Thursday, January 07, 2010

REQUEST NUMBER: 10-1130

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:10-1130

Per Agreement Number:126310011

Project Cost Code: MR3A05529E00

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 1/7/2010

TURNAROUND/REPORT DUE: 2/6/2010

TURNAROUND REQ'D: 30 Days

RAD SCREENING: Not Required

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:901.1	1	RE12-10-7697	R	1/5/2010	
		1	RE12-10-7698	R	1/5/2010	
		1	RE12-10-7703	R	1/5/2010	
		1	RE12-10-7704	R	1/5/2010	
	HASL-300:AM-241	1	RE12-10-7697	R	1/5/2010	
		1	RE12-10-7698	R	1/5/2010	
		1	RE12-10-7703	R	1/5/2010	
		1	RE12-10-7704	R	1/5/2010	
	HASL-300:ISOPU	1	RE12-10-7697	R	1/5/2010	

Thursday, January 07, 2010

REQUEST NUMBER: 10-1130

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	HASL-300:ISOPU	1	RE12-10-7698	R	1/5/2010	
		1	RE12-10-7703	R	1/5/2010	
		1	RE12-10-7704	R	1/5/2010	
	HASL-300:ISOU	1	RE12-10-7697	R	1/5/2010	
		1	RE12-10-7698	R	1/5/2010	
		1	RE12-10-7703	R	1/5/2010	
		1	RE12-10-7704	R	1/5/2010	
	SW-846:6020	1	RE12-10-7697	R	1/5/2010	
		1	RE12-10-7698	R	1/5/2010	
		1	RE12-10-7703	R	1/5/2010	
		1	RE12-10-7704	R	1/5/2010	
	SW-846:6850	1	RE12-10-7697	R	1/5/2010	
		1	RE12-10-7698	R	1/5/2010	
		1	RE12-10-7703	R	1/5/2010	
		1	RE12-10-7704	R	1/5/2010	
	SW-846:7471A	1	RE12-10-7697	R	1/5/2010	
		1	RE12-10-7698	R	1/5/2010	
		1	RE12-10-7703	R	1/5/2010	
		1	RE12-10-7704	R	1/5/2010	
	SW-846:8082	1	RE12-10-7697	R	1/5/2010	
		1	RE12-10-7698	R	1/5/2010	
	SW-846:8321A_MOD	1	RE12-10-7697	R	1/5/2010	
		1	RE12-10-7698	R	1/5/2010	
		1	RE12-10-7703	R	1/5/2010	
		1	RE12-10-7704	R	1/5/2010	
	SW-846:9012A	1	RE12-10-7697	R	1/5/2010	
		1	RE12-10-7698	R	1/5/2010	
		1	RE12-10-7703	R	1/5/2010	

Thursday, January 07, 2010

REQUEST NUMBER: 10-1130

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:9012A	1	RE12-10-7704	R	1/5/2010	

Final Page of REQUEST NUMBER 10-1130

Thursday, January 07, 2010

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-1130

REQUEST NUMBER: 10-1130

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 2/6/2010

TURNAROUND REQ'D: 30

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
RE12-10-7698	1	AMBER GLASS	8082+NMED-HEXP	Ice	R
RE12-10-7698	1	POLY	AM241+GS+ISOPU+ISOU	None	R
RE12-10-7698	1	POLY	Met+U+CLO4+CN	Ice	R
RE12-10-7697	1	AMBER GLASS	8082+NMED-HEXP	Ice	R
RE12-10-7697	1	POLY	AM241+GS+ISOPU+ISOU	None	R
RE12-10-7697	1	POLY	Met+U+CLO4+CN	Ice	R
RE12-10-7704	1	POLY	AM241+GS+ISOPU+ISOU	None	R
RE12-10-7704	1	POLY	Met+U+CLO4+CN	Ice	R
RE12-10-7704	1	AMBER GLASS	NMED Explosives list	Ice	R
RE12-10-7703	1	POLY	AM241+GS+ISOPU+ISOU	None	R
RE12-10-7703	1	POLY	Met+U+CLO4+CN	Ice	R
RE12-10-7703	1	AMBER GLASS	NMED Explosives list	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
		1/7/10	1400				
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

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

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2493 **EVENT NAME:** 4th Qtr. FY09 - CU 12-001(a)-99 - Threemile Canyon

SAMPLE ID: RE12-10-7697 **WORK ORDER:**

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		01/05/~~10~~ 2010 11/05/10	MEDIA:	OBT3	ALLH
TIME COLLECTED (HH:MM)		1005	SUB-MEDIA:	TUFF 1	NA
PRS ID:	12-001(a)-99	OK	SAMPLE TECH CODE:	HA	OK
LOCATION ID:	12-610666	OK	FIELD QC TYPE:	NA	|
LOCATION TYPE:	GENERIC	OK	FIELD PREP:	NA	|
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	✓
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:		~~NO~~ RS 01/05/10 NA
FIELD MATRIX:	R	S	EXCAVATED: YES / (NO) / NA		

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

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

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	normal	8082+NMED-HEXP	250 ML AMBER GLASS	Ice	Y	
1	|	AM241+GS+ISOPU+ISOU	~~1 LITER~~ POLY RS 01-05-10 1 Liter Poly	None	Y	
1	|	Met+U+CLO4+CN	~~1 GAL~~ POLY RS 01-05-10 1 Liter Poly	Ice	Y	
1	✓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC: Brown Silty sand Some clay

SAMPLE COMMENTS: NA

LOCATION DESC: 1a-13

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 22$ dpm PID ambient reading 0.0 ppm 0.0 HE Neg

$\beta\gamma \leq 2090$ dpm

COLLECTED BY (PRINT) R Saunders **REVIEWED BY (PRINT)** TLMcFarland

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) R Saunders (Signature) R. Saunders	01/05/2010 1540	(Printed Name) Melissa Montoya (Signature)	1/5/10 1540
RELINQUISHED BY (Printed Name) (Signature)	**Date/Time**	**RECEIVED BY** (Printed Name) (Signature)	**Date/Time**

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2493 **EVENT NAME:** 4th Qtr. FY09 - CU 12-001(a)-99 - Threemile Canyon

SAMPLE ID: RE12-10-7698 **WORK ORDER:**

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		01/05/2010 (RS 01/05/10)	MEDIA:	QBT3	ALLH
TIME COLLECTED (HH:MM)		1017	SUB-MEDIA:	TUFF 1	NA
PRS ID:	12-001(a)-99	OK	SAMPLE TECH CODE:	HA	OK
LOCATION ID:	12-610666	OK	FIELD QC TYPE:	NA	↓
LOCATION TYPE:	GENERIC	OK	FIELD PREP:	NA	↓
TOP DEPTH:	0	~~0.0~~ 1.0 (RS 01/05/10)	SAMPLE USAGE:	INV	✓
BOTTOM DEPTH:	0	2.0	SCREEN/PORT DESC:		NA
FIELD MATRIX:	R	S	EXCAVATED: YES / (NO) / NA		

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

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

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Normal	8082+NMED-HEXP	250 ML AMBER GLASS	Ice	Yes	
1	↓	AM241+GS+ISO PU+ISOU	1 LITER POLY 73m 1/5/10	None	Yes	
1	↓	Met+U+CLO4+CN	~~1 GAL~~ POLY 1 Liter	Ice	Yes	
1	✓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Yes	

SAMPLE DESC: Brown Silty sand and pinkish grey weathered Tuff

SAMPLE COMMENTS:
Hit Tuff at 1.8 ft

LOCATION DESC: 1a-13 ~~fc~~ 73m 1/05/10

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 38 dpm PID ambient reading 0.0 / 0.0 ppm

βγ ≤ 2030 dpm

COLLECTED BY (PRINT) R Saunders **REVIEWED BY (PRINT)** TLMcFarlana

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) R. Saunders	01/05/2010	(Printed Name) [illegible]	1/5/10
(Signature) R. Saunders	1540	(Signature) [illegible]	1541
RELINQUISHED BY	**Date/Time**	**RECEIVED BY**	**Date/Time**
(Printed Name)		(Printed Name)	
(Signature)		(Signature)	

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2493 **EVENT NAME:** 4th Qtr. FY09 - CU 12-001(a)-99 - Threemile Canyon

SAMPLE ID: RE12-10-7703 **WORK ORDER:**

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		01/05/2010	MEDIA:	OBT3	ALLH
TIME COLLECTED (HH:MM)		1038	SUB-MEDIA:	TUFF 1	NA
PRS ID:	12-001(a)-99	ok	SAMPLE TECH CODE:	HA	ok
LOCATION ID:	12-610669	↓	FIELD QC TYPE:	NA	↓
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	↓
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	0.7	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	S	EXCAVATED: YES / (NO) / NA		

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

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

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Normal	AM241+GS+ISOPU+ISOU	1 LITER POLY	None	Y	
1	↓	Met+U+CLO4+CN	~~1 GAL~~ POLY 1 Liter	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: dark brown moist silty sand with clay and rocks

SAMPLE COMMENTS: NA

LOCATION DESC: 1a-12

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 33 dpm PID ambient reading 0.0 / 0.0 ppm

βγ ≤ 2010 dpm HE negative

COLLECTED BY (PRINT) TLMcFarland **REVIEWED BY (PRINT)** TLMcFarland

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) R. Saunders	01/05/2010	(Printed Name) [illegible]	1/5/10
(Signature) R. Saunders	1540	(Signature) [illegible]	1540
RELINQUISHED BY	**Date/Time**	**RECEIVED BY**	**Date/Time**
(Printed Name)		(Printed Name)	
(Signature)		(Signature)	

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2493 **EVENT NAME:** 4th Qtr. FY09 - CU 12-001(a)-99 - Threemile Canyon

SAMPLE ID: RE12-10-7704 **WORK ORDER:**

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		01/05/2010	MEDIA:	QBT3	ALLIt
TIME COLLECTED (HH:MM)		1100	SUB-MEDIA:	TUFF 1	NA
PRS ID:	12-001(a)-99	OK	SAMPLE TECH CODE:	HA	OK
LOCATION ID:	12-610669	↓	FIELD QC TYPE:	NA	↓
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	↓
TOP DEPTH:	0	1.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	2.1	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+ISOPU+ISOU	1 LITER POLY	None	Yes	
1	↓	Met+U+CLO4+CN	~~1 GAL~~ POLY 1 Liter	Ice	Yes	
1	↓	NMED Explosives list	250 ML AMBER GLASS	Ice	Yes	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Yes	

SAMPLE DESC: Brown sandy soil

SAMPLE COMMENTS: NA

LOCATION DESC: 1a-12

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 44 dpm

βγ ≤ 2220 dpm

PID ambient reading 0.0 ppm

COLLECTED BY (PRINT) R Saunders **REVIEWED BY (PRINT)** TL McFarland

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) R. Saunders	01/05/2010	(Printed Name)	1/5/10
(Signature) R. Saunders	1540	(Signature)	1540
RELINQUISHED BY	**Date/Time**	**RECEIVED BY**	**Date/Time**
(Printed Name)		(Printed Name)	
(Signature)		(Signature)	

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-10-00004
Client Sample ID: RE12-10-7697
Sample Collection Date: 01/05/10 10:05
Sample Matrix: Soil/Solid

Request or PO Number:
ARS Sample ID: ARS2-10-00004-001
Date Received: 01/06/10 00:00
Report Date: 01/07/10 07:45

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	58.36	26.52	27.01	27.46		pCi/g	EPA 900.0M	1/6/2010	ME	N/A
GROSS BETA	33.54	10.74	12.49	11.50		pCi/g	EPA 900.0M	1/6/2010	ME	N/A
NA-22	0.00	0.00	0.10	0.00		pCi/g	EPA 901.1M	1/6/2010	ME	N/A
K-40	18.63	7.20	1.87	7.22		pCi/g	EPA 901.1M	1/6/2010	ME	N/A
CO-60	0.00	10.26	0.10	10.26		pCi/g	EPA 901.1M	1/6/2010	ME	N/A
CS-134	0.06	0.09	0.10	0.09		pCi/g	EPA 901.1M	1/6/2010	ME	N/A
CS-137	-0.01	13.43	0.06	13.43		pCi/g	EPA 901.1M	1/6/2010	ME	N/A
EU-152	0.69	0.62	0.15	0.62		pCi/g	EPA 901.1M	1/6/2010	ME	N/A
PB-212	1.77	0.54	0.15	0.55		pCi/g	EPA 901.1M	1/6/2010	ME	N/A
RA-228	2.69	0.97	0.27	0.98		pCi/g	EPA 901.1M	1/6/2010	ME	N/A
U-235	1.44	0.80	0.33	0.80		pCi/g	EPA 901.1M	1/6/2010	ME	N/A
U-238	6.04	4.12	1.54	4.34		pCi/g	EPA 901.1M	1/6/2010	ME	N/A
AM-241	0.49	0.29	0.10	0.30		pCi/g	EPA 901.1M	1/6/2010	ME	N/A

NOTES: % Moisture: 1.44

Matthew L. Eden
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

AMERICAN RADIATION SERVICES, INC.
133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-10-00004
Client Sample ID: RE12-10-7698
Sample Collection Date: 01/05/10 10:17
Sample Matrix: Soil/Solid

Request or PO Number:
ARS Sample ID: ARS2-10-00004-002
Date Received: 01/06/10 00:00
Report Date: 01/07/10 07:45

Analysis Description	Analysis Results	Analysis Error +/- 2s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	38.73	21.64	22.96	21.57		pCi/g	EPA 900.0M	1/6/2010	ME	N/A
GROSS BETA	38.76	11.02	12.66	12.00		pCi/g	EPA 900.0M	1/6/2010	ME	N/A
NA-22	0.00	0.00	0.10	0.00		pCi/g	EPA 901.1M	1/6/2010	ME	N/A
K-40	17.99	7.22	1.63	7.24		pCi/g	EPA 901.1M	1/6/2010	ME	N/A
CO-60	0.00	10.65	0.11	10.65		pCi/g	EPA 901.1M	1/6/2010	ME	N/A
CS-134	0.17	0.20	0.08	0.20		pCi/g	EPA 901.1M	1/6/2010	ME	N/A
CS-137	-0.01	13.93	0.07	13.93		pCi/g	EPA 901.1M	1/6/2010	ME	N/A
EU-152	0.17	0.23	0.12	0.22		pCi/g	EPA 901.1M	1/6/2010	ME	N/A
PB-212	1.88	0.57	0.15	0.57		pCi/g	EPA 901.1M	1/6/2010	ME	N/A
RA-228	2.22	0.91	0.28	0.92		pCi/g	EPA 901.1M	1/6/2010	ME	N/A
U-235	0.74	0.42	0.19	0.43		pCi/g	EPA 901.1M	1/6/2010	ME	N/A
U-238	3.03	3.79	1.56	3.86		pCi/g	EPA 901.1M	1/6/2010	ME	N/A
AM-241	0.27	0.27	0.11	0.27		pCi/g	EPA 901.1M	1/6/2010	ME	N/A

NOTES: % Moisture: 0.96

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

ARS AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-10-00004
Client Sample ID: RE12-10-7703
Sample Collection Date: 01/05/10 10:38
Sample Matrix: Soil/Solid

Request or PO Number:
ARS Sample ID: ARS2-10-00004-003
Date Received: 01/06/10 00:00
Report Date: 01/07/10 07:45

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	33.20	19.13	19.32	19.66		pCi/g	EPA 900.0M	1/6/2010	ME	N/A
GROSS BETA	29.07	10.88	13.71	11.45		pCi/g	EPA 900.0M	1/6/2010	ME	N/A
NA-22	0.00	0.00	0.07	0.00		pCi/g	EPA 901.1M	1/6/2010	ME	N/A
K-40	13.05	5.24	1.18	5.26		pCi/g	EPA 901.1M	1/6/2010	ME	N/A
CO-60	0.00	7.73	0.08	7.73		pCi/g	EPA 901.1M	1/6/2010	ME	N/A
CS-134	0.00	0.00	0.06	0.00		pCi/g	EPA 901.1M	1/6/2010	ME	N/A
CS-137	-0.01	10.11	0.05	10.11		pCi/g	EPA 901.1M	1/6/2010	ME	N/A
EU-152	0.00	8.04	0.09	8.04		pCi/g	EPA 901.1M	1/6/2010	ME	N/A
PB-212	1.68	0.45	0.11	0.46		pCi/g	EPA 901.1M	1/6/2010	ME	N/A
RA-228	1.63	0.66	0.41	0.66		pCi/g	EPA 901.1M	1/6/2010	ME	N/A
U-235	1.19	0.75	0.29	0.75		pCi/g	EPA 901.1M	1/6/2010	ME	N/A
U-238	4.68	2.74	0.96	2.94		pCi/g	EPA 901.1M	1/6/2010	ME	N/A
AM-241	0.21	0.22	0.09	0.22		pCi/g	EPA 901.1M	1/6/2010	ME	N/A

NOTES: % Moisture: 1.75

Matthew L. Eden
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

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-10-00004	Request or PO Number:	
Client Sample ID:	RE12-10-7704	ARS Sample ID:	ARS2-10-00004-004
Sample Collection Date:	01/05/10 11:00	Date Received:	01/06/10 00:00
Sample Matrix:	Soil/Solid	Report Date:	01/07/10 07:46

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	23.41	17.86	23.98	18.08		pCi/g	EPA 900.0M	1/6/2010	ME	N/A
GROSS BETA	28.66	10.18	13.00	10.77		pCi/g	EPA 900.0M	1/6/2010	ME	N/A
NA-22	0.00	0.00	0.09	0.00		pCi/g	EPA 901.1M	1/6/2010	ME	N/A
K-40	13.60	5.96	1.45	5.97		pCi/g	EPA 901.1M	1/6/2010	ME	N/A
CO-60	0.00	0.46	0.10	0.46		pCi/g	EPA 901.1M	1/6/2010	ME	N/A
CS-134	0.38	0.22	0.07	0.23		pCi/g	EPA 901.1M	1/6/2010	ME	N/A
CS-137	-0.01	12.38	0.06	12.38		pCi/g	EPA 901.1M	1/6/2010	ME	N/A
EU-152	0.64	0.46	0.11	0.46		pCi/g	EPA 901.1M	1/6/2010	ME	N/A
PB-212	2.00	0.55	0.14	0.55		pCi/g	EPA 901.1M	1/6/2010	ME	N/A
RA-226	2.75	1.10	0.25	1.11		pCi/g	EPA 901.1M	1/6/2010	ME	N/A
U-235	1.07	1.11	0.39	1.12		pCi/g	EPA 901.1M	1/6/2010	ME	N/A
U-238	3.77	3.98	1.50	4.08		pCi/g	EPA 901.1M	1/6/2010	ME	N/A
AM-241	0.00	0.04	0.05	0.04		pCi/g	EPA 901.1M	1/6/2010	ME	N/A

NOTES: % Moisture: 0.92

Matthew J. Eder
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

DATA VALIDATION COVER SHEET

5121-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST 1943

Section I.

REQUEST NUMBER: 10-1130 VALIDATION DATE: 02/24/10 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: David Schwent ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

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

Section II. Completeness Check

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

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

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

Reviewed by: Monica Dymerski **Level I** **Date:** 02/25/10

VALIDATOR'S SIGNATURE: David Schmoll	DATE: 02/24/10
Form 5121-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

LC/MS/MS PERCHLORATE ANALYTICAL DATA VALIDATION CHECKLIST

5121-2

LC/MS/MS Perchlorate Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

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

LC/MS/MS PERCHLORATE ANALYTICAL DATA VALIDATION CHECKLIST

5121-2

LC/MS/MS Perchlorate Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

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

LC/MS/MS PERCHLORATE ANALYTICAL DATA VALIDATION CHECKLIST

5121-2 LC/MS/MS Perchlorate Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

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

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 940125

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
RE12-10-7698

Date Received: 08-JAN-10

GEL Job No (SDG): 10-1130

GEL Sample ID: 244125001

Date Filtered: 12-JAN-10

Injection Volume (uL): 20

%Solids: 90.1

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.555	2.22	0.555	ug/kg	U	1	14-JAN-10 16:48	per0114029a
	Perchlorate Isotope Ratio						1	14-JAN-10 16:48	per0114029a
14797-73-0	Perchlorate-101	.555	2.22	0.555	ug/kg	U	1	14-JAN-10 16:48	per0114029a
	Perchlorate-O(18)			5.56	ug/kg		1	14-JAN-10 16:48	per0114029a

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

*Concentration =

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

DJS
02/24/10

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 940125

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
RE12-10-7697

Date Received: 08-JAN-10

GEL Job No (SDG): 10-1130

GEL Sample ID: 244125002

Date Filtered: 12-JAN-10

Injection Volume (uL): 20

%Solids: 85

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.586	2.34	0.586	ug/kg	U	1	14-JAN-10 16:58	per0114030a
	Perchlorate Isotope Ratio						1	14-JAN-10 16:58	per0114030a
14797-73-0	Perchlorate-101	.586	2.34	0.586	ug/kg	U	1	14-JAN-10 16:58	per0114030a
	Perchlorate-O(18)			5.75	ug/kg		1	14-JAN-10 16:58	per0114030a

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

*Concentration =

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

DJS
02/24/10

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 940125

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
RE12-10-7704

Date Received: 08-JAN-10

GEL Job No (SDG): 10-1130

GEL Sample ID: 244125003

Date Filtered: 12-JAN-10

Injection Volume (uL): 20

%Solids: 90.7

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.551	2.21	0.551	ug/kg	U	1	14-JAN-10 17:39	per0114034a
	Perchlorate Isotope Ratio						1	14-JAN-10 17:39	per0114034a
14797-73-0	Perchlorate-101	.551	2.21	0.551	ug/kg	U	1	14-JAN-10 17:39	per0114034a
	Perchlorate-O(18)			5.47	ug/kg		1	14-JAN-10 17:39	per0114034a

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

*Concentration =

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

DJS
02/24/10

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 940125

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
RE12-10-7703

Date Received: 08-JAN-10

GEL Job No (SDG): 10-1130

GEL Sample ID: 244125004

Date Filtered: 12-JAN-10

Injection Volume (uL): 20

%Solids: 80

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.623	2.49	0.623	ug/kg	U	1	14-JAN-10 17:49	per0114035a
	Perchlorate Isotope Ratio						1	14-JAN-10 17:49	per0114035a
14797-73-0	Perchlorate-101	.623	2.49	0.623	ug/kg	U	1	14-JAN-10 17:49	per0114035a
	Perchlorate-O(18)			6.45	ug/kg		1	14-JAN-10 17:49	per0114035a

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

*Concentration =

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

DJS
02/24/10

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DATA VALIDATION COVER SHEET

5122-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 10-1130 VALIDATION DATE: 02/24/10 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: David Schwent ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

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

Section II. Completeness Check

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

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

1. The ICV and/or bracketing CCV %Ds of p-nitrotoluene and RDX were >20% with positive bias. All associated sample results were NDs and, thus, were not qualified.

Reviewed by: Monica Dymerski **Level I** **Date:** 02/25/10

DATA VALIDATION COVER SHEET	
5122-1 **Data Validation Cover Sheet**	Records Use only Los Alamos NATIONAL LABORATORY EST. 1943
VALIDATOR'S SIGNATURE: David Schmont	DATE: 02/24/10
Form 5122-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

LC/MS/MS HIGH EXPLOSIVE ANALYTICAL DATA VALIDATION CHECKLIST

5122-2

LC/MS/MS High Explosive Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

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

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

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

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

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	23. The mass spectral documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, HE8a	R, HE8a
☐	☒	☐	24. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, HE9	J-, HE9
☐	☒	☐	25. The holding time was >2 times the applicable holding time requirement.	R, HE9a	J-, HE9a
☐	☒	☐	26. The LCS percent recovery was <10%. Follow the external laboratory limits.	R, HE12	J-, HE12
☐	☒	☐	27. The LCS percent recovery was < the Lower Acceptance Limit but >10%. Follow the external laboratory limits.	UJ, HE12a	J-, HE12a
☐	☒	☐	28. The LCS percent recovery was > the Upper Acceptance Limit. Follow the external laboratory limits.	N/A	J+, HE12b
☐	☒	☐	29. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, HE12c	R, HE12c
☐	☒	☐	30. The MS/MSD percent recovery was <10%.	R, HE12d	R, HE12d
☐	☒	☐	31. The MS/MSD percent recovery was >10% but <70%.	UJ, HE12e	J, HE12e
☐	☒	☐	32. The MS/MSD percent recover was >70%.	N/A	J+, HE12f
☐	☒	☐	33. The MS/MSD relative percent difference was >30%.	UJ, HE12g	J, HE12g
☐	☐	☒	34. The affected analytes are considered suspect because the sample was diluted without any target analytes identified due to matrix interference. (Qualify as Reject if the analytical laboratory cannot provide proof for matrix interference.)	UJ, R, HE15	R, HE15
☐	☐	☒	35. The sample was diluted because target analytes were > the initial verification calibration.	UJ, HE15a	J, HE15a

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

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

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7698

Lab Code: GEL

GEL Job No (SDG) 10-1130

Matrix: SOIL

GEL Sample ID: 244125001

Sample Amount 2

Moisture: 9.9

Amount Units g

Date Received: 08-JAN-10

Extraction Type Sonication

Extraction Batch ID: 940075

Concentrated Extract Volume (mL) 10

Date Extracted: 19-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0118157a

Date Analyzed: 21-JAN-10 18:46

Units: ug/kg

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

*Concentration =

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

DJS
02/24/10

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7698

Lab Code: GEL

GEL Job No (SDG) 10-1130

Matrix: SOIL

GEL Sample ID: 244125001

Sample Amount 2

Moisture: 9.9

Amount Units g

Date Received: 08-JAN-10

Extraction Type Sonication

Extraction Batch ID: 940075

Concentrated Extract Volume (mL) 10

Date Extracted: 19-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS01200053.wiff

Date Analyzed: 21-JAN-10 00:06

Units: ug/kg

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

*Concentration =

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

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02/24/10

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7697

Lab Code: GEL

GEL Job No (SDG) 10-1130

Matrix: SOIL

GEL Sample ID: 244125002

Sample Amount 2

Moisture: 14.7

Amount Units g

Date Received: 08-JAN-10

Extraction Type Sonication

Extraction Batch ID: 940075

Concentrated Extract Volume (mL) 10

Date Extracted: 19-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0118160a

Date Analyzed: 21-JAN-10 20:15

Units: ug/kg

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

*Concentration =

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

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7697

Lab Code: GEL

GEL Job No (SDG) 10-1130

Matrix: SOIL

GEL Sample ID: 244125002

Sample Amount 2

Moisture: 14.7

Amount Units g

Date Received: 08-JAN-10

Extraction Type Sonication

Extraction Batch ID: 940075

Concentrated Extract Volume (mL) 10

Date Extracted: 19-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS01200056.wiff

Date Analyzed: 21-JAN-10 00:53

Units: ug/kg

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

*Concentration =

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

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02/24/10

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7704

Lab Code: GEL

GEL Job No (SDG) 10-1130

Matrix: SOIL

GEL Sample ID: 244125003

Sample Amount 2

Moisture: 9.3

Amount Units g

Date Received: 08-JAN-10

Extraction Type Sonication

Extraction Batch ID: 940075

Concentrated Extract Volume (mL) 10

Date Extracted: 19-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0118164a

Date Analyzed: 21-JAN-10 22:13

Units: ug/kg

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

*Concentration =

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

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02/24/10

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

1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7704

Lab Code: GEL

GEL Job No (SDG) 10-1130

Matrix: SOIL

GEL Sample ID: 244125003

Sample Amount 2

Moisture: 9.3

Amount Units g

Date Received: 08-JAN-10

Extraction Type Sonication

Extraction Batch ID: 940075

Concentrated Extract Volume (mL) 10

Date Extracted: 19-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS01200057.wiff

Date Analyzed: 21-JAN-10 01:09

Units: ug/kg

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

*Concentration =

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

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02/24/10

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7703

Lab Code: GEL

GEL Job No (SDG) 10-1130

Matrix: SOIL

GEL Sample ID: 244125004

Sample Amount 2

Moisture: 19.8

Amount Units g

Date Received: 08-JAN-10

Extraction Type Sonication

Extraction Batch ID: 940075

Concentrated Extract Volume (mL) 10

Date Extracted: 19-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0118165a

Date Analyzed: 21-JAN-10 22:42

Units: ug/kg

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

*Concentration =

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

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02/24/10

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12--10-7703

Lab Code: GEL

GEL Job No (SDG) 10-1130

Matrix: SOIL

GEL Sample ID: 244125004

Sample Amount 2

Moisture: 19.8

Amount Units g

Date Received: 08-JAN--10

Extraction Type Sonication

Extraction Batch ID: 940075

Concentrated Extract Volume (mL) 10

Date Extracted: 19-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS01200058.wiff

Date Analyzed: 21-JAN-10 01:24

Units: ug/kg

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

*Concentration =

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

DJS
02/24/10

DATA VALIDATION COVER SHEET

5116-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY

Section I.

REQUEST NUMBER: 10-1130 VALIDATION DATE: 02/24/10 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: David Schwent ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

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

Section II. Completeness Check

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

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

1. It should be noted that the MS and MSD analyses were performed on a LANL sample from another RN. No sample data were qualified as a result.

Reviewed by: Monica Dymerski **Level I** **Date:** 02/25/10

VALIDATOR'S SIGNATURE: David Schwent DATE: 02/24/10

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

5116-2

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

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Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, P9	J-, P9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, P9	J-, P9a
☐	☒	☐	3. The affected analytes are regarded as rejected because the analytical holding time was exceeded.	R, P9b	R, P9b
☐	☒	☐	4. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, P7	J, P7
☐	☒	☐	5. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, P7a	J, P7a
☐	☒	☐	6. The Initial Calibration Verification (ICV) and/or Continuing Calibration Verification (CCV) were recovered outside the method-specific limits.	UJ, P7c	J, P7c
☐	☒	☐	7. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, P7d	J, P7d
☐	☐	☒	8. The multicomponent standard was not analyzed within 72 hours of the initial analysis.	R, P7e	J, P7e
☐	☒	☐	9. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, P7f	R, P7f
☐	☐	☒	10. The breakdown criteria have been exceeded. This can cause low bias in reported results. If compound is detected, qualify J-. If compound is not present, but breakdown products are present, qualify R. If no compounds or breakdown products are present, qualify UJ (4,4' DDT and Endrin).	UJ, R, P13	J-, P13

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

5116-2

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

Records Use only

Los Alamos NATIONAL LABORATORY

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

ORGANOCHLORINE PESTICIDE (PEST) AND POLYCHLORINATED BIPHENYL (PCB) ANALYTICAL DATA VALIDATION CHECKLIST	
5116-2 Organochlorine Pesticide (PEST) and Polychlorinated Biphenyl (PCB) Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY EST 1943

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

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

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

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☐	☒	32. The affected analytes have elevated detection limits and may not meet project DQOs because the sample was diluted without any target analytees identified due to matrix interference. Qualify as Reject if the analytical laboratory cannot provide proof for matrix interference.	UJ, R, P15	R, P15
☒	☐	☐	33. Qualification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB, NQ, NQ
☐	☒	☐	34. The LANL project chemist identified quality deficiencies in the reported data that requires further qualification. This code can only be used and/or under advisement by the LANL project chemist.	UJ, R, P19	J, R, P19

PCB
Certificate of Analysis
Sample Summary

SDG Number:	**10-1130**	**Date Collected:**	**01/05/2010 12:00**	**Matrix:**	**R**
Lab Sample ID:	**244125002**	**Date Received:**	**01/08/2010 09:05**	**%Moisture:**	**14.7**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**RE12-10-7697**	**Method:**	**SW846 8082**	**SOP Ref:**	**GL-OA-E-040**
Batch ID:	**940403**	**Inst:**	**ECD1A.I**	**Dilution:**	**1**
Run Date:	**01/12/2010 11:58**	**Analyst:**	**YS1**	**Inj. Vol:**	**1 uL**
Prep Date:	**01/11/2010 19:04**	**Aliquot:**	**30.03 g**	**Final Volume:**	**1 mL**
Data File:	**024f2401.d**	**Column:**	**1 CLP1**	**Level:**	**LOW**
	024b2401.d		**2 CLP2**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.90	ug/kg	1.30	3.90	1
11104-28-2	Aroclor-1221	U	3.90	ug/kg	1.30	3.90	1
11141-16-5	Aroclor-1232	U	3.90	ug/kg	1.30	3.90	1
53469-21-9	Aroclor-1242	U	3.90	ug/kg	1.30	3.90	1
12672-29-6	Aroclor-1248	U	3.90	ug/kg	1.30	3.90	1
11097-69-1	Aroclor-1254	U	3.90	ug/kg	1.30	3.90	1
11096-82-5	Aroclor-1260	U	3.90	ug/kg	1.30	3.90	1

DJS
02/24/10

PCB
Certificate of Analysis
Sample Summary

SDG Number:	**10–1130**	**Date Collected:**	**01/05/2010 12:00**	**Matrix:**	**R**
Lab Sample ID:	**244125001**	**Date Received:**	**01/08/2010 09:05**	**%Moisture:**	**9.9**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**RE12–10–7698**	**Method:**	**SW846 8082**	**SOP Ref:**	**GL–OA–E–040**
Batch ID:	**940403**	**Inst:**	**ECD1A.I**	**Dilution:**	**1**
Run Date:	**01/12/2010 11:46**	**Analyst:**	**YS1**	**Inj. Vol:**	**1 uL**
Prep Date:	**01/11/2010 19:04**	**Aliquot:**	**30.12 g**	**Final Volume:**	**1 mL**
Data File:	**023f2301.d**	**Column:**	**1 CLP1**	**Level:**	**LOW**
	023b2301.d		**2 CLP2**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674–11–2	Aroclor–1016	U	3.69	ug/kg	1.23	3.69	1
11104–28–2	Aroclor–1221	U	3.69	ug/kg	1.23	3.69	1
11141–16–5	Aroclor–1232	U	3.69	ug/kg	1.23	3.69	1
53469–21–9	Aroclor–1242	U	3.69	ug/kg	1.23	3.69	1
12672–29–6	Aroclor–1248	U	3.69	ug/kg	1.23	3.69	1
11097–69–1	Aroclor–1254	U	3.69	ug/kg	1.23	3.69	1
11096–82–5	Aroclor–1260	U	3.69	ug/kg	1.23	3.69	1

DJS
02/24/10

DATA VALIDATION COVER SHEET

5118-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY

Section I.

REQUEST NUMBER: 10-1130 VALIDATION DATE: 02/24/10 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: David Schwent ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

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

Section II. Completeness Check

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

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

1. In the MB, Fe was detected. All associated sample results were detects >50X the MB concentration and, thus, were not qualified, based on professional judgment.

2. In the ICB and CCB, Sb, was detected. The Sb result of sample RE12-10-7698 was an ND and, thus, was not qualified. All other Sb results were detects ≤5X the greatest calibration blank concentration and, thus, were qualified U,I4b.

3. The MS %R of Mg was > the laboratory UAL. All Mg sample results were detects and, thus, were qualified J+,I6b. The MS %Rs of Mn and Se were < the laboratory LAL but ≥10%. All Mn sample results were detects and, thus, were qualified J-,I6a. All Se sample results were NDs and, thus, were qualified UJ,I6a. Also, the MS %Rs of Al and Fe were outside laboratory acceptance limits. However, the parent sample concentrations were >4X the spike concentrations. Based on professional judgment, no sample data were qualified.

4. The duplicate sample RPD of K was >35% and both the parent and duplicate sample results were ≥5X the PQLs. All associated sample results were detects and, thus, were qualified J,I10a.

DATA VALIDATION COVER SHEET

5118-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

5. It should be noted that the matrix QC analyses for all the metals batches were performed on LANL samples from other RNs and that the raw data for the parent samples were not included in the data package. No sample data were qualified as a result.

Reviewed by: Monica Dymerski **Level I** **Date:** 02/25/10

VALIDATOR'S SIGNATURE: David Schmoll DATE: 02/24/10

Form 5118-1, Revision 0.0

LOS ALAMOS
Environmental Restoration Project

METALS ANALYTICAL DATA VALIDATION CHECKLIST

5118-2

Metals Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

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

METALS ANALYTICAL DATA VALIDATION CHECKLIST

5118-2

Metals Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

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

METALS ANALYTICAL DATA VALIDATION CHECKLIST

5118-2

Metals Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

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

METALS ANALYTICAL DATA VALIDATION CHECKLIST

5118-2 Metals Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

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

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 10-1130 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 244125001 **BASIS:** Dry Weight **DATE COLLECTED** 05-JAN-10

CLIENT ID: RE12-10-7698 **LEVEL:** Low **DATE RECEIVED** 08-JAN-10

MATRIX: SOIL **%SOLIDS:** 90.1

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	17600000	ug/Kg		7550	22200	22200	1	P	HSC	01/20/10 22:09	012010-1	940187
7440-36-0	Antimony	1110	ug/Kg	U	366	1110	1110	1	P	HSC	01/20/10 22:09	012010-1	940187
7440-38-2	Arsenic	2.27	mg/kg		0.22	1.1	1.1	2	MS	PRB	01/19/10 18:55	100119-3	940107
7440-39-3	Barium	195000	ug/Kg		111	555	555	1	P	HSC	01/20/10 22:09	012010-1	940187
7440-41-7	Beryllium	1.45	mg/kg		0.022	0.11	0.11	2	MS	PRB	01/19/10 18:55	100119-3	940107
7440-43-9	Cadmium	555	ug/Kg	U	111	555	555	1	P	HSC	01/20/10 22:09	012010-1	940187
7440-70-2	Calcium	2210000	ug/Kg		8880	27800	27800	1	P	HSC	01/20/10 22:09	012010-1	940187
7440-47-3	Chromium	12700	ug/Kg		167	555	555	1	P	HSC	01/20/10 22:09	012010-1	940187
7440-48-4	Cobalt	5890	ug/Kg		167	555	555	1	P	HSC	01/20/10 22:09	012010-1	940187
7440-50-8	Copper	9490	ug/Kg		333	1110	1110	1	P	HSC	01/20/10 22:09	012010-1	940187
7439-89-6	Iron	16200000	ug/Kg		8880	27800	27800	1	P	HSC	01/20/10 22:09	012010-1	940187
7439-92-1	Lead	12200	ug/Kg		278	1110	1110	1	P	HSC	01/20/10 22:09	012010-1	940187
7439-95-4	Magnesium J+,I6b	2760000	ug/Kg		9440	33300	33300	1	P	HSC	01/20/10 22:09	012010-1	940187
7439-96-5	Manganese J-,I6a	362000	ug/Kg		222	1110	1110	1	P	HSC	01/20/10 22:09	012010-1	940187
7439-97-6	Mercury	22.1	ug/kg		4.27	12.6	12.6	1	AV	JXL1	01/21/10 11:23	012110S1-4	943237
7440-02-0	Nickel	9.39	mg/kg		0.11	0.441	0.441	2	MS	PRB	01/16/10 02:20	100115-2	940107
7440-09-7	Potassium J,I10a	2480000	ug/Kg		7110	27800	27800	1	P	HSC	01/20/10 22:09	012010-1	940187
7782-49-2	Selenium UJ,I6a	1.1	mg/kg	U	0.551	1.1	1.1	2	MS	PRB	01/16/10 02:20	100115-2	940107
7440-22-4	Silver	464	ug/Kg	J	111	555	555	1	P	HSC	01/20/10 22:09	012010-1	940187
7440-23-5	Sodium	161000	ug/Kg		7770	27800	27800	1	P	HSC	01/20/10 22:09	012010-1	940187
7440-28-0	Thallium	0.277	mg/kg		0.0661	0.22	0.22	2	MS	PRB	01/16/10 02:20	100115-2	940107
7440-61-1	Uranium	0.820	mg/kg		0.0145	0.0441	0.0441	2	MS	PRB	01/16/10 02:20	100115-2	940107
7440-62-2	Vanadium	30300	ug/Kg		111	555	555	1	P	HSC	01/20/10 22:09	012010-1	940187
7440-66-6	Zinc	31100	ug/Kg		366	1110	1110	1	P	HSC	01/20/10 22:09	012010-1	940187

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
940107	940101	SW846 3050B	0.504	g	50	mL	01/11/10	BXA1
940187	940186	SW846 3050B	0.5	g	50	mL	01/11/10	BXA1
943237	943235	SW846 7471A Prep	0.53	g	30	mL	01/20/10	TXB3

DJS
02/24/10

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 10-1130 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 244125002 **BASIS:** Dry Weight **DATE COLLECTED** 05-JAN-10

CLIENT ID: RE12-10-7697 **LEVEL:** Low **DATE RECEIVED** 08-JAN-10

MATRIX: SOIL **%SOLIDS:** 85

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19200000	ug/Kg		7800	22900	22900	1	P	HSC	01/20/10 22:16	012010-1	940187
7440-36-0	Antimony U,I4b	795	ug/Kg	J	379	1150	1150	1	P	HSC	01/20/10 22:16	012010-1	940187
7440-38-2	Arsenic	2.65	mg/kg		0.232	1.16	1.16	2	MS	PRB	01/19/10 18:59	100119-3	940107
7440-39-3	Barium	222000	ug/Kg		115	574	574	1	P	HSC	01/20/10 22:16	012010-1	940187
7440-41-7	Beryllium	1.44	mg/kg		0.0232	0.116	0.116	2	MS	PRB	01/19/10 18:59	100119-3	940107
7440-43-9	Cadmium	574	ug/Kg	U	115	574	574	1	P	HSC	01/20/10 22:16	012010-1	940187
7440-70-2	Calcium	2650000	ug/Kg		9180	28700	28700	1	P	HSC	01/20/10 22:16	012010-1	940187
7440-47-3	Chromium	20000	ug/Kg		172	574	574	1	P	HSC	01/20/10 22:16	012010-1	940187
7440-48-4	Cobalt	6760	ug/Kg		172	574	574	1	P	HSC	01/20/10 22:16	012010-1	940187
7440-50-8	Copper	11500	ug/Kg		344	1150	1150	1	P	HSC	01/20/10 22:16	012010-1	940187
7439-89-6	Iron	17200000	ug/Kg		9180	28700	28700	1	P	HSC	01/20/10 22:16	012010-1	940187
7439-92-1	Lead	16100	ug/Kg		287	1150	1150	1	P	HSC	01/20/10 22:16	012010-1	940187
7439-95-4	Magnesium J+,I6b	2720000	ug/Kg		9750	34400	34400	1	P	HSC	01/20/10 22:16	012010-1	940187
7439-96-5	Manganese J-,I6a	440000	ug/Kg		229	1150	1150	1	P	HSC	01/20/10 22:16	012010-1	940187
7439-97-6	Mercury	22.9	ug/kg		4.6	13.5	13.5	1	AV	JXL1	01/21/10 11:25	012110S1-4	943237
7440-02-0	Nickel	10.3	mg/kg		0.116	0.464	0.464	2	MS	PRB	01/16/10 02:23	100115-2	940107
7440-09-7	Potassium J,I10a	2650000	ug/Kg		7340	28700	28700	1	P	HSC	01/20/10 22:16	012010-1	940187
7782-49-2	Selenium UJ,I6a	1.16	mg/kg	U	0.58	1.16	1.16	2	MS	PRB	01/16/10 02:23	100115-2	940107
7440-22-4	Silver	197	ug/Kg	J	115	574	574	1	P	HSC	01/20/10 22:16	012010-1	940187
7440-23-5	Sodium	95400	ug/Kg		8030	28700	28700	1	P	HSC	01/20/10 22:16	012010-1	940187
7440-28-0	Thallium	0.249	mg/kg		0.0696	0.232	0.232	2	MS	PRB	01/16/10 02:23	100115-2	940107
7440-61-1	Uranium	1.84	mg/kg		0.0153	0.0464	0.0464	2	MS	PRB	01/16/10 02:23	100115-2	940107
7440-62-2	Vanadium	34400	ug/Kg		115	574	574	1	P	HSC	01/20/10 22:16	012010-1	940187
7440-66-6	Zinc	36300	ug/Kg		379	1150	1150	1	P	HSC	01/20/10 22:16	012010-1	940187

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
940107	940101	SW846 3050B	0.505	g	50	mL	01/11/10	BXA1
940187	940186	SW846 3050B	0.511	g	50	mL	01/11/10	BXA1
943237	943235	SW846 7471A Prep	0.52	g	30	mL	01/20/10	TXB3

DJS
02/24/10

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 10-1130 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 244125003 **BASIS:** Dry Weight **DATE COLLECTED** 05-JAN-10

CLIENT ID: RE12-10-7704 **LEVEL:** Low **DATE RECEIVED** 08-JAN-10

MATRIX: SOIL **%SOLIDS:** 90.7

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	16600000	ug/Kg		7450	21900	21900	1	P	HSC	01/20/10 22:24	012010-1	940187
7440-36-0	Antimony U,I4b	581	ug/Kg	J	362	1100	1100	1	P	HSC	01/20/10 22:24	012010-1	940187
7440-38-2	Arsenic	2.39	mg/kg		0.215	1.07	1.07	2	MS	PRB	01/19/10 19:11	100119-3	940107
7440-39-3	Barium	237000	ug/Kg		110	548	548	1	P	HSC	01/20/10 22:24	012010-1	940187
7440-41-7	Beryllium	1.36	mg/kg		0.0215	0.107	0.107	2	MS	PRB	01/19/10 19:11	100119-3	940107
7440-43-9	Cadmium	548	ug/Kg	U	110	548	548	1	P	HSC	01/20/10 22:24	012010-1	940187
7440-70-2	Calcium	2260000	ug/Kg		8770	27400	27400	1	P	HSC	01/20/10 22:24	012010-1	940187
7440-47-3	Chromium	12800	ug/Kg		164	548	548	1	P	HSC	01/20/10 22:24	012010-1	940187
7440-48-4	Cobalt	6990	ug/Kg		164	548	548	1	P	HSC	01/20/10 22:24	012010-1	940187
7440-50-8	Copper	8150	ug/Kg		329	1100	1100	1	P	HSC	01/20/10 22:24	012010-1	940187
7439-89-6	Iron	15900000	ug/Kg		8770	27400	27400	1	P	HSC	01/20/10 22:24	012010-1	940187
7439-92-1	Lead	15200	ug/Kg		274	1100	1100	1	P	HSC	01/20/10 22:24	012010-1	940187
7439-95-4	Magnesium J+,I6b	2450000	ug/Kg		9320	32900	32900	1	P	HSC	01/20/10 22:24	012010-1	940187
7439-96-5	Manganese J-,I6a	475000	ug/Kg		219	1100	1100	1	P	HSC	01/20/10 22:24	012010-1	940187
7439-97-6	Mercury	14.6	ug/kg		3.91	11.5	11.5	1	AV	JXL1	01/21/10 11:26	012110S1-4	943237
7440-02-0	Nickel	9	mg/kg		0.107	0.429	0.429	2	MS	PRB	01/16/10 02:25	100115-2	940107
7440-09-7	Potassium J,I10a	2140000	ug/Kg		7020	27400	27400	1	P	HSC	01/20/10 22:24	012010-1	940187
7782-49-2	Selenium UJ,I6a	1.07	mg/kg	U	0.536	1.07	1.07	2	MS	PRB	01/16/10 02:25	100115-2	940107
7440-22-4	Silver	264	ug/Kg	J	110	548	548	1	P	HSC	01/20/10 22:24	012010-1	940187
7440-23-5	Sodium	101000	ug/Kg		7670	27400	27400	1	P	HSC	01/20/10 22:24	012010-1	940187
7440-28-0	Thallium	0.244	mg/kg		0.0644	0.215	0.215	2	MS	PRB	01/16/10 02:25	100115-2	940107
7440-61-1	Uranium	1.29	mg/kg		0.0142	0.0429	0.0429	2	MS	PRB	01/16/10 02:25	100115-2	940107
7440-62-2	Vanadium	32900	ug/Kg		110	548	548	1	P	HSC	01/20/10 22:24	012010-1	940187
7440-66-6	Zinc	29700	ug/Kg		362	1100	1100	1	P	HSC	01/20/10 22:24	012010-1	940187

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
940107	940101	SW846 3050B	0.514	g	50	mL	01/11/10	BXA1
940187	940186	SW846 3050B	0.503	g	50	mL	01/11/10	BXA1
943237	943235	SW846 7471A Prep	0.575	g	30	mL	01/20/10	TXB3

DJS
02/24/10

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 10-1130 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 244125004 **BASIS:** Dry Weight **DATE COLLECTED** 05-JAN-10

CLIENT ID: RE12-10-7703 **LEVEL:** Low **DATE RECEIVED** 08-JAN-10

MATRIX: SOIL **%SOLIDS:** 80

CAS No.	Analyte		Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum		13800000	ug/Kg		8150	24000	24000	1	P	HSC	01/20/10 22:31	012010-1	940187
7440-36-0	Antimony	U,I4b	1450	ug/Kg		396	1200	1200	1	P	HSC	01/20/10 22:31	012010-1	940187
7440-38-2	Arsenic		2.21	mg/kg		0.237	1.19	1.19	2	MS	PRB	01/19/10 19:15	100119-3	940107
7440-39-3	Barium		218000	ug/Kg		120	599	599	1	P	HSC	01/20/10 22:31	012010-1	940187
7440-41-7	Beryllium		1.16	mg/kg		0.0237	0.119	0.119	2	MS	PRB	01/19/10 19:15	100119-3	940107
7440-43-9	Cadmium		599	ug/Kg	U	120	599	599	1	P	HSC	01/20/10 22:31	012010-1	940187
7440-70-2	Calcium		2630000	ug/Kg		9590	30000	30000	1	P	HSC	01/20/10 22:31	012010-1	940187
7440-47-3	Chromium		69800	ug/Kg		180	599	599	1	P	HSC	01/20/10 22:31	012010-1	940187
7440-48-4	Cobalt		6950	ug/Kg		180	599	599	1	P	HSC	01/20/10 22:31	012010-1	940187
7440-50-8	Copper		8020	ug/Kg		360	1200	1200	1	P	HSC	01/20/10 22:31	012010-1	940187
7439-89-6	Iron		14300000	ug/Kg		9590	30000	30000	1	P	HSC	01/20/10 22:31	012010-1	940187
7439-92-1	Lead		14400	ug/Kg		300	1200	1200	1	P	HSC	01/20/10 22:31	012010-1	940187
7439-95-4	Magnesium	J+,I6b	2070000	ug/Kg		10200	36000	36000	1	P	HSC	01/20/10 22:31	012010-1	940187
7439-96-5	Manganese	J-,I6a	520000	ug/Kg		240	1200	1200	1	P	HSC	01/20/10 22:31	012010-1	940187
7439-97-6	Mercury		14.2	ug/kg	J	5.09	15	15	1	AV	JXL1	01/21/10 11:31	012110S1-4	943237
7440-02-0	Nickel		12.1	mg/kg		0.119	0.475	0.475	2	MS	PRB	01/16/10 02:28	100115-2	940107
7440-09-7	Potassium	J,I10a	2100000	ug/Kg		7670	30000	30000	1	P	HSC	01/20/10 22:31	012010-1	940187
7782-49-2	Selenium	UJ,I6a	1.19	mg/kg	U	0.594	1.19	1.19	2	MS	PRB	01/16/10 02:28	100115-2	940107
7440-22-4	Silver		349	ug/Kg	J	120	599	599	1	P	HSC	01/20/10 22:31	012010-1	940187
7440-23-5	Sodium		98000	ug/Kg		8390	30000	30000	1	P	HSC	01/20/10 22:31	012010-1	940187
7440-28-0	Thallium		0.209	mg/kg	J	0.0712	0.237	0.237	2	MS	PRB	01/16/10 02:28	100115-2	940107
7440-61-1	Uranium		1.25	mg/kg		0.0157	0.0475	0.0475	2	MS	PRB	01/16/10 02:28	100115-2	940107
7440-62-2	Vanadium		28800	ug/Kg		120	599	599	1	P	HSC	01/20/10 22:31	012010-1	940187
7440-66-6	Zinc		25900	ug/Kg		396	1200	1200	1	P	HSC	01/20/10 22:31	012010-1	940187

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
940107	940101	SW846 3050B	0.525	g	50	mL	01/11/10	BXA1
940187	940186	SW846 3050B	0.52	g	50	mL	01/11/10	BXA1
943237	943235	SW846 7471A Prep	0.5	g	30	mL	01/20/10	TXB3

DJS
02/24/10

DATA VALIDATION COVER SHEET

5120-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 10-1130 VALIDATION DATE: 02/24/10 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: David Schwent ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

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

☐ OTHER (DESCRIBE): Total CN only

Section II. Completeness Check

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

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

1. The total CN analysis included multiple matrix QC samples and the matrix QC analyses were performed on LANL samples from another RN. Sample results were not qualified.

Reviewed by: Monica Dymerski **Level I** **Date:** 02/25/10

DATA VALIDATION COVER SHEET

5120-1 **Data Validation Cover Sheet**	Records Use only Los Alamos NATIONAL LABORATORY EST 1943

VALIDATOR'S SIGNATURE: David Schwartz DATE: 02/24/10

Form 5120-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

GENERAL CHEMISTRY ANALYTICAL DATA VALIDATION CHECKLIST

5120-2

General Chemistry Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

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

GENERAL CHEMISTRY ANALYTICAL DATA VALIDATION CHECKLIST

5120-2

General Chemistry Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

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

GENERAL CHEMISTRY ANALYTICAL DATA VALIDATION CHECKLIST

5120-2

General Chemistry Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

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

GEL LABORATORIES LLC

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

Certificate of Analysis

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

Report Date: January 29, 2010

Client SDG: 10-1130

Client Sample ID:	RE12-10-7698	Project:	LANL01004
Sample ID:	244125001	Client ID:	LANL010
Matrix:	R		
Collect Date:	05-JAN-10 12:00		
Receive Date:	08-JAN-10		
Collector:	Client		
Moisture:	9.92%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Flow Injection Analysis										
SW9012A Cyanide, Total "Dry Weight Corrected"										
Cyanide, Total	U	ND	69.9	257	ug/kg	1	AXC2 01/14/10	1146	940234	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/13/10	1551	940233

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

DJS
02/24/10

GEL LABORATORIES LLC

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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: January 29, 2010

Client SDG: 10-1130

Client Sample ID:	RE12-10-7697	Project:	LANL01004
Sample ID:	244125002	Client ID:	LANL010
Matrix:	R		
Collect Date:	05-JAN-10 12:00		
Receive Date:	08-JAN-10		
Collector:	Client		
Moisture:	14.7%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Flow Injection Analysis										
SW9012A Cyanide, Total "Dry Weight Corrected"										
Cyanide, Total	U	ND	73.8	271	ug/kg	1	AXC2 01/14/10	1147	940234	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/13/10	1551	940233

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

DJS
02/24/10

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

Report Date: January 29, 2010

Client SDG: 10-1130

Client Sample ID:	RE12-10-7704	Project:	LANL01004
Sample ID:	244125003	Client ID:	LANL010
Matrix:	R		
Collect Date:	05-JAN-10 12:00		
Receive Date:	08-JAN-10		
Collector:	Client		
Moisture:	9.32%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Flow Injection Analysis											
SW9012A Cyanide, Total "Dry Weight Corrected"											
Cyanide, Total	U	ND	65.8	242	ug/kg	1	AXC2	01/14/10	1148	940234	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/13/10	1551	940233

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

DJS
02/24/10

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Certificate of Analysis

Company : Los Alamos National Laboratory
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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: January 29, 2010

Client SDG: 10-1130

Client Sample ID:	RE12-10-7703	Project:	LANL01004
Sample ID:	244125004	Client ID:	LANL010
Matrix:	R		
Collect Date:	05-JAN-10 12:00		
Receive Date:	08-JAN-10		
Collector:	Client		
Moisture:	19.8%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Flow Injection Analysis										
SW9012A Cyanide, Total "Dry Weight Corrected"										
Cyanide, Total	J	101	81.5	300	ug/kg	1	AXC2 01/14/10	1149	940234	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/13/10	1551	940233

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

DJS
02/24/10

DATA VALIDATION COVER SHEET

5119-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST 1943

Section I.

REQUEST NUMBER: 10-1130 VALIDATION DATE: 02/24/10 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: David Schwent ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

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

Section II. Completeness Check

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

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

1. All reported sample results that were rejected by the laboratory due to interference or low abundance were qualified R,R5a. In the QC samples, several results were also rejected by the laboratory. No sample data were qualified as a result.

Reviewed by: Monica Dymerski **Level I** **Date:** 02/25/10

DATA VALIDATION COVER SHEET

5119-1 **Data Validation Cover Sheet**	Records Use only Los Alamos NATIONAL LABORATORY EST 1943

VALIDATOR'S SIGNATURE: David Schwartz DATE: 02/24/10

Form 5119-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

RAD ANALYTICAL DATA VALIDATION CHECKLIST

5119-2

Rad Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

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

RAD ANALYTICAL DATA VALIDATION CHECKLIST

5119-2

Rad Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

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

RAD ANALYTICAL DATA VALIDATION CHECKLIST

5119-2 Rad Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

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

GEL LABORATORIES LLC

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

Certificate of Analysis

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

Report Date: January 21, 2010

Client Sample ID: RE12-10-7698
Sample ID: 244125001
Matrix: R
Collect Date: 05-JAN-10
Receive Date: 08-JAN-10
Collector: Client
Moisture: 9.92%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids													
"As Received"													
Rad Alpha Spec Analysis													
AM241 "Dry Weight Corrected"													
Americium-241	U	-0.00182		0.0211	+/-0.0044	0.050	pCi/g		JXD2	01/16/10	1130	940222	2
ISOPU "Dry Weight Corrected"													
Plutonium-238	U	0.00		0.0202	+/-0.0052	0.050	pCi/g		JXD2	01/16/10	1129	940223	3
Plutonium-239/240	U	0.00368		0.0232	+/-0.00325	0.050	pCi/g						
ISOU "Dry Weight Corrected"													
Uranium-233/234		0.941		0.117	+/-0.0899	0.100	pCi/g		JXD2	01/19/10	1047	940225	4
Uranium-235/236	U	0.0465		0.0724	+/-0.0165	0.100	pCi/g						
Uranium-238		0.805		0.0677	+/-0.0796	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	-0.0581		0.201	+/-0.0689	0.200	pCi/g		MXR1	01/20/10	1329	940263	5
Bismuth-211	UI	3.83	R,R5a	0.317	+/-0.260		pCi/g						
Bismuth-214		1.29		0.110	+/-0.0919	0.200	pCi/g						
Cadmium-109	UI	3.44	R,R5a	1.22	+/-0.460		pCi/g						
Cerium-139	U	-0.00618		0.0481	+/-0.0147	0.050	pCi/g						
Cesium-134	UI	0.109	R,R5a	0.0892	+/-0.0309	0.100	pCi/g						
Cesium-137	U	0.00968		0.064	+/-0.0192	0.100	pCi/g						
Cobalt-60	U	-0.00739		0.0592	+/-0.0185	0.100	pCi/g						
Europium-152	U	-0.0195		0.150	+/-0.0595	0.200	pCi/g						
Lanthanum-140	U	-0.0833		0.128	+/-0.0486		pCi/g						
Lead-212		1.68		0.089	+/-0.0815	0.100	pCi/g						
Lead-214		1.33		0.111	+/-0.097	0.100	pCi/g						
Mercury-203	U	0.0316		0.0634	+/-0.0221	0.100	pCi/g						
Potassium-40		19.4		0.499	+/-0.984	1.00	pCi/g						
Radium-223	U	-0.41		1.10	+/-0.334		pCi/g						
Radium-224	UI	4.44	R,R5a	1.01	+/-0.687		pCi/g						
Radium-226		1.29		0.110	+/-0.0919		pCi/g						
Radium-228		1.60		0.217	+/-0.176	0.500	pCi/g						
Ruthenium-106	U	0.105		0.504	+/-0.149	0.800	pCi/g						

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

Report Date: January 21, 2010

Client Sample ID: RE12-10-7698
Sample ID: 244125001
Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Sodium-22	U	0.0319	0.0729	+/-0.0205	0.080	pCi/g						
Strontium-85	U	0.0678	0.0679	+/-0.0208		pCi/g						
Thallium-208		0.579	0.0493	+/-0.0446	0.080	pCi/g						
Thorium-227	U	0.125	0.621	+/-0.178		pCi/g						
Thorium-231	U	-0.41	1.10	+/-0.334		pCi/g						
Thorium-234		2.69	1.79	+/-0.907	2.00	pCi/g						
Tin-113	U	-0.0228	0.0717	+/-0.0219	0.100	pCi/g						
Uranium-235	U	0.345	0.375	+/-0.110	0.500	pCi/g						
Yttrium-88	U	0.00595	0.0559	+/-0.0168	0.100	pCi/g						

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	90.6	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	85.1	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	89.9	(50%-105%)

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

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

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 21, 2010

Client Sample ID: RE12-10-7697
Sample ID: 244125002
Matrix: R
Collect Date: 05-JAN-10
Receive Date: 08-JAN-10
Collector: Client
Moisture: 14.7%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids													
"As Received"													
Rad Alpha Spec Analysis													
AM241 "Dry Weight Corrected"													
Americium-241	U	0.00513		0.0236	+/-0.00551	0.050	pCi/g		JXD2	01/16/10	1130	940222	2
ISOPU "Dry Weight Corrected"													
Plutonium-238	U	0.00		0.0234	+/-0.00722	0.050	pCi/g		JXD2	01/16/10	1129	940223	3
Plutonium-239/240	U	0.00142		0.0268	+/-0.00549	0.050	pCi/g						
ISOU "Dry Weight Corrected"													
Uranium-233/234		1.20		0.153	+/-0.117	0.100	pCi/g		JXD2	01/19/10	1047	940225	4
Uranium-235/236	U	0.0793		0.0949	+/-0.0227	0.100	pCi/g						
Uranium-238		1.32		0.0887	+/-0.125	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	0.0735		0.225	+/-0.0735	0.200	pCi/g		MXR1	01/20/10	1330	940263	5
Bismuth-211	UI	4.19	R,R5a	0.326	+/-0.330		pCi/g						
Bismuth-214		1.28		0.098	+/-0.114	0.200	pCi/g						
Cadmium-109	UI	3.92	R,R5a	1.09	+/-0.490		pCi/g						
Cerium-139	U	0.000166		0.0467	+/-0.0138	0.050	pCi/g						
Cesium-134	UI	0.120	R,R5a	0.0912	+/-0.0331	0.100	pCi/g						
Cesium-137		0.108		0.061	+/-0.0335	0.100	pCi/g						
Cobalt-60	U	-0.0268		0.0519	+/-0.0181	0.100	pCi/g						
Europium-152	U	0.0386		0.152	+/-0.0486	0.200	pCi/g						
Lanthanum-140	U	-0.136		0.120	+/-0.0469		pCi/g						
Lead-212		1.75		0.084	+/-0.118	0.100	pCi/g						
Lead-214		1.46		0.114	+/-0.121	0.100	pCi/g						
Mercury-203	U	0.00161		0.0637	+/-0.022	0.100	pCi/g						
Potassium-40		21.0		0.459	+/-1.19	1.00	pCi/g						
Radium-223	U	0.245		1.04	+/-0.354		pCi/g						
Radium-224	UI	4.64	R,R5a	0.956	+/-0.652		pCi/g						
Radium-226		1.28		0.098	+/-0.114		pCi/g						
Radium-228		1.79		0.184	+/-0.194	0.500	pCi/g						
Ruthenium-106	U	-0.191		0.469	+/-0.152	0.800	pCi/g						
Sodium-22	U	-0.0166		0.0583	+/-0.0191	0.080	pCi/g						

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

Report Date: January 21, 2010

Client Sample ID: RE12-10-7697
Sample ID: 244125002

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Strontium-85	U	0.0349	0.0641	+/-0.0204		pCi/g						
Thallium-208		0.594	0.055	+/-0.050	0.080	pCi/g						
Thorium-227	U	0.00953	0.610	+/-0.186		pCi/g						
Thorium-231	U	0.245	1.04	+/-0.354		pCi/g						
Thorium-234		2.34	1.89	+/-0.866	2.00	pCi/g						
Tin-113	U	-0.0336	0.0671	+/-0.0209	0.100	pCi/g						
Uranium-235	U	0.158	0.353	+/-0.103	0.500	pCi/g						
Yttrium-88	U	0.00576	0.0555	+/-0.0164	0.100	pCi/g						

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	83.0	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	80.9	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	71.9	(50%-105%)

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

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

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

Report Date: January 21, 2010

Client Sample ID: RE12-10-7704
Sample ID: 244125003
Matrix: R
Collect Date: 05-JAN-10
Receive Date: 08-JAN-10
Collector: Client
Moisture: 9.32%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids													
"As Received"													
Rad Alpha Spec Analysis													
AM241 "Dry Weight Corrected"													
Americium-241	U	0.00211		0.0222	+/-0.00166	0.050	pCi/g		JXD2	01/16/10	1130	940222	2
ISOPU "Dry Weight Corrected"													
Plutonium-238	U	0.0167		0.0229	+/-0.00686	0.050	pCi/g		JXD2	01/16/10	1129	940223	3
Plutonium-239/240	U	-0.00139		0.0263	+/-0.00368	0.050	pCi/g						
ISOU "Dry Weight Corrected"													
Uranium-233/234		1.12		0.0821	+/-0.0945	0.100	pCi/g		JXD2	01/19/10	0935	940225	4
Uranium-235/236		0.0852		0.051	+/-0.0183	0.100	pCi/g						
Uranium-238		1.15		0.0476	+/-0.0969	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	0.0843		0.299	+/-0.0843	0.200	pCi/g		MXR1	01/20/10	1330	940263	5
Bismuth-211	UI	3.96	R,R5a	0.276	+/-0.226		pCi/g						
Bismuth-214		1.25		0.0939	+/-0.0843	0.200	pCi/g						
Cadmium-109	UI	4.81	R,R5a	1.16	+/-0.458		pCi/g						
Cerium-139	U	0.00101		0.0428	+/-0.0123	0.050	pCi/g						
Cesium-134	UI	0.126	R,R5a	0.0733	+/-0.0293	0.100	pCi/g						
Cesium-137	U	-0.000648		0.047	+/-0.0139	0.100	pCi/g						
Cobalt-60	U	-0.0121		0.0501	+/-0.0159	0.100	pCi/g						
Europium-152	U	0.000533		0.139	+/-0.0467	0.200	pCi/g						
Lanthanum-140	U	-0.0751		0.101	+/-0.0351		pCi/g						
Lead-212		1.74		0.0766	+/-0.0808	0.100	pCi/g						
Lead-214		1.38		0.0967	+/-0.0863	0.100	pCi/g						
Mercury-203	U	0.0131		0.0566	+/-0.0167	0.100	pCi/g						
Potassium-40		20.0		0.460	+/-0.990	1.00	pCi/g						
Radium-223	U	0.177		0.897	+/-0.307		pCi/g						
Radium-224	UI	4.86	R,R5a	0.871	+/-0.601		pCi/g						
Radium-226		1.25		0.0939	+/-0.0843		pCi/g						
Radium-228		1.81		0.161	+/-0.182	0.500	pCi/g						
Ruthenium-106	U	0.250		0.448	+/-0.129	0.800	pCi/g						
Sodium-22	U	-0.0105		0.0558	+/-0.0174	0.080	pCi/g						

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 21, 2010

Client Sample ID: RE12-10-7704
Sample ID: 244125003

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Strontium-85	UI	0.0935	R,R5a	0.0597	+/-0.0176		pCi/g						
Thallium-208		0.482		0.0468	+/-0.0382	0.080	pCi/g						
Thorium-227	U	-0.139		0.517	+/-0.158		pCi/g						
Thorium-231	U	0.177		0.897	+/-0.307		pCi/g						
Thorium-234	U	0.271		2.48	+/-0.716	2.00	pCi/g						
Tin-113	U	0.00685		0.0615	+/-0.0179	0.100	pCi/g						
Uranium-235	U	0.192		0.323	+/-0.0972	0.500	pCi/g						
Yttrium-88	U	0.015		0.0483	+/-0.0137	0.100	pCi/g						

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	84.5	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	82.5	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	84.2	(50%-105%)

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

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

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 21, 2010

Client Sample ID: RE12-10-7703
Sample ID: 244125004
Matrix: R
Collect Date: 05-JAN-10
Receive Date: 08-JAN-10
Collector: Client
Moisture: 19.8%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids													
"As Received"													
Rad Alpha Spec Analysis													
AM241 "Dry Weight Corrected"													
Americium-241	U	0.00799		0.0208	+/-0.00316	0.050	pCi/g		JXD2	01/16/10	1130	940222	2
ISOPU "Dry Weight Corrected"													
Plutonium-238	U	0.00565		0.0233	+/-0.00774	0.050	pCi/g		JXD2	01/16/10	1129	940223	3
Plutonium-239/240	U	0.0113		0.0267	+/-0.0045	0.050	pCi/g						
ISOU "Dry Weight Corrected"													
Uranium-233/234		1.82		0.0976	+/-0.148	0.100	pCi/g		JXD2	01/19/10	0935	940225	4
Uranium-235/236		0.132		0.0606	+/-0.0251	0.100	pCi/g						
Uranium-238		2.02		0.0566	+/-0.162	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	0.0161		0.216	+/-0.0687	0.200	pCi/g		MXR1	01/20/10	1331	940263	5
Bismuth-211	UI	4.27	R,R5a	0.295	+/-0.315		pCi/g						
Bismuth-214		1.16		0.0994	+/-0.0985	0.200	pCi/g						
Cadmium-109	UI	3.35	R,R5a	1.12	+/-0.523		pCi/g						
Cerium-139	U	0.00774		0.0475	+/-0.0137	0.050	pCi/g						
Cesium-134	UI	0.0876	R,R5a	0.0802	+/-0.0247	0.100	pCi/g						
Cesium-137		0.0992		0.0542	+/-0.0213	0.100	pCi/g						
Cobalt-60	U	0.0011		0.0538	+/-0.0163	0.100	pCi/g						
Europium-152	U	0.0458		0.152	+/-0.0571	0.200	pCi/g						
Lanthanum-140	U	0.0211		0.123	+/-0.0419		pCi/g						
Lead-212		1.77		0.089	+/-0.128	0.100	pCi/g						
Lead-214		1.49		0.103	+/-0.116	0.100	pCi/g						
Mercury-203	U	0.0234		0.0667	+/-0.0199	0.100	pCi/g						
Potassium-40		21.2		0.463	+/-1.18	1.00	pCi/g						
Radium-223	U	-0.688		1.02	+/-0.319		pCi/g						
Radium-224	UI	5.02	R,R5a	1.01	+/-0.770		pCi/g						
Radium-226		1.16		0.0994	+/-0.0985		pCi/g						
Radium-228		1.86		0.191	+/-0.175	0.500	pCi/g						
Ruthenium-106	U	0.155		0.475	+/-0.138	0.800	pCi/g						
Sodium-22	U	-0.0173		0.0583	+/-0.0183	0.080	pCi/g						

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 21, 2010

Client Sample ID: RE12-10-7703
Sample ID: 244125004
Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Strontium-85	UI	0.180	R,R5a	0.0729	+/-0.0221		pCi/g						
Thallium-208		0.517		0.0542	+/-0.0457	0.080	pCi/g						
Thorium-227	U	-0.256		0.597	+/-0.188		pCi/g						
Thorium-231	U	-0.688		1.02	+/-0.319		pCi/g						
Thorium-234	U	1.54		1.77	+/-0.856	2.00	pCi/g						
Tin-113	U	-0.0323		0.0647	+/-0.0201	0.100	pCi/g						
Uranium-235	U	0.0159		0.339	+/-0.100	0.500	pCi/g						
Yttrium-88	U	0.0368		0.0582	+/-0.0157	0.100	pCi/g						

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	85.8	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	80.0	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	73.5	(50%-105%)

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

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

DJS
02/24/10

Thursday, January 07, 2010

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-1130

REQUEST NUMBER: 10-1130

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 2/6/2010

TURNAROUND REQ'D: 30

LAB REQUEST COMMENTS: 244125 1.

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
RE12-10-7698	1	AMBER GLASS	8082+NMED-HEXP	Ice	R
RE12-10-7698	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE12-10-7698	1	POLY	Met+U+CLO4+CN	Ice	R
RE12-10-7697	1	AMBER GLASS	8082+NMED-HEXP	Ice	R
RE12-10-7697	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE12-10-7697	1	POLY	Met+U+CLO4+CN	Ice	R
RE12-10-7704	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE12-10-7704	1	POLY	Met+U+CLO4+CN	Ice	R
RE12-10-7704	1	AMBER GLASS	NMED Explosives list	Ice	R
RE12-10-7703	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE12-10-7703	1	POLY	Met+U+CLO4+CN	Ice	R
RE12-10-7703	1	AMBER GLASS	NMED Explosives list	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
[illegible]	[illegible]	1/7/10	1400	Patricia Doverdent	P.A. Doverdent	1-8-10	09:05
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

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

Printed Name Signature

Thursday, January 07, 2010

REQUEST NUMBER: 10-1130

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:10-1130
Per Agreement Number:126310011
Project Cost Code: MR3A05529E00

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 1/7/2010
TURNAROUND/REPORT DUE: 2/6/2010
TURNAROUND REQ'D: 30 Days

RAD SCREENING: Not Required
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:901.1	1	RE12-10-7697	R	1/5/2010	
		1	RE12-10-7698	R	1/5/2010	
		1	RE12-10-7703	R	1/5/2010	
		1	RE12-10-7704	R	1/5/2010	
	HASL-300:AM-241	1	RE12-10-7697	R	1/5/2010	
		1	RE12-10-7698	R	1/5/2010	
		1	RE12-10-7703	R	1/5/2010	
		1	RE12-10-7704	R	1/5/2010	
	HASL-300:ISOPU	1	RE12-10-7697	R	1/5/2010	

Thursday, January 07, 2010

REQUEST NUMBER: 10-1130

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	HASL-300:ISOPU	1	RE12-10-7698	R	1/5/2010	
		1	RE12-10-7703	R	1/5/2010	
		1	RE12-10-7704	R	1/5/2010	
	HASL-300:ISOU	1	RE12-10-7697	R	1/5/2010	
		1	RE12-10-7698	R	1/5/2010	
		1	RE12-10-7703	R	1/5/2010	
		1	RE12-10-7704	R	1/5/2010	
	SW-846:6020	1	RE12-10-7697	R	1/5/2010	
		1	RE12-10-7698	R	1/5/2010	
		1	RE12-10-7703	R	1/5/2010	
		1	RE12-10-7704	R	1/5/2010	
	SW-846:6850	1	RE12-10-7697	R	1/5/2010	
		1	RE12-10-7698	R	1/5/2010	
		1	RE12-10-7703	R	1/5/2010	
		1	RE12-10-7704	R	1/5/2010	
	SW-846:7471A	1	RE12-10-7697	R	1/5/2010	
		1	RE12-10-7698	R	1/5/2010	
		1	RE12-10-7703	R	1/5/2010	
		1	RE12-10-7704	R	1/5/2010	
	SW-846:8082	1	RE12-10-7697	R	1/5/2010	
		1	RE12-10-7698	R	1/5/2010	
	SW-846:8321A_MOD	1	RE12-10-7697	R	1/5/2010	
		1	RE12-10-7698	R	1/5/2010	
		1	RE12-10-7703	R	1/5/2010	
		1	RE12-10-7704	R	1/5/2010	
	SW-846:9012A	1	RE12-10-7697	R	1/5/2010	
		1	RE12-10-7698	R	1/5/2010	
		1	RE12-10-7703	R	1/5/2010	

Thursday, January 07, 2010

REQUEST NUMBER: 10-1130

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:9012A	1	RE12-10-7704	R	1/5/2010	

Final Page of REQUEST NUMBER 10-1130

GEL Laboratories LLC

a member of The GEL Group INC

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

www.gel.com

January 12, 2010

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

Re: LANL ER Project
Work Order: 244125
SDG: 10-1130

Dear Ms. Valdez:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on January 08, 2010, and analyzed for Explosives by LCMSMS, GC Semivolatile PCB, General Chemistry, Metals, Perchlorates by LCMSMS and Radiochemistry. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

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

Sincerely,

for

Valerie Davis
Project Manager

Purchase Order: 72733-001-09
Chain of Custody: 10-1130
Enclosures

problem solved

Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Work Order #: 244125
SDG: 10-1130

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Standards Data.....500
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Standards.....666
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Miscellaneous.....981

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Sample Data Summary.....1032
Quality Control Summary.....1038
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Cyanide, Total.....1043
Miscellaneous.....1053

Radiological Analysis.....1055
Sample Data Summary.....1064
Quality Control Data.....1078
Raw Data.....1085
Background and Efficiency Data.....1441
Standards Data.....1517
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Case Narrative

Case Narrative for
Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Workorder #: 244125
SDG # : 10-1130

January 12, 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 08, 2010 for analysis. The samples were prepared/analyzed within the required holding time. Shipping container temperatures were checked, documented, and within specifications. The samples were screened according to GEL Standard Operating Procedure. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. Containers were checked for pH, where appropriate, and matched the preservative as documented on the accompanying chain of custody. The containers for radiochemistry were received at 9,13,14C temperatures. Shipping container temperature was within specification (0 - 6C).

Sample Identification The laboratory received the following samples:

Laboratory ID	Client ID
244125001	RE12-10-7698
244125002	RE12-10-7697
244125003	RE12-10-7704
244125004	RE12-10-7703

Case Narrative

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

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

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

for

Valerie Davis

Project Manager

List of current GEL Certifications as of 12 January 2010

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

Chain of Custody and Supporting Documentation

Thursday, January 07, 2010

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-1130

REQUEST NUMBER: 10-1130

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 2/6/2010

TURNAROUND REQ'D: 30

LAB REQUEST COMMENTS: 244125 1.

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
RE12-10-7698	1	AMBER GLASS	8082+NMED-HEXP	Ice	R
RE12-10-7698	1	POLY	AM241+GS+ISOPU+ISOU	None	R
RE12-10-7698	1	POLY	Met+U+CLO4+CN	Ice	R
RE12-10-7697	1	AMBER GLASS	8082+NMED-HEXP	Ice	R
RE12-10-7697	1	POLY	AM241+GS+ISOPU+ISOU	None	R
RE12-10-7697	1	POLY	Met+U+CLO4+CN	Ice	R
RE12-10-7704	1	POLY	AM241+GS+ISOPU+ISOU	None	R
RE12-10-7704	1	POLY	Met+U+CLO4+CN	Ice	R
RE12-10-7704	1	AMBER GLASS	NMED Explosives list	Ice	R
RE12-10-7703	1	POLY	AM241+GS+ISOPU+ISOU	None	R
RE12-10-7703	1	POLY	Met+U+CLO4+CN	Ice	R
RE12-10-7703	1	AMBER GLASS	NMED Explosives list	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
[illegible]	[illegible]	1/7/10	1400	Patricia Dover-Dent	[illegible]	1-8-10	09:05
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

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

Thursday, January 07, 2010

REQUEST NUMBER: 10-1130

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:10-1130

Per Agreement Number:126310011

Project Cost Code: MR3A05529E00

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 1/7/2010

TURNAROUND/REPORT DUE: 2/6/2010

TURNAROUND REQ'D: 30 Days

RAD SCREENING: Not Required

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:901.1	1	RE12-10-7697	R	1/5/2010	
		1	RE12-10-7698	R	1/5/2010	
		1	RE12-10-7703	R	1/5/2010	
		1	RE12-10-7704	R	1/5/2010	
	HASL-300:AM-241	1	RE12-10-7697	R	1/5/2010	
		1	RE12-10-7698	R	1/5/2010	
		1	RE12-10-7703	R	1/5/2010	
		1	RE12-10-7704	R	1/5/2010	
	HASL-300:ISOPU	1	RE12-10-7697	R	1/5/2010	

Thursday, January 07, 2010

REQUEST NUMBER: 10-1130

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	HASL-300:ISOPU	1	RE12-10-7698	R	1/5/2010	
		1	RE12-10-7703	R	1/5/2010	
		1	RE12-10-7704	R	1/5/2010	
	HASL-300:ISOU	1	RE12-10-7697	R	1/5/2010	
		1	RE12-10-7698	R	1/5/2010	
		1	RE12-10-7703	R	1/5/2010	
		1	RE12-10-7704	R	1/5/2010	
	SW-846:6020	1	RE12-10-7697	R	1/5/2010	
		1	RE12-10-7698	R	1/5/2010	
		1	RE12-10-7703	R	1/5/2010	
		1	RE12-10-7704	R	1/5/2010	
	SW-846:6850	1	RE12-10-7697	R	1/5/2010	
		1	RE12-10-7698	R	1/5/2010	
		1	RE12-10-7703	R	1/5/2010	
		1	RE12-10-7704	R	1/5/2010	
	SW-846:7471A	1	RE12-10-7697	R	1/5/2010	
		1	RE12-10-7698	R	1/5/2010	
		1	RE12-10-7703	R	1/5/2010	
		1	RE12-10-7704	R	1/5/2010	
	SW-846:8082	1	RE12-10-7697	R	1/5/2010	
		1	RE12-10-7698	R	1/5/2010	
	SW-846:8321A_MOD	1	RE12-10-7697	R	1/5/2010	
		1	RE12-10-7698	R	1/5/2010	
		1	RE12-10-7703	R	1/5/2010	
		1	RE12-10-7704	R	1/5/2010	
	SW-846:9012A	1	RE12-10-7697	R	1/5/2010	
		1	RE12-10-7698	R	1/5/2010	
		1	RE12-10-7703	R	1/5/2010	

Thursday, January 07, 2010

REQUEST NUMBER: 10-1130

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:9012A	1	RE12-10-7704	R	1/5/2010	

Final Page of REQUEST NUMBER 10-1130

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client:LANL	**SDG/ARCOC/Work Order:10-1130**
Received By:Patricia Dover-Dent	**Date Received: JANUARY 8, 2009**

Suspected Hazard Information	**Yes**	**No**	*If Counts > x2 area background on samples not marked "radioactive", contact the Radiation Safety Group of further
COC/Samples marked as radioactive?		X	Maximum Counts Observed*:20CPM
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) **1,2,9,13,14**
3	Chain of custody documents included with shipment?	X			
4	Sample containers intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other (describe)
5	Samples requiring chemical preservation at proper pH?		X		Sample ID's, containers affected and observed pH. If Preservative added Lot#
6	VOA vials free of headspace (defined as < 6mm bubble)?		X		Sample ID's and containers affected:
7	Are Encore containers present?			X	(If yes, immediately deliver to Volatiles laboratory)
8	Samples received within holding time?	X			Id's and tests affected:
9	Sample ID's on COC match ID's on bottles?	X			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?		X		Sample ID's affected: **No Time on Chain of Custody**
11	Number of containers received match number indicated on COC?	X			Sample ID's affected:
12	COC form is properly signed in relinquished/received sections?	X			

Comments:FED EX #'S

7209 7849 4203 1C
7209 7849 4188 1C
7209 7849 4166 2C
7209 7849 4155 2C
7209 7849 4199 2C
7209 7849 4177 2C
7209 7849 4144 9C
7209 7849 4133 13C
7209 7849 4122 14C

PM review: Initials _____ Date 1/11/10

ORIGIN ID: SAFA (505) 665-9969
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 07JAN10
ACTWGT: 37.0 LB MAN
CAD: 0014176/CAFE2449

BILL SENDER

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

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

1C

FedEx Express

2 of 2
PS# 263 7209 7849 4203
Mstr# 7209 7849 4199 0201

FRI - 08JAN A1
PRIORITY OVERNIGHT

29407
SC-US
CHS

XX CHSA

ORIGIN ID: SAFA (505) 665-9969
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 07JAN10
ACTWGT: 58.0 LB MAN
CAD: 0014176/CAFE2449

BILL SENDER

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

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

1C

FedEx Express

2 of 2
MPS# 0263 7209 7849 4188
Mstr# 7209 7849 4177 0201

FRI - 08JAN A1
PRIORITY OVERNIGHT

29407
SC-US
CHS

XX CHSA

ORIGIN ID: SAFA (505) 665-9969
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 07JAN10
ACTWGT: 58.0 LB MAN
CAD: 0014176/CAFE2449

BILL SENDER

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

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

2C

FedEx Express

2 of 2
PS# 263 7209 7849 4166
Mstr# 7209 7849 4155 0201

FRI - 08JAN A1
PRIORITY OVERNIGHT

29407
SC-US
CHS

XX CHSA

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

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

2C

FedEx Express

1 of 2
TRK# 0201 7209 7849 4155
MASTER

FRI - 08JAN A1
PRIORITY OVERNIGHT

29407
SC-US
CHS

XX CHSA

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

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 07JAN10
ACTWGT: 56.0 LB MAN
CAD: 0014176/CAFE2449

BILL SENDER

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

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

2c

FedEx Express

1 of 2

TRK# 0201 7209 7849 4199

FRI - 08JAN A1
PRIORITY OVERNIGHT

MM MASTER MM

XX CHSA

29407
SC-US
CHS

Part # 156148-434 NAITV3 09-09

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

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 07JAN10
ACTWGT: 23.0 LB MAN
CAD: 0014176/CAFE2449

BILL SENDER

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407
(843) 556-8171
REF: 6B010AMR2A0515BYDO

9c

FedEx Express

TRK# 0201 7209 7849 4144

FRI - 08JAN A1
PRIORITY OVERNIGHT

XX CHSA

29407
SC-US
CHS

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

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 07JAN10
ACTWGT: 56.0 LB MAN
CAD: 0014176/CAFE2449

BILL SENDER

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

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

2c

FedEx Express

1 of 2

TRK# 0201 7209 7849 4177

FRI - 08JAN A1
PRIORITY OVERNIGHT

MM MASTER MM

XX CHSA

29407
SC-US
CHS

Part # 156148-434 NAITV3 09-09

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

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 08JAN10
ACTWGT: 65.0 LB MAN
CAD: 0014176/CAFE2449

BILL SENDER

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407
(843) 556-8171
REF: 6B010AMR2A0515BYDO

13c

FedEx Express

3 of 3

TRK# 0203 7209 7849 4133

FRI - 08JAN A1
PRIORITY OVERNIGHT

Mstr# 7209 7849 4111 020T

XX CHSA

29407
SC-US
CHS

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

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP
AC DATE: 07JAN10
WGT: 57.0 LB MAN
: 0014176/CAFE2449

ILL SENDER

TO VALERIE DAVIS
GENERAL ENGINEERIN LAB
2040 SAVAGE RD

CHARLESTON SC 29 07
(843) 556-8171
REF: 6B010AMR2A0515

14C

BYDO

FedEx
Express

E

2 of 3
MPS# 7209 7849 4122
0253
Mstr# 72 09 7849 4111 0201

FRI - 08JAN A1
PRIORITY OVERNIGHT

XX CHSA

29407
SC-US
CHS

Part # 156148-434 NRIT

Data Review Qualifier Flag Definition Sheet

Data Review Qualifier Definitions

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

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LC/MS/MS PERCHLORATE ANALYSIS

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Perchlorate by LC/MSMS
Los Alamos National Laboratory (LANL)
SDG 10-1130

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:	940129
Prep Batch Number:	940125

Sample Analysis

Sample ID	Client ID
244125001	RE12-10-7698
244125002	RE12-10-7697
244125003	RE12-10-7704
244125004	RE12-10-7703
1202011801	Interference Check Sample (ICS)
1202011797	Method Blank (MB)
1202011798	Laboratory Control Sample (LCS)
1202011799	244228001(RE12-10-7709) Matrix Spike (MS)
1202011800	244228001(RE12-10-7709) Matrix Spike Duplicate (MSD)

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

Preparation/Analytical Method Verification

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

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Calibration Information

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

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

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

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

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

Quality Control (QC) Information

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

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

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

QC Sample Designation
Client sample 244228001 (RE12-10-7709) from SDG 10-1161-2 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.

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

Technical Information

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

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

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

Sample Re-extraction/Re-analysis
The SDG was re-analyzed due to a CVS failing acceptance criteria. The re-analysis passed acceptance criteria and is reported.

Miscellaneous Information

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

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

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

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

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

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

System Configuration

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

Chromatographic Columns

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

Dionex: IonPac AG-16 2 x 50 mm.

Certification Statement

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

Review Validation:

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

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

Reviewer: Heather M Maer **Date:** 01/19/10

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SAMPLE DATA SUMMARY

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 940125

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
RE12-10-7698

Date Received: 08-JAN-10

GEL Job No (SDG): 10-1130

GEL Sample ID: 244125001

Date Filtered: 12-JAN-10

Injection Volume (uL): 20

%Solids: 90.1

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.555	2.22	0.555	ug/kg	U	1	14-JAN-10 16:48	per0114029a
	Perchlorate Isotope Ratio						1	14-JAN-10 16:48	per0114029a
14797-73-0	Perchlorate-101	.555	2.22	0.555	ug/kg	U	1	14-JAN-10 16:48	per0114029a
	Perchlorate-O(18)			5.56	ug/kg		1	14-JAN-10 16:48	per0114029a

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

*Concentration =

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

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 940125

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
RE12-10-7697

Date Received: 08-JAN-10

GEL Job No (SDG): 10-1130

GEL Sample ID: 244125002

Date Filtered: 12-JAN-10

Injection Volume (uL): 20

%Solids: 85

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.586	2.34	0.586	ug/kg	U	1	14-JAN-10 16:58	per0114030a
	Perchlorate Isotope Ratio						1	14-JAN-10 16:58	per0114030a
14797-73-0	Perchlorate-101	.586	2.34	0.586	ug/kg	U	1	14-JAN-10 16:58	per0114030a
	Perchlorate-O(18)			5.75	ug/kg		1	14-JAN-10 16:58	per0114030a

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

*Concentration =

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

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 940125

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
RE12-10-7704

Date Received: 08-JAN-10

GEL Job No (SDG): 10-1130

GEL Sample ID: 244125003

Date Filtered: 12-JAN-10

Injection Volume (uL): 20

%Solids: 90.7

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.551	2.21	0.551	ug/kg	U	1	14-JAN-10 17:39	per0114034a
	Perchlorate Isotope Ratio						1	14-JAN-10 17:39	per0114034a
14797-73-0	Perchlorate-101	.551	2.21	0.551	ug/kg	U	1	14-JAN-10 17:39	per0114034a
	Perchlorate-O(18)			5.47	ug/kg		1	14-JAN-10 17:39	per0114034a

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

*Concentration =

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

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 940125

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
RE12-10-7703

Date Received: 08-JAN-10

GEL Job No (SDG): 10-1130

GEL Sample ID: 244125004

Date Filtered: 12-JAN-10

Injection Volume (uL): 20

%Solids: 80

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.623	2.49	0.623	ug/kg	U	1	14-JAN-10 17:49	per0114035a
	Perchlorate Isotope Ratio						1	14-JAN-10 17:49	per0114035a
14797-73-0	Perchlorate-101	.623	2.49	0.623	ug/kg	U	1	14-JAN-10 17:49	per0114035a
	Perchlorate-O(18)			6.45	ug/kg		1	14-JAN-10 17:49	per0114035a

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

*Concentration =

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

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QUALITY CONTROL SUMMARY

Perchlorate Laboratory Control Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 10–1130

Extract Batch Code: 940125

Date Filtered: 12–JAN–10

Matrix: SOIL

Sample ID: 1202011798

Analyte^	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	2.00	2.01	ug/kg	100		70 – 130
Perchlorate Isotope Ratio		3.01				–
Perchlorate–101	2.00	2.06	ug/kg	103		70 – 130
Perchlorate–O(18)		5.04	ug/kg			–

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

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Perchlorate Interference Check Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 10–1130

Extract Batch Code: 940125

Date Filtered: 12–JAN–10

Matrix: SOIL

Sample ID: 1202011801

Analyte^	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	2.00	2.09	ug/kg	104		70 – 130
Perchlorate Isotope Ratio		3.1				
Perchlorate–101	2.00	2.08	ug/kg	104		70 – 130
Perchlorate–O(18)		5.13	ug/kg			

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

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Dataset: C:\MassLynx\Perchlorate.PRO\per011410a.qld

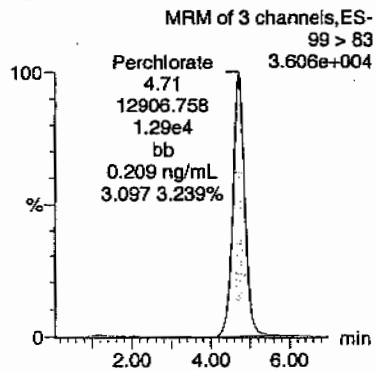
Last Altered: Friday, January 15, 2010 7:53:06 AM Eastern Standard Time
Printed: Friday, January 15, 2010 8:09:48 AM Eastern Standard Time

Name: per0114028a
Date: 14-Jan-2010
Time: 16:38:36
ID: 1202011801
Vial: 1:4,C

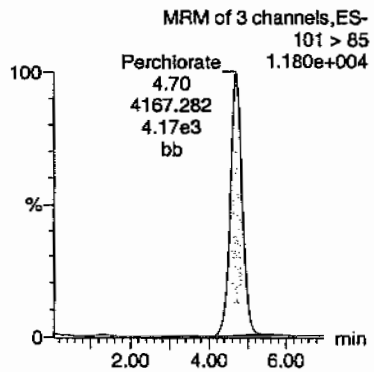
|LANL|940129|SOLID|ICS|1|RA

WD
01-15-10

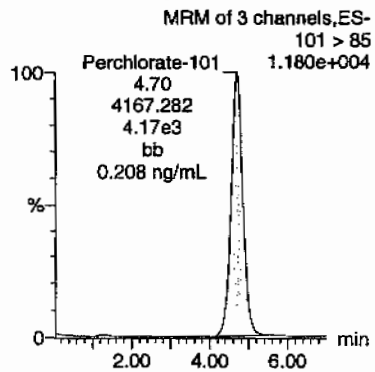
Perchlorate



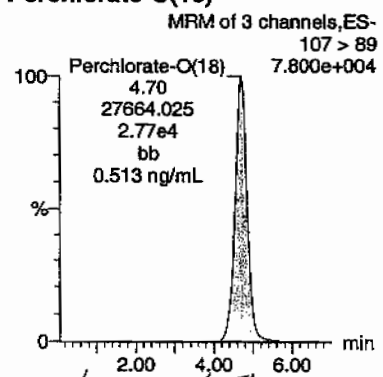
Perchlorate



Perchlorate-101



Perchlorate-O(18)



Hmm 01/15/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202011801	Perchlorate	99 > 83	4.71	12906.758	12906.758	bb			0.2089	104.47	4.47	1389.3...	3.10
1202011801	Perchlorate-101	101 > 85	4.70	4167.282	4167.282	bb			0.2080	104.00	4.00	1115.1...	
1202011801	Perchlorate-O(18)	107 > 89	4.70	27664.025	27664.025	bb			0.5128	102.57	2.57	4164.5...	

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Perchlorate Spike/Spike Duplicate Summary

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No (SDG): 10–1130

Extract Batch Code: 940125

Date Extracted: 12–JAN–10

GEL MS/PS ID: 1202011799

Client ID: RE12–10–7709

GEL MSD/PSD ID: 1202011800

QC Type: MS

Compound^	Spike Added	Sample Conc	Units	MS Conc	MS Rec #	MSD Conc	MSD Rec #	RPD #	RPD Limit	Recovery Limit
Perchlorate	2.37	0.262	ug/kg	2.64	100	2.57	97.3	2.52	30	75 – 125
Perchlorate Isotope Ratio	0	0.00		3.23		3.23		0		–
Perchlorate–101	2.37	0.264	ug/kg	2.52	94.9	2.46	92.3	2.46	30	75 – 125
Perchlorate–O(18)	0	5.62	ug/kg	5.88		5.78		1.81		–

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

Comments:

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Perchlorate Initial Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10–1130

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	14–JAN–10	per0114001a	IPB001
Perchlorate–101	0.00	0	NA	14–JAN–10	per0114001a	IPB001
Perchlorate	0.00	0	NA	14–JAN–10	per0114002a	IPB001
Perchlorate–101	0.00	0	NA	14–JAN–10	per0114002a	IPB001

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

Dataset: C:\MassLynx\Perchlorate.PRO\per011410a.qld

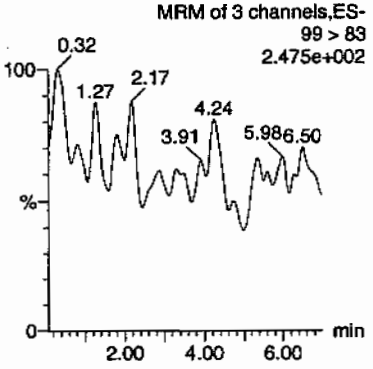
Last Altered: Friday, January 15, 2010 7:53:06 AM Eastern Standard Time
Printed: Friday, January 15, 2010 8:09:48 AM Eastern Standard Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per011410a.mdb 15 Jan 2010 07:52:49
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per011410a.cdb 15 Jan 2010 07:53:05

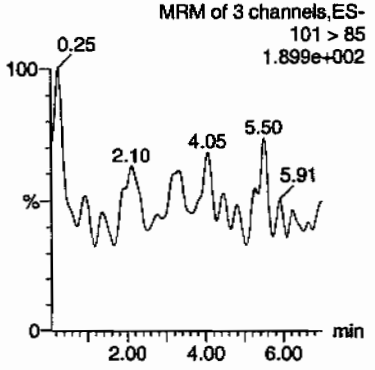
Name: per0114001a
Date: 14-Jan-2010
Time: 12:07:30
ID: IPB001
Vial: 1:1,A

CWW
01-15-10

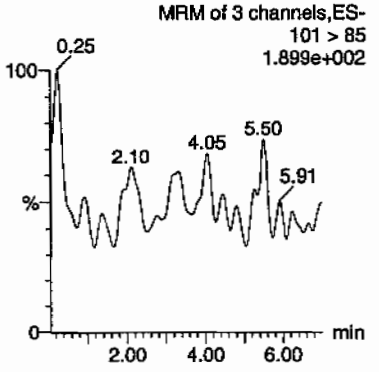
Perchlorate



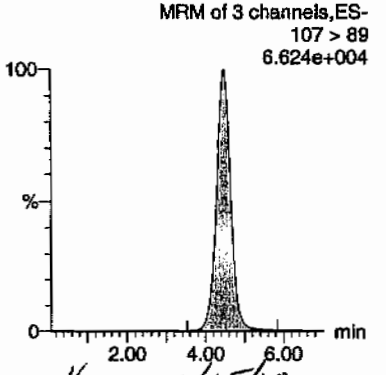
Perchlorate



Perchlorate-101



Perchlorate-O(18)



Hmc 01/15/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB001	Perchlorate	99 > 83											0.00
IPB001	Perchlorate-101	101 > 85											
IPB001	Perchlorate-O(18)	107 > 89	4.46	28151.078	28151.078	bb			0.5219	104.37	4.37	5021.0...	

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

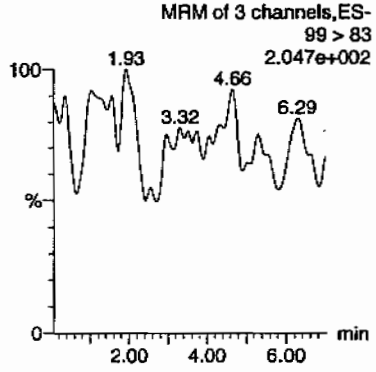
Dataset: C:\MassLynx\Perchlorate.PRO\per011410a.qld

Last Altered: Friday, January 15, 2010 7:53:06 AM Eastern Standard Time
Printed: Friday, January 15, 2010 8:09:48 AM Eastern Standard Time

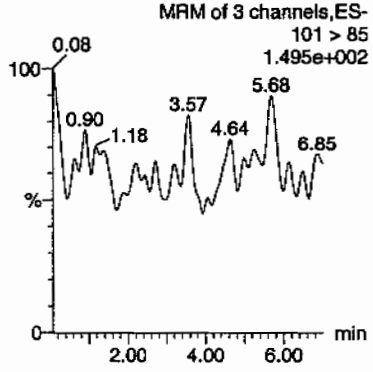
Name: per0114002a
Date: 14-Jan-2010
Time: 12:17:32
ID: IPB001
Vial: 1:1,A

CWW
01-15-10

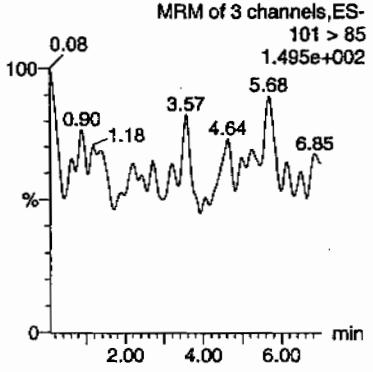
Perchlorate



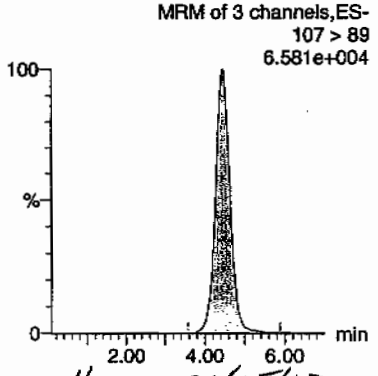
Perchlorate



Perchlorate-101



Perchlorate-O(18)



HNM 01/15/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB001	Perchlorate	99 > 83											0.00
IPB001	Perchlorate-101	101 > 85											
IPB001	Perchlorate-O(18)	107 > 89	4.45	27733.281	27733.281	bb			0.5141	102.82	2.82	1554.1...	

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

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Perchlorate Continuing Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10–1130

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	14–JAN–10	per0114008a	IPB002
Perchlorate–101	0.00	0	NA	14–JAN–10	per0114008a	IPB002
Perchlorate	0.00	0	NA	14–JAN–10	per0114010a	IPB003
Perchlorate–101	0.00	0	NA	14–JAN–10	per0114010a	IPB003
Perchlorate	0.00	0	NA	14–JAN–10	per0114019a	IPB004
Perchlorate–101	0.00	0	NA	14–JAN–10	per0114019a	IPB004
Perchlorate	0.00	0	NA	14–JAN–10	per0114025a	IPB005
Perchlorate–101	0.00	0	NA	14–JAN–10	per0114025a	IPB005
Perchlorate	0.00	0	NA	14–JAN–10	per0114032a	IPB006
Perchlorate–101	0.00	0	NA	14–JAN–10	per0114032a	IPB006
Perchlorate	0.00	0	NA	14–JAN–10	per0114044a	IPB007
Perchlorate–101	0.00	0	NA	14–JAN–10	per0114044a	IPB007

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

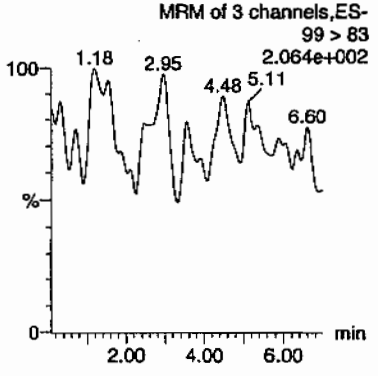
Dataset: C:\MassLynx\Perchlorate.PRO\per011410a.qld

Last Altered: Friday, January 15, 2010 7:53:06 AM Eastern Standard Time
Printed: Friday, January 15, 2010 8:09:48 AM Eastern Standard Time

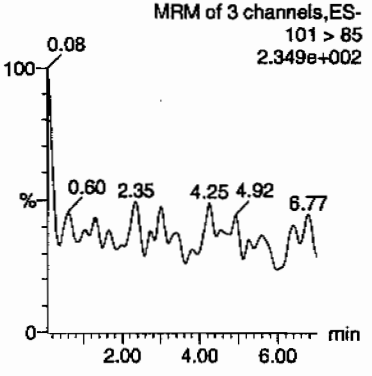
Name: per0114008a
Date: 14-Jan-2010
Time: 13:17:39
ID: IPB002
Vial: 1:1,A

CW
01-15-10

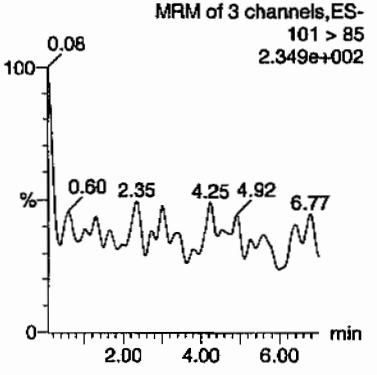
Perchlorate



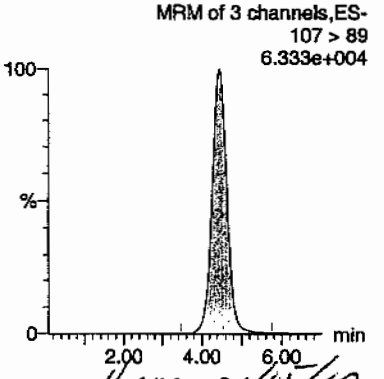
Perchlorate



Perchlorate-101



Perchlorate-O(18)



HMM 01/15/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB002	Perchlorate	99 > 83											0.00
IPB002	Perchlorate-101	101 > 85											
IPB002	Perchlorate-O(18)	107 > 89	4.44	26947.334	26947.334	bb			0.4995	99.91	-0.09	5879.1...	

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

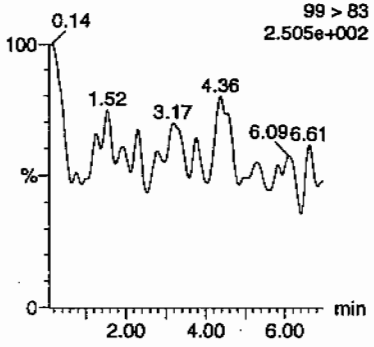
Dataset: C:\MassLynx\Perchlorate.PRO\per011410a.qld

Last Altered: Friday, January 15, 2010 7:53:06 AM Eastern Standard Time
Printed: Friday, January 15, 2010 8:09:48 AM Eastern Standard Time

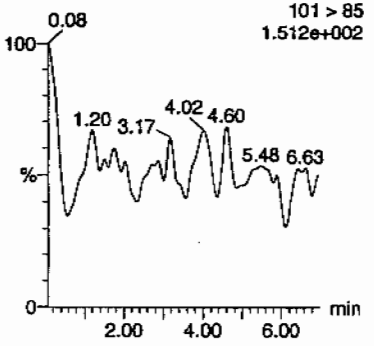
Name: per0114010a
Date: 14-Jan-2010
Time: 13:37:44
ID: IPB003
Vial: 1:1,A

CWW
01-15-10

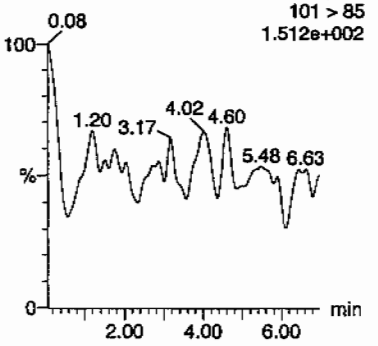
Perchlorate



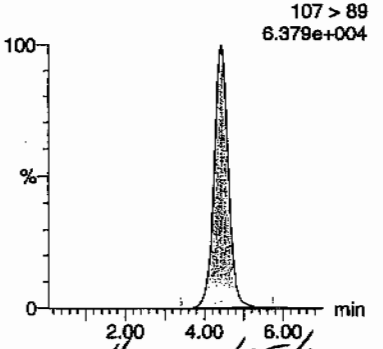
Perchlorate



Perchlorate-101



Perchlorate-O(18)



HMM 01/15/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB003	Perchlorate	99 > 83											0.00
IPB003	Perchlorate-101	101 > 85											
IPB003	Perchlorate-O(18)	107 > 89	4.43	26662.340	26662.340	bb			0.4943	98.85	-1.15	8197.9...	

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

Dataset: C:\MassLynx\Perchlorate.PRO\per011410a.qld

Last Altered: Friday, January 15, 2010 7:53:06 AM Eastern Standard Time
Printed: Friday, January 15, 2010 8:09:48 AM Eastern Standard Time

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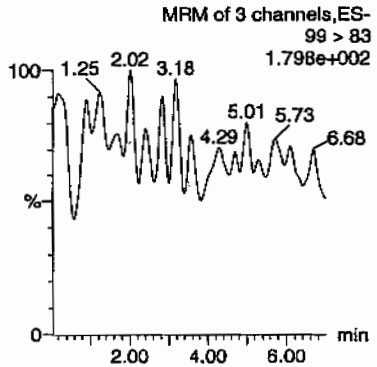
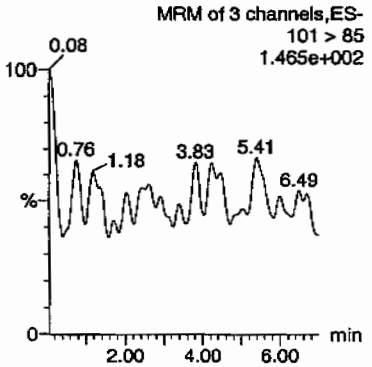
Name: per0114019a
Date: 14-Jan-2010
Time: 15:08:15
ID: IPB004
Vial: 1:1,A

CWO
01-13-10

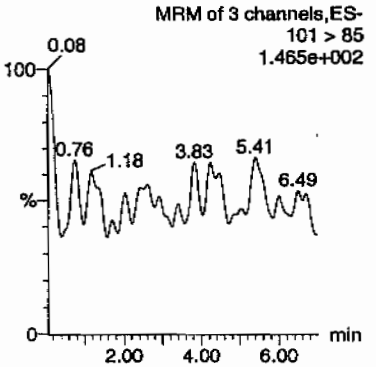
Perchlorate



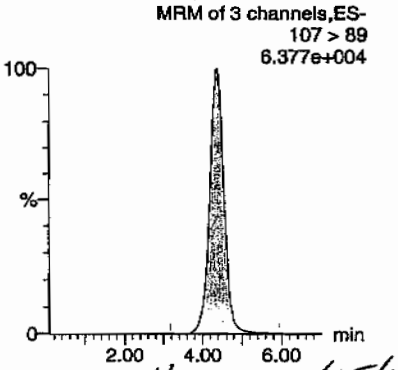
Perchlorate



Perchlorate-101



Perchlorate-O(18)



HMM 01/15/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB004	Perchlorate	99 > 83											0.00
IPB004	Perchlorate-101	101 > 85											
IPB004	Perchlorate-O(18)	107 > 89	4.36	26505.346	26505.346	bb			0.4914	98.27	-1.73	772.109	

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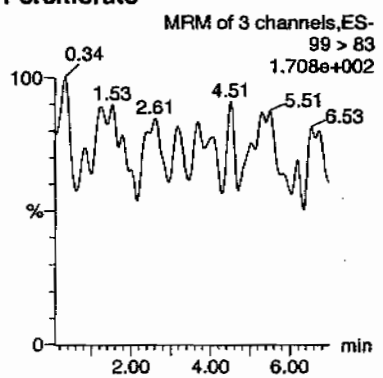
Dataset: C:\MassLynx\Perchlorate.PRO\per011410a.qld

Last Altered: Friday, January 15, 2010 7:53:06 AM Eastern Standard Time
Printed: Friday, January 15, 2010 8:09:48 AM Eastern Standard Time

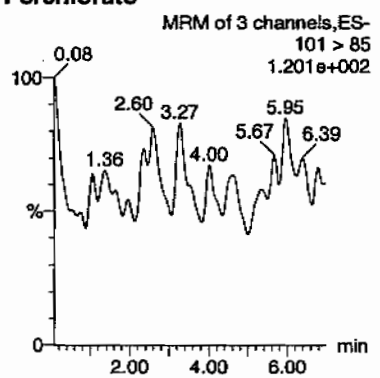
Name: per0114025a
Date: 14-Jan-2010
Time: 16:08:28
ID: IPB005
Vial: 1:1,A

CWW
01-15-10

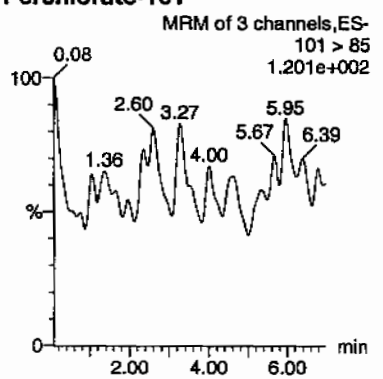
Perchlorate



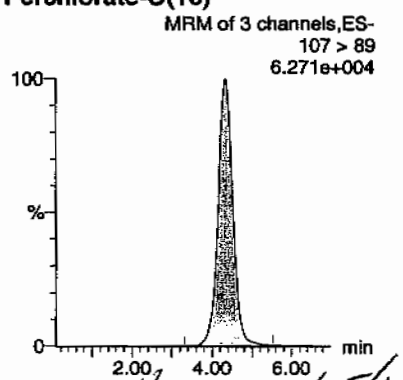
Perchlorate



Perchlorate-101



Perchlorate-O(18)



Hmm 01/15/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB005	Perchlorate	99 > 83											0.00
IPB005	Perchlorate-101	101 > 85											
IPB005	Perchlorate-O(18)	107 > 89	4.34	26369.939	26369.939	bb			0.4888	97.77	-2.23	1558.9...	

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

Dataset: C:\MassLynx\Perchlorate.PRO\per011410a.qld

Last Altered: Friday, January 15, 2010 7:53:06 AM Eastern Standard Time
Printed: Friday, January 15, 2010 8:09:48 AM Eastern Standard Time

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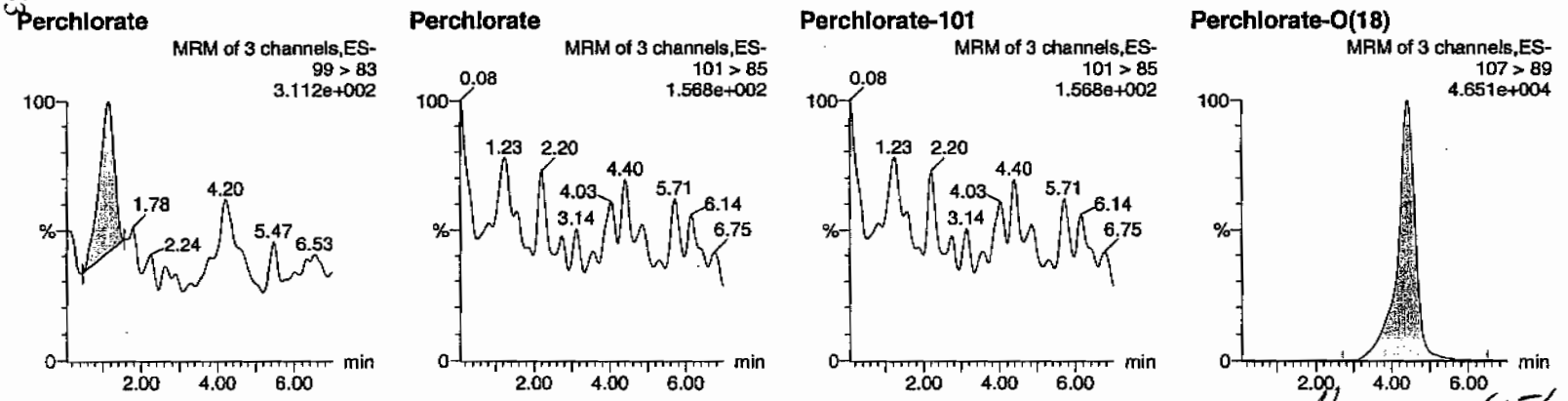
Name: per0114032a
Date: 14-Jan-2010
Time: 17:18:55
ID: IPB006
Vial: 1:1,A

CW 01-15-10



Hmm 01/15/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB006	Perchlorate	99 > 83	1.15	83.529	83.529	bb			0.0014			6.486	0.00
IPB006	Perchlorate-101	101 > 85											
IPB006	Perchlorate-O(18)	107 > 89	4.43	25032.135	25032.135	bb			0.4640	92.81	-7.19	3012.7...	

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

Dataset: C:\MassLynx\Perchlorate.PRO\per011410a.qld

Last Altered: Friday, January 15, 2010 7:53:06 AM Eastern Standard Time
Printed: Friday, January 15, 2010 8:09:48 AM Eastern Standard Time

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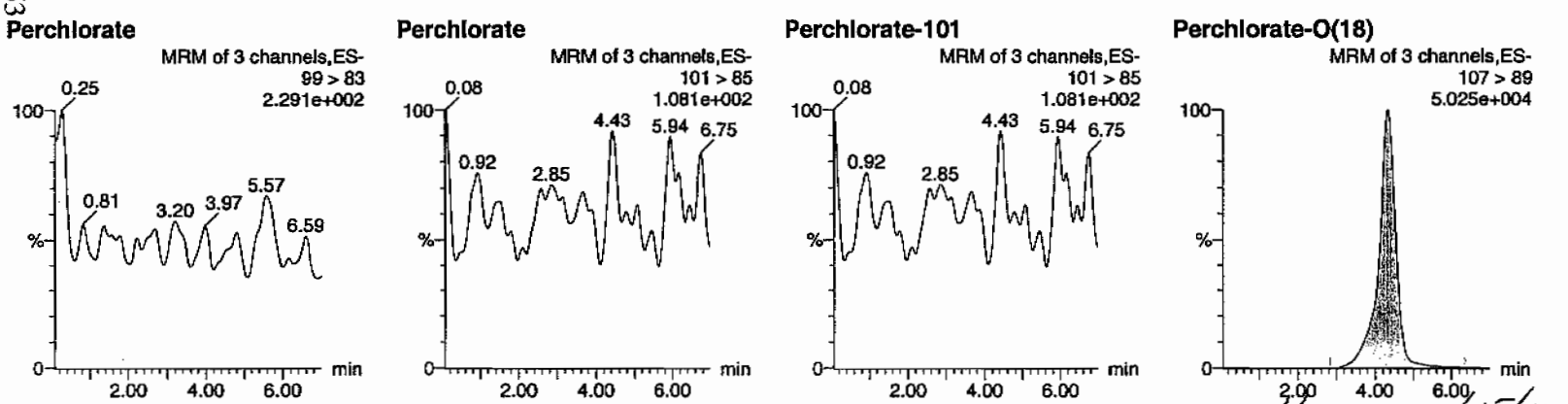
Name: per0114044a
Date: 14-Jan-2010
Time: 19:19:39
ID: IPB007
Vial: 1:1,A

BJ 01-15-10



Hmm 01/15/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB007	Perchlorate	99 > 83											0.00
IPB007	Perchlorate-101	101 > 85											
IPB007	Perchlorate-O(18)	107 > 89	4.35	25878.777	25878.777	bb			0.4797	95.95	-4.05	3560.3...	

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Nairb.ref

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

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

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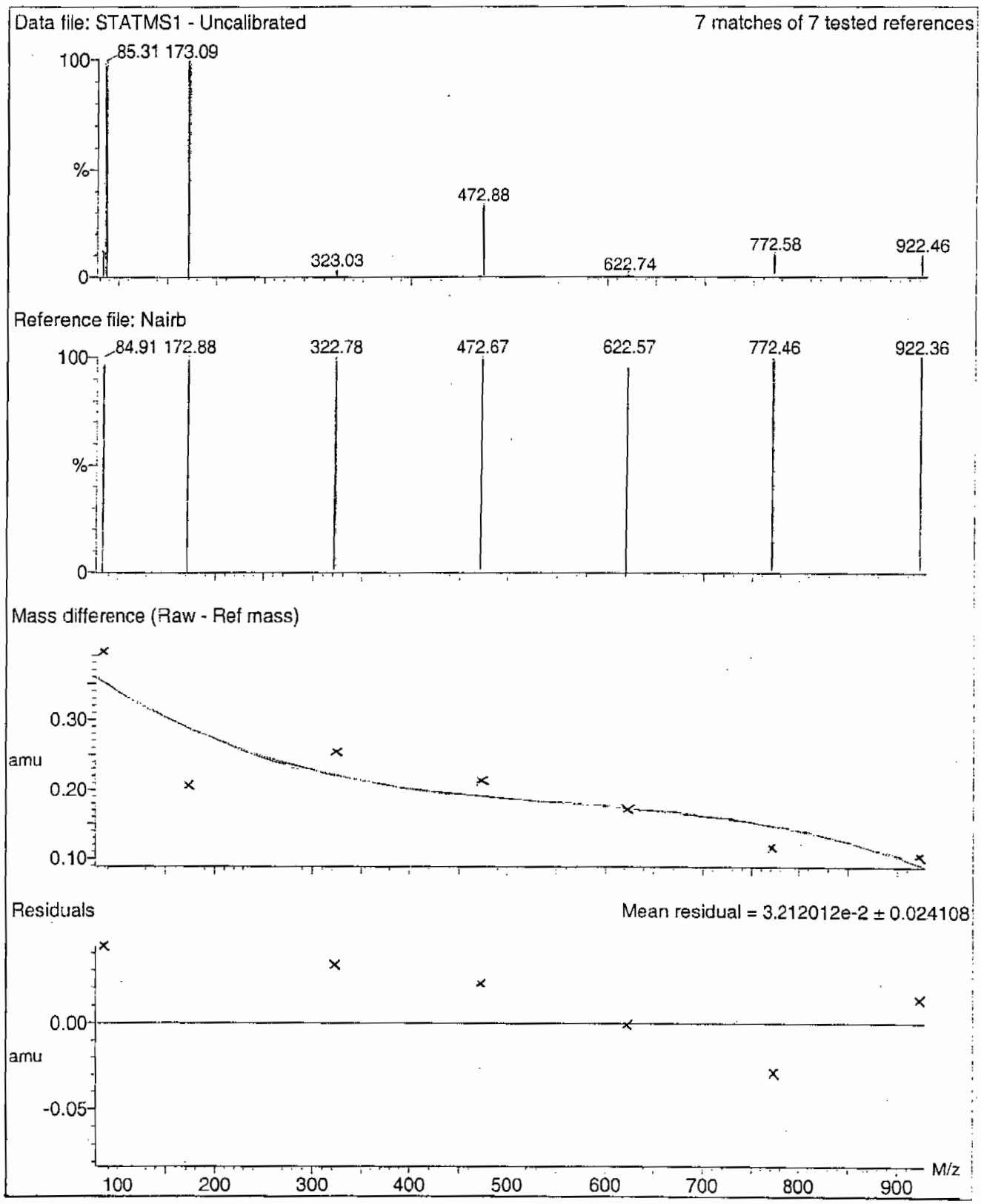
QUATRO ULTIMA: nairb_01_08_08.cal

Calibration Report - MS1 Static

Printed: Tue Jan 08 12:19:12 2008

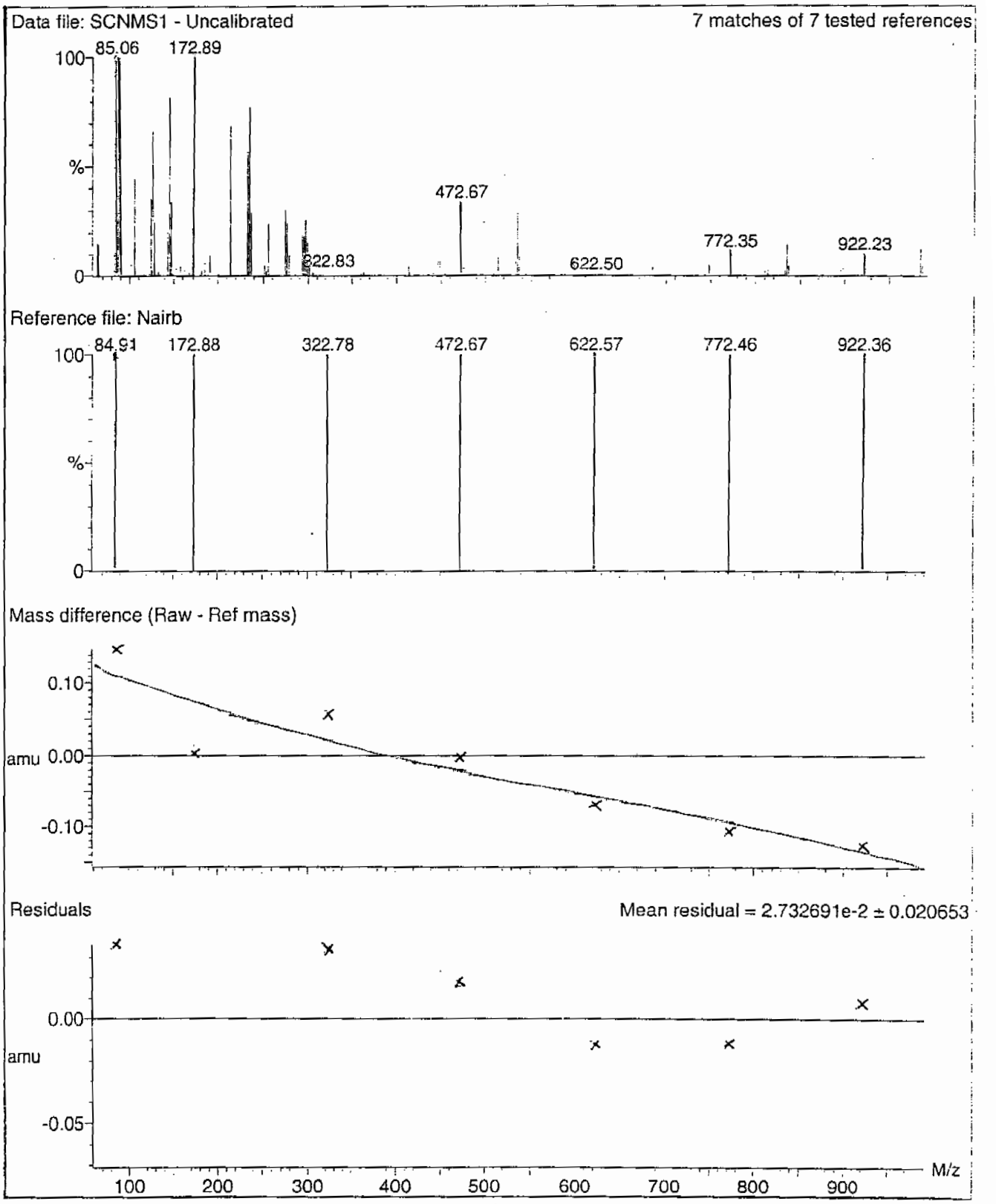
PARTS HIGHLIGHTED BY CWW 01-09-08



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

Calibration Report - MS1 Scanning

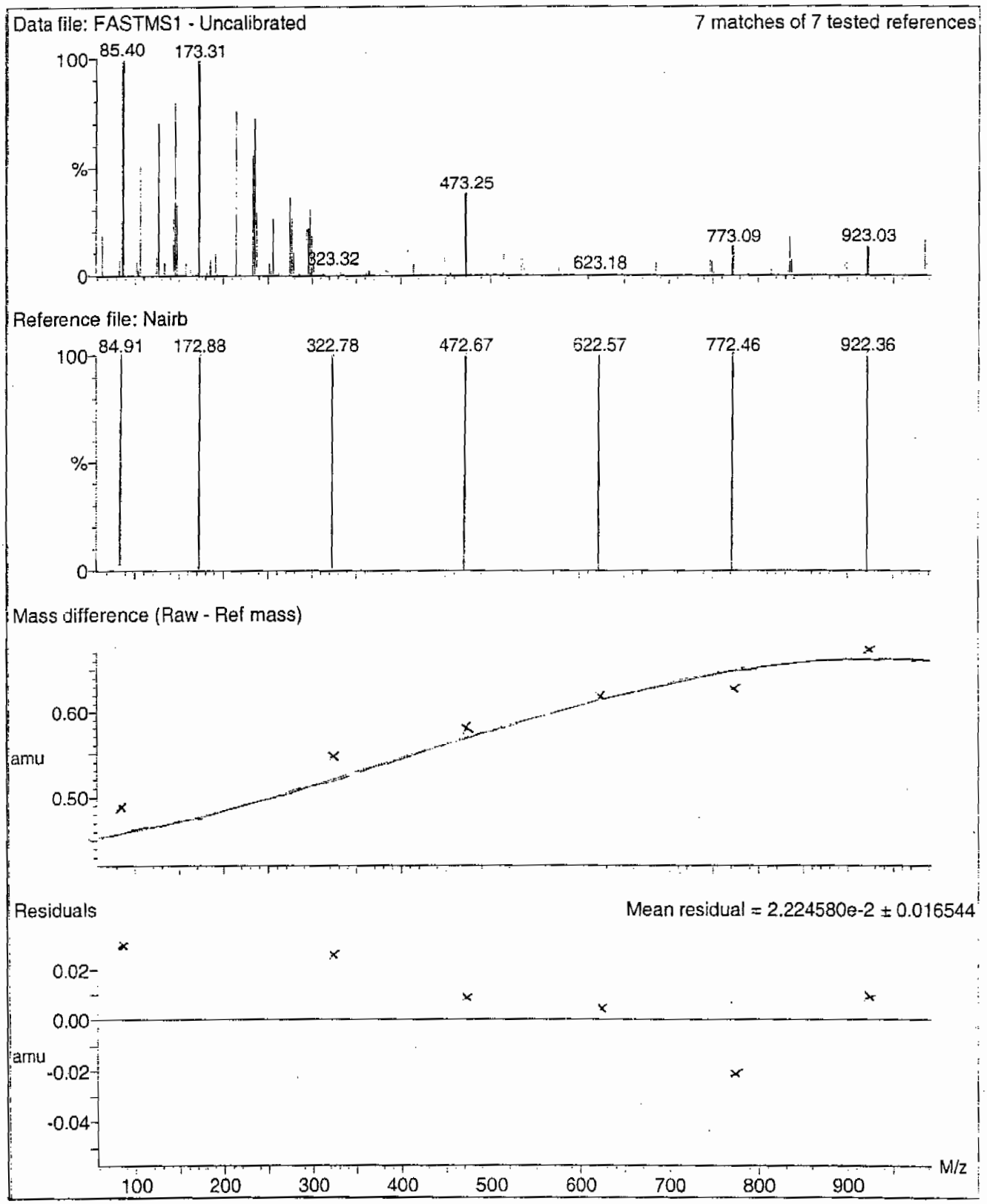
Printed: Tue Jan 08 12:20:09 2008



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

Calibration Report - MS1 Scan Speed Compensation

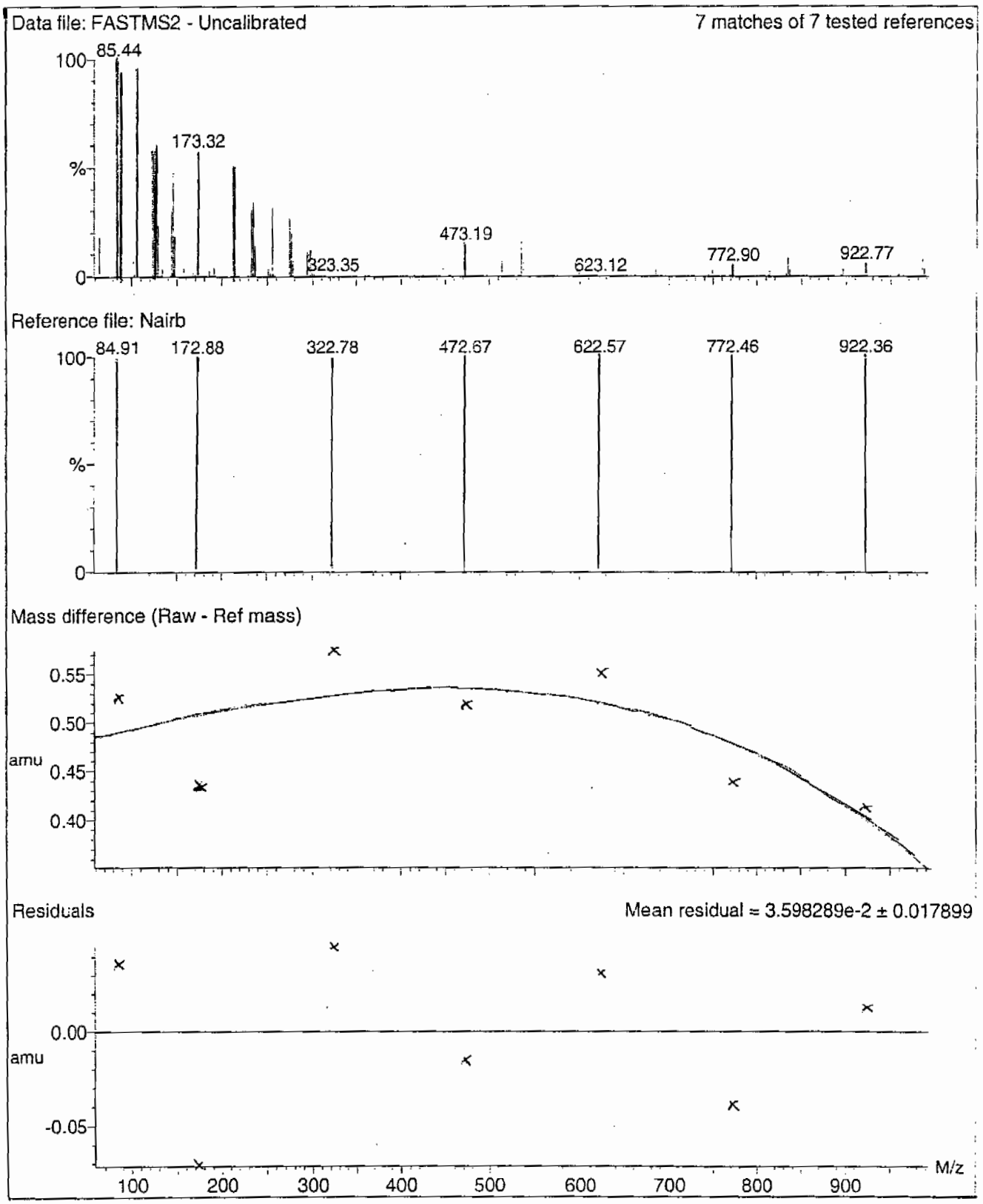
Printed: Tue Jan 08 12:21:04 2008



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

Calibration Report - MS2 Scan Speed Compensation

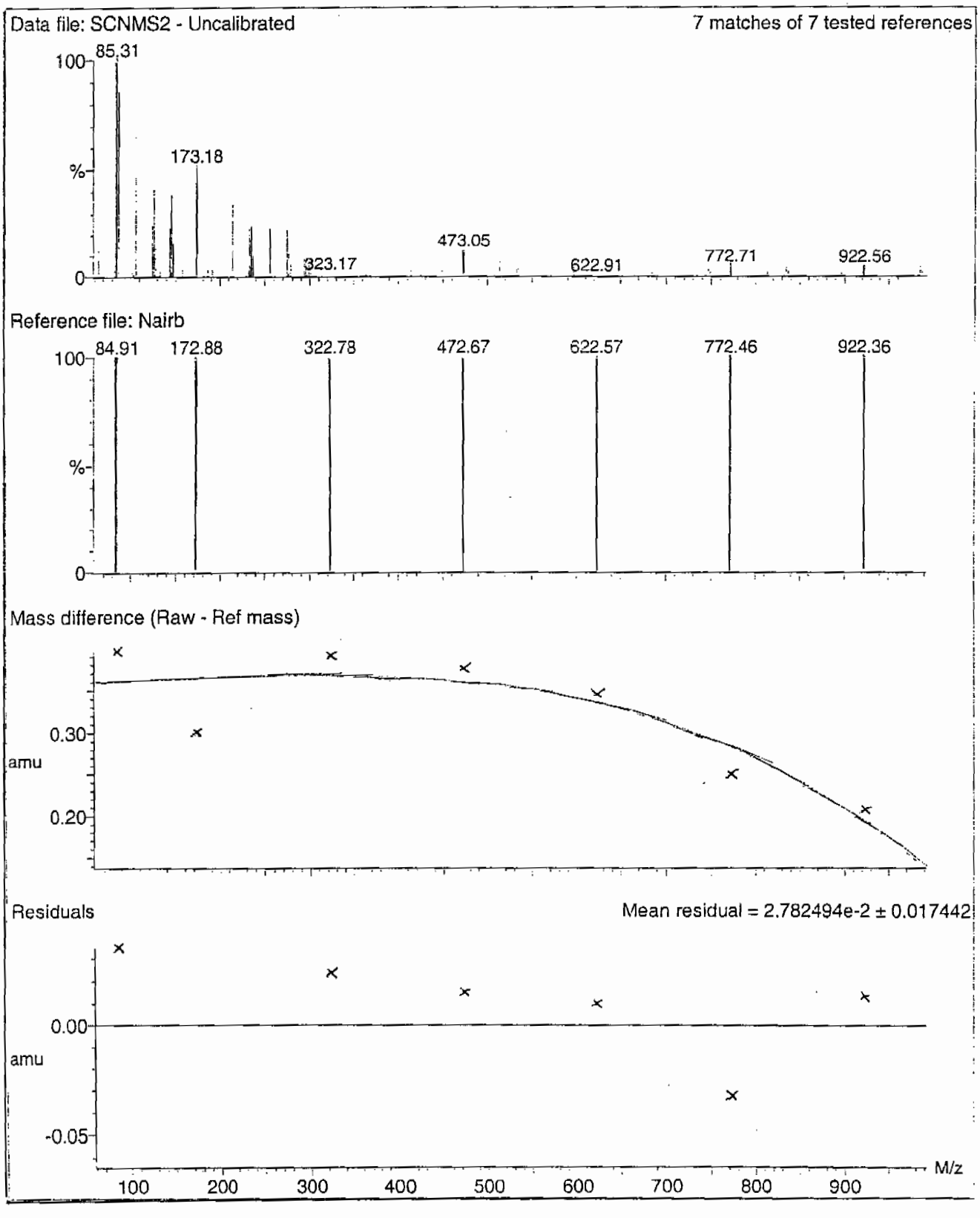
Printed: Tue Jan 08 12:23:51 2008



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

Calibration Report - MS2 Scanning

Printed: Tue Jan 08 12:22:56 2008



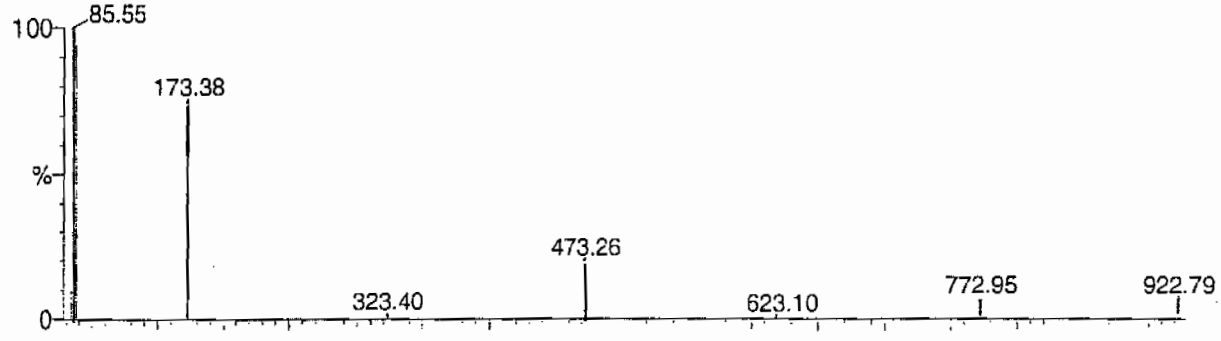
PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Calibration Report - MS2 Static

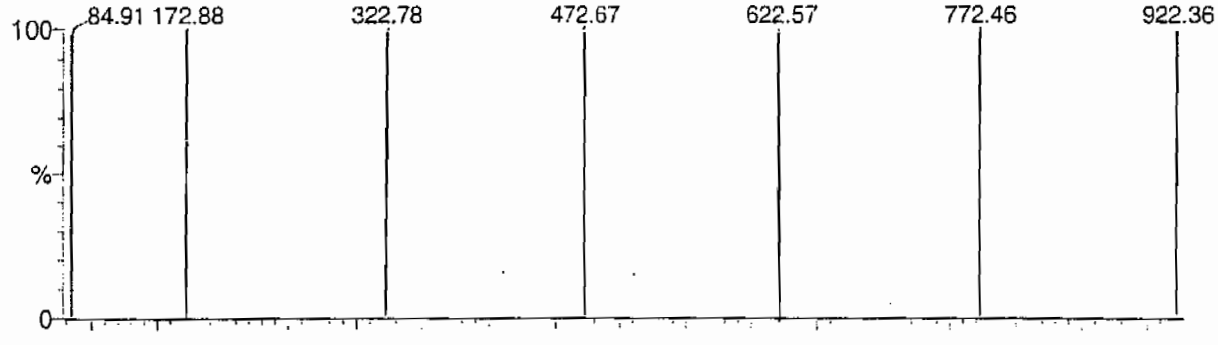
Printed: Tue Jan 08 12:21:59 2008

Data file: STATMS2 - Uncalibrated

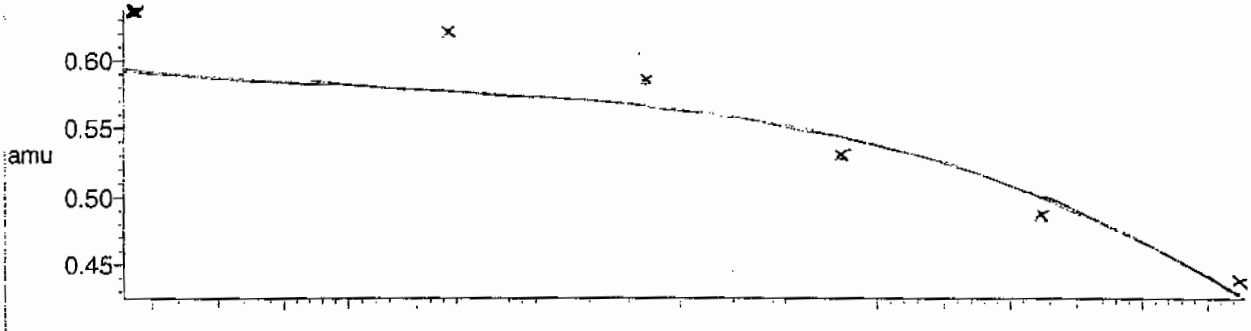
7 matches of 7 tested references



Reference file: Nairb

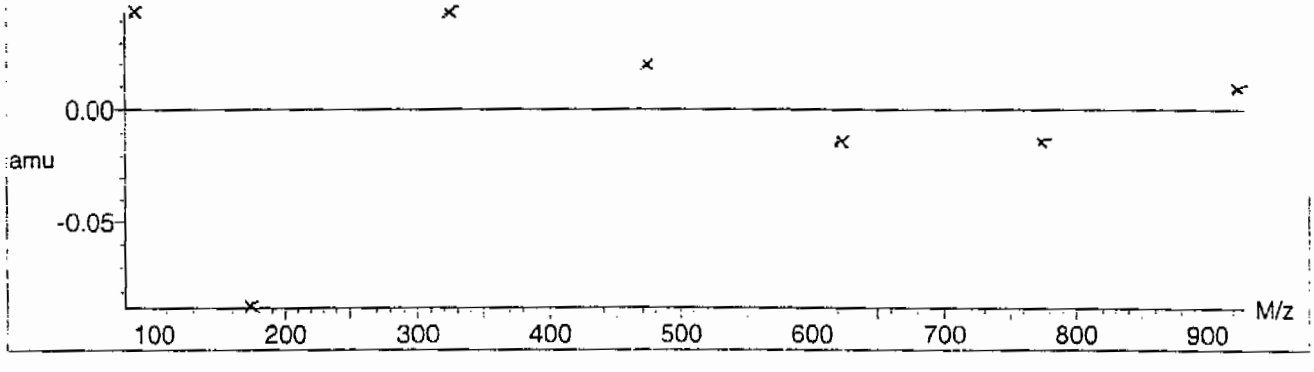


Mass difference (Raw - Ref mass)



Residuals

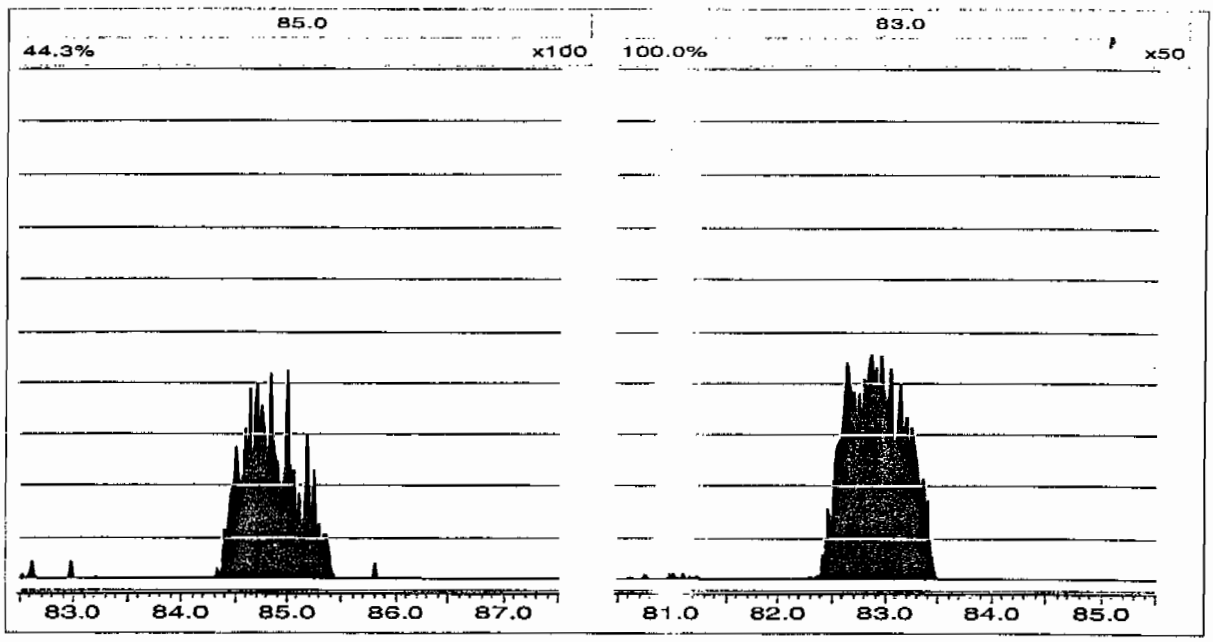
Mean residual = 3.295980e-2 ± 0.025603



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

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

Printed: Thursday, January 14, 2010 10:32:26 Eastern Standard Time



Perchlorate RT And Area Summary

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 10–1130

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	**per0114006a**	**14–JAN–10**	**27456.1**				
Lower Area Limit			**13728.05**				
Upper Area Limit			**54912.2**				
1202011797	per0114026a	14–JAN–10 16:18	26278.3	4.32			
1202011798	per0114027a	14–JAN–10 16:28	27192.7	4.3	4.3276	1.006	
1202011801	per0114028a	14–JAN–10 16:38	27664	4.7	4.71258	1.003	
244125001	per0114029a	14–JAN–10 16:48	27007.2	4.29	4.31513	1.006	
244125002	per0114030a	14–JAN–10 16:58	26461.1	4.28	4.29032	1.002	
244125003	per0114034a	14–JAN–10 17:39	26733	4.41	4.43942	1.007	
244125004	per0114035a	14–JAN–10 17:49	27898.6	4.4	4.41445	1.003	

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SAMPLE DATA

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 940125

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
RE12-10-7698

Date Received: 08-JAN-10

GEL Job No (SDG): 10-1130

GEL Sample ID: 244125001

Date Filtered: 12-JAN-10

Injection Volume (uL): 20

%Solids: 90.1

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.555	2.22	0.555	ug/kg	U	1	14-JAN-10 16:48	per0114029a
	Perchlorate Isotope Ratio						1	14-JAN-10 16:48	per0114029a
14797-73-0	Perchlorate-101	.555	2.22	0.555	ug/kg	U	1	14-JAN-10 16:48	per0114029a
	Perchlorate-O(18)			5.56	ug/kg		1	14-JAN-10 16:48	per0114029a

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

*Concentration =

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

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

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

Dataset: C:\MassLynx\Perchlorate.PRO\per011410a.qld

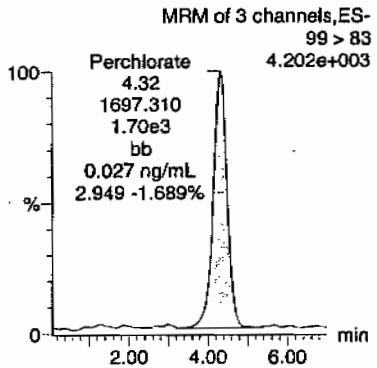
Last Altered: Friday, January 15, 2010 7:53:06 AM Eastern Standard Time
Printed: Friday, January 15, 2010 8:09:48 AM Eastern Standard Time

Name: per0114029a
Date: 14-Jan-2010
Time: 16:48:39
ID: 244125001
Vial: 1:4,D

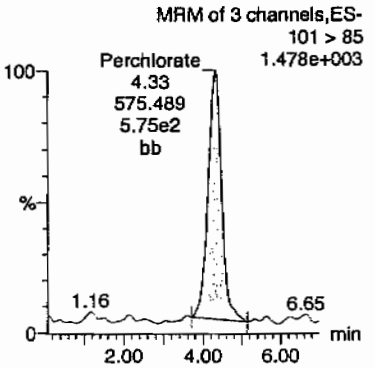
LANL | 940129 | SOL2D | 1 | RA

01-15-10

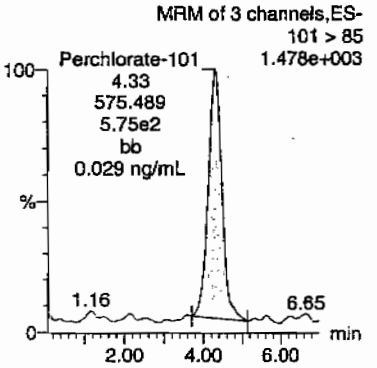
Perchlorate



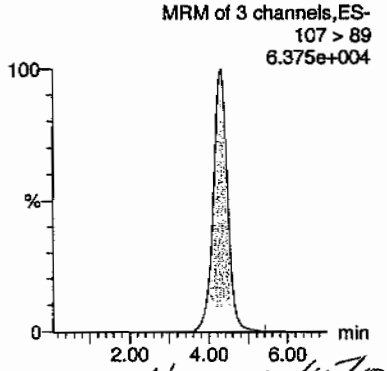
Perchlorate



Perchlorate-101



Perchlorate-O(18)



Hmm 01/15/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
244125001	Perchlorate	99 > 83	4.32	1697.310	1697.310	bb			0.0275			247.975	2.95
244125001	Perchlorate-101	101 > 85	4.33	575.489	575.489	bb			0.0287			72.116	
244125001	Perchlorate-O(18)	107 > 89	4.29	27007.199	27007.199	bb			0.5007	100.13	0.13	4040.7...	

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 940125

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
RE12-10-7697

Date Received: 08-JAN-10

GEL Job No (SDG): 10-1130

GEL Sample ID: 244125002

Date Filtered: 12-JAN-10

Injection Volume (uL): 20

%Solids: 85

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.586	2.34	0.586	ug/kg	U	1	14-JAN-10 16:58	per0114030a
	Perchlorate Isotope Ratio						1	14-JAN-10 16:58	per0114030a
14797-73-0	Perchlorate-101	.586	2.34	0.586	ug/kg	U	1	14-JAN-10 16:58	per0114030a
	Perchlorate-O(18)			5.75	ug/kg		1	14-JAN-10 16:58	per0114030a

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

*Concentration =

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

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

Dataset: C:\MassLynx\Perchlorate.PRO\per011410a.qld

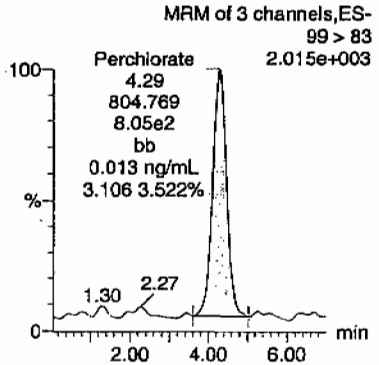
Last Altered: Friday, January 15, 2010 7:53:06 AM Eastern Standard Time
Printed: Friday, January 15, 2010 8:09:48 AM Eastern Standard Time

Name: per0114030a
Date: 14-Jan-2010
Time: 16:58:41
ID: 244125002
Vial: 1:4,E

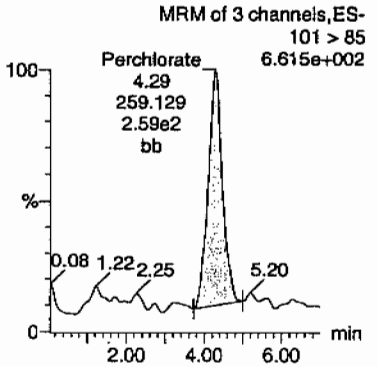
| LANL | 940129 | 50120 | 1 | RA

CWD
01-15-10

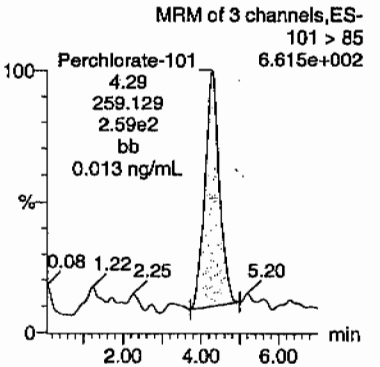
Perchlorate



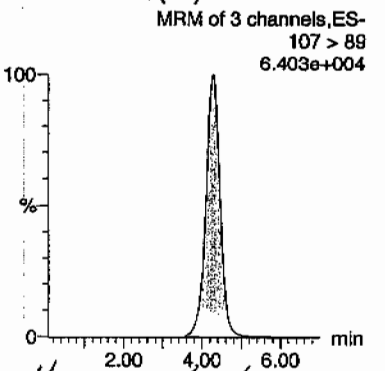
Perchlorate



Perchlorate-101



Perchlorate-O(18)



Hmm 01/15/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
244125002	Perchlorate	99 > 83	4.29	804.769	804.769	bb			0.0130			91.271	3.11
244125002	Perchlorate-101	101 > 85	4.29	259.129	259.129	bb			0.0129			14.498	
244125002	Perchlorate-O(18)	107 > 89	4.28	26461.115	26461.115	bb			0.4905	98.11	-1.89	5703.2...	

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

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 940125

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
RE12-10-7704

Date Received: 08-JAN-10

GEL Job No (SDG): 10-1130

GEL Sample ID: 244125003

Date Filtered: 12-JAN-10

Injection Volume (uL): 20

%Solids: 90.7

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.551	2.21	0.551	ug/kg	U	1	14-JAN-10 17:39	per0114034a
	Perchlorate Isotope Ratio						1	14-JAN-10 17:39	per0114034a
14797-73-0	Perchlorate-101	.551	2.21	0.551	ug/kg	U	1	14-JAN-10 17:39	per0114034a
	Perchlorate-O(18)			5.47	ug/kg		1	14-JAN-10 17:39	per0114034a

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

*Concentration =

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

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

Dataset: C:\MassLynx\Perchlorate.PRO\per011410a.qld

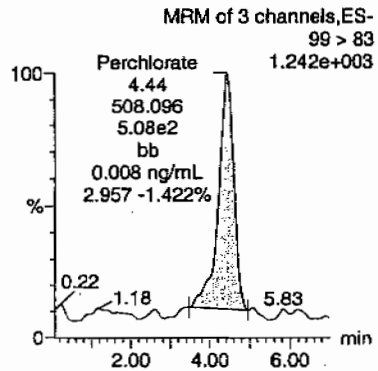
Last Altered: Friday, January 15, 2010 7:53:06 AM Eastern Standard Time
Printed: Friday, January 15, 2010 8:09:48 AM Eastern Standard Time

Name: per0114034a
Date: 14-Jan-2010
Time: 17:39:10
ID: 244125003
Vial: 1:4,F

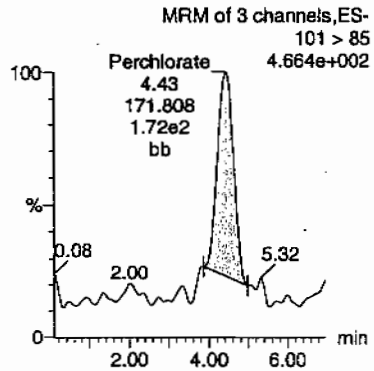
|LANL|940129|50L20|1|RA

01-15-10

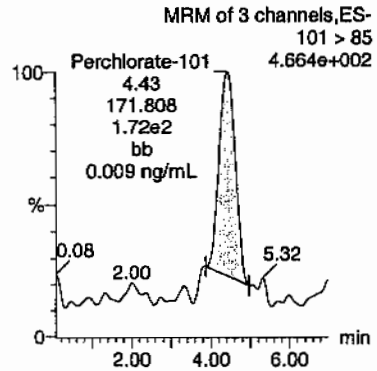
Perchlorate



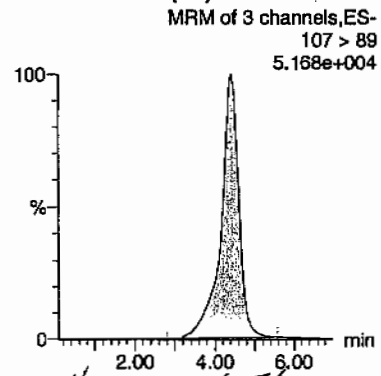
Perchlorate



Perchlorate-101



Perchlorate-O(18)



Hmm 01/15/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
244125003	Perchlorate	99 > 83	4.44	508.096	508.096	bb			0.0082			57.879	2.96
244125003	Perchlorate-101	101 > 85	4.43	171.808	171.808	bb			0.0086			40.427	
244125003	Perchlorate-O(18)	107 > 89	4.41	26732.992	26732.992	bb			0.4956	99.11	-0.89	1067.9...	

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

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

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 940125

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
RE12-10-7703

Date Received: 08-JAN-10

GEL Job No (SDG): 10-1130

GEL Sample ID: 244125004

Date Filtered: 12-JAN-10

Injection Volume (uL): 20

%Solids: 80

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.623	2.49	0.623	ug/kg	U	1	14-JAN-10 17:49	per0114035a
	Perchlorate Isotope Ratio						1	14-JAN-10 17:49	per0114035a
14797-73-0	Perchlorate-101	.623	2.49	0.623	ug/kg	U	1	14-JAN-10 17:49	per0114035a
	Perchlorate-O(18)			6.45	ug/kg		1	14-JAN-10 17:49	per0114035a

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

*Concentration =

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

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

Dataset: C:\MassLynx\Perchlorate.PRO\per011410a.qld

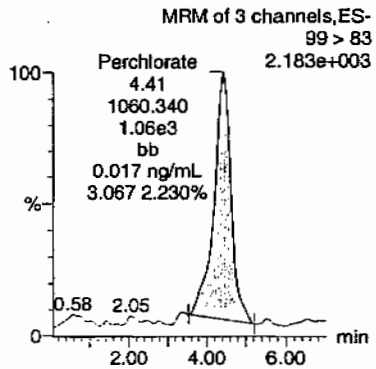
Last Altered: Friday, January 15, 2010 7:53:06 AM Eastern Standard Time
Printed: Friday, January 15, 2010 8:09:48 AM Eastern Standard Time

Name: per0114035a
Date: 14-Jan-2010
Time: 17:49:11
ID: 244125004
Vial: 1:5,A

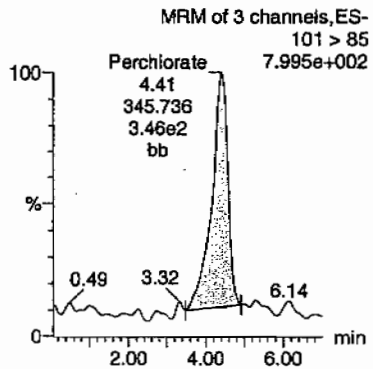
|LANL|940129|SOL20|1|RA

01-15-10

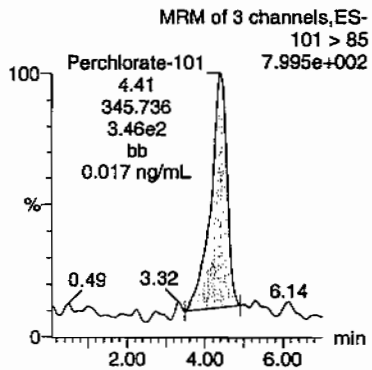
Perchlorate



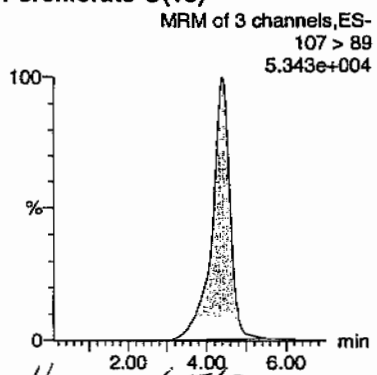
Perchlorate



Perchlorate-101



Perchlorate-O(18)



Hmm 01/15/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
244125004	Perchlorate	99 > 83	4.41	1060.340	1060.340	bb			0.0172			53.974	3.07
244125004	Perchlorate-101	101 > 85	4.41	345.736	345.736	bb			0.0173			29.254	
244125004	Perchlorate-O(18)	107 > 89	4.40	27898.588	27898.588	bb			0.5172	103.44	3.44	1590.9...	

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STANDARDS DATA

Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 10–1130

Lab Code: GEL

Instrument ID: LCMSMS **Date Analyzed:** 14–JAN–10

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

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

Parmname Perchlorate

Coefficient of Determination:

Calibration Curve: 61773.18

Response Type: External Standard

Curve Type: RF

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Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 10–1130

Lab Code: GEL

Instrument ID: LCMSMS **Date Analyzed:** 14–JAN–10

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

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

Parmname Perchlorate–101

Coefficient of Determination:

Calibration Curve: 20035.48

Response Type: External Standard

Curve Type: RF

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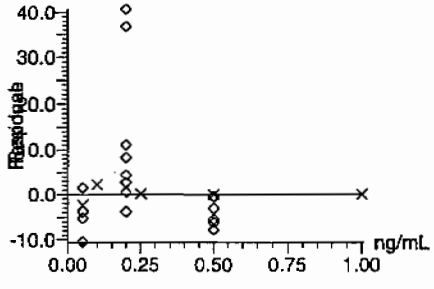
Quantify Calibration Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charlers W. Wilson

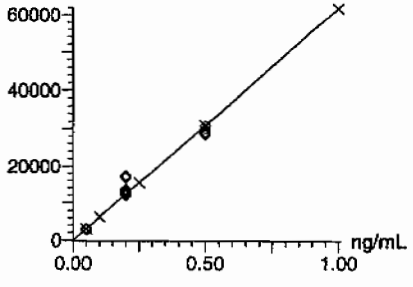
Dataset: C:\MassLynx\Perchlorate.PRO\per011410a.qld

Last Altered: Friday, January 15, 2010 7:53:06 AM Eastern Standard Time
Printed: Friday, January 15, 2010 8:09:48 AM Eastern Standard Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per011410a.mdb 15 Jan 2010 07:52:49
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per011410a.cdb 15 Jan 2010 07:53:05

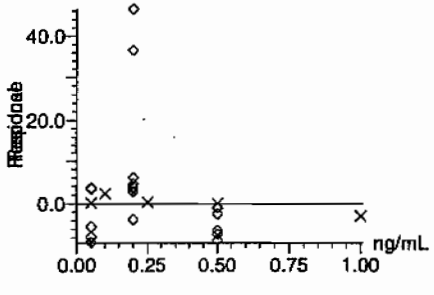
Compound name: Perchlorate
Response Factor: 61773.2
RRF SD: 1017.11, % Relative SD: 1.64652
Response type: External Std, Area
Curve type: RF

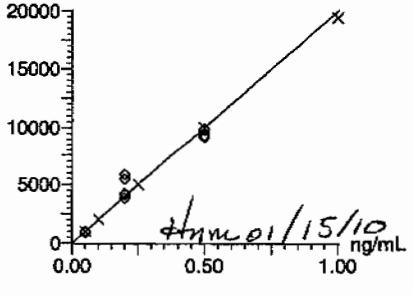




RW
01-15-10

Compound name: Perchlorate-101
Response Factor: 20035.5
RRF SD: 375.03, % Relative SD: 1.87183
Response type: External Std, Area
Curve type: RF





HMM 01/15/10

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

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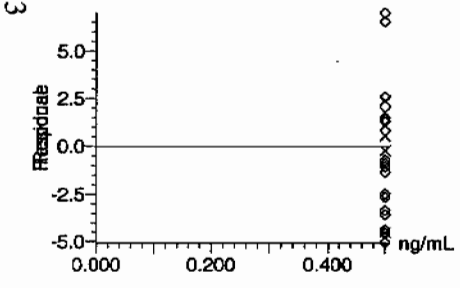
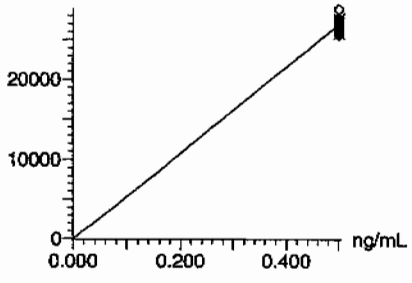
Quantify Calibration Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per011410a.qld

Last Altered: Friday, January 15, 2010 7:53:06 AM Eastern Standard Time
Printed: Friday, January 15, 2010 8:09:48 AM Eastern Standard Time

Compound name: Perchlorate-O(18)
Response Factor: 53943.5
RRF SD: 1468.17, % Relative SD: 2.72168
Response type: External Std, Area
Curve type: RF





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Perchlorate Initial Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10–1130

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.5	99.47	14–JAN–10 13:27	per0114009a
Perchlorate Isotope Ratio		3.09		14–JAN–10 13:27	per0114009a
Perchlorate–101	.5	.5	99.1	14–JAN–10 13:27	per0114009a

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

Dataset: C:\MassLynx\Perchlorate.PRO\per011410a.qld

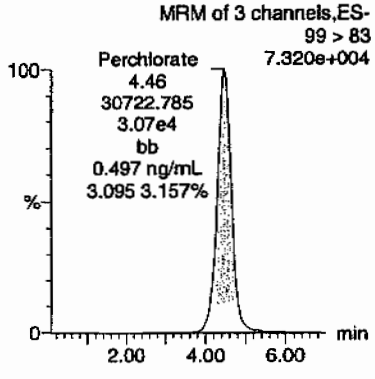
Last Altered: Friday, January 15, 2010 7:53:06 AM Eastern Standard Time
Printed: Friday, January 15, 2010 8:09:48 AM Eastern Standard Time

Page 9 of 53

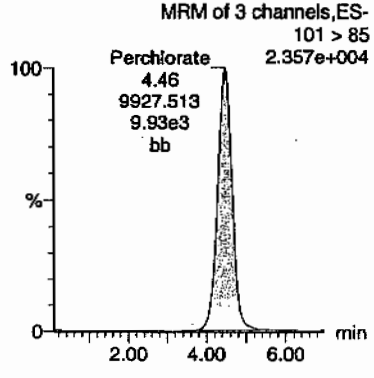
Name: per0114009a
Date: 14-Jan-2010
Time: 13:27:42
ID: WCL100104-06ICV
Vial: 1:2,A

Pass
aw
01-15-10

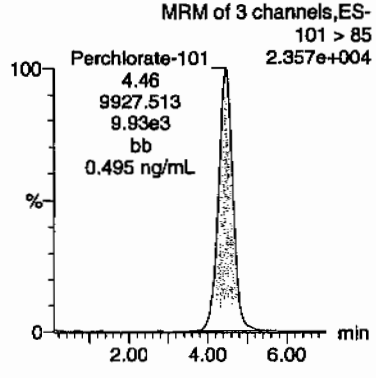
Perchlorate



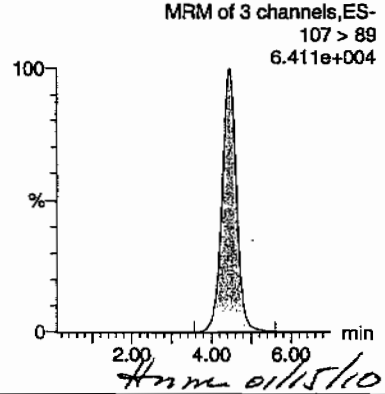
Perchlorate



Perchlorate-101



Perchlorate-O(18)



Hmm 01/15/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100104-06ICV	Perchlorate	99 > 83	4.46	30722.785	30722.785	bb			0.4973	99.47	-0.53	7933.4...	3.09
WCL100104-06ICV	Perchlorate-101	101 > 85	4.46	9927.513	9927.513	bb			0.4955	99.10	-0.90	1335.6...	
WCL100104-06ICV	Perchlorate-O(18)	107 > 89	4.44	26691.609	26691.609	bb			0.4948	98.96	-1.04	1434.0...	

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Perchlorate Continuing Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10–1130

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.48	96.9	14–JAN–10 14:58	per0114018a
Perchlorate Isotope Ratio		3.06		14–JAN–10 14:58	per0114018a
Perchlorate–101	.5	.49	97.63	14–JAN–10 14:58	per0114018a
Perchlorate	.5	.47	93.83	14–JAN–10 17:08	per0114031a
Perchlorate Isotope Ratio		3.09		14–JAN–10 17:08	per0114031a
Perchlorate–101	.5	.47	93.76	14–JAN–10 17:08	per0114031a
Perchlorate	.5	.47	94.52	14–JAN–10 19:09	per0114043a
Perchlorate Isotope Ratio		3.19		14–JAN–10 19:09	per0114043a
Perchlorate–101	.5	.46	91.36	14–JAN–10 19:09	per0114043a

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

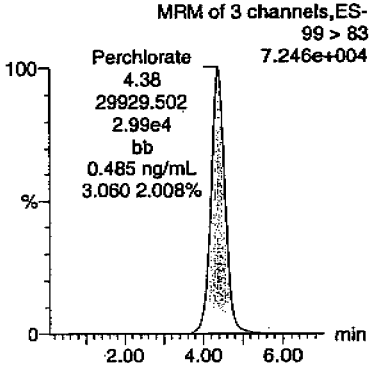
Dataset: C:\MassLynx\Perchlorate.PRO\per011410a.qld

Last Altered: Friday, January 15, 2010 7:53:06 AM Eastern Standard Time
Printed: Friday, January 15, 2010 8:09:48 AM Eastern Standard Time

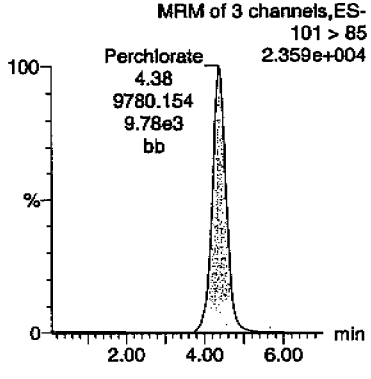
Name: per0114018a
Date: 14-Jan-2010
Time: 14:58:13
ID: WCL100104-06CCV
Vial: 1:2,A

Pass
aw
01-15-10

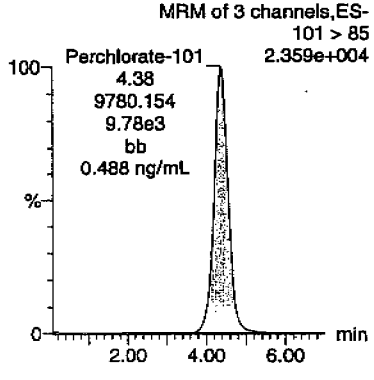
Perchlorate



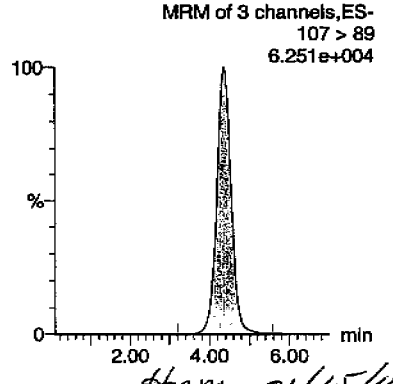
Perchlorate



Perchlorate-101



Perchlorate-O(18)



Hmm 01/15/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100104-06CCV	Perchlorate	99 > 83	4.38	29929.502	29929.502	bb			0.4845	96.90	-3.10	2092.1...	3.06
WCL100104-06CCV	Perchlorate-101	101 > 85	4.38	9780.154	9780.154	bb			0.4881	97.63	-2.37	4252.2...	
WCL100104-06CCV	Perchlorate-O(18)	107 > 89	4.36	26014.844	26014.844	bb			0.4823	96.45	-3.55	3850.4...	

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

Dataset: C:\MassLynx\Perchlorate.PRO\per011410a.qld

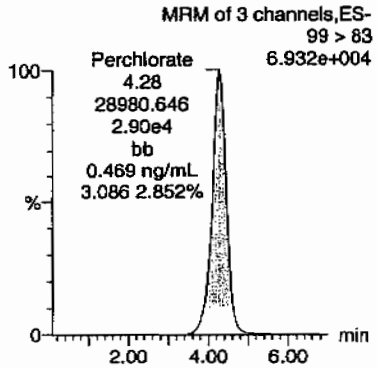
Last Altered: Friday, January 15, 2010 7:53:06 AM Eastern Standard Time
Printed: Friday, January 15, 2010 8:09:48 AM Eastern Standard Time

Page 6/6 1553

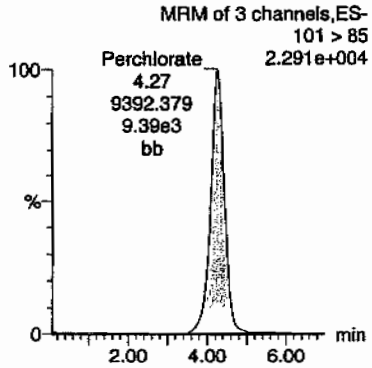
Name: per0114031a
Date: 14-Jan-2010
Time: 17:08:42
ID: WCL100104-06CCV
Vial: 1:2,A

Pass
01-15-10

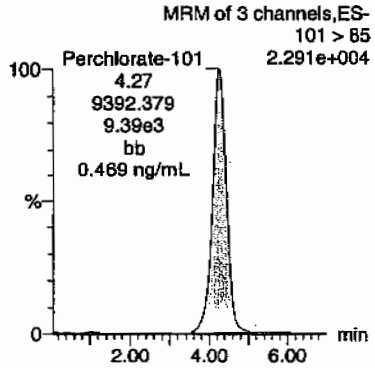
Perchlorate



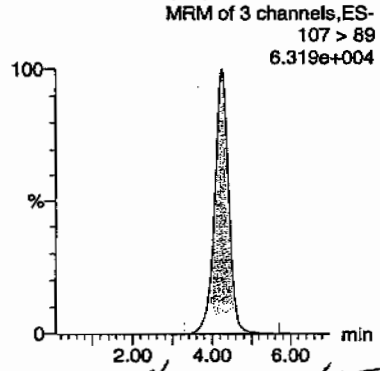
Perchlorate



Perchlorate-101



Perchlorate-O(18)



Hmm 01/15/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100104-06CCV	Perchlorate	99 > 83	4.28	28980.646	28980.646	bb			0.4691	93.83	-6.17	2926.1...	3.09
WCL100104-06CCV	Perchlorate-101	101 > 85	4.27	9392.379	9392.379	bb			0.4688	93.76	-6.24	1878.1...	
WCL100104-06CCV	Perchlorate-O(18)	107 > 89	4.25	26075.045	26075.045	bb			0.4834	96.68	-3.32	5377.2...	

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

Dataset: C:\MassLynx\Perchlorate.PRO\per011410a.qld

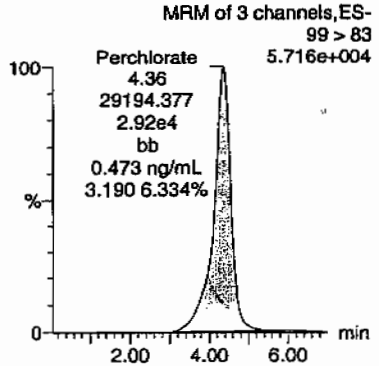
Last Altered: Friday, January 15, 2010 7:53:06 AM Eastern Standard Time
Printed: Friday, January 15, 2010 8:09:48 AM Eastern Standard Time

Page 33

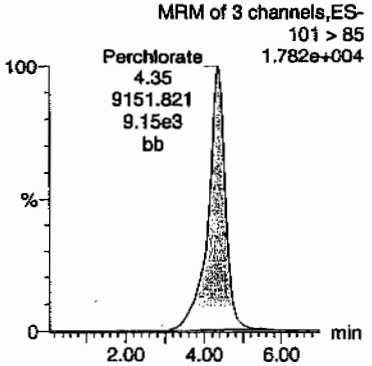
Name: per0114043a
Date: 14-Jan-2010
Time: 19:09:36
ID: WCL100104-06CCV
Vial: 1:2,A

CWW
01-15-10

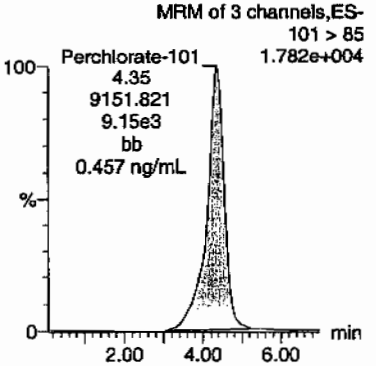
Perchlorate



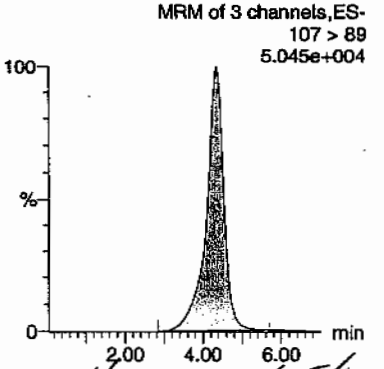
Perchlorate



Perchlorate-101



Perchlorate-O(18)



HMM 01/15/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100104-06CCV	Perchlorate	99 > 83	4.36	29194.377	29194.377	bb			0.4726	94.52	-5.48	1537.3...	3.19
WCL100104-06CCV	Perchlorate-101	101 > 85	4.35	9151.821	9151.821	bb			0.4568	91.36	-8.64	1154.8...	
WCL100104-06CCV	Perchlorate-O(18)	107 > 89	4.34	25742.227	25742.227	bb			0.4772	95.44	-4.56	1360.6...	

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

Perchlorate MDL Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10–1130

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.05	.05	96.16	14–JAN–10 13:47	per0114011a
Perchlorate Isotope Ratio		2.87		14–JAN–10 13:47	per0114011a
Perchlorate–101	.05	.05	103.46	14–JAN–10 13:47	per0114011a
Perchlorate	.05	.05	101.41	14–JAN–10 15:18	per0114020a
Perchlorate Isotope Ratio		3.02		14–JAN–10 15:18	per0114020a
Perchlorate–101	.05	.05	103.66	14–JAN–10 15:18	per0114020a
Perchlorate	.05	.04	89.58	14–JAN–10 17:29	per0114033a
Perchlorate Isotope Ratio		3.04		14–JAN–10 17:29	per0114033a
Perchlorate–101	.05	.05	90.88	14–JAN–10 17:29	per0114033a
Perchlorate	.05	.05	101.57	14–JAN–10 19:29	per0114045a
Perchlorate Isotope Ratio		3.4		14–JAN–10 19:29	per0114045a

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

Perchlorate MDL Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10–1130

Lab Code: GEL

Reporting Units: ug/kg

Perchlorate–101	.05	.05	92.18	14–JAN–10 19:29	per0114045a

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

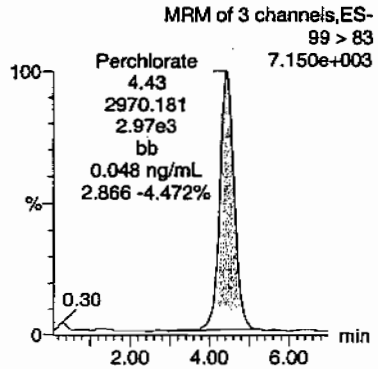
Dataset: C:\MassLynx\Perchlorate.PRO\per011410a.qld

Last Altered: Friday, January 15, 2010 7:53:06 AM Eastern Standard Time
Printed: Friday, January 15, 2010 8:09:48 AM Eastern Standard Time

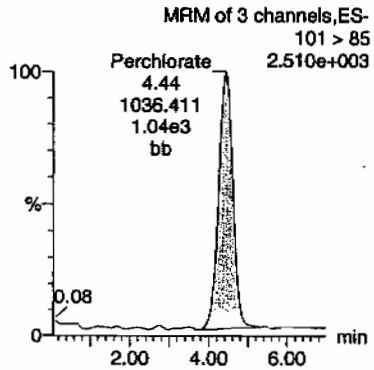
Name: per0114011a
Date: 14-Jan-2010
Time: 13:47:46
ID: WCL100104-07CRI
Vial: 1:2,B

Pass
aw
01-15-10

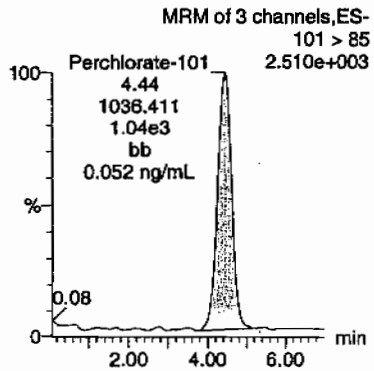
Perchlorate



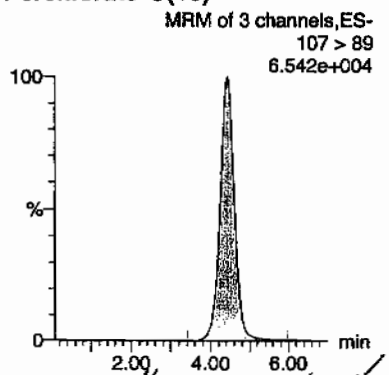
Perchlorate



Perchlorate-101



Perchlorate-O(18)



Amm 01/15/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100104-07CRI	Perchlorate	99 > 83	4.43	2970.181	2970.181	bb			0.0481	96.16	-3.84	337.495	2.87
WCL100104-07CRI	Perchlorate-101	101 > 85	4.44	1036.411	1036.411	bb			0.0517	103.46	3.46	410.631	
WCL100104-07CRI	Perchlorate-O(18)	107 > 89	4.41	27352.369	27352.369	bb			0.5071	101.41	1.41	2099.5...	

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

Dataset: C:\MassLynx\Perchlorate.PRO\per011410a.qld

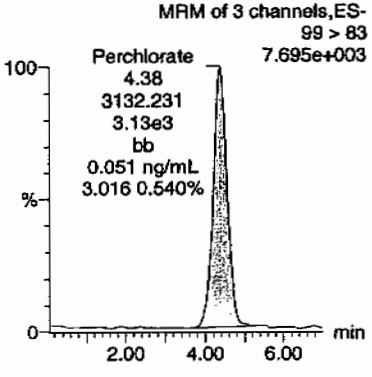
Last Altered: Friday, January 15, 2010 7:53:06 AM Eastern Standard Time
Printed: Friday, January 15, 2010 8:09:48 AM Eastern Standard Time

Page 72 of 53

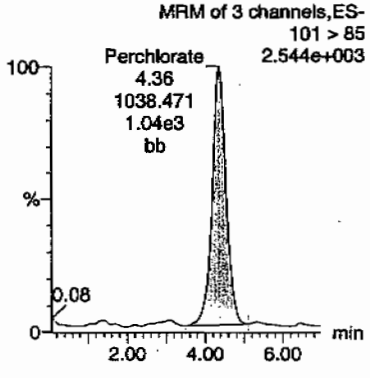
Name: per0114020a
Date: 14-Jan-2010
Time: 15:18:17
ID: WCL100104-07CRI
Vial: 1:2,B

Pass
aw
01-15-10

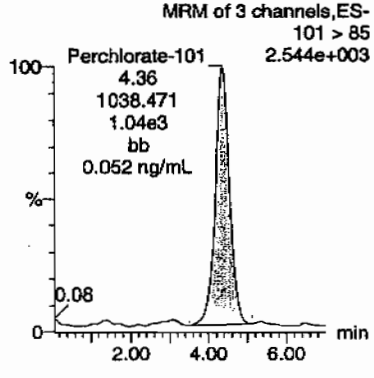
Perchlorate



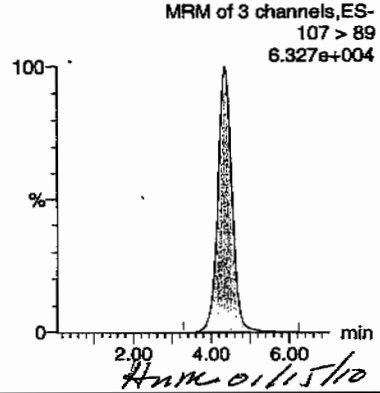
Perchlorate



Perchlorate-101



Perchlorate-O(18)



Hmk 01/15/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100104-07CRI	Perchlorate	99 > 83	4.38	3132.231	3132.231	bb			0.0507	101.41	1.41	663.473	3.02
WCL100104-07CRI	Perchlorate-101	101 > 85	4.36	1038.471	1038.471	bb			0.0518	103.66	3.66	192.575	
WCL100104-07CRI	Perchlorate-O(18)	107 > 89	4.35	26616.289	26616.289	bb			0.4934	98.68	-1.32	5978.8...	

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

Dataset: C:\MassLynx\Perchlorate.PRO\per011410a.qld

Last Altered: Friday, January 15, 2010 7:53:06 AM Eastern Standard Time
Printed: Friday, January 15, 2010 8:09:48 AM Eastern Standard Time

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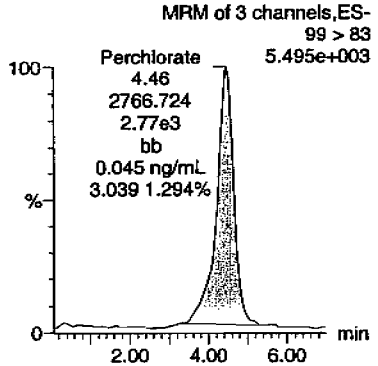
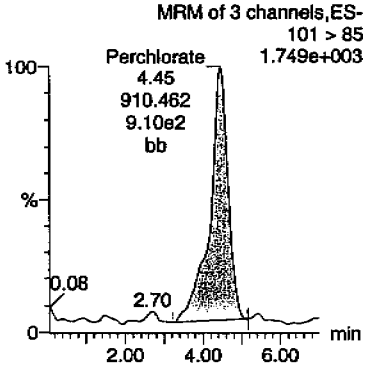
Name: per0114033a
Date: 14-Jan-2010
Time: 17:29:06
ID: WCL100104-07CRI
Vial: 1:2,B

Pass
aw
01-15-10

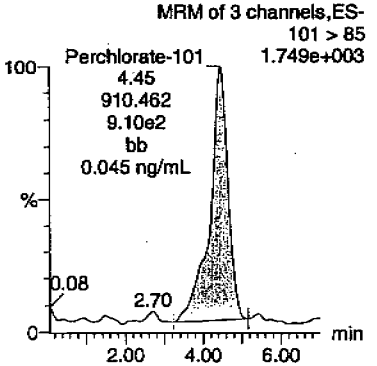
Perchlorate



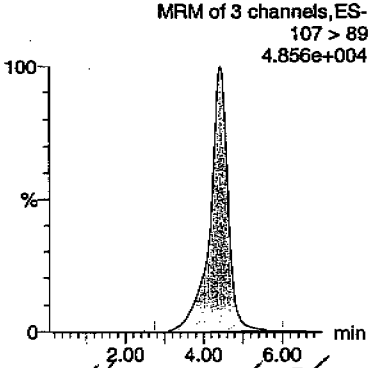
Perchlorate



Perchlorate-101



Perchlorate-O(18)



dmm 01/15/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100104-07CRI	Perchlorate	99 > 83	4.46	2766.724	2766.724	bb			0.0448	89.58	-10.42	147.450	3.04
WCL100104-07CRI	Perchlorate-101	101 > 85	4.45	910.462	910.462	bb			0.0454	90.88	-9.12	46.735	
WCL100104-07CRI	Perchlorate-O(18)	107 > 89	4.43	25756.949	25756.949	bb			0.4775	95.50	-4.50	3802.0...	

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

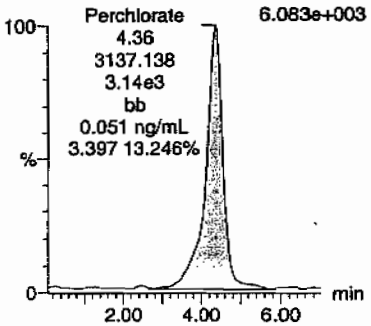
Dataset: C:\MassLynx\Perchlorate.PRO\per011410a.qld

Last Altered: Friday, January 15, 2010 7:53:06 AM Eastern Standard Time
Printed: Friday, January 15, 2010 8:09:48 AM Eastern Standard Time

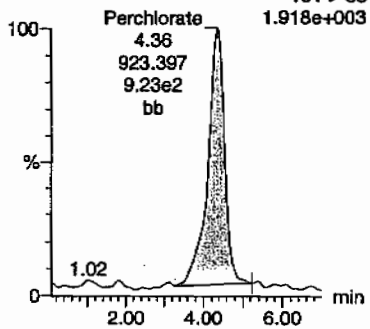
Name: per0114045a
Date: 14-Jan-2010
Time: 19:29:41
ID: WCL100104-07CRI
Vial: 1:2,B

Pass
aw
01-15-10

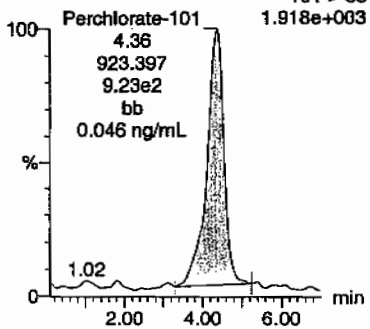
Perchlorate



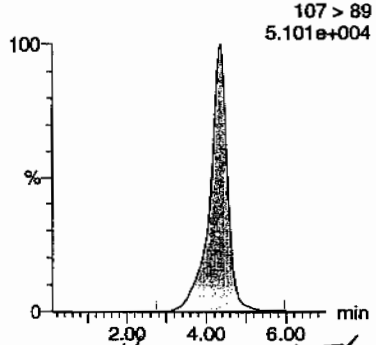
Perchlorate



Perchlorate-101



Perchlorate-O(18)



HMM 01/15/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100104-07CRI	Perchlorate	99 > 83	4.36	3137.138	3137.138	bb			0.0508	101.57	1.57	177.070	3.40
WCL100104-07CRI	Perchlorate-101	101 > 85	4.36	923.397	923.397	bb			0.0461	92.18	-7.82	181.224	
WCL100104-07CRI	Perchlorate-O(18)	107 > 89	4.34	26303.965	26303.965	bb			0.4876	97.52	-2.48	1415.2...	

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QUALITY CONTROL

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: SOIL

Extraction Batch ID: 940125

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
MB

Date Received: 12–JAN–10

GEL Job No (SDG): 10–1130

GEL Sample ID: 1202011797

Date Filtered: 12–JAN–10

Injection Volume (uL): 20

%Solids: 100

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797–73–0	Perchlorate	.5	2	0.500	ug/kg	U	1	14–JAN–10 16:18	per0114026a
	Perchlorate Isotope Ratio						1	14–JAN–10 16:18	per0114026a
14797–73–0	Perchlorate–101	.5	2	0.500	ug/kg	U	1	14–JAN–10 16:18	per0114026a
	Perchlorate–O(18)			4.87	ug/kg		1	14–JAN–10 16:18	per0114026a

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

*Concentration =

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

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

Dataset: C:\MassLynx\Perchlorate.PRO\per011410a.qld

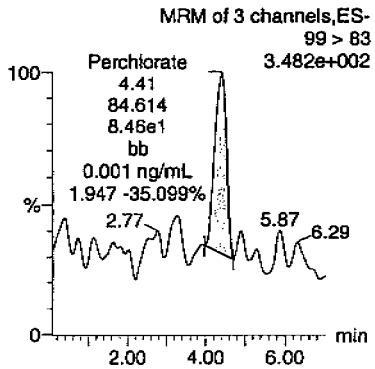
Last Altered: Friday, January 15, 2010 7:53:06 AM Eastern Standard Time
Printed: Friday, January 15, 2010 8:09:48 AM Eastern Standard Time

Name: per0114026a
Date: 14-Jan-2010
Time: 16:18:31
ID: 1202011797
Vial: 1:4,A

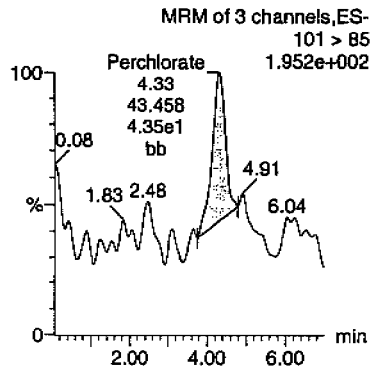
|LANL|940129|50020|MB|1|RA

CWO 01-15-10

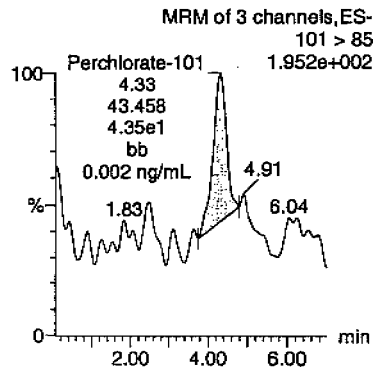
Perchlorate



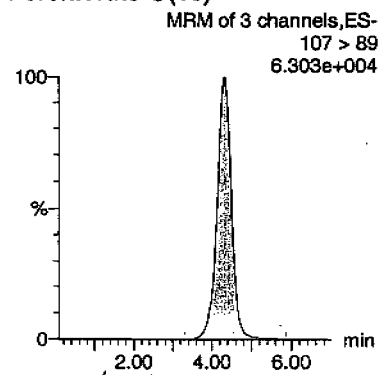
Perchlorate



Perchlorate-101



Perchlorate-O(18)



Hmm 01/15/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio	
1202011797	Perchlorate	99 > 83	4.41	84.614	84.614	bb			0.0014			13.209	1.95	OKAY
1202011797	Perchlorate-101	101 > 85	4.33	43.458	43.458	bb			0.0022			15.496		<0.0500
1202011797	Perchlorate-O(18)	107 > 89	4.32	26278.291	26278.291	bb			0.4871	97.43	-2.57	3363.6...		

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: SOIL

Extraction Batch ID: 940125

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
LCS

Date Received: 12–JAN–10

GEL Job No (SDG): 10–1130

GEL Sample ID: 1202011798

Date Filtered: 12–JAN–10

Injection Volume (uL): 20

%Solids: 100

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797–73–0	Perchlorate	.5	2	2.01	ug/kg		1	14–JAN–10 16:28	per0114027a
	Perchlorate Isotope Ratio			3.01			1	14–JAN–10 16:28	per0114027a
14797–73–0	Perchlorate–101	.5	2	2.06	ug/kg		1	14–JAN–10 16:28	per0114027a
	Perchlorate–O(18)			5.04	ug/kg		1	14–JAN–10 16:28	per0114027a

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

*Concentration =

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

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

Dataset: C:\MassLynx\Perchlorate.PRO\per011410a.qld

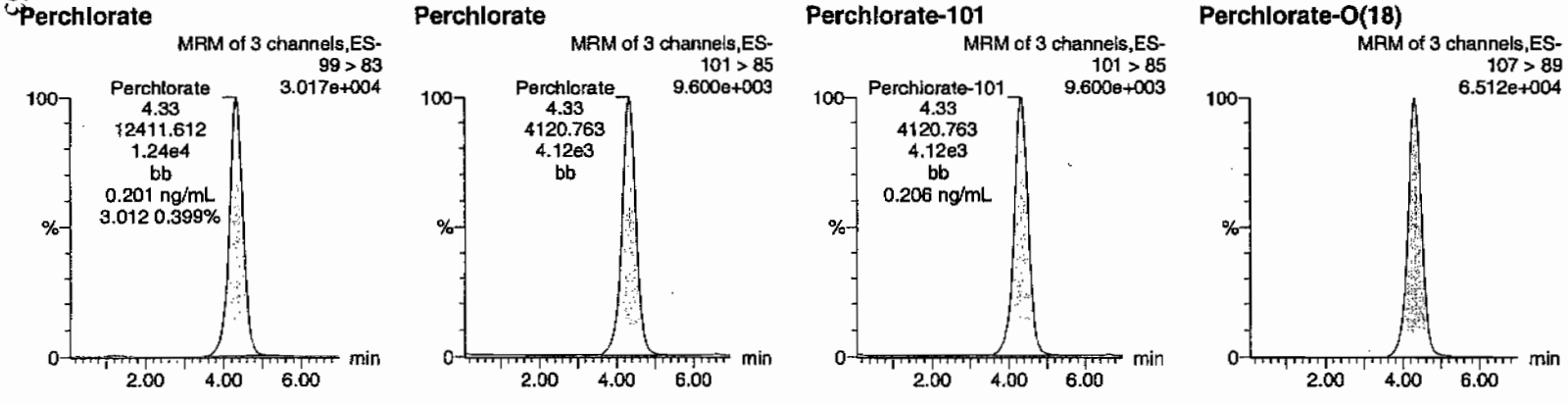
Last Altered: Friday, January 15, 2010 7:53:06 AM Eastern Standard Time
Printed: Friday, January 15, 2010 8:09:48 AM Eastern Standard Time

Page 79 of 553

Name: per0114027a
Date: 14-Jan-2010
Time: 16:28:34
ID: 1202011798
Vial: 1:4,B

|LANL|940129|50120|LCS|1|RA

GWJ 01-15-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202011798	Perchlorate	99 > 83	4.33	12411.612	12411.612	bb			0.2009	100.46	0.46	425.116	3.01
1202011798	Perchlorate-101	101 > 85	4.33	4120.763	4120.763	bb			0.2057	102.84	2.84	336.476	
1202011798	Perchlorate-O(18)	107 > 89	4.30	27192.725	27192.725	bb			0.5041	100.82	0.82	5675.7...	

$\frac{12411.612}{61773.2} = 0.2009$
HMK 01/15/10

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MISCELLANEOUS DATA

Prep Logbook

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

Batch ID: 940125 **Verified by:** _____

Analyst: Charles Wilson

Method: SW846 6850 Modified

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

Instrument: MicroMass Quatro Ultima

Sample ID	Run Date	Aliquot (g)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1202011797 MB	12-JAN-2010 14:39:16	2	20	10
1202011798 LCS	12-JAN-2010 14:39:16	2	20	10
244125001	12-JAN-2010 14:39:16	2	20	10
244125002	12-JAN-2010 14:39:16	2	20	10
244125003	12-JAN-2010 14:39:16	2	20	10
244125004	12-JAN-2010 14:39:16	2	20	10
244137001	12-JAN-2010 14:39:16	2	20	10
244137002	12-JAN-2010 14:39:16	2	20	10
244137003	12-JAN-2010 14:39:16	2	20	10
244137004	12-JAN-2010 14:39:16	2	20	10
244137005	12-JAN-2010 14:39:16	2	20	10
244137006	12-JAN-2010 14:39:16	2	20	10
244137007	12-JAN-2010 14:39:16	2	20	10
244228001	12-JAN-2010 14:39:16	2	20	10
1202011799 MS (244228001)	12-JAN-2010 14:39:16	2	20	10
1202011800 MSD (244228001)	12-JAN-2010 14:39:16	2	20	10
244228002	12-JAN-2010 14:39:16	2	20	10
244228003	12-JAN-2010 14:39:16	2	20	10
244228004	12-JAN-2010 14:39:16	2	20	10
244228005	12-JAN-2010 14:39:16	2	20	10
244228006	12-JAN-2010 14:39:16	2	20	10
1202011801 ICS	12-JAN-2010 14:39:16	2	20	10

Type	Sample Id	Description	Serial Number	Spike Amt	Units
ICS	1202011801	10 ug/L ICV/CCV Second Source	UCL091230-01.1	.4	mL
LCS	1202011798	10 ug/L ICV/CCV Second Source	UCL091230-01.1	.4	mL
MS	1202011799	10 ug/L ICV/CCV Second Source	UCL091230-01.1	.4	mL
MSD	1202011800	10 ug/L ICV/CCV Second Source	UCL091230-01.1	.4	mL

Comments:

Desalting cartridges used: 091006-1-H & 090810-1-Ba

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GEL ORGANIC RUN LOG INSTRUMENT ID: LCMSMS#2

Date: 01/14/10
Extr. Injection Volume: 20uL
Sequence Number: per011410a
Initial Calibration Date: 01/14/10

Method: EPA 6850-Modified
Int. Std.: UCL091019-03.2
Mobile Phase Lot#: 1254342, 1246195
Standard-Samp Reagent Lot#:: 1233976

Reviewed BY: Hnm
Date: 01/15/10
SOP: GL-OA-E-067 Rev.6
Alt Check Std. ID: WCL100104-06

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC_Flag
per0114001a	IPB001	CWW	1/14/2010 12:07			1		USE	B
per0114002a	IPB001	CWW	1/14/2010 12:17			1		USE	B
per0114003a	WCLICAL-01	CWW	1/14/2010 12:27			1		USE	I
per0114004a	WCLICAL-02	CWW	1/14/2010 12:37			1		USE	I
per0114005a	WCLICAL-03	CWW	1/14/2010 12:47			1		USE	I
per0114006a	WCLICAL-04	CWW	1/14/2010 12:57			1		USE	I
per0114007a	WCLICAL-05	CWW	1/14/2010 13:07			1		USE	I
per0114008a	IPB002	CWW	1/14/2010 13:17			1		USE	B
per0114009a	WCLICV	CWW	1/14/2010 13:27			1		USE	C
per0114010a	IPB003	CWW	1/14/2010 13:37			1		USE	B
per0114011a	WCLCRI	CWW	1/14/2010 13:47			1		USE	C
per0114012a	1202014474	CWW	1/14/2010 13:57	941221	10-1208	1	LANL	USE	S
per0114013a	1202014475	CWW	1/14/2010 14:07	941221	10-1208	1	LANL	USE	S
per0114014a	1202014478	CWW	1/14/2010 14:17	941221	10-1208	1	LANL	USE	S
per0114015a	244522001	CWW	1/14/2010 14:28	941221	10-1208	1	LANL	USE	S
per0114016a	1202014476	CWW	1/14/2010 14:38	941221	10-1208	1	LANL	USE	S
per0114017a	1202014477	CWW	1/14/2010 14:48	941221	10-1208	1	LANL	USE	S
per0114018a	WCLCCV	CWW	1/14/2010 14:58			1		USE	C
per0114019a	IPB004	CWW	1/14/2010 15:08			1		USE	B
per0114020a	WCLCRI	CWW	1/14/2010 15:18			1		USE	C
per0114021a	244218002	CWW	1/14/2010 15:28	940121	10-1152-1	1	LANL	USE	S
per0114022a	244218003	CWW	1/14/2010 15:38	940121	10-1152-~~2~~ 1	1	LANL	USE	S
per0114023a	244218004	CWW	1/14/2010 15:48	940121	10-1152-~~3~~ 1	1	LANL	USE	S
per0114024a	244218005	CWW	1/14/2010 15:58	940121	10-1152-~~4~~ 1 Hnm 01/15/10		LANL	USE	S
per0114025a	IPB005	CWW	1/14/2010 16:08			1		USE	B
per0114026a	1202011797	CWW	1/14/2010 16:18	940129	VARIOUS	1	LANL	USE	S
per0114027a	1202011798	CWW	1/14/2010 16:28	940129	VARIOUS	1	LANL	USE	S
per0114028a	1202011801	CWW	1/14/2010 16:38	940129	VARIOUS	1	LANL	USE	S
per0114029a	244125001	CWW	1/14/2010 16:48	940129	10-1130	1	LANL	USE	S

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per0114030a	244125002	CWW	1/14/2010 16:58	940129	10-1130	1	LANL	USE	S
per0114031a	WCLCCV	CWW	1/14/2010 17:08			1		USE	C
per0114032a	IPB006	CWW	1/14/2010 17:18			1		USE	B
per0114033a	WCLCRI	CWW	1/14/2010 17:29			1		USE	C
per0114034a	244125003	CWW	1/14/2010 17:39	940129	10-1130	1	LANL	USE	S
per0114035a	244125004	CWW	1/14/2010 17:49	940129	10-1130	1	LANL	USE	S
per0114036a	244137001	CWW	1/14/2010 17:59	940129	10-1126	1	LANL	USE	S
per0114037a	244137002	CWW	1/14/2010 18:09	940129	10-1126	1	LANL	USE	S
per0114038a	244137003	CWW	1/14/2010 18:19	940129	10-1126	1	LANL	USE	S
per0114039a	244137004	CWW	1/14/2010 18:29	940129	10-1126	1	LANL	USE	S
per0114040a	244137005	CWW	1/14/2010 18:39	940129	10-1126	1	LANL	USE	S
per0114041a	244137006	CWW	1/14/2010 18:49	940129	10-1126	1	LANL	USE	S
per0114042a	244137007	CWW	1/14/2010 18:59	940129	10-1126	1	LANL	USE	S
per0114043a	WCLCCV	CWW	1/14/2010 19:09			1		USE	C
per0114044a	IPB007	CWW	1/14/2010 19:19			1		USE	B
per0114045a	WCLCRI	CWW	1/14/2010 19:29			1		USE	C
per0114046a	244228001	CWW	1/14/2010 19:39	940129	10-1161-2	1	LANL	USE	S
per0114047a	1202011799	CWW	1/14/2010 19:49	940129	10-1161-2	1	LANL	USE	S
per0114048a	1202011800	CWW	1/14/2010 19:59	940129	10-1161-2	1	LANL	USE	S
per0114049a	244228002	CWW	1/14/2010 20:09	940129	10-1161-2	1	LANL	USE	S
per0114050a	244228003	CWW	1/14/2010 20:19	940129	10-1161-2	1	LANL	USE	S
per0114051a	244228004	CWW	1/14/2010 20:29	940129	10-1161-2	1	LANL	USE	S
per0114052a	244228005	CWW	1/14/2010 20:40	940129	10-1161-2	1	LANL	USE	S
per0114053a	244228006	CWW	1/14/2010 20:50	940129	10-1161-2	1	LANL	USE	S
per0114054a	IPB008	CWW	1/14/2010 21:00			1		USE	B
per0114055a	244609001	CWW	1/14/2010 21:10	Screen		10	GEL	DUSE	S
per0114056a	WCLCCV	CWW	1/14/2010 21:20			1		USE	C
per0114057a	IPB009	CWW	1/14/2010 21:31			1		USE	B
per0114058a	WCLCRI	CWW	1/14/2010 21:41			1		USE	C

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Dataset: C:\MassLynx\Perchlorate.PRO\per011410a.qld

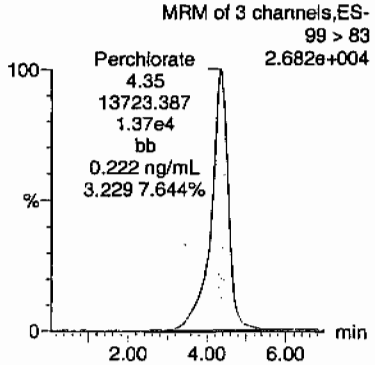
Last Altered: Friday, January 15, 2010 7:53:06 AM Eastern Standard Time
Printed: Friday, January 15, 2010 8:09:48 AM Eastern Standard Time

Name: per0114047a
Date: 14-Jan-2010
Time: 19:49:46
ID: 1202011799
Vial: 1:6,D

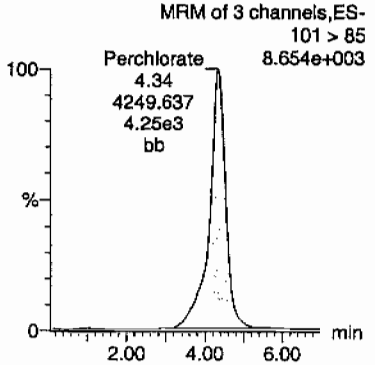
|LANL|940129|SOLID|MS|1|RA

CWW
01-15-10

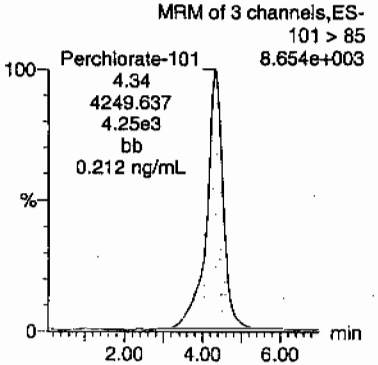
Perchlorate



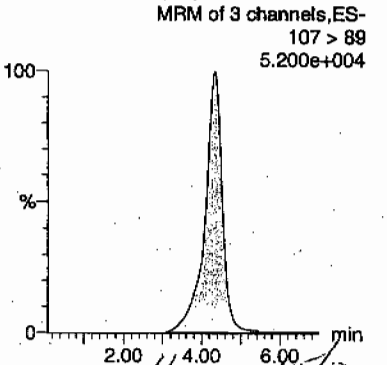
Perchlorate



Perchlorate-101



Perchlorate-O(18)



Hmm 01/15/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202011799	Perchlorate	99 > 83	4.35	13723.387	13723.387	bb			0.2222	111.08	11.08	697.565	3.23
1202011799	Perchlorate-101	101 > 85	4.34	4249.637	4249.637	bb			0.2121	106.05	6.05	282.807	
1202011799	Perchlorate-O(18)	107 > 89	4.34	26735.686	26735.686	bb			0.4956	99.12	-0.88	5717.1...	

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Dataset: C:\MassLynx\Perchlorate.PRO\per011410a.qld

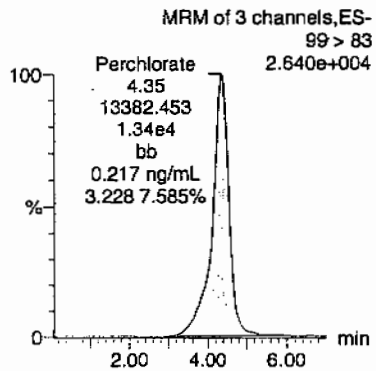
Last Altered: Friday, January 15, 2010 7:53:06 AM Eastern Standard Time
Printed: Friday, January 15, 2010 8:09:48 AM Eastern Standard Time

Name: per0114048a
Date: 14-Jan-2010
Time: 19:59:49
ID: 1202011800
Vial: 1:6,E

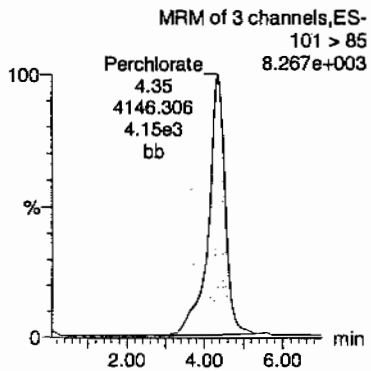
|LANL|940129|SOLID|MSD|1|

01-15-10

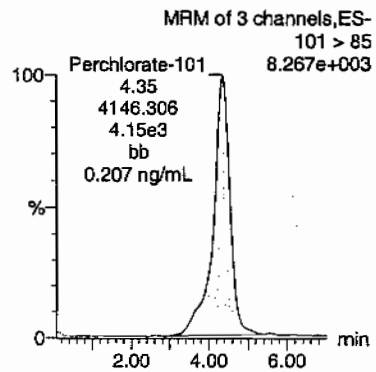
Perchlorate



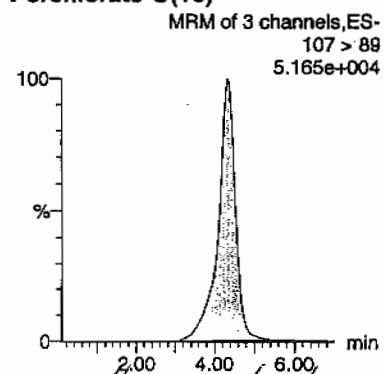
Perchlorate



Perchlorate-101



Perchlorate-O(18)



AMM 01/15/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202011800	Perchlorate	99 > 83	4.35	13382.453	13382.453	bb			0.2166	108.32	8.32	1189.7...	3.23
1202011800	Perchlorate-101	101 > 85	4.35	4146.306	4146.306	bb			0.2069	103.47	3.47	328.191	
1202011800	Perchlorate-O(18)	107 > 89	4.34	26255.121	26255.121	bb			0.4867	97.34	-2.66	2609.0...	

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Isotope Ratio Criteria

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

2.31-3.85

Tune Criteria

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

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LC/MS/MS EXPLOSIVES ANALYSIS

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LC/MS/MS Case Narrative
Los Alamos National Laboratory (LANL)
SDG 10-1130

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:	940080
Prep Batch Number:	940075

Sample Analysis

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

Sample ID	Client ID
244125001	RE12-10-7698
244125002	RE12-10-7697
244125003	RE12-10-7704
244125004	RE12-10-7703
1202011699	Method Blank (MB)
1202011700	Laboratory Control Sample (LCS)
1202011701	244125001(RE12-10-7698) Matrix Spike (MS)
1202011702	244125001(RE12-10-7698) 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.

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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 spike recoveries were within the established acceptance limits.

QC Sample Designation
Sample 244125001 (RE12-10-7698) 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.

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Technical Information

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

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

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

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

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.

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QC Sample Designation
Sample 244125001 (RE12-10-7698) 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
All samples in this SDG in this analytical batch met the specified holding time. GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration.

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

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

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

Miscellaneous Information

Data Exception (DER) Documentation
Data exception 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 required manual integrations due to software limitations.

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

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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: Herbert K. Maier **Date:** 01/26/10

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SAMPLE DATA SUMMARY

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7698

Lab Code: GEL

GEL Job No (SDG) 10-1130

Matrix: SOIL

GEL Sample ID: 244125001

Sample Amount 2

Moisture: 9.9

Amount Units g

Date Received: 08-JAN-10

Extraction Type Sonication

Extraction Batch ID: 940075

Concentrated Extract Volume (mL) 10

Date Extracted: 19-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0118157a

Date Analyzed: 21-JAN-10 18:46

Units: ug/kg

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

*Concentration =

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

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7698

Lab Code: GEL

GEL Job No (SDG) 10-1130

Matrix: SOIL

GEL Sample ID: 244125001

Sample Amount 2

Moisture: 9.9

Amount Units g

Date Received: 08-JAN-10

Extraction Type Sonication

Extraction Batch ID: 940075

Concentrated Extract Volume (mL) 10

Date Extracted: 19-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS01200053.wiff

Date Analyzed: 21-JAN-10 00:06

Units: ug/kg

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

*Concentration =

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

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7697

Lab Code: GEL

GEL Job No (SDG) 10-1130

Matrix: SOIL

GEL Sample ID: 244125002

Sample Amount 2

Moisture: 14.7

Amount Units g

Date Received: 08-JAN-10

Extraction Type Sonication

Extraction Batch ID: 940075

Concentrated Extract Volume (mL) 10

Date Extracted: 19-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0118160a

Date Analyzed: 21-JAN-10 20:15

Units: ug/kg

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

*Concentration =

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

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7697

Lab Code: GEL

GEL Job No (SDG) 10-1130

Matrix: SOIL

GEL Sample ID: 244125002

Sample Amount 2

Moisture: 14.7

Amount Units g

Date Received: 08-JAN-10

Extraction Type Sonication

Extraction Batch ID: 940075

Concentrated Extract Volume (mL) 10

Date Extracted: 19-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS01200056.wiff

Date Analyzed: 21-JAN-10 00:53

Units: ug/kg

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

*Concentration =

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

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7704

Lab Code: GEL

GEL Job No (SDG) 10-1130

Matrix: SOIL

GEL Sample ID: 244125003

Sample Amount 2

Moisture: 9.3

Amount Units g

Date Received: 08-JAN-10

Extraction Type Sonication

Extraction Batch ID: 940075

Concentrated Extract Volume (mL) 10

Date Extracted: 19-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0118164a

Date Analyzed: 21-JAN-10 22:13

Units: ug/kg

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

*Concentration =

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

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7704

Lab Code: GEL

GEL Job No (SDG) 10-1130

Matrix: SOIL

GEL Sample ID: 244125003

Sample Amount 2

Moisture: 9.3

Amount Units g

Date Received: 08-JAN-10

Extraction Type Sonication

Extraction Batch ID: 940075

Concentrated Extract Volume (mL) 10

Date Extracted: 19-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS01200057.wiff

Date Analyzed: 21-JAN-10 01:09

Units: ug/kg

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

*Concentration =

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

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7703

Lab Code: GEL

GEL Job No (SDG) 10-1130

Matrix: SOIL

GEL Sample ID: 244125004

Sample Amount 2

Moisture: 19.8

Amount Units g

Date Received: 08-JAN-10

Extraction Type Sonication

Extraction Batch ID: 940075

Concentrated Extract Volume (mL) 10

Date Extracted: 19-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0118165a

Date Analyzed: 21-JAN-10 22:42

Units: ug/kg

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

*Concentration =

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

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7703

Lab Code: GEL

GEL Job No (SDG) 10-1130

Matrix: SOIL

GEL Sample ID: 244125004

Sample Amount 2

Moisture: 19.8

Amount Units g

Date Received: 08-JAN-10

Extraction Type Sonication

Extraction Batch ID: 940075

Concentrated Extract Volume (mL) 10

Date Extracted: 19-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS01200058.wiff

Date Analyzed: 21-JAN-10 01:24

Units: ug/kg

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

*Concentration =

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

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QUALITY CONTROL SUMMARY

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2

High Explosives Surrogate Recovery Summary

Lab Name: GEL Laboratories LLC **GEL Job No (SDG):** 10-1130

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

Lab Sample ID	Client Sample ID	DNT	QC Limits	Flg
244125001	RE12-10-7698	113	73.7 - 133.3	
244125001	RE12-10-7698	112	73.7 - 133.3	
244125002	RE12-10-7697	120	73.7 - 133.3	
244125002	RE12-10-7697	113	73.7 - 133.3	
244125003	RE12-10-7704	108	73.7 - 133.3	
244125003	RE12-10-7704	110	73.7 - 133.3	
244125004	RE12-10-7703	112	73.7 - 133.3	
244125004	RE12-10-7703	114	73.7 - 133.3	
1202011699	MB for batch 940075	115	73.7 - 133.3	
1202011699	MB for batch 940075	117	73.7 - 133.3	
1202011700	LCS for batch 940075	104	73.7 - 133.3	
1202011700	LCS for batch 940075	111	73.7 - 133.3	
1202011701	RE12-10-7698(244125001MS)	108	73.7 - 133.3	
1202011701	RE12-10-7698(244125001MS)	113	73.7 - 133.3	
1202011702	RE12-10-7698(244125001MSD)	109	73.7 - 133.3	
1202011702	RE12-10-7698(244125001MSD)	113	73.7 - 133.3	

DNT = 3,4-Dinitrotoluene

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3B
High Explosives LCS/LCS Duplicate Summary

Lab Name: GEL Laboratories LLC

Client ID: LCS

Lab Code: GEL

GEL Job No (SDG) 10-1130

Extract Batch Code: 940075

Date Extracted: 19-JAN-10

GEL LCS ID: 1202011700

GEL LCSDUP ID:

Analysis Date/Time: 21-JAN-10 18:17

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
o-Nitrotoluene	5000	5180	104					75 – 123
2,6-Dinitrotoluene	5000	5010	100					86.9 – 122
4-Amino-2,6-dinitrotoluene	5000	5410	108					85.6 – 133
Nitrobenzene	5000	4720	94.4					71.8 – 126
m-Dinitrobenzene	5000	5040	101					80.9 – 127
Tetryl	5000	3370	67.3					31.2 – 119
RDX	5000	5730	115					78.7 – 144
PETN	5000	5280	106					64.6 – 147
HMX	5000	6970	139					66.5 – 142
2-Amino-4,6-dinitrotoluene	5000	5280	106					84.2 – 149
2,4-Dinitrotoluene	5000	5290	106					82.7 – 132
m-Nitrotoluene	5000	5060	101					71.9 – 126
1,3,5-Trinitrobenzene	5000	4530	90.7					62.1 – 124
2,4,6-Trinitrotoluene	5000	4950	99.1					78.3 – 132
p-Nitrotoluene	5000	5190	104					73.7 – 124

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

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3B
High Explosives LCS/LCS Duplicate Summary

Lab Name: GEL Laboratories LLC

Client ID: LCS

Lab Code: GEL

GEL Job No (SDG) 10–1130

Extract Batch Code: 940075

Date Extracted: 19–JAN–10

GEL LCS ID: 1202011700

GEL LCSDUP ID:

Analysis Date/Time: 20–JAN–10 23:50

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	4580	91.6					64.8 – 128
2,6–Diamino–4–nitrotoluene	5000	4710	94.2					69.6 – 133
3,5–Dinitroaniline	5000	4940	98.8					77.3 – 123
TATB	5000	5890	118					46.8 – 166
tris(o–cresyl) phosphate	5000	5210	104					84.3 – 120

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

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3

High Explosives MS/MSD Summary

Lab Name: GEL Laboratories LLC

Client ID: RE12-10-7698

Lab Code: GEL

GEL Job No (SDG) 10-1130

Extract Batch Code: 940075

Date Extracted: 19-JAN-10

GEL Spike ID: 1202011701

GEL SpikeDup ID: 1202011702

Analysis Date/Time: 21-JAN-10 19:16

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	5130	103	5200	103	1.45	30	70.7 - 130
2,4,6-Trinitrotoluene	5000	0	5340	107	5300	106	.849	30	83.4 - 138
2,4-Dinitrotoluene	5000	0	4880	97.6	5110	102	4.61	30	79.1 - 137
2,6-Dinitrotoluene	5000	0	5190	104	5040	101	2.94	30	85.4 - 125
2-Amino-4,6-dinitrotoluene	5000	0	5540	111	5460	109	1.49	30	77.4 - 154
4-Amino-2,6-dinitrotoluene	5000	0	5520	110	5660	113	2.56	30	77.3 - 140
HMX	5000	0	5280	106	5270	105	.259	30	66.7 - 144
Nitrobenzene	5000	0	4990	99.8	4710	94.2	5.85	30	70.4 - 129
PETN	5000	0	5040	101	5140	103	1.89	30	61.9 - 153
RDX	5000	0	5470	109	5600	112	2.37	30	73 - 140
Tetryl	5000	0	4120	82.4	4140	82.9	.593	30	46.8 - 138
m-Dinitrobenzene	5000	0	5160	103	5010	100	2.86	30	83.5 - 126
m-Nitrotoluene	5000	0	5010	100	4920	98.3	1.9	30	68.6 - 135
o-Nitrotoluene	5000	0	5200	104	4900	97.9	6.11	30	71.2 - 131
p-Nitrotoluene	5000	0	5600	112	5170	103	7.97	30	69.3 - 133

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

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3

High Explosives MS/MSD Summary

Lab Name: GEL Laboratories LLC

Client ID: RE12-10-7698

Lab Code: GEL

GEL Job No (SDG) 10-1130

Extract Batch Code: 940075

Date Extracted: 19-JAN-10

GEL Spike ID: 1202011701

GEL SpikeDup ID: 1202011702

Analysis Date/Time: 21-JAN-10 00:22

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	4300	86	4560	91.2	5.87	30	51.6 – 127
2,6-Diamino-4-nitrotoluene	5000	0	5000	100	4910	98.2	1.82	30	58.9 – 135
3,5-Dinitroaniline	5000	0	5060	101	5130	103	1.37	30	72.8 – 125
tris(o-cresyl) phosphate	5000	0	5390	108	5250	105	2.63	30	79.1 – 124
TATB	5000	0	5120	102	5370	107	4.77	30	43.9 – 166

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

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Explosives Initial Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1130

Lab Code: GEL

Lab Sample ID: XIBLK01

Analysis Date: 18-JAN-10 14:03

GEL Data File: EXP0118001a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
1,3,5-Trinitrobenzene	0	0
1,3-Dinitrobenzene-d4	500	533.831
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	572.959
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\011810expA.qld, Time: Tue Jan 19 10:59:58 2010

Method: C:\MASSLYNX\New_Exp.PRO\MethDB\011810expa.mdb, Time: Tue Jan 19 09:10:36 2010
Calibration: Untitled, Time: Tue Jan 19 10:56:45 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118001a
Date: 18-Jan-2010
Time: 14:03:34
ID: XIBLK01
Vial: 1:1,A

MMT 1/19/10

HMX
F2:MRM of 1 channel,AP-
4.01 176 > 102 1.627e+004
8.35
min 5.00 10.00

RDX
F2:MRM of 1 channel,AP-
4.01 176 > 102 1.627e+004
8.35
min 5.00 10.00

135-Trinitrobenzene
F4:MRM of 1 channel,AP-
8.01 213 > 183 1.025e+004
min 10.00 12.50

13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142 1.536e+004
10.01
min 10.00 12.00 14.00

13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138 6.590e+003
min 10.00 12.00 14.00

Tetryl
F6:MRM of 1 channel,AP-
241 > 181 6.654e+003
min 10.00 15.00

Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46 6.580e+003
min 12.00 14.00 16.00

4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
13.65 197 > 167 7.525e+003
min 14.00 16.00 18.00

2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
13.57 197 > 180 7.404e+003
min 14.00 16.00 18.00

246-Trinitrotoluene
F10:MRM of 1 channel,AP-
13.12 227 > 210 7.028e+003
min 14.00 16.00 18.00

34-dinitrotoluene
F9:MRM of 2 channels,AP-
14.21 182 > 152 6.744e+003
HMW 01/19/10
min 15.00 20.00

26-dinitrotoluene
F9:MRM of 2 channels,AP-
14.16 182 > 152 6.790e+003
min 15.00 20.00

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

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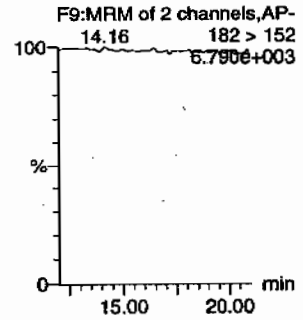
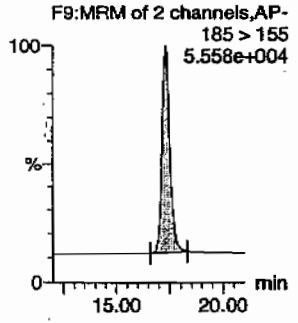
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA.qld, Time: Tue Jan 19 10:59:58 2010

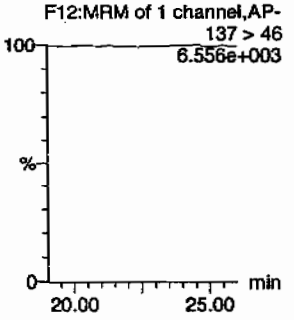
24-dinitrotoluene



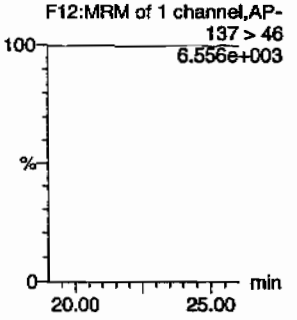
26-dinitrotoluene-d3



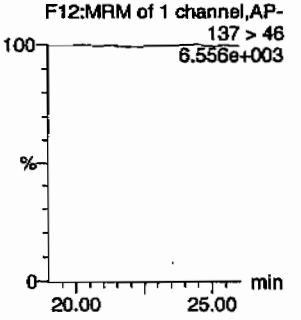
2-Nitrotoluene



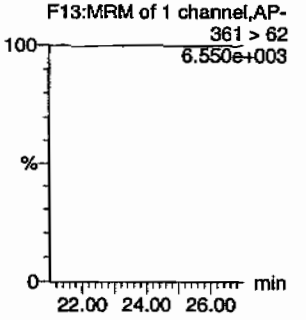
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/ml	%Rec	%Dev	S/N
XIBLK01	HMX	176 > 102			3622.916									
XIBLK01	RDX	176 > 102			3622.916									
XIBLK01	135-Trinitrobenzene	213 > 183			3622.916									
XIBLK01	13-Dinitrobenzene-d4	172 > 142	12.00	3622.916		3622.916	3622.916	bb			533.8315	106.8	6.8	515.3
XIBLK01	13-Dinitrobenzene	168 > 138			3622.916									
XIBLK01	Tetryl	241 > 181			3622.916									
XIBLK01	Nitrobenzene	123 > 46			3622.916									
XIBLK01	4-Amino-26-dinitrotoluene	197 > 167			21021.373									
XIBLK01	2-Amino-46-dinitrotoluene	197 > 180			21021.373									
XIBLK01	246-Trinitrotoluene	227 > 210			21021.373									
XIBLK01	34-dinitrotoluene	182 > 152			21021.373									
XIBLK01	26-dinitrotoluene	182 > 152			21021.373			MM-	19-Jan-10	10:52:05				
XIBLK01	24-dinitrotoluene	182 > 152			21021.373									
XIBLK01	26-dinitrotoluene-d3	185 > 155	17.33	21021.373		21021.373	21021.373	bb			572.9589	114.6	14.6	1215.1
XIBLK01	2-Nitrotoluene	137 > 46			21021.373									
XIBLK01	4-Nitrotoluene	137 > 46			21021.373									
XIBLK01	3-Nitrotoluene	137 > 46			21021.373									
XIBLK01	PETN	361 > 62			21021.373									

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4

Explosives Initial Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10–1130

Lab Code: GEL

Lab Sample ID: XIBLK01

Analysis Date: 18–JAN–10 14:33

GEL Data File: EXP0118002a

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	548.487
2,4,6–Trinitrotoluene	0	0
2,4–Dinitrotoluene	0	0
2,6–Dinitrotoluene	0	0
2,6–Dinitrotoluene–d3	500	599.618
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

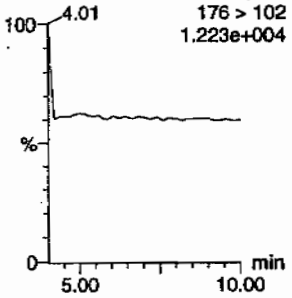
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA.qld, Time: Tue Jan 19 10:59:58 2010

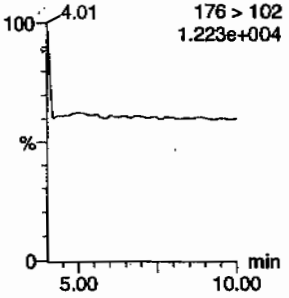
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118002a
Date: 18-Jan-2010
Time: 14:33:05
ID: XIBLK01
Vial: 1:1,A

MM 1/19/10

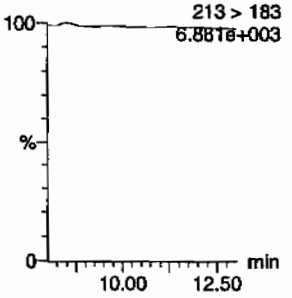
HMX
F2:MRM of 1 channel,AP-
4.01 176 > 102
1.223e+004



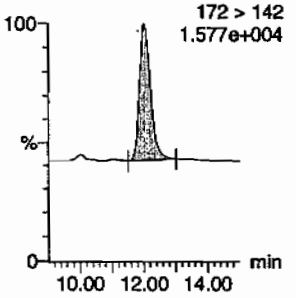
RDX
F2:MRM of 1 channel,AP-
4.01 176 > 102
1.223e+004



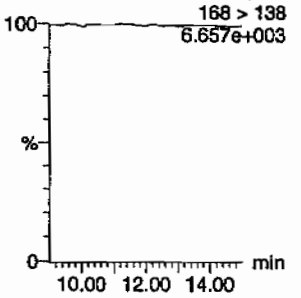
135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
6.881e+003



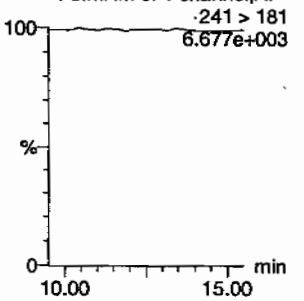
13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
1.577e+004



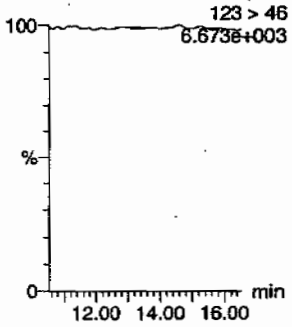
13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
6.657e+003



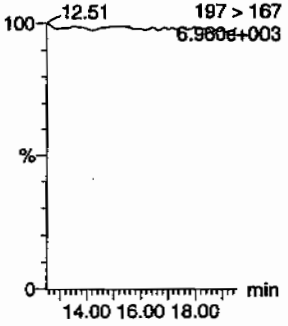
Tetryl
F6:MRM of 1 channel,AP-
241 > 181
6.677e+003



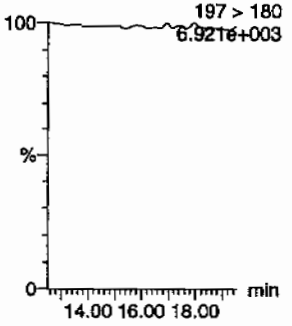
Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
6.673e+003



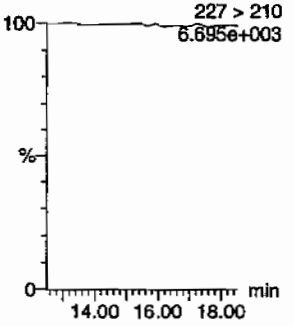
4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
12.51 197 > 167
6.960e+003



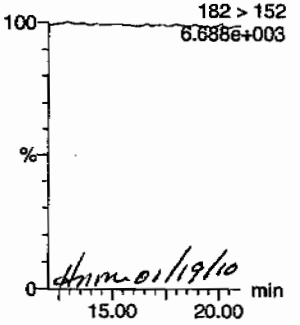
2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
6.921e+003



246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
6.695e+003

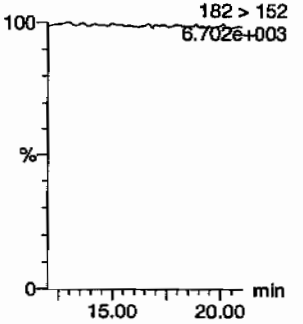


34-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
6.688e+003



dmm 01/19/10

26-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
6.702e+003



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

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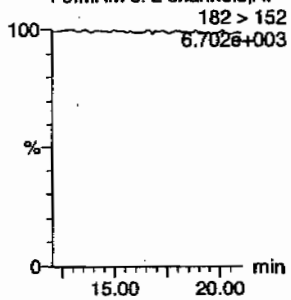
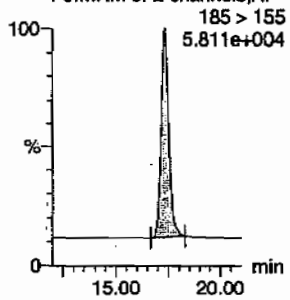
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA.qld, Time: Tue Jan 19 10:59:58 2010

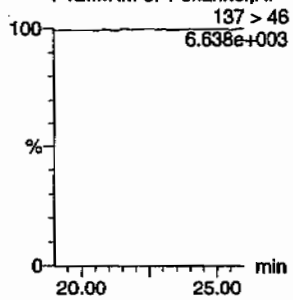
24-dinitrotoluene



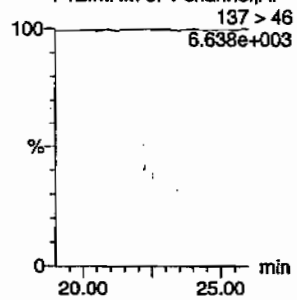
26-dinitrotoluene-d3



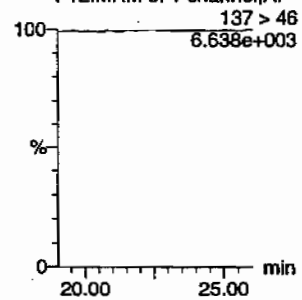
2-Nitrotoluene



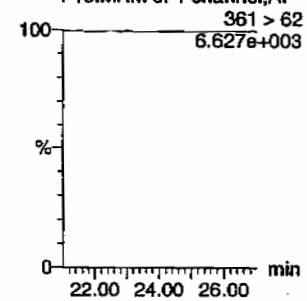
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/ml	%Rec	%Dev	S/N
XIBLK01	HMX	176 > 102			3722.375									
XIBLK01	RDX	176 > 102			3722.375									
XIBLK01	135-Trinitrobenzene	213 > 183			3722.375									
XIBLK01	13-Dinitrobenzene-d4	172 > 142	12.00	3722.375		3722.375	3722.375	bb			548.4866	109.7	9.7	375.6
XIBLK01	13-Dinitrobenzene	168 > 138			3722.375									
XIBLK01	Tetryl	241 > 181			3722.375									
XIBLK01	Nitrobenzene	123 > 46			3722.375									
XIBLK01	4-Amino-26-dinitrotoluene	197 > 167			21999.465									
XIBLK01	2-Amino-46-dinitrotoluene	197 > 180			21999.465									
XIBLK01	246-Trinitrotoluene	227 > 210			21999.465									
XIBLK01	34-dinitrotoluene	182 > 152			21999.465									
XIBLK01	26-dinitrotoluene	182 > 152			21999.465									
XIBLK01	24-dinitrotoluene	182 > 152			21999.465									
XIBLK01	26-dinitrotoluene-d3	185 > 155	17.33	21999.465		21999.465	21999.465	bb			599.6178	119.9	19.9	2732.8
XIBLK01	2-Nitrotoluene	137 > 46			21999.465									
XIBLK01	4-Nitrotoluene	137 > 46			21999.465									
XIBLK01	3-Nitrotoluene	137 > 46			21999.465									
XIBLK01	PETN	361 > 62			21999.465									

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4

Explosives Initial Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10–1130

Lab Code: GEL

Lab Sample ID: XIBLK01

Analysis Date: 20–JAN–10 10:28

GEL Data File: EXS01200001.wiff

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

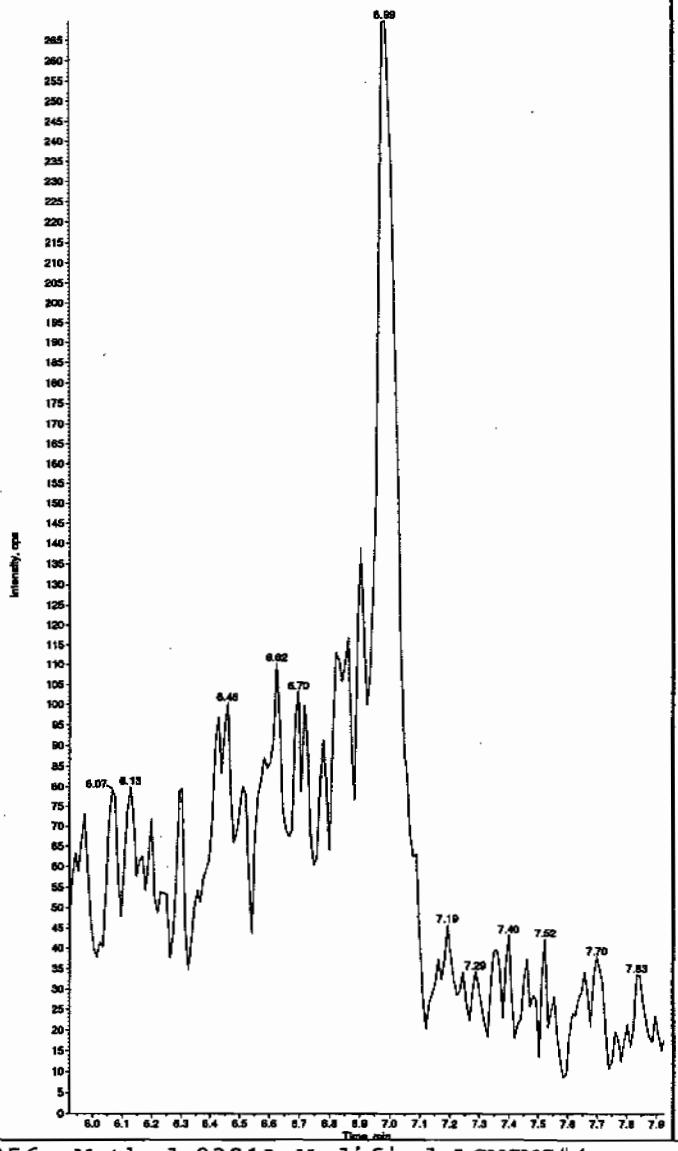
Compound	True	Found (ug/L)
2,4–Diamino–6–nitrotoluene	0	0
2,6–Diamino–4–nitrotoluene	0	0
3,4–Dinitrotoluene	0	0
tris(o–cresyl) phosphate	0	1.15
TATB	0	0
3,5–Dinitroaniline	0	0

Sler 1/21/10

Sample Name: "XIBLK01" Sample ID: "|1|LER" File: "EXS01200001.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 10:28:43 AM

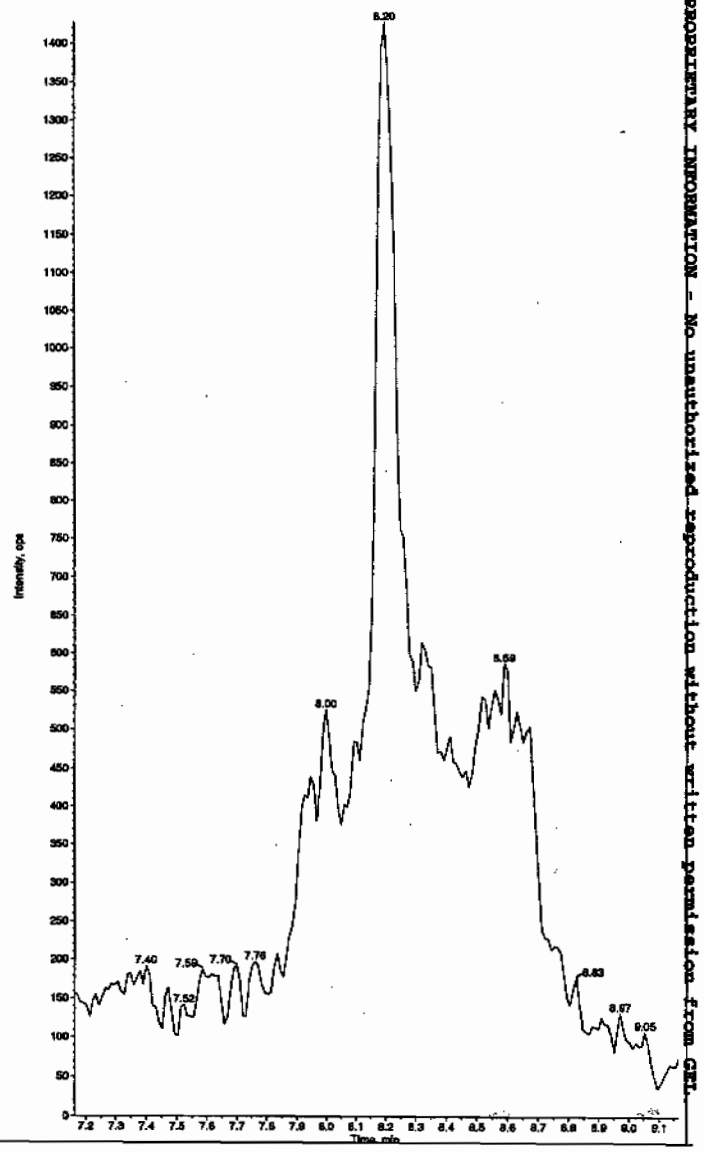
Modified: No



Sample Name: "XIBLK01" Sample ID: "|1|LER" File: "EXS01200001.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 10:28:43 AM

Modified: No



Hmm 01/21/10

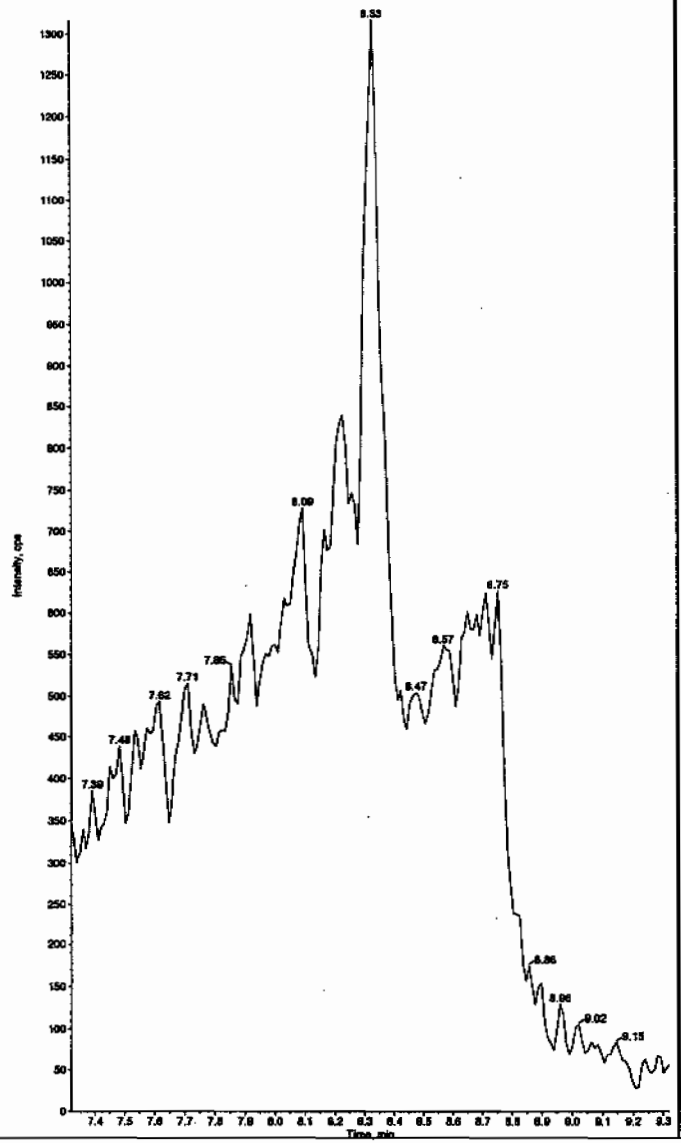
*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL

Sample Name: "XIBLK01" Sample ID: "[1]LER" File: "EXS01200001.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 10:28:43 AM

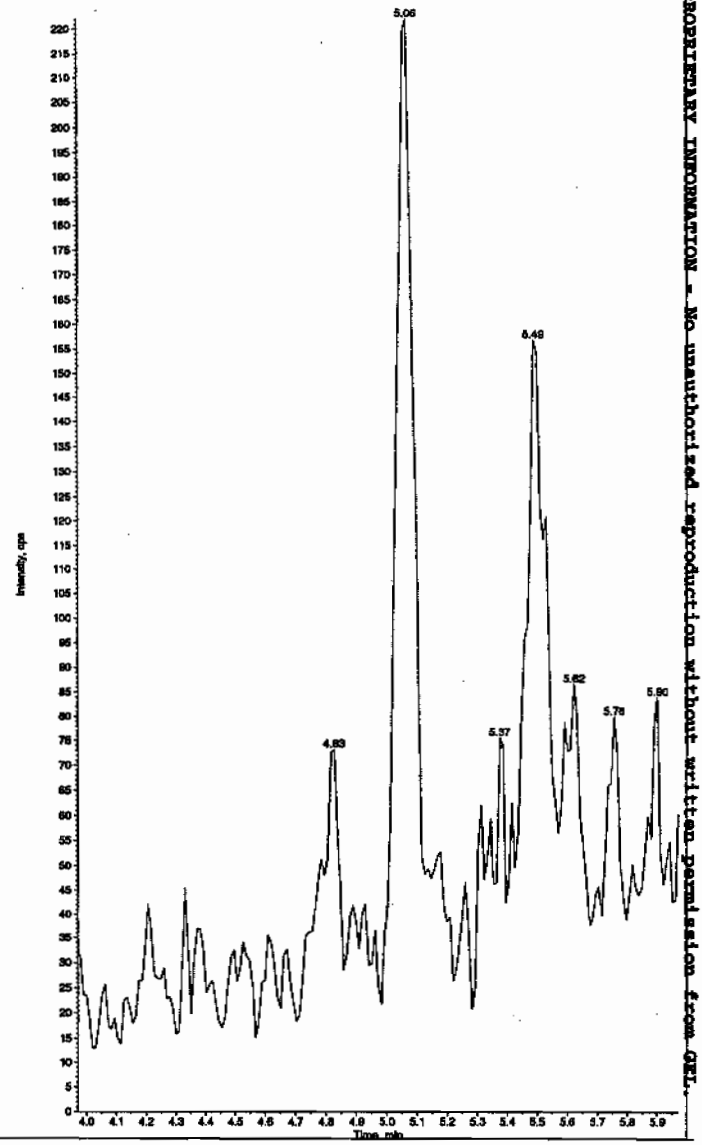
Modified: No



Sample Name: "XIBLK01" Sample ID: "[1]LER" File: "EXS01200001.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 10:28:43 AM

Modified: No



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

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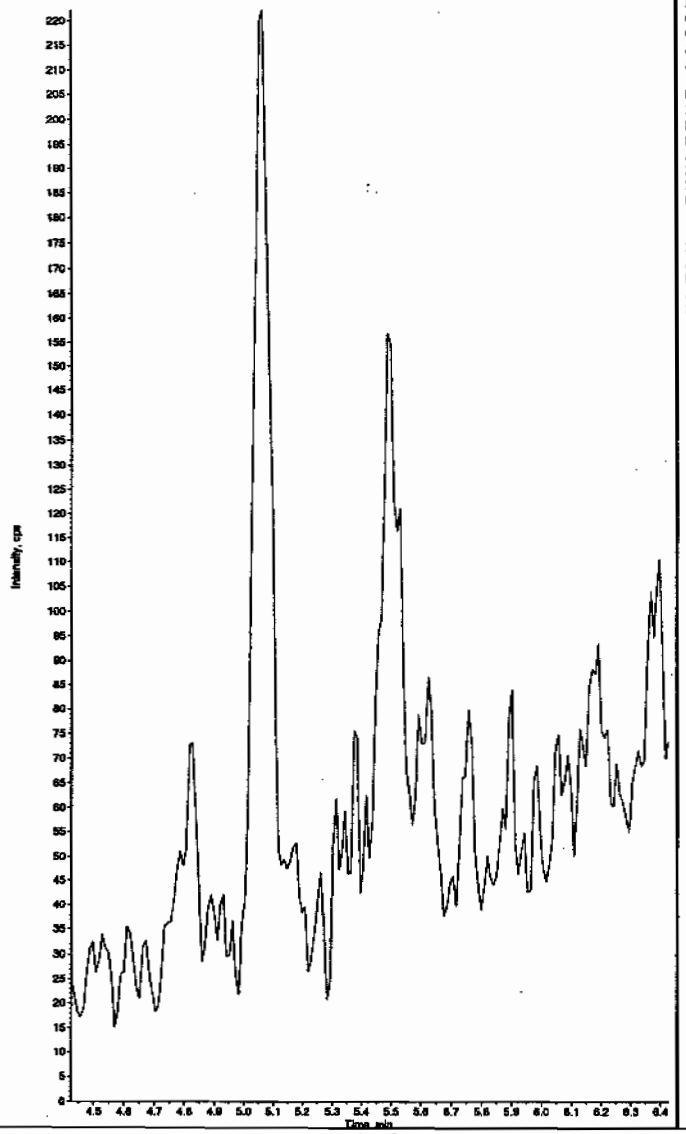
Sample Name: "XIBLK01" Sample ID: "[1]LER" File: "EXS01200001.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 10:28:43 AM

Modified: No

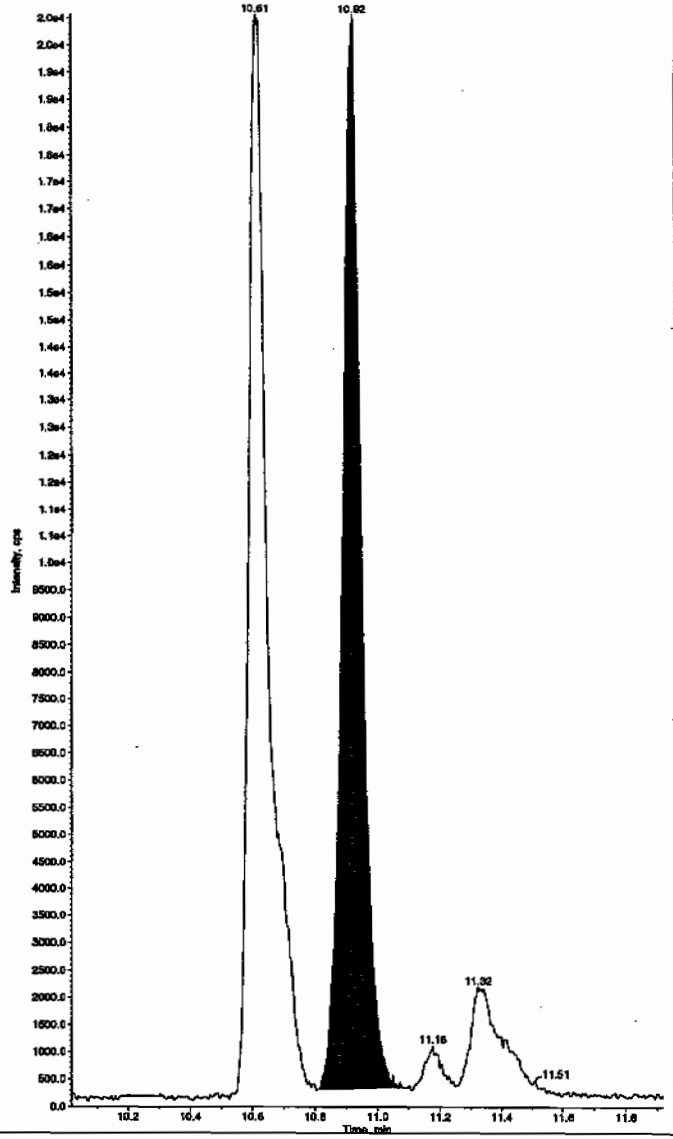


Sample Name: "XIBLK01" Sample ID: "[1]LER" File: "EXS01200001.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 1.15 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 10:28:43 AM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.9 min
Area: 5.57e+004 counts
Height: 19742.895 cps
Start Time: 10.8 min
End Time: 11.1 min



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

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4

Explosives Initial Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10–1130

Lab Code: GEL

Lab Sample ID: XIBLK01

Analysis Date: 20–JAN–10 10:45

GEL Data File: EXS01200002.wiff

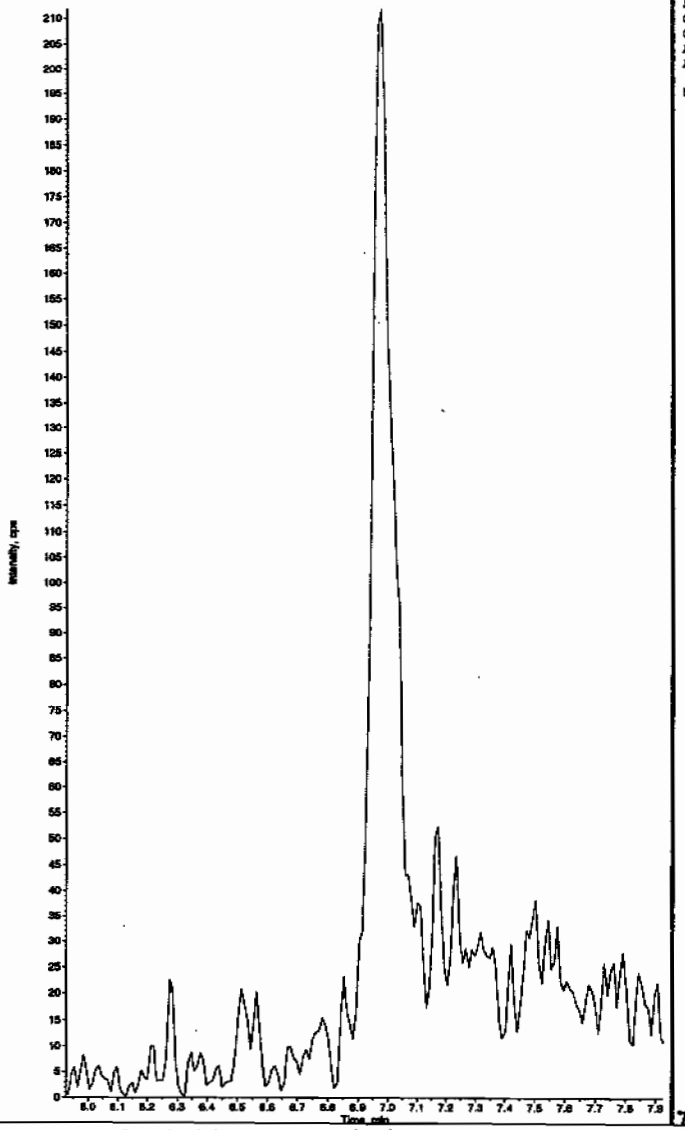
Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

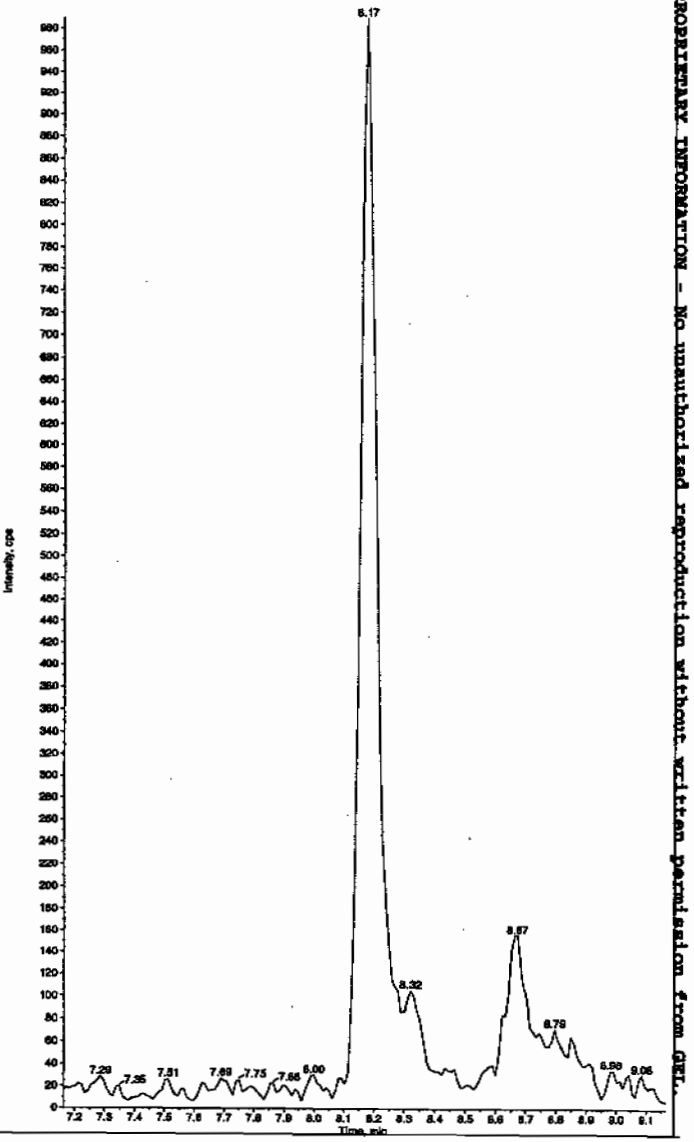
Compound	True	Found (ug/L)
3,4–Dinitrotoluene	0	0
tris(o–cresyl) phosphate	0	.167
TATB	0	0
3,5–Dinitroaniline	0	0
2,4–Diamino–6–nitrotoluene	0	0
2,6–Diamino–4–nitrotoluene	0	0

Lan 1/21/10

Sample Name: "XIBLK01" Sample ID: "[1]LER" File: "EXS01200002.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_B" Annotation: ""
Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 10:45:29 AM
Modified: No



Sample Name: "XIBLK01" Sample ID: "[1]LER" File: "EXS01200002.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""
Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 10:45:29 AM
Modified: No



Hnm 01/21/10

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

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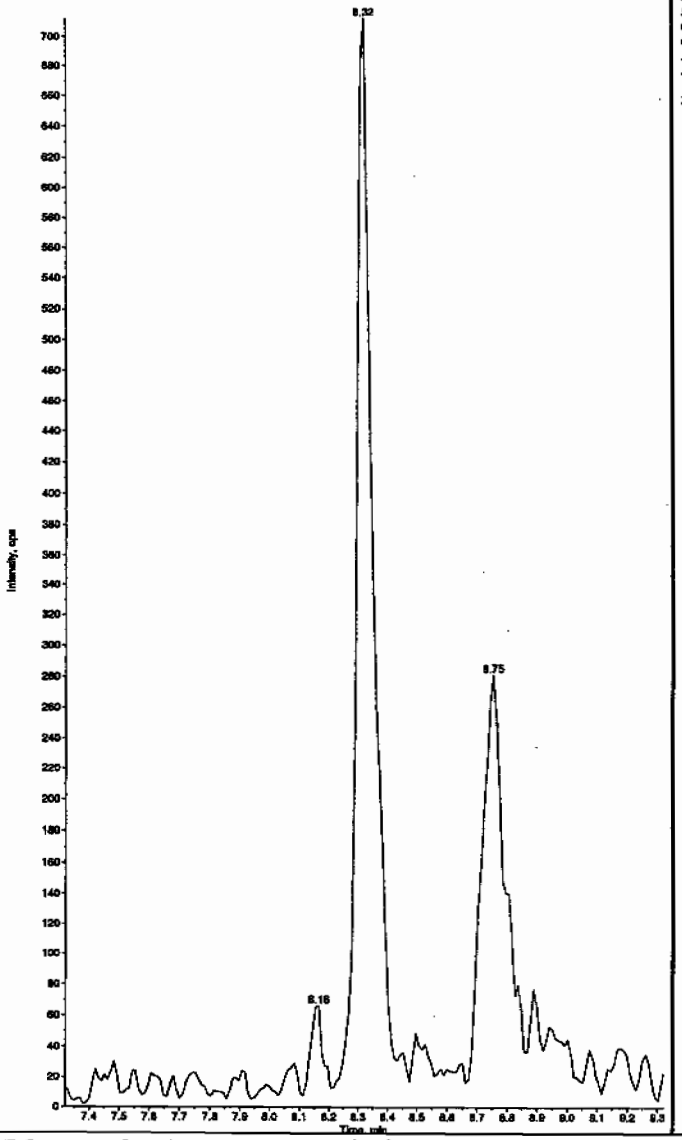
Sample Name: "XIBLK01" Sample ID: "[1]LER" File: "EXS01200002.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 10:45:29 AM

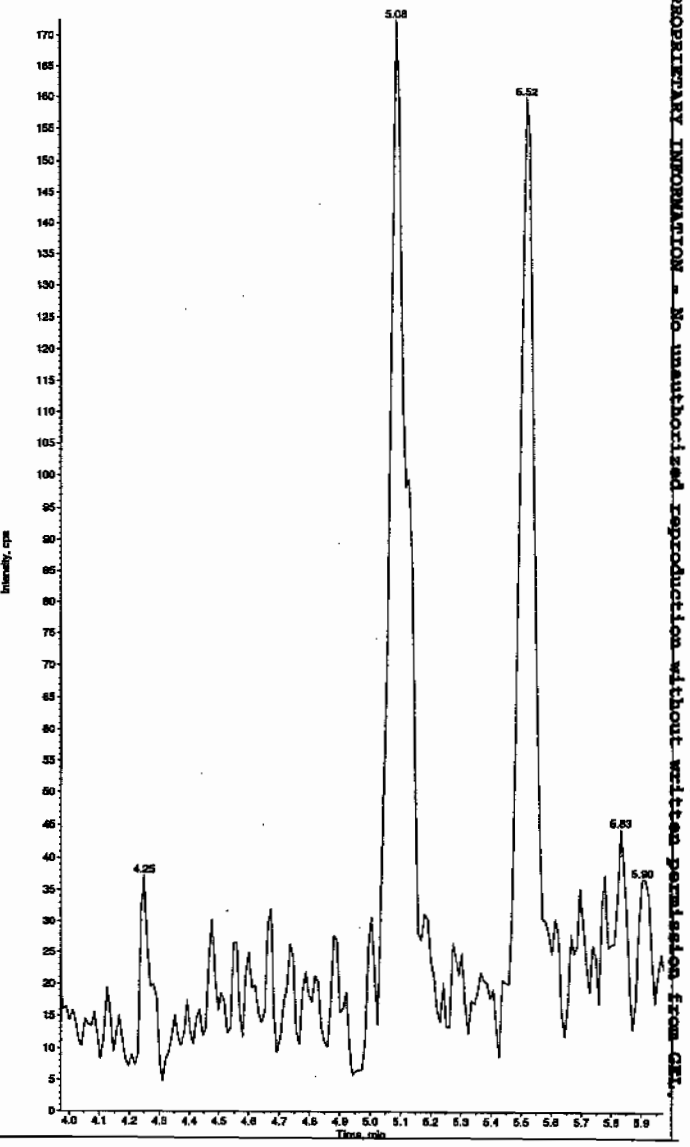
Modified: No



Sample Name: "XIBLK01" Sample ID: "[1]LER" File: "EXS01200002.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 10:45:29 AM

Modified: No



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

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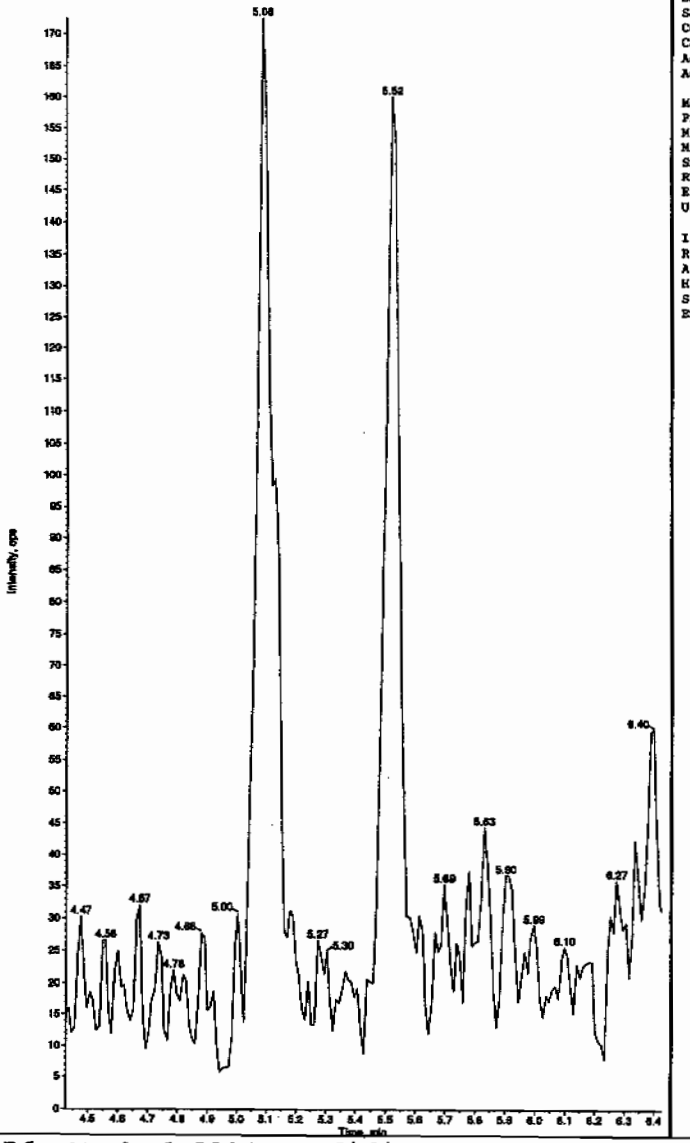
Sample Name: "XIBLK01" Sample ID: "[1]LER" File: "EXS01200002.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 10:45:29 AM

Modified: No

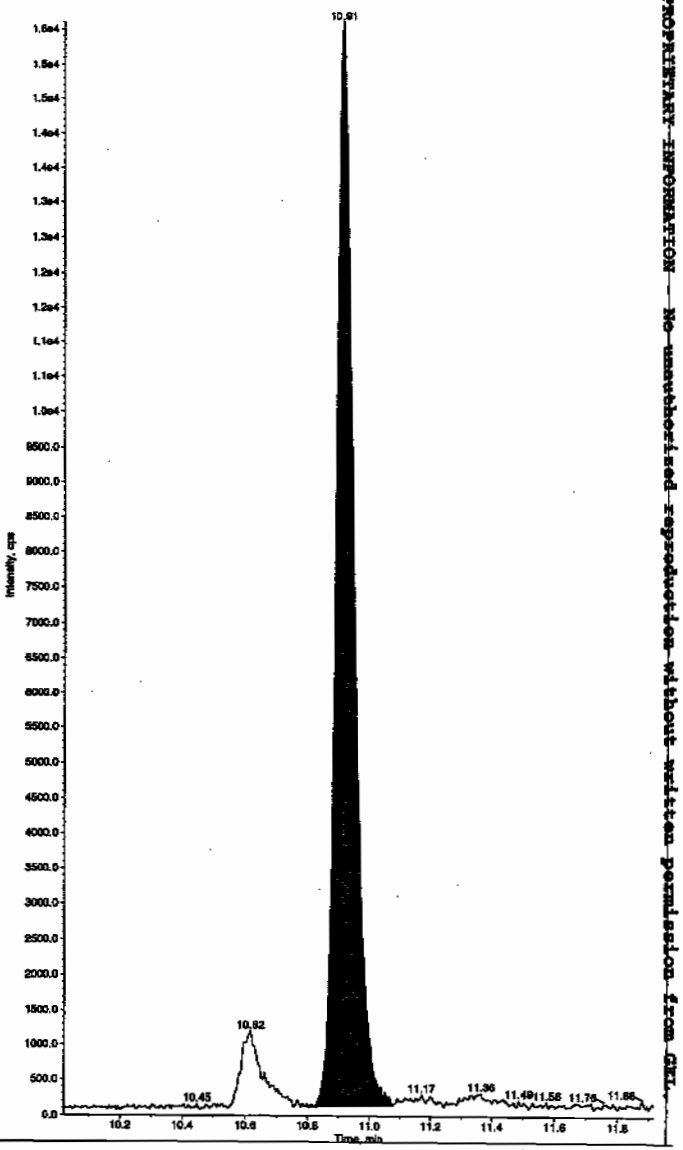


Sample Name: "XIBLK01" Sample ID: "[1]LER" File: "EXS01200002.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.167 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 10:45:29 AM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.9 min
Area: 6.30e+004 counts
Height: 15486.757 cps
Start Time: 10.8 min
End Time: 11.1 min



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4A
Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10–1130

Lab Code: GEL

Lab Sample ID: XIBLK02

Analysis Date: 18–JAN–10 17:59

GEL Data File: EXP0118009a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4–Dinitrotoluene	0	0
1,3,5–Trinitrobenzene	0	0
1,3–Dinitrobenzene–d4	500	469.445
2,4,6–Trinitrotoluene	0	0
2,4–Dinitrotoluene	0	0
2,6–Dinitrotoluene	0	0
2,6–Dinitrotoluene–d3	500	491.076
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

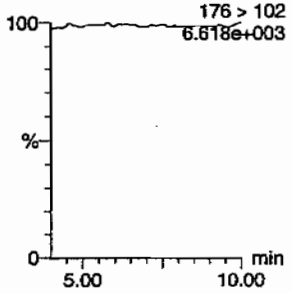
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA.qld, Time: Tue Jan 19 10:59:58 2010

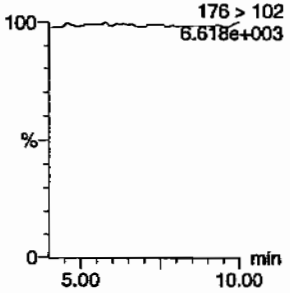
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118009a
Date: 18-Jan-2010
Time: 17:59:22
ID: XIBLK02
Vial: 1:1,A

MAP 1/19/10

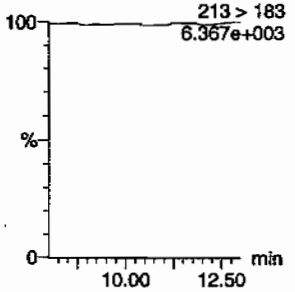
HMX
F2:MRM of 1 channel,AP-
176 > 102
6.618e+003



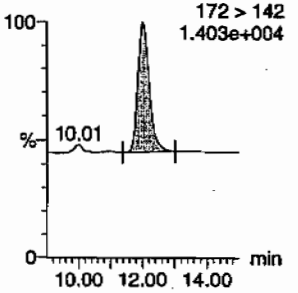
RDX
F2:MRM of 1 channel,AP-
176 > 102
6.618e+003



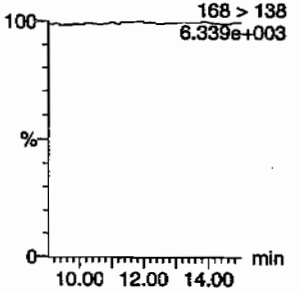
135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
6.367e+003



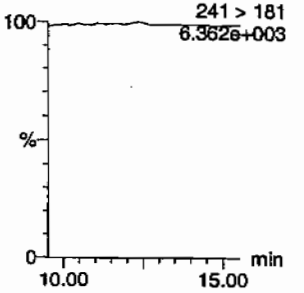
13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
1.403e+004



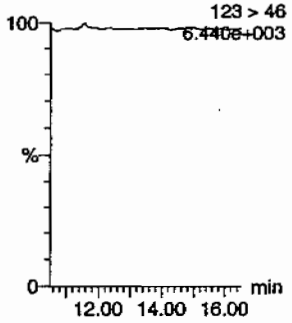
13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
6.339e+003



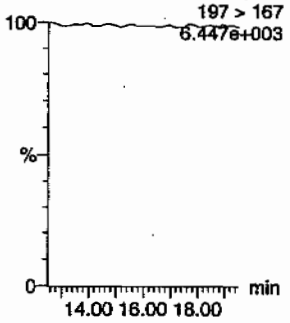
Tetryl
F6:MRM of 1 channel,AP-
241 > 181
6.362e+003



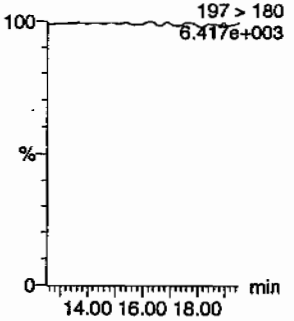
Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
6.440e+003



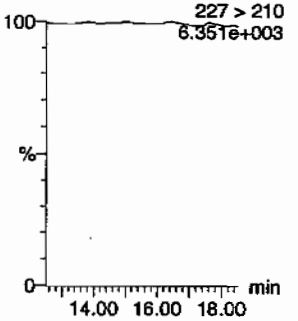
4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 167
6.447e+003



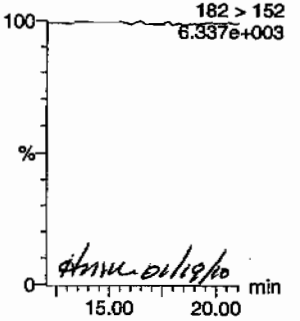
2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
6.417e+003



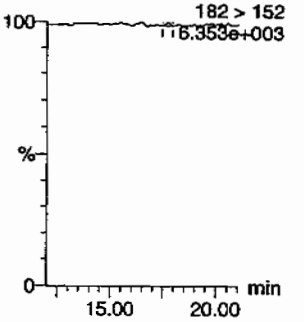
246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
6.351e+003



34-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
6.337e+003



26-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
6.353e+003



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

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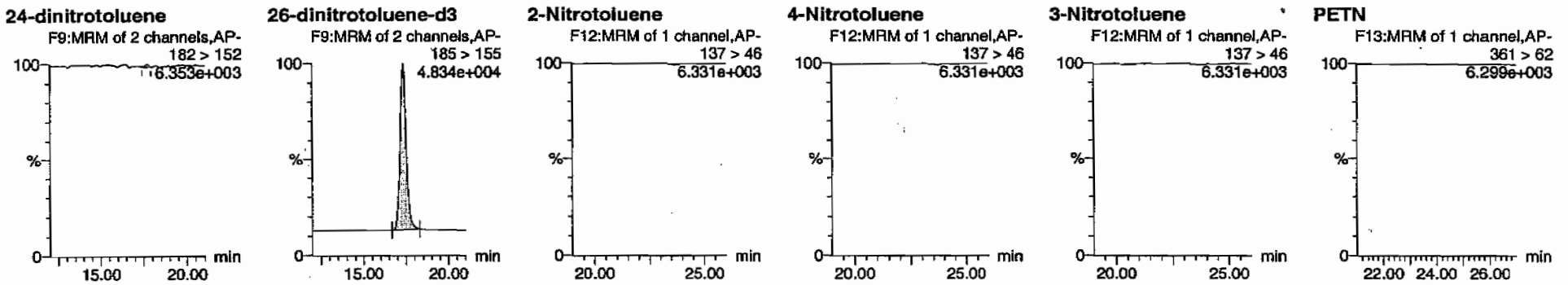
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA.qld, Time: Tue Jan 19 10:59:58 2010



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N
XIBLK02	HMX	176 > 102			3185.947									
XIBLK02	RDX	176 > 102			3185.947									
XIBLK02	135-Trinitrobenzene	213 > 183			3185.947									
XIBLK02	13-Dinitrobenzene-d4	172 > 142	12.00	3185.947		3185.947	3185.947	bb			469.4447	93.9	-6.1	154.4
XIBLK02	13-Dinitrobenzene	168 > 138			3185.947									
XIBLK02	Tetryl	241 > 181			3185.947									
XIBLK02	Nitrobenzene	123 > 46			3185.947									
XIBLK02	4-Amino-26-dinitrotoluene	197 > 167			18017.145									
XIBLK02	2-Amino-46-dinitrotoluene	197 > 180			18017.145									
XIBLK02	246-Trinitrotoluene	227 > 210			18017.145									
XIBLK02	34-dinitrotoluene	182 > 152			18017.145									
XIBLK02	26-dinitrotoluene	182 > 152			18017.145			MM-	19-Jan-10	10:53:00				
XIBLK02	24-dinitrotoluene	182 > 152			18017.145			MM-	19-Jan-10	10:56:51				
XIBLK02	26-dinitrotoluene-d3	185 > 155	17.31	18017.145		18017.145	18017.145	bb			491.0756	98.2	-1.8	1816.2
XIBLK02	2-Nitrotoluene	137 > 46			18017.145									
XIBLK02	4-Nitrotoluene	137 > 46			18017.145									
XIBLK02	3-Nitrotoluene	137 > 46			18017.145									
XIBLK02	PETN	361 > 62			18017.145									

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

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10–1130

Lab Code: GEL

Lab Sample ID: XIBLK03

Analysis Date: 18–JAN–10 18:58

GEL Data File: EXP0118011a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
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	464.129
2,4,6–Trinitrotoluene	0	0
2,4–Dinitrotoluene	0	0
2,6–Dinitrotoluene	0	0
2,6–Dinitrotoluene–d3	500	483.307
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

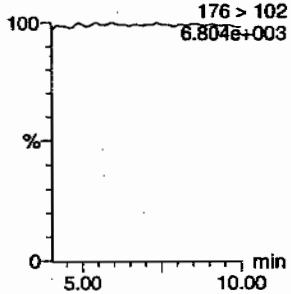
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA.qld, Time: Tue Jan 19 10:59:58 2010

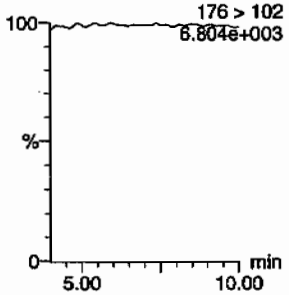
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118011a
Date: 18-Jan-2010
Time: 18:58:20
ID: XIBLK03
Vial: 1:1,A

MATP 1/19/10

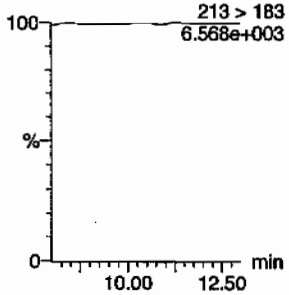
HMX
F2:MRM of 1 channel,AP-
176 > 102
6.804e+003



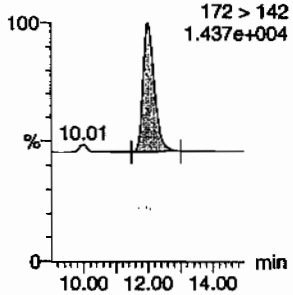
RDX
F2:MRM of 1 channel,AP-
176 > 102
6.804e+003



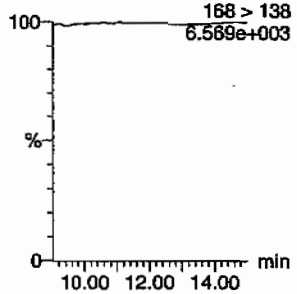
135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
6.568e+003



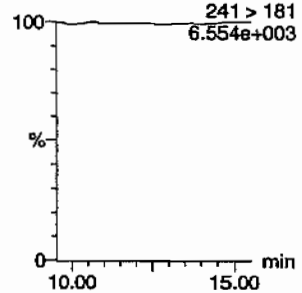
13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
1.437e+004



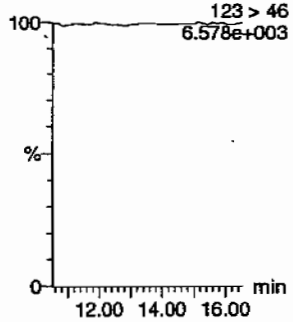
13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
6.569e+003



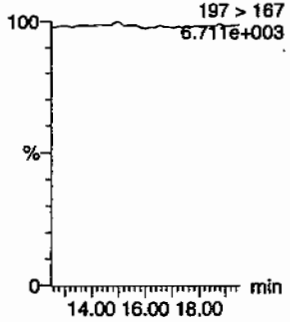
Tetryl
F6:MRM of 1 channel,AP-
241 > 181
6.554e+003



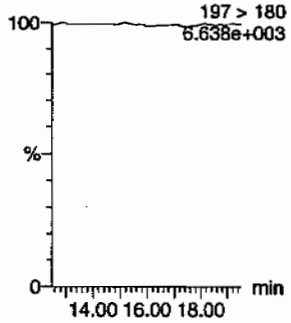
Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
6.578e+003



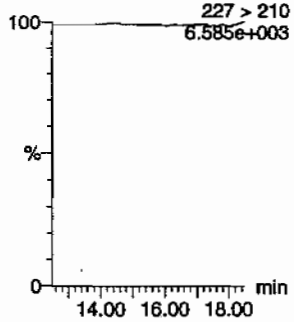
4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 167
6.711e+003



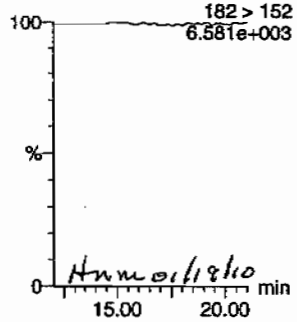
2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
6.638e+003



246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
6.585e+003

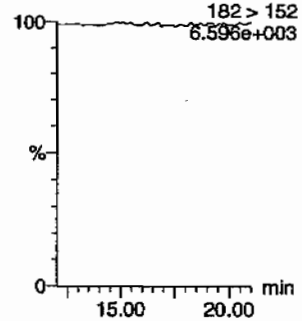


34-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
6.581e+003



Hmm 01/18/10

26-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
6.596e+003



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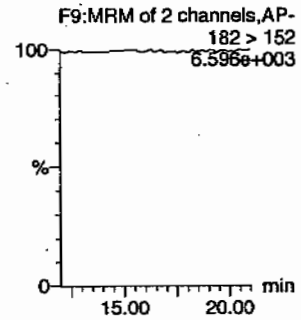
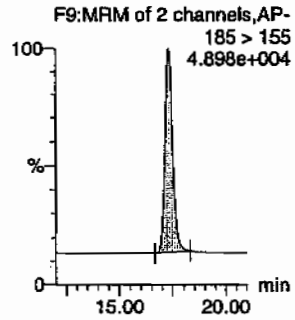
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA.qld, Time: Tue Jan 19 10:59:58 2010

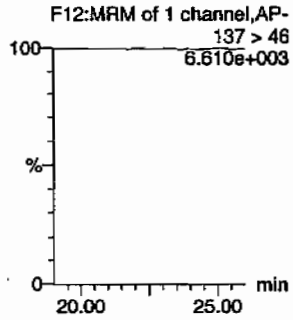
24-dinitrotoluene



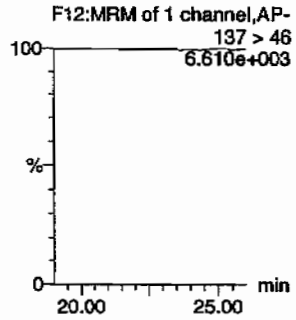
26-dinitrotoluene-d3



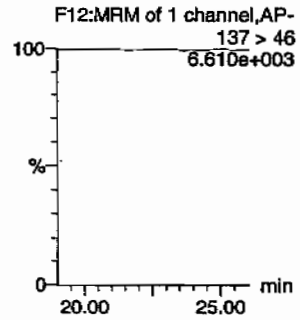
2-Nitrotoluene



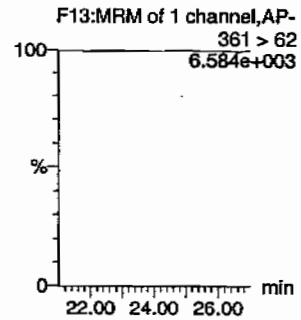
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N
XIBLK03	HMX	176 > 102			3149.868									
XIBLK03	RDX	176 > 102			3149.868									
XIBLK03	135-Trinitrobenzene	213 > 183			3149.868									
XIBLK03	13-Dinitrobenzene-d4	172 > 142	12.00	3149.868		3149.868	3149.868	bb			464.1285	92.8	-7.2	336.5
XIBLK03	13-Dinitrobenzene	168 > 138			3149.868									
XIBLK03	Tetryl	241 > 181			3149.868									
XIBLK03	Nitrobenzene	123 > 46			3149.868									
XIBLK03	4-Amino-26-dinitrotoluene	197 > 167			17732.127									
XIBLK03	2-Amino-46-dinitrotoluene	197 > 180			17732.127									
XIBLK03	246-Trinitrotoluene	227 > 210			17732.127									
XIBLK03	34-dinitrotoluene	182 > 152			17732.127									
XIBLK03	26-dinitrotoluene	182 > 152			17732.127									
XIBLK03	24-dinitrotoluene	182 > 152			17732.127									
XIBLK03	26-dinitrotoluene-d3	185 > 155	17.31	17732.127		17732.127	17732.127	bb			483.3072	96.7	-3.3	818.5
XIBLK03	2-Nitrotoluene	137 > 46			17732.127									
XIBLK03	4-Nitrotoluene	137 > 46			17732.127									
XIBLK03	3-Nitrotoluene	137 > 46			17732.127									
XIBLK03	PETN	361 > 62			17732.127									

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

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4A
Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10–1130

Lab Code: GEL

Lab Sample ID: XIBLK04

Analysis Date: 18–JAN–10 23:23

GEL Data File: EXP0118020a

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	472.082
2,4,6–Trinitrotoluene	0	0
2,4–Dinitrotoluene	0	0
2,6–Dinitrotoluene	0	0
2,6–Dinitrotoluene–d3	500	530.135
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

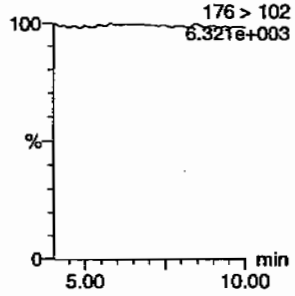
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA.qld, Time: Tue Jan 19 10:59:58 2010

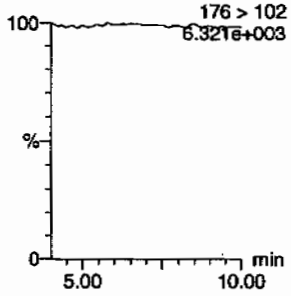
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118020a
Date: 18-Jan-2010
Time: 23:23:38
ID: XIBLK04
Vial: 1:1,A

MMP 1/19/10

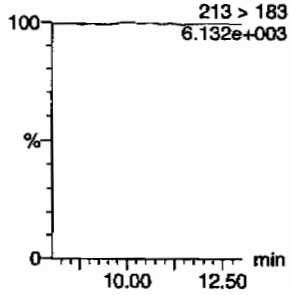
HMX
F2:MRM of 1 channel,AP-
176 > 102
6.321e+003



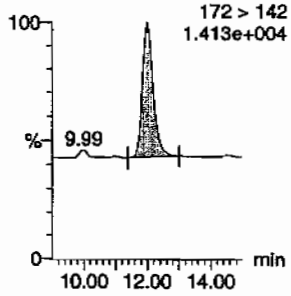
RDX
F2:MRM of 1 channel,AP-
176 > 102
6.321e+003



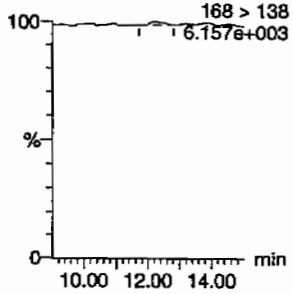
135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
6.132e+003



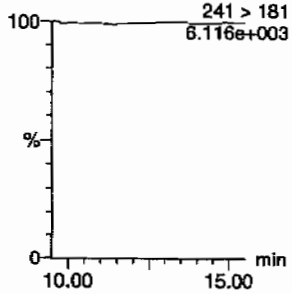
13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
1.413e+004



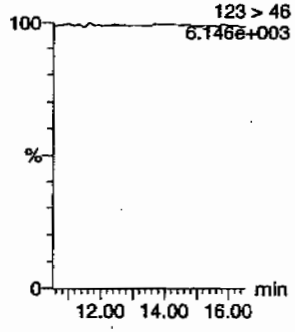
13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
6.157e+003



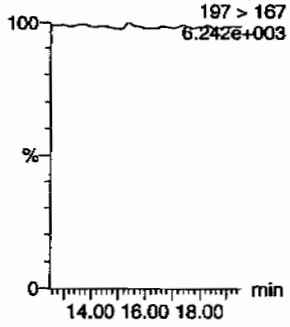
Tetryl
F6:MRM of 1 channel,AP-
241 > 181
6.116e+003



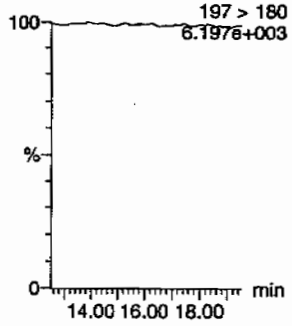
Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
6.146e+003



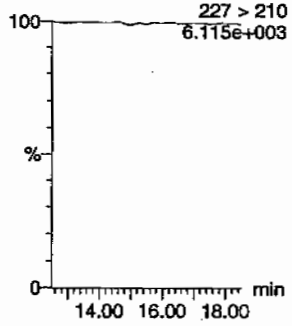
4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 167
6.242e+003



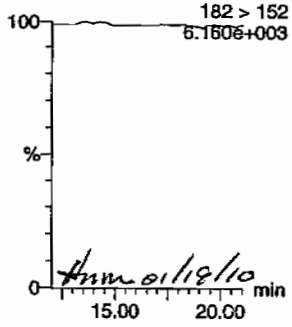
2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
6.197e+003



246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
6.115e+003

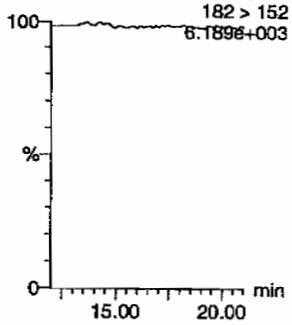


34-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
6.160e+003



Amm 01/19/10

26-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
6.189e+003



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

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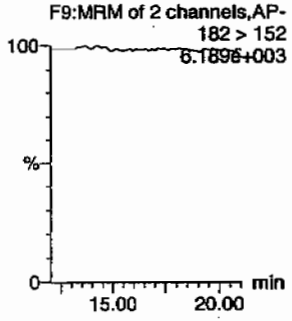
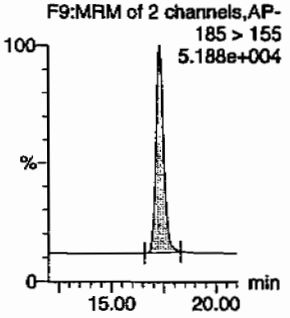
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA.qld, Time: Tue Jan 19 10:59:58 2010

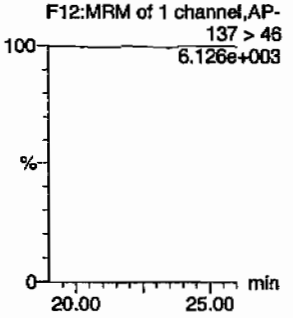
24-dinitrotoluene



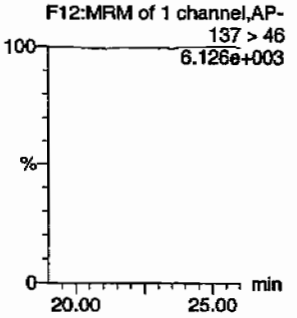
26-dinitrotoluene-d3



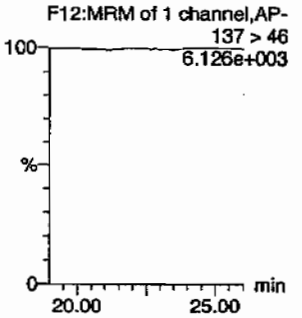
2-Nitrotoluene



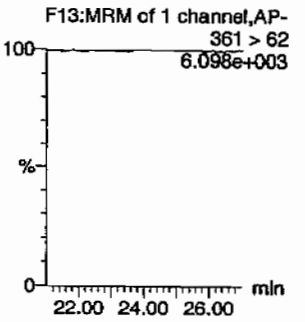
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	Conc/ml	%Rec	%Dev	S/N
XIBLK04	HMX	176 > 102			3203.848									
XIBLK04	RDX	176 > 102			3203.848									
XIBLK04	135-Trinitrobenzene	213 > 183			3203.848									
XIBLK04	13-Dinitrobenzene-d4	172 > 142	11.97	3203.848		3203.848	3203.848	bb			472.0824	94.4	-5.6	317.6
XIBLK04	13-Dinitrobenzene	168 > 138			3203.848			MM-	19-Jan-10	10:45:50				
XIBLK04	Tetryl	241 > 181			3203.848									
XIBLK04	Nitrobenzene	123 > 46			3203.848									
XIBLK04	4-Amino-26-dinitrotoluene	197 > 167			19450.213									
XIBLK04	2-Amino-46-dinitrotoluene	197 > 180			19450.213									
XIBLK04	246-Trinitrotoluene	227 > 210			19450.213									
XIBLK04	34-dinitrotoluene	182 > 152			19450.213									
XIBLK04	26-dinitrotoluene	182 > 152			19450.213									
XIBLK04	24-dinitrotoluene	182 > 152			19450.213									
XIBLK04	26-dinitrotoluene-d3	185 > 155	17.29	19450.213		19450.213	19450.213	bb			530.1354	106.0	6.0	1988.7
XIBLK04	2-Nitrotoluene	137 > 46			19450.213									
XIBLK04	4-Nitrotoluene	137 > 46			19450.213									
XIBLK04	3-Nitrotoluene	137 > 46			19450.213									
XIBLK04	PETN	361 > 62			19450.213									

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

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4A
Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10–1130

Lab Code: GEL

Lab Sample ID: XIBLK05

Analysis Date: 19–JAN–10 05:47

GEL Data File: EXP0118033a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

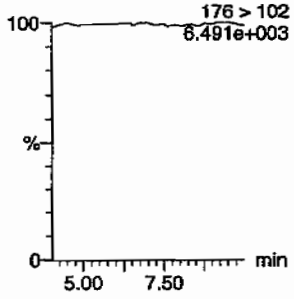
Compound	True	Found (ug/L)
m–Dinitrobenzene	0	0
m–Nitrotoluene	0	0
o–Nitrotoluene	0	0
p–Nitrotoluene	0	0
3,4–Dinitrotoluene	0	0
1,3,5–Trinitrobenzene	0	0
1,3–Dinitrobenzene–d4	500	455.774
2,4,6–Trinitrotoluene	0	0
2,4–Dinitrotoluene	0	0
2,6–Dinitrotoluene	0	0
2,6–Dinitrotoluene–d3	500	496.57
2–Amino–4,6–dinitrotoluene	0	0
4–Amino–2,6–dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA.qld, Time: Tue Jan 19 10:59:58 2010

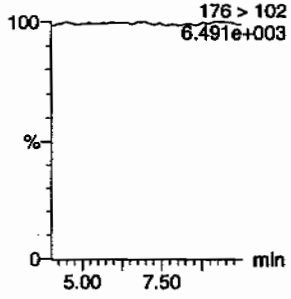
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118033a
Date: 19-Jan-2010
Time: 05:47:12
ID: XIBLK05
Vial: 1:1,A

MMT 1/19/10

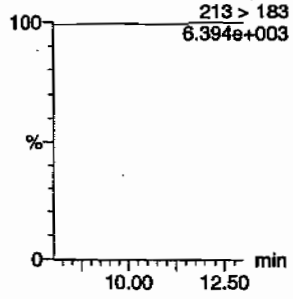
HMX
F2:MRM of 1 channel,AP-
176 > 102
6.491e+003



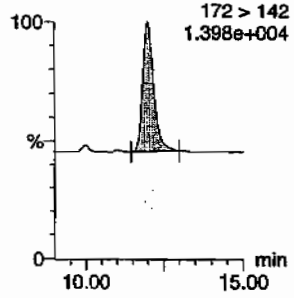
RDX
F2:MRM of 1 channel,AP-
176 > 102
6.491e+003



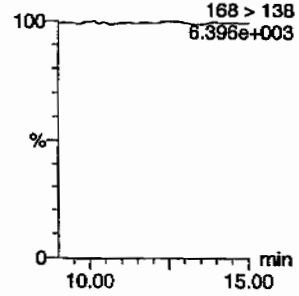
135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
6.394e+003



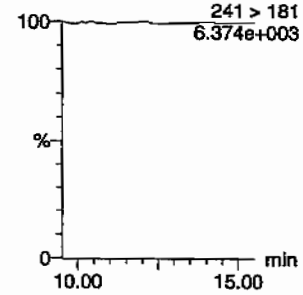
13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
1.398e+004



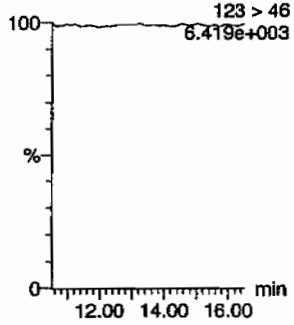
13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
6.396e+003



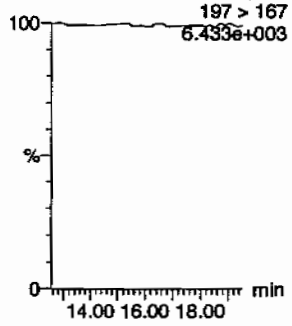
Tetryl
F6:MRM of 1 channel,AP-
241 > 181
6.374e+003



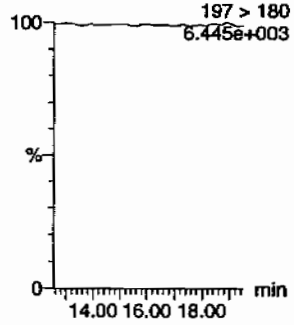
Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
6.419e+003



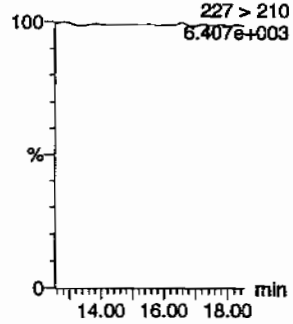
4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 167
6.433e+003



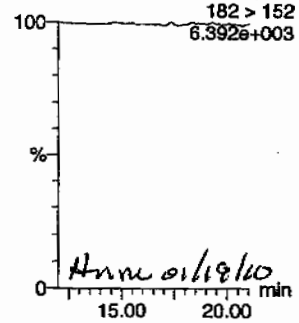
2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
6.445e+003



246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
6.407e+003

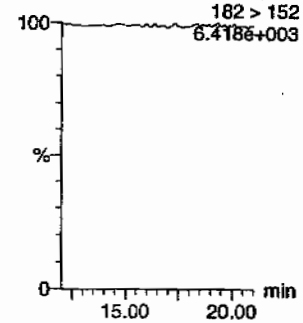


34-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
6.392e+003



Hmm 01/18/10

26-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
6.418e+003



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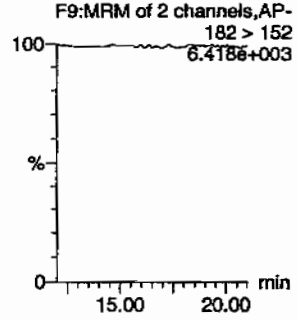
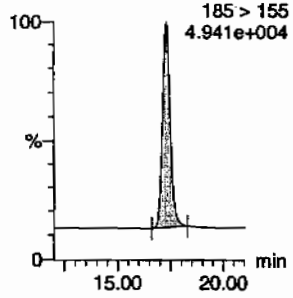
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA.qld, Time: Tue Jan 19 10:59:58 2010

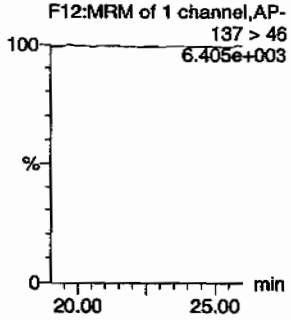
24-dinitrotoluene



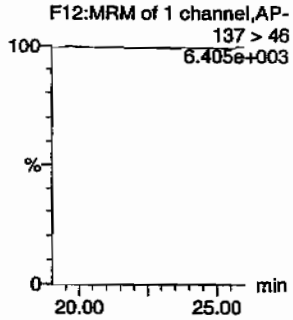
26-dinitrotoluene-d3



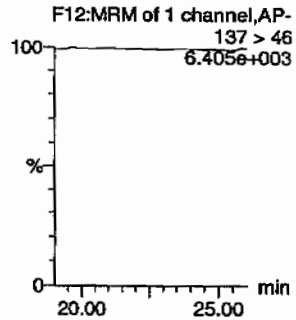
2-Nitrotoluene



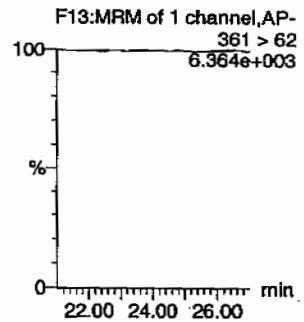
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N
XIBLK05	HMX	176 > 102			3093.171									
XIBLK05	RDX	176 > 102			3093.171									
XIBLK05	135-Trinitrobenzene	213 > 183			3093.171									
XIBLK05	13-Dinitrobenzene-d4	172 > 142	11.97	3093.171		3093.171	3093.171	bb			455.7743	91.2	-8.8	395.3
XIBLK05	13-Dinitrobenzene	168 > 138			3093.171									
XIBLK05	Tetryl	241 > 181			3093.171									
XIBLK05	Nitrobenzene	123 > 46			3093.171									
XIBLK05	4-Amino-26-dinitrotoluene	197 > 167			18218.725									
XIBLK05	2-Amino-46-dinitrotoluene	197 > 180			18218.725									
XIBLK05	246-Trinitrotoluene	227 > 210			18218.725									
XIBLK05	34-dinitrotoluene	182 > 152			18218.725									
XIBLK05	26-dinitrotoluene	182 > 152			18218.725									
XIBLK05	24-dinitrotoluene	182 > 152			18218.725									
XIBLK05	26-dinitrotoluene-d3	185 > 155	17.30	18218.725		18218.725	18218.725	bb			496.5699	99.3	-0.7	1078.6
XIBLK05	2-Nitrotoluene	137 > 46			18218.725									
XIBLK05	4-Nitrotoluene	137 > 46			18218.725									
XIBLK05	3-Nitrotoluene	137 > 46			18218.725									
XIBLK05	PETN	361 > 62			18218.725									

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1130

Lab Code: GEL

Lab Sample ID: XIBLK06

Analysis Date: 19-JAN-10 09:43

GEL Data File: EXP0118041a

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	454.25
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	439.42
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

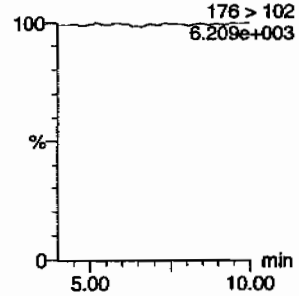
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA.qld, Time: Tue Jan 19 10:59:58 2010

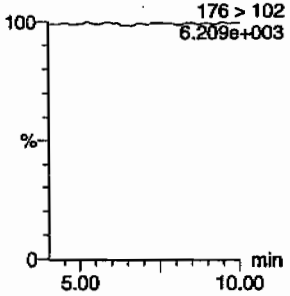
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118041a
Date: 19-Jan-2010
Time: 09:43:25
ID: XIBLK06
Vial: 1:1,A

MMT 1/19/10

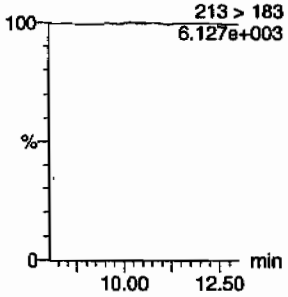
HMX
F2:MRM of 1 channel,AP-
176 > 102
6.209e+003



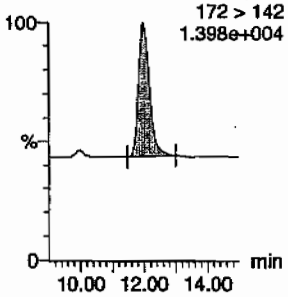
RDX
F2:MRM of 1 channel,AP-
176 > 102
6.209e+003



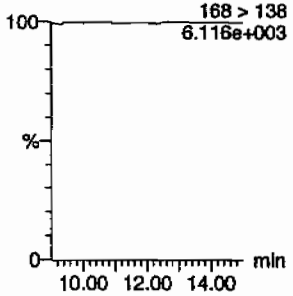
135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
6.127e+003



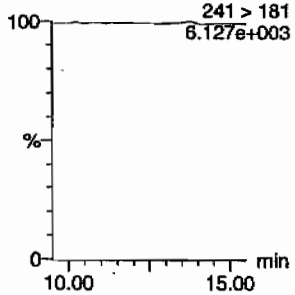
13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
1.398e+004



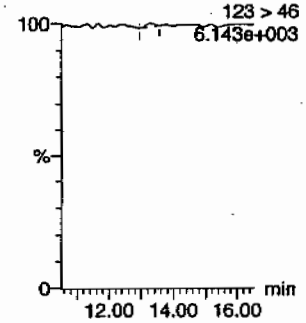
13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
6.116e+003



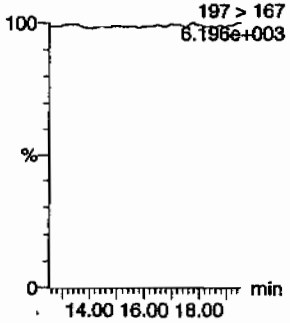
Tetryl
F6:MRM of 1 channel,AP-
241 > 181
6.127e+003



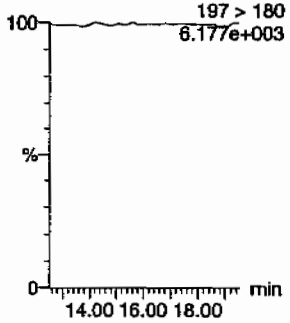
Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
6.143e+003



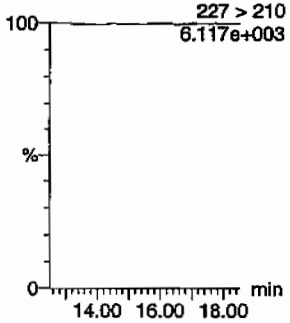
4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 167
6.196e+003



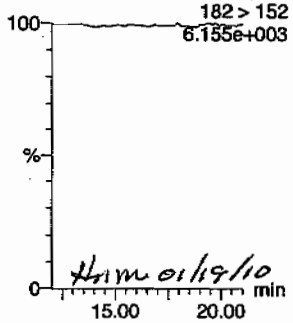
2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
6.177e+003



246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
6.117e+003

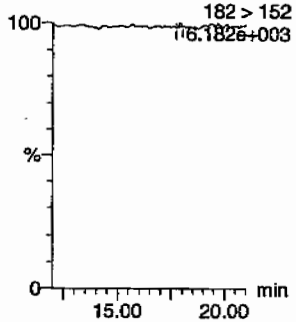


34-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
6.155e+003



HMM 01/19/10

26-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
6.182e+003



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

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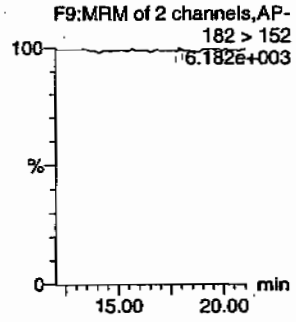
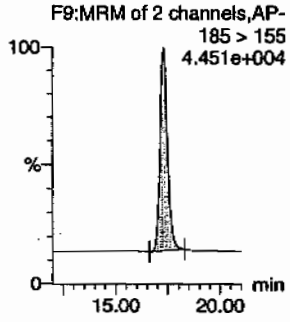
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA.qld, Time: Tue Jan 19 10:59:58 2010

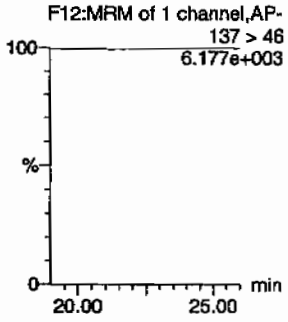
24-dinitrotoluene



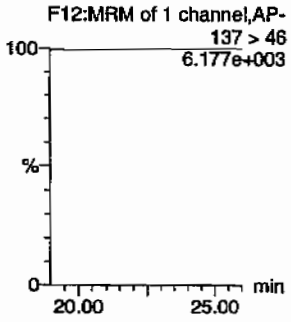
26-dinitrotoluene-d3



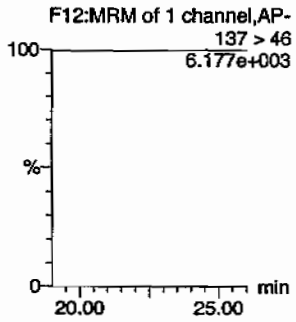
2-Nitrotoluene



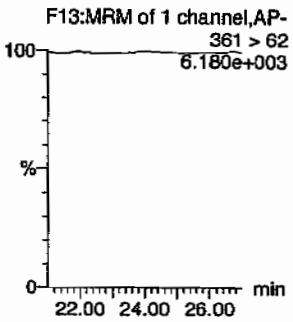
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/ml	%Rec	%Dev	S/N
XIBLK06	HMX	176 > 102			3082.826									
XIBLK06	RDX	176 > 102			3082.826									
XIBLK06	135-Trinitrobenzene	213 > 183			3082.826									
XIBLK06	13-Dinitrobenzene-d4	172 > 142	11.97	3082.826		3082.826	3082.826	bb			454.2500	90.8	-9.2	202.8
XIBLK06	13-Dinitrobenzene	168 > 138			3082.826									
XIBLK06	Tetryl	241 > 181			3082.826									
XIBLK06	Nitrobenzene	123 > 46			3082.826			MM-	19-Jan-10	10:46:25				
XIBLK06	4-Amino-26-dinitrotoluene	197 > 167			16121.945									
XIBLK06	2-Amino-46-dinitrotoluene	197 > 180			16121.945									
XIBLK06	246-Trinitrotoluene	227 > 210			16121.945									
XIBLK06	34-dinitrotoluene	182 > 152			16121.945									
XIBLK06	26-dinitrotoluene	182 > 152			16121.945			MM-	19-Jan-10	10:55:13				
XIBLK06	24-dinitrotoluene	182 > 152			16121.945			MM-	19-Jan-10	10:59:48				
XIBLK06	26-dinitrotoluene-d3	185 > 155	17.29	16121.945		16121.945	16121.945	bb			439.4200	87.9	-12.1	2145.0
XIBLK06	2-Nitrotoluene	137 > 46			16121.945									
XIBLK06	4-Nitrotoluene	137 > 46			16121.945									
XIBLK06	3-Nitrotoluene	137 > 46			16121.945									
XIBLK06	PETN	361 > 62			16121.945									

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4A
Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10–1130

Lab Code: GEL

Lab Sample ID: XIBLK07

Analysis Date: 19–JAN–10 16:07

GEL Data File: EXP0118054a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

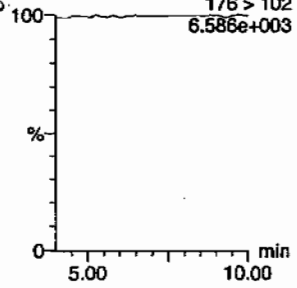
Compound	True	Found (ug/L)
Tetryl	0	0
m–Dinitrobenzene	0	0
m–Nitrotoluene	0	0
o–Nitrotoluene	0	0
p–Nitrotoluene	0	0
3,4–Dinitrotoluene	0	0
1,3,5–Trinitrobenzene	0	0
1,3–Dinitrobenzene–d4	500	264.495
2,4,6–Trinitrotoluene	0	0
2,4–Dinitrotoluene	0	0
2,6–Dinitrotoluene	0	0
2,6–Dinitrotoluene–d3	500	292.749
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

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA1.qld, Time: Wed Jan 20 09:06:02 2010

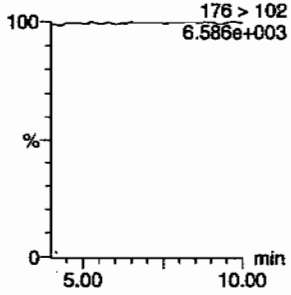
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118054a
Date: 19-Jan-2010
Time: 16:07:15
ID: XIBLK07
Vial: 1:1,A

MMT 1/20/10

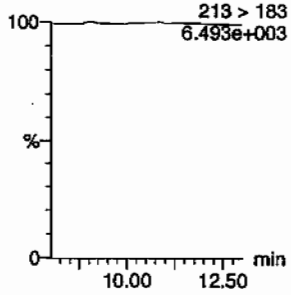
HMX
F2:MRM of 1 channel,AP-
176 > 102
6.586e+003



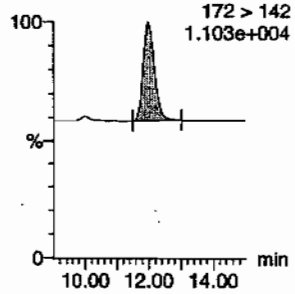
RDX
F2:MRM of 1 channel,AP-
176 > 102
6.586e+003



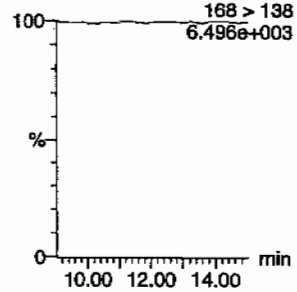
135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
6.493e+003



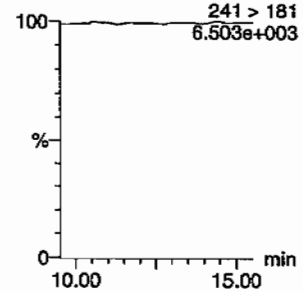
13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
1.103e+004



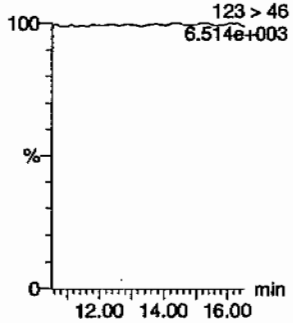
13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
6.496e+003



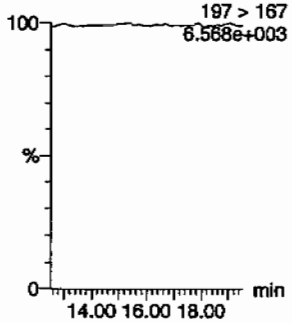
Tetryl
F6:MRM of 1 channel,AP-
241 > 181
6.503e+003



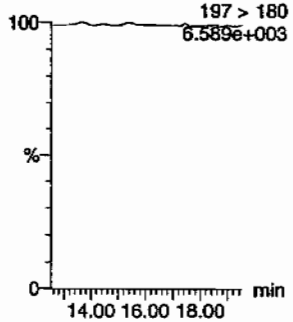
Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
6.514e+003



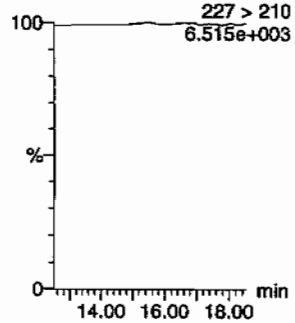
4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 167
6.568e+003



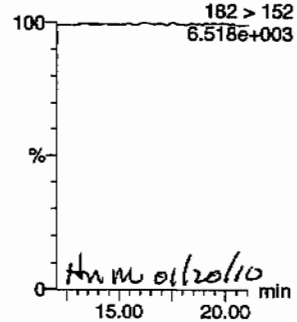
2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
6.589e+003



246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
6.515e+003

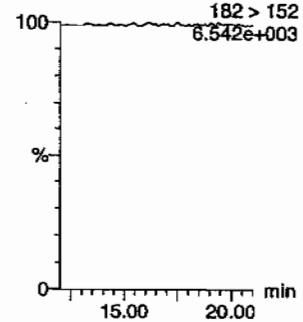


34-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
6.518e+003



HMM 01/20/10

26-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
6.542e+003



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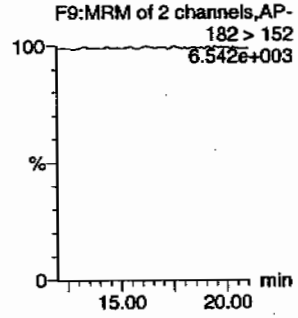
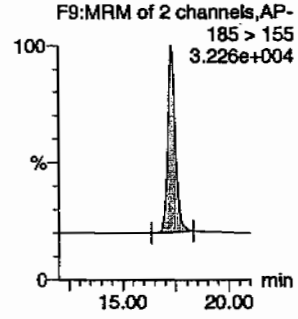
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA1.qld, Time: Wed Jan 20 09:06:02 2010

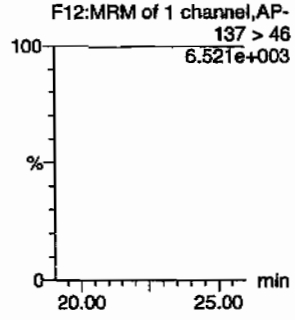
24-dinitrotoluene



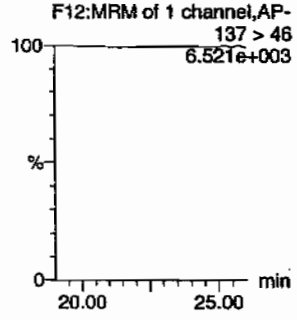
26-dinitrotoluene-d3



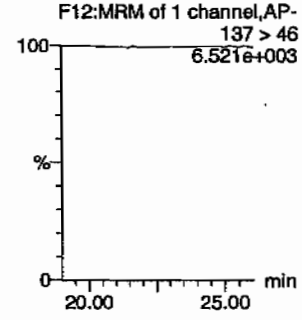
2-Nitrotoluene



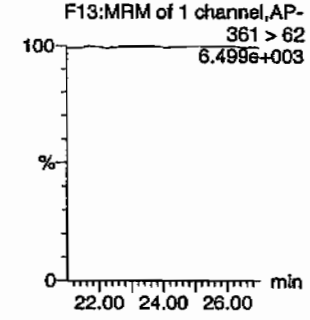
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N
XIBLK07	HMX	176 > 102			1795.026									
XIBLK07	RDX	176 > 102			1795.026									
XIBLK07	135-Trinitrobenzene	213 > 183			1795.026									
XIBLK07	13-Dinitrobenzene-d4	172 > 142	11.97	1795.026		1795.026	1795.026	bb			264.4945	52.9	-47.1	68.5
XIBLK07	13-Dinitrobenzene	168 > 138			1795.026									
XIBLK07	Tetryl	241 > 181			1795.026									
XIBLK07	Nitrobenzene	123 > 46			1795.026									
XIBLK07	4-Amino-26-dinitrotoluene	197 > 167			10740.725									
XIBLK07	2-Amino-46-dinitrotoluene	197 > 180			10740.725									
XIBLK07	246-Trinitrotoluene	227 > 210			10740.725									
XIBLK07	34-dinitrotoluene	182 > 152			10740.725									
XIBLK07	26-dinitrotoluene	182 > 152			10740.725									
XIBLK07	24-dinitrotoluene	182 > 152			10740.725									
XIBLK07	26-dinitrotoluene-d3	185 > 155	17.29	10740.725		10740.725	10740.725	bb			292.7494	58.5	-41.5	895.1
XIBLK07	2-Nitrotoluene	137 > 46			10740.725									
XIBLK07	4-Nitrotoluene	137 > 46			10740.725									
XIBLK07	3-Nitrotoluene	137 > 46			10740.725									
XIBLK07	PETN	361 > 62			10740.725									

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4A
Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10–1130

Lab Code: GEL

Lab Sample ID: XIBLK08

Analysis Date: 19–JAN–10 21:02

GEL Data File: EXP0118064a

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	331.358
2,4,6–Trinitrotoluene	0	0
2,4–Dinitrotoluene	0	0
2,6–Dinitrotoluene	0	0
2,6–Dinitrotoluene–d3	500	339.75
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

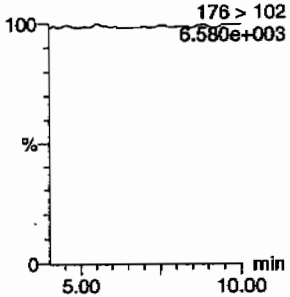
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA1.qld, Time: Wed Jan 20 09:06:02 2010

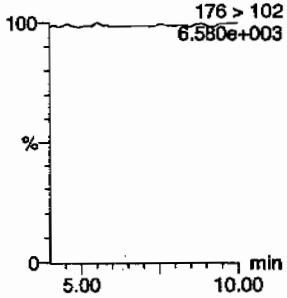
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118064a
Date: 19-Jan-2010
Time: 21:02:17
ID: XIBLK08
Vial: 1:1,A

MAT 1/20/10

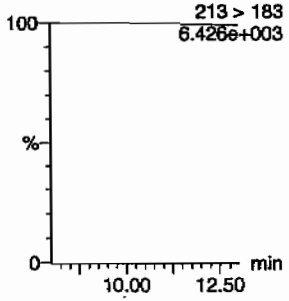
HMX
F2:MRM of 1 channel,AP-
176 > 102
6.580e+003



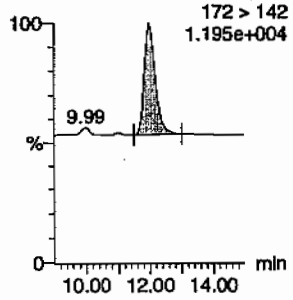
RDX
F2:MRM of 1 channel,AP-
176 > 102
6.580e+003



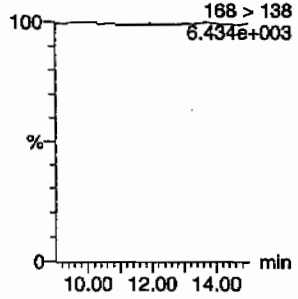
135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
6.426e+003



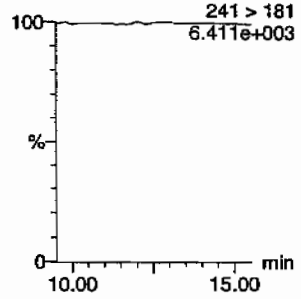
13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
1.195e+004



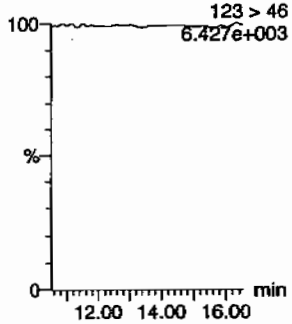
13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
6.434e+003



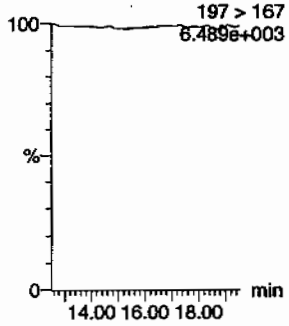
Tetryl
F6:MRM of 1 channel,AP-
241 > 181
6.411e+003



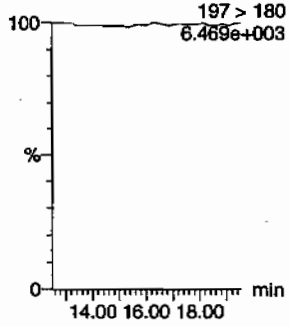
Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
6.427e+003



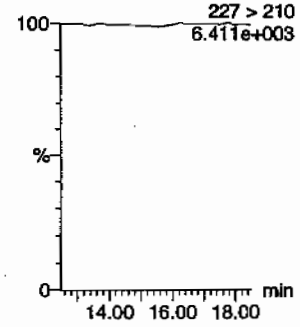
4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 167
6.489e+003



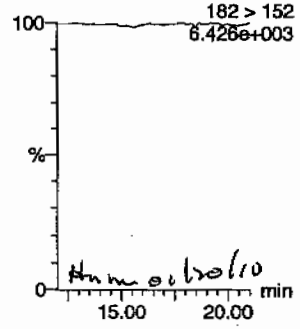
2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
6.469e+003



246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
6.411e+003

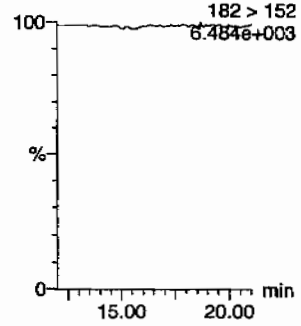


34-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
6.426e+003



Hmm 01/20/10

26-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
6.484e+003



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

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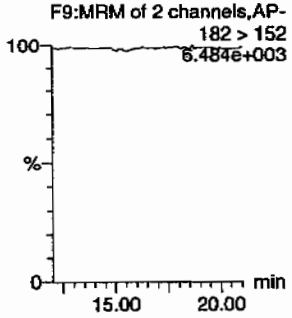
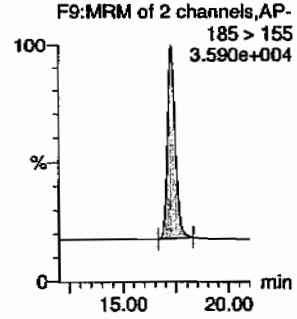
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA1.qld, Time: Wed Jan 20 09:06:02 2010

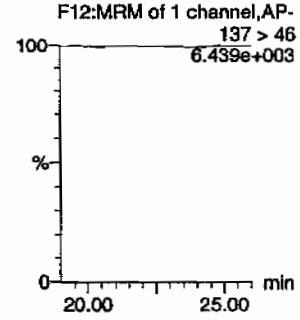
24-dinitrotoluene



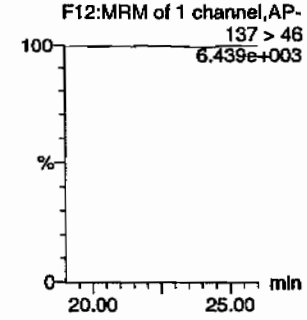
26-dinitrotoluene-d3



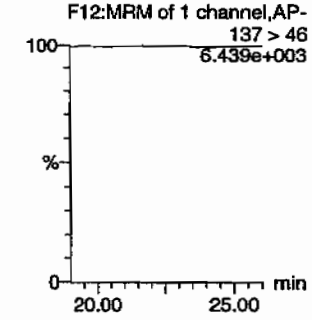
2-Nitrotoluene



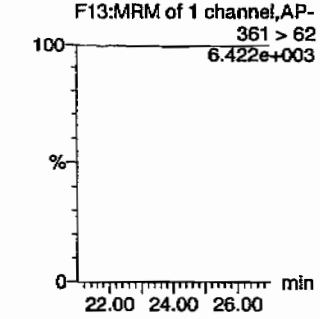
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Rel Response	Flags	Mod Date	Mod Time	Ind/ml	%Rec	%Dev	RS/N
XIBLK08	HMX	176 > 102			2248.805									
XIBLK08	RDX	176 > 102			2248.805									
XIBLK08	135-Trinitrobenzene	213 > 183			2248.805									
XIBLK08	13-Dinitrobenzene-d4	172 > 142	11.97	2248.805		2248.805	2248.805	bb			331.3582	66.3	-33.7	446.5
XIBLK08	13-Dinitrobenzene	168 > 138			2248.805									
XIBLK08	Tetryl	241 > 181			2248.805									
XIBLK08	Nitrobenzene	123 > 46			2248.805									
XIBLK08	4-Amino-26-dinitrotoluene	197 > 167			12465.129									
XIBLK08	2-Amino-46-dinitrotoluene	197 > 180			12465.129									
XIBLK08	246-Trinitrotoluene	227 > 210			12465.129									
XIBLK08	34-dinitrotoluene	182 > 152			12465.129									
XIBLK08	26-dinitrotoluene	182 > 152			12465.129									
XIBLK08	24-dinitrotoluene	182 > 152			12465.129			MM-	20-Jan-10	09:01:58				
XIBLK08	26-dinitrotoluene-d3	185 > 155	17.29	12465.129		12465.129	12465.129	bb			339.7498	67.9	-32.1	851.8
XIBLK08	2-Nitrotoluene	137 > 46			12465.129									
XIBLK08	4-Nitrotoluene	137 > 46			12465.129									
XIBLK08	3-Nitrotoluene	137 > 46			12465.129									
XIBLK08	PETN	361 > 62			12465.129									

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

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4A
Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1130

Lab Code: GEL

Lab Sample ID: XIBLK09

Analysis Date: 20-JAN-10 03:25

GEL Data File: EXP0118077a

Instrument ID: LCMSMS

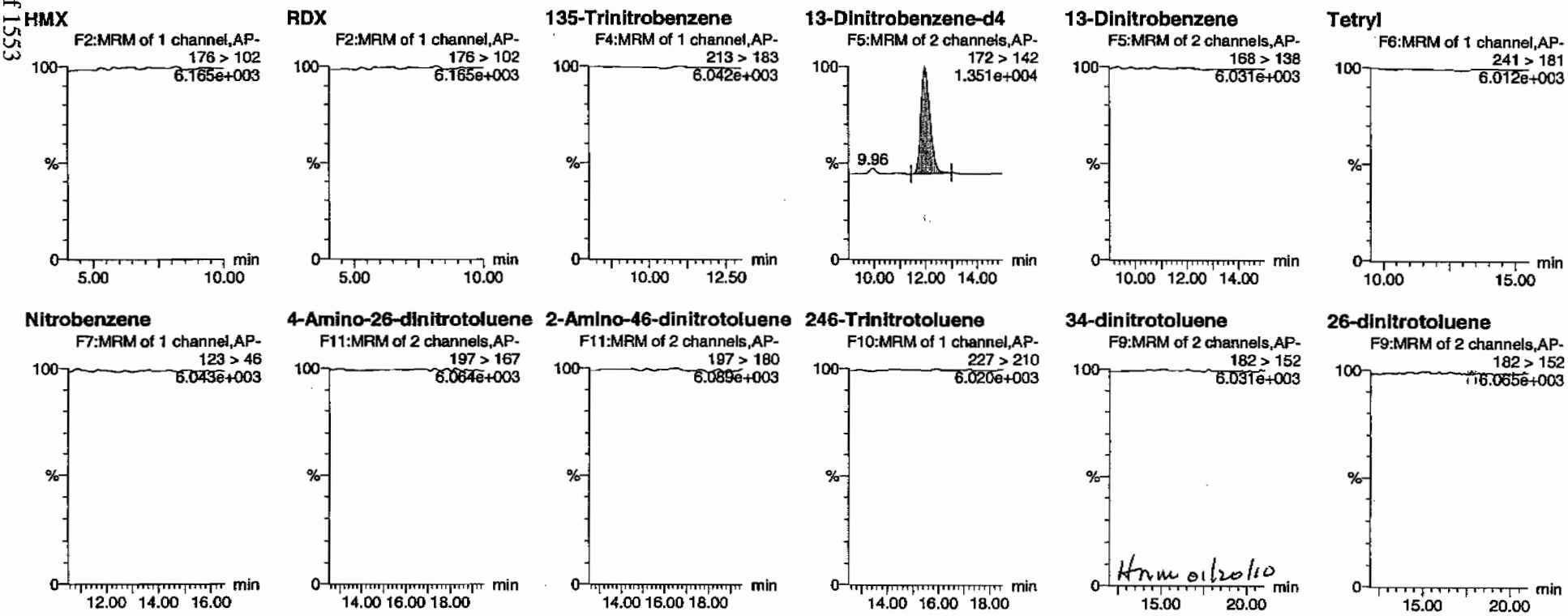
Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
Tetryl	0	0
m-Dinitrobenzene	0	0
m-Nitrotoluene	0	0
o-Nitrotoluene	0	0
p-Nitrotoluene	0	0
RDX	0	0
3,4-Dinitrotoluene	0	0
1,3,5-Trinitrobenzene	0	0
1,3-Dinitrobenzene-d4	500	441.686
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	409.806
2-Amino-4,6-dinitrotoluene	0	0
4-Amino-2,6-dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA1.qld, Time: Wed Jan 20 09:06:02 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118077a
Date: 20-Jan-2010
Time: 03:25:38
ID: XIBLK09
Vial: 1:1,A

MAP 1/20/10



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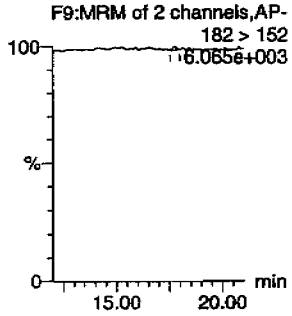
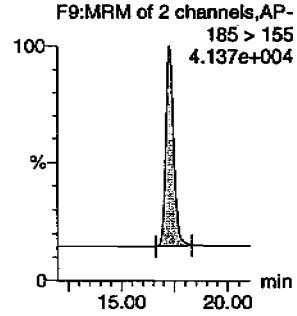
Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA1.qld, Time: Wed Jan 20 09:06:02 2010

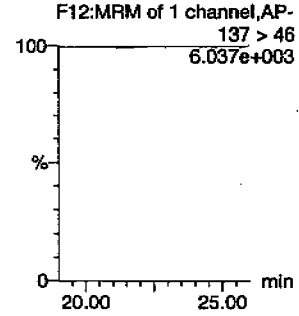
24-dinitrotoluene



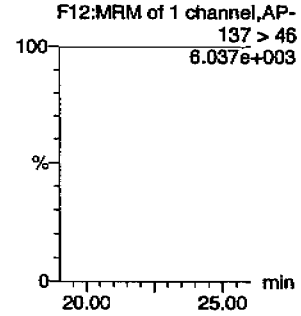
26-dinitrotoluene-d3



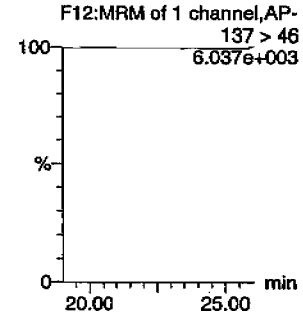
2-Nitrotoluene



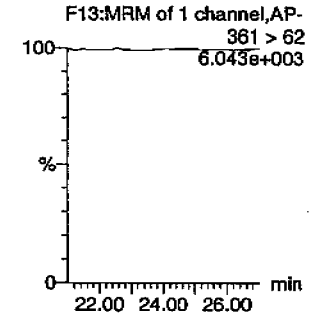
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	mg/mL	%Rec	%Dev	S/N
XIBLK09	HMX	176 > 102			2997.556									
XIBLK09	RDX	176 > 102			2997.556									
XIBLK09	135-Trinitrobenzene	213 > 183			2997.556									
XIBLK09	13-Dinitrobenzene-d4	172 > 142	11.97	2997.556		2997.556	2997.556	bb			441.6856	88.3	-11.7	375.4
XIBLK09	13-Dinitrobenzene	168 > 138			2997.556									
XIBLK09	Tetryl	241 > 181			2997.556									
XIBLK09	Nitrobenzene	123 > 46			2997.556									
XIBLK09	4-Amino-26-dinitrotoluene	197 > 167			15035.415									
XIBLK09	2-Amino-46-dinitrotoluene	197 > 180			15035.415									
XIBLK09	246-Trinitrotoluene	227 > 210			15035.415									
XIBLK09	34-dinitrotoluene	182 > 152			15035.415									
XIBLK09	26-dinitrotoluene	182 > 152			15035.415			MM-	20-Jan-10	08:58:49				
XIBLK09	24-dinitrotoluene	182 > 152			15035.415			MM-	20-Jan-10	09:00:19				
XIBLK09	26-dinitrotoluene-d3	185 > 155	17.29	15035.415		15035.415	15035.415	bb			409.8055	82.0	-18.0	1603.3
XIBLK09	2-Nitrotoluene	137 > 46			15035.415									
XIBLK09	4-Nitrotoluene	137 > 46			15035.415									
XIBLK09	3-Nitrotoluene	137 > 46			15035.415									
XIBLK09	PETN	361 > 62			15035.415									

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4A
Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10–1130

Lab Code: GEL

Lab Sample ID: XIBLK10

Analysis Date: 20–JAN–10 07:51

GEL Data File: EXP0118086a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

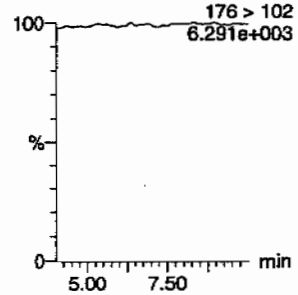
Compound	True	Found (ug/L)
3,4–Dinitrotoluene	0	0
1,3,5–Trinitrobenzene	0	0
1,3–Dinitrobenzene–d4	500	596.779
2,4,6–Trinitrotoluene	0	0
2,4–Dinitrotoluene	0	0
2,6–Dinitrotoluene	0	0
2,6–Dinitrotoluene–d3	500	501.037
2–Amino–4,6–dinitrotoluene	0	0
4–Amino–2,6–dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m–Dinitrobenzene	0	0
m–Nitrotoluene	0	0
o–Nitrotoluene	0	0
p–Nitrotoluene	0	0

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA1.qld, Time: Wed Jan 20 09:06:02 2010

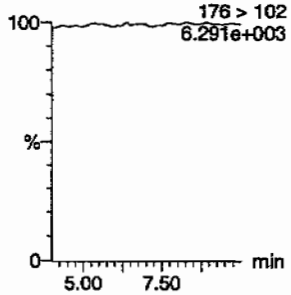
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118086a
Date: 20-Jan-2010
Time: 07:51:19
ID: XIBLK10
Vial: 1:1,A

MATT 1/20/10

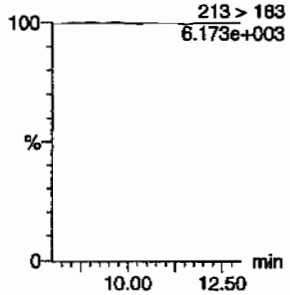
HMX
F2:MRM of 1 channel,AP-
176 > 102
6.291e+003



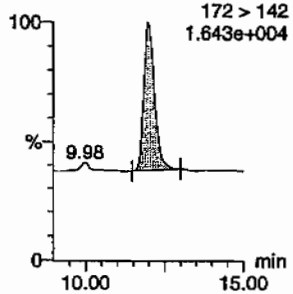
RDX
F2:MRM of 1 channel,AP-
176 > 102
6.291e+003



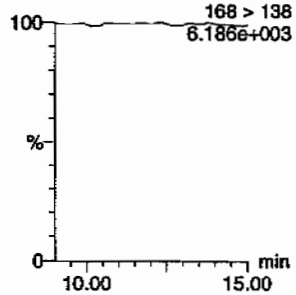
135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
6.173e+003



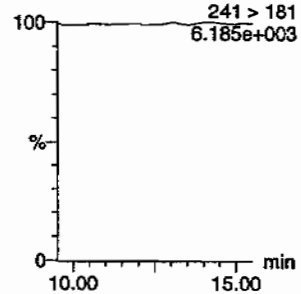
13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
1.643e+004



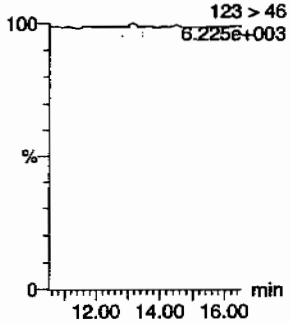
13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
6.186e+003



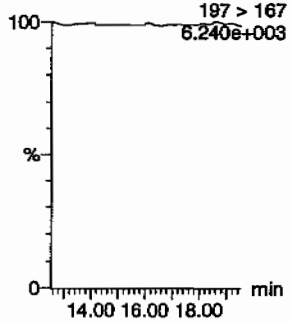
Tetryl
F6:MRM of 1 channel,AP-
241 > 181
6.185e+003



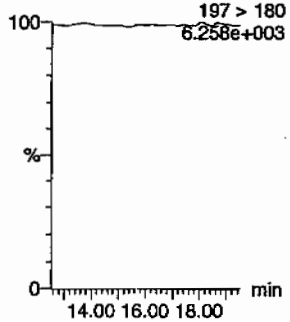
Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
6.225e+003



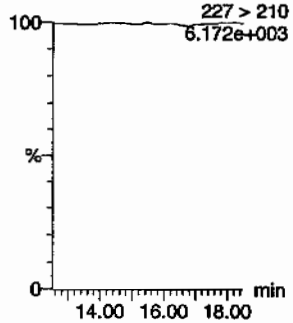
4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 167
6.240e+003



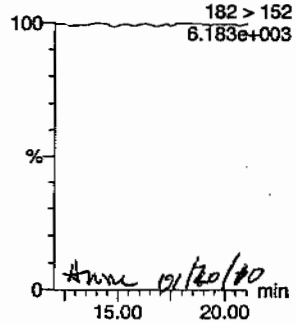
2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
6.258e+003



246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
6.172e+003

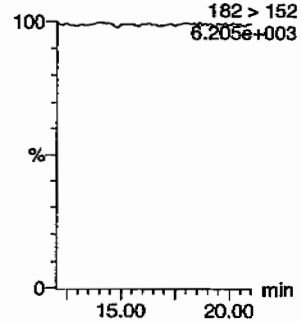


34-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
6.183e+003



Anne 01/20/10

26-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
6.205e+003



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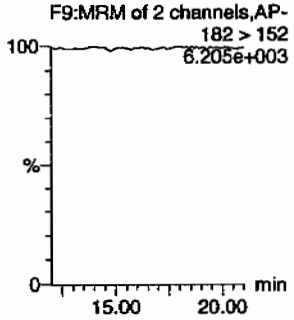
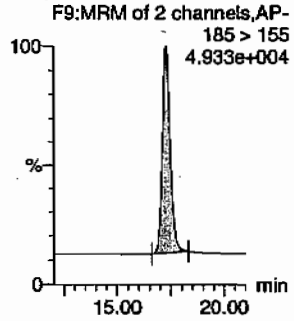
Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA1.qld, Time: Wed Jan 20 09:06:02 2010

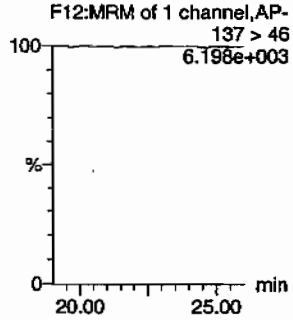
24-dinitrotoluene



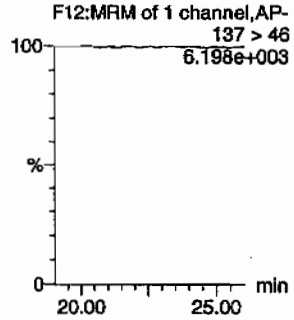
26-dinitrotoluene-d3



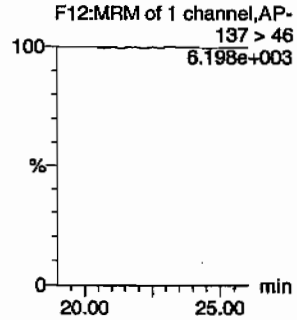
2-Nitrotoluene



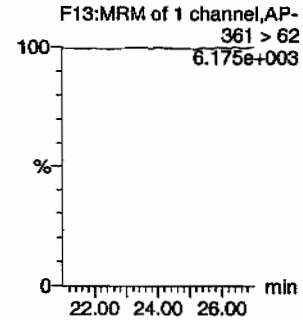
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/ml	%Rec	%Dev	S/N
XIBLK10	HMX	176 > 102			4050.115									
XIBLK10	RDX	176 > 102			4050.115									
XIBLK10	135-Trinitrobenzene	213 > 183			4050.115									
XIBLK10	13-Dinitrobenzene-d4	172 > 142	11.97	4050.115		4050.115	4050.115	bb			596.7786	119.4	19.4	518.1
XIBLK10	13-Dinitrobenzene	168 > 138			4050.115									
XIBLK10	Tetryl	241 > 181			4050.115									
XIBLK10	Nitrobenzene	123 > 46			4050.115			MM-	20-Jan-10	08:52:32				
XIBLK10	4-Amino-26-dinitrotoluene	197 > 167			18382.605									
XIBLK10	2-Amino-46-dinitrotoluene	197 > 180			18382.605									
XIBLK10	246-Trinitrotoluene	227 > 210			18382.605									
XIBLK10	34-dinitrotoluene	182 > 152			18382.605									
XIBLK10	26-dinitrotoluene	182 > 152			18382.605									
XIBLK10	24-dinitrotoluene	182 > 152			18382.605									
XIBLK10	26-dinitrotoluene-d3	185 > 155	17.28	18382.605		18382.605	18382.605	bb			501.0366	100.2	0.2	1735.5
XIBLK10	2-Nitrotoluene	137 > 46			18382.605									
XIBLK10	4-Nitrotoluene	137 > 46			18382.605									
XIBLK10	3-Nitrotoluene	137 > 46			18382.605									
XIBLK10	PETN	361 > 62			18382.605									

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

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4A
Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10–1130

Lab Code: GEL

Lab Sample ID: XIBLK11

Analysis Date: 20–JAN–10 13:45

GEL Data File: EXP0118098a

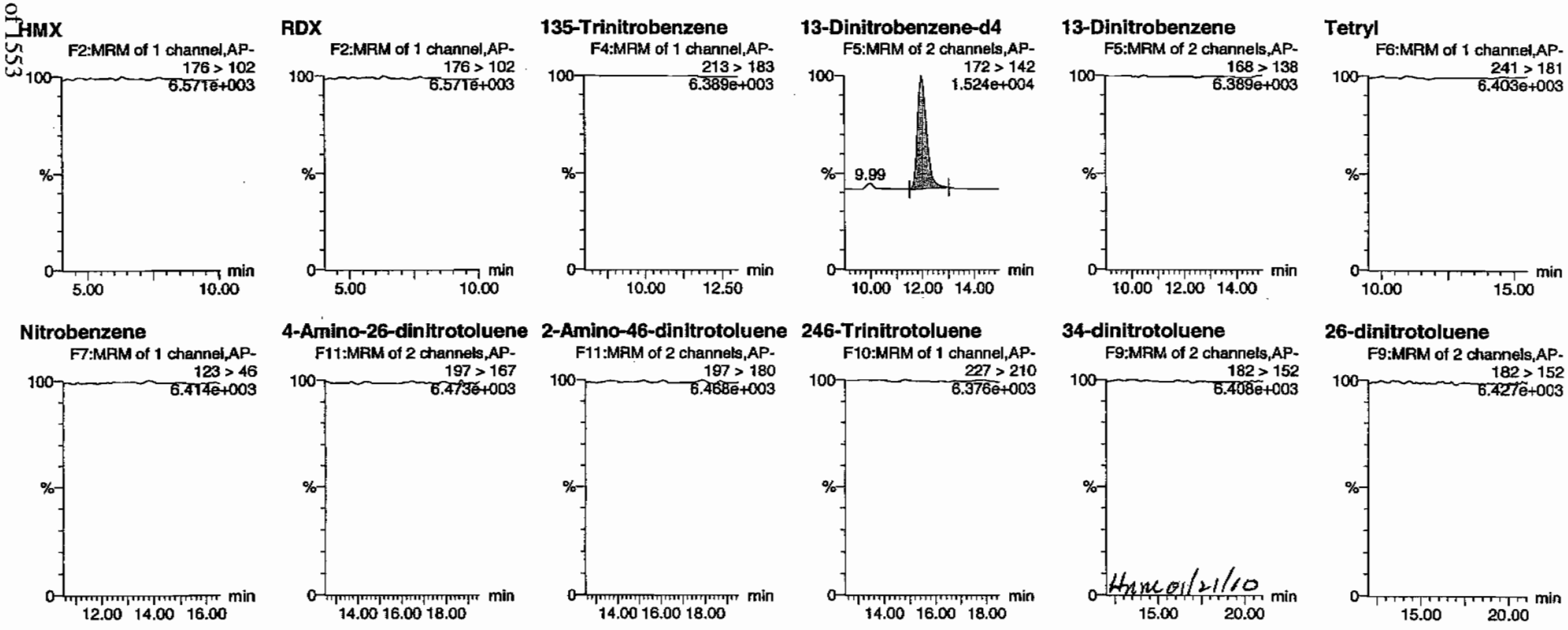
Instrument ID: LCMSMS

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	523.058
2,4,6–Trinitrotoluene	0	0
2,4–Dinitrotoluene	0	0
2,6–Dinitrotoluene	0	0
2,6–Dinitrotoluene–d3	500	528.726
2–Amino–4,6–dinitrotoluene	0	0
4–Amino–2,6–dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m–Dinitrobenzene	0	0
m–Nitrotoluene	0	0
o–Nitrotoluene	0	0
p–Nitrotoluene	0	0

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA2.qld, Time: Thu Jan 21 11:10:12 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118098a
Date: 20-Jan-2010
Time: 13:45:19
ID: XIBLK11
Vial: 1:1,A



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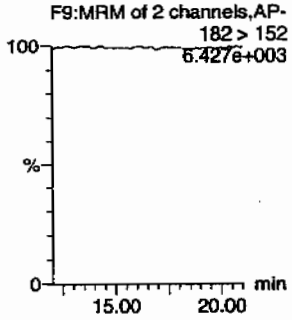
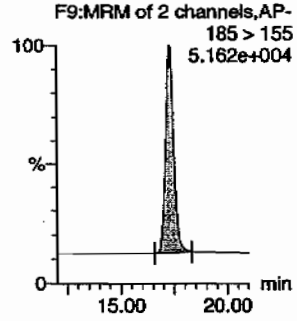
Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA2.qld, Time: Thu Jan 21 11:10:12 2010

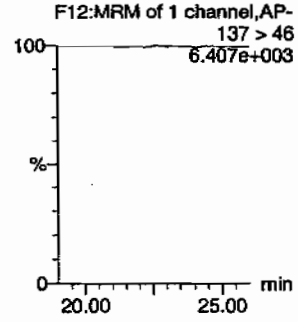
24-dinitrotoluene



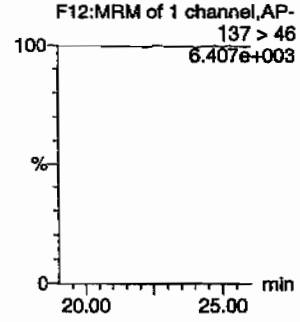
26-dinitrotoluene-d3



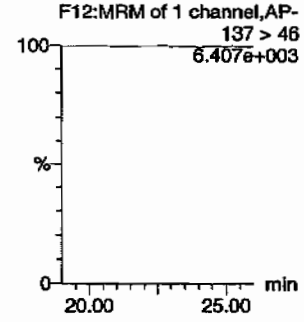
2-Nitrotoluene



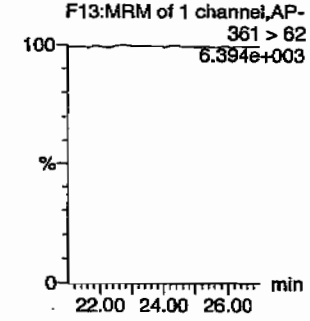
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	ISArea	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N
XIBLK11	HMX	176 > 102			3549.802									
XIBLK11	RDX	176 > 102			3549.802									
XIBLK11	135-Trinitrobenzene	213 > 183			3549.802									
XIBLK11	13-Dinitrobenzene-d4	172 > 142	11.97	3549.802		3549.802	3549.802	bb			523.0582	104.6	4.6	657.7
XIBLK11	13-Dinitrobenzene	168 > 138			3549.802									
XIBLK11	Tetryl	241 > 181			3549.802									
XIBLK11	Nitrobenzene	123 > 46			3549.802									
XIBLK11	4-Amino-26-dinitrotoluene	197 > 167			19398.510									
XIBLK11	2-Amino-46-dinitrotoluene	197 > 180			19398.510									
XIBLK11	246-Trinitrotoluene	227 > 210			19398.510									
XIBLK11	34-dinitrotoluene	182 > 152			19398.510									
XIBLK11	26-dinitrotoluene	182 > 152			19398.510									
XIBLK11	24-dinitrotoluene	182 > 152			19398.510									
XIBLK11	26-dinitrotoluene-d3	185 > 155	17.29	19398.510		19398.510	19398.510	bb			528.7261	105.7	5.7	1369.9
XIBLK11	2-Nitrotoluene	137 > 46			19398.510									
XIBLK11	4-Nitrotoluene	137 > 46			19398.510									
XIBLK11	3-Nitrotoluene	137 > 46			19398.510									
XIBLK11	PETN	361 > 62			19398.510									

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1130

Lab Code: GEL

Lab Sample ID: XIBLK12

Analysis Date: 20-JAN-10 19:39

GEL Data File: EXP0118110a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
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	580.628
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	623.989

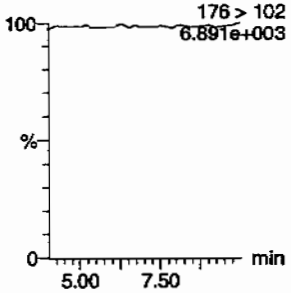
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA2.qld, Time: Thu Jan 21 11:10:12 2010

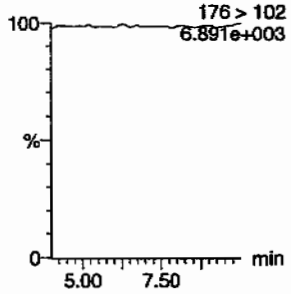
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118110a
Date: 20-Jan-2010
Time: 19:39:27
ID: XIBLK12
Vial: 1:1,A

MJT 1/21/10

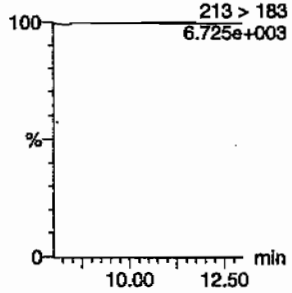
HMX
F2:MRM of 1 channel,AP-
176 > 102
6.891e+003



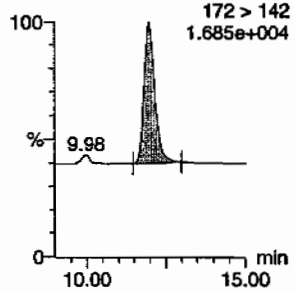
RDX
F2:MRM of 1 channel,AP-
176 > 102
6.891e+003



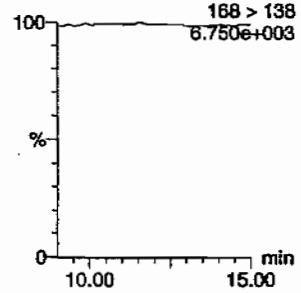
135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
6.725e+003



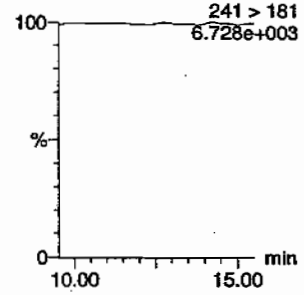
13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
1.685e+004



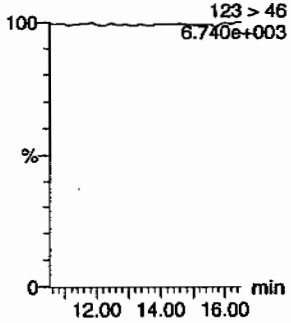
13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
6.750e+003



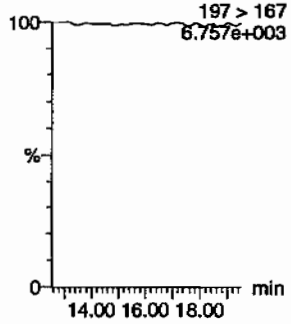
Tetryl
F6:MRM of 1 channel,AP-
241 > 181
6.728e+003



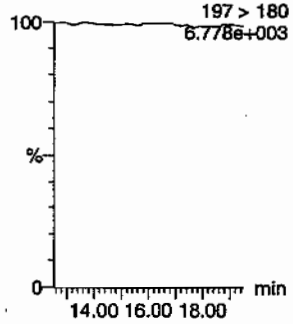
Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
6.740e+003



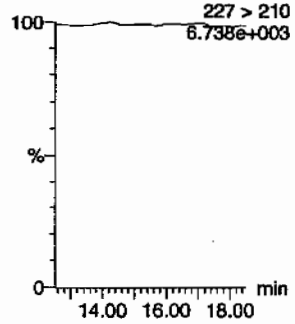
4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 167
6.757e+003



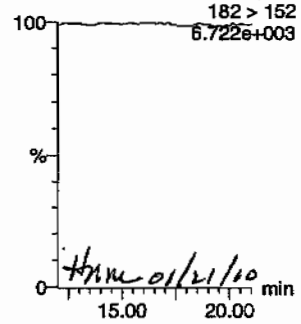
2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
6.778e+003



246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
6.738e+003

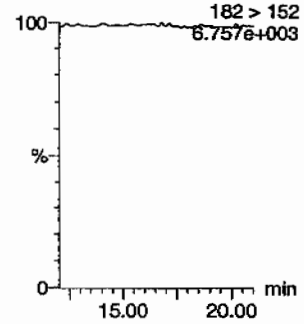


34-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
6.722e+003



HNM 01/21/10

26-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
6.757e+003



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

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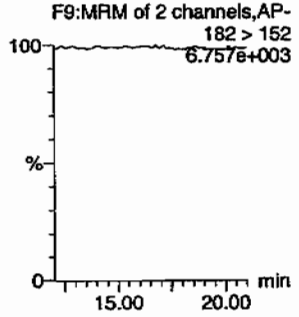
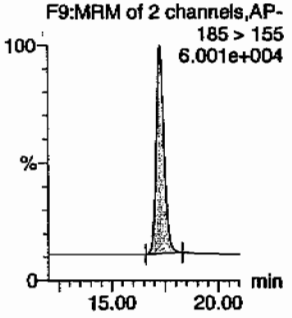
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA2.qld, Time: Thu Jan 21 11:10:12 2010

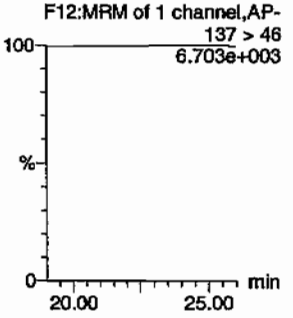
24-dinitrotoluene



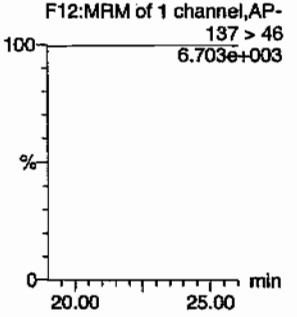
26-dinitrotoluene-d3



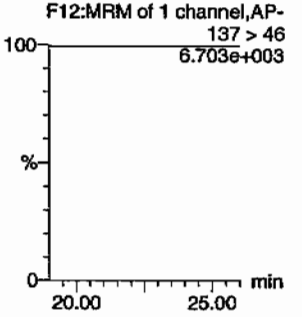
2-Nitrotoluene



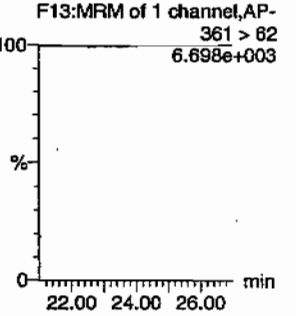
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N
XIBLK12	HMX	176 > 102			3940.508									
XIBLK12	RDX	176 > 102			3940.508									
XIBLK12	135-Trinitrobenzene	213 > 183			3940.508									
XIBLK12	13-Dinitrobenzene-d4	172 > 142	11.97	3940.508		3940.508	3940.508	bb			580.6282	116.1	16.1	558.8
XIBLK12	13-Dinitrobenzene	168 > 138			3940.508									
XIBLK12	Tetryl	241 > 181			3940.508									
XIBLK12	Nitrobenzene	123 > 46			3940.508									
XIBLK12	4-Amino-26-dinitrotoluene	197 > 167			22893.627									
XIBLK12	2-Amino-46-dinitrotoluene	197 > 180			22893.627									
XIBLK12	246-Trinitrotoluene	227 > 210			22893.627									
XIBLK12	34-dinitrotoluene	182 > 152			22893.627									
XIBLK12	26-dinitrotoluene	182 > 152			22893.627									
XIBLK12	24-dinitrotoluene	182 > 152			22893.627									
XIBLK12	26-dinitrotoluene-d3	185 > 155	17.26	22893.627		22893.627	22893.627	bb			623.9891	124.8	24.8	2174.6
XIBLK12	2-Nitrotoluene	137 > 46			22893.627									
XIBLK12	4-Nitrotoluene	137 > 46			22893.627									
XIBLK12	3-Nitrotoluene	137 > 46			22893.627									
XIBLK12	PETN	361 > 62			22893.627									

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

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4A
Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC
GEL Job No(SDG): 10–1130
Lab Code: GEL
Lab Sample ID: XIBLK13
Analysis Date: 20–JAN–10 22:07
GEL Data File: EXP0118115a
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	573.478
2,4,6–Trinitrotoluene	0	0
2,4–Dinitrotoluene	0	0
2,6–Dinitrotoluene	0	0
2,6–Dinitrotoluene–d3	500	566.009
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

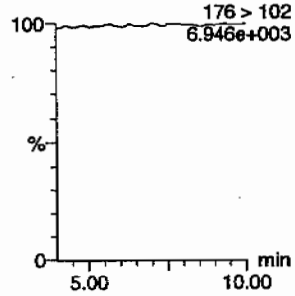
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA2.qld, Time: Thu Jan 21 11:10:12 2010

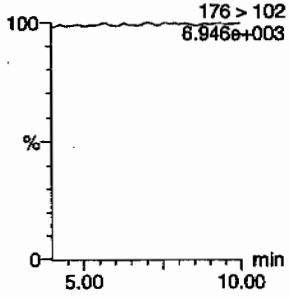
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118115a
Date: 20-Jan-2010
Time: 22:07:13
ID: XIBLK13
Vial: 1:1,A

MAT 1/21/10

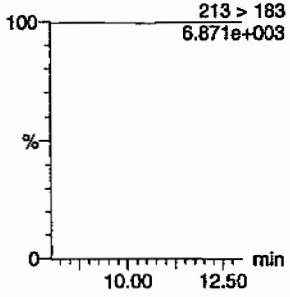
HMX
F2:MRM of 1 channel,AP-
176 > 102
6.946e+003



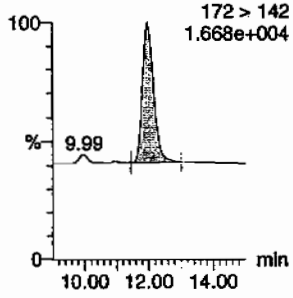
RDX
F2:MRM of 1 channel,AP-
176 > 102
6.946e+003



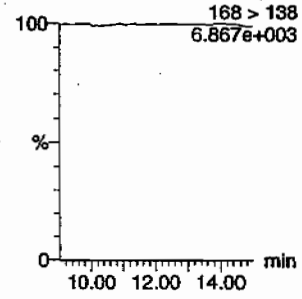
135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
6.871e+003



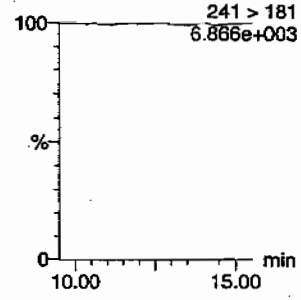
13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
1.668e+004



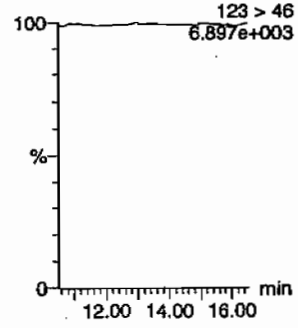
13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
6.867e+003



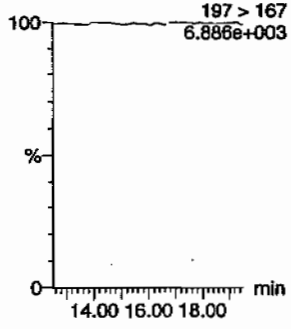
Tetryl
F6:MRM of 1 channel,AP-
241 > 181
6.866e+003



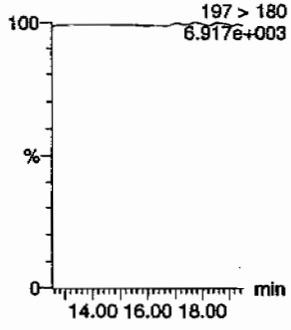
Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
6.897e+003



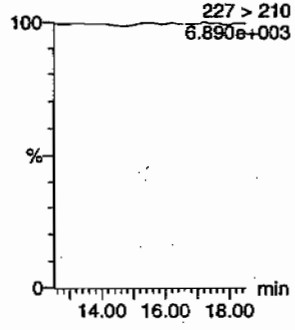
4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 167
6.886e+003



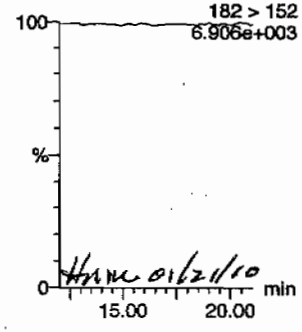
2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
6.917e+003



246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
6.890e+003

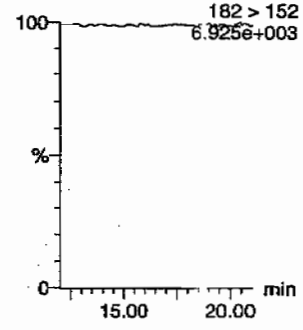


34-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
6.906e+003



HMM 01/21/10

26-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
6.925e+003



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

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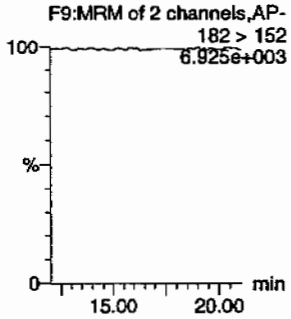
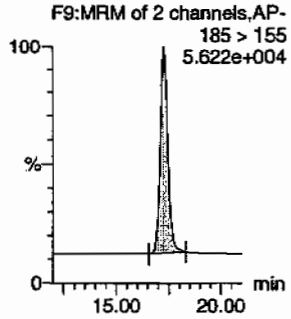
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA2.qld, Time: Thu Jan 21 11:10:12 2010

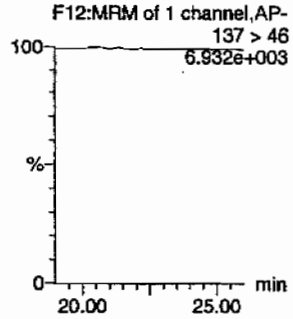
24-dinitrotoluene



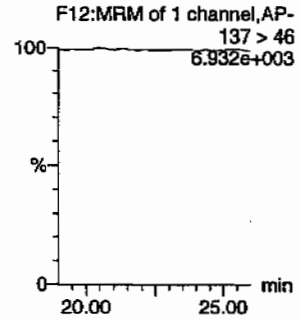
26-dinitrotoluene-d3



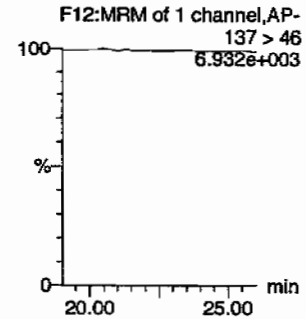
2-Nitrotoluene



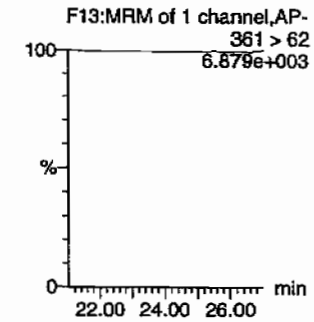
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N
XIBLK13	HMX	176 > 102			3891.983									
XIBLK13	RDX	176 > 102			3891.983									
XIBLK13	135-Trinitrobenzene	213 > 183			3891.983									
XIBLK13	13-Dinitrobenzene-d4	172 > 142	11.97	3891.983		3891.983	3891.983	bb			573.4781	114.7	14.7	492.2
XIBLK13	13-Dinitrobenzene	168 > 138			3891.983									
XIBLK13	Tetryl	241 > 181			3891.983									
XIBLK13	Nitrobenzene	123 > 46			3891.983									
XIBLK13	4-Amino-26-dinitrotoluene	197 > 167			20766.395									
XIBLK13	2-Amino-46-dinitrotoluene	197 > 180			20766.395									
XIBLK13	246-Trinitrotoluene	227 > 210			20766.395									
XIBLK13	34-dinitrotoluene	182 > 152			20766.395									
XIBLK13	26-dinitrotoluene	182 > 152			20766.395									
XIBLK13	24-dinitrotoluene	182 > 152			20766.395									
XIBLK13	26-dinitrotoluene-d3	185 > 155	17.27	20766.395		20766.395	20766.395	bb			566.0092	113.2	13.2	1103.8
XIBLK13	2-Nitrotoluene	137 > 46			20766.395									
XIBLK13	4-Nitrotoluene	137 > 46			20766.395									
XIBLK13	3-Nitrotoluene	137 > 46			20766.395									
XIBLK13	PETN	361 > 62			20766.395									

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1130

Lab Code: GEL

Lab Sample ID: XIBLK14

Analysis Date: 21-JAN-10 02:03

GEL Data File: EXP0118123a

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	577.603
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	588.226
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

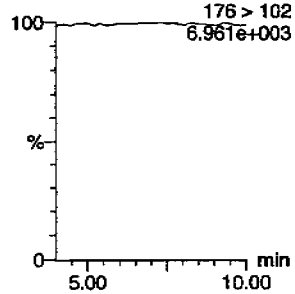
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA2.qld, Time: Thu Jan 21 11:10:12 2010

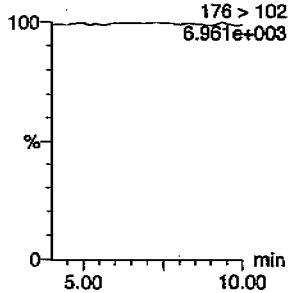
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118123a
Date: 21-Jan-2010
Time: 02:03:12
ID: XIBLK14
Vial: 1:1,A

MAP 1/21/10

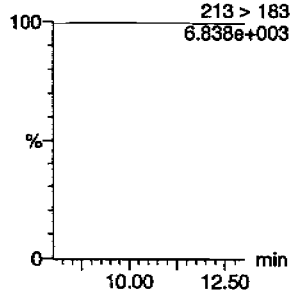
HMX
F2:MRM of 1 channel,AP-
176 > 102
6.961e+003



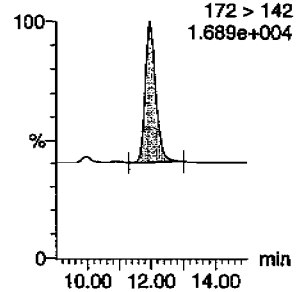
RDX
F2:MRM of 1 channel,AP-
176 > 102
6.961e+003



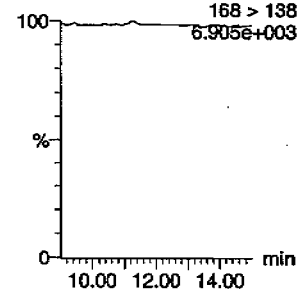
135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
6.838e+003



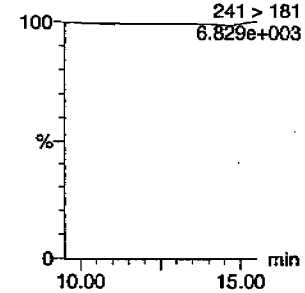
13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
1.689e+004



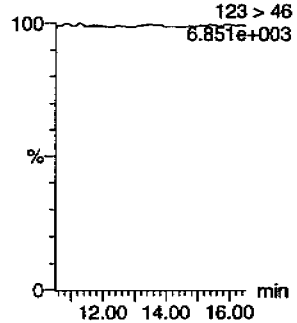
13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
6.905e+003



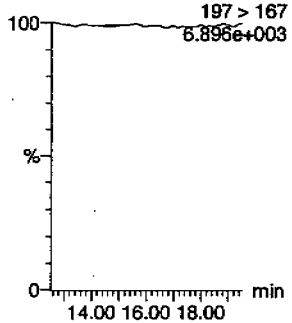
Tetryl
F6:MRM of 1 channel,AP-
241 > 181
6.829e+003



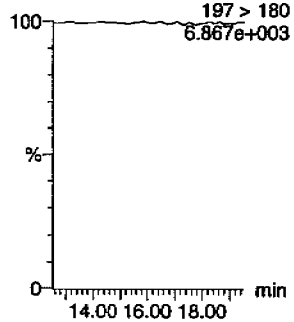
Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
6.851e+003



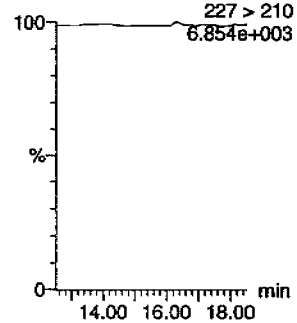
4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 167
6.896e+003



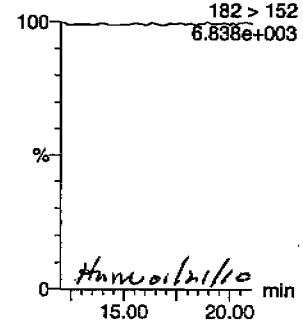
2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
6.867e+003



246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
6.854e+003

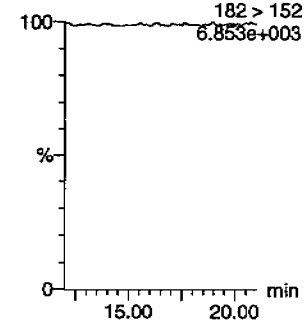


34-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
6.838e+003



Hmm 01/21/10

26-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
6.853e+003



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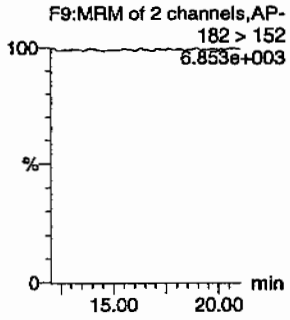
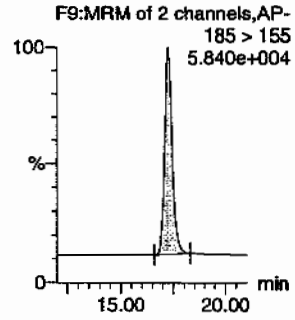
Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA2.qld, Time: Thu Jan 21 11:10:12 2010

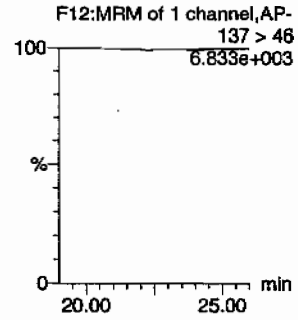
24-dinitrotoluene



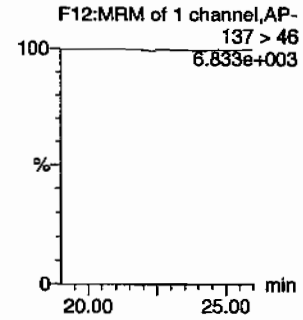
26-dinitrotoluene-d3



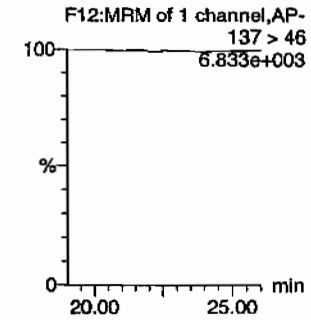
2-Nitrotoluene



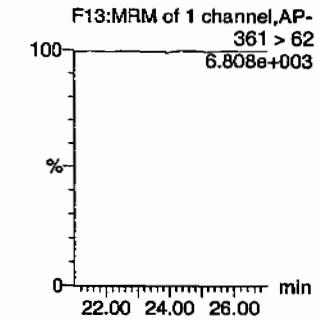
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N
XIBLK14	HMX	176 > 102			3919.977									
XIBLK14	RDX	176 > 102			3919.977									
XIBLK14	135-Trinitrobenzene	213 > 183			3919.977									
XIBLK14	13-Dinitrobenzene-d4	172 > 142	11.95	3919.977		3919.977	3919.977	bb			577.6030	115.5	15.5	320.7
XIBLK14	13-Dinitrobenzene	168 > 138			3919.977									
XIBLK14	Tetryl	241 > 181			3919.977									
XIBLK14	Nitrobenzene	123 > 46			3919.977									
XIBLK14	4-Amino-26-dinitrotoluene	197 > 167			21581.516									
XIBLK14	2-Amino-46-dinitrotoluene	197 > 180			21581.516									
XIBLK14	246-Trinitrotoluene	227 > 210			21581.516									
XIBLK14	34-dinitrotoluene	182 > 152			21581.516									
XIBLK14	26-dinitrotoluene	182 > 152			21581.516									
XIBLK14	24-dinitrotoluene	182 > 152			21581.516									
XIBLK14	26-dinitrotoluene-d3	185 > 155	17.27	21581.516		21581.516	21581.516	bb			588.2262	117.6	17.6	1520.0
XIBLK14	2-Nitrotoluene	137 > 46			21581.516									
XIBLK14	4-Nitrotoluene	137 > 46			21581.516									
XIBLK14	3-Nitrotoluene	137 > 46			21581.516									
XIBLK14	PETN	361 > 62			21581.516									

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1130

Lab Code: GEL

Lab Sample ID: XIBLK15

Analysis Date: 21-JAN-10 08:26

GEL Data File: EXP0118136a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

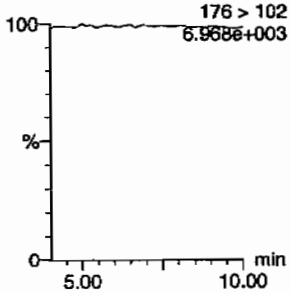
Compound	True	Found (ug/L)
1,3-Dinitrobenzene-d4	500	592.456
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	593.099
2-Amino-4,6-dinitrotoluene	0	0
4-Amino-2,6-dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m-Dinitrobenzene	0	0
m-Nitrotoluene	0	0
o-Nitrotoluene	0	0
p-Nitrotoluene	0	0
3,4-Dinitrotoluene	0	0
1,3,5-Trinitrobenzene	0	0

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA2.qld, Time: Thu Jan 21 11:10:12 2010

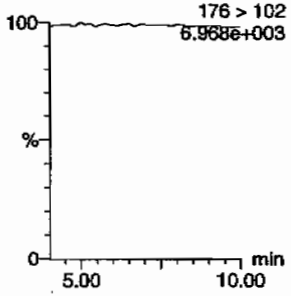
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118136a
Date: 21-Jan-2010
Time: 08:26:32
ID: XIBLK15
Vial: 1:1,A

MM 1/21/10

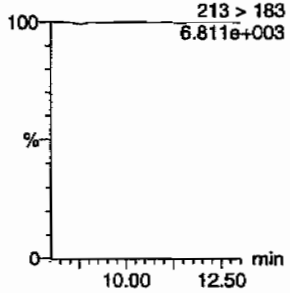
HMX
F2:MRM of 1 channel,AP-
176 > 102
6.968e+003



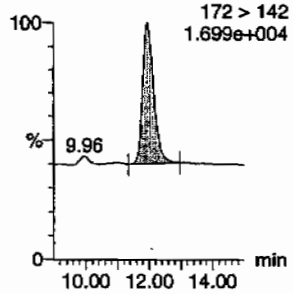
RDX
F2:MRM of 1 channel,AP-
176 > 102
6.968e+003



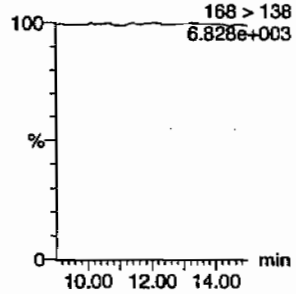
135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
6.811e+003



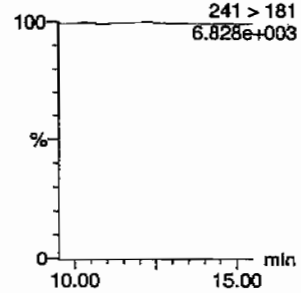
13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
1.699e+004



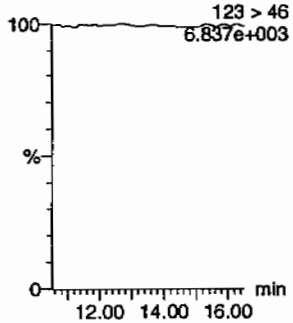
13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
6.828e+003



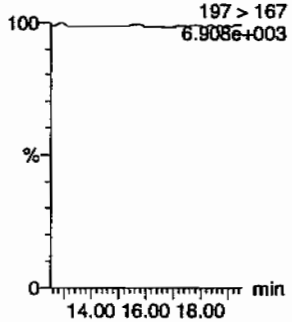
Tetryl
F6:MRM of 1 channel,AP-
241 > 181
6.828e+003



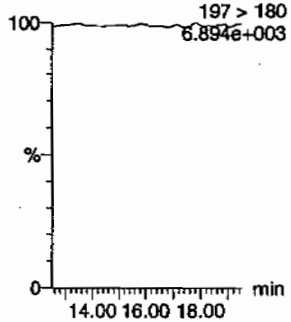
Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
6.837e+003



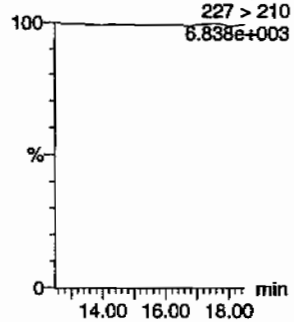
4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 167
6.908e+003



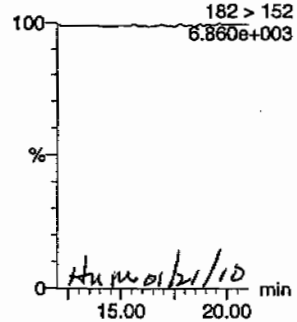
2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
6.894e+003



246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
6.838e+003

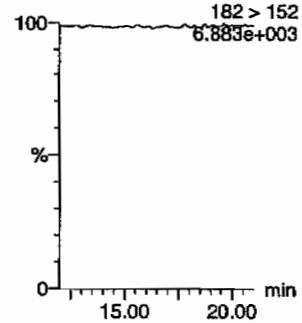


34-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
6.860e+003



Hu 01/21/10

26-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
6.883e+003



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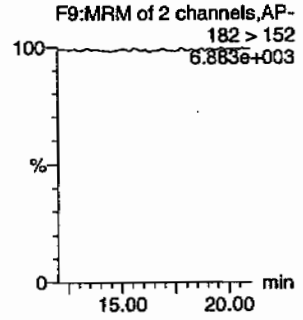
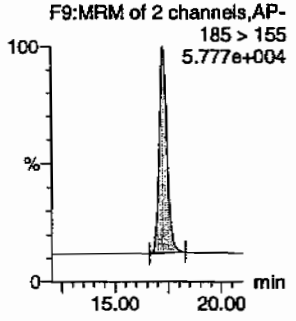
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA2.qld, Time: Thu Jan 21 11:10:12 2010

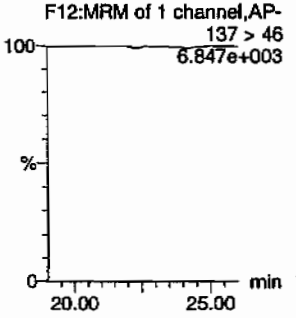
24-dinitrotoluene



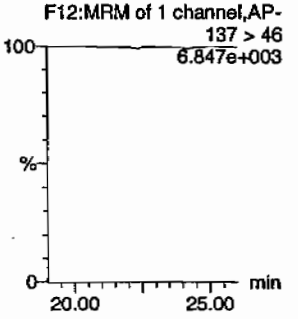
26-dinitrotoluene-d3



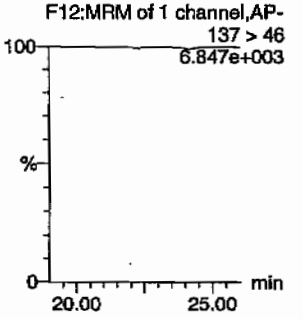
2-Nitrotoluene



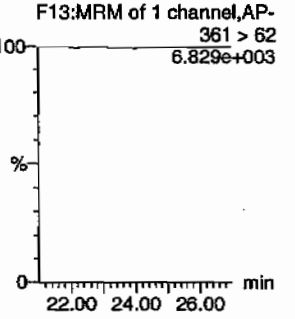
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/ml	%Rec	%Dev	S/N
XIBLK15	HMX	176 > 102			4020.780									
XIBLK15	RDX	176 > 102			4020.780									
XIBLK15	135-Trinitrobenzene	213 > 183			4020.780									
XIBLK15	13-Dinitrobenzene-d4	172 > 142	11.95	4020.780		4020.780	4020.780	bb			592.4562	118.5	18.5	426.1
XIBLK15	13-Dinitrobenzene	168 > 138			4020.780									
XIBLK15	Tetryl	241 > 181			4020.780									
XIBLK15	Nitrobenzene	123 > 46			4020.780									
XIBLK15	4-Amino-26-dinitrotoluene	197 > 167			21760.291									
XIBLK15	2-Amino-46-dinitrotoluene	197 > 180			21760.291									
XIBLK15	246-Trinitrotoluene	227 > 210			21760.291									
XIBLK15	34-dinitrotoluene	182 > 152			21760.291									
XIBLK15	26-dinitrotoluene	182 > 152			21760.291									
XIBLK15	24-dinitrotoluene	182 > 152			21760.291									
XIBLK15	26-dinitrotoluene-d3	185 > 155	17.26	21760.291		21760.291	21760.291	bb			593.0989	118.6	18.6	1035.5
XIBLK15	2-Nitrotoluene	137 > 46			21760.291									
XIBLK15	4-Nitrotoluene	137 > 46			21760.291									
XIBLK15	3-Nitrotoluene	137 > 46			21760.291									
XIBLK15	PETN	361 > 62			21760.291									

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1130

Lab Code: GEL

Lab Sample ID: XIBLK16

Analysis Date: 21-JAN-10 14:50

GEL Data File: EXP0118149a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

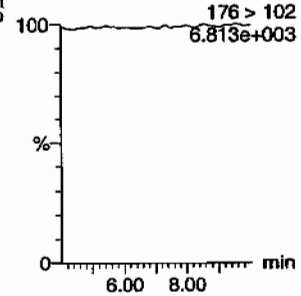
Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
1,3,5-Trinitrobenzene	0	0
1,3-Dinitrobenzene-d4	500	547.545
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	551.518
2-Amino-4,6-dinitrotoluene	0	0
4-Amino-2,6-dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m-Dinitrobenzene	0	0
m-Nitrotoluene	0	0
o-Nitrotoluene	0	0
p-Nitrotoluene	0	0

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA3.qld, Time: Fri Jan 22 10:11:48 2010

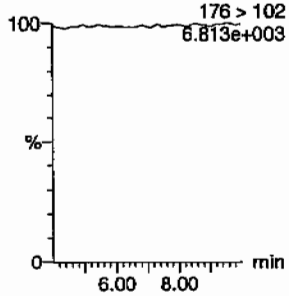
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118149a
Date: 21-Jan-2010
Time: 14:50:30
ID: XIBLK16
Vial: 1:1,A

MMT 1/22/10

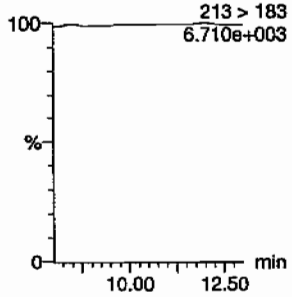
HMX
F2:MRM of 1 channel,AP-
176 > 102
6.813e+003



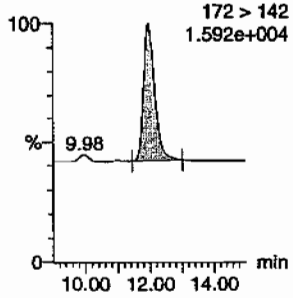
RDX
F2:MRM of 1 channel,AP-
176 > 102
6.813e+003



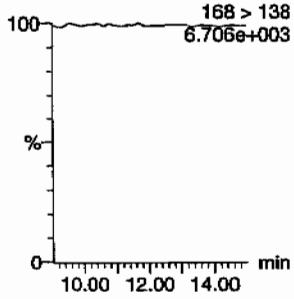
135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
6.710e+003



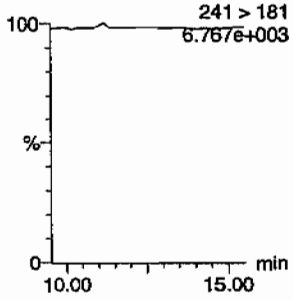
13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
1.592e+004



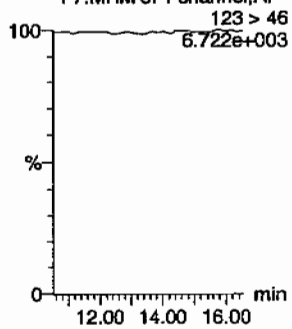
13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
6.706e+003



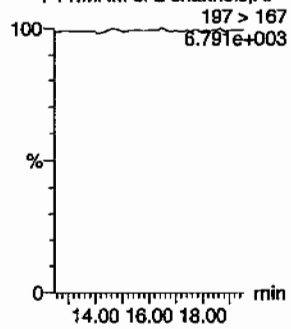
Tetryl
F6:MRM of 1 channel,AP-
241 > 181
6.767e+003



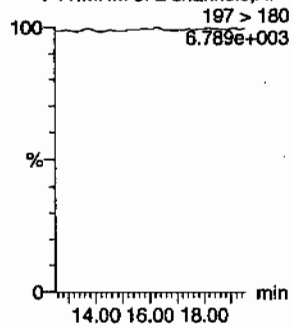
Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
6.722e+003



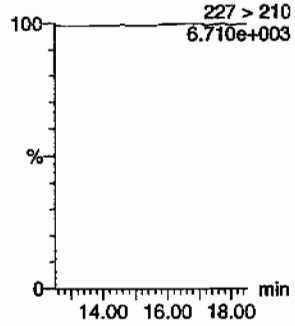
4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 167
6.791e+003



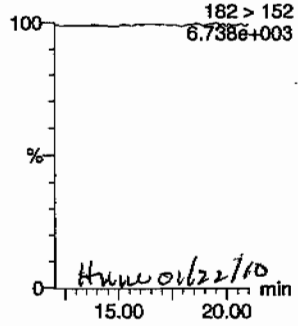
2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
6.789e+003



246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
6.710e+003

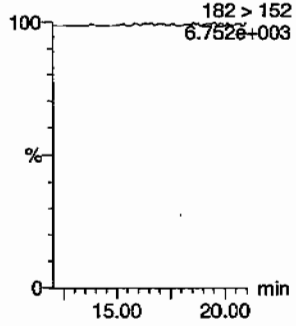


34-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
6.738e+003



Hmw 01/22/10

26-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
6.752e+003



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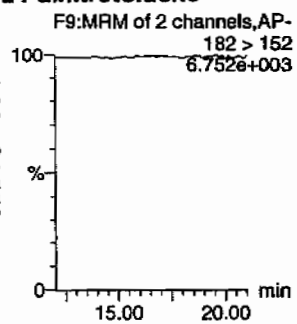
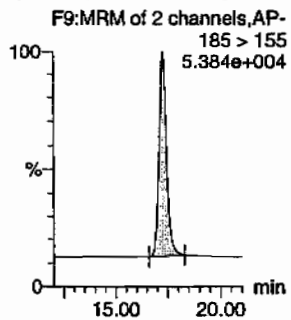
Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA3.qld, Time: Fri Jan 22 10:11:48 2010

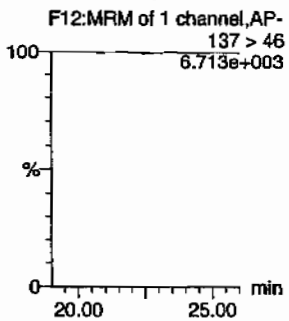
24-dinitrotoluene



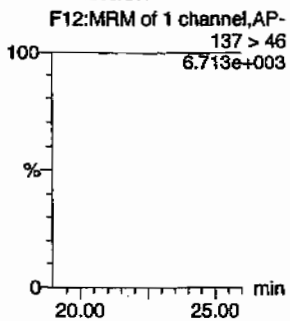
26-dinitrotoluene-d3



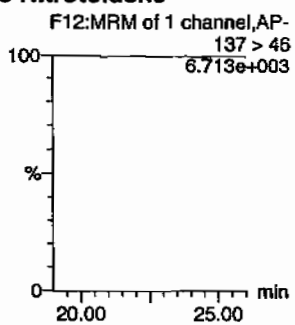
2-Nitrotoluene



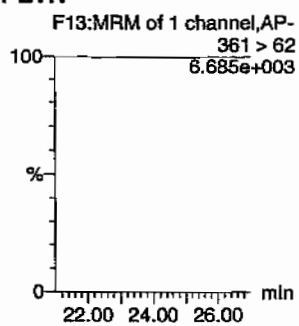
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N
XIBLK16	HMX	176 > 102			3715.984									
XIBLK16	RDX	176 > 102			3715.984									
XIBLK16	135-Trinitrobenzene	213 > 183			3715.984									
XIBLK16	13-Dinitrobenzene-d4	172 > 142	11.97	3715.984		3715.984	3715.984	bb			547.5449	109.5	9.5	297.8
XIBLK16	13-Dinitrobenzene	168 > 138			3715.984									
XIBLK16	Tetryl	241 > 181			3715.984									
XIBLK16	Nitrobenzene	123 > 46			3715.984									
XIBLK16	4-Amino-26-dinitrotoluene	197 > 167			20234.727									
XIBLK16	2-Amino-46-dinitrotoluene	197 > 180			20234.727									
XIBLK16	246-Trinitrotoluene	227 > 210			20234.727									
XIBLK16	34-dinitrotoluene	182 > 152			20234.727									
XIBLK16	26-dinitrotoluene	182 > 152			20234.727									
XIBLK16	24-dinitrotoluene	182 > 152			20234.727									
XIBLK16	26-dinitrotoluene-d3	185 > 155	17.27	20234.727		20234.727	20234.727	bb			551.5181	110.3	10.3	2876.4
XIBLK16	2-Nitrotoluene	137 > 46			20234.727									
XIBLK16	4-Nitrotoluene	137 > 46			20234.727									
XIBLK16	3-Nitrotoluene	137 > 46			20234.727									
XIBLK16	PETN	361 > 62			20234.727									

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4A
Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10–1130

Lab Code: GEL

Lab Sample ID: XIBLK17

Analysis Date: 21–JAN–10 17:18

GEL Data File: EXP0118154a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
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	616.676
2,4,6–Trinitrotoluene	0	0
2,4–Dinitrotoluene	0	0
2,6–Dinitrotoluene	0	0
2,6–Dinitrotoluene–d3	500	606.864
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

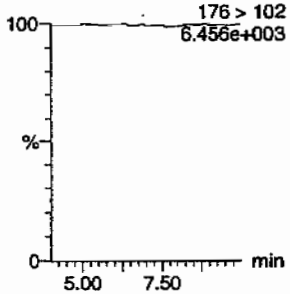
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA3.qld, Time: Fri Jan 22 10:11:48 2010

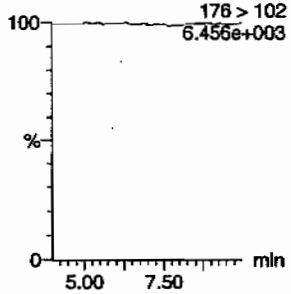
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118154a
Date: 21-Jan-2010
Time: 17:18:08
ID: XIBLK17
Vial: 1:1,A

MAP 1/22/10

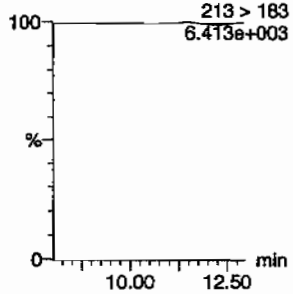
HMX
F2:MRM of 1 channel,AP-
176 > 102
6.456e+003



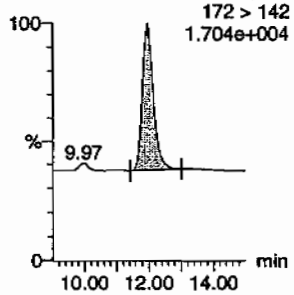
RDX
F2:MRM of 1 channel,AP-
176 > 102
6.456e+003



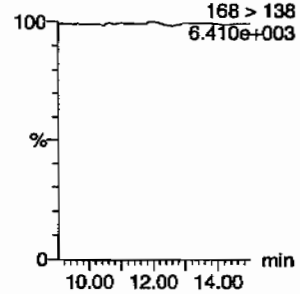
135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
6.413e+003



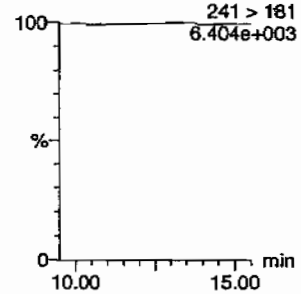
13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
1.704e+004



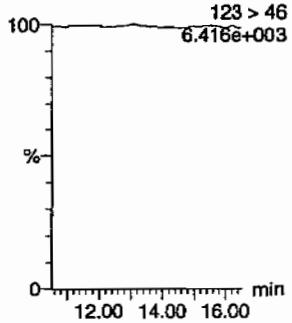
13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
6.410e+003



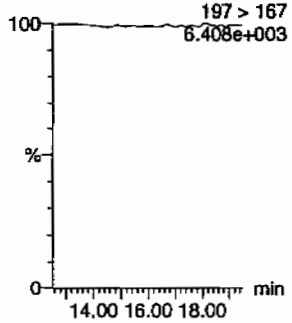
Tetryl
F6:MRM of 1 channel,AP-
241 > 181
6.404e+003



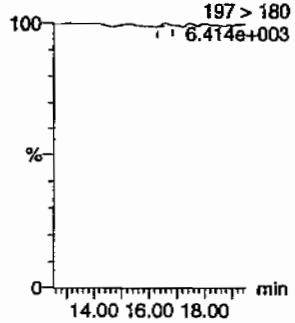
Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
6.416e+003



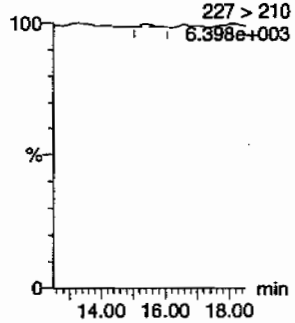
4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 167
6.408e+003



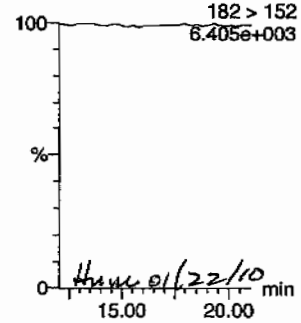
2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
6.414e+003



246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
6.398e+003

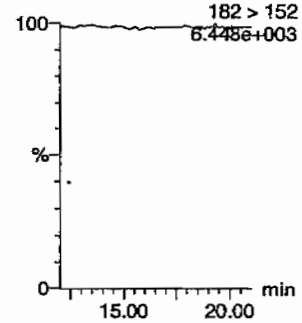


34-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
6.405e+003



HMW 01/22/10

26-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
6.448e+003



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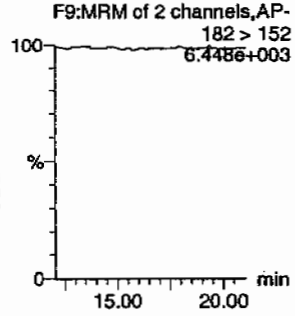
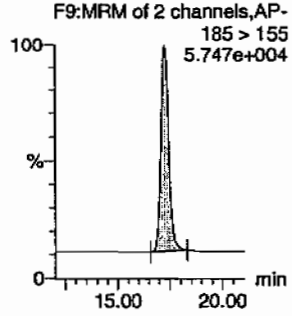
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA3.qld, Time: Fri Jan 22 10:11:48 2010

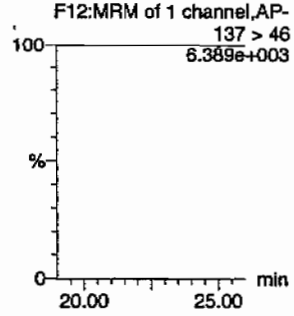
24-dinitrotoluene



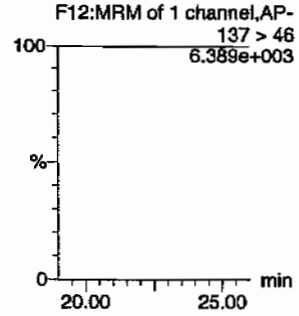
26-dinitrotoluene-d3



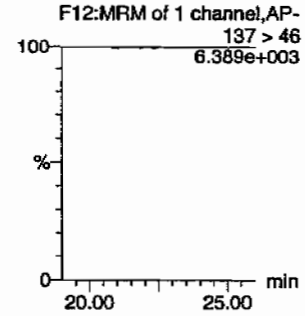
2-Nitrotoluene



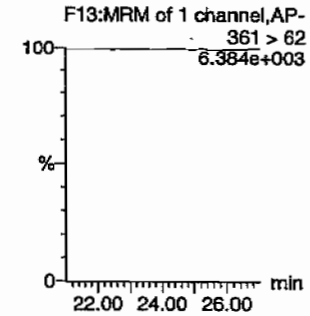
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	µg/ml	%Rec	%Dev	S/N
XIBLK17	HMX	176 > 102			4185.148									
XIBLK17	RDX	176 > 102			4185.148									
XIBLK17	135-Trinitrobenzene	213 > 183			4185.148									
XIBLK17	13-Dinitrobenzene-d4	172 > 142	11.95	4185.148		4185.148	4185.148	bb			616.6756	123.3	23.3	442.9
XIBLK17	13-Dinitrobenzene	168 > 138			4185.148									
XIBLK17	Tetryl	241 > 181			4185.148									
XIBLK17	Nitrobenzene	123 > 46			4185.148									
XIBLK17	4-Amino-26-dinitrotoluene	197 > 167			22265.324									
XIBLK17	2-Amino-46-dinitrotoluene	197 > 180			22265.324			MM-	22-Jan-10	10:03:27				
XIBLK17	246-Trinitrotoluene	227 > 210			22265.324			MM-	22-Jan-10	10:04:58				
XIBLK17	34-dinitrotoluene	182 > 152			22265.324									
XIBLK17	26-dinitrotoluene	182 > 152			22265.324									
XIBLK17	24-dinitrotoluene	182 > 152			22265.324									
XIBLK17	26-dinitrotoluene-d3	185 > 155	17.25	22265.324		22265.324	22265.324	bb			606.8641	121.4	21.4	830.0
XIBLK17	2-Nitrotoluene	137 > 46			22265.324									
XIBLK17	4-Nitrotoluene	137 > 46			22265.324									
XIBLK17	3-Nitrotoluene	137 > 46			22265.324									
XIBLK17	PETN	361 > 62			22265.324									

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

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4A
Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10–1130

Lab Code: GEL

Lab Sample ID: XIBLK18

Analysis Date: 21–JAN–10 21:14

GEL Data File: EXP0118162a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

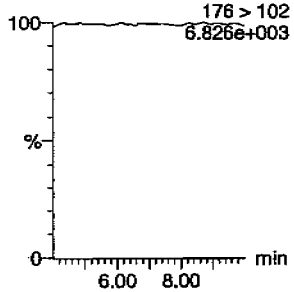
Compound	True	Found (ug/L)
3,4–Dinitrotoluene	0	0
1,3,5–Trinitrobenzene	0	0
1,3–Dinitrobenzene–d4	500	506.311
2,4,6–Trinitrotoluene	0	0
2,4–Dinitrotoluene	0	0
2,6–Dinitrotoluene	0	0
2,6–Dinitrotoluene–d3	500	502.987
2–Amino–4,6–dinitrotoluene	0	0
4–Amino–2,6–dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m–Dinitrobenzene	0	0
m–Nitrotoluene	0	0
o–Nitrotoluene	0	0
p–Nitrotoluene	0	0

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA3.qld, Time: Fri Jan 22 10:11:48 2010

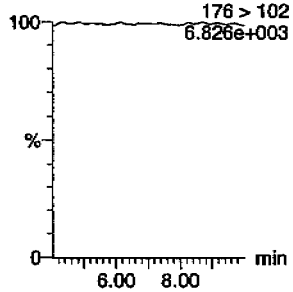
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118162a
Date: 21-Jan-2010
Time: 21:14:13
ID: XIBLK18
Vial: 1:1,A

MMT 1/22/10

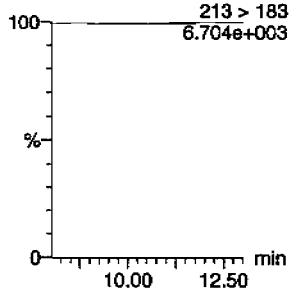
HMX
F2:MRM of 1 channel,AP-
176 > 102
6.826e+003



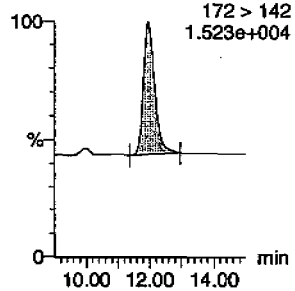
RDX
F2:MRM of 1 channel,AP-
176 > 102
6.826e+003



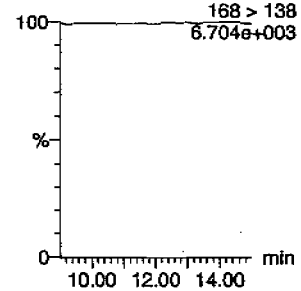
135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
6.704e+003



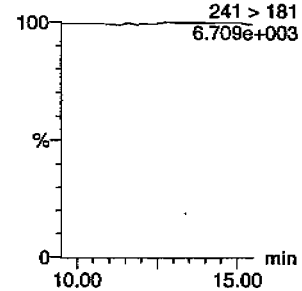
13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
1.523e+004



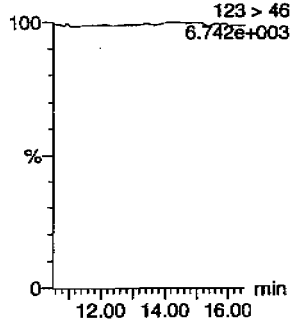
13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
6.704e+003



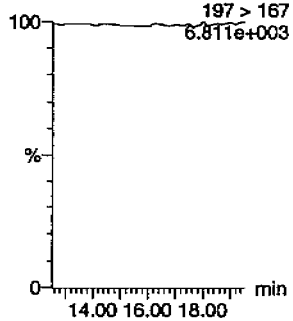
Tetryl
F6:MRM of 1 channel,AP-
241 > 181
6.709e+003



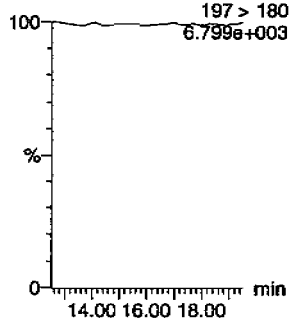
Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
6.742e+003



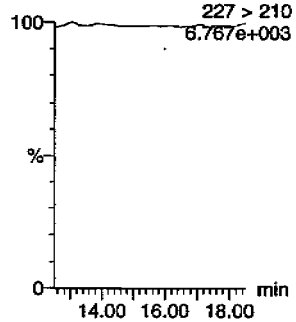
4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 167
6.811e+003



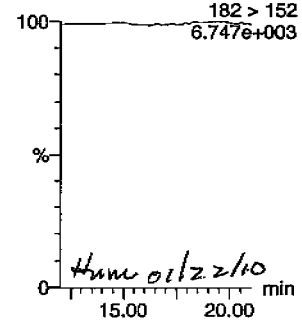
2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
6.799e+003



246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
6.767e+003

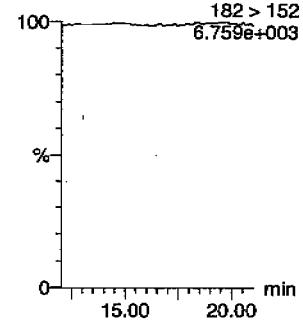


34-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
6.747e+003



Hmm 01/22/10

26-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
6.759e+003



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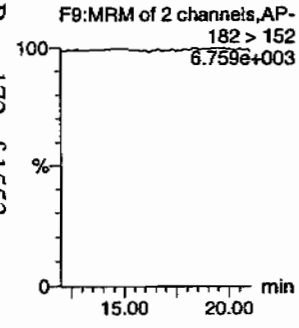
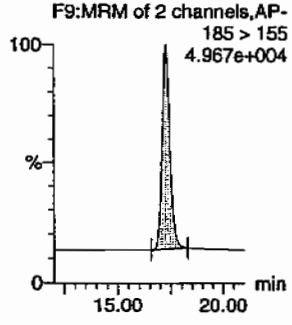
Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA3.qld, Time: Fri Jan 22 10:11:48 2010

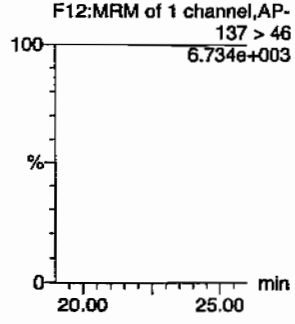
24-dinitrotoluene



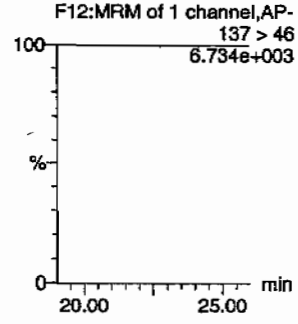
26-dinitrotoluene-d3



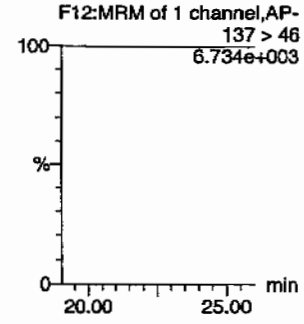
2-Nitrotoluene



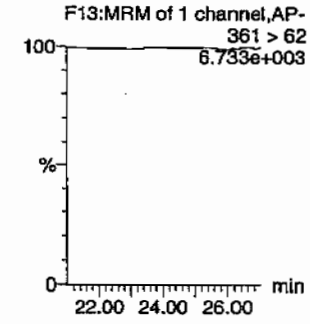
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N
XIBLK18	HMX	176 > 102			3436.145									
XIBLK18	RDX	176 > 102			3436.145									
XIBLK18	135-Trinitrobenzene	213 > 183			3436.145									
XIBLK18	13-Dinitrobenzene-d4	172 > 142	11.97	3436.145		3436.145	3436.145	bb			506.3110	101.3	1.3	262.1
XIBLK18	13-Dinitrobenzene	168 > 138			3436.145									
XIBLK18	Tetryl	241 > 181			3436.145									
XIBLK18	Nitrobenzene	123 > 46			3436.145									
XIBLK18	4-Amino-26-dinitrotoluene	197 > 167			18454.170									
XIBLK18	2-Amino-46-dinitrotoluene	197 > 180			18454.170									
XIBLK18	246-Trinitrotoluene	227 > 210			18454.170									
XIBLK18	34-dinitrotoluene	182 > 152			18454.170									
XIBLK18	26-dinitrotoluene	182 > 152			18454.170									
XIBLK18	24-dinitrotoluene	182 > 152			18454.170									
XIBLK18	26-dinitrotoluene-d3	185 > 155	17.26	18454.170		18454.170	18454.170	bb			502.9872	100.6	0.6	1942.9
XIBLK18	2-Nitrotoluene	137 > 46			18454.170									
XIBLK18	4-Nitrotoluene	137 > 46			18454.170									
XIBLK18	3-Nitrotoluene	137 > 46			18454.170									
XIBLK18	PETN	361 > 62			18454.170									

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10–1130

Lab Code: GEL

Lab Sample ID: XIBLK19

Analysis Date: 22–JAN–10 02:38

GEL Data File: EXP0118173a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

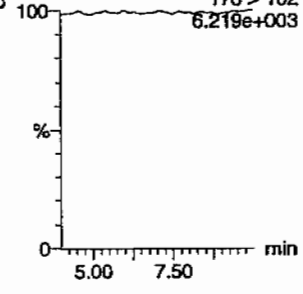
Compound	True	Found (ug/L)
3,4–Dinitrotoluene	0	0
1,3,5–Trinitrobenzene	0	0
1,3–Dinitrobenzene–d4	500	556.239
2,4,6–Trinitrotoluene	0	0
2,4–Dinitrotoluene	0	0
2,6–Dinitrotoluene	0	0
2,6–Dinitrotoluene–d3	500	562.939
2–Amino–4,6–dinitrotoluene	0	0
4–Amino–2,6–dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m–Dinitrobenzene	0	0
m–Nitrotoluene	0	0
o–Nitrotoluene	0	0
p–Nitrotoluene	0	0

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA3.qld, Time: Fri Jan 22 10:11:48 2010

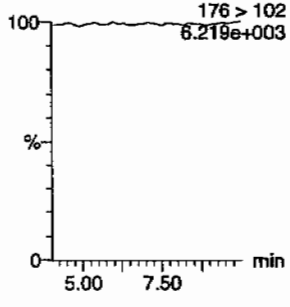
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118173a
Date: 22-Jan-2010
Time: 02:38:46
ID: XIBLK19
Vial: 1:1,A

MM 1/22/10

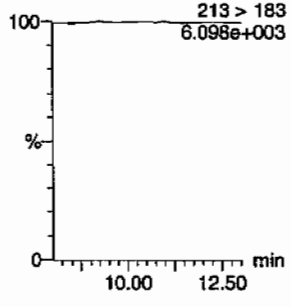
HMX
F2:MRM of 1 channel,AP-
176 > 102
6.219e+003



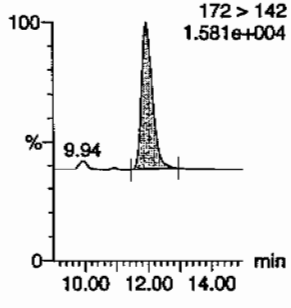
RDX
F2:MRM of 1 channel,AP-
176 > 102
6.219e+003



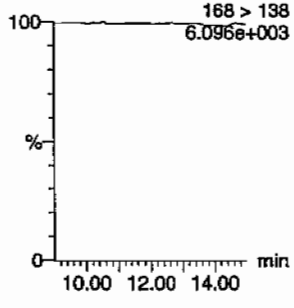
135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
6.098e+003



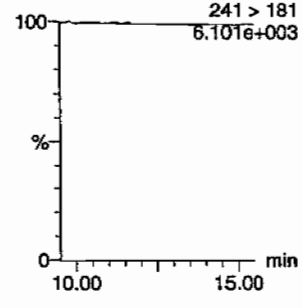
13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
1.581e+004



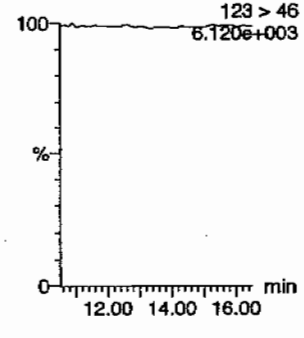
13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
6.096e+003



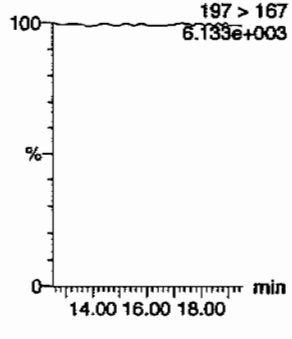
Tetryl
F6:MRM of 1 channel,AP-
241 > 181
6.101e+003



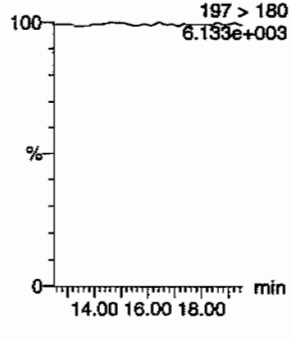
Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
6.120e+003



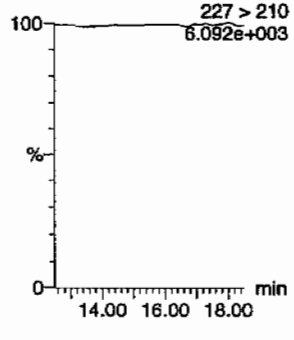
4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 167
6.133e+003



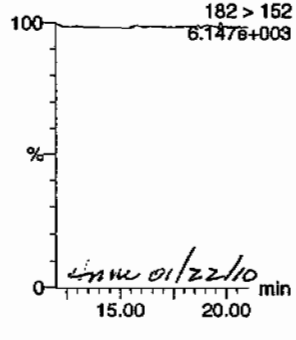
2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
6.133e+003



246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
6.092e+003

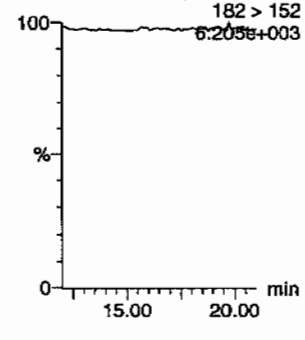


34-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
6.147e+003



MM 01/22/10

26-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
6.205e+003



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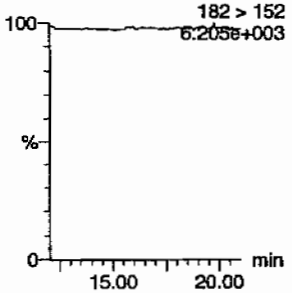
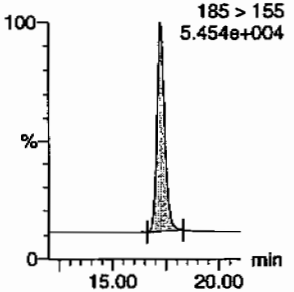
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA3.qld, Time: Fri Jan 22 10:11:48 2010

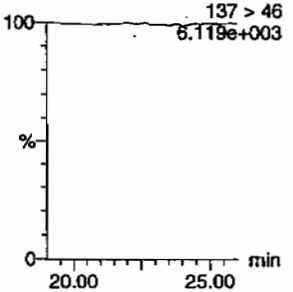
24-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
6.205e+003



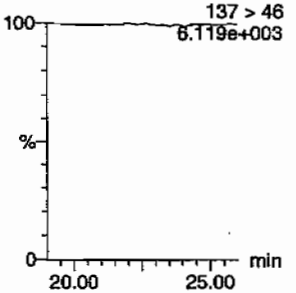
26-dinitrotoluene-d3
F9:MRM of 2 channels,AP-
185 > 155
5.454e+004



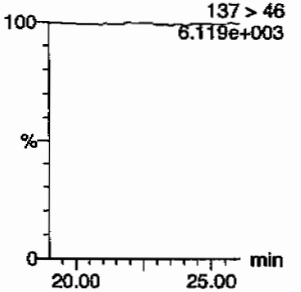
2-Nitrotoluene
F12:MRM of 1 channel,AP-
137 > 46
6.119e+003



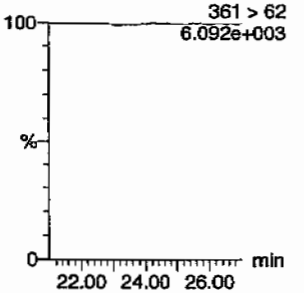
4-Nitrotoluene
F12:MRM of 1 channel,AP-
137 > 46
6.119e+003



3-Nitrotoluene
F12:MRM of 1 channel,AP-
137 > 46
6.119e+003



PETN
F13:MRM of 1 channel,AP-
361 > 62
6.092e+003



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N
XIBLK19	HMX	176 > 102			3774.990									
XIBLK19	RDX	176 > 102			3774.990									
XIBLK19	135-Trinitrobenzene	213 > 183			3774.990									
XIBLK19	13-Dinitrobenzene-d4	172 > 142	11.95	3774.990		3774.990	3774.990	bb			556.2394	111.2	11.2	873.6
XIBLK19	13-Dinitrobenzene	168 > 138			3774.990									
XIBLK19	Tetryl	241 > 181			3774.990									
XIBLK19	Nitrobenzene	123 > 46			3774.990									
XIBLK19	4-Amino-26-dinitrotoluene	197 > 167			20653.754									
XIBLK19	2-Amino-46-dinitrotoluene	197 > 180			20653.754									
XIBLK19	246-Trinitrotoluene	227 > 210			20653.754									
XIBLK19	34-dinitrotoluene	182 > 152			20653.754									
XIBLK19	26-dinitrotoluene	182 > 152			20653.754									
XIBLK19	24-dinitrotoluene	182 > 152			20653.754									
XIBLK19	26-dinitrotoluene-d3	185 > 155	17.24	20653.754		20653.754	20653.754	bb			562.9391	112.6	12.6	2120.0
XIBLK19	2-Nitrotoluene	137 > 46			20653.754									
XIBLK19	4-Nitrotoluene	137 > 46			20653.754									
XIBLK19	3-Nitrotoluene	137 > 46			20653.754									
XIBLK19	PETN	361 > 62			20653.754									

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10–1130

Lab Code: GEL

Lab Sample ID: XIBLK02

Analysis Date: 20–JAN–10 12:51

GEL Data File: EXS01200010.wiff

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

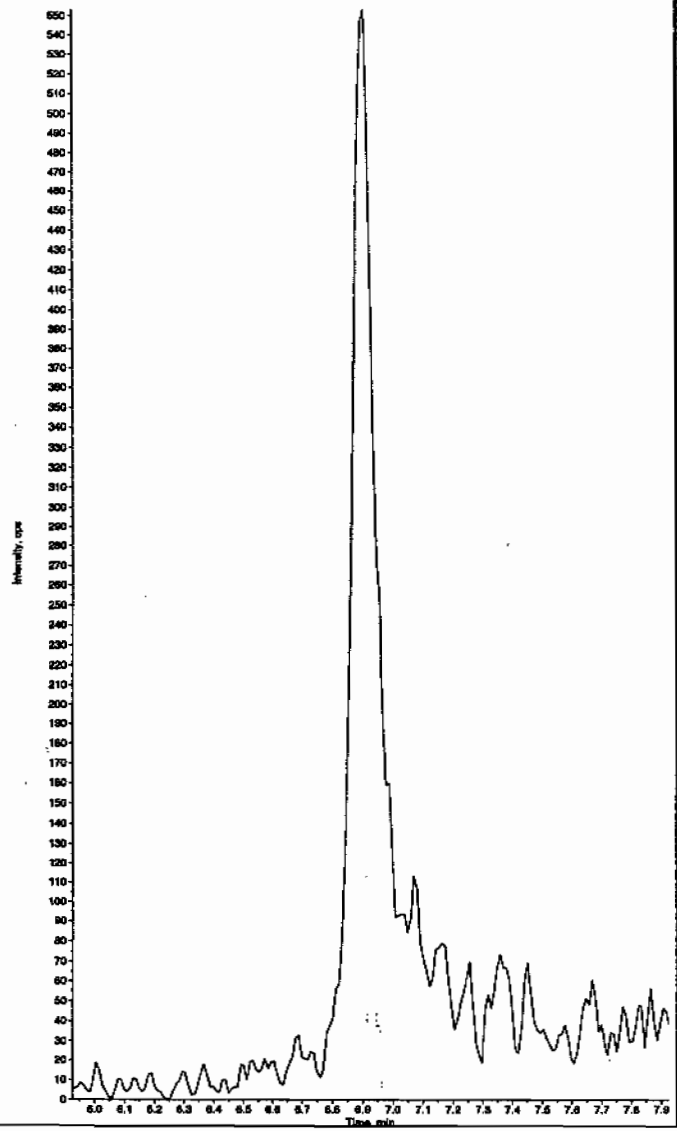
Compound	True	Found (ug/L)
3,4–Dinitrotoluene	0	0
tris(o–cresyl) phosphate	0	6.97
TATB	0	0
3,5–Dinitroaniline	0	2.92
2,4–Diamino–6–nitrotoluene	0	0
2,6–Diamino–4–nitrotoluene	0	0

Sler 1/21/10

Sample Name: "XIBLK02" Sample ID: "[1]LER" File: "EXS01200010.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 12:51:04 PM

Modified: No

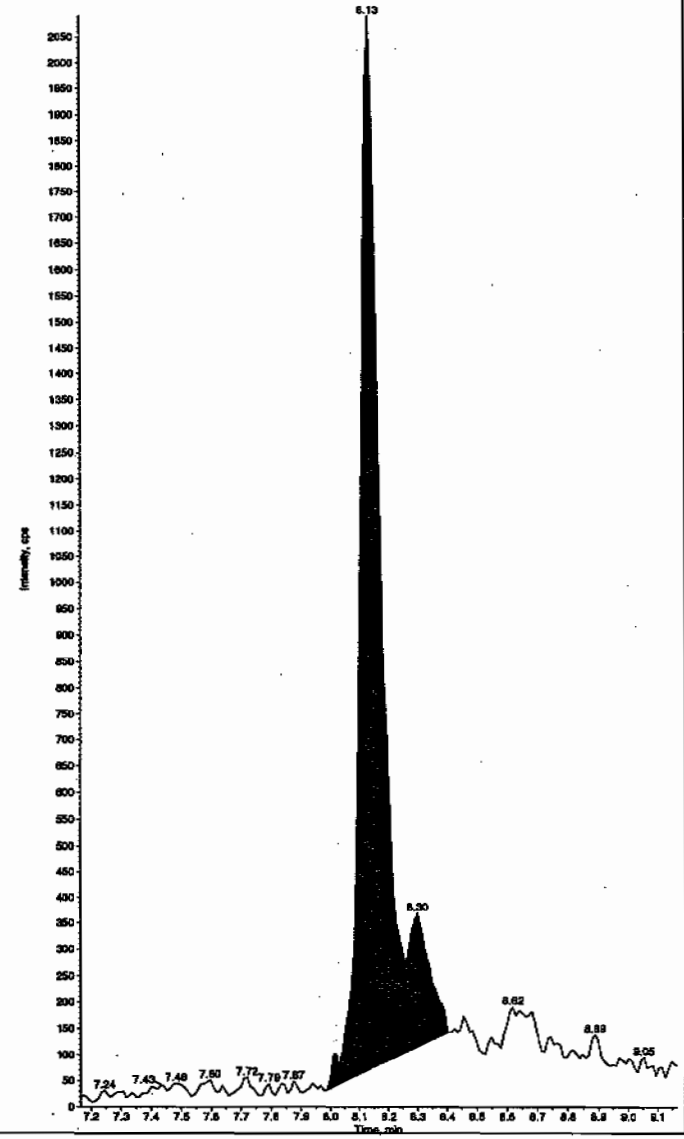


Sample Name: "XIBLK02" Sample ID: "[1]LER" File: "EXS01200010.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 2.92 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 12:51:04 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.16 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.13 min
Area: 1.15e+004 counts
Height: 2022.150 cps
Start Time: 7.99 min
End Time: 8.40 min



thme 01/21/10

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

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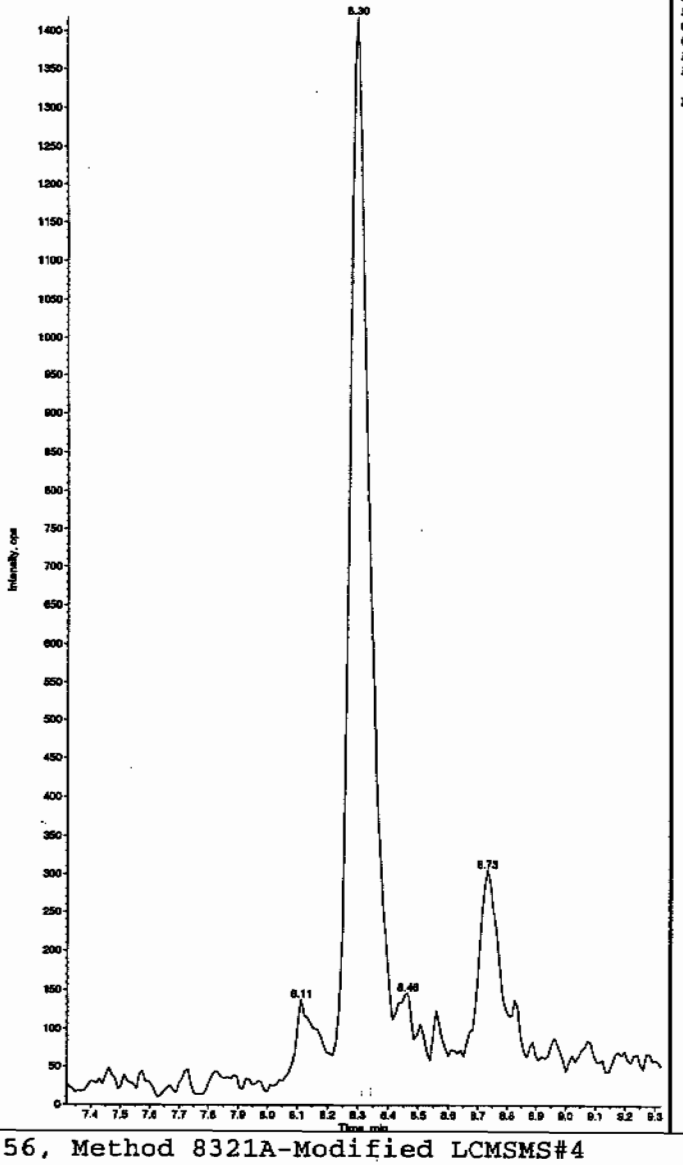
Sample Name: "XIBLK02" Sample ID: "[1]LER" File: "EXS01200010.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 12:51:04 PM

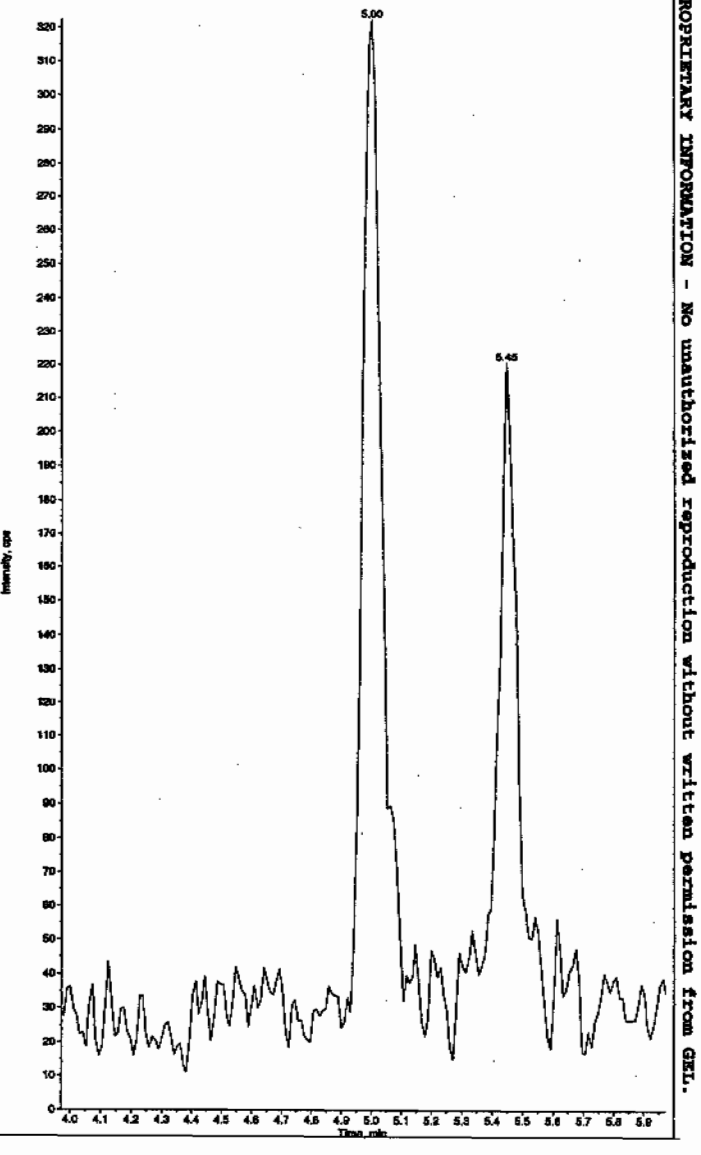
Modified: No



Sample Name: "XIBLK02" Sample ID: "[1]LER" File: "EXS01200010.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 12:51:04 PM

Modified: No



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

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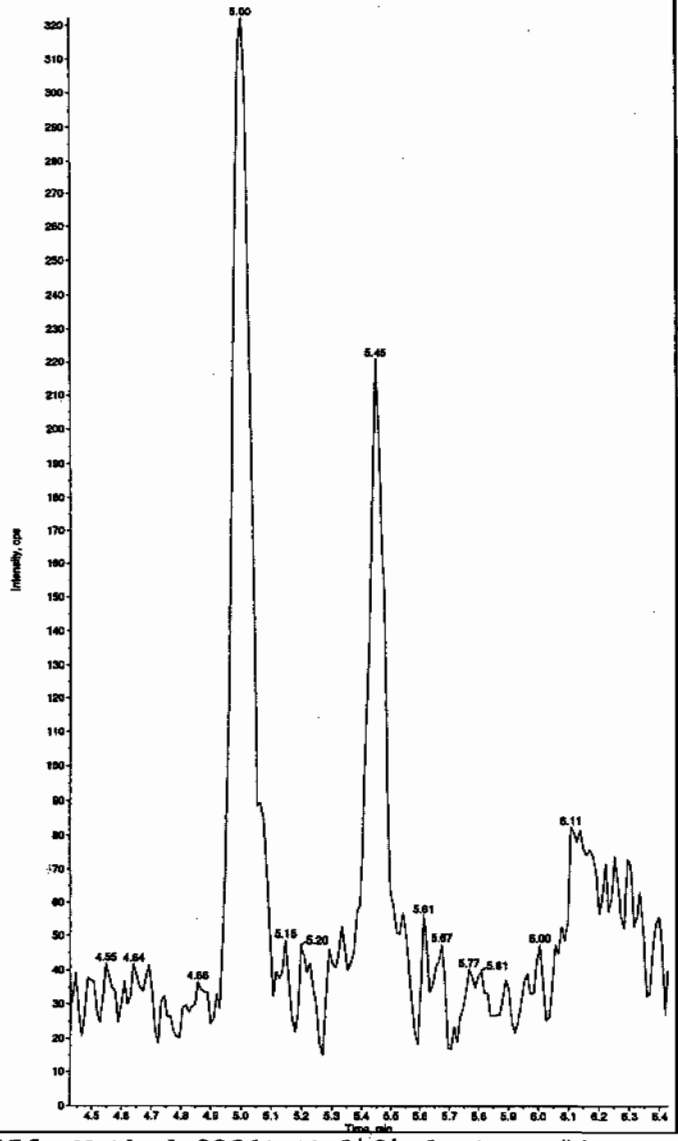
Sample Name: "XIBLK02" Sample ID: "[1]LER" File: "EXS01200010.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 12:51:04 PM

Modified: No

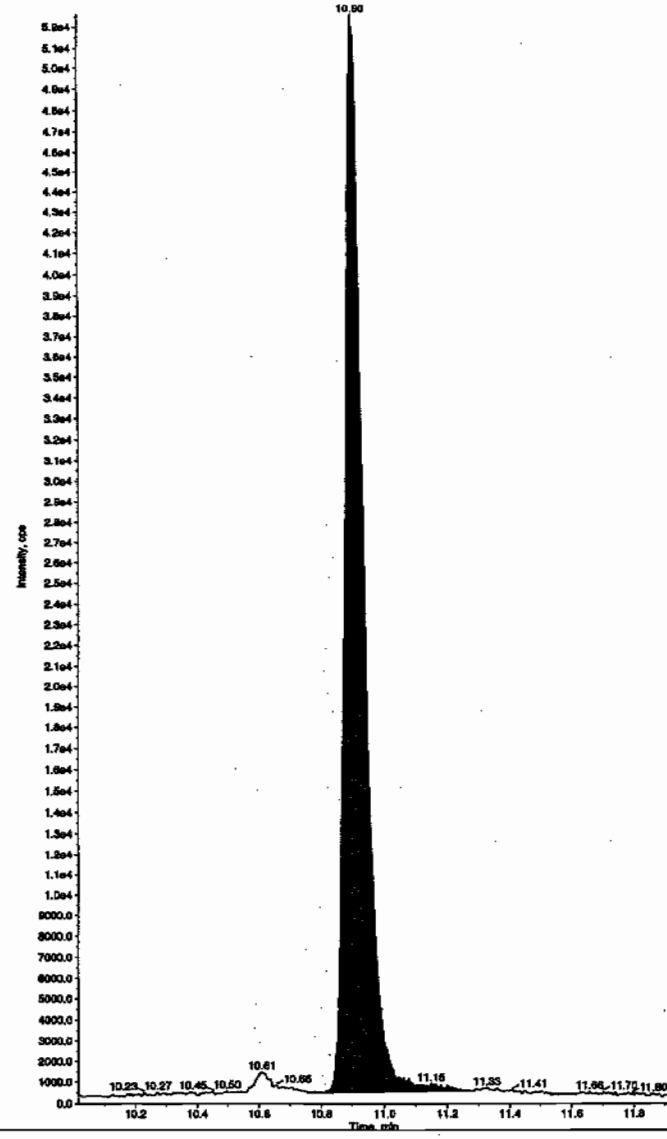


Sample Name: "XIBLK02" Sample ID: "[1]LER" File: "EXS01200010.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 6.97 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 12:51:04 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.9 min
Area: 2.20e+005 counts
Height: 52153.744 cps
Start Time: 10.8 min
End Time: 11.3 min



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

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4A
Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10–1130

Lab Code: GEL

Lab Sample ID: XIBLK03

Analysis Date: 20–JAN–10 13:22

GEL Data File: EXS01200012.wiff

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

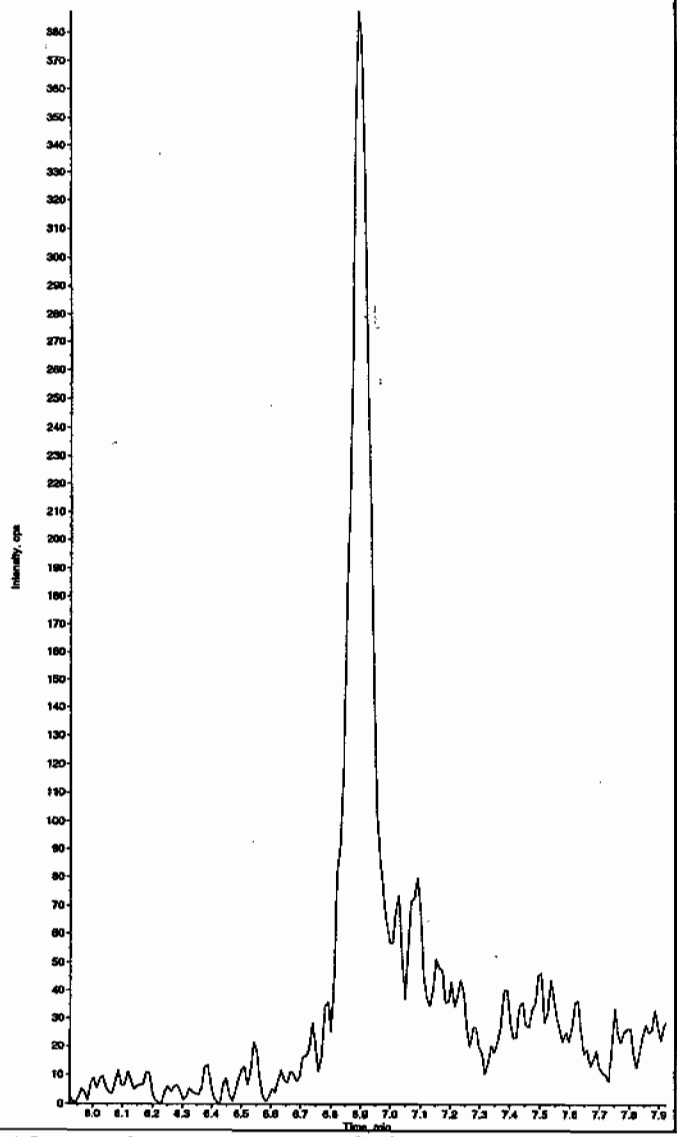
Compound	True	Found (ug/L)
3,4–Dinitrotoluene	0	0
tris(o–cresyl) phosphate	0	3.31
TATB	0	0
3,5–Dinitroaniline	0	0
2,4–Diamino–6–nitrotoluene	0	0
2,6–Diamino–4–nitrotoluene	0	0

Lee 1/21/10

Sample Name: "XIBLK03" Sample ID: "[1]LER" File: "EXS01200012.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 1:22:27 PM

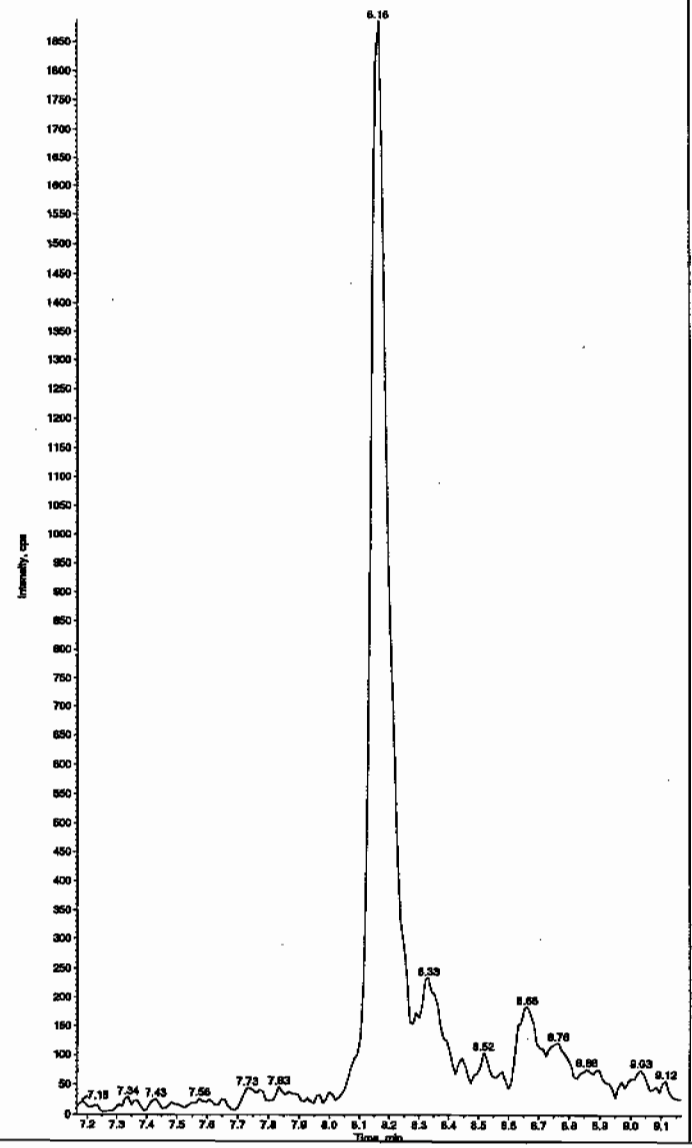
Modified: No



Sample Name: "XIBLK03" Sample ID: "[1]LER" File: "EXS01200012.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 1:22:27 PM

Modified: No



Hnm 01/21/10

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

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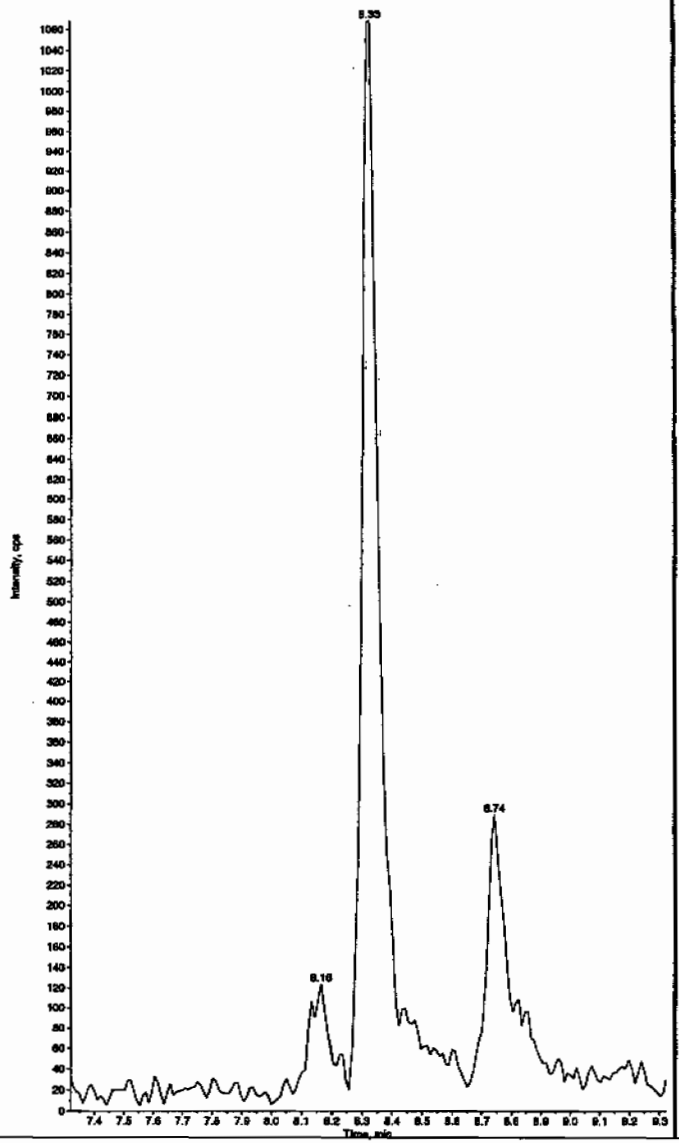
Sample Name: "XBLK03" Sample ID: "[1]LER" File: "EXS01200012.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 1:22:27 PM

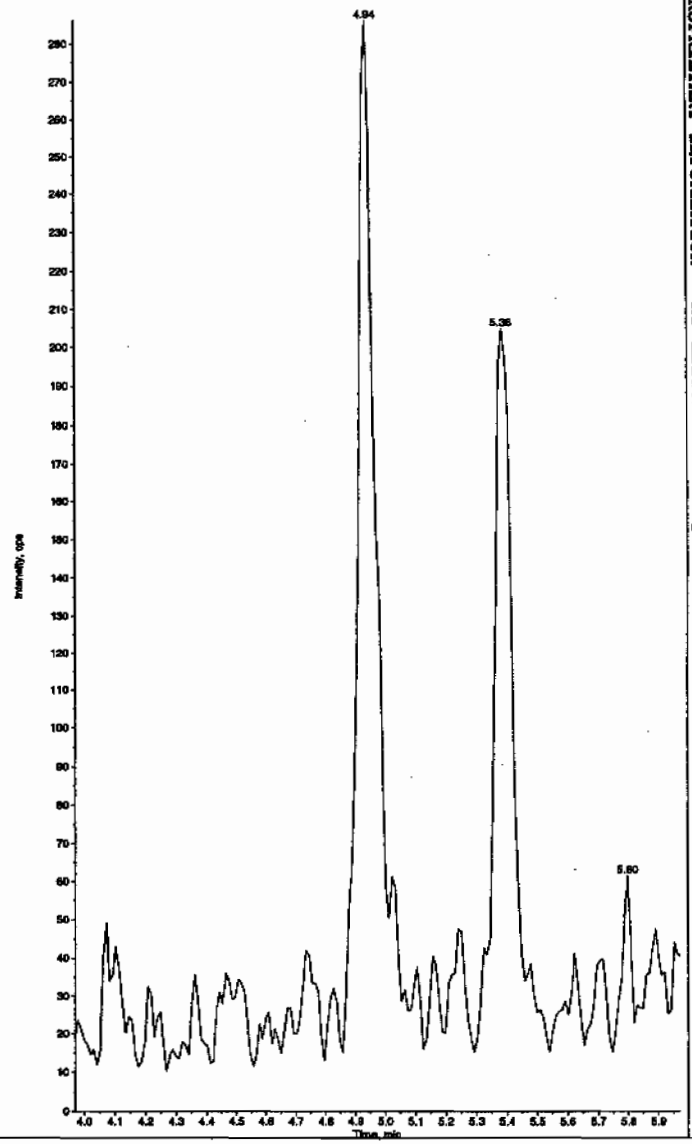
Modified: No



Sample Name: "XBLK03" Sample ID: "[1]LER" File: "EXS01200012.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 1:22:27 PM

Modified: No



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

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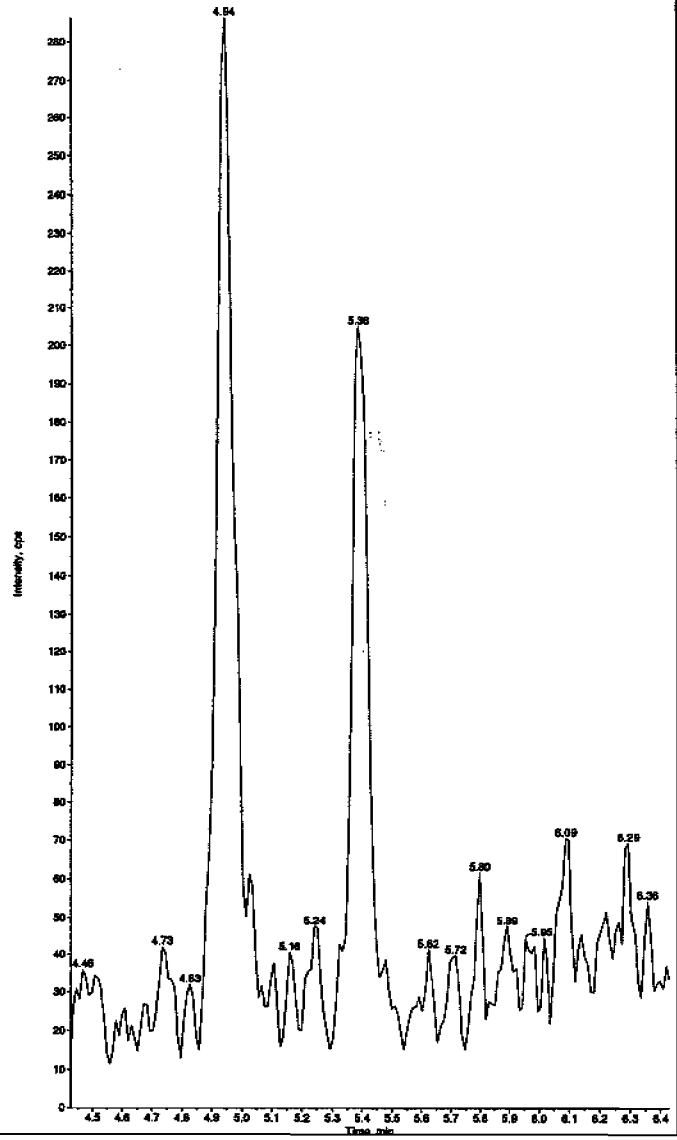
Sample Name: "XIBLK03" Sample ID: "|1|LER" File: "EXS01200012.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 1:22:27 PM

Modified: No

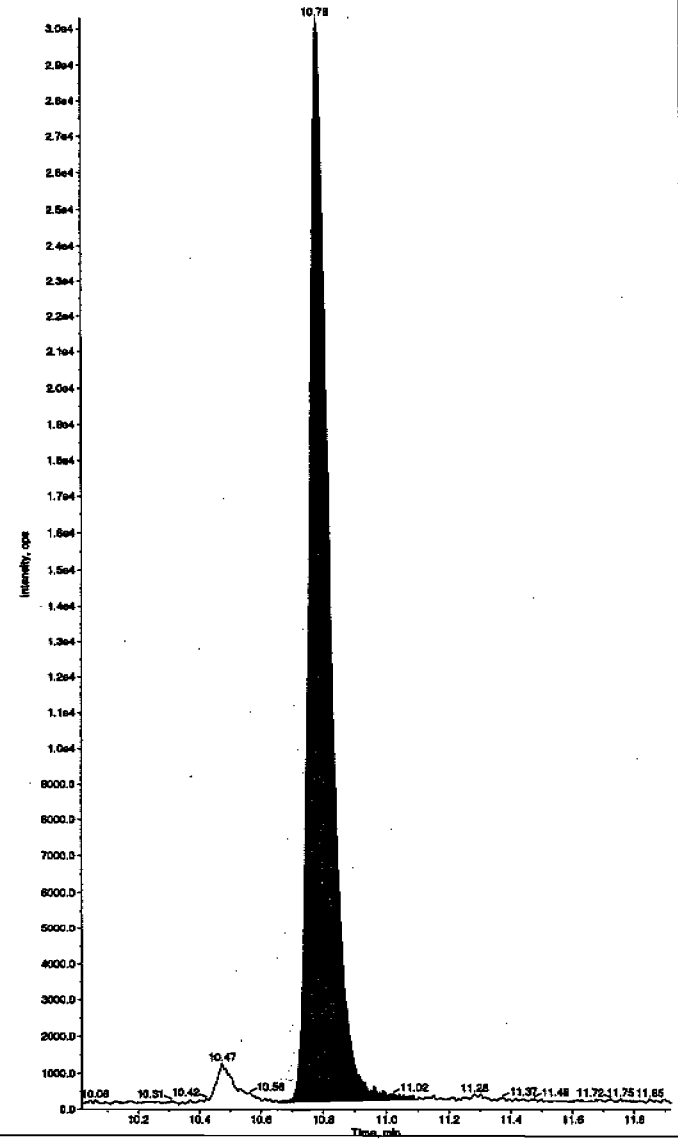


Sample Name: "XIBLK03" Sample ID: "|1|LER" File: "EXS01200012.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 3.31 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 1:22:27 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.8 min
Area: 1.36e+005 counts
Height: 30080.732 cps
Start Time: 10.7 min
End Time: 11.1 min



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

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4A
Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10–1130

Lab Code: GEL

Lab Sample ID: XIBLK04

Analysis Date: 20–JAN–10 16:46

GEL Data File: EXS01200025.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	.915
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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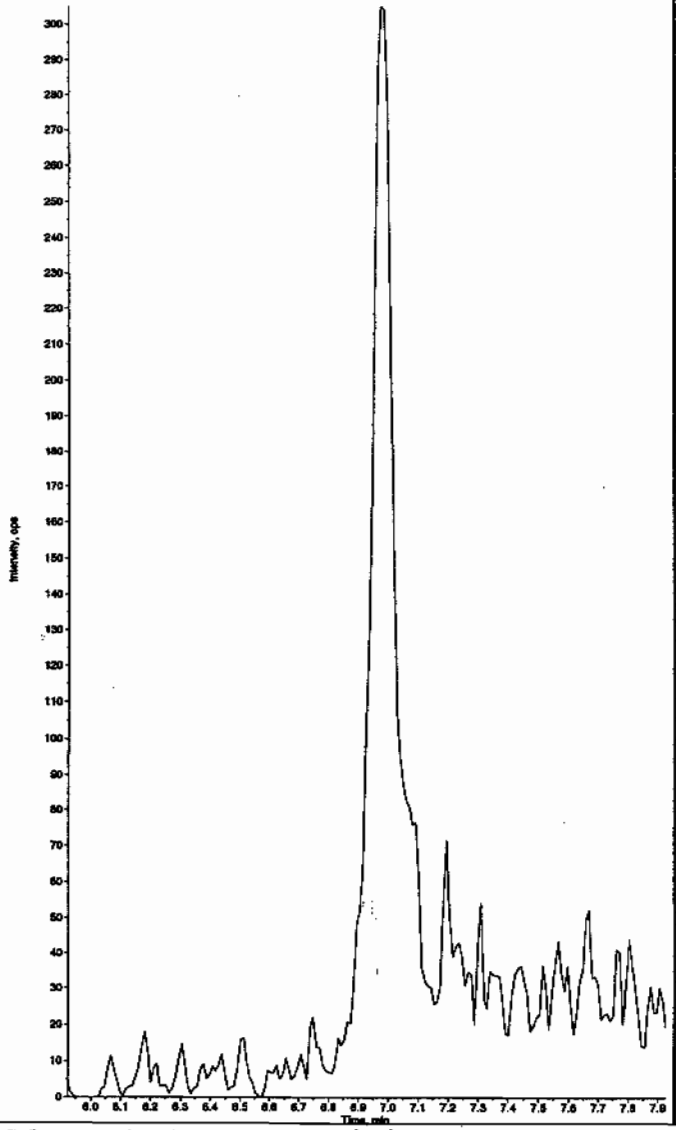
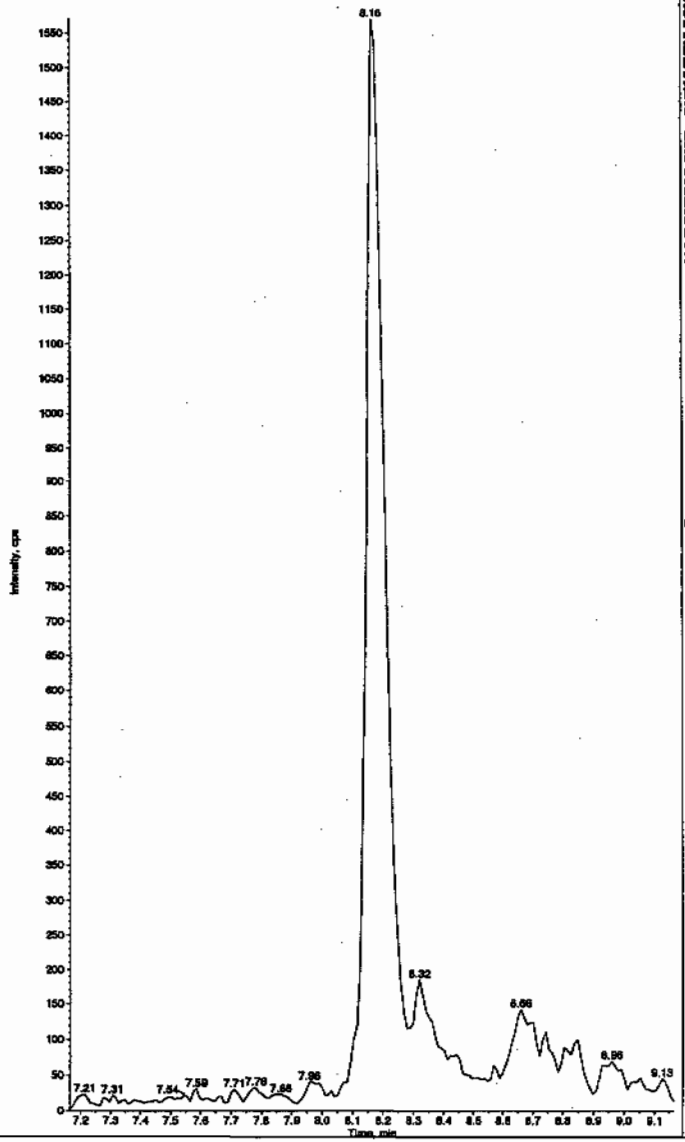
Sample Name: "XIBLK04" Sample ID: "[1]LER" File: "EXS01200025.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_B" Annotation: ""
Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 4:46:36 PM

Modified: No



Sample Name: "XIBLK04" Sample ID: "[1]LER" File: "EXS01200025.wiff"
Peak Name: "35-Dinitroaniline" Mass(as): "182.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""
Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 4:46:36 PM

Modified: No



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

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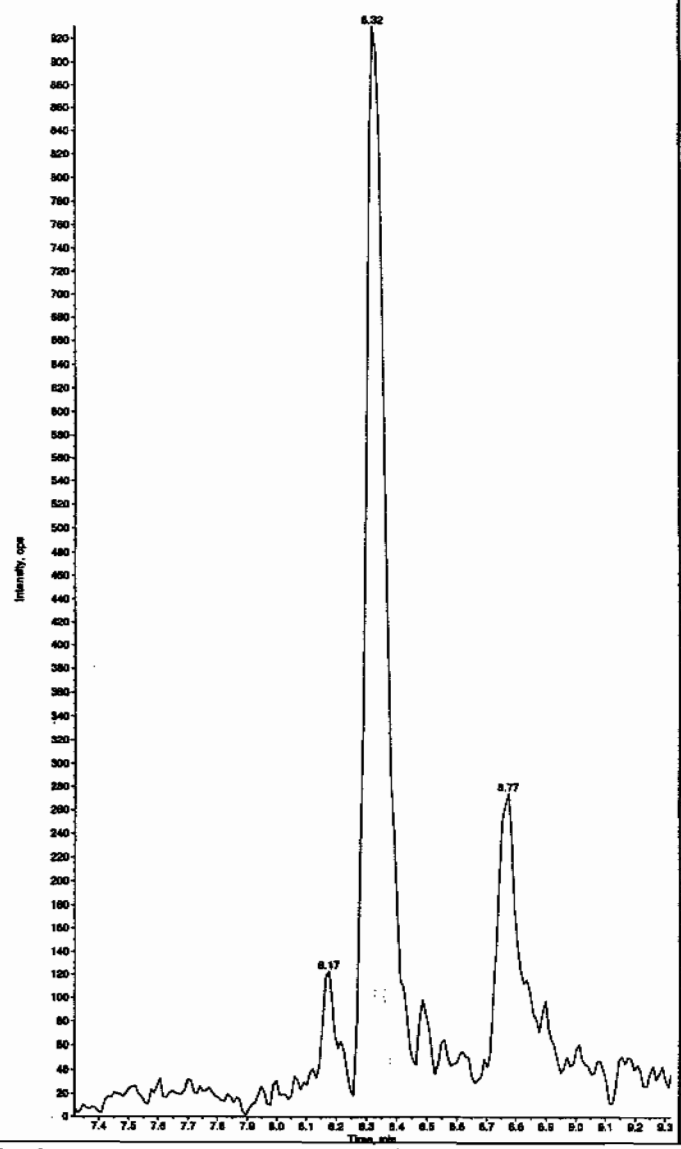
Sample Name: "XIBLK04" Sample ID: "[1]LER" File: "EXS01200025.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 4:46:36 PM

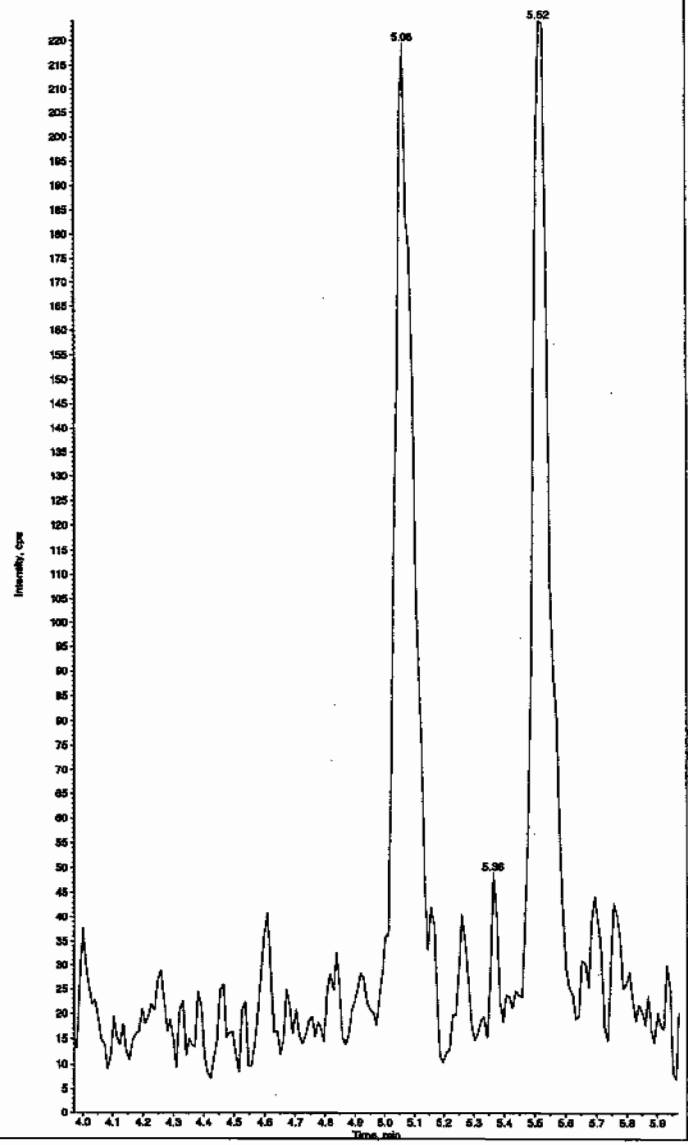
Modified: No



Sample Name: "XIBLK04" Sample ID: "[1]LER" File: "EXS01200025.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 4:46:36 PM

Modified: No



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

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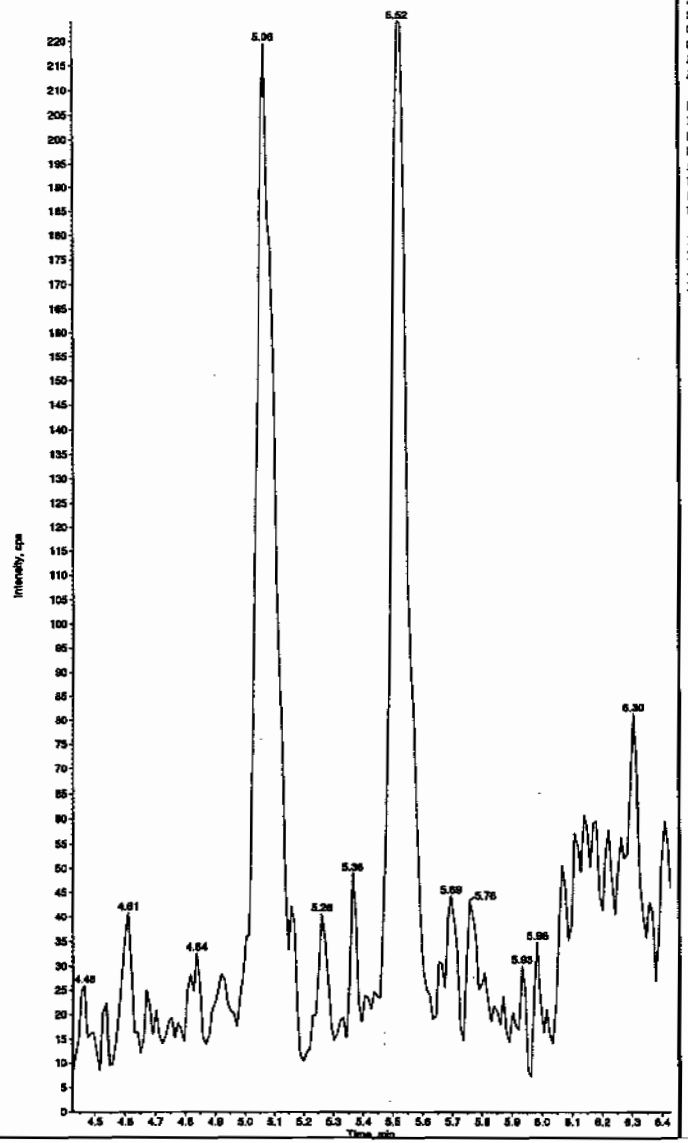
Sample Name: "XIBLK04" Sample ID: "[1]LER" File: "EXS01200025.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 4:46:36 PM

Modified: No

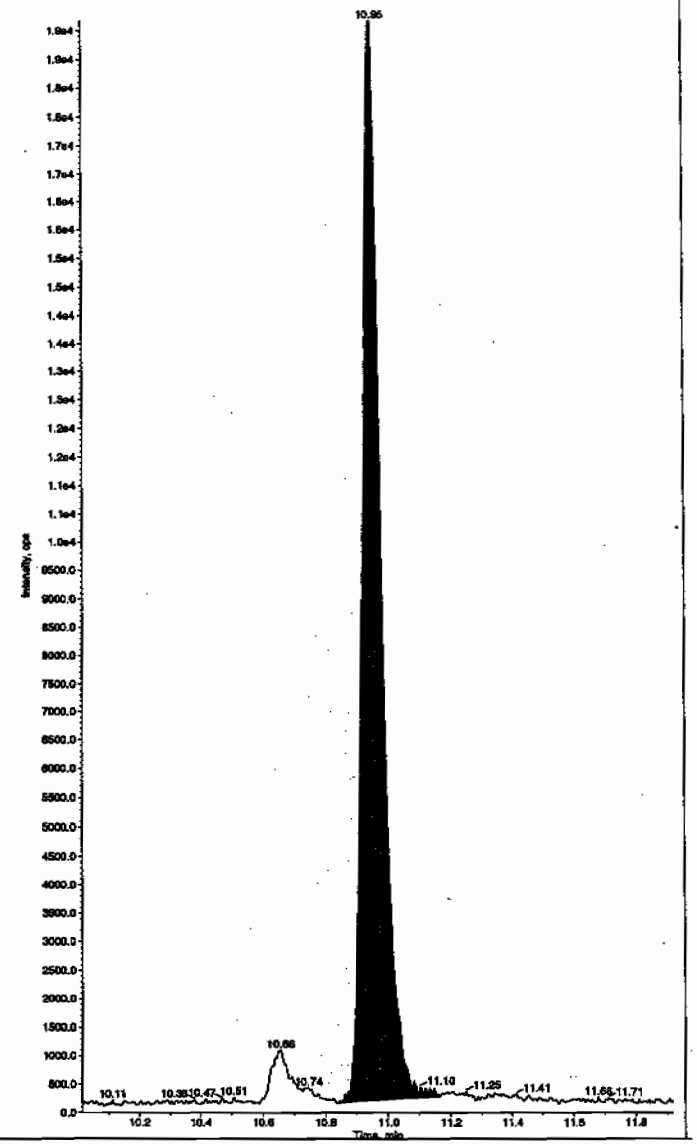


Sample Name: "XIBLK04" Sample ID: "[1]LER" File: "EXS01200025.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.915 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 4:46:36 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 11.0 min
Area: 8.03e+004 counts
Height: 18981.157 cps
Start Time: 10.8 min
End Time: 11.2 min



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

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4A
Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10–1130

Lab Code: GEL

Lab Sample ID: XIBLK05

Analysis Date: 20–JAN–10 20:10

GEL Data File: EXS01200038.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	.766
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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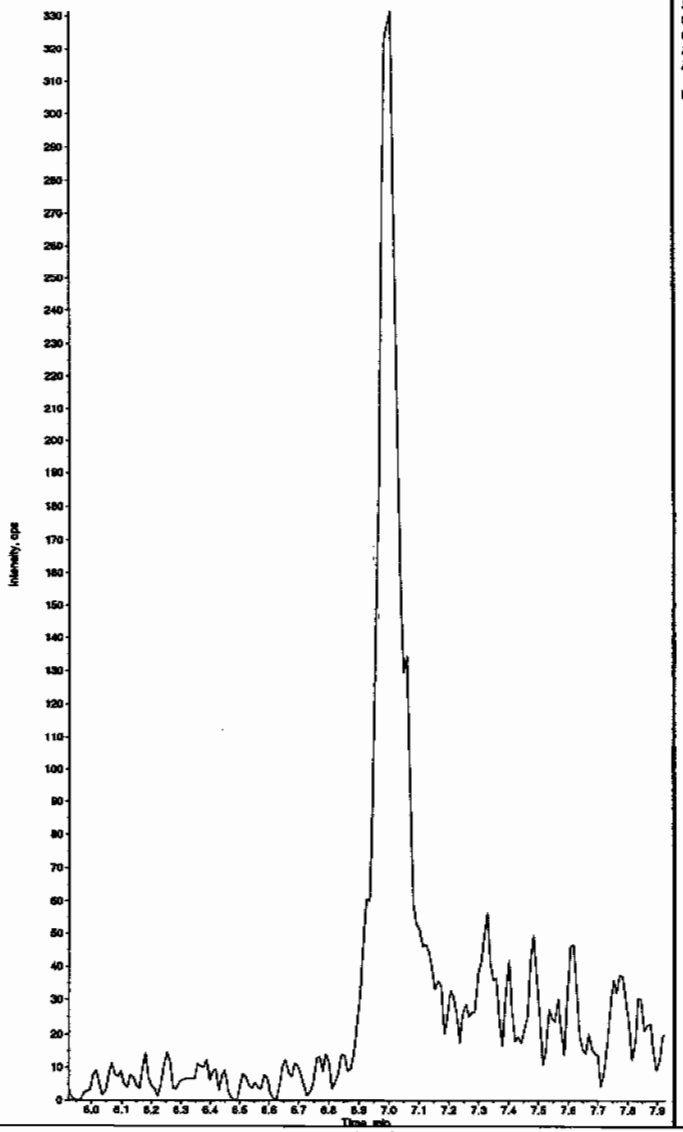
Sample Name: "XBLK05" Sample ID: "|1|LER" File: "EXS01200038.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 8:10:45 PM

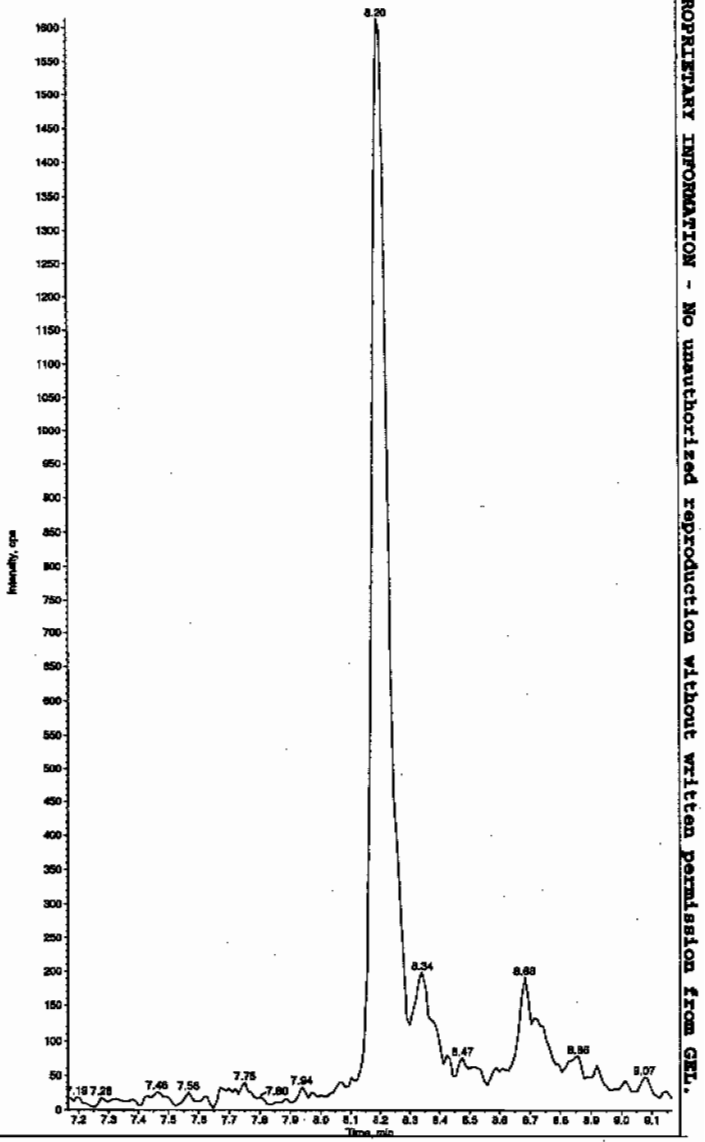
Modified: No



Sample Name: "XBLK05" Sample ID: "|1|LER" File: "EXS01200038.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 8:10:45 PM

Modified: No



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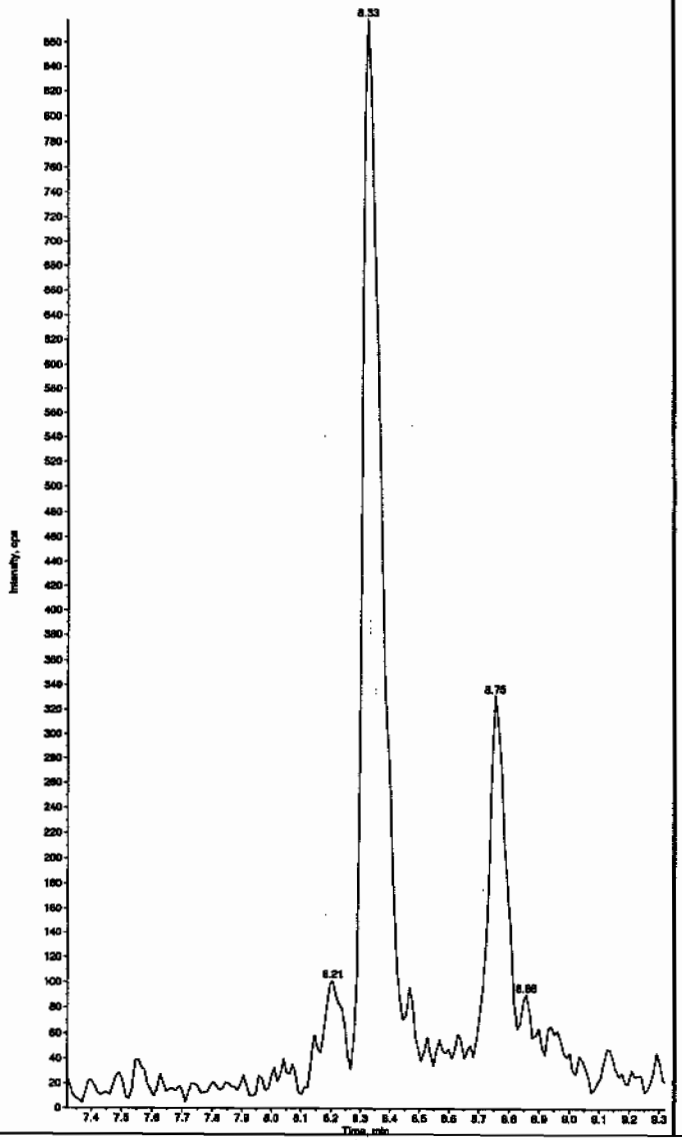
Sample Name: "XIBLK05" Sample ID: "[1][LER" File: "EXS01200038.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 8:10:45 PM

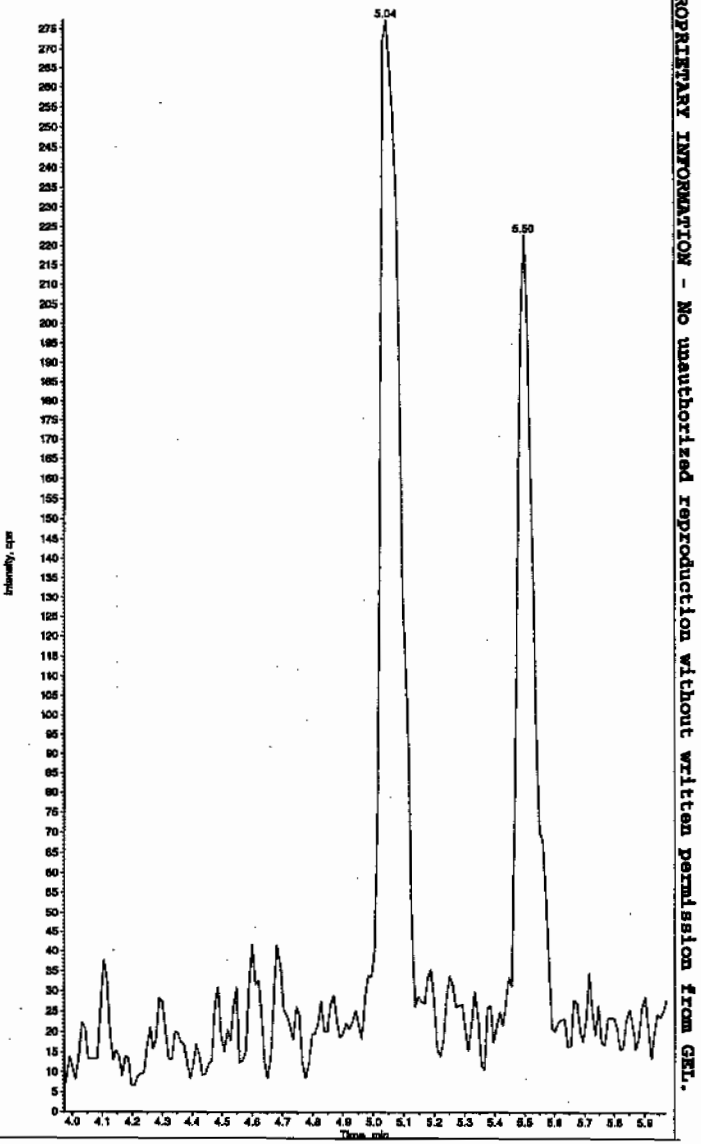
Modified: No



Sample Name: "XIBLK05" Sample ID: "[1][LER" File: "EXS01200038.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 8:10:45 PM

Modified: No

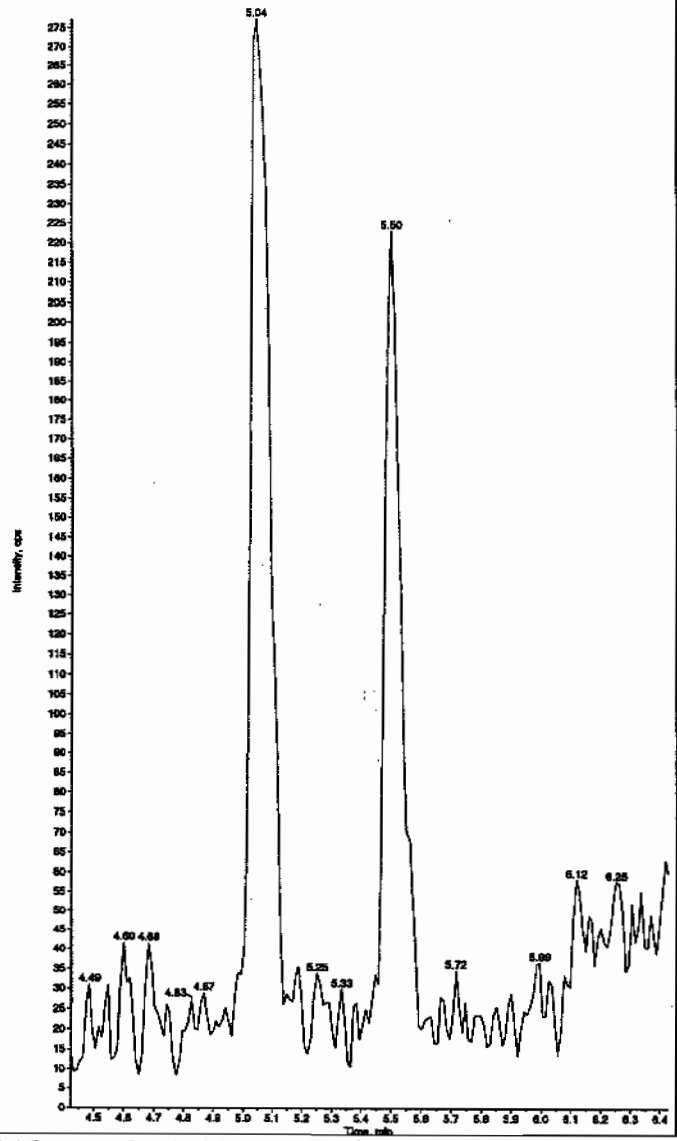


*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "XIBLK05" Sample ID: "[1]LER" File: "EXS01200038.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "165.0/46.0 amu"
Comment: "LCMSEXP_8" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 8:10:45 PM

Modified: No

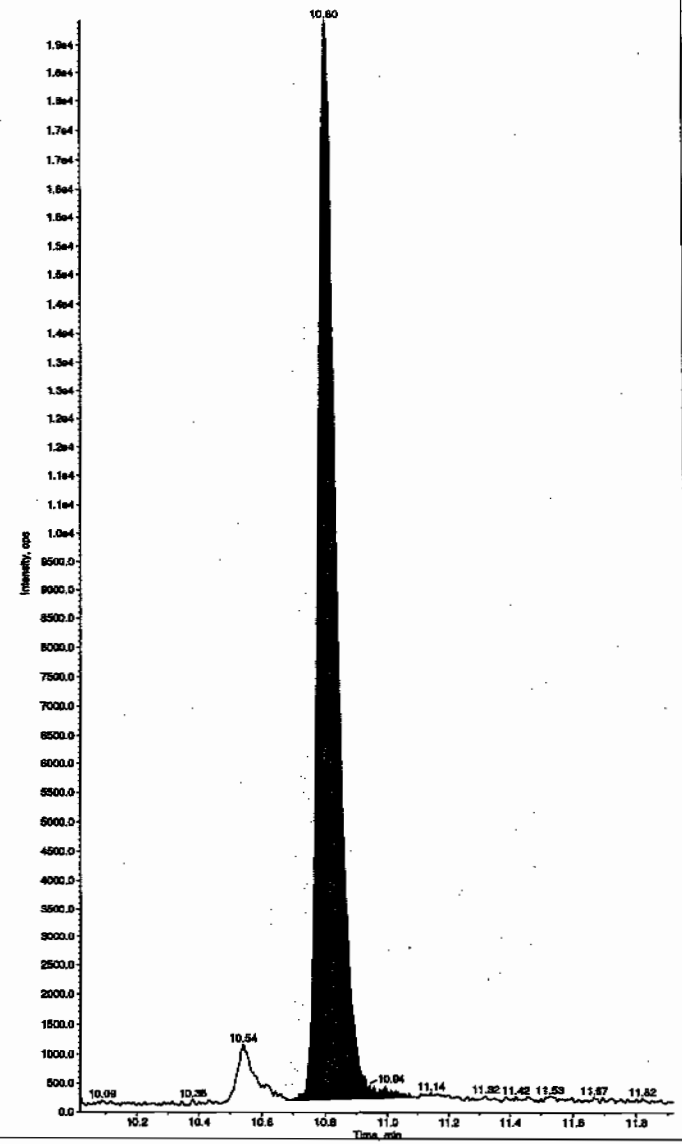


Sample Name: "XIBLK05" Sample ID: "[1]LER" File: "EXS01200038.wiff"
Peak Name: "Tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_8" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.766 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 8:10:45 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.8 min
Area: 7.58e+004 counts
Height: 18729.128 cps
Start Time: 10.7 min
End Time: 11.1 min



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

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4A
Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10–1130

Lab Code: GEL

Lab Sample ID: XIBLK06

Analysis Date: 20–JAN–10 21:13

GEL Data File: EXS01200042.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

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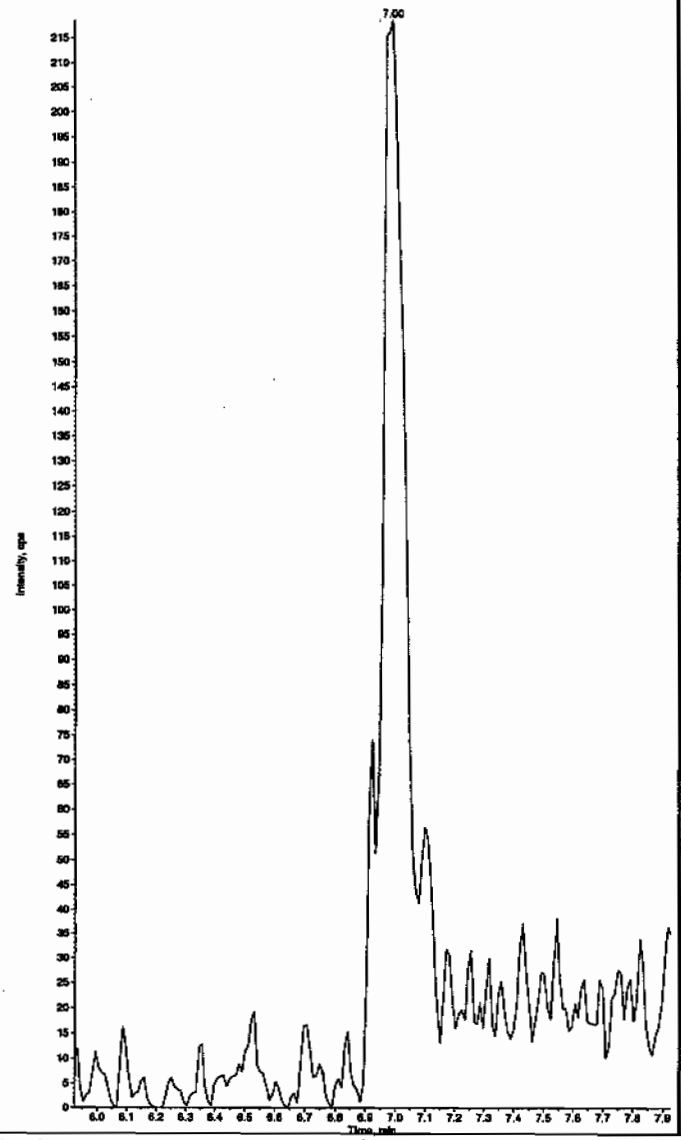
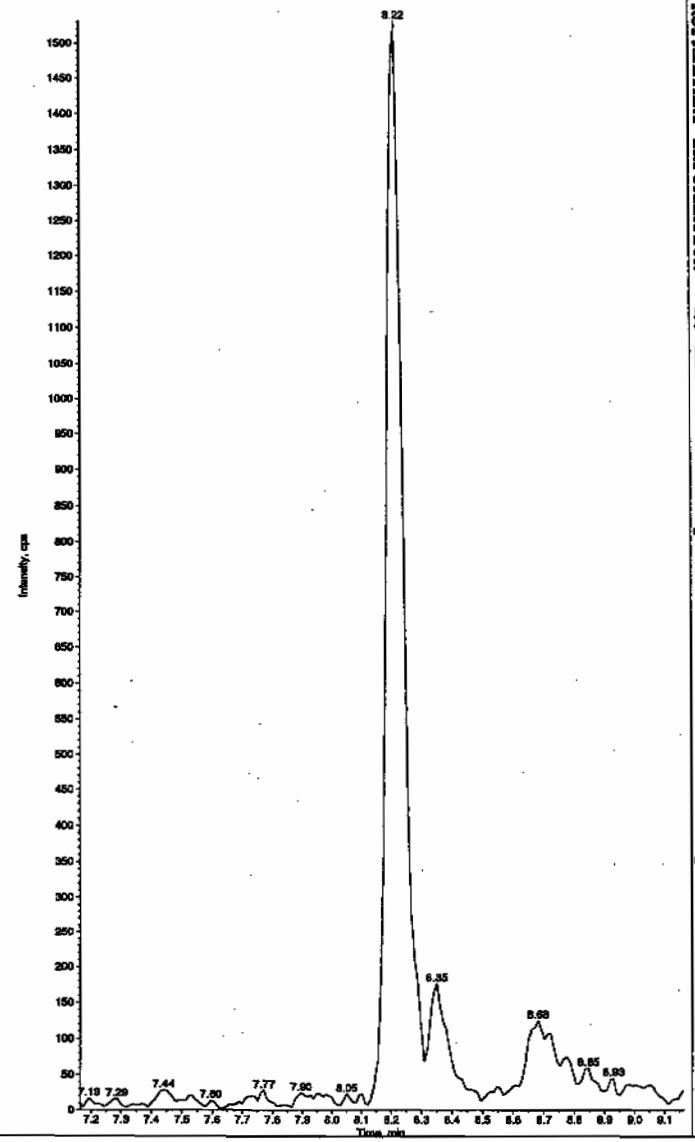
Sample Name: "XIBLK06" Sample ID: "|1|LER" File: "EXS01200042.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_B" Annotation: ""
Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 9:13:33 PM

Modified: No



Sample Name: "XIBLK06" Sample ID: "|1|LER" File: "EXS01200042.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""
Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 9:13:33 PM

Modified: No



Hnm 01/21/10

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

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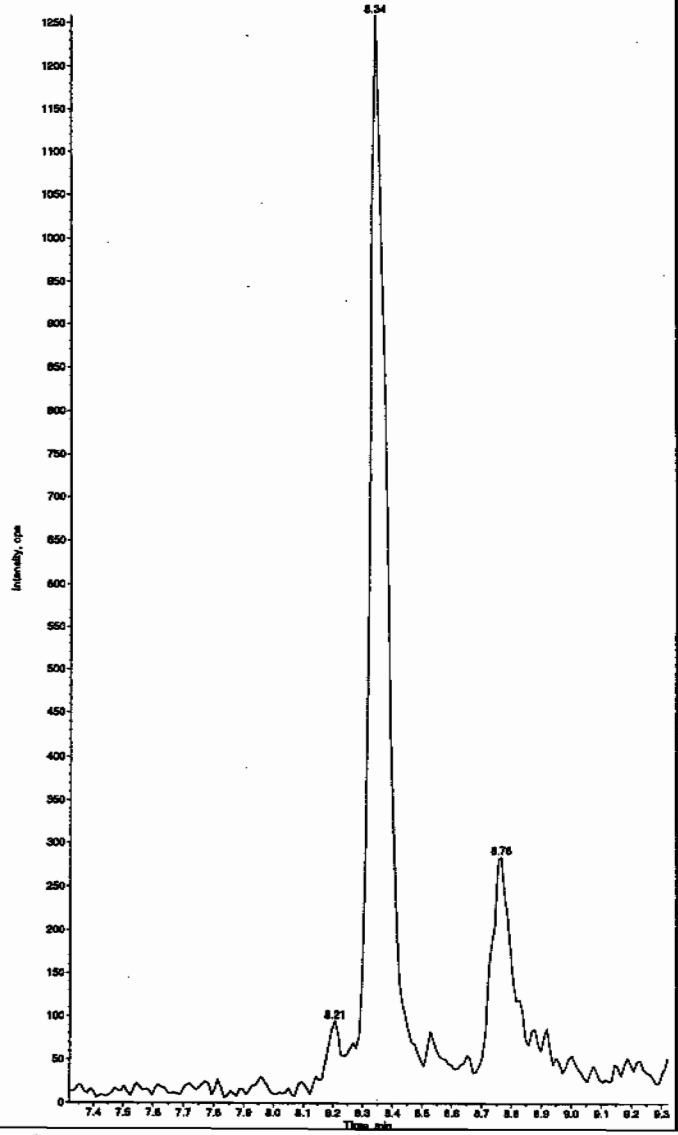
Sample Name: "XIBLK05" Sample ID: "[1]LER" File: "EXS01200042.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 9:13:33 PM

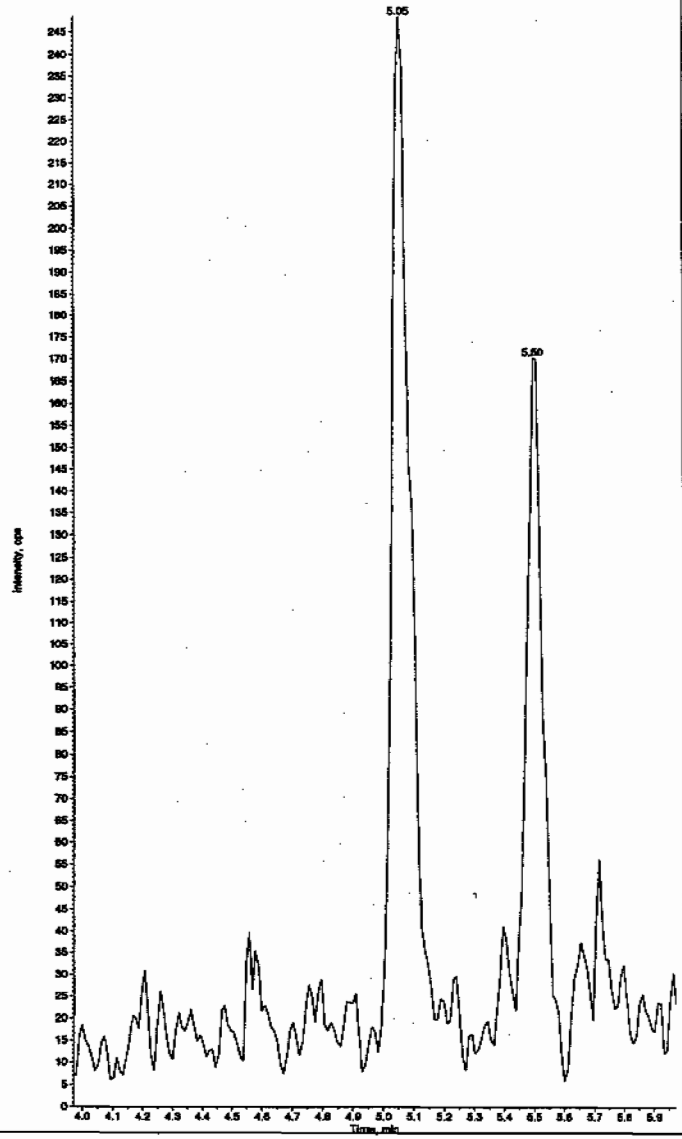
Modified: No



Sample Name: "XIBLK05" Sample ID: "[1]LER" File: "EXS01200042.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 9:13:33 PM

Modified: No



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

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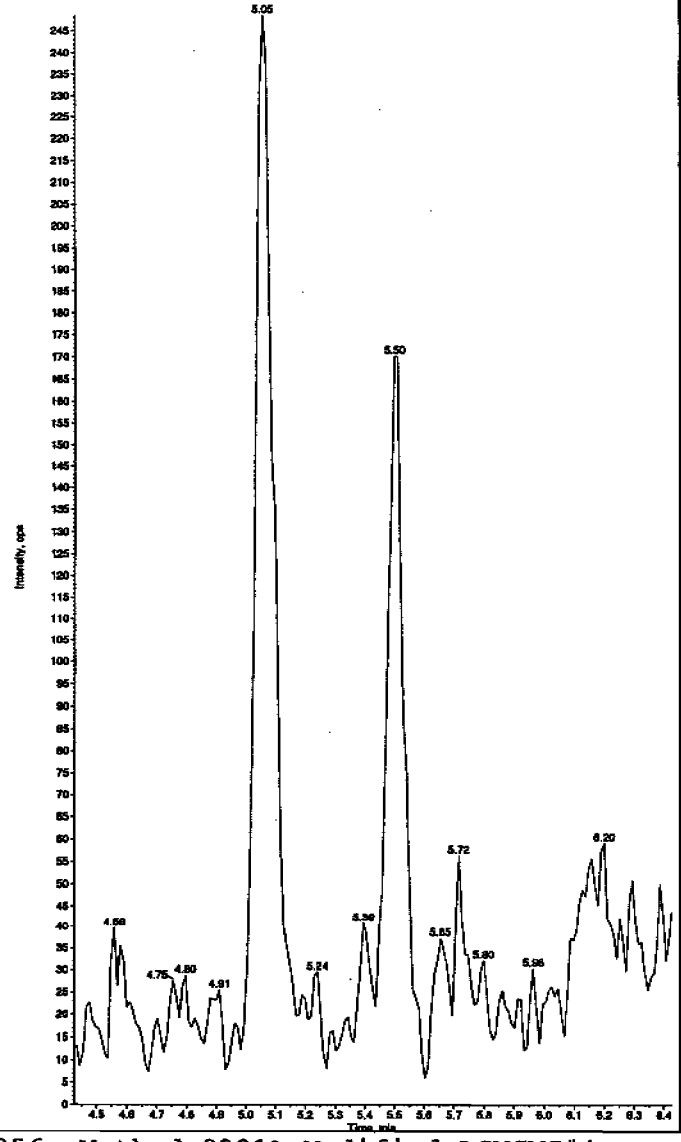
Sample Name: "XIBLK06" Sample ID: "[1]LER" File: "EXS01200042.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 9:13:33 PM

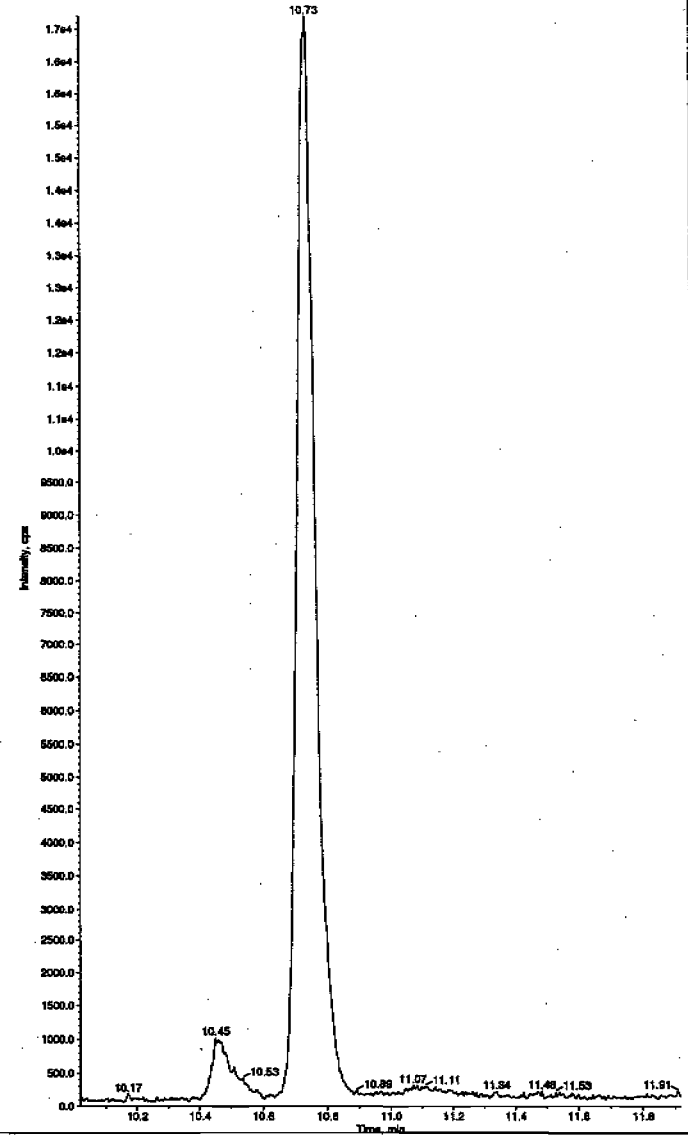
Modified: No



Sample Name: "XIBLK06" Sample ID: "[1]LER" File: "EXS01200042.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 9:13:33 PM

Modified: No



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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10–1130

Lab Code: GEL

Lab Sample ID: XIBLK07

Analysis Date: 20–JAN–10 23:03

GEL Data File: EXS01200049.wiff

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

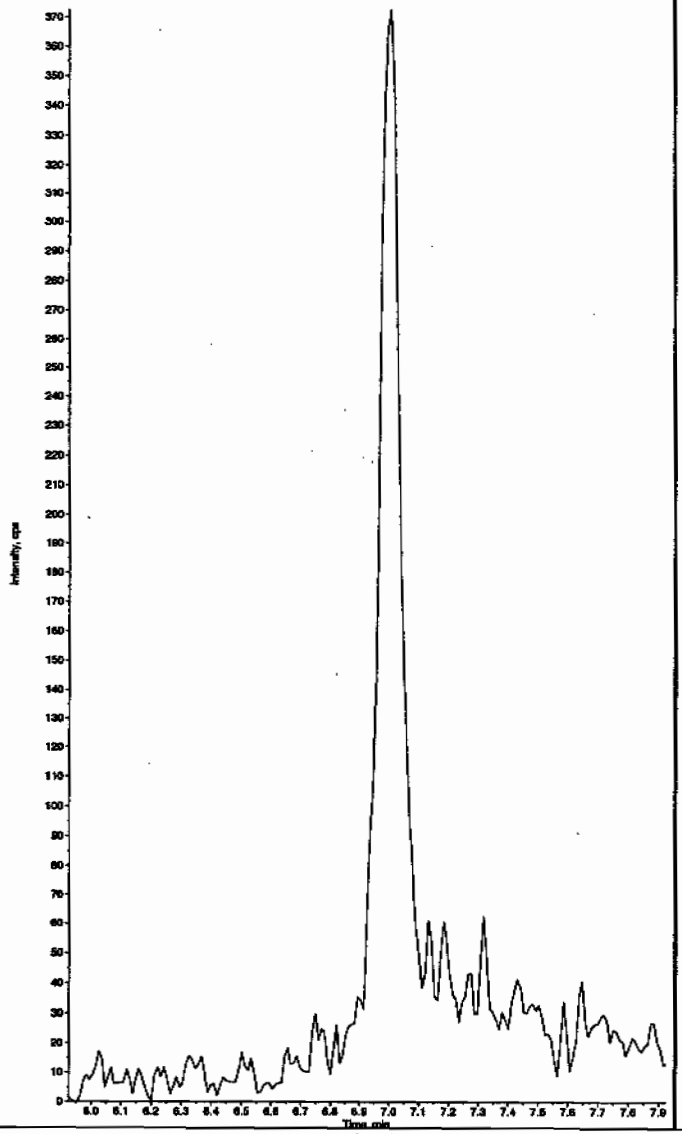
Compound	True	Found (ug/L)
3,4–Dinitrotoluene	0	0
tris(o–cresyl) phosphate	0	0
TATB	0	0
3,5–Dinitroaniline	0	0
2,4–Diamino–6–nitrotoluene	0	0
2,6–Diamino–4–nitrotoluene	0	0

Dan 1/21/10

Sample Name: "XIBLK07" Sample ID: "[1]LER" File: "EXS01200049.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 11:03:33 PM

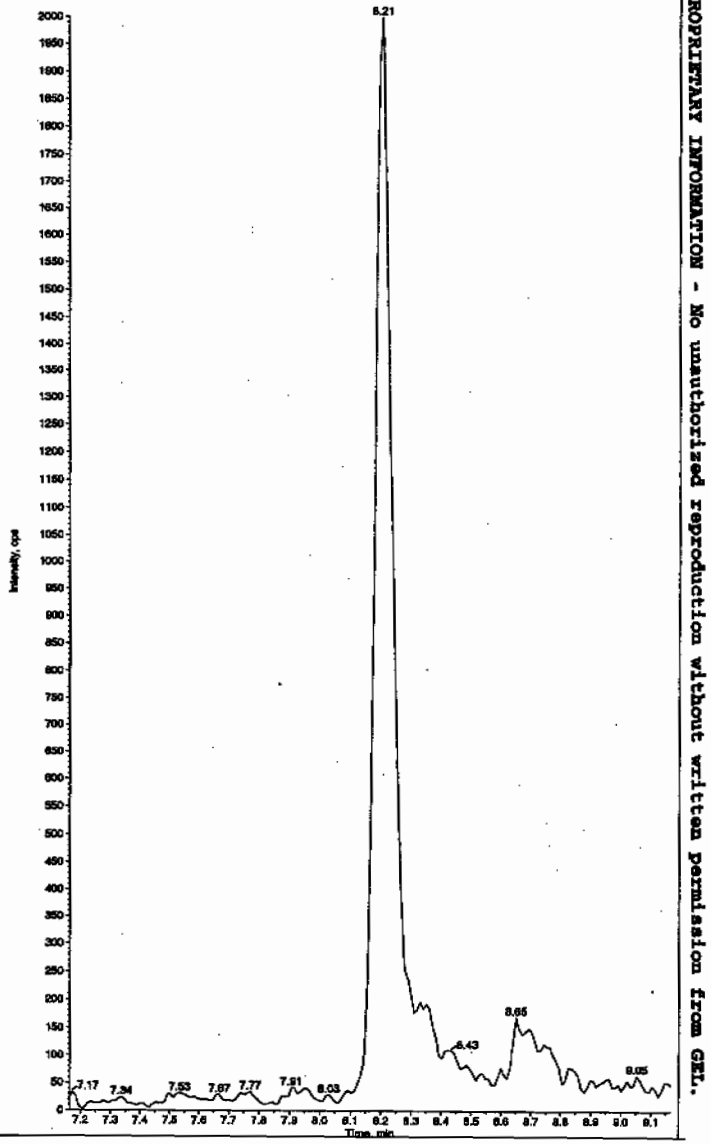
Modified: No



Sample Name: "XIBLK07" Sample ID: "[1]LER" File: "EXS01200049.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 11:03:33 PM

Modified: No



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

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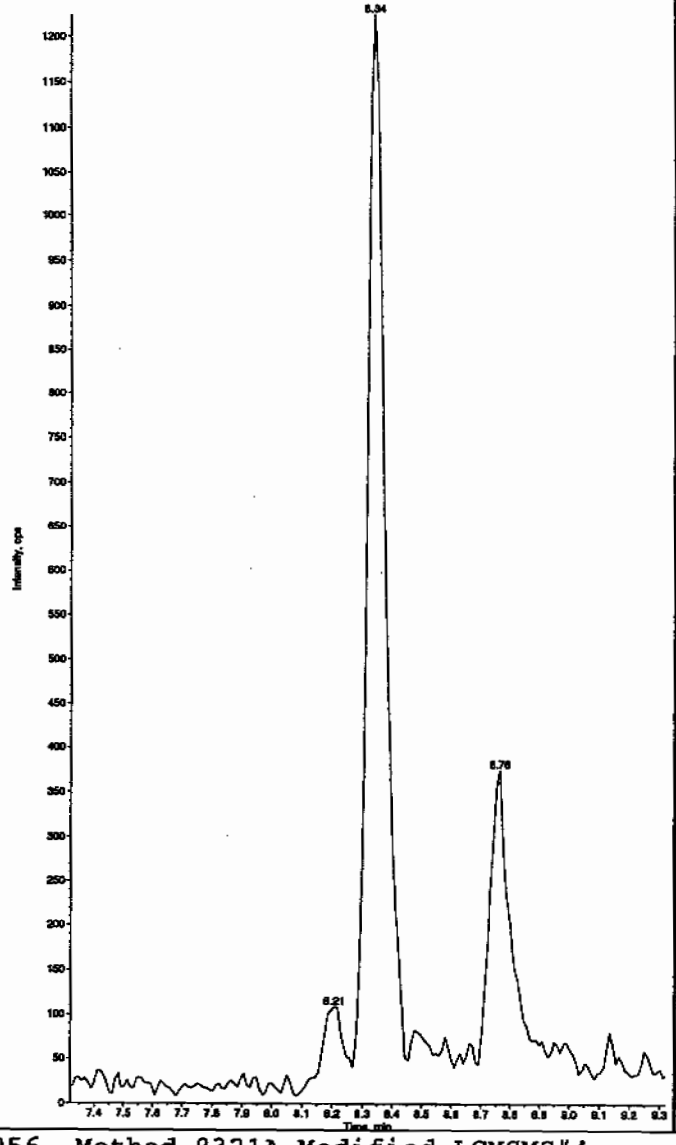
Sample Name: "XBLK07" Sample ID: "[1|LER" File: "EXS01200049.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 11:03:33 PM

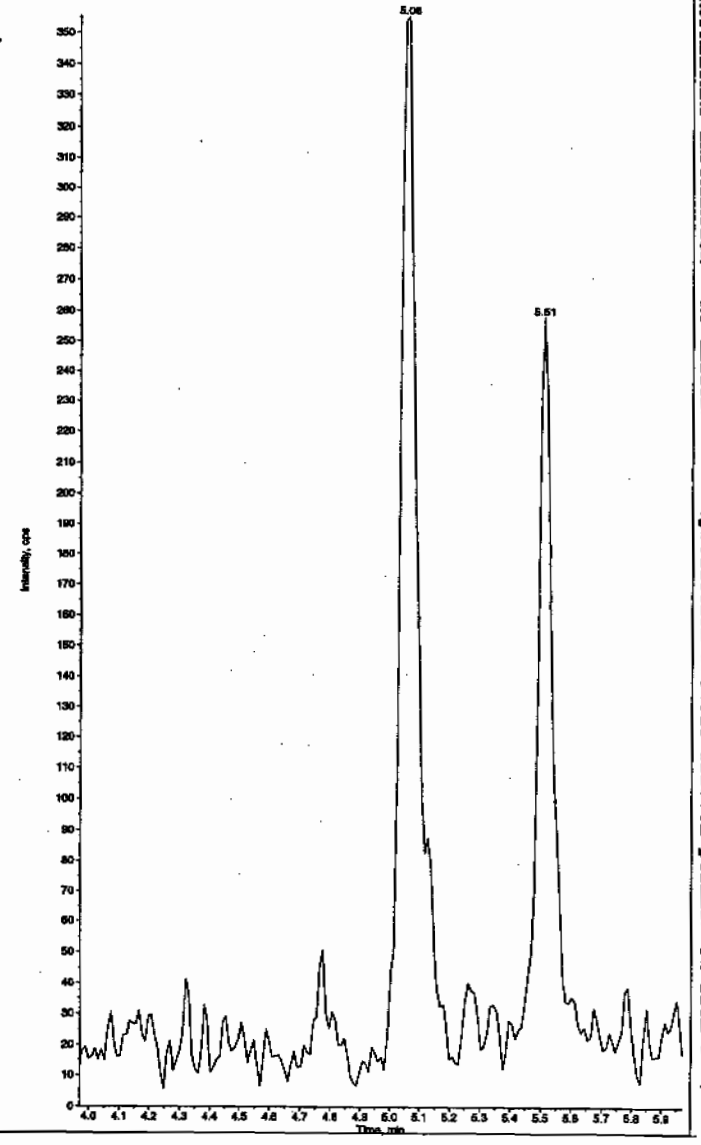
Modified: No



Sample Name: "XBLK07" Sample ID: "[1|LER" File: "EXS01200049.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 11:03:33 PM

Modified: No



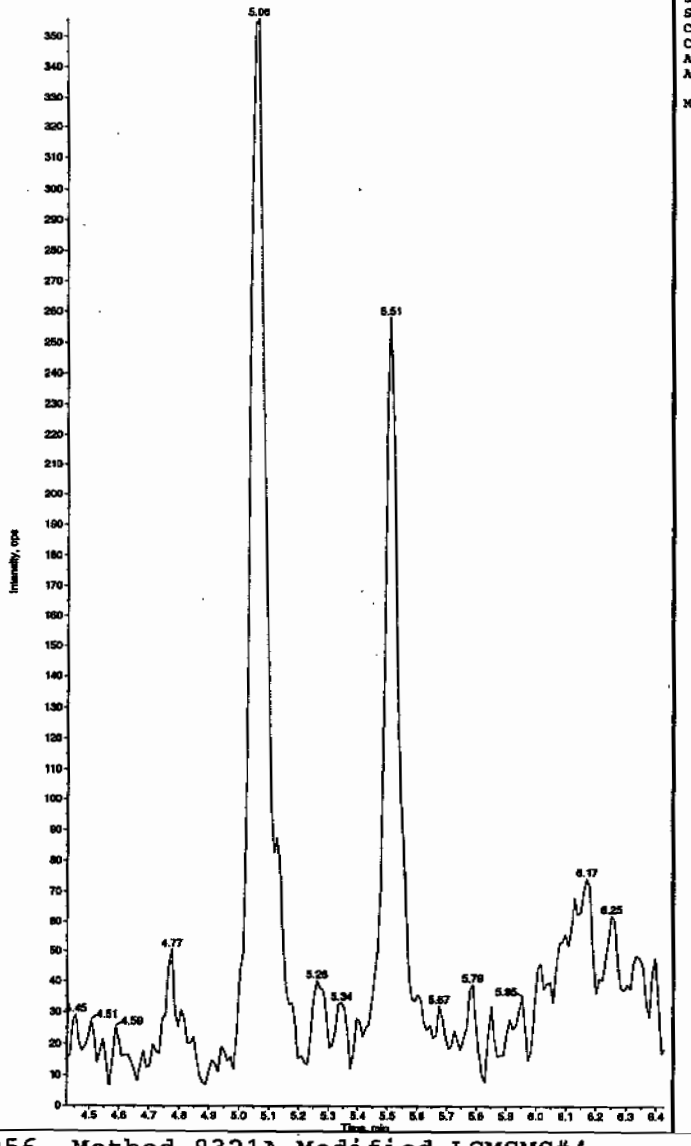
*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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

Sample Name: "XIBLK07" Sample ID: "|1|LER" File: "EXS01200049.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 11:03:33 PM

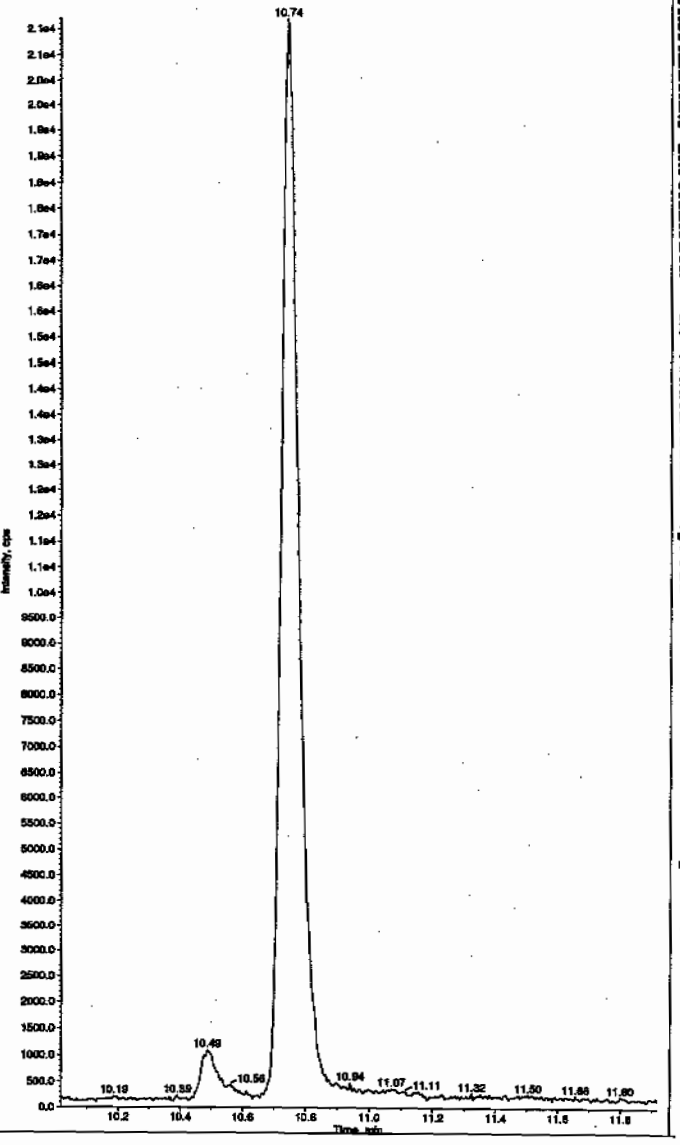
Modified: No



Sample Name: "XIBLK07" Sample ID: "|1|LER" File: "EXS01200049.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 11:03:33 PM

Modified: No



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

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10–1130

Lab Code: GEL

Lab Sample ID: XIBLK08

Analysis Date: 21–JAN–10 02:27

GEL Data File: EXS01200062.wiff

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

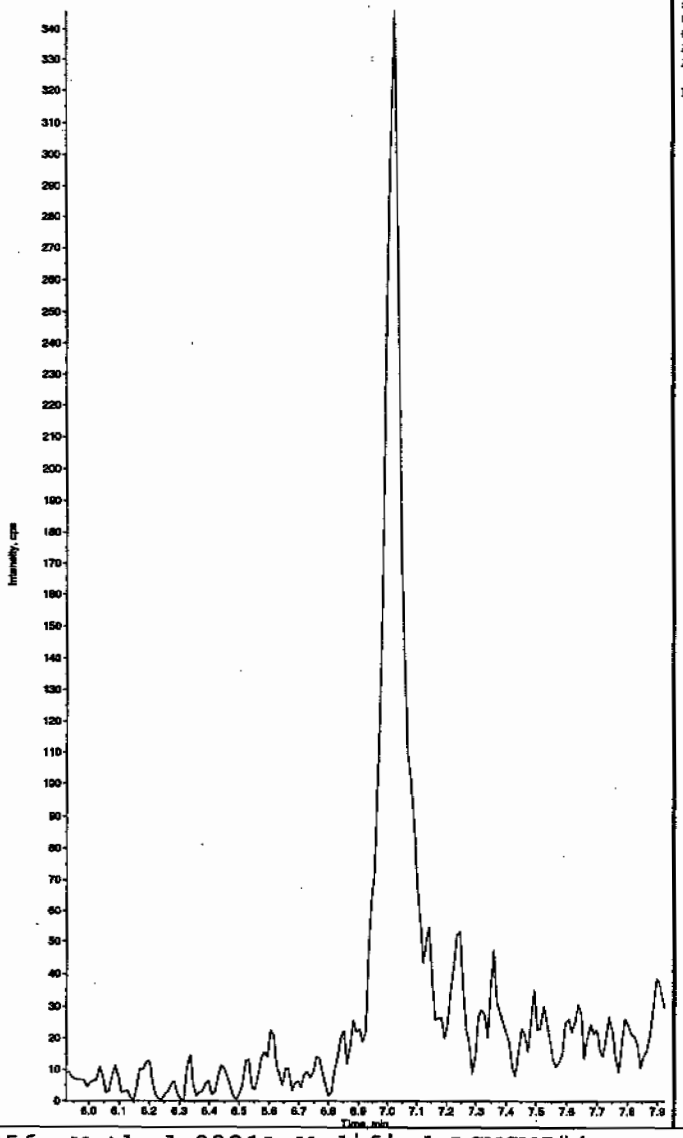
Compound	True	Found (ug/L)
3,4–Dinitrotoluene	0	0
tris(o–cresyl) phosphate	0	.746
TATB	0	0
3,5–Dinitroaniline	0	0
2,4–Diamino–6–nitrotoluene	0	0
2,6–Diamino–4–nitrotoluene	0	0

Lcn 1/21/10

Sample Name: "XIBLK08" Sample ID: "[1]LER" File: "EXS01200062.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_8" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/21/2010
Acq. Time: 2:27:46 AM

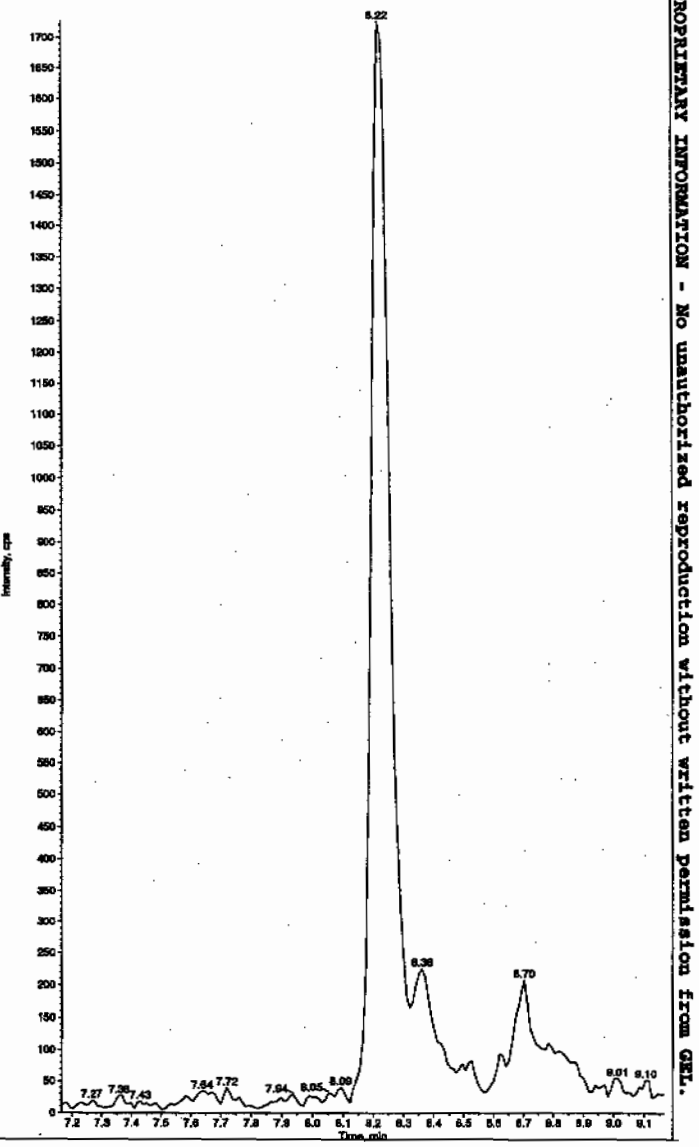
Modified: No



Sample Name: "XIBLK08" Sample ID: "[1]LER" File: "EXS01200062.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_8" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/21/2010
Acq. Time: 2:27:46 AM

Modified: No



Hnm 01/21/10

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

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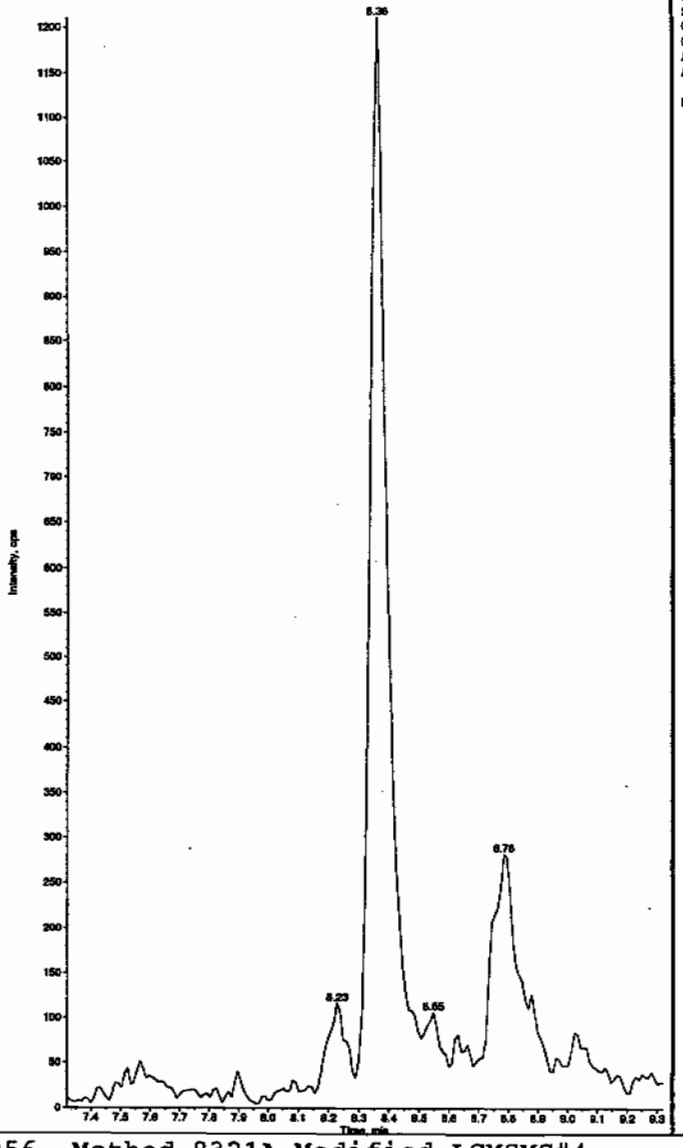
Sample Name: "XIBLK08" Sample ID: "[1][LER" File: "EXS01200062.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/21/2010
Acq. Time: 2:27:46 AM

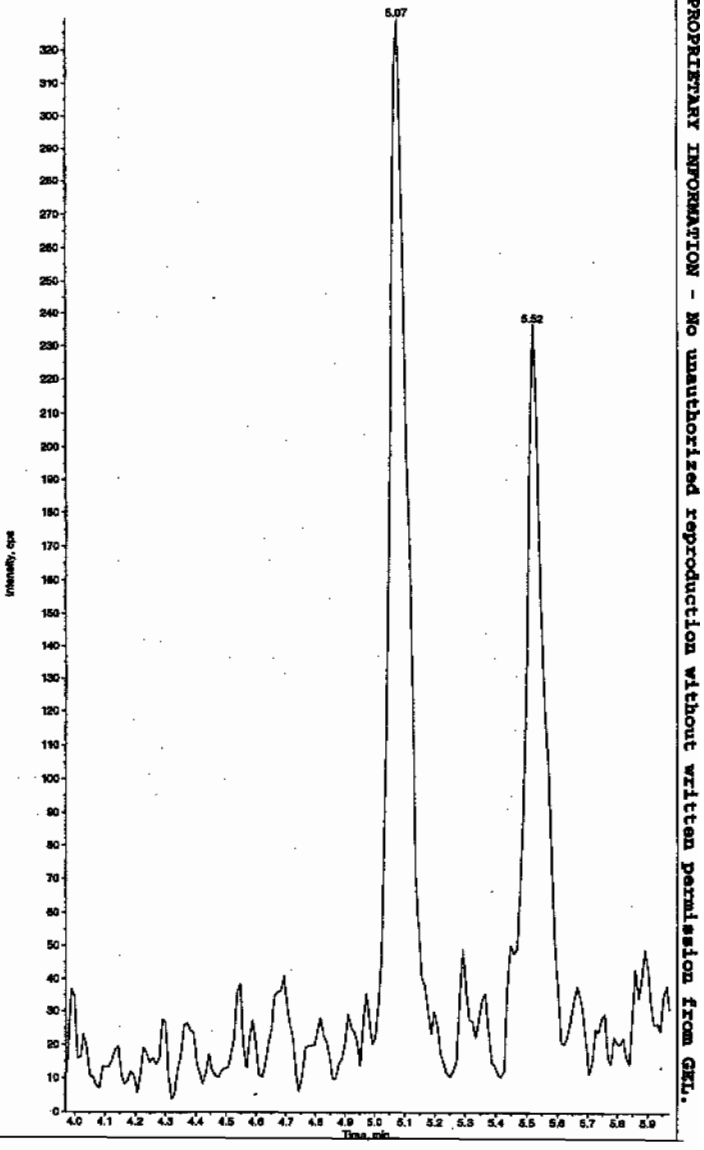
Modified: No



Sample Name: "XIBLK08" Sample ID: "[1][LER" File: "EXS01200062.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/45.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/21/2010
Acq. Time: 2:27:46 AM

Modified: No



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

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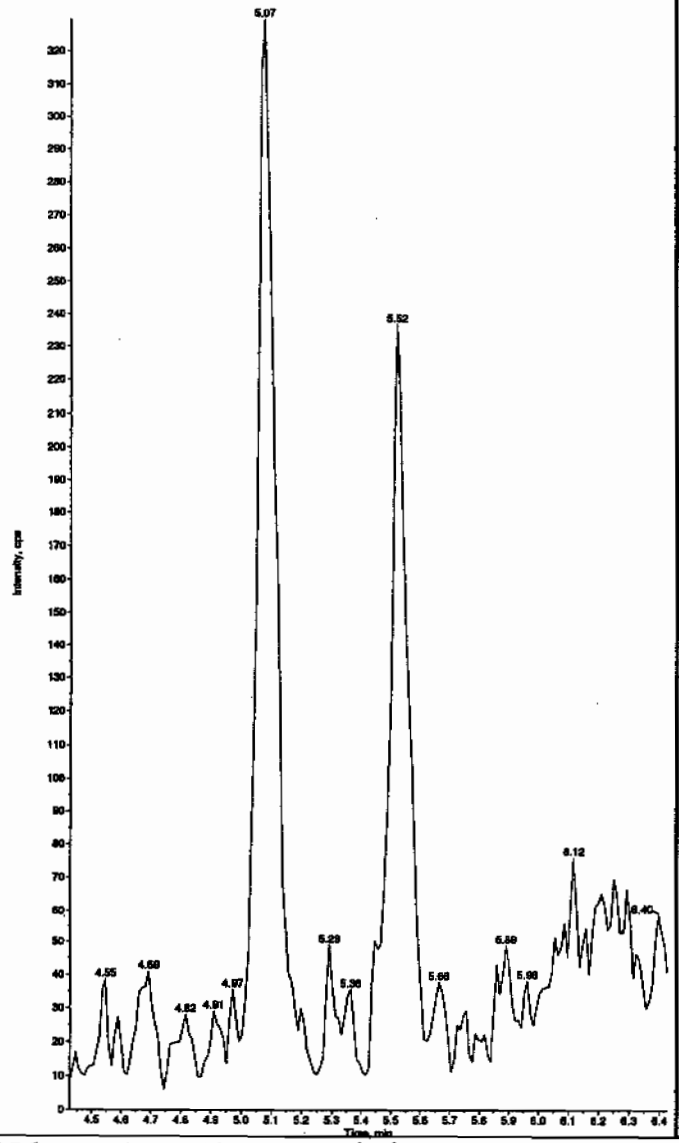
Sample Name: "XIBLK08" Sample ID: "[1]LER" File: "EXS01200062.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/21/2010
Acq. Time: 2:27:46 AM

Modified: No

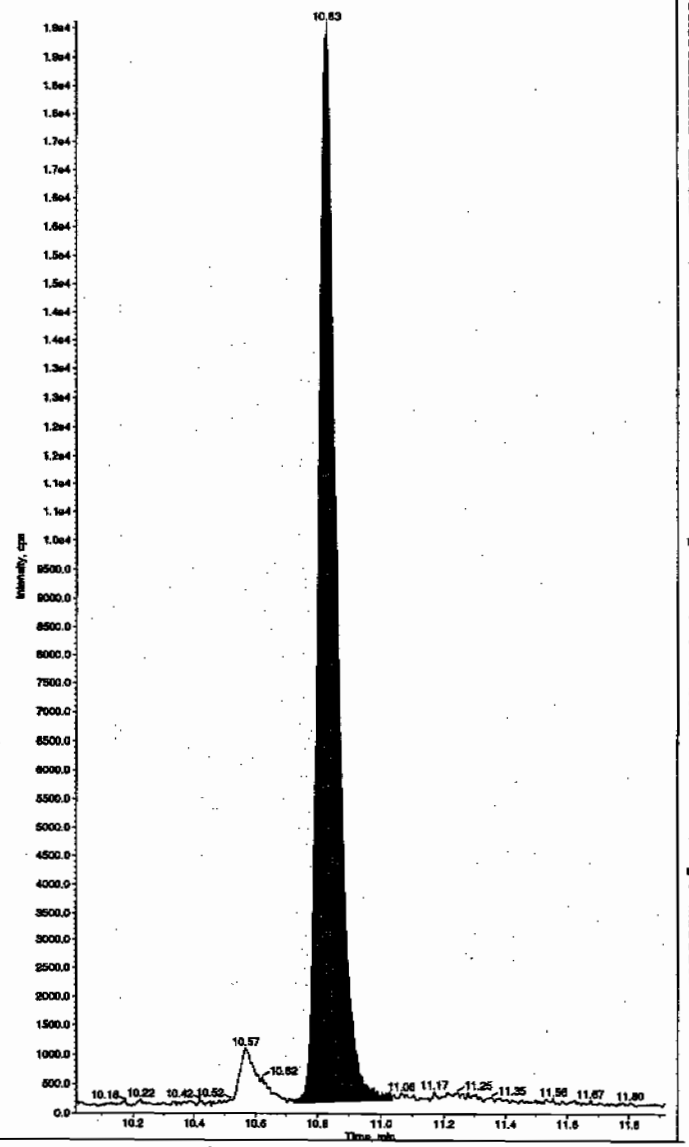


Sample Name: "XIBLK08" Sample ID: "[1]LER" File: "EXS01200062.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.746 ng/mL
Acq. Date: 1/21/2010
Acq. Time: 2:27:46 AM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.8 min
Area: 7.54e+004 counts
Height: 18902.752 cps
Start Time: 10.7 min
End Time: 11.0 min



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

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Nairb.ref

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

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

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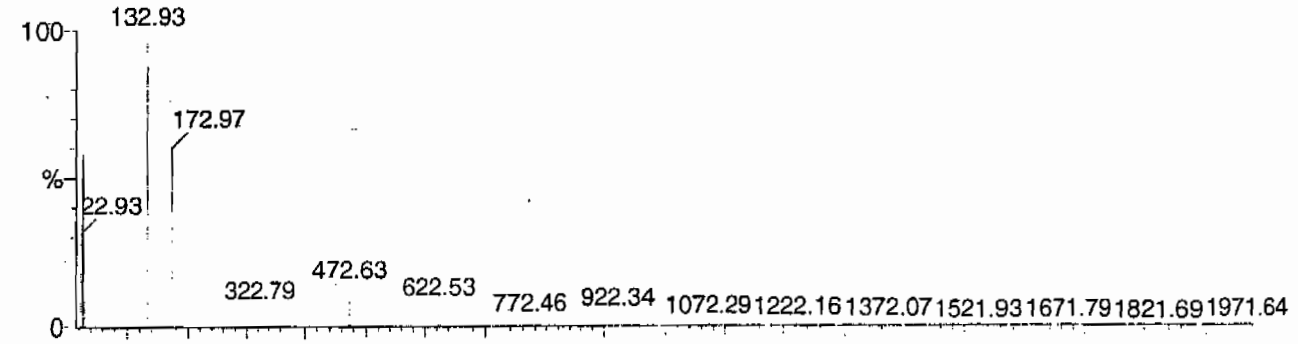
Calibration Report - MS1 Static

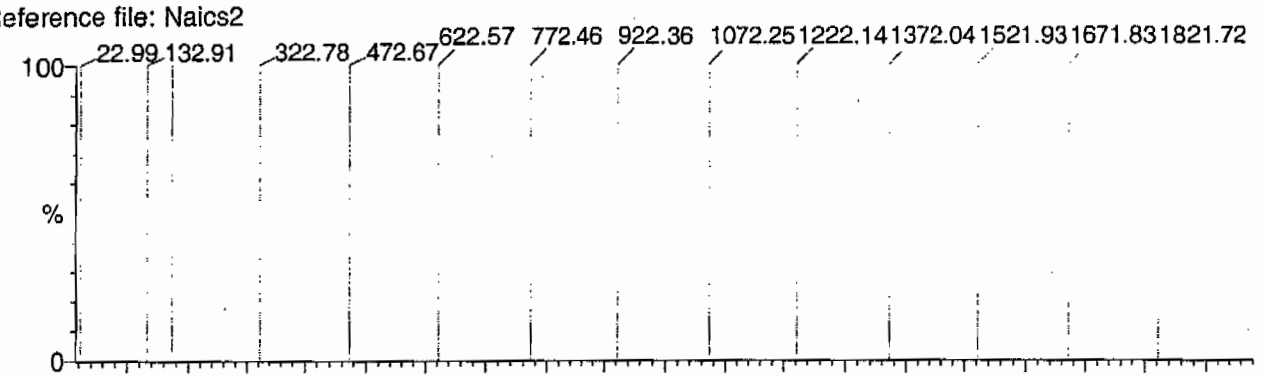
Printed: Fri Aug 25 10:50:01 2006

Data file: STATMS1 - Calibrated

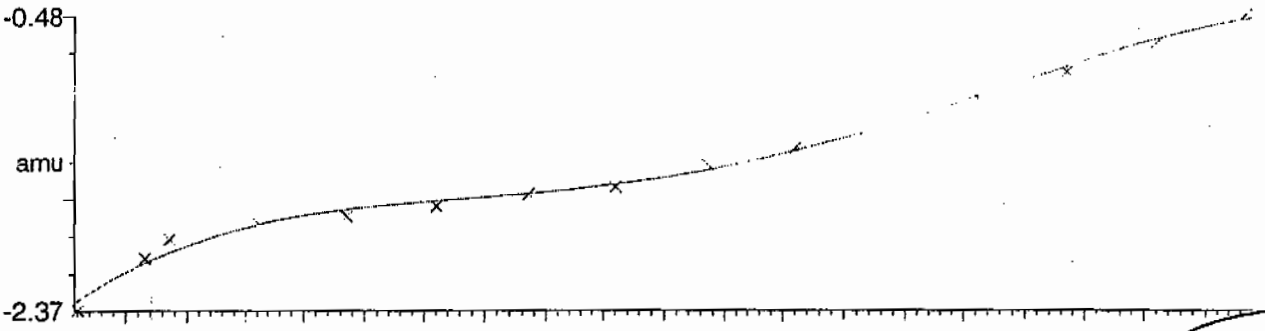
15 matches of 15 tested references



Reference file: Naics2



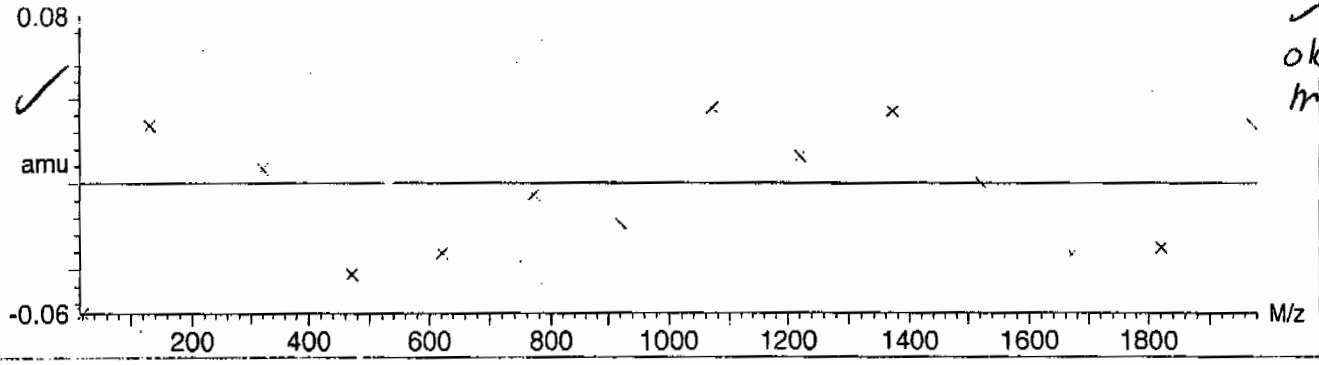
Mass difference (Raw - Ref mass)



Residuals

Mean residual = -1.673470e-9 ± 0.036953

ok
hm



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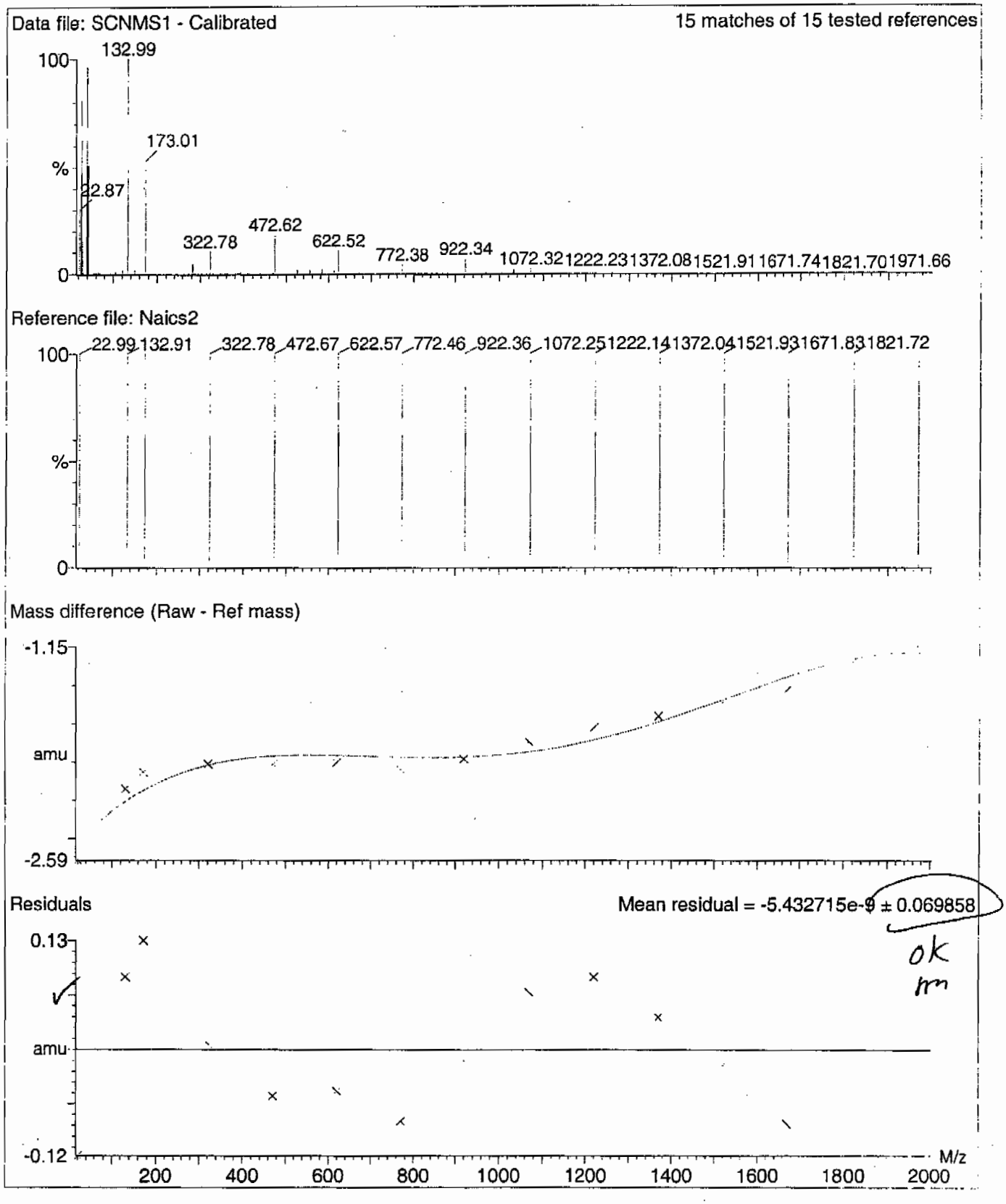
Calibration Report - MS1 Scanning

Printed: Fri Aug 25 10:51:06 2006



ok
m

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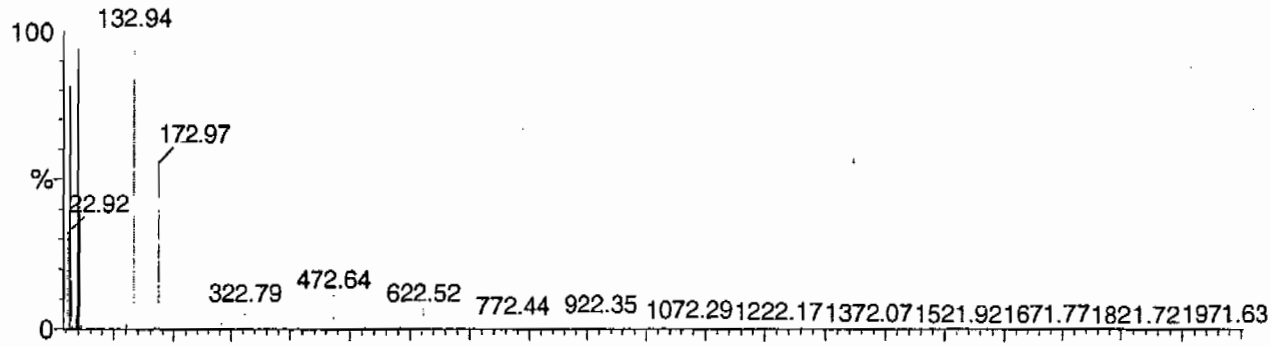
Calibration Report - MS1 Scan Speed Compensation

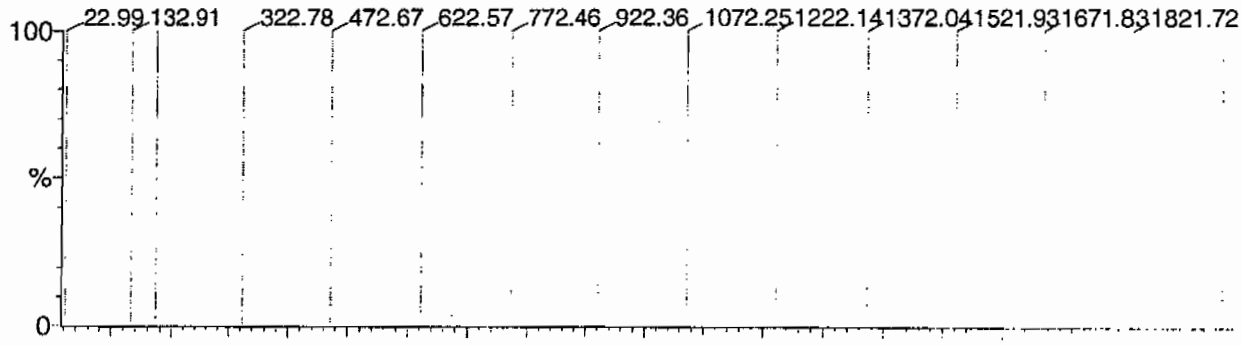
Printed: Fri Aug 25 10:52:01 2006

Data file: FASTMS1 - Calibrated

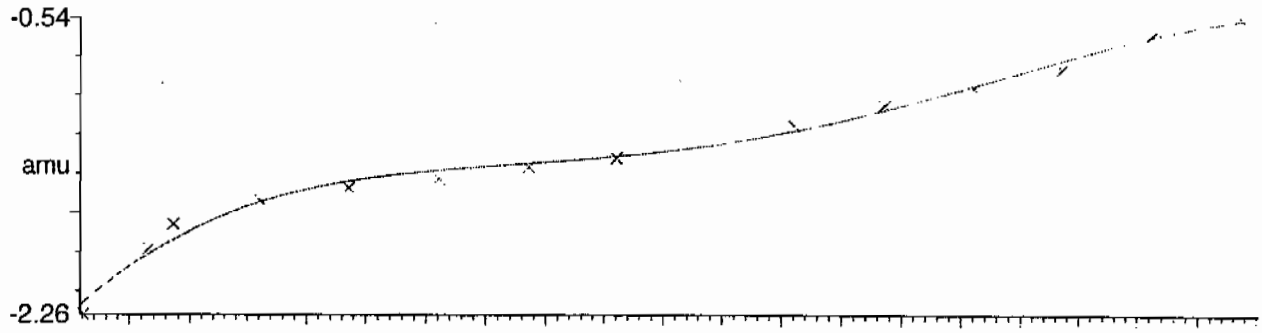
15 matches of 15 tested references



Reference file: Naics2

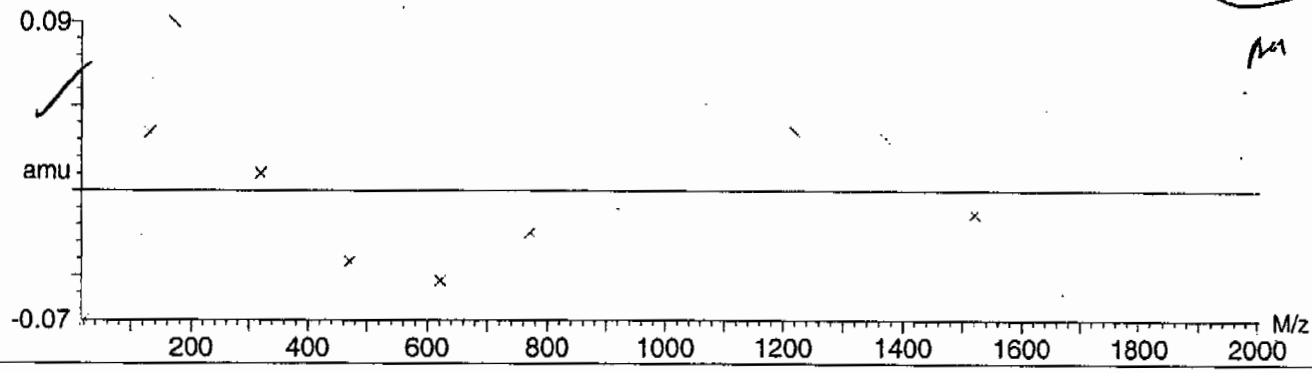


Mass difference (Raw - Ref mass)



Residuals

Mean residual = 3.486639e-9 ± 0.040487



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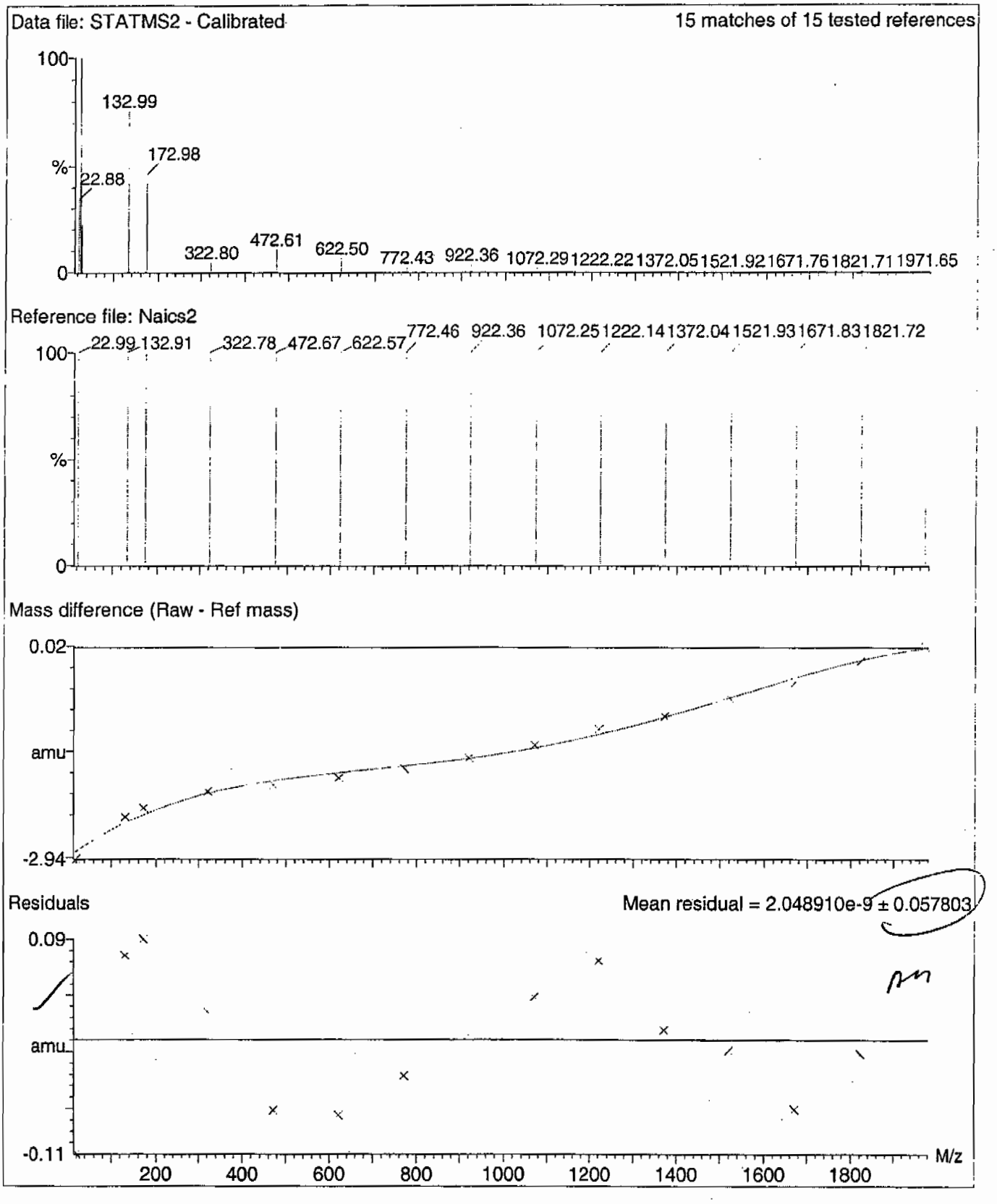
Calibration Report - MS2 Static

Printed: Fri Aug 25 10:52:54 2006



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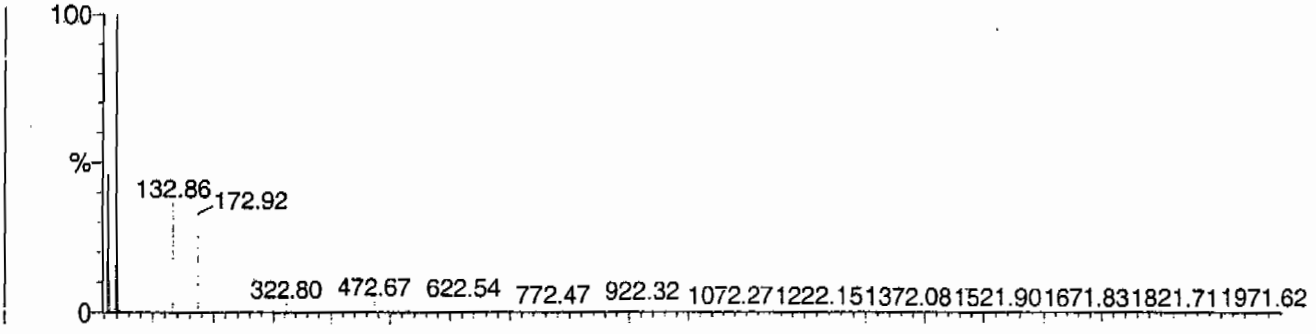
Calibration Report - MS2 Scanning

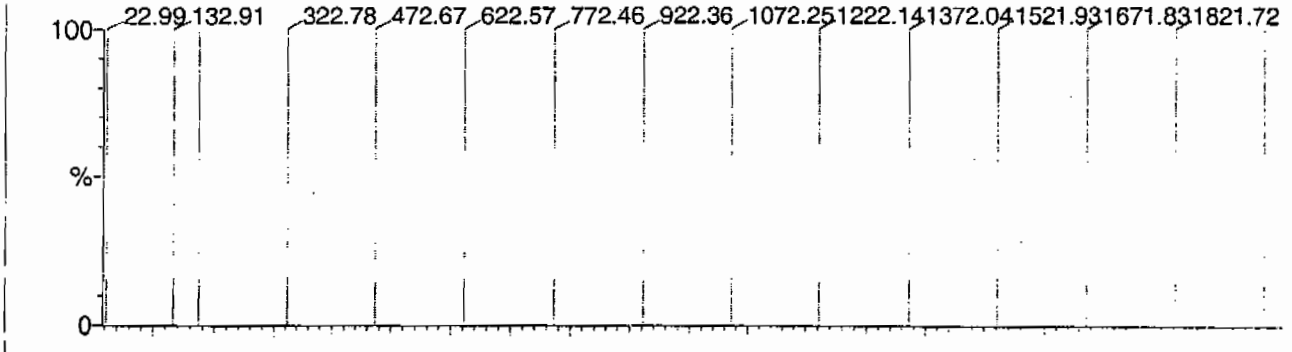
Printed: Fri Aug 25 10:54:00 2006

Data file: SCNMS2 - Calibrated

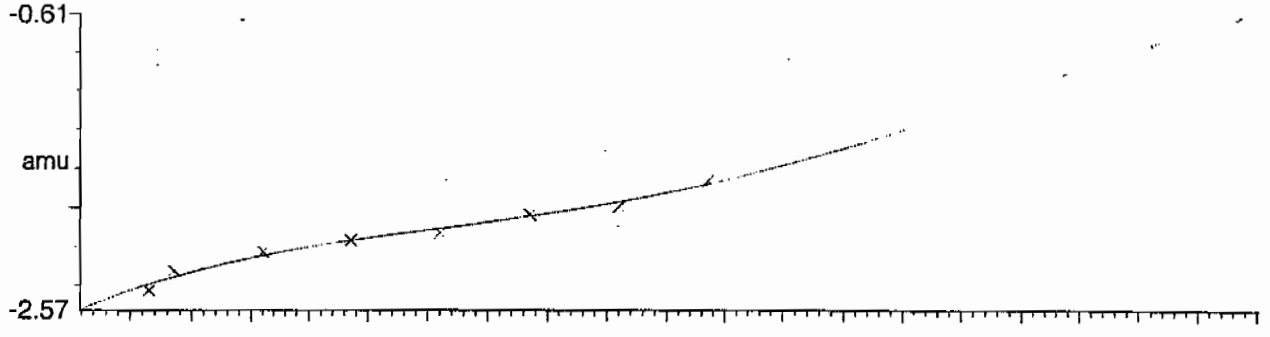
14 matches of 15 tested references



Reference file: Naics2

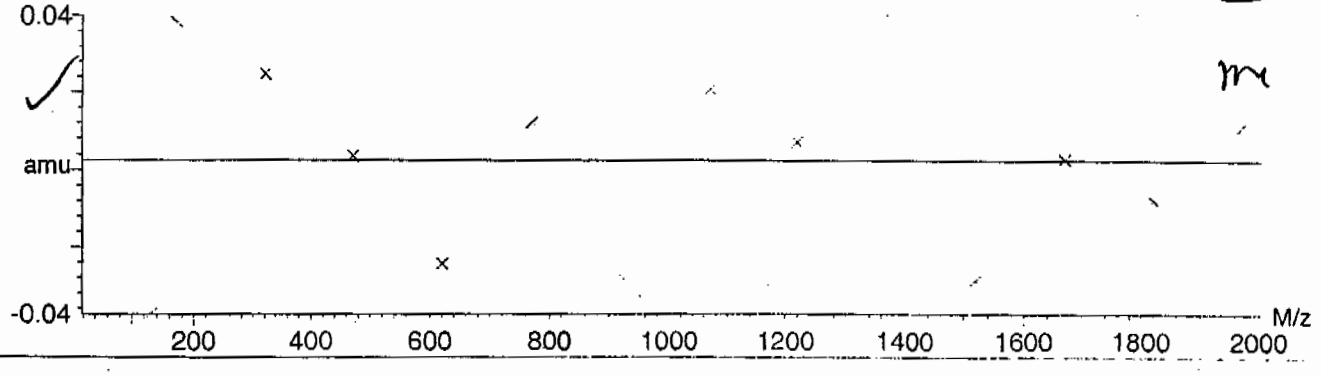


Mass difference (Raw - Ref mass)



Residuals

Mean residual = -2.623502e-9 ± 0.025622



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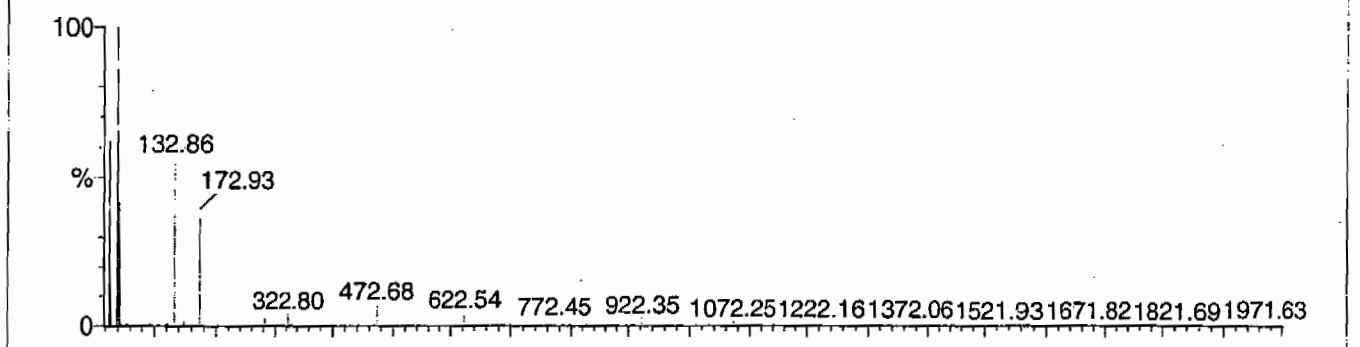
Calibration Report - MS2 Scan Speed Compensation

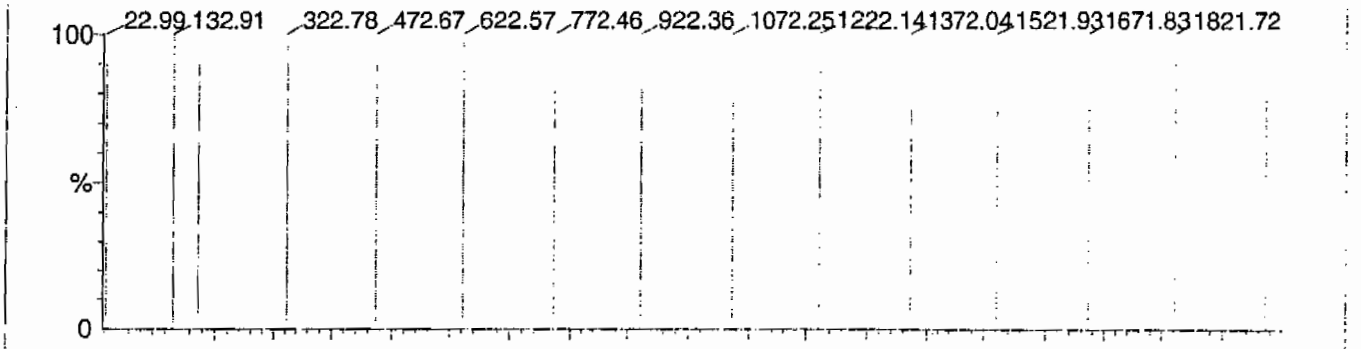
Printed: Fri Aug 25 10:54:54 2006

Data file: FASTMS2 - Calibrated

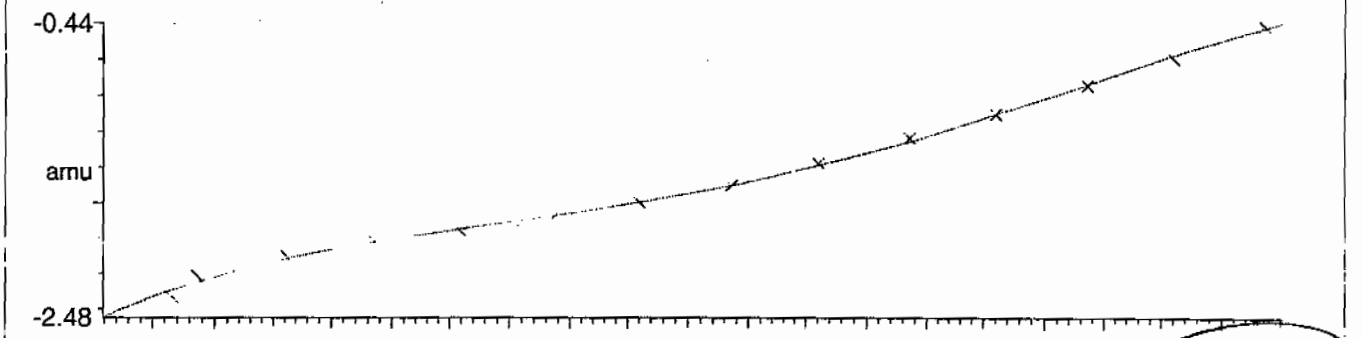
14 matches of 15 tested references



Reference file: Naics2



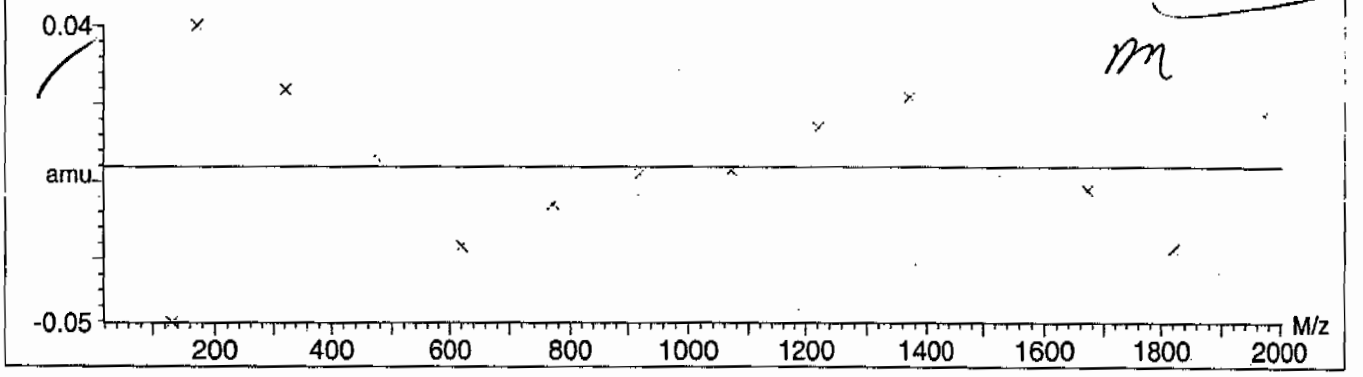
Mass difference (Raw - Ref mass)



Residuals

Mean residual = -6.785350e-9 ± 0.023134

m



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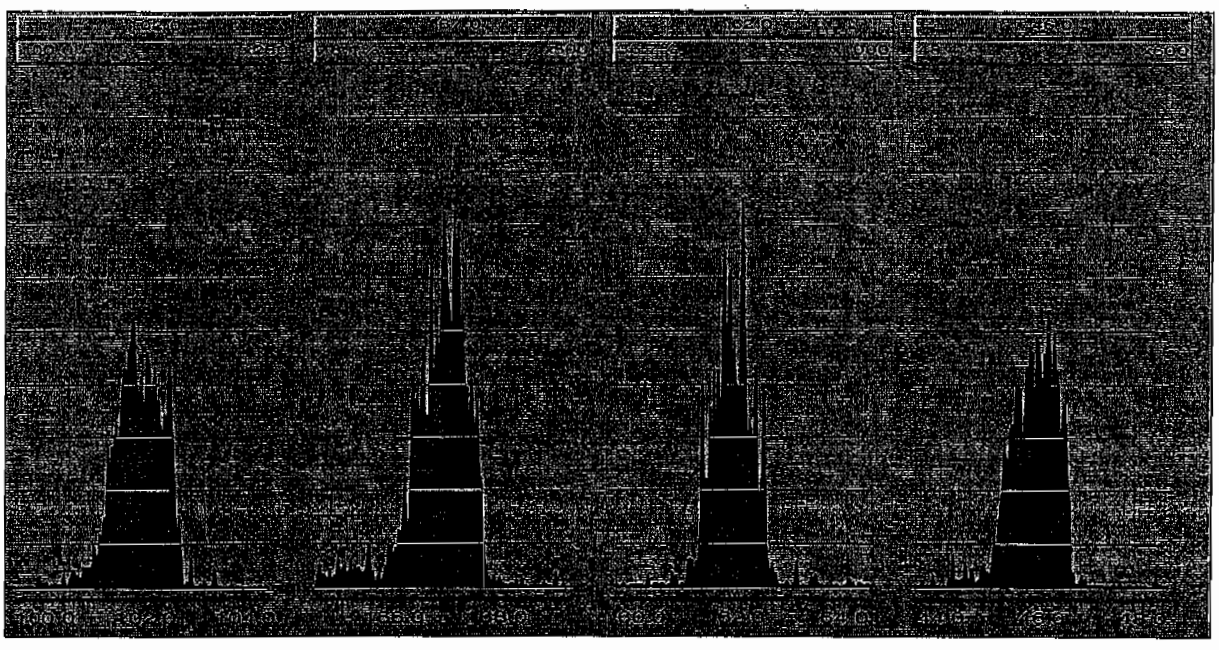
Quattro Micro Tune Parameters

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

Printed : Mon Jan 18 14:02:19 2010



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8

High Explosives Internal Standard Summary

Lab Name: GEL Laboratories LLC **GEL Job No (SDG):** 10-1130

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) #
			3393.317	11.997	18344.583	17.32
Upper Limit			4411.3121	12.497	23847.9579	17.82
Lower Limit			2375.3219	11.497	12841.2081	16.82
MB for batch 940075	21-jan-10 17:47	EXP0118155a	3399.89	11.947	18753.1	17.247
LCS for batch 940075	21-jan-10 18:17	EXP0118156a	3636.65	11.947	20329.9	17.242
RE12-10-7698	21-jan-10 18:46	EXP0118157a	3982.09	11.95	20943.3	17.267
RE12-10-7698(244125001MS)	21-jan-10 19:16	EXP0118158a	3796.32	11.947	21838.3	17.244
RE12-10-7698(244125001MSD)	21-jan-10 19:45	EXP0118159a	3805.23	11.947	20783.8	17.266
RE12-10-7697	21-jan-10 20:15	EXP0118160a	3539.23	11.973	18664.2	17.267
RE12-10-7704	21-jan-10 22:13	EXP0118164a	3111.36	11.973	17638	17.269
RE12-10-7703	21-jan-10 22:42	EXP0118165a	3622.62	11.944	19226.7	17.267

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

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

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

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

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SAMPLE DATA

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7698

Lab Code: GEL

GEL Job No (SDG) 10-1130

Matrix: SOIL

GEL Sample ID: 244125001

Sample Amount 2

Moisture: 9.9

Amount Units g

Date Received: 08-JAN-10

Extraction Type Sonication

Extraction Batch ID: 940075

Concentrated Extract Volume (mL) 10

Date Extracted: 19-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0118157a

Date Analyzed: 21-JAN-10 18:46

Units: ug/kg

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

*Concentration =

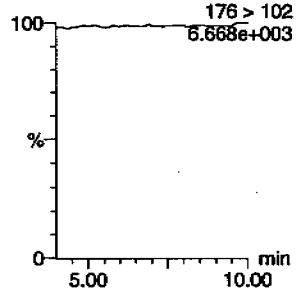
$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA3.qld, Time: Fri Jan 22 10:11:48 2010

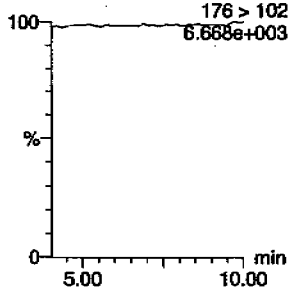
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118157a
Date: 21-Jan-2010
Time: 18:46:47
ID: 244125001 | LANL | 940080 | Solid | 2 |
Vial: 4:5,C

MAP 1/22/10

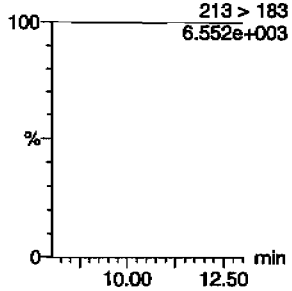
HMX
F2:MRM of 1 channel,AP-
176 > 102
6.668e+003



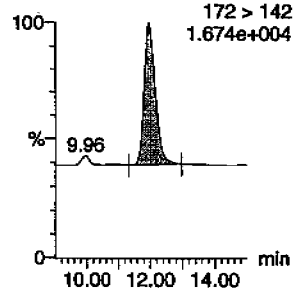
RDX
F2:MRM of 1 channel,AP-
176 > 102
6.668e+003



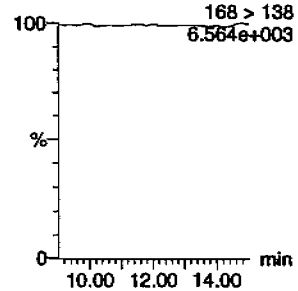
135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
6.552e+003



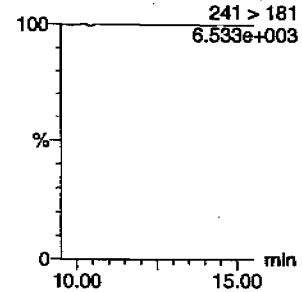
13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
1.674e+004



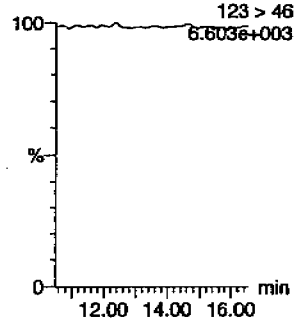
13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
6.564e+003



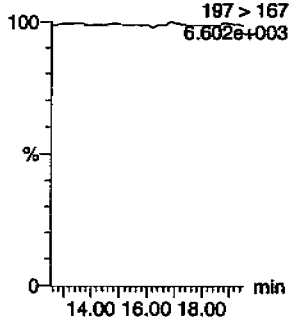
Tetryl
F6:MRM of 1 channel,AP-
241 > 181
6.533e+003



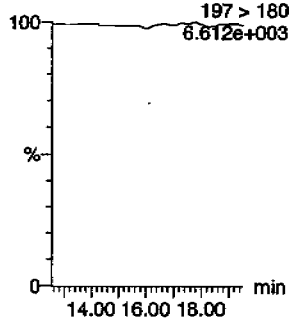
Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
6.603e+003



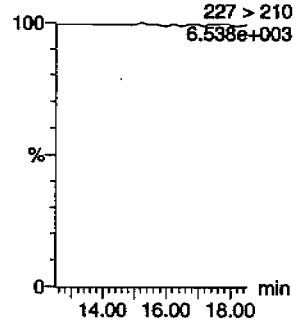
4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 167
6.602e+003



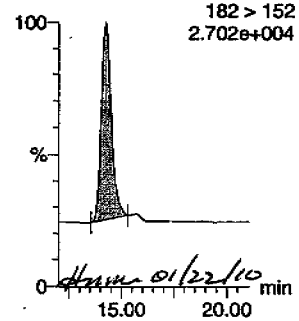
2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
6.612e+003



246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
6.538e+003

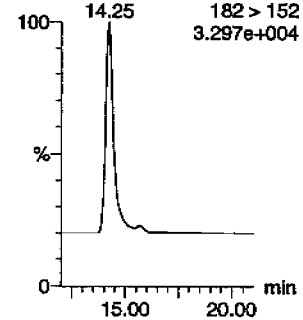


34-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
2.702e+004



01/22/10

26-dinitrotoluene
F9:MRM of 2 channels,AP-
14.25
182 > 152
3.297e+004



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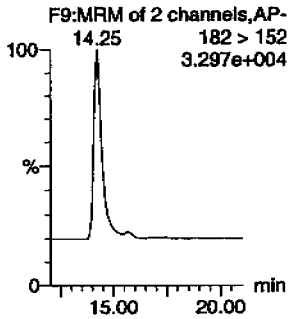
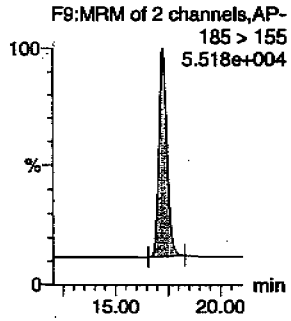
Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA3.qld, Time: Fri Jan 22 10:11:48 2010

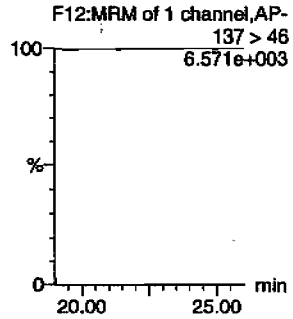
24-dinitrotoluene



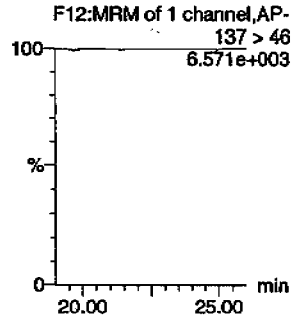
26-dinitrotoluene-d3



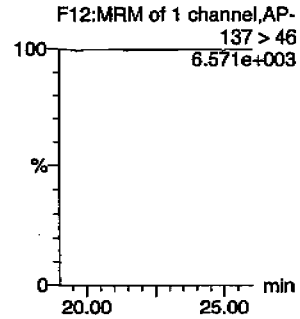
2-Nitrotoluene



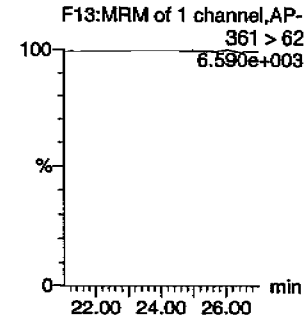
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	R1	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/ml	%Rec	%Dev	S/N
244125001	HMX	176 > 102			3982.088									
244125001	RDX	176 > 102			3982.088									
244125001	135-Trinitrobenzene	213 > 183			3982.088									
244125001	13-Dinitrobenzene-d4	172 > 142	11.95	3982.088		3982.088	3982.088	bb			586.7550	117.4	17.4	326.4
244125001	13-Dinitrobenzene	168 > 138			3982.088									
244125001	Tetryl	241 > 181			3982.088									
244125001	Nitrobenzene	123 > 46			3982.088									
244125001	4-Amino-26-dinitrotoluene	197 > 167			20943.332									
244125001	2-Amino-46-dinitrotoluene	197 > 180			20943.332									
244125001	246-Trinitrotoluene	227 > 210			20943.332									
244125001	34-dinitrotoluene	182 > 152	14.25	11044.318	20943.332	11044.318	263.671	bb			282.8358	113.1	13.1	1014.1
244125001	26-dinitrotoluene	182 > 152			20943.332									
244125001	24-dinitrotoluene	182 > 152			20943.332									
244125001	26-dinitrotoluene-d3	185 > 155	17.27	20943.332		20943.332	20943.332	bb			570.8318	114.2	14.2	1642.6
244125001	2-Nitrotoluene	137 > 46			20943.332									
244125001	4-Nitrotoluene	137 > 46			20943.332									
244125001	3-Nitrotoluene	137 > 46			20943.332									
244125001	PETN	361 > 62			20943.332									

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High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7698

Lab Code: GEL

GEL Job No (SDG) 10-1130

Matrix: SOIL

GEL Sample ID: 244125001

Sample Amount 2

Moisture: 9.9

Amount Units g

Date Received: 08-JAN-10

Extraction Type Sonication

Extraction Batch ID: 940075

Concentrated Extract Volume (mL) 10

Date Extracted: 19-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS01200053.wiff

Date Analyzed: 21-JAN-10 00:06

Units: ug/kg

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

*Concentration =

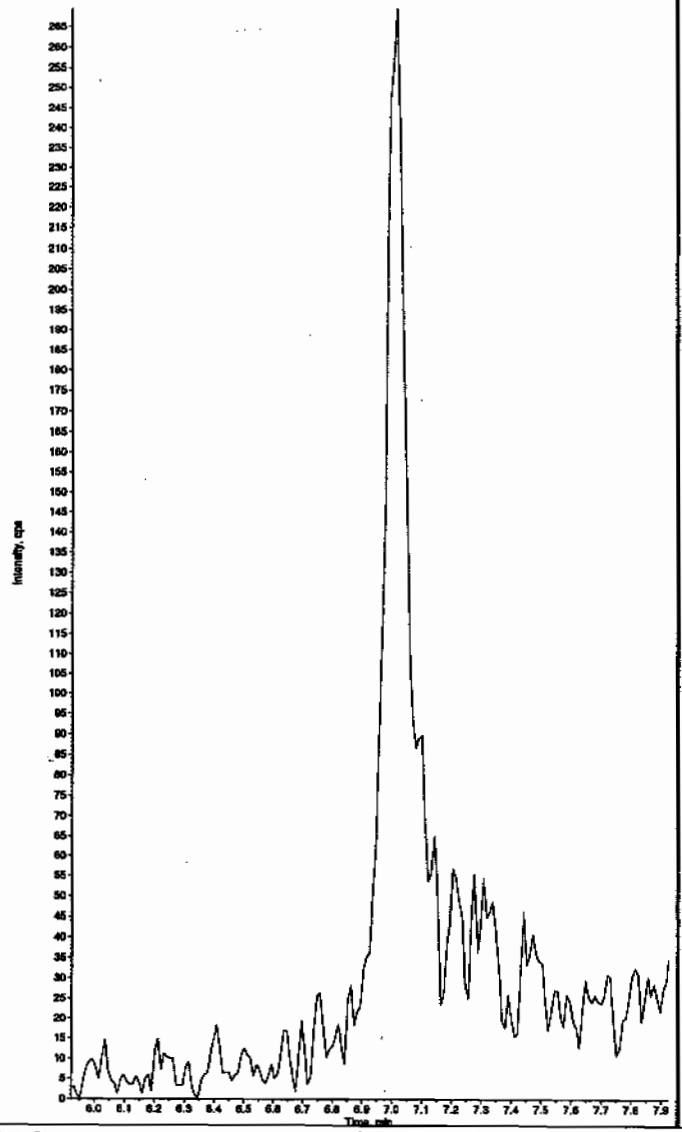
$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Dan 1/21/10

Sample Name: "244125001" Sample ID: "940080[2]LER" File: "EXS01200053.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCXB3212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/21/2010
Acq. Time: 12:06:28 AM

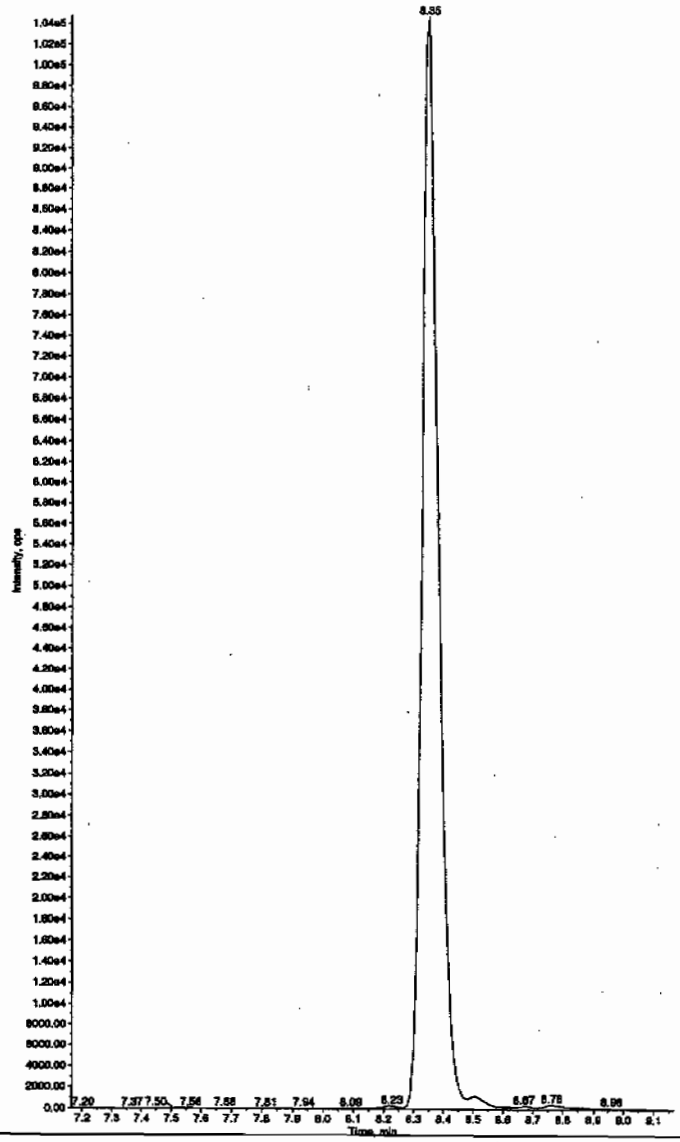
Modified: No



Sample Name: "244125001" Sample ID: "940080[2]LER" File: "EXS01200053.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCXB3212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/21/2010
Acq. Time: 12:06:28 AM

Modified: No



Hmc 01/21/10

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

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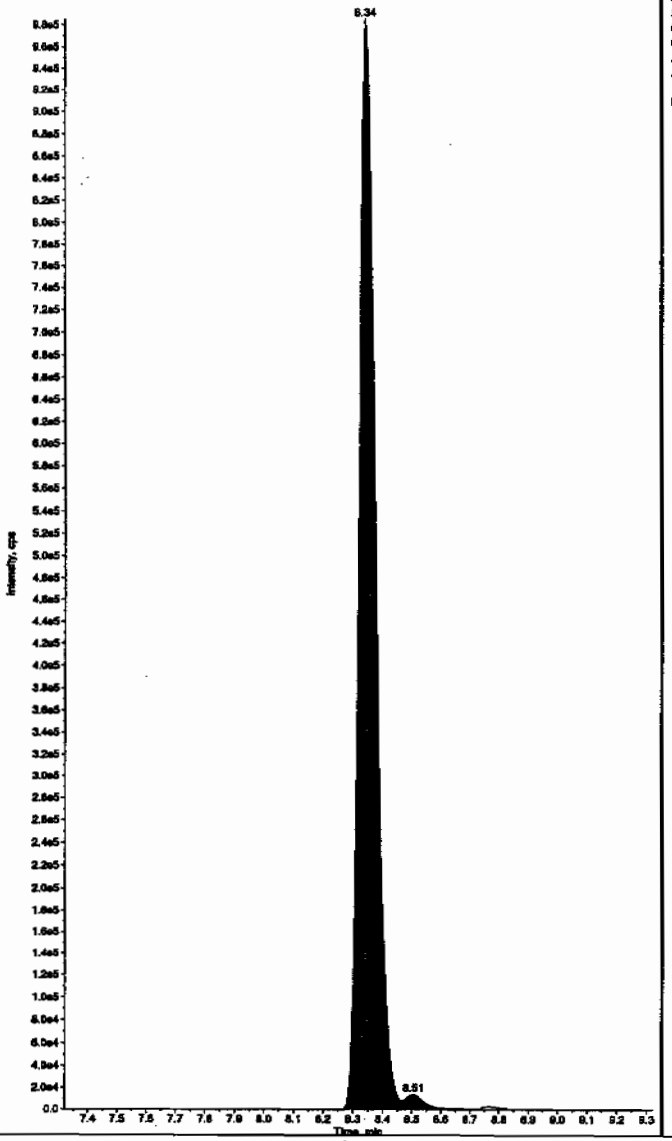
Sample Name: "244125001" Sample ID: "940080|2|LER" File: "EXS01200053.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 279. ng/mL
Acq. Date: 1/21/2010
Acq. Time: 12:06:28 AM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.32 min
Use Relative RT: No

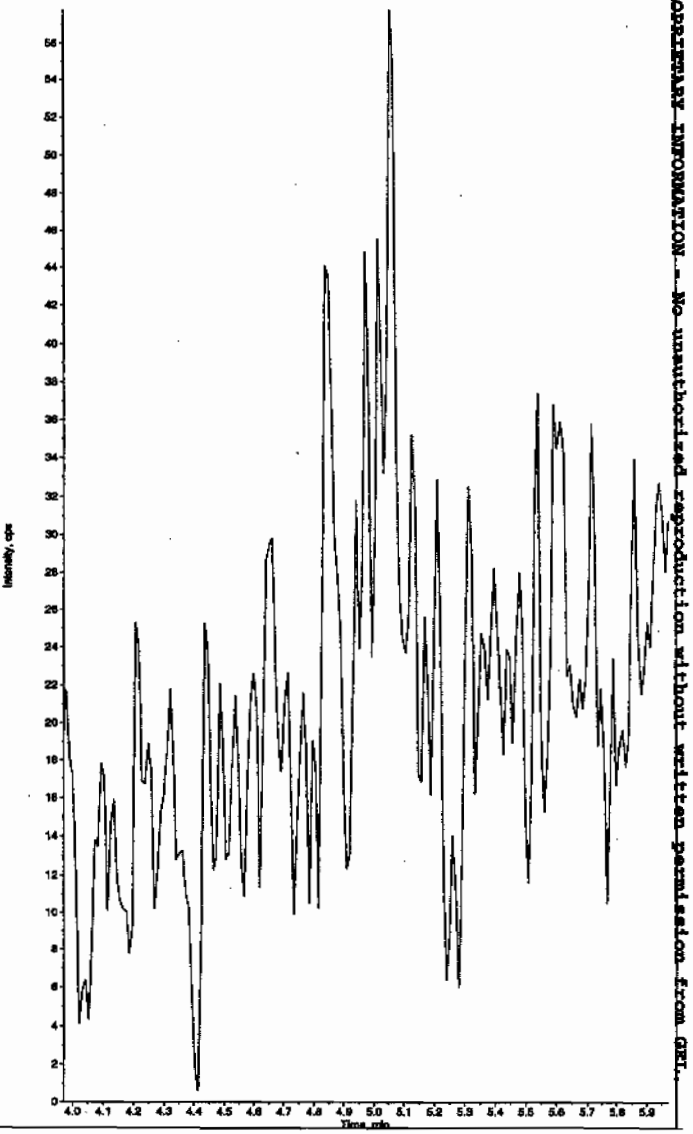
Int. Type: Valley
Retention Time: 8.34 min
Area: 3.91e+006 counts
Height: 985269.470 cps
Start Time: 8.25 min
End Time: 8.65 min



Sample Name: "244125001" Sample ID: "940080|2|LER" File: "EXS01200053.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/21/2010
Acq. Time: 12:06:28 AM

Modified: No



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

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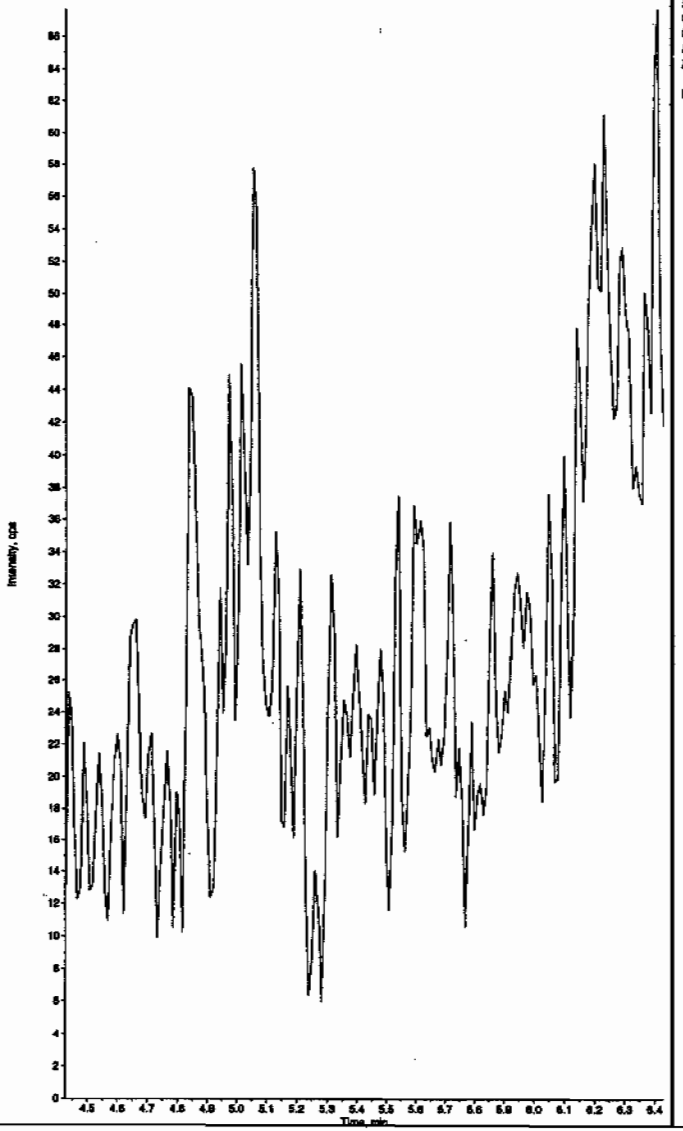
Sample Name: "244125001" Sample ID: "940080|2|LER" File: "EXS01200053.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/21/2010
Acq. Time: 12:06:28 AM

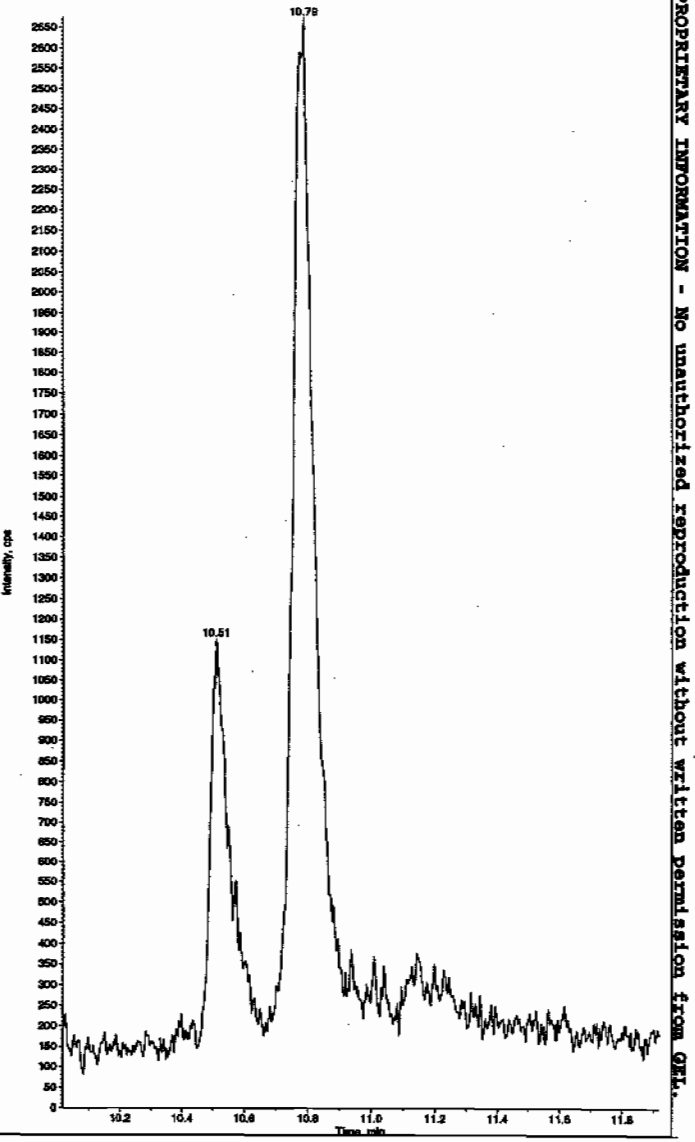
Modified: No



Sample Name: "244125001" Sample ID: "940080|2|LER" File: "EXS01200053.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/21/2010
Acq. Time: 12:06:28 AM

Modified: No



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

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7697

Lab Code: GEL

GEL Job No (SDG) 10-1130

Matrix: SOIL

GEL Sample ID: 244125002

Sample Amount 2

Moisture: 14.7

Amount Units g

Date Received: 08-JAN-10

Extraction Type Sonication

Extraction Batch ID: 940075

Concentrated Extract Volume (mL) 10

Date Extracted: 19-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0118160a

Date Analyzed: 21-JAN-10 20:15

Units: ug/kg

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

*Concentration =

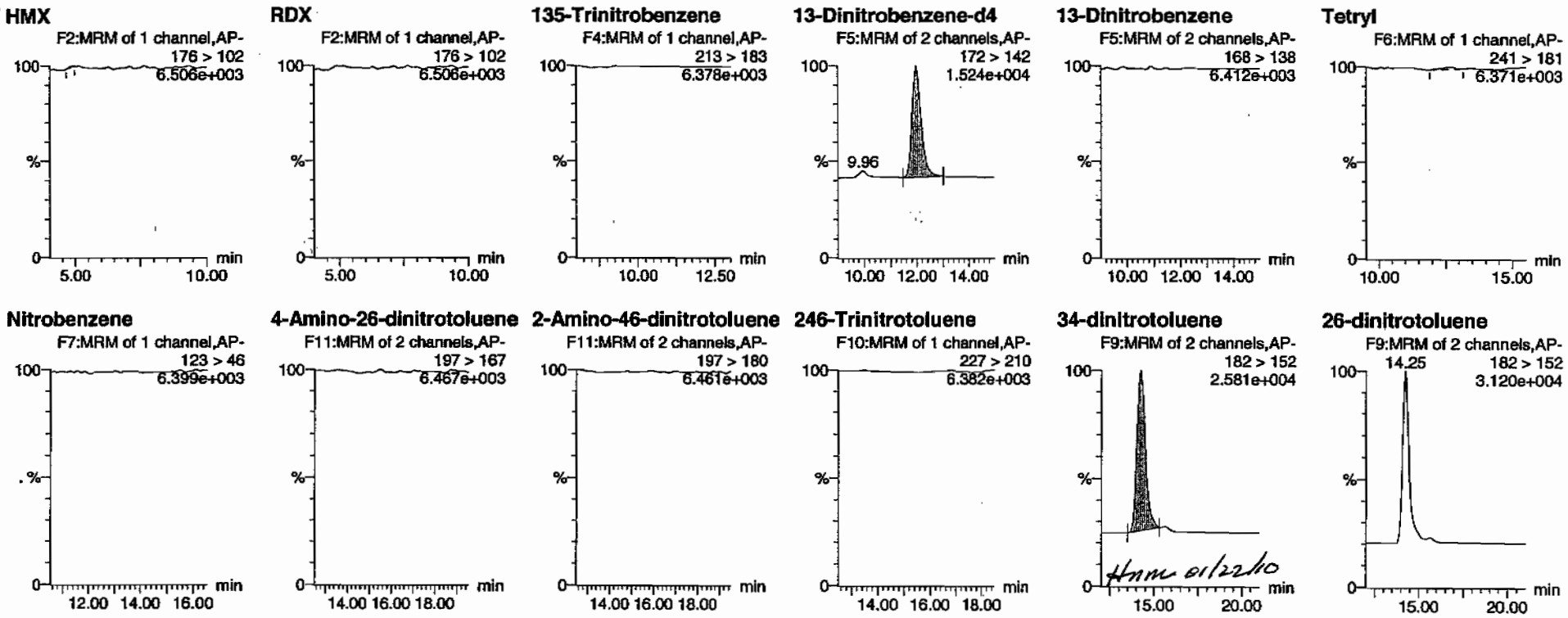
$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

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

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA3.qld, Time: Fri Jan 22 10:11:48 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118160a
Date: 21-Jan-2010
Time: 20:15:14
ID: 244125002 | LANU | 940080 | Solids | 21
Vial: 4:5,F

MAP 1/22/10



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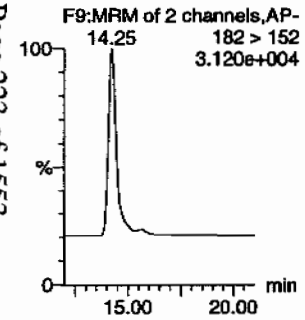
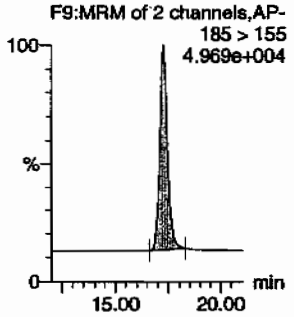
Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA3.qld, Time: Fri Jan 22 10:11:48 2010

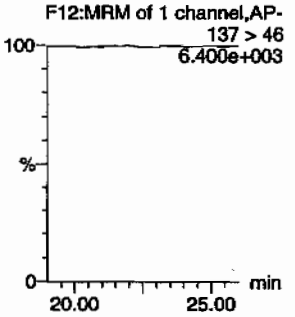
24-dinitrotoluene



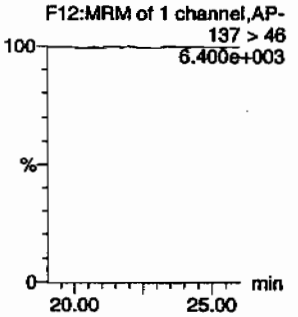
26-dinitrotoluene-d3



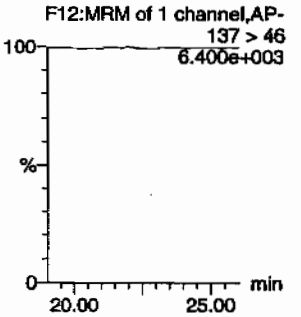
2-Nitrotoluene



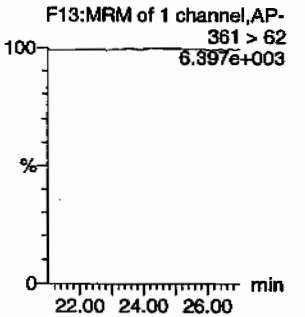
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/ml	%Rec	%Dev	S/N
244125002	HMX	176 > 102			3539.231			MM-	22-Jan-10	09:57:00				
244125002	RDX	176 > 102			3539.231									
244125002	135-Trinitrobenzene	213 > 183			3539.231									
244125002	13-Dinitrobenzene-d4	172 > 142	11.97	3539.231		3539.231	3539.231	bb			521.5006	104.3	4.3	329.1
244125002	13-Dinitrobenzene	168 > 138			3539.231									
244125002	Tetryl	241 > 181			3539.231			MM-	22-Jan-10	09:58:56				
244125002	Nitrobenzene	123 > 46			3539.231									
244125002	4-Amino-26-dinitrotoluene	197 > 167			18664.193									
244125002	2-Amino-46-dinitrotoluene	197 > 180			18664.193									
244125002	246-Trinitrotoluene	227 > 210			18664.193									
244125002	34-dinitrotoluene	182 > 152	14.25	10446.825	18664.193	10446.825	279.863	bb			300.2039	120.1	20.1	362.4
244125002	26-dinitrotoluene	182 > 152			18664.193									
244125002	24-dinitrotoluene	182 > 152			18664.193									
244125002	26-dinitrotoluene-d3	185 > 155	17.27	18664.193		18664.193	18664.193	bb			508.7116	101.7	1.7	1800.8
244125002	2-Nitrotoluene	137 > 46			18664.193									
244125002	4-Nitrotoluene	137 > 46			18664.193									
244125002	3-Nitrotoluene	137 > 46			18664.193									
244125002	PETN	361 > 62			18664.193									

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7697

Lab Code: GEL

GEL Job No (SDG) 10-1130

Matrix: SOIL

GEL Sample ID: 244125002

Sample Amount 2

Moisture: 14.7

Amount Units g

Date Received: 08-JAN-10

Extraction Type Sonication

Extraction Batch ID: 940075

Concentrated Extract Volume (mL) 10

Date Extracted: 19-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS01200056.wiff

Date Analyzed: 21-JAN-10 00:53

Units: ug/kg

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

*Concentration =

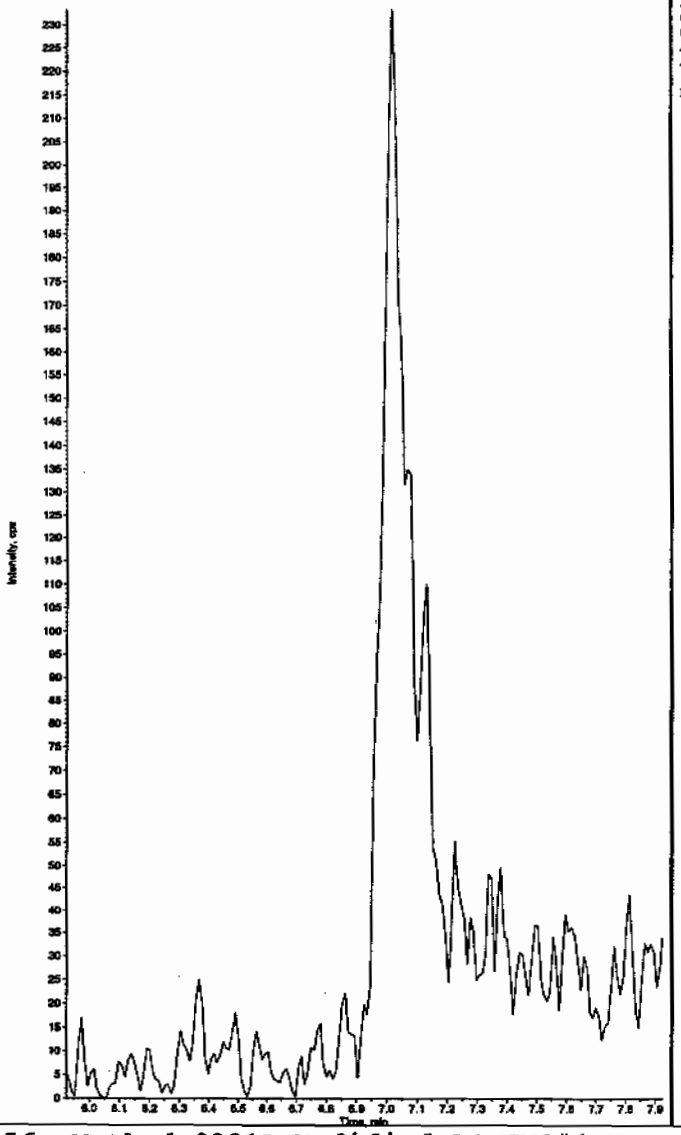
$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Lan 1/21/10

Sample Name: "244125002" Sample ID: "940080|2|LER" File: "EXS01200056.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/21/2010
Acq. Time: 12:53:34 AM

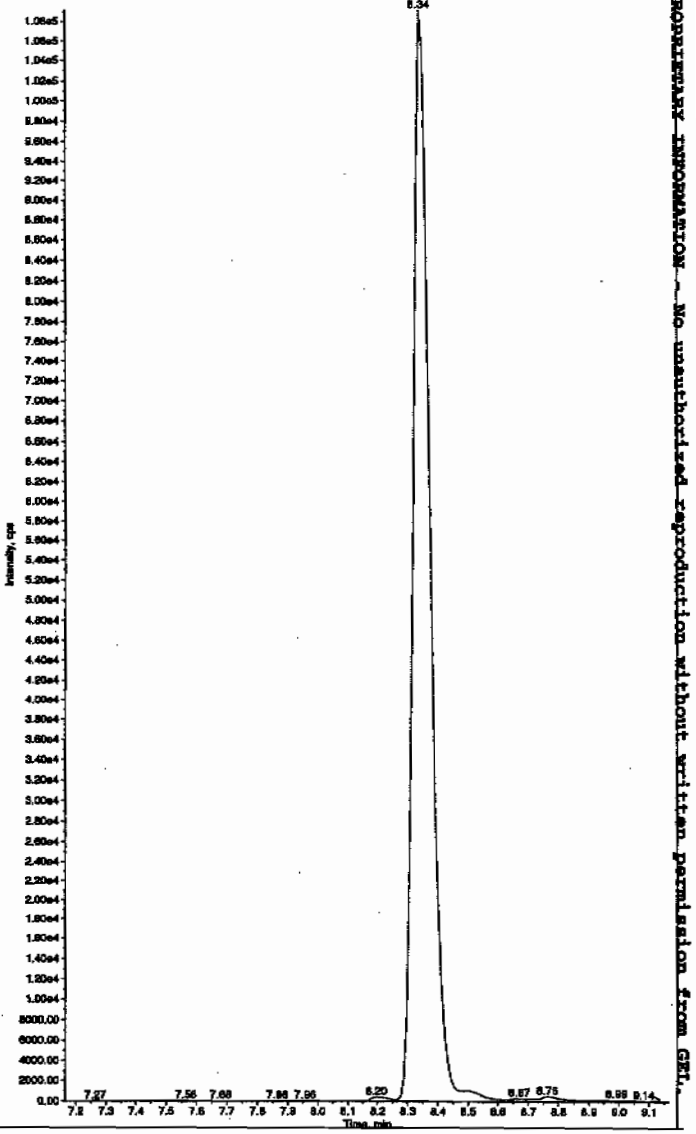
Modified: No



Sample Name: "244125002" Sample ID: "940080|2|LER" File: "EXS01200056.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/21/2010
Acq. Time: 12:53:34 AM

Modified: No



Hme 01/21/10

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

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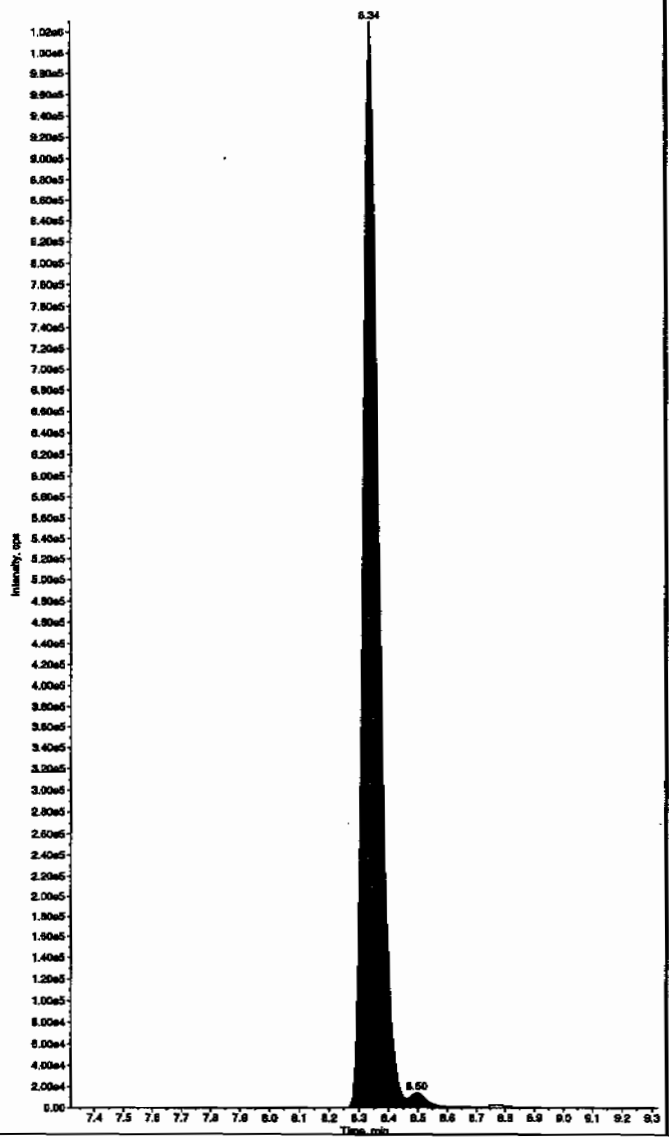
Sample Name: "244125002" Sample ID: "940080|2|LER" File: "EXS01200056.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCX832125" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 283. ng/mL
Acq. Date: 1/21/2010
Acq. Time: 12:53:34 AM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.32 min
Use Relative RT: No

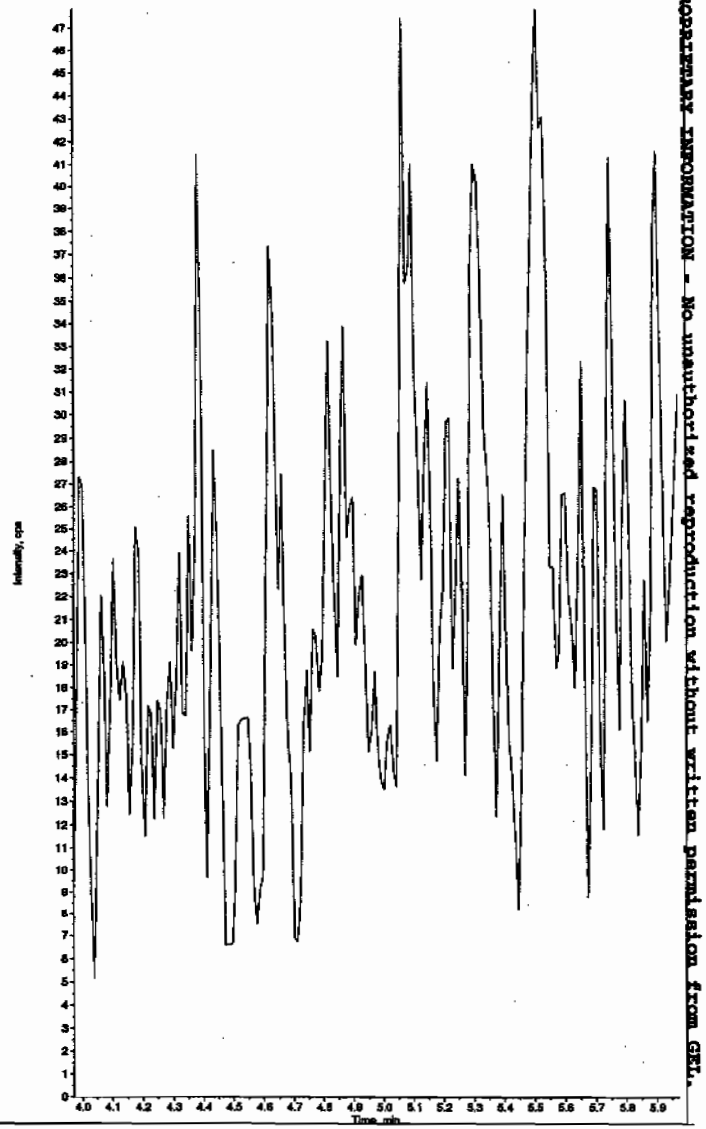
Int. Type: Valley
Retention Time: 8.34 min
Area: 3.96e+006 counts
Height: 1030372.437 cps
Start Time: 8.21 min
End Time: 8.68 min



Sample Name: "244125002" Sample ID: "940080|2|LER" File: "EXS01200056.wiff"
Peak Name: "2S-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX832125" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/21/2010
Acq. Time: 12:53:34 AM

Modified: No



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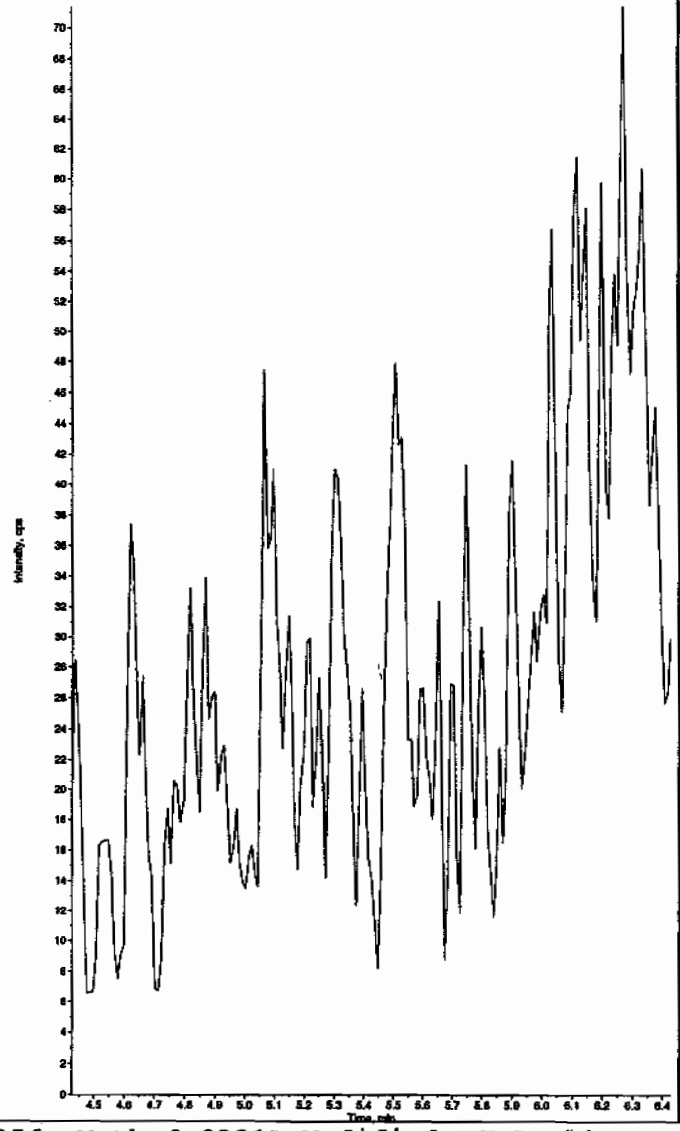
*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "244125002" Sample ID: "940080[2]LER" File: "EXS01200056.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX832125" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/21/2010
Acq. Time: 12:53:34 AM

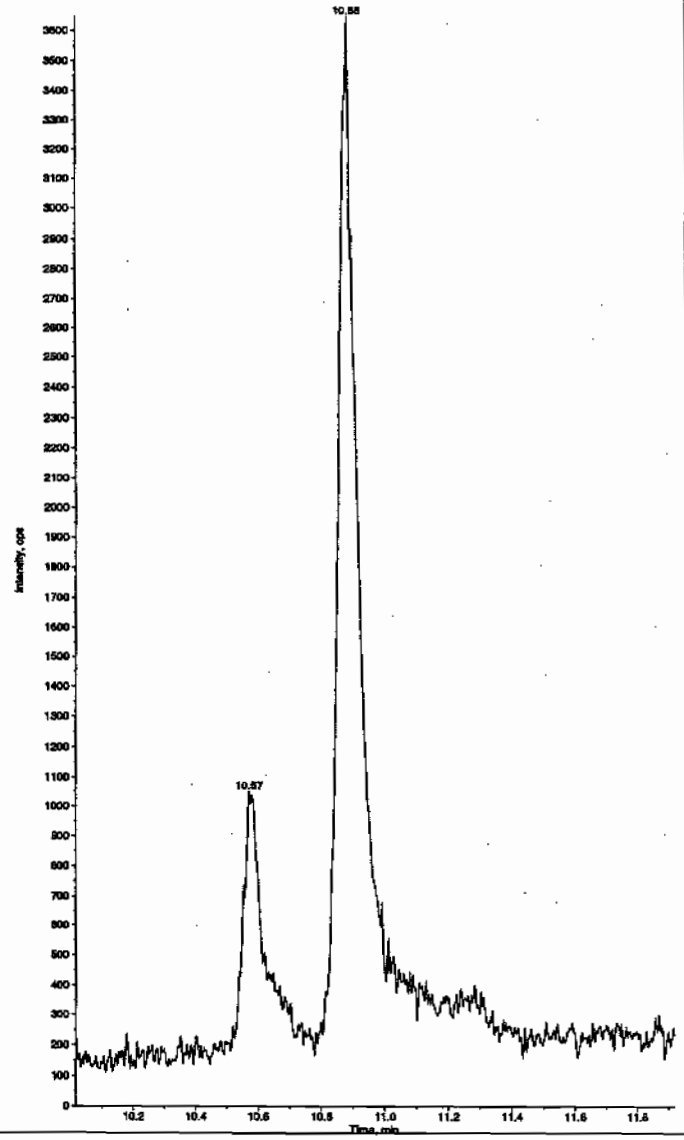
Modified: No



Sample Name: "244125002" Sample ID: "940080[2]LER" File: "EXS01200056.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCX832125" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/21/2010
Acq. Time: 12:53:34 AM

Modified: No



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

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7704

Lab Code: GEL

GEL Job No (SDG) 10-1130

Matrix: SOIL

GEL Sample ID: 244125003

Sample Amount 2

Moisture: 9.3

Amount Units g

Date Received: 08-JAN-10

Extraction Type Sonication

Extraction Batch ID: 940075

Concentrated Extract Volume (mL) 10

Date Extracted: 19-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0118164a

Date Analyzed: 21-JAN-10 22:13

Units: ug/kg

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

*Concentration =

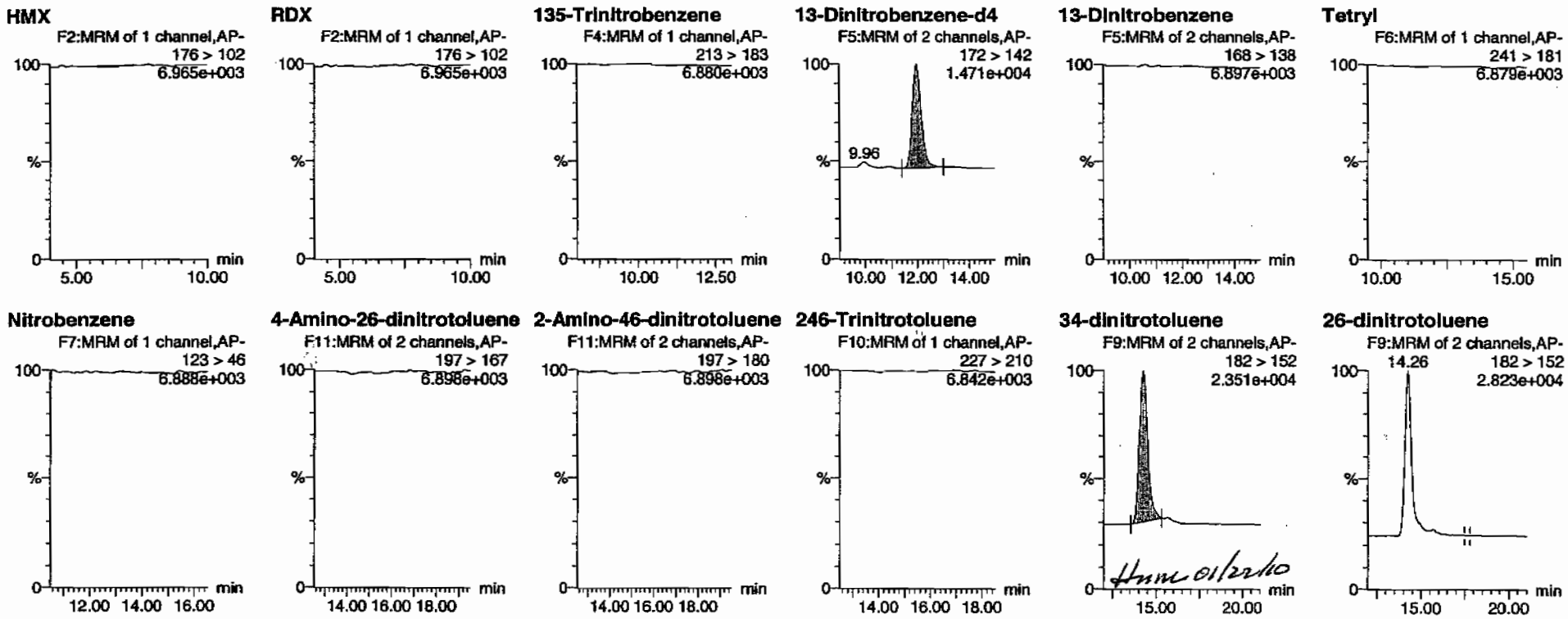
$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

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

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA3.qld, Time: Fri Jan 22 10:11:48 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118164a
Date: 21-Jan-2010
Time: 22:13:09
ID: 244125003 | LANL | 940080 | Soil | 21
Vial: 4:6,A

MAP 1/22/10



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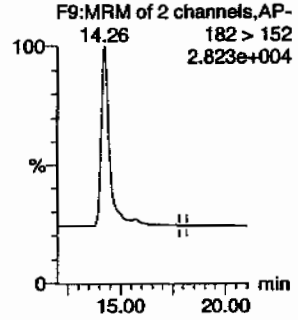
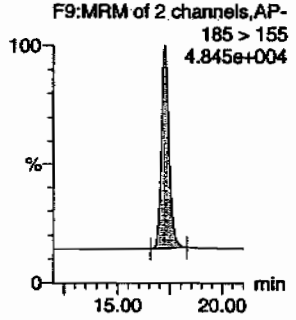
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA3.qld, Time: Fri Jan 22 10:11:48 2010

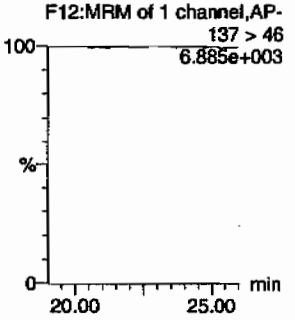
24-dinitrotoluene



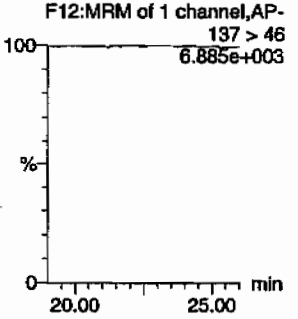
26-dinitrotoluene-d3



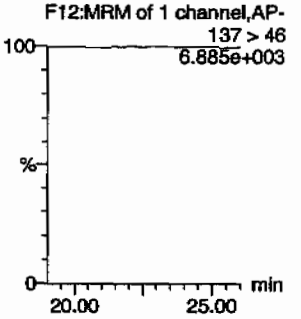
2-Nitrotoluene



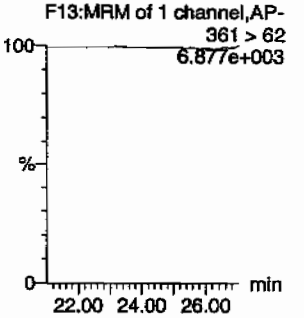
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/ml	%Rec	%Dev	S/N
244125003	HMX	176 > 102			3111.365									
244125003	RDX	176 > 102			3111.365									
244125003	135-Trinitrobenzene	213 > 183			3111.365									
244125003	13-Dinitrobenzene-d4	172 > 142	11.97	3111.365		3111.365	3111.365	bb			458.4552	91.7	-8.3	284.9
244125003	13-Dinitrobenzene	168 > 138			3111.365									
244125003	Tetryl	241 > 181			3111.365									
244125003	Nitrobenzene	123 > 46			3111.365									
244125003	4-Amino-26-dinitrotoluene	197 > 167			17638.031									
244125003	2-Amino-46-dinitrotoluene	197 > 180			17638.031									
244125003	246-Trinitrotoluene	227 > 210			17638.031									
244125003	34-dinitrotoluene	182 > 152	14.26	8845.371	17638.031	8845.371	250.747	bb			268.9721	107.6	7.6	326.9
244125003	26-dinitrotoluene	182 > 152			17638.031			MM-	22-Jan-10	10:07:45				
244125003	24-dinitrotoluene	182 > 152			17638.031			MM-	22-Jan-10	10:10:06				
244125003	26-dinitrotoluene-d3	185 > 155	17.27	17638.031		17638.031	17638.031	bb			480.7425	96.1	-3.9	1286.3
244125003	2-Nitrotoluene	137 > 46			17638.031									
244125003	4-Nitrotoluene	137 > 46			17638.031									
244125003	3-Nitrotoluene	137 > 46			17638.031									
244125003	PETN	361 > 62			17638.031									

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High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7704

Lab Code: GEL

GEL Job No (SDG) 10-1130

Matrix: SOIL

GEL Sample ID: 244125003

Sample Amount 2

Moisture: 9.3

Amount Units g

Date Received: 08-JAN-10

Extraction Type Sonication

Extraction Batch ID: 940075

Concentrated Extract Volume (mL) 10

Date Extracted: 19-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS01200057.wiff

Date Analyzed: 21-JAN-10 01:09

Units: ug/kg

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

*Concentration =

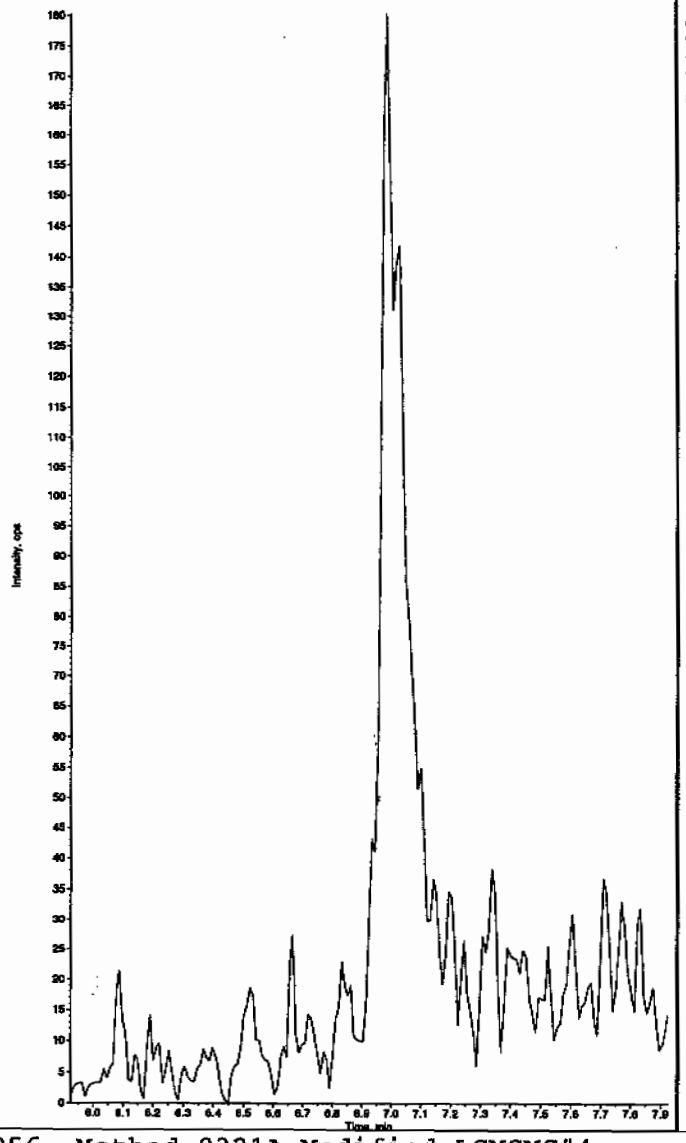
$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Lan 1/21/10

Sample Name: "244125003" Sample ID: "940060[2]LER" File: "EXS01200057.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/21/2010
Acq. Time: 1:09:16 AM

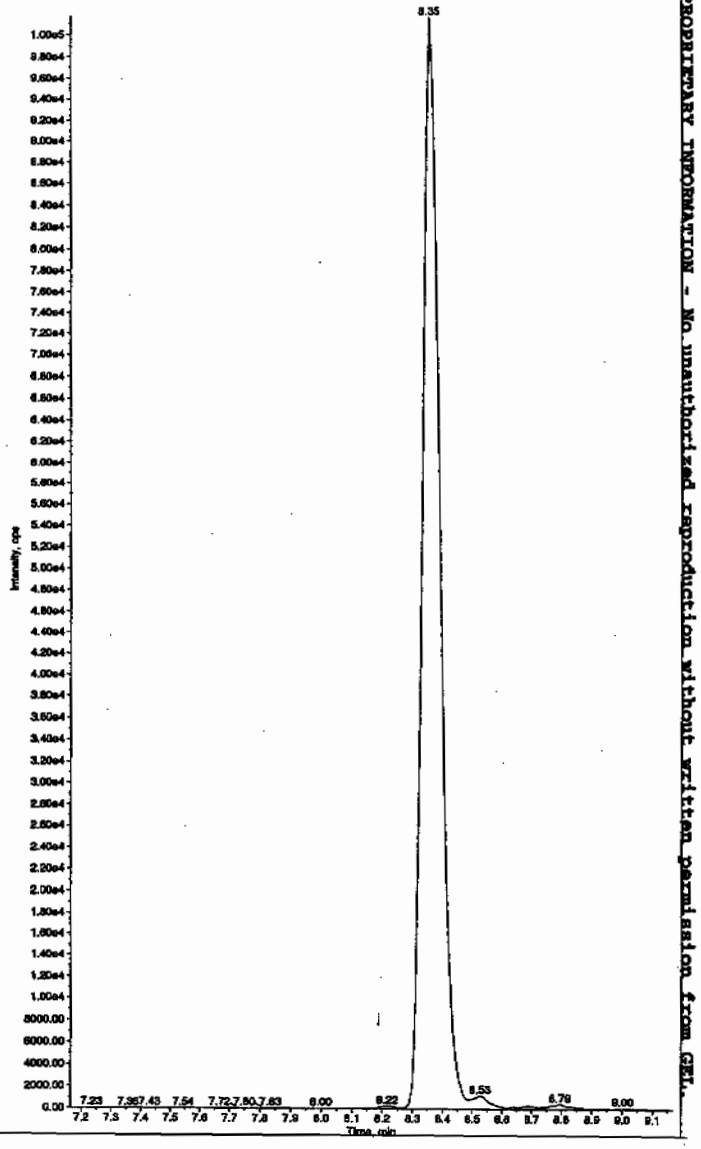
Modified: No



Sample Name: "244125003" Sample ID: "940060[2]LER" File: "EXS01200057.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/21/2010
Acq. Time: 1:09:16 AM

Modified: No



thm 01/21/10

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

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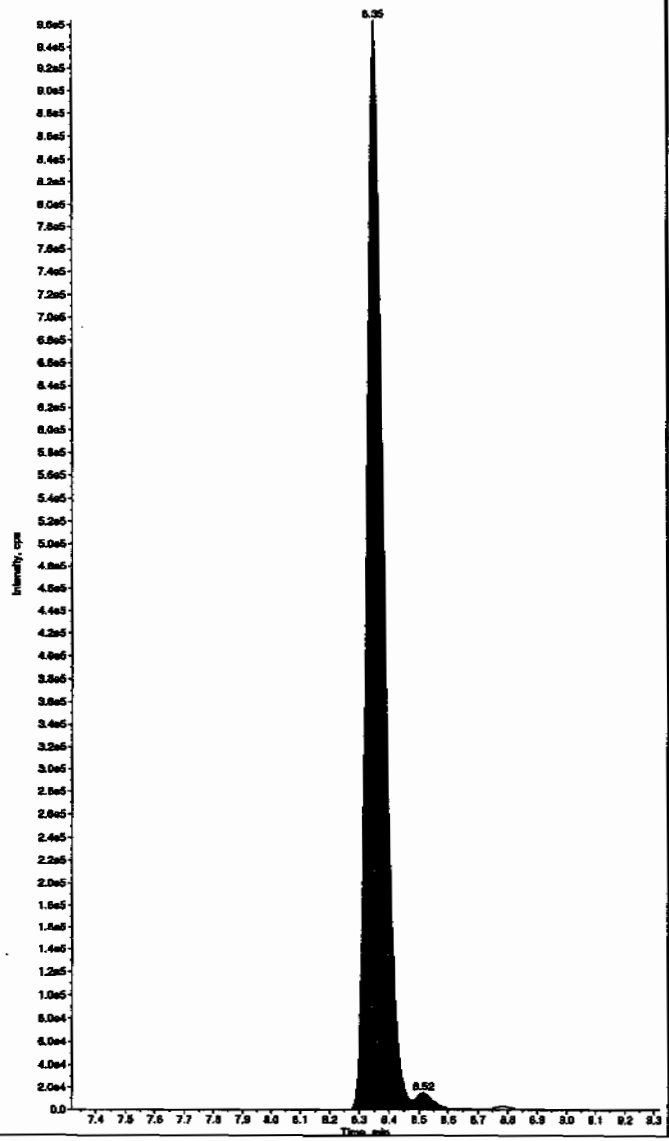
Sample Name: "244125003" Sample ID: "940080|2|LER" File: "EXS01200057.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 276. ng/mL
Acq. Date: 1/21/2010
Acq. Time: 1:09:16 AM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.32 min
Use Relative RT: No

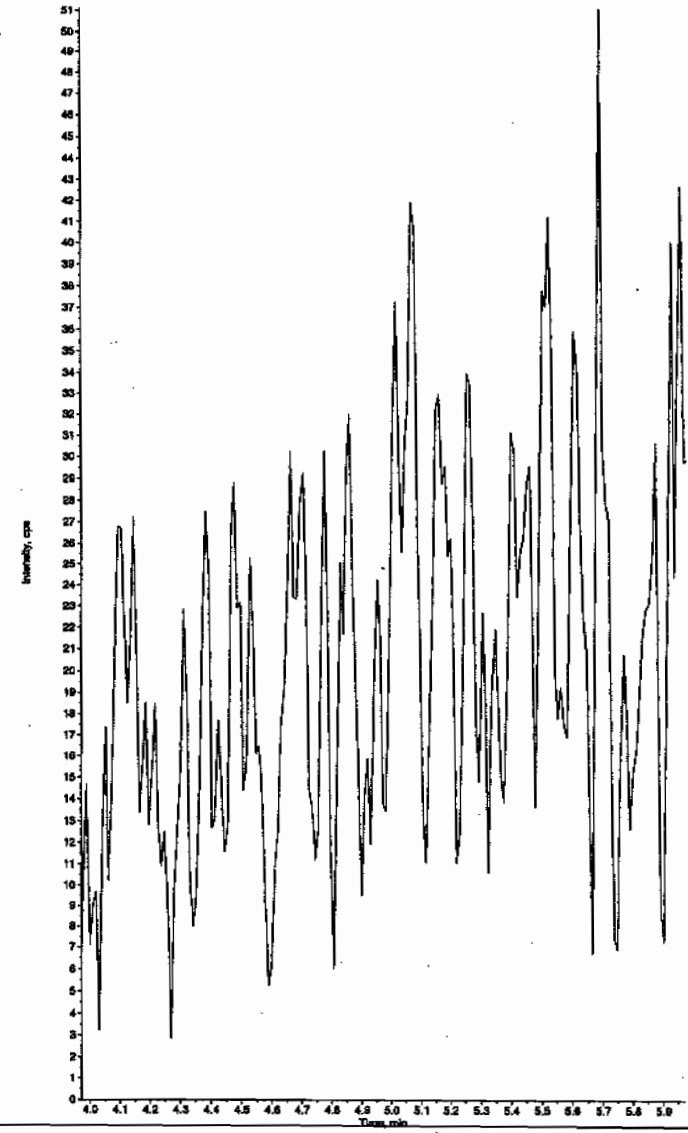
Int. Type: Valley
Retention Time: 8.35 min
Area: 3.87e+006 counts
Height: 964176.025 cps
Start Time: 8.25 min
End Time: 8.70 min



Sample Name: "244125003" Sample ID: "940080|2|LER" File: "EXS01200057.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/21/2010
Acq. Time: 1:09:16 AM

Modified: No



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

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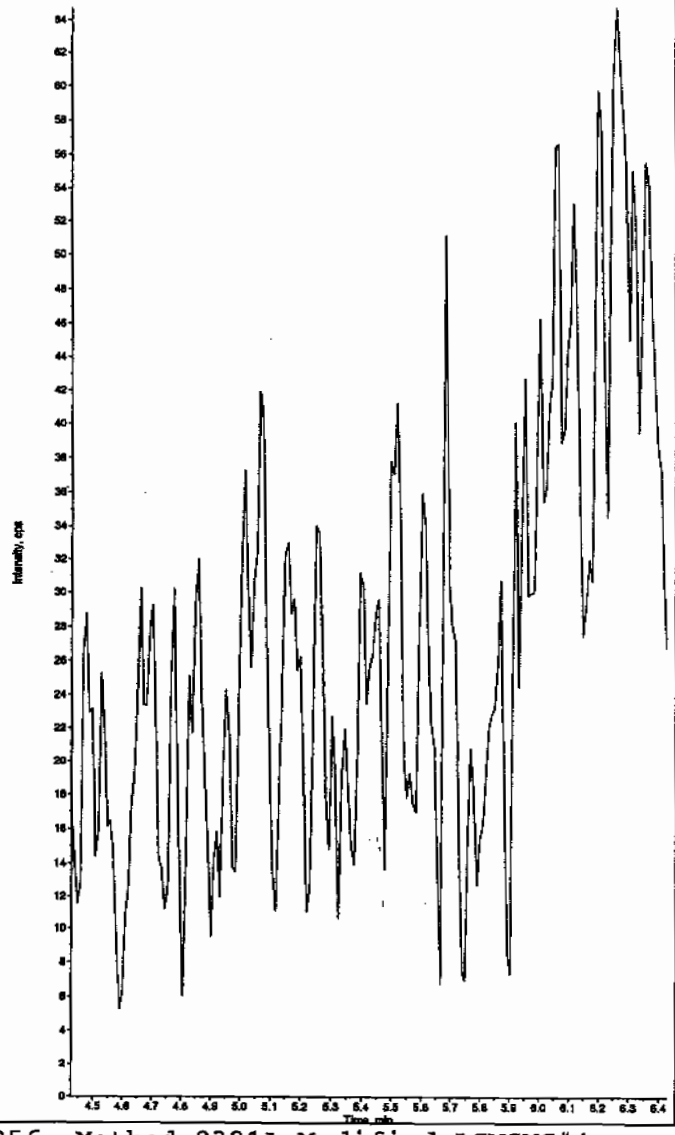
Sample Name: "244125003" Sample ID: "940080[2]LER" File: "EXS01200057.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/21/2010
Acq. Time: 1:09:16 AM

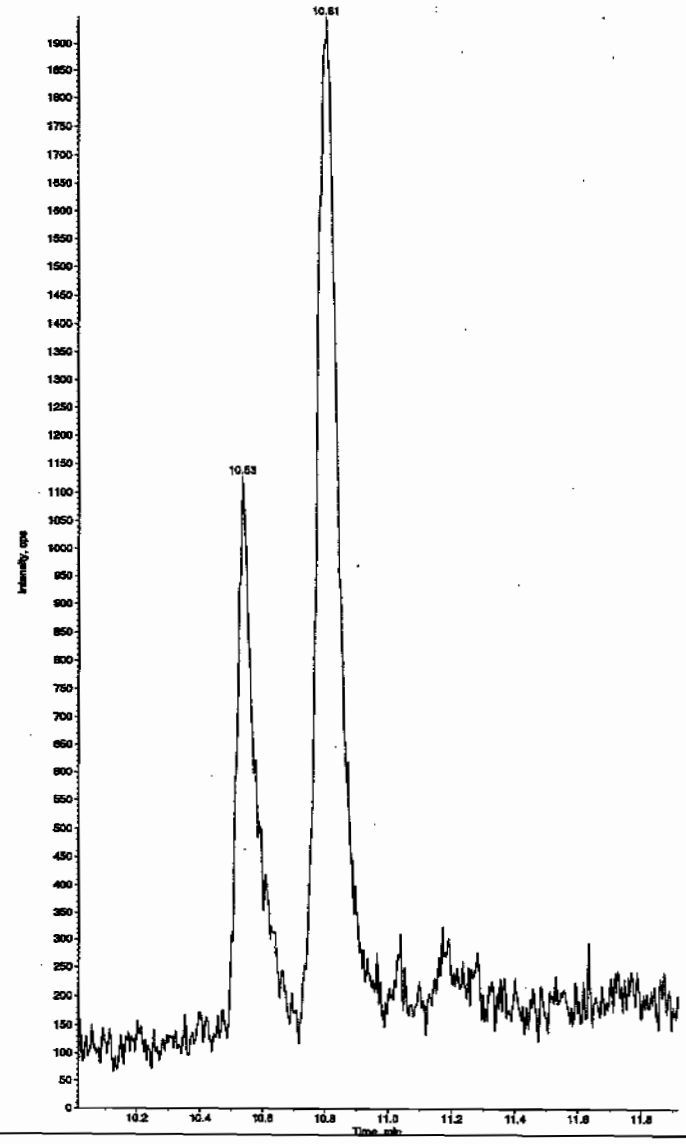
Modified: No



Sample Name: "244125003" Sample ID: "940080[2]LER" File: "EXS01200057.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/21/2010
Acq. Time: 1:09:16 AM

Modified: No



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

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7703

Lab Code: GEL

GEL Job No (SDG) 10-1130

Matrix: SOIL

GEL Sample ID: 244125004

Sample Amount 2

Moisture: 19.8

Amount Units g

Date Received: 08-JAN-10

Extraction Type Sonication

Extraction Batch ID: 940075

Concentrated Extract Volume (mL) 10

Date Extracted: 19-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0118165a

Date Analyzed: 21-JAN-10 22:42

Units: ug/kg

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

*Concentration =

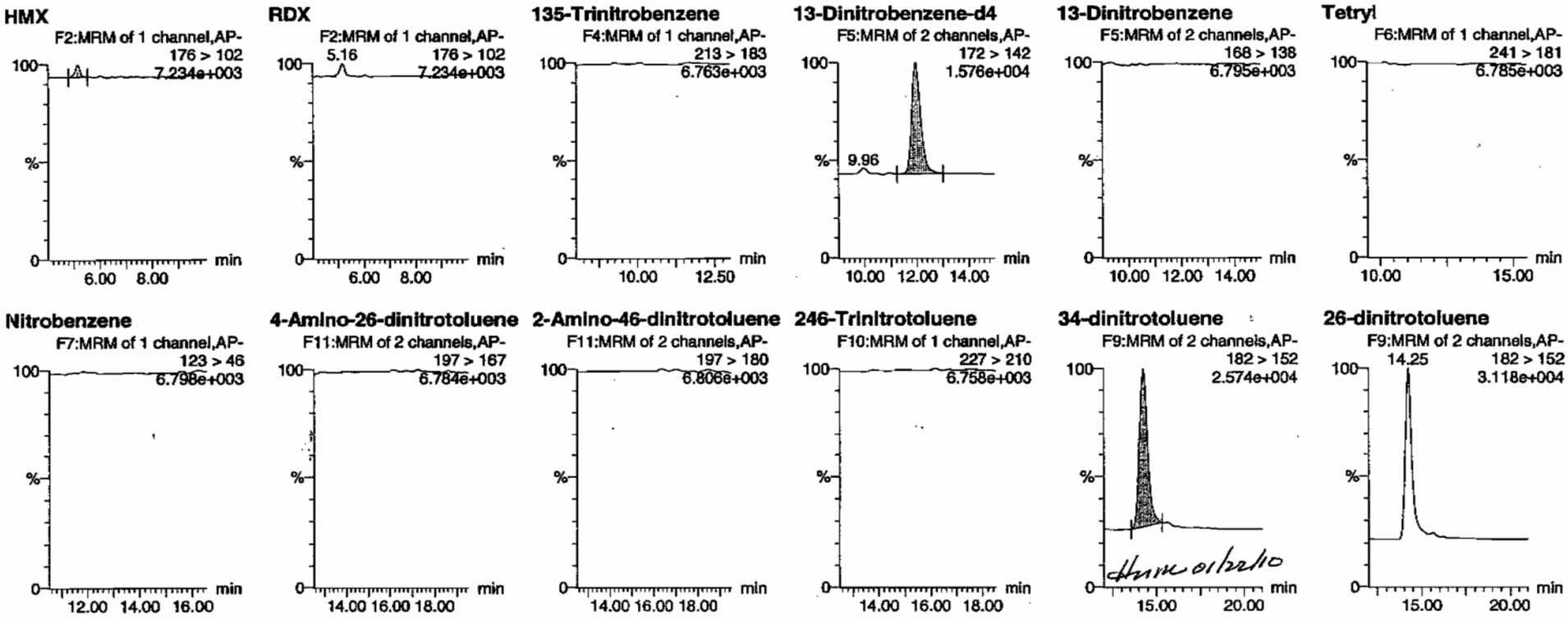
$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

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

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA3.qld, Time: Fri Jan 22 10:11:48 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118165a
Date: 21-Jan-2010
Time: 22:42:46
ID: 244125004 | LANL | 940080 | Solid | 2 |
Vial: 4:6,B

MAP
1/22/10



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

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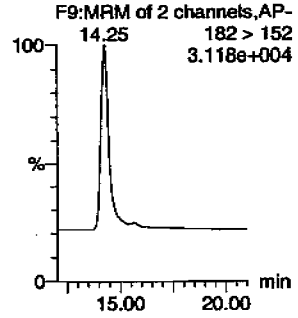
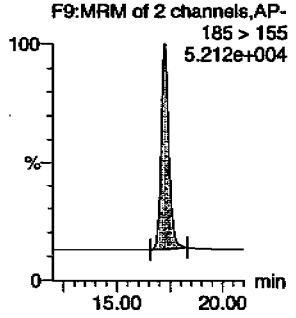
Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA3.qld, Time: Fri Jan 22 10:11:48 2010

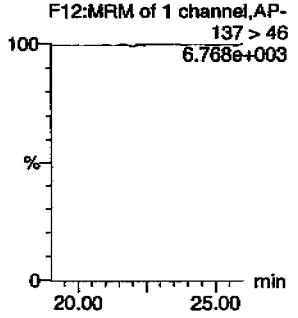
24-dinitrotoluene



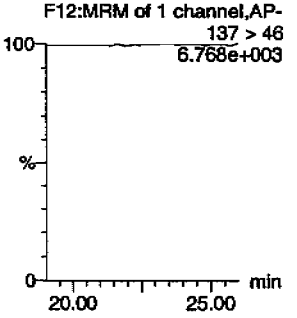
26-dinitrotoluene-d3



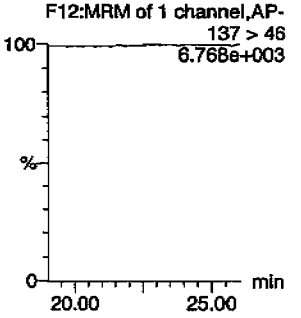
2-Nitrotoluene



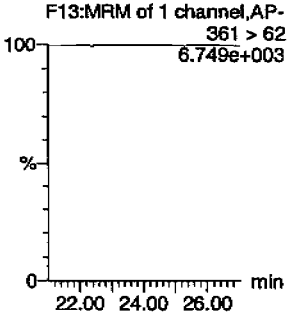
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	StArea	AbsArea	Response	Flags	ModDate	ModTime	ug/ml	%Rec	%Dev	S/N
244125004	HMX	176 > 102	5.16	104.322	3622.624	104.322	14.399	bb			4.4605			17.7
244125004	RDX	176 > 102			3622.624									
244125004	135-Trinitrobenzene	213 > 183			3622.624									
244125004	13-Dinitrobenzene-d4	172 > 142	11.94	3622.624		3622.624	3622.624	bb			533.7885	106.8	6.8	295.1
244125004	13-Dinitrobenzene	168 > 138			3622.624									
244125004	Tetryl	241 > 181			3622.624									
244125004	Nitrobenzene	123 > 46			3622.624									
244125004	4-Amino-26-dinitrotoluene	197 > 167			19226.748									
244125004	2-Amino-46-dinitrotoluene	197 > 180			19226.748									
244125004	246-Trinitrotoluene	227 > 210			19226.748									
244125004	34-dinitrotoluene	182 > 152	14.25	10078.692	19226.748	10078.692	262.101	bb			281.1509	112.5	12.5	629.7
244125004	26-dinitrotoluene	182 > 152			19226.748									
244125004	24-dinitrotoluene	182 > 152			19226.748									
244125004	26-dinitrotoluene-d3	185 > 155	17.27	19226.748		19226.748	19226.748	bb			524.0446	104.8	4.8	2158.3
244125004	2-Nitrotoluene	137 > 46			19226.748									
244125004	4-Nitrotoluene	137 > 46			19226.748									
244125004	3-Nitrotoluene	137 > 46			19226.748									
244125004	PETN	361 > 62			19226.748									

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7703

Lab Code: GEI

GEL Job No (SDG) 10-1130

Matrix: SOIL

GEL Sample ID: 244125004

Sample Amount 2

Moisture: 19.8

Amount Units g

Date Received: 08-JAN-10

Extraction Type Sonication

Extraction Batch ID: 940075

Concentrated Extract Volume (mL) 10

Date Extracted: 19-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS01200058.wiff

Date Analyzed: 21-JAN-10 01:24

Units: ug/kg

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

*Concentration =

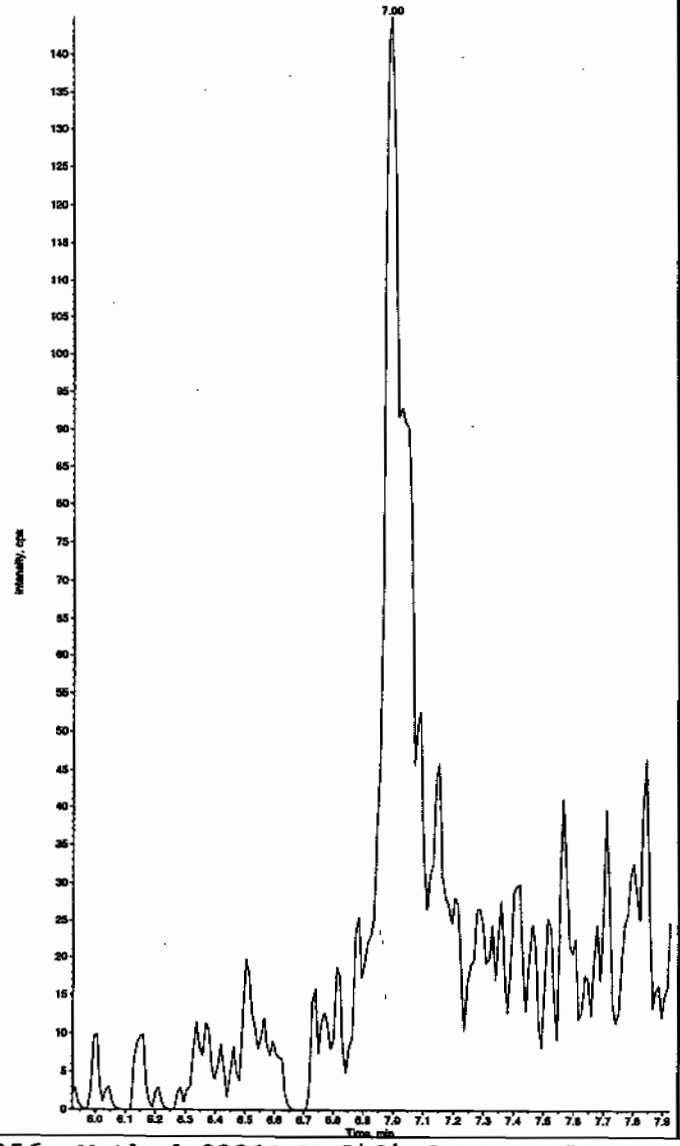
$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Dan 1/21/10

Sample Name: "244125004" Sample ID: "940080[2]LER" File: "EXS01200058.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/21/2010
Acq. Time: 1:24:58 AM

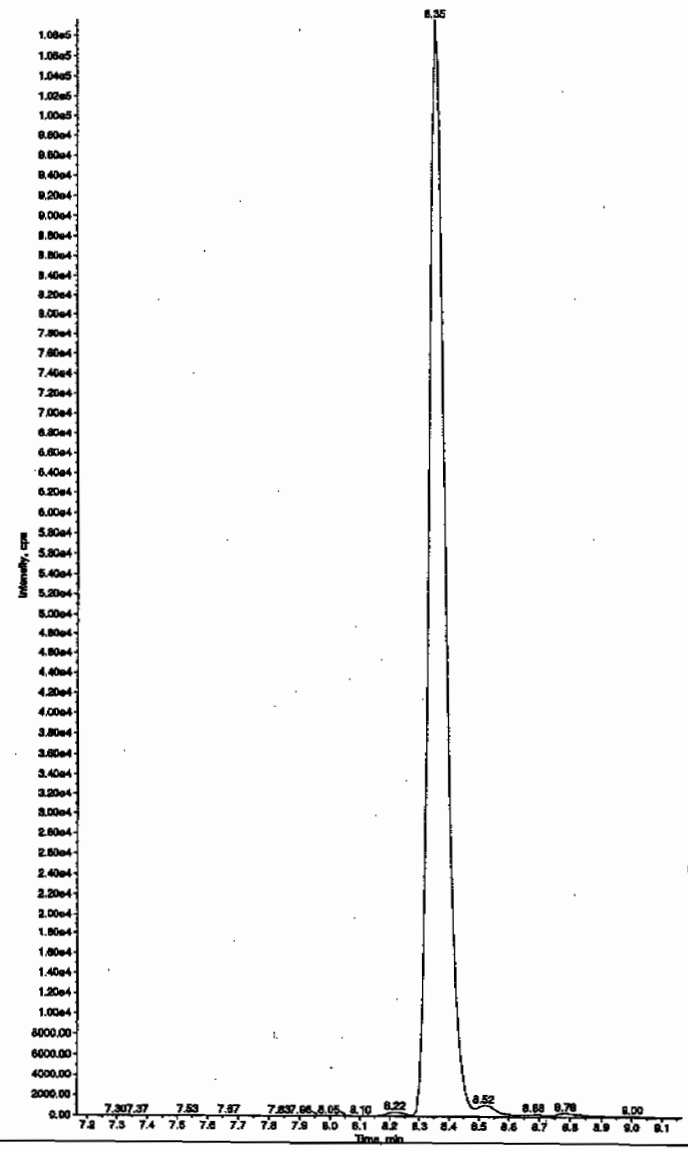
Modified: No



Sample Name: "244125004" Sample ID: "940080[2]LER" File: "EXS01200058.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/21/2010
Acq. Time: 1:24:58 AM

Modified: No



AMM 01/21/10

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

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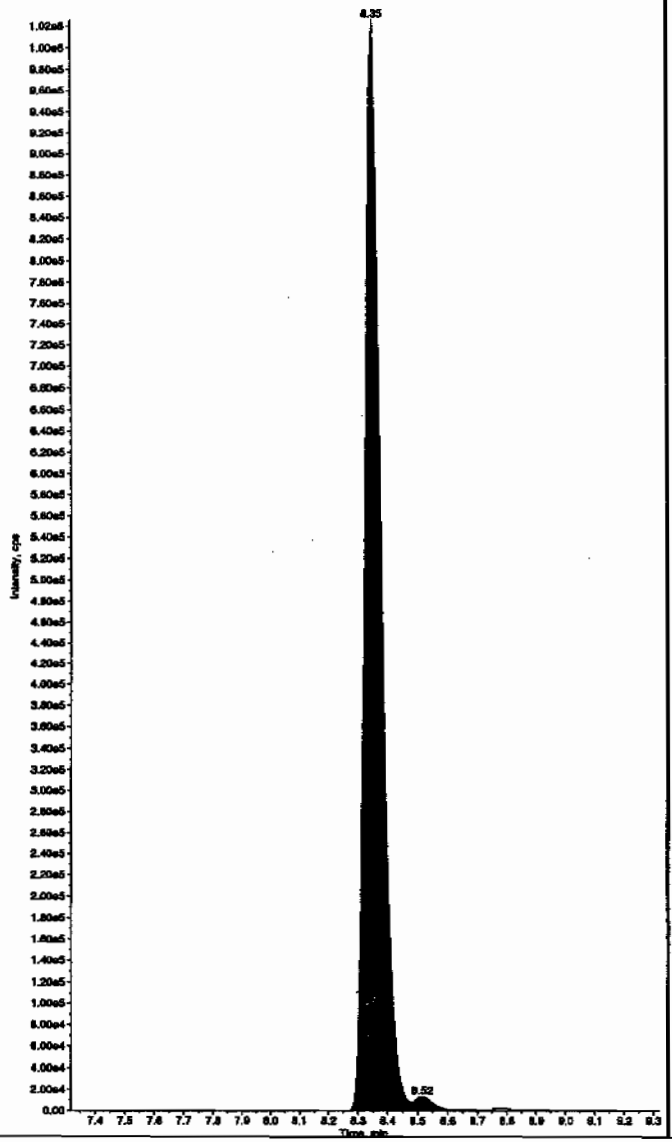
Sample Name: "244125004" Sample ID: "940080[2]LER" File: "EXS01200058.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 286. ng/mL
Acq. Date: 1/21/2010
Acq. Time: 1:24:58 AM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.32 min
Use Relative RT: No

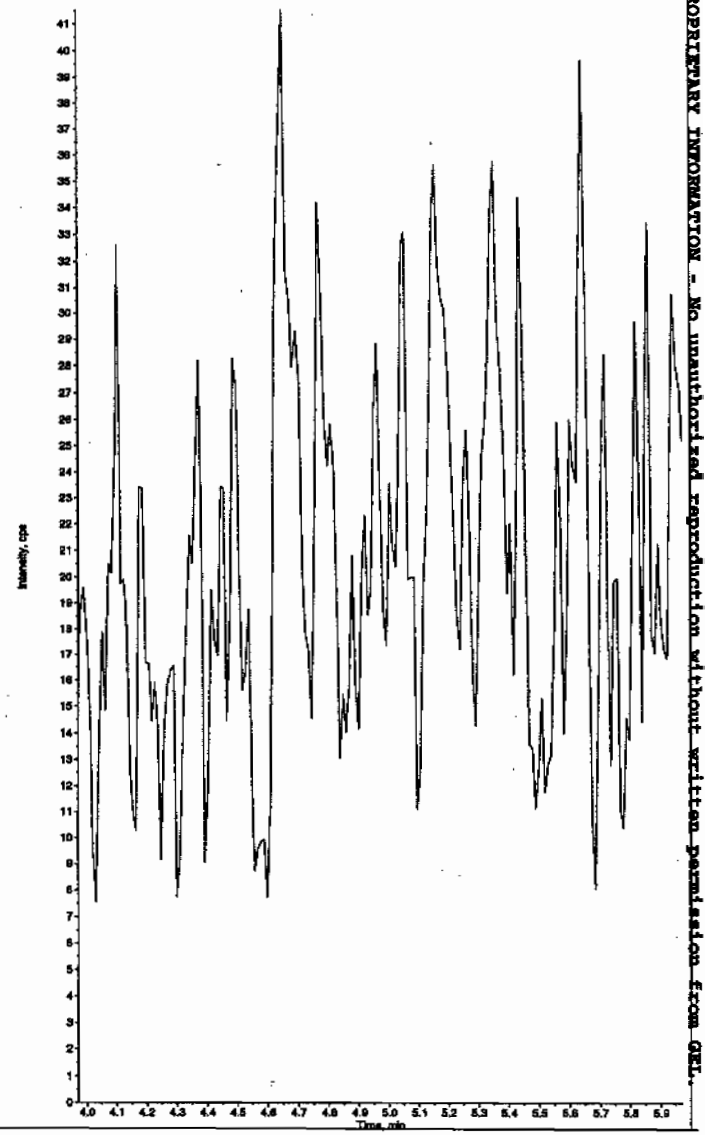
Int. Type: Valley
Retention Time: 8.35 min
Area: 4.00e+006 counts
Height: 1025634.033 cps
Start Time: 8.20 min
End Time: 8.70 min



Sample Name: "244125004" Sample ID: "940080[2]LER" File: "EXS01200058.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/21/2010
Acq. Time: 1:24:58 AM

Modified: No



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

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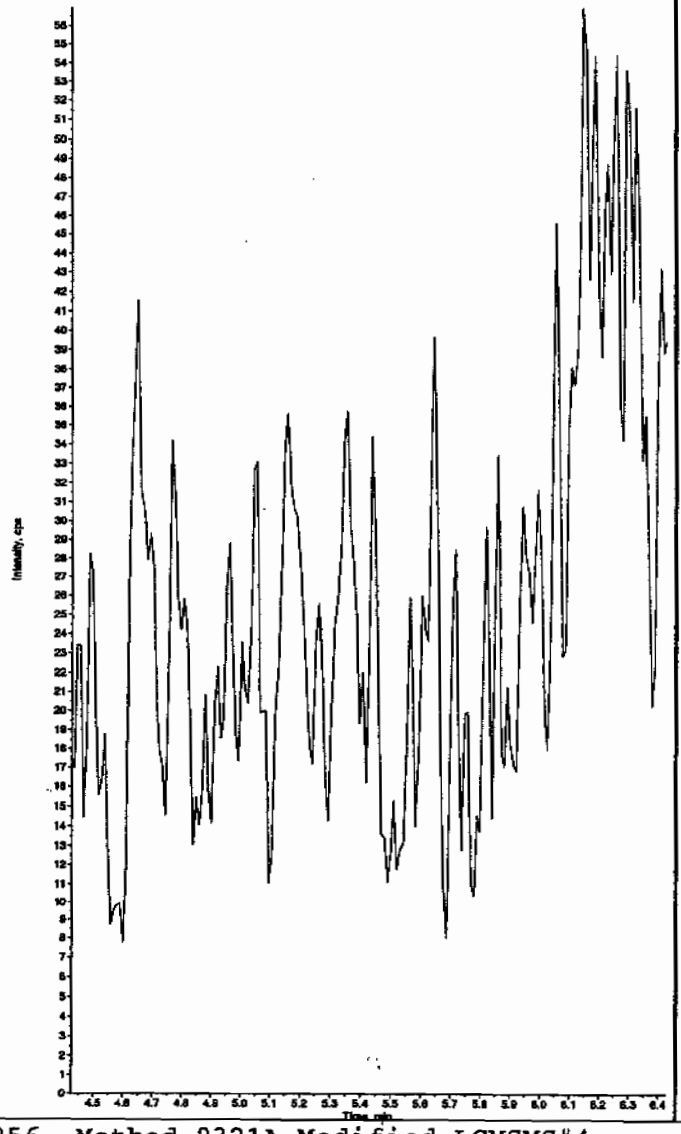
Sample Name: "244125004" Sample ID: "940080[2]LER" File: "EXS01200058.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX63212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/21/2010
Acq. Time: 1:24:58 AM

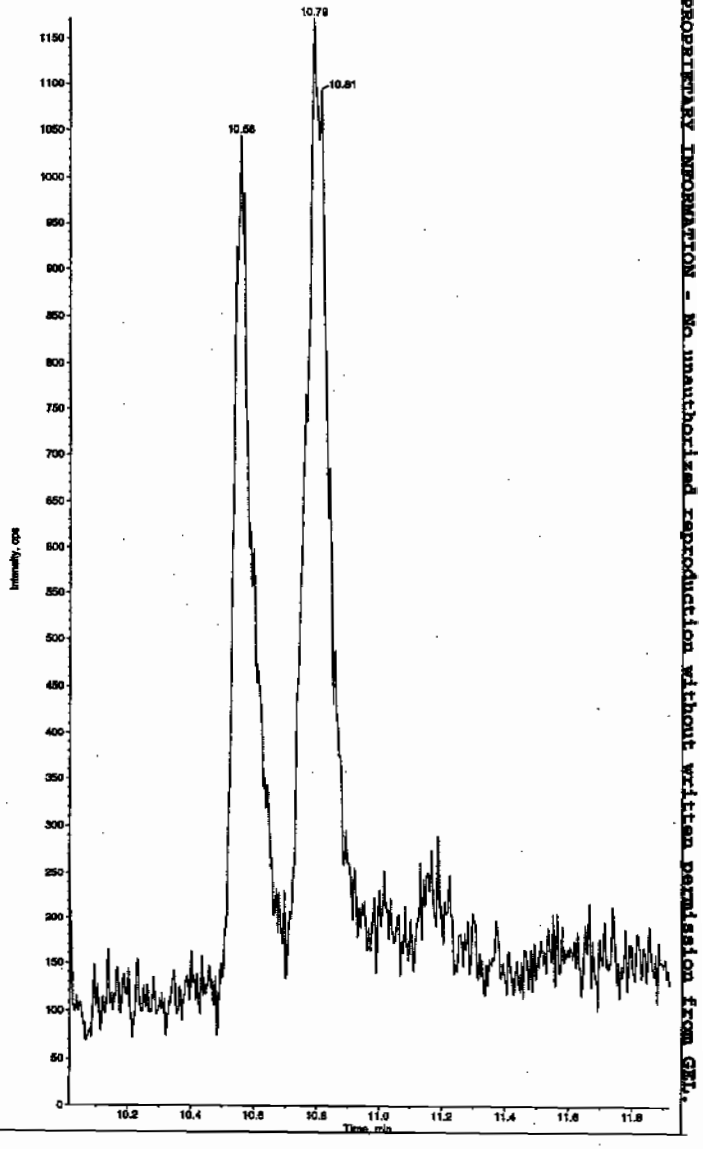
Modified: No



Sample Name: "244125004" Sample ID: "940080[2]LER" File: "EXS01200058.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "368.1/91.0 amu"
Comment: "LCX63212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/21/2010
Acq. Time: 1:24:58 AM

Modified: No



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

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STANDARDS DATA

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SW846 8321A Modified-Explosives
Calibration Standard Concentration Levels

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

All values are ug/L without the prep factor

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

Explosives Initial Calibration

Form 6

Lab Name: GEL Laboratories LLC

GEL Job No: 10-1130

Lab Code: GEL

Run Date: 18-JAN-10,20-JAN-10

LCMSMS Instrument ID: LCMSMS

Method: 8321A Modified

HPLC Column: Phenomenex Ultracarb 5 ODS(20)

Calibration Type: Average RF

Calibration Level:	1	2	3	4	5	6	Ave RF	RSD	Q
Data File:	EXP0118003a	EXP0118004a	EXP0118005a	EXP0118006a	EXP0118007a	EXP0118008a			
Parmname									
1,3,5-Trinitrobenzene	3.484	3.337	3.183	3.346	3.389	3.251	3.332	3.151	
1,3-Dinitrobenzene-d4	8.417	7.127	6.57	7.116	5.921	5.569	6.787	14.975	
2,4,6-Trinitrotoluene	.377	.396	.322	.334	.345	.339	0.352	7.994	
2,4-Dinitrotoluene	.243	.259	.246	.253	.265	.251	0.253	3.203	
2,6-Dinitrotoluene	1.153	1.028	1.057	1.111	1.097	1.108	1.092	4.045	
2,6-Dinitrotoluene-d3	39.096	38.049	37.926	39.55	34.278	31.235	36.689	8.867	
2-Amino-4,6-dinitrotoluene	.384	.362	.364	.408	.425	.393	0.389	6.304	
3,4-Dinitrotoluene	1.094	.866	.869	.913	.9	.951	0.932	9.132	
4-Amino-2,6-dinitrotoluene	.207	.279	.263	.272	.282	.281	0.264	10.877	
HMX	2.748	3.079	2.841	3.009	4.254	3.437	3.228	17.23	
Nitrobenzene	.948	.786	.819	.79	.837	.843	0.837	7.056	
PETN	1.934	1.886	1.782	1.556	1.494	1.373	1.671	13.671	
RDX	1.703	2.055	2.131	2.096	3.008	2.349	2.224	19.659	
Tetryl	1.014	1.261	1.006	.872	.832	.875	0.977	16.224	
m-Dinitrobenzene	1.102	1.271	1.177	1.173	1.202	1.167	1.182	4.639	
m-Nitrotoluene	.074	.088	.086	.096	.085	.083	0.085	8.24	
o-Nitrotoluene	.142	.174	.141	.15	.148	.145	0.150	8.071	
p-Nitrotoluene	.072	.076	.065	.075	.072	.069	0.072	5.54	

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

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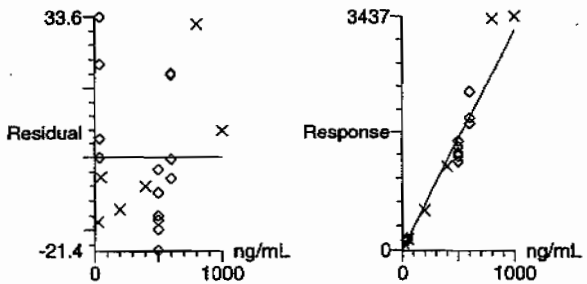
Quantify Calibration Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA.qld, Time: Tue Jan 19 10:59:58 2010

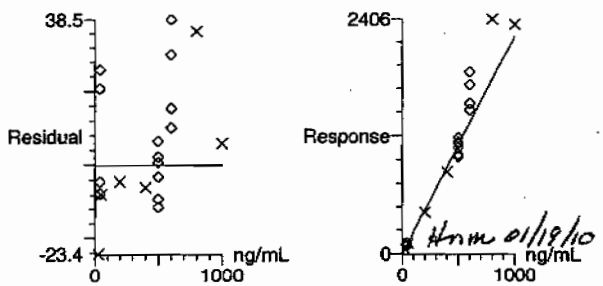
Method: C:\MASSLYNX\New_Exp.PRO\MethDB\011810expa.mdb, Time: Tue Jan 19 09:10:36 2010
Calibration: Untitled, Time: Tue Jan 19 10:56:45 2010

Compound name: HMX
Response Factor: 3.22807
RRF SD: 0.556189, % Relative SD: 17.2298
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF



MM 1/19/10

Compound name: RDX
Response Factor: 2.22353
RRF SD: 0.437117, % Relative SD: 19.6587
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF



Hnm 01/19/10

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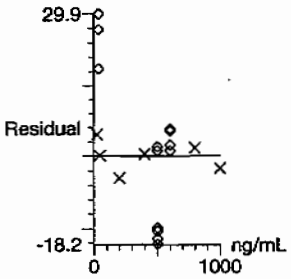
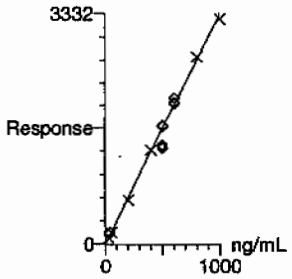
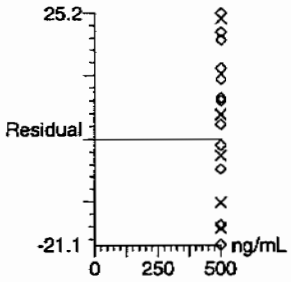
Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA.qld, Time: Tue Jan 19 10:59:58 2010

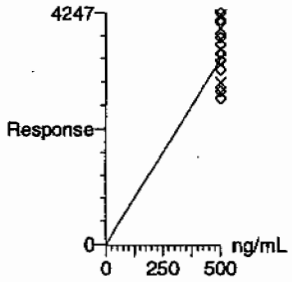
Compound name: 135-Trinitrobenzene
Response Factor: 3.33183
RRF SD: 0.104974, % Relative SD: 3.15064
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF





Compound name: 13-Dinitrobenzene-d4
Response Factor: 6.78663
RRF SD: 1.01627, % Relative SD: 14.9747
Response type: External Std, Area
Curve type: RF





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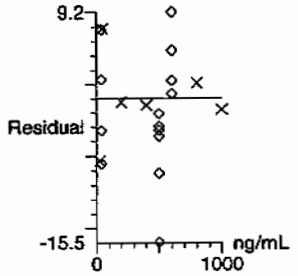
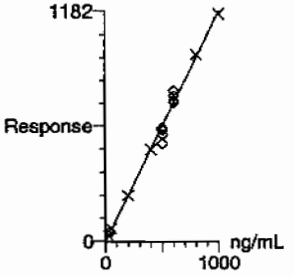
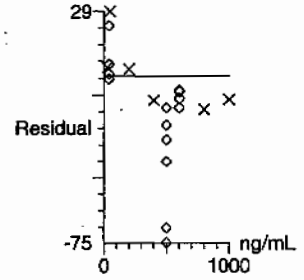
Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA.qld, Time: Tue Jan 19 10:59:58 2010

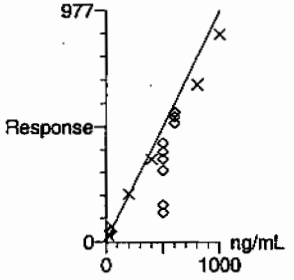
Compound name: 13-Dinitrobenzene
Response Factor: 1.18172
RRF SD: 0.0548147, % Relative SD: 4.63857
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF





Compound name: Tetryl
Response Factor: 0.976612
RRF SD: 0.158443, % Relative SD: 16.2237
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF





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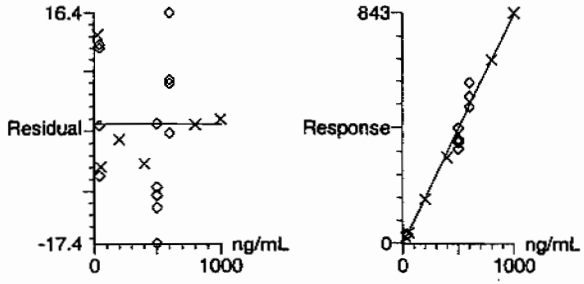
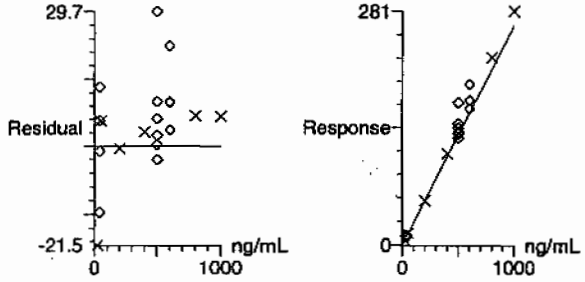
Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA.qld, Time: Tue Jan 19 10:59:58 2010

Compound name: Nitrobenzene
Response Factor: 0.837186
RRF SD: 0.0590728, % Relative SD: 7.05612
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF



Compound name: 4-Amino-26-dinitrotoluene
Response Factor: 0.263992
RRF SD: 0.0287134, % Relative SD: 10.8766
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF



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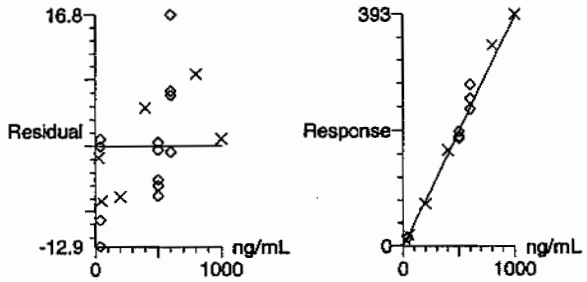
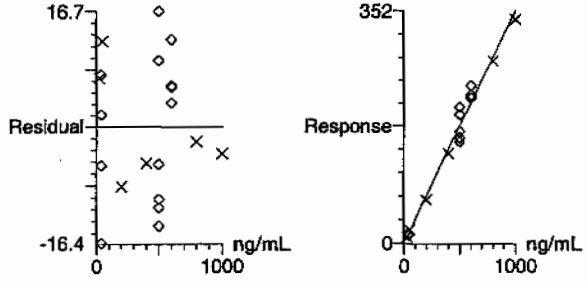
Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA.qld, Time: Tue Jan 19 10:59:58 2010

Compound name: 2-Amino-46-dinitrotoluene
Response Factor: 0.389564
RRF SD: 0.0245563, % Relative SD: 6.30354
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF



Compound name: 246-Trinitrotoluene
Response Factor: 0.352125
RRF SD: 0.0281482, % Relative SD: 7.99381
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF



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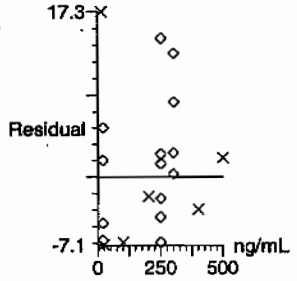
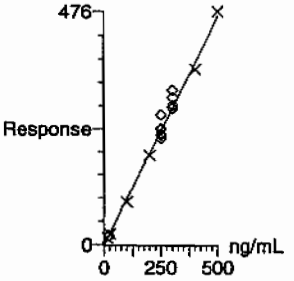
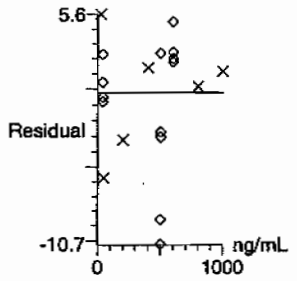
Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA.qld, Time: Tue Jan 19 10:59:58 2010

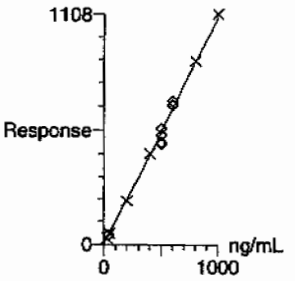
Compound name: 34-dinitrotoluene
Response Factor: 0.932242
RRF SD: 0.0851351, % Relative SD: 9.1323
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF





Compound name: 26-dinitrotoluene
Response Factor: 1.09228
RRF SD: 0.0441813, % Relative SD: 4.04489
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF





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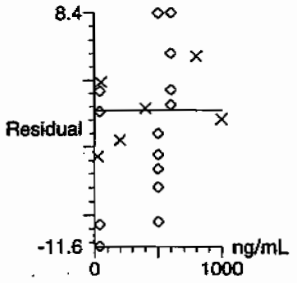
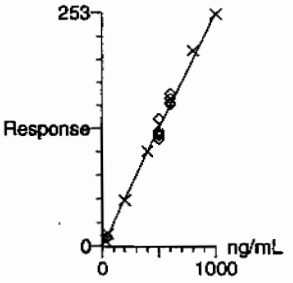
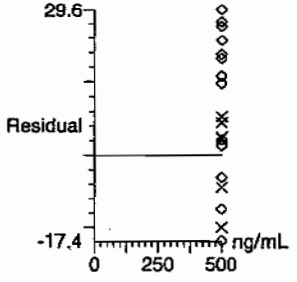
Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA.qld, Time: Tue Jan 19 10:59:58 2010

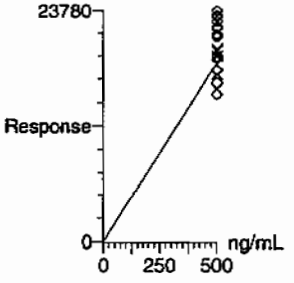
Compound name: 24-dinitrotoluene
Response Factor: 0.252831
RRF SD: 0.00809816, % Relative SD: 3.20299
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF





Compound name: 26-dinitrotoluene-d3
Response Factor: 36.6891
RRF SD: 3.25316, % Relative SD: 8.86682
Response type: External Std, Area
Curve type: RF





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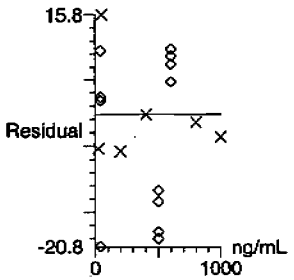
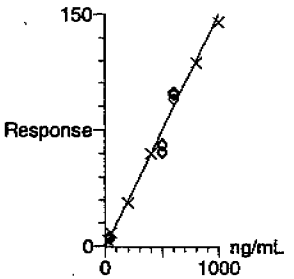
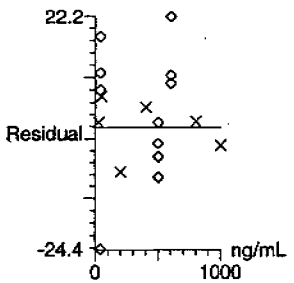
Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA.qld, Time: Tue Jan 19 10:59:58 2010

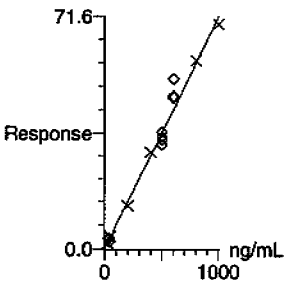
Compound name: 2-Nitrotoluene
Response Factor: 0.150077
RRF SD: 0.0121131, % Relative SD: 8.07131
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF





Compound name: 4-Nitrotoluene
Response Factor: 0.0715991
RRF SD: 0.00396681, % Relative SD: 5.5403
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF





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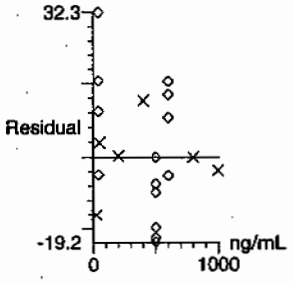
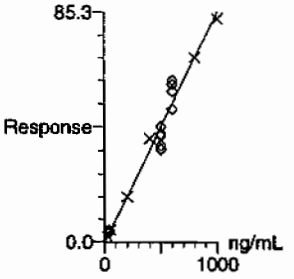
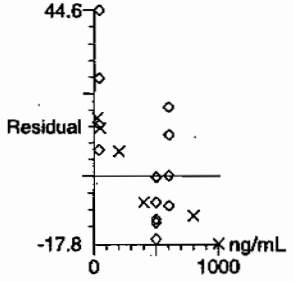
Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA.qld, Time: Tue Jan 19 10:59:58 2010

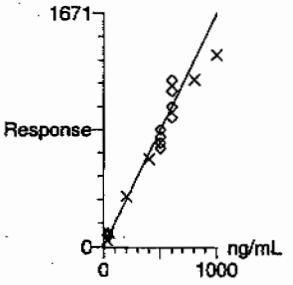
Compound name: 3-Nitrotoluene
Response Factor: 0.0852801
RRF SD: 0.00702733, % Relative SD: 8.24029
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF





Compound name: PETN
Response Factor: 1.67101
RRF SD: 0.228436, % Relative SD: 13.6705
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF





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Explosives Initial Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10–1130

Lab Code: GEL

GEL Sample ID: WXXICV

GEL Data File EXP0118010a

Analysis Date: 18–JAN–10 18:28

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
m–Nitrotoluene	600	682.223	114	
o–Nitrotoluene	600	662.222	110	
p–Nitrotoluene	600	732.953	122	*
1,3,5–Trinitrobenzene	600	606.572	101	
1,3–Dinitrobenzene–d4	500	470.52	94	
2,4,6–Trinitrotoluene	600	621.487	104	
2,4–Dinitrotoluene	600	602.873	100	
2,6–Dinitrotoluene	600	630.14	105	
2,6–Dinitrotoluene–d3	500	515.861	103	
2–Amino–4,6–dinitrotoluene	600	595.43	99	
3,4–Dinitrotoluene	300	300.86	100	
4–Amino–2,6–dinitrotoluene	600	621.304	104	
HMX	600	570.4	95	
Nitrobenzene	600	639.033	107	
PETN	600	552.42	92	
RDX	600	658.602	110	
Tetryl	600	515.579	86	
m–Dinitrobenzene	600	611.69	102	

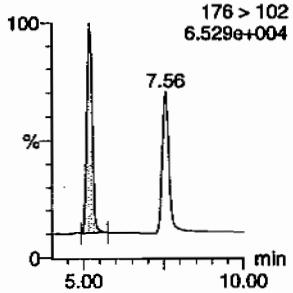
Recovery Limits:
3,4–Dinitrotoluene (Surrogate),TATB, tris(o–cresyl)phosphate, 3,5–Dinitroaniline, 2,6–Diamino–4–nitrotoluene , 2,4–Diamino–6–nitrotoluene 70–130%
OtherTarget Analytes 80–120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA.qld, Time: Tue Jan 19 10:59:58 2010

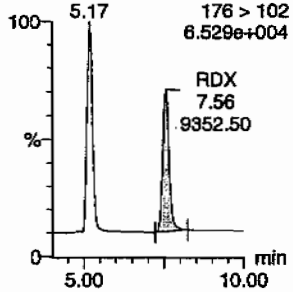
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118010a
Date: 18-Jan-2010
Time: 18:28:52
ID: WXX100118-07ICV
Vial: 1:1,B

MAP 1/19/10

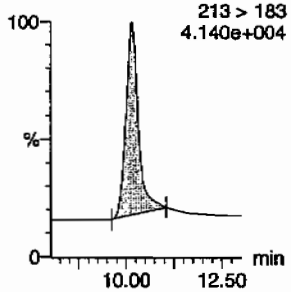
HMX
F2:MRM of 1 channel,AP-
176 > 102
6.529e+004



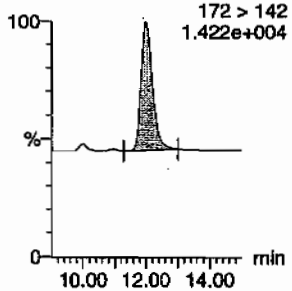
RDX
F2:MRM of 1 channel,AP-
176 > 102
6.529e+004



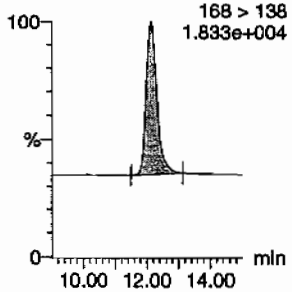
135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
4.140e+004



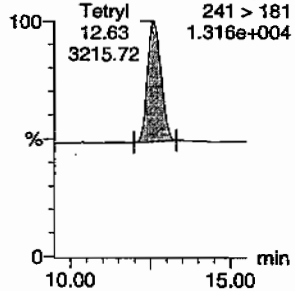
13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
1.422e+004



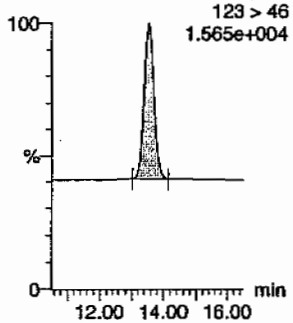
13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
1.833e+004



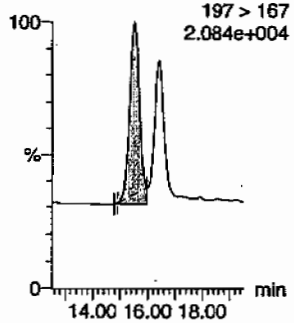
Tetryl
F6:MRM of 1 channel,AP-
241 > 181
1.316e+004



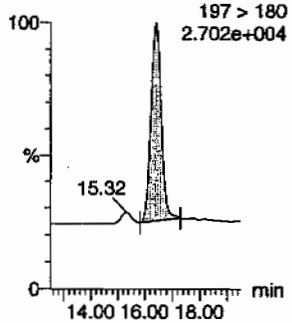
Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
1.565e+004



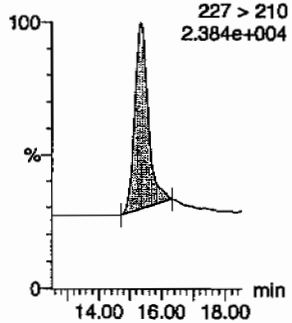
4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 167
2.084e+004



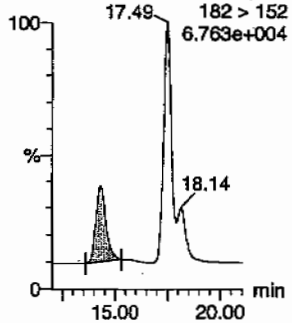
2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
2.702e+004



246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
2.384e+004

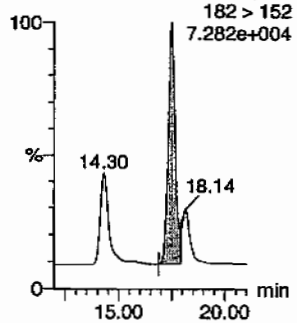


34-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
6.763e+004



HMM 01/19/10

26-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
7.282e+004



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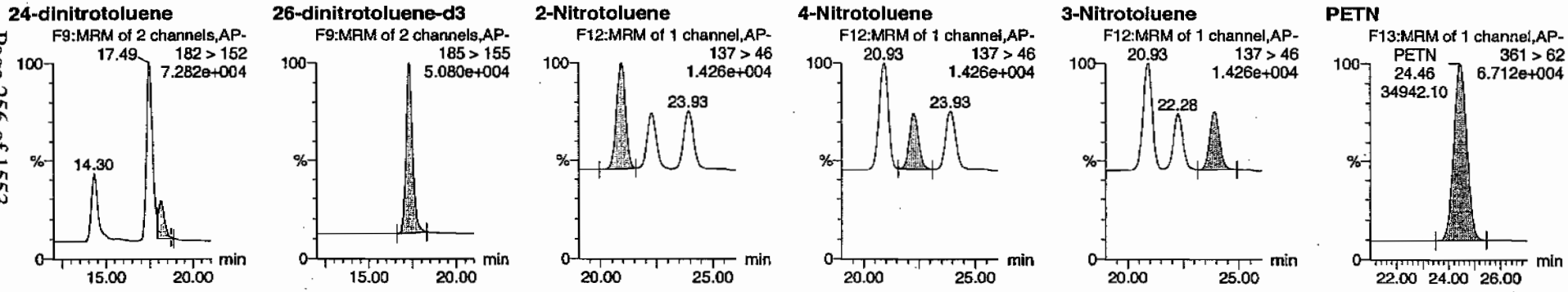
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA.qld, Time: Tue Jan 19 10:59:58 2010



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/ml	%Rec	%Dev	S/N
WXX100118-07ICV	HMX	176 > 102	5.17	11759.395	3193.243	11759.395	1841.293	db			570.4004	95.1	-4.9	1064.9
WXX100118-07ICV	RDX	176 > 102	7.56	9352.498	3193.243	9352.498	1464.420	bb			658.6019	109.8	9.8	713.6
WXX100118-07ICV	135-Trinitrobenzene	213 > 183	10.16	12907.048	3193.243	12907.048	2020.994	bb			606.5717	101.1	1.1	1644.6
WXX100118-07ICV	13-Dinitrobenzene-d4	172 > 142	12.00	3193.243		3193.243	3193.243	bb			470.5198	94.1	-5.9	176.3
WXX100118-07ICV	13-Dinitrobenzene	168 > 138	12.14	4616.433	3193.243	4616.433	722.844	bb			611.6900	101.9	1.9	629.5
WXX100118-07ICV	Tetryl	241 > 181	12.63	3215.724	3193.243	3215.724	503.520	bb			515.5786	85.9	-14.1	315.4
WXX100118-07ICV	Nitrobenzene	123 > 46	13.54	3416.705	3193.243	3416.705	534.990	bb			639.0335	106.5	6.5	527.3
WXX100118-07ICV	4-Amino-26-dinitrotoluene	197 > 167	15.53	6208.615	18926.488	6208.615	164.019	MM	19-Jan-10	10:47:48	621.3039	103.6	3.6	189.2
WXX100118-07ICV	2-Amino-46-dinitrotoluene	197 > 180	16.40	8780.297	18926.488	8780.297	231.958	bb			595.4297	99.2	-0.8	266.0
WXX100118-07ICV	246-Trinitrotoluene	227 > 210	15.35	8283.787	18926.488	8283.787	218.841	bb			621.4874	103.6	3.6	346.8
WXX100118-07ICV	34-dinitrotoluene	182 > 152	14.30	10616.799	18926.488	10616.799	280.475	bb			300.8602	100.3	0.3	580.9
WXX100118-07ICV	26-dinitrotoluene	182 > 152	17.49	26053.697	18926.488	26053.697	688.287	MM	19-Jan-10	10:53:08	630.1400	105.0	5.0	1044.8
WXX100118-07ICV	24-dinitrotoluene	182 > 152	18.14	5769.747	18926.488	5769.747	152.425	MM	19-Jan-10	10:57:03	602.8729	100.5	0.5	217.3
WXX100118-07ICV	26-dinitrotoluene-d3	185 > 155	17.31	18926.488		18926.488	18926.488	bb			515.8607	103.2	3.2	1349.0
WXX100118-07ICV	2-Nitrotoluene	137 > 46	20.93	3761.979	18926.488	3761.979	99.384	bb			662.2219	110.4	10.4	542.3
WXX100118-07ICV	4-Nitrotoluene	137 > 46	22.28	1986.477	18926.488	1986.477	52.479	bb			732.9527	122.2	22.2	287.7
WXX100118-07ICV	3-Nitrotoluene	137 > 46	23.93	2202.288	18926.488	2202.288	58.180	bb			682.2228	113.7	13.7	300.5
WXX100118-07ICV	PETN	361 > 62	24.46	34942.102	18926.488	34942.102	923.101	bb			552.4198	92.1	-7.9	3601.3

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

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GRAND MEAN AVERAGE

Vendor: Restek
Date of Analysis: 01/18/10
Time of Injection: 1828
Standard Number: WXX100118-07ICV
Data File: EXP0118010a

HMX		95.1
RDX		109.8
135-TNB		101.1
13-DNB		101.9
Tetryl		85.9
Nitrobenzene		106.5
4A-26-DNT		103.6
2A-46-DNT		99.2
246-TNT		103.6
34-DNT(surr)		100.3
26-DNT		105.0
24-DNT		100.5
2-NT		110.4
4-NT		122.2
3-NT		113.7
PETN		92.1
	Total	1650.9
	Average	103.2

MAP 1/19/10

Hmk 01/19/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

Explosives Initial Calibration

Form 6

Lab Name: GEL Laboratories LLC

GEL Job No: 10–1130

Lab Code: GEL

Run Date: 18–JAN–10,20–JAN–10

LCMSMS Instrument ID: LCMSMS4

Method: 8321A Modified

HPLC Column: YMC J–Sphere ODS–H8O

Calibration Type: 2nd Order

Calibration Level:	19	20	21	22	23	24	25	X	X^2	Intercept	COD	Q
Data File:	EXS01200003.wifl	EXS01200004.wifl	EXS01200005.wifl	EXS01200006.wifl	EXS01200007.wifl	EXS01200008.wifl	EXS01200009.wifl					
Parmname:												
2,4–Diamino–6–nitrotoluene	143000	312000	782000	1520000	2180000	2880000	5850000	33900	2850	.025	.9999	
2,6–Diamino–4–nitrotoluene	231000	439000	1170000	2260000	3470000	4470000	8810000	–2160	4620	–.107	.9999	
3,4–Dinitrotoluene	343000	661000	1660000	3400000	5040000	6400000	12000000	–56000	15100	–3.05	.998	
3,5–Dinitroaniline	541000	1060000	2580000	4890000	7490000	9240000	15800000	–20000	10800	–1.47	.9998	
TATB	70100	137000	341000	668000	1070000	1430000	2710000	–17300	1480	–.056	.9998	
tris(o–cresyl) phosphate	1300000	2540000	6130000	8810000	16000000	20200000	32000000	59200	23100	–3.51	.9968	

Quadradic Fit: y = Ax^2 + Bx + C
where X^2 column above is coefficient A
X column above is coefficient B
intercept is C

COD is Coefficient of Determination

Q column used to flag COD outside of Limit (<0.990)
* Values outside of QC Limit

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Peak Name: TATB
No Internal Standard
Q1/Q3 Masses: 257.20/204.90 amu

Fit	Quadratic	Weighting	None	Iterate No
a0	-1.73e+004			
a1	1.48e+003			
a2	-0.056			

Correlation coefficient 0.9998
Use Area

Peak Name: 35-Dinitroaniline
No Internal Standard
Q1/Q3 Masses: 182.00/46.00 amu

Fit	Quadratic	Weighting	None	Iterate No
a0	-2e+004			
a1	1.08e+004			
a2	-1.47			

Correlation coefficient 0.9998
Use Area

Peak Name: 34-Dinitrotoluene
No Internal Standard
Q1/Q3 Masses: 182.08/151.90 amu

Lan
1/21/10

Fit	Quadratic	Weighting	None	Iterate No
a0	-5.6e+004			
a1	1.51e+004			
a2	-3.05			

Correlation coefficient 0.9980
Use Area

Peak Name: 26-Diamino-4-nitrotoluene
No Internal Standard
Q1/Q3 Masses: 165.97/46.00 amu

Fit	Quadratic	Weighting	None	Iterate No
a0	-2.16e+003			
a1	4.62e+003			
a2	-0.107			

Correlation coefficient 0.9999
Use Area

Peak Name: 24-Diamino-6-nitrotoluene
No Internal Standard
Q1/Q3 Masses: 165.97/46.00 amu

Hnm 01/21/10

Fit	Quadratic	Weighting	None	Iterate No
a0	3.39e+004			
a1	2.85e+003			
a2	0.0247			

Correlation coefficient 0.9999
Use Area

Peak Name: tris(o-cresyl) phosphate
No Internal Standard
Q1/Q3 Masses: 369.15/91.00 amu

Fit	Quadratic	Weighting	None	Iterate No
a0	5.92e+004			
a1	2.31e+004			
a2	-3.51			

Correlation coefficient 0.9968
Use Area

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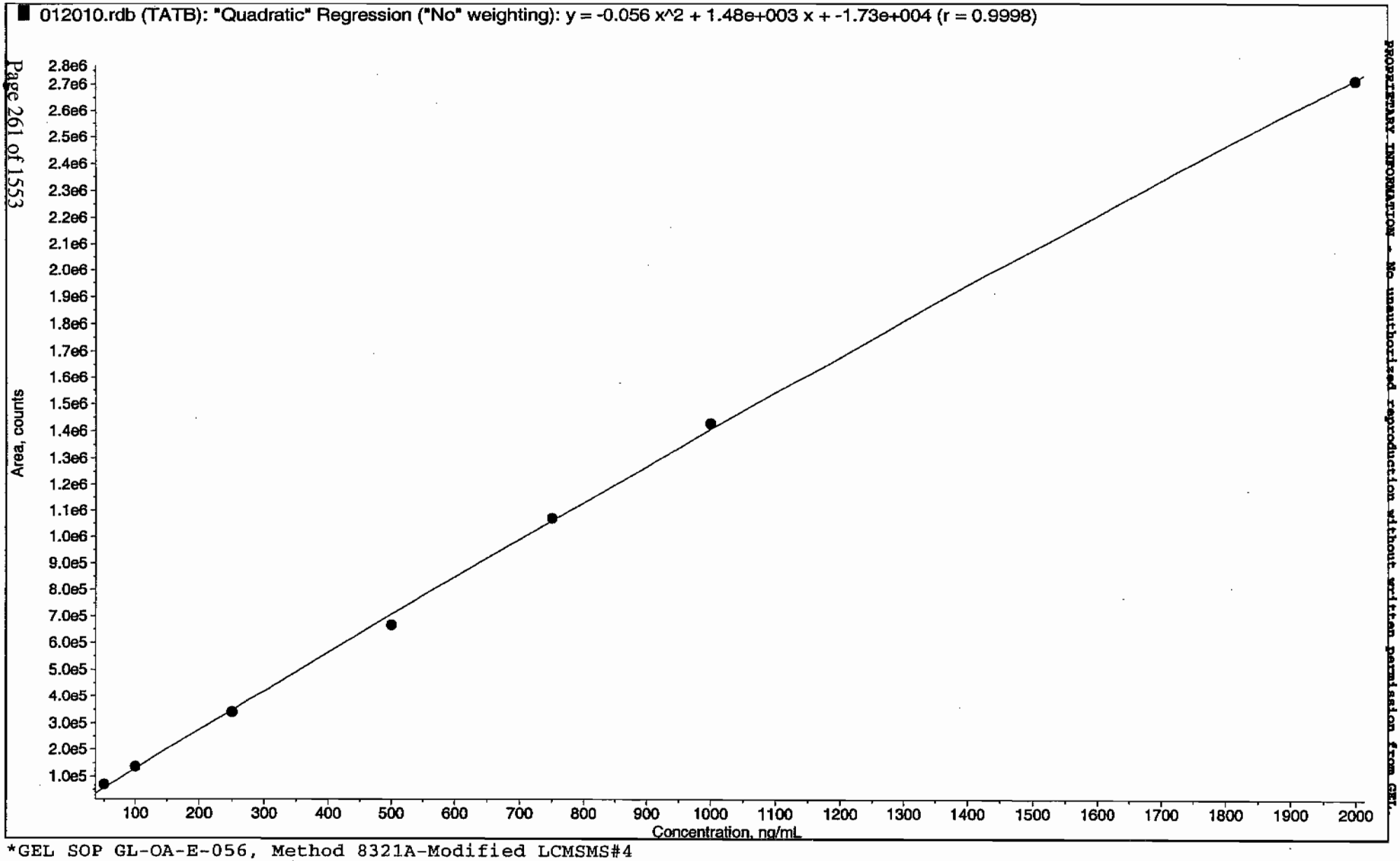

*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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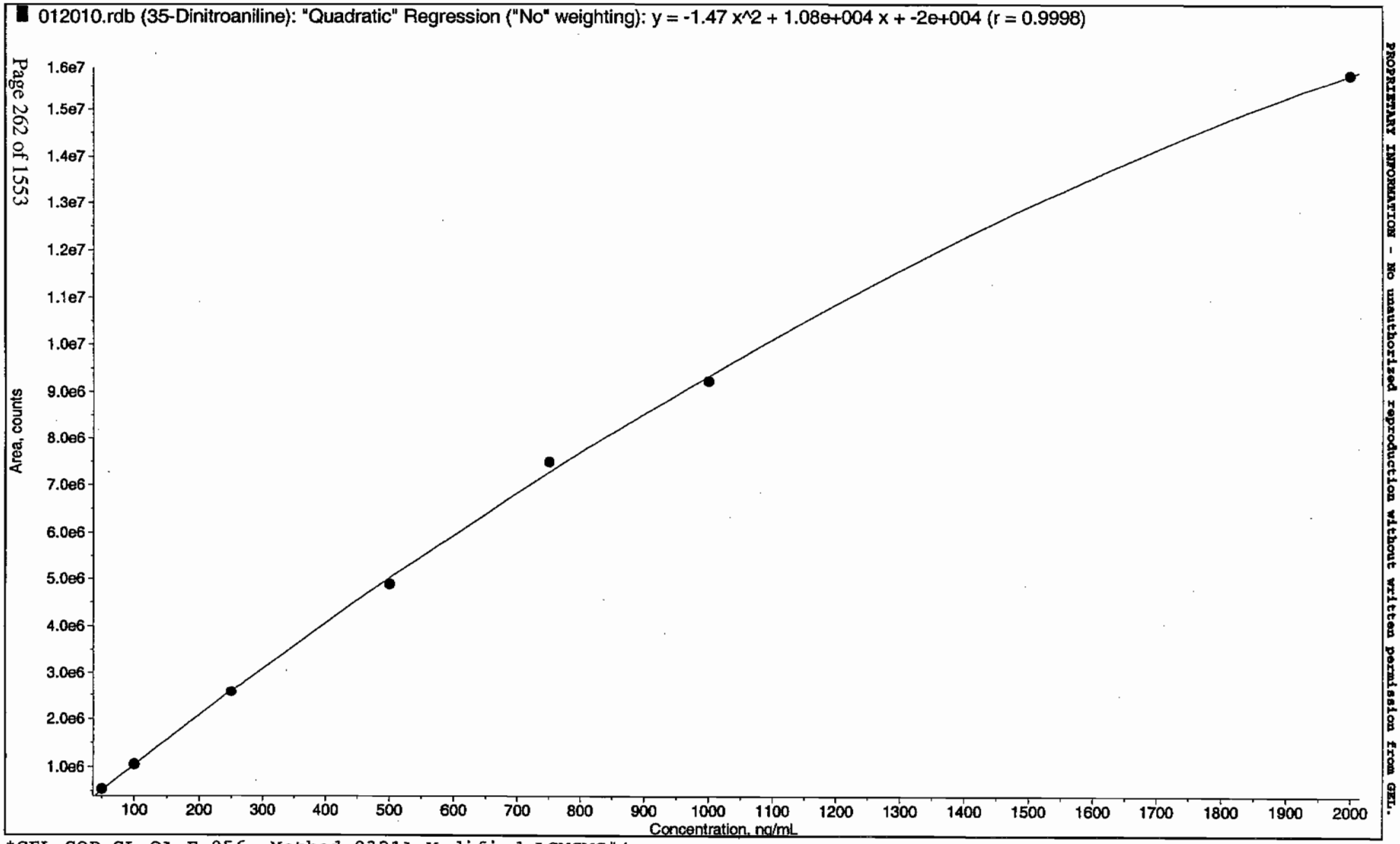

*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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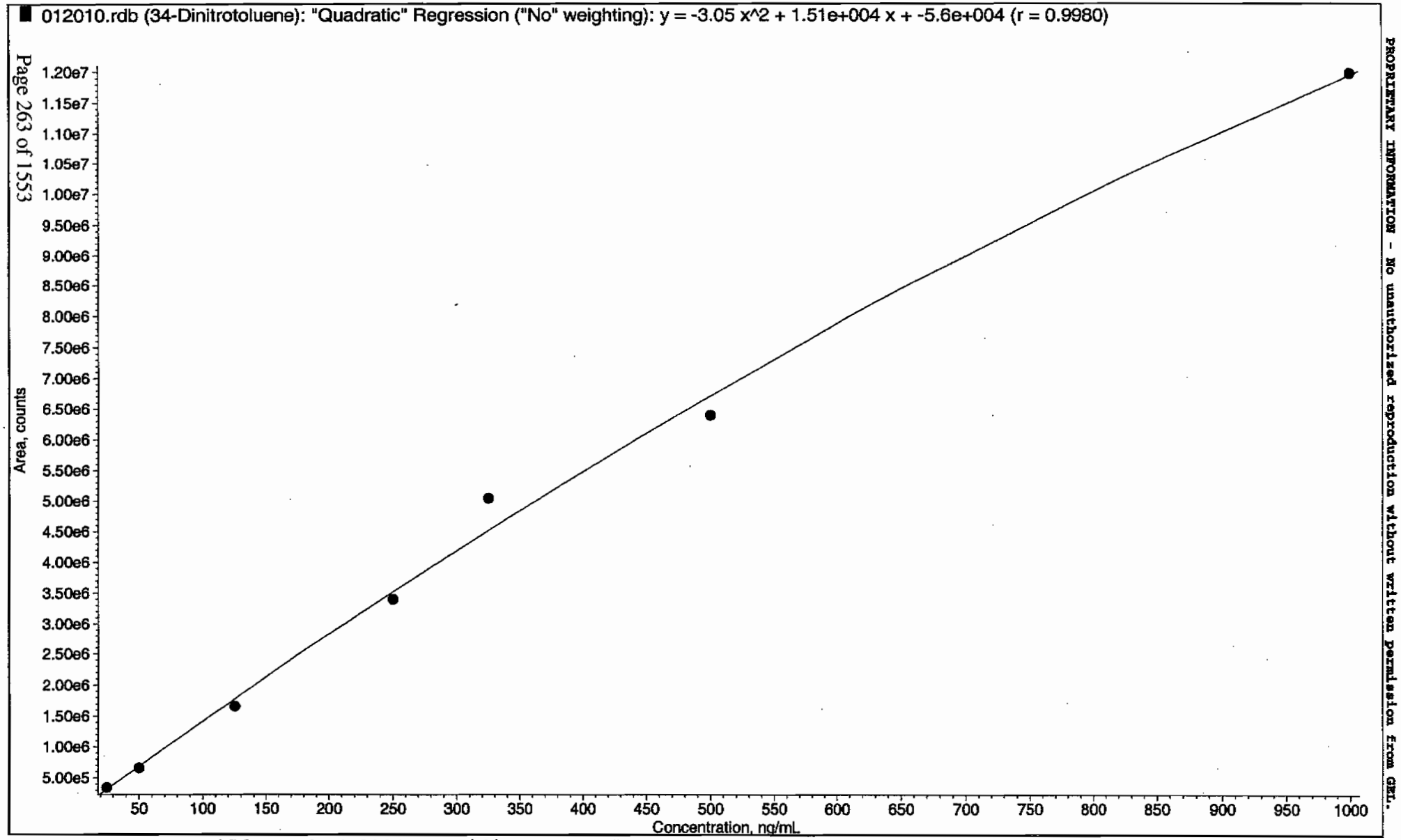

*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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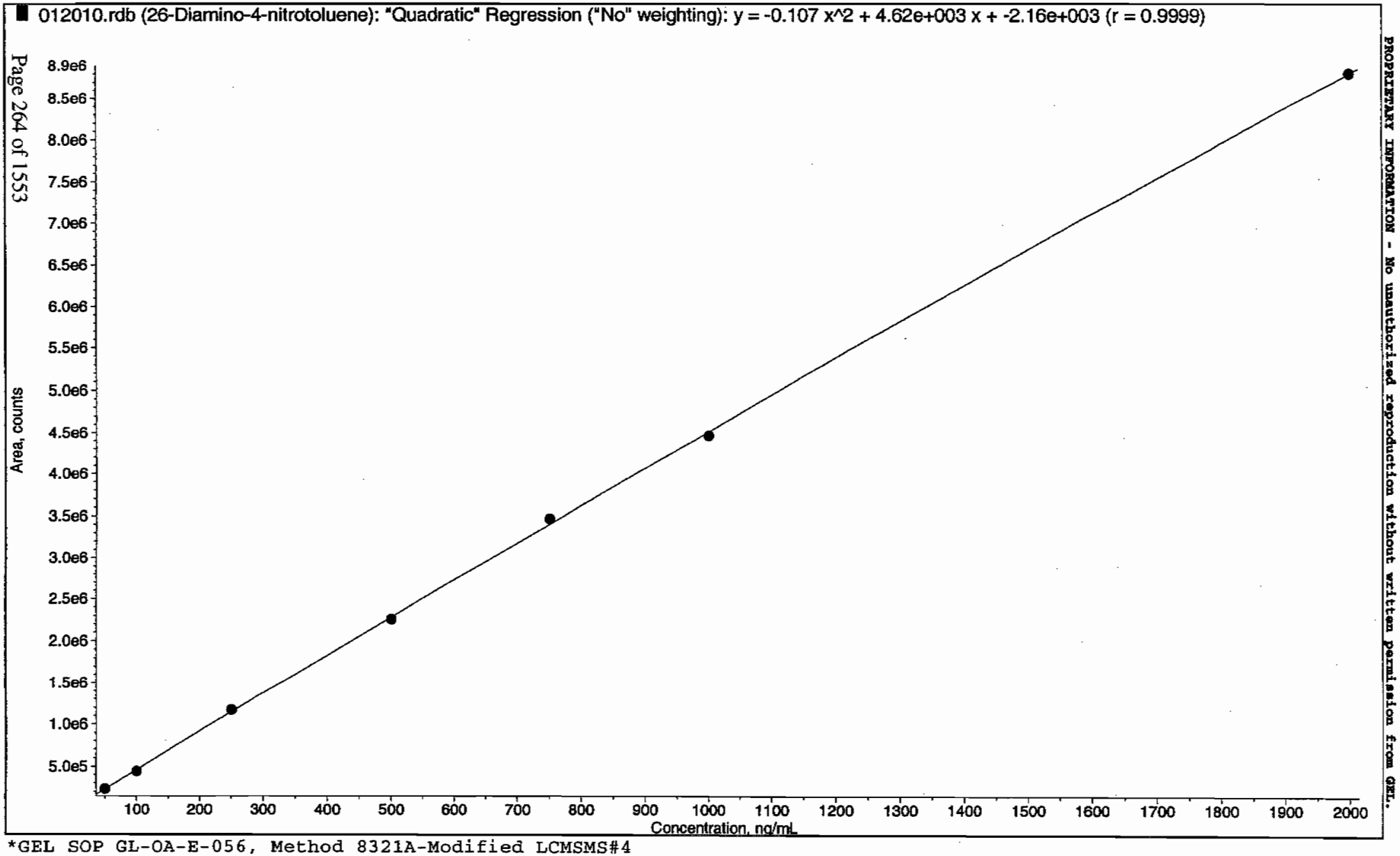

*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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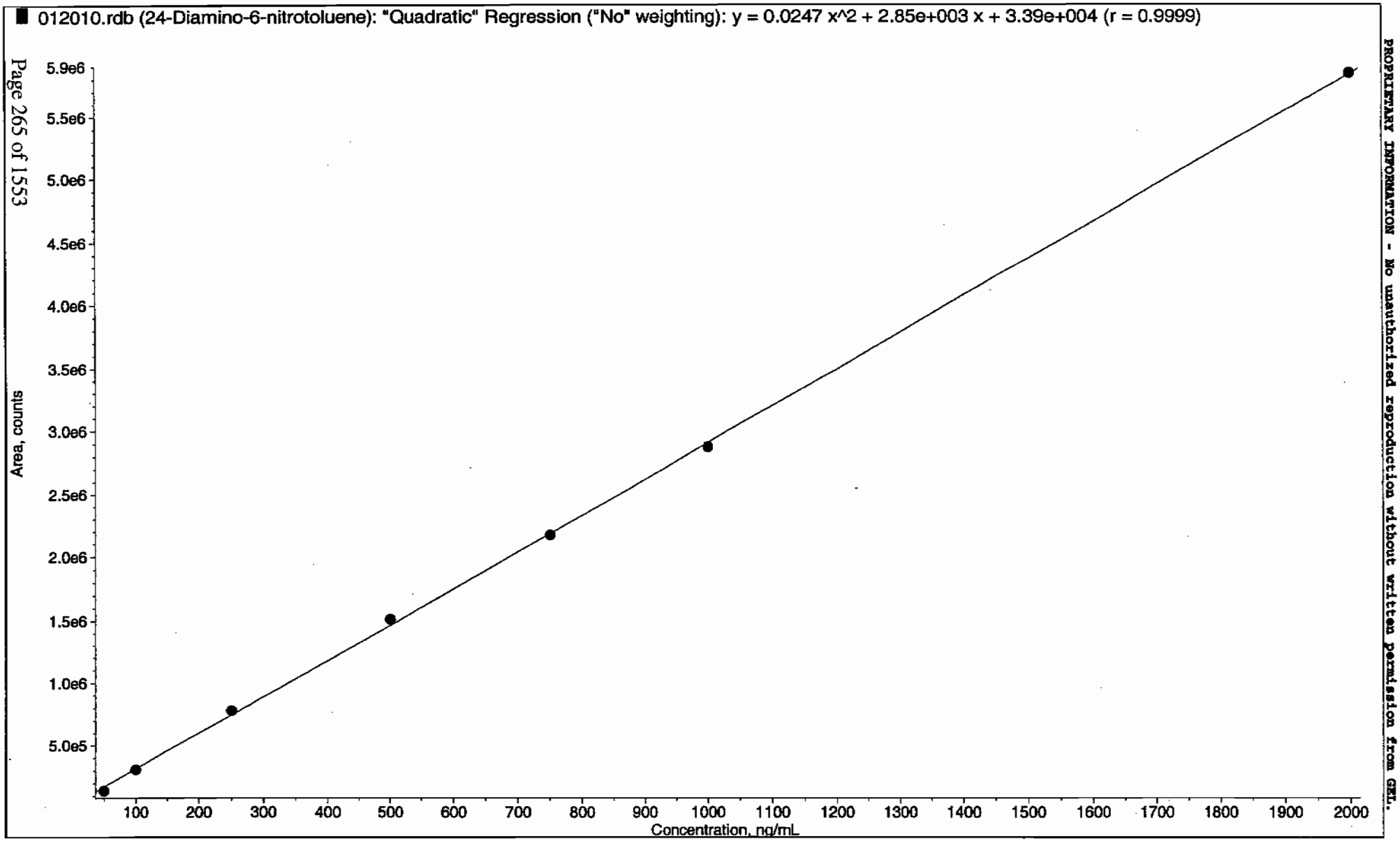

*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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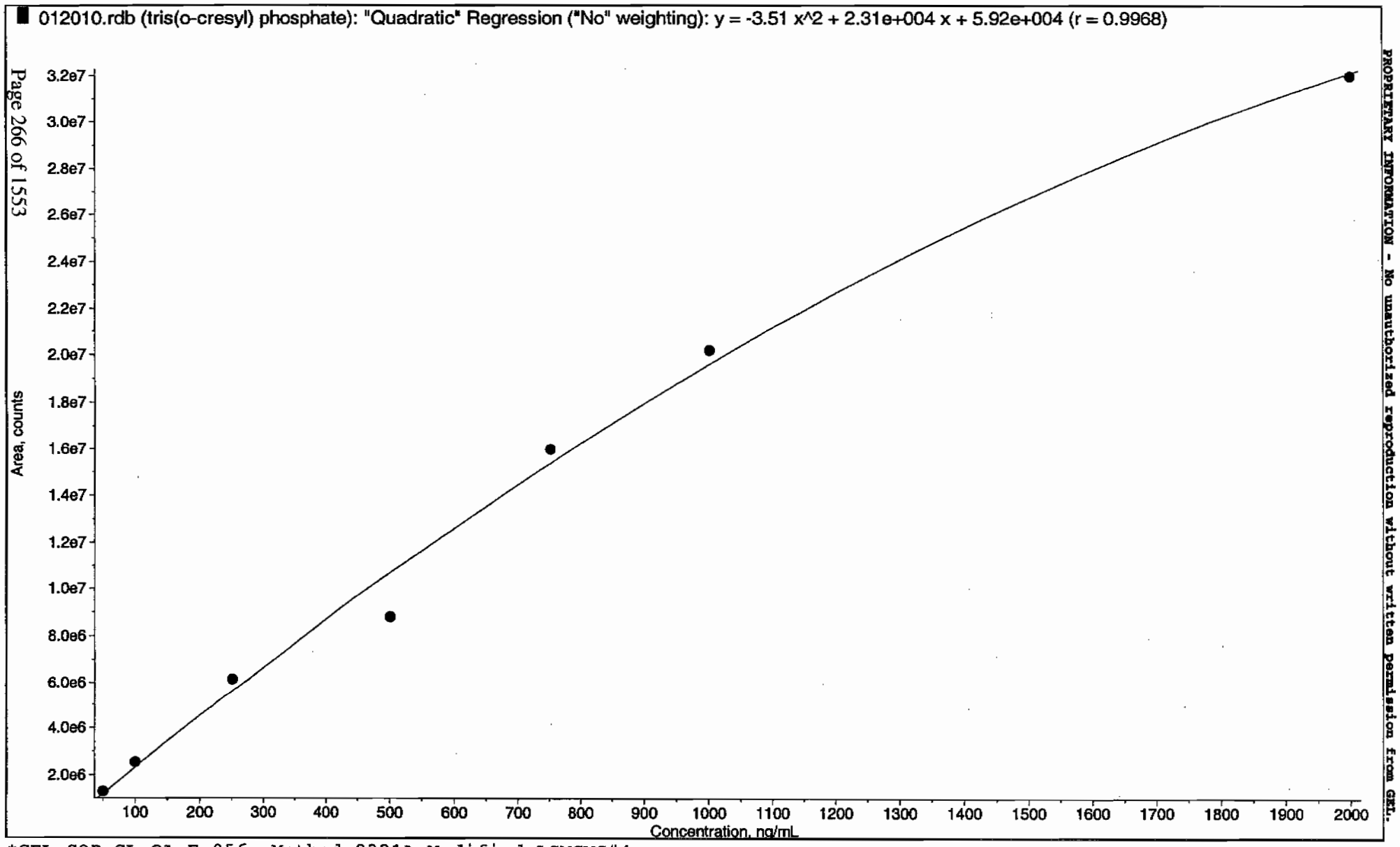

*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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7

Explosives Initial Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10–1130

Lab Code: GEI

GEL Sample ID: WXXICV

GEL Data File EXS01200011.wiff

Analysis Date: 20–JAN–10 13:06

LCMSMS ID: 1358

Column ID: JSphere ODS–H80

Compound	True	Found	Recovery	Q
2,4–Diamino–6–nitrotoluene	500	488	98	
2,6–Diamino–4–nitrotoluene	500	471	94	
3,4–Dinitrotoluene	250	228	91	
3,5–Dinitroaniline	500	499	100	
TATB	500	484	97	
tris(o–cresyl) phosphate	500	521	104	

Recovery Limits:
3,4–Dinitrotoluene (Surrogate),TATB, tris(o–cresyl)phosphate, 3,5–Dinitroaniline, 2,6–Diamino–4–nitrotoluene , 2,4–Diamino–6–nitrotoluene 70–130%
OtherTarget Analytes 80–120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

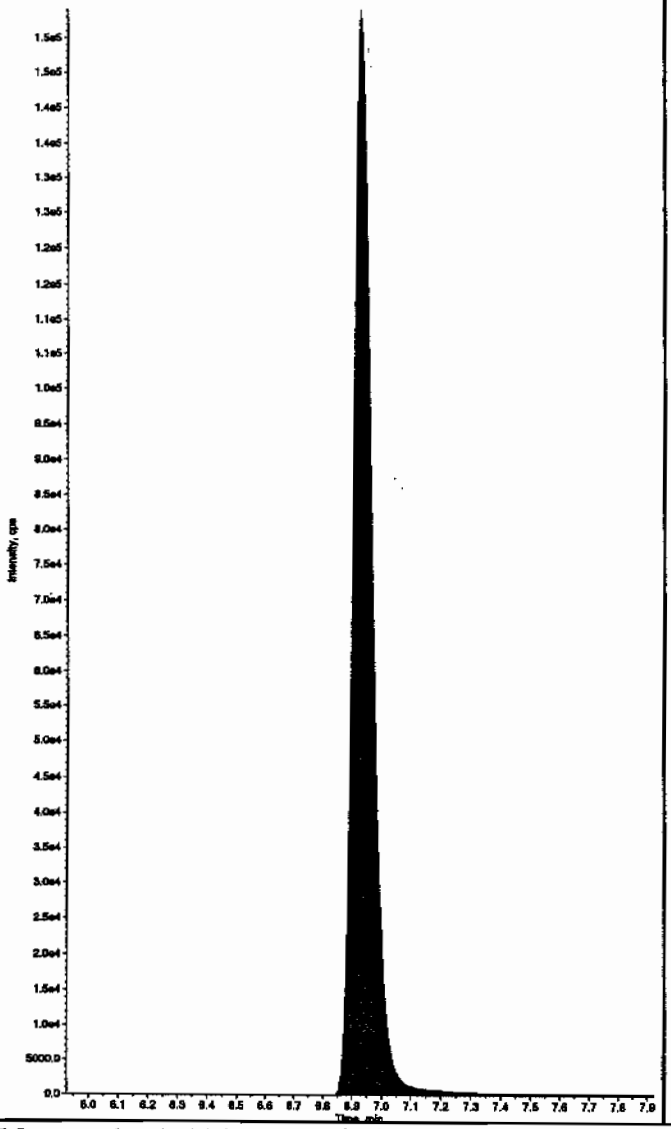
Before Dan 1/21/10

Sample Name: "WXX100120-26ICV" Sample ID: "|1|LER" File: "EXS01200011.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 484. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 1:06:46 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 6.92 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 6.92 min
Area: 6.85e+005 counts
Height: 154043.076 cps
Start Time: 6.80 min
End Time: 7.43 min

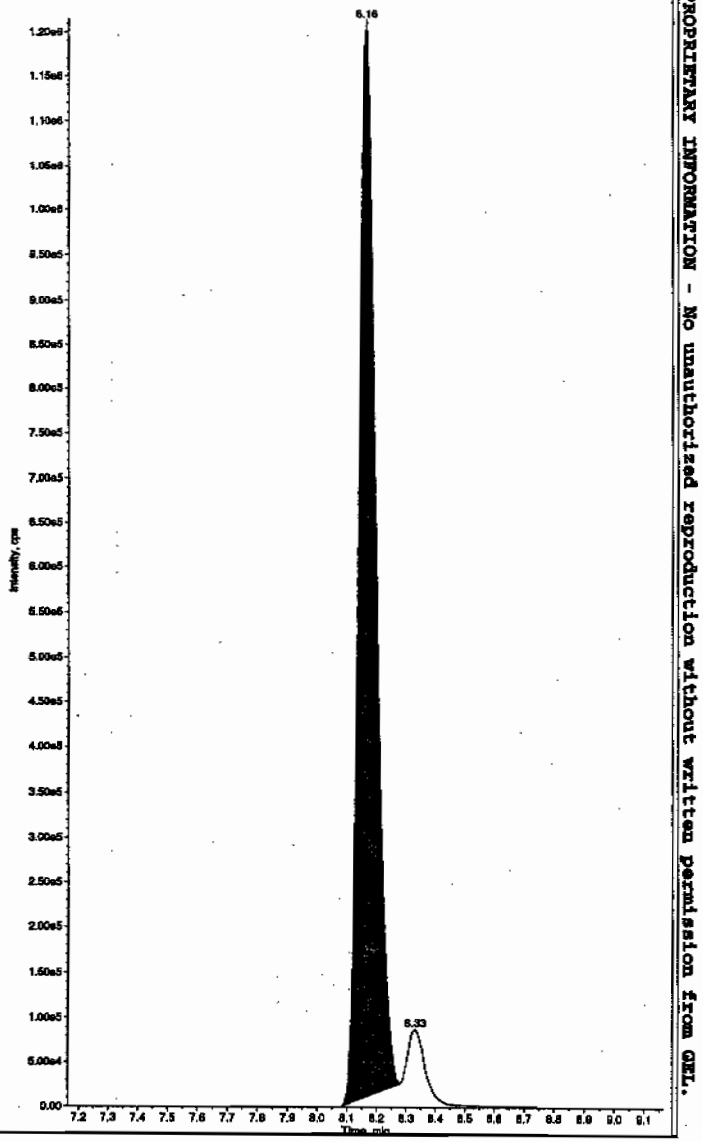


Sample Name: "WXX100120-26ICV" Sample ID: "|1|LER" File: "EXS01200011.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/45.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 486. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 1:05:46 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.16 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.16 min
Area: 4.89e+006 counts
Height: 1204174.805 cps
Start Time: 8.08 min
End Time: 8.28 min



HMM 01/21/10

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

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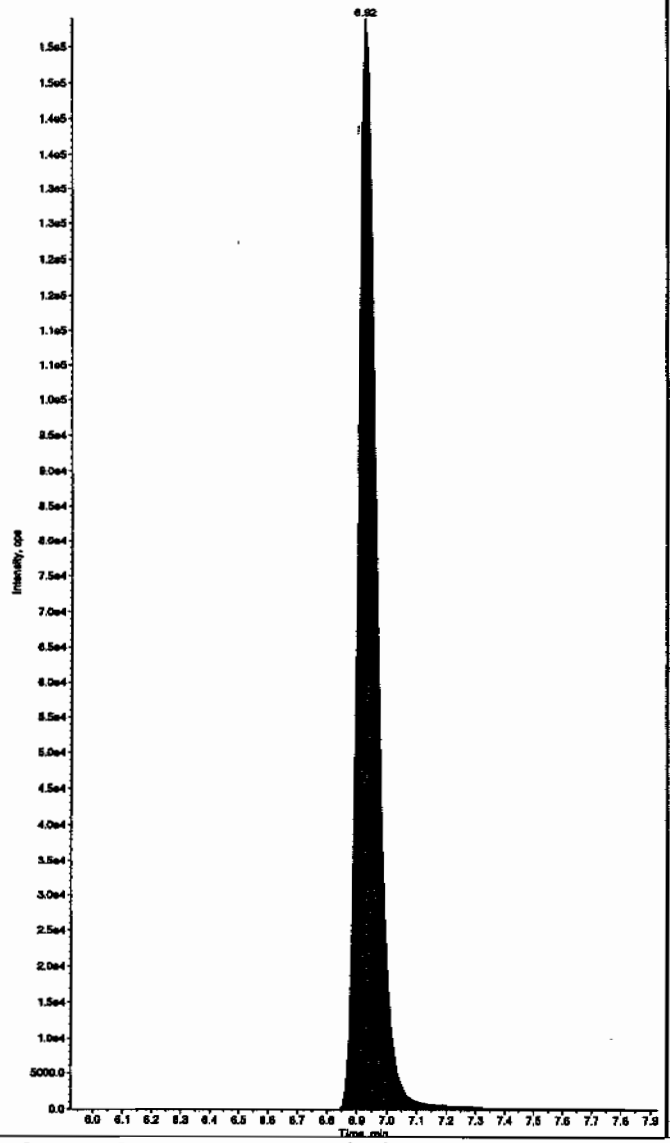
after Dan 1/21/10

Sample Name: "WXX100120-26ICV" Sample ID: "[1]LER" File: "EXS01200011.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 484. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 1:06:46 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 6.92 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 6.92 min
Area: 6.86e+005 counts
Height: 154043.076 cps
Start Time: 6.80 min
End Time: 7.43 min

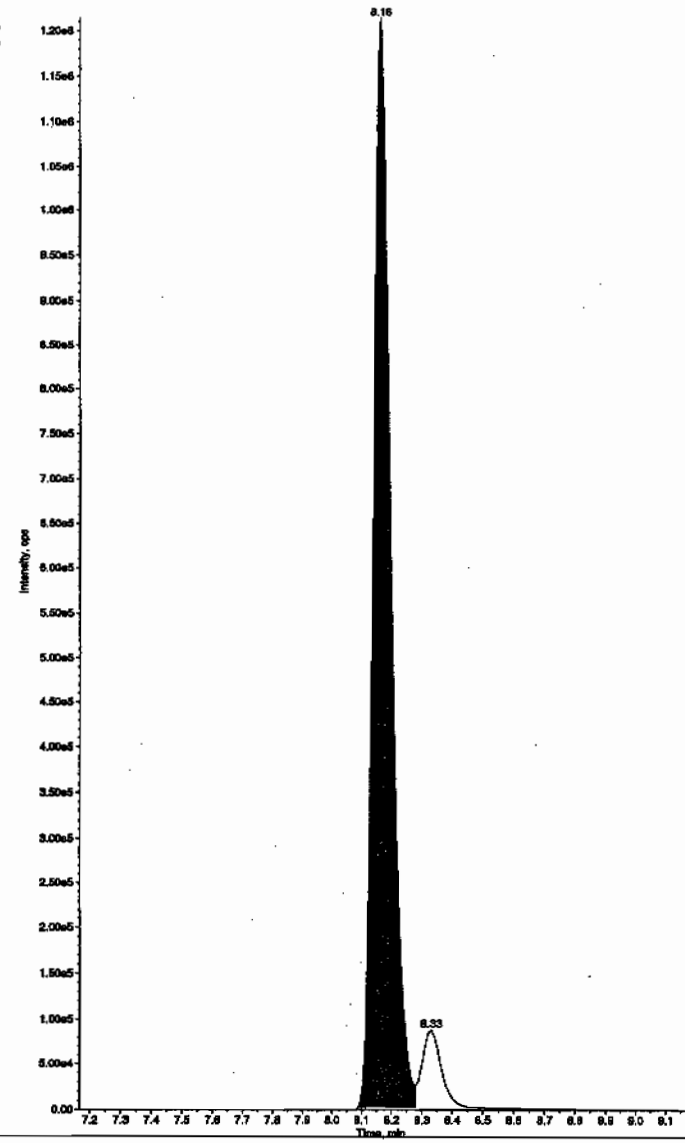


Sample Name: "WXX100120-26ICV" Sample ID: "[1]LER" File: "EXS01200011.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 499. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 1:06:46 PM

Modified: Yes
RT Window: 15.0 sec
Expected RT: 8.16 min
Use Relative RT: No

Int. Type: Manual
Retention Time: 8.16 min
Area: 5.02e+006 counts
Height: 1215268.488 cps
Start Time: 8.09 min
End Time: 8.28 min



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

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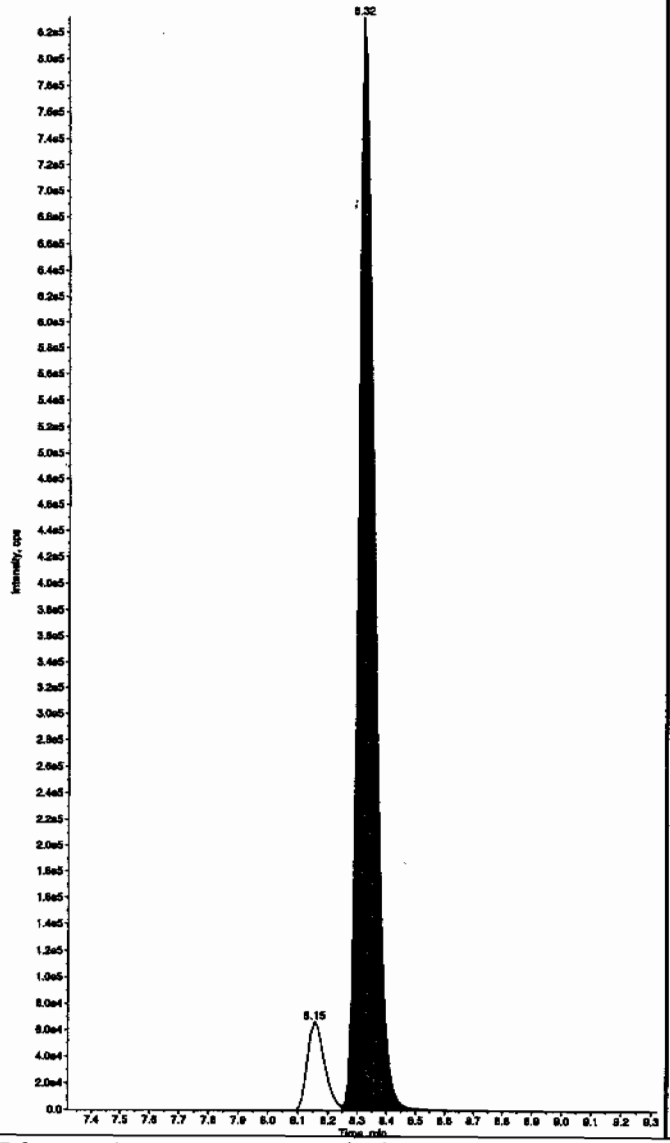
Sample Name: "WXX100120-26ICV" Sample ID: "[1]LER" File: "EXS01200011.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 250. ng/mL
Calculated Conc: 228. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 1:06:46 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.32 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.32 min
Area: 3.22e+006 counts
Height: 832330.872 cps
Start Time: 8.25 min
End Time: 8.65 min

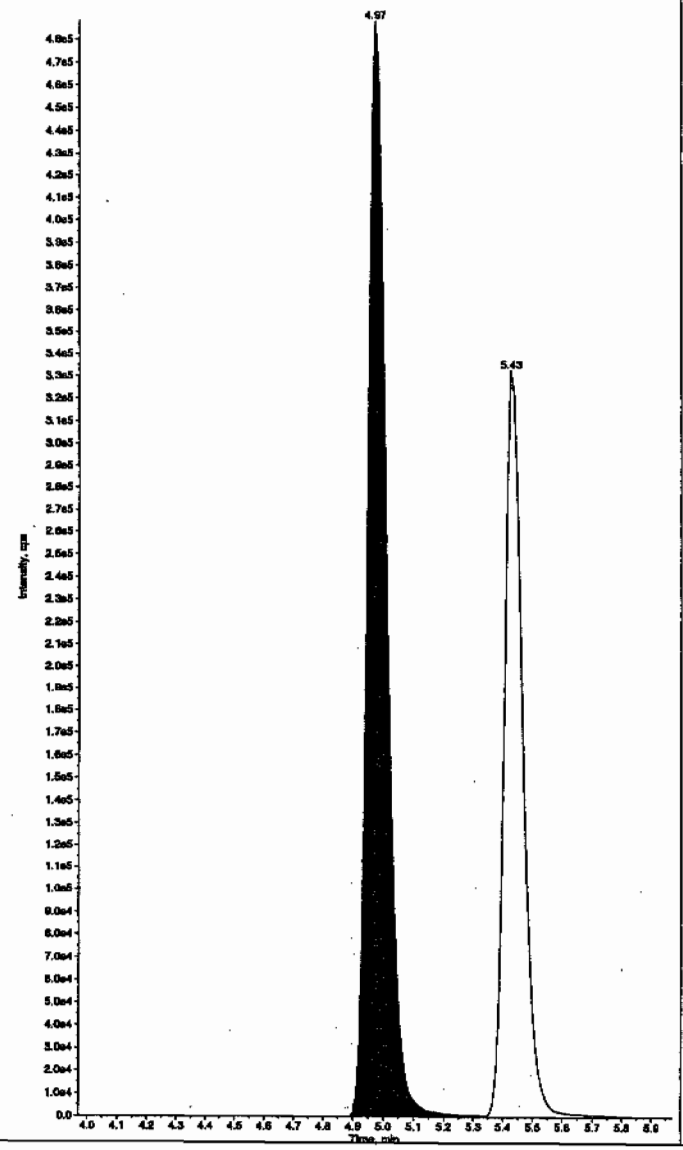


Sample Name: "WXX100120-26ICV" Sample ID: "[1]LER" File: "EXS01200011.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 471. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 1:06:46 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 450.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 4.97 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 4.97 min
Area: 2.15e+006 counts
Height: 488607.605 cps
Start Time: 4.87 min
End Time: 5.26 min



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

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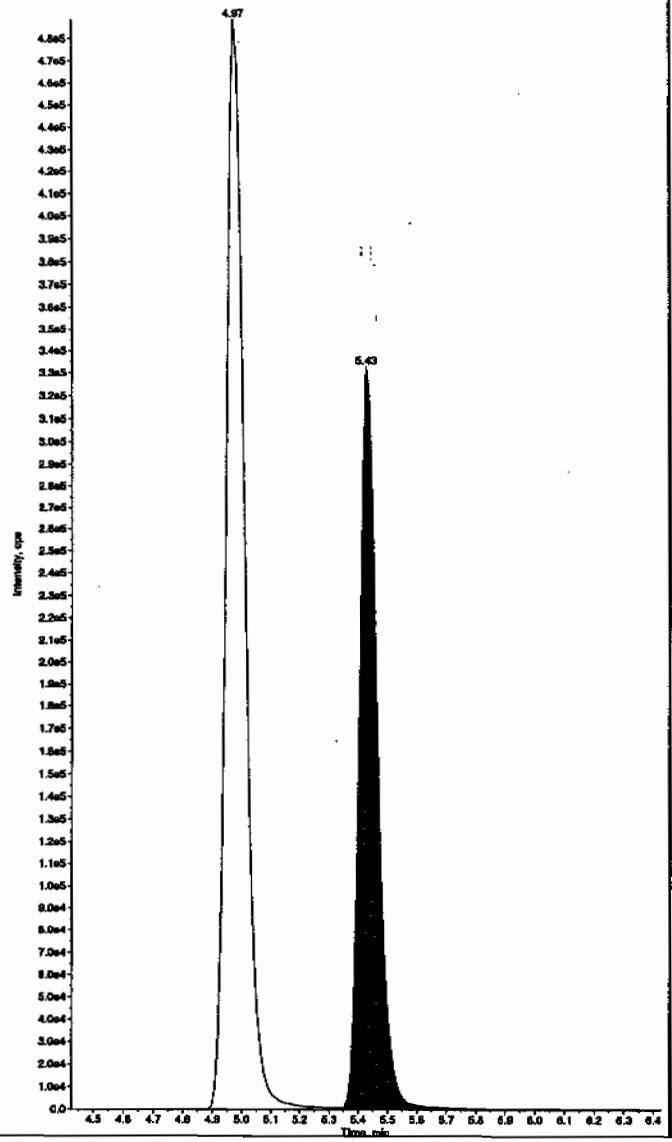
Sample Name: "WXX100120-26ICV" Sample ID: "[1]LER" File: "EXS01200011.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 488. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 1:06:46 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.43 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.43 min
Area: 1.43e+006 counts
Height: 332641.968 cps
Start Time: 5.33 min
End Time: 5.81 min

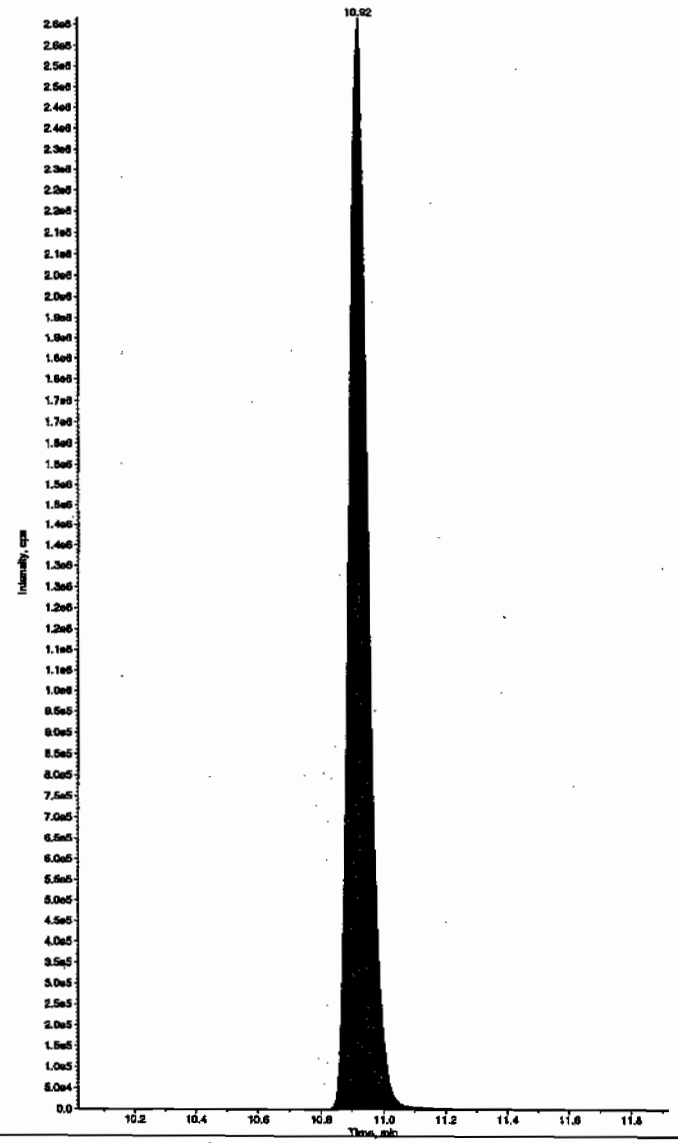


Sample Name: "WXX100120-26ICV" Sample ID: "[1]LER" File: "EXS01200011.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 521. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 1:06:46 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.9 min
Area: 1.11e+007 counts
Height: 2617369.873 cps
Start Time: 10.8 min
End Time: 11.2 min



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

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10–1130

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP0118012a

Analysis Date: 18–JAN–10 19:27

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5–Trinitrobenzene	40	50.691	127	
1,3–Dinitrobenzene–d4	500	537.934	108	
2,4,6–Trinitrotoluene	40	43.056	108	
2,4–Dinitrotoluene	40	39.965	100	
2,6–Dinitrotoluene	40	39.88	100	
2,6–Dinitrotoluene–d3	500	597.351	119	
2–Amino–4,6–dinitrotoluene	40	39.987	100	
3,4–Dinitrotoluene	20	18.681	93	
4–Amino–2,6–dinitrotoluene	40	42.288	106	
HMX	40	39.982	100	
Nitrobenzene	40	44.51	111	
PETN	40	45.548	114	
RDX	40	37.064	93	
Tetryl	40	49.073	123	
m–Dinitrobenzene	40	40.812	102	
m–Nitrotoluene	40	46.72	117	
o–Nitrotoluene	40	41.066	103	
p–Nitrotoluene	40	43.026	108	

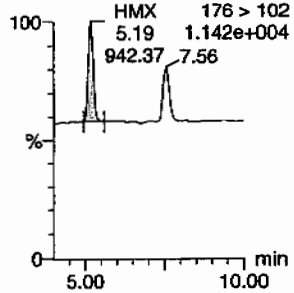
Recovery Limits:
3,4–Dinitrotoluene (Surrogate),TATB, tris(o–cresyl)phosphate, 3,5–Dinitroaniline, 2,6–Diamino–4–nitrotoluene , 2,4–Diamino–6–nitrotoluene 50–150%
OtherTarget Analytes 70–130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA.qld, Time: Tue Jan 19 10:59:58 2010

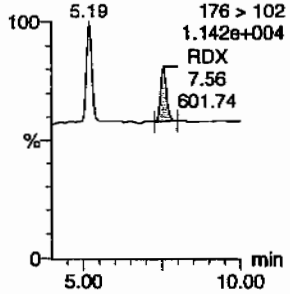
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118012a
Date: 18-Jan-2010
Time: 19:27:49
ID: WXX100118-08CRI
Vial: 1:1,C

MMT 1/19/10

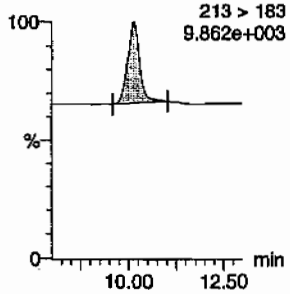
HMX
F2:MRM of 1 channel,AP-
HMX 176 > 102
5.19 1.142e+004
942.37 7.56



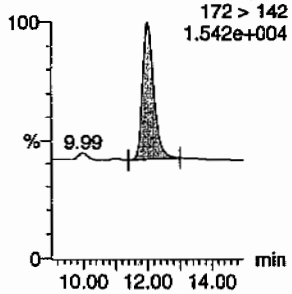
RDX
F2:MRM of 1 channel,AP-
5.19 176 > 102
1.142e+004
RDX
7.56
601.74



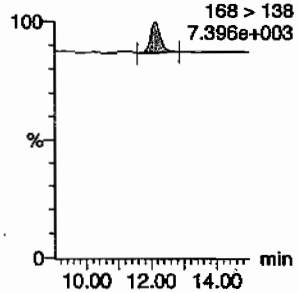
135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
9.862e+003



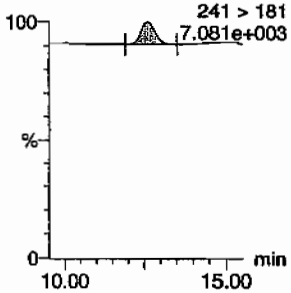
13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
1.542e+004



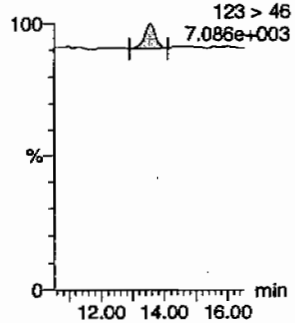
13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
7.396e+003



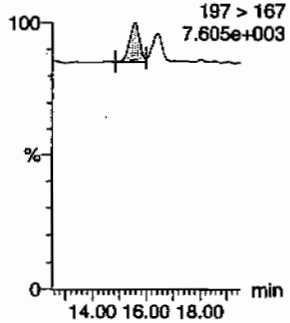
Tetryl
F6:MRM of 1 channel,AP-
241 > 181
7.081e+003



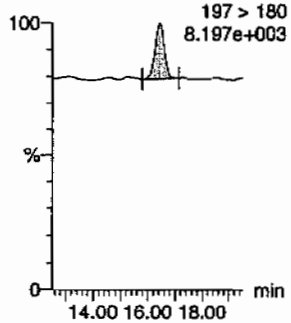
Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
7.086e+003



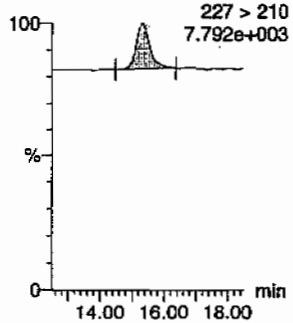
4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 167
7.605e+003



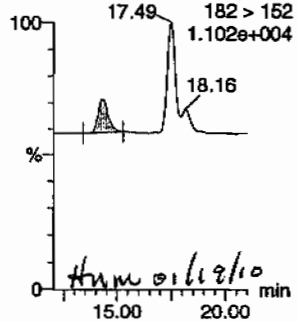
2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
8.197e+003



246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
7.792e+003

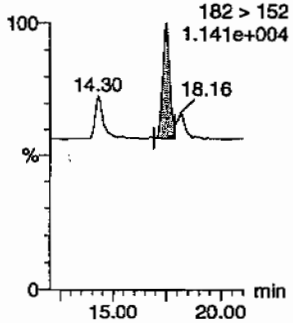


34-dinitrotoluene
F9:MRM of 2 channels,AP-
17.49 182 > 152
1.102e+004
18.16



HMM 01/19/10

26-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
1.141e+004
14.30
18.16



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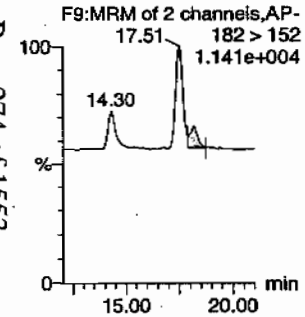
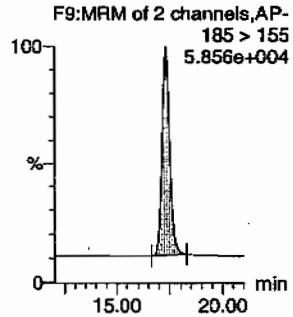
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA.qld, Time: Tue Jan 19 10:59:58 2010

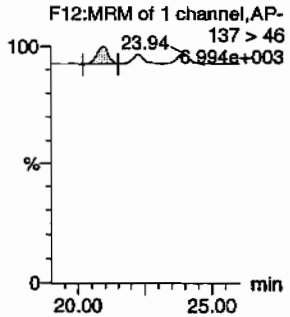
24-dinitrotoluene



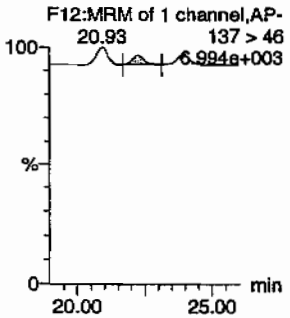
26-dinitrotoluene-d3



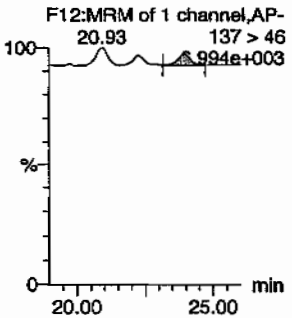
2-Nitrotoluene



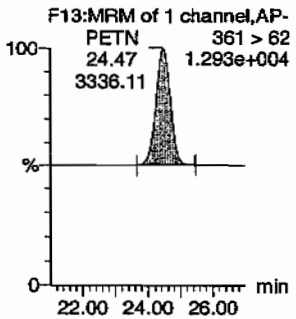
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	ISArea	AbsResp	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N
WXX100118-08CRI	HMX	176 > 102	5.19	942.368	3650.761	942.368	129.065	bb			39.9819	100.0	-0.0	82.8
WXX100118-08CRI	RDX	176 > 102	7.56	601.741	3650.761	601.741	82.413	bb			37.0641	92.7	-7.3	45.2
WXX100118-08CRI	135-Trinitrobenzene	213 > 183	10.14	1233.176	3650.761	1233.176	168.893	bb			50.6908	126.7	26.7	172.6
WXX100118-08CRI	13-Dinitrobenzene-d4	172 > 142	12.00	3650.761		3650.761	3650.761	bb			537.9344	107.6	7.6	517.0
WXX100118-08CRI	13-Dinitrobenzene	168 > 138	12.14	352.143	3650.761	352.143	48.229	bb			40.8124	102.0	2.0	45.8
WXX100118-08CRI	Tetryl	241 > 181	12.63	349.926	3650.761	349.926	47.925	bb			49.0728	122.7	22.7	30.8
WXX100118-08CRI	Nitrobenzene	123 > 46	13.54	272.080	3650.761	272.080	37.263	bb			44.5104	111.3	11.3	20.2
WXX100118-08CRI	4-Amino-26-dinitrotoluene	197 > 167	15.56	489.338	21916.291	489.338	11.164	MM	19-Jan-10	10:47:55	42.2884	105.7	5.7	22.6
WXX100118-08CRI	2-Amino-46-dinitrotoluene	197 > 180	16.43	682.797	21916.291	682.797	15.577	bb			39.9867	100.0	-0.0	33.0
WXX100118-08CRI	246-Trinitrotoluene	227 > 210	15.31	664.546	21916.291	664.546	15.161	bb			43.0558	107.6	7.6	61.0
WXX100118-08CRI	34-dinitrotoluene	182 > 152	14.30	763.362	21916.291	763.362	17.415	bb			18.6812	93.4	-6.6	26.5
WXX100118-08CRI	26-dinitrotoluene	182 > 152	17.51	1909.356	21916.291	1909.356	43.560	MM	19-Jan-10	10:53:17	39.8802	99.7	-0.3	71.1
WXX100118-08CRI	24-dinitrotoluene	182 > 152	18.16	442.897	21916.291	442.897	10.104	MM	19-Jan-10	10:57:10	39.9645	99.9	-0.1	15.2
WXX100118-08CRI	26-dinitrotoluene-d3	185 > 155	17.31	21916.291		21916.291	21916.291	bb			597.3508	119.5	19.5	1503.2
WXX100118-08CRI	2-Nitrotoluene	137 > 46	20.93	270.144	21916.291	270.144	6.163	bb			41.0663	102.7	2.7	68.3
WXX100118-08CRI	4-Nitrotoluene	137 > 46	22.25	135.030	21916.291	135.030	3.081	bb			43.0255	107.6	7.6	35.9
WXX100118-08CRI	3-Nitrotoluene	137 > 46	23.94	174.640	21916.291	174.640	3.984	bb			46.7196	116.8	16.8	41.7
WXX100118-08CRI	PETN	361 > 62	24.47	3336.115	21916.291	3336.115	76.110	bb			45.5475	113.9	13.9	655.3

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

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GRAND MEAN AVERAGE

Vendor:	UltraScientific
Date of Analysis	01/18/10
Time of Injection	1927
Standard Number	WXX100118-08CRI
Data File	EXP0118012a

HMX	100.0
RDX	92.7
135-TNB	126.7
13-DNB	102.0
Tetryl	122.7
Nitrobenzene	111.3
4A-26-DNT	105.7
2A-46-DNT	100.0
246-TNT	107.6
34-DNT(surr)	93.4
26-DNT	99.7
24-DNT	99.9
2-NT	102.7
4-NT	107.6
3-NT	116.8
PETN	113.9
Total	1702.7
Average	106.4

MAP 1/19/10

Hnm 01/19/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1130

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXP0118019a

Analysis Date: 18-JAN-10 22:54

LCMSMS ID: 903

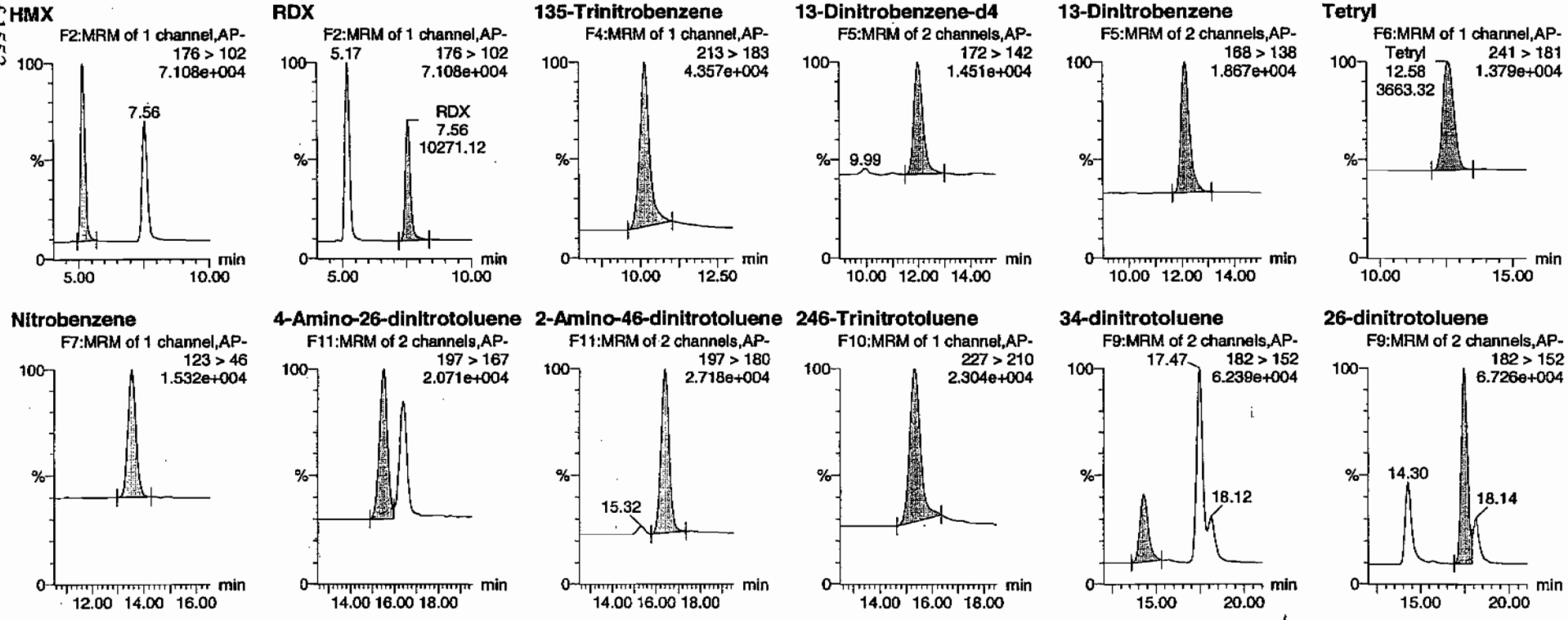
Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	600	614.058	102	
1,3-Dinitrobenzene-d4	500	494.251	99	
2,4,6-Trinitrotoluene	600	636.232	106	
2,4-Dinitrotoluene	600	629.771	105	
2,6-Dinitrotoluene	600	614.102	102	
2,6-Dinitrotoluene-d3	500	477.476	95	
2-Amino-4,6-dinitrotoluene	600	641.375	107	
3,4-Dinitrotoluene	300	323.805	108	
4-Amino-2,6-dinitrotoluene	600	659.577	110	
HMX	600	597.765	100	
Nitrobenzene	600	592.53	99	
PETN	600	600.489	100	
RDX	600	688.562	115	
Tetryl	600	559.14	93	
m-Dinitrobenzene	600	603.025	101	
m-Nitrotoluene	600	651.691	109	
o-Nitrotoluene	600	630.709	105	
p-Nitrotoluene	600	662.108	110	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 70-130%
OtherTarget Analytes 80-120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA.qld, Time: Tue Jan 19 10:59:58 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118019a
Date: 18-Jan-2010
Time: 22:54:11
ID: WXX100118-07CCV
Vial: 1:1,B



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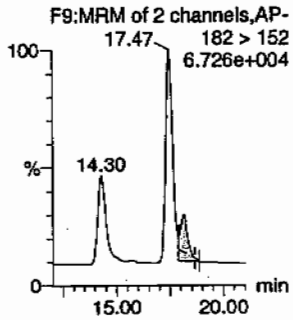
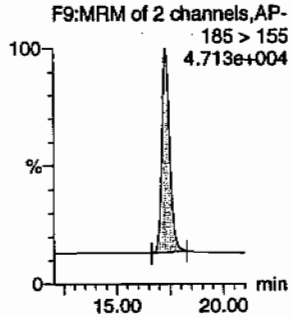
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA.qld, Time: Tue Jan 19 10:59:58 2010

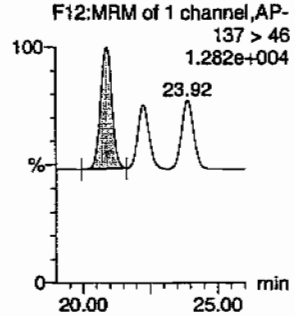
24-dinitrotoluene



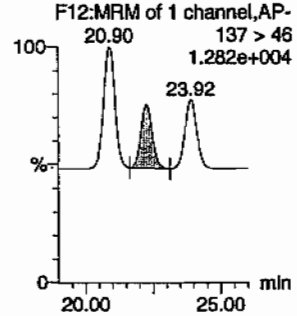
26-dinitrotoluene-d3



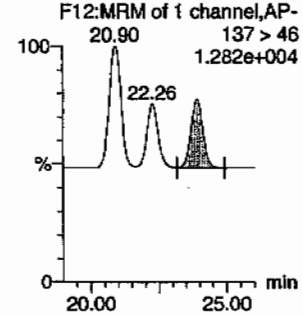
2-Nitrotoluene



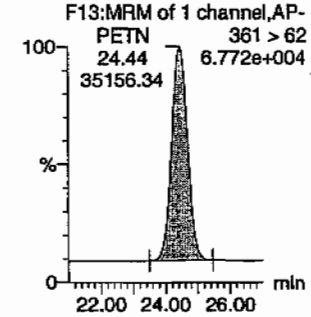
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N
WXX100118-07CCV	HMX	176 > 102	5.17	12945.098	3354.300	12945.098	1929.627	bb			597.7646	99.6	-0.4	1846.7
WXX100118-07CCV	RDX	176 > 102	7.56	10271.115	3354.300	10271.115	1531.037	bb			688.5619	114.8	14.8	1239.7
WXX100118-07CCV	135-Trinitrobenzene	213 > 183	10.14	13725.381	3354.300	13725.381	2045.938	bb			614.0585	102.3	2.3	5254.0
WXX100118-07CCV	13-Dinitrobenzene-d4	172 > 142	11.97	3354.300		3354.300	3354.300	bb			494.2513	98.9	-1.1	141.9
WXX100118-07CCV	13-Dinitrobenzene	168 > 138	12.14	4780.582	3354.300	4780.582	712.605	bb			603.0255	100.5	0.5	527.6
WXX100118-07CCV	Tetryl	241 > 181	12.58	3663.319	3354.300	3663.319	546.063	bb			559.1405	93.2	-6.8	411.0
WXX100118-07CCV	Nitrobenzene	123 > 46	13.54	3327.854	3354.300	3327.854	496.058	bb			592.5302	98.8	-1.2	261.0
WXX100118-07CCV	4-Amino-26-dinitrotoluene	197 > 167	15.53	6100.633	17518.184	6100.633	174.123	MM	19-Jan-10	10:48:31	659.5765	109.9	9.9	175.1
WXX100118-07CCV	2-Amino-46-dinitrotoluene	197 > 180	16.40	8754.067	17518.184	8754.067	249.857	bb			641.3751	106.9	6.9	378.4
WXX100118-07CCV	246-Trinitrotoluene	227 > 210	15.34	7849.298	17518.184	7849.298	224.033	bb			636.2316	106.0	6.0	522.3
WXX100118-07CCV	34-dinitrotoluene	182 > 152	14.30	10576.247	17518.184	10576.247	301.865	bb			323.8051	107.9	7.9	523.1
WXX100118-07CCV	26-dinitrotoluene	182 > 152	17.47	23501.309	17518.184	23501.309	670.769	MM	19-Jan-10	10:54:02	614.1022	102.4	2.4	880.3
WXX100118-07CCV	24-dinitrotoluene	182 > 152	18.14	5578.699	17518.184	5578.699	159.226	MM	19-Jan-10	10:58:11	629.7714	105.0	5.0	193.9
WXX100118-07CCV	26-dinitrotoluene-d3	185 > 155	17.29	17518.184		17518.184	17518.184	bb			477.4759	95.5	-4.5	2270.7
WXX100118-07CCV	2-Nitrotoluene	137 > 46	20.90	3316.352	17518.184	3316.352	94.655	bb			630.7086	105.1	5.1	204.8
WXX100118-07CCV	4-Nitrotoluene	137 > 46	22.26	1660.945	17518.184	1660.945	47.406	bb			662.1077	110.4	10.4	107.3
WXX100118-07CCV	3-Nitrotoluene	137 > 46	23.92	1947.193	17518.184	1947.193	55.576	bb			651.6915	108.6	8.6	116.4
WXX100118-07CCV	PETN	361 > 62	24.44	35156.344	17518.184	35156.344	1003.424	bb			600.4887	100.1	0.1	10636.3

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GRAND MEAN AVERAGE

Vendor: Restek
Date of Analysis: 01/18/10
Time of Injection: 2254
Standard Number: WXX100118-07CCV
Data File: EXP0118019a

HMX		99.6
RDX		114.8
135-TNB		102.3
13-DNB		100.5
Tetryl		93.2
Nitrobenzene		98.8
4A-26-DNT		109.9
2A-46-DNT		106.9
246-TNT		106.0
34-DNT(surr)		107.9
26-DNT		102.4
24-DNT		105.0
2-NT		105.1
4-NT		110.4
3-NT		108.6
PETN		100.1
	Total	1671.5
	Average	104.5

MOT 1/19/10

Hmm 01/19/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10–1130

Lab Code: GEI

GEL Sample ID: WXXCRI

GEL Data File EXP0118021a

Analysis Date: 18–JAN–10 23:53

LCMSMS ID: 903

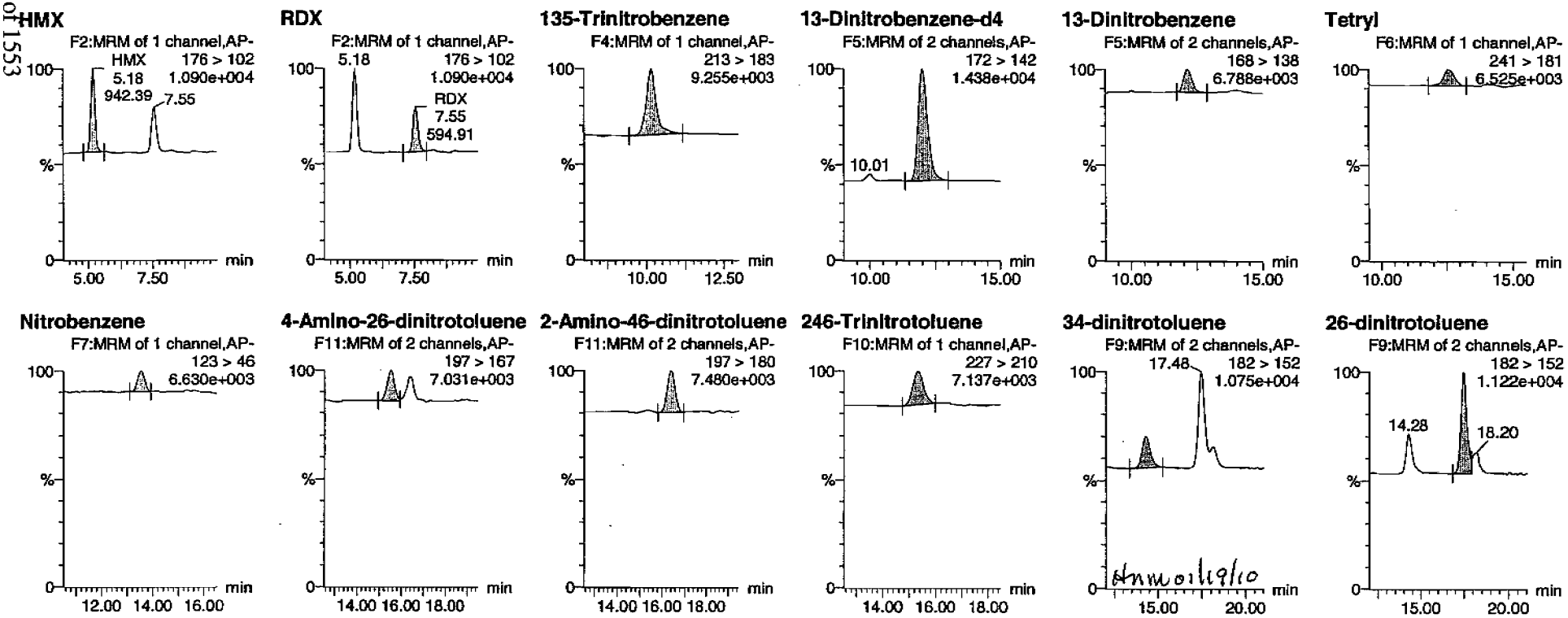
Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
4–Amino–2,6–dinitrotoluene	40	34.262	86	
HMX	40	41.795	104	
Nitrobenzene	40	37.04	93	
PETN	40	42.807	107	
RDX	40	38.304	96	
Tetryl	40	40.399	101	
m–Dinitrobenzene	40	37.182	93	
m–Nitrotoluene	40	38.459	96	
o–Nitrotoluene	40	31.698	79	
p–Nitrotoluene	40	30.243	76	
1,3,5–Trinitrobenzene	40	51.962	130	
1,3–Dinitrobenzene–d4	500	514.616	103	
2,4,6–Trinitrotoluene	40	33.453	84	
2,4–Dinitrotoluene	40	40.668	102	
2,6–Dinitrotoluene	40	41.074	103	
2,6–Dinitrotoluene–d3	500	616.151	123	
2–Amino–4,6–dinitrotoluene	40	34.84	87	
3,4–Dinitrotoluene	20	20.351	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 50–150%
OtherTarget Analytes 70–130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA.qld, Time: Tue Jan 19 10:59:58 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118021a
Date: 18-Jan-2010
Time: 23:53:08
ID: WXX100118-08CRI
Vial: 1:1,C



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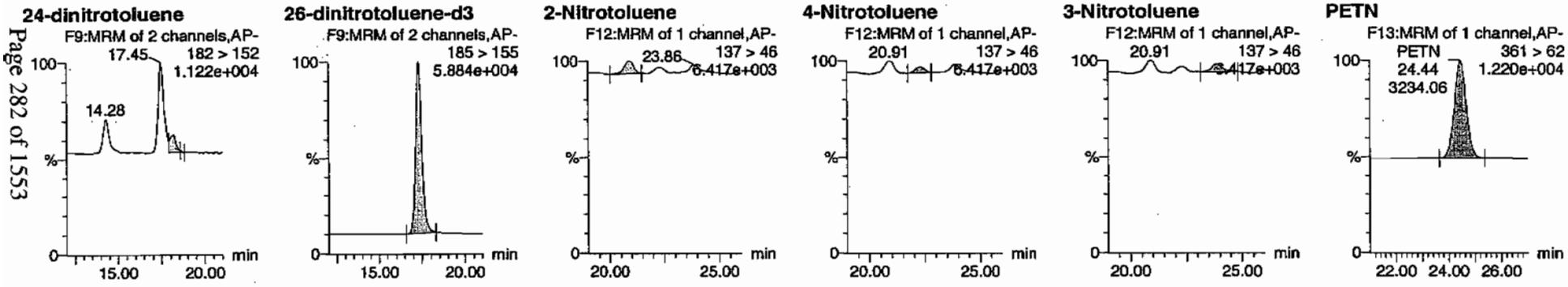
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA.qld, Time: Tue Jan 19 10:59:58 2010



ID	Name	Trace	RT	Area	S/Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/ml	%Rec	%Dev	S/N
WXX100118-08CRI	HMX	176 > 102	5.18	942.393	3492.511	942.393	134.916	bb			41.7947	104.5	4.5	254.1
WXX100118-08CRI	RDX	176 > 102	7.55	594.913	3492.511	594.913	85.170	bb			38.3039	95.8	-4.2	134.6
WXX100118-08CRI	135-Trinitrobenzene	213 > 183	10.14	1209.311	3492.511	1209.311	173.129	bb			51.9622	129.9	29.9	190.4
WXX100118-08CRI	13-Dinitrobenzene-d4	172 > 142	12.00	3492.511		3492.511	3492.511	bb			514.6165	102.9	2.9	318.5
WXX100118-08CRI	13-Dinitrobenzene	168 > 138	12.17	306.910	3492.511	306.910	43.938	bb			37.1818	93.0	-7.0	57.9
WXX100118-08CRI	Tetryl	241 > 181	12.61	275.585	3492.511	275.585	39.454	bb			40.3986	101.0	1.0	35.5
WXX100118-08CRI	Nitrobenzene	123 > 46	13.52	216.600	3492.511	216.600	31.009	bb			37.0398	92.6	-7.4	24.7
WXX100118-08CRI	4-Amino-26-dinitrotoluene	197 > 167	15.52	408.943	22606.063	408.943	9.045	MM	19-Jan-10	10:48:39	34.2624	85.7	-14.3	28.5
WXX100118-08CRI	2-Amino-46-dinitrotoluene	197 > 180	16.42	613.641	22606.063	613.641	13.572	bb			34.8402	87.1	-12.9	33.4
WXX100118-08CRI	246-Trinitrotoluene	227 > 210	15.33	532.583	22606.063	532.583	11.780	bb			33.4531	83.6	-16.4	68.4
WXX100118-08CRI	34-dinitrotoluene	182 > 152	14.28	857.752	22606.063	857.752	18.972	bb			20.3506	101.8	1.8	19.8
WXX100118-08CRI	26-dinitrotoluene	182 > 152	17.45	2028.394	22606.063	2028.394	44.864	MM	19-Jan-10	10:54:11	41.0738	102.7	2.7	55.3
WXX100118-08CRI	24-dinitrotoluene	182 > 152	18.20	464.880	22606.063	464.880	10.282	MM	19-Jan-10	10:58:21	40.6682	101.7	1.7	11.2
WXX100118-08CRI	26-dinitrotoluene-d3	185 > 155	17.30	22606.063		22606.063	22606.063	bb			616.1513	123.2	23.2	1991.2
WXX100118-08CRI	2-Nitrotoluene	137 > 46	20.91	215.080	22606.063	215.080	4.757	bb			31.6980	79.2	-20.8	40.2
WXX100118-08CRI	4-Nitrotoluene	137 > 46	22.31	97.900	22606.063	97.900	2.165	bb			30.2427	75.6	-24.4	17.8
WXX100118-08CRI	3-Nitrotoluene	137 > 46	23.86	148.285	22606.063	148.285	3.280	bb			38.4587	96.1	-3.9	25.0
WXX100118-08CRI	PETN	361 > 62	24.44	3234.064	22606.063	3234.064	71.531	bb			42.8069	107.0	7.0	1225.9

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GRAND MEAN AVERAGE

Vendor:	UltraScientific
Date of Analysis	01/18/10
Time of Injection	2353
Standard Number	WXX100118-08CRI
Data File	EXP0118021a

HMX	104.5
RDX	95.8
135-TNB	129.9
13-DNB	93.0
Tetryl	101.0
Nitrobenzene	92.6
4A-26-DNT	85.7
2A-46-DNT	87.1
246-TNT	83.6
34-DNT(surr)	101.8
26-DNT	102.7
24-DNT	101.7
2-NT	79.2
4-NT	75.6
3-NT	96.1
PETN	107.0
Total	1537.3
Average	96.1

MAT 1/19/10

01/18/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1130

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXP0118032a

Analysis Date: 19-JAN-10 05:17

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
2,4,6-Trinitrotoluene	600	675.704	113	
2,4-Dinitrotoluene	600	650.536	108	
2,6-Dinitrotoluene	600	616.93	103	
2,6-Dinitrotoluene-d3	500	412.842	83	
2-Amino-4,6-dinitrotoluene	600	700.536	117	
3,4-Dinitrotoluene	300	339.167	113	
4-Amino-2,6-dinitrotoluene	600	733.212	122	*
HMX	600	718.941	120	
Nitrobenzene	600	698.366	116	
PETN	600	712.727	119	
RDX	600	831.01	139	*
Tetryl	600	541.216	90	
m-Dinitrobenzene	600	655.489	109	
m-Nitrotoluene	600	699.981	117	
o-Nitrotoluene	600	655.642	109	
p-Nitrotoluene	600	732.167	122	*
1,3,5-Trinitrobenzene	600	634.051	106	
1,3-Dinitrobenzene-d4	500	394.416	79	*

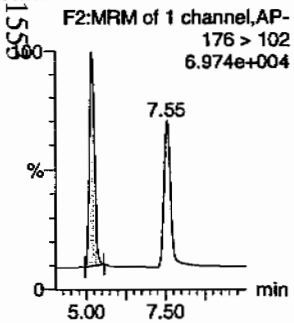
Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 70-130%
OtherTarget Analytes 80-120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA.qld, Time: Tue Jan 19 10:59:58 2010

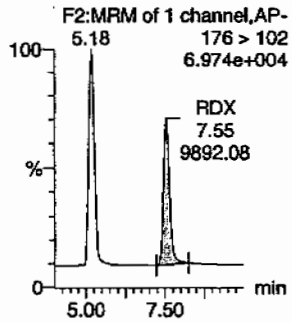
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118032a
Date: 19-Jan-2010
Time: 05:17:22
ID: WXX100118-07CCV
Vial: 1:1,B

MM 1/19/10

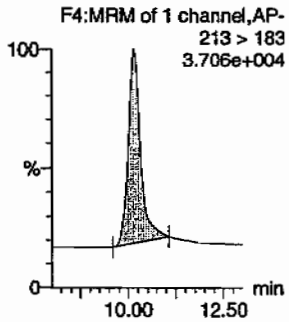
HMX



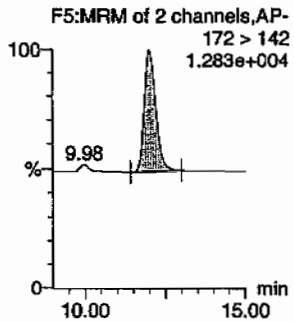
RDX



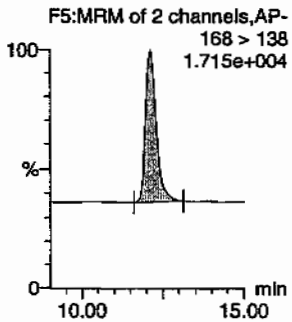
135-Trinitrobenzene



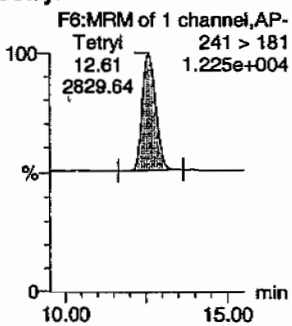
13-Dinitrobenzene-d4



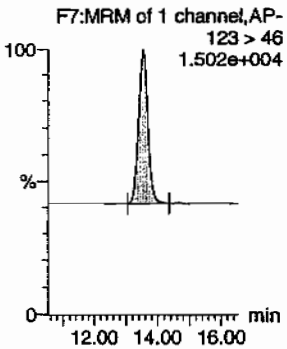
13-Dinitrobenzene



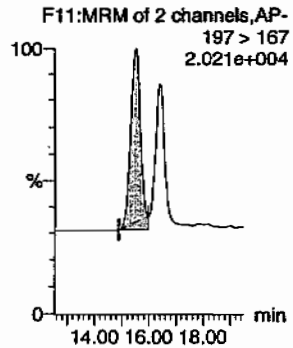
Tetryl



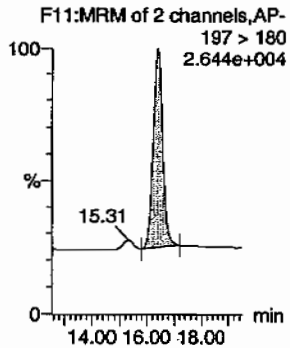
Nitrobenzene



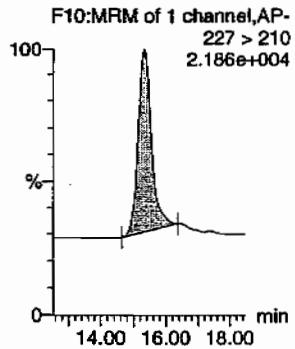
4-Amino-26-dinitrotoluene



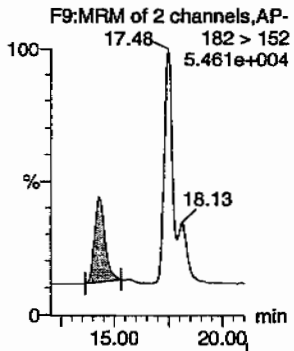
2-Amino-46-dinitrotoluene



246-Trinitrotoluene

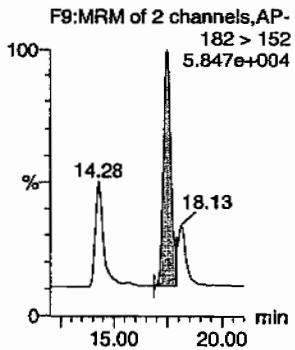


34-dinitrotoluene



Hmm 01/19/10

26-dinitrotoluene



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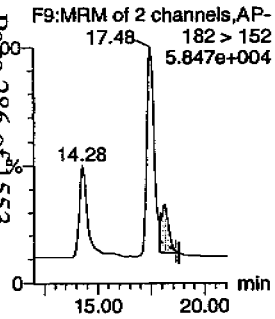
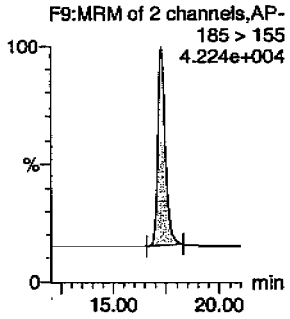
Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA.qld, Time: Tue Jan 19 10:59:58 2010

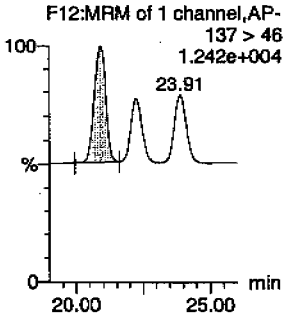
24-dinitrotoluene



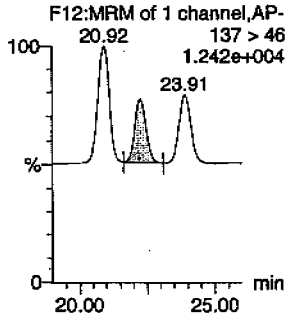
26-dinitrotoluene-d3



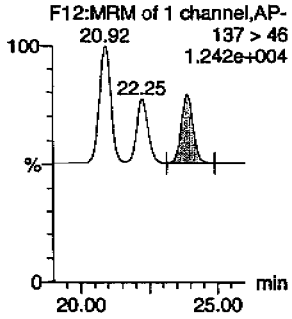
2-Nitrotoluene



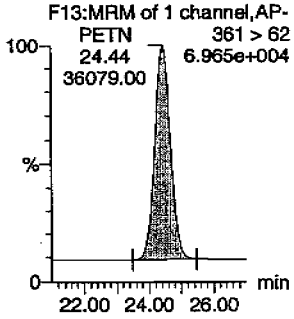
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/ml	%Rec	%Dev	S/N
WXX100118-07CCV	HMX	176 > 102	5.18	12424.388	2676.754	12424.388	2320.794	bb			718.9411	119.8	19.8	638.9
WXX100118-07CCV	RDX	176 > 102	7.55	9892.078	2676.754	9892.078	1847.775	bb			831.0103	138.5	38.5	430.0
WXX100118-07CCV	135-Trinitrobenzene	213 > 183	10.14	11309.556	2676.754	11309.556	2112.550	bb			634.0512	105.7	5.7	423.0
WXX100118-07CCV	13-Dinitrobenzene-d4	172 > 142	12.00	2676.754		2676.754	2676.754	bb			394.4159	78.9	-21.1	150.6
WXX100118-07CCV	13-Dinitrobenzene	168 > 138	12.13	4146.839	2676.754	4146.839	774.602	bb			655.4891	109.2	9.2	349.3
WXX100118-07CCV	Tetryl	241 > 181	12.61	2829.641	2676.754	2829.641	528.558	bb			541.2164	90.2	-9.8	432.4
WXX100118-07CCV	Nitrobenzene	123 > 46	13.52	3129.994	2676.754	3129.994	584.662	bb			698.3661	116.4	16.4	143.2
WXX100118-07CCV	4-Amino-26-dinitrotoluene	197 > 167	15.52	5863.693	15146.812	5863.693	193.562	MM	19-Jan-10	10:49:33	733.2117	122.2	22.2	220.4
WXX100118-07CCV	2-Amino-46-dinitrotoluene	197 > 180	16.39	8267.241	15146.812	8267.241	272.904	bb			700.5364	116.8	16.8	214.7
WXX100118-07CCV	246-Trinitrotoluene	227 > 210	15.33	7207.828	15146.812	7207.828	237.932	bb			675.7042	112.6	12.6	160.8
WXX100118-07CCV	34-dinitrotoluene	182 > 152	14.28	9578.402	15146.812	9578.402	316.185	bb			339.1666	113.1	13.1	248.2
WXX100118-07CCV	26-dinitrotoluene	182 > 152	17.48	20413.605	15146.812	20413.605	673.858	MM	19-Jan-10	10:54:48	616.9304	102.8	2.8	582.2
WXX100118-07CCV	24-dinitrotoluene	182 > 152	18.13	4982.572	15146.812	4982.572	164.476	MM	19-Jan-10	10:59:24	650.5361	108.4	8.4	137.5
WXX100118-07CCV	26-dinitrotoluene-d3	185 > 155	17.30	15146.812		15146.812	15146.812	bb			412.8418	82.6	-17.4	1951.6
WXX100118-07CCV	2-Nitrotoluene	137 > 46	20.92	2980.786	15146.812	2980.786	98.396	bb			655.6420	109.3	9.3	144.7
WXX100118-07CCV	4-Nitrotoluene	137 > 46	22.25	1588.068	15146.812	1588.068	52.423	bb			732.1673	122.0	22.0	77.5
WXX100118-07CCV	3-Nitrotoluene	137 > 46	23.91	1808.363	15146.812	1808.363	59.695	bb			699.9814	116.7	16.7	83.3
WXX100118-07CCV	PETN	361 > 62	24.44	36079.000	15146.812	36079.000	1190.977	bb			712.7275	118.8	18.8	7840.5

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GRAND MEAN AVERAGE

Vendor: Restek
Date of Analysis: 01/19/10
Time of Injection: 0517
Standard Number: WXX100118-07CCV
Data File: EXP0118032a

HMX		119.8
RDX		138.5
135-TNB		105.7
13-DNB		109.2
Tetryl		90.2
Nitrobenzene		116.4
4A-26-DNT		122.2
2A-46-DNT		116.8
246-TNT		112.6
34-DNT(surr)		113.1
26-DNT		102.8
24-DNT		108.4
2-NT		109.3
4-NT		122.0
3-NT		116.7
PETN		118.8
Total		1822.5
Average		113.9

MAT 1/19/10

dmm 01/19/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10–1130

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP0118034a

Analysis Date: 19–JAN–10 06:16

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5–Trinitrobenzene	40	47.44	119	
1,3–Dinitrobenzene–d4	500	540.81	108	
2,4,6–Trinitrotoluene	40	40.724	102	
2,4–Dinitrotoluene	40	36.114	90	
2,6–Dinitrotoluene	40	40.276	101	
2,6–Dinitrotoluene–d3	500	509.827	102	
2–Amino–4,6–dinitrotoluene	40	40.36	101	
3,4–Dinitrotoluene	20	21.051	105	
4–Amino–2,6–dinitrotoluene	40	45.261	113	
HMX	40	48.959	122	
Nitrobenzene	40	39.915	100	
PETN	40	57.829	145	*
RDX	40	47.995	120	
Tetryl	40	42.081	105	
m–Dinitrobenzene	40	38.582	96	
m–Nitrotoluene	40	52.934	132	*
o–Nitrotoluene	40	40.872	102	
p–Nitrotoluene	40	44.36	111	

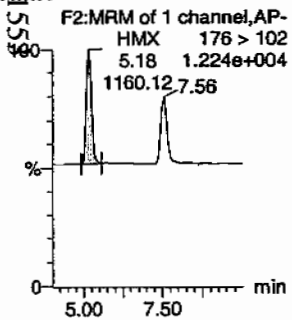
Recovery Limits:
3,4–Dinitrotoluene (Surrogate),TATB, tris(o–cresyl)phosphate, 3,5–Dinitroaniline, 2,6–Diamino–4–nitrotoluene , 2,4–Diamino–6–nitrotoluene 50–150%
OtherTarget Analytes 70–130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA.qld, Time: Tue Jan 19 10:59:58 2010

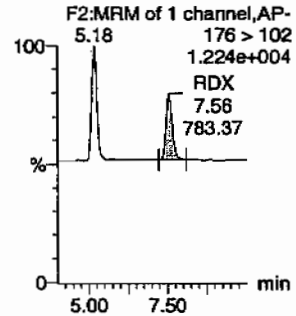
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118034a
Date: 19-Jan-2010
Time: 06:16:41
ID: WXX100118-08CRI
Vial: 1:1,C

MAT 1/19/10

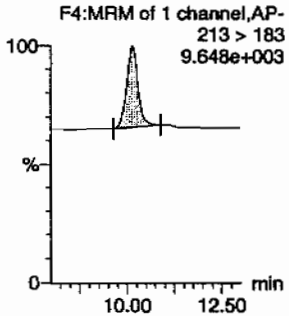
HMX



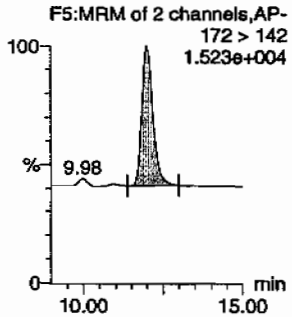
RDX



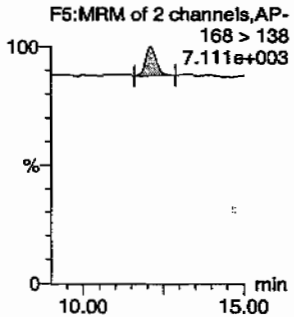
135-Trinitrobenzene



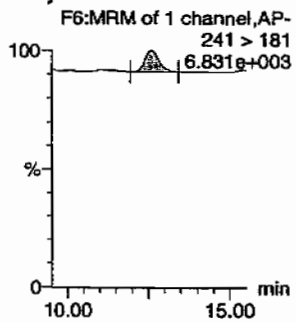
13-Dinitrobenzene-d4



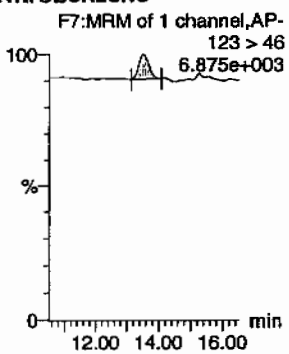
13-Dinitrobenzene



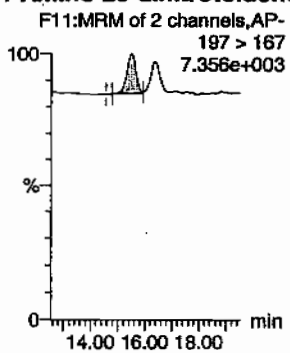
Tetryl



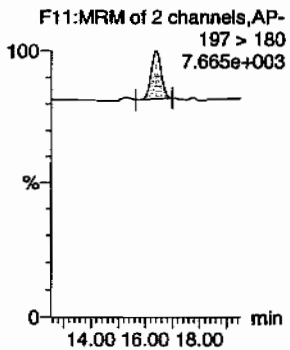
Nitrobenzene



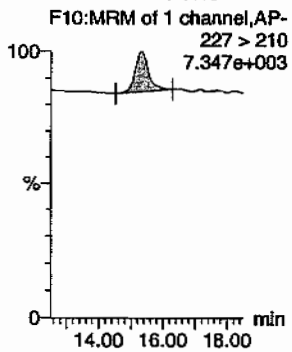
4-Amino-26-dinitrotoluene



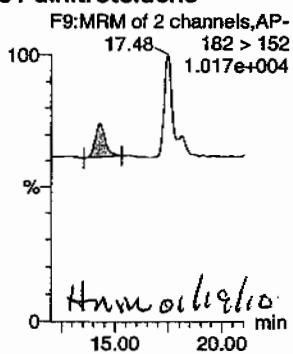
2-Amino-46-dinitrotoluene



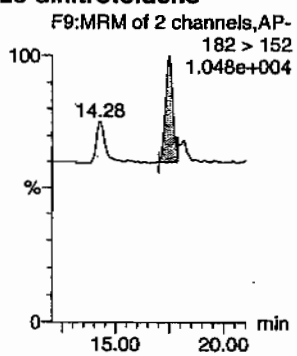
246-Trinitrotoluene



34-dinitrotoluene



26-dinitrotoluene



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

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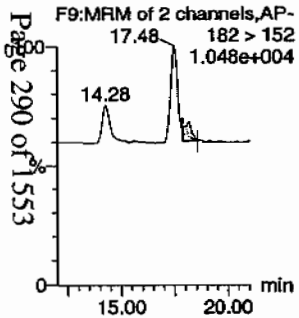
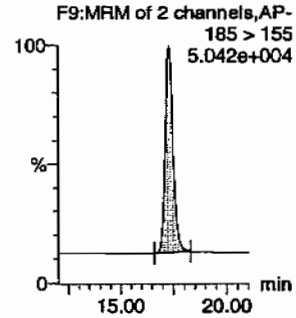
Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA.qld, Time: Tue Jan 19 10:59:58 2010

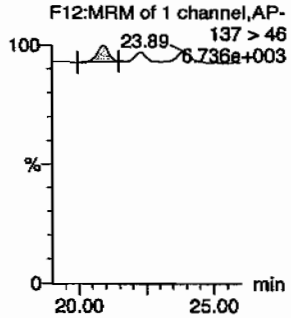
24-dinitrotoluene



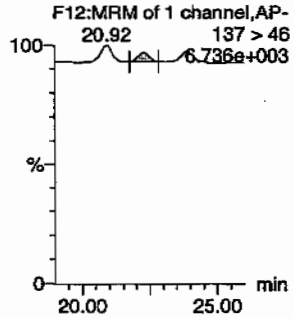
26-dinitrotoluene-d3



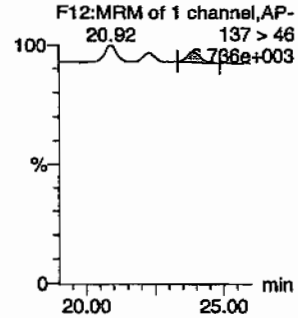
2-Nitrotoluene



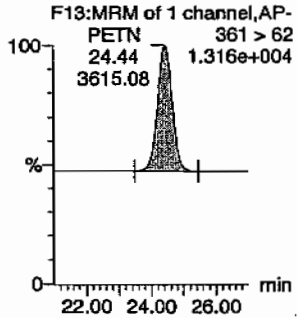
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N
WXX100118-08CRI	HMX	176 > 102	5.18	1160.117	3670.280	1160.117	158.042	bb			48.9586	122.4	22.4	287.5
WXX100118-08CRI	RDX	176 > 102	7.56	783.367	3670.280	783.367	106.718	bb			47.9947	120.0	20.0	164.9
WXX100118-08CRI	135-Trinitrobenzene	213 > 183	10.14	1160.259	3670.280	1160.259	158.061	bb			47.4398	118.6	18.6	165.9
WXX100118-08CRI	13-Dinitrobenzene-d4	172 > 142	11.97	3670.280		3670.280	3670.280	bb			540.8105	108.2	8.2	1095.7
WXX100118-08CRI	13-Dinitrobenzene	168 > 138	12.10	334.676	3670.280	334.676	45.593	bb			38.5818	96.5	-3.5	27.1
WXX100118-08CRI	Tetryl	241 > 181	12.56	301.671	3670.280	301.671	41.096	bb			42.0807	105.2	5.2	11.1
WXX100118-08CRI	Nitrobenzene	123 > 46	13.52	245.293	3670.280	245.293	33.416	bb			39.9148	99.8	-0.2	18.5
WXX100118-08CRI	4-Amino-26-dinitrotoluene	197 > 167	15.51	446.994	18705.123	446.994	11.948	MM	19-Jan-10	10:49:42	45.2606	113.2	13.2	35.4
WXX100118-08CRI	2-Amino-46-dinitrotoluene	197 > 180	16.39	588.199	18705.123	588.199	15.723	bb			40.3604	100.9	0.9	56.9
WXX100118-08CRI	246-Trinitrotoluene	227 > 210	15.30	536.462	18705.123	536.462	14.340	bb			40.7241	101.8	1.8	78.4
WXX100118-08CRI	34-dinitrotoluene	182 > 152	14.28	734.146	18705.123	734.146	19.624	bb			21.0505	105.3	5.3	37.4
WXX100118-08CRI	26-dinitrotoluene	182 > 152	17.48	1645.753	18705.123	1645.753	43.992	MM	19-Jan-10	10:54:54	40.2756	100.7	0.7	64.0
WXX100118-08CRI	24-dinitrotoluene	182 > 152	18.15	341.583	18705.123	341.583	9.131	MM	19-Jan-10	10:59:33	36.1139	90.3	-9.7	12.7
WXX100118-08CRI	26-dinitrotoluene-d3	185 > 155	17.30	18705.123		18705.123	18705.123	bb			509.8272	102.0	2.0	1813.3
WXX100118-08CRI	2-Nitrotoluene	137 > 46	20.92	229.474	18705.123	229.474	6.134	bb			40.8724	102.2	2.2	59.8
WXX100118-08CRI	4-Nitrotoluene	137 > 46	22.29	118.820	18705.123	118.820	3.176	bb			44.3600	110.9	10.9	32.6
WXX100118-08CRI	3-Nitrotoluene	137 > 46	23.89	168.877	18705.123	168.877	4.514	bb			52.9337	132.3	32.3	37.6
WXX100118-08CRI	PETN	361 > 62	24.44	3615.083	18705.123	3615.083	96.633	bb			57.8293	144.6	44.6	643.2

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GRAND MEAN AVERAGE

Vendor:	UltraScientific
Date of Analysis	01/19/10
Time of Injection	0616
Standard Number	WXX100118-08CRI
Data File	EXP0118034a

HMX	122.4
RDX	120.0
135-TNB	118.6
13-DNB	96.5
Tetryl	105.2
Nitrobenzene	99.8
4A-26-DNT	113.2
2A-46-DNT	100.9
246-TNT	101.8
34-DNT(surr)	105.3
26-DNT	100.7
24-DNT	90.3
2-NT	102.2
4-NT	110.9
3-NT	132.3
PETN	144.6
Total	1764.7
Average	110.3

HMM 01/19/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1130

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXP0118040a

Analysis Date: 19-JAN-10 09:13

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
RDX	600	774.185	129	*
Tetryl	600	563.562	94	
m-Dinitrobenzene	600	631.38	105	
m-Nitrotoluene	600	576.242	96	
o-Nitrotoluene	600	648.077	108	
p-Nitrotoluene	600	653.047	109	
1,3,5-Trinitrobenzene	600	631.181	105	
1,3-Dinitrobenzene-d4	500	413.146	83	
2,4,6-Trinitrotoluene	600	634.514	106	
2,4-Dinitrotoluene	600	610.908	102	
2,6-Dinitrotoluene	600	612.692	102	
2,6-Dinitrotoluene-d3	500	444.446	89	
2-Amino-4,6-dinitrotoluene	600	638.318	106	
3,4-Dinitrotoluene	300	307.641	103	
4-Amino-2,6-dinitrotoluene	600	658.172	110	
HMX	600	722.023	120	*
Nitrobenzene	600	635.366	106	
PETN	600	666.241	111	

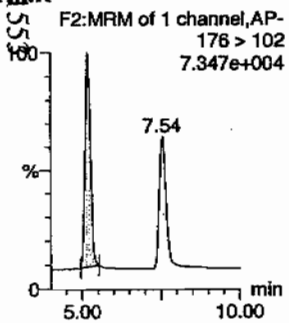
Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 70-130%
OtherTarget Analytes 80-120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA.qld, Time: Tue Jan 19 10:59:58 2010

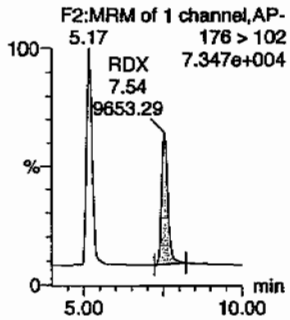
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118040a
Date: 19-Jan-2010
Time: 09:13:50
ID: WXX100118-07CCV
Vial: 1:1,B

MMP 1/19/10

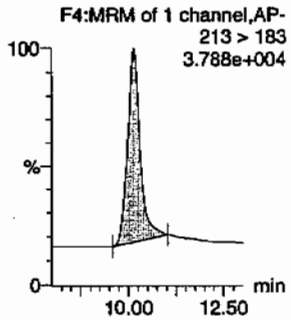
HMX



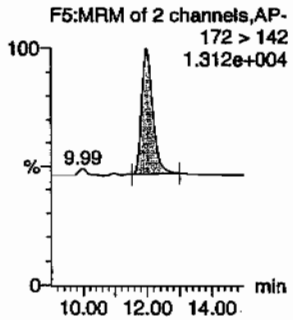
RDX



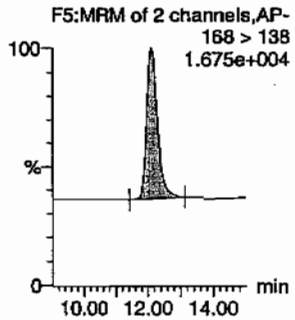
135-Trinitrobenzene



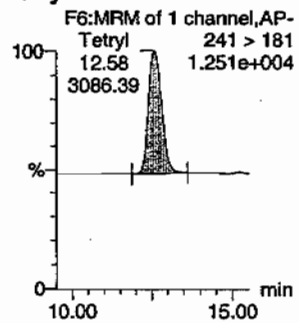
13-Dinitrobenzene-d4



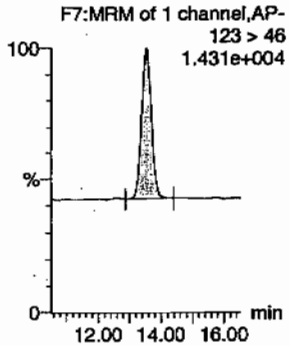
13-Dinitrobenzene



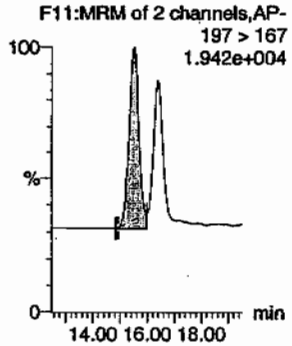
Tetryl



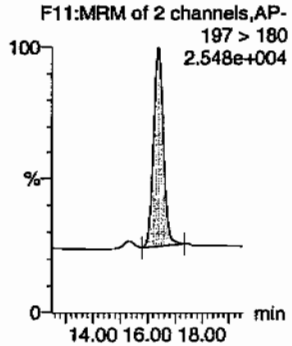
Nitrobenzene



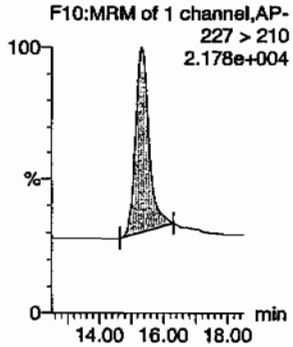
4-Amino-26-dinitrotoluene



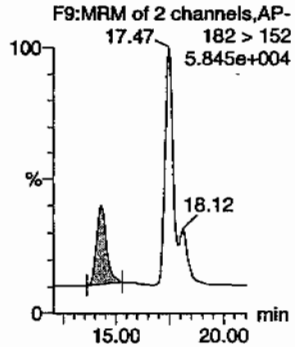
2-Amino-46-dinitrotoluene



246-Trinitrotoluene

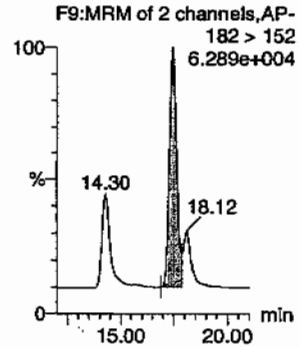


34-dinitrotoluene



HMM 01/19/10

26-dinitrotoluene



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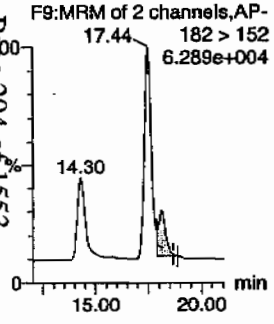
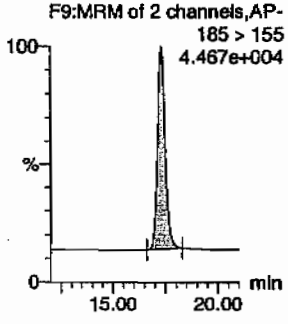
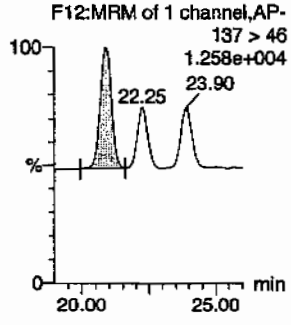
24-dinitrotoluene



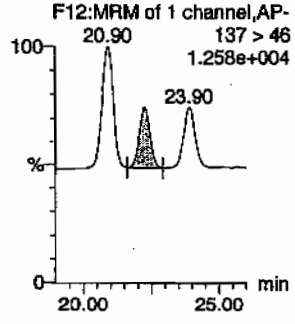
26-dinitrotoluene-d3



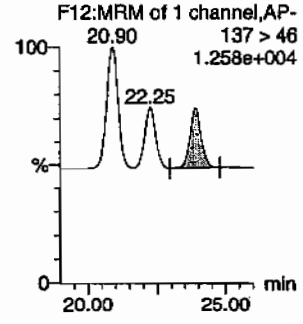
2-Nitrotoluene



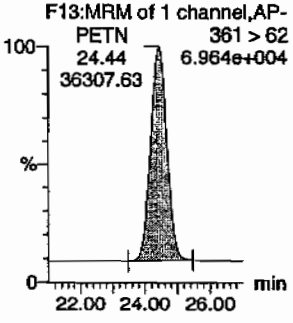
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	S/Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/ml	%Rec	%Dev	S/N
WXX100118-07CCV	HMX	176 > 102	5.17	13070.210	2803.871	13070.210	2330.744	bb			722.0235	120.3	20.3	1315.1
WXX100118-07CCV	RDX	176 > 102	7.54	9653.289	2803.871	9653.289	1721.422	bb			774.1847	129.0	29.0	808.7
WXX100118-07CCV	135-Trinitrobenzene	213 > 183	10.14	11793.014	2803.871	11793.014	2102.988	bb			631.1811	105.2	5.2	1546.3
WXX100118-07CCV	13-Dinitrobenzene-d4	172 > 142	11.97	2803.871		2803.871	2803.871	bb			413.1464	82.6	-17.4	176.8
WXX100118-07CCV	13-Dinitrobenzene	168 > 138	12.14	4184.004	2803.871	4184.004	746.112	bb			631.3800	105.2	5.2	358.8
WXX100118-07CCV	Tetryl	241 > 181	12.58	3086.394	2803.871	3086.394	550.381	bb			563.5616	93.9	-6.1	229.8
WXX100118-07CCV	Nitrobenzene	123 > 46	13.54	2982.869	2803.871	2982.869	531.920	bb			635.3664	105.9	5.9	400.4
WXX100118-07CCV	4-Amino-26-dinitrotoluene	197 > 167	15.53	5666.526	16306.342	5666.526	173.752	MM	19-Jan-10	10:49:57	658.1725	109.7	9.7	273.8
WXX100118-07CCV	2-Amino-46-dinitrotoluene	197 > 180	16.40	8109.655	16306.342	8109.655	248.666	bb			638.3181	106.4	6.4	635.6
WXX100118-07CCV	246-Trinitrotoluene	227 > 210	15.31	7286.585	16306.342	7286.585	223.428	bb			634.5136	105.8	5.8	332.8
WXX100118-07CCV	34-dinitrotoluene	182 > 152	14.30	9353.200	16306.342	9353.200	286.796	bb			307.6415	102.5	2.5	304.7
WXX100118-07CCV	26-dinitrotoluene	182 > 152	17.44	21825.346	16306.342	21825.346	669.229	MM	19-Jan-10	10:55:09	612.6921	102.1	2.1	825.3
WXX100118-07CCV	24-dinitrotoluene	182 > 152	18.12	5037.244	16306.342	5037.244	154.457	MM	19-Jan-10	10:59:45	610.9076	101.8	1.8	178.5
WXX100118-07CCV	26-dinitrotoluene-d3	185 > 155	17.29	16306.342		16306.342	16306.342	bb			444.4460	88.9	-11.1	1394.6
WXX100118-07CCV	2-Nitrotoluene	137 > 46	20.90	3171.949	16306.342	3171.949	97.261	bb			648.0774	108.0	8.0	511.5
WXX100118-07CCV	4-Nitrotoluene	137 > 46	22.25	1524.889	16306.342	1524.889	46.758	bb			653.0465	108.8	8.8	260.1
WXX100118-07CCV	3-Nitrotoluene	137 > 46	23.90	1602.653	16306.342	1602.653	49.142	bb			576.2422	96.0	-4.0	257.5
WXX100118-07CCV	PETN	361 > 62	24.44	36307.629	16306.342	36307.629	1113.298	bb			666.2413	111.0	11.0	5934.4

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GRAND MEAN AVERAGE

Vendor: Restek
Date of Analysis: 01/19/10
Time of Injection: 0913
Standard Number: WXX100118-07CCV
Data File: EXP0118040a

HMX		120.3
RDX		129.0
135-TNB		105.2
13-DNB		105.2
Tetryl		93.9
Nitrobenzene		105.9
4A-26-DNT		109.7
2A-46-DNT		106.4
246-TNT		105.8
34-DNT(surr)		102.5
26-DNT		102.1
24-DNT		101.8
2-NT		108.0
4-NT		108.8
3-NT		96.0
PETN		111.0
	Total	1711.6
	Average	107.0

MAT 1/19/10

thm 01/18/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10–1130

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP0118042a

Analysis Date: 19–JAN–10 10:12

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3–Dinitrobenzene–d4	500	569.733	114	
2,4,6–Trinitrotoluene	40	37.811	95	
2,4–Dinitrotoluene	40	35.368	88	
2,6–Dinitrotoluene	40	39.754	99	
2,6–Dinitrotoluene–d3	500	579.167	116	
2–Amino–4,6–dinitrotoluene	40	36.213	91	
3,4–Dinitrotoluene	20	19.032	95	
4–Amino–2,6–dinitrotoluene	40	39.56	99	
HMX	40	53.426	134	*
Nitrobenzene	40	44.713	112	
PETN	40	50.574	126	
RDX	40	49.946	125	
Tetryl	40	39.539	99	
m–Dinitrobenzene	40	42.962	107	
m–Nitrotoluene	40	44.032	110	
o–Nitrotoluene	40	44.062	110	
p–Nitrotoluene	40	47.224	118	
1,3,5–Trinitrobenzene	40	47.396	118	

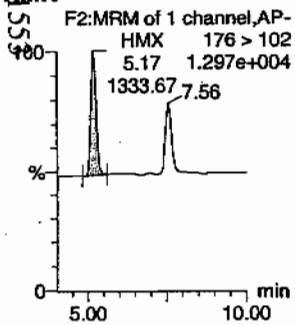
Recovery Limits:
3,4–Dinitrotoluene (Surrogate),TATB, tris(o–cresyl)phosphate, 3,5–Dinitroaniline, 2,6–Diamino–4–nitrotoluene , 2,4–Diamino–6–nitrotoluene 50–150%
OtherTarget Analytes 70–130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA.qld, Time: Tue Jan 19 10:59:58 2010

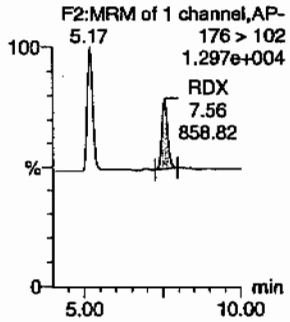
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118042a
Date: 19-Jan-2010
Time: 10:12:54
ID: WXX100118-08CRI
Vial: 1:1,C

MMT 1/19/10

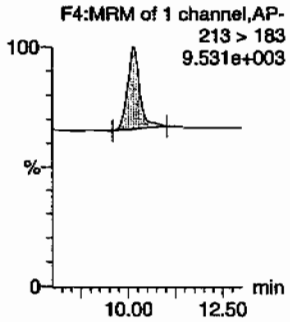
HMX



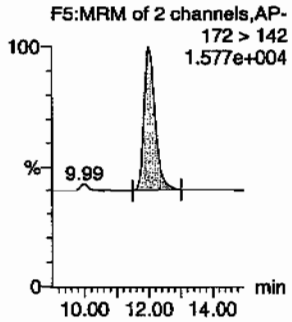
RDX



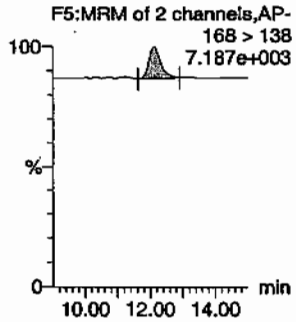
135-Trinitrobenzene



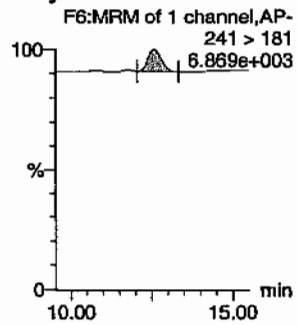
13-Dinitrobenzene-d4



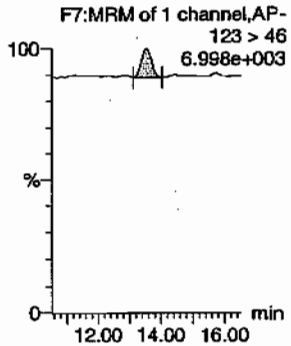
13-Dinitrobenzene



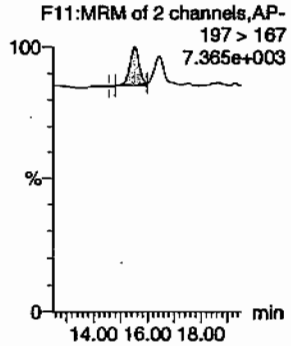
Tetryl



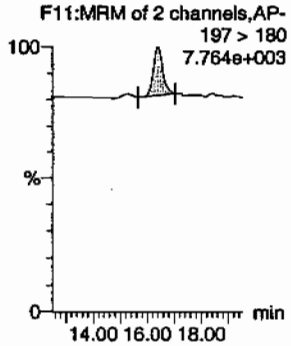
Nitrobenzene



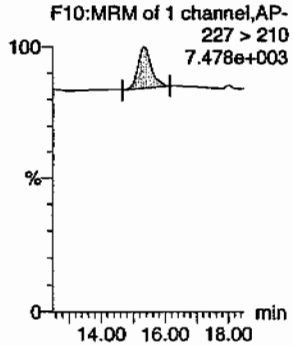
4-Amino-26-dinitrotoluene



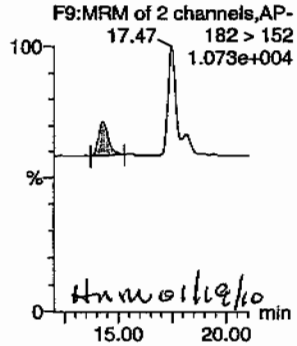
2-Amino-46-dinitrotoluene



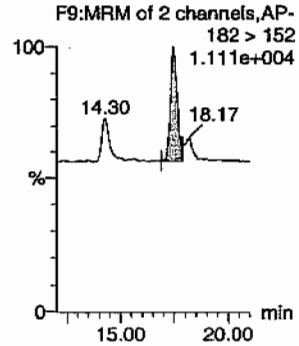
246-Trinitrotoluene



34-dinitrotoluene



26-dinitrotoluene



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

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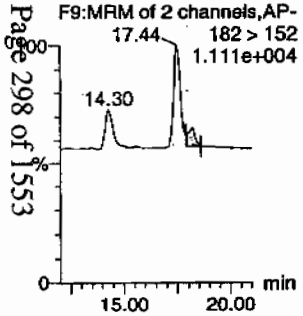
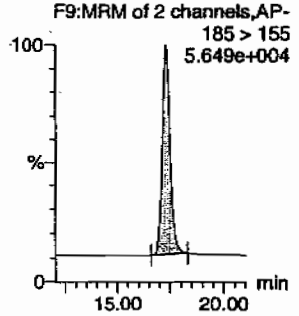
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA.qld, Time: Tue Jan 19 10:59:58 2010

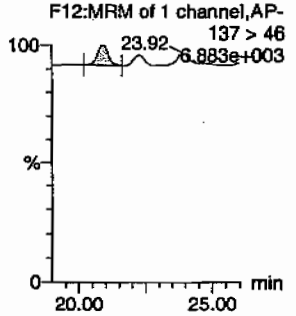
24-dinitrotoluene



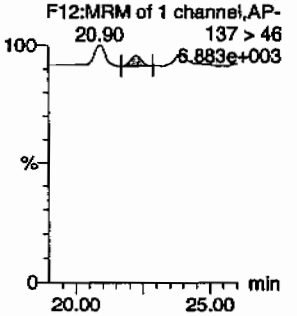
26-dinitrotoluene-d3



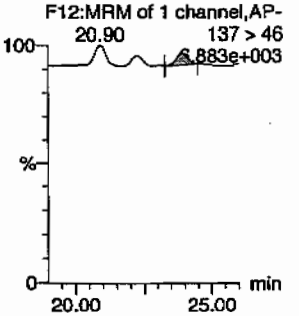
2-Nitrotoluene



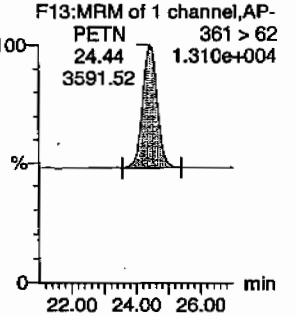
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N
WXX100118-08CRI	HMX	176 > 102	5.17	1333.665	3866.563	1333.665	172.461	bb			53.4255	133.6	33.6	292.4
WXX100118-08CRI	RDX	176 > 102	7.56	858.817	3866.563	858.817	111.057	bb			49.9462	124.9	24.9	166.5
WXX100118-08CRI	135-Trinitrobenzene	213 > 183	10.14	1221.177	3866.563	1221.177	157.915	bb			47.3959	118.5	18.5	239.4
WXX100118-08CRI	13-Dinitrobenzene-d4	172 > 142	12.00	3866.563		3866.563	3866.563	bb			569.7325	113.9	13.9	203.5
WXX100118-08CRI	13-Dinitrobenzene	168 > 138	12.14	392.604	3866.563	392.604	50.769	bb			42.9622	107.4	7.4	51.7
WXX100118-08CRI	Tetryl	241 > 181	12.58	298.612	3866.563	298.612	38.615	bb			39.5394	98.8	-1.2	27.5
WXX100118-08CRI	Nitrobenzene	123 > 46	13.54	289.477	3866.563	289.477	37.433	bb			44.7133	111.8	11.8	25.4
WXX100118-08CRI	4-Amino-26-dinitrotoluene	197 > 167	15.53	443.835	21249.145	443.835	10.444	MM	19-Jan-10	10:50:07	39.5603	98.9	-1.1	21.3
WXX100118-08CRI	2-Amino-46-dinitrotoluene	197 > 180	16.40	599.542	21249.145	599.542	14.107	bb			36.2134	90.5	-9.5	46.5
WXX100118-08CRI	246-Trinitrotoluene	227 > 210	15.35	565.831	21249.145	565.831	13.314	bb			37.8111	94.5	-5.5	47.9
WXX100118-08CRI	34-dinitrotoluene	182 > 152	14.30	754.022	21249.145	754.022	17.742	bb			19.0320	95.2	-4.8	61.7
WXX100118-08CRI	26-dinitrotoluene	182 > 152	17.44	1845.370	21249.145	1845.370	43.422	MM	19-Jan-10	10:55:26	39.7539	99.4	-0.6	71.0
WXX100118-08CRI	24-dinitrotoluene	182 > 152	18.17	380.030	21249.145	380.030	8.942	MM	19-Jan-10	10:59:58	35.3684	88.4	-11.6	13.4
WXX100118-08CRI	26-dinitrotoluene-d3	185 > 155	17.31	21249.145		21249.145	21249.145	bb			579.1671	115.8	15.8	2376.2
WXX100118-08CRI	2-Nitrotoluene	137 > 46	20.90	281.027	21249.145	281.027	6.613	bb			44.0620	110.2	10.2	22.8
WXX100118-08CRI	4-Nitrotoluene	137 > 46	22.26	143.694	21249.145	143.694	3.381	bb			47.2237	118.1	18.1	11.7
WXX100118-08CRI	3-Nitrotoluene	137 > 46	23.92	159.584	21249.145	159.584	3.755	bb			44.0322	110.1	10.1	12.0
WXX100118-08CRI	PETN	361 > 62	24.44	3591.523	21249.145	3591.523	84.510	bb			50.5740	126.4	26.4	1221.5

✓

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

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GRAND MEAN AVERAGE

Vendor:	UltraScientific
Date of Analysis	01/19/10
Time of Injection	1012
Standard Number	WXX100118-08CRI
Data File	EXP0118042a

HMX	133.6
RDX	124.9
135-TNB	118.5
13-DNB	107.4
Tetryl	98.8
Nitrobenzene	111.8
4A-26-DNT	98.9
2A-46-DNT	90.5
246-TNT	94.5
34-DNT(surr)	95.2
26-DNT	99.4
24-DNT	88.4
2-NT	110.2
4-NT	118.1
3-NT	110.1
PETN	126.4
Total	1726.7
Average	107.9

1/19/10

HMX 01/18/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1130

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXP0118053a

Analysis Date: 19-JAN-10 15:37

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	600	641.265	107	
1,3-Dinitrobenzene-d4	500	449.958	90	
2,4,6-Trinitrotoluene	600	684.57	114	
2,4-Dinitrotoluene	600	624.701	104	
2,6-Dinitrotoluene	600	610.092	102	
2,6-Dinitrotoluene-d3	500	486.695	97	
2-Amino-4,6-dinitrotoluene	600	652.06	109	
3,4-Dinitrotoluene	300	339.189	113	
4-Amino-2,6-dinitrotoluene	600	690.543	115	
HMX	600	654.179	109	
Nitrobenzene	600	680.594	113	
PETN	600	613.545	102	
RDX	600	715.015	119	
Tetryl	600	579.396	97	
m-Dinitrobenzene	600	604.233	101	
m-Nitrotoluene	600	609.049	102	
o-Nitrotoluene	600	583.021	97	
p-Nitrotoluene	600	625.888	104	

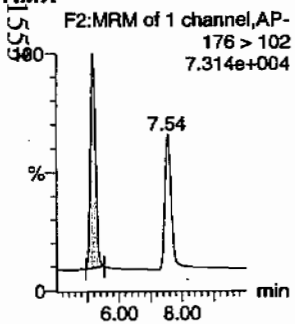
Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 70-130%
OtherTarget Analytes 80-120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA1.qld, Time: Wed Jan 20 09:06:02 2010

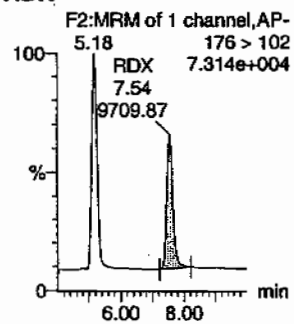
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118053a
Date: 19-Jan-2010
Time: 15:37:40
ID: WXX100118-07CCV
Vial: 1:1,B

MMT 1/20/10

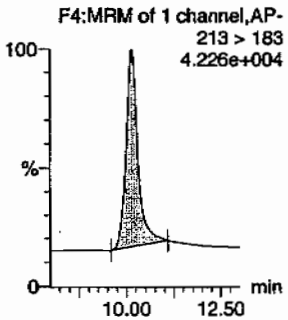
HMX



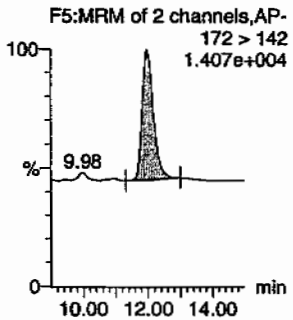
RDX



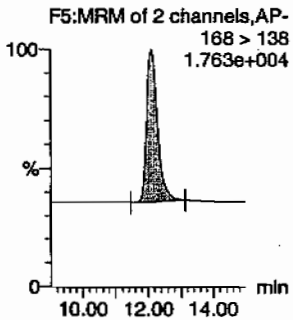
135-Trinitrobenzene



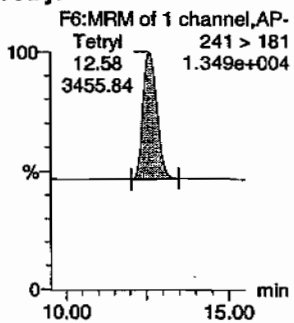
13-Dinitrobenzene-d4



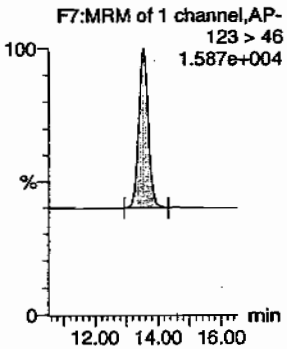
13-Dinitrobenzene



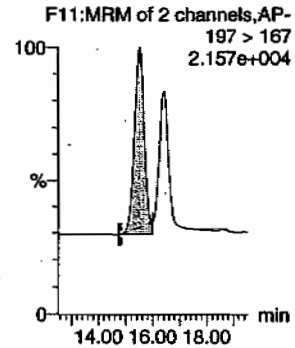
Tetryl



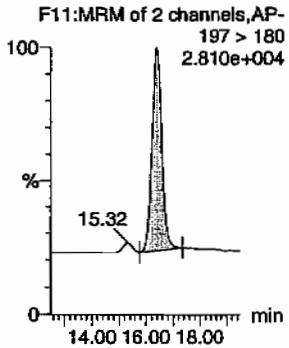
Nitrobenzene



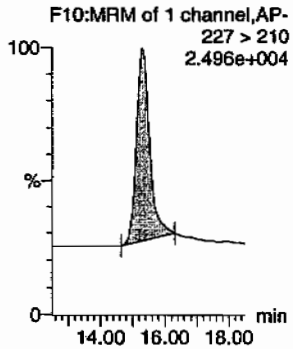
4-Amino-26-dinitrotoluene



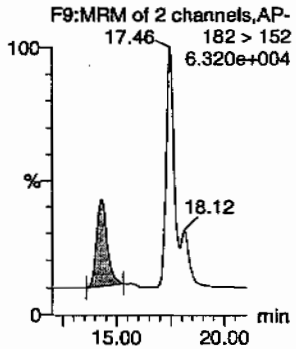
2-Amino-46-dinitrotoluene



246-Trinitrotoluene

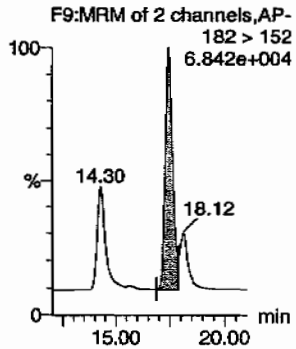


34-dinitrotoluene



HMW 01/20/10

26-dinitrotoluene



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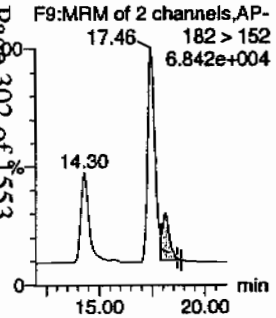
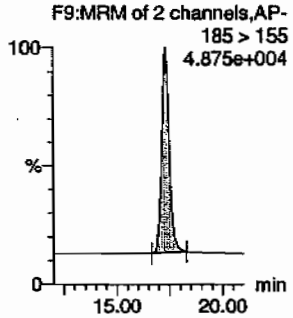
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA1.qld, Time: Wed Jan 20 09:06:02 2010

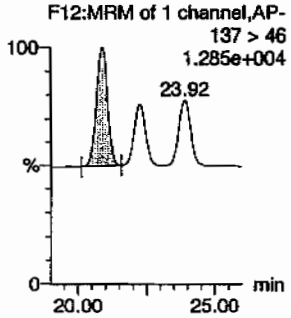
24-dinitrotoluene



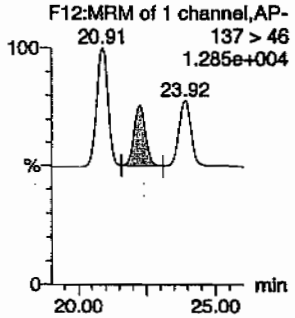
26-dinitrotoluene-d3



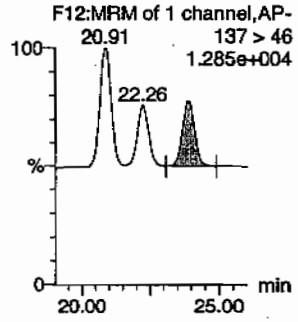
2-Nitrotoluene



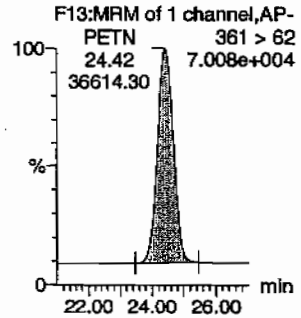
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/ml	%Rec	%Dev	S/N
WXX100118-07CCV	HMX	176 > 102	5.18	12897.193	3053.695	12897.193	2111.736	bb			654.1786	109.0	9.0	1605.2
WXX100118-07CCV	RDX	176 > 102	7.54	9709.867	3053.695	9709.867	1589.855	bb			715.0147	119.2	19.2	1005.3
WXX100118-07CCV	135-Trinitrobenzene	213 > 183	10.14	13048.964	3053.695	13048.964	2136.586	bb			641.2651	106.9	6.9	652.8
WXX100118-07CCV	13-Dinitrobenzene-d4	172 > 142	11.97	3053.695		3053.695	3053.695	bb			449.9576	90.0	-10.0	275.3
WXX100118-07CCV	13-Dinitrobenzene	168 > 138	12.10	4360.870	3053.695	4360.870	714.032	bb			604.2328	100.7	0.7	319.5
WXX100118-07CCV	Tetryl	241 > 181	12.58	3455.837	3053.695	3455.837	565.845	bb			579.3962	96.6	-3.4	477.8
WXX100118-07CCV	Nitrobenzene	123 > 46	13.54	3479.890	3053.695	3479.890	569.783	bb			680.5938	113.4	13.4	256.7
WXX100118-07CCV	4-Amino-26-dinitrotoluene	197 > 167	15.52	6510.371	17856.412	6510.371	182.298	MM	20-Jan-10	08:53:22	690.5433	115.1	15.1	276.2
WXX100118-07CCV	2-Amino-46-dinitrotoluene	197 > 180	16.40	9071.741	17856.412	9071.741	254.019	bb			652.0603	108.7	8.7	510.3
WXX100118-07CCV	246-Trinitrotoluene	227 > 210	15.31	8608.719	17856.412	8608.719	241.054	bb			684.5699	114.1	14.1	434.5
WXX100118-07CCV	34-dinitrotoluene	182 > 152	14.30	11292.611	17856.412	11292.611	316.206	bb			339.1887	113.1	13.1	196.9
WXX100118-07CCV	26-dinitrotoluene	182 > 152	17.46	23798.637	17856.412	23798.637	666.389	MM	20-Jan-10	08:57:01	610.0923	101.7	1.7	934.5
WXX100118-07CCV	24-dinitrotoluene	182 > 152	18.12	5640.626	17856.412	5640.626	157.944	MM	20-Jan-10	09:03:28	624.7009	104.1	4.1	204.9
WXX100118-07CCV	26-dinitrotoluene-d3	185 > 155	17.29	17856.412		17856.412	17856.412	bb			486.6947	97.3	-2.7	1020.3
WXX100118-07CCV	2-Nitrotoluene	137 > 46	20.91	3124.791	17856.412	3124.791	87.498	bb			583.0207	97.2	-2.8	376.5
WXX100118-07CCV	4-Nitrotoluene	137 > 46	22.26	1600.400	17856.412	1600.400	44.813	bb			625.8882	104.3	4.3	194.3
WXX100118-07CCV	3-Nitrotoluene	137 > 46	23.92	1854.917	17856.412	1854.917	51.940	bb			609.0493	101.5	1.5	210.7
WXX100118-07CCV	PETN	361 > 62	24.42	36614.297	17856.412	36614.297	1025.242	bb			613.5454	102.3	2.3	5926.0

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

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GRAND MEAN AVERAGE

Vendor: Restek
Date of Analysis: 01/19/10
Time of Injection: 1537
Standard Number: WXX100118-07CCV
Data File: EXP0118053a

HMX		109.0
RDX		119.2
135-TNB		106.9
13-DNB		100.7
Tetryl		96.6
Nitrobenzene		113.4
4A-26-DNT		115.1
2A-46-DNT		108.7
246-TNT		114.1
34-DNT(surr)		113.1
26-DNT		101.7
24-DNT		104.1
2-NT		97.2
4-NT		104.3
3-NT		101.5
PETN		102.3
	Total	1707.9
	Average	106.7

MAT 1/20/10

HNM 01/20/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1130

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP0118055a

Analysis Date: 19-JAN-10 16:36

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
RDX	40	45.247	113	
Tetryl	40	46.869	117	
m-Dinitrobenzene	40	38.753	97	
m-Nitrotoluene	40	44.424	111	
o-Nitrotoluene	40	41.754	104	
p-Nitrotoluene	40	38.156	95	
1,3,5-Trinitrobenzene	40	52.005	130	*
1,3-Dinitrobenzene-d4	500	471.448	94	
2,4,6-Trinitrotoluene	40	53.52	134	*
2,4-Dinitrotoluene	40	40.215	101	
2,6-Dinitrotoluene	40	39.93	100	
2,6-Dinitrotoluene-d3	500	509.225	102	
2-Amino-4,6-dinitrotoluene	40	45.269	113	
3,4-Dinitrotoluene	20	26.069	130	*
4-Amino-2,6-dinitrotoluene	40	61.793	154	*
HMX	40	48.373	121	
Nitrobenzene	40	46.845	117	
PETN	40	58.517	146	*

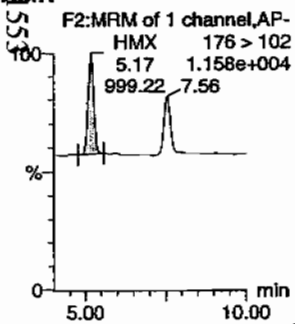
Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 50-150%
OtherTarget Analytes 70-130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA1.qld, Time: Wed Jan 20 09:06:02 2010

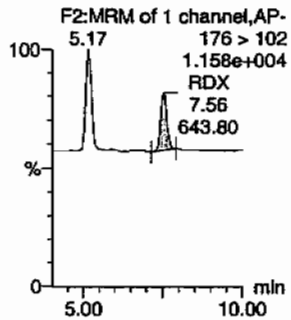
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118055a
Date: 19-Jan-2010
Time: 16:36:45
ID: WXX100118-08CRI
Vial: 1:1,C

MMT 1/20/10

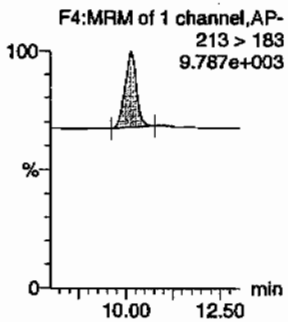
HMX



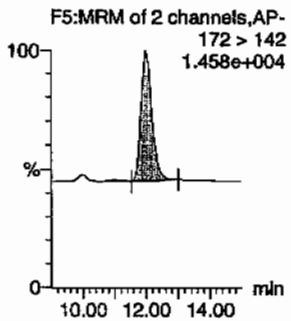
RDX



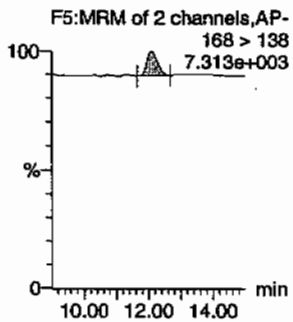
135-Trinitrobenzene



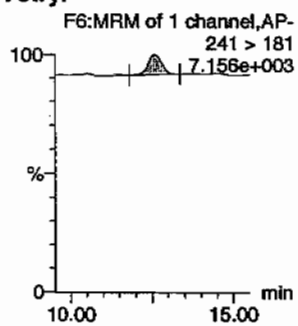
13-Dinitrobenzene-d4



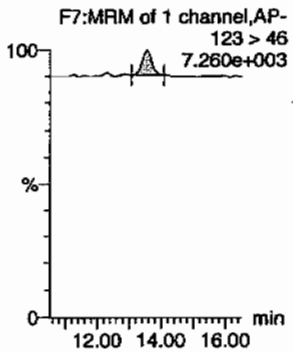
13-Dinitrobenzene



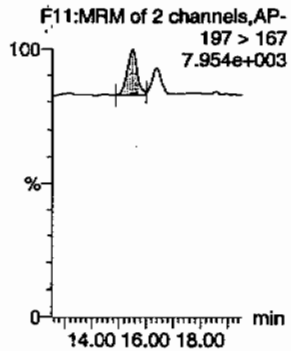
Tetryl



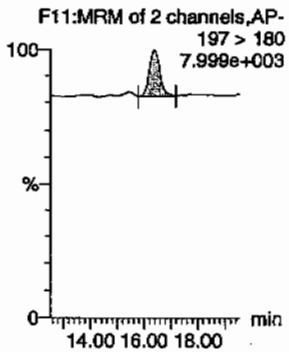
Nitrobenzene



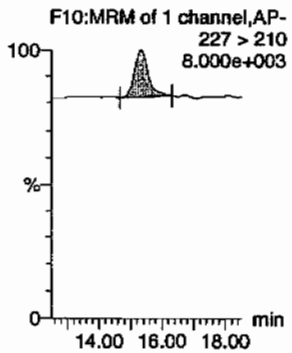
4-Amino-26-dinitrotoluene



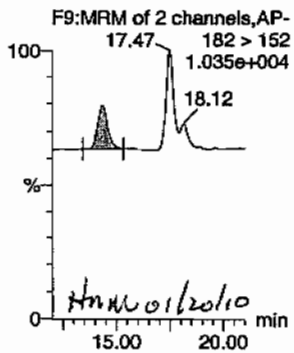
2-Amino-46-dinitrotoluene



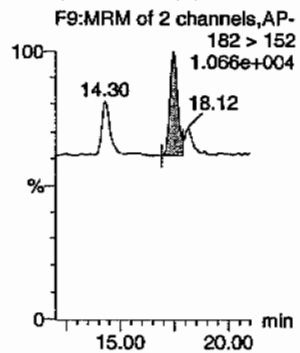
246-Trinitrotoluene



34-dinitrotoluene



26-dinitrotoluene



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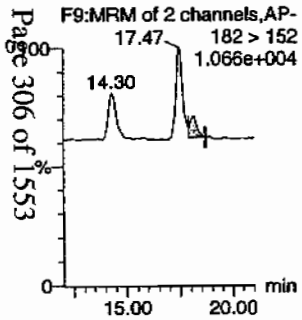
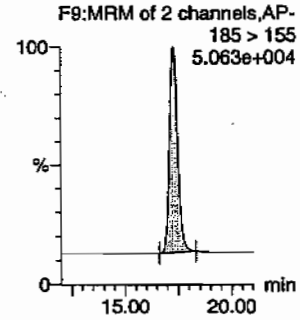
Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA1.qld, Time: Wed Jan 20 09:06:02 2010

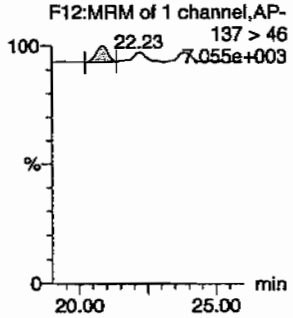
24-dinitrotoluene



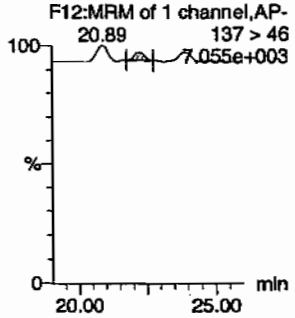
26-dinitrotoluene-d3



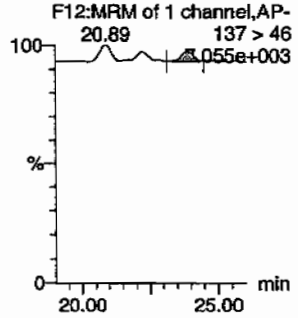
2-Nitrotoluene



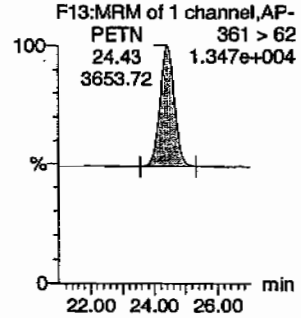
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/ml	%Rec	%Dev	S/N
WXX100118-08CRI	HMX	176 > 102	5.17	999.224	3199.541	999.224	156.151	bb			48.3729	120.9	20.9	119.8
WXX100118-08CRI	RDX	176 > 102	7.56	643.797	3199.541	643.797	100.608	bb			45.2469	113.1	13.1	67.1
WXX100118-08CRI	135-Trinitrobenzene	213 > 183	10.14	1108.781	3199.541	1108.781	173.272	bb			52.0050	130.0	30.0	204.6
WXX100118-08CRI	13-Dinitrobenzene-d4	172 > 142	11.97	3199.541		3199.541	3199.541	bb			471.4478	94.3	-5.7	362.5
WXX100118-08CRI	13-Dinitrobenzene	168 > 138	12.10	293.048	3199.541	293.048	45.795	bb			38.7532	96.9	-3.1	30.7
WXX100118-08CRI	Tetryl	241 > 181	12.58	292.906	3199.541	292.906	45.773	bb			46.8693	117.2	17.2	19.8
WXX100118-08CRI	Nitrobenzene	123 > 46	13.54	250.958	3199.541	250.958	39.218	bb			46.8448	117.1	17.1	21.2
WXX100118-08CRI	4-Amino-26-dinitrotoluene	197 > 167	15.49	609.543	18683.012	609.543	16.313	MM	20-Jan-10	08:53:29	61.7927	154.5	54.5	72.0
WXX100118-08CRI	2-Amino-46-dinitrotoluene	197 > 180	16.37	658.955	18683.012	658.955	17.635	bb			45.2689	113.2	13.2	64.6
WXX100118-08CRI	246-Trinitrotoluene	227 > 210	15.31	704.195	18683.012	704.195	18.846	bb			53.5204	133.8	33.8	103.8
WXX100118-08CRI	34-dinitrotoluene	182 > 152	14.34	908.079	18683.012	908.079	24.302	bb			26.0686	130.3	30.3	27.3
WXX100118-08CRI	26-dinitrotoluene	182 > 152	17.47	1629.697	18683.012	1629.697	43.614	MM	20-Jan-10	08:57:10	39.9298	99.8	-0.2	46.9
WXX100118-08CRI	24-dinitrotoluene	182 > 152	18.12	379.920	18683.012	379.920	10.168	MM	20-Jan-10	09:03:11	40.2147	100.5	0.5	10.8
WXX100118-08CRI	26-dinitrotoluene-d3	185 > 155	17.29	18683.012		18683.012	18683.012	bb			509.2245	101.8	1.8	1918.0
WXX100118-08CRI	2-Nitrotoluene	137 > 46	20.89	234.144	18683.012	234.144	6.266	bb			41.7535	104.4	4.4	16.3
WXX100118-08CRI	4-Nitrotoluene	137 > 46	22.23	102.081	18683.012	102.081	2.732	bb			38.1558	95.4	-4.6	8.1
WXX100118-08CRI	3-Nitrotoluene	137 > 46	23.86	141.562	18683.012	141.562	3.789	bb			44.4244	111.1	11.1	8.9
WXX100118-08CRI	PETN	361 > 62	24.43	3653.719	18683.012	3653.719	97.782	bb			58.5165	146.3	46.3	725.0

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

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GRAND MEAN AVERAGE

Vendor:	UltraScientific
Date of Analysis	01/19/10
Time of Injection	1636
Standard Number	WXX100118-08CRI
Data File	EXP0118055a

HMX		120.9
RDX		113.1
135-TNB		130.0
13-DNB		96.9
Tetryl		117.2
Nitrobenzene		117.1
4A-26-DNT		154.5
2A-46-DNT		113.2
246-TNT		133.8
34-DNT(surr)		130.3
26-DNT		99.8
24-DNT		100.5
2-NT		104.4
4-NT		95.4
3-NT		111.1
PETN		146.3
	Total	1884.5
	Average	117.8

MAP 1/20/10

HMM 01/20/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10–1130

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXP0118063a

Analysis Date: 19–JAN–10 20:32

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
2,6–Dinitrotoluene	600	609.367	102	
2,6–Dinitrotoluene–d3	500	459.861	92	
2–Amino–4,6–dinitrotoluene	600	665.061	111	
3,4–Dinitrotoluene	300	317.724	106	
4–Amino–2,6–dinitrotoluene	600	675.893	113	
HMX	600	589.035	98	
Nitrobenzene	600	539.341	90	
PETN	600	624.935	104	
RDX	600	603.348	101	
Tetryl	600	551.593	92	
m–Dinitrobenzene	600	587.865	98	
m–Nitrotoluene	600	623.448	104	
o–Nitrotoluene	600	569.875	95	
p–Nitrotoluene	600	638.952	106	
1,3,5–Trinitrobenzene	600	597.48	100	
1,3–Dinitrobenzene–d4	500	493.748	99	
2,4,6–Trinitrotoluene	600	651.248	109	
2,4–Dinitrotoluene	600	634.193	106	

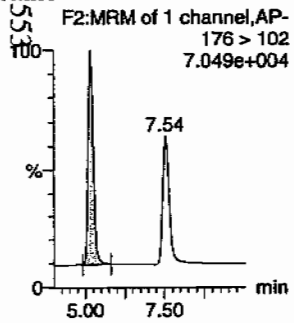
Recovery Limits:
3,4–Dinitrotoluene (Surrogate),TATB, tris(o–cresyl)phosphate, 3,5–Dinitroaniline, 2,6–Diamino–4–nitrotoluene , 2,4–Diamino–6–nitrotoluene 70–130%
OtherTarget Analytes 80–120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA1.qld, Time: Wed Jan 20 09:06:02 2010

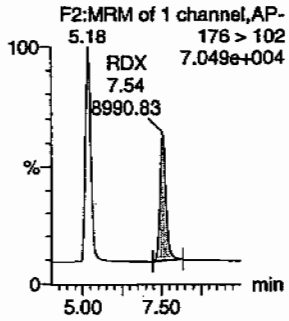
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118063a
Date: 19-Jan-2010
Time: 20:32:42
ID: WXX100118-07CCV
Vial: 1:1,B

HMW 1/20/10

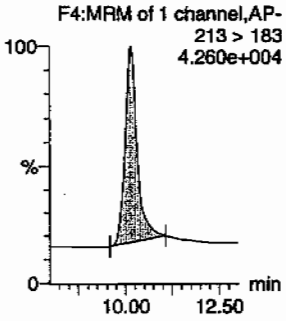
HMX



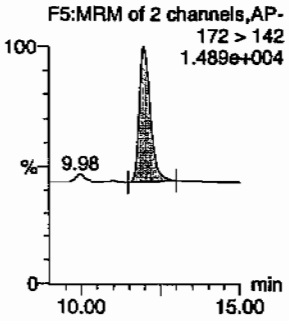
RDX



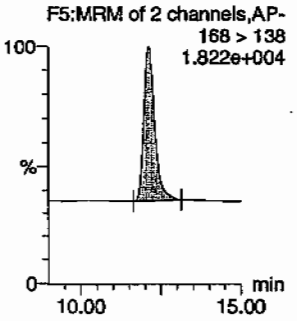
135-Trinitrobenzene



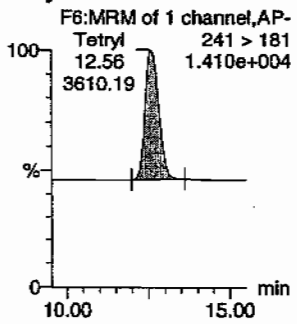
13-Dinitrobenzene-d4



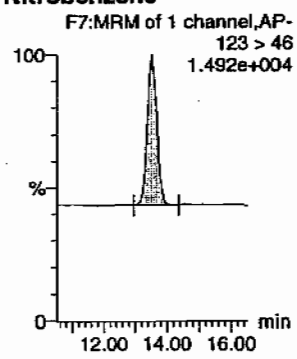
13-Dinitrobenzene



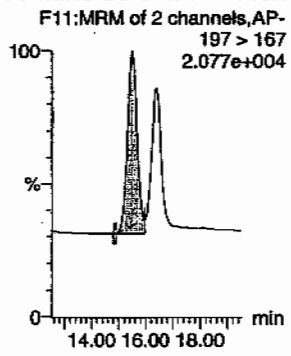
Tetryl



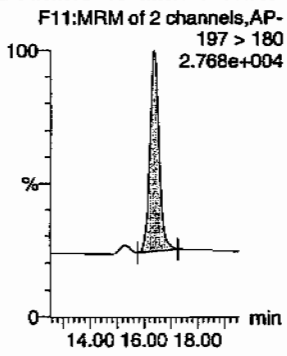
Nitrobenzene



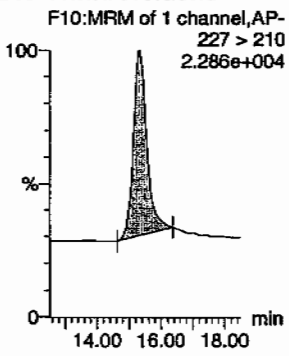
4-Amino-26-dinitrotoluene



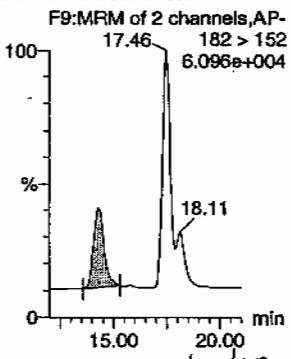
2-Amino-46-dinitrotoluene



246-Trinitrotoluene

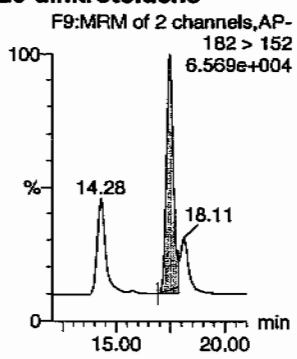


34-dinitrotoluene



HMW 01/20/10

26-dinitrotoluene



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

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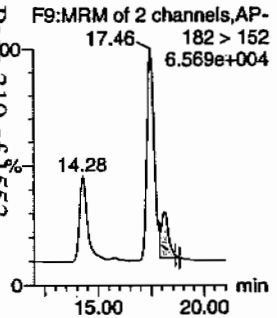
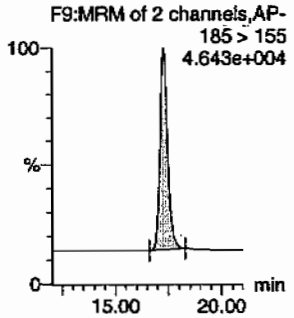
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA1.qld, Time: Wed Jan 20 09:06:02 2010

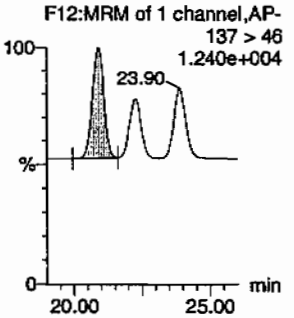
24-dinitrotoluene



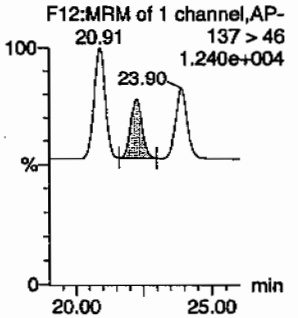
26-dinitrotoluene-d3



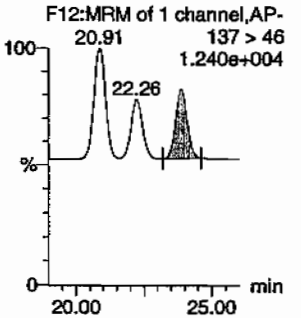
2-Nitrotoluene



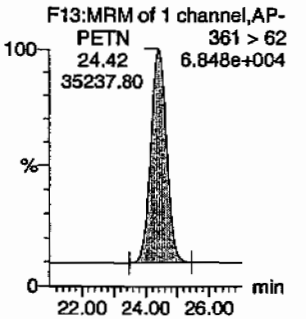
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	S/Area	AbsResp	Response	Flags	Mod Date	Mod Time	ng/ml	%Rec	%Dev	S/N
WXX100118-07CCV	HMX	176 > 102	5.18	12743.064	3350.884	12743.064	1901.448	db			589.0352	98.2	-1.8	2926.4
WXX100118-07CCV	RDX	176 > 102	7.54	8990.833	3350.884	8990.833	1341.561	bb			603.3480	100.6	0.6	1769.9
WXX100118-07CCV	135-Trinitrobenzene	213 > 183	10.14	13341.229	3350.884	13341.229	1990.703	bb			597.4804	99.6	-0.4	1645.4
WXX100118-07CCV	13-Dinitrobenzene-d4	172 > 142	11.97	3350.884		3350.884	3350.884	bb			493.7480	98.7	-1.3	335.0
WXX100118-07CCV	13-Dinitrobenzene	168 > 138	12.13	4655.647	3350.884	4655.647	694.689	bb			587.8648	98.0	-2.0	579.2
WXX100118-07CCV	Tetryl	241 > 181	12.56	3610.188	3350.884	3610.188	538.692	bb			551.5927	91.9	-8.1	546.5
WXX100118-07CCV	Nitrobenzene	123 > 46	13.53	3026.039	3350.884	3026.039	451.528	bb			539.3408	89.9	-10.1	298.3
WXX100118-07CCV	4-Amino-26-dinitrotoluene	197 > 167	15.52	6020.920	16871.916	6020.920	178.430	MM	20-Jan-10	08:53:53	675.8928	112.6	12.6	342.0
WXX100118-07CCV	2-Amino-46-dinitrotoluene	197 > 180	16.39	8742.483	16871.916	8742.483	259.084	bb			665.0614	110.8	10.8	292.1
WXX100118-07CCV	246-Trinitrotoluene	227 > 210	15.33	7738.158	16871.916	7738.158	229.321	bb			651.2484	108.5	8.5	469.3
WXX100118-07CCV	34-dinitrotoluene	182 > 152	14.28	9994.788	16871.916	9994.788	296.196	bb			317.7243	105.9	5.9	515.6
WXX100118-07CCV	26-dinitrotoluene	182 > 152	17.46	22459.803	16871.916	22459.803	665.597	MM	20-Jan-10	08:57:52	609.3674	101.6	1.6	866.8
WXX100118-07CCV	24-dinitrotoluene	182 > 152	18.11	5410.613	16871.916	5410.613	160.344	MM	20-Jan-10	09:02:07	634.1925	105.7	5.7	187.6
WXX100118-07CCV	26-dinitrotoluene-d3	185 > 155	17.30	16871.916		16871.916	16871.916	bb			459.8612	92.0	-8.0	1513.5
WXX100118-07CCV	2-Nitrotoluene	137 > 46	20.91	2885.936	16871.916	2885.936	85.525	bb			569.8749	95.0	-5.0	180.8
WXX100118-07CCV	4-Nitrotoluene	137 > 46	22.26	1543.726	16871.916	1543.726	45.748	bb			638.9520	106.5	6.5	96.7
WXX100118-07CCV	3-Nitrotoluene	137 > 46	23.90	1794.082	16871.916	1794.082	53.168	bb			623.4477	103.9	3.9	112.9
WXX100118-07CCV	PETN	361 > 62	24.42	35237.797	16871.916	35237.797	1044.274	bb			624.9346	104.2	4.2	4694.1

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

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GRAND MEAN AVERAGE

Vendor: Restek
Date of Analysis: 01/19/10
Time of Injection: 2032
Standard Number: WXX100118-07CCV
Data File: EXP0118063a

HMX		98.2
RDX		100.6
135-TNB		99.6
13-DNB		98.0
Tetryl		91.9
Nitrobenzene		89.9
4A-26-DNT		112.6
2A-46-DNT		110.8
246-TNT		108.5
34-DNT(surr)		105.9
26-DNT		101.6
24-DNT		105.7
2-NT		95.0
4-NT		106.5
3-NT		103.9
PETN		104.2
	Total	1632.9
	Average	102.1

MAP 1/20/10

Hmm 01/20/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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

7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1130

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP0118065a

Analysis Date: 19-JAN-10 21:31

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	40	53.768	134	*
1,3-Dinitrobenzene-d4	500	477.108	95	
2,4,6-Trinitrotoluene	40	40.849	102	
2,4-Dinitrotoluene	40	38.415	96	
2,6-Dinitrotoluene	40	40.096	100	
2,6-Dinitrotoluene-d3	500	481.721	96	
2-Amino-4,6-dinitrotoluene	40	40.575	101	
3,4-Dinitrotoluene	20	19.64	98	
4-Amino-2,6-dinitrotoluene	40	43.191	108	
HMX	40	46.336	116	
Nitrobenzene	40	40.877	102	
PETN	40	62.952	157	*
RDX	40	43.65	109	
Tetryl	40	41.268	103	
m-Dinitrobenzene	40	42.917	107	
m-Nitrotoluene	40	37.778	94	
o-Nitrotoluene	40	41.925	105	
p-Nitrotoluene	40	38.775	97	

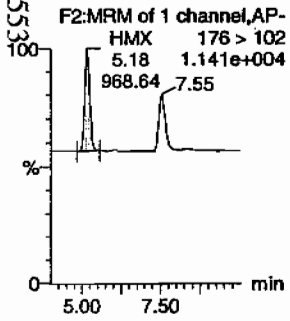
Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 50-150%
OtherTarget Analytes 70-130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA1.qld, Time: Wed Jan 20 09:06:02 2010

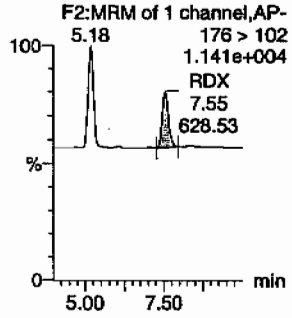
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118065a
Date: 19-Jan-2010
Time: 21:31:46
ID: WXX100118-08CRI
Vial: 1:1,C

MAP 1/20/10

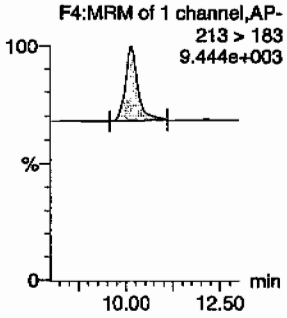
HMX



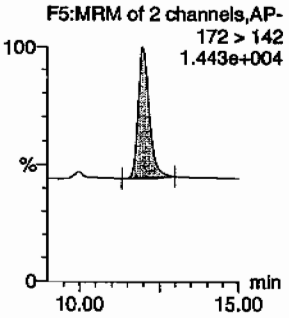
RDX



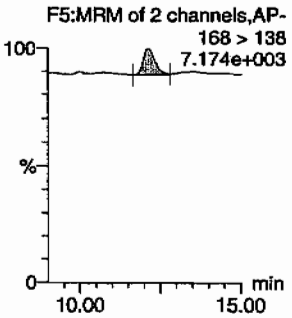
135-Trinitrobenzene



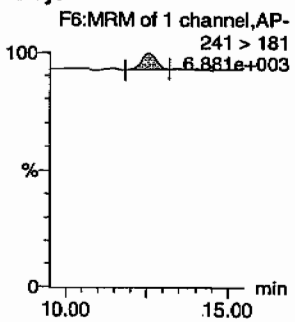
13-Dinitrobenzene-d4



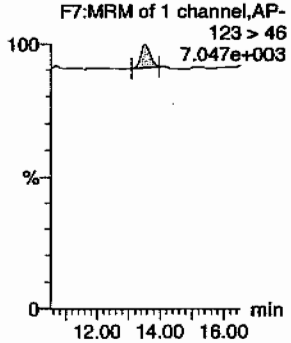
13-Dinitrobenzene



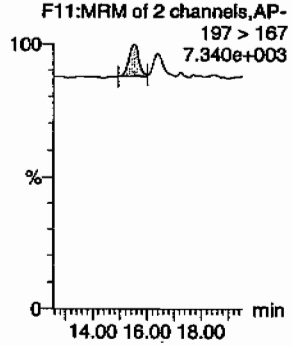
Tetryl



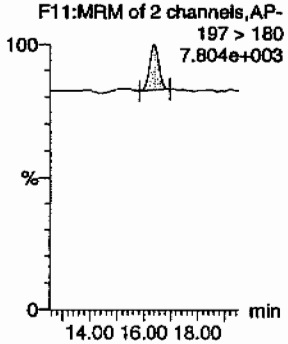
Nitrobenzene



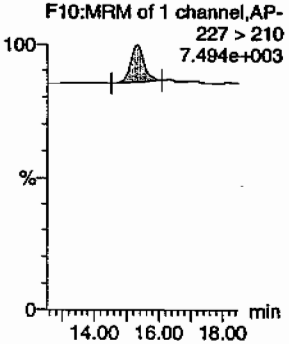
4-Amino-26-dinitrotoluene



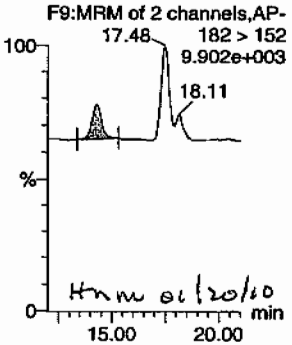
2-Amino-46-dinitrotoluene



246-Trinitrotoluene

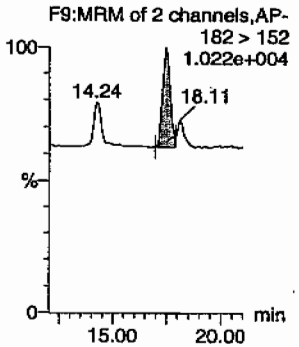


34-dinitrotoluene



Hmm 01/20/10

26-dinitrotoluene



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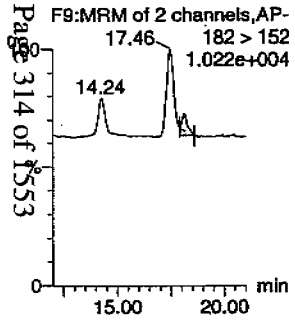
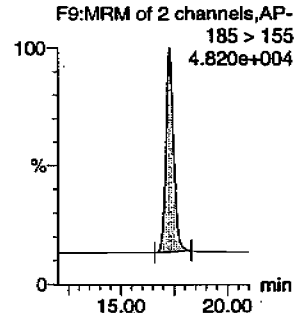
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA1.qld, Time: Wed Jan 20 09:06:02 2010

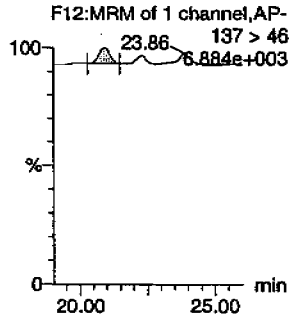
24-dinitrotoluene



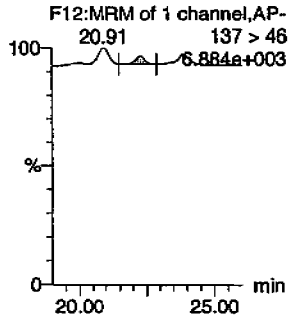
26-dinitrotoluene-d3



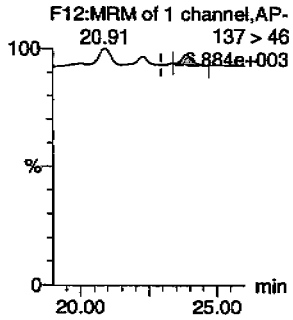
2-Nitrotoluene



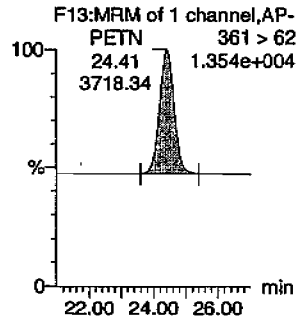
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	S Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N
WXX100118-08CRI	HMX	176 > 102	5.18	968.644	3237.958	968.644	149.576	bb			46.3361	115.8	15.8	155.3
WXX100118-08CRI	RDX	176 > 102	7.55	628.535	3237.958	628.535	97.057	bb			43.6501	109.1	9.1	83.4
WXX100118-08CRI	135-Trinitrobenzene	213 > 183	10.14	1160.131	3237.958	1160.131	179.145	bb			53.7679	134.4	34.4	140.2
WXX100118-08CRI	13-Dinitrobenzene-d4	172 > 142	11.97	3237.958		3237.958	3237.958	bb			477.1085	95.4	-4.6	294.7
WXX100118-08CRI	13-Dinitrobenzene	168 > 138	12.13	328.432	3237.958	328.432	50.716	bb			42.9172	107.3	7.3	26.0
WXX100118-08CRI	Tetryl	241 > 181	12.56	260.997	3237.958	260.997	40.303	bb			41.2679	103.2	3.2	9.8
WXX100118-08CRI	Nitrobenzene	123 > 46	13.52	221.614	3237.958	221.614	34.221	bb			40.8765	102.2	2.2	24.6
WXX100118-08CRI	4-Amino-26-dinitrotoluene	197 > 167	15.48	403.042	17673.938	403.042	11.402	MM	20-Jan-10	08:54:00	43.1913	108.0	8.0	19.8
WXX100118-08CRI	2-Amino-46-dinitrotoluene	197 > 180	16.36	558.733	17673.938	558.733	15.807	bb			40.5754	101.4	1.4	80.6
WXX100118-08CRI	246-Trinitrotoluene	227 > 210	15.30	508.441	17673.938	508.441	14.384	bb			40.8489	102.1	2.1	32.3
WXX100118-08CRI	34-dinitrotoluene	182 > 152	14.28	647.194	17673.938	647.194	18.309	bb			19.6400	98.2	-1.8	34.6
WXX100118-08CRI	26-dinitrotoluene	182 > 152	17.46	1548.096	17673.938	1548.096	43.796	MM	20-Jan-10	08:58:04	40.0961	100.2	0.2	73.9
WXX100118-08CRI	24-dinitrotoluene	182 > 152	18.11	343.313	17673.938	343.313	9.712	MM	20-Jan-10	09:01:54	38.4146	96.0	-4.0	18.5
WXX100118-08CRI	26-dinitrotoluene-d3	185 > 155	17.30	17673.938		17673.938	17673.938	bb			481.7212	96.3	-3.7	1787.2
WXX100118-08CRI	2-Nitrotoluene	137 > 46	20.91	222.409	17673.938	222.409	6.292	bb			41.9253	104.8	4.8	111.7
WXX100118-08CRI	4-Nitrotoluene	137 > 46	22.29	98.134	17673.938	98.134	2.776	bb			38.7747	96.9	-3.1	58.0
WXX100118-08CRI	3-Nitrotoluene	137 > 46	23.86	113.880	17673.938	113.880	3.222	MM	20-Jan-10	09:05:44	37.7778	94.4	-5.6	66.0
WXX100118-08CRI	PETN	361 > 62	24.41	3718.344	17673.938	3718.344	105.193	bb			62.9516	157.4	57.4	966.8

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

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GRAND MEAN AVERAGE

Vendor:	UltraScientific
Date of Analysis	01/19/10
Time of Injection	2131
Standard Number	WXX100118-08CRI
Data File	EXP0118065a

HMX	115.8
RDX	109.1
135-TNB	134.4
13-DNB	107.3
Tetryl	103.2
Nitrobenzene	102.2
4A-26-DNT	108.0
2A-46-DNT	101.4
246-TNT	102.1
34-DNT(surr)	98.2
26-DNT	100.2
24-DNT	96.0
2-NT	104.8
4-NT	96.9
3-NT	94.4
PETN	157.4
Total	1731.4
Average	108.2

MTP 1/20/10

Hnm 01/20/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC **GEL Job No (SDG):** 10–1130

Lab Code: GEL **GEL Sample ID:** WXXCCV

GEL Data File EXP0118076a **Analysis Date:** 20–JAN–10 02:56

LCMSMS ID: 903 **Column ID:** Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
m–Dinitrobenzene	600	608.053	101	
m–Nitrotoluene	600	591.079	99	
o–Nitrotoluene	600	567.32	95	
p–Nitrotoluene	600	592.52	99	
1,3,5–Trinitrobenzene	600	640.284	107	
1,3–Dinitrobenzene–d4	500	490.948	98	
2,4,6–Trinitrotoluene	600	650.13	108	
2,4–Dinitrotoluene	600	652.421	109	
2,6–Dinitrotoluene	600	608.03	101	
2,6–Dinitrotoluene–d3	500	511.595	102	
2–Amino–4,6–dinitrotoluene	600	628.911	105	
3,4–Dinitrotoluene	300	313.769	105	
4–Amino–2,6–dinitrotoluene	600	625.949	104	
HMX	600	668.961	111	
Nitrobenzene	600	609.741	102	
PETN	600	626.708	104	
RDX	600	734.827	122	*
Tetryl	600	568.121	95	

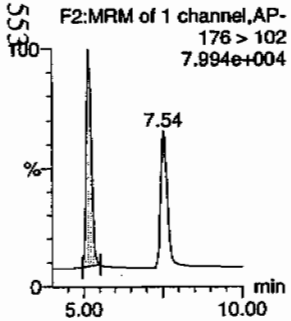
Recovery Limits:
3,4–Dinitrotoluene (Surrogate),TATB, tris(o–cresyl)phosphate, 3,5–Dinitroaniline, 2,6–Diamino–4–nitrotoluene , 2,4–Diamino–6–nitrotoluene 70–130%
OtherTarget Analytes 80–120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA1.qld, Time: Wed Jan 20 09:06:02 2010

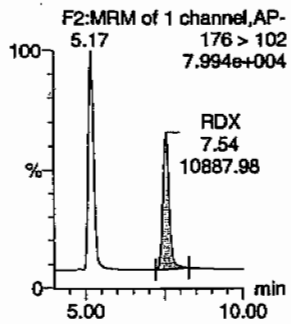
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118076a
Date: 20-Jan-2010
Time: 02:56:03
ID: WXX100118-07CCV
Vial: 1:1,B

MM 1/20/10

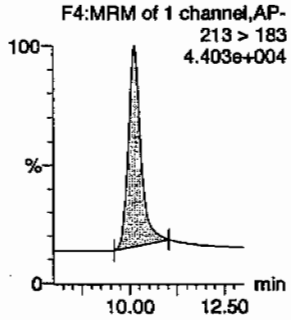
HMX



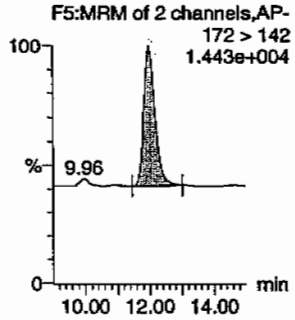
RDX



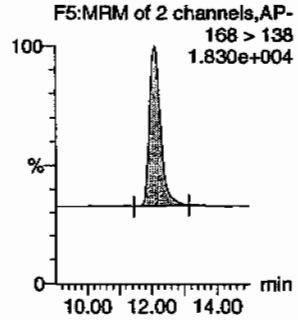
135-Trinitrobenzene



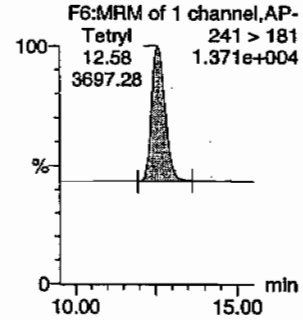
13-Dinitrobenzene-d4



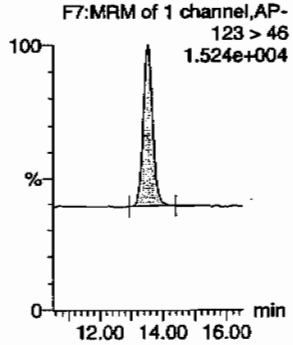
13-Dinitrobenzene



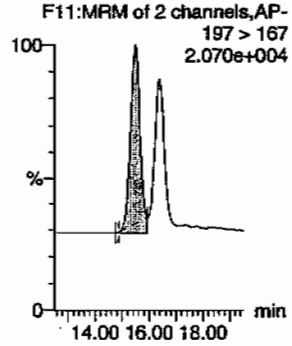
Tetryl



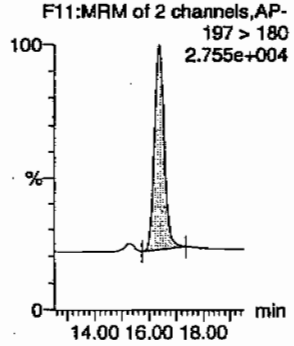
Nitrobenzene



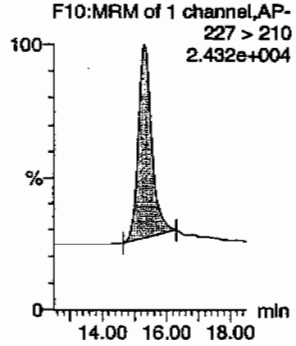
4-Amino-26-dinitrotoluene



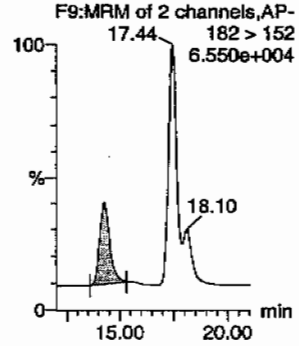
2-Amino-46-dinitrotoluene



246-Trinitrotoluene

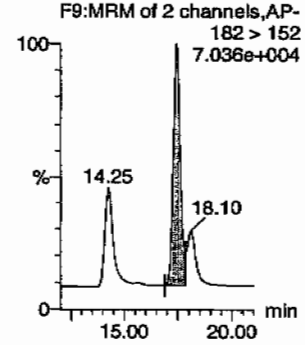


34-dinitrotoluene



Hmw 01/20/10

26-dinitrotoluene



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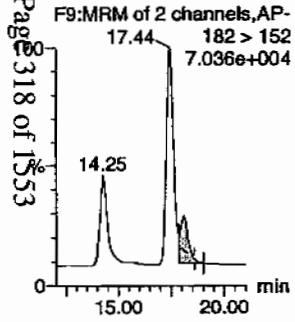
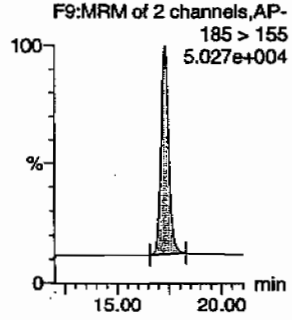
Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA1.qld, Time: Wed Jan 20 09:06:02 2010

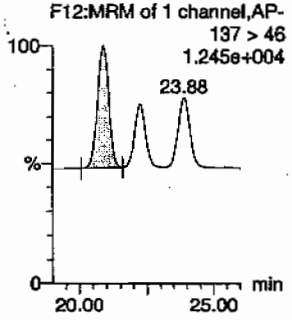
24-dinitrotoluene



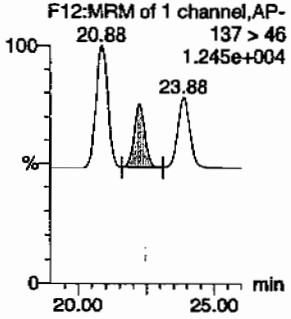
26-dinitrotoluene-d3



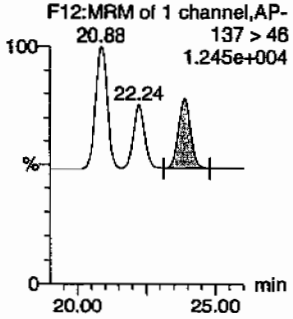
2-Nitrotoluene



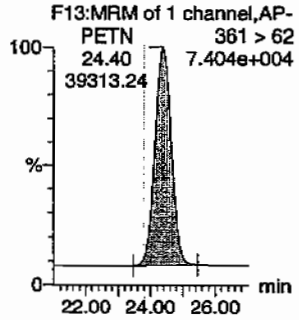
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	Amount	%Rec	%Dev	S/N
WXX100118-07CCV	HMX	176 > 102	5.17	14390.106	3331.883	14390.106	2159.455	bb			668.9614	111.5	11.5	2494.9
WXX100118-07CCV	RDX	176 > 102	7.54	10887.982	3331.883	10887.982	1633.908	bb			734.8268	122.5	22.5	1571.8
WXX100118-07CCV	135-Trinitrobenzene	213 > 183	10.14	14215.931	3331.883	14215.931	2133.318	bb			640.2842	106.7	6.7	2233.9
WXX100118-07CCV	13-Dinitrobenzene-d4	172 > 142	11.97	3331.883		3331.883	3331.883	bb			490.9482	98.2	-1.8	247.2
WXX100118-07CCV	13-Dinitrobenzene	168 > 138	12.10	4788.223	3331.883	4788.223	718.546	bb			608.0530	101.3	1.3	362.0
WXX100118-07CCV	Tetryl	241 > 181	12.58	3697.284	3331.883	3697.284	554.834	bb			568.1214	94.7	-5.3	301.4
WXX100118-07CCV	Nitrobenzene	123 > 46	13.54	3401.629	3331.883	3401.629	510.466	bb			609.7409	101.6	1.6	404.8
WXX100118-07CCV	4-Amino-26-dinitrotoluene	197 > 167	15.49	6203.312	18769.986	6203.312	165.246	MM	20-Jan-10	08:54:45	625.9491	104.3	4.3	110.8
WXX100118-07CCV	2-Amino-46-dinitrotoluene	197 > 180	16.37	9197.336	18769.986	9197.336	245.001	bb			628.9113	104.8	4.8	459.6
WXX100118-07CCV	246-Trinitrotoluene	227 > 210	15.31	8593.913	18769.986	8593.913	228.927	bb			650.1304	108.4	8.4	218.9
WXX100118-07CCV	34-dinitrotoluene	182 > 152	14.30	10980.773	18769.986	10980.773	292.509	bb			313.7691	104.6	4.6	357.9
WXX100118-07CCV	26-dinitrotoluene	182 > 152	17.44	24931.680	18769.986	24931.680	664.137	MM	20-Jan-10	08:58:45	608.0304	101.3	1.3	1236.9
WXX100118-07CCV	24-dinitrotoluene	182 > 152	18.10	6192.308	18769.986	6192.308	164.952	MM	20-Jan-10	09:00:35	652.4206	108.7	8.7	265.7
WXX100118-07CCV	26-dinitrotoluene-d3	185 > 155	17.29	18769.986		18769.986	18769.986	bb			511.5951	102.3	2.3	858.2
WXX100118-07CCV	2-Nitrotoluene	137 > 46	20.88	3196.209	18769.986	3196.209	85.141	bb			567.3205	94.6	-5.4	302.4
WXX100118-07CCV	4-Nitrotoluene	137 > 46	22.24	1592.593	18769.986	1592.593	42.424	bb			592.5204	98.8	-1.2	158.6
WXX100118-07CCV	3-Nitrotoluene	137 > 46	23.88	1892.290	18769.986	1892.290	50.407	bb			591.0795	98.5	-1.5	173.6
WXX100118-07CCV	PETN	361 > 62	24.40	39313.238	18769.986	39313.238	1047.237	bb			626.7078	104.5	4.5	9557.0

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GRAND MEAN AVERAGE

Vendor: Restek
Date of Analysis: 01/20/10
Time of Injection: 0256
Standard Number: WXX100118-07CCV
Data File: EXP0118076a

HMX		111.5
RDX		122.5
135-TNB		106.7
13-DNB		101.3
Tetryl		94.7
Nitrobenzene		101.6
4A-26-DNT		104.3
2A-46-DNT		104.8
246-TNT		108.4
34-DNT(surr)		104.6
26-DNT		101.3
24-DNT		108.7
2-NT		94.6
4-NT		98.8
3-NT		98.5
PETN		104.5
Total		1666.8
Average		104.2

1/20/10

1/20/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10–1130

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP0118078a

Analysis Date: 20–JAN–10 03:55

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
2,6–Dinitrotoluene	40	43.09	108	
2,6–Dinitrotoluene–d3	500	509.997	102	
2–Amino–4,6–dinitrotoluene	40	40.777	102	
3,4–Dinitrotoluene	20	22.038	110	
4–Amino–2,6–dinitrotoluene	40	38.054	95	
HMX	40	45.427	114	
Nitrobenzene	40	35.181	88	
PETN	40	60.716	152	*
RDX	40	44.087	110	
Tetryl	40	41.817	105	
m–Dinitrobenzene	40	40.818	102	
m–Nitrotoluene	40	38.014	95	
o–Nitrotoluene	40	41.099	103	
p–Nitrotoluene	40	42.203	106	
1,3,5–Trinitrobenzene	40	47.507	119	
1,3–Dinitrobenzene–d4	500	492.654	99	
2,4,6–Trinitrotoluene	40	36.482	91	
2,4–Dinitrotoluene	40	37.365	93	

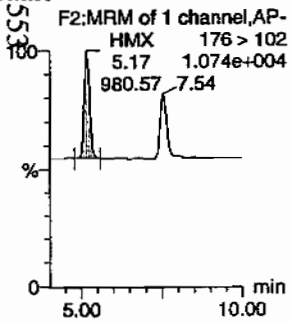
Recovery Limits:
3,4–Dinitrotoluene (Surrogate),TATB, tris(o–cresyl)phosphate, 3,5–Dinitroaniline, 2,6–Diamino–4–nitrotoluene , 2,4–Diamino–6–nitrotoluene 50–150%
OtherTarget Analytes 70–130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA1.qld, Time: Wed Jan 20 09:06:02 2010

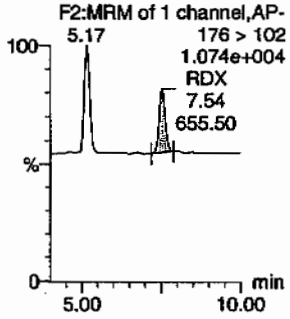
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118078a
Date: 20-Jan-2010
Time: 03:55:06
ID: WXX100118-08CRI
Vial: 1:1,C

MMT 1/20/10

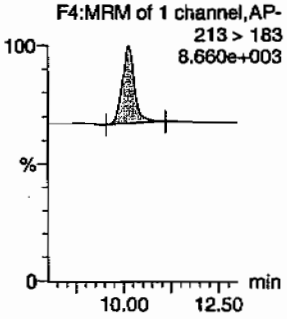
HMX



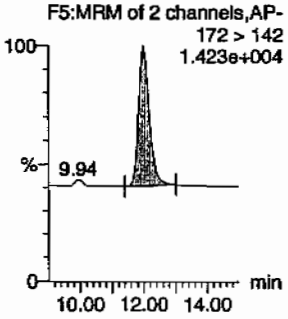
RDX



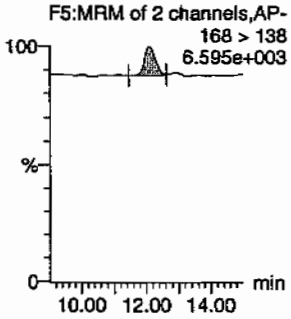
135-Trinitrobenzene



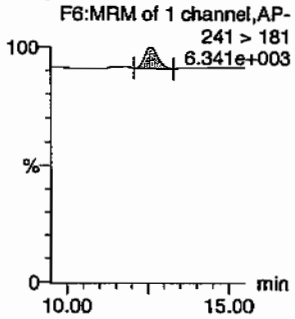
13-Dinitrobenzene-d4



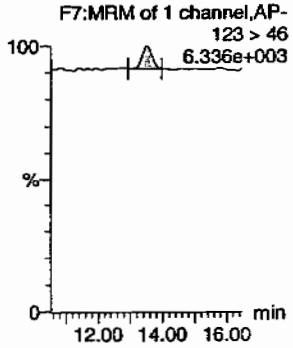
13-Dinitrobenzene



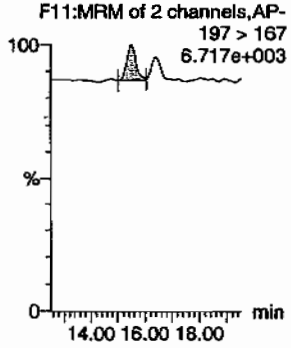
Tetryl



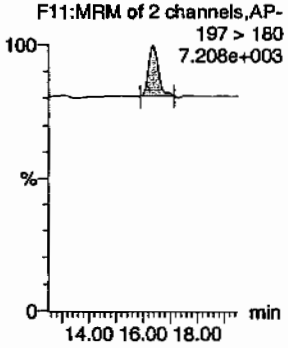
Nitrobenzene



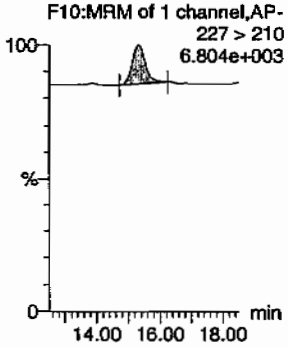
4-Amino-26-dinitrotoluene



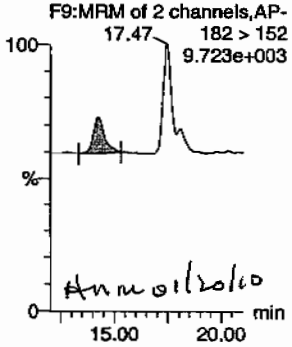
2-Amino-46-dinitrotoluene



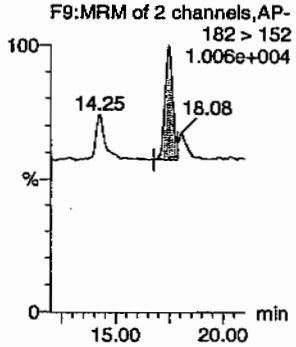
246-Trinitrotoluene



34-dinitrotoluene



26-dinitrotoluene



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

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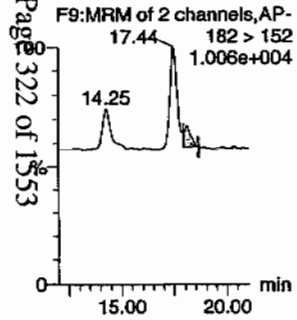
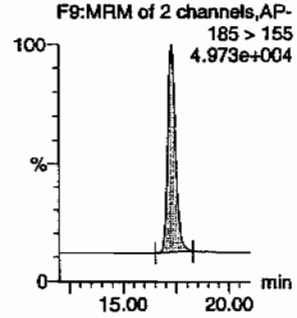
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA1.qld, Time: Wed Jan 20 09:06:02 2010

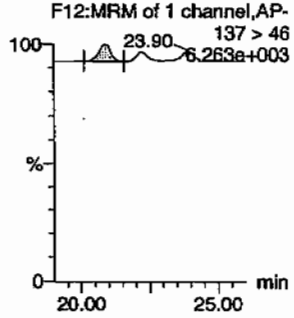
24-dinitrotoluene



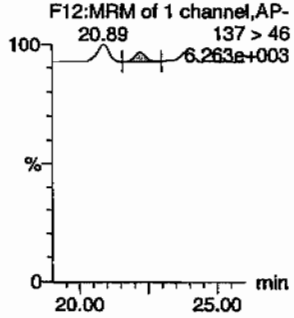
26-dinitrotoluene-d3



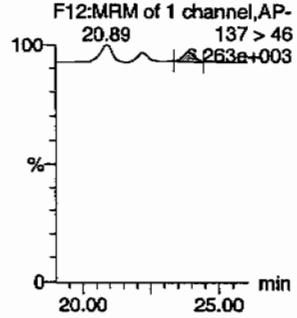
2-Nitrotoluene



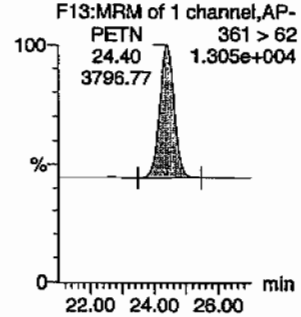
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/ml	%Rec	%Dev	S/N
WXX100118-08CRI	HMX	176 > 102	5.17	980.572	3343.459	980.572	146.640	bb			45.4266	113.6	13.6	158.6
WXX100118-08CRI	RDX	176 > 102	7.54	655.504	3343.459	655.504	98.028	bb			44.0866	110.2	10.2	93.1
WXX100118-08CRI	135-Trinitrobenzene	213 > 183	10.14	1058.448	3343.459	1058.448	158.286	bb			47.5073	118.8	18.8	120.9
WXX100118-08CRI	13-Dinitrobenzene-d4	172 > 142	11.97	3343.459		3343.459	3343.459	bb			492.6539	98.5	-1.5	178.3
WXX100118-08CRI	13-Dinitrobenzene	168 > 138	12.10	322.549	3343.459	322.549	48.236	bd			40.8184	102.0	2.0	40.9
WXX100118-08CRI	Tetryl	241 > 181	12.58	273.085	3343.459	273.085	40.839	bb			41.8167	104.5	4.5	29.1
WXX100118-08CRI	Nitrobenzene	123 > 46	13.50	196.952	3343.459	196.952	29.453	bb			35.1814	88.0	-12.0	19.9
WXX100118-08CRI	4-Amino-26-dinitrotoluene	197 > 167	15.49	375.943	18711.342	375.943	10.046	MM	20-Jan-10	08:54:52	38.0537	95.1	-4.9	37.0
WXX100118-08CRI	2-Amino-46-dinitrotoluene	197 > 180	16.37	594.466	18711.342	594.466	15.885	bb			40.7768	101.9	1.9	48.4
WXX100118-08CRI	246-Trinitrotoluene	227 > 210	15.31	480.744	18711.342	480.744	12.846	bb			36.4823	91.2	-8.8	75.2
WXX100118-08CRI	34-dinitrotoluene	182 > 152	14.25	768.850	18711.342	768.850	20.545	bb			22.0383	110.2	10.2	22.5
WXX100118-08CRI	26-dinitrotoluene	182 > 152	17.44	1761.346	18711.342	1761.346	47.066	MM	20-Jan-10	08:58:56	43.0901	107.7	7.7	67.5
WXX100118-08CRI	24-dinitrotoluene	182 > 152	18.08	353.531	18711.342	353.531	9.447	MM	20-Jan-10	09:00:15	37.3647	93.4	-6.6	14.4
WXX100118-08CRI	26-dinitrotoluene-d3	185 > 155	17.27	18711.342		18711.342	18711.342	bb			509.9967	102.0	2.0	1017.3
WXX100118-08CRI	2-Nitrotoluene	137 > 46	20.89	230.822	18711.342	230.822	6.168	bb			41.0988	102.7	2.7	81.5
WXX100118-08CRI	4-Nitrotoluene	137 > 46	22.20	113.080	18711.342	113.080	3.022	bb			42.2030	105.5	5.5	43.2
WXX100118-08CRI	3-Nitrotoluene	137 > 46	23.90	121.318	18711.342	121.318	3.242	bb			38.0139	95.0	-5.0	45.2
WXX100118-08CRI	PETN	361 > 62	24.40	3796.772	18711.342	3796.772	101.456	bb			60.7155	151.8	51.8	441.6

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GRAND MEAN AVERAGE

Vendor:	UltraScientific
Date of Analysis	01/20/10
Time of Injection	0355
Standard Number	WXX100118-08CRI
Data File	EXP0118078a

HMX	113.6
RDX	110.2
135-TNB	118.8
13-DNB	102.0
Tetryl	104.5
Nitrobenzene	88.0
4A-26-DNT	95.1
2A-46-DNT	101.9
246-TNT	91.2
34-DNT(surr)	110.2
26-DNT	107.7
24-DNT	93.4
2-NT	102.7
4-NT	105.5
3-NT	95.0
PETN	151.8
Total	1691.6
Average	105.7

MAT 1/20/10

Hmm 01/20/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10–1130

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXP0118085a

Analysis Date: 20–JAN–10 07:21

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5–Trinitrobenzene	600	632.699	105	
1,3–Dinitrobenzene–d4	500	426.571	85	
2,4,6–Trinitrotoluene	600	637.03	106	
2,4–Dinitrotoluene	600	599.038	100	
2,6–Dinitrotoluene	600	623.491	104	
2,6–Dinitrotoluene–d3	500	467.038	93	
2–Amino–4,6–dinitrotoluene	600	640.88	107	
3,4–Dinitrotoluene	300	329.178	110	
4–Amino–2,6–dinitrotoluene	600	643.668	107	
HMX	600	879.109	147	*
Nitrobenzene	600	658.1	110	
PETN	600	683.277	114	
RDX	600	799.002	133	*
Tetryl	600	578.544	96	
m–Dinitrobenzene	600	606.937	101	
m–Nitrotoluene	600	611.12	102	
o–Nitrotoluene	600	597.194	100	
p–Nitrotoluene	600	682.387	114	

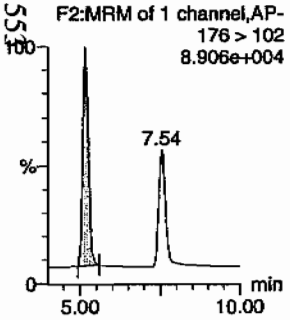
Recovery Limits:
3,4–Dinitrotoluene (Surrogate),TATB, tris(o–cresyl)phosphate, 3,5–Dinitroaniline, 2,6–Diamino–4–nitrotoluene , 2,4–Diamino–6–nitrotoluene 70–130%
OtherTarget Analytes 80–120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA1.qld, Time: Wed Jan 20 09:06:02 2010

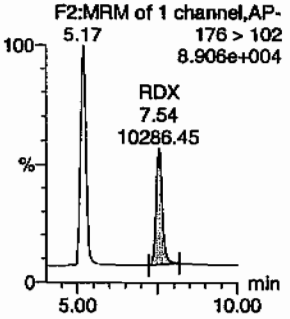
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118085a
Date: 20-Jan-2010
Time: 07:21:45
ID: WXX100118-07CCV
Vial: 1:1,B

MAP 1/20/10

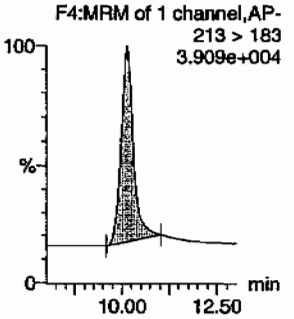
HMX



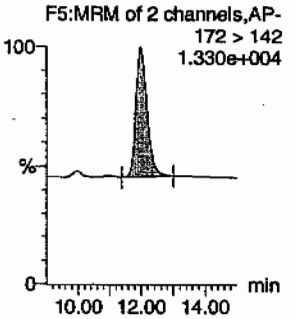
RDX



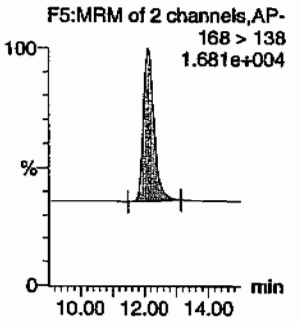
135-Trinitrobenzene



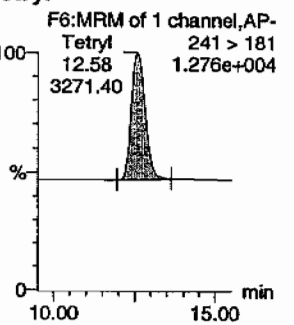
13-Dinitrobenzene-d4



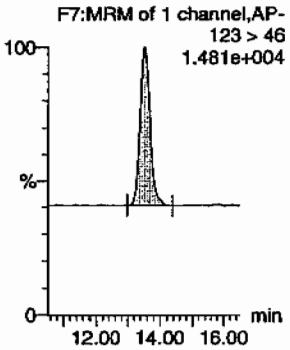
13-Dinitrobenzene



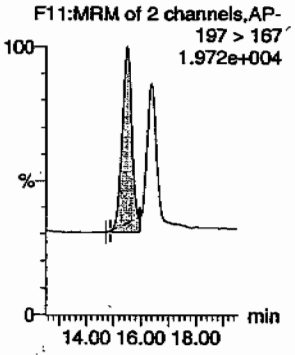
Tetryl



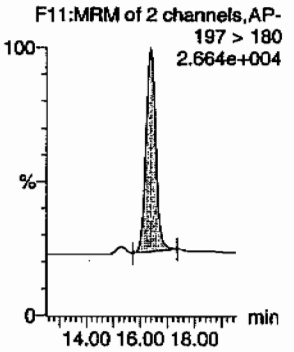
Nitrobenzene



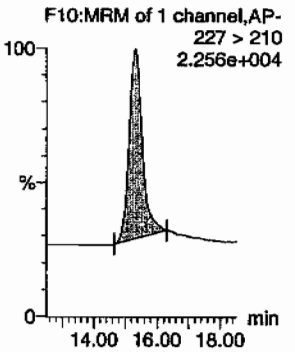
4-Amino-26-dinitrotoluene



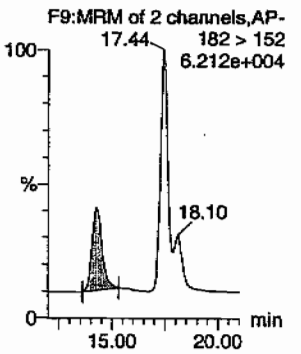
2-Amino-46-dinitrotoluene



246-Trinitrotoluene

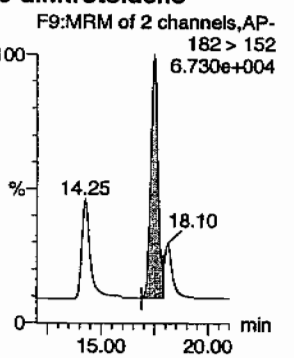


34-dinitrotoluene



Hmm 01/20/10

26-dinitrotoluene



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Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA1.qld, Time: Wed Jan 20 09:06:02 2010

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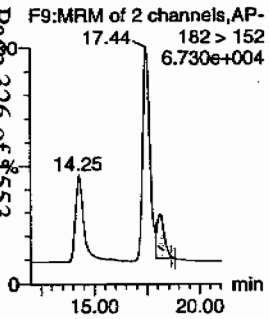
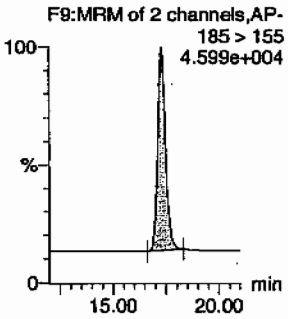
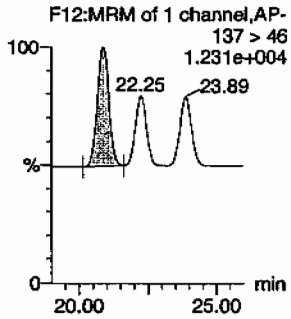
24-dinitrotoluene



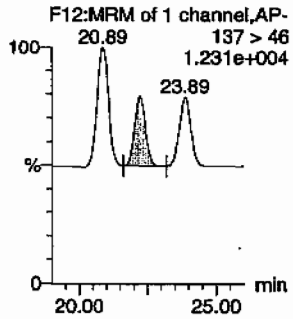
26-dinitrotoluene-d3



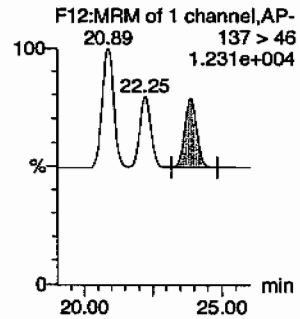
2-Nitrotoluene



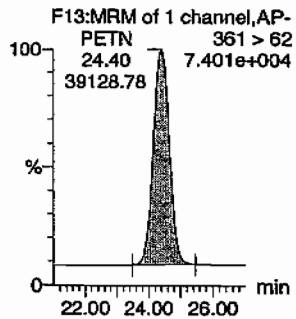
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/ml	%Rec	%Dev	S/N
WXX100118-07CCV	HMX	176 > 102	5.17	16430.898	2894.977	16430.898	2837.829	bb			879.1095	146.5	46.5	2178.1
WXX100118-07CCV	RDX	176 > 102	7.54	10286.454	2894.977	10286.454	1776.604	bb			799.0021	133.2	33.2	1165.6
WXX100118-07CCV	135-Trinitrobenzene	213 > 183	10.14	12205.478	2894.977	12205.478	2108.044	bb			632.6986	105.4	5.4	2422.2
WXX100118-07CCV	13-Dinitrobenzene-d4	172 > 142	11.97	2894.977		2894.977	2894.977	bb			426.5707	85.3	-14.7	143.0
WXX100118-07CCV	13-Dinitrobenzene	168 > 138	12.10	4152.713	2894.977	4152.713	717.227	bb			606.9370	101.2	1.2	367.6
WXX100118-07CCV	Tetryl	241 > 181	12.58	3271.397	2894.977	3271.397	565.013	bb			578.5438	96.4	-3.6	302.9
WXX100118-07CCV	Nitrobenzene	123 > 46	13.50	3189.989	2894.977	3189.989	550.952	bb			658.1004	109.7	9.7	403.5
WXX100118-07CCV	4-Amino-26-dinitrotoluene	197 > 167	15.49	5823.340	17135.229	5823.340	169.923	MM	20-Jan-10	08:55:12	643.6675	107.3	7.3	327.9
WXX100118-07CCV	2-Amino-46-dinitrotoluene	197 > 180	16.37	8556.094	17135.229	8556.094	249.664	bb			640.8804	106.8	6.8	257.3
WXX100118-07CCV	246-Trinitrotoluene	227 > 210	15.31	7687.343	17135.229	7687.343	224.314	bb			637.0299	106.2	6.2	170.3
WXX100118-07CCV	34-dinitrotoluene	182 > 152	14.25	10516.708	17135.229	10516.708	306.874	bb			329.1782	109.7	9.7	299.0
WXX100118-07CCV	26-dinitrotoluene	182 > 152	17.44	23339.014	17135.229	23339.014	681.024	MM	20-Jan-10	08:59:16	623.4911	103.9	3.9	800.8
WXX100118-07CCV	24-dinitrotoluene	182 > 152	18.10	5190.452	17135.229	5190.452	151.456	MM	20-Jan-10	08:59:56	599.0379	99.8	-0.2	165.9
WXX100118-07CCV	26-dinitrotoluene-d3	185 > 155	17.27	17135.229		17135.229	17135.229	bb			467.0381	93.4	-6.6	1899.6
WXX100118-07CCV	2-Nitrotoluene	137 > 46	20.89	3071.481	17135.229	3071.481	89.625	bb			597.1936	99.5	-0.5	206.5
WXX100118-07CCV	4-Nitrotoluene	137 > 46	22.25	1674.397	17135.229	1674.397	48.858	bb			682.3873	113.7	13.7	120.4
WXX100118-07CCV	3-Nitrotoluene	137 > 46	23.89	1786.053	17135.229	1786.053	52.116	bb			611.1201	101.9	1.9	118.3
WXX100118-07CCV	PETN	361 > 62	24.40	39128.781	17135.229	39128.781	1141.764	bb			683.2767	113.9	13.9	9499.0

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GRAND MEAN AVERAGE

Vendor: Restek
Date of Analysis: 01/20/10
Time of Injection: 0721
Standard Number: WXX100118-07CCV
Data File: EXP0118085a

HMX	146.5
RDX	133.2
135-TNB	105.4
13-DNB	101.2
Tetryl	96.4
Nitrobenzene	109.7
4A-26-DNT	107.3
2A-46-DNT	106.8
246-TNT	106.2
34-DNT(surr)	109.7
26-DNT	103.9
24-DNT	99.8
2-NT	99.5
4-NT	113.7
3-NT	101.9
PETN	113.9
Total	1755.1
Average	109.7

MJT 1/20/10

Hmm 01/20/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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

7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1130

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP0118087a

Analysis Date: 20-JAN-10 08:20

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

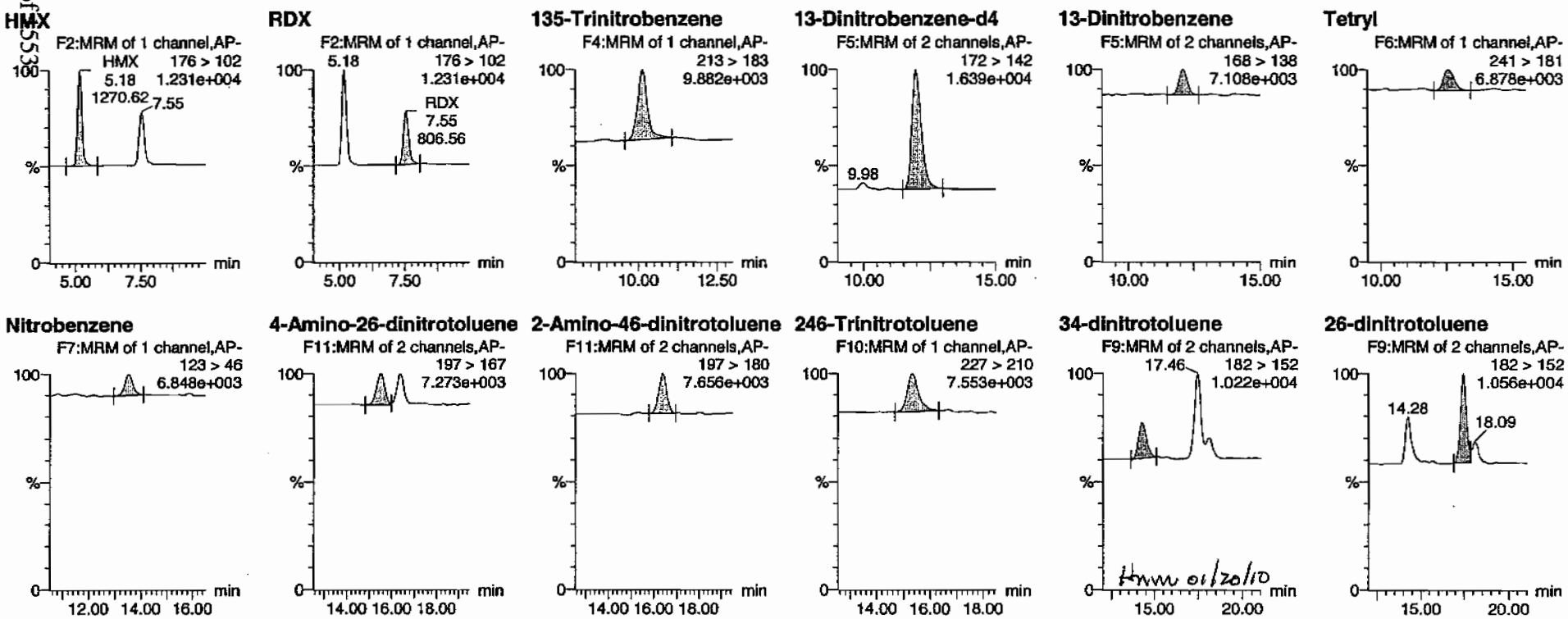
Compound	True	Found	Recovery	Q
m-Nitrotoluene	40	38.841	97	
o-Nitrotoluene	40	37.33	93	
p-Nitrotoluene	40	40.237	101	
1,3,5-Trinitrobenzene	40	47.843	120	
1,3-Dinitrobenzene-d4	500	609.314	122	
2,4,6-Trinitrotoluene	40	47.917	120	
2,4-Dinitrotoluene	40	43.948	110	
2,6-Dinitrotoluene	40	38.66	97	
2,6-Dinitrotoluene-d3	500	544.903	109	
2-Amino-4,6-dinitrotoluene	40	38.208	96	
3,4-Dinitrotoluene	20	23.717	119	
4-Amino-2,6-dinitrotoluene	40	44.756	112	
HMX	40	47.593	119	
Nitrobenzene	40	36.217	91	
PETN	40	57.219	143	*
RDX	40	43.86	110	
Tetryl	40	43.015	108	
m-Dinitrobenzene	40	36.983	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%
OtherTarget Analytes 70-130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA1.qld, Time: Wed Jan 20 09:06:02 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118087a
Date: 20-Jan-2010
Time: 08:20:48
ID: WXX100118-08CRI
Vial: 1:1,C

MM 1/20/10



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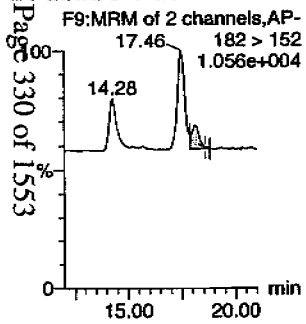
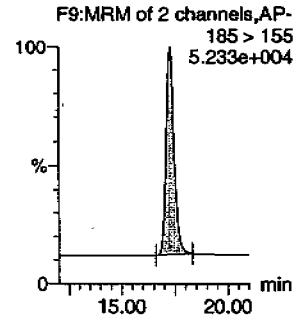
Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA1.qld, Time: Wed Jan 20 09:06:02 2010

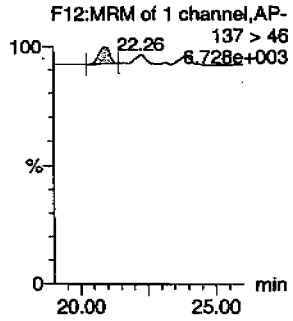
24-dinitrotoluene



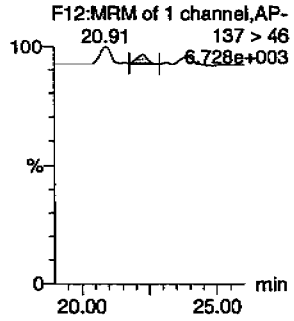
26-dinitrotoluene-d3



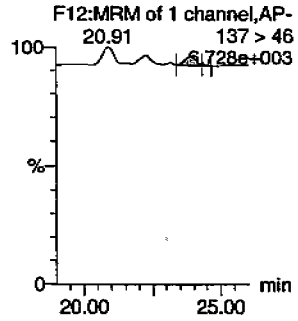
2-Nitrotoluene



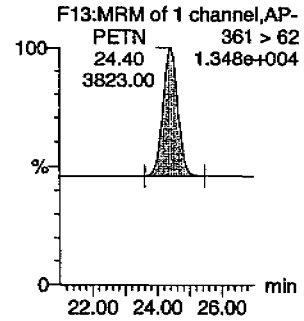
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/ml	%Rec	%Dev	S/N
WXX100118-08CRI	HMX	176 > 102	5.18	1270.619	4135.187	1270.619	153.635	bb			47.5934	119.0	19.0	221.1
WXX100118-08CRI	RDX	176 > 102	7.55	806.560	4135.187	806.560	97.524	bb			43.8600	109.7	9.7	121.5
WXX100118-08CRI	135-Trinitrobenzene	213 > 183	10.14	1318.336	4135.187	1318.336	159.405	bb			47.8430	119.6	19.6	398.2
WXX100118-08CRI	13-Dinitrobenzene-d4	172 > 142	11.97	4135.187		4135.187	4135.187	bb			609.3139	121.9	21.9	280.4
WXX100118-08CRI	13-Dinitrobenzene	168 > 138	12.13	361.441	4135.187	361.441	43.703	bb			36.9827	92.5	-7.5	12.5
WXX100118-08CRI	Tetryl	241 > 181	12.57	347.427	4135.187	347.427	42.009	bb			43.0147	107.5	7.5	16.3
WXX100118-08CRI	Nitrobenzene	123 > 46	13.53	250.759	4135.187	250.759	30.320	bb			36.2168	90.5	-9.5	16.9
WXX100118-08CRI	4-Amino-26-dinitrotoluene	197 > 167	15.52	472.417	19992.039	472.417	11.815	MM	20-Jan-10	08:55:18	44.7556	111.9	11.9	35.7
WXX100118-08CRI	2-Amino-46-dinitrotoluene	197 > 180	16.39	595.142	19992.039	595.142	14.884	bb			38.2080	95.5	-4.5	82.8
WXX100118-08CRI	246-Trinitrotoluene	227 > 210	15.33	674.645	19992.039	674.645	16.873	bb			47.9172	119.8	19.8	76.2
WXX100118-08CRI	34-dinitrotoluene	182 > 152	14.28	884.055	19992.039	884.055	22.110	bb			23.7172	118.6	18.6	40.1
WXX100118-08CRI	26-dinitrotoluene	182 > 152	17.46	1688.423	19992.039	1688.423	42.227	MM	20-Jan-10	08:59:25	38.6600	96.7	-3.3	69.0
WXX100118-08CRI	24-dinitrotoluene	182 > 152	18.09	444.275	19992.039	444.275	11.111	MM	20-Jan-10	08:59:40	43.9475	109.9	9.9	16.1
WXX100118-08CRI	26-dinitrotoluene-d3	185 > 155	17.28	19992.039		19992.039	19992.039	bb			544.9034	109.0	9.0	1666.3
WXX100118-08CRI	2-Nitrotoluene	137 > 46	20.91	224.003	19992.039	224.003	5.602	bb			37.3297	93.3	-6.7	23.9
WXX100118-08CRI	4-Nitrotoluene	137 > 46	22.26	115.191	19992.039	115.191	2.881	bb			40.2368	100.6	0.6	12.5
WXX100118-08CRI	3-Nitrotoluene	137 > 46	23.90	132.441	19992.039	132.441	3.312	MM	20-Jan-10	09:04:57	38.8407	97.1	-2.9	12.3
WXX100118-08CRI	PETN	361 > 62	24.40	3823.000	19992.039	3823.000	95.613	bb			57.2186	143.0	43.0	1477.4

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GRAND MEAN AVERAGE

Vendor:	UltraScientific
Date of Analysis	01/20/10
Time of Injection	0820
Standard Number	WXX100118-08CRI
Data File	EXP0118087a

HMX		119.0
RDX		109.7
135-TNB		119.6
13-DNB		92.5
Tetryl		107.5
Nitrobenzene		90.5
4A-26-DNT		111.9
2A-46-DNT		95.5
246-TNT		119.8
34-DNT(surr)		118.6
26-DNT		96.7
24-DNT		109.9
2-NT		93.3
4-NT		100.6
3-NT		97.1
PETN		143.0
	Total	1725.2
	Average	107.8

MAT 1/20/10

Hmm 01/20/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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

7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10–1130

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXP0118097a

Analysis Date: 20–JAN–10 13:15

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
2–Amino–4,6–dinitrotoluene	600	651.425	109	
3,4–Dinitrotoluene	300	308.193	103	
4–Amino–2,6–dinitrotoluene	600	652.201	109	
HMX	600	675.004	113	
Nitrobenzene	600	594.145	99	
PETN	600	627.958	105	
RDX	600	720.606	120	*
Tetryl	600	522.087	87	
m–Dinitrobenzene	600	627.606	105	
m–Nitrotoluene	600	604.197	101	
o–Nitrotoluene	600	570.278	95	
p–Nitrotoluene	600	637.802	106	
1,3,5–Trinitrobenzene	600	626.788	104	
1,3–Dinitrobenzene–d4	500	476.464	95	
2,4,6–Trinitrotoluene	600	640.81	107	
2,4–Dinitrotoluene	600	595.553	99	
2,6–Dinitrotoluene	600	622.071	104	
2,6–Dinitrotoluene–d3	500	508.725	102	

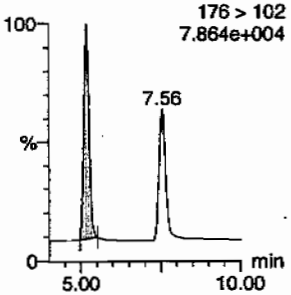
Recovery Limits:
3,4–Dinitrotoluene (Surrogate),TATB, tris(o–cresyl)phosphate, 3,5–Dinitroaniline, 2,6–Diamino–4–nitrotoluene , 2,4–Diamino–6–nitrotoluene 70–130%
OtherTarget Analytes 80–120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA2.qld, Time: Thu Jan 21 11:10:12 2010

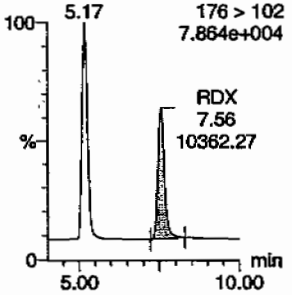
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118097a
Date: 20-Jan-2010
Time: 13:15:45
ID: WXX100118-07CCV
Vial: 1:1,B

MMT 1/21/10

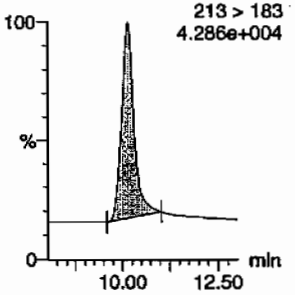
HMX
F2:MRM of 1 channel,AP-
176 > 102
7.864e+004



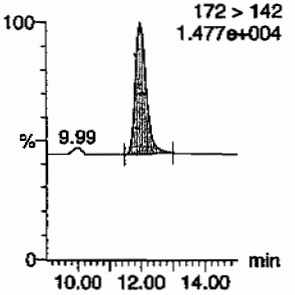
RDX
F2:MRM of 1 channel,AP-
5.17
176 > 102
7.864e+004



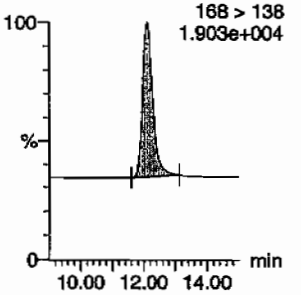
135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
4.286e+004



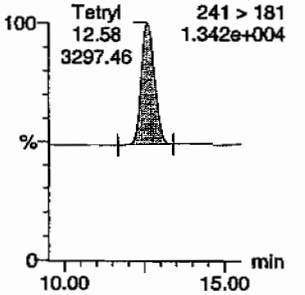
13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
1.477e+004



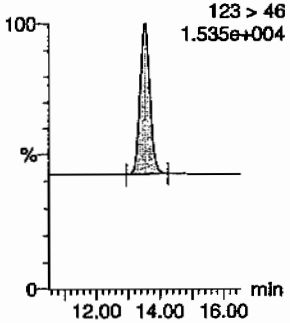
13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
1.903e+004



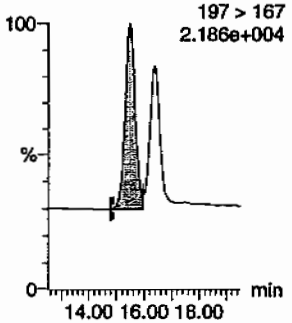
Tetryl
F6:MRM of 1 channel,AP-
Tetryl
12.58
3297.46
241 > 181
1.342e+004



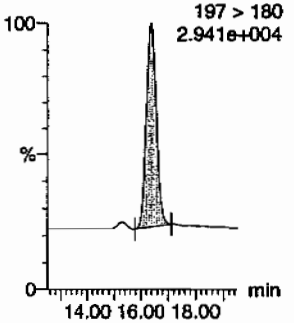
Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
1.535e+004



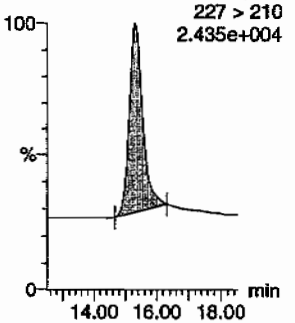
4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 167
2.186e+004



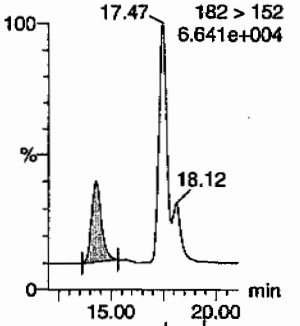
2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
2.941e+004



246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
2.435e+004

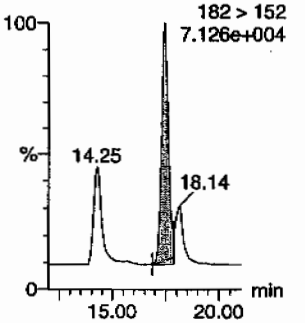


34-dinitrotoluene
F9:MRM of 2 channels,AP-
17.47
182 > 152
6.641e+004



stmm 01/21/10

26-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
7.126e+004



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

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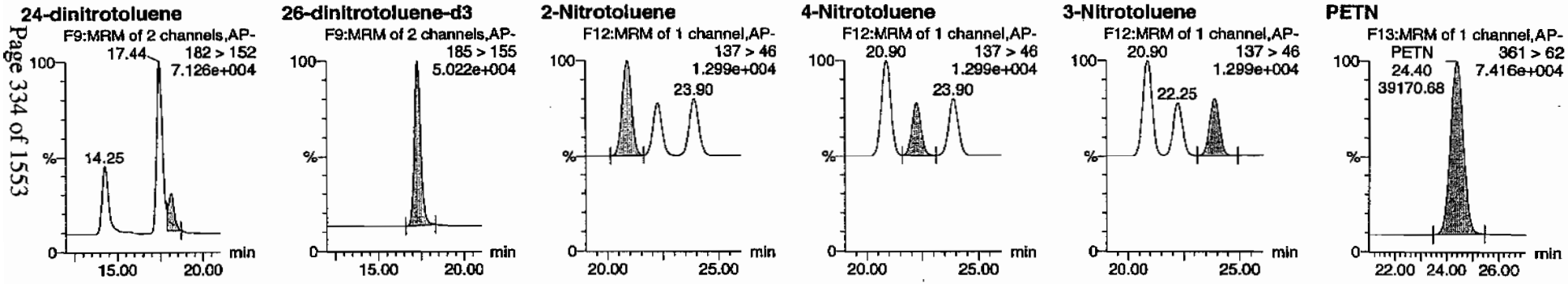
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA2.qld, Time: Thu Jan 21 11:10:12 2010



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/ml	%Rec	%Dev	S/N
WXX100118-07CCV	HMX	176 > 102	5.17	14091.709	3233.584	14091.709	2178.961	bb			675.0039	112.5	12.5	1480.9
WXX100118-07CCV	RDX	176 > 102	7.56	10362.266	3233.584	10362.266	1602.288	bb			720.6061	120.1	20.1	902.0
WXX100118-07CCV	135-Trinitrobenzene	213 > 183	10.14	13505.723	3233.584	13505.723	2088.352	bb			626.7883	104.5	4.5	317.0
WXX100118-07CCV	13-Dinitrobenzene-d4	172 > 142	11.97	3233.584		3233.584	3233.584	bb			476.4640	95.3	-4.7	545.4
WXX100118-07CCV	13-Dinitrobenzene	168 > 138	12.10	4796.387	3233.584	4796.387	741.652	bb			627.6057	104.6	4.6	1084.2
WXX100118-07CCV	Tetryl	241 > 181	12.58	3297.456	3233.584	3297.456	509.876	bb			522.0871	87.0	-13.0	249.9
WXX100118-07CCV	Nitrobenzene	123 > 46	13.54	3216.833	3233.584	3216.833	497.410	bb			594.1450	99.0	-1.0	398.0
WXX100118-07CCV	4-Amino-26-dinitrotoluene	197 > 167	15.49	6427.213	18664.682	6427.213	172.176	MM	21-Jan-10	10:51:29	652.2010	108.7	8.7	361.1
WXX100118-07CCV	2-Amino-46-dinitrotoluene	197 > 180	16.37	9473.127	18664.682	9473.127	253.771	bb			651.4245	108.6	8.6	537.2
WXX100118-07CCV	246-Trinitrotoluene	227 > 210	15.31	8423.185	18664.682	8423.185	225.645	bb			640.8099	106.8	6.8	307.6
WXX100118-07CCV	34-dinitrotoluene	182 > 152	14.30	10725.116	18664.682	10725.116	287.310	bb			308.1929	102.7	2.7	521.2
WXX100118-07CCV	26-dinitrotoluene	182 > 152	17.44	25364.279	18664.682	25364.279	679.473	MM	21-Jan-10	10:58:46	622.0705	103.7	3.7	1151.9
WXX100118-07CCV	24-dinitrotoluene	182 > 152	18.14	5620.848	18664.682	5620.848	150.574	MM	21-Jan-10	11:00:13	595.5528	99.3	-0.7	250.8
WXX100118-07CCV	26-dinitrotoluene-d3	185 > 155	17.29	18664.682		18664.682	18664.682	bb			508.7249	101.7	1.7	1534.9
WXX100118-07CCV	2-Nitrotoluene	137 > 46	20.90	3194.846	18664.682	3194.846	85.585	bb			570.2779	95.0	-5.0	152.3
WXX100118-07CCV	4-Nitrotoluene	137 > 46	22.25	1704.684	18664.682	1704.684	45.666	bb			637.8018	106.3	6.3	84.1
WXX100118-07CCV	3-Nitrotoluene	137 > 46	23.90	1923.433	18664.682	1923.433	51.526	bb			604.1970	100.7	0.7	90.9
WXX100118-07CCV	PETN	361 > 62	24.40	39170.676	18664.682	39170.676	1049.326	bb			627.9582	104.7	4.7	8589.1

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

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GRAND MEAN AVERAGE

Vendor: Restek
Date of Analysis: 01/20/10
Time of Injection: 1315
Standard Number: WXX100118-07CCV
Data File: EXP0118097a

HMX		112.5
RDX		120.1
135-TNB		104.5
13-DNB		104.6
Tetryl		87.0
Nitrobenzene		99.0
4A-26-DNT		108.7
2A-46-DNT		108.6
246-TNT		106.8
34-DNT(surr)		102.7
26-DNT		103.7
24-DNT		99.3
2-NT		95.0
4-NT		106.3
3-NT		100.7
PETN		104.7
	Total	1664.2
	Average	104.0

WAP 1/21/10

HTime 01/21/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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

7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10–1130

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP0118099a

Analysis Date: 20–JAN–10 14:14

LCMSMS ID: 903

Column ID Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5–Trinitrobenzene	40	52.142	130	*
1,3–Dinitrobenzene–d4	500	524.869	105	
2,4,6–Trinitrotoluene	40	41.13	103	
2,4–Dinitrotoluene	40	36.32	91	
2,6–Dinitrotoluene	40	41.388	103	
2,6–Dinitrotoluene–d3	500	567.481	113	
2–Amino–4,6–dinitrotoluene	40	45.847	115	
3,4–Dinitrotoluene	20	20.312	102	
4–Amino–2,6–dinitrotoluene	40	47.391	118	
HMX	40	47.595	119	
Nitrobenzene	40	37.134	93	
PETN	40	55.321	138	*
RDX	40	41.818	105	
Tetryl	40	45.181	113	
m–Dinitrobenzene	40	43.761	109	
m–Nitrotoluene	40	46.246	116	
o–Nitrotoluene	40	30.413	76	
p–Nitrotoluene	40	35.08	88	

Recovery Limits:
3,4–Dinitrotoluene (Surrogate),TATB, tris(o–cresyl)phosphate, 3,5–Dinitroaniline, 2,6–Diamino–4–nitrotoluene , 2,4–Diamino–6–nitrotoluene 50–150%
OtherTarget Analytes 70–130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

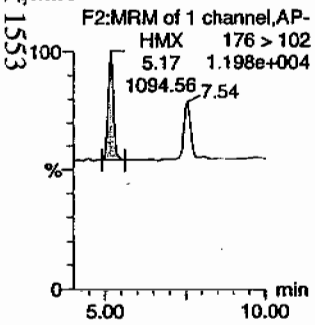
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA2.qld, Time: Thu Jan 21 11:10:12 2010

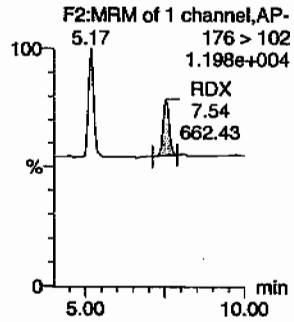
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118099a
Date: 20-Jan-2010
Time: 14:14:48
ID: WXX100118-08CRI
Vial: 1:1,C

MMT 1/21/10

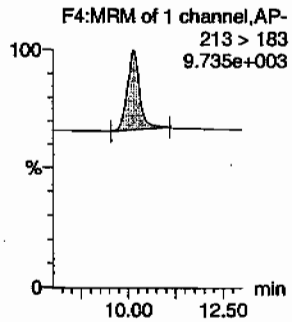
HMX



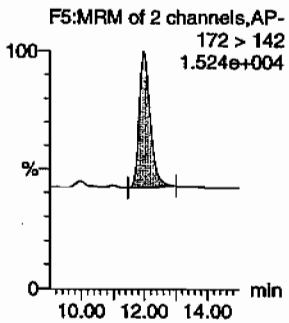
RDX



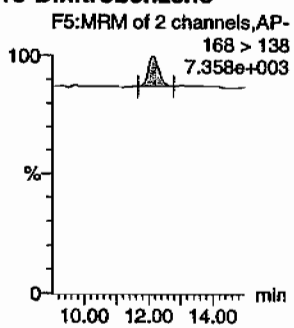
135-Trinitrobenzene



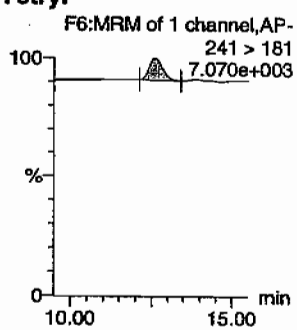
13-Dinitrobenzene-d4



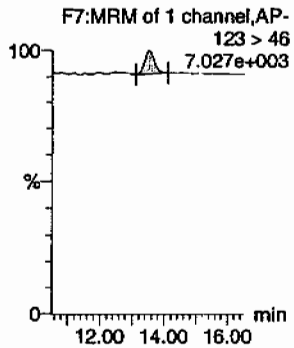
13-Dinitrobenzene



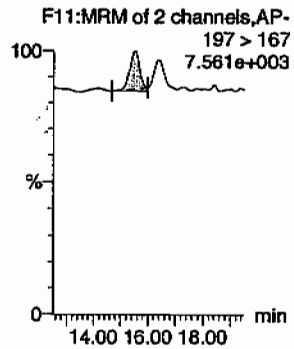
Tetryl



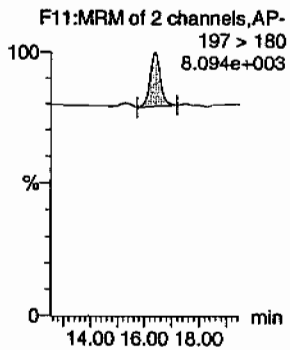
Nitrobenzene



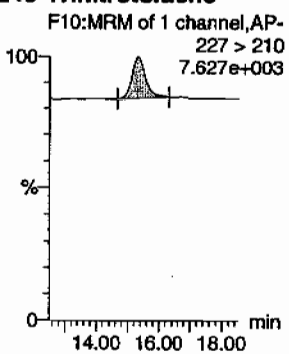
4-Amino-26-dinitrotoluene



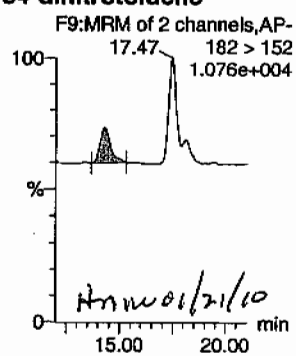
2-Amino-46-dinitrotoluene



246-Trinitrotoluene

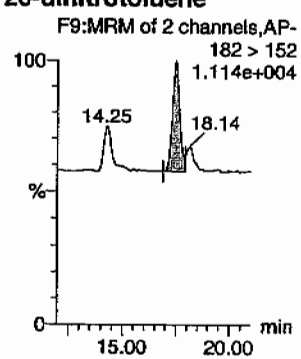


34-dinitrotoluene



Hmw 01/21/10

26-dinitrotoluene



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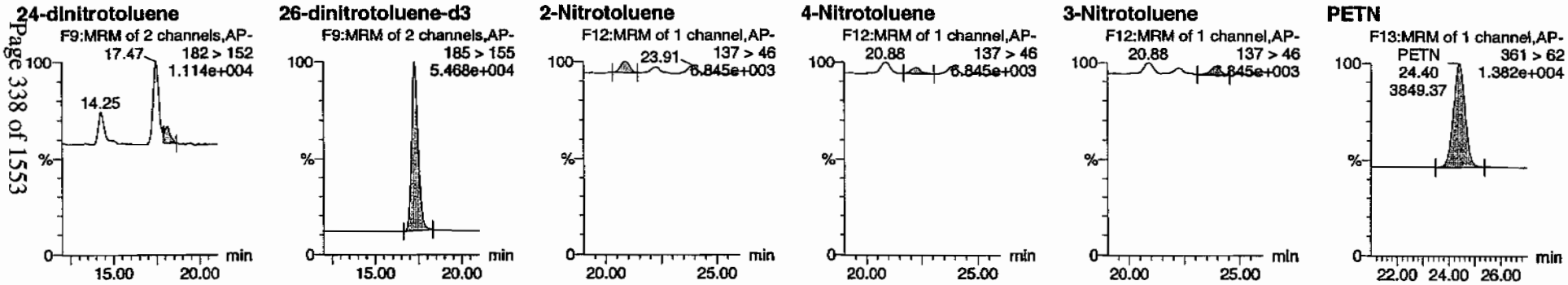
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA2.qld, Time: Thu Jan 21 11:10:12 2010



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N
WXX100118-08CRI	HMX	176 > 102	5.17	1094.563	3562.093	1094.563	153.640	bb			47.5951	119.0	19.0	196.4
WXX100118-08CRI	RDX	176 > 102	7.54	662.426	3562.093	662.426	92.983	bb			41.8176	104.5	4.5	102.8
WXX100118-08CRI	135-Trinitrobenzene	213 > 183	10.14	1237.660	3562.093	1237.660	173.727	bb			52.1415	130.4	30.4	1277.3
WXX100118-08CRI	13-Dinitrobenzene-d4	172 > 142	11.97	3562.093		3562.093	3562.093	bb			524.8693	105.0	5.0	498.1
WXX100118-08CRI	13-Dinitrobenzene	168 > 138	12.10	368.412	3562.093	368.412	51.713	bb			43.7608	109.4	9.4	36.0
WXX100118-08CRI	Tetryl	241 > 181	12.58	314.346	3562.093	314.346	44.124	bb			45.1805	113.0	13.0	43.7
WXX100118-08CRI	Nitrobenzene	123 > 46	13.50	221.476	3562.093	221.476	31.088	bb			37.1338	92.8	-7.2	34.6
WXX100118-08CRI	4-Amino-26-dinitrotoluene	197 > 167	15.49	520.959	20820.393	520.959	12.511	MM	21-Jan-10	10:51:42	47.3908	118.5	18.5	19.0
WXX100118-08CRI	2-Amino-46-dinitrotoluene	197 > 180	16.37	743.716	20820.393	743.716	17.860	bb			45.8469	114.6	14.6	52.9
WXX100118-08CRI	246-Trinitrotoluene	227 > 210	15.31	603.071	20820.393	603.071	14.483	bb			41.1295	102.8	2.8	9.6
WXX100118-08CRI	34-dinitrotoluene	182 > 152	14.30	788.478	20820.393	788.478	18.935	bb			20.3115	101.6	1.6	29.2
WXX100118-08CRI	26-dinitrotoluene	182 > 152	17.47	1882.458	20820.393	1882.458	45.207	MM	21-Jan-10	10:58:39	41.3880	103.5	3.5	70.1
WXX100118-08CRI	24-dinitrotoluene	182 > 152	18.14	382.384	20820.393	382.384	9.183	MM	21-Jan-10	11:00:25	36.3203	90.8	-9.2	14.4
WXX100118-08CRI	26-dinitrotoluene-d3	185 > 155	17.29	20820.393		20820.393	20820.393	bb			567.4810	113.5	13.5	2795.2
WXX100118-08CRI	2-Nitrotoluene	137 > 46	20.88	190.057	20820.393	190.057	4.564	bb			30.4125	76.0	-24.0	56.4
WXX100118-08CRI	4-Nitrotoluene	137 > 46	22.26	104.589	20820.393	104.589	2.512	bb			35.0800	87.7	-12.3	29.0
WXX100118-08CRI	3-Nitrotoluene	137 > 46	23.91	164.225	20820.393	164.225	3.944	bb			46.2458	115.6	15.6	43.3
WXX100118-08CRI	PETN	361 > 62	24.40	3849.366	20820.393	3849.366	92.442	bb			55.3211	138.3	38.3	679.9

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

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GRAND MEAN AVERAGE

Vendor:	UltraScientific
Date of Analysis	01/20/10
Time of Injection	1414
Standard Number	WXX100118-08CRI
Data File	EXP0118099a

HMX	119.0
RDX	104.5
135-TNB	130.4
13-DNB	109.4
Tetryl	113.0
Nitrobenzene	92.8
4A-26-DNT	118.5
2A-46-DNT	114.6
246-TNT	102.8
34-DNT(surr)	101.6
26-DNT	103.5
24-DNT	90.8
2-NT	76.0
4-NT	87.7
3-NT	115.6
PETN	138.3
Total	1718.5
Average	107.4

1/21/10

Hunc 01/21/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1130

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXP0118109a

Analysis Date: 20-JAN-10 19:09

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
o-Nitrotoluene	600	577.581	96	
p-Nitrotoluene	600	584.574	97	
1,3,5-Trinitrobenzene	600	596.069	99	
1,3-Dinitrobenzene-d4	500	490.444	98	
2,4,6-Trinitrotoluene	600	594.338	99	
2,4-Dinitrotoluene	600	574.604	96	
2,6-Dinitrotoluene	600	584.823	97	
2,6-Dinitrotoluene-d3	500	551.472	110	
2-Amino-4,6-dinitrotoluene	600	630.111	105	
3,4-Dinitrotoluene	300	291.942	97	
4-Amino-2,6-dinitrotoluene	600	600.771	100	
HMX	600	722.514	120	*
Nitrobenzene	600	591.502	99	
PETN	600	549.812	92	
RDX	600	759.977	127	*
Tetryl	600	529.575	88	
m-Dinitrobenzene	600	624.508	104	
m-Nitrotoluene	600	575.831	96	

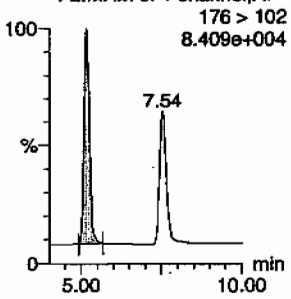
Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 70-130%
OtherTarget Analytes 80-120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA2.qld, Time: Thu Jan 21 11:10:12 2010

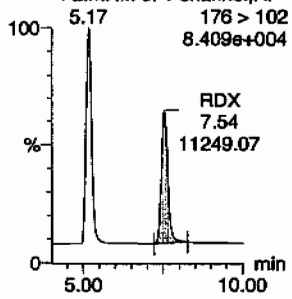
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118109a
Date: 20-Jan-2010
Time: 19:09:53
ID: WXX100118-07CCV
Vial: 1:1,B

MMT 1/21/10

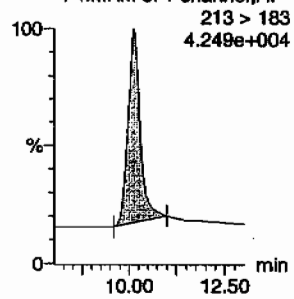
HMX



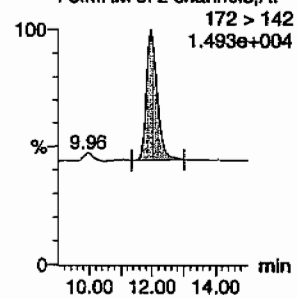
RDX



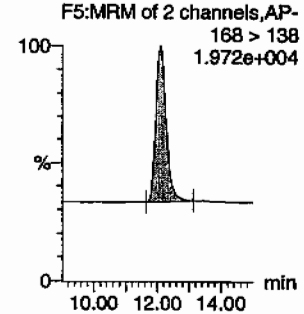
135-Trinitrobenzene



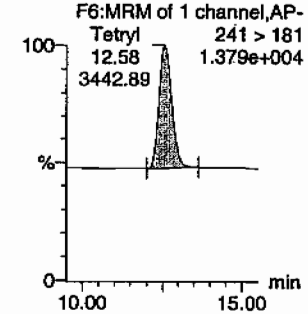
13-Dinitrobenzene-d4



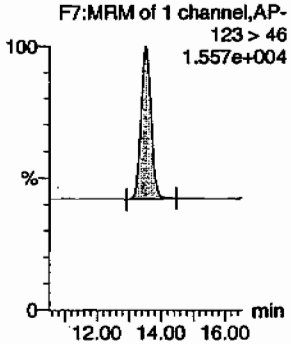
13-Dinitrobenzene



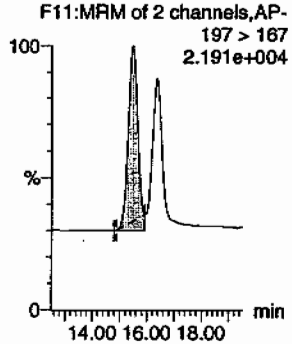
Tetryl



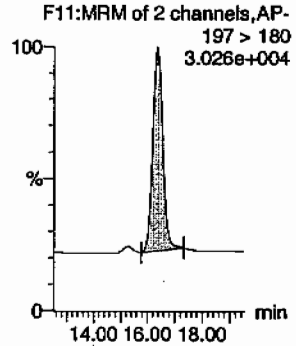
Nitrobenzene



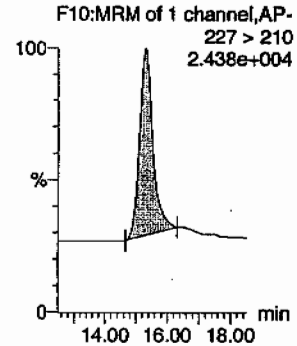
4-Amino-26-dinitrotoluene



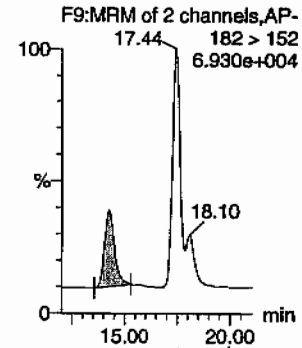
2-Amino-46-dinitrotoluene



246-Trinitrotoluene

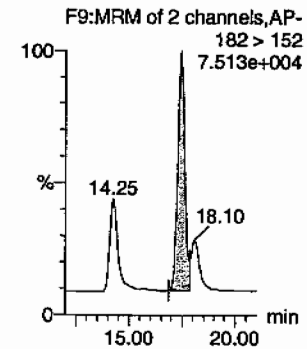


34-dinitrotoluene



HMM 01/21/10

26-dinitrotoluene



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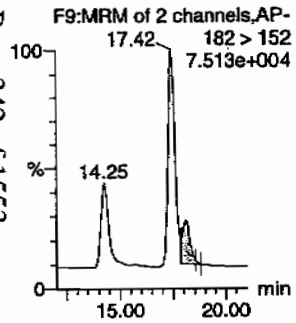
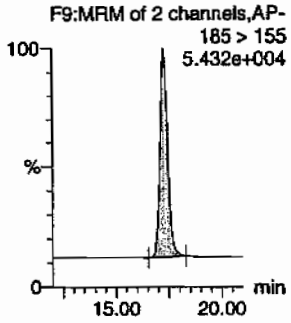
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA2.qld, Time: Thu Jan 21 11:10:12 2010

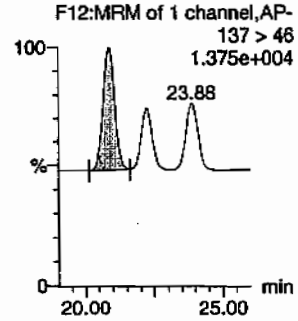
24-dinitrotoluene



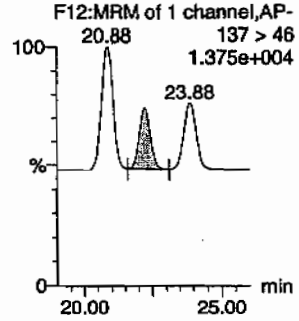
26-dinitrotoluene-d3



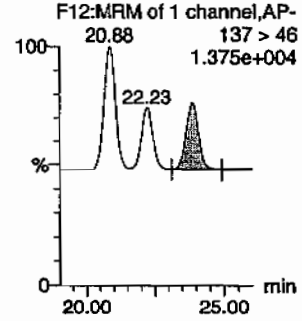
2-Nitrotoluene



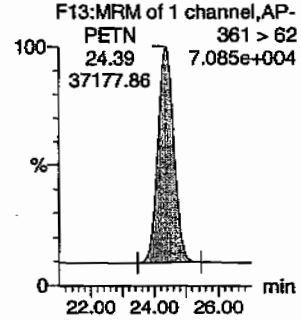
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	ADJ Resp	Response	Flags	Mod Date	Mod Time	ng/ml	%Rec	%Dev	S/N
WXX100118-07CCV	HMX	176 > 102	5.17	15526.128	3328.462	15526.128	2332.328	db			722.5141	120.4	20.4	2189.5
WXX100118-07CCV	RDX	176 > 102	7.54	11249.068	3328.462	11249.068	1689.830	bb			759.9767	126.7	26.7	1341.1
WXX100118-07CCV	135-Trinitrobenzene	213 > 183	10.13	13220.648	3328.462	13220.648	1986.000	bb			596.0687	99.3	-0.7	1802.2
WXX100118-07CCV	13-Dinitrobenzene-d4	172 > 142	11.97	3328.462		3328.462	3328.462	bb			490.4441	98.1	-1.9	245.6
WXX100118-07CCV	13-Dinitrobenzene	168 > 138	12.10	4912.749	3328.462	4912.749	737.991	bb			624.5076	104.1	4.1	483.1
WXX100118-07CCV	Tetryl	241 > 181	12.58	3442.892	3328.462	3442.892	517.190	bb			529.5755	88.3	-11.7	554.0
WXX100118-07CCV	Nitrobenzene	123 > 46	13.50	3296.491	3328.462	3296.491	495.197	bb			591.5023	98.6	-1.4	227.8
WXX100118-07CCV	4-Amino-26-dinitrotoluene	197 > 167	15.49	6417.862	20233.025	6417.862	158.599	MM	21-Jan-10	10:52:55	600.7710	100.1	0.1	286.3
WXX100118-07CCV	2-Amino-46-dinitrotoluene	197 > 180	16.38	9933.136	20233.025	9933.136	245.468	bb			630.1108	105.0	5.0	1187.9
WXX100118-07CCV	246-Trinitrotoluene	227 > 210	15.31	8468.778	20233.025	8468.778	209.281	bb			594.3379	99.1	-0.9	405.5
WXX100118-07CCV	34-dinitrotoluene	182 > 152	14.25	11013.273	20233.025	11013.273	272.161	bb			291.9421	97.3	-2.7	251.7
WXX100118-07CCV	26-dinitrotoluene	182 > 152	17.42	25849.234	20233.025	25849.234	638.788	MM	21-Jan-10	10:57:59	584.8231	97.5	-2.5	599.5
WXX100118-07CCV	24-dinitrotoluene	182 > 152	18.10	5878.828	20233.025	5878.828	145.278	MM	21-Jan-10	11:01:10	574.6045	95.8	-4.2	120.7
WXX100118-07CCV	26-dinitrotoluene-d3	185 > 155	17.27	20233.025		20233.025	20233.025	bb			551.4717	110.3	10.3	1825.7
WXX100118-07CCV	2-Nitrotoluene	137 > 46	20.88	3507.649	20233.025	3507.649	86.681	bb			577.5805	96.3	-3.7	90.6
WXX100118-07CCV	4-Nitrotoluene	137 > 46	22.23	1693.705	20233.025	1693.705	41.855	bb			584.5739	97.4	-2.6	45.4
WXX100118-07CCV	3-Nitrotoluene	137 > 46	23.88	1987.163	20233.025	1987.163	49.107	bb			575.8307	96.0	-4.0	49.2
WXX100118-07CCV	PETN	361 > 62	24.39	37177.863	20233.025	37177.863	918.742	bb			549.8115	91.6	-8.4	11630.5

WXX100120-07CCV

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

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GRAND MEAN AVERAGE

Vendor: Restek
Date of Analysis: 01/20/10
Time of Injection: 1909
Standard Number: WXX100120-07CCV
Data File: EXP0118109a

HMX		120.4
RDX		126.7
135-TNB		99.3
13-DNB		104.1
Tetryl		88.3
Nitrobenzene		98.6
4A-26-DNT		100.1
2A-46-DNT		105.0
246-TNT		99.1
34-DNT(surr)		97.3
26-DNT		97.5
24-DNT		95.8
2-NT		96.3
4-NT		97.4
3-NT		96.0
PETN		91.6
Total		1613.5
Average		100.8

1/21/10

01/21/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1130

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP0118111a

Analysis Date: 20-JAN-10 20:09

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
4-Amino-2,6-dinitrotoluene	40	45.987	115	
HMX	40	44.49	111	
Nitrobenzene	40	27.62	69	*
PETN	40	52.198	130	*
RDX	40	45.999	115	
Tetryl	40	40.994	102	
m-Dinitrobenzene	40	35.659	89	
m-Nitrotoluene	40	33.642	84	
o-Nitrotoluene	40	34.492	86	
p-Nitrotoluene	40	42.056	105	
1,3,5-Trinitrobenzene	40	52.835	132	*
1,3-Dinitrobenzene-d4	500	498.142	100	
2,4,6-Trinitrotoluene	40	35.127	88	
2,4-Dinitrotoluene	40	35.917	90	
2,6-Dinitrotoluene	40	38.125	95	
2,6-Dinitrotoluene-d3	500	552.183	110	
2-Amino-4,6-dinitrotoluene	40	38.958	97	
3,4-Dinitrotoluene	20	19.446	97	

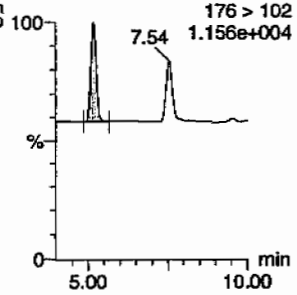
Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 50-150%
OtherTarget Analytes 70-130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA2.qld, Time: Thu Jan 21 11:10:12 2010

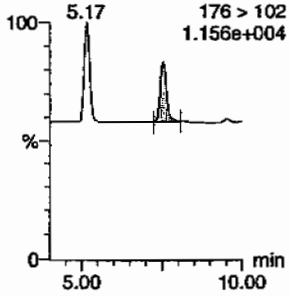
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118111a
Date: 20-Jan-2010
Time: 20:09:11
ID: WXX100120-08CRI
Vial: 1:1,C

MMP 1/21/10

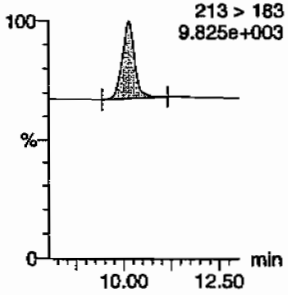
HMX
F2:MRM of 1 channel,AP-
176 > 102
7.54 1.156e+004



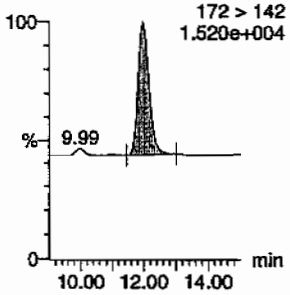
RDX
F2:MRM of 1 channel,AP-
5.17 176 > 102
1.156e+004



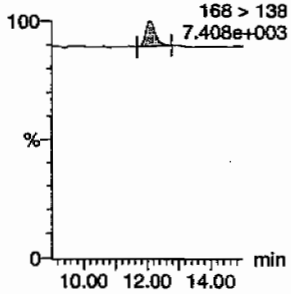
135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
9.825e+003



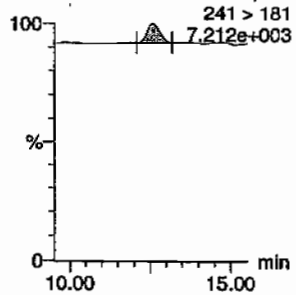
13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
1.520e+004



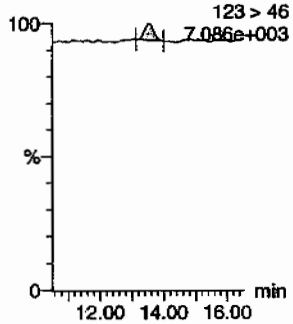
13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
7.408e+003



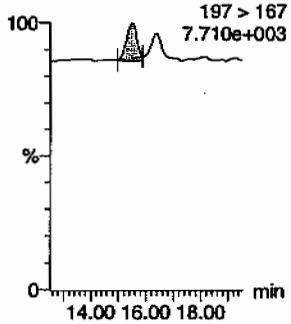
Tetryl
F6:MRM of 1 channel,AP-
241 > 181
7.212e+003



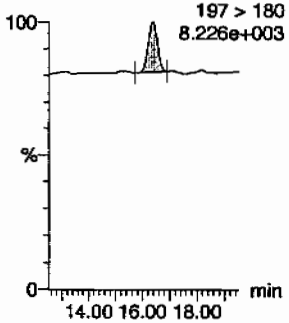
Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
7.086e+003



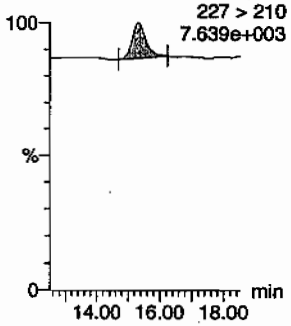
4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 167
7.710e+003



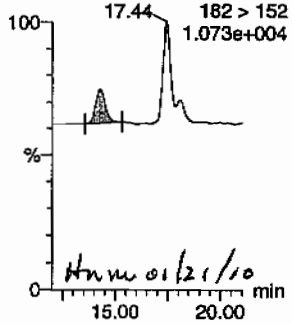
2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
8.226e+003



246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
7.639e+003

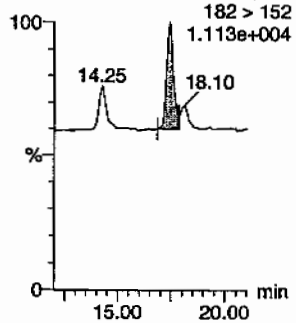


34-dinitrotoluene
F9:MRM of 2 channels,AP-
17.44 182 > 152
1.073e+004



HMM 01/21/10

26-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
1.113e+004



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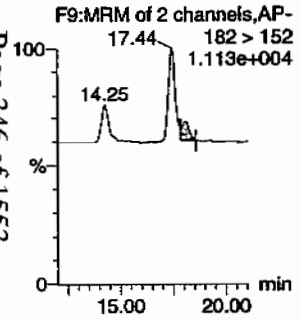
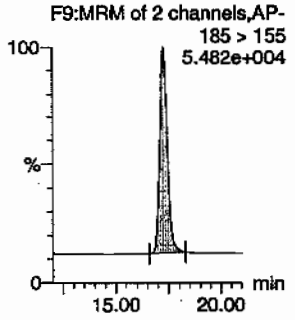
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA2.qld, Time: Thu Jan 21 11:10:12 2010

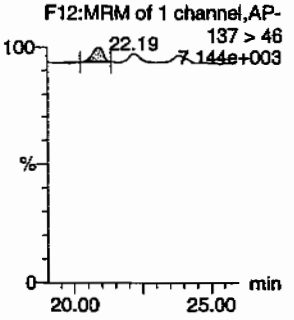
24-dinitrotoluene



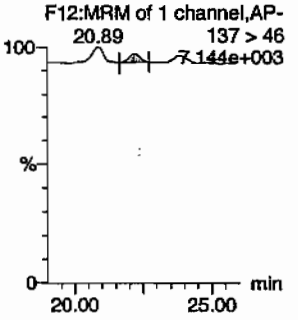
26-dinitrotoluene-d3



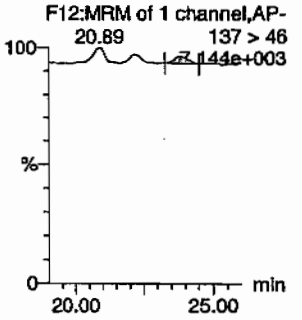
2-Nitrotoluene



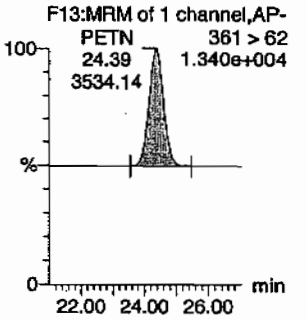
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N
WXX100120-08CRI	HMX	176 > 102	5.17	971.052	3380.705	971.052	143.617	bb			44.4900	111.2	11.2	156.5
WXX100120-08CRI	RDX	176 > 102	7.54	691.560	3380.705	691.560	102.280	bb			45.9992	115.0	15.0	94.4
WXX100120-08CRI	135-Trinitrobenzene	213 > 183	10.12	1190.258	3380.705	1190.258	176.037	bb			52.8349	132.1	32.1	193.0
WXX100120-08CRI	13-Dinitrobenzene-d4	172 > 142	11.97	3380.705		3380.705	3380.705	bb			498.1420	99.6	-0.4	545.1
WXX100120-08CRI	13-Dinitrobenzene	168 > 138	12.07	284.921	3380.705	284.921	42.139	bb			35.6594	89.1	-10.9	48.6
WXX100120-08CRI	Tetryl	241 > 181	12.58	270.695	3380.705	270.695	40.035	bb			40.9941	102.5	2.5	67.6
WXX100120-08CRI	Nitrobenzene	123 > 46	13.50	156.342	3380.705	156.342	23.123	bb			27.6195	69.0	-31.0	12.0
WXX100120-08CRI	4-Amino-26-dinitrotoluene	197 > 167	15.49	491.903	20259.125	491.903	12.140	MM	21-Jan-10	10:53:01	45.9873	115.0	15.0	13.9
WXX100120-08CRI	2-Amino-46-dinitrotoluene	197 > 180	16.37	614.928	20259.125	614.928	15.177	bb			38.9578	97.4	-2.6	117.3
WXX100120-08CRI	246-Trinitrotoluene	227 > 210	15.31	501.167	20259.125	501.167	12.369	bb			35.1265	87.8	-12.2	56.7
WXX100120-08CRI	34-dinitrotoluene	182 > 152	14.25	734.542	20259.125	734.542	18.129	bb			19.4463	97.2	-2.8	64.7
WXX100120-08CRI	26-dinitrotoluene	182 > 152	17.44	1687.289	20259.125	1687.289	41.643	MM	21-Jan-10	10:57:53	38.1247	95.3	-4.7	144.4
WXX100120-08CRI	24-dinitrotoluene	182 > 152	18.10	367.945	20259.125	367.945	9.081	MM	21-Jan-10	11:01:16	35.9171	89.8	-10.2	29.5
WXX100120-08CRI	26-dinitrotoluene-d3	185 > 155	17.27	20259.125		20259.125	20259.125	bb			552.1831	110.4	10.4	1387.6
WXX100120-08CRI	2-Nitrotoluene	137 > 46	20.89	209.741	20259.125	209.741	5.176	bb			34.4921	86.2	-13.8	47.6
WXX100120-08CRI	4-Nitrotoluene	137 > 46	22.19	122.007	20259.125	122.007	3.011	bb			42.0559	105.1	5.1	26.4
WXX100120-08CRI	3-Nitrotoluene	137 > 46	23.82	116.248	20259.125	116.248	2.869	bb			33.6424	84.1	-15.9	22.2
WXX100120-08CRI	PETN	361 > 62	24.39	3534.143	20259.125	3534.143	87.223	bb			52.1980	130.5	30.5	495.1

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

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GRAND MEAN AVERAGE

Vendor:	UltraScientific
Date of Analysis	01/20/10
Time of Injection	2009
Standard Number	WXX100120-08CRI
Data File	EXP0118111a

HMX	111.2
RDX	115.0
135-TNB	132.1
13-DNB	89.1
Tetryl	102.5
Nitrobenzene	69.0
4A-26-DNT	115.0
2A-46-DNT	97.4
246-TNT	87.8
34-DNT(surr)	97.2
26-DNT	95.3
24-DNT	89.8
2-NT	86.2
4-NT	105.1
3-NT	84.1
PETN	130.5
Total	1607.3
Average	100.5

MAT 1/21/10

Hmm 01/21/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10–1130

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXP0118122a

Analysis Date: 21–JAN–10 01:33

LCMSMS ID: 903

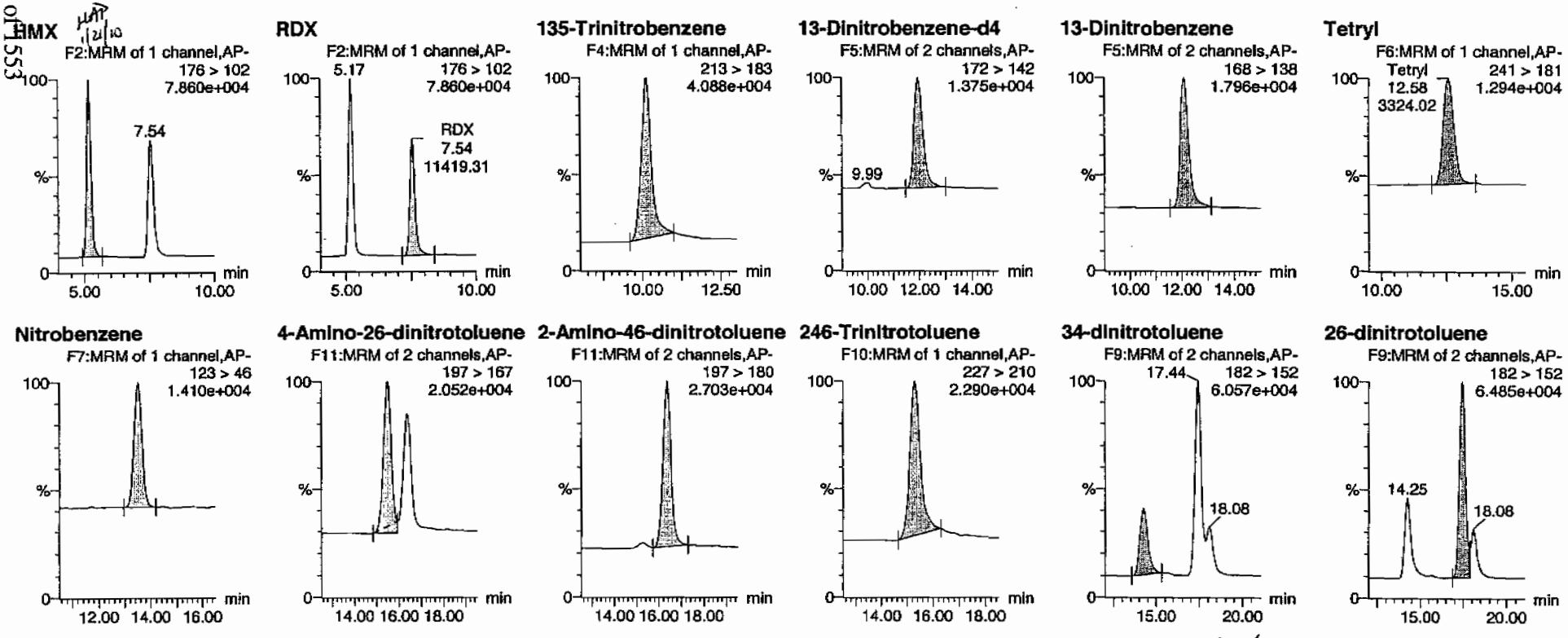
Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5–Trinitrobenzene	600	627.251	105	
1,3–Dinitrobenzene–d4	500	457.44	91	
2,4,6–Trinitrotoluene	600	646.198	108	
2,4–Dinitrotoluene	600	623.68	104	
2,6–Dinitrotoluene	600	603.908	101	
2,6–Dinitrotoluene–d3	500	479.463	96	
2–Amino–4,6–dinitrotoluene	600	645.389	108	
3,4–Dinitrotoluene	300	312.066	104	
4–Amino–2,6–dinitrotoluene	600	652.809	109	
HMX	600	729.95	122	*
Nitrobenzene	600	574.704	96	
PETN	600	642.403	107	
RDX	600	827.14	138	*
Tetryl	600	548.181	91	
m–Dinitrobenzene	600	635.352	106	
m–Nitrotoluene	600	636.813	106	
o–Nitrotoluene	600	579.604	97	
p–Nitrotoluene	600	656.564	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 70–130%
OtherTarget Analytes 80–120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA2.qld, Time: Thu Jan 21 11:10:12 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118122a
Date: 21-Jan-2010
Time: 01:33:40
ID: WXX100118-07CCV
Vial: 1:1,B



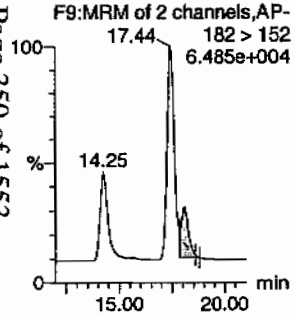
GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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

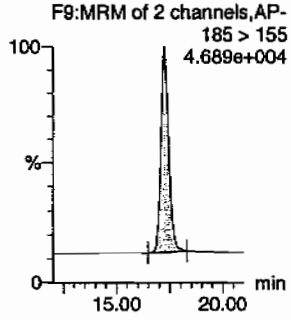
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA2.qld, Time: Thu Jan 21 11:10:12 2010

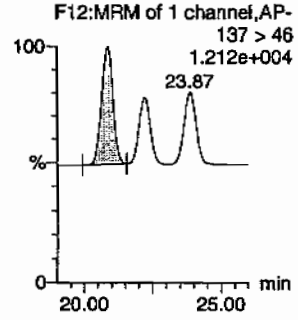
24-dinitrotoluene



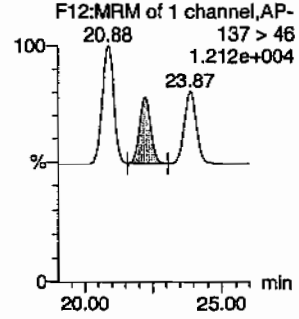
26-dinitrotoluene-d3



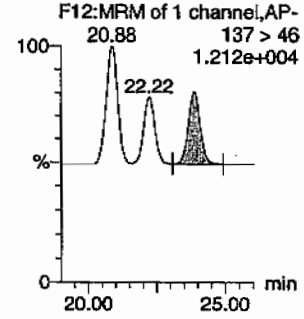
2-Nitrotoluene



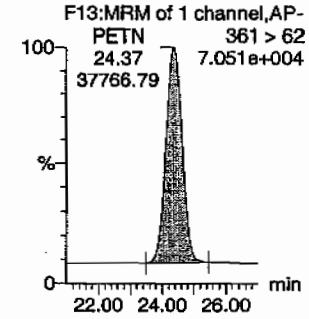
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N
WXX100118-07CCV	HMX	176 > 102	5.17	14630.337	3104.474	14630.337	2356.331	db			729.9500	121.7	21.7	1297.1
WXX100118-07CCV	RDX	176 > 102	7.54	11419.305	3104.474	11419.305	1839.169	bb			827.1399	137.9	37.9	851.7
WXX100118-07CCV	135-Trinitrobenzene	213 > 183	10.13	12976.041	3104.474	12976.041	2089.894	bb			627.2510	104.5	4.5	1898.4
WXX100118-07CCV	13-Dinitrobenzene-d4	172 > 142	11.97	3104.474		3104.474	3104.474	bb			457.4398	91.5	-8.5	421.8
WXX100118-07CCV	13-Dinitrobenzene	168 > 138	12.10	4661.711	3104.474	4661.711	750.805	bb			635.3516	105.9	5.9	599.8
WXX100118-07CCV	Tetryl	241 > 181	12.58	3324.023	3104.474	3324.023	535.360	bb			548.1811	91.4	-8.6	190.8
WXX100118-07CCV	Nitrobenzene	123 > 46	13.50	2987.337	3104.474	2987.337	481.134	bb			574.7041	95.8	-4.2	385.8
WXX100118-07CCV	4-Amino-26-dinitrotoluene	197 > 167	15.46	6063.169	17591.100	6063.169	172.336	MM	21-Jan-10	10:53:34	652.8089	108.8	8.8	321.0
WXX100118-07CCV	2-Amino-46-dinitrotoluene	197 > 180	16.35	8845.521	17591.100	8845.521	251.420	bb			645.3893	107.6	7.6	266.0
WXX100118-07CCV	246-Trinitrotoluene	227 > 210	15.31	8005.440	17591.100	8005.440	227.542	bb			646.1981	107.7	7.7	513.0
WXX100118-07CCV	34-dinitrotoluene	182 > 152	14.25	10235.234	17591.100	10235.234	290.921	bb			312.0657	104.0	4.0	500.1
WXX100118-07CCV	26-dinitrotoluene	182 > 152	17.44	23207.393	17591.100	23207.393	659.635	MM	21-Jan-10	10:57:14	603.9084	100.7	0.7	826.4
WXX100118-07CCV	24-dinitrotoluene	182 > 152	18.08	5547.736	17591.100	5547.736	157.686	MM	21-Jan-10	11:08:40	623.6800	103.9	3.9	191.5
WXX100118-07CCV	26-dinitrotoluene-d3	185 > 155	17.27	17591.100		17591.100	17591.100	bb			479.4633	95.9	-4.1	787.8
WXX100118-07CCV	2-Nitrotoluene	137 > 46	20.88	3060.323	17591.100	3060.323	86.985	bb			579.6042	96.6	-3.4	201.8
WXX100118-07CCV	4-Nitrotoluene	137 > 46	22.22	1653.893	17591.100	1653.893	47.009	bb			656.5637	109.4	9.4	114.3
WXX100118-07CCV	3-Nitrotoluene	137 > 46	23.87	1910.656	17591.100	1910.656	54.307	bb			636.8126	106.1	6.1	124.2
WXX100118-07CCV	PETN	361 > 62	24.37	37766.789	17591.100	37766.789	1073.463	bb			642.4026	107.1	7.1	11409.2

WXX100120-07CCV

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GRAND MEAN AVERAGE

Vendor: Restek
Date of Analysis: 01/21/10
Time of Injection: 0133
Standard Number: WXX100120-07CCV
Data File: EXP0118122a

HMX		121.7
RDX		137.9
135-TNB		104.5
13-DNB		105.9
Tetryl		91.4
Nitrobenzene		95.8
4A-26-DNT		108.8
2A-46-DNT		107.6
246-TNT		107.7
34-DNT(surr)		104.0
26-DNT		100.7
24-DNT		103.9
2-NT		96.6
4-NT		109.4
3-NT		106.1
PETN		107.1
	Total	1709.1
	Average	106.8

MAT 1/21/10

Hnw 01/21/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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

7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1130

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP0118124a

Analysis Date: 21-JAN-10 02:32

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	40	46.676	117	
1,3-Dinitrobenzene-d4	500	483.077	97	
2,4,6-Trinitrotoluene	40	34.007	85	
2,4-Dinitrotoluene	40	40.22	101	
2,6-Dinitrotoluene	40	37.749	94	
2,6-Dinitrotoluene-d3	500	517.015	103	
2-Amino-4,6-dinitrotoluene	40	36.511	91	
3,4-Dinitrotoluene	20	19.624	98	
4-Amino-2,6-dinitrotoluene	40	36.926	92	
HMX	40	47.442	119	
Nitrobenzene	40	30.074	75	
PETN	40	52.703	132	*
RDX	40	44.436	111	
Tetryl	40	40.223	101	
m-Dinitrobenzene	40	38.947	97	
m-Nitrotoluene	40	37.153	93	
o-Nitrotoluene	40	41.541	104	
p-Nitrotoluene	40	42.06	105	

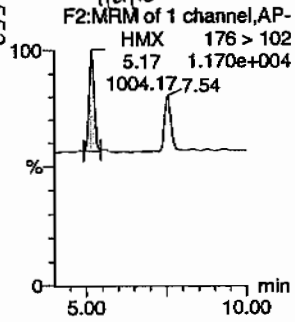
Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 50-150%
OtherTarget Analytes 70-130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA2.qld, Time: Thu Jan 21 11:10:12 2010

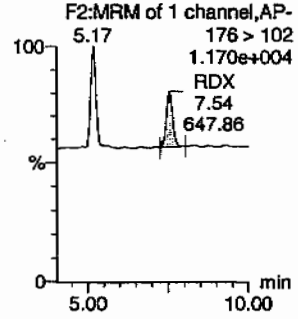
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118124a
Date: 21-Jan-2010
Time: 02:32:41
ID: WXX100118-08CRI
Vial: 1:1,C

MMT 1/21/10

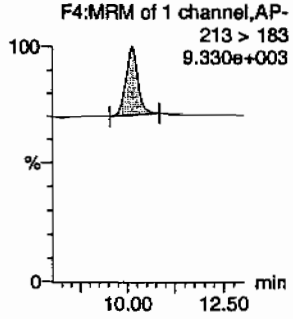
HMX MMT 1/21/10



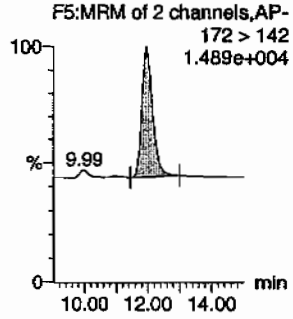
RDX



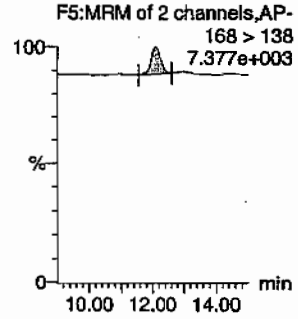
135-Trinitrobenzene



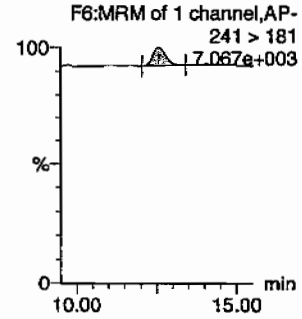
13-Dinitrobenzene-d4



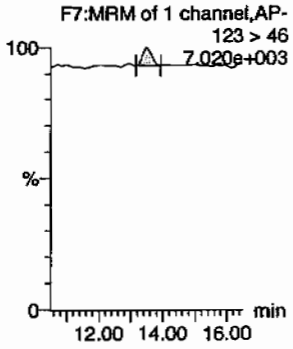
13-Dinitrobenzene



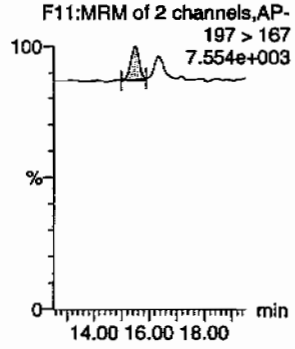
Tetryl



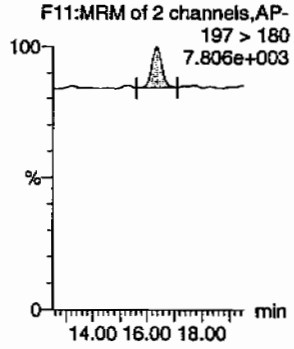
Nitrobenzene



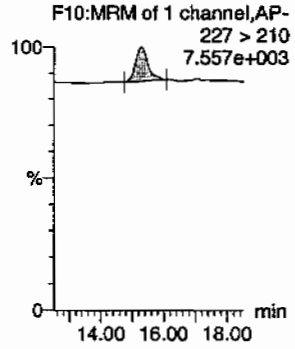
4-Amino-26-dinitrotoluene



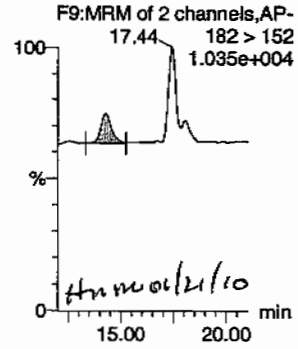
2-Amino-46-dinitrotoluene



246-Trinitrotoluene

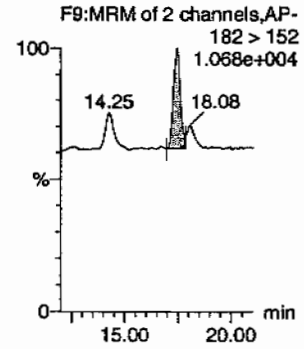


34-dinitrotoluene



Hnm 01/21/10

26-dinitrotoluene



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

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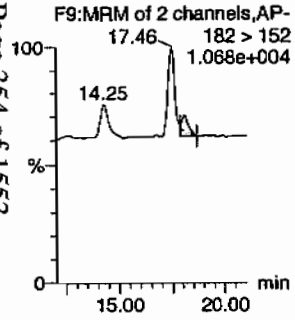
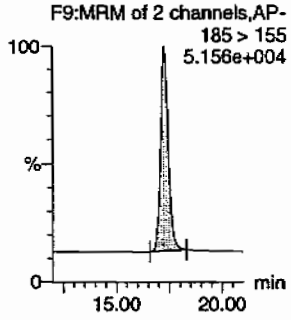
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA2.qld, Time: Thu Jan 21 11:10:12 2010

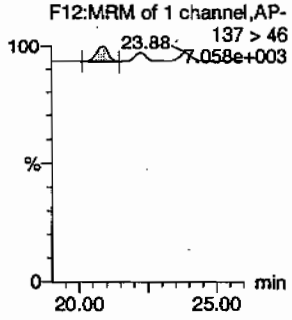
24-dinitrotoluene



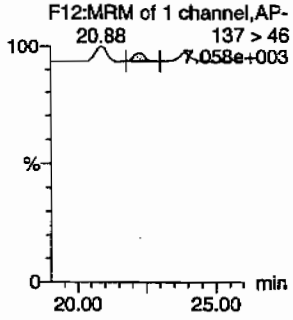
26-dinitrotoluene-d3



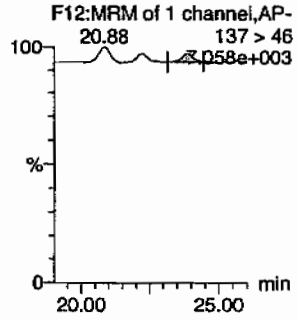
2-Nitrotoluene



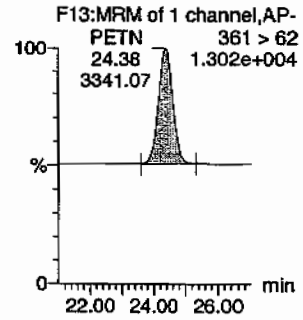
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ug/mL	%Rec	%Dev	S/N
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WXX100118-08CRI	RDX	176 > 102	7.54	647.857	3278.461	647.857	98.805	bb			44.4362	111.1	11.1	58.5
WXX100118-08CRI	135-Trinitrobenzene	213 > 183	10.13	1019.701	3278.461	1019.701	155.515	bb			46.6756	116.7	16.7	143.4
WXX100118-08CRI	13-Dinitrobenzene-d4	172 > 142	11.97	3278.461		3278.461	3278.461	bb			483.0765	96.6	-3.4	117.1
WXX100118-08CRI	13-Dinitrobenzene	168 > 138	12.10	301.779	3278.461	301.779	46.024	bb			38.9472	97.4	-2.6	25.1
WXX100118-08CRI	Tetryl	241 > 181	12.58	257.571	3278.461	257.571	39.282	bb			40.2231	100.6	0.6	25.3
WXX100118-08CRI	Nitrobenzene	123 > 46	13.50	165.085	3278.461	165.085	25.177	bb			30.0736	75.2	-24.8	15.8
WXX100118-08CRI	4-Amino-26-dinitrotoluene	197 > 167	15.49	369.820	18968.854	369.820	9.748	MM	21-Jan-10	10:53:40	36.9257	92.3	-7.7	36.3
WXX100118-08CRI	2-Amino-46-dinitrotoluene	197 > 180	16.38	539.596	18968.854	539.596	14.223	bb			36.5106	91.3	-8.7	72.4
WXX100118-08CRI	246-Trinitrotoluene	227 > 210	15.28	454.289	18968.854	454.289	11.975	bb			34.0067	85.0	-15.0	41.2
WXX100118-08CRI	34-dinitrotoluene	182 > 152	14.25	694.035	18968.854	694.035	18.294	bb			19.6237	98.1	-1.9	34.6
WXX100118-08CRI	26-dinitrotoluene	182 > 152	17.46	1564.271	18968.854	1564.271	41.233	MM	21-Jan-10	10:57:03	37.7493	94.4	-5.6	77.0
WXX100118-08CRI	24-dinitrotoluene	182 > 152	18.08	385.781	18968.854	385.781	10.169	MM	21-Jan-10	11:08:48	40.2197	100.5	0.5	17.6
WXX100118-08CRI	26-dinitrotoluene-d3	185 > 155	17.27	18968.854		18968.854	18968.854	bb			517.0154	103.4	3.4	2171.2
WXX100118-08CRI	2-Nitrotoluene	137 > 46	20.88	236.515	18968.854	236.515	6.234	bb			41.5408	103.9	3.9	49.1
WXX100118-08CRI	4-Nitrotoluene	137 > 46	22.25	114.249	18968.854	114.249	3.011	bb			42.0604	105.2	5.2	25.6
WXX100118-08CRI	3-Nitrotoluene	137 > 46	23.88	120.201	18968.854	120.201	3.168	bb			37.1526	92.9	-7.1	26.1
WXX100118-08CRI	PETN	361 > 62	24.38	3341.068	18968.854	3341.068	88.067	bb			52.7029	131.8	31.8	371.4

WXX100120-08CRI

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GRAND MEAN AVERAGE

Vendor:	UltraScientific
Date of Analysis	01/21/10
Time of Injection	0232
Standard Number	WXX100120-08CRI
Data File	EXP0118124a

HMX	118.6
RDX	111.1
135-TNB	116.7
13-DNB	97.4
Tetryl	100.6
Nitrobenzene	75.2
4A-26-DNT	92.3
2A-46-DNT	91.3
246-TNT	85.0
34-DNT(surr)	98.1
26-DNT	94.4
24-DNT	100.5
2-NT	103.9
4-NT	105.2
3-NT	92.9
PETN	131.8
Total	1615.0
Average	100.9

HMM 1/21/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1130

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXP0118135a

Analysis Date: 21-JAN-10 07:57

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
4-Amino-2,6-dinitrotoluene	600	661.856	110	
HMX	600	741.034	124	*
Nitrobenzene	600	576.535	96	
PETN	600	606.829	101	
RDX	600	777.363	130	*
Tetryl	600	516.549	86	
m-Dinitrobenzene	600	613.085	102	
m-Nitrotoluene	600	574.736	96	
o-Nitrotoluene	600	580.946	97	
p-Nitrotoluene	600	631.846	105	
1,3,5-Trinitrobenzene	600	613.986	102	
1,3-Dinitrobenzene-d4	500	502.745	101	
2,4,6-Trinitrotoluene	600	657.947	110	
2,4-Dinitrotoluene	600	606.484	101	
2,6-Dinitrotoluene	600	606.508	101	
2,6-Dinitrotoluene-d3	500	518.301	104	
2-Amino-4,6-dinitrotoluene	600	656.988	109	
3,4-Dinitrotoluene	300	327.071	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 70-130%
OtherTarget Analytes 80-120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

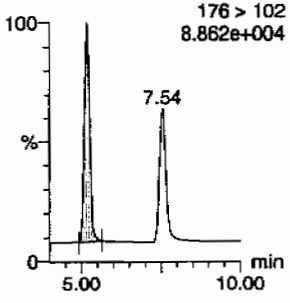
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA2.qld, Time: Thu Jan 21 11:10:12 2010

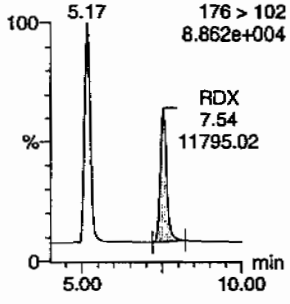
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118135a
Date: 21-Jan-2010
Time: 07:57:00
ID: WXX100118-07CCV
Vial: 1:1,B

MMP 1/21/10

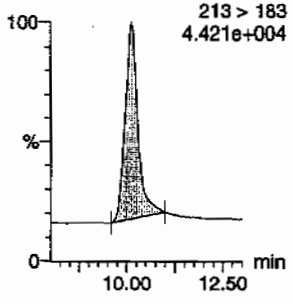
HMX MMP 1/21/10
F2:MRM of 1 channel,AP-
176 > 102
8.862e+004



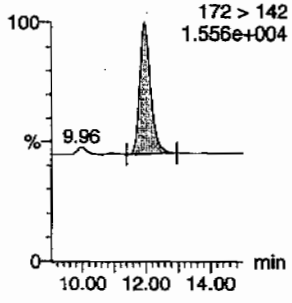
RDX
F2:MRM of 1 channel,AP-
176 > 102
8.862e+004



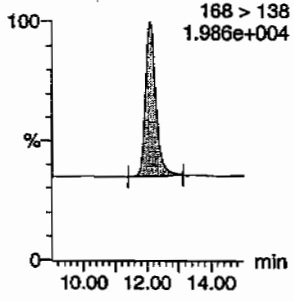
135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
4.421e+004



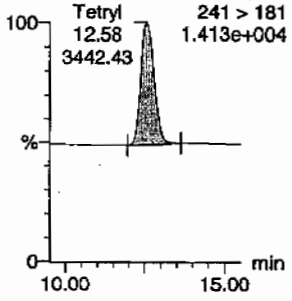
13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
1.556e+004



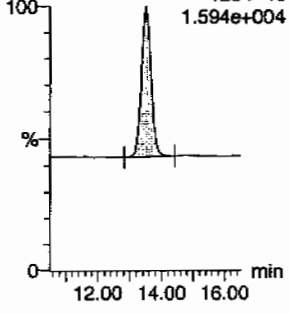
13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
1.986e+004



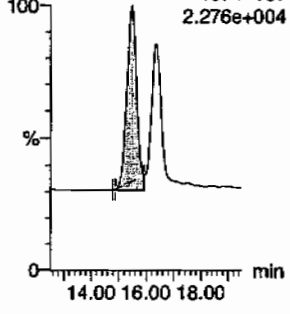
Tetryl
F6:MRM of 1 channel,AP-
241 > 181
1.413e+004



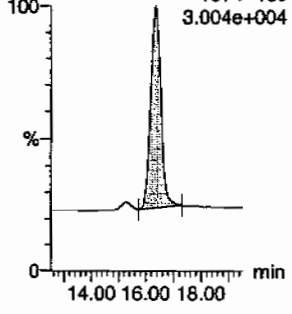
Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
1.594e+004



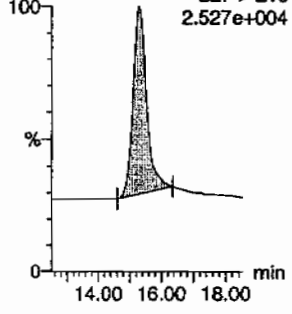
4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 167
2.276e+004



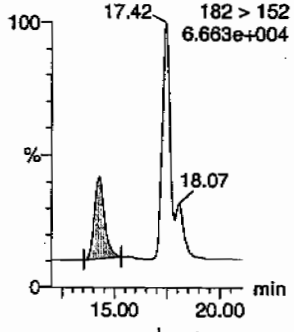
2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
3.004e+004



246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
2.527e+004

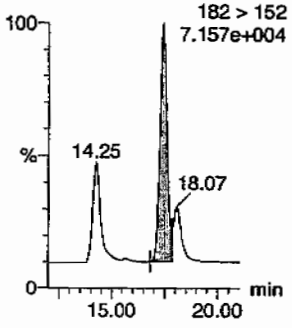


34-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
6.663e+004



MMP 01/21/10

26-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
7.157e+004



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

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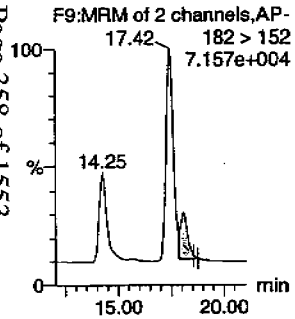
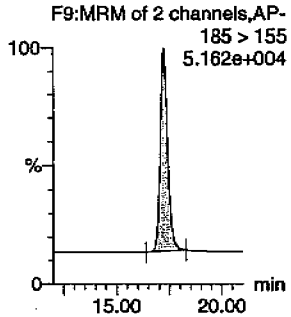
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA2.qld, Time: Thu Jan 21 11:10:12 2010

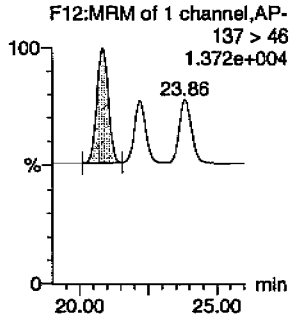
24-dinitrotoluene



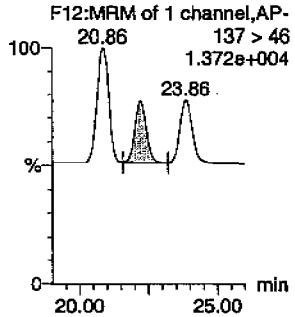
26-dinitrotoluene-d3



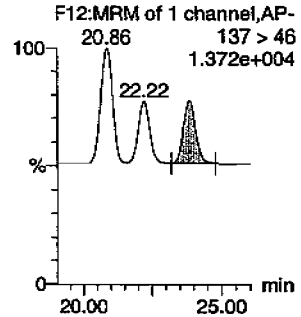
2-Nitrotoluene



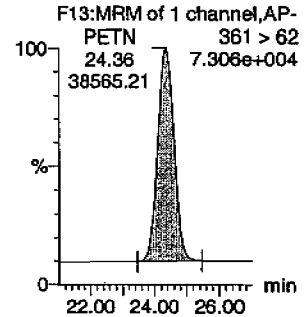
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N
WXX100118-07CCV	HMX	176 > 102	5.17	16323.502	3411.946	16323.502	2392.110	bb			741.0337	123.5	23.5	2685.5
WXX100118-07CCV	RDX	176 > 102	7.54	11795.019	3411.946	11795.019	1728.489	bb			777.3629	129.6	29.6	1639.2
WXX100118-07CCV	135-Trinitrobenzene	213 > 183	10.13	13959.620	3411.946	13959.620	2045.698	bb			613.9863	102.3	2.3	870.8
WXX100118-07CCV	13-Dinitrobenzene-d4	172 > 142	11.95	3411.946		3411.946	3411.946	bb			502.7453	100.5	0.5	198.3
WXX100118-07CCV	13-Dinitrobenzene	168 > 138	12.10	4943.859	3411.946	4943.859	724.493	bb			613.0850	102.2	2.2	311.4
WXX100118-07CCV	Tetryl	241 > 181	12.58	3442.435	3411.946	3442.435	504.468	bb			516.5492	86.1	-13.9	277.8
WXX100118-07CCV	Nitrobenzene	123 > 46	13.49	3293.665	3411.946	3293.665	482.667	bb			576.5346	96.1	-3.9	353.5
WXX100118-07CCV	4-Amino-26-dinitrotoluene	197 > 167	15.49	6645.125	19016.006	6645.125	174.725	MM	21-Jan-10	10:53:55	661.8556	110.3	10.3	224.3
WXX100118-07CCV	2-Amino-46-dinitrotoluene	197 > 180	16.34	9733.871	19016.006	9733.871	255.939	bb			656.9883	109.5	9.5	492.5
WXX100118-07CCV	246-Trinitrotoluene	227 > 210	15.30	8811.235	19016.006	8811.235	231.679	bb			657.9471	109.7	9.7	605.3
WXX100118-07CCV	34-dinitrotoluene	182 > 152	14.25	11596.318	19016.006	11596.318	304.909	bb			327.0710	109.0	9.0	436.7
WXX100118-07CCV	26-dinitrotoluene	182 > 152	17.42	25195.219	19016.006	25195.219	662.474	MM	21-Jan-10	10:56:49	606.5080	101.1	1.1	679.7
WXX100118-07CCV	24-dinitrotoluene	182 > 152	18.07	5831.759	19016.006	5831.759	153.338	MM	21-Jan-10	11:09:16	606.4840	101.1	1.1	150.0
WXX100118-07CCV	26-dinitrotoluene-d3	185 > 155	17.26	19016.006		19016.006	19016.006	bb			518.3006	103.7	3.7	869.6
WXX100118-07CCV	2-Nitrotoluene	137 > 46	20.86	3315.871	19016.006	3315.871	87.186	bb			580.9457	96.8	-3.2	735.8
WXX100118-07CCV	4-Nitrotoluene	137 > 46	22.22	1720.553	19016.006	1720.553	45.240	bb			631.8459	105.3	5.3	395.7
WXX100118-07CCV	3-Nitrotoluene	137 > 46	23.86	1864.085	19016.006	1864.085	49.014	bb			574.7362	95.8	-4.2	404.3
WXX100118-07CCV	PETN	361 > 62	24.36	38565.211	19016.006	38565.211	1014.020	bb			606.8294	101.1	1.1	8307.9

MMT 1/21/10

WXX100120-07CCV

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

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

GRAND MEAN AVERAGE

Vendor: Restek
Date of Analysis: 01/21/10
Time of Injection: 0757
Standard Number: WXX100120-07CCV
Data File: EXP0118135a

HMX	123.5
RDX	129.6
135-TNB	102.3
13-DNB	102.2
Tetryl	86.1
Nitrobenzene	96.1
4A-26-DNT	100.3
2A-46-DNT	109.5
246-TNT	109.7
34-DNT(surr)	109.0
26-DNT	101.1
24-DNT	101.1
2-NT	96.8
4-NT	105.3
3-NT	95.8
PETN	101.1
Total	1669.5
Average	104.3

MAP 1/21/10

Hmm 01/21/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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

7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10–1130

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP0118137a

Analysis Date: 21–JAN–10 08:56

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

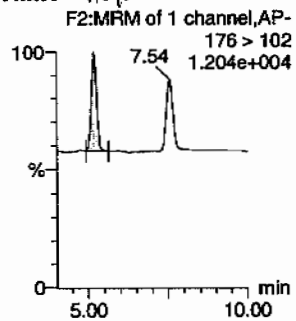
Compound	True	Found	Recovery	Q
1,3–Dinitrobenzene–d4	500	499.684	100	
2,4,6–Trinitrotoluene	40	31.811	80	
2,4–Dinitrotoluene	40	36.141	90	
2,6–Dinitrotoluene	40	37.612	94	
2,6–Dinitrotoluene–d3	500	504.64	101	
2–Amino–4,6–dinitrotoluene	40	36.551	91	
3,4–Dinitrotoluene	20	21.416	107	
4–Amino–2,6–dinitrotoluene	40	40.936	102	
HMX	40	45.829	115	
Nitrobenzene	40	38.48	96	
PETN	40	57.69	144	*
RDX	40	57.565	144	*
Tetryl	40	34.838	87	
m–Dinitrobenzene	40	37.272	93	
m–Nitrotoluene	40	40.699	102	
o–Nitrotoluene	40	36.116	90	
p–Nitrotoluene	40	44.391	111	
1,3,5–Trinitrobenzene	40	57.143	143	*

Recovery Limits:
3,4–Dinitrotoluene (Surrogate),TATB, tris(o–cresyl)phosphate, 3,5–Dinitroaniline, 2,6–Diamino–4–nitrotoluene , 2,4–Diamino–6–nitrotoluene 50–150%
OtherTarget Analytes 70–130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

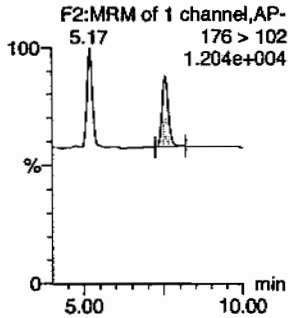
Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA2.qld, Time: Thu Jan 21 11:10:12 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118137a
Date: 21-Jan-2010
Time: 08:56:01
ID: WXX100118-08CRI
Vial: 1:1,C

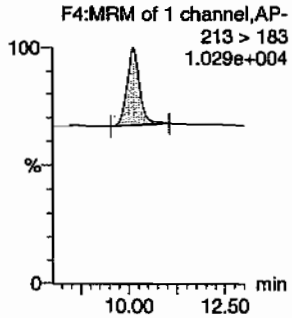
HMX



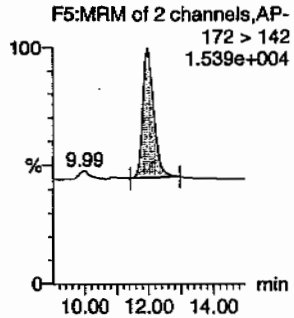
RDX



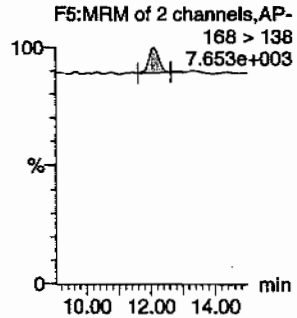
135-Trinitrobenzene



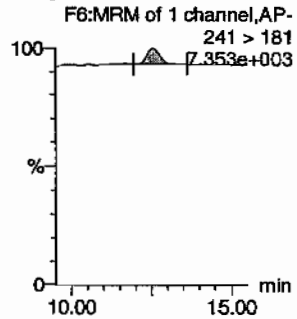
13-Dinitrobenzene-d4



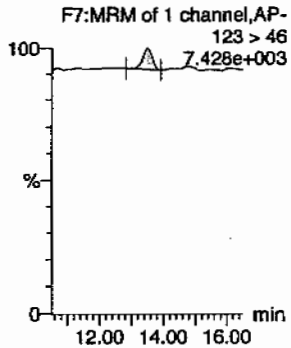
13-Dinitrobenzene



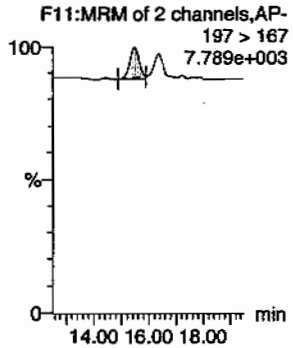
Tetryl



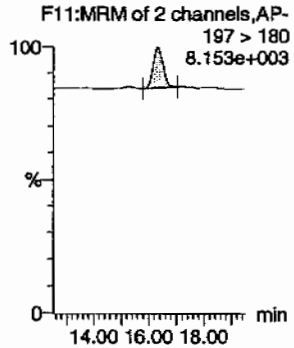
Nitrobenzene



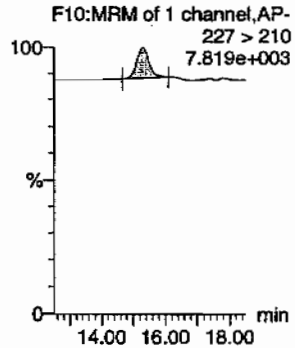
4-Amino-26-dinitrotoluene



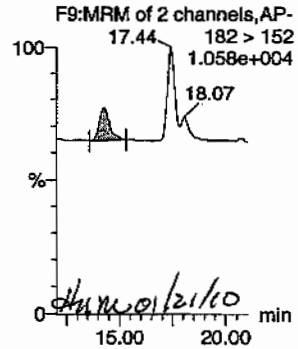
2-Amino-46-dinitrotoluene



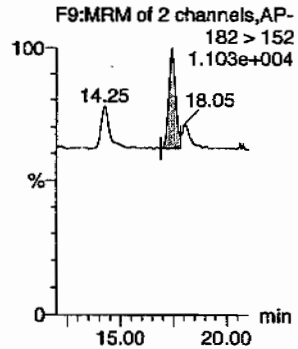
246-Trinitrotoluene



34-dinitrotoluene



26-dinitrotoluene



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

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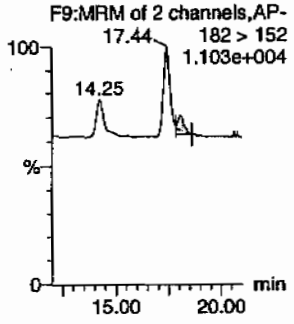
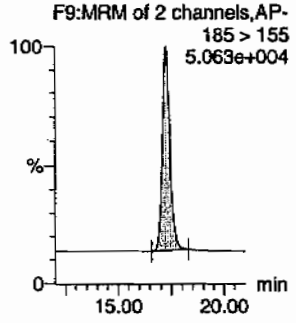
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA2.qld, Time: Thu Jan 21 11:10:12 2010

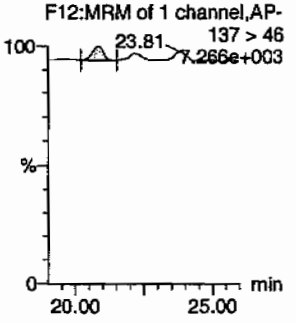
24-dinitrotoluene



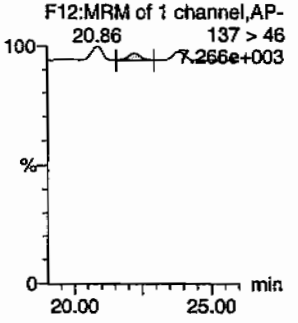
26-dinitrotoluene-d3



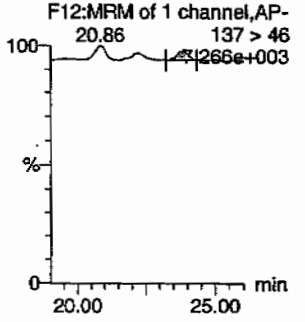
2-Nitrotoluene



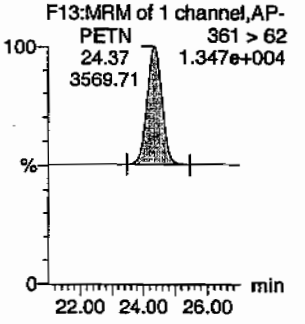
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N
WXX100118-08CRI	HMX	176 > 102	5.17	1003.370	3391.170	1003.370	147.939	bb			45.8288	114.6	14.6	143.0
WXX100118-08CRI	RDX	176 > 102	7.54	868.122	3391.170	868.122	127.997	bb			57.5650	143.9	43.9	102.5
WXX100118-08CRI	135-Trinitrobenzene	213 > 183	10.13	1291.302	3391.170	1291.302	190.392	bb			57.1433	142.9	42.9	370.1
WXX100118-08CRI	13-Dinitrobenzene-d4	172 > 142	11.95	3391.170		3391.170	3391.170	bb			499.6840	99.9	-0.1	166.5
WXX100118-08CRI	13-Dinitrobenzene	168 > 138	12.07	298.725	3391.170	298.725	44.045	bb			37.2717	93.2	-6.8	23.9
WXX100118-08CRI	Tetryl	241 > 181	12.54	230.754	3391.170	230.754	34.023	bb			34.8376	87.1	-12.9	27.9
WXX100118-08CRI	Nitrobenzene	123 > 46	13.49	218.492	3391.170	218.492	32.215	bb			38.4799	96.2	-3.8	27.7
WXX100118-08CRI	4-Amino-26-dinitrotoluene	197 > 167	15.45	400.167	18514.828	400.167	10.807	MM	21-Jan-10	10:54:02	40.9356	102.3	2.3	20.4
WXX100118-08CRI	2-Amino-46-dinitrotoluene	197 > 180	16.34	527.267	18514.828	527.267	14.239	bb			36.5513	91.4	-8.6	34.5
WXX100118-08CRI	246-Trinitrotoluene	227 > 210	15.27	414.788	18514.828	414.788	11.202	bb			31.8112	79.5	-20.5	81.2
WXX100118-08CRI	34-dinitrotoluene	182 > 152	14.25	739.276	18514.828	739.276	19.964	bb			21.4155	107.1	7.1	34.2
WXX100118-08CRI	26-dinitrotoluene	182 > 152	17.44	1521.276	18514.828	1521.276	41.083	MM	21-Jan-10	10:56:38	37.6120	94.0	-6.0	72.1
WXX100118-08CRI	24-dinitrotoluene	182 > 152	18.05	338.363	18514.828	338.363	9.138	MM	21-Jan-10	11:09:25	36.1412	90.4	-9.6	15.2
WXX100118-08CRI	26-dinitrotoluene-d3	185 > 155	17.26	18514.828		18514.828	18514.828	bb			504.6405	100.9	0.9	1434.1
WXX100118-08CRI	2-Nitrotoluene	137 > 46	20.86	200.705	18514.828	200.705	5.420	bb			36.1157	90.3	-9.7	35.0
WXX100118-08CRI	4-Nitrotoluene	137 > 46	22.21	117.692	18514.828	117.692	3.178	bb			44.3905	111.0	11.0	17.0
WXX100118-08CRI	3-Nitrotoluene	137 > 46	23.81	128.524	18514.828	128.524	3.471	bb			40.6993	101.7	1.7	21.1
WXX100118-08CRI	PETN	361 > 62	24.37	3569.707	18514.828	3569.707	96.401	bb			57.6903	144.2	44.2	764.1

WXX100120-08CRI

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

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GRAND MEAN AVERAGE

Vendor:	UltraScientific
Date of Analysis	01/21/10
Time of Injection	0856
Standard Number	WXX100120-08CRI
Data File	EXP0118137a

HMX	114.6
RDX	143.9
135-TNB	142.9
13-DNB	93.2
Tetryl	87.1
Nitrobenzene	96.2
4A-26-DNT	102.3
2A-46-DNT	91.4
246-TNT	79.5
34-DNT(surr)	107.1
26-DNT	94.0
24-DNT	90.4
2-NT	90.3
4-NT	111.0
3-NT	101.7
PETN	144.2
Total	1689.8
Average	105.6

MAP 1/21/10

Hmc 01/21/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1130

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXP0118148a

Analysis Date: 21-JAN-10 14:20

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	600	634.611	106	
1,3-Dinitrobenzene-d4	500	531.17	106	
2,4,6-Trinitrotoluene	600	641.187	107	
2,4-Dinitrotoluene	600	609.405	102	
2,6-Dinitrotoluene	600	609.202	102	
2,6-Dinitrotoluene-d3	500	507.788	102	
2-Amino-4,6-dinitrotoluene	600	662.001	110	
3,4-Dinitrotoluene	300	312.977	104	
4-Amino-2,6-dinitrotoluene	600	666.95	111	
HMX	600	747.633	125	*
Nitrobenzene	600	541.53	90	
PETN	600	607.314	101	
RDX	600	774.928	129	*
Tetryl	600	543.178	91	
m-Dinitrobenzene	600	600.643	100	
m-Nitrotoluene	600	682.444	114	
o-Nitrotoluene	600	620.487	103	
p-Nitrotoluene	600	680.799	113	

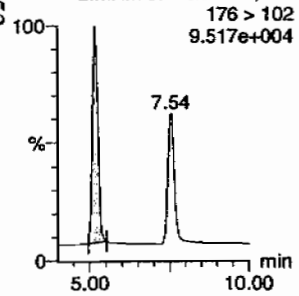
Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 70-130%
OtherTarget Analytes 80-120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA3.qld, Time: Fri Jan 22 10:11:48 2010

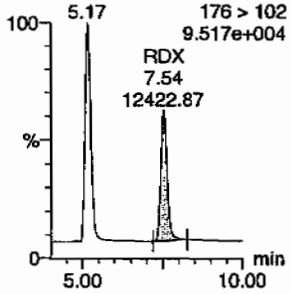
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118148a
Date: 21-Jan-2010
Time: 14:20:48
ID: WXX100120-07CCV
Vial: 1:1,B

MMT 1/22/10

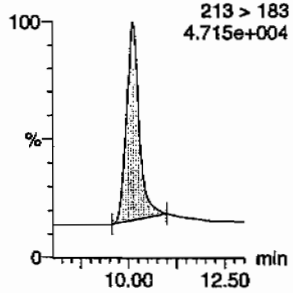
HMX
F2:MRM of 1 channel,AP-
176 > 102
9.517e+004



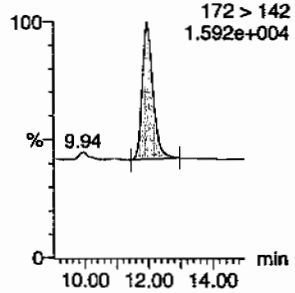
RDX
F2:MRM of 1 channel,AP-
176 > 102
9.517e+004



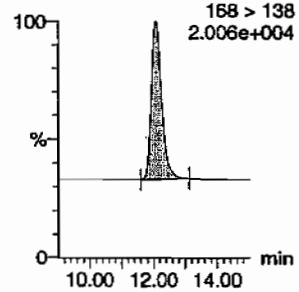
135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
4.715e+004



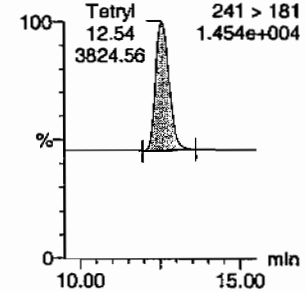
13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
1.592e+004



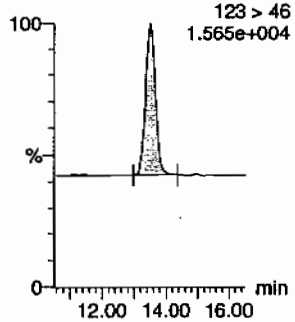
13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
2.006e+004



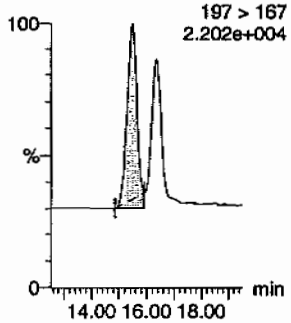
Tetryl
F6:MRM of 1 channel,AP-
241 > 181
1.454e+004



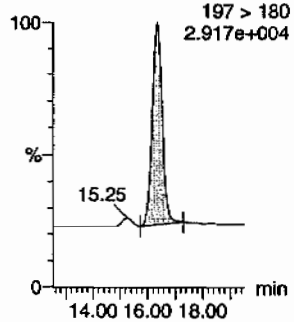
Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
1.565e+004



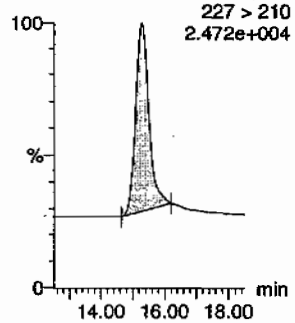
4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 167
2.202e+004



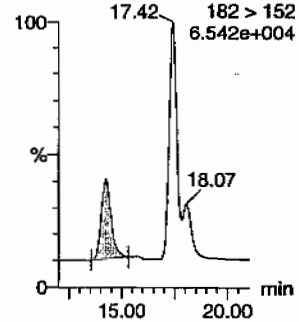
2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
2.917e+004



246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
2.472e+004

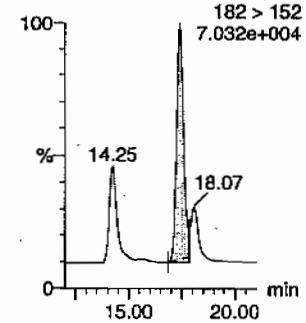


34-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
6.542e+004



Hum 01/22/10

26-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
7.032e+004



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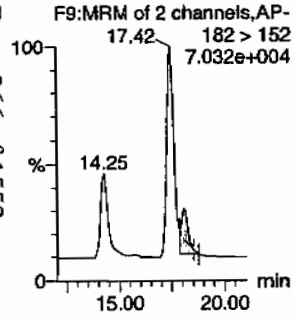
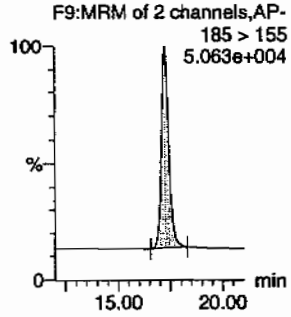
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA3.qld, Time: Fri Jan 22 10:11:48 2010

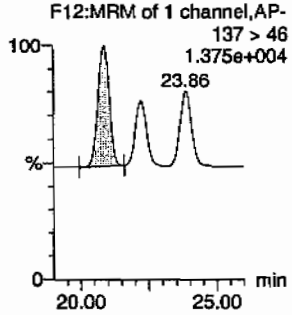
24-dinitrotoluene



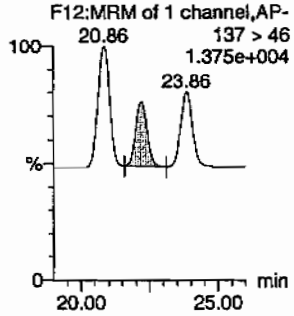
26-dinitrotoluene-d3



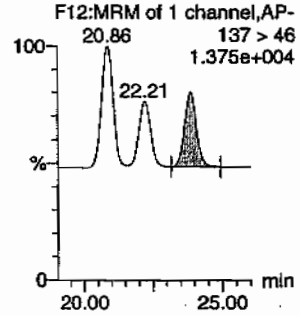
2-Nitrotoluene



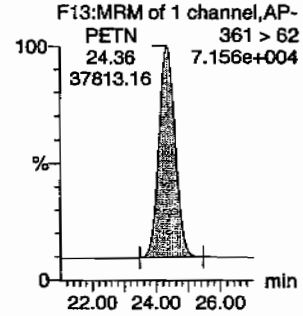
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	AbsResp	Response	Flags	Mod Date	Mod Time	ng/ml	%Rec	%Dev	S/N
WXX100120-07CCV	HMX	176 > 102	5.17	17400.000	3604.854	17400.000	2413.413	bb			747.6328	124.6	24.6	2174.8
WXX100120-07CCV	RDX	176 > 102	7.54	12422.865	3604.854	12422.865	1723.075	bb			774.9281	129.2	29.2	1299.7
WXX100120-07CCV	135-Trinitrobenzene	213 > 183	10.13	15244.311	3604.854	15244.311	2114.414	bb			634.6106	105.8	5.8	2556.3
WXX100120-07CCV	13-Dinitrobenzene-d4	172 > 142	11.95	3604.854		3604.854	3604.854	bb			531.1701	106.2	6.2	179.7
WXX100120-07CCV	13-Dinitrobenzene	168 > 138	12.07	5117.373	3604.854	5117.373	709.789	bb			600.6427	100.1	0.1	378.2
WXX100120-07CCV	Tetryl	241 > 181	12.54	3824.563	3604.854	3824.563	530.474	bb			543.1781	90.5	-9.5	346.7
WXX100120-07CCV	Nitrobenzene	123 > 46	13.49	3268.602	3604.854	3268.602	453.361	bb			541.5299	90.3	-9.7	272.1
WXX100120-07CCV	4-Amino-26-dinitrotoluene	197 > 167	15.49	6560.457	18630.313	6560.457	176.069	MM	22-Jan-10	10:00:19	666.9501	111.2	11.2	538.1
WXX100120-07CCV	2-Amino-46-dinitrotoluene	197 > 180	16.34	9609.198	18630.313	9609.198	257.891	bb			662.0005	110.3	10.3	1008.8
WXX100120-07CCV	246-Trinitrotoluene	227 > 210	15.27	8412.618	18630.313	8412.618	225.778	bb			641.1867	106.9	6.9	672.9
WXX100120-07CCV	34-dinitrotoluene	182 > 152	14.25	10871.541	18630.313	10871.541	291.770	bb			312.9768	104.3	4.3	274.4
WXX100120-07CCV	26-dinitrotoluene	182 > 152	17.42	24793.852	18630.313	24793.852	665.417	MM	22-Jan-10	10:06:49	609.2023	101.5	1.5	713.1
WXX100120-07CCV	24-dinitrotoluene	182 > 152	18.07	5740.994	18630.313	5740.994	154.077	MM	22-Jan-10	10:11:29	609.4050	101.6	1.6	157.1
WXX100120-07CCV	26-dinitrotoluene-d3	185 > 155	17.24	18630.313		18630.313	18630.313	bb			507.7881	101.6	1.6	1388.3
WXX100120-07CCV	2-Nitrotoluene	137 > 46	20.86	3469.728	18630.313	3469.728	93.120	bb			620.4867	103.4	3.4	432.7
WXX100120-07CCV	4-Nitrotoluene	137 > 46	22.21	1816.253	18630.313	1816.253	48.745	bb			680.7986	113.5	13.5	230.0
WXX100120-07CCV	3-Nitrotoluene	137 > 46	23.86	2168.528	18630.313	2168.528	58.199	bb			682.4440	113.7	13.7	267.0
WXX100120-07CCV	PETN	361 > 62	24.36	37813.156	18630.313	37813.156	1014.829	bb			607.3136	101.2	1.2	8971.9

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

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GRAND MEAN AVERAGE

Vendor: Restek
Date of Analysis: 01/21/10
Time of Injection: 1420
Standard Number: WXX100120-07CCV
Data File: EXP0118148a

HMX		124.6
RDX		129.2
135-TNB		105.8
13-DNB		100.1
Tetryl		90.5
Nitrobenzene		90.3
4A-26-DNT		111.2
2A-46-DNT		110.3
246-TNT		106.9
34-DNT(surr)		104.3
26-DNT		101.5
24-DNT		101.6
2-NT		103.4
4-NT		113.5
3-NT		113.7
PETN		101.2
	Total	1708.1
	Average	106.8

1/22/10

Hmm 01/22/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC **GEL Job No (SDG):** 10–1130

Lab Code: GEL **GEL Sample ID:** WXXCRI

GEL Data File EXP0118150a **Analysis Date:** 21–JAN–10 15:19

LCMSMS ID: 903 **Column ID:** Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
PETN	40	53.782	134	*
RDX	40	43.693	109	
Tetryl	40	40.24	101	
m–Dinitrobenzene	40	40.33	101	
m–Nitrotoluene	40	35.188	88	
o–Nitrotoluene	40	35.751	89	
p–Nitrotoluene	40	34.517	86	
1,3,5–Trinitrobenzene	40	45.658	114	
1,3–Dinitrobenzene–d4	500	526.112	105	
2,4,6–Trinitrotoluene	40	32.125	80	
2,4–Dinitrotoluene	40	36.889	92	
2,6–Dinitrotoluene	40	38.475	96	
2,6–Dinitrotoluene–d3	500	585.26	117	
2–Amino–4,6–dinitrotoluene	40	40.771	102	
3,4–Dinitrotoluene	20	18.95	95	
4–Amino–2,6–dinitrotoluene	40	36.871	92	
HMX	40	47.138	118	
Nitrobenzene	40	44.391	111	

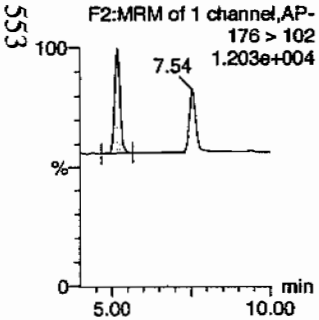
Recovery Limits:
3,4–Dinitrotoluene (Surrogate),TATB, tris(o–cresyl)phosphate, 3,5–Dinitroaniline, 2,6–Diamino–4–nitrotoluene , 2,4–Diamino–6–nitrotoluene 50–150%
OtherTarget Analytes 70–130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA3.qld, Time: Fri Jan 22 10:11:48 2010

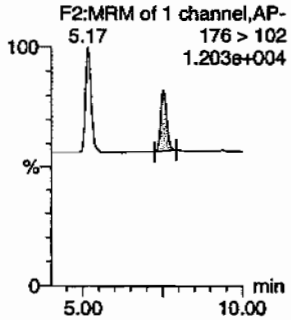
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118150a
Date: 21-Jan-2010
Time: 15:19:59
ID: WXX100120-08CRI
Vial: 1:1,C

MMT 1/22/10

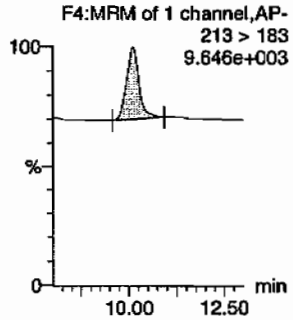
HMX



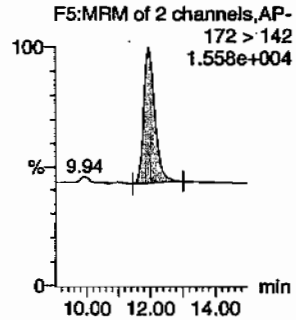
RDX



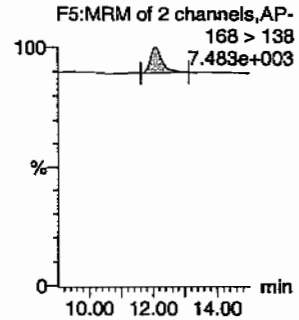
135-Trinitrobenzene



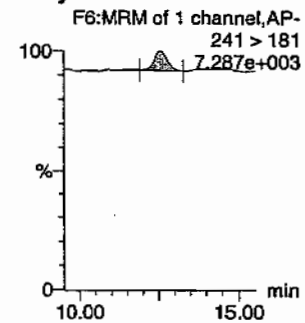
13-Dinitrobenzene-d4



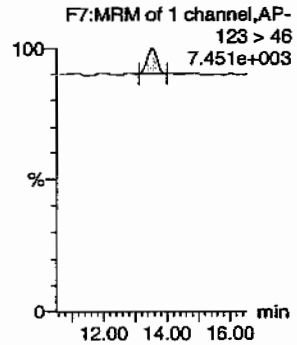
13-Dinitrobenzene



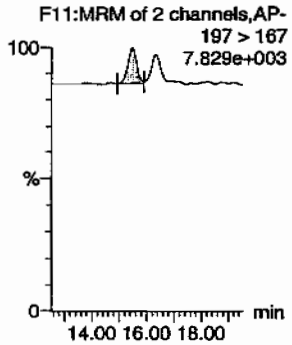
Tetryl



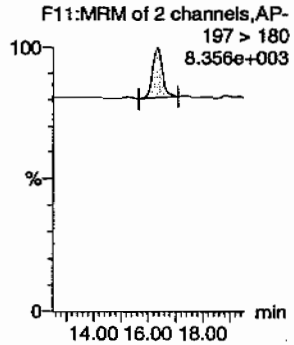
Nitrobenzene



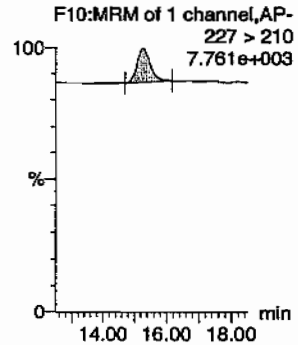
4-Amino-26-dinitrotoluene



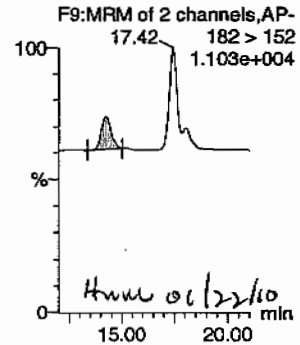
2-Amino-46-dinitrotoluene



246-Trinitrotoluene

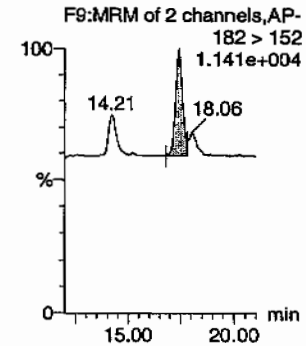


34-dinitrotoluene



Hmm 01/22/10

26-dinitrotoluene



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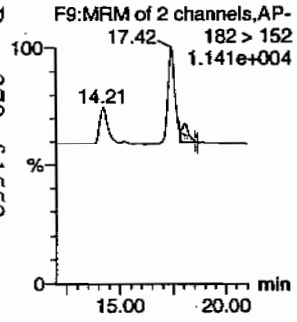
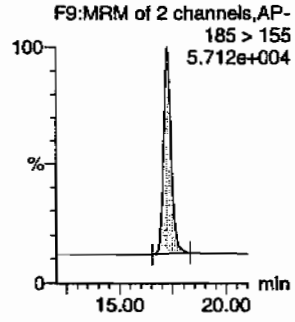
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA3.qld, Time: Fri Jan 22 10:11:48 2010

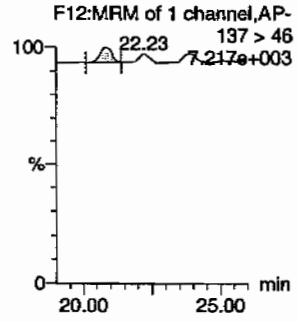
24-dinitrotoluene



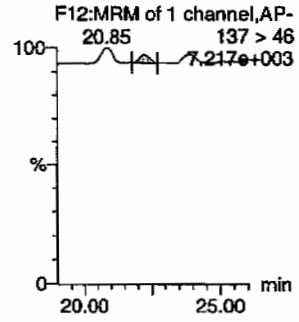
26-dinitrotoluene-d3



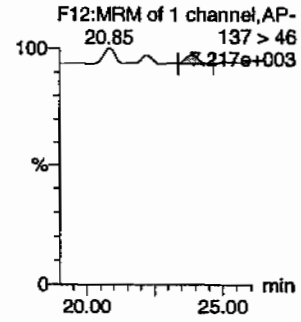
2-Nitrotoluene



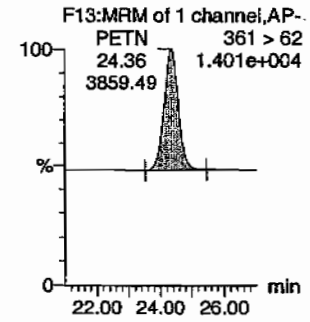
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N
WXX100120-08CRI	HMX	176 > 102	5.17	1086.624	3570.529	1086.624	152.166	bb			47.1383	117.8	17.8	165.1
WXX100120-08CRI	RDX	176 > 102	7.54	693.767	3570.529	693.767	97.152	bb			43.6927	109.2	9.2	96.0
WXX100120-08CRI	135-Trinitrobenzene	213 > 183	10.11	1086.334	3570.529	1086.334	152.125	bb			45.6581	114.1	14.1	279.5
WXX100120-08CRI	13-Dinitrobenzene-d4	172 > 142	11.95	3570.529		3570.529	3570.529	bb			526.1123	105.2	5.2	478.2
WXX100120-08CRI	13-Dinitrobenzene	168 > 138	12.10	340.333	3570.529	340.333	47.659	bb			40.3300	100.8	0.8	38.8
WXX100120-08CRI	Tetryl	241 > 181	12.53	280.637	3570.529	280.637	39.299	bb			40.2402	100.6	0.6	19.1
WXX100120-08CRI	Nitrobenzene	123 > 46	13.50	265.386	3570.529	265.386	37.163	bb			44.3909	111.0	11.0	21.2
WXX100120-08CRI	4-Amino-26-dinitrotoluene	197 > 167	15.46	418.011	21472.699	418.011	9.734	MM	22-Jan-10	10:00:25	36.8706	92.2	-7.8	23.1
WXX100120-08CRI	2-Amino-46-dinitrotoluene	197 > 180	16.35	682.100	21472.699	682.100	15.883	bb			40.7711	101.9	1.9	38.7
WXX100120-08CRI	246-Trinitrotoluene	227 > 210	15.28	485.791	21472.699	485.791	11.312	bb			32.1245	80.3	-19.7	32.2
WXX100120-08CRI	34-dinitrotoluene	182 > 152	14.25	758.667	21472.699	758.667	17.666	bb			18.9498	94.7	-5.3	54.8
WXX100120-08CRI	26-dinitrotoluene	182 > 152	17.42	1804.812	21472.699	1804.812	42.026	MM	22-Jan-10	10:06:58	38.4754	96.2	-3.8	67.4
WXX100120-08CRI	24-dinitrotoluene	182 > 152	18.06	400.543	21472.699	400.543	9.327	MM	22-Jan-10	10:11:18	36.8894	92.2	-7.8	14.1
WXX100120-08CRI	26-dinitrotoluene-d3	185 > 155	17.25	21472.699		21472.699	21472.699	bb			585.2603	117.1	17.1	1390.7
WXX100120-08CRI	2-Nitrotoluene	137 > 46	20.85	230.419	21472.699	230.419	5.365	bb			35.7511	89.4	-10.6	30.3
WXX100120-08CRI	4-Nitrotoluene	137 > 46	22.23	106.133	21472.699	106.133	2.471	bb			34.5165	86.3	-13.7	16.2
WXX100120-08CRI	3-Nitrotoluene	137 > 46	23.89	128.871	21472.699	128.871	3.001	bb			35.1877	88.0	-12.0	15.7
WXX100120-08CRI	PETN	361 > 62	24.36	3859.488	21472.699	3859.488	89.870	bb			53.7815	134.5	34.5	1137.1

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

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GRAND MEAN AVERAGE

Vendor:	UltraScientific
Date of Analysis	01/21/10
Time of Injection	1519
Standard Number	WXX100120-08CRI
Data File	EXP0118150a

HMX	117.8
RDX	109.2
135-TNB	114.1
13-DNB	100.8
Tetryl	100.6
Nitrobenzene	111.0
4A-26-DNT	92.2
2A-46-DNT	101.9
246-TNT	80.3
34-DNT(surr)	94.7
26-DNT	96.2
24-DNT	92.2
2-NT	89.4
4-NT	86.3
3-NT	88.0
PETN	134.5
Total	1609.2
Average	100.6

MAP 1/22/10

Hmk 01/22/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10–1130

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXP0118161a

Analysis Date: 21–JAN–10 20:44

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5–Trinitrobenzene	600	640.69	107	
1,3–Dinitrobenzene–d4	500	493.932	99	
2,4,6–Trinitrotoluene	600	646.064	108	
2,4–Dinitrotoluene	600	593.334	99	
2,6–Dinitrotoluene	600	619.188	103	
2,6–Dinitrotoluene–d3	500	495.382	99	
2–Amino–4,6–dinitrotoluene	600	677.874	113	
3,4–Dinitrotoluene	300	332.19	111	
4–Amino–2,6–dinitrotoluene	600	667.68	111	
HMX	600	699.078	117	
Nitrobenzene	600	579.852	97	
PETN	600	628.681	105	
RDX	600	747.518	125	*
Tetryl	600	530.703	88	
m–Dinitrobenzene	600	619.193	103	
m–Nitrotoluene	600	617.166	103	
o–Nitrotoluene	600	628.024	105	
p–Nitrotoluene	600	648.766	108	

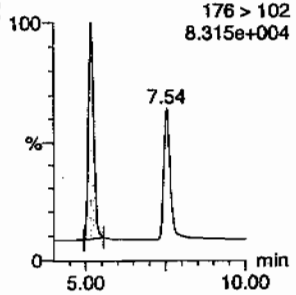
Recovery Limits:
3,4–Dinitrotoluene (Surrogate),TATB, tris(o–cresyl)phosphate, 3,5–Dinitroaniline, 2,6–Diamino–4–nitrotoluene , 2,4–Diamino–6–nitrotoluene 70–130%
OtherTarget Analytes 80–120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA3.qld, Time: Fri Jan 22 10:11:48 2010

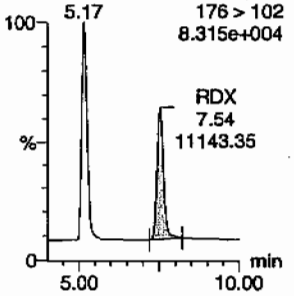
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118161a
Date: 21-Jan-2010
Time: 20:44:42
ID: WXX100120-07CCV
Vial: 1:1,B

MATT 1/22/10

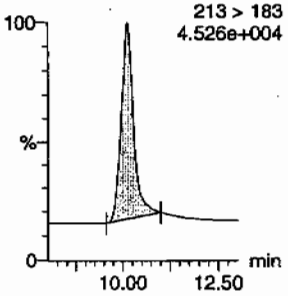
HMX
F2:MRM of 1 channel,AP-
176 > 102
8.315e+004



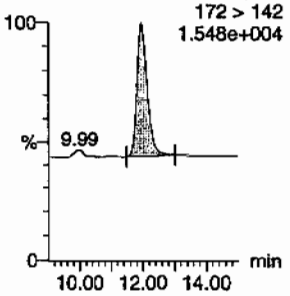
RDX
F2:MRM of 1 channel,AP-
176 > 102
8.315e+004



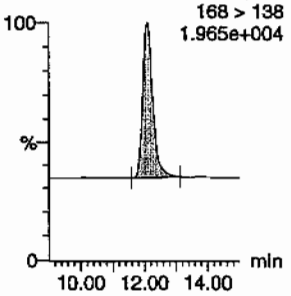
135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
4.526e+004



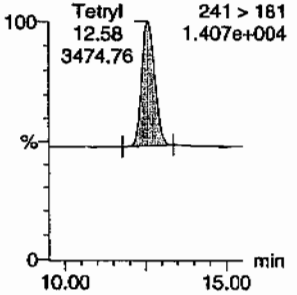
13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
1.548e+004



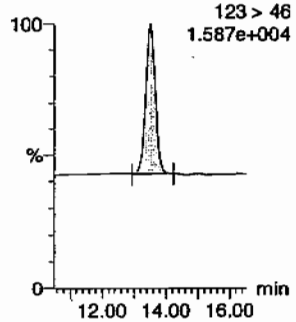
13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
1.965e+004



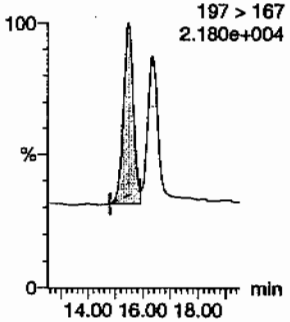
Tetryl
F6:MRM of 1 channel,AP-
241 > 181
1.407e+004



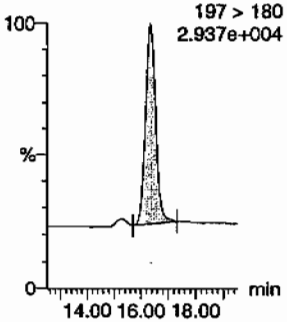
Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
1.587e+004



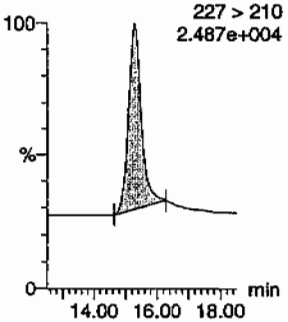
4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 167
2.180e+004



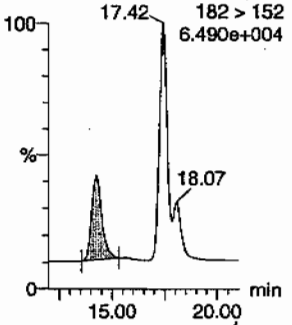
2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
2.937e+004



246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
2.487e+004

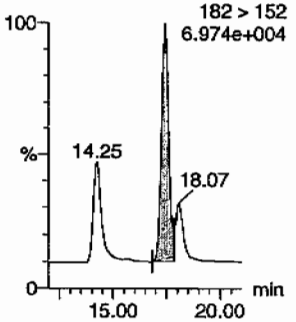


34-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
6.490e+004



thru 01/22/10

26-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
6.974e+004



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

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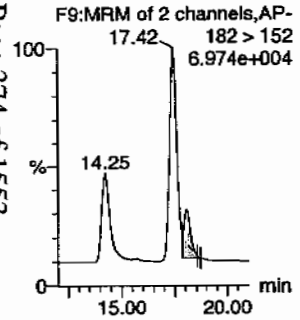
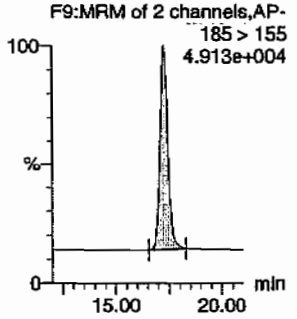
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA3.qld, Time: Fri Jan 22 10:11:48 2010

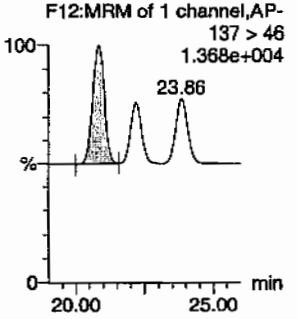
24-dinitrotoluene



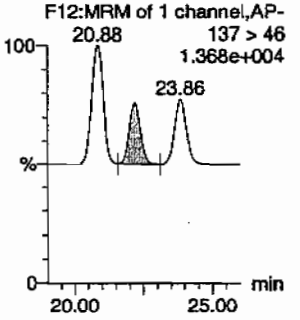
26-dinitrotoluene-d3



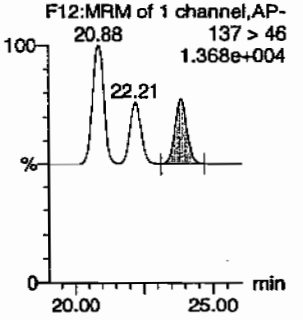
2-Nitrotoluene



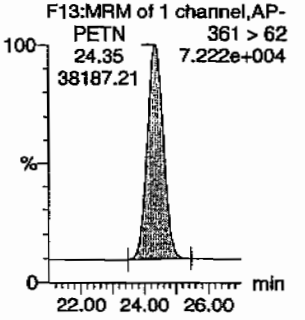
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	norm	%Rec	%Dev	S/N
WXX100120-07CCV	HMX	176 > 102	5.17	15129.346	3352.135	15129.346	2256.673	bb			699.0777	116.5	16.5	1588.9
WXX100120-07CCV	RDX	176 > 102	7.54	11143.347	3352.135	11143.347	1662.127	bb			747.5177	124.6	24.6	978.8
WXX100120-07CCV	135-Trinitrobenzene	213 > 183	10.13	14311.402	3352.135	14311.402	2134.670	bb			640.6899	106.8	6.8	1199.3
WXX100120-07CCV	13-Dinitrobenzene-d4	172 > 142	11.95	3352.135		3352.135	3352.135	bb			493.9323	98.8	-1.2	176.6
WXX100120-07CCV	13-Dinitrobenzene	168 > 138	12.10	4905.586	3352.135	4905.586	731.711	bb			619.1932	103.2	3.2	785.1
WXX100120-07CCV	Tetryl	241 > 181	12.58	3474.764	3352.135	3474.764	518.291	bb			530.7034	88.5	-11.5	257.1
WXX100120-07CCV	Nitrobenzene	123 > 46	13.50	3254.546	3352.135	3254.546	485.444	bb			579.8518	96.6	-3.4	326.8
WXX100120-07CCV	4-Amino-26-dinitrotoluene	197 > 167	15.49	6407.184	18175.148	6407.184	176.262	MM	22-Jan-10	10:01:06	667.6804	111.3	11.3	231.0
WXX100120-07CCV	2-Amino-46-dinitrotoluene	197 > 180	16.34	9599.213	18175.148	9599.213	264.075	bb			677.8740	113.0	13.0	305.1
WXX100120-07CCV	246-Trinitrotoluene	227 > 210	15.28	8269.517	18175.148	8269.517	227.495	bb			646.0642	107.7	7.7	669.4
WXX100120-07CCV	34-dinitrotoluene	182 > 152	14.25	11257.031	18175.148	11257.031	309.682	bb			332.1904	110.7	10.7	385.1
WXX100120-07CCV	26-dinitrotoluene	182 > 152	17.42	24584.600	18175.148	24584.600	676.325	MM	22-Jan-10	10:07:33	619.1885	103.2	3.2	540.3
WXX100120-07CCV	24-dinitrotoluene	182 > 152	18.07	5453.034	18175.148	5453.034	150.013	MM	22-Jan-10	10:10:29	593.3341	98.9	-1.1	120.9
WXX100120-07CCV	26-dinitrotoluene-d3	185 > 155	17.27	18175.148		18175.148	18175.148	bb			495.3822	99.1	-0.9	1469.4
WXX100120-07CCV	2-Nitrotoluene	137 > 46	20.88	3426.076	18175.148	3426.076	94.252	bb			628.0240	104.7	4.7	888.8
WXX100120-07CCV	4-Nitrotoluene	137 > 46	22.21	1688.511	18175.148	1688.511	46.451	bb			648.7664	108.1	8.1	462.6
WXX100120-07CCV	3-Nitrotoluene	137 > 46	23.86	1913.189	18175.148	1913.189	52.632	bb			617.1661	102.9	2.9	489.2
WXX100120-07CCV	PETN	361 > 62	24.35	38187.215	18175.148	38187.215	1050.534	bb			628.6809	104.8	4.8	2926.3

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GRAND MEAN AVERAGE

Vendor: Restek
Date of Analysis: 01/21/10
Time of Injection: 2044
Standard Number: WXX100120-07CCV
Data File: EXP0118161a

HMX		116.5
RDX		124.6
135-TNB		106.8
13-DNB		103.2
Tetryl		88.5
Nitrobenzene		96.6
4A-26-DNT		111.3
2A-46-DNT		113.0
246-TNT		107.7
34-DNT(surr)		110.7
26-DNT		103.2
24-DNT		98.9
2-NT		104.7
4-NT		108.1
3-NT		102.9
PETN		104.8
	Total	1701.5
	Average	106.3

MAP 1/22/10

Hmw 01/22/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10–1130

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP0118163a

Analysis Date: 21–JAN–10 21:43

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

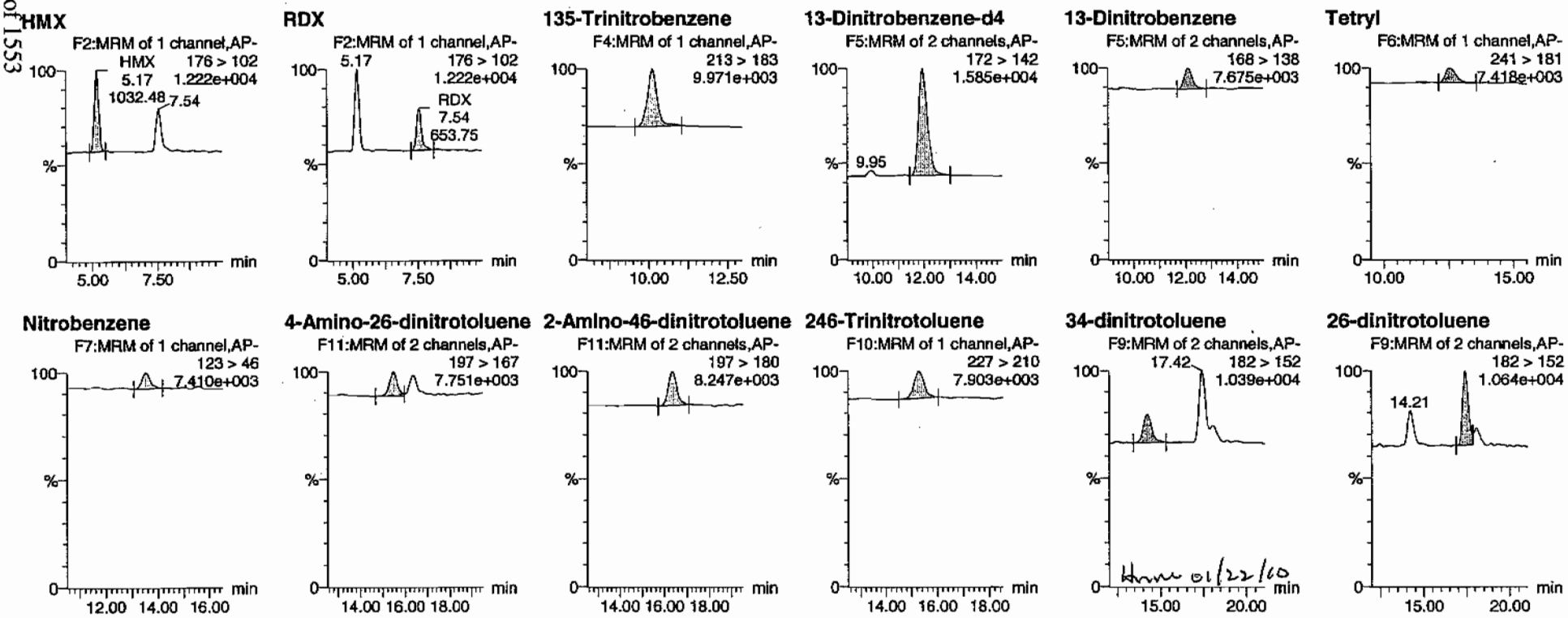
Compound	True	Found	Recovery	Q
1,3,5–Trinitrobenzene	40	47.473	119	
1,3–Dinitrobenzene–d4	500	519.557	104	
2,4,6–Trinitrotoluene	40	35.505	89	
2,4–Dinitrotoluene	40	37.753	94	
2,6–Dinitrotoluene	40	36.751	92	
2,6–Dinitrotoluene–d3	500	512.345	102	
2–Amino–4,6–dinitrotoluene	40	40.846	102	
3,4–Dinitrotoluene	20	21.838	109	
4–Amino–2,6–dinitrotoluene	40	38.299	96	
HMX	40	45.355	113	
Nitrobenzene	40	36.589	91	
PETN	40	56.952	142	*
RDX	40	41.692	104	
Tetryl	40	40.503	101	
m–Dinitrobenzene	40	37.266	93	
m–Nitrotoluene	40	35.772	89	
o–Nitrotoluene	40	42.975	107	
p–Nitrotoluene	40	44.346	111	

Recovery Limits:
3,4–Dinitrotoluene (Surrogate),TATB, tris(o–cresyl)phosphate, 3,5–Dinitroaniline, 2,6–Diamino–4–nitrotoluene , 2,4–Diamino–6–nitrotoluene 50–150%
OtherTarget Analytes 70–130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA3.qld, Time: Fri Jan 22 10:11:48 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118163a
Date: 21-Jan-2010
Time: 21:43:41
ID: WXX100120-08CRI
Vial: 1:1,C

MATP 1/22/10



Hmm 01/22/10

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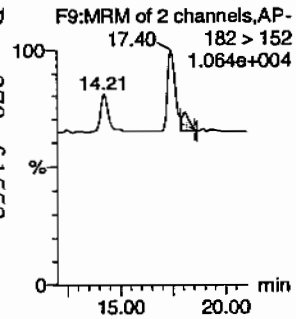
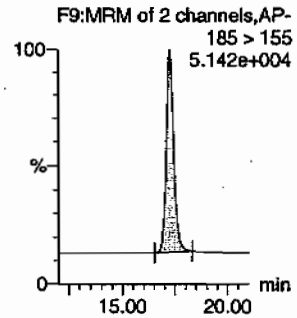
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA3.qld, Time: Fri Jan 22 10:11:48 2010

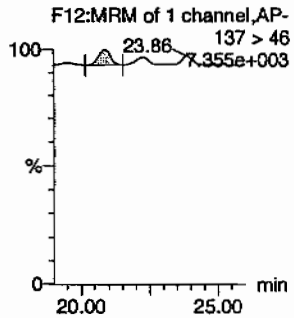
24-dinitrotoluene



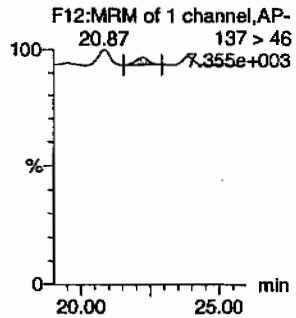
26-dinitrotoluene-d3



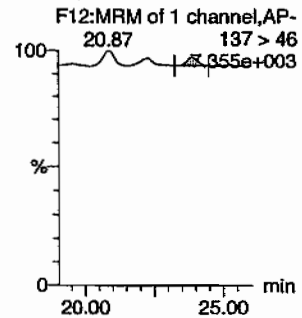
2-Nitrotoluene



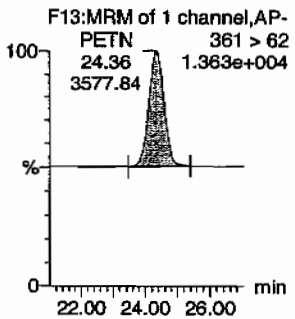
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/ml	%Rec	%Dev	S/N
WXX100120-08CRI	HMX	176 > 102	5.17	1032.482	3526.042	1032.482	146.408	bb			45.3546	113.4	13.4	310.1
WXX100120-08CRI	RDX	176 > 102	7.54	653.748	3526.042	653.748	92.703	bb			41.6918	104.2	4.2	159.4
WXX100120-08CRI	135-Trinitrobenzene	213 > 183	10.13	1115.443	3526.042	1115.443	158.172	bb			47.4730	118.7	18.7	276.7
WXX100120-08CRI	13-Dinitrobenzene-d4	172 > 142	11.95	3526.042		3526.042	3526.042	bb			519.5572	103.9	3.9	789.4
WXX100120-08CRI	13-Dinitrobenzene	168 > 138	12.11	310.558	3526.042	310.558	44.038	bb			37.2659	93.2	-6.8	52.4
WXX100120-08CRI	Tetryl	241 > 181	12.54	278.951	3526.042	278.951	39.556	bb			40.5031	101.3	1.3	34.7
WXX100120-08CRI	Nitrobenzene	123 > 46	13.54	216.016	3526.042	216.016	30.632	bb			36.5887	91.5	-8.5	21.2
WXX100120-08CRI	4-Amino-26-dinitrotoluene	197 > 167	15.46	380.112	18797.486	380.112	10.111	MM	22-Jan-10	10:01:14	38.2993	95.7	-4.3	17.6
WXX100120-08CRI	2-Amino-46-dinitrotoluene	197 > 180	16.35	598.218	18797.486	598.218	15.912	bb			40.8461	102.1	2.1	34.0
WXX100120-08CRI	246-Trinitrotoluene	227 > 210	15.28	470.017	18797.486	470.017	12.502	bb			35.5048	88.8	-11.2	58.9
WXX100120-08CRI	34-dinitrotoluene	182 > 152	14.26	765.359	18797.486	765.359	20.358	bb			21.8377	109.2	9.2	22.6
WXX100120-08CRI	26-dinitrotoluene	182 > 152	17.40	1509.163	18797.486	1509.163	40.143	MM	22-Jan-10	10:07:40	36.7514	91.9	-8.1	66.9
WXX100120-08CRI	24-dinitrotoluene	182 > 152	18.08	358.851	18797.486	358.851	9.545	MM	22-Jan-10	10:10:16	37.7532	94.4	-5.6	15.3
WXX100120-08CRI	26-dinitrotoluene-d3	185 > 155	17.25	18797.486		18797.486	18797.486	bb			512.3446	102.5	2.5	1621.1
WXX100120-08CRI	2-Nitrotoluene	137 > 46	20.87	242.468	18797.486	242.468	6.449	bb			42.9746	107.4	7.4	61.2
WXX100120-08CRI	4-Nitrotoluene	137 > 46	22.27	119.369	18797.486	119.369	3.175	bb			44.3460	110.9	10.9	28.5
WXX100120-08CRI	3-Nitrotoluene	137 > 46	23.86	114.689	18797.486	114.689	3.051	bb			35.7721	89.4	-10.6	32.7
WXX100120-08CRI	PETN	361 > 62	24.36	3577.843	18797.486	3577.843	95.168	bb			56.9524	142.4	42.4	1027.5

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

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GRAND MEAN AVERAGE

Vendor:	UltraScientific
Date of Analysis	01/21/10
Time of Injection	2143
Standard Number	WXX100120-08CRI
Data File	EXP0118163a

HMX	113.4
RDX	104.2
135-TNB	118.7
13-DNB	93.2
Tetryl	101.3
Nitrobenzene	91.5
4A-26-DNT	95.7
2A-46-DNT	102.1
246-TNT	88.8
34-DNT(surr)	109.2
26-DNT	91.9
24-DNT	94.4
2-NT	107.4
4-NT	110.9
3-NT	89.4
PETN	142.4
Total	1654.5
Average	103.4

MOTT 1/22/10

Hmc 01/22/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1130

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXP0118172a

Analysis Date: 22-JAN-10 02:09

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
Nitrobenzene	600	564.419	94	
PETN	600	515.721	86	
RDX	600	733.204	122	*
Tetryl	600	510.107	85	
m-Dinitrobenzene	600	581.124	97	
m-Nitrotoluene	600	649.946	108	
o-Nitrotoluene	600	628.081	105	
p-Nitrotoluene	600	693.492	116	
1,3,5-Trinitrobenzene	600	583.649	97	
1,3-Dinitrobenzene-d4	500	604.451	121	*
2,4,6-Trinitrotoluene	600	648.525	108	
2,4-Dinitrotoluene	600	586.846	98	
2,6-Dinitrotoluene	600	597.249	100	
2,6-Dinitrotoluene-d3	500	587.642	118	
2-Amino-4,6-dinitrotoluene	600	689.86	115	
3,4-Dinitrotoluene	300	332.809	111	
4-Amino-2,6-dinitrotoluene	600	699.672	117	
HMX	600	777.883	130	*

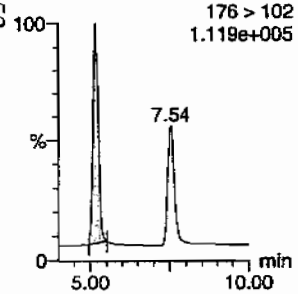
Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 70-130%
OtherTarget Analytes 80-120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA3.qld, Time: Fri Jan 22 10:11:48 2010

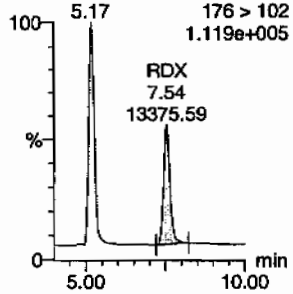
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118172a
Date: 22-Jan-2010
Time: 02:09:14
ID: WXX100120-07CCV
Vial: 1:1,B

AMT 1/22/10

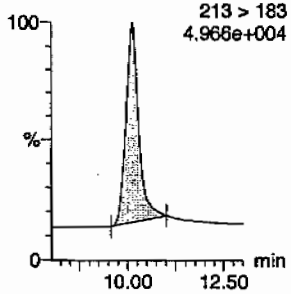
HMX
F2:MRM of 1 channel,AP-
176 > 102
1.119e+005



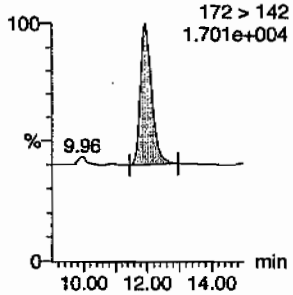
RDX
F2:MRM of 1 channel,AP-
176 > 102
1.119e+005



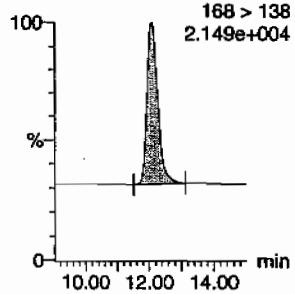
135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
4.966e+004



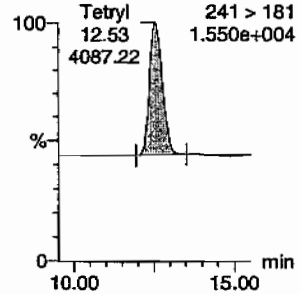
13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
1.701e+004



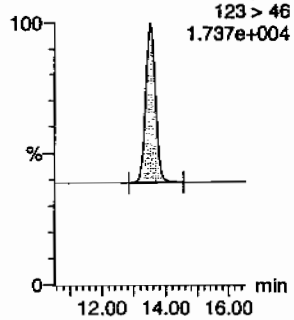
13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
2.149e+004



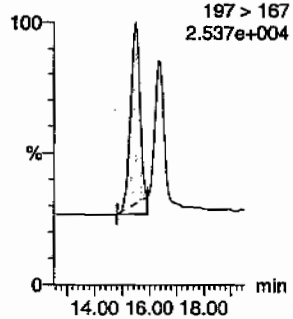
Tetryl
F6:MRM of 1 channel,AP-
241 > 181
1.550e+004



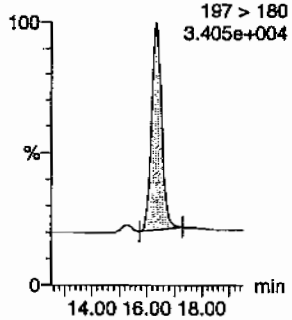
Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
1.737e+004



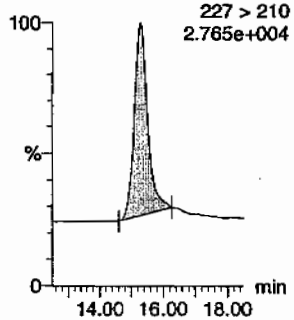
4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 167
2.537e+004



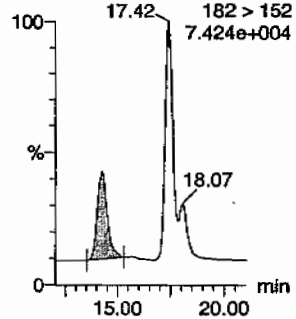
2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
3.405e+004



246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
2.765e+004

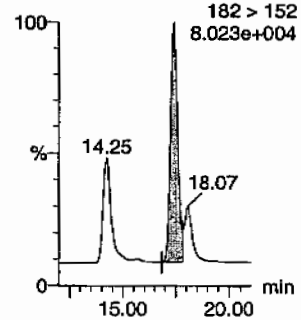


34-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
7.424e+004



HMW 01/22/10

26-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
8.023e+004



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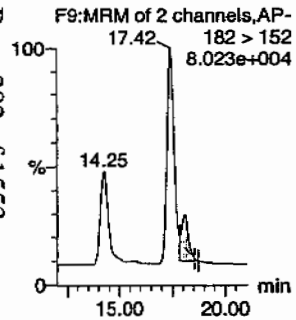
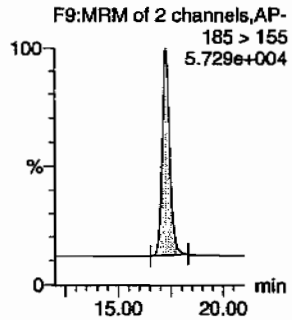
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA3.qld, Time: Fri Jan 22 10:11:48 2010

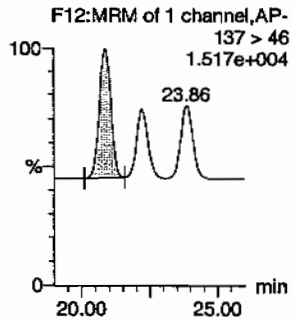
24-dinitrotoluene



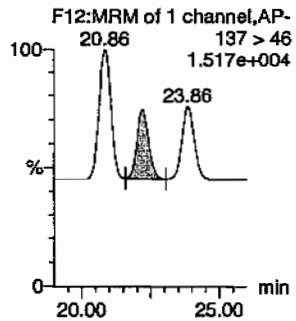
26-dinitrotoluene-d3



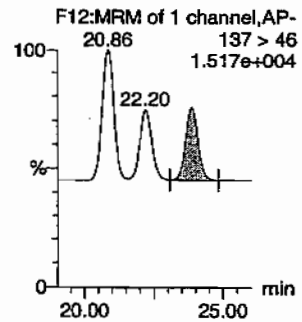
2-Nitrotoluene



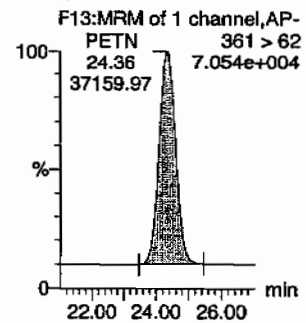
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs.Resp	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N
WXX100120-07CCV	HMX	176 > 102	5.17	20601.672	4102.185	20601.672	2511.061	bb			777.8825	129.6	29.6	4245.7
WXX100120-07CCV	RDX	176 > 102	7.54	13375.591	4102.185	13375.591	1630.301	bb			733.2044	122.2	22.2	2276.4
WXX100120-07CCV	135-Trinitrobenzene	213 > 183	10.13	15954.365	4102.185	15954.365	1944.618	bb			583.6487	97.3	-2.7	3716.4
WXX100120-07CCV	13-Dinitrobenzene-d4	172 > 142	11.95	4102.185		4102.185	4102.185	bb			604.4511	120.9	20.9	158.9
WXX100120-07CCV	13-Dinitrobenzene	168 > 138	12.10	5634.133	4102.185	5634.133	686.723	bb			581.1238	96.9	-3.1	295.1
WXX100120-07CCV	Tetryl	241 > 181	12.53	4087.221	4102.185	4087.221	498.176	bb			510.1066	85.0	-15.0	375.5
WXX100120-07CCV	Nitrobenzene	123 > 46	13.49	3876.756	4102.185	3876.756	472.523	bb			564.4186	94.1	-5.9	294.0
WXX100120-07CCV	4-Amino-26-dinitrotoluene	197 > 167	15.49	7964.635	21560.088	7964.635	184.708	MM	22-Jan-10	10:01:53	699.6724	116.6	16.6	291.8
WXX100120-07CCV	2-Amino-46-dinitrotoluene	197 > 180	16.34	11588.305	21560.088	11588.305	268.744	bb			689.8596	115.0	15.0	458.7
WXX100120-07CCV	246-Trinitrotoluene	227 > 210	15.27	9846.999	21560.088	9846.999	228.362	bb			648.5252	108.1	8.1	369.6
WXX100120-07CCV	34-dinitrotoluene	182 > 152	14.25	13378.389	21560.088	13378.389	310.258	bb			332.8086	110.9	10.9	514.5
WXX100120-07CCV	26-dinitrotoluene	182 > 152	17.42	28129.924	21560.088	28129.924	652.361	MM	22-Jan-10	10:07:54	597.2494	99.5	-0.5	773.9
WXX100120-07CCV	24-dinitrotoluene	182 > 152	18.07	6397.870	21560.088	6397.870	148.373	MM	22-Jan-10	10:09:53	586.8457	97.8	-2.2	166.3
WXX100120-07CCV	26-dinitrotoluene-d3	185 > 155	17.24	21560.088		21560.088	21560.088	bb			587.6421	117.5	17.5	1235.9
WXX100120-07CCV	2-Nitrotoluene	137 > 46	20.86	4064.517	21560.088	4064.517	94.260	bb			628.0810	104.7	4.7	237.9
WXX100120-07CCV	4-Nitrotoluene	137 > 46	22.20	2141.064	21560.088	2141.064	49.653	bb			693.4922	115.6	15.6	125.2
WXX100120-07CCV	3-Nitrotoluene	137 > 46	23.86	2390.041	21560.088	2390.041	55.427	bb			649.9455	108.3	8.3	132.2
WXX100120-07CCV	PETN	361 > 62	24.36	37159.969	21560.088	37159.969	861.777	bb			515.7213	86.0	-14.0	5072.7

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

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GRAND MEAN AVERAGE

Vendor: Restek
Date of Analysis: 01/22/10
Time of Injection: 0209
Standard Number: WXX100120-07CCV
Data File: EXP0118172a

HMX		129.6
RDX		122.2
135-TNB		97.3
13-DNB		96.9
Tetryl		85.0
Nitrobenzene		94.1
4A-26-DNT		116.6
2A-46-DNT		115.0
246-TNT		108.1
34-DNT(surr)		110.9
26-DNT		99.5
24-DNT		97.8
2-NT		104.7
4-NT		115.6
3-NT		108.3
PETN		86.0
	Total	1687.6
	Average	105.5

1/22/10

Hmm 01/22/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1130

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP0118174a

Analysis Date: 22-JAN-10 03:08

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

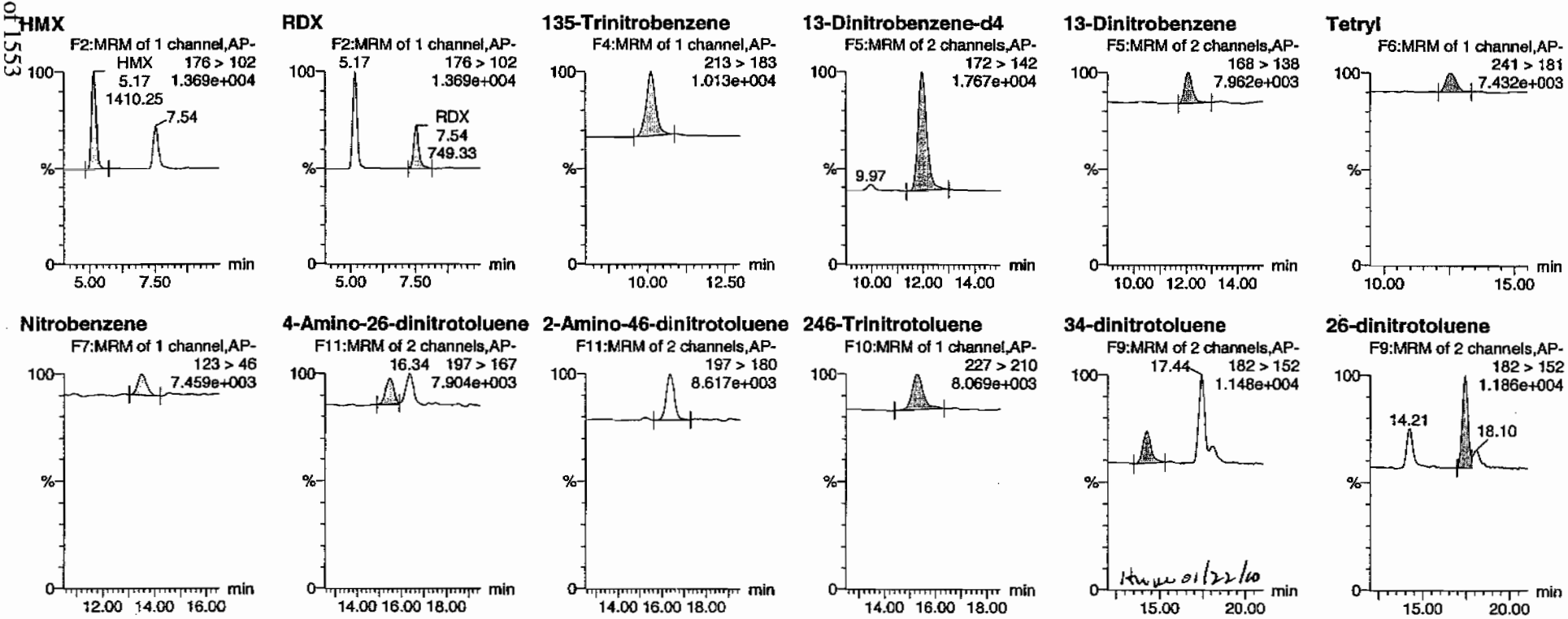
Compound	True	Found	Recovery	Q
2,6-Dinitrotoluene	40	38.26	96	
2,6-Dinitrotoluene-d3	500	638.223	128	
2-Amino-4,6-dinitrotoluene	40	44.612	112	
3,4-Dinitrotoluene	20	21.826	109	
4-Amino-2,6-dinitrotoluene	40	33.173	83	
HMX	40	50.319	126	
Nitrobenzene	40	39.866	100	
PETN	40	44.393	111	
RDX	40	38.815	97	
Tetryl	40	39.445	99	
m-Dinitrobenzene	40	43.862	110	
m-Nitrotoluene	40	33.74	84	
o-Nitrotoluene	40	39.989	100	
p-Nitrotoluene	40	37.479	94	
1,3,5-Trinitrobenzene	40	41.019	103	
1,3-Dinitrobenzene-d4	500	639.649	128	
2,4,6-Trinitrotoluene	40	40.729	102	
2,4-Dinitrotoluene	40	35.027	88	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 50-150%
OtherTarget Analytes 70-130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA3.qld, Time: Fri Jan 22 10:11:48 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118174a
Date: 22-Jan-2010
Time: 03:08:14
ID: WXX100120-08CRI
Vial: 1:1,C

MAP 1/22/10



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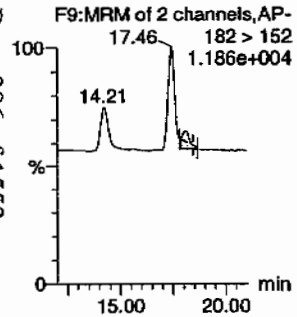
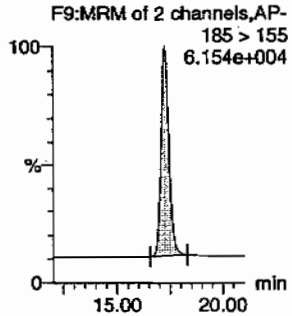
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA3.qld, Time: Fri Jan 22 10:11:48 2010

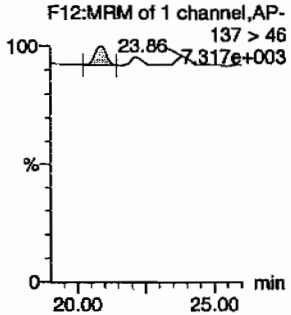
24-dinitrotoluene



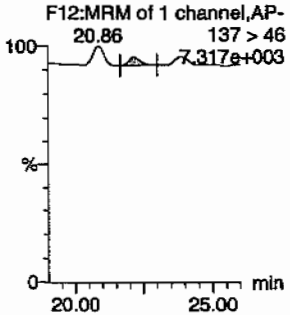
26-dinitrotoluene-d3



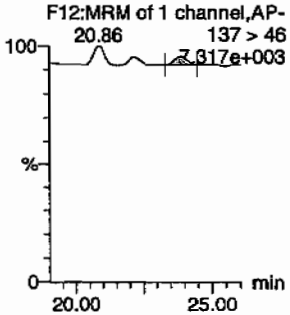
2-Nitrotoluene



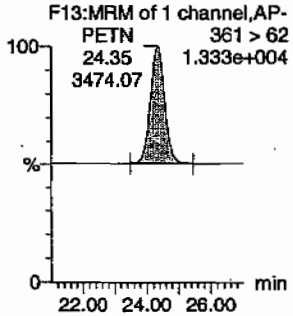
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	S/Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/ml	%Rec	%Dev	S/N
WXX100120-08CRI	HMX	176 > 102	5.17	1410.254	4341.059	1410.254	162.432	bb			50.3186	125.8	25.8	294.8
WXX100120-08CRI	RDX	176 > 102	7.54	749.328	4341.059	749.328	86.307	bb			38.8154	97.0	-3.0	131.3
WXX100120-08CRI	135-Trinitrobenzene	213 > 183	10.13	1186.558	4341.059	1186.558	136.667	bb			41.0186	102.5	2.5	270.5
WXX100120-08CRI	13-Dinitrobenzene-d4	172 > 142	11.95	4341.059		4341.059	4341.059	bb			639.6488	127.9	27.9	300.8
WXX100120-08CRI	13-Dinitrobenzene	168 > 138	12.07	450.018	4341.059	450.018	51.833	bb			43.8623	109.7	9.7	37.7
WXX100120-08CRI	Tetryl	241 > 181	12.54	334.453	4341.059	334.453	38.522	bb			39.4446	98.6	-1.4	32.4
WXX100120-08CRI	Nitrobenzene	123 > 46	13.50	289.764	4341.059	289.764	33.375	bb			39.8655	99.7	-0.3	21.3
WXX100120-08CRI	4-Amino-26-dinitrotoluene	197 > 167	15.46	410.124	23415.855	410.124	8.757	MM	22-Jan-10	10:02:06	33.1730	82.9	-17.1	25.8
WXX100120-08CRI	2-Amino-46-dinitrotoluene	197 > 180	16.34	813.895	23415.855	813.895	17.379	bb			44.6118	111.5	11.5	48.3
WXX100120-08CRI	246-Trinitrotoluene	227 > 210	15.28	671.639	23415.855	671.639	14.342	bb			40.7286	101.8	1.8	34.7
WXX100120-08CRI	34-dinitrotoluene	182 > 152	14.26	952.887	23415.855	952.887	20.347	bb			21.8259	109.1	9.1	44.9
WXX100120-08CRI	26-dinitrotoluene	182 > 152	17.46	1957.133	23415.855	1957.133	41.791	MM	22-Jan-10	10:08:01	38.2603	95.7	-4.3	69.0
WXX100120-08CRI	24-dinitrotoluene	182 > 152	18.10	414.734	23415.855	414.734	8.856	MM	22-Jan-10	10:09:41	35.0267	87.6	-12.4	12.2
WXX100120-08CRI	26-dinitrotoluene-d3	185 > 155	17.27	23415.855		23415.855	23415.855	bb			638.2230	127.6	27.6	1412.6
WXX100120-08CRI	2-Nitrotoluene	137 > 46	20.86	281.056	23415.855	281.056	6.001	bb			39.9890	100.0	-0.0	32.6
WXX100120-08CRI	4-Nitrotoluene	137 > 46	22.17	125.670	23415.855	125.670	2.683	bb			37.4787	93.7	-6.3	14.3
WXX100120-08CRI	3-Nitrotoluene	137 > 46	23.86	134.751	23415.855	134.751	2.877	bb			33.7399	84.3	-15.7	14.4
WXX100120-08CRI	PETN	361 > 62	24.35	3474.069	23415.855	3474.069	74.182	bb			44.3934	111.0	11.0	433.1

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

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GRAND MEAN AVERAGE

Vendor:	UltraScientific
Date of Analysis	01/22/10
Time of Injection	0308
Standard Number	WXX100120-08CRI
Data File	EXP0118174a

HMX	125.8
RDX	97.0
135-TNB	102.5
13-DNB	109.7
Tetryl	98.6
Nitrobenzene	99.7
4A-26-DNT	82.9
2A-46-DNT	111.5
246-TNT	101.8
34-DNT(surr)	109.1
26-DNT	95.7
24-DNT	87.6
2-NT	100.0
4-NT	93.7
3-NT	84.3
PETN	111.0
Total	1610.9
Average	100.7

1/22/10

HMK 01/22/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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

7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1130

Lab Code: GEI

GEL Sample ID: WXXCRI

GEL Data File EXS01200013.wiff

Analysis Date: 20-JAN-10 13:38

LCMSMS ID: 1358

Column ID: JSphere ODS--H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	100	85.3	85	
2,6-Diamino-4-nitrotoluene	100	88.9	89	
3,4-Dinitrotoluene	50	47	94	
3,5-Dinitroaniline	100	97.6	98	
TATB	100	107	107	
tris(o-cresyl) phosphate	100	86.4	86	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 50-150%
OtherTarget Analytes 70-130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

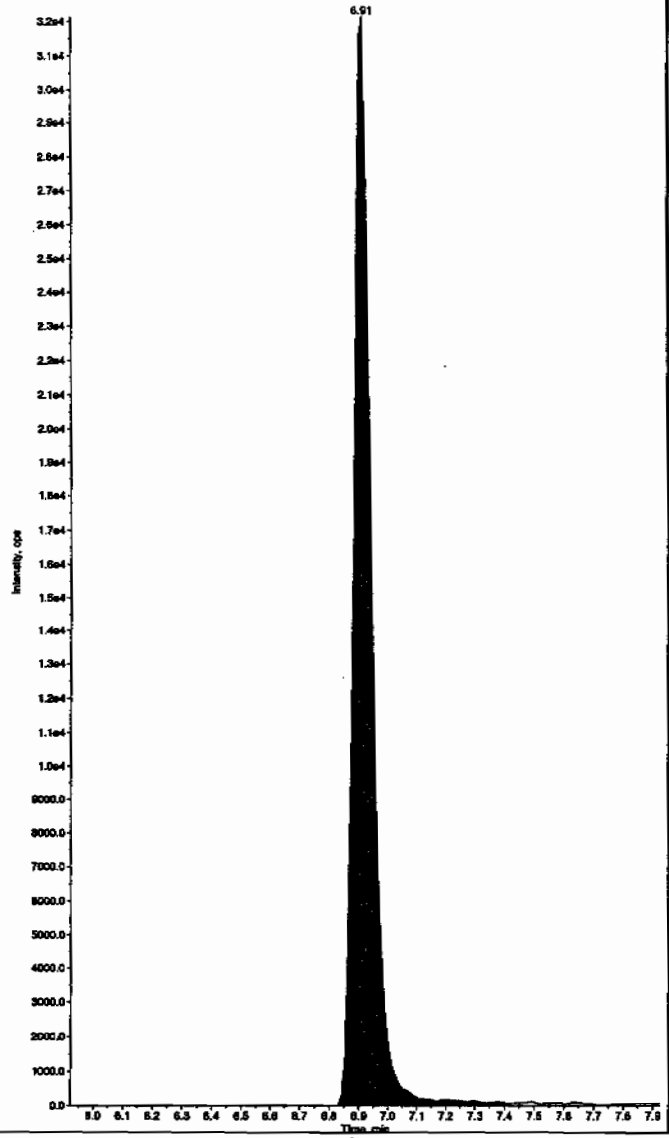
Lan 1/21/10

Sample Name: "WXX100120-27CRI" Sample ID: "[1]LER" File: "EXS01200013.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 107. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 1:38:09 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 6.92 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 6.91 min
Area: 1.40e+005 counts
Height: 32130.642 cps
Start Time: 6.82 min
End Time: 7.42 min

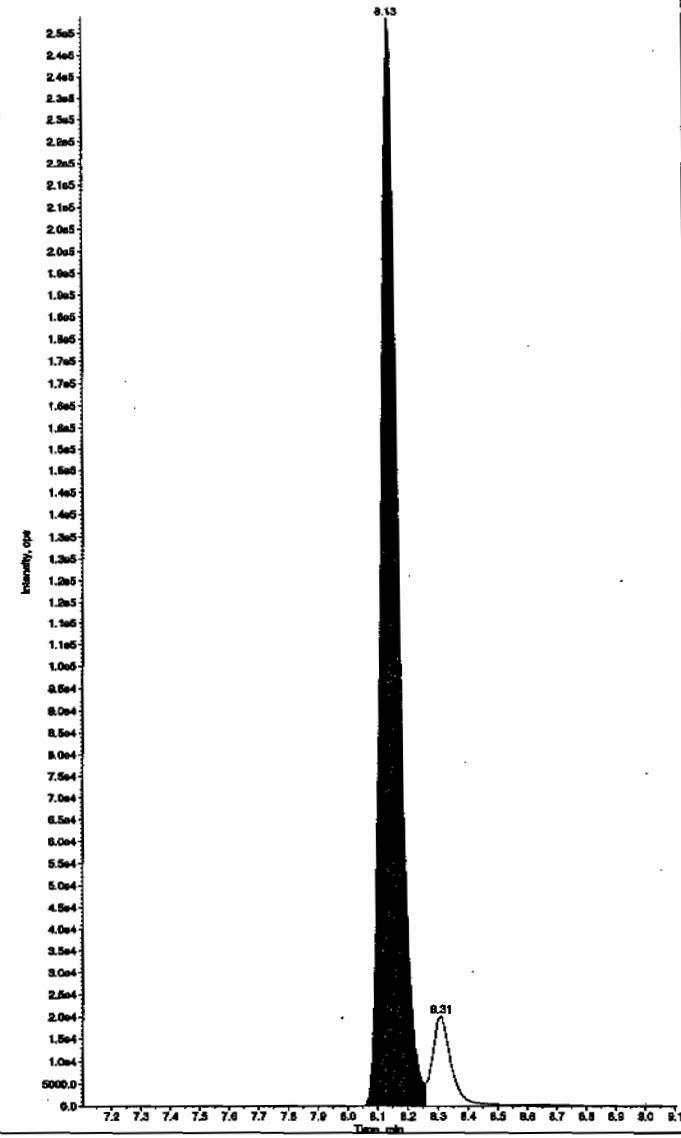


Sample Name: "WXX100120-27CRI" Sample ID: "[1]LER" File: "EXS01200013.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 97.6 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 1:38:09 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: 8.10 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.13 min
Area: 1.02e+006 counts
Height: 248717.117 cps
Start Time: 8.01 min
End Time: 8.26 min



Hmm 01/21/10

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

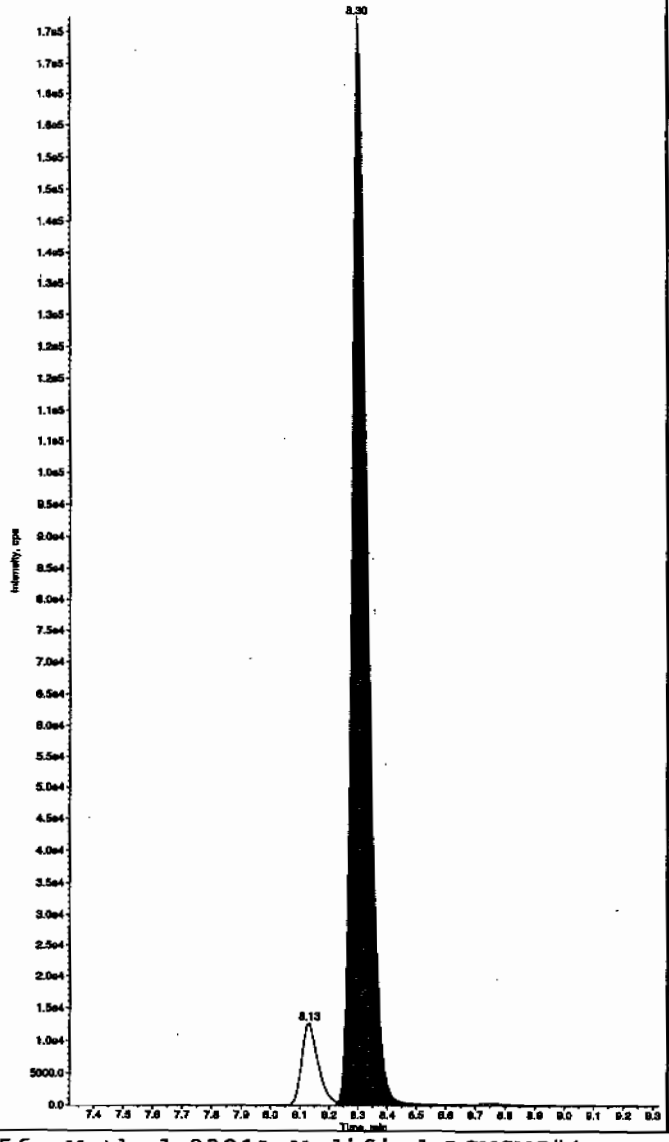
PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Sample Name: "WXX100120-27CRI" Sample ID: "[1]LER" File: "EXS01200013.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 50.0 ng/mL
Calculated Conc: 47.0 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 1:38:09 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.32 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.30 min
Area: 6.46e+005 counts
Height: 172340.332 cps
Start Time: 8.23 min
End Time: 8.64 min

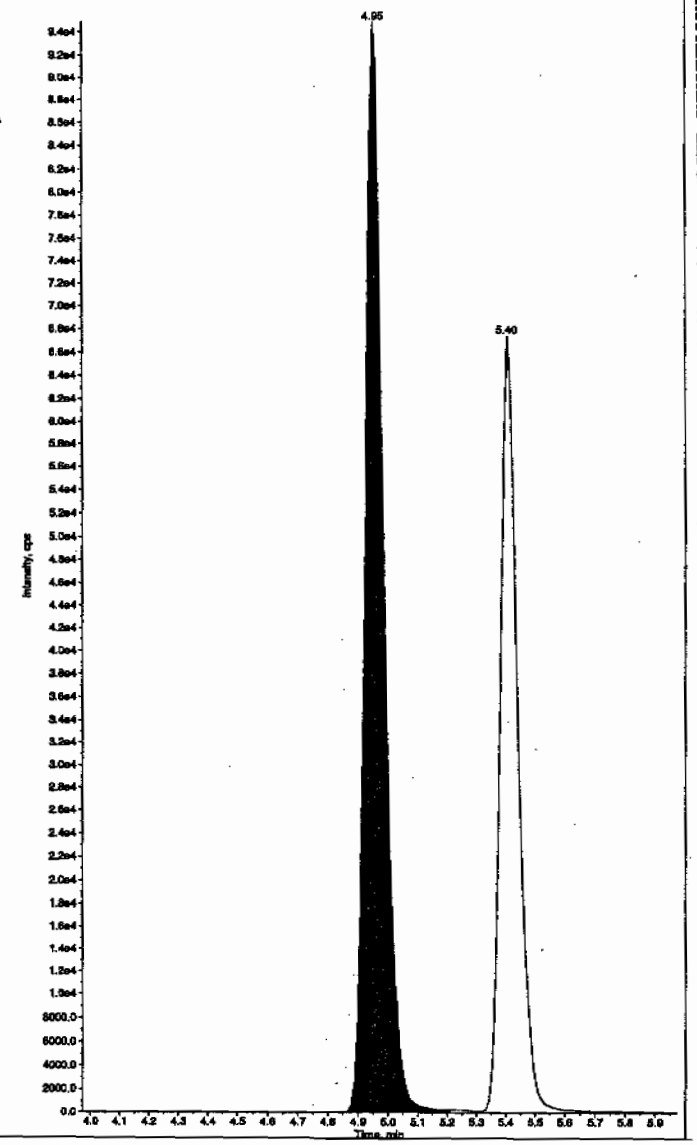


Sample Name: "WXX100120-27CRI" Sample ID: "[1]LER" File: "EXS01200013.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 88.9 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 1:38:09 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 450.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 4.97 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 4.95 min
Area: 4.08e+005 counts
Height: 94892.570 cps
Start Time: 4.78 min
End Time: 5.21 min



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

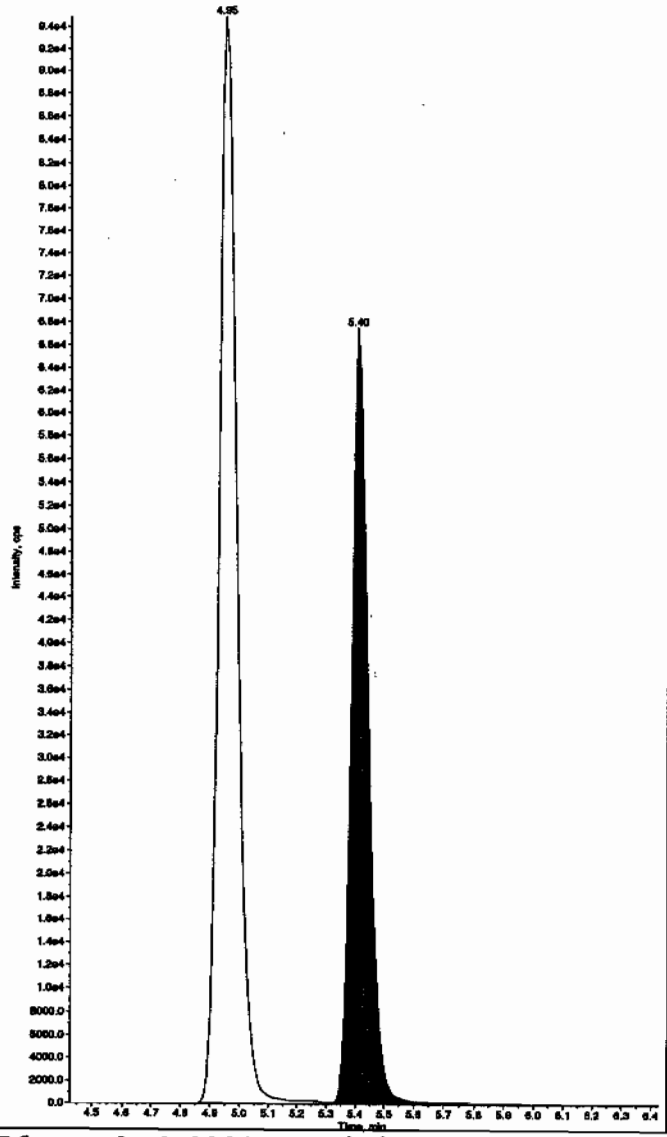
PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Sample Name: "WXX100120-27CRI" Sample ID: "[1]LER" File: "EXS01200013.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 85.3 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 1:38:09 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.43 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.40 min
Area: 2.77e+005 counts
Height: 67401.680 cps
Start Time: 5.30 min
End Time: 5.81 min

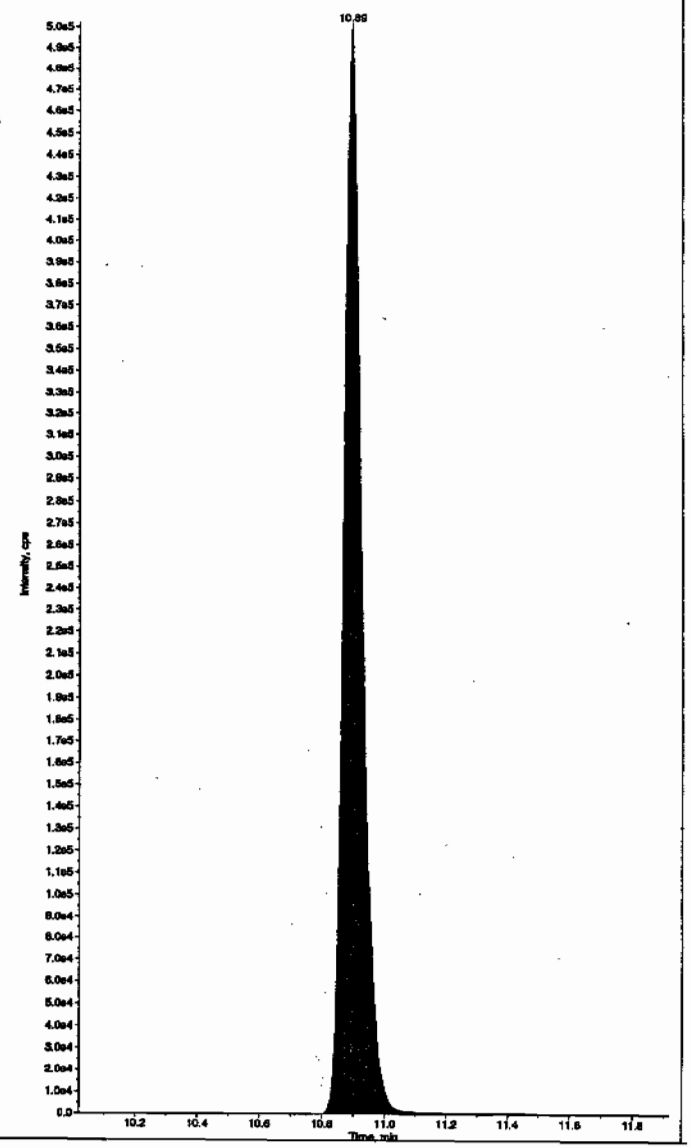


Sample Name: "WXX100120-27CRI" Sample ID: "[1]LER" File: "EXS01200013.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 86.4 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 1:38:09 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.9 min
Area: 2.03e+006 counts
Height: 501609.528 cps
Start Time: 10.8 min
End Time: 11.2 min



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

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7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10–1130

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXS01200024.wiff

Analysis Date: 20–JAN–10 16:30

LCMSMS ID: 1358

Column ID: JSphere ODS–H80

Compound	True	Found	Recovery	Q
2,4–Diamino–6–nitrotoluene	500	461	92	
2,6–Diamino–4–nitrotoluene	500	472	94	
3,4–Dinitrotoluene	250	221	88	
3,5–Dinitroaniline	500	477	95	
TATB	500	484	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%
OtherTarget Analytes 80–120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

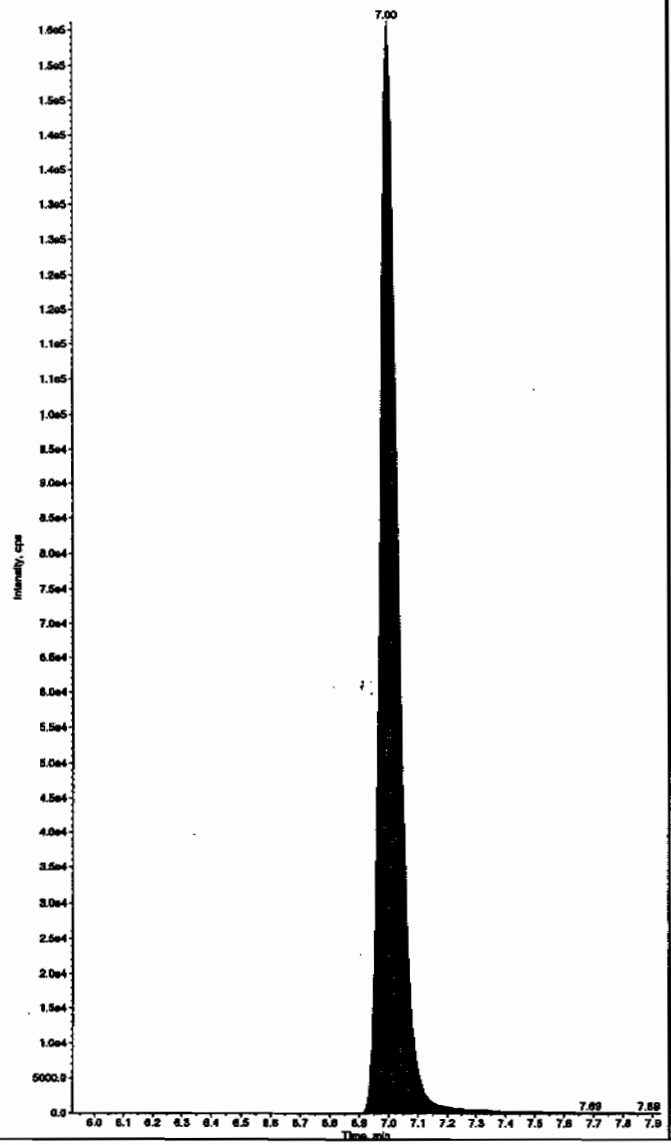
Lar 1/21/10

Sample Name: "WXX100120-26CCV" Sample ID: "[1]LER" File: "EXS01200024.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 484. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 4:30:55 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 6.92 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.00 min
Area: 6.85e+005 counts
Height: 156186.141 cps
Start Time: 6.85 min
End Time: 7.62 min

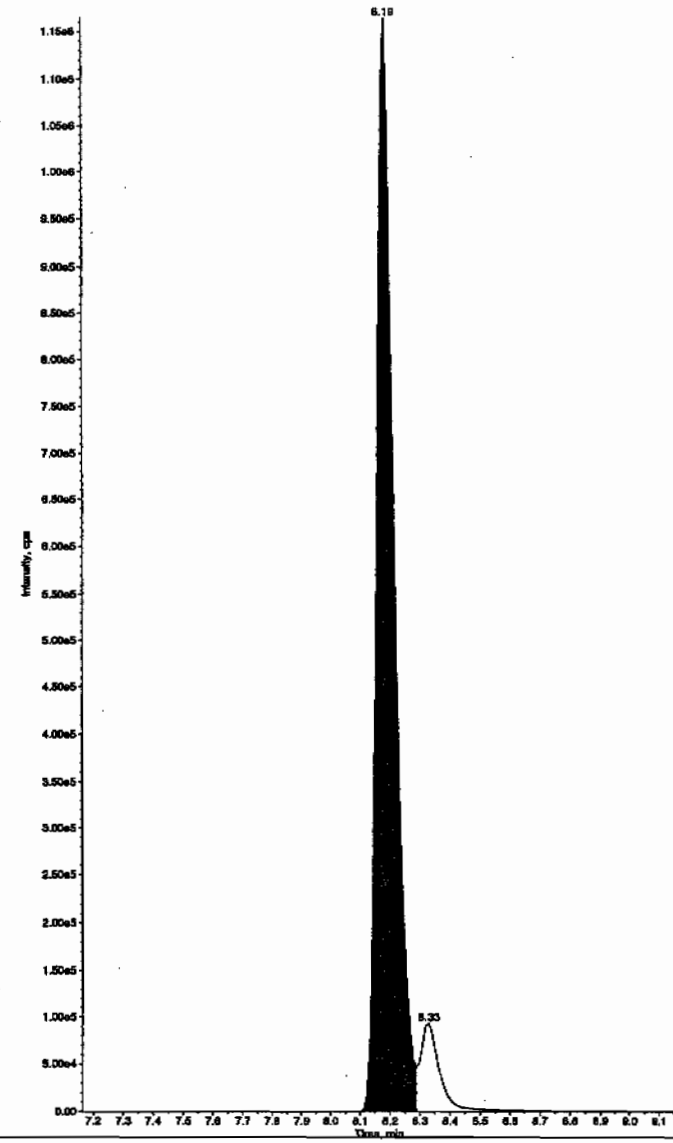


Sample Name: "WXX100120-26CCV" Sample ID: "[1]LER" File: "EXS01200024.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 477. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 4:30:55 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.16 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.19 min
Area: 4.81e+006 counts
Height: 1164490.845 cps
Start Time: 8.08 min
End Time: 8.29 min



HNW 01/21/10

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

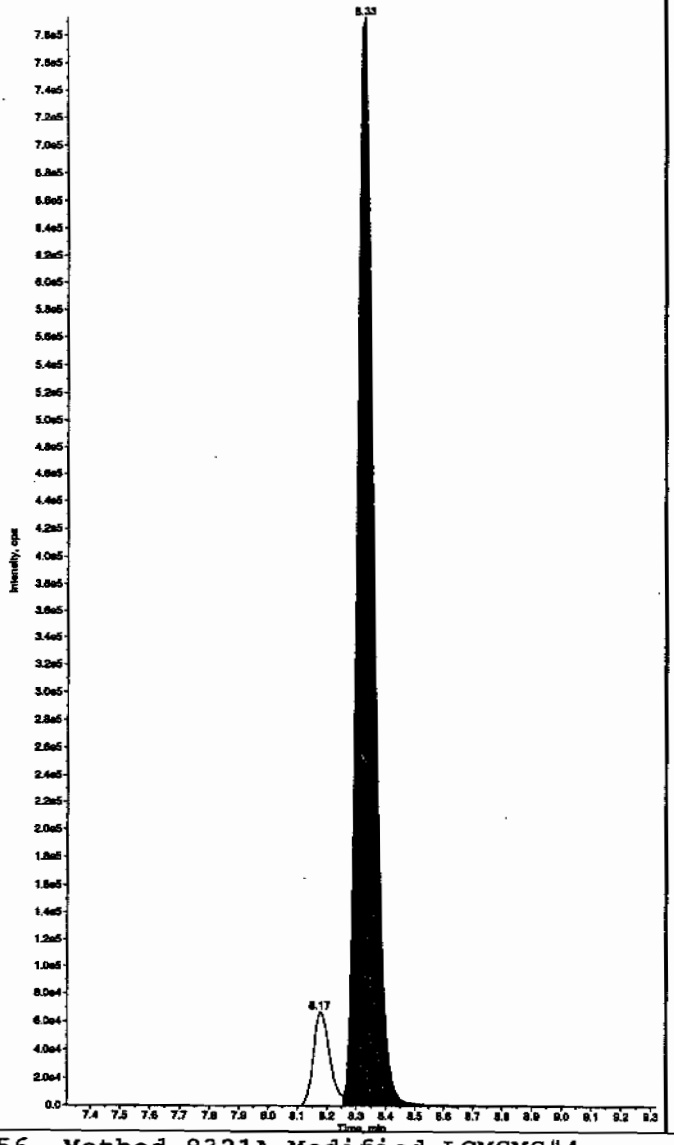
PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Sample Name: "WXX100120-26CCV" Sample ID: "[1]LER" File: "EXS01200024.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 250. ng/mL
Calculated Conc: 221. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 4:30:55 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.32 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.33 min
Area: 3.12e+006 counts
Height: 792953.674 cps
Start Time: 8.26 min
End Time: 8.65 min

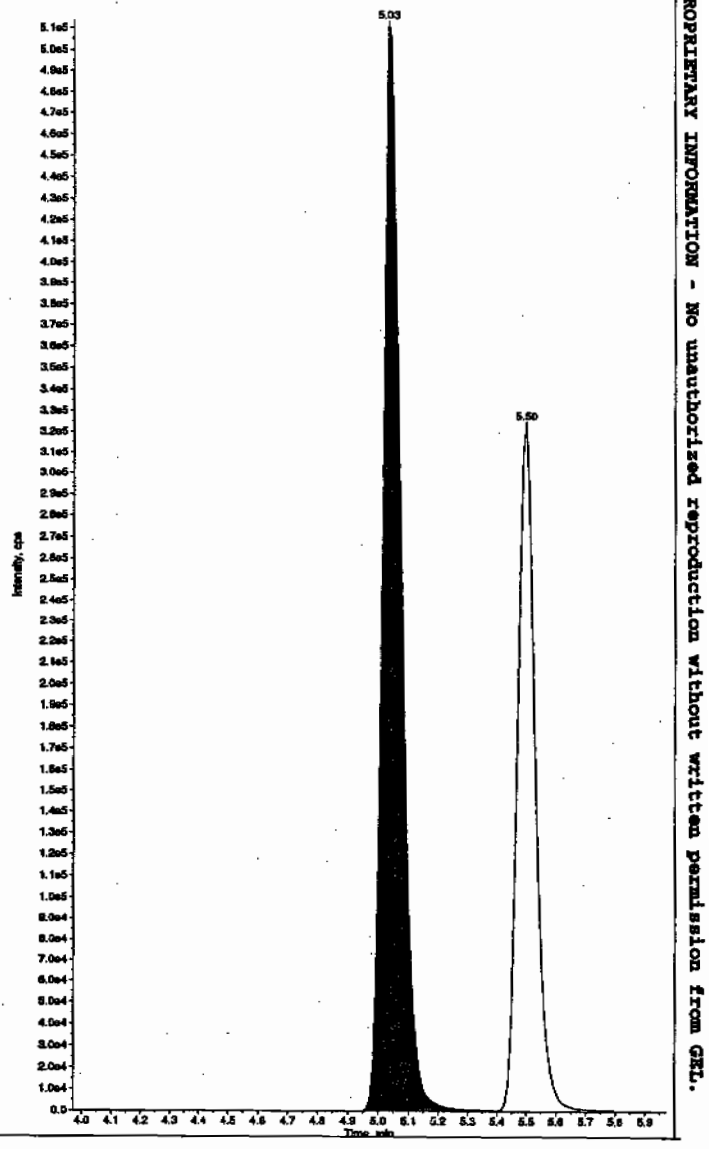


Sample Name: "WXX100120-26CCV" Sample ID: "[1]LER" File: "EXS01200024.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/45.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 472. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 4:30:55 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 450.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 4.97 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.03 min
Area: 2.15e+006 counts
Height: 513390.930 cps
Start Time: 4.94 min
End Time: 5.33 min



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

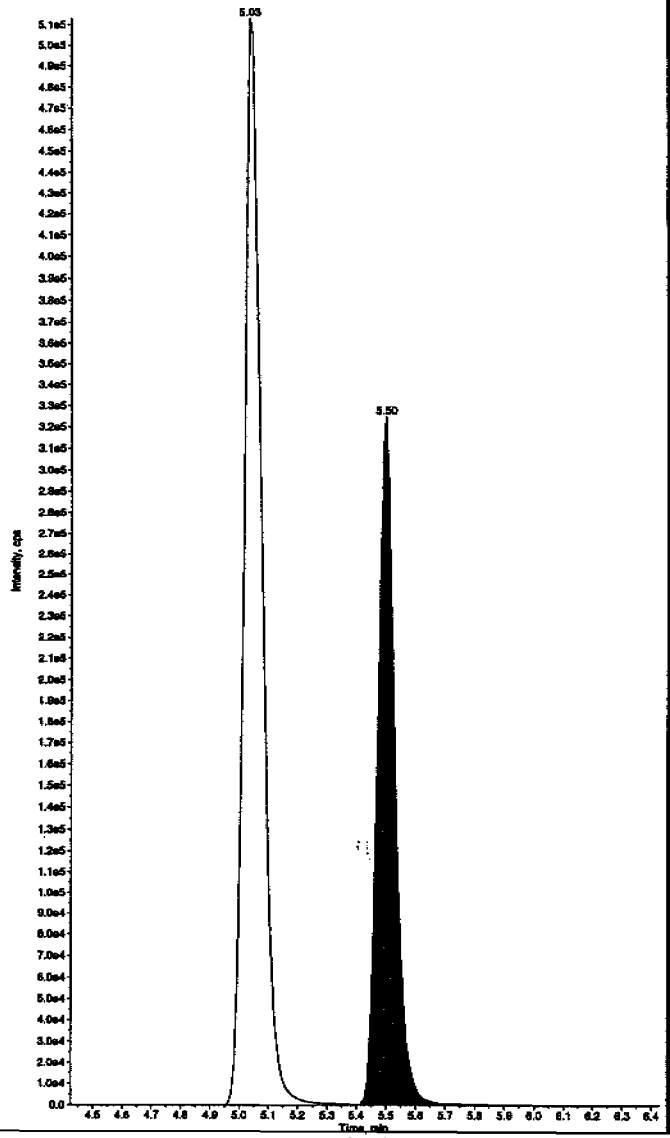
PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Sample Name: "WJX100120-26CCV" Sample ID: "1|1|LER" File: "EXS01200024.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 461. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 4:30:55 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.43 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.50 min
Area: 1.35e+006 counts
Height: 324894.806 cps
Start Time: 5.39 min
End Time: 5.92 min

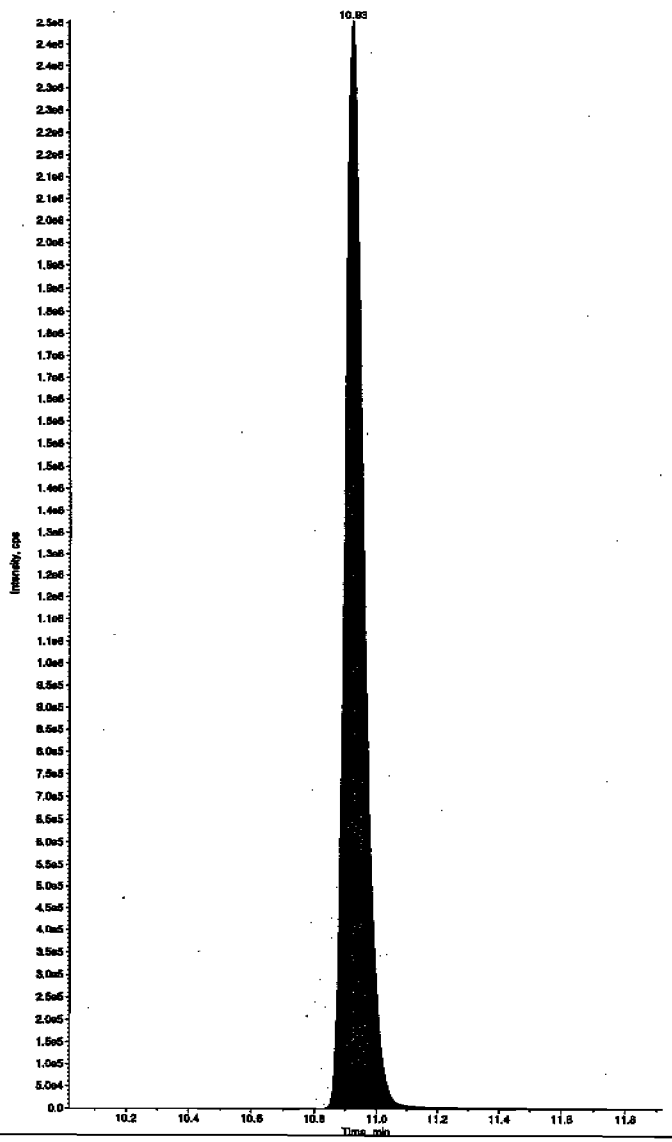


Sample Name: "WJX100120-26CCV" Sample ID: "1|1|LER" File: "EXS01200024.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 498. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 4:30:55 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.9 min
Area: 1.07e+007 counts
Height: 2456601.074 cps
Start Time: 10.8 min
End Time: 11.2 min



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

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10–1130

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXS01200026.wiff

Analysis Date: 20–JAN–10 17:02

LCMSMS ID: 1358

Column ID: JSphere ODS–H80

Compound	True	Found	Recovery	Q
2,4–Diamino–6–nitrotoluene	100	83.9	84	
2,6–Diamino–4–nitrotoluene	100	93.5	94	
3,4–Dinitrotoluene	50	46.5	93	
3,5–Dinitroaniline	100	98.3	98	
TATB	100	106	106	
tris(o–cresyl) phosphate	100	103	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 50–150%
OtherTarget Analytes 70–130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

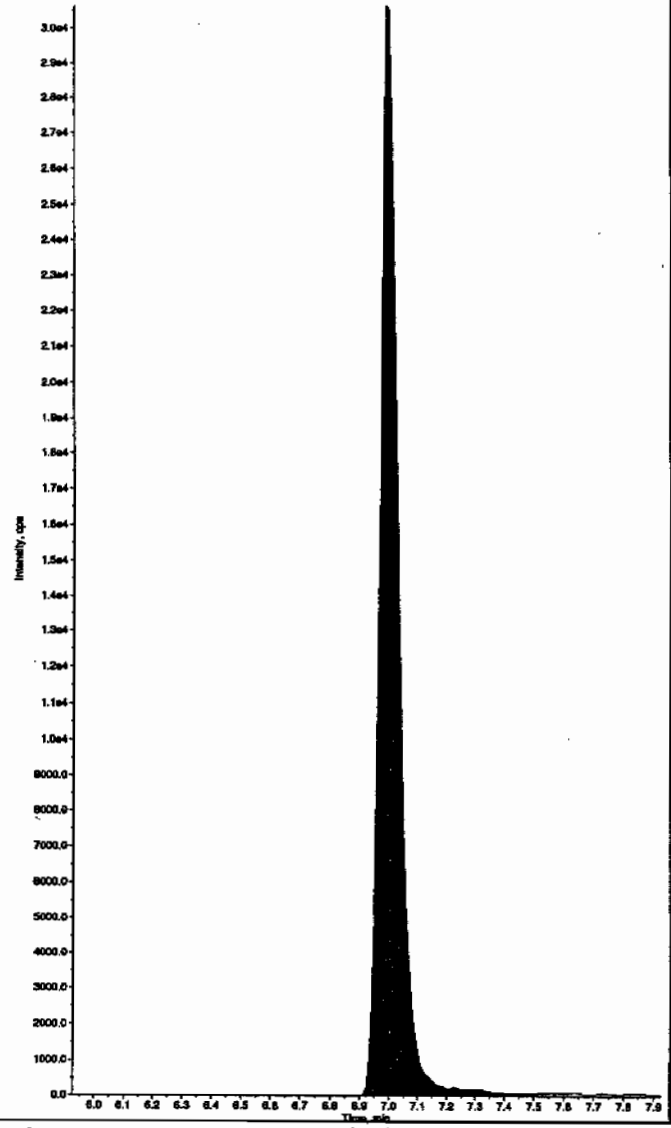
Before Jan 1/21/10

Sample Name: "WXX100120-27CRI" Sample ID: "[1]LER" File: "EXS01200025.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 106. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 5:02:18 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 6.92 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 6.99 min
Area: 1.38e+005 counts
Height: 30629.271 cps
Start Time: 6.86 min
End Time: 7.51 min

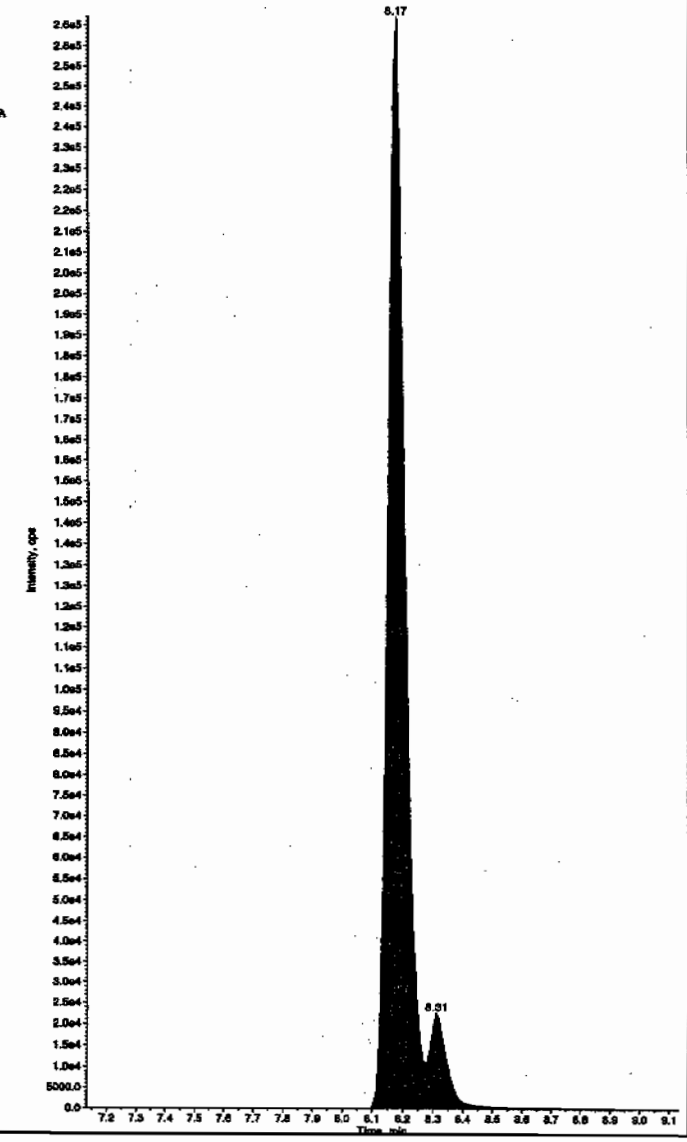


Sample Name: "WXX100120-27CRI" Sample ID: "[1]LER" File: "EXS01200026.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 108. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 5:02:18 PM

Modified: Yes
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.13 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.17 min
Area: 1.14e+006 counts
Height: 262113.312 cps
Start Time: 8.07 min
End Time: 8.58 min



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

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

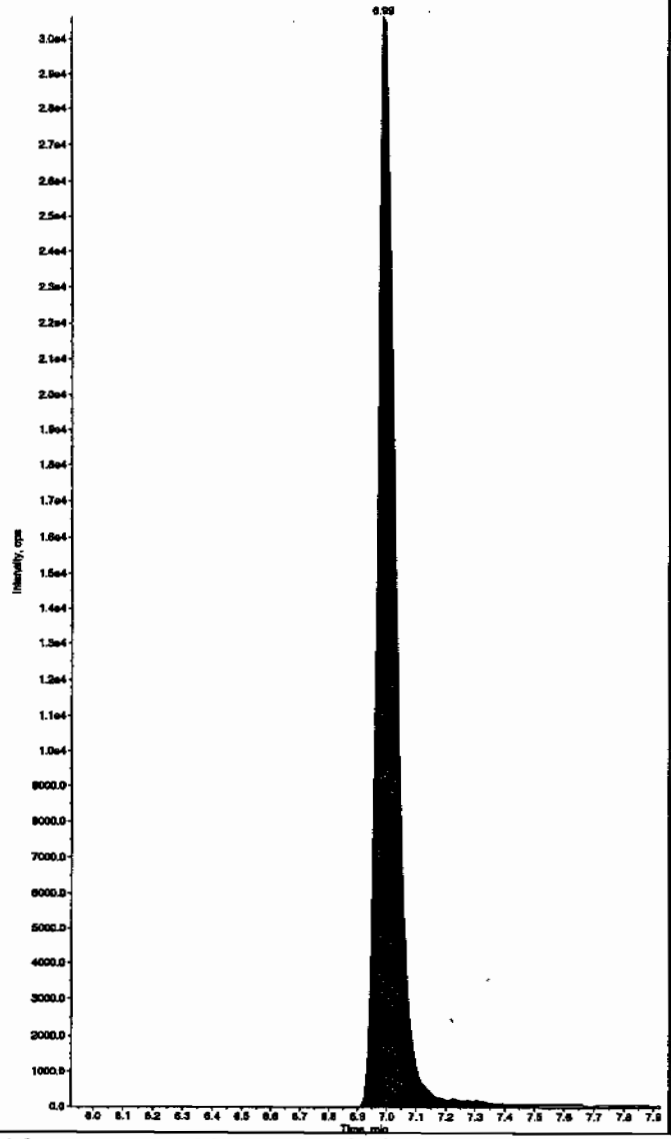
after Lan 1/21/10

Sample Name: "WXX100120-27CRI" Sample ID: "[1]LER" File: "EXS01200026.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 106. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 5:02:18 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 6.92 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 6.99 min
Area: 1.38e+005 counts
Height: 30629.271 cps
Start Time: 6.86 min
End Time: 7.51 min

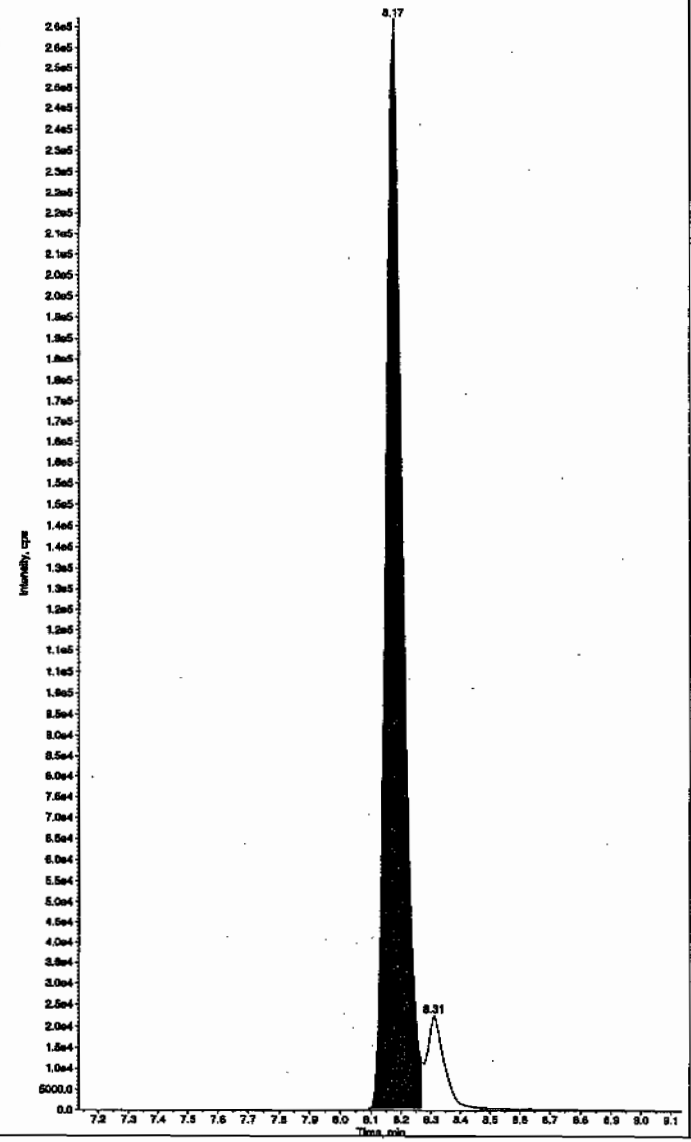


Sample Name: "WXX100120-27CRI" Sample ID: "[1]LER" File: "EXS01200025.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 98.3 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 5:02:18 PM

Modified: Yes
RT Window: 15.0 sec
Expected RT: 8.13 min
Use Relative RT: No

Int. Type: Manual
Retention Time: 8.17 min
Area: 1.01e+006 counts
Height: 262074.659 cps
Start Time: 8.09 min
End Time: 8.27 min



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

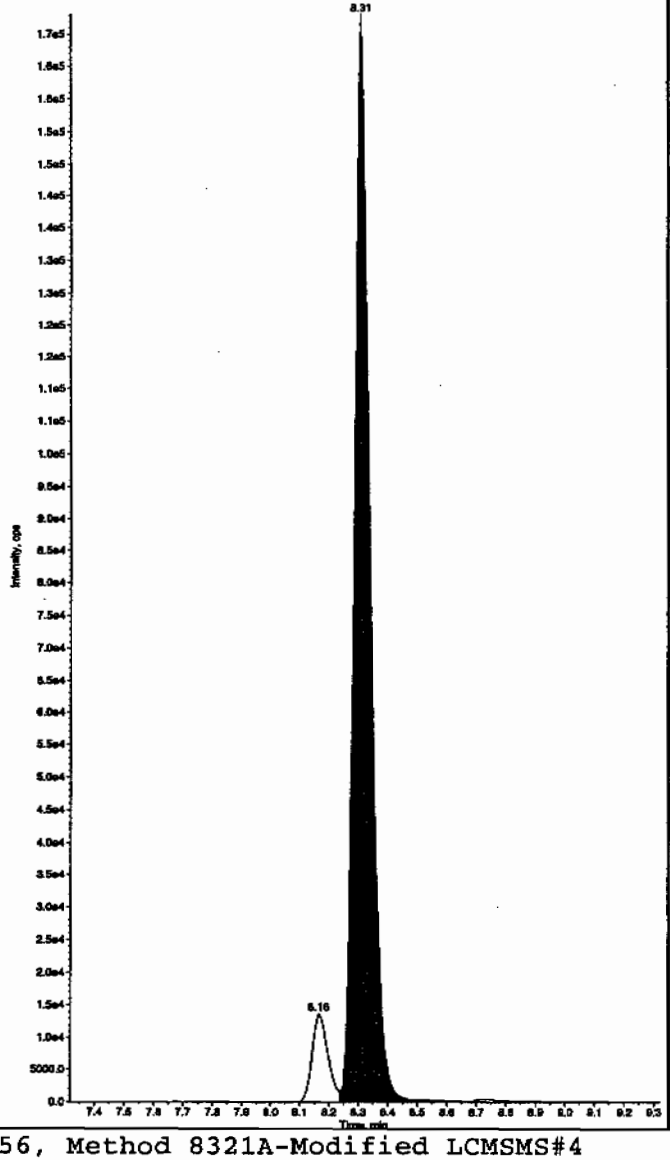
PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Sample Name: "WXX100120-27CRI" Sample ID: "[1]LER" File: "EXS01200026.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 50.0 ng/mL
Calculated Conc: 46.5 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 5:02:18 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.32 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.31 min
Area: 6.38e+005 counts
Height: 168267.426 cps
Start Time: 8.24 min
End Time: 8.63 min

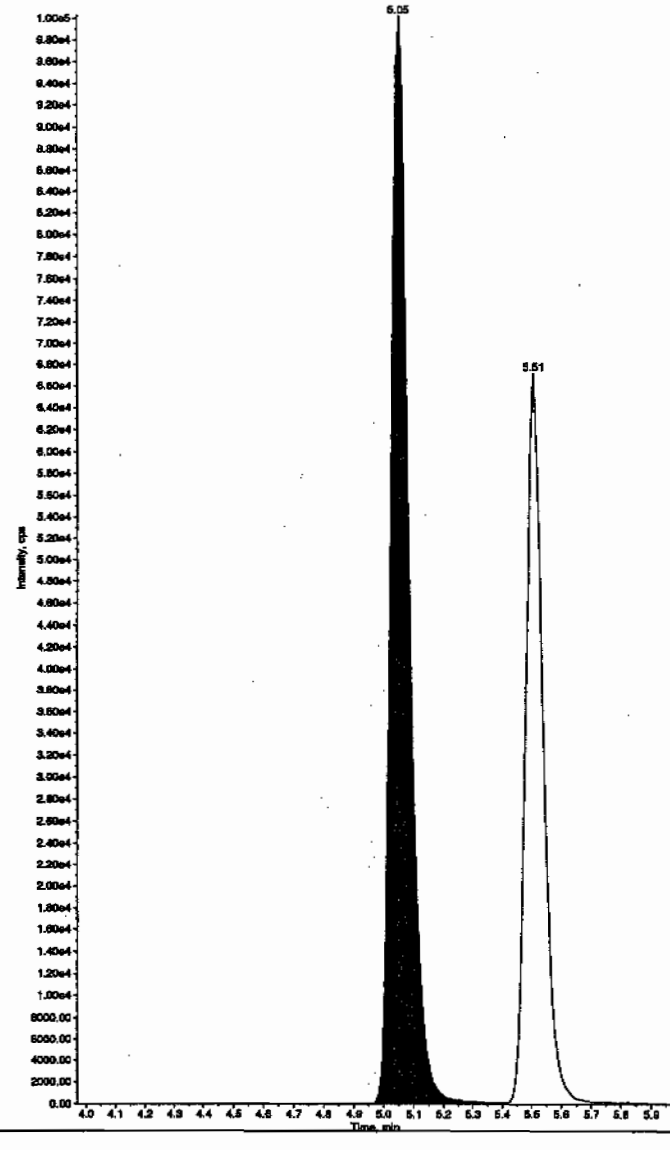


Sample Name: "WXX100120-27CRI" Sample ID: "[1]LER" File: "EXS01200026.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 93.5 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 5:02:18 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 450.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 4.97 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.05 min
Area: 4.29e+005 counts
Height: 100308.609 cps
Start Time: 4.94 min
End Time: 5.35 min



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

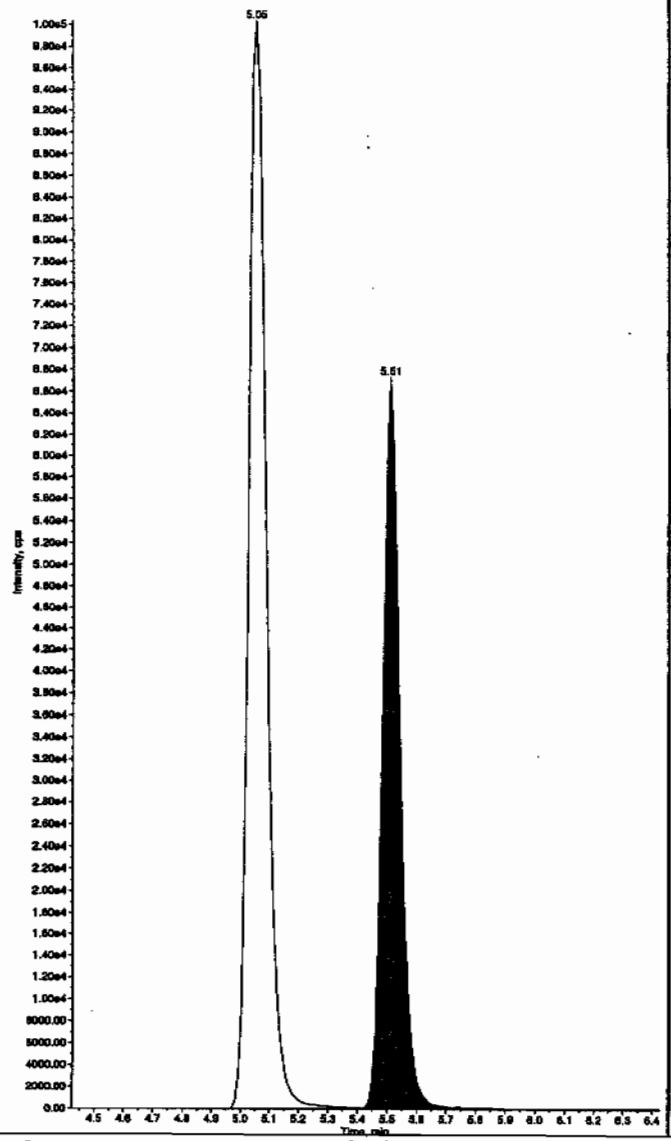
PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Sample Name: "WXX100120-27CRI" Sample ID: "[1]LER" File: "EXS01200026.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 83.9 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 5:02:18 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.43 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.51 min
Area: 2.73e+005 counts
Height: 67193.642 cps
Start Time: 5.42 min
End Time: 5.79 min

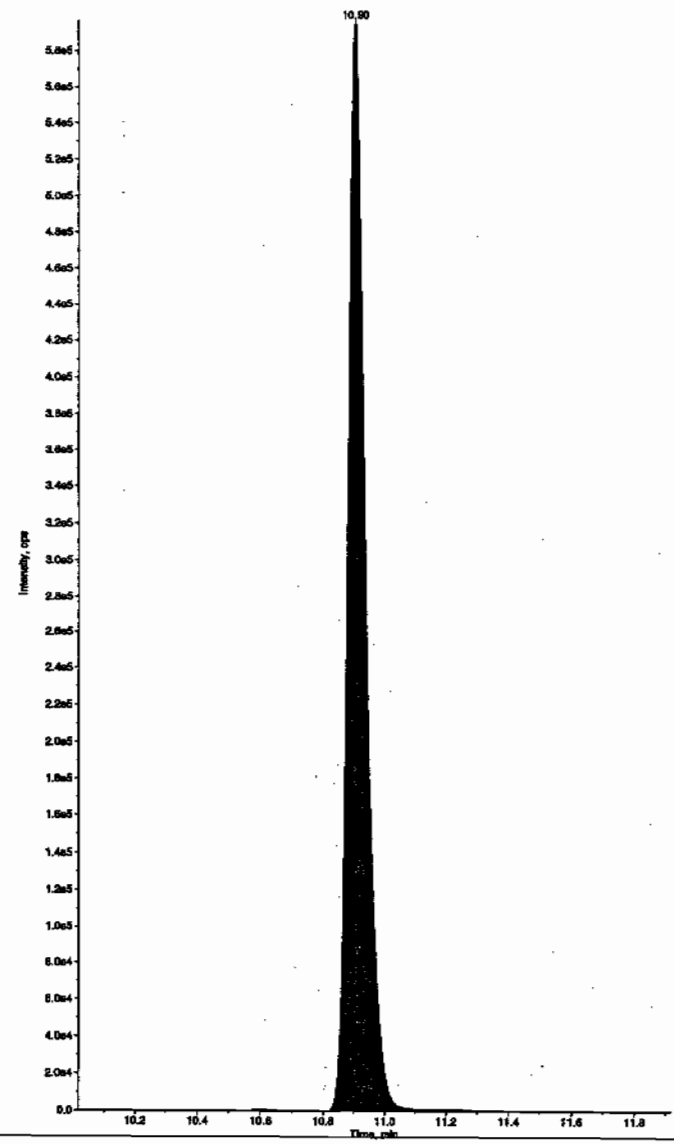


Sample Name: "WXX100120-27CRI" Sample ID: "[1]LER" File: "EXS01200026.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 103. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 5:02:18 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.9 min
Area: 2.41e+006 counts
Height: 596034.668 cps
Start Time: 10.8 min
End Time: 11.2 min



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

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7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1130

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXS01200037.wiff

Analysis Date: 20-JAN-10 19:55

LCMSMS ID: 1358

Column ID JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	500	458	92	
2,6-Diamino-4-nitrotoluene	500	473	95	
3,4-Dinitrotoluene	250	228	91	
3,5-Dinitroaniline	500	473	95	
TATB	500	508	102	
tris(o-cresyl) phosphate	500	507	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%
OtherTarget Analytes 80-120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

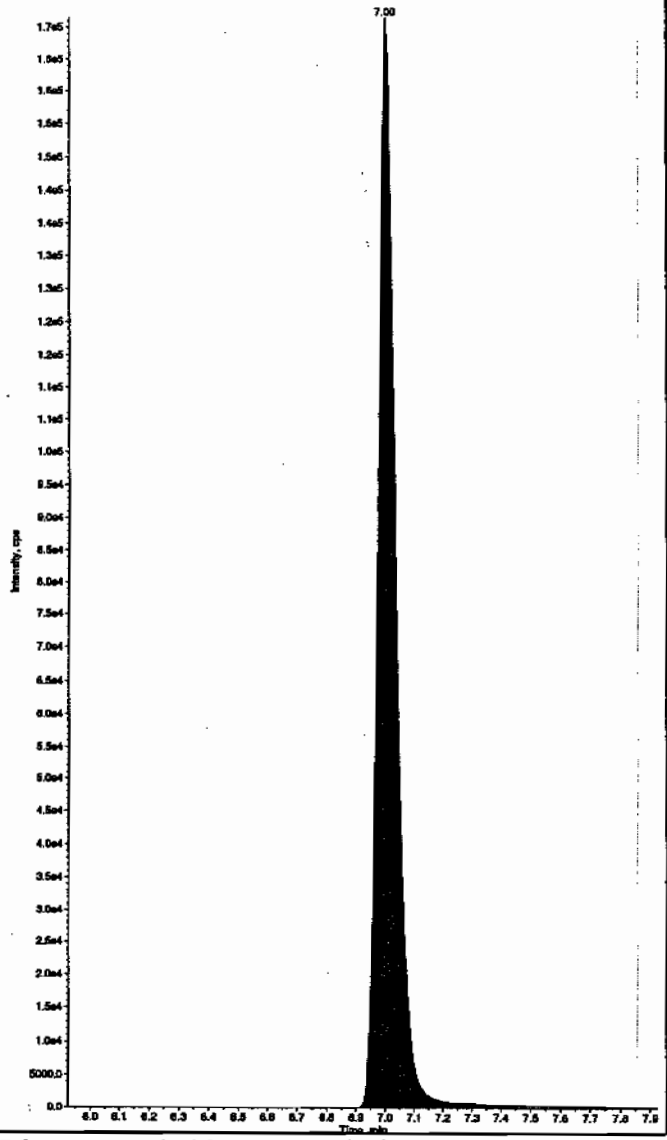
Before Sat 1/21/10

Sample Name: "WXX100120-26CCV" Sample ID: "[1]LER" File: "EXS01200037.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 508. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 7:55:03 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 6.92 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.00 min
Area: 7.19e+005 counts
Height: 165451.828 cps
Start Time: 6.86 min
End Time: 7.45 min

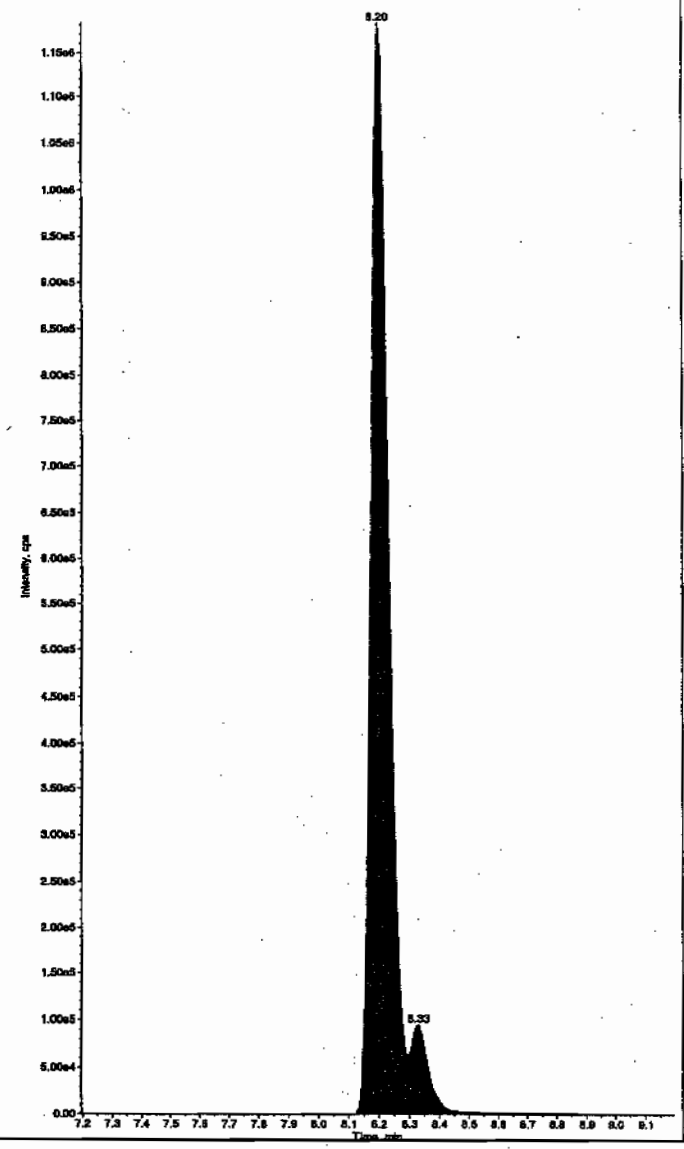


Sample Name: "WXX100120-26CCV" Sample ID: "[1]LER" File: "EXS01200037.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 521. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 7:55:03 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: 8.20 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.20 min
Area: 5.23e+006 counts
Height: 1182977.295 cps
Start Time: 8.10 min
End Time: 8.79 min



Hmm 01/21/10

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

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

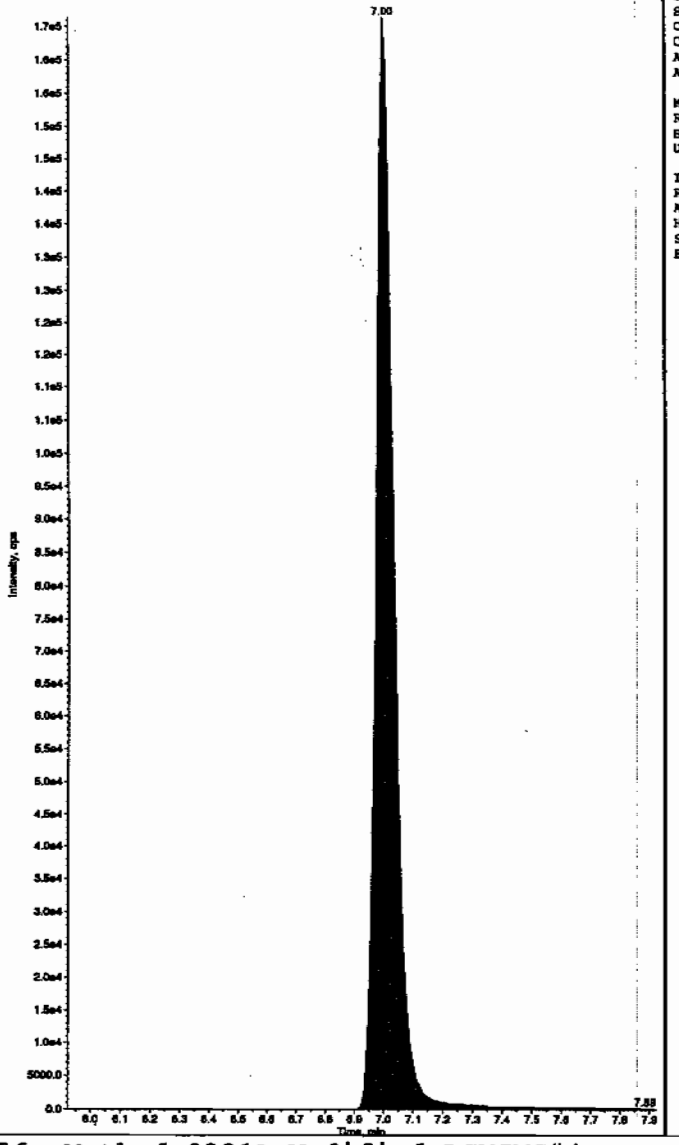
after Dan 1/21/10

Sample Name: "WXX100120-26CCV" Sample ID: "[1]LER" File: "EXS01200037.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 508. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 7:55:03 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 6.92 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.00 min
Area: 7.19e+005 counts
Height: 165451.828 cps
Start Time: 6.86 min
End Time: 7.45 min

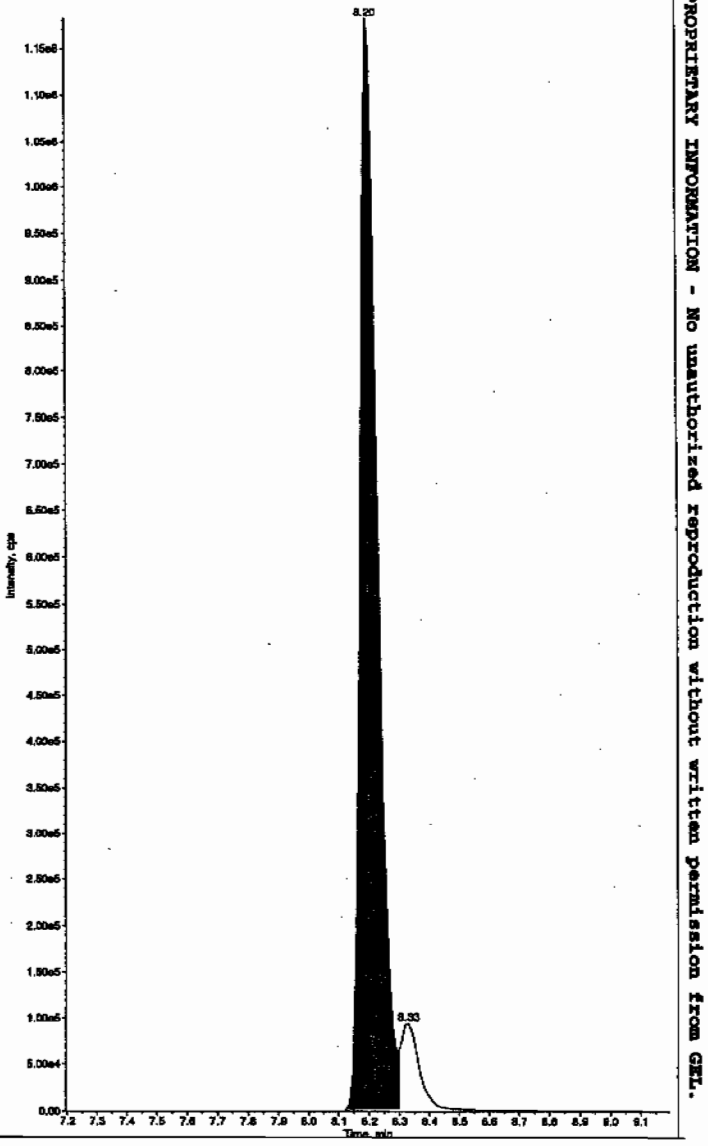


Sample Name: "WXX100120-26CCV" Sample ID: "[1]LER" File: "EXS01200037.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 473. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 7:55:03 PM

Modified: Yes
RT Window: 15.0 sec
Expected RT: 8.20 min
Use Relative RT: No

Int. Type: Manual
Retention Time: 8.20 min
Area: 4.77e+006 counts
Height: 1191449.804 cps
Start Time: 8.12 min
End Time: 8.30 min



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

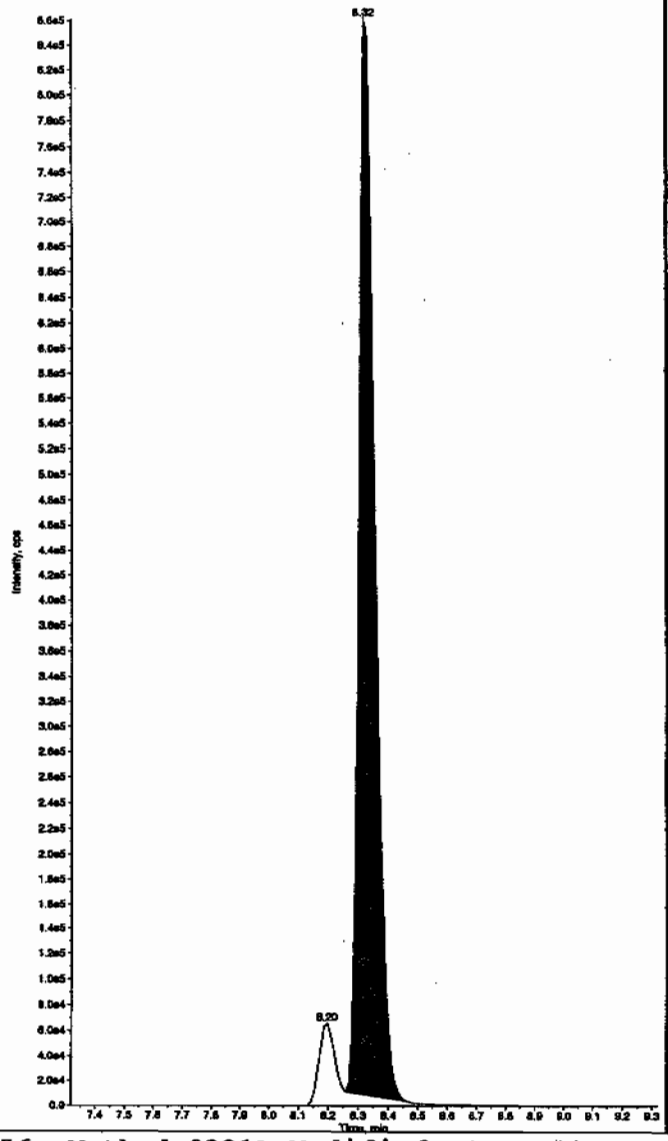
PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Sample Name: "WXX100120-26CCV" Sample ID: "[1]LER" File: "EXS01200037.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 250. ng/mL
Calculated Conc: 228. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 7:55:03 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.32 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.32 min
Area: 3.22e+006 counts
Height: 852806.274 cps
Start Time: 8.26 min
End Time: 8.46 min

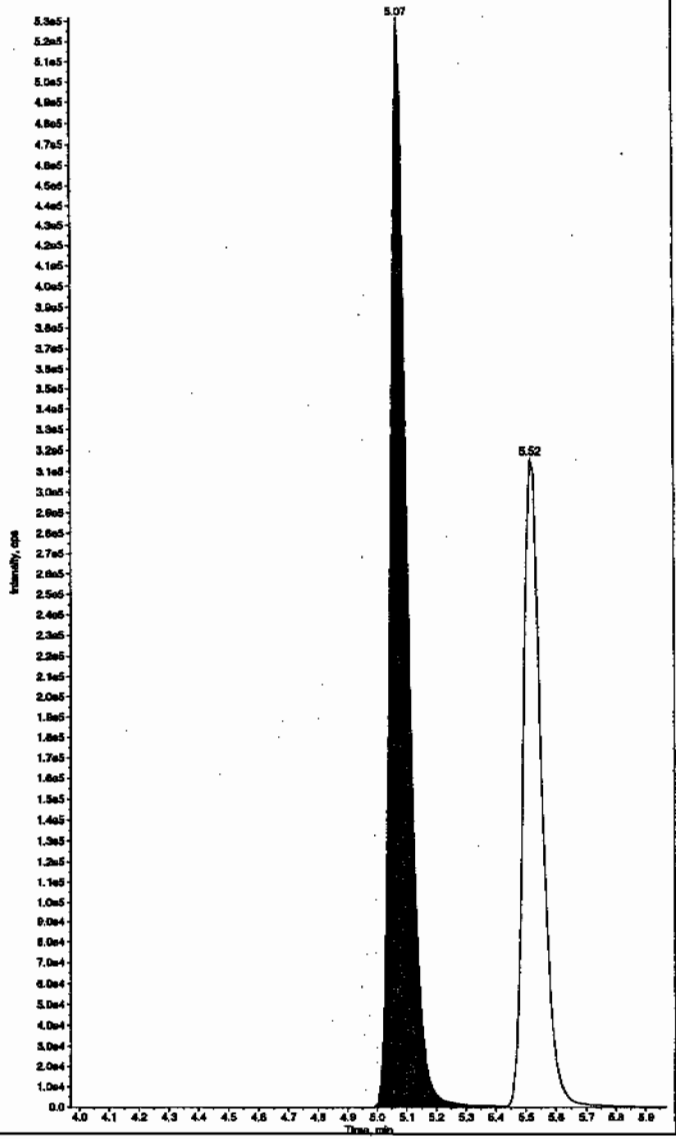


Sample Name: "WXX100120-26CCV" Sample ID: "[1]LER" File: "EXS01200037.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 473. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 7:55:03 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 450.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 4.97 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.07 min
Area: 2.16e+006 counts
Height: 531733.826 cps
Start Time: 4.97 min
End Time: 5.36 min



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

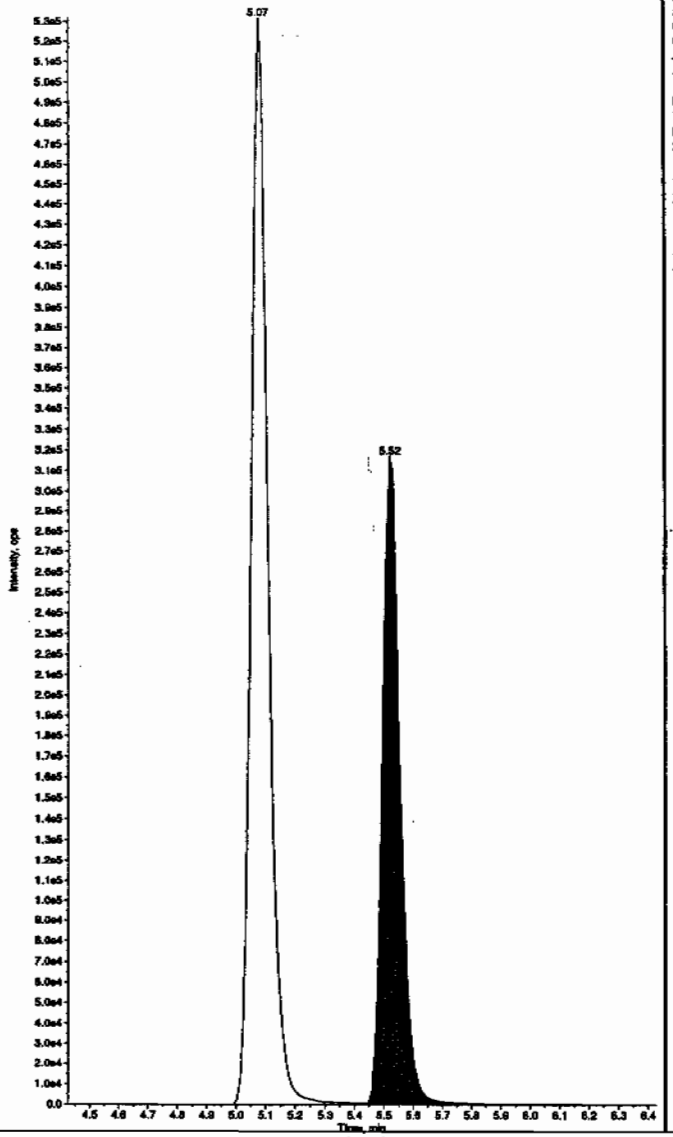
PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Sample Name: "WXX100120-26CCV" Sample ID: "[1]LER" File: "EXS01200037.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 458. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 7:55:03 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.43 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.52 min
Area: 1.34e+006 counts
Height: 316421.570 cps
Start Time: 5.43 min
End Time: 5.94 min

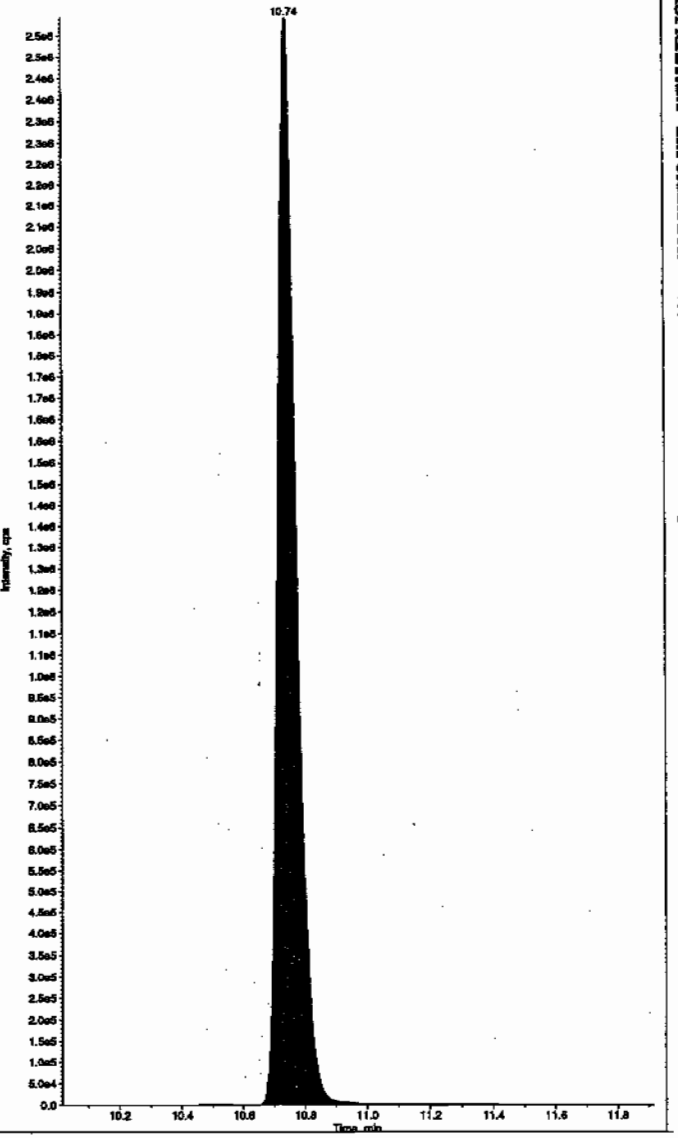


Sample Name: "WXX100120-26CCV" Sample ID: "[1]LER" File: "EXS01200037.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 507. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 7:55:03 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.7 min
Area: 1.08e+007 counts
Height: 2545575.660 cps
Start Time: 10.6 min
End Time: 11.0 min



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

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10–1130

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXS01200039.wiff

Analysis Date: 20–JAN–10 20:26

LCMSMS ID: 1358

Column ID: JSphere ODS–H80

Compound	True	Found	Recovery	Q
2,4–Diamino–6–nitrotoluene	100	88.8	89	
2,6–Diamino–4–nitrotoluene	100	95.8	96	
3,4–Dinitrotoluene	50	49.5	99	
3,5–Dinitroaniline	100	102	102	
TATB	100	112	112	
tris(o–cresyl) phosphate	100	104	104	

Recovery Limits:
3,4–Dinitrotoluene (Surrogate),TATB, tris(o–cresyl)phosphate, 3,5–Dinitroaniline, 2,6–Diamino–4–nitrotoluene , 2,4–Diamino–6–nitrotoluene 50–150%
OtherTarget Analytes 70–130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

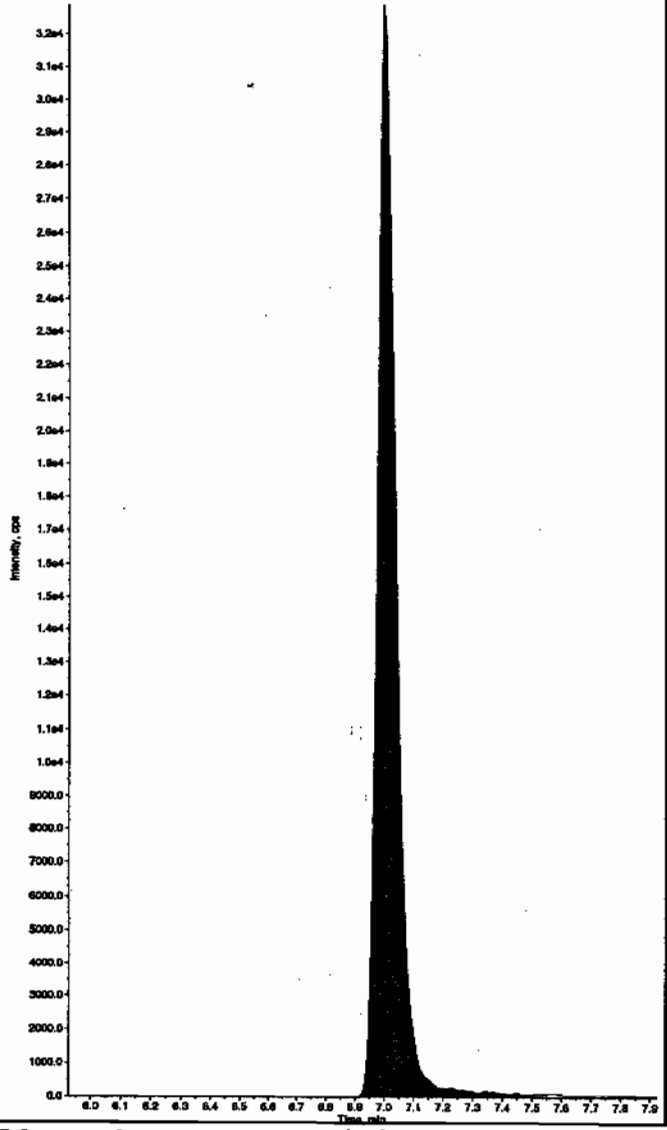
Before Lan 1/21/10

Sample Name: "WXX100120-27CRI" Sample ID: "j1jLER" File: "EXS01200039.wiff"
Peak Name: "TATB" Mass(as): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 112. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 8:26:27 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 6.92 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.00 min
Area: 1.48e+005 counts
Height: 32862.663 cps
Start Time: 6.85 min
End Time: 7.48 min

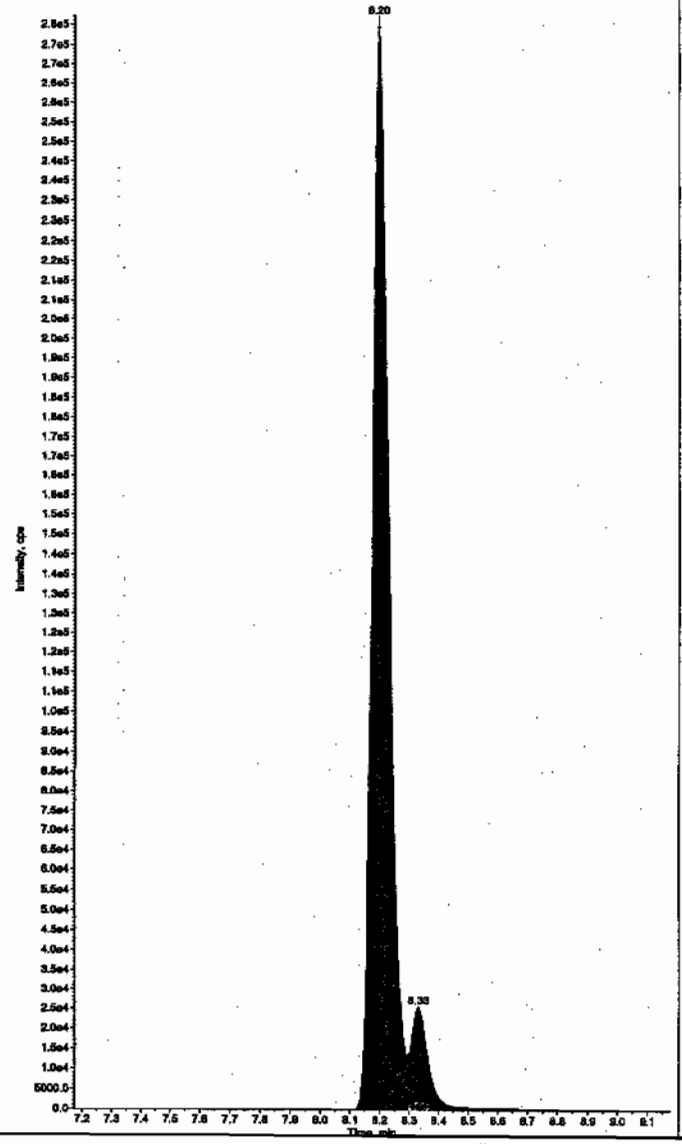


Sample Name: "WXX100120-27CRI" Sample ID: "j1jLER" File: "EXS01200039.wiff"
Peak Name: "35-Dinitroaniline" Mass(as): "182.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 113. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 8:26:27 PM

Modified: Yes
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.17 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.20 min
Area: 1.18e+006 counts
Height: 277372.589 cps
Start Time: 8.10 min
End Time: 8.59 min



Hnm 01/21/10

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

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

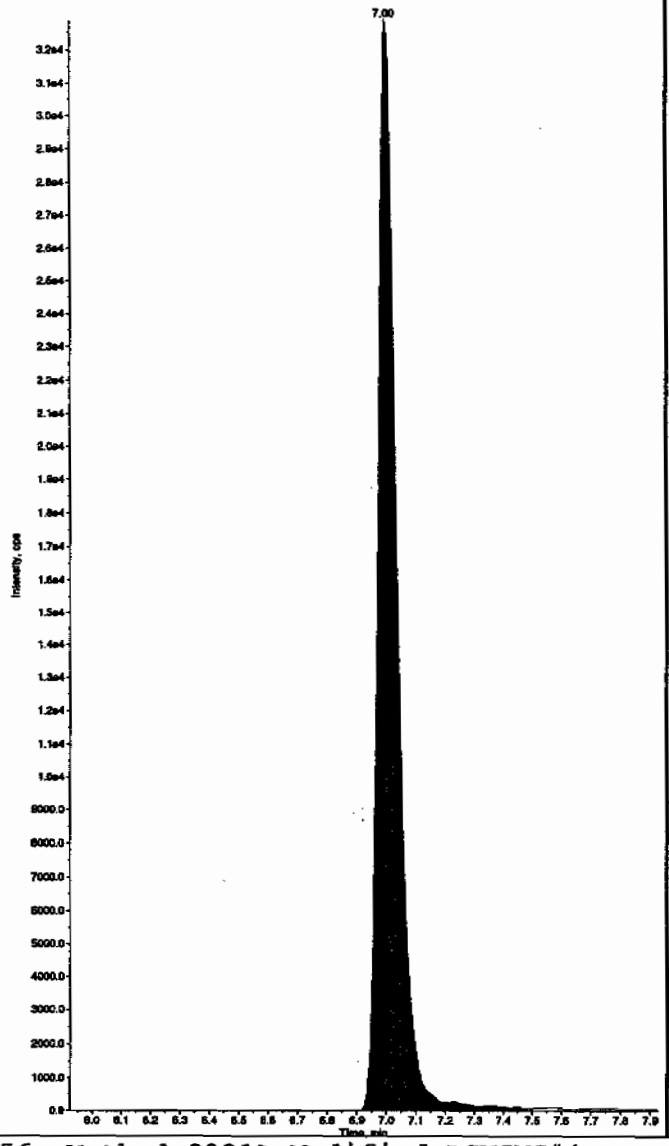
After Lar 1/21/10

Sample Name: "WXX100120-27CRI" Sample ID: "[1]LER" File: "EXS01200039.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 112. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 8:26:27 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 6.92 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.00 min
Area: 1.48e+005 counts
Height: 32862.663 cps
Start Time: 6.85 min
End Time: 7.48 min

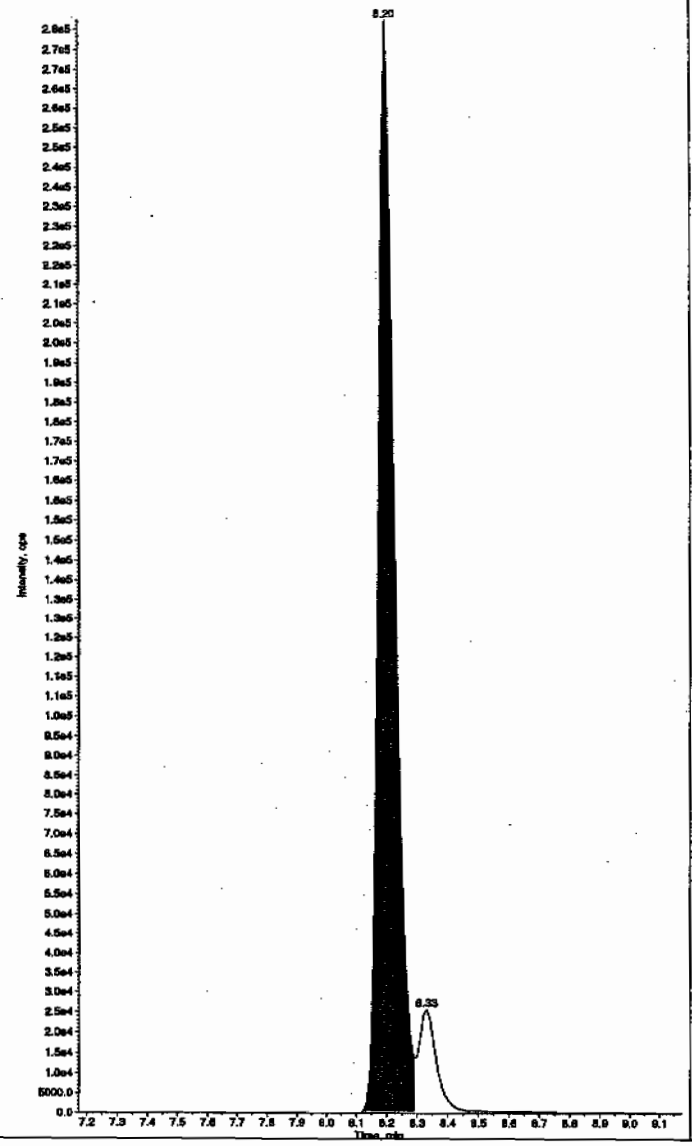


Sample Name: "WXX100120-27CRI" Sample ID: "[1]LER" File: "EXS01200039.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 102. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 8:26:27 PM

Modified: Yes
RT Window: 15.0 sec
Expected RT: 8.17 min
Use Relative RT: No

Int. Type: Manual
Retention Time: 8.20 min
Area: 1.07e+006 counts
Height: 277035.536 cps
Start Time: 8.12 min
End Time: 8.29 min



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

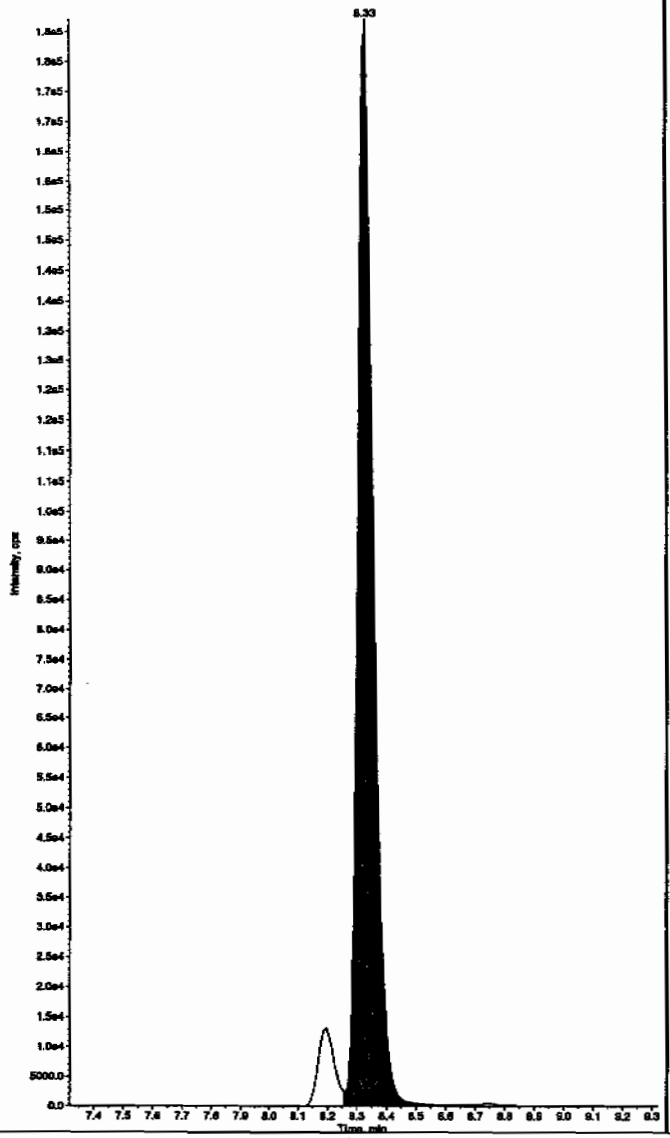
PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Sample Name: "WXX100120-27CRI" Sample ID: "[1]LER" File: "EXS01200039.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 50.0 ng/mL
Calculated Conc: 49.5 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 8:26:27 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.32 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.33 min
Area: 6.82e+005 counts
Height: 182117.081 cps
Start Time: 8.26 min
End Time: 8.62 min

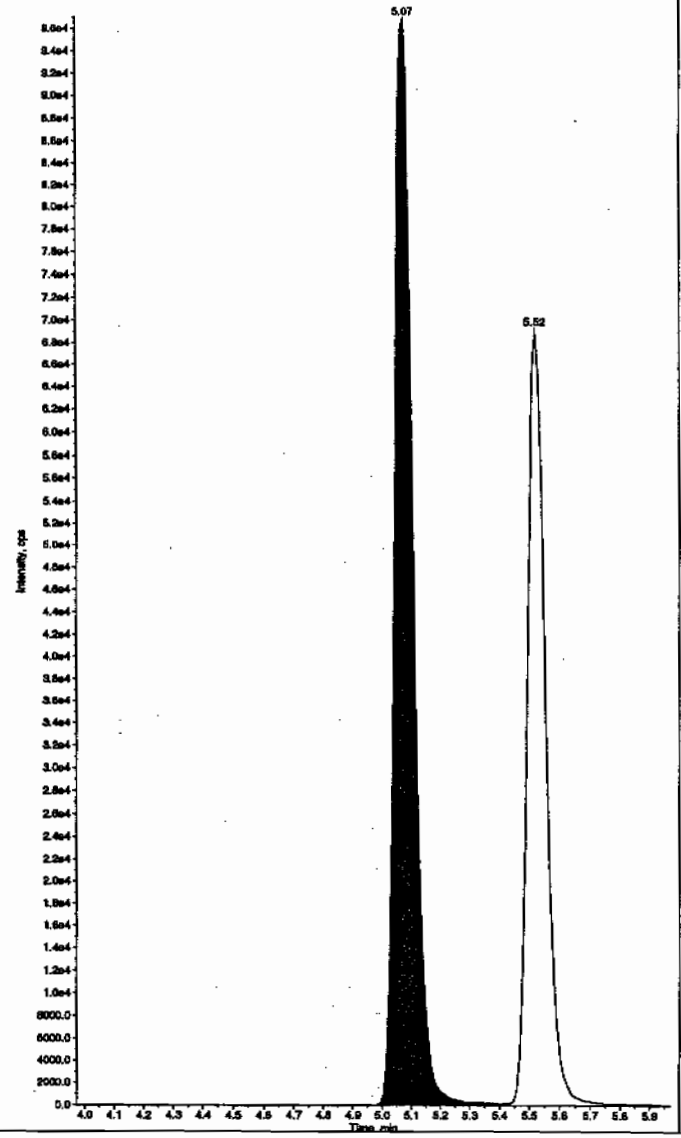


Sample Name: "WXX100120-27CRI" Sample ID: "[1]LER" File: "EXS01200039.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 95.8 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 8:26:27 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 450.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 4.97 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.07 min
Area: 4.39e+005 counts
Height: 97068.130 cps
Start Time: 4.90 min
End Time: 5.41 min



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

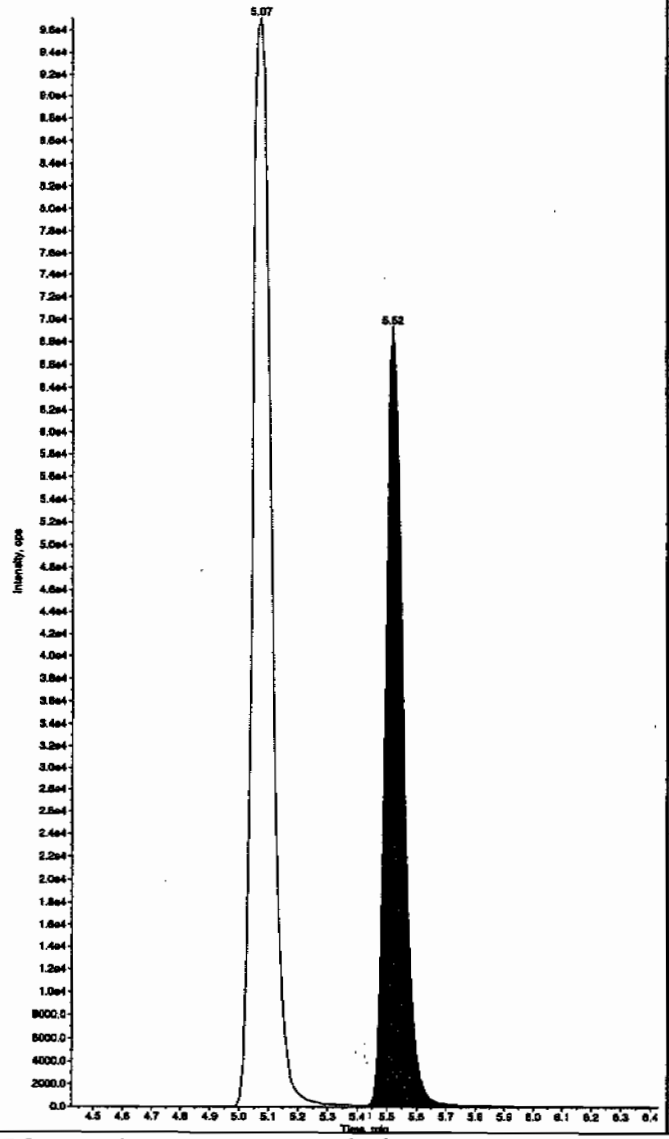
PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Sample Name: "WXX100120-27CRI" Sample ID: "[1]LER" File: "EXS01200039.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 88.8 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 8:26:27 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.43 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.52 min
Area: 2.87e+005 counts
Height: 69267.128 cps
Start Time: 5.41 min
End Time: 5.77 min

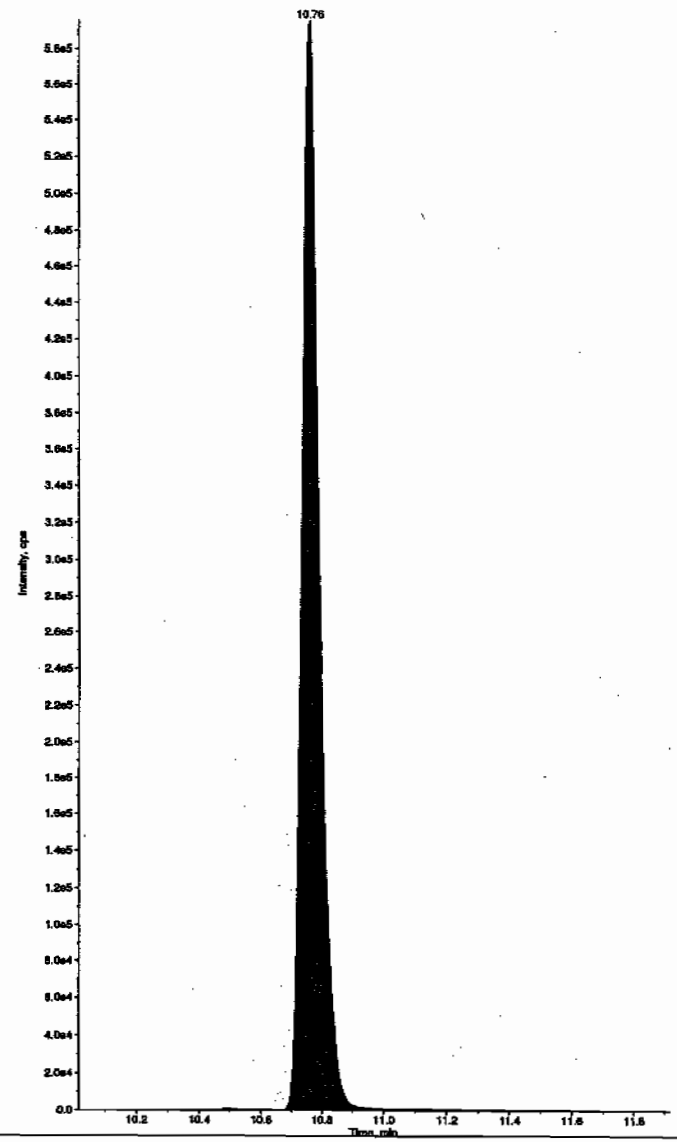


Sample Name: "WXX100120-27CRI" Sample ID: "[1]LER" File: "EXS01200039.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 104. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 8:26:27 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.8 min
Area: 2.43e+006 counts
Height: 595395.325 cps
Start Time: 10.7 min
End Time: 11.1 min



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

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7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10–1130

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXS01200048.wiff

Analysis Date: 20–JAN–10 22:47

LCMSMS ID: 1358

Column ID: JSphere ODS–H80

Compound	True	Found	Recovery	Q
2,4–Diamino–6–nitrotoluene	500	465	93	
2,6–Diamino–4–nitrotoluene	500	473	95	
3,4–Dinitrotoluene	250	223	89	
3,5–Dinitroaniline	500	491	98	
TATB	500	505	101	
tris(o–cresyl) phosphate	500	516	103	

Recovery Limits:
3,4–Dinitrotoluene (Surrogate),TATB, tris(o–cresyl)phosphate, 3,5–Dinitroaniline, 2,6–Diamino–4–nitrotoluene , 2,4–Diamino–6–nitrotoluene 70–130%
OtherTarget Analytes 80–120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

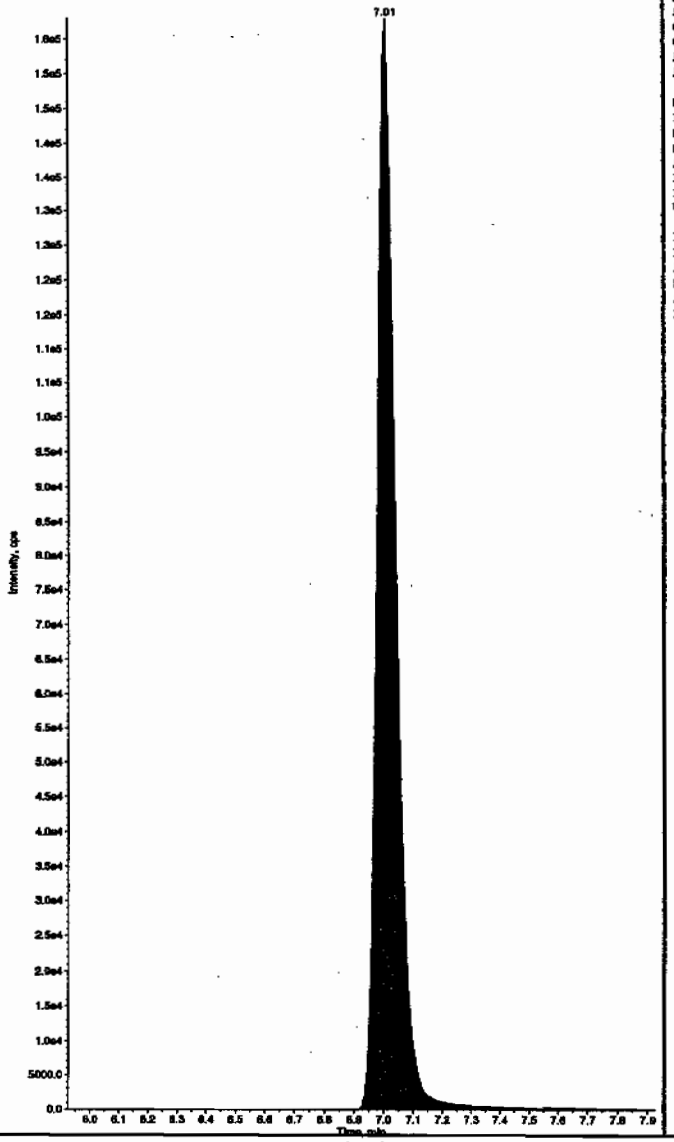
Before Start 1/21/10

Sample Name: "WXX100120-26CCV" Sample ID: "|1|LER" File: "EXS01200048.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 505. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 10:47:51 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 6.92 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.01 min
Area: 7.16e+005 counts
Height: 158053.741 cps
Start Time: 6.90 min
End Time: 7.53 min

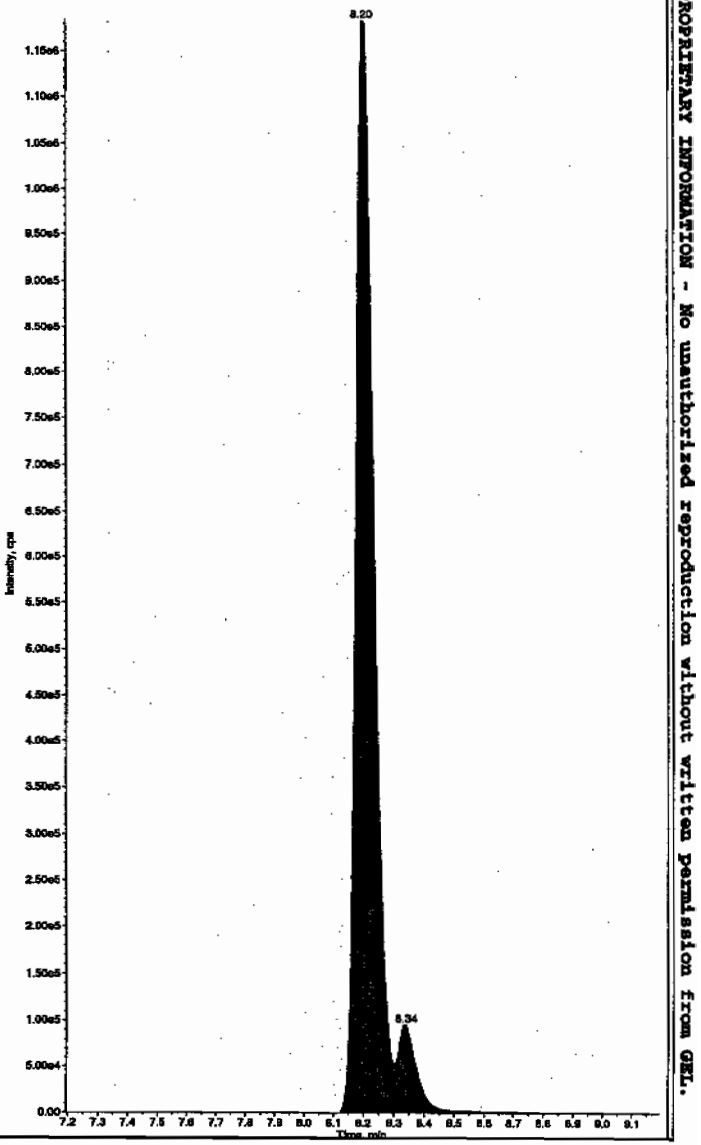


Sample Name: "WXX100120-26CCV" Sample ID: "|1|LER" File: "EXS01200048.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 544. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 10:47:51 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: 8.20 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.20 min
Area: 5.44e+006 counts
Height: 1184544.800 cps
Start Time: 8.10 min
End Time: 8.81 min



Hume 01/21/10

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

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

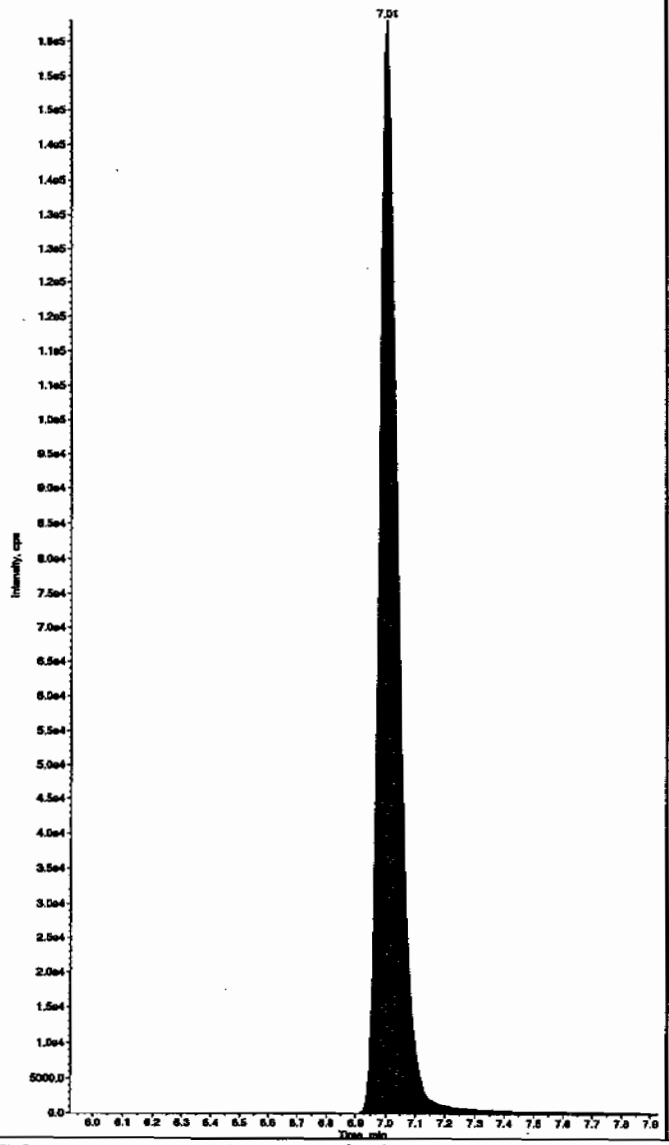
after Lar 1/21/10

Sample Name: "WXX100120-26CCV" Sample ID: "[1]LER" File: "EXS01200048.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 505. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 10:47:51 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 6.92 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.01 min
Area: 7.16e+005 counts
Height: 158053.741 cps
Start Time: 6.90 min
End Time: 7.53 min

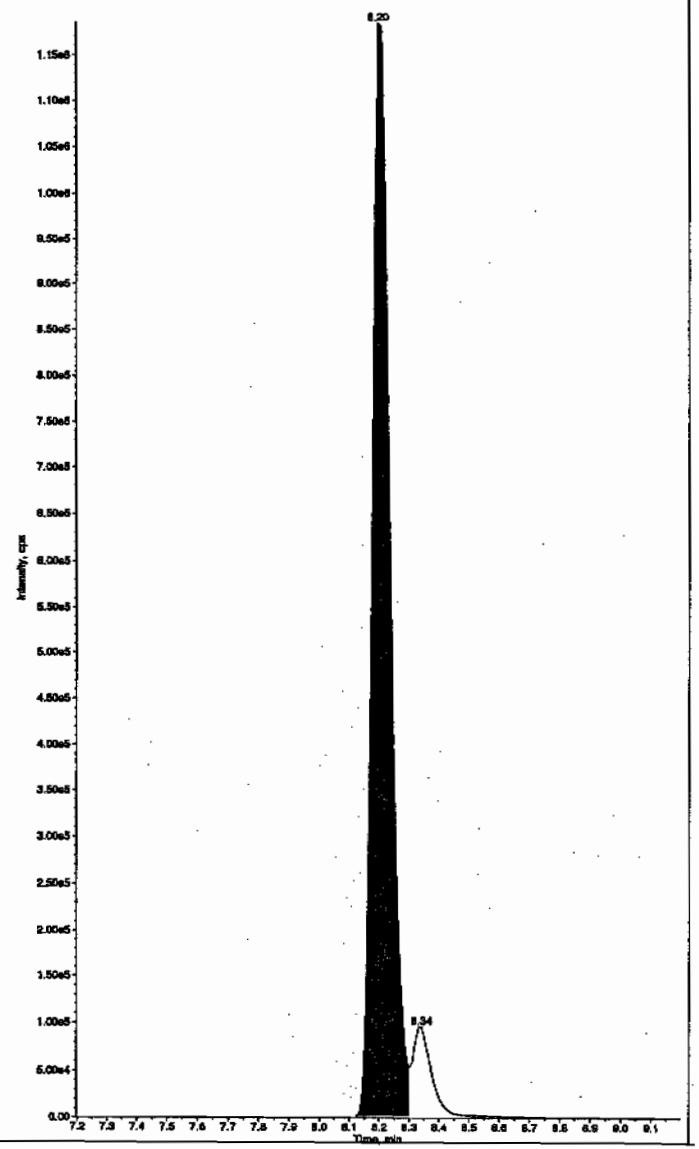


Sample Name: "WXX100120-26CCV" Sample ID: "[1]LER" File: "EXS01200048.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 491. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 10:47:51 PM

Modified: Yes
RT Window: 15.0 sec
Expected RT: 8.20 min
Use Relative RT: No

Int. Type: Manual
Retention Time: 8.20 min
Area: 4.95e+006 counts
Height: 1201914.384 cps
Start Time: 8.12 min
End Time: 8.30 min



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

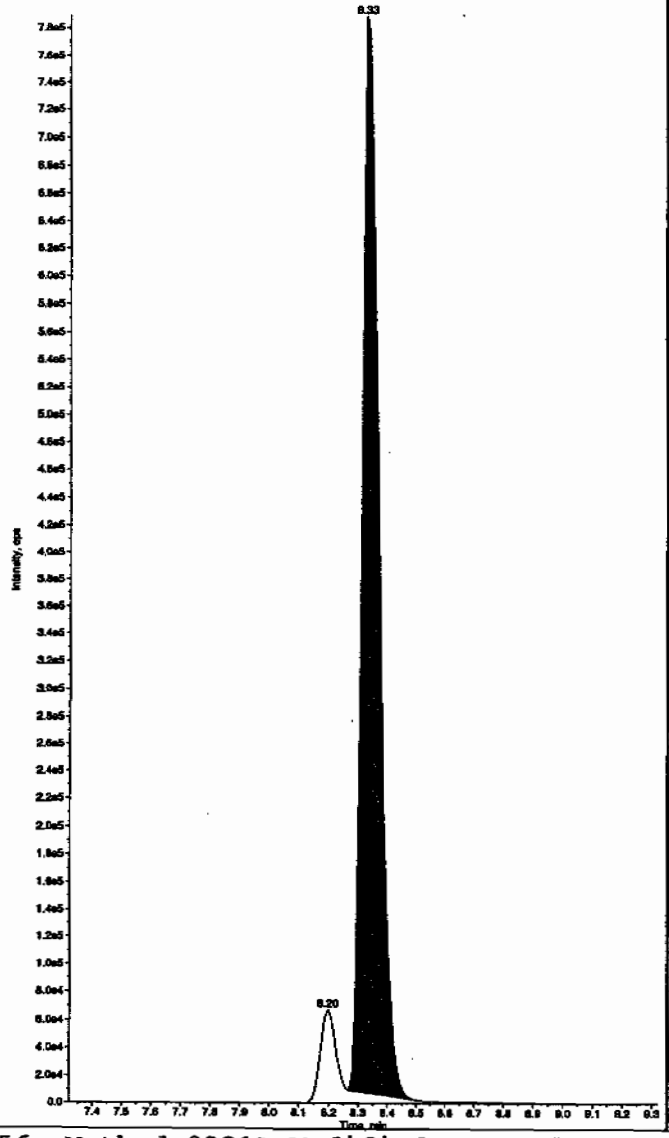
PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Sample Name: "WXX100120-26CCV" Sample ID: "[1]LER" File: "EXS01200048.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 250. ng/mL
Calculated Conc: 223. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 10:47:51 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.32 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.33 min
Area: 3.15e+006 counts
Height: 781205.078 cps
Start Time: 8.27 min
End Time: 8.50 min

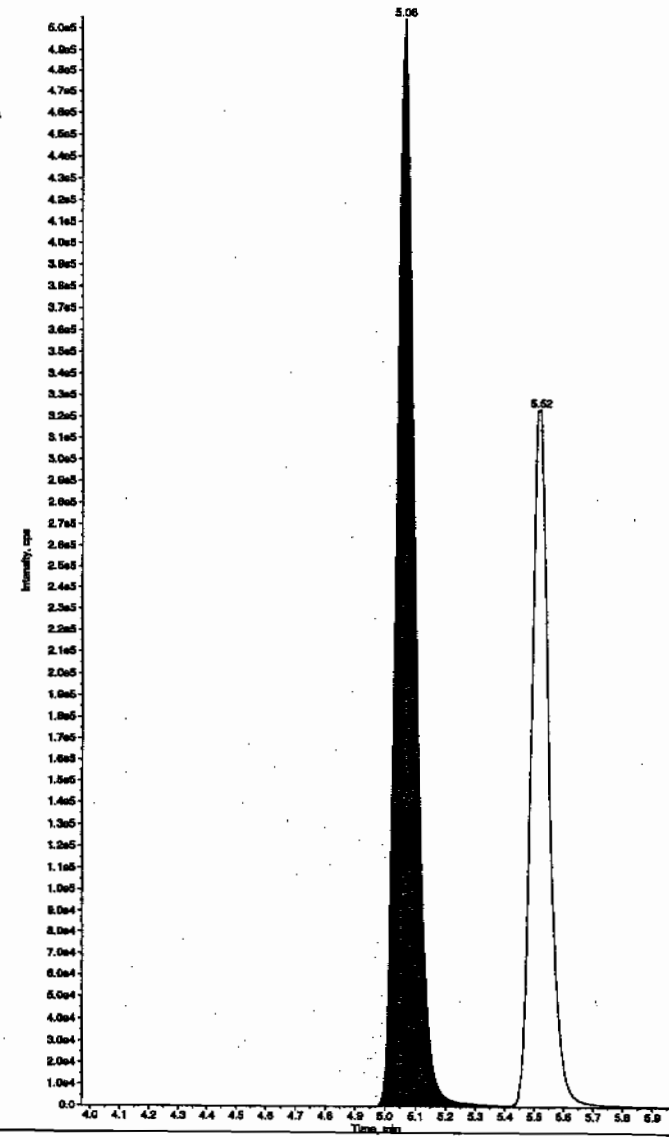


Sample Name: "WXX100120-26CCV" Sample ID: "[1]LER" File: "EXS01200048.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 473. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 10:47:51 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 450.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 4.97 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.06 min
Area: 2.16e+006 counts
Height: 505110.748 cps
Start Time: 4.96 min
End Time: 5.35 min



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

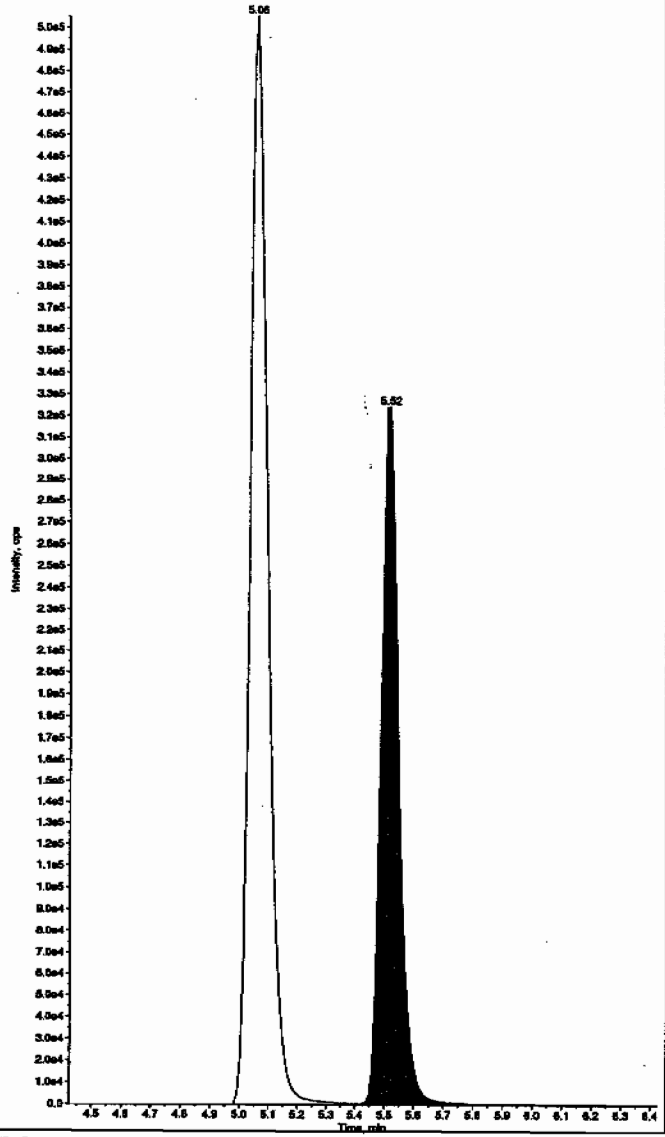
PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Sample Name: "WXX100120-26CCV" Sample ID: "[1]LER" File: "EXS01200048.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 465. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 10:47:51 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.43 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.52 min
Area: 1.37e+006 counts
Height: 324031.860 cps
Start Time: 5.41 min
End Time: 5.99 min

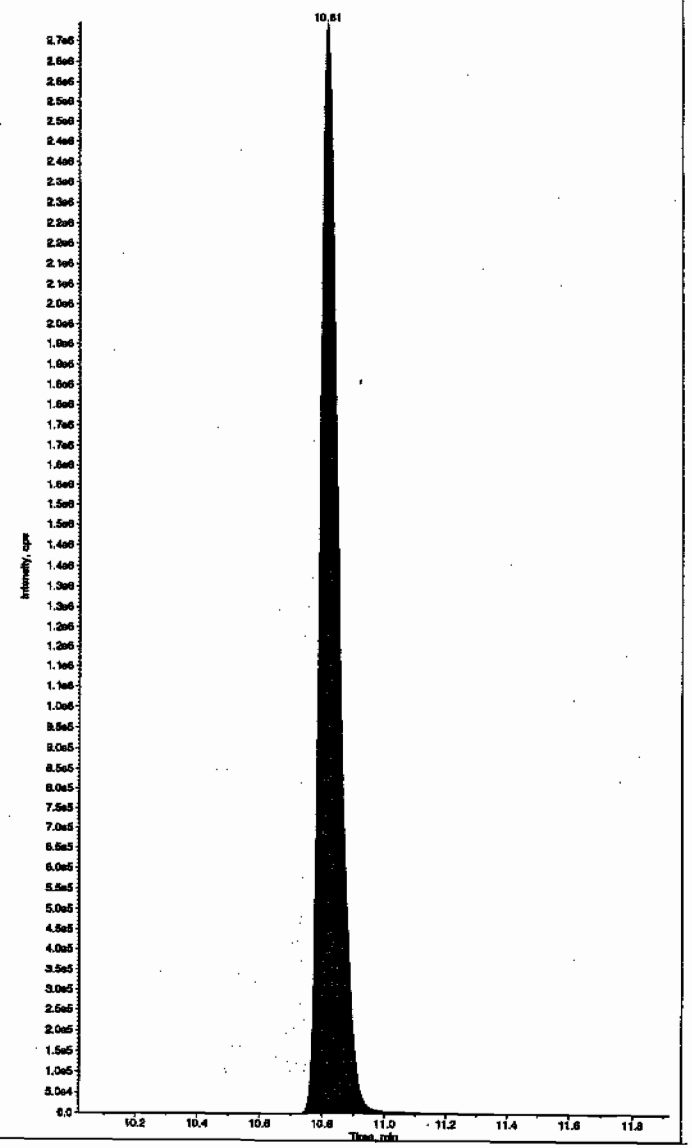


Sample Name: "WXX100120-26CCV" Sample ID: "[1]LER" File: "EXS01200048.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 516. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 10:47:51 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.8 min
Area: 1.10e+007 counts
Height: 2694970.947 cps
Start Time: 10.7 min
End Time: 11.1 min



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

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1130

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXS01200050.wiff

Analysis Date: 20-JAN-10 23:19

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	100	90.2	90	
2,6-Diamino-4-nitrotoluene	100	91.9	92	
3,4-Dinitrotoluene	50	50.6	101	
3,5-Dinitroaniline	100	101	101	
TATB	100	112	112	
tris(o-cresyl) phosphate	100	106	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 50-150%
OtherTarget Analytes 70-130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

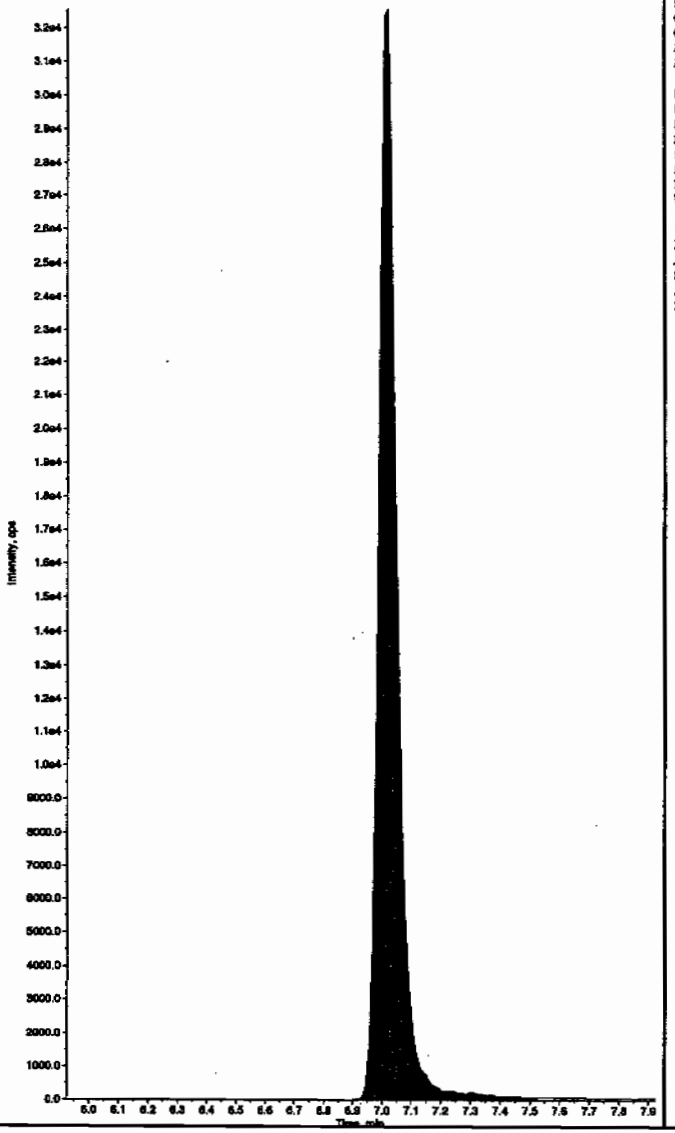
Before Lab 1/21/10

Sample Name: "WXX100120-27CRI" Sample ID: "[1]LER" File: "EXS01200050.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 112. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 11:19:15 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 6.92 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.02 min
Area: 1.47e+005 counts
Height: 32581.310 cps
Start Time: 6.86 min
End Time: 7.52 min

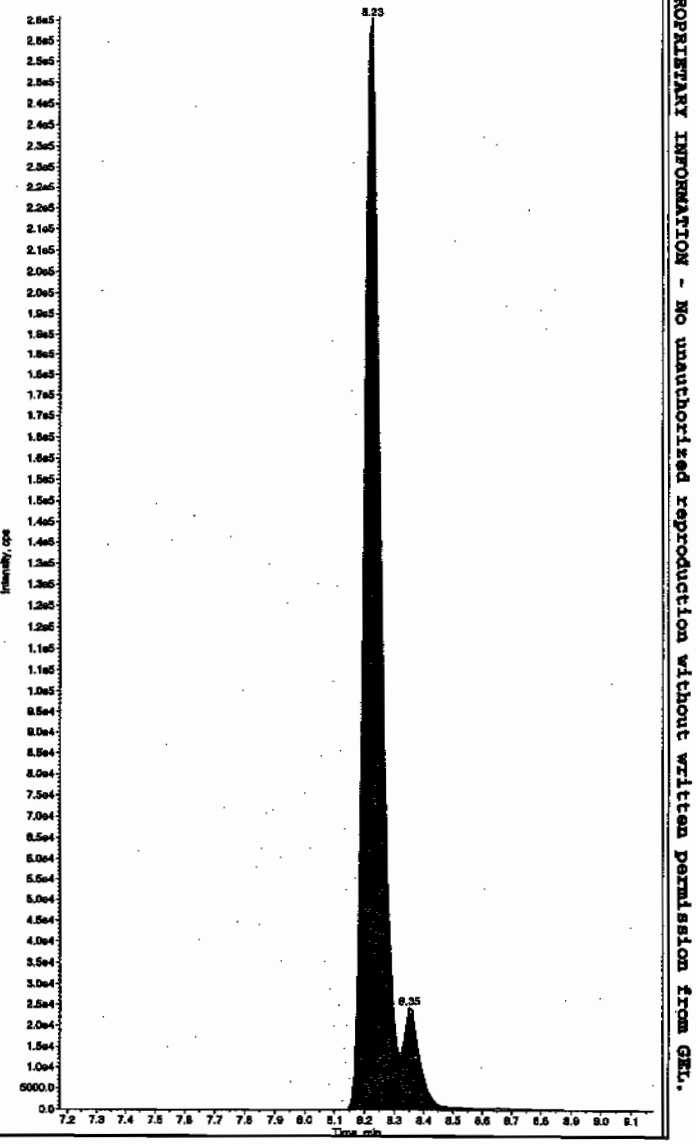


Sample Name: "WXX100120-27CRI" Sample ID: "[1]LER" File: "EXS01200050.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 111. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 11:19:15 PM

Modified: Yes
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.17 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.23 min
Area: 1.16e+006 counts
Height: 260879.181 cps
Start Time: 8.11 min
End Time: 8.63 min



Hum 01/21/10

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

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

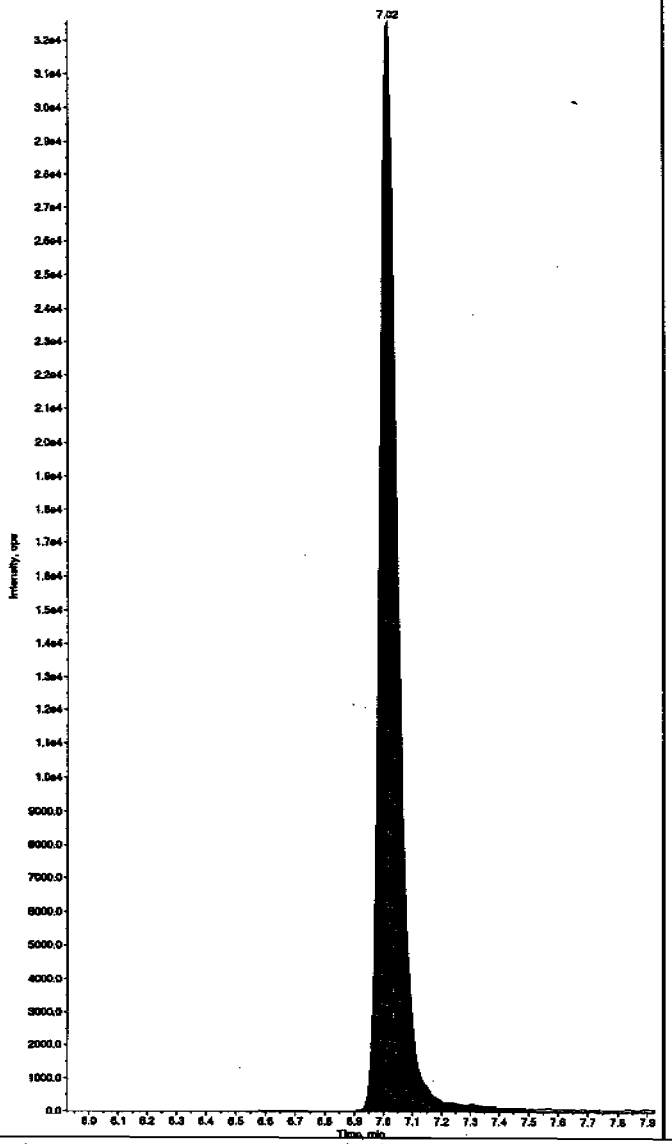
after Lan 1/21/10

Sample Name: "WXX100120-27CRI" Sample ID: "[1]LER" File: "EXS01200050.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 112. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 11:19:15 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 6.92 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.02 min
Area: 1.47e+005 counts
Height: 32581.310 cps
Start Time: 6.86 min
End Time: 7.52 min

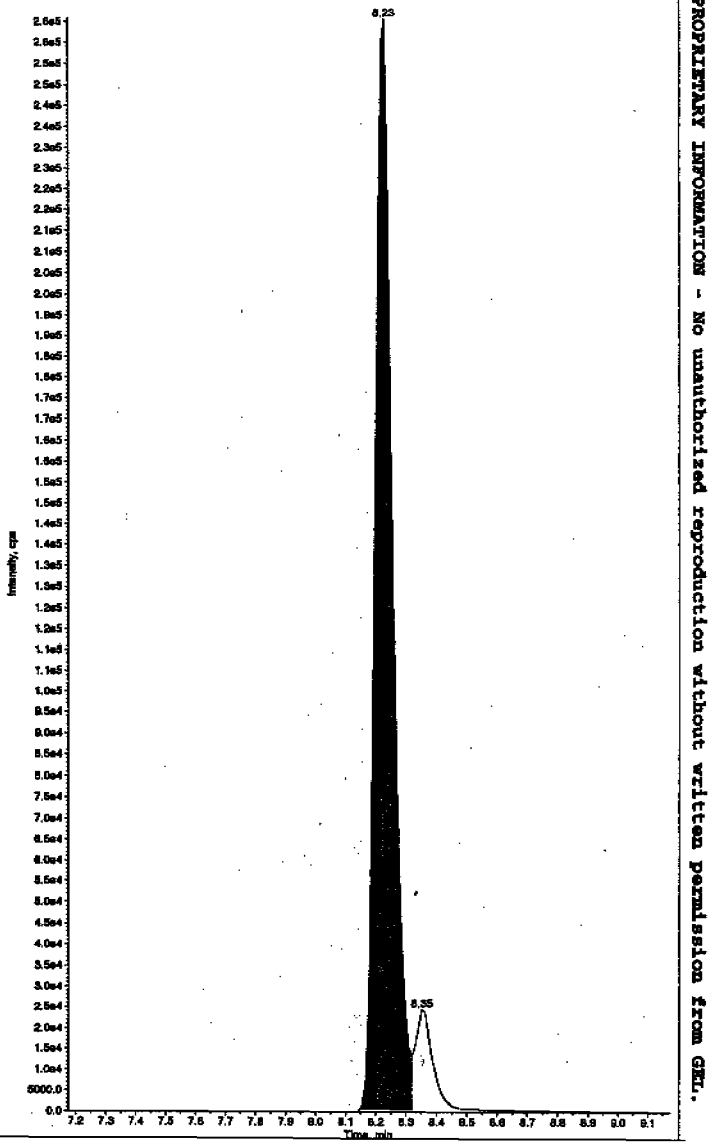


Sample Name: "WXX100120-27CRI" Sample ID: "[1]LER" File: "EXS01200050.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: "" ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 101. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 11:19:15 PM

Modified: Yes
RT Window: 15.0 sec
Expected RT: 8.17 min
Use Relative RT: No

Int. Type: Manual
Retention Time: 8.22 min
Area: 1.05e+006 counts
Height: 263038.847 cps
Start Time: 8.14 min
End Time: 8.32 min



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

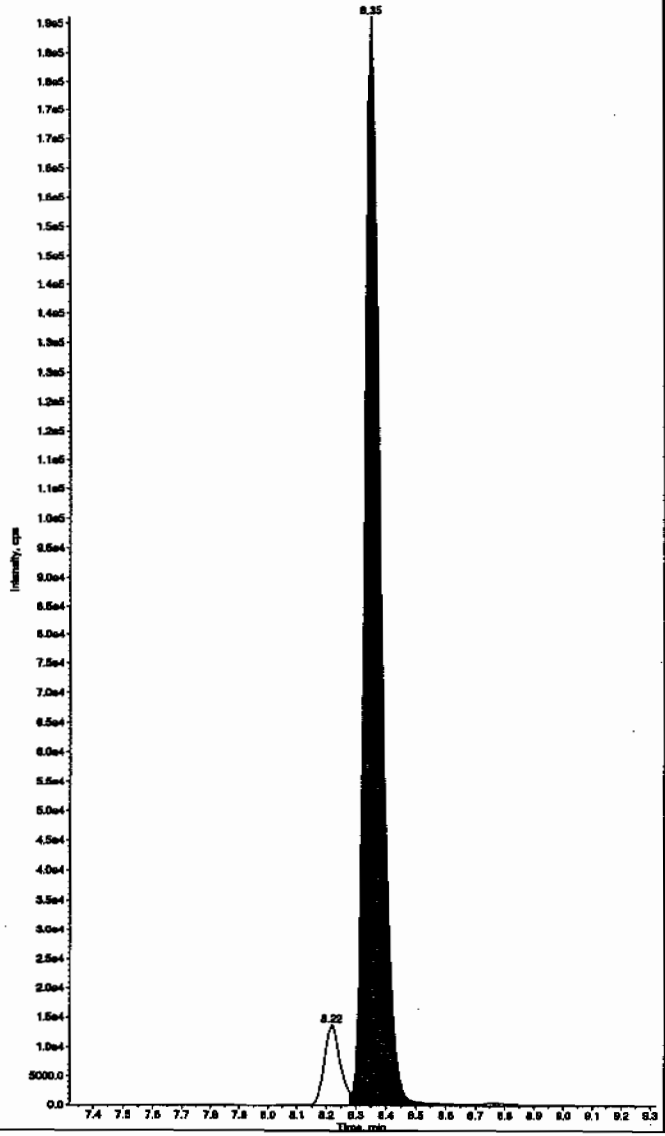
PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Sample Name: "WXX100120-27CRI" Sample ID: "[1]LER" File: "EXS01200050.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 50.0 ng/mL
Calculated Conc: 50.6 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 11:19:15 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.32 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.35 min
Area: 6.98e+005 counts
Height: 185958.237 cps
Start Time: 8.28 min
End Time: 8.66 min

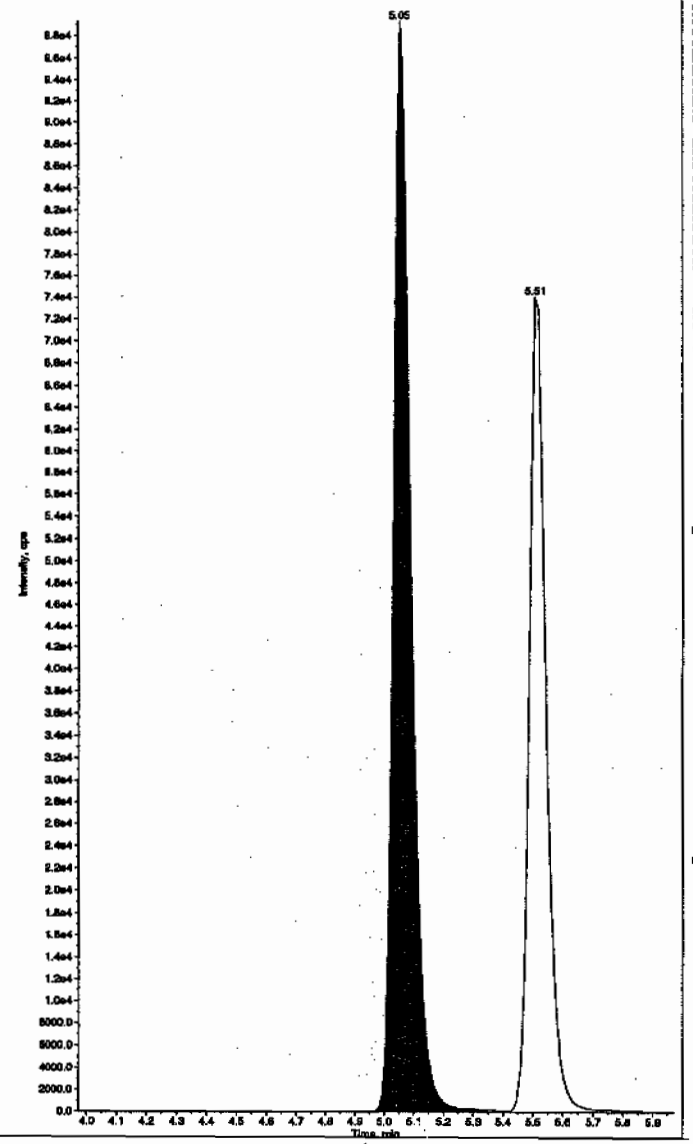


Sample Name: "WXX100120-27CRI" Sample ID: "[1]LER" File: "EXS01200050.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 91.9 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 11:19:15 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 450.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 4.97 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.05 min
Area: 4.21e+005 counts
Height: 99316.338 cps
Start Time: 4.96 min
End Time: 5.34 min



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

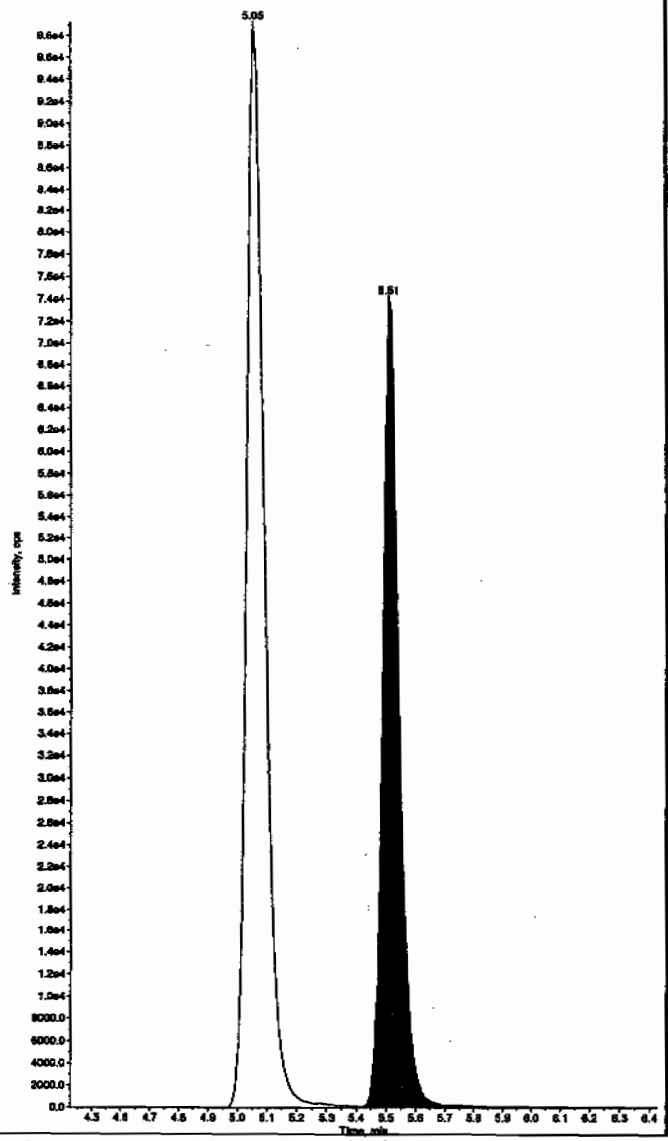
PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Sample Name: "WXX100120-27CRI" Sample ID: "|1|LER" File: "EXS01200050.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 90.2 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 11:19:15 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.43 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.51 min
Area: 2.91e+005 counts
Height: 74110.046 cps
Start Time: 5.42 min
End Time: 5.84 min

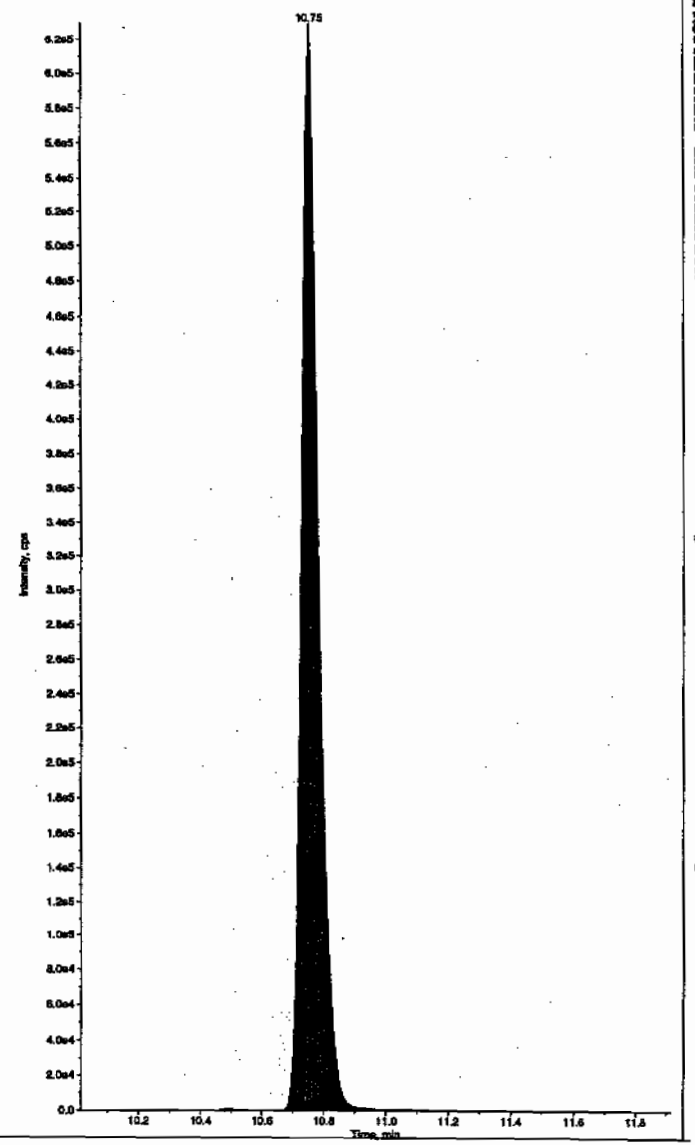


Sample Name: "WXX100120-27CRI" Sample ID: "|1|LER" File: "EXS01200050.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 106. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 11:19:15 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.8 min
Area: 2.46e+006 counts
Height: 629573.547 cps
Start Time: 10.7 min
End Time: 11.0 min



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

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7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1130

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXS01200061.wiff

Analysis Date: 21-JAN-10 02:12

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
TATB	500	480	96	
tris(o-cresyl) phosphate	500	514	103	
2,4-Diamino-6-nitrotoluene	500	484	97	
2,6-Diamino-4-nitrotoluene	500	485	97	
3,4-Dinitrotoluene	250	234	94	
3,5-Dinitroaniline	500	477	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 70-130%
OtherTarget Analytes 80-120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

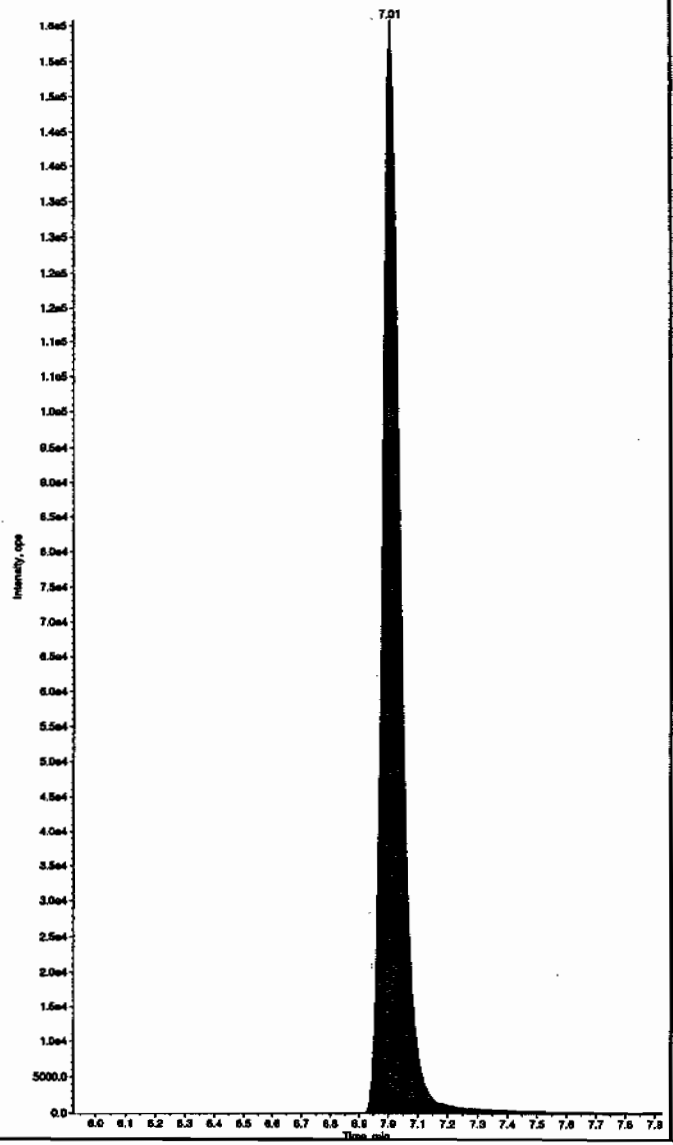
Before Lab 1/21/10

Sample Name: "WXX100120-26CCV" Sample ID: "[1]LER" File: "EXS01200061.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 480. ng/mL
Acq. Date: 1/21/2010
Acq. Time: 2:12:04 AM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 6.92 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.01 min
Area: 6.80e+005 counts
Height: 155868.530 cps
Start Time: 6.87 min
End Time: 7.67 min

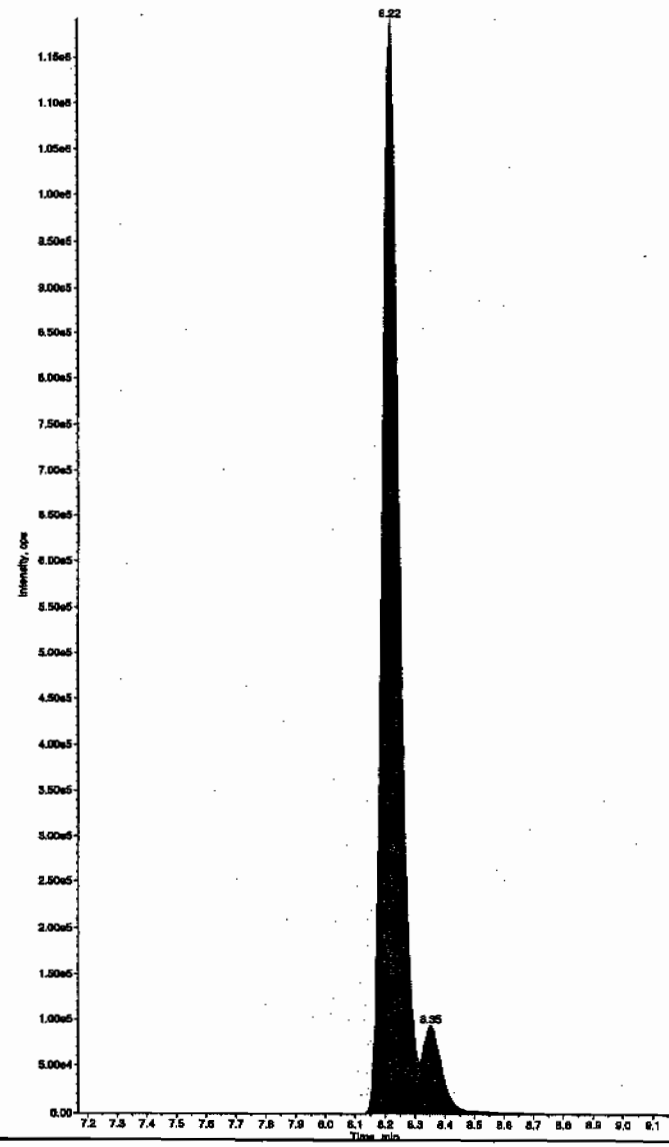


Sample Name: "WXX100120-26CCV" Sample ID: "[1]LER" File: "EXS01200061.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/45.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 530. ng/mL
Acq. Date: 1/21/2010
Acq. Time: 2:12:04 AM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.16 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.22 min
Area: 5.31e+006 counts
Height: 1192360.474 cps
Start Time: 8.11 min
End Time: 8.82 min



Hume 01/21/10

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

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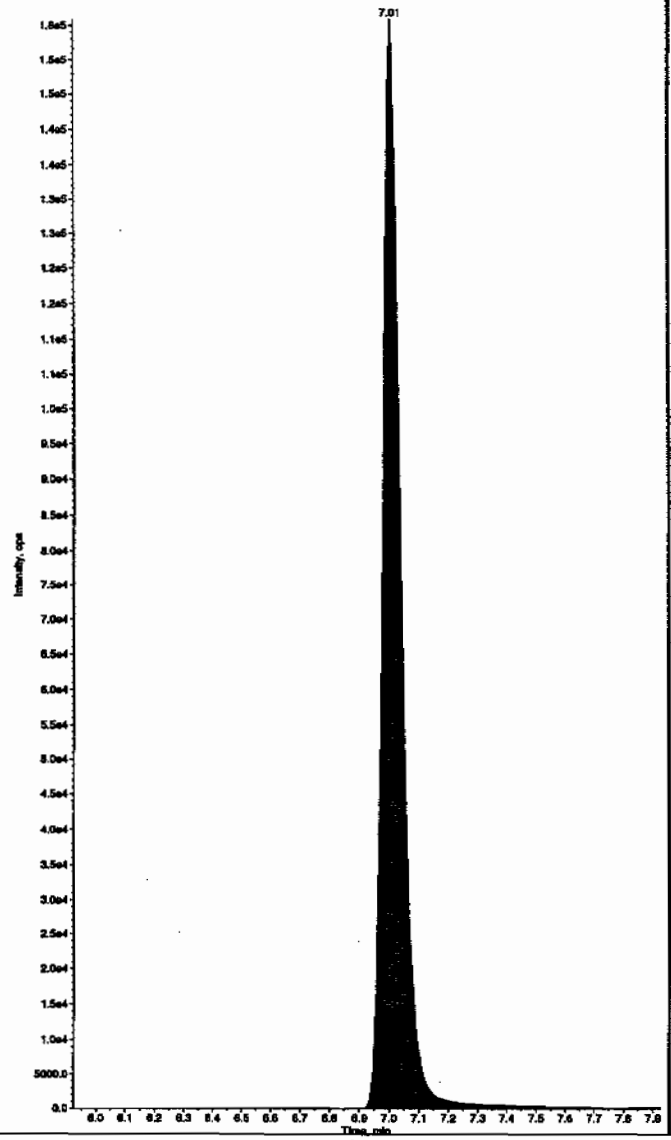
after clean 1/21/10

Sample Name: "WXX100120-25CCV" Sample ID: "[1]LER" File: "EXS01200061.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 480. ng/mL
Acq. Date: 1/21/2010
Acq. Time: 2:12:04 AM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 6.92 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.01 min
Area: 6.80e+005 counts
Height: 155868.530 cps
Start Time: 6.87 min
End Time: 7.67 min

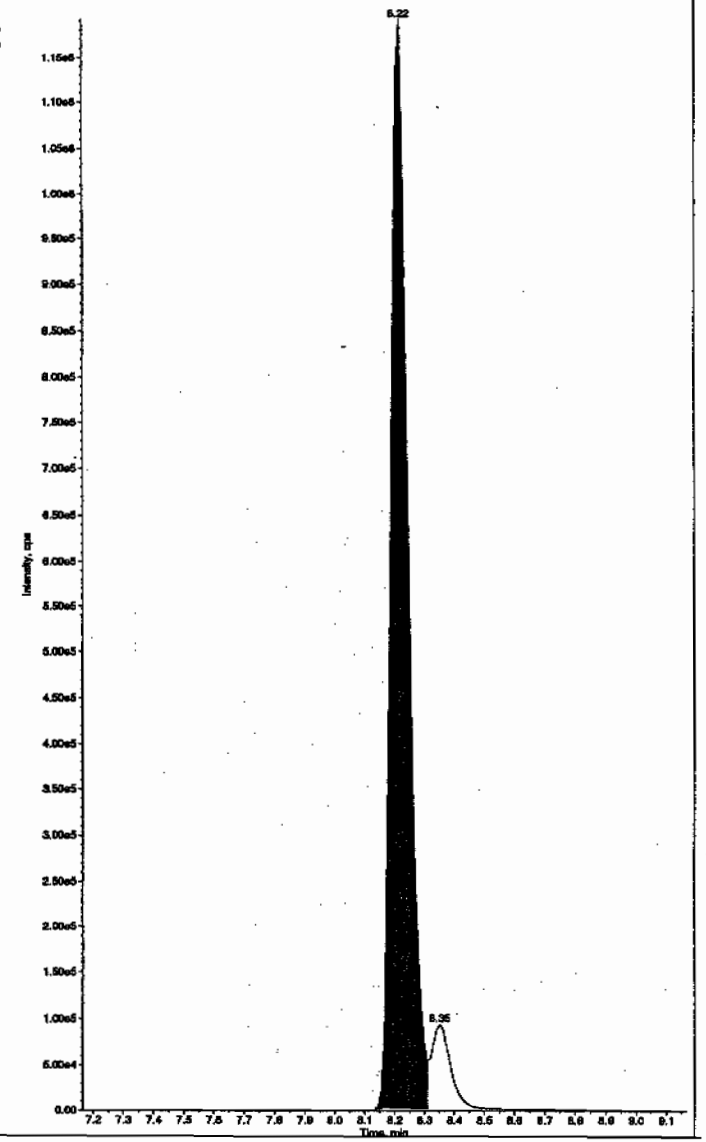


Sample Name: "WXX100120-25CCV" Sample ID: "[1]LER" File: "EXS01200061.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 477. ng/mL
Acq. Date: 1/21/2010
Acq. Time: 2:12:04 AM

Modified: Yes
RT Window: 15.0 sec
Expected RT: 8.16 min
Use Relative RT: No

Int. Type: Manual
Retention Time: 8.21 min
Area: 4.81e+006 counts
Height: 1194277.845 cps
Start Time: 8.13 min
End Time: 8.31 min



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

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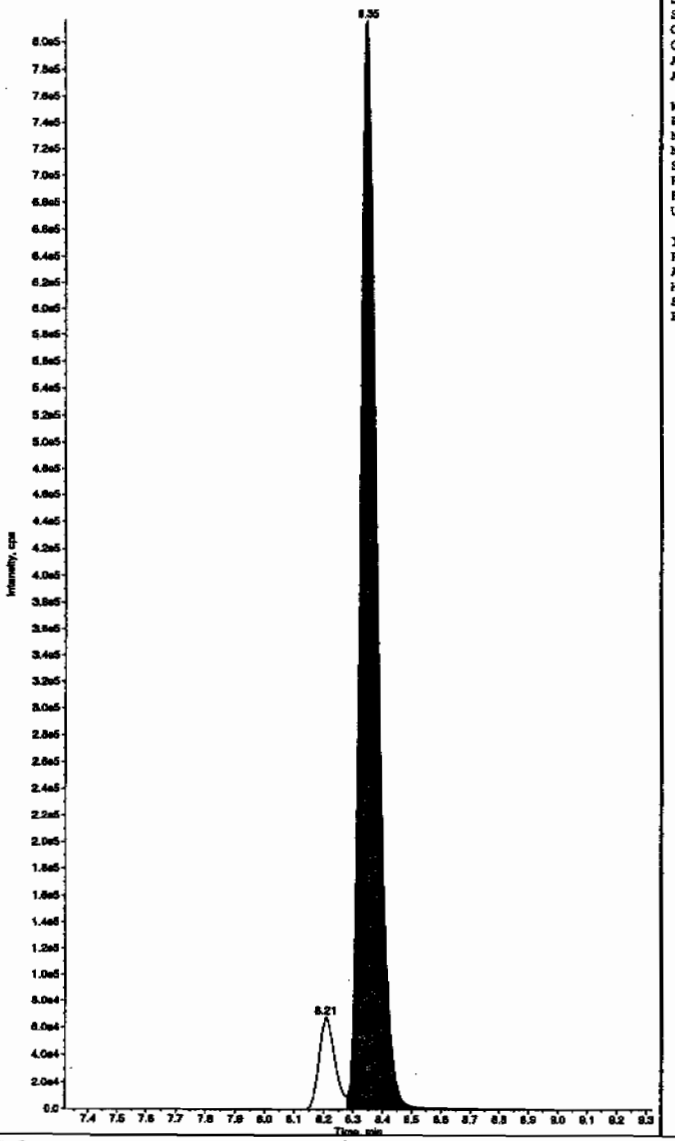
Sample Name: "WXX100120-26CCV" Sample ID: "[1][LER" File: "EXS01200061.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 250. ng/mL
Calculated Conc: 234. ng/mL
Acq. Date: 1/21/2010
Acq. Time: 2:12:04 AM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.32 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.35 min
Area: 3.31e+006 counts
Height: 816369.202 cps
Start Time: 8.28 min
End Time: 8.67 min

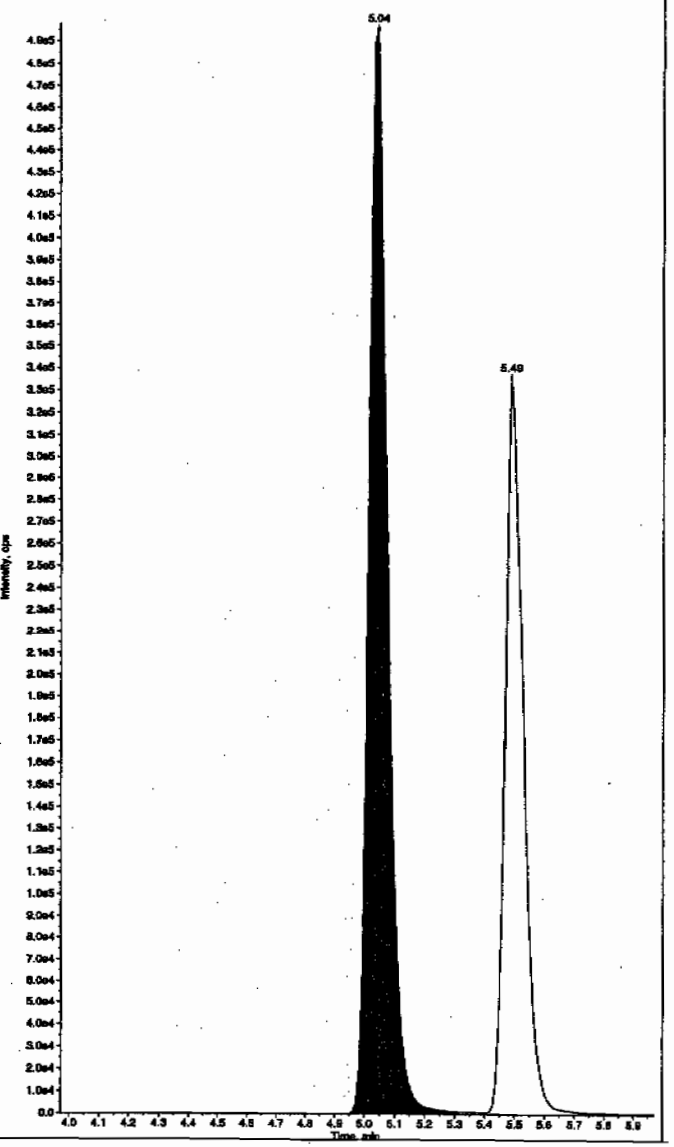


Sample Name: "WXX100120-26CCV" Sample ID: "[1][LER" File: "EXS01200061.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 485. ng/mL
Acq. Date: 1/21/2010
Acq. Time: 2:12:04 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: 4.97 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.04 min
Area: 2.21e+006 counts
Height: 497986.115 cps
Start Time: 4.94 min
End Time: 5.31 min



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

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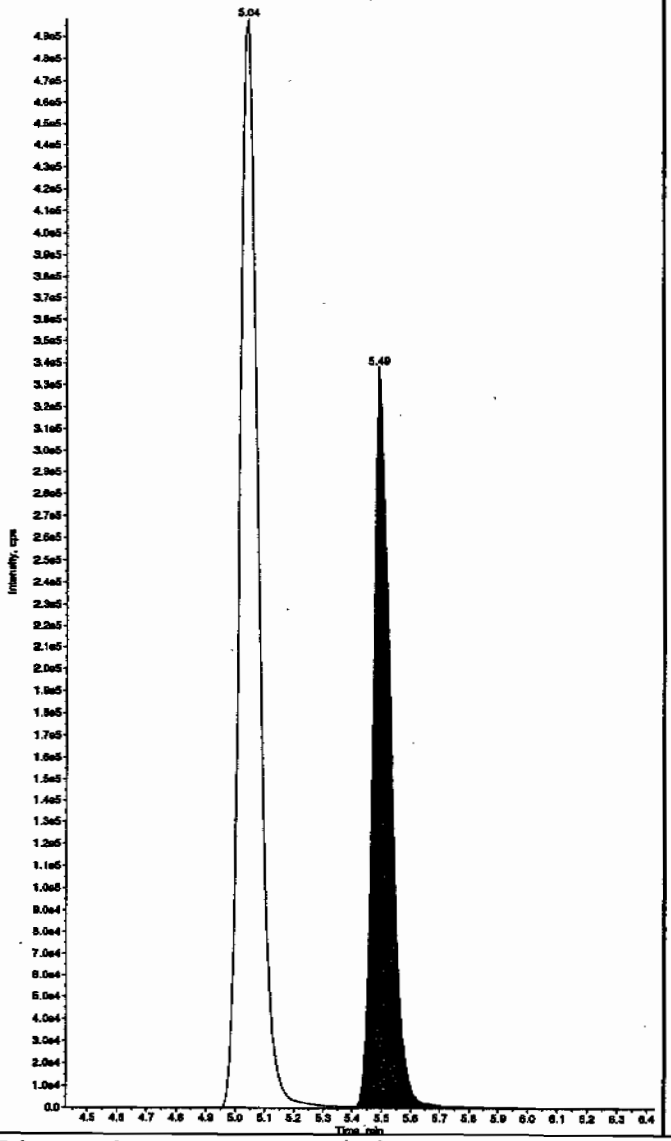
Sample Name: "WXX100120-26CCV" Sample ID: "[1]LER" File: "EXS01200061.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 484. ng/mL
Acq. Date: 1/21/2010
Acq. Time: 2:12:04 AM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.43 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.49 min
Area: 1.42e+006 counts
Height: 337891.266 cps
Start Time: 5.39 min
End Time: 5.96 min

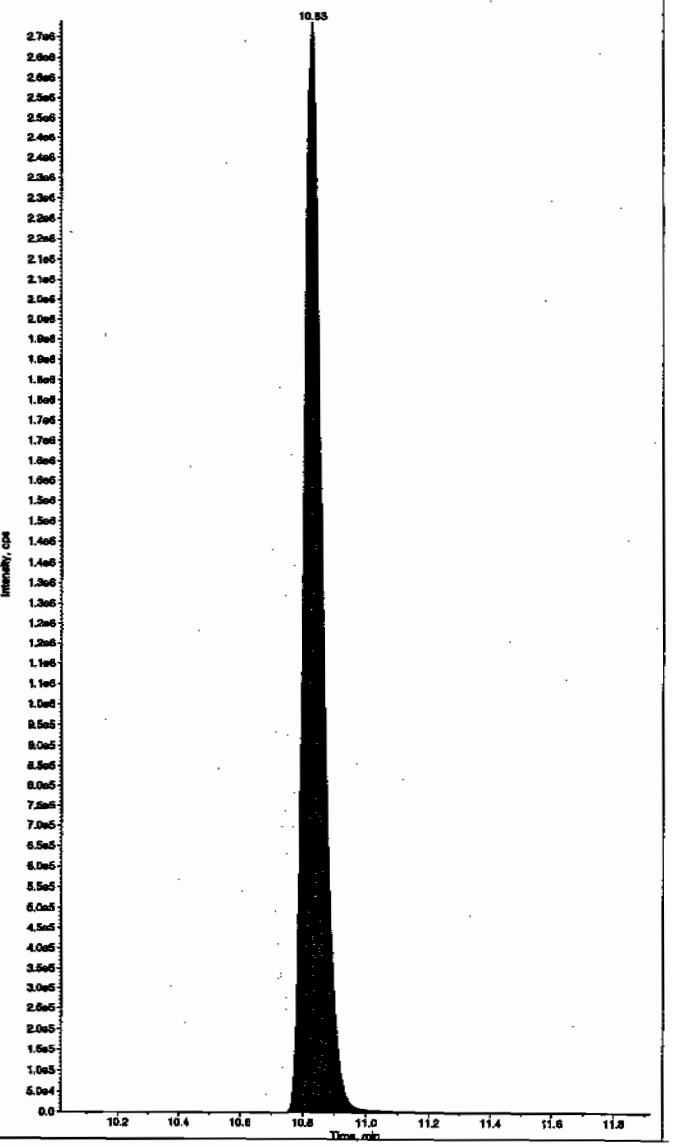


Sample Name: "WXX100120-26CCV" Sample ID: "[1]LER" File: "EXS01200061.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 514. ng/mL
Acq. Date: 1/21/2010
Acq. Time: 2:12:04 AM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.8 min
Area: 1.10e+007 counts
Height: 2688757.324 cps
Start Time: 10.7 min
End Time: 11.1 min



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

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10–1130

Lab Code: GEI

GEL Sample ID: WXXCRI

GEL Data File EXS01200063.wiff

Analysis Date: 21–JAN–10 02:43

LCMSMS ID: 1358

Column ID: JSphere ODS--H80

Compound	True	Found	Recovery	Q
tris(o–cresyl) phosphate	100	105	105	
TATB	100	106	106	
2,4–Diamino–6–nitrotoluene	100	90.9	91	
2,6--Diamino--4–nitrotoluene	100	99.7	100	
3,4–Dinitrotoluene	50	48.2	96	
3,5–Dinitroaniline	100	98	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 50–150%
OtherTarget Analytes 70–130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

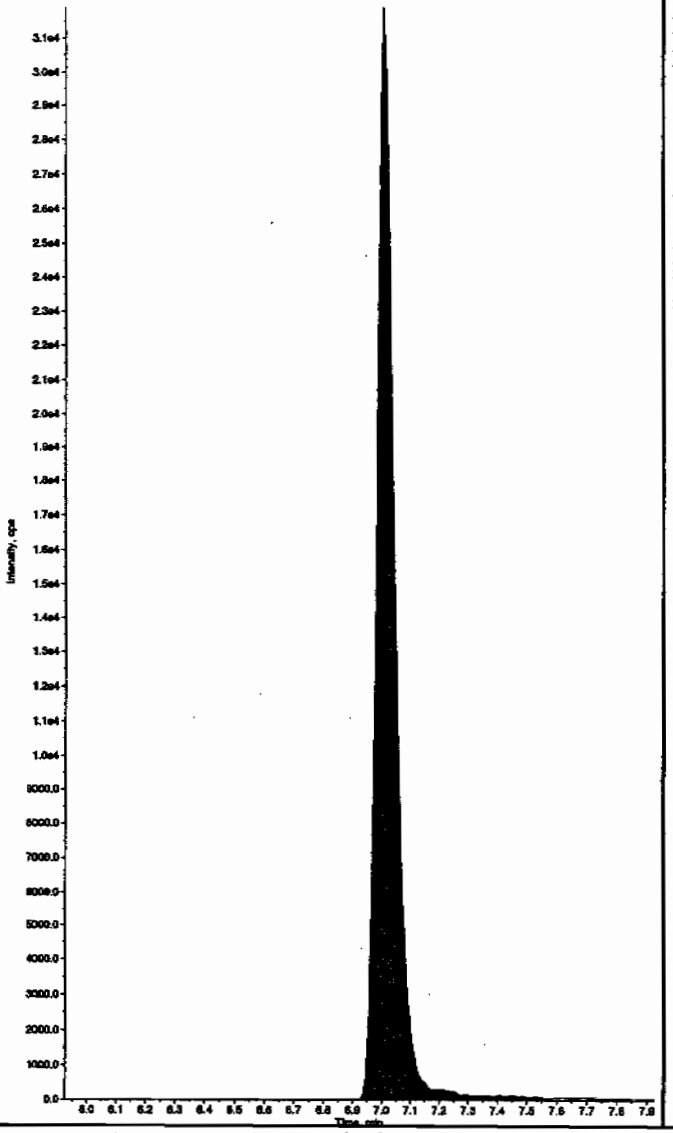
Before Dan 1/21/10

Sample Name: "WXX100120-27CRI" Sample ID: "|1|LER" File: "EXS01200063.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 106. ng/mL
Acq. Date: 1/21/2010
Acq. Time: 2:43:29 AM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 6.92 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.01 min
Area: 1.39e+005 counts
Height: 31864.849 cps
Start Time: 6.88 min
End Time: 7.58 min

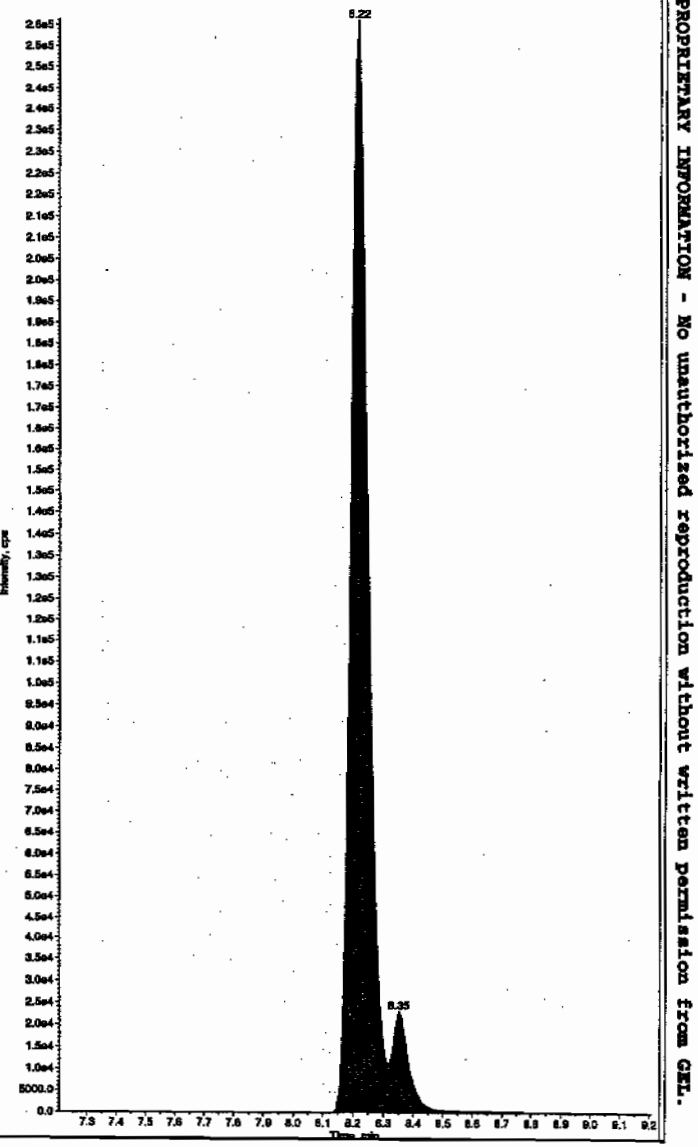


Sample Name: "WXX100120-27CRI" Sample ID: "|1|LER" File: "EXS01200063.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 108. ng/mL
Acq. Date: 1/21/2010
Acq. Time: 2:43:29 AM

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: 8.22 min
Area: 1.13e+006 counts
Height: 256375.732 cps
Start Time: 8.09 min
End Time: 8.62 min



Hmm 01/21/10

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

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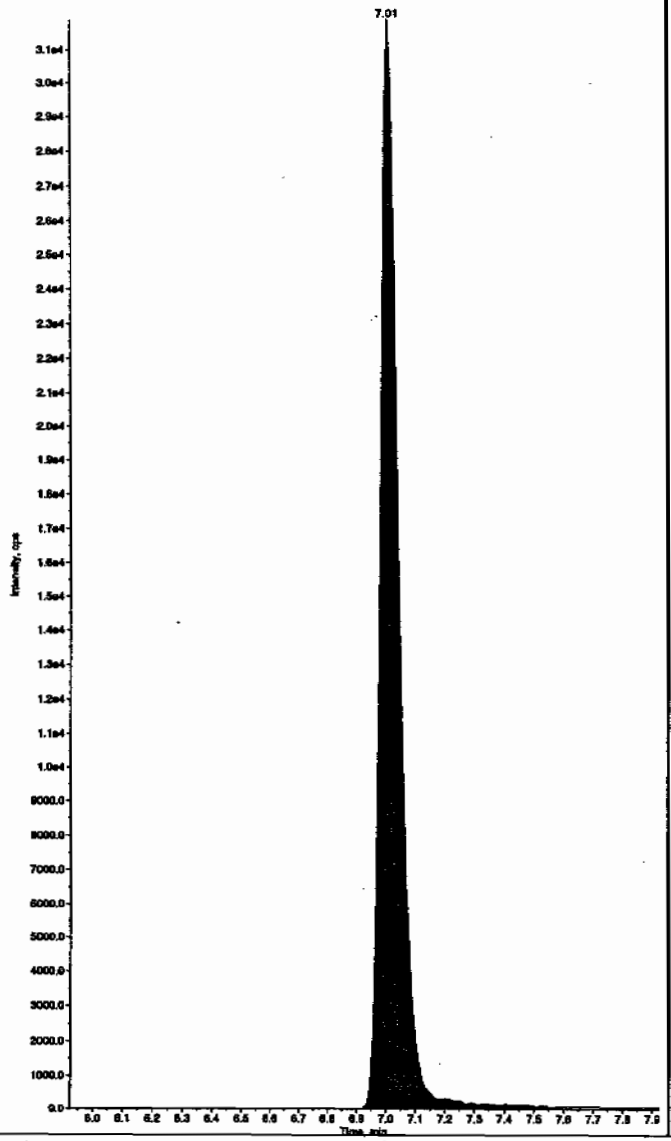
after clean 1/21/10

Sample Name: "WXX100120-27CRI" Sample ID: "[1]LER" File: "EXS01200063.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 106. ng/mL
Acq. Date: 1/21/2010
Acq. Time: 2:43:29 AM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 6.92 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.01 min
Area: 1.39e+005 counts
Height: 31864.849 cps
Start Time: 6.88 min
End Time: 7.58 min

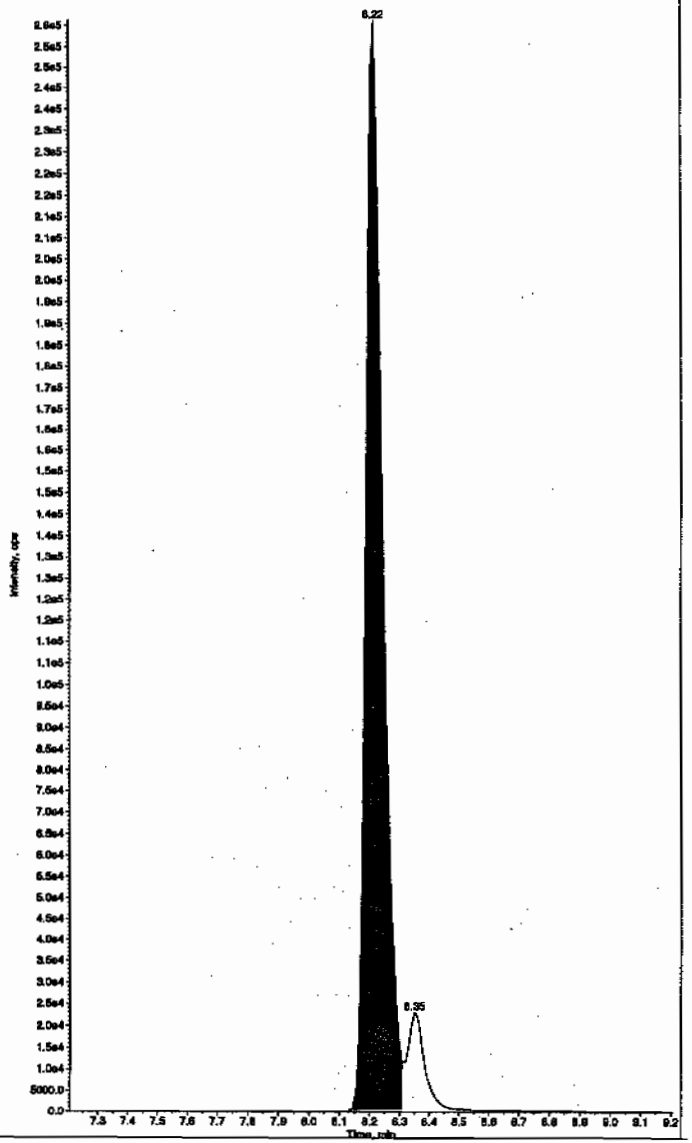


Sample Name: "WXX100120-27CRI" Sample ID: "[1]LER" File: "EXS01200063.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 98.0 ng/mL
Acq. Date: 1/21/2010
Acq. Time: 2:43:29 AM

Modified: Yes
RT Window: 15.0 sec
Expected RT: 8.21 min
Use Relative RT: No

Int. Type: Manual
Retention Time: 8.21 min
Area: 1.03e+006 counts
Height: 256753.843 cps
Start Time: 8.13 min
End Time: 8.31 min



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

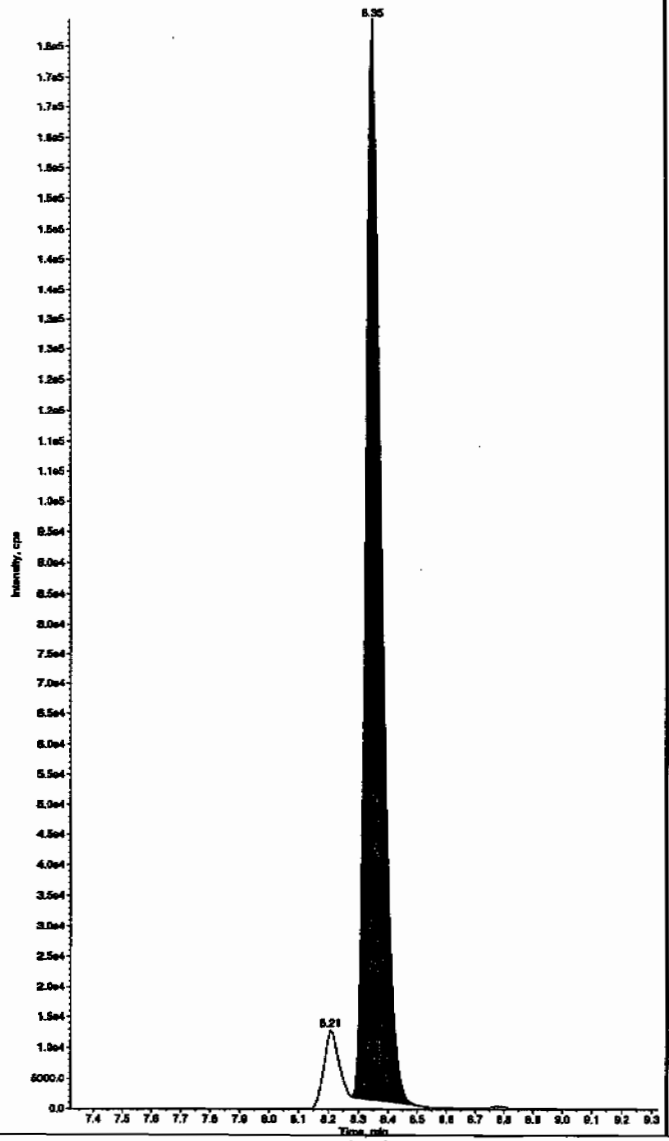
PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Sample Name: "WXX100120-27CRI" Sample ID: "[1]LER" File: "EXS01200063.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 50.0 ng/mL
Calculated Conc: 48.2 ng/mL
Acq. Date: 1/21/2010
Acq. Time: 2:43:29 AM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.32 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.35 min
Area: 6.63e+005 counts
Height: 177917.542 cps
Start Time: 8.28 min
End Time: 8.51 min

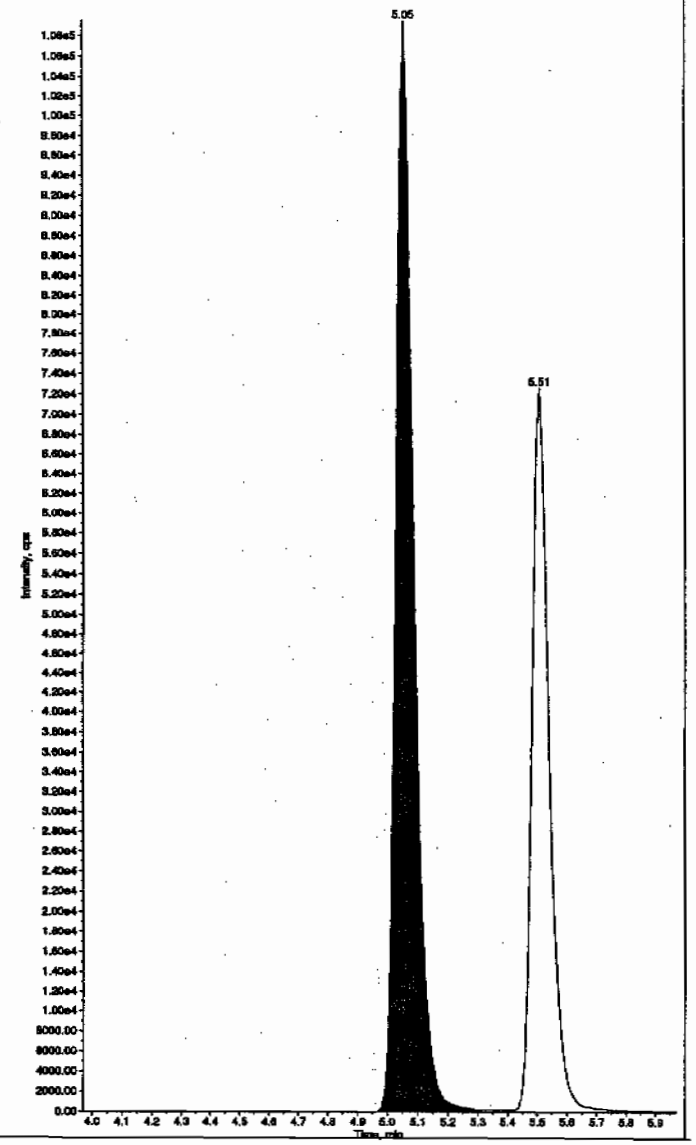


Sample Name: "WXX100120-27CRI" Sample ID: "[1]LER" File: "EXS01200063.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 99.7 ng/mL
Acq. Date: 1/21/2010
Acq. Time: 2:43:29 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: 4.97 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.05 min
Area: 4.57e+005 counts
Height: 109585.297 cps
Start Time: 4.94 min
End Time: 5.31 min



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

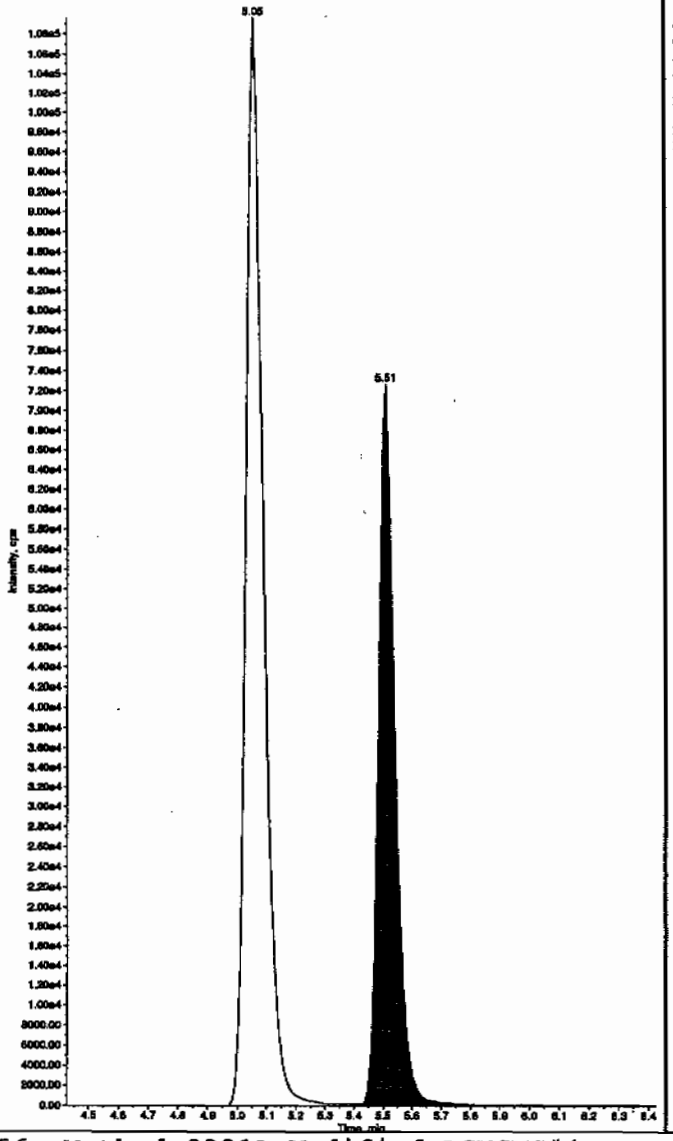
PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Sample Name: "WXX100120-27CRI" Sample ID: "[1]LER" File: "EXS01200063.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/45.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 90.9 ng/mL
Acq. Date: 1/21/2010
Acq. Time: 2:43:29 AM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.43 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.51 min
Area: 2.93e+005 counts
Height: 72565.933 cps
Start Time: 5.42 min
End Time: 5.84 min

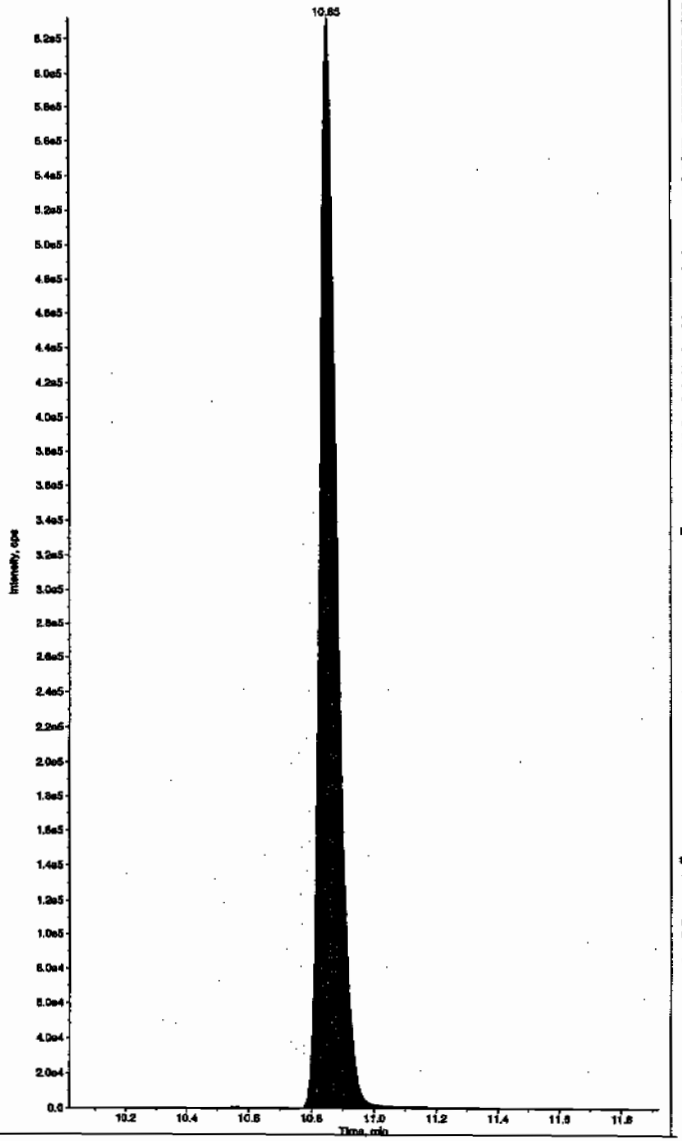


Sample Name: "WXX100120-27CRI" Sample ID: "[1]LER" File: "EXS01200053.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 105. ng/mL
Acq. Date: 1/21/2010
Acq. Time: 2:43:29 AM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.9 min
Area: 2.45e+006 counts
Height: 631744.324 cps
Start Time: 10.8 min
End Time: 11.1 min



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

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QUALITY CONTROL DATA

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: MB for batch 940075

Lab Code: GEL

GEL Job No (SDG) 10-1130

Matrix: SOIL

GEL Sample ID: 1202011699

Sample Amount 2

Moisture:

Amount Units g

Date Received: 11-JAN-10

Extraction Type Sonication

Extraction Batch ID: 940075

Concentrated Extract Volume (mL) 10

Date Extracted: 19-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0118155a

Date Analyzed: 21-JAN-10 17:47

Units: ug/kg

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

*Concentration =

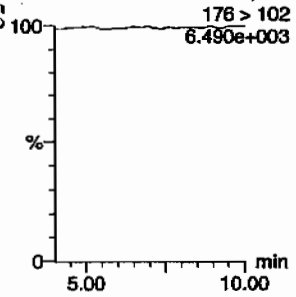
$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA3.qld, Time: Fri Jan 22 10:11:48 2010

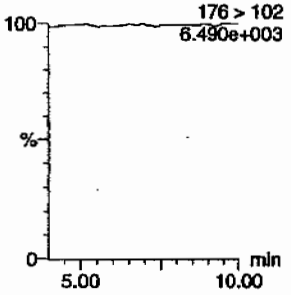
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118155a
Date: 21-Jan-2010
Time: 17:47:40
ID: 1202011699 | LANL | 940080 | Soxp | MB | 2 |
Vial: 4:5,A

MM 1/22/10

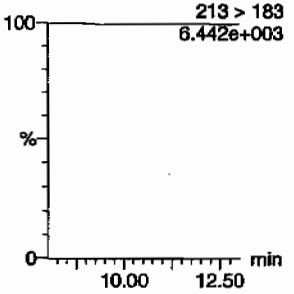
HMX
F2:MRM of 1 channel,AP-
176 > 102
6.490e+003



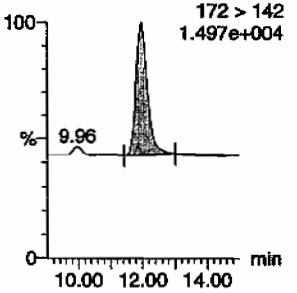
RDX
F2:MRM of 1 channel,AP-
176 > 102
6.490e+003



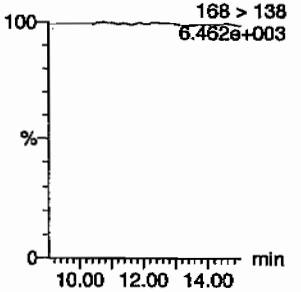
135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
6.442e+003



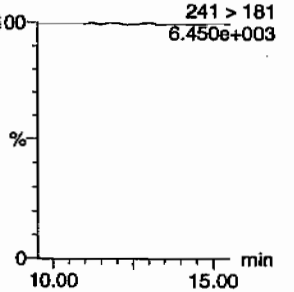
13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
1.497e+004



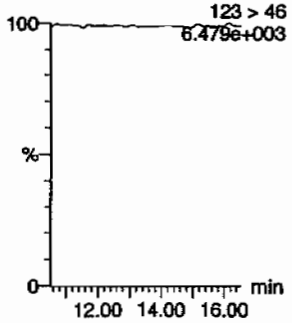
13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
6.462e+003



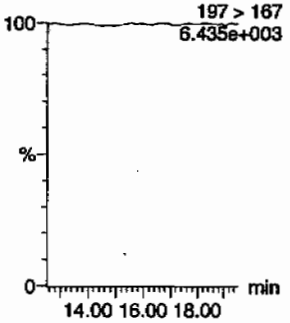
Tetryl
F6:MRM of 1 channel,AP-
241 > 181
6.450e+003



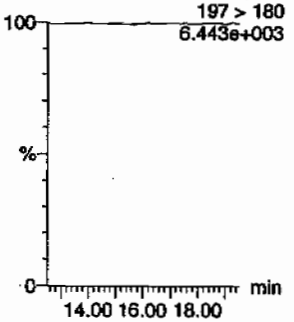
Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
6.479e+003



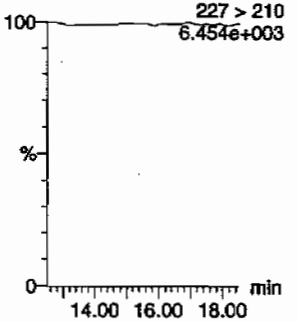
4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 167
6.435e+003



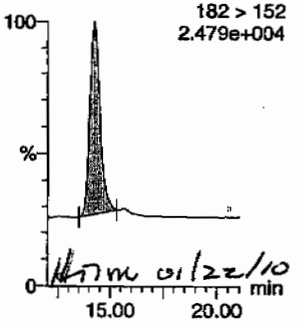
2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
6.443e+003



246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
6.454e+003

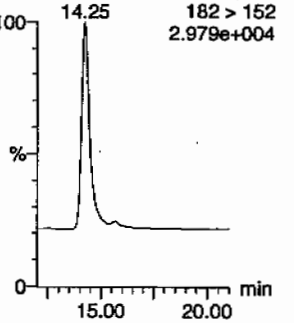


34-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
2.479e+004



MM 01/22/10

26-dinitrotoluene
F9:MRM of 2 channels,AP-
14.25
182 > 152
2.979e+004



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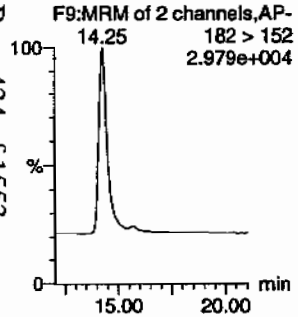
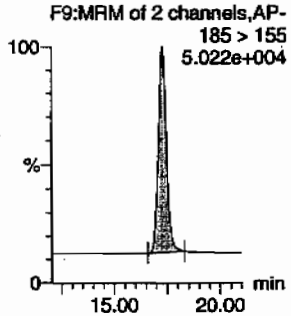
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA3.qld, Time: Fri Jan 22 10:11:48 2010

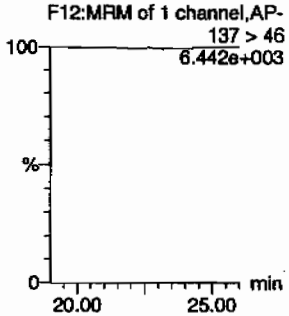
24-dinitrotoluene



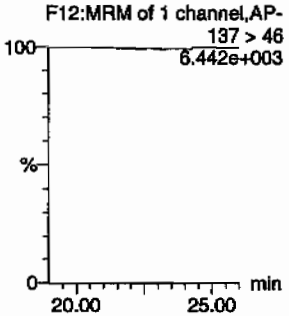
26-dinitrotoluene-d3



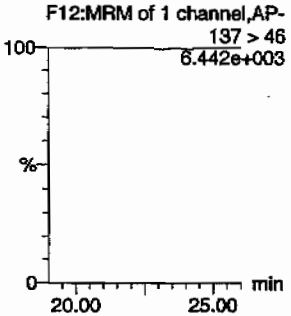
2-Nitrotoluene



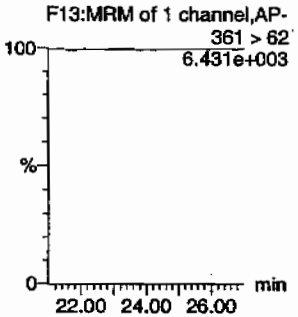
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	ISArea	AbsResp	RespRatio	Flags	ModGate	ModTime	Conc	%Rec	%Dev	S/N
1202011699	HMX	176 > 102			3399.889									
1202011699	RDX	176 > 102			3399.889									
1202011699	135-Trinitrobenzene	213 > 183			3399.889									
1202011699	13-Dinitrobenzene-d4	172 > 142	11.95	3399.889		3399.889	3399.889	bb			500.9688	100.2	0.2	553.2
1202011699	13-Dinitrobenzene	168 > 138			3399.889									
1202011699	Tetryl	241 > 181			3399.889									
1202011699	Nitrobenzene	123 > 46			3399.889									
1202011699	4-Amino-26-dinitrotoluene	197 > 167			18753.059									
1202011699	2-Amino-46-dinitrotoluene	197 > 180			18753.059									
1202011699	246-Trinitrotoluene	227 > 210			18753.059									
1202011699	34-dinitrotoluene	182 > 152	14.25	10062.854	18753.059	10062.854	268.299	bb			287.7997	115.1	15.1	501.9
1202011699	26-dinitrotoluene	182 > 152			18753.059									
1202011699	24-dinitrotoluene	182 > 152			18753.059									
1202011699	26-dinitrotoluene-d3	185 > 155	17.25	18753.059		18753.059	18753.059	bb			511.1337	102.2	2.2	1602.5
1202011699	2-Nitrotoluene	137 > 46			18753.059									
1202011699	4-Nitrotoluene	137 > 46			18753.059									
1202011699	3-Nitrotoluene	137 > 46			18753.059									
1202011699	PETN	361 > 62			18753.059									

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

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High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: MB for batch 940075

Lab Code: GEI

GEL Job No (SDG) 10-1130

Matrix: SOIL

GEL Sample ID: 1202011699

Sample Amount 2

Moisture:

Amount Units g

Date Received: 11-JAN-10

Extraction Type Sonication

Extraction Batch ID: 940075

Concentrated Extract Volume (mL) 10

Date Extracted: 19-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS01200051.wiff

Date Analyzed: 20-JAN-10 23:34

Units: ug/kg

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

*Concentration =

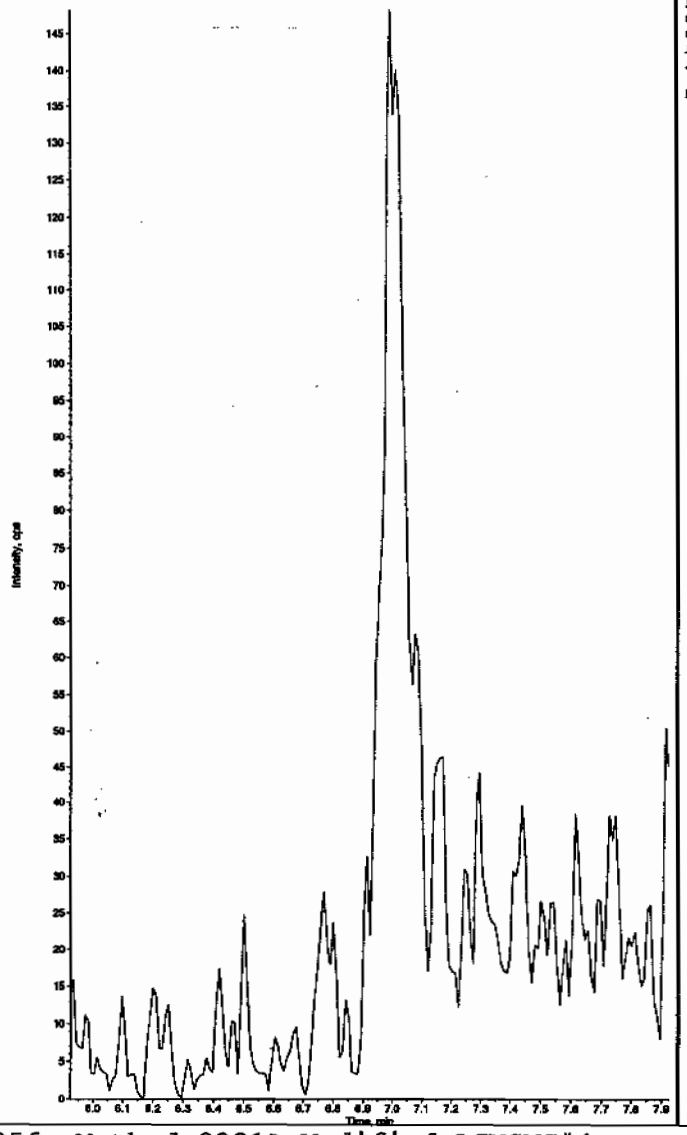
$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Ler 1/21/10

Sample Name: "1202011699" Sample ID: "940080[2]LER" File: "EXS01200051.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 11:34:58 PM

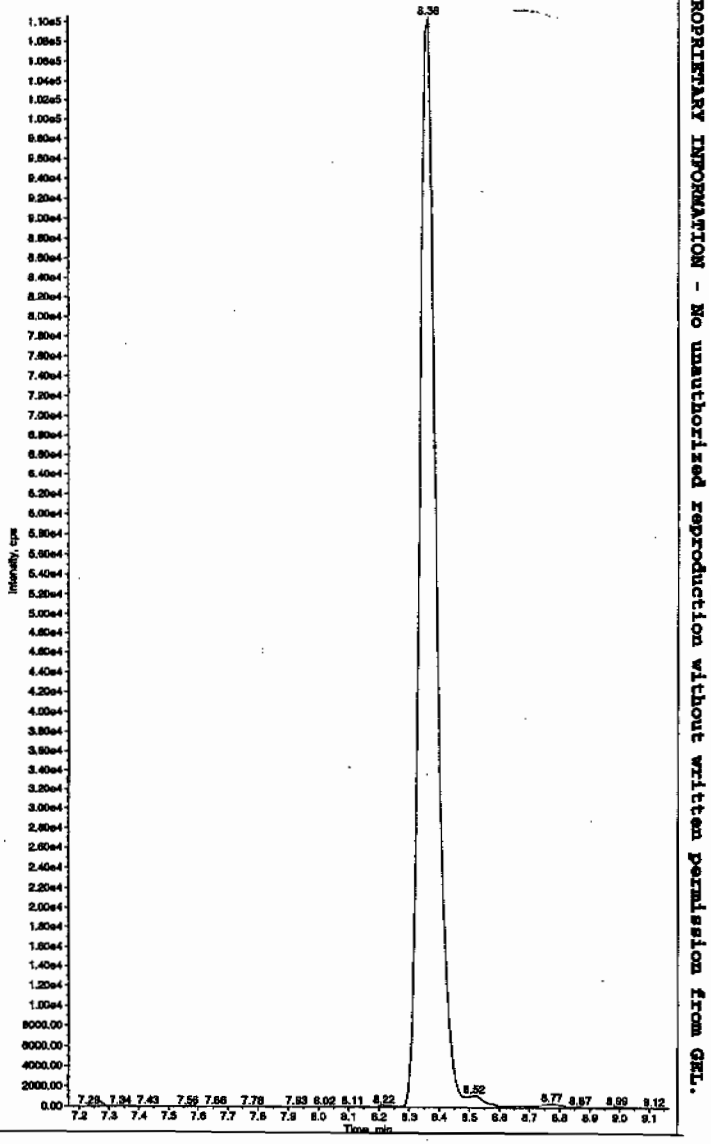
Modified: No



Sample Name: "1202011699" Sample ID: "940080[2]LER" File: "EXS01200051.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 11:34:58 PM

Modified: No



Hmm 01/21/10

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

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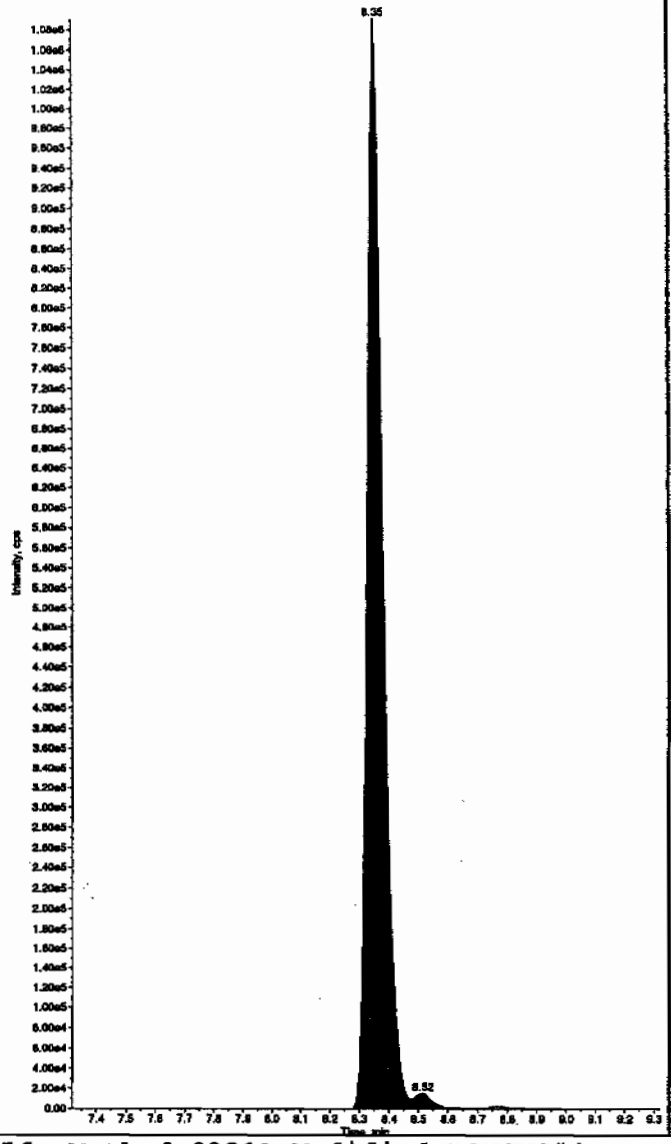
Sample Name: "1202011699" Sample ID: "940080[2]LER" File: "EXS01200051.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 293. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 11:34:58 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.32 min
Use Relative RT: No

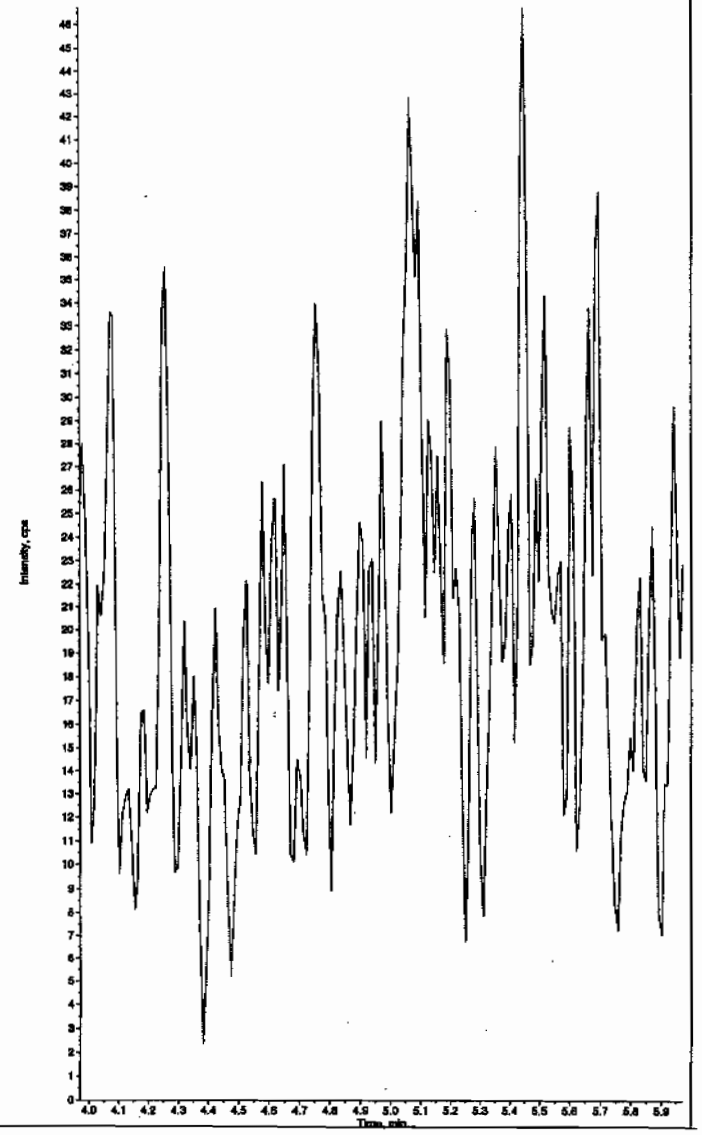
Int. Type: Valley
Retention Time: 8.35 min
Area: 4.09e+006 counts
Height: 1090871.826 cps
Start Time: 8.24 min
End Time: 8.69 min



Sample Name: "1202011699" Sample ID: "940080[2]LER" File: "EXS01200051.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 11:34:58 PM

Modified: No



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

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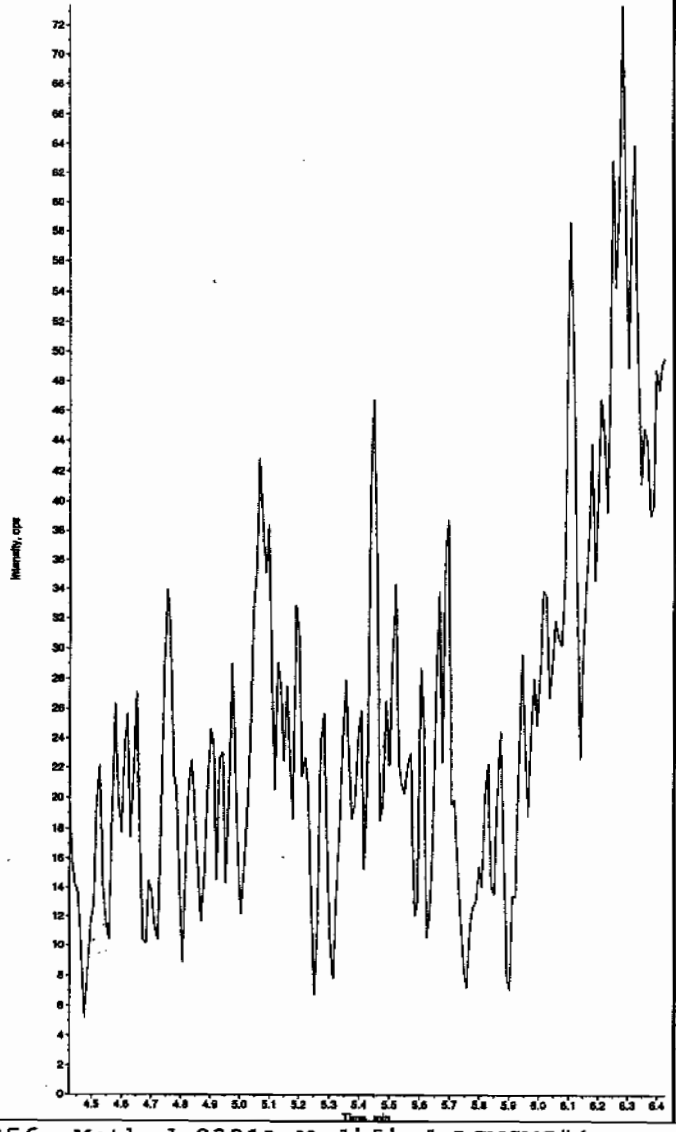
Sample Name: "1202011699" Sample ID: "940080[2]LER" File: "EXS01200051.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 11:34:58 PM

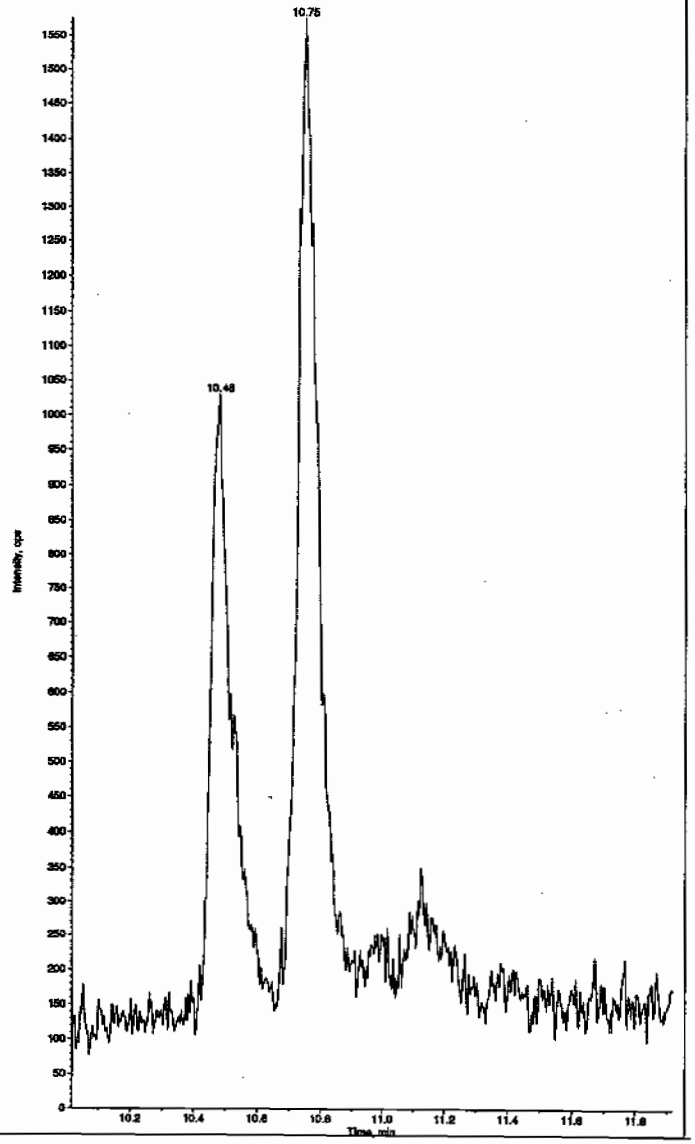
Modified: No



Sample Name: "1202011699" Sample ID: "940080[2]LER" File: "EXS01200051.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/20/2010
Acq. Time: 11:34:58 PM

Modified: No



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

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: LCS for batch 940075

Lab Code: GEL

GEL Job No (SDG) 10-1130

Matrix: SOIL

GEL Sample ID: 1202011700

Sample Amount 2

Moisture:

Amount Units g

Date Received: 11-JAN-10

Extraction Type Sonication

Extraction Batch ID: 940075

Concentrated Extract Volume (mL) 10

Date Extracted: 19-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0118156a

Date Analyzed: 21-JAN-10 18:17

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	4950	
121-14-2	2,4-Dinitrotoluene	5290	
121-82-4	RDX	5730	
19406-51-0	4-Amino-2,6-dinitrotoluene	5410	
2691-41-0	HMX	6970	
35572-78-2	2-Amino-4,6-dinitrotoluene	5280	
479-45-8	Tetryl	3370	
606-20-2	2,6-Dinitrotoluene	5010	
78-11-5	PETN	5280	
88-72-2	o-Nitrotoluene	5180	
98-95-3	Nitrobenzene	4720	
99-08-1	m-Nitrotoluene	5060	
99-35-4	1,3,5-Trinitrobenzene	4530	
99-65-0	m-Dinitrobenzene	5040	
99-99-0	p-Nitrotoluene	5190	

*Concentration =

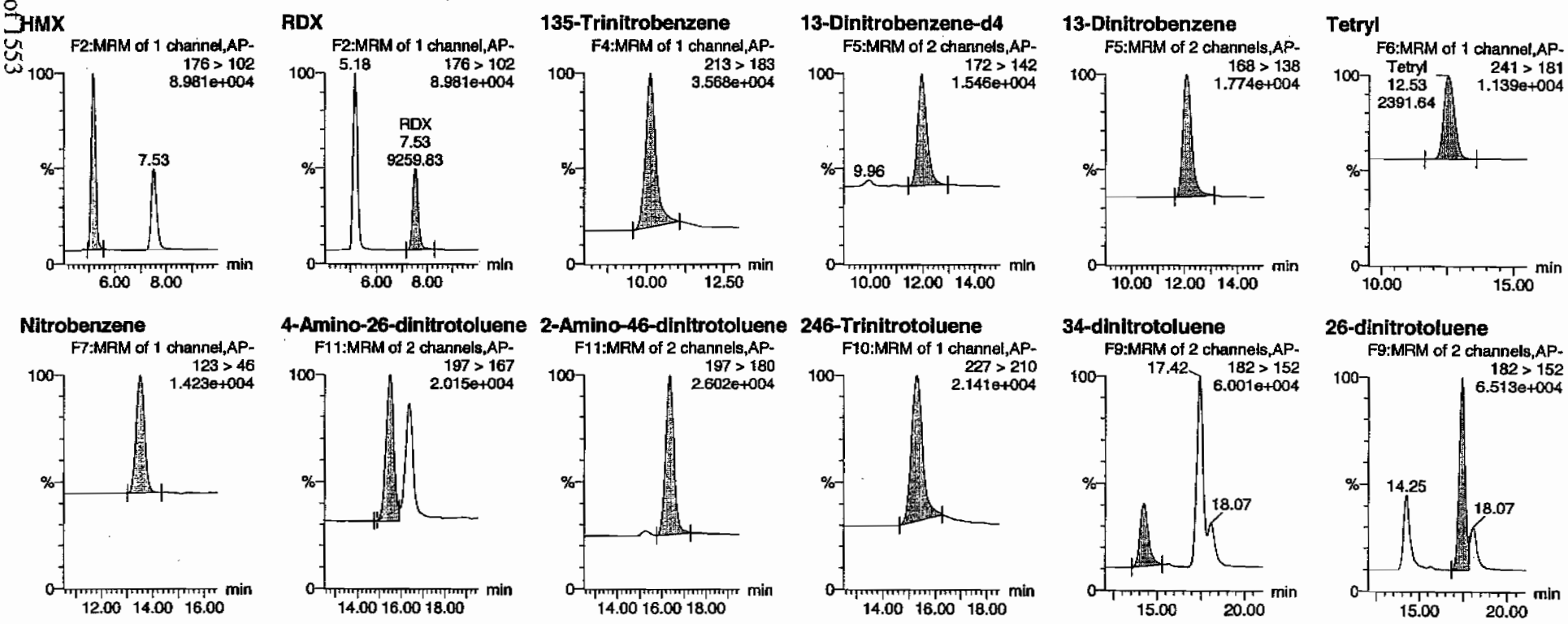
$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA3.qld, Time: Fri Jan 22 10:11:48 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118156a
Date: 21-Jan-2010
Time: 18:17:17
ID: 1202011700
Vial: 4:5,B

| LANL | 940080 | Soles | LCS | 2 |

MAP 1/22/10



Hmm 01/22/10

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

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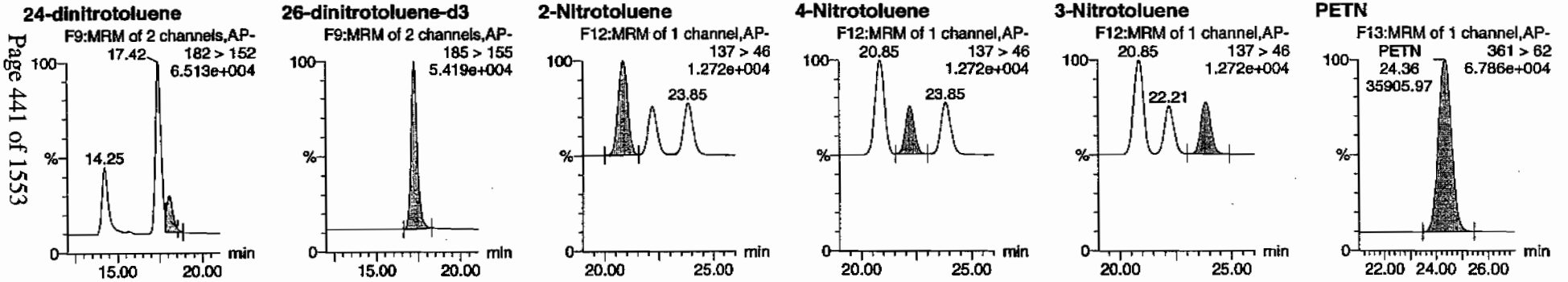
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA3.qld, Time: Fri Jan 22 10:11:48 2010



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/mt	%Rec	%Dev	S/N
1202011700	HMX	176 > 102	5.18	16353.831	3636.648	16353.831	2248.476	bb			696.5383	139.3	39.3	2249.4
1202011700	RDX	176 > 102	7.53	9259.831	3636.648	9259.831	1273.127	bb			572.5707	114.5	14.5	1031.3
1202011700	135-Trinitrobenzene	213 > 183	10.12	10989.111	3636.648	10989.111	1510.885	bb			453.4699	90.7	-9.3	582.3
1202011700	13-Dinitrobenzene-d4	172 > 142	11.95	3636.648		3636.648	3636.648	bb			535.8549	107.2	7.2	524.3
1202011700	13-Dinitrobenzene	168 > 138	12.07	4330.423	3636.648	4330.423	595.387	bb			503.8321	100.8	0.8	611.6
1202011700	Tetryl	241 > 181	12.53	2391.643	3636.648	2391.643	328.825	bb			336.7000	67.3	-32.7	235.7
1202011700	Nitrobenzene	123 > 46	13.49	2872.743	3636.648	2872.743	394.971	bb			471.7844	94.4	-5.6	372.1
1202011700	4-Amino-26-dinitrotoluene	197 > 167	15.45	5811.693	20329.908	5811.693	142.935	MM	22-Jan-10	10:00:38	541.4354	108.3	8.3	116.2
1202011700	2-Amino-46-dinitrotoluene	197 > 180	16.34	8367.633	20329.908	8367.633	205.796	bb			528.2732	105.7	5.7	528.8
1202011700	246-Trinitrotoluene	227 > 210	15.27	7091.819	20329.908	7091.819	174.418	bb			495.3312	99.1	-0.9	442.8
1202011700	34-dinitrotoluene	182 > 152	14.25	9813.592	20329.908	9813.592	241.358	bb			258.9010	103.6	3.6	228.9
1202011700	26-dinitrotoluene	182 > 152	17.42	22268.383	20329.908	22268.383	547.675	MM	22-Jan-10	10:07:14	501.4077	100.3	0.3	695.8
1202011700	24-dinitrotoluene	182 > 152	18.07	5440.401	20329.908	5440.401	133.803	MM	22-Jan-10	10:11:06	529.2179	105.8	5.8	148.8
1202011700	26-dinitrotoluene-d3	185 > 155	17.24	20329.908		20329.908	20329.908	bb			554.1123	110.8	10.8	1427.8
1202011700	2-Nitrotoluene	137 > 46	20.85	3163.501	20329.908	3163.501	77.804	bb			518.4296	103.7	3.7	283.6
1202011700	4-Nitrotoluene	137 > 46	22.21	1510.747	20329.908	1510.747	37.156	bb			518.9419	103.8	3.8	142.4
1202011700	3-Nitrotoluene	137 > 46	23.85	1755.654	20329.908	1755.654	43.179	bb			506.3207	101.3	1.3	153.2
1202011700	PETN	361 > 62	24.36	35905.969	20329.908	35905.969	883.082	bb			528.4714	105.7	5.7	11353.0

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

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: LCS for batch 940075

Lab Code: GEI

GEL Job No (SDG) 10–1130

Matrix: SOIL

GEL Sample ID: 1202011700

Sample Amount 2

Moisture:

Amount Units g

Date Received: 11–JAN–10

Extraction Type Sonication

Extraction Batch ID: 940075

Concentrated Extract Volume (mL) 10

Date Extracted: 19–JAN–10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS01200052.wiff

Date Analyzed: 20–JAN–10 23:50

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058–38–6	TATB	5890	
59229–75–3	2,6–Diamino–4–nitrotoluene	4710	
618–87–1	3,5–Dinitroaniline	4940	
6629–29–4	2,4–Diamino–6–nitrotoluene	4580	
78–30–8	tris(o–cresyl) phosphate	5210	

*Concentration =

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

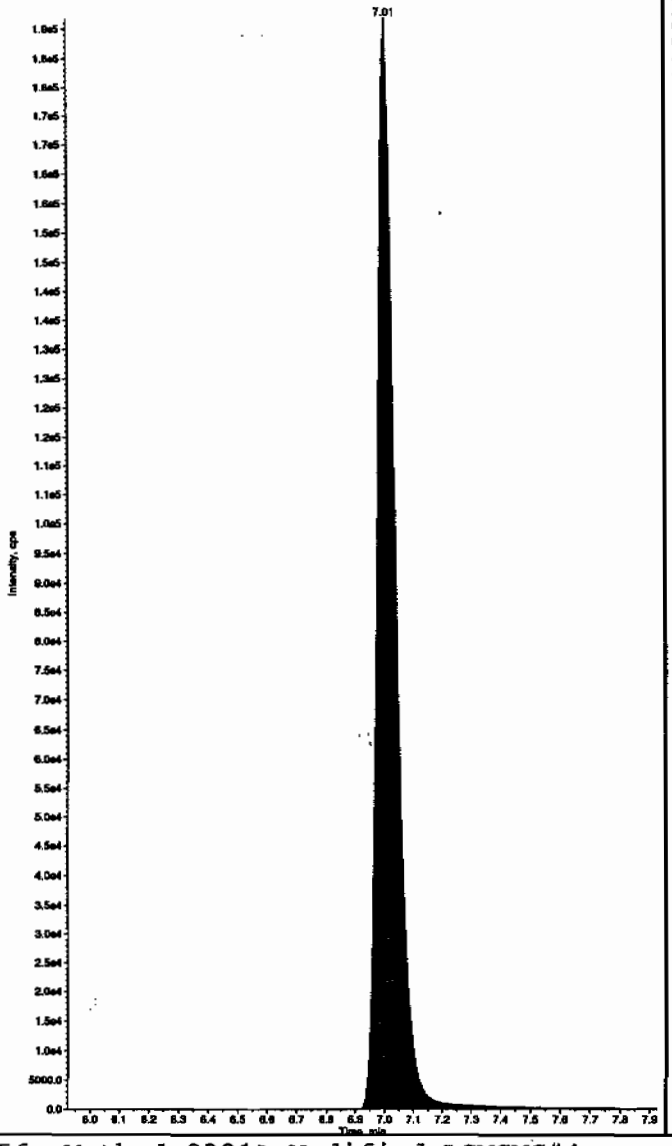
Before Lan 1/21/10

Sample Name: "1202011700" Sample ID: "940080|2|LER" File: "EXS01200052.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 589. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 11:50:45 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 6.92 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.01 min
Area: 8.34e+005 counts
Height: 186801.041 cps
Start Time: 6.84 min
End Time: 7.59 min

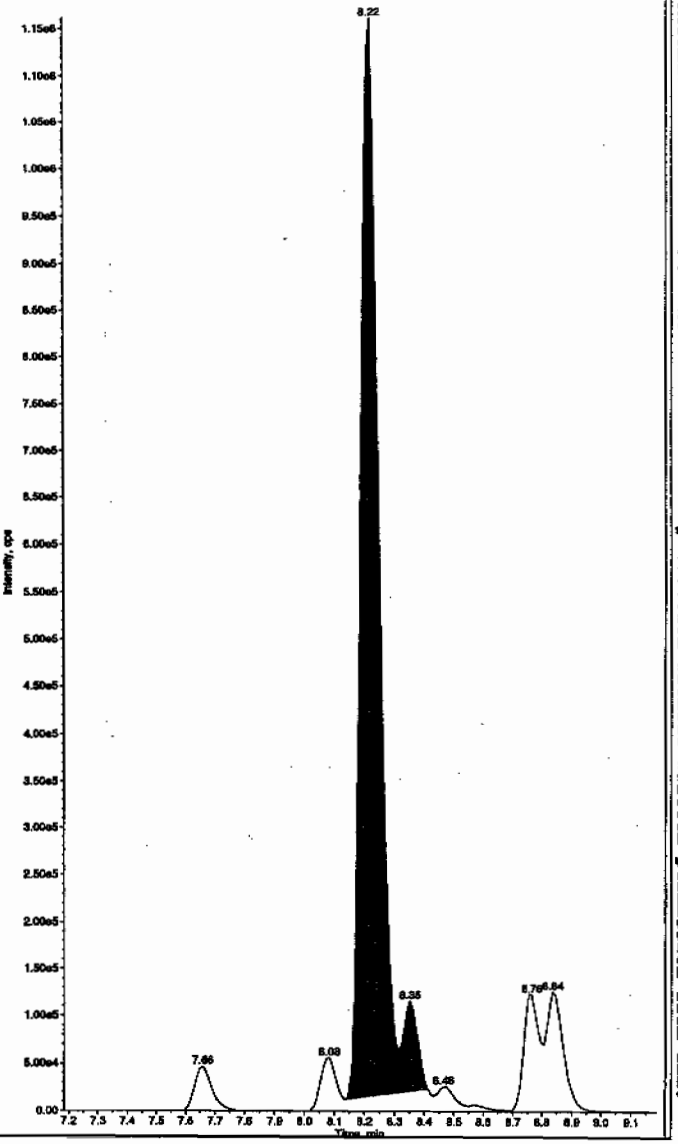


Sample Name: "1202011700" Sample ID: "940080|2|LER" File: "EXS01200052.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 516. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 11:50:45 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: 8.19 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.22 min
Area: 5.17e+006 counts
Height: 1147301.147 cps
Start Time: 8.13 min
End Time: 8.41 min



Amm 01/21/10

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

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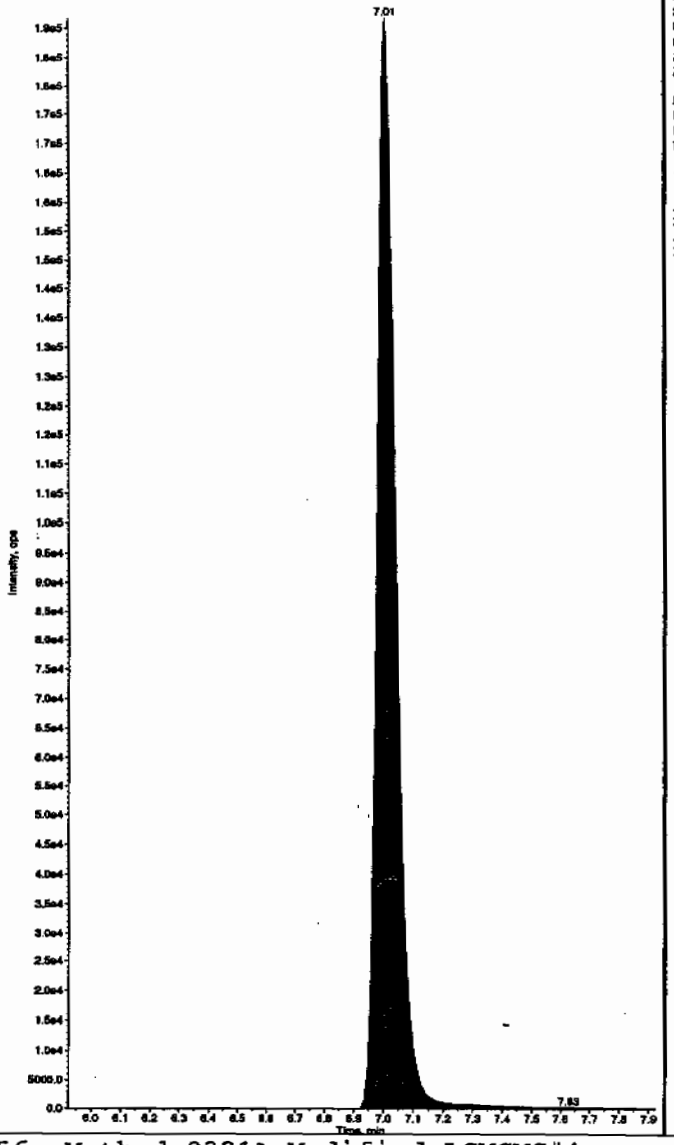
after Lan 1/21/10

Sample Name: "1202011700" Sample ID: "940080|2|LER" File: "EXS01200052.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 589. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 11:50:45 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 6.92 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.01 min
Area: 8.34e+005 counts
Height: 186801.041 cps
Start Time: 6.84 min
End Time: 7.59 min

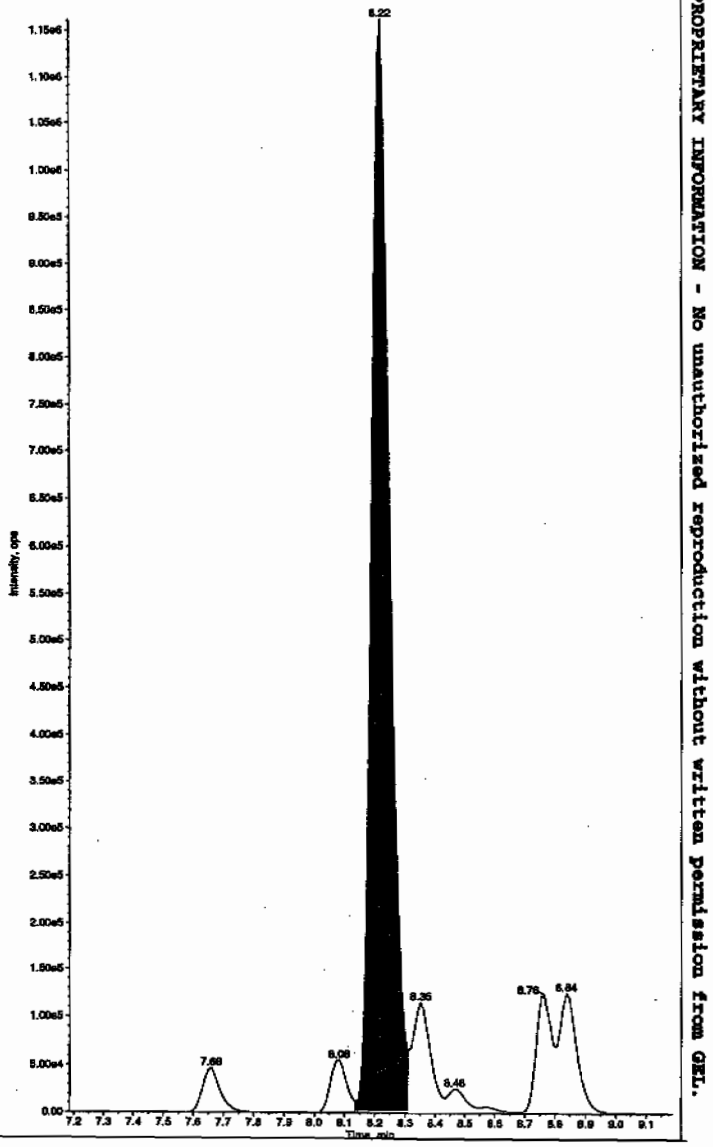


Sample Name: "1202011700" Sample ID: "940080|2|LER" File: "EXS01200052.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 494. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 11:50:45 PM

Modified: Yes
RT Window: 15.0 sec
Expected RT: 8.19 min
Use Relative RT: No

Int. Type: Manual
Retention Time: 8.21 min
Area: 4.97e+006 counts
Height: 1165775.983 cps
Start Time: 8.13 min
End Time: 8.31 min



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

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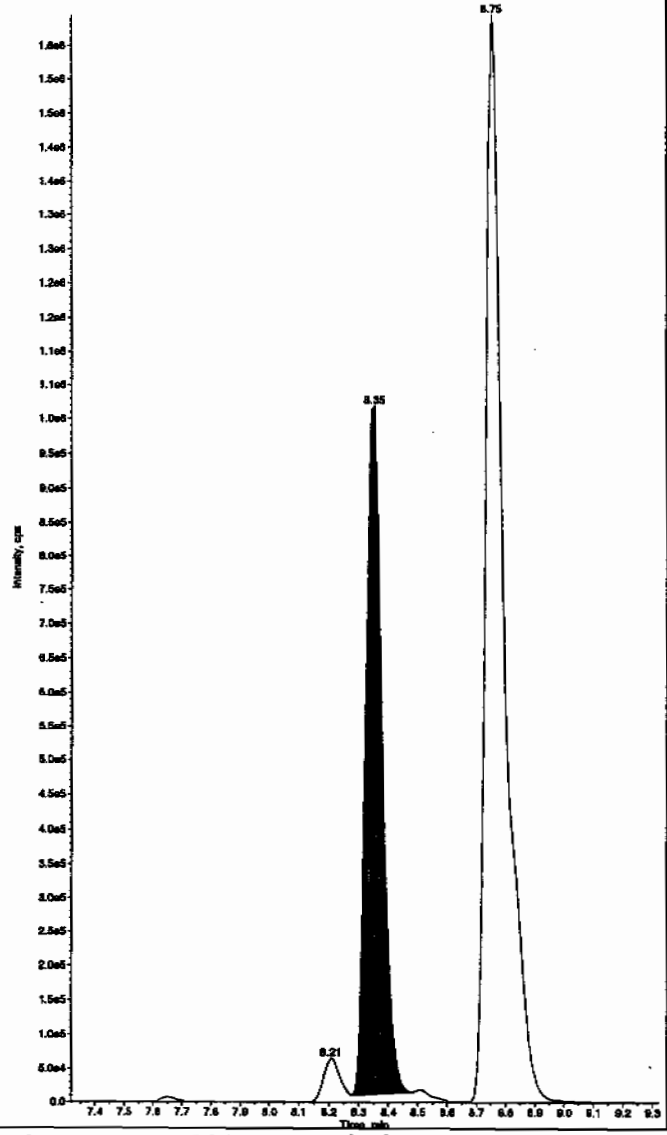
Sample Name: "1202011700" Sample ID: "940060[2]LER" File: "EXS01200052.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 278. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 11:50:45 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.32 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.35 min
Area: 3.69e+006 counts
Height: 1006814.148 cps
Start Time: 8.28 min
End Time: 8.47 min

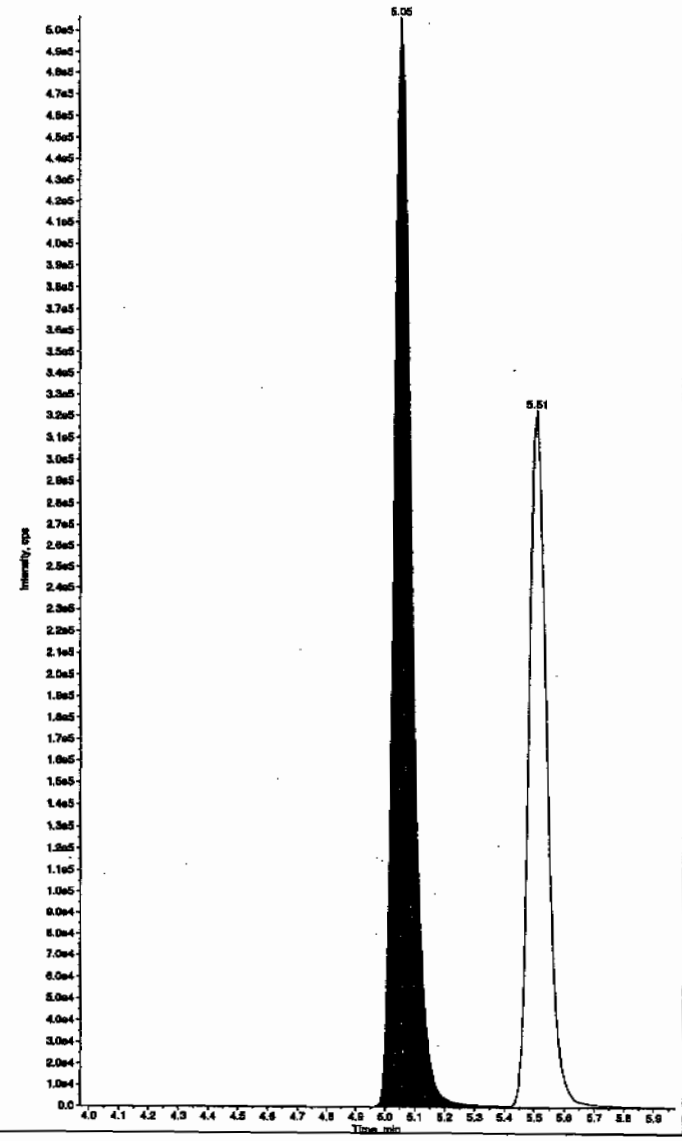


Sample Name: "1202011700" Sample ID: "940060[2]LER" File: "EXS01200052.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 471. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 11:50:45 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 450.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 4.97 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.05 min
Area: 2.15e+006 counts
Height: 506913.696 cps
Start Time: 4.95 min
End Time: 5.35 min



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

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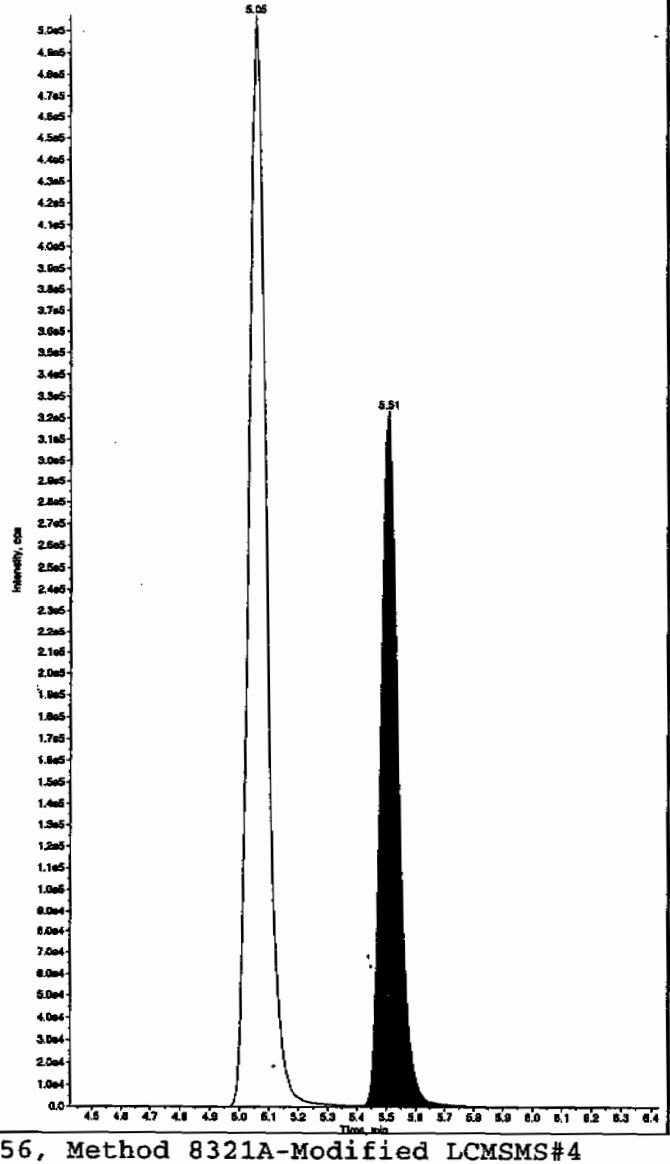
Sample Name: "1202011700" Sample ID: "940080[2]LER" File: "EXS01200052.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 458. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 11:50:45 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.43 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.51 min
Area: 1.35e+006 counts
Height: 323045.258 cps
Start Time: 5.39 min
End Time: 5.93 min

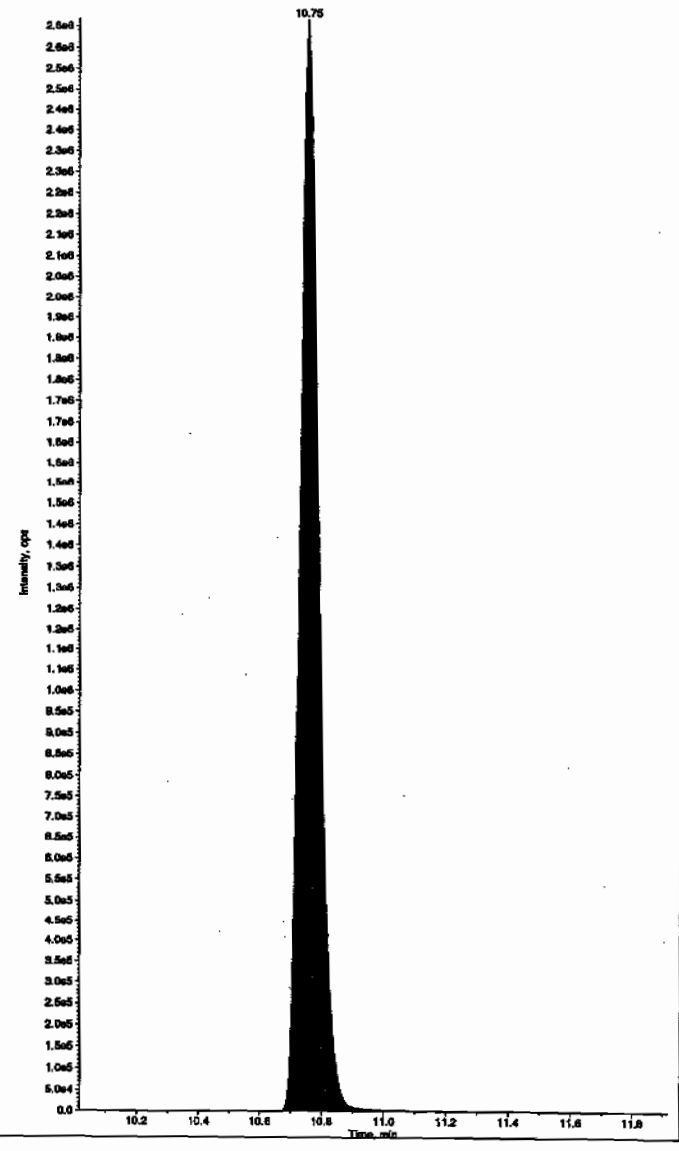


Sample Name: "1202011700" Sample ID: "940080[2]LER" File: "EXS01200052.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 521. ng/mL
Acq. Date: 1/20/2010
Acq. Time: 11:50:45 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.8 min
Area: 1.11e+007 counts
Height: 2617474.854 cps
Start Time: 10.7 min
End Time: 11.0 min



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

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High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7698(244125001MS)

Lab Code: GEL

GEL Job No (SDG) 10-1130

Matrix: SOIL

GEL Sample ID: 1202011701

Sample Amount 2

Moisture: 9.9

Amount Units g

Date Received: 08-JAN-10

Extraction Type Sonication

Extraction Batch ID: 940075

Concentrated Extract Volume (mL) 10

Date Extracted: 19-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0118158a

Date Analyzed: 21-JAN-10 19:16

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	5340	
121-14-2	2,4-Dinitrotoluene	4880	
121-82-4	RDX	5470	
19406-51-0	4-Amino-2,6-dinitrotoluene	5520	
2691-41-0	HMX	5280	
35572-78-2	2-Amino-4,6-dinitrotoluene	5540	
479-45-8	Tetryl	4120	
606-20-2	2,6-Dinitrotoluene	5190	
78-11-5	PETN	5040	
88-72-2	o-Nitrotoluene	5200	
98-95-3	Nitrobenzene	4990	
99-08-1	m-Nitrotoluene	5010	
99-35-4	1,3,5-Trinitrobenzene	5130	
99-65-0	m-Dinitrobenzene	5160	
99-99-0	p-Nitrotoluene	5600	

*Concentration =

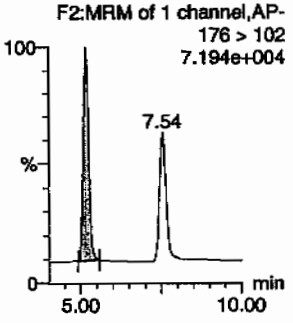
$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA3.qld, Time: Fri Jan 22 10:11:48 2010

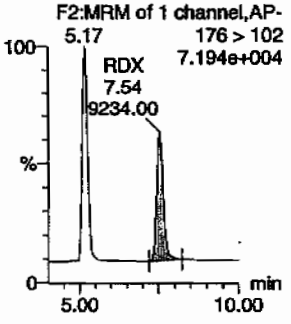
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118158a
Date: 21-Jan-2010
Time: 19:16:16
ID: 1202011701 | LANL | 940080 | Solid | 244125001 MS | 2 |
Vial: 4:5,D

MAP 1/22/10

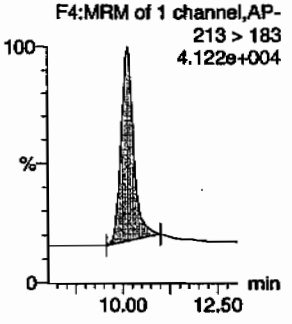
HMX



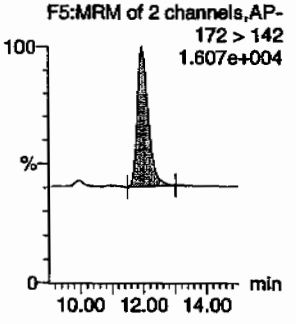
RDX



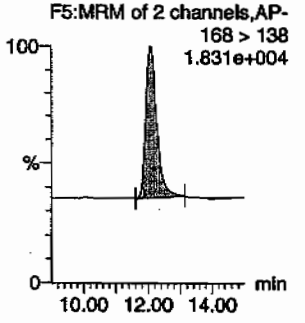
135-Trinitrobenzene



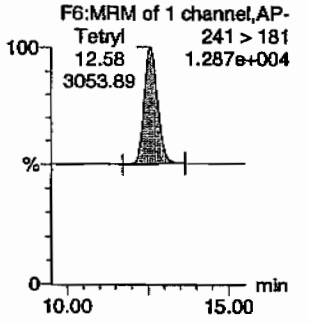
13-Dinitrobenzene-d4



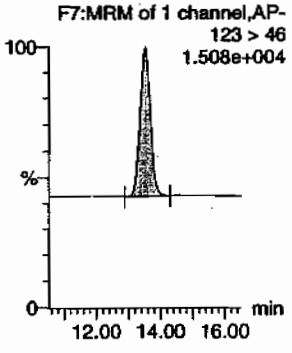
13-Dinitrobenzene



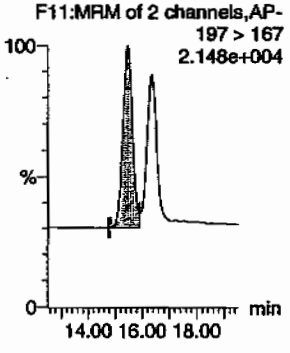
Tetryl



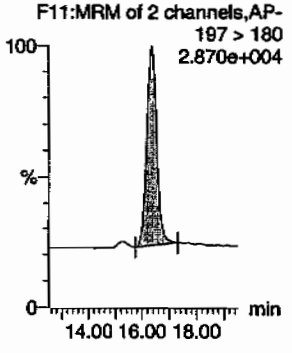
Nitrobenzene



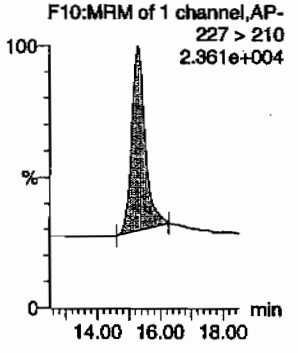
4-Amino-26-dinitrotoluene



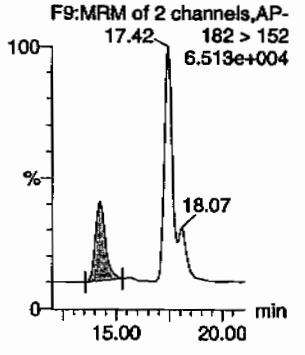
2-Amino-46-dinitrotoluene



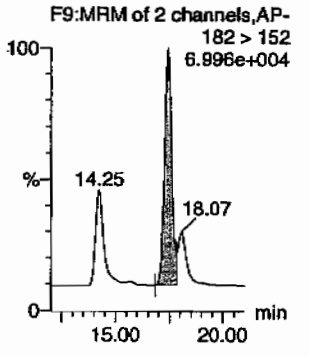
246-Trinitrotoluene



34-dinitrotoluene



26-dinitrotoluene



Hmm 01/22/10

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

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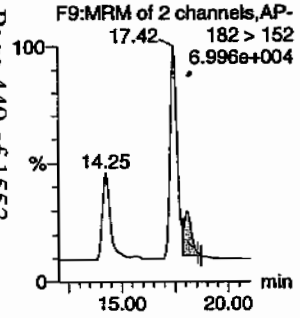
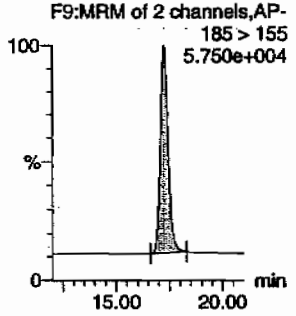
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA3.qld, Time: Fri Jan 22 10:11:48 2010

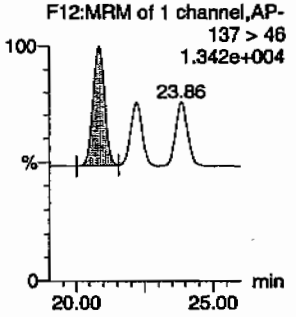
24-dinitrotoluene



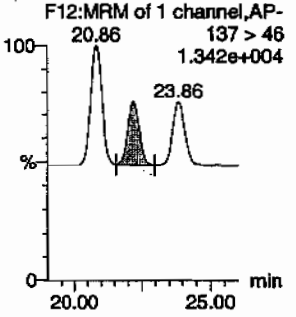
26-dinitrotoluene-d3



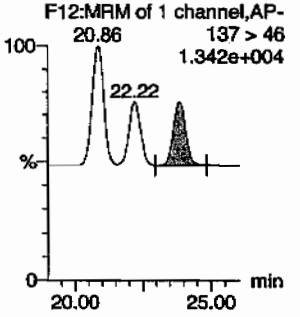
2-Nitrotoluene



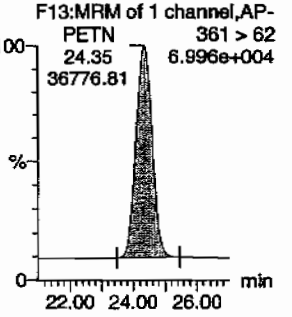
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	ISArea	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/ml	%Rec	%Dev	S/N
1202011701	HMX	176 > 102	5.17	12943.349	3796.324	12943.349	1704.721	bb			528.0927	105.6	5.6	2215.5
1202011701	RDX	176 > 102	7.54	9234.004	3796.324	9234.004	1216.177	bb			546.9582	109.4	9.4	1315.5
1202011701	135-Trinitrobenzene	213 > 183	10.13	12974.935	3796.324	12974.935	1708.881	bb			512.8958	102.6	2.6	918.7
1202011701	13-Dinitrobenzene-d4	172 > 142	11.95	3796.324		3796.324	3796.324	bb			559.3829	111.9	11.9	771.2
1202011701	13-Dinitrobenzene	168 > 138	12.10	4628.107	3796.324	4628.107	609.551	bb			515.8185	103.2	3.2	212.1
1202011701	Tetryl	241 > 181	12.58	3053.892	3796.324	3053.892	402.217	bb			411.8494	82.4	-17.6	512.5
1202011701	Nitrobenzene	123 > 46	13.50	3172.820	3796.324	3172.820	417.881	bb			499.1491	99.8	-0.2	353.3
1202011701	4-Amino-26-dinitrotoluene	197 > 167	15.46	6359.761	21838.266	6359.761	145.610	MM	22-Jan-10	10:00:48	551.5717	110.3	10.3	347.3
1202011701	2-Amino-46-dinitrotoluene	197 > 180	16.34	9429.107	21838.266	9429.107	215.885	bb			554.1709	110.8	10.8	449.6
1202011701	246-Trinitrotoluene	227 > 210	15.28	8216.110	21838.266	8216.110	188.113	bb			534.2217	106.8	6.8	383.7
1202011701	34-dinitrotoluene	182 > 152	14.25	10998.166	21838.266	10998.166	251.810	bb			270.1117	108.0	8.0	362.9
1202011701	26-dinitrotoluene	182 > 152	17.42	24754.498	21838.266	24754.498	566.769	MM	22-Jan-10	10:07:20	518.8880	103.8	3.8	545.4
1202011701	24-dinitrotoluene	182 > 152	18.07	5390.500	21838.266	5390.500	123.419	MM	22-Jan-10	10:10:52	488.1462	97.6	-2.4	114.6
1202011701	26-dinitrotoluene-d3	185 > 155	17.24	21838.266		21838.266	21838.266	bb			595.2242	119.0	19.0	1222.1
1202011701	2-Nitrotoluene	137 > 46	20.86	3411.281	21838.266	3411.281	78.103	bb			520.4231	104.1	4.1	441.8
1202011701	4-Nitrotoluene	137 > 46	22.22	1752.080	21838.266	1752.080	40.115	bb			560.2711	112.1	12.1	234.3
1202011701	3-Nitrotoluene	137 > 46	23.86	1866.291	21838.266	1866.291	42.730	bb			501.0526	100.2	0.2	236.0
1202011701	PETN	361 > 62	24.35	36776.813	21838.266	36776.813	842.027	bb			503.9021	100.8	0.8	2910.1

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

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7698(244125001MS)

Lab Code: GEL

GEL Job No (SDG) 10-1130

Matrix: SOIL

GEL Sample ID: 1202011701

Sample Amount 2

Moisture: 9.9

Amount Units g

Date Received: 08-JAN-10

Extraction Type Sonication

Extraction Batch ID: 940075

Concentrated Extract Volume (mL) 10

Date Extracted: 19-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS01200054.wiff

Date Analyzed: 21-JAN-10 00:22

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB	5120	
59229-75-3	2,6-Diamino-4-nitrotoluene	5000	
618-87-1	3,5-Dinitroaniline	5060	
6629-29-4	2,4-Diamino-6-nitrotoluene	4300	
78-30-8	tris(o-cresyl) phosphate	5390	

*Concentration =

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

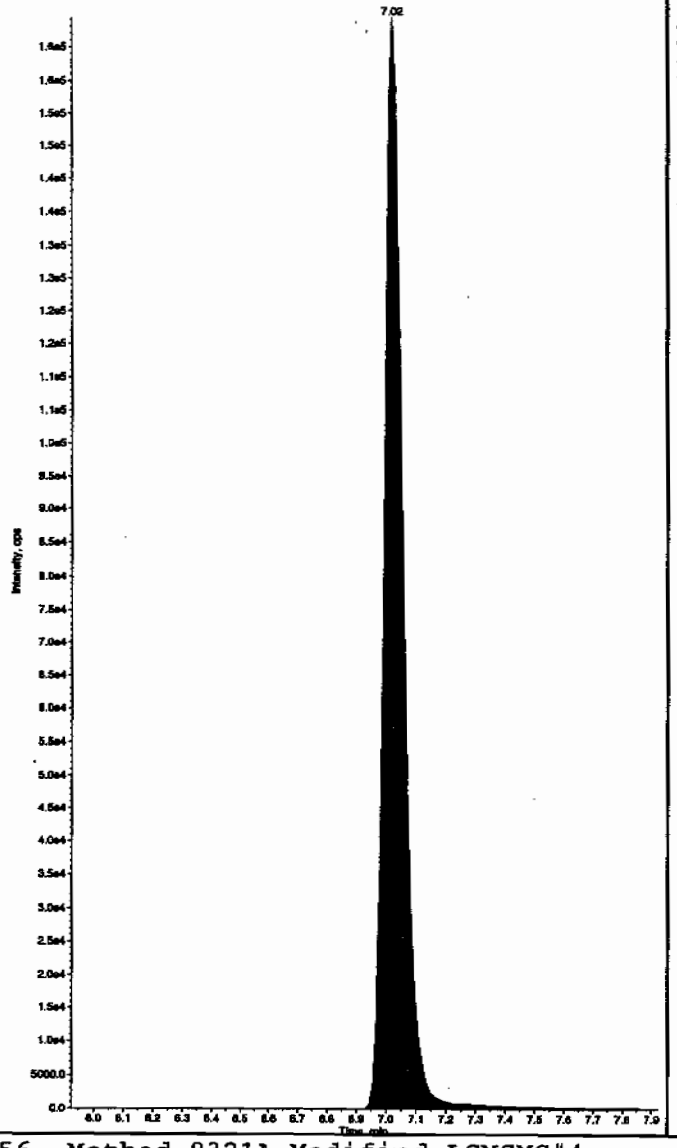
Before Clark 1/21/10

Sample Name: "1202011701" Sample ID: "940060|2|LER" File: "EXS01200054.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 512. ng/mL
Acq. Date: 1/21/2010
Acq. Time: 12:22:10 AM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 6.92 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.02 min
Area: 7.25e+005 counts
Height: 164305.450 cps
Start Time: 6.90 min
End Time: 7.59 min

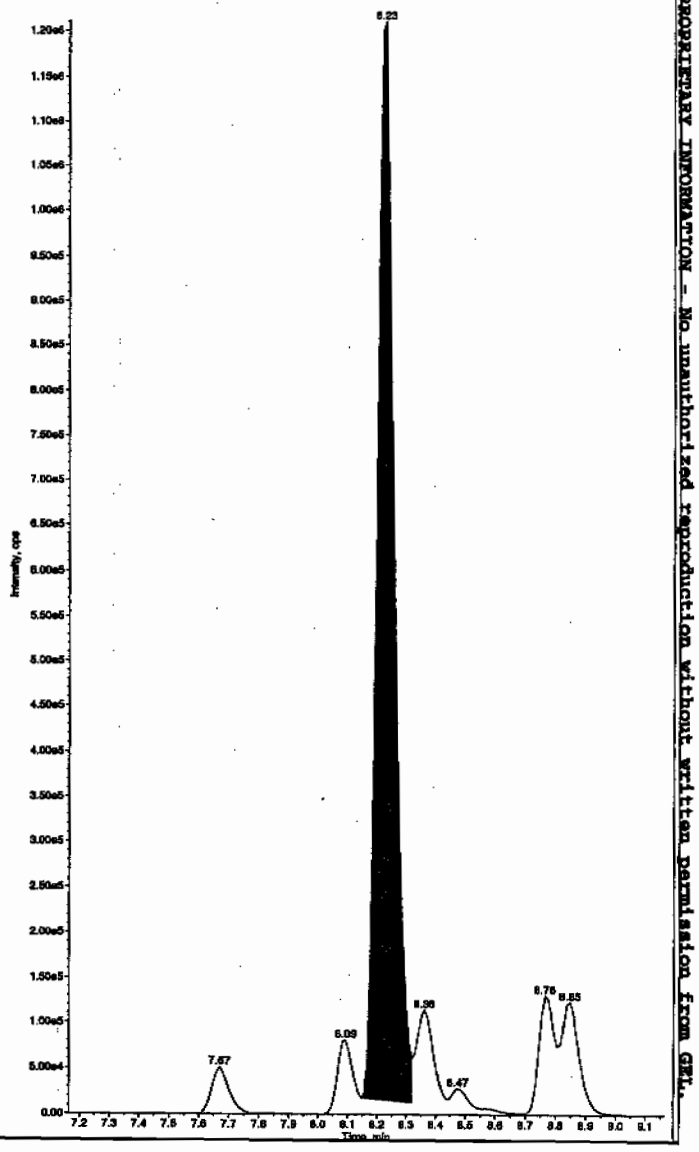


Sample Name: "1202011701" Sample ID: "940060|2|LER" File: "EXS01200054.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 493. ng/mL
Acq. Date: 1/21/2010
Acq. Time: 12:22:10 AM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.16 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.23 min
Area: 4.96e+006 counts
Height: 1195835.449 cps
Start Time: 8.14 min
End Time: 8.32 min



HMM 01/21/10

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

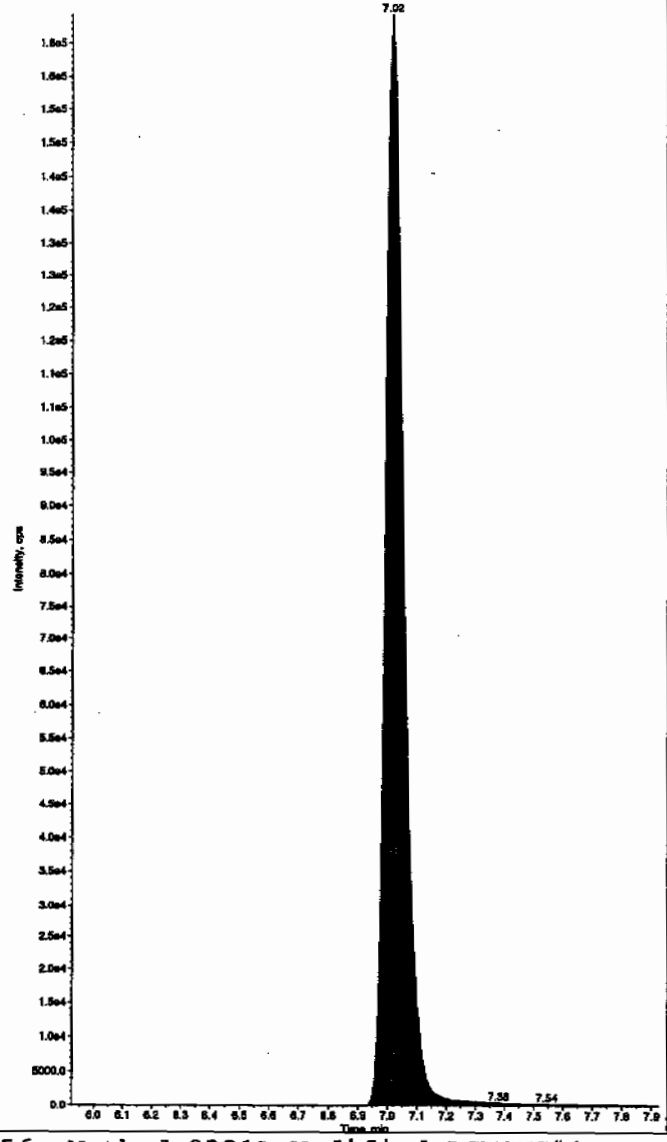
after Lab 1/21/10

Sample Name: "1202011701" Sample ID: "940080|2|LER" File: "EXS01200054.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 512. ng/mL
Acq. Date: 1/21/2010
Acq. Time: 12:22:10 AM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 6.92 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.02 min
Area: 7.25e+005 counts
Height: 164305.450 cps
Start Time: 6.90 min
End Time: 7.59 min

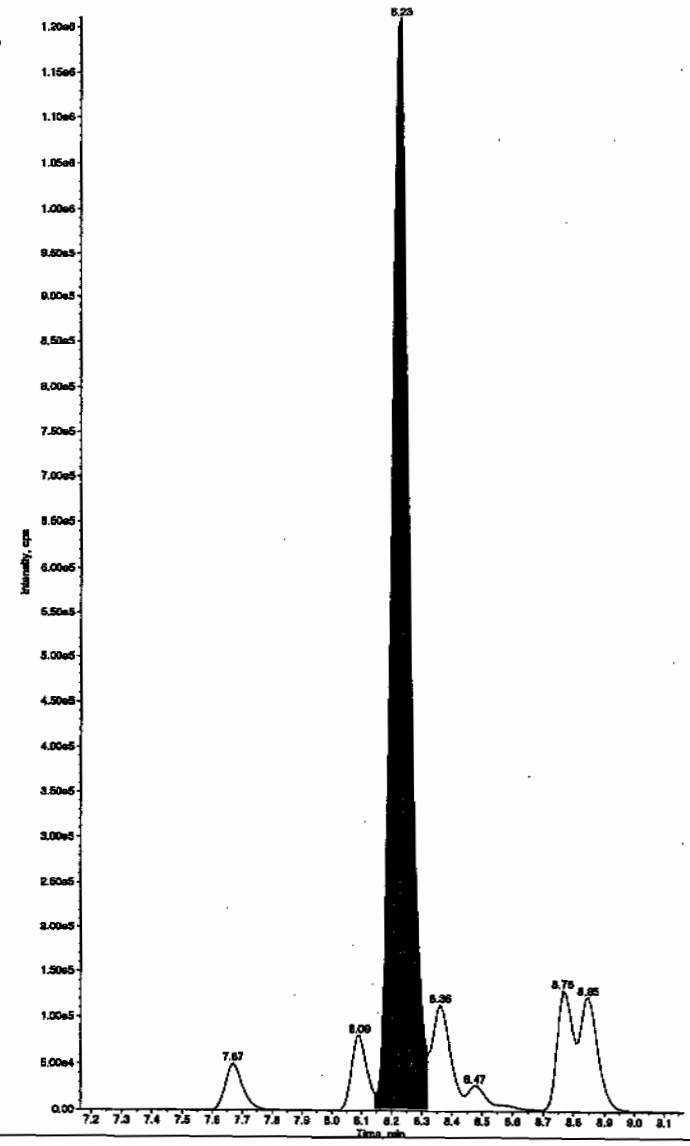


Sample Name: "1202011701" Sample ID: "940080|2|LER" File: "EXS01200054.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 506. ng/mL
Acq. Date: 1/21/2010
Acq. Time: 12:22:10 AM

Modified: Yes
RT Window: 15.0 sec
Expected RT: 8.15 min
Use Relative RT: No

Int. Type: Manual
Retention Time: 8.22 min
Area: 5.09e+006 counts
Height: 1226977.898 cps
Start Time: 8.14 min
End Time: 8.32 min



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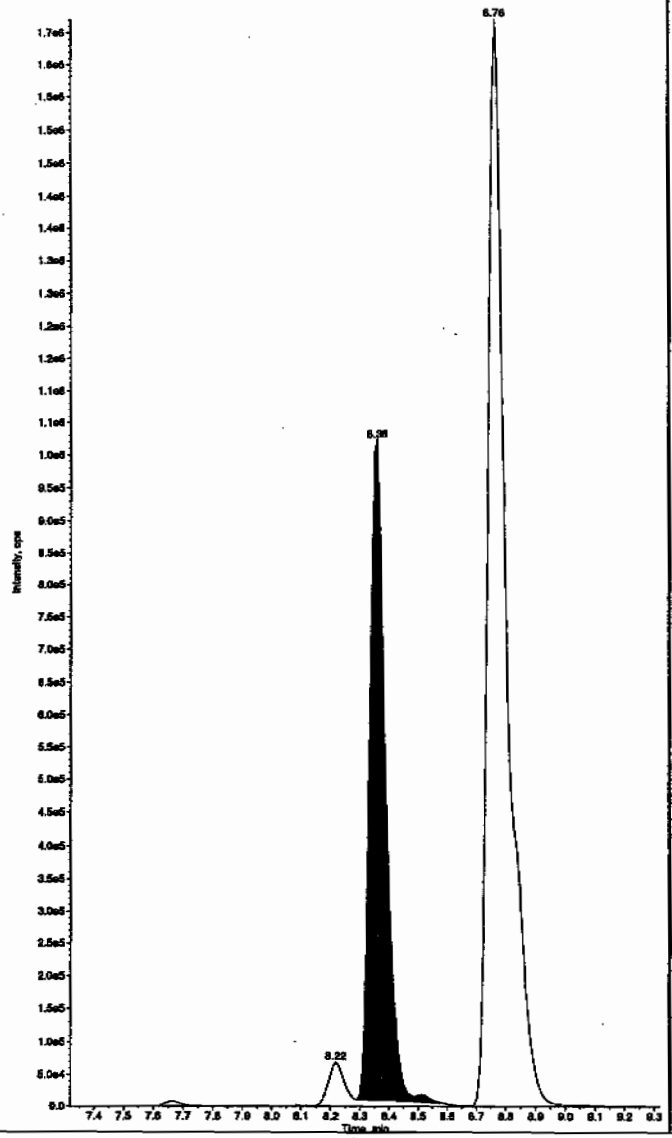
*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "1202011701" Sample ID: "940060[2]LER" File: "EXS01200054.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 283. ng/mL
Acq. Date: 1/21/2010
Acq. Time: 12:22:10 AM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.32 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.36 min
Area: 3.96e+006 counts
Height: 1013693.909 cps
Start Time: 8.29 min
End Time: 8.59 min

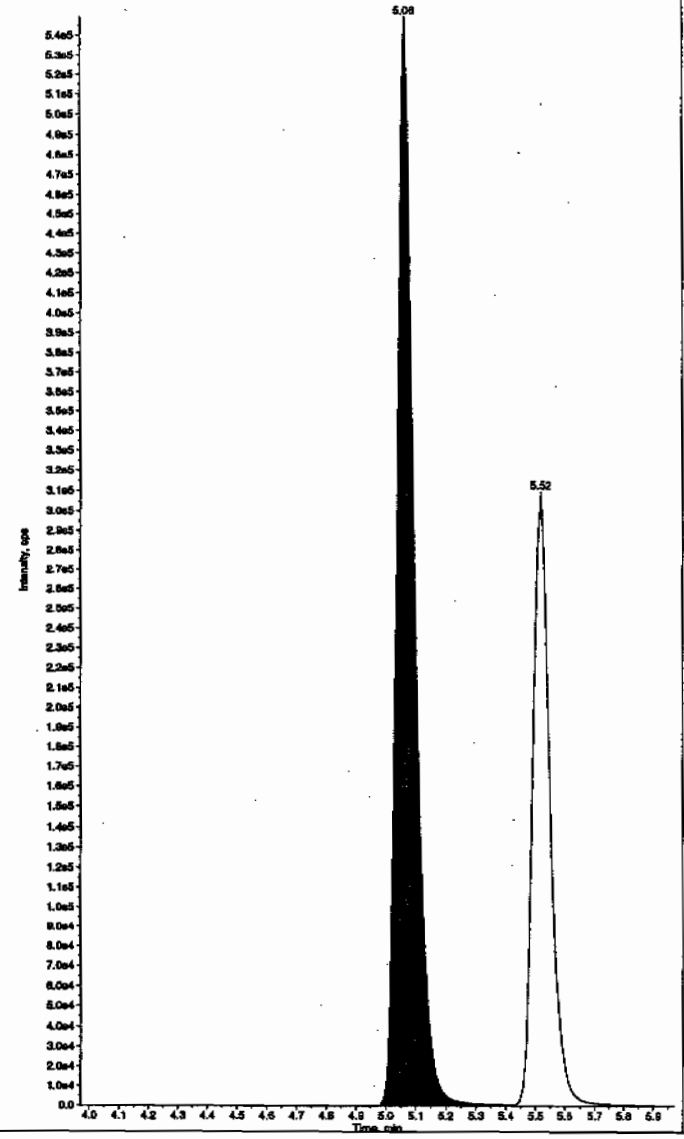


Sample Name: "1202011701" Sample ID: "940060[2]LER" File: "EXS01200054.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 500. ng/mL
Acq. Date: 1/21/2010
Acq. Time: 12:22:10 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: 4.97 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.06 min
Area: 2.28e+006 counts
Height: 549864.563 cps
Start Time: 4.95 min
End Time: 5.35 min



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

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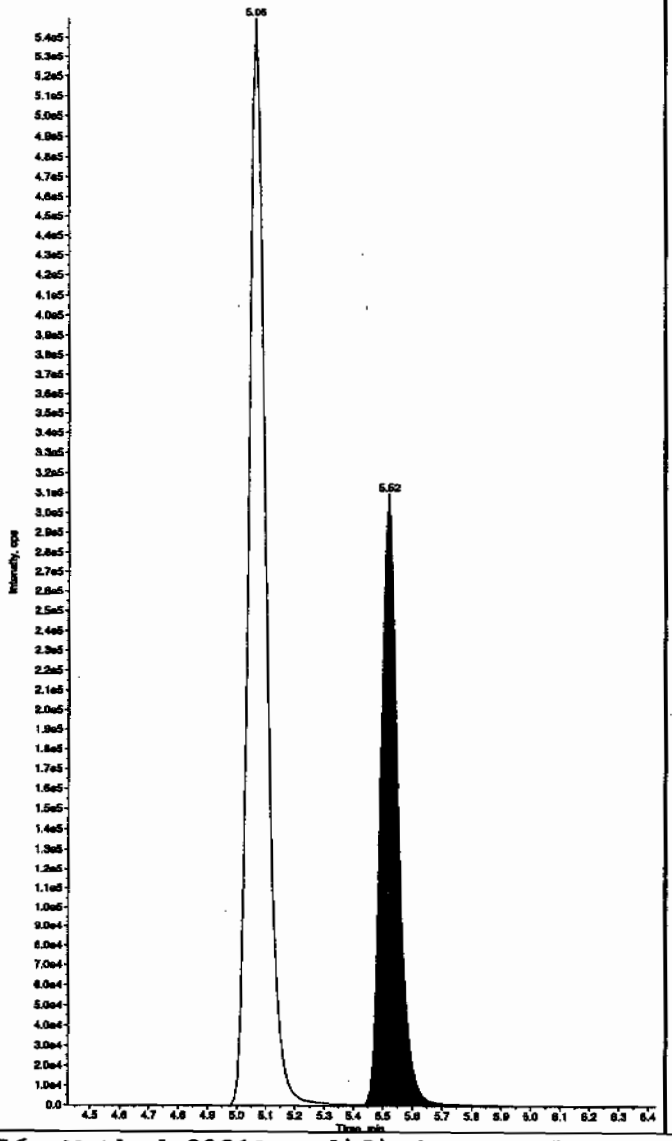
Sample Name: "1202011701" Sample ID: "940060|2|LER" File: "EXS01200054.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 430. ng/mL
Acq. Date: 1/21/2010
Acq. Time: 12:22:10 AM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.43 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.52 min
Area: 1.27e+006 counts
Height: 309436.066 cps
Start Time: 5.41 min
End Time: 5.86 min

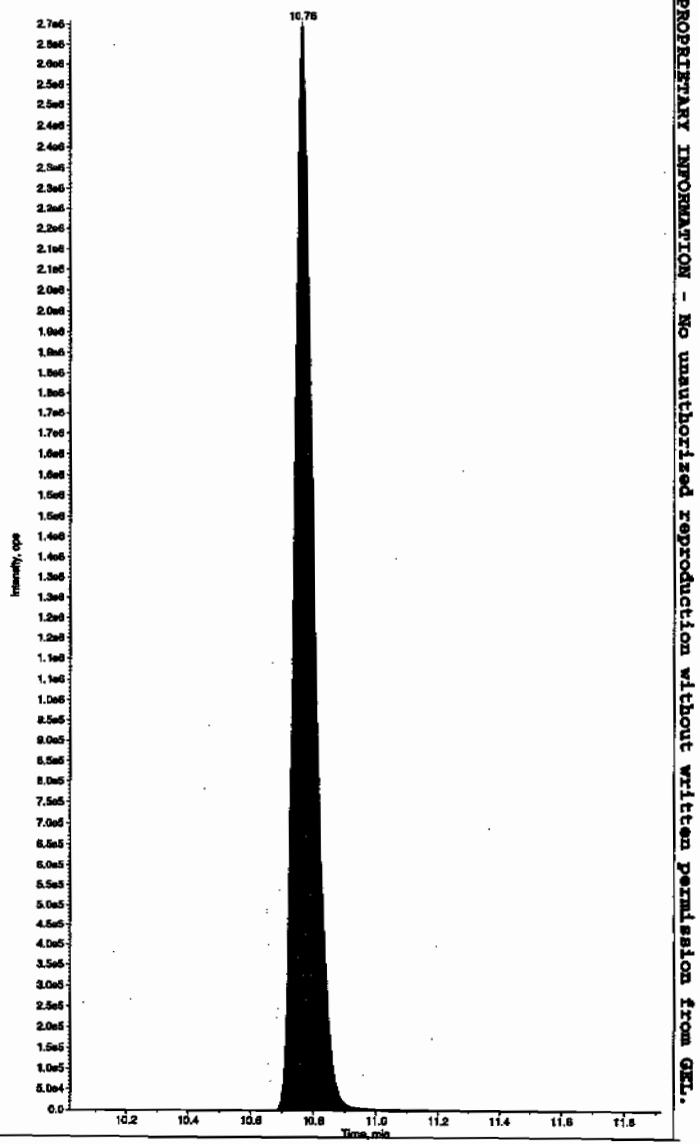


Sample Name: "1202011701" Sample ID: "940060|2|LER" File: "EXS01200054.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 539. ng/mL
Acq. Date: 1/21/2010
Acq. Time: 12:22:10 AM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.8 min
Area: 1.15e+007 counts
Height: 2656928.467 cps
Start Time: 10.7 min
End Time: 11.1 min



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

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7698(244125001MSD)

Lab Code: GEL

GEL Job No (SDG) 10-1130

Matrix: SOIL

GEL Sample ID: 1202011702

Sample Amount 2

Moisture: 9.9

Amount Units g

Date Received: 08-JAN-10

Extraction Type Sonication

Extraction Batch ID: 940075

Concentrated Extract Volume (mL) 10

Date Extracted: 19-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0118159a

Date Analyzed: 21-JAN-10 19:45

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	5300	
121-14-2	2,4-Dinitrotoluene	5110	
121-82-4	RDX	5600	
19406-51-0	4-Amino-2,6-dinitrotoluene	5660	
2691-41-0	HMX	5270	
35572-78-2	2-Amino-4,6-dinitrotoluene	5460	
479-45-8	Tetryl	4140	
606-20-2	2,6-Dinitrotoluene	5040	
78-11-5	PETN	5140	
88-72-2	o-Nitrotoluene	4900	
98-95-3	Nitrobenzene	4710	
99-08-1	m-Nitrotoluene	4920	
99-35-4	1,3,5-Trinitrobenzene	5200	
99-65-0	m-Dinitrobenzene	5010	
99-99-0	p-Nitrotoluene	5170	

*Concentration =

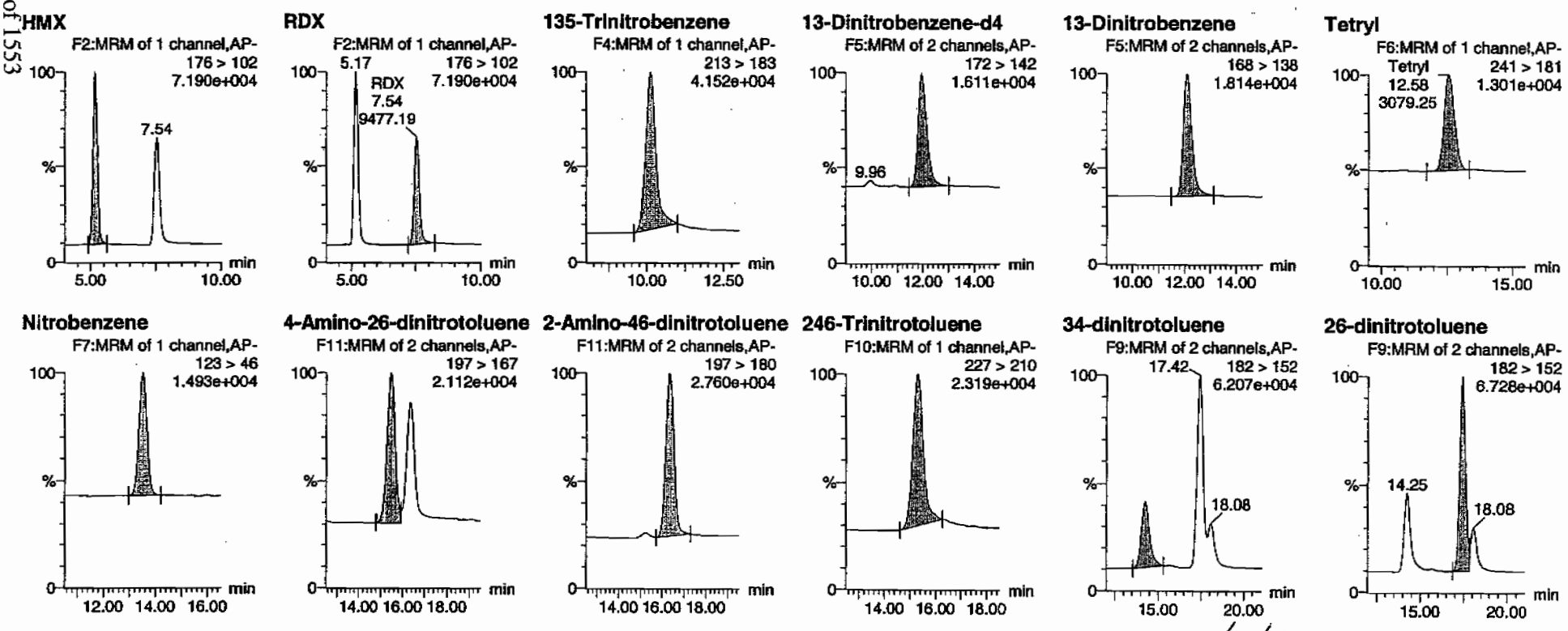
$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

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

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA3.qld, Time: Fri Jan 22 10:11:48 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118159a
Date: 21-Jan-2010
Time: 19:45:45
ID: 1202011702 | LANL | 940080 | Soil | 244125001MSD | 2 |
Vial: 4:5,E

MAP 1/22/10



Hmm 01/22/10

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

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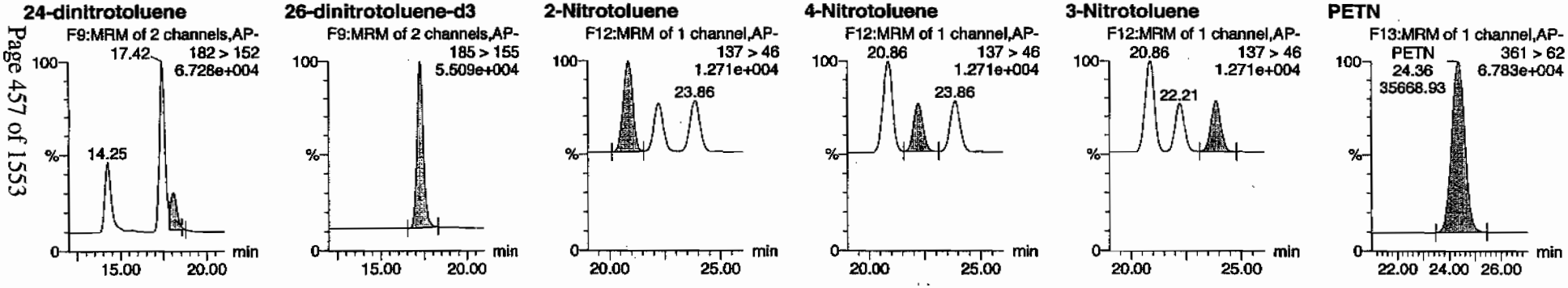
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA3.qld, Time: Fri Jan 22 10:11:48 2010



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N
1202011702	HMX	176 > 102	5.17	12940.204	3805.227	12940.204	1700.320	bb			526.7291	105.3	5.3	2421.0
1202011702	RDX	176 > 102	7.54	9477.194	3805.227	9477.194	1245.286	bb			560.0496	112.0	12.0	1487.6
1202011702	135-Trinitrobenzene	213 > 183	10.13	13195.883	3805.227	13195.883	1733.915	bb			520.4094	104.1	4.1	982.0
1202011702	13-Dinitrobenzene-d4	172 > 142	11.95	3805.227		3805.227	3805.227	bb			560.6947	112.1	12.1	221.5
1202011702	13-Dinitrobenzene	168 > 138	12.10	4508.231	3805.227	4508.231	592.373	bb			501.2823	100.3	0.3	467.0
1202011702	Tetryl	241 > 181	12.58	3079.248	3805.227	3079.248	404.608	bb			414.2974	82.9	-17.1	224.4
1202011702	Nitrobenzene	123 > 46	13.50	2999.435	3805.227	2999.435	394.120	bb			470.7681	94.2	-5.8	407.0
1202011702	4-Amino-26-dinitrotoluene	197 > 167	15.49	6209.604	20783.770	6209.604	149.386	MM	22-Jan-10	10:00:58	565.8730	113.2	13.2	283.5
1202011702	2-Amino-46-dinitrotoluene	197 > 180	16.34	8840.817	20783.770	8840.817	212.686	bb			545.9582	109.2	9.2	246.1
1202011702	246-Trinitrotoluene	227 > 210	15.28	7753.300	20783.770	7753.300	186.523	bb			529.7070	105.9	5.9	553.4
1202011702	34-dinitrotoluene	182 > 152	14.25	10557.175	20783.770	10557.175	253.976	bb			272.4361	109.0	9.0	432.5
1202011702	26-dinitrotoluene	182 > 152	17.42	22877.295	20783.770	22877.295	550.364	MM	22-Jan-10	10:07:27	503.8695	100.8	0.8	851.8
1202011702	24-dinitrotoluene	182 > 152	18.08	5372.239	20783.770	5372.239	129.241	MM	22-Jan-10	10:10:41	511.1755	102.2	2.2	181.5
1202011702	26-dinitrotoluene-d3	185 > 155	17.27	20783.770		20783.770	20783.770	bb			566.4828	113.3	13.3	1923.2
1202011702	2-Nitrotoluene	137 > 46	20.86	3054.008	20783.770	3054.008	73.471	bb			489.5568	97.9	-2.1	1195.3
1202011702	4-Nitrotoluene	137 > 46	22.21	1539.712	20783.770	1539.712	37.041	bb			517.3418	103.5	3.5	627.7
1202011702	3-Nitrotoluene	137 > 46	23.86	1742.770	20783.770	1742.770	41.926	bb			491.6294	98.3	-1.7	668.6
1202011702	PETN	361 > 62	24.36	35668.930	20783.770	35668.930	858.096	bb			513.5184	102.7	2.7	10820.7

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7698(244125001MSD)

Lab Code: GEL

GEL Job No (SDG) 10-1130

Matrix: SOIL

GEL Sample ID: 1202011702

Sample Amount 2

Moisture: 9.9

Amount Units g

Date Received: 08-JAN-10

Extraction Type Sonication

Extraction Batch ID: 940075

Concentrated Extract Volume (mL) 10

Date Extracted: 19-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS01200055.wiff

Date Analyzed: 21-JAN-10 00:37

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB	5370	
59229-75-3	2,6-Diamino-4-nitrotoluene	4910	
618-87-1	3,5-Dinitroaniline	5130	
6629-29-4	2,4-Diamino-6-nitrotoluene	4560	
78-30-8	tris(o-cresyl) phosphate	5250	

*Concentration =

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

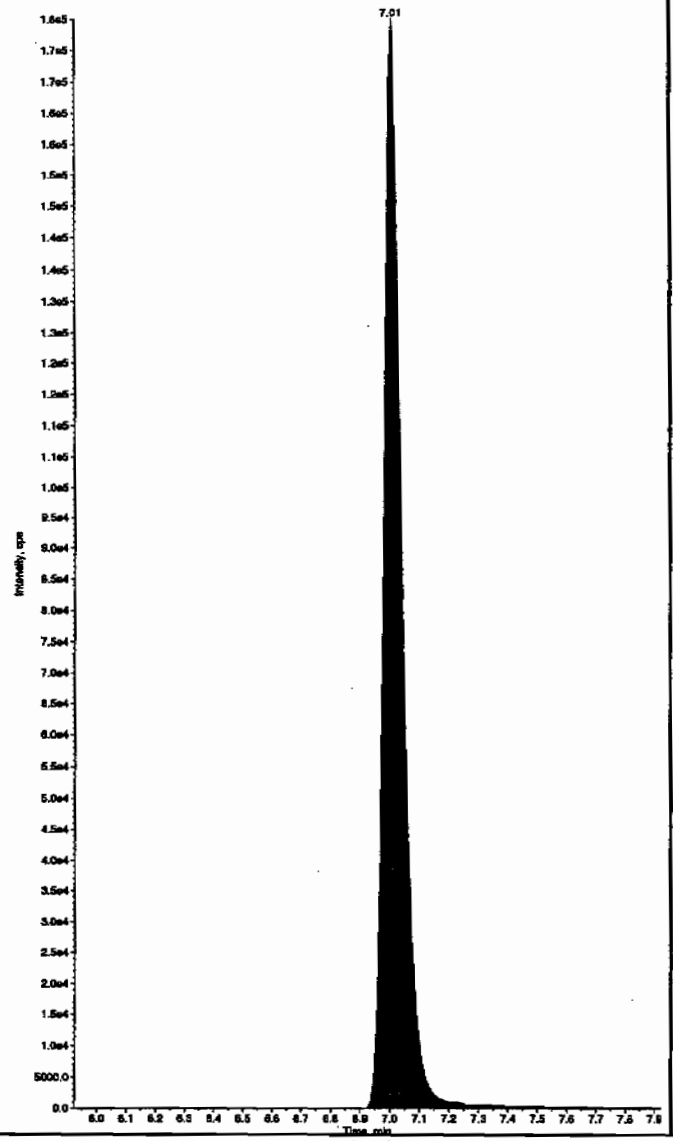
Before Clean 1/21/10

Sample Name: "1202011702" Sample ID: "940080[2]LER" File: "EXS01200055.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 537. ng/mL
Acq. Date: 1/21/2010
Acq. Time: 12:37:52 AM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 6.92 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.01 min
Area: 7.60e+005 counts
Height: 175025.238 cps
Start Time: 6.90 min
End Time: 7.62 min

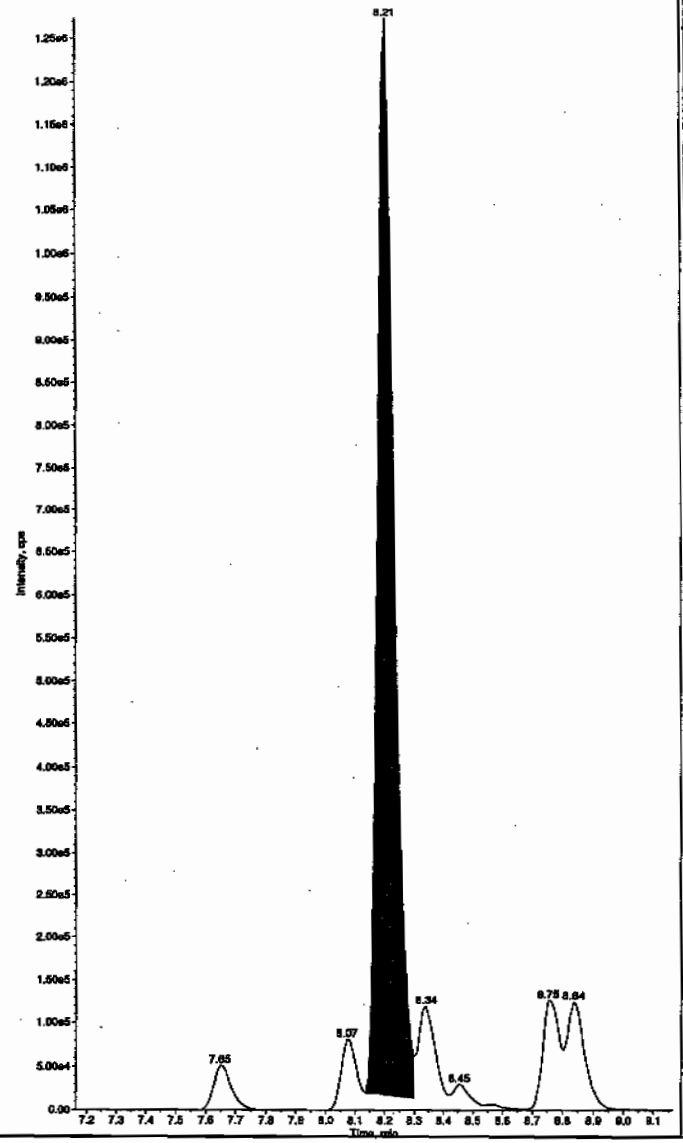


Sample Name: "1202011702" Sample ID: "940080[2]LER" File: "EXS01200055.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 499. ng/mL
Acq. Date: 1/21/2010
Acq. Time: 12:37:52 AM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.16 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.21 min
Area: 5.02e+006 counts
Height: 1256597.412 cps
Start Time: 8.13 min
End Time: 8.30 min



Hum 01/21/10

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

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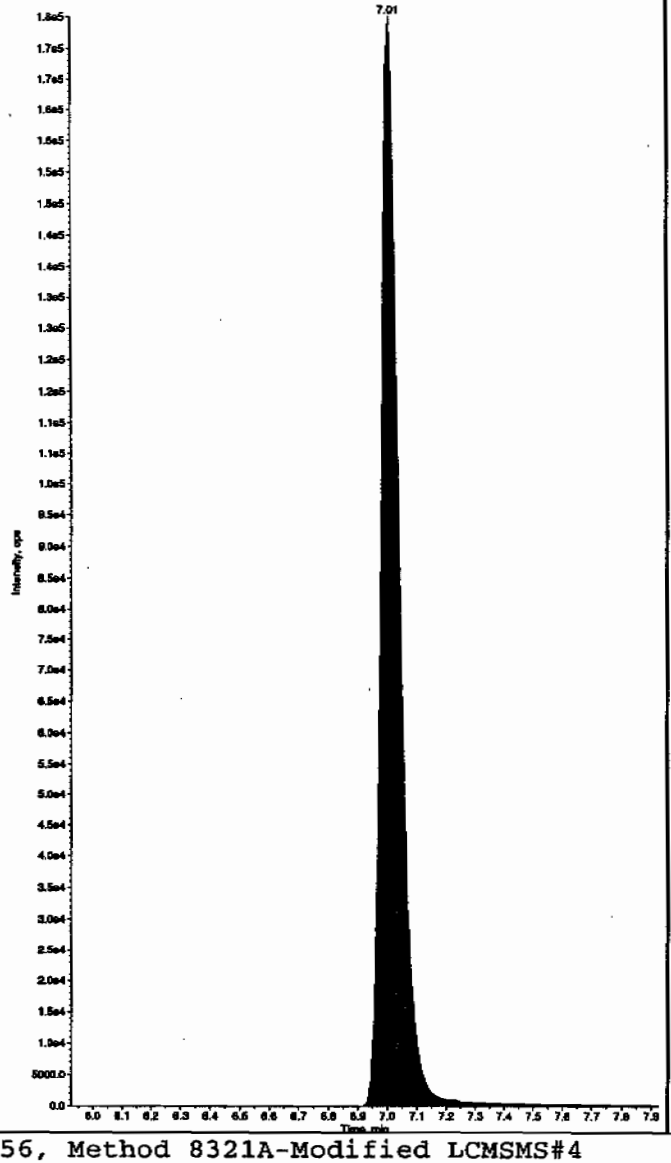
after Ran 1/24/10

Sample Name: "1202011702" Sample ID: "940080|2|LER" File: "EXS01200055.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 537. ng/mL
Acq. Date: 1/21/2010
Acq. Time: 12:37:52 AM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 6.92 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.01 min
Area: 7.60e+005 counts
Height: 175025.238 cps
Start Time: 6.90 min
End Time: 7.62 min

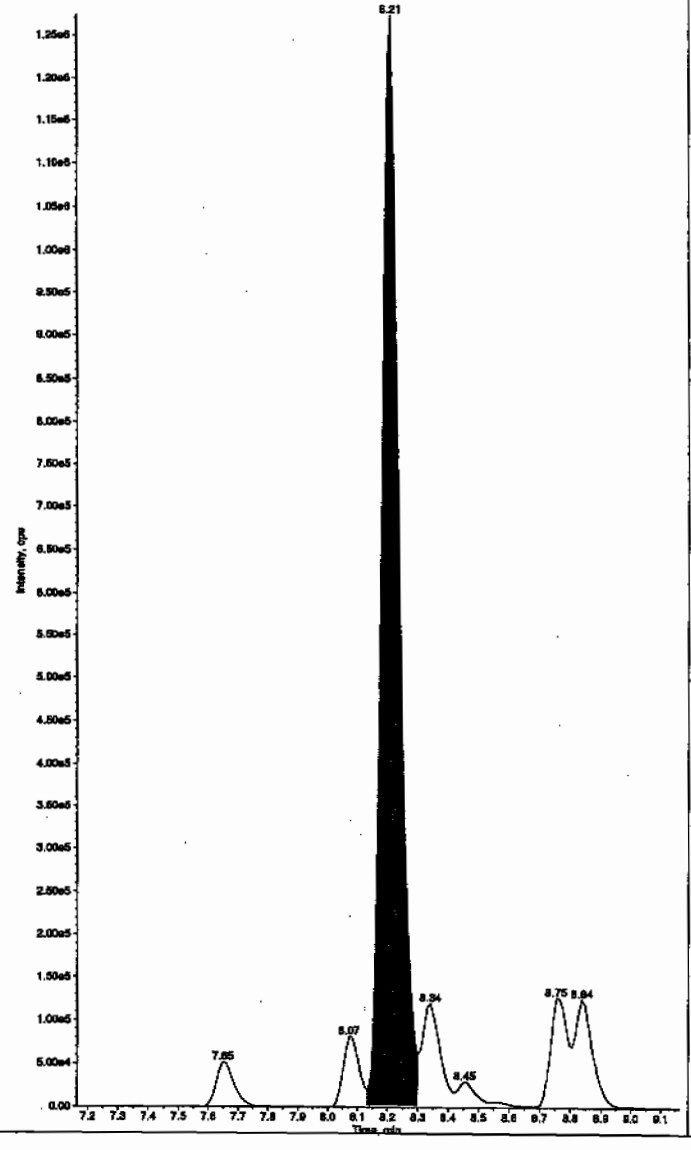


Sample Name: "1202011702" Sample ID: "940080|2|LER" File: "EXS01200055.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 513. ng/mL
Acq. Date: 1/21/2010
Acq. Time: 12:37:52 AM

Modified: Yes
RT Window: 15.0 sec
Expected RT: 8.16 min
Use Relative RT: No

Int. Type: Manual
Retention Time: 8.20 min
Area: 5.14e+006 counts
Height: 1277583.581 cps
Start Time: 8.13 min
End Time: 8.30 min



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

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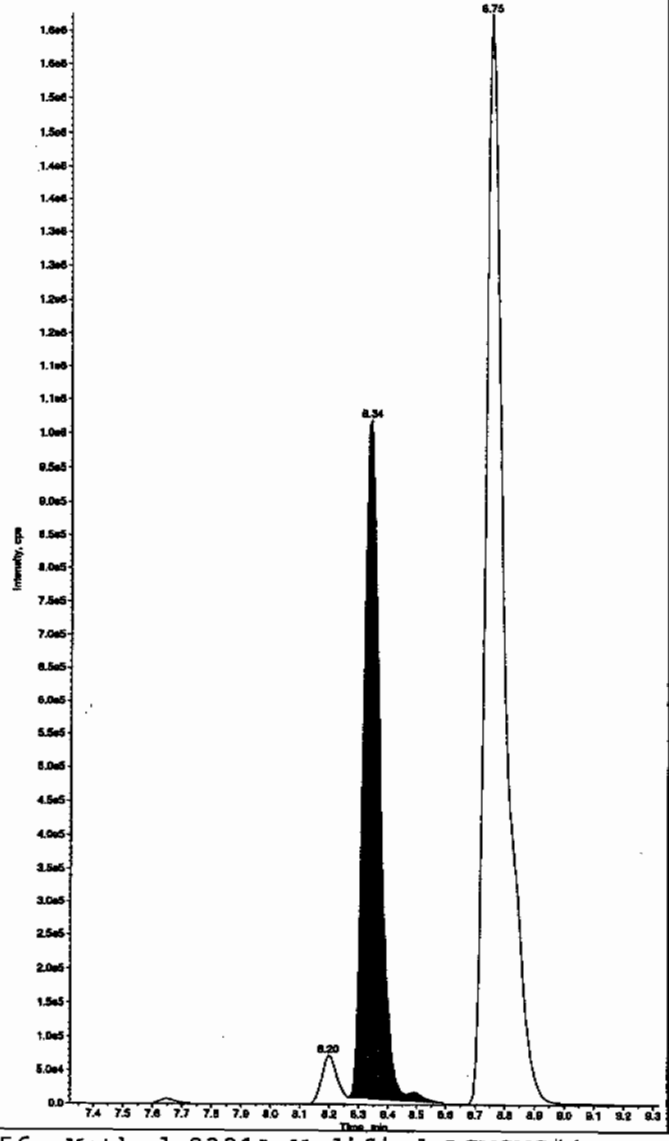
Sample Name: "1202011702" Sample ID: "940080|2|LER" File: "EXS01200055.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 283. ng/mL
Acq. Date: 1/21/2010
Acq. Time: 12:37:52 AM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.32 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.34 min
Area: 3.96e+006 counts
Height: 1011248.413 cps
Start Time: 8.27 min
End Time: 8.58 min

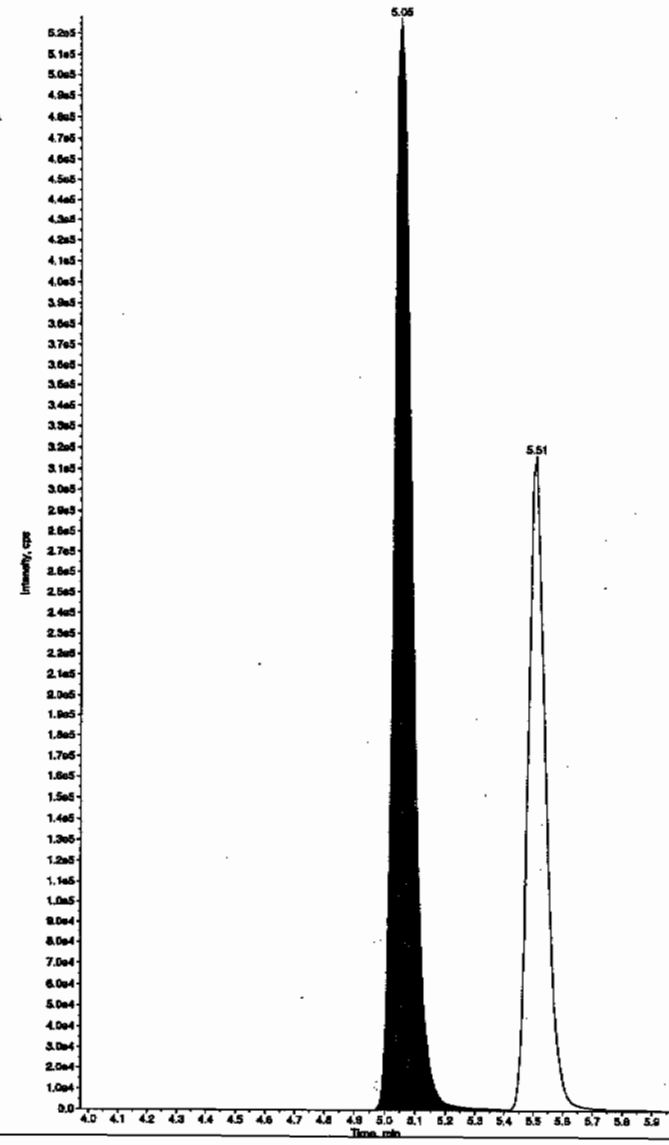


Sample Name: "1202011702" Sample ID: "940080|2|LER" File: "EXS01200055.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 491. ng/mL
Acq. Date: 1/21/2010
Acq. Time: 12:37:52 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: 4.97 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.05 min
Area: 2.24e+006 counts
Height: 528171.814 cps
Start Time: 4.95 min
End Time: 5.34 min



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

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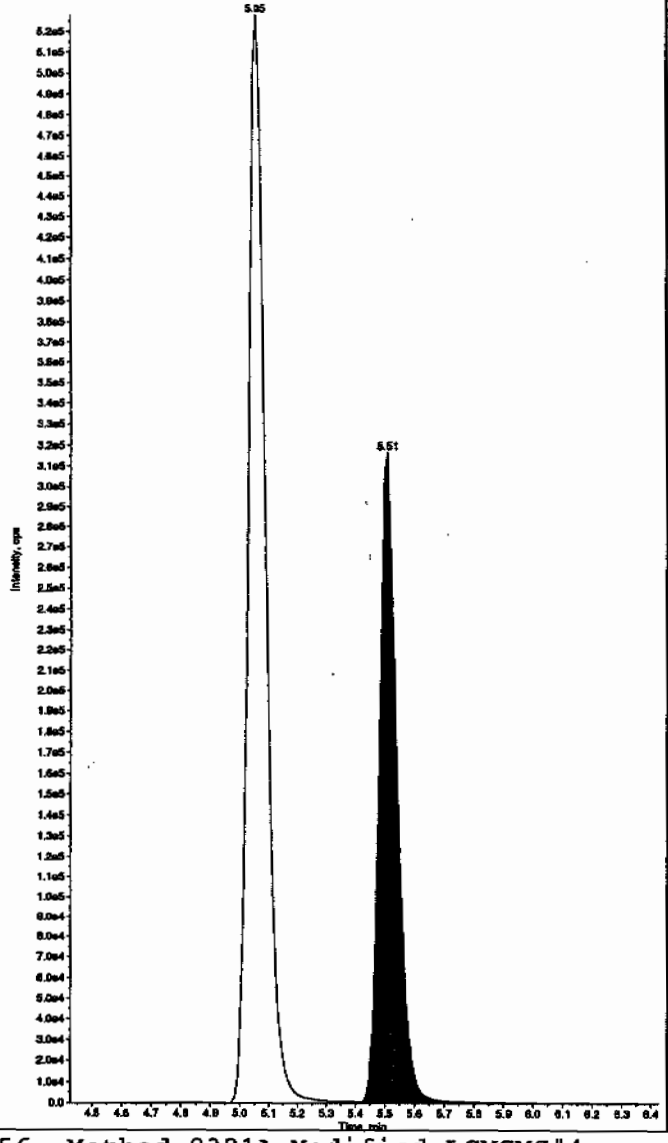
Sample Name: "1202011702" Sample ID: "940060[2]LER" File: "EXS01200055.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 456. ng/mL
Acq. Date: 1/21/2010
Acq. Time: 12:37:52 AM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.43 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.51 min
Area: 1.34e+006 counts
Height: 316621.490 cps
Start Time: 5.42 min
End Time: 6.04 min

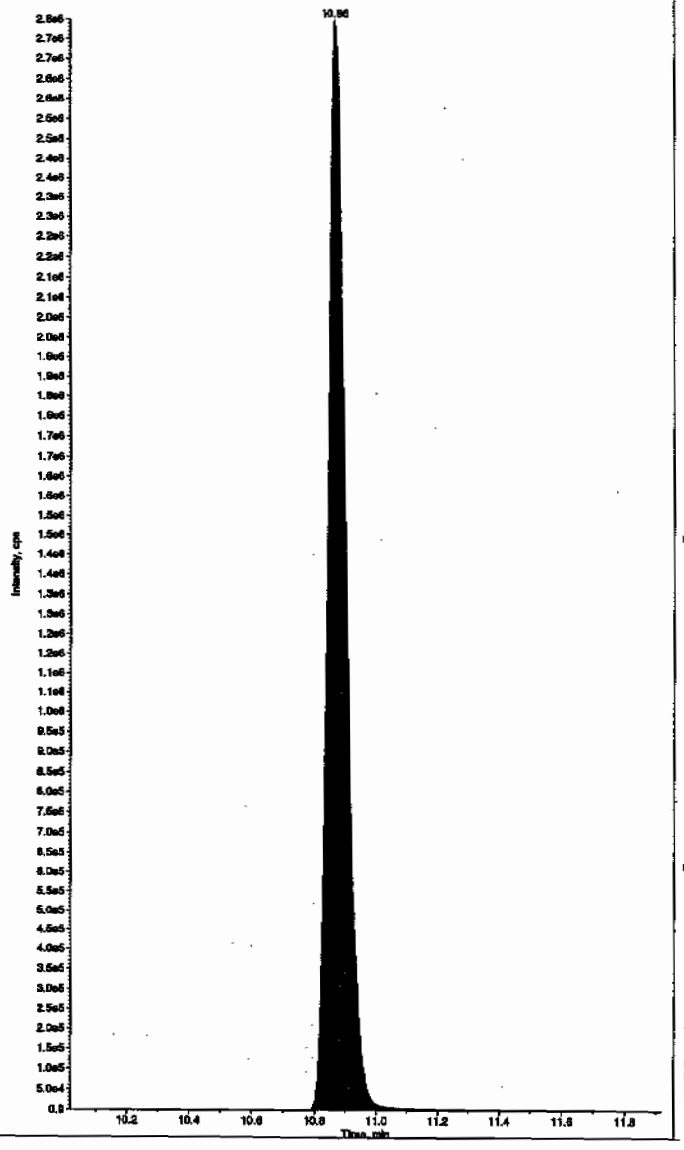


Sample Name: "1202011702" Sample ID: "940060[2]LER" File: "EXS01200055.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 525. ng/mL
Acq. Date: 1/21/2010
Acq. Time: 12:37:52 AM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.9 min
Area: 1.12e+007 counts
Height: 2750069.580 cps
Start Time: 10.8 min
End Time: 11.2 min



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

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MISCELLANEOUS DATA

Prep Logbook

Nitroaromatics and Nitramines by High Performance Liquid Chromatography (HPLC)

Batch ID: 940075 **Verified by:** _____

Analyst: Sirena White

Method: SW846 8330 PREP

Lab SOP: GL-OA-E-033 REV# 17

Instrument: Semi-Volatiles Manual

Sample ID	Run Date	Aliquot (g)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1202011699 MB	19-JAN-2010 17:11:16	2	10	5
1202011700 LCS	19-JAN-2010 17:11:16	2	10	5
244125001	19-JAN-2010 17:11:16	2	10	5
1202011701 MS (244125001)	19-JAN-2010 17:11:16	2	10	5
1202011702 MSD (244125001)	19-JAN-2010 17:11:16	2	10	5
244125002	19-JAN-2010 17:11:16	2	10	5
244125003	19-JAN-2010 17:11:16	2	10	5
244125004	19-JAN-2010 17:11:16	2	10	5
244215002	19-JAN-2010 17:11:16	2	10	5
244215003	19-JAN-2010 17:11:16	2	10	5
244215004	19-JAN-2010 17:11:16	2	10	5
244215005	19-JAN-2010 17:11:16	2	10	5
244215006	19-JAN-2010 17:11:16	2	10	5
244215007	19-JAN-2010 17:11:16	2	10	5

Type	Sample Id	Description	Serial Number	Spike Amt	Units
LCS	1202011700	8321 Explosives LCS	IXX091230-03	.1	mL
LCS	1202011700	8321 LANL Explosives Mix 10mg/L	UXX091229-02.2	1	mL
MS	1202011701	8321 Explosives LCS	IXX091230-03	.1	mL
MS	1202011701	8321 LANL Explosives Mix 10mg/L	UXX091229-02.2	1	mL
MSD	1202011702	8321 Explosives LCS	IXX091230-03	.1	mL
MSD	1202011702	8321 LANL Explosives Mix 10mg/L	UXX091229-02.2	1	mL
SURR	All	3,4-Dinitrotoluene (8330 Surr.) 100ppm	IXP100114-02	.05	mL

Comments:

Final Solvent: ACN

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GEL ORGANIC RUN LOG

INSTRUMENT ID: LCMSMS #1

Date: 01/18/10
Extr. Injection Volume: 50uL
Sequence Number: 011810expA
Initial Calibration Date: 01/18/10

Method: SW846 8321A-Modified
Int. Std.: UXX091230-01.2
Mobile Phase Lot#: 1255172, 1236350
Standard-Samp Reagent Lot#: 1253092, 1246195

Reviewed BY: [illegible]
Date: 01/22/10
SOP: GL-OA-E-056 Rev.12
Alt Check Std. ID: WXX100118-07

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC_Flag
EXP0118001a	XIBLK01	MAP	1/18/10 14:03			1		USE	B
EXP0118002a	XIBLK01	MAP	1/18/10 14:33			1		USE	B
EXP0118003a	WXXICAL-01	MAP	1/18/10 15:02			1		USE	I
EXP0118004a	WXXICAL-02	MAP	1/18/10 15:32			1		USE	I
EXP0118005a	WXXICAL-03	MAP	1/18/10 16:01			1		USE	I
EXP0118006a	WXXICAL-04	MAP	1/18/10 16:31			1		USE	I
EXP0118007a	WXXICAL-05	MAP	1/18/10 17:00			1		USE	I
EXP0118008a	WXXICAL-06	MAP	1/18/10 17:29			1		USE	I
EXP0118009a	XIBLK02	MAP	1/18/10 17:59			1		USE	B
EXP0118010a	WXXICV	MAP	1/18/10 18:28			1		USE	C
EXP0118011a	XIBLK03	MAP	1/18/10 18:58			1		USE	B
EXP0118012a	WXXCRI	MAP	1/18/10 19:27			1		USE	C
EXP0118013a	1202003473	MAP	1/18/10 19:57	936340	10-1020	2	LANL	USE	S
EXP0118014a	1202003474	MAP	1/18/10 20:26	936340	10-1020	2	LANL	USE	S
EXP0118015a	243401006	MAP	1/18/10 20:56	936340	10-1020	2	LANL	USE	S
EXP0118016a	1202003475	MAP	1/18/10 21:25	936340	10-1020	2	LANL	USE	S
EXP0118017a	1202003476	MAP	1/18/10 21:55	936340	10-1020	2	LANL	USE	S
EXP0118018a	243401010	MAP	1/18/10 22:24	936340	10-1020	2	LANL	USE	S
EXP0118019a	WXXCCV	MAP	1/18/10 22:54			1		USE	C
EXP0118020a	XIBLK04	MAP	1/18/10 23:23			1		USE	B
EXP0118021a	WXXCRI	MAP	1/18/10 23:53			1		USE	C
EXP0118022a	1202006240	MAP	1/19/10 0:22	937564	10-1100	2	LANL	USE	S
EXP0118023a	1202006241	MAP	1/19/10 0:52	937564	10-1100	2	LANL	USE	S
EXP0118024a	243624001	MAP	1/19/10 1:21	937564	10-1100	2	LANL	USE	S
EXP0118025a	1202006242	MAP	1/19/10 1:51	937564	10-1100	2	LANL	USE	S
EXP0118026a	1202006243	MAP	1/19/10 2:20	937564	10-1100	2	LANL	USE	S
EXP0118027a	243624002	MAP	1/19/10 2:50	937564	10-1100	2	LANL	USE	S
EXP0118028a	243624003	MAP	1/19/10 3:19	937564	10-1100	2	LANL	USE	S
EXP0118029a	243624004	MAP	1/19/10 3:48	937564	10-1100	2	LANL	USE	S

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EXP0118030a	243624005	MAP	1/19/10 4:18	937564	10-1100	2	LANL	USE	S
EXP0118031a	243624006	MAP	1/19/10 4:47	937564	10-1100	2	LANL	USE	S
EXP0118032a	WXXCCV	MAP	1/19/10 5:17			1		USE	C
EXP0118033a	XIBLK05	MAP	1/19/10 5:47			1		USE	B
EXP0118034a	WXXCRI	MAP	1/19/10 6:16			1		USE	C
EXP0118035a	243624007	MAP	1/19/10 6:46	937564	10-1100	2	LANL	USE	S
EXP0118036a	243624008	MAP	1/19/10 7:15	937564	10-1100	2	LANL	USE	S
EXP0118037a	243624009	MAP	1/19/10 7:45	937564	10-1100	2	LANL	USE	S
EXP0118038a	243624010	MAP	1/19/10 8:14	937564	10-1100	2	LANL	USE	S
EXP0118039a	243624011	MAP	1/19/10 8:44	937564	10-1100	2	LANL	USE	S
EXP0118040a	WXXCCV	MAP	1/19/10 9:13			1		USE	C
EXP0118041a	XIBLK06	MAP	1/19/10 9:43			1		USE	B
EXP0118042a	WXXCRI	MAP	1/19/10 10:12			1		USE	C
EXP0118043a	1202006244	MAP	1/19/10 10:42	937567	10-1102	2	LANL	USE	S
EXP0118044a	1202006245	MAP	1/19/10 11:12	937567	10-1102	2	LANL	USE	S
EXP0118045a	243630001	MAP	1/19/10 11:41	937567	10-1102	2	LANL	USE	S
EXP0118046a	1202006246	MAP	1/19/10 12:11	937567	10-1102	2	LANL	USE	S
EXP0118047a	1202006247	MAP	1/19/10 12:40	937567	10-1102	2	LANL	DUSE-RA	S
EXP0118048a	243630002	MAP	1/19/10 13:10	937567	10-1102	2	LANL	USE	S
EXP0118049a	243630003	MAP	1/19/10 13:39	937567	10-1102	2	LANL	DUSE-RA	S
EXP0118050a	243630004	MAP	1/19/10 14:08	937567	10-1102	2	LANL	USE	S
EXP0118051a	243630005	MAP	1/19/10 14:38	937567	10-1102	2	LANL	USE	S
EXP0118052a	243630006	MAP	1/19/10 15:08	937567	10-1102	2	LANL	USE	S
EXP0118053a	WXXCCV	MAP	1/19/10 15:37			1		USE	C
EXP0118054a	XIBLK07	MAP	1/19/10 16:07			1		USE	B
EXP0118055a	WXXCRI	MAP	1/19/10 16:36			1		USE	C
EXP0118056a	243630007	MAP	1/19/10 17:06	937567	10-1102	2	LANL	USE	S
EXP0118057a	243630008	MAP	1/19/10 17:35	937567	10-1102	2	LANL	USE	S
EXP0118058a	243630009	MAP	1/19/10 18:05	937567	10-1102	2	LANL	USE	S
EXP0118059a	243630010	MAP	1/19/10 18:34	937567	10-1102	2	LANL	USE	S
EXP0118060a	243630011	MAP	1/19/10 19:04	937567	10-1102	2	LANL	USE	S
EXP0118061a	1202006247	MAP	1/19/10 19:33	937567	10-1102	2	LANL	USE	S
EXP0118062a	243630003	MAP	1/19/10 20:03	937567	10-1102	2	LANL	USE	S
EXP0118063a	WXXCCV	MAP	1/19/10 20:32			1		USE	C
EXP0118064a	XIBLK08	MAP	1/19/10 21:02			1		USE	B
EXP0118065a	WXXCRI	MAP	1/19/10 21:31			1		USE	C
EXP0118066a	1202011756	MAP	1/19/10 22:01	940106	Various	2	LANL	USE	S

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EXP0118067a	1202011757	MAP	1/19/10 22:30	940106	Various	2	LANL	USE	S
EXP0118068a	244209001	MAP	1/19/10 23:00	940106	10-1160	2	LANL	USE	S
EXP0118069a	1202011758	MAP	1/19/10 23:29	940106	10-1160	2	LANL	USE	S
EXP0118070a	1202011759	MAP	1/19/10 23:59	940106	10-1160	2	LANL	USE	S
EXP0118071a	244209002	MAP	1/20/10 0:28	940106	10-1160	2	LANL	USE	S
EXP0118072a	244209003	MAP	1/20/10 0:58	940106	10-1160	2	LANL	USE	S
EXP0118073a	244209004	MAP	1/20/10 1:27	940106	10-1160	2	LANL	USE	S
EXP0118074a	244209005	MAP	1/20/10 1:57	940106	10-1160	2	LANL	USE	S
EXP0118075a	244209006	MAP	1/20/10 2:26	940106	10-1160	2	LANL	USE	S
EXP0118076a	WXXCCV	MAP	1/20/10 2:56			1		USE	C
EXP0118077a	XIBLK09	MAP	1/20/10 3:25			1		USE	B
EXP0118078a	WXXCRI	MAP	1/20/10 3:55			1		USE	C
EXP0118079a	244211001	MAP	1/20/10 4:24	940106	10-1158	2	LANL	USE	S
EXP0118080a	244211002	MAP	1/20/10 4:54	940106	10-1158	2	LANL	USE	S
EXP0118081a	244211003	MAP	1/20/10 5:23	940106	10-1158	2	LANL	USE	S
EXP0118082a	244211004	MAP	1/20/10 5:53	940106	10-1158	2	LANL	USE	S
EXP0118083a	244211005	MAP	1/20/10 6:22	940106	10-1158	2	LANL	USE	S
EXP0118084a	244211006	MAP	1/20/10 6:52	940106	10-1158	2	LANL	USE	S
EXP0118085a	WXXCCV	MAP	1/20/10 7:21			1		USE	C
EXP0118086a	XIBLK10	MAP	1/20/10 7:51			1		USE	B
EXP0118087a	WXXCRI	MAP	1/20/10 8:20			1		USE	C
EXP0118088a	1202012970	MAP	1/20/10 8:50	940577	10-1151	2	LANL	USE	S
EXP0118089a	1202012971	MAP	1/20/10 9:19	940577	10-1151	2	LANL	USE	S
EXP0118090a	244219002	MAP	1/20/10 9:49	940577	10-1151	2	LANL	USE	S
EXP0118091a	1202012972	MAP	1/20/10 10:18	940577	10-1151	2	LANL	USE	S
EXP0118092a	1202012973	MAP	1/20/10 10:48	940577	10-1151	2	LANL	USE	S
EXP0118093a	244219003	MAP	1/20/10 11:17	940577	10-1151	2	LANL	USE	S
EXP0118094a	244219004	MAP	1/20/10 11:47	940577	10-1151	2	LANL	DUSE-RA	S
EXP0118095a	244219005	MAP	1/20/10 12:16	940577	10-1151	2	LANL	USE	S
EXP0118096a	244219006	MAP	1/20/10 12:46	940577	10-1151	2	LANL	USE	S
EXP0118097a	WXXCCV	MAP	1/20/10 13:15			1		USE	C
EXP0118098a	XIBLK11	MAP	1/20/10 13:45			1		USE	B
EXP0118099a	WXXCRI	MAP	1/20/10 14:14			1		USE	C
EXP0118100a	1202011738	MAP	1/20/10 14:44	940094	10-1149	2	LANL	USE	S
EXP0118101a	1202011739	MAP	1/20/10 15:13	940094	10-1149	2	LANL	USE	S
EXP0118102a	244221002	MAP	1/20/10 15:43	940094	10-1149	2	LANL	USE	S
EXP0118103a	1202011740	MAP	1/20/10 16:12	940094	10-1149	2	LANL	USE	S

EXP0118104a	1202011741	MAP	1/20/10 16:42	940094	10-1149	2	LANL	USE	S
EXP0118105a	244221003	MAP	1/20/10 17:11	940094	10-1149	2	LANL	USE	S
EXP0118106a	244221004	MAP	1/20/10 17:41	940094	10-1149	2	LANL	USE	S
EXP0118107a	244221005	MAP	1/20/10 18:10	940094	10-1149	2	LANL	USE	S
EXP0118108a	244221006	MAP	1/20/10 18:40	940094	10-1149	2	LANL	USE	S
EXP0118109a	WXXCCV	MAP	1/20/10 19:09			1		USE	C
EXP0118110a	XIBLK12	MAP	1/20/10 19:39			1		USE	B
EXP0118111a	WXXCRI	MAP	1/20/10 20:09			1		USE	C
EXP0118112a	244219002	MAP	1/20/10 20:38	940577	10-1151	5	LANL	DUSE	S
EXP0118113a	244219002	MAP	1/20/10 21:08	940577	10-1151	5	LANL	USE	S
EXP0118114a	244219004	MAP	1/20/10 21:37	940577	10-1151	2	LANL	USE	S
EXP0118115a	XIBLK13	MAP	1/20/10 22:07			1		USE	B
EXP0118116a	1202011748	MAP	1/20/10 22:36	940099	10-1155	2	LANL	USE	S
EXP0118117a	1202011749	MAP	1/20/10 23:06	940099	10-1155	2	LANL	USE	S
EXP0118118a	244223001	MAP	1/20/10 23:35	940099	10-1155	2	LANL	USE	S
EXP0118119a	1202011750	MAP	1/21/10 0:05	940099	10-1155	2	LANL	USE	S
EXP0118120a	1202011751	MAP	1/21/10 0:34	940099	10-1155	2	LANL	USE	S
EXP0118121a	244223002	MAP	1/21/10 1:04	940099	10-1155	2	LANL	USE	S
EXP0118122a	WXXCCV	MAP	1/21/10 1:33			1		USE	C
EXP0118123a	XIBLK14	MAP	1/21/10 2:03			1		USE	B
EXP0118124a	WXXCRI	MAP	1/21/10 2:32			1		USE	C
EXP0118125a	244223003	MAP	1/21/10 3:02	940099	10-1155	2	LANL	USE	S
EXP0118126a	244223004	MAP	1/21/10 3:31	940099	10-1155	2	LANL	USE	S
EXP0118127a	244223005	MAP	1/21/10 4:01	940099	10-1155	2	LANL	USE	S
EXP0118128a	244223006	MAP	1/21/10 4:30	940099	10-1155	2	LANL	USE	S
EXP0118129a	244223007	MAP	1/21/10 5:00	940099	10-1155	2	LANL	USE	S
EXP0118130a	244223008	MAP	1/21/10 5:29	940099	10-1155	2	LANL	USE	S
EXP0118131a	244223009	MAP	1/21/10 5:59	940099	10-1155	2	LANL	USE	S
EXP0118132a	244223010	MAP	1/21/10 6:28	940099	10-1155	2	LANL	USE	S
EXP0118133a	244223011	MAP	1/21/10 6:58	940099	10-1155	2	LANL	USE	S
EXP0118134a	244223012	MAP	1/21/10 7:27	940099	10-1155	2	LANL	USE	S
EXP0118135a	WXXCCV	MAP	1/21/10 7:57			1		USE	C
EXP0118136a	XIBLK15	MAP	1/21/10 8:26			1		USE	B
EXP0118137a	WXXCRI	MAP	1/21/10 8:56			1		USE	C
EXP0118138a	244223013	MAP	1/21/10 9:25	940099	10-1155	2	LANL	USE	S
EXP0118139a	244223014	MAP	1/21/10 9:55	940099	10-1155	2	LANL	DUSE-RA	S
EXP0118140a	244223015	MAP	1/21/10 10:24	940099	10-1155	2	LANL	USE	S

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EXP0118141a	244223016	MAP	1/21/10 10:54	940099	10-1155	2	LANL	USE	S
EXP0118142a	244223017	MAP	1/21/10 11:23	940099	10-1155	2	LANL	USE	S
EXP0118143a	244223018	MAP	1/21/10 11:53	940099	10-1155	2	LANL	USE	S
EXP0118144a	244223019	MAP	1/21/10 12:22	940099	10-1155	2	LANL	USE	S
EXP0118145a	244223020	MAP	1/21/10 12:52	940099	10-1155	2	LANL	USE	S
EXP0118146a	244223014	MAP	1/21/10 13:21	940099	10-1155	2	LANL	USE	S
EXP0118147a	244219003	MAP	1/21/10 13:51	940577	10-1151	5	LANL	USE	S
EXP0118148a	WXXCCV	MAP	1/21/10 14:20			1		USE	C
EXP0118149a	XIBLK16	MAP	1/21/10 14:50			1		USE	B
EXP0118150a	WXXCRI	MAP	1/21/10 15:19			1		USE	C
EXP0118151a	244223013	MAP	1/21/10 15:49	940099	10-1155	5	LANL	DUSE	S
EXP0118152a	244223015	MAP	1/21/10 16:19	940099	10-1155	5	LANL	DUSE	S
EXP0118153a	244223016	MAP	1/21/10 16:48	940099	10-1155	10	LANL	USE	S
EXP0118154a	XIBLK17	MAP	1/21/10 17:18			1		USE	B
EXP0118155a	1202011699	MAP	1/21/10 17:47	940080	Various	2	LANL	USE	S
EXP0118156a	1202011700	MAP	1/21/10 18:17	940080	Various	2	LANL	USE	S
EXP0118157a	244125001	MAP	1/21/10 18:46	940080	10-1130	2	LANL	USE	S
EXP0118158a	1202011701	MAP	1/21/10 19:16	940080	10-1130	2	LANL	USE	S
EXP0118159a	1202011702	MAP	1/21/10 19:45	940080	10-1130	2	LANL	USE	S
EXP0118160a	244125002	MAP	1/21/10 20:15	940080	10-1130	2	LANL	USE	S
EXP0118161a	WXXCCV	MAP	1/21/10 20:44			1		USE	C
EXP0118162a	XIBLK18	MAP	1/21/10 21:14			1		USE	B
EXP0118163a	WXXCRI	MAP	1/21/10 21:43			1		USE	C
EXP0118164a	244125003	MAP	1/21/10 22:13	940080	10-1130	2	LANL	USE	S
EXP0118165a	244125004	MAP	1/21/10 22:42	940080	10-1130	2	LANL	USE	S
EXP0118166a	244215002	MAP	1/21/10 23:12	940080	10-1153	2	LANL	USE	S
EXP0118167a	244215003	MAP	1/21/10 23:41	940080	10-1153	2	LANL	USE	S
EXP0118168a	244215004	MAP	1/22/10 0:11	940080	10-1153	2	LANL	USE	S
EXP0118169a	244215005	MAP	1/22/10 0:40	940080	10-1153	2	LANL	USE	S
EXP0118170a	244215006	MAP	1/22/10 1:10	940080	10-1153	2	LANL	USE	S
EXP0118171a	244215007	MAP	1/22/10 1:39	940080	10-1153	2	LANL	USE	S
EXP0118172a	WXXCCV	MAP	1/22/10 2:09			1		USE	C
EXP0118173a	XIBLK19	MAP	1/22/10 2:38			1		USE	B
EXP0118174a	WXXCRI	MAP	1/22/10 3:08			1		USE	C
EXP0118175a	1202013482	MAP	1/22/10 3:37	940796	Various	2	LANL	USE	S
EXP0118176a	1202013483	MAP	1/22/10 4:07	940796	Various	2	LANL	USE	S
EXP0118177a	244413001	MAP	1/22/10 4:36	940796	10-1202	2	LANL	USE	S

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EXP0118178a	1202013484	MAP	1/22/10 5:06	940796	10-1202	2	LANL	USE	S
EXP0118179a	1202013485	MAP	1/22/10 5:35	940796	10-1202	2	LANL	USE	S
EXP0118180a	244413002	MAP	1/22/10 6:05	940796	10-1202	2	LANL	USE	S
EXP0118181a	244413003	MAP	1/22/10 6:34	940796	10-1202	2	LANL	USE	S
EXP0118182a	244413004	MAP	1/22/10 7:04	940796	10-1202	2	LANL	USE	S
EXP0118183a	244413005	MAP	1/22/10 7:33	940796	10-1202	2	LANL	USE	S
EXP0118184a	WXXCCV	MAP	1/22/10 8:03			1		USE	C
EXP0118185a	XIBLK20	MAP	1/22/10 8:32			1		USE	B
EXP0118186a	WXXCRI	MAP	1/22/10 9:02			1		USE	C

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GEL ORGANIC RUN LOG

INSTRUMENT ID: LCMSMS4

Date: 01/20/10
Extr. Injection Volume: 10uL
Sequence Number: 012010exs
Initial Calibration Date: 012010

Method: 8321A-Modified
Int. Std.: N/A
Mobile Phase Lot#:1236350, 1246467
Standard-Samp Reagent Lot# :1246195, 1253092

Reviewed By: Hnm
Date: 01/21/10
SOP: GL-OA-E-056 Rev.12
Alt Check Std. ID: WXX100120-26

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC Flag
EXS01200001.wiff	XIBLK01	LER	1/20/2010 10:28			1		USE	B
EXS01200002.wiff	XIBLK01	LER	1/20/2010 10:45			1		USE	B
EXS01200003.wiff	WXXICAL-19	LER	1/20/2010 11:01			1		USE	I
EXS01200004.wiff	WXXICAL-20	LER	1/20/2010 11:16			1		USE	I
EXS01200005.wiff	WXXICAL-21	LER	1/20/2010 11:32			1		USE	I
EXS01200006.wiff	WXXICAL-22	LER	1/20/2010 11:48			1		USE	I
EXS01200007.wiff	WXXICAL-23	LER	1/20/2010 12:04			1		USE	I
EXS01200008.wiff	WXXICAL-24	LER	1/20/2010 12:19			1		USE	I
EXS01200009.wiff	WXXICAL-25	LER	1/20/2010 12:35			1		USE	I
EXS01200010.wiff	XIBLK02	LER	1/20/2010 12:51			1		USE	B
EXS01200011.wiff	WXXICV	LER	1/20/2010 13:06			1		USE	C
EXS01200012.wiff	XIBLK03	LER	1/20/2010 13:22			1		USE	B
EXS01200013.wiff	WXXCRI	LER	1/20/2010 13:38			1		USE	C
EXS01200014.wiff	1202011650	LER	1/20/2010 13:53	940057	10-1127	2	LANL	USE	S
EXS01200015.wiff	1202011651	LER	1/20/2010 14:09	940057	10-1127	2	LANL	USE	S
EXS01200016.wiff	244142001	LER	1/20/2010 14:25	940057	10-1127	2	LANL	USE	S
EXS01200017.wiff	1202011652	LER	1/20/2010 14:41	940057	10-1127	2	LANL	USE	S
EXS01200018.wiff	1202011653	LER	1/20/2010 14:56	940057	10-1127	2	LANL	USE	S
EXS01200019.wiff	244142002	LER	1/20/2010 15:12	940057	10-1127	2	LANL	USE	S
EXS01200020.wiff	244142003	LER	1/20/2010 15:28	940057	10-1127	2	LANL	USE	S
EXS01200021.wiff	244142004	LER	1/20/2010 15:43	940057	10-1127	2	LANL	USE	S
EXS01200022.wiff	244142005	LER	1/20/2010 15:59	940057	10-1127	2	LANL	USE	S
EXS01200023.wiff	244142006	LER	1/20/2010 16:15	940057	10-1127	2	LANL	USE	S
EXS01200024.wiff	WXXCCV	LER	1/20/2010 16:30			1		USE	C
EXS01200025.wiff	XIBLK04	LER	1/20/2010 16:46			1		USE	B
EXS01200026.wiff	WXXCRI	LER	1/20/2010 17:02			1		USE	C
EXS01200027.wiff	244142007	LER	1/20/2010 17:18	940057	10-1127	2	LANL	USE	S
EXS01200028.wiff	244142008	LER	1/20/2010 17:33	940057	10-1127	2	LANL	USE	S
EXS01200029.wiff	244142009	LER	1/20/2010 17:49	940057	10-1127	2	LANL	USE	S

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EXS01200030.wiff	244142010	LER	1/20/2010 18:05	940057	10-1127	2	LANL	USE	S
EXS01200031.wiff	244142011	LER	1/20/2010 18:20	940057	10-1127	2	LANL	USE	S
EXS01200032.wiff	244142012	LER	1/20/2010 18:36	940057	10-1127	2	LANL	USE	S
EXS01200033.wiff	244142013	LER	1/20/2010 18:52	940057	10-1127	2	LANL	USE	S
EXS01200034.wiff	244142014	LER	1/20/2010 19:07	940057	10-1127	2	LANL	USE	S
EXS01200035.wiff	244142015	LER	1/20/2010 19:23	940057	10-1127	2	LANL	USE	S
EXS01200036.wiff	244142016	LER	1/20/2010 19:39	940057	10-1127	2	LANL	USE	S
EXS01200037.wiff	WXXCCV	LER	1/20/2010 19:55			1		USE	C
EXS01200038.wiff	XIBLK05	LER	1/20/2010 20:10			1		USE	B
EXS01200039.wiff	WXXCRI	LER	1/20/2010 20:26			1		USE	C
EXS01200040.wiff	244142017	LER	1/20/2010 20:42	940057	10-1127	2	LANL	USE	S
EXS01200041.wiff	244142018	LER	1/20/2010 20:57	940057	10-1127	2	LANL	USE	S
EXS01200042.wiff	XIBLK06	LER	1/20/2010 21:13			1		USE	B
EXS01200043.wiff	1202014483	LER	1/20/2010 21:29	941226	VARIOUS	2	LANL	USE	S
EXS01200044.wiff	1202014484	LER	1/20/2010 21:44	941226	VARIOUS	2	LANL	USE	S
EXS01200045.wiff	1202014487	LER	1/20/2010 22:00	941226	VARIOUS	2	LANL	USE	S
EXS01200046.wiff	244509007	LER	1/20/2010 22:16	941226	10-1187	2	LANL	USE	S
EXS01200047.wiff	244524007	LER	1/20/2010 22:32	941226	10-1184	2	LANL	USE	S
EXS01200048.wiff	WXXCCV	LER	1/20/2010 22:47			1		USE	C
EXS01200049.wiff	XIBLK07	LER	1/20/2010 23:03			1		USE	B
EXS01200050.wiff	WXXCRI	LER	1/20/2010 23:19			1		USE	C
EXS01200051.wiff	1202011699	LER	1/20/2010 23:34	940080	VARIOUS	2	LANL	USE	S
EXS01200052.wiff	1202011700	LER	1/20/2010 23:50	940080	VARIOUS	2	LANL	USE	S
EXS01200053.wiff	244125001	LER	1/21/2010 0:06	940080	10-1130	2	LANL	USE	S
EXS01200054.wiff	1202011701	LER	1/21/2010 0:22	940080	10-1130	2	LANL	USE	S
EXS01200055.wiff	1202011702	LER	1/21/2010 0:37	940080	10-1130	2	LANL	USE	S
EXS01200056.wiff	244125002	LER	1/21/2010 0:53	940080	10-1130	2	LANL	USE	S
EXS01200057.wiff	244125003	LER	1/21/2010 1:09	940080	10-1130	2	LANL	USE	S
EXS01200058.wiff	244125004	LER	1/21/2010 1:24	940080	10-1130	2	LANL	USE	S
EXS01200059.wiff	244215002	LER	1/21/2010 1:40	940080	10-1153	2	LANL	USE	S
EXS01200060.wiff	244215003	LER	1/21/2010 1:56	940080	10-1153	2	LANL	USE	S
EXS01200061.wiff	WXXCCV	LER	1/21/2010 2:12			1		USE	C
EXS01200062.wiff	XIBLK08	LER	1/21/2010 2:27			1		USE	B
EXS01200063.wiff	WXXCRI	LER	1/21/2010 2:43			1		USE	C
EXS01200064.wiff	244215004	LER	1/21/2010 2:59	940080	10-1153	2	LANL	USE	S
EXS01200065.wiff	244215005	LER	1/21/2010 3:14	940080	10-1153	2	LANL	USE	S
EXS01200066.wiff	244215006	LER	1/21/2010 3:30	940080	10-1153	2	LANL	USE	S

EXS01200067.wiff	244215007	LER	1/21/2010 3:46	940080	10-1153	2	LANL	USE	S
EXS01200068.wiff	WXXCCV	LER	1/21/2010 4:02			1		USE	C
EXS01200069.wiff	XIBLK09	LER	1/21/2010 4:17			1		USE	B
EXS01200070.wiff	WXXCRI	LER	1/21/2010 4:33			1		USE	C

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GC SEMIVOLATILE PCB ANALYSIS

PCB Case Narrative
Los Alamos National Laboratory (LANL)
SDG 10-1130

Method/Analysis Information

Procedure:	**Analysis of Polychlorinated Biphenyls by ECD**
Analytical Method:	SW846 8082
Prep Method:	SW846 3550B
Analytical Batch Number:	940403
Prep Batch Number:	940402

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 8082:

Sample ID	Client ID
244125001	RE12-10-7698
244125002	RE12-10-7697
1202012544	Method Blank (MB)
1202012545	Laboratory Control Sample (LCS)
1202012546	244126019(RE12-10-7657) Matrix Spike (MS)
1202012547	244126019(RE12-10-7657) Matrix Spike Duplicate (MSD)

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

Preparation/Analytical Method Verification

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-040 REV# 14.

Raw data reports are processed and reviewed by the analyst using the Target software package. False positives have been removed from the Target quantitation reports per standard operating procedures (SOP) section 23.0.

Calibration Information

Please note that the 'Cal Date' indicated on each quantitation report reflects the date and time of the most recent calibrated analyte(s) in the Target processing method. Since the laboratory may calibrate with multiple solutions on different days using the same processing method, the Target software will update the 'Cal Date' to the last calibration file, date and time. The correct dates and times for all calibration files are located on the Calibration History report in the Standard Data section in the data package.

Due to software limitations, the Calibration Summary Form 6 may not indicate all the calibration files comprising the initial calibration. A complete list of the initial calibration data files are shown in the Calibration History report located in the Standard Data section of the data package.

Initial Calibration
All initial calibration requirements have been met for this sample delivery group (SDG).

The linear equation used in Target and indicated on the initial calibration summary form is not a conventional linear equation (slope intercept formula) and does not match the equation found in SW-846 method 8000B. The x and y axes are inversed in Target, so that the instrument response is treated as the independent variable (x) and the concentration ratio is treated as the dependent variable (y). The equation used in Target to calculate sample results is adjusted to account for the linear equation inversion and reciprocal slope. The adjusted calculation has been independently verified to produce valid results.

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

Quality Control (QC) Information

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

Surrogate Recoveries
All surrogate recoveries were within the established acceptance criteria for this SDG.

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

QC Sample Designation
A LANL sample of similar matrix associated with another SDG (#10-1131) was selected for the matrix spike and matrix spike duplicate analysis. A Form III and QC raw data are included in the package summarizing the results.

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

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries for this SDG 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.

Technical Information

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

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP. All sample extracts were cleaned using alumina. Additionally, copper was added to all sample extracts to remove sulfur.

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

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

Miscellaneous Information

Electronic Package Comment

The following package was generated using an electronic data processing program referred to as "virtual packaging". In an effort to increase quality and efficiency, the laboratory is developing systems to eventually generate all data packages electronically. The following change from "traditional" packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative of each electronic package will indicate the analyst, reviewer, and report specialist names associated with the generation of the data and package. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Data Exception (DER) Documentation
Data exception reports (DERs) are for documentation of any procedural anomalies that may deviate from referenced

SOP or contractual document. A DER was not required for this SDG.

Manual Integrations
Certain standards and samples may have required manual integration to correctly position the baseline as set in the calibration standard injections. If manual integration was performed, copies of all manual integration peak profiles are included in the raw data section of this PCB fraction.

Additional Comments
The additional comments field is used to address special issues associated with each analysis, clarify method/contractual issues pertaining to the analysis, and to list any report documents generated as a result of sample analysis or review. The following additional comments were required:

The higher results from either column have been chosen and reported in the data package for the client samples, MB and LCS.

The data reported on the form I and III may differ slightly from the data reported on the form X. This is due to software limitations in rounding differences between the forms.

Aroclors quantitated on the raw data report by the Target data system do not necessarily represent positive Aroclor identification. In order for positive identification to be made, the Aroclor must match in pattern and retention time; as well as quantitate relatively close between the primary and confirmation columns, as specified in SW846 method 8000. When these conditions are not met, the Aroclor is reported as a non-detect on the data report. These situations will be noted on the raw data as DMP, representing does not match pattern, or DNC does not confirm.

Due to software limitation, the Form VIIs will display the results either in the % difference or % drift depending on the type of the calibration curve. If the curve of all analytes is generated using an average response factor (RF), the Form VII will display results using the %difference calculation (RF). If the curve of one or more analytes is generated using a linear curve, the Form VII will display results using the % drift calculation (by concentration) for all analytes.

System Configuration

The Semi-Volatiles-PCB analysis was performed on the following instrument configuration:

Instrument ID	Instrument	System Configuration	Column ID	Column Description
ECD1A.I_1	HP Gas Chromatograph	HP6890 Series ECD	Rtx-CLP I	30m x 0.25mm, 0.25um (Rtx-CLPesticide)
ECD1A.I_2	HP Gas Chromatograph	HP6890 Series ECD	Rtx-CLP II	30m x 0.25mm, 0.20um (Rtx-CLPesticideII)

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: Andy Whitlock Date: 2-2-2010

Roadmap for LANL 10-1130 PCB

This roadmap was analyzed by yip00818 on 01-12-2010, 14:37.
This roadmap was reviewed by rob01090 on 01-19-2010, 15:38.
This roadmap was packaged by yml on 02-02-2010, 14:49.
This roadmap was validated by rob01090 on 02-02-2010, 21:44.

Front Sample Column

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	prepbatchid	comment
☐	N	/chem/ecd1a.i/011210.b/023f2301.d	244125001	sample	12-JAN-2010	11:46	10-1130.sub	RE12-10-7698	1.00000	940403	UPLOAD BOTH COLUMNS, USE HIGHER
☐	N	/chem/ecd1a.i/011210.b/024f2401.d	244125002	sample	12-JAN-2010	11:58	10-1130.sub	RE12-10-7697	1.00000	940403	UPLOAD BOTH COLUMNS, USE HIGHER

Back Sample Column

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	prepbatchid	comment
☐	N	/chem/ecd1a.i/011210.b/023b2301.d	244125001	sample	12-JAN-2010	11:46	10-1130.sub	RE12-10-7698	1.00000	940403	UPLOAD BOTH COLUMNS, USE HIGHER
☐	N	/chem/ecd1a.i/011210.b/024b2401.d	244125002	sample	12-JAN-2010	11:58	10-1130.sub	RE12-10-7697	1.00000	940403	UPLOAD BOTH COLUMNS, USE HIGHER

Front QC Sample Column

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	prepbatchid	comment
☐	N	/chem/ecd1a.i/011210.b/021f2101-2.d	1202012544	mb	12-JAN-2010	11:24	10-1130.sub	PBLK01	1.00000	940403	
☐	N	/chem/ecd1a.i/011210.b/022f2201-2.d	1202012545	lcs	12-JAN-2010	11:35	10-1130.sub	PBLK01LCS	1.00000	940403	

Back QC Sample Column

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	prepbatchid	comment
☐	N	/chem/ecd1a.i/011210.b/021b2101-2.d	1202012544	mb	12-JAN-2010	11:24	10-1130.sub	PBLK01	1.00000	940403	
☐	N	/chem/ecd1a.i/011210.b/022b2201-2.d	1202012545	lcs	12-JAN-2010	11:35	10-1130.sub	PBLK01LCS	1.00000	940403	

SAMPLE DATA SUMMARY

PCB
Certificate of Analysis
Sample Summary

SDG Number:	**10–1130**	**Date Collected:**	**01/05/2010 12:00**	**Matrix:**	**R**
Lab Sample ID:	**244125002**	**Date Received:**	**01/08/2010 09:05**	**%Moisture:**	**14.7**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**RE12–10–7697**	**Method:**	**SW846 8082**	**SOP Ref:**	**GL–OA–E–040**
Batch ID:	**940403**	**Inst:**	**ECD1A.I**	**Dilution:**	**1**
Run Date:	**01/12/2010 11:58**	**Analyst:**	**YS1**	**Inj. Vol:**	**1 uL**
Prep Date:	**01/11/2010 19:04**	**Aliquot:**	**30.03 g**	**Final Volume:**	**1 mL**
Data File:	**024f2401.d**	**Column:**	**1 CLP1**	**Level:**	**LOW**
	024b2401.d		**2 CLP2**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674–11–2	Aroclor–1016	U	3.90	ug/kg	1.30	3.90	1
11104–28–2	Aroclor–1221	U	3.90	ug/kg	1.30	3.90	1
11141–16–5	Aroclor–1232	U	3.90	ug/kg	1.30	3.90	1
53469–21–9	Aroclor–1242	U	3.90	ug/kg	1.30	3.90	1
12672–29–6	Aroclor–1248	U	3.90	ug/kg	1.30	3.90	1
11097–69–1	Aroclor–1254	U	3.90	ug/kg	1.30	3.90	1
11096–82–5	Aroclor–1260	U	3.90	ug/kg	1.30	3.90	1

PCB
Certificate of Analysis
Sample Summary

SDG Number:	10–1130	**Date Collected:**	01/05/2010 12:00	**Matrix:**	R
Lab Sample ID:	244125001	**Date Received:**	01/08/2010 09:05	**%Moisture:**	9.9
		Client:	LANL010	**Project:**	LANL01004
Client ID:	RE12–10–7698	**Method:**	SW846 8082	**SOP Ref:**	GL–OA–E–040
Batch ID:	940403	**Inst:**	ECD1A.I	**Dilution:**	1
Run Date:	01/12/2010 11:46	**Analyst:**	YS1	**Inj. Vol:**	1 uL
Prep Date:	01/11/2010 19:04	**Aliquot:**	30.12 g	**Final Volume:**	1 mL
Data File:	023f2301.d	**Column:**	1 CLP1	**Level:**	LOW
	023b2301.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674–11–2	Aroclor–1016	U	3.69	ug/kg	1.23	3.69	1
11104–28–2	Aroclor–1221	U	3.69	ug/kg	1.23	3.69	1
11141–16–5	Aroclor–1232	U	3.69	ug/kg	1.23	3.69	1
53469–21–9	Aroclor–1242	U	3.69	ug/kg	1.23	3.69	1
12672–29–6	Aroclor–1248	U	3.69	ug/kg	1.23	3.69	1
11097–69–1	Aroclor–1254	U	3.69	ug/kg	1.23	3.69	1
11096–82–5	Aroclor–1260	U	3.69	ug/kg	1.23	3.69	1

QUALITY CONTROL SUMMARY

Surrogate Recovery Report

SDG Number: 10–1130

Matrix Type: SOLID

CAP Column (1) : CLP1 **CAP Column (2) : CLP2**

Sample ID	Client ID	4CMX 1 %REC #	4CMX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #
1202012544	MB for batch 940402	66	61	67	66
1202012545	LCS for batch 940402	66	61	63	64
244125001	RE12–10–7698	64	59	64	65
244125002	RE12–10–7697	60	57	50	60

Surrogate	Acceptance Limits
4CMX = 4cmx	(34%–105%)
DCB = Decachlorobiphenyl	(33%–115%)

* Recovery outside Acceptance Limits

\# Column to be used to flag recovery values

D Sample Diluted

PCB

Quality Control Summary
Spike Recovery Report

SDG Number: 10–1130
Client ID: LCS for batch 940402
Lab Sample ID: 1202012545
Instrument: ECD1A.I
Analyst: YS1
Inj. Vol: 1 uL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 01/12/2010 11:35
Dilution: 1
Prep Batch ID: 940402
Batch ID: 940403

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
12674–11–2	LCS	Aroclor–1016	33.3	0.0	21.1	63	41–110
11096–82–5	LCS	Aroclor–1260	33.3	0.0	24.0	72	48–110

PCB

Quality Control Summary
Spike Recovery Report

SDG Number:	**10-1131**	**Sample Type:**	**Matrix Spike**
Client ID:	**RE12-10-7657MS**	**Matrix:**	**R**
Lab Sample ID:	**1202012546**	**%Moisture:**	**10.1**
Instrument:	**ECD1A.I**	**Analysis Date:**	**01/12/2010 12:23**
Analyst:	**YS1**	**Prep Batch ID:**	**940402**
Inj. Vol:	**1 uL**	**Batch ID:**	**940403**

Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
12674-11-2	MS	Aroclor-1016	37.0	0.00	U	23.1	62	23-117
11096-82-5	MS	Aroclor-1260	37.0	0.00	U	28.9	78	27-116

PCB

Quality Control Summary
Spike Recovery Report

SDG Number:	**10-1131**	**Sample Type:**	**Matrix Spike Duplicate**
Client ID:	**RE12-10-7657MSD**	**Matrix:**	**R**
Lab Sample ID:	**1202012547**	**%Moisture:**	**10.1**
Instrument:	**ECD1A.I**	**Analysis Date:**	**01/12/2010 12:36**
Analyst:	**YS1**	**Prep Batch ID:**	**940402**
Inj. Vol:	**1 uL**	**Batch ID:**	**940403**

Dilution: 1

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
12674-11-2	MSD Aroclor-1016	37.1	0.00	U	23.5	63	23-117	2	0-30
11096-82-5	MSD Aroclor-1260	37.1	0.00	U	30.7	83	27-116	6	0-30

Method Blank Summary

SDG Number:	10-1130	Client:	LANL010	Matrix:	SOIL
Client ID:	MB for batch 940402	Instrument ID:	ECD1A.I_2 ECD1A.I_1	Data File:	021b2101-1.d 021f2101-1.d
Lab Sample ID:	1202012544				
Column:	CLP2 CLP1	Prep Date:	01/11/2010 19:04	Analyzed:	01/12/10 11:24
		Level:	LOW		

This method blank applies to the following samples and quality control samples:

Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01 LCS for batch 940402	1202012545	022f2201-1.d 022b2201-1.d	01/12/10	1135
02 RE12-10-7698	244125001	023f2301.d 023b2301.d	01/12/10	1146
03 RE12-10-7697	244125002	024f2401.d 024b2401.d	01/12/10	1158

SAMPLE DATA

PCB
Certificate of Analysis
Sample Summary

SDG Number:	**10–1130**	**Date Collected:**	**01/05/2010 12:00**	**Matrix:**	**R**
Lab Sample ID:	**244125002**	**Date Received:**	**01/08/2010 09:05**	**%Moisture:**	**14.7**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**RE12–10–7697**	**Method:**	**SW846 8082**	**SOP Ref:**	**GL–OA–E–040**
Batch ID:	**940403**	**Inst:**	**ECD1A.I**	**Dilution:**	**1**
Run Date:	**01/12/2010 11:58**	**Analyst:**	**YS1**	**Inj. Vol:**	**1 uL**
Prep Date:	**01/11/2010 19:04**	**Aliquot:**	**30.03 g**	**Final Volume:**	**1 mL**
Data File:	**024f2401.d**	**Column:**	**1 CLP1**	**Level:**	**LOW**
	024b2401.d		**2 CLP2**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674–11–2	Aroclor–1016	U	3.90	ug/kg	1.30	3.90	1
11104–28–2	Aroclor–1221	U	3.90	ug/kg	1.30	3.90	1
11141–16–5	Aroclor–1232	U	3.90	ug/kg	1.30	3.90	1
53469–21–9	Aroclor–1242	U	3.90	ug/kg	1.30	3.90	1
12672–29–6	Aroclor–1248	U	3.90	ug/kg	1.30	3.90	1
11097–69–1	Aroclor–1254	U	3.90	ug/kg	1.30	3.90	1
11096–82–5	Aroclor–1260	U	3.90	ug/kg	1.30	3.90	1

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/011210.b/024f2401.d
Lab Smp Id: 244125002 Client Smp ID: RE12-10-7697
Inj Date : 12-JAN-2010 11:58
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |244125002|1|
Misc Info : |ECD82P_1S|940403|SVA|LANL|SOIL|RE12-10-7697|||
Comment :
Method : /chem/ecd1a.i/011210.b/ECD1-F-8082-121409.m
Meth Date : 23-Jan-2010 10:48 yip00818 Quant Type: ESTD
Cal Date : 14-DEC-2009 11:34 Cal File: 040f4001.d
Als bottle: 24
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 10-1130.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.03000	Weight of sample extracted (g)
M	14.70100	% Moisture

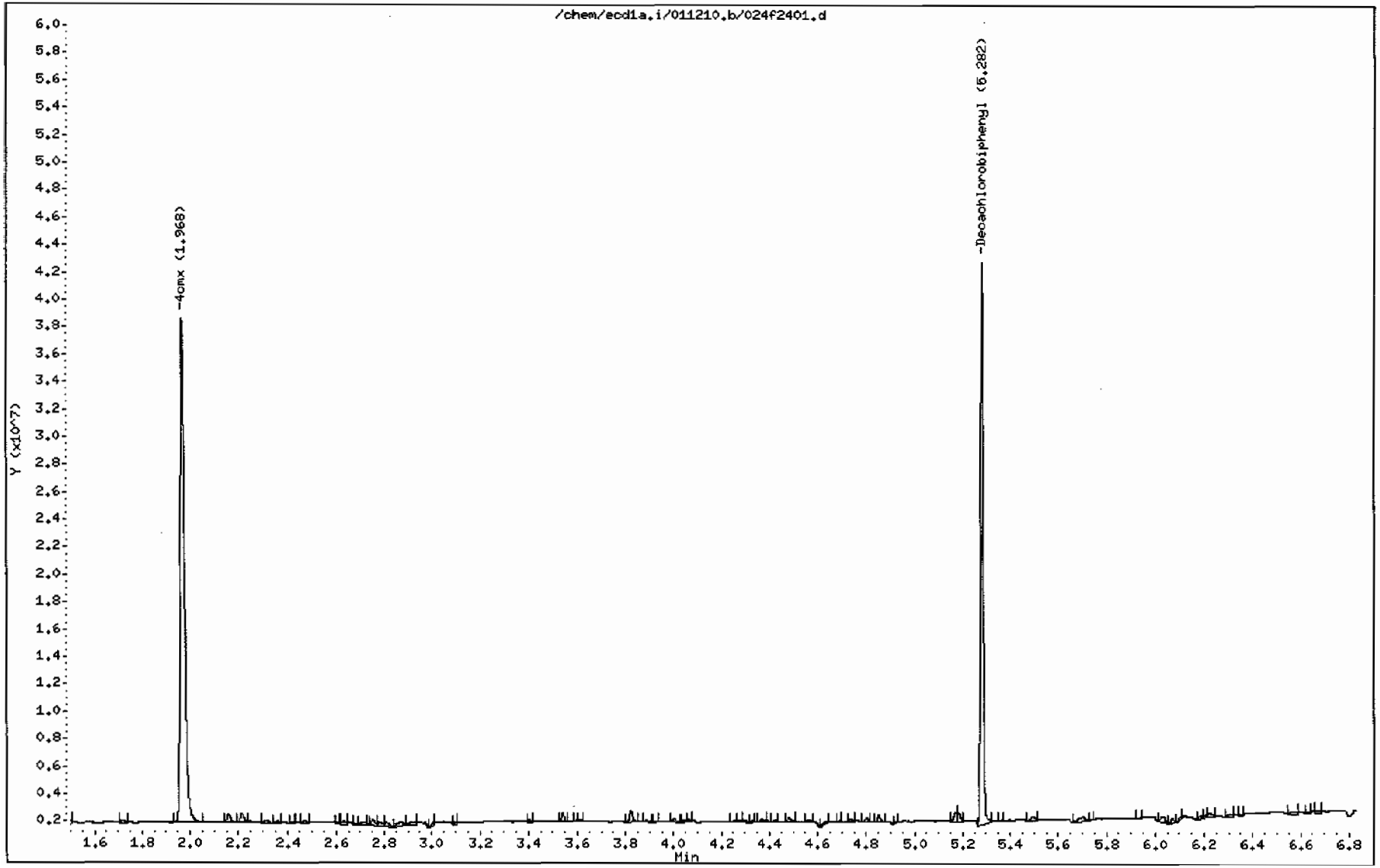
Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.968	1.969	-0.001	43132321	120.656	4.7	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.282	5.283	-0.001	30080119	99.5997	3.9	80.00- 120.00	100.00

Data File: /chem/ecd1a.i/011210.b/024f2401.d
Date : 12-JAN-2010 11:58
Client ID: RE12-10-7697
Sample Info: |244125002|1|
Volume Injected (uL): 1.0
Column phase: CLP1

Instrument: ecd1a.i

Operator: YS1
Column diameter: 0.25



GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/011210.b/024b2401.d
Lab Smp Id: 244125002 Client Smp ID: RE12-10-7697
Inj Date : 12-JAN-2010 11:58
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |244125002|1|
Misc Info : |ECD82P_1S|940403|SVA|LANL|SOIL|RE12-10-7697|||
Comment :
Method : /chem/ecd1a.i/011210.b/ECD1-B-8082-121409.m
Meth Date : 23-Jan-2010 10:48 yip00818 Quant Type: ESTD
Cal Date : 14-DEC-2009 12:16 Cal File: 044b4401.d
Als bottle: 24
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 10-1130.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.03000	Weight of sample extracted (g)
M	14.70100	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.299	2.299	0.000	32251421	113.028	4.4	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.942	5.945	-0.003	26792116	120.801	4.7	80.00- 120.00	100.00

Data File: /chem/ecd1a.i/011210.b/024b2401.d

Date : 12-JAN-2010 11:58

Client ID: RE12-10-7697

Sample Info: |244125002|1|

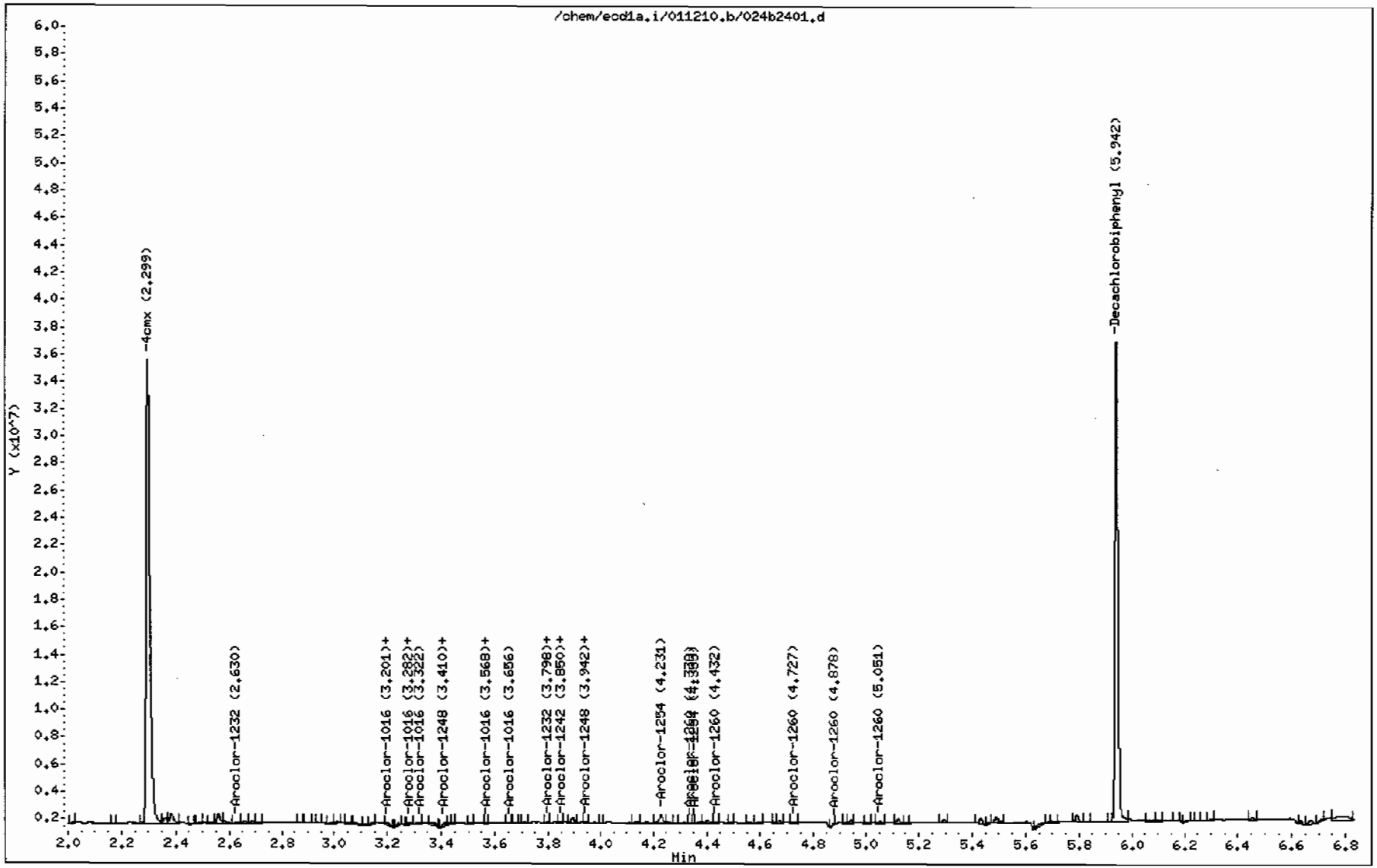
Volume Injected (uL): 1.0

Column phase: CLP2

Instrument: ecd1a.i

Operator: YS1

Column diameter: 0.25



PCB
Certificate of Analysis
Sample Summary

SDG Number:	**10-1130**	**Date Collected:**	**01/05/2010 12:00**	**Matrix:**	**R**
Lab Sample ID:	**244125001**	**Date Received:**	**01/08/2010 09:05**	**%Moisture:**	**9.9**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**RE12-10-7698**	**Method:**	**SW846 8082**	**SOP Ref:**	**GL-OA-E-040**
Batch ID:	**940403**	**Inst:**	**ECD1A.I**	**Dilution:**	**1**
Run Date:	**01/12/2010 11:46**	**Analyst:**	**YS1**	**Inj. Vol:**	**1 uL**
Prep Date:	**01/11/2010 19:04**	**Aliquot:**	**30.12 g**	**Final Volume:**	**1 mL**
Data File:	**023f2301.d**	**Column:**	**1 CLP1**	**Level:**	**LOW**
	023b2301.d		**2 CLP2**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.69	ug/kg	1.23	3.69	1
11104-28-2	Aroclor-1221	U	3.69	ug/kg	1.23	3.69	1
11141-16-5	Aroclor-1232	U	3.69	ug/kg	1.23	3.69	1
53469-21-9	Aroclor-1242	U	3.69	ug/kg	1.23	3.69	1
12672-29-6	Aroclor-1248	U	3.69	ug/kg	1.23	3.69	1
11097-69-1	Aroclor-1254	U	3.69	ug/kg	1.23	3.69	1
11096-82-5	Aroclor-1260	U	3.69	ug/kg	1.23	3.69	1

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/011210.b/023f2301.d
Lab Smp Id: 244125001 Client Smp ID: RE12-10-7698
Inj Date : 12-JAN-2010 11:46
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |244125001|1|
Misc Info : |ECD82P_1S|940403|SVA|LANL|SOIL|RE12-10-7698|||
Comment :
Method : /chem/ecd1a.i/011210.b/ECD1-F-8082-121409.m
Meth Date : 23-Jan-2010 10:48 yip00818 Quant Type: ESTD
Cal Date : 14-DEC-2009 11:34 Cal File: 040f4001.d
Als bottle: 23
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 10-1130.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.12000	Weight of sample extracted (g)
M	9.92410	% Moisture

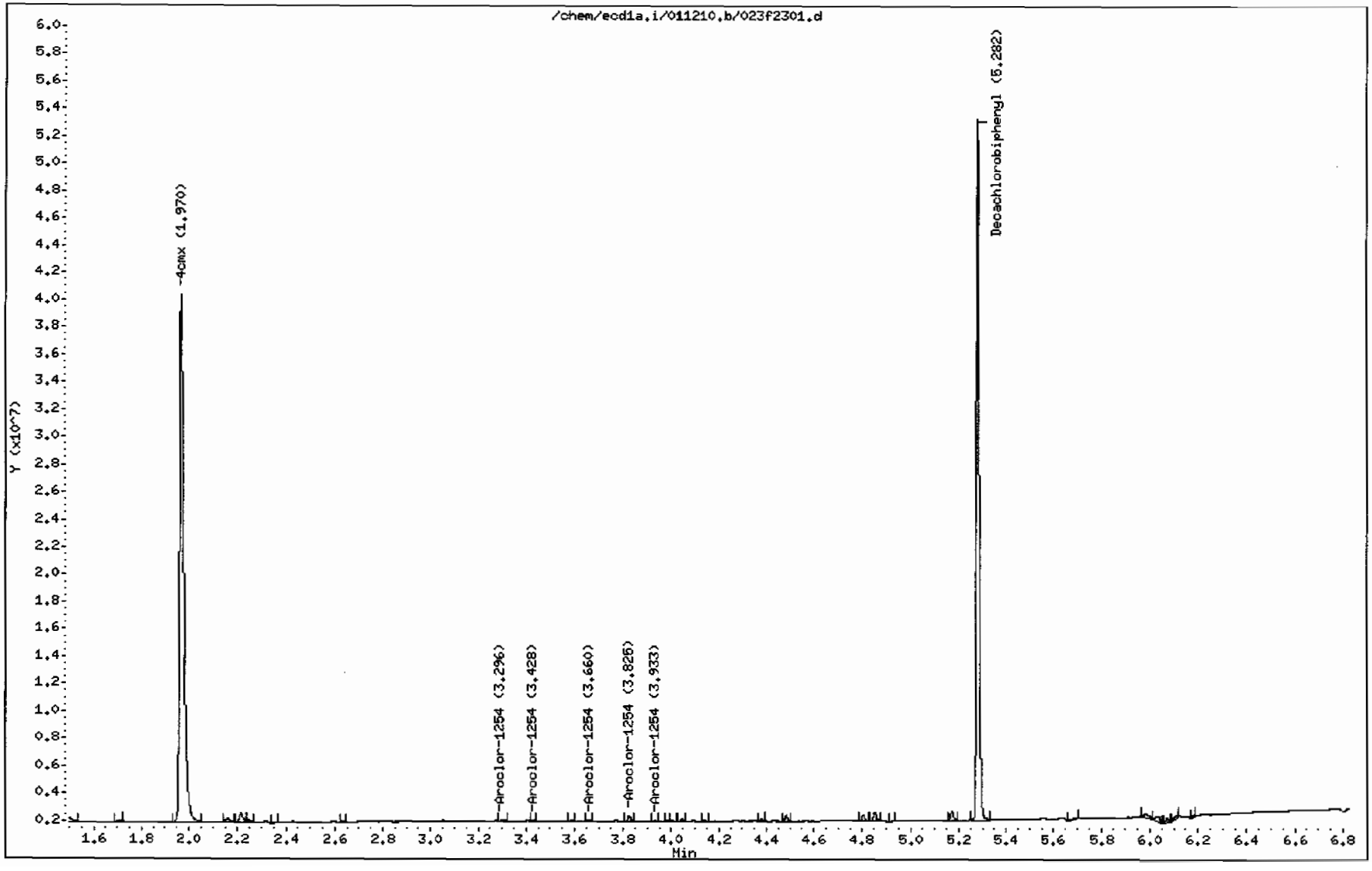
Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.970	1.969	0.001	45478481	127.219	4.7	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.282	5.283	-0.001	38895688	128.789	4.7	80.00- 120.00	100.00

Data File: /chem/ecd1a.i/011210.b/023f2301.d
Date : 12-JAN-2010 11:46
Client ID: RE12-10-7698
Sample Info: |244125001|1|
Volume Injected (uL): 1.0
Column phase: CLP1

Instrument: ecd1a.i

Operator: YS1
Column diameter: 0.25



GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/011210.b/023b2301.d
Lab Smp Id: 244125001 Client Smp ID: RE12-10-7698
Inj Date : 12-JAN-2010 11:46
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |244125001|1|
Misc Info : |ECD82P_1S|940403|SVA|LANL|SOIL|RE12-10-7698|||
Comment :
Method : /chem/ecd1a.i/011210.b/ECD1-B-8082-121409.m
Meth Date : 23-Jan-2010 10:48 yip00818 Quant Type: ESTD
Cal Date : 14-DEC-2009 12:16 Cal File: 044b4401.d
Als bottle: 23
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 10-1130.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

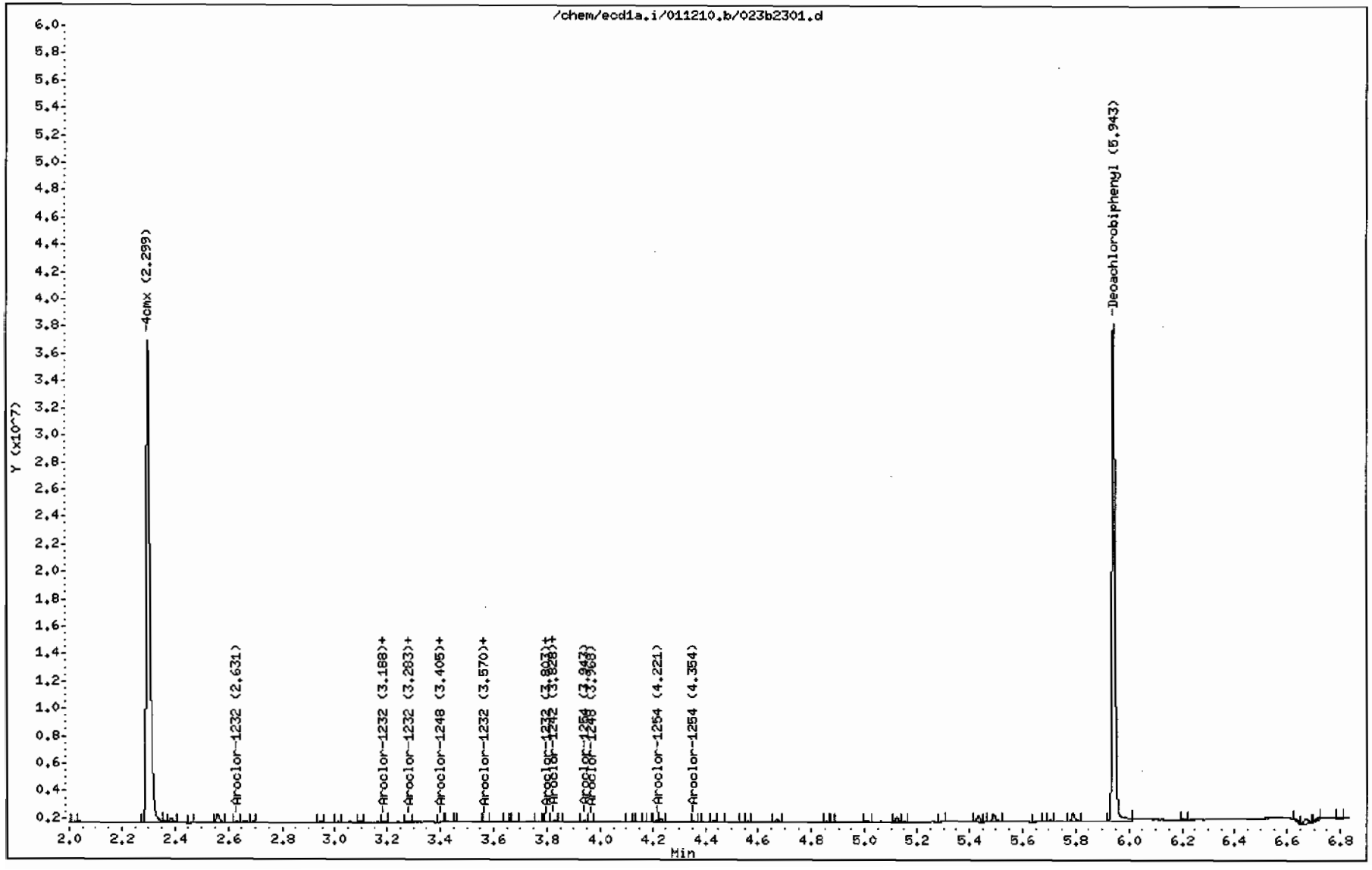
Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.12000	Weight of sample extracted (g)
M	9.92410	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.299	2.299	0.000	33837628	118.587	4.4	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.943	5.945	-0.002	28917375	130.384	4.8	80.00- 120.00	100.00

Data File: /chem/ecd1a.i/011210.b/023b2301.d
Date : 12-JAN-2010 11:46
Client ID: RE12-10-7698
Sample Info: |244125001|1|
Volume Injected (uL): 1.0
Column phase: CLP2

Instrument: ecd1a.i
Operator: YS1
Column diameter: 0.25



STANDARDS DATA

Report Date: 13-Jan-2010 08:03

Calibration History

Method : /chem/ecd1a.i/011210.b/ECD1-F-8082-121409.m
Start Cal Date: 14-DEC-2009 05:36
End Cal Date : 14-DEC-2009 12:37

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 100.00000		
14-DEC-2009 11:34	AR1268	/chem/ecd1a.i/121409.b/040f4001.d
14-DEC-2009 09:28	AR1248	/chem/ecd1a.i/121409.b/028f2801.d
14-DEC-2009 08:25	AR1242	/chem/ecd1a.i/121409.b/022f2201.d
14-DEC-2009 07:22	AR1254	/chem/ecd1a.i/121409.b/016f1601.d
14-DEC-2009 10:31	AR1660	/chem/ecd1a.i/121409.b/034f3401.d
Cal Level: 2 , Cal Amount: 200.00000		
14-DEC-2009 11:44	AR1268	/chem/ecd1a.i/121409.b/041f4101.d
14-DEC-2009 09:38	AR1248	/chem/ecd1a.i/121409.b/029f2901.d
14-DEC-2009 08:35	AR1242	/chem/ecd1a.i/121409.b/023f2301.d
14-DEC-2009 07:32	AR1254	/chem/ecd1a.i/121409.b/017f1701.d
14-DEC-2009 10:41	AR1660	/chem/ecd1a.i/121409.b/035f3501.d
Cal Level: 3 , Cal Amount: 500.00000		
14-DEC-2009 11:55	AR1268	/chem/ecd1a.i/121409.b/042f4201.d
14-DEC-2009 09:49	AR1248	/chem/ecd1a.i/121409.b/030f3001.d
14-DEC-2009 08:46	AR1242	/chem/ecd1a.i/121409.b/024f2401.d
14-DEC-2009 07:43	AR1254	/chem/ecd1a.i/121409.b/018f1801.d
14-DEC-2009 10:52	AR1660	/chem/ecd1a.i/121409.b/036f3601.d
Cal Level: 4 , Cal Amount: 1000.00000		
14-DEC-2009 12:37	DDTANALOGSTD	/chem/ecd1a.i/121409.b/046f4601.d
14-DEC-2009 09:59	AR1248	/chem/ecd1a.i/121409.b/031f3101.d
14-DEC-2009 08:56	AR1242	/chem/ecd1a.i/121409.b/025f2501.d
14-DEC-2009 07:53	AR1254	/chem/ecd1a.i/121409.b/019f1901.d
14-DEC-2009 11:02	AR1660	/chem/ecd1a.i/121409.b/037f3701.d
14-DEC-2009 12:06	AR1268	/chem/ecd1a.i/121409.b/043f4301.d
14-DEC-2009 05:58	AR1262	/chem/ecd1a.i/121409.b/008f0801.d
14-DEC-2009 05:47	AR1221	/chem/ecd1a.i/121409.b/007f0701.d
14-DEC-2009 05:36	AR1232	/chem/ecd1a.i/121409.b/006f0601.d
Cal Level: 5 , Cal Amount: 4000.00000		
14-DEC-2009 12:16	AR1268	/chem/ecd1a.i/121409.b/044f4401.d
14-DEC-2009 10:10	AR1248	/chem/ecd1a.i/121409.b/032f3201.d
14-DEC-2009 09:07	AR1242	/chem/ecd1a.i/121409.b/026f2601.d
14-DEC-2009 08:04	AR1254	/chem/ecd1a.i/121409.b/020f2001.d
14-DEC-2009 11:13	AR1660	/chem/ecd1a.i/121409.b/038f3801.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 4

Ccal Level: 4 , Ccal Amount: 1000		
12-JAN-2010 15:41	AR1660	/chem/ecd1a.i/011210.b/042f4201.d
Ccal Level: 4 , Ccal Amount: 1000		
12-JAN-2010 13:27	AR1660	/chem/ecd1a.i/011210.b/031f3101.d
Ccal Level: 4 , Ccal Amount: 1000		
12-JAN-2010 11:03	AR1660	/chem/ecd1a.i/011210.b/019f1901.d
Ccal Level: 4 , Ccal Amount: 1000		
12-JAN-2010 09:33	AR1268	/chem/ecd1a.i/011210.b/011f1101.d
Ccal Level: 4 , Ccal Amount: 1000		
12-JAN-2010 09:23	AR1262	/chem/ecd1a.i/011210.b/010f1001.d
Ccal Level: 4 , Ccal Amount: 1000		
12-JAN-2010 09:12	AR1242	/chem/ecd1a.i/011210.b/009f0901.d
Ccal Level: 4 , Ccal Amount: 1000		
12-JAN-2010 09:02	AR1660	/chem/ecd1a.i/011210.b/008f0801.d
Ccal Level: 4 , Ccal Amount: 1000		
12-JAN-2010 08:51	AR1221	/chem/ecd1a.i/011210.b/007f0701.d
Ccal Level: 4 , Ccal Amount: 1000		
12-JAN-2010 08:41	AR1232	/chem/ecd1a.i/011210.b/006f0601.d
Ccal Level: 4 , Ccal Amount: 1000		
12-JAN-2010 08:30	AR1248	/chem/ecd1a.i/011210.b/005f0501.d
Ccal Level: 4 , Ccal Amount: 1000		
12-JAN-2010 08:09	AR1254	/chem/ecd1a.i/011210.b/003f0301.d

Report Date: 13-Jan-2010 08:03

Calibration History

Method : /chem/ecd1a.i/011210.b/ECD1-B-8082-121409.m
Start Cal Date: 11-DEC-2009 10:17
End Cal Date : 14-DEC-2009 12:37

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 100.00000		
14-DEC-2009 11:34	AR1268	/chem/ecd1a.i/121409.b/040b4001.d
14-DEC-2009 09:28	AR1248	/chem/ecd1a.i/121409.b/028b2801.d
14-DEC-2009 08:25	AR1242	/chem/ecd1a.i/121409.b/022b2201.d
14-DEC-2009 07:22	AR1254	/chem/ecd1a.i/121409.b/016b1601.d
14-DEC-2009 10:31	AR1660	/chem/ecd1a.i/121409.b/034b3401.d
Cal Level: 2 , Cal Amount: 200.00000		
14-DEC-2009 11:44	AR1268	/chem/ecd1a.i/121409.b/041b4101.d
14-DEC-2009 09:38	AR1248	/chem/ecd1a.i/121409.b/029b2901.d
14-DEC-2009 08:35	AR1242	/chem/ecd1a.i/121409.b/023b2301.d
14-DEC-2009 07:32	AR1254	/chem/ecd1a.i/121409.b/017b1701.d
14-DEC-2009 10:41	AR1660	/chem/ecd1a.i/121409.b/035b3501.d
Cal Level: 3 , Cal Amount: 500.00000		
14-DEC-2009 11:55	AR1268	/chem/ecd1a.i/121409.b/042b4201.d
14-DEC-2009 09:49	AR1248	/chem/ecd1a.i/121409.b/030b3001.d
14-DEC-2009 08:46	AR1242	/chem/ecd1a.i/121409.b/024b2401.d
14-DEC-2009 07:43	AR1254	/chem/ecd1a.i/121409.b/018b1801.d
14-DEC-2009 10:52	AR1660	/chem/ecd1a.i/121409.b/036b3601.d
Cal Level: 4 , Cal Amount: 1000.00000		
14-DEC-2009 12:37	DDTANALOGSTD	/chem/ecd1a.i/121409.b/046b4601.d
14-DEC-2009 12:06	AR1268	/chem/ecd1a.i/121409.b/043b4301.d
14-DEC-2009 05:58	AR1262	/chem/ecd1a.i/121409.b/008b0801.d
14-DEC-2009 05:47	AR1221	/chem/ecd1a.i/121409.b/007b0701.d
14-DEC-2009 05:36	AR1232	/chem/ecd1a.i/121409.b/006b0601.d
14-DEC-2009 09:59	AR1248	/chem/ecd1a.i/121409.b/031b3101.d
14-DEC-2009 08:56	AR1242	/chem/ecd1a.i/121409.b/025b2501.d
14-DEC-2009 07:53	AR1254	/chem/ecd1a.i/121409.b/019b1901.d
14-DEC-2009 11:02	AR1660	/chem/ecd1a.i/121409.b/037b3701.d
Cal Level: 5 , Cal Amount: 4000.00000		
14-DEC-2009 12:16	AR1268	/chem/ecd1a.i/121409.b/044b4401.d
14-DEC-2009 10:10	AR1248	/chem/ecd1a.i/121409.b/032b3201.d
14-DEC-2009 09:07	AR1242	/chem/ecd1a.i/121409.b/026b2601.d
14-DEC-2009 08:04	AR1254	/chem/ecd1a.i/121409.b/020b2001.d
14-DEC-2009 11:13	AR1660	/chem/ecd1a.i/121409.b/038b3801.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 4

Ccal Level: 4 , Ccal Amount: 1000		
12-JAN-2010 15:41	AR1660	/chem/ecd1a.i/011210.b/042b4201.d
Ccal Level: 4 , Ccal Amount: 1000		
12-JAN-2010 13:27	AR1660	/chem/ecd1a.i/011210.b/031b3101.d
Ccal Level: 4 , Ccal Amount: 1000		
12-JAN-2010 11:03	AR1660	/chem/ecd1a.i/011210.b/019b1901.d
Ccal Level: 4 , Ccal Amount: 1000		
12-JAN-2010 09:33	AR1268	/chem/ecd1a.i/011210.b/011b1101.d
Ccal Level: 4 , Ccal Amount: 1000		
12-JAN-2010 09:23	AR1262	/chem/ecd1a.i/011210.b/010b1001.d
Ccal Level: 4 , Ccal Amount: 1000		
12-JAN-2010 09:12	AR1242	/chem/ecd1a.i/011210.b/009b0901.d
Ccal Level: 4 , Ccal Amount: 1000		
12-JAN-2010 09:02	AR1660	/chem/ecd1a.i/011210.b/008b0801.d
Ccal Level: 4 , Ccal Amount: 1000		
12-JAN-2010 08:51	AR1221	/chem/ecd1a.i/011210.b/007b0701.d
Ccal Level: 4 , Ccal Amount: 1000		
12-JAN-2010 08:41	AR1232	/chem/ecd1a.i/011210.b/006b0601.d
Ccal Level: 4 , Ccal Amount: 1000		
12-JAN-2010 08:30	AR1248	/chem/ecd1a.i/011210.b/005b0501.d
Ccal Level: 4 , Ccal Amount: 1000		
12-JAN-2010 08:09	AR1254	/chem/ecd1a.i/011210.b/003b0301.d

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COMPOUND LISTING

Method file : /chem/ecd1a.i/011210.b/ECD1-F-8082-121409.m
Quant Method : ESTD Target Version : 3.50
Last Update : 13-Jan-2010 07:57 Number of Cpnds : 15
Data Type : GC MULTI COMP

Global Integrator : Falcon

Chromat Events	Values
Initial:Start Threshold	12031.000000
Initial:End Threshold	6015.500000
Initial:Area Threshold	15489.000000
Initial:P-P Resolution	1.000000
Initial:Bunch Factor	2.000000
Initial:Negative Peaks	OFF
Initial:Tension	0.500000

Compound	RT	RT Window	RF
1 Aroclor-1016	2.424	2.394-2.454	1.387e+04
	2.702	2.672-2.732	1.010e+04
	2.794	2.764-2.824	1.176e+04
	2.832	2.802-2.862	6.599e+03
	3.043	3.013-3.073	8.673e+03
63 4,4-DDD	3.953	3.933-3.973	3.938e+05
64 4,4-DDE	3.603	3.583-3.623	4.795e+05
62 4,4-DDT	4.118	4.098-4.138	3.238e+05
2 Aroclor-1221	2.081	2.051-2.111	4.301e+03
	2.174	2.144-2.204	2.440e+03
	2.200	2.170-2.230	1.027e+04
3 Aroclor-1232	2.425	2.395-2.455	6.717e+03
	2.714	2.684-2.744	8.157e+03
	2.795	2.765-2.825	5.751e+03
	3.043	3.013-3.073	3.954e+03
	3.296	3.266-3.326	3.533e+03
4 Aroclor-1242	2.425	2.395-2.455	1.166e+04
	2.714	2.684-2.744	1.345e+04
	2.832	2.802-2.862	5.506e+03
	3.043	3.013-3.073	7.245e+03
	3.297	3.267-3.327	6.811e+03

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COMPOUND LISTING

Method file : /chem/ecd1a.i/011210.b/ECD1-F-8082-121409.m

Compound	RT	RT Window	RF
5 Aroclor-1248	3.093	3.063-3.123	7.848e+03
	3.245	3.215-3.275	6.870e+03
	3.295	3.265-3.325	1.331e+04
	3.428	3.398-3.458	1.101e+04
	3.660	3.630-3.690	7.455e+03
6 Aroclor-1254	3.271	3.241-3.301	1.249e+04
	3.426	3.396-3.456	1.672e+04
	3.660	3.630-3.690	2.071e+04
	3.823	3.793-3.853	1.569e+04
	3.932	3.902-3.962	1.517e+04
7 Aroclor-1260	3.769	3.739-3.799	1.675e+04
	3.932	3.902-3.962	2.474e+04
	4.163	4.133-4.193	1.469e+04
	4.305	4.275-4.335	1.518e+04
	4.484	4.454-4.514	3.435e+04
8 Aroclor-1262	3.769	3.739-3.799	1.402e+04
	3.931	3.901-3.961	1.841e+04
	4.162	4.132-4.192	2.251e+04
	4.305	4.275-4.335	2.033e+04
	4.484	4.454-4.514	4.317e+04
9 Aroclor-1268	4.669	4.639-4.699	5.438e+04
	4.692	4.662-4.722	5.419e+04
	4.805	4.775-4.835	4.052e+04
	5.008	4.978-5.038	1.833e+04
	5.173	5.143-5.203	1.233e+05
M 10 Aroclor-Total	1.000	0.980-1.020	
$ 11 4cmx	1.969	1.939-1.999	3.757e+05
$ 12 Decachlorobiphenyl	5.283	5.253-5.313	3.175e+05

GEL Laboratories LLC

COMPOUND LISTING

Method file : /chem/ecd1a.i/011210.b/ECD1-B-8082-121409.m
Quant Method : ESTD Target Version : 3.50
Last Update : 13-Jan-2010 07:57 Number of Cpnds : 15
Data Type : GC MULTI COMP

Global Integrator : Falcon

Chromat Events	Values
Initial:Start Threshold	7222.000000
Initial:End Threshold	3611.000000
Initial:Area Threshold	6833.000000
Initial:P-P Resolution	0.000000
Initial:Bunch Factor	2.000000
Initial:Negative Peaks	OFF
Initial:Tension	0.500000

Compound	RT	RT Window	RF
1 Aroclor-1016	3.195	3.165-3.225	1.261e+04
	3.279	3.249-3.309	9.328e+03
	3.342	3.312-3.372	5.411e+03
	3.569	3.539-3.599	7.052e+03
	3.645	3.615-3.675	6.551e+03
62 4,4-DDT	4.670	4.650-4.690	2.436e+05
63 4,4-DDE	4.139	4.119-4.159	3.580e+05
64 4,4-DDD	4.483	4.463-4.503	2.893e+05
2 Aroclor-1221	2.495	2.465-2.525	3.640e+03
	2.590	2.560-2.620	2.329e+03
	2.631	2.601-2.661	8.119e+03
3 Aroclor-1232	2.631	2.601-2.661	6.156e+03
	3.196	3.166-3.226	6.302e+03
	3.280	3.250-3.310	4.701e+03
	3.570	3.540-3.600	3.243e+03
	3.803	3.773-3.833	3.151e+03
4 Aroclor-1242	3.197	3.167-3.227	1.059e+04
	3.279	3.249-3.309	8.054e+03
	3.570	3.540-3.600	5.962e+03
	3.803	3.773-3.833	6.057e+03
	3.831	3.801-3.861	6.701e+03

GEL Laboratories LLC

COMPOUND LISTING

Method file : /chem/ecd1a.i/011210.b/ECD1-B-8082-121409.m

Compound	RT	RT Window	RF
5 Aroclor-1248	3.404	3.374-3.434	8.054e+03
	3.569	3.539-3.599	9.874e+03
	3.802	3.772-3.832	1.122e+04
	3.830	3.800-3.860	1.248e+04
	3.967	3.937-3.997	1.210e+04
6 Aroclor-1254	3.403	3.373-3.433	6.435e+03
	3.826	3.796-3.856	1.156e+04
	3.942	3.912-3.972	1.243e+04
	4.218	4.188-4.248	1.688e+04
	4.355	4.325-4.385	1.244e+04
7 Aroclor-1260	4.335	4.305-4.365	1.368e+04
	4.459	4.429-4.489	1.603e+04
	4.726	4.696-4.756	1.256e+04
	4.899	4.869-4.929	1.281e+04
	5.046	5.016-5.076	2.790e+04
8 Aroclor-1262	4.460	4.430-4.490	1.292e+04
	4.726	4.696-4.756	1.831e+04
	4.900	4.870-4.930	1.658e+04
	5.047	5.017-5.077	3.329e+04
	5.260	5.230-5.290	2.297e+04
9 Aroclor-1268	5.258	5.228-5.288	4.358e+04
	5.285	5.255-5.315	4.039e+04
	5.435	5.405-5.465	3.144e+04
	5.599	5.569-5.629	1.427e+04
	5.792	5.762-5.822	8.886e+04
M 10 Aroclor-Total	1.000	0.980-1.020	
$ 11 4cmx	2.299	2.269-2.329	3.000e+05
$ 12 Decachlorobiphenyl	5.945	5.915-5.975	2.332e+05

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 14-DEC-2009 05:36
End Cal Date : 14-DEC-2009 12:37
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /chem/ecd1a.i/011210.b/ECD1-F-8082-121409.m
Cal Date : 13-Jan-2010 07:57 yip00818
Curve Type : Average

Calibration File Names:
Level 1: /chem/ecd1a.i/121409.b/040f4001.d
Level 2: /chem/ecd1a.i/121409.b/041f4101.d
Level 3: /chem/ecd1a.i/121409.b/042f4201.d
Level 4: /chem/ecd1a.i/121409.b/046f4601.d
Level 5: /chem/ecd1a.i/121409.b/044f4401.d

Compound	100.000 Level 1	200.000 Level 2	500.000 Level 3	1000.000 Level 4	4000.000 Level 5	RRF	% RSD
1 Aroclor-1016(1)	15975	14641	13829	13236	11653	13867	11.596
(2)	10801	10349	9832	9922	9584	10098	4.757
(3)	13242	12280	11732	11291	10240	11757	9.507
(4)	7178	6867	6609	6421	5920	6599	7.183
(5)	9710	9021	8649	8224	7763	8673	8.604
63 4,4-DDD	+++++	+++++	+++++	393799	+++++	393799	0.000
64 4,4-DDE	+++++	+++++	+++++	479509	+++++	479509	0.000
62 4,4-DDT	+++++	+++++	+++++	323817	+++++	323817	0.000
2 Aroclor-1221(1)	+++++	+++++	+++++	4301	+++++	4301	0.000
(2)	+++++	+++++	+++++	2440	+++++	2440	0.000
(3)	+++++	+++++	+++++	10272	+++++	10272	0.000
3 Aroclor-1232(1)	+++++	+++++	+++++	6717	+++++	6717	0.000
(2)	+++++	+++++	+++++	8157	+++++	8157	0.000
(3)	+++++	+++++	+++++	5751	+++++	5751	0.000
(4)	+++++	+++++	+++++	3954	+++++	3954	0.000
(5)	+++++	+++++	+++++	3533	+++++	3533	0.000
4 Aroclor-1242(1)	13692	12467	11522	10819	9798	11660	12.846
(2)	14782	14429	13236	12555	12263	13453	8.301
(3)	6076	5890	5423	5191	4949	5506	8.563
(4)	8395	7578	7079	6747	6426	7245	10.645
(5)	7587	7189	6604	6378	6296	6811	8.178
5 Aroclor-1248(1)	9070	8103	7743	7247	7078	7848	10.119
(2)	7785	7181	6827	6444	6114	6870	9.456
(3)	15108	13267	13037	12915	12225	13310	8.094
(4)	12682	11331	10815	10392	9852	11015	9.799
(5)	8605	7806	7405	7124	6336	7455	11.244

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 14-DEC-2009 05:36
End Cal Date : 14-DEC-2009 12:37
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /chem/ecd1a.i/011210.b/ECD1-F-8082-121409.m
Cal Date : 13-Jan-2010 07:57 yip00818
Curve Type : Average

Compound	100.000 Level 1	200.000 Level 2	500.000 Level 3	1000.000 Level 4	4000.000 Level 5	RRF	% RSD
6 Aroclor-1254(1)	14281	12975	12313	11911	10947	12485	9.963
(2)	18803	17181	16666	15949	15010	16722	8.494
(3)	22492	20906	20786	20326	19059	20714	5.957
(4)	16753	15627	15809	15513	14770	15694	4.535
(5)	16595	15169	15433	15075	13591	15172	7.071
7 Aroclor-1260(1)	18145	17177	16842	16407	15189	16752	6.464
(2)	26410	24871	24973	24571	22887	24743	5.081
(3)	16099	14386	14855	14472	13625	14687	6.171
(4)	16517	14719	15311	15032	14343	15185	5.451
(5)	35425	33953	34899	34487	32987	34350	2.719
8 Aroclor-1262(1)	+++++	+++++	+++++	14019	+++++	14019	0.000
(2)	+++++	+++++	+++++	18406	+++++	18406	0.000
(3)	+++++	+++++	+++++	22511	+++++	22511	0.000
(4)	+++++	+++++	+++++	20327	+++++	20327	0.000
(5)	+++++	+++++	+++++	43170	+++++	43170	0.000
9 Aroclor-1268(1)	56914	55996	53872	52565	52528	54375	3.680
(2)	57500	55307	54092	52376	51697	54194	4.300
(3)	43006	41368	40020	38976	39247	40524	4.120
(4)	19620	18932	18085	17425	17569	18326	5.094
(5)	128350	126812	122798	118830	119599	123278	3.436
M 10 Aroclor-Total	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 11 4cmx	367897	454677	359986	359846	335942	375669	12.182
$ 12 Decachlorobiphenyl	316645	388263	307193	296602	278999	317541	13.206

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 11-DEC-2009 10:17
End Cal Date : 14-DEC-2009 12:37
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /chem/ecd1a.i/011210.b/ECD1-B-8082-121409.m
Cal Date : 13-Jan-2010 07:57 yip00818
Curve Type : Average

Calibration File Names:
Level 1: /chem/ecd1a.i/121409.b/040b4001.d
Level 2: /chem/ecd1a.i/121409.b/041b4101.d
Level 3: /chem/ecd1a.i/121409.b/042b4201.d
Level 4: /chem/ecd1a.i/121409.b/046b4601.d
Level 5: /chem/ecd1a.i/121409.b/044b4401.d

Compound	100.000 Level 1	200.000 Level 2	500.000 Level 3	1000.000 Level 4	4000.000 Level 5	___ RRF	% RSD
1 Aroclor-1016(1)	14281	12734	12848	12156	11039	12612	9.333
(2)	10954	9913	9256	8806	7710	9328	13.003
(3)	6310	5679	5380	5089	4598	5411	11.852
(4)	8214	7430	6981	6696	5938	7052	12.003
(5)	7754	6843	6481	6115	5561	6551	12.561
62 4,4-DDT	+++++	+++++	+++++	243613	+++++	243613	0.000
63 4,4-DDE	+++++	+++++	+++++	357996	+++++	357996	0.000
64 4,4-DDD	+++++	+++++	+++++	289343	+++++	289343	0.000
2 Aroclor-1221(1)	+++++	+++++	+++++	3640	+++++	3640	0.000
(2)	+++++	+++++	+++++	2329	+++++	2329	0.000
(3)	+++++	+++++	+++++	8119	+++++	8119	0.000
3 Aroclor-1232(1)	+++++	+++++	+++++	6156	+++++	6156	0.000
(2)	+++++	+++++	+++++	6302	+++++	6302	0.000
(3)	+++++	+++++	+++++	4701	+++++	4701	0.000
(4)	+++++	+++++	+++++	3243	+++++	3243	0.000
(5)	+++++	+++++	+++++	3151	+++++	3151	0.000
4 Aroclor-1242(1)	12348	11309	9989	9755	9542	10589	11.338
(2)	9730	8628	7875	7358	6677	8054	14.627
(3)	7163	6326	5763	5452	5107	5962	13.534
(4)	7183	6468	5900	5548	5185	6057	12.997
(5)	7820	7123	6589	6229	5746	6701	11.977
5 Aroclor-1248(1)	9914	8542	7972	7289	6553	8054	15.880
(2)	11996	10356	9798	9046	8173	9874	14.605
(3)	13306	11756	11119	10365	9555	11220	12.723
(4)	14720	13121	12480	11577	10516	12483	12.732
(5)	14361	12633	11977	11210	10342	12104	12.596

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 11-DEC-2009 10:17
End Cal Date : 14-DEC-2009 12:37
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /chem/ecd1a.i/011210.b/ECD1-B-8082-121409.m
Cal Date : 13-Jan-2010 07:57 yip00818
Curve Type : Average

Compound	100.000 Level 1	200.000 Level 2	500.000 Level 3	1000.000 Level 4	4000.000 Level 5	RRF	% RSD
6 Aroclor-1254 (1)	7857	6938	6317	5878	5185	6435	15.850
(2)	13759	12316	11389	10708	9625	11559	13.615
(3)	14674	13172	12243	11576	10492	12431	12.786
(4)	19102	17554	16808	16165	14771	16880	9.533
(5)	14276	12708	12612	11843	10739	12435	10.425
7 Aroclor-1260 (1)	15678	14232	13583	13177	11731	13680	10.567
(2)	18142	16574	16035	15527	13867	16029	9.709
(3)	14298	13064	12524	12030	10903	12564	9.989
(4)	14593	13310	12766	12230	11150	12810	9.970
(5)	30553	28626	28257	27276	24777	27898	7.569
8 Aroclor-1262 (1)	+++++	+++++	+++++	12922	+++++	12922	0.000
(2)	+++++	+++++	+++++	18311	+++++	18311	0.000
(3)	+++++	+++++	+++++	16579	+++++	16579	0.000
(4)	+++++	+++++	+++++	33287	+++++	33287	0.000
(5)	+++++	+++++	+++++	22972	+++++	22972	0.000
9 Aroclor-1268 (1)	48327	45655	43354	41349	39206	43578	8.193
(2)	44968	41865	39872	38249	36983	40388	7.790
(3)	35350	32573	30975	29630	28674	31440	8.372
(4)	16410	14977	13894	13214	12876	14274	10.077
(5)	96769	92419	87897	84047	83161	88859	6.460
M 10 Aroclor-Total	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 11 4cmx	307069	367145	286931	282899	256086	300026	13.893
$ 12 Decachlorobiphenyl	248884	286011	224119	212175	194946	233227	15.194

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 10-1130

Instrument ID: ECD1A Calibration Date: 01/12/10 Time: 0902

Lab File ID: 008F0801 Init. Calib. Date(s): 12/14/09 12/14/09

Heated Purge: (Y/N) N Init. Calib. Times: 1031 1113

GC Column: CLP1 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	13866.870	13485.876	0.01	-2.7	15.0
(2)	10097.726	10723.493	0.01	6.2	15.0
(3)	11757.020	11460.019	0.01	-2.5	15.0
(4)	6599.010	6856.400	0.01	3.9	15.0
(5)	8673.402	8914.101	0.01	2.8	15.0
Aroclor-1260	16752.150	17526.056	0.01	4.6	15.0
(2)	24742.603	26588.446	0.01	7.5	15.0
(3)	14687.346	15728.241	0.01	7.1	15.0
(4)	15184.529	16552.699	0.01	9.0	15.0
(5)	34350.443	37633.318	0.01	9.6	15.0
4cmx	357482.34	370322.48	0.01	3.6	15.0
Decachlorobiphenyl	302009.99	307865.06	0.01	1.9	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 10-1130

Instrument ID: ECD1A Calibration Date: 01/12/10 Time: 0902

Lab File ID: 008B0801 Init. Calib. Date(s): 12/14/09 12/14/09

Heated Purge: (Y/N) N Init. Calib. Times: 1031 1113

GC Column: CLP2 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	12611.539	12467.792	0.01	-1.1	15.0
(2)	9327.875	8419.719	0.01	-9.7	15.0
(3)	5411.316	5218.830	0.01	-3.6	15.0
(4)	7051.879	6829.739	0.01	-3.2	15.0
(5)	6550.733	6310.818	0.01	-3.7	15.0
Aroclor-1260	13680.027	12787.808	0.01	-6.5	15.0
(2)	16029.019	15544.463	0.01	-3.0	15.0
(3)	12563.933	11912.459	0.01	-5.2	15.0
(4)	12810.076	12233.996	0.01	-4.5	15.0
(5)	27897.674	27319.408	0.01	-2.1	15.0
4cmx	285339.98	275724.17	0.01	-3.4	15.0
Decachlorobiphenyl	221786.62	214390.79	0.01	-3.3	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 10-1130

Instrument ID: ECD1A Calibration Date: 01/12/10 Time: 1103

Lab File ID: 019F1901 Init. Calib. Date(s): 12/14/09 12/14/09

Heated Purge: (Y/N) N Init. Calib. Times: 1031 1113

GC Column: CLP1 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	13866.870	13310.670	0.01	-4.0	15.0
(2)	10097.726	10242.811	0.01	1.4	15.0
(3)	11757.020	11285.268	0.01	-4.0	15.0
(4)	6599.010	6765.072	0.01	2.5	15.0
(5)	8673.402	8738.943	0.01	0.8	15.0
Aroclor-1260	16752.150	17036.620	0.01	1.7	15.0
(2)	24742.603	25904.092	0.01	4.7	15.0
(3)	14687.346	15393.580	0.01	4.8	15.0
(4)	15184.529	16083.121	0.01	5.9	15.0
(5)	34350.443	36752.784	0.01	7.0	15.0
4cmx	357482.34	363951.48	0.01	1.8	15.0
Decachlorobiphenyl	302009.99	302177.43	0.01	0.0	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 10-1130

Instrument ID: ECD1A Calibration Date: 01/12/10 Time: 1103

Lab File ID: 019B1901 Init. Calib. Date(s): 12/14/09 12/14/09

Heated Purge: (Y/N) N Init. Calib. Times: 1031 1113

GC Column: CLP2 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	12611.539	12578.862	0.01	-0.2	15.0
(2)	9327.875	8317.700	0.01	-10.8	15.0
(3)	5411.316	5139.316	0.01	-5.0	15.0
(4)	7051.879	6728.760	0.01	-4.6	15.0
(5)	6550.733	6209.908	0.01	-5.2	15.0
Aroclor-1260	13680.027	12600.351	0.01	-7.9	15.0
(2)	16029.019	15305.012	0.01	-4.5	15.0
(3)	12563.933	11700.179	0.01	-6.9	15.0
(4)	12810.076	12037.919	0.01	-6.0	15.0
(5)	27897.674	26844.001	0.01	-3.8	15.0
4cmx	285339.98	272373.06	0.01	-4.5	15.0
Decachlorobiphenyl	221786.62	209659.97	0.01	-5.5	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 10-1130

Instrument ID: ECD1A Calibration Date: 01/12/10 Time: 1327

Lab File ID: 031F3101 Init. Calib. Date(s): 12/14/09 12/14/09

Heated Purge: (Y/N) N Init. Calib. Times: 1031 1113

GC Column: CLP1 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	13866.870	13975.254	0.01	0.8	15.0
(2)	10097.726	11118.675	0.01	10.1	15.0
(3)	11757.020	11874.482	0.01	1.0	15.0
(4)	6599.010	7065.924	0.01	7.1	15.0
(5)	8673.402	9128.367	0.01	5.2	15.0
Aroclor-1260	16752.150	17811.470	0.01	6.3	15.0
(2)	24742.603	27097.503	0.01	9.5	15.0
(3)	14687.346	16042.757	0.01	9.2	15.0
(4)	15184.529	16822.381	0.01	10.8	15.0
(5)	34350.443	38270.168	0.01	11.4	15.0
4cmx	357482.34	384339.66	0.01	7.5	15.0
Decachlorobiphenyl	302009.99	312466.13	0.01	3.5	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 10-1130

Instrument ID: ECD1A Calibration Date: 01/12/10 Time: 1327

Lab File ID: 031B3101 Init. Calib. Date(s): 12/14/09 12/14/09

Heated Purge: (Y/N) N Init. Calib. Times: 1031 1113

GC Column: CLP2 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	12611.539	13074.814	0.01	3.7	15.0
(2)	9327.875	8777.811	0.01	-5.9	15.0
(3)	5411.316	5413.636	0.01	0.0	15.0
(4)	7051.879	6892.457	0.01	-2.3	15.0
(5)	6550.733	6412.928	0.01	-2.1	15.0
Aroclor-1260	13680.027	13295.972	0.01	-2.8	15.0
(2)	16029.019	16138.030	0.01	0.7	15.0
(3)	12563.933	12348.659	0.01	-1.7	15.0
(4)	12810.076	12683.793	0.01	-1.0	15.0
(5)	27897.674	28029.483	0.01	0.5	15.0
4cmx	285339.98	286277.34	0.01	0.3	15.0
Decachlorobiphenyl	221786.62	219603.59	0.01	-1.0	15.0

FORM VII PEST

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/011210.b/003f0301.d
Lab Smp Id: WAR091216-54 Client Smp ID: AR125401
Inj Date : 12-JAN-2010 08:09
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR091216-54
Misc Info :
Comment :
Method : /chem/ecd1a.i/011210.b/ECD1-F-8082-121409.m
Meth Date : 23-Jan-2010 10:45 yip00818 Quant Type: ESTD
Cal Date : 14-DEC-2009 11:34 Cal File: 040f4001.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1254.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
6 Aroclor-1254					CAS #: 11097-69-1		
3.271	3.271	0.000	12037540	1000.00	964	80.00- 120.00	100.00
3.426	3.426	0.000	16646305	1000.00	995	118.29- 158.29	138.29
3.660	3.660	0.000	21499049	1000.00	1040	158.60- 198.60	178.60
3.823	3.823	0.000	16291323	1000.00	1040	115.34- 155.34	135.34
3.932	3.932	0.000	15561834	1000.00	1020	109.28- 149.28	129.28

Average of Peak Amounts = 1.01e+03

Data File: /chem/ecd1a.i/011210.b/003f0301.d

Date : 12-JAN-2010 08:09

Client ID: AR125401

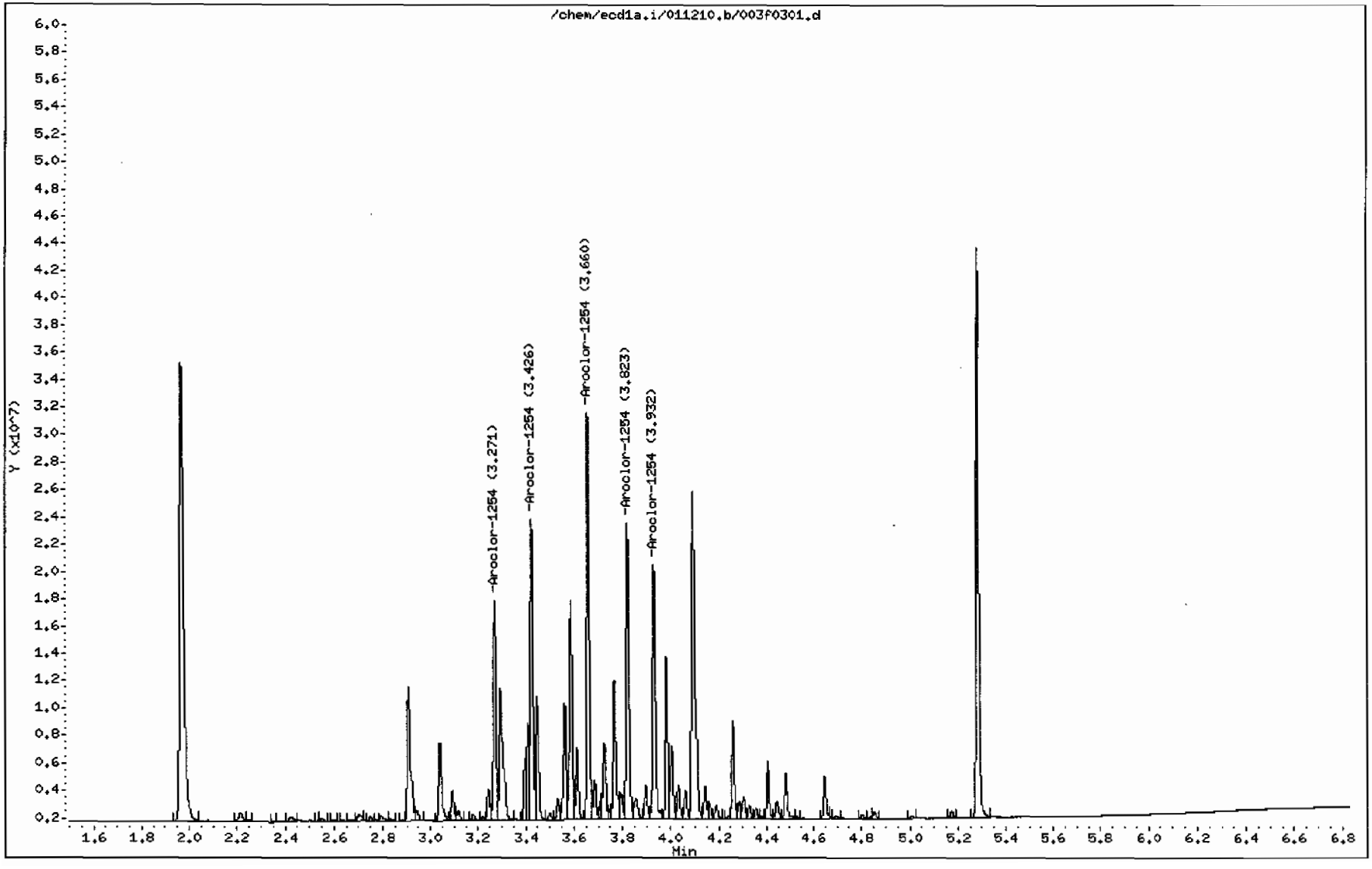
Sample Info: IWAR091216-54

Column phase: CLP1

Instrument: ecd1a.i

Operator: YS1

Column diameter: 0.25



GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/011210.b/003b0301.d
Lab Smp Id: WAR091216-54 Client Smp ID: AR125401
Inj Date : 12-JAN-2010 08:09
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR091216-54
Misc Info :
Comment :
Method : /chem/ecd1a.i/011210.b/ECD1-B-8082-121409.m
Meth Date : 23-Jan-2010 10:45 yip00818 Quant Type: ESTD
Cal Date : 14-DEC-2009 12:16 Cal File: 044b4401.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1254.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

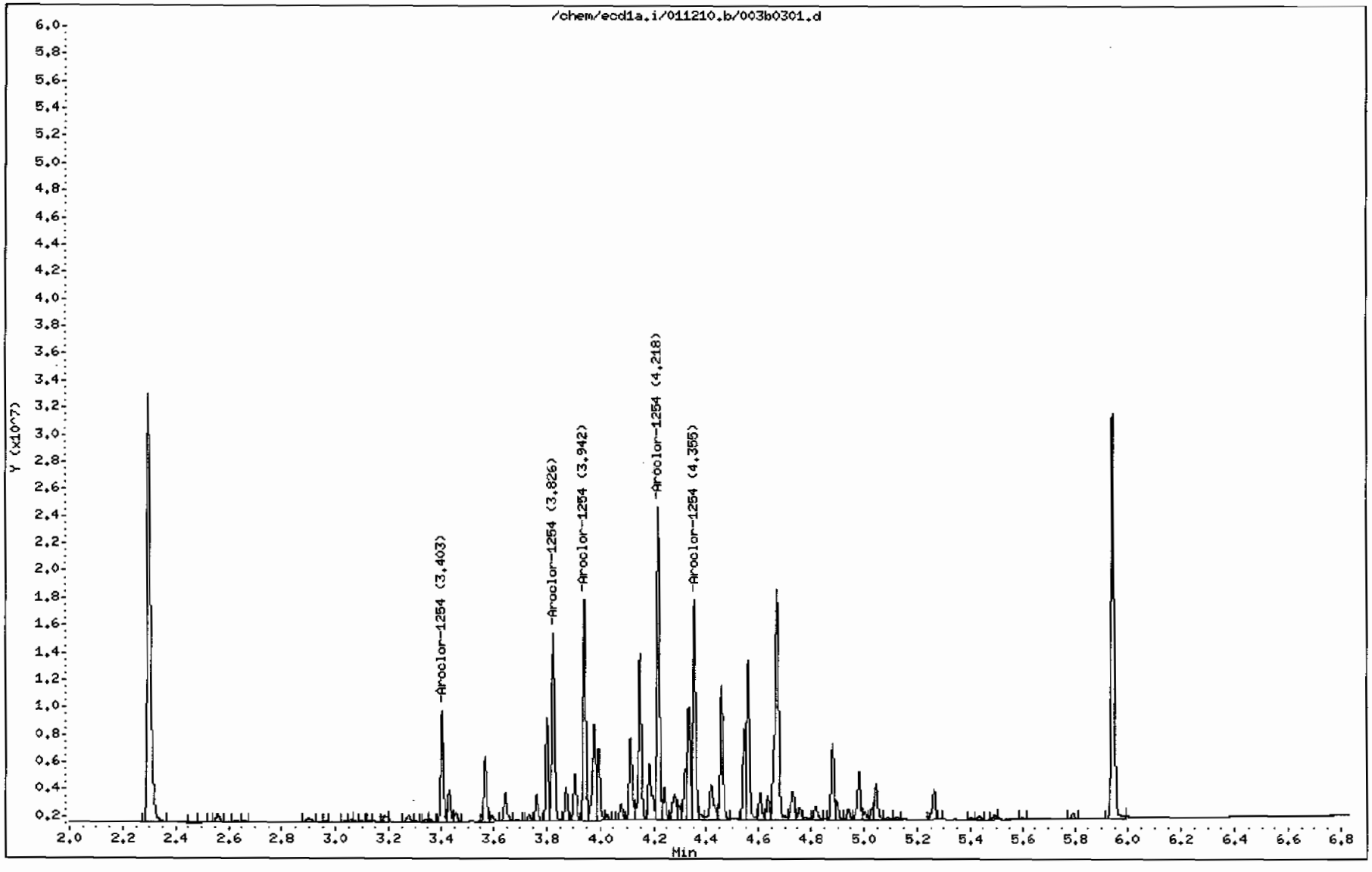
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
6 Aroclor-1254					CAS #: 11097-69-1		
3.403	3.403	0.000	5736608	1000.00	891	80.00- 120.00	100.00
3.826	3.826	0.000	10322492	1000.00	893	159.94- 199.94	179.94
3.942	3.942	0.000	11402181	1000.00	917	178.76- 218.76	198.76
4.218	4.218	0.000	15866334	1000.00	940	256.58- 296.58	276.58
4.355	4.355	0.000	11536355	1000.00	928	181.10- 221.10	201.10
Average of Peak Amounts =					914		

Data File: /chem/ecd1a.i/011210.b/003b0301.d
Date : 12-JAN-2010 08:09
Client ID: AR125401
Sample Info: IWAR091216-54

Column phase: CLP2

Instrument: ecd1a.i

Operator: YS1
Column diameter: 0.25



GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/011210.b/005f0501.d
Lab Smp Id: WAR091217-48 Client Smp ID: AR124801
Inj Date : 12-JAN-2010 08:30
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR091217-48
Misc Info :
Comment :
Method : /chem/ecd1a.i/011210.b/ECD1-F-8082-121409.m
Meth Date : 23-Jan-2010 10:45 yip00818 Quant Type: ESTD
Cal Date : 14-DEC-2009 11:34 Cal File: 040f4001.d
Als bottle: 5 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1248.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
5 Aroclor-1248					CAS #: 12672-29-6		
3.093	3.093	0.000	7744080	1000.00	987	80.00- 120.00	100.00
3.245	3.245	0.000	6860341	1000.00	998	68.59- 108.59	88.59
3.295	3.295	0.000	13763918	1000.00	1030	157.73- 197.73	177.73
3.428	3.428	0.000	10860022	1000.00	986	120.24- 160.24	140.24
3.660	3.660	0.000	6934632	1000.00	930	69.55- 109.55	89.55
		Average of Peak Amounts =			987		

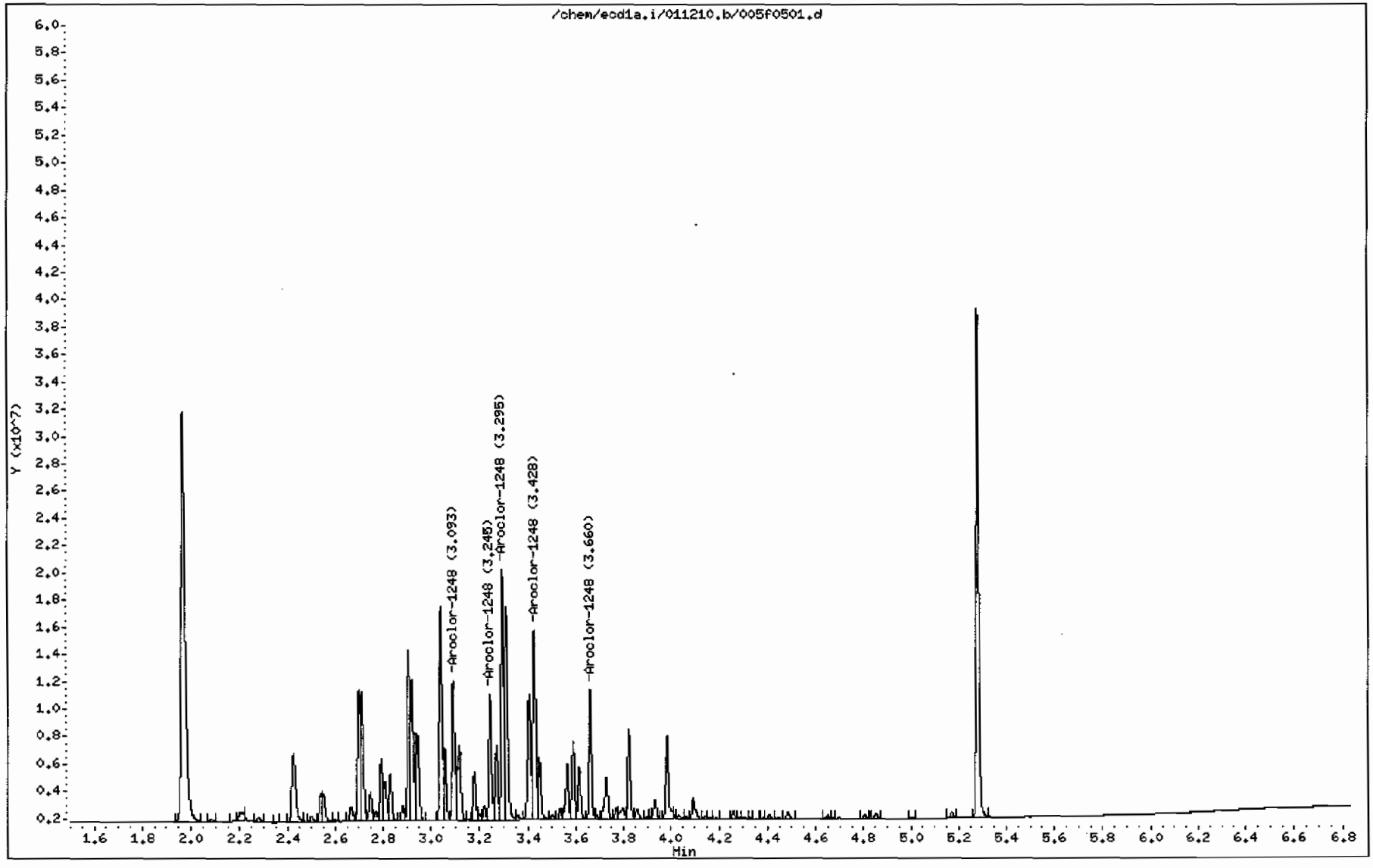
Data File: /chem/ecd1a.i/011210.b/005f0501.d
Date : 12-JAN-2010 08:30
Client ID: AR124801
Sample Info: !WAR091217-48

Column phase: CLP1

Page 1

Instrument: ecd1a.i

Operator: YS1
Column diameter: 0.25



GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/011210.b/005b0501.d
Lab Smp Id: WAR091217-48 Client Smp ID: AR124801
Inj Date : 12-JAN-2010 08:30
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR091217-48
Misc Info :
Comment :
Method : /chem/ecd1a.i/011210.b/ECD1-B-8082-121409.m
Meth Date : 23-Jan-2010 10:45 yip00818 Quant Type: ESTD
Cal Date : 14-DEC-2009 12:16 Cal File: 044b4401.d
Als bottle: 5 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1248.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpc1p1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
5 Aroclor-1248					CAS #: 12672-29-6		
3.404	3.404	0.000	7175864	1000.00	891	80.00- 120.00	100.00
3.569	3.569	0.000	8975948	1000.00	909	105.09- 145.09	125.09
3.802	3.802	0.000	10195525	1000.00	909	122.08- 162.08	142.08
3.830	3.830	0.000	11296712	1000.00	905	137.43- 177.43	157.43
3.967	3.967	0.000	10909666	1000.00	901	132.03- 172.03	152.03
Average of Peak Amounts =					903		

Data File: /chem/ecd1a.i/011210.b/005b0501.d

Date : 12-JAN-2010 08:30

Client ID: AR124801

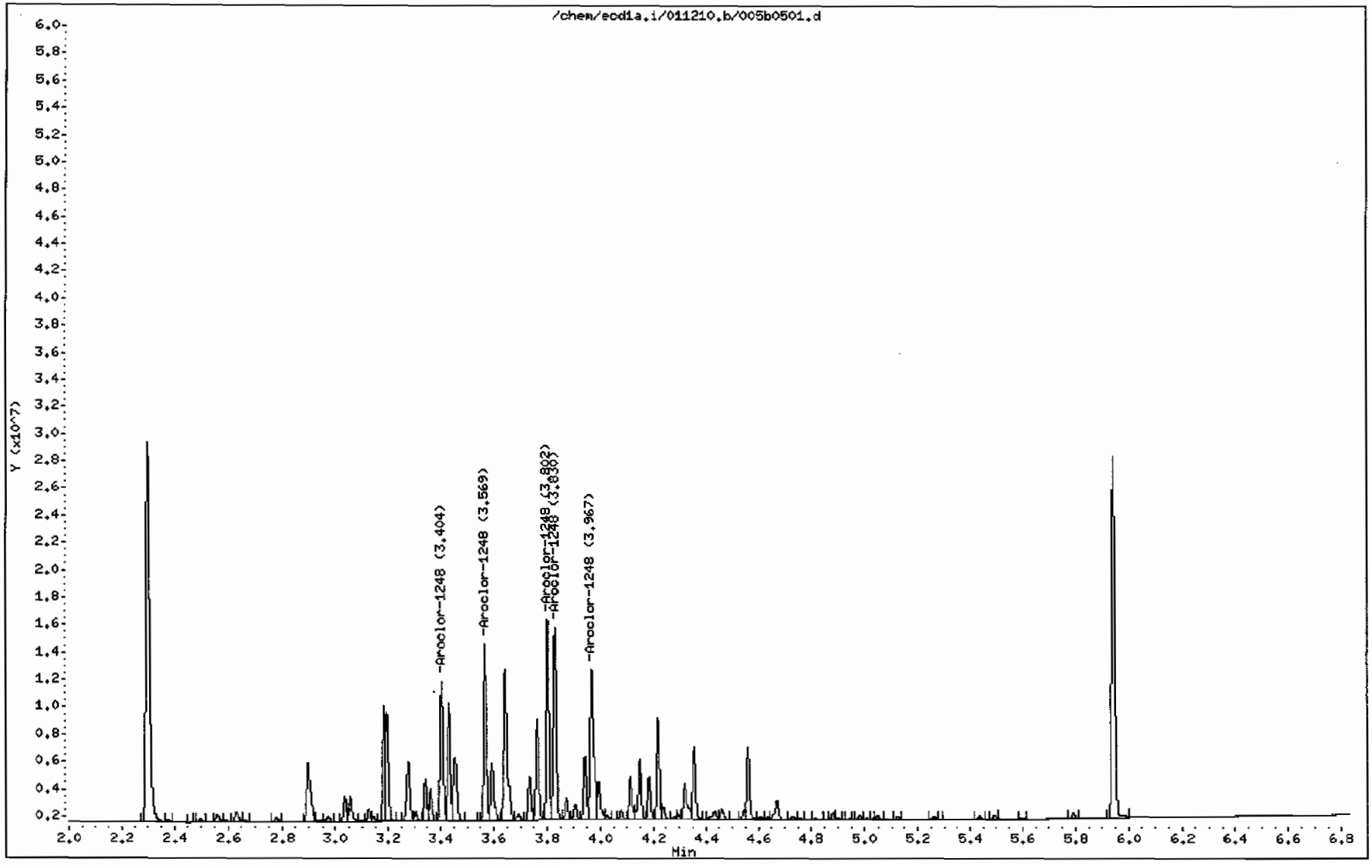
Sample Info: IWAR091217-48

Column phase: CLP2

Instrument: ecd1a.i

Operator: YS1

Column diameter: 0.25



GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/011210.b/006f0601.d
Lab Smp Id: WAR100104-32 Client Smp ID: AR123201
Inj Date : 12-JAN-2010 08:41
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR100104-32
Misc Info :
Comment :
Method : /chem/ecd1a.i/011210.b/ECD1-F-8082-121409.m
Meth Date : 23-Jan-2010 10:45 yip00818 Quant Type: ESTD
Cal Date : 14-DEC-2009 11:34 Cal File: 040f4001.d
Als bottle: 6 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1232.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

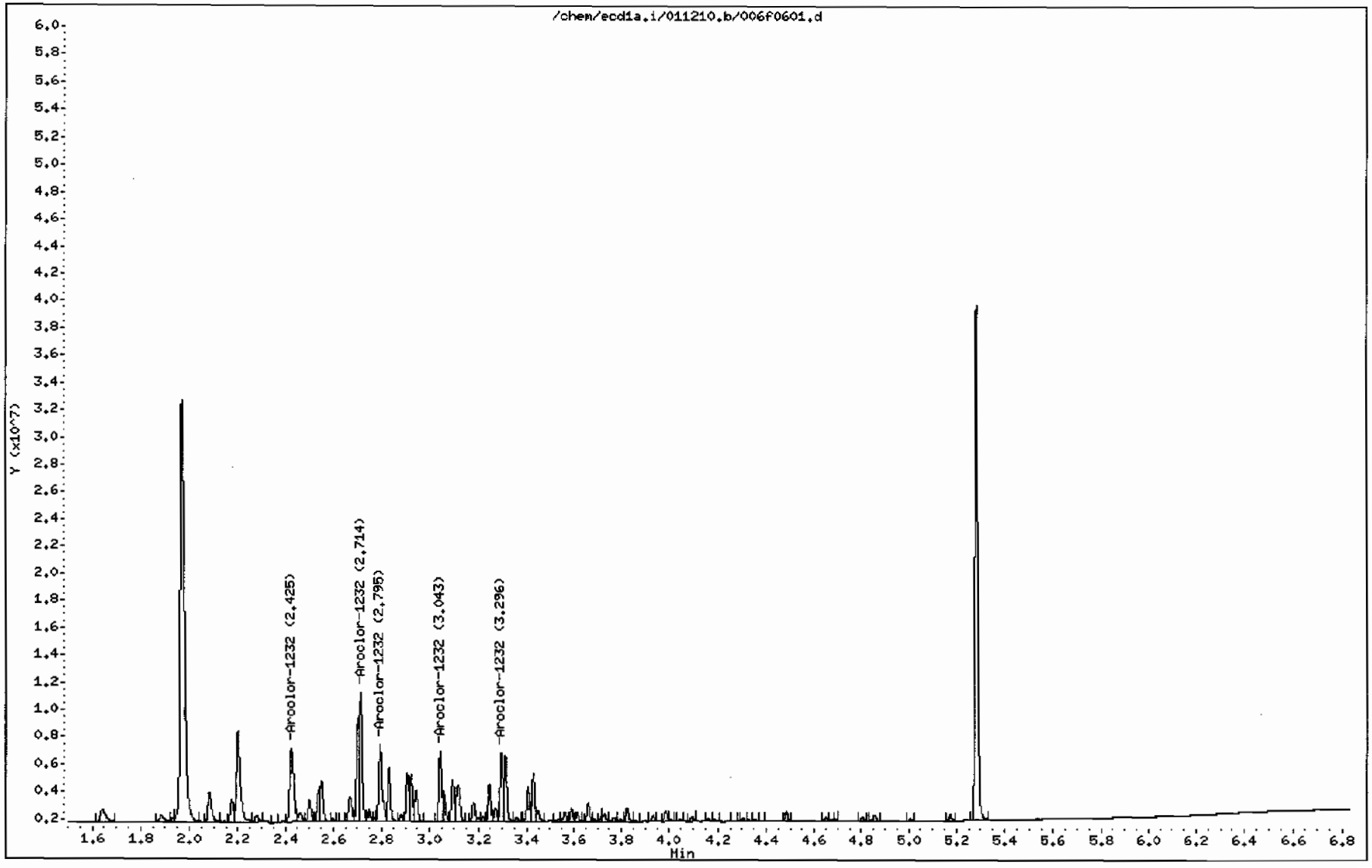
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
3 Aroclor-1232					CAS #: 11141-16-5		
2.425	2.425	0.000	6216352	1000.00	925	80.00- 120.00	100.00
2.714	2.714	0.000	8111036	1000.00	994	110.48- 150.48	130.48
2.795	2.795	0.000	5312389	1000.00	924	65.46- 105.46	85.46
3.043	3.043	0.000	3927160	1000.00	993	43.17- 83.17	63.17
3.296	3.296	0.000	3710292	1000.00	1050	39.69- 79.69	59.69
			Average of Peak Amounts =		977		

Data File: /chem/ecd1a.i/011210.b/006f0601.d
Date : 12-JAN-2010 08:41
Client ID: AR123201
Sample Info: IWAR100104-32

Column phase: CLP1

Instrument: ecd1a.i

Operator: YS1
Column diameter: 0.25



GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/011210.b/006b0601.d
Lab Smp Id: WAR100104-32 Client Smp ID: AR123201
Inj Date : 12-JAN-2010 08:41
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR100104-32
Misc Info :
Comment :
Method : /chem/ecd1a.i/011210.b/ECD1-B-8082-121409.m
Meth Date : 23-Jan-2010 10:45 yip00818 Quant Type: ESTD
Cal Date : 14-DEC-2009 12:16 Cal File: 044b4401.d
Als bottle: 6 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1232.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
3 Aroclor-1232					CAS #: 11141-16-5		
2.631	2.631	0.000	5454142	1000.00	886	80.00- 120.00	100.00
3.196	3.196	0.000	5887460	1000.00	934	87.94- 127.94	107.94
3.280	3.280	0.000	4094285	1000.00	871	55.07- 95.07	75.07
3.570	3.570	0.000	3125770	1000.00	964	37.31- 77.31	57.31
3.803	3.803	0.000	3007054	1000.00	954	35.13- 75.13	55.13
Average of Peak Amounts =					922		

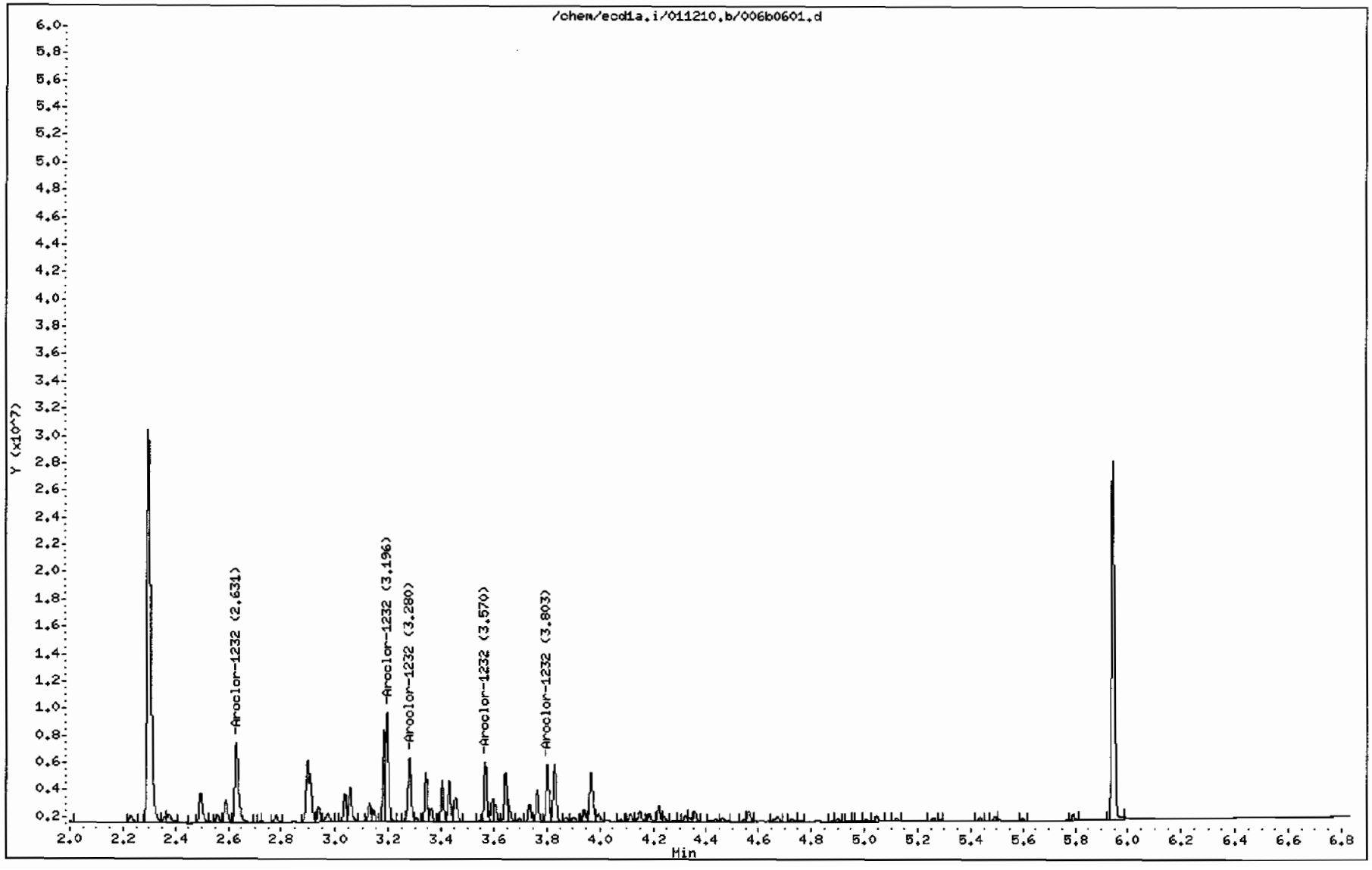
Data File: /chem/ecd1a.i/011210.b/006b0601.d
Date : 12-JAN-2010 08:41
Client ID: AR123201
Sample Info: IWAR100104-32

Column phase: CLP2

Page 1

Instrument: ecd1a.i

Operator: YS1
Column diameter: 0.25



GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/011210.b/007f0701.d
Lab Smp Id: WAR100104-21 Client Smp ID: AR122101
Inj Date : 12-JAN-2010 08:51
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR100104-21
Misc Info :
Comment :
Method : /chem/ecd1a.i/011210.b/ECD1-F-8082-121409.m
Meth Date : 23-Jan-2010 10:45 yip00818 Quant Type: ESTD
Cal Date : 14-DEC-2009 11:34 Cal File: 040f4001.d
Als bottle: 7 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1221.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
2 Aroclor-1221					CAS #: 11104-28-2		
2.081	2.081	0.000	3977249	1000.00	925	80.00- 120.00	100.00
2.174	2.174	0.000	2228631	1000.00	913	36.03- 76.03	56.03
2.200	2.200	0.000	9517642	1000.00	926	219.30- 259.30	239.30
Average of Peak Amounts =					921		

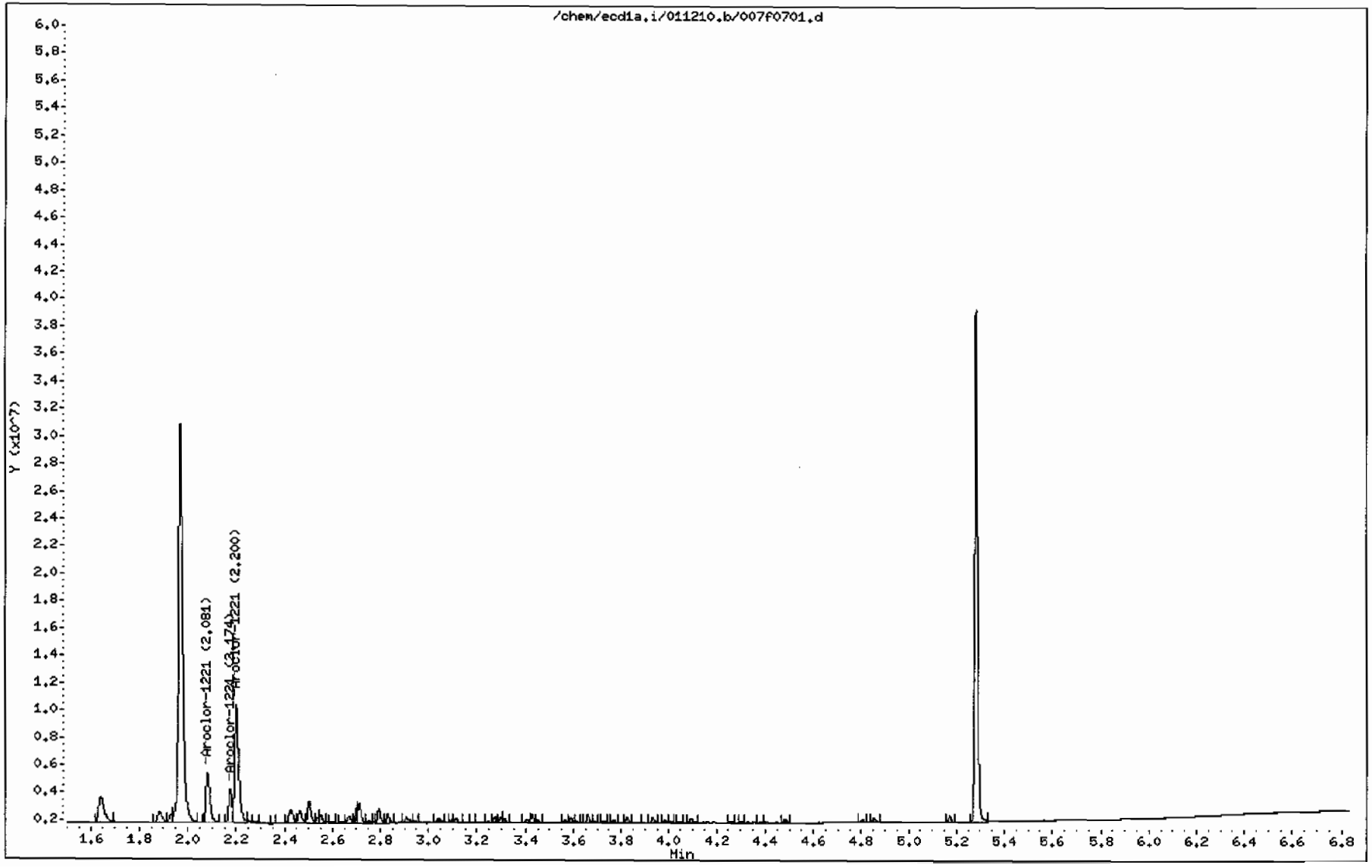
Data File: /chem/ecd1a.i/011210.b/007f0701.d
Date : 12-JAN-2010 08:51
Client ID: AR122101
Sample Info: IWAR100104-21

Column phase: CLP1

Page 1

Instrument: ecd1a.i

Operator: YS1
Column diameter: 0.25



GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/011210.b/007b0701.d
Lab Smp Id: WAR100104-21 Client Smp ID: AR122101
Inj Date : 12-JAN-2010 08:51
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR100104-21
Misc Info :
Comment :
Method : /chem/ecd1a.i/011210.b/ECD1-B-8082-121409.m
Meth Date : 23-Jan-2010 10:45 yip00818 Quant Type: ESTD
Cal Date : 14-DEC-2009 12:16 Cal File: 044b4401.d
Als bottle: 7 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1221.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

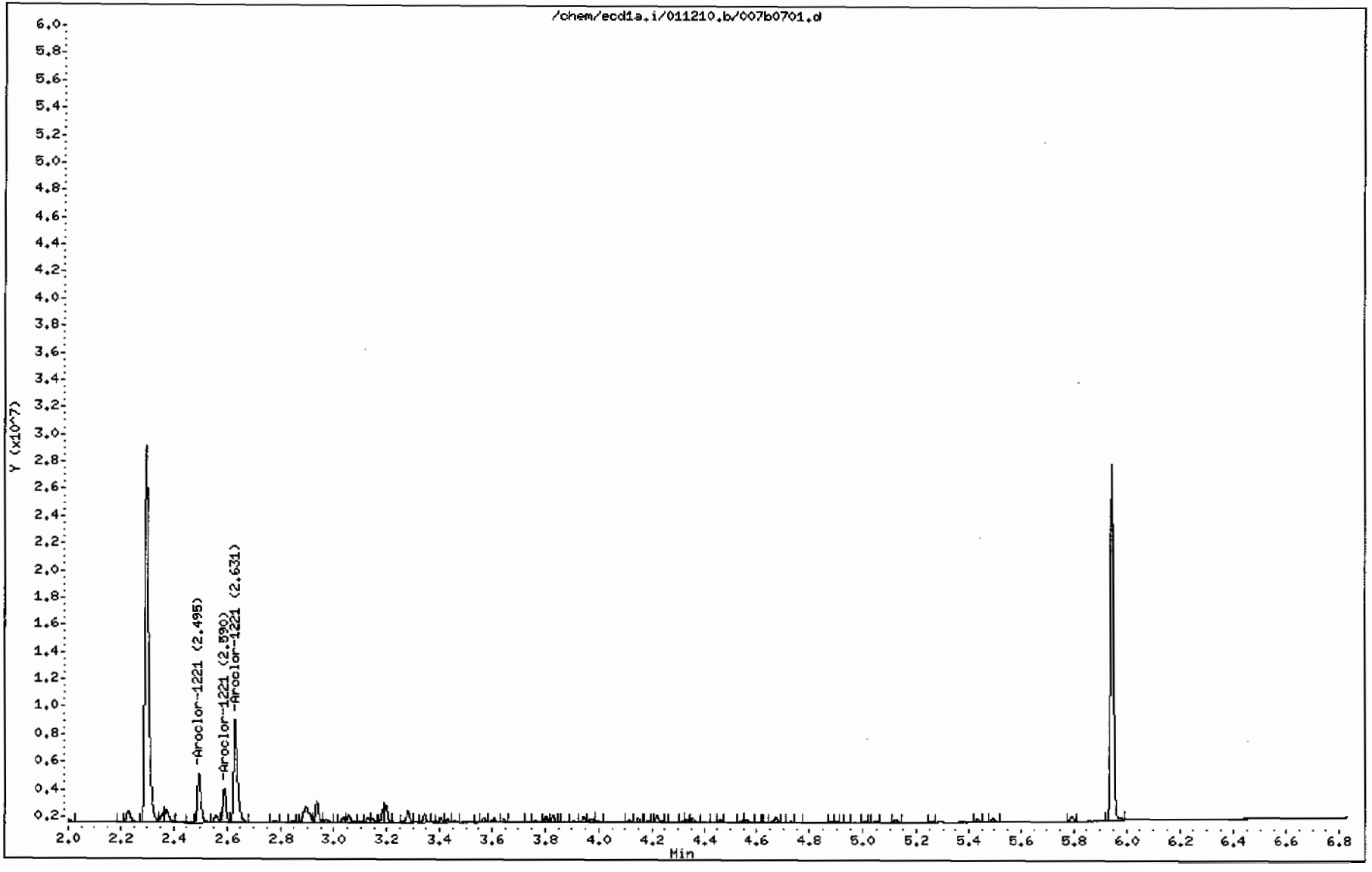
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
2 Aroclor-1221					CAS #: 11104-28-2		
2.495	2.495	0.000	3505686	1000.00	963	80.00- 120.00	100.00
2.590	2.590	0.000	2164005	1000.00	929	41.73- 81.73	61.73
2.631	2.631	0.000	7278336	1000.00	896	187.62- 227.62	207.62
			Average of Peak Amounts =		930		

Data File: /chem/ecd1a.i/011210.b/007b0701.d
Date : 12-JAN-2010 08:51
Client ID: AR122101
Sample Info: IWAR100104-21

Column phase: CLP2

Instrument: ecd1a.i

Operator: YS1
Column diameter: 0.25



GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/011210.b/008f0801.d
Lab Smp Id: WAR100104-60 01 Client Smp ID: AR166001
Inj Date : 12-JAN-2010 09:02
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR100104-60 01
Misc Info :
Comment :
Method : /chem/ecd1a.i/011210.b/ECD1-F-8082-121409.m
Meth Date : 23-Jan-2010 10:46 yip00818 Quant Type: ESTD
Cal Date : 14-DEC-2009 11:34 Cal File: 040f4001.d
Als bottle: 8 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

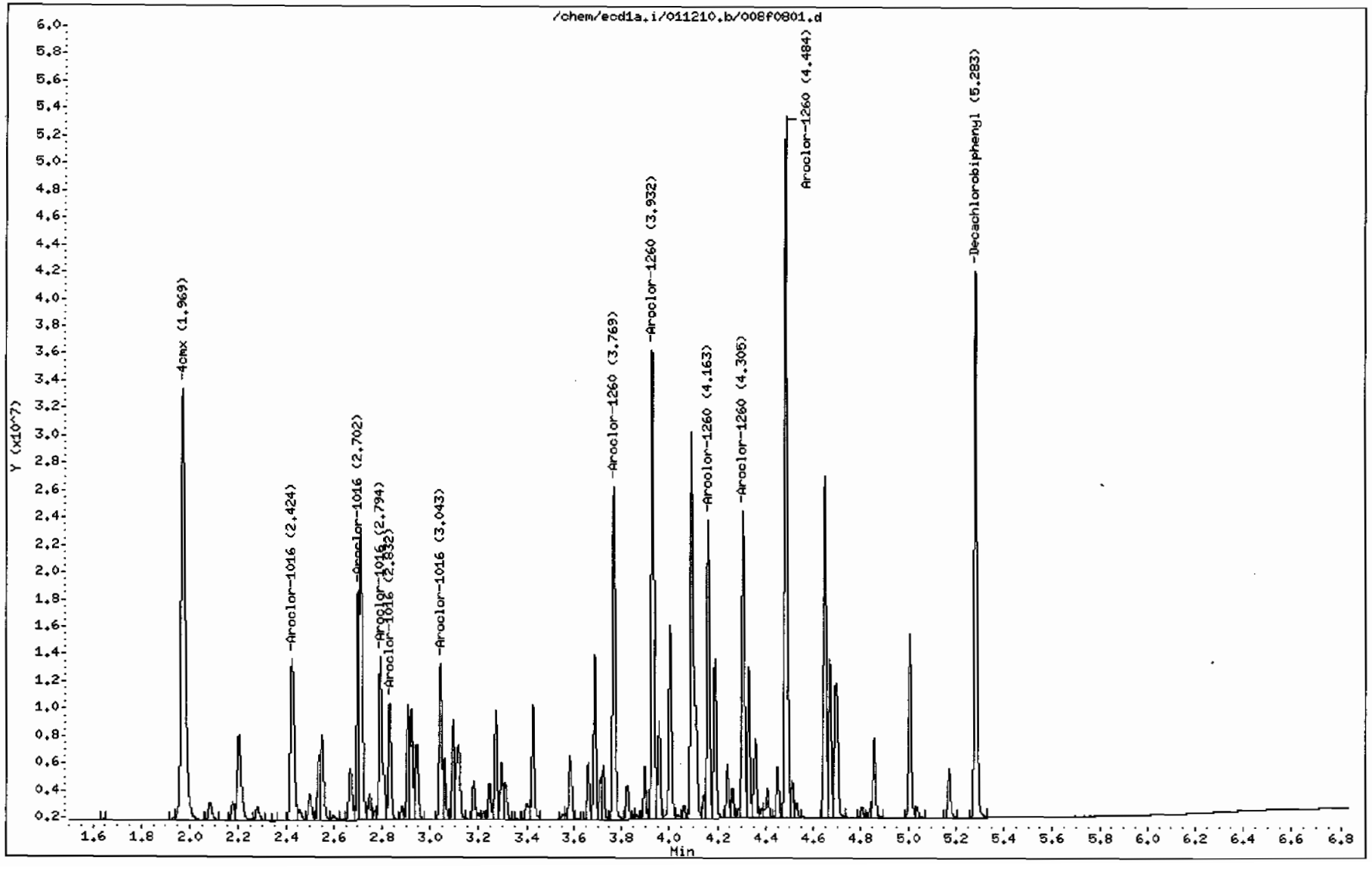
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.969	1.969	0.000	37032248	100.000	104	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.283	5.283	0.000	30786506	100.000	102	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.424	2.424	0.000	13485876	1000.00	972	80.00- 120.00	100.00
2.702	2.702	0.000	10723493	1000.00	1060	59.52- 99.52	79.52
2.794	2.794	0.000	11460019	1000.00	975	64.98- 104.98	84.98
2.832	2.832	0.000	6856400	1000.00	1040	30.84- 70.84	50.84
3.043	3.043	0.000	8914101	1000.00	1030	46.10- 86.10	66.10
Average of Peak Amounts =					1.02e+03		
7 Aroclor-1260					CAS #: 11096-82-5		
3.769	3.769	0.000	17526056	1000.00	1050	80.00- 120.00	100.00
3.932	3.932	0.000	26588446	1000.00	1070	131.71- 171.71	151.71
4.163	4.163	0.000	15728241	1000.00	1070	69.74- 109.74	89.74
4.305	4.305	0.000	16552699	1000.00	1090	74.45- 114.45	94.45
4.484	4.484	0.000	37633318	1000.00	1100	194.73- 234.73	214.73
Average of Peak Amounts =					1.08e+03		

Data File: /chem/ecd1a.i/011210.b/008f0801.d
Date : 12-JAN-2010 09:02
Client ID: AR166001
Sample Info: /WAR100104-60 01

Column phase: CLP1

Instrument: ecd1a.i

Operator: YS1
Column diameter: 0.25



GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/011210.b/008b0801.d
Lab Smp Id: WAR100104-60 01 Client Smp ID: AR166001
Inj Date : 12-JAN-2010 09:02
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR100104-60 01
Misc Info :
Comment :
Method : /chem/ecd1a.i/011210.b/ECD1-B-8082-121409.m
Meth Date : 23-Jan-2010 10:45 yip00818 Quant Type: ESTD
Cal Date : 14-DEC-2009 12:16 Cal File: 044b4401.d
Als bottle: 8 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

AMOUNTS

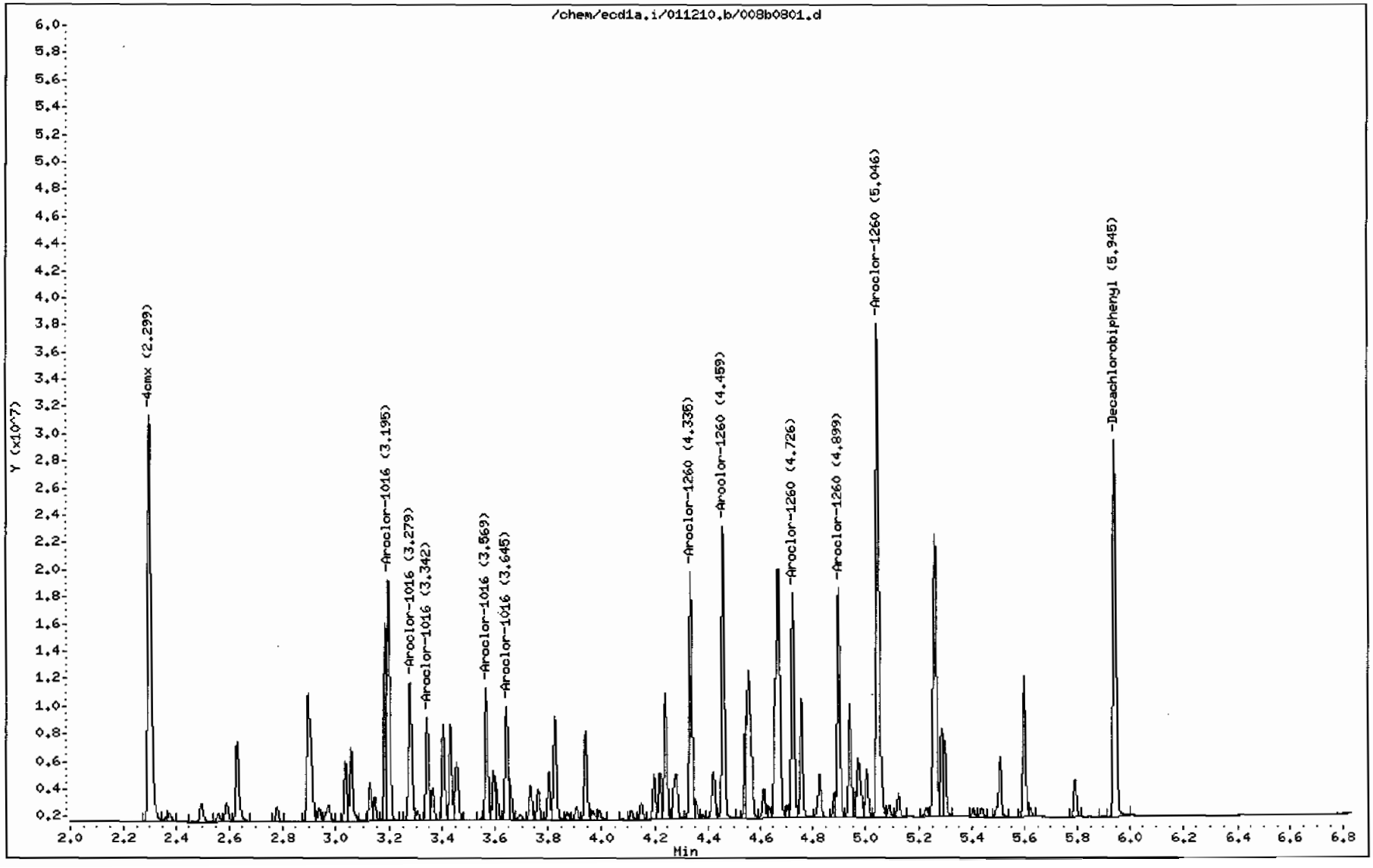
RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/L)	ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.299	2.299	0.000	27572417	100.000	96.6	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.945	5.945	0.000	21439079	100.000	96.7	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
3.195	3.195	0.000	12467792	1000.00	989	80.00- 120.00	100.00
3.279	3.279	0.000	8419719	1000.00	903	47.53- 87.53	67.53
3.342	3.342	0.000	5218830	1000.00	964	21.86- 61.86	41.86
3.569	3.569	0.000	6829739	1000.00	968	34.78- 74.78	54.78
3.645	3.645	0.000	6310818	1000.00	963	30.62- 70.62	50.62
Average of Peak Amounts =					958		
7 Aroclor-1260					CAS #: 11096-82-5		
4.335	4.335	0.000	12787808	1000.00	935	80.00- 120.00	100.00
4.459	4.459	0.000	15544463	1000.00	970	101.56- 141.56	121.56
4.726	4.726	0.000	11912459	1000.00	948	73.15- 113.15	93.15
4.899	4.899	0.000	12233996	1000.00	955	75.67- 115.67	95.67
5.046	5.046	0.000	27319408	1000.00	979	193.64- 233.64	213.64
Average of Peak Amounts =					957		

Data File: /chem/ecd1a.i/011210.b/008b0801.d
Date : 12-JAN-2010 09:02
Client ID: AR166001
Sample Info: IWAR100104-60 01

Column phase: CLP2

Instrument: ecd1a.i

Operator: YS1
Column diameter: 0.25



GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/011210.b/009f0901.d
Lab Smp Id: WAR091217-42 Client Smp ID: AR124201
Inj Date : 12-JAN-2010 09:12
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR091217-42
Misc Info :
Comment :
Method : /chem/ecd1a.i/011210.b/ECD1-F-8082-121409.m
Meth Date : 23-Jan-2010 10:46 yip00818 Quant Type: ESTD
Cal Date : 14-DEC-2009 11:34 Cal File: 040f4001.d
Als bottle: 9 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1242.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
4 Aroclor-1242					CAS #: 53469-21-9		
2.425	2.425	0.000	11081560	1000.00	950	80.00- 120.00	100.00
2.714	2.714	0.000	14162445	1000.00	1050	107.80- 147.80	127.80
2.832	2.832	0.000	5547704	1000.00	1010	30.06- 70.06	50.06
3.043	3.043	0.000	7181018	1000.00	991	44.80- 84.80	64.80
3.297	3.297	0.000	7294617	1000.00	1070	45.83- 85.83	65.83

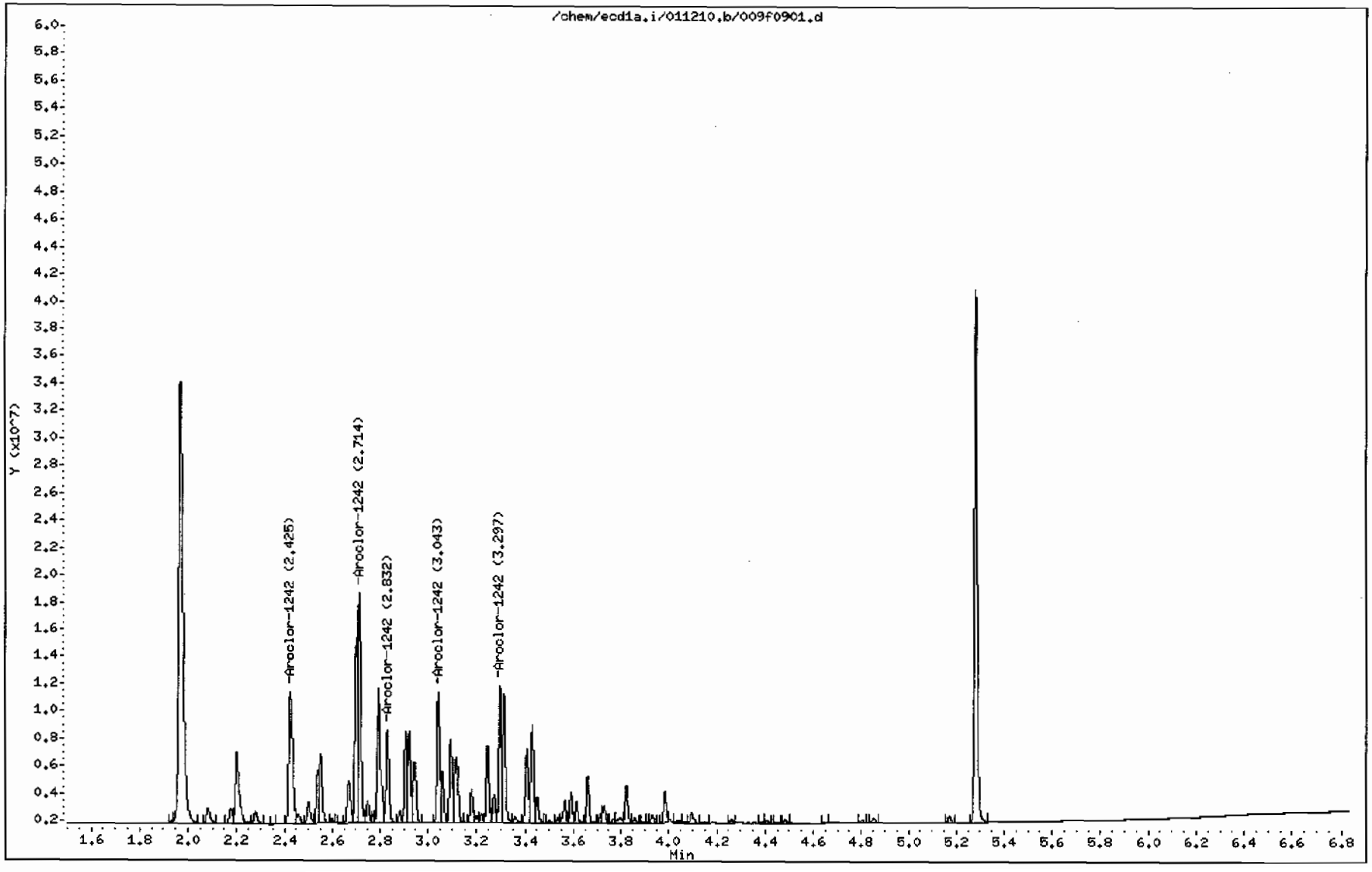
Average of Peak Amounts = 1.01e+03

Data File: /chem/ecd1a.i/011210.b/009f0901.d
Date : 12-JAN-2010 09:12
Client ID: AR124201
Sample Info: IWAR091217-42

Column phase: CLP1

Instrument: ecd1a.i

Operator: YS1
Column diameter: 0.25



GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/011210.b/009b0901.d
Lab Smp Id: WAR091217-42 Client Smp ID: AR124201
Inj Date : 12-JAN-2010 09:12
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR091217-42
Misc Info :
Comment :
Method : /chem/ecd1a.i/011210.b/ECD1-B-8082-121409.m
Meth Date : 23-Jan-2010 10:46 yip00818 Quant Type: ESTD
Cal Date : 14-DEC-2009 12:16 Cal File: 044b4401.d
Als bottle: 9 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1242.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

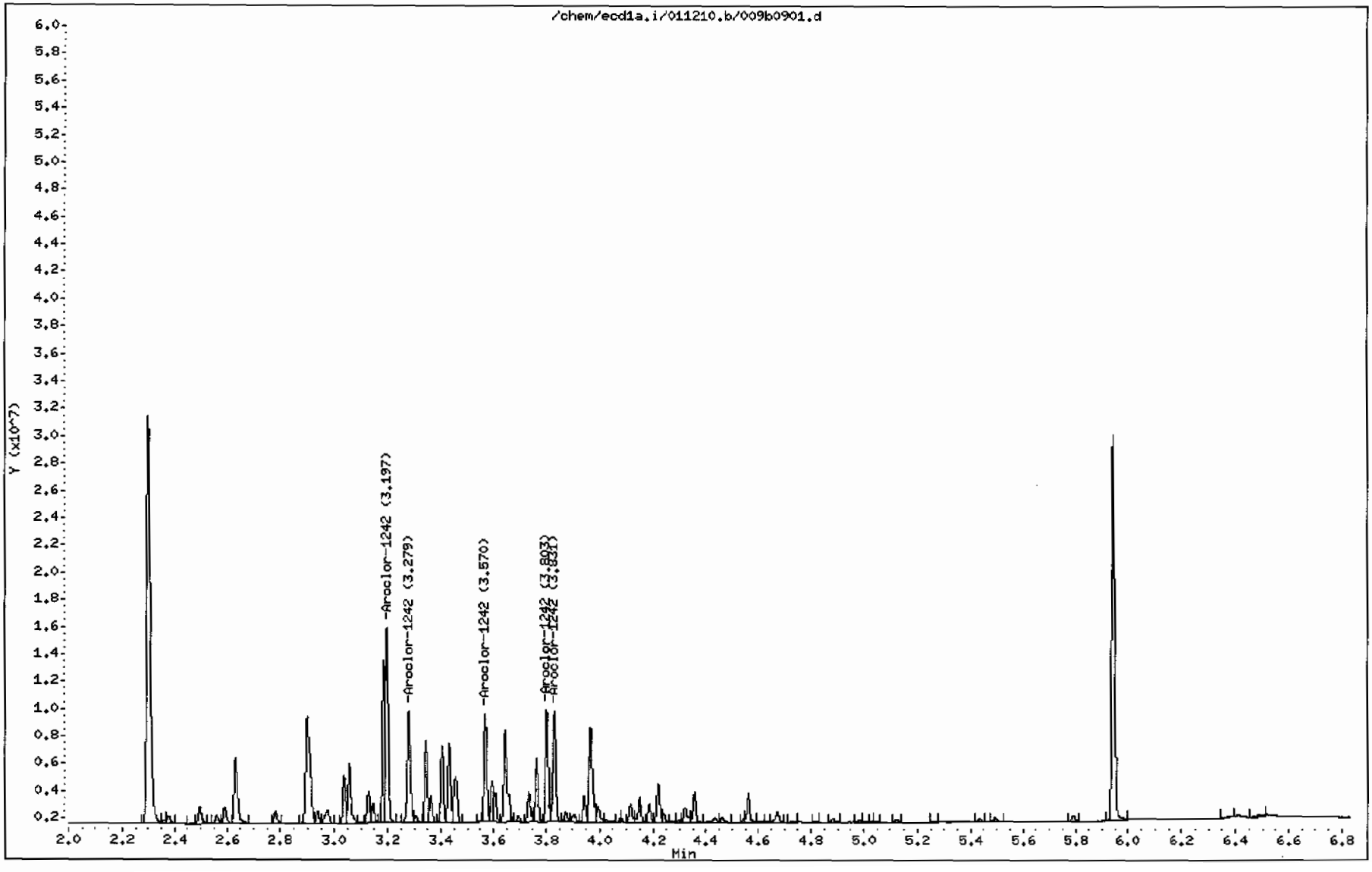
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
4 Aroclor-1242					CAS #: 53469-21-9		
3.197	3.197	0.000	10071737	1000.00	951	80.00- 120.00	100.00
3.279	3.279	0.000	6944935	1000.00	862	48.95- 88.95	68.95
3.570	3.570	0.000	5469377	1000.00	917	34.30- 74.30	54.30
3.803	3.803	0.000	5657077	1000.00	934	36.17- 76.17	56.17
3.831	3.831	0.000	6282902	1000.00	938	42.38- 82.38	62.38
		Average of Peak Amounts =			920		

Data File: /chem/ecd1a.i/011210.b/009b0901.d
Date : 12-JAN-2010 09:12
Client ID: AR124201
Sample Info: IWAR091217-42

Column phase: CLP2

Instrument: ecd1a.i

Operator: YS1
Column diameter: 0.25



GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

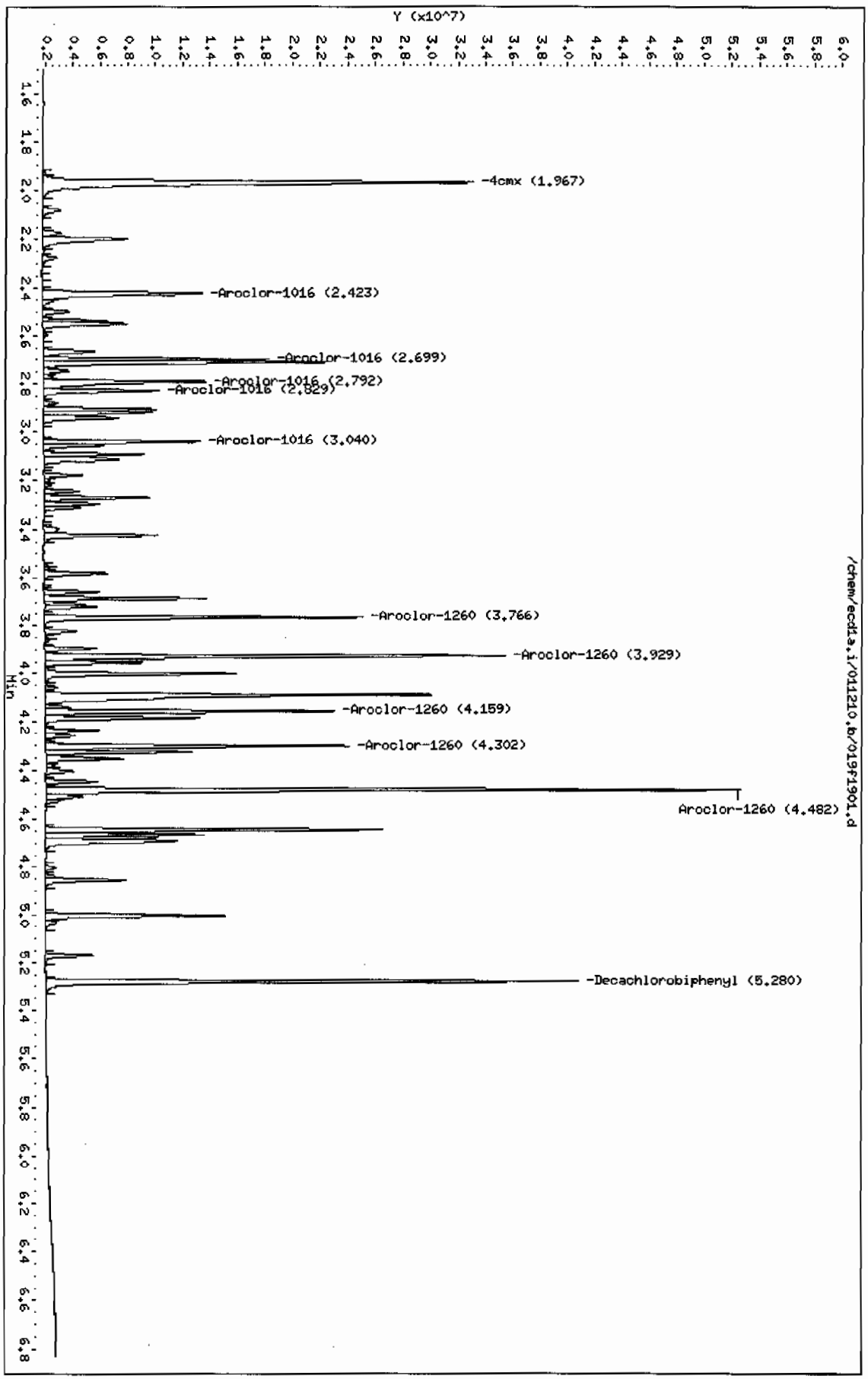
Data file : /chem/ecd1a.i/011210.b/019f1901.d
Lab Smp Id: WAR100104-60 02 Client Smp ID: AR166002
Inj Date : 12-JAN-2010 11:03
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR100104-60 02
Misc Info :
Comment :
Method : /chem/ecd1a.i/011210.b/ECD1-F-8082-121409.m
Meth Date : 23-Jan-2010 10:48 yip00818 Quant Type: ESTD
Cal Date : 14-DEC-2009 11:34 Cal File: 040f4001.d
Als bottle: 19 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.967	1.969	-0.002	36395148	100.000	102	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.280	5.283	-0.003	30217743	100.000	100	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.423	2.424	-0.001	13310670	1000.00	960	80.00- 120.00	100.00
2.699	2.702	-0.003	10242811	1000.00	1010	56.95- 96.95	76.95
2.792	2.794	-0.002	11285268	1000.00	960	64.78- 104.78	84.78
2.829	2.832	-0.003	6765072	1000.00	1020	30.82- 70.82	50.82
3.040	3.043	-0.003	8738943	1000.00	1010	45.65- 85.65	65.65
Average of Peak Amounts =					993		
7 Aroclor-1260					CAS #: 11096-82-5		
3.766	3.769	-0.003	17036620	1000.00	1020	80.00- 120.00	100.00
3.929	3.932	-0.003	25904092	1000.00	1050	132.05- 172.05	152.05
4.159	4.163	-0.004	15393580	1000.00	1050	70.36- 110.36	90.36
4.302	4.305	-0.003	16083121	1000.00	1060	74.40- 114.40	94.40
4.482	4.484	-0.002	36752784	1000.00	1070	195.73- 235.73	215.73
Average of Peak Amounts =					1.05e+03		

Data File: /chem/ecd1a.i/011210.b/019f1901.d
Date : 12-JAN-2010 11:03
Client ID: AR166002
Sample Info: IWAR100104-60 02

Column phase: CLP1

Instrument: ecd1a.i
Operator: YS1
Column diameter: 0.25



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GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/011210.b/019b1901.d
Lab Smp Id: WAR100104-60 02 Client Smp ID: AR166002
Inj Date : 12-JAN-2010 11:03
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR100104-60 02
Misc Info :
Comment :
Method : /chem/ecd1a.i/011210.b/ECD1-B-8082-121409.m
Meth Date : 23-Jan-2010 10:48 yip00818 Quant Type: ESTD
Cal Date : 14-DEC-2009 12:16 Cal File: 044b4401.d
Als bottle: 19 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclpl

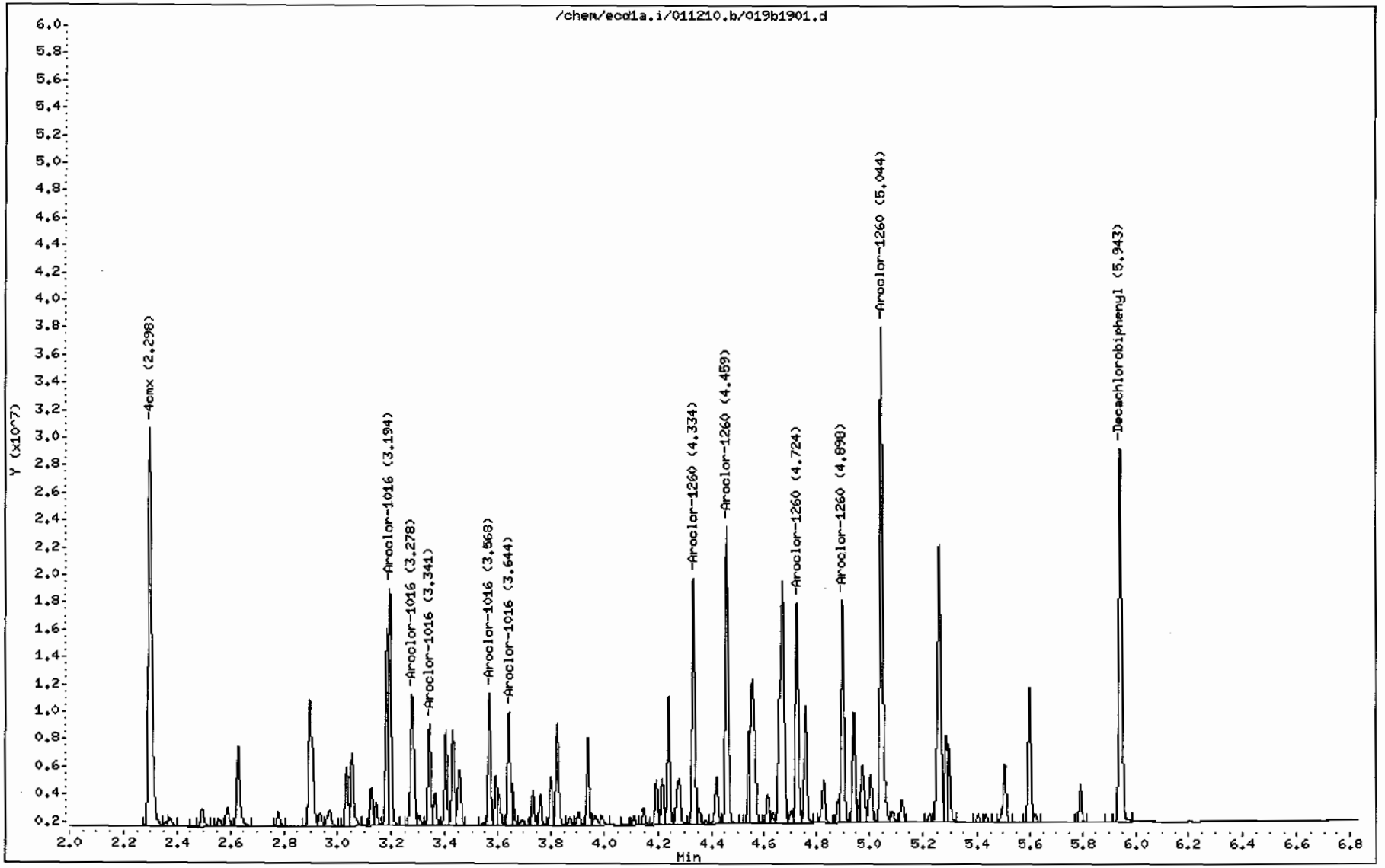
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.298	2.299	-0.001	27237306	100.000	95.4	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.943	5.945	-0.002	20965997	100.000	94.5	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
3.194	3.195	-0.001	12578862	1000.00	997	80.00- 120.00	100.00
3.278	3.279	-0.001	8317700	1000.00	892	46.12- 86.12	66.12
3.341	3.342	-0.001	5139316	1000.00	950	20.86- 60.86	40.86
3.568	3.569	-0.001	6728760	1000.00	954	33.49- 73.49	53.49
3.644	3.645	-0.001	6209908	1000.00	948	29.37- 69.37	49.37
Average of Peak Amounts =					948		
7 Aroclor-1260					CAS #: 11096-82-5		
4.334	4.335	-0.001	12600351	1000.00	921	80.00- 120.00	100.00
4.459	4.459	0.000	15305012	1000.00	955	101.46- 141.46	121.46
4.724	4.726	-0.002	11700179	1000.00	931	72.86- 112.86	92.86
4.898	4.899	-0.001	12037919	1000.00	940	75.54- 115.54	95.54
5.044	5.046	-0.002	26844001	1000.00	962	193.04- 233.04	213.04
Average of Peak Amounts =					942		

Data File: /chem/ecd1a.i/011210.b/019b1901.d
Date : 12-JAN-2010 11:03
Client ID: AR166002
Sample Info: IWAR100104-60 02

Column phase: CLP2

Instrument: ecd1a.i

Operator: YS1
Column diameter: 0.25



GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/011210.b/031f3101.d
Lab Smp Id: WAR100104-60 03 Client Smp ID: AR166003
Inj Date : 12-JAN-2010 13:27
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR100104-60 03
Misc Info :
Comment :
Method : /chem/ecd1a.i/011210.b/ECD1-F-8082-121409.m
Meth Date : 23-Jan-2010 10:51 yip00818 Quant Type: ESTD
Cal Date : 14-DEC-2009 11:34 Cal File: 040f4001.d
Als bottle: 31 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

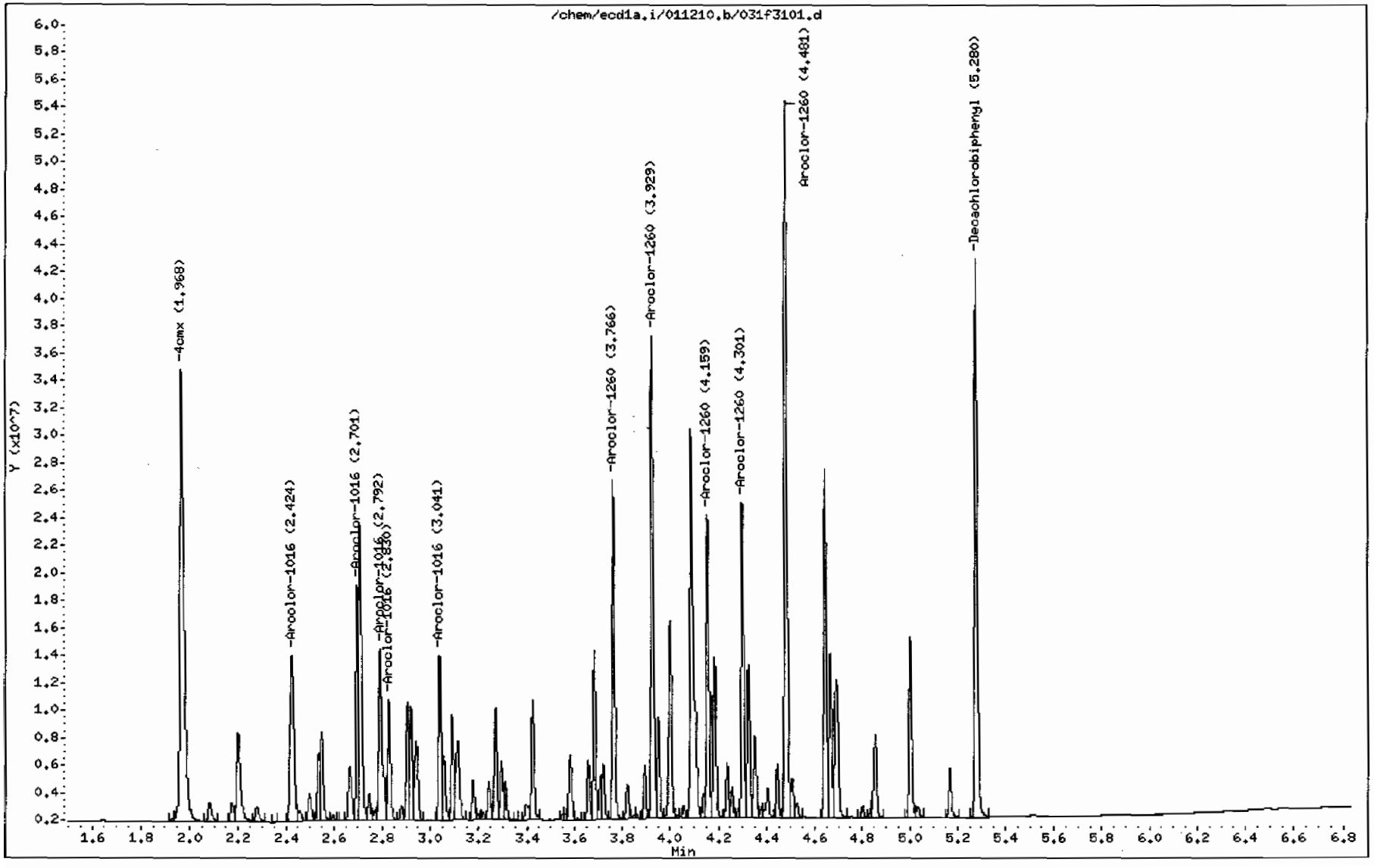
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.968	1.969	-0.001	38433966	100.000	108	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.280	5.283	-0.003	31246613	100.000	103	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.424	2.424	0.000	13975254	1000.00	1010	80.00- 120.00	100.00
2.701	2.702	-0.001	11118675	1000.00	1100	59.56- 99.56	79.56
2.792	2.794	-0.002	11874482	1000.00	1010	64.97- 104.97	84.97
2.830	2.832	-0.002	7065924	1000.00	1070	30.56- 70.56	50.56
3.041	3.043	-0.002	9128367	1000.00	1050	45.32- 85.32	65.32
Average of Peak Amounts =					1.05e+03		
7 Aroclor-1260					CAS #: 11096-82-5		
3.766	3.769	-0.003	17811470	1000.00	1060	80.00- 120.00	100.00
3.929	3.932	-0.003	27097503	1000.00	1100	132.14- 172.14	152.14
4.159	4.163	-0.004	16042757	1000.00	1090	70.07- 110.07	90.07
4.301	4.305	-0.004	16822381	1000.00	1110	74.45- 114.45	94.45
4.481	4.484	-0.003	38270168	1000.00	1110	194.86- 234.86	214.86
Average of Peak Amounts =					1.09e+03		

Data File: /chem/ecd1a.i/011210.b/031f3101.d
Date : 12-JAN-2010 13:27
Client ID: AR166003
Sample Info: IWAR100104-60 03

Column phase: CLP1

Instrument: ecd1a.i

Operator: YS1
Column diameter: 0.25



GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/011210.b/031b3101.d
Lab Smp Id: WAR100104-60 03 Client Smp ID: AR166003
Inj Date : 12-JAN-2010 13:27
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR100104-60 03
Misc Info :
Comment :
Method : /chem/ecd1a.i/011210.b/ECD1-B-8082-121409.m
Meth Date : 23-Jan-2010 10:51 yip00818 Quant Type: ESTD
Cal Date : 14-DEC-2009 12:16 Cal File: 044b4401.d
Als bottle: 31 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

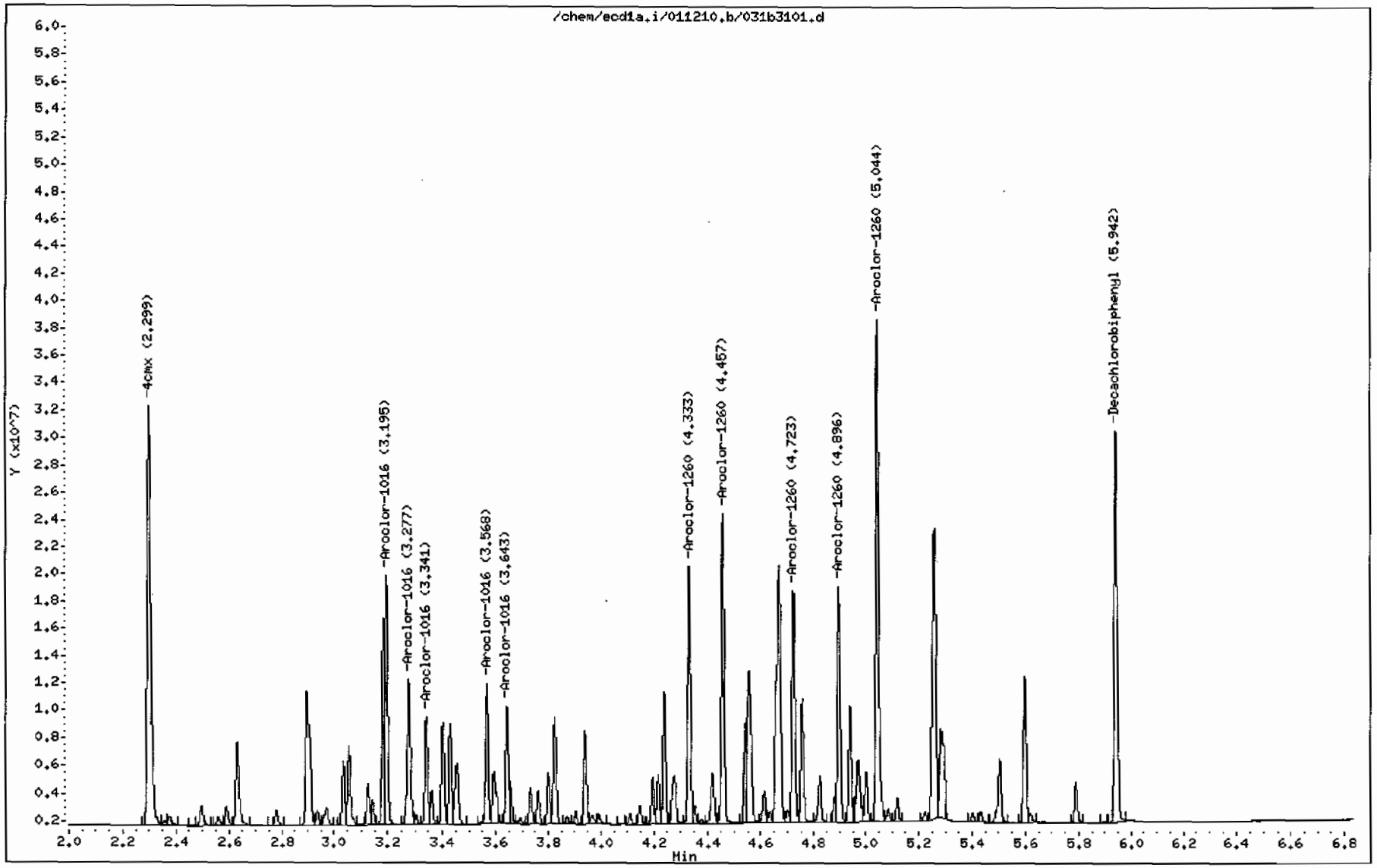
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.299	2.299	0.000	28627734	100.000	100	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.942	5.945	-0.003	21960359	100.000	99.0	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
3.195	3.195	0.000	13074814	1000.00	1040	80.00- 120.00	100.00
3.277	3.279	-0.002	8777811	1000.00	941	47.14- 87.14	67.14
3.341	3.342	-0.001	5413636	1000.00	1000	21.41- 61.41	41.41
3.568	3.569	-0.001	6892457	1000.00	977	32.72- 72.72	52.72
3.643	3.645	-0.002	6412928	1000.00	979	29.05- 69.05	49.05
Average of Peak Amounts =					987		
7 Aroclor-1260					CAS #: 11096-82-5		
4.333	4.335	-0.002	13295972	1000.00	972	80.00- 120.00	100.00
4.457	4.459	-0.002	16138030	1000.00	1010	101.38- 141.38	121.38
4.723	4.726	-0.003	12348659	1000.00	983	72.88- 112.88	92.88
4.896	4.899	-0.003	12683793	1000.00	990	75.40- 115.40	95.40
5.044	5.046	-0.002	28029483	1000.00	1000	190.81- 230.81	210.81
Average of Peak Amounts =					991		

Data File: /chem/ecd1a.i/011210.b/031b3101.d
Date : 12-JAN-2010 13:27
Client ID: AR166003
Sample Info: IWAR100104-60 03

Column phase: CLP2

Instrument: ecd1a.i

Operator: YS1
Column diameter: 0.25



8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 10-1130

GC Column: CLP1 ID: 0.25 (mm) Init. Calib. Date(s): 12/14/09 12/14/09

Instrument ID: ECD1A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 1.97 DCB: 5.29

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	PIBLK01	WAR091130-99	12/14/09	0444	1.97	5.29
02	ZZZZZ	ZZZZZ	12/14/09	0454	1.97	5.29
03	ZZZZZ	ZZZZZ	12/14/09	0505	1.97	5.29
04	ZZZZZ	ZZZZZ	12/14/09	0515	1.97	5.29
05	ZZZZZ	ZZZZZ	12/14/09	0526	1.97	5.29
06	AR123201	WAR090930-32	12/14/09	0536	1.97	5.29
07	AR122101	WAR090803-21	12/14/09	0547	1.97	5.29
08	AR126201	WAR090803-62	12/14/09	0558	1.97	5.29
09	ZZZZZ	ZZZZZ	12/14/09	0608	1.97	5.29
10	ZZZZZ	ZZZZZ	12/14/09	0619	1.97	5.29
11	ZZZZZ	ZZZZZ	12/14/09	0629	1.97	5.29
12	ZZZZZ	ZZZZZ	12/14/09	0640	1.97	5.29
13	ZZZZZ	ZZZZZ	12/14/09	0650	1.97	5.29
14	ZZZZZ	ZZZZZ	12/14/09	0701	1.97	5.29
15	ZZZZZ	ZZZZZ	12/14/09	0711	1.97	5.29
16	AR125401	WAR091214-05	12/14/09	0722	1.97	5.29
17	AR125402	WAR091214-06	12/14/09	0732	1.97	5.29
18	AR125403	WAR091214-07	12/14/09	0743	1.97	5.29
19	AR125404	WAR091214-08	12/14/09	0753	1.97	5.29
20	AR125405	IAR091027-01	12/14/09	0804	1.97	5.29
21	AR125401	WAR091102-54	12/14/09	0814	1.97	5.29
22	AR124201	WAR091214-09	12/14/09	0825	1.97	5.29
23	AR124202	WAR091214-10	12/14/09	0835	1.97	5.29
24	AR124203	WAR091214-11	12/14/09	0846	1.97	5.29
25	AR124204	WAR091214-12	12/14/09	0856	1.97	5.29
26	AR124205	IAR0911111-0	12/14/09	0907	1.97	5.29
27	AR124201	WAR091102-42	12/14/09	0917	1.97	5.29
28	AR124801	WAR091214-13	12/14/09	0928	1.97	5.29
29	AR124802	WAR091214-14	12/14/09	0938	1.97	5.29
30	AR124803	WAR091214-15	12/14/09	0949	1.97	5.29
31	AR124804	WAR091214-16	12/14/09	0959	1.97	5.29
32	AR124805	IAR091027-02	12/14/09	1010	1.97	5.29

QC LIMITS
S1 = 4cmx (+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl (+/- 0.03 MINUTES)

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

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 10-1130

GC Column: CLP1 ID: 0.25 (mm) Init. Calib. Date(s): 12/14/09 12/14/09

Instrument ID: ECD1A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 1.97 DCB: 5.29

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	AR124801	WAR091027-48	12/14/09	1020	1.97	5.29
02	AR166001	WAR091214-01	12/14/09	1031	1.97	5.29
03	AR166002	WAR091214-02	12/14/09	1041	1.97	5.29
04	AR166003	WAR091214-03	12/14/09	1052	1.97	5.29
05	AR166004	WAR091214-04	12/14/09	1102	1.97	5.29
06	AR166005	IAR091102-01	12/14/09	1113	1.97	5.29
07	AR166001	WAR091211-60	12/14/09	1123	1.97	5.29
08	AR126801	WAR091214-17	12/14/09	1134	1.97	5.29
09	AR126802	WAR091214-18	12/14/09	1144	1.97	5.29
10	AR126803	WAR091214-19	12/14/09	1155	1.97	5.29
11	AR126804	WAR091214-20	12/14/09	1206	1.97	5.29
12	AR126805	IAR090817-02	12/14/09	1216	1.97	5.29
13	AR126801	WAR091106-68	12/14/09	1227	1.97	5.29
14	DDTANALOGSTD	WAR091020-DD	12/14/09	1237		
15	PIBLK02	WAR091130-99	12/14/09	1248	1.97	5.29
16	ZZZZZ	ZZZZZ	12/14/09	1258	1.97	5.29
17	ZZZZZ	ZZZZZ	12/14/09	1309	1.97	5.29
18	ZZZZZ	ZZZZZ	12/14/09	1319	1.97	5.29
19	ZZZZZ	ZZZZZ	12/14/09	1330	1.97	5.29
20	ZZZZZ	ZZZZZ	12/14/09	1340	1.97	5.29
21	ZZZZZ	ZZZZZ	12/14/09	1351	1.97	5.29
22	ZZZZZ	ZZZZZ	12/14/09	1403	1.97	5.29
23	ZZZZZ	ZZZZZ	12/14/09	1416	1.97	5.29
24	ZZZZZ	ZZZZZ	12/14/09	1429	1.97	5.29
25	ZZZZZ	ZZZZZ	12/14/09	1441	1.97	5.29
26	AR166002	WAR091211-60	12/14/09	1452	1.97	5.29
27	PIBLK03	WAR091130-99	12/14/09	1502	1.97	5.29
28	ZZZZZ	ZZZZZ	12/14/09	1513	1.97	5.29
29	ZZZZZ	ZZZZZ	12/14/09	1525	1.97	5.29
30	ZZZZZ	ZZZZZ	12/14/09	1538	1.97	5.29
31	ZZZZZ	ZZZZZ	12/14/09	1551	1.97	5.29
32	ZZZZZ	ZZZZZ	12/14/09	1603	1.97	5.27

	QC LIMITS
S1 = 4cmx	(+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl	(+/- 0.03 MINUTES)

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

FORM VIII PEST OLM03.0

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 10-1130

GC Column: CLP2 ID: 0.25 (mm) Init. Calib. Date(s): 12/11/09 12/14/09

Instrument ID: ECD1A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.30 DCB: 5.94

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	PIBLK01	WAR091130-99	12/14/09	0444	2.30	5.95
02	ZZZZZ	ZZZZZ	12/14/09	0454	2.30	5.94
03	ZZZZZ	ZZZZZ	12/14/09	0505	2.30	5.95
04	ZZZZZ	ZZZZZ	12/14/09	0515	2.30	5.95
05	ZZZZZ	ZZZZZ	12/14/09	0526	2.30	5.95
06	AR123201	WAR090930-32	12/14/09	0536	2.30	5.95
07	AR122101	WAR090803-21	12/14/09	0547	2.30	5.95
08	AR126201	WAR090803-62	12/14/09	0558	2.30	5.94
09	ZZZZZ	ZZZZZ	12/14/09	0608	2.30	5.94
10	ZZZZZ	ZZZZZ	12/14/09	0619	2.30	5.95
11	ZZZZZ	ZZZZZ	12/14/09	0629	2.30	5.94
12	ZZZZZ	ZZZZZ	12/14/09	0640	2.30	5.94
13	ZZZZZ	ZZZZZ	12/14/09	0650	2.30	5.95
14	ZZZZZ	ZZZZZ	12/14/09	0701	2.30	5.94
15	ZZZZZ	ZZZZZ	12/14/09	0711	2.30	5.95
16	AR125401	WAR091214-05	12/14/09	0722	2.30	5.94
17	AR125402	WAR091214-06	12/14/09	0732	2.30	5.94
18	AR125403	WAR091214-07	12/14/09	0743	2.30	5.94
19	AR125404	WAR091214-08	12/14/09	0753	2.30	5.94
20	AR125405	IAR091027-01	12/14/09	0804	2.30	5.95
21	AR125401	WAR091102-54	12/14/09	0814	2.30	5.94
22	AR124201	WAR091214-09	12/14/09	0825	2.30	5.94
23	AR124202	WAR091214-10	12/14/09	0835	2.30	5.94
24	AR124203	WAR091214-11	12/14/09	0846	2.30	5.94
25	AR124204	WAR091214-12	12/14/09	0856	2.30	5.94
26	AR124205	IAR0911111-0	12/14/09	0907	2.30	5.94
27	AR124201	WAR091102-42	12/14/09	0917	2.30	5.94
28	AR124801	WAR091214-13	12/14/09	0928	2.30	5.94
29	AR124802	WAR091214-14	12/14/09	0938	2.30	5.94
30	AR124803	WAR091214-15	12/14/09	0949	2.30	5.94
31	AR124804	WAR091214-16	12/14/09	0959	2.30	5.94
32	AR124805	IAR091027-02	12/14/09	1010	2.30	5.94

	QC LIMITS
S1 = 4cmx	(+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl	(+/- 0.03 MINUTES)

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

FORM VIII PEST OLM03.0

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 10-1130

GC Column: CLP2 ID: 0.25 (mm) Init. Calib. Date(s): 12/11/09 12/14/09

Instrument ID: ECD1A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.30 DCB: 5.94

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	AR124801	WAR091027-48	12/14/09	1020	2.30	5.95
02	AR166001	WAR091214-01	12/14/09	1031	2.30	5.94
03	AR166002	WAR091214-02	12/14/09	1041	2.30	5.94
04	AR166003	WAR091214-03	12/14/09	1052	2.30	5.94
05	AR166004	WAR091214-04	12/14/09	1102	2.30	5.94
06	AR166005	IAR091102-01	12/14/09	1113	2.30	5.94
07	AR166001	WAR091211-60	12/14/09	1123	2.30	5.94
08	AR126801	WAR091214-17	12/14/09	1134		
09	AR126802	WAR091214-18	12/14/09	1144		
10	AR126803	WAR091214-19	12/14/09	1155		
11	AR126804	WAR091214-20	12/14/09	1206		
12	AR126805	IAR090817-02	12/14/09	1216		
13	AR126801	WAR091106-68	12/14/09	1227	2.30	5.94
14	DDTANALOGSTD	WAR091020-DD	12/14/09	1237		
15	PIBLK02	WAR091130-99	12/14/09	1248	2.30	5.94
16	ZZZZZ	ZZZZZ	12/14/09	1258	2.30	5.94
17	ZZZZZ	ZZZZZ	12/14/09	1309	2.30	5.94
18	ZZZZZ	ZZZZZ	12/14/09	1319	2.30	5.94
19	ZZZZZ	ZZZZZ	12/14/09	1330	2.30	5.94
20	ZZZZZ	ZZZZZ	12/14/09	1340	2.30	5.94
21	ZZZZZ	ZZZZZ	12/14/09	1351	2.30	5.94
22	ZZZZZ	ZZZZZ	12/14/09	1403	2.30	5.94
23	ZZZZZ	ZZZZZ	12/14/09	1416	2.30	5.94
24	ZZZZZ	ZZZZZ	12/14/09	1429	2.30	5.94
25	ZZZZZ	ZZZZZ	12/14/09	1441	2.30	5.94
26	AR166002	WAR091211-60	12/14/09	1452	2.30	5.94
27	PIBLK03	WAR091130-99	12/14/09	1502	2.30	5.94
28	ZZZZZ	ZZZZZ	12/14/09	1513	2.30	5.94
29	ZZZZZ	ZZZZZ	12/14/09	1525	2.30	5.94
30	ZZZZZ	ZZZZZ	12/14/09	1538	2.30	5.94
31	ZZZZZ	ZZZZZ	12/14/09	1551	2.30	5.94
32	ZZZZZ	ZZZZZ	12/14/09	1603	2.30	5.94

	QC LIMITS
S1 = 4cmx	(+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl	(+/- 0.03 MINUTES)

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

FORM VIII PEST OLM03.0

8D
PESTICIDE ANALYTICAL SEQUENCE

Lab Name: GEL LABORATORIES LLC Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 10-1130

GC Column: CLP1 ID: 0.25 (mm) Init. Calib. Date(s): 12/14/09 12/14/09

Instrument ID: ECD1A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 1.97 DCB: 5.28

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	PIBLK01	WAR100105-99	01/12/10	0748	1.97	5.28
02	ZZZZZ	ZZZZZ	01/12/10	0759	1.97	5.28
03	AR125401	WAR091216-54	01/12/10	0809		
04	ZZZZZ	ZZZZZ	01/12/10	0820		
05	AR124801	WAR091217-48	01/12/10	0830		
06	AR123201	WAR100104-32	01/12/10	0841		
07	AR122101	WAR100104-21	01/12/10	0851		
08	AR166001	WAR100104-60	01/12/10	0902	1.97	5.28
09	AR124201	WAR091217-42	01/12/10	0912		
10	AR126201	WAR100104-62	01/12/10	0923		
11	AR126801	WAR100111-68	01/12/10	0933		
12	DDTANALOGSTD	WAR091219-DD	01/12/10	0944		
13	PIBLK02	WAR100105-99	01/12/10	0954	1.97	5.28
14	ZZZZZ	ZZZZZ	01/12/10	1005	1.97	5.28
15	ZZZZZ	ZZZZZ	01/12/10	1015	1.97	5.28
16	ZZZZZ	ZZZZZ	01/12/10	1026	1.98	5.28
17	ZZZZZ	ZZZZZ	01/12/10	1038	1.98	5.28
18	ZZZZZ	ZZZZZ	01/12/10	1051	1.98	5.28
19	AR166002	WAR100104-60	01/12/10	1103	1.97	5.28
20	PIBLK03	WAR100105-99	01/12/10	1114	1.97	5.28
21	PBLK01	1202012544	01/12/10	1124	1.97	5.28
22	PBLK01LCS	1202012545	01/12/10	1135	1.97	5.28
23	RE12-10-7698	244125001	01/12/10	1146	1.97	5.28
24	RE12-10-7697	244125002	01/12/10	1158	1.97	5.28
25	ZZZZZ	ZZZZZ	01/12/10	1211	1.97	5.28
26	ZZZZZ	ZZZZZ	01/12/10	1223	1.97	5.28
27	ZZZZZ	ZZZZZ	01/12/10	1236	1.97	5.28
28	ZZZZZ	ZZZZZ	01/12/10	1249	1.97	5.28
29	ZZZZZ	ZZZZZ	01/12/10	1301	1.97	5.28
30	ZZZZZ	ZZZZZ	01/12/10	1314	1.97	5.28
31	AR166003	WAR100104-60	01/12/10	1327	1.97	5.28
32	PIBLK04	WAR100105-99	01/12/10	1337	1.97	5.28

	QC LIMITS
S1 = 4cmx	(+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl	(+/- 0.03 MINUTES)

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

FORM VIII PEST OLM03.0

8D
PESTICIDE ANALYTICAL SEQUENCE

Lab Name: GEL LABORATORIES LLC Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 10-1130

GC Column: CLP2 ID: 0.25 (mm) Init. Calib. Date(s): 12/14/09 12/14/09

Instrument ID: ECD1A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.30 DCB: 5.95

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	PIBLK01	WAR100105-99	01/12/10	0748	2.30	5.94
02	ZZZZZ	ZZZZZ	01/12/10	0759	2.30	5.94
03	AR125401	WAR091216-54	01/12/10	0809		
04	ZZZZZ	ZZZZZ	01/12/10	0820		
05	AR124801	WAR091217-48	01/12/10	0830		
06	AR123201	WAR100104-32	01/12/10	0841		
07	AR122101	WAR100104-21	01/12/10	0851		
08	AR166001	WAR100104-60	01/12/10	0902	2.30	5.95
09	AR124201	WAR091217-42	01/12/10	0912		
10	AR126201	WAR100104-62	01/12/10	0923		
11	AR126801	WAR100111-68	01/12/10	0933		
12	DDTANALOGSTD	WAR091219-DD	01/12/10	0944		
13	PIBLK02	WAR100105-99	01/12/10	0954	2.30	5.95
14	ZZZZZ	ZZZZZ	01/12/10	1005	2.30	5.94
15	ZZZZZ	ZZZZZ	01/12/10	1015	2.30	5.94
16	ZZZZZ	ZZZZZ	01/12/10	1026	2.31	5.95
17	ZZZZZ	ZZZZZ	01/12/10	1038	2.31	5.95
18	ZZZZZ	ZZZZZ	01/12/10	1051	2.31	5.94
19	AR166002	WAR100104-60	01/12/10	1103	2.30	5.94
20	PIBLK03	WAR100105-99	01/12/10	1114	2.30	5.94
21	PBLK01	1202012544	01/12/10	1124	2.30	5.94
22	PBLK01LCS	1202012545	01/12/10	1135	2.30	5.94
23	RE12-10-7698	244125001	01/12/10	1146	2.30	5.94
24	RE12-10-7697	244125002	01/12/10	1158	2.30	5.94
25	ZZZZZ	ZZZZZ	01/12/10	1211	2.30	5.94
26	ZZZZZ	ZZZZZ	01/12/10	1223	2.30	5.94
27	ZZZZZ	ZZZZZ	01/12/10	1236	2.30	5.94
28	ZZZZZ	ZZZZZ	01/12/10	1249	2.30	5.94
29	ZZZZZ	ZZZZZ	01/12/10	1301	2.30	5.94
30	ZZZZZ	ZZZZZ	01/12/10	1314	2.30	5.94
31	AR166003	WAR100104-60	01/12/10	1327	2.30	5.94
32	PIBLK04	WAR100105-99	01/12/10	1337	2.30	5.94

QC LIMITS
S1 = 4cmx (+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl (+/- 0.03 MINUTES)

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

FORM VIII PEST OLM03.0

Identification Summary

SDG Number: 10–1130 **Client ID:** LCS for batch 940402

Lab Sample ID: 1202012545

Data File:	022f2201.d	**Data File:**	022b2201.d
Inst:	ECD1A.I_1	**Inst:**	ECD1A.I_2
Column:	CLP1	**Column:**	CLP2
Analyzed:	12–JAN–10 11:35	**Analyzed:**	12–JAN–10 11:35

Analyte	Peak	RT	RT Window	Conc.	Ave Conc.	Units	RPD
Aroclor–1016							3.82
Column 1	1	2.42	2.39 – 2.45	20.4		ug/kg	
	2	2.7	2.67 – 2.73	21.5		ug/kg	
	3	2.79	2.76 – 2.82	20.5		ug/kg	
	4	2.83	2.8 – 2.86	21.4		ug/kg	
	5	3.04	3.01 – 3.07	21.5		ug/kg	
					21.1		
Column 2	1	3.2	3.17 – 3.23	20.9		ug/kg	
	2	3.28	3.25 – 3.31	19.4		ug/kg	
	3	3.34	3.31 – 3.37	20.3		ug/kg	
	4	3.57	3.54 – 3.6	20.6		ug/kg	
	5	3.64	3.62 – 3.68	20.3		ug/kg	
					20.3		
Aroclor–1260							7.73
Column 1	1	3.77	3.74 – 3.8	23.2		ug/kg	
	2	3.93	3.9 – 3.96	22.9		ug/kg	
	3	4.16	4.13 – 4.19	24		ug/kg	
	4	4.3	4.28 – 4.34	24.7		ug/kg	
	5	4.48	4.45 – 4.51	25.3		ug/kg	
					24		
Column 2	1	4.33	4.31 – 4.37	21.6		ug/kg	
	2	4.46	4.43 – 4.49	22.4		ug/kg	
	3	4.72	4.7 – 4.76	22		ug/kg	
	4	4.9	4.87 – 4.93	22.2		ug/kg	
	5	5.05	5.02 – 5.08	23		ug/kg	
					22.2		

QUALITY CONTROL DATA

PCB
Certificate of Analysis
Sample Summary

SDG Number:	**10–1130**			**Matrix:**	**SOIL**
Lab Sample ID:	**1202012544**				
Client Sample:	**QC for batch 940402**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**MB for batch 940402**	**Method:**	**SW846 8082**	**SOP Ref:**	**GL–OA–E–040**
Batch ID:	**940403**	**Inst:**	**ECD1A.I**	**Dilution:**	**1**
Run Date:	**01/12/2010 11:24**	**Analyst:**	**YS1**	**Inj. Vol:**	**1 uL**
Prep Date:	**01/11/2010 19:04**	**Aliquot:**	**30 g**	**Final Volume:**	**1 mL**
Data File:	**021f2101–1.d**	**Column:**	**1 CLP1**	**Level:**	**LOW**
	021b2101–1.d		**2 CLP2**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674–11–2	Aroclor–1016	U	3.33	ug/kg	1.11	3.33	1
11104–28–2	Aroclor–1221	U	3.33	ug/kg	1.11	3.33	1
11141–16–5	Aroclor–1232	U	3.33	ug/kg	1.11	3.33	1
53469–21–9	Aroclor–1242	U	3.33	ug/kg	1.11	3.33	1
12672–29–6	Aroclor–1248	U	3.33	ug/kg	1.11	3.33	1
11097–69–1	Aroclor–1254	U	3.33	ug/kg	1.11	3.33	1
11096–82–5	Aroclor–1260	U	3.33	ug/kg	1.11	3.33	1

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/011210.b/021f2101-2.d
Lab Smp Id: 1202012544 Client Smp ID: PBLK01
Inj Date : 12-JAN-2010 11:24
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |1202012544|1|
Misc Info : |ECD82P_1S|940403|SVA|QC A|SOIL|MB|||
Comment :
Method : /chem/ecd1a.i/011210.b/ECD1-F-8082-121409.m
Meth Date : 23-Jan-2010 10:48 yip00818 Quant Type: ESTD
Cal Date : 14-DEC-2009 11:34 Cal File: 040f4001.d
Als bottle: 21 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 10-1130.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.968	1.969	-0.001	46967099	131.383	4.4	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.281	5.283	-0.002	40527430	134.192	4.5	80.00- 120.00	100.00

Data File: /chem/ecd1a.i/011210.b/021f2101-2.d

Page 1

Date : 12-JAN-2010 11:24

Client ID: PBLK01

Instrument: ecd1a.i

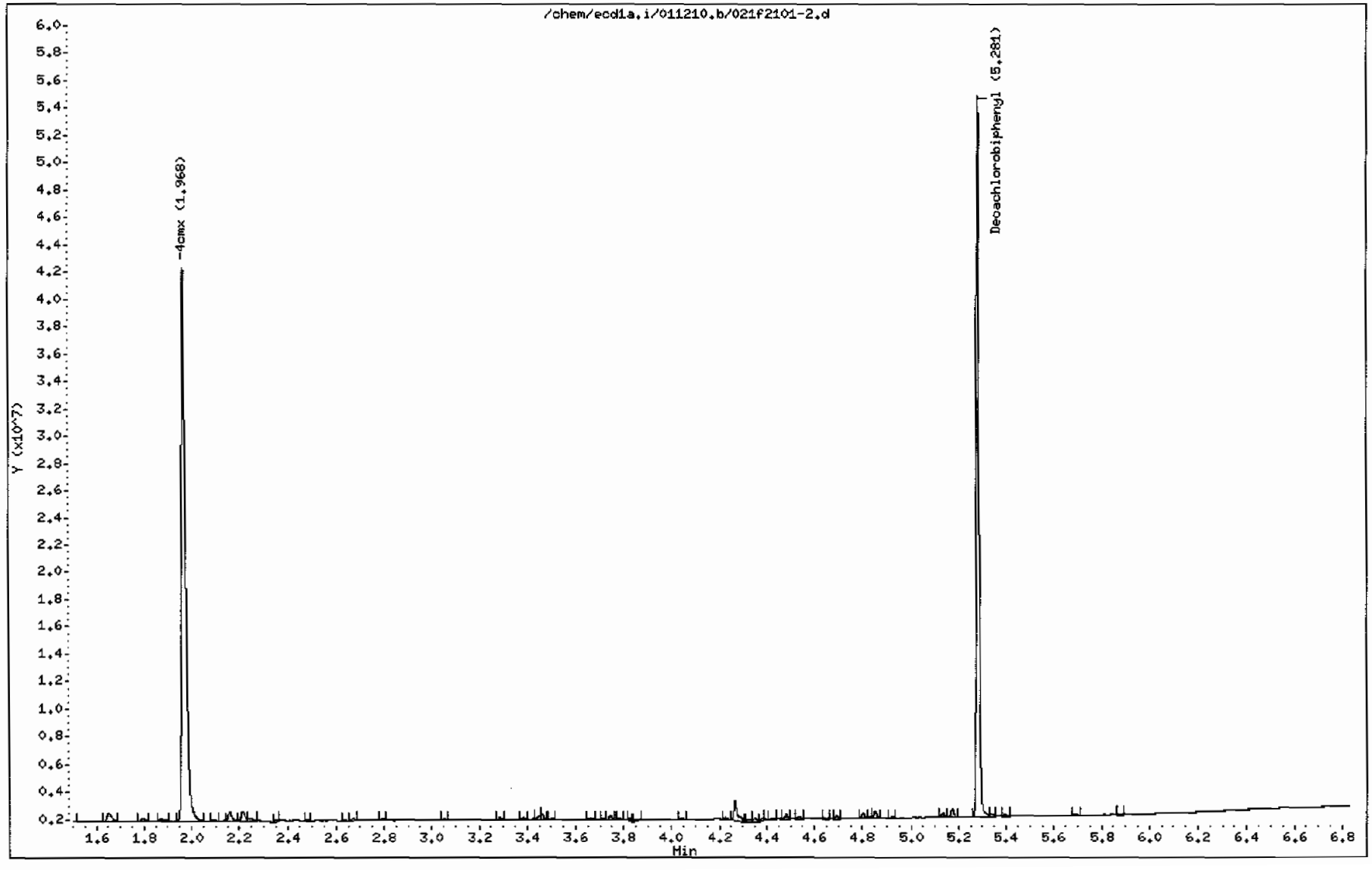
Sample Info: |1202012544|1|

Volume Injected (uL): 1.0

Operator: YS1

Column phase: CLP1

Column diameter: 0.25



GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/011210.b/021b2101-2.d
Lab Smp Id: 1202012544 Client Smp ID: PBLK01
Inj Date : 12-JAN-2010 11:24
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |1202012544|1|
Misc Info : |ECD82P_1S|940403|SVA|QC A|SOIL|MB|||
Comment :
Method : /chem/ecd1a.i/011210.b/ECD1-B-8082-121409.m
Meth Date : 23-Jan-2010 10:48 yip00818 Quant Type: ESTD
Cal Date : 14-DEC-2009 12:16 Cal File: 044b4401.d
Als bottle: 21 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 10-1130.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

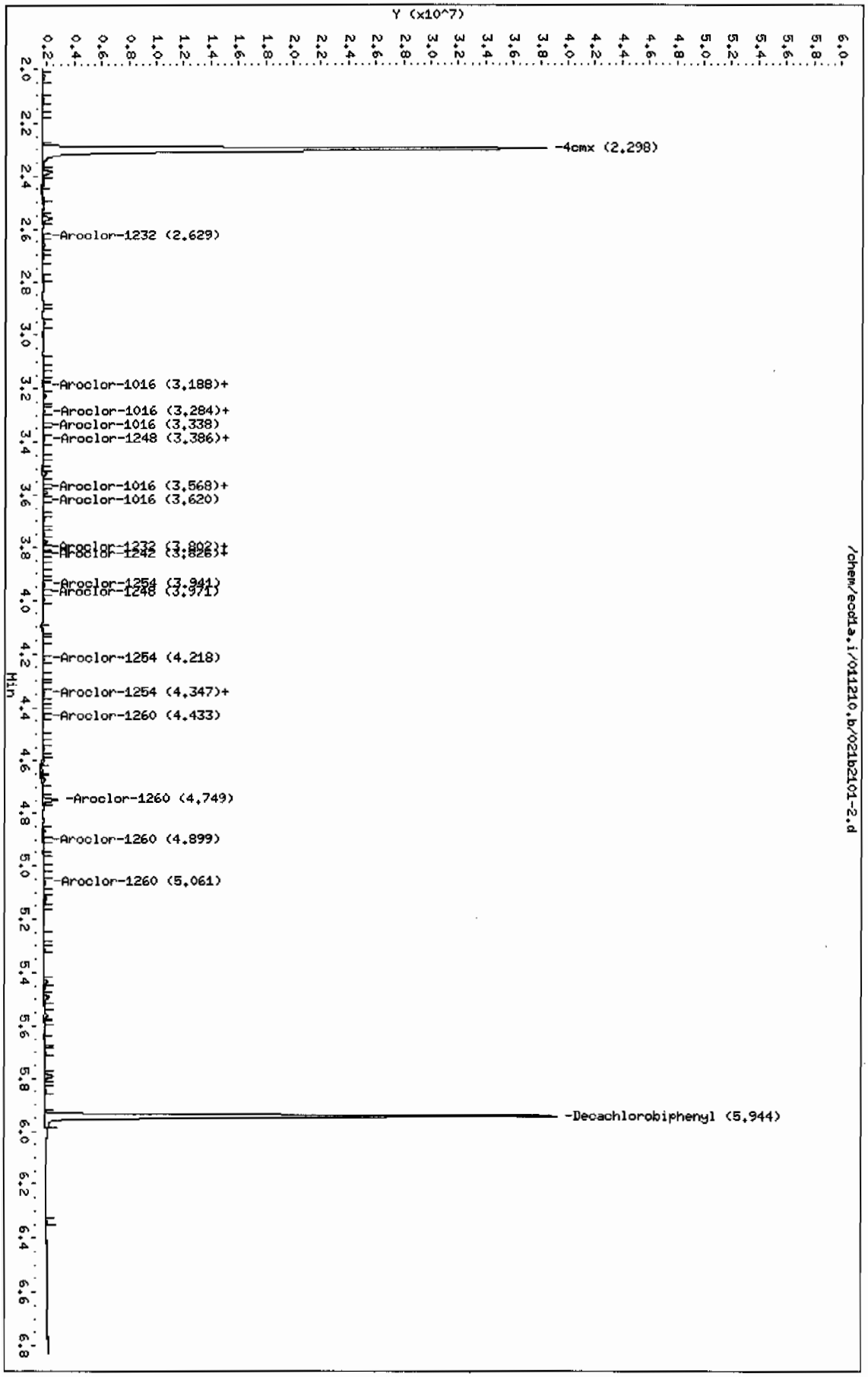
Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.298	2.299	-0.001	34773482	121.867	4.1	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.944	5.945	-0.001	29068897	131.067	4.4	80.00- 120.00	100.00

Data File: /chem/ecd1a.i/011210.b/021b2101-2.d
Date : 12-JAN-2010 11:24
Client ID: PBLK01
Sample Info: 1120201254111
Volume Injected (uL): 1.0
Column phase: CLP2

Instrument: ecd1a.i
Operator: YS1
Column diameter: 0.25



PCB
Certificate of Analysis
Sample Summary

SDG Number:	**10–1130**			**Matrix:**	**SOIL**
Lab Sample ID:	**1202012545**				
Client Sample:	**QC for batch 940402**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**LCS for batch 940402**	**Method:**	**SW846 8082**	**SOP Ref:**	**GL–OA–E–040**
Batch ID:	**940403**	**Inst:**	**ECD1A.I**	**Dilution:**	**1**
Run Date:	**01/12/2010 11:35**	**Analyst:**	**YS1**	**Inj. Vol:**	**1 uL**
Prep Date:	**01/11/2010 19:04**	**Aliquot:**	**30 g**	**Final Volume:**	**1 mL**
Data File:	**022f2201–1.d**	**Column:**	**1 CLP1**	**Level:**	**LOW**
	022b2201–1.d		**2 CLP2**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674–11–2	Aroclor–1016		21.1	ug/kg	1.11	3.33	1
11104–28–2	Aroclor–1221	U	3.33	ug/kg	1.11	3.33	1
11141–16–5	Aroclor–1232	U	3.33	ug/kg	1.11	3.33	1
53469–21–9	Aroclor–1242	U	3.33	ug/kg	1.11	3.33	1
12672–29–6	Aroclor–1248	U	3.33	ug/kg	1.11	3.33	1
11097–69–1	Aroclor–1254	U	3.33	ug/kg	1.11	3.33	1
11096–82–5	Aroclor–1260		24.0	ug/kg	1.11	3.33	1

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/011210.b/022f2201-2.d
Lab Smp Id: 1202012545 Client Smp ID: PBLK01LCS
Inj Date : 12-JAN-2010 11:35
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |1202012545|1|
Misc Info : |ECD82P_1S|940403|SVA|QC A|SOIL|LCS|||
Comment :
Method : /chem/ecd1a.i/011210.b/ECD1-F-8082-121409.m
Meth Date : 23-Jan-2010 10:48 yip00818 Quant Type: ESTD
Cal Date : 14-DEC-2009 11:34 Cal File: 040f4001.d
Als bottle: 22 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 10-1130.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

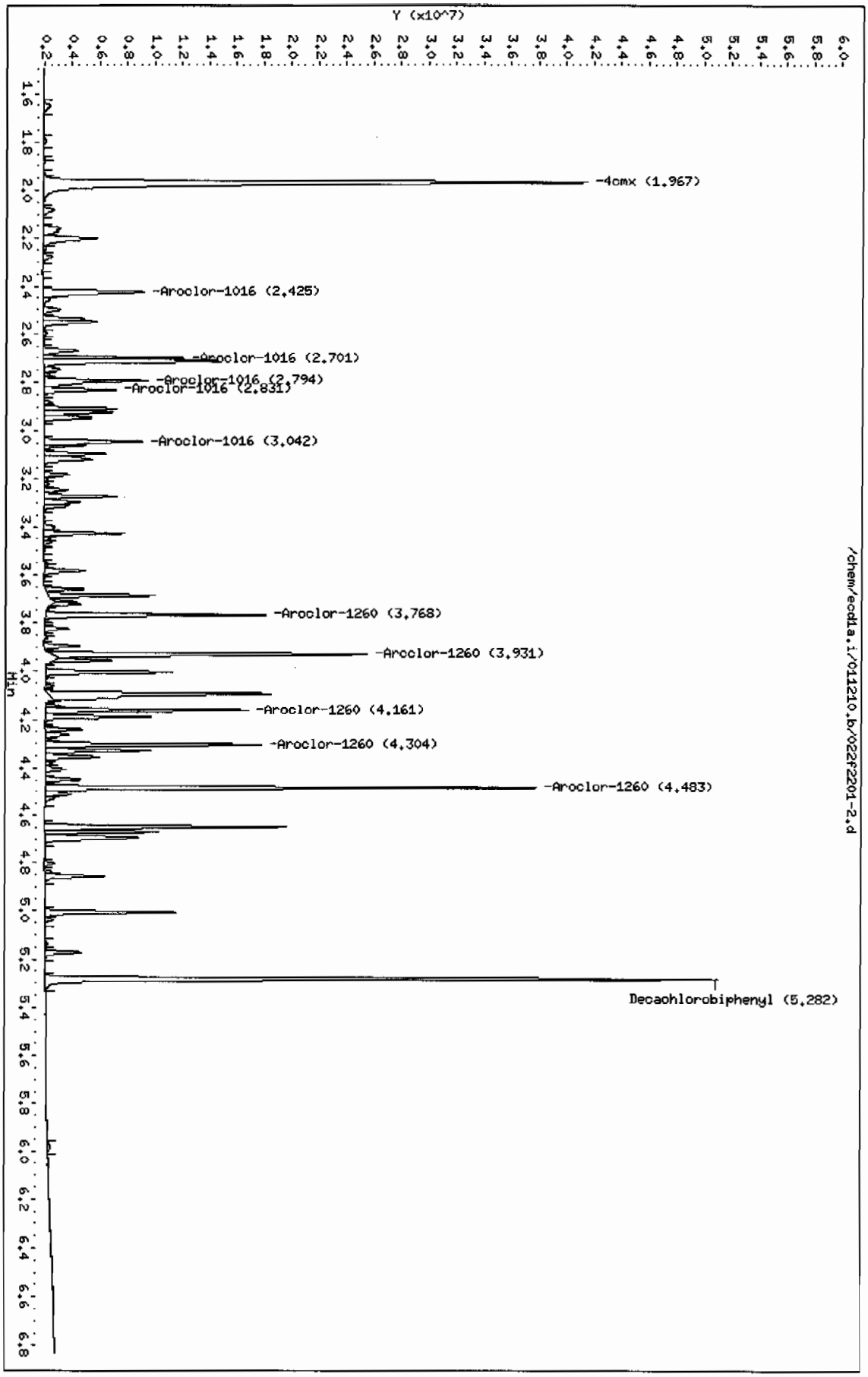
Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.967	1.969	-0.002	46854408	131.068	4.4	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.282	5.283	-0.001	37971519	125.729	4.2	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.425	2.424	0.001	8504367	613.287	20.4	80.00- 120.00	100.00
2.701	2.702	-0.001	6527683	646.451	21.5	56.95- 96.95	76.76
2.794	2.794	0.000	7247117	616.408	20.5	64.78- 104.78	85.22
2.831	2.832	-0.001	4232148	641.331	21.4	30.82- 70.82	49.76

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	CONCENTRATIONS FINAL (ug/Kg)	TARGET RANGE	RATIO
1 Aroclor-1016 (continued)							
3.042	3.043	-0.001	5584300	643.842	21.5	45.65- 85.65	65.66
Average of Peak Concentrations =					21.1		
7 Aroclor-1260					CAS #: 11096-82-5		
3.768	3.769	-0.001	11662396	696.173	23.2	80.00- 120.00	100.00
3.931	3.932	-0.001	16976594	686.128	22.9	132.05- 172.05	145.57
4.161	4.163	-0.002	10582860	720.543	24.0	70.36- 110.36	90.74
4.304	4.305	-0.001	11236423	739.992	24.7	74.40- 114.40	96.35
4.483	4.484	-0.001	26113549	760.210	25.3	195.73- 235.73	223.91
Average of Peak Concentrations =					24.0		

Data File: /chem/ecd1a.i/011210.b/022F2201-2.d
Date : 12-JAN-2010 11:35
Client ID: PBLK01LCS
Sample Info: 1120201254511!
Volume Injected (uL): 1.0
Column phase: CLP1

Instrument: ecd1a.i
Operator: YS1
Column diameter: 0.25



GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/011210.b/022b2201-2.d
Lab Smp Id: 1202012545 Client Smp ID: PBLK01LCS
Inj Date : 12-JAN-2010 11:35
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |1202012545|1|
Misc Info : |ECD82P_1S|940403|SVA|QC A|SOIL|LCS|||
Comment :
Method : /chem/ecd1a.i/011210.b/ECD1-B-8082-121409.m
Meth Date : 23-Jan-2010 10:48 yip00818 Quant Type: ESTD
Cal Date : 14-DEC-2009 12:16 Cal File: 044b4401.d
Als bottle: 22 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 10-1130.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

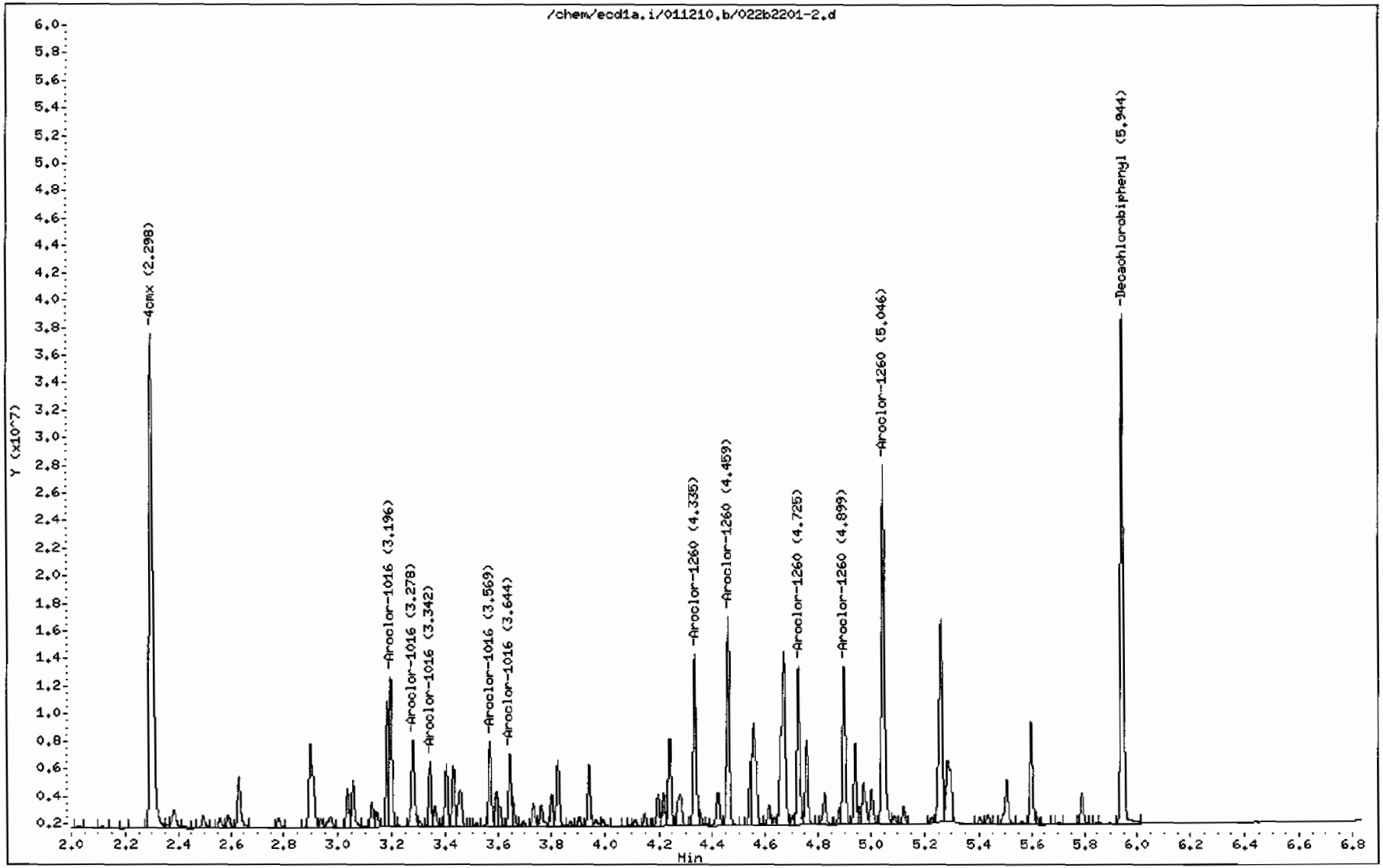
Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.298	2.299	-0.001	34638630	121.394	4.0	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.944	5.945	-0.001	28530665	128.640	4.3	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
3.196	3.195	0.001	7903170	626.662	20.9	80.00- 120.00	100.00
3.278	3.279	-0.001	5435868	582.755	19.4	46.12- 86.12	68.78
3.342	3.342	0.000	3292343	608.418	20.3	20.86- 60.86	41.66
3.569	3.569	0.000	4351150	617.020	20.6	33.49- 73.49	55.06

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
1 Aroclor-1016 (continued)							
3.644	3.645	-0.001	3983564	608.110	20.3	29.37- 69.37	50.40
		Average of Peak Concentrations =			20.3		
7 Aroclor-1260					CAS #: 11096-82-5		
4.335	4.335	0.000	8864669	648.001	21.6	80.00- 120.00	100.00
4.459	4.459	0.000	10750422	670.685	22.4	101.46- 141.46	121.27
4.725	4.726	-0.001	8290666	659.878	22.0	72.86- 112.86	93.52
4.899	4.899	0.000	8542315	666.843	22.2	75.54- 115.54	96.36
5.046	5.046	0.000	19238490	689.609	23.0	193.04- 233.04	217.02
		Average of Peak Concentrations =			22.2		

Data File: /chem/ecd1a.i/011210.b/022b2201-2.d
Date : 12-JAN-2010 11:35
Client ID: PBLK01LCS
Sample Info: !1202012545!1!
Volume Injected (uL): 1.0
Column phase: CLP2

Instrument: ecd1a.i
Operator: YS1
Column diameter: 0.25



MISCELLANEOUS DATA

GEL ORGANIC RUN LOG INSTRUMENT ID: ECD1

DATE: 12/15/2009 METHOD: ECD1-F-8082-121409.m OPERATOR:YS1 REVIEWED BY:_____
DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 1 on pg. 1 SOLVENT LOT DA385
ALUMINA LOT 1230997-A
COPPER LOT 236547-A

Calibration & QC Information
Initial Calibration Dates: See Calibration History and Standard Logbook.
Initial Calibration Std ID's: See Calibration History and Standard Logbook.
GEL SOP GL-OA-E-040 Polychlorinated Biphenyl: EPA 8082
Chromatogram Abbreviation Legend: AB-Assign Baseline, AP-Assign Peak,
DNC-Do Not Call, DMP-Doesn't Match Pattern, NC-Not Confirmed, RT-Retention Time,
BF-Before, AF-After.

Sequence Number: /chem/ecd1a.i/121409.b Injection Volume: 0.5 ul

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
001f0101.d	WAR091130-99 01	YS1	14-DEC-2009 04:44		121409	1.0	CLEAN	
002f0201.d	WAR091211-60 01	YS1	14-DEC-2009 04:54		121409	1.0	DUSE RE-ICAL	
003f0301.d	WAR091102-54	YS1	14-DEC-2009 05:05		121409	1.0	DUSE RE-ICAL	
004f0401.d	WAR091102-42	YS1	14-DEC-2009 05:15		121409	1.0	DUSE RE-ICAL	
005f0501.d	WAR091027-48	YS1	14-DEC-2009 05:26		121409	1.0	DUSE RE-ICAL	
006f0601.d	WAR090930-32	YS1	14-DEC-2009 05:36		121409	1.0	PATTERN ONLY	
007f0701.d	WAR090803-21	YS1	14-DEC-2009 05:47		121409	1.0	PATTERN ONLY	
008f0801.d	WAR090803-62	YS1	14-DEC-2009 05:58		121409	1.0	PATTERN ONLY	
009f0901.d	WAR091106-68	YS1	14-DEC-2009 06:08		121409	1.0	DUSE RE-ICAL	
010f1001.d	1660-1	YS1	14-DEC-2009 06:19		121409	1.0	DUSE	
011f1101.d	1660-2	YS1	14-DEC-2009 06:29		121409	1.0	DUSE	
012f1201.d	1660-3	YS1	14-DEC-2009 06:40		121409	1.0	DUSE	
013f1301.d	1660-4	YS1	14-DEC-2009 06:50		121409	1.0	DUSE	
014f1401.d	IAR091102-01	YS1	14-DEC-2009 07:01		121409	1.0	DUSE	
015f1501.d	WAR091211-60 01	YS1	14-DEC-2009 07:11		121409	1.0	DUSE	

Instrument Batch: /chem/ecd1a.i/121409.b Page: 1

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments

016f1601.d	WAR091214-05 54	YS1	14-DEC-2009 07:22	121409	1.0	AR1254 I-CAL LEVEL 1	
017f1701.d	WAR091214-06 54	YS1	14-DEC-2009 07:32	121409	1.0	AR1254 I-CAL LEVEL 2	
018f1801.d	WAR091214-07 54	YS1	14-DEC-2009 07:43	121409	1.0	AR1254 I-CAL LEVEL 3	
019f1901.d	WAR091214-08 54	YS1	14-DEC-2009 07:53	121409	1.0	AR1254 I-CAL LEVEL 4	
020f2001.d	IAR091027-01	YS1	14-DEC-2009 08:04	121409	1.0	AR1254 I-CAL LEVEL 5	
021f2101.d	WAR091102-54	YS1	14-DEC-2009 08:14	121409	1.0	PASSED ON BOTH COLUMNS	
022f2201.d	WAR091214-09 42	YS1	14-DEC-2009 08:25	121409	1.0	AR1242 I-CAL LEVEL 1	
023f2301.d	WAR091214-10 42	YS1	14-DEC-2009 08:35	121409	1.0	AR1242 I-CAL LEVEL 2	
024f2401.d	WAR091214-11 42	YS1	14-DEC-2009 08:46	121409	1.0	AR1242 I-CAL LEVEL 3	
025f2501.d	WAR091214-12 42	YS1	14-DEC-2009 08:56	121409	1.0	AR1242 I-CAL LEVEL 4	
026f2601.d	IAR0911111-01	YS1	14-DEC-2009 09:07	121409	1.0	AR1242 I-CAL LEVEL 5	
027f2701.d	WAR091102-42	YS1	14-DEC-2009 09:17	121409	1.0	PASSED ON BOTH COLUMNS	
028f2801.d	WAR091214-13 48	YS1	14-DEC-2009 09:28	121409	1.0	AR1248 I-CAL LEVEL 1	
029f2901.d	WAR091214-14 48	YS1	14-DEC-2009 09:38	121409	1.0	AR1248 I-CAL LEVEL 2	
030f3001.d	WAR091214-15 48	YS1	14-DEC-2009 09:49	121409	1.0	AR1248 I-CAL LEVEL 3	
031f3101.d	WAR091214-16 48	YS1	14-DEC-2009 09:59	121409	1.0	AR1248 I-CAL LEVEL 4	
032f3201.d	IAR091027-02	YS1	14-DEC-2009 10:10	121409	1.0	AR1248 I-CAL LEVEL 5	
033f3301.d	WAR091027-48	YS1	14-DEC-2009 10:20	121409	1.0	PASSED ON BOTH COLUMNS	
034f3401.d	WAR091214-01 60	YS1	14-DEC-2009 10:31	121409	1.0	AR1660 I-CAL LEVEL 1	
035f3501.d	WAR091214-02 60	YS1	14-DEC-2009 10:41	121409	1.0	AR1660 I-CAL LEVEL 2	

Instrument Batch: /chem/ecd1a.i/121409.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
036f3601.d	WAR091214-03 60	YS1	14-DEC-2009 10:52	121409		1.0		AR1660 I-CAL LEVEL 3
037f3701.d	WAR091214-04 60	YS1	14-DEC-2009 11:02	121409		1.0		AR1660 I-CAL LEVEL 4
038f3801.d	IAR091102-01	YS1	14-DEC-2009 11:13	121409		1.0		AR1660 I-CAL LEVEL 5
039f3901.d	WAR091211-60 01	YS1	14-DEC-2009 11:23	121409		1.0		PASSED ON BOTH COLUMNS
040f4001.d	WAR091214-17 68	YS1	14-DEC-2009 11:34	121409		1.0		AR1268 I-CAL LEVEL 1

041f4101.d	WAR091214-18 68	YS1	14-DEC-2009 11:44		121409		1.0		AR1268 I-CAL LEVEL 2
042f4201.d	WAR091214-19 68	YS1	14-DEC-2009 11:55		121409		1.0		AR1268 I-CAL LEVEL 3
043f4301.d	WAR091214-20 68	YS1	14-DEC-2009 12:06		121409		1.0		AR1268 I-CAL LEVEL 4
044f4401.d	IAR090817-02	YS1	14-DEC-2009 12:16		121409		1.0		AR1268 I-CAL LEVEL 5
045f4501.d	WAR091106-68	YS1	14-DEC-2009 12:27		121409		1.0		PASSED ON BOTH COLUMNS
046f4601.d	WAR091020-DDT	YS1	14-DEC-2009 12:37		121409		1.0		DDT ANALOG STANDARD
047f4701.d	WAR091130-99 02	YS1	14-DEC-2009 12:48		121409		1.0		CLEAN
048f4801.d	1201991693	YS1	14-DEC-2009 12:58	931140	10-782		1.0	QC A	UPLOAD BOTH COLUMNS, USE HIGHER
049f4901.d	1201991694	YS1	14-DEC-2009 13:09	931140	10-782		1.0	QC A	UPLOAD BOTH COLUMNS, USE HIGHER
050f5001.d	242297001	YS1	14-DEC-2009 13:19	931140	10-782		1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
051f5101.d	242297002	YS1	14-DEC-2009 13:30	931140	10-782		10.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
052f5201.d	242297003	YS1	14-DEC-2009 13:40	931140	10-782		1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
053f5301.d	242297004	YS1	14-DEC-2009 13:51	931140	10-782		5.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
054f5401.d	242297005	YS1	14-DEC-2009 14:03	931140	10-782		5.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
055f5501.d	242297006	YS1	14-DEC-2009 14:16	931140	10-782		10.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER

Instrument Batch: /chem/ecd1a.i/121409.b Page: 3

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
056f5601.d	242297007	YS1	14-DEC-2009 14:29	931140	10-782	5.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
057f5701.d	242297008	YS1	14-DEC-2009 14:41	931140	10-782	25.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
058f5801.d	WAR091211-60 02	YS1	14-DEC-2009 14:52		121409	1.0		PASSED ON BOTH COLUMNS
059f5901.d	WAR091130-99 03	YS1	14-DEC-2009 15:02		121409	1.0		CLEAN
060f6001.d	242297009	YS1	14-DEC-2009 15:13	931140	10-782	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
061f6101.d	242297010	YS1	14-DEC-2009 15:25	931140	10-782	1.0	LANL	DCB LOW RE
062f6201.d	242297011	YS1	14-DEC-2009 15:38	931140	10-782	5.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
063f6301.d	242297012	YS1	14-DEC-2009 15:51	931140	10-782	5.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
064f6401.d	242297013	YS1	14-DEC-2009 16:03	931140	10-782	10.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER

065f6501.d	242305004	YS1	14-DEC-2009 16:16	931140	10-786		5.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
066f6601.d	1201991695	YS1	14-DEC-2009 16:28	931140	10-786		5.0	QC A	UPLOAD BOTH COLUMNS, USE HIGHER
067f6701.d	1201991696	YS1	14-DEC-2009 16:41	931140	10-786		5.0	QC A	UPLOAD BOTH COLUMNS, USE HIGHER
068f6801.d	242305005	YS1	14-DEC-2009 16:53	931140	10-786		5.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
069f6901.d	242305006	YS1	14-DEC-2009 17:06	931140	10-786		5.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
070f7001.d	WAR091211-60 03	YS1	14-DEC-2009 17:19		121409		1.0		PASSED ON BOTH COLUMNS
071f7101.d	WAR091130-99 04	YS1	14-DEC-2009 17:31		121409		1.0		CLEAN
072f7201.d	1201992645	YS1	14-DEC-2009 17:44	931553	242521		1.0	QC A	UPLOAD BOTH COLUMNS, USE HIGHER
073f7301.d	1201992646	YS1	14-DEC-2009 17:57	931553	242521		1.0	QC A	UPLOAD BOTH COLUMNS, USE HIGHER
074f7401.d	242264001	YS1	14-DEC-2009 18:09	931553	242264		5.0	ENRG	UPLOAD BOTH COLUMNS, USE HIGHER
075f7501.d	242521001	YS1	14-DEC-2009 18:22	931553	242521		5.0	EMSC	UPLOAD BOTH COLUMNS, USE HIGHER

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
076f7601.d	1201992647	YS1	14-DEC-2009 18:35	931553	242521	5.0	QC A	UPLOAD BOTH COLUMNS, USE HIGHER
077f7701.d	1201992648	YS1	14-DEC-2009 18:47	931553	242521	5.0	QC A	UPLOAD BOTH COLUMNS, USE HIGHER
078f7801.d	242521002	YS1	14-DEC-2009 19:00	931553	242521	5.0	EMSC	UPLOAD BOTH COLUMNS, USE HIGHER
079f7901.d	242521003	YS1	14-DEC-2009 19:12	931553	242521	5.0	EMSC	UPLOAD BOTH COLUMNS, USE HIGHER
080f8001.d	242521004	YS1	14-DEC-2009 19:25	931553	242521	5.0	EMSC	UPLOAD BOTH COLUMNS, USE HIGHER
081f8101.d	242521005	YS1	14-DEC-2009 19:38	931553	242521	5.0	EMSC	UPLOAD BOTH COLUMNS, USE HIGHER
082f8201.d	WAR091211-60 04	YS1	14-DEC-2009 19:50		121409	1.0		PASSED ON BOTH COLUMNS
083f8301.d	WAR091130-99 05	YS1	14-DEC-2009 20:03		121409	1.0		CLEAN
084f8401.d	242521006	YS1	14-DEC-2009 20:15	931553	242521	5.0	EMSC	UPLOAD BOTH COLUMNS, USE HIGHER
085f8501.d	242521007	YS1	14-DEC-2009 20:28	931553	242521	5.0	EMSC	UPLOAD BOTH COLUMNS, USE HIGHER
086f8601.d	242521008	YS1	14-DEC-2009 20:41	931553	242521	5.0	EMSC	UPLOAD BOTH COLUMNS, USE HIGHER
087f8701.d	WAR091211-60 05	YS1	14-DEC-2009 20:53		121409	1.0		PASSED ON BOTH COLUMNS
088f8801.d	WAR091130-99 06	YS1	14-DEC-2009 21:06		121409	1.0		CLEAN
089f8901.d	242297010	YS1	14-DEC-2009 21:19	931140	10-782	1.0	LANL	

090f9001.d	WAR091211-60 06	YS1	14-DEC-2009 21:31		121409	1.0	PASSED ON BOTH COLUMNS
091f9101.d	WAR091130-99 07	YS1	14-DEC-2009 21:44		121409	1.0	CLEAN
092f9201.d	1660	YS1	14-DEC-2009 21:56		121409	1.0	screen
093f9301.d	1660	YS1	14-DEC-2009 22:09		121409	1.0	screen
094f9401.d	1660	YS1	14-DEC-2009 22:22		121409	1.0	screen

GEL ORGANIC RUN LOG INSTRUMENT ID: ECD1

DATE: 01/13/2010 METHOD: ECD1-F-8082-121409.m OPERATOR:YS1 REVIEWED BY:_____
DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 1 on pg. 1 SOLVENT LOT DA699
ALUMINA LOT 1240553-A
COPPER LOT 236547-A

Calibration & QC Information
Initial Calibration Dates: See Calibration History and Standard Logbook.
Initial Calibration Std ID's: See Calibration History and Standard Logbook.
GEL SOP GL-OA-E-040 Polychlorinated Biphenyl: EPA 8082
Chromatogram Abbreviation Legend: AB-Assign Baseline, AP-Assign Peak,
DNC-Do Not Call, DMP-Doesn't Match Pattern, NC-Not Confirmed, RT-Retention Time,
BF-Before, AF-After.

Sequence Number: /chem/ecd1a.i/011210.b Injection Volume: 0.5 ul

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
001f0101.d	WAR100105-99 01	YS1	12-JAN-2010 07:48		011210	1.0		CLEAN
002f0201.d	WAR100104-60 01	YS1	12-JAN-2010 07:59		011210	1.0		DUSE RR FILE 8
003f0301.d	WAR091216-54	YS1	12-JAN-2010 08:09		011210	1.0		PASSED ON BOTH COLUMNS
004f0401.d	WAR091217-42	YS1	12-JAN-2010 08:20		011210	1.0		DUSE RR FILE 9
005f0501.d	WAR091217-48	YS1	12-JAN-2010 08:30		011210	1.0		PASSED ON BOTH COLUMNS
006f0601.d	WAR100104-32	YS1	12-JAN-2010 08:41		011210	1.0		PATTERN ONLY
007f0701.d	WAR100104-21	YS1	12-JAN-2010 08:51		011210	1.0		PATTERN ONLY
008f0801.d	WAR100104-60 01	YS1	12-JAN-2010 09:02		011210	1.0		PASSED ON BOTH COLUMNS
009f0901.d	WAR091217-42	YS1	12-JAN-2010 09:12		011210	1.0		PASSED ON BOTH COLUMNS
010f1001.d	WAR100104-62	YS1	12-JAN-2010 09:23		011210	1.0		PATTERN ONLY
011f1101.d	WAR100111-68	YS1	12-JAN-2010 09:33		011210	1.0		PATTERN ONLY
012f1201.d	WAR091219-DDT	YS1	12-JAN-2010 09:44		011210	1.0		DDT ANALOG STANDARD
013f1301.d	WAR100105-99 02	YS1	12-JAN-2010 09:54		011210	1.0		CLEAN
014f1401.d	1202012930	YS1	12-JAN-2010 10:05	940561	244363	1.0	QC A	UPLOAD BOTH COLUMNS, USE HIGHER
015f1501.d	1202012931	YS1	12-JAN-2010 10:15	940561	244363	1.0	QC A	UPLOAD BOTH COLUMNS, USE HIGHER

Instrument Batch: /chem/ecd1a.i/011210.b Page: 1

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments

016f1601.d	244363001	YS1	12-JAN-2010 10:26	940561	244363		5.0	SCEG	UPLOAD BOTH COLUMNS, USE HIGHER
017f1701.d	1202012932	YS1	12-JAN-2010 10:38	940561	244363		5.0	QC A	UPLOAD BOTH COLUMNS, USE HIGHER
018f1801.d	1202012933	YS1	12-JAN-2010 10:51	940561	244363		5.0	QC A	UPLOAD BOTH COLUMNS, USE HIGHER
019f1901.d	WAR100104-60 02	YS1	12-JAN-2010 11:03		011210		1.0		PASSED ON BOTH COLUMNS
020f2001.d	WAR100105-99 03	YS1	12-JAN-2010 11:14		011210		1.0		CLEAN
021f2101.d	1202012544	YS1	12-JAN-2010 11:24	940403	10-1126		1.0	QC A	UPLOAD BOTH COLUMNS, USE HIGHER
022f2201.d	1202012545	YS1	12-JAN-2010 11:35	940403	10-1126		1.0	QC A	UPLOAD BOTH COLUMNS, USE HIGHER
023f2301.d	244125001	YS1	12-JAN-2010 11:46	940403	10-1130		1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
024f2401.d	244125002	YS1	12-JAN-2010 11:58	940403	10-1130		1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
025f2501.d	244126019	YS1	12-JAN-2010 12:11	940403	10-1131		1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
026f2601.d	1202012546	YS1	12-JAN-2010 12:23	940403	10-1131		1.0	QC A	UPLOAD BOTH COLUMNS, USE HIGHER
027f2701.d	1202012547	YS1	12-JAN-2010 12:36	940403	10-1131		1.0	QC A	UPLOAD BOTH COLUMNS, USE HIGHER
028f2801.d	244126020	YS1	12-JAN-2010 12:49	940403	10-1131		1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
029f2901.d	244137001	YS1	12-JAN-2010 13:01	940403	10-1126		1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
030f3001.d	244142001	YS1	12-JAN-2010 13:14	940403	10-1127		1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
031f3101.d	WAR100104-60 03	YS1	12-JAN-2010 13:27		011210		1.0		PASSED ON BOTH COLUMNS
032f3201.d	WAR100105-99 04	YS1	12-JAN-2010 13:37		011210		1.0		CLEAN
033f3301.d	244142002	YS1	12-JAN-2010 13:48	940403	10-1127		1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
034f3401.d	244142003	YS1	12-JAN-2010 14:00	940403	10-1127		1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
035f3501.d	244142004	YS1	12-JAN-2010 14:13	940403	10-1127		1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
036f3601.d	244142005	YS1	12-JAN-2010 14:25	940403	10-1127	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
037f3701.d	244142006	YS1	12-JAN-2010 14:38	940403	10-1127	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
038f3801.d	244142007	YS1	12-JAN-2010 14:51	940403	10-1127	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
039f3901.d	244142008	YS1	12-JAN-2010 15:03	940403	10-1127	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
040f4001.d	244142017	YS1	12-JAN-2010 15:16	940403	10-1127	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER

041f4101.d	244242018	YS1	12-JAN-2010 15:28	940403	10-1127	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
042f4201.d	WAR100104-60 04	YS1	12-JAN-2010 15:41		011210	1.0		PASSED ON BOTH COLUMNS
043f4301.d	WAR100105-99 05	YS1	12-JAN-2010 15:51		011210	1.0		CLEAN

* An error was found in the initial calibration level 2 for surrogate 4cmx and DCB. The concentration for 1.cal. level 2 was changed from 20ppb to 25ppb on both columns for surrogate 4cmx and DCB in the method to correct the mistake after the data were originally processed. All files in this sequence were re-processed using the corrected method on 01/22/10, and the surrogate concentration was changed slightly. Therefore, the data in Target are slightly different from the ones documented in the original folder.

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/011210.b/026b2601.d
Lab Smp Id: 1202012546 Client Smp ID: RE12-10-7657MS
Inj Date : 12-JAN-2010 12:23
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |1202012546|1|
Misc Info : |ECD82P_1S|940403|SVA|QC A|SOIL|MS|||
Comment :
Method : /chem/ecd1a.i/011210.b/ECD1-B-8082-121409.m
Meth Date : 23-Jan-2010 10:48 yip00818 Quant Type: ESTD
Cal Date : 14-DEC-2009 12:16 Cal File: 044b4401.d
Als bottle: 26 QC Sample: MS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 10-1131.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.05000	Weight of sample extracted (g)
M	10.13920	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.299	2.299	0.000	33867293	118.691	4.4	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.943	5.945	-0.002	27330329	123.228	4.6	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
3.195	3.195	0.000	7876825	624.573	23.1	80.00- 120.00	100.00(M)
3.278	3.279	-0.001	5344778	572.990	21.2	46.12- 86.12	67.85
3.342	3.342	0.000	3207830	592.800	22.0	20.86- 60.86	40.72
3.568	3.569	-0.001	4248114	602.409	22.3	33.49- 73.49	53.93

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
1 Aroclor-1016 (continued)							
3.643	3.645	-0.002	3970304	606.085	22.4	29.37- 69.37	50.40
Average of Peak Concentrations =					22.2		
7 Aroclor-1260					CAS #: 11096-82-5		
4.333	4.335	-0.002	9316110	681.001	25.2	80.00- 120.00	100.00
4.458	4.459	-0.001	11534402	719.595	26.6	101.46- 141.46	123.81
4.723	4.726	-0.003	8924159	710.300	26.3	72.86- 112.86	95.79
4.898	4.899	-0.001	8987562	701.601	26.0	75.54- 115.54	96.47
5.044	5.046	-0.002	20370694	730.193	27.0	193.04- 233.04	218.66
Average of Peak Concentrations =					26.2		

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecd1a.i/011210.b/026b2601.d

Date : 12-JAN-2010 12:23

Client ID: RE12-10-7657MS

Sample Info: |1202012546|1|

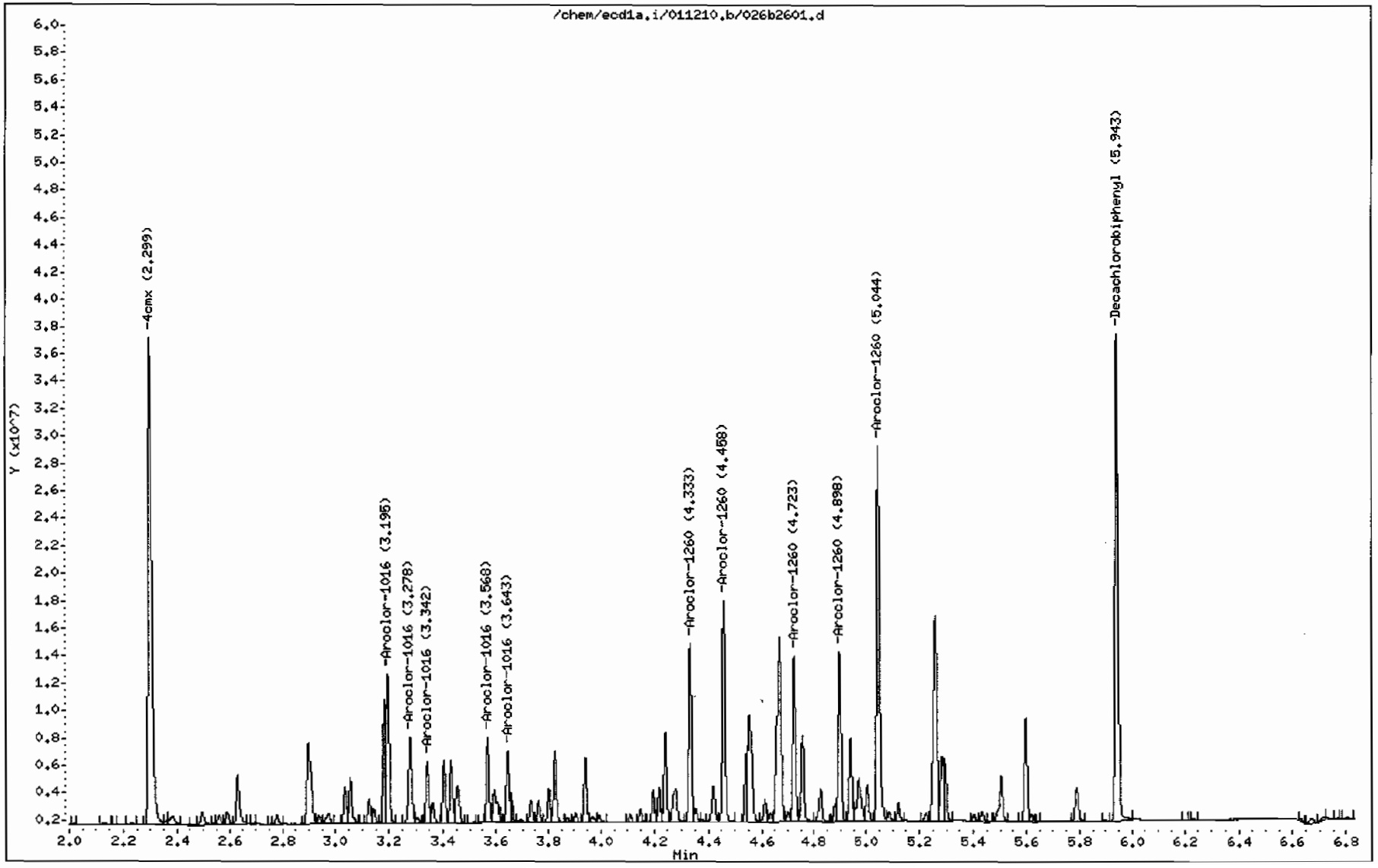
Volume Injected (uL): 1.0

Column phase: CLP2

Instrument: ecd1a.i

Operator: YS1

Column diameter: 0.25



GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/011210.b/026f2601.d
Lab Smp Id: 1202012546 Client Smp ID: RE12-10-7657MS
Inj Date : 12-JAN-2010 12:23
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |1202012546|1|
Misc Info : |ECD82P_1S|940403|SVA|QC A|SOIL|MS|||
Comment :
Method : /chem/ecd1a.i/011210.b/ECD1-F-8082-121409.m
Meth Date : 23-Jan-2010 10:48 yip00818 Quant Type: ESTD
Cal Date : 14-DEC-2009 11:34 Cal File: 040f4001.d
Als bottle: 26 QC Sample: MS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 10-1131.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclpl

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.05000	Weight of sample extracted (g)
M	10.13920	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.968	1.969	-0.001	45139410	126.270	4.7	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.280	5.283	-0.003	36214649	119.912	4.4	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.424	2.424	0.000	8371359	603.695	22.4	80.00- 120.00	100.00
2.700	2.702	-0.002	6649092	658.474	24.4	56.95- 96.95	79.43
2.793	2.794	-0.001	7098099	603.733	22.4	64.78- 104.78	84.79
2.831	2.832	-0.001	4019549	609.114	22.6	30.82- 70.82	48.02

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
1 Aroclor-1016 (continued)							
3.041	3.043	-0.002	5566390	641.777	23.8	45.65- 85.65	66.49
		Average of Peak Concentrations =			23.1		

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7 Aroclor-1260					CAS #: 11096-82-5		
3.767	3.769	-0.002	12513128	746.957	27.7	80.00- 120.00	100.00
3.929	3.932	-0.003	19192433	775.684	28.7	132.05- 172.05	153.38
4.159	4.163	-0.004	11535253	785.387	29.1	70.36- 110.36	92.19
4.303	4.305	-0.002	11935980	786.062	29.1	74.40- 114.40	95.39
4.482	4.484	-0.002	27577879	802.839	29.7	195.73- 235.73	220.39
		Average of Peak Concentrations =			28.9		

Data File: /chem/ecd1a.i/011210.b/026f2601.d

Date : 12-JAN-2010 12:23

Client ID: RE12-10-7657MS

Sample Info: |12020125461|

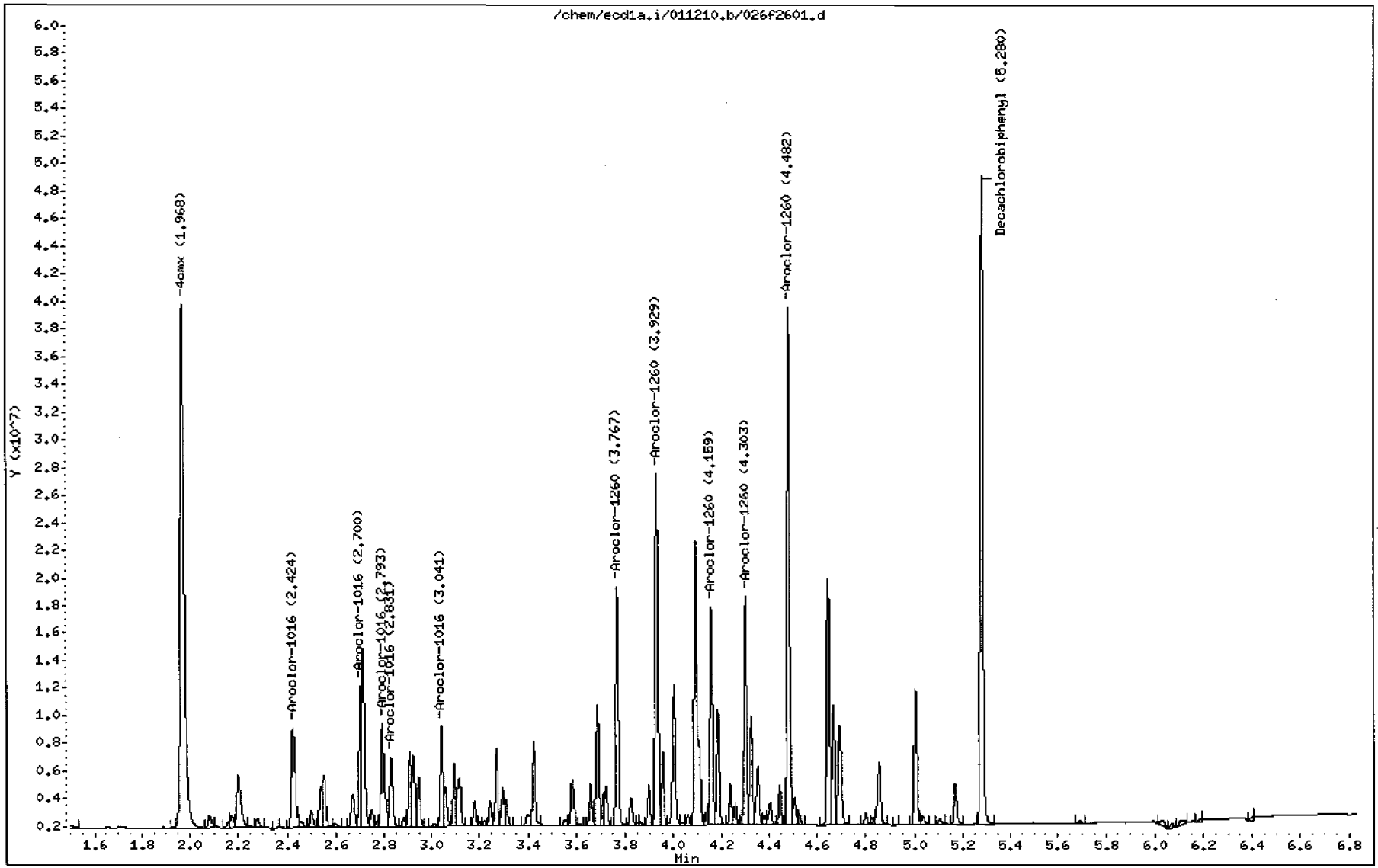
Volume Injected (uL): 1.0

Column phase: CLP1

Instrument: ecd1a.i

Operator: YS1

Column diameter: 0.25



GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/011210.b/027b2701.d
Lab Smp Id: 1202012547 Client Smp ID: RE12-10-7657MSD
Inj Date : 12-JAN-2010 12:36
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |1202012547|1|
Misc Info : |ECD82P_1S|940403|SVA|QC A|SOIL|MSD|||
Comment :
Method : /chem/ecd1a.i/011210.b/ECD1-B-8082-121409.m
Meth Date : 23-Jan-2010 10:48 yip00818 Quant Type: ESTD
Cal Date : 14-DEC-2009 12:16 Cal File: 044b4401.d
Als bottle: 27 QC Sample: MSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 10-1131.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.03000	Weight of sample extracted (g)
M	10.13920	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.299	2.299	0.000	34007105	119.181	4.4	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.943	5.945	-0.002	28959137	130.572	4.8	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
3.195	3.195	0.000	8066275	639.595	23.7	80.00- 120.00	100.00(M)
3.278	3.279	-0.001	5586744	598.930	22.2	46.12- 86.12	69.26
3.342	3.342	0.000	3374212	623.547	23.1	20.86- 60.86	41.83
3.568	3.569	-0.001	4424468	627.417	23.2	33.49- 73.49	54.85

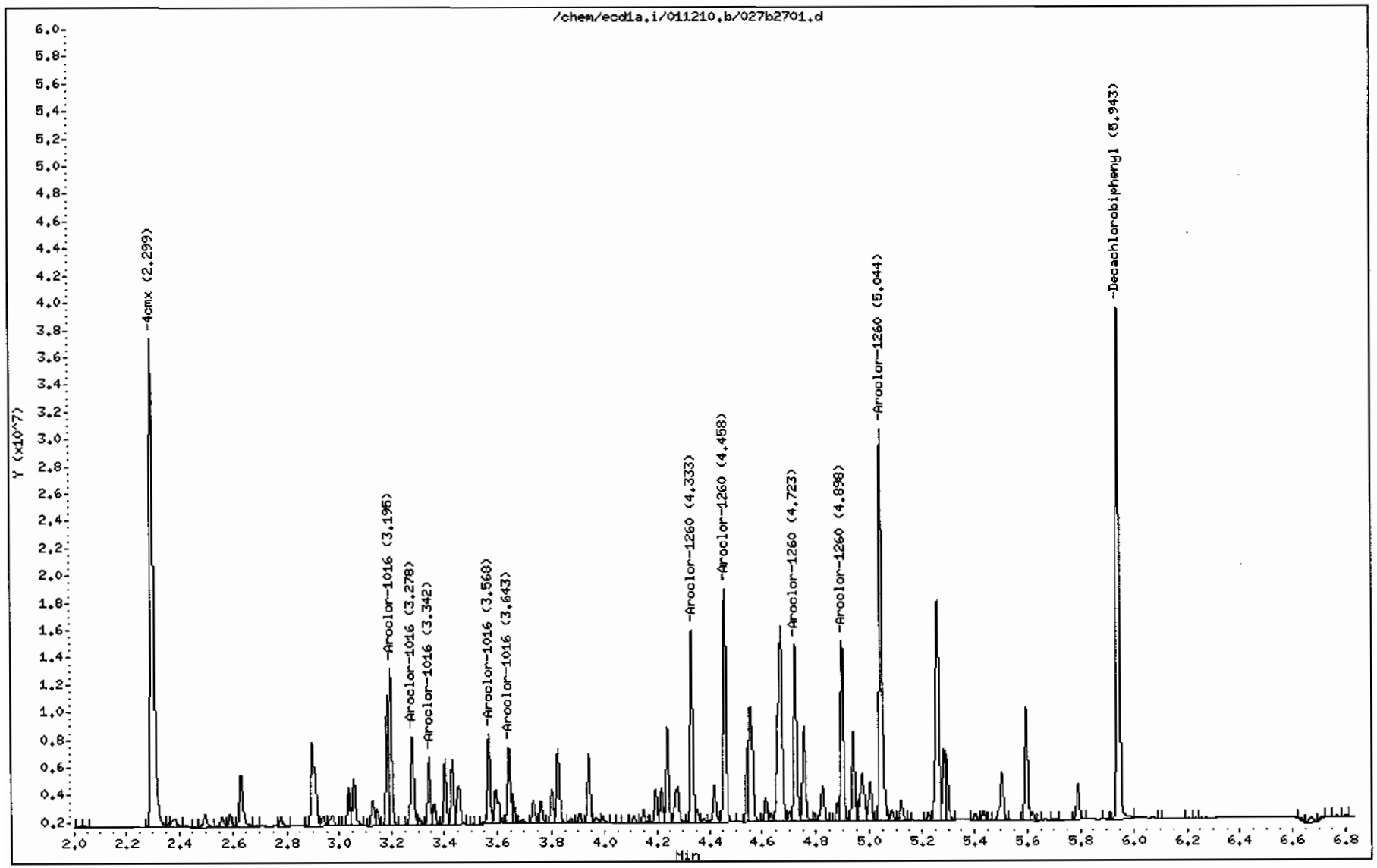
RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
1 Aroclor-1016 (continued)							
3.643	3.645	-0.002	4156734	634.545	23.5	29.37- 69.37	51.53
		Average of Peak Concentrations =			23.2		
7 Aroclor-1260					CAS #: 11096-82-5		
4.333	4.335	-0.002	9844873	719.653	26.7	80.00- 120.00	100.00
4.458	4.459	-0.001	12247415	764.078	28.3	101.46- 141.46	124.40
4.723	4.726	-0.003	9461291	753.052	27.9	72.86- 112.86	96.10
4.898	4.899	-0.001	9608711	750.090	27.8	75.54- 115.54	97.60
5.044	5.046	-0.002	21793597	781.198	28.9	193.04- 233.04	221.37
		Average of Peak Concentrations =			27.9		

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecd1a.i/011210.b/027b2701.d
Date : 12-JAN-2010 12:36
Client ID: RE12-10-7667MSD
Sample Info: |1202012547|1|
Volume Injected (uL): 1.0
Column phase: CLP2

Instrument: ecd1a.i
Operator: YS1
Column diameter: 0.25



GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/011210.b/027f2701.d
Lab Smp Id: 1202012547 Client Smp ID: RE12-10-7657MSD
Inj Date : 12-JAN-2010 12:36
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |1202012547|1|
Misc Info : |ECD82P_1S|940403|SVA|QC A|SOIL|MSD|||
Comment :
Method : /chem/ecd1a.i/011210.b/ECD1-F-8082-121409.m
Meth Date : 23-Jan-2010 10:48 yip00818 Quant Type: ESTD
Cal Date : 14-DEC-2009 11:34 Cal File: 040f4001.d
Als bottle: 27 QC Sample: MSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 10-1131.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.03000	Weight of sample extracted (g)
M	10.13920	% Moisture

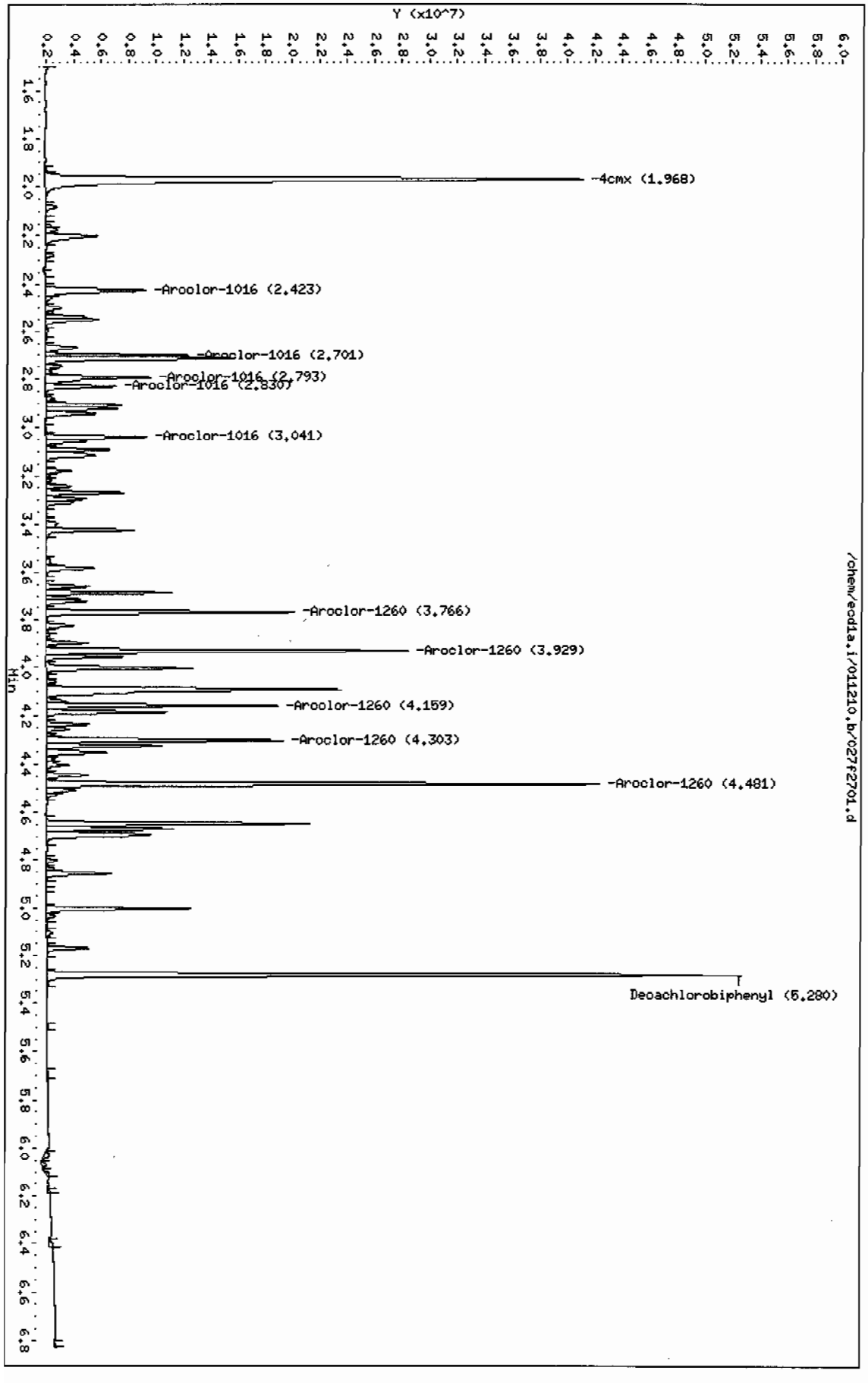
Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.968	1.969	-0.001	46082141	128.907	4.8	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.280	5.283	-0.003	39080955	129.403	4.8	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.423	2.424	-0.001	8552901	616.787	22.8	80.00- 120.00	100.00
2.701	2.702	-0.001	6740986	667.575	24.7	56.95- 96.95	78.82
2.793	2.794	-0.001	7284909	619.622	23.0	64.78- 104.78	85.17
2.830	2.832	-0.002	4032218	611.034	22.6	30.82- 70.82	47.14

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
1 Aroclor-1016 (continued)							
3.041	3.043	-0.002	5718071	659.265	24.4	45.65- 85.65	66.86
Average of Peak Concentrations =					23.5		
7 Aroclor-1260					CAS #: 11096-82-5		
3.766	3.769	-0.003	13235145	790.056	29.3	80.00- 120.00	100.00
3.929	3.932	-0.003	20420750	825.327	30.6	132.05- 172.05	154.29
4.159	4.163	-0.004	12276506	835.856	31.0	70.36- 110.36	92.76
4.303	4.305	-0.002	12656315	833.501	30.9	74.40- 114.40	95.63
4.481	4.484	-0.003	29316181	853.444	31.6	195.73- 235.73	221.50
Average of Peak Concentrations =					30.7		

Data File: /chem/ecd1a.i/011210.b/027f2701.d
Date : 12-JAN-2010 12:36
Client ID: RE12-10-7657MSD
Sample Info: 1120201254711
Volume Injected (uL): 1.0
Column phase: CLP1

Instrument: ecd1a.i
Operator: YS1
Column diameter: 0.25



Page 1

Prep Logbook

Extraction of Semivolatile and Nonvolatile Organic Compounds from Soil, Sludge, and Other Miscellaneous Solid Samples

Batch ID: 940402 **Verified by:** _____

Analyst: Andrew Schwemin

Method: SW846 3550B

Lab SOP: GL–OA–E–010 REV# 18

Instrument: Semi–Volatiles Manual

Sample ID	Run Date	Aliquot (g)	Clean Up	Prior to Clean up (mL)	Amount Cleaned (mL)	After Clean up (mL)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1202012544 MB	11–JAN–2010 19:04:36	30	H2SO4/KMl2		2	9	1	0.03333
1202012545 LCS	11–JAN–2010 19:04:36	30	H2SO4/KMl2		2	9	1	0.03333
244125001	11–JAN–2010 19:04:36	30.12	H2SO4/KMl2		2	9	1	0.0332
244125002	11–JAN–2010 19:04:36	30.03	H2SO4/KMl2		2	9	1	0.0333
244126019	11–JAN–2010 19:04:36	30.08	H2SO4/KMl2		2	9	1	0.03324
1202012546 MS (244126019)	11–JAN–2010 19:04:36	30.05	H2SO4/KMl2		2	9	1	0.03328
1202012547 MSD (244126019)	11–JAN–2010 19:04:36	30.03	H2SO4/KMl2		2	9	1	0.0333
244126020	11–JAN–2010 19:04:36	30.17	H2SO4/KMl2		2	9	1	0.03315
244137001	11–JAN–2010 19:04:36	30.03	H2SO4/KMl2		2	9	1	0.0333
244142001	11–JAN–2010 19:04:36	30.09	H2SO4/KMl2		2	9	1	0.03323
244142002	11–JAN–2010 19:04:36	30.19	H2SO4/KMl2		2	9	1	0.03312
244142003	11–JAN–2010 19:04:36	30.02	H2SO4/KMl2		2	9	1	0.03331
244142004	11–JAN–2010 19:04:36	30.05	H2SO4/KMl2		2	9	1	0.03328
244142005	11–JAN–2010 19:04:36	30.17	H2SO4/KMl2		2	9	1	0.03315
244142006	11–JAN–2010 19:04:36	30.15	H2SO4/KMl2		2	9	1	0.03317
244142007	11–JAN–2010 19:04:36	30.17	H2SO4/KMl2		2	9	1	0.03315
244142008	11–JAN–2010 19:04:36	30.05	H2SO4/KMl2		2	9	1	0.03328
244142017	11–JAN–2010 19:04:36	30.08	H2SO4/KMl2		2	9	1	0.03324
244142018	11–JAN–2010 19:04:36	30.13	H2SO4/KMl2		2	9	1	0.03319

Type	Sample Id	Description	Serial Number	Spike Amt	Units
LCS	1202012545	PCB Laboratory Control	WE100105–07	1	mL
MS	1202012546	PCB Laboratory Control	WE100105–07	1	mL
MSD	1202012547	PCB Laboratory Control	WE100105–07	1	mL
SURR	All	PEST LOW LEVEL SURROGATE 200 UG/L	UE091217–15	1	mL
REGNT	All	1:1 sulfuric acid	1133264a	5	mL
REGNT	All	Acetone	1233927	150	mL
REGNT	All	Hexane	1241300–B2	150	mL
REGNT	All	5% Potassium Permanganate	B1202457–F	5	mL
SOURC	All	SODIUM SULFATE	1248200	30	g

Comments:

Clean up Date: 01/11/10

Clean up Initials: AJS

Verified By: AV

Final Solvent: Hexane

Clean Up SOP: GL–OA–E–037

Metals Analysis

Case Narrative

Metals Fractional Narrative
Los Alamos National Laboratory (LANL)
SDG 10-1130

Sample Analysis

Sample ID	Client ID
244125001	RE12-10-7698
244125002	RE12-10-7697
244125003	RE12-10-7704
244125004	RE12-10-7703
1202011921	Method Blank (MB) **ICP**
1202011922	Laboratory Control Sample (LCS)
1202011925	244222001(RE16-10-2782L) Serial Dilution (SD)
1202011923	244222001(RE16-10-2782D) Sample Duplicate (DUP)
1202011924	244222001(RE16-10-2782S) Matrix Spike (MS)
1202011932	244222001(RE16-10-2782SD) Matrix Spike Duplicate (MSD)
1202011760	Method Blank (MB) **ICP-MS**
1202011761	Laboratory Control Sample (LCS)
1202011764	244128006(RE12-10-7647L) Serial Dilution (SD)
1202011762	244128006(RE12-10-7647D) Sample Duplicate (DUP)
1202011763	244128006(RE12-10-7647S) Matrix Spike (MS)
1202011771	244128006(RE12-10-7647SD) Matrix Spike Duplicate (MSD)
1202019573	Method Blank (MB) **CVAA**
1202019574	Laboratory Control Sample (LCS)
1202019579	244619001(RE16-10-2926L) Serial Dilution (SD)
1202019575	244619001(RE16-10-2926D) Sample Duplicate (DUP)

1202019576	244619001(RE16-10-2926S) Matrix Spike (MS)
1202019580	244619001(RE16-10-2926SD) Matrix Spike Duplicate (MSD)

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

Method/Analysis Information

Analytical Batch:	940187, 940107 and 943237
Prep Batch :	940186, 940101 and 943235
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 samples were selected as the quality control (QC) samples for this SDG: 244222001, 244128006 and 244619001.

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 selenium, magnesium and manganese, 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 selenium, barium, calcium, magnesium and potassium, as indicated by the "N" qualifiers.

MS/MSD Relative Percent Difference (RPD) Statement
The relative percent difference (RPD) obtained from the designated matrix spike duplicate (MSD) is evaluated based on acceptance criteria of 20%. The RPD between qualifying elements results in the MS and MSD were within the acceptance limits of 20% with the exception of barium, as indicated by the "*" qualifier.

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 magnesium and potassium, 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.

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: 781601 and 782866. 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 Parson **Date:** 2/2/10

Sample Data Summary

METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 10-1130 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 244125001 **BASIS:** Dry Weight **DATE COLLECTED** 05-JAN-10

CLIENT ID: RE12-10-7698 **LEVEL:** Low **DATE RECEIVED** 08-JAN-10

MATRIX: SOIL **%SOLIDS:** 90.1

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	17600000	ug/Kg		7550	22200	22200	1	P	HSC	01/20/10 22:09	012010-1	940187
7440-36-0	Antimony	1110	ug/Kg	U	366	1110	1110	1	P	HSC	01/20/10 22:09	012010-1	940187
7440-38-2	Arsenic	2.27	mg/kg		0.22	1.1	1.1	2	MS	PRB	01/19/10 18:55	100119-3	940107
7440-39-3	Barium	195000	ug/Kg		111	555	555	1	P	HSC	01/20/10 22:09	012010-1	940187
7440-41-7	Beryllium	1.45	mg/kg		0.022	0.11	0.11	2	MS	PRB	01/19/10 18:55	100119-3	940107
7440-43-9	Cadmium	555	ug/Kg	U	111	555	555	1	P	HSC	01/20/10 22:09	012010-1	940187
7440-70-2	Calcium	2210000	ug/Kg		8880	27800	27800	1	P	HSC	01/20/10 22:09	012010-1	940187
7440-47-3	Chromium	12700	ug/Kg		167	555	555	1	P	HSC	01/20/10 22:09	012010-1	940187
7440-48-4	Cobalt	5890	ug/Kg		167	555	555	1	P	HSC	01/20/10 22:09	012010-1	940187
7440-50-8	Copper	9490	ug/Kg		333	1110	1110	1	P	HSC	01/20/10 22:09	012010-1	940187
7439-89-6	Iron	16200000	ug/Kg		8880	27800	27800	1	P	HSC	01/20/10 22:09	012010-1	940187
7439-92-1	Lead	12200	ug/Kg		278	1110	1110	1	P	HSC	01/20/10 22:09	012010-1	940187
7439-95-4	Magnesium	2760000	ug/Kg		9440	33300	33300	1	P	HSC	01/20/10 22:09	012010-1	940187
7439-96-5	Manganese	362000	ug/Kg		222	1110	1110	1	P	HSC	01/20/10 22:09	012010-1	940187
7439-97-6	Mercury	22.1	ug/kg		4.27	12.6	12.6	1	AV	JXL1	01/21/10 11:23	012110S1-4	943237
7440-02-0	Nickel	9.39	mg/kg		0.11	0.441	0.441	2	MS	PRB	01/16/10 02:20	100115-2	940107
7440-09-7	Potassium	2480000	ug/Kg		7110	27800	27800	1	P	HSC	01/20/10 22:09	012010-1	940187
7782-49-2	Selenium	1.1	mg/kg	U	0.551	1.1	1.1	2	MS	PRB	01/16/10 02:20	100115-2	940107
7440-22-4	Silver	464	ug/Kg	J	111	555	555	1	P	HSC	01/20/10 22:09	012010-1	940187
7440-23-5	Sodium	161000	ug/Kg		7770	27800	27800	1	P	HSC	01/20/10 22:09	012010-1	940187
7440-28-0	Thallium	0.277	mg/kg		0.0661	0.22	0.22	2	MS	PRB	01/16/10 02:20	100115-2	940107
7440-61-1	Uranium	0.820	mg/kg		0.0145	0.0441	0.0441	2	MS	PRB	01/16/10 02:20	100115-2	940107
7440-62-2	Vanadium	30300	ug/Kg		111	555	555	1	P	HSC	01/20/10 22:09	012010-1	940187
7440-66-6	Zinc	31100	ug/Kg		366	1110	1110	1	P	HSC	01/20/10 22:09	012010-1	940187

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
940107	940101	SW846 3050B	0.504	g	50	mL	01/11/10	BXA1
940187	940186	SW846 3050B	0.5	g	50	mL	01/11/10	BXA1
943237	943235	SW846 7471A Prep	0.53	g	30	mL	01/20/10	TXB3

METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 10-1130 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 244125002 **BASIS:** Dry Weight **DATE COLLECTED** 05-JAN-10

CLIENT ID: RE12-10-7697 **LEVEL:** Low **DATE RECEIVED** 08-JAN-10

MATRIX: SOIL **%SOLIDS:** 85

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19200000	ug/Kg		7800	22900	22900	1	P	HSC	01/20/10 22:16	012010-1	940187
7440-36-0	Antimony	795	ug/Kg	J	379	1150	1150	1	P	HSC	01/20/10 22:16	012010-1	940187
7440-38-2	Arsenic	2.65	mg/kg		0.232	1.16	1.16	2	MS	PRB	01/19/10 18:59	100119-3	940107
7440-39-3	Barium	222000	ug/Kg		115	574	574	1	P	HSC	01/20/10 22:16	012010-1	940187
7440-41-7	Beryllium	1.44	mg/kg		0.0232	0.116	0.116	2	MS	PRB	01/19/10 18:59	100119-3	940107
7440-43-9	Cadmium	574	ug/Kg	U	115	574	574	1	P	HSC	01/20/10 22:16	012010-1	940187
7440-70-2	Calcium	2650000	ug/Kg		9180	28700	28700	1	P	HSC	01/20/10 22:16	012010-1	940187
7440-47-3	Chromium	20000	ug/Kg		172	574	574	1	P	HSC	01/20/10 22:16	012010-1	940187
7440-48-4	Cobalt	6760	ug/Kg		172	574	574	1	P	HSC	01/20/10 22:16	012010-1	940187
7440-50-8	Copper	11500	ug/Kg		344	1150	1150	1	P	HSC	01/20/10 22:16	012010-1	940187
7439-89-6	Iron	17200000	ug/Kg		9180	28700	28700	1	P	HSC	01/20/10 22:16	012010-1	940187
7439-92-1	Lead	16100	ug/Kg		287	1150	1150	1	P	HSC	01/20/10 22:16	012010-1	940187
7439-95-4	Magnesium	2720000	ug/Kg		9750	34400	34400	1	P	HSC	01/20/10 22:16	012010-1	940187
7439-96-5	Manganese	440000	ug/Kg		229	1150	1150	1	P	HSC	01/20/10 22:16	012010-1	940187
7439-97-6	Mercury	22.9	ug/kg		4.6	13.5	13.5	1	AV	JXL1	01/21/10 11:25	012110S1-4	943237
7440-02-0	Nickel	10.3	mg/kg		0.116	0.464	0.464	2	MS	PRB	01/16/10 02:23	100115-2	940107
7440-09-7	Potassium	2650000	ug/Kg		7340	28700	28700	1	P	HSC	01/20/10 22:16	012010-1	940187
7782-49-2	Selenium	1.16	mg/kg	U	0.58	1.16	1.16	2	MS	PRB	01/16/10 02:23	100115-2	940107
7440-22-4	Silver	197	ug/Kg	J	115	574	574	1	P	HSC	01/20/10 22:16	012010-1	940187
7440-23-5	Sodium	95400	ug/Kg		8030	28700	28700	1	P	HSC	01/20/10 22:16	012010-1	940187
7440-28-0	Thallium	0.249	mg/kg		0.0696	0.232	0.232	2	MS	PRB	01/16/10 02:23	100115-2	940107
7440-61-1	Uranium	1.84	mg/kg		0.0153	0.0464	0.0464	2	MS	PRB	01/16/10 02:23	100115-2	940107
7440-62-2	Vanadium	34400	ug/Kg		115	574	574	1	P	HSC	01/20/10 22:16	012010-1	940187
7440-66-6	Zinc	36300	ug/Kg		379	1150	1150	1	P	HSC	01/20/10 22:16	012010-1	940187

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
940107	940101	SW846 3050B	0.505	g	50	mL	01/11/10	BXA1
940187	940186	SW846 3050B	0.511	g	50	mL	01/11/10	BXA1
943237	943235	SW846 7471A Prep	0.52	g	30	mL	01/20/10	TXB3

METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 10-1130 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 244125003 **BASIS:** Dry Weight **DATE COLLECTED** 05-JAN-10

CLIENT ID: RE12-10-7704 **LEVEL:** Low **DATE RECEIVED** 08-JAN-10

MATRIX: SOIL **%SOLIDS:** 90.7

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	16600000	ug/Kg		7450	21900	21900	1	P	HSC	01/20/10 22:24	012010-1	940187
7440-36-0	Antimony	581	ug/Kg	J	362	1100	1100	1	P	HSC	01/20/10 22:24	012010-1	940187
7440-38-2	Arsenic	2.39	mg/kg		0.215	1.07	1.07	2	MS	PRB	01/19/10 19:11	100119-3	940107
7440-39-3	Barium	237000	ug/Kg		110	548	548	1	P	HSC	01/20/10 22:24	012010-1	940187
7440-41-7	Beryllium	1.36	mg/kg		0.0215	0.107	0.107	2	MS	PRB	01/19/10 19:11	100119-3	940107
7440-43-9	Cadmium	548	ug/Kg	U	110	548	548	1	P	HSC	01/20/10 22:24	012010-1	940187
7440-70-2	Calcium	2260000	ug/Kg		8770	27400	27400	1	P	HSC	01/20/10 22:24	012010-1	940187
7440-47-3	Chromium	12800	ug/Kg		164	548	548	1	P	HSC	01/20/10 22:24	012010-1	940187
7440-48-4	Cobalt	6990	ug/Kg		164	548	548	1	P	HSC	01/20/10 22:24	012010-1	940187
7440-50-8	Copper	8150	ug/Kg		329	1100	1100	1	P	HSC	01/20/10 22:24	012010-1	940187
7439-89-6	Iron	15900000	ug/Kg		8770	27400	27400	1	P	HSC	01/20/10 22:24	012010-1	940187
7439-92-1	Lead	15200	ug/Kg		274	1100	1100	1	P	HSC	01/20/10 22:24	012010-1	940187
7439-95-4	Magnesium	2450000	ug/Kg		9320	32900	32900	1	P	HSC	01/20/10 22:24	012010-1	940187
7439-96-5	Manganese	475000	ug/Kg		219	1100	1100	1	P	HSC	01/20/10 22:24	012010-1	940187
7439-97-6	Mercury	14.6	ug/kg		3.91	11.5	11.5	1	AV	JXL1	01/21/10 11:26	012110S1-4	943237
7440-02-0	Nickel	9	mg/kg		0.107	0.429	0.429	2	MS	PRB	01/16/10 02:25	100115-2	940107
7440-09-7	Potassium	2140000	ug/Kg		7020	27400	27400	1	P	HSC	01/20/10 22:24	012010-1	940187
7782-49-2	Selenium	1.07	mg/kg	U	0.536	1.07	1.07	2	MS	PRB	01/16/10 02:25	100115-2	940107
7440-22-4	Silver	264	ug/Kg	J	110	548	548	1	P	HSC	01/20/10 22:24	012010-1	940187
7440-23-5	Sodium	101000	ug/Kg		7670	27400	27400	1	P	HSC	01/20/10 22:24	012010-1	940187
7440-28-0	Thallium	0.244	mg/kg		0.0644	0.215	0.215	2	MS	PRB	01/16/10 02:25	100115-2	940107
7440-61-1	Uranium	1.29	mg/kg		0.0142	0.0429	0.0429	2	MS	PRB	01/16/10 02:25	100115-2	940107
7440-62-2	Vanadium	32900	ug/Kg		110	548	548	1	P	HSC	01/20/10 22:24	012010-1	940187
7440-66-6	Zinc	29700	ug/Kg		362	1100	1100	1	P	HSC	01/20/10 22:24	012010-1	940187

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
940107	940101	SW846 3050B	0.514	g	50	mL	01/11/10	BXA1
940187	940186	SW846 3050B	0.503	g	50	mL	01/11/10	BXA1
943237	943235	SW846 7471A Prep	0.575	g	30	mL	01/20/10	TXB3

METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 10-1130 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 244125004 **BASIS:** Dry Weight **DATE COLLECTED** 05-JAN-10

CLIENT ID: RE12-10-7703 **LEVEL:** Low **DATE RECEIVED** 08-JAN-10

MATRIX: SOIL **%SOLIDS:** 80

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	13800000	ug/Kg		8150	24000	24000	1	P	HSC	01/20/10 22:31	012010-1	940187
7440-36-0	Antimony	1450	ug/Kg		396	1200	1200	1	P	HSC	01/20/10 22:31	012010-1	940187
7440-38-2	Arsenic	2.21	mg/kg		0.237	1.19	1.19	2	MS	PRB	01/19/10 19:15	100119-3	940107
7440-39-3	Barium	218000	ug/Kg		120	599	599	1	P	HSC	01/20/10 22:31	012010-1	940187
7440-41-7	Beryllium	1.16	mg/kg		0.0237	0.119	0.119	2	MS	PRB	01/19/10 19:15	100119-3	940107
7440-43-9	Cadmium	599	ug/Kg	U	120	599	599	1	P	HSC	01/20/10 22:31	012010-1	940187
7440-70-2	Calcium	2630000	ug/Kg		9590	30000	30000	1	P	HSC	01/20/10 22:31	012010-1	940187
7440-47-3	Chromium	69800	ug/Kg		180	599	599	1	P	HSC	01/20/10 22:31	012010-1	940187
7440-48-4	Cobalt	6950	ug/Kg		180	599	599	1	P	HSC	01/20/10 22:31	012010-1	940187
7440-50-8	Copper	8020	ug/Kg		360	1200	1200	1	P	HSC	01/20/10 22:31	012010-1	940187
7439-89-6	Iron	14300000	ug/Kg		9590	30000	30000	1	P	HSC	01/20/10 22:31	012010-1	940187
7439-92-1	Lead	14400	ug/Kg		300	1200	1200	1	P	HSC	01/20/10 22:31	012010-1	940187
7439-95-4	Magnesium	2070000	ug/Kg		10200	36000	36000	1	P	HSC	01/20/10 22:31	012010-1	940187
7439-96-5	Manganese	520000	ug/Kg		240	1200	1200	1	P	HSC	01/20/10 22:31	012010-1	940187
7439-97-6	Mercury	14.2	ug/kg	J	5.09	15	15	1	AV	JXL1	01/21/10 11:31	012110S1-4	943237
7440-02-0	Nickel	12.1	mg/kg		0.119	0.475	0.475	2	MS	PRB	01/16/10 02:28	100115-2	940107
7440-09-7	Potassium	2100000	ug/Kg		7670	30000	30000	1	P	HSC	01/20/10 22:31	012010-1	940187
7782-49-2	Selenium	1.19	mg/kg	U	0.594	1.19	1.19	2	MS	PRB	01/16/10 02:28	100115-2	940107
7440-22-4	Silver	349	ug/Kg	J	120	599	599	1	P	HSC	01/20/10 22:31	012010-1	940187
7440-23-5	Sodium	98000	ug/Kg		8390	30000	30000	1	P	HSC	01/20/10 22:31	012010-1	940187
7440-28-0	Thallium	0.209	mg/kg	J	0.0712	0.237	0.237	2	MS	PRB	01/16/10 02:28	100115-2	940107
7440-61-1	Uranium	1.25	mg/kg		0.0157	0.0475	0.0475	2	MS	PRB	01/16/10 02:28	100115-2	940107
7440-62-2	Vanadium	28800	ug/Kg		120	599	599	1	P	HSC	01/20/10 22:31	012010-1	940187
7440-66-6	Zinc	25900	ug/Kg		396	1200	1200	1	P	HSC	01/20/10 22:31	012010-1	940187

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
940107	940101	SW846 3050B	0.525	g	50	mL	01/11/10	BXA1
940187	940186	SW846 3050B	0.52	g	50	mL	01/11/10	BXA1
943237	943235	SW846 7471A Prep	0.5	g	30	mL	01/20/10	TXB3

Quality Control Summary

METALS
–2a–
Initial and Continuing Calibration Verification

SDG No: 10–1130

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS3,ICPMS5,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
ICV01										
	Nickel	50.9	ug/L	50	ug/L	101.7	90.0 – 110.0	MS	16–JAN–10 00:29	100115–2
	Selenium	46.9	ug/L	50	ug/L	93.8	90.0 – 110.0	MS	16–JAN–10 00:29	100115–2
	Thallium	49.4	ug/L	50	ug/L	98.7	90.0 – 110.0	MS	16–JAN–10 00:29	100115–2
	Uranium	54.7	ug/L	50	ug/L	109.3	90.0 – 110.0	MS	16–JAN–10 00:29	100115–2
	Arsenic	47.1	ug/L	50	ug/L	94.1	90.0 – 110.0	MS	19–JAN–10 18:09	100119–3
	Beryllium	51.5	ug/L	50	ug/L	103	90.0 – 110.0	MS	19–JAN–10 18:09	100119–3
	Aluminum	4900	ug/L	5000	ug/L	98	90.0 – 110.0	P	20–JAN–10 11:16	012010–1
	Antimony	517	ug/L	500	ug/L	103.5	90.0 – 110.0	P	20–JAN–10 11:16	012010–1
	Barium	515	ug/L	500	ug/L	103.1	90.0 – 110.0	P	20–JAN–10 11:16	012010–1
	Cadmium	491	ug/L	500	ug/L	98.2	90.0 – 110.0	P	20–JAN–10 11:16	012010–1
	Calcium	5010	ug/L	5000	ug/L	100.2	90.0 – 110.0	P	20–JAN–10 11:16	012010–1
	Chromium	491	ug/L	500	ug/L	98.2	90.0 – 110.0	P	20–JAN–10 11:16	012010–1
	Cobalt	507	ug/L	500	ug/L	101.5	90.0 – 110.0	P	20–JAN–10 11:16	012010–1
	Copper	512	ug/L	500	ug/L	102.4	90.0 – 110.0	P	20–JAN–10 11:16	012010–1
	Iron	5230	ug/L	5000	ug/L	104.5	90.0 – 110.0	P	20–JAN–10 11:16	012010–1
	Lead	506	ug/L	500	ug/L	101.2	90.0 – 110.0	P	20–JAN–10 11:16	012010–1
	Magnesium	5210	ug/L	5000	ug/L	104.2	90.0 – 110.0	P	20–JAN–10 11:16	012010–1
	Manganese	512	ug/L	500	ug/L	102.3	90.0 – 110.0	P	20–JAN–10 11:16	012010–1
	Potassium	2460	ug/L	2500	ug/L	98.3	90.0 – 110.0	P	20–JAN–10 11:16	012010–1
	Silver	257	ug/L	250	ug/L	102.9	90.0 – 110.0	P	20–JAN–10 11:16	012010–1
	Sodium	2650	ug/L	2500	ug/L	106.2	90.0 – 110.0	P	20–JAN–10 11:16	012010–1
	Vanadium	510	ug/L	500	ug/L	102.1	90.0 – 110.0	P	20–JAN–10 11:16	012010–1
	Zinc	503	ug/L	500	ug/L	100.6	90.0 – 110.0	P	20–JAN–10 11:16	012010–1
	Mercury	5.15	ug/L	5	ug/L	103.1	90.0 – 110.0	AV	21–JAN–10 09:02	012110S1–4
CCV01										
	Nickel	49.5	ug/L	50	ug/L	99.1	90.0 – 110.0	MS	16–JAN–10 00:43	100115–2
	Selenium	48.1	ug/L	50	ug/L	96.3	90.0 – 110.0	MS	16–JAN–10 00:43	100115–2
	Thallium	51.1	ug/L	50	ug/L	102.2	90.0 – 110.0	MS	16–JAN–10 00:43	100115–2
	Uranium	51.7	ug/L	50	ug/L	103.3	90.0 – 110.0	MS	16–JAN–10 00:43	100115–2
	Arsenic	46.3	ug/L	50	ug/L	92.7	90.0 – 110.0	MS	19–JAN–10 18:28	100119–3

METALS
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Initial and Continuing Calibration Verification

SDG No: 10–1130

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS3,ICPMS5,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Beryllium	52.4	ug/L	50	ug/L	104.9	90.0 – 110.0	MS	19–JAN–10 18:28	100119–3
	Aluminum	4970	ug/L	5000	ug/L	99.4	90.0 – 110.0	P	20–JAN–10 12:16	012010–1
	Antimony	516	ug/L	500	ug/L	103.3	90.0 – 110.0	P	20–JAN–10 12:16	012010–1
	Barium	503	ug/L	500	ug/L	100.5	90.0 – 110.0	P	20–JAN–10 12:16	012010–1
	Cadmium	500	ug/L	500	ug/L	100	90.0 – 110.0	P	20–JAN–10 12:16	012010–1
	Calcium	5030	ug/L	5000	ug/L	100.7	90.0 – 110.0	P	20–JAN–10 12:16	012010–1
	Chromium	500	ug/L	500	ug/L	99.9	90.0 – 110.0	P	20–JAN–10 12:16	012010–1
	Cobalt	504	ug/L	500	ug/L	100.7	90.0 – 110.0	P	20–JAN–10 12:16	012010–1
	Copper	499	ug/L	500	ug/L	99.8	90.0 – 110.0	P	20–JAN–10 12:16	012010–1
	Iron	5180	ug/L	5000	ug/L	103.5	90.0 – 110.0	P	20–JAN–10 12:16	012010–1
	Lead	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	20–JAN–10 12:16	012010–1
	Magnesium	5050	ug/L	5000	ug/L	101	90.0 – 110.0	P	20–JAN–10 12:16	012010–1
	Manganese	502	ug/L	500	ug/L	100.4	90.0 – 110.0	P	20–JAN–10 12:16	012010–1
	Potassium	5020	ug/L	5000	ug/L	100.4	90.0 – 110.0	P	20–JAN–10 12:16	012010–1
	Silver	501	ug/L	500	ug/L	100.2	90.0 – 110.0	P	20–JAN–10 12:16	012010–1
	Sodium	10400	ug/L	10000	ug/L	104	90.0 – 110.0	P	20–JAN–10 12:16	012010–1
	Vanadium	505	ug/L	500	ug/L	101	90.0 – 110.0	P	20–JAN–10 12:16	012010–1
	Zinc	495	ug/L	500	ug/L	99.1	90.0 – 110.0	P	20–JAN–10 12:16	012010–1
	Mercury	5.14	ug/L	5	ug/L	102.8	80.0 – 120.0	AV	21–JAN–10 09:07	012110S1–4
CCV02										
	Nickel	49.9	ug/L	50	ug/L	99.7	90.0 – 110.0	MS	16–JAN–10 01:08	100115–2
	Selenium	49.6	ug/L	50	ug/L	99.2	90.0 – 110.0	MS	16–JAN–10 01:08	100115–2
	Thallium	51	ug/L	50	ug/L	101.9	90.0 – 110.0	MS	16–JAN–10 01:08	100115–2
	Uranium	52.1	ug/L	50	ug/L	104.2	90.0 – 110.0	MS	16–JAN–10 01:08	100115–2
	Arsenic	47.2	ug/L	50	ug/L	94.4	90.0 – 110.0	MS	19–JAN–10 18:40	100119–3
	Beryllium	52.6	ug/L	50	ug/L	105.2	90.0 – 110.0	MS	19–JAN–10 18:40	100119–3
	Aluminum	4990	ug/L	5000	ug/L	99.7	90.0 – 110.0	P	20–JAN–10 12:37	012010–1
	Antimony	521	ug/L	500	ug/L	104.1	90.0 – 110.0	P	20–JAN–10 12:37	012010–1
	Barium	510	ug/L	500	ug/L	102	90.0 – 110.0	P	20–JAN–10 12:37	012010–1
	Cadmium	508	ug/L	500	ug/L	101.5	90.0 – 110.0	P	20–JAN–10 12:37	012010–1

METALS
–2a–
Initial and Continuing Calibration Verification

SDG No: 10–1130

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS3,ICPMS5,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Calcium	5080	ug/L	5000	ug/L	101.6	90.0 – 110.0	P	20–JAN–10 12:37	012010–1
	Chromium	507	ug/L	500	ug/L	101.5	90.0 – 110.0	P	20–JAN–10 12:37	012010–1
	Cobalt	510	ug/L	500	ug/L	102.1	90.0 – 110.0	P	20–JAN–10 12:37	012010–1
	Copper	508	ug/L	500	ug/L	101.6	90.0 – 110.0	P	20–JAN–10 12:37	012010–1
	Iron	5280	ug/L	5000	ug/L	105.5	90.0 – 110.0	P	20–JAN–10 12:37	012010–1
	Lead	506	ug/L	500	ug/L	101.1	90.0 – 110.0	P	20–JAN–10 12:37	012010–1
	Magnesium	5090	ug/L	5000	ug/L	101.8	90.0 – 110.0	P	20–JAN–10 12:37	012010–1
	Manganese	505	ug/L	500	ug/L	100.9	90.0 – 110.0	P	20–JAN–10 12:37	012010–1
	Potassium	5030	ug/L	5000	ug/L	100.5	90.0 – 110.0	P	20–JAN–10 12:37	012010–1
	Silver	508	ug/L	500	ug/L	101.7	90.0 – 110.0	P	20–JAN–10 12:37	012010–1
	Sodium	10500	ug/L	10000	ug/L	105.4	90.0 – 110.0	P	20–JAN–10 12:37	012010–1
	Vanadium	513	ug/L	500	ug/L	102.5	90.0 – 110.0	P	20–JAN–10 12:37	012010–1
	Zinc	502	ug/L	500	ug/L	100.5	90.0 – 110.0	P	20–JAN–10 12:37	012010–1
	Mercury	5.33	ug/L	5	ug/L	106.7	80.0 – 120.0	AV	21–JAN–10 09:27	012110S1–4
CCV03										
	Nickel	49.9	ug/L	50	ug/L	99.9	90.0 – 110.0	MS	16–JAN–10 01:24	100115–2
	Selenium	47.5	ug/L	50	ug/L	95.1	90.0 – 110.0	MS	16–JAN–10 01:24	100115–2
	Thallium	51.4	ug/L	50	ug/L	102.8	90.0 – 110.0	MS	16–JAN–10 01:24	100115–2
	Uranium	52.2	ug/L	50	ug/L	104.5	90.0 – 110.0	MS	16–JAN–10 01:24	100115–2
	Arsenic	47.5	ug/L	50	ug/L	95	90.0 – 110.0	MS	19–JAN–10 19:03	100119–3
	Beryllium	53.8	ug/L	50	ug/L	107.5	90.0 – 110.0	MS	19–JAN–10 19:03	100119–3
	Aluminum	5020	ug/L	5000	ug/L	100.3	90.0 – 110.0	P	20–JAN–10 13:37	012010–1
	Antimony	519	ug/L	500	ug/L	103.9	90.0 – 110.0	P	20–JAN–10 13:37	012010–1
	Barium	510	ug/L	500	ug/L	102.1	90.0 – 110.0	P	20–JAN–10 13:37	012010–1
	Cadmium	508	ug/L	500	ug/L	101.7	90.0 – 110.0	P	20–JAN–10 13:37	012010–1
	Calcium	5080	ug/L	5000	ug/L	101.6	90.0 – 110.0	P	20–JAN–10 13:37	012010–1
	Chromium	505	ug/L	500	ug/L	101.1	90.0 – 110.0	P	20–JAN–10 13:37	012010–1
	Cobalt	503	ug/L	500	ug/L	100.7	90.0 – 110.0	P	20–JAN–10 13:37	012010–1
	Copper	512	ug/L	500	ug/L	102.4	90.0 – 110.0	P	20–JAN–10 13:37	012010–1
	Iron	5240	ug/L	5000	ug/L	104.8	90.0 – 110.0	P	20–JAN–10 13:37	012010–1

METALS
–2a–
Initial and Continuing Calibration Verification

SDG No: 10–1130

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS3,ICPMS5,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Lead	507	ug/L	500	ug/L	101.5	90.0 – 110.0	P	20–JAN–10 13:37	012010–1
	Magnesium	5180	ug/L	5000	ug/L	103.7	90.0 – 110.0	P	20–JAN–10 13:37	012010–1
	Manganese	510	ug/L	500	ug/L	101.9	90.0 – 110.0	P	20–JAN–10 13:37	012010–1
	Potassium	5050	ug/L	5000	ug/L	101.1	90.0 – 110.0	P	20–JAN–10 13:37	012010–1
	Silver	507	ug/L	500	ug/L	101.4	90.0 – 110.0	P	20–JAN–10 13:37	012010–1
	Sodium	10400	ug/L	10000	ug/L	104.1	90.0 – 110.0	P	20–JAN–10 13:37	012010–1
	Vanadium	510	ug/L	500	ug/L	102.1	90.0 – 110.0	P	20–JAN–10 13:37	012010–1
	Zinc	503	ug/L	500	ug/L	100.6	90.0 – 110.0	P	20–JAN–10 13:37	012010–1
	Mercury	5.01	ug/L	5	ug/L	100.1	80.0 – 120.0	AV	21–JAN–10 09:47	012110S1–4
CCV04										
	Nickel	49.5	ug/L	50	ug/L	98.9	90.0 – 110.0	MS	16–JAN–10 01:49	100115–2
	Selenium	50.1	ug/L	50	ug/L	100.1	90.0 – 110.0	MS	16–JAN–10 01:49	100115–2
	Thallium	51.4	ug/L	50	ug/L	102.7	90.0 – 110.0	MS	16–JAN–10 01:49	100115–2
	Uranium	52	ug/L	50	ug/L	104.1	90.0 – 110.0	MS	16–JAN–10 01:49	100115–2
	Arsenic	47.7	ug/L	50	ug/L	95.5	90.0 – 110.0	MS	19–JAN–10 19:30	100119–3
	Beryllium	53.7	ug/L	50	ug/L	107.5	90.0 – 110.0	MS	19–JAN–10 19:30	100119–3
	Aluminum	5050	ug/L	5000	ug/L	101	90.0 – 110.0	P	20–JAN–10 15:08	012010–1
	Antimony	523	ug/L	500	ug/L	104.5	90.0 – 110.0	P	20–JAN–10 15:08	012010–1
	Barium	514	ug/L	500	ug/L	102.8	90.0 – 110.0	P	20–JAN–10 15:08	012010–1
	Cadmium	512	ug/L	500	ug/L	102.3	90.0 – 110.0	P	20–JAN–10 15:08	012010–1
	Calcium	5130	ug/L	5000	ug/L	102.7	90.0 – 110.0	P	20–JAN–10 15:08	012010–1
	Chromium	511	ug/L	500	ug/L	102.1	90.0 – 110.0	P	20–JAN–10 15:08	012010–1
	Cobalt	515	ug/L	500	ug/L	103	90.0 – 110.0	P	20–JAN–10 15:08	012010–1
	Copper	510	ug/L	500	ug/L	102.1	90.0 – 110.0	P	20–JAN–10 15:08	012010–1
	Iron	5230	ug/L	5000	ug/L	104.6	90.0 – 110.0	P	20–JAN–10 15:08	012010–1
	Lead	506	ug/L	500	ug/L	101.3	90.0 – 110.0	P	20–JAN–10 15:08	012010–1
	Magnesium	5230	ug/L	5000	ug/L	104.6	90.0 – 110.0	P	20–JAN–10 15:08	012010–1
	Manganese	513	ug/L	500	ug/L	102.5	90.0 – 110.0	P	20–JAN–10 15:08	012010–1
	Potassium	5130	ug/L	5000	ug/L	102.5	90.0 – 110.0	P	20–JAN–10 15:08	012010–1
	Silver	512	ug/L	500	ug/L	102.4	90.0 – 110.0	P	20–JAN–10 15:08	012010–1

METALS
–2a–
Initial and Continuing Calibration Verification

SDG No: 10–1130

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS3,ICPMS5,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Sodium	10400	ug/L	10000	ug/L	104.4	90.0 – 110.0	P	20–JAN–10 15:08	012010–1
	Vanadium	516	ug/L	500	ug/L	103.1	90.0 – 110.0	P	20–JAN–10 15:08	012010–1
	Zinc	506	ug/L	500	ug/L	101.2	90.0 – 110.0	P	20–JAN–10 15:08	012010–1
	Mercury	5.21	ug/L	5	ug/L	104.2	80.0 – 120.0	AV	21–JAN–10 10:07	012110S1–4
CCV05										
	Nickel	50	ug/L	50	ug/L	100	90.0 – 110.0	MS	16–JAN–10 02:09	100115–2
	Selenium	47.9	ug/L	50	ug/L	95.8	90.0 – 110.0	MS	16–JAN–10 02:09	100115–2
	Thallium	51.3	ug/L	50	ug/L	102.5	90.0 – 110.0	MS	16–JAN–10 02:09	100115–2
	Uranium	51.4	ug/L	50	ug/L	102.9	90.0 – 110.0	MS	16–JAN–10 02:09	100115–2
	Arsenic	47	ug/L	50	ug/L	94	90.0 – 110.0	MS	19–JAN–10 19:54	100119–3
	Beryllium	53.6	ug/L	50	ug/L	107.3	90.0 – 110.0	MS	19–JAN–10 19:54	100119–3
	Aluminum	5060	ug/L	5000	ug/L	101.2	90.0 – 110.0	P	20–JAN–10 16:10	012010–1
	Antimony	533	ug/L	500	ug/L	106.6	90.0 – 110.0	P	20–JAN–10 16:10	012010–1
	Barium	522	ug/L	500	ug/L	104.5	90.0 – 110.0	P	20–JAN–10 16:10	012010–1
	Cadmium	521	ug/L	500	ug/L	104.1	90.0 – 110.0	P	20–JAN–10 16:10	012010–1
	Calcium	5150	ug/L	5000	ug/L	103	90.0 – 110.0	P	20–JAN–10 16:10	012010–1
	Chromium	519	ug/L	500	ug/L	103.9	90.0 – 110.0	P	20–JAN–10 16:10	012010–1
	Cobalt	523	ug/L	500	ug/L	104.6	90.0 – 110.0	P	20–JAN–10 16:10	012010–1
	Copper	519	ug/L	500	ug/L	103.8	90.0 – 110.0	P	20–JAN–10 16:10	012010–1
	Iron	5370	ug/L	5000	ug/L	107.5	90.0 – 110.0	P	20–JAN–10 16:10	012010–1
	Lead	512	ug/L	500	ug/L	102.5	90.0 – 110.0	P	20–JAN–10 16:10	012010–1
	Magnesium	5290	ug/L	5000	ug/L	105.9	90.0 – 110.0	P	20–JAN–10 16:10	012010–1
	Manganese	518	ug/L	500	ug/L	103.5	90.0 – 110.0	P	20–JAN–10 16:10	012010–1
	Potassium	5180	ug/L	5000	ug/L	103.6	90.0 – 110.0	P	20–JAN–10 16:10	012010–1
	Silver	520	ug/L	500	ug/L	104	90.0 – 110.0	P	20–JAN–10 16:10	012010–1
	Sodium	11000	ug/L	10000	ug/L	110.4	90.0 – 110.0	P	20–JAN–10 16:10	012010–1
	Vanadium	525	ug/L	500	ug/L	105	90.0 – 110.0	P	20–JAN–10 16:10	012010–1
	Zinc	514	ug/L	500	ug/L	102.9	90.0 – 110.0	P	20–JAN–10 16:10	012010–1
	Mercury	5.34	ug/L	5	ug/L	106.7	80.0 – 120.0	AV	21–JAN–10 10:27	012110S1–4

METALS
–2a–
Initial and Continuing Calibration Verification

SDG No: 10–1130

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS3,ICPMS5,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
CCV06										
	Nickel	49.3	ug/L	50	ug/L	98.6	90.0 – 110.0	MS	16–JAN–10 02:31	100115–2
	Selenium	48.6	ug/L	50	ug/L	97.3	90.0 – 110.0	MS	16–JAN–10 02:31	100115–2
	Thallium	50.6	ug/L	50	ug/L	101.2	90.0 – 110.0	MS	16–JAN–10 02:31	100115–2
	Uranium	51.1	ug/L	50	ug/L	102.3	90.0 – 110.0	MS	16–JAN–10 02:31	100115–2
	Aluminum	5100	ug/L	5000	ug/L	102	90.0 – 110.0	P	20–JAN–10 17:13	012010–1
	Antimony	545	ug/L	500	ug/L	109.1	90.0 – 110.0	P	20–JAN–10 17:13	012010–1
	Barium	529	ug/L	500	ug/L	105.8	90.0 – 110.0	P	20–JAN–10 17:13	012010–1
	Cadmium	528	ug/L	500	ug/L	105.6	90.0 – 110.0	P	20–JAN–10 17:13	012010–1
	Calcium	5210	ug/L	5000	ug/L	104.2	90.0 – 110.0	P	20–JAN–10 17:13	012010–1
	Chromium	526	ug/L	500	ug/L	105.2	90.0 – 110.0	P	20–JAN–10 17:13	012010–1
	Cobalt	531	ug/L	500	ug/L	106.1	90.0 – 110.0	P	20–JAN–10 17:13	012010–1
	Copper	524	ug/L	500	ug/L	104.9	90.0 – 110.0	P	20–JAN–10 17:13	012010–1
	Iron	5450	ug/L	5000	ug/L	109	90.0 – 110.0	P	20–JAN–10 17:13	012010–1
	Lead	525	ug/L	500	ug/L	104.9	90.0 – 110.0	P	20–JAN–10 17:13	012010–1
	Magnesium	5350	ug/L	5000	ug/L	106.9	90.0 – 110.0	P	20–JAN–10 17:13	012010–1
	Manganese	528	ug/L	500	ug/L	105.6	90.0 – 110.0	P	20–JAN–10 17:13	012010–1
	Potassium	5260	ug/L	5000	ug/L	105.3	90.0 – 110.0	P	20–JAN–10 17:13	012010–1
	Silver	525	ug/L	500	ug/L	105	90.0 – 110.0	P	20–JAN–10 17:13	012010–1
	Sodium	10800	ug/L	10000	ug/L	108.4	90.0 – 110.0	P	20–JAN–10 17:13	012010–1
	Vanadium	530	ug/L	500	ug/L	105.9	90.0 – 110.0	P	20–JAN–10 17:13	012010–1
	Zinc	522	ug/L	500	ug/L	104.4	90.0 – 110.0	P	20–JAN–10 17:13	012010–1
	Mercury	5.31	ug/L	5	ug/L	106.2	80.0 – 120.0	AV	21–JAN–10 10:48	012110S1–4
CCV07										
	Nickel	49.4	ug/L	50	ug/L	98.8	90.0 – 110.0	MS	16–JAN–10 03:01	100115–2
	Selenium	49.5	ug/L	50	ug/L	99	90.0 – 110.0	MS	16–JAN–10 03:01	100115–2
	Thallium	50.2	ug/L	50	ug/L	100.3	90.0 – 110.0	MS	16–JAN–10 03:01	100115–2
	Uranium	51.5	ug/L	50	ug/L	103	90.0 – 110.0	MS	16–JAN–10 03:01	100115–2
	Aluminum	5140	ug/L	5000	ug/L	102.8	90.0 – 110.0	P	20–JAN–10 18:02	012010–1
	Antimony	532	ug/L	500	ug/L	106.4	90.0 – 110.0	P	20–JAN–10 18:02	012010–1
	Barium	524	ug/L	500	ug/L	104.8	90.0 – 110.0	P	20–JAN–10 18:02	012010–1

METALS
–2a–
Initial and Continuing Calibration Verification

SDG No: 10–1130

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS3,ICPMS5,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Cadmium	522	ug/L	500	ug/L	104.5	90.0 – 110.0	P	20–JAN–10 18:02	012010–1
	Calcium	5270	ug/L	5000	ug/L	105.5	90.0 – 110.0	P	20–JAN–10 18:02	012010–1
	Chromium	519	ug/L	500	ug/L	103.7	90.0 – 110.0	P	20–JAN–10 18:02	012010–1
	Cobalt	516	ug/L	500	ug/L	103.1	90.0 – 110.0	P	20–JAN–10 18:02	012010–1
	Copper	526	ug/L	500	ug/L	105.2	90.0 – 110.0	P	20–JAN–10 18:02	012010–1
	Iron	5570	ug/L	5000	ug/L	111.3	90.0 – 110.0	P	20–JAN–10 18:02	012010–1
	Lead	519	ug/L	500	ug/L	103.8	90.0 – 110.0	P	20–JAN–10 18:02	012010–1
	Magnesium	5370	ug/L	5000	ug/L	107.4	90.0 – 110.0	P	20–JAN–10 18:02	012010–1
	Manganese	524	ug/L	500	ug/L	104.8	90.0 – 110.0	P	20–JAN–10 18:02	012010–1
	Potassium	5340	ug/L	5000	ug/L	106.7	90.0 – 110.0	P	20–JAN–10 18:02	012010–1
	Silver	520	ug/L	500	ug/L	104	90.0 – 110.0	P	20–JAN–10 18:02	012010–1
	Sodium	11200	ug/L	10000	ug/L	111.8	90.0 – 110.0	P	20–JAN–10 18:02	012010–1
	Vanadium	524	ug/L	500	ug/L	104.8	90.0 – 110.0	P	20–JAN–10 18:02	012010–1
	Zinc	516	ug/L	500	ug/L	103.3	90.0 – 110.0	P	20–JAN–10 18:02	012010–1
	Mercury	5.2	ug/L	5	ug/L	104	80.0 – 120.0	AV	21–JAN–10 11:08	012110S1–4
CCV08										
	Aluminum	5140	ug/L	5000	ug/L	102.8	90.0 – 110.0	P	20–JAN–10 19:17	012010–1
	Antimony	537	ug/L	500	ug/L	107.4	90.0 – 110.0	P	20–JAN–10 19:17	012010–1
	Barium	520	ug/L	500	ug/L	104.1	90.0 – 110.0	P	20–JAN–10 19:17	012010–1
	Cadmium	518	ug/L	500	ug/L	103.6	90.0 – 110.0	P	20–JAN–10 19:17	012010–1
	Calcium	5190	ug/L	5000	ug/L	103.8	90.0 – 110.0	P	20–JAN–10 19:17	012010–1
	Chromium	515	ug/L	500	ug/L	103	90.0 – 110.0	P	20–JAN–10 19:17	012010–1
	Cobalt	523	ug/L	500	ug/L	104.6	90.0 – 110.0	P	20–JAN–10 19:17	012010–1
	Copper	520	ug/L	500	ug/L	104	90.0 – 110.0	P	20–JAN–10 19:17	012010–1
	Iron	5310	ug/L	5000	ug/L	106.1	90.0 – 110.0	P	20–JAN–10 19:17	012010–1
	Lead	513	ug/L	500	ug/L	102.6	90.0 – 110.0	P	20–JAN–10 19:17	012010–1
	Magnesium	5230	ug/L	5000	ug/L	104.7	90.0 – 110.0	P	20–JAN–10 19:17	012010–1
	Manganese	522	ug/L	500	ug/L	104.4	90.0 – 110.0	P	20–JAN–10 19:17	012010–1
	Potassium	5230	ug/L	5000	ug/L	104.7	90.0 – 110.0	P	20–JAN–10 19:17	012010–1
	Silver	519	ug/L	500	ug/L	103.7	90.0 – 110.0	P	20–JAN–10 19:17	012010–1

METALS
–2a–
Initial and Continuing Calibration Verification

SDG No: 10–1130

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS3,ICPMS5,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Sodium	10100	ug/L	10000	ug/L	100.8	90.0 – 110.0	P	20–JAN–10 19:17	012010–1
	Vanadium	521	ug/L	500	ug/L	104.2	90.0 – 110.0	P	20–JAN–10 19:17	012010–1
	Zinc	514	ug/L	500	ug/L	102.8	90.0 – 110.0	P	20–JAN–10 19:17	012010–1
	Mercury	5.36	ug/L	5	ug/L	107.2	80.0 – 120.0	AV	21–JAN–10 11:28	012110S1–4
CCV09										
	Aluminum	5170	ug/L	5000	ug/L	103.3	90.0 – 110.0	P	20–JAN–10 20:33	012010–1
	Antimony	546	ug/L	500	ug/L	109.2	90.0 – 110.0	P	20–JAN–10 20:33	012010–1
	Barium	535	ug/L	500	ug/L	107	90.0 – 110.0	P	20–JAN–10 20:33	012010–1
	Cadmium	541	ug/L	500	ug/L	108.2	90.0 – 110.0	P	20–JAN–10 20:33	012010–1
	Calcium	5370	ug/L	5000	ug/L	107.5	90.0 – 110.0	P	20–JAN–10 20:33	012010–1
	Chromium	534	ug/L	500	ug/L	106.8	90.0 – 110.0	P	20–JAN–10 20:33	012010–1
	Cobalt	533	ug/L	500	ug/L	106.6	90.0 – 110.0	P	20–JAN–10 20:33	012010–1
	Copper	532	ug/L	500	ug/L	106.4	90.0 – 110.0	P	20–JAN–10 20:33	012010–1
	Iron	5570	ug/L	5000	ug/L	111.4	90.0 – 110.0	P	20–JAN–10 20:33	012010–1
	Lead	541	ug/L	500	ug/L	108.2	90.0 – 110.0	P	20–JAN–10 20:33	012010–1
	Magnesium	5580	ug/L	5000	ug/L	111.6	90.0 – 110.0	P	20–JAN–10 20:33	012010–1
	Manganese	534	ug/L	500	ug/L	106.9	90.0 – 110.0	P	20–JAN–10 20:33	012010–1
	Potassium	5530	ug/L	5000	ug/L	110.6	90.0 – 110.0	P	20–JAN–10 20:33	012010–1
	Silver	526	ug/L	500	ug/L	105.2	90.0 – 110.0	P	20–JAN–10 20:33	012010–1
	Sodium	11000	ug/L	10000	ug/L	109.8	90.0 – 110.0	P	20–JAN–10 20:33	012010–1
	Vanadium	533	ug/L	500	ug/L	106.6	90.0 – 110.0	P	20–JAN–10 20:33	012010–1
	Zinc	534	ug/L	500	ug/L	106.8	90.0 – 110.0	P	20–JAN–10 20:33	012010–1
	Mercury	5.34	ug/L	5	ug/L	106.7	80.0 – 120.0	AV	21–JAN–10 11:48	012110S1–4
CCV10										
	Aluminum	5100	ug/L	5000	ug/L	102	90.0 – 110.0	P	20–JAN–10 21:42	012010–1
	Antimony	536	ug/L	500	ug/L	107.3	90.0 – 110.0	P	20–JAN–10 21:42	012010–1
	Barium	522	ug/L	500	ug/L	104.3	90.0 – 110.0	P	20–JAN–10 21:42	012010–1
	Cadmium	517	ug/L	500	ug/L	103.4	90.0 – 110.0	P	20–JAN–10 21:42	012010–1
	Calcium	5250	ug/L	5000	ug/L	105	90.0 – 110.0	P	20–JAN–10 21:42	012010–1
	Chromium	516	ug/L	500	ug/L	103.2	90.0 – 110.0	P	20–JAN–10 21:42	012010–1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 10-1130

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS3,ICPMS5,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Cobalt	518	ug/L	500	ug/L	103.6	90.0 – 110.0	P	20-JAN-10 21:42	012010-1
	Copper	531	ug/L	500	ug/L	106.1	90.0 – 110.0	P	20-JAN-10 21:42	012010-1
	Iron	5450	ug/L	5000	ug/L	109	90.0 – 110.0	P	20-JAN-10 21:42	012010-1
	Lead	519	ug/L	500	ug/L	103.9	90.0 – 110.0	P	20-JAN-10 21:42	012010-1
	Magnesium	5300	ug/L	5000	ug/L	106	90.0 – 110.0	P	20-JAN-10 21:42	012010-1
	Manganese	522	ug/L	500	ug/L	104.4	90.0 – 110.0	P	20-JAN-10 21:42	012010-1
	Potassium	5160	ug/L	5000	ug/L	103.2	90.0 – 110.0	P	20-JAN-10 21:42	012010-1
	Silver	521	ug/L	500	ug/L	104.1	90.0 – 110.0	P	20-JAN-10 21:42	012010-1
	Sodium	10600	ug/L	10000	ug/L	105.9	90.0 – 110.0	P	20-JAN-10 21:42	012010-1
	Vanadium	523	ug/L	500	ug/L	104.5	90.0 – 110.0	P	20-JAN-10 21:42	012010-1
	Zinc	515	ug/L	500	ug/L	103.1	90.0 – 110.0	P	20-JAN-10 21:42	012010-1
	Mercury	5.3	ug/L	5	ug/L	105.9	80.0 – 120.0	AV	21-JAN-10 12:09	012110S1-4
CCV11										
	Aluminum	5080	ug/L	5000	ug/L	101.7	90.0 – 110.0	P	20-JAN-10 22:59	012010-1
	Antimony	538	ug/L	500	ug/L	107.6	90.0 – 110.0	P	20-JAN-10 22:59	012010-1
	Barium	525	ug/L	500	ug/L	105	90.0 – 110.0	P	20-JAN-10 22:59	012010-1
	Cadmium	522	ug/L	500	ug/L	104.4	90.0 – 110.0	P	20-JAN-10 22:59	012010-1
	Calcium	5200	ug/L	5000	ug/L	104	90.0 – 110.0	P	20-JAN-10 22:59	012010-1
	Chromium	521	ug/L	500	ug/L	104.2	90.0 – 110.0	P	20-JAN-10 22:59	012010-1
	Cobalt	528	ug/L	500	ug/L	105.5	90.0 – 110.0	P	20-JAN-10 22:59	012010-1
	Copper	532	ug/L	500	ug/L	106.4	90.0 – 110.0	P	20-JAN-10 22:59	012010-1
	Iron	5430	ug/L	5000	ug/L	108.7	90.0 – 110.0	P	20-JAN-10 22:59	012010-1
	Lead	515	ug/L	500	ug/L	102.9	90.0 – 110.0	P	20-JAN-10 22:59	012010-1
	Magnesium	5330	ug/L	5000	ug/L	106.7	90.0 – 110.0	P	20-JAN-10 22:59	012010-1
	Manganese	522	ug/L	500	ug/L	104.5	90.0 – 110.0	P	20-JAN-10 22:59	012010-1
	Potassium	5140	ug/L	5000	ug/L	102.8	90.0 – 110.0	P	20-JAN-10 22:59	012010-1
	Silver	527	ug/L	500	ug/L	105.5	90.0 – 110.0	P	20-JAN-10 22:59	012010-1
	Sodium	10700	ug/L	10000	ug/L	107.5	90.0 – 110.0	P	20-JAN-10 22:59	012010-1
	Vanadium	530	ug/L	500	ug/L	105.9	90.0 – 110.0	P	20-JAN-10 22:59	012010-1
	Zinc	520	ug/L	500	ug/L	104	90.0 – 110.0	P	20-JAN-10 22:59	012010-1

METALS
–2a–
Initial and Continuing Calibration Verification

SDG No: 10–1130

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS3,ICPMS5,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
CCV12										
	Aluminum	5100	ug/L	5000	ug/L	102.1	90.0 – 110.0	P	21–JAN–10 00:16	012010–1
	Antimony	538	ug/L	500	ug/L	107.7	90.0 – 110.0	P	21–JAN–10 00:16	012010–1
	Barium	525	ug/L	500	ug/L	105	90.0 – 110.0	P	21–JAN–10 00:16	012010–1
	Cadmium	522	ug/L	500	ug/L	104.4	90.0 – 110.0	P	21–JAN–10 00:16	012010–1
	Calcium	5250	ug/L	5000	ug/L	105.1	90.0 – 110.0	P	21–JAN–10 00:16	012010–1
	Chromium	522	ug/L	500	ug/L	104.3	90.0 – 110.0	P	21–JAN–10 00:16	012010–1
	Cobalt	526	ug/L	500	ug/L	105.3	90.0 – 110.0	P	21–JAN–10 00:16	012010–1
	Copper	529	ug/L	500	ug/L	105.7	90.0 – 110.0	P	21–JAN–10 00:16	012010–1
	Iron	5460	ug/L	5000	ug/L	109.1	90.0 – 110.0	P	21–JAN–10 00:16	012010–1
	Lead	516	ug/L	500	ug/L	103.1	90.0 – 110.0	P	21–JAN–10 00:16	012010–1
	Magnesium	5290	ug/L	5000	ug/L	105.7	90.0 – 110.0	P	21–JAN–10 00:16	012010–1
	Manganese	525	ug/L	500	ug/L	104.9	90.0 – 110.0	P	21–JAN–10 00:16	012010–1
	Potassium	5150	ug/L	5000	ug/L	102.9	90.0 – 110.0	P	21–JAN–10 00:16	012010–1
	Silver	526	ug/L	500	ug/L	105.2	90.0 – 110.0	P	21–JAN–10 00:16	012010–1
	Sodium	10500	ug/L	10000	ug/L	105.2	90.0 – 110.0	P	21–JAN–10 00:16	012010–1
	Vanadium	528	ug/L	500	ug/L	105.7	90.0 – 110.0	P	21–JAN–10 00:16	012010–1
	Zinc	519	ug/L	500	ug/L	103.9	90.0 – 110.0	P	21–JAN–10 00:16	012010–1
CCV13										
	Aluminum	5060	ug/L	5000	ug/L	101.2	90.0 – 110.0	P	21–JAN–10 01:27	012010–1
	Antimony	532	ug/L	500	ug/L	106.4	90.0 – 110.0	P	21–JAN–10 01:27	012010–1
	Barium	525	ug/L	500	ug/L	104.9	90.0 – 110.0	P	21–JAN–10 01:27	012010–1
	Cadmium	521	ug/L	500	ug/L	104.2	90.0 – 110.0	P	21–JAN–10 01:27	012010–1
	Calcium	5230	ug/L	5000	ug/L	104.5	90.0 – 110.0	P	21–JAN–10 01:27	012010–1
	Chromium	521	ug/L	500	ug/L	104.2	90.0 – 110.0	P	21–JAN–10 01:27	012010–1
	Cobalt	526	ug/L	500	ug/L	105.3	90.0 – 110.0	P	21–JAN–10 01:27	012010–1
	Copper	530	ug/L	500	ug/L	105.9	90.0 – 110.0	P	21–JAN–10 01:27	012010–1
	Iron	5500	ug/L	5000	ug/L	109.9	90.0 – 110.0	P	21–JAN–10 01:27	012010–1
	Lead	512	ug/L	500	ug/L	102.3	90.0 – 110.0	P	21–JAN–10 01:27	012010–1
	Magnesium	5400	ug/L	5000	ug/L	108	90.0 – 110.0	P	21–JAN–10 01:27	012010–1
	Manganese	522	ug/L	500	ug/L	104.4	90.0 – 110.0	P	21–JAN–10 01:27	012010–1

METALS
–2a–
Initial and Continuing Calibration Verification

SDG No: 10–1130

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS3,ICPMS5,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Potassium	5120	ug/L	5000	ug/L	102.4	90.0 – 110.0	P	21–JAN–10 01:27	012010–1
	Silver	527	ug/L	500	ug/L	105.4	90.0 – 110.0	P	21–JAN–10 01:27	012010–1
	Sodium	10900	ug/L	10000	ug/L	109	90.0 – 110.0	P	21–JAN–10 01:27	012010–1
	Vanadium	529	ug/L	500	ug/L	105.8	90.0 – 110.0	P	21–JAN–10 01:27	012010–1
	Zinc	518	ug/L	500	ug/L	103.7	90.0 – 110.0	P	21–JAN–10 01:27	012010–1

METALS
–2b–
CRDL Standard for AA & ICP

SDG No: 10–1130

Contract: LANL01004 **Lab Code:** GEL

AA CRDL Standard Source: SPEX

ICP CRDL Standard Source Solutions Plus

Instrument ID: HG3,ICPMS3,ICPMS5,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M	Analysis Date/Time	Run Number
CRDL01										
	Nickel	2.14	ug/L	2	ug/L	107.1	70.0 – 130.0	MS	16–JAN–10 00:34	100115–2
	Thallium	1.14	ug/L	1	ug/L	114.1	70.0 – 130.0	MS	16–JAN–10 00:34	100115–2
	Selenium	5.57	ug/L	5	ug/L	111.4	70.0 – 130.0	MS	16–JAN–10 00:34	100115–2
	Uranium	.213	ug/L	.2	ug/L	106.5	70.0 – 130.0	MS	16–JAN–10 00:34	100115–2
	Arsenic	5.8	ug/L	5	ug/L	116	70.0 – 130.0	MS	19–JAN–10 18:17	100119–3
	Beryllium	.601	ug/L	.5	ug/L	120.2	70.0 – 130.0	MS	19–JAN–10 18:17	100119–3
	Mercury	.187	ug/L	.2	ug/L	93.5	70.0 – 130.0	AV	21–JAN–10 09:06	012110S1–4
PQL01										
	Aluminum	185	ug/L	200	ug/L	92.6	70.0 – 130.0	P	20–JAN–10 11:30	012010–1
	Iron	104	ug/L	100	ug/L	104.3	70.0 – 130.0	P	20–JAN–10 11:30	012010–1
	Lead	7.59	ug/L	10	ug/L	75.9	70.0 – 130.0	P	20–JAN–10 11:30	012010–1
	Magnesium	254	ug/L	300	ug/L	84.7	70.0 – 130.0	P	20–JAN–10 11:30	012010–1
	Manganese	11	ug/L	10	ug/L	109.8	70.0 – 130.0	P	20–JAN–10 11:30	012010–1
	Potassium	165	ug/L	150	ug/L	109.8	70.0 – 130.0	P	20–JAN–10 11:30	012010–1
	Silver	5.19	ug/L	5	ug/L	103.7	70.0 – 130.0	P	20–JAN–10 11:30	012010–1
	Sodium	304	ug/L	300	ug/L	101.4	70.0 – 130.0	P	20–JAN–10 11:30	012010–1
	Antimony	11.2	ug/L	10	ug/L	112.1	70.0 – 130.0	P	20–JAN–10 11:30	012010–1
	Barium	5.34	ug/L	5	ug/L	106.9	70.0 – 130.0	P	20–JAN–10 11:30	012010–1
	Cadmium	5.23	ug/L	5	ug/L	104.7	70.0 – 130.0	P	20–JAN–10 11:30	012010–1
	Chromium	5.06	ug/L	5	ug/L	101.2	70.0 – 130.0	P	20–JAN–10 11:30	012010–1
	Cobalt	4.96	ug/L	5	ug/L	99.2	70.0 – 130.0	P	20–JAN–10 11:30	012010–1
	Copper	11.4	ug/L	10	ug/L	114	70.0 – 130.0	P	20–JAN–10 11:30	012010–1
	Vanadium	5.03	ug/L	5	ug/L	100.5	70.0 – 130.0	P	20–JAN–10 11:30	012010–1
	Zinc	10.4	ug/L	10	ug/L	104.2	70.0 – 130.0	P	20–JAN–10 11:30	012010–1
	Calcium	209	ug/L	200	ug/L	104.7	70.0 – 130.0	P	20–JAN–10 11:30	012010–1
PQL02										
	Aluminum	183	ug/L	200	ug/L	91.5	70.0 – 130.0	P	20–JAN–10 13:43	012010–1
	Calcium	208	ug/L	200	ug/L	103.8	70.0 – 130.0	P	20–JAN–10 13:43	012010–1
	Zinc	9.61	ug/L	10	ug/L	96.1	70.0 – 130.0	P	20–JAN–10 13:43	012010–1
	Vanadium	5.39	ug/L	5	ug/L	107.7	70.0 – 130.0	P	20–JAN–10 13:43	012010–1

METALS
–2b–
CRDL Standard for AA & ICP

SDG No: 10–1130

Contract: LANL01004 **Lab Code:** GEL

AA CRDL Standard Source:

ICP CRDL Standard Source

Instrument ID: HG3,ICPMS3,ICPMS5,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M	Analysis Date/Time	Run Number
	Copper	10.4	ug/L	10	ug/L	104.2	70.0 – 130.0	P	20–JAN–10 13:43	012010–1
	Cobalt	5.06	ug/L	5	ug/L	101.3	70.0 – 130.0	P	20–JAN–10 13:43	012010–1
	Chromium	4.97	ug/L	5	ug/L	99.3	70.0 – 130.0	P	20–JAN–10 13:43	012010–1
	Cadmium	5.15	ug/L	5	ug/L	103.1	70.0 – 130.0	P	20–JAN–10 13:43	012010–1
	Barium	5.14	ug/L	5	ug/L	102.8	70.0 – 130.0	P	20–JAN–10 13:43	012010–1
	Antimony	13.5	ug/L	10	ug/L	135.4	70.0 – 130.0	P	20–JAN–10 13:43	012010–1
	Sodium	349	ug/L	300	ug/L	116.4	70.0 – 130.0	P	20–JAN–10 13:43	012010–1
	Iron	97.7	ug/L	100	ug/L	97.7	70.0 – 130.0	P	20–JAN–10 13:43	012010–1
	Lead	7.78	ug/L	10	ug/L	77.8	70.0 – 130.0	P	20–JAN–10 13:43	012010–1
	Magnesium	200	ug/L	300	ug/L	66.8	70.0 – 130.0	P	20–JAN–10 13:43	012010–1
	Manganese	10.6	ug/L	10	ug/L	106.1	70.0 – 130.0	P	20–JAN–10 13:43	012010–1
	Potassium	156	ug/L	150	ug/L	104.2	70.0 – 130.0	P	20–JAN–10 13:43	012010–1
	Silver	5.03	ug/L	5	ug/L	100.6	70.0 – 130.0	P	20–JAN–10 13:43	012010–1
PQL03										
	Calcium	213	ug/L	200	ug/L	106.3	70.0 – 130.0	P	20–JAN–10 15:15	012010–1
	Aluminum	195	ug/L	200	ug/L	97.5	70.0 – 130.0	P	20–JAN–10 15:15	012010–1
	Iron	110	ug/L	100	ug/L	110.2	70.0 – 130.0	P	20–JAN–10 15:15	012010–1
	Lead	7.99	ug/L	10	ug/L	79.9	70.0 – 130.0	P	20–JAN–10 15:15	012010–1
	Magnesium	225	ug/L	300	ug/L	75.1	70.0 – 130.0	P	20–JAN–10 15:15	012010–1
	Manganese	10.6	ug/L	10	ug/L	105.7	70.0 – 130.0	P	20–JAN–10 15:15	012010–1
	Potassium	183	ug/L	150	ug/L	121.9	70.0 – 130.0	P	20–JAN–10 15:15	012010–1
	Silver	5.35	ug/L	5	ug/L	107.1	70.0 – 130.0	P	20–JAN–10 15:15	012010–1
	Sodium	352	ug/L	300	ug/L	117.4	70.0 – 130.0	P	20–JAN–10 15:15	012010–1
	Antimony	11.2	ug/L	10	ug/L	111.5	70.0 – 130.0	P	20–JAN–10 15:15	012010–1
	Barium	5.14	ug/L	5	ug/L	102.8	70.0 – 130.0	P	20–JAN–10 15:15	012010–1
	Cadmium	5.2	ug/L	5	ug/L	103.9	70.0 – 130.0	P	20–JAN–10 15:15	012010–1
	Chromium	4.92	ug/L	5	ug/L	98.5	70.0 – 130.0	P	20–JAN–10 15:15	012010–1
	Cobalt	4.97	ug/L	5	ug/L	99.3	70.0 – 130.0	P	20–JAN–10 15:15	012010–1
	Copper	9.9	ug/L	10	ug/L	99.1	70.0 – 130.0	P	20–JAN–10 15:15	012010–1
	Vanadium	5.24	ug/L	5	ug/L	104.7	70.0 – 130.0	P	20–JAN–10 15:15	012010–1

METALS
–2b–
CRDL Standard for AA & ICP

SDG No: 10–1130

Contract: LANL01004 **Lab Code:** GEL

AA CRDL Standard Source:

ICP CRDL Standard Source

Instrument ID: HG3,ICPMS3,ICPMS5,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M	Analysis Date/Time	Run Number
	Zinc	9.6	ug/L	10	ug/L	96	70.0 – 130.0	P	20–JAN–10 15:15	012010–1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 10–1130

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
ICB01										
	Nickel	0.5	+/–2	U	0.5	2.0	SOL	MS	16–JAN–10 00:32	100115–2
	Selenium	2.5	+/–5	U	2.5	5.0	SOL	MS	16–JAN–10 00:32	100115–2
	Thallium	0.3	+/–1	U	0.3	1.0	SOL	MS	16–JAN–10 00:32	100115–2
	Uranium	0.066	+/–.2	U	0.066	0.2	SOL	MS	16–JAN–10 00:32	100115–2
	Arsenic	1.0	+/–5	U	1.0	5.0	SOL	MS	19–JAN–10 18:13	100119–3
	Beryllium	0.1	+/–.5	U	0.1	0.5	SOL	MS	19–JAN–10 18:13	100119–3
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	20–JAN–10 11:23	012010–1
	Antimony	3.66	+/–10	J	3.3	10.0	SOL	P	20–JAN–10 11:23	012010–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	20–JAN–10 11:23	012010–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	20–JAN–10 11:23	012010–1
	Calcium	80.0	+/–250	U	80.0	250	SOL	P	20–JAN–10 11:23	012010–1
	Chromium	1.5	+/–5	U	1.5	5.0	SOL	P	20–JAN–10 11:23	012010–1
	Cobalt	1.5	+/–5	U	1.5	5.0	SOL	P	20–JAN–10 11:23	012010–1
	Copper	3.0	+/–10	U	3.0	10.0	SOL	P	20–JAN–10 11:23	012010–1
	Iron	80.0	+/–250	U	80.0	250	SOL	P	20–JAN–10 11:23	012010–1
	Lead	2.5	+/–10	U	2.5	10.0	SOL	P	20–JAN–10 11:23	012010–1
	Magnesium	85.0	+/–300	U	85.0	300	SOL	P	20–JAN–10 11:23	012010–1
	Manganese	2.0	+/–10	U	2.0	10.0	SOL	P	20–JAN–10 11:23	012010–1
	Potassium	64.0	+/–250	U	64.0	250	SOL	P	20–JAN–10 11:23	012010–1
	Silver	1.0	+/–5	U	1.0	5.0	SOL	P	20–JAN–10 11:23	012010–1
	Sodium	70.0	+/–250	U	70.0	250	SOL	P	20–JAN–10 11:23	012010–1
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	20–JAN–10 11:23	012010–1
	Zinc	3.3	+/–10	U	3.3	10.0	SOL	P	20–JAN–10 11:23	012010–1
	Mercury	0.068	+/–.2	U	0.068	0.2	SOL	AV	21–JAN–10 09:04	012110S1–4
CCB01										
	Nickel	0.5	+/–2	U	0.5	2.0	SOL	MS	16–JAN–10 00:45	100115–2
	Selenium	2.5	+/–5	U	2.5	5.0	SOL	MS	16–JAN–10 00:45	100115–2
	Thallium	0.3	+/–1	U	0.3	1.0	SOL	MS	16–JAN–10 00:45	100115–2
	Uranium	0.066	+/–.2	U	0.066	0.2	SOL	MS	16–JAN–10 00:45	100115–2
	Arsenic	1.0	+/–5	U	1.0	5.0	SOL	MS	19–JAN–10 18:32	100119–3
	Beryllium	0.1	+/–.5	U	0.1	0.5	SOL	MS	19–JAN–10 18:32	100119–3

Metals
–3a–
Initial and Continuing Calibration Blank Summary

SDG No.: 10–1130

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	20–JAN–10 12:23	012010–1
	Antimony	4.82	+/–10	J	3.3	10.0	SOL	P	20–JAN–10 12:23	012010–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	20–JAN–10 12:23	012010–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	20–JAN–10 12:23	012010–1
	Calcium	80.0	+/–250	U	80.0	250	SOL	P	20–JAN–10 12:23	012010–1
	Chromium	1.5	+/–5	U	1.5	5.0	SOL	P	20–JAN–10 12:23	012010–1
	Cobalt	1.5	+/–5	U	1.5	5.0	SOL	P	20–JAN–10 12:23	012010–1
	Copper	3.0	+/–10	U	3.0	10.0	SOL	P	20–JAN–10 12:23	012010–1
	Iron	80.0	+/–250	U	80.0	250	SOL	P	20–JAN–10 12:23	012010–1
	Lead	2.5	+/–10	U	2.5	10.0	SOL	P	20–JAN–10 12:23	012010–1
	Magnesium	85.0	+/–300	U	85.0	300	SOL	P	20–JAN–10 12:23	012010–1
	Manganese	2.0	+/–10	U	2.0	10.0	SOL	P	20–JAN–10 12:23	012010–1
	Potassium	64.0	+/–250	U	64.0	250	SOL	P	20–JAN–10 12:23	012010–1
	Silver	1.0	+/–5	U	1.0	5.0	SOL	P	20–JAN–10 12:23	012010–1
	Sodium	70.0	+/–250	U	70.0	250	SOL	P	20–JAN–10 12:23	012010–1
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	20–JAN–10 12:23	012010–1
	Zinc	3.3	+/–10	U	3.3	10.0	SOL	P	20–JAN–10 12:23	012010–1
	Mercury	0.068	+/–.2	U	0.068	0.2	SOL	AV	21–JAN–10 09:09	012110S1–4
CCB02										
	Nickel	0.5	+/–2	U	0.5	2.0	SOL	MS	16–JAN–10 01:10	100115–2
	Selenium	2.5	+/–5	U	2.5	5.0	SOL	MS	16–JAN–10 01:10	100115–2
	Thallium	0.3	+/–1	U	0.3	1.0	SOL	MS	16–JAN–10 01:10	100115–2
	Uranium	0.066	+/–.2	U	0.066	0.2	SOL	MS	16–JAN–10 01:10	100115–2
	Arsenic	1.0	+/–5	U	1.0	5.0	SOL	MS	19–JAN–10 18:44	100119–3
	Beryllium	0.1	+/–.5	U	0.1	0.5	SOL	MS	19–JAN–10 18:44	100119–3
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	20–JAN–10 12:44	012010–1
	Antimony	3.3	+/–10	U	3.3	10.0	SOL	P	20–JAN–10 12:44	012010–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	20–JAN–10 12:44	012010–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	20–JAN–10 12:44	012010–1
	Calcium	80.0	+/–250	U	80.0	250	SOL	P	20–JAN–10 12:44	012010–1
	Chromium	1.5	+/–5	U	1.5	5.0	SOL	P	20–JAN–10 12:44	012010–1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 10-1130

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	20-JAN-10 12:44	012010-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	20-JAN-10 12:44	012010-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	20-JAN-10 12:44	012010-1
	Lead	-3.37	+/-10	J	2.5	10.0	SOL	P	20-JAN-10 12:44	012010-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	20-JAN-10 12:44	012010-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	20-JAN-10 12:44	012010-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	20-JAN-10 12:44	012010-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	20-JAN-10 12:44	012010-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	20-JAN-10 12:44	012010-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	20-JAN-10 12:44	012010-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	20-JAN-10 12:44	012010-1
	Mercury	0.068	+/-.2	U	0.068	0.2	SOL	AV	21-JAN-10 09:29	012110S1-4
CCB03										
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	16-JAN-10 01:27	100115-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	16-JAN-10 01:27	100115-2
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	16-JAN-10 01:27	100115-2
	Uranium	0.066	+/-.2	U	0.066	0.2	SOL	MS	16-JAN-10 01:27	100115-2
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	19-JAN-10 19:07	100119-3
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	19-JAN-10 19:07	100119-3
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	20-JAN-10 13:50	012010-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	20-JAN-10 13:50	012010-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	20-JAN-10 13:50	012010-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	20-JAN-10 13:50	012010-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	20-JAN-10 13:50	012010-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	20-JAN-10 13:50	012010-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	20-JAN-10 13:50	012010-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	20-JAN-10 13:50	012010-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	20-JAN-10 13:50	012010-1
	Lead	-3.05	+/-10	J	2.5	10.0	SOL	P	20-JAN-10 13:50	012010-1
	Magnesium	-90.31	+/-300	J	85.0	300	SOL	P	20-JAN-10 13:50	012010-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	20-JAN-10 13:50	012010-1

Metals
–3a–
Initial and Continuing Calibration Blank Summary

SDG No.: 10–1130

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Potassium	64.0	+/–250	U	64.0	250	SOL	P	20–JAN–10 13:50	012010–1
	Silver	1.0	+/–5	U	1.0	5.0	SOL	P	20–JAN–10 13:50	012010–1
	Sodium	70.0	+/–250	U	70.0	250	SOL	P	20–JAN–10 13:50	012010–1
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	20–JAN–10 13:50	012010–1
	Zinc	3.3	+/–10	U	3.3	10.0	SOL	P	20–JAN–10 13:50	012010–1
	Mercury	0.068	+/–.2	U	0.068	0.2	SOL	AV	21–JAN–10 09:49	012110S1–4
CCB04										
	Nickel	0.5	+/–2	U	0.5	2.0	SOL	MS	16–JAN–10 01:52	100115–2
	Selenium	2.5	+/–5	U	2.5	5.0	SOL	MS	16–JAN–10 01:52	100115–2
	Thallium	0.3	+/–1	U	0.3	1.0	SOL	MS	16–JAN–10 01:52	100115–2
	Uranium	0.066	+/–.2	U	0.066	0.2	SOL	MS	16–JAN–10 01:52	100115–2
	Arsenic	1.0	+/–5	U	1.0	5.0	SOL	MS	19–JAN–10 19:34	100119–3
	Beryllium	0.1	+/–.5	U	0.1	0.5	SOL	MS	19–JAN–10 19:34	100119–3
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	20–JAN–10 15:22	012010–1
	Antimony	3.3	+/–10	U	3.3	10.0	SOL	P	20–JAN–10 15:22	012010–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	20–JAN–10 15:22	012010–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	20–JAN–10 15:22	012010–1
	Calcium	80.0	+/–250	U	80.0	250	SOL	P	20–JAN–10 15:22	012010–1
	Chromium	1.5	+/–5	U	1.5	5.0	SOL	P	20–JAN–10 15:22	012010–1
	Cobalt	1.5	+/–5	U	1.5	5.0	SOL	P	20–JAN–10 15:22	012010–1
	Copper	3.0	+/–10	U	3.0	10.0	SOL	P	20–JAN–10 15:22	012010–1
	Iron	80.0	+/–250	U	80.0	250	SOL	P	20–JAN–10 15:22	012010–1
	Lead	–2.96	+/–10	J	2.5	10.0	SOL	P	20–JAN–10 15:22	012010–1
	Magnesium	85.0	+/–300	U	85.0	300	SOL	P	20–JAN–10 15:22	012010–1
	Manganese	2.0	+/–10	U	2.0	10.0	SOL	P	20–JAN–10 15:22	012010–1
	Potassium	64.0	+/–250	U	64.0	250	SOL	P	20–JAN–10 15:22	012010–1
	Silver	1.0	+/–5	U	1.0	5.0	SOL	P	20–JAN–10 15:22	012010–1
	Sodium	70.0	+/–250	U	70.0	250	SOL	P	20–JAN–10 15:22	012010–1
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	20–JAN–10 15:22	012010–1
	Zinc	3.3	+/–10	U	3.3	10.0	SOL	P	20–JAN–10 15:22	012010–1
	Mercury	0.068	+/–.2	U	0.068	0.2	SOL	AV	21–JAN–10 10:09	012110S1–4

Metals
–3a–
Initial and Continuing Calibration Blank Summary

SDG No.: 10–1130

Contract: LANL01004 **Lab Code: GEL**

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
CCB05										
	Nickel	0.5	+/–2	U	0.5	2.0	SOL	MS	16–JAN–10 02:12	100115–2
	Selenium	2.5	+/–5	U	2.5	5.0	SOL	MS	16–JAN–10 02:12	100115–2
	Thallium	0.3	+/–1	U	0.3	1.0	SOL	MS	16–JAN–10 02:12	100115–2
	Uranium	0.066	+/–.2	U	0.066	0.2	SOL	MS	16–JAN–10 02:12	100115–2
	Arsenic	1.0	+/–5	U	1.0	5.0	SOL	MS	19–JAN–10 19:58	100119–3
	Beryllium	0.1	+/–.5	U	0.1	0.5	SOL	MS	19–JAN–10 19:58	100119–3
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	20–JAN–10 16:18	012010–1
	Antimony	3.3	+/–10	U	3.3	10.0	SOL	P	20–JAN–10 16:18	012010–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	20–JAN–10 16:18	012010–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	20–JAN–10 16:18	012010–1
	Calcium	80.0	+/–250	U	80.0	250	SOL	P	20–JAN–10 16:18	012010–1
	Chromium	1.5	+/–5	U	1.5	5.0	SOL	P	20–JAN–10 16:18	012010–1
	Cobalt	1.5	+/–5	U	1.5	5.0	SOL	P	20–JAN–10 16:18	012010–1
	Copper	3.0	+/–10	U	3.0	10.0	SOL	P	20–JAN–10 16:18	012010–1
	Iron	80.0	+/–250	U	80.0	250	SOL	P	20–JAN–10 16:18	012010–1
	Lead	–3.03	+/–10	J	2.5	10.0	SOL	P	20–JAN–10 16:18	012010–1
	Magnesium	85.0	+/–300	U	85.0	300	SOL	P	20–JAN–10 16:18	012010–1
	Manganese	2.0	+/–10	U	2.0	10.0	SOL	P	20–JAN–10 16:18	012010–1
	Potassium	64.0	+/–250	U	64.0	250	SOL	P	20–JAN–10 16:18	012010–1
	Silver	1.0	+/–5	U	1.0	5.0	SOL	P	20–JAN–10 16:18	012010–1
	Sodium	70.0	+/–250	U	70.0	250	SOL	P	20–JAN–10 16:18	012010–1
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	20–JAN–10 16:18	012010–1
	Zinc	3.3	+/–10	U	3.3	10.0	SOL	P	20–JAN–10 16:18	012010–1
	Mercury	0.068	+/–.2	U	0.068	0.2	SOL	AV	21–JAN–10 10:29	012110S1–4
CCB06										
	Nickel	0.5	+/–2	U	0.5	2.0	SOL	MS	16–JAN–10 02:34	100115–2
	Selenium	2.5	+/–5	U	2.5	5.0	SOL	MS	16–JAN–10 02:34	100115–2
	Thallium	0.3	+/–1	U	0.3	1.0	SOL	MS	16–JAN–10 02:34	100115–2
	Uranium	0.066	+/–.2	U	0.066	0.2	SOL	MS	16–JAN–10 02:34	100115–2
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	20–JAN–10 17:20	012010–1
	Antimony	3.3	+/–10	U	3.3	10.0	SOL	P	20–JAN–10 17:20	012010–1

Metals
–3a–
Initial and Continuing Calibration Blank Summary

SDG No.: 10–1130

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	20–JAN–10 17:20	012010–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	20–JAN–10 17:20	012010–1
	Calcium	80.0	+/–250	U	80.0	250	SOL	P	20–JAN–10 17:20	012010–1
	Chromium	1.5	+/–5	U	1.5	5.0	SOL	P	20–JAN–10 17:20	012010–1
	Cobalt	1.5	+/–5	U	1.5	5.0	SOL	P	20–JAN–10 17:20	012010–1
	Copper	3.0	+/–10	U	3.0	10.0	SOL	P	20–JAN–10 17:20	012010–1
	Iron	80.0	+/–250	U	80.0	250	SOL	P	20–JAN–10 17:20	012010–1
	Lead	–2.67	+/–10	J	2.5	10.0	SOL	P	20–JAN–10 17:20	012010–1
	Magnesium	–150.33	+/–300	J	85.0	300	SOL	P	20–JAN–10 17:20	012010–1
	Manganese	2.0	+/–10	U	2.0	10.0	SOL	P	20–JAN–10 17:20	012010–1
	Potassium	64.38	+/–250	J	64.0	250	SOL	P	20–JAN–10 17:20	012010–1
	Silver	1.0	+/–5	U	1.0	5.0	SOL	P	20–JAN–10 17:20	012010–1
	Sodium	70.0	+/–250	U	70.0	250	SOL	P	20–JAN–10 17:20	012010–1
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	20–JAN–10 17:20	012010–1
	Zinc	3.3	+/–10	U	3.3	10.0	SOL	P	20–JAN–10 17:20	012010–1
	Mercury	0.068	+/–.2	U	0.068	0.2	SOL	AV	21–JAN–10 10:49	012110S1–4
CCB07										
	Nickel	0.5	+/–2	U	0.5	2.0	SOL	MS	16–JAN–10 03:04	100115–2
	Selenium	2.5	+/–5	U	2.5	5.0	SOL	MS	16–JAN–10 03:04	100115–2
	Thallium	0.3	+/–1	U	0.3	1.0	SOL	MS	16–JAN–10 03:04	100115–2
	Uranium	0.066	+/–.2	U	0.066	0.2	SOL	MS	16–JAN–10 03:04	100115–2
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	20–JAN–10 18:09	012010–1
	Antimony	3.3	+/–10	U	3.3	10.0	SOL	P	20–JAN–10 18:09	012010–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	20–JAN–10 18:09	012010–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	20–JAN–10 18:09	012010–1
	Calcium	80.0	+/–250	U	80.0	250	SOL	P	20–JAN–10 18:09	012010–1
	Chromium	1.5	+/–5	U	1.5	5.0	SOL	P	20–JAN–10 18:09	012010–1
	Cobalt	1.5	+/–5	U	1.5	5.0	SOL	P	20–JAN–10 18:09	012010–1
	Copper	3.0	+/–10	U	3.0	10.0	SOL	P	20–JAN–10 18:09	012010–1
	Iron	80.0	+/–250	U	80.0	250	SOL	P	20–JAN–10 18:09	012010–1
	Lead	–2.98	+/–10	J	2.5	10.0	SOL	P	20–JAN–10 18:09	012010–1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 10-1130

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Magnesium	-125.28	+/-300	J	85.0	300	SOL	P	20-JAN-10 18:09	012010-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	20-JAN-10 18:09	012010-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	20-JAN-10 18:09	012010-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	20-JAN-10 18:09	012010-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	20-JAN-10 18:09	012010-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	20-JAN-10 18:09	012010-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	20-JAN-10 18:09	012010-1
	Mercury	0.068	+/-.2	U	0.068	0.2	SOL	AV	21-JAN-10 11:09	012110S1-4
CCB08										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	20-JAN-10 19:24	012010-1
	Antimony	4.3	+/-10	J	3.3	10.0	SOL	P	20-JAN-10 19:24	012010-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	20-JAN-10 19:24	012010-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	20-JAN-10 19:24	012010-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	20-JAN-10 19:24	012010-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	20-JAN-10 19:24	012010-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	20-JAN-10 19:24	012010-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	20-JAN-10 19:24	012010-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	20-JAN-10 19:24	012010-1
	Lead	-2.75	+/-10	J	2.5	10.0	SOL	P	20-JAN-10 19:24	012010-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	20-JAN-10 19:24	012010-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	20-JAN-10 19:24	012010-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	20-JAN-10 19:24	012010-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	20-JAN-10 19:24	012010-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	20-JAN-10 19:24	012010-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	20-JAN-10 19:24	012010-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	20-JAN-10 19:24	012010-1
	Mercury	0.068	+/-.2	U	0.068	0.2	SOL	AV	21-JAN-10 11:30	012110S1-4
CCB09										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	20-JAN-10 20:39	012010-1
	Antimony	4.21	+/-10	J	3.3	10.0	SOL	P	20-JAN-10 20:39	012010-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	20-JAN-10 20:39	012010-1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 10–1130

Contract: LANL01004 **Lab Code: GEL**

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	20–JAN–10 20:39	012010–1
	Calcium	80.0	+/–250	U	80.0	250	SOL	P	20–JAN–10 20:39	012010–1
	Chromium	1.5	+/–5	U	1.5	5.0	SOL	P	20–JAN–10 20:39	012010–1
	Cobalt	1.5	+/–5	U	1.5	5.0	SOL	P	20–JAN–10 20:39	012010–1
	Copper	3.0	+/–10	U	3.0	10.0	SOL	P	20–JAN–10 20:39	012010–1
	Iron	80.0	+/–250	U	80.0	250	SOL	P	20–JAN–10 20:39	012010–1
	Lead	–3.24	+/–10	J	2.5	10.0	SOL	P	20–JAN–10 20:39	012010–1
	Magnesium	85.0	+/–300	U	85.0	300	SOL	P	20–JAN–10 20:39	012010–1
	Manganese	2.0	+/–10	U	2.0	10.0	SOL	P	20–JAN–10 20:39	012010–1
	Potassium	170.17	+/–250	J	64.0	250	SOL	P	20–JAN–10 20:39	012010–1
	Silver	1.0	+/–5	U	1.0	5.0	SOL	P	20–JAN–10 20:39	012010–1
	Sodium	70.0	+/–250	U	70.0	250	SOL	P	20–JAN–10 20:39	012010–1
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	20–JAN–10 20:39	012010–1
	Zinc	3.3	+/–10	U	3.3	10.0	SOL	P	20–JAN–10 20:39	012010–1
	Mercury	0.068	+/–.2	U	0.068	0.2	SOL	AV	21–JAN–10 11:50	012110S1–4
CCB10										
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	20–JAN–10 21:49	012010–1
	Antimony	5.77	+/–10	J	3.3	10.0	SOL	P	20–JAN–10 21:49	012010–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	20–JAN–10 21:49	012010–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	20–JAN–10 21:49	012010–1
	Calcium	80.0	+/–250	U	80.0	250	SOL	P	20–JAN–10 21:49	012010–1
	Chromium	1.5	+/–5	U	1.5	5.0	SOL	P	20–JAN–10 21:49	012010–1
	Cobalt	1.5	+/–5	U	1.5	5.0	SOL	P	20–JAN–10 21:49	012010–1
	Copper	3.0	+/–10	U	3.0	10.0	SOL	P	20–JAN–10 21:49	012010–1
	Iron	80.0	+/–250	U	80.0	250	SOL	P	20–JAN–10 21:49	012010–1
	Lead	–2.58	+/–10	J	2.5	10.0	SOL	P	20–JAN–10 21:49	012010–1
	Magnesium	–120.19	+/–300	J	85.0	300	SOL	P	20–JAN–10 21:49	012010–1
	Manganese	2.0	+/–10	U	2.0	10.0	SOL	P	20–JAN–10 21:49	012010–1
	Potassium	64.0	+/–250	U	64.0	250	SOL	P	20–JAN–10 21:49	012010–1
	Silver	1.0	+/–5	U	1.0	5.0	SOL	P	20–JAN–10 21:49	012010–1
	Sodium	70.0	+/–250	U	70.0	250	SOL	P	20–JAN–10 21:49	012010–1

Metals
–3a–
Initial and Continuing Calibration Blank Summary

SDG No.: 10–1130

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	20–JAN–10 21:49	012010–1
	Zinc	3.3	+/–10	U	3.3	10.0	SOL	P	20–JAN–10 21:49	012010–1
	Mercury	0.068	+/–.2	U	0.068	0.2	SOL	AV	21–JAN–10 12:10	012110S1–4
CCB11										
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	20–JAN–10 23:06	012010–1
	Antimony	3.3	+/–10	U	3.3	10.0	SOL	P	20–JAN–10 23:06	012010–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	20–JAN–10 23:06	012010–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	20–JAN–10 23:06	012010–1
	Calcium	80.0	+/–250	U	80.0	250	SOL	P	20–JAN–10 23:06	012010–1
	Chromium	1.5	+/–5	U	1.5	5.0	SOL	P	20–JAN–10 23:06	012010–1
	Cobalt	1.5	+/–5	U	1.5	5.0	SOL	P	20–JAN–10 23:06	012010–1
	Copper	3.0	+/–10	U	3.0	10.0	SOL	P	20–JAN–10 23:06	012010–1
	Iron	80.0	+/–250	U	80.0	250	SOL	P	20–JAN–10 23:06	012010–1
	Lead	2.5	+/–10	U	2.5	10.0	SOL	P	20–JAN–10 23:06	012010–1
	Magnesium	–117.78	+/–300	J	85.0	300	SOL	P	20–JAN–10 23:06	012010–1
	Manganese	2.0	+/–10	U	2.0	10.0	SOL	P	20–JAN–10 23:06	012010–1
	Potassium	64.0	+/–250	U	64.0	250	SOL	P	20–JAN–10 23:06	012010–1
	Silver	1.0	+/–5	U	1.0	5.0	SOL	P	20–JAN–10 23:06	012010–1
	Sodium	70.0	+/–250	U	70.0	250	SOL	P	20–JAN–10 23:06	012010–1
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	20–JAN–10 23:06	012010–1
	Zinc	3.3	+/–10	U	3.3	10.0	SOL	P	20–JAN–10 23:06	012010–1
CCB12										
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	21–JAN–10 00:23	012010–1
	Antimony	5.59	+/–10	J	3.3	10.0	SOL	P	21–JAN–10 00:23	012010–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	21–JAN–10 00:23	012010–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	21–JAN–10 00:23	012010–1
	Calcium	80.0	+/–250	U	80.0	250	SOL	P	21–JAN–10 00:23	012010–1
	Chromium	1.5	+/–5	U	1.5	5.0	SOL	P	21–JAN–10 00:23	012010–1
	Cobalt	1.5	+/–5	U	1.5	5.0	SOL	P	21–JAN–10 00:23	012010–1
	Copper	3.0	+/–10	U	3.0	10.0	SOL	P	21–JAN–10 00:23	012010–1
	Iron	80.0	+/–250	U	80.0	250	SOL	P	21–JAN–10 00:23	012010–1

Metals
–3a–
Initial and Continuing Calibration Blank Summary

SDG No.: 10–1130

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Lead	–3.45	+/–10	J	2.5	10.0	SOL	P	21–JAN–10 00:23	012010–1
	Magnesium	85.0	+/–300	U	85.0	300	SOL	P	21–JAN–10 00:23	012010–1
	Manganese	2.0	+/–10	U	2.0	10.0	SOL	P	21–JAN–10 00:23	012010–1
	Potassium	64.0	+/–250	U	64.0	250	SOL	P	21–JAN–10 00:23	012010–1
	Silver	1.0	+/–5	U	1.0	5.0	SOL	P	21–JAN–10 00:23	012010–1
	Sodium	70.0	+/–250	U	70.0	250	SOL	P	21–JAN–10 00:23	012010–1
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	21–JAN–10 00:23	012010–1
	Zinc	3.3	+/–10	U	3.3	10.0	SOL	P	21–JAN–10 00:23	012010–1
CCB13										
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	21–JAN–10 01:34	012010–1
	Antimony	3.3	+/–10	U	3.3	10.0	SOL	P	21–JAN–10 01:34	012010–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	21–JAN–10 01:34	012010–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	21–JAN–10 01:34	012010–1
	Calcium	80.0	+/–250	U	80.0	250	SOL	P	21–JAN–10 01:34	012010–1
	Chromium	1.5	+/–5	U	1.5	5.0	SOL	P	21–JAN–10 01:34	012010–1
	Cobalt	1.5	+/–5	U	1.5	5.0	SOL	P	21–JAN–10 01:34	012010–1
	Copper	3.0	+/–10	U	3.0	10.0	SOL	P	21–JAN–10 01:34	012010–1
	Iron	80.0	+/–250	U	80.0	250	SOL	P	21–JAN–10 01:34	012010–1
	Lead	–4.03	+/–10	J	2.5	10.0	SOL	P	21–JAN–10 01:34	012010–1
	Magnesium	85.0	+/–300	U	85.0	300	SOL	P	21–JAN–10 01:34	012010–1
	Manganese	2.0	+/–10	U	2.0	10.0	SOL	P	21–JAN–10 01:34	012010–1
	Potassium	64.0	+/–250	U	64.0	250	SOL	P	21–JAN–10 01:34	012010–1
	Silver	1.0	+/–5	U	1.0	5.0	SOL	P	21–JAN–10 01:34	012010–1
	Sodium	70.0	+/–250	U	70.0	250	SOL	P	21–JAN–10 01:34	012010–1
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	21–JAN–10 01:34	012010–1
	Zinc	3.3	+/–10	U	3.3	10.0	SOL	P	21–JAN–10 01:34	012010–1

METALS
–3b–
PREPARATION BLANK SUMMARY

SDG NO. 10–1130

Contract: LANL01004

Matrix: SOIL

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M	MDL	RDL
1202011760								
	Arsenic	0.191	mg/kg	+/–0.954	U	MS	0.191	0.954
	Beryllium	0.0191	mg/kg	+/–0.0954	U	MS	0.0191	0.0954
	Nickel	0.0954	mg/kg	+/–0.382	U	MS	0.0954	0.382
	Selenium	0.477	mg/kg	+/–0.954	U	MS	0.477	0.954
	Thallium	0.0573	mg/kg	+/–0.191	U	MS	0.0573	0.191
	Uranium	0.0126	mg/kg	+/–0.0382	U	MS	0.0126	0.0382
1202011921								
	Aluminum	6720	ug/Kg	+/–19800	U	P	6720	19800
	Antimony	326	ug/Kg	+/–988	U	P	326	988
	Barium	98.8	ug/Kg	+/–494	U	P	98.8	494
	Cadmium	98.8	ug/Kg	+/–494	U	P	98.8	494
	Calcium	7910	ug/Kg	+/–24700	U	P	7910	24700
	Chromium	148	ug/Kg	+/–494	U	P	148	494
	Cobalt	148	ug/Kg	+/–494	U	P	148	494
	Copper	296	ug/Kg	+/–988	U	P	296	988
	Iron	8000	ug/Kg	+/–24700	J	P	7910	24700
	Lead	247	ug/Kg	+/–988	U	P	247	988
	Magnesium	8400	ug/Kg	+/–29600	U	P	8400	29600
	Manganese	198	ug/Kg	+/–988	U	P	198	988
	Potassium	6320	ug/Kg	+/–24700	U	P	6320	24700
	Silver	98.8	ug/Kg	+/–494	U	P	98.8	494
	Sodium	6920	ug/Kg	+/–24700	U	P	6920	24700
	Vanadium	98.8	ug/Kg	+/–494	U	P	98.8	494
	Zinc	326	ug/Kg	+/–988	U	P	326	988
1202019573								
	Mercury	3.53	ug/kg	+/–10.4	U	AV	3.53	10.4

METALS
-4-
Interference Check Sample

SDG No: 10-1130

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Aluminum	524000	ug/L	500000	ug/L	105	80.0 – 120.0	20-JAN-10 11:37	012010-1
	Antimony	5.0	ug/L					20-JAN-10 11:37	012010-1
	Barium	0.623	ug/L					20-JAN-10 11:37	012010-1
	Cadmium	-1.1	ug/L					20-JAN-10 11:37	012010-1
	Calcium	489000	ug/L	500000	ug/L	97.9	80.0 – 120.0	20-JAN-10 11:37	012010-1
	Chromium	1.42	ug/L					20-JAN-10 11:37	012010-1
	Cobalt	-1.72	ug/L					20-JAN-10 11:37	012010-1
	Copper	2.12	ug/L					20-JAN-10 11:37	012010-1
	Iron	189000	ug/L	200000	ug/L	94.7	80.0 – 120.0	20-JAN-10 11:37	012010-1
	Lead	-8.71	ug/L					20-JAN-10 11:37	012010-1
	Magnesium	494000	ug/L	500000	ug/L	98.9	80.0 – 120.0	20-JAN-10 11:37	012010-1
	Manganese	-2.45	ug/L					20-JAN-10 11:37	012010-1
	Potassium	-172.0	ug/L					20-JAN-10 11:37	012010-1
	Silver	-0.368	ug/L					20-JAN-10 11:37	012010-1
	Sodium	34.1	ug/L					20-JAN-10 11:37	012010-1
	Vanadium	-1.7	ug/L					20-JAN-10 11:37	012010-1
	Zinc	8.29	ug/L					20-JAN-10 11:37	012010-1
ICSAB01									
	Aluminum	533000	ug/L	500000	ug/L	107	80.0 – 120.0	20-JAN-10 11:43	012010-1
	Antimony	556	ug/L	500	ug/L	111	80.0 – 120.0	20-JAN-10 11:43	012010-1
	Barium	506	ug/L	500	ug/L	101	80.0 – 120.0	20-JAN-10 11:43	012010-1
	Cadmium	483	ug/L	500	ug/L	96.6	80.0 – 120.0	20-JAN-10 11:43	012010-1
	Calcium	497000	ug/L	500000	ug/L	99.5	80.0 – 120.0	20-JAN-10 11:43	012010-1
	Chromium	495	ug/L	500	ug/L	98.9	80.0 – 120.0	20-JAN-10 11:43	012010-1
	Cobalt	453	ug/L	500	ug/L	90.5	80.0 – 120.0	20-JAN-10 11:43	012010-1
	Copper	570	ug/L	500	ug/L	114	80.0 – 120.0	20-JAN-10 11:43	012010-1
	Iron	193000	ug/L	200000	ug/L	96.6	80.0 – 120.0	20-JAN-10 11:43	012010-1
	Lead	466	ug/L	500	ug/L	93.2	80.0 – 120.0	20-JAN-10 11:43	012010-1
	Magnesium	501000	ug/L	500000	ug/L	100	80.0 – 120.0	20-JAN-10 11:43	012010-1

METALS
–4–
Interference Check Sample

SDG No: 10–1130

Contract: LANL01004 **Lab Code:** GEL

ICS:

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
	Manganese	491	ug/L	500	ug/L	98.2	80.0 – 120.0	20–JAN–10 11:43	012010–1
	Potassium	5420	ug/L	5000	ug/L	108	80.0 – 120.0	20–JAN–10 11:43	012010–1
	Silver	280	ug/L	250	ug/L	112	80.0 – 120.0	20–JAN–10 11:43	012010–1
	Sodium	5680	ug/L	5000	ug/L	114	80.0 – 120.0	20–JAN–10 11:43	012010–1
	Vanadium	520	ug/L	500	ug/L	104	80.0 – 120.0	20–JAN–10 11:43	012010–1
	Zinc	513	ug/L	500	ug/L	103	80.0 – 120.0	20–JAN–10 11:43	012010–1

METALS
–4–
Interference Check Sample

SDG No: 10–1130

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Nickel	2.74	ug/L					16–JAN–10 00:37	100115–2
	Selenium	–0.62	ug/L					16–JAN–10 00:37	100115–2
	Thallium	0.036	ug/L					16–JAN–10 00:37	100115–2
	Uranium	–0.028	ug/L					16–JAN–10 00:37	100115–2
ICSAB01									
	Nickel	21.9	ug/L	22.7	ug/L	96.2	80.0 – 120.0	16–JAN–10 00:40	100115–2
	Selenium	19.6	ug/L	20	ug/L	98.1	80.0 – 120.0	16–JAN–10 00:40	100115–2
	Thallium	19.0	ug/L	20	ug/L	94.7	80.0 – 120.0	16–JAN–10 00:40	100115–2
	Uranium	22.0	ug/L	20	ug/L	110	80.0 – 120.0	16–JAN–10 00:40	100115–2

METALS
–4–
Interference Check Sample

SDG No: 10–1130

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS5

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Arsenic	–0.03	ug/L					19–JAN–10 18:20	100119–3
	Beryllium	0.086	ug/L					19–JAN–10 18:20	100119–3
ICSAB01									
	Arsenic	19.8	ug/L	20	ug/L	98.9	80.0 – 120.0	19–JAN–10 18:24	100119–3
	Beryllium	20.5	ug/L	20	ug/L	102	80.0 – 120.0	19–JAN–10 18:24	100119–3

METALS
-5a-

Matrix Spike Summary

SDG NO. 10-1130 **Client ID:** RE12-10-7647S

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 83

Sample ID: 244128006 **Spike ID:** 1202011763

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	mg/kg	75-125	11.6		2.17		9.55	98.8		MS
Beryllium	mg/kg	75-125	7.77		1.22		5.97	110		MS
Nickel	mg/kg	75-125	14.1		9.34		5.97	79.9		MS
Selenium	mg/kg	75-125	1.52		0.594	U	2.39	63.7	N	MS
Thallium	mg/kg	75-125	11.9		0.264		11.9	97.1		MS
Uranium	mg/kg	75-125	10.9		3.58		5.97	123		MS

METALS
–5a–

Matrix Spike Duplicate Summary

SDG NO. 10–1130 **Client ID** RE12–10–7647SD

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 83

Sample ID: 244128006 **Spike ID:** 1202011771

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	mg/kg	75–125	11.3		2.17		9.25	98.6		MS
Beryllium	mg/kg	75–125	7.89		1.22		5.78	115		MS
Nickel	mg/kg	75–125	14.7		9.34		5.78	92.4		MS
Selenium	mg/kg	75–125	1.38		0.594	U	2.31	59.5	N	MS
Thallium	mg/kg	75–125	11.7		0.264		11.6	98.8		MS
Uranium	mg/kg	75–125	10.5		3.58		5.78	119		MS

METALS
-5a-

Matrix Spike Summary

SDG NO. 10-1130 **Client ID** RE16-10-2782S

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 87

Sample ID: 244222001 **Spike ID:** 1202011924

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Calcium	ug/Kg	75-125	2560000		2110000		567000	79.1		P
Chromium	ug/Kg	75-125	65900		7840		56700	102		P
Cobalt	ug/Kg	75-125	58500		2980		56700	97.8		P
Copper	ug/Kg	75-125	84600		27800		56700	100		P
Iron	ug/Kg		11200000		11300000		567000	-24.6	N/A	P
Lead	ug/Kg	75-125	75900		21800		56700	95.4		P
Magnesium	ug/Kg	75-125	2210000		1480000		567000	130	N	P
Manganese	ug/Kg	75-125	242000		214000		56700	49.7	N	P
Potassium	ug/Kg	75-125	1650000		1010000		567000	113		P
Silver	ug/Kg	75-125	59600		327	J	56700	104		P
Sodium	ug/Kg	75-125	726000		74800		567000	115		P
Vanadium	ug/Kg	75-125	79100		19600		56700	105		P
Zinc	ug/Kg	75-125	104000		52800		56700	89.9		P
Aluminum	ug/Kg		8450000		5820000		567000	465	N/A	P
Antimony	ug/Kg	75-125	56900		448	J	56700	99.5		P
Barium	ug/Kg	75-125	215000		166000		56700	87.4		P
Cadmium	ug/Kg	75-125	56700		112	U	56700	99.7		P

METALS
–5a–

Matrix Spike Duplicate Summary

SDG NO. 10–1130 **Client ID** RE16–10–2782SD

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 87

Sample ID: 244222001 **Spike ID:** 1202011932

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/Kg		10300000		5820000		551000	808	N/A	P
Antimony	ug/Kg	75–125	52700		448	J	55100	94.8		P
Barium	ug/Kg	75–125	275000		166000		55100	199	N	P
Cadmium	ug/Kg	75–125	54300		112	U	55100	98.4		P
Calcium	ug/Kg	75–125	3030000		2110000		551000	167	N	P
Chromium	ug/Kg	75–125	65400		7840		55100	104		P
Cobalt	ug/Kg	75–125	56600		2980		55100	97.4		P
Copper	ug/Kg	75–125	86400		27800		55100	106		P
Iron	ug/Kg		13000000		11300000		551000	299	N/A	P
Lead	ug/Kg	75–125	78800		21800		55100	103		P
Magnesium	ug/Kg	75–125	2580000		1480000		551000	199	N	P
Manganese	ug/Kg	75–125	281000		214000		55100	121		P
Potassium	ug/Kg	75–125	1860000		1010000		551000	154	N	P
Silver	ug/Kg	75–125	57200		327	J	55100	103		P
Sodium	ug/Kg	75–125	684000		74800		551000	110		P
Vanadium	ug/Kg	75–125	79300		19600		55100	108		P
Zinc	ug/Kg	75–125	119000		52800		55100	120		P

METALS
-5a-

Matrix Spike Summary

SDG NO. 10-1130 **Client ID** RE16-10-2926S

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 83

Sample ID: 244619001 **Spike ID:** 1202019576

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/kg	75-125	160		8.39	J	130	116		AV

METALS
-5a-
Matrix Spike Duplicate Summary

SDG NO. 10-1130 **Client ID** RE16-10-2926SD

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 83

Sample ID: 244619001 **Spike ID:** 1202019580

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/kg	75-125	159		8.39	J	127	118		AV

Metals
–6–
Duplicate Sample Summary

SDG No.: 10–1130

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** RE12–10–7647D

Sample ID: 244128006 **Duplicate ID:** 1202011762 **Percent Solids for Dup:** 83

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	mg/kg	+/–1.17	2.17		2.24		3.31		MS
Beryllium	mg/kg	+/–20%	1.22		1.26		3.01		MS
Nickel	mg/kg	+/–20%	9.34		8.17		13.3		MS
Selenium	mg/kg		0.594	U	0.587	U			MS
Thallium	mg/kg	+/–.235	0.264		0.245		7.58		MS
Uranium	mg/kg	+/–20%	3.58		3.75		4.66		MS

Metals
-6-
Duplicate Sample Summary

SDG No.: 10-1130

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** RE12-10-7647SD

Sample ID: 1202011763 **Duplicate ID:** 1202011771 **Percent Solids for Dup:** 83

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	mg/kg	+/-20	11.6		11.3		2.69		MS
Beryllium	mg/kg	+/-20	7.77		7.89		1.58		MS
Nickel	mg/kg	+/-20	14.1		14.7		4.01		MS
Selenium	mg/kg	+/-20	1.52		1.38		10		MS
Thallium	mg/kg	+/-20	11.9		11.7		1.33		MS
Uranium	mg/kg	+/-20	10.9		10.5		4.44		MS

Metals
–6–
Duplicate Sample Summary

SDG No.: 10–1130

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** RE16–10–2782D

Sample ID: 244222001 **Duplicate ID:** 1202011923 **Percent Solids for Dup:** 87

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/Kg	+/–20%	5820000		5980000		2.78		P
Antimony	ug/Kg		448	J	368	U	200		P
Barium	ug/Kg	+/–20%	166000		181000		9.01		P
Cadmium	ug/Kg		112	U	112	U			P
Calcium	ug/Kg	+/–20%	2110000		2340000		10.2		P
Chromium	ug/Kg	+/–20%	7840		7470		4.83		P
Cobalt	ug/Kg	+/–20%	2980		3300		10.3		P
Copper	ug/Kg	+/–20%	27800		23600		16.4		P
Iron	ug/Kg	+/–20%	11300000		12100000		6.57		P
Lead	ug/Kg	+/–20%	21800		19500		11.1		P
Magnesium	ug/Kg	+/–20%	1480000		1920000		26	*	P
Manganese	ug/Kg	+/–20%	214000		224000		4.65		P
Potassium	ug/Kg	+/–20%	1010000		1510000		39.5	*	P
Silver	ug/Kg	+/–558	327	J	517	J	44.8		P
Sodium	ug/Kg	+/–27900	74800		75800		1.28		P
Vanadium	ug/Kg	+/–20%	19600		22300		13.1		P
Zinc	ug/Kg	+/–20%	52800		51600		2.23		P

Metals
–6–
Duplicate Sample Summary

SDG No.: 10–1130

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** RE16–10–2782SD

Sample ID: 1202011924 **Duplicate ID:** 1202011932 **Percent Solids for Dup:** 87

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/Kg	+/–20	8450000		10300000		19.4		P
Antimony	ug/Kg	+/–20	56900		52700		7.67		P
Barium	ug/Kg	+/–20	215000		275000		24.5	*	P
Cadmium	ug/Kg	+/–20	56700		54300		4.23		P
Calcium	ug/Kg	+/–20	2560000		3030000		16.8		P
Chromium	ug/Kg	+/–20	65900		65400		.783		P
Cobalt	ug/Kg	+/–20	58500		56600		3.21		P
Copper	ug/Kg	+/–20	84600		86400		2.12		P
Iron	ug/Kg	+/–20	11200000		13000000		14.8		P
Lead	ug/Kg	+/–20	75900		78800		3.69		P
Magnesium	ug/Kg	+/–20	2210000		2580000		15.1		P
Manganese	ug/Kg	+/–20	242000		281000		14.8		P
Potassium	ug/Kg	+/–20	1650000		1860000		11.9		P
Silver	ug/Kg	+/–20	59600		57200		4.22		P
Sodium	ug/Kg	+/–20	726000		684000		5.93		P
Vanadium	ug/Kg	+/–20	79100		79300		.245		P
Zinc	ug/Kg	+/–20	104000		119000		13.4		P

Metals
-6-
Duplicate Sample Summary

SDG No.: 10-1130

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** RE16-10-2926D

Sample ID: 244619001 **Duplicate ID:** 1202019575 **Percent Solids for Dup:** 83

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/kg	+/-12	8.39	J	8.86	J	5.36		AV

Metals
–6–
Duplicate Sample Summary

SDG No.: 10–1130

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** RE16–10–2926SD

Sample ID: 1202019576 **Duplicate ID:** 1202019580 **Percent Solids for Dup:** 83

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/kg	+/–20	160		159		.479		AV

METALS
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Laboratory Control Sample Summary

SDG NO. 10-1130

Contract: LANL01004

Aqueous LCS Source:

Solid LCS Source: ERA

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1202011761								
	Arsenic	mg/kg	104	120		116	83-120	MS
	Beryllium	mg/kg	77.6	94.6		122	81.2-126.8	MS
	Nickel	mg/kg	134	148		110	83.3-121.4	MS
	Selenium	mg/kg	286	311		109	80.2-125.9	MS
	Thallium	mg/kg	121	136		112	78-123.2	MS
	Uranium	mg/kg	2.13	1.98		93.2	61.9-130.7	MS

METALS
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Laboratory Control Sample Summary

SDG NO. 10-1130

Contract: LANL01004

Aqueous LCS Source: **Solid LCS Source:** ERA

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1202011922								
	Aluminum	ug/Kg	10500000	9600000		91.4	56-144	P
	Antimony	ug/Kg	173000	159000		92.1	71-130	P
	Barium	ug/Kg	198000	197000		99.4	80-120	P
	Cadmium	ug/Kg	60700	55800		92	81-120	P
	Calcium	ug/Kg	9870000	9680000		98.1	83-117	P
	Chromium	ug/Kg	236000	229000		97.2	80-120	P
	Cobalt	ug/Kg	91200	87900		96.4	81-120	P
	Copper	ug/Kg	174000	185000		106	81-118	P
	Iron	ug/Kg	18000000	19000000		106	51-149	P
	Lead	ug/Kg	86000	78000		90.7	79-121	P
	Magnesium	ug/Kg	4000000	3810000		95.2	79-122	P
	Manganese	ug/Kg	558000	527000		94.5	81-119	P
	Potassium	ug/Kg	4300000	4140000		96.3	74-127	P
	Silver	ug/Kg	30100	30500		101	66-134	P
	Sodium	ug/Kg	1020000	979000		96	74-127	P
	Vanadium	ug/Kg	115000	122000		106	79-121	P
	Zinc	ug/Kg	594000	562000		94.6	80-121	P

METALS
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Laboratory Control Sample Summary

SDG NO. 10-1130

Contract: LANL01004

Aqueous LCS Source: **Solid LCS Source:** ERA

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1202019574								
	Mercury	ug/kg	5150	5660		110	71.6-128.3	AV

METALS
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Serial Dilution Sample Summary

SDG NO. 10–1130 **Client ID** RE12–10–7647L

Contract: LANL01004

Matrix: SOLID **Level:** Low

Sample ID: 244128006 **Serial Dilution ID:** 1202011764

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Arsenic	9.12		9.15	J	.329			MS
Beryllium	5.13		5.5		7.21			MS
Nickel	39.3		43.1		9.67			MS
Selenium	2.5	U	12.5	U				MS
Thallium	1.11		1.77	J	59.5			MS
Uranium	15.1		14.8		1.99		10	MS

METALS
–9–
Serial Dilution Sample Summary

SDG NO. 10–1130 **Client ID** RE16–10–2782L

Contract: LANL01004

Matrix: SOLID **Level:** Low

Sample ID: 244222001 **Serial Dilution ID:** 1202011925

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Aluminum	52200		50500		3.26		10	P
Antimony	4.02	J	16.5	U	100			P
Barium	1480		1550		4.39		10	P
Cadmium	1	U	5	U				P
Calcium	18900		18800		.794		10	P
Chromium	70.3		71.5		1.71			P
Cobalt	26.7		28.2		5.43			P
Copper	250		244		2.4		10	P
Iron	102000		107000		4.41		10	P
Lead	195		194		.513		10	P
Magnesium	13300		13000		2.26		10	P
Manganese	1920		2010		4.69		10	P
Potassium	9070		8900		1.87		10	P
Silver	2.94	J	5	U	100			P
Sodium	671		910	J	35.6			P
Vanadium	175		177		1.14		10	P
Zinc	473		479		1.27		10	P

METALS
–9–
Serial Dilution Sample Summary

SDG NO. 10–1130 **Client ID:** RE16–10–2926L

Contract: LANL01004

Matrix: SOLID **Level:** Low

Sample ID: 244619001 **Serial Dilution ID:** 1202019579

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Mercury	.137	J	.34	U	100			AV

METALS
–13–
SAMPLE PREPARATION SUMMARY

SDG No: 10–1130 **Method Type:** P

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number 940186							
1202011921	MB for batch 940186	MB	S	11–JAN–10	.506g	50mL	
1202011922	LCS for batch 940186	LCS	S	11–JAN–10	.504g	50mL	
1202011924	RE16–10–2782S	MS	S	11–JAN–10	.504g	50mL	
1202011932	RE16–10–2782SD	MSD	S	11–JAN–10	.519g	50mL	
1202011923	RE16–10–2782D	DUP	S	11–JAN–10	.513g	50mL	
244125001	RE12–10–7698	SAMPLE	S	11–JAN–10	.5g	50mL	
244125002	RE12–10–7697	SAMPLE	S	11–JAN–10	.511g	50mL	
244125003	RE12–10–7704	SAMPLE	S	11–JAN–10	.503g	50mL	
244125004	RE12–10–7703	SAMPLE	S	11–JAN–10	.52g	50mL	

METALS
–13–
SAMPLE PREPARATION SUMMARY

SDG No: 10–1130 **Method Type:** MS

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number 940101							
1202011760	MB for batch 940101	MB	S	11–JAN–10	.524g	50mL	
1202011761	LCS for batch 940101	LCS	S	11–JAN–10	.522g	50mL	
1202011763	RE12–10–7647S	MS	S	11–JAN–10	.506g	50mL	
1202011771	RE12–10–7647SD	MSD	S	11–JAN–10	.522g	50mL	
1202011762	RE12–10–7647D	DUP	S	11–JAN–10	.514g	50mL	
244125001	RE12–10–7698	SAMPLE	S	11–JAN–10	.504g	50mL	
244125002	RE12–10–7697	SAMPLE	S	11–JAN–10	.505g	50mL	
244125003	RE12–10–7704	SAMPLE	S	11–JAN–10	.514g	50mL	
244125004	RE12–10–7703	SAMPLE	S	11–JAN–10	.525g	50mL	

METALS
–13–
SAMPLE PREPARATION SUMMARY

SDG No: 10–1130 **Method Type:** AV

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	943235						
1202019573	MB for batch 943235	MB	S	20–JAN–10	.578g	30mL	
1202019574	LCS for batch 943235	LCS	S	20–JAN–10	.205g	30mL	
1202019576	RE16–10–2926S	MS	S	20–JAN–10	.556g	30mL	
1202019580	RE16–10–2926SD	MSD	S	20–JAN–10	.568g	30mL	
1202019575	RE16–10–2926D	DUP	S	20–JAN–10	.6g	30mL	
244125001	RE12–10–7698	SAMPLE	S	20–JAN–10	.53g	30mL	
244125002	RE12–10–7697	SAMPLE	S	20–JAN–10	.52g	30mL	
244125003	RE12–10–7704	SAMPLE	S	20–JAN–10	.575g	30mL	
244125004	RE12–10–7703	SAMPLE	S	20–JAN–10	.5g	30mL	

Metals
–14–
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: ICPMS5
Start Date: 19–JAN–10 **End Date:** 19–JAN–10

Client Sdg: 10–1130
Method MS
Data File: 100119–3

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	17:57			X		X																			
S10	1	18:01			X		X																			
S100	1	18:05			X		X																			
ICV01	1	18:09			X		X																			
ICB01	1	18:13			X		X																			
CRDL01	1	18:17			X		X																			
ICSA01	1	18:20			X		X																			
ICSAB01	1	18:24			X		X																			
CCV01	1	18:28			X		X																			
CCB01	1	18:32			X		X																			
LR01	1	18:36			X		X																			
CCV02	1	18:40			X		X																			
CCB02	1	18:44			X		X																			
1202011760	2	18:48			X		X																			
1202011761	40	18:51			X		X																			
244125001	2	18:55			X		X																			
244125002	2	18:59			X		X																			
CCV03	1	19:03			X		X																			
CCB03	1	19:07			X		X																			
244125003	2	19:11			X		X																			
244125004	2	19:15			X		X																			
ZZZZZZ	2	19:19																								
1202011762	2	19:23			X		X																			
1202011763	2	19:26			X		X																			
CCV04	1	19:30			X		X																			
CCB04	1	19:34			X		X																			
1202011771	2	19:38			X		X																			
1202011764	10	19:42			X		X																			
ZZZZZZ	2	19:46																								
ZZZZZZ	2	19:50																								
CCV05	1	19:54			X		X																			
CCB05	1	19:58			X		X																			

Metals
–14–
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: OPTIMA3
Start Date: 20–JAN–10 **End Date:** 21–JAN–10

Client Sdg: 10–1130
Method P
Data File: 012010–1

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	10:43	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
S0.1	1	10:50		X		X		X		X	X	X		X		X			X		X				X	X
S0.5	1	10:56	X	X		X		X	X	X	X	X		X	X	X			X		X				X	X
SCAL	1	11:03	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
S10	1	11:11	X						X				X		X							X				
ICV01	1	11:16	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ICB01	1	11:23	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
PQL01	1	11:30	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ICSA01	1	11:37	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ICSAB01	1	11:43	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
LR01	1	11:49	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
LR02	1	11:55	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	12:02																								
ZZZZZZ	1	12:09																								
CCV01	1	12:16	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB01	1	12:23	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
LR03	1	12:30	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCV02	1	12:37	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB02	1	12:44	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	12:55																								
ZZZZZZ	1	13:02																								
ZZZZZZ	1	13:09																								
ZZZZZZ	1	13:16																								
ZZZZZZ	1	13:23																								
ZZZZZZ	5	13:30																								
CCV03	1	13:37	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
PQL02	1	13:43	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB03	1	13:50	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	13:58																								
ZZZZZZ	1	14:05																								
ZZZZZZ	1	14:11																								
ZZZZZZ	1	14:18																								
ZZZZZZ	1	14:25																								
ZZZZZZ	5	14:32																								
ZZZZZZ	1	14:39																								
ZZZZZZ	1	14:46																								
ZZZZZZ	1	14:53																								
CCV04	1	15:08	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
PQL03	1	15:15	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB04	1	15:22	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X

Metals
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Analysis Run Log

Samp No.	D/F	Run Time																							
ZZZZZZ	1	15:29																							
ZZZZZZ	1	15:36																							
ZZZZZZ	1	15:43																							
ZZZZZZ	1	15:50																							
ZZZZZZ	1	15:56																							
ZZZZZZ	5	16:03																							
CCV05	1	16:10	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB05	1	16:18	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	16:25																							
ZZZZZZ	1	16:31																							
ZZZZZZ	1	16:38																							
ZZZZZZ	1	16:45																							
ZZZZZZ	1	16:52																							
ZZZZZZ	1	16:59																							
ZZZZZZ	5	17:06																							
CCV06	1	17:13	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB06	1	17:20	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	17:27																							
ZZZZZZ	1	17:34																							
ZZZZZZ	1	17:41																							
ZZZZZZ	1	17:48																							
ZZZZZZ	1	17:55																							
CCV07	1	18:02	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB07	1	18:09	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	18:16																							
ZZZZZZ	1	18:23																							
ZZZZZZ	1	18:30																							
ZZZZZZ	1	18:36																							
ZZZZZZ	1	18:43																							
ZZZZZZ	1	18:50																							
ZZZZZZ	1	18:57																							
ZZZZZZ	1	19:04																							
ZZZZZZ	1	19:11																							
CCV08	1	19:17	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB08	1	19:24	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	19:31																							
ZZZZZZ	1	19:38																							
ZZZZZZ	1	19:45																							
ZZZZZZ	1	19:52																							
CCV09	1	20:33	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X

Metals
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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
CCB09	1	20:39	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	20:46																								
ZZZZZZ	1	20:53																								
ZZZZZZ	1	21:00																								
ZZZZZZ	1	21:07																								
ZZZZZZ	1	21:14																								
ZZZZZZ	1	21:21																								
ZZZZZZ	5	21:28																								
ZZZZZZ	1	21:35																								
CCV10	1	21:42	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB10	1	21:49	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
1202011921	1	21:56	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
1202011922	1	22:03	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
244125001	1	22:09	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
244125002	1	22:16	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
244125003	1	22:24	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
244125004	1	22:31	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	22:38																								
ZZZZZZ	1	22:45																								
ZZZZZZ	1	22:52																								
CCV11	1	22:59	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB11	1	23:06	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	23:13																								
ZZZZZZ	1	23:20																								
ZZZZZZ	1	23:27																								
ZZZZZZ	1	23:34																								
ZZZZZZ	1	23:41																								
ZZZZZZ	1	23:48																								
ZZZZZZ	1	23:55																								
ZZZZZZ	1	00:02																								
ZZZZZZ	1	00:09																								
CCV12	1	00:16	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB12	1	00:23	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	00:30																								
1202011923	1	00:37	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
1202011924	1	00:45	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
1202011932	1	00:51	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
1202011925	5	00:58	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	01:05																								
ZZZZZZ	1	01:12																								

Metals
–14–
Analysis Run Log

Samp No.	D/F	Run Time																							
ZZZZZZ	1	01:19																							
CCV13	1	01:27	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB13	1	01:34	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X

Metals
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Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: HG3
Start Date: 21-JAN-10 **End Date:** 21-JAN-10

Client Sdg: 10-1130
Method AV
Data File: 012110S1-4

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	08:52															X									
S0.2	1	08:54															X									
S0.5	1	08:55															X									
S2.0	1	08:57															X									
S5.0	1	08:59															X									
S10.0	1	09:01															X									
ICV01	1	09:02															X									
ICB01	1	09:04															X									
CRDL01	1	09:06															X									
CCV01	1	09:07															X									
CCB01	1	09:09															X									
ZZZZZZ	1	09:11																								
ZZZZZZ	10	09:12																								
ZZZZZZ	1	09:14																								
ZZZZZZ	1	09:16																								
ZZZZZZ	1	09:17																								
ZZZZZZ	1	09:19																								
ZZZZZZ	5	09:21																								
ZZZZZZ	1	09:22																								
ZZZZZZ	1	09:24																								
ZZZZZZ	1	09:26																								
CCV02	1	09:27															X									
CCB02	1	09:29															X									
ZZZZZZ	1	09:31																								
ZZZZZZ	1	09:32																								
ZZZZZZ	1	09:34																								
ZZZZZZ	1	09:36																								
ZZZZZZ	1	09:37																								
ZZZZZZ	1	09:39																								
ZZZZZZ	1	09:41																								
ZZZZZZ	10	09:42																								
ZZZZZZ	1	09:44																								
ZZZZZZ	1	09:46																								
CCV03	1	09:47															X									
CCB03	1	09:49															X									
ZZZZZZ	1	09:51																								
ZZZZZZ	1	09:52																								
ZZZZZZ	5	09:54																								
ZZZZZZ	1	09:56																								
ZZZZZZ	1	09:57																								

Metals
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Analysis Run Log

Samp No.	D/F	Run Time																								
ZZZZZZ	1	09:59																								
ZZZZZZ	1	10:01																								
ZZZZZZ	1	10:02																								
ZZZZZZ	1	10:04																								
ZZZZZZ	1	10:06																								
CCV04	1	10:07														X										
CCB04	1	10:09														X										
ZZZZZZ	1	10:11																								
ZZZZZZ	1	10:12																								
ZZZZZZ	1	10:14																								
ZZZZZZ	1	10:16																								
ZZZZZZ	1	10:17																								
ZZZZZZ	1	10:19																								
ZZZZZZ	1	10:21																								
ZZZZZZ	1	10:22																								
ZZZZZZ	1	10:24																								
ZZZZZZ	1	10:26																								
CCV05	1	10:27														X										
CCB05	1	10:29														X										
ZZZZZZ	1	10:31																								
ZZZZZZ	1	10:32																								
ZZZZZZ	1	10:34																								
ZZZZZZ	10	10:36																								
ZZZZZZ	1	10:37																								
ZZZZZZ	1	10:39																								
ZZZZZZ	1	10:41																								
ZZZZZZ	1	10:43																								
ZZZZZZ	5	10:44																								
ZZZZZZ	1	10:46																								
CCV06	1	10:48														X										
CCB06	1	10:49														X										
ZZZZZZ	1	10:51																								
ZZZZZZ	1	10:53																								
ZZZZZZ	1	10:54																								
ZZZZZZ	1	10:56																								
ZZZZZZ	1	10:58																								
ZZZZZZ	1	10:59																								
ZZZZZZ	1	11:01																								
ZZZZZZ	1	11:03																								
ZZZZZZ	1	11:04																								

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	11:06																								
CCV07	1	11:08															X									
CCB07	1	11:09															X									
ZZZZZZ	1	11:11																								
ZZZZZZ	1	11:13																								
ZZZZZZ	1	11:15																								
ZZZZZZ	1	11:16																								
ZZZZZZ	1	11:18																								
1202019573	1	11:20															X									
1202019574	10	11:21															X									
244125001	1	11:23															X									
244125002	1	11:25															X									
244125003	1	11:26															X									
CCV08	1	11:28															X									
CCB08	1	11:30															X									
244125004	1	11:31															X									
ZZZZZZ	1	11:33																								
ZZZZZZ	1	11:35																								
ZZZZZZ	1	11:36																								
ZZZZZZ	1	11:38																								
ZZZZZZ	1	11:40																								
ZZZZZZ	1	11:41																								
ZZZZZZ	1	11:43																								
ZZZZZZ	1	11:45																								
ZZZZZZ	1	11:47																								
CCV09	1	11:48															X									
CCB09	1	11:50															X									
ZZZZZZ	1	11:52																								
ZZZZZZ	1	11:53																								
1202019575	1	11:55															X									
1202019576	1	11:57															X									
1202019580	1	11:58															X									
1202019579	5	12:00															X									
ZZZZZZ	1	12:02																								
ZZZZZZ	1	12:03																								
ZZZZZZ	1	12:05																								
ZZZZZZ	1	12:07																								
CCV10	1	12:09															X									
CCB10	1	12:10															X									

Metals
–14–
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: ICPMS3
Start Date: 16–JAN–10 **End Date:** 16–JAN–10

Client Sdg: 10–1130
Method MS
Data File: 100115–2

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	00:21																X		X			X	X		
S10	1	00:24																X		X			X	X		
S100	1	00:26																X		X			X	X		
ICV01	1	00:29																X		X			X	X		
ICB01	1	00:32																X		X			X	X		
CRDL01	1	00:34																X		X			X	X		
ICSA01	1	00:37																X		X			X	X		
ICSAB01	1	00:40																X		X			X	X		
CCV01	1	00:43																X		X			X	X		
CCB01	1	00:45																X		X			X	X		
ZZZZZZ	2	00:48																								
ZZZZZZ	40	00:51																								
ZZZZZZ	2	00:54																								
ZZZZZZ	2	00:56																								
ZZZZZZ	2	00:59																								
ZZZZZZ	2	01:02																								
ZZZZZZ	10	01:05																								
CCV02	1	01:08																X		X			X	X		
CCB02	1	01:10																X		X			X	X		
ZZZZZZ	2	01:13																								
ZZZZZZ	2	01:16																								
ZZZZZZ	2	01:19																								
ZZZZZZ	2	01:21																								
CCV03	1	01:24																X		X			X	X		
CCB03	1	01:27																X		X			X	X		
ZZZZZZ	2	01:30																								
ZZZZZZ	40	01:33																								
ZZZZZZ	2	01:35																								
ZZZZZZ	2	01:38																								
ZZZZZZ	2	01:41																								
ZZZZZZ	2	01:44																								
ZZZZZZ	10	01:46																								
CCV04	1	01:49																X		X			X	X		
CCB04	1	01:52																X		X			X	X		
ZZZZZZ	2	01:55																								
ZZZZZZ	2	01:58																								
ZZZZZZ	2	02:00																								
ZZZZZZ	2	02:03																								
ZZZZZZ	2	02:06																								
CCV05	1	02:09																X		X			X	X		

Metals
–14–
Analysis Run Log

Samp No.	D/F	Run Time																								
CCB05	1	02:12																X		X			X	X		
1202011760	2	02:14																X		X			X	X		
1202011761	40	02:17																X		X			X	X		
244125001	2	02:20																X		X			X	X		
244125002	2	02:23																X		X			X	X		
244125003	2	02:25																X		X			X	X		
244125004	2	02:28																X		X			X	X		
CCV06	1	02:31																X		X			X	X		
CCB06	1	02:34																X		X			X	X		
ZZZZZZ	2	02:36																								
1202011762	2	02:39																X		X			X	X		
1202011763	2	02:42																X		X			X	X		
1202011771	2	02:44																X		X			X	X		
1202011764	10	02:47																X		X			X	X		
ZZZZZZ	2	02:50																								
ZZZZZZ	2	02:53																								
ZZZZZZ	2	02:55																								
ZZZZZZ	2	02:58																								
CCV07	1	03:01																X		X			X	X		
CCB07	1	03:04																X		X			X	X		

Standards

METALS
–10–
Instrument Detection Limits

SDG NO. 10–1130

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 01–JUL–09

ICP/MS	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
SOLID	Aluminum		15.0	50
	Antimony		0.5	3
	Arsenic		1.0	5
	Barium		0.5	2
	Beryllium		0.1	.5
	Cadmium		0.1	1
	Calcium		33.0	100
	Chromium		1.0	3
	Cobalt		0.3	1
	Copper		0.33	1
	Iron		25.0	100
	Lead		0.5	2
	Magnesium		7.5	25
	Manganese		1.0	5
	Nickel		0.5	2
	Potassium		80.0	300
	Selenium		2.5	5
	Silver		0.2	1
	Sodium		80.0	250
	Thallium		0.3	1
	Uranium		0.066	.2
	Vanadium		2.0	10
	Zinc		2.0	10

METALS
–10–
Instrument Detection Limits

SDG NO. 10–1130

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 15–JUN–09

MERCURY	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
SOLID	Mercury		0.068	.2

METALS
–10–
Instrument Detection Limits

SDG NO. 10–1130

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 01–JUL–09

ICP	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
SOLID	Aluminum	396.153	68.0	200
	Antimony	206.836	3.3	10
	Arsenic	188.979	5.0	30
	Barium	233.527	1.0	5
	Beryllium	313.107	1.0	5
	Cadmium	226.502	1.0	5
	Calcium	317.933	80.0	250
	Chromium	267.716	1.5	5
	Cobalt	228.616	1.5	5
	Copper	324.752	3.0	10
	Iron	238.204	80.0	250
	Lead	220.353	2.5	10
	Magnesium	279.077	85.0	300
	Manganese	257.61	2.0	10
	Nickel	231.604	1.5	5
	Potassium	766.49	64.0	250
	Selenium	196.026	5.0	30
	Silver	328.068	1.0	5
	Sodium	589.592	70.0	250
	Thallium	190.801	5.0	20
	Uranium	409.014	10.0	50
	Vanadium	292.402	1.0	5
	Zinc	213.857	3.3	10

METALS
–11–
Interelement Correction Factors

Lab Code: GEL **GEL Job No:** 10–1130
Contract: LANL01004
Instrument: OPTIMA3 **Effective Dates:** 01–NOV–09
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Aluminum	Antimony	Arsenic	Barium	Beryllium
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.02738	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	–0.44940	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	–0.22121	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	–0.33886	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	–0.13648	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	–0.05571	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.19671	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	–0.02739	0.00000	0.00000	0.00000	0.00000
Tin	189.927	–0.00058	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL **GEL Job No:** 10-1130
Contract: LANL01004
Instrument: OPTIMA3 **Effective Dates:** 01-NOV-09
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Boron	Cadmium	Chromium	Cobalt	Copper
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	24.5549	0.00000	0.00000
Arsenic	188.979	0.52529	0.00000	-0.67113	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	2.54031	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	0.38952	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	-31.5465	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.78023
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	0.63859	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	160.41
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	5.22870	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.35099	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	1.93161	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.39273	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	1.19810

METALS
-11-
Interelement Correction Factors

Lab Code: GEL **GEL Job No:** 10-1130
Contract: LANL01004
Instrument: OPTIMA3 **Effective Dates:** 01-NOV-09
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	42.8126
Antimony	206.836	-0.01635	0.00000	0.00000	0.00000	-22.2146
Arsenic	188.979	-0.21271	0.00000	0.00000	0.00000	1.34645
Barium	233.527	-0.03709	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.13266	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.09998	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	-0.01788	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.01425	0.00000	0.00000	0.00000	-2.64232
Copper	324.752	-0.05101	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.09069	0.00000	0.00000	0.00000	-2.44485
Magnesium	279.077	0.85543	0.00000	0.00000	0.00000	-20.2401
Manganese	257.61	-0.09972	0.00000	0.01862	0.00000	0.00000
Molybdenum	202.031	-0.07094	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.80633	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	-0.03176	0.00000	0.01823	12.4291	-3.60863
Selenium	196.026	-3.00009	0.00000	0.00000	0.00000	-3.17982
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	17.4444
Silver	328.068	-0.31825	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	-5.85948	0.00000
Tin	189.927	-0.01337	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.12581	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.15211	0.00000	-0.02256	0.00000	-14.2921
Zinc	213.857	0.09548	0.00000	0.03423	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 10-1130
Effective Dates: 01-NOV-09

Parmname	Wavelength	Nickel	Phosphorous	Potassium	Selenium	Silicon
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	-0.64279	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	0.44040	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.33191	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	6.38465	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL | GEL Job No: 10-1130

Contract: LANL01004

Instrument: OPTIMA3 | Effective Dates: 01-NOV-09

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Silver	Strontium	Sulfur	Thallium	Tin
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	-17.4077
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	-13.8713
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	3.10491
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 10-1130
Effective Dates: 01-NOV-09

Parmname	Wavelength	Titanium	Uranium	Vanadium	Zinc
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	2.73145	0.00000	-2.31857	0.00000
Arsenic	188.979	-8.38419	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	-2.24883	0.00000
Beryllium	313.107	-1.96555	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.32181	-1.76281	0.00000
Cobalt	228.616	2.12623	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.85359	-3.92851	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	-7.67419	0.00000	2.18873	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.44145	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	1.10141	-1.94183	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000

METALS
–12–
Linear Ranges

SDG NO. 10–1130

Contract: LANL01004 **Lab Code: GEL**

Instrument ID ICPMS5

Analyte	Integration Time (msec)	LDR	Units	Effective Date
Aluminum	1	50000	ug/L	01–NOV–09
Antimony	1000	250	ug/L	01–NOV–09
Arsenic	1000	1000	ug/L	01–NOV–09
Barium	1000	1000	ug/L	01–NOV–09
Beryllium	1000	1000	ug/L	01–NOV–09
Cadmium	1000	1000	ug/L	01–NOV–09
Calcium	500	50000	ug/L	01–NOV–09
Chromium	1000	1000	ug/L	01–NOV–09
Cobalt	1000	1000	ug/L	01–NOV–09
Copper	1000	1000	ug/L	01–NOV–09
Iron	500	50000	ug/L	01–NOV–09
Lead	1000	5000	ug/L	01–NOV–09
Magnesium	1	50000	ug/L	01–NOV–09
Manganese	1000	1000	ug/L	01–NOV–09
Nickel	1000	1000	ug/L	01–NOV–09
Potassium	1	50000	ug/L	01–NOV–09
Selenium	1000	500	ug/L	01–NOV–09
Silver	1000	250	ug/L	01–NOV–09
Sodium	1	50000	ug/L	01–NOV–09
Thallium	1000	500	ug/L	01–NOV–09
Uranium	1000	5000	ug/L	01–NOV–09
Vanadium	1000	100	ug/L	01–NOV–09
Zinc	1000	2500	ug/L	01–NOV–09

METALS
–12–
Linear Ranges

SDG NO. 10–1130

Contract: LANL01004 **Lab Code: GEL**

Instrument ID OPTIMA3

Analyte	Integration Time (sec)	LDR	Units	Effective Date
Aluminum	20	500000	ug/L	01–NOV–09
Antimony	20	10000	ug/L	01–NOV–09
Arsenic	20	10000	ug/L	01–NOV–09
Barium	20	15000	ug/L	01–NOV–09
Beryllium	20	3000	ug/L	01–NOV–09
Cadmium	20	10000	ug/L	01–NOV–09
Calcium	20	500000	ug/L	01–NOV–09
Chromium	20	25000	ug/L	01–NOV–09
Cobalt	20	10000	ug/L	01–NOV–09
Copper	20	20000	ug/L	01–NOV–09
Iron	20	500000	ug/L	01–NOV–09
Lead	20	25000	ug/L	01–NOV–09
Magnesium	20	500000	ug/L	01–NOV–09
Manganese	20	10000	ug/L	01–NOV–09
Nickel	20	10000	ug/L	01–NOV–09
Potassium	20	300000	ug/L	01–NOV–09
Selenium	20	10000	ug/L	01–NOV–09
Silver	20	1000	ug/L	01–NOV–09
Sodium	20	500000	ug/L	01–NOV–09
Thallium	20	10000	ug/L	01–NOV–09
Uranium	20	15000	ug/L	01–NOV–09
Vanadium	20	10000	ug/L	01–NOV–09
Zinc	20	15000	ug/L	01–NOV–09

METALS
–12–
Linear Ranges

SDG NO. 10–1130

Contract: LANL01004 **Lab Code: GEL**

Instrument ID ICPMS3

Analyte	Integration Time (msec)	LDR	Units	Effective Date
Aluminum	1	50000	ug/L	01–NOV–09
Antimony	1000	250	ug/L	01–NOV–09
Arsenic	1000	1000	ug/L	01–NOV–09
Barium	1000	1000	ug/L	01–NOV–09
Beryllium	1000	1000	ug/L	01–NOV–09
Cadmium	1000	1000	ug/L	01–NOV–09
Calcium	500	50000	ug/L	01–NOV–09
Chromium	1000	1000	ug/L	01–NOV–09
Cobalt	1000	1000	ug/L	01–NOV–09
Copper	1000	1000	ug/L	01–NOV–09
Iron	500	50000	ug/L	01–NOV–09
Lead	1000	5000	ug/L	01–NOV–09
Magnesium	1	50000	ug/L	01–NOV–09
Manganese	1000	1000	ug/L	01–NOV–09
Nickel	1000	1000	ug/L	01–NOV–09
Potassium	1	50000	ug/L	01–NOV–09
Selenium	1000	500	ug/L	01–NOV–09
Silver	1000	250	ug/L	01–NOV–09
Sodium	1	50000	ug/L	01–NOV–09
Thallium	1000	500	ug/L	01–NOV–09
Uranium	1000	5000	ug/L	01–NOV–09
Vanadium	1000	100	ug/L	01–NOV–09
Zinc	1000	2500	ug/L	01–NOV–09

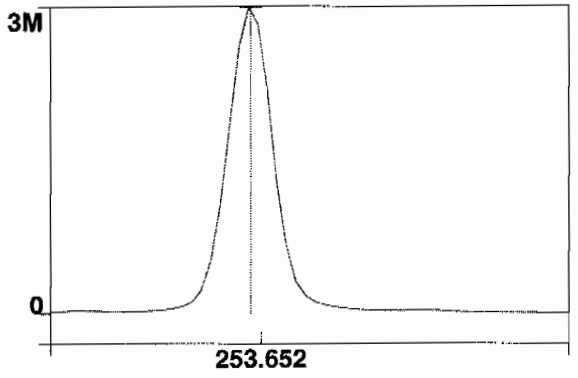
Raw Data

Method: Hg_ReAlign
Result: 012710

Sample ID: Hg_ReAlign

Hg 253.652

Rep: 1



Intensity: 3286104.6 cps
Conc:

1

1/20/2010 10:40:44 Hg ReAlign... Actual peak offset (nm): -0.009
Drift (nm): 0.000 Slit adjustment: -7

Analysis Begun

Start Time: 1/20/2010 10:43:52 **Plasma On Time: 1/18/2010 05:48:39**
Logged In Analyst: Optima3 **Technique: ICP Continuous**
Spectrometer Model: Optima 5300 DV, S/N 077C7090601Autosampler Model: S10

Sample Information File: C:\pe\Optima3\Sample Information\012010.sif
Batch ID:
Results Data Set: 012010
Results Library: C:\pe\Optima3\Results\Results.mdb

Method Loaded
Method Name: General Eng.2AX **Method Last Saved: 1/19/2010 16:24:45**
IEC File: 011110.iec **MSF File:**
Method Description:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Al 396.153Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
B 249.677	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Be 313.107	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ca 317.933Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Cd 226.502	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cr 267.716	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Fe 238.204 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
K 766.490 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mg 279.077 IEC	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mn 257.610	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Na 589.592 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Ni 231.604	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
P 214.914	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
S 181.975 Axial	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sc 361.383	Lin Thru 0	Peak Area	Axial	n/a	n/a
Sc Radial	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Se 196.026	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Si 251.611	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Ti 334.940	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
U 409.014	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y 371.029	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Zn 213.857	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y RADIAL	Lin, Calc Int	Peak Area	Radial	n/a	n/a
SiO2	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes

Sequence No.: 1 **Autosampler Location: 8**
Sample ID: S0 **Date Collected: 1/20/2010 10:43:53**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: S0

	Net	Corrected	Calib.	Analysis

Repl#	Analyte	Intensity	Intensity	Conc.	Units	Time
1	Sc Radial	5172.5	5172.5	0.000	%	10:45:46
1	Y RADIAL	5463.1	5463.1	0.000	%	10:45:46
1	Al 396.153Radial†	11.8	11.9	[0.00]	ug/L	10:45:46
1	Ca 317.933Radial†	16.6	16.7	[0.00]	ug/L	10:46:06
1	Fe 238.204 Radial†	12.3	12.4	[0.00]	ug/L	10:46:06
1	K 766.490 Radial†	2824.6	2847.9	[0.00]	ug/L	10:45:46
1	Mg 279.077 IEC†	1.0	1.0	[0.00]	ug/L	10:46:06
1	Na 589.592 Radial†	-1228.1	-1238.3	[0.00]	ug/L	10:45:46
1	Sr 421.552†	-26.1	-26.3	[0.00]	ug/L	10:45:46
1	Sc 361.383	941494.0	941494.0	0.0000	%	10:47:03
1	Y 371.029	790449.3	790449.3	0.0000	%	10:47:03
1	Ag 328.068†	385.5	386.4	[0.00]	ug/L	10:47:08
1	As 188.979†	-19.8	-19.8	[0.00]	ug/L	10:47:28
1	B 249.677†	-384.0	-384.9	[0.00]	ug/L	10:47:28
1	Ba 233.527†	-0.1	-0.1	[0.00]	ug/L	10:47:28
1	Be 313.107†	-4397.7	-4408.2	[0.00]	ug/L	10:47:08
1	Cd 226.502†	-215.8	-216.3	[0.00]	ug/L	10:47:28
1	Co 228.616†	-72.5	-72.6	[0.00]	ug/L	10:47:28
1	Cr 267.716†	101.7	101.9	[0.00]	ug/L	10:47:28
1	Cu 324.752†	6182.8	6197.6	[0.00]	ug/L	10:47:08
1	Mn 257.610†	461.0	462.1	[0.00]	ug/L	10:47:28
1	Mo 202.031†	23.9	23.9	[0.00]	ug/L	10:47:28
1	Ni 231.604†	89.0	89.2	[0.00]	ug/L	10:47:28
1	P 214.914†	221.5	222.0	[0.00]	ug/L	10:47:28
1	Pb 220.353†	-32.9	-33.0	[0.00]	ug/L	10:47:28
1	S 181.975 Axial†	44.2	44.3	[0.00]	ug/L	10:47:28
1	Sb 206.836†	25.7	25.8	[0.00]	ug/L	10:47:28
1	Se 196.026†	-27.5	-27.5	[0.00]	ug/L	10:47:28
1	Si 251.611†	467.9	469.0	[0.00]	ug/L	10:47:28
1	Sn 189.927†	8.2	8.2	[0.00]	ug/L	10:47:28
1	Ti 334.940†	-1421.9	-1425.3	[0.00]	ug/L	10:47:08
1	Tl 190.801†	-32.0	-32.1	[0.00]	ug/L	10:47:28
1	U 409.014†	-1741.8	-1746.0	[0.00]	ug/L	10:47:03
1	V 292.402†	-1407.1	-1410.5	[0.00]	ug/L	10:47:08
1	Zn 213.857†	794.3	796.2	[0.00]	ug/L	10:47:28
1	SiO2†	500.0	501.2	[0.00]	ug/L	10:48:34
2	Sc Radial	5253.8	5253.8	0.000	%	10:46:11
2	Y RADIAL	5547.0	5547.0	0.000	%	10:46:11
2	Al 396.153Radial†	-3.8	-3.8	[0.00]	ug/L	10:46:11
2	Ca 317.933Radial†	20.2	20.1	[0.00]	ug/L	10:46:31
2	Fe 238.204 Radial†	8.8	8.7	[0.00]	ug/L	10:46:31
2	K 766.490 Radial†	2810.1	2789.6	[0.00]	ug/L	10:46:11
2	Mg 279.077 IEC†	6.4	6.3	[0.00]	ug/L	10:46:31
2	Na 589.592 Radial†	-1223.8	-1214.9	[0.00]	ug/L	10:46:11
2	Sr 421.552†	15.9	15.8	[0.00]	ug/L	10:46:11
2	Sc 361.383	941375.0	941375.0	0.0000	%	10:47:33
2	Y 371.029	790863.1	790863.1	0.0000	%	10:47:33
2	Ag 328.068†	475.6	476.8	[0.00]	ug/L	10:47:38
2	As 188.979†	-27.6	-27.7	[0.00]	ug/L	10:47:58
2	B 249.677†	-372.6	-373.5	[0.00]	ug/L	10:47:58
2	Ba 233.527†	22.8	22.9	[0.00]	ug/L	10:47:58
2	Be 313.107†	-4356.5	-4367.5	[0.00]	ug/L	10:47:38
2	Cd 226.502†	-221.2	-221.7	[0.00]	ug/L	10:47:58
2	Co 228.616†	-74.1	-74.3	[0.00]	ug/L	10:47:58
2	Cr 267.716†	92.0	92.3	[0.00]	ug/L	10:47:58
2	Cu 324.752†	6152.8	6168.3	[0.00]	ug/L	10:47:38
2	Mn 257.610†	477.9	479.1	[0.00]	ug/L	10:47:58
2	Mo 202.031†	30.6	30.7	[0.00]	ug/L	10:47:58
2	Ni 231.604†	101.2	101.5	[0.00]	ug/L	10:47:58
2	P 214.914†	228.0	228.6	[0.00]	ug/L	10:47:58
2	Pb 220.353†	-42.1	-42.2	[0.00]	ug/L	10:47:58
2	S 181.975 Axial†	46.7	46.8	[0.00]	ug/L	10:47:58
2	Sb 206.836†	35.2	35.3	[0.00]	ug/L	10:47:58
2	Se 196.026†	-32.5	-32.6	[0.00]	ug/L	10:47:58
2	Si 251.611†	464.7	465.9	[0.00]	ug/L	10:47:58
2	Sn 189.927†	1.9	1.9	[0.00]	ug/L	10:47:58
2	Ti 334.940†	-1457.6	-1461.3	[0.00]	ug/L	10:47:38
2	Tl 190.801†	-38.2	-38.3	[0.00]	ug/L	10:47:58
2	U 409.014†	-1919.4	-1924.3	[0.00]	ug/L	10:47:33
2	V 292.402†	-1519.9	-1523.7	[0.00]	ug/L	10:47:38

2	Zn 213.857†	781.9	783.9	[0.00]	ug/L	10:47:58
2	SiO2†	506.1	507.4	[0.00]	ug/L	10:48:39
3	Sc Radial	5219.7	5219.7	0.000	%	10:46:36
3	Y RADIAL	5516.2	5516.2	0.000	%	10:46:36
3	Al 396.153Radial†	28.8	28.8	[0.00]	ug/L	10:46:36
3	Ca 317.933Radial†	15.6	15.6	[0.00]	ug/L	10:46:56
3	Fe 238.204 Radial†	11.9	11.9	[0.00]	ug/L	10:46:56
3	K 766.490 Radial†	2714.3	2712.0	[0.00]	ug/L	10:46:36
3	Mg 279.077 IEC†	6.1	6.1	[0.00]	ug/L	10:46:56
3	Na 589.592 Radial†	-1245.7	-1244.6	[0.00]	ug/L	10:46:36
3	Sr 421.552†	19.9	19.8	[0.00]	ug/L	10:46:36
3	Sc 361.383	948383.0	948383.0	0.0000	%	10:48:03
3	Y 371.029	798539.7	798539.7	0.0000	%	10:48:03
3	Ag 328.068†	493.9	491.4	[0.00]	ug/L	10:48:08
3	As 188.979†	-22.3	-22.2	[0.00]	ug/L	10:48:28
3	B 249.677†	-422.6	-420.6	[0.00]	ug/L	10:48:28
3	Ba 233.527†	6.9	6.9	[0.00]	ug/L	10:48:28
3	Be 313.107†	-4400.4	-4378.9	[0.00]	ug/L	10:48:08
3	Cd 226.502†	-211.8	-210.7	[0.00]	ug/L	10:48:28
3	Co 228.616†	-76.4	-76.1	[0.00]	ug/L	10:48:28
3	Cr 267.716†	85.1	84.7	[0.00]	ug/L	10:48:28
3	Cu 324.752†	6076.8	6047.1	[0.00]	ug/L	10:48:08
3	Mn 257.610†	462.4	460.1	[0.00]	ug/L	10:48:28
3	Mo 202.031†	33.7	33.6	[0.00]	ug/L	10:48:28
3	Ni 231.604†	104.9	104.4	[0.00]	ug/L	10:48:28
3	P 214.914†	222.2	221.1	[0.00]	ug/L	10:48:28
3	Pb 220.353†	-39.9	-39.8	[0.00]	ug/L	10:48:28
3	S 181.975 Axial†	46.7	46.5	[0.00]	ug/L	10:48:28
3	Sb 206.836†	30.8	30.7	[0.00]	ug/L	10:48:28
3	Se 196.026†	-29.5	-29.4	[0.00]	ug/L	10:48:28
3	Si 251.611†	482.2	479.9	[0.00]	ug/L	10:48:28
3	Sn 189.927†	2.7	2.7	[0.00]	ug/L	10:48:28
3	Ti 334.940†	-1356.4	-1349.8	[0.00]	ug/L	10:48:08
3	Tl 190.801†	-39.2	-39.1	[0.00]	ug/L	10:48:28
3	U 409.014†	-1515.0	-1507.6	[0.00]	ug/L	10:48:03
3	V 292.402†	-1530.2	-1522.8	[0.00]	ug/L	10:48:08
3	Zn 213.857†	794.6	790.8	[0.00]	ug/L	10:48:28
3	SiO2†	489.3	486.9	[0.00]	ug/L	10:48:44

Mean Data: S0

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	943750.6	4012.15	0.43%	0.0000	%
Sc Radial	5215.4	40.83	0.78%	0.000	%
Y 371.029	793284.0	4556.23	0.57%	0.0000	%
Y RADIAL	5508.8	42.47	0.77%	0.000	%
Ag 328.068†	451.6	56.91	12.60%	[0.00]	ug/L
Al 396.153Radial†	12.3	16.31	132.44%	[0.00]	ug/L
As 188.979†	-23.2	4.00	17.24%	[0.00]	ug/L
B 249.677†	-393.0	24.54	6.24%	[0.00]	ug/L
Ba 233.527†	9.9	11.75	118.72%	[0.00]	ug/L
Be 313.107†	-4384.9	21.00	0.48%	[0.00]	ug/L
Ca 317.933Radial†	17.5	2.34	13.41%	[0.00]	ug/L
Cd 226.502†	-216.2	5.50	2.54%	[0.00]	ug/L
Co 228.616†	-74.3	1.72	2.31%	[0.00]	ug/L
Cr 267.716†	93.0	8.63	9.28%	[0.00]	ug/L
Cu 324.752†	6137.7	79.78	1.30%	[0.00]	ug/L
Fe 238.204 Radial†	11.0	2.00	18.22%	[0.00]	ug/L
K 766.490 Radial†	2783.2	68.21	2.45%	[0.00]	ug/L
Mg 279.077 IEC†	4.5	3.00	66.80%	[0.00]	ug/L
Mn 257.610†	467.1	10.44	2.23%	[0.00]	ug/L
Mo 202.031†	29.4	4.96	16.87%	[0.00]	ug/L
Na 589.592 Radial†	-1232.6	15.65	1.27%	[0.00]	ug/L
Ni 231.604†	98.4	8.09	8.23%	[0.00]	ug/L
P 214.914†	223.9	4.08	1.82%	[0.00]	ug/L
Pb 220.353†	-38.3	4.75	12.40%	[0.00]	ug/L
S 181.975 Axial†	45.9	1.34	2.92%	[0.00]	ug/L
Sb 206.836†	30.6	4.77	15.61%	[0.00]	ug/L
Se 196.026†	-29.8	2.57	8.61%	[0.00]	ug/L
Si 251.611†	471.6	7.34	1.56%	[0.00]	ug/L

Sn 189.927†	4.3	3.43	80.65%	[0.00]	ug/L
Sr 421.552†	3.1	25.55	819.51%	[0.00]	ug/L
Ti 334.940†	-1412.1	56.91	4.03%	[0.00]	ug/L
Tl 190.801†	-36.5	3.84	10.53%	[0.00]	ug/L
U 409.014†	-1726.0	209.04	12.11%	[0.00]	ug/L
V 292.402†	-1485.7	65.10	4.38%	[0.00]	ug/L
Zn 213.857†	790.3	6.15	0.78%	[0.00]	ug/L
SiO2†	498.5	10.52	2.11%	[0.00]	ug/L

Sequence No.: 2
Sample ID: S0.1
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 2
Date Collected: 1/20/2010 10:50:54
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S0.1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	5304.4	5304.4	102	%	10:52:51
1	Y RADIAL	5594.3	5594.3	101.6	%	10:52:51
1	K 766.490 Radial†	7761.4	4848.0	[1000]	ug/L	10:52:46
1	Sr 421.552†	16045.6	15773.2	[100]	ug/L	10:52:51
1	Sc 361.383	944600.2	944600.2	100.09	%	10:53:19
1	Y 371.029	791489.0	791489.0	99.774	%	10:53:19
1	Ag 328.068†	23510.7	23038.0	[100]	ug/L	10:53:19
1	As 188.979†	213.6	236.6	[100]	ug/L	10:53:39
1	B 249.677†	4010.9	4400.3	[100]	ug/L	10:53:19
1	Ba 233.527†	14035.8	14013.3	[100]	ug/L	10:53:19
1	Be 313.107†	284647.0	288775.9	[100]	ug/L	10:53:19
1	Cd 226.502†	9281.3	9489.2	[100]	ug/L	10:53:39
1	Co 228.616†	5180.7	5250.4	[100]	ug/L	10:53:39
1	Cr 267.716†	9475.5	9374.0	[100]	ug/L	10:53:19
1	Cu 324.752†	40602.5	34428.3	[100]	ug/L	10:53:19
1	Mn 257.610†	98660.3	98104.4	[100]	ug/L	10:53:19
1	Mo 202.031†	1545.4	1514.6	[100]	ug/L	10:53:39
1	Ni 231.604†	4384.1	4281.8	[100]	ug/L	10:53:39
1	P 214.914†	1095.3	870.4	[500]	ug/L	10:53:39
1	Pb 220.353†	853.8	891.4	[100]	ug/L	10:53:39
1	S 181.975 Axial†	190.1	144.1	[200]	ug/L	10:53:39
1	Sb 206.836†	341.6	310.7	[100]	ug/L	10:53:39
1	Se 196.026†	138.7	168.5	[100]	ug/L	10:53:39
1	Si 251.611†	17158.6	16671.6	[500]	ug/L	10:53:19
1	Sn 189.927†	612.7	607.9	[100]	ug/L	10:53:39
1	Ti 334.940†	65879.7	67232.6	[100]	ug/L	10:53:19
1	Tl 190.801†	312.8	349.0	[100]	ug/L	10:53:39
1	U 409.014†	1967.5	3691.7	[100]	ug/L	10:53:19
1	V 292.402†	13785.3	15258.5	[100]	ug/L	10:53:19
1	Zn 213.857†	11931.1	11130.1	[100]	ug/L	10:53:39
1	SiO2†	17102.3	16588.4	[1069.5]	ug/L	10:54:36
2	Sc Radial	5083.3	5083.3	97.5	%	10:53:01
2	Y RADIAL	5387.8	5387.8	97.80	%	10:53:01
2	K 766.490 Radial†	7859.2	5280.2	[1000]	ug/L	10:52:56
2	Sr 421.552†	15407.8	15804.9	[100]	ug/L	10:53:01
2	Sc 361.383	945683.2	945683.2	100.20	%	10:53:45
2	Y 371.029	793353.6	793353.6	100.01	%	10:53:45
2	Ag 328.068†	23589.1	23089.3	[100]	ug/L	10:53:45
2	As 188.979†	229.7	252.5	[100]	ug/L	10:54:05
2	B 249.677†	3999.6	4384.5	[100]	ug/L	10:53:45
2	Ba 233.527†	14109.3	14070.6	[100]	ug/L	10:53:45
2	Be 313.107†	286646.4	290445.5	[100]	ug/L	10:53:45
2	Cd 226.502†	9349.9	9547.1	[100]	ug/L	10:54:05
2	Co 228.616†	5198.4	5262.2	[100]	ug/L	10:54:05
2	Cr 267.716†	9519.9	9407.5	[100]	ug/L	10:53:45
2	Cu 324.752†	40782.0	34561.0	[100]	ug/L	10:53:45
2	Mn 257.610†	99153.1	98483.4	[100]	ug/L	10:53:45
2	Mo 202.031†	1561.3	1528.7	[100]	ug/L	10:54:05
2	Ni 231.604†	4384.7	4277.3	[100]	ug/L	10:54:05
2	P 214.914†	1118.9	892.7	[500]	ug/L	10:54:05
2	Pb 220.353†	852.7	889.3	[100]	ug/L	10:54:05
2	S 181.975 Axial†	197.7	151.4	[200]	ug/L	10:54:05
2	Sb 206.836†	340.4	309.1	[100]	ug/L	10:54:05
2	Se 196.026†	131.6	161.2	[100]	ug/L	10:54:05
2	Si 251.611†	17193.6	16686.9	[500]	ug/L	10:53:45
2	Sn 189.927†	614.7	609.2	[100]	ug/L	10:54:05
2	Ti 334.940†	66121.0	67398.0	[100]	ug/L	10:53:45
2	Tl 190.801†	319.2	355.0	[100]	ug/L	10:54:05
2	U 409.014†	1951.8	3673.7	[100]	ug/L	10:53:45

2	V 292.402†	13884.0	15341.3	[100]	ug/L	10:53:45
2	Zn 213.857†	12029.0	11214.1	[100]	ug/L	10:54:05
2	SiO2†	17114.8	16581.4	[1069.5]	ug/L	10:54:41
3	Sc Radial	5292.7	5292.7	101	%	10:53:12
3	Y RADIAL	5575.6	5575.6	101.2	%	10:53:12
3	K 766.490 Radial†	7662.9	4767.8	[1000]	ug/L	10:53:06
3	Sr 421.552†	15956.8	15720.5	[100]	ug/L	10:53:12
3	Sc 361.383	945930.6	945930.6	100.23	%	10:54:11
3	Y 371.029	792020.7	792020.7	99.841	%	10:54:11
3	Ag 328.068†	23585.1	23079.2	[100]	ug/L	10:54:11
3	As 188.979†	224.0	246.8	[100]	ug/L	10:54:31
3	B 249.677†	4038.4	4422.1	[100]	ug/L	10:54:11
3	Ba 233.527†	14119.9	14077.5	[100]	ug/L	10:54:11
3	Be 313.107†	285293.8	289021.1	[100]	ug/L	10:54:11
3	Cd 226.502†	9291.3	9486.1	[100]	ug/L	10:54:31
3	Co 228.616†	5173.5	5235.9	[100]	ug/L	10:54:31
3	Cr 267.716†	9521.2	9406.3	[100]	ug/L	10:54:11
3	Cu 324.752†	40592.0	34360.8	[100]	ug/L	10:54:11
3	Mn 257.610†	99131.8	98436.2	[100]	ug/L	10:54:11
3	Mo 202.031†	1550.7	1517.8	[100]	ug/L	10:54:31
3	Ni 231.604†	4351.3	4243.0	[100]	ug/L	10:54:31
3	P 214.914†	1099.8	873.3	[500]	ug/L	10:54:31
3	Pb 220.353†	836.4	872.8	[100]	ug/L	10:54:31
3	S 181.975 Axial†	193.8	147.5	[200]	ug/L	10:54:31
3	Sb 206.836†	331.1	299.8	[100]	ug/L	10:54:31
3	Se 196.026†	131.8	161.3	[100]	ug/L	10:54:31
3	Si 251.611†	17115.9	16604.9	[500]	ug/L	10:54:11
3	Sn 189.927†	612.7	607.1	[100]	ug/L	10:54:31
3	Ti 334.940†	66074.2	67334.1	[100]	ug/L	10:54:11
3	Tl 190.801†	328.1	363.8	[100]	ug/L	10:54:31
3	U 409.014†	1928.4	3649.9	[100]	ug/L	10:54:11
3	V 292.402†	13877.5	15331.2	[100]	ug/L	10:54:11
3	Zn 213.857†	11935.9	11118.1	[100]	ug/L	10:54:31
3	SiO2†	16999.4	16461.7	[1069.5]	ug/L	10:54:46

Mean Data: S0.1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	945404.6	707.62	0.07%	100.18	%
Sc Radial	5226.8	124.39	2.38%	100	%
Y 371.029	792287.8	960.55	0.12%	99.874	%
Y RADIAL	5519.2	114.24	2.07%	100.2	%
Ag 328.068†	23068.8	27.20	0.12%	[100]	ug/L
As 188.979†	245.3	8.04	3.28%	[100]	ug/L
B 249.677†	4402.3	18.91	0.43%	[100]	ug/L
Ba 233.527†	14053.8	35.26	0.25%	[100]	ug/L
Be 313.107†	289414.2	901.54	0.31%	[100]	ug/L
Cd 226.502†	9507.5	34.34	0.36%	[100]	ug/L
Co 228.616†	5249.5	13.13	0.25%	[100]	ug/L
Cr 267.716†	9395.9	18.99	0.20%	[100]	ug/L
Cu 324.752†	34450.0	101.83	0.30%	[100]	ug/L
K 766.490 Radial†	4965.3	275.62	5.55%	[1000]	ug/L
Mn 257.610†	98341.3	206.51	0.21%	[100]	ug/L
Mo 202.031†	1520.4	7.37	0.48%	[100]	ug/L
Ni 231.604†	4267.4	21.26	0.50%	[100]	ug/L
P 214.914†	878.8	12.14	1.38%	[500]	ug/L
Pb 220.353†	884.5	10.18	1.15%	[100]	ug/L
S 181.975 Axial†	147.7	3.69	2.50%	[200]	ug/L
Sb 206.836†	306.5	5.91	1.93%	[100]	ug/L
Se 196.026†	163.7	4.16	2.54%	[100]	ug/L
Si 251.611†	16654.5	43.61	0.26%	[500]	ug/L
Sn 189.927†	608.1	1.07	0.18%	[100]	ug/L
Sr 421.552†	15766.2	42.64	0.27%	[100]	ug/L
Ti 334.940†	67321.6	83.39	0.12%	[100]	ug/L
Tl 190.801†	356.0	7.45	2.09%	[100]	ug/L
U 409.014†	3671.8	21.00	0.57%	[100]	ug/L
V 292.402†	15310.3	45.15	0.29%	[100]	ug/L
Zn 213.857†	11154.1	52.32	0.47%	[100]	ug/L
SiO2†	16543.8	71.20	0.43%	[1069.5]	ug/L

Sequence No.: 3
Sample ID: S0.5
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 3
Date Collected: 1/20/2010 10:56:56
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S0.5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	5200.5	5200.5	99.7	%	10:58:49
1	Y RADIAL	5469.4	5469.4	99.29	%	10:58:49
1	Al 396.153Radial†	6488.7	6494.9	[5000]	ug/L	10:58:49
1	Ca 317.933Radial†	3085.9	3077.3	[5000]	ug/L	10:59:09
1	K 766.490 Radial†	27358.3	24653.2	[5000]	ug/L	10:58:49
1	Mg 279.077 IEC†	162.7	158.6	[5000]	ug/L	10:59:09
1	Sr 421.552†	79925.1	80150.1	[500]	ug/L	10:58:49
1	Sc 361.383	943799.3	943799.3	100.01	%	11:00:06
1	Y 371.029	783263.6	783263.6	98.737	%	11:00:06
1	Ag 328.068†	119079.5	118621.8	[500]	ug/L	11:00:11
1	As 188.979†	1262.6	1285.8	[500]	ug/L	11:00:31
1	B 249.677†	23420.0	23811.8	[500]	ug/L	11:00:11
1	Ba 233.527†	72018.1	72004.5	[500]	ug/L	11:00:11
1	Be 313.107†	1479204.9	1483513.6	[500]	ug/L	11:00:06
1	Cd 226.502†	49323.0	49536.7	[500]	ug/L	11:00:11
1	Co 228.616†	26932.1	27005.1	[500]	ug/L	11:00:11
1	Cr 267.716†	48288.3	48192.8	[500]	ug/L	11:00:11
1	Cu 324.752†	185309.9	179162.7	[500]	ug/L	11:00:11
1	Mn 257.610†	492243.1	491750.6	[500]	ug/L	11:00:06
1	Mo 202.031†	7688.8	7659.0	[500]	ug/L	11:00:31
1	Ni 231.604†	22052.8	21953.3	[500]	ug/L	11:00:11
1	P 214.914†	4708.0	4483.9	[2500]	ug/L	11:00:31
1	Pb 220.353†	4356.6	4394.7	[500]	ug/L	11:00:31
1	S 181.975 Axial†	806.4	760.4	[1000]	ug/L	11:00:31
1	Sb 206.836†	1584.5	1553.9	[500]	ug/L	11:00:31
1	Se 196.026†	823.5	853.2	[500]	ug/L	11:00:31
1	Si 251.611†	86769.4	86293.3	[2500]	ug/L	11:00:11
1	Sn 189.927†	3085.8	3081.4	[500]	ug/L	11:00:31
1	Ti 334.940†	338795.8	340190.5	[500]	ug/L	11:00:11
1	Tl 190.801†	1758.3	1794.7	[500]	ug/L	11:00:31
1	U 409.014†	16575.8	18300.9	[500]	ug/L	11:00:11
1	V 292.402†	78607.1	80088.7	[500]	ug/L	11:00:11
1	Zn 213.857†	59597.6	58804.2	[500]	ug/L	11:00:11
1	SiO2†	84688.8	84186.0	[5347.5]	ug/L	11:01:38
2	Sc Radial	5116.4	5116.4	98.1	%	10:59:14
2	Y RADIAL	5345.6	5345.6	97.04	%	10:59:14
2	Al 396.153Radial†	6411.3	6523.0	[5000]	ug/L	10:59:14
2	Ca 317.933Radial†	3076.4	3118.4	[5000]	ug/L	10:59:34
2	K 766.490 Radial†	27220.0	24963.3	[5000]	ug/L	10:59:14
2	Mg 279.077 IEC†	159.7	158.3	[5000]	ug/L	10:59:34
2	Sr 421.552†	79438.3	80971.6	[500]	ug/L	10:59:14
2	Sc 361.383	937484.4	937484.4	99.336	%	11:00:37
2	Y 371.029	779106.6	779106.6	98.213	%	11:00:37
2	Ag 328.068†	117174.6	117506.2	[500]	ug/L	11:00:42
2	As 188.979†	1259.5	1291.2	[500]	ug/L	11:01:02
2	B 249.677†	22920.4	23466.6	[500]	ug/L	11:00:42
2	Ba 233.527†	71070.4	71535.5	[500]	ug/L	11:00:42
2	Be 313.107†	1474552.7	1488793.6	[500]	ug/L	11:00:37
2	Cd 226.502†	48949.6	49493.0	[500]	ug/L	11:00:42
2	Co 228.616†	26574.6	26826.5	[500]	ug/L	11:00:42
2	Cr 267.716†	47870.1	48097.1	[500]	ug/L	11:00:42
2	Cu 324.752†	181655.7	176732.2	[500]	ug/L	11:00:42
2	Mn 257.610†	491338.6	494155.7	[500]	ug/L	11:00:37
2	Mo 202.031†	7669.5	7691.4	[500]	ug/L	11:01:02
2	Ni 231.604†	21813.9	21861.3	[500]	ug/L	11:00:42
2	P 214.914†	4748.2	4556.0	[2500]	ug/L	11:01:02
2	Pb 220.353†	4371.4	4438.9	[500]	ug/L	11:01:02
2	S 181.975 Axial†	809.7	769.3	[1000]	ug/L	11:01:02
2	Sb 206.836†	1596.7	1576.8	[500]	ug/L	11:01:02

2	Se 196.026†	815.4	850.7	[500]	ug/L	11:01:02
2	Si 251.611†	85306.4	85405.0	[2500]	ug/L	11:00:42
2	Sn 189.927†	3094.7	3111.2	[500]	ug/L	11:01:02
2	Ti 334.940†	333327.6	336967.7	[500]	ug/L	11:00:42
2	Tl 190.801†	1752.4	1800.6	[500]	ug/L	11:01:02
2	U 409.014†	16201.8	18036.1	[500]	ug/L	11:00:42
2	V 292.402†	77442.9	79446.2	[500]	ug/L	11:00:42
2	Zn 213.857†	58796.2	58398.9	[500]	ug/L	11:00:42
2	SiO2†	85561.5	85634.9	[5347.5]	ug/L	11:01:44
3	Sc Radial	5141.7	5141.7	98.6	%	10:59:39
3	Y RADIAL	5363.4	5363.4	97.36	%	10:59:39
3	Al 396.153Radial†	6465.0	6545.3	[5000]	ug/L	10:59:39
3	Ca 317.933Radial†	3058.0	3084.4	[5000]	ug/L	10:59:59
3	K 766.490 Radial†	27377.5	24986.2	[5000]	ug/L	10:59:39
3	Mg 279.077 IEC†	158.7	156.5	[5000]	ug/L	10:59:59
3	Sr 421.552†	79810.5	80950.0	[500]	ug/L	10:59:39
3	Sc 361.383	935870.6	935870.6	99.165	%	11:01:08
3	Y 371.029	775581.2	775581.2	97.768	%	11:01:08
3	Ag 328.068†	117289.2	117825.2	[500]	ug/L	11:01:13
3	As 188.979†	1258.7	1292.5	[500]	ug/L	11:01:33
3	B 249.677†	23021.2	23608.0	[500]	ug/L	11:01:13
3	Ba 233.527†	70943.5	71531.0	[500]	ug/L	11:01:13
3	Be 313.107†	1469386.4	1486143.5	[500]	ug/L	11:01:08
3	Cd 226.502†	48733.6	49360.2	[500]	ug/L	11:01:13
3	Co 228.616†	26479.9	26777.2	[500]	ug/L	11:01:13
3	Cr 267.716†	47665.5	47973.8	[500]	ug/L	11:01:13
3	Cu 324.752†	182125.2	177521.1	[500]	ug/L	11:01:13
3	Mn 257.610†	491129.8	494798.0	[500]	ug/L	11:01:08
3	Mo 202.031†	7682.4	7717.7	[500]	ug/L	11:01:33
3	Ni 231.604†	21702.0	21786.4	[500]	ug/L	11:01:13
3	P 214.914†	4703.9	4519.5	[2500]	ug/L	11:01:33
3	Pb 220.353†	4354.5	4429.5	[500]	ug/L	11:01:33
3	S 181.975 Axial†	797.5	758.4	[1000]	ug/L	11:01:33
3	Sb 206.836†	1595.6	1578.5	[500]	ug/L	11:01:33
3	Se 196.026†	825.7	862.5	[500]	ug/L	11:01:33
3	Si 251.611†	85301.2	85547.8	[2500]	ug/L	11:01:13
3	Sn 189.927†	3095.8	3117.6	[500]	ug/L	11:01:33
3	Ti 334.940†	333112.5	337329.4	[500]	ug/L	11:01:13
3	Tl 190.801†	1746.7	1797.8	[500]	ug/L	11:01:33
3	U 409.014†	16213.7	18076.1	[500]	ug/L	11:01:13
3	V 292.402†	77199.1	79334.8	[500]	ug/L	11:01:13
3	Zn 213.857†	58671.9	58375.6	[500]	ug/L	11:01:13
3	SiO2†	85929.4	86154.5	[5347.5]	ug/L	11:01:49

Mean Data: S0.5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	939051.4	4190.17	0.45%	99.502	%
Sc Radial	5152.9	43.15	0.84%	98.8	%
Y 371.029	779317.1	3845.52	0.49%	98.239	%
Y RADIAL	5392.8	66.94	1.24%	97.90	%
Ag 328.068†	117984.4	574.56	0.49%	[500]	ug/L
Al 396.153Radial†	6521.1	25.24	0.39%	[5000]	ug/L
As 188.979†	1289.8	3.54	0.27%	[500]	ug/L
B 249.677†	23628.8	173.53	0.73%	[500]	ug/L
Ba 233.527†	71690.3	272.07	0.38%	[500]	ug/L
Be 313.107†	1486150.3	2640.04	0.18%	[500]	ug/L
Ca 317.933Radial†	3093.4	22.01	0.71%	[5000]	ug/L
Cd 226.502†	49463.3	91.91	0.19%	[500]	ug/L
Co 228.616†	26869.6	119.87	0.45%	[500]	ug/L
Cr 267.716†	48087.9	109.78	0.23%	[500]	ug/L
Cu 324.752†	177805.3	1239.91	0.70%	[500]	ug/L
K 766.490 Radial†	24867.6	186.03	0.75%	[5000]	ug/L
Mg 279.077 IEC†	157.8	1.15	0.73%	[5000]	ug/L
Mn 257.610†	493568.1	1606.44	0.33%	[500]	ug/L
Mo 202.031†	7689.4	29.42	0.38%	[500]	ug/L
Ni 231.604†	21867.0	83.60	0.38%	[500]	ug/L
P 214.914†	4519.8	36.07	0.80%	[2500]	ug/L
Pb 220.353†	4421.0	23.31	0.53%	[500]	ug/L
S 181.975 Axial†	762.7	5.79	0.76%	[1000]	ug/L

Sb 206.836†	1569.7	13.76	0.88%	[500]	ug/L
Se 196.026†	855.5	6.20	0.72%	[500]	ug/L
Si 251.611†	85748.7	477.02	0.56%	[2500]	ug/L
Sn 189.927†	3103.4	19.31	0.62%	[500]	ug/L
Sr 421.552†	80690.5	468.20	0.58%	[500]	ug/L
Ti 334.940†	338162.5	1765.52	0.52%	[500]	ug/L
Tl 190.801†	1797.7	2.93	0.16%	[500]	ug/L
U 409.014†	18137.7	142.75	0.79%	[500]	ug/L
V 292.402†	79623.3	406.94	0.51%	[500]	ug/L
Zn 213.857†	58526.3	241.01	0.41%	[500]	ug/L
SiO2†	85325.1	1020.15	1.20%	[5347.5]	ug/L

Sequence No.: 4
Sample ID: SCAL
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 4
Date Collected: 1/20/2010 11:03:59
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: SCAL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	5090.4	5090.4	97.6	%	11:06:12
1	Y RADIAL	5291.3	5291.3	96.05	%	11:06:12
1	Al 396.153Radial†	12817.5	13119.8	[10000]	ug/L	11:05:52
1	Ca 317.933Radial†	6063.9	6195.3	[10000]	ug/L	11:06:12
1	Fe 238.204 Radial†	1131.0	1147.7	[10000]	ug/L	11:06:12
1	K 766.490 Radial†	51358.9	49836.6	[10000]	ug/L	11:05:52
1	Mg 279.077 IEC†	313.8	317.0	[10000]	ug/L	11:06:12
1	Na 589.592 Radial†	35958.3	38073.7	[10000]	ug/L	11:05:52
1	Sr 421.552†	156488.4	160327.2	[1000]	ug/L	11:05:52
1	Sc 361.383	940793.3	940793.3	99.687	%	11:07:10
1	Y 371.029	753942.7	753942.7	95.041	%	11:07:16
1	Ag 328.068†	230781.3	231055.2	[1000]	ug/L	11:07:16
1	As 188.979†	2536.6	2567.8	[1000]	ug/L	11:07:36
1	B 249.677†	46223.8	46762.1	[1000]	ug/L	11:07:16
1	Ba 233.527†	139236.0	139663.7	[1000]	ug/L	11:07:16
1	Be 313.107†	2932068.2	2945669.9	[1000]	ug/L	11:07:10
1	Cd 226.502†	95551.1	96067.7	[1000]	ug/L	11:07:16
1	Co 228.616†	51955.5	52193.2	[1000]	ug/L	11:07:16
1	Cr 267.716†	93252.8	93452.9	[1000]	ug/L	11:07:16
1	Cu 324.752†	353203.0	348175.6	[1000]	ug/L	11:07:16
1	Mn 257.610†	973079.8	975671.5	[1000]	ug/L	11:07:10
1	Mo 202.031†	15289.0	15307.7	[1000]	ug/L	11:07:36
1	Ni 231.604†	42305.0	42339.6	[1000]	ug/L	11:07:16
1	P 214.914†	9262.6	9067.7	[5000]	ug/L	11:07:36
1	Pb 220.353†	8737.3	8803.0	[1000]	ug/L	11:07:36
1	S 181.975 Axial†	1572.8	1531.9	[2000]	ug/L	11:07:36
1	Sb 206.836†	3153.7	3133.0	[1000]	ug/L	11:07:36
1	Se 196.026†	1642.4	1677.4	[1000]	ug/L	11:07:36
1	Si 251.611†	168782.9	168841.9	[5000]	ug/L	11:07:16
1	Sn 189.927†	6186.9	6202.1	[1000]	ug/L	11:07:36
1	Ti 334.940†	681277.4	684831.1	[1000]	ug/L	11:07:10
1	Tl 190.801†	3515.3	3562.8	[1000]	ug/L	11:07:36
1	U 409.014†	33730.4	35562.4	[1000]	ug/L	11:07:16
1	V 292.402†	153404.7	155372.6	[1000]	ug/L	11:07:16
1	Zn 213.857†	114267.3	113836.2	[1000]	ug/L	11:07:16
1	SiO2†	168849.6	168881.9	[10695]	ug/L	11:08:45
2	Sc Radial	5043.8	5043.8	96.7	%	11:06:37
2	Y RADIAL	5262.5	5262.5	95.53	%	11:06:37
2	Al 396.153Radial†	12877.8	13303.5	[10000]	ug/L	11:06:17
2	Ca 317.933Radial†	6035.2	6223.0	[10000]	ug/L	11:06:37
2	Fe 238.204 Radial†	1115.0	1141.9	[10000]	ug/L	11:06:37
2	K 766.490 Radial†	51648.3	50621.6	[10000]	ug/L	11:06:17
2	Mg 279.077 IEC†	312.0	318.2	[10000]	ug/L	11:06:37
2	Na 589.592 Radial†	36158.5	38620.8	[10000]	ug/L	11:06:17
2	Sr 421.552†	157503.0	162856.4	[1000]	ug/L	11:06:17
2	Sc 361.383	935096.0	935096.0	99.083	%	11:07:42
2	Y 371.029	754429.5	754429.5	95.102	%	11:07:48
2	Ag 328.068†	231700.1	233393.0	[1000]	ug/L	11:07:48
2	As 188.979†	2535.7	2582.4	[1000]	ug/L	11:08:08
2	B 249.677†	46373.9	47196.1	[1000]	ug/L	11:07:48
2	Ba 233.527†	139410.5	140690.8	[1000]	ug/L	11:07:48
2	Be 313.107†	2913821.2	2945174.3	[1000]	ug/L	11:07:42
2	Cd 226.502†	95867.3	96970.8	[1000]	ug/L	11:07:48
2	Co 228.616†	52122.7	52679.5	[1000]	ug/L	11:07:48
2	Cr 267.716†	93468.1	94240.2	[1000]	ug/L	11:07:48
2	Cu 324.752†	353696.6	350832.5	[1000]	ug/L	11:07:48
2	Mn 257.610†	969921.8	978431.6	[1000]	ug/L	11:07:42
2	Mo 202.031†	15265.3	15377.2	[1000]	ug/L	11:08:08
2	Ni 231.604†	42494.6	42789.6	[1000]	ug/L	11:07:48

2	P 214.914†	9272.6	9134.5	[5000]	ug/L	11:08:08
2	Pb 220.353†	8701.8	8820.6	[1000]	ug/L	11:08:08
2	S 181.975 Axial†	1571.7	1540.4	[2000]	ug/L	11:08:08
2	Sb 206.836†	3163.4	3162.1	[1000]	ug/L	11:08:08
2	Se 196.026†	1644.5	1689.6	[1000]	ug/L	11:08:08
2	Si 251.611†	169254.7	170349.6	[5000]	ug/L	11:07:48
2	Sn 189.927†	6206.3	6259.4	[1000]	ug/L	11:08:08
2	Ti 334.940†	677683.7	685368.0	[1000]	ug/L	11:07:42
2	Tl 190.801†	3510.9	3579.9	[1000]	ug/L	11:08:08
2	U 409.014†	34054.9	36096.0	[1000]	ug/L	11:07:48
2	V 292.402†	153908.1	156818.2	[1000]	ug/L	11:07:48
2	Zn 213.857†	114672.1	114943.1	[1000]	ug/L	11:07:48
2	SiO2†	168958.4	170023.7	[10695]	ug/L	11:08:51
3	Sc Radial	5051.5	5051.5	96.9	%	11:07:02
3	Y RADIAL	5257.2	5257.2	95.43	%	11:07:02
3	Al 396.153Radial†	12691.0	13090.2	[10000]	ug/L	11:06:42
3	Ca 317.933Radial†	6035.5	6213.8	[10000]	ug/L	11:07:02
3	Fe 238.204 Radial†	1111.9	1137.0	[10000]	ug/L	11:07:02
3	K 766.490 Radial†	50926.1	49794.4	[10000]	ug/L	11:06:42
3	Mg 279.077 IEC†	313.0	318.7	[10000]	ug/L	11:07:02
3	Na 589.592 Radial†	35389.6	37769.8	[10000]	ug/L	11:06:42
3	Sr 421.552†	155109.5	160136.3	[1000]	ug/L	11:06:42
3	Sc 361.383	939744.4	939744.4	99.575	%	11:08:14
3	Y 371.029	755890.4	755890.4	95.286	%	11:08:20
3	Ag 328.068†	232118.0	232656.0	[1000]	ug/L	11:08:20
3	As 188.979†	2540.6	2574.7	[1000]	ug/L	11:08:40
3	B 249.677†	46634.4	47226.3	[1000]	ug/L	11:08:20
3	Ba 233.527†	139668.9	140254.5	[1000]	ug/L	11:08:20
3	Be 313.107†	2934144.4	2951038.0	[1000]	ug/L	11:08:14
3	Cd 226.502†	96122.6	96748.6	[1000]	ug/L	11:08:20
3	Co 228.616†	52198.3	52495.2	[1000]	ug/L	11:08:20
3	Cr 267.716†	93612.7	93918.8	[1000]	ug/L	11:08:20
3	Cu 324.752†	355005.7	350381.5	[1000]	ug/L	11:08:20
3	Mn 257.610†	975583.1	979275.0	[1000]	ug/L	11:08:14
3	Mo 202.031†	15311.5	15347.4	[1000]	ug/L	11:08:40
3	Ni 231.604†	42533.8	42616.7	[1000]	ug/L	11:08:20
3	P 214.914†	9234.5	9049.9	[5000]	ug/L	11:08:40
3	Pb 220.353†	8718.1	8793.6	[1000]	ug/L	11:08:40
3	S 181.975 Axial†	1579.3	1540.1	[2000]	ug/L	11:08:40
3	Sb 206.836†	3161.0	3143.9	[1000]	ug/L	11:08:40
3	Se 196.026†	1658.9	1695.8	[1000]	ug/L	11:08:40
3	Si 251.611†	169628.9	169880.5	[5000]	ug/L	11:08:20
3	Sn 189.927†	6197.3	6219.5	[1000]	ug/L	11:08:40
3	Ti 334.940†	682304.7	686625.6	[1000]	ug/L	11:08:14
3	Tl 190.801†	3539.1	3590.6	[1000]	ug/L	11:08:40
3	U 409.014†	33841.0	35711.2	[1000]	ug/L	11:08:20
3	V 292.402†	154235.2	156378.4	[1000]	ug/L	11:08:20
3	Zn 213.857†	114962.7	114662.5	[1000]	ug/L	11:08:20
3	SiO2†	169353.5	169577.0	[10695]	ug/L	11:08:56

Mean Data: SCAL

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	938544.6	3032.21	0.32%	99.448	%
Sc Radial	5061.9	24.95	0.49%	97.1	%
Y 371.029	754754.2	1013.64	0.13%	95.143	%
Y RADIAL	5270.3	18.34	0.35%	95.67	%
Ag 328.068†	232368.1	1195.20	0.51%	[1000]	ug/L
Al 396.153Radial†	13171.2	115.53	0.88%	[10000]	ug/L
As 188.979†	2575.0	7.33	0.28%	[1000]	ug/L
B 249.677†	47061.5	259.71	0.55%	[1000]	ug/L
Ba 233.527†	140203.0	515.48	0.37%	[1000]	ug/L
Be 313.107†	2947294.1	3251.79	0.11%	[1000]	ug/L
Ca 317.933Radial†	6210.7	14.09	0.23%	[10000]	ug/L
Cd 226.502†	96595.7	470.57	0.49%	[1000]	ug/L
Co 228.616†	52455.9	245.51	0.47%	[1000]	ug/L
Cr 267.716†	93870.7	395.87	0.42%	[1000]	ug/L
Cu 324.752†	349796.5	1421.75	0.41%	[1000]	ug/L
Fe 238.204 Radial†	1142.2	5.39	0.47%	[10000]	ug/L
K 766.490 Radial†	50084.2	465.90	0.93%	[10000]	ug/L

Mg 279.077 IEC†	317.9	0.87	0.27%	[10000]	ug/L
Mn 257.610†	977792.7	1884.79	0.19%	[1000]	ug/L
Mo 202.031†	15344.1	34.90	0.23%	[1000]	ug/L
Na 589.592 Radial†	38154.7	431.25	1.13%	[10000]	ug/L
Ni 231.604†	42582.0	227.01	0.53%	[1000]	ug/L
P 214.914†	9084.0	44.57	0.49%	[5000]	ug/L
Pb 220.353†	8805.8	13.71	0.16%	[1000]	ug/L
S 181.975 Axial†	1537.5	4.84	0.31%	[2000]	ug/L
Sb 206.836†	3146.4	14.71	0.47%	[1000]	ug/L
Se 196.026†	1687.6	9.36	0.55%	[1000]	ug/L
Si 251.611†	169690.7	771.58	0.45%	[5000]	ug/L
Sn 189.927†	6227.0	29.40	0.47%	[1000]	ug/L
Sr 421.552†	161106.6	1518.36	0.94%	[1000]	ug/L
Ti 334.940†	685608.2	921.06	0.13%	[1000]	ug/L
Tl 190.801†	3577.8	14.04	0.39%	[1000]	ug/L
U 409.014†	35789.9	275.37	0.77%	[1000]	ug/L
V 292.402†	156189.7	741.02	0.47%	[1000]	ug/L
Zn 213.857†	114480.6	575.44	0.50%	[1000]	ug/L
SiO2†	169494.2	575.38	0.34%	[10695]	ug/L

Sequence No.: 5
Sample ID: S10
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 5
Date Collected: 1/20/2010 11:11:07
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S10

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	5018.1	5018.1	96.2	%	11:13:20
1	Y RADIAL	5246.2	5246.2	95.23	%	11:13:20
1	Al 396.153Radial†	62840.8	65298.5	[50000]	ug/L	11:13:00
1	Ca 317.933Radial†	29153.3	30281.7	[50000]	ug/L	11:13:00
1	Fe 238.204 Radial†	2110.9	2182.9	[20000]	ug/L	11:13:20
1	Mg 279.077 IEC†	1465.7	1518.8	[50000]	ug/L	11:13:20
1	Na 589.592 Radial†	65882.2	69704.4	[20000]	ug/L	11:13:00
1	Sc 361.383	910619.2	910619.2	96.489	%	11:14:17
1	Y 371.029	749497.2	749497.2	94.480	%	11:14:17
2	Sc Radial	4991.6	4991.6	95.7	%	11:13:45
2	Y RADIAL	5202.2	5202.2	94.43	%	11:13:45
2	Al 396.153Radial†	62409.4	65194.7	[50000]	ug/L	11:13:25
2	Ca 317.933Radial†	28927.2	30206.5	[50000]	ug/L	11:13:25
2	Fe 238.204 Radial†	2087.1	2169.6	[20000]	ug/L	11:13:45
2	Mg 279.077 IEC†	1451.5	1512.1	[50000]	ug/L	11:13:45
2	Na 589.592 Radial†	64957.7	69102.0	[20000]	ug/L	11:13:25
2	Sc 361.383	901487.1	901487.1	95.522	%	11:14:23
2	Y 371.029	741083.0	741083.0	93.420	%	11:14:23
3	Sc Radial	4991.4	4991.4	95.7	%	11:14:10
3	Y RADIAL	5231.4	5231.4	94.96	%	11:14:10
3	Al 396.153Radial†	63636.8	66480.0	[50000]	ug/L	11:13:50
3	Ca 317.933Radial†	29467.4	30772.1	[50000]	ug/L	11:13:50
3	Fe 238.204 Radial†	2092.1	2175.0	[20000]	ug/L	11:14:10
3	Mg 279.077 IEC†	1461.6	1522.7	[50000]	ug/L	11:14:10
3	Na 589.592 Radial†	66336.5	70545.7	[20000]	ug/L	11:13:50
3	Sc 361.383	907077.2	907077.2	96.114	%	11:14:29
3	Y 371.029	745509.8	745509.8	93.978	%	11:14:29

Mean Data: S10

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	906394.5	4604.19	0.51%	96.042	%
Sc Radial	5000.4	15.37	0.31%	95.9	%
Y 371.029	745363.3	4209.04	0.56%	93.959	%
Y RADIAL	5226.6	22.40	0.43%	94.88	%
Al 396.153Radial†	65657.7	714.01	1.09%	[50000]	ug/L
Ca 317.933Radial†	30420.1	307.18	1.01%	[50000]	ug/L
Fe 238.204 Radial†	2175.8	6.66	0.31%	[20000]	ug/L
Mg 279.077 IEC†	1517.9	5.35	0.35%	[50000]	ug/L
Na 589.592 Radial†	69784.0	725.12	1.04%	[20000]	ug/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	3	Lin Thru 0	0.0	233.1	0.00000	0.999981	
Al 396.153Radial	3	Lin Thru 0	0.0	1.313	0.00000	1.000000	
As 188.979	3	Lin Thru 0	0.0	2.575	0.00000	0.999991	
B 249.677	3	Lin Thru 0	0.0	47.08	0.00000	0.999982	
Ba 233.527	3	Lin Thru 0	0.0	140.8	0.00000	0.999960	
Be 313.107	3	Lin Thru 0	0.0	2952	0.00000	0.999993	
Ca 317.933Radial	3	Lin Thru 0	0.0	0.6090	0.00000	0.999991	
Cd 226.502	3	Lin Thru 0	0.0	97.05	0.00000	0.999953	
Co 228.616	3	Lin Thru 0	0.0	52.71	0.00000	0.999953	
Cr 267.716	3	Lin Thru 0	0.0	94.33	0.00000	0.999953	
Cu 324.752	3	Lin Thru 0	0.0	350.9	0.00000	0.999977	
Fe 238.204 Radia	2	Lin Thru 0	0.0	0.1099	0.00000	0.999805	
K 766.490 Radial	3	Lin Thru 0	0.0	5.001	0.00000	0.999996	

Mg 279.077 IEC	3	Lin Thru 0	0.0	0.0304	0.00000	0.999952
Mn 257.610	3	Lin Thru 0	0.0	979.7	0.00000	0.999993
Mo 202.031	3	Lin Thru 0	0.0	15.35	0.00000	0.999999
Na 589.592 Radia	2	Lin Thru 0	0.0	3.554	0.00000	0.999327
Ni 231.604	3	Lin Thru 0	0.0	42.81	0.00000	0.999942
P 214.914	3	Lin Thru 0	0.0	1.815	0.00000	0.999994
Pb 220.353	3	Lin Thru 0	0.0	8.813	0.00000	0.999999
S 181.975 Axial	3	Lin Thru 0	0.0	0.7673	0.00000	0.999989
Sb 206.836	3	Lin Thru 0	0.0	3.144	0.00000	0.999997
Se 196.026	3	Lin Thru 0	0.0	1.692	0.00000	0.999981
Si 251.611	3	Lin Thru 0	0.0	34.00	0.00000	0.999989
Sn 189.927	3	Lin Thru 0	0.0	6.222	0.00000	0.999997
Sr 421.552	3	Lin Thru 0	0.0	161.1	0.00000	0.999998
Ti 334.940	3	Lin Thru 0	0.0	683.7	0.00000	0.999984
Tl 190.801	3	Lin Thru 0	0.0	3.581	0.00000	0.999998
U 409.014	3	Lin Thru 0	0.0	35.89	0.00000	0.999983
V 292.402	3	Lin Thru 0	0.0	156.8	0.00000	0.999968
Zn 213.857	3	Lin Thru 0	0.0	115.0	0.00000	0.999957
SiO2	3	Lin Thru 0	0.0	15.87	0.00000	0.999994

Sequence No.: 6
Sample ID: ICV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 9
Date Collected: 1/20/2010 11:16:40
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5223.2	5223.2	100	%			11:18:33
1	Y RADIAL	5430.8	5430.8	98.58	%			11:18:33
1	Al 396.153Radial†	6471.1	6449.1	4885.0	ug/L	4885.0	ppb	11:18:33
1	Ca 317.933Radial†	3074.2	3052.1	5011.8	ug/L	5011.8	ppb	11:18:53
1	Fe 238.204 Radial†	585.4	573.5	5234.7	ug/L	5234.7	ppb	11:18:53
1	K 766.490 Radial†	15114.1	12308.2	2457.5	ug/L	2457.5	ppb	11:18:33
1	Mg 279.077 IEC†	162.9	158.2	5199.5	ug/L	5199.5	ppb	11:18:53
1	Na 589.592 Radial†	8205.4	9425.7	2651.8	ug/L	2651.8	ppb	11:18:33
1	Sr 421.552†	83714.4	83585.4	518.70	ug/L	518.70	ppb	11:18:33
1	Sc 361.383	931091.2	931091.2	98.659	%			11:19:50
1	Y 371.029	772799.4	772799.4	97.418	%			11:19:50
1	Ag 328.068†	58989.8	59340.3	257.87	ug/L	257.87	ppb	11:19:50
1	As 188.979†	1195.1	1234.6	483.64	ug/L	483.64	ppb	11:20:10
1	B 249.677†	23723.3	24438.8	516.83	ug/L	516.83	ppb	11:19:50
1	Ba 233.527†	71444.9	72406.4	515.39	ug/L	515.39	ppb	11:19:50
1	Be 313.107†	747880.5	762433.8	259.41	ug/L	259.41	ppb	11:19:50
1	Cd 226.502†	46962.8	47817.6	492.60	ug/L	492.60	ppb	11:20:10
1	Co 228.616†	26414.7	26848.2	509.52	ug/L	509.52	ppb	11:20:10
1	Cr 267.716†	45828.6	46358.7	492.08	ug/L	492.08	ppb	11:19:50
1	Cu 324.752†	183748.4	180109.1	513.27	ug/L	513.27	ppb	11:19:50
1	Mn 257.610†	495499.6	501769.5	512.47	ug/L	512.47	ppb	11:19:50
1	Mo 202.031†	8128.9	8210.0	535.33	ug/L	535.33	ppb	11:20:10
1	Ni 231.604†	21154.4	21343.7	498.25	ug/L	498.25	ppb	11:20:10
1	P 214.914†	4785.3	4626.4	2449.6	ug/L	2449.6	ppb	11:20:10
1	Pb 220.353†	4345.2	4442.6	505.76	ug/L	505.76	ppb	11:20:10
1	S 181.975 Axial†	1925.2	1905.5	2482.5	ug/L	2482.5	ppb	11:20:10
1	Sb 206.836†	1577.9	1568.7	518.31	ug/L	518.31	ppb	11:20:10
1	Se 196.026†	4307.6	4396.0	2619.1	ug/L	2619.1	ppb	11:20:10
1	Si 251.611†	165071.7	166844.5	4899.9	ug/L	4899.9	ppb	11:19:50
1	Sn 189.927†	3262.5	3302.6	531.66	ug/L	531.66	ppb	11:20:10
1	Ti 334.940†	330270.8	336173.5	491.58	ug/L	491.58	ppb	11:19:50
1	Tl 190.801†	1808.5	1869.5	525.39	ug/L	525.39	ppb	11:20:10
1	U 409.014†	15594.1	17532.1	486.75	ug/L	486.75	ppb	11:19:50
1	V 292.402†	76474.4	78999.8	511.05	ug/L	511.05	ppb	11:19:50
1	Zn 213.857†	58476.2	58481.0	504.30	ug/L	504.30	ppb	11:19:50
1	SiO2†	165296.3	167045.2	10514	ug/L	10514	ppb	11:21:08
2	Sc Radial	5203.0	5203.0	99.8	%			11:18:58
2	Y RADIAL	5469.2	5469.2	99.28	%			11:18:58
2	Al 396.153Radial†	6477.0	6480.0	4908.6	ug/L	4908.6	ppb	11:18:58
2	Ca 317.933Radial†	3047.2	3036.9	4986.9	ug/L	4986.9	ppb	11:19:18
2	Fe 238.204 Radial†	579.2	569.6	5198.8	ug/L	5198.8	ppb	11:19:18
2	K 766.490 Radial†	14987.3	12239.7	2443.8	ug/L	2443.8	ppb	11:18:58
2	Mg 279.077 IEC†	165.0	160.9	5288.4	ug/L	5288.4	ppb	11:19:18
2	Na 589.592 Radial†	8182.3	9434.3	2654.2	ug/L	2654.2	ppb	11:18:58
2	Sr 421.552†	83497.7	83692.4	519.36	ug/L	519.36	ppb	11:18:58
2	Sc 361.383	935143.5	935143.5	99.088	%			11:20:16
2	Y 371.029	775467.5	775467.5	97.754	%			11:20:16
2	Ag 328.068†	59165.5	59258.5	257.50	ug/L	257.50	ppb	11:20:16
2	As 188.979†	1197.2	1231.5	482.45	ug/L	482.45	ppb	11:20:36
2	B 249.677†	23923.1	24536.3	518.92	ug/L	518.92	ppb	11:20:16
2	Ba 233.527†	71827.2	72478.4	515.90	ug/L	515.90	ppb	11:20:16
2	Be 313.107†	750386.5	761678.1	259.15	ug/L	259.15	ppb	11:20:16
2	Cd 226.502†	46971.4	47619.9	490.57	ug/L	490.57	ppb	11:20:36
2	Co 228.616†	26361.9	26678.9	506.30	ug/L	506.30	ppb	11:20:36
2	Cr 267.716†	45912.1	46241.7	490.84	ug/L	490.84	ppb	11:20:16
2	Cu 324.752†	184435.0	179994.9	512.94	ug/L	512.94	ppb	11:20:16
2	Mn 257.610†	497195.5	501304.6	511.99	ug/L	511.99	ppb	11:20:16
2	Mo 202.031†	8128.9	8174.3	532.99	ug/L	532.99	ppb	11:20:36
2	Ni 231.604†	21150.6	21246.9	495.99	ug/L	495.99	ppb	11:20:36

2	P 214.914†	4791.6	4611.8	2441.6 ug/L	2441.6 ppb	11:20:36
2	Pb 220.353†	4380.0	4458.6	507.58 ug/L	507.58 ppb	11:20:36
2	S 181.975 Axial†	1925.4	1897.2	2471.7 ug/L	2471.7 ppb	11:20:36
2	Sb 206.836†	1571.9	1555.8	514.11 ug/L	514.11 ppb	11:20:36
2	Se 196.026†	4311.1	4380.6	2609.9 ug/L	2609.9 ppb	11:20:36
2	Si 251.611†	165532.2	166584.2	4892.3 ug/L	4892.3 ppb	11:20:16
2	Sn 189.927†	3262.1	3287.9	529.29 ug/L	529.29 ppb	11:20:36
2	Ti 334.940†	331685.7	336150.7	491.53 ug/L	491.53 ppb	11:20:16
2	Tl 190.801†	1812.0	1865.2	524.19 ug/L	524.19 ppb	11:20:36
2	U 409.014†	15808.5	17680.0	490.88 ug/L	490.88 ppb	11:20:16
2	V 292.402†	76744.9	78936.9	510.63 ug/L	510.63 ppb	11:20:16
2	Zn 213.857†	58654.4	58403.9	503.65 ug/L	503.65 ppb	11:20:16
2	SiO2†	165881.3	166909.6	10505 ug/L	10505 ppb	11:21:13
3	Sc Radial	5214.1	5214.1	100.0 %		11:19:23
3	Y RADIAL	5482.0	5482.0	99.51 %		11:19:23
3	Al 396.153Radial†	6481.0	6470.2	4901.1 ug/L	4901.1 ppb	11:19:23
3	Ca 317.933Radial†	3076.1	3059.4	5023.8 ug/L	5023.8 ppb	11:19:43
3	Fe 238.204 Radial†	585.4	574.5	5243.8 ug/L	5243.8 ppb	11:19:43
3	K 766.490 Radial†	15140.9	12361.4	2468.2 ug/L	2468.2 ppb	11:19:23
3	Mg 279.077 IEC†	160.6	156.2	5134.2 ug/L	5134.2 ppb	11:19:43
3	Na 589.592 Radial†	8203.6	9438.2	2655.3 ug/L	2655.3 ppb	11:19:23
3	Sr 421.552†	83659.2	83676.3	519.26 ug/L	519.26 ppb	11:19:23
3	Sc 361.383	935179.6	935179.6	99.092 %		11:20:42
3	Y 371.029	777140.9	777140.9	97.965 %		11:20:42
3	Ag 328.068†	58920.4	59008.9	256.44 ug/L	256.44 ppb	11:20:42
3	As 188.979†	1188.0	1222.2	478.82 ug/L	478.82 ppb	11:21:02
3	B 249.677†	23616.7	24226.1	512.32 ug/L	512.32 ppb	11:20:42
3	Ba 233.527†	71683.5	72330.6	514.85 ug/L	514.85 ppb	11:20:42
3	Be 313.107†	749616.4	760871.6	258.88 ug/L	258.88 ppb	11:20:42
3	Cd 226.502†	46862.0	47507.7	489.41 ug/L	489.41 ppb	11:21:02
3	Co 228.616†	26344.6	26660.4	505.95 ug/L	505.95 ppb	11:21:02
3	Cr 267.716†	45880.0	46207.5	490.47 ug/L	490.47 ppb	11:20:42
3	Cu 324.752†	183383.2	178926.2	509.90 ug/L	509.90 ppb	11:20:42
3	Mn 257.610†	495669.0	499744.7	510.41 ug/L	510.41 ppb	11:20:42
3	Mo 202.031†	8135.2	8180.3	533.39 ug/L	533.39 ppb	11:21:02
3	Ni 231.604†	21139.0	21234.4	495.69 ug/L	495.69 ppb	11:21:02
3	P 214.914†	4753.7	4573.3	2421.0 ug/L	2421.0 ppb	11:21:02
3	Pb 220.353†	4359.4	4437.6	505.20 ug/L	505.20 ppb	11:21:02
3	S 181.975 Axial†	1914.9	1886.6	2457.8 ug/L	2457.8 ppb	11:21:02
3	Sb 206.836†	1588.4	1572.4	519.38 ug/L	519.38 ppb	11:21:02
3	Se 196.026†	4316.4	4385.8	2613.1 ug/L	2613.1 ppb	11:21:02
3	Si 251.611†	164863.8	165903.2	4872.3 ug/L	4872.3 ppb	11:20:42
3	Sn 189.927†	3254.5	3280.1	528.05 ug/L	528.05 ppb	11:21:02
3	Ti 334.940†	330707.8	335150.9	490.09 ug/L	490.09 ppb	11:20:42
3	Tl 190.801†	1816.8	1869.9	525.49 ug/L	525.49 ppb	11:21:02
3	U 409.014†	15624.2	17493.4	485.68 ug/L	485.68 ppb	11:20:42
3	V 292.402†	76608.8	78796.6	509.72 ug/L	509.72 ppb	11:20:42
3	Zn 213.857†	58383.3	58128.1	501.25 ug/L	501.25 ppb	11:20:42
3	SiO2†	166323.0	167348.9	10533 ug/L	10533 ppb	11:21:18

Mean Data: ICV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	933804.7	98.946	%	0.2490				0.25%
Sc Radial	5213.4	100.0	%	0.19				0.19%
Y 371.029	775135.9	97.712	%	0.2760				0.28%
Y RADIAL	5460.7	99.13	%	0.484				0.49%
Ag 328.068†	59202.6	257.27	ug/L	0.739	257.27	ppb	0.739	0.29%
QC value within limits for Ag 328.068 Recovery = 102.91%								
Al 396.153Radial†	6466.4	4898.2	ug/L	12.09	4898.2	ppb	12.09	0.25%
QC value within limits for Al 396.153Radial Recovery = 97.96%								
As 188.979†	1229.4	481.64	ug/L	2.513	481.64	ppb	2.513	0.52%
QC value within limits for As 188.979 Recovery = 96.33%								
B 249.677†	24400.4	516.02	ug/L	3.371	516.02	ppb	3.371	0.65%
QC value within limits for B 249.677 Recovery = 103.20%								
Ba 233.527†	72405.1	515.38	ug/L	0.525	515.38	ppb	0.525	0.10%
QC value within limits for Ba 233.527 Recovery = 103.08%								
Be 313.107†	761661.2	259.15	ug/L	0.266	259.15	ppb	0.266	0.10%
QC value within limits for Be 313.107 Recovery = 103.66%								
Ca 317.933Radial†	3049.5	5007.5	ug/L	18.82	5007.5	ppb	18.82	0.38%

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   QC value within limits for Ca 317.933Radial  Recovery = 100.15%
Cd 226.502†            47648.4      490.86 ug/L         1.617      490.86 ppb          1.617   0.33%
   QC value within limits for Cd 226.502  Recovery = 98.17%
Co 228.616†            26729.2      507.26 ug/L         1.965      507.26 ppb          1.965   0.39%
   QC value within limits for Co 228.616  Recovery = 101.45%
Cr 267.716†            46269.3      491.13 ug/L         0.841      491.13 ppb          0.841   0.17%
   QC value within limits for Cr 267.716  Recovery = 98.23%
Cu 324.752†           179676.7      512.04 ug/L         1.858      512.04 ppb          1.858   0.36%
   QC value within limits for Cu 324.752  Recovery = 102.41%
Fe 238.204 Radial†       572.5      5225.8 ug/L        23.75      5225.8 ppb          23.75   0.45%
   QC value within limits for Fe 238.204 Radial  Recovery = 104.52%
K 766.490 Radial†      12303.1      2456.5 ug/L        12.19      2456.5 ppb          12.19   0.50%
   QC value within limits for K 766.490 Radial  Recovery = 98.26%
Mg 279.077 IEC†          158.4      5207.3 ug/L        77.42      5207.3 ppb          77.42   1.49%
   QC value within limits for Mg 279.077 IEC  Recovery = 104.15%
Mn 257.610†           500939.6      511.63 ug/L         1.079      511.63 ppb          1.079   0.21%
   QC value within limits for Mn 257.610  Recovery = 102.33%
Mo 202.031†             8188.2      533.90 ug/L         1.247      533.90 ppb          1.247   0.23%
   QC value within limits for Mo 202.031  Recovery = 106.78%
Na 589.592 Radial†      9432.7      2653.8 ug/L         1.80      2653.8 ppb           1.80   0.07%
   QC value within limits for Na 589.592 Radial  Recovery = 106.15%
Ni 231.604†            21275.0      496.64 ug/L         1.396      496.64 ppb          1.396   0.28%
   QC value within limits for Ni 231.604  Recovery = 99.33%
P 214.914†              4603.8      2437.4 ug/L        14.78      2437.4 ppb          14.78   0.61%
   QC value within limits for P 214.914  Recovery = 97.50%
Pb 220.353†             4446.3      506.18 ug/L         1.245      506.18 ppb          1.245   0.25%
   QC value within limits for Pb 220.353  Recovery = 101.24%
S 181.975 Axial†        1896.4      2470.7 ug/L        12.39      2470.7 ppb          12.39   0.50%
   QC value within limits for S 181.975 Axial  Recovery = 98.83%
Sb 206.836†             1565.7      517.27 ug/L         2.787      517.27 ppb          2.787   0.54%
   QC value within limits for Sb 206.836  Recovery = 103.45%
Se 196.026†             4387.5      2614.0 ug/L         4.69      2614.0 ppb           4.69   0.18%
   QC value within limits for Se 196.026  Recovery = 104.56%
Si 251.611†           166444.0      4888.1 ug/L        14.29      4888.1 ppb          14.29   0.29%
   QC value within limits for Si 251.611  Recovery = 97.76%
Sn 189.927†             3290.2      529.66 ug/L         1.834      529.66 ppb          1.834   0.35%
   QC value within limits for Sn 189.927  Recovery = 105.93%
Sr 421.552†            83651.4      519.11 ug/L         0.358      519.11 ppb          0.358   0.07%
   QC value within limits for Sr 421.552  Recovery = 103.82%
Ti 334.940†           335825.0      491.06 ug/L         0.846      491.06 ppb          0.846   0.17%
   QC value within limits for Ti 334.940  Recovery = 98.21%
Tl 190.801†             1868.2      525.03 ug/L         0.724      525.03 ppb          0.724   0.14%
   QC value within limits for Tl 190.801  Recovery = 105.01%
U 409.014†             17568.5      487.77 ug/L         2.746      487.77 ppb          2.746   0.56%
   QC value within limits for U 409.014  Recovery = 97.55%
V 292.402†             78911.1      510.47 ug/L         0.678      510.47 ppb          0.678   0.13%
   QC value within limits for V 292.402  Recovery = 102.09%
Zn 213.857†            58337.7      503.06 ug/L         1.606      503.06 ppb          1.606   0.32%
   QC value within limits for Zn 213.857  Recovery = 100.61%
SiO2†                 167101.2       10517 ug/L          14.2       10517 ppb           14.2   0.13%
   QC value within limits for SiO2  Recovery = 98.34%
All analyte(s) passed QC.
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Sequence No.: 7
Sample ID: ICB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 10
Date Collected: 1/20/2010 11:23:29
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5156.0	5156.0	98.9	%			11:25:22
1	Y RADIAL	5429.9	5429.9	98.57	%			11:25:22
1	Al 396.153Radial†	19.5	7.4	5.6185	ug/L	5.6185	ppb	11:25:22
1	Ca 317.933Radial†	24.0	6.8	11.183	ug/L	11.183	ppb	11:25:42
1	Fe 238.204 Radial†	10.7	-0.2	-1.3999	ug/L	-1.3999	ppb	11:25:42
1	K 766.490 Radial†	2834.3	83.8	16.747	ug/L	16.747	ppb	11:25:22
1	Mg 279.077 IEC†	0.9	-3.6	-119.13	ug/L	-119.13	ppb	11:25:42
1	Na 589.592 Radial†	-1208.0	10.7	3.0127	ug/L	3.0127	ppb	11:25:22
1	Sr 421.552†	16.6	13.7	0.0849	ug/L	0.0849	ppb	11:25:22
1	Sc 361.383	947098.2	947098.2	100.35	%			11:26:39
1	Y 371.029	792538.1	792538.1	99.906	%			11:26:39
1	Ag 328.068†	473.4	20.2	0.0854	ug/L	0.0854	ppb	11:26:44
1	As 188.979†	-32.3	-9.0	-3.4883	ug/L	-3.4883	ppb	11:27:04
1	B 249.677†	-215.6	178.2	3.7837	ug/L	3.7837	ppb	11:27:04
1	Ba 233.527†	-3.8	-13.7	-0.0980	ug/L	-0.0980	ppb	11:27:04
1	Be 313.107†	-4502.5	-101.7	-0.0344	ug/L	-0.0344	ppb	11:26:44
1	Cd 226.502†	-224.5	-7.5	-0.0767	ug/L	-0.0767	ppb	11:27:04
1	Co 228.616†	-58.6	16.0	0.3025	ug/L	0.3025	ppb	11:27:04
1	Cr 267.716†	109.9	16.6	0.1756	ug/L	0.1756	ppb	11:27:04
1	Cu 324.752†	6298.1	138.2	0.3942	ug/L	0.3942	ppb	11:26:44
1	Mn 257.610†	477.6	8.8	0.0137	ug/L	0.0137	ppb	11:27:04
1	Mo 202.031†	25.7	-3.8	-0.2477	ug/L	-0.2477	ppb	11:27:04
1	Ni 231.604†	109.7	10.9	0.2549	ug/L	0.2549	ppb	11:27:04
1	P 214.914†	218.4	-6.3	-3.5305	ug/L	-3.5305	ppb	11:27:04
1	Pb 220.353†	-51.1	-12.6	-1.4298	ug/L	-1.4298	ppb	11:27:04
1	S 181.975 Axial†	48.3	2.3	2.9457	ug/L	2.9457	ppb	11:27:04
1	Sb 206.836†	34.8	4.2	1.3234	ug/L	1.3234	ppb	11:27:04
1	Se 196.026†	-31.3	-1.4	-0.8202	ug/L	-0.8202	ppb	11:27:04
1	Si 251.611†	547.5	74.0	2.1791	ug/L	2.1791	ppb	11:27:04
1	Sn 189.927†	7.6	3.3	0.5393	ug/L	0.5393	ppb	11:27:04
1	Ti 334.940†	-1399.1	18.0	0.0378	ug/L	0.0378	ppb	11:26:44
1	Tl 190.801†	-43.9	-7.2	-2.0195	ug/L	-2.0195	ppb	11:27:04
1	U 409.014†	-1760.5	-28.3	-0.7898	ug/L	-0.7898	ppb	11:26:39
1	V 292.402†	-1537.9	-46.8	-0.3059	ug/L	-0.3059	ppb	11:26:44
1	Zn 213.857†	818.7	25.5	0.2196	ug/L	0.2196	ppb	11:27:04
1	SiO2†	556.4	55.9	3.5317	ug/L	3.5317	ppb	11:28:10
2	Sc Radial	5115.9	5115.9	98.1	%			11:25:47
2	Y RADIAL	5417.4	5417.4	98.34	%			11:25:47
2	Al 396.153Radial†	9.8	-2.3	-1.7756	ug/L	-1.7756	ppb	11:25:47
2	Ca 317.933Radial†	17.0	-0.1	-0.1563	ug/L	-0.1563	ppb	11:26:07
2	Fe 238.204 Radial†	13.6	2.9	26.091	ug/L	26.091	ppb	11:26:07
2	K 766.490 Radial†	2964.2	238.7	47.727	ug/L	47.727	ppb	11:25:47
2	Mg 279.077 IEC†	5.5	1.1	36.417	ug/L	36.417	ppb	11:26:07
2	Na 589.592 Radial†	-1272.4	-64.6	-18.170	ug/L	-18.170	ppb	11:25:47
2	Sr 421.552†	24.2	21.6	0.1341	ug/L	0.1341	ppb	11:25:47
2	Sc 361.383	928819.7	928819.7	98.418	%			11:27:09
2	Y 371.029	778376.3	778376.3	98.121	%			11:27:09
2	Ag 328.068†	481.8	38.0	0.1709	ug/L	0.1709	ppb	11:27:14
2	As 188.979†	-29.2	-6.5	-2.5097	ug/L	-2.5097	ppb	11:27:34
2	B 249.677†	-192.1	197.8	4.1960	ug/L	4.1960	ppb	11:27:34
2	Ba 233.527†	9.7	-0.0	0.0002	ug/L	0.0002	ppb	11:27:34
2	Be 313.107†	-4450.7	-137.4	-0.0462	ug/L	-0.0462	ppb	11:27:14
2	Cd 226.502†	-223.1	-10.4	-0.1099	ug/L	-0.1099	ppb	11:27:34
2	Co 228.616†	-54.4	19.0	0.3610	ug/L	0.3610	ppb	11:27:34
2	Cr 267.716†	115.8	24.7	0.2624	ug/L	0.2624	ppb	11:27:34
2	Cu 324.752†	6023.9	-16.9	-0.0468	ug/L	-0.0468	ppb	11:27:14
2	Mn 257.610†	492.9	33.7	0.0355	ug/L	0.0355	ppb	11:27:34
2	Mo 202.031†	32.1	3.2	0.2105	ug/L	0.2105	ppb	11:27:34
2	Ni 231.604†	110.3	13.7	0.3204	ug/L	0.3204	ppb	11:27:34

2	P 214.914†	229.3	9.0	4.9683 ug/L	4.9683 ppb	11:27:34
2	Pb 220.353†	-64.6	-27.3	-3.1045 ug/L	-3.1045 ppb	11:27:34
2	S 181.975 Axial†	43.1	-2.1	-2.7152 ug/L	-2.7152 ppb	11:27:34
2	Sb 206.836†	45.4	15.5	4.9497 ug/L	4.9497 ppb	11:27:34
2	Se 196.026†	-20.7	8.8	5.3057 ug/L	5.3057 ppb	11:27:34
2	Si 251.611†	550.3	87.6	2.5726 ug/L	2.5726 ppb	11:27:34
2	Sn 189.927†	6.4	2.3	0.3682 ug/L	0.3682 ppb	11:27:34
2	Ti 334.940†	-1276.6	115.0	0.1652 ug/L	0.1652 ppb	11:27:14
2	Tl 190.801†	-46.3	-10.6	-2.9602 ug/L	-2.9602 ppb	11:27:34
2	U 409.014†	-1700.9	-2.3	-0.0667 ug/L	-0.0667 ppb	11:27:09
2	V 292.402†	-1491.8	-30.1	-0.1929 ug/L	-0.1929 ppb	11:27:14
2	Zn 213.857†	804.7	27.4	0.2336 ug/L	0.2336 ppb	11:27:34
2	SiO2†	570.8	81.5	5.1309 ug/L	5.1309 ppb	11:28:15
3	Sc Radial	5231.5	5231.5	100 %		11:26:12
3	Y RADIAL	5542.1	5542.1	100.6 %		11:26:12
3	Al 396.153Radial†	-22.5	-34.7	-26.447 ug/L	-26.447 ppb	11:26:12
3	Ca 317.933Radial†	19.1	1.6	2.5864 ug/L	2.5864 ppb	11:26:32
3	Fe 238.204 Radial†	11.2	0.2	1.7146 ug/L	1.7146 ppb	11:26:32
3	K 766.490 Radial†	2863.8	71.8	14.354 ug/L	14.354 ppb	11:26:12
3	Mg 279.077 IEC†	2.9	-1.6	-53.879 ug/L	-53.879 ppb	11:26:32
3	Na 589.592 Radial†	-1255.8	-19.4	-5.4497 ug/L	-5.4497 ppb	11:26:12
3	Sr 421.552†	-4.4	-7.5	-0.0466 ug/L	-0.0466 ppb	11:26:12
3	Sc 361.383	946446.2	946446.2	100.29 %		11:27:39
3	Y 371.029	793787.6	793787.6	100.06 %		11:27:39
3	Ag 328.068†	420.6	-32.2	-0.1379 ug/L	-0.1379 ppb	11:27:44
3	As 188.979†	-22.3	1.0	0.3711 ug/L	0.3711 ppb	11:28:04
3	B 249.677†	-246.4	147.3	3.1287 ug/L	3.1287 ppb	11:28:04
3	Ba 233.527†	8.4	-1.5	-0.0104 ug/L	-0.0104 ppb	11:28:04
3	Be 313.107†	-4465.6	-68.0	-0.0229 ug/L	-0.0229 ppb	11:27:44
3	Cd 226.502†	-231.5	-14.6	-0.1499 ug/L	-0.1499 ppb	11:28:04
3	Co 228.616†	-70.2	4.3	0.0817 ug/L	0.0817 ppb	11:28:04
3	Cr 267.716†	96.5	3.3	0.0347 ug/L	0.0347 ppb	11:28:04
3	Cu 324.752†	6230.7	75.3	0.2140 ug/L	0.2140 ppb	11:27:44
3	Mn 257.610†	460.0	-8.5	-0.0063 ug/L	-0.0063 ppb	11:28:04
3	Mo 202.031†	30.2	0.8	0.0490 ug/L	0.0490 ppb	11:28:04
3	Ni 231.604†	105.8	7.1	0.1666 ug/L	0.1666 ppb	11:28:04
3	P 214.914†	231.8	7.2	3.9301 ug/L	3.9301 ppb	11:28:04
3	Pb 220.353†	-49.2	-10.8	-1.2317 ug/L	-1.2317 ppb	11:28:04
3	S 181.975 Axial†	45.3	-0.7	-0.9195 ug/L	-0.9195 ppb	11:28:04
3	Sb 206.836†	45.4	14.7	4.7146 ug/L	4.7146 ppb	11:28:04
3	Se 196.026†	-29.3	0.7	0.3941 ug/L	0.3941 ppb	11:28:04
3	Si 251.611†	551.9	78.7	2.3135 ug/L	2.3135 ppb	11:28:04
3	Sn 189.927†	16.2	11.9	1.9189 ug/L	1.9189 ppb	11:28:04
3	Ti 334.940†	-1389.4	26.6	0.0432 ug/L	0.0432 ppb	11:27:44
3	Tl 190.801†	-36.3	0.2	0.0638 ug/L	0.0638 ppb	11:28:04
3	U 409.014†	-1691.2	39.6	1.1030 ug/L	1.1030 ppb	11:27:39
3	V 292.402†	-1467.1	22.7	0.1463 ug/L	0.1463 ppb	11:27:44
3	Zn 213.857†	802.4	9.8	0.0841 ug/L	0.0841 ppb	11:28:04
3	SiO2†	594.0	93.8	5.9109 ug/L	5.9109 ppb	11:28:20

Mean Data: ICB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	940788.0	99.686	%	1.0988				1.10%
Sc Radial	5167.8	99.1	%	1.13				1.14%
Y 371.029	788234.0	99.363	%	1.0790				1.09%
Y RADIAL	5463.2	99.17	%	1.247				1.26%
Ag 328.068†	8.7	0.0395	ug/L	0.15945	0.0395	ppb	0.15945	404.07%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-9.9	-7.5348	ug/L	16.79067	-7.5348	ppb	16.79067	222.84%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-4.8	-1.8756	ug/L	2.00631	-1.8756	ppb	2.00631	106.97%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	174.4	3.7028	ug/L	0.53824	3.7028	ppb	0.53824	14.54%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-5.1	-0.0360	ug/L	0.05389	-0.0360	ppb	0.05389	149.51%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-102.3	-0.0345	ug/L	0.01161	-0.0345	ppb	0.01161	33.66%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	2.8	4.5376	ug/L	5.91597	4.5376	ppb	5.91597	130.38%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -10.8     -0.1121 ug/L       0.03665     -0.1121 ppb        0.03665  32.68%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†               13.1      0.2484 ug/L       0.14730      0.2484 ppb        0.14730  59.30%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               14.9      0.1576 ug/L       0.11492      0.1576 ppb        0.11492  72.93%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               65.5      0.1872 ug/L       0.22172      0.1872 ppb        0.22172 118.47%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         1.0      8.8018 ug/L      15.05341      8.8018 ppb       15.05341 171.03%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        131.4      26.276 ug/L       18.6155      26.276 ppb        18.6155  70.85%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           -1.4     -45.530 ug/L       78.1082     -45.530 ppb        78.1082 171.55%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               11.3      0.0143 ug/L       0.02087      0.0143 ppb        0.02087 146.03%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                0.0      0.0040 ug/L       0.23240      0.0040 ppb        0.23240 >999.9%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       -24.4     -6.8691 ug/L      10.66253     -6.8691 ppb       10.66253 155.22%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               10.6      0.2473 ug/L       0.07718      0.2473 ppb        0.07718  31.20%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 3.3      1.7893 ug/L       4.63622      1.7893 ppb        4.63622 259.11%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†              -16.9     -1.9220 ug/L       1.02885     -1.9220 ppb        1.02885  53.53%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -0.2     -0.2296 ug/L       2.89280     -0.2296 ppb        2.89280 >999.9%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               11.5      3.6626 ug/L       2.02920      3.6626 ppb        2.02920  55.40%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                2.7      1.6266 ug/L       3.24359      1.6266 ppb        3.24359 199.41%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               80.1      2.3551 ug/L       0.20003      2.3551 ppb        0.20003   8.49%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                5.9      0.9421 ug/L       0.85026      0.9421 ppb        0.85026  90.25%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                9.3      0.0575 ug/L       0.09338      0.0575 ppb        0.09338 162.50%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               53.2      0.0821 ug/L       0.07204      0.0821 ppb        0.07204  87.75%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               -5.9     -1.6386 ug/L       1.54752     -1.6386 ppb        1.54752  94.44%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                 3.0      0.0822 ug/L       0.95515      0.0822 ppb        0.95515 >999.9%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               -18.1     -0.1175 ug/L       0.23533     -0.1175 ppb        0.23533 200.34%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               20.9      0.1791 ug/L       0.08257      0.1791 ppb        0.08257  46.10%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     77.1      4.8578 ug/L       1.21289      4.8578 ppb        1.21289  24.97%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 8
Sample ID: PQL
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 11
Date Collected: 1/20/2010 11:30:30
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: PQL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5227.9	5227.9	100	%			11:32:24
1	Y RADIAL	5558.2	5558.2	100.9	%			11:32:24
1	Al 396.153Radial†	251.8	238.9	181.43	ug/L	181.43	ppb	11:32:24
1	Ca 317.933Radial†	145.4	127.6	209.46	ug/L	209.46	ppb	11:32:44
1	Fe 238.204 Radial†	24.3	13.2	120.28	ug/L	120.28	ppb	11:32:44
1	K 766.490 Radial†	3489.3	697.8	139.32	ug/L	139.32	ppb	11:32:24
1	Mg 279.077 IEC†	11.6	7.1	233.80	ug/L	233.80	ppb	11:32:44
1	Na 589.592 Radial†	-188.2	1044.8	293.94	ug/L	293.94	ppb	11:32:24
1	Sr 421.552†	801.4	796.4	4.9407	ug/L	4.9407	ppb	11:32:24
1	Sc 361.383	908920.6	908920.6	96.309	%			11:33:41
1	Y 371.029	766967.1	766967.1	96.683	%			11:33:41
1	Ag 328.068†	1548.4	1156.2	4.9759	ug/L	4.9759	ppb	11:33:41
1	As 188.979†	54.1	79.4	30.883	ug/L	30.883	ppb	11:34:01
1	B 249.677†	1974.0	2442.7	51.854	ug/L	51.854	ppb	11:33:41
1	Ba 233.527†	737.0	755.3	5.3773	ug/L	5.3773	ppb	11:34:01
1	Be 313.107†	10389.1	15172.1	5.1517	ug/L	5.1517	ppb	11:33:41
1	Cd 226.502†	283.3	510.4	5.2599	ug/L	5.2599	ppb	11:34:01
1	Co 228.616†	177.8	259.0	4.9240	ug/L	4.9240	ppb	11:34:01
1	Cr 267.716†	557.9	486.3	5.1443	ug/L	5.1443	ppb	11:34:01
1	Cu 324.752†	9745.8	3981.6	11.325	ug/L	11.325	ppb	11:33:41
1	Mn 257.610†	10833.5	10781.6	11.007	ug/L	11.007	ppb	11:33:41
1	Mo 202.031†	176.7	154.1	10.052	ug/L	10.052	ppb	11:34:01
1	Ni 231.604†	317.1	230.9	5.3898	ug/L	5.3898	ppb	11:34:01
1	P 214.914†	491.4	286.3	155.57	ug/L	155.57	ppb	11:34:01
1	Pb 220.353†	27.4	66.8	7.6264	ug/L	7.6264	ppb	11:34:01
1	S 181.975 Axial†	118.3	77.0	100.25	ug/L	100.25	ppb	11:34:01
1	Sb 206.836†	62.9	34.8	11.439	ug/L	11.439	ppb	11:34:01
1	Se 196.026†	19.4	50.0	30.049	ug/L	30.049	ppb	11:34:01
1	Si 251.611†	3919.4	3598.0	105.69	ug/L	105.69	ppb	11:33:41
1	Sn 189.927†	71.7	70.2	11.318	ug/L	11.318	ppb	11:34:01
1	Ti 334.940†	2066.3	3557.6	5.1890	ug/L	5.1890	ppb	11:33:41
1	Tl 190.801†	30.0	67.6	18.949	ug/L	18.949	ppb	11:34:01
1	U 409.014†	59.0	1787.2	49.767	ug/L	49.767	ppb	11:33:41
1	V 292.402†	-697.9	761.0	5.0710	ug/L	5.0710	ppb	11:33:41
1	Zn 213.857†	1908.5	1191.4	10.301	ug/L	10.301	ppb	11:34:01
1	SiO2†	3958.3	3611.5	227.35	ug/L	227.35	ppb	11:34:57
2	Sc Radial	5184.8	5184.8	99.4	%			11:32:49
2	Y RADIAL	5503.0	5503.0	99.90	%			11:32:49
2	Al 396.153Radial†	257.1	246.3	187.10	ug/L	187.10	ppb	11:32:49
2	Ca 317.933Radial†	144.5	127.9	209.97	ug/L	209.97	ppb	11:33:09
2	Fe 238.204 Radial†	22.7	11.8	107.52	ug/L	107.52	ppb	11:33:09
2	K 766.490 Radial†	3621.4	859.6	171.67	ug/L	171.67	ppb	11:32:49
2	Mg 279.077 IEC†	11.3	6.9	227.59	ug/L	227.59	ppb	11:33:09
2	Na 589.592 Radial†	-116.1	1115.8	313.92	ug/L	313.92	ppb	11:32:49
2	Sr 421.552†	807.3	808.9	5.0185	ug/L	5.0185	ppb	11:32:49
2	Sc 361.383	912113.6	912113.6	96.648	%			11:34:06
2	Y 371.029	770306.9	770306.9	97.104	%			11:34:06
2	Ag 328.068†	1659.7	1265.7	5.4445	ug/L	5.4445	ppb	11:34:06
2	As 188.979†	44.1	68.9	26.786	ug/L	26.786	ppb	11:34:26
2	B 249.677†	2056.7	2521.1	53.522	ug/L	53.522	ppb	11:34:06
2	Ba 233.527†	728.5	743.9	5.2957	ug/L	5.2957	ppb	11:34:26
2	Be 313.107†	10512.7	15262.2	5.1821	ug/L	5.1821	ppb	11:34:06
2	Cd 226.502†	282.9	509.0	5.2462	ug/L	5.2462	ppb	11:34:26
2	Co 228.616†	167.5	247.7	4.7103	ug/L	4.7103	ppb	11:34:26
2	Cr 267.716†	540.6	466.4	4.9350	ug/L	4.9350	ppb	11:34:26
2	Cu 324.752†	9768.5	3969.7	11.293	ug/L	11.293	ppb	11:34:06
2	Mn 257.610†	10811.3	10719.2	10.943	ug/L	10.943	ppb	11:34:06
2	Mo 202.031†	176.8	153.6	10.015	ug/L	10.015	ppb	11:34:26
2	Ni 231.604†	325.7	238.7	5.5725	ug/L	5.5725	ppb	11:34:26

2	P 214.914†	512.0	305.8	166.33 ug/L	166.33 ppb	11:34:26
2	Pb 220.353†	28.9	68.2	7.7917 ug/L	7.7917 ppb	11:34:26
2	S 181.975 Axial†	122.5	80.9	105.43 ug/L	105.43 ppb	11:34:26
2	Sb 206.836†	56.2	27.5	9.1248 ug/L	9.1248 ppb	11:34:26
2	Se 196.026†	18.8	49.3	29.568 ug/L	29.568 ppb	11:34:26
2	Si 251.611†	4047.7	3716.5	109.17 ug/L	109.17 ppb	11:34:06
2	Sn 189.927†	68.4	66.5	10.726 ug/L	10.726 ppb	11:34:26
2	Ti 334.940†	2051.7	3534.9	5.1580 ug/L	5.1580 ppb	11:34:06
2	Tl 190.801†	21.5	58.7	16.470 ug/L	16.470 ppb	11:34:26
2	U 409.014†	-61.1	1662.7	46.299 ug/L	46.299 ppb	11:34:06
2	V 292.402†	-700.8	760.6	5.0630 ug/L	5.0630 ppb	11:34:06
2	Zn 213.857†	1930.3	1207.0	10.437 ug/L	10.437 ppb	11:34:26
2	SiO2†	3976.7	3616.1	227.64 ug/L	227.64 ppb	11:35:02
3	Sc Radial	5161.8	5161.8	99.0 %		11:33:14
3	Y RADIAL	5481.7	5481.7	99.51 %		11:33:14
3	Al 396.153Radial†	255.8	246.1	186.93 ug/L	186.93 ppb	11:33:14
3	Ca 317.933Radial†	142.9	126.9	208.45 ug/L	208.45 ppb	11:33:34
3	Fe 238.204 Radial†	20.1	9.3	85.121 ug/L	85.121 ppb	11:33:34
3	K 766.490 Radial†	3662.4	917.3	183.20 ug/L	183.20 ppb	11:33:14
3	Mg 279.077 IEC†	13.5	9.2	301.15 ug/L	301.15 ppb	11:33:34
3	Na 589.592 Radial†	-146.9	1084.2	305.01 ug/L	305.01 ppb	11:33:14
3	Sr 421.552†	787.5	792.6	4.9171 ug/L	4.9171 ppb	11:33:14
3	Sc 361.383	907633.0	907633.0	96.173 %		11:34:32
3	Y 371.029	766136.3	766136.3	96.578 %		11:34:32
3	Ag 328.068†	1585.4	1196.9	5.1357 ug/L	5.1357 ppb	11:34:32
3	As 188.979†	55.5	80.9	31.478 ug/L	31.478 ppb	11:34:52
3	B 249.677†	1984.3	2456.2	52.146 ug/L	52.146 ppb	11:34:32
3	Ba 233.527†	733.2	752.5	5.3558 ug/L	5.3558 ppb	11:34:52
3	Be 313.107†	10333.0	15129.0	5.1372 ug/L	5.1372 ppb	11:34:32
3	Cd 226.502†	276.3	503.5	5.1937 ug/L	5.1937 ppb	11:34:52
3	Co 228.616†	194.0	276.0	5.2475 ug/L	5.2475 ppb	11:34:52
3	Cr 267.716†	553.6	482.7	5.1039 ug/L	5.1039 ppb	11:34:52
3	Cu 324.752†	9815.5	4068.4	11.569 ug/L	11.569 ppb	11:34:32
3	Mn 257.610†	10805.2	10768.1	10.987 ug/L	10.987 ppb	11:34:32
3	Mo 202.031†	172.8	150.3	9.7974 ug/L	9.7974 ppb	11:34:52
3	Ni 231.604†	312.9	227.0	5.2987 ug/L	5.2987 ppb	11:34:52
3	P 214.914†	510.7	307.1	166.99 ug/L	166.99 ppb	11:34:52
3	Pb 220.353†	25.0	64.3	7.3507 ug/L	7.3507 ppb	11:34:52
3	S 181.975 Axial†	127.9	87.1	113.46 ug/L	113.46 ppb	11:34:52
3	Sb 206.836†	67.9	40.1	13.080 ug/L	13.080 ppb	11:34:52
3	Se 196.026†	27.9	58.9	35.155 ug/L	35.155 ppb	11:34:52
3	Si 251.611†	3951.6	3637.3	106.84 ug/L	106.84 ppb	11:34:32
3	Sn 189.927†	57.9	55.9	9.0187 ug/L	9.0187 ppb	11:34:52
3	Ti 334.940†	2090.0	3585.3	5.2222 ug/L	5.2222 ppb	11:34:32
3	Tl 190.801†	33.6	71.4	20.005 ug/L	20.005 ppb	11:34:52
3	U 409.014†	186.7	1920.1	53.474 ug/L	53.474 ppb	11:34:32
3	V 292.402†	-717.4	739.7	4.9450 ug/L	4.9450 ppb	11:34:32
3	Zn 213.857†	1929.8	1216.4	10.522 ug/L	10.522 ppb	11:34:52
3	SiO2†	3987.9	3648.1	229.66 ug/L	229.66 ppb	11:35:07

Mean Data: PQL

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	909555.8	96.377	%	0.2444				0.25%
Sc Radial	5191.5	99.5	%	0.64				0.65%
Y 371.029	767803.5	96.788	%	0.2783				0.29%
Y RADIAL	5514.3	100.1	%	0.72				0.72%
Ag 328.068†	1206.3	5.1854	ug/L	0.23822	5.1854	ppb	0.23822	4.59%
QC value within limits for Ag 328.068 Recovery = 103.71%								
Al 396.153Radial†	243.8	185.16	ug/L	3.224	185.16	ppb	3.224	1.74%
QC value within limits for Al 396.153Radial Recovery = 92.58%								
As 188.979†	76.4	29.716	ug/L	2.5543	29.716	ppb	2.5543	8.60%
QC value within limits for As 188.979 Recovery = 99.05%								
B 249.677†	2473.3	52.507	ug/L	0.8908	52.507	ppb	0.8908	1.70%
QC value within limits for B 249.677 Recovery = 105.01%								
Ba 233.527†	750.5	5.3430	ug/L	0.04229	5.3430	ppb	0.04229	0.79%
QC value within limits for Ba 233.527 Recovery = 106.86%								
Be 313.107†	15187.8	5.1570	ug/L	0.02294	5.1570	ppb	0.02294	0.44%
QC value within limits for Be 313.107 Recovery = 103.14%								
Ca 317.933Radial†	127.5	209.29	ug/L	0.775	209.29	ppb	0.775	0.37%

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   QC value within limits for Ca 317.933Radial  Recovery = 104.65%
Cd 226.502†              507.6      5.2333 ug/L       0.03493      5.2333 ppb        0.03493   0.67%
   QC value within limits for Cd 226.502  Recovery = 104.67%
Co 228.616†              260.9      4.9606 ug/L       0.27047      4.9606 ppb        0.27047   5.45%
   QC value within limits for Co 228.616  Recovery = 99.21%
Cr 267.716†              478.4      5.0611 ug/L       0.11107      5.0611 ppb        0.11107   2.19%
   QC value within limits for Cr 267.716  Recovery = 101.22%
Cu 324.752†             4006.6      11.396 ug/L        0.1509      11.396 ppb         0.1509   1.32%
   QC value within limits for Cu 324.752  Recovery = 113.96%
Fe 238.204 Radial†        11.4      104.31 ug/L        17.800      104.31 ppb         17.800  17.06%
   QC value within limits for Fe 238.204 Radial  Recovery = 104.31%
K 766.490 Radial†        824.9      164.73 ug/L        22.748      164.73 ppb         22.748  13.81%
   QC value within limits for K 766.490 Radial  Recovery = 109.82%
Mg 279.077 IEC†            7.7      254.18 ug/L        40.797      254.18 ppb         40.797  16.05%
   QC value within limits for Mg 279.077 IEC  Recovery = 84.73%
Mn 257.610†            10756.3      10.979 ug/L        0.0331      10.979 ppb         0.0331   0.30%
   QC value within limits for Mn 257.610  Recovery = 109.79%
Mo 202.031†              152.6      9.9548 ug/L       0.13754      9.9548 ppb        0.13754   1.38%
   QC value within limits for Mo 202.031  Recovery = 99.55%
Na 589.592 Radial†      1081.6      304.29 ug/L        10.010      304.29 ppb         10.010   3.29%
   QC value within limits for Na 589.592 Radial  Recovery = 101.43%
Ni 231.604†              232.2      5.4203 ug/L       0.13944      5.4203 ppb        0.13944   2.57%
   QC value within limits for Ni 231.604  Recovery = 108.41%
P 214.914†               299.7      162.96 ug/L         6.412      162.96 ppb          6.412   3.93%
   QC value within limits for P 214.914  Recovery = 108.64%
Pb 220.353†               66.4      7.5896 ug/L       0.22278      7.5896 ppb        0.22278   2.94%
   QC value within limits for Pb 220.353  Recovery = 75.90%
S 181.975 Axial†          81.7      106.38 ug/L         6.654      106.38 ppb          6.654   6.26%
   QC value within limits for S 181.975 Axial  Recovery = 106.38%
Sb 206.836†               34.1      11.214 ug/L        1.9869      11.214 ppb         1.9869  17.72%
   QC value within limits for Sb 206.836  Recovery = 112.14%
Se 196.026†               52.7      31.590 ug/L        3.0961      31.590 ppb         3.0961   9.80%
   QC value within limits for Se 196.026  Recovery = 105.30%
Si 251.611†             3650.6      107.23 ug/L         1.774      107.23 ppb          1.774   1.65%
   QC value within limits for Si 251.611  Recovery = 107.23%
Sn 189.927†               64.2      10.354 ug/L        1.1939      10.354 ppb         1.1939  11.53%
   QC value within limits for Sn 189.927  Recovery = 103.54%
Sr 421.552†              799.3      4.9587 ug/L       0.05309      4.9587 ppb        0.05309   1.07%
   QC value within limits for Sr 421.552  Recovery = 99.17%
Ti 334.940†             3559.3      5.1897 ug/L       0.03211      5.1897 ppb        0.03211   0.62%
   QC value within limits for Ti 334.940  Recovery = 103.79%
Tl 190.801†               65.9      18.475 ug/L        1.8145      18.475 ppb         1.8145   9.82%
   QC value within limits for Tl 190.801  Recovery = 92.37%
U 409.014†              1790.0      49.847 ug/L        3.5878      49.847 ppb         3.5878   7.20%
   QC value within limits for U 409.014  Recovery = 99.69%
V 292.402†               753.8      5.0263 ug/L       0.07051      5.0263 ppb        0.07051   1.40%
   QC value within limits for V 292.402  Recovery = 100.53%
Zn 213.857†             1204.9      10.420 ug/L        0.1115      10.420 ppb         0.1115   1.07%
   QC value within limits for Zn 213.857  Recovery = 104.20%
SiO2†                   3625.2      228.21 ug/L         1.259      228.21 ppb          1.259   0.55%
   QC value within limits for SiO2  Recovery = 107.14%
All analyte(s) passed QC.
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Sequence No.: 9
Sample ID: ICSA
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 13
Date Collected: 1/20/2010 11:37:18
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICSA

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4604.8	4604.8	88.3	%			11:39:16
1	Y RADIAL	4858.4	4858.4	88.19	%			11:39:16
1	Al 396.153Radial†	608850.9	689559.7	525090	ug/L	525090	ppb	11:39:11
1	Ca 317.933Radial†	263784.8	298739.7	490560	ug/L	490560	ppb	11:39:11
1	Fe 238.204 Radial†	18439.2	20872.9	189970	ug/L	189970	ppb	11:39:16
1	K 766.490 Radial†	2465.6	9.4	-162.21	ug/L	-162.21	ppb	11:39:11
1	Mg 279.077 IEC†	13351.3	15116.9	496680	ug/L	496680	ppb	11:39:16
1	Na 589.592 Radial†	-1008.9	90.0	25.311	ug/L	25.311	ppb	11:39:16
1	Sr 421.552†	538.4	606.6	0.1018	ug/L	0.1018	ppb	11:39:16
1	Sc 361.383	790796.8	790796.8	83.793	%			11:39:43
1	Y 371.029	648533.1	648533.1	81.753	%			11:39:43
1	Ag 328.068†	-10357.3	-12812.1	-0.0703	ug/L	-0.0703	ppb	11:39:43
1	As 188.979†	-98.4	-94.2	7.7234	ug/L	7.7234	ppb	11:40:04
1	B 249.677†	410.6	883.0	-12.095	ug/L	-12.095	ppb	11:39:43
1	Ba 233.527†	-594.8	-719.7	0.7056	ug/L	0.7056	ppb	11:40:04
1	Be 313.107†	-4221.6	-653.3	-0.2782	ug/L	-0.2782	ppb	11:39:43
1	Cd 226.502†	1327.8	1800.9	-1.0591	ug/L	-1.0591	ppb	11:40:04
1	Co 228.616†	-37.7	29.4	-2.1776	ug/L	-2.1776	ppb	11:40:04
1	Cr 267.716†	-129.7	-247.8	1.0806	ug/L	1.0806	ppb	11:40:04
1	Cu 324.752†	2774.4	-2826.7	1.9881	ug/L	1.9881	ppb	11:39:43
1	Mn 257.610†	-471.6	-1029.9	-2.6052	ug/L	-2.6052	ppb	11:39:43
1	Mo 202.031†	-211.1	-281.3	2.2594	ug/L	2.2594	ppb	11:40:04
1	Ni 231.604†	215.4	158.7	3.7070	ug/L	3.7070	ppb	11:40:04
1	P 214.914†	168.4	-22.9	-33.781	ug/L	-33.781	ppb	11:40:04
1	Pb 220.353†	-867.5	-996.9	-9.8722	ug/L	-9.8722	ppb	11:40:04
1	S 181.975 Axial†	69.8	37.4	-49.604	ug/L	-49.604	ppb	11:40:04
1	Sb 206.836†	54.9	35.0	0.4196	ug/L	0.4196	ppb	11:40:04
1	Se 196.026†	-1038.5	-1209.6	28.225	ug/L	28.225	ppb	11:40:04
1	Si 251.611†	485.8	108.2	3.4080	ug/L	3.4080	ppb	11:40:04
1	Sn 189.927†	-361.0	-435.1	7.8186	ug/L	7.8186	ppb	11:40:04
1	Ti 334.940†	-15540.6	-17134.2	0.1414	ug/L	0.1414	ppb	11:39:43
1	Tl 190.801†	-79.4	-58.3	-16.533	ug/L	-16.533	ppb	11:40:04
1	U 409.014†	-824.0	742.6	-0.9625	ug/L	-0.9625	ppb	11:39:43
1	V 292.402†	928.0	2593.2	-1.7217	ug/L	-1.7217	ppb	11:40:04
1	Zn 213.857†	3249.3	3087.5	8.4151	ug/L	8.4151	ppb	11:40:04
1	SiO2†	480.3	74.7	5.2081	ug/L	5.2081	ppb	11:41:00
2	Sc Radial	4683.0	4683.0	89.8	%			11:39:27
2	Y RADIAL	4898.9	4898.9	88.93	%			11:39:27
2	Al 396.153Radial†	614850.0	684732.2	521420	ug/L	521420	ppb	11:39:22
2	Ca 317.933Radial†	265824.6	296025.3	486100	ug/L	486100	ppb	11:39:22
2	Fe 238.204 Radial†	18661.0	20771.4	189040	ug/L	189040	ppb	11:39:27
2	K 766.490 Radial†	2363.5	-151.0	-192.79	ug/L	-192.79	ppb	11:39:22
2	Mg 279.077 IEC†	13474.5	15001.8	492900	ug/L	492900	ppb	11:39:27
2	Na 589.592 Radial†	-991.2	128.7	36.208	ug/L	36.208	ppb	11:39:27
2	Sr 421.552†	535.7	593.5	0.0536	ug/L	0.0536	ppb	11:39:27
2	Sc 361.383	790083.7	790083.7	83.717	%			11:40:09
2	Y 371.029	646909.1	646909.1	81.548	%			11:40:09
2	Ag 328.068†	-10399.1	-12873.2	-0.5709	ug/L	-0.5709	ppb	11:40:09
2	As 188.979†	-87.8	-81.6	12.409	ug/L	12.409	ppb	11:40:29
2	B 249.677†	426.2	902.1	-11.541	ug/L	-11.541	ppb	11:40:09
2	Ba 233.527†	-600.0	-726.6	0.6281	ug/L	0.6281	ppb	11:40:29
2	Be 313.107†	-4288.9	-738.2	-0.3068	ug/L	-0.3068	ppb	11:40:09
2	Cd 226.502†	1321.5	1794.7	-1.0263	ug/L	-1.0263	ppb	11:40:29
2	Co 228.616†	6.4	82.0	-1.1684	ug/L	-1.1684	ppb	11:40:29
2	Cr 267.716†	-76.7	-184.6	1.7319	ug/L	1.7319	ppb	11:40:29
2	Cu 324.752†	2843.7	-2740.9	2.1842	ug/L	2.1842	ppb	11:40:09
2	Mn 257.610†	-256.8	-773.9	-2.2803	ug/L	-2.2803	ppb	11:40:09
2	Mo 202.031†	-224.9	-298.0	1.0449	ug/L	1.0449	ppb	11:40:29
2	Ni 231.604†	244.4	193.6	4.5203	ug/L	4.5203	ppb	11:40:29

2	P 214.914†	176.4	-13.2	-28.644 ug/L	-28.644 ppb	11:40:29
2	Pb 220.353†	-845.5	-971.6	-7.7845 ug/L	-7.7845 ppb	11:40:29
2	S 181.975 Axial†	87.9	59.2	-20.620 ug/L	-20.620 ppb	11:40:29
2	Sb 206.836†	72.8	56.4	7.2500 ug/L	7.2500 ppb	11:40:29
2	Se 196.026†	-1029.9	-1200.4	29.847 ug/L	29.847 ppb	11:40:29
2	Si 251.611†	491.7	115.8	3.6435 ug/L	3.6435 ppb	11:40:29
2	Sn 189.927†	-370.3	-446.6	5.2771 ug/L	5.2771 ppb	11:40:29
2	Ti 334.940†	-15489.6	-17090.1	-0.0827 ug/L	-0.0827 ppb	11:40:09
2	Tl 190.801†	-64.4	-40.4	-11.531 ug/L	-11.531 ppb	11:40:29
2	U 409.014†	-853.0	707.1	-1.8469 ug/L	-1.8469 ppb	11:40:09
2	V 292.402†	902.2	2563.4	-1.8678 ug/L	-1.8678 ppb	11:40:29
2	Zn 213.857†	3216.9	3052.3	8.1933 ug/L	8.1933 ppb	11:40:29
2	SiO2†	422.1	5.8	0.8923 ug/L	0.8923 ppb	11:41:05
3	Sc Radial	4567.7	4567.7	87.6 %		11:39:37
3	Y RADIAL	4796.6	4796.6	87.07 %		11:39:37
3	Al 396.153Radial†	604085.4	689726.1	525220 ug/L	525220 ppb	11:39:32
3	Ca 317.933Radial†	261945.7	299069.5	491100 ug/L	491100 ppb	11:39:32
3	Fe 238.204 Radial†	18225.7	20798.9	189290 ug/L	189290 ppb	11:39:37
3	K 766.490 Radial†	2449.9	14.1	-161.46 ug/L	-161.46 ppb	11:39:32
3	Mg 279.077 IEC†	13159.8	15021.2	493540 ug/L	493540 ppb	11:39:37
3	Na 589.592 Radial†	-952.6	144.9	40.763 ug/L	40.763 ppb	11:39:37
3	Sr 421.552†	508.7	577.8	-0.0814 ug/L	-0.0814 ppb	11:39:37
3	Sc 361.383	790307.6	790307.6	83.741 %		11:40:34
3	Y 371.029	647647.1	647647.1	81.641 %		11:40:34
3	Ag 328.068†	-10384.9	-12852.7	-0.4631 ug/L	-0.4631 ppb	11:40:34
3	As 188.979†	-76.2	-67.8	17.826 ug/L	17.826 ppb	11:40:55
3	B 249.677†	381.0	848.0	-12.730 ug/L	-12.730 ppb	11:40:34
3	Ba 233.527†	-612.1	-740.8	0.5358 ug/L	0.5358 ppb	11:40:55
3	Be 313.107†	-4294.1	-742.9	-0.3092 ug/L	-0.3092 ppb	11:40:34
3	Cd 226.502†	1307.7	1777.8	-1.2278 ug/L	-1.2278 ppb	11:40:55
3	Co 228.616†	-21.7	48.5	-1.8059 ug/L	-1.8059 ppb	11:40:55
3	Cr 267.716†	-100.4	-212.9	1.4402 ug/L	1.4402 ppb	11:40:55
3	Cu 324.752†	2843.7	-2741.9	2.1983 ug/L	2.1983 ppb	11:40:34
3	Mn 257.610†	-410.9	-957.8	-2.4696 ug/L	-2.4696 ppb	11:40:34
3	Mo 202.031†	-213.9	-284.9	1.9804 ug/L	1.9804 ppb	11:40:55
3	Ni 231.604†	237.3	185.1	4.3220 ug/L	4.3220 ppb	11:40:55
3	P 214.914†	164.9	-27.0	-35.545 ug/L	-35.545 ppb	11:40:55
3	Pb 220.353†	-857.3	-985.4	-8.4625 ug/L	-8.4625 ppb	11:40:55
3	S 181.975 Axial†	70.4	38.2	-48.585 ug/L	-48.585 ppb	11:40:55
3	Sb 206.836†	73.5	57.2	7.3403 ug/L	7.3403 ppb	11:40:55
3	Se 196.026†	-1037.3	-1208.9	26.261 ug/L	26.261 ppb	11:40:55
3	Si 251.611†	497.2	122.1	3.8203 ug/L	3.8203 ppb	11:40:55
3	Sn 189.927†	-401.8	-484.1	0.0045 ug/L	0.0045 ppb	11:40:55
3	Ti 334.940†	-15696.3	-17331.7	0.1850 ug/L	0.1850 ppb	11:40:34
3	Tl 190.801†	-90.5	-71.6	-20.253 ug/L	-20.253 ppb	11:40:55
3	U 409.014†	-1045.2	477.8	-8.2629 ug/L	-8.2629 ppb	11:40:34
3	V 292.402†	954.4	2625.3	-1.4964 ug/L	-1.4964 ppb	11:40:55
3	Zn 213.857†	3226.9	3063.2	8.2644 ug/L	8.2644 ppb	11:40:55
3	SiO2†	478.7	73.2	5.1196 ug/L	5.1196 ppb	11:41:10

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	790396.0	83.751	%	0.0386				0.05%
Sc Radial	4618.5	88.6	%	1.13				1.27%
Y 371.029	647696.4	81.647	%	0.1025				0.13%
Y RADIAL	4851.3	88.07	%	0.935				1.06%
Ag 328.068†	-12846.0	-0.3681	ug/L	0.26349	-0.3681	ppb	0.26349	71.58%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	688006.0	523910	ug/L	2159.9	523910	ppb	2159.9	0.41%
QC value within limits for Al 396.153Radial Recovery = 104.78%								
As 188.979†	-81.2	12.653	ug/L	5.0560	12.653	ppb	5.0560	39.96%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	877.7	-12.122	ug/L	0.5951	-12.122	ppb	0.5951	4.91%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-729.1	0.6232	ug/L	0.08503	0.6232	ppb	0.08503	13.64%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-711.4	-0.2981	ug/L	0.01726	-0.2981	ppb	0.01726	5.79%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	297944.8	489250	ug/L	2743.1	489250	ppb	2743.1	0.56%

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   QC value within limits for Ca 317.933Radial  Recovery = 97.85%
Cd 226.502†            1791.1     -1.1044 ug/L       0.10812     -1.1044 ppb        0.10812   9.79%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†              53.3     -1.7173 ug/L       0.51041     -1.7173 ppb        0.51041  29.72%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†            -215.1      1.4175 ug/L       0.32622      1.4175 ppb        0.32622  23.01%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†           -2769.8      2.1235 ug/L       0.11749      2.1235 ppb        0.11749   5.53%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†    20814.4      189430 ug/L         477.8      189430 ppb          477.8   0.25%
   QC value within limits for Fe 238.204 Radial  Recovery = 94.72%
K 766.490 Radial†       -42.5     -172.15 ug/L        17.876     -172.15 ppb         17.876  10.38%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†       15046.6      494380 ug/L        2024.7      494380 ppb         2024.7   0.41%
   QC value within limits for Mg 279.077 IEC  Recovery = 98.88%
Mn 257.610†            -920.5     -2.4517 ug/L       0.16315     -2.4517 ppb        0.16315   6.65%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†            -288.0      1.7616 ug/L       0.63614      1.7616 ppb        0.63614  36.11%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†      121.2      34.094 ug/L        7.9397      34.094 ppb         7.9397  23.29%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†             179.1      4.1831 ug/L       0.42405      4.1831 ppb        0.42405  10.14%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†              -21.0     -32.657 ug/L        3.5855     -32.657 ppb         3.5855  10.98%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†            -984.7     -8.7064 ug/L       1.06503     -8.7064 ppb        1.06503  12.23%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†         45.0     -39.603 ug/L       16.4475     -39.603 ppb        16.4475  41.53%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†              49.5      5.0033 ug/L       3.96985      5.0033 ppb        3.96985  79.34%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†           -1206.3      28.111 ug/L        1.7953      28.111 ppb         1.7953   6.39%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†             115.4      3.6239 ug/L       0.20686      3.6239 ppb        0.20686   5.71%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†            -455.2      4.3667 ug/L       3.98581      4.3667 ppb        3.98581  91.28%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†             592.6      0.0247 ug/L       0.09500      0.0247 ppb        0.09500 384.99%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†          -17185.4      0.0812 ug/L       0.14360      0.0812 ppb        0.14360 176.79%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†             -56.8     -16.105 ug/L        4.3769     -16.105 ppb         4.3769  27.18%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              642.5     -3.6907 ug/L       3.98420     -3.6907 ppb        3.98420 107.95%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†             2594.0     -1.6953 ug/L       0.18710     -1.6953 ppb        0.18710  11.04%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†            3067.7      8.2909 ug/L       0.11326      8.2909 ppb        0.11326   1.37%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                   51.2      3.7400 ug/L       2.46661      3.7400 ppb        2.46661  65.95%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 10
Sample ID: ICSAB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 14
Date Collected: 1/20/2010 11:43:21
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICSAB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4594.0	4594.0	88.1	%			11:45:18
1	Y RADIAL	4831.1	4831.1	87.70	%			11:45:18
1	Al 396.153Radial†	616850.9	700270.5	533220	ug/L	533220	ppb	11:45:13
1	Ca 317.933Radial†	266405.0	302420.1	496600	ug/L	496600	ppb	11:45:13
1	Fe 238.204 Radial†	18693.2	21210.5	193050	ug/L	193050	ppb	11:45:18
1	K 766.490 Radial†	27052.5	27928.3	5415.3	ug/L	5415.3	ppb	11:45:13
1	Mg 279.077 IEC†	13401.2	15209.2	499720	ug/L	499720	ppb	11:45:18
1	Na 589.592 Radial†	16637.3	20120.2	5660.6	ug/L	5660.6	ppb	11:45:18
1	Sr 421.552†	72082.4	81828.7	504.12	ug/L	504.12	ppb	11:45:13
1	Sc 361.383	803231.3	803231.3	85.111	%			11:45:46
1	Y 371.029	657680.4	657680.4	82.906	%			11:45:46
1	Ag 328.068†	44240.5	51528.5	278.56	ug/L	278.56	ppb	11:45:46
1	As 188.979†	1037.7	1242.5	530.84	ug/L	530.84	ppb	11:46:06
1	B 249.677†	21750.0	25948.0	518.54	ug/L	518.54	ppb	11:45:46
1	Ba 233.527†	59757.9	70202.2	505.51	ug/L	505.51	ppb	11:45:46
1	Be 313.107†	619945.9	732785.7	249.36	ug/L	249.36	ppb	11:45:46
1	Cd 226.502†	41258.6	48692.7	482.21	ug/L	482.21	ppb	11:45:46
1	Co 228.616†	20445.8	24097.0	454.48	ug/L	454.48	ppb	11:46:06
1	Cr 267.716†	39428.8	46233.6	494.42	ug/L	494.42	ppb	11:45:46
1	Cu 324.752†	171992.1	195943.2	568.31	ug/L	568.31	ppb	11:45:46
1	Mn 257.610†	410008.5	481269.3	489.87	ug/L	489.87	ppb	11:45:46
1	Mo 202.031†	6315.5	7391.0	502.39	ug/L	502.39	ppb	11:46:06
1	Ni 231.604†	16847.7	19696.8	459.81	ug/L	459.81	ppb	11:46:06
1	P 214.914†	4197.0	4707.3	2464.7	ug/L	2464.7	ppb	11:46:06
1	Pb 220.353†	2683.0	3190.7	467.76	ug/L	467.76	ppb	11:46:06
1	S 181.975 Axial†	1839.9	2115.9	2657.7	ug/L	2657.7	ppb	11:46:06
1	Sb 206.836†	1508.2	1741.5	561.06	ug/L	561.06	ppb	11:46:06
1	Se 196.026†	2750.5	3261.6	2684.5	ug/L	2684.5	ppb	11:46:06
1	Si 251.611†	155435.9	182156.6	5350.9	ug/L	5350.9	ppb	11:45:46
1	Sn 189.927†	2262.1	2653.6	505.22	ug/L	505.22	ppb	11:46:06
1	Ti 334.940†	284609.9	335812.4	516.55	ug/L	516.55	ppb	11:45:46
1	Tl 190.801†	1364.5	1639.6	461.27	ug/L	461.27	ppb	11:46:06
1	U 409.014†	14849.7	19173.4	511.07	ug/L	511.07	ppb	11:45:46
1	V 292.402†	69645.0	83314.6	520.10	ug/L	520.10	ppb	11:45:46
1	Zn 213.857†	52881.3	61342.2	511.15	ug/L	511.15	ppb	11:45:46
1	SiO2†	155863.7	182632.4	11498	ug/L	11498	ppb	11:47:04
2	Sc Radial	4618.5	4618.5	88.6	%			11:45:29
2	Y RADIAL	4851.5	4851.5	88.07	%			11:45:29
2	Al 396.153Radial†	617764.5	697585.3	531180	ug/L	531180	ppb	11:45:24
2	Ca 317.933Radial†	267482.8	302031.8	495960	ug/L	495960	ppb	11:45:24
2	Fe 238.204 Radial†	18863.3	21290.0	193780	ug/L	193780	ppb	11:45:29
2	K 766.490 Radial†	27169.2	27897.1	5409.2	ug/L	5409.2	ppb	11:45:24
2	Mg 279.077 IEC†	13516.9	15259.2	501360	ug/L	501360	ppb	11:45:29
2	Na 589.592 Radial†	16904.4	20321.6	5717.2	ug/L	5717.2	ppb	11:45:29
2	Sr 421.552†	72410.5	81764.9	503.73	ug/L	503.73	ppb	11:45:24
2	Sc 361.383	803170.1	803170.1	85.104	%			11:46:12
2	Y 371.029	657571.2	657571.2	82.892	%			11:46:12
2	Ag 328.068†	44632.5	51993.1	280.81	ug/L	280.81	ppb	11:46:12
2	As 188.979†	1041.3	1246.8	532.70	ug/L	532.70	ppb	11:46:33
2	B 249.677†	21978.1	26218.0	524.16	ug/L	524.16	ppb	11:46:12
2	Ba 233.527†	60058.3	70560.6	508.08	ug/L	508.08	ppb	11:46:12
2	Be 313.107†	622613.5	735975.7	250.45	ug/L	250.45	ppb	11:46:12
2	Cd 226.502†	41360.2	48815.8	483.40	ug/L	483.40	ppb	11:46:12
2	Co 228.616†	20425.9	24075.5	454.06	ug/L	454.06	ppb	11:46:33
2	Cr 267.716†	39525.4	46350.7	495.68	ug/L	495.68	ppb	11:46:12
2	Cu 324.752†	172757.9	196858.4	570.96	ug/L	570.96	ppb	11:46:12
2	Mn 257.610†	411593.4	483168.3	491.81	ug/L	491.81	ppb	11:46:12
2	Mo 202.031†	6312.3	7387.8	502.24	ug/L	502.24	ppb	11:46:33
2	Ni 231.604†	16858.1	19710.5	460.13	ug/L	460.13	ppb	11:46:33

2	P 214.914†	4192.9	4702.8	2460.7	ug/L	2460.7 ppb	11:46:33
2	Pb 220.353†	2658.1	3161.7	463.95	ug/L	463.95 ppb	11:46:33
2	S 181.975 Axial†	1846.0	2123.2	2667.6	ug/L	2667.6 ppb	11:46:33
2	Sb 206.836†	1498.0	1729.6	557.40	ug/L	557.40 ppb	11:46:33
2	Se 196.026†	2721.9	3228.1	2667.0	ug/L	2667.0 ppb	11:46:33
2	Si 251.611†	155889.3	182703.4	5366.9	ug/L	5366.9 ppb	11:46:12
2	Sn 189.927†	2280.0	2674.8	508.54	ug/L	508.54 ppb	11:46:33
2	Ti 334.940†	285843.2	337287.1	518.49	ug/L	518.49 ppb	11:46:12
2	Tl 190.801†	1342.3	1613.8	454.08	ug/L	454.08 ppb	11:46:33
2	U 409.014†	14764.8	19075.1	508.25	ug/L	508.25 ppb	11:46:12
2	V 292.402†	69824.3	83531.4	521.40	ug/L	521.40 ppb	11:46:12
2	Zn 213.857†	53108.8	61614.3	513.44	ug/L	513.44 ppb	11:46:12
2	SiO2†	157664.0	184761.8	11632	ug/L	11632 ppb	11:47:09
3	Sc Radial	4576.8	4576.8	87.8	%		11:45:39
3	Y RADIAL	4817.2	4817.2	87.45	%		11:45:39
3	Al 396.153Radial†	615552.0	701415.2	534100	ug/L	534100 ppb	11:45:34
3	Ca 317.933Radial†	266876.7	304091.1	499340	ug/L	499340 ppb	11:45:34
3	Fe 238.204 Radial†	18601.4	21185.5	192820	ug/L	192820 ppb	11:45:39
3	K 766.490 Radial†	27079.7	28074.5	5443.6	ug/L	5443.6 ppb	11:45:34
3	Mg 279.077 IEC†	13390.3	15253.9	501190	ug/L	501190 ppb	11:45:39
3	Na 589.592 Radial†	16582.3	20128.3	5662.8	ug/L	5662.8 ppb	11:45:39
3	Sr 421.552†	72095.3	82150.2	506.10	ug/L	506.10 ppb	11:45:34
3	Sc 361.383	810195.0	810195.0	85.848	%		11:46:39
3	Y 371.029	663286.2	663286.2	83.613	%		11:46:39
3	Ag 328.068†	44791.3	51723.3	279.30	ug/L	279.30 ppb	11:46:39
3	As 188.979†	1077.5	1278.3	544.73	ug/L	544.73 ppb	11:46:59
3	B 249.677†	22086.4	26120.3	522.25	ug/L	522.25 ppb	11:46:39
3	Ba 233.527†	60255.1	70177.9	505.33	ug/L	505.33 ppb	11:46:39
3	Be 313.107†	626701.0	734393.7	249.91	ug/L	249.91 ppb	11:46:39
3	Cd 226.502†	41682.7	48770.1	483.02	ug/L	483.02 ppb	11:46:39
3	Co 228.616†	20393.8	23829.9	449.40	ug/L	449.40 ppb	11:46:59
3	Cr 267.716†	39728.6	46184.7	493.90	ug/L	493.90 ppb	11:46:39
3	Cu 324.752†	173772.8	196280.4	569.27	ug/L	569.27 ppb	11:46:39
3	Mn 257.610†	414166.7	481972.4	490.51	ug/L	490.51 ppb	11:46:39
3	Mo 202.031†	6305.8	7315.9	497.52	ug/L	497.52 ppb	11:46:59
3	Ni 231.604†	16820.8	19495.2	455.10	ug/L	455.10 ppb	11:46:59
3	P 214.914†	4184.8	4650.8	2433.8	ug/L	2433.8 ppb	11:46:59
3	Pb 220.353†	2692.1	3174.2	466.14	ug/L	466.14 ppb	11:46:59
3	S 181.975 Axial†	1846.6	2105.2	2643.5	ug/L	2643.5 ppb	11:46:59
3	Sb 206.836†	1492.4	1707.8	550.18	ug/L	550.18 ppb	11:46:59
3	Se 196.026†	2725.5	3204.6	2650.2	ug/L	2650.2 ppb	11:46:59
3	Si 251.611†	157071.7	182492.4	5360.8	ug/L	5360.8 ppb	11:46:39
3	Sn 189.927†	2272.8	2643.2	503.96	ug/L	503.96 ppb	11:46:59
3	Ti 334.940†	287597.6	336418.5	517.69	ug/L	517.69 ppb	11:46:39
3	Tl 190.801†	1325.2	1580.1	444.68	ug/L	444.68 ppb	11:46:59
3	U 409.014†	14641.7	18781.3	500.17	ug/L	500.17 ppb	11:46:39
3	V 292.402†	70191.6	83247.9	519.65	ug/L	519.65 ppb	11:46:39
3	Zn 213.857†	53511.2	61541.9	512.94	ug/L	512.94 ppb	11:46:39
3	SiO2†	155763.1	180941.2	11391	ug/L	11391 ppb	11:47:15

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	805532.2	85.354	%	0.4279				0.50%
Sc Radial	4596.4	88.1	%	0.40				0.46%
Y 371.029	659512.6	83.137	%	0.4120				0.50%
Y RADIAL	4833.3	87.74	%	0.313				0.36%
Ag 328.068†	51748.3	279.56	ug/L	1.145	279.56	ppb	1.145	0.41%
QC value within limits for Ag 328.068 Recovery = 111.82%								
Al 396.153Radial†	699757.0	532830	ug/L	1497.1	532830	ppb	1497.1	0.28%
QC value within limits for Al 396.153Radial Recovery = 106.57%								
As 188.979†	1255.9	536.09	ug/L	7.541	536.09	ppb	7.541	1.41%
QC value within limits for As 188.979 Recovery = 107.22%								
B 249.677†	26095.4	521.65	ug/L	2.857	521.65	ppb	2.857	0.55%
QC value within limits for B 249.677 Recovery = 104.33%								
Ba 233.527†	70313.6	506.31	ug/L	1.538	506.31	ppb	1.538	0.30%
QC value within limits for Ba 233.527 Recovery = 101.26%								
Be 313.107†	734385.0	249.91	ug/L	0.543	249.91	ppb	0.543	0.22%
QC value within limits for Be 313.107 Recovery = 99.96%								
Ca 317.933Radial†	302847.7	497300	ug/L	1796.8	497300	ppb	1796.8	0.36%

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   QC value within limits for Ca 317.933Radial  Recovery = 99.46%
Cd 226.502†            48759.5      482.87 ug/L         0.610      482.87 ppb          0.610   0.13%
   QC value within limits for Cd 226.502  Recovery = 96.57%
Co 228.616†            24000.8      452.65 ug/L         2.817      452.65 ppb          2.817   0.62%
   QC value within limits for Co 228.616  Recovery = 90.53%
Cr 267.716†            46256.3      494.67 ug/L         0.914      494.67 ppb          0.914   0.18%
   QC value within limits for Cr 267.716  Recovery = 98.93%
Cu 324.752†           196360.7      569.51 ug/L         1.341      569.51 ppb          1.341   0.24%
   QC value within limits for Cu 324.752  Recovery = 113.90%
Fe 238.204 Radial†     21228.7      193220 ug/L         496.9      193220 ppb          496.9   0.26%
   QC value within limits for Fe 238.204 Radial  Recovery = 96.61%
K 766.490 Radial†      27966.6      5422.7 ug/L         18.34      5422.7 ppb          18.34   0.34%
   QC value within limits for K 766.490 Radial  Recovery = 108.45%
Mg 279.077 IEC†        15240.8      500760 ug/L         902.6      500760 ppb          902.6   0.18%
   QC value within limits for Mg 279.077 IEC  Recovery = 100.15%
Mn 257.610†           482136.7      490.73 ug/L         0.991      490.73 ppb          0.991   0.20%
   QC value within limits for Mn 257.610  Recovery = 98.15%
Mo 202.031†             7364.9      500.72 ug/L         2.772      500.72 ppb          2.772   0.55%
   QC value within limits for Mo 202.031  Recovery = 100.14%
Na 589.592 Radial†     20190.0      5680.2 ug/L         32.07      5680.2 ppb          32.07   0.56%
   QC value within limits for Na 589.592 Radial  Recovery = 113.60%
Ni 231.604†            19634.2      458.35 ug/L         2.814      458.35 ppb          2.814   0.61%
   QC value within limits for Ni 231.604  Recovery = 91.67%
P 214.914†              4686.9      2453.0 ug/L         16.82      2453.0 ppb          16.82   0.69%
   QC value within limits for P 214.914  Recovery = 98.12%
Pb 220.353†             3175.5      465.95 ug/L         1.911      465.95 ppb          1.911   0.41%
   QC value within limits for Pb 220.353  Recovery = 93.19%
S 181.975 Axial†        2114.8      2656.3 ug/L         12.08      2656.3 ppb          12.08   0.45%
   QC value within limits for S 181.975 Axial  Recovery = 106.25%
Sb 206.836†             1726.3      556.21 ug/L         5.535      556.21 ppb          5.535   1.00%
   QC value within limits for Sb 206.836  Recovery = 111.24%
Se 196.026†             3231.4      2667.2 ug/L         17.18      2667.2 ppb          17.18   0.64%
   QC value within limits for Se 196.026  Recovery = 106.69%
Si 251.611†           182450.8      5359.5 ug/L          8.11      5359.5 ppb           8.11   0.15%
   QC value within limits for Si 251.611  Recovery = 107.19%
Sn 189.927†             2657.2      505.90 ug/L         2.367      505.90 ppb          2.367   0.47%
   QC value within limits for Sn 189.927  Recovery = 101.18%
Sr 421.552†            81914.6      504.65 ug/L         1.268      504.65 ppb          1.268   0.25%
   QC value within limits for Sr 421.552  Recovery = 100.93%
Ti 334.940†           336506.0      517.58 ug/L         0.974      517.58 ppb          0.974   0.19%
   QC value within limits for Ti 334.940  Recovery = 103.52%
Tl 190.801†             1611.2      453.34 ug/L         8.323      453.34 ppb          8.323   1.84%
   QC value within limits for Tl 190.801  Recovery = 90.67%
U 409.014†             19009.9      506.50 ug/L         5.656      506.50 ppb          5.656   1.12%
   QC value within limits for U 409.014  Recovery = 101.30%
V 292.402†             83364.6      520.38 ug/L         0.910      520.38 ppb          0.910   0.17%
   QC value within limits for V 292.402  Recovery = 104.08%
Zn 213.857†            61499.4      512.51 ug/L         1.204      512.51 ppb          1.204   0.23%
   QC value within limits for Zn 213.857  Recovery = 102.50%
SiO2†                 182778.5       11507 ug/L         120.6       11507 ppb          120.6   1.05%
   QC value within limits for SiO2  Recovery = 107.59%
All analyte(s) passed QC.
```

Sequence No.: 11
Sample ID: LR1
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 15
Date Collected: 1/20/2010 11:49:25
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4578.4	4578.4	87.8	%			11:51:23
1	Y RADIAL	4816.9	4816.9	87.44	%			11:51:23
1	Al 396.153Radial†	585845.8	667330.7	508170	ug/L	508170	ppb	11:51:18
1	Ca 317.933Radial†	254139.6	289475.6	475340	ug/L	475340	ppb	11:51:18
1	Fe 238.204 Radial†	43024.9	48999.1	445950	ug/L	445950	ppb	11:51:23
1	K 766.490 Radial†	2532.8	102.0	-338.10	ug/L	-338.10	ppb	11:51:18
1	Mg 279.077 IEC†	12919.6	14712.4	483120	ug/L	483120	ppb	11:51:23
1	Na 589.592 Radial†	1595119.8	1818250.2	511540	ug/L	511540	ppb	11:51:18
1	Sr 421.552†	735.7	834.9	1.6321	ug/L	1.6321	ppb	11:51:23
1	Sc 361.383	785750.4	785750.4	83.258	%			11:51:51
1	Y 371.029	644741.8	644741.8	81.275	%			11:51:51
1	Ag 328.068†	-24486.1	-29861.4	-2.2248	ug/L	-2.2248	ppb	11:51:51
1	As 188.979†	-208.0	-226.6	16.327	ug/L	16.327	ppb	11:52:11
1	B 249.677†	1482.4	2173.4	-26.268	ug/L	-26.268	ppb	11:51:51
1	Ba 233.527†	-1680.6	-2028.4	-0.7718	ug/L	-0.7718	ppb	11:52:11
1	Be 313.107†	-11199.6	-9066.8	-3.1287	ug/L	-3.1287	ppb	11:51:51
1	Cd 226.502†	3342.2	4230.5	0.4375	ug/L	0.4375	ppb	11:52:11
1	Co 228.616†	196.2	310.0	-0.6112	ug/L	-0.6112	ppb	11:52:11
1	Cr 267.716†	55.0	-26.9	2.5095	ug/L	2.5095	ppb	11:52:11
1	Cu 324.752†	-123.2	-6285.7	-2.5648	ug/L	-2.5648	ppb	11:51:51
1	Mn 257.610†	-25693.1	-31326.6	-7.7042	ug/L	-7.7042	ppb	11:51:51
1	Mo 202.031†	-512.3	-644.7	-1.7283	ug/L	-1.7283	ppb	11:52:11
1	Ni 231.604†	306.1	269.3	6.2867	ug/L	6.2867	ppb	11:52:11
1	P 214.914†	584.0	477.5	33.471	ug/L	33.471	ppb	11:52:11
1	Pb 220.353†	-594.1	-675.2	-1.7848	ug/L	-1.7848	ppb	11:52:11
1	S 181.975 Axial†	100.7	75.0	2.5456	ug/L	2.5456	ppb	11:52:11
1	Sb 206.836†	54.4	34.8	6.6311	ug/L	6.6311	ppb	11:52:11
1	Se 196.026†	-2351.8	-2794.9	-10.111	ug/L	-10.111	ppb	11:52:11
1	Si 251.611†	-526.8	-1104.3	-31.957	ug/L	-31.957	ppb	11:52:11
1	Sn 189.927†	-413.3	-500.7	-0.7361	ug/L	-0.7361	ppb	11:52:11
1	Ti 334.940†	-15488.3	-17190.6	-7.4365	ug/L	-7.4365	ppb	11:51:51
1	Tl 190.801†	-120.3	-108.1	-30.614	ug/L	-30.614	ppb	11:52:11
1	U 409.014†	444245.9	535301.7	14863	ug/L	14863	ppb	11:51:51
1	V 292.402†	2497.8	4485.8	0.9795	ug/L	0.9795	ppb	11:51:51
1	Zn 213.857†	5972.5	6383.1	12.246	ug/L	12.246	ppb	11:52:11
1	SiO2†	-535.8	-1142.0	-70.830	ug/L	-70.830	ppb	11:53:08
2	Sc Radial	4554.9	4554.9	87.3	%			11:51:33
2	Y RADIAL	4814.6	4814.6	87.40	%			11:51:33
2	Al 396.153Radial†	585070.9	669888.8	510110	ug/L	510110	ppb	11:51:28
2	Ca 317.933Radial†	254383.4	291249.4	478260	ug/L	478260	ppb	11:51:28
2	Fe 238.204 Radial†	42902.4	49111.9	446970	ug/L	446970	ppb	11:51:33
2	K 766.490 Radial†	2449.6	21.6	-355.90	ug/L	-355.90	ppb	11:51:28
2	Mg 279.077 IEC†	12919.7	14788.4	485620	ug/L	485620	ppb	11:51:33
2	Na 589.592 Radial†	1592887.6	1825075.1	513460	ug/L	513460	ppb	11:51:28
2	Sr 421.552†	739.7	843.9	1.6659	ug/L	1.6659	ppb	11:51:33
2	Sc 361.383	779973.3	779973.3	82.646	%			11:52:17
2	Y 371.029	640173.8	640173.8	80.699	%			11:52:17
2	Ag 328.068†	-24347.2	-29911.1	-2.1577	ug/L	-2.1577	ppb	11:52:17
2	As 188.979†	-192.3	-209.5	23.228	ug/L	23.228	ppb	11:52:37
2	B 249.677†	1550.7	2269.3	-24.400	ug/L	-24.400	ppb	11:52:17
2	Ba 233.527†	-1689.7	-2054.4	-0.9257	ug/L	-0.9257	ppb	11:52:37
2	Be 313.107†	-11204.9	-9172.8	-3.1655	ug/L	-3.1655	ppb	11:52:17
2	Cd 226.502†	3402.5	4333.2	1.3926	ug/L	1.3926	ppb	11:52:37
2	Co 228.616†	233.1	356.4	0.2582	ug/L	0.2582	ppb	11:52:37
2	Cr 267.716†	57.1	-23.9	2.5553	ug/L	2.5553	ppb	11:52:37
2	Cu 324.752†	-269.8	-6464.1	-3.0266	ug/L	-3.0266	ppb	11:52:17
2	Mn 257.610†	-25455.0	-31267.1	-7.6442	ug/L	-7.6442	ppb	11:52:17
2	Mo 202.031†	-490.5	-622.8	-0.1882	ug/L	-0.1882	ppb	11:52:37
2	Ni 231.604†	314.8	282.6	6.5958	ug/L	6.5958	ppb	11:52:37

2	P 214.914†	597.7	499.2	45.181	ug/L	45.181 ppb	11:52:37
2	Pb 220.353†	-601.6	-689.7	-3.0436	ug/L	-3.0436 ppb	11:52:37
2	S 181.975 Axial†	85.6	57.7	-20.374	ug/L	-20.374 ppb	11:52:37
2	Sb 206.836†	36.8	13.9	-0.0430	ug/L	-0.0430 ppb	11:52:37
2	Se 196.026†	-2371.8	-2840.0	-32.842	ug/L	-32.842 ppb	11:52:37
2	Si 251.611†	-502.1	-1079.2	-31.236	ug/L	-31.236 ppb	11:52:37
2	Sn 189.927†	-425.5	-519.1	-3.2367	ug/L	-3.2367 ppb	11:52:37
2	Ti 334.940†	-15595.2	-17457.8	-7.6467	ug/L	-7.6467 ppb	11:52:17
2	Tl 190.801†	-119.1	-107.6	-30.495	ug/L	-30.495 ppb	11:52:37
2	U 409.014†	441386.3	535793.7	14876	ug/L	14876 ppb	11:52:17
2	V 292.402†	2441.0	4439.2	0.6279	ug/L	0.6279 ppb	11:52:17
2	Zn 213.857†	6038.7	6516.4	13.305	ug/L	13.305 ppb	11:52:37
2	SiO2†	-648.8	-1283.6	-79.793	ug/L	-79.793 ppb	11:53:13
3	Sc Radial	4535.6	4535.6	87.0	%		11:51:44
3	Y RADIAL	4786.5	4786.5	86.89	%		11:51:44
3	Al 396.153Radial†	588524.2	676708.8	515310	ug/L	515310 ppb	11:51:39
3	Ca 317.933Radial†	254380.0	292484.3	480280	ug/L	480280 ppb	11:51:39
3	Fe 238.204 Radial†	42870.2	49283.8	448540	ug/L	448540 ppb	11:51:44
3	K 766.490 Radial†	2532.2	128.5	-336.30	ug/L	-336.30 ppb	11:51:39
3	Mg 279.077 IEC†	12859.9	14782.6	485430	ug/L	485430 ppb	11:51:44
3	Na 589.592 Radial†	1594888.0	1835132.4	516290	ug/L	516290 ppb	11:51:39
3	Sr 421.552†	761.8	872.8	1.8304	ug/L	1.8304 ppb	11:51:44
3	Sc 361.383	782610.9	782610.9	82.926	%		11:52:42
3	Y 371.029	642936.5	642936.5	81.047	%		11:52:42
3	Ag 328.068†	-24497.8	-29993.5	-2.0361	ug/L	-2.0361 ppb	11:52:42
3	As 188.979†	-201.7	-220.0	19.507	ug/L	19.507 ppb	11:53:03
3	B 249.677†	1408.7	2091.8	-28.425	ug/L	-28.425 ppb	11:52:42
3	Ba 233.527†	-1658.9	-2010.3	-0.5658	ug/L	-0.5658 ppb	11:53:03
3	Be 313.107†	-11174.8	-9090.8	-3.1383	ug/L	-3.1383 ppb	11:52:42
3	Cd 226.502†	3369.6	4279.7	0.6805	ug/L	0.6805 ppb	11:53:03
3	Co 228.616†	221.5	341.5	-0.0485	ug/L	-0.0485 ppb	11:53:03
3	Cr 267.716†	41.0	-43.5	2.3763	ug/L	2.3763 ppb	11:53:03
3	Cu 324.752†	-234.4	-6420.3	-2.8210	ug/L	-2.8210 ppb	11:52:42
3	Mn 257.610†	-25677.4	-31431.5	-7.6496	ug/L	-7.6496 ppb	11:52:42
3	Mo 202.031†	-501.0	-633.5	-0.7363	ug/L	-0.7363 ppb	11:53:03
3	Ni 231.604†	323.5	291.8	6.8117	ug/L	6.8117 ppb	11:53:03
3	P 214.914†	581.3	477.0	32.997	ug/L	32.997 ppb	11:53:03
3	Pb 220.353†	-611.5	-699.0	-3.1126	ug/L	-3.1126 ppb	11:53:03
3	S 181.975 Axial†	104.0	79.5	7.0666	ug/L	7.0666 ppb	11:53:03
3	Sb 206.836†	54.3	34.9	6.5905	ug/L	6.5905 ppb	11:53:03
3	Se 196.026†	-2365.3	-2822.4	-16.246	ug/L	-16.246 ppb	11:53:03
3	Si 251.611†	-469.5	-1037.8	-30.010	ug/L	-30.010 ppb	11:53:03
3	Sn 189.927†	-401.5	-488.4	2.0400	ug/L	2.0400 ppb	11:53:03
3	Ti 334.940†	-15795.2	-17635.3	-7.6204	ug/L	-7.6204 ppb	11:52:42
3	Tl 190.801†	-111.3	-97.8	-27.750	ug/L	-27.750 ppb	11:53:03
3	U 409.014†	442993.2	535931.6	14880	ug/L	14880 ppb	11:52:42
3	V 292.402†	2411.1	4393.3	0.1011	ug/L	0.1011 ppb	11:52:42
3	Zn 213.857†	5998.4	6443.2	12.515	ug/L	12.515 ppb	11:53:03
3	SiO2†	-475.8	-1072.3	-66.457	ug/L	-66.457 ppb	11:53:18

Mean Data: LR1

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	782778.2	82.943	%	0.3065				0.37%
Sc Radial	4556.3	87.4	%	0.41				0.47%
Y 371.029	642617.4	81.007	%	0.2900				0.36%
Y RADIAL	4806.0	87.24	%	0.307				0.35%
Ag 328.068†	-29922.0	-2.1395	ug/L	0.09566	-2.1395	ppb	0.09566	4.47%
Al 396.153Radial†	671309.5	511200	ug/L	3691.5	511200	ppb	3691.5	0.72%
QC value within limits for Al 396.153Radial Recovery = 102.24%								
As 188.979†	-218.7	19.687	ug/L	3.4538	19.687	ppb	3.4538	17.54%
B 249.677†	2178.2	-26.364	ug/L	2.0142	-26.364	ppb	2.0142	7.64%
Ba 233.527†	-2031.0	-0.7544	ug/L	0.18057	-0.7544	ppb	0.18057	23.93%
Be 313.107†	-9110.1	-3.1441	ug/L	0.01909	-3.1441	ppb	0.01909	0.61%
Ca 317.933Radial†	291069.8	477960	ug/L	2483.4	477960	ppb	2483.4	0.52%
QC value within limits for Ca 317.933Radial Recovery = 95.59%								
Cd 226.502†	4281.1	0.8369	ug/L	0.49635	0.8369	ppb	0.49635	59.31%
Co 228.616†	336.0	-0.1338	ug/L	0.44093	-0.1338	ppb	0.44093	329.43%
Cr 267.716†	-31.5	2.4804	ug/L	0.09294	2.4804	ppb	0.09294	3.75%
Cu 324.752†	-6390.0	-2.8041	ug/L	0.23134	-2.8041	ppb	0.23134	8.25%

Fe 238.204 Radial†	49131.6	447150	ug/L	1304.8	447150	ppb	1304.8	0.29%
QC value less than the lower limit for Fe 238.204 Radial Recovery = 89.43%								
K 766.490 Radial†	84.0	-343.44	ug/L	10.834	-343.44	ppb	10.834	3.15%
Mg 279.077 IEC†	14761.1	484720	ug/L	1389.2	484720	ppb	1389.2	0.29%
QC value within limits for Mg 279.077 IEC Recovery = 96.94%								
Mn 257.610†	-31341.7	-7.6660	ug/L	0.03316	-7.6660	ppb	0.03316	0.43%
Mo 202.031†	-633.7	-0.8843	ug/L	0.78065	-0.8843	ppb	0.78065	88.28%
Na 589.592 Radial†	1826152.6	513760	ug/L	2389.3	513760	ppb	2389.3	0.47%
QC value within limits for Na 589.592 Radial Recovery = 102.75%								
Ni 231.604†	281.2	6.5647	ug/L	0.26386	6.5647	ppb	0.26386	4.02%
P 214.914†	484.6	37.216	ug/L	6.9017	37.216	ppb	6.9017	18.55%
Pb 220.353†	-688.0	-2.6470	ug/L	0.74749	-2.6470	ppb	0.74749	28.24%
S 181.975 Axial†	70.8	-3.5873	ug/L	14.71246	-3.5873	ppb	14.71246	410.13%
Sb 206.836†	27.9	4.3929	ug/L	3.84166	4.3929	ppb	3.84166	87.45%
Se 196.026†	-2819.1	-19.733	ug/L	11.7599	-19.733	ppb	11.7599	59.60%
Si 251.611†	-1073.7	-31.068	ug/L	0.9844	-31.068	ppb	0.9844	3.17%
Sn 189.927†	-502.7	-0.6443	ug/L	2.63954	-0.6443	ppb	2.63954	409.70%
Sr 421.552†	850.5	1.7095	ug/L	0.10609	1.7095	ppb	0.10609	6.21%
Ti 334.940†	-17427.9	-7.5679	ug/L	0.11454	-7.5679	ppb	0.11454	1.51%
Tl 190.801†	-104.5	-29.620	ug/L	1.6201	-29.620	ppb	1.6201	5.47%
U 409.014†	535675.7	14873	ug/L	9.1	14873	ppb	9.1	0.06%
QC value within limits for U 409.014 Recovery = 99.15%								
V 292.402†	4439.4	0.5695	ug/L	0.44206	0.5695	ppb	0.44206	77.62%
Zn 213.857†	6447.6	12.689	ug/L	0.5504	12.689	ppb	0.5504	4.34%
SiO2†	-1165.9	-72.360	ug/L	6.7986	-72.360	ppb	6.7986	9.40%

QC Failed. Continue with analysis.

Sequence No.: 12
Sample ID: LR2
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 16
Date Collected: 1/20/2010 11:55:27
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR2

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5004.5	5004.5	96.0	%			11:57:25
1	Y RADIAL	5259.2	5259.2	95.47	%			11:57:25
1	Al 396.153Radial†	603.5	616.6	-7.9909	ug/L	-7.9909	ppb	11:57:25
1	Ca 317.933Radial†	29.1	12.9	21.132	ug/L	21.132	ppb	11:57:45
1	Fe 238.204 Radial†	-21.7	-33.7	-18.583	ug/L	-18.583	ppb	11:57:45
1	K 766.490 Radial†	1420225.4	1477266.6	295370	ug/L	295370	ppb	11:57:20
1	Mg 279.077 IEC†	-5.8	-10.5	-241.58	ug/L	-241.58	ppb	11:57:45
1	Na 589.592 Radial†	-589.7	618.1	173.89	ug/L	173.89	ppb	11:57:25
1	Sr 421.552†	1449002.3	1510035.7	9371.3	ug/L	9371.3	ppb	11:57:20
1	Sc 361.383	874159.4	874159.4	92.626	%			11:59:02
1	Y 371.029	714717.4	714717.4	90.096	%			11:59:02
1	Ag 328.068†	-7613.6	-8671.3	3.7298	ug/L	3.7298	ppb	11:59:08
1	As 188.979†	24074.3	26014.1	10165	ug/L	10165	ppb	11:59:08
1	B 249.677†	223259.0	241425.5	5101.0	ug/L	5101.0	ppb	11:59:02
1	Ba 233.527†	1880178.4	2029848.3	14435	ug/L	14435	ppb	11:59:02
1	Be 313.107†	7994076.6	8634864.7	2947.9	ug/L	2947.9	ppb	11:58:56
1	Cd 226.502†	885383.0	956084.0	9858.2	ug/L	9858.2	ppb	11:59:02
1	Co 228.616†	469512.4	506964.3	9616.0	ug/L	9616.0	ppb	11:59:08
1	Cr 267.716†	2128254.3	2297590.2	24372	ug/L	24372	ppb	11:59:02
1	Cu 324.752†	6717047.0	7245649.0	20648	ug/L	20648	ppb	11:58:56
1	Mn 257.610†	8782023.8	9480687.9	9677.2	ug/L	9677.2	ppb	11:58:56
1	Mo 202.031†	140038.4	151157.4	9847.5	ug/L	9847.5	ppb	11:59:08
1	Ni 231.604†	395201.4	426564.7	9958.0	ug/L	9958.0	ppb	11:59:02
1	P 214.914†	31144.8	33400.3	14404	ug/L	14404	ppb	11:59:08
1	Pb 220.353†	202021.8	218142.9	24764	ug/L	24764	ppb	11:59:08
1	S 181.975 Axial†	36938.3	39833.1	51914	ug/L	51914	ppb	11:59:08
1	Sb 206.836†	30705.8	33119.7	10901	ug/L	10901	ppb	11:59:08
1	Se 196.026†	15948.1	17247.6	10224	ug/L	10224	ppb	11:59:08
1	Si 251.611†	1531618.9	1653078.5	48492	ug/L	48492	ppb	11:59:02
1	Sn 189.927†	60368.2	65169.9	10474	ug/L	10474	ppb	11:59:08
1	Ti 334.940†	6310461.0	6814244.8	9958.4	ug/L	9958.4	ppb	11:58:56
1	Tl 190.801†	32170.1	34767.6	9776.2	ug/L	9776.2	ppb	11:59:08
1	U 409.014†	-672.3	1000.1	-26.611	ug/L	-26.611	ppb	11:59:08
1	V 292.402†	1472888.3	1591629.6	10272	ug/L	10272	ppb	11:59:02
1	Zn 213.857†	1527809.3	1648646.9	14249	ug/L	14249	ppb	11:59:02
1	SiO2†	1567034.5	1691286.7	106330	ug/L	106330	ppb	11:59:55
2	Sc Radial	4977.8	4977.8	95.4	%			11:57:56
2	Y RADIAL	5219.9	5219.9	94.76	%			11:57:56
2	Al 396.153Radial†	588.7	604.5	-19.842	ug/L	-19.842	ppb	11:57:56
2	Ca 317.933Radial†	34.8	19.0	31.147	ug/L	31.147	ppb	11:58:16
2	Fe 238.204 Radial†	-18.1	-29.9	16.810	ug/L	16.810	ppb	11:58:16
2	K 766.490 Radial†	1424909.5	1490124.3	297940	ug/L	297940	ppb	11:57:51
2	Mg 279.077 IEC†	-2.9	-7.5	-143.26	ug/L	-143.26	ppb	11:58:16
2	Na 589.592 Radial†	-584.6	620.1	174.46	ug/L	174.46	ppb	11:57:56
2	Sr 421.552†	1456067.9	1525549.8	9467.6	ug/L	9467.6	ppb	11:57:51
2	Sc 361.383	882585.0	882585.0	93.519	%			11:59:22
2	Y 371.029	722161.3	722161.3	91.034	%			11:59:22
2	Ag 328.068†	-7710.1	-8696.0	3.6174	ug/L	3.6174	ppb	11:59:27
2	As 188.979†	24545.4	26269.7	10263	ug/L	10263	ppb	11:59:27
2	B 249.677†	225245.5	241248.6	5097.1	ug/L	5097.1	ppb	11:59:22
2	Ba 233.527†	1897703.4	2029209.8	14431	ug/L	14431	ppb	11:59:22
2	Be 313.107†	7966571.2	8523062.1	2909.8	ug/L	2909.8	ppb	11:59:16
2	Cd 226.502†	894644.9	956862.6	9866.2	ug/L	9866.2	ppb	11:59:22
2	Co 228.616†	476745.2	509859.3	9671.3	ug/L	9671.3	ppb	11:59:27
2	Cr 267.716†	2148815.6	2297641.7	24372	ug/L	24372	ppb	11:59:22
2	Cu 324.752†	6702372.4	7160728.1	20406	ug/L	20406	ppb	11:59:16
2	Mn 257.610†	8757794.7	9364267.7	9558.4	ug/L	9558.4	ppb	11:59:16
2	Mo 202.031†	142154.4	151976.8	9900.8	ug/L	9900.8	ppb	11:59:27
2	Ni 231.604†	399261.0	426832.5	9964.3	ug/L	9964.3	ppb	11:59:22

2	P 214.914†	31636.6	33605.1	14565	ug/L	14565 ppb	11:59:27
2	Pb 220.353†	204935.5	219176.4	24882	ug/L	24882 ppb	11:59:27
2	S 181.975 Axial†	37746.0	40316.1	52543	ug/L	52543 ppb	11:59:27
2	Sb 206.836†	31355.3	33497.8	11024	ug/L	11024 ppb	11:59:27
2	Se 196.026†	16382.7	17547.9	10402	ug/L	10402 ppb	11:59:27
2	Si 251.611†	1545594.1	1652236.5	48466	ug/L	48466 ppb	11:59:22
2	Sn 189.927†	61222.6	65461.3	10521	ug/L	10521 ppb	11:59:27
2	Ti 334.940†	6299218.5	6737184.4	9845.7	ug/L	9845.7 ppb	11:59:16
2	Tl 190.801†	32708.0	35011.2	9842.5	ug/L	9842.5 ppb	11:59:27
2	U 409.014†	-336.4	1366.2	-16.416	ug/L	-16.416 ppb	11:59:27
2	V 292.402†	1486763.1	1591285.7	10271	ug/L	10271 ppb	11:59:22
2	Zn 213.857†	1540716.4	1646702.1	14232	ug/L	14232 ppb	11:59:22
2	SiO2†	1555936.3	1663268.6	104560	ug/L	104560 ppb	12:00:02
3	Sc Radial	4933.4	4933.4	94.6	%		11:58:26
3	Y RADIAL	5208.8	5208.8	94.55	%		11:58:26
3	Al 396.153Radial†	562.2	582.0	-31.148	ug/L	-31.148 ppb	11:58:26
3	Ca 317.933Radial†	30.2	14.5	23.833	ug/L	23.833 ppb	11:58:46
3	Fe 238.204 Radial†	-15.0	-26.9	41.288	ug/L	41.288 ppb	11:58:46
3	K 766.490 Radial†	1391459.1	1468202.3	293560	ug/L	293560 ppb	11:58:21
3	Mg 279.077 IEC†	-4.8	-9.6	-213.02	ug/L	-213.02 ppb	11:58:46
3	Na 589.592 Radial†	-653.0	542.3	152.57	ug/L	152.57 ppb	11:58:26
3	Sr 421.552†	1415282.7	1496167.5	9285.3	ug/L	9285.3 ppb	11:58:21
3	Sc 361.383	891235.3	891235.3	94.435	%		11:59:42
3	Y 371.029	728641.3	728641.3	91.851	%		11:59:42
3	Ag 328.068†	-7806.8	-8718.3	3.4905	ug/L	3.4905 ppb	11:59:47
3	As 188.979†	24464.8	25929.6	10132	ug/L	10132 ppb	11:59:47
3	B 249.677†	228476.8	242332.6	5120.4	ug/L	5120.4 ppb	11:59:42
3	Ba 233.527†	1912330.6	2025003.2	14401	ug/L	14401 ppb	11:59:42
3	Be 313.107†	8108911.6	8591107.4	2933.0	ug/L	2933.0 ppb	11:59:36
3	Cd 226.502†	900577.9	953860.0	9835.3	ug/L	9835.3 ppb	11:59:42
3	Co 228.616†	475513.8	503607.4	9552.2	ug/L	9552.2 ppb	11:59:47
3	Cr 267.716†	2164909.8	2292382.3	24316	ug/L	24316 ppb	11:59:42
3	Cu 324.752†	6841243.4	7238220.3	20627	ug/L	20627 ppb	11:59:36
3	Mn 257.610†	8905903.8	9430209.6	9625.7	ug/L	9625.7 ppb	11:59:36
3	Mo 202.031†	141819.9	150147.1	9781.7	ug/L	9781.7 ppb	11:59:47
3	Ni 231.604†	402026.8	425617.5	9935.9	ug/L	9935.9 ppb	11:59:42
3	P 214.914†	31451.2	33080.5	14231	ug/L	14231 ppb	11:59:47
3	Pb 220.353†	204764.3	216868.2	24620	ug/L	24620 ppb	11:59:47
3	S 181.975 Axial†	37549.1	39715.8	51761	ug/L	51761 ppb	11:59:47
3	Sb 206.836†	31088.1	32889.4	10826	ug/L	10826 ppb	11:59:47
3	Se 196.026†	16262.7	17250.8	10226	ug/L	10226 ppb	11:59:47
3	Si 251.611†	1565076.6	1656825.9	48603	ug/L	48603 ppb	11:59:42
3	Sn 189.927†	61241.3	64845.7	10422	ug/L	10422 ppb	11:59:47
3	Ti 334.940†	6414358.4	6793731.2	9928.4	ug/L	9928.4 ppb	11:59:36
3	Tl 190.801†	32597.3	34554.6	9716.5	ug/L	9716.5 ppb	11:59:47
3	U 409.014†	-419.3	1281.9	-18.642	ug/L	-18.642 ppb	11:59:47
3	V 292.402†	1499791.6	1589651.2	10259	ug/L	10259 ppb	11:59:42
3	Zn 213.857†	1552347.6	1643028.1	14200	ug/L	14200 ppb	11:59:42
3	SiO2†	1538156.8	1628292.9	102360	ug/L	102360 ppb	12:00:09

Mean Data: LR2

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	882659.9	93.527	%	0.9047				0.97%
Sc Radial	4971.9	95.3	%	0.69				0.72%
Y 371.029	721840.0	90.994	%	0.8783				0.97%
Y RADIAL	5229.3	94.93	%	0.481				0.51%
Ag 328.068†	-8695.2	3.6126	ug/L	0.11974	3.6126	ppb	0.11974	3.31%
Al 396.153Radial†	601.0	-19.661	ug/L	11.5798	-19.661	ppb	11.5798	58.90%
As 188.979†	26071.2	10187	ug/L	68.2	10187	ppb	68.2	0.67%
QC value within limits for As 188.979 Recovery = 101.87%								
B 249.677†	241668.9	5106.1	ug/L	12.51	5106.1	ppb	12.51	0.24%
QC value within limits for B 249.677 Recovery = 102.12%								
Ba 233.527†	2028020.4	14422	ug/L	18.7	14422	ppb	18.7	0.13%
QC value within limits for Ba 233.527 Recovery = 96.15%								
Be 313.107†	8583011.4	2930.2	ug/L	19.22	2930.2	ppb	19.22	0.66%
QC value within limits for Be 313.107 Recovery = 97.67%								
Ca 317.933Radial†	15.5	25.371	ug/L	5.1811	25.371	ppb	5.1811	20.42%
Cd 226.502†	955602.2	9853.3	ug/L	16.07	9853.3	ppb	16.07	0.16%
QC value within limits for Cd 226.502 Recovery = 98.53%								

Co 228.616†	506810.3	9613.2 ug/L	59.57	9613.2 ppb	59.57	0.62%
QC value within limits for Co 228.616 Recovery = 96.13%						
Cr 267.716†	2295871.4	24353 ug/L	32.0	24353 ppb	32.0	0.13%
QC value within limits for Cr 267.716 Recovery = 97.41%						
Cu 324.752†	7214865.8	20561 ug/L	134.0	20561 ppb	134.0	0.65%
QC value within limits for Cu 324.752 Recovery = 102.80%						
Fe 238.204 Radial†	-30.2	13.172 ug/L	30.1010	13.172 ppb	30.1010	228.52%
K 766.490 Radial†	1478531.1	295620 ug/L	2202.5	295620 ppb	2202.5	0.75%
QC value within limits for K 766.490 Radial Recovery = 98.54%						
Mg 279.077 IEC†	-9.2	-199.28 ug/L	50.580	-199.28 ppb	50.580	25.38%
Mn 257.610†	9425055.1	9620.4 ug/L	59.59	9620.4 ppb	59.59	0.62%
QC value within limits for Mn 257.610 Recovery = 96.20%						
Mo 202.031†	151093.8	9843.3 ug/L	59.70	9843.3 ppb	59.70	0.61%
QC value within limits for Mo 202.031 Recovery = 98.43%						
Na 589.592 Radial†	593.5	166.97 ug/L	12.480	166.97 ppb	12.480	7.47%
Ni 231.604†	426338.2	9952.7 ug/L	14.88	9952.7 ppb	14.88	0.15%
QC value within limits for Ni 231.604 Recovery = 99.53%						
P 214.914†	33362.0	14400 ug/L	167.0	14400 ppb	167.0	1.16%
QC value within limits for P 214.914 Recovery = 96.00%						
Pb 220.353†	218062.5	24755 ug/L	131.4	24755 ppb	131.4	0.53%
QC value within limits for Pb 220.353 Recovery = 99.02%						
S 181.975 Axial†	39955.0	52073 ug/L	414.6	52073 ppb	414.6	0.80%
QC value within limits for S 181.975 Axial Recovery = 104.15%						
Sb 206.836†	33169.0	10917 ug/L	99.8	10917 ppb	99.8	0.91%
QC value within limits for Sb 206.836 Recovery = 109.17%						
Se 196.026†	17348.7	10284 ug/L	102.1	10284 ppb	102.1	0.99%
QC value within limits for Se 196.026 Recovery = 102.84%						
Si 251.611†	1654047.0	48520 ug/L	72.6	48520 ppb	72.6	0.15%
QC value within limits for Si 251.611 Recovery = 97.04%						
Sn 189.927†	65159.0	10473 ug/L	49.5	10473 ppb	49.5	0.47%
QC value within limits for Sn 189.927 Recovery = 104.73%						
Sr 421.552†	1510584.4	9374.7 ug/L	91.22	9374.7 ppb	91.22	0.97%
QC value within limits for Sr 421.552 Recovery = 93.75%						
Ti 334.940†	6781720.1	9910.8 ug/L	58.38	9910.8 ppb	58.38	0.59%
QC value within limits for Ti 334.940 Recovery = 99.11%						
Tl 190.801†	34777.8	9778.4 ug/L	63.01	9778.4 ppb	63.01	0.64%
QC value within limits for Tl 190.801 Recovery = 97.78%						
U 409.014†	1216.1	-20.556 ug/L	5.3601	-20.556 ppb	5.3601	26.08%
V 292.402†	1590855.5	10267 ug/L	7.4	10267 ppb	7.4	0.07%
QC value within limits for V 292.402 Recovery = 102.67%						
Zn 213.857†	1646125.7	14227 ug/L	24.8	14227 ppb	24.8	0.17%
QC value within limits for Zn 213.857 Recovery = 94.85%						
SiO2†	1660949.4	104420 ug/L	1988.2	104420 ppb	1988.2	1.90%
QC value within limits for SiO2 Recovery = 97.58%						

All analyte(s) passed QC.

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Analysis Begun

Start Time: 1/20/2010 12:16:49 **Plasma On Time: 1/18/2010 05:48:39**
Logged In Analyst: Optima3 **Technique: ICP Continuous**
Spectrometer Model: Optima 5300 DV, S/N 077C7090601Autosampler Model: S10

Sample Information File: C:\pe\Optima3\Sample Information\012010.sif
Batch ID:
Results Data Set: 012010
Results Library: C:\pe\Optima3\Results\Results.mdb

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Method Loaded
Method Name: General Eng.2AX **Method Last Saved: 1/20/2010 10:48:45**
IEC File: 011110.iec **MSF File:**
Method Description:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Al 396.153Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
B 249.677	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Be 313.107	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ca 317.933Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Cd 226.502	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cr 267.716	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Fe 238.204 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
K 766.490 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mg 279.077 IEC	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mn 257.610	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Na 589.592 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Ni 231.604	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
P 214.914	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
S 181.975 Axial	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sc 361.383	Lin Thru 0	Peak Area	Axial	n/a	n/a
Sc Radial	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Se 196.026	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Si 251.611	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Ti 334.940	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
U 409.014	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y 371.029	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Zn 213.857	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y RADIAL	Lin, Calc Int	Peak Area	Radial	n/a	n/a
SiO2	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes

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Sequence No.: 1 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 1/20/2010 12:16:50**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5172.0	5172.0	99.2	%			12:18:42
1	Y RADIAL	5463.3	5463.3	99.17	%			12:18:42
1	Al 396.153Radial†	6496.5	6538.6	4955.3	ug/L	4955.3	ppb	12:18:42

1	Ca 317.933Radial†	3042.4	3050.4	5009.1 ug/L	5009.1 ppb	12:19:02
1	Fe 238.204 Radial†	569.8	563.6	5144.2 ug/L	5144.2 ppb	12:19:02
1	K 766.490 Radial†	27596.0	25044.1	5001.2 ug/L	5001.2 ppb	12:18:42
1	Mg 279.077 IEC†	157.3	154.1	5065.7 ug/L	5065.7 ppb	12:19:02
1	Na 589.592 Radial†	35382.1	36911.1	10384 ug/L	10384 ppb	12:18:42
1	Sr 421.552†	78471.0	79125.3	491.02 ug/L	491.02 ppb	12:18:42
1	Sc 361.383	942126.7	942126.7	99.828 %		12:19:59
1	Y 371.029	779765.4	779765.4	98.296 %		12:19:59
1	Ag 328.068†	114725.2	114471.4	494.32 ug/L	494.32 ppb	12:20:05
1	As 188.979†	1254.0	1279.4	501.06 ug/L	501.06 ppb	12:20:25
1	B 249.677†	23304.1	23737.3	501.98 ug/L	501.98 ppb	12:20:05
1	Ba 233.527†	69565.5	69675.5	495.97 ug/L	495.97 ppb	12:20:05
1	Be 313.107†	1463048.1	1469954.8	499.07 ug/L	499.07 ppb	12:19:59
1	Cd 226.502†	47613.4	47911.7	493.58 ug/L	493.58 ppb	12:20:05
1	Co 228.616†	26083.6	26202.9	497.18 ug/L	497.18 ppb	12:20:05
1	Cr 267.716†	46502.4	46489.6	493.44 ug/L	493.44 ppb	12:20:05
1	Cu 324.752†	178267.3	172436.9	491.40 ug/L	491.40 ppb	12:20:05
1	Mn 257.610†	490871.6	491250.6	501.73 ug/L	501.73 ppb	12:19:59
1	Mo 202.031†	7539.1	7522.7	490.54 ug/L	490.54 ppb	12:20:25
1	Ni 231.604†	21327.0	21265.4	496.42 ug/L	496.42 ppb	12:20:05
1	P 214.914†	4652.0	4436.1	2348.8 ug/L	2348.8 ppb	12:20:25
1	Pb 220.353†	4284.8	4330.4	492.96 ug/L	492.96 ppb	12:20:25
1	S 181.975 Axial†	799.8	755.3	983.49 ug/L	983.49 ppb	12:20:25
1	Sb 206.836†	1582.0	1554.2	512.10 ug/L	512.10 ppb	12:20:25
1	Se 196.026†	814.8	846.0	520.32 ug/L	520.32 ppb	12:20:25
1	Si 251.611†	83838.2	83511.1	2449.8 ug/L	2449.8 ppb	12:20:05
1	Sn 189.927†	3040.1	3041.0	489.62 ug/L	489.62 ppb	12:20:25
1	Ti 334.940†	327044.9	329020.7	481.12 ug/L	481.12 ppb	12:20:05
1	Tl 190.801†	1722.1	1761.5	495.17 ug/L	495.17 ppb	12:20:25
1	U 409.014†	16076.7	17830.4	495.07 ug/L	495.07 ppb	12:20:05
1	V 292.402†	75509.1	77124.9	498.49 ug/L	498.49 ppb	12:20:05
1	Zn 213.857†	57428.3	56737.0	489.18 ug/L	489.18 ppb	12:20:05
1	SiO2†	85417.3	85066.0	5348.0 ug/L	5348.0 ppb	12:21:32
2	Sc Radial	5149.1	5149.1	98.7 %		12:19:07
2	Y RADIAL	5428.7	5428.7	98.55 %		12:19:07
2	Al 396.153Radial†	6487.5	6558.7	4970.2 ug/L	4970.2 ppb	12:19:07
2	Ca 317.933Radial†	3050.3	3072.2	5044.7 ug/L	5044.7 ppb	12:19:27
2	Fe 238.204 Radial†	567.9	564.2	5150.3 ug/L	5150.3 ppb	12:19:27
2	K 766.490 Radial†	27643.8	25216.6	5035.6 ug/L	5035.6 ppb	12:19:07
2	Mg 279.077 IEC†	154.1	151.6	4983.8 ug/L	4983.8 ppb	12:19:27
2	Na 589.592 Radial†	35232.7	36918.8	10387 ug/L	10387 ppb	12:19:07
2	Sr 421.552†	78335.3	79340.7	492.35 ug/L	492.35 ppb	12:19:07
2	Sc 361.383	935759.3	935759.3	99.153 %		12:20:30
2	Y 371.029	774069.2	774069.2	97.578 %		12:20:30
2	Ag 328.068†	116519.0	117062.5	505.47 ug/L	505.47 ppb	12:20:35
2	As 188.979†	1261.7	1295.7	507.46 ug/L	507.46 ppb	12:20:56
2	B 249.677†	23822.4	24418.8	516.42 ug/L	516.42 ppb	12:20:35
2	Ba 233.527†	70716.8	71310.9	507.60 ug/L	507.60 ppb	12:20:35
2	Be 313.107†	1453499.8	1470297.4	499.22 ug/L	499.22 ppb	12:20:30
2	Cd 226.502†	48382.2	49011.6	504.93 ug/L	504.93 ppb	12:20:35
2	Co 228.616†	26482.5	26783.0	508.18 ug/L	508.18 ppb	12:20:35
2	Cr 267.716†	47154.0	47463.8	503.78 ug/L	503.78 ppb	12:20:35
2	Cu 324.752†	181874.3	177289.8	505.22 ug/L	505.22 ppb	12:20:35
2	Mn 257.610†	487890.6	491590.0	502.08 ug/L	502.08 ppb	12:20:30
2	Mo 202.031†	7604.6	7640.2	498.19 ug/L	498.19 ppb	12:20:56
2	Ni 231.604†	21624.9	21711.2	506.83 ug/L	506.83 ppb	12:20:35
2	P 214.914†	4711.3	4527.6	2396.5 ug/L	2396.5 ppb	12:20:56
2	Pb 220.353†	4298.8	4373.8	497.89 ug/L	497.89 ppb	12:20:56
2	S 181.975 Axial†	801.1	762.1	992.31 ug/L	992.31 ppb	12:20:56
2	Sb 206.836†	1593.1	1576.2	519.33 ug/L	519.33 ppb	12:20:56
2	Se 196.026†	801.1	837.8	515.53 ug/L	515.53 ppb	12:20:56
2	Si 251.611†	85394.8	85652.5	2512.7 ug/L	2512.7 ppb	12:20:35
2	Sn 189.927†	3052.7	3074.5	495.00 ug/L	495.00 ppb	12:20:56
2	Ti 334.940†	333104.4	337361.2	493.32 ug/L	493.32 ppb	12:20:35
2	Tl 190.801†	1740.4	1791.7	503.64 ug/L	503.64 ppb	12:20:56
2	U 409.014†	16487.7	18354.5	509.65 ug/L	509.65 ppb	12:20:35
2	V 292.402†	76635.6	78775.8	509.14 ug/L	509.14 ppb	12:20:35
2	Zn 213.857†	58319.0	58026.7	500.31 ug/L	500.31 ppb	12:20:35
2	SiO2†	84450.9	84673.6	5323.1 ug/L	5323.1 ppb	12:21:37
3	Sc Radial	5148.7	5148.7	98.7 %		12:19:32
3	Y RADIAL	5412.6	5412.6	98.25 %		12:19:32

3	Al 396.153Radial†	6495.9	6567.6	4977.1 ug/L	4977.1 ppb	12:19:32
3	Ca 317.933Radial†	3050.9	3072.9	5046.0 ug/L	5046.0 ppb	12:19:52
3	Fe 238.204 Radial†	576.9	573.4	5233.4 ug/L	5233.4 ppb	12:19:52
3	K 766.490 Radial†	27544.5	25117.9	5015.9 ug/L	5015.9 ppb	12:19:32
3	Mg 279.077 IEC†	157.4	155.0	5093.1 ug/L	5093.1 ppb	12:19:52
3	Na 589.592 Radial†	35329.3	37019.2	10415 ug/L	10415 ppb	12:19:32
3	Sr 421.552†	78302.9	79313.3	492.18 ug/L	492.18 ppb	12:19:32
3	Sc 361.383	936772.3	936772.3	99.261 %		12:21:01
3	Y 371.029	775589.2	775589.2	97.769 %		12:21:01
3	Ag 328.068†	115998.8	116411.4	502.70 ug/L	502.70 ppb	12:21:06
3	As 188.979†	1252.3	1284.9	503.25 ug/L	503.25 ppb	12:21:27
3	B 249.677†	23622.4	24191.4	511.59 ug/L	511.59 ppb	12:21:06
3	Ba 233.527†	70354.9	70869.1	504.46 ug/L	504.46 ppb	12:21:06
3	Be 313.107†	1457385.1	1472626.5	500.00 ug/L	500.00 ppb	12:21:01
3	Cd 226.502†	48128.7	48703.4	501.74 ug/L	501.74 ppb	12:21:06
3	Co 228.616†	26351.2	26621.9	505.13 ug/L	505.13 ppb	12:21:06
3	Cr 267.716†	46978.2	47235.2	501.36 ug/L	501.36 ppb	12:21:06
3	Cu 324.752†	180582.0	175789.6	500.95 ug/L	500.95 ppb	12:21:06
3	Mn 257.610†	488981.7	492157.2	502.67 ug/L	502.67 ppb	12:21:01
3	Mo 202.031†	7605.6	7632.9	497.73 ug/L	497.73 ppb	12:21:27
3	Ni 231.604†	21467.9	21529.5	502.59 ug/L	502.59 ppb	12:21:06
3	P 214.914†	4705.0	4516.1	2390.9 ug/L	2390.9 ppb	12:21:27
3	Pb 220.353†	4299.4	4369.7	497.42 ug/L	497.42 ppb	12:21:27
3	S 181.975 Axial†	812.4	772.5	1005.9 ug/L	1005.9 ppb	12:21:27
3	Sb 206.836†	1590.6	1571.9	517.94 ug/L	517.94 ppb	12:21:27
3	Se 196.026†	813.8	849.7	522.84 ug/L	522.84 ppb	12:21:27
3	Si 251.611†	84866.8	85027.4	2494.3 ug/L	2494.3 ppb	12:21:06
3	Sn 189.927†	3042.4	3060.8	492.81 ug/L	492.81 ppb	12:21:27
3	Ti 334.940†	330873.4	334750.3	489.50 ug/L	489.50 ppb	12:21:06
3	Tl 190.801†	1737.5	1787.0	502.30 ug/L	502.30 ppb	12:21:27
3	U 409.014†	16201.6	18048.2	501.11 ug/L	501.11 ppb	12:21:06
3	V 292.402†	76328.4	78382.6	506.60 ug/L	506.60 ppb	12:21:06
3	Zn 213.857†	57999.6	57641.4	496.98 ug/L	496.98 ppb	12:21:06
3	SiO2†	84944.0	85078.3	5348.6 ug/L	5348.6 ppb	12:21:42

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	938219.4	99.414	%	0.3625				0.36%
Sc Radial	5156.6	98.9	%	0.26				0.26%
Y 371.029	776474.6	97.881	%	0.3718				0.38%
Y RADIAL	5434.9	98.66	%	0.470				0.48%
Ag 328.068†	115981.8	500.83	ug/L	5.805	500.83	ppb	5.805	1.16%
QC value within limits for Ag 328.068 Recovery = 100.17%								
Al 396.153Radial†	6555.0	4967.5	ug/L	11.12	4967.5	ppb	11.12	0.22%
QC value within limits for Al 396.153Radial Recovery = 99.35%								
As 188.979†	1286.6	503.92	ug/L	3.251	503.92	ppb	3.251	0.65%
QC value within limits for As 188.979 Recovery = 100.78%								
B 249.677†	24115.8	510.00	ug/L	7.353	510.00	ppb	7.353	1.44%
QC value within limits for B 249.677 Recovery = 102.00%								
Ba 233.527†	70618.5	502.68	ug/L	6.019	502.68	ppb	6.019	1.20%
QC value within limits for Ba 233.527 Recovery = 100.54%								
Be 313.107†	1470959.6	499.43	ug/L	0.497	499.43	ppb	0.497	0.10%
QC value within limits for Be 313.107 Recovery = 99.89%								
Ca 317.933Radial†	3065.2	5033.3	ug/L	20.97	5033.3	ppb	20.97	0.42%
QC value within limits for Ca 317.933Radial Recovery = 100.67%								
Cd 226.502†	48542.3	500.08	ug/L	5.850	500.08	ppb	5.850	1.17%
QC value within limits for Cd 226.502 Recovery = 100.02%								
Co 228.616†	26535.9	503.50	ug/L	5.678	503.50	ppb	5.678	1.13%
QC value within limits for Co 228.616 Recovery = 100.70%								
Cr 267.716†	47062.8	499.53	ug/L	5.406	499.53	ppb	5.406	1.08%
QC value within limits for Cr 267.716 Recovery = 99.91%								
Cu 324.752†	175172.1	499.19	ug/L	7.078	499.19	ppb	7.078	1.42%
QC value within limits for Cu 324.752 Recovery = 99.84%								
Fe 238.204 Radial†	567.1	5176.0	ug/L	49.86	5176.0	ppb	49.86	0.96%
QC value within limits for Fe 238.204 Radial Recovery = 103.52%								
K 766.490 Radial†	25126.2	5017.6	ug/L	17.30	5017.6	ppb	17.30	0.34%
QC value within limits for K 766.490 Radial Recovery = 100.35%								
Mg 279.077 IEC†	153.6	5047.6	ug/L	56.88	5047.6	ppb	56.88	1.13%
QC value within limits for Mg 279.077 IEC Recovery = 100.95%								

Mn 257.610†	491665.9	502.16 ug/L	0.471	502.16 ppb	0.471	0.09%
QC value within limits for Mn 257.610 Recovery = 100.43%						
Mo 202.031†	7598.6	495.49 ug/L	4.290	495.49 ppb	4.290	0.87%
QC value within limits for Mo 202.031 Recovery = 99.10%						
Na 589.592 Radial†	36949.7	10395 ug/L	17.0	10395 ppb	17.0	0.16%
QC value within limits for Na 589.592 Radial Recovery = 103.95%						
Ni 231.604†	21502.0	501.95 ug/L	5.234	501.95 ppb	5.234	1.04%
QC value within limits for Ni 231.604 Recovery = 100.39%						
P 214.914†	4493.3	2378.8 ug/L	26.10	2378.8 ppb	26.10	1.10%
QC value within limits for P 214.914 Recovery = 95.15%						
Pb 220.353†	4358.0	496.09 ug/L	2.723	496.09 ppb	2.723	0.55%
QC value within limits for Pb 220.353 Recovery = 99.22%						
S 181.975 Axial†	763.3	993.90 ug/L	11.288	993.90 ppb	11.288	1.14%
QC value within limits for S 181.975 Axial Recovery = 99.39%						
Sb 206.836†	1567.4	516.46 ug/L	3.835	516.46 ppb	3.835	0.74%
QC value within limits for Sb 206.836 Recovery = 103.29%						
Se 196.026†	844.5	519.56 ug/L	3.710	519.56 ppb	3.710	0.71%
QC value within limits for Se 196.026 Recovery = 103.91%						
Si 251.611†	84730.3	2485.6 ug/L	32.33	2485.6 ppb	32.33	1.30%
QC value within limits for Si 251.611 Recovery = 99.42%						
Sn 189.927†	3058.8	492.48 ug/L	2.707	492.48 ppb	2.707	0.55%
QC value within limits for Sn 189.927 Recovery = 98.50%						
Sr 421.552†	79259.8	491.85 ug/L	0.727	491.85 ppb	0.727	0.15%
QC value within limits for Sr 421.552 Recovery = 98.37%						
Ti 334.940†	333710.8	487.98 ug/L	6.241	487.98 ppb	6.241	1.28%
QC value within limits for Ti 334.940 Recovery = 97.60%						
Tl 190.801†	1780.1	500.37 ug/L	4.555	500.37 ppb	4.555	0.91%
QC value within limits for Tl 190.801 Recovery = 100.07%						
U 409.014†	18077.7	501.94 ug/L	7.325	501.94 ppb	7.325	1.46%
QC value within limits for U 409.014 Recovery = 100.39%						
V 292.402†	78094.4	504.74 ug/L	5.562	504.74 ppb	5.562	1.10%
QC value within limits for V 292.402 Recovery = 100.95%						
Zn 213.857†	57468.4	495.49 ug/L	5.714	495.49 ppb	5.714	1.15%
QC value within limits for Zn 213.857 Recovery = 99.10%						
SiO2†	84939.3	5339.9 ug/L	14.57	5339.9 ppb	14.57	0.27%
QC value within limits for SiO2 Recovery = 99.86%						

All analyte(s) passed QC.

Sequence No.: 2
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 1/20/2010 12:23:52
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5388.8	5388.8	103	%			12:25:45
1	Y RADIAL	5717.2	5717.2	103.8	%			12:25:45
1	Al 396.153Radial†	-3.4	-15.6	-11.823	ug/L	-11.823	ppb	12:25:45
1	Ca 317.933Radial†	17.1	-0.9	-1.4929	ug/L	-1.4929	ppb	12:26:05
1	Fe 238.204 Radial†	10.8	-0.6	-5.3042	ug/L	-5.3042	ppb	12:26:05
1	K 766.490 Radial†	3102.9	219.9	43.947	ug/L	43.947	ppb	12:25:45
1	Mg 279.077 IEC†	4.5	-0.1	-4.5665	ug/L	-4.5665	ppb	12:26:05
1	Na 589.592 Radial†	-1068.8	198.2	55.772	ug/L	55.772	ppb	12:25:45
1	Sr 421.552†	-11.1	-13.9	-0.0861	ug/L	-0.0861	ppb	12:25:45
1	Sc 361.383	914823.0	914823.0	96.935	%			12:27:02
1	Y 371.029	773626.2	773626.2	97.522	%			12:27:02
1	Ag 328.068†	395.3	-43.8	-0.1858	ug/L	-0.1858	ppb	12:27:02
1	As 188.979†	-27.1	-4.7	-1.8181	ug/L	-1.8181	ppb	12:27:22
1	B 249.677†	151.4	549.2	11.667	ug/L	11.667	ppb	12:27:02
1	Ba 233.527†	3.7	-6.1	-0.0438	ug/L	-0.0438	ppb	12:27:22
1	Be 313.107†	-4446.2	-201.9	-0.0687	ug/L	-0.0687	ppb	12:27:02
1	Cd 226.502†	-219.2	-9.9	-0.1024	ug/L	-0.1024	ppb	12:27:22
1	Co 228.616†	-73.5	-1.5	-0.0290	ug/L	-0.0290	ppb	12:27:22
1	Cr 267.716†	85.6	-4.6	-0.0473	ug/L	-0.0473	ppb	12:27:22
1	Cu 324.752†	6154.8	211.7	0.6058	ug/L	0.6058	ppb	12:27:02
1	Mn 257.610†	421.9	-31.8	-0.0328	ug/L	-0.0328	ppb	12:27:22
1	Mo 202.031†	21.8	-6.9	-0.4468	ug/L	-0.4468	ppb	12:27:22
1	Ni 231.604†	108.2	13.3	0.3104	ug/L	0.3104	ppb	12:27:22
1	P 214.914†	227.5	10.8	5.8306	ug/L	5.8306	ppb	12:27:22
1	Pb 220.353†	-57.1	-20.6	-2.3410	ug/L	-2.3410	ppb	12:27:22
1	S 181.975 Axial†	48.9	4.6	5.9991	ug/L	5.9991	ppb	12:27:22
1	Sb 206.836†	53.8	25.0	7.9432	ug/L	7.9432	ppb	12:27:22
1	Se 196.026†	-28.8	0.1	0.0669	ug/L	0.0669	ppb	12:27:22
1	Si 251.611†	563.3	109.5	3.2249	ug/L	3.2249	ppb	12:27:22
1	Sn 189.927†	7.6	3.6	0.5820	ug/L	0.5820	ppb	12:27:22
1	Ti 334.940†	-1464.1	-98.2	-0.1414	ug/L	-0.1414	ppb	12:27:02
1	Tl 190.801†	-37.4	-2.1	-0.6005	ug/L	-0.6005	ppb	12:27:22
1	U 409.014†	-1840.3	-172.5	-4.8054	ug/L	-4.8054	ppb	12:27:02
1	V 292.402†	-1446.1	-6.1	-0.0538	ug/L	-0.0538	ppb	12:27:02
1	Zn 213.857†	764.4	-1.7	-0.0173	ug/L	-0.0173	ppb	12:27:22
1	SiO2†	570.4	90.0	5.6817	ug/L	5.6817	ppb	12:28:18
2	Sc Radial	5286.9	5286.9	101	%			12:26:10
2	Y RADIAL	5629.7	5629.7	102.2	%			12:26:10
2	Al 396.153Radial†	10.0	-2.5	-1.8890	ug/L	-1.8890	ppb	12:26:10
2	Ca 317.933Radial†	19.7	2.0	3.3193	ug/L	3.3193	ppb	12:26:30
2	Fe 238.204 Radial†	14.2	3.0	27.676	ug/L	27.676	ppb	12:26:30
2	K 766.490 Radial†	2940.6	117.7	23.514	ug/L	23.514	ppb	12:26:10
2	Mg 279.077 IEC†	2.7	-1.9	-61.516	ug/L	-61.516	ppb	12:26:30
2	Na 589.592 Radial†	-1098.1	149.3	42.010	ug/L	42.010	ppb	12:26:10
2	Sr 421.552†	-0.4	-3.5	-0.0215	ug/L	-0.0215	ppb	12:26:10
2	Sc 361.383	923552.1	923552.1	97.860	%			12:27:27
2	Y 371.029	782280.0	782280.0	98.613	%			12:27:27
2	Ag 328.068†	416.0	-26.5	-0.1064	ug/L	-0.1064	ppb	12:27:27
2	As 188.979†	-12.5	10.4	4.0580	ug/L	4.0580	ppb	12:27:47
2	B 249.677†	214.3	612.0	12.995	ug/L	12.995	ppb	12:27:27
2	Ba 233.527†	19.4	9.9	0.0709	ug/L	0.0709	ppb	12:27:47
2	Be 313.107†	-4468.3	-181.2	-0.0615	ug/L	-0.0615	ppb	12:27:27
2	Cd 226.502†	-208.6	3.0	0.0285	ug/L	0.0285	ppb	12:27:47
2	Co 228.616†	-71.9	0.8	0.0153	ug/L	0.0153	ppb	12:27:47
2	Cr 267.716†	103.6	12.9	0.1370	ug/L	0.1370	ppb	12:27:47
2	Cu 324.752†	6084.2	79.5	0.2276	ug/L	0.2276	ppb	12:27:27
2	Mn 257.610†	450.1	-7.2	-0.0021	ug/L	-0.0021	ppb	12:27:47
2	Mo 202.031†	27.4	-1.3	-0.0855	ug/L	-0.0855	ppb	12:27:47
2	Ni 231.604†	95.0	-1.3	-0.0305	ug/L	-0.0305	ppb	12:27:47

2	P 214.914†	221.0	1.9	0.9905	ug/L	0.9905 ppb	12:27:47
2	Pb 220.353†	-44.8	-7.5	-0.8567	ug/L	-0.8567 ppb	12:27:47
2	S 181.975 Axial†	44.1	-0.8	-1.0418	ug/L	-1.0418 ppb	12:27:47
2	Sb 206.836†	39.9	10.2	3.2506	ug/L	3.2506 ppb	12:27:47
2	Se 196.026†	-33.1	-4.0	-2.2851	ug/L	-2.2851 ppb	12:27:47
2	Si 251.611†	546.3	86.6	2.5481	ug/L	2.5481 ppb	12:27:47
2	Sn 189.927†	4.2	0.0	0.0063	ug/L	0.0063 ppb	12:27:47
2	Ti 334.940†	-1425.9	-45.0	-0.0608	ug/L	-0.0608 ppb	12:27:27
2	Tl 190.801†	-32.4	3.4	0.9385	ug/L	0.9385 ppb	12:27:47
2	U 409.014†	-1654.4	35.3	0.9809	ug/L	0.9809 ppb	12:27:27
2	V 292.402†	-1483.5	-30.3	-0.1977	ug/L	-0.1977 ppb	12:27:27
2	Zn 213.857†	761.6	-12.0	-0.1072	ug/L	-0.1072 ppb	12:27:47
2	SiO2†	557.3	71.0	4.4779	ug/L	4.4779 ppb	12:28:23
3	Sc Radial	5215.2	5215.2	100.0	%		12:26:35
3	Y RADIAL	5550.1	5550.1	100.8	%		12:26:35
3	Al 396.153Radial†	-4.2	-16.5	-12.552	ug/L	-12.552 ppb	12:26:35
3	Ca 317.933Radial†	11.0	-6.4	-10.528	ug/L	-10.528 ppb	12:26:55
3	Fe 238.204 Radial†	9.2	-1.8	-16.361	ug/L	-16.361 ppb	12:26:55
3	K 766.490 Radial†	2984.3	201.3	40.241	ug/L	40.241 ppb	12:26:35
3	Mg 279.077 IEC†	5.5	1.0	31.940	ug/L	31.940 ppb	12:26:55
3	Na 589.592 Radial†	-1179.6	52.9	14.891	ug/L	14.891 ppb	12:26:35
3	Sr 421.552†	44.4	41.3	0.2564	ug/L	0.2564 ppb	12:26:35
3	Sc 361.383	913300.4	913300.4	96.773	%		12:27:52
3	Y 371.029	771944.3	771944.3	97.310	%		12:27:52
3	Ag 328.068†	499.5	64.6	0.2746	ug/L	0.2746 ppb	12:27:52
3	As 188.979†	-19.0	3.6	1.3952	ug/L	1.3952 ppb	12:28:13
3	B 249.677†	164.3	562.8	11.956	ug/L	11.956 ppb	12:27:52
3	Ba 233.527†	11.5	2.0	0.0119	ug/L	0.0119 ppb	12:28:13
3	Be 313.107†	-4404.9	-166.9	-0.0565	ug/L	-0.0565 ppb	12:27:52
3	Cd 226.502†	-208.4	0.9	0.0091	ug/L	0.0091 ppb	12:28:13
3	Co 228.616†	-65.7	6.5	0.1233	ug/L	0.1233 ppb	12:28:13
3	Cr 267.716†	99.2	9.5	0.1020	ug/L	0.1020 ppb	12:28:13
3	Cu 324.752†	6153.2	220.7	0.6318	ug/L	0.6318 ppb	12:27:52
3	Mn 257.610†	443.5	-8.8	-0.0119	ug/L	-0.0119 ppb	12:28:13
3	Mo 202.031†	27.0	-1.5	-0.1016	ug/L	-0.1016 ppb	12:28:13
3	Ni 231.604†	79.4	-16.3	-0.3811	ug/L	-0.3811 ppb	12:28:13
3	P 214.914†	234.2	18.1	9.8666	ug/L	9.8666 ppb	12:28:13
3	Pb 220.353†	-71.5	-35.6	-4.0434	ug/L	-4.0434 ppb	12:28:13
3	S 181.975 Axial†	49.0	4.7	6.1880	ug/L	6.1880 ppb	12:28:13
3	Sb 206.836†	39.5	10.2	3.2798	ug/L	3.2798 ppb	12:28:13
3	Se 196.026†	-32.1	-3.3	-2.0258	ug/L	-2.0258 ppb	12:28:13
3	Si 251.611†	533.3	79.4	2.3373	ug/L	2.3373 ppb	12:28:13
3	Sn 189.927†	14.8	11.0	1.7701	ug/L	1.7701 ppb	12:28:13
3	Ti 334.940†	-1361.7	5.0	0.0062	ug/L	0.0062 ppb	12:27:52
3	Tl 190.801†	-35.2	0.1	0.0154	ug/L	0.0154 ppb	12:28:13
3	U 409.014†	-1902.8	-240.3	-6.6938	ug/L	-6.6938 ppb	12:27:52
3	V 292.402†	-1545.7	-111.6	-0.7229	ug/L	-0.7229 ppb	12:27:52
3	Zn 213.857†	757.4	-7.6	-0.0629	ug/L	-0.0629 ppb	12:28:13
3	SiO2†	591.1	112.3	7.0796	ug/L	7.0796 ppb	12:28:28

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	917225.1	97.189	%	0.5862				0.60%
Sc Radial	5297.0	102	%	1.7				1.65%
Y 371.029	775950.2	97.815	%	0.6991				0.71%
Y RADIAL	5632.3	102.2	%	1.52				1.48%
Ag 328.068†	-1.9	-0.0058	ug/L	0.24614	-0.0058	ppb	0.24614	>999.9%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-11.5	-8.7545	ug/L	5.95693	-8.7545	ppb	5.95693	68.04%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	3.1	1.2117	ug/L	2.94232	1.2117	ppb	2.94232	242.82%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	574.6	12.206	ug/L	0.6985	12.206	ppb	0.6985	5.72%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	1.9	0.0130	ug/L	0.05735	0.0130	ppb	0.05735	439.84%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-183.3	-0.0623	ug/L	0.00613	-0.0623	ppb	0.00613	9.85%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-1.8	-2.9006	ug/L	7.03028	-2.9006	ppb	7.03028	242.38%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -2.0     -0.0216 ug/L      0.07065     -0.0216 ppb      0.07065 327.03%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†               1.9      0.0365 ug/L      0.07830      0.0365 ppb      0.07830 214.29%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               5.9      0.0639 ug/L      0.09788      0.0639 ppb      0.09788 153.16%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†             170.7      0.4884 ug/L      0.22623      0.4884 ppb      0.22623  46.32%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        0.2      2.0035 ug/L     22.91008      2.0035 ppb     22.91008 >999.9%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†       179.6     35.901 ug/L      10.8861     35.901 ppb      10.8861  30.32%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†          -0.3    -11.381 ug/L      47.0994    -11.381 ppb      47.0994 413.85%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†             -16.0     -0.0156 ug/L      0.01569     -0.0156 ppb      0.01569 100.45%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†              -3.2     -0.2113 ug/L      0.20409     -0.2113 ppb      0.20409  96.60%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†      133.5     37.558 ug/L      20.8008     37.558 ppb      20.8008  55.38%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†              -1.4     -0.0337 ug/L      0.34577     -0.0337 ppb      0.34577 >999.9%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†               10.3      5.5626 ug/L      4.44412      5.5626 ppb      4.44412  79.89%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†             -21.2     -2.4137 ug/L      1.59460     -2.4137 ppb      1.59460  66.07%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          2.8      3.7151 ug/L      4.12066      3.7151 ppb      4.12066 110.92%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†              15.1      4.8245 ug/L      2.70086      4.8245 ppb      2.70086  55.98%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†              -2.4     -1.4147 ug/L      1.28959     -1.4147 ppb      1.28959  91.16%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              91.8      2.7034 ug/L      0.46374      2.7034 ppb      0.46374  17.15%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               4.9      0.7861 ug/L      0.89945      0.7861 ppb      0.89945 114.41%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               8.0      0.0496 ug/L      0.18197      0.0496 ppb      0.18197 367.04%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†             -46.1     -0.0653 ug/L      0.07390     -0.0653 ppb      0.07390 113.15%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               0.4      0.1178 ug/L      0.77458      0.1178 ppb      0.77458 657.56%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†             -125.8     -3.5061 ug/L      3.99894     -3.5061 ppb      3.99894 114.06%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†              -49.3     -0.3248 ug/L      0.35221     -0.3248 ppb      0.35221 108.44%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†              -7.1     -0.0624 ug/L      0.04496     -0.0624 ppb      0.04496  72.01%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    91.1      5.7464 ug/L      1.30206      5.7464 ppb      1.30206  22.66%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 3
Sample ID: LR1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 37
Date Collected: 1/20/2010 12:30:38
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5145.6	5145.6	98.7	%			12:32:31
1	Y RADIAL	5449.6	5449.6	98.93	%			12:32:31
1	Al 396.153Radial†	-5.6	-18.0	-12.438	ug/L	-12.438	ppb	12:32:31
1	Ca 317.933Radial†	11.1	-6.2	-10.137	ug/L	-10.137	ppb	12:32:52
1	Fe 238.204 Radial†	42700.7	43268.4	393790	ug/L	393790	ppb	12:32:31
1	K 766.490 Radial†	2443.4	-306.6	-61.280	ug/L	-61.280	ppb	12:32:31
1	Mg 279.077 IEC†	8.2	3.9	-285.12	ug/L	-285.12	ppb	12:32:52
1	Na 589.592 Radial†	-1023.7	195.0	54.855	ug/L	54.855	ppb	12:32:31
1	Sr 421.552†	64.6	62.4	0.3874	ug/L	0.3874	ppb	12:32:31
1	Sc 361.383	921575.8	921575.8	97.650	%			12:33:49
1	Y 371.029	768543.9	768543.9	96.881	%			12:33:49
1	Ag 328.068†	-27904.0	-29027.0	3.1601	ug/L	3.1601	ppb	12:33:49
1	As 188.979†	-232.8	-215.2	8.7471	ug/L	8.7471	ppb	12:34:09
1	B 249.677†	2008.8	2450.1	-11.920	ug/L	-11.920	ppb	12:33:49
1	Ba 233.527†	-1934.6	-1991.0	-2.0352	ug/L	-2.0352	ppb	12:33:49
1	Be 313.107†	-4331.1	-50.4	-0.0173	ug/L	-0.0173	ppb	12:33:49
1	Cd 226.502†	3314.3	3610.2	-3.4609	ug/L	-3.4609	ppb	12:33:49
1	Co 228.616†	214.5	294.0	-0.1736	ug/L	-0.1736	ppb	12:34:09
1	Cr 267.716†	-647.0	-755.5	-0.3022	ug/L	-0.3022	ppb	12:33:49
1	Cu 324.752†	-2133.6	-8322.6	-2.9068	ug/L	-2.9068	ppb	12:33:49
1	Mn 257.610†	-40835.9	-42285.6	-4.2743	ug/L	-4.2743	ppb	12:33:49
1	Mo 202.031†	-362.4	-400.5	4.4777	ug/L	4.4777	ppb	12:33:49
1	Ni 231.604†	214.6	121.4	2.8315	ug/L	2.8315	ppb	12:34:09
1	P 214.914†	766.5	561.0	-3.3560	ug/L	-3.3560	ppb	12:34:09
1	Pb 220.353†	227.7	271.5	-6.8726	ug/L	-6.8726	ppb	12:34:09
1	S 181.975 Axial†	60.8	16.4	21.325	ug/L	21.325	ppb	12:34:09
1	Sb 206.836†	12.2	-18.1	3.6377	ug/L	3.6377	ppb	12:34:09
1	Se 196.026†	-2147.2	-2169.0	104.24	ug/L	104.24	ppb	12:34:09
1	Si 251.611†	-840.9	-1332.7	-38.872	ug/L	-38.872	ppb	12:33:49
1	Sn 189.927†	-47.0	-52.4	-1.8030	ug/L	-1.8030	ppb	12:34:09
1	Ti 334.940†	-1454.0	-76.9	-0.1472	ug/L	-0.1472	ppb	12:33:49
1	Tl 190.801†	-56.8	-21.7	-6.4046	ug/L	-6.4046	ppb	12:34:09
1	U 409.014†	384.6	2119.8	14.184	ug/L	14.184	ppb	12:33:49
1	V 292.402†	6955.6	8608.7	-2.6906	ug/L	-2.6906	ppb	12:33:49
1	Zn 213.857†	4712.0	4035.1	-3.0880	ug/L	-3.0880	ppb	12:34:09
1	SiO2†	-768.7	-1285.6	-80.318	ug/L	-80.318	ppb	12:35:06
2	Sc Radial	5129.7	5129.7	98.4	%			12:32:57
2	Y RADIAL	5461.9	5461.9	99.15	%			12:32:57
2	Al 396.153Radial†	6.8	-5.4	-2.8495	ug/L	-2.8495	ppb	12:32:57
2	Ca 317.933Radial†	11.9	-5.4	-8.8485	ug/L	-8.8485	ppb	12:33:17
2	Fe 238.204 Radial†	42684.3	43385.6	394860	ug/L	394860	ppb	12:32:57
2	K 766.490 Radial†	2631.0	-108.3	-21.619	ug/L	-21.619	ppb	12:32:57
2	Mg 279.077 IEC†	12.0	7.7	-161.00	ug/L	-161.00	ppb	12:33:17
2	Na 589.592 Radial†	-1032.3	183.1	51.510	ug/L	51.510	ppb	12:32:57
2	Sr 421.552†	127.1	126.1	0.7828	ug/L	0.7828	ppb	12:32:57
2	Sc 361.383	920183.3	920183.3	97.503	%			12:34:15
2	Y 371.029	768092.7	768092.7	96.824	%			12:34:15
2	Ag 328.068†	-27755.9	-28918.3	3.9689	ug/L	3.9689	ppb	12:34:15
2	As 188.979†	-225.2	-207.8	11.862	ug/L	11.862	ppb	12:34:35
2	B 249.677†	1979.9	2423.6	-12.655	ug/L	-12.655	ppb	12:34:15
2	Ba 233.527†	-1937.2	-1996.7	-2.0447	ug/L	-2.0447	ppb	12:34:15
2	Be 313.107†	-4364.8	-91.7	-0.0309	ug/L	-0.0309	ppb	12:34:15
2	Cd 226.502†	3338.4	3640.1	-3.2639	ug/L	-3.2639	ppb	12:34:15
2	Co 228.616†	203.2	282.7	-0.4035	ug/L	-0.4035	ppb	12:34:35
2	Cr 267.716†	-630.6	-739.7	-0.1152	ug/L	-0.1152	ppb	12:34:15
2	Cu 324.752†	-2054.7	-8245.0	-2.6295	ug/L	-2.6295	ppb	12:34:15
2	Mn 257.610†	-40894.2	-42408.7	-4.2996	ug/L	-4.2996	ppb	12:34:15
2	Mo 202.031†	-359.2	-397.8	4.7366	ug/L	4.7366	ppb	12:34:15
2	Ni 231.604†	186.9	93.3	2.1760	ug/L	2.1760	ppb	12:34:35

2	P 214.914†	758.8	554.3	-7.9359	ug/L	-7.9359	ppb	12:34:35
2	Pb 220.353†	218.0	261.9	-8.0649	ug/L	-8.0649	ppb	12:34:35
2	S 181.975 Axial†	66.0	21.9	28.491	ug/L	28.491	ppb	12:34:35
2	Sb 206.836†	18.7	-11.4	5.8518	ug/L	5.8518	ppb	12:34:35
2	Se 196.026†	-2143.0	-2168.1	108.55	ug/L	108.55	ppb	12:34:35
2	Si 251.611†	-803.3	-1295.5	-37.777	ug/L	-37.777	ppb	12:34:15
2	Sn 189.927†	-30.2	-35.2	0.9852	ug/L	0.9852	ppb	12:34:35
2	Ti 334.940†	-1319.3	59.0	0.0411	ug/L	0.0411	ppb	12:34:15
2	Tl 190.801†	-51.2	-16.0	-4.8006	ug/L	-4.8006	ppb	12:34:35
2	U 409.014†	411.0	2147.4	14.831	ug/L	14.831	ppb	12:34:15
2	V 292.402†	6847.6	8508.7	-3.4777	ug/L	-3.4777	ppb	12:34:15
2	Zn 213.857†	4717.7	4048.3	-3.0730	ug/L	-3.0730	ppb	12:34:35
2	SiO2†	-856.6	-1377.0	-86.082	ug/L	-86.082	ppb	12:35:11
3	Sc Radial	5019.4	5019.4	96.2	%			12:33:22
3	Y RADIAL	5275.4	5275.4	95.76	%			12:33:22
3	Al 396.153Radial†	-15.0	-27.8	-19.997	ug/L	-19.997	ppb	12:33:22
3	Ca 317.933Radial†	10.7	-6.4	-10.482	ug/L	-10.482	ppb	12:33:42
3	Fe 238.204 Radial†	41655.0	43270.6	393810	ug/L	393810	ppb	12:33:22
3	K 766.490 Radial†	2734.7	58.4	11.705	ug/L	11.705	ppb	12:33:22
3	Mg 279.077 IEC†	11.3	7.3	-173.37	ug/L	-173.37	ppb	12:33:42
3	Na 589.592 Radial†	-1051.0	140.6	39.542	ug/L	39.542	ppb	12:33:22
3	Sr 421.552†	74.1	73.9	0.4587	ug/L	0.4587	ppb	12:33:22
3	Sc 361.383	920367.5	920367.5	97.522	%			12:34:41
3	Y 371.029	767717.4	767717.4	96.777	%			12:34:41
3	Ag 328.068†	-27621.9	-28775.2	4.2460	ug/L	4.2460	ppb	12:34:41
3	As 188.979†	-235.8	-218.6	7.4299	ug/L	7.4299	ppb	12:35:01
3	B 249.677†	2073.7	2519.4	-10.450	ug/L	-10.450	ppb	12:34:41
3	Ba 233.527†	-2034.9	-2096.5	-2.7819	ug/L	-2.7819	ppb	12:34:41
3	Be 313.107†	-4373.0	-99.2	-0.0336	ug/L	-0.0336	ppb	12:34:41
3	Cd 226.502†	3400.6	3703.2	-2.5050	ug/L	-2.5050	ppb	12:34:41
3	Co 228.616†	206.8	286.4	-0.3156	ug/L	-0.3156	ppb	12:35:01
3	Cr 267.716†	-635.0	-744.1	-0.1818	ug/L	-0.1818	ppb	12:34:41
3	Cu 324.752†	-2064.6	-8254.7	-2.7152	ug/L	-2.7152	ppb	12:34:41
3	Mn 257.610†	-40824.0	-42328.3	-4.3204	ug/L	-4.3204	ppb	12:34:41
3	Mo 202.031†	-344.3	-382.4	5.6567	ug/L	5.6567	ppb	12:34:41
3	Ni 231.604†	158.5	64.2	1.4969	ug/L	1.4969	ppb	12:35:01
3	P 214.914†	773.4	569.1	1.0340	ug/L	1.0340	ppb	12:35:01
3	Pb 220.353†	223.7	267.7	-7.3080	ug/L	-7.3080	ppb	12:35:01
3	S 181.975 Axial†	65.0	20.8	27.062	ug/L	27.062	ppb	12:35:01
3	Sb 206.836†	32.0	2.3	10.167	ug/L	10.167	ppb	12:35:01
3	Se 196.026†	-2121.8	-2145.9	117.97	ug/L	117.97	ppb	12:35:01
3	Si 251.611†	-831.5	-1324.2	-38.634	ug/L	-38.634	ppb	12:34:41
3	Sn 189.927†	-38.6	-43.8	-0.4181	ug/L	-0.4181	ppb	12:35:01
3	Ti 334.940†	-1383.6	-6.6	-0.0561	ug/L	-0.0561	ppb	12:34:41
3	Tl 190.801†	-46.6	-11.3	-3.4915	ug/L	-3.4915	ppb	12:35:01
3	U 409.014†	576.8	2317.4	19.685	ug/L	19.685	ppb	12:34:41
3	V 292.402†	7077.4	8742.9	-1.8084	ug/L	-1.8084	ppb	12:34:41
3	Zn 213.857†	4712.2	4041.7	-3.0243	ug/L	-3.0243	ppb	12:35:01
3	SiO2†	-720.4	-1237.1	-77.294	ug/L	-77.294	ppb	12:35:16

Mean Data: LR1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	920708.9	97.558	%	0.0801				0.08%
Sc Radial	5098.2	97.8	%	1.32				1.35%
Y 371.029	768118.0	96.828	%	0.0522				0.05%
Y RADIAL	5395.6	97.95	%	1.893				1.93%
Ag 328.068†	-28906.8	3.7916	ug/L	0.56425	3.7916	ppb	0.56425	14.88%
Al 396.153Radial†	-17.1	-11.761	ug/L	8.5937	-11.761	ppb	8.5937	73.07%
As 188.979†	-213.8	9.3463	ug/L	2.27599	9.3463	ppb	2.27599	24.35%
B 249.677†	2464.4	-11.675	ug/L	1.1225	-11.675	ppb	1.1225	9.61%
Ba 233.527†	-2028.1	-2.2873	ug/L	0.42839	-2.2873	ppb	0.42839	18.73%
Be 313.107†	-80.5	-0.0273	ug/L	0.00872	-0.0273	ppb	0.00872	31.96%
Ca 317.933Radial†	-6.0	-9.8225	ug/L	0.86096	-9.8225	ppb	0.86096	8.77%
Cd 226.502†	3651.2	-3.0766	ug/L	0.50474	-3.0766	ppb	0.50474	16.41%
Co 228.616†	287.7	-0.2975	ug/L	0.11600	-0.2975	ppb	0.11600	38.99%
Cr 267.716†	-746.5	-0.1997	ug/L	0.09478	-0.1997	ppb	0.09478	47.45%
Cu 324.752†	-8274.1	-2.7505	ug/L	0.14196	-2.7505	ppb	0.14196	5.16%
Fe 238.204 Radial†	43308.2	394150	ug/L	610.4	394150	ppb	610.4	0.15%
K 766.490 Radial†	-118.8	-23.731	ug/L	36.5379	-23.731	ppb	36.5379	153.96%

Mg 279.077 IEC†	6.3	-206.50	ug/L	68.374	-206.50	ppb	68.374	33.11%
Mn 257.610†	-42340.9	-4.2981	ug/L	0.02311	-4.2981	ppb	0.02311	0.54%
Mo 202.031†	-393.6	4.9570	ug/L	0.61962	4.9570	ppb	0.61962	12.50%
Na 589.592 Radial†	172.9	48.636	ug/L	8.0509	48.636	ppb	8.0509	16.55%
Ni 231.604†	93.0	2.1681	ug/L	0.66737	2.1681	ppb	0.66737	30.78%
P 214.914†	561.5	-3.4193	ug/L	4.48528	-3.4193	ppb	4.48528	131.18%
Pb 220.353†	267.0	-7.4152	ug/L	0.60334	-7.4152	ppb	0.60334	8.14%
S 181.975 Axial†	19.7	25.626	ug/L	3.7926	25.626	ppb	3.7926	14.80%
Sb 206.836†	-9.1	6.5523	ug/L	3.32076	6.5523	ppb	3.32076	50.68%
Se 196.026†	-2161.0	110.25	ug/L	7.025	110.25	ppb	7.025	6.37%
Si 251.611†	-1317.5	-38.428	ug/L	0.5757	-38.428	ppb	0.5757	1.50%
Sn 189.927†	-43.8	-0.4120	ug/L	1.39412	-0.4120	ppb	1.39412	338.41%
Sr 421.552†	87.5	0.5429	ug/L	0.21073	0.5429	ppb	0.21073	38.81%
Ti 334.940†	-8.2	-0.0541	ug/L	0.09417	-0.0541	ppb	0.09417	174.11%
Tl 190.801†	-16.3	-4.8989	ug/L	1.45901	-4.8989	ppb	1.45901	29.78%
U 409.014†	2194.9	16.233	ug/L	3.0064	16.233	ppb	3.0064	18.52%
V 292.402†	8620.1	-2.6589	ug/L	0.83514	-2.6589	ppb	0.83514	31.41%
Zn 213.857†	4041.7	-3.0618	ug/L	0.03330	-3.0618	ppb	0.03330	1.09%
SiO2†	-1299.9	-81.231	ug/L	4.4649	-81.231	ppb	4.4649	5.50%

Sequence No.: 4
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 1/20/2010 12:37:28
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5103.5	5103.5	97.9	%			12:39:20
1	Y RADIAL	5352.0	5352.0	97.15	%			12:39:20
1	Al 396.153Radial†	6416.4	6544.6	4959.0	ug/L	4959.0	ppb	12:39:20
1	Ca 317.933Radial†	3060.6	3110.1	5107.1	ug/L	5107.1	ppb	12:39:40
1	Fe 238.204 Radial†	575.5	577.1	5267.3	ug/L	5267.3	ppb	12:39:40
1	K 766.490 Radial†	27199.6	25012.3	4994.7	ug/L	4994.7	ppb	12:39:20
1	Mg 279.077 IEC†	154.4	153.3	5039.0	ug/L	5039.0	ppb	12:39:40
1	Na 589.592 Radial†	35255.9	37260.8	10483	ug/L	10483	ppb	12:39:20
1	Sr 421.552†	77776.8	79477.6	493.20	ug/L	493.20	ppb	12:39:20
1	Sc 361.383	918582.8	918582.8	97.333	%			12:40:38
1	Y 371.029	761283.8	761283.8	95.966	%			12:40:38
1	Ag 328.068†	114978.3	117677.0	508.17	ug/L	508.17	ppb	12:40:43
1	As 188.979†	1272.6	1330.7	521.15	ug/L	521.15	ppb	12:41:03
1	B 249.677†	22993.0	24015.9	507.84	ug/L	507.84	ppb	12:40:43
1	Ba 233.527†	69749.6	71650.8	510.03	ug/L	510.03	ppb	12:40:43
1	Be 313.107†	1436159.9	1479893.5	502.49	ug/L	502.49	ppb	12:40:38
1	Cd 226.502†	47726.6	49250.5	507.38	ug/L	507.38	ppb	12:40:43
1	Co 228.616†	26080.1	26869.0	509.82	ug/L	509.82	ppb	12:40:43
1	Cr 267.716†	46625.0	47809.5	507.45	ug/L	507.45	ppb	12:40:43
1	Cu 324.752†	179303.9	178078.9	507.48	ug/L	507.48	ppb	12:40:43
1	Mn 257.610†	481512.6	494238.3	504.80	ug/L	504.80	ppb	12:40:38
1	Mo 202.031†	7623.8	7803.3	508.83	ug/L	508.83	ppb	12:41:03
1	Ni 231.604†	21324.6	21810.5	509.15	ug/L	509.15	ppb	12:40:43
1	P 214.914†	4685.0	4589.5	2430.2	ug/L	2430.2	ppb	12:41:03
1	Pb 220.353†	4326.1	4482.9	510.29	ug/L	510.29	ppb	12:41:03
1	S 181.975 Axial†	801.6	777.6	1012.6	ug/L	1012.6	ppb	12:41:03
1	Sb 206.836†	1569.7	1582.1	521.58	ug/L	521.58	ppb	12:41:03
1	Se 196.026†	806.8	858.7	528.31	ug/L	528.31	ppb	12:41:03
1	Si 251.611†	84081.2	85913.3	2520.2	ug/L	2520.2	ppb	12:40:43
1	Sn 189.927†	3056.7	3136.2	504.93	ug/L	504.93	ppb	12:41:03
1	Ti 334.940†	332862.3	343394.3	502.15	ug/L	502.15	ppb	12:40:38
1	Tl 190.801†	1742.4	1826.6	513.44	ug/L	513.44	ppb	12:41:03
1	U 409.014†	15970.0	18133.5	503.47	ug/L	503.47	ppb	12:40:43
1	V 292.402†	75699.6	79259.3	512.33	ug/L	512.33	ppb	12:40:43
1	Zn 213.857†	57446.3	58230.0	502.05	ug/L	502.05	ppb	12:40:43
1	SiO2†	85252.7	87090.0	5475.1	ug/L	5475.1	ppb	12:42:11
2	Sc Radial	5114.1	5114.1	98.1	%			12:39:45
2	Y RADIAL	5394.0	5394.0	97.92	%			12:39:45
2	Al 396.153Radial†	6520.5	6637.3	5029.9	ug/L	5029.9	ppb	12:39:45
2	Ca 317.933Radial†	3054.9	3098.0	5087.1	ug/L	5087.1	ppb	12:40:05
2	Fe 238.204 Radial†	580.8	581.3	5305.9	ug/L	5305.9	ppb	12:40:05
2	K 766.490 Radial†	27610.5	25374.2	5067.1	ug/L	5067.1	ppb	12:39:45
2	Mg 279.077 IEC†	156.1	154.7	5084.9	ug/L	5084.9	ppb	12:40:05
2	Na 589.592 Radial†	35687.9	37627.4	10586	ug/L	10586	ppb	12:39:45
2	Sr 421.552†	78685.7	80241.1	497.94	ug/L	497.94	ppb	12:39:45
2	Sc 361.383	930608.1	930608.1	98.607	%			12:41:09
2	Y 371.029	771762.6	771762.6	97.287	%			12:41:09
2	Ag 328.068†	115956.3	117142.3	505.88	ug/L	505.88	ppb	12:41:14
2	As 188.979†	1259.2	1300.2	509.31	ug/L	509.31	ppb	12:41:34
2	B 249.677†	23365.9	24088.9	509.39	ug/L	509.39	ppb	12:41:14
2	Ba 233.527†	70406.2	71390.6	508.18	ug/L	508.18	ppb	12:41:14
2	Be 313.107†	1457895.6	1482869.7	503.49	ug/L	503.49	ppb	12:41:09
2	Cd 226.502†	48146.3	49042.5	505.23	ug/L	505.23	ppb	12:41:14
2	Co 228.616†	26321.0	26767.0	507.87	ug/L	507.87	ppb	12:41:14
2	Cr 267.716†	47029.5	47600.7	505.24	ug/L	505.24	ppb	12:41:14
2	Cu 324.752†	180867.4	177284.1	505.22	ug/L	505.22	ppb	12:41:14
2	Mn 257.610†	487153.0	493565.7	504.11	ug/L	504.11	ppb	12:41:09
2	Mo 202.031†	7616.0	7694.2	501.72	ug/L	501.72	ppb	12:41:34
2	Ni 231.604†	21515.1	21720.6	507.05	ug/L	507.05	ppb	12:41:14

2	P 214.914†	4724.8	4567.6	2418.5 ug/L	2418.5 ppb	12:41:34
2	Pb 220.353†	4331.4	4430.9	504.38 ug/L	504.38 ppb	12:41:34
2	S 181.975 Axial†	805.5	771.0	1003.9 ug/L	1003.9 ppb	12:41:34
2	Sb 206.836†	1597.7	1589.6	523.80 ug/L	523.80 ppb	12:41:34
2	Se 196.026†	808.7	850.0	523.28 ug/L	523.28 ppb	12:41:34
2	Si 251.611†	84977.8	85706.3	2514.2 ug/L	2514.2 ppb	12:41:14
2	Sn 189.927†	3084.8	3124.1	502.98 ug/L	502.98 ppb	12:41:34
2	Ti 334.940†	336912.5	343082.6	501.69 ug/L	501.69 ppb	12:41:09
2	Tl 190.801†	1737.6	1798.6	505.64 ug/L	505.64 ppb	12:41:34
2	U 409.014†	16190.7	18145.3	503.80 ug/L	503.80 ppb	12:41:14
2	V 292.402†	76416.9	78981.8	510.46 ug/L	510.46 ppb	12:41:14
2	Zn 213.857†	57969.1	57997.5	500.04 ug/L	500.04 ppb	12:41:14
2	SiO2†	84591.7	85287.9	5361.7 ug/L	5361.7 ppb	12:42:16
3	Sc Radial	5116.2	5116.2	98.1 %		12:40:10
3	Y RADIAL	5388.7	5388.7	97.82 %		12:40:10
3	Al 396.153Radial†	6444.2	6556.7	4968.6 ug/L	4968.6 ppb	12:40:10
3	Ca 317.933Radial†	3031.3	3072.6	5045.4 ug/L	5045.4 ppb	12:40:30
3	Fe 238.204 Radial†	575.9	576.1	5258.5 ug/L	5258.5 ppb	12:40:30
3	K 766.490 Radial†	27377.4	25124.8	5017.2 ug/L	5017.2 ppb	12:40:10
3	Mg 279.077 IEC†	158.0	156.6	5146.5 ug/L	5146.5 ppb	12:40:30
3	Na 589.592 Radial†	35567.2	37489.0	10547 ug/L	10547 ppb	12:40:10
3	Sr 421.552†	78395.6	79911.5	495.90 ug/L	495.90 ppb	12:40:10
3	Sc 361.383	929317.5	929317.5	98.471 %		12:41:40
3	Y 371.029	769029.7	769029.7	96.943 %		12:41:40
3	Ag 328.068†	116957.0	118321.9	510.93 ug/L	510.93 ppb	12:41:45
3	As 188.979†	1259.3	1302.1	510.07 ug/L	510.07 ppb	12:42:05
3	B 249.677†	23539.2	24297.8	513.82 ug/L	513.82 ppb	12:41:45
3	Ba 233.527†	70835.9	71926.1	511.99 ug/L	511.99 ppb	12:41:45
3	Be 313.107†	1453096.0	1480048.9	502.54 ug/L	502.54 ppb	12:41:40
3	Cd 226.502†	48567.0	49537.6	510.34 ug/L	510.34 ppb	12:41:45
3	Co 228.616†	26552.7	27039.4	513.03 ug/L	513.03 ppb	12:41:45
3	Cr 267.716†	47324.0	47966.0	509.11 ug/L	509.11 ppb	12:41:45
3	Cu 324.752†	182781.3	179482.4	511.47 ug/L	511.47 ppb	12:41:45
3	Mn 257.610†	487528.5	494633.2	505.19 ug/L	505.19 ppb	12:41:40
3	Mo 202.031†	7581.9	7670.3	500.17 ug/L	500.17 ppb	12:42:05
3	Ni 231.604†	21623.9	21861.4	510.34 ug/L	510.34 ppb	12:41:45
3	P 214.914†	4687.2	4536.1	2399.9 ug/L	2399.9 ppb	12:42:05
3	Pb 220.353†	4304.9	4410.1	502.00 ug/L	502.00 ppb	12:42:05
3	S 181.975 Axial†	800.1	766.7	998.27 ug/L	998.27 ppb	12:42:05
3	Sb 206.836†	1572.6	1566.4	516.36 ug/L	516.36 ppb	12:42:05
3	Se 196.026†	806.0	848.3	522.12 ug/L	522.12 ppb	12:42:05
3	Si 251.611†	85697.0	86556.4	2539.3 ug/L	2539.3 ppb	12:41:45
3	Sn 189.927†	3068.9	3112.3	501.08 ug/L	501.08 ppb	12:42:05
3	Ti 334.940†	337196.9	343846.0	502.79 ug/L	502.79 ppb	12:41:40
3	Tl 190.801†	1736.0	1799.4	505.85 ug/L	505.85 ppb	12:42:05
3	U 409.014†	16546.7	18529.6	514.50 ug/L	514.50 ppb	12:41:45
3	V 292.402†	77051.4	79733.8	515.26 ug/L	515.26 ppb	12:41:45
3	Zn 213.857†	58445.7	58563.1	504.93 ug/L	504.93 ppb	12:41:45
3	SiO2†	85417.5	86245.7	5422.1 ug/L	5422.1 ppb	12:42:21

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	926169.5	98.137	%	0.6995				0.71%
Sc Radial	5111.3	98.0	%	0.13				0.13%
Y 371.029	767358.7	96.732	%	0.6852				0.71%
Y RADIAL	5378.2	97.63	%	0.415				0.43%
Ag 328.068†	117713.8	508.33	ug/L	2.532	508.33	ppb	2.532	0.50%
QC value within limits for Ag 328.068 Recovery = 101.67%								
Al 396.153Radial†	6579.6	4985.8	ug/L	38.46	4985.8	ppb	38.46	0.77%
QC value within limits for Al 396.153Radial Recovery = 99.72%								
As 188.979†	1311.0	513.51	ug/L	6.629	513.51	ppb	6.629	1.29%
QC value within limits for As 188.979 Recovery = 102.70%								
B 249.677†	24134.2	510.35	ug/L	3.103	510.35	ppb	3.103	0.61%
QC value within limits for B 249.677 Recovery = 102.07%								
Ba 233.527†	71655.8	510.06	ug/L	1.906	510.06	ppb	1.906	0.37%
QC value within limits for Ba 233.527 Recovery = 102.01%								
Be 313.107†	1480937.4	502.84	ug/L	0.567	502.84	ppb	0.567	0.11%
QC value within limits for Be 313.107 Recovery = 100.57%								
Ca 317.933Radial†	3093.6	5079.9	ug/L	31.46	5079.9	ppb	31.46	0.62%

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   QC value within limits for Ca 317.933Radial  Recovery = 101.60%
Cd 226.502†            49276.9      507.65 ug/L         2.566      507.65 ppb          2.566   0.51%
   QC value within limits for Cd 226.502  Recovery = 101.53%
Co 228.616†            26891.8      510.24 ug/L         2.607      510.24 ppb          2.607   0.51%
   QC value within limits for Co 228.616  Recovery = 102.05%
Cr 267.716†            47792.1      507.27 ug/L         1.944      507.27 ppb          1.944   0.38%
   QC value within limits for Cr 267.716  Recovery = 101.45%
Cu 324.752†           178281.8      508.06 ug/L         3.168      508.06 ppb          3.168   0.62%
   QC value within limits for Cu 324.752  Recovery = 101.61%
Fe 238.204 Radial†       578.2      5277.2 ug/L         25.23      5277.2 ppb          25.23   0.48%
   QC value within limits for Fe 238.204 Radial  Recovery = 105.54%
K 766.490 Radial†      25170.4      5026.3 ug/L         37.02      5026.3 ppb          37.02   0.74%
   QC value within limits for K 766.490 Radial  Recovery = 100.53%
Mg 279.077 IEC†          154.9      5090.1 ug/L         53.93      5090.1 ppb          53.93   1.06%
   QC value within limits for Mg 279.077 IEC  Recovery = 101.80%
Mn 257.610†           494145.7      504.70 ug/L         0.547      504.70 ppb          0.547   0.11%
   QC value within limits for Mn 257.610  Recovery = 100.94%
Mo 202.031†             7722.6      503.57 ug/L         4.617      503.57 ppb          4.617   0.92%
   QC value within limits for Mo 202.031  Recovery = 100.71%
Na 589.592 Radial†     37459.1       10539 ug/L          52.1       10539 ppb           52.1   0.49%
   QC value within limits for Na 589.592 Radial  Recovery = 105.39%
Ni 231.604†            21797.5      508.85 ug/L         1.663      508.85 ppb          1.663   0.33%
   QC value within limits for Ni 231.604  Recovery = 101.77%
P 214.914†              4564.4      2416.2 ug/L         15.25      2416.2 ppb          15.25   0.63%
   QC value within limits for P 214.914  Recovery = 96.65%
Pb 220.353†             4441.3      505.56 ug/L         4.267      505.56 ppb          4.267   0.84%
   QC value within limits for Pb 220.353  Recovery = 101.11%
S 181.975 Axial†         771.8      1004.9 ug/L          7.20      1004.9 ppb           7.20   0.72%
   QC value within limits for S 181.975 Axial  Recovery = 100.49%
Sb 206.836†             1579.4      520.58 ug/L         3.819      520.58 ppb          3.819   0.73%
   QC value within limits for Sb 206.836  Recovery = 104.12%
Se 196.026†              852.3      524.57 ug/L         3.295      524.57 ppb          3.295   0.63%
   QC value within limits for Se 196.026  Recovery = 104.91%
Si 251.611†            86058.7      2524.6 ug/L         13.06      2524.6 ppb          13.06   0.52%
   QC value within limits for Si 251.611  Recovery = 100.98%
Sn 189.927†             3124.2      502.99 ug/L         1.925      502.99 ppb          1.925   0.38%
   QC value within limits for Sn 189.927  Recovery = 100.60%
Sr 421.552†            79876.8      495.68 ug/L         2.377      495.68 ppb          2.377   0.48%
   QC value within limits for Sr 421.552  Recovery = 99.14%
Ti 334.940†           343441.0      502.21 ug/L         0.552      502.21 ppb          0.552   0.11%
   QC value within limits for Ti 334.940  Recovery = 100.44%
Tl 190.801†             1808.2      508.31 ug/L         4.445      508.31 ppb          4.445   0.87%
   QC value within limits for Tl 190.801  Recovery = 101.66%
U 409.014†             18269.5      507.26 ug/L         6.278      507.26 ppb          6.278   1.24%
   QC value within limits for U 409.014  Recovery = 101.45%
V 292.402†             79325.0      512.69 ug/L         2.420      512.69 ppb          2.420   0.47%
   QC value within limits for V 292.402  Recovery = 102.54%
Zn 213.857†            58263.5      502.34 ug/L         2.460      502.34 ppb          2.460   0.49%
   QC value within limits for Zn 213.857  Recovery = 100.47%
SiO2†                  86207.8      5419.6 ug/L         56.73      5419.6 ppb          56.73   1.05%
   QC value within limits for SiO2  Recovery = 101.35%
All analyte(s) passed QC.
```

Sequence No.: 5
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 1/20/2010 12:44:30
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5214.4	5214.4	100.0	%			12:46:23
1	Y RADIAL	5524.2	5524.2	100.3	%			12:46:23
1	Al 396.153Radial†	32.6	20.3	15.492	ug/L	15.492	ppb	12:46:23
1	Ca 317.933Radial†	13.8	-3.6	-5.9779	ug/L	-5.9779	ppb	12:46:43
1	Fe 238.204 Radial†	12.6	1.6	14.659	ug/L	14.659	ppb	12:46:43
1	K 766.490 Radial†	2903.2	120.5	24.095	ug/L	24.095	ppb	12:46:23
1	Mg 279.077 IEC†	4.2	-0.3	-8.3390	ug/L	-8.3390	ppb	12:46:43
1	Na 589.592 Radial†	-1203.9	28.5	8.0044	ug/L	8.0044	ppb	12:46:23
1	Sr 421.552†	23.5	20.4	0.1264	ug/L	0.1264	ppb	12:46:23
1	Sc 361.383	957301.9	957301.9	101.44	%			12:47:39
1	Y 371.029	803842.9	803842.9	101.33	%			12:47:39
1	Ag 328.068†	344.8	-111.6	-0.4788	ug/L	-0.4788	ppb	12:47:45
1	As 188.979†	-17.1	6.4	2.4898	ug/L	2.4898	ppb	12:48:05
1	B 249.677†	0.4	393.4	8.3537	ug/L	8.3537	ppb	12:47:45
1	Ba 233.527†	-3.5	-13.3	-0.0947	ug/L	-0.0947	ppb	12:48:05
1	Be 313.107†	-4411.4	35.9	0.0126	ug/L	0.0126	ppb	12:47:45
1	Cd 226.502†	-212.3	6.9	0.0706	ug/L	0.0706	ppb	12:48:05
1	Co 228.616†	-83.3	-7.8	-0.1486	ug/L	-0.1486	ppb	12:48:05
1	Cr 267.716†	85.3	-8.9	-0.0960	ug/L	-0.0960	ppb	12:48:05
1	Cu 324.752†	6068.1	-155.5	-0.4452	ug/L	-0.4452	ppb	12:47:45
1	Mn 257.610†	400.7	-72.1	-0.0718	ug/L	-0.0718	ppb	12:48:05
1	Mo 202.031†	23.9	-5.8	-0.3789	ug/L	-0.3789	ppb	12:48:05
1	Ni 231.604†	92.2	-7.4	-0.1731	ug/L	-0.1731	ppb	12:48:05
1	P 214.914†	232.2	5.0	2.8404	ug/L	2.8404	ppb	12:48:05
1	Pb 220.353†	-64.7	-25.5	-2.8872	ug/L	-2.8872	ppb	12:48:05
1	S 181.975 Axial†	46.2	-0.4	-0.4602	ug/L	-0.4602	ppb	12:48:05
1	Sb 206.836†	46.8	15.6	4.9493	ug/L	4.9493	ppb	12:48:05
1	Se 196.026†	-31.0	-0.7	-0.3724	ug/L	-0.3724	ppb	12:48:05
1	Si 251.611†	522.1	43.1	1.2724	ug/L	1.2724	ppb	12:48:05
1	Sn 189.927†	4.8	0.5	0.0744	ug/L	0.0744	ppb	12:48:05
1	Ti 334.940†	-1293.7	136.7	0.1977	ug/L	0.1977	ppb	12:47:45
1	Tl 190.801†	-30.1	6.8	1.9135	ug/L	1.9135	ppb	12:48:05
1	U 409.014†	-1564.8	183.3	5.1046	ug/L	5.1046	ppb	12:47:39
1	V 292.402†	-1530.8	-23.4	-0.1476	ug/L	-0.1476	ppb	12:47:45
1	Zn 213.857†	709.1	-91.2	-0.7933	ug/L	-0.7933	ppb	12:48:05
1	SiO2†	542.3	36.2	2.2889	ug/L	2.2889	ppb	12:49:11
2	Sc Radial	5205.5	5205.5	99.8	%			12:46:48
2	Y RADIAL	5522.9	5522.9	100.3	%			12:46:48
2	Al 396.153Radial†	2.6	-9.7	-7.3666	ug/L	-7.3666	ppb	12:46:48
2	Ca 317.933Radial†	9.0	-8.4	-13.836	ug/L	-13.836	ppb	12:47:08
2	Fe 238.204 Radial†	10.0	-1.0	-8.6614	ug/L	-8.6614	ppb	12:47:08
2	K 766.490 Radial†	2860.3	82.5	16.490	ug/L	16.490	ppb	12:46:48
2	Mg 279.077 IEC†	2.8	-1.7	-55.535	ug/L	-55.535	ppb	12:47:08
2	Na 589.592 Radial†	-1099.6	130.9	36.827	ug/L	36.827	ppb	12:46:48
2	Sr 421.552†	16.2	13.1	0.0813	ug/L	0.0813	ppb	12:46:48
2	Sc 361.383	944167.5	944167.5	100.04	%			12:48:10
2	Y 371.029	792818.4	792818.4	99.941	%			12:48:10
2	Ag 328.068†	453.6	1.9	0.0053	ug/L	0.0053	ppb	12:48:15
2	As 188.979†	-21.3	2.0	0.7696	ug/L	0.7696	ppb	12:48:35
2	B 249.677†	59.0	452.0	9.6027	ug/L	9.6027	ppb	12:48:15
2	Ba 233.527†	1.2	-8.7	-0.0621	ug/L	-0.0621	ppb	12:48:35
2	Be 313.107†	-4460.7	-73.8	-0.0248	ug/L	-0.0248	ppb	12:48:15
2	Cd 226.502†	-210.9	5.4	0.0563	ug/L	0.0563	ppb	12:48:35
2	Co 228.616†	-79.5	-5.1	-0.0966	ug/L	-0.0966	ppb	12:48:35
2	Cr 267.716†	76.1	-16.9	-0.1793	ug/L	-0.1793	ppb	12:48:35
2	Cu 324.752†	6084.4	-55.9	-0.1595	ug/L	-0.1595	ppb	12:48:15
2	Mn 257.610†	423.4	-43.9	-0.0434	ug/L	-0.0434	ppb	12:48:35
2	Mo 202.031†	30.3	0.9	0.0554	ug/L	0.0554	ppb	12:48:35
2	Ni 231.604†	94.1	-4.3	-0.1001	ug/L	-0.1001	ppb	12:48:35

2	P 214.914†	228.8	4.7	2.6509	ug/L	2.6509	ppb	12:48:35
2	Pb 220.353†	-82.3	-44.0	-4.9903	ug/L	-4.9903	ppb	12:48:35
2	S 181.975 Axial†	38.0	-7.9	-10.302	ug/L	-10.302	ppb	12:48:35
2	Sb 206.836†	30.1	-0.5	-0.1432	ug/L	-0.1432	ppb	12:48:35
2	Se 196.026†	-22.9	7.0	4.0897	ug/L	4.0897	ppb	12:48:35
2	Si 251.611†	536.2	64.3	1.8915	ug/L	1.8915	ppb	12:48:35
2	Sn 189.927†	13.6	9.4	1.5054	ug/L	1.5054	ppb	12:48:35
2	Ti 334.940†	-1347.9	64.8	0.0977	ug/L	0.0977	ppb	12:48:15
2	Tl 190.801†	-43.6	-7.1	-1.9870	ug/L	-1.9870	ppb	12:48:35
2	U 409.014†	-1747.0	-20.2	-0.5622	ug/L	-0.5622	ppb	12:48:10
2	V 292.402†	-1508.4	-22.1	-0.1408	ug/L	-0.1408	ppb	12:48:15
2	Zn 213.857†	724.3	-66.3	-0.5750	ug/L	-0.5750	ppb	12:48:35
2	SiO2†	503.6	4.9	0.3047	ug/L	0.3047	ppb	12:49:16
3	Sc Radial	5256.2	5256.2	101	%			12:47:13
3	Y RADIAL	5567.4	5567.4	101.1	%			12:47:13
3	Al 396.153Radial†	1.3	-11.1	-8.4166	ug/L	-8.4166	ppb	12:47:13
3	Ca 317.933Radial†	10.5	-7.1	-11.602	ug/L	-11.602	ppb	12:47:33
3	Fe 238.204 Radial†	10.4	-0.7	-5.9529	ug/L	-5.9529	ppb	12:47:33
3	K 766.490 Radial†	2934.5	128.5	25.693	ug/L	25.693	ppb	12:47:13
3	Mg 279.077 IEC†	3.1	-1.4	-46.330	ug/L	-46.330	ppb	12:47:33
3	Na 589.592 Radial†	-1163.5	78.1	21.981	ug/L	21.981	ppb	12:47:13
3	Sr 421.552†	32.2	28.9	0.1793	ug/L	0.1793	ppb	12:47:13
3	Sc 361.383	946939.9	946939.9	100.34	%			12:48:40
3	Y 371.029	795213.9	795213.9	100.24	%			12:48:40
3	Ag 328.068†	330.7	-122.0	-0.5286	ug/L	-0.5286	ppb	12:48:45
3	As 188.979†	-24.5	-1.1	-0.4431	ug/L	-0.4431	ppb	12:49:05
3	B 249.677†	88.7	481.4	10.226	ug/L	10.226	ppb	12:48:45
3	Ba 233.527†	-6.4	-16.3	-0.1163	ug/L	-0.1163	ppb	12:49:05
3	Be 313.107†	-4396.0	3.7	0.0012	ug/L	0.0012	ppb	12:48:45
3	Cd 226.502†	-207.3	9.6	0.1004	ug/L	0.1004	ppb	12:49:05
3	Co 228.616†	-72.1	2.5	0.0466	ug/L	0.0466	ppb	12:49:05
3	Cr 267.716†	71.4	-21.9	-0.2334	ug/L	-0.2334	ppb	12:49:05
3	Cu 324.752†	6072.2	-85.9	-0.2466	ug/L	-0.2466	ppb	12:48:45
3	Mn 257.610†	408.2	-60.3	-0.0603	ug/L	-0.0603	ppb	12:49:05
3	Mo 202.031†	26.7	-2.8	-0.1822	ug/L	-0.1822	ppb	12:49:05
3	Ni 231.604†	91.6	-7.1	-0.1653	ug/L	-0.1653	ppb	12:49:05
3	P 214.914†	237.7	13.0	7.2131	ug/L	7.2131	ppb	12:49:05
3	Pb 220.353†	-58.1	-19.6	-2.2269	ug/L	-2.2269	ppb	12:49:05
3	S 181.975 Axial†	41.5	-4.5	-5.9185	ug/L	-5.9185	ppb	12:49:05
3	Sb 206.836†	36.0	5.3	1.6752	ug/L	1.6752	ppb	12:49:05
3	Se 196.026†	-32.7	-2.8	-1.6768	ug/L	-1.6768	ppb	12:49:05
3	Si 251.611†	510.7	37.4	1.1015	ug/L	1.1015	ppb	12:49:05
3	Sn 189.927†	6.1	1.8	0.2938	ug/L	0.2938	ppb	12:49:05
3	Ti 334.940†	-1428.2	-11.3	-0.0154	ug/L	-0.0154	ppb	12:48:45
3	Tl 190.801†	-31.5	5.1	1.4231	ug/L	1.4231	ppb	12:49:05
3	U 409.014†	-1630.2	101.2	2.8214	ug/L	2.8214	ppb	12:48:40
3	V 292.402†	-1531.4	-40.6	-0.2561	ug/L	-0.2561	ppb	12:48:45
3	Zn 213.857†	729.2	-63.6	-0.5509	ug/L	-0.5509	ppb	12:49:05
3	SiO2†	521.3	21.0	1.3302	ug/L	1.3302	ppb	12:49:21

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	949469.8	100.61	%	0.734				0.73%
Sc Radial	5225.4	100	%	0.5				0.52%
Y 371.029	797291.7	100.51	%	0.731				0.73%
Y RADIAL	5538.2	100.5	%	0.46				0.46%
Ag 328.068†	-77.2	-0.3340	ug/L	0.29493	-0.3340	ppb	0.29493	88.29%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-0.1	-0.0970	ug/L	13.51081	-0.0970	ppb	13.51081	>999.9%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	2.4	0.9388	ug/L	1.47372	0.9388	ppb	1.47372	156.99%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	442.2	9.3942	ug/L	0.95360	9.3942	ppb	0.95360	10.15%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-12.8	-0.0910	ug/L	0.02729	-0.0910	ppb	0.02729	29.99%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-11.4	-0.0037	ug/L	0.01918	-0.0037	ppb	0.01918	524.96%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-6.4	-10.472	ug/L	4.0490	-10.472	ppb	4.0490	38.67%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                7.3      0.0758 ug/L       0.02248      0.0758 ppb        0.02248  29.68%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†               -3.5     -0.0662 ug/L       0.10106     -0.0662 ppb        0.10106 152.64%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              -15.9     -0.1695 ug/L       0.06919     -0.1695 ppb        0.06919  40.81%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              -99.1     -0.2838 ug/L       0.14641     -0.2838 ppb        0.14641  51.60%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         0.0      0.0150 ug/L      12.75451      0.0150 ppb       12.75451 >999.9%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        110.5      22.093 ug/L        4.9171      22.093 ppb         4.9171  22.26%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           -1.1     -36.735 ug/L       25.0184     -36.735 ppb        25.0184  68.11%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†              -58.8     -0.0585 ug/L       0.01426     -0.0585 ppb        0.01426  24.38%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               -2.6     -0.1685 ug/L       0.21747     -0.1685 ppb        0.21747 129.03%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        79.2      22.271 ug/L       14.4137      22.271 ppb        14.4137  64.72%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               -6.3     -0.1462 ug/L       0.04009     -0.1462 ppb        0.04009  27.43%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 7.6      4.2348 ug/L       2.58106      4.2348 ppb        2.58106  60.95%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†              -29.7     -3.3681 ug/L       1.44315     -3.3681 ppb        1.44315  42.85%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -4.3     -5.5601 ug/L       4.93044     -5.5601 ppb        4.93044  88.68%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                6.8      2.1604 ug/L       2.58071      2.1604 ppb        2.58071 119.45%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                1.2      0.6802 ug/L       3.02389      0.6802 ppb        3.02389 444.59%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               48.3      1.4218 ug/L       0.41568      1.4218 ppb        0.41568  29.24%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                3.9      0.6246 ug/L       0.77071      0.6246 ppb        0.77071 123.40%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               20.8      0.1290 ug/L       0.04904      0.1290 ppb        0.04904  38.02%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               63.4      0.0933 ug/L       0.10661      0.0933 ppb        0.10661 114.22%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                1.6      0.4499 ug/L       2.12457      0.4499 ppb        2.12457 472.24%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                88.1      2.4546 ug/L       2.85116      2.4546 ppb        2.85116 116.16%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               -28.7     -0.1815 ug/L       0.06468     -0.1815 ppb        0.06468  35.64%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†              -73.7     -0.6397 ug/L       0.13355     -0.6397 ppb        0.13355  20.88%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     20.7      1.3079 ug/L       0.99228      1.3079 ppb        0.99228  75.87%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 7
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 1/20/2010 13:37:05
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5193.0	5193.0	99.6	%			13:38:57
1	Y RADIAL	5496.6	5496.6	99.78	%			13:38:57
1	Al 396.153Radial†	6616.4	6632.5	5026.0	ug/L	5026.0	ppb	13:38:57
1	Ca 317.933Radial†	3078.7	3074.4	5048.5	ug/L	5048.5	ppb	13:39:17
1	Fe 238.204 Radial†	579.1	570.6	5208.1	ug/L	5208.1	ppb	13:39:17
1	K 766.490 Radial†	28046.3	25383.7	5069.0	ug/L	5069.0	ppb	13:38:57
1	Mg 279.077 IEC†	159.9	156.1	5131.7	ug/L	5131.7	ppb	13:39:17
1	Na 589.592 Radial†	35691.8	37077.8	10431	ug/L	10431	ppb	13:38:57
1	Sr 421.552†	79553.9	79892.7	495.78	ug/L	495.78	ppb	13:38:57
1	Sc 361.383	940037.8	940037.8	99.607	%			13:40:16
1	Y 371.029	776540.6	776540.6	97.889	%			13:40:16
1	Ag 328.068†	117410.8	117423.0	507.06	ug/L	507.06	ppb	13:40:16
1	As 188.979†	1271.6	1299.9	509.20	ug/L	509.20	ppb	13:40:36
1	B 249.677†	23391.0	23876.4	504.90	ug/L	504.90	ppb	13:40:16
1	Ba 233.527†	71428.7	71700.9	510.38	ug/L	510.38	ppb	13:40:16
1	Be 313.107†	1480911.0	1491144.9	506.31	ug/L	506.31	ppb	13:40:16
1	Cd 226.502†	48931.5	49341.0	508.31	ug/L	508.31	ppb	13:40:16
1	Co 228.616†	26438.2	26617.0	505.03	ug/L	505.03	ppb	13:40:36
1	Cr 267.716†	47536.0	47630.8	505.56	ug/L	505.56	ppb	13:40:16
1	Cu 324.752†	184995.4	179588.4	511.79	ug/L	511.79	ppb	13:40:16
1	Mn 257.610†	497450.0	498947.6	509.59	ug/L	509.59	ppb	13:40:16
1	Mo 202.031†	7780.9	7782.3	507.46	ug/L	507.46	ppb	13:40:36
1	Ni 231.604†	21603.9	21590.8	504.02	ug/L	504.02	ppb	13:40:36
1	P 214.914†	4796.2	4591.2	2430.3	ug/L	2430.3	ppb	13:40:36
1	Pb 220.353†	4406.9	4462.6	508.00	ug/L	508.00	ppb	13:40:36
1	S 181.975 Axial†	818.5	775.9	1010.3	ug/L	1010.3	ppb	13:40:36
1	Sb 206.836†	1597.6	1573.4	518.71	ug/L	518.71	ppb	13:40:36
1	Se 196.026†	816.1	849.1	522.45	ug/L	522.45	ppb	13:40:36
1	Si 251.611†	86094.1	85962.5	2521.7	ug/L	2521.7	ppb	13:40:16
1	Sn 189.927†	3113.2	3121.2	502.51	ug/L	502.51	ppb	13:40:36
1	Ti 334.940†	343943.4	346713.9	507.00	ug/L	507.00	ppb	13:40:16
1	Tl 190.801†	1762.3	1805.7	507.72	ug/L	507.72	ppb	13:40:36
1	U 409.014†	15731.9	17520.0	486.39	ug/L	486.39	ppb	13:40:16
1	V 292.402†	77106.1	78896.3	509.97	ug/L	509.97	ppb	13:40:16
1	Zn 213.857†	58898.6	58341.0	503.05	ug/L	503.05	ppb	13:40:16
1	SiO2†	85410.5	85249.3	5359.1	ug/L	5359.1	ppb	13:41:36
2	Sc Radial	5185.2	5185.2	99.4	%			13:39:22
2	Y RADIAL	5476.4	5476.4	99.41	%			13:39:22
2	Al 396.153Radial†	6615.2	6641.3	5032.8	ug/L	5032.8	ppb	13:39:22
2	Ca 317.933Radial†	3107.2	3107.8	5103.3	ug/L	5103.3	ppb	13:39:42
2	Fe 238.204 Radial†	583.1	575.5	5252.8	ug/L	5252.8	ppb	13:39:42
2	K 766.490 Radial†	27915.3	25294.3	5051.1	ug/L	5051.1	ppb	13:39:22
2	Mg 279.077 IEC†	161.4	157.8	5186.9	ug/L	5186.9	ppb	13:39:42
2	Na 589.592 Radial†	35610.8	37050.2	10424	ug/L	10424	ppb	13:39:22
2	Sr 421.552†	79293.5	79750.9	494.90	ug/L	494.90	ppb	13:39:22
2	Sc 361.383	940883.7	940883.7	99.696	%			13:40:43
2	Y 371.029	778328.0	778328.0	98.115	%			13:40:43
2	Ag 328.068†	117669.5	117576.5	507.73	ug/L	507.73	ppb	13:40:43
2	As 188.979†	1269.4	1296.5	507.91	ug/L	507.91	ppb	13:41:03
2	B 249.677†	23524.4	23989.0	507.29	ug/L	507.29	ppb	13:40:43
2	Ba 233.527†	71472.1	71680.0	510.23	ug/L	510.23	ppb	13:40:43
2	Be 313.107†	1485990.4	1494903.2	507.58	ug/L	507.58	ppb	13:40:43
2	Cd 226.502†	48963.4	49328.8	508.18	ug/L	508.18	ppb	13:40:43
2	Co 228.616†	26418.8	26573.7	504.20	ug/L	504.20	ppb	13:41:03
2	Cr 267.716†	47473.8	47525.5	504.45	ug/L	504.45	ppb	13:40:43
2	Cu 324.752†	185287.6	179714.6	512.14	ug/L	512.14	ppb	13:40:43
2	Mn 257.610†	497763.2	498812.8	509.46	ug/L	509.46	ppb	13:40:43
2	Mo 202.031†	7765.5	7759.7	505.99	ug/L	505.99	ppb	13:41:03
2	Ni 231.604†	21585.7	21553.1	503.14	ug/L	503.14	ppb	13:41:03

2	P 214.914†	4800.0	4590.7	2429.9 ug/L	2429.9 ppb	13:41:03
2	Pb 220.353†	4401.4	4453.1	506.91 ug/L	506.91 ppb	13:41:03
2	S 181.975 Axial†	819.0	775.7	1010.0 ug/L	1010.0 ppb	13:41:03
2	Sb 206.836†	1610.0	1584.3	522.12 ug/L	522.12 ppb	13:41:03
2	Se 196.026†	823.9	856.3	526.84 ug/L	526.84 ppb	13:41:03
2	Si 251.611†	86094.4	85885.2	2519.5 ug/L	2519.5 ppb	13:40:43
2	Sn 189.927†	3104.9	3110.1	500.73 ug/L	500.73 ppb	13:41:03
2	Ti 334.940†	344168.7	346629.5	506.88 ug/L	506.88 ppb	13:40:43
2	Tl 190.801†	1753.4	1795.2	504.78 ug/L	504.78 ppb	13:41:03
2	U 409.014†	16030.7	17805.5	494.34 ug/L	494.34 ppb	13:40:43
2	V 292.402†	77254.1	78975.2	510.47 ug/L	510.47 ppb	13:40:43
2	Zn 213.857†	58898.9	58288.1	502.59 ug/L	502.59 ppb	13:40:43
2	SiO2†	86069.4	85833.2	5396.0 ug/L	5396.0 ppb	13:41:41
3	Sc Radial	5166.4	5166.4	99.1 %		13:39:47
3	Y RADIAL	5450.5	5450.5	98.94 %		13:39:47
3	Al 396.153Radial†	6532.7	6582.3	4988.0 ug/L	4988.0 ppb	13:39:47
3	Ca 317.933Radial†	3088.2	3100.0	5090.4 ug/L	5090.4 ppb	13:40:07
3	Fe 238.204 Radial†	582.0	576.5	5261.4 ug/L	5261.4 ppb	13:40:07
3	K 766.490 Radial†	27747.6	25227.2	5037.7 ug/L	5037.7 ppb	13:39:47
3	Mg 279.077 IEC†	162.2	159.3	5235.3 ug/L	5235.3 ppb	13:40:07
3	Na 589.592 Radial†	35293.7	36860.5	10370 ug/L	10370 ppb	13:39:47
3	Sr 421.552†	78507.9	79248.2	491.78 ug/L	491.78 ppb	13:39:47
3	Sc 361.383	942403.8	942403.8	99.857 %		13:41:11
3	Y 371.029	779737.3	779737.3	98.292 %		13:41:11
3	Ag 328.068†	117651.3	117367.9	506.84 ug/L	506.84 ppb	13:41:11
3	As 188.979†	1272.5	1297.5	508.31 ug/L	508.31 ppb	13:41:31
3	B 249.677†	23473.8	23900.4	505.41 ug/L	505.41 ppb	13:41:11
3	Ba 233.527†	71604.8	71697.2	510.35 ug/L	510.35 ppb	13:41:11
3	Be 313.107†	1489184.5	1495697.8	507.85 ug/L	507.85 ppb	13:41:11
3	Cd 226.502†	49103.5	49389.9	508.80 ug/L	508.80 ppb	13:41:11
3	Co 228.616†	26304.5	26416.4	501.21 ug/L	501.21 ppb	13:41:31
3	Cr 267.716†	47687.9	47663.1	505.91 ug/L	505.91 ppb	13:41:11
3	Cu 324.752†	185481.1	179608.5	511.85 ug/L	511.85 ppb	13:41:11
3	Mn 257.610†	498991.0	499237.0	509.89 ug/L	509.89 ppb	13:41:11
3	Mo 202.031†	7729.6	7711.2	502.83 ug/L	502.83 ppb	13:41:31
3	Ni 231.604†	21485.9	21418.2	499.99 ug/L	499.99 ppb	13:41:31
3	P 214.914†	4757.2	4540.1	2402.0 ug/L	2402.0 ppb	13:41:31
3	Pb 220.353†	4412.1	4456.7	507.30 ug/L	507.30 ppb	13:41:31
3	S 181.975 Axial†	805.0	760.2	989.86 ug/L	989.86 ppb	13:41:31
3	Sb 206.836†	1598.7	1570.4	517.61 ug/L	517.61 ppb	13:41:31
3	Se 196.026†	820.0	851.0	523.72 ug/L	523.72 ppb	13:41:31
3	Si 251.611†	86241.5	85893.2	2519.7 ug/L	2519.7 ppb	13:41:11
3	Sn 189.927†	3094.8	3094.9	498.29 ug/L	498.29 ppb	13:41:31
3	Ti 334.940†	345022.7	346927.9	507.31 ug/L	507.31 ppb	13:41:11
3	Tl 190.801†	1756.8	1795.8	504.96 ug/L	504.96 ppb	13:41:31
3	U 409.014†	15876.8	17625.5	489.32 ug/L	489.32 ppb	13:41:11
3	V 292.402†	77408.6	79004.8	510.60 ug/L	510.60 ppb	13:41:11
3	Zn 213.857†	59067.2	58361.3	503.24 ug/L	503.24 ppb	13:41:11
3	SiO2†	86287.1	85911.9	5401.0 ug/L	5401.0 ppb	13:41:46

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	941108.4	99.720	%	0.1270				0.13%
Sc Radial	5181.6	99.4	%	0.26				0.26%
Y 371.029	778202.0	98.099	%	0.2020				0.21%
Y RADIAL	5474.5	99.38	%	0.420				0.42%
Ag 328.068†	117455.8	507.21	ug/L	0.462	507.21	ppb	0.462	0.09%
QC value within limits for Ag 328.068 Recovery = 101.44%								
Al 396.153Radial†	6618.7	5015.6	ug/L	24.16	5015.6	ppb	24.16	0.48%
QC value within limits for Al 396.153Radial Recovery = 100.31%								
As 188.979†	1298.0	508.48	ug/L	0.660	508.48	ppb	0.660	0.13%
QC value within limits for As 188.979 Recovery = 101.70%								
B 249.677†	23921.9	505.87	ug/L	1.257	505.87	ppb	1.257	0.25%
QC value within limits for B 249.677 Recovery = 101.17%								
Ba 233.527†	71692.7	510.32	ug/L	0.079	510.32	ppb	0.079	0.02%
QC value within limits for Ba 233.527 Recovery = 102.06%								
Be 313.107†	1493915.3	507.25	ug/L	0.824	507.25	ppb	0.824	0.16%
QC value within limits for Be 313.107 Recovery = 101.45%								
Ca 317.933Radial†	3094.1	5080.7	ug/L	28.66	5080.7	ppb	28.66	0.56%

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   QC value within limits for Ca 317.933Radial  Recovery = 101.61%
Cd 226.502†            49353.3      508.43 ug/L         0.330      508.43 ppb          0.330   0.06%
   QC value within limits for Cd 226.502  Recovery = 101.69%
Co 228.616†            26535.7      503.48 ug/L         2.008      503.48 ppb          2.008   0.40%
   QC value within limits for Co 228.616  Recovery = 100.70%
Cr 267.716†            47606.5      505.30 ug/L         0.764      505.30 ppb          0.764   0.15%
   QC value within limits for Cr 267.716  Recovery = 101.06%
Cu 324.752†           179637.2      511.93 ug/L         0.192      511.93 ppb          0.192   0.04%
   QC value within limits for Cu 324.752  Recovery = 102.39%
Fe 238.204 Radial†       574.2      5240.8 ug/L         28.65      5240.8 ppb          28.65   0.55%
   QC value within limits for Fe 238.204 Radial  Recovery = 104.82%
K 766.490 Radial†      25301.7      5052.6 ug/L         15.70      5052.6 ppb          15.70   0.31%
   QC value within limits for K 766.490 Radial  Recovery = 101.05%
Mg 279.077 IEC†          157.7      5184.6 ug/L         51.88      5184.6 ppb          51.88   1.00%
   QC value within limits for Mg 279.077 IEC  Recovery = 103.69%
Mn 257.610†           498999.2      509.65 ug/L         0.221      509.65 ppb          0.221   0.04%
   QC value within limits for Mn 257.610  Recovery = 101.93%
Mo 202.031†             7751.1      505.43 ug/L         2.364      505.43 ppb          2.364   0.47%
   QC value within limits for Mo 202.031  Recovery = 101.09%
Na 589.592 Radial†     36996.2       10408 ug/L          33.3       10408 ppb           33.3   0.32%
   QC value within limits for Na 589.592 Radial  Recovery = 104.08%
Ni 231.604†            21520.7      502.38 ug/L         2.118      502.38 ppb          2.118   0.42%
   QC value within limits for Ni 231.604  Recovery = 100.48%
P 214.914†              4574.0      2420.7 ug/L         16.21      2420.7 ppb          16.21   0.67%
   QC value within limits for P 214.914  Recovery = 96.83%
Pb 220.353†             4457.5      507.40 ug/L         0.551      507.40 ppb          0.551   0.11%
   QC value within limits for Pb 220.353  Recovery = 101.48%
S 181.975 Axial†         770.6      1003.4 ug/L         11.69      1003.4 ppb          11.69   1.17%
   QC value within limits for S 181.975 Axial  Recovery = 100.34%
Sb 206.836†             1576.0      519.48 ug/L         2.354      519.48 ppb          2.354   0.45%
   QC value within limits for Sb 206.836  Recovery = 103.90%
Se 196.026†              852.1      524.34 ug/L         2.257      524.34 ppb          2.257   0.43%
   QC value within limits for Se 196.026  Recovery = 104.87%
Si 251.611†            85913.6      2520.3 ug/L          1.23      2520.3 ppb           1.23   0.05%
   QC value within limits for Si 251.611  Recovery = 100.81%
Sn 189.927†             3108.7      500.51 ug/L         2.120      500.51 ppb          2.120   0.42%
   QC value within limits for Sn 189.927  Recovery = 100.10%
Sr 421.552†            79630.6      494.15 ug/L         2.102      494.15 ppb          2.102   0.43%
   QC value within limits for Sr 421.552  Recovery = 98.83%
Ti 334.940†           346757.1      507.06 ug/L         0.223      507.06 ppb          0.223   0.04%
   QC value within limits for Ti 334.940  Recovery = 101.41%
Tl 190.801†             1798.9      505.82 ug/L         1.646      505.82 ppb          1.646   0.33%
   QC value within limits for Tl 190.801  Recovery = 101.16%
U 409.014†             17650.3      490.02 ug/L         4.021      490.02 ppb          4.021   0.82%
   QC value within limits for U 409.014  Recovery = 98.00%
V 292.402†             78958.8      510.35 ug/L         0.330      510.35 ppb          0.330   0.06%
   QC value within limits for V 292.402  Recovery = 102.07%
Zn 213.857†            58330.1      502.96 ug/L         0.337      502.96 ppb          0.337   0.07%
   QC value within limits for Zn 213.857  Recovery = 100.59%
SiO2†                  85664.8      5385.4 ug/L         22.86      5385.4 ppb          22.86   0.42%
   QC value within limits for SiO2  Recovery = 100.71%
All analyte(s) passed QC.
```

Sequence No.: 8
Sample ID: PQL
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 11
Date Collected: 1/20/2010 13:43:57
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: PQL

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5279.7	5279.7	101	%			13:45:50
1	Y RADIAL	5599.5	5599.5	101.6	%			13:45:50
1	Al 396.153Radial†	260.4	244.9	186.02	ug/L	186.02	ppb	13:45:50
1	Ca 317.933Radial†	143.4	124.2	203.90	ug/L	203.90	ppb	13:46:10
1	Fe 238.204 Radial†	20.3	9.1	82.935	ug/L	82.935	ppb	13:46:10
1	K 766.490 Radial†	3614.9	787.7	157.28	ug/L	157.28	ppb	13:45:50
1	Mg 279.077 IEC†	8.4	3.8	123.50	ug/L	123.50	ppb	13:46:10
1	Na 589.592 Radial†	68.9	1300.6	365.91	ug/L	365.91	ppb	13:45:50
1	Sr 421.552†	791.8	779.0	4.8330	ug/L	4.8330	ppb	13:45:50
1	Sc 361.383	949151.5	949151.5	100.57	%			13:47:06
1	Y 371.029	794924.6	794924.6	100.21	%			13:47:06
1	Ag 328.068†	1697.9	1236.7	5.3097	ug/L	5.3097	ppb	13:47:11
1	As 188.979†	53.4	76.3	29.664	ug/L	29.664	ppb	13:47:31
1	B 249.677†	2255.7	2635.9	55.964	ug/L	55.964	ppb	13:47:11
1	Ba 233.527†	723.2	709.2	5.0497	ug/L	5.0497	ppb	13:47:31
1	Be 313.107†	10504.4	14829.5	5.0352	ug/L	5.0352	ppb	13:47:11
1	Cd 226.502†	277.7	492.4	5.0784	ug/L	5.0784	ppb	13:47:31
1	Co 228.616†	197.2	270.5	5.1414	ug/L	5.1414	ppb	13:47:31
1	Cr 267.716†	559.9	463.8	4.9050	ug/L	4.9050	ppb	13:47:31
1	Cu 324.752†	9818.6	3625.1	10.306	ug/L	10.306	ppb	13:47:11
1	Mn 257.610†	10853.4	10324.5	10.542	ug/L	10.542	ppb	13:47:11
1	Mo 202.031†	172.6	142.2	9.2717	ug/L	9.2717	ppb	13:47:31
1	Ni 231.604†	335.2	235.0	5.4855	ug/L	5.4855	ppb	13:47:31
1	P 214.914†	508.8	282.0	153.42	ug/L	153.42	ppb	13:47:31
1	Pb 220.353†	40.9	78.9	9.0081	ug/L	9.0081	ppb	13:47:31
1	S 181.975 Axial†	115.3	68.8	89.577	ug/L	89.577	ppb	13:47:31
1	Sb 206.836†	64.3	33.3	10.962	ug/L	10.962	ppb	13:47:31
1	Se 196.026†	16.6	46.4	27.756	ug/L	27.756	ppb	13:47:31
1	Si 251.611†	4008.2	3513.8	103.22	ug/L	103.22	ppb	13:47:11
1	Sn 189.927†	71.4	66.7	10.754	ug/L	10.754	ppb	13:47:31
1	Ti 334.940†	2014.7	3415.3	4.9884	ug/L	4.9884	ppb	13:47:11
1	Tl 190.801†	37.4	73.7	20.626	ug/L	20.626	ppb	13:47:31
1	U 409.014†	129.1	1854.3	51.640	ug/L	51.640	ppb	13:47:06
1	V 292.402†	-653.4	836.0	5.5455	ug/L	5.5455	ppb	13:47:11
1	Zn 213.857†	1910.6	1109.5	9.5933	ug/L	9.5933	ppb	13:47:31
1	SiO2†	3934.6	3413.7	214.90	ug/L	214.90	ppb	13:48:37
2	Sc Radial	5299.9	5299.9	102	%			13:46:15
2	Y RADIAL	5652.9	5652.9	102.6	%			13:46:15
2	Al 396.153Radial†	254.0	237.6	180.47	ug/L	180.47	ppb	13:46:15
2	Ca 317.933Radial†	148.6	128.7	211.41	ug/L	211.41	ppb	13:46:35
2	Fe 238.204 Radial†	21.3	10.0	90.708	ug/L	90.708	ppb	13:46:35
2	K 766.490 Radial†	3585.7	745.4	148.83	ug/L	148.83	ppb	13:46:15
2	Mg 279.077 IEC†	12.5	7.8	257.97	ug/L	257.97	ppb	13:46:35
2	Na 589.592 Radial†	-37.2	1195.9	336.46	ug/L	336.46	ppb	13:46:15
2	Sr 421.552†	836.7	820.2	5.0889	ug/L	5.0889	ppb	13:46:15
2	Sc 361.383	946343.1	946343.1	100.27	%			13:47:37
2	Y 371.029	794723.2	794723.2	100.18	%			13:47:37
2	Ag 328.068†	1601.4	1145.4	4.9237	ug/L	4.9237	ppb	13:47:42
2	As 188.979†	48.4	71.5	27.803	ug/L	27.803	ppb	13:48:02
2	B 249.677†	2273.8	2660.6	56.488	ug/L	56.488	ppb	13:47:42
2	Ba 233.527†	727.7	715.8	5.0967	ug/L	5.0967	ppb	13:48:02
2	Be 313.107†	10635.6	14991.3	5.0903	ug/L	5.0903	ppb	13:47:42
2	Cd 226.502†	278.1	493.5	5.0888	ug/L	5.0888	ppb	13:48:02
2	Co 228.616†	191.0	264.8	5.0331	ug/L	5.0331	ppb	13:48:02
2	Cr 267.716†	561.4	466.9	4.9399	ug/L	4.9399	ppb	13:48:02
2	Cu 324.752†	9869.5	3704.7	10.536	ug/L	10.536	ppb	13:47:42
2	Mn 257.610†	10932.1	10435.0	10.650	ug/L	10.650	ppb	13:47:42
2	Mo 202.031†	172.1	142.2	9.2755	ug/L	9.2755	ppb	13:48:02
2	Ni 231.604†	322.8	223.6	5.2201	ug/L	5.2201	ppb	13:48:02

2	P 214.914†	487.5	262.2	142.48 ug/L	142.48 ppb	13:48:02
2	Pb 220.353†	24.1	62.3	7.1186 ug/L	7.1186 ppb	13:48:02
2	S 181.975 Axial†	122.2	76.0	99.058 ug/L	99.058 ppb	13:48:02
2	Sb 206.836†	70.5	39.7	12.997 ug/L	12.997 ppb	13:48:02
2	Se 196.026†	21.7	51.5	30.812 ug/L	30.812 ppb	13:48:02
2	Si 251.611†	4035.7	3553.1	104.37 ug/L	104.37 ppb	13:47:42
2	Sn 189.927†	72.3	67.9	10.946 ug/L	10.946 ppb	13:48:02
2	Ti 334.940†	2096.9	3503.2	5.1090 ug/L	5.1090 ppb	13:47:42
2	Tl 190.801†	40.5	76.8	21.512 ug/L	21.512 ppb	13:48:02
2	U 409.014†	-36.4	1689.6	47.051 ug/L	47.051 ppb	13:47:37
2	V 292.402†	-672.6	814.9	5.4033 ug/L	5.4033 ppb	13:47:42
2	Zn 213.857†	1910.3	1114.8	9.6399 ug/L	9.6399 ppb	13:48:02
2	SiO2†	3987.3	3477.9	218.94 ug/L	218.94 ppb	13:48:43
3	Sc Radial	5163.8	5163.8	99.0 %		13:46:40
3	Y RADIAL	5478.8	5478.8	99.46 %		13:46:40
3	Al 396.153Radial†	250.2	240.4	182.53 ug/L	182.53 ppb	13:46:40
3	Ca 317.933Radial†	142.4	126.4	207.52 ug/L	207.52 ppb	13:47:00
3	Fe 238.204 Radial†	23.9	13.1	119.56 ug/L	119.56 ppb	13:47:00
3	K 766.490 Radial†	3562.6	815.0	162.74 ug/L	162.74 ppb	13:46:40
3	Mg 279.077 IEC†	11.1	6.7	219.71 ug/L	219.71 ppb	13:47:00
3	Na 589.592 Radial†	-6.9	1225.6	344.81 ug/L	344.81 ppb	13:46:40
3	Sr 421.552†	784.4	789.1	4.8956 ug/L	4.8956 ppb	13:46:40
3	Sc 361.383	944569.7	944569.7	100.09 %		13:48:07
3	Y 371.029	791314.9	791314.9	99.752 %		13:48:07
3	Ag 328.068†	1581.6	1128.6	4.8536 ug/L	4.8536 ppb	13:48:12
3	As 188.979†	52.9	76.0	29.577 ug/L	29.577 ppb	13:48:32
3	B 249.677†	2359.5	2750.4	58.391 ug/L	58.391 ppb	13:48:12
3	Ba 233.527†	751.9	741.3	5.2782 ug/L	5.2782 ppb	13:48:32
3	Be 313.107†	10587.3	14963.0	5.0807 ug/L	5.0807 ppb	13:48:12
3	Cd 226.502†	297.9	513.9	5.2967 ug/L	5.2967 ppb	13:48:32
3	Co 228.616†	189.5	263.7	5.0144 ug/L	5.0144 ppb	13:48:32
3	Cr 267.716†	571.3	477.8	5.0527 ug/L	5.0527 ppb	13:48:32
3	Cu 324.752†	9808.8	3662.6	10.413 ug/L	10.413 ppb	13:48:12
3	Mn 257.610†	10886.4	10409.9	10.628 ug/L	10.628 ppb	13:48:12
3	Mo 202.031†	190.9	161.3	10.521 ug/L	10.521 ppb	13:48:32
3	Ni 231.604†	322.7	224.1	5.2310 ug/L	5.2310 ppb	13:48:32
3	P 214.914†	499.7	275.3	149.68 ug/L	149.68 ppb	13:48:32
3	Pb 220.353†	24.8	63.1	7.2102 ug/L	7.2102 ppb	13:48:32
3	S 181.975 Axial†	118.9	72.9	95.007 ug/L	95.007 ppb	13:48:32
3	Sb 206.836†	81.9	51.2	16.668 ug/L	16.668 ppb	13:48:32
3	Se 196.026†	21.6	51.4	30.872 ug/L	30.872 ppb	13:48:32
3	Si 251.611†	4003.8	3528.7	103.64 ug/L	103.64 ppb	13:48:12
3	Sn 189.927†	68.4	64.1	10.339 ug/L	10.339 ppb	13:48:32
3	Ti 334.940†	2094.2	3504.5	5.1100 ug/L	5.1100 ppb	13:48:12
3	Tl 190.801†	44.1	80.5	22.544 ug/L	22.544 ppb	13:48:32
3	U 409.014†	247.6	1973.4	54.953 ug/L	54.953 ppb	13:48:07
3	V 292.402†	-705.9	780.4	5.2111 ug/L	5.2111 ppb	13:48:12
3	Zn 213.857†	1902.2	1110.2	9.5978 ug/L	9.5978 ppb	13:48:32
3	SiO2†	4007.2	3505.3	220.64 ug/L	220.64 ppb	13:48:48

Mean Data: PQL

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	946688.1	100.31	%	0.245				0.24%
Sc Radial	5247.8	101	%	1.4				1.40%
Y 371.029	793654.2	100.05	%	0.256				0.26%
Y RADIAL	5577.0	101.2	%	1.62				1.60%
Ag 328.068†	1170.3	5.0290	ug/L	0.24561	5.0290	ppb	0.24561	4.88%
QC value within limits for Ag 328.068 Recovery = 100.58%								
Al 396.153Radial†	240.9	183.01	ug/L	2.805	183.01	ppb	2.805	1.53%
QC value within limits for Al 396.153Radial Recovery = 91.50%								
As 188.979†	74.6	29.014	ug/L	1.0502	29.014	ppb	1.0502	3.62%
QC value within limits for As 188.979 Recovery = 96.71%								
B 249.677†	2682.3	56.947	ug/L	1.2771	56.947	ppb	1.2771	2.24%
QC value within limits for B 249.677 Recovery = 113.89%								
Ba 233.527†	722.1	5.1415	ug/L	0.12069	5.1415	ppb	0.12069	2.35%
QC value within limits for Ba 233.527 Recovery = 102.83%								
Be 313.107†	14927.9	5.0687	ug/L	0.02945	5.0687	ppb	0.02945	0.58%
QC value within limits for Be 313.107 Recovery = 101.37%								
Ca 317.933Radial†	126.4	207.61	ug/L	3.758	207.61	ppb	3.758	1.81%

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   QC value within limits for Ca 317.933Radial  Recovery = 103.81%
Cd 226.502†              499.9      5.1546 ug/L       0.12315      5.1546 ppb        0.12315   2.39%
   QC value within limits for Cd 226.502  Recovery = 103.09%
Co 228.616†              266.3      5.0630 ug/L       0.06854      5.0630 ppb        0.06854   1.35%
   QC value within limits for Co 228.616  Recovery = 101.26%
Cr 267.716†              469.5      4.9659 ug/L       0.07723      4.9659 ppb        0.07723   1.56%
   QC value within limits for Cr 267.716  Recovery = 99.32%
Cu 324.752†             3664.2      10.419 ug/L        0.1151      10.419 ppb         0.1151   1.10%
   QC value within limits for Cu 324.752  Recovery = 104.19%
Fe 238.204 Radial†        10.7      97.735 ug/L       19.2985      97.735 ppb        19.2985  19.75%
   QC value within limits for Fe 238.204 Radial  Recovery = 97.74%
K 766.490 Radial†        782.7      156.28 ug/L         7.010      156.28 ppb          7.010   4.49%
   QC value within limits for K 766.490 Radial  Recovery = 104.19%
Mg 279.077 IEC†            6.1      200.40 ug/L        69.287      200.40 ppb         69.287  34.58%
   QC value less than the lower limit for Mg 279.077 IEC  Recovery = 66.80%
Mn 257.610†            10389.8      10.607 ug/L        0.0573      10.607 ppb         0.0573   0.54%
   QC value within limits for Mn 257.610  Recovery = 106.07%
Mo 202.031†              148.6      9.6895 ug/L       0.72047      9.6895 ppb        0.72047   7.44%
   QC value within limits for Mo 202.031  Recovery = 96.90%
Na 589.592 Radial†      1240.7      349.06 ug/L        15.175      349.06 ppb         15.175   4.35%
   QC value within limits for Na 589.592 Radial  Recovery = 116.35%
Ni 231.604†              227.6      5.3122 ug/L       0.15015      5.3122 ppb        0.15015   2.83%
   QC value within limits for Ni 231.604  Recovery = 106.24%
P 214.914†               273.2      148.53 ug/L         5.563      148.53 ppb          5.563   3.75%
   QC value within limits for P 214.914  Recovery = 99.02%
Pb 220.353†               68.1      7.7790 ug/L       1.06544      7.7790 ppb        1.06544  13.70%
   QC value within limits for Pb 220.353  Recovery = 77.79%
S 181.975 Axial†          72.6      94.547 ug/L        4.7569      94.547 ppb         4.7569   5.03%
   QC value within limits for S 181.975 Axial  Recovery = 94.55%
Sb 206.836†               41.4      13.542 ug/L        2.8915      13.542 ppb         2.8915  21.35%
   QC value greater than the upper limit for Sb 206.836  Recovery = 135.42%
Se 196.026†               49.8      29.813 ug/L        1.7821      29.813 ppb         1.7821   5.98%
   QC value within limits for Se 196.026  Recovery = 99.38%
Si 251.611†             3531.9      103.74 ug/L         0.584      103.74 ppb          0.584   0.56%
   QC value within limits for Si 251.611  Recovery = 103.74%
Sn 189.927†               66.2      10.680 ug/L        0.3101      10.680 ppb         0.3101   2.90%
   QC value within limits for Sn 189.927  Recovery = 106.80%
Sr 421.552†              796.1      4.9392 ug/L       0.13340      4.9392 ppb        0.13340   2.70%
   QC value within limits for Sr 421.552  Recovery = 98.78%
Ti 334.940†             3474.4      5.0691 ug/L       0.06992      5.0691 ppb        0.06992   1.38%
   QC value within limits for Ti 334.940  Recovery = 101.38%
Tl 190.801†               77.0      21.561 ug/L        0.9598      21.561 ppb         0.9598   4.45%
   QC value within limits for Tl 190.801  Recovery = 107.80%
U 409.014†              1839.1      51.215 ug/L        3.9680      51.215 ppb         3.9680   7.75%
   QC value within limits for U 409.014  Recovery = 102.43%
V 292.402†               810.4      5.3866 ug/L       0.16783      5.3866 ppb        0.16783   3.12%
   QC value within limits for V 292.402  Recovery = 107.73%
Zn 213.857†             1111.5      9.6103 ug/L       0.02570      9.6103 ppb        0.02570   0.27%
   QC value within limits for Zn 213.857  Recovery = 96.10%
SiO2†                   3465.6      218.16 ug/L         2.948      218.16 ppb          2.948   1.35%
   QC value within limits for SiO2  Recovery = 102.42%
QC Failed.  Continue with analysis.
```

Sequence No.: 9
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 1/20/2010 13:50:59
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5137.9	5137.9	98.5	%			13:52:51
1	Y RADIAL	5501.3	5501.3	99.86	%			13:52:51
1	Al 396.153Radial†	15.5	3.4	2.6474	ug/L	2.6474	ppb	13:52:51
1	Ca 317.933Radial†	16.1	-1.1	-1.8339	ug/L	-1.8339	ppb	13:53:11
1	Fe 238.204 Radial†	12.7	1.9	17.552	ug/L	17.552	ppb	13:53:11
1	K 766.490 Radial†	2928.1	189.1	37.796	ug/L	37.796	ppb	13:52:51
1	Mg 279.077 IEC†	0.6	-3.9	-127.90	ug/L	-127.90	ppb	13:53:11
1	Na 589.592 Radial†	-1084.5	131.7	37.064	ug/L	37.064	ppb	13:52:51
1	Sr 421.552†	35.0	32.4	0.2012	ug/L	0.2012	ppb	13:52:51
1	Sc 361.383	952548.1	952548.1	100.93	%			13:54:08
1	Y 371.029	798584.6	798584.6	100.67	%			13:54:08
1	Ag 328.068†	500.4	44.3	0.1951	ug/L	0.1951	ppb	13:54:13
1	As 188.979†	-23.4	0.0	0.0257	ug/L	0.0257	ppb	13:54:33
1	B 249.677†	-194.8	200.0	4.2462	ug/L	4.2462	ppb	13:54:13
1	Ba 233.527†	-4.4	-14.2	-0.1000	ug/L	-0.1000	ppb	13:54:33
1	Be 313.107†	-4504.7	-78.2	-0.0261	ug/L	-0.0261	ppb	13:54:13
1	Cd 226.502†	-222.7	-4.4	-0.0467	ug/L	-0.0467	ppb	13:54:33
1	Co 228.616†	-68.6	6.4	0.1190	ug/L	0.1190	ppb	13:54:33
1	Cr 267.716†	80.1	-13.6	-0.1442	ug/L	-0.1442	ppb	13:54:33
1	Cu 324.752†	6082.1	-111.7	-0.3182	ug/L	-0.3182	ppb	13:54:13
1	Mn 257.610†	426.3	-44.8	-0.0387	ug/L	-0.0387	ppb	13:54:33
1	Mo 202.031†	14.4	-15.1	-0.9852	ug/L	-0.9852	ppb	13:54:33
1	Ni 231.604†	110.9	11.5	0.2681	ug/L	0.2681	ppb	13:54:33
1	P 214.914†	230.0	4.0	2.2552	ug/L	2.2552	ppb	13:54:33
1	Pb 220.353†	-63.6	-24.7	-2.8058	ug/L	-2.8058	ppb	13:54:33
1	S 181.975 Axial†	38.4	-7.8	-10.186	ug/L	-10.186	ppb	13:54:33
1	Sb 206.836†	33.3	2.4	0.7555	ug/L	0.7555	ppb	13:54:33
1	Se 196.026†	-38.6	-8.4	-4.8859	ug/L	-4.8859	ppb	13:54:33
1	Si 251.611†	497.4	21.2	0.6349	ug/L	0.6349	ppb	13:54:33
1	Sn 189.927†	9.4	5.1	0.8212	ug/L	0.8212	ppb	13:54:33
1	Ti 334.940†	-1307.6	116.6	0.1802	ug/L	0.1802	ppb	13:54:13
1	Tl 190.801†	-41.3	-4.4	-1.2305	ug/L	-1.2305	ppb	13:54:33
1	U 409.014†	-1691.8	49.8	1.3864	ug/L	1.3864	ppb	13:54:08
1	V 292.402†	-1472.7	26.5	0.1528	ug/L	0.1528	ppb	13:54:13
1	Zn 213.857†	744.5	-52.7	-0.4610	ug/L	-0.4610	ppb	13:54:33
1	SiO2†	518.9	15.6	1.0125	ug/L	1.0125	ppb	13:55:39
2	Sc Radial	5217.3	5217.3	100	%			13:53:16
2	Y RADIAL	5580.1	5580.1	101.3	%			13:53:16
2	Al 396.153Radial†	-1.6	-13.9	-10.527	ug/L	-10.527	ppb	13:53:16
2	Ca 317.933Radial†	19.1	1.7	2.7269	ug/L	2.7269	ppb	13:53:36
2	Fe 238.204 Radial†	11.9	0.9	7.9676	ug/L	7.9676	ppb	13:53:36
2	K 766.490 Radial†	2766.3	-17.9	-3.6044	ug/L	-3.6044	ppb	13:53:16
2	Mg 279.077 IEC†	3.3	-1.2	-39.887	ug/L	-39.887	ppb	13:53:36
2	Na 589.592 Radial†	-1075.2	157.8	44.397	ug/L	44.397	ppb	13:53:16
2	Sr 421.552†	40.8	37.7	0.2337	ug/L	0.2337	ppb	13:53:16
2	Sc 361.383	950096.6	950096.6	100.67	%			13:54:38
2	Y 371.029	797490.0	797490.0	100.53	%			13:54:38
2	Ag 328.068†	453.4	-1.2	-0.0054	ug/L	-0.0054	ppb	13:54:43
2	As 188.979†	-13.4	9.9	3.8599	ug/L	3.8599	ppb	13:55:03
2	B 249.677†	-233.9	160.7	3.4116	ug/L	3.4116	ppb	13:54:43
2	Ba 233.527†	-1.3	-11.2	-0.0794	ug/L	-0.0794	ppb	13:55:03
2	Be 313.107†	-4393.7	20.6	0.0068	ug/L	0.0068	ppb	13:54:43
2	Cd 226.502†	-229.0	-11.2	-0.1158	ug/L	-0.1158	ppb	13:55:03
2	Co 228.616†	-75.5	-0.6	-0.0144	ug/L	-0.0144	ppb	13:55:03
2	Cr 267.716†	85.3	-8.2	-0.0881	ug/L	-0.0881	ppb	13:55:03
2	Cu 324.752†	6147.8	-30.9	-0.0891	ug/L	-0.0891	ppb	13:54:43
2	Mn 257.610†	452.9	-17.2	-0.0152	ug/L	-0.0152	ppb	13:55:03
2	Mo 202.031†	11.9	-17.5	-1.1425	ug/L	-1.1425	ppb	13:55:03
2	Ni 231.604†	89.4	-9.6	-0.2231	ug/L	-0.2231	ppb	13:55:03

2	P 214.914†	229.7	4.2	2.3155 ug/L	2.3155 ppb	13:55:03
2	Pb 220.353†	-72.1	-33.3	-3.7876 ug/L	-3.7876 ppb	13:55:03
2	S 181.975 Axial†	45.2	-1.0	-1.2494 ug/L	-1.2494 ppb	13:55:03
2	Sb 206.836†	37.4	6.5	2.0519 ug/L	2.0519 ppb	13:55:03
2	Se 196.026†	-31.3	-1.3	-0.7403 ug/L	-0.7403 ppb	13:55:03
2	Si 251.611†	482.5	7.6	0.2387 ug/L	0.2387 ppb	13:55:03
2	Sn 189.927†	3.9	-0.4	-0.0638 ug/L	-0.0638 ppb	13:55:03
2	Ti 334.940†	-1476.4	-54.4	-0.0771 ug/L	-0.0771 ppb	13:54:43
2	Tl 190.801†	-42.9	-6.1	-1.7076 ug/L	-1.7076 ppb	13:55:03
2	U 409.014†	-1642.0	94.9	2.6424 ug/L	2.6424 ppb	13:54:38
2	V 292.402†	-1527.4	-31.5	-0.2141 ug/L	-0.2141 ppb	13:54:43
2	Zn 213.857†	732.1	-63.1	-0.5481 ug/L	-0.5481 ppb	13:55:03
2	SiO2†	525.9	23.9	1.5378 ug/L	1.5378 ppb	13:55:44
3	Sc Radial	5169.0	5169.0	99.1 %		13:53:42
3	Y RADIAL	5505.6	5505.6	99.94 %		13:53:42
3	Al 396.153Radial†	2.4	-9.9	-7.4958 ug/L	-7.4958 ppb	13:53:42
3	Ca 317.933Radial†	16.0	-1.3	-2.1934 ug/L	-2.1934 ppb	13:54:02
3	Fe 238.204 Radial†	11.4	0.5	4.7522 ug/L	4.7522 ppb	13:54:02
3	K 766.490 Radial†	2849.4	91.8	18.337 ug/L	18.337 ppb	13:53:42
3	Mg 279.077 IEC†	1.3	-3.1	-103.15 ug/L	-103.15 ppb	13:54:02
3	Na 589.592 Radial†	-1098.9	123.8	34.840 ug/L	34.840 ppb	13:53:42
3	Sr 421.552†	5.5	2.4	0.0151 ug/L	0.0151 ppb	13:53:42
3	Sc 361.383	943503.9	943503.9	99.974 %		13:55:09
3	Y 371.029	790934.9	790934.9	99.704 %		13:55:09
3	Ag 328.068†	522.6	71.2	0.3063 ug/L	0.3063 ppb	13:55:14
3	As 188.979†	-20.1	3.1	1.2033 ug/L	1.2033 ppb	13:55:34
3	B 249.677†	-176.9	216.1	4.5892 ug/L	4.5892 ppb	13:55:14
3	Ba 233.527†	8.4	-1.5	-0.0107 ug/L	-0.0107 ppb	13:55:34
3	Be 313.107†	-4491.4	-107.7	-0.0365 ug/L	-0.0365 ppb	13:55:14
3	Cd 226.502†	-199.7	16.5	0.1696 ug/L	0.1696 ppb	13:55:34
3	Co 228.616†	-83.1	-8.8	-0.1681 ug/L	-0.1681 ppb	13:55:34
3	Cr 267.716†	75.5	-17.5	-0.1858 ug/L	-0.1858 ppb	13:55:34
3	Cu 324.752†	6190.7	54.7	0.1554 ug/L	0.1554 ppb	13:55:14
3	Mn 257.610†	443.5	-23.5	-0.0193 ug/L	-0.0193 ppb	13:55:34
3	Mo 202.031†	25.2	-4.2	-0.2719 ug/L	-0.2719 ppb	13:55:34
3	Ni 231.604†	91.6	-6.8	-0.1580 ug/L	-0.1580 ppb	13:55:34
3	P 214.914†	225.1	1.2	0.6299 ug/L	0.6299 ppb	13:55:34
3	Pb 220.353†	-60.8	-22.5	-2.5532 ug/L	-2.5532 ppb	13:55:34
3	S 181.975 Axial†	48.9	3.0	3.9078 ug/L	3.9078 ppb	13:55:34
3	Sb 206.836†	40.4	9.9	3.1381 ug/L	3.1381 ppb	13:55:34
3	Se 196.026†	-35.7	-5.9	-3.4500 ug/L	-3.4500 ppb	13:55:34
3	Si 251.611†	498.7	27.2	0.8043 ug/L	0.8043 ppb	13:55:34
3	Sn 189.927†	6.5	2.3	0.3621 ug/L	0.3621 ppb	13:55:34
3	Ti 334.940†	-1402.1	9.6	0.0218 ug/L	0.0218 ppb	13:55:14
3	Tl 190.801†	-35.1	1.3	0.3736 ug/L	0.3736 ppb	13:55:34
3	U 409.014†	-1684.0	41.5	1.1560 ug/L	1.1560 ppb	13:55:09
3	V 292.402†	-1482.8	2.5	0.0117 ug/L	0.0117 ppb	13:55:14
3	Zn 213.857†	737.8	-52.3	-0.4544 ug/L	-0.4544 ppb	13:55:34
3	SiO2†	516.3	17.9	1.1386 ug/L	1.1386 ppb	13:55:49

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	948716.2	100.53	%	0.496				0.49%
Sc Radial	5174.7	99.2	%	0.77				0.77%
Y 371.029	795669.8	100.30	%	0.521				0.52%
Y RADIAL	5529.0	100.4	%	0.80				0.80%
Ag 328.068†	38.1	0.1654	ug/L	0.15794	0.1654	ppb	0.15794	95.52%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-6.8	-5.1250	ug/L	6.89953	-5.1250	ppb	6.89953	134.63%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	4.4	1.6963	ug/L	1.96410	1.6963	ppb	1.96410	115.79%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	192.3	4.0823	ug/L	0.60568	4.0823	ppb	0.60568	14.84%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-9.0	-0.0634	ug/L	0.04677	-0.0634	ppb	0.04677	73.81%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-55.1	-0.0186	ug/L	0.02258	-0.0186	ppb	0.02258	121.47%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-0.3	-0.4335	ug/L	2.74283	-0.4335	ppb	2.74283	632.77%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                 0.3      0.0024 ug/L       0.14888      0.0024 ppb        0.14888 >999.9%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                -1.0     -0.0212 ug/L       0.14368     -0.0212 ppb        0.14368 678.79%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               -13.1     -0.1394 ug/L       0.04903     -0.1394 ppb        0.04903  35.18%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -29.3     -0.0840 ug/L       0.23684     -0.0840 ppb        0.23684 282.08%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          1.1      10.090 ug/L        6.6585      10.090 ppb         6.6585  65.99%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          87.6      17.509 ug/L       20.7124      17.509 ppb        20.7124 118.29%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -2.7     -90.312 ug/L       45.3892     -90.312 ppb        45.3892  50.26%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               -28.5     -0.0244 ug/L       0.01258     -0.0244 ppb        0.01258  51.54%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               -12.3     -0.7998 ug/L       0.46395     -0.7998 ppb        0.46395  58.00%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        137.8      38.767 ug/L        5.0009      38.767 ppb         5.0009  12.90%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                -1.6     -0.0377 ug/L       0.26683     -0.0377 ppb        0.26683 708.38%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                  3.1      1.7335 ug/L       0.95627      1.7335 ppb        0.95627  55.16%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               -26.8     -3.0489 ug/L       0.65210     -3.0489 ppb        0.65210  21.39%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           -1.9     -2.5092 ug/L       7.13081     -2.5092 ppb        7.13081 284.19%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 6.3      1.9818 ug/L       1.19283      1.9818 ppb        1.19283  60.19%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -5.2     -3.0254 ug/L       2.10516     -3.0254 ppb        2.10516  69.58%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                18.7      0.5593 ug/L       0.29027      0.5593 ppb        0.29027  51.90%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 2.3      0.3732 ug/L       0.44264      0.3732 ppb        0.44264 118.62%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                24.2      0.1500 ug/L       0.11797      0.1500 ppb        0.11797  78.65%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                23.9      0.0416 ug/L       0.12984      0.0416 ppb        0.12984 311.96%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                -3.1     -0.8548 ug/L       1.09029     -0.8548 ppb        1.09029 127.54%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                 62.1      1.7283 ug/L       0.80002      1.7283 ppb        0.80002  46.29%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 -0.8     -0.0165 ug/L       0.18511     -0.0165 ppb        0.18511 >999.9%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               -56.0     -0.4878 ug/L       0.05232     -0.4878 ppb        0.05232  10.72%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      19.2      1.2296 ug/L       0.27425      1.2296 ppb        0.27425  22.30%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

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Analysis Begun

Start Time: 1/20/2010 15:08:32 **Plasma On Time: 1/18/2010 05:48:39**
Logged In Analyst: Optima3 **Technique: ICP Continuous**
Spectrometer Model: Optima 5300 DV, S/N 077C7090601Autosampler Model: S10

Sample Information File: C:\pe\Optima3\Sample Information\012010.sif
Batch ID:
Results Data Set: 012010
Results Library: C:\pe\Optima3\Results\Results.mdb

==========

Sequence No.: 1 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 1/20/2010 15:08:33**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5145.0	5145.0	98.7	%			15:10:25
1	Y RADIAL	5391.6	5391.6	97.87	%			15:10:25
1	Al 396.153Radial†	6584.0	6661.7	5048.5	ug/L	5048.5	ppb	15:10:25
1	Ca 317.933Radial†	3081.2	3105.9	5100.1	ug/L	5100.1	ppb	15:10:45
1	Fe 238.204 Radial†	570.5	567.3	5178.4	ug/L	5178.4	ppb	15:10:45
1	K 766.490 Radial†	27962.4	25561.7	5104.6	ug/L	5104.6	ppb	15:10:25
1	Mg 279.077 IEC†	159.8	157.5	5178.1	ug/L	5178.1	ppb	15:10:45
1	Na 589.592 Radial†	35470.2	37187.9	10462	ug/L	10462	ppb	15:10:25
1	Sr 421.552†	78726.4	79800.1	495.20	ug/L	495.20	ppb	15:10:25
1	Sc 361.383	933224.9	933224.9	98.885	%			15:11:42
1	Y 371.029	774013.1	774013.1	97.571	%			15:11:42
1	Ag 328.068†	117319.2	118190.9	510.34	ug/L	510.34	ppb	15:11:48
1	As 188.979†	1254.2	1291.5	505.99	ug/L	505.99	ppb	15:12:08
1	B 249.677†	23137.0	23791.0	503.07	ug/L	503.07	ppb	15:11:48
1	Ba 233.527†	71174.8	71967.7	512.28	ug/L	512.28	ppb	15:11:48
1	Be 313.107†	1483565.9	1504683.7	510.90	ug/L	510.90	ppb	15:11:42
1	Cd 226.502†	48818.9	49585.7	510.84	ug/L	510.84	ppb	15:11:48
1	Co 228.616†	26667.5	27042.7	513.08	ug/L	513.08	ppb	15:11:48
1	Cr 267.716†	47512.5	47955.4	509.00	ug/L	509.00	ppb	15:11:48
1	Cu 324.752†	182451.4	178371.6	508.30	ug/L	508.30	ppb	15:11:48
1	Mn 257.610†	495897.8	501023.8	511.71	ug/L	511.71	ppb	15:11:42
1	Mo 202.031†	7641.4	7698.2	501.98	ug/L	501.98	ppb	15:12:08
1	Ni 231.604†	21745.4	21892.3	511.06	ug/L	511.06	ppb	15:11:48
1	P 214.914†	4752.7	4582.3	2426.1	ug/L	2426.1	ppb	15:12:08
1	Pb 220.353†	4345.3	4432.6	504.59	ug/L	504.59	ppb	15:12:08
1	S 181.975 Axial†	805.6	768.8	1001.0	ug/L	1001.0	ppb	15:12:08
1	Sb 206.836†	1597.5	1585.0	522.27	ug/L	522.27	ppb	15:12:08
1	Se 196.026†	810.5	849.4	522.52	ug/L	522.52	ppb	15:12:08
1	Si 251.611†	85616.9	86111.0	2526.1	ug/L	2526.1	ppb	15:11:48
1	Sn 189.927†	3079.9	3110.4	500.78	ug/L	500.78	ppb	15:12:08
1	Ti 334.940†	343034.9	348316.1	509.33	ug/L	509.33	ppb	15:11:42
1	Tl 190.801†	1751.7	1807.9	508.31	ug/L	508.31	ppb	15:12:08
1	U 409.014†	16412.5	18323.6	508.77	ug/L	508.77	ppb	15:11:48
1	V 292.402†	77134.2	79489.9	513.73	ug/L	513.73	ppb	15:11:48
1	Zn 213.857†	58670.7	58542.2	504.76	ug/L	504.76	ppb	15:11:48
1	SiO2†	85856.3	86326.1	5427.1	ug/L	5427.1	ppb	15:13:15
2	Sc Radial	5041.7	5041.7	96.7	%			15:10:50
2	Y RADIAL	5297.5	5297.5	96.16	%			15:10:50
2	Al 396.153Radial†	6434.2	6643.6	5034.3	ug/L	5034.3	ppb	15:10:50
2	Ca 317.933Radial†	3048.5	3136.0	5149.6	ug/L	5149.6	ppb	15:11:10
2	Fe 238.204 Radial†	566.3	574.9	5247.3	ug/L	5247.3	ppb	15:11:10
2	K 766.490 Radial†	27494.7	25658.8	5124.0	ug/L	5124.0	ppb	15:10:50
2	Mg 279.077 IEC†	156.6	157.5	5175.7	ug/L	5175.7	ppb	15:11:10
2	Na 589.592 Radial†	34682.1	37109.6	10440	ug/L	10440	ppb	15:10:50
2	Sr 421.552†	77171.5	79827.2	495.37	ug/L	495.37	ppb	15:10:50
2	Sc 361.383	928924.6	928924.6	98.429	%			15:12:14
2	Y 371.029	769556.5	769556.5	97.009	%			15:12:14

2	Ag 328.068†	117571.7	118996.6	513.83 ug/L	513.83 ppb	15:12:19
2	As 188.979†	1272.0	1315.5	515.31 ug/L	515.31 ppb	15:12:39
2	B 249.677†	23193.1	23956.3	506.56 ug/L	506.56 ppb	15:12:19
2	Ba 233.527†	71195.8	72322.2	514.80 ug/L	514.80 ppb	15:12:19
2	Be 313.107†	1479851.1	1507855.0	511.98 ug/L	511.98 ppb	15:12:14
2	Cd 226.502†	48748.8	49743.0	512.46 ug/L	512.46 ppb	15:12:19
2	Co 228.616†	26675.5	27175.6	515.62 ug/L	515.62 ppb	15:12:19
2	Cr 267.716†	47510.4	48175.7	511.34 ug/L	511.34 ppb	15:12:19
2	Cu 324.752†	183080.3	179864.6	512.56 ug/L	512.56 ppb	15:12:19
2	Mn 257.610†	495118.0	502553.1	513.28 ug/L	513.28 ppb	15:12:14
2	Mo 202.031†	7729.7	7823.6	510.16 ug/L	510.16 ppb	15:12:39
2	Ni 231.604†	21746.1	21994.9	513.45 ug/L	513.45 ppb	15:12:19
2	P 214.914†	4786.4	4638.9	2456.4 ug/L	2456.4 ppb	15:12:39
2	Pb 220.353†	4371.0	4479.0	509.86 ug/L	509.86 ppb	15:12:39
2	S 181.975 Axial†	821.8	789.1	1027.4 ug/L	1027.4 ppb	15:12:39
2	Sb 206.836†	1600.9	1595.9	526.00 ug/L	526.00 ppb	15:12:39
2	Se 196.026†	824.1	867.1	533.25 ug/L	533.25 ppb	15:12:39
2	Si 251.611†	85816.3	86714.4	2543.8 ug/L	2543.8 ppb	15:12:19
2	Sn 189.927†	3102.3	3147.5	506.75 ug/L	506.75 ppb	15:12:39
2	Ti 334.940†	341635.8	348500.5	509.61 ug/L	509.61 ppb	15:12:14
2	Tl 190.801†	1758.1	1822.7	512.42 ug/L	512.42 ppb	15:12:39
2	U 409.014†	16717.6	18710.4	519.54 ug/L	519.54 ppb	15:12:19
2	V 292.402†	77344.8	80065.0	517.52 ug/L	517.52 ppb	15:12:19
2	Zn 213.857†	58658.1	58804.0	507.01 ug/L	507.01 ppb	15:12:19
2	SiO2†	85896.5	86769.0	5454.8 ug/L	5454.8 ppb	15:13:21
3	Sc Radial	5088.0	5088.0	97.6 %		15:11:15
3	Y RADIAL	5373.8	5373.8	97.55 %		15:11:15
3	Al 396.153Radial†	6533.2	6684.4	5065.6 ug/L	5065.6 ppb	15:11:15
3	Ca 317.933Radial†	3078.4	3138.0	5152.9 ug/L	5152.9 ppb	15:11:35
3	Fe 238.204 Radial†	573.2	576.6	5262.7 ug/L	5262.7 ppb	15:11:35
3	K 766.490 Radial†	27866.2	25780.4	5148.3 ug/L	5148.3 ppb	15:11:15
3	Mg 279.077 IEC†	162.6	162.2	5330.3 ug/L	5330.3 ppb	15:11:35
3	Na 589.592 Radial†	34900.0	37006.0	10411 ug/L	10411 ppb	15:11:15
3	Sr 421.552†	77952.3	79900.1	495.82 ug/L	495.82 ppb	15:11:15
3	Sc 361.383	932028.5	932028.5	98.758 %		15:12:45
3	Y 371.029	770988.5	770988.5	97.189 %		15:12:45
3	Ag 328.068†	117396.6	118421.6	511.37 ug/L	511.37 ppb	15:12:50
3	As 188.979†	1268.5	1307.7	512.27 ug/L	512.27 ppb	15:13:10
3	B 249.677†	23285.1	23971.0	506.87 ug/L	506.87 ppb	15:12:50
3	Ba 233.527†	71352.7	72240.3	514.22 ug/L	514.22 ppb	15:12:50
3	Be 313.107†	1481367.6	1504383.6	510.80 ug/L	510.80 ppb	15:12:45
3	Cd 226.502†	48841.1	49671.6	511.72 ug/L	511.72 ppb	15:12:50
3	Co 228.616†	26782.5	27193.7	515.95 ug/L	515.95 ppb	15:12:50
3	Cr 267.716†	47681.8	48188.5	511.47 ug/L	511.47 ppb	15:12:50
3	Cu 324.752†	182834.4	178996.3	510.09 ug/L	510.09 ppb	15:12:50
3	Mn 257.610†	496510.5	502288.0	513.00 ug/L	513.00 ppb	15:12:45
3	Mo 202.031†	7678.4	7745.6	505.07 ug/L	505.07 ppb	15:13:10
3	Ni 231.604†	21788.0	21963.6	512.72 ug/L	512.72 ppb	15:12:50
3	P 214.914†	4753.0	4588.8	2429.3 ug/L	2429.3 ppb	15:13:10
3	Pb 220.353†	4342.9	4435.9	504.96 ug/L	504.96 ppb	15:13:10
3	S 181.975 Axial†	813.3	777.6	1012.5 ug/L	1012.5 ppb	15:13:10
3	Sb 206.836†	1587.2	1576.6	519.74 ug/L	519.74 ppb	15:13:10
3	Se 196.026†	813.7	853.7	525.37 ug/L	525.37 ppb	15:13:10
3	Si 251.611†	85866.5	86474.8	2536.8 ug/L	2536.8 ppb	15:12:50
3	Sn 189.927†	3108.4	3143.2	506.06 ug/L	506.06 ppb	15:13:10
3	Ti 334.940†	343444.1	349175.7	510.58 ug/L	510.58 ppb	15:12:45
3	Tl 190.801†	1771.8	1830.6	514.64 ug/L	514.64 ppb	15:13:10
3	U 409.014†	16450.6	18383.4	510.42 ug/L	510.42 ppb	15:12:50
3	V 292.402†	77349.2	79807.7	515.79 ug/L	515.79 ppb	15:12:50
3	Zn 213.857†	58762.8	58711.5	506.21 ug/L	506.21 ppb	15:12:50
3	SiO2†	86025.3	86608.7	5444.9 ug/L	5444.9 ppb	15:13:26

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	931392.7	98.691	%	0.2352				0.24%
Sc Radial	5091.5	97.6	%	0.99				1.02%
Y 371.029	771519.4	97.256	%	0.2868				0.29%
Y RADIAL	5354.3	97.20	%	0.908				0.93%
Ag 328.068†	118536.4	511.85	ug/L	1.791	511.85	ppb	1.791	0.35%

```
   QC value within limits for Ag 328.068  Recovery = 102.37%
Al 396.153Radial†       6663.2      5049.5 ug/L        15.70      5049.5 ppb        15.70   0.31%
   QC value within limits for Al 396.153Radial  Recovery = 100.99%
As 188.979†             1304.9      511.19 ug/L        4.753      511.19 ppb        4.753   0.93%
   QC value within limits for As 188.979  Recovery = 102.24%
B 249.677†             23906.1      505.50 ug/L        2.111      505.50 ppb        2.111   0.42%
   QC value within limits for B 249.677  Recovery = 101.10%
Ba 233.527†            72176.7      513.77 ug/L        1.323      513.77 ppb        1.323   0.26%
   QC value within limits for Ba 233.527  Recovery = 102.75%
Be 313.107†          1505640.8      511.23 ug/L        0.651      511.23 ppb        0.651   0.13%
   QC value within limits for Be 313.107  Recovery = 102.25%
Ca 317.933Radial†       3126.6      5134.2 ug/L        29.60      5134.2 ppb        29.60   0.58%
   QC value within limits for Ca 317.933Radial  Recovery = 102.68%
Cd 226.502†            49666.8      511.67 ug/L        0.810      511.67 ppb        0.810   0.16%
   QC value within limits for Cd 226.502  Recovery = 102.33%
Co 228.616†            27137.3      514.89 ug/L        1.569      514.89 ppb        1.569   0.30%
   QC value within limits for Co 228.616  Recovery = 102.98%
Cr 267.716†            48106.5      510.60 ug/L        1.391      510.60 ppb        1.391   0.27%
   QC value within limits for Cr 267.716  Recovery = 102.12%
Cu 324.752†           179077.5      510.32 ug/L        2.135      510.32 ppb        2.135   0.42%
   QC value within limits for Cu 324.752  Recovery = 102.06%
Fe 238.204 Radial†       572.9      5229.5 ug/L        44.88      5229.5 ppb        44.88   0.86%
   QC value within limits for Fe 238.204 Radial  Recovery = 104.59%
K 766.490 Radial†      25667.0      5125.6 ug/L        21.91      5125.6 ppb        21.91   0.43%
   QC value within limits for K 766.490 Radial  Recovery = 102.51%
Mg 279.077 IEC†          159.1      5228.0 ug/L        88.53      5228.0 ppb        88.53   1.69%
   QC value within limits for Mg 279.077 IEC  Recovery = 104.56%
Mn 257.610†           501955.0      512.66 ug/L        0.837      512.66 ppb        0.837   0.16%
   QC value within limits for Mn 257.610  Recovery = 102.53%
Mo 202.031†             7755.8      505.74 ug/L        4.128      505.74 ppb        4.128   0.82%
   QC value within limits for Mo 202.031  Recovery = 101.15%
Na 589.592 Radial†     37101.2       10438 ug/L         25.7       10438 ppb         25.7   0.25%
   QC value within limits for Na 589.592 Radial  Recovery = 104.38%
Ni 231.604†            21950.3      512.41 ug/L        1.227      512.41 ppb        1.227   0.24%
   QC value within limits for Ni 231.604  Recovery = 102.48%
P 214.914†              4603.3      2437.3 ug/L        16.65      2437.3 ppb        16.65   0.68%
   QC value within limits for P 214.914  Recovery = 97.49%
Pb 220.353†             4449.2      506.47 ug/L        2.944      506.47 ppb        2.944   0.58%
   QC value within limits for Pb 220.353  Recovery = 101.29%
S 181.975 Axial†         778.5      1013.6 ug/L        13.24      1013.6 ppb        13.24   1.31%
   QC value within limits for S 181.975 Axial  Recovery = 101.36%
Sb 206.836†             1585.8      522.67 ug/L        3.151      522.67 ppb        3.151   0.60%
   QC value within limits for Sb 206.836  Recovery = 104.53%
Se 196.026†              856.8      527.05 ug/L        5.555      527.05 ppb        5.555   1.05%
   QC value within limits for Se 196.026  Recovery = 105.41%
Si 251.611†            86433.4      2535.6 ug/L         8.89      2535.6 ppb         8.89   0.35%
   QC value within limits for Si 251.611  Recovery = 101.42%
Sn 189.927†             3133.7      504.53 ug/L        3.268      504.53 ppb        3.268   0.65%
   QC value within limits for Sn 189.927  Recovery = 100.91%
Sr 421.552†            79842.5      495.47 ug/L        0.321      495.47 ppb        0.321   0.06%
   QC value within limits for Sr 421.552  Recovery = 99.09%
Ti 334.940†           348664.1      509.84 ug/L        0.658      509.84 ppb        0.658   0.13%
   QC value within limits for Ti 334.940  Recovery = 101.97%
Tl 190.801†             1820.4      511.79 ug/L        3.212      511.79 ppb        3.212   0.63%
   QC value within limits for Tl 190.801  Recovery = 102.36%
U 409.014†             18472.5      512.91 ug/L        5.796      512.91 ppb        5.796   1.13%
   QC value within limits for U 409.014  Recovery = 102.58%
V 292.402†             79787.5      515.68 ug/L        1.899      515.68 ppb        1.899   0.37%
   QC value within limits for V 292.402  Recovery = 103.14%
Zn 213.857†            58685.9      505.99 ug/L        1.141      505.99 ppb        1.141   0.23%
   QC value within limits for Zn 213.857  Recovery = 101.20%
SiO2†                  86568.0      5442.3 ug/L        14.02      5442.3 ppb        14.02   0.26%
   QC value within limits for SiO2  Recovery = 101.77%
All analyte(s) passed QC.
```

Sequence No.: 2
Sample ID: PQL
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 11
Date Collected: 1/20/2010 15:15:36
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: PQL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5246.6	5246.6	101	%			15:17:29
1	Y RADIAL	5561.0	5561.0	100.9	%			15:17:29
1	Al 396.153Radial†	285.2	271.2	206.07	ug/L	206.07	ppb	15:17:29
1	Ca 317.933Radial†	146.5	128.2	210.50	ug/L	210.50	ppb	15:17:49
1	Fe 238.204 Radial†	20.7	9.6	87.479	ug/L	87.479	ppb	15:17:49
1	K 766.490 Radial†	3599.6	794.9	158.73	ug/L	158.73	ppb	15:17:29
1	Mg 279.077 IEC†	10.8	6.3	206.35	ug/L	206.35	ppb	15:17:49
1	Na 589.592 Radial†	32.8	1265.2	355.94	ug/L	355.94	ppb	15:17:29
1	Sr 421.552†	869.2	860.9	5.3414	ug/L	5.3414	ppb	15:17:29
1	Sc 361.383	943697.3	943697.3	99.994	%			15:18:45
1	Y 371.029	792739.6	792739.6	99.931	%			15:18:45
1	Ag 328.068†	1805.7	1354.3	5.8125	ug/L	5.8125	ppb	15:18:51
1	As 188.979†	46.5	69.8	27.137	ug/L	27.137	ppb	15:19:11
1	B 249.677†	2016.6	2409.7	51.158	ug/L	51.158	ppb	15:18:51
1	Ba 233.527†	743.0	733.1	5.2186	ug/L	5.2186	ppb	15:19:11
1	Be 313.107†	10532.6	14918.0	5.0653	ug/L	5.0653	ppb	15:18:51
1	Cd 226.502†	286.1	502.4	5.1811	ug/L	5.1811	ppb	15:19:11
1	Co 228.616†	181.4	255.7	4.8630	ug/L	4.8630	ppb	15:19:11
1	Cr 267.716†	554.4	461.5	4.8796	ug/L	4.8796	ppb	15:19:11
1	Cu 324.752†	9625.3	3488.2	9.9161	ug/L	9.9161	ppb	15:18:51
1	Mn 257.610†	10875.1	10408.6	10.625	ug/L	10.625	ppb	15:18:51
1	Mo 202.031†	179.2	149.9	9.7729	ug/L	9.7729	ppb	15:19:11
1	Ni 231.604†	318.6	220.3	5.1422	ug/L	5.1422	ppb	15:19:11
1	P 214.914†	490.1	266.2	144.82	ug/L	144.82	ppb	15:19:11
1	Pb 220.353†	37.2	75.5	8.6202	ug/L	8.6202	ppb	15:19:11
1	S 181.975 Axial†	118.0	72.1	93.968	ug/L	93.968	ppb	15:19:11
1	Sb 206.836†	62.4	31.8	10.465	ug/L	10.465	ppb	15:19:11
1	Se 196.026†	19.1	48.9	29.283	ug/L	29.283	ppb	15:19:11
1	Si 251.611†	3976.1	3504.7	102.95	ug/L	102.95	ppb	15:18:51
1	Sn 189.927†	68.1	63.8	10.288	ug/L	10.288	ppb	15:19:11
1	Ti 334.940†	2049.0	3461.2	5.0493	ug/L	5.0493	ppb	15:18:51
1	Tl 190.801†	47.1	83.5	23.389	ug/L	23.389	ppb	15:19:11
1	U 409.014†	156.6	1882.6	52.428	ug/L	52.428	ppb	15:18:45
1	V 292.402†	-739.0	746.6	4.9846	ug/L	4.9846	ppb	15:18:51
1	Zn 213.857†	1905.8	1115.6	9.6488	ug/L	9.6488	ppb	15:19:11
1	SiO2†	4013.9	3515.6	221.31	ug/L	221.31	ppb	15:20:17
2	Sc Radial	5140.9	5140.9	98.6	%			15:17:54
2	Y RADIAL	5504.4	5504.4	99.92	%			15:17:54
2	Al 396.153Radial†	240.2	231.4	175.79	ug/L	175.79	ppb	15:17:54
2	Ca 317.933Radial†	146.9	131.5	216.00	ug/L	216.00	ppb	15:18:14
2	Fe 238.204 Radial†	23.2	12.5	114.04	ug/L	114.04	ppb	15:18:14
2	K 766.490 Radial†	3730.2	1001.1	199.95	ug/L	199.95	ppb	15:17:54
2	Mg 279.077 IEC†	11.0	6.7	219.66	ug/L	219.66	ppb	15:18:14
2	Na 589.592 Radial†	-7.2	1225.3	344.71	ug/L	344.71	ppb	15:17:54
2	Sr 421.552†	786.4	794.7	4.9301	ug/L	4.9301	ppb	15:17:54
2	Sc 361.383	946426.0	946426.0	100.28	%			15:19:16
2	Y 371.029	796299.4	796299.4	100.38	%			15:19:16
2	Ag 328.068†	1698.5	1242.2	5.3390	ug/L	5.3390	ppb	15:19:21
2	As 188.979†	56.0	79.0	30.740	ug/L	30.740	ppb	15:19:41
2	B 249.677†	2088.4	2475.5	52.551	ug/L	52.551	ppb	15:19:21
2	Ba 233.527†	730.7	718.7	5.1178	ug/L	5.1178	ppb	15:19:41
2	Be 313.107†	10498.2	14853.4	5.0435	ug/L	5.0435	ppb	15:19:21
2	Cd 226.502†	295.3	510.7	5.2650	ug/L	5.2650	ppb	15:19:41
2	Co 228.616†	194.9	268.7	5.1062	ug/L	5.1062	ppb	15:19:41
2	Cr 267.716†	565.1	470.5	4.9756	ug/L	4.9756	ppb	15:19:41
2	Cu 324.752†	9680.5	3515.4	9.9935	ug/L	9.9935	ppb	15:19:21
2	Mn 257.610†	10853.4	10355.6	10.573	ug/L	10.573	ppb	15:19:21
2	Mo 202.031†	167.4	137.6	8.9740	ug/L	8.9740	ppb	15:19:41
2	Ni 231.604†	318.3	219.0	5.1131	ug/L	5.1131	ppb	15:19:41

2	P 214.914†	505.1	279.8	152.24 ug/L	152.24 ppb	15:19:41
2	Pb 220.353†	20.1	58.3	6.6652 ug/L	6.6652 ppb	15:19:41
2	S 181.975 Axial†	113.0	66.8	87.065 ug/L	87.065 ppb	15:19:41
2	Sb 206.836†	62.7	31.9	10.499 ug/L	10.499 ppb	15:19:41
2	Se 196.026†	23.8	53.6	32.145 ug/L	32.145 ppb	15:19:41
2	Si 251.611†	3967.7	3484.9	102.37 ug/L	102.37 ppb	15:19:21
2	Sn 189.927†	67.7	63.2	10.197 ug/L	10.197 ppb	15:19:41
2	Ti 334.940†	2090.1	3496.3	5.0990 ug/L	5.0990 ppb	15:19:21
2	Tl 190.801†	33.8	70.2	19.650 ug/L	19.650 ppb	15:19:41
2	U 409.014†	259.8	1985.1	55.280 ug/L	55.280 ppb	15:19:16
2	V 292.402†	-690.0	797.6	5.3007 ug/L	5.3007 ppb	15:19:21
2	Zn 213.857†	1903.5	1107.8	9.5785 ug/L	9.5785 ppb	15:19:41
2	SiO2†	3975.3	3465.6	218.18 ug/L	218.18 ppb	15:20:22
3	Sc Radial	5146.6	5146.6	98.7 %		15:18:19
3	Y RADIAL	5485.5	5485.5	99.58 %		15:18:19
3	Al 396.153Radial†	275.7	267.1	202.92 ug/L	202.92 ppb	15:18:19
3	Ca 317.933Radial†	144.3	128.7	211.37 ug/L	211.37 ppb	15:18:39
3	Fe 238.204 Radial†	24.8	14.2	129.01 ug/L	129.01 ppb	15:18:39
3	K 766.490 Radial†	3684.4	950.5	189.83 ug/L	189.83 ppb	15:18:19
3	Mg 279.077 IEC†	11.9	7.6	249.81 ug/L	249.81 ppb	15:18:39
3	Na 589.592 Radial†	32.0	1265.1	355.91 ug/L	355.91 ppb	15:18:19
3	Sr 421.552†	813.3	821.1	5.0939 ug/L	5.0939 ppb	15:18:19
3	Sc 361.383	950624.1	950624.1	100.73 %		15:19:46
3	Y 371.029	797610.2	797610.2	100.55 %		15:19:46
3	Ag 328.068†	1602.1	1138.9	4.9064 ug/L	4.9064 ppb	15:19:51
3	As 188.979†	54.3	77.2	30.022 ug/L	30.022 ppb	15:20:11
3	B 249.677†	1998.9	2377.5	50.467 ug/L	50.467 ppb	15:19:51
3	Ba 233.527†	729.3	714.2	5.0862 ug/L	5.0862 ppb	15:20:11
3	Be 313.107†	10597.8	14906.1	5.0612 ug/L	5.0612 ppb	15:19:51
3	Cd 226.502†	285.1	499.3	5.1447 ug/L	5.1447 ppb	15:20:11
3	Co 228.616†	186.3	259.3	4.9302 ug/L	4.9302 ppb	15:20:11
3	Cr 267.716†	561.3	464.2	4.9119 ug/L	4.9119 ppb	15:20:11
3	Cu 324.752†	9655.1	3447.6	9.8045 ug/L	9.8045 ppb	15:19:51
3	Mn 257.610†	10849.5	10303.9	10.520 ug/L	10.520 ppb	15:19:51
3	Mo 202.031†	177.4	146.8	9.5739 ug/L	9.5739 ppb	15:20:11
3	Ni 231.604†	336.2	235.4	5.4956 ug/L	5.4956 ppb	15:20:11
3	P 214.914†	501.0	273.5	148.79 ug/L	148.79 ppb	15:20:11
3	Pb 220.353†	37.9	76.0	8.6721 ug/L	8.6721 ppb	15:20:11
3	S 181.975 Axial†	114.3	67.6	88.085 ug/L	88.085 ppb	15:20:11
3	Sb 206.836†	69.2	38.1	12.480 ug/L	12.480 ppb	15:20:11
3	Se 196.026†	16.4	46.1	27.742 ug/L	27.742 ppb	15:20:11
3	Si 251.611†	3966.5	3466.2	101.81 ug/L	101.81 ppb	15:19:51
3	Sn 189.927†	70.0	65.2	10.517 ug/L	10.517 ppb	15:20:11
3	Ti 334.940†	2033.0	3430.4	5.0022 ug/L	5.0022 ppb	15:19:51
3	Tl 190.801†	39.5	75.7	21.189 ug/L	21.189 ppb	15:20:11
3	U 409.014†	42.4	1768.0	49.232 ug/L	49.232 ppb	15:19:46
3	V 292.402†	-673.1	817.4	5.4223 ug/L	5.4223 ppb	15:19:51
3	Zn 213.857†	1911.4	1107.3	9.5703 ug/L	9.5703 ppb	15:20:11
3	SiO2†	3934.9	3408.0	214.53 ug/L	214.53 ppb	15:20:27

Mean Data: PQL

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	946915.8	100.34	%	0.370				0.37%
Sc Radial	5178.0	99.3	%	1.14				1.15%
Y 371.029	795549.7	100.29	%	0.318				0.32%
Y RADIAL	5517.0	100.1	%	0.71				0.71%
Ag 328.068†	1245.1	5.3526	ug/L	0.45321	5.3526	ppb	0.45321	8.47%
QC value within limits for Ag 328.068 Recovery = 107.05%								
Al 396.153Radial†	256.6	194.93	ug/L	16.650	194.93	ppb	16.650	8.54%
QC value within limits for Al 396.153Radial Recovery = 97.46%								
As 188.979†	75.3	29.300	ug/L	1.9071	29.300	ppb	1.9071	6.51%
QC value within limits for As 188.979 Recovery = 97.67%								
B 249.677†	2420.9	51.392	ug/L	1.0612	51.392	ppb	1.0612	2.06%
QC value within limits for B 249.677 Recovery = 102.78%								
Ba 233.527†	722.0	5.1409	ug/L	0.06916	5.1409	ppb	0.06916	1.35%
QC value within limits for Ba 233.527 Recovery = 102.82%								
Be 313.107†	14892.5	5.0567	ug/L	0.01156	5.0567	ppb	0.01156	0.23%
QC value within limits for Be 313.107 Recovery = 101.13%								
Ca 317.933Radial†	129.5	212.62	ug/L	2.954	212.62	ppb	2.954	1.39%

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   QC value within limits for Ca 317.933Radial  Recovery = 106.31%
Cd 226.502†              504.1      5.1969 ug/L       0.06169      5.1969 ppb        0.06169   1.19%
   QC value within limits for Cd 226.502  Recovery = 103.94%
Co 228.616†              261.3      4.9665 ug/L       0.12561      4.9665 ppb        0.12561   2.53%
   QC value within limits for Co 228.616  Recovery = 99.33%
Cr 267.716†              465.4      4.9224 ug/L       0.04883      4.9224 ppb        0.04883   0.99%
   QC value within limits for Cr 267.716  Recovery = 98.45%
Cu 324.752†             3483.8      9.9047 ug/L       0.09501      9.9047 ppb        0.09501   0.96%
   QC value within limits for Cu 324.752  Recovery = 99.05%
Fe 238.204 Radial†        12.1      110.18 ug/L        21.034      110.18 ppb         21.034  19.09%
   QC value within limits for Fe 238.204 Radial  Recovery = 110.18%
K 766.490 Radial†        915.5      182.84 ug/L        21.482      182.84 ppb         21.482  11.75%
   QC value within limits for K 766.490 Radial  Recovery = 121.89%
Mg 279.077 IEC†            6.9      225.27 ug/L        22.267      225.27 ppb         22.267   9.88%
   QC value within limits for Mg 279.077 IEC  Recovery = 75.09%
Mn 257.610†            10356.1      10.572 ug/L        0.0523      10.572 ppb         0.0523   0.49%
   QC value within limits for Mn 257.610  Recovery = 105.72%
Mo 202.031†              144.7      9.4403 ug/L       0.41591      9.4403 ppb        0.41591   4.41%
   QC value within limits for Mo 202.031  Recovery = 94.40%
Na 589.592 Radial†      1251.8      352.19 ug/L         6.474      352.19 ppb          6.474   1.84%
   QC value within limits for Na 589.592 Radial  Recovery = 117.40%
Ni 231.604†              224.9      5.2503 ug/L       0.21293      5.2503 ppb        0.21293   4.06%
   QC value within limits for Ni 231.604  Recovery = 105.01%
P 214.914†               273.2      148.62 ug/L         3.710      148.62 ppb          3.710   2.50%
   QC value within limits for P 214.914  Recovery = 99.08%
Pb 220.353†               69.9      7.9858 ug/L       1.14404      7.9858 ppb        1.14404  14.33%
   QC value within limits for Pb 220.353  Recovery = 79.86%
S 181.975 Axial†          68.9      89.706 ug/L        3.7259      89.706 ppb         3.7259   4.15%
   QC value within limits for S 181.975 Axial  Recovery = 89.71%
Sb 206.836†               33.9      11.148 ug/L        1.1538      11.148 ppb         1.1538  10.35%
   QC value within limits for Sb 206.836  Recovery = 111.48%
Se 196.026†               49.5      29.723 ug/L        2.2340      29.723 ppb         2.2340   7.52%
   QC value within limits for Se 196.026  Recovery = 99.08%
Si 251.611†             3485.3      102.38 ug/L         0.566      102.38 ppb          0.566   0.55%
   QC value within limits for Si 251.611  Recovery = 102.38%
Sn 189.927†               64.1      10.334 ug/L        0.1651      10.334 ppb         0.1651   1.60%
   QC value within limits for Sn 189.927  Recovery = 103.34%
Sr 421.552†              825.5      5.1218 ug/L       0.20709      5.1218 ppb        0.20709   4.04%
   QC value within limits for Sr 421.552  Recovery = 102.44%
Ti 334.940†             3462.7      5.0502 ug/L       0.04837      5.0502 ppb        0.04837   0.96%
   QC value within limits for Ti 334.940  Recovery = 101.00%
Tl 190.801†               76.5      21.410 ug/L        1.8792      21.410 ppb         1.8792   8.78%
   QC value within limits for Tl 190.801  Recovery = 107.05%
U 409.014†              1878.6      52.313 ug/L        3.0255      52.313 ppb         3.0255   5.78%
   QC value within limits for U 409.014  Recovery = 104.63%
V 292.402†               787.2      5.2359 ug/L       0.22594      5.2359 ppb        0.22594   4.32%
   QC value within limits for V 292.402  Recovery = 104.72%
Zn 213.857†             1110.2      9.5992 ug/L       0.04318      9.5992 ppb        0.04318   0.45%
   QC value within limits for Zn 213.857  Recovery = 95.99%
SiO2†                   3463.1      218.01 ug/L         3.393      218.01 ppb          3.393   1.56%
   QC value within limits for SiO2  Recovery = 102.35%
All analyte(s) passed QC.
```

Sequence No.: 3
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 1/20/2010 15:22:38
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5109.3	5109.3	98.0	%			15:24:30
1	Y RADIAL	5422.6	5422.6	98.44	%			15:24:30
1	Al 396.153Radial†	11.9	-0.1	-0.0860	ug/L	-0.0860	ppb	15:24:30
1	Ca 317.933Radial†	24.9	8.0	13.122	ug/L	13.122	ppb	15:24:50
1	Fe 238.204 Radial†	10.9	0.2	1.5876	ug/L	1.5876	ppb	15:24:50
1	K 766.490 Radial†	2914.5	191.8	38.346	ug/L	38.346	ppb	15:24:30
1	Mg 279.077 IEC†	6.6	2.2	72.269	ug/L	72.269	ppb	15:24:50
1	Na 589.592 Radial†	-1140.6	68.3	19.223	ug/L	19.223	ppb	15:24:30
1	Sr 421.552†	1.7	-1.4	-0.0085	ug/L	-0.0085	ppb	15:24:30
1	Sc 361.383	934879.6	934879.6	99.060	%			15:25:47
1	Y 371.029	785716.1	785716.1	99.046	%			15:25:47
1	Ag 328.068†	453.9	6.7	0.0278	ug/L	0.0278	ppb	15:25:52
1	As 188.979†	-20.7	2.3	0.9020	ug/L	0.9020	ppb	15:26:12
1	B 249.677†	-357.8	31.8	0.6759	ug/L	0.6759	ppb	15:26:12
1	Ba 233.527†	0.7	-9.2	-0.0662	ug/L	-0.0662	ppb	15:26:12
1	Be 313.107†	-4350.8	-7.2	-0.0026	ug/L	-0.0026	ppb	15:25:52
1	Cd 226.502†	-222.2	-8.1	-0.0833	ug/L	-0.0833	ppb	15:26:12
1	Co 228.616†	-68.5	5.2	0.0975	ug/L	0.0975	ppb	15:26:12
1	Cr 267.716†	82.6	-9.6	-0.1021	ug/L	-0.1021	ppb	15:26:12
1	Cu 324.752†	6150.1	70.8	0.2026	ug/L	0.2026	ppb	15:25:52
1	Mn 257.610†	420.7	-42.4	-0.0461	ug/L	-0.0461	ppb	15:26:12
1	Mo 202.031†	25.9	-3.2	-0.2087	ug/L	-0.2087	ppb	15:26:12
1	Ni 231.604†	124.6	27.4	0.6405	ug/L	0.6405	ppb	15:26:12
1	P 214.914†	229.9	8.1	4.4550	ug/L	4.4550	ppb	15:26:12
1	Pb 220.353†	-57.4	-19.6	-2.2293	ug/L	-2.2293	ppb	15:26:12
1	S 181.975 Axial†	42.1	-3.4	-4.3958	ug/L	-4.3958	ppb	15:26:12
1	Sb 206.836†	33.4	3.2	1.0135	ug/L	1.0135	ppb	15:26:12
1	Se 196.026†	-26.7	2.9	1.6913	ug/L	1.6913	ppb	15:26:12
1	Si 251.611†	513.8	47.1	1.3872	ug/L	1.3872	ppb	15:26:12
1	Sn 189.927†	9.7	5.6	0.8946	ug/L	0.8946	ppb	15:26:12
1	Ti 334.940†	-1460.0	-61.8	-0.0939	ug/L	-0.0939	ppb	15:25:52
1	Tl 190.801†	-42.5	-6.4	-1.7841	ug/L	-1.7841	ppb	15:26:12
1	U 409.014†	-1756.3	-47.0	-1.3085	ug/L	-1.3085	ppb	15:25:47
1	V 292.402†	-1558.0	-87.1	-0.5596	ug/L	-0.5596	ppb	15:25:52
1	Zn 213.857†	760.7	-22.4	-0.1989	ug/L	-0.1989	ppb	15:26:12
1	SiO2†	527.4	33.9	2.1423	ug/L	2.1423	ppb	15:27:18
2	Sc Radial	5153.8	5153.8	98.8	%			15:24:56
2	Y RADIAL	5475.8	5475.8	99.40	%			15:24:56
2	Al 396.153Radial†	-2.9	-15.3	-11.635	ug/L	-11.635	ppb	15:24:56
2	Ca 317.933Radial†	17.4	0.1	0.2424	ug/L	0.2424	ppb	15:25:16
2	Fe 238.204 Radial†	10.2	-0.6	-5.8535	ug/L	-5.8535	ppb	15:25:16
2	K 766.490 Radial†	2893.7	145.0	28.990	ug/L	28.990	ppb	15:24:56
2	Mg 279.077 IEC†	1.9	-2.6	-84.903	ug/L	-84.903	ppb	15:25:16
2	Na 589.592 Radial†	-1123.8	95.4	26.828	ug/L	26.828	ppb	15:24:56
2	Sr 421.552†	-6.8	-10.0	-0.0624	ug/L	-0.0624	ppb	15:24:56
2	Sc 361.383	931767.7	931767.7	98.730	%			15:26:17
2	Y 371.029	783252.2	783252.2	98.735	%			15:26:17
2	Ag 328.068†	349.1	-98.0	-0.4178	ug/L	-0.4178	ppb	15:26:23
2	As 188.979†	-19.1	3.8	1.4885	ug/L	1.4885	ppb	15:26:43
2	B 249.677†	-342.0	46.6	0.9905	ug/L	0.9905	ppb	15:26:43
2	Ba 233.527†	10.5	0.7	0.0061	ug/L	0.0061	ppb	15:26:43
2	Be 313.107†	-4401.0	-72.7	-0.0246	ug/L	-0.0246	ppb	15:26:23
2	Cd 226.502†	-221.5	-8.1	-0.0834	ug/L	-0.0834	ppb	15:26:43
2	Co 228.616†	-80.3	-7.0	-0.1324	ug/L	-0.1324	ppb	15:26:43
2	Cr 267.716†	85.5	-6.4	-0.0660	ug/L	-0.0660	ppb	15:26:43
2	Cu 324.752†	6142.3	83.6	0.2400	ug/L	0.2400	ppb	15:26:23
2	Mn 257.610†	448.6	-12.7	-0.0101	ug/L	-0.0101	ppb	15:26:43
2	Mo 202.031†	30.1	1.1	0.0718	ug/L	0.0718	ppb	15:26:43
2	Ni 231.604†	114.5	17.7	0.4124	ug/L	0.4124	ppb	15:26:43

2	P 214.914†	227.7	6.7	3.6601 ug/L	3.6601 ppb	15:26:43
2	Pb 220.353†	-57.5	-19.9	-2.2620 ug/L	-2.2620 ppb	15:26:43
2	S 181.975 Axial†	40.8	-4.5	-5.8727 ug/L	-5.8727 ppb	15:26:43
2	Sb 206.836†	30.0	-0.2	-0.0625 ug/L	-0.0625 ppb	15:26:43
2	Se 196.026†	-25.4	4.1	2.4241 ug/L	2.4241 ppb	15:26:43
2	Si 251.611†	485.2	19.8	0.5820 ug/L	0.5820 ppb	15:26:43
2	Sn 189.927†	2.9	-1.3	-0.2140 ug/L	-0.2140 ppb	15:26:43
2	Ti 334.940†	-1390.2	4.1	0.0145 ug/L	0.0145 ppb	15:26:23
2	Tl 190.801†	-30.7	5.3	1.4886 ug/L	1.4886 ppb	15:26:43
2	U 409.014†	-1829.8	-127.4	-3.5480 ug/L	-3.5480 ppb	15:26:17
2	V 292.402†	-1401.8	65.9	0.4137 ug/L	0.4137 ppb	15:26:23
2	Zn 213.857†	775.2	-5.1	-0.0467 ug/L	-0.0467 ppb	15:26:43
2	SiO2†	501.2	9.2	0.5786 ug/L	0.5786 ppb	15:27:23
3	Sc Radial	5079.4	5079.4	97.4 %		15:25:21
3	Y RADIAL	5434.0	5434.0	98.64 %		15:25:21
3	Al 396.153Radial†	-8.6	-21.2	-16.098 ug/L	-16.098 ppb	15:25:21
3	Ca 317.933Radial†	22.0	5.2	8.4617 ug/L	8.4617 ppb	15:25:41
3	Fe 238.204 Radial†	10.6	-0.1	-0.7466 ug/L	-0.7466 ppb	15:25:41
3	K 766.490 Radial†	2850.8	143.9	28.772 ug/L	28.772 ppb	15:25:21
3	Mg 279.077 IEC†	3.3	-1.1	-36.453 ug/L	-36.453 ppb	15:25:41
3	Na 589.592 Radial†	-1148.0	53.8	15.141 ug/L	15.141 ppb	15:25:21
3	Sr 421.552†	24.1	21.7	0.1344 ug/L	0.1344 ppb	15:25:21
3	Sc 361.383	940424.1	940424.1	99.648 %		15:26:48
3	Y 371.029	790086.1	790086.1	99.597 %		15:26:48
3	Ag 328.068†	340.1	-110.3	-0.4711 ug/L	-0.4711 ppb	15:26:53
3	As 188.979†	-26.8	-3.7	-1.4205 ug/L	-1.4205 ppb	15:27:13
3	B 249.677†	-367.3	24.4	0.5179 ug/L	0.5179 ppb	15:27:13
3	Ba 233.527†	3.7	-6.2	-0.0429 ug/L	-0.0429 ppb	15:27:13
3	Be 313.107†	-4387.5	-18.2	-0.0064 ug/L	-0.0064 ppb	15:26:53
3	Cd 226.502†	-222.0	-6.6	-0.0679 ug/L	-0.0679 ppb	15:27:13
3	Co 228.616†	-71.2	2.8	0.0536 ug/L	0.0536 ppb	15:27:13
3	Cr 267.716†	109.7	17.1	0.1822 ug/L	0.1822 ppb	15:27:13
3	Cu 324.752†	6046.7	-69.6	-0.1978 ug/L	-0.1978 ppb	15:26:53
3	Mn 257.610†	427.3	-38.3	-0.0377 ug/L	-0.0377 ppb	15:27:13
3	Mo 202.031†	25.7	-3.6	-0.2316 ug/L	-0.2316 ppb	15:27:13
3	Ni 231.604†	87.7	-10.3	-0.2415 ug/L	-0.2415 ppb	15:27:13
3	P 214.914†	231.0	7.8	4.3545 ug/L	4.3545 ppb	15:27:13
3	Pb 220.353†	-76.6	-38.6	-4.3789 ug/L	-4.3789 ppb	15:27:13
3	S 181.975 Axial†	43.2	-2.6	-3.3332 ug/L	-3.3332 ppb	15:27:13
3	Sb 206.836†	40.3	9.9	3.1269 ug/L	3.1269 ppb	15:27:13
3	Se 196.026†	-28.5	1.2	0.7310 ug/L	0.7310 ppb	15:27:13
3	Si 251.611†	519.9	50.2	1.4782 ug/L	1.4782 ppb	15:27:13
3	Sn 189.927†	1.4	-2.8	-0.4486 ug/L	-0.4486 ppb	15:27:13
3	Ti 334.940†	-1486.9	-80.0	-0.1125 ug/L	-0.1125 ppb	15:26:53
3	Tl 190.801†	-33.6	2.8	0.7793 ug/L	0.7793 ppb	15:27:13
3	U 409.014†	-1763.0	-43.3	-1.2063 ug/L	-1.2063 ppb	15:26:48
3	V 292.402†	-1421.7	58.9	0.3695 ug/L	0.3695 ppb	15:26:53
3	Zn 213.857†	756.8	-30.8	-0.2664 ug/L	-0.2664 ppb	15:27:13
3	SiO2†	486.3	-10.5	-0.6545 ug/L	-0.6545 ppb	15:27:28

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	935690.5	99.146	%	0.4646				0.47%
Sc Radial	5114.2	98.1	%	0.72				0.73%
Y 371.029	786351.5	99.126	%	0.4363				0.44%
Y RADIAL	5444.2	98.83	%	0.508				0.51%
Ag 328.068†	-67.2	-0.2870	ug/L	0.27393	-0.2870	ppb	0.27393	95.44%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-12.2	-9.2729	ug/L	8.26317	-9.2729	ppb	8.26317	89.11%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	0.8	0.3233	ug/L	1.53843	0.3233	ppb	1.53843	475.82%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	34.3	0.7281	ug/L	0.24059	0.7281	ppb	0.24059	33.04%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-4.9	-0.0344	ug/L	0.03689	-0.0344	ppb	0.03689	107.35%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-32.7	-0.0112	ug/L	0.01174	-0.0112	ppb	0.01174	104.62%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	4.4	7.2753	ug/L	6.52121	7.2753	ppb	6.52121	89.63%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -7.6     -0.0782 ug/L      0.00895     -0.0782 ppb       0.00895  11.44%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†               0.3      0.0062 ug/L      0.12207      0.0062 ppb       0.12207 >999.9%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               0.4      0.0047 ug/L      0.15477      0.0047 ppb       0.15477 >999.9%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              28.3      0.0816 ug/L      0.24267      0.0816 ppb       0.24267 297.30%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†       -0.2     -1.6708 ug/L      3.80568     -1.6708 ppb       3.80568 227.77%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†       160.3      32.036 ug/L       5.4657      32.036 ppb        5.4657  17.06%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†          -0.5     -16.362 ug/L      80.4890     -16.362 ppb       80.4890 491.92%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†             -31.1     -0.0313 ug/L      0.01885     -0.0313 ppb       0.01885  60.24%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†              -1.9     -0.1228 ug/L      0.16892     -0.1228 ppb       0.16892 137.53%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       72.5      20.398 ug/L       5.9313      20.398 ppb        5.9313  29.08%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†              11.6      0.2705 ug/L      0.45782      0.2705 ppb       0.45782 169.28%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                7.6      4.1565 ug/L      0.43286      4.1565 ppb       0.43286  10.41%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†             -26.0     -2.9568 ug/L      1.23175     -2.9568 ppb       1.23175  41.66%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†         -3.5     -4.5339 ug/L      1.27539     -4.5339 ppb       1.27539  28.13%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               4.3      1.3593 ug/L      1.62262      1.3593 ppb       1.62262 119.37%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               2.7      1.6155 ug/L      0.84910      1.6155 ppb       0.84910  52.56%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              39.0      1.1492 ug/L      0.49326      1.1492 ppb       0.49326  42.92%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               0.5      0.0773 ug/L      0.71741      0.0773 ppb       0.71741 927.95%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               3.4      0.0212 ug/L      0.10167      0.0212 ppb       0.10167 479.94%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†             -45.9     -0.0640 ug/L      0.06857     -0.0640 ppb       0.06857 107.20%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               0.6      0.1613 ug/L      1.72166      0.1613 ppb       1.72166 >999.9%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              -72.5     -2.0209 ug/L      1.32344     -2.0209 ppb       1.32344  65.49%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               12.6      0.0745 ug/L      0.54964      0.0745 ppb       0.54964 737.43%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†             -19.4     -0.1707 ug/L      0.11254     -0.1707 ppb       0.11254  65.93%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    10.9      0.6888 ug/L      1.40164      0.6888 ppb       1.40164 203.49%
   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: 1/20/2010 16:10:58
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5076.6	5076.6	97.3	%			16:12:50
1	Y RADIAL	5354.7	5354.7	97.20	%			16:12:50
1	Al 396.153Radial†	6521.4	6687.3	5067.7	ug/L	5067.7	ppb	16:12:50
1	Ca 317.933Radial†	3087.7	3154.7	5180.2	ug/L	5180.2	ppb	16:13:10
1	Fe 238.204 Radial†	585.2	590.2	5387.2	ug/L	5387.2	ppb	16:13:10
1	K 766.490 Radial†	27992.7	25974.5	5186.9	ug/L	5186.9	ppb	16:12:50
1	Mg 279.077 IEC†	164.2	164.2	5395.3	ug/L	5395.3	ppb	16:13:10
1	Na 589.592 Radial†	36887.1	39127.8	11008	ug/L	11008	ppb	16:12:50
1	Sr 421.552†	79874.2	82054.1	509.19	ug/L	509.19	ppb	16:12:50
1	Sc 361.383	934753.6	934753.6	99.047	%			16:14:08
1	Y 371.029	773792.8	773792.8	97.543	%			16:14:08
1	Ag 328.068†	118088.8	118773.9	512.93	ug/L	512.93	ppb	16:14:13
1	As 188.979†	1266.5	1301.9	510.09	ug/L	510.09	ppb	16:14:33
1	B 249.677†	23223.8	23840.3	504.07	ug/L	504.07	ppb	16:14:13
1	Ba 233.527†	71674.5	72354.4	515.04	ug/L	515.04	ppb	16:14:13
1	Be 313.107†	1496261.0	1515047.4	514.42	ug/L	514.42	ppb	16:14:08
1	Cd 226.502†	49221.2	49911.2	514.18	ug/L	514.18	ppb	16:14:13
1	Co 228.616†	26852.8	27185.6	515.80	ug/L	515.80	ppb	16:14:13
1	Cr 267.716†	47911.1	48279.3	512.44	ug/L	512.44	ppb	16:14:13
1	Cu 324.752†	183566.6	179195.8	510.66	ug/L	510.66	ppb	16:14:13
1	Mn 257.610†	500771.0	505123.8	515.90	ug/L	515.90	ppb	16:14:08
1	Mo 202.031†	7740.7	7785.8	507.71	ug/L	507.71	ppb	16:14:33
1	Ni 231.604†	21870.2	21982.4	513.16	ug/L	513.16	ppb	16:14:13
1	P 214.914†	4797.3	4619.5	2446.0	ug/L	2446.0	ppb	16:14:33
1	Pb 220.353†	4385.1	4465.6	508.33	ug/L	508.33	ppb	16:14:33
1	S 181.975 Axial†	817.1	779.1	1014.4	ug/L	1014.4	ppb	16:14:33
1	Sb 206.836†	1614.0	1599.0	526.94	ug/L	526.94	ppb	16:14:33
1	Se 196.026†	824.4	862.1	530.78	ug/L	530.78	ppb	16:14:33
1	Si 251.611†	86133.2	86490.6	2537.2	ug/L	2537.2	ppb	16:14:13
1	Sn 189.927†	3121.2	3147.0	506.68	ug/L	506.68	ppb	16:14:33
1	Ti 334.940†	346462.2	351209.0	513.56	ug/L	513.56	ppb	16:14:08
1	Tl 190.801†	1767.9	1821.4	512.12	ug/L	512.12	ppb	16:14:33
1	U 409.014†	16536.9	18422.0	511.48	ug/L	511.48	ppb	16:14:13
1	V 292.402†	77913.8	80149.3	517.99	ug/L	517.99	ppb	16:14:13
1	Zn 213.857†	58999.5	58777.0	506.77	ug/L	506.77	ppb	16:14:13
1	SiO2†	86051.7	86381.5	5430.5	ug/L	5430.5	ppb	16:15:41
2	Sc Radial	5163.5	5163.5	99.0	%			16:13:15
2	Y RADIAL	5430.6	5430.6	98.58	%			16:13:15
2	Al 396.153Radial†	6575.1	6628.9	5022.9	ug/L	5022.9	ppb	16:13:15
2	Ca 317.933Radial†	3092.8	3106.4	5101.0	ug/L	5101.0	ppb	16:13:35
2	Fe 238.204 Radial†	592.2	587.2	5359.6	ug/L	5359.6	ppb	16:13:35
2	K 766.490 Radial†	28296.9	25798.1	5151.6	ug/L	5151.6	ppb	16:13:15
2	Mg 279.077 IEC†	157.7	154.8	5088.8	ug/L	5088.8	ppb	16:13:35
2	Na 589.592 Radial†	37532.0	39141.7	11012	ug/L	11012	ppb	16:13:15
2	Sr 421.552†	80896.7	81706.5	507.03	ug/L	507.03	ppb	16:13:15
2	Sc 361.383	924403.1	924403.1	97.950	%			16:14:39
2	Y 371.029	767435.2	767435.2	96.742	%			16:14:39
2	Ag 328.068†	118225.4	120248.2	519.26	ug/L	519.26	ppb	16:14:44
2	As 188.979†	1283.2	1333.3	522.26	ug/L	522.26	ppb	16:15:04
2	B 249.677†	23276.6	24156.8	510.78	ug/L	510.78	ppb	16:14:44
2	Ba 233.527†	71763.3	73255.4	521.45	ug/L	521.45	ppb	16:14:44
2	Be 313.107†	1487243.5	1522756.0	517.04	ug/L	517.04	ppb	16:14:39
2	Cd 226.502†	49235.7	50482.4	520.07	ug/L	520.07	ppb	16:14:44
2	Co 228.616†	26934.3	27572.4	523.15	ug/L	523.15	ppb	16:14:44
2	Cr 267.716†	48055.0	48967.8	519.75	ug/L	519.75	ppb	16:14:44
2	Cu 324.752†	183981.8	181694.8	517.78	ug/L	517.78	ppb	16:14:44
2	Mn 257.610†	496416.6	506339.4	517.16	ug/L	517.16	ppb	16:14:39
2	Mo 202.031†	7770.5	7903.8	515.38	ug/L	515.38	ppb	16:15:04
2	Ni 231.604†	21956.0	22317.2	520.98	ug/L	520.98	ppb	16:14:44

2	P 214.914†	4807.5	4684.1	2480.3 ug/L	2480.3 ppb	16:15:04
2	Pb 220.353†	4390.8	4521.0	514.62 ug/L	514.62 ppb	16:15:04
2	S 181.975 Axial†	813.3	784.5	1021.4 ug/L	1021.4 ppb	16:15:04
2	Sb 206.836†	1616.7	1619.9	533.89 ug/L	533.89 ppb	16:15:04
2	Se 196.026†	821.2	868.2	534.32 ug/L	534.32 ppb	16:15:04
2	Si 251.611†	86439.7	87777.2	2575.0 ug/L	2575.0 ppb	16:14:44
2	Sn 189.927†	3131.3	3192.6	513.99 ug/L	513.99 ppb	16:15:04
2	Ti 334.940†	343305.8	351903.3	514.58 ug/L	514.58 ppb	16:14:39
2	Tl 190.801†	1766.0	1839.5	517.13 ug/L	517.13 ppb	16:15:04
2	U 409.014†	16550.6	18622.9	517.07 ug/L	517.07 ppb	16:14:44
2	V 292.402†	77956.6	81073.9	524.00 ug/L	524.00 ppb	16:14:44
2	Zn 213.857†	59146.4	59594.0	513.82 ug/L	513.82 ppb	16:14:44
2	SiO2†	85541.7	86833.6	5458.8 ug/L	5458.8 ppb	16:15:46
3	Sc Radial	5085.8	5085.8	97.5 %		16:13:40
3	Y RADIAL	5353.6	5353.6	97.18 %		16:13:40
3	Al 396.153Radial†	6569.2	6724.3	5095.5 ug/L	5095.5 ppb	16:13:40
3	Ca 317.933Radial†	3083.4	3144.5	5163.5 ug/L	5163.5 ppb	16:14:00
3	Fe 238.204 Radial†	585.0	588.9	5375.7 ug/L	5375.7 ppb	16:14:00
3	K 766.490 Radial†	28116.9	26050.1	5201.9 ug/L	5201.9 ppb	16:13:40
3	Mg 279.077 IEC†	164.5	164.2	5395.6 ug/L	5395.6 ppb	16:14:00
3	Na 589.592 Radial†	37249.4	39431.0	11093 ug/L	11093 ppb	16:13:40
3	Sr 421.552†	80618.9	82669.8	513.01 ug/L	513.01 ppb	16:13:40
3	Sc 361.383	917908.5	917908.5	97.262 %		16:15:10
3	Y 371.029	759535.5	759535.5	95.746 %		16:15:10
3	Ag 328.068†	119458.8	122370.4	528.40 ug/L	528.40 ppb	16:15:15
3	As 188.979†	1273.3	1332.3	521.91 ug/L	521.91 ppb	16:15:35
3	B 249.677†	23643.8	24702.5	522.35 ug/L	522.35 ppb	16:15:15
3	Ba 233.527†	72521.4	74553.3	530.68 ug/L	530.68 ppb	16:15:15
3	Be 313.107†	1477410.7	1523389.6	517.26 ug/L	517.26 ppb	16:15:10
3	Cd 226.502†	49594.5	51206.9	527.54 ug/L	527.54 ppb	16:15:15
3	Co 228.616†	27114.5	27952.2	530.36 ug/L	530.36 ppb	16:15:15
3	Cr 267.716†	48305.9	49572.9	526.17 ug/L	526.17 ppb	16:15:15
3	Cu 324.752†	186373.6	185482.9	528.57 ug/L	528.57 ppb	16:15:15
3	Mn 257.610†	495533.5	509017.3	519.88 ug/L	519.88 ppb	16:15:10
3	Mo 202.031†	7717.5	7905.3	515.49 ug/L	515.49 ppb	16:15:35
3	Ni 231.604†	22124.2	22648.7	528.72 ug/L	528.72 ppb	16:15:15
3	P 214.914†	4766.6	4676.8	2474.2 ug/L	2474.2 ppb	16:15:35
3	Pb 220.353†	4357.9	4518.9	514.39 ug/L	514.39 ppb	16:15:35
3	S 181.975 Axial†	812.8	789.8	1028.3 ug/L	1028.3 ppb	16:15:35
3	Sb 206.836†	1618.2	1633.2	538.13 ug/L	538.13 ppb	16:15:35
3	Se 196.026†	815.4	868.2	534.35 ug/L	534.35 ppb	16:15:35
3	Si 251.611†	87397.4	89386.4	2622.3 ug/L	2622.3 ppb	16:15:15
3	Sn 189.927†	3114.0	3197.4	514.78 ug/L	514.78 ppb	16:15:35
3	Ti 334.940†	342151.5	353196.3	516.45 ug/L	516.45 ppb	16:15:10
3	Tl 190.801†	1763.5	1849.6	519.94 ug/L	519.94 ppb	16:15:35
3	U 409.014†	16903.1	19105.0	530.48 ug/L	530.48 ppb	16:15:15
3	V 292.402†	78710.3	82412.0	532.56 ug/L	532.56 ppb	16:15:15
3	Zn 213.857†	59671.8	60561.4	522.16 ug/L	522.16 ppb	16:15:15
3	SiO2†	86602.6	88542.3	5566.5 ug/L	5566.5 ppb	16:15:51

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	925688.4	98.086	%	0.9002				0.92%
Sc Radial	5108.6	98.0	%	0.92				0.93%
Y 371.029	766921.2	96.677	%	0.9004				0.93%
Y RADIAL	5379.6	97.66	%	0.801				0.82%
Ag 328.068†	120464.2	520.19	ug/L	7.777	520.19	ppb	7.777	1.50%
QC value within limits for Ag 328.068 Recovery = 104.04%								
Al 396.153Radial†	6680.2	5062.0	ug/L	36.65	5062.0	ppb	36.65	0.72%
QC value within limits for Al 396.153Radial Recovery = 101.24%								
As 188.979†	1322.5	518.09	ug/L	6.924	518.09	ppb	6.924	1.34%
QC value within limits for As 188.979 Recovery = 103.62%								
B 249.677†	24233.2	512.40	ug/L	9.245	512.40	ppb	9.245	1.80%
QC value within limits for B 249.677 Recovery = 102.48%								
Ba 233.527†	73387.7	522.39	ug/L	7.864	522.39	ppb	7.864	1.51%
QC value within limits for Ba 233.527 Recovery = 104.48%								
Be 313.107†	1520397.7	516.24	ug/L	1.576	516.24	ppb	1.576	0.31%
QC value within limits for Be 313.107 Recovery = 103.25%								
Ca 317.933Radial†	3135.2	5148.2	ug/L	41.77	5148.2	ppb	41.77	0.81%

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   QC value within limits for Ca 317.933Radial  Recovery = 102.96%
Cd 226.502†            50533.5      520.60 ug/L         6.699      520.60 ppb          6.699   1.29%
   QC value within limits for Cd 226.502  Recovery = 104.12%
Co 228.616†            27570.1      523.10 ug/L         7.279      523.10 ppb          7.279   1.39%
   QC value within limits for Co 228.616  Recovery = 104.62%
Cr 267.716†            48940.0      519.45 ug/L         6.868      519.45 ppb          6.868   1.32%
   QC value within limits for Cr 267.716  Recovery = 103.89%
Cu 324.752†           182124.5      519.00 ug/L         9.015      519.00 ppb          9.015   1.74%
   QC value within limits for Cu 324.752  Recovery = 103.80%
Fe 238.204 Radial†       588.8      5374.2 ug/L        13.85      5374.2 ppb          13.85   0.26%
   QC value within limits for Fe 238.204 Radial  Recovery = 107.48%
K 766.490 Radial†      25940.9      5180.1 ug/L        25.83      5180.1 ppb          25.83   0.50%
   QC value within limits for K 766.490 Radial  Recovery = 103.60%
Mg 279.077 IEC†          161.0      5293.2 ug/L       177.09      5293.2 ppb         177.09   3.35%
   QC value within limits for Mg 279.077 IEC  Recovery = 105.86%
Mn 257.610†           506826.8      517.65 ug/L         2.031      517.65 ppb          2.031   0.39%
   QC value within limits for Mn 257.610  Recovery = 103.53%
Mo 202.031†             7865.0      512.86 ug/L         4.464      512.86 ppb          4.464   0.87%
   QC value within limits for Mo 202.031  Recovery = 102.57%
Na 589.592 Radial†     39233.5       11038 ug/L          48.2       11038 ppb           48.2   0.44%
   QC value greater than the upper limit for Na 589.592 Radial  Recovery = 110.38%
Ni 231.604†            22316.1      520.95 ug/L         7.777      520.95 ppb          7.777   1.49%
   QC value within limits for Ni 231.604  Recovery = 104.19%
P 214.914†              4660.2      2466.8 ug/L        18.29      2466.8 ppb          18.29   0.74%
   QC value within limits for P 214.914  Recovery = 98.67%
Pb 220.353†             4501.8      512.45 ug/L         3.570      512.45 ppb          3.570   0.70%
   QC value within limits for Pb 220.353  Recovery = 102.49%
S 181.975 Axial†         784.4      1021.4 ug/L         6.96      1021.4 ppb           6.96   0.68%
   QC value within limits for S 181.975 Axial  Recovery = 102.14%
Sb 206.836†             1617.4      532.98 ug/L         5.651      532.98 ppb          5.651   1.06%
   QC value within limits for Sb 206.836  Recovery = 106.60%
Se 196.026†              866.2      533.15 ug/L         2.053      533.15 ppb          2.053   0.39%
   QC value within limits for Se 196.026  Recovery = 106.63%
Si 251.611†            87884.7      2578.2 ug/L        42.62      2578.2 ppb          42.62   1.65%
   QC value within limits for Si 251.611  Recovery = 103.13%
Sn 189.927†             3179.0      511.82 ug/L         4.465      511.82 ppb          4.465   0.87%
   QC value within limits for Sn 189.927  Recovery = 102.36%
Sr 421.552†            82143.5      509.75 ug/L         3.027      509.75 ppb          3.027   0.59%
   QC value within limits for Sr 421.552  Recovery = 101.95%
Ti 334.940†           352102.9      514.86 ug/L         1.466      514.86 ppb          1.466   0.28%
   QC value within limits for Ti 334.940  Recovery = 102.97%
Tl 190.801†             1836.8      516.40 ug/L         3.960      516.40 ppb          3.960   0.77%
   QC value within limits for Tl 190.801  Recovery = 103.28%
U 409.014†             18716.6      519.68 ug/L         9.764      519.68 ppb          9.764   1.88%
   QC value within limits for U 409.014  Recovery = 103.94%
V 292.402†             81211.7      524.85 ug/L         7.323      524.85 ppb          7.323   1.40%
   QC value within limits for V 292.402  Recovery = 104.97%
Zn 213.857†            59644.2      514.25 ug/L         7.708      514.25 ppb          7.708   1.50%
   QC value within limits for Zn 213.857  Recovery = 102.85%
SiO2†                  87252.4      5485.2 ug/L        71.75      5485.2 ppb          71.75   1.31%
   QC value within limits for SiO2  Recovery = 102.58%
QC Failed.  Continue with analysis.
```

Sequence No.: 11
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 1/20/2010 16:18:00
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5141.6	5141.6	98.6	%			16:19:53
1	Y RADIAL	5453.3	5453.3	98.99	%			16:19:53
1	Al 396.153Radial†	-5.6	-18.0	-13.661	ug/L	-13.661	ppb	16:19:53
1	Ca 317.933Radial†	20.2	3.0	4.8998	ug/L	4.8998	ppb	16:20:13
1	Fe 238.204 Radial†	13.2	2.4	21.769	ug/L	21.769	ppb	16:20:13
1	K 766.490 Radial†	2968.2	227.7	45.514	ug/L	45.514	ppb	16:19:53
1	Mg 279.077 IEC†	3.2	-1.2	-39.892	ug/L	-39.892	ppb	16:20:13
1	Na 589.592 Radial†	-1107.9	108.8	30.599	ug/L	30.599	ppb	16:19:53
1	Sr 421.552†	1.0	-2.1	-0.0133	ug/L	-0.0133	ppb	16:19:53
1	Sc 361.383	930311.1	930311.1	98.576	%			16:21:10
1	Y 371.029	782532.0	782532.0	98.645	%			16:21:10
1	Ag 328.068†	484.7	40.1	0.1807	ug/L	0.1807	ppb	16:21:15
1	As 188.979†	-20.4	2.5	0.9796	ug/L	0.9796	ppb	16:21:35
1	B 249.677†	-346.8	41.2	0.8722	ug/L	0.8722	ppb	16:21:35
1	Ba 233.527†	0.5	-9.4	-0.0656	ug/L	-0.0656	ppb	16:21:35
1	Be 313.107†	-4389.4	-68.0	-0.0232	ug/L	-0.0232	ppb	16:21:15
1	Cd 226.502†	-221.1	-8.0	-0.0851	ug/L	-0.0851	ppb	16:21:35
1	Co 228.616†	-74.3	-1.0	-0.0200	ug/L	-0.0200	ppb	16:21:35
1	Cr 267.716†	92.8	1.1	0.0130	ug/L	0.0130	ppb	16:21:35
1	Cu 324.752†	6144.5	95.6	0.2742	ug/L	0.2742	ppb	16:21:15
1	Mn 257.610†	449.2	-11.4	-0.0079	ug/L	-0.0079	ppb	16:21:35
1	Mo 202.031†	20.8	-8.2	-0.5350	ug/L	-0.5350	ppb	16:21:35
1	Ni 231.604†	99.9	3.0	0.0697	ug/L	0.0697	ppb	16:21:35
1	P 214.914†	231.1	10.5	5.7002	ug/L	5.7002	ppb	16:21:35
1	Pb 220.353†	-64.2	-26.8	-3.0472	ug/L	-3.0472	ppb	16:21:35
1	S 181.975 Axial†	50.6	5.4	7.0916	ug/L	7.0916	ppb	16:21:35
1	Sb 206.836†	41.3	11.3	3.5927	ug/L	3.5927	ppb	16:21:35
1	Se 196.026†	-28.4	1.0	0.6926	ug/L	0.6926	ppb	16:21:35
1	Si 251.611†	527.7	63.8	1.8814	ug/L	1.8814	ppb	16:21:35
1	Sn 189.927†	9.4	5.3	0.8561	ug/L	0.8561	ppb	16:21:35
1	Ti 334.940†	-1457.6	-66.5	-0.0929	ug/L	-0.0929	ppb	16:21:15
1	Tl 190.801†	-35.3	0.6	0.1794	ug/L	0.1794	ppb	16:21:35
1	U 409.014†	-1740.7	-39.9	-1.1133	ug/L	-1.1133	ppb	16:21:10
1	V 292.402†	-1438.7	26.2	0.1534	ug/L	0.1534	ppb	16:21:15
1	Zn 213.857†	758.4	-20.9	-0.1847	ug/L	-0.1847	ppb	16:21:35
1	SiO2†	547.2	56.7	3.5860	ug/L	3.5860	ppb	16:22:41
2	Sc Radial	5231.4	5231.4	100	%			16:20:18
2	Y RADIAL	5569.7	5569.7	101.1	%			16:20:18
2	Al 396.153Radial†	21.6	9.2	7.0327	ug/L	7.0327	ppb	16:20:18
2	Ca 317.933Radial†	18.1	0.6	1.0432	ug/L	1.0432	ppb	16:20:38
2	Fe 238.204 Radial†	12.7	1.6	14.825	ug/L	14.825	ppb	16:20:38
2	K 766.490 Radial†	2862.8	70.8	14.138	ug/L	14.138	ppb	16:20:18
2	Mg 279.077 IEC†	1.6	-2.9	-93.948	ug/L	-93.948	ppb	16:20:38
2	Na 589.592 Radial†	-1089.5	146.4	41.197	ug/L	41.197	ppb	16:20:18
2	Sr 421.552†	80.3	76.9	0.4772	ug/L	0.4772	ppb	16:20:18
2	Sc 361.383	932283.7	932283.7	98.785	%			16:21:40
2	Y 371.029	783258.9	783258.9	98.736	%			16:21:40
2	Ag 328.068†	381.8	-65.1	-0.2753	ug/L	-0.2753	ppb	16:21:45
2	As 188.979†	-18.0	5.0	1.9478	ug/L	1.9478	ppb	16:22:05
2	B 249.677†	-323.2	65.9	1.3966	ug/L	1.3966	ppb	16:22:05
2	Ba 233.527†	1.6	-8.2	-0.0572	ug/L	-0.0572	ppb	16:22:05
2	Be 313.107†	-4345.8	-14.4	-0.0051	ug/L	-0.0051	ppb	16:21:45
2	Cd 226.502†	-214.5	-0.9	-0.0104	ug/L	-0.0104	ppb	16:22:05
2	Co 228.616†	-68.3	5.2	0.0991	ug/L	0.0991	ppb	16:22:05
2	Cr 267.716†	79.5	-12.5	-0.1328	ug/L	-0.1328	ppb	16:22:05
2	Cu 324.752†	6044.0	-19.3	-0.0561	ug/L	-0.0561	ppb	16:21:45
2	Mn 257.610†	413.9	-48.2	-0.0438	ug/L	-0.0438	ppb	16:22:05
2	Mo 202.031†	29.3	0.3	0.0197	ug/L	0.0197	ppb	16:22:05
2	Ni 231.604†	102.8	5.7	0.1339	ug/L	0.1339	ppb	16:22:05

2	P 214.914†	236.0	15.0	8.2714 ug/L	8.2714 ppb	16:22:05
2	Pb 220.353†	-64.3	-26.8	-3.0438 ug/L	-3.0438 ppb	16:22:05
2	S 181.975 Axial†	38.7	-6.7	-8.7554 ug/L	-8.7554 ppb	16:22:05
2	Sb 206.836†	39.0	8.9	2.8335 ug/L	2.8335 ppb	16:22:05
2	Se 196.026†	-38.9	-9.5	-5.5839 ug/L	-5.5839 ppb	16:22:05
2	Si 251.611†	537.4	72.4	2.1294 ug/L	2.1294 ppb	16:22:05
2	Sn 189.927†	7.2	3.1	0.4909 ug/L	0.4909 ppb	16:22:05
2	Ti 334.940†	-1465.3	-71.2	-0.0977 ug/L	-0.0977 ppb	16:21:45
2	Tl 190.801†	-38.8	-2.8	-0.7961 ug/L	-0.7961 ppb	16:22:05
2	U 409.014†	-1592.7	113.7	3.1657 ug/L	3.1657 ppb	16:21:40
2	V 292.402†	-1406.3	62.0	0.3981 ug/L	0.3981 ppb	16:21:45
2	Zn 213.857†	776.7	-4.0	-0.0373 ug/L	-0.0373 ppb	16:22:05
2	SiO2†	577.7	86.4	5.4432 ug/L	5.4432 ppb	16:22:46
3	Sc Radial	5115.7	5115.7	98.1 %		16:20:43
3	Y RADIAL	5426.6	5426.6	98.51 %		16:20:43
3	Al 396.153Radial†	-6.0	-18.5	-14.078 ug/L	-14.078 ppb	16:20:43
3	Ca 317.933Radial†	22.3	5.3	8.6933 ug/L	8.6933 ppb	16:21:03
3	Fe 238.204 Radial†	14.2	3.4	31.343 ug/L	31.343 ppb	16:21:03
3	K 766.490 Radial†	2842.8	115.0	22.981 ug/L	22.981 ppb	16:20:43
3	Mg 279.077 IEC†	4.3	-0.1	-3.3985 ug/L	-3.3985 ppb	16:21:03
3	Na 589.592 Radial†	-1105.5	105.6	29.699 ug/L	29.699 ppb	16:20:43
3	Sr 421.552†	-8.7	-12.0	-0.0746 ug/L	-0.0746 ppb	16:20:43
3	Sc 361.383	932625.2	932625.2	98.821 %		16:22:10
3	Y 371.029	783470.9	783470.9	98.763 %		16:22:10
3	Ag 328.068†	428.6	-17.8	-0.0687 ug/L	-0.0687 ppb	16:22:15
3	As 188.979†	-25.0	-2.1	-0.7971 ug/L	-0.7971 ppb	16:22:35
3	B 249.677†	-337.8	51.2	1.0820 ug/L	1.0820 ppb	16:22:35
3	Ba 233.527†	24.6	15.0	0.1063 ug/L	0.1063 ppb	16:22:35
3	Be 313.107†	-4374.8	-42.1	-0.0141 ug/L	-0.0141 ppb	16:22:15
3	Cd 226.502†	-204.0	9.8	0.0977 ug/L	0.0977 ppb	16:22:35
3	Co 228.616†	-57.5	16.1	0.3061 ug/L	0.3061 ppb	16:22:35
3	Cr 267.716†	86.7	-5.2	-0.0557 ug/L	-0.0557 ppb	16:22:35
3	Cu 324.752†	6140.3	75.9	0.2176 ug/L	0.2176 ppb	16:22:15
3	Mn 257.610†	451.8	-9.9	-0.0069 ug/L	-0.0069 ppb	16:22:35
3	Mo 202.031†	34.8	5.9	0.3850 ug/L	0.3850 ppb	16:22:35
3	Ni 231.604†	98.4	1.2	0.0289 ug/L	0.0289 ppb	16:22:35
3	P 214.914†	220.9	-0.4	-0.2994 ug/L	-0.2994 ppb	16:22:35
3	Pb 220.353†	-64.0	-26.4	-3.0036 ug/L	-3.0036 ppb	16:22:35
3	S 181.975 Axial†	40.5	-4.9	-6.4185 ug/L	-6.4185 ppb	16:22:35
3	Sb 206.836†	37.2	7.1	2.2523 ug/L	2.2523 ppb	16:22:35
3	Se 196.026†	-33.4	-4.0	-2.2461 ug/L	-2.2461 ppb	16:22:35
3	Si 251.611†	541.1	76.0	2.2302 ug/L	2.2302 ppb	16:22:35
3	Sn 189.927†	3.0	-1.3	-0.1992 ug/L	-0.1992 ppb	16:22:35
3	Ti 334.940†	-1338.2	58.0	0.0861 ug/L	0.0861 ppb	16:22:15
3	Tl 190.801†	-31.5	4.6	1.2796 ug/L	1.2796 ppb	16:22:35
3	U 409.014†	-1690.8	15.0	0.4151 ug/L	0.4151 ppb	16:22:10
3	V 292.402†	-1540.0	-72.7	-0.4623 ug/L	-0.4623 ppb	16:22:15
3	Zn 213.857†	772.0	-9.0	-0.0822 ug/L	-0.0822 ppb	16:22:35
3	SiO2†	597.2	105.9	6.6611 ug/L	6.6611 ppb	16:22:51

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	931740.0	98.727	%	0.1324				0.13%
Sc Radial	5162.9	99.0	%	1.16				1.18%
Y 371.029	783087.3	98.715	%	0.0621				0.06%
Y RADIAL	5483.2	99.54	%	1.381				1.39%
Ag 328.068†	-14.3	-0.0544	ug/L	0.22836	-0.0544	ppb	0.22836	419.49%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-9.1	-6.9023	ug/L	12.06988	-6.9023	ppb	12.06988	174.87%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	1.8	0.7101	ug/L	1.39212	0.7101	ppb	1.39212	196.04%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	52.8	1.1169	ug/L	0.26396	1.1169	ppb	0.26396	23.63%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-0.9	-0.0055	ug/L	0.09690	-0.0055	ppb	0.09690	>999.9%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-41.5	-0.0141	ug/L	0.00907	-0.0141	ppb	0.00907	64.17%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	3.0	4.8788	ug/L	3.82509	4.8788	ppb	3.82509	78.40%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                0.3      0.0007 ug/L       0.09188      0.0007 ppb        0.09188 >999.9%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                6.8      0.1284 ug/L       0.16505      0.1284 ppb        0.16505 128.54%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               -5.5     -0.0585 ug/L       0.07291     -0.0585 ppb        0.07291 124.64%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               50.7      0.1453 ug/L       0.17663      0.1453 ppb        0.17663 121.60%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         2.5      22.646 ug/L        8.2939      22.646 ppb         8.2939  36.62%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        137.8      27.544 ug/L       16.1779      27.544 ppb        16.1779  58.73%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           -1.4     -45.746 ug/L       45.5578     -45.746 ppb        45.5578  99.59%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†              -23.2     -0.0196 ug/L       0.02105     -0.0196 ppb        0.02105 107.64%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               -0.7     -0.0434 ug/L       0.46320     -0.0434 ppb        0.46320 >999.9%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       120.3      33.832 ug/L        6.3945      33.832 ppb         6.3945  18.90%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                3.3      0.0775 ug/L       0.05294      0.0775 ppb        0.05294  68.32%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 8.4      4.5574 ug/L       4.39817      4.5574 ppb        4.39817  96.51%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†              -26.7     -3.0315 ug/L       0.02421     -3.0315 ppb        0.02421   0.80%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -2.1     -2.6941 ug/L       8.55488     -2.6941 ppb        8.55488 317.54%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                9.1      2.8928 ug/L       0.67216      2.8928 ppb        0.67216  23.24%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               -4.2     -2.3792 ug/L       3.14034     -2.3792 ppb        3.14034 131.99%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               70.7      2.0803 ug/L       0.17951      2.0803 ppb        0.17951   8.63%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                2.4      0.3826 ug/L       0.53593      0.3826 ppb        0.53593 140.07%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               20.9      0.1298 ug/L       0.30244      0.1298 ppb        0.30244 233.07%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              -26.6     -0.0348 ug/L       0.10478     -0.0348 ppb        0.10478 300.69%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                0.8      0.2210 ug/L       1.03849      0.2210 ppb        1.03849 469.93%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                29.6      0.8225 ug/L       2.16842      0.8225 ppb        2.16842 263.64%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 5.2      0.0298 ug/L       0.44335      0.0298 ppb        0.44335 >999.9%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†              -11.3     -0.1014 ug/L       0.07555     -0.1014 ppb        0.07555  74.52%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     83.0      5.2301 ug/L       1.54860      5.2301 ppb        1.54860  29.61%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 19
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 1/20/2010 17:13:17
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5110.2	5110.2	98.0	%			17:15:09
1	Y RADIAL	5393.9	5393.9	97.91	%			17:15:09
1	Al 396.153Radial†	6479.0	6600.1	5000.5	ug/L	5000.5	ppb	17:15:09
1	Ca 317.933Radial†	3093.8	3140.0	5156.2	ug/L	5156.2	ppb	17:15:29
1	Fe 238.204 Radial†	588.4	589.5	5381.2	ug/L	5381.2	ppb	17:15:29
1	K 766.490 Radial†	28249.8	26047.9	5201.7	ug/L	5201.7	ppb	17:15:09
1	Mg 279.077 IEC†	160.3	159.1	5228.1	ug/L	5228.1	ppb	17:15:29
1	Na 589.592 Radial†	36012.9	37986.6	10687	ug/L	10687	ppb	17:15:09
1	Sr 421.552†	78685.0	80301.0	498.31	ug/L	498.31	ppb	17:15:09
1	Sc 361.383	914485.6	914485.6	96.899	%			17:16:27
1	Y 371.029	755431.7	755431.7	95.228	%			17:16:27
1	Ag 328.068†	117320.8	120623.7	520.89	ug/L	520.89	ppb	17:16:32
1	As 188.979†	1298.3	1363.1	533.89	ug/L	533.89	ppb	17:16:52
1	B 249.677†	23289.7	24428.1	516.53	ug/L	516.53	ppb	17:16:32
1	Ba 233.527†	71469.6	73746.9	524.94	ug/L	524.94	ppb	17:16:32
1	Be 313.107†	1486378.4	1538329.8	522.33	ug/L	522.33	ppb	17:16:27
1	Cd 226.502†	49118.9	50907.0	524.45	ug/L	524.45	ppb	17:16:32
1	Co 228.616†	26823.7	27756.5	526.65	ug/L	526.65	ppb	17:16:32
1	Cr 267.716†	47799.0	49235.7	522.59	ug/L	522.59	ppb	17:16:32
1	Cu 324.752†	182421.9	182122.0	519.00	ug/L	519.00	ppb	17:16:32
1	Mn 257.610†	499233.6	514742.7	525.73	ug/L	525.73	ppb	17:16:27
1	Mo 202.031†	7801.5	8021.8	523.07	ug/L	523.07	ppb	17:16:52
1	Ni 231.604†	21871.8	22473.4	524.62	ug/L	524.62	ppb	17:16:32
1	P 214.914†	4873.7	4805.8	2547.2	ug/L	2547.2	ppb	17:16:52
1	Pb 220.353†	4451.8	4632.5	527.29	ug/L	527.29	ppb	17:16:52
1	S 181.975 Axial†	832.1	812.9	1058.5	ug/L	1058.5	ppb	17:16:52
1	Sb 206.836†	1635.9	1657.7	546.17	ug/L	546.17	ppb	17:16:52
1	Se 196.026†	834.4	891.0	547.84	ug/L	547.84	ppb	17:16:52
1	Si 251.611†	86154.3	88439.8	2594.4	ug/L	2594.4	ppb	17:16:32
1	Sn 189.927†	3148.7	3245.2	522.45	ug/L	522.45	ppb	17:16:52
1	Ti 334.940†	344479.5	356915.5	521.91	ug/L	521.91	ppb	17:16:27
1	Tl 190.801†	1798.2	1892.2	531.94	ug/L	531.94	ppb	17:16:52
1	U 409.014†	16372.2	18622.1	517.03	ug/L	517.03	ppb	17:16:32
1	V 292.402†	77446.3	81410.4	526.24	ug/L	526.24	ppb	17:16:32
1	Zn 213.857†	58909.4	60004.3	517.36	ug/L	517.36	ppb	17:16:32
1	SiO2†	86533.9	88804.7	5582.8	ug/L	5582.8	ppb	17:18:00
2	Sc Radial	5076.1	5076.1	97.3	%			17:15:34
2	Y RADIAL	5324.8	5324.8	96.66	%			17:15:34
2	Al 396.153Radial†	6595.4	6764.0	5125.4	ug/L	5125.4	ppb	17:15:34
2	Ca 317.933Radial†	3121.7	3189.9	5238.0	ug/L	5238.0	ppb	17:15:54
2	Fe 238.204 Radial†	598.6	604.1	5513.7	ug/L	5513.7	ppb	17:15:54
2	K 766.490 Radial†	28404.7	26401.0	5272.1	ug/L	5272.1	ppb	17:15:34
2	Mg 279.077 IEC†	161.4	161.4	5303.4	ug/L	5303.4	ppb	17:15:54
2	Na 589.592 Radial†	36497.7	38731.7	10897	ug/L	10897	ppb	17:15:34
2	Sr 421.552†	79857.2	82045.4	509.14	ug/L	509.14	ppb	17:15:34
2	Sc 361.383	909041.6	909041.6	96.322	%			17:16:58
2	Y 371.029	751482.8	751482.8	94.731	%			17:16:58
2	Ag 328.068†	118237.1	122300.1	528.14	ug/L	528.14	ppb	17:17:03
2	As 188.979†	1281.1	1353.2	530.12	ug/L	530.12	ppb	17:17:23
2	B 249.677†	23587.6	24881.2	526.11	ug/L	526.11	ppb	17:17:03
2	Ba 233.527†	72002.2	74741.5	532.02	ug/L	532.02	ppb	17:17:03
2	Be 313.107†	1487056.1	1548219.8	525.69	ug/L	525.69	ppb	17:16:58
2	Cd 226.502†	49349.6	51450.1	530.03	ug/L	530.03	ppb	17:17:03
2	Co 228.616†	27018.1	28124.0	533.61	ug/L	533.61	ppb	17:17:03
2	Cr 267.716†	47991.2	49730.6	527.85	ug/L	527.85	ppb	17:17:03
2	Cu 324.752†	184799.4	185717.7	529.25	ug/L	529.25	ppb	17:17:03
2	Mn 257.610†	499306.2	517903.6	528.97	ug/L	528.97	ppb	17:16:58
2	Mo 202.031†	7758.5	8025.3	523.32	ug/L	523.32	ppb	17:17:23
2	Ni 231.604†	21991.0	22732.3	530.67	ug/L	530.67	ppb	17:17:03

2	P 214.914†	4812.8	4772.7	2526.8 ug/L	2526.8 ppb	17:17:23
2	Pb 220.353†	4397.9	4604.2	524.08 ug/L	524.08 ppb	17:17:23
2	S 181.975 Axial†	818.8	804.2	1047.1 ug/L	1047.1 ppb	17:17:23
2	Sb 206.836†	1628.9	1660.5	547.09 ug/L	547.09 ppb	17:17:23
2	Se 196.026†	830.0	891.5	548.66 ug/L	548.66 ppb	17:17:23
2	Si 251.611†	86864.7	89709.8	2631.7 ug/L	2631.7 ppb	17:17:03
2	Sn 189.927†	3130.2	3245.5	522.52 ug/L	522.52 ppb	17:17:23
2	Ti 334.940†	344396.1	358958.0	524.90 ug/L	524.90 ppb	17:16:58
2	Tl 190.801†	1769.3	1873.3	526.65 ug/L	526.65 ppb	17:17:23
2	U 409.014†	16443.6	18797.4	521.89 ug/L	521.89 ppb	17:17:03
2	V 292.402†	77795.4	82251.5	531.60 ug/L	531.60 ppb	17:17:03
2	Zn 213.857†	59446.8	60926.3	525.31 ug/L	525.31 ppb	17:17:03
2	SiO2†	86991.8	89814.9	5646.4 ug/L	5646.4 ppb	17:18:05
3	Sc Radial	5056.2	5056.2	96.9 %		17:15:59
3	Y RADIAL	5314.3	5314.3	96.47 %		17:15:59
3	Al 396.153Radial†	6627.6	6823.9	5171.0 ug/L	5171.0 ppb	17:15:59
3	Ca 317.933Radial†	3103.5	3183.7	5227.9 ug/L	5227.9 ppb	17:16:19
3	Fe 238.204 Radial†	590.3	597.9	5457.3 ug/L	5457.3 ppb	17:16:19
3	K 766.490 Radial†	28499.8	26613.7	5314.7 ug/L	5314.7 ppb	17:15:59
3	Mg 279.077 IEC†	166.9	167.6	5509.3 ug/L	5509.3 ppb	17:16:19
3	Na 589.592 Radial†	36467.2	38847.6	10929 ug/L	10929 ppb	17:15:59
3	Sr 421.552†	79900.4	82412.2	511.41 ug/L	511.41 ppb	17:15:59
3	Sc 361.383	909000.3	909000.3	96.318 %		17:17:29
3	Y 371.029	750233.4	750233.4	94.573 %		17:17:29
3	Ag 328.068†	117649.8	121695.9	525.52 ug/L	525.52 ppb	17:17:34
3	As 188.979†	1284.8	1357.2	531.65 ug/L	531.65 ppb	17:17:54
3	B 249.677†	23482.0	24772.7	523.82 ug/L	523.82 ppb	17:17:34
3	Ba 233.527†	71788.6	74523.1	530.47 ug/L	530.47 ppb	17:17:34
3	Be 313.107†	1488355.5	1549639.0	526.17 ug/L	526.17 ppb	17:17:29
3	Cd 226.502†	49310.8	51412.2	529.65 ug/L	529.65 ppb	17:17:34
3	Co 228.616†	26918.5	28021.9	531.67 ug/L	531.67 ppb	17:17:34
3	Cr 267.716†	47932.1	49671.5	527.21 ug/L	527.21 ppb	17:17:34
3	Cu 324.752†	183259.4	184127.6	524.71 ug/L	524.71 ppb	17:17:34
3	Mn 257.610†	500172.0	518826.1	529.89 ug/L	529.89 ppb	17:17:29
3	Mo 202.031†	7734.6	8000.9	521.72 ug/L	521.72 ppb	17:17:54
3	Ni 231.604†	22014.5	22757.7	531.26 ug/L	531.26 ppb	17:17:34
3	P 214.914†	4810.2	4770.1	2526.3 ug/L	2526.3 ppb	17:17:54
3	Pb 220.353†	4386.6	4592.6	522.78 ug/L	522.78 ppb	17:17:54
3	S 181.975 Axial†	820.1	805.6	1048.9 ug/L	1048.9 ppb	17:17:54
3	Sb 206.836†	1615.4	1646.6	542.57 ug/L	542.57 ppb	17:17:54
3	Se 196.026†	832.0	893.7	549.72 ug/L	549.72 ppb	17:17:54
3	Si 251.611†	86517.8	89353.7	2621.3 ug/L	2621.3 ppb	17:17:34
3	Sn 189.927†	3108.7	3223.3	518.95 ug/L	518.95 ppb	17:17:54
3	Ti 334.940†	345342.8	359957.1	526.34 ug/L	526.34 ppb	17:17:29
3	Tl 190.801†	1783.5	1888.2	530.85 ug/L	530.85 ppb	17:17:54
3	U 409.014†	16704.1	19068.7	529.46 ug/L	529.46 ppb	17:17:34
3	V 292.402†	77737.0	82194.5	531.24 ug/L	531.24 ppb	17:17:34
3	Zn 213.857†	59155.0	60626.2	522.71 ug/L	522.71 ppb	17:17:34
3	SiO2†	86294.8	89095.3	5601.1 ug/L	5601.1 ppb	17:18:10

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	910842.5	96.513	%	0.3343				0.35%
Sc Radial	5080.8	97.4	%	0.52				0.54%
Y 371.029	752382.7	94.844	%	0.3421				0.36%
Y RADIAL	5344.3	97.02	%	0.785				0.81%
Ag 328.068†	121539.9	524.85	ug/L	3.672	524.85	ppb	3.672	0.70%
QC value within limits for Ag 328.068 Recovery = 104.97%								
Al 396.153Radial†	6729.3	5099.0	ug/L	88.27	5099.0	ppb	88.27	1.73%
QC value within limits for Al 396.153Radial Recovery = 101.98%								
As 188.979†	1357.8	531.89	ug/L	1.895	531.89	ppb	1.895	0.36%
QC value within limits for As 188.979 Recovery = 106.38%								
B 249.677†	24694.0	522.15	ug/L	5.006	522.15	ppb	5.006	0.96%
QC value within limits for B 249.677 Recovery = 104.43%								
Ba 233.527†	74337.2	529.14	ug/L	3.720	529.14	ppb	3.720	0.70%
QC value within limits for Ba 233.527 Recovery = 105.83%								
Be 313.107†	1545396.2	524.73	ug/L	2.092	524.73	ppb	2.092	0.40%
QC value within limits for Be 313.107 Recovery = 104.95%								
Ca 317.933Radial†	3171.2	5207.4	ug/L	44.60	5207.4	ppb	44.60	0.86%

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   QC value within limits for Ca 317.933Radial  Recovery = 104.15%
Cd 226.502†            51256.4      528.04 ug/L        3.121      528.04 ppb        3.121   0.59%
   QC value within limits for Cd 226.502  Recovery = 105.61%
Co 228.616†            27967.5      530.64 ug/L        3.595      530.64 ppb        3.595   0.68%
   QC value within limits for Co 228.616  Recovery = 106.13%
Cr 267.716†            49545.9      525.88 ug/L        2.869      525.88 ppb        2.869   0.55%
   QC value within limits for Cr 267.716  Recovery = 105.18%
Cu 324.752†           183989.1      524.32 ug/L        5.137      524.32 ppb        5.137   0.98%
   QC value within limits for Cu 324.752  Recovery = 104.86%
Fe 238.204 Radial†       597.2      5450.7 ug/L       66.48      5450.7 ppb       66.48   1.22%
   QC value within limits for Fe 238.204 Radial  Recovery = 109.01%
K 766.490 Radial†      26354.2      5262.8 ug/L       57.08      5262.8 ppb       57.08   1.08%
   QC value within limits for K 766.490 Radial  Recovery = 105.26%
Mg 279.077 IEC†          162.7      5346.9 ug/L      145.58      5346.9 ppb      145.58   2.72%
   QC value within limits for Mg 279.077 IEC  Recovery = 106.94%
Mn 257.610†           517157.5      528.20 ug/L        2.186      528.20 ppb        2.186   0.41%
   QC value within limits for Mn 257.610  Recovery = 105.64%
Mo 202.031†             8016.0      522.70 ug/L        0.859      522.70 ppb        0.859   0.16%
   QC value within limits for Mo 202.031  Recovery = 104.54%
Na 589.592 Radial†     38522.0       10838 ug/L        131.5       10838 ppb        131.5   1.21%
   QC value within limits for Na 589.592 Radial  Recovery = 108.38%
Ni 231.604†            22654.5      528.85 ug/L        3.674      528.85 ppb        3.674   0.69%
   QC value within limits for Ni 231.604  Recovery = 105.77%
P 214.914†              4782.9      2533.4 ug/L       11.89      2533.4 ppb       11.89   0.47%
   QC value within limits for P 214.914  Recovery = 101.34%
Pb 220.353†             4609.8      524.72 ug/L        2.321      524.72 ppb        2.321   0.44%
   QC value within limits for Pb 220.353  Recovery = 104.94%
S 181.975 Axial†         807.6      1051.5 ug/L         6.10      1051.5 ppb         6.10   0.58%
   QC value within limits for S 181.975 Axial  Recovery = 105.15%
Sb 206.836†             1654.9      545.28 ug/L        2.391      545.28 ppb        2.391   0.44%
   QC value within limits for Sb 206.836  Recovery = 109.06%
Se 196.026†              892.1      548.74 ug/L        0.942      548.74 ppb        0.942   0.17%
   QC value within limits for Se 196.026  Recovery = 109.75%
Si 251.611†            89167.8      2615.8 ug/L       19.27      2615.8 ppb       19.27   0.74%
   QC value within limits for Si 251.611  Recovery = 104.63%
Sn 189.927†             3238.0      521.31 ug/L        2.043      521.31 ppb        2.043   0.39%
   QC value within limits for Sn 189.927  Recovery = 104.26%
Sr 421.552†            81586.2      506.29 ug/L        7.000      506.29 ppb        7.000   1.38%
   QC value within limits for Sr 421.552  Recovery = 101.26%
Ti 334.940†           358610.2      524.38 ug/L        2.259      524.38 ppb        2.259   0.43%
   QC value within limits for Ti 334.940  Recovery = 104.88%
Tl 190.801†             1884.6      529.81 ug/L        2.789      529.81 ppb        2.789   0.53%
   QC value within limits for Tl 190.801  Recovery = 105.96%
U 409.014†             18829.4      522.79 ug/L        6.260      522.79 ppb        6.260   1.20%
   QC value within limits for U 409.014  Recovery = 104.56%
V 292.402†             81952.1      529.69 ug/L        2.993      529.69 ppb        2.993   0.57%
   QC value within limits for V 292.402  Recovery = 105.94%
Zn 213.857†            60518.9      521.79 ug/L        4.056      521.79 ppb        4.056   0.78%
   QC value within limits for Zn 213.857  Recovery = 104.36%
SiO2†                  89238.3      5610.1 ug/L       32.77      5610.1 ppb       32.77   0.58%
   QC value within limits for SiO2  Recovery = 104.91%
All analyte(s) passed QC.
```

Sequence No.: 20
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 1/20/2010 17:20:19
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5068.9	5068.9	97.2	%			17:22:12
1	Y RADIAL	5375.6	5375.6	97.58	%			17:22:12
1	Al 396.153Radial†	16.8	5.0	3.8151	ug/L	3.8151	ppb	17:22:12
1	Ca 317.933Radial†	21.4	4.6	7.5234	ug/L	7.5234	ppb	17:22:32
1	Fe 238.204 Radial†	13.7	3.1	28.416	ug/L	28.416	ppb	17:22:32
1	K 766.490 Radial†	3079.2	385.0	76.965	ug/L	76.965	ppb	17:22:12
1	Mg 279.077 IEC†	-0.4	-4.9	-162.52	ug/L	-162.52	ppb	17:22:32
1	Na 589.592 Radial†	-1107.0	93.6	26.326	ug/L	26.326	ppb	17:22:12
1	Sr 421.552†	8.2	5.3	0.0331	ug/L	0.0331	ppb	17:22:12
1	Sc 361.383	935448.4	935448.4	99.120	%			17:23:29
1	Y 371.029	784004.0	784004.0	98.830	%			17:23:29
1	Ag 328.068†	404.8	-43.2	-0.1730	ug/L	-0.1730	ppb	17:23:34
1	As 188.979†	-9.5	13.7	5.3155	ug/L	5.3155	ppb	17:23:54
1	B 249.677†	-187.0	204.4	4.3369	ug/L	4.3369	ppb	17:23:54
1	Ba 233.527†	1.4	-8.5	-0.0588	ug/L	-0.0588	ppb	17:23:54
1	Be 313.107†	-4363.8	-17.6	-0.0059	ug/L	-0.0059	ppb	17:23:34
1	Cd 226.502†	-192.8	21.7	0.2201	ug/L	0.2201	ppb	17:23:54
1	Co 228.616†	-77.7	-4.0	-0.0781	ug/L	-0.0781	ppb	17:23:54
1	Cr 267.716†	67.7	-24.6	-0.2591	ug/L	-0.2591	ppb	17:23:54
1	Cu 324.752†	6108.2	24.8	0.0737	ug/L	0.0737	ppb	17:23:34
1	Mn 257.610†	472.6	9.7	0.0194	ug/L	0.0194	ppb	17:23:54
1	Mo 202.031†	22.0	-7.2	-0.4689	ug/L	-0.4689	ppb	17:23:54
1	Ni 231.604†	108.3	10.9	0.2545	ug/L	0.2545	ppb	17:23:54
1	P 214.914†	235.9	14.0	7.6959	ug/L	7.6959	ppb	17:23:54
1	Pb 220.353†	-56.2	-18.3	-2.0848	ug/L	-2.0848	ppb	17:23:54
1	S 181.975 Axial†	42.3	-3.2	-4.1257	ug/L	-4.1257	ppb	17:23:54
1	Sb 206.836†	30.9	0.6	0.1846	ug/L	0.1846	ppb	17:23:54
1	Se 196.026†	-35.7	-6.2	-3.5462	ug/L	-3.5462	ppb	17:23:54
1	Si 251.611†	597.3	131.0	3.8586	ug/L	3.8586	ppb	17:23:54
1	Sn 189.927†	9.5	5.3	0.8509	ug/L	0.8509	ppb	17:23:54
1	Ti 334.940†	-1394.9	4.9	0.0227	ug/L	0.0227	ppb	17:23:34
1	Tl 190.801†	-31.4	4.7	1.3251	ug/L	1.3251	ppb	17:23:54
1	U 409.014†	-1811.2	-101.3	-2.8242	ug/L	-2.8242	ppb	17:23:29
1	V 292.402†	-1434.5	38.4	0.2258	ug/L	0.2258	ppb	17:23:34
1	Zn 213.857†	783.1	-0.3	-0.0068	ug/L	-0.0068	ppb	17:23:54
1	SiO2†	601.4	108.3	6.8354	ug/L	6.8354	ppb	17:25:00
2	Sc Radial	5142.3	5142.3	98.6	%			17:22:37
2	Y RADIAL	5414.7	5414.7	98.29	%			17:22:37
2	Al 396.153Radial†	-29.2	-41.9	-31.880	ug/L	-31.880	ppb	17:22:37
2	Ca 317.933Radial†	25.5	8.4	13.728	ug/L	13.728	ppb	17:22:57
2	Fe 238.204 Radial†	10.8	-0.1	-0.4707	ug/L	-0.4707	ppb	17:22:57
2	K 766.490 Radial†	3052.4	312.6	62.490	ug/L	62.490	ppb	17:22:37
2	Mg 279.077 IEC†	-1.2	-5.7	-188.62	ug/L	-188.62	ppb	17:22:57
2	Na 589.592 Radial†	-1099.7	117.3	33.003	ug/L	33.003	ppb	17:22:37
2	Sr 421.552†	35.2	32.6	0.2023	ug/L	0.2023	ppb	17:22:37
2	Sc 361.383	930207.0	930207.0	98.565	%			17:23:59
2	Y 371.029	778266.0	778266.0	98.107	%			17:23:59
2	Ag 328.068†	431.6	-13.7	-0.0579	ug/L	-0.0579	ppb	17:24:04
2	As 188.979†	-23.6	-0.7	-0.2638	ug/L	-0.2638	ppb	17:24:24
2	B 249.677†	-138.2	252.8	5.3700	ug/L	5.3700	ppb	17:24:24
2	Ba 233.527†	-1.1	-11.1	-0.0784	ug/L	-0.0784	ppb	17:24:24
2	Be 313.107†	-4517.2	-198.1	-0.0670	ug/L	-0.0670	ppb	17:24:04
2	Cd 226.502†	-207.1	6.1	0.0627	ug/L	0.0627	ppb	17:24:24
2	Co 228.616†	-85.9	-12.8	-0.2447	ug/L	-0.2447	ppb	17:24:24
2	Cr 267.716†	81.9	-9.9	-0.1045	ug/L	-0.1045	ppb	17:24:24
2	Cu 324.752†	6200.1	152.7	0.4357	ug/L	0.4357	ppb	17:24:04
2	Mn 257.610†	478.7	18.5	0.0266	ug/L	0.0266	ppb	17:24:24
2	Mo 202.031†	20.5	-8.6	-0.5578	ug/L	-0.5578	ppb	17:24:24
2	Ni 231.604†	98.8	1.9	0.0444	ug/L	0.0444	ppb	17:24:24

2	P 214.914†	223.0	2.3	1.1948	ug/L	1.1948 ppb	17:24:24
2	Pb 220.353†	-50.7	-13.2	-1.5032	ug/L	-1.5032 ppb	17:24:24
2	S 181.975 Axial†	50.3	5.1	6.7112	ug/L	6.7112 ppb	17:24:24
2	Sb 206.836†	38.2	8.2	2.6108	ug/L	2.6108 ppb	17:24:24
2	Se 196.026†	-29.3	0.1	0.0677	ug/L	0.0677 ppb	17:24:24
2	Si 251.611†	595.0	132.1	3.8910	ug/L	3.8910 ppb	17:24:24
2	Sn 189.927†	10.0	5.9	0.9540	ug/L	0.9540 ppb	17:24:24
2	Ti 334.940†	-1372.7	19.4	0.0462	ug/L	0.0462 ppb	17:24:04
2	Tl 190.801†	-30.6	5.5	1.5254	ug/L	1.5254 ppb	17:24:24
2	U 409.014†	-1739.4	-38.8	-1.0807	ug/L	-1.0807 ppb	17:23:59
2	V 292.402†	-1455.1	9.4	0.0462	ug/L	0.0462 ppb	17:24:04
2	Zn 213.857†	800.1	21.4	0.1855	ug/L	0.1855 ppb	17:24:24
2	SiO2†	597.4	107.6	6.7964	ug/L	6.7964 ppb	17:25:05
3	Sc Radial	5167.7	5167.7	99.1	%		17:23:02
3	Y RADIAL	5481.5	5481.5	99.51	%		17:23:02
3	Al 396.153Radial†	-3.3	-15.7	-11.922	ug/L	-11.922 ppb	17:23:02
3	Ca 317.933Radial†	25.7	8.5	13.912	ug/L	13.912 ppb	17:23:22
3	Fe 238.204 Radial†	9.4	-1.5	-13.689	ug/L	-13.689 ppb	17:23:22
3	K 766.490 Radial†	3023.9	268.6	53.695	ug/L	53.695 ppb	17:23:02
3	Mg 279.077 IEC†	1.4	-3.0	-99.847	ug/L	-99.847 ppb	17:23:22
3	Na 589.592 Radial†	-1135.3	86.9	24.434	ug/L	24.434 ppb	17:23:02
3	Sr 421.552†	38.6	35.9	0.2224	ug/L	0.2224 ppb	17:23:02
3	Sc 361.383	920804.2	920804.2	97.569	%		17:24:29
3	Y 371.029	770808.5	770808.5	97.167	%		17:24:29
3	Ag 328.068†	487.1	47.7	0.2004	ug/L	0.2004 ppb	17:24:35
3	As 188.979†	-22.2	0.5	0.1724	ug/L	0.1724 ppb	17:24:55
3	B 249.677†	-186.7	201.7	4.2862	ug/L	4.2862 ppb	17:24:55
3	Ba 233.527†	-11.2	-21.4	-0.1528	ug/L	-0.1528 ppb	17:24:55
3	Be 313.107†	-4353.1	-76.7	-0.0260	ug/L	-0.0260 ppb	17:24:35
3	Cd 226.502†	-200.3	10.9	0.1138	ug/L	0.1138 ppb	17:24:55
3	Co 228.616†	-69.2	3.4	0.0646	ug/L	0.0646 ppb	17:24:55
3	Cr 267.716†	65.8	-25.5	-0.2708	ug/L	-0.2708 ppb	17:24:55
3	Cu 324.752†	6085.4	99.3	0.2833	ug/L	0.2833 ppb	17:24:35
3	Mn 257.610†	477.2	21.9	0.0251	ug/L	0.0251 ppb	17:24:55
3	Mo 202.031†	26.5	-2.3	-0.1493	ug/L	-0.1493 ppb	17:24:55
3	Ni 231.604†	98.6	2.7	0.0624	ug/L	0.0624 ppb	17:24:55
3	P 214.914†	231.6	13.5	7.3770	ug/L	7.3770 ppb	17:24:55
3	Pb 220.353†	-75.5	-39.1	-4.4347	ug/L	-4.4347 ppb	17:24:55
3	S 181.975 Axial†	42.1	-2.7	-3.5340	ug/L	-3.5340 ppb	17:24:55
3	Sb 206.836†	28.4	-1.5	-0.4681	ug/L	-0.4681 ppb	17:24:55
3	Se 196.026†	-31.6	-2.5	-1.5564	ug/L	-1.5564 ppb	17:24:55
3	Si 251.611†	583.8	126.8	3.7294	ug/L	3.7294 ppb	17:24:55
3	Sn 189.927†	9.3	5.3	0.8535	ug/L	0.8535 ppb	17:24:55
3	Ti 334.940†	-1364.9	13.2	0.0302	ug/L	0.0302 ppb	17:24:35
3	Tl 190.801†	-24.2	11.6	3.2501	ug/L	3.2501 ppb	17:24:55
3	U 409.014†	-1740.9	-58.3	-1.6234	ug/L	-1.6234 ppb	17:24:29
3	V 292.402†	-1490.8	-42.3	-0.2747	ug/L	-0.2747 ppb	17:24:35
3	Zn 213.857†	785.8	15.1	0.1317	ug/L	0.1317 ppb	17:24:55
3	SiO2†	595.5	111.9	7.0554	ug/L	7.0554 ppb	17:25:10

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	928819.9	98.418	%	0.7862				0.80%
Sc Radial	5126.3	98.3	%	0.98				1.00%
Y 371.029	777692.8	98.035	%	0.8341				0.85%
Y RADIAL	5423.9	98.46	%	0.972				0.99%
Ag 328.068†	-3.1	-0.0102	ug/L	0.19124	-0.0102	ppb	0.19124	>999.9%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-17.5	-13.329	ug/L	17.8889	-13.329	ppb	17.8889	134.21%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	4.5	1.7414	ug/L	3.10293	1.7414	ppb	3.10293	178.19%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	219.6	4.6644	ug/L	0.61162	4.6644	ppb	0.61162	13.11%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-13.6	-0.0967	ug/L	0.04955	-0.0967	ppb	0.04955	51.26%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-97.5	-0.0330	ug/L	0.03114	-0.0330	ppb	0.03114	94.44%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	7.1	11.721	ug/L	3.6365	11.721	ppb	3.6365	31.02%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              12.9      0.1322 ug/L       0.08025      0.1322 ppb        0.08025  60.70%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†              -4.5     -0.0861 ug/L       0.15482     -0.0861 ppb        0.15482 179.89%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†             -20.0     -0.2114 ug/L       0.09283     -0.2114 ppb        0.09283  43.91%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              92.3      0.2642 ug/L       0.18178      0.2642 ppb        0.18178  68.80%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        0.5      4.7519 ug/L      21.53289      4.7519 ppb       21.53289 453.14%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†       322.1      64.383 ug/L       11.7503      64.383 ppb        11.7503  18.25%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†          -4.6     -150.33 ug/L        45.625     -150.33 ppb         45.625  30.35%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†              16.7      0.0237 ug/L       0.00381      0.0237 ppb        0.00381  16.09%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†              -6.0     -0.3920 ug/L       0.21484     -0.3920 ppb        0.21484  54.81%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       99.2      27.921 ug/L        4.5018      27.921 ppb         4.5018  16.12%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               5.2      0.1204 ug/L       0.11647      0.1204 ppb        0.11647  96.70%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                9.9      5.4226 ug/L       3.66485      5.4226 ppb        3.66485  67.58%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†             -23.5     -2.6742 ug/L       1.55208     -2.6742 ppb        1.55208  58.04%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†         -0.2     -0.3162 ug/L       6.09307     -0.3162 ppb        6.09307 >999.9%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               2.4      0.7758 ug/L       1.62233      0.7758 ppb        1.62233 209.13%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†              -2.9     -1.6783 ug/L       1.81002     -1.6783 ppb        1.81002 107.85%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†             130.0      3.8264 ug/L       0.08549      3.8264 ppb        0.08549   2.23%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               5.5      0.8861 ug/L       0.05879      0.8861 ppb        0.05879   6.63%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              24.6      0.1526 ug/L       0.10396      0.1526 ppb        0.10396  68.11%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              12.5      0.0330 ug/L       0.01200      0.0330 ppb        0.01200  36.33%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               7.3      2.0335 ug/L       1.05835      2.0335 ppb        1.05835  52.04%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              -66.1     -1.8428 ug/L       0.89219     -1.8428 ppb        0.89219  48.42%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                1.8     -0.0009 ug/L       0.25357     -0.0009 ppb        0.25357 >999.9%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†              12.1      0.1034 ug/L       0.09921      0.1034 ppb        0.09921  95.90%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                   109.2      6.8958 ug/L       0.13962      6.8958 ppb        0.13962   2.02%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
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Sequence No.: 26
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 1/20/2010 18:02:38
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5067.1	5067.1	97.2	%			18:04:30
1	Y RADIAL	5325.8	5325.8	96.68	%			18:04:30
1	Al 396.153Radial†	6596.2	6776.8	5135.2	ug/L	5135.2	ppb	18:04:30
1	Ca 317.933Radial†	3109.5	3183.0	5226.8	ug/L	5226.8	ppb	18:04:50
1	Fe 238.204 Radial†	599.1	605.6	5527.4	ug/L	5527.4	ppb	18:04:50
1	K 766.490 Radial†	28526.0	26577.2	5307.3	ug/L	5307.3	ppb	18:04:30
1	Mg 279.077 IEC†	161.5	161.7	5314.2	ug/L	5314.2	ppb	18:04:50
1	Na 589.592 Radial†	37584.8	39916.8	11230	ug/L	11230	ppb	18:04:30
1	Sr 421.552†	81060.4	83428.3	517.72	ug/L	517.72	ppb	18:04:30
1	Sc 361.383	920328.0	920328.0	97.518	%			18:05:49
1	Y 371.029	759523.8	759523.8	95.744	%			18:05:49
1	Ag 328.068†	118097.7	120651.8	521.06	ug/L	521.06	ppb	18:05:49
1	As 188.979†	1273.1	1328.8	520.60	ug/L	520.60	ppb	18:06:09
1	B 249.677†	23339.8	24326.8	514.37	ug/L	514.37	ppb	18:05:49
1	Ba 233.527†	71820.8	73638.8	524.17	ug/L	524.17	ppb	18:05:49
1	Be 313.107†	1491073.2	1533406.4	520.66	ug/L	520.66	ppb	18:05:49
1	Cd 226.502†	49343.9	50816.0	523.48	ug/L	523.48	ppb	18:05:49
1	Co 228.616†	26655.2	27407.9	520.03	ug/L	520.03	ppb	18:06:09
1	Cr 267.716†	47729.3	48851.1	518.52	ug/L	518.52	ppb	18:05:49
1	Cu 324.752†	186141.0	184740.7	526.48	ug/L	526.48	ppb	18:05:49
1	Mn 257.610†	501382.0	513675.2	524.65	ug/L	524.65	ppb	18:05:49
1	Mo 202.031†	7826.2	7996.0	521.41	ug/L	521.41	ppb	18:06:09
1	Ni 231.604†	21748.2	22203.3	518.32	ug/L	518.32	ppb	18:06:09
1	P 214.914†	4841.9	4741.2	2509.9	ug/L	2509.9	ppb	18:06:09
1	Pb 220.353†	4450.9	4602.4	523.89	ug/L	523.89	ppb	18:06:09
1	S 181.975 Axial†	828.2	803.4	1046.1	ug/L	1046.1	ppb	18:06:09
1	Sb 206.836†	1614.3	1624.8	535.57	ug/L	535.57	ppb	18:06:09
1	Se 196.026†	831.6	882.6	543.41	ug/L	543.41	ppb	18:06:09
1	Si 251.611†	86741.9	88477.9	2595.5	ug/L	2595.5	ppb	18:05:49
1	Sn 189.927†	3128.9	3204.3	515.90	ug/L	515.90	ppb	18:06:09
1	Ti 334.940†	346467.6	356697.4	521.60	ug/L	521.60	ppb	18:05:49
1	Tl 190.801†	1778.3	1860.0	522.98	ug/L	522.98	ppb	18:06:09
1	U 409.014†	15694.0	17819.4	494.66	ug/L	494.66	ppb	18:05:49
1	V 292.402†	77554.2	81013.6	523.63	ug/L	523.63	ppb	18:05:49
1	Zn 213.857†	59190.0	59906.2	516.52	ug/L	516.52	ppb	18:05:49
1	SiO2†	86849.1	88560.9	5567.5	ug/L	5567.5	ppb	18:07:09
2	Sc Radial	5069.6	5069.6	97.2	%			18:04:55
2	Y RADIAL	5337.5	5337.5	96.89	%			18:04:55
2	Al 396.153Radial†	6601.0	6778.5	5137.0	ug/L	5137.0	ppb	18:04:55
2	Ca 317.933Radial†	3145.5	3218.5	5285.0	ug/L	5285.0	ppb	18:05:15
2	Fe 238.204 Radial†	609.5	616.0	5621.9	ug/L	5621.9	ppb	18:05:15
2	K 766.490 Radial†	28716.0	26758.3	5343.5	ug/L	5343.5	ppb	18:04:55
2	Mg 279.077 IEC†	164.8	165.1	5425.2	ug/L	5425.2	ppb	18:05:15
2	Na 589.592 Radial†	37220.5	39523.1	11119	ug/L	11119	ppb	18:04:55
2	Sr 421.552†	80870.9	83192.6	516.26	ug/L	516.26	ppb	18:04:55
2	Sc 361.383	930545.5	930545.5	98.601	%			18:06:16
2	Y 371.029	768367.4	768367.4	96.859	%			18:06:16
2	Ag 328.068†	119093.2	120331.7	519.72	ug/L	519.72	ppb	18:06:16
2	As 188.979†	1268.7	1309.9	513.33	ug/L	513.33	ppb	18:06:37
2	B 249.677†	23498.8	24225.3	512.23	ug/L	512.23	ppb	18:06:16
2	Ba 233.527†	72569.1	73589.0	523.82	ug/L	523.82	ppb	18:06:16
2	Be 313.107†	1510128.1	1535942.9	521.52	ug/L	521.52	ppb	18:06:16
2	Cd 226.502†	49710.1	50631.8	521.57	ug/L	521.57	ppb	18:06:16
2	Co 228.616†	26438.5	26888.1	510.14	ug/L	510.14	ppb	18:06:37
2	Cr 267.716†	48340.6	48933.6	519.40	ug/L	519.40	ppb	18:06:16
2	Cu 324.752†	188157.4	184689.8	526.34	ug/L	526.34	ppb	18:06:16
2	Mn 257.610†	505890.1	512601.9	523.56	ug/L	523.56	ppb	18:06:16
2	Mo 202.031†	7760.4	7841.1	511.33	ug/L	511.33	ppb	18:06:37
2	Ni 231.604†	21601.0	21809.1	509.12	ug/L	509.12	ppb	18:06:37

2	P 214.914†	4818.2	4662.7	2466.5 ug/L	2466.5 ppb	18:06:37
2	Pb 220.353†	4414.0	4514.9	513.92 ug/L	513.92 ppb	18:06:37
2	S 181.975 Axial†	815.3	781.0	1016.9 ug/L	1016.9 ppb	18:06:37
2	Sb 206.836†	1614.8	1607.1	529.56 ug/L	529.56 ppb	18:06:37
2	Se 196.026†	824.9	866.4	534.16 ug/L	534.16 ppb	18:06:37
2	Si 251.611†	87592.1	88363.6	2592.3 ug/L	2592.3 ppb	18:06:16
2	Sn 189.927†	3100.5	3140.2	505.61 ug/L	505.61 ppb	18:06:37
2	Ti 334.940†	349997.5	356376.3	521.13 ug/L	521.13 ppb	18:06:16
2	Tl 190.801†	1773.0	1834.6	515.92 ug/L	515.92 ppb	18:06:37
2	U 409.014†	16044.1	17997.7	499.62 ug/L	499.62 ppb	18:06:16
2	V 292.402†	78470.9	81070.1	523.84 ug/L	523.84 ppb	18:06:16
2	Zn 213.857†	59829.0	59887.8	516.41 ug/L	516.41 ppb	18:06:16
2	SiO2†	86790.5	87523.7	5502.4 ug/L	5502.4 ppb	18:07:15
3	Sc Radial	5036.6	5036.6	96.6 %		18:05:20
3	Y RADIAL	5302.5	5302.5	96.26 %		18:05:20
3	Al 396.153Radial†	6564.3	6785.0	5141.6 ug/L	5141.6 ppb	18:05:20
3	Ca 317.933Radial†	3138.1	3232.0	5307.2 ug/L	5307.2 ppb	18:05:40
3	Fe 238.204 Radial†	598.0	608.2	5551.2 ug/L	5551.2 ppb	18:05:40
3	K 766.490 Radial†	28610.6	26842.8	5360.4 ug/L	5360.4 ppb	18:05:20
3	Mg 279.077 IEC†	162.1	163.4	5369.2 ug/L	5369.2 ppb	18:05:40
3	Na 589.592 Radial†	37199.1	39751.8	11184 ug/L	11184 ppb	18:05:20
3	Sr 421.552†	80331.9	83179.7	516.18 ug/L	516.18 ppb	18:05:20
3	Sc 361.383	923165.9	923165.9	97.819 %		18:06:44
3	Y 371.029	762614.2	762614.2	96.134 %		18:06:44
3	Ag 328.068†	118066.1	120247.2	519.33 ug/L	519.33 ppb	18:06:44
3	As 188.979†	1280.4	1332.2	521.92 ug/L	521.92 ppb	18:07:04
3	B 249.677†	23483.0	24399.6	515.93 ug/L	515.93 ppb	18:06:44
3	Ba 233.527†	71905.8	73499.3	523.19 ug/L	523.19 ppb	18:06:44
3	Be 313.107†	1497164.4	1534933.1	521.18 ug/L	521.18 ppb	18:06:44
3	Cd 226.502†	49324.3	50640.4	521.67 ug/L	521.67 ppb	18:06:44
3	Co 228.616†	26554.2	27220.6	516.47 ug/L	516.47 ppb	18:07:04
3	Cr 267.716†	47839.5	48813.2	518.12 ug/L	518.12 ppb	18:06:44
3	Cu 324.752†	186297.8	184314.2	525.26 ug/L	525.26 ppb	18:06:44
3	Mn 257.610†	501892.7	512616.8	523.57 ug/L	523.57 ppb	18:06:44
3	Mo 202.031†	7783.8	7928.0	516.98 ug/L	516.98 ppb	18:07:04
3	Ni 231.604†	21691.1	22076.4	515.36 ug/L	515.36 ppb	18:07:04
3	P 214.914†	4838.9	4722.8	2500.0 ug/L	2500.0 ppb	18:07:04
3	Pb 220.353†	4423.9	4560.9	519.16 ug/L	519.16 ppb	18:07:04
3	S 181.975 Axial†	817.9	790.2	1028.9 ug/L	1028.9 ppb	18:07:04
3	Sb 206.836†	1603.1	1608.3	530.15 ug/L	530.15 ppb	18:07:04
3	Se 196.026†	820.4	868.5	535.17 ug/L	535.17 ppb	18:07:04
3	Si 251.611†	86799.8	88263.7	2589.3 ug/L	2589.3 ppb	18:06:44
3	Sn 189.927†	3112.4	3177.5	511.61 ug/L	511.61 ppb	18:07:04
3	Ti 334.940†	347260.7	356416.0	521.19 ug/L	521.19 ppb	18:06:44
3	Tl 190.801†	1779.1	1855.3	521.66 ug/L	521.66 ppb	18:07:04
3	U 409.014†	15926.3	18007.4	499.90 ug/L	499.90 ppb	18:06:44
3	V 292.402†	77847.1	81068.6	523.92 ug/L	523.92 ppb	18:06:44
3	Zn 213.857†	59374.1	59907.8	516.55 ug/L	516.55 ppb	18:06:44
3	SiO2†	87019.8	88461.6	5561.3 ug/L	5561.3 ppb	18:07:20

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	924679.8	97.979	%	0.5589				0.57%
Sc Radial	5057.8	97.0	%	0.35				0.36%
Y 371.029	763501.8	96.246	%	0.5658				0.59%
Y RADIAL	5321.9	96.61	%	0.324				0.33%
Ag 328.068†	120410.2	520.04	ug/L	0.909	520.04	ppb	0.909	0.17%
QC value within limits for Ag 328.068 Recovery = 104.01%								
Al 396.153Radial†	6780.1	5137.9	ug/L	3.33	5137.9	ppb	3.33	0.06%
QC value within limits for Al 396.153Radial Recovery = 102.76%								
As 188.979†	1323.6	518.62	ug/L	4.629	518.62	ppb	4.629	0.89%
QC value within limits for As 188.979 Recovery = 103.72%								
B 249.677†	24317.2	514.18	ug/L	1.856	514.18	ppb	1.856	0.36%
QC value within limits for B 249.677 Recovery = 102.84%								
Ba 233.527†	73575.7	523.73	ug/L	0.502	523.73	ppb	0.502	0.10%
QC value within limits for Ba 233.527 Recovery = 104.75%								
Be 313.107†	1534760.8	521.12	ug/L	0.432	521.12	ppb	0.432	0.08%
QC value within limits for Be 313.107 Recovery = 104.22%								
Ca 317.933Radial†	3211.2	5273.0	ug/L	41.55	5273.0	ppb	41.55	0.79%

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   QC value within limits for Ca 317.933Radial  Recovery = 105.46%
Cd 226.502†            50696.0      522.24 ug/L        1.077      522.24 ppb          1.077   0.21%
   QC value within limits for Cd 226.502  Recovery = 104.45%
Co 228.616†            27172.2      515.55 ug/L        5.007      515.55 ppb          5.007   0.97%
   QC value within limits for Co 228.616  Recovery = 103.11%
Cr 267.716†            48866.0      518.68 ug/L        0.653      518.68 ppb          0.653   0.13%
   QC value within limits for Cr 267.716  Recovery = 103.74%
Cu 324.752†           184581.5      526.03 ug/L        0.665      526.03 ppb          0.665   0.13%
   QC value within limits for Cu 324.752  Recovery = 105.21%
Fe 238.204 Radial†       610.0      5566.8 ug/L        49.15      5566.8 ppb          49.15   0.88%
   QC value greater than the upper limit for Fe 238.204 Radial  Recovery = 111.34%
K 766.490 Radial†      26726.1      5337.0 ug/L        27.14      5337.0 ppb          27.14   0.51%
   QC value within limits for K 766.490 Radial  Recovery = 106.74%
Mg 279.077 IEC†          163.4      5369.5 ug/L        55.50      5369.5 ppb          55.50   1.03%
   QC value within limits for Mg 279.077 IEC  Recovery = 107.39%
Mn 257.610†           512964.6      523.93 ug/L        0.627      523.93 ppb          0.627   0.12%
   QC value within limits for Mn 257.610  Recovery = 104.79%
Mo 202.031†             7921.7      516.57 ug/L        5.054      516.57 ppb          5.054   0.98%
   QC value within limits for Mo 202.031  Recovery = 103.31%
Na 589.592 Radial†     39730.6       11178 ug/L         55.6       11178 ppb           55.6   0.50%
   QC value greater than the upper limit for Na 589.592 Radial  Recovery = 111.78%
Ni 231.604†            22029.6      514.26 ug/L        4.697      514.26 ppb          4.697   0.91%
   QC value within limits for Ni 231.604  Recovery = 102.85%
P 214.914†              4708.9      2492.2 ug/L        22.74      2492.2 ppb          22.74   0.91%
   QC value within limits for P 214.914  Recovery = 99.69%
Pb 220.353†             4559.4      518.99 ug/L        4.983      518.99 ppb          4.983   0.96%
   QC value within limits for Pb 220.353  Recovery = 103.80%
S 181.975 Axial†         791.5      1030.6 ug/L        14.66      1030.6 ppb          14.66   1.42%
   QC value within limits for S 181.975 Axial  Recovery = 103.06%
Sb 206.836†             1613.4      531.76 ug/L        3.307      531.76 ppb          3.307   0.62%
   QC value within limits for Sb 206.836  Recovery = 106.35%
Se 196.026†              872.5      537.58 ug/L        5.075      537.58 ppb          5.075   0.94%
   QC value within limits for Se 196.026  Recovery = 107.52%
Si 251.611†            88368.4      2592.3 ug/L         3.12      2592.3 ppb           3.12   0.12%
   QC value within limits for Si 251.611  Recovery = 103.69%
Sn 189.927†             3174.0      511.04 ug/L        5.168      511.04 ppb          5.168   1.01%
   QC value within limits for Sn 189.927  Recovery = 102.21%
Sr 421.552†            83266.8      516.72 ug/L        0.869      516.72 ppb          0.869   0.17%
   QC value within limits for Sr 421.552  Recovery = 103.34%
Ti 334.940†           356496.6      521.31 ug/L        0.256      521.31 ppb          0.256   0.05%
   QC value within limits for Ti 334.940  Recovery = 104.26%
Tl 190.801†             1850.0      520.19 ug/L        3.754      520.19 ppb          3.754   0.72%
   QC value within limits for Tl 190.801  Recovery = 104.04%
U 409.014†             17941.5      498.06 ug/L        2.945      498.06 ppb          2.945   0.59%
   QC value within limits for U 409.014  Recovery = 99.61%
V 292.402†             81050.8      523.80 ug/L        0.153      523.80 ppb          0.153   0.03%
   QC value within limits for V 292.402  Recovery = 104.76%
Zn 213.857†            59900.6      516.49 ug/L        0.075      516.49 ppb          0.075   0.01%
   QC value within limits for Zn 213.857  Recovery = 103.30%
SiO2†                  88182.1      5543.7 ug/L        35.94      5543.7 ppb          35.94   0.65%
   QC value within limits for SiO2  Recovery = 103.67%
QC Failed.  Continue with analysis.
```

Sequence No.: 27
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 1/20/2010 18:09:30
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5182.3	5182.3	99.4	%			18:11:22
1	Y RADIAL	5483.4	5483.4	99.54	%			18:11:22
1	Al 396.153Radial†	7.2	-5.1	-3.9062	ug/L	-3.9062	ppb	18:11:22
1	Ca 317.933Radial†	32.6	15.4	25.265	ug/L	25.265	ppb	18:11:42
1	Fe 238.204 Radial†	10.8	-0.1	-1.2082	ug/L	-1.2082	ppb	18:11:42
1	K 766.490 Radial†	3061.7	298.1	59.601	ug/L	59.601	ppb	18:11:22
1	Mg 279.077 IEC†	-0.3	-4.8	-158.02	ug/L	-158.02	ppb	18:11:42
1	Na 589.592 Radial†	-1197.5	27.4	7.7181	ug/L	7.7181	ppb	18:11:22
1	Sr 421.552†	-10.5	-13.7	-0.0853	ug/L	-0.0853	ppb	18:11:22
1	Sc 361.383	934061.7	934061.7	98.973	%			18:12:39
1	Y 371.029	781289.6	781289.6	98.488	%			18:12:39
1	Ag 328.068†	454.3	7.4	0.0324	ug/L	0.0324	ppb	18:12:44
1	As 188.979†	-27.8	-4.9	-1.8895	ug/L	-1.8895	ppb	18:13:04
1	B 249.677†	-319.7	69.9	1.4861	ug/L	1.4861	ppb	18:13:04
1	Ba 233.527†	16.0	6.2	0.0443	ug/L	0.0443	ppb	18:13:04
1	Be 313.107†	-4350.6	-10.9	-0.0036	ug/L	-0.0036	ppb	18:12:44
1	Cd 226.502†	-201.0	13.1	0.1351	ug/L	0.1351	ppb	18:13:04
1	Co 228.616†	-79.0	-5.5	-0.1035	ug/L	-0.1035	ppb	18:13:04
1	Cr 267.716†	90.1	-1.9	-0.0197	ug/L	-0.0197	ppb	18:13:04
1	Cu 324.752†	6215.7	142.5	0.4070	ug/L	0.4070	ppb	18:12:44
1	Mn 257.610†	531.0	69.4	0.0772	ug/L	0.0772	ppb	18:13:04
1	Mo 202.031†	32.8	3.8	0.2475	ug/L	0.2475	ppb	18:13:04
1	Ni 231.604†	99.0	1.7	0.0388	ug/L	0.0388	ppb	18:13:04
1	P 214.914†	230.1	8.6	4.6633	ug/L	4.6633	ppb	18:13:04
1	Pb 220.353†	-66.1	-28.5	-3.2346	ug/L	-3.2346	ppb	18:13:04
1	S 181.975 Axial†	47.6	2.2	2.9292	ug/L	2.9292	ppb	18:13:04
1	Sb 206.836†	32.0	1.8	0.5863	ug/L	0.5863	ppb	18:13:04
1	Se 196.026†	-29.5	0.0	0.0020	ug/L	0.0020	ppb	18:13:04
1	Si 251.611†	569.8	104.1	3.0591	ug/L	3.0591	ppb	18:13:04
1	Sn 189.927†	13.5	9.4	1.5088	ug/L	1.5088	ppb	18:13:04
1	Ti 334.940†	-1359.5	38.5	0.0734	ug/L	0.0734	ppb	18:12:44
1	Tl 190.801†	-35.1	1.0	0.2808	ug/L	0.2808	ppb	18:13:04
1	U 409.014†	-1767.3	-59.7	-1.6626	ug/L	-1.6626	ppb	18:12:39
1	V 292.402†	-1475.0	-4.6	-0.0319	ug/L	-0.0319	ppb	18:12:44
1	Zn 213.857†	798.8	16.8	0.1458	ug/L	0.1458	ppb	18:13:04
1	SiO2†	530.8	37.8	2.3748	ug/L	2.3748	ppb	18:14:10
2	Sc Radial	5236.2	5236.2	100	%			18:11:47
2	Y RADIAL	5560.2	5560.2	100.9	%			18:11:47
2	Al 396.153Radial†	16.0	3.6	2.8247	ug/L	2.8247	ppb	18:11:47
2	Ca 317.933Radial†	25.9	8.3	13.687	ug/L	13.687	ppb	18:12:07
2	Fe 238.204 Radial†	14.3	3.2	29.334	ug/L	29.334	ppb	18:12:07
2	K 766.490 Radial†	3000.1	205.0	40.984	ug/L	40.984	ppb	18:11:47
2	Mg 279.077 IEC†	0.1	-4.4	-144.97	ug/L	-144.97	ppb	18:12:07
2	Na 589.592 Radial†	-1160.6	76.6	21.544	ug/L	21.544	ppb	18:11:47
2	Sr 421.552†	38.3	35.0	0.2170	ug/L	0.2170	ppb	18:11:47
2	Sc 361.383	929037.5	929037.5	98.441	%			18:13:09
2	Y 371.029	777989.1	777989.1	98.072	%			18:13:09
2	Ag 328.068†	483.2	39.3	0.1769	ug/L	0.1769	ppb	18:13:14
2	As 188.979†	-14.3	8.7	3.3957	ug/L	3.3957	ppb	18:13:34
2	B 249.677†	-293.8	94.5	2.0030	ug/L	2.0030	ppb	18:13:34
2	Ba 233.527†	7.5	-2.3	-0.0158	ug/L	-0.0158	ppb	18:13:34
2	Be 313.107†	-4469.9	-155.8	-0.0527	ug/L	-0.0527	ppb	18:13:14
2	Cd 226.502†	-217.1	-4.3	-0.0476	ug/L	-0.0476	ppb	18:13:34
2	Co 228.616†	-73.5	-0.4	-0.0104	ug/L	-0.0104	ppb	18:13:34
2	Cr 267.716†	99.7	8.3	0.0882	ug/L	0.0882	ppb	18:13:34
2	Cu 324.752†	6065.4	23.8	0.0689	ug/L	0.0689	ppb	18:13:14
2	Mn 257.610†	502.1	43.0	0.0527	ug/L	0.0527	ppb	18:13:34
2	Mo 202.031†	8.6	-20.7	-1.3429	ug/L	-1.3429	ppb	18:13:34
2	Ni 231.604†	97.1	0.3	0.0067	ug/L	0.0067	ppb	18:13:34

2	P 214.914†	238.3	18.2	9.9789 ug/L	9.9789 ppb	18:13:34
2	Pb 220.353†	-70.4	-33.3	-3.7785 ug/L	-3.7785 ppb	18:13:34
2	S 181.975 Axial†	45.1	-0.1	-0.1406 ug/L	-0.1406 ppb	18:13:34
2	Sb 206.836†	30.3	0.2	0.0352 ug/L	0.0352 ppb	18:13:34
2	Se 196.026†	-25.6	3.8	2.3471 ug/L	2.3471 ppb	18:13:34
2	Si 251.611†	627.1	165.4	4.8815 ug/L	4.8815 ppb	18:13:34
2	Sn 189.927†	7.6	3.5	0.5636 ug/L	0.5636 ppb	18:13:34
2	Ti 334.940†	-1370.0	20.4	0.0432 ug/L	0.0432 ppb	18:13:14
2	Tl 190.801†	-40.3	-4.4	-1.2349 ug/L	-1.2349 ppb	18:13:34
2	U 409.014†	-1670.8	28.7	0.7949 ug/L	0.7949 ppb	18:13:09
2	V 292.402†	-1472.6	-10.3	-0.0902 ug/L	-0.0902 ppb	18:13:14
2	Zn 213.857†	792.7	15.0	0.1273 ug/L	0.1273 ppb	18:13:34
2	SiO2†	852.6	367.6	23.204 ug/L	23.204 ppb	18:14:15
3	Sc Radial	5156.2	5156.2	98.9 %		18:12:12
3	Y RADIAL	5426.4	5426.4	98.50 %		18:12:12
3	Al 396.153Radial†	-12.5	-25.0	-19.008 ug/L	-19.008 ppb	18:12:12
3	Ca 317.933Radial†	19.3	2.0	3.3165 ug/L	3.3165 ppb	18:12:32
3	Fe 238.204 Radial†	12.1	1.2	11.227 ug/L	11.227 ppb	18:12:32
3	K 766.490 Radial†	2987.8	239.0	47.783 ug/L	47.783 ppb	18:12:12
3	Mg 279.077 IEC†	2.2	-2.2	-72.863 ug/L	-72.863 ppb	18:12:32
3	Na 589.592 Radial†	-1202.3	16.5	4.6374 ug/L	4.6374 ppb	18:12:12
3	Sr 421.552†	12.2	9.2	0.0572 ug/L	0.0572 ppb	18:12:12
3	Sc 361.383	923050.7	923050.7	97.807 %		18:13:39
3	Y 371.029	772565.8	772565.8	97.388 %		18:13:39
3	Ag 328.068†	422.1	-20.0	-0.0814 ug/L	-0.0814 ppb	18:13:45
3	As 188.979†	-24.7	-2.0	-0.7837 ug/L	-0.7837 ppb	18:14:05
3	B 249.677†	-332.7	52.8	1.1204 ug/L	1.1204 ppb	18:14:05
3	Ba 233.527†	-6.9	-17.0	-0.1207 ug/L	-0.1207 ppb	18:14:05
3	Be 313.107†	-4414.6	-128.7	-0.0438 ug/L	-0.0438 ppb	18:13:45
3	Cd 226.502†	-222.9	-11.6	-0.1218 ug/L	-0.1218 ppb	18:14:05
3	Co 228.616†	-78.0	-5.4	-0.1026 ug/L	-0.1026 ppb	18:14:05
3	Cr 267.716†	69.9	-21.5	-0.2272 ug/L	-0.2272 ppb	18:14:05
3	Cu 324.752†	6092.2	91.2	0.2618 ug/L	0.2618 ppb	18:13:45
3	Mn 257.610†	511.5	55.9	0.0611 ug/L	0.0611 ppb	18:14:05
3	Mo 202.031†	26.6	-2.2	-0.1406 ug/L	-0.1406 ppb	18:14:05
3	Ni 231.604†	90.5	-5.8	-0.1352 ug/L	-0.1352 ppb	18:14:05
3	P 214.914†	222.3	3.3	1.7755 ug/L	1.7755 ppb	18:14:05
3	Pb 220.353†	-54.1	-17.0	-1.9352 ug/L	-1.9352 ppb	18:14:05
3	S 181.975 Axial†	45.3	0.5	0.5942 ug/L	0.5942 ppb	18:14:05
3	Sb 206.836†	31.0	1.2	0.3777 ug/L	0.3777 ppb	18:14:05
3	Se 196.026†	-25.7	3.6	2.1477 ug/L	2.1477 ppb	18:14:05
3	Si 251.611†	643.8	186.6	5.4903 ug/L	5.4903 ppb	18:14:05
3	Sn 189.927†	7.5	3.4	0.5491 ug/L	0.5491 ppb	18:14:05
3	Ti 334.940†	-1447.6	-67.9	-0.0918 ug/L	-0.0918 ppb	18:13:45
3	Tl 190.801†	-29.6	6.2	1.7283 ug/L	1.7283 ppb	18:14:05
3	U 409.014†	-1773.0	-86.8	-2.4204 ug/L	-2.4204 ppb	18:13:39
3	V 292.402†	-1491.6	-39.4	-0.2608 ug/L	-0.2608 ppb	18:13:45
3	Zn 213.857†	794.1	21.6	0.1876 ug/L	0.1876 ppb	18:14:05
3	SiO2†	555.5	69.4	4.3795 ug/L	4.3795 ppb	18:14:20

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	928716.6	98.407	%	0.5841				0.59%
Sc Radial	5191.5	99.5	%	0.78				0.79%
Y 371.029	777281.5	97.983	%	0.5553				0.57%
Y RADIAL	5490.0	99.66	%	1.219				1.22%
Ag 328.068†	8.9	0.0426	ug/L	0.12945	0.0426	ppb	0.12945	303.68%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-8.8	-6.6964	ug/L	11.18033	-6.6964	ppb	11.18033	166.96%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	0.6	0.2408	ug/L	2.78753	0.2408	ppb	2.78753	>999.9%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	72.4	1.5365	ug/L	0.44346	1.5365	ppb	0.44346	28.86%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-4.3	-0.0307	ug/L	0.08347	-0.0307	ppb	0.08347	271.66%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-98.5	-0.0334	ug/L	0.02619	-0.0334	ppb	0.02619	78.51%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	8.6	14.089	ug/L	10.9798	14.089	ppb	10.9798	77.93%

```
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -1.0     -0.0114 ug/L       0.13219     -0.0114 ppb        0.13219 >999.9%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†              -3.7     -0.0722 ug/L       0.05352     -0.0722 ppb        0.05352  74.17%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              -5.0     -0.0529 ug/L       0.16030     -0.0529 ppb        0.16030 303.17%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              85.8      0.2459 ug/L       0.16958      0.2459 ppb        0.16958  68.96%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        1.4      13.118 ug/L       15.3585      13.118 ppb        15.3585 117.08%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†       247.4      49.456 ug/L        9.4203      49.456 ppb         9.4203  19.05%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†          -3.8     -125.28 ug/L        45.863     -125.28 ppb         45.863  36.61%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†              56.1      0.0637 ug/L       0.01245      0.0637 ppb        0.01245  19.55%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†              -6.3     -0.4120 ug/L       0.82918     -0.4120 ppb        0.82918 201.26%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       40.2      11.300 ug/L        9.0042      11.300 ppb         9.0042  79.69%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†              -1.3     -0.0299 ug/L       0.09260     -0.0299 ppb        0.09260 309.44%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†               10.0      5.4726 ug/L       4.16110      5.4726 ppb        4.16110  76.04%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†             -26.3     -2.9828 ug/L       0.94712     -2.9828 ppb        0.94712  31.75%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          0.9      1.1276 ug/L       1.60289      1.1276 ppb        1.60289 142.15%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               1.0      0.3331 ug/L       0.27827      0.3331 ppb        0.27827  83.55%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               2.5      1.4990 ug/L       1.30021      1.4990 ppb        1.30021  86.74%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†             152.1      4.4770 ug/L       1.26509      4.4770 ppb        1.26509  28.26%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               5.4      0.8739 ug/L       0.54996      0.8739 ppb        0.54996  62.94%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              10.2      0.0630 ug/L       0.15124      0.0630 ppb        0.15124 240.16%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              -3.0      0.0082 ug/L       0.08795      0.0082 ppb        0.08795 >999.9%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               0.9      0.2581 ug/L       1.48173      0.2581 ppb        1.48173 574.18%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              -39.3     -1.0960 ug/L       1.68087     -1.0960 ppb        1.68087 153.36%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†              -18.1     -0.1277 ug/L       0.11897     -0.1277 ppb        0.11897  93.20%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†              17.8      0.1536 ug/L       0.03091      0.1536 ppb        0.03091  20.13%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                   158.3      9.9860 ug/L      11.49069      9.9860 ppb       11.49069 115.07%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 37
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 1/20/2010 19:17:57
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5121.6	5121.6	98.2	%			19:19:49
1	Y RADIAL	5363.2	5363.2	97.36	%			19:19:49
1	Al 396.153Radial†	6593.0	6701.3	5078.1	ug/L	5078.1	ppb	19:19:49
1	Ca 317.933Radial†	3077.8	3116.7	5117.8	ug/L	5117.8	ppb	19:20:09
1	Fe 238.204 Radial†	581.0	580.7	5300.4	ug/L	5300.4	ppb	19:20:09
1	K 766.490 Radial†	28346.6	26082.1	5208.8	ug/L	5208.8	ppb	19:19:49
1	Mg 279.077 IEC†	158.7	157.1	5162.5	ug/L	5162.5	ppb	19:20:09
1	Na 589.592 Radial†	33886.9	35739.6	10055	ug/L	10055	ppb	19:19:49
1	Sr 421.552†	76986.1	78391.8	486.46	ug/L	486.46	ppb	19:19:49
1	Sc 361.383	926976.9	926976.9	98.223	%			19:21:06
1	Y 371.029	764592.5	764592.5	96.383	%			19:21:06
1	Ag 328.068†	118923.3	120623.7	520.85	ug/L	520.85	ppb	19:21:12
1	As 188.979†	1279.5	1325.9	519.43	ug/L	519.43	ppb	19:21:32
1	B 249.677†	23427.6	24244.6	512.65	ug/L	512.65	ppb	19:21:12
1	Ba 233.527†	72086.3	73380.9	522.34	ug/L	522.34	ppb	19:21:12
1	Be 313.107†	1492595.7	1523989.2	517.46	ug/L	517.46	ppb	19:21:06
1	Cd 226.502†	49356.0	50465.4	519.90	ug/L	519.90	ppb	19:21:12
1	Co 228.616†	27154.9	27720.6	525.95	ug/L	525.95	ppb	19:21:12
1	Cr 267.716†	47996.8	48772.3	517.67	ug/L	517.67	ppb	19:21:12
1	Cu 324.752†	186248.6	183481.1	522.86	ug/L	522.86	ppb	19:21:12
1	Mn 257.610†	501465.8	510072.8	520.96	ug/L	520.96	ppb	19:21:06
1	Mo 202.031†	7759.4	7870.5	513.21	ug/L	513.21	ppb	19:21:32
1	Ni 231.604†	21986.3	22285.8	520.24	ug/L	520.24	ppb	19:21:12
1	P 214.914†	4841.5	4705.1	2490.9	ug/L	2490.9	ppb	19:21:32
1	Pb 220.353†	4416.6	4534.8	516.20	ug/L	516.20	ppb	19:21:32
1	S 181.975 Axial†	827.6	796.7	1037.4	ug/L	1037.4	ppb	19:21:32
1	Sb 206.836†	1633.6	1632.6	537.77	ug/L	537.77	ppb	19:21:32
1	Se 196.026†	829.8	874.7	537.90	ug/L	537.90	ppb	19:21:32
1	Si 251.611†	87412.9	88523.1	2596.9	ug/L	2596.9	ppb	19:21:12
1	Sn 189.927†	3109.9	3161.9	509.06	ug/L	509.06	ppb	19:21:32
1	Ti 334.940†	347405.7	355104.1	519.26	ug/L	519.26	ppb	19:21:06
1	Tl 190.801†	1775.9	1844.5	518.59	ug/L	518.59	ppb	19:21:32
1	U 409.014†	16916.6	18948.7	526.15	ug/L	526.15	ppb	19:21:12
1	V 292.402†	78123.4	81022.8	523.66	ug/L	523.66	ppb	19:21:12
1	Zn 213.857†	59563.5	59851.1	516.05	ug/L	516.05	ppb	19:21:12
1	SiO2†	88321.3	89421.0	5621.9	ug/L	5621.9	ppb	19:22:39
2	Sc Radial	5055.3	5055.3	96.9	%			19:20:14
2	Y RADIAL	5295.9	5295.9	96.14	%			19:20:14
2	Al 396.153Radial†	6612.6	6809.7	5160.7	ug/L	5160.7	ppb	19:20:14
2	Ca 317.933Radial†	3098.8	3179.5	5221.0	ug/L	5221.0	ppb	19:20:34
2	Fe 238.204 Radial†	576.1	583.4	5325.0	ug/L	5325.0	ppb	19:20:34
2	K 766.490 Radial†	28099.0	26205.7	5233.4	ug/L	5233.4	ppb	19:20:14
2	Mg 279.077 IEC†	158.4	158.9	5224.0	ug/L	5224.0	ppb	19:20:34
2	Na 589.592 Radial†	33504.2	35797.8	10071	ug/L	10071	ppb	19:20:14
2	Sr 421.552†	76825.8	79255.7	491.82	ug/L	491.82	ppb	19:20:14
2	Sc 361.383	925998.3	925998.3	98.119	%			19:21:38
2	Y 371.029	763387.4	763387.4	96.231	%			19:21:38
2	Ag 328.068†	118216.8	120031.6	518.31	ug/L	518.31	ppb	19:21:43
2	As 188.979†	1276.5	1324.2	518.77	ug/L	518.77	ppb	19:22:03
2	B 249.677†	23195.1	24032.8	508.15	ug/L	508.15	ppb	19:21:43
2	Ba 233.527†	71694.5	73059.0	520.04	ug/L	520.04	ppb	19:21:43
2	Be 313.107†	1489017.9	1521948.8	516.77	ug/L	516.77	ppb	19:21:38
2	Cd 226.502†	49133.5	50291.7	518.11	ug/L	518.11	ppb	19:21:43
2	Co 228.616†	26918.1	27508.5	521.93	ug/L	521.93	ppb	19:21:43
2	Cr 267.716†	47660.7	48481.5	514.59	ug/L	514.59	ppb	19:21:43
2	Cu 324.752†	184587.0	181988.0	518.61	ug/L	518.61	ppb	19:21:43
2	Mn 257.610†	501321.9	510465.7	521.36	ug/L	521.36	ppb	19:21:38
2	Mo 202.031†	7739.6	7858.6	512.44	ug/L	512.44	ppb	19:22:03
2	Ni 231.604†	21928.0	22250.1	519.41	ug/L	519.41	ppb	19:21:43

2	P 214.914†	4820.9	4689.3	2483.0 ug/L	2483.0 ppb	19:22:03
2	Pb 220.353†	4377.7	4500.0	512.26 ug/L	512.26 ppb	19:22:03
2	S 181.975 Axial†	820.8	790.7	1029.5 ug/L	1029.5 ppb	19:22:03
2	Sb 206.836†	1623.6	1624.1	535.05 ug/L	535.05 ppb	19:22:03
2	Se 196.026†	836.1	881.9	542.29 ug/L	542.29 ppb	19:22:03
2	Si 251.611†	86730.3	87921.4	2579.3 ug/L	2579.3 ppb	19:21:43
2	Sn 189.927†	3106.5	3161.8	509.05 ug/L	509.05 ppb	19:22:03
2	Ti 334.940†	347274.3	355344.0	519.62 ug/L	519.62 ppb	19:21:38
2	Tl 190.801†	1764.9	1835.2	516.01 ug/L	516.01 ppb	19:22:03
2	U 409.014†	16519.6	18562.3	515.39 ug/L	515.39 ppb	19:21:43
2	V 292.402†	77464.0	80434.7	519.88 ug/L	519.88 ppb	19:21:43
2	Zn 213.857†	59262.0	59607.8	513.95 ug/L	513.95 ppb	19:21:43
2	SiO2†	86653.3	87816.1	5520.8 ug/L	5520.8 ppb	19:22:44
3	Sc Radial	5056.2	5056.2	96.9 %		19:20:39
3	Y RADIAL	5359.3	5359.3	97.29 %		19:20:39
3	Al 396.153Radial†	6640.5	6837.2	5181.7 ug/L	5181.7 ppb	19:20:39
3	Ca 317.933Radial†	3106.2	3186.5	5232.5 ug/L	5232.5 ppb	19:20:59
3	Fe 238.204 Radial†	572.8	579.8	5292.5 ug/L	5292.5 ppb	19:20:59
3	K 766.490 Radial†	28233.2	26338.8	5260.0 ug/L	5260.0 ppb	19:20:39
3	Mg 279.077 IEC†	161.2	161.8	5316.8 ug/L	5316.8 ppb	19:20:59
3	Na 589.592 Radial†	33651.4	35943.2	10112 ug/L	10112 ppb	19:20:39
3	Sr 421.552†	77179.0	79605.3	493.99 ug/L	493.99 ppb	19:20:39
3	Sc 361.383	929164.4	929164.4	98.454 %		19:22:09
3	Y 371.029	766109.1	766109.1	96.574 %		19:22:09
3	Ag 328.068†	118281.3	119686.5	516.81 ug/L	516.81 ppb	19:22:14
3	As 188.979†	1279.4	1322.7	518.20 ug/L	518.20 ppb	19:22:34
3	B 249.677†	23350.9	24110.5	509.81 ug/L	509.81 ppb	19:22:14
3	Ba 233.527†	71712.7	72828.6	518.41 ug/L	518.41 ppb	19:22:14
3	Be 313.107†	1500745.6	1528689.5	519.06 ug/L	519.06 ppb	19:22:09
3	Cd 226.502†	49096.4	50083.4	515.96 ug/L	515.96 ppb	19:22:14
3	Co 228.616†	26937.5	27434.7	520.52 ug/L	520.52 ppb	19:22:14
3	Cr 267.716†	47706.9	48362.9	513.33 ug/L	513.33 ppb	19:22:14
3	Cu 324.752†	185018.5	181785.3	518.04 ug/L	518.04 ppb	19:22:14
3	Mn 257.610†	504669.4	512124.6	523.04 ug/L	523.04 ppb	19:22:09
3	Mo 202.031†	7748.1	7840.4	511.25 ug/L	511.25 ppb	19:22:34
3	Ni 231.604†	21987.3	22234.1	519.04 ug/L	519.04 ppb	19:22:14
3	P 214.914†	4837.8	4689.8	2483.4 ug/L	2483.4 ppb	19:22:34
3	Pb 220.353†	4371.2	4478.1	509.79 ug/L	509.79 ppb	19:22:34
3	S 181.975 Axial†	820.1	787.1	1024.8 ug/L	1024.8 ppb	19:22:34
3	Sb 206.836†	1640.5	1635.7	538.68 ug/L	538.68 ppb	19:22:34
3	Se 196.026†	827.5	870.3	535.31 ug/L	535.31 ppb	19:22:34
3	Si 251.611†	86801.5	87692.5	2572.5 ug/L	2572.5 ppb	19:22:14
3	Sn 189.927†	3109.0	3153.6	507.74 ug/L	507.74 ppb	19:22:34
3	Ti 334.940†	349309.1	356204.7	520.88 ug/L	520.88 ppb	19:22:09
3	Tl 190.801†	1762.1	1826.2	513.53 ug/L	513.53 ppb	19:22:34
3	U 409.014†	16540.3	18525.9	514.39 ug/L	514.39 ppb	19:22:14
3	V 292.402†	77634.1	80338.5	519.25 ug/L	519.25 ppb	19:22:14
3	Zn 213.857†	59221.3	59360.6	511.80 ug/L	511.80 ppb	19:22:14
3	SiO2†	86867.1	87732.2	5515.5 ug/L	5515.5 ppb	19:22:50

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	927379.9	98.265	%	0.1718				0.17%
Sc Radial	5077.7	97.4	%	0.73				0.75%
Y 371.029	764696.3	96.396	%	0.1719				0.18%
Y RADIAL	5339.5	96.93	%	0.686				0.71%
Ag 328.068†	120114.0	518.65	ug/L	2.039	518.65	ppb	2.039	0.39%
QC value within limits for Ag 328.068 Recovery = 103.73%								
Al 396.153Radial†	6782.7	5140.2	ug/L	54.76	5140.2	ppb	54.76	1.07%
QC value within limits for Al 396.153Radial Recovery = 102.80%								
As 188.979†	1324.3	518.80	ug/L	0.617	518.80	ppb	0.617	0.12%
QC value within limits for As 188.979 Recovery = 103.76%								
B 249.677†	24129.3	510.20	ug/L	2.271	510.20	ppb	2.271	0.45%
QC value within limits for B 249.677 Recovery = 102.04%								
Ba 233.527†	73089.5	520.26	ug/L	1.975	520.26	ppb	1.975	0.38%
QC value within limits for Ba 233.527 Recovery = 104.05%								
Be 313.107†	1524875.8	517.77	ug/L	1.173	517.77	ppb	1.173	0.23%
QC value within limits for Be 313.107 Recovery = 103.55%								
Ca 317.933Radial†	3160.9	5190.4	ug/L	63.16	5190.4	ppb	63.16	1.22%

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   QC value within limits for Ca 317.933Radial  Recovery = 103.81%
Cd 226.502†            50280.2      517.99 ug/L         1.972      517.99 ppb          1.972   0.38%
   QC value within limits for Cd 226.502  Recovery = 103.60%
Co 228.616†            27554.6      522.80 ug/L         2.819      522.80 ppb          2.819   0.54%
   QC value within limits for Co 228.616  Recovery = 104.56%
Cr 267.716†            48538.9      515.19 ug/L         2.234      515.19 ppb          2.234   0.43%
   QC value within limits for Cr 267.716  Recovery = 103.04%
Cu 324.752†           182418.1      519.84 ug/L         2.635      519.84 ppb          2.635   0.51%
   QC value within limits for Cu 324.752  Recovery = 103.97%
Fe 238.204 Radial†       581.3      5306.0 ug/L        16.91      5306.0 ppb          16.91   0.32%
   QC value within limits for Fe 238.204 Radial  Recovery = 106.12%
K 766.490 Radial†      26208.9      5234.1 ug/L        25.63      5234.1 ppb          25.63   0.49%
   QC value within limits for K 766.490 Radial  Recovery = 104.68%
Mg 279.077 IEC†          159.3      5234.4 ug/L        77.66      5234.4 ppb          77.66   1.48%
   QC value within limits for Mg 279.077 IEC  Recovery = 104.69%
Mn 257.610†           510887.7      521.79 ug/L         1.108      521.79 ppb          1.108   0.21%
   QC value within limits for Mn 257.610  Recovery = 104.36%
Mo 202.031†             7856.5      512.30 ug/L         0.988      512.30 ppb          0.988   0.19%
   QC value within limits for Mo 202.031  Recovery = 102.46%
Na 589.592 Radial†     35826.9       10079 ug/L          29.5       10079 ppb           29.5   0.29%
   QC value within limits for Na 589.592 Radial  Recovery = 100.79%
Ni 231.604†            22256.7      519.56 ug/L         0.617      519.56 ppb          0.617   0.12%
   QC value within limits for Ni 231.604  Recovery = 103.91%
P 214.914†              4694.8      2485.8 ug/L          4.42      2485.8 ppb           4.42   0.18%
   QC value within limits for P 214.914  Recovery = 99.43%
Pb 220.353†             4504.3      512.75 ug/L         3.232      512.75 ppb          3.232   0.63%
   QC value within limits for Pb 220.353  Recovery = 102.55%
S 181.975 Axial†         791.5      1030.6 ug/L          6.36      1030.6 ppb           6.36   0.62%
   QC value within limits for S 181.975 Axial  Recovery = 103.06%
Sb 206.836†             1630.8      537.17 ug/L         1.891      537.17 ppb          1.891   0.35%
   QC value within limits for Sb 206.836  Recovery = 107.43%
Se 196.026†              875.6      538.50 ug/L         3.526      538.50 ppb          3.526   0.65%
   QC value within limits for Se 196.026  Recovery = 107.70%
Si 251.611†            88045.7      2582.9 ug/L         12.60      2582.9 ppb          12.60   0.49%
   QC value within limits for Si 251.611  Recovery = 103.32%
Sn 189.927†             3159.1      508.62 ug/L         0.761      508.62 ppb          0.761   0.15%
   QC value within limits for Sn 189.927  Recovery = 101.72%
Sr 421.552†            79084.3      490.76 ug/L         3.876      490.76 ppb          3.876   0.79%
   QC value within limits for Sr 421.552  Recovery = 98.15%
Ti 334.940†           355551.0      519.92 ug/L         0.849      519.92 ppb          0.849   0.16%
   QC value within limits for Ti 334.940  Recovery = 103.98%
Tl 190.801†             1835.3      516.04 ug/L         2.530      516.04 ppb          2.530   0.49%
   QC value within limits for Tl 190.801  Recovery = 103.21%
U 409.014†             18679.0      518.64 ug/L         6.523      518.64 ppb          6.523   1.26%
   QC value within limits for U 409.014  Recovery = 103.73%
V 292.402†             80598.6      520.93 ug/L         2.386      520.93 ppb          2.386   0.46%
   QC value within limits for V 292.402  Recovery = 104.19%
Zn 213.857†            59606.5      513.94 ug/L         2.125      513.94 ppb          2.125   0.41%
   QC value within limits for Zn 213.857  Recovery = 102.79%
SiO2†                  88323.1      5552.7 ug/L         59.96      5552.7 ppb          59.96   1.08%
   QC value within limits for SiO2  Recovery = 103.84%
All analyte(s) passed QC.
```

Sequence No.: 38
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 1/20/2010 19:24:59
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5056.3	5056.3	97.0	%			19:26:51
1	Y RADIAL	5358.1	5358.1	97.27	%			19:26:51
1	Al 396.153Radial†	5.5	-6.6	-5.0539	ug/L	-5.0539	ppb	19:26:51
1	Ca 317.933Radial†	12.4	-4.7	-7.6640	ug/L	-7.6640	ppb	19:27:11
1	Fe 238.204 Radial†	10.7	0.0	0.0362	ug/L	0.0362	ppb	19:27:11
1	K 766.490 Radial†	3011.3	322.8	64.538	ug/L	64.538	ppb	19:26:51
1	Mg 279.077 IEC†	6.1	1.8	60.249	ug/L	60.249	ppb	19:27:11
1	Na 589.592 Radial†	-1116.2	81.3	22.867	ug/L	22.867	ppb	19:26:51
1	Sr 421.552†	-13.2	-16.8	-0.1041	ug/L	-0.1041	ppb	19:26:51
1	Sc 361.383	922317.1	922317.1	97.729	%			19:28:08
1	Y 371.029	770627.3	770627.3	97.144	%			19:28:08
1	Ag 328.068†	415.3	-26.6	-0.1125	ug/L	-0.1125	ppb	19:28:13
1	As 188.979†	-16.4	6.4	2.4870	ug/L	2.4870	ppb	19:28:33
1	B 249.677†	-427.2	-44.1	-0.9374	ug/L	-0.9374	ppb	19:28:33
1	Ba 233.527†	-12.2	-22.4	-0.1597	ug/L	-0.1597	ppb	19:28:33
1	Be 313.107†	-4465.9	-184.8	-0.0625	ug/L	-0.0625	ppb	19:28:13
1	Cd 226.502†	-213.7	-2.4	-0.0249	ug/L	-0.0249	ppb	19:28:33
1	Co 228.616†	-73.0	-0.3	-0.0063	ug/L	-0.0063	ppb	19:28:33
1	Cr 267.716†	78.3	-12.9	-0.1354	ug/L	-0.1354	ppb	19:28:33
1	Cu 324.752†	6072.7	76.1	0.2189	ug/L	0.2189	ppb	19:28:13
1	Mn 257.610†	467.1	10.8	0.0086	ug/L	0.0086	ppb	19:28:33
1	Mo 202.031†	27.5	-1.2	-0.0792	ug/L	-0.0792	ppb	19:28:33
1	Ni 231.604†	131.9	36.6	0.8548	ug/L	0.8548	ppb	19:28:33
1	P 214.914†	224.2	5.5	3.0111	ug/L	3.0111	ppb	19:28:33
1	Pb 220.353†	-58.8	-21.9	-2.4877	ug/L	-2.4877	ppb	19:28:33
1	S 181.975 Axial†	41.6	-3.3	-4.3532	ug/L	-4.3532	ppb	19:28:33
1	Sb 206.836†	46.8	17.3	5.5262	ug/L	5.5262	ppb	19:28:33
1	Se 196.026†	-40.2	-11.3	-6.6952	ug/L	-6.6952	ppb	19:28:33
1	Si 251.611†	535.0	75.8	2.2313	ug/L	2.2313	ppb	19:28:33
1	Sn 189.927†	14.6	10.7	1.7163	ug/L	1.7163	ppb	19:28:33
1	Ti 334.940†	-1360.9	19.6	0.0243	ug/L	0.0243	ppb	19:28:13
1	Tl 190.801†	-39.5	-4.0	-1.1139	ug/L	-1.1139	ppb	19:28:33
1	U 409.014†	-1812.7	-128.9	-3.5915	ug/L	-3.5915	ppb	19:28:08
1	V 292.402†	-1508.3	-57.7	-0.3751	ug/L	-0.3751	ppb	19:28:13
1	Zn 213.857†	720.5	-53.1	-0.4672	ug/L	-0.4672	ppb	19:28:33
1	SiO2†	529.4	43.2	2.7279	ug/L	2.7279	ppb	19:29:39
2	Sc Radial	5092.5	5092.5	97.6	%			19:27:16
2	Y RADIAL	5410.8	5410.8	98.22	%			19:27:16
2	Al 396.153Radial†	-0.1	-12.4	-9.4806	ug/L	-9.4806	ppb	19:27:16
2	Ca 317.933Radial†	18.0	0.9	1.5487	ug/L	1.5487	ppb	19:27:36
2	Fe 238.204 Radial†	11.5	0.8	7.3135	ug/L	7.3135	ppb	19:27:36
2	K 766.490 Radial†	2972.5	261.1	52.193	ug/L	52.193	ppb	19:27:16
2	Mg 279.077 IEC†	4.9	0.5	17.745	ug/L	17.745	ppb	19:27:36
2	Na 589.592 Radial†	-1153.5	51.3	14.425	ug/L	14.425	ppb	19:27:16
2	Sr 421.552†	37.4	35.2	0.2182	ug/L	0.2182	ppb	19:27:16
2	Sc 361.383	924783.8	924783.8	97.990	%			19:28:38
2	Y 371.029	773994.4	773994.4	97.568	%			19:28:38
2	Ag 328.068†	497.3	56.0	0.2438	ug/L	0.2438	ppb	19:28:43
2	As 188.979†	-19.3	3.5	1.3750	ug/L	1.3750	ppb	19:29:03
2	B 249.677†	-418.6	-34.2	-0.7274	ug/L	-0.7274	ppb	19:29:03
2	Ba 233.527†	21.5	12.0	0.0848	ug/L	0.0848	ppb	19:29:03
2	Be 313.107†	-4393.9	-99.1	-0.0334	ug/L	-0.0334	ppb	19:28:43
2	Cd 226.502†	-214.6	-2.8	-0.0302	ug/L	-0.0302	ppb	19:29:03
2	Co 228.616†	-79.7	-7.0	-0.1323	ug/L	-0.1323	ppb	19:29:03
2	Cr 267.716†	74.7	-16.7	-0.1765	ug/L	-0.1765	ppb	19:29:03
2	Cu 324.752†	6040.5	26.7	0.0785	ug/L	0.0785	ppb	19:28:43
2	Mn 257.610†	428.1	-30.2	-0.0309	ug/L	-0.0309	ppb	19:29:03
2	Mo 202.031†	30.0	1.3	0.0833	ug/L	0.0833	ppb	19:29:03
2	Ni 231.604†	102.6	6.3	0.1481	ug/L	0.1481	ppb	19:29:03

2	P 214.914†	236.5	17.4	9.5625 ug/L	9.5625 ppb	19:29:03
2	Pb 220.353†	-57.6	-20.5	-2.3236 ug/L	-2.3236 ppb	19:29:03
2	S 181.975 Axial†	49.2	4.3	5.6629 ug/L	5.6629 ppb	19:29:03
2	Sb 206.836†	38.9	9.1	2.8909 ug/L	2.8909 ppb	19:29:03
2	Se 196.026†	-21.2	8.2	4.8818 ug/L	4.8818 ppb	19:29:03
2	Si 251.611†	523.2	62.4	1.8336 ug/L	1.8336 ppb	19:29:03
2	Sn 189.927†	5.1	1.0	0.1537 ug/L	0.1537 ppb	19:29:03
2	Ti 334.940†	-1331.7	53.1	0.0780 ug/L	0.0780 ppb	19:28:43
2	Tl 190.801†	-38.3	-2.7	-0.7396 ug/L	-0.7396 ppb	19:29:03
2	U 409.014†	-1810.3	-121.5	-3.3851 ug/L	-3.3851 ppb	19:28:38
2	V 292.402†	-1514.0	-59.4	-0.3848 ug/L	-0.3848 ppb	19:28:43
2	Zn 213.857†	718.3	-57.3	-0.4999 ug/L	-0.4999 ppb	19:29:03
2	SiO2†	540.4	53.0	3.3384 ug/L	3.3384 ppb	19:29:44
3	Sc Radial	5183.7	5183.7	99.4 %		19:27:41
3	Y RADIAL	5501.0	5501.0	99.86 %		19:27:41
3	Al 396.153Radial†	-6.9	-19.3	-14.692 ug/L	-14.692 ppb	19:27:41
3	Ca 317.933Radial†	10.6	-6.8	-11.177 ug/L	-11.177 ppb	19:28:01
3	Fe 238.204 Radial†	12.8	1.9	17.321 ug/L	17.321 ppb	19:28:01
3	K 766.490 Radial†	2935.3	170.1	34.000 ug/L	34.000 ppb	19:27:41
3	Mg 279.077 IEC†	1.2	-3.3	-108.03 ug/L	-108.03 ppb	19:28:01
3	Na 589.592 Radial†	-1098.9	127.0	35.730 ug/L	35.730 ppb	19:27:41
3	Sr 421.552†	12.7	9.7	0.0601 ug/L	0.0601 ppb	19:27:41
3	Sc 361.383	926589.4	926589.4	98.182 %		19:29:08
3	Y 371.029	774351.8	774351.8	97.613 %		19:29:08
3	Ag 328.068†	373.7	-71.0	-0.3016 ug/L	-0.3016 ppb	19:29:13
3	As 188.979†	-25.7	-2.9	-1.1321 ug/L	-1.1321 ppb	19:29:33
3	B 249.677†	-428.7	-43.6	-0.9285 ug/L	-0.9285 ppb	19:29:33
3	Ba 233.527†	10.1	0.4	0.0036 ug/L	0.0036 ppb	19:29:33
3	Be 313.107†	-4504.2	-202.7	-0.0688 ug/L	-0.0688 ppb	19:29:13
3	Cd 226.502†	-213.8	-1.6	-0.0173 ug/L	-0.0173 ppb	19:29:33
3	Co 228.616†	-77.3	-4.4	-0.0837 ug/L	-0.0837 ppb	19:29:33
3	Cr 267.716†	74.5	-17.1	-0.1825 ug/L	-0.1825 ppb	19:29:33
3	Cu 324.752†	5967.1	-60.1	-0.1724 ug/L	-0.1724 ppb	19:29:13
3	Mn 257.610†	450.0	-8.7	-0.0028 ug/L	-0.0028 ppb	19:29:33
3	Mo 202.031†	26.7	-2.2	-0.1398 ug/L	-0.1398 ppb	19:29:33
3	Ni 231.604†	94.4	-2.2	-0.0514 ug/L	-0.0514 ppb	19:29:33
3	P 214.914†	237.2	17.7	9.7739 ug/L	9.7739 ppb	19:29:33
3	Pb 220.353†	-67.2	-30.1	-3.4250 ug/L	-3.4250 ppb	19:29:33
3	S 181.975 Axial†	50.1	5.2	6.7580 ug/L	6.7580 ppb	19:29:33
3	Sb 206.836†	43.9	14.1	4.4836 ug/L	4.4836 ppb	19:29:33
3	Se 196.026†	-33.9	-4.7	-2.7320 ug/L	-2.7320 ppb	19:29:33
3	Si 251.611†	515.4	53.4	1.5712 ug/L	1.5712 ppb	19:29:33
3	Sn 189.927†	4.2	0.0	0.0061 ug/L	0.0061 ppb	19:29:33
3	Ti 334.940†	-1419.8	-34.0	-0.0439 ug/L	-0.0439 ppb	19:29:13
3	Tl 190.801†	-37.4	-1.6	-0.4442 ug/L	-0.4442 ppb	19:29:33
3	U 409.014†	-1565.1	131.9	3.6723 ug/L	3.6723 ppb	19:29:08
3	V 292.402†	-1455.1	3.7	0.0239 ug/L	0.0239 ppb	19:29:13
3	Zn 213.857†	715.4	-61.6	-0.5369 ug/L	-0.5369 ppb	19:29:33
3	SiO2†	534.1	45.5	2.8698 ug/L	2.8698 ppb	19:29:49

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	924563.4	97.967	%	0.2272				0.23%
Sc Radial	5110.8	98.0	%	1.26				1.28%
Y 371.029	772991.2	97.442	%	0.2590				0.27%
Y RADIAL	5423.3	98.45	%	1.311				1.33%
Ag 328.068†	-13.9	-0.0568	ug/L	0.27694	-0.0568	ppb	0.27694	487.89%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-12.8	-9.7420	ug/L	4.82412	-9.7420	ppb	4.82412	49.52%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	2.3	0.9100	ug/L	1.85383	0.9100	ppb	1.85383	203.72%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	-40.6	-0.8644	ug/L	0.11876	-0.8644	ppb	0.11876	13.74%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-3.3	-0.0238	ug/L	0.12455	-0.0238	ppb	0.12455	523.82%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-162.2	-0.0549	ug/L	0.01889	-0.0549	ppb	0.01889	34.39%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-3.5	-5.7640	ug/L	6.57200	-5.7640	ppb	6.57200	114.02%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -2.3     -0.0241 ug/L       0.00647     -0.0241 ppb        0.00647  26.81%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†              -3.9     -0.0741 ug/L       0.06353     -0.0741 ppb        0.06353  85.72%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†             -15.6     -0.1648 ug/L       0.02561     -0.1648 ppb        0.02561  15.54%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              14.3      0.0417 ug/L       0.19820      0.0417 ppb        0.19820 475.69%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        0.9      8.2237 ug/L       8.67851      8.2237 ppb        8.67851 105.53%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†       251.3      50.243 ug/L       15.3620      50.243 ppb        15.3620  30.58%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†          -0.3     -10.011 ug/L       87.5047     -10.011 ppb        87.5047 874.06%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†              -9.4     -0.0084 ug/L       0.02029     -0.0084 ppb        0.02029 242.57%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†              -0.7     -0.0453 ug/L       0.11540     -0.0453 ppb        0.11540 255.02%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       86.5      24.341 ug/L       10.7286      24.341 ppb        10.7286  44.08%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†              13.6      0.3172 ug/L       0.47616      0.3172 ppb        0.47616 150.13%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†               13.5      7.4492 ug/L       3.84494      7.4492 ppb        3.84494  51.62%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†             -24.2     -2.7454 ug/L       0.59420     -2.7454 ppb        0.59420  21.64%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          2.1      2.6892 ug/L       6.12347      2.6892 ppb        6.12347 227.70%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†              13.5      4.3002 ug/L       1.32719      4.3002 ppb        1.32719  30.86%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†              -2.6     -1.5151 ug/L       5.88364     -1.5151 ppb        5.88364 388.33%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              63.9      1.8787 ug/L       0.33239      1.8787 ppb        0.33239  17.69%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               3.9      0.6253 ug/L       0.94768      0.6253 ppb        0.94768 151.55%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               9.3      0.0581 ug/L       0.16114      0.0581 ppb        0.16114 277.58%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              12.9      0.0195 ug/L       0.06112      0.0195 ppb        0.06112 313.87%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              -2.7     -0.7659 ug/L       0.33562     -0.7659 ppb        0.33562  43.82%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              -39.5     -1.1014 ug/L       4.13548     -1.1014 ppb        4.13548 375.47%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†              -37.8     -0.2453 ug/L       0.23323     -0.2453 ppb        0.23323  95.07%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†             -57.3     -0.5014 ug/L       0.03489     -0.5014 ppb        0.03489   6.96%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    47.2      2.9787 ug/L       0.31950      2.9787 ppb        0.31950  10.73%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
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Analysis Begun

Start Time: 1/20/2010 20:33:04 **Plasma On Time: 1/20/2010 20:28:13**
Logged In Analyst: Optima3 **Technique: ICP Continuous**
Spectrometer Model: Optima 5300 DV, S/N 077C7090601Autosampler Model: S10

Sample Information File: C:\pe\Optima3\Sample Information\012010.sif
Batch ID:
Results Data Set: 012010
Results Library: C:\pe\Optima3\Results\Results.mdb

==========

Sequence No.: 1 **Autosampler Location: 1**
Sample ID: CCV **Date Collected: 1/20/2010 20:33:04**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4803.0	4803.0	92.1	%			20:34:56
1	Y RADIAL	5005.3	5005.3	90.86	%			20:34:56
1	Al 396.153Radial†	6298.9	6827.3	5173.4	ug/L	5173.4	ppb	20:34:56
1	Ca 317.933Radial†	3026.3	3268.6	5367.4	ug/L	5367.4	ppb	20:35:16
1	Fe 238.204 Radial†	573.1	611.3	5579.8	ug/L	5579.8	ppb	20:35:16
1	K 766.490 Radial†	28195.0	27832.4	5558.3	ug/L	5558.3	ppb	20:34:56
1	Mg 279.077 IEC†	161.0	170.3	5598.7	ug/L	5598.7	ppb	20:35:16
1	Na 589.592 Radial†	34892.1	39120.3	11006	ug/L	11006	ppb	20:34:56
1	Sr 421.552†	74409.5	80794.7	501.37	ug/L	501.37	ppb	20:34:56
1	Sc 361.383	936857.0	936857.0	99.270	%			20:36:15
1	Y 371.029	775715.2	775715.2	97.785	%			20:36:15
1	Ag 328.068†	121211.2	121651.5	525.40	ug/L	525.40	ppb	20:36:15
1	As 188.979†	1328.0	1361.0	533.11	ug/L	533.11	ppb	20:36:35
1	B 249.677†	32575.8	33208.5	703.00	ug/L	703.00	ppb	20:36:15
1	Ba 233.527†	74342.0	74879.1	533.00	ug/L	533.00	ppb	20:36:15
1	Be 313.107†	1570647.5	1586589.5	538.68	ug/L	538.68	ppb	20:36:15
1	Cd 226.502†	51771.8	52369.0	539.49	ug/L	539.49	ppb	20:36:15
1	Co 228.616†	27693.1	27971.3	530.72	ug/L	530.72	ppb	20:36:35
1	Cr 267.716†	49940.6	50215.1	533.00	ug/L	533.00	ppb	20:36:15
1	Cu 324.752†	191038.8	186306.8	530.95	ug/L	530.95	ppb	20:36:15
1	Mn 257.610†	518336.2	521683.1	532.82	ug/L	532.82	ppb	20:36:15
1	Mo 202.031†	8050.3	8080.2	526.90	ug/L	526.90	ppb	20:36:35
1	Ni 231.604†	22659.2	22727.6	530.56	ug/L	530.56	ppb	20:36:35
1	P 214.914†	5094.5	4908.1	2601.1	ug/L	2601.1	ppb	20:36:35
1	Pb 220.353†	4672.3	4744.9	540.07	ug/L	540.07	ppb	20:36:35
1	S 181.975 Axial†	866.4	826.9	1076.7	ug/L	1076.7	ppb	20:36:35
1	Sb 206.836†	1655.6	1637.2	539.87	ug/L	539.87	ppb	20:36:35
1	Se 196.026†	856.0	892.2	549.28	ug/L	549.28	ppb	20:36:35
1	Si 251.611†	89709.3	89897.8	2637.2	ug/L	2637.2	ppb	20:36:15
1	Sn 189.927†	3270.6	3290.4	529.76	ug/L	529.76	ppb	20:36:35
1	Ti 334.940†	353474.4	357487.5	522.75	ug/L	522.75	ppb	20:36:15
1	Tl 190.801†	1844.4	1894.5	532.58	ug/L	532.58	ppb	20:36:35
1	U 409.014†	15914.9	17757.9	492.91	ug/L	492.91	ppb	20:36:15
1	V 292.402†	80284.2	82360.6	532.29	ug/L	532.29	ppb	20:36:15
1	Zn 213.857†	62103.5	61770.2	532.64	ug/L	532.64	ppb	20:36:15
1	SiO2†	88265.2	88416.2	5558.2	ug/L	5558.2	ppb	20:37:35
2	Sc Radial	4803.1	4803.1	92.1	%			20:35:21
2	Y RADIAL	5054.3	5054.3	91.75	%			20:35:21
2	Al 396.153Radial†	6297.5	6825.7	5172.1	ug/L	5172.1	ppb	20:35:21
2	Ca 317.933Radial†	3033.6	3276.5	5380.3	ug/L	5380.3	ppb	20:35:41
2	Fe 238.204 Radial†	571.5	609.6	5563.7	ug/L	5563.7	ppb	20:35:41
2	K 766.490 Radial†	28090.8	27718.7	5535.5	ug/L	5535.5	ppb	20:35:21
2	Mg 279.077 IEC†	161.7	171.1	5623.8	ug/L	5623.8	ppb	20:35:41
2	Na 589.592 Radial†	34916.3	39145.9	11013	ug/L	11013	ppb	20:35:21
2	Sr 421.552†	74379.1	80760.2	501.16	ug/L	501.16	ppb	20:35:21
2	Sc 361.383	937136.8	937136.8	99.299	%			20:36:42
2	Y 371.029	775740.2	775740.2	97.788	%			20:36:42

2	Ag 328.068†	121096.6	121499.7	524.75 ug/L	524.75 ppb	20:36:42
2	As 188.979†	1331.3	1363.9	534.25 ug/L	534.25 ppb	20:37:03
2	B 249.677†	32245.1	32865.7	695.71 ug/L	695.71 ppb	20:36:42
2	Ba 233.527†	74531.2	75047.3	534.20 ug/L	534.20 ppb	20:36:42
2	Be 313.107†	1569886.5	1585350.8	538.26 ug/L	538.26 ppb	20:36:42
2	Cd 226.502†	51923.1	52505.8	540.90 ug/L	540.90 ppb	20:36:42
2	Co 228.616†	27830.0	28100.7	533.19 ug/L	533.19 ppb	20:37:03
2	Cr 267.716†	49923.3	50182.7	532.65 ug/L	532.65 ppb	20:36:42
2	Cu 324.752†	191068.4	186279.2	530.87 ug/L	530.87 ppb	20:36:42
2	Mn 257.610†	519416.3	522615.0	533.77 ug/L	533.77 ppb	20:36:42
2	Mo 202.031†	8091.1	8118.8	529.41 ug/L	529.41 ppb	20:37:03
2	Ni 231.604†	22788.6	22851.1	533.44 ug/L	533.44 ppb	20:37:03
2	P 214.914†	5113.1	4925.2	2610.6 ug/L	2610.6 ppb	20:37:03
2	Pb 220.353†	4668.7	4739.9	539.51 ug/L	539.51 ppb	20:37:03
2	S 181.975 Axial†	871.8	832.1	1083.5 ug/L	1083.5 ppb	20:37:03
2	Sb 206.836†	1685.8	1667.1	549.49 ug/L	549.49 ppb	20:37:03
2	Se 196.026†	856.4	892.3	549.32 ug/L	549.32 ppb	20:37:03
2	Si 251.611†	89780.5	89942.6	2638.5 ug/L	2638.5 ppb	20:36:42
2	Sn 189.927†	3292.4	3311.4	533.13 ug/L	533.13 ppb	20:37:03
2	Ti 334.940†	353866.9	357776.5	523.17 ug/L	523.17 ppb	20:36:42
2	Tl 190.801†	1855.1	1904.7	535.44 ug/L	535.44 ppb	20:37:03
2	U 409.014†	15966.9	17805.6	494.24 ug/L	494.24 ppb	20:36:42
2	V 292.402†	80327.9	82380.5	532.45 ug/L	532.45 ppb	20:36:42
2	Zn 213.857†	62246.9	61895.9	533.72 ug/L	533.72 ppb	20:36:42
2	SiO2†	89177.9	89308.8	5614.4 ug/L	5614.4 ppb	20:37:41
3	Sc Radial	4828.6	4828.6	92.6 %		20:35:46
3	Y RADIAL	5087.3	5087.3	92.35 %		20:35:46
3	Al 396.153Radial†	6310.5	6803.6	5155.1 ug/L	5155.1 ppb	20:35:46
3	Ca 317.933Radial†	3043.5	3269.9	5369.4 ug/L	5369.4 ppb	20:36:06
3	Fe 238.204 Radial†	574.4	609.4	5562.6 ug/L	5562.6 ppb	20:36:06
3	K 766.490 Radial†	28042.6	27505.6	5493.0 ug/L	5493.0 ppb	20:35:46
3	Mg 279.077 IEC†	159.5	167.8	5515.4 ug/L	5515.4 ppb	20:36:06
3	Na 589.592 Radial†	34810.3	38831.2	10925 ug/L	10925 ppb	20:35:46
3	Sr 421.552†	74684.3	80663.5	500.56 ug/L	500.56 ppb	20:35:46
3	Sc 361.383	926413.1	926413.1	98.163 %		20:37:10
3	Y 371.029	766339.6	766339.6	96.603 %		20:37:10
3	Ag 328.068†	120399.9	122201.6	527.77 ug/L	527.77 ppb	20:37:10
3	As 188.979†	1325.6	1373.7	538.05 ug/L	538.05 ppb	20:37:30
3	B 249.677†	31647.4	32632.7	690.76 ug/L	690.76 ppb	20:37:10
3	Ba 233.527†	74184.4	75562.9	537.86 ug/L	537.86 ppb	20:37:10
3	Be 313.107†	1556014.0	1589519.2	539.68 ug/L	539.68 ppb	20:37:10
3	Cd 226.502†	51491.0	52670.9	542.60 ug/L	542.60 ppb	20:37:10
3	Co 228.616†	27635.6	28227.1	535.58 ug/L	535.58 ppb	20:37:30
3	Cr 267.716†	49633.5	50469.4	535.69 ug/L	535.69 ppb	20:37:10
3	Cu 324.752†	189795.8	187210.1	533.52 ug/L	533.52 ppb	20:37:10
3	Mn 257.610†	516145.0	525337.4	536.55 ug/L	536.55 ppb	20:37:10
3	Mo 202.031†	8025.2	8146.0	531.18 ug/L	531.18 ppb	20:37:30
3	Ni 231.604†	22559.7	22883.5	534.20 ug/L	534.20 ppb	20:37:30
3	P 214.914†	5042.1	4912.5	2603.1 ug/L	2603.1 ppb	20:37:30
3	Pb 220.353†	4652.5	4777.8	543.81 ug/L	543.81 ppb	20:37:30
3	S 181.975 Axial†	867.0	837.4	1090.3 ug/L	1090.3 ppb	20:37:30
3	Sb 206.836†	1662.7	1663.2	548.28 ug/L	548.28 ppb	20:37:30
3	Se 196.026†	845.1	890.7	548.39 ug/L	548.39 ppb	20:37:30
3	Si 251.611†	89158.7	90355.7	2650.6 ug/L	2650.6 ppb	20:37:10
3	Sn 189.927†	3257.7	3314.5	533.62 ug/L	533.62 ppb	20:37:30
3	Ti 334.940†	351612.1	359604.5	525.85 ug/L	525.85 ppb	20:37:10
3	Tl 190.801†	1840.9	1911.8	537.44 ug/L	537.44 ppb	20:37:30
3	U 409.014†	15669.9	17689.1	490.99 ug/L	490.99 ppb	20:37:10
3	V 292.402†	79637.3	82613.3	533.95 ug/L	533.95 ppb	20:37:10
3	Zn 213.857†	61752.6	62118.0	535.64 ug/L	535.64 ppb	20:37:10
3	SiO2†	88786.2	89949.3	5654.7 ug/L	5654.7 ppb	20:37:46

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	933469.0	98.911	%	0.6476				0.65%
Sc Radial	4811.6	92.3	%	0.28				0.31%
Y 371.029	772598.3	97.392	%	0.6833				0.70%
Y RADIAL	5049.0	91.65	%	0.750				0.82%
Ag 328.068†	121784.2	525.97	ug/L	1.588	525.97	ppb	1.588	0.30%

```
   QC value within limits for Ag 328.068  Recovery = 105.19%
Al 396.153Radial†       6818.9      5166.9 ug/L        10.18      5166.9 ppb        10.18   0.20%
   QC value within limits for Al 396.153Radial  Recovery = 103.34%
As 188.979†             1366.2      535.14 ug/L        2.585      535.14 ppb        2.585   0.48%
   QC value within limits for As 188.979  Recovery = 107.03%
B 249.677†             32902.3      696.49 ug/L        6.159      696.49 ppb        6.159   0.88%
   QC value greater than the upper limit for B 249.677  Recovery = 139.30%
Ba 233.527†            75163.1      535.02 ug/L        2.532      535.02 ppb        2.532   0.47%
   QC value within limits for Ba 233.527  Recovery = 107.00%
Be 313.107†          1587153.2      538.87 ug/L        0.729      538.87 ppb        0.729   0.14%
   QC value within limits for Be 313.107  Recovery = 107.77%
Ca 317.933Radial†       3271.7      5372.4 ug/L         6.94      5372.4 ppb         6.94   0.13%
   QC value within limits for Ca 317.933Radial  Recovery = 107.45%
Cd 226.502†            52515.2      541.00 ug/L        1.560      541.00 ppb        1.560   0.29%
   QC value within limits for Cd 226.502  Recovery = 108.20%
Co 228.616†            28099.7      533.17 ug/L        2.429      533.17 ppb        2.429   0.46%
   QC value within limits for Co 228.616  Recovery = 106.63%
Cr 267.716†            50289.1      533.78 ug/L        1.667      533.78 ppb        1.667   0.31%
   QC value within limits for Cr 267.716  Recovery = 106.76%
Cu 324.752†           186598.7      531.78 ug/L        1.510      531.78 ppb        1.510   0.28%
   QC value within limits for Cu 324.752  Recovery = 106.36%
Fe 238.204 Radial†       610.1      5568.7 ug/L         9.61      5568.7 ppb         9.61   0.17%
   QC value greater than the upper limit for Fe 238.204 Radial  Recovery = 111.37%
K 766.490 Radial†      27685.6      5528.9 ug/L        33.16      5528.9 ppb        33.16   0.60%
   QC value greater than the upper limit for K 766.490 Radial  Recovery = 110.58%
Mg 279.077 IEC†          169.7      5579.3 ug/L        56.72      5579.3 ppb        56.72   1.02%
   QC value greater than the upper limit for Mg 279.077 IEC  Recovery = 111.59%
Mn 257.610†           523211.8      534.38 ug/L        1.940      534.38 ppb        1.940   0.36%
   QC value within limits for Mn 257.610  Recovery = 106.88%
Mo 202.031†             8115.0      529.16 ug/L        2.154      529.16 ppb        2.154   0.41%
   QC value within limits for Mo 202.031  Recovery = 105.83%
Na 589.592 Radial†     39032.4       10981 ug/L         49.2       10981 ppb         49.2   0.45%
   QC value within limits for Na 589.592 Radial  Recovery = 109.81%
Ni 231.604†            22820.7      532.73 ug/L        1.920      532.73 ppb        1.920   0.36%
   QC value within limits for Ni 231.604  Recovery = 106.55%
P 214.914†              4915.3      2605.0 ug/L         5.03      2605.0 ppb         5.03   0.19%
   QC value within limits for P 214.914  Recovery = 104.20%
Pb 220.353†             4754.2      541.13 ug/L        2.339      541.13 ppb        2.339   0.43%
   QC value within limits for Pb 220.353  Recovery = 108.23%
S 181.975 Axial†         832.1      1083.5 ug/L         6.80      1083.5 ppb         6.80   0.63%
   QC value within limits for S 181.975 Axial  Recovery = 108.35%
Sb 206.836†             1655.9      545.88 ug/L        5.241      545.88 ppb        5.241   0.96%
   QC value within limits for Sb 206.836  Recovery = 109.18%
Se 196.026†              891.7      549.00 ug/L        0.523      549.00 ppb        0.523   0.10%
   QC value within limits for Se 196.026  Recovery = 109.80%
Si 251.611†            90065.3      2642.1 ug/L         7.40      2642.1 ppb         7.40   0.28%
   QC value within limits for Si 251.611  Recovery = 105.68%
Sn 189.927†             3305.4      532.17 ug/L        2.106      532.17 ppb        2.106   0.40%
   QC value within limits for Sn 189.927  Recovery = 106.43%
Sr 421.552†            80739.4      501.03 ug/L        0.422      501.03 ppb        0.422   0.08%
   QC value within limits for Sr 421.552  Recovery = 100.21%
Ti 334.940†           358289.5      523.92 ug/L        1.683      523.92 ppb        1.683   0.32%
   QC value within limits for Ti 334.940  Recovery = 104.78%
Tl 190.801†             1903.7      535.15 ug/L        2.442      535.15 ppb        2.442   0.46%
   QC value within limits for Tl 190.801  Recovery = 107.03%
U 409.014†             17750.9      492.72 ug/L        1.634      492.72 ppb        1.634   0.33%
   QC value within limits for U 409.014  Recovery = 98.54%
V 292.402†             82451.5      532.90 ug/L        0.917      532.90 ppb        0.917   0.17%
   QC value within limits for V 292.402  Recovery = 106.58%
Zn 213.857†            61928.0      534.00 ug/L        1.520      534.00 ppb        1.520   0.28%
   QC value within limits for Zn 213.857  Recovery = 106.80%
SiO2†                  89224.8      5609.1 ug/L        48.47      5609.1 ppb        48.47   0.86%
   QC value within limits for SiO2  Recovery = 104.89%
QC Failed.  Continue with analysis.
```

Sequence No.: 2
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 1/20/2010 20:39:55
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4999.0	4999.0	95.9	%			20:41:47
1	Y RADIAL	5262.9	5262.9	95.54	%			20:41:47
1	Al 396.153Radial†	24.7	13.5	10.251	ug/L	10.251	ppb	20:41:47
1	Ca 317.933Radial†	23.9	7.5	12.353	ug/L	12.353	ppb	20:42:07
1	Fe 238.204 Radial†	11.6	1.1	10.153	ug/L	10.153	ppb	20:42:07
1	K 766.490 Radial†	3516.0	884.9	176.92	ug/L	176.92	ppb	20:41:47
1	Mg 279.077 IEC†	2.2	-2.2	-73.723	ug/L	-73.723	ppb	20:42:07
1	Na 589.592 Radial†	-1002.5	186.7	52.526	ug/L	52.526	ppb	20:41:47
1	Sr 421.552†	15.8	13.4	0.0829	ug/L	0.0829	ppb	20:41:47
1	Sc 361.383	922096.1	922096.1	97.705	%			20:43:04
1	Y 371.029	779436.4	779436.4	98.254	%			20:43:04
1	Ag 328.068†	473.1	32.6	0.1458	ug/L	0.1458	ppb	20:43:04
1	As 188.979†	-34.1	-11.6	-4.5173	ug/L	-4.5173	ppb	20:43:24
1	B 249.677†	4082.0	4570.8	97.092	ug/L	97.092	ppb	20:43:04
1	Ba 233.527†	22.2	12.9	0.0902	ug/L	0.0902	ppb	20:43:24
1	Be 313.107†	-4252.9	32.1	0.0106	ug/L	0.0106	ppb	20:43:04
1	Cd 226.502†	-189.9	21.9	0.2235	ug/L	0.2235	ppb	20:43:24
1	Co 228.616†	-65.4	7.4	0.1406	ug/L	0.1406	ppb	20:43:24
1	Cr 267.716†	80.7	-10.4	-0.1082	ug/L	-0.1082	ppb	20:43:24
1	Cu 324.752†	6049.7	54.1	0.1584	ug/L	0.1584	ppb	20:43:04
1	Mn 257.610†	619.0	166.4	0.1739	ug/L	0.1739	ppb	20:43:24
1	Mo 202.031†	30.4	1.8	0.1160	ug/L	0.1160	ppb	20:43:24
1	Ni 231.604†	109.0	13.2	0.3081	ug/L	0.3081	ppb	20:43:24
1	P 214.914†	223.1	4.4	2.3917	ug/L	2.3917	ppb	20:43:24
1	Pb 220.353†	-50.8	-13.7	-1.5576	ug/L	-1.5576	ppb	20:43:24
1	S 181.975 Axial†	47.2	2.4	3.1651	ug/L	3.1651	ppb	20:43:24
1	Sb 206.836†	41.4	11.8	3.8121	ug/L	3.8121	ppb	20:43:24
1	Se 196.026†	-30.1	-1.0	-0.5291	ug/L	-0.5291	ppb	20:43:24
1	Si 251.611†	533.8	74.8	2.1976	ug/L	2.1976	ppb	20:43:24
1	Sn 189.927†	21.7	18.0	2.8929	ug/L	2.8929	ppb	20:43:24
1	Ti 334.940†	-1472.8	-95.2	-0.1288	ug/L	-0.1288	ppb	20:43:04
1	Tl 190.801†	-34.7	1.0	0.2714	ug/L	0.2714	ppb	20:43:24
1	U 409.014†	-1912.5	-231.4	-6.4483	ug/L	-6.4483	ppb	20:43:04
1	V 292.402†	-1552.0	-102.8	-0.6693	ug/L	-0.6693	ppb	20:43:04
1	Zn 213.857†	795.1	23.5	0.2015	ug/L	0.2015	ppb	20:43:24
1	SiO2†	565.4	80.2	5.0529	ug/L	5.0529	ppb	20:44:20
2	Sc Radial	5004.1	5004.1	95.9	%			20:42:12
2	Y RADIAL	5288.3	5288.3	96.00	%			20:42:12
2	Al 396.153Radial†	-10.0	-22.7	-17.316	ug/L	-17.316	ppb	20:42:12
2	Ca 317.933Radial†	23.9	7.4	12.229	ug/L	12.229	ppb	20:42:32
2	Fe 238.204 Radial†	12.4	2.0	17.810	ug/L	17.810	ppb	20:42:32
2	K 766.490 Radial†	3457.1	819.8	163.91	ug/L	163.91	ppb	20:42:12
2	Mg 279.077 IEC†	3.4	-1.0	-31.803	ug/L	-31.803	ppb	20:42:32
2	Na 589.592 Radial†	-1023.7	165.6	46.603	ug/L	46.603	ppb	20:42:12
2	Sr 421.552†	46.6	45.4	0.2817	ug/L	0.2817	ppb	20:42:12
2	Sc 361.383	918176.4	918176.4	97.290	%			20:43:29
2	Y 371.029	774730.0	774730.0	97.661	%			20:43:29
2	Ag 328.068†	446.0	6.8	0.0397	ug/L	0.0397	ppb	20:43:29
2	As 188.979†	-29.4	-7.0	-2.7218	ug/L	-2.7218	ppb	20:43:49
2	B 249.677†	3932.4	4434.9	94.204	ug/L	94.204	ppb	20:43:29
2	Ba 233.527†	35.0	26.0	0.1852	ug/L	0.1852	ppb	20:43:49
2	Be 313.107†	-4377.1	-114.2	-0.0393	ug/L	-0.0393	ppb	20:43:29
2	Cd 226.502†	-187.7	23.3	0.2377	ug/L	0.2377	ppb	20:43:49
2	Co 228.616†	-69.8	2.6	0.0503	ug/L	0.0503	ppb	20:43:49
2	Cr 267.716†	85.4	-5.2	-0.0519	ug/L	-0.0519	ppb	20:43:49
2	Cu 324.752†	6189.3	224.0	0.6428	ug/L	0.6428	ppb	20:43:29
2	Mn 257.610†	597.4	146.9	0.1530	ug/L	0.1530	ppb	20:43:49
2	Mo 202.031†	30.9	2.4	0.1568	ug/L	0.1568	ppb	20:43:49
2	Ni 231.604†	107.9	12.5	0.2927	ug/L	0.2927	ppb	20:43:49

2	P 214.914†	246.0	28.9	15.797 ug/L	15.797 ppb	20:43:49
2	Pb 220.353†	-71.8	-35.5	-4.0311 ug/L	-4.0311 ppb	20:43:49
2	S 181.975 Axial†	45.9	1.3	1.6359 ug/L	1.6359 ppb	20:43:49
2	Sb 206.836†	45.6	16.3	5.1873 ug/L	5.1873 ppb	20:43:49
2	Se 196.026†	-31.3	-2.3	-1.3252 ug/L	-1.3252 ppb	20:43:49
2	Si 251.611†	575.3	119.7	3.5193 ug/L	3.5193 ppb	20:43:49
2	Sn 189.927†	7.9	3.8	0.6162 ug/L	0.6162 ppb	20:43:49
2	Ti 334.940†	-1549.7	-180.8	-0.2573 ug/L	-0.2573 ppb	20:43:29
2	Tl 190.801†	-34.1	1.4	0.3983 ug/L	0.3983 ppb	20:43:49
2	U 409.014†	-1903.6	-230.7	-6.4288 ug/L	-6.4288 ppb	20:43:29
2	V 292.402†	-1462.5	-17.6	-0.1252 ug/L	-0.1252 ppb	20:43:29
2	Zn 213.857†	794.2	26.1	0.2222 ug/L	0.2222 ppb	20:43:49
2	SiO2†	572.4	89.9	5.6615 ug/L	5.6615 ppb	20:44:25
3	Sc Radial	4995.1	4995.1	95.8 %		20:42:37
3	Y RADIAL	5256.5	5256.5	95.42 %		20:42:37
3	Al 396.153Radial†	-6.8	-19.4	-14.770 ug/L	-14.770 ppb	20:42:37
3	Ca 317.933Radial†	17.5	0.8	1.2703 ug/L	1.2703 ppb	20:42:57
3	Fe 238.204 Radial†	11.8	1.3	11.649 ug/L	11.649 ppb	20:42:57
3	K 766.490 Radial†	3478.5	848.7	169.67 ug/L	169.67 ppb	20:42:37
3	Mg 279.077 IEC†	2.1	-2.3	-76.517 ug/L	-76.517 ppb	20:42:57
3	Na 589.592 Radial†	-981.3	208.0	58.531 ug/L	58.531 ppb	20:42:37
3	Sr 421.552†	46.9	45.9	0.2847 ug/L	0.2847 ppb	20:42:37
3	Sc 361.383	918247.4	918247.4	97.298 %		20:43:54
3	Y 371.029	774570.2	774570.2	97.641 %		20:43:54
3	Ag 328.068†	384.4	-56.5	-0.2317 ug/L	-0.2317 ppb	20:43:54
3	As 188.979†	-30.4	-8.0	-3.1006 ug/L	-3.1006 ppb	20:44:14
3	B 249.677†	3817.2	4316.3	91.684 ug/L	91.684 ppb	20:43:54
3	Ba 233.527†	24.8	15.6	0.1096 ug/L	0.1096 ppb	20:44:14
3	Be 313.107†	-4348.1	-84.0	-0.0287 ug/L	-0.0287 ppb	20:43:54
3	Cd 226.502†	-186.3	24.7	0.2517 ug/L	0.2517 ppb	20:44:14
3	Co 228.616†	-71.1	1.3	0.0246 ug/L	0.0246 ppb	20:44:14
3	Cr 267.716†	90.3	-0.1	0.0024 ug/L	0.0024 ppb	20:44:14
3	Cu 324.752†	6220.8	255.9	0.7361 ug/L	0.7361 ppb	20:43:54
3	Mn 257.610†	589.7	139.0	0.1461 ug/L	0.1461 ppb	20:44:14
3	Mo 202.031†	27.3	-1.3	-0.0826 ug/L	-0.0826 ppb	20:44:14
3	Ni 231.604†	107.4	12.0	0.2814 ug/L	0.2814 ppb	20:44:14
3	P 214.914†	248.2	31.2	17.069 ug/L	17.069 ppb	20:44:14
3	Pb 220.353†	-72.6	-36.4	-4.1299 ug/L	-4.1299 ppb	20:44:14
3	S 181.975 Axial†	55.8	11.5	14.979 ug/L	14.979 ppb	20:44:14
3	Sb 206.836†	40.7	11.3	3.6275 ug/L	3.6275 ppb	20:44:14
3	Se 196.026†	-28.7	0.3	0.2436 ug/L	0.2436 ppb	20:44:14
3	Si 251.611†	549.8	93.5	2.7501 ug/L	2.7501 ppb	20:44:14
3	Sn 189.927†	23.1	19.4	3.1255 ug/L	3.1255 ppb	20:44:14
3	Ti 334.940†	-1434.3	-62.0	-0.0793 ug/L	-0.0793 ppb	20:43:54
3	Tl 190.801†	-36.3	-0.8	-0.2275 ug/L	-0.2275 ppb	20:44:14
3	U 409.014†	-2070.6	-402.1	-11.204 ug/L	-11.204 ppb	20:43:54
3	V 292.402†	-1531.6	-88.5	-0.5902 ug/L	-0.5902 ppb	20:43:54
3	Zn 213.857†	773.6	4.8	0.0378 ug/L	0.0378 ppb	20:44:14
3	SiO2†	564.6	81.8	5.1603 ug/L	5.1603 ppb	20:44:30

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	919506.6	97.431	%	0.2376				0.24%
Sc Radial	4999.4	95.9	%	0.09				0.09%
Y 371.029	776245.5	97.852	%	0.3485				0.36%
Y RADIAL	5269.2	95.65	%	0.305				0.32%
Ag 328.068†	-5.7	-0.0154	ug/L	0.19468	-0.0154	ppb	0.19468	>999.9%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-9.6	-7.2787	ug/L	15.23403	-7.2787	ppb	15.23403	209.30%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-8.9	-3.4466	ug/L	0.94643	-3.4466	ppb	0.94643	27.46%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	4440.7	94.327	ug/L	2.7058	94.327	ppb	2.7058	2.87%
QC value greater than the upper limit for B 249.677 Recovery = Not calculated								
Ba 233.527†	18.2	0.1283	ug/L	0.05019	0.1283	ppb	0.05019	39.11%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-55.4	-0.0191	ug/L	0.02625	-0.0191	ppb	0.02625	137.23%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	5.2	8.6175	ug/L	6.36317	8.6175	ppb	6.36317	73.84%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                 23.3      0.2376 ug/L       0.01413      0.2376 ppb        0.01413   5.94%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                  3.8      0.0718 ug/L       0.06094      0.0718 ppb        0.06094  84.83%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                 -5.2     -0.0526 ug/L       0.05530     -0.0526 ppb        0.05530 105.22%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†                178.0      0.5125 ug/L       0.31015      0.5125 ppb        0.31015  60.52%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†           1.5      13.204 ug/L        4.0581      13.204 ppb         4.0581  30.73%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          851.2      170.17 ug/L         6.522      170.17 ppb          6.522   3.83%
   QC value greater than the upper limit for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             -1.8     -60.681 ug/L       25.0482     -60.681 ppb        25.0482  41.28%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                150.8      0.1577 ug/L       0.01446      0.1577 ppb        0.01446   9.17%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                  1.0      0.0634 ug/L       0.12805      0.0634 ppb        0.12805 201.94%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†         186.8      52.553 ug/L        5.9643      52.553 ppb         5.9643  11.35%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                 12.6      0.2940 ug/L       0.01342      0.2940 ppb        0.01342   4.57%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                  21.5      11.753 ug/L        8.1318      11.753 ppb         8.1318  69.19%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                -28.5     -3.2395 ug/L       1.45744     -3.2395 ppb        1.45744  44.99%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†             5.1      6.5934 ug/L       7.30255      6.5934 ppb        7.30255 110.75%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 13.1      4.2090 ug/L       0.85229      4.2090 ppb        0.85229  20.25%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 -1.0     -0.5369 ug/L       0.78443     -0.5369 ppb        0.78443 146.11%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                 96.0      2.8223 ug/L       0.66382      2.8223 ppb        0.66382  23.52%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 13.8      2.2115 ug/L       1.38648      2.2115 ppb        1.38648  62.69%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                 34.9      0.2164 ug/L       0.11560      0.2164 ppb        0.11560  53.41%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               -112.7     -0.1551 ug/L       0.09188     -0.1551 ppb        0.09188  59.22%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                  0.5      0.1474 ug/L       0.33081      0.1474 ppb        0.33081 224.41%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                -288.1     -8.0272 ug/L       2.75159     -8.0272 ppb        2.75159  34.28%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 -69.6     -0.4616 ug/L       0.29397     -0.4616 ppb        0.29397  63.69%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                 18.1      0.1538 ug/L       0.10104      0.1538 ppb        0.10104  65.69%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                       84.0      5.2916 ug/L       0.32486      5.2916 ppb        0.32486   6.14%
   QC value within limits for SiO2  Recovery = Not calculated
QC Failed.  Continue with analysis.
```

Sequence No.: 11
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 1/20/2010 21:42:37
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	4969.2	4969.2	95.3	%			21:44:29
1	Y RADIAL	5176.9	5176.9	93.98	%			21:44:29
1	Al 396.153Radial†	6401.3	6706.1	5081.5	ug/L	5081.5	ppb	21:44:29
1	Ca 317.933Radial†	3075.4	3210.3	5271.5	ug/L	5271.5	ppb	21:44:49
1	Fe 238.204 Radial†	578.8	596.5	5444.1	ug/L	5444.1	ppb	21:44:49
1	K 766.490 Radial†	27244.2	25810.7	5154.2	ug/L	5154.2	ppb	21:44:29
1	Mg 279.077 IEC†	156.3	159.5	5243.2	ug/L	5243.2	ppb	21:44:49
1	Na 589.592 Radial†	34781.1	37736.7	10617	ug/L	10617	ppb	21:44:29
1	Sr 421.552†	77331.0	81158.9	503.63	ug/L	503.63	ppb	21:44:29
1	Sc 361.383	927511.5	927511.5	98.279	%			21:45:48
1	Y 371.029	764495.8	764495.8	96.371	%			21:45:48
1	Ag 328.068†	118907.6	120537.9	520.53	ug/L	520.53	ppb	21:45:48
1	As 188.979†	1282.5	1328.2	520.37	ug/L	520.37	ppb	21:46:08
1	B 249.677†	24367.0	25186.6	532.65	ug/L	532.65	ppb	21:45:48
1	Ba 233.527†	72146.1	73399.3	522.47	ug/L	522.47	ppb	21:45:48
1	Be 313.107†	1493242.5	1523771.5	517.40	ug/L	517.40	ppb	21:45:48
1	Cd 226.502†	49090.8	50166.6	516.80	ug/L	516.80	ppb	21:45:48
1	Co 228.616†	26792.9	27336.3	518.67	ug/L	518.67	ppb	21:46:08
1	Cr 267.716†	47879.2	48624.5	516.11	ug/L	516.11	ppb	21:45:48
1	Cu 324.752†	189107.5	186280.7	530.86	ug/L	530.86	ppb	21:45:48
1	Mn 257.610†	503000.4	511339.9	522.26	ug/L	522.26	ppb	21:45:48
1	Mo 202.031†	7837.2	7945.0	518.08	ug/L	518.08	ppb	21:46:08
1	Ni 231.604†	21814.8	22098.4	515.87	ug/L	515.87	ppb	21:46:08
1	P 214.914†	4853.0	4714.1	2494.1	ug/L	2494.1	ppb	21:46:08
1	Pb 220.353†	4450.9	4567.1	519.86	ug/L	519.86	ppb	21:46:08
1	S 181.975 Axial†	822.2	790.7	1029.6	ug/L	1029.6	ppb	21:46:08
1	Sb 206.836†	1634.5	1632.5	537.89	ug/L	537.89	ppb	21:46:08
1	Se 196.026†	830.5	874.8	538.53	ug/L	538.53	ppb	21:46:08
1	Si 251.611†	87408.9	88467.7	2595.3	ug/L	2595.3	ppb	21:45:48
1	Sn 189.927†	3130.5	3181.0	512.16	ug/L	512.16	ppb	21:46:08
1	Ti 334.940†	348911.8	356432.7	521.22	ug/L	521.22	ppb	21:45:48
1	Tl 190.801†	1759.8	1827.1	513.77	ug/L	513.77	ppb	21:46:08
1	U 409.014†	16196.0	18205.5	505.43	ug/L	505.43	ppb	21:45:48
1	V 292.402†	77908.0	80757.7	521.98	ug/L	521.98	ppb	21:45:48
1	Zn 213.857†	59432.9	59683.1	514.60	ug/L	514.60	ppb	21:45:48
1	SiO2†	87508.1	88541.7	5566.3	ug/L	5566.3	ppb	21:47:08
2	Sc Radial	5006.2	5006.2	96.0	%			21:44:54
2	Y RADIAL	5258.1	5258.1	95.45	%			21:44:54
2	Al 396.153Radial†	6484.3	6742.9	5109.4	ug/L	5109.4	ppb	21:44:54
2	Ca 317.933Radial†	3075.1	3186.1	5231.9	ug/L	5231.9	ppb	21:45:14
2	Fe 238.204 Radial†	580.7	593.9	5421.1	ug/L	5421.1	ppb	21:45:14
2	K 766.490 Radial†	27466.7	25831.2	5158.4	ug/L	5158.4	ppb	21:44:54
2	Mg 279.077 IEC†	159.8	162.0	5324.2	ug/L	5324.2	ppb	21:45:14
2	Na 589.592 Radial†	34808.1	37495.2	10549	ug/L	10549	ppb	21:44:54
2	Sr 421.552†	77860.6	81110.9	503.34	ug/L	503.34	ppb	21:44:54
2	Sc 361.383	923976.5	923976.5	97.905	%			21:46:15
2	Y 371.029	762485.8	762485.8	96.118	%			21:46:15
2	Ag 328.068†	118508.7	120593.3	520.77	ug/L	520.77	ppb	21:46:15
2	As 188.979†	1288.0	1338.8	524.48	ug/L	524.48	ppb	21:46:36
2	B 249.677†	24286.4	25199.1	532.92	ug/L	532.92	ppb	21:46:15
2	Ba 233.527†	71683.2	73207.4	521.11	ug/L	521.11	ppb	21:46:15
2	Be 313.107†	1490047.4	1526321.0	518.26	ug/L	518.26	ppb	21:46:15
2	Cd 226.502†	48926.3	50189.6	517.04	ug/L	517.04	ppb	21:46:15
2	Co 228.616†	26775.9	27423.3	520.32	ug/L	520.32	ppb	21:46:36
2	Cr 267.716†	47671.4	48598.7	515.84	ug/L	515.84	ppb	21:46:15
2	Cu 324.752†	188260.5	186151.8	530.49	ug/L	530.49	ppb	21:46:15
2	Mn 257.610†	500660.7	510908.2	521.82	ug/L	521.82	ppb	21:46:15
2	Mo 202.031†	7847.0	7985.6	520.72	ug/L	520.72	ppb	21:46:36
2	Ni 231.604†	21867.6	22237.2	519.11	ug/L	519.11	ppb	21:46:36

2	P 214.914†	4855.8	4735.7	2506.2	ug/L	2506.2 ppb	21:46:36
2	Pb 220.353†	4445.8	4579.2	521.25	ug/L	521.25 ppb	21:46:36
2	S 181.975 Axial†	829.8	801.7	1043.8	ug/L	1043.8 ppb	21:46:36
2	Sb 206.836†	1630.8	1635.1	538.83	ug/L	538.83 ppb	21:46:36
2	Se 196.026†	825.3	872.8	537.23	ug/L	537.23 ppb	21:46:36
2	Si 251.611†	87013.2	88403.8	2593.3	ug/L	2593.3 ppb	21:46:15
2	Sn 189.927†	3140.3	3203.3	515.73	ug/L	515.73 ppb	21:46:36
2	Ti 334.940†	347427.4	356274.9	520.98	ug/L	520.98 ppb	21:46:15
2	Tl 190.801†	1755.9	1829.9	514.56	ug/L	514.56 ppb	21:46:36
2	U 409.014†	16187.5	18259.8	506.95	ug/L	506.95 ppb	21:46:15
2	V 292.402†	77770.7	80920.7	523.07	ug/L	523.07 ppb	21:46:15
2	Zn 213.857†	59326.9	59806.3	515.65	ug/L	515.65 ppb	21:46:15
2	SiO2†	87917.8	89300.8	5614.1	ug/L	5614.1 ppb	21:47:14
3	Sc Radial	5004.5	5004.5	96.0	%		21:45:19
3	Y RADIAL	5227.2	5227.2	94.89	%		21:45:19
3	Al 396.153Radial†	6478.9	6739.5	5107.1	ug/L	5107.1 ppb	21:45:19
3	Ca 317.933Radial†	3078.3	3190.6	5239.2	ug/L	5239.2 ppb	21:45:39
3	Fe 238.204 Radial†	586.4	600.1	5476.9	ug/L	5476.9 ppb	21:45:39
3	K 766.490 Radial†	27469.3	25843.3	5160.8	ug/L	5160.8 ppb	21:45:19
3	Mg 279.077 IEC†	159.9	162.1	5329.0	ug/L	5329.0 ppb	21:45:39
3	Na 589.592 Radial†	34952.5	37657.5	10594	ug/L	10594 ppb	21:45:19
3	Sr 421.552†	77947.2	81227.7	504.06	ug/L	504.06 ppb	21:45:19
3	Sc 361.383	934749.7	934749.7	99.046	%		21:46:43
3	Y 371.029	772206.4	772206.4	97.343	%		21:46:43
3	Ag 328.068†	119836.6	120539.0	520.55	ug/L	520.55 ppb	21:46:43
3	As 188.979†	1282.3	1317.8	516.34	ug/L	516.34 ppb	21:47:03
3	B 249.677†	24648.5	25278.9	534.62	ug/L	534.62 ppb	21:46:43
3	Ba 233.527†	72555.3	73244.0	521.37	ug/L	521.37 ppb	21:46:43
3	Be 313.107†	1511063.6	1529998.9	519.50	ug/L	519.50 ppb	21:46:43
3	Cd 226.502†	49482.6	50175.3	516.89	ug/L	516.89 ppb	21:46:43
3	Co 228.616†	26797.4	27129.8	514.74	ug/L	514.74 ppb	21:47:03
3	Cr 267.716†	48266.8	48638.6	516.26	ug/L	516.26 ppb	21:46:43
3	Cu 324.752†	190381.6	186077.2	530.28	ug/L	530.28 ppb	21:46:43
3	Mn 257.610†	506420.2	510829.5	521.74	ug/L	521.74 ppb	21:46:43
3	Mo 202.031†	7866.7	7913.0	516.00	ug/L	516.00 ppb	21:47:03
3	Ni 231.604†	21861.0	21973.2	512.95	ug/L	512.95 ppb	21:47:03
3	P 214.914†	4846.6	4669.3	2469.6	ug/L	2469.6 ppb	21:47:03
3	Pb 220.353†	4457.7	4538.9	516.66	ug/L	516.66 ppb	21:47:03
3	S 181.975 Axial†	830.3	792.4	1031.8	ug/L	1031.8 ppb	21:47:03
3	Sb 206.836†	1629.8	1615.0	532.22	ug/L	532.22 ppb	21:47:03
3	Se 196.026†	832.5	870.3	535.96	ug/L	535.96 ppb	21:47:03
3	Si 251.611†	88086.8	88463.4	2595.1	ug/L	2595.1 ppb	21:46:43
3	Sn 189.927†	3141.2	3167.2	509.93	ug/L	509.93 ppb	21:47:03
3	Ti 334.940†	351376.5	356172.1	520.83	ug/L	520.83 ppb	21:46:43
3	Tl 190.801†	1758.9	1812.3	509.67	ug/L	509.67 ppb	21:47:03
3	U 409.014†	16207.6	18089.6	502.20	ug/L	502.20 ppb	21:46:43
3	V 292.402†	78609.8	80852.5	522.55	ug/L	522.55 ppb	21:46:43
3	Zn 213.857†	60072.7	59860.8	516.16	ug/L	516.16 ppb	21:46:43
3	SiO2†	88131.9	88482.0	5562.6	ug/L	5562.6 ppb	21:47:19

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	928745.9	98.410	%	0.5819				0.59%
Sc Radial	4993.3	95.7	%	0.40				0.42%
Y 371.029	766396.0	96.611	%	0.6468				0.67%
Y RADIAL	5220.8	94.77	%	0.744				0.79%
Ag 328.068†	120556.8	520.62	ug/L	0.129	520.62	ppb	0.129	0.02%
QC value within limits for Ag 328.068 Recovery = 104.12%								
Al 396.153Radial†	6729.5	5099.3	ug/L	15.45	5099.3	ppb	15.45	0.30%
QC value within limits for Al 396.153Radial Recovery = 101.99%								
As 188.979†	1328.3	520.40	ug/L	4.067	520.40	ppb	4.067	0.78%
QC value within limits for As 188.979 Recovery = 104.08%								
B 249.677†	25221.5	533.40	ug/L	1.066	533.40	ppb	1.066	0.20%
QC value within limits for B 249.677 Recovery = 106.68%								
Ba 233.527†	73283.6	521.65	ug/L	0.722	521.65	ppb	0.722	0.14%
QC value within limits for Ba 233.527 Recovery = 104.33%								
Be 313.107†	1526697.1	518.39	ug/L	1.060	518.39	ppb	1.060	0.20%
QC value within limits for Be 313.107 Recovery = 103.68%								
Ca 317.933Radial†	3195.7	5247.5	ug/L	21.10	5247.5	ppb	21.10	0.40%

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   QC value within limits for Ca 317.933Radial  Recovery = 104.95%
Cd 226.502†            50177.1      516.91 ug/L         0.123      516.91 ppb          0.123   0.02%
   QC value within limits for Cd 226.502  Recovery = 103.38%
Co 228.616†            27296.5      517.91 ug/L         2.865      517.91 ppb          2.865   0.55%
   QC value within limits for Co 228.616  Recovery = 103.58%
Cr 267.716†            48620.6      516.07 ug/L         0.216      516.07 ppb          0.216   0.04%
   QC value within limits for Cr 267.716  Recovery = 103.21%
Cu 324.752†           186169.9      530.54 ug/L         0.292      530.54 ppb          0.292   0.06%
   QC value within limits for Cu 324.752  Recovery = 106.11%
Fe 238.204 Radial†       596.8      5447.4 ug/L         28.06      5447.4 ppb          28.06   0.52%
   QC value within limits for Fe 238.204 Radial  Recovery = 108.95%
K 766.490 Radial†      25828.4      5157.8 ug/L          3.31      5157.8 ppb           3.31   0.06%
   QC value within limits for K 766.490 Radial  Recovery = 103.16%
Mg 279.077 IEC†          161.2      5298.8 ug/L         48.21      5298.8 ppb          48.21   0.91%
   QC value within limits for Mg 279.077 IEC  Recovery = 105.98%
Mn 257.610†           511025.9      521.94 ug/L         0.282      521.94 ppb          0.282   0.05%
   QC value within limits for Mn 257.610  Recovery = 104.39%
Mo 202.031†             7947.9      518.27 ug/L         2.366      518.27 ppb          2.366   0.46%
   QC value within limits for Mo 202.031  Recovery = 103.65%
Na 589.592 Radial†     37629.8       10587 ug/L          34.6       10587 ppb           34.6   0.33%
   QC value within limits for Na 589.592 Radial  Recovery = 105.87%
Ni 231.604†            22102.9      515.97 ug/L         3.083      515.97 ppb          3.083   0.60%
   QC value within limits for Ni 231.604  Recovery = 103.19%
P 214.914†              4706.4      2490.0 ug/L         18.68      2490.0 ppb          18.68   0.75%
   QC value within limits for P 214.914  Recovery = 99.60%
Pb 220.353†             4561.8      519.26 ug/L         2.352      519.26 ppb          2.352   0.45%
   QC value within limits for Pb 220.353  Recovery = 103.85%
S 181.975 Axial†         794.9      1035.1 ug/L          7.67      1035.1 ppb           7.67   0.74%
   QC value within limits for S 181.975 Axial  Recovery = 103.51%
Sb 206.836†             1627.5      536.31 ug/L         3.573      536.31 ppb          3.573   0.67%
   QC value within limits for Sb 206.836  Recovery = 107.26%
Se 196.026†              872.6      537.24 ug/L         1.284      537.24 ppb          1.284   0.24%
   QC value within limits for Se 196.026  Recovery = 107.45%
Si 251.611†            88445.0      2594.6 ug/L          1.08      2594.6 ppb           1.08   0.04%
   QC value within limits for Si 251.611  Recovery = 103.78%
Sn 189.927†             3183.8      512.61 ug/L         2.926      512.61 ppb          2.926   0.57%
   QC value within limits for Sn 189.927  Recovery = 102.52%
Sr 421.552†            81165.8      503.68 ug/L         0.365      503.68 ppb          0.365   0.07%
   QC value within limits for Sr 421.552  Recovery = 100.74%
Ti 334.940†           356293.2      521.01 ug/L         0.198      521.01 ppb          0.198   0.04%
   QC value within limits for Ti 334.940  Recovery = 104.20%
Tl 190.801†             1823.1      512.67 ug/L         2.625      512.67 ppb          2.625   0.51%
   QC value within limits for Tl 190.801  Recovery = 102.53%
U 409.014†             18185.0      504.86 ug/L         2.426      504.86 ppb          2.426   0.48%
   QC value within limits for U 409.014  Recovery = 100.97%
V 292.402†             80843.6      522.53 ug/L         0.543      522.53 ppb          0.543   0.10%
   QC value within limits for V 292.402  Recovery = 104.51%
Zn 213.857†            59783.4      515.47 ug/L         0.797      515.47 ppb          0.797   0.15%
   QC value within limits for Zn 213.857  Recovery = 103.09%
SiO2†                  88774.9      5581.0 ug/L         28.71      5581.0 ppb          28.71   0.51%
   QC value within limits for SiO2  Recovery = 104.37%
All analyte(s) passed QC.
```

Sequence No.: 12
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 1/20/2010 21:49:28
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5073.5	5073.5	97.3	%			21:51:20
1	Y RADIAL	5380.4	5380.4	97.67	%			21:51:20
1	Al 396.153Radial†	-17.4	-30.2	-23.029	ug/L	-23.029	ppb	21:51:20
1	Ca 317.933Radial†	19.5	2.6	4.2527	ug/L	4.2527	ppb	21:51:40
1	Fe 238.204 Radial†	10.3	-0.4	-3.9806	ug/L	-3.9806	ppb	21:51:40
1	K 766.490 Radial†	2731.1	24.3	4.8452	ug/L	4.8452	ppb	21:51:20
1	Mg 279.077 IEC†	1.5	-3.0	-97.026	ug/L	-97.026	ppb	21:51:40
1	Na 589.592 Radial†	-1066.0	136.8	38.478	ug/L	38.478	ppb	21:51:20
1	Sr 421.552†	8.1	5.2	0.0325	ug/L	0.0325	ppb	21:51:20
1	Sc 361.383	946027.7	946027.7	100.24	%			21:52:37
1	Y 371.029	790662.4	790662.4	99.670	%			21:52:37
1	Ag 328.068†	355.9	-96.5	-0.4139	ug/L	-0.4139	ppb	21:52:42
1	As 188.979†	-22.2	1.1	0.4303	ug/L	0.4303	ppb	21:53:02
1	B 249.677†	454.2	846.1	17.972	ug/L	17.972	ppb	21:52:42
1	Ba 233.527†	23.1	13.1	0.0941	ug/L	0.0941	ppb	21:53:02
1	Be 313.107†	-4570.2	-174.3	-0.0587	ug/L	-0.0587	ppb	21:52:42
1	Cd 226.502†	-214.7	2.0	0.0214	ug/L	0.0214	ppb	21:53:02
1	Co 228.616†	-61.3	13.2	0.2501	ug/L	0.2501	ppb	21:53:02
1	Cr 267.716†	78.6	-14.6	-0.1542	ug/L	-0.1542	ppb	21:53:02
1	Cu 324.752†	6098.5	-53.8	-0.1539	ug/L	-0.1539	ppb	21:52:42
1	Mn 257.610†	452.9	-15.3	-0.0121	ug/L	-0.0121	ppb	21:53:02
1	Mo 202.031†	30.6	1.2	0.0768	ug/L	0.0768	ppb	21:53:02
1	Ni 231.604†	86.9	-11.7	-0.2729	ug/L	-0.2729	ppb	21:53:02
1	P 214.914†	230.3	5.8	3.2578	ug/L	3.2578	ppb	21:53:02
1	Pb 220.353†	-61.0	-22.5	-2.5607	ug/L	-2.5607	ppb	21:53:02
1	S 181.975 Axial†	45.5	-0.4	-0.5779	ug/L	-0.5779	ppb	21:53:02
1	Sb 206.836†	60.7	30.0	9.5841	ug/L	9.5841	ppb	21:53:02
1	Se 196.026†	-28.6	1.3	0.7531	ug/L	0.7531	ppb	21:53:02
1	Si 251.611†	556.1	83.2	2.4455	ug/L	2.4455	ppb	21:53:02
1	Sn 189.927†	19.3	15.0	2.4070	ug/L	2.4070	ppb	21:53:02
1	Ti 334.940†	-1319.4	95.9	0.1487	ug/L	0.1487	ppb	21:52:42
1	Tl 190.801†	-32.1	4.4	1.2300	ug/L	1.2300	ppb	21:53:02
1	U 409.014†	-1715.0	15.0	0.4196	ug/L	0.4196	ppb	21:52:37
1	V 292.402†	-1423.4	65.7	0.4197	ug/L	0.4197	ppb	21:52:42
1	Zn 213.857†	726.9	-65.1	-0.5641	ug/L	-0.5641	ppb	21:53:02
1	SiO2†	519.3	19.5	1.2297	ug/L	1.2297	ppb	21:54:08
2	Sc Radial	5061.2	5061.2	97.0	%			21:51:45
2	Y RADIAL	5366.3	5366.3	97.41	%			21:51:45
2	Al 396.153Radial†	3.3	-8.9	-6.8020	ug/L	-6.8020	ppb	21:51:45
2	Ca 317.933Radial†	18.6	1.8	2.8852	ug/L	2.8852	ppb	21:52:05
2	Fe 238.204 Radial†	10.6	-0.1	-1.0550	ug/L	-1.0550	ppb	21:52:05
2	K 766.490 Radial†	2808.1	110.4	22.060	ug/L	22.060	ppb	21:51:45
2	Mg 279.077 IEC†	1.3	-3.2	-104.79	ug/L	-104.79	ppb	21:52:05
2	Na 589.592 Radial†	-993.5	208.9	58.764	ug/L	58.764	ppb	21:51:45
2	Sr 421.552†	15.2	12.6	0.0781	ug/L	0.0781	ppb	21:51:45
2	Sc 361.383	919832.8	919832.8	97.466	%			21:53:07
2	Y 371.029	769382.2	769382.2	96.987	%			21:53:07
2	Ag 328.068†	578.8	142.3	0.6065	ug/L	0.6065	ppb	21:53:12
2	As 188.979†	-30.1	-7.7	-2.9722	ug/L	-2.9722	ppb	21:53:32
2	B 249.677†	436.5	840.8	17.862	ug/L	17.862	ppb	21:53:12
2	Ba 233.527†	-5.5	-15.6	-0.1110	ug/L	-0.1110	ppb	21:53:32
2	Be 313.107†	-4563.0	-296.8	-0.1005	ug/L	-0.1005	ppb	21:53:12
2	Cd 226.502†	-198.4	12.7	0.1316	ug/L	0.1316	ppb	21:53:32
2	Co 228.616†	-83.0	-10.8	-0.2043	ug/L	-0.2043	ppb	21:53:32
2	Cr 267.716†	68.3	-22.9	-0.2441	ug/L	-0.2441	ppb	21:53:32
2	Cu 324.752†	6115.3	136.6	0.3871	ug/L	0.3871	ppb	21:53:12
2	Mn 257.610†	462.6	7.5	0.0119	ug/L	0.0119	ppb	21:53:32
2	Mo 202.031†	27.8	-0.8	-0.0533	ug/L	-0.0533	ppb	21:53:32
2	Ni 231.604†	89.1	-6.9	-0.1614	ug/L	-0.1614	ppb	21:53:32

2	P 214.914†	235.1	17.3	9.4512 ug/L	9.4512 ppb	21:53:32
2	Pb 220.353†	-62.2	-25.6	-2.9022 ug/L	-2.9022 ppb	21:53:32
2	S 181.975 Axial†	56.2	11.8	15.379 ug/L	15.379 ppb	21:53:32
2	Sb 206.836†	38.3	8.8	2.7874 ug/L	2.7874 ppb	21:53:32
2	Se 196.026†	-34.8	-5.9	-3.4931 ug/L	-3.4931 ppb	21:53:32
2	Si 251.611†	523.1	65.1	1.9157 ug/L	1.9157 ppb	21:53:32
2	Sn 189.927†	4.8	0.7	0.1096 ug/L	0.1096 ppb	21:53:32
2	Ti 334.940†	-1362.2	14.5	0.0286 ug/L	0.0286 ppb	21:53:12
2	Tl 190.801†	-33.8	1.8	0.5130 ug/L	0.5130 ppb	21:53:32
2	U 409.014†	-1544.7	141.1	3.9316 ug/L	3.9316 ppb	21:53:07
2	V 292.402†	-1472.2	-24.8	-0.1535 ug/L	-0.1535 ppb	21:53:12
2	Zn 213.857†	739.7	-31.4	-0.2725 ug/L	-0.2725 ppb	21:53:32
2	SiO2†	564.0	80.2	5.0553 ug/L	5.0553 ppb	21:54:13
3	Sc Radial	5036.3	5036.3	96.6 %		21:52:10
3	Y RADIAL	5357.8	5357.8	97.26 %		21:52:10
3	Al 396.153Radial†	2.3	-9.9	-7.5662 ug/L	-7.5662 ppb	21:52:10
3	Ca 317.933Radial†	12.7	-4.3	-7.0253 ug/L	-7.0253 ppb	21:52:30
3	Fe 238.204 Radial†	11.4	0.8	7.0813 ug/L	7.0813 ppb	21:52:30
3	K 766.490 Radial†	2817.7	134.7	26.923 ug/L	26.923 ppb	21:52:10
3	Mg 279.077 IEC†	-0.3	-4.8	-158.77 ug/L	-158.77 ppb	21:52:30
3	Na 589.592 Radial†	-1056.7	138.3	38.914 ug/L	38.914 ppb	21:52:10
3	Sr 421.552†	18.1	15.6	0.0969 ug/L	0.0969 ppb	21:52:10
3	Sc 361.383	936783.1	936783.1	99.262 %		21:53:37
3	Y 371.029	784021.9	784021.9	98.832 %		21:53:37
3	Ag 328.068†	374.8	-73.9	-0.3165 ug/L	-0.3165 ppb	21:53:42
3	As 188.979†	-17.5	5.6	2.1791 ug/L	2.1791 ppb	21:54:02
3	B 249.677†	369.7	765.4	16.258 ug/L	16.258 ppb	21:53:42
3	Ba 233.527†	-0.2	-10.1	-0.0715 ug/L	-0.0715 ppb	21:54:02
3	Be 313.107†	-4456.4	-104.7	-0.0356 ug/L	-0.0356 ppb	21:53:42
3	Cd 226.502†	-207.6	7.1	0.0725 ug/L	0.0725 ppb	21:54:02
3	Co 228.616†	-74.0	-0.3	-0.0051 ug/L	-0.0051 ppb	21:54:02
3	Cr 267.716†	69.8	-22.6	-0.2407 ug/L	-0.2407 ppb	21:54:02
3	Cu 324.752†	6109.9	17.6	0.0492 ug/L	0.0492 ppb	21:53:42
3	Mn 257.610†	481.9	18.3	0.0259 ug/L	0.0259 ppb	21:54:02
3	Mo 202.031†	26.2	-3.0	-0.1967 ug/L	-0.1967 ppb	21:54:02
3	Ni 231.604†	85.0	-12.8	-0.2981 ug/L	-0.2981 ppb	21:54:02
3	P 214.914†	224.1	1.8	0.9893 ug/L	0.9893 ppb	21:54:02
3	Pb 220.353†	-57.9	-20.0	-2.2764 ug/L	-2.2764 ppb	21:54:02
3	S 181.975 Axial†	52.2	6.7	8.6986 ug/L	8.6986 ppb	21:54:02
3	Sb 206.836†	45.7	15.4	4.9404 ug/L	4.9404 ppb	21:54:02
3	Se 196.026†	-23.7	6.0	3.5679 ug/L	3.5679 ppb	21:54:02
3	Si 251.611†	537.9	70.3	2.0699 ug/L	2.0699 ppb	21:54:02
3	Sn 189.927†	16.3	12.2	1.9584 ug/L	1.9584 ppb	21:54:02
3	Ti 334.940†	-1450.5	-49.2	-0.0609 ug/L	-0.0609 ppb	21:53:42
3	Tl 190.801†	-37.7	-1.5	-0.4212 ug/L	-0.4212 ppb	21:54:02
3	U 409.014†	-1620.8	93.1	2.5936 ug/L	2.5936 ppb	21:53:37
3	V 292.402†	-1458.3	16.5	0.1037 ug/L	0.1037 ppb	21:53:42
3	Zn 213.857†	736.7	-48.1	-0.4174 ug/L	-0.4174 ppb	21:54:02
3	SiO2†	530.7	36.2	2.2843 ug/L	2.2843 ppb	21:54:18

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	934214.5	98.990	%	1.4077				1.42%
Sc Radial	5057.0	97.0	%	0.36				0.37%
Y 371.029	781355.5	98.496	%	1.3725				1.39%
Y RADIAL	5368.1	97.45	%	0.207				0.21%
Ag 328.068†	-9.4	-0.0413	ug/L	0.56311	-0.0413	ppb	0.56311	>999.9%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-16.4	-12.466	ug/L	9.1559	-12.466	ppb	9.1559	73.45%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-0.3	-0.1209	ug/L	2.61955	-0.1209	ppb	2.61955	>999.9%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	817.4	17.364	ug/L	0.9595	17.364	ppb	0.9595	5.53%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-4.2	-0.0295	ug/L	0.10880	-0.0295	ppb	0.10880	369.19%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-191.9	-0.0649	ug/L	0.03287	-0.0649	ppb	0.03287	50.62%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	0.0	0.0376	ug/L	6.15468	0.0376	ppb	6.15468	>999.9%

```
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                 7.3      0.0752 ug/L       0.05518      0.0752 ppb        0.05518  73.40%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 0.7      0.0135 ug/L       0.22778      0.0135 ppb        0.22778 >999.9%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               -20.0     -0.2130 ug/L       0.05094     -0.2130 ppb        0.05094  23.92%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†                33.5      0.0941 ug/L       0.27327      0.0941 ppb        0.27327 290.35%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          0.1      0.6819 ug/L       5.73183      0.6819 ppb        5.73183 840.55%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          89.8      17.943 ug/L       11.6007      17.943 ppb        11.6007  64.65%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -3.7     -120.19 ug/L        33.629     -120.19 ppb         33.629  27.98%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                 3.5      0.0086 ug/L       0.01920      0.0086 ppb        0.01920 224.02%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                -0.9     -0.0577 ug/L       0.13682     -0.0577 ppb        0.13682 237.08%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        161.3      45.385 ug/L       11.5884      45.385 ppb        11.5884  25.53%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               -10.5     -0.2441 ug/L       0.07274     -0.2441 ppb        0.07274  29.80%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                  8.3      4.5661 ug/L       4.38005      4.5661 ppb        4.38005  95.93%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               -22.7     -2.5798 ug/L       0.31331     -2.5798 ppb        0.31331  12.14%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            6.0      7.8333 ug/L       8.01365      7.8333 ppb        8.01365 102.30%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                18.1      5.7706 ug/L       3.47359      5.7706 ppb        3.47359  60.19%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 0.5      0.2760 ug/L       3.55463      0.2760 ppb        3.55463 >999.9%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                72.9      2.1437 ug/L       0.27254      2.1437 ppb        0.27254  12.71%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 9.3      1.4917 ug/L       1.21776      1.4917 ppb        1.21776  81.64%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                11.1      0.0692 ug/L       0.03311      0.0692 ppb        0.03311  47.87%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                20.4      0.0388 ug/L       0.10518      0.0388 ppb        0.10518 271.22%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 1.6      0.4406 ug/L       0.82799      0.4406 ppb        0.82799 187.94%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                 83.1      2.3149 ug/L       1.77254      2.3149 ppb        1.77254  76.57%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 19.1      0.1233 ug/L       0.28707      0.1233 ppb        0.28707 232.82%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               -48.2     -0.4180 ug/L       0.14580     -0.4180 ppb        0.14580  34.88%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      45.3      2.8564 ug/L       1.97595      2.8564 ppb        1.97595  69.17%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 13
Sample ID: 1202011921|940187|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 62
Date Collected: 1/20/2010 21:56:27
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1202011921|940187|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5072.7	5072.7	97.3	%			21:58:20
1	Y RADIAL	5326.6	5326.6	96.69	%			21:58:20
1	Al 396.153Radial†	14.3	2.4	1.8424	ug/L	1.8424	ppb	21:58:20
1	Ca 317.933Radial†	27.3	10.6	17.440	ug/L	17.440	ppb	21:58:40
1	Fe 238.204 Radial†	20.2	9.8	88.908	ug/L	88.908	ppb	21:58:40
1	K 766.490 Radial†	2855.8	153.0	30.565	ug/L	30.565	ppb	21:58:20
1	Mg 279.077 IEC†	3.0	-1.4	-46.224	ug/L	-46.224	ppb	21:58:40
1	Na 589.592 Radial†	-977.3	227.8	64.082	ug/L	64.082	ppb	21:58:20
1	Sr 421.552†	12.6	9.8	0.0606	ug/L	0.0606	ppb	21:58:20
1	Sc 361.383	927526.3	927526.3	98.281	%			21:59:37
1	Y 371.029	777083.1	777083.1	97.958	%			21:59:37
1	Ag 328.068†	412.6	-31.8	-0.1129	ug/L	-0.1129	ppb	21:59:42
1	As 188.979†	-28.8	-6.0	-2.3136	ug/L	-2.3136	ppb	22:00:02
1	B 249.677†	435.2	835.8	17.740	ug/L	17.740	ppb	21:59:42
1	Ba 233.527†	35.6	26.3	0.1887	ug/L	0.1887	ppb	22:00:02
1	Be 313.107†	-4339.9	-30.9	-0.0080	ug/L	-0.0080	ppb	21:59:42
1	Cd 226.502†	-191.3	21.5	0.2137	ug/L	0.2137	ppb	22:00:02
1	Co 228.616†	-82.6	-9.7	-0.1898	ug/L	-0.1898	ppb	22:00:02
1	Cr 267.716†	138.9	48.4	0.5123	ug/L	0.5123	ppb	22:00:02
1	Cu 324.752†	6240.0	211.5	0.6049	ug/L	0.6049	ppb	21:59:42
1	Mn 257.610†	1189.0	742.7	0.7687	ug/L	0.7687	ppb	22:00:02
1	Mo 202.031†	18.7	-10.4	-0.6697	ug/L	-0.6697	ppb	22:00:02
1	Ni 231.604†	98.9	2.3	0.0534	ug/L	0.0534	ppb	22:00:02
1	P 214.914†	240.5	20.8	11.285	ug/L	11.285	ppb	22:00:02
1	Pb 220.353†	-42.5	-5.0	-0.5748	ug/L	-0.5748	ppb	22:00:02
1	S 181.975 Axial†	51.3	6.3	8.2049	ug/L	8.2049	ppb	22:00:02
1	Sb 206.836†	41.6	11.7	3.7402	ug/L	3.7402	ppb	22:00:02
1	Se 196.026†	-24.4	5.0	3.2425	ug/L	3.2425	ppb	22:00:02
1	Si 251.611†	1297.8	848.9	24.972	ug/L	24.972	ppb	22:00:02
1	Sn 189.927†	16.7	12.7	2.0471	ug/L	2.0471	ppb	22:00:02
1	Ti 334.940†	-648.4	752.4	1.1045	ug/L	1.1045	ppb	21:59:42
1	Tl 190.801†	-43.0	-7.3	-2.0325	ug/L	-2.0325	ppb	22:00:02
1	U 409.014†	-1541.7	157.3	4.3716	ug/L	4.3716	ppb	21:59:37
1	V 292.402†	-1524.7	-65.7	-0.4358	ug/L	-0.4358	ppb	21:59:42
1	Zn 213.857†	942.0	168.2	1.4534	ug/L	1.4534	ppb	22:00:02
1	SiO2†	1325.9	850.6	53.628	ug/L	53.628	ppb	22:01:08
2	Sc Radial	5017.5	5017.5	96.2	%			21:58:45
2	Y RADIAL	5298.2	5298.2	96.18	%			21:58:45
2	Al 396.153Radial†	13.6	1.9	1.4136	ug/L	1.4136	ppb	21:58:45
2	Ca 317.933Radial†	26.8	10.4	17.088	ug/L	17.088	ppb	21:59:05
2	Fe 238.204 Radial†	17.8	7.5	68.641	ug/L	68.641	ppb	21:59:05
2	K 766.490 Radial†	2656.7	-21.7	-4.3648	ug/L	-4.3648	ppb	21:58:45
2	Mg 279.077 IEC†	5.4	1.1	37.301	ug/L	37.301	ppb	21:59:05
2	Na 589.592 Radial†	-994.0	199.4	56.107	ug/L	56.107	ppb	21:58:45
2	Sr 421.552†	52.8	51.8	0.3214	ug/L	0.3214	ppb	21:58:45
2	Sc 361.383	939910.5	939910.5	99.593	%			22:00:07
2	Y 371.029	787372.0	787372.0	99.255	%			22:00:07
2	Ag 328.068†	430.6	-19.2	-0.0620	ug/L	-0.0620	ppb	22:00:12
2	As 188.979†	-16.8	6.4	2.5091	ug/L	2.5091	ppb	22:00:32
2	B 249.677†	364.8	759.3	16.118	ug/L	16.118	ppb	22:00:12
2	Ba 233.527†	31.4	21.6	0.1556	ug/L	0.1556	ppb	22:00:32
2	Be 313.107†	-4438.7	-72.0	-0.0219	ug/L	-0.0219	ppb	22:00:12
2	Cd 226.502†	-197.4	18.1	0.1798	ug/L	0.1798	ppb	22:00:32
2	Co 228.616†	-58.9	15.2	0.2851	ug/L	0.2851	ppb	22:00:32
2	Cr 267.716†	118.1	25.6	0.2722	ug/L	0.2722	ppb	22:00:32
2	Cu 324.752†	6121.3	8.6	0.0269	ug/L	0.0269	ppb	22:00:12
2	Mn 257.610†	1186.4	724.2	0.7444	ug/L	0.7444	ppb	22:00:32
2	Mo 202.031†	29.3	0.1	0.0106	ug/L	0.0106	ppb	22:00:32
2	Ni 231.604†	128.5	30.7	0.7159	ug/L	0.7159	ppb	22:00:32

2	P 214.914†	226.2	3.2	1.7093	ug/L	1.7093 ppb	22:00:32
2	Pb 220.353†	-46.9	-8.8	-1.0043	ug/L	-1.0043 ppb	22:00:32
2	S 181.975 Axial†	51.4	5.7	7.4116	ug/L	7.4116 ppb	22:00:32
2	Sb 206.836†	40.2	9.8	3.1494	ug/L	3.1494 ppb	22:00:32
2	Se 196.026†	-32.4	-2.6	-1.3239	ug/L	-1.3239 ppb	22:00:32
2	Si 251.611†	1305.9	839.7	24.693	ug/L	24.693 ppb	22:00:32
2	Sn 189.927†	20.1	15.9	2.5652	ug/L	2.5652 ppb	22:00:32
2	Ti 334.940†	-657.2	752.2	1.0983	ug/L	1.0983 ppb	22:00:12
2	Tl 190.801†	-39.9	-3.6	-0.9887	ug/L	-0.9887 ppb	22:00:32
2	U 409.014†	-1631.7	87.6	2.4330	ug/L	2.4330 ppb	22:00:07
2	V 292.402†	-1463.3	16.4	0.0986	ug/L	0.0986 ppb	22:00:12
2	Zn 213.857†	925.8	139.3	1.2002	ug/L	1.2002 ppb	22:00:32
2	SiO2†	1311.5	818.4	51.581	ug/L	51.581 ppb	22:01:13
3	Sc Radial	5055.3	5055.3	96.9	%		21:59:10
3	Y RADIAL	5333.7	5333.7	96.82	%		21:59:10
3	Al 396.153Radial†	3.9	-8.3	-6.3180	ug/L	-6.3180 ppb	21:59:10
3	Ca 317.933Radial†	28.1	11.5	18.959	ug/L	18.959 ppb	21:59:30
3	Fe 238.204 Radial†	19.8	9.4	85.418	ug/L	85.418 ppb	21:59:30
3	K 766.490 Radial†	2741.2	44.9	8.9348	ug/L	8.9348 ppb	21:59:10
3	Mg 279.077 IEC†	4.4	0.0	0.1638	ug/L	0.1638 ppb	21:59:30
3	Na 589.592 Radial†	-938.0	264.9	74.519	ug/L	74.519 ppb	21:59:10
3	Sr 421.552†	14.8	12.2	0.0753	ug/L	0.0753 ppb	21:59:10
3	Sc 361.383	931343.7	931343.7	98.685	%		22:00:37
3	Y 371.029	780499.8	780499.8	98.388	%		22:00:37
3	Ag 328.068†	491.1	46.1	0.2248	ug/L	0.2248 ppb	22:00:42
3	As 188.979†	-18.4	4.6	1.8266	ug/L	1.8266 ppb	22:01:02
3	B 249.677†	397.9	796.2	16.899	ug/L	16.899 ppb	22:00:42
3	Ba 233.527†	46.5	37.3	0.2679	ug/L	0.2679 ppb	22:01:02
3	Be 313.107†	-4362.7	-36.0	-0.0098	ug/L	-0.0098 ppb	22:00:42
3	Cd 226.502†	-219.4	-6.1	-0.0706	ug/L	-0.0706 ppb	22:01:02
3	Co 228.616†	-80.3	-7.0	-0.1360	ug/L	-0.1360 ppb	22:01:02
3	Cr 267.716†	123.5	32.2	0.3423	ug/L	0.3423 ppb	22:01:02
3	Cu 324.752†	6128.8	72.8	0.2109	ug/L	0.2109 ppb	22:00:42
3	Mn 257.610†	1186.2	734.8	0.7585	ug/L	0.7585 ppb	22:01:02
3	Mo 202.031†	30.0	1.0	0.0716	ug/L	0.0716 ppb	22:01:02
3	Ni 231.604†	116.4	19.6	0.4572	ug/L	0.4572 ppb	22:01:02
3	P 214.914†	233.4	12.6	6.8530	ug/L	6.8530 ppb	22:01:02
3	Pb 220.353†	-58.1	-20.6	-2.3437	ug/L	-2.3437 ppb	22:01:02
3	S 181.975 Axial†	46.8	1.5	2.0112	ug/L	2.0112 ppb	22:01:02
3	Sb 206.836†	38.3	8.2	2.6668	ug/L	2.6668 ppb	22:01:02
3	Se 196.026†	-26.2	3.3	2.2245	ug/L	2.2245 ppb	22:01:02
3	Si 251.611†	1259.4	804.6	23.661	ug/L	23.661 ppb	22:01:02
3	Sn 189.927†	25.7	21.8	3.5131	ug/L	3.5131 ppb	22:01:02
3	Ti 334.940†	-678.2	724.9	1.0620	ug/L	1.0620 ppb	22:00:42
3	Tl 190.801†	-42.5	-6.6	-1.8211	ug/L	-1.8211 ppb	22:01:02
3	U 409.014†	-1641.5	62.6	1.7332	ug/L	1.7332 ppb	22:00:37
3	V 292.402†	-1418.6	48.2	0.2979	ug/L	0.2979 ppb	22:00:42
3	Zn 213.857†	928.3	150.4	1.2965	ug/L	1.2965 ppb	22:01:02
3	SiO2†	1301.8	820.6	51.719	ug/L	51.719 ppb	22:01:18

Mean Data: 1202011921|940187|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	932926.8	98.853	%	0.6720				0.68%
Sc Radial	5048.5	96.8	%	0.54				0.56%
Y 371.029	781651.6	98.534	%	0.6606				0.67%
Y RADIAL	5319.5	96.56	%	0.341				0.35%
Ag 328.068†	-1.6	0.0166	ug/L	0.18209	0.0166	ppb	0.18209	>999.9%
Al 396.153Radial†	-1.4	-1.0207	ug/L	4.59259	-1.0207	ppb	4.59259	449.96%
As 188.979†	1.7	0.6741	ug/L	2.60978	0.6741	ppb	2.60978	387.18%
B 249.677†	797.1	16.919	ug/L	0.8113	16.919	ppb	0.8113	4.80%
Ba 233.527†	28.4	0.2041	ug/L	0.05770	0.2041	ppb	0.05770	28.27%
Be 313.107†	-46.3	-0.0132	ug/L	0.00757	-0.0132	ppb	0.00757	57.25%
Ca 317.933Radial†	10.9	17.829	ug/L	0.9943	17.829	ppb	0.9943	5.58%
Cd 226.502†	11.2	0.1076	ug/L	0.15528	0.1076	ppb	0.15528	144.25%
Co 228.616†	-0.5	-0.0136	ug/L	0.26005	-0.0136	ppb	0.26005	>999.9%
Cr 267.716†	35.4	0.3756	ug/L	0.12348	0.3756	ppb	0.12348	32.87%
Cu 324.752†	97.6	0.2809	ug/L	0.29529	0.2809	ppb	0.29529	105.11%
Fe 238.204 Radial†	8.9	80.989	ug/L	10.8354	80.989	ppb	10.8354	13.38%
K 766.490 Radial†	58.7	11.712	ug/L	17.6298	11.712	ppb	17.6298	150.53%

Mg 279.077 IEC†	-0.1	-2.9200	ug/L	41.84788	-2.9200	ppb	41.84788	>999.9%
Mn 257.610†	733.9	0.7572	ug/L	0.01221	0.7572	ppb	0.01221	1.61%
Mo 202.031†	-3.1	-0.1959	ug/L	0.41150	-0.1959	ppb	0.41150	210.10%
Na 589.592 Radial†	230.7	64.903	ug/L	9.2334	64.903	ppb	9.2334	14.23%
Ni 231.604†	17.5	0.4088	ug/L	0.33390	0.4088	ppb	0.33390	81.67%
P 214.914†	12.2	6.6158	ug/L	4.79236	6.6158	ppb	4.79236	72.44%
Pb 220.353†	-11.5	-1.3076	ug/L	0.92265	-1.3076	ppb	0.92265	70.56%
S 181.975 Axial†	4.5	5.8759	ug/L	3.37034	5.8759	ppb	3.37034	57.36%
Sb 206.836†	9.9	3.1854	ug/L	0.53762	3.1854	ppb	0.53762	16.88%
Se 196.026†	1.9	1.3810	ug/L	2.39720	1.3810	ppb	2.39720	173.58%
Si 251.611†	831.1	24.442	ug/L	0.6905	24.442	ppb	0.6905	2.83%
Sn 189.927†	16.8	2.7085	ug/L	0.74344	2.7085	ppb	0.74344	27.45%
Sr 421.552†	24.6	0.1524	ug/L	0.14650	0.1524	ppb	0.14650	96.12%
Ti 334.940†	743.2	1.0883	ug/L	0.02298	1.0883	ppb	0.02298	2.11%
Tl 190.801†	-5.8	-1.6141	ug/L	0.55183	-1.6141	ppb	0.55183	34.19%
U 409.014†	102.5	2.8459	ug/L	1.36678	2.8459	ppb	1.36678	48.03%
V 292.402†	-0.4	-0.0131	ug/L	0.37934	-0.0131	ppb	0.37934	>999.9%
Zn 213.857†	152.6	1.3167	ug/L	0.12781	1.3167	ppb	0.12781	9.71%
SiO2†	829.9	52.309	ug/L	1.1436	52.309	ppb	1.1436	2.19%

Sequence No.: 14
Sample ID: 1202011922|940187|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 63
Date Collected: 1/20/2010 22:03:28
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1202011922|940187|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5147.3	5147.3	98.7	%			22:05:41
1	Y RADIAL	5920.1	5920.1	107.5	%			22:05:41
1	Al 396.153Radial†	126118.5	127773.2	97273	ug/L	97273	ppb	22:05:21
1	Ca 317.933Radial†	58901.1	59662.2	97970	ug/L	97970	ppb	22:05:21
1	Fe 238.204 Radial†	20900.1	21165.3	192650	ug/L	192650	ppb	22:05:21
1	K 766.490 Radial†	209637.1	209624.8	41876	ug/L	41876	ppb	22:05:21
1	Mg 279.077 IEC†	1159.7	1170.5	38278	ug/L	38278	ppb	22:05:41
1	Na 589.592 Radial†	33597.6	35274.2	9924.0	ug/L	9924.0	ppb	22:05:21
1	Sr 421.552†	349850.4	354471.5	2199.1	ug/L	2199.1	ppb	22:05:21
1	Sc 361.383	930021.8	930021.8	98.545	%			22:06:43
1	Y 371.029	838953.6	838953.6	105.76	%			22:06:43
1	Ag 328.068†	56037.1	56412.8	308.35	ug/L	308.35	ppb	22:06:43
1	As 188.979†	2484.2	2544.1	1085.3	ug/L	1085.3	ppb	22:06:48
1	B 249.677†	71177.7	72621.4	1508.8	ug/L	1508.8	ppb	22:06:43
1	Ba 233.527†	274584.8	278628.2	1987.0	ug/L	1987.0	ppb	22:06:43
1	Be 313.107†	2239842.4	2277291.5	785.45	ug/L	785.45	ppb	22:06:43
1	Cd 226.502†	55876.6	56917.7	567.38	ug/L	567.38	ppb	22:06:48
1	Co 228.616†	47111.4	47881.2	893.79	ug/L	893.79	ppb	22:06:48
1	Cr 267.716†	214721.4	217798.1	2314.5	ug/L	2314.5	ppb	22:06:43
1	Cu 324.752†	647074.2	650488.5	1864.0	ug/L	1864.0	ppb	22:06:43
1	Mn 257.610†	5125802.5	5201001.6	5326.3	ug/L	5326.3	ppb	22:06:43
1	Mo 202.031†	7576.8	7659.3	515.10	ug/L	515.10	ppb	22:06:48
1	Ni 231.604†	54469.7	55175.4	1288.3	ug/L	1288.3	ppb	22:06:48
1	P 214.914†	14181.0	14166.4	7317.8	ug/L	7317.8	ppb	22:06:48
1	Pb 220.353†	6790.3	6928.8	790.59	ug/L	790.59	ppb	22:06:48
1	S 181.975 Axial†	2868.6	2865.1	3715.8	ug/L	3715.8	ppb	22:06:48
1	Sb 206.836†	4996.2	5039.4	1615.8	ug/L	1615.8	ppb	22:06:48
1	Se 196.026†	3868.7	3955.7	3031.6	ug/L	3031.6	ppb	22:06:48
1	Si 251.611†	1076879.5	1092304.7	32116	ug/L	32116	ppb	22:06:43
1	Sn 189.927†	6478.9	6570.2	1074.1	ug/L	1074.1	ppb	22:06:48
1	Ti 334.940†	4143230.5	4205804.3	6161.1	ug/L	6161.1	ppb	22:06:43
1	Tl 190.801†	3901.5	3995.6	1185.8	ug/L	1185.8	ppb	22:06:48
1	U 409.014†	-9114.0	-7522.6	-236.71	ug/L	-236.71	ppb	22:06:43
1	V 292.402†	192660.3	196990.0	1228.5	ug/L	1228.5	ppb	22:06:43
1	Zn 213.857†	646853.4	655611.8	5673.2	ug/L	5673.2	ppb	22:06:43
1	SiO2†	1083119.2	1098609.5	69228	ug/L	69228	ppb	22:07:22
2	Sc Radial	5183.5	5183.5	99.4	%			22:06:07
2	Y RADIAL	5952.1	5952.1	108.0	%			22:06:07
2	Al 396.153Radial†	125979.5	126741.7	96488	ug/L	96488	ppb	22:05:47
2	Ca 317.933Radial†	58985.6	59330.8	97426	ug/L	97426	ppb	22:05:47
2	Fe 238.204 Radial†	20919.1	21036.7	191480	ug/L	191480	ppb	22:05:47
2	K 766.490 Radial†	209718.2	208224.4	41596	ug/L	41596	ppb	22:05:47
2	Mg 279.077 IEC†	1177.8	1180.5	38607	ug/L	38607	ppb	22:06:07
2	Na 589.592 Radial†	33537.3	34976.1	9840.1	ug/L	9840.1	ppb	22:05:47
2	Sr 421.552†	349586.7	351732.9	2182.1	ug/L	2182.1	ppb	22:05:47
2	Sc 361.383	941303.2	941303.2	99.741	%			22:06:57
2	Y 371.029	850473.4	850473.4	107.21	%			22:06:57
2	Ag 328.068†	56576.1	56271.7	307.36	ug/L	307.36	ppb	22:06:57
2	As 188.979†	2478.2	2507.8	1070.8	ug/L	1070.8	ppb	22:07:02
2	B 249.677†	71873.2	72453.1	1505.4	ug/L	1505.4	ppb	22:06:57
2	Ba 233.527†	277082.2	277792.7	1981.0	ug/L	1981.0	ppb	22:06:57
2	Be 313.107†	2267909.9	2278191.5	785.73	ug/L	785.73	ppb	22:06:57
2	Cd 226.502†	55729.4	56090.5	558.97	ug/L	558.97	ppb	22:07:02
2	Co 228.616†	47030.1	47226.7	881.40	ug/L	881.40	ppb	22:07:02
2	Cr 267.716†	216857.0	217327.9	2309.5	ug/L	2309.5	ppb	22:06:57
2	Cu 324.752†	654145.9	649709.0	1861.8	ug/L	1861.8	ppb	22:06:57
2	Mn 257.610†	5173040.0	5186023.1	5310.9	ug/L	5310.9	ppb	22:06:57
2	Mo 202.031†	7569.6	7559.9	508.53	ug/L	508.53	ppb	22:07:02
2	Ni 231.604†	54392.9	54436.0	1271.0	ug/L	1271.0	ppb	22:07:02

2	P 214.914†	14159.1	13972.0	7211.7 ug/L	7211.7 ppb	22:07:02
2	Pb 220.353†	6770.3	6826.2	778.86 ug/L	778.86 ppb	22:07:02
2	S 181.975 Axial†	2856.3	2817.9	3654.4 ug/L	3654.4 ppb	22:07:02
2	Sb 206.836†	5018.9	5001.4	1603.3 ug/L	1603.3 ppb	22:07:02
2	Se 196.026†	3853.4	3893.3	2990.5 ug/L	2990.5 ppb	22:07:02
2	Si 251.611†	1087152.3	1089507.3	32034 ug/L	32034 ppb	22:06:57
2	Sn 189.927†	6461.4	6473.9	1058.5 ug/L	1058.5 ppb	22:07:02
2	Ti 334.940†	4186573.5	4198871.0	6150.8 ug/L	6150.8 ppb	22:06:57
2	Tl 190.801†	3866.5	3913.0	1162.6 ug/L	1162.6 ppb	22:07:02
2	U 409.014†	-8999.2	-7296.7	-230.27 ug/L	-230.27 ppb	22:06:57
2	V 292.402†	194756.2	196748.3	1227.1 ug/L	1227.1 ppb	22:06:57
2	Zn 213.857†	652600.1	653506.7	5655.1 ug/L	5655.1 ppb	22:06:57
2	SiO2†	1092436.7	1094778.6	68986 ug/L	68986 ppb	22:07:28
3	Sc Radial	5181.8	5181.8	99.4 %		22:06:32
3	Y RADIAL	5943.8	5943.8	107.9 %		22:06:32
3	Al 396.153Radial†	126055.2	126858.6	96577 ug/L	96577 ppb	22:06:12
3	Ca 317.933Radial†	58879.9	59243.5	97283 ug/L	97283 ppb	22:06:12
3	Fe 238.204 Radial†	20893.5	21017.7	191310 ug/L	191310 ppb	22:06:12
3	K 766.490 Radial†	210214.0	208791.2	41710 ug/L	41710 ppb	22:06:12
3	Mg 279.077 IEC†	1168.0	1171.1	38297 ug/L	38297 ppb	22:06:32
3	Na 589.592 Radial†	33541.5	34991.2	9844.3 ug/L	9844.3 ppb	22:06:12
3	Sr 421.552†	349939.5	352200.9	2185.0 ug/L	2185.0 ppb	22:06:12
3	Sc 361.383	936307.9	936307.9	99.211 %		22:07:11
3	Y 371.029	846430.8	846430.8	106.70 %		22:07:11
3	Ag 328.068†	56277.6	56273.4	307.32 ug/L	307.32 ppb	22:07:11
3	As 188.979†	2469.0	2511.9	1072.3 ug/L	1072.3 ppb	22:07:16
3	B 249.677†	71373.1	72333.5	1502.9 ug/L	1502.9 ppb	22:07:11
3	Ba 233.527†	275671.3	277852.7	1981.5 ug/L	1981.5 ppb	22:07:11
3	Be 313.107†	2261316.2	2283676.2	787.58 ug/L	787.58 ppb	22:07:11
3	Cd 226.502†	55699.4	56358.4	561.75 ug/L	561.75 ppb	22:07:16
3	Co 228.616†	46887.2	47334.2	883.45 ug/L	883.45 ppb	22:07:16
3	Cr 267.716†	216095.7	217720.5	2313.7 ug/L	2313.7 ppb	22:07:11
3	Cu 324.752†	649900.6	648929.0	1859.5 ug/L	1859.5 ppb	22:07:11
3	Mn 257.610†	5147380.1	5187829.5	5312.7 ug/L	5312.7 ppb	22:07:11
3	Mo 202.031†	7536.8	7567.3	508.99 ug/L	508.99 ppb	22:07:16
3	Ni 231.604†	54240.6	54573.4	1274.2 ug/L	1274.2 ppb	22:07:16
3	P 214.914†	14162.7	14051.3	7256.1 ug/L	7256.1 ppb	22:07:16
3	Pb 220.353†	6816.2	6908.7	788.26 ug/L	788.26 ppb	22:07:16
3	S 181.975 Axial†	2864.1	2841.0	3684.6 ug/L	3684.6 ppb	22:07:16
3	Sb 206.836†	4979.0	4988.0	1599.1 ug/L	1599.1 ppb	22:07:16
3	Se 196.026†	3830.5	3890.8	2988.4 ug/L	2988.4 ppb	22:07:16
3	Si 251.611†	1081882.7	1090011.0	32049 ug/L	32049 ppb	22:07:11
3	Sn 189.927†	6438.5	6485.4	1060.4 ug/L	1060.4 ppb	22:07:16
3	Ti 334.940†	4160820.6	4195307.1	6145.6 ug/L	6145.6 ppb	22:07:11
3	Tl 190.801†	3868.5	3935.7	1168.9 ug/L	1168.9 ppb	22:07:16
3	U 409.014†	-9135.0	-7481.7	-235.41 ug/L	-235.41 ppb	22:07:11
3	V 292.402†	193795.8	196822.0	1227.6 ug/L	1227.6 ppb	22:07:11
3	Zn 213.857†	649536.7	653909.6	5658.6 ug/L	5658.6 ppb	22:07:11
3	SiO2†	1095765.3	1103977.0	69566 ug/L	69566 ppb	22:07:34

Mean Data: 1202011922|940187|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	935877.6	99.166	%	0.5990				0.60%
Sc Radial	5170.9	99.1	%	0.39				0.39%
Y 371.029	845285.9	106.56	%	0.737				0.69%
Y RADIAL	5938.7	107.8	%	0.30				0.28%
Ag 328.068†	56319.3	307.67	ug/L	0.583	307.67	ppb	0.583	0.19%
Al 396.153Radial†	127124.5	96780	ug/L	429.9	96780	ppb	429.9	0.44%
As 188.979†	2521.3	1076.1	ug/L	7.95	1076.1	ppb	7.95	0.74%
B 249.677†	72469.3	1505.7	ug/L	2.94	1505.7	ppb	2.94	0.20%
Ba 233.527†	278091.2	1983.2	ug/L	3.33	1983.2	ppb	3.33	0.17%
Be 313.107†	2279719.8	786.25	ug/L	1.156	786.25	ppb	1.156	0.15%
Ca 317.933Radial†	59412.2	97560	ug/L	362.7	97560	ppb	362.7	0.37%
Cd 226.502†	56455.5	562.70	ug/L	4.286	562.70	ppb	4.286	0.76%
Co 228.616†	47480.7	886.21	ug/L	6.643	886.21	ppb	6.643	0.75%
Cr 267.716†	217615.5	2312.6	ug/L	2.68	2312.6	ppb	2.68	0.12%
Cu 324.752†	649708.8	1861.8	ug/L	2.26	1861.8	ppb	2.26	0.12%
Fe 238.204 Radial†	21073.2	191820	ug/L	731.4	191820	ppb	731.4	0.38%
K 766.490 Radial†	208880.1	41727	ug/L	140.7	41727	ppb	140.7	0.34%

Mg 279.077 IEC†	1174.0	38394	ug/L	185.0	38394	ppb	185.0	0.48%
Mn 257.610†	5191618.1	5316.6	ug/L	8.42	5316.6	ppb	8.42	0.16%
Mo 202.031†	7595.5	510.87	ug/L	3.666	510.87	ppb	3.666	0.72%
Na 589.592 Radial†	35080.5	9869.4	ug/L	47.25	9869.4	ppb	47.25	0.48%
Ni 231.604†	54728.3	1277.8	ug/L	9.18	1277.8	ppb	9.18	0.72%
P 214.914†	14063.2	7261.9	ug/L	53.30	7261.9	ppb	53.30	0.73%
Pb 220.353†	6887.9	785.90	ug/L	6.206	785.90	ppb	6.206	0.79%
S 181.975 Axial†	2841.3	3684.9	ug/L	30.71	3684.9	ppb	30.71	0.83%
Sb 206.836†	5009.6	1606.1	ug/L	8.67	1606.1	ppb	8.67	0.54%
Se 196.026†	3913.2	3003.5	ug/L	24.37	3003.5	ppb	24.37	0.81%
Si 251.611†	1090607.7	32066	ug/L	43.8	32066	ppb	43.8	0.14%
Sn 189.927†	6509.9	1064.3	ug/L	8.52	1064.3	ppb	8.52	0.80%
Sr 421.552†	352801.8	2188.8	ug/L	9.09	2188.8	ppb	9.09	0.42%
Ti 334.940†	4199994.2	6152.5	ug/L	7.86	6152.5	ppb	7.86	0.13%
Tl 190.801†	3948.1	1172.5	ug/L	11.98	1172.5	ppb	11.98	1.02%
U 409.014†	-7433.6	-234.13	ug/L	3.406	-234.13	ppb	3.406	1.45%
V 292.402†	196853.4	1227.7	ug/L	0.73	1227.7	ppb	0.73	0.06%
Zn 213.857†	654342.7	5662.3	ug/L	9.59	5662.3	ppb	9.59	0.17%
SiO2†	1099121.7	69260	ug/L	291.2	69260	ppb	291.2	0.42%

Sequence No.: 15
Sample ID: 244125001|940187|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 64
Date Collected: 1/20/2010 22:09:44
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 244125001|940187|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5204.6	5204.6	99.8	%			22:11:57
1	Y RADIAL	6172.7	6172.7	112.1	%			22:11:57
1	Al 396.153Radial†	209035.3	209454.7	159500	ug/L	159500	ppb	22:11:37
1	Ca 317.933Radial†	12127.8	12135.4	19927	ug/L	19927	ppb	22:11:57
1	Fe 238.204 Radial†	16157.3	16179.7	147250	ug/L	147250	ppb	22:11:37
1	K 766.490 Radial†	115232.4	112687.2	22524	ug/L	22524	ppb	22:11:37
1	Mg 279.077 IEC†	761.0	758.1	24765	ug/L	24765	ppb	22:11:57
1	Na 589.592 Radial†	3917.7	5158.4	1451.2	ug/L	1451.2	ppb	22:11:37
1	Sr 421.552†	44797.2	44886.6	278.42	ug/L	278.42	ppb	22:11:37
1	Sc 361.383	931562.0	931562.0	98.708	%			22:12:56
1	Y 371.029	869641.7	869641.7	109.63	%			22:12:56
1	Ag 328.068†	-9833.1	-10413.3	4.1453	ug/L	4.1453	ppb	22:13:01
1	As 188.979†	-91.7	-69.7	60.419	ug/L	60.419	ppb	22:13:21
1	B 249.677†	2478.6	2904.0	37.582	ug/L	37.582	ppb	22:13:01
1	Ba 233.527†	247141.0	250364.7	1782.9	ug/L	1782.9	ppb	22:13:01
1	Be 313.107†	-11090.3	-6850.5	11.560	ug/L	11.560	ppb	22:13:01
1	Cd 226.502†	1182.2	1413.9	-0.6245	ug/L	-0.6245	ppb	22:13:21
1	Co 228.616†	3437.5	3556.8	53.333	ug/L	53.333	ppb	22:13:21
1	Cr 267.716†	10504.0	10548.4	115.20	ug/L	115.20	ppb	22:13:21
1	Cu 324.752†	33480.4	27780.8	87.082	ug/L	87.082	ppb	22:13:01
1	Mn 257.610†	3152842.1	3193626.9	3273.4	ug/L	3273.4	ppb	22:12:56
1	Mo 202.031†	-75.1	-105.5	4.7971	ug/L	4.7971	ppb	22:13:21
1	Ni 231.604†	3947.9	3901.2	91.084	ug/L	91.084	ppb	22:13:21
1	P 214.914†	1760.7	1559.8	764.88	ug/L	764.88	ppb	22:13:21
1	Pb 220.353†	739.1	787.1	109.61	ug/L	109.61	ppb	22:13:21
1	S 181.975 Axial†	399.0	358.3	437.09	ug/L	437.09	ppb	22:13:21
1	Sb 206.836†	108.2	79.0	4.8307	ug/L	4.8307	ppb	22:13:21
1	Se 196.026†	-807.7	-788.5	74.954	ug/L	74.954	ppb	22:13:21
1	Si 251.611†	1181694.2	1196684.0	35192	ug/L	35192	ppb	22:12:56
1	Sn 189.927†	-113.3	-119.0	-13.623	ug/L	-13.623	ppb	22:13:21
1	Ti 334.940†	4124609.0	4179987.7	6114.8	ug/L	6114.8	ppb	22:12:56
1	Tl 190.801†	-248.8	-215.5	5.2557	ug/L	5.2557	ppb	22:13:21
1	U 409.014†	-9332.9	-7729.0	-232.37	ug/L	-232.37	ppb	22:13:01
1	V 292.402†	45668.3	47751.5	276.60	ug/L	276.60	ppb	22:13:01
1	Zn 213.857†	34811.8	34477.0	284.91	ug/L	284.91	ppb	22:13:01
1	SiO2†	1193625.5	1208744.4	76183	ug/L	76183	ppb	22:14:32
2	Sc Radial	5240.1	5240.1	100	%			22:12:23
2	Y RADIAL	6226.4	6226.4	113.0	%			22:12:23
2	Al 396.153Radial†	209844.2	208842.4	159030	ug/L	159030	ppb	22:12:03
2	Ca 317.933Radial†	12207.6	12132.5	19923	ug/L	19923	ppb	22:12:23
2	Fe 238.204 Radial†	16084.5	15997.7	145600	ug/L	145600	ppb	22:12:03
2	K 766.490 Radial†	115179.3	111853.1	22357	ug/L	22357	ppb	22:12:03
2	Mg 279.077 IEC†	766.6	758.5	24778	ug/L	24778	ppb	22:12:23
2	Na 589.592 Radial†	3950.3	5164.3	1452.9	ug/L	1452.9	ppb	22:12:03
2	Sr 421.552†	45034.8	44819.3	278.00	ug/L	278.00	ppb	22:12:03
2	Sc 361.383	943997.8	943997.8	100.03	%			22:13:28
2	Y 371.029	881340.5	881340.5	111.10	%			22:13:28
2	Ag 328.068†	-9737.5	-10186.5	4.5482	ug/L	4.5482	ppb	22:13:33
2	As 188.979†	-82.0	-58.8	64.166	ug/L	64.166	ppb	22:13:54
2	B 249.677†	2440.1	2832.4	36.332	ug/L	36.332	ppb	22:13:33
2	Ba 233.527†	245249.0	245174.8	1745.9	ug/L	1745.9	ppb	22:13:33
2	Be 313.107†	-11141.3	-6753.5	11.566	ug/L	11.566	ppb	22:13:33
2	Cd 226.502†	1220.0	1435.9	-0.2260	ug/L	-0.2260	ppb	22:13:54
2	Co 228.616†	3447.4	3520.8	52.681	ug/L	52.681	ppb	22:13:54
2	Cr 267.716†	10567.0	10471.3	114.34	ug/L	114.34	ppb	22:13:54
2	Cu 324.752†	33028.8	26882.5	84.430	ug/L	84.430	ppb	22:13:33
2	Mn 257.610†	3183505.3	3182204.7	3261.5	ug/L	3261.5	ppb	22:13:28
2	Mo 202.031†	-78.3	-107.7	4.5236	ug/L	4.5236	ppb	22:13:54
2	Ni 231.604†	3966.6	3867.2	90.292	ug/L	90.292	ppb	22:13:54

2	P 214.914†	1757.8	1533.4	752.06	ug/L	752.06 ppb	22:13:54
2	Pb 220.353†	766.4	804.5	111.65	ug/L	111.65 ppb	22:13:54
2	S 181.975 Axial†	400.4	354.4	432.08	ug/L	432.08 ppb	22:13:54
2	Sb 206.836†	98.5	67.9	1.3084	ug/L	1.3084 ppb	22:13:54
2	Se 196.026†	-810.9	-780.9	73.540	ug/L	73.540 ppb	22:13:54
2	Si 251.611†	1195481.3	1194696.7	35133	ug/L	35133 ppb	22:13:28
2	Sn 189.927†	-104.3	-108.5	-11.967	ug/L	-11.967 ppb	22:13:54
2	Ti 334.940†	4171627.4	4171947.4	6103.0	ug/L	6103.0 ppb	22:13:28
2	Tl 190.801†	-253.3	-216.7	4.7843	ug/L	4.7843 ppb	22:13:54
2	U 409.014†	-9191.7	-7463.3	-224.78	ug/L	-224.78 ppb	22:13:33
2	V 292.402†	45190.2	46664.0	269.93	ug/L	269.93 ppb	22:13:33
2	Zn 213.857†	34361.5	33562.2	277.13	ug/L	277.13 ppb	22:13:33
2	SiO2†	1192567.1	1191756.4	75112	ug/L	75112 ppb	22:14:38
3	Sc Radial	5244.7	5244.7	101	%		22:12:48
3	Y RADIAL	6225.1	6225.1	113.0	%		22:12:48
3	Al 396.153Radial†	207864.6	206687.7	157390	ug/L	157390 ppb	22:12:28
3	Ca 317.933Radial†	12228.7	12142.8	19939	ug/L	19939 ppb	22:12:48
3	Fe 238.204 Radial†	15935.4	15835.2	144120	ug/L	144120 ppb	22:12:28
3	K 766.490 Radial†	114402.2	110978.1	22182	ug/L	22182 ppb	22:12:28
3	Mg 279.077 IEC†	774.0	765.1	24999	ug/L	24999 ppb	22:12:48
3	Na 589.592 Radial†	3896.7	5107.4	1436.9	ug/L	1436.9 ppb	22:12:28
3	Sr 421.552†	44586.4	44333.5	274.99	ug/L	274.99 ppb	22:12:28
3	Sc 361.383	941902.9	941902.9	99.804	%		22:14:00
3	Y 371.029	880014.4	880014.4	110.93	%		22:14:00
3	Ag 328.068†	-9765.9	-10236.6	3.8564	ug/L	3.8564 ppb	22:14:06
3	As 188.979†	-93.9	-70.8	59.182	ug/L	59.182 ppb	22:14:26
3	B 249.677†	2391.2	2788.8	35.645	ug/L	35.645 ppb	22:14:06
3	Ba 233.527†	245437.2	245908.8	1751.1	ug/L	1751.1 ppb	22:14:06
3	Be 313.107†	-11248.7	-6885.8	11.531	ug/L	11.531 ppb	22:14:06
3	Cd 226.502†	1231.1	1449.8	0.0707	ug/L	0.0707 ppb	22:14:26
3	Co 228.616†	3463.7	3544.9	53.150	ug/L	53.150 ppb	22:14:26
3	Cr 267.716†	10567.0	10494.8	114.56	ug/L	114.56 ppb	22:14:26
3	Cu 324.752†	33206.4	27133.9	85.065	ug/L	85.065 ppb	22:14:06
3	Mn 257.610†	3173427.8	3179186.1	3258.3	ug/L	3258.3 ppb	22:14:00
3	Mo 202.031†	-81.4	-110.9	4.1985	ug/L	4.1985 ppb	22:14:26
3	Ni 231.604†	3948.6	3858.0	90.077	ug/L	90.077 ppb	22:14:26
3	P 214.914†	1735.9	1515.4	742.75	ug/L	742.75 ppb	22:14:26
3	Pb 220.353†	743.3	783.1	109.01	ug/L	109.01 ppb	22:14:26
3	S 181.975 Axial†	407.1	362.1	442.38	ug/L	442.38 ppb	22:14:26
3	Sb 206.836†	105.4	75.1	3.5683	ug/L	3.5683 ppb	22:14:26
3	Se 196.026†	-827.2	-799.0	57.398	ug/L	57.398 ppb	22:14:26
3	Si 251.611†	1191866.2	1193732.7	35105	ug/L	35105 ppb	22:14:00
3	Sn 189.927†	-107.9	-112.3	-12.602	ug/L	-12.602 ppb	22:14:26
3	Ti 334.940†	4165410.9	4174994.5	6107.4	ug/L	6107.4 ppb	22:14:00
3	Tl 190.801†	-241.9	-205.9	7.8331	ug/L	7.8331 ppb	22:14:26
3	U 409.014†	-8971.6	-7263.2	-219.03	ug/L	-219.03 ppb	22:14:06
3	V 292.402†	45371.3	46946.0	271.95	ug/L	271.95 ppb	22:14:06
3	Zn 213.857†	34326.3	33603.3	277.63	ug/L	277.63 ppb	22:14:06
3	SiO2†	1185440.0	1187267.0	74829	ug/L	74829 ppb	22:14:44

Mean Data: 244125001|940187|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	939154.2	99.513	%	0.7055				0.71%
Sc Radial	5229.8	100	%	0.4				0.42%
Y 371.029	876998.9	110.55	%	0.808				0.73%
Y RADIAL	6208.1	112.7	%	0.56				0.49%
Ag 328.068†	-10278.8	4.1833	ug/L	0.34749	4.1833	ppb	0.34749	8.31%
Al 396.153Radial†	208328.3	158640	ug/L	1106.7	158640	ppb	1106.7	0.70%
As 188.979†	-66.4	61.256	ug/L	2.5949	61.256	ppb	2.5949	4.24%
B 249.677†	2841.8	36.520	ug/L	0.9821	36.520	ppb	0.9821	2.69%
Ba 233.527†	247149.4	1760.0	ug/L	19.99	1760.0	ppb	19.99	1.14%
Be 313.107†	-6830.0	11.552	ug/L	0.0185	11.552	ppb	0.0185	0.16%
Ca 317.933Radial†	12136.9	19930	ug/L	8.7	19930	ppb	8.7	0.04%
Cd 226.502†	1433.2	-0.2599	ug/L	0.34882	-0.2599	ppb	0.34882	134.20%
Co 228.616†	3540.8	53.055	ug/L	0.3365	53.055	ppb	0.3365	0.63%
Cr 267.716†	10504.8	114.70	ug/L	0.448	114.70	ppb	0.448	0.39%
Cu 324.752†	27265.7	85.525	ug/L	1.3845	85.525	ppb	1.3845	1.62%
Fe 238.204 Radial†	16004.2	145660	ug/L	1568.7	145660	ppb	1568.7	1.08%
K 766.490 Radial†	111839.4	22354	ug/L	170.9	22354	ppb	170.9	0.76%

Mg 279.077 IEC†	760.6	24847	ug/L	131.4	24847	ppb	131.4	0.53%
Mn 257.610†	3185005.9	3264.4	ug/L	7.93	3264.4	ppb	7.93	0.24%
Mo 202.031†	-108.0	4.5064	ug/L	0.29964	4.5064	ppb	0.29964	6.65%
Na 589.592 Radial†	5143.4	1447.0	ug/L	8.79	1447.0	ppb	8.79	0.61%
Ni 231.604†	3875.5	90.484	ug/L	0.5304	90.484	ppb	0.5304	0.59%
P 214.914†	1536.2	753.23	ug/L	11.111	753.23	ppb	11.111	1.48%
Pb 220.353†	791.5	110.09	ug/L	1.380	110.09	ppb	1.380	1.25%
S 181.975 Axial†	358.3	437.18	ug/L	5.152	437.18	ppb	5.152	1.18%
Sb 206.836†	74.0	3.2358	ug/L	1.78454	3.2358	ppb	1.78454	55.15%
Se 196.026†	-789.5	68.630	ug/L	9.7535	68.630	ppb	9.7535	14.21%
Si 251.611†	1195037.8	35143	ug/L	44.3	35143	ppb	44.3	0.13%
Sn 189.927†	-113.3	-12.731	ug/L	0.8356	-12.731	ppb	0.8356	6.56%
Sr 421.552†	44679.8	277.14	ug/L	1.873	277.14	ppb	1.873	0.68%
Ti 334.940†	4175643.2	6108.4	ug/L	5.94	6108.4	ppb	5.94	0.10%
Tl 190.801†	-212.7	5.9577	ug/L	1.64119	5.9577	ppb	1.64119	27.55%
U 409.014†	-7485.2	-225.39	ug/L	6.689	-225.39	ppb	6.689	2.97%
V 292.402†	47120.5	272.83	ug/L	3.420	272.83	ppb	3.420	1.25%
Zn 213.857†	33880.9	279.89	ug/L	4.359	279.89	ppb	4.359	1.56%
SiO2†	1195922.6	75375	ug/L	714.0	75375	ppb	714.0	0.95%

Sequence No.: 16
Sample ID: 244125002|940187|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 65
Date Collected: 1/20/2010 22:16:54
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 244125002|940187|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5153.1	5153.1	98.8	%			22:19:07
1	Y RADIAL	6108.1	6108.1	110.9	%			22:19:07
1	Al 396.153Radial†	215139.1	217727.8	165800	ug/L	165800	ppb	22:18:47
1	Ca 317.933Radial†	13860.8	14010.9	23007	ug/L	23007	ppb	22:18:47
1	Fe 238.204 Radial†	16261.4	16447.0	149690	ug/L	149690	ppb	22:18:47
1	K 766.490 Radial†	116184.1	114805.6	22946	ug/L	22946	ppb	22:18:47
1	Mg 279.077 IEC†	722.6	726.8	23733	ug/L	23733	ppb	22:19:07
1	Na 589.592 Radial†	1677.5	2930.3	824.41	ug/L	824.41	ppb	22:18:47
1	Sr 421.552†	43242.0	43761.7	271.41	ug/L	271.41	ppb	22:18:47
1	Sc 361.383	889762.5	889762.5	94.279	%			22:20:11
1	Y 371.029	853987.1	853987.1	107.65	%			22:20:11
1	Ag 328.068†	-10165.3	-11233.6	1.4879	ug/L	1.4879	ppb	22:20:11
1	As 188.979†	-78.8	-60.4	65.468	ug/L	65.468	ppb	22:20:31
1	B 249.677†	2431.9	2972.4	38.623	ug/L	38.623	ppb	22:20:11
1	Ba 233.527†	256881.9	272458.9	1939.9	ug/L	1939.9	ppb	22:20:11
1	Be 313.107†	-8173.6	-4284.7	12.655	ug/L	12.655	ppb	22:20:11
1	Cd 226.502†	1275.4	1569.0	0.7390	ug/L	0.7390	ppb	22:20:31
1	Co 228.616†	3589.6	3881.8	59.306	ug/L	59.306	ppb	22:20:31
1	Cr 267.716†	15211.4	16041.5	173.53	ug/L	173.53	ppb	22:20:31
1	Cu 324.752†	36207.6	32266.9	100.01	ug/L	100.01	ppb	22:20:11
1	Mn 257.610†	3516716.4	3729633.3	3820.8	ug/L	3820.8	ppb	22:20:05
1	Mo 202.031†	-60.0	-93.1	5.8314	ug/L	5.8314	ppb	22:20:31
1	Ni 231.604†	5091.8	5302.4	123.81	ug/L	123.81	ppb	22:20:31
1	P 214.914†	1980.6	1876.9	936.68	ug/L	936.68	ppb	22:20:31
1	Pb 220.353†	960.3	1056.8	141.39	ug/L	141.39	ppb	22:20:31
1	S 181.975 Axial†	641.1	634.1	795.39	ug/L	795.39	ppb	22:20:31
1	Sb 206.836†	102.5	78.2	4.2291	ug/L	4.2291	ppb	22:20:31
1	Se 196.026†	-823.3	-843.5	51.915	ug/L	51.915	ppb	22:20:31
1	Si 251.611†	1049010.8	1112190.1	32707	ug/L	32707	ppb	22:20:05
1	Sn 189.927†	-106.2	-116.9	-12.780	ug/L	-12.780	ppb	22:20:31
1	Ti 334.940†	4003655.0	4247997.0	6214.7	ug/L	6214.7	ppb	22:20:05
1	Tl 190.801†	-277.2	-257.5	-3.0952	ug/L	-3.0952	ppb	22:20:31
1	U 409.014†	-9671.8	-8532.7	-255.17	ug/L	-255.17	ppb	22:20:11
1	V 292.402†	47191.8	51541.0	300.24	ug/L	300.24	ppb	22:20:11
1	Zn 213.857†	36808.0	38251.1	317.28	ug/L	317.28	ppb	22:20:11
1	SiO2†	1059049.4	1122810.9	70767	ug/L	70767	ppb	22:21:40
2	Sc Radial	5185.8	5185.8	99.4	%			22:19:32
2	Y RADIAL	6141.4	6141.4	111.5	%			22:19:32
2	Al 396.153Radial†	217946.5	219174.2	166900	ug/L	166900	ppb	22:19:12
2	Ca 317.933Radial†	13925.1	13986.9	22968	ug/L	22968	ppb	22:19:12
2	Fe 238.204 Radial†	16357.2	16439.3	149620	ug/L	149620	ppb	22:19:12
2	K 766.490 Radial†	117091.4	114974.4	22980	ug/L	22980	ppb	22:19:12
2	Mg 279.077 IEC†	725.9	725.5	23692	ug/L	23692	ppb	22:19:32
2	Na 589.592 Radial†	1706.1	2948.4	829.48	ug/L	829.48	ppb	22:19:12
2	Sr 421.552†	43679.7	43925.1	272.43	ug/L	272.43	ppb	22:19:12
2	Sc 361.383	892340.4	892340.4	94.553	%			22:20:42
2	Y 371.029	856415.2	856415.2	107.96	%			22:20:42
2	Ag 328.068†	-10198.3	-11237.4	1.4431	ug/L	1.4431	ppb	22:20:42
2	As 188.979†	-82.7	-64.2	64.075	ug/L	64.075	ppb	22:21:02
2	B 249.677†	2320.5	2847.2	35.976	ug/L	35.976	ppb	22:20:42
2	Ba 233.527†	257934.4	272784.9	1942.2	ug/L	1942.2	ppb	22:20:42
2	Be 313.107†	-8351.5	-4447.7	12.632	ug/L	12.632	ppb	22:20:42
2	Cd 226.502†	1295.6	1586.5	0.9271	ug/L	0.9271	ppb	22:21:02
2	Co 228.616†	3562.5	3842.1	58.526	ug/L	58.526	ppb	22:21:02
2	Cr 267.716†	15337.2	16127.8	174.44	ug/L	174.44	ppb	22:21:02
2	Cu 324.752†	36432.1	32393.4	100.36	ug/L	100.36	ppb	22:20:42
2	Mn 257.610†	3525667.1	3728323.5	3819.4	ug/L	3819.4	ppb	22:20:37
2	Mo 202.031†	-51.6	-84.0	6.4175	ug/L	6.4175	ppb	22:21:02
2	Ni 231.604†	5098.8	5294.2	123.62	ug/L	123.62	ppb	22:21:02

2	P 214.914†	1986.2	1876.7	936.84 ug/L	936.84 ppb	22:21:02
2	Pb 220.353†	922.4	1013.9	136.75 ug/L	136.75 ppb	22:21:02
2	S 181.975 Axial†	642.1	633.2	793.96 ug/L	793.96 ppb	22:21:02
2	Sb 206.836†	125.9	102.6	11.923 ug/L	11.923 ppb	22:21:02
2	Se 196.026†	-843.9	-862.7	40.438 ug/L	40.438 ppb	22:21:02
2	Si 251.611†	1052838.3	1113023.6	32731 ug/L	32731 ppb	22:20:37
2	Sn 189.927†	-111.2	-121.8	-13.570 ug/L	-13.570 ppb	22:21:02
2	Ti 334.940†	4024523.7	4257799.8	6229.0 ug/L	6229.0 ppb	22:20:37
2	Tl 190.801†	-252.6	-230.7	4.5009 ug/L	4.5009 ppb	22:21:02
2	U 409.014†	-9516.9	-8339.2	-249.77 ug/L	-249.77 ppb	22:20:42
2	V 292.402†	47261.7	51470.2	299.80 ug/L	299.80 ppb	22:20:42
2	Zn 213.857†	36898.0	38233.5	317.13 ug/L	317.13 ppb	22:20:42
2	SiO2†	1058881.6	1119388.2	70551 ug/L	70551 ppb	22:21:46
3	Sc Radial	5141.4	5141.4	98.6 %		22:19:58
3	Y RADIAL	6092.3	6092.3	110.6 %		22:19:58
3	Al 396.153Radial†	219072.4	222213.1	169210 ug/L	169210 ppb	22:19:38
3	Ca 317.933Radial†	13974.8	14158.4	23249 ug/L	23249 ppb	22:19:38
3	Fe 238.204 Radial†	16398.7	16623.7	151300 ug/L	151300 ppb	22:19:38
3	K 766.490 Radial†	117613.3	116522.9	23290 ug/L	23290 ppb	22:19:38
3	Mg 279.077 IEC†	720.0	725.9	23701 ug/L	23701 ppb	22:19:58
3	Na 589.592 Radial†	1734.0	2991.5	841.62 ug/L	841.62 ppb	22:19:38
3	Sr 421.552†	43775.9	44402.8	275.39 ug/L	275.39 ppb	22:19:38
3	Sc 361.383	887216.5	887216.5	94.010 %		22:21:14
3	Y 371.029	851559.8	851559.8	107.35 %		22:21:14
3	Ag 328.068†	-10087.0	-11181.3	2.2173 ug/L	2.2173 ppb	22:21:14
3	As 188.979†	-82.9	-64.9	64.653 ug/L	64.653 ppb	22:21:34
3	B 249.677†	2248.1	2784.3	34.366 ug/L	34.366 ppb	22:21:14
3	Ba 233.527†	255362.3	271624.2	1934.0 ug/L	1934.0 ppb	22:21:14
3	Be 313.107†	-8389.8	-4539.5	12.721 ug/L	12.721 ppb	22:21:14
3	Cd 226.502†	1260.5	1557.1	0.4520 ug/L	0.4520 ppb	22:21:34
3	Co 228.616†	3575.6	3877.8	59.063 ug/L	59.063 ppb	22:21:34
3	Cr 267.716†	15271.1	16151.2	174.72 ug/L	174.72 ppb	22:21:34
3	Cu 324.752†	36098.5	32261.0	100.07 ug/L	100.07 ppb	22:21:14
3	Mn 257.610†	3538644.8	3763662.8	3855.7 ug/L	3855.7 ppb	22:21:09
3	Mo 202.031†	-55.6	-88.6	6.2507 ug/L	6.2507 ppb	22:21:34
3	Ni 231.604†	5101.4	5328.1	124.41 ug/L	124.41 ppb	22:21:34
3	P 214.914†	1982.1	1884.4	940.39 ug/L	940.39 ppb	22:21:34
3	Pb 220.353†	956.0	1055.2	141.78 ug/L	141.78 ppb	22:21:34
3	S 181.975 Axial†	647.5	642.9	806.20 ug/L	806.20 ppb	22:21:34
3	Sb 206.836†	104.3	80.3	4.6279 ug/L	4.6279 ppb	22:21:34
3	Se 196.026†	-836.7	-860.2	48.170 ug/L	48.170 ppb	22:21:34
3	Si 251.611†	1057016.1	1123898.4	33051 ug/L	33051 ppb	22:21:09
3	Sn 189.927†	-115.6	-127.2	-14.367 ug/L	-14.367 ppb	22:21:34
3	Ti 334.940†	4035303.9	4293848.6	6281.8 ug/L	6281.8 ppb	22:21:09
3	Tl 190.801†	-263.8	-244.2	1.3544 ug/L	1.3544 ppb	22:21:34
3	U 409.014†	-9313.4	-8180.9	-245.55 ug/L	-245.55 ppb	22:21:14
3	V 292.402†	46885.5	51358.8	298.79 ug/L	298.79 ppb	22:21:14
3	Zn 213.857†	36584.6	38125.5	316.03 ug/L	316.03 ppb	22:21:14
3	SiO2†	1055440.7	1122195.7	70728 ug/L	70728 ppb	22:21:52

Mean Data: 244125002|940187|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	889773.2	94.281	%	0.2715				0.29%
Sc Radial	5160.1	98.9	%	0.44				0.45%
Y 371.029	853987.4	107.65	%	0.306				0.28%
Y RADIAL	6114.0	111.0	%	0.46				0.41%
Ag 328.068†	-11217.4	1.7161	ug/L	0.43465	1.7161	ppb	0.43465	25.33%
Al 396.153Radial†	219705.0	167300	ug/L	1743.2	167300	ppb	1743.2	1.04%
As 188.979†	-63.2	64.732	ug/L	0.7002	64.732	ppb	0.7002	1.08%
B 249.677†	2868.0	36.322	ug/L	2.1493	36.322	ppb	2.1493	5.92%
Ba 233.527†	272289.3	1938.7	ug/L	4.22	1938.7	ppb	4.22	0.22%
Be 313.107†	-4424.0	12.669	ug/L	0.0460	12.669	ppb	0.0460	0.36%
Ca 317.933Radial†	14052.1	23075	ug/L	152.5	23075	ppb	152.5	0.66%
Cd 226.502†	1570.9	0.7060	ug/L	0.23929	0.7060	ppb	0.23929	33.89%
Co 228.616†	3867.2	58.965	ug/L	0.3993	58.965	ppb	0.3993	0.68%
Cr 267.716†	16106.8	174.23	ug/L	0.622	174.23	ppb	0.622	0.36%
Cu 324.752†	32307.1	100.15	ug/L	0.189	100.15	ppb	0.189	0.19%
Fe 238.204 Radial†	16503.3	150200	ug/L	949.6	150200	ppb	949.6	0.63%
K 766.490 Radial†	115434.3	23072	ug/L	189.2	23072	ppb	189.2	0.82%

Mg 279.077 IEC†	726.1	23708	ug/L	22.0	23708	ppb	22.0	0.09%
Mn 257.610†	3740539.8	3831.9	ug/L	20.55	3831.9	ppb	20.55	0.54%
Mo 202.031†	-88.5	6.1665	ug/L	0.30198	6.1665	ppb	0.30198	4.90%
Na 589.592 Radial†	2956.7	831.84	ug/L	8.846	831.84	ppb	8.846	1.06%
Ni 231.604†	5308.2	123.95	ug/L	0.413	123.95	ppb	0.413	0.33%
P 214.914†	1879.4	937.97	ug/L	2.098	937.97	ppb	2.098	0.22%
Pb 220.353†	1042.0	139.97	ug/L	2.796	139.97	ppb	2.796	2.00%
S 181.975 Axial†	636.8	798.52	ug/L	6.691	798.52	ppb	6.691	0.84%
Sb 206.836†	87.0	6.9268	ug/L	4.33181	6.9268	ppb	4.33181	62.54%
Se 196.026†	-855.5	46.841	ug/L	5.8526	46.841	ppb	5.8526	12.49%
Si 251.611†	1116370.7	32830	ug/L	192.1	32830	ppb	192.1	0.59%
Sn 189.927†	-122.0	-13.572	ug/L	0.7935	-13.572	ppb	0.7935	5.85%
Sr 421.552†	44029.9	273.08	ug/L	2.066	273.08	ppb	2.066	0.76%
Ti 334.940†	4266548.5	6241.9	ug/L	35.34	6241.9	ppb	35.34	0.57%
Tl 190.801†	-244.1	0.9200	ug/L	3.81663	0.9200	ppb	3.81663	414.84%
U 409.014†	-8350.9	-250.16	ug/L	4.820	-250.16	ppb	4.820	1.93%
V 292.402†	51456.7	299.61	ug/L	0.741	299.61	ppb	0.741	0.25%
Zn 213.857†	38203.4	316.81	ug/L	0.685	316.81	ppb	0.685	0.22%
SiO2†	1121464.9	70682	ug/L	115.0	70682	ppb	115.0	0.16%

Sequence No.: 17
Sample ID: 244125003|940187|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 66
Date Collected: 1/20/2010 22:24:02
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 244125003|940187|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5153.3	5153.3	98.8	%			22:26:15
1	Y RADIAL	5995.8	5995.8	108.8	%			22:26:15
1	Al 396.153Radial†	195358.2	197696.5	150540	ug/L	150540	ppb	22:25:55
1	Ca 317.933Radial†	12316.5	12447.2	20439	ug/L	20439	ppb	22:25:55
1	Fe 238.204 Radial†	15651.2	15828.5	144060	ug/L	144060	ppb	22:25:55
1	K 766.490 Radial†	98189.1	96587.4	19304	ug/L	19304	ppb	22:25:55
1	Mg 279.077 IEC†	682.0	685.7	22387	ug/L	22387	ppb	22:26:15
1	Na 589.592 Radial†	1965.5	3221.7	906.39	ug/L	906.39	ppb	22:25:55
1	Sr 421.552†	42650.5	43160.5	267.70	ug/L	267.70	ppb	22:25:55
1	Sc 361.383	899515.6	899515.6	95.313	%			22:27:18
1	Y 371.029	813266.6	813266.6	102.52	%			22:27:18
1	Ag 328.068†	-9801.3	-10734.9	1.8291	ug/L	1.8291	ppb	22:27:18
1	As 188.979†	-86.3	-67.3	68.062	ug/L	68.062	ppb	22:27:38
1	B 249.677†	1920.3	2407.8	27.523	ug/L	27.523	ppb	22:27:18
1	Ba 233.527†	289421.4	303644.3	2161.1	ug/L	2161.1	ppb	22:27:18
1	Be 313.107†	-16342.0	-12760.7	11.516	ug/L	11.516	ppb	22:27:18
1	Cd 226.502†	1250.8	1528.6	0.8851	ug/L	0.8851	ppb	22:27:38
1	Co 228.616†	3955.7	4224.6	64.422	ug/L	64.422	ppb	22:27:38
1	Cr 267.716†	10406.3	10825.1	118.11	ug/L	118.11	ppb	22:27:38
1	Cu 324.752†	28114.7	23359.6	74.319	ug/L	74.319	ppb	22:27:18
1	Mn 257.610†	4039829.5	4238027.0	4339.2	ug/L	4339.2	ppb	22:27:13
1	Mo 202.031†	-62.5	-94.9	5.2421	ug/L	5.2421	ppb	22:27:38
1	Ni 231.604†	3806.5	3895.4	90.941	ug/L	90.941	ppb	22:27:38
1	P 214.914†	1989.3	1863.2	934.90	ug/L	934.90	ppb	22:27:38
1	Pb 220.353†	983.9	1070.6	140.19	ug/L	140.19	ppb	22:27:38
1	S 181.975 Axial†	440.7	416.5	514.66	ug/L	514.66	ppb	22:27:38
1	Sb 206.836†	109.3	84.1	3.8397	ug/L	3.8397	ppb	22:27:38
1	Se 196.026†	-819.4	-829.9	37.973	ug/L	37.973	ppb	22:27:38
1	Si 251.611†	1116469.0	1170901.4	34433	ug/L	34433	ppb	22:27:13
1	Sn 189.927†	-105.5	-115.0	-12.950	ug/L	-12.950	ppb	22:27:38
1	Ti 334.940†	4544949.3	4769866.1	6977.8	ug/L	6977.8	ppb	22:27:13
1	Tl 190.801†	-287.4	-265.0	3.5868	ug/L	3.5868	ppb	22:27:38
1	U 409.014†	-9365.3	-8099.9	-242.34	ug/L	-242.34	ppb	22:27:18
1	V 292.402†	47687.0	51517.7	300.12	ug/L	300.12	ppb	22:27:18
1	Zn 213.857†	32008.9	32792.7	270.59	ug/L	270.59	ppb	22:27:18
1	SiO2†	1109038.9	1163079.1	73305	ug/L	73305	ppb	22:28:48
2	Sc Radial	5147.2	5147.2	98.7	%			22:26:40
2	Y RADIAL	6011.9	6011.9	109.1	%			22:26:40
2	Al 396.153Radial†	197790.7	200398.0	152600	ug/L	152600	ppb	22:26:20
2	Ca 317.933Radial†	12400.0	12546.8	20603	ug/L	20603	ppb	22:26:20
2	Fe 238.204 Radial†	15838.0	16036.8	145950	ug/L	145950	ppb	22:26:20
2	K 766.490 Radial†	99627.4	98163.7	19619	ug/L	19619	ppb	22:26:20
2	Mg 279.077 IEC†	677.9	682.4	22278	ug/L	22278	ppb	22:26:40
2	Na 589.592 Radial†	2004.8	3263.9	918.27	ug/L	918.27	ppb	22:26:20
2	Sr 421.552†	43163.1	43731.7	271.25	ug/L	271.25	ppb	22:26:20
2	Sc 361.383	904069.3	904069.3	95.795	%			22:27:50
2	Y 371.029	818009.5	818009.5	103.12	%			22:27:50
2	Ag 328.068†	-9808.6	-10690.7	2.6378	ug/L	2.6378	ppb	22:27:50
2	As 188.979†	-81.8	-62.2	70.590	ug/L	70.590	ppb	22:28:10
2	B 249.677†	1944.3	2422.7	27.533	ug/L	27.533	ppb	22:27:50
2	Ba 233.527†	291891.3	304693.1	2168.6	ug/L	2168.6	ppb	22:27:50
2	Be 313.107†	-16946.7	-13305.6	11.356	ug/L	11.356	ppb	22:27:50
2	Cd 226.502†	1237.1	1507.6	0.4727	ug/L	0.4727	ppb	22:28:10
2	Co 228.616†	3959.3	4207.5	64.047	ug/L	64.047	ppb	22:28:10
2	Cr 267.716†	10389.1	10752.1	117.38	ug/L	117.38	ppb	22:28:10
2	Cu 324.752†	28294.2	23398.4	74.530	ug/L	74.530	ppb	22:27:50
2	Mn 257.610†	4062926.9	4240789.6	4342.2	ug/L	4342.2	ppb	22:27:45
2	Mo 202.031†	-88.9	-122.2	3.6149	ug/L	3.6149	ppb	22:28:10
2	Ni 231.604†	3799.4	3867.8	90.298	ug/L	90.298	ppb	22:28:10

2	P 214.914†	1979.4	1842.4	922.41	ug/L	922.41 ppb	22:28:10
2	Pb 220.353†	969.5	1050.3	138.15	ug/L	138.15 ppb	22:28:10
2	S 181.975 Axial†	426.5	399.3	491.86	ug/L	491.86 ppb	22:28:10
2	Sb 206.836†	110.7	85.0	4.0597	ug/L	4.0597 ppb	22:28:10
2	Se 196.026†	-830.8	-837.4	40.458	ug/L	40.458 ppb	22:28:10
2	Si 251.611†	1121279.6	1170023.2	34408	ug/L	34408 ppb	22:27:45
2	Sn 189.927†	-98.7	-107.3	-11.662	ug/L	-11.662 ppb	22:28:10
2	Ti 334.940†	4574891.0	4777104.1	6988.5	ug/L	6988.5 ppb	22:27:45
2	Tl 190.801†	-305.9	-282.8	-1.2780	ug/L	-1.2780 ppb	22:28:10
2	U 409.014†	-9403.4	-8090.2	-242.29	ug/L	-242.29 ppb	22:27:50
2	V 292.402†	48202.2	51803.6	301.63	ug/L	301.63 ppb	22:27:50
2	Zn 213.857†	32363.4	32993.7	272.16	ug/L	272.16 ppb	22:27:50
2	SiO2†	1121488.1	1170213.9	73754	ug/L	73754 ppb	22:28:54
3	Sc Radial	5147.9	5147.9	98.7	%		22:27:05
3	Y RADIAL	6002.9	6002.9	109.0	%		22:27:05
3	Al 396.153Radial†	197619.3	200196.8	152450	ug/L	152450 ppb	22:26:45
3	Ca 317.933Radial†	12442.4	12588.0	20671	ug/L	20671 ppb	22:26:45
3	Fe 238.204 Radial†	15774.4	15970.2	145350	ug/L	145350 ppb	22:26:45
3	K 766.490 Radial†	99165.2	97681.6	19523	ug/L	19523 ppb	22:26:45
3	Mg 279.077 IEC†	680.7	685.1	22367	ug/L	22367 ppb	22:27:05
3	Na 589.592 Radial†	2064.7	3324.4	935.27	ug/L	935.27 ppb	22:26:45
3	Sr 421.552†	43000.5	43560.9	270.19	ug/L	270.19 ppb	22:26:45
3	Sc 361.383	918311.7	918311.7	97.304	%		22:28:22
3	Y 371.029	826128.4	826128.4	104.14	%		22:28:22
3	Ag 328.068†	-9890.1	-10615.6	2.7469	ug/L	2.7469 ppb	22:28:22
3	As 188.979†	-93.6	-73.0	65.855	ug/L	65.855 ppb	22:28:42
3	B 249.677†	1998.5	2446.9	28.150	ug/L	28.150 ppb	22:28:22
3	Ba 233.527†	294097.9	302235.1	2151.1	ug/L	2151.1 ppb	22:28:22
3	Be 313.107†	-16655.5	-12732.0	11.449	ug/L	11.449 ppb	22:28:22
3	Cd 226.502†	1230.3	1480.6	0.2576	ug/L	0.2576 ppb	22:28:42
3	Co 228.616†	3949.7	4133.4	62.742	ug/L	62.742 ppb	22:28:42
3	Cr 267.716†	10324.4	10517.4	114.87	ug/L	114.87 ppb	22:28:42
3	Cu 324.752†	28616.9	23271.9	74.133	ug/L	74.133 ppb	22:28:22
3	Mn 257.610†	4097434.3	4210473.6	4311.2	ug/L	4311.2 ppb	22:28:16
3	Mo 202.031†	-65.1	-96.3	5.2534	ug/L	5.2534 ppb	22:28:42
3	Ni 231.604†	3804.3	3811.3	88.978	ug/L	88.978 ppb	22:28:42
3	P 214.914†	1954.7	1784.9	891.27	ug/L	891.27 ppb	22:28:42
3	Pb 220.353†	987.3	1052.9	138.48	ug/L	138.48 ppb	22:28:42
3	S 181.975 Axial†	430.3	396.3	487.91	ug/L	487.91 ppb	22:28:42
3	Sb 206.836†	124.1	96.9	8.0115	ug/L	8.0115 ppb	22:28:42
3	Se 196.026†	-809.7	-802.3	59.101	ug/L	59.101 ppb	22:28:42
3	Si 251.611†	1133760.3	1164695.9	34251	ug/L	34251 ppb	22:28:16
3	Sn 189.927†	-106.4	-113.6	-12.670	ug/L	-12.670 ppb	22:28:42
3	Ti 334.940†	4617189.9	4746506.6	6943.7	ug/L	6943.7 ppb	22:28:16
3	Tl 190.801†	-301.7	-273.6	0.7978	ug/L	0.7978 ppb	22:28:42
3	U 409.014†	-9293.3	-7824.8	-234.82	ug/L	-234.82 ppb	22:28:22
3	V 292.402†	48609.8	51442.0	299.50	ug/L	299.50 ppb	22:28:22
3	Zn 213.857†	32636.9	32750.7	270.11	ug/L	270.11 ppb	22:28:22
3	SiO2†	1126137.2	1156834.8	72911	ug/L	72911 ppb	22:29:00

Mean Data: 244125003|940187|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	907298.9	96.138	%	1.0390				1.08%
Sc Radial	5149.5	98.7	%	0.06				0.07%
Y 371.029	819134.8	103.26	%	0.820				0.79%
Y RADIAL	6003.5	109.0	%	0.15				0.13%
Ag 328.068†	-10680.4	2.4046	ug/L	0.50140	2.4046	ppb	0.50140	20.85%
Al 396.153Radial†	199430.4	151860	ug/L	1146.1	151860	ppb	1146.1	0.75%
As 188.979†	-67.5	68.169	ug/L	2.3692	68.169	ppb	2.3692	3.48%
B 249.677†	2425.8	27.735	ug/L	0.3589	27.735	ppb	0.3589	1.29%
Ba 233.527†	303524.1	2160.3	ug/L	8.77	2160.3	ppb	8.77	0.41%
Be 313.107†	-12932.8	11.440	ug/L	0.0806	11.440	ppb	0.0806	0.70%
Ca 317.933Radial†	12527.3	20571	ug/L	118.8	20571	ppb	118.8	0.58%
Cd 226.502†	1505.6	0.5385	ug/L	0.31886	0.5385	ppb	0.31886	59.22%
Co 228.616†	4188.5	63.737	ug/L	0.8820	63.737	ppb	0.8820	1.38%
Cr 267.716†	10698.2	116.79	ug/L	1.699	116.79	ppb	1.699	1.45%
Cu 324.752†	23343.3	74.327	ug/L	0.1984	74.327	ppb	0.1984	0.27%
Fe 238.204 Radial†	15945.1	145120	ug/L	968.2	145120	ppb	968.2	0.67%
K 766.490 Radial†	97477.6	19482	ug/L	161.5	19482	ppb	161.5	0.83%

Mg 279.077 IEC†	684.4	22344	ug/L	57.8	22344	ppb	57.8	0.26%
Mn 257.610†	4229763.4	4330.9	ug/L	17.10	4330.9	ppb	17.10	0.39%
Mo 202.031†	-104.5	4.7035	ug/L	0.94273	4.7035	ppb	0.94273	20.04%
Na 589.592 Radial†	3270.0	919.98	ug/L	14.513	919.98	ppb	14.513	1.58%
Ni 231.604†	3858.2	90.072	ug/L	1.0007	90.072	ppb	1.0007	1.11%
P 214.914†	1830.2	916.19	ug/L	22.472	916.19	ppb	22.472	2.45%
Pb 220.353†	1057.9	138.94	ug/L	1.095	138.94	ppb	1.095	0.79%
S 181.975 Axial†	404.1	498.15	ug/L	14.438	498.15	ppb	14.438	2.90%
Sb 206.836†	88.7	5.3036	ug/L	2.34769	5.3036	ppb	2.34769	44.27%
Se 196.026†	-823.2	45.844	ug/L	11.5476	45.844	ppb	11.5476	25.19%
Si 251.611†	1168540.2	34364	ug/L	98.8	34364	ppb	98.8	0.29%
Sn 189.927†	-112.0	-12.427	ug/L	0.6776	-12.427	ppb	0.6776	5.45%
Sr 421.552†	43484.4	269.71	ug/L	1.819	269.71	ppb	1.819	0.67%
Ti 334.940†	4764492.2	6970.0	ug/L	23.39	6970.0	ppb	23.39	0.34%
Tl 190.801†	-273.8	1.0355	ug/L	2.44111	1.0355	ppb	2.44111	235.74%
U 409.014†	-8005.0	-239.82	ug/L	4.328	-239.82	ppb	4.328	1.80%
V 292.402†	51587.8	300.41	ug/L	1.095	300.41	ppb	1.095	0.36%
Zn 213.857†	32845.7	270.95	ug/L	1.070	270.95	ppb	1.070	0.39%
SiO2†	1163375.9	73323	ug/L	422.0	73323	ppb	422.0	0.58%

Sequence No.: 18
Sample ID: 244125004|940187|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 67
Date Collected: 1/20/2010 22:31:10
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 244125004|940187|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5105.1	5105.1	97.9	%			22:33:23
1	Y RADIAL	5919.3	5919.3	107.5	%			22:33:23
1	Al 396.153Radial†	147812.7	150994.0	114980	ug/L	114980	ppb	22:33:03
1	Ca 317.933Radial†	13043.5	13307.9	21853	ug/L	21853	ppb	22:33:03
1	Fe 238.204 Radial†	12835.9	13102.3	119250	ug/L	119250	ppb	22:33:03
1	K 766.490 Radial†	88265.7	87389.6	17465	ug/L	17465	ppb	22:33:03
1	Mg 279.077 IEC†	528.1	535.0	17460	ug/L	17460	ppb	22:33:23
1	Na 589.592 Radial†	1597.5	2864.6	805.93	ug/L	805.93	ppb	22:33:03
1	Sr 421.552†	37963.6	38780.7	240.51	ug/L	240.51	ppb	22:33:03
1	Sc 361.383	900046.4	900046.4	95.369	%			22:34:27
1	Y 371.029	867425.8	867425.8	109.35	%			22:34:21
1	Ag 328.068†	-7731.0	-8558.0	2.8254	ug/L	2.8254	ppb	22:34:27
1	As 188.979†	-75.1	-55.5	58.655	ug/L	58.655	ppb	22:34:47
1	B 249.677†	1896.6	2381.7	31.023	ug/L	31.023	ppb	22:34:27
1	Ba 233.527†	243974.7	255811.7	1820.6	ug/L	1820.6	ppb	22:34:27
1	Be 313.107†	-17526.8	-13993.0	8.9654	ug/L	8.9654	ppb	22:34:27
1	Cd 226.502†	972.8	1236.2	0.5821	ug/L	0.5821	ppb	22:34:47
1	Co 228.616†	3546.7	3793.3	58.245	ug/L	58.245	ppb	22:34:47
1	Cr 267.716†	52179.6	54620.4	581.81	ug/L	581.81	ppb	22:34:27
1	Cu 324.752†	26048.4	21175.6	66.763	ug/L	66.763	ppb	22:34:27
1	Mn 257.610†	4092893.5	4291168.3	4391.2	ug/L	4391.2	ppb	22:34:21
1	Mo 202.031†	239.2	221.4	23.943	ug/L	23.943	ppb	22:34:47
1	Ni 231.604†	12825.1	13349.5	311.78	ug/L	311.78	ppb	22:34:47
1	P 214.914†	2127.4	2006.8	1026.3	ug/L	1026.3	ppb	22:34:47
1	Pb 220.353†	857.1	937.0	119.89	ug/L	119.89	ppb	22:34:47
1	S 181.975 Axial†	613.9	597.8	757.54	ug/L	757.54	ppb	22:34:47
1	Sb 206.836†	124.1	99.5	12.558	ug/L	12.558	ppb	22:34:47
1	Se 196.026†	-657.3	-659.4	46.422	ug/L	46.422	ppb	22:34:47
1	Si 251.611†	1153086.8	1208606.6	35542	ug/L	35542	ppb	22:34:21
1	Sn 189.927†	-129.7	-140.2	-17.213	ug/L	-17.213	ppb	22:34:47
1	Ti 334.940†	3934889.0	4127370.7	6038.5	ug/L	6038.5	ppb	22:34:21
1	Tl 190.801†	-280.3	-257.4	-1.6705	ug/L	-1.6705	ppb	22:34:47
1	U 409.014†	-8229.4	-6903.0	-207.21	ug/L	-207.21	ppb	22:34:27
1	V 292.402†	38021.4	41353.3	239.98	ug/L	239.98	ppb	22:34:27
1	Zn 213.857†	26045.9	26520.3	217.04	ug/L	217.04	ppb	22:34:47
1	SiO2†	1151330.1	1206737.7	76056	ug/L	76056	ppb	22:35:57
2	Sc Radial	5082.6	5082.6	97.5	%			22:33:48
2	Y RADIAL	5890.9	5890.9	106.9	%			22:33:48
2	Al 396.153Radial†	147982.8	151834.4	115620	ug/L	115620	ppb	22:33:28
2	Ca 317.933Radial†	13059.0	13382.5	21975	ug/L	21975	ppb	22:33:28
2	Fe 238.204 Radial†	12797.0	13120.2	119410	ug/L	119410	ppb	22:33:28
2	K 766.490 Radial†	88548.3	88077.2	17602	ug/L	17602	ppb	22:33:28
2	Mg 279.077 IEC†	516.3	525.3	17141	ug/L	17141	ppb	22:33:48
2	Na 589.592 Radial†	1686.1	2962.7	833.52	ug/L	833.52	ppb	22:33:28
2	Sr 421.552†	38118.0	39110.1	242.55	ug/L	242.55	ppb	22:33:28
2	Sc 361.383	904433.7	904433.7	95.834	%			22:34:59
2	Y 371.029	860135.1	860135.1	108.43	%			22:34:53
2	Ag 328.068†	-7717.6	-8504.7	3.1161	ug/L	3.1161	ppb	22:34:59
2	As 188.979†	-85.0	-65.4	54.061	ug/L	54.061	ppb	22:35:19
2	B 249.677†	1954.4	2432.4	32.073	ug/L	32.073	ppb	22:34:59
2	Ba 233.527†	245794.7	256469.8	1825.3	ug/L	1825.3	ppb	22:34:59
2	Be 313.107†	-17545.9	-13923.7	8.7857	ug/L	8.7857	ppb	22:34:59
2	Cd 226.502†	966.3	1224.6	0.4425	ug/L	0.4425	ppb	22:35:19
2	Co 228.616†	3537.9	3766.0	57.910	ug/L	57.910	ppb	22:35:19
2	Cr 267.716†	52477.7	54666.0	582.30	ug/L	582.30	ppb	22:34:59
2	Cu 324.752†	26131.6	21129.9	66.646	ug/L	66.646	ppb	22:34:59
2	Mn 257.610†	4057935.8	4233872.8	4332.7	ug/L	4332.7	ppb	22:34:53
2	Mo 202.031†	212.8	192.7	22.086	ug/L	22.086	ppb	22:35:19
2	Ni 231.604†	12826.3	13285.6	310.29	ug/L	310.29	ppb	22:35:19

2	P 214.914†	2120.7	1988.9	1016.6 ug/L	1016.6 ppb	22:35:19
2	Pb 220.353†	854.1	929.5	119.17 ug/L	119.17 ppb	22:35:19
2	S 181.975 Axial†	617.9	598.9	758.89 ug/L	758.89 ppb	22:35:19
2	Sb 206.836†	113.6	88.0	9.1715 ug/L	9.1715 ppb	22:35:19
2	Se 196.026†	-656.4	-655.1	49.591 ug/L	49.591 ppb	22:35:19
2	Si 251.611†	1140717.6	1189834.6	34990 ug/L	34990 ppb	22:34:53
2	Sn 189.927†	-110.3	-119.4	-13.840 ug/L	-13.840 ppb	22:35:19
2	Ti 334.940†	3895430.7	4066182.6	5949.0 ug/L	5949.0 ppb	22:34:53
2	Tl 190.801†	-275.9	-251.5	-1.0236 ug/L	-1.0236 ppb	22:35:19
2	U 409.014†	-8565.3	-7211.7	-215.83 ug/L	-215.83 ppb	22:34:59
2	V 292.402†	38350.3	41503.1	240.96 ug/L	240.96 ppb	22:34:59
2	Zn 213.857†	26040.2	26381.9	215.83 ug/L	215.83 ppb	22:35:19
2	SiO2†	1152195.0	1201784.0	75744 ug/L	75744 ppb	22:36:03
3	Sc Radial	5122.6	5122.6	98.2 %		22:34:14
3	Y RADIAL	5952.9	5952.9	108.1 %		22:34:14
3	Al 396.153Radial†	149536.4	152231.8	115920 ug/L	115920 ppb	22:33:54
3	Ca 317.933Radial†	13179.6	13400.8	22005 ug/L	22005 ppb	22:33:54
3	Fe 238.204 Radial†	12942.3	13165.6	119820 ug/L	119820 ppb	22:33:54
3	K 766.490 Radial†	89316.8	88150.9	17617 ug/L	17617 ppb	22:33:54
3	Mg 279.077 IEC†	521.4	526.3	17175 ug/L	17175 ppb	22:34:14
3	Na 589.592 Radial†	1628.1	2890.2	813.12 ug/L	813.12 ppb	22:33:54
3	Sr 421.552†	38534.1	39228.8	243.29 ug/L	243.29 ppb	22:33:54
3	Sc 361.383	913875.3	913875.3	96.834 %		22:35:31
3	Y 371.029	861600.1	861600.1	108.61 %		22:35:25
3	Ag 328.068†	-7900.5	-8610.3	2.7915 ug/L	2.7915 ppb	22:35:31
3	As 188.979†	-96.3	-76.2	49.642 ug/L	49.642 ppb	22:35:51
3	B 249.677†	1987.5	2445.5	32.285 ug/L	32.285 ppb	22:35:31
3	Ba 233.527†	247960.3	256056.4	1822.3 ug/L	1822.3 ppb	22:35:31
3	Be 313.107†	-17485.4	-13672.1	8.7822 ug/L	8.7822 ppb	22:35:31
3	Cd 226.502†	952.4	1199.8	0.1443 ug/L	0.1443 ppb	22:35:51
3	Co 228.616†	3559.7	3750.4	57.687 ug/L	57.687 ppb	22:35:51
3	Cr 267.716†	53056.0	54697.5	582.64 ug/L	582.64 ppb	22:35:31
3	Cu 324.752†	26659.3	21393.2	67.415 ug/L	67.415 ppb	22:35:31
3	Mn 257.610†	4069871.6	4202452.2	4300.7 ug/L	4300.7 ppb	22:35:25
3	Mo 202.031†	206.2	183.5	21.521 ug/L	21.521 ppb	22:35:51
3	Ni 231.604†	12844.7	13166.3	307.50 ug/L	307.50 ppb	22:35:51
3	P 214.914†	2171.2	2018.2	1032.3 ug/L	1032.3 ppb	22:35:51
3	Pb 220.353†	879.9	947.0	121.17 ug/L	121.17 ppb	22:35:51
3	S 181.975 Axial†	618.2	592.6	750.56 ug/L	750.56 ppb	22:35:51
3	Sb 206.836†	131.0	104.7	14.579 ug/L	14.579 ppb	22:35:51
3	Se 196.026†	-656.5	-648.1	55.236 ug/L	55.236 ppb	22:35:51
3	Si 251.611†	1145907.9	1182897.1	34786 ug/L	34786 ppb	22:35:25
3	Sn 189.927†	-130.0	-138.5	-16.906 ug/L	-16.906 ppb	22:35:51
3	Ti 334.940†	3910224.8	4039465.6	5909.9 ug/L	5909.9 ppb	22:35:25
3	Tl 190.801†	-270.4	-242.8	0.9251 ug/L	0.9251 ppb	22:35:51
3	U 409.014†	-8434.0	-6983.7	-209.53 ug/L	-209.53 ppb	22:35:31
3	V 292.402†	38756.4	41509.0	240.98 ug/L	240.98 ppb	22:35:31
3	Zn 213.857†	26167.3	26232.4	214.51 ug/L	214.51 ppb	22:35:51
3	SiO2†	1133267.4	1169816.5	73729 ug/L	73729 ppb	22:36:09

Mean Data: 244125004|940187|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	906118.4	96.012	%	0.7488				0.78%
Sc Radial	5103.4	97.9	%	0.38				0.39%
Y 371.029	863053.7	108.80	%	0.486				0.45%
Y RADIAL	5921.0	107.5	%	0.56				0.52%
Ag 328.068†	-8557.7	2.9110	ug/L	0.17843	2.9110	ppb	0.17843	6.13%
Al 396.153Radial†	151686.7	115510	ug/L	481.3	115510	ppb	481.3	0.42%
As 188.979†	-65.7	54.119	ug/L	4.5071	54.119	ppb	4.5071	8.33%
B 249.677†	2419.9	31.794	ug/L	0.6759	31.794	ppb	0.6759	2.13%
Ba 233.527†	256112.7	1822.7	ug/L	2.36	1822.7	ppb	2.36	0.13%
Be 313.107†	-13862.9	8.8444	ug/L	0.10477	8.8444	ppb	0.10477	1.18%
Ca 317.933Radial†	13363.7	21944	ug/L	80.8	21944	ppb	80.8	0.37%
Cd 226.502†	1220.2	0.3896	ug/L	0.22364	0.3896	ppb	0.22364	57.40%
Co 228.616†	3769.9	57.947	ug/L	0.2809	57.947	ppb	0.2809	0.48%
Cr 267.716†	54661.3	582.25	ug/L	0.418	582.25	ppb	0.418	0.07%
Cu 324.752†	21232.9	66.942	ug/L	0.4142	66.942	ppb	0.4142	0.62%
Fe 238.204 Radial†	13129.4	119490	ug/L	297.3	119490	ppb	297.3	0.25%
K 766.490 Radial†	87872.6	17561	ug/L	83.9	17561	ppb	83.9	0.48%

Mg 279.077 IEC†	528.9	17259	ug/L	175.2	17259	ppb	175.2	1.02%
Mn 257.610†	4242497.7	4341.5	ug/L	45.88	4341.5	ppb	45.88	1.06%
Mo 202.031†	199.2	22.517	ug/L	1.2672	22.517	ppb	1.2672	5.63%
Na 589.592 Radial†	2905.8	817.52	ug/L	14.315	817.52	ppb	14.315	1.75%
Ni 231.604†	13267.1	309.85	ug/L	2.172	309.85	ppb	2.172	0.70%
P 214.914†	2004.6	1025.1	ug/L	7.93	1025.1	ppb	7.93	0.77%
Pb 220.353†	937.8	120.08	ug/L	1.013	120.08	ppb	1.013	0.84%
S 181.975 Axial†	596.4	755.66	ug/L	4.472	755.66	ppb	4.472	0.59%
Sb 206.836†	97.4	12.103	ug/L	2.7324	12.103	ppb	2.7324	22.58%
Se 196.026†	-654.2	50.416	ug/L	4.4646	50.416	ppb	4.4646	8.86%
Si 251.611†	1193779.4	35106	ug/L	391.1	35106	ppb	391.1	1.11%
Sn 189.927†	-132.7	-15.986	ug/L	1.8649	-15.986	ppb	1.8649	11.67%
Sr 421.552†	39039.9	242.12	ug/L	1.440	242.12	ppb	1.440	0.59%
Ti 334.940†	4077673.0	5965.8	ug/L	65.89	5965.8	ppb	65.89	1.10%
Tl 190.801†	-250.6	-0.5897	ug/L	1.35114	-0.5897	ppb	1.35114	229.14%
U 409.014†	-7032.8	-210.85	ug/L	4.460	-210.85	ppb	4.460	2.12%
V 292.402†	41455.1	240.64	ug/L	0.571	240.64	ppb	0.571	0.24%
Zn 213.857†	26378.2	215.79	ug/L	1.267	215.79	ppb	1.267	0.59%
SiO2†	1192779.4	75176	ug/L	1263.0	75176	ppb	1263.0	1.68%

Sequence No.: 22
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 1/20/2010 22:59:38
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5089.2	5089.2	97.6	%			23:01:31
1	Y RADIAL	5346.6	5346.6	97.06	%			23:01:31
1	Al 396.153Radial†	6526.5	6676.0	5058.8	ug/L	5058.8	ppb	23:01:31
1	Ca 317.933Radial†	3098.5	3157.8	5185.4	ug/L	5185.4	ppb	23:01:51
1	Fe 238.204 Radial†	587.0	590.5	5390.5	ug/L	5390.5	ppb	23:01:51
1	K 766.490 Radial†	27752.3	25657.2	5123.5	ug/L	5123.5	ppb	23:01:31
1	Mg 279.077 IEC†	161.1	160.6	5279.5	ug/L	5279.5	ppb	23:01:51
1	Na 589.592 Radial†	36013.0	38138.4	10730	ug/L	10730	ppb	23:01:31
1	Sr 421.552†	79563.0	81532.4	505.95	ug/L	505.95	ppb	23:01:31
1	Sc 361.383	929787.4	929787.4	98.520	%			23:02:48
1	Y 371.029	768252.2	768252.2	96.845	%			23:02:48
1	Ag 328.068†	121624.0	122998.9	531.09	ug/L	531.09	ppb	23:02:53
1	As 188.979†	1287.8	1330.4	521.20	ug/L	521.20	ppb	23:03:14
1	B 249.677†	24321.6	25079.9	530.37	ug/L	530.37	ppb	23:02:53
1	Ba 233.527†	72900.4	73985.3	526.65	ug/L	526.65	ppb	23:02:53
1	Be 313.107†	1504827.4	1531811.3	520.12	ug/L	520.12	ppb	23:02:48
1	Cd 226.502†	49908.2	50873.9	524.11	ug/L	524.11	ppb	23:02:53
1	Co 228.616†	27418.9	27905.0	529.44	ug/L	529.44	ppb	23:02:53
1	Cr 267.716†	48653.4	49291.1	523.18	ug/L	523.18	ppb	23:02:53
1	Cu 324.752†	191319.4	188054.9	535.90	ug/L	535.90	ppb	23:02:53
1	Mn 257.610†	504805.3	511919.2	522.85	ug/L	522.85	ppb	23:02:48
1	Mo 202.031†	7783.4	7870.9	513.24	ug/L	513.24	ppb	23:03:14
1	Ni 231.604†	22282.9	22519.2	525.69	ug/L	525.69	ppb	23:02:53
1	P 214.914†	4829.5	4678.1	2473.3	ug/L	2473.3	ppb	23:03:14
1	Pb 220.353†	4393.1	4497.4	511.93	ug/L	511.93	ppb	23:03:14
1	S 181.975 Axial†	824.3	790.9	1029.7	ug/L	1029.7	ppb	23:03:14
1	Sb 206.836†	1646.3	1640.4	540.30	ug/L	540.30	ppb	23:03:14
1	Se 196.026†	834.9	877.3	539.79	ug/L	539.79	ppb	23:03:14
1	Si 251.611†	89176.6	90044.3	2641.7	ug/L	2641.7	ppb	23:02:53
1	Sn 189.927†	3122.8	3165.5	509.65	ug/L	509.65	ppb	23:03:14
1	Ti 334.940†	350293.9	356966.7	521.97	ug/L	521.97	ppb	23:02:48
1	Tl 190.801†	1775.5	1838.7	516.96	ug/L	516.96	ppb	23:03:14
1	U 409.014†	17227.1	19211.7	533.46	ug/L	533.46	ppb	23:02:53
1	V 292.402†	79623.9	82305.4	531.84	ug/L	531.84	ppb	23:02:53
1	Zn 213.857†	60468.7	60586.6	522.39	ug/L	522.39	ppb	23:02:53
1	SiO2†	87616.8	88434.1	5559.7	ug/L	5559.7	ppb	23:04:21
2	Sc Radial	5118.3	5118.3	98.1	%			23:01:56
2	Y RADIAL	5353.3	5353.3	97.18	%			23:01:56
2	Al 396.153Radial†	6597.2	6710.0	5084.6	ug/L	5084.6	ppb	23:01:56
2	Ca 317.933Radial†	3100.5	3141.9	5159.2	ug/L	5159.2	ppb	23:02:16
2	Fe 238.204 Radial†	590.3	590.5	5390.3	ug/L	5390.3	ppb	23:02:16
2	K 766.490 Radial†	27866.8	25612.0	5114.5	ug/L	5114.5	ppb	23:01:56
2	Mg 279.077 IEC†	161.6	160.2	5265.5	ug/L	5265.5	ppb	23:02:16
2	Na 589.592 Radial†	36090.2	38007.2	10693	ug/L	10693	ppb	23:01:56
2	Sr 421.552†	80118.9	81635.1	506.59	ug/L	506.59	ppb	23:01:56
2	Sc 361.383	930936.8	930936.8	98.642	%			23:03:19
2	Y 371.029	770275.7	770275.7	97.100	%			23:03:19
2	Ag 328.068†	120486.6	121693.5	525.48	ug/L	525.48	ppb	23:03:25
2	As 188.979†	1292.7	1333.7	522.49	ug/L	522.49	ppb	23:03:45
2	B 249.677†	24080.1	24804.5	524.52	ug/L	524.52	ppb	23:03:25
2	Ba 233.527†	72643.3	73633.3	524.14	ug/L	524.14	ppb	23:03:25
2	Be 313.107†	1507492.7	1532627.4	520.39	ug/L	520.39	ppb	23:03:19
2	Cd 226.502†	49590.6	50489.4	520.14	ug/L	520.14	ppb	23:03:25
2	Co 228.616†	27315.6	27765.9	526.81	ug/L	526.81	ppb	23:03:25
2	Cr 267.716†	48426.2	48999.7	520.09	ug/L	520.09	ppb	23:03:25
2	Cu 324.752†	189873.2	186349.0	531.04	ug/L	531.04	ppb	23:03:25
2	Mn 257.610†	504365.2	510840.4	521.75	ug/L	521.75	ppb	23:03:19
2	Mo 202.031†	7809.9	7888.0	514.36	ug/L	514.36	ppb	23:03:45
2	Ni 231.604†	22163.8	22370.5	522.22	ug/L	522.22	ppb	23:03:25

2	P 214.914†	4850.3	4693.1	2482.6 ug/L	2482.6 ppb	23:03:45
2	Pb 220.353†	4421.8	4521.0	514.62 ug/L	514.62 ppb	23:03:45
2	S 181.975 Axial†	828.3	793.9	1033.7 ug/L	1033.7 ppb	23:03:45
2	Sb 206.836†	1638.2	1630.2	537.07 ug/L	537.07 ppb	23:03:45
2	Se 196.026†	831.6	872.9	537.18 ug/L	537.18 ppb	23:03:45
2	Si 251.611†	88571.4	89319.0	2620.3 ug/L	2620.3 ppb	23:03:25
2	Sn 189.927†	3137.1	3176.0	511.34 ug/L	511.34 ppb	23:03:45
2	Ti 334.940†	349641.4	355866.1	520.37 ug/L	520.37 ppb	23:03:19
2	Tl 190.801†	1785.9	1847.0	519.27 ug/L	519.27 ppb	23:03:45
2	U 409.014†	17117.4	19079.0	529.77 ug/L	529.77 ppb	23:03:25
2	V 292.402†	79207.1	81783.0	528.52 ug/L	528.52 ppb	23:03:25
2	Zn 213.857†	60036.3	60072.4	517.95 ug/L	517.95 ppb	23:03:25
2	SiO2†	88003.1	88715.9	5577.4 ug/L	5577.4 ppb	23:04:26
3	Sc Radial	5011.0	5011.0	96.1 %		23:02:21
3	Y RADIAL	5291.5	5291.5	96.06 %		23:02:21
3	Al 396.153Radial†	6483.8	6735.9	5104.4 ug/L	5104.4 ppb	23:02:21
3	Ca 317.933Radial†	3095.0	3203.7	5260.8 ug/L	5260.8 ppb	23:02:41
3	Fe 238.204 Radial†	591.5	604.6	5518.5 ug/L	5518.5 ppb	23:02:41
3	K 766.490 Radial†	27614.6	25957.5	5183.5 ug/L	5183.5 ppb	23:02:21
3	Mg 279.077 IEC†	163.8	166.0	5455.3 ug/L	5455.3 ppb	23:02:41
3	Na 589.592 Radial†	35738.5	38428.4	10811 ug/L	10811 ppb	23:02:21
3	Sr 421.552†	78854.8	82067.2	509.27 ug/L	509.27 ppb	23:02:21
3	Sc 361.383	928532.4	928532.4	98.387 %		23:03:51
3	Y 371.029	768668.4	768668.4	96.897 %		23:03:51
3	Ag 328.068†	120251.2	121770.5	525.85 ug/L	525.85 ppb	23:03:56
3	As 188.979†	1279.9	1324.1	518.78 ug/L	518.78 ppb	23:04:16
3	B 249.677†	24067.6	24855.0	525.58 ug/L	525.58 ppb	23:03:56
3	Ba 233.527†	72508.4	73686.8	524.53 ug/L	524.53 ppb	23:03:56
3	Be 313.107†	1507115.7	1536201.6	521.61 ug/L	521.61 ppb	23:03:51
3	Cd 226.502†	49590.0	50619.0	521.46 ug/L	521.46 ppb	23:03:56
3	Co 228.616†	27234.7	27755.4	526.61 ug/L	526.61 ppb	23:03:56
3	Cr 267.716†	48326.8	49025.8	520.37 ug/L	520.37 ppb	23:03:56
3	Cu 324.752†	188864.9	185822.7	529.55 ug/L	529.55 ppb	23:03:56
3	Mn 257.610†	503744.6	511533.7	522.46 ug/L	522.46 ppb	23:03:51
3	Mo 202.031†	7781.8	7880.0	513.85 ug/L	513.85 ppb	23:04:16
3	Ni 231.604†	22186.1	22451.4	524.11 ug/L	524.11 ppb	23:03:56
3	P 214.914†	4823.3	4678.4	2474.7 ug/L	2474.7 ppb	23:04:16
3	Pb 220.353†	4434.6	4545.6	517.40 ug/L	517.40 ppb	23:04:16
3	S 181.975 Axial†	828.5	796.2	1036.6 ug/L	1036.6 ppb	23:04:16
3	Sb 206.836†	1632.4	1628.6	536.53 ug/L	536.53 ppb	23:04:16
3	Se 196.026†	832.2	875.7	539.28 ug/L	539.28 ppb	23:04:16
3	Si 251.611†	88141.5	89114.5	2614.3 ug/L	2614.3 ppb	23:03:56
3	Sn 189.927†	3112.7	3159.5	508.70 ug/L	508.70 ppb	23:04:16
3	Ti 334.940†	349244.0	356380.1	521.12 ug/L	521.12 ppb	23:03:51
3	Tl 190.801†	1775.1	1840.6	517.51 ug/L	517.51 ppb	23:04:16
3	U 409.014†	16939.8	18943.4	525.98 ug/L	525.98 ppb	23:03:56
3	V 292.402†	79004.8	81785.3	528.51 ug/L	528.51 ppb	23:03:56
3	Zn 213.857†	60013.7	60207.0	519.10 ug/L	519.10 ppb	23:03:56
3	SiO2†	87234.5	88165.8	5542.8 ug/L	5542.8 ppb	23:04:32

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	929752.2	98.517	%	0.1274				0.13%
Sc Radial	5072.8	97.3	%	1.06				1.09%
Y 371.029	769065.4	96.947	%	0.1347				0.14%
Y RADIAL	5330.5	96.76	%	0.615				0.64%
Ag 328.068†	122154.3	527.48	ug/L	3.137	527.48	ppb	3.137	0.59%
QC value within limits for Ag 328.068 Recovery = 105.50%								
Al 396.153Radial†	6707.3	5082.6	ug/L	22.84	5082.6	ppb	22.84	0.45%
QC value within limits for Al 396.153Radial Recovery = 101.65%								
As 188.979†	1329.4	520.82	ug/L	1.885	520.82	ppb	1.885	0.36%
QC value within limits for As 188.979 Recovery = 104.16%								
B 249.677†	24913.2	526.82	ug/L	3.114	526.82	ppb	3.114	0.59%
QC value within limits for B 249.677 Recovery = 105.36%								
Ba 233.527†	73768.5	525.11	ug/L	1.350	525.11	ppb	1.350	0.26%
QC value within limits for Ba 233.527 Recovery = 105.02%								
Be 313.107†	1533546.8	520.71	ug/L	0.791	520.71	ppb	0.791	0.15%
QC value within limits for Be 313.107 Recovery = 104.14%								
Ca 317.933Radial†	3167.8	5201.8	ug/L	52.74	5201.8	ppb	52.74	1.01%

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   QC value within limits for Ca 317.933Radial  Recovery = 104.04%
Cd 226.502†            50660.8      521.91 ug/L        2.019      521.91 ppb        2.019   0.39%
   QC value within limits for Cd 226.502  Recovery = 104.38%
Co 228.616†            27808.8      527.62 ug/L        1.582      527.62 ppb        1.582   0.30%
   QC value within limits for Co 228.616  Recovery = 105.52%
Cr 267.716†            49105.5      521.21 ug/L        1.710      521.21 ppb        1.710   0.33%
   QC value within limits for Cr 267.716  Recovery = 104.24%
Cu 324.752†           186742.2      532.16 ug/L        3.321      532.16 ppb        3.321   0.62%
   QC value within limits for Cu 324.752  Recovery = 106.43%
Fe 238.204 Radial†       595.2      5433.1 ug/L       73.97      5433.1 ppb       73.97   1.36%
   QC value within limits for Fe 238.204 Radial  Recovery = 108.66%
K 766.490 Radial†      25742.2      5140.5 ug/L       37.51      5140.5 ppb       37.51   0.73%
   QC value within limits for K 766.490 Radial  Recovery = 102.81%
Mg 279.077 IEC†          162.3      5333.5 ug/L      105.76      5333.5 ppb      105.76   1.98%
   QC value within limits for Mg 279.077 IEC  Recovery = 106.67%
Mn 257.610†           511431.1      522.35 ug/L        0.558      522.35 ppb        0.558   0.11%
   QC value within limits for Mn 257.610  Recovery = 104.47%
Mo 202.031†             7879.6      513.82 ug/L        0.558      513.82 ppb        0.558   0.11%
   QC value within limits for Mo 202.031  Recovery = 102.76%
Na 589.592 Radial†     38191.4       10745 ug/L         60.6       10745 ppb         60.6   0.56%
   QC value within limits for Na 589.592 Radial  Recovery = 107.45%
Ni 231.604†            22447.0      524.01 ug/L        1.738      524.01 ppb        1.738   0.33%
   QC value within limits for Ni 231.604  Recovery = 104.80%
P 214.914†              4683.2      2476.9 ug/L        5.00      2476.9 ppb         5.00   0.20%
   QC value within limits for P 214.914  Recovery = 99.07%
Pb 220.353†             4521.3      514.65 ug/L        2.736      514.65 ppb        2.736   0.53%
   QC value within limits for Pb 220.353  Recovery = 102.93%
S 181.975 Axial†         793.6      1033.4 ug/L        3.46      1033.4 ppb         3.46   0.33%
   QC value within limits for S 181.975 Axial  Recovery = 103.34%
Sb 206.836†             1633.1      537.97 ug/L        2.041      537.97 ppb        2.041   0.38%
   QC value within limits for Sb 206.836  Recovery = 107.59%
Se 196.026†              875.3      538.75 ug/L        1.384      538.75 ppb        1.384   0.26%
   QC value within limits for Se 196.026  Recovery = 107.75%
Si 251.611†            89492.6      2625.4 ug/L       14.37      2625.4 ppb       14.37   0.55%
   QC value within limits for Si 251.611  Recovery = 105.02%
Sn 189.927†             3167.0      509.90 ug/L        1.337      509.90 ppb        1.337   0.26%
   QC value within limits for Sn 189.927  Recovery = 101.98%
Sr 421.552†            81744.9      507.27 ug/L        1.761      507.27 ppb        1.761   0.35%
   QC value within limits for Sr 421.552  Recovery = 101.45%
Ti 334.940†           356404.3      521.15 ug/L        0.805      521.15 ppb        0.805   0.15%
   QC value within limits for Ti 334.940  Recovery = 104.23%
Tl 190.801†             1842.1      517.91 ug/L        1.207      517.91 ppb        1.207   0.23%
   QC value within limits for Tl 190.801  Recovery = 103.58%
U 409.014†             19078.1      529.73 ug/L        3.741      529.73 ppb        3.741   0.71%
   QC value within limits for U 409.014  Recovery = 105.95%
V 292.402†             81957.9      529.63 ug/L        1.922      529.63 ppb        1.922   0.36%
   QC value within limits for V 292.402  Recovery = 105.93%
Zn 213.857†            60288.7      519.81 ug/L        2.307      519.81 ppb        2.307   0.44%
   QC value within limits for Zn 213.857  Recovery = 103.96%
SiO2†                  88438.6      5560.0 ug/L       17.33      5560.0 ppb       17.33   0.31%
   QC value within limits for SiO2  Recovery = 103.97%
All analyte(s) passed QC.
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Sequence No.: 23
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 1/20/2010 23:06:41
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5066.5	5066.5	97.1	%			23:08:33
1	Y RADIAL	5338.9	5338.9	96.92	%			23:08:33
1	Al 396.153Radial†	17.5	5.7	4.3495	ug/L	4.3495	ppb	23:08:33
1	Ca 317.933Radial†	21.3	4.5	7.3674	ug/L	7.3674	ppb	23:08:53
1	Fe 238.204 Radial†	9.5	-1.2	-10.645	ug/L	-10.645	ppb	23:08:53
1	K 766.490 Radial†	2944.2	247.5	49.474	ug/L	49.474	ppb	23:08:33
1	Mg 279.077 IEC†	0.4	-4.1	-133.41	ug/L	-133.41	ppb	23:08:53
1	Na 589.592 Radial†	-1099.1	101.2	28.475	ug/L	28.475	ppb	23:08:33
1	Sr 421.552†	24.1	21.7	0.1344	ug/L	0.1344	ppb	23:08:33
1	Sc 361.383	915997.9	915997.9	97.059	%			23:09:50
1	Y 371.029	772339.7	772339.7	97.360	%			23:09:50
1	Ag 328.068†	309.0	-133.2	-0.5760	ug/L	-0.5760	ppb	23:09:50
1	As 188.979†	-26.1	-3.7	-1.4317	ug/L	-1.4317	ppb	23:10:10
1	B 249.677†	-111.5	278.1	5.9087	ug/L	5.9087	ppb	23:10:10
1	Ba 233.527†	3.1	-6.7	-0.0490	ug/L	-0.0490	ppb	23:10:10
1	Be 313.107†	-4541.8	-294.6	-0.0998	ug/L	-0.0998	ppb	23:09:50
1	Cd 226.502†	-213.6	-3.8	-0.0382	ug/L	-0.0382	ppb	23:10:10
1	Co 228.616†	-65.1	7.3	0.1387	ug/L	0.1387	ppb	23:10:10
1	Cr 267.716†	86.0	-4.4	-0.0473	ug/L	-0.0473	ppb	23:10:10
1	Cu 324.752†	6191.9	241.9	0.6892	ug/L	0.6892	ppb	23:09:50
1	Mn 257.610†	494.6	42.5	0.0478	ug/L	0.0478	ppb	23:10:10
1	Mo 202.031†	29.2	0.7	0.0436	ug/L	0.0436	ppb	23:10:10
1	Ni 231.604†	117.2	22.3	0.5219	ug/L	0.5219	ppb	23:10:10
1	P 214.914†	233.3	16.5	8.9606	ug/L	8.9606	ppb	23:10:10
1	Pb 220.353†	-55.3	-18.7	-2.1144	ug/L	-2.1144	ppb	23:10:10
1	S 181.975 Axial†	42.0	-2.6	-3.4156	ug/L	-3.4156	ppb	23:10:10
1	Sb 206.836†	37.0	7.6	2.4415	ug/L	2.4415	ppb	23:10:10
1	Se 196.026†	-29.2	-0.3	-0.1939	ug/L	-0.1939	ppb	23:10:10
1	Si 251.611†	575.0	120.8	3.5514	ug/L	3.5514	ppb	23:10:10
1	Sn 189.927†	13.8	9.9	1.5996	ug/L	1.5996	ppb	23:10:10
1	Ti 334.940†	-1371.4	-0.9	0.0110	ug/L	0.0110	ppb	23:09:50
1	Tl 190.801†	-31.1	4.4	1.2427	ug/L	1.2427	ppb	23:10:10
1	U 409.014†	-1703.4	-29.0	-0.8070	ug/L	-0.8070	ppb	23:09:50
1	V 292.402†	-1499.6	-59.4	-0.3806	ug/L	-0.3806	ppb	23:09:50
1	Zn 213.857†	723.4	-45.0	-0.3942	ug/L	-0.3942	ppb	23:10:10
1	SiO2†	587.6	106.9	6.7394	ug/L	6.7394	ppb	23:11:06
2	Sc Radial	5119.5	5119.5	98.2	%			23:08:58
2	Y RADIAL	5404.4	5404.4	98.11	%			23:08:58
2	Al 396.153Radial†	0.6	-11.7	-8.9408	ug/L	-8.9408	ppb	23:08:58
2	Ca 317.933Radial†	13.6	-3.6	-5.9923	ug/L	-5.9923	ppb	23:09:18
2	Fe 238.204 Radial†	12.5	1.7	15.715	ug/L	15.715	ppb	23:09:18
2	K 766.490 Radial†	2885.1	156.0	31.177	ug/L	31.177	ppb	23:08:58
2	Mg 279.077 IEC†	-0.8	-5.3	-175.27	ug/L	-175.27	ppb	23:09:18
2	Na 589.592 Radial†	-1064.8	147.8	41.582	ug/L	41.582	ppb	23:08:58
2	Sr 421.552†	51.1	49.0	0.3040	ug/L	0.3040	ppb	23:08:58
2	Sc 361.383	915156.4	915156.4	96.970	%			23:10:15
2	Y 371.029	772418.3	772418.3	97.370	%			23:10:15
2	Ag 328.068†	466.7	29.8	0.1306	ug/L	0.1306	ppb	23:10:15
2	As 188.979†	-26.6	-4.2	-1.6123	ug/L	-1.6123	ppb	23:10:35
2	B 249.677†	-158.4	229.7	4.8751	ug/L	4.8751	ppb	23:10:35
2	Ba 233.527†	23.5	14.3	0.1002	ug/L	0.1002	ppb	23:10:35
2	Be 313.107†	-4515.4	-271.7	-0.0917	ug/L	-0.0917	ppb	23:10:15
2	Cd 226.502†	-204.1	5.8	0.0577	ug/L	0.0577	ppb	23:10:35
2	Co 228.616†	-56.8	15.8	0.2986	ug/L	0.2986	ppb	23:10:35
2	Cr 267.716†	82.4	-8.0	-0.0856	ug/L	-0.0856	ppb	23:10:35
2	Cu 324.752†	6226.5	283.3	0.8092	ug/L	0.8092	ppb	23:10:15
2	Mn 257.610†	520.0	69.1	0.0793	ug/L	0.0793	ppb	23:10:35
2	Mo 202.031†	29.4	0.9	0.0604	ug/L	0.0604	ppb	23:10:35
2	Ni 231.604†	105.3	10.3	0.2394	ug/L	0.2394	ppb	23:10:35

2	P 214.914†	233.5	16.9	9.1434 ug/L	9.1434 ppb		23:10:35
2	Pb 220.353†	-54.8	-18.2	-2.0667 ug/L	-2.0667 ppb		23:10:35
2	S 181.975 Axial†	35.3	-9.5	-12.389 ug/L	-12.389 ppb		23:10:35
2	Sb 206.836†	27.7	-2.0	-0.6235 ug/L	-0.6235 ppb		23:10:35
2	Se 196.026†	-20.5	8.7	5.1852 ug/L	5.1852 ppb		23:10:35
2	Si 251.611†	569.3	115.5	3.3950 ug/L	3.3950 ppb		23:10:35
2	Sn 189.927†	5.7	1.7	0.2654 ug/L	0.2654 ppb		23:10:35
2	Ti 334.940†	-1281.2	90.9	0.1472 ug/L	0.1472 ppb		23:10:15
2	Tl 190.801†	-29.1	6.5	1.8032 ug/L	1.8032 ppb		23:10:35
2	U 409.014†	-1730.5	-58.6	-1.6346 ug/L	-1.6346 ppb		23:10:15
2	V 292.402†	-1576.6	-140.1	-0.9020 ug/L	-0.9020 ppb		23:10:15
2	Zn 213.857†	726.3	-41.3	-0.3632 ug/L	-0.3632 ppb		23:10:35
2	SiO2†	574.3	93.8	5.9080 ug/L	5.9080 ppb		23:11:11
3	Sc Radial	5198.9	5198.9	99.7 %			23:09:23
3	Y RADIAL	5459.3	5459.3	99.10 %			23:09:23
3	Al 396.153Radial†	10.2	-2.1	-1.5875 ug/L	-1.5875 ppb		23:09:23
3	Ca 317.933Radial†	17.8	0.4	0.7225 ug/L	0.7225 ppb		23:09:43
3	Fe 238.204 Radial†	9.9	-1.1	-9.6560 ug/L	-9.6560 ppb		23:09:43
3	K 766.490 Radial†	2854.7	80.6	16.099 ug/L	16.099 ppb		23:09:23
3	Mg 279.077 IEC†	3.1	-1.4	-44.659 ug/L	-44.659 ppb		23:09:43
3	Na 589.592 Radial†	-1057.7	171.5	48.250 ug/L	48.250 ppb		23:09:23
3	Sr 421.552†	17.2	14.1	0.0876 ug/L	0.0876 ppb		23:09:23
3	Sc 361.383	914912.6	914912.6	96.944 %			23:10:41
3	Y 371.029	772983.1	772983.1	97.441 %			23:10:41
3	Ag 328.068†	364.2	-75.8	-0.3261 ug/L	-0.3261 ppb		23:10:41
3	As 188.979†	-31.2	-8.9	-3.4602 ug/L	-3.4602 ppb		23:11:01
3	B 249.677†	-117.9	271.4	5.7673 ug/L	5.7673 ppb		23:11:01
3	Ba 233.527†	11.8	2.3	0.0160 ug/L	0.0160 ppb		23:11:01
3	Be 313.107†	-4441.1	-196.2	-0.0663 ug/L	-0.0663 ppb		23:10:41
3	Cd 226.502†	-198.6	11.3	0.1174 ug/L	0.1174 ppb		23:11:01
3	Co 228.616†	-90.1	-18.6	-0.3535 ug/L	-0.3535 ppb		23:11:01
3	Cr 267.716†	66.2	-24.7	-0.2610 ug/L	-0.2610 ppb		23:11:01
3	Cu 324.752†	6082.3	136.4	0.3900 ug/L	0.3900 ppb		23:10:41
3	Mn 257.610†	493.9	42.4	0.0441 ug/L	0.0441 ppb		23:11:01
3	Mo 202.031†	24.9	-3.7	-0.2442 ug/L	-0.2442 ppb		23:11:01
3	Ni 231.604†	118.2	23.6	0.5511 ug/L	0.5511 ppb		23:11:01
3	P 214.914†	225.5	8.7	4.7112 ug/L	4.7112 ppb		23:11:01
3	Pb 220.353†	-58.1	-21.6	-2.4490 ug/L	-2.4490 ppb		23:11:01
3	S 181.975 Axial†	38.9	-5.7	-7.4709 ug/L	-7.4709 ppb		23:11:01
3	Sb 206.836†	40.8	11.5	3.6515 ug/L	3.6515 ppb		23:11:01
3	Se 196.026†	-25.3	3.7	2.1432 ug/L	2.1432 ppb		23:11:01
3	Si 251.611†	564.0	110.2	3.2441 ug/L	3.2441 ppb		23:11:01
3	Sn 189.927†	7.9	3.9	0.6235 ug/L	0.6235 ppb		23:11:01
3	Ti 334.940†	-1322.5	47.9	0.0754 ug/L	0.0754 ppb		23:10:41
3	Tl 190.801†	-29.1	6.5	1.8153 ug/L	1.8153 ppb		23:11:01
3	U 409.014†	-1794.8	-125.4	-3.4921 ug/L	-3.4921 ppb		23:10:41
3	V 292.402†	-1455.1	-15.3	-0.1072 ug/L	-0.1072 ppb		23:10:41
3	Zn 213.857†	721.9	-45.6	-0.3997 ug/L	-0.3997 ppb		23:11:01
3	SiO2†	569.4	88.8	5.6043 ug/L	5.6043 ppb		23:11:16

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	915355.7	96.991	%	0.0603				0.06%
Sc Radial	5128.3	98.3	%	1.28				1.30%
Y 371.029	772580.4	97.390	%	0.0442				0.05%
Y RADIAL	5400.9	98.04	%	1.094				1.12%
Ag 328.068†	-59.8	-0.2571	ug/L	0.35834	-0.2571	ppb	0.35834	139.35%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-2.7	-2.0596	ug/L	6.65771	-2.0596	ppb	6.65771	323.25%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-5.6	-2.1681	ug/L	1.12267	-2.1681	ppb	1.12267	51.78%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	259.7	5.5170	ug/L	0.56036	5.5170	ppb	0.56036	10.16%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	3.3	0.0224	ug/L	0.07482	0.0224	ppb	0.07482	334.37%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-254.1	-0.0859	ug/L	0.01748	-0.0859	ppb	0.01748	20.35%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	0.4	0.6992	ug/L	6.67991	0.6992	ppb	6.67991	955.35%

```
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                 4.4      0.0456 ug/L       0.07851      0.0456 ppb        0.07851 172.08%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 1.5      0.0279 ug/L       0.33987      0.0279 ppb        0.33987 >999.9%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               -12.4     -0.1313 ug/L       0.11393     -0.1313 ppb        0.11393  86.78%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               220.5      0.6295 ug/L       0.21586      0.6295 ppb        0.21586  34.29%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         -0.2     -1.5285 ug/L      14.94168     -1.5285 ppb       14.94168 977.53%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         161.4      32.250 ug/L       16.7133      32.250 ppb        16.7133  51.82%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -3.6     -117.78 ug/L        66.693     -117.78 ppb         66.693  56.63%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                51.3      0.0571 ug/L       0.01933      0.0571 ppb        0.01933  33.86%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                -0.7     -0.0467 ug/L       0.17123     -0.0467 ppb        0.17123 366.30%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        140.2      39.436 ug/L       10.0604      39.436 ppb        10.0604  25.51%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                18.7      0.4375 ug/L       0.17214      0.4375 ppb        0.17214  39.35%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 14.0      7.6051 ug/L       2.50786      7.6051 ppb        2.50786  32.98%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               -19.5     -2.2100 ug/L       0.20832     -2.2100 ppb        0.20832   9.43%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           -6.0     -7.7584 ug/L       4.49349     -7.7584 ppb        4.49349  57.92%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 5.7      1.8232 ug/L       2.20356      1.8232 ppb        2.20356 120.86%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 4.0      2.3782 ug/L       2.69723      2.3782 ppb        2.69723 113.42%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               115.5      3.3968 ug/L       0.15368      3.3968 ppb        0.15368   4.52%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 5.2      0.8295 ug/L       0.69055      0.8295 ppb        0.69055  83.25%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                28.3      0.1753 ug/L       0.11385      0.1753 ppb        0.11385  64.93%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                46.0      0.0779 ug/L       0.06813      0.0779 ppb        0.06813  87.49%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 5.8      1.6204 ug/L       0.32712      1.6204 ppb        0.32712  20.19%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                -71.0     -1.9779 ug/L       1.37506     -1.9779 ppb        1.37506  69.52%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                -71.6     -0.4633 ug/L       0.40382     -0.4633 ppb        0.40382  87.17%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               -43.9     -0.3857 ug/L       0.01970     -0.3857 ppb        0.01970   5.11%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      96.5      6.0839 ug/L       0.58767      6.0839 ppb        0.58767   9.66%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 33
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 1/21/2010 00:16:45
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5027.7	5027.7	96.4	%			00:18:37
1	Y RADIAL	5270.5	5270.5	95.68	%			00:18:37
1	Al 396.153Radial†	6375.1	6600.7	5001.3	ug/L	5001.3	ppb	00:18:37
1	Ca 317.933Radial†	3093.1	3191.0	5240.0	ug/L	5240.0	ppb	00:18:57
1	Fe 238.204 Radial†	583.5	594.2	5424.0	ug/L	5424.0	ppb	00:18:57
1	K 766.490 Radial†	27233.8	25467.1	5085.6	ug/L	5085.6	ppb	00:18:37
1	Mg 279.077 IEC†	159.4	160.9	5288.1	ug/L	5288.1	ppb	00:18:57
1	Na 589.592 Radial†	34369.7	36885.0	10377	ug/L	10377	ppb	00:18:37
1	Sr 421.552†	76355.9	79202.5	491.49	ug/L	491.49	ppb	00:18:37
1	Sc 361.383	922778.2	922778.2	97.778	%			00:19:55
1	Y 371.029	761917.4	761917.4	96.046	%			00:19:55
1	Ag 328.068†	119053.7	121308.0	523.84	ug/L	523.84	ppb	00:20:00
1	As 188.979†	1284.9	1337.3	523.91	ug/L	523.91	ppb	00:20:20
1	B 249.677†	23366.0	24290.0	513.59	ug/L	513.59	ppb	00:20:00
1	Ba 233.527†	72080.6	73708.9	524.68	ug/L	524.68	ppb	00:20:00
1	Be 313.107†	1497486.8	1535905.9	521.51	ug/L	521.51	ppb	00:19:55
1	Cd 226.502†	49260.8	50596.6	521.24	ug/L	521.24	ppb	00:20:00
1	Co 228.616†	27006.8	27694.9	525.46	ug/L	525.46	ppb	00:20:00
1	Cr 267.716†	48059.3	49058.6	520.71	ug/L	520.71	ppb	00:20:00
1	Cu 324.752†	186510.7	184612.0	526.09	ug/L	526.09	ppb	00:20:00
1	Mn 257.610†	502918.8	513881.7	524.85	ug/L	524.85	ppb	00:19:55
1	Mo 202.031†	7781.9	7929.4	517.06	ug/L	517.06	ppb	00:20:20
1	Ni 231.604†	21995.4	22397.0	522.84	ug/L	522.84	ppb	00:20:00
1	P 214.914†	4850.3	4736.7	2507.5	ug/L	2507.5	ppb	00:20:20
1	Pb 220.353†	4388.7	4526.8	515.27	ug/L	515.27	ppb	00:20:20
1	S 181.975 Axial†	830.0	803.0	1045.6	ug/L	1045.6	ppb	00:20:20
1	Sb 206.836†	1625.8	1632.2	537.78	ug/L	537.78	ppb	00:20:20
1	Se 196.026†	824.9	873.5	537.63	ug/L	537.63	ppb	00:20:20
1	Si 251.611†	87429.3	88944.8	2609.3	ug/L	2609.3	ppb	00:20:00
1	Sn 189.927†	3114.4	3181.0	512.15	ug/L	512.15	ppb	00:20:20
1	Ti 334.940†	348659.9	357996.2	523.49	ug/L	523.49	ppb	00:19:55
1	Tl 190.801†	1779.5	1856.4	521.96	ug/L	521.96	ppb	00:20:20
1	U 409.014†	16666.0	18770.7	521.17	ug/L	521.17	ppb	00:20:00
1	V 292.402†	78243.5	81507.4	526.78	ug/L	526.78	ppb	00:20:00
1	Zn 213.857†	59564.0	60127.5	518.43	ug/L	518.43	ppb	00:20:00
1	SiO2†	88946.2	90469.3	5687.9	ug/L	5687.9	ppb	00:21:28
2	Sc Radial	4963.2	4963.2	95.2	%			00:19:02
2	Y RADIAL	5212.0	5212.0	94.61	%			00:19:02
2	Al 396.153Radial†	6506.0	6824.2	5171.2	ug/L	5171.2	ppb	00:19:02
2	Ca 317.933Radial†	3095.2	3234.9	5312.1	ug/L	5312.1	ppb	00:19:22
2	Fe 238.204 Radial†	584.8	603.5	5508.7	ug/L	5508.7	ppb	00:19:22
2	K 766.490 Radial†	27480.4	26093.4	5210.7	ug/L	5210.7	ppb	00:19:02
2	Mg 279.077 IEC†	157.3	160.8	5286.3	ug/L	5286.3	ppb	00:19:22
2	Na 589.592 Radial†	34682.2	37676.8	10600	ug/L	10600	ppb	00:19:02
2	Sr 421.552†	77637.3	81578.5	506.24	ug/L	506.24	ppb	00:19:02
2	Sc 361.383	918024.5	918024.5	97.274	%			00:20:26
2	Y 371.029	759098.5	759098.5	95.691	%			00:20:26
2	Ag 328.068†	120759.3	123691.9	534.11	ug/L	534.11	ppb	00:20:31
2	As 188.979†	1279.8	1338.9	524.51	ug/L	524.51	ppb	00:20:51
2	B 249.677†	23937.3	25001.1	528.66	ug/L	528.66	ppb	00:20:31
2	Ba 233.527†	72575.4	74599.3	531.02	ug/L	531.02	ppb	00:20:31
2	Be 313.107†	1491112.4	1537283.2	521.98	ug/L	521.98	ppb	00:20:26
2	Cd 226.502†	49573.2	51178.7	527.24	ug/L	527.24	ppb	00:20:31
2	Co 228.616†	27265.9	28104.4	533.24	ug/L	533.24	ppb	00:20:31
2	Cr 267.716†	48457.3	49722.2	527.76	ug/L	527.76	ppb	00:20:31
2	Cu 324.752†	189937.4	189122.4	538.94	ug/L	538.94	ppb	00:20:31
2	Mn 257.610†	499788.7	513327.3	524.29	ug/L	524.29	ppb	00:20:26
2	Mo 202.031†	7820.8	8010.6	522.36	ug/L	522.36	ppb	00:20:51
2	Ni 231.604†	22151.7	22674.1	529.31	ug/L	529.31	ppb	00:20:31

2	P 214.914†	4835.1	4746.7	2510.5 ug/L	2510.5 ppb	00:20:51
2	Pb 220.353†	4397.6	4559.1	518.98 ug/L	518.98 ppb	00:20:51
2	S 181.975 Axial†	821.7	798.8	1040.1 ug/L	1040.1 ppb	00:20:51
2	Sb 206.836†	1645.3	1660.8	547.09 ug/L	547.09 ppb	00:20:51
2	Se 196.026†	828.8	881.8	542.92 ug/L	542.92 ppb	00:20:51
2	Si 251.611†	88537.0	90546.6	2656.3 ug/L	2656.3 ppb	00:20:31
2	Sn 189.927†	3127.4	3210.8	516.95 ug/L	516.95 ppb	00:20:51
2	Ti 334.940†	346348.6	357466.5	522.72 ug/L	522.72 ppb	00:20:26
2	Tl 190.801†	1779.7	1866.0	524.58 ug/L	524.58 ppb	00:20:51
2	U 409.014†	17101.9	19307.1	536.09 ug/L	536.09 ppb	00:20:31
2	V 292.402†	79200.5	82905.7	535.79 ug/L	535.79 ppb	00:20:31
2	Zn 213.857†	60140.1	61035.1	526.25 ug/L	526.25 ppb	00:20:31
2	SiO2†	87100.4	89042.8	5597.8 ug/L	5597.8 ppb	00:21:33
3	Sc Radial	5042.6	5042.6	96.7 %		00:19:27
3	Y RADIAL	5270.4	5270.4	95.67 %		00:19:27
3	Al 396.153Radial†	6565.6	6778.2	5136.7 ug/L	5136.7 ppb	00:19:27
3	Ca 317.933Radial†	3082.8	3170.9	5206.9 ug/L	5206.9 ppb	00:19:47
3	Fe 238.204 Radial†	586.3	595.4	5434.6 ug/L	5434.6 ppb	00:19:47
3	K 766.490 Radial†	27586.8	25748.5	5141.8 ug/L	5141.8 ppb	00:19:27
3	Mg 279.077 IEC†	159.8	160.8	5283.9 ug/L	5283.9 ppb	00:19:47
3	Na 589.592 Radial†	35206.4	37644.7	10591 ug/L	10591 ppb	00:19:27
3	Sr 421.552†	78462.9	81147.0	503.56 ug/L	503.56 ppb	00:19:27
3	Sc 361.383	929983.8	929983.8	98.541 %		00:20:57
3	Y 371.029	768276.1	768276.1	96.848 %		00:20:57
3	Ag 328.068†	119158.2	120470.6	520.23 ug/L	520.23 ppb	00:21:02
3	As 188.979†	1278.7	1320.8	517.53 ug/L	517.53 ppb	00:21:22
3	B 249.677†	23406.7	24146.2	510.55 ug/L	510.55 ppb	00:21:02
3	Ba 233.527†	71990.9	73046.7	519.97 ug/L	519.97 ppb	00:21:02
3	Be 313.107†	1514262.3	1541063.3	523.26 ug/L	523.26 ppb	00:20:57
3	Cd 226.502†	49227.9	50172.9	516.87 ug/L	516.87 ppb	00:21:02
3	Co 228.616†	26960.1	27433.5	520.49 ug/L	520.49 ppb	00:21:02
3	Cr 267.716†	48014.1	48631.9	516.19 ug/L	516.19 ppb	00:21:02
3	Cu 324.752†	186222.7	182841.8	521.05 ug/L	521.05 ppb	00:21:02
3	Mn 257.610†	506511.1	513542.1	524.51 ug/L	524.51 ppb	00:20:57
3	Mo 202.031†	7763.9	7849.5	511.85 ug/L	511.85 ppb	00:21:22
3	Ni 231.604†	21919.6	22145.7	516.97 ug/L	516.97 ppb	00:21:02
3	P 214.914†	4801.5	4648.6	2460.0 ug/L	2460.0 ppb	00:21:22
3	Pb 220.353†	4398.3	4501.7	512.45 ug/L	512.45 ppb	00:21:22
3	S 181.975 Axial†	814.5	780.7	1016.4 ug/L	1016.4 ppb	00:21:22
3	Sb 206.836†	1614.9	1608.2	529.93 ug/L	529.93 ppb	00:21:22
3	Se 196.026†	831.5	873.7	537.78 ug/L	537.78 ppb	00:21:22
3	Si 251.611†	87222.2	88041.8	2582.8 ug/L	2582.8 ppb	00:21:02
3	Sn 189.927†	3102.5	3144.2	506.23 ug/L	506.23 ppb	00:21:22
3	Ti 334.940†	351565.8	358182.3	523.76 ug/L	523.76 ppb	00:20:57
3	Tl 190.801†	1768.2	1830.8	514.83 ug/L	514.83 ppb	00:21:22
3	U 409.014†	16679.9	18652.8	517.90 ug/L	517.90 ppb	00:21:02
3	V 292.402†	78206.8	80850.2	522.51 ug/L	522.51 ppb	00:21:02
3	Zn 213.857†	59422.6	59512.0	513.12 ug/L	513.12 ppb	00:21:02
3	SiO2†	87754.3	88554.9	5567.3 ug/L	5567.3 ppb	00:21:38

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	923595.5	97.864	%	0.6380				0.65%
Sc Radial	5011.2	96.1	%	0.81				0.84%
Y 371.029	763097.3	96.195	%	0.5926				0.62%
Y RADIAL	5251.0	95.32	%	0.613				0.64%
Ag 328.068†	121823.5	526.06	ug/L	7.203	526.06	ppb	7.203	1.37%
QC value within limits for Ag 328.068 Recovery = 105.21%								
Al 396.153Radial†	6734.3	5103.1	ug/L	89.83	5103.1	ppb	89.83	1.76%
QC value within limits for Al 396.153Radial Recovery = 102.06%								
As 188.979†	1332.3	521.98	ug/L	3.868	521.98	ppb	3.868	0.74%
QC value within limits for As 188.979 Recovery = 104.40%								
B 249.677†	24479.1	517.60	ug/L	9.698	517.60	ppb	9.698	1.87%
QC value within limits for B 249.677 Recovery = 103.52%								
Ba 233.527†	73785.0	525.22	ug/L	5.548	525.22	ppb	5.548	1.06%
QC value within limits for Ba 233.527 Recovery = 105.04%								
Be 313.107†	1538084.1	522.25	ug/L	0.905	522.25	ppb	0.905	0.17%
QC value within limits for Be 313.107 Recovery = 104.45%								
Ca 317.933Radial†	3199.0	5253.0	ug/L	53.77	5253.0	ppb	53.77	1.02%

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   QC value within limits for Ca 317.933Radial  Recovery = 105.06%
Cd 226.502†            50649.4      521.78 ug/L         5.205      521.78 ppb          5.205   1.00%
   QC value within limits for Cd 226.502  Recovery = 104.36%
Co 228.616†            27744.3      526.40 ug/L         6.427      526.40 ppb          6.427   1.22%
   QC value within limits for Co 228.616  Recovery = 105.28%
Cr 267.716†            49137.6      521.55 ug/L         5.831      521.55 ppb          5.831   1.12%
   QC value within limits for Cr 267.716  Recovery = 104.31%
Cu 324.752†           185525.4      528.70 ug/L         9.226      528.70 ppb          9.226   1.74%
   QC value within limits for Cu 324.752  Recovery = 105.74%
Fe 238.204 Radial†       597.7      5455.8 ug/L        46.16      5455.8 ppb          46.16   0.85%
   QC value within limits for Fe 238.204 Radial  Recovery = 109.12%
K 766.490 Radial†      25769.6      5146.1 ug/L        62.67      5146.1 ppb          62.67   1.22%
   QC value within limits for K 766.490 Radial  Recovery = 102.92%
Mg 279.077 IEC†          160.8      5286.1 ug/L         2.11      5286.1 ppb           2.11   0.04%
   QC value within limits for Mg 279.077 IEC  Recovery = 105.72%
Mn 257.610†           513583.7      524.55 ug/L        0.281      524.55 ppb          0.281   0.05%
   QC value within limits for Mn 257.610  Recovery = 104.91%
Mo 202.031†             7929.8      517.09 ug/L        5.251      517.09 ppb          5.251   1.02%
   QC value within limits for Mo 202.031  Recovery = 103.42%
Na 589.592 Radial†     37402.2       10523 ug/L        126.1       10523 ppb          126.1   1.20%
   QC value within limits for Na 589.592 Radial  Recovery = 105.23%
Ni 231.604†            22405.6      523.04 ug/L        6.169      523.04 ppb          6.169   1.18%
   QC value within limits for Ni 231.604  Recovery = 104.61%
P 214.914†              4710.7      2492.7 ug/L        28.37      2492.7 ppb          28.37   1.14%
   QC value within limits for P 214.914  Recovery = 99.71%
Pb 220.353†             4529.2      515.56 ug/L        3.274      515.56 ppb          3.274   0.64%
   QC value within limits for Pb 220.353  Recovery = 103.11%
S 181.975 Axial†         794.2      1034.0 ug/L        15.49      1034.0 ppb          15.49   1.50%
   QC value within limits for S 181.975 Axial  Recovery = 103.40%
Sb 206.836†             1633.7      538.27 ug/L        8.590      538.27 ppb          8.590   1.60%
   QC value within limits for Sb 206.836  Recovery = 107.65%
Se 196.026†              876.3      539.45 ug/L        3.010      539.45 ppb          3.010   0.56%
   QC value within limits for Se 196.026  Recovery = 107.89%
Si 251.611†            89177.7      2616.1 ug/L        37.24      2616.1 ppb          37.24   1.42%
   QC value within limits for Si 251.611  Recovery = 104.65%
Sn 189.927†             3178.6      511.78 ug/L        5.369      511.78 ppb          5.369   1.05%
   QC value within limits for Sn 189.927  Recovery = 102.36%
Sr 421.552†            80642.7      500.43 ug/L        7.855      500.43 ppb          7.855   1.57%
   QC value within limits for Sr 421.552  Recovery = 100.09%
Ti 334.940†           357881.7      523.33 ug/L        0.542      523.33 ppb          0.542   0.10%
   QC value within limits for Ti 334.940  Recovery = 104.67%
Tl 190.801†             1851.1      520.46 ug/L        5.045      520.46 ppb          5.045   0.97%
   QC value within limits for Tl 190.801  Recovery = 104.09%
U 409.014†             18910.2      525.06 ug/L        9.698      525.06 ppb          9.698   1.85%
   QC value within limits for U 409.014  Recovery = 105.01%
V 292.402†             81754.4      528.36 ug/L        6.780      528.36 ppb          6.780   1.28%
   QC value within limits for V 292.402  Recovery = 105.67%
Zn 213.857†            60224.9      519.27 ug/L        6.609      519.27 ppb          6.609   1.27%
   QC value within limits for Zn 213.857  Recovery = 103.85%
SiO2†                  89355.7      5617.7 ug/L        62.66      5617.7 ppb          62.66   1.12%
   QC value within limits for SiO2  Recovery = 105.05%
All analyte(s) passed QC.
```

Sequence No.: 34
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 1/21/2010 00:23:48
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5055.6	5055.6	96.9	%			00:25:39
1	Y RADIAL	5358.0	5358.0	97.26	%			00:25:39
1	Al 396.153Radial†	2.6	-9.6	-7.3426	ug/L	-7.3426	ppb	00:25:39
1	Ca 317.933Radial†	17.1	0.2	0.3744	ug/L	0.3744	ppb	00:25:59
1	Fe 238.204 Radial†	12.8	2.2	20.155	ug/L	20.155	ppb	00:25:59
1	K 766.490 Radial†	2831.0	137.3	27.441	ug/L	27.441	ppb	00:25:39
1	Mg 279.077 IEC†	2.0	-2.4	-79.168	ug/L	-79.168	ppb	00:25:59
1	Na 589.592 Radial†	-1045.7	153.8	43.279	ug/L	43.279	ppb	00:25:39
1	Sr 421.552†	43.7	42.0	0.2604	ug/L	0.2604	ppb	00:25:39
1	Sc 361.383	946127.2	946127.2	100.25	%			00:26:56
1	Y 371.029	791002.2	791002.2	99.712	%			00:26:56
1	Ag 328.068†	375.5	-77.0	-0.3290	ug/L	-0.3290	ppb	00:27:01
1	As 188.979†	-26.7	-3.4	-1.3066	ug/L	-1.3066	ppb	00:27:21
1	B 249.677†	-380.1	13.9	0.2909	ug/L	0.2909	ppb	00:27:21
1	Ba 233.527†	15.6	5.6	0.0394	ug/L	0.0394	ppb	00:27:21
1	Be 313.107†	-4527.4	-131.2	-0.0439	ug/L	-0.0439	ppb	00:27:01
1	Cd 226.502†	-211.0	5.8	0.0586	ug/L	0.0586	ppb	00:27:21
1	Co 228.616†	-71.3	3.2	0.0600	ug/L	0.0600	ppb	00:27:21
1	Cr 267.716†	98.1	4.8	0.0493	ug/L	0.0493	ppb	00:27:21
1	Cu 324.752†	6273.9	120.5	0.3422	ug/L	0.3422	ppb	00:27:01
1	Mn 257.610†	485.6	17.2	0.0228	ug/L	0.0228	ppb	00:27:21
1	Mo 202.031†	30.9	1.5	0.0962	ug/L	0.0962	ppb	00:27:21
1	Ni 231.604†	111.8	13.2	0.3071	ug/L	0.3071	ppb	00:27:21
1	P 214.914†	230.8	6.3	3.3734	ug/L	3.3734	ppb	00:27:21
1	Pb 220.353†	-74.8	-36.3	-4.1251	ug/L	-4.1251	ppb	00:27:21
1	S 181.975 Axial†	45.2	-0.7	-0.9723	ug/L	-0.9723	ppb	00:27:21
1	Sb 206.836†	48.1	17.4	5.5312	ug/L	5.5312	ppb	00:27:21
1	Se 196.026†	-36.1	-6.2	-3.5766	ug/L	-3.5766	ppb	00:27:21
1	Si 251.611†	561.8	88.8	2.6092	ug/L	2.6092	ppb	00:27:21
1	Sn 189.927†	-2.1	-6.4	-1.0217	ug/L	-1.0217	ppb	00:27:21
1	Ti 334.940†	-1252.9	162.4	0.2423	ug/L	0.2423	ppb	00:27:01
1	Tl 190.801†	-36.0	0.6	0.1653	ug/L	0.1653	ppb	00:27:21
1	U 409.014†	-1585.8	144.1	4.0126	ug/L	4.0126	ppb	00:26:56
1	V 292.402†	-1564.2	-74.7	-0.4719	ug/L	-0.4719	ppb	00:27:01
1	Zn 213.857†	709.4	-82.6	-0.7233	ug/L	-0.7233	ppb	00:27:21
1	SiO2†	557.9	58.0	3.6513	ug/L	3.6513	ppb	00:28:27
2	Sc Radial	5016.7	5016.7	96.2	%			00:26:04
2	Y RADIAL	5280.0	5280.0	95.85	%			00:26:04
2	Al 396.153Radial†	-4.0	-16.5	-12.551	ug/L	-12.551	ppb	00:26:04
2	Ca 317.933Radial†	15.4	-1.5	-2.3903	ug/L	-2.3903	ppb	00:26:24
2	Fe 238.204 Radial†	12.3	1.8	16.292	ug/L	16.292	ppb	00:26:24
2	K 766.490 Radial†	2834.1	163.1	32.606	ug/L	32.606	ppb	00:26:04
2	Mg 279.077 IEC†	3.3	-1.1	-34.597	ug/L	-34.597	ppb	00:26:24
2	Na 589.592 Radial†	-1121.9	66.2	18.637	ug/L	18.637	ppb	00:26:04
2	Sr 421.552†	31.5	29.6	0.1839	ug/L	0.1839	ppb	00:26:04
2	Sc 361.383	929698.4	929698.4	98.511	%			00:27:26
2	Y 371.029	779328.5	779328.5	98.241	%			00:27:26
2	Ag 328.068†	466.8	22.4	0.0997	ug/L	0.0997	ppb	00:27:31
2	As 188.979†	-24.4	-1.5	-0.5760	ug/L	-0.5760	ppb	00:27:51
2	B 249.677†	-347.7	40.0	0.8468	ug/L	0.8468	ppb	00:27:51
2	Ba 233.527†	13.8	4.1	0.0287	ug/L	0.0287	ppb	00:27:51
2	Be 313.107†	-4441.2	-123.5	-0.0416	ug/L	-0.0416	ppb	00:27:31
2	Cd 226.502†	-212.3	0.7	0.0058	ug/L	0.0058	ppb	00:27:51
2	Co 228.616†	-70.0	3.3	0.0613	ug/L	0.0613	ppb	00:27:51
2	Cr 267.716†	79.8	-12.0	-0.1269	ug/L	-0.1269	ppb	00:27:51
2	Cu 324.752†	6154.3	109.6	0.3137	ug/L	0.3137	ppb	00:27:31
2	Mn 257.610†	496.7	37.1	0.0409	ug/L	0.0409	ppb	00:27:51
2	Mo 202.031†	25.4	-3.6	-0.2304	ug/L	-0.2304	ppb	00:27:51
2	Ni 231.604†	93.4	-3.6	-0.0836	ug/L	-0.0836	ppb	00:27:51

2	P 214.914†	211.7	-9.0	-5.0562 ug/L	-5.0562 ppb	00:27:51
2	Pb 220.353†	-60.0	-22.6	-2.5704 ug/L	-2.5704 ppb	00:27:51
2	S 181.975 Axial†	40.0	-5.3	-6.8815 ug/L	-6.8815 ppb	00:27:51
2	Sb 206.836†	48.5	18.7	5.9185 ug/L	5.9185 ppb	00:27:51
2	Se 196.026†	-27.8	1.6	0.9855 ug/L	0.9855 ppb	00:27:51
2	Si 251.611†	543.7	80.3	2.3648 ug/L	2.3648 ppb	00:27:51
2	Sn 189.927†	0.1	-4.1	-0.6627 ug/L	-0.6627 ppb	00:27:51
2	Ti 334.940†	-1322.8	69.3	0.1043 ug/L	0.1043 ppb	00:27:31
2	Tl 190.801†	-39.8	-4.0	-1.1033 ug/L	-1.1033 ppb	00:27:51
2	U 409.014†	-1729.7	-29.9	-0.8334 ug/L	-0.8334 ppb	00:27:26
2	V 292.402†	-1545.4	-83.1	-0.5380 ug/L	-0.5380 ppb	00:27:31
2	Zn 213.857†	725.9	-53.4	-0.4663 ug/L	-0.4663 ppb	00:27:51
2	SiO2†	569.8	79.9	5.0423 ug/L	5.0423 ppb	00:28:32
3	Sc Radial	5194.4	5194.4	99.6 %		00:26:30
3	Y RADIAL	5472.2	5472.2	99.34 %		00:26:30
3	Al 396.153Radial†	-15.3	-27.7	-21.068 ug/L	-21.068 ppb	00:26:30
3	Ca 317.933Radial†	22.7	5.3	8.7578 ug/L	8.7578 ppb	00:26:50
3	Fe 238.204 Radial†	10.9	-0.1	-0.7020 ug/L	-0.7020 ppb	00:26:50
3	K 766.490 Radial†	2874.6	103.0	20.582 ug/L	20.582 ppb	00:26:30
3	Mg 279.077 IEC†	4.4	-0.0	-1.1208 ug/L	-1.1208 ppb	00:26:50
3	Na 589.592 Radial†	-1090.9	137.3	38.620 ug/L	38.620 ppb	00:26:30
3	Sr 421.552†	33.1	30.1	0.1870 ug/L	0.1870 ppb	00:26:30
3	Sc 361.383	932718.9	932718.9	98.831 %		00:27:57
3	Y 371.029	780540.6	780540.6	98.394 %		00:27:57
3	Ag 328.068†	385.5	-61.5	-0.2688 ug/L	-0.2688 ppb	00:28:02
3	As 188.979†	-32.3	-9.4	-3.6533 ug/L	-3.6533 ppb	00:28:22
3	B 249.677†	-343.0	45.9	0.9745 ug/L	0.9745 ppb	00:28:22
3	Ba 233.527†	9.4	-0.4	-0.0030 ug/L	-0.0030 ppb	00:28:22
3	Be 313.107†	-4399.9	-67.0	-0.0227 ug/L	-0.0227 ppb	00:28:02
3	Cd 226.502†	-211.6	2.2	0.0236 ug/L	0.0236 ppb	00:28:22
3	Co 228.616†	-61.7	11.9	0.2262 ug/L	0.2262 ppb	00:28:22
3	Cr 267.716†	84.1	-7.9	-0.0860 ug/L	-0.0860 ppb	00:28:22
3	Cu 324.752†	6155.8	91.0	0.2562 ug/L	0.2562 ppb	00:28:02
3	Mn 257.610†	519.8	58.8	0.0600 ug/L	0.0600 ppb	00:28:22
3	Mo 202.031†	27.0	-2.1	-0.1367 ug/L	-0.1367 ppb	00:28:22
3	Ni 231.604†	111.5	14.5	0.3382 ug/L	0.3382 ppb	00:28:22
3	P 214.914†	226.5	5.3	2.8408 ug/L	2.8408 ppb	00:28:22
3	Pb 220.353†	-69.7	-32.2	-3.6635 ug/L	-3.6635 ppb	00:28:22
3	S 181.975 Axial†	44.2	-1.1	-1.4771 ug/L	-1.4771 ppb	00:28:22
3	Sb 206.836†	46.8	16.8	5.3192 ug/L	5.3192 ppb	00:28:22
3	Se 196.026†	-36.9	-7.5	-4.4477 ug/L	-4.4477 ppb	00:28:22
3	Si 251.611†	565.0	100.1	2.9443 ug/L	2.9443 ppb	00:28:22
3	Sn 189.927†	-4.8	-9.2	-1.4701 ug/L	-1.4701 ppb	00:28:22
3	Ti 334.940†	-1377.6	18.2	0.0255 ug/L	0.0255 ppb	00:28:02
3	Tl 190.801†	-45.1	-9.1	-2.5518 ug/L	-2.5518 ppb	00:28:22
3	U 409.014†	-1510.2	197.9	5.5137 ug/L	5.5137 ppb	00:27:57
3	V 292.402†	-1477.0	-8.8	-0.0473 ug/L	-0.0473 ppb	00:28:02
3	Zn 213.857†	711.9	-69.9	-0.6108 ug/L	-0.6108 ppb	00:28:22
3	SiO2†	579.5	87.9	5.5433 ug/L	5.5433 ppb	00:28:37

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	936181.5	99.198	%	0.9266				0.93%
Sc Radial	5088.9	97.6	%	1.79				1.84%
Y 371.029	783623.7	98.782	%	0.8091				0.82%
Y RADIAL	5370.1	97.48	%	1.755				1.80%
Ag 328.068†	-38.7	-0.1660	ug/L	0.23211	-0.1660	ppb	0.23211	139.81%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-17.9	-13.654	ug/L	6.9287	-13.654	ppb	6.9287	50.75%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-4.8	-1.8453	ug/L	1.60784	-1.8453	ppb	1.60784	87.13%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	33.3	0.7041	ug/L	0.36347	0.7041	ppb	0.36347	51.63%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	3.1	0.0217	ug/L	0.02209	0.0217	ppb	0.02209	101.82%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-107.2	-0.0361	ug/L	0.01166	-0.0361	ppb	0.01166	32.34%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	1.4	2.2473	ug/L	5.80525	2.2473	ppb	5.80525	258.32%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                 2.9      0.0293 ug/L       0.02687      0.0293 ppb        0.02687  91.67%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 6.1      0.1158 ug/L       0.09560      0.1158 ppb        0.09560  82.52%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                -5.0     -0.0545 ug/L       0.09225     -0.0545 ppb        0.09225 169.17%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               107.0      0.3040 ug/L       0.04382      0.3040 ppb        0.04382  14.41%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          1.3      11.915 ug/L       11.0962      11.915 ppb        11.0962  93.13%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         134.5      26.876 ug/L        6.0317      26.876 ppb         6.0317  22.44%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -1.2     -38.295 ug/L       39.1546     -38.295 ppb        39.1546 102.24%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                37.7      0.0412 ug/L       0.01860      0.0412 ppb        0.01860  45.11%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                -1.4     -0.0903 ug/L       0.16815     -0.0903 ppb        0.16815 186.21%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        119.1      33.512 ug/L       13.0912      33.512 ppb        13.0912  39.06%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                 8.0      0.1873 ug/L       0.23507      0.1873 ppb        0.23507 125.53%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                  0.9      0.3860 ug/L       4.72061      0.3860 ppb        4.72061 >999.9%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               -30.4     -3.4530 ug/L       0.79846     -3.4530 ppb        0.79846  23.12%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           -2.4     -3.1103 ug/L       3.27568     -3.1103 ppb        3.27568 105.32%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                17.6      5.5896 ug/L       0.30390      5.5896 ppb        0.30390   5.44%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -4.0     -2.3463 ug/L       2.91807     -2.3463 ppb        2.91807 124.37%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                89.7      2.6394 ug/L       0.29089      2.6394 ppb        0.29089  11.02%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                -6.5     -1.0515 ug/L       0.40454     -1.0515 ppb        0.40454  38.47%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                33.9      0.2104 ug/L       0.04331      0.2104 ppb        0.04331  20.58%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                83.3      0.1240 ug/L       0.10974      0.1240 ppb        0.10974  88.49%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                -4.2     -1.1633 ug/L       1.35955     -1.1633 ppb        1.35955 116.87%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                104.1      2.8976 ug/L       3.31716      2.8976 ppb        3.31716 114.48%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                -55.5     -0.3524 ug/L       0.26632     -0.3524 ppb        0.26632  75.57%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               -68.7     -0.6001 ug/L       0.12882     -0.6001 ppb        0.12882  21.46%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      75.3      4.7456 ug/L       0.98026      4.7456 ppb        0.98026  20.66%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 36
Sample ID: 1202011923|940187|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 81
Date Collected: 1/21/2010 00:37:53
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1202011923|940187|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5036.9	5036.9	96.6	%			00:40:07
1	Y RADIAL	5839.9	5839.9	106.0	%			00:40:07
1	Al 396.153Radial†	67520.0	69900.4	53228	ug/L	53228	ppb	00:39:47
1	Ca 317.933Radial†	12268.7	12686.0	20831	ug/L	20831	ppb	00:39:47
1	Fe 238.204 Radial†	11428.3	11822.3	107600	ug/L	107600	ppb	00:39:47
1	K 766.490 Radial†	67800.5	67420.0	13473	ug/L	13473	ppb	00:39:47
1	Mg 279.077 IEC†	518.5	532.3	17385	ug/L	17385	ppb	00:40:07
1	Na 589.592 Radial†	1128.7	2401.3	675.57	ug/L	675.57	ppb	00:39:47
1	Sr 421.552†	20110.0	20819.5	129.05	ug/L	129.05	ppb	00:39:47
1	Sc 361.383	930497.0	930497.0	98.596	%			00:41:04
1	Y 371.029	853358.5	853358.5	107.57	%			00:41:04
1	Ag 328.068†	-6752.2	-7299.9	4.2688	ug/L	4.2688	ppb	00:41:09
1	As 188.979†	-73.7	-51.5	35.395	ug/L	35.395	ppb	00:41:29
1	B 249.677†	876.9	1282.4	9.6593	ug/L	9.6593	ppb	00:41:09
1	Ba 233.527†	227732.1	230965.9	1643.7	ug/L	1643.7	ppb	00:41:09
1	Be 313.107†	-17778.8	-13647.2	3.2846	ug/L	3.2846	ppb	00:41:09
1	Cd 226.502†	889.7	1118.6	0.4196	ug/L	0.4196	ppb	00:41:29
1	Co 228.616†	1891.6	1992.9	29.710	ug/L	29.710	ppb	00:41:29
1	Cr 267.716†	6122.7	6116.9	67.314	ug/L	67.314	ppb	00:41:09
1	Cu 324.752†	78375.6	73354.3	214.82	ug/L	214.82	ppb	00:41:09
1	Mn 257.610†	1934879.7	1961972.2	2012.6	ug/L	2012.6	ppb	00:41:04
1	Mo 202.031†	-19.8	-49.5	5.3786	ug/L	5.3786	ppb	00:41:29
1	Ni 231.604†	2617.8	2556.8	59.699	ug/L	59.699	ppb	00:41:29
1	P 214.914†	5893.7	5753.7	3055.8	ug/L	3055.8	ppb	00:41:29
1	Pb 220.353†	1469.9	1529.2	174.86	ug/L	174.86	ppb	00:41:29
1	S 181.975 Axial†	763.4	728.4	939.39	ug/L	939.39	ppb	00:41:29
1	Sb 206.836†	70.4	40.9	3.1244	ug/L	3.1244	ppb	00:41:29
1	Se 196.026†	-594.5	-573.1	47.573	ug/L	47.573	ppb	00:41:29
1	Si 251.611†	914128.5	926677.3	27251	ug/L	27251	ppb	00:41:04
1	Sn 189.927†	-92.9	-98.5	-10.852	ug/L	-10.852	ppb	00:41:29
1	Ti 334.940†	2346533.4	2381368.5	3484.6	ug/L	3484.6	ppb	00:41:04
1	Tl 190.801†	-170.1	-136.0	-0.0915	ug/L	-0.0915	ppb	00:41:29
1	U 409.014†	-7294.3	-5672.2	-170.44	ug/L	-170.44	ppb	00:41:09
1	V 292.402†	32893.0	34847.1	202.88	ug/L	202.88	ppb	00:41:09
1	Zn 213.857†	55201.3	55197.2	469.01	ug/L	469.01	ppb	00:41:09
1	SiO2†	916686.8	929245.2	58567	ug/L	58567	ppb	00:42:38
2	Sc Radial	5010.0	5010.0	96.1	%			00:40:32
2	Y RADIAL	5791.6	5791.6	105.1	%			00:40:32
2	Al 396.153Radial†	67792.4	70559.1	53730	ug/L	53730	ppb	00:40:12
2	Ca 317.933Radial†	12300.1	12786.8	20997	ug/L	20997	ppb	00:40:12
2	Fe 238.204 Radial†	11492.3	11952.4	108780	ug/L	108780	ppb	00:40:12
2	K 766.490 Radial†	67837.2	67835.0	13556	ug/L	13556	ppb	00:40:12
2	Mg 279.077 IEC†	509.6	526.0	17177	ug/L	17177	ppb	00:40:32
2	Na 589.592 Radial†	1169.0	2449.5	689.12	ug/L	689.12	ppb	00:40:12
2	Sr 421.552†	20188.5	21013.0	130.25	ug/L	130.25	ppb	00:40:12
2	Sc 361.383	946508.8	946508.8	100.29	%			00:41:35
2	Y 371.029	868195.6	868195.6	109.44	%			00:41:35
2	Ag 328.068†	-6727.6	-7159.5	5.2305	ug/L	5.2305	ppb	00:41:41
2	As 188.979†	-70.9	-47.5	37.183	ug/L	37.183	ppb	00:42:01
2	B 249.677†	881.0	1271.5	9.2356	ug/L	9.2356	ppb	00:41:41
2	Ba 233.527†	226986.9	226315.5	1610.7	ug/L	1610.7	ppb	00:41:41
2	Be 313.107†	-17980.3	-13543.0	3.3089	ug/L	3.3089	ppb	00:41:41
2	Cd 226.502†	915.2	1128.8	0.4021	ug/L	0.4021	ppb	00:42:01
2	Co 228.616†	1918.2	1986.9	29.577	ug/L	29.577	ppb	00:42:01
2	Cr 267.716†	6165.8	6054.8	66.672	ug/L	66.672	ppb	00:41:41
2	Cu 324.752†	77996.1	71631.2	209.98	ug/L	209.98	ppb	00:41:41
2	Mn 257.610†	1961814.2	1955630.3	2006.2	ug/L	2006.2	ppb	00:41:35
2	Mo 202.031†	-5.0	-34.3	6.4573	ug/L	6.4573	ppb	00:42:01
2	Ni 231.604†	2625.3	2519.3	58.824	ug/L	58.824	ppb	00:42:01

2	P 214.914†	5961.3	5720.0	3037.3	ug/L	3037.3 ppb	00:42:01
2	Pb 220.353†	1502.2	1536.2	175.66	ug/L	175.66 ppb	00:42:01
2	S 181.975 Axial†	776.1	727.9	938.63	ug/L	938.63 ppb	00:42:01
2	Sb 206.836†	63.7	33.0	0.6195	ug/L	0.6195 ppb	00:42:01
2	Se 196.026†	-589.2	-557.6	60.964	ug/L	60.964 ppb	00:42:01
2	Si 251.611†	928396.8	925219.8	27209	ug/L	27209 ppb	00:41:35
2	Sn 189.927†	-105.9	-109.8	-12.628	ug/L	-12.628 ppb	00:42:01
2	Ti 334.940†	2383604.5	2378070.7	3479.8	ug/L	3479.8 ppb	00:41:35
2	Tl 190.801†	-170.5	-133.6	0.5321	ug/L	0.5321 ppb	00:42:01
2	U 409.014†	-7380.3	-5632.9	-169.48	ug/L	-169.48 ppb	00:41:41
2	V 292.402†	32649.0	34039.5	197.58	ug/L	197.58 ppb	00:41:41
2	Zn 213.857†	54854.5	53904.3	457.66	ug/L	457.66 ppb	00:41:41
2	SiO2†	918735.3	915559.6	57704	ug/L	57704 ppb	00:42:44
3	Sc Radial	5067.0	5067.0	97.2	%		00:40:57
3	Y RADIAL	5860.0	5860.0	106.4	%		00:40:57
3	Al 396.153Radial†	68851.3	70855.0	53955	ug/L	53955 ppb	00:40:37
3	Ca 317.933Radial†	12506.2	12854.9	21109	ug/L	21109 ppb	00:40:37
3	Fe 238.204 Radial†	11663.0	11993.5	109150	ug/L	109150 ppb	00:40:37
3	K 766.490 Radial†	68851.5	68084.5	13606	ug/L	13606 ppb	00:40:37
3	Mg 279.077 IEC†	513.2	523.8	17102	ug/L	17102 ppb	00:40:57
3	Na 589.592 Radial†	1132.7	2398.5	674.78	ug/L	674.78 ppb	00:40:37
3	Sr 421.552†	20471.1	21067.4	130.59	ug/L	130.59 ppb	00:40:37
3	Sc 361.383	941487.8	941487.8	99.760	%		00:42:06
3	Y 371.029	865082.3	865082.3	109.05	%		00:42:06
3	Ag 328.068†	-6914.2	-7382.4	4.3994	ug/L	4.3994 ppb	00:42:12
3	As 188.979†	-72.6	-49.5	36.486	ug/L	36.486 ppb	00:42:32
3	B 249.677†	786.8	1181.7	7.2688	ug/L	7.2688 ppb	00:42:12
3	Ba 233.527†	227000.1	227535.8	1619.4	ug/L	1619.4 ppb	00:42:12
3	Be 313.107†	-17904.7	-13562.8	3.3037	ug/L	3.3037 ppb	00:42:12
3	Cd 226.502†	920.6	1139.0	0.4692	ug/L	0.4692 ppb	00:42:32
3	Co 228.616†	1906.0	1985.0	29.537	ug/L	29.537 ppb	00:42:32
3	Cr 267.716†	6173.9	6095.7	67.114	ug/L	67.114 ppb	00:42:12
3	Cu 324.752†	77855.1	71904.6	210.77	ug/L	210.77 ppb	00:42:12
3	Mn 257.610†	1953913.0	1958142.1	2008.8	ug/L	2008.8 ppb	00:42:06
3	Mo 202.031†	-1.1	-30.5	6.7395	ug/L	6.7395 ppb	00:42:32
3	Ni 231.604†	2610.1	2518.0	58.794	ug/L	58.794 ppb	00:42:32
3	P 214.914†	5939.4	5729.8	3042.3	ug/L	3042.3 ppb	00:42:32
3	Pb 220.353†	1477.9	1519.7	173.81	ug/L	173.81 ppb	00:42:32
3	S 181.975 Axial†	752.9	708.9	913.75	ug/L	913.75 ppb	00:42:32
3	Sb 206.836†	74.9	44.5	4.2973	ug/L	4.2973 ppb	00:42:32
3	Se 196.026†	-583.2	-554.8	63.992	ug/L	63.992 ppb	00:42:32
3	Si 251.611†	924223.5	925973.2	27231	ug/L	27231 ppb	00:42:06
3	Sn 189.927†	-107.2	-111.7	-12.906	ug/L	-12.906 ppb	00:42:32
3	Ti 334.940†	2371423.4	2378535.3	3480.5	ug/L	3480.5 ppb	00:42:06
3	Tl 190.801†	-171.3	-135.3	0.0666	ug/L	0.0666 ppb	00:42:32
3	U 409.014†	-7253.9	-5545.4	-167.08	ug/L	-167.08 ppb	00:42:12
3	V 292.402†	32767.9	34332.3	199.40	ug/L	199.40 ppb	00:42:12
3	Zn 213.857†	55018.5	54360.5	461.59	ug/L	461.59 ppb	00:42:12
3	SiO2†	908467.5	910152.5	57363	ug/L	57363 ppb	00:42:50

Mean Data: 1202011923|940187|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	939497.9	99.549	%	0.8677				0.87%
Sc Radial	5037.9	96.6	%	0.55				0.57%
Y 371.029	862212.1	108.69	%	0.986				0.91%
Y RADIAL	5830.5	105.8	%	0.64				0.60%
Ag 328.068†	-7280.6	4.6329	ug/L	0.52167	4.6329	ppb	0.52167	11.26%
Al 396.153Radial†	70438.2	53638	ug/L	372.1	53638	ppb	372.1	0.69%
As 188.979†	-49.5	36.354	ug/L	0.9012	36.354	ppb	0.9012	2.48%
B 249.677†	1245.2	8.7212	ug/L	1.27555	8.7212	ppb	1.27555	14.63%
Ba 233.527†	228272.4	1624.6	ug/L	17.10	1624.6	ppb	17.10	1.05%
Be 313.107†	-13584.3	3.2991	ug/L	0.01282	3.2991	ppb	0.01282	0.39%
Ca 317.933Radial†	12775.9	20979	ug/L	139.6	20979	ppb	139.6	0.67%
Cd 226.502†	1128.8	0.4303	ug/L	0.03482	0.4303	ppb	0.03482	8.09%
Co 228.616†	1988.3	29.608	ug/L	0.0907	29.608	ppb	0.0907	0.31%
Cr 267.716†	6089.2	67.033	ug/L	0.3289	67.033	ppb	0.3289	0.49%
Cu 324.752†	72296.7	211.86	ug/L	2.600	211.86	ppb	2.600	1.23%
Fe 238.204 Radial†	11922.7	108510	ug/L	813.4	108510	ppb	813.4	0.75%
K 766.490 Radial†	67779.8	13545	ug/L	67.1	13545	ppb	67.1	0.50%

Mg 279.077 IEC†	527.4	17221	ug/L	146.8	17221	ppb	146.8	0.85%
Mn 257.610†	1958581.5	2009.2	ug/L	3.19	2009.2	ppb	3.19	0.16%
Mo 202.031†	-38.1	6.1918	ug/L	0.71828	6.1918	ppb	0.71828	11.60%
Na 589.592 Radial†	2416.4	679.82	ug/L	8.064	679.82	ppb	8.064	1.19%
Ni 231.604†	2531.4	59.106	ug/L	0.5140	59.106	ppb	0.5140	0.87%
P 214.914†	5734.5	3045.1	ug/L	9.55	3045.1	ppb	9.55	0.31%
Pb 220.353†	1528.4	174.78	ug/L	0.928	174.78	ppb	0.928	0.53%
S 181.975 Axial†	721.7	930.59	ug/L	14.590	930.59	ppb	14.590	1.57%
Sb 206.836†	39.5	2.6804	ug/L	1.87867	2.6804	ppb	1.87867	70.09%
Se 196.026†	-561.9	57.509	ug/L	8.7376	57.509	ppb	8.7376	15.19%
Si 251.611†	925956.8	27230	ug/L	21.4	27230	ppb	21.4	0.08%
Sn 189.927†	-106.7	-12.128	ug/L	1.1141	-12.128	ppb	1.1141	9.19%
Sr 421.552†	20966.6	129.96	ug/L	0.808	129.96	ppb	0.808	0.62%
Ti 334.940†	2379324.8	3481.7	ug/L	2.58	3481.7	ppb	2.58	0.07%
Tl 190.801†	-135.0	0.1691	ug/L	0.32418	0.1691	ppb	0.32418	191.72%
U 409.014†	-5616.8	-169.00	ug/L	1.728	-169.00	ppb	1.728	1.02%
V 292.402†	34406.3	199.95	ug/L	2.697	199.95	ppb	2.697	1.35%
Zn 213.857†	54487.4	462.76	ug/L	5.763	462.76	ppb	5.763	1.25%
SiO2†	918319.1	57878	ug/L	620.3	57878	ppb	620.3	1.07%

Sequence No.: 37
Sample ID: 1202011924|940187|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 82
Date Collected: 1/21/2010 00:45:00
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1202011924|940187|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5078.1	5078.1	97.4	%			00:47:13
1	Y RADIAL	5697.6	5697.6	103.4	%			00:47:13
1	Al 396.153Radial†	93954.8	96482.5	73446	ug/L	73446	ppb	00:46:53
1	Ca 317.933Radial†	13241.2	13581.7	22302	ug/L	22302	ppb	00:46:53
1	Fe 238.204 Radial†	10431.9	10702.9	97424	ug/L	97424	ppb	00:46:53
1	K 766.490 Radial†	72894.7	72082.3	14402	ug/L	14402	ppb	00:46:53
1	Mg 279.077 IEC†	582.6	593.8	19422	ug/L	19422	ppb	00:47:13
1	Na 589.592 Radial†	20723.0	22515.9	6334.6	ug/L	6334.6	ppb	00:46:53
1	Sr 421.552†	98220.9	100873.2	625.86	ug/L	625.86	ppb	00:46:53
1	Sc 361.383	929611.9	929611.9	98.502	%			00:48:12
1	Y 371.029	829858.3	829858.3	104.61	%			00:48:12
1	Ag 328.068†	113085.1	114353.4	524.42	ug/L	524.42	ppb	00:48:12
1	As 188.979†	1223.8	1265.6	546.14	ug/L	546.14	ppb	00:48:32
1	B 249.677†	24821.4	25592.0	526.32	ug/L	526.32	ppb	00:48:12
1	Ba 233.527†	262324.7	266304.6	1895.4	ug/L	1895.4	ppb	00:48:12
1	Be 313.107†	1525467.1	1553053.3	534.78	ug/L	534.78	ppb	00:48:12
1	Cd 226.502†	48523.9	49478.1	500.20	ug/L	500.20	ppb	00:48:12
1	Co 228.616†	27083.9	27570.2	515.46	ug/L	515.46	ppb	00:48:32
1	Cr 267.716†	53860.6	54586.8	581.42	ug/L	581.42	ppb	00:48:12
1	Cu 324.752†	261484.5	259323.8	743.94	ug/L	743.94	ppb	00:48:12
1	Mn 257.610†	2049009.4	2079706.3	2131.6	ug/L	2131.6	ppb	00:48:12
1	Mo 202.031†	7483.3	7567.7	500.84	ug/L	500.84	ppb	00:48:32
1	Ni 231.604†	22755.0	23002.7	536.99	ug/L	536.99	ppb	00:48:32
1	P 214.914†	5255.5	5111.5	2614.6	ug/L	2614.6	ppb	00:48:32
1	Pb 220.353†	5704.4	5829.4	669.05	ug/L	669.05	ppb	00:48:32
1	S 181.975 Axial†	4473.5	4495.7	5845.4	ug/L	5845.4	ppb	00:48:32
1	Sb 206.836†	1563.4	1556.6	503.14	ug/L	503.14	ppb	00:48:32
1	Se 196.026†	297.7	332.1	551.17	ug/L	551.17	ppb	00:48:32
1	Si 251.611†	1045752.1	1061185.7	31201	ug/L	31201	ppb	00:48:12
1	Sn 189.927†	3029.1	3070.9	498.60	ug/L	498.60	ppb	00:48:32
1	Ti 334.940†	2562922.8	2603315.3	3808.9	ug/L	3808.9	ppb	00:48:12
1	Tl 190.801†	1566.9	1627.2	492.50	ug/L	492.50	ppb	00:48:32
1	U 409.014†	12291.1	14204.0	383.33	ug/L	383.33	ppb	00:48:12
1	V 292.402†	107812.4	110937.8	697.31	ug/L	697.31	ppb	00:48:12
1	Zn 213.857†	105824.9	106644.1	913.73	ug/L	913.73	ppb	00:48:12
1	SiO2†	1055994.2	1071556.6	67523	ug/L	67523	ppb	00:49:33
2	Sc Radial	4987.3	4987.3	95.6	%			00:47:38
2	Y RADIAL	5615.4	5615.4	101.9	%			00:47:38
2	Al 396.153Radial†	95110.1	99446.9	75704	ug/L	75704	ppb	00:47:18
2	Ca 317.933Radial†	13377.4	13971.6	22943	ug/L	22943	ppb	00:47:18
2	Fe 238.204 Radial†	10550.7	11022.1	100330	ug/L	100330	ppb	00:47:18
2	K 766.490 Radial†	73483.3	74060.4	14797	ug/L	14797	ppb	00:47:18
2	Mg 279.077 IEC†	579.9	601.9	19685	ug/L	19685	ppb	00:47:38
2	Na 589.592 Radial†	20904.5	23093.0	6496.9	ug/L	6496.9	ppb	00:47:18
2	Sr 421.552†	99185.9	103718.3	643.51	ug/L	643.51	ppb	00:47:18
2	Sc 361.383	937425.7	937425.7	99.330	%			00:48:40
2	Y 371.029	835611.0	835611.0	105.34	%			00:48:40
2	Ag 328.068†	114071.7	114389.9	525.51	ug/L	525.51	ppb	00:48:40
2	As 188.979†	1218.3	1249.7	540.63	ug/L	540.63	ppb	00:49:00
2	B 249.677†	25061.8	25623.9	526.53	ug/L	526.53	ppb	00:48:40
2	Ba 233.527†	264220.6	265993.4	1893.3	ug/L	1893.3	ppb	00:48:40
2	Be 313.107†	1537137.3	1551893.5	534.38	ug/L	534.38	ppb	00:48:40
2	Cd 226.502†	48774.7	49320.0	498.26	ug/L	498.26	ppb	00:48:40
2	Co 228.616†	27104.8	27362.0	511.46	ug/L	511.46	ppb	00:49:00
2	Cr 267.716†	54221.0	54493.9	580.50	ug/L	580.50	ppb	00:48:40
2	Cu 324.752†	263867.2	259509.8	744.63	ug/L	744.63	ppb	00:48:40
2	Mn 257.610†	2065276.1	2078743.7	2130.9	ug/L	2130.9	ppb	00:48:40
2	Mo 202.031†	7473.6	7494.6	496.31	ug/L	496.31	ppb	00:49:00
2	Ni 231.604†	22709.9	22764.8	531.43	ug/L	531.43	ppb	00:49:00

2	P 214.914†	5261.7	5073.3	2591.6	ug/L	2591.6 ppb	00:49:00
2	Pb 220.353†	5721.2	5798.1	665.70	ug/L	665.70 ppb	00:49:00
2	S 181.975 Axial†	4453.8	4437.9	5769.7	ug/L	5769.7 ppb	00:49:00
2	Sb 206.836†	1555.6	1535.5	496.29	ug/L	496.29 ppb	00:49:00
2	Se 196.026†	302.3	334.2	562.93	ug/L	562.93 ppb	00:49:00
2	Si 251.611†	1055015.7	1061662.5	31215	ug/L	31215 ppb	00:48:40
2	Sn 189.927†	3034.8	3051.0	495.55	ug/L	495.55 ppb	00:49:00
2	Ti 334.940†	2583388.5	2602231.1	3807.4	ug/L	3807.4 ppb	00:48:40
2	Tl 190.801†	1568.7	1615.7	489.30	ug/L	489.30 ppb	00:49:00
2	U 409.014†	12193.7	14002.0	377.37	ug/L	377.37 ppb	00:48:40
2	V 292.402†	108661.8	110880.6	696.45	ug/L	696.45 ppb	00:48:40
2	Zn 213.857†	106798.2	106728.5	914.22	ug/L	914.22 ppb	00:48:40
2	SiO2†	1039290.3	1045804.0	65900	ug/L	65900 ppb	00:49:39
3	Sc Radial	5019.9	5019.9	96.3	%		00:48:04
3	Y RADIAL	5637.6	5637.6	102.3	%		00:48:04
3	Al 396.153Radial†	93952.5	97597.3	74295	ug/L	74295 ppb	00:47:44
3	Ca 317.933Radial†	13171.6	13666.9	22442	ug/L	22442 ppb	00:47:44
3	Fe 238.204 Radial†	10378.1	10771.0	98044	ug/L	98044 ppb	00:47:44
3	K 766.490 Radial†	72401.6	72436.7	14473	ug/L	14473 ppb	00:47:44
3	Mg 279.077 IEC†	576.3	594.2	19434	ug/L	19434 ppb	00:48:04
3	Na 589.592 Radial†	20521.9	22553.3	6345.1	ug/L	6345.1 ppb	00:47:44
3	Sr 421.552†	97788.6	101591.9	630.31	ug/L	630.31 ppb	00:47:44
3	Sc 361.383	928529.1	928529.1	98.387	%		00:49:07
3	Y 371.029	827053.0	827053.0	104.26	%		00:49:07
3	Ag 328.068†	113234.8	114639.5	525.85	ug/L	525.85 ppb	00:49:07
3	As 188.979†	1230.1	1273.4	549.39	ug/L	549.39 ppb	00:49:27
3	B 249.677†	24837.2	25637.4	527.17	ug/L	527.17 ppb	00:49:07
3	Ba 233.527†	262260.9	266550.3	1897.2	ug/L	1897.2 ppb	00:49:07
3	Be 313.107†	1520836.3	1550152.5	533.82	ug/L	533.82 ppb	00:49:07
3	Cd 226.502†	48372.3	49381.6	499.14	ug/L	499.14 ppb	00:49:07
3	Co 228.616†	27239.7	27760.6	519.06	ug/L	519.06 ppb	00:49:27
3	Cr 267.716†	53718.7	54506.4	580.58	ug/L	580.58 ppb	00:49:07
3	Cu 324.752†	262624.7	260792.3	748.16	ug/L	748.16 ppb	00:49:07
3	Mn 257.610†	2050384.6	2083529.7	2135.6	ug/L	2135.6 ppb	00:49:07
3	Mo 202.031†	7527.4	7621.4	504.39	ug/L	504.39 ppb	00:49:27
3	Ni 231.604†	22822.7	23098.5	539.22	ug/L	539.22 ppb	00:49:27
3	P 214.914†	5289.8	5152.6	2636.2	ug/L	2636.2 ppb	00:49:27
3	Pb 220.353†	5720.9	5853.0	671.85	ug/L	671.85 ppb	00:49:27
3	S 181.975 Axial†	4487.7	4515.4	5870.9	ug/L	5870.9 ppb	00:49:27
3	Sb 206.836†	1565.8	1560.9	504.56	ug/L	504.56 ppb	00:49:27
3	Se 196.026†	288.6	323.1	548.18	ug/L	548.18 ppb	00:49:27
3	Si 251.611†	1048687.7	1065407.4	31325	ug/L	31325 ppb	00:49:07
3	Sn 189.927†	3033.3	3078.8	499.90	ug/L	499.90 ppb	00:49:27
3	Ti 334.940†	2566267.0	2609748.3	3818.3	ug/L	3818.3 ppb	00:49:07
3	Tl 190.801†	1582.0	1644.4	497.38	ug/L	497.38 ppb	00:49:27
3	U 409.014†	12187.5	14113.3	380.73	ug/L	380.73 ppb	00:49:07
3	V 292.402†	107628.4	110878.4	696.87	ug/L	696.87 ppb	00:49:07
3	Zn 213.857†	105850.0	106795.0	914.96	ug/L	914.96 ppb	00:49:07
3	SiO2†	1039812.9	1056360.2	66565	ug/L	66565 ppb	00:49:45

Mean Data: 1202011924|940187|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	931855.6	98.740	%	0.5143				0.52%
Sc Radial	5028.4	96.4	%	0.88				0.91%
Y 371.029	830840.8	104.73	%	0.550				0.53%
Y RADIAL	5650.2	102.6	%	0.77				0.75%
Ag 328.068†	114460.9	525.26	ug/L	0.746	525.26	ppb	0.746	0.14%
Al 396.153Radial†	97842.2	74482	ug/L	1140.3	74482	ppb	1140.3	1.53%
As 188.979†	1262.9	545.39	ug/L	4.425	545.39	ppb	4.425	0.81%
B 249.677†	25617.7	526.67	ug/L	0.443	526.67	ppb	0.443	0.08%
Ba 233.527†	266282.8	1895.3	ug/L	1.95	1895.3	ppb	1.95	0.10%
Be 313.107†	1551699.7	534.32	ug/L	0.483	534.32	ppb	0.483	0.09%
Ca 317.933Radial†	13740.1	22562	ug/L	336.7	22562	ppb	336.7	1.49%
Cd 226.502†	49393.2	499.20	ug/L	0.968	499.20	ppb	0.968	0.19%
Co 228.616†	27564.3	515.33	ug/L	3.798	515.33	ppb	3.798	0.74%
Cr 267.716†	54529.0	580.83	ug/L	0.512	580.83	ppb	0.512	0.09%
Cu 324.752†	259875.3	745.58	ug/L	2.264	745.58	ppb	2.264	0.30%
Fe 238.204 Radial†	10832.0	98599	ug/L	1530.0	98599	ppb	1530.0	1.55%
K 766.490 Radial†	72859.8	14557	ug/L	210.8	14557	ppb	210.8	1.45%

Mg 279.077 IEC†	596.6	19514	ug/L	148.3	19514	ppb	148.3	0.76%
Mn 257.610†	2080659.9	2132.7	ug/L	2.52	2132.7	ppb	2.52	0.12%
Mo 202.031†	7561.3	500.52	ug/L	4.050	500.52	ppb	4.050	0.81%
Na 589.592 Radial†	22720.7	6392.2	ug/L	90.85	6392.2	ppb	90.85	1.42%
Ni 231.604†	22955.3	535.88	ug/L	4.011	535.88	ppb	4.011	0.75%
P 214.914†	5112.5	2614.2	ug/L	22.27	2614.2	ppb	22.27	0.85%
Pb 220.353†	5826.8	668.86	ug/L	3.082	668.86	ppb	3.082	0.46%
S 181.975 Axial†	4483.0	5828.7	ug/L	52.65	5828.7	ppb	52.65	0.90%
Sb 206.836†	1551.0	501.33	ug/L	4.421	501.33	ppb	4.421	0.88%
Se 196.026†	329.8	554.09	ug/L	7.798	554.09	ppb	7.798	1.41%
Si 251.611†	1062751.9	31247	ug/L	68.0	31247	ppb	68.0	0.22%
Sn 189.927†	3066.9	498.02	ug/L	2.233	498.02	ppb	2.233	0.45%
Sr 421.552†	102061.1	633.23	ug/L	9.179	633.23	ppb	9.179	1.45%
Ti 334.940†	2605098.2	3811.5	ug/L	5.93	3811.5	ppb	5.93	0.16%
Tl 190.801†	1629.1	493.06	ug/L	4.069	493.06	ppb	4.069	0.83%
U 409.014†	14106.4	380.47	ug/L	2.987	380.47	ppb	2.987	0.79%
V 292.402†	110899.0	696.87	ug/L	0.429	696.87	ppb	0.429	0.06%
Zn 213.857†	106722.5	914.30	ug/L	0.620	914.30	ppb	0.620	0.07%
SiO2†	1057907.0	66662	ug/L	815.9	66662	ppb	815.9	1.22%

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Sequence No.: 38
Sample ID: 1202011932|940187|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 83
Date Collected: 1/21/2010 00:51:57
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1202011932|940187|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5101.5	5101.5	97.8	%			00:54:10
1	Y RADIAL	5968.2	5968.2	108.3	%			00:54:10
1	Al 396.153Radial†	120103.0	122771.3	93465	ug/L	93465	ppb	00:53:50
1	Ca 317.933Radial†	16446.2	16795.8	27580	ug/L	27580	ppb	00:53:50
1	Fe 238.204 Radial†	12674.2	12946.1	117840	ug/L	117840	ppb	00:54:10
1	K 766.490 Radial†	85544.0	84670.1	16917	ug/L	16917	ppb	00:53:50
1	Mg 279.077 IEC†	704.6	715.8	23410	ug/L	23410	ppb	00:54:10
1	Na 589.592 Radial†	20470.7	22160.1	6234.5	ug/L	6234.5	ppb	00:53:50
1	Sr 421.552†	104807.8	107143.9	664.73	ug/L	664.73	ppb	00:53:50
1	Sc 361.383	939332.8	939332.8	99.532	%			00:55:09
1	Y 371.029	865661.9	865661.9	109.12	%			00:55:09
1	Ag 328.068†	111432.5	111505.0	518.90	ug/L	518.90	ppb	00:55:09
1	As 188.979†	1225.2	1254.2	550.61	ug/L	550.61	ppb	00:55:29
1	B 249.677†	25032.1	25542.9	521.96	ug/L	521.96	ppb	00:55:09
1	Ba 233.527†	349290.1	350923.0	2496.9	ug/L	2496.9	ppb	00:55:09
1	Be 313.107†	1520336.9	1531872.3	528.68	ug/L	528.68	ppb	00:55:09
1	Cd 226.502†	48599.6	49044.4	493.61	ug/L	493.61	ppb	00:55:09
1	Co 228.616†	27231.3	27433.8	511.85	ug/L	511.85	ppb	00:55:29
1	Cr 267.716†	55607.5	55776.1	594.49	ug/L	594.49	ppb	00:55:09
1	Cu 324.752†	277940.4	273110.0	784.35	ug/L	784.35	ppb	00:55:09
1	Mn 257.610†	2473501.7	2484668.0	2546.8	ug/L	2546.8	ppb	00:55:09
1	Mo 202.031†	7399.3	7404.7	491.87	ug/L	491.87	ppb	00:55:29
1	Ni 231.604†	23408.5	23420.3	546.74	ug/L	546.74	ppb	00:55:29
1	P 214.914†	5824.4	5627.9	2879.9	ug/L	2879.9	ppb	00:55:29
1	Pb 220.353†	6121.1	6188.2	712.13	ug/L	712.13	ppb	00:55:29
1	S 181.975 Axial†	4750.8	4727.3	6143.4	ug/L	6143.4	ppb	00:55:29
1	Sb 206.836†	1493.9	1470.4	473.84	ug/L	473.84	ppb	00:55:29
1	Se 196.026†	179.7	210.3	553.88	ug/L	553.88	ppb	00:55:29
1	Si 251.611†	1184373.2	1189471.9	34974	ug/L	34974	ppb	00:55:09
1	Sn 189.927†	3002.9	3012.8	490.40	ug/L	490.40	ppb	00:55:29
1	Ti 334.940†	2912105.4	2927213.8	4283.0	ug/L	4283.0	ppb	00:55:09
1	Tl 190.801†	1561.4	1605.2	492.23	ug/L	492.23	ppb	00:55:29
1	U 409.014†	10217.4	11991.4	319.33	ug/L	319.33	ppb	00:55:09
1	V 292.402†	113105.4	115123.1	720.33	ug/L	720.33	ppb	00:55:09
1	Zn 213.857†	125891.8	125693.6	1077.3	ug/L	1077.3	ppb	00:55:09
1	SiO2†	1171320.3	1176330.8	74127	ug/L	74127	ppb	00:56:30
2	Sc Radial	5093.9	5093.9	97.7	%			00:54:35
2	Y RADIAL	5947.1	5947.1	108.0	%			00:54:35
2	Al 396.153Radial†	118412.3	121223.2	92286	ug/L	92286	ppb	00:54:15
2	Ca 317.933Radial†	16228.5	16597.9	27255	ug/L	27255	ppb	00:54:15
2	Fe 238.204 Radial†	12656.7	12947.5	117850	ug/L	117850	ppb	00:54:35
2	K 766.490 Radial†	84565.6	83798.7	16743	ug/L	16743	ppb	00:54:15
2	Mg 279.077 IEC†	701.4	713.7	23340	ug/L	23340	ppb	00:54:35
2	Na 589.592 Radial†	20121.6	21834.0	6142.7	ug/L	6142.7	ppb	00:54:15
2	Sr 421.552†	103390.3	105852.3	656.72	ug/L	656.72	ppb	00:54:15
2	Sc 361.383	931885.0	931885.0	98.743	%			00:55:36
2	Y 371.029	858139.8	858139.8	108.18	%			00:55:36
2	Ag 328.068†	110602.9	111559.6	519.14	ug/L	519.14	ppb	00:55:36
2	As 188.979†	1213.6	1252.2	549.87	ug/L	549.87	ppb	00:55:57
2	B 249.677†	24941.4	25652.0	524.27	ug/L	524.27	ppb	00:55:36
2	Ba 233.527†	346772.6	351178.1	2498.7	ug/L	2498.7	ppb	00:55:36
2	Be 313.107†	1504015.2	1527550.6	527.22	ug/L	527.22	ppb	00:55:36
2	Cd 226.502†	48083.2	48911.7	492.25	ug/L	492.25	ppb	00:55:36
2	Co 228.616†	27215.4	27636.3	515.69	ug/L	515.69	ppb	00:55:57
2	Cr 267.716†	55114.2	55723.0	593.92	ug/L	593.92	ppb	00:55:36
2	Cu 324.752†	275904.4	273279.7	784.83	ug/L	784.83	ppb	00:55:36
2	Mn 257.610†	2456078.4	2486884.3	2549.1	ug/L	2549.1	ppb	00:55:36
2	Mo 202.031†	7409.2	7474.2	496.39	ug/L	496.39	ppb	00:55:57
2	Ni 231.604†	23342.5	23541.4	549.57	ug/L	549.57	ppb	00:55:57

2	P 214.914†	5836.4	5686.7	2911.9 ug/L	2911.9 ppb	00:55:57
2	Pb 220.353†	6115.0	6231.2	716.76 ug/L	716.76 ppb	00:55:57
2	S 181.975 Axial†	4751.7	4766.3	6194.6 ug/L	6194.6 ppb	00:55:57
2	Sb 206.836†	1506.1	1494.7	481.76 ug/L	481.76 ppb	00:55:57
2	Se 196.026†	184.1	216.3	557.28 ug/L	557.28 ppb	00:55:57
2	Si 251.611†	1175389.7	1189884.2	34986 ug/L	34986 ppb	00:55:36
2	Sn 189.927†	3004.0	3038.0	494.40 ug/L	494.40 ppb	00:55:57
2	Ti 334.940†	2891804.0	2930037.1	4287.1 ug/L	4287.1 ppb	00:55:36
2	Tl 190.801†	1553.4	1609.6	493.49 ug/L	493.49 ppb	00:55:57
2	U 409.014†	10190.6	12046.3	320.86 ug/L	320.86 ppb	00:55:36
2	V 292.402†	112046.7	114959.1	719.34 ug/L	719.34 ppb	00:55:36
2	Zn 213.857†	124915.3	125715.5	1077.5 ug/L	1077.5 ppb	00:55:36
2	SiO2†	1175180.4	1189645.3	74966 ug/L	74966 ppb	00:56:36
3	Sc Radial	5091.1	5091.1	97.6 %		00:55:00
3	Y RADIAL	5955.0	5955.0	108.1 %		00:55:00
3	Al 396.153Radial†	120294.9	123219.2	93806 ug/L	93806 ppb	00:54:40
3	Ca 317.933Radial†	16458.8	16843.1	27658 ug/L	27658 ppb	00:54:40
3	Fe 238.204 Radial†	12619.7	12916.7	117570 ug/L	117570 ppb	00:55:00
3	K 766.490 Radial†	85720.3	85029.7	16989 ug/L	16989 ppb	00:54:40
3	Mg 279.077 IEC†	701.4	714.0	23352 ug/L	23352 ppb	00:55:00
3	Na 589.592 Radial†	20423.6	22154.8	6233.0 ug/L	6233.0 ppb	00:54:40
3	Sr 421.552†	105240.4	107806.5	668.84 ug/L	668.84 ppb	00:54:40
3	Sc 361.383	933576.5	933576.5	98.922 %		00:56:04
3	Y 371.029	858629.7	858629.7	108.24 %		00:56:04
3	Ag 328.068†	110476.9	111229.4	517.62 ug/L	517.62 ppb	00:56:04
3	As 188.979†	1207.8	1244.2	546.61 ug/L	546.61 ppb	00:56:24
3	B 249.677†	25129.9	25796.7	527.39 ug/L	527.39 ppb	00:56:04
3	Ba 233.527†	347198.7	350972.6	2497.3 ug/L	2497.3 ppb	00:56:04
3	Be 313.107†	1502858.1	1523621.2	525.87 ug/L	525.87 ppb	00:56:04
3	Cd 226.502†	48177.3	48918.6	492.35 ug/L	492.35 ppb	00:56:04
3	Co 228.616†	27182.1	27552.7	514.12 ug/L	514.12 ppb	00:56:24
3	Cr 267.716†	55030.0	55536.8	591.94 ug/L	591.94 ppb	00:56:04
3	Cu 324.752†	275962.6	272832.4	783.54 ug/L	783.54 ppb	00:56:04
3	Mn 257.610†	2456768.8	2483075.7	2545.2 ug/L	2545.2 ppb	00:56:04
3	Mo 202.031†	7409.6	7461.0	495.52 ug/L	495.52 ppb	00:56:24
3	Ni 231.604†	23311.9	23467.6	547.85 ug/L	547.85 ppb	00:56:24
3	P 214.914†	5838.4	5678.1	2908.0 ug/L	2908.0 ppb	00:56:24
3	Pb 220.353†	6108.8	6213.7	715.13 ug/L	715.13 ppb	00:56:24
3	S 181.975 Axial†	4730.7	4736.4	6155.3 ug/L	6155.3 ppb	00:56:24
3	Sb 206.836†	1499.6	1485.4	478.72 ug/L	478.72 ppb	00:56:24
3	Se 196.026†	181.0	212.8	554.47 ug/L	554.47 ppb	00:56:24
3	Si 251.611†	1176207.3	1188554.1	34947 ug/L	34947 ppb	00:56:04
3	Sn 189.927†	3003.5	3032.0	493.50 ug/L	493.50 ppb	00:56:24
3	Ti 334.940†	2892351.8	2925284.9	4280.2 ug/L	4280.2 ppb	00:56:04
3	Tl 190.801†	1547.0	1600.3	490.83 ug/L	490.83 ppb	00:56:24
3	U 409.014†	10296.9	12135.1	323.37 ug/L	323.37 ppb	00:56:04
3	V 292.402†	112104.6	114812.0	718.45 ug/L	718.45 ppb	00:56:04
3	Zn 213.857†	124952.2	125523.6	1075.9 ug/L	1075.9 ppb	00:56:04
3	SiO2†	1175256.5	1187566.1	74835 ug/L	74835 ppb	00:56:42

Mean Data: 1202011932|940187|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	934931.4	99.066	%	0.4137				0.42%
Sc Radial	5095.5	97.7	%	0.10				0.11%
Y 371.029	860810.5	108.51	%	0.531				0.49%
Y RADIAL	5956.8	108.1	%	0.19				0.18%
Ag 328.068†	111431.3	518.55	ug/L	0.817	518.55	ppb	0.817	0.16%
Al 396.153Radial†	122404.6	93186	ug/L	797.6	93186	ppb	797.6	0.86%
As 188.979†	1250.2	549.03	ug/L	2.130	549.03	ppb	2.130	0.39%
B 249.677†	25663.9	524.54	ug/L	2.725	524.54	ppb	2.725	0.52%
Ba 233.527†	351024.6	2497.6	ug/L	0.96	2497.6	ppb	0.96	0.04%
Be 313.107†	1527681.4	527.26	ug/L	1.401	527.26	ppb	1.401	0.27%
Ca 317.933Radial†	16745.6	27498	ug/L	213.6	27498	ppb	213.6	0.78%
Cd 226.502†	48958.2	492.74	ug/L	0.762	492.74	ppb	0.762	0.15%
Co 228.616†	27540.9	513.89	ug/L	1.933	513.89	ppb	1.933	0.38%
Cr 267.716†	55678.6	593.45	ug/L	1.338	593.45	ppb	1.338	0.23%
Cu 324.752†	273074.0	784.24	ug/L	0.652	784.24	ppb	0.652	0.08%
Fe 238.204 Radial†	12936.8	117750	ug/L	158.0	117750	ppb	158.0	0.13%
K 766.490 Radial†	84499.5	16883	ug/L	126.5	16883	ppb	126.5	0.75%

Mg 279.077 IEC†	714.5	23368	ug/L	37.5	23368	ppb	37.5	0.16%
Mn 257.610†	2484876.0	2547.1	ug/L	1.97	2547.1	ppb	1.97	0.08%
Mo 202.031†	7446.6	494.59	ug/L	2.398	494.59	ppb	2.398	0.48%
Na 589.592 Radial†	22049.6	6203.4	ug/L	52.55	6203.4	ppb	52.55	0.85%
Ni 231.604†	23476.4	548.05	ug/L	1.424	548.05	ppb	1.424	0.26%
P 214.914†	5664.3	2899.9	ug/L	17.50	2899.9	ppb	17.50	0.60%
Pb 220.353†	6211.0	714.67	ug/L	2.346	714.67	ppb	2.346	0.33%
S 181.975 Axial†	4743.3	6164.4	ug/L	26.77	6164.4	ppb	26.77	0.43%
Sb 206.836†	1483.5	478.11	ug/L	3.994	478.11	ppb	3.994	0.84%
Se 196.026†	213.2	555.21	ug/L	1.818	555.21	ppb	1.818	0.33%
Si 251.611†	1189303.4	34969	ug/L	20.0	34969	ppb	20.0	0.06%
Sn 189.927†	3027.6	492.77	ug/L	2.101	492.77	ppb	2.101	0.43%
Sr 421.552†	106934.2	663.43	ug/L	6.166	663.43	ppb	6.166	0.93%
Ti 334.940†	2927511.9	4283.5	ug/L	3.47	4283.5	ppb	3.47	0.08%
Tl 190.801†	1605.1	492.18	ug/L	1.331	492.18	ppb	1.331	0.27%
U 409.014†	12057.6	321.18	ug/L	2.039	321.18	ppb	2.039	0.63%
V 292.402†	114964.7	719.37	ug/L	0.942	719.37	ppb	0.942	0.13%
Zn 213.857†	125644.2	1076.9	ug/L	0.90	1076.9	ppb	0.90	0.08%
SiO2†	1184514.1	74642	ug/L	451.4	74642	ppb	451.4	0.60%

Sequence No.: 39
Sample ID: 1202011925|940187|5
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 84
Date Collected: 1/21/2010 00:58:52
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1202011925|940187|5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5175.1	5175.1	99.2	%			01:00:46
1	Y RADIAL	5566.3	5566.3	101.0	%			01:00:46
1	Al 396.153Radial†	13102.1	13191.8	10045	ug/L	10045	ppb	01:00:46
1	Ca 317.933Radial†	2284.7	2285.1	3752.2	ug/L	3752.2	ppb	01:01:06
1	Fe 238.204 Radial†	2340.4	2347.6	21366	ug/L	21366	ppb	01:01:06
1	K 766.490 Radial†	11651.9	8959.5	1790.0	ug/L	1790.0	ppb	01:00:46
1	Mg 279.077 IEC†	83.2	79.4	2586.2	ug/L	2586.2	ppb	01:01:06
1	Na 589.592 Radial†	-619.4	608.3	171.15	ug/L	171.15	ppb	01:00:46
1	Sr 421.552†	4360.6	4391.4	27.225	ug/L	27.225	ppb	01:00:46
1	Sc 361.383	942239.9	942239.9	99.840	%			01:02:03
1	Y 371.029	799724.3	799724.3	100.81	%			01:02:03
1	Ag 328.068†	-1070.0	-1523.2	0.5162	ug/L	0.5162	ppb	01:02:03
1	As 188.979†	-31.6	-8.4	6.8803	ug/L	6.8803	ppb	01:02:23
1	B 249.677†	-126.7	266.1	2.1630	ug/L	2.1630	ppb	01:02:03
1	Ba 233.527†	43232.5	43291.9	308.13	ug/L	308.13	ppb	01:02:03
1	Be 313.107†	-6308.6	-1933.9	0.6947	ug/L	0.6947	ppb	01:02:03
1	Cd 226.502†	16.8	233.0	0.1949	ug/L	0.1949	ppb	01:02:23
1	Co 228.616†	294.5	369.4	5.5927	ug/L	5.5927	ppb	01:02:23
1	Cr 267.716†	1384.5	1293.7	14.198	ug/L	14.198	ppb	01:02:23
1	Cu 324.752†	22874.3	16773.3	48.947	ug/L	48.947	ppb	01:02:03
1	Mn 257.610†	391188.4	391348.5	401.46	ug/L	401.46	ppb	01:02:03
1	Mo 202.031†	14.1	-15.3	0.7083	ug/L	0.7083	ppb	01:02:23
1	Ni 231.604†	533.0	435.5	10.168	ug/L	10.168	ppb	01:02:23
1	P 214.914†	1025.2	802.9	418.23	ug/L	418.23	ppb	01:02:23
1	Pb 220.353†	290.6	329.3	37.515	ug/L	37.515	ppb	01:02:23
1	S 181.975 Axial†	187.0	141.4	182.46	ug/L	182.46	ppb	01:02:23
1	Sb 206.836†	42.2	11.7	2.0354	ug/L	2.0354	ppb	01:02:23
1	Se 196.026†	-141.2	-111.5	10.709	ug/L	10.709	ppb	01:02:23
1	Si 251.611†	194204.2	194044.0	5706.4	ug/L	5706.4	ppb	01:02:03
1	Sn 189.927†	-25.7	-30.0	-3.8857	ug/L	-3.8857	ppb	01:02:23
1	Ti 334.940†	404444.9	406505.5	594.89	ug/L	594.89	ppb	01:02:03
1	Tl 190.801†	-64.4	-28.0	-1.0939	ug/L	-1.0939	ppb	01:02:23
1	U 409.014†	-2793.8	-1072.3	-32.341	ug/L	-32.341	ppb	01:02:03
1	V 292.402†	4669.7	6162.9	35.543	ug/L	35.543	ppb	01:02:03
1	Zn 213.857†	11948.7	11177.6	95.022	ug/L	95.022	ppb	01:02:23
1	SiO2†	190282.3	190089.0	11981	ug/L	11981	ppb	01:03:20
2	Sc Radial	5185.6	5185.6	99.4	%			01:01:11
2	Y RADIAL	5570.9	5570.9	101.1	%			01:01:11
2	Al 396.153Radial†	13081.7	13144.5	10009	ug/L	10009	ppb	01:01:11
2	Ca 317.933Radial†	2291.9	2287.6	3756.4	ug/L	3756.4	ppb	01:01:31
2	Fe 238.204 Radial†	2352.4	2354.9	21433	ug/L	21433	ppb	01:01:31
2	K 766.490 Radial†	11677.1	8960.9	1790.3	ug/L	1790.3	ppb	01:01:11
2	Mg 279.077 IEC†	82.9	78.9	2571.3	ug/L	2571.3	ppb	01:01:31
2	Na 589.592 Radial†	-566.3	663.0	186.53	ug/L	186.53	ppb	01:01:11
2	Sr 421.552†	4314.7	4336.3	26.883	ug/L	26.883	ppb	01:01:11
2	Sc 361.383	929470.9	929470.9	98.487	%			01:02:29
2	Y 371.029	788931.4	788931.4	99.451	%			01:02:29
2	Ag 328.068†	-1113.8	-1582.5	0.2831	ug/L	0.2831	ppb	01:02:29
2	As 188.979†	-33.0	-10.2	6.2066	ug/L	6.2066	ppb	01:02:49
2	B 249.677†	-121.5	269.6	2.2253	ug/L	2.2253	ppb	01:02:29
2	Ba 233.527†	42956.1	43606.1	310.36	ug/L	310.36	ppb	01:02:29
2	Be 313.107†	-6276.1	-1987.6	0.6775	ug/L	0.6775	ppb	01:02:29
2	Cd 226.502†	19.4	235.9	0.2172	ug/L	0.2172	ppb	01:02:49
2	Co 228.616†	304.6	383.6	5.8613	ug/L	5.8613	ppb	01:02:49
2	Cr 267.716†	1388.2	1316.5	14.441	ug/L	14.441	ppb	01:02:49
2	Cu 324.752†	22474.2	16681.8	48.691	ug/L	48.691	ppb	01:02:29
2	Mn 257.610†	386954.8	392432.5	402.58	ug/L	402.58	ppb	01:02:29
2	Mo 202.031†	9.2	-20.0	0.4035	ug/L	0.4035	ppb	01:02:49
2	Ni 231.604†	521.4	431.0	10.064	ug/L	10.064	ppb	01:02:49

2	P 214.914†	1038.6	830.7	433.52	ug/L	433.52 ppb	01:02:49
2	Pb 220.353†	302.3	345.2	39.301	ug/L	39.301 ppb	01:02:49
2	S 181.975 Axial†	180.4	137.3	177.06	ug/L	177.06 ppb	01:02:49
2	Sb 206.836†	33.1	3.0	-0.7339	ug/L	-0.7339 ppb	01:02:49
2	Se 196.026†	-138.0	-110.3	11.656	ug/L	11.656 ppb	01:02:49
2	Si 251.611†	191837.6	194313.3	5714.3	ug/L	5714.3 ppb	01:02:29
2	Sn 189.927†	-26.9	-31.5	-4.1363	ug/L	-4.1363 ppb	01:02:49
2	Ti 334.940†	399239.5	406785.2	595.30	ug/L	595.30 ppb	01:02:29
2	Tl 190.801†	-57.7	-22.2	0.5598	ug/L	0.5598 ppb	01:02:49
2	U 409.014†	-2804.7	-1121.9	-33.730	ug/L	-33.730 ppb	01:02:29
2	V 292.402†	4554.5	6110.2	35.190	ug/L	35.190 ppb	01:02:29
2	Zn 213.857†	12029.5	11424.1	97.160	ug/L	97.160 ppb	01:02:49
2	SiO2†	190339.3	192765.0	12149	ug/L	12149 ppb	01:03:26
3	Sc Radial	5220.3	5220.3	100	%		01:01:36
3	Y RADIAL	5578.5	5578.5	101.3	%		01:01:36
3	Al 396.153Radial†	13304.3	13279.3	10112	ug/L	10112 ppb	01:01:36
3	Ca 317.933Radial†	2290.6	2271.0	3729.1	ug/L	3729.1 ppb	01:01:56
3	Fe 238.204 Radial†	2346.0	2332.8	21231	ug/L	21231 ppb	01:01:56
3	K 766.490 Radial†	11666.2	8871.9	1772.5	ug/L	1772.5 ppb	01:01:36
3	Mg 279.077 IEC†	86.1	81.5	2656.4	ug/L	2656.4 ppb	01:01:56
3	Na 589.592 Radial†	-565.5	667.6	187.82	ug/L	187.82 ppb	01:01:36
3	Sr 421.552†	4380.9	4373.6	27.115	ug/L	27.115 ppb	01:01:36
3	Sc 361.383	940123.0	940123.0	99.616	%		01:02:55
3	Y 371.029	797716.6	797716.6	100.56	%		01:02:55
3	Ag 328.068†	-1085.8	-1541.5	0.3944	ug/L	0.3944 ppb	01:02:55
3	As 188.979†	-26.5	-3.4	8.8106	ug/L	8.8106 ppb	01:03:15
3	B 249.677†	-140.6	251.8	1.8824	ug/L	1.8824 ppb	01:02:55
3	Ba 233.527†	43252.0	43409.0	308.96	ug/L	308.96 ppb	01:02:55
3	Be 313.107†	-6168.1	-1807.1	0.7371	ug/L	0.7371 ppb	01:02:55
3	Cd 226.502†	19.5	235.8	0.2374	ug/L	0.2374 ppb	01:03:15
3	Co 228.616†	286.0	361.5	5.4441	ug/L	5.4441 ppb	01:03:15
3	Cr 267.716†	1393.5	1305.9	14.324	ug/L	14.324 ppb	01:03:15
3	Cu 324.752†	22717.9	16667.9	48.640	ug/L	48.640 ppb	01:02:55
3	Mn 257.610†	390700.8	391741.2	401.85	ug/L	401.85 ppb	01:02:55
3	Mo 202.031†	4.8	-24.6	0.0927	ug/L	0.0927 ppb	01:03:15
3	Ni 231.604†	519.6	423.3	9.8830	ug/L	9.8830 ppb	01:03:15
3	P 214.914†	1041.2	821.3	428.54	ug/L	428.54 ppb	01:03:15
3	Pb 220.353†	307.3	346.7	39.514	ug/L	39.514 ppb	01:03:15
3	S 181.975 Axial†	184.0	138.8	179.05	ug/L	179.05 ppb	01:03:15
3	Sb 206.836†	38.1	7.7	0.7466	ug/L	0.7466 ppb	01:03:15
3	Se 196.026†	-137.6	-108.3	12.157	ug/L	12.157 ppb	01:03:15
3	Si 251.611†	193758.8	194034.9	5706.1	ug/L	5706.1 ppb	01:02:55
3	Sn 189.927†	-26.1	-30.5	-3.9729	ug/L	-3.9729 ppb	01:03:15
3	Ti 334.940†	403363.4	406331.9	594.63	ug/L	594.63 ppb	01:02:55
3	Tl 190.801†	-49.8	-13.5	2.9754	ug/L	2.9754 ppb	01:03:15
3	U 409.014†	-2820.0	-1104.9	-33.235	ug/L	-33.235 ppb	01:02:55
3	V 292.402†	4631.6	6135.2	35.378	ug/L	35.378 ppb	01:02:55
3	Zn 213.857†	11956.0	11211.8	95.335	ug/L	95.335 ppb	01:03:15
3	SiO2†	193120.5	193367.2	12187	ug/L	12187 ppb	01:03:31

Mean Data: 1202011925|940187|5

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	937277.9	99.314	%	0.7251				0.73%
Sc Radial	5193.7	99.6	%	0.45				0.46%
Y 371.029	795457.4	100.27	%	0.724				0.72%
Y RADIAL	5571.9	101.1	%	0.11				0.11%
Ag 328.068†	-1549.1	0.3979	ug/L	0.11659	0.3979	ppb	0.11659	29.30%
Al 396.153Radial†	13205.2	10056	ug/L	52.1	10056	ppb	52.1	0.52%
As 188.979†	-7.4	7.2991	ug/L	1.35158	7.2991	ppb	1.35158	18.52%
B 249.677†	262.5	2.0902	ug/L	0.18264	2.0902	ppb	0.18264	8.74%
Ba 233.527†	43435.7	309.15	ug/L	1.129	309.15	ppb	1.129	0.37%
Be 313.107†	-1909.5	0.7031	ug/L	0.03070	0.7031	ppb	0.03070	4.37%
Ca 317.933Radial†	2281.2	3745.9	ug/L	14.70	3745.9	ppb	14.70	0.39%
Cd 226.502†	234.9	0.2165	ug/L	0.02126	0.2165	ppb	0.02126	9.82%
Co 228.616†	371.5	5.6327	ug/L	0.21144	5.6327	ppb	0.21144	3.75%
Cr 267.716†	1305.4	14.321	ug/L	0.1214	14.321	ppb	0.1214	0.85%
Cu 324.752†	16707.7	48.759	ug/L	0.1647	48.759	ppb	0.1647	0.34%
Fe 238.204 Radial†	2345.1	21343	ug/L	102.7	21343	ppb	102.7	0.48%
K 766.490 Radial†	8930.8	1784.3	ug/L	10.19	1784.3	ppb	10.19	0.57%

Mg 279.077 IEC†	79.9	2604.6	ug/L	45.46	2604.6	ppb	45.46	1.75%
Mn 257.610†	391840.8	401.96	ug/L	0.566	401.96	ppb	0.566	0.14%
Mo 202.031†	-20.0	0.4015	ug/L	0.30782	0.4015	ppb	0.30782	76.67%
Na 589.592 Radial†	646.3	181.83	ug/L	9.276	181.83	ppb	9.276	5.10%
Ni 231.604†	429.9	10.038	ug/L	0.1441	10.038	ppb	0.1441	1.44%
P 214.914†	818.3	426.76	ug/L	7.799	426.76	ppb	7.799	1.83%
Pb 220.353†	340.4	38.776	ug/L	1.0979	38.776	ppb	1.0979	2.83%
S 181.975 Axial†	139.2	179.52	ug/L	2.734	179.52	ppb	2.734	1.52%
Sb 206.836†	7.4	0.6827	ug/L	1.38575	0.6827	ppb	1.38575	202.98%
Se 196.026†	-110.1	11.507	ug/L	0.7353	11.507	ppb	0.7353	6.39%
Si 251.611†	194130.7	5708.9	ug/L	4.65	5708.9	ppb	4.65	0.08%
Sn 189.927†	-30.7	-3.9983	ug/L	0.12721	-3.9983	ppb	0.12721	3.18%
Sr 421.552†	4367.1	27.075	ug/L	0.1745	27.075	ppb	0.1745	0.64%
Ti 334.940†	406540.9	594.94	ug/L	0.340	594.94	ppb	0.340	0.06%
Tl 190.801†	-21.2	0.8138	ug/L	2.04652	0.8138	ppb	2.04652	251.48%
U 409.014†	-1099.7	-33.102	ug/L	0.7040	-33.102	ppb	0.7040	2.13%
V 292.402†	6136.1	35.370	ug/L	0.1770	35.370	ppb	0.1770	0.50%
Zn 213.857†	11271.2	95.839	ug/L	1.1549	95.839	ppb	1.1549	1.21%
SiO2†	192073.7	12106	ug/L	110.0	12106	ppb	110.0	0.91%

Sequence No.: 43
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 1/21/2010 01:27:02
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5089.0	5089.0	97.6	%			01:28:54
1	Y RADIAL	5330.6	5330.6	96.76	%			01:28:54
1	Al 396.153Radial†	6533.8	6683.7	5064.6	ug/L	5064.6	ppb	01:28:54
1	Ca 317.933Radial†	3111.8	3171.6	5208.0	ug/L	5208.0	ppb	01:29:14
1	Fe 238.204 Radial†	598.6	602.5	5499.0	ug/L	5499.0	ppb	01:29:14
1	K 766.490 Radial†	27749.9	25655.6	5123.1	ug/L	5123.1	ppb	01:28:54
1	Mg 279.077 IEC†	162.2	161.8	5317.1	ug/L	5317.1	ppb	01:29:14
1	Na 589.592 Radial†	36622.5	38764.3	10906	ug/L	10906	ppb	01:28:54
1	Sr 421.552†	79926.8	81908.0	508.28	ug/L	508.28	ppb	01:28:54
1	Sc 361.383	923164.3	923164.3	97.819	%			01:30:12
1	Y 371.029	762445.8	762445.8	96.113	%			01:30:12
1	Ag 328.068†	120159.4	122387.4	528.50	ug/L	528.50	ppb	01:30:17
1	As 188.979†	1285.3	1337.2	523.85	ug/L	523.85	ppb	01:30:37
1	B 249.677†	23666.1	24586.9	519.88	ug/L	519.88	ppb	01:30:17
1	Ba 233.527†	72503.5	74110.4	527.54	ug/L	527.54	ppb	01:30:17
1	Be 313.107†	1491959.2	1529614.4	519.37	ug/L	519.37	ppb	01:30:12
1	Cd 226.502†	49588.8	50910.9	524.48	ug/L	524.48	ppb	01:30:17
1	Co 228.616†	27156.9	27836.9	528.15	ug/L	528.15	ppb	01:30:17
1	Cr 267.716†	48304.4	49288.6	523.15	ug/L	523.15	ppb	01:30:17
1	Cu 324.752†	188244.1	186304.2	530.92	ug/L	530.92	ppb	01:30:17
1	Mn 257.610†	501006.4	511711.6	522.64	ug/L	522.64	ppb	01:30:12
1	Mo 202.031†	7757.5	7901.1	515.22	ug/L	515.22	ppb	01:30:37
1	Ni 231.604†	22097.7	22492.1	525.06	ug/L	525.06	ppb	01:30:17
1	P 214.914†	4822.9	4706.5	2489.9	ug/L	2489.9	ppb	01:30:37
1	Pb 220.353†	4377.5	4513.5	513.76	ug/L	513.76	ppb	01:30:37
1	S 181.975 Axial†	822.3	794.8	1034.9	ug/L	1034.9	ppb	01:30:37
1	Sb 206.836†	1614.3	1619.7	533.77	ug/L	533.77	ppb	01:30:37
1	Se 196.026†	833.7	882.1	543.03	ug/L	543.03	ppb	01:30:37
1	Si 251.611†	88335.3	89833.6	2635.5	ug/L	2635.5	ppb	01:30:17
1	Sn 189.927†	3111.6	3176.8	511.47	ug/L	511.47	ppb	01:30:37
1	Ti 334.940†	347131.0	356284.0	520.98	ug/L	520.98	ppb	01:30:12
1	Tl 190.801†	1775.7	1851.8	520.62	ug/L	520.62	ppb	01:30:37
1	U 409.014†	17020.7	19126.2	531.06	ug/L	531.06	ppb	01:30:17
1	V 292.402†	78835.4	82079.1	530.41	ug/L	530.41	ppb	01:30:17
1	Zn 213.857†	59919.8	60465.7	521.34	ug/L	521.34	ppb	01:30:17
1	SiO2†	88091.7	89557.7	5630.5	ug/L	5630.5	ppb	01:31:45
2	Sc Radial	5024.8	5024.8	96.3	%			01:29:20
2	Y RADIAL	5291.7	5291.7	96.06	%			01:29:20
2	Al 396.153Radial†	6467.5	6700.4	5077.5	ug/L	5077.5	ppb	01:29:20
2	Ca 317.933Radial†	3102.1	3202.3	5258.5	ug/L	5258.5	ppb	01:29:40
2	Fe 238.204 Radial†	590.3	601.7	5492.3	ug/L	5492.3	ppb	01:29:40
2	K 766.490 Radial†	27452.1	25710.1	5134.0	ug/L	5134.0	ppb	01:29:20
2	Mg 279.077 IEC†	163.6	165.3	5431.9	ug/L	5431.9	ppb	01:29:40
2	Na 589.592 Radial†	36337.5	38948.2	10958	ug/L	10958	ppb	01:29:20
2	Sr 421.552†	79208.7	82209.6	510.16	ug/L	510.16	ppb	01:29:20
2	Sc 361.383	928757.9	928757.9	98.411	%			01:30:43
2	Y 371.029	767389.9	767389.9	96.736	%			01:30:43
2	Ag 328.068†	121515.6	123025.6	531.24	ug/L	531.24	ppb	01:30:48
2	As 188.979†	1268.7	1312.4	514.26	ug/L	514.26	ppb	01:31:08
2	B 249.677†	23990.7	24771.0	523.78	ug/L	523.78	ppb	01:30:48
2	Ba 233.527†	73090.0	74260.0	528.60	ug/L	528.60	ppb	01:30:48
2	Be 313.107†	1501282.0	1529901.8	519.47	ug/L	519.47	ppb	01:30:43
2	Cd 226.502†	49878.7	50900.1	524.37	ug/L	524.37	ppb	01:30:48
2	Co 228.616†	27444.3	27961.7	530.51	ug/L	530.51	ppb	01:30:48
2	Cr 267.716†	48724.8	49418.4	524.53	ug/L	524.53	ppb	01:30:48
2	Cu 324.752†	190830.1	187773.0	535.10	ug/L	535.10	ppb	01:30:48
2	Mn 257.610†	503559.6	511221.4	522.14	ug/L	522.14	ppb	01:30:43
2	Mo 202.031†	7747.1	7842.7	511.42	ug/L	511.42	ppb	01:31:08
2	Ni 231.604†	22281.2	22542.5	526.23	ug/L	526.23	ppb	01:30:48

2	P 214.914†	4811.4	4665.2	2466.2 ug/L	2466.2 ppb	01:31:08
2	Pb 220.353†	4379.2	4488.2	510.88 ug/L	510.88 ppb	01:31:08
2	S 181.975 Axial†	819.2	786.5	1024.1 ug/L	1024.1 ppb	01:31:08
2	Sb 206.836†	1625.3	1620.9	534.01 ug/L	534.01 ppb	01:31:08
2	Se 196.026†	843.2	886.7	545.66 ug/L	545.66 ppb	01:31:08
2	Si 251.611†	89193.4	90161.6	2645.1 ug/L	2645.1 ppb	01:30:48
2	Sn 189.927†	3098.2	3144.0	506.20 ug/L	506.20 ppb	01:31:08
2	Ti 334.940†	349355.0	356406.7	521.15 ug/L	521.15 ppb	01:30:43
2	Tl 190.801†	1773.5	1838.6	516.92 ug/L	516.92 ppb	01:31:08
2	U 409.014†	17116.1	19118.4	530.84 ug/L	530.84 ppb	01:30:48
2	V 292.402†	79646.4	82417.8	532.52 ug/L	532.52 ppb	01:30:48
2	Zn 213.857†	60351.4	60535.3	521.93 ug/L	521.93 ppb	01:30:48
2	SiO2†	87982.7	88904.5	5589.4 ug/L	5589.4 ppb	01:31:50
3	Sc Radial	5078.5	5078.5	97.4 %		01:29:45
3	Y RADIAL	5315.1	5315.1	96.48 %		01:29:45
3	Al 396.153Radial†	6487.7	6650.3	5039.3 ug/L	5039.3 ppb	01:29:45
3	Ca 317.933Radial†	3106.9	3173.2	5210.6 ug/L	5210.6 ppb	01:30:05
3	Fe 238.204 Radial†	597.0	602.1	5495.1 ug/L	5495.1 ppb	01:30:05
3	K 766.490 Radial†	27593.6	25554.1	5102.9 ug/L	5102.9 ppb	01:29:45
3	Mg 279.077 IEC†	165.7	165.7	5444.9 ug/L	5444.9 ppb	01:30:05
3	Na 589.592 Radial†	36321.6	38533.1	10841 ug/L	10841 ppb	01:29:45
3	Sr 421.552†	79574.2	81715.7	507.09 ug/L	507.09 ppb	01:29:45
3	Sc 361.383	932394.5	932394.5	98.797 %		01:31:14
3	Y 371.029	771726.5	771726.5	97.282 %		01:31:14
3	Ag 328.068†	119615.2	120620.5	520.90 ug/L	520.90 ppb	01:31:20
3	As 188.979†	1285.0	1323.8	518.68 ug/L	518.68 ppb	01:31:40
3	B 249.677†	23558.9	24238.9	512.51 ug/L	512.51 ppb	01:31:20
3	Ba 233.527†	71878.8	72744.4	517.82 ug/L	517.82 ppb	01:31:20
3	Be 313.107†	1510697.7	1533482.2	520.68 ug/L	520.68 ppb	01:31:14
3	Cd 226.502†	49065.4	49879.2	513.84 ug/L	513.84 ppb	01:31:20
3	Co 228.616†	27025.0	27428.5	520.40 ug/L	520.40 ppb	01:31:20
3	Cr 267.716†	48044.4	48536.6	515.18 ug/L	515.18 ppb	01:31:20
3	Cu 324.752†	187287.8	183431.3	522.73 ug/L	522.73 ppb	01:31:20
3	Mn 257.610†	504521.2	510198.9	521.09 ug/L	521.09 ppb	01:31:14
3	Mo 202.031†	7766.8	7832.0	510.72 ug/L	510.72 ppb	01:31:40
3	Ni 231.604†	21995.6	22165.1	517.43 ug/L	517.43 ppb	01:31:20
3	P 214.914†	4809.4	4644.0	2457.1 ug/L	2457.1 ppb	01:31:40
3	Pb 220.353†	4389.6	4481.3	510.10 ug/L	510.10 ppb	01:31:40
3	S 181.975 Axial†	823.2	787.3	1025.1 ug/L	1025.1 ppb	01:31:40
3	Sb 206.836†	1612.1	1601.2	527.69 ug/L	527.69 ppb	01:31:40
3	Se 196.026†	849.4	889.6	547.39 ug/L	547.39 ppb	01:31:40
3	Si 251.611†	87558.9	88153.8	2586.1 ug/L	2586.1 ppb	01:31:20
3	Sn 189.927†	3109.3	3143.0	506.04 ug/L	506.04 ppb	01:31:40
3	Ti 334.940†	350156.3	355833.1	520.31 ug/L	520.31 ppb	01:31:14
3	Tl 190.801†	1781.0	1839.2	517.12 ug/L	517.12 ppb	01:31:40
3	U 409.014†	16940.3	18872.6	524.02 ug/L	524.02 ppb	01:31:20
3	V 292.402†	78601.4	81044.4	523.74 ug/L	523.74 ppb	01:31:20
3	Zn 213.857†	59439.0	59372.6	511.89 ug/L	511.89 ppb	01:31:20
3	SiO2†	88656.2	89237.5	5610.4 ug/L	5610.4 ppb	01:31:55

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	928105.6	98.342	%	0.4927				0.50%
Sc Radial	5064.1	97.1	%	0.66				0.68%
Y 371.029	767187.4	96.710	%	0.5854				0.61%
Y RADIAL	5312.5	96.44	%	0.355				0.37%
Ag 328.068†	122011.2	526.88	ug/L	5.361	526.88	ppb	5.361	1.02%
QC value within limits for Ag 328.068 Recovery = 105.38%								
Al 396.153Radial†	6678.1	5060.5	ug/L	19.41	5060.5	ppb	19.41	0.38%
QC value within limits for Al 396.153Radial Recovery = 101.21%								
As 188.979†	1324.5	518.93	ug/L	4.803	518.93	ppb	4.803	0.93%
QC value within limits for As 188.979 Recovery = 103.79%								
B 249.677†	24532.2	518.72	ug/L	5.726	518.72	ppb	5.726	1.10%
QC value within limits for B 249.677 Recovery = 103.74%								
Ba 233.527†	73704.9	524.65	ug/L	5.940	524.65	ppb	5.940	1.13%
QC value within limits for Ba 233.527 Recovery = 104.93%								
Be 313.107†	1530999.4	519.84	ug/L	0.729	519.84	ppb	0.729	0.14%
QC value within limits for Be 313.107 Recovery = 103.97%								
Ca 317.933Radial†	3182.4	5225.7	ug/L	28.41	5225.7	ppb	28.41	0.54%

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   QC value within limits for Ca 317.933Radial  Recovery = 104.51%
Cd 226.502†            50563.4      520.89 ug/L         6.110      520.89 ppb          6.110   1.17%
   QC value within limits for Cd 226.502  Recovery = 104.18%
Co 228.616†            27742.3      526.36 ug/L         5.293      526.36 ppb          5.293   1.01%
   QC value within limits for Co 228.616  Recovery = 105.27%
Cr 267.716†            49081.2      520.95 ug/L         5.052      520.95 ppb          5.052   0.97%
   QC value within limits for Cr 267.716  Recovery = 104.19%
Cu 324.752†           185836.1      529.58 ug/L         6.291      529.58 ppb          6.291   1.19%
   QC value within limits for Cu 324.752  Recovery = 105.92%
Fe 238.204 Radial†       602.1      5495.5 ug/L          3.37      5495.5 ppb           3.37   0.06%
   QC value within limits for Fe 238.204 Radial  Recovery = 109.91%
K 766.490 Radial†      25639.9      5120.0 ug/L         15.80      5120.0 ppb          15.80   0.31%
   QC value within limits for K 766.490 Radial  Recovery = 102.40%
Mg 279.077 IEC†          164.2      5398.0 ug/L         70.34      5398.0 ppb          70.34   1.30%
   QC value within limits for Mg 279.077 IEC  Recovery = 107.96%
Mn 257.610†           511044.0      521.96 ug/L         0.790      521.96 ppb          0.790   0.15%
   QC value within limits for Mn 257.610  Recovery = 104.39%
Mo 202.031†             7858.6      512.46 ug/L         2.423      512.46 ppb          2.423   0.47%
   QC value within limits for Mo 202.031  Recovery = 102.49%
Na 589.592 Radial†     38748.5       10901 ug/L          58.5       10901 ppb           58.5   0.54%
   QC value within limits for Na 589.592 Radial  Recovery = 109.01%
Ni 231.604†            22399.9      522.91 ug/L         4.782      522.91 ppb          4.782   0.91%
   QC value within limits for Ni 231.604  Recovery = 104.58%
P 214.914†              4671.9      2471.1 ug/L         16.97      2471.1 ppb          16.97   0.69%
   QC value within limits for P 214.914  Recovery = 98.84%
Pb 220.353†             4494.3      511.58 ug/L         1.927      511.58 ppb          1.927   0.38%
   QC value within limits for Pb 220.353  Recovery = 102.32%
S 181.975 Axial†         789.5      1028.0 ug/L          5.93      1028.0 ppb           5.93   0.58%
   QC value within limits for S 181.975 Axial  Recovery = 102.80%
Sb 206.836†             1613.9      531.82 ug/L         3.585      531.82 ppb          3.585   0.67%
   QC value within limits for Sb 206.836  Recovery = 106.36%
Se 196.026†              886.1      545.36 ug/L         2.195      545.36 ppb          2.195   0.40%
   QC value within limits for Se 196.026  Recovery = 109.07%
Si 251.611†            89383.0      2622.2 ug/L         31.66      2622.2 ppb          31.66   1.21%
   QC value within limits for Si 251.611  Recovery = 104.89%
Sn 189.927†             3154.6      507.90 ug/L         3.089      507.90 ppb          3.089   0.61%
   QC value within limits for Sn 189.927  Recovery = 101.58%
Sr 421.552†            81944.4      508.51 ug/L         1.545      508.51 ppb          1.545   0.30%
   QC value within limits for Sr 421.552  Recovery = 101.70%
Ti 334.940†           356174.6      520.81 ug/L         0.443      520.81 ppb          0.443   0.09%
   QC value within limits for Ti 334.940  Recovery = 104.16%
Tl 190.801†             1843.2      518.22 ug/L         2.077      518.22 ppb          2.077   0.40%
   QC value within limits for Tl 190.801  Recovery = 103.64%
U 409.014†             19039.0      528.64 ug/L         4.007      528.64 ppb          4.007   0.76%
   QC value within limits for U 409.014  Recovery = 105.73%
V 292.402†             81847.1      528.89 ug/L         4.583      528.89 ppb          4.583   0.87%
   QC value within limits for V 292.402  Recovery = 105.78%
Zn 213.857†            60124.5      518.39 ug/L         5.634      518.39 ppb          5.634   1.09%
   QC value within limits for Zn 213.857  Recovery = 103.68%
SiO2†                  89233.2      5610.1 ug/L         20.53      5610.1 ppb          20.53   0.37%
   QC value within limits for SiO2  Recovery = 104.91%
All analyte(s) passed QC.
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Sequence No.: 44
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 1/21/2010 01:34:05
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5166.9	5166.9	99.1	%			01:35:57
1	Y RADIAL	5446.0	5446.0	98.86	%			01:35:57
1	Al 396.153Radial†	9.3	-2.9	-2.2170	ug/L	-2.2170	ppb	01:35:57
1	Ca 317.933Radial†	16.2	-1.1	-1.7767	ug/L	-1.7767	ppb	01:36:17
1	Fe 238.204 Radial†	12.0	1.1	9.7162	ug/L	9.7162	ppb	01:36:17
1	K 766.490 Radial†	2812.7	55.9	11.165	ug/L	11.165	ppb	01:35:57
1	Mg 279.077 IEC†	2.7	-1.8	-58.635	ug/L	-58.635	ppb	01:36:17
1	Na 589.592 Radial†	-1084.6	137.8	38.781	ug/L	38.781	ppb	01:35:57
1	Sr 421.552†	30.5	27.6	0.1715	ug/L	0.1715	ppb	01:35:57
1	Sc 361.383	914596.6	914596.6	96.911	%			01:37:14
1	Y 371.029	771183.0	771183.0	97.214	%			01:37:14
1	Ag 328.068†	385.4	-53.9	-0.2328	ug/L	-0.2328	ppb	01:37:14
1	As 188.979†	-25.1	-2.6	-1.0245	ug/L	-1.0245	ppb	01:37:34
1	B 249.677†	-373.2	8.0	0.1669	ug/L	0.1669	ppb	01:37:34
1	Ba 233.527†	15.7	6.3	0.0434	ug/L	0.0434	ppb	01:37:34
1	Be 313.107†	-4454.9	-212.0	-0.0718	ug/L	-0.0718	ppb	01:37:14
1	Cd 226.502†	-210.4	-0.9	-0.0095	ug/L	-0.0095	ppb	01:37:34
1	Co 228.616†	-65.2	7.1	0.1346	ug/L	0.1346	ppb	01:37:34
1	Cr 267.716†	80.8	-9.6	-0.1038	ug/L	-0.1038	ppb	01:37:34
1	Cu 324.752†	6115.7	173.0	0.4921	ug/L	0.4921	ppb	01:37:14
1	Mn 257.610†	479.4	27.6	0.0315	ug/L	0.0315	ppb	01:37:34
1	Mo 202.031†	27.0	-1.5	-0.0961	ug/L	-0.0961	ppb	01:37:34
1	Ni 231.604†	83.9	-11.8	-0.2749	ug/L	-0.2749	ppb	01:37:34
1	P 214.914†	236.9	20.5	11.223	ug/L	11.223	ppb	01:37:34
1	Pb 220.353†	-74.9	-39.0	-4.4235	ug/L	-4.4235	ppb	01:37:34
1	S 181.975 Axial†	40.8	-3.8	-4.9597	ug/L	-4.9597	ppb	01:37:34
1	Sb 206.836†	34.4	5.0	1.5868	ug/L	1.5868	ppb	01:37:34
1	Se 196.026†	-25.7	3.3	1.9860	ug/L	1.9860	ppb	01:37:34
1	Si 251.611†	641.0	189.9	5.5849	ug/L	5.5849	ppb	01:37:34
1	Sn 189.927†	8.2	4.2	0.6686	ug/L	0.6686	ppb	01:37:34
1	Ti 334.940†	-1360.7	8.1	0.0153	ug/L	0.0153	ppb	01:37:14
1	Tl 190.801†	-39.7	-4.5	-1.2627	ug/L	-1.2627	ppb	01:37:34
1	U 409.014†	-1581.7	93.9	2.6140	ug/L	2.6140	ppb	01:37:14
1	V 292.402†	-1542.0	-105.5	-0.6718	ug/L	-0.6718	ppb	01:37:14
1	Zn 213.857†	731.3	-35.6	-0.3097	ug/L	-0.3097	ppb	01:37:34
1	SiO2†	631.0	152.7	9.6249	ug/L	9.6249	ppb	01:38:30
2	Sc Radial	5166.6	5166.6	99.1	%			01:36:22
2	Y RADIAL	5486.4	5486.4	99.59	%			01:36:22
2	Al 396.153Radial†	-13.2	-25.7	-19.517	ug/L	-19.517	ppb	01:36:22
2	Ca 317.933Radial†	11.2	-6.2	-10.143	ug/L	-10.143	ppb	01:36:42
2	Fe 238.204 Radial†	11.3	0.4	4.0775	ug/L	4.0775	ppb	01:36:42
2	K 766.490 Radial†	2817.7	61.1	12.215	ug/L	12.215	ppb	01:36:22
2	Mg 279.077 IEC†	3.4	-1.1	-35.855	ug/L	-35.855	ppb	01:36:42
2	Na 589.592 Radial†	-1103.9	118.2	33.262	ug/L	33.262	ppb	01:36:22
2	Sr 421.552†	35.5	32.7	0.2031	ug/L	0.2031	ppb	01:36:22
2	Sc 361.383	914146.9	914146.9	96.863	%			01:37:39
2	Y 371.029	771939.6	771939.6	97.309	%			01:37:39
2	Ag 328.068†	405.6	-32.8	-0.1384	ug/L	-0.1384	ppb	01:37:39
2	As 188.979†	-17.4	5.3	2.0663	ug/L	2.0663	ppb	01:37:59
2	B 249.677†	-397.7	-17.6	-0.3740	ug/L	-0.3740	ppb	01:37:59
2	Ba 233.527†	19.2	9.9	0.0698	ug/L	0.0698	ppb	01:37:59
2	Be 313.107†	-4383.1	-140.1	-0.0473	ug/L	-0.0473	ppb	01:37:39
2	Cd 226.502†	-208.4	1.1	0.0101	ug/L	0.0101	ppb	01:37:59
2	Co 228.616†	-69.5	2.6	0.0476	ug/L	0.0476	ppb	01:37:59
2	Cr 267.716†	94.7	4.8	0.0520	ug/L	0.0520	ppb	01:37:59
2	Cu 324.752†	6138.5	199.6	0.5708	ug/L	0.5708	ppb	01:37:39
2	Mn 257.610†	489.6	38.3	0.0409	ug/L	0.0409	ppb	01:37:59
2	Mo 202.031†	18.5	-10.3	-0.6725	ug/L	-0.6725	ppb	01:37:59
2	Ni 231.604†	95.6	0.4	0.0084	ug/L	0.0084	ppb	01:37:59

2	P 214.914†	232.7	16.3	8.8350	ug/L	8.8350	ppb	01:37:59
2	Pb 220.353†	-70.9	-34.8	-3.9606	ug/L	-3.9606	ppb	01:37:59
2	S 181.975 Axial†	42.5	-2.0	-2.6444	ug/L	-2.6444	ppb	01:37:59
2	Sb 206.836†	38.1	8.7	2.7606	ug/L	2.7606	ppb	01:37:59
2	Se 196.026†	-26.6	2.4	1.4282	ug/L	1.4282	ppb	01:37:59
2	Si 251.611†	617.1	165.5	4.8758	ug/L	4.8758	ppb	01:37:59
2	Sn 189.927†	4.1	-0.0	-0.0021	ug/L	-0.0021	ppb	01:37:59
2	Ti 334.940†	-1328.2	41.0	0.0628	ug/L	0.0628	ppb	01:37:39
2	Tl 190.801†	-45.6	-10.6	-2.9622	ug/L	-2.9622	ppb	01:37:59
2	U 409.014†	-1780.4	-112.1	-3.1250	ug/L	-3.1250	ppb	01:37:39
2	V 292.402†	-1493.3	-56.0	-0.3738	ug/L	-0.3738	ppb	01:37:39
2	Zn 213.857†	708.0	-59.3	-0.5174	ug/L	-0.5174	ppb	01:37:59
2	SiO2†	638.1	160.3	10.122	ug/L	10.122	ppb	01:38:35
3	Sc Radial	5137.9	5137.9	98.5	%			01:36:47
3	Y RADIAL	5460.0	5460.0	99.12	%			01:36:47
3	Al 396.153Radial†	10.1	-2.0	-1.5006	ug/L	-1.5006	ppb	01:36:47
3	Ca 317.933Radial†	15.0	-2.2	-3.5825	ug/L	-3.5825	ppb	01:37:07
3	Fe 238.204 Radial†	11.3	0.5	4.2070	ug/L	4.2070	ppb	01:37:07
3	K 766.490 Radial†	2887.4	147.8	29.534	ug/L	29.534	ppb	01:36:47
3	Mg 279.077 IEC†	1.3	-3.2	-104.03	ug/L	-104.03	ppb	01:37:07
3	Na 589.592 Radial†	-1070.1	146.4	41.175	ug/L	41.175	ppb	01:36:47
3	Sr 421.552†	12.2	9.3	0.0575	ug/L	0.0575	ppb	01:36:47
3	Sc 361.383	927578.6	927578.6	98.286	%			01:38:04
3	Y 371.029	784537.0	784537.0	98.897	%			01:38:04
3	Ag 328.068†	481.0	37.9	0.1647	ug/L	0.1647	ppb	01:38:04
3	As 188.979†	-18.7	4.2	1.6457	ug/L	1.6457	ppb	01:38:25
3	B 249.677†	-370.9	15.6	0.3317	ug/L	0.3317	ppb	01:38:25
3	Ba 233.527†	19.1	9.5	0.0667	ug/L	0.0667	ppb	01:38:25
3	Be 313.107†	-4492.6	-186.0	-0.0629	ug/L	-0.0629	ppb	01:38:04
3	Cd 226.502†	-216.9	-4.4	-0.0462	ug/L	-0.0462	ppb	01:38:25
3	Co 228.616†	-76.0	-3.0	-0.0578	ug/L	-0.0578	ppb	01:38:25
3	Cr 267.716†	92.9	1.5	0.0170	ug/L	0.0170	ppb	01:38:25
3	Cu 324.752†	6229.4	200.4	0.5728	ug/L	0.5728	ppb	01:38:04
3	Mn 257.610†	479.2	20.4	0.0255	ug/L	0.0255	ppb	01:38:25
3	Mo 202.031†	19.6	-9.5	-0.6170	ug/L	-0.6170	ppb	01:38:25
3	Ni 231.604†	123.2	27.0	0.6317	ug/L	0.6317	ppb	01:38:25
3	P 214.914†	227.1	7.1	3.8001	ug/L	3.8001	ppb	01:38:25
3	Pb 220.353†	-69.6	-32.5	-3.6959	ug/L	-3.6959	ppb	01:38:25
3	S 181.975 Axial†	42.0	-3.2	-4.1274	ug/L	-4.1274	ppb	01:38:25
3	Sb 206.836†	37.6	7.6	2.4415	ug/L	2.4415	ppb	01:38:25
3	Se 196.026†	-22.5	7.0	4.1377	ug/L	4.1377	ppb	01:38:25
3	Si 251.611†	613.0	152.1	4.4812	ug/L	4.4812	ppb	01:38:25
3	Sn 189.927†	13.2	9.2	1.4819	ug/L	1.4819	ppb	01:38:25
3	Ti 334.940†	-1345.9	42.7	0.0718	ug/L	0.0718	ppb	01:38:04
3	Tl 190.801†	-34.6	1.2	0.3476	ug/L	0.3476	ppb	01:38:25
3	U 409.014†	-1797.7	-103.1	-2.8725	ug/L	-2.8725	ppb	01:38:04
3	V 292.402†	-1518.3	-59.1	-0.3937	ug/L	-0.3937	ppb	01:38:04
3	Zn 213.857†	737.5	-40.0	-0.3527	ug/L	-0.3527	ppb	01:38:25
3	SiO2†	613.7	126.0	7.9552	ug/L	7.9552	ppb	01:38:40

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	918774.0	97.353	%	0.8083				0.83%
Sc Radial	5157.1	98.9	%	0.32				0.32%
Y 371.029	775886.5	97.807	%	0.9456				0.97%
Y RADIAL	5464.2	99.19	%	0.373				0.38%
Ag 328.068†	-16.3	-0.0688	ug/L	0.20770	-0.0688	ppb	0.20770	301.74%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-10.2	-7.7447	ug/L	10.20097	-7.7447	ppb	10.20097	131.72%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	2.3	0.8959	ug/L	1.67629	0.8959	ppb	1.67629	187.11%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	2.0	0.0415	ug/L	0.36919	0.0415	ppb	0.36919	888.57%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	8.6	0.0600	ug/L	0.01441	0.0600	ppb	0.01441	24.03%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-179.4	-0.0607	ug/L	0.01238	-0.0607	ppb	0.01238	20.40%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-3.1	-5.1675	ug/L	4.40280	-5.1675	ppb	4.40280	85.20%

```
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                -1.4     -0.0152 ug/L       0.02859     -0.0152 ppb        0.02859 188.12%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 2.3      0.0415 ug/L       0.09639      0.0415 ppb        0.09639 232.39%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                -1.1     -0.0116 ug/L       0.08173     -0.0116 ppb        0.08173 704.89%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               191.0      0.5453 ug/L       0.04604      0.5453 ppb        0.04604   8.44%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          0.7      6.0002 ug/L       3.21877      6.0002 ppb        3.21877  53.64%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          88.3     17.638 ug/L       10.3156     17.638 ppb        10.3156  58.49%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -2.0    -66.174 ug/L       34.7087    -66.174 ppb        34.7087  52.45%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                28.8      0.0327 ug/L       0.00778      0.0327 ppb        0.00778  23.80%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                -7.1     -0.4619 ug/L       0.31795     -0.4619 ppb        0.31795  68.84%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        134.1     37.739 ug/L        4.0580     37.739 ppb         4.0580  10.75%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                 5.2      0.1218 ug/L       0.46381      0.1218 ppb        0.46381 380.93%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 14.6      7.9528 ug/L       3.78942      7.9528 ppb        3.78942  47.65%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               -35.5     -4.0267 ug/L       0.36828     -4.0267 ppb        0.36828   9.15%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           -3.0     -3.9105 ug/L       1.17282     -3.9105 ppb        1.17282  29.99%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 7.1      2.2629 ug/L       0.60694      2.2629 ppb        0.60694  26.82%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 4.2      2.5173 ug/L       1.43077      2.5173 ppb        1.43077  56.84%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               169.2      4.9806 ug/L       0.55925      4.9806 ppb        0.55925  11.23%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 4.5      0.7161 ug/L       0.74314      0.7161 ppb        0.74314 103.77%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                23.2      0.1440 ug/L       0.07659      0.1440 ppb        0.07659  53.19%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                30.6      0.0500 ug/L       0.03038      0.0500 ppb        0.03038  60.83%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                -4.6     -1.2924 ug/L       1.65510     -1.2924 ppb        1.65510 128.06%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                -40.5     -1.1278 ug/L       3.24301     -1.1278 ppb        3.24301 287.55%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                -73.5     -0.4798 ug/L       0.16658     -0.4798 ppb        0.16658  34.72%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               -45.0     -0.3933 ug/L       0.10961     -0.3933 ppb        0.10961  27.87%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     146.3      9.2341 ug/L       1.13523      9.2341 ppb        1.13523  12.29%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

ICPMS#3 Daily Performance Report

Sample ID: Sample
Sample Date/Time: Friday, January 15, 2010 13:28:48
Sample Description:
Method File: c:\elandata\Method\daily2.mth
Dataset File: c:\elandata\Dataset\default\Sample.5467
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	292.0	292.003	9.849	3.4
	Mg	24.0	3347.0	3346.992	113.085	3.4
	Co	58.9	11556.9	11556.876	320.233	2.8
	Rh	102.9	36153.9	36153.893	303.753	0.8
	In	114.9	51903.7	51903.722	337.935	0.7
	Pb	208.0	33531.7	33531.718	613.062	1.8
⌈>	Ba	137.9	42557.6	42557.564	558.316	1.3
⌊	Ba++	69.0	795.3	0.019	0.001	4.3
⌈>	Ce	139.9	56782.6	56782.631	450.802	0.8
⌊	CeO	155.9	1372.8	0.024	0.001	2.5
	Bkgd	220.0	1.6	1.600	0.652	40.7

Current Optimization File Data

Current Value	Description
1.10	Nebulizer Gas Flow
5.00	Lens Voltage
1450.00	ICP RF Power
-1812.00	Analog Stage Voltage
950.00	Pulse Stage Voltage
70.00	Discriminator Threshold
-7.00	AC Rod Offset
60.00	Service DAC 1
0.00	Quadrupole Rod Offset

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	13	6.0	307.7
Co	59	13	6.5	15285.8
In	115	13	7.0	72172.9

ICPMS#3 Instrument Tuning Report

File Name: 100115.tun
File Path: C:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas Peak W
He	3.0	3.1	585	2070	0.602
Be	9.0	9.0	2070	2080	0.604
Mg	24.0	24.0	5706	2130	0.531
Mg	25.0	25.0	5922	2040	0.589
Mg	26.0	26.0	6226	2150	0.605
Co	58.9	58.9	14203	2140	0.583
Rh	102.9	102.9	24911	2180	0.631
In	114.9	114.9	27835	2180	0.661
Ce	139.9	139.9	33924	2220	0.632
Pb	206.0	206.0	49992	2280	0.672
Pb	207.0	207.0	50296	2300	0.708
Pb	208.0	207.9	50462	2310	0.672
U	238.1	238.1	57845	2350	0.677

ICPMS#3 - Summary Report

Sample ID: Blank
Sample Date/Time: Saturday, January 16, 2010 00:21:24
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100115\Blank.077

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9		ug/L		3	
>	Sc	45		ug/L		98248	
	Ni	60		ug/L		16	
>	Ge	74		ug/L		59441	
	As	75		ug/L		233	
	Se	77		ug/L		1420	
	Se	82		ug/L		-3	
	Kr	83		ug/L		19	
>	Lu	175		ug/L		70088	
	Tl	205		ug/L		143	
	U	238		ug/L		137	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
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
	Be	9					
>	Sc	45					
	Ni	60					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175					
	Tl	205					
	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#3 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Saturday, January 16, 2010 00:24:06
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100115\Standard 1.078

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	10.000	ug/L	9.240	89	0.001
>	Sc	45		ug/L		98752	98751.599
	Ni	60	10.000	ug/L	5.935	1741	0.017
>	Ge	74		ug/L		60415	60415.428
	As	75	10.000	ug/L	1.018	1981	0.029
	Se	77		ug/L		1541	0.002
	Se	82	10.000	ug/L	9.344	148	0.003
	Kr	83		ug/L		12	-0.000
>	Lu	175		ug/L		70438	70437.964
	Tl	205	10.000	ug/L	2.067	31718	0.448
	U	238	10.000	ug/L	0.480	41083	0.581

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
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
	Be	9					
>	Sc	45					
	Ni	60					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175					
	Tl	205					
	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#3 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Saturday, January 16, 2010 00:26:46
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100115\Standard 2.079

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**99.836**	**ug/L**	4.838	740	0.007
>	Sc	45		**ug/L**		98613	98613.224
	Ni	60	**99.985**	**ug/L**	2.620	17003	0.172
>	Ge	74		**ug/L**		61168	61167.964
	As	75	**100.052**	**ug/L**	2.343	18857	0.304
	Se	77		**ug/L**		2732	0.021
	Se	82	**100.096**	**ug/L**	2.636	1691	0.028
	Kr	83		**ug/L**		21	0.000
>	Lu	175		**ug/L**		73403	73402.848
	Tl	205	**99.954**	**ug/L**	2.489	314691	4.286
	U	238	**99.957**	**ug/L**	2.086	409073	5.572

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	0.9999
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
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
	Be	9					
>	Sc	45					
	Ni	60					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175					
	Tl	205					
	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#3 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Saturday, January 16, 2010 00:29:26
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100115\QC Std 1.080

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**51.819**	**ug/L**	7.466	402	0.004
>	Sc	45		**ug/L**		102755	102754.963
	Ni	60	**50.856**	**ug/L**	1.503	9021	0.088
>	Ge	74		**ug/L**		61881	61880.684
	As	75	**47.647**	**ug/L**	5.208	9214	0.145
	Se	77		**ug/L**		2294	0.013
	Se	82	**46.877**	**ug/L**	2.304	799	0.013
	Kr	83		**ug/L**		21	0.000
>	Lu	175		**ug/L**		72856	72856.057
	Tl	205	**49.351**	**ug/L**	1.764	154291	2.116
	U	238	**54.653**	**ug/L**	1.053	222105	3.046

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	0.9999
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9	103.639				
>	Sc	45		104.6			
	Ni	60	101.711				
>	Ge	74		104.1			
	As	75	95.295				
	Se	77					
	Se	82	93.754				
	Kr	83					
>	Lu	175		103.9			
	Tl	205	98.702				
	U	238	109.306				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Saturday, January 16, 2010 00:32:09
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100115\QC Std 2.081

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**-0.232**	**ug/L**	65.203	2	-0.000
>	Sc	45		**ug/L**		100613	100613.110
	Ni	60	**-0.016**	**ug/L**	82.145	13	-0.000
>	Ge	74		**ug/L**		60980	60979.817
	As	75	**1.139**	**ug/L**	82.694	451	0.003
	Se	77		**ug/L**		1631	0.003
	Se	82	**0.800**	**ug/L**	15.154	10	0.000
	Kr	83		**ug/L**		10	-0.000
>	Lu	175		**ug/L**		71614	71614.107
	Tl	205	**0.221**	**ug/L**	2.106	826	0.009
	U	238	**0.018**	**ug/L**	18.251	212	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	0.9999
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
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
	Be	9					
>	Sc	45		102.4			
	Ni	60					
>	Ge	74		102.6			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		102.2			
	Tl	205					
	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#3 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Saturday, January 16, 2010 00:34:52
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100115\QC Std 3.082

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.750**	**ug/L**	33.089	9	0.000
>	Sc	45		**ug/L**		100165	100164.660
	Ni	60	**2.141**	**ug/L**	4.381	385	0.004
>	Ge	74		**ug/L**		61507	61507.469
	As	75	**6.605**	**ug/L**	14.614	1479	0.020
	Se	77		**ug/L**		1730	0.004
	Se	82	**5.572**	**ug/L**	8.335	91	0.002
	Kr	83		**ug/L**		15	-0.000
>	Lu	175		**ug/L**		71071	71071.096
	Tl	205	**1.141**	**ug/L**	3.600	3620	0.049
	U	238	**0.213**	**ug/L**	2.901	982	0.012

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	0.9999
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
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
	Be	9	149.950				
>	Sc	45		102.0			
	Ni	60	107.058				
>	Ge	74		103.5			
	As	75	132.098				
	Se	77					
	Se	82	111.445				
	Kr	83					
>	Lu	175		101.4			
	Tl	205	114.089				
	U	238	106.379				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 3	Be	9CRDL is out of limits
QC Std 3	As	75CRDL is out of limits

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Saturday, January 16, 2010 00:37:34
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100115\QC Std 4.083

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**-0.112**	**ug/L**	419.761	2	-0.000
>	Sc	45		**ug/L**		90508	90508.056
	Ni	60	**2.738**	**ug/L**	5.664	441	0.005
>	Ge	74		**ug/L**		53418	53417.568
	As	75	**0.193**	**ug/L**	684.505	242	0.001
	Se	77		**ug/L**		1522	0.005
	Se	82	**-0.620**	**ug/L**	30.049	-12	-0.000
	Kr	83		**ug/L**		34	0.000
>	Lu	175		**ug/L**		64849	64849.183
	Tl	205	**0.036**	**ug/L**	32.236	231	0.002
	U	238	**-0.028**	**ug/L**	1.730	26	-0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	0.9999
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
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
	Be	9					
>	Sc	45			92.1		
	Ni	60	101.417				
>	Ge	74			89.9		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175			92.5		
	Tl	205					
	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#3 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Saturday, January 16, 2010 00:40:16
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100115\QC Std 5.084

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**19.369**	**ug/L**	4.426	132	0.001
>	Sc	45		**ug/L**		89196	89196.489
	Ni	60	**21.845**	**ug/L**	0.624	3372	0.038
>	Ge	74		**ug/L**		53057	53056.918
	As	75	**20.152**	**ug/L**	7.850	3462	0.061
	Se	77		**ug/L**		1694	0.008
	Se	82	**19.612**	**ug/L**	8.546	285	0.005
	Kr	83		**ug/L**		43	0.000
>	Lu	175		**ug/L**		65000	65000.205
	Tl	205	**18.948**	**ug/L**	3.142	52927	0.812
	U	238	**21.976**	**ug/L**	0.990	79754	1.225

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	0.9999
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
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
	Be	9	96.847				
>	Sc	45			90.8		
	Ni	60	96.234				
>	Ge	74			89.3		
	As	75	100.759				
	Se	77					
	Se	82	98.059				
	Kr	83					
>	Lu	175			92.7		
	Tl	205	94.739				
	U	238	109.878				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Saturday, January 16, 2010 00:43:02
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100115\QC Std 6.085

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**52.117**	**ug/L**	2.219	389	0.004
>	Sc	45		**ug/L**		98774	98773.648
	Ni	60	**49.528**	**ug/L**	0.801	8446	0.085
>	Ge	74		**ug/L**		60936	60935.964
	As	75	**49.763**	**ug/L**	0.870	9465	0.151
	Se	77		**ug/L**		2273	0.013
	Se	82	**48.138**	**ug/L**	4.171	808	0.013
	Kr	83		**ug/L**		18	-0.000
>	Lu	175		**ug/L**		72751	72750.852
	Tl	205	**51.104**	**ug/L**	0.753	159561	2.191
	U	238	**51.669**	**ug/L**	2.245	209674	2.880

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	0.9999
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
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
	Be	9	104.234				
>	Sc	45		100.5			
	Ni	60	99.056				
>	Ge	74		102.5			
	As	75	99.526				
	Se	77					
	Se	82	96.277				
	Kr	83					
>	Lu	175		103.8			
	Tl	205	102.208				
	U	238	103.337				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Saturday, January 16, 2010 00:45:50
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100115\QC Std 7.086

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	-0.095	ug/L	78.574	3	-0.000
>	Sc	45		ug/L		99355	99355.341
	Ni	60	0.005	ug/L	189.308	17	0.000
>	Ge	74		ug/L		59919	59919.050
	As	75	1.293	ug/L	102.780	467	0.004
	Se	77		ug/L		1927	0.008
	Se	82	0.295	ug/L	237.916	1	0.000
	Kr	83		ug/L		14	-0.000
>	Lu	175		ug/L		71292	71292.200
	Tl	205	0.239	ug/L	6.225	876	0.010
	U	238	0.023	ug/L	29.349	229	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	0.9999
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
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
	Be	9					
>	Sc	45		101.1			
	Ni	60					
>	Ge	74		100.8			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		101.7			
	Tl	205					
	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#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Saturday, January 16, 2010 01:08:01
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100115\QC Std 6.094

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**57.598**	**ug/L**	4.323	427	0.004
>	Sc	45		**ug/L**		98353	98353.064
	Ni	60	**49.848**	**ug/L**	2.750	8463	0.086
>	Ge	74		**ug/L**		60183	60183.106
	As	75	**51.020**	**ug/L**	4.192	9578	0.155
	Se	77		**ug/L**		1946	0.008
	Se	82	**49.598**	**ug/L**	1.113	823	0.014
	Kr	83		**ug/L**		13	-0.000
>	Lu	175		**ug/L**		73708	73708.458
	Tl	205	**50.947**	**ug/L**	1.592	161139	2.184
	U	238	**52.079**	**ug/L**	1.408	214085	2.903

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	0.9999
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
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
⌈	Be	9	115.195				
|>	Sc	45		100.1			
⌊	Ni	60	99.697				
⌈>	Ge	74		101.2			
|	As	75	102.040				
|	Se	77					
|	Se	82	99.196				
⌊	Kr	83					
⌈>	Lu	175		105.2			
|	Tl	205	101.895				
⌊	U	238	104.158				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 6	Be	9CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Saturday, January 16, 2010 01:10:49
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100115\QC Std 7.095

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	-0.139	ug/L	203.286	2	-0.000
>	Sc	45		ug/L		98738	98738.108
	Ni	60	0.002	ug/L	700.848	16	0.000
>	Ge	74		ug/L		59927	59927.378
	As	75	1.058	ug/L	44.627	428	0.003
	Se	77		ug/L		1516	0.001
	Se	82	0.509	ug/L	84.287	5	0.000
	Kr	83		ug/L		16	-0.000
>	Lu	175		ug/L		72285	72284.842
	Tl	205	0.241	ug/L	3.306	893	0.010
	U	238	0.018	ug/L	8.993	213	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	0.9999
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
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
	Be	9					
>	Sc	45		100.5			
	Ni	60					
>	Ge	74		100.8			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		103.1			
	Tl	205					
	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#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Saturday, January 16, 2010 01:24:41
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100115\QC Std 6.100

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**56.949**	**ug/L**	2.714	416	0.004
>	Sc	45		**ug/L**		96891	96891.111
	Ni	60	**49.928**	**ug/L**	2.445	8351	0.086
>	Ge	74		**ug/L**		59975	59975.245
	As	75	**49.049**	**ug/L**	0.615	9186	0.149
	Se	77		**ug/L**		1808	0.006
	Se	82	**47.527**	**ug/L**	3.433	786	0.013
	Kr	83		**ug/L**		19	0.000
>	Lu	175		**ug/L**		73164	73163.948
	Tl	205	**51.380**	**ug/L**	1.206	161335	2.203
	U	238	**52.232**	**ug/L**	2.669	213157	2.911

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	0.9999
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
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
	Be	9	113.899				
>	Sc	45		98.6			
	Ni	60	99.857				
>	Ge	74		100.9			
	As	75	98.098				
	Se	77					
	Se	82	95.055				
	Kr	83					
>	Lu	175		104.4			
	Tl	205	102.760				
	U	238	104.464				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 6	Be	9CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Saturday, January 16, 2010 01:27:28
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100115\QC Std 7.101

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.050**	**ug/L**	415.507	4	0.000
>	Sc	45		**ug/L**		97102	97102.252
	Ni	60	**0.003**	**ug/L**	675.090	16	0.000
>	Ge	74		**ug/L**		59295	59295.402
	As	75	**1.094**	**ug/L**	37.795	430	0.003
	Se	77		**ug/L**		1305	-0.002
	Se	82	**0.409**	**ug/L**	22.133	3	0.000
	Kr	83		**ug/L**		11	-0.000
>	Lu	175		**ug/L**		71086	71086.497
	Tl	205	**0.199**	**ug/L**	7.343	750	0.009
	U	238	**0.019**	**ug/L**	29.209	213	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	0.9999
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
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
	Be	9					
>	Sc	45		98.8			
	Ni	60					
>	Ge	74		99.8			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		101.4			
	Tl	205					
	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#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Saturday, January 16, 2010 01:49:47
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100115\QC Std 6.109

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**55.692**	**ug/L**	10.609	410	0.004
>	Sc	45		**ug/L**		97628	97627.800
	Ni	60	**49.454**	**ug/L**	2.326	8334	0.085
>	Ge	74		**ug/L**		59374	59374.410
	As	75	**50.711**	**ug/L**	2.024	9393	0.154
	Se	77		**ug/L**		1938	0.009
	Se	82	**50.056**	**ug/L**	4.807	819	0.014
	Kr	83		**ug/L**		17	-0.000
>	Lu	175		**ug/L**		73084	73083.546
	Tl	205	**51.368**	**ug/L**	1.559	161120	2.202
	U	238	**52.030**	**ug/L**	3.448	212063	2.900

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	0.9999
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
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
	Be	9	111.384				
>	Sc	45		99.4			
	Ni	60	98.909				
>	Ge	74		99.9			
	As	75	101.421				
	Se	77					
	Se	82	100.112				
	Kr	83					
>	Lu	175		104.3			
	Tl	205	102.737				
	U	238	104.059				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 6	Be	9CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Saturday, January 16, 2010 01:52:35
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100115\QC Std 7.110

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.094**	**ug/L**	288.165	4	0.000
>	Sc	45		**ug/L**		97533	97533.466
	Ni	60	**-0.003**	**ug/L**	198.815	15	-0.000
>	Ge	74		**ug/L**		59698	59698.076
	As	75	**1.020**	**ug/L**	104.891	420	0.003
	Se	77		**ug/L**		1401	-0.000
	Se	82	**0.326**	**ug/L**	74.886	2	0.000
	Kr	83		**ug/L**		16	-0.000
>	Lu	175		**ug/L**		70516	70515.993
	Tl	205	**0.277**	**ug/L**	3.772	983	0.012
	U	238	**0.024**	**ug/L**	20.482	232	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	0.9999
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
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
	Be	9					
>	Sc	45		99.3			
	Ni	60					
>	Ge	74		100.4			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		100.6			
	Tl	205					
	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#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Saturday, January 16, 2010 02:09:22
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100115\QC Std 6.116

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**58.730**	**ug/L**	6.853	429	0.004
>	Sc	45		**ug/L**		96806	96806.217
	Ni	60	**50.009**	**ug/L**	1.441	8357	0.086
>	Ge	74		**ug/L**		59774	59774.392
	As	75	**49.678**	**ug/L**	2.098	9270	0.151
	Se	77		**ug/L**		1907	0.008
	Se	82	**47.879**	**ug/L**	3.237	789	0.013
	Kr	83		**ug/L**		16	-0.000
>	Lu	175		**ug/L**		72564	72563.920
	Tl	205	**51.255**	**ug/L**	1.794	159608	2.198
	U	238	**51.423**	**ug/L**	0.937	208152	2.866

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	0.9999
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
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
	Be	9	117.461				
>	Sc	45		98.5			
	Ni	60	100.018				
>	Ge	74		100.6			
	As	75	99.356				
	Se	77					
	Se	82	95.757				
	Kr	83					
>	Lu	175		103.5			
	Tl	205	102.510				
	U	238	102.845				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 6	Be	9CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Saturday, January 16, 2010 02:12:09
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100115\QC Std 7.117

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.002**	**ug/L**	11697.942	3	0.000
>	Sc	45		**ug/L**		97929	97928.820
	Ni	60	**0.030**	**ug/L**	83.778	21	0.000
>	Ge	74		**ug/L**		59207	59207.379
	As	75	**0.431**	**ug/L**	137.792	311	0.001
	Se	77		**ug/L**		1371	-0.001
	Se	82	**0.102**	**ug/L**	273.908	-2	0.000
	Kr	83		**ug/L**		18	-0.000
>	Lu	175		**ug/L**		71265	71265.406
	Tl	205	**0.199**	**ug/L**	4.361	753	0.009
	U	238	**0.019**	**ug/L**	0.706	213	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	0.9999
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
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
	Be	9					
>	Sc	45		99.7			
	Ni	60					
>	Ge	74		99.6			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		101.7			
	Tl	205					
	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#3 - Summary Report

Sample ID: 1202011760
Sample Date/Time: Saturday, January 16, 2010 02:14:53
Sample Type:
Sample Description: LANL 6020 MB
Number of Replicates: 3
Batch ID: 940107|2|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100115\1202011760.118

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.097**	**ug/L**	249.116	4	0.000
>	Sc	45		**ug/L**		97396	97396.210
	Ni	60	**0.040**	**ug/L**	56.482	22	0.000
>	Ge	74		**ug/L**		57969	57968.962
	As	75	**0.385**	**ug/L**	99.855	296	0.001
	Se	77		**ug/L**		810	-0.010
	Se	82	**-0.318**	**ug/L**	194.863	-9	-0.000
	Kr	83		**ug/L**		20	0.000
>	Lu	175		**ug/L**		71470	71470.395
	Tl	205	**0.073**	**ug/L**	12.591	369	0.003
	U	238	**-0.026**	**ug/L**	4.898	35	-0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	0.9999
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
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
	Be	9					
>	Sc	45		99.1			
	Ni	60					
>	Ge	74		97.5			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		102.0			
	Tl	205					
	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#3 - Summary Report

Sample ID: 1202011761
Sample Date/Time: Saturday, January 16, 2010 02:17:35
Sample Type:
Sample Description: LANL 6020 LCS
Number of Replicates: 3
Batch ID: 940107|40|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100115\1202011761.119

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**26.728**	ug/L	3.332	196	0.002
>	Sc	45		ug/L		96350	96349.821
	Ni	60	**38.535**	ug/L	0.727	6414	0.066
>	Ge	74		ug/L		58819	58819.126
	As	75	**30.270**	ug/L	0.907	5649	0.092
	Se	77		ug/L		2226	0.014
	Se	82	**81.082**	ug/L	0.523	1317	0.022
	Kr	83		ug/L		17	-0.000
>	Lu	175		ug/L		70891	70890.532
	Tl	205	**35.427**	ug/L	2.263	107797	1.519
	U	238	**0.518**	ug/L	0.233	2184	0.029

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	0.9999
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
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
	Be	9					
>	Sc	45		98.1			
	Ni	60					
>	Ge	74		99.0			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		101.1			
	Tl	205					
	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#3 - Summary Report

Sample ID: 244125001
Sample Date/Time: Saturday, January 16, 2010 02:20:17
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 940107|2|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100115\244125001.120

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**7.487**	**ug/L**	13.597	58	0.001
>	Sc	45		**ug/L**		97157	97156.730
	Ni	60	**42.649**	**ug/L**	2.228	7153	0.073
>	Ge	74		**ug/L**		53466	53466.418
	As	75	**9.024**	**ug/L**	9.089	1677	0.027
	Se	77		**ug/L**		701	-0.011
	Se	82	**-1.482**	**ug/L**	30.971	-25	-0.000
	Kr	83		**ug/L**		55	0.001
>	Lu	175		**ug/L**		70020	70019.585
	Tl	205	**1.258**	**ug/L**	3.276	3918	0.054
	U	238	**3.721**	**ug/L**	2.728	14657	0.207

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	0.9999
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
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
	Be	9					
>	Sc	45		98.9			
	Ni	60					
>	Ge	74		89.9			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		99.9			
	Tl	205					
	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#3 - Summary Report

Sample ID: 244125002
Sample Date/Time: Saturday, January 16, 2010 02:23:00
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 940107|2|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100115\244125002.121

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**6.368**	ug/L	25.817	50	0.000
>	Sc	45		ug/L		97118	97117.679
	Ni	60	**44.283**	ug/L	0.820	7426	0.076
>	Ge	74		ug/L		53931	53931.175
	As	75	**10.188**	ug/L	7.694	1882	0.031
	Se	77		ug/L		730	-0.010
	Se	82	**-0.267**	ug/L	227.107	-7	-0.000
	Kr	83		ug/L		51	0.001
>	Lu	175		ug/L		70436	70436.258
	Tl	205	**1.073**	ug/L	0.676	3383	0.046
	U	238	**7.913**	ug/L	2.526	31204	0.441

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	0.9999
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
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
	Be	9					
>	Sc	45		98.8			
	Ni	60					
>	Ge	74		90.7			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		100.5			
	Tl	205					
	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#3 - Summary Report

Sample ID: 244125003
Sample Date/Time: Saturday, January 16, 2010 02:25:44
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 940107|2|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100115\244125003.122

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**6.752**	**ug/L**	16.113	52	0.001
>	Sc	45		**ug/L**		96544	96544.466
	Ni	60	**41.968**	**ug/L**	3.650	6995	0.072
>	Ge	74		**ug/L**		53732	53732.421
	As	75	**9.573**	**ug/L**	6.888	1775	0.029
	Se	77		**ug/L**		700	-0.011
	Se	82	**-0.896**	**ug/L**	14.322	-16	-0.000
	Kr	83		**ug/L**		54	0.001
>	Lu	175		**ug/L**		70248	70247.672
	Tl	205	**1.137**	**ug/L**	3.309	3568	0.049
	U	238	**5.992**	**ug/L**	3.143	23596	0.334

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	0.9999
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
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
	Be	9					
>	Sc	45		98.3			
	Ni	60					
>	Ge	74		90.4			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		100.2			
	Tl	205					
	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#3 - Summary Report

Sample ID: 244125004
Sample Date/Time: Saturday, January 16, 2010 02:28:28
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 940107|2|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100115\244125004.123

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**4.479**	**ug/L**	5.043	36	0.000
>	Sc	45		**ug/L**		96573	96572.759
	Ni	60	**50.849**	**ug/L**	3.273	8474	0.088
>	Ge	74		**ug/L**		54723	54722.837
	As	75	**8.481**	**ug/L**	13.372	1625	0.026
	Se	77		**ug/L**		704	-0.011
	Se	82	**0.520**	**ug/L**	112.289	5	0.000
	Kr	83		**ug/L**		37	0.000
>	Lu	175		**ug/L**		69920	69920.403
	Tl	205	**0.882**	**ug/L**	4.362	2787	0.038
	U	238	**5.248**	**ug/L**	1.826	20588	0.293

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	0.9999
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
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
	Be	9					
>	Sc	45		98.3			
	Ni	60					
>	Ge	74		92.1			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		99.8			
	Tl	205					
	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#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Saturday, January 16, 2010 02:31:15
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100115\QC Std 6.124

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**59.988**	**ug/L**	9.450	438	0.004
>	Sc	45		**ug/L**		96853	96852.925
	Ni	60	**49.315**	**ug/L**	3.106	8243	0.085
>	Ge	74		**ug/L**		59423	59423.266
	As	75	**49.814**	**ug/L**	1.708	9240	0.152
	Se	77		**ug/L**		1788	0.006
	Se	82	**48.631**	**ug/L**	3.292	796	0.013
	Kr	83		**ug/L**		16	-0.000
>	Lu	175		**ug/L**		72645	72645.348
	Tl	205	**50.578**	**ug/L**	0.938	157674	2.169
	U	238	**51.142**	**ug/L**	0.910	207205	2.851

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	0.9999
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
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
	Be	9	119.977				
>	Sc	45		98.6			
	Ni	60	98.629				
>	Ge	74		100.0			
	As	75	99.628				
	Se	77					
	Se	82	97.262				
	Kr	83					
>	Lu	175		103.6			
	Tl	205	101.157				
	U	238	102.284				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 6	Be	9CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Saturday, January 16, 2010 02:34:03
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100115\QC Std 7.125

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.540**	**ug/L**	82.592	7	0.000
>	Sc	45		**ug/L**		98861	98861.244
	Ni	60	**0.019**	**ug/L**	167.795	19	0.000
>	Ge	74		**ug/L**		59814	59813.895
	As	75	**1.094**	**ug/L**	116.506	433	0.003
	Se	77		**ug/L**		1327	-0.002
	Se	82	**0.486**	**ug/L**	91.267	5	0.000
	Kr	83		**ug/L**		14	-0.000
>	Lu	175		**ug/L**		71316	71315.972
	Tl	205	**0.208**	**ug/L**	10.375	782	0.009
	U	238	**0.025**	**ug/L**	26.065	240	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	0.9999
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
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
	Be	9					
>	Sc	45		100.6			
	Ni	60					
>	Ge	74		100.6			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		101.8			
	Tl	205					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 7	Be	9	CCB is out of limts (+/- PQL)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: 1202011762
Sample Date/Time: Saturday, January 16, 2010 02:39:31
Sample Type:
Sample Description: LANL 6020 DUP
Number of Replicates: 3
Batch ID: 940107|2|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100115\1202011762.127

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**5.501**	**ug/L**	25.325	43	0.000
>	Sc	45		**ug/L**		97445	97445.246
	Ni	60	**34.782**	**ug/L**	5.980	5853	0.060
>	Ge	74		**ug/L**		54018	54018.483
	As	75	**8.825**	**ug/L**	7.537	1662	0.027
	Se	77		**ug/L**		675	-0.011
	Se	82	**-0.809**	**ug/L**	86.784	-15	-0.000
	Kr	83		**ug/L**		39	0.000
>	Lu	175		**ug/L**		70022	70021.908
	Tl	205	**1.042**	**ug/L**	5.758	3270	0.045
	U	238	**15.957**	**ug/L**	2.123	62406	0.889

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	0.9999
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
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
	Be	9					
>	Sc	45		99.2			
	Ni	60					
>	Ge	74		90.9			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		99.9			
	Tl	205					
	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#3 - Summary Report

Sample ID: 1202011763
Sample Date/Time: Saturday, January 16, 2010 02:42:14
Sample Type:
Sample Description: LANL 6020 MS
Number of Replicates: 3
Batch ID: 940107|2|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100115\1202011763.128

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**31.249**	**ug/L**	4.765	236	0.002
>	Sc	45		**ug/L**		99676	99675.722
	Ni	60	**59.094**	**ug/L**	1.799	10163	0.102
>	Ge	74		**ug/L**		55659	55659.117
	As	75	**44.874**	**ug/L**	2.827	7817	0.137
	Se	77		**ug/L**		807	-0.009
	Se	82	**6.374**	**ug/L**	3.732	95	0.002
	Kr	83		**ug/L**		51	0.001
>	Lu	175		**ug/L**		71073	71072.889
	Tl	205	**49.671**	**ug/L**	2.587	151422	2.130
	U	238	**45.841**	**ug/L**	1.341	181683	2.555

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	0.9999
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
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
	Be	9					
>	Sc	45		101.5			
	Ni	60					
>	Ge	74		93.6			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		101.4			
	Tl	205					
	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#3 - Summary Report

Sample ID: 1202011771
Sample Date/Time: Saturday, January 16, 2010 02:44:57
Sample Type:
Sample Description: LANL 6020 MSD
Number of Replicates: 3
Batch ID: 940107|2|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100115\1202011771.129

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**33.295**	**ug/L**	3.976	252	0.002
>	Sc	45		**ug/L**		99593	99592.972
	Ni	60	**63.456**	**ug/L**	1.639	10905	0.109
>	Ge	74		**ug/L**		55150	55150.171
	As	75	**46.209**	**ug/L**	1.905	7968	0.141
	Se	77		**ug/L**		811	-0.009
	Se	82	**5.948**	**ug/L**	10.674	87	0.002
	Kr	83		**ug/L**		60	0.001
>	Lu	175		**ug/L**		70602	70602.124
	Tl	205	**50.563**	**ug/L**	2.517	153169	2.168
	U	238	**45.235**	**ug/L**	1.800	178122	2.521

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	0.9999
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
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
	Be	9					
>	Sc	45		101.4			
	Ni	60					
>	Ge	74		92.8			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		100.7			
	Tl	205					
	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#3 - Summary Report

Sample ID: 1202011764
Sample Date/Time: Saturday, January 16, 2010 02:47:40
Sample Type:
Sample Description: LANL 6020 SDILT
Number of Replicates: 3
Batch ID: 940107|10|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100115\1202011764.130

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**1.047**	**ug/L**	40.752	11	0.000
>	Sc	45		**ug/L**		95185	95185.037
	Ni	60	**8.617**	**ug/L**	6.300	1428	0.015
>	Ge	74		**ug/L**		57447	57446.857
	As	75	**1.776**	**ug/L**	26.523	537	0.005
	Se	77		**ug/L**		881	-0.009
	Se	82	**-0.387**	**ug/L**	81.027	-10	-0.000
	Kr	83		**ug/L**		22	0.000
>	Lu	175		**ug/L**		71308	71307.583
	Tl	205	**0.354**	**ug/L**	4.202	1227	0.015
	U	238	**2.961**	**ug/L**	3.348	11906	0.165

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	0.9999
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
>	Sc	45		96.9			
	Ni	60					
>	Ge	74		96.6			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		101.7			
	Tl	205					
	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#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Saturday, January 16, 2010 03:01:25
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100115\QC Std 6.135

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**53.982**	**ug/L**	2.453	392	0.004
>	Sc	45		**ug/L**		96301	96301.498
	Ni	60	**49.380**	**ug/L**	1.988	8208	0.085
>	Ge	74		**ug/L**		59277	59276.675
	As	75	**50.414**	**ug/L**	0.906	9326	0.153
	Se	77		**ug/L**		1703	0.005
	Se	82	**49.490**	**ug/L**	2.209	809	0.014
	Kr	83		**ug/L**		19	0.000
>	Lu	175		**ug/L**		72094	72093.842
	Tl	205	**50.163**	**ug/L**	1.350	155201	2.151
	U	238	**51.521**	**ug/L**	1.704	207182	2.872

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	0.9999
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
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
	Be	9	107.965				
>	Sc	45		98.0			
	Ni	60	98.760				
>	Ge	74		99.7			
	As	75	100.828				
	Se	77					
	Se	82	98.979				
	Kr	83					
>	Lu	175		102.9			
	Tl	205	100.326				
	U	238	103.042				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Saturday, January 16, 2010 03:04:12
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100115\QC Std 7.136

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.284**	**ug/L**	184.883	5	0.000
>	Sc	45		**ug/L**		97114	97114.300
	Ni	60	**-0.005**	**ug/L**	289.718	15	-0.000
>	Ge	74		**ug/L**		58852	58851.578
	As	75	**0.850**	**ug/L**	125.649	384	0.003
	Se	77		**ug/L**		1290	-0.002
	Se	82	**0.492**	**ug/L**	51.456	5	0.000
	Kr	83		**ug/L**		15	-0.000
>	Lu	175		**ug/L**		70732	70731.717
	Tl	205	**0.211**	**ug/L**	2.671	783	0.009
	U	238	**0.022**	**ug/L**	6.572	225	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	0.9999
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
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
	Be	9					
>	Sc	45		98.8			
	Ni	60					
>	Ge	74		99.0			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		100.9			
	Tl	205					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS #5 Daily Performance Report

Sample ID: Sample
Sample Date/Time: Tuesday, January 19, 2010 13:23:15
Sample Description:
Method File: c:\elandata\Method\Daily2.mth
Dataset File: c:\elandata\Dataset\default2\Sample.1712
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	2101.0	2100.955	60.430	2.9
	Mg	24.0	32124.3	32124.286	529.371	1.6
	Co	58.9	71722.0	71722.005	704.635	1.0
	Rh	102.9	135750.5	135750.541	345.800	0.3
	In	114.9	183626.7	183626.677	1434.560	0.8
	Pb	208.0	189160.8	189160.797	1607.030	0.8
⌈>	Ba	137.9	172804.6	172804.555	2380.667	1.4
⌊	Ba++	69.0	2589.3	0.015	0.000	2.2
⌈>	Ce	139.9	212183.3	212183.319	2515.737	1.2
⌊	CeO	155.9	4358.7	0.021	0.000	1.5
	Bkgd	220.0	24.4	24.400	2.408	9.9

Current Optimization File Data

Current Value	Description
0.85	Nebulizer Gas Flow
8.75	Lens Voltage
1450.00	ICP RF Power
-1718.75	Analog Stage Voltage
1200.00	Pulse Stage Voltage
275.00	Discriminator Threshold
-6.00	AC Rod Offset

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	21	9.0	3839.5
Co	59	21	9.5	70049.3
In	115	21	11.5	177022.4

ICPMS #5 Instrument Tuning Report

File Name: 100119.tun
File Path: C:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width
He	3.0	3.0	588	2050	0.631
Be	9.0	9.0	2056	2070	0.619
Mg	24.0	24.0	5691	2070	0.603
Mg	25.0	25.0	5943	2070	0.600
Mg	26.0	26.0	6177	2070	0.640
Co	58.9	58.9	14184	2105	0.610
Rh	102.9	102.9	24882	2165	0.604
In	114.9	114.9	27796	2185	0.597
Ce	139.9	139.9	33868	2200	0.621
Pb	206.0	206.0	49948	2270	0.661
Pb	207.0	207.0	50159	2235	0.633
Pb	208.0	208.0	50451	2260	0.687
U	238.1	238.1	57732	2275	0.703

ICPMS#5 - Summary Report

Sample ID: Blank
Sample Date/Time: Tuesday, January 19, 2010 17:57:45
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be and as.mth
Dataset File: c:\elandata\Dataset\100119\Blank.085

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9		ug/L		17	
>	Sc	45		ug/L		1368780	
>	Ge	74		ug/L		400237	
	As	75		ug/L		-56	
	Se	77		ug/L		8013	
	Se	82		ug/L		-19	
	Kr	83		ug/L		139	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Simple Linear	
Sc	45	Simple Linear	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9					
>	Sc	45					
>	Ge	74					
	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: Standard 1
Sample Date/Time: Tuesday, January 19, 2010 18:01:37
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be and as.mth
Dataset File: c:\elandata\Dataset\100119\Standard 1.086

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	10.000	ug/L	4.983	3418	0.002
Sc	45		ug/L		1385638	1385637.630
Ge	74		ug/L		399580	399579.708
As	75	10.000	ug/L	6.710	10675	0.027
Se	77		ug/L		11379	0.008
Se	82	10.000	ug/L	4.323	995	0.003
Kr	83		ug/L		138	-0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Be	9					
Sc	45					
Ge	74					
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: Standard 2
Sample Date/Time: Tuesday, January 19, 2010 18:05:28
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be and as.mth
Dataset File: c:\elandata\Dataset\100119\Standard 2.087

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Be	9	**100.015**	**ug/L**	1.184	33100	0.025
⌊>	Sc	45		**ug/L**		1326698	1326698.061
⌈>	Ge	74		**ug/L**		390141	390140.647
|	As	75	**100.072**	**ug/L**	0.846	112998	0.290
|	Se	77		**ug/L**		15406	0.019
|	Se	82	**100.041**	**ug/L**	1.367	10308	0.026
⌊	Kr	83		**ug/L**		146	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
⌈	Be	9					
⌊>	Sc	45					
⌈>	Ge	74					
|	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: QC Std 1
Sample Date/Time: Tuesday, January 19, 2010 18:09:19
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be and as.mth
Dataset File: c:\elandata\Dataset\100119\QC Std 1.088

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**51.477**	**ug/L**	2.012	17249	0.013
>	Sc	45		**ug/L**		1342906	1342905.547
>	Ge	74		**ug/L**		389145	389145.219
	As	75	**47.048**	**ug/L**	1.699	52963	0.136
	Se	77		**ug/L**		12216	0.011
	Se	82	**49.653**	**ug/L**	0.994	5095	0.013
	Kr	83		**ug/L**		128	-0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Be	9	102.954				
>	Sc	45		98.1			
>	Ge	74		97.2			
	As	75	94.097				
	Se	77					
	Se	82	99.305				
	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 2
Sample Date/Time: Tuesday, January 19, 2010 18:13:12
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be and as.mth
Dataset File: c:\elandata\Dataset\100119\QC Std 2.089

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.013**	**ug/L**	264.310	21	0.000
>	Sc	45		**ug/L**		1347013	1347012.921
>	Ge	74		**ug/L**		394022	394021.700
	As	75	**-0.110**	**ug/L**	81.151	-180	-0.000
	Se	77		**ug/L**		7017	-0.002
	Se	82	**-0.024**	**ug/L**	734.842	-21	-0.000
	Kr	83		**ug/L**		139	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		98.4			
>	Ge	74		98.4			
	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: QC Std 3
Sample Date/Time: Tuesday, January 19, 2010 18:17:06
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be and as.mth
Dataset File: c:\elandata\Dataset\100119\QC Std 3.090

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.601**	**ug/L**	7.725	221	0.000
>	Sc	45		**ug/L**		1361682	1361682.245
>	Ge	74		**ug/L**		393622	393622.001
	As	75	**5.802**	**ug/L**	8.541	6553	0.017
	Se	77		**ug/L**		10804	0.007
	Se	82	**5.422**	**ug/L**	8.780	546	0.001
	Kr	83		**ug/L**		131	-0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Be	9	120.238				
>	Sc	45		99.5			
>	Ge	74		98.3			
	As	75	116.031				
	Se	77					
	Se	82	108.433				
	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 4
Sample Date/Time: Tuesday, January 19, 2010 18:20:58
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be and as.mth
Dataset File: c:\elandata\Dataset\100119\QC Std 4.091

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	0.086	ug/L	24.531	41	0.000
>	Sc	45		ug/L		1221664	1221663.603
>	Ge	74		ug/L		356232	356232.381
	As	75	-0.030	ug/L	2223.326	-74	-0.000
	Se	77		ug/L		7795	0.002
	Se	82	-0.892	ug/L	24.477	-100	-0.000
	Kr	83		ug/L		270	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		89.3			
>	Ge	74		89.0			
	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: QC Std 5
Sample Date/Time: Tuesday, January 19, 2010 18:24:51
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be and as.mth
Dataset File: c:\elandata\Dataset\100119\QC Std 5.092

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**20.489**	**ug/L**	1.738	6274	0.005
>	Sc	45		**ug/L**		1225360	1225360.226
>	Ge	74		**ug/L**		353891	353891.262
	As	75	**19.771**	**ug/L**	1.623	20211	0.057
	Se	77		**ug/L**		10475	0.010
	Se	82	**18.614**	**ug/L**	2.750	1727	0.005
	Kr	83		**ug/L**		278	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Be	9	102.445				
>	Sc	45		89.5			
>	Ge	74		88.4			
	As	75	98.853				
	Se	77					
	Se	82	93.070				
	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 6
Sample Date/Time: Tuesday, January 19, 2010 18:28:43
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be and as.mth
Dataset File: c:\elandata\Dataset\100119\QC Std 6.093

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**52.444**	**ug/L**	2.474	17148	0.013
>	Sc	45		**ug/L**		1310226	1310226.401
>	Ge	74		**ug/L**		383712	383712.075
	As	75	**46.326**	**ug/L**	1.005	51427	0.134
	Se	77		**ug/L**		11488	0.010
	Se	82	**49.202**	**ug/L**	0.550	4978	0.013
	Kr	83		**ug/L**		127	-0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Be	9	104.887				
>	Sc	45		95.7			
>	Ge	74		95.9			
	As	75	92.652				
	Se	77					
	Se	82	98.403				
	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: Tuesday, January 19, 2010 18:32:37
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be and as.mth
Dataset File: c:\elandata\Dataset\100119\QC Std 7.094

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	0.019	ug/L	58.980	22	0.000
>	Sc	45		ug/L		1295752	1295752.421
>	Ge	74		ug/L		385185	385184.596
	As	75	0.163	ug/L	144.491	128	0.000
	Se	77		ug/L		6437	-0.003
	Se	82	0.046	ug/L	249.236	-13	0.000
	Kr	83		ug/L		131	-0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		94.7			
>	Ge	74		96.2			
	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: QC Std 10
Sample Date/Time: Tuesday, January 19, 2010 18:36:30
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be and as.mth
Dataset File: c:\elandata\Dataset\100119\QC Std 10.095

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**1037.949**	**ug/L**	1.853	315261	0.259
>	Sc	45		**ug/L**		1218259	1218259.448
>	Ge	74		**ug/L**		352020	352020.269
	As	75	**858.971**	**ug/L**	2.321	875490	2.487
	Se	77		**ug/L**		39669	0.093
	Se	82	**466.328**	**ug/L**	1.079	43419	0.123
	Kr	83		**ug/L**		186	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9	103.795				
>	Sc	45		89.0			
>	Ge	74		88.0			
	As	75	85.897				
	Se	77					
	Se	82	93.266				
	Kr	83					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 10	As	75	LRS is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 11
Sample Date/Time: Tuesday, January 19, 2010 18:40:21
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be and as.mth
Dataset File: c:\elandata\Dataset\100119\QC Std 11.096

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	52.595	ug/L	1.776	16956	0.013
>	Sc	45		ug/L		1291821	1291820.676
>	Ge	74		ug/L		374328	374328.371
	As	75	47.213	ug/L	0.787	51127	0.137
	Se	77		ug/L		10898	0.009
	Se	82	49.946	ug/L	2.235	4930	0.013
	Kr	83		ug/L		125	-0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9	105.189				
>	Sc	45		94.4			
>	Ge	74		93.5			
	As	75	94.426				
	Se	77					
	Se	82	99.892				
	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 12
Sample Date/Time: Tuesday, January 19, 2010 18:44:14
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be and as.mth
Dataset File: c:\elandata\Dataset\100119\QC Std 12.097

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	**0.011**	**ug/L**	96.976	19	0.000
> Sc	45		**ug/L**		1290337	1290336.985
> Ge	74		**ug/L**		384743	384742.659
As	75	**0.404**	**ug/L**	33.358	397	0.001
Se	77		**ug/L**		6018	-0.004
Se	82	**-0.003**	**ug/L**	2121.901	-18	-0.000
Kr	83		**ug/L**		132	-0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Be	9					
> Sc	45		94.3			
> Ge	74		96.1			
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: 1202011760
Sample Date/Time: Tuesday, January 19, 2010 18:48:08
Sample Type:
Sample Description: LANL 6020 MB
Number of Replicates: 3
Batch ID: 940107|2|prb
Method File: c:\elandata\Method\be and as.mth
Dataset File: c:\elandata\Dataset\100119\1202011760.098

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.013**	ug/L	103.388	21	0.000
>	Sc	45		ug/L		1333874	1333873.804
>	Ge	74		ug/L		382556	382555.712
	As	75	**0.145**	ug/L	220.005	106	0.000
	Se	77		ug/L		5836	-0.005
	Se	82	**0.083**	ug/L	25.117	-9	0.000
	Kr	83		ug/L		117	-0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		97.4			
>	Ge	74		95.6			
	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: 1202011761
Sample Date/Time: Tuesday, January 19, 2010 18:51:59
Sample Type:
Sample Description: LANL 6020 LCS
Number of Replicates: 3
Batch ID: 940107|40|prb
Method File: c:\elandata\Method\be and as.mth
Dataset File: c:\elandata\Dataset\100119\1202011761.099

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**24.679**	**ug/L**	0.925	8145	0.006
>	Sc	45		**ug/L**		1321160	1321159.940
>	Ge	74		**ug/L**		385364	385364.362
	As	75	**31.408**	**ug/L**	2.476	34994	0.091
	Se	77		**ug/L**		14370	0.017
	Se	82	**87.452**	**ug/L**	1.780	8899	0.023
	Kr	83		**ug/L**		141	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		96.5			
>	Ge	74		96.3			
	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

ICPMS#5 - Summary Report

Sample ID: 244125001
Sample Date/Time: Tuesday, January 19, 2010 18:55:51
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 940107|2|prb
Method File: c:\elandata\Method\be and as.mth
Dataset File: c:\elandata\Dataset\100119\244125001.100

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**6.599**	**ug/L**	0.953	2218	0.002
>	Sc	45		**ug/L**		1338070	1338069.889
>	Ge	74		**ug/L**		358408	358408.003
	As	75	**10.286**	**ug/L**	2.552	10626	0.030
	Se	77		**ug/L**		4736	-0.007
	Se	82	**-1.721**	**ug/L**	6.934	-180	-0.000
	Kr	83		**ug/L**		427	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		97.8			
>	Ge	74		89.5			
	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: 244125002
Sample Date/Time: Tuesday, January 19, 2010 18:59:44
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 940107|2|prb
Method File: c:\elandata\Method\be and as.mth
Dataset File: c:\elandata\Dataset\100119\244125002.101

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**6.192**	**ug/L**	4.519	2087	0.002
>	Sc	45		**ug/L**		1340711	1340710.535
>	Ge	74		**ug/L**		361127	361127.391
	As	75	**11.417**	**ug/L**	2.495	11887	0.033
	Se	77		**ug/L**		4746	-0.007
	Se	82	**-0.770**	**ug/L**	61.219	-90	-0.000
	Kr	83		**ug/L**		372	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		97.9			
>	Ge	74		90.2			
	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: QC Std 6
Sample Date/Time: Tuesday, January 19, 2010 19:03:36
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be and as.mth
Dataset File: c:\elandata\Dataset\100119\QC Std 6.102

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**53.757**	**ug/L**	1.302	17668	0.013
>	Sc	45		**ug/L**		1316994	1316993.550
>	Ge	74		**ug/L**		385622	385621.553
	As	75	**47.493**	**ug/L**	2.729	52978	0.138
	Se	77		**ug/L**		11357	0.009
	Se	82	**50.243**	**ug/L**	0.267	5109	0.013
	Kr	83		**ug/L**		138	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9	107.514				
>	Sc	45		96.2			
>	Ge	74		96.3			
	As	75	94.986				
	Se	77					
	Se	82	100.486				
	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: Tuesday, January 19, 2010 19:07:30
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be and as.mth
Dataset File: c:\elandata\Dataset\100119\QC Std 7.103

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Be	9	**0.017**	**ug/L**	36.286	21	0.000
⌊>	Sc	45		**ug/L**		1301410	1301409.589
⌈>	Ge	74		**ug/L**		389127	389127.488
|	As	75	**0.284**	**ug/L**	102.024	266	0.001
|	Se	77		**ug/L**		6210	-0.004
|	Se	82	**0.096**	**ug/L**	64.488	-8	0.000
⌊	Kr	83		**ug/L**		130	-0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
⌈	Be	9					
⌊>	Sc	45		95.1			
⌈>	Ge	74		97.2			
|	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: 244125003
Sample Date/Time: Tuesday, January 19, 2010 19:11:24
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 940107|2|prb
Method File: c:\elandata\Method\be and as.mth
Dataset File: c:\elandata\Dataset\100119\244125003.104

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**6.330**	**ug/L**	2.823	2140	0.002
>	Sc	45		**ug/L**		1345447	1345446.954
>	Ge	74		**ug/L**		361611	361611.229
	As	75	**11.143**	**ug/L**	3.326	11616	0.032
	Se	77		**ug/L**		4804	-0.007
	Se	82	**-1.062**	**ug/L**	20.695	-118	-0.000
	Kr	83		**ug/L**		370	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		98.3			
>	Ge	74		90.3			
	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

ICPMS#5 - Summary Report

Sample ID: 244125004
Sample Date/Time: Tuesday, January 19, 2010 19:15:18
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 940107|2|prb
Method File: c:\elandata\Method\be and as.mth
Dataset File: c:\elandata\Dataset\100119\244125004.105

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**4.868**	**ug/L**	1.182	1634	0.001
>	Sc	45		**ug/L**		1332983	1332983.373
>	Ge	74		**ug/L**		369474	369473.784
	As	75	**9.295**	**ug/L**	4.945	9893	0.027
	Se	77		**ug/L**		4843	-0.007
	Se	82	**-0.425**	**ug/L**	5.395	-59	-0.000
	Kr	83		**ug/L**		303	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		97.4			
>	Ge	74		92.3			
	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

ICPMS#5 - Summary Report

Sample ID: 1202011762
Sample Date/Time: Tuesday, January 19, 2010 19:23:03
Sample Type:
Sample Description: LANL 6020 DUP
Number of Replicates: 3
Batch ID: 940107|2|prb
Method File: c:\elandata\Method\be and as.mth
Dataset File: c:\elandata\Dataset\100119\1202011762.107

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Be	9	**5.348**	**ug/L**	4.117	1808	0.001
⌊>	Sc	45		**ug/L**		1343850	1343849.933
⌈>	Ge	74		**ug/L**		362309	362309.098
|	As	75	**9.537**	**ug/L**	5.950	9955	0.028
|	Se	77		**ug/L**		4516	-0.008
|	Se	82	**-1.028**	**ug/L**	23.685	-115	-0.000
⌊	Kr	83		**ug/L**		341	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
⌈	Be	9					
⌊>	Sc	45		98.2			
⌈>	Ge	74		90.5			
|	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: 1202011763
Sample Date/Time: Tuesday, January 19, 2010 19:26:55
Sample Type:
Sample Description: LANL 6020 MS
Number of Replicates: 3
Batch ID: 940107|2|prb
Method File: c:\elandata\Method\be and as.mth
Dataset File: c:\elandata\Dataset\100119\1202011763.108

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**32.560**	**ug/L**	2.315	10924	0.008
>	Sc	45		**ug/L**		1343787	1343787.295
>	Ge	74		**ug/L**		363498	363497.785
	As	75	**48.592**	**ug/L**	1.793	51096	0.141
	Se	77		**ug/L**		5234	-0.006
	Se	82	**7.198**	**ug/L**	12.420	675	0.002
	Kr	83		**ug/L**		371	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		98.2			
>	Ge	74		90.8			
	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: QC Std 6
Sample Date/Time: Tuesday, January 19, 2010 19:30:47
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be and as.mth
Dataset File: c:\elandata\Dataset\100119\QC Std 6.109

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Be	9	**53.730**	**ug/L**	2.268	17682	0.013
⌊>	Sc	45		**ug/L**		1318799	1318798.543
⌈>	Ge	74		**ug/L**		378995	378994.669
|	As	75	**47.735**	**ug/L**	1.285	52340	0.138
|	Se	77		**ug/L**		11277	0.010
|	Se	82	**50.018**	**ug/L**	2.426	4999	0.013
⌊	Kr	83		**ug/L**		134	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
⌈	Be	9	107.460				
⌊>	Sc	45		96.3			
⌈>	Ge	74		94.7			
|	As	75	95.471				
|	Se	77					
|	Se	82	100.036				
⌊	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: Tuesday, January 19, 2010 19:34:40
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be and as.mth
Dataset File: c:\elandata\Dataset\100119\QC Std 7.110

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	0.022	ug/L	97.080	23	0.000
>	Sc	45		ug/L		1306292	1306292.226
>	Ge	74		ug/L		388288	388287.822
	As	75	-0.129	ug/L	114.398	-199	-0.000
	Se	77		ug/L		5787	-0.005
	Se	82	-0.067	ug/L	142.182	-25	-0.000
	Kr	83		ug/L		128	-0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		95.4			
>	Ge	74		97.0			
	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: 1202011771
Sample Date/Time: Tuesday, January 19, 2010 19:38:35
Sample Type:
Sample Description: LANL 6020 MSD
Number of Replicates: 3
Batch ID: 940107|2|prb
Method File: c:\elandata\Method\be and as.mth
Dataset File: c:\elandata\Dataset\100119\1202011771.111

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**34.124**	**ug/L**	0.750	11457	0.009
>	Sc	45		**ug/L**		1344685	1344684.643
>	Ge	74		**ug/L**		361924	361924.279
	As	75	**48.799**	**ug/L**	0.339	51092	0.141
	Se	77		**ug/L**		5247	-0.006
	Se	82	**6.829**	**ug/L**	7.316	637	0.002
	Kr	83		**ug/L**		403	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		98.2			
>	Ge	74		90.4			
	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: 1202011764
Sample Date/Time: Tuesday, January 19, 2010 19:42:28
Sample Type:
Sample Description: LANL 6020 SDILT
Number of Replicates: 3
Batch ID: 940107|10|prb
Method File: c:\elandata\Method\be and as.mth
Dataset File: c:\elandata\Dataset\100119\1202011764.112

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**1.101**	**ug/L**	5.031	367	0.000
>	Sc	45		**ug/L**		1282286	1282285.826
>	Ge	74		**ug/L**		374481	374481.231
	As	75	**1.832**	**ug/L**	18.761	1937	0.005
	Se	77		**ug/L**		6023	-0.004
	Se	82	**-0.204**	**ug/L**	126.738	-37	-0.000
	Kr	83		**ug/L**		168	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		93.7			
>	Ge	74		93.6			
	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: QC Std 6
Sample Date/Time: Tuesday, January 19, 2010 19:54:10
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be and as.mth
Dataset File: c:\elandata\Dataset\100119\QC Std 6.115

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**53.641**	**ug/L**	3.008	17608	0.013
>	Sc	45		**ug/L**		1315638	1315638.443
>	Ge	74		**ug/L**		378814	378813.727
	As	75	**47.001**	**ug/L**	1.024	51503	0.136
	Se	77		**ug/L**		11046	0.009
	Se	82	**49.225**	**ug/L**	1.633	4917	0.013
	Kr	83		**ug/L**		117	-0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9	107.281				
>	Sc	45		96.1			
>	Ge	74		94.6			
	As	75	94.001				
	Se	77					
	Se	82	98.449				
	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: Tuesday, January 19, 2010 19:58:03
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be and as.mth
Dataset File: c:\elandata\Dataset\100119\QC Std 7.116

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.009**	**ug/L**	208.661	19	0.000
>	Sc	45		**ug/L**		1291785	1291785.343
>	Ge	74		**ug/L**		380716	380716.457
	As	75	**0.324**	**ug/L**	93.151	303	0.001
	Se	77		**ug/L**		5956	-0.004
	Se	82	**0.091**	**ug/L**	123.254	-8	0.000
	Kr	83		**ug/L**		123	-0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		94.4			
>	Ge	74		95.1			
	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 Begun

Logged In Analyst: Administrator **Technique: AA FIMS-MHS**
Spectrometer Model: FIMS-100, S/N B050-9550 **Autosampler Model: S10**

Sample Information File: C:\data-AA\Administrator\Sample Information\012110S1.SIF
Batch ID:
Results Data Set: 012110S1
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: 1/21/2010 08:51:16**
Analyst: **Data Type: Original**

Replicate Data: Calib Blank

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.00]	0.0001	0.0001	0.0001	08:52:08	Yes
2		[0.00]	0.0001	-0.0001	0.0001	08:52:38	Yes
Mean:		[0.00]	0.0001				
SD:		0.00	0.0000				
%RSD:		0.00	11.64				

Auto-zero performed.

Sequence No.: 2 **Autosampler Location: 2**
Sample ID: S0.2 **Date Collected: 1/21/2010 08:52:57**
Analyst: **Data Type: Original**

Replicate Data: S0.2

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.2]	0.0021	0.0089	0.0022	08:53:47	Yes
2		[0.2]	0.0022	0.0096	0.0022	08:54:17	Yes
Mean:		[0.2]	0.0021				
SD:		0.0	0.0001				
%RSD:		0.0	2.46				

Standard number 1 applied. [0.2]
Correlation Coef.: 1.000000 Slope: 0.01058 Intercept: 0.00000

Sequence No.: 3 **Autosampler Location: 3**
Sample ID: S0.5 **Date Collected: 1/21/2010 08:54:36**
Analyst: **Data Type: Original**

Replicate Data: S0.5

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.5]	0.0057	0.0253	0.0058	08:55:27	Yes
2		[0.5]	0.0057	0.0252	0.0058	08:55:57	Yes
Mean:		[0.5]	0.0057				
SD:		0.0	0.0000				
%RSD:		0.0	0.38				

Standard number 2 applied. [0.5]
Correlation Coef.: 0.999400 Slope: 0.01150 Intercept: -0.00007

Sequence No.: 4 **Autosampler Location: 4**
Sample ID: S2.0 **Date Collected: 1/21/2010 08:56:16**
Analyst: **Data Type: Original**

Replicate Data: S2.0

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[2.0]	0.0219	0.0980	0.0220	08:57:08	Yes
2		[2.0]	0.0218	0.0968	0.0219	08:57:38	Yes
Mean:		[2.0]	0.0218				
SD:		0.0	0.0000				
%RSD:		0.0	0.22				

Standard number 3 applied. [2.0]
Correlation Coef.: 0.999885 Slope: 0.01091 Intercept: 0.00006

Sequence No.: 5 **Autosampler Location: 5**
Sample ID: S5.0 **Date Collected: 1/21/2010 08:57:58**
Analyst: **Data Type: Original**

Replicate Data: S5.0

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[5.0]	0.0539	0.2409	0.0539	08:58:50	Yes
2		[5.0]	0.0533	0.2366	0.0534	08:59:20	Yes
Mean:		[5.0]	0.0536				
SD:		0.0	0.0004				
%RSD:		0.0	0.68				

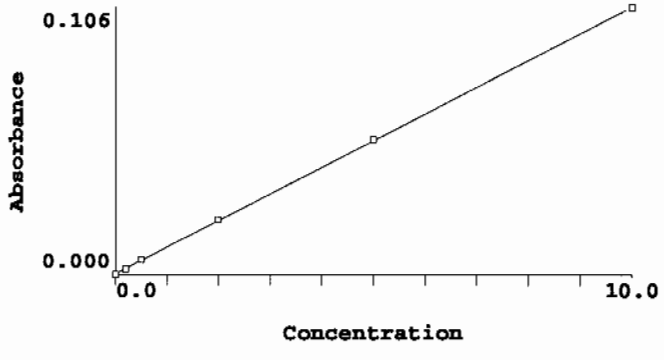
Standard number 4 applied. [5.0]
Correlation Coef.: 0.999955 Slope: 0.01071 Intercept: 0.00016

Sequence No.: 6 **Autosampler Location: 6**
Sample ID: S10.0 **Date Collected: 1/21/2010 08:59:40**
Analyst: **Data Type: Original**

Replicate Data: S10.0

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[10.0]	0.1058	0.4741	0.1059	09:00:30	Yes
2		[10.0]	0.1054	0.4709	0.1055	09:01:00	Yes
Mean:		[10.0]	0.1056				
SD:		0.0	0.0003				
%RSD:		0.0	0.28				

Standard number 5 applied. [10.0]
Correlation Coef.: 0.999960 Slope: 0.01056 Intercept: 0.00033



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	-0.031	0.00	11.6
S0.2	0.0021	0.2	0.169	0.00	2.5
S0.5	0.0057	0.5	0.511	0.00	0.4
S2.0	0.0218	2.0	2.036	0.00	0.2

S5.0	0.0536	5.0	5.045	0.00	0.7
S10.0	0.1056	10.0	9.971	0.00	0.3

Correlation Coef.: 0.999960 Slope: 0.01056 Intercept: 0.00033

Sequence No.: 7 **Autosampler Location: 9**
Sample ID: ICV **Date Collected: 1/21/2010 09:01:18**
Analyst: **Data Type: Original**

Replicate Data: ICV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.186	5.186	0.0551	0.2441	0.0552	09:02:10	Yes
2	5.123	5.123	0.0544	0.2407	0.0545	09:02:40	Yes
Mean:	5.154	5.154	0.0548				
SD:	0.044	0.044	0.0005				
%RSD:	0.858	0.858	0.85				

QC value within limits for Hg 253.7 Recovery = 103.09%
All analyte(s) passed QC.

Sequence No.: 8 **Autosampler Location: 10**
Sample ID: ICB **Date Collected: 1/21/2010 09:02:59**
Analyst: **Data Type: Original**

Replicate Data: ICB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.030	-0.030	0.0000	-0.0004	0.0001	09:03:50	Yes
2	-0.029	-0.029	0.0000	-0.0000	0.0001	09:04:20	Yes
Mean:	-0.030	-0.030	0.0000				
SD:	0.001	0.001	0.0000				
%RSD:	4.257	4.257	70.02				

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: 1/21/2010 09:04:40**
Analyst: **Data Type: Original**

Replicate Data: CRDL

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.187	0.187	0.0023	0.0096	0.0024	09:05:31	Yes
2	0.186	0.186	0.0023	0.0098	0.0024	09:06:01	Yes
Mean:	0.187	0.187	0.0023				
SD:	0.000	0.000	0.0000				
%RSD:	0.075	0.075	0.06				

QC value within limits for Hg 253.7 Recovery = 93.30%
All analyte(s) passed QC.

Sequence No.: 10 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 1/21/2010 09:06:21**
Analyst: **Data Type: Original**

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.162	5.162	0.0548	0.2407	0.0549	09:07:12	Yes
2	5.121	5.121	0.0544	0.2374	0.0545	09:07:42	Yes
Mean:	5.142	5.142	0.0546				
SD:	0.029	0.029	0.0003				
%RSD:	0.573	0.573	0.57				

QC value within limits for Hg 253.7 Recovery = 102.83%
All analyte(s) passed QC.

Sequence No.: 11 Autosampler Location: 8
Sample ID: CCB Date Collected: 1/21/2010 09:08:01
Analyst: Data Type: Original

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.026	-0.026	0.0001	-0.0003	0.0001	09:08:52	Yes
2	-0.020	-0.020	0.0001	-0.0000	0.0002	09:09:22	Yes
Mean:	-0.023	-0.023	0.0001				
SD:	0.004	0.004	0.0000				
%RSD:	15.98	15.98	44.26				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 12 Autosampler Location: 12
Sample ID: 1202012918|940555|1 Date Collected: 1/21/2010 09:09:41
Analyst: JXL Data Type: Original

Replicate Data: 1202012918|940555|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.022	-0.022	0.0001	0.0001	0.0002	09:10:32	Yes
2	-0.024	-0.024	0.0001	-0.0007	0.0002	09:11:02	Yes
Mean:	-0.023	-0.023	0.0001				
SD:	0.001	0.001	0.0000				
%RSD:	6.177	6.177	16.20				

Sequence No.: 13 Autosampler Location: 13
Sample ID: 1202012919|940555|10 Date Collected: 1/21/2010 09:11:22
Analyst: JXL Data Type: Original

Replicate Data: 1202012919|940555|10

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	3.829	3.829	0.0408	0.1769	0.0409	09:12:14	Yes
2	3.784	3.784	0.0403	0.1741	0.0404	09:12:44	Yes
Mean:	3.807	3.807	0.0405				
SD:	0.032	0.032	0.0003				
%RSD:	0.846	0.846	0.84				

Sequence No.: 14 Autosampler Location: 14
Sample ID: 244218001|940555|1 Date Collected: 1/21/2010 09:13:05
Analyst: JXL Data Type: Original

Replicate Data: 244218001|940555|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.653	0.653	0.0072	0.0314	0.0073	09:13:55	Yes
2	0.664	0.664	0.0073	0.0313	0.0074	09:14:25	Yes
Mean:	0.658	0.658	0.0073				
SD:	0.008	0.008	0.0001				
%RSD:	1.265	1.265	1.21				

Sequence No.: 15 Autosampler Location: 15
Sample ID: 1202012920|940555|1 Date Collected: 1/21/2010 09:14:44
Analyst: JXL Data Type: Original

Replicate Data: 1202012920|940555|1

Repl	SampleConc	StndConc	BlnkCorr	Peak	Peak	Time	Peak

Replicate Data: 244218003|940555|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.460	0.460	0.0052	0.0225	0.0053	09:23:53	Yes
2	0.465	0.465	0.0052	0.0230	0.0053	09:24:23	Yes
Mean:	0.462	0.462	0.0052				
SD:	0.003	0.003	0.0000				
%RSD:	0.691	0.691	0.65				

Sequence No.: 21
Sample ID: 244218004|940555|1
Analyst: JXL
Autosampler Location: 21
Date Collected: 1/21/2010 09:24:43
Data Type: Original

Replicate Data: 244218004|940555|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	1.356	1.356	0.0147	0.0643	0.0147	09:25:34	Yes
2	1.370	1.370	0.0148	0.0654	0.0149	09:26:03	Yes
Mean:	1.363	1.363	0.0147				
SD:	0.010	0.010	0.0001				
%RSD:	0.725	0.725	0.71				

Sequence No.: 22
Sample ID: CCV
Analyst:
Autosampler Location: 7
Date Collected: 1/21/2010 09:26:23
Data Type: Original

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.357	5.357	0.0569	0.2458	0.0570	09:27:14	Yes
2	5.309	5.309	0.0564	0.2442	0.0565	09:27:44	Yes
Mean:	5.333	5.333	0.0566				
SD:	0.034	0.034	0.0004				
%RSD:	0.644	0.644	0.64				

QC value within limits for Hg 253.7 Recovery = 106.66%
All analyte(s) passed QC.

Sequence No.: 23
Sample ID: CCB
Analyst:
Autosampler Location: 8
Date Collected: 1/21/2010 09:28:02
Data Type: Original

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.018	-0.018	0.0001	0.0018	0.0002	09:28:53	Yes
2	-0.023	-0.023	0.0001	0.0008	0.0002	09:29:23	Yes
Mean:	-0.021	-0.021	0.0001				
SD:	0.004	0.004	0.0000				
%RSD:	18.05	18.05	34.79				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 24
Sample ID: 244218005|940555|1
Analyst: JXL
Autosampler Location: 22
Date Collected: 1/21/2010 09:29:42
Data Type: Original

Replicate Data: 244218005|940555|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.950	0.950	0.0104	0.0447	0.0105	09:30:34	Yes
2	0.949	0.949	0.0103	0.0445	0.0104	09:31:03	Yes

Replicate Data: 1202012926|940558|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.462	0.462	0.0052	0.0229	0.0053	09:45:37	Yes
2	0.462	0.462	0.0052	0.0227	0.0053	09:46:07	Yes
Mean:	0.462	0.462	0.0052				
SD:	0.000	0.000	0.0000				
%RSD:	0.014	0.014	0.01				

==========

Sequence No.: 34 Autosampler Location: 7
Sample ID: CCV Date Collected: 1/21/2010 09:46:26
Analyst: Data Type: Original

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.014	5.014	0.0533	0.2300	0.0534	09:47:16	Yes
2	4.996	4.996	0.0531	0.2286	0.0532	09:47:46	Yes
Mean:	5.005	5.005	0.0532				
SD:	0.013	0.013	0.0001				
%RSD:	0.261	0.261	0.26				

QC value within limits for Hg 253.7 Recovery = 100.10%
All analyte(s) passed QC.

==========

Sequence No.: 35 Autosampler Location: 8
Sample ID: CCB Date Collected: 1/21/2010 09:48:05
Analyst: Data Type: Original

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.009	-0.009	0.0002	0.0018	0.0003	09:48:56	Yes
2	-0.019	-0.019	0.0001	0.0009	0.0002	09:49:25	Yes
Mean:	-0.014	-0.014	0.0002				
SD:	0.007	0.007	0.0001				
%RSD:	47.22	47.22	38.56				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

==========

Sequence No.: 36 Autosampler Location: 32
Sample ID: 1202012927|940558|1 Date Collected: 1/21/2010 09:49:45
Analyst: JXL Data Type: Original

Replicate Data: 1202012927|940558|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.628	2.628	0.0281	0.1214	0.0282	09:50:35	Yes
2	2.635	2.635	0.0282	0.1219	0.0282	09:51:05	Yes
Mean:	2.632	2.632	0.0281				
SD:	0.005	0.005	0.0000				
%RSD:	0.179	0.179	0.18				

==========

Sequence No.: 37 Autosampler Location: 33
Sample ID: 1202012929|940558|1 Date Collected: 1/21/2010 09:51:25
Analyst: JXL Data Type: Original

Replicate Data: 1202012929|940558|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.873	2.873	0.0307	0.1327	0.0308	09:52:15	Yes
2	2.876	2.876	0.0307	0.1328	0.0308	09:52:45	Yes
Mean:	2.875	2.875	0.0307				
SD:	0.002	0.002	0.0000				

1	1.193	1.193	0.0129	0.0558	0.0130	10:00:41	Yes
2	1.194	1.194	0.0129	0.0557	0.0130	10:01:11	Yes
Mean:	1.193	1.193	0.0129				
SD:	0.001	0.001	0.0000				
%RSD:	0.076	0.076	0.07				

Sequence No.: 43 **Autosampler Location: 39**
Sample ID: 244224006|940558|1 **Date Collected: 1/21/2010 10:01:30**
Analyst: JXL **Data Type: Original**

Replicate Data: 244224006|940558|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.455	0.455	0.0051	0.0223	0.0052	10:02:21	Yes
2	0.459	0.459	0.0052	0.0221	0.0053	10:02:51	Yes
Mean:	0.457	0.457	0.0052				
SD:	0.003	0.003	0.0000				
%RSD:	0.573	0.573	0.54				

Sequence No.: 44 **Autosampler Location: 40**
Sample ID: 244224007|940558|1 **Date Collected: 1/21/2010 10:03:10**
Analyst: JXL **Data Type: Original**

Replicate Data: 244224007|940558|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.943	0.943	0.0103	0.0439	0.0104	10:04:01	Yes
2	0.951	0.951	0.0104	0.0442	0.0105	10:04:31	Yes
Mean:	0.947	0.947	0.0103				
SD:	0.006	0.006	0.0001				
%RSD:	0.592	0.592	0.57				

Sequence No.: 45 **Autosampler Location: 41**
Sample ID: 244224008|940558|1 **Date Collected: 1/21/2010 10:04:50**
Analyst: JXL **Data Type: Original**

Replicate Data: 244224008|940558|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	1.136	1.136	0.0123	0.0521	0.0124	10:05:41	Yes
2	1.131	1.131	0.0123	0.0516	0.0124	10:06:11	Yes
Mean:	1.133	1.133	0.0123				
SD:	0.004	0.004	0.0000				
%RSD:	0.325	0.325	0.32				

Sequence No.: 46 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 1/21/2010 10:06:30**
Analyst: **Data Type: Original**

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.226	5.226	0.0555	0.2329	0.0556	10:07:21	Yes
2	5.198	5.198	0.0552	0.2319	0.0553	10:07:50	Yes
Mean:	5.212	5.212	0.0554				
SD:	0.020	0.020	0.0002				
%RSD:	0.390	0.390	0.39				

QC value within limits for Hg 253.7 Recovery = 104.24%
All analyte(s) passed QC.

Sequence No.: 47 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 1/21/2010 10:08:09**

Analyst: Data Type: Original

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.014	-0.014	0.0002	0.0008	0.0003	10:09:00	Yes
2	-0.016	-0.016	0.0002	0.0005	0.0002	10:09:30	Yes
Mean:	-0.015	-0.015	0.0002				
SD:	0.002	0.002	0.0000				
%RSD:	11.41	11.41	10.58				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 48 Autosampler Location: 42
Sample ID: 244224009|940558|1 Date Collected: 1/21/2010 10:09:49
Analyst: JXL Data Type: Original

Replicate Data: 244224009|940558|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.101	2.101	0.0225	0.0961	0.0226	10:10:40	Yes
2	2.094	2.094	0.0224	0.0934	0.0225	10:11:10	Yes
Mean:	2.097	2.097	0.0225				
SD:	0.005	0.005	0.0001				
%RSD:	0.244	0.244	0.24				

Sequence No.: 49 Autosampler Location: 43
Sample ID: 244224010|940558|1 Date Collected: 1/21/2010 10:11:29
Analyst: JXL Data Type: Original

Replicate Data: 244224010|940558|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.389	0.389	0.0044	0.0186	0.0045	10:12:20	Yes
2	0.395	0.395	0.0045	0.0185	0.0046	10:12:50	Yes
Mean:	0.392	0.392	0.0045				
SD:	0.004	0.004	0.0000				
%RSD:	1.041	1.041	0.96				

Sequence No.: 50 Autosampler Location: 44
Sample ID: 244224011|940558|1 Date Collected: 1/21/2010 10:13:10
Analyst: JXL Data Type: Original

Replicate Data: 244224011|940558|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.491	0.491	0.0055	0.0230	0.0056	10:14:00	Yes
2	0.496	0.496	0.0056	0.0234	0.0057	10:14:30	Yes
Mean:	0.494	0.494	0.0055				
SD:	0.004	0.004	0.0000				
%RSD:	0.732	0.732	0.69				

Sequence No.: 51 Autosampler Location: 45
Sample ID: 244224012|940558|1 Date Collected: 1/21/2010 10:14:50
Analyst: JXL Data Type: Original

Replicate Data: 244224012|940558|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.210	0.210	0.0025	0.0108	0.0026	10:15:41	Yes
2	0.202	0.202	0.0025	0.0096	0.0026	10:16:11	Yes
Mean:	0.206	0.206	0.0025				

#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.370	0.370	0.0042	0.0180	0.0043	10:24:06	Yes
2	0.369	0.369	0.0042	0.0176	0.0043	10:24:36	Yes
Mean:	0.369	0.369	0.0042				
SD:	0.001	0.001	0.0000				
%RSD:	0.332	0.332	0.31				

==========

Sequence No.: 57 **Autosampler Location: 51**
Sample ID: 244224018|940558|1 **Date Collected: 1/21/2010 10:24:56**
Analyst: JXL **Data Type: Original**

Replicate Data: 244224018|940558|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.211	0.211	0.0026	0.0103	0.0026	10:25:47	Yes
2	0.216	0.216	0.0026	0.0108	0.0027	10:26:17	Yes
Mean:	0.213	0.213	0.0026				
SD:	0.004	0.004	0.0000				
%RSD:	1.743	1.743	1.52				

==========

Sequence No.: 58 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 1/21/2010 10:26:36**
Analyst: **Data Type: Original**

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.339	5.339	0.0567	0.2394	0.0568	10:27:26	Yes
2	5.332	5.332	0.0566	0.2380	0.0567	10:27:56	Yes
Mean:	5.335	5.335	0.0567				
SD:	0.004	0.004	0.0000				
%RSD:	0.083	0.083	0.08				

QC value within limits for Hg 253.7 Recovery = 106.71%
All analyte(s) passed QC.

==========

Sequence No.: 59 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 1/21/2010 10:28:15**
Analyst: **Data Type: Original**

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.016	-0.016	0.0002	0.0007	0.0003	10:29:06	Yes
2	-0.020	-0.020	0.0001	0.0008	0.0002	10:29:36	Yes
Mean:	-0.018	-0.018	0.0001				
SD:	0.003	0.003	0.0000				
%RSD:	15.65	15.65	19.99				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

==========

Sequence No.: 60 **Autosampler Location: 52**
Sample ID: 244224019|940558|1 **Date Collected: 1/21/2010 10:29:56**
Analyst: JXL **Data Type: Original**

Replicate Data: 244224019|940558|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.179	0.179	0.0022	0.0092	0.0023	10:30:47	Yes
2	0.178	0.178	0.0022	0.0090	0.0023	10:31:17	Yes
Mean:	0.178	0.178	0.0022				
SD:	0.001	0.001	0.0000				
%RSD:	0.344	0.344	0.29				

Mean:	0.570	0.570	0.0063
SD:	0.001	0.001	0.0000
%RSD:	0.135	0.135	0.13

==========

Sequence No.: 66 **Autosampler Location: 58**
Sample ID: 1202019605|943247|1 **Date Collected: 1/21/2010 10:40:00**
Analyst: JXL **Data Type: Original**

Replicate Data: 1202019605|943247|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.875	2.875	0.0307	0.1294	0.0308	10:40:51	Yes
2	2.855	2.855	0.0305	0.1280	0.0306	10:41:21	Yes
Mean:	2.865	2.865	0.0306				
SD:	0.014	0.014	0.0001				
%RSD:	0.494	0.494	0.49				

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Sequence No.: 67 **Autosampler Location: 59**
Sample ID: 1202019607|943247|1 **Date Collected: 1/21/2010 10:41:41**
Analyst: JXL **Data Type: Original**

Replicate Data: 1202019607|943247|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.844	2.844	0.0304	0.1269	0.0304	10:42:32	Yes
2	2.848	2.848	0.0304	0.1268	0.0305	10:43:02	Yes
Mean:	2.846	2.846	0.0304				
SD:	0.003	0.003	0.0000				
%RSD:	0.098	0.098	0.10				

==========

Sequence No.: 68 **Autosampler Location: 60**
Sample ID: 1202019606|943247|5 **Date Collected: 1/21/2010 10:43:22**
Analyst: JXL **Data Type: Original**

Replicate Data: 1202019606|943247|5

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.084	0.084	0.0012	0.0055	0.0013	10:44:13	Yes
2	0.082	0.082	0.0012	0.0052	0.0013	10:44:43	Yes
Mean:	0.083	0.083	0.0012				
SD:	0.001	0.001	0.0000				
%RSD:	1.782	1.782	1.29				

==========

Sequence No.: 69 **Autosampler Location: 61**
Sample ID: 244036002|943247|1 **Date Collected: 1/21/2010 10:45:03**
Analyst: JXL **Data Type: Original**

Replicate Data: 244036002|943247|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.113	0.113	0.0015	0.0062	0.0016	10:45:55	Yes
2	0.119	0.119	0.0016	0.0070	0.0017	10:46:25	Yes
Mean:	0.116	0.116	0.0016				
SD:	0.004	0.004	0.0000				
%RSD:	3.256	3.256	2.56				

==========

Sequence No.: 70 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 1/21/2010 10:46:45**
Analyst: **Data Type: Original**

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.284	5.284	0.0561	0.2371	0.0562	10:47:35	Yes
2	5.335	5.335	0.0567	0.2379	0.0568	10:48:05	Yes
Mean:	5.309	5.309	0.0564				
SD:	0.036	0.036	0.0004				
%RSD:	0.683	0.683	0.68				

QC value within limits for Hg 253.7 Recovery = 106.19%
All analyte(s) passed QC.

Sequence No.: 71 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 1/21/2010 10:48:24**
Analyst: **Data Type: Original**

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.021	-0.021	0.0001	0.0007	0.0002	10:49:15	Yes
2	-0.023	-0.023	0.0001	0.0005	0.0002	10:49:45	Yes
Mean:	-0.022	-0.022	0.0001				
SD:	0.002	0.002	0.0000				
%RSD:	8.128	8.128	19.65				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 72 **Autosampler Location: 62**
Sample ID: 244036003|943247|1 **Date Collected: 1/21/2010 10:50:05**
Analyst: JXL **Data Type: Original**

Replicate Data: 244036003|943247|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.403	0.403	0.0046	0.0198	0.0047	10:50:56	Yes
2	0.398	0.398	0.0045	0.0194	0.0046	10:51:26	Yes
Mean:	0.401	0.401	0.0046				
SD:	0.004	0.004	0.0000				
%RSD:	1.047	1.047	0.97				

Sequence No.: 73 **Autosampler Location: 63**
Sample ID: 244036004|943247|1 **Date Collected: 1/21/2010 10:51:46**
Analyst: JXL **Data Type: Original**

Replicate Data: 244036004|943247|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.354	0.354	0.0041	0.0175	0.0042	10:52:37	Yes
2	0.360	0.360	0.0041	0.0174	0.0042	10:53:07	Yes
Mean:	0.357	0.357	0.0041				
SD:	0.004	0.004	0.0000				
%RSD:	1.186	1.186	1.09				

Sequence No.: 74 **Autosampler Location: 64**
Sample ID: 244036005|943247|1 **Date Collected: 1/21/2010 10:53:26**
Analyst: JXL **Data Type: Original**

Replicate Data: 244036005|943247|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.158	0.158	0.0020	0.0085	0.0021	10:54:18	Yes
2	0.162	0.162	0.0020	0.0084	0.0021	10:54:48	Yes
Mean:	0.160	0.160	0.0020				
SD:	0.003	0.003	0.0000				
%RSD:	1.738	1.738	1.45				

2	0.086	0.086	0.0012	0.0056	0.0013	11:03:14	Yes
Mean:	0.085	0.085	0.0012				
SD:	0.001	0.001	0.0000				
%RSD:	1.723	1.723	1.26				

Sequence No.: 80 **Autosampler Location: 70**
Sample ID: 244036011|943247|1 **Date Collected: 1/21/2010 11:03:34**
Analyst: JXL **Data Type: Original**

Replicate Data: 244036011|943247|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.658	0.658	0.0073	0.0313	0.0074	11:04:25	Yes
2	0.665	0.665	0.0074	0.0323	0.0074	11:04:55	Yes
Mean:	0.661	0.661	0.0073				
SD:	0.005	0.005	0.0001				
%RSD:	0.767	0.767	0.73				

Sequence No.: 81 **Autosampler Location: 71**
Sample ID: 244036012|943247|1 **Date Collected: 1/21/2010 11:05:15**
Analyst: JXL **Data Type: Original**

Replicate Data: 244036012|943247|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.327	0.327	0.0038	0.0164	0.0039	11:06:07	Yes
2	0.330	0.330	0.0038	0.0166	0.0039	11:06:37	Yes
Mean:	0.328	0.328	0.0038				
SD:	0.002	0.002	0.0000				
%RSD:	0.604	0.604	0.55				

Sequence No.: 82 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 1/21/2010 11:06:57**
Analyst: **Data Type: Original**

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.212	5.212	0.0554	0.2342	0.0555	11:07:47	Yes
2	5.183	5.183	0.0551	0.2332	0.0552	11:08:17	Yes
Mean:	5.198	5.198	0.0552				
SD:	0.020	0.020	0.0002				
%RSD:	0.390	0.390	0.39				

QC value within limits for Hg 253.7 Recovery = 103.95%
All analyte(s) passed QC.

Sequence No.: 83 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 1/21/2010 11:08:35**
Analyst: **Data Type: Original**

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.022	-0.022	0.0001	0.0004	0.0002	11:09:26	Yes
2	-0.021	-0.021	0.0001	0.0006	0.0002	11:09:56	Yes
Mean:	-0.021	-0.021	0.0001				
SD:	0.001	0.001	0.0000				
%RSD:	3.694	3.694	7.61				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 84 **Autosampler Location: 72**

%RSD:	2.881	2.881	2.47

==========

Sequence No.: 89
Sample ID: 1202019573|943237|1
Analyst: JXL

Autosampler Location: 77
Date Collected: 1/21/2010 11:18:43
Data Type: Original

Replicate Data: 1202019573|943237|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.018	-0.018	0.0001	0.0008	0.0002	11:19:34	Yes
2	-0.017	-0.017	0.0001	0.0006	0.0002	11:20:04	Yes
Mean:	-0.018	-0.018	0.0001				
SD:	0.001	0.001	0.0000				
%RSD:	4.476	4.476	5.95				

==========

Sequence No.: 90
Sample ID: 1202019574|943237|10
Analyst: JXL

Autosampler Location: 78
Date Collected: 1/21/2010 11:20:24
Data Type: Original

Replicate Data: 1202019574|943237|10

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	3.860	3.860	0.0411	0.1727	0.0412	11:21:15	Yes
2	3.878	3.878	0.0413	0.1727	0.0414	11:21:45	Yes
Mean:	3.869	3.869	0.0412				
SD:	0.013	0.013	0.0001				
%RSD:	0.325	0.325	0.32				

==========

Sequence No.: 91
Sample ID: 244125001|943237|1
Analyst: JXL

Autosampler Location: 79
Date Collected: 1/21/2010 11:22:05
Data Type: Original

Replicate Data: 244125001|943237|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.349	0.349	0.0040	0.0169	0.0041	11:22:56	Yes
2	0.353	0.353	0.0041	0.0172	0.0041	11:23:26	Yes
Mean:	0.351	0.351	0.0040				
SD:	0.002	0.002	0.0000				
%RSD:	0.699	0.699	0.64				

==========

Sequence No.: 92
Sample ID: 244125002|943237|1
Analyst: JXL

Autosampler Location: 80
Date Collected: 1/21/2010 11:23:46
Data Type: Original

Replicate Data: 244125002|943237|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.342	0.342	0.0039	0.0165	0.0040	11:24:37	Yes
2	0.335	0.335	0.0039	0.0165	0.0040	11:25:07	Yes
Mean:	0.339	0.339	0.0039				
SD:	0.005	0.005	0.0000				
%RSD:	1.368	1.368	1.25				

==========

Sequence No.: 93
Sample ID: 244125003|943237|1
Analyst: JXL

Autosampler Location: 81
Date Collected: 1/21/2010 11:25:27
Data Type: Original

Replicate Data: 244125003|943237|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored

1	0.254	0.254	0.0030	0.0126	0.0031	11:26:18	Yes
2	0.251	0.251	0.0030	0.0123	0.0031	11:26:48	Yes
Mean:	0.253	0.253	0.0030				
SD:	0.002	0.002	0.0000				
%RSD:	0.760	0.760	0.68				

Sequence No.: 94 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 1/21/2010 11:27:08**
Analyst: **Data Type: Original**

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.361	5.361	0.0569	0.2398	0.0570	11:27:59	Yes
2	5.361	5.361	0.0569	0.2388	0.0570	11:28:29	Yes
Mean:	5.361	5.361	0.0569				
SD:	0.000	0.000	0.0000				
%RSD:	0.001	0.001	0.00				

QC value within limits for Hg 253.7 Recovery = 107.23%
All analyte(s) passed QC.

Sequence No.: 95 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 1/21/2010 11:28:48**
Analyst: **Data Type: Original**

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.023	-0.023	0.0001	0.0004	0.0002	11:29:38	Yes
2	-0.022	-0.022	0.0001	0.0006	0.0002	11:30:08	Yes
Mean:	-0.022	-0.022	0.0001				
SD:	0.001	0.001	0.0000				
%RSD:	2.377	2.377	5.97				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 96 **Autosampler Location: 82**
Sample ID: 244125004|943237|1 **Date Collected: 1/21/2010 11:30:27**
Analyst: JXL **Data Type: Original**

Replicate Data: 244125004|943237|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.188	0.188	0.0023	0.0096	0.0024	11:31:19	Yes
2	0.192	0.192	0.0024	0.0100	0.0024	11:31:49	Yes
Mean:	0.190	0.190	0.0023				
SD:	0.002	0.002	0.0000				
%RSD:	1.269	1.269	1.09				

Sequence No.: 97 **Autosampler Location: 83**
Sample ID: 244611001|943237|1 **Date Collected: 1/21/2010 11:32:09**
Analyst: JXL **Data Type: Original**

Replicate Data: 244611001|943237|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	12.03	12.03	0.1274	0.5384	0.1275	11:33:01	Yes
	Sample concentration is greater than that of the highest standard.						
2	12.01	12.01	0.1271	0.5374	0.1272	11:33:30	Yes
	Sample concentration is greater than that of the highest standard.						
Mean:	12.02	12.02	0.1272				
SD:	0.018	0.018	0.0002				
%RSD:	0.146	0.146	0.15				

1	0.713	0.713	0.0079	0.0330	0.0080	11:41:28	Yes
2	0.713	0.713	0.0079	0.0337	0.0079	11:41:58	Yes
Mean:	0.713	0.713	0.0079				
SD:	0.000	0.000	0.0000				
%RSD:	0.055	0.055	0.05				

==========

Sequence No.: 103 **Autosampler Location: 89**
Sample ID: 244611007|943237|1 **Date Collected: 1/21/2010 11:42:18**
Analyst: JXL **Data Type: Original**

Replicate Data: 244611007|943237|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.352	0.352	0.0040	0.0173	0.0041	11:43:09	Yes
2	0.358	0.358	0.0041	0.0179	0.0042	11:43:39	Yes
Mean:	0.355	0.355	0.0041				
SD:	0.005	0.005	0.0000				
%RSD:	1.280	1.280	1.18				

==========

Sequence No.: 104 **Autosampler Location: 90**
Sample ID: 244611008|943237|1 **Date Collected: 1/21/2010 11:43:59**
Analyst: JXL **Data Type: Original**

Replicate Data: 244611008|943237|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	1.013	1.013	0.0110	0.0470	0.0111	11:44:51	Yes
2	1.008	1.008	0.0110	0.0465	0.0111	11:45:21	Yes
Mean:	1.011	1.011	0.0110				
SD:	0.003	0.003	0.0000				
%RSD:	0.344	0.344	0.33				

==========

Sequence No.: 105 **Autosampler Location: 91**
Sample ID: 244612001|943237|1 **Date Collected: 1/21/2010 11:45:41**
Analyst: JXL **Data Type: Original**

Replicate Data: 244612001|943237|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.281	0.281	0.0033	0.0140	0.0034	11:46:32	Yes
2	0.278	0.278	0.0033	0.0139	0.0034	11:47:02	Yes
Mean:	0.280	0.280	0.0033				
SD:	0.002	0.002	0.0000				
%RSD:	0.769	0.769	0.69				

==========

Sequence No.: 106 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 1/21/2010 11:47:22**
Analyst: **Data Type: Original**

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.347	5.347	0.0568	0.2395	0.0569	11:48:13	Yes
2	5.324	5.324	0.0566	0.2385	0.0566	11:48:43	Yes
Mean:	5.335	5.335	0.0567				
SD:	0.016	0.016	0.0002				
%RSD:	0.306	0.306	0.30				

QC value within limits for Hg 253.7 Recovery = 106.71%
All analyte(s) passed QC.

==========

Sequence No.: 107 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 1/21/2010 11:49:02**

Analyst: Data Type: Original

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.016	-0.016	0.0002	0.0010	0.0002	11:49:53	Yes
2	-0.024	-0.024	0.0001	0.0003	0.0002	11:50:23	Yes
Mean:	-0.020	-0.020	0.0001				
SD:	0.005	0.005	0.0001				
%RSD:	26.50	26.50	45.59				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 108 Autosampler Location: 92
Sample ID: 244613001|943237|1 Date Collected: 1/21/2010 11:50:42
Analyst: JXL Data Type: Original

Replicate Data: 244613001|943237|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.236	0.236	0.0028	0.0121	0.0029	11:51:33	Yes
2	0.239	0.239	0.0029	0.0122	0.0029	11:52:03	Yes
Mean:	0.237	0.237	0.0028				
SD:	0.002	0.002	0.0000				
%RSD:	0.793	0.793	0.70				

Sequence No.: 109 Autosampler Location: 93
Sample ID: 244619001|943237|1 Date Collected: 1/21/2010 11:52:23
Analyst: JXL Data Type: Original

Replicate Data: 244619001|943237|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.136	0.136	0.0018	0.0077	0.0019	11:53:15	Yes
2	0.138	0.138	0.0018	0.0080	0.0019	11:53:45	Yes
Mean:	0.137	0.137	0.0018				
SD:	0.001	0.001	0.0000				
%RSD:	0.934	0.934	0.76				

Sequence No.: 110 Autosampler Location: 94
Sample ID: 1202019575|943237|1 Date Collected: 1/21/2010 11:54:05
Analyst: JXL Data Type: Original

Replicate Data: 1202019575|943237|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.148	0.148	0.0019	0.0079	0.0020	11:54:57	Yes
2	0.146	0.146	0.0019	0.0081	0.0020	11:55:27	Yes
Mean:	0.147	0.147	0.0019				
SD:	0.002	0.002	0.0000				
%RSD:	1.140	1.140	0.94				

Sequence No.: 111 Autosampler Location: 95
Sample ID: 1202019576|943237|1 Date Collected: 1/21/2010 11:55:47
Analyst: JXL Data Type: Original

Replicate Data: 1202019576|943237|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.463	2.463	0.0263	0.1105	0.0264	11:56:38	Yes
2	2.448	2.448	0.0262	0.1101	0.0263	11:57:08	Yes
Mean:	2.455	2.455	0.0263				

SD:	0.010	0.010	0.0001
%RSD:	0.415	0.415	0.41

==========

Sequence No.: 112 **Autosampler Location: 96**
Sample ID: 1202019580|943237|1 **Date Collected: 1/21/2010 11:57:29**
Analyst: JXL **Data Type: Original**

Replicate Data: 1202019580|943237|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.496	2.496	0.0267	0.1126	0.0268	11:58:20	Yes
2	2.496	2.496	0.0267	0.1122	0.0268	11:58:50	Yes
Mean:	2.496	2.496	0.0267				
SD:	0.000	0.000	0.0000				
%RSD:	0.008	0.008	0.01				

==========

Sequence No.: 113 **Autosampler Location: 97**
Sample ID: 1202019579|943237|5 **Date Collected: 1/21/2010 11:59:10**
Analyst: JXL **Data Type: Original**

Replicate Data: 1202019579|943237|5

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.011	0.011	0.0004	0.0025	0.0005	12:00:01	Yes
2	0.005	0.005	0.0004	0.0016	0.0005	12:00:31	Yes
Mean:	0.008	0.008	0.0004				
SD:	0.004	0.004	0.0000				
%RSD:	54.94	54.94	10.71				

==========

Sequence No.: 114 **Autosampler Location: 98**
Sample ID: 244619002|943237|1 **Date Collected: 1/21/2010 12:00:52**
Analyst: JXL **Data Type: Original**

Replicate Data: 244619002|943237|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.088	0.088	0.0013	0.0057	0.0014	12:01:44	Yes
2	0.090	0.090	0.0013	0.0054	0.0014	12:02:14	Yes
Mean:	0.089	0.089	0.0013				
SD:	0.001	0.001	0.0000				
%RSD:	1.020	1.020	0.75				

==========

Sequence No.: 115 **Autosampler Location: 99**
Sample ID: 244619003|943237|1 **Date Collected: 1/21/2010 12:02:34**
Analyst: JXL **Data Type: Original**

Replicate Data: 244619003|943237|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.355	0.355	0.0041	0.0178	0.0042	12:03:26	Yes
2	0.356	0.356	0.0041	0.0175	0.0042	12:03:56	Yes
Mean:	0.356	0.356	0.0041				
SD:	0.000	0.000	0.0000				
%RSD:	0.053	0.053	0.05				

==========

Sequence No.: 116 **Autosampler Location: 100**
Sample ID: 244619004|943237|1 **Date Collected: 1/21/2010 12:04:16**
Analyst: JXL **Data Type: Original**

Replicate Data: 244619004|943237|1

Repl	SampleConc	StndConc	BlnkCorr	Peak	Peak	Time	Peak

#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.171	0.171	0.0021	0.0089	0.0022	12:05:09	Yes
2	0.179	0.179	0.0022	0.0095	0.0023	12:05:39	Yes
Mean:	0.175	0.175	0.0022				
SD:	0.005	0.005	0.0001				
%RSD:	3.090	3.090	2.62				

==========

Sequence No.: 117 **Autosampler Location: 101**
Sample ID: 244619005|943237|1 **Date Collected: 1/21/2010 12:05:59**
Analyst: JXL **Data Type: Original**

Replicate Data: 244619005|943237|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.128	0.128	0.0017	0.0072	0.0018	12:06:51	Yes
2	0.122	0.122	0.0016	0.0072	0.0017	12:07:21	Yes
Mean:	0.125	0.125	0.0016				
SD:	0.004	0.004	0.0000				
%RSD:	3.081	3.081	2.46				

==========

Sequence No.: 118 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 1/21/2010 12:07:41**
Analyst: **Data Type: Original**

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.299	5.299	0.0563	0.2378	0.0564	12:08:31	Yes
2	5.293	5.293	0.0562	0.2378	0.0563	12:09:01	Yes
Mean:	5.296	5.296	0.0563				
SD:	0.004	0.004	0.0000				
%RSD:	0.074	0.074	0.07				

QC value within limits for Hg 253.7 Recovery = 105.92%
All analyte(s) passed QC.

==========

Sequence No.: 119 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 1/21/2010 12:09:20**
Analyst: **Data Type: Original**

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.027	-0.027	0.0000	0.0000	0.0001	12:10:11	Yes
2	-0.024	-0.024	0.0001	0.0007	0.0002	12:10:41	Yes
Mean:	-0.026	-0.026	0.0001				
SD:	0.003	0.003	0.0000				
%RSD:	10.84	10.84	47.53				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

==========

Sequence No.: 120 **Autosampler Location: 102**
Sample ID: 1202019591|943244|1 **Date Collected: 1/21/2010 12:11:00**
Analyst: JXL **Data Type: Original**

Replicate Data: 1202019591|943244|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.023	-0.023	0.0001	0.0004	0.0002	12:11:52	Yes
2	-0.028	-0.028	0.0000	0.0004	0.0001	12:12:22	Yes
Mean:	-0.026	-0.026	0.0001				
SD:	0.004	0.004	0.0000				
%RSD:	14.36	14.36	63.86				

Miscellaneous

Prep LogBook

Analyst: BXA1 Verified by:_____

Batch: 940101

Lab SOP: GL-MA-E-009 REV# 19

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1202011761	UI062540-MS	.522	g
MS	1202011763	UI091015-A	.5	mL
MS	1202011763	UI091015-B	.5	mL
MSD	1202011771	UI091015-A	.5	mL
MSD	1202011771	UI091015-B	.5	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1202011760		SW846 3050B	11-JAN-2010 16:49	0.524 g	50 mL	95.41985	SOIL
LCS	1202011761		SW846 3050B	11-JAN-2010 16:49	0.522 g	50 mL	95.78544	SOIL
SAMPLE	244125001		SW846 3050B	11-JAN-2010 16:49	0.504 g	50 mL	99.20635	SOIL
SAMPLE	244125002		SW846 3050B	11-JAN-2010 16:49	0.505 g	50 mL	99.0099	SOIL
SAMPLE	244125003		SW846 3050B	11-JAN-2010 16:49	0.514 g	50 mL	97.27626	SOIL
SAMPLE	244125004		SW846 3050B	11-JAN-2010 16:49	0.525 g	50 mL	95.2381	SOIL
SAMPLE	244128006		SW846 3050B	11-JAN-2010 16:49	0.508 g	50 mL	98.4252	SOIL
DUP	1202011762	244128006	SW846 3050B	11-JAN-2010 16:49	0.514 g	50 mL	97.27626	SOIL
MS	1202011763	244128006	SW846 3050B	11-JAN-2010 16:49	0.506 g	50 mL	98.81423	SOIL
MSD	1202011771	244128006	SW846 3050B	11-JAN-2010 16:49	0.522 g	50 mL	95.78544	SOIL
SDILT	1202011764	244128006	SW846 3050B	11-JAN-2010 16:49	0.508 g	50 mL	98.4252	SOIL
SAMPLE	244128007		SW846 3050B	11-JAN-2010 16:49	0.508 g	50 mL	98.4252	SOIL
SAMPLE	244128008		SW846 3050B	11-JAN-2010 16:49	0.502 g	50 mL	99.60159	SOIL
SAMPLE	244128009		SW846 3050B	11-JAN-2010 16:49	0.514 g	50 mL	97.27626	SOIL
SAMPLE	244128010		SW846 3050B	11-JAN-2010 16:49	0.502 g	50 mL	99.60159	SOIL
SAMPLE	244128011		SW846 3050B	11-JAN-2010 16:49	0.522 g	50 mL	95.78544	SOIL
SAMPLE	244128012		SW846 3050B	11-JAN-2010 16:49	0.525 g	50 mL	95.2381	SOIL
SAMPLE	244128013		SW846 3050B	11-JAN-2010 16:49	0.519 g	50 mL	96.33911	SOIL
SAMPLE	244128014		SW846 3050B	11-JAN-2010 16:49	0.52 g	50 mL	96.15385	SOIL
SAMPLE	244128015		SW846 3050B	11-JAN-2010 16:49	0.51 g	50 mL	98.03922	SOIL
SAMPLE	244128016		SW846 3050B	11-JAN-2010 16:49	0.515 g	50 mL	97.08738	SOIL
SAMPLE	244128017		SW846 3050B	11-JAN-2010 16:49	0.519 g	50 mL	96.33911	SOIL
SAMPLE	244128018		SW846 3050B	11-JAN-2010 16:49	0.505 g	50 mL	99.0099	SOIL
SAMPLE	244128019		SW846 3050B	11-JAN-2010 16:49	0.516 g	50 mL	96.89922	SOIL
SAMPLE	244128020		SW846 3050B	11-JAN-2010 16:49	0.517 g	50 mL	96.7118	SOIL

Reagent/Solvent Lot ID	Amount	Description
1203655-02	1.5 mL	Hydrogen Peroxide 30%

Comments: sample#244128006 is a brown powder like soil with rocky material.

Prep LogBook

1252836	5 mL	Nitric Acid CONC.

Prep LogBook

Analyst: BXA1 Verified by:_____

Batch: 940186

Lab SOP: GL-MA-E-009 REV# 19

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1202011922	UI062540-I	.504	g
MS	1202011924	UI091216-01	.25	mL
MS	1202011924	UI091216-06	.25	mL
MSD	1202011932	UI091216-01	.25	mL
MSD	1202011932	UI091216-06	.25	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1202011921		SW846 3050B	11-JAN-2010 16:54	0.506 g	50 mL	98.81423	SOIL
LCS	1202011922		SW846 3050B	11-JAN-2010 16:54	0.504 g	50 mL	99.20635	SOIL
SAMPLE	244125001		SW846 3050B	11-JAN-2010 16:54	0.5 g	50 mL	100	SOIL
SAMPLE	244125002		SW846 3050B	11-JAN-2010 16:54	0.511 g	50 mL	97.84736	SOIL
SAMPLE	244125003		SW846 3050B	11-JAN-2010 16:54	0.503 g	50 mL	99.40358	SOIL
SAMPLE	244125004		SW846 3050B	11-JAN-2010 16:54	0.52 g	50 mL	96.15385	SOIL
SAMPLE	244139001		SW846 3050B	11-JAN-2010 16:54	0.506 g	50 mL	98.81423	SOIL
SAMPLE	244139002		SW846 3050B	11-JAN-2010 16:54	0.505 g	50 mL	99.0099	SOIL
SAMPLE	244139003		SW846 3050B	11-JAN-2010 16:54	0.519 g	50 mL	96.33911	SOIL
SAMPLE	244139004		SW846 3050B	11-JAN-2010 16:54	0.522 g	50 mL	95.78544	SOIL
SAMPLE	244139005		SW846 3050B	11-JAN-2010 16:54	0.515 g	50 mL	97.08738	SOIL
SAMPLE	244139006		SW846 3050B	11-JAN-2010 16:54	0.516 g	50 mL	96.89922	SOIL
SAMPLE	244139007		SW846 3050B	11-JAN-2010 16:54	0.509 g	50 mL	98.23183	SOIL
SAMPLE	244139008		SW846 3050B	11-JAN-2010 16:54	0.502 g	50 mL	99.60159	SOIL
SAMPLE	244139009		SW846 3050B	11-JAN-2010 16:54	0.511 g	50 mL	97.84736	SOIL
SAMPLE	244139010		SW846 3050B	11-JAN-2010 16:54	0.522 g	50 mL	95.78544	SOIL
SAMPLE	244139011		SW846 3050B	11-JAN-2010 16:54	0.502 g	50 mL	99.60159	SOIL
SAMPLE	244139012		SW846 3050B	11-JAN-2010 16:54	0.502 g	50 mL	99.60159	SOIL
SAMPLE	244222001		SW846 3050B	11-JAN-2010 16:54	0.513 g	50 mL	97.46589	SOIL
DUP	1202011923	244222001	SW846 3050B	11-JAN-2010 16:54	0.513 g	50 mL	97.46589	SOIL
MS	1202011924	244222001	SW846 3050B	11-JAN-2010 16:54	0.504 g	50 mL	99.20635	SOIL
MSD	1202011932	244222001	SW846 3050B	11-JAN-2010 16:54	0.519 g	50 mL	96.33911	SOIL
SDILT	1202011925	244222001	SW846 3050B	11-JAN-2010 16:54	0.513 g	50 mL	97.46589	SOIL
SAMPLE	244222002		SW846 3050B	11-JAN-2010 16:54	0.513 g	50 mL	97.46589	SOIL
SAMPLE	244222003		SW846 3050B	11-JAN-2010 16:54	0.505 g	50 mL	99.0099	SOIL
SAMPLE	244222004		SW846 3050B	11-JAN-2010 16:54	0.506 g	50 mL	98.81423	SOIL

Reagent/Solvent Lot ID Amount Description

Prep LogBook

1252838	10 mL	HYDROCHLORIC ACID
1252836	1.25 mL	Nitric Acid CONC.

Comments sample#244222001 is a dark brown clumpy soil.

Prep LogBook

Analyst: TXB3 Verified by:_____

Batch: 943235

Lab SOP: GL-MA-E-010 REV# 23

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1202019574	UI031809A	.205	g
MS	1202019576	WHG100120-14	.3	mL
MSD	1202019580	WHG100120-14	.3	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1202019573		SW846 7471A Prep	20-JAN-2010 14:05	0.578 g	30 mL	51.90311	SOIL
LCS	1202019574		SW846 7471A Prep	20-JAN-2010 14:05	0.205 g	30 mL	146.34146	SOIL
SAMPLE	244125001		SW846 7471A Prep	20-JAN-2010 14:05	0.53 g	30 mL	56.60377	SOIL
SAMPLE	244125002		SW846 7471A Prep	20-JAN-2010 14:05	0.52 g	30 mL	57.69231	SOIL
SAMPLE	244125003		SW846 7471A Prep	20-JAN-2010 14:05	0.575 g	30 mL	52.17391	SOIL
SAMPLE	244125004		SW846 7471A Prep	20-JAN-2010 14:05	0.5 g	30 mL	60	SOIL
SAMPLE	244611001		SW846 7471A Prep	20-JAN-2010 14:05	0.534 g	30 mL	56.17978	SOIL
SAMPLE	244611002		SW846 7471A Prep	20-JAN-2010 14:05	0.528 g	30 mL	56.81818	SOIL
SAMPLE	244611003		SW846 7471A Prep	20-JAN-2010 14:05	0.557 g	30 mL	53.85996	SOIL
SAMPLE	244611004		SW846 7471A Prep	20-JAN-2010 14:05	0.574 g	30 mL	52.26481	SOIL
SAMPLE	244611005		SW846 7471A Prep	20-JAN-2010 14:05	0.55 g	30 mL	54.54545	SOIL
SAMPLE	244611006		SW846 7471A Prep	20-JAN-2010 14:05	0.505 g	30 mL	59.40594	SOIL
SAMPLE	244611007		SW846 7471A Prep	20-JAN-2010 14:05	0.523 g	30 mL	57.36138	SOIL
SAMPLE	244611008		SW846 7471A Prep	20-JAN-2010 14:05	0.596 g	30 mL	50.33557	SOIL
SAMPLE	244612001		SW846 7471A Prep	20-JAN-2010 14:05	0.53 g	30 mL	56.60377	SOIL
SAMPLE	244613001		SW846 7471A Prep	20-JAN-2010 14:05	0.529 g	30 mL	56.71078	SOIL
SAMPLE	244619001		SW846 7471A Prep	20-JAN-2010 14:05	0.59 g	30 mL	50.84746	SOIL
DUP	1202019575	244619001	SW846 7471A Prep	20-JAN-2010 14:05	0.6 g	30 mL	50	SOIL
MS	1202019576	244619001	SW846 7471A Prep	20-JAN-2010 14:05	0.556 g	30 mL	53.95683	SOIL
MSD	1202019580	244619001	SW846 7471A Prep	20-JAN-2010 14:05	0.568 g	30 mL	52.8169	SOIL
SDILT	1202019579	244619001	SW846 7471A Prep	20-JAN-2010 14:05	0.59 g	30 mL	50.84746	SOIL
SAMPLE	244619002		SW846 7471A Prep	20-JAN-2010 14:05	0.5 g	30 mL	60	SOIL
SAMPLE	244619003		SW846 7471A Prep	20-JAN-2010 14:05	0.524 g	30 mL	57.25191	SOIL
SAMPLE	244619004		SW846 7471A Prep	20-JAN-2010 14:05	0.542 g	30 mL	55.35055	SOIL
SAMPLE	244619005		SW846 7471A Prep	20-JAN-2010 14:05	0.552 g	30 mL	54.34783	SOIL

Reagent/Solvent Lot ID	Amount	Description
1236355-A	1.125 mL	Hydrochloric Acid Conc.
1257474-1	.375 mL	NITRIC ACID
1255535-C	7.5 mL	5% KMnO4 solution
1255532-C	2 mL	Hg reducing agent

Comments Sample 244619001 is a dry brown soil.
Digestion Start Date: 20-JAN-10 14:05
Digestion End Date: 20-JAN-10 14:35

Prep LogBook

WHG100120-07	30 uL	Mercury Working Standard 1st Source CAL S 0.2/CRA
WHG100120-08	75 uL	Mercury Working Standard 1st Source CAL S 0.5
WHG100120-11	1.5 mL	Mercury Working 1st Source CAL S 10.0
WHG100120-09	300 uL	Mercury Working 1st Source CAL S 2.0
WHG100120-10	750 uL	Mercury Working 1st Source CAL S 5.0/CCV
WHG100120-12	750 uL	Mercury Working 2nd Source S 5.0/ICV

DATA EXCEPTION REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
20-JAN-10	Industrial	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
ICP/MS	SW846 3050B/6020	Solid	LANL
Batch ID:	**Sample Numbers:**		
940107	See Below		

Potentially affected work order(s)(SDG): 244125(10-1130),244128(10-1132)

Application Issues:

Failed Recovery for MS/PS

Failed Recovery for MSD/PSD

Specification and Requirements Exception Description:	DER Disposition:
1. Failed Recovery for MS/PS: QC 1202011763MS 2. Failed Recovery for MSD/PSD: QC 1202011771MSD	The matrix spike and matrix spike duplicate recovery failed outside of the control limits for Se due to possible matrix interferences and/or sample non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported.

Originator's Name:

Paul Boyd 20-JAN-10

Data Validator/Group Leader:

Elizabeth Janssen 21-JAN-10

DATA EXCEPTION REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
25-JAN-10	Industrial	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
ICP	SW846 3050B/6010B	Solid	LANL
Batch ID:	**Sample Numbers:**		
940187	See Below		

Potentially affected work order(s)(SDG): 244125(10-1130),244139(10-1145),244222(10-1150)

Application Issues:

Failed Recovery for MS/PS

Failed RPD for MS/MSD, or PS/PSD

Failed RPD for DUP

Failed Recovery for MSD/PSD

Specification and Requirements Exception Description:	DER Disposition:
1. Failed Recovery for MS/PS: QC 1202011924MS 2. Failed RPD for DUP: QC 1202011923DUP 3. Failed RPD for MS/MSD, or PS/PSD: QC 1202011932MSD 4. Failed Recovery for MSD/PSD: QC 1202011932MSD	1. The matrix spike recovery failed outside of the control limits for magnesium and manganese 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 magnesium and potassium due to possible sample non-homogeneity and/or matrix interference. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported. 3. The matrix spike and matrix spike duplicate % RPD failed outside of the control limits for barium due to possible matrix interferences and/or sample non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported. 4. The matrix spike duplicate recovery failed outside of the control limits for barium,calcium,magnesium and potassium due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported.

Originator's Name:
Helen Camello 27-JAN-10

Data Validator/Group Leader:
Louise Smith 27-JAN-10

Standard Logbook

Serial ID: UHG1167639-01 **Opened:** 13-AUG-09 **Amount :** 125 mL
Name: MHGSTOCK1 **Received:** 13-AUG-09 **Catalog Number :** PLHG4-2Y
Type: Source Material **Expires:** 13-AUG-10 **Lot Number :** 15-37HG
Employee: Bryan Davis **Solvent :** 10% HNO3
Supplier: Spex
Description: Mercury Source Standard #1 1,000 mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	1000 mg/L		

Serial ID: UHG1167641-02 **Opened:** 13-AUG-09 **Amount :** 100 mL
Name: MHGSTOCK2 **Received:** 13-AUG-09 **Catalog Number :** AHG1KN-100
Type: Source Material **Expires:** 13-AUG-10 **Lot Number :** 4905530
Employee: Bryan Davis **Solvent :** 3% HNO3
Supplier: Ricca Chemical Company
Description: Mercury Source Standard #2 1,000 mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	999.7 mg/L		

Serial ID: UI031809A **Opened:** 18-MAR-09 **Catalog Number :** 540
Name: METALSOILSRM **Received:** 18-MAR-09 **Lot Number :** D061-540
Type: Source Material **Expires:** 10-OCT-10
Employee: Jamie Johnson
Supplier: ERA
Description: Metals LCS Soil SRM
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	10600 mg/kg	Antimony	126 mg/kg
Arsenic	225 mg/kg	Barium	565 mg/kg
Beryllium	162 mg/kg	Boron	107 mg/kg
Cadmium	69.1 mg/kg	Calcium	10000 mg/kg
Chromium	124 mg/kg	Cobalt	115 mg/kg
Copper	66.7 mg/kg	Iron	17600 mg/kg
Lead	223 mg/kg	Magnesium	4260 mg/kg
Manganese	368 mg/kg	Mercury	5.15 mg/kg
Molybdenum	107 mg/kg	Nickel	172 mg/kg
Potassium	4090 mg/kg	Selenium	147 mg/kg
Silver	35.2 mg/kg	Sodium	538 mg/kg
Strontium	117 mg/kg	Thallium	173 mg/kg
Tin	164 mg/kg	Titanium	381 mg/kg
Vanadium	93.9 mg/kg	Zinc	349 mg/kg

Standard Logbook

Serial ID: UI062540-I **Opened:** 12-JUN-09 **Amount :** 80 g
Name: ICP SOIL SRM **Received:** 12-JUN-09 **Lot Number :** D062-540
Type: Source Material **Expires:** 31-JAN-12
Employee: Bryan Davis
Supplier: ERA
Description: Metals Soil LCS SRM ICP/Hg
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	10500 mg/kg	Antimony	173 mg/kg
Arsenic	104 mg/kg	Barium	198 mg/kg
Beryllium	77.6 mg/kg	Boron	141 mg/kg
Cadmium	60.7 mg/kg	Calcium	9870 mg/kg
Chromium	236 mg/kg	Cobalt	91.2 mg/kg
Copper	174 mg/kg	Iron	18000 mg/kg
Lead	86 mg/kg	Magnesium	4000 mg/kg
Manganese	558 mg/kg	Mercury	8.46 mg/kg
Molybdenum	48.6 mg/kg	Nickel	134 mg/kg
Phosphorous	736 mg/kg	Potassium	4300 mg/kg
Selenium	286 mg/kg	Silica	2591 mg/kg
Silicon	1211 mg/kg	Silver	30.1 mg/kg
Sodium	1020 mg/kg	Strontium	227 mg/kg
Sulfur	385 mg/kg	Thallium	121 mg/kg
Tin	104 mg/kg	Titanium	462 mg/kg
Vanadium	115 mg/kg	Zinc	594 mg/kg

Serial ID: UI062540-MS **Opened:** 12-JUN-09 **Lot Number :** D062-540
Name: ICPMS SOIL SRM **Received:** 12-JUN-09
Type: Source Material **Expires:** 31-JAN-12
Employee: Bryan Davis
Supplier: ERA
Description: Metals Soil LCS SRM ICPMS
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	10500 mg/kg	Antimony	67.4 mg/kg
Arsenic	104 mg/kg	Barium	198 mg/kg
Beryllium	77.6 mg/kg	Boron	141 mg/kg
Cadmium	60.6 mg/kg	Calcium	9870 mg/kg
Chromium	236 mg/kg	Cobalt	91.2 mg/kg
Copper	174 mg/kg	Iron	18000 mg/kg
Lead	86 mg/kg	Lithium	10.6 mg/kg
Magnesium	4000 mg/kg	Manganese	558 mg/kg
Mercury	8.46 mg/kg	Molybdenum	48.6 mg/kg
Nickel	134 mg/kg	Phosphorous	755 mg/kg
Potassium	4300 mg/kg	Selenium	286 mg/kg
Silver	30.1 mg/kg	Sodium	1020 mg/kg

Analyte	Concentration	Analyte	Concentration
Strontium	227 mg/kg	Thallium	121 mg/kg
Thorium	9.84 mg/kg	Tin	104 mg/kg
Titanium	462 mg/kg	Uranium	2.13 mg/kg
Uranium-235	.0153 mg/kg	Uranium-238	2.11 mg/kg
Vanadium	92.4 mg/kg	Zinc	594 mg/kg
Zirconium	10.6 mg/kg		

Serial ID: UI090422-40 **Opened:** 04-MAY-09 **Amount :** 500 mL
Name: TRACE ICP ICSA SOLN A **Received:** 22-APR-09 **Catalog Number :** 160005-01-03
Type: Source Material **Expires:** 04-MAY-10 **Lot Number :** 1013357
Employee: Helen Camello **Solvent :** 5%HNO3
Supplier: o2si
Description: TRACE ICP ICSA SOLN A mg/L+/-0.5%IN5%HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	5000 mg/L	Calcium	5000 mg/L
Iron	2000 mg/L	Magnesium	5000 mg/L

Serial ID: UI090610-03 **Opened:** 10-JUN-09 **Catalog Number :** 060074-06-01
Name: ICPMS Tungsten - 10mg/L S **Received:** 10-JUN-09 **Lot Number :** 1016338
Type: Source Material **Expires:** 10-JUN-10 **Solvent :** 2% HNO3
Employee: Paul Boyd
Supplier: O2SI
Description: ICPMS Tungsten standard SPIKE - 10mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Tungsten	10 mg/L		

Serial ID: UI090701-09 **Opened:** 01-JUL-09 **Amount :** 250 mL
Name: ICP-MS CRDL Master #1 **Received:** 01-JUL-09 **Catalog Number :** 160044-09-02
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016477
Employee: Paul Boyd **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: 02SI
Description: ICPMS CRDL Master Soln #1
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	15 mg/L	Arsenic	5 mg/L
Barium	2 mg/L	Beryllium	.5 mg/L
Boron	15 mg/L	Cadmium	1 mg/L
Calcium	100 mg/L	Chromium	3 mg/L
Cobalt	1 mg/L	Copper	1 mg/L

Analyte	Concentration	Analyte	Concentration
Iron	25 mg/L	Lead	2 mg/L
Lithium	10 mg/L	Magnesium	15 mg/L
Manganese	5 mg/L	Nickel	2 mg/L
Phosphorous	50 mg/L	Potassium	300 mg/L
Selenium	5 mg/L	Sodium	250 mg/L
Strontium	10 mg/L	Thallium	1 mg/L
Thorium	1 mg/L	Uranium	.2 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID: UI090701-10 **Opened:** 01-JUL-09 **Amount :** 250 mL
Name: ICP-MS CRDL Master #2 **Received:** 01-JUL-09 **Catalog Number :** 160044-08-02
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016476
Employee: Paul Boyd **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: 02SI
Description: ICPMS CRDL Soln #2
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Molybdenum	.5 mg/L
Silver	1 mg/L	Tin	2 mg/L
Titanium	10 mg/L	Tungsten	5 mg/L
Zirconium	2 mg/L		

Serial ID: UI090701-40 **Opened:** 01-JUL-09 **Amount :** 500 mL
Name: TRACE ICP Stock PQL 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

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

Analyte	Concentration	Analyte	Concentration
Molybdenum	100 mg/L	Nickel	100 mg/L
Silver	50 mg/L	Sulfur	500 mg/L
Thallium	100 mg/L	Tin	100 mg/L
Titanium	100 mg/L	Uranium	100 mg/L
Vanadium	100 mg/L	Zinc	100 mg/L

Serial ID: UI091015-42 **Opened:** 28-OCT-09 **Amount :** 500 mL
Name: SI 1000mg/L **Received:** 15-OCT-09 **Catalog Number :** 060014-02-03
Type: Source Material **Expires:** 28-OCT-10 **Lot Number :** 1017581
Employee: Helen Camello **Solvent :** 0.3%H2O(NH4)2SiF6
Supplier: o2si
Description: Silicon 1000mg/L+/-0.3%in H2O(NH4)2SiF6
Comments: None

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID: UI091015-A **Opened:** 15-OCT-09 **Catalog Number :** 160067-03
Name: ICP-MS DOE SOIL SPIKE **Received:** 15-OCT-09 **Lot Number :** 1017142
Type: Source Material **Expires:** 15-OCT-10
Employee: Francena Armstrong
Supplier: 02si
Description: ICP-MS Spike for soil products.
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	200 mg/L	Arsenic	8 mg/L
Barium	5 mg/L	Beryllium	5 mg/L
Boron	10 mg/L	Cadmium	1 mg/L
Calcium	200 mg/L	Chromium	5 mg/L
Cobalt	5 mg/L	Copper	5 mg/L
Iron	200 mg/L	Lead	20 mg/L
Lithium	5 mg/L	Magnesium	200 mg/L
Manganese	5 mg/L	Nickel	5 mg/L
Phosphorus, Total as P	200 mg/L	Potassium	200 mg/L
Selenium	2 mg/L	Sodium	200 mg/L
Strontium	5 mg/L	Thallium	10 mg/L
Thorium	5 mg/L	Uranium	5 mg/L
Uranium-235	.036 mg/L	Uranium-238	4.964 mg/L
Vanadium	5 mg/L	Zinc	5 mg/L

Standard Logbook

Serial ID: UI091015-B **Opened:** 15-OCT-09 **Catalog Number :** 160067-03
Name: ICP-MS DOE SOIL SPIKE **Received:** 15-OCT-09 **Lot Number :** 1017142
Type: Source Material **Expires:** 15-OCT-10
Employee: Francena Armstrong
Supplier: 02si
Description: ICP-MS Spike for Soil Products
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	5 mg/L
Silicon	200 mg/L	Silver	5 mg/L
Tin	5 mg/L	Zirconium	5 mg/L

Serial ID: UI091102-40 **Opened:** 16-NOV-09 **Amount :** 500 mL
Name: TRACE CALSTD#1A SOUF **Received:** 02-NOV-09 **Catalog Number :** HP2270-1-500
Type: Source Material **Expires:** 31-OCT-10 **Lot Number :** 0930215
Employee: Helen Camello **Solvent :** HNO3
Supplier: Environmental Express
Description: Trace Calibration Std #1A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	2000 mg/L	Arsenic	200 mg/L
Barium	200 mg/L	Beryllium	200 mg/L
Boron	200 mg/L	Cadmium	200 mg/L
Calcium	2000 mg/L	Chromium	200 mg/L
Cobalt	200 mg/L	Copper	200 mg/L
Iron	2000 mg/L	Lead	200 mg/L
Magnesium	2000 mg/L	Manganese	200 mg/L
Nickel	200 mg/L	Phosphorous	1000 mg/L
Potassium	2000 mg/L	Selenium	200 mg/L
Sodium	2000 mg/L	Strontium	200 mg/L
Thallium	200 mg/L	Uranium	200 mg/L
Vanadium	200 mg/L	Zinc	200 mg/L

Serial ID: UI091102-41 **Opened:** 16-NOV-09 **Amount :** 500 mL
Name: TRACE CALSTD#1B SOUF **Received:** 02-NOV-09 **Catalog Number :** HP2270-2-500
Type: Source Material **Expires:** 31-OCT-10 **Lot Number :** 0930216
Employee: Helen Camello **Solvent :** HNO3
Supplier: Environmental Express
Description: Trace Calibration Standard #1B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	200 mg/L	Molybdenum	200 mg/L
Silver	200 mg/L	Sulfur	400 mg/L

Analyte	Concentration	Analyte	Concentration
Tin	200 mg/L	Titanium	200 mg/L

Serial ID: UI091102-42 **Opened:** 17-NOV-09 **Amount :** 200 mL
Name: SILICON **Received:** 02-NOV-09 **Catalog Number :** HP100050-4F
Type: Source Material **Expires:** 17-NOV-10 **Lot Number :** 0921924
Employee: Helen Camello **Solvent :** H20/tr HF
Supplier: ENVIRNMENTAL EXPRESS
Description: SILICON 1000mg/L H20/tr HF
Comments: None

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID: UI091212-11 **Opened:** 12-DEC-09 **Amount :** 1000 mL
Name: ICP-MS ICSA Master A **Received:** 12-DEC-09 **Catalog Number :** 160013-01-01L
Type: Source Material **Expires:** 12-DEC-10 **Lot Number :** 1015303
Employee: Paul Boyd **Solvent :** 2% HNO3
Supplier: 02SI
Description: ICP-MS ICSA Master A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Carbon	2000 mg/L	Chloride	10000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Molybdenum	20 mg/L	Phosphorous	1000 mg/L
Potassium	1000 mg/L	Sodium	1000 mg/L
Sulfur	1000 mg/L	Titanium	20 mg/L

Serial ID: UI091212-60 **Opened:** 12-DEC-09 **Amount :** .5 mL
Name: ICPMS High Range Standar **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

Standard Logbook

Analyte	Concentration	Analyte	Concentration
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 Standar **Received:** 12-DEC-09 **Catalog Number :** 160212-02-01
Type: Source Material **Expires:** 12-DEC-10 **Lot Number :** 1018064
Employee: Paul Boyd **Solvent :** 2%HNO3 + Tr HF
Supplier: O2SI
Description: Linear Range Standard B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	25 mg/L	Molybdenum	100 mg/L
Silver	25 mg/L	Tin	100 mg/L
Tungsten	100 mg/L	Zirconium	50 mg/L

Serial ID: UI091215-48 **Opened:** 04-JAN-10 **Amount :** 1000 mL
Name: Trace ICP ICSA **Received:** 18-DEC-09 **Catalog Number :** 160005-02
Type: Source Material **Expires:** 04-JAN-11 **Lot Number :** 1018219
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: UI091216-01 **Opened:** 16-DEC-09 **Lot Number :** 1018095
Name: METALSPIKE-1 **Received:** 16-DEC-09
Type: Source Material **Expires:** 16-DEC-10
Employee: Francena Armstrong
Supplier: OS2I
Description: Metals Spike Mix I
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 ug/mL	Arsenic	100 ug/mL
Barium	100 ug/mL	Beryllium	100 ug/mL

Analyte	Concentration	Analyte	Concentration
Boron	100 ug/mL	Cadmium	100 ug/mL
Calcium	1000 ug/mL	Cobalt	100 ug/mL
Iron	1000 ug/mL	Lead	100 ug/mL
Magnesium	1000 ug/mL	Phosphorous	100 ug/mL
Potassium	1000 ug/mL	Silver	100 ug/mL
Sodium	1000 ug/mL	Strontium	100 ug/mL

Serial ID: UI091216-06 **Opened:** 16-DEC-09 **Lot Number :** 1018096
Name: METALSPIKE-2 **Received:** 16-DEC-09
Type: Source Material **Expires:** 16-DEC-10
Employee: Francena Armstrong
Supplier: OS2I
Description: Metals Spike Mix II
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 ug/mL	Chromium	100 ug/mL
Copper	100 ug/mL	Manganese	100 ug/mL
Molybdenum	100 ug/mL	Nickel	100 ug/mL
Selenium	100 ug/mL	Silica	2141 ug/mL
Silicon	1000 ug/mL	Sulfur	1000 ug/mL
Thallium	100 ug/mL	Tin	100 ug/mL
Titanium	100 ug/mL	Uranium	100 ug/mL
Vanadium	100 ug/mL	Zinc	100 ug/mL

Serial ID: UI091217-06 **Opened:** 17-DEC-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master A **Received:** 17-DEC-09 **Catalog Number :** 160055-01
Type: Source Material **Expires:** 17-DEC-10 **Lot Number :** 1018209
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV SOLN A - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	2020 mg/L	Calcium	2000 mg/L
Iron	2000 mg/L	Magnesium	2000 mg/L
Phosphorous	2000 mg/L	Potassium	2000 mg/L
Sodium	2000 mg/L		

Serial ID: UI091217-07 **Opened:** 17-DEC-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master B **Received:** 17-DEC-09 **Catalog Number :** 160054-02
Type: Source Material **Expires:** 17-DEC-10 **Lot Number :** 1018210
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI

Description: ICPMS ICV/CCV Soln B - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	20 mg/L	Barium	20 mg/L
Beryllium	20 mg/L	Boron	40 mg/L
Cadmium	20 mg/L	Chromium	20 mg/L
Cobalt	20 mg/L	Copper	20 mg/L
Lead	20 mg/L	Lithium	20 mg/L
Manganese	20 mg/L	Nickel	20 mg/L
Selenium	20 mg/L	Strontium	20 mg/L
Thallium	20 mg/L	Thorium	20 mg/L
Uranium	20 mg/L	Vanadium	20 mg/L
Zinc	20 mg/L		

Serial ID: UI091217-08 **Opened:** 17-DEC-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master C **Received:** 17-DEC-09 **Catalog Number :** 160054-03
Type: Source Material **Expires:** 17-DEC-10 **Lot Number :** 1018211
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV Soln C - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	20 mg/L
Silver	20 mg/L	Tin	20 mg/L
Titanium	20 mg/L	Tungsten	20 mg/L
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

Analyte	Concentration	Analyte	Concentration
Uranium	2 mg/L	Vanadium	2 mg/L
Zinc	2 mg/L		

Serial ID: UI091217-13 **Opened:** 17-DEC-09 **Amount :** 250 mL
Name: ICP-MS ICSAB Master C **Received:** 17-DEC-09 **Catalog Number :** 160033-03
Type: Source Material **Expires:** 17-DEC-10 **Lot Number :** 1016926
Employee: Paul Boyd **Solvent :** +/- 0.5% in 2% HNO3
Supplier: 02SI
Description: ICPMS ICSAB Master C
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Silver	2 mg/L
Tin	2 mg/L	Tungsten	2 mg/L
Zirconium	2 mg/L		

Serial ID: UI100114-40 **Opened:** 14-JAN-10 **Amount :** 500 mL
Name: ICP HIGH RANGE STD-A **Received:** 14-JAN-10 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 14-JAN-11 **Lot Number :** 1018160
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STD SOLUTION A
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10000 ug/L	Arsenic	10000 ug/L
Barium	15000 ug/L	Beryllium	3000 ug/L
Boron	5000 ug/L	Cadmium	10000 ug/L
Chromium	25000 ug/L	Cobalt	10000 ug/L
Copper	20000 ug/L	Lead	25000 ug/L
Manganese	10000 ug/L	Molybdenum	10000 ug/L
Nickel	10000 ug/L	Phosphorous	15000 ug/L
Potassium	300000 ug/L	Selenium	10000 ug/L
Silica	107000 ug/L	Silicon	50000 ug/L
Silver	1000 ug/L	Strontium	10000 ug/L
Sulfur	50000 ug/L	Thallium	10000 ug/L
Tin	10000 ug/L	Titanium	10000 ug/L
Vanadium	10000 ug/L	Zinc	15000 ug/L

Serial ID: UI100114-41 **Opened:** 14-JAN-10 **Amount :** 500 mL
Name: ICP HIGH RANGE STD B **Received:** 14-JAN-10 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 14-JAN-11 **Lot Number :** 1018160
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI

Standard Logbook

Description: ICP HIGH RANGE STD SOLUTION B
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Calcium	500000 ug/L
Iron	500000 ug/L	Magnesium	500000 ug/L
Sodium	500000 ug/L	Uranium	15000 ug/L

Serial ID: UMS090303-01 **Opened:** 03-MAR-09 **Amount :** 250 mL
Name: 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		

Standard Logbook

Serial ID: UMS090303-03 **Opened:** 03-MAR-09 **Amount :** 250 ml
Name: ICPMSCalSPIKEC **Received:** 03-MAR-09 **Catalog Number :** ZGEL-101-250
Type: Source Material **Expires:** 28-FEB-10 **Lot Number :** 15-199JB
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution C
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10 mg/L	Molybdenum	10 mg/L
Tin	10 mg/L	Titanium	10 mg/L
Zirconium	10 mg/L		

Serial ID: IHG100120-01 **Opened:** 20-JAN-10 **Instrument Id :** Mercury
Name: MHGINTER1 **Received:** 20-JAN-10 **Pipet Id :** Minou1
Type: Intermediate **Expires:** 21-JAN-10 **Solvent :** 1mL HNO3 + Typel H2O
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Intermediate 1st Source 200 ug/L
Comments: Prepare fresh daily

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG1167639-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: IHG100120-02 **Opened:** 20-JAN-10 **Pipet Id :** Minou1
Name: MHGINTER2 **Received:** 20-JAN-10 **Solvent :** 2% HNO3-1257474
Type: Intermediate **Expires:** 21-JAN-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: WHG100120-07 **Opened:** 20-JAN-10 **Pipet Id :** Hg1289245
Name: MHGWORKCALS0.2CRA **Received:** 20-JAN-10 **Solvent :** 2% HNO3-1257474
Type: Working **Expires:** 27-JAN-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.
IHG100120-01	Mercury	200 ug/L	30 uL	30 mL	.2 ug/L

Standard Logbook

Serial ID: WHG100120-08 **Opened:** 20-JAN-10 **Pipet Id :** Hg1289245
Name: MHGWORKCALS0.5 **Received:** 20-JAN-10 **Solvent :** 2% HNO3-1257474
Type: Working **Expires:** 27-JAN-10
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working Standard 1st Source CAL S 0.5
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG100120-01	Mercury	200 ug/L	75 uL	30 mL	.5 ug/L

Serial ID: WHG100120-09 **Opened:** 20-JAN-10 **Pipet Id :** Hg1289245
Name: MHGWORKCALS2.0 **Received:** 20-JAN-10 **Solvent :** 2% HNO3-1257474
Type: Working **Expires:** 27-JAN-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.
IHG100120-01	Mercury	200 ug/L	300 uL	30 mL	2 ug/L

Serial ID: WHG100120-10 **Opened:** 20-JAN-10 **Pipet Id :** Hg1289245
Name: MHGWORKCALS5.0CCV **Received:** 20-JAN-10 **Solvent :** 2% HNO3-1257474
Type: Working **Expires:** 27-JAN-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.
IHG100120-01	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Serial ID: WHG100120-11 **Opened:** 20-JAN-10 **Pipet Id :** Hg1289245
Name: MHGWORKCALS10.0 **Received:** 20-JAN-10 **Solvent :** 2% HNO3-1257474
Type: Working **Expires:** 27-JAN-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.
IHG100120-01	Mercury	200 ug/L	1.5 mL	30 mL	10 ug/L

Standard Logbook

Serial ID: WHG100120-12 **Opened:** 20-JAN-10 **Pipet Id :** Hg1289245
Name: MHGWORKS5.0ICV **Received:** 20-JAN-10 **Solvent :** 2% HNO3-1257474
Type: Working **Expires:** 27-JAN-10
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 2nd Source S 5.0/ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG100120-02	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Serial ID: WHG100120-14 **Opened:** 20-JAN-10 **Pipet Id :** Hg1289245
Name: MHGSOILMSSPIKE **Received:** 20-JAN-10 **Solvent :** 2% HNO3-1257474
Type: Working **Expires:** 27-JAN-10
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury soil working intermediate standard for MS
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG1167639-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WI100120-42 **Opened:** 20-JAN-10 **Balance Id :** 216
Name: TRACE ICP 0.1 PPM STD. **Received:** 02-NOV-09 **Pipet Id :** 1099667
Type: Working **Expires:** 21-JAN-10 **Solvent :** 3%HCL and 1%HNO3 -1256122
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP 0.1 PPM CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WI100120-44	Aluminum	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100120-44	Antimony	1000 ug/L	10 mL	100 mL	100 ug/L
WI100120-44	Arsenic	1000 ug/L	10 mL	100 mL	100 ug/L
WI100120-44	Barium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100120-44	Beryllium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100120-44	Boron	1000 ug/L	10 mL	100 mL	100 ug/L
WI100120-44	Cadmium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100120-44	Calcium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100120-44	Chromium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100120-44	Cobalt	1000 ug/L	10 mL	100 mL	100 ug/L
WI100120-44	Copper	1000 ug/L	10 mL	100 mL	100 ug/L
WI100120-44	Iron	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100120-44	Lead	1000 ug/L	10 mL	100 mL	100 ug/L
WI100120-44	Magnesium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100120-44	Manganese	1000 ug/L	10 mL	100 mL	100 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WI100120-44	Molybdenum	1000 ug/L	10 mL	100 mL	100 ug/L
WI100120-44	Nickel	1000 ug/L	10 mL	100 mL	100 ug/L
WI100120-44	Phosphorous	5000 ug/L	10 mL	100 mL	500 ug/L
WI100120-44	Potassium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100120-44	Selenium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100120-44	Silica	10698 ug/L	10 mL	100 mL	1069 ug/L
WI100120-44	Silicon	5000 ug/L	10 mL	100 mL	500 ug/L
WI100120-44	Silver	1000 ug/L	10 mL	100 mL	100 ug/L
WI100120-44	Sodium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100120-44	Strontium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100120-44	Sulfur	2000 ug/L	10 mL	100 mL	200 ug/L
WI100120-44	Thallium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100120-44	Tin	1000 ug/L	10 mL	100 mL	100 ug/L
WI100120-44	Titanium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100120-44	Uranium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100120-44	Vanadium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100120-44	Zinc	1000 ug/L	10 mL	100 mL	100 ug/L

Serial ID: WI100120-43 **Opened:** 20-JAN-10 **Balance Id :** 216
Name: TRACE ICP 0.5/CCV STD. **Received:** 02-NOV-09 **Pipet Id :** 1099667
Type: Working **Expires:** 21-JAN-10 **Solvent :** 3%HCL and 1%HNO3 -1256122
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

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091102-40	Phosphorous	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI091102-40	Potassium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Selenium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Sodium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Strontium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Thallium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Uranium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Vanadium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Zinc	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Antimony	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Molybdenum	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Silver	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Sulfur	400 mg/L	2.5 mL	1000 mL	1000 UG/L
UI091102-41	Tin	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Titanium	200 mg/L	2.5 mL	1000 mL	500 UG/L

Serial ID: WI100120-44 **Opened:** 20-JAN-10 **Balance Id :** 216
Name: TRACE ICP SCAL 1.0 **Received:** 02-NOV-09 **Pipet Id :** 1099667
Type: Working **Expires:** 21-JAN-10 **Solvent :** 3%HCL and 1 %HNO3-1256122
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

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091102-40	Sodium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Strontium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Thallium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Uranium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Vanadium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Zinc	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-41	Antimony	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-41	Molybdenum	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-41	Silver	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-41	Sulfur	400 mg/L	2.5 mL	500 mL	2000 ug/L
UI091102-41	Tin	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-41	Titanium	200 mg/L	2.5 mL	500 mL	1000 ug/L

Serial ID: WI100120-45 **Opened:** 20-JAN-10 **Balance Id :** 216
Name: TRACE ICP S-10 STD **Received:** 22-APR-09 **Pipet Id :** 1099667
Type: Working **Expires:** 21-JAN-10 **Solvent :** 3%HCL and 1%HNO3 -1256122
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: WI100120-46 **Opened:** 20-JAN-10 **Balance Id :** 216
Name: ICP TRACE ICV **Received:** 25-SEP-09 **Pipet Id :** 1099667
Type: Working **Expires:** 21-JAN-10 **Solvent :** 3%HCL AND 1%HNO3-1256122
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

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090925-40	Copper	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Iron	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090925-40	Lead	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Phosphorous	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-40	Potassium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-40	Selenium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-40	Sodium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-40	Strontium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Antimony	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Beryllium	50 mg/L	2.5 mL	500 mL	250 ug/L
UI090925-41	Magnesium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090925-41	Manganese	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Molybdenum	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Nickel	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Silver	50 mg/L	2.5 mL	500 mL	250 ug/L
UI090925-41	Sulfur	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-41	Thallium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Tin	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Titanium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Uranium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Vanadium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Zinc	100 mg/L	2.5 mL	500 mL	500 ug/L
UI091102-42	Silica	2139 mg/L	2.5 mL	500 mL	10695 ug/L
UI091102-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L

Serial ID: WI100120-47 **Opened:** 20-JAN-10 **Balance Id :** 216
Name: PQL Working Standard **Received:** 30-JUN-09 **Pipet Id :** 1099667
Type: Working **Expires:** 21-JAN-10 **Solvent :** 3%HCL &1%HNO3-1256122
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

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-40	Iron	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Lead	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Magnesium	150 mg/L	2 mL	1000 mL	300 ug/L
UI090701-40	Manganese	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Molybdenum	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Nickel	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Phosphorous	75 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Potassium	75 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Selenium	15 mg/L	2 mL	1000 mL	15 ug/L
UI090701-40	Silicon	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Silver	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Sodium	150 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Strontium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Sulfur	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Thallium	10 mg/L	2 mL	1000 mL	20 ug/L
UI090701-40	Tin	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Titanium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Uranium	25 mg/L	2 mL	1000 mL	50 ug/L
UI090701-40	Vanadium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Zinc	5 mg/L	2 mL	1000 mL	10 ug/L

Serial ID: WMS100114-04B **Opened:** 14-JAN-10 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 14-JAN-10 **Balance Id :** 40245216
Type: Working **Expires:** 15-JAN-10 **Pipet Id :** 1758088
Employee: Rose Jenkins **Solvent :** 2%HNO3/1%HCl- 1238829
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	50 mL	100 ug/l
UMS090303-01	Barium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Beryllium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Boron	20 mg/L	.5	50 mL	200 ug/l
UMS090303-01	Cadmium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Chromium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Cobalt	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Copper	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Lead	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Lithium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Manganese	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Nickel	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Selenium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Silver	10 mg/L	.5	50 mL	100 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UMS090303-01	Strontium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Thallium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Thorium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Uranium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Vanadium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Zinc	10 mg/L	.5	50 mL	100 ug/l
UMS090303-02	Aluminum	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-02	Calcium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-02	Iron	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-02	Magnesium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-02	Phosphorous	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-02	Potassium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-02	Sodium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-03	Antimony	10 mg/L	.5	50 mL	100 ug/l
UMS090303-03	Molybdenum	10 mg/L	.5	50 mL	100 ug/l
UMS090303-03	Tin	10 mg/L	.5	50 mL	100 ug/l
UMS090303-03	Titanium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-03	Zirconium	10 mg/L	.5	50 mL	100 ug/l

Serial ID: WMS100115-04 **Opened:** 15-JAN-10 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 15-JAN-10 **Balance Id :** 4025216
Type: Working **Expires:** 16-JAN-10 **Pipet Id :** 3541598
Employee: Paul Boyd **Solvent :** 2%HNO3/1%HCl-1253206
Supplier: GEL
Description: ICPMS Calibration Standard (100 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-03	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS090303-01	Arsenic	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Barium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Beryllium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Boron	20 mg/L	.5 mL	50 mL	200 ug/l
UMS090303-01	Cadmium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Chromium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Cobalt	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Copper	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Lead	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Lithium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Manganese	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Nickel	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Selenium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Silver	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Strontium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Thallium	10 mg/L	.5 mL	50 mL	100 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UMS090303-01	Thorium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Uranium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Vanadium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Zinc	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-02	Aluminum	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Calcium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Iron	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Magnesium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Phosphorous	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Potassium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Sodium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-03	Antimony	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Molybdenum	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Tin	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Titanium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Zirconium	10 mg/L	.5 mL	50 mL	100 ug/l

Serial ID: WMS100115-04A **Opened:** 15-JAN-10 **Balance Id :** 4025216
Name: ICPMS Cal Standard 10 **Received:** 15-JAN-10 **Pipet Id :** 3541598
Type: Working **Expires:** 16-JAN-10 **Solvent :** 2%HNO3/1%HCl - 1253206
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS Calibration Standard (10 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS100114-04B	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100114-04B	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS100114-04B	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS100114-04B	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100114-04B	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100114-04B	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS100114-04B	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100114-04B	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100114-04B	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100114-04B	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS100114-04B	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS100114-04B	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100114-04B	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS100114-04B	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100114-04B	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100114-04B	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS100114-04B	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS100114-04B	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS100114-04B	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS100114-04B	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100114-04B	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100114-04B	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS100114-04B	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100114-04B	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100114-04B	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100114-04B	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100114-04B	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS100114-04B	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100114-04B	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS100114-04B	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100114-04B	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100114-04B	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS100114-04B	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

Serial ID: WMS100115-05 **Opened:** 15-JAN-10 **Balance Id :** 40245216
Name: ICPMS ICV **Received:** 15-JAN-10 **Pipet Id :** 3541598
Type: Working **Expires:** 16-JAN-10 **Solvent :** 2%HNO3/1%HCl - 1253206
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

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L

Serial ID: WMS100115-06 **Opened:** 15-JAN-10 **Balance Id :** 40245216
Name: ICPMS CRDL **Received:** 15-JAN-10 **Pipet Id :** 3820544
Type: Working **Expires:** 16-JAN-10 **Solvent :** 2%HNO3/1%HCl - 1253206
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

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI090701-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

Serial ID: WMS100115-07 **Opened:** 15-JAN-10 **Balance Id :** 40245216
Name: ICPMS ICSA **Received:** 15-JAN-10 **Lot Number :** 1010773
Type: Working **Expires:** 16-JAN-10 **Pipet Id :** 3541598
Employee: Paul Boyd **Solvent :** 2%HNO3/1%HCl - 1253206
Supplier: GEL
Description: ICPMS ICSA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091212-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI091212-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI091212-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS100115-08 **Opened:** 15-JAN-10 **Balance Id :** 40245216
Name: ICPMS ICSAB **Received:** 15-JAN-10 **Pipet Id :** 1758088
Type: Working **Expires:** 16-JAN-10 **Solvent :** 2%HNO3/1%HCl - 1253206
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICSAB
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091212-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI091212-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091212-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI091212-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L
UI091217-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI091217-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI091217-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI091217-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI091217-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI091217-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI091217-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI091217-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI091217-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L

Serial ID: WMS100119-04 **Opened:** 19-JAN-10 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 19-JAN-10 **Balance Id :** 4025216
Type: Working **Expires:** 20-JAN-10 **Pipet Id :** 3541598
Employee: Paul Boyd **Solvent :** 2%HNO3/1%HCl-1256053
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

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UMS090303-01	Boron	20 mg/L	.5 mL	50 mL	200 ug/l
UMS090303-01	Cadmium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Chromium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Cobalt	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Copper	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Lead	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Lithium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Manganese	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Nickel	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Selenium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Silver	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Strontium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Thallium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Thorium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Uranium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Vanadium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Zinc	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-02	Aluminum	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Calcium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Iron	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Magnesium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Phosphorous	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Potassium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Sodium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-03	Antimony	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Molybdenum	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Tin	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Titanium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Zirconium	10 mg/L	.5 mL	50 mL	100 ug/l

Serial ID: WMS100119-04A **Opened:** 19-JAN-10 **Balance Id :** 4025216
Name: ICPMS Cal Standard 10 **Received:** 19-JAN-10 **Pipet Id :** 3541598
Type: Working **Expires:** 20-JAN-10 **Solvent :** 2%HNO3/1%HCl - 1256053
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS Calibration Standard (10 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS100119-04	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100119-04	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS100119-04	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS100119-04	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100119-04	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100119-04	Boron	200 ug/l	5 mL	50 mL	20 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS100119-04	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100119-04	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100119-04	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100119-04	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS100119-04	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS100119-04	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100119-04	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS100119-04	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100119-04	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100119-04	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS100119-04	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS100119-04	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS100119-04	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100119-04	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100119-04	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100119-04	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS100119-04	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100119-04	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100119-04	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100119-04	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100119-04	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS100119-04	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100119-04	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS100119-04	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100119-04	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100119-04	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS100119-04	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

Serial ID: WMS100119-05 **Opened:** 19-JAN-10 **Balance Id :** 40245216
Name: ICPMS ICV **Received:** 19-JAN-10 **Pipet Id :** 3541598
Type: Working **Expires:** 20-JAN-10 **Solvent :** 2%HNO3/1%HCl - 1256053
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

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L
UI091217-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L

Serial ID: WMS100119-06 **Opened:** 19-JAN-10 **Balance Id :** 40245216
Name: ICPMS CRDL **Received:** 19-JAN-10 **Pipet Id :** 3820544
Type: Working **Expires:** 20-JAN-10 **Solvent :** 2%HNO3/1%HCl - 1256053
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

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Iron	25 mg/L	.05 mL	50 mL	25 ug/L
UI090701-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI090701-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L
UI090701-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI090701-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI090701-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

Serial ID: WMS100119-07 **Opened:** 19-JAN-10 **Balance Id :** 40245216
Name: ICPMS ICSA **Received:** 19-JAN-10 **Lot Number :** 1010773
Type: Working **Expires:** 20-JAN-10 **Pipet Id :** 3541598
Employee: Paul Boyd **Solvent :** 2%HNO3/1%HCl - 1256053
Supplier: GEL
Description: ICPMS ICSA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091212-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI091212-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI091212-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Standard Logbook

Serial ID: WMS100119-08 **Opened:** 19-JAN-10 **Balance Id :** 40245216
Name: ICPMS ICSAB **Received:** 19-JAN-10 **Pipet Id :** 1758088
Type: Working **Expires:** 20-JAN-10 **Solvent :** 2%HNO3/1%HCl - 1256053
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICSAB
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091212-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI091212-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI091212-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L
UI091217-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI091217-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI091217-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI091217-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI091217-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI091217-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI091217-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
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

Standard Logbook

Serial ID: WMS100119-70 **Opened:** 19-JAN-10 **Balance Id :** 40245216
Name: ICPMS LINEAR RANGE ST **Received:** 19-JAN-10 **Pipet Id :** 1758088
Type: Working **Expires:** 20-JAN-10 **Solvent :** 2%HNO3/1%HCl - 1253206
Employee: Paul Boyd
Supplier: 02SI
Description: ICPMS LINEAR RANGE STANDARD
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091212-60	Aluminum	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Arsenic	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Barium	250 mg/L	.5 mL	50 mL	2500 ug/L
UI091212-60	Beryllium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Cadmium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Calcium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Chromium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Cobalt	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Copper	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Iron	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Lead	500 mg/L	.5 mL	50 mL	5000 ug/L
UI091212-60	Lithium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Magnesium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Manganese	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Nickel	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Phosphorous	2500 mg/L	.5 mL	50 mL	25000 ug/L
UI091212-60	Potassium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Selenium	50 mg/L	.5 mL	50 mL	500 ug/L
UI091212-60	Sodium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Strontium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Thallium	50 mg/L	.5 mL	50 mL	500 ug/L
UI091212-60	Thorium	250 mg/L	.5 mL	50 mL	2500 ug/L
UI091212-60	Uranium	500 mg/L	.5 mL	50 mL	5000 ug/L
UI091212-60	Vanadium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Zinc	250 mg/L	.5 mL	50 mL	2500 ug/L
UI091212-61	Antimony	25 mg/L	.5 mL	50 mL	250 ug/L
UI091212-61	Molybdenum	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-61	Silver	25 mg/L	.5 mL	50 mL	250 ug/L
UI091212-61	Tin	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-61	Tungsten	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-61	Zirconium	50 mg/L	.5 mL	50 mL	500 ug/L

Serial ID: 1156689-A **Opened:** 20-JUL-09 **Lot Number :** 41226920
Name: B-KMnO4(VWR)-MER **Received:** 20-JUL-09
Type: Reagent/Solvent **Expires:** 20-JUL-10
Employee: Tara Griffin **Verified:** 07-AUG-07
Supplier: VWR

Description: Potassium Permanganate
Comments: None

Serial ID: 1203655-02 **Opened:** 15-OCT-09 **Lot Number :** ZU74081198 mL
Name: B-H2O2 **Received:** 15-OCT-09
Type: Reagent/Solvent **Expires:** 15-OCT-10
Employee: Francena Armstrong
Supplier: EM SCIENCE
Description: Hydrogen Peroxide 30%
Comments: None

Serial ID: 1228372-A **Opened:** 12-NOV-09 **Lot Number :** 49215936
Name: B-NH2OH.HCl-MER **Received:** 12-NOV-09
Type: Reagent/Solvent **Expires:** 12-NOV-10
Employee: Tara Griffin
Supplier: Fisher Scientific
Description: Hydroxlyamine Hydrochloride
Comments: None

Serial ID: 1236355-A **Opened:** 01-DEC-09 **Lot Number :** 200930201
Name: B-HCl-MER **Received:** 01-DEC-09
Type: Reagent/Solvent **Expires:** 01-DEC-10
Employee: Tara Griffin
Supplier: Aristar
Description: Hydrochloric Acid Conc.
Comments: None

Serial ID: 1238345 **Opened:** 04-DEC-09 **Lot Number :** H20053 L
Name: I-HNO3 **Received:** 04-DEC-09
Type: Reagent/Solvent **Expires:** 04-DEC-10
Employee: Francena Armstrong
Supplier: BAKER
Description: Nitric Acid CONC.
Comments: None

Serial ID: 1244970 **Opened:** 18-DEC-09 **Lot Number :** H41032
Name: I-HCL **Received:** 18-DEC-09 **Preservative_Id :** 5 none
Type: Reagent/Solvent **Expires:** 18-DEC-10
Employee: Francena Armstrong
Supplier: J.T. BAKER
Description: HYDROCHLORIC ACID
Comments: None

Standard Logbook

Serial ID: 1252836 **Opened:** 08-JAN-10 **Lot Number :** H20053 L
Name: I-HNO3 **Received:** 08-JAN-10
Type: Reagent/Solvent **Expires:** 08-JAN-11
Employee: Francena Armstrong
Supplier: BAKER
Description: Nitric Acid CONC.
Comments: None

Serial ID: 1252838 **Opened:** 08-JAN-10 **Lot Number :** H41032
Name: I-HCL **Received:** 08-JAN-10 **Preservative_Id :** 5 none
Type: Reagent/Solvent **Expires:** 08-JAN-11
Employee: Francena Armstrong
Supplier: J.T. BAKER
Description: HYDROCHLORIC ACID
Comments: None

Serial ID: 1253206 **Opened:** 11-JAN-10 **Solvent :** Type I Water
Name: B-2%HNO3/1%HCl-ICPMS **Received:** 11-JAN-10
Type: Reagent/Solvent **Expires:** 18-JAN-10
Employee: Paul Boyd
Supplier: GEL
Description: 2%HNO3/1%HCl Solution (Type I Water)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1238345	I-HNO3	69.0-70.0	180 mL	9 l	N/A
1244970	I-HCL	36.5-38.0	90 mL	9 l	N/A

Serial ID: 1255532-C **Opened:** 15-JAN-10 **Balance Id :** BAL-002
Name: B-NaCl.NH2OH.HCl-MER **Received:** 15-JAN-10
Type: Reagent/Solvent **Expires:** 15-JUL-10
Employee: Tara Griffin
Supplier: GEL
Description: Hg reducing agent
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1228372-A	B-NH2OH.HCl-MER	N/A	120 g	1000 mL	N/A

Standard Logbook

Serial ID: 1255535-C **Opened:** 15-JAN-10 **Balance Id :** BAL-002
Name: B-KMnO4-MER **Received:** 15-JAN-10
Type: Reagent/Solvent **Expires:** 15-JUL-10
Employee: Tara Griffin
Supplier: GEL
Description: 5% KMnO4 solution
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1156689-A	B-KMnO4(VWR)-MER	Crystals	50 g	1000 mL	3%

Serial ID: 1256053 **Opened:** 18-JAN-10 **Solvent :** Type I Water
Name: B-2%HNO3/1%HCl-ICPMS **Received:** 18-JAN-10
Type: Reagent/Solvent **Expires:** 25-JAN-10
Employee: Paul Boyd
Supplier: GEL
Description: 2%HNO3/1%HCl Solution (Type I Water)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1238345	I-HNO3	69.0-70.0	180 mL	9 l	N/A
1244970	I-HCL	36.5-38.0	90 mL	9 l	N/A

Serial ID: 1256122 **Opened:** 18-JAN-10 **Amount :** 20 L
Name: B-ICP-RINSE SOLN **Received:** 18-DEC-10 **Lot Number :** H04040+G34050
Type: Reagent/Solvent **Expires:** 24-JAN-10 **Solvent :** 3%HCL+1%HNO3
Employee: Helen Camello
Supplier: GEL
Description: 3%HCL+1%HNO3 RINSE SOLN.
Comments: None

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

General Chemistry Analysis

Case Narrative

General Chemistry Narrative
Los Alamos National Laboratory (LANL)
SDG 10-1130

Method/Analysis Information

Product:	**Cyanide, Total**		
Analytical Batch:	940234	**Method:**	SW846 9012A
Prep Batch :	940233	**Method:**	SW846 9010B Prep

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 9012A:

Sample ID	Client ID
244125001	RE12-10-7698
244125002	RE12-10-7697
244125003	RE12-10-7704
244125004	RE12-10-7703
1202012043	Method Blank (MB)
1202012044	244224019(RE16-10-410) Sample Duplicate (DUP)
1202012045	244224020(RE16-10-414) Sample Duplicate (DUP)
1202012046	244224019(RE16-10-410) Matrix Spike (MS)
1202012047	244224020(RE16-10-414) Matrix Spike (MS)
1202012048	244224019(RE16-10-410) Matrix Spike Duplicate (MSD)
1202012049	244224020(RE16-10-414) Matrix Spike Duplicate (MSD)
1202012050	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: 244224019 (RE16-10-410) and 244224020 (RE16-10-414).

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 spike duplicate recovery falls outside of the client specified acceptance limits. Since both the spike recovery and the RPD between the spike and spike duplicate fall within acceptance limits, the data is reported. 1202012049 (RE16-10-414).

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

Duplicate Relative Percent Difference (RPD) Statement
The values for the sample and duplicate are less than the Practical Quantitation Limit (PQL); therefore, the RPD is not applicable. 1202012044 (RE16-10-410) and 1202012045 (RE16-10-414).

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: 1202012050 (LCS).

Sample Re-analysis

The samples in this SDG did not require re-analysis.

Miscellaneous Information

Data Exception (DER) Documentation
The following DER was generated for this SDG: 780336 1202012049 (RE16-10-414).

Additional Comments
Additional comments were not required for this SDG.

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Certification Statement

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

Review Validation:

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

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

Reviewer: Tom Lewis, Jr. **Date:** 01Feb10

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: 10-1130 GEL Work Order: 244125

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, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: January 29, 2010

Client SDG: 10-1130

Client Sample ID:	RE12-10-7698	Project:	LANL01004
Sample ID:	244125001	Client ID:	LANL010
Matrix:	R		
Collect Date:	05-JAN-10 12:00		
Receive Date:	08-JAN-10		
Collector:	Client		
Moisture:	9.92%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Flow Injection Analysis										
SW9012A Cyanide, Total "Dry Weight Corrected"										
Cyanide, Total	U	ND	69.9	257	ug/kg	1	AXC2 01/14/10	1146	940234	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/13/10	1551	940233

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: January 29, 2010

Client SDG: 10-1130

Client Sample ID:	RE12-10-7697	Project:	LANL01004
Sample ID:	244125002	Client ID:	LANL010
Matrix:	R		
Collect Date:	05-JAN-10 12:00		
Receive Date:	08-JAN-10		
Collector:	Client		
Moisture:	14.7%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Flow Injection Analysis										
SW9012A Cyanide, Total "Dry Weight Corrected"										
Cyanide, Total	U	ND	73.8	271	ug/kg	1	AXC2 01/14/10	1147	940234	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/13/10	1551	940233

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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

Report Date: January 29, 2010

Client SDG: 10-1130

Client Sample ID:	RE12-10-7704	Project:	LANL01004
Sample ID:	244125003	Client ID:	LANL010
Matrix:	R		
Collect Date:	05-JAN-10 12:00		
Receive Date:	08-JAN-10		
Collector:	Client		
Moisture:	9.32%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Flow Injection Analysis										
SW9012A Cyanide, Total "Dry Weight Corrected"										
Cyanide, Total	U	ND	65.8	242	ug/kg	1	AXC2 01/14/10	1148	940234	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/13/10	1551	940233

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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

Report Date: January 29, 2010

Client SDG: 10-1130

Client Sample ID:	RE12-10-7703	Project:	LANL01004
Sample ID:	244125004	Client ID:	LANL010
Matrix:	R		
Collect Date:	05-JAN-10 12:00		
Receive Date:	08-JAN-10		
Collector:	Client		
Moisture:	19.8%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Flow Injection Analysis										
SW9012A Cyanide, Total "Dry Weight Corrected"										
Cyanide, Total	J	101	81.5	300	ug/kg	1	AXC2 01/14/10	1149	940234	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/13/10	1551	940233

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

Quality Control Summary

GEL LABORATORIES LLC

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QC Summary

Report Date: January 29, 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: 244125

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Flow Injection Analysis											
Batch 940234											
QC1202012044 244224019 DUP											
Cyanide, Total		U	ND	U	ND	ug/kg	N/A			AXC2	01/14/10 12:10
QC1202012045 244224020 DUP											
Cyanide, Total		J	251	J	150	ug/kg	50.4 ^		(+/-366)		01/14/10 12:14
QC1202012050 LCS											
Cyanide, Total	67900				81500	ug/kg		120	(46%-145%)		01/14/10 11:45
QC1202012043 MB											
Cyanide, Total				U	250	ug/kg					01/14/10 11:40
QC1202012046 244224019 MS											
Cyanide, Total	6530	U	ND		5810	ug/kg		88.9	(50%-130%)		01/14/10 12:11
QC1202012047 244224020 MS											
Cyanide, Total	7040	J	251		6500	ug/kg		88.7	(50%-130%)		01/14/10 12:14
QC1202012048 244224019 MSD											
Cyanide, Total	6280	U	ND		5350	ug/kg	8.28	85.1	(0%-30%)		01/14/10 12:12
QC1202012049 244224020 MSD											
Cyanide, Total	6780	J	251		5070	ug/kg	24.7	71.1	(0%-30%)		01/14/10 12:15

Notes:
RER is calculated at the 95% confidence level (2-sigma).
The Qualifiers in this report are defined as follows:

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- E General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
- E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- E Organics--Concentration of the target analyte exceeds the instrument calibration range
- F Estimated Value
- H Analytical holding time was exceeded
- J Value is estimated
- M M if above MDC and less than LLD
- M Matrix Related Failure
- N Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based

QC Summary

Workorder: 244125

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

on nearest internal standard response factor

N/A	RPD or %Recovery limits do not apply.
ND	Analyte concentration is not detected above the detection limit
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P	Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R	Sample results are rejected
U	Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI	Gamma Spectroscopy--Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d	5-day BOD--The 2:1 depletion requirement was not met for this sample
h	Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
* Indicates that a Quality Control parameter was not within specifications.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

Instrument QC Data Summary

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 29-JAN-2010 14:03

GEL Laboratories LLC
Contract: LANL01004
SDG #: 10-1130

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	**14-JAN-2010 11:02:40**	**OM_1-14-2010_10-54-00**	**144**	**150**	**96**	**(90%-110%)**	**Yes**
CCV	14-JAN-2010 11:29:23	OM_1-14-2010_10-54-00	103	100	103	(90%-110%)	Yes
CCV	14-JAN-2010 11:41:48	OM_1-14-2010_10-54-00	101	100	101	(90%-110%)	Yes
CCV	14-JAN-2010 11:54:19	OM_1-14-2010_10-54-00	102	100	102	(90%-110%)	Yes
CCV	14-JAN-2010 12:06:47	OM_1-14-2010_10-54-00	101	100	101	(90%-110%)	Yes
CCV	14-JAN-2010 12:16:37	OM_1-14-2010_10-54-00	102	100	102	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	**14-JAN-2010 11:04:30**	**OM_1-14-2010_10-54-00**	**-2.39**	**5**	**Yes**
CCB	14-JAN-2010 11:31:13	OM_1-14-2010_10-54-00	-1.98	5	Yes
CCB	14-JAN-2010 11:43:38	OM_1-14-2010_10-54-00	-1.93	5	Yes
CCB	14-JAN-2010 11:56:09	OM_1-14-2010_10-54-00	-1.85	5	Yes
CCB	14-JAN-2010 12:08:38	OM_1-14-2010_10-54-00	-3.03	5	Yes
CCB	14-JAN-2010 12:18:29	OM_1-14-2010_10-54-00	-2.1	5	Yes

Cyanide, Total

Prep LogBook

Analyst: AXS5 Verified by:_____

Batch: 940233

Lab SOP: GL-GC-E-067 REV# 13

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1202012050	URF1200957-01	.25	g
MS	1202012046	URF1184831-02	.025	mL
MS	1202012047	URF1184831-02	.025	mL
MSD	1202012048	URF1184831-02	.025	mL
MSD	1202012049	URF1184831-02	.025	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Ph	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1202012043		SW846 9010B Prep	13-JAN-2010 15:51	>12	0.5 g	25 mL	50	SOIL
LCS	1202012050		SW846 9010B Prep	13-JAN-2010 15:51	>12	0.25 g	25 mL	100	SOIL
SAMPLE	244125001		SW846 9010B Prep	13-JAN-2010 15:51	>12	0.54 g	25 mL	46.2963	SOIL
SAMPLE	244125002		SW846 9010B Prep	13-JAN-2010 15:51	>12	0.54 g	25 mL	46.2963	SOIL
SAMPLE	244125003		SW846 9010B Prep	13-JAN-2010 15:51	>12	0.57 g	25 mL	43.85965	SOIL
SAMPLE	244125004		SW846 9010B Prep	13-JAN-2010 15:51	>12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	244128001		SW846 9010B Prep	13-JAN-2010 15:51	>12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	244128002		SW846 9010B Prep	13-JAN-2010 15:51	>12	0.5 g	25 mL	50	SOIL
SAMPLE	244128003		SW846 9010B Prep	13-JAN-2010 15:51	>12	0.5 g	25 mL	50	SOIL
SAMPLE	244128004		SW846 9010B Prep	13-JAN-2010 15:51	>12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	244128005		SW846 9010B Prep	13-JAN-2010 15:51	>12	0.53 g	25 mL	47.16981	SOIL
SAMPLE	244128006		SW846 9010B Prep	13-JAN-2010 15:51	>12	0.55 g	25 mL	45.45455	SOIL
SAMPLE	244128007		SW846 9010B Prep	13-JAN-2010 15:51	>12	0.53 g	25 mL	47.16981	SOIL
SAMPLE	244128008		SW846 9010B Prep	13-JAN-2010 15:51	>12	0.51 g	25 mL	49.01961	SOIL
SAMPLE	244128009		SW846 9010B Prep	13-JAN-2010 15:51	>12	0.5 g	25 mL	50	SOIL
SAMPLE	244128010		SW846 9010B Prep	13-JAN-2010 15:51	>12	0.51 g	25 mL	49.01961	SOIL
SAMPLE	244128011		SW846 9010B Prep	13-JAN-2010 15:51	>12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	244128012		SW846 9010B Prep	13-JAN-2010 15:51	>12	0.5 g	25 mL	50	SOIL
SAMPLE	244128013		SW846 9010B Prep	13-JAN-2010 15:51	>12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	244128014		SW846 9010B Prep	13-JAN-2010 15:51	>12	0.5 g	25 mL	50	SOIL
SAMPLE	244224019		SW846 9010B Prep	13-JAN-2010 15:51	>12	0.51 g	25 mL	49.01961	SOIL
DUP	1202012044	244224019	SW846 9010B Prep	13-JAN-2010 15:51	>12	0.57 g	25 mL	43.85965	SOIL
MS	1202012046	244224019	SW846 9010B Prep	13-JAN-2010 15:51	>12	0.5 g	25 mL	50	SOIL
MSD	1202012048	244224019	SW846 9010B Prep	13-JAN-2010 15:51	>12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	244224020		SW846 9010B Prep	13-JAN-2010 15:51	>12	0.5 g	25 mL	50	SOIL
DUP	1202012045	244224020	SW846 9010B Prep	13-JAN-2010 15:51	>12	0.5 g	25 mL	50	SOIL
MS	1202012047	244224020	SW846 9010B Prep	13-JAN-2010 15:51	>12	0.52 g	25 mL	48.07692	SOIL
MSD	1202012049	244224020	SW846 9010B Prep	13-JAN-2010 15:51	>12	0.54 g	25 mL	46.2963	SOIL

Prep LogBook

Reagent/Solvent Lot ID	Amount	Description
091211-C	25 mL	0.25N Sodium Hydroxide Solution
WCN100113-07	.0375 mL	150 ppb CN Distilled ICV Standard
1176724-C	1.25 mL	0.8N H3NO3S
1238146-C	2.5 mL	50% H2SO4 CN Prep
1176778-C	1 mL	51% MgCl2 Soln
1238142-C	1.25 mL	Bismuth Nitrate Solution

Comments:

This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
200 ppb		1	axc2	1/14/2010 10:55:31	OM_1-14-2010_10-54-00
150 ppb		1	axc2	1/14/2010 10:56:23	OM_1-14-2010_10-54-00
100 ppb		1	axc2	1/14/2010 10:57:15	OM_1-14-2010_10-54-00
50 ppb		1	axc2	1/14/2010 10:58:08	OM_1-14-2010_10-54-00
10 ppb		1	axc2	1/14/2010 10:59:01	OM_1-14-2010_10-54-00
CRDL 5.0 ppb		1	axc2	1/14/2010 10:59:55	OM_1-14-2010_10-54-00
ICAL-00		1	axc2	1/14/2010 11:00:49	OM_1-14-2010_10-54-00
ICV		1	axc2	1/14/2010 11:02:40	OM_1-14-2010_10-54-00
ICB		1	axc2	1/14/2010 11:04:30	OM_1-14-2010_10-54-00
CRDL		1	axc2	1/14/2010 11:06:20	OM_1-14-2010_10-54-00
		1	axc2	1/14/2010 11:08:09	OM_1-14-2010_10-54-00
1202012054	940238	1	axc2	1/14/2010 11:09:03	OM_1-14-2010_10-54-00
1202012061	940238	25	axc2	1/14/2010 11:09:56	OM_1-14-2010_10-54-00
244116001	940238	1	axc2	1/14/2010 11:10:49	OM_1-14-2010_10-54-00
244116002	940238	1	axc2	1/14/2010 11:11:43	OM_1-14-2010_10-54-00
244128015	940238	1	axc2	1/14/2010 11:12:36	OM_1-14-2010_10-54-00
1202012055	940238	1	axc2	1/14/2010 11:13:28	OM_1-14-2010_10-54-00
1202012057	940238	1	axc2	1/14/2010 11:14:21	OM_1-14-2010_10-54-00
1202012059	940238	1	axc2	1/14/2010 11:15:14	OM_1-14-2010_10-54-00
244128016	940238	1	axc2	1/14/2010 11:16:06	OM_1-14-2010_10-54-00
CCV		1	axc2	1/14/2010 11:16:58	OM_1-14-2010_10-54-00
CCB		1	axc2	1/14/2010 11:18:49	OM_1-14-2010_10-54-00
1202012056	940238	1	axc2	1/14/2010 11:20:37	OM_1-14-2010_10-54-00
1202012058	940238	1	axc2	1/14/2010 11:21:29	OM_1-14-2010_10-54-00
1202012060	940238	1	axc2	1/14/2010 11:22:21	OM_1-14-2010_10-54-00
244128017	940238	1	axc2	1/14/2010 11:23:13	OM_1-14-2010_10-54-00
244128018	940238	1	axc2	1/14/2010 11:24:04	OM_1-14-2010_10-54-00
244128019	940238	1	axc2	1/14/2010 11:24:56	OM_1-14-2010_10-54-00
244128020	940238	1	axc2	1/14/2010 11:25:50	OM_1-14-2010_10-54-00
244139001	940238	1	axc2	1/14/2010 11:26:43	OM_1-14-2010_10-54-00
244139002	940238	1	axc2	1/14/2010 11:27:37	OM_1-14-2010_10-54-00
244139003	940238	1	axc2	1/14/2010 11:28:30	OM_1-14-2010_10-54-00
CCV		1	axc2	1/14/2010 11:29:23	OM_1-14-2010_10-54-00
CCB		1	axc2	1/14/2010 11:31:13	OM_1-14-2010_10-54-00
244139004	940238	1	axc2	1/14/2010 11:33:03	OM_1-14-2010_10-54-00
244139005	940238	1	axc2	1/14/2010 11:33:56	OM_1-14-2010_10-54-00
244139006	940238	1	axc2	1/14/2010 11:34:49	OM_1-14-2010_10-54-00
244139007	940238	1	axc2	1/14/2010 11:35:42	OM_1-14-2010_10-54-00
244139008	940238	1	axc2	1/14/2010 11:36:34	OM_1-14-2010_10-54-00
244222001	940238	1	axc2	1/14/2010 11:37:27	OM_1-14-2010_10-54-00
244222002	940238	1	axc2	1/14/2010 11:38:19	OM_1-14-2010_10-54-00
244222003	940238	1	axc2	1/14/2010 11:39:11	OM_1-14-2010_10-54-00
244222004	940238	1	axc2	1/14/2010 11:40:04	OM_1-14-2010_10-54-00
1202012043	940234	1	axc2	1/14/2010 11:40:55	OM_1-14-2010_10-54-00
CCV		1	axc2	1/14/2010 11:41:48	OM_1-14-2010_10-54-00
CCB		1	axc2	1/14/2010 11:43:38	OM_1-14-2010_10-54-00
1202012050	940234	25	axc2	1/14/2010 11:45:26	OM_1-14-2010_10-54-00
244125001	940234	1	axc2	1/14/2010 11:46:20	OM_1-14-2010_10-54-00
244125002	940234	1	axc2	1/14/2010 11:47:14	OM_1-14-2010_10-54-00
244125003	940234	1	axc2	1/14/2010 11:48:07	OM_1-14-2010_10-54-00
244125004	940234	1	axc2	1/14/2010 11:49:01	OM_1-14-2010_10-54-00
244128001	940234	1	axc2	1/14/2010 11:49:54	OM_1-14-2010_10-54-00
244128002	940234	1	axc2	1/14/2010 11:50:48	OM_1-14-2010_10-54-00
244128003	940234	1	axc2	1/14/2010 11:51:40	OM_1-14-2010_10-54-00
244128004	940234	1	axc2	1/14/2010 11:52:33	OM_1-14-2010_10-54-00
244128005	940234	1	axc2	1/14/2010 11:53:27	OM_1-14-2010_10-54-00
CCV		1	axc2	1/14/2010 11:54:19	OM_1-14-2010_10-54-00
CCB		1	axc2	1/14/2010 11:56:09	OM_1-14-2010_10-54-00

244128006	940234	1	axc2	1/14/2010 11:57:57	OM_1-14-2010_10-54-00
244128007	940234	1	axc2	1/14/2010 11:58:50	OM_1-14-2010_10-54-00
244128008	940234	1	axc2	1/14/2010 11:59:42	OM_1-14-2010_10-54-00
244128009	940234	1	axc2	1/14/2010 12:00:34	OM_1-14-2010_10-54-00
244128010	940234	1	axc2	1/14/2010 12:01:27	OM_1-14-2010_10-54-00
244128011	940234	1	axc2	1/14/2010 12:02:19	OM_1-14-2010_10-54-00
244128012	940234	1	axc2	1/14/2010 12:03:13	OM_1-14-2010_10-54-00
244128013	940234	1	axc2	1/14/2010 12:04:07	OM_1-14-2010_10-54-00
244128014	940234	1	axc2	1/14/2010 12:05:01	OM_1-14-2010_10-54-00
244224019	940234	1	axc2	1/14/2010 12:05:54	OM_1-14-2010_10-54-00
CCV		1	axc2	1/14/2010 12:06:47	OM_1-14-2010_10-54-00
CCB		1	axc2	1/14/2010 12:08:38	OM_1-14-2010_10-54-00
1202012044	940234	1	axc2	1/14/2010 12:10:27	OM_1-14-2010_10-54-00
1202012046	940234	1	axc2	1/14/2010 12:11:20	OM_1-14-2010_10-54-00
1202012048	940234	1	axc2	1/14/2010 12:12:14	OM_1-14-2010_10-54-00
244224020	940234	1	axc2	1/14/2010 12:13:06	OM_1-14-2010_10-54-00
1202012045	940234	1	axc2	1/14/2010 12:14:00	OM_1-14-2010_10-54-00
1202012047	940234	1	axc2	1/14/2010 12:14:53	OM_1-14-2010_10-54-00
1202012049	940234	1	axc2	1/14/2010 12:15:45	OM_1-14-2010_10-54-00
CCV		1	axc2	1/14/2010 12:16:37	OM_1-14-2010_10-54-00
CCB		1	axc2	1/14/2010 12:18:29	OM_1-14-2010_10-54-00

Author: axc2 Date : 1/14/2010

Original Run Filename: OM_1-14-2010_10-54-00.OMN created 1/14/2010 10:54:00
Original Run Author's Signature: [axc2]
Current Run Filename: OM_1-14-2010_10-54-00.OMN last modified 1/14/2010 12:19:33
Current Run Author's Signature: [axc2]
Description: GL-GC-E-095 EPA 335.1, 335.3, 335.4, 9012A, CLP335.2-M
Liquid LCS nominal 50 ug/L

Sample	Rep.	Cup No.	Channel 1 TCYANIDE Conc. (ug/L)	Area (Vs)	Detection Time	ADF	MDF	Description
WCN100114-01	1	S1	200	7.48	1/14/2010@10:55:31			200 ppb
WCN100114-02	1	S2	150	5.59	1/14/2010@10:56:23			150 ppb
WCN100114-03	1	S3	100	3.94	1/14/2010@10:57:15			100 ppb
WCN100114-04	1	S4	50.0	2.00	1/14/2010@10:58:08			50 ppb
WCN100114-05	1	S5	10.0	0.469	1/14/2010@10:59:01			10 ppb
WCN100114-06	1	S6	5.00	0.298	1/14/2010@10:59:55			CRDL 5.0 ppb
WCN100114-08	1	S7	0.00	0.0276	1/14/2010@11:00:49			0.0 ppb
DQM Test: Minimum Correlation Coefficient								
		Result:	0.99969 > 0.99500					
		Message	Pass					
		Action	Continue					
WCN100114-07	1	S8	144	5.43	1/14/2010@11:02:40			ICV
		Known Conc:	150					
DQM Test: > + Percent Relative Difference								
		Result:	-4.0 < 10.0					
		Message	ICV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	-4.0 < 10.0					
		Message	ICV Passed					
		Action	Continue					
		Calibration:	Table/Fig. 1					
WCN100114-08	1	S7	-2.39	0.0170	1/14/2010@11:04:30			ICB/CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-2.39 < 5.01					
		Message	ICB/CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-2.39 > -5.01					
		Message	ICB/CCB Passed					
		Action	Continue					
WCN100114-06	1	S6	5.34	0.303	1/14/2010@11:06:20			CRDL
		Known Conc:	5.00					
DQM Test: > + Concentration Limit								
		Result:	5.34 < 7.50					
		Message	CRDL Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	5.34 > 2.50					
		Message	Pass					
		Action	None					
200 ppb LCR	1	57	202	7.58	1/14/2010@11:08:09			
1202012054|940238|MB	1	1	1.30	0.153	1/14/2010@11:09:03			
1202012061||LCS	1	2	33.4	1.34	1/14/2010@11:09:56		25.00	
244116001	1	3	6.39	0.342	1/14/2010@11:10:49			
244116002	1	4	0.106	0.109	1/14/2010@11:11:43			
244128015	1	5	-1.62	0.0455	1/14/2010@11:12:36			
1202012055||DUP	1	6	-1.75	0.0404	1/14/2010@11:13:28			
1202012057||MS	1	7	100	3.81	1/14/2010@11:14:21			
1202012059||MSD	1	8	104	3.96	1/14/2010@11:15:14			
244128016	1	9	-0.910	0.0717	1/14/2010@11:16:06			
WCN100114-03	1	S3	102	3.87	1/14/2010@11:16:58			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	1.8 < 10.0					

		Message	CCV Passed					
		Action	Continue					
			DQM Test: < - Percent Relative Difference					
		Result:	1.8 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN100114-08	1	S7	-2.39	0.0167	1/14/2010@11:18:49			CCB
		Known Conc:	0.00					
			DQM Test: > + Concentration Limit					
		Result:	-2.39 < 5.00					
		Message	CCB Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	-2.39 > -5.00					
		Message	CCB Passed					
		Action	Continue					
1202012056||DUP	1	10	-0.493	0.0871	1/14/2010@11:20:37			
1202012058||MS	1	11	90.0	3.44	1/14/2010@11:21:29			
1202012060||MSD	1	12	94.7	3.61	1/14/2010@11:22:21			
244128017	1	13	-1.46	0.0513	1/14/2010@11:23:13			
244128018	1	14	-1.12	0.0640	1/14/2010@11:24:04			
244128019	1	15	-1.52	0.0489	1/14/2010@11:24:56			
244128020	1	16	-2.13	0.0264	1/14/2010@11:25:50			
244139001	1	17	-1.07	0.0658	1/14/2010@11:26:43			
244139002	1	18	-1.49	0.0501	1/14/2010@11:27:37			
244139003	1	19	0.660	0.130	1/14/2010@11:28:30			
WCN100114-03	1	S3	103	3.90	1/14/2010@11:29:23			CCV
		Known Conc:	100					
			DQM Test: > + Percent Relative Difference					
		Result:	2.5 < 10.0					
		Message	CCV Passed					
		Action	Continue					
			DQM Test: < - Percent Relative Difference					
		Result:	2.5 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN100114-08	1	S7	-1.98	0.0321	1/14/2010@11:31:13			CCB
		Known Conc:	0.00					
			DQM Test: > + Concentration Limit					
		Result:	-1.98 < 5.00					
		Message	CCB Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	-1.98 > -5.00					
		Message	CCB Passed					
		Action	Continue					
244139004	1	20	-1.96	0.0327	1/14/2010@11:33:03			
244139005	1	21	-1.59	0.0465	1/14/2010@11:33:56			
244139006	1	22	-1.55	0.0481	1/14/2010@11:34:49			
244139007	1	23	-1.64	0.0447	1/14/2010@11:35:42			
244139008	1	24	-1.79	0.0391	1/14/2010@11:36:34			
244222001	1	25	-2.10	0.0276	1/14/2010@11:37:27			
244222002	1	26	-1.40	0.0533	1/14/2010@11:38:19			
244222003	1	27	-1.88	0.0358	1/14/2010@11:39:11			
244222004	1	28	-0.452	0.0886	1/14/2010@11:40:04			
1202012043|940234|MB	1	29	-3.18	-0.0123	1/14/2010@11:40:55			
WCN100114-03	1	S3	101	3.86	1/14/2010@11:41:48			CCV
		Known Conc:	100					
			DQM Test: > + Percent Relative Difference					
		Result:	1.5 < 10.0					
		Message	CCV Passed					
		Action	Continue					
			DQM Test: < - Percent Relative Difference					
		Result:	1.5 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN100114-08	1	S7	-1.93	0.0340	1/14/2010@11:43:38			CCB
		Known Conc:	0.00					

DQM Test: > + Concentration Limit								
		Result:	-1.93 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-1.93 > -5.00					
		Message	CCB Passed					
		Action	Continue					
1202012050||LCS	1	30	32.6	1.31	1/14/2010@11:45:26		25.00	
244125001	1	31	-0.502	0.0867	1/14/2010@11:46:20			
244125002	1	32	0.569	0.126	1/14/2010@11:47:14			
244125003	1	33	-0.0243	0.104	1/14/2010@11:48:07			
244125004	1	34	1.69	0.168	1/14/2010@11:49:01			
244128001	1	35	-0.730	0.0783	1/14/2010@11:49:54			
244128002	1	36	-1.69	0.0429	1/14/2010@11:50:48			
244128003	1	37	3.51	0.235	1/14/2010@11:51:40			
244128004	1	38	1.26	0.152	1/14/2010@11:52:33			
244128005	1	39	4.68	0.279	1/14/2010@11:53:27			
WCN100114-03	1	S3	102	3.87	1/14/2010@11:54:19			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	1.8 < 10.0					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	1.8 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN100114-08	1	S7	-1.85	0.0367	1/14/2010@11:56:09			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-1.85 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-1.85 > -5.00					
		Message	CCB Passed					
		Action	Continue					
244128006	1	40	-1.40	0.0536	1/14/2010@11:57:57			
244128007	1	41	-1.05	0.0664	1/14/2010@11:58:50			
244128008	1	42	-1.26	0.0588	1/14/2010@11:59:42			
244128009	1	43	0.198	0.113	1/14/2010@12:00:34			
244128010	1	44	-1.36	0.0549	1/14/2010@12:01:27			
244128011	1	45	0.346	0.118	1/14/2010@12:02:19			
244128012	1	46	-1.25	0.0589	1/14/2010@12:03:13			
244128013	1	47	0.413	0.121	1/14/2010@12:04:07			
244128014	1	48	0.264	0.115	1/14/2010@12:05:01			
244224019	1	49	0.108	0.109	1/14/2010@12:05:54			
WCN100114-03	1	S3	101	3.86	1/14/2010@12:06:47			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	1.3 < 10.0					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	1.3 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN100114-08	1	S7	-3.03	-0.00668	1/14/2010@12:08:38			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-3.03 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-3.03 > -5.00					
		Message	CCB Passed					
		Action	Continue					

1202012044||DUP	1	50	-0.496	0.0870	1/14/2010@12:10:27			
1202012046||MS	1	51	89.0	3.40	1/14/2010@12:11:20			
1202012048||MSD	1	52	85.2	3.26	1/14/2010@12:12:14			
244224020	1	53	3.43	0.232	1/14/2010@12:13:06			
1202012045||DUP	1	54	2.05	0.181	1/14/2010@12:14:00			
1202012047||MS	1	55	92.3	3.52	1/14/2010@12:14:53			
1202012049||MSD	1	56	74.8	2.87	1/14/2010@12:15:45			
WCN100114-03	1	S3	102	3.89	1/14/2010@12:16:37			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	2.2 < 10.0					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	2.2 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN100114-08	1	S7	-2.10	0.0275	1/14/2010@12:18:29			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-2.10 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-2.10 > -5.00					
		Message	CCB Passed					
		Action	Continue					

Analyte Properties Table for OM_1-14-2010_10-54-00.OMN

Property	Channel 1
	TCYANIDE
Concentration Units	ug/L
Calibration Fit Type	First Order
Clear Calibration	True
Force Through Zero	False
Calibration Weighting	None
Auto Dilution Trigger	True
% of High Standard	100
Quik Chem Method	10-204-00-1-A
Chemistry	Direct/Bipolar
Calibration by Height	False
Inject to Peak Start	22
Peak Base Width	39

Author: axc2 Date : 1/14/2010

Channel 1: Current View

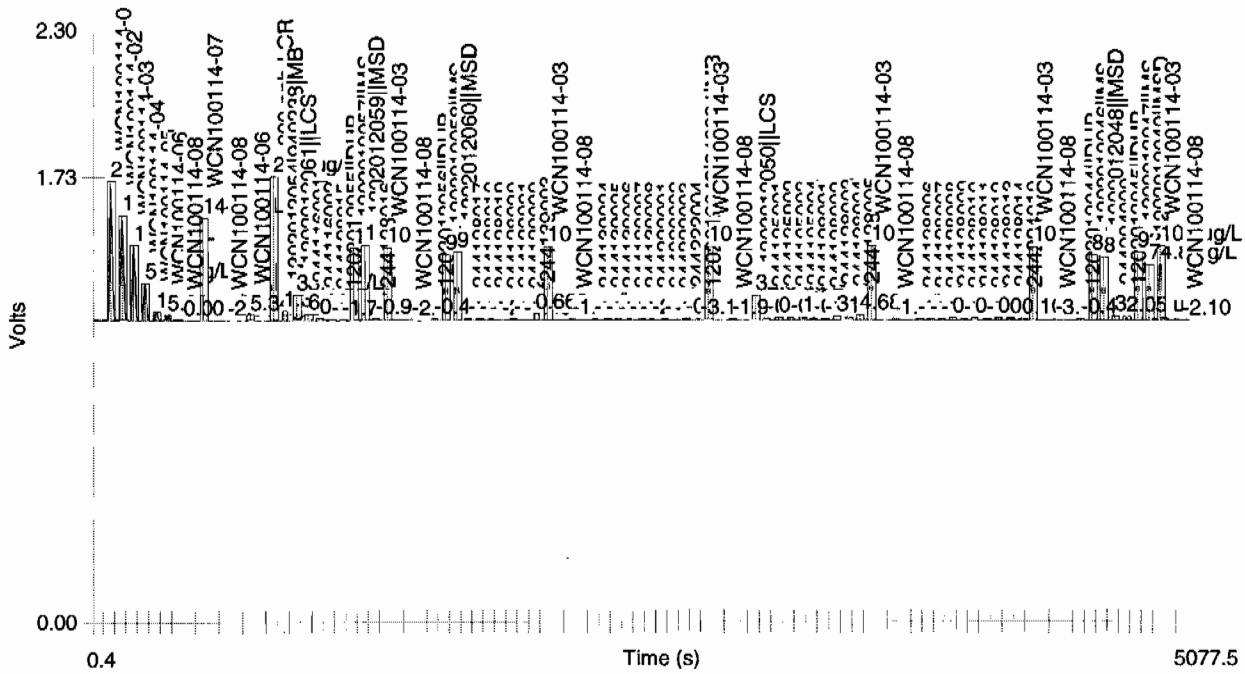
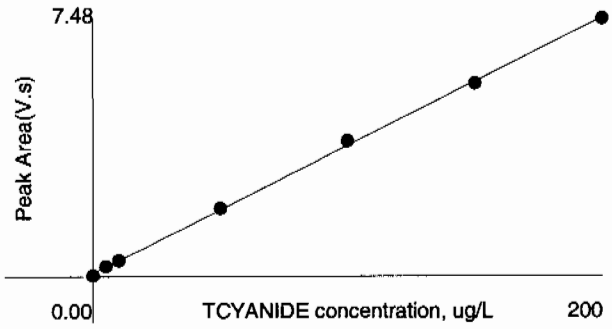


Table 1: TCYANIDE

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	7.48	0.544	0.4	1/14/2010	10:56:34
2	150	1	5.59	0.409	1.2	1/14/2010	10:57:26
3	100	1	3.94	0.293	-3.5	1/14/2010	10:58:18
4	50.0	1	2.00	0.145	-2.1	1/14/2010	10:59:11
5	10.0	1	0.469	0.0327	1.7	1/14/2010	11:00:05
6	5.00	1	0.298	0.0216	-2.1	1/14/2010	11:00:58
7	0.00	1	0.0276	0.00183		1/14/2010	11:01:52

Figure 1: TCYANIDE



Area = 0.0370 * Conc + 0.107
Conc = 27.0 * Area - 2.85
Correlation Coefficient (r) = 0.99969

No Weighting

Miscellaneous

DATA EXCEPTION REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
14-JAN-10	Federal	SOP	Process
Instrument Type: LACHAT Flow Injection Analyzer	**Test / Method:** SW846 9012A	**Matrix Type:** Solid	**Client Code:** LANL
Batch ID: 940234	**Sample Numbers:** See Below		

Potentially affected work order(s)(SDG): 244125(10-1130),244128(10-1132),244224(10-1156)

Application Issues:

Failed Recovery for MSD/PSD

Specification and Requirements Exception Description:	DER Disposition:
1. Failed recovery for MSD: QC 1202012049MSD	1. The spike duplicate recovery falls outside of the client specified acceptance limits. Since both the spike recovery and the RPD between the spike and spike duplicate fall within acceptance limits, the data is reported.

Originator's Name:

Ashley Earl 14-JAN-10

Data Validator/Group Leader:

Elzbieta Szulc 21-JAN-10

RADIOLOGICAL ANALYSIS

Radiochemistry Case Narrative
Los Alamos National Laboratory (LANL)
SDG 10-1130

Method/Analysis Information

Product: **Dry Weight-Percent Moisture**
Analytical Method: Dry Soil Prep
Analytical Batch Number: 940002

Sample ID	Client ID
244125001	RE12-10-7698
244125002	RE12-10-7697
244125003	RE12-10-7704
244125004	RE12-10-7703
1202011557	244137001(RE12-10-7859) 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: 244137001 (RE12-10-7859). The QC was from LANL work order 244137.

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:	940222
Prep Batch Number:	940002

Sample ID	Client ID
244125001	RE12-10-7698
244125002	RE12-10-7697
244125003	RE12-10-7704
244125004	RE12-10-7703
1202012011	Method Blank (MB)
1202012012	244125002(RE12-10-7697) Sample Duplicate (DUP)
1202012013	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 1202012011 (MB) was changed to 1.0 per client request.

Designated QC
The following sample was used for QC: 244125002 (RE12-10-7697). The QC was from LANL work order 244125.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

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

Manual Integration
No manual integrations were performed on data in this batch.

Additional Comments
The MDCs are calculated using a blank population.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**ISOPU**
Analytical Method:	DOE EML HASL-300, Pu-11-RC Modified
Prep Method:	Dry Soil Prep
Analytical Batch Number:	940223
Prep Batch Number:	940002

Sample ID	Client ID
244125001	RE12-10-7698
244125002	RE12-10-7697
244125003	RE12-10-7704
244125004	RE12-10-7703
1202012014	Method Blank (MB)
1202012015	244125002(RE12-10-7697) Sample Duplicate (DUP)
1202012016	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 1202012014 (MB) was changed to 1.0 per client request.

Designated QC
The following sample was used for QC: 244125002 (RE12-10-7697). The QC was from LANL work order 244125.

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:	940225
Prep Batch Number:	940002

Sample ID	**Client ID**
244125001	RE12-10-7698
244125002	RE12-10-7697
244125003	RE12-10-7704
244125004	RE12-10-7703
1202012017	Method Blank (MB)
1202012018	244125002(RE12-10-7697) Sample Duplicate (DUP)
1202012019	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 1202012017 (MB) was changed to 1.0 per client request.

Designated QC
The following sample was used for QC: 244125002 (RE12-10-7697). The QC was from LANL work order 244125.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank, 1202012017 (MB), result for U-238 is 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:	**GAMMA SPEC**
Analytical Method:	DOE HASL 300, 4.5.2.3/Ga-01-R
Prep Method:	Dry Soil Prep
Analytical Batch Number:	940263
Prep Batch Number:	940002

Sample ID	Client ID
244125001	RE12-10-7698
244125002	RE12-10-7697
244125003	RE12-10-7704
244125004	RE12-10-7703
1202012144	Method Blank (MB)
1202012145	244125001(RE12-10-7698) Sample Duplicate (DUP)
1202012146	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, April 2009, May 2009, November 2009 and December 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: 244125001 (RE12-10-7698). The QC was from LANL work order 244125.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank, 1202012144 (MB), result for Sr-85 is greater than 1.65 times the CSU but less than the MDC.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

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

Additional Comments
Additional comments were not required for this sample set.

Blank Decision Level
The blank, 1202012144 (MB), result for Sr-85 is greater than the decision level but less than the MDC.

Qualifier information

Qualifier	Reason	Analyte	Sample	Client Sample
UI	Data rejected due to interference.	Bismuth-211	244125001	RE12-10-7698
			244125002	RE12-10-7697
			244125003	RE12-10-7704
			244125004	RE12-10-7703
			1202012145	RE12-10-7698(244125001DUP)
		Cadmium-109	244125001	RE12-10-7698
			244125002	RE12-10-7697
			244125003	RE12-10-7704

			244125004	RE12-10-7703
			1202012145	RE12-10-7698(244125001DUP)
		Radium-224	244125001	RE12-10-7698
			244125002	RE12-10-7697
			244125003	RE12-10-7704
			244125004	RE12-10-7703
			1202012145	RE12-10-7698(244125001DUP)
UI	Data rejected due to low abundance.	Cesium-134	244125001	RE12-10-7698
			244125002	RE12-10-7697
			244125003	RE12-10-7704
			244125004	RE12-10-7703
			1202012145	RE12-10-7698(244125001DUP)
		Strontium-85	244125003	RE12-10-7704
			244125004	RE12-10-7703
			1202012145	RE12-10-7698(244125001DUP)

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: Pamela Wilkes 1/21/10

SAMPLE DATA SUMMARY

GEL LABORATORIES LLC

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

Certificate of Analysis Report
for

LANL010 Los Alamos National Laboratory (72733-001-09)

Client SDG: 10-1130 GEL Work Order: 244125

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 _____ 1/21/10

GEL LABORATORIES LLC

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

Certificate of Analysis

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

Report Date: January 21, 2010

Client Sample ID: RE12-10-7698
Sample ID: 244125001
Matrix: R
Collect Date: 05-JAN-10
Receive Date: 08-JAN-10
Collector: Client
Moisture: 9.92%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids												
"As Received"												
Rad Alpha Spec Analysis												
AM241 "Dry Weight Corrected"												
Americium-241	U	-0.00182	0.0211	+/-0.0044	0.050	pCi/g		JXD2	01/16/10	1130	940222	2
ISOPU "Dry Weight Corrected"												
Plutonium-238	U	0.00	0.0202	+/-0.0052	0.050	pCi/g		JXD2	01/16/10	1129	940223	3
Plutonium-239/240	U	0.00368	0.0232	+/-0.00325	0.050	pCi/g						
ISOU "Dry Weight Corrected"												
Uranium-233/234		0.941	0.117	+/-0.0899	0.100	pCi/g		JXD2	01/19/10	1047	940225	4
Uranium-235/236	U	0.0465	0.0724	+/-0.0165	0.100	pCi/g						
Uranium-238		0.805	0.0677	+/-0.0796	0.100	pCi/g						
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	-0.0581	0.201	+/-0.0689	0.200	pCi/g		MXR1	01/20/10	1329	940263	5
Bismuth-211	UI	3.83	0.317	+/-0.260		pCi/g						
Bismuth-214		1.29	0.110	+/-0.0919	0.200	pCi/g						
Cadmium-109	UI	3.44	1.22	+/-0.460		pCi/g						
Cerium-139	U	-0.00618	0.0481	+/-0.0147	0.050	pCi/g						
Cesium-134	UI	0.109	0.0892	+/-0.0309	0.100	pCi/g						
Cesium-137	U	0.00968	0.064	+/-0.0192	0.100	pCi/g						
Cobalt-60	U	-0.00739	0.0592	+/-0.0185	0.100	pCi/g						
Europium-152	U	-0.0195	0.150	+/-0.0595	0.200	pCi/g						
Lanthanum-140	U	-0.0833	0.128	+/-0.0486		pCi/g						
Lead-212		1.68	0.089	+/-0.0815	0.100	pCi/g						
Lead-214		1.33	0.111	+/-0.097	0.100	pCi/g						
Mercury-203	U	0.0316	0.0634	+/-0.0221	0.100	pCi/g						
Potassium-40		19.4	0.499	+/-0.984	1.00	pCi/g						
Radium-223	U	-0.41	1.10	+/-0.334		pCi/g						
Radium-224	UI	4.44	1.01	+/-0.687		pCi/g						
Radium-226		1.29	0.110	+/-0.0919		pCi/g						
Radium-228		1.60	0.217	+/-0.176	0.500	pCi/g						
Ruthenium-106	U	0.105	0.504	+/-0.149	0.800	pCi/g						

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 21, 2010

Client Sample ID: RE12-10-7698
Sample ID: 244125001

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Sodium-22	U	0.0319	0.0729	+/-0.0205	0.080	pCi/g						
Strontium-85	U	0.0678	0.0679	+/-0.0208		pCi/g						
Thallium-208		0.579	0.0493	+/-0.0446	0.080	pCi/g						
Thorium-227	U	0.125	0.621	+/-0.178		pCi/g						
Thorium-231	U	-0.41	1.10	+/-0.334		pCi/g						
Thorium-234		2.69	1.79	+/-0.907	2.00	pCi/g						
Tin-113	U	-0.0228	0.0717	+/-0.0219	0.100	pCi/g						
Uranium-235	U	0.345	0.375	+/-0.110	0.500	pCi/g						
Yttrium-88	U	0.00595	0.0559	+/-0.0168	0.100	pCi/g						

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	90.6	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	85.1	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	89.9	(50%-105%)

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

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

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 21, 2010

Client Sample ID: RE12-10-7698
Sample ID: 244125001

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

E Organics--Concentration of the target analyte exceeds the instrument calibration range
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d 5-day BOD--The 2:1 depletion requirement was not met for this sample
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 21, 2010

Client Sample ID: RE12-10-7697
Sample ID: 244125002
Matrix: R
Collect Date: 05-JAN-10
Receive Date: 08-JAN-10
Collector: Client
Moisture: 14.7%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids												
"As Received"												
Rad Alpha Spec Analysis												
AM241 "Dry Weight Corrected"												
Americium-241	U	0.00513	0.0236	+/-0.00551	0.050	pCi/g		JXD2	01/16/10	1130	940222	2
ISOPU "Dry Weight Corrected"												
Plutonium-238	U	0.00	0.0234	+/-0.00722	0.050	pCi/g		JXD2	01/16/10	1129	940223	3
Plutonium-239/240	U	0.00142	0.0268	+/-0.00549	0.050	pCi/g						
ISOU "Dry Weight Corrected"												
Uranium-233/234		1.20	0.153	+/-0.117	0.100	pCi/g		JXD2	01/19/10	1047	940225	4
Uranium-235/236	U	0.0793	0.0949	+/-0.0227	0.100	pCi/g						
Uranium-238		1.32	0.0887	+/-0.125	0.100	pCi/g						
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	0.0735	0.225	+/-0.0735	0.200	pCi/g		MXR1	01/20/10	1330	940263	5
Bismuth-211	UI	4.19	0.326	+/-0.330		pCi/g						
Bismuth-214		1.28	0.098	+/-0.114	0.200	pCi/g						
Cadmium-109	UI	3.92	1.09	+/-0.490		pCi/g						
Cerium-139	U	0.000166	0.0467	+/-0.0138	0.050	pCi/g						
Cesium-134	UI	0.120	0.0912	+/-0.0331	0.100	pCi/g						
Cesium-137		0.108	0.061	+/-0.0335	0.100	pCi/g						
Cobalt-60	U	-0.0268	0.0519	+/-0.0181	0.100	pCi/g						
Europium-152	U	0.0386	0.152	+/-0.0486	0.200	pCi/g						
Lanthanum-140	U	-0.136	0.120	+/-0.0469		pCi/g						
Lead-212		1.75	0.084	+/-0.118	0.100	pCi/g						
Lead-214		1.46	0.114	+/-0.121	0.100	pCi/g						
Mercury-203	U	0.00161	0.0637	+/-0.022	0.100	pCi/g						
Potassium-40		21.0	0.459	+/-1.19	1.00	pCi/g						
Radium-223	U	0.245	1.04	+/-0.354		pCi/g						
Radium-224	UI	4.64	0.956	+/-0.652		pCi/g						
Radium-226		1.28	0.098	+/-0.114		pCi/g						
Radium-228		1.79	0.184	+/-0.194	0.500	pCi/g						
Ruthenium-106	U	-0.191	0.469	+/-0.152	0.800	pCi/g						
Sodium-22	U	-0.0166	0.0583	+/-0.0191	0.080	pCi/g						

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Project: LANL ER Project

Report Date: January 21, 2010

Client Sample ID: RE12-10-7697
Sample ID: 244125002
Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Strontium-85	U	0.0349	0.0641	+/-0.0204		pCi/g						
Thallium-208		0.594	0.055	+/-0.050	0.080	pCi/g						
Thorium-227	U	0.00953	0.610	+/-0.186		pCi/g						
Thorium-231	U	0.245	1.04	+/-0.354		pCi/g						
Thorium-234		2.34	1.89	+/-0.866	2.00	pCi/g						
Tin-113	U	-0.0336	0.0671	+/-0.0209	0.100	pCi/g						
Uranium-235	U	0.158	0.353	+/-0.103	0.500	pCi/g						
Yttrium-88	U	0.00576	0.0555	+/-0.0164	0.100	pCi/g						

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	83.0	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	80.9	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	71.9	(50%-105%)

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

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

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 21, 2010

Client Sample ID: RE12-10-7697
Sample ID: 244125002

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d 5-day BOD--The 2:1 depletion requirement was not met for this sample
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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

Report Date: January 21, 2010

Client Sample ID: RE12-10-7704
Sample ID: 244125003
Matrix: R
Collect Date: 05-JAN-10
Receive Date: 08-JAN-10
Collector: Client
Moisture: 9.32%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids												
"As Received"												
Rad Alpha Spec Analysis												
AM241 "Dry Weight Corrected"												
Americium-241	U	0.00211	0.0222	+/-0.00166	0.050	pCi/g		JXD2	01/16/10	1130	940222	2
ISOPU "Dry Weight Corrected"												
Plutonium-238	U	0.0167	0.0229	+/-0.00686	0.050	pCi/g		JXD2	01/16/10	1129	940223	3
Plutonium-239/240	U	-0.00139	0.0263	+/-0.00368	0.050	pCi/g						
ISOU "Dry Weight Corrected"												
Uranium-233/234		1.12	0.0821	+/-0.0945	0.100	pCi/g		JXD2	01/19/10	0935	940225	4
Uranium-235/236		0.0852	0.051	+/-0.0183	0.100	pCi/g						
Uranium-238		1.15	0.0476	+/-0.0969	0.100	pCi/g						
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	0.0843	0.299	+/-0.0843	0.200	pCi/g		MXR1	01/20/10	1330	940263	5
Bismuth-211	UI	3.96	0.276	+/-0.226		pCi/g						
Bismuth-214		1.25	0.0939	+/-0.0843	0.200	pCi/g						
Cadmium-109	UI	4.81	1.16	+/-0.458		pCi/g						
Cerium-139	U	0.00101	0.0428	+/-0.0123	0.050	pCi/g						
Cesium-134	UI	0.126	0.0733	+/-0.0293	0.100	pCi/g						
Cesium-137	U	-0.000648	0.047	+/-0.0139	0.100	pCi/g						
Cobalt-60	U	-0.0121	0.0501	+/-0.0159	0.100	pCi/g						
Europium-152	U	0.000533	0.139	+/-0.0467	0.200	pCi/g						
Lanthanum-140	U	-0.0751	0.101	+/-0.0351		pCi/g						
Lead-212		1.74	0.0766	+/-0.0808	0.100	pCi/g						
Lead-214		1.38	0.0967	+/-0.0863	0.100	pCi/g						
Mercury-203	U	0.0131	0.0566	+/-0.0167	0.100	pCi/g						
Potassium-40		20.0	0.460	+/-0.990	1.00	pCi/g						
Radium-223	U	0.177	0.897	+/-0.307		pCi/g						
Radium-224	UI	4.86	0.871	+/-0.601		pCi/g						
Radium-226		1.25	0.0939	+/-0.0843		pCi/g						
Radium-228		1.81	0.161	+/-0.182	0.500	pCi/g						
Ruthenium-106	U	0.250	0.448	+/-0.129	0.800	pCi/g						
Sodium-22	U	-0.0105	0.0558	+/-0.0174	0.080	pCi/g						

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

Report Date: January 21, 2010

Client Sample ID: RE12-10-7704
Sample ID: 244125003
Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Strontium-85	UI	0.0935	0.0597	+/-0.0176		pCi/g						
Thallium-208		0.482	0.0468	+/-0.0382	0.080	pCi/g						
Thorium-227	U	-0.139	0.517	+/-0.158		pCi/g						
Thorium-231	U	0.177	0.897	+/-0.307		pCi/g						
Thorium-234	U	0.271	2.48	+/-0.716	2.00	pCi/g						
Tin-113	U	0.00685	0.0615	+/-0.0179	0.100	pCi/g						
Uranium-235	U	0.192	0.323	+/-0.0972	0.500	pCi/g						
Yttrium-88	U	0.015	0.0483	+/-0.0137	0.100	pCi/g						

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	84.5	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	82.5	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	84.2	(50%-105%)

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

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

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Certificate of Analysis

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

Report Date: January 21, 2010

Client Sample ID: RE12-10-7704
Sample ID: 244125003

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d 5-day BOD--The 2:1 depletion requirement was not met for this sample
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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

Report Date: January 21, 2010

Client Sample ID: RE12-10-7703
Sample ID: 244125004
Matrix: R
Collect Date: 05-JAN-10
Receive Date: 08-JAN-10
Collector: Client
Moisture: 19.8%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids												
"As Received"												
Rad Alpha Spec Analysis												
AM241 "Dry Weight Corrected"												
Americium-241	U	0.00799	0.0208	+/-0.00316	0.050	pCi/g		JXD2	01/16/10	1130	940222	2
ISOPU "Dry Weight Corrected"												
Plutonium-238	U	0.00565	0.0233	+/-0.00774	0.050	pCi/g		JXD2	01/16/10	1129	940223	3
Plutonium-239/240	U	0.0113	0.0267	+/-0.0045	0.050	pCi/g						
ISOU "Dry Weight Corrected"												
Uranium-233/234		1.82	0.0976	+/-0.148	0.100	pCi/g		JXD2	01/19/10	0935	940225	4
Uranium-235/236		0.132	0.0606	+/-0.0251	0.100	pCi/g						
Uranium-238		2.02	0.0566	+/-0.162	0.100	pCi/g						
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	0.0161	0.216	+/-0.0687	0.200	pCi/g		MXR1	01/20/10	1331	940263	5
Bismuth-211	UI	4.27	0.295	+/-0.315		pCi/g						
Bismuth-214		1.16	0.0994	+/-0.0985	0.200	pCi/g						
Cadmium-109	UI	3.35	1.12	+/-0.523		pCi/g						
Cerium-139	U	0.00774	0.0475	+/-0.0137	0.050	pCi/g						
Cesium-134	UI	0.0876	0.0802	+/-0.0247	0.100	pCi/g						
Cesium-137		0.0992	0.0542	+/-0.0213	0.100	pCi/g						
Cobalt-60	U	0.0011	0.0538	+/-0.0163	0.100	pCi/g						
Europium-152	U	0.0458	0.152	+/-0.0571	0.200	pCi/g						
Lanthanum-140	U	0.0211	0.123	+/-0.0419		pCi/g						
Lead-212		1.77	0.089	+/-0.128	0.100	pCi/g						
Lead-214		1.49	0.103	+/-0.116	0.100	pCi/g						
Mercury-203	U	0.0234	0.0667	+/-0.0199	0.100	pCi/g						
Potassium-40		21.2	0.463	+/-1.18	1.00	pCi/g						
Radium-223	U	-0.688	1.02	+/-0.319		pCi/g						
Radium-224	UI	5.02	1.01	+/-0.770		pCi/g						
Radium-226		1.16	0.0994	+/-0.0985		pCi/g						
Radium-228		1.86	0.191	+/-0.175	0.500	pCi/g						
Ruthenium-106	U	0.155	0.475	+/-0.138	0.800	pCi/g						
Sodium-22	U	-0.0173	0.0583	+/-0.0183	0.080	pCi/g						

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 21, 2010

Client Sample ID: RE12-10-7703
Sample ID: 244125004

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Strontium-85	UI	0.180	0.0729	+/-0.0221		pCi/g						
Thallium-208		0.517	0.0542	+/-0.0457	0.080	pCi/g						
Thorium-227	U	-0.256	0.597	+/-0.188		pCi/g						
Thorium-231	U	-0.688	1.02	+/-0.319		pCi/g						
Thorium-234	U	1.54	1.77	+/-0.856	2.00	pCi/g						
Tin-113	U	-0.0323	0.0647	+/-0.0201	0.100	pCi/g						
Uranium-235	U	0.0159	0.339	+/-0.100	0.500	pCi/g						
Yttrium-88	U	0.0368	0.0582	+/-0.0157	0.100	pCi/g						

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	85.8	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	80.0	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	73.5	(50%-105%)

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

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

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 21, 2010

Client Sample ID: RE12-10-7703
Sample ID: 244125004

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d 5-day BOD--The 2:1 depletion requirement was not met for this sample
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

QUALITY CONTROL DATA

GEL LABORATORIES LLC

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QC Summary

Report Date: January 21, 2010

Client : Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico

Contact: Ms. Joylene Valdez

Workorder: 244125

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 940222										
QC1202012012 244125002 DUP										
Americium-241	U	0.00513	U	-0.000531	pCi/g	0.385		(0-1)	JXD2	01/16/1011:30
	TPU:	+/-0.00551		+/-0.00183						
	Yield:	83.0		85.5						
QC1202012013 LCS										
Americium-241	33.2			33.5	pCi/g		101	(75%-125%)		
	TPU:			+/-2.41						
	Yield:			92.8						
QC1202012011 MB										
Americium-241			U	-0.00569	pCi/g					01/16/1011:30
	TPU:			+/-0.00773						
	Yield:			87.9						
Batch 940223										
QC1202012015 244125002 DUP										
Plutonium-238	U	0.00	U	0.00	pCi/g	0.00		(0-1)	JXD2	01/16/1011:29
	TPU:	+/-0.00722		+/-0.00132						
	Yield:	80.9		90.2						
Plutonium-239/240	U	0.00142	U	0.0066	pCi/g	0.306		(0-1)		
	TPU:	+/-0.00549		+/-0.00297						
	Yield:	80.9		90.2						
QC1202012016 LCS										
Plutonium-238				8.00	pCi/g			(75%-125%)		
	TPU:			+/-0.618						
	Yield:			81.4						
Plutonium-239/240	41.8			38.1	pCi/g		91.3	(75%-125%)		
	TPU:			+/-2.48						
	Yield:			81.4						
QC1202012014 MB										
Plutonium-238			U	0.0017	pCi/g					
	TPU:			+/-0.0045						
	Yield:			83.7						
Plutonium-239/240			U	0.0051	pCi/g					
	TPU:			+/-0.00511						
	Yield:			83.7						
Batch 940225										
QC1202012018 244125002 DUP										
Uranium-233/234		1.20		1.14	pCi/g	0.152		(0-1)	JXD2	01/19/1009:35
	TPU:	+/-0.117		+/-0.100						
	Yield:	71.9		68.0						
Uranium-235/236	U	0.0793		0.089	pCi/g	0.114		(0-1)		
	TPU:	+/-0.0227		+/-0.020						
	Yield:	71.9		68.0						
Uranium-238		1.32		1.24	pCi/g	0.171		(0-1)		
	TPU:	+/-0.125		+/-0.108						

QC Summary

Workorder: 244125

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 940225										
	Yield:	71.9		68.0						
QC1202012019 LCS										
Uranium-233/234				5.86	pCi/g			(75%-125%)		01/19/1009:35
	TPU:			+/-0.534						
	Yield:			81.1						
Uranium-235/236				0.496	pCi/g			(75%-125%)		
	TPU:			+/-0.103						
	Yield:			81.1						
Uranium-238	5.75			5.47	pCi/g		95.2	(75%-125%)		
	TPU:			+/-0.504						
	Yield:			81.1						
QC1202012017 MB										
Uranium-233/234			U	0.00958	pCi/g					01/19/1009:35
	TPU:			+/-0.00602						
	Yield:			90.9						
Uranium-235/236			U	0.00479	pCi/g					
	TPU:			+/-0.00424						
	Yield:			90.9						
Uranium-238			U	0.00646	pCi/g					
	TPU:			+/-0.0039						
	Yield:			90.9						
Rad Gamma Spec										
Batch 940263										
QC1202012145 244125001 DUP										
Americium-241	U	-0.0581	U	-0.0135	pCi/g	0.149		(0-1)	MXR1	01/20/1015:47
	TPU:	+/-0.0689		+/-0.0808						
Bismuth-211	UI	3.83	UI	3.78	pCi/g	0.0497		(0-1)		
	TPU:	+/-0.260		+/-0.233						
Bismuth-214		1.29		1.03	pCi/g	0.763		(0-1)		
	TPU:	+/-0.0919		+/-0.0819						
Cadmium-109	UI	3.44	UI	2.68	pCi/g	0.373		(0-1)		
	TPU:	+/-0.460		+/-0.551						
Cerium-139	U	-0.00618	U	0.0018	pCi/g	0.150		(0-1)		
	TPU:	+/-0.0147		+/-0.0119						
Cesium-134	UI	0.109	UI	0.0785	pCi/g	0.277		(0-1)		
	TPU:	+/-0.0309		+/-0.0239						
Cesium-137	U	0.00968	U	-0.00478	pCi/g	0.213		(0-1)		
	TPU:	+/-0.0192		+/-0.0147						
Cobalt-60	U	-0.00739	U	-0.00565	pCi/g	0.0264		(0-1)		
	TPU:	+/-0.0185		+/-0.0143						
Europium-152	U	-0.0195	U	-0.0962	pCi/g	0.351		(0-1)		
	TPU:	+/-0.0595		+/-0.0496						
Lanthanum-140	U	-0.0833	U	0.0277	pCi/g	0.667		(0-1)		
	TPU:	+/-0.0486		+/-0.0347						
Lead-212		1.68		1.62	pCi/g	0.167		(0-1)		
	TPU:	+/-0.0815		+/-0.0743						
Lead-214		1.33		1.32	pCi/g	0.0432		(0-1)		
	TPU:	+/-0.097		+/-0.0881						
Mercury-203	U	0.0316	U	0.0225	pCi/g	0.118		(0-1)		
	TPU:	+/-0.0221		+/-0.0164						

QC Summary

Workorder: 244125

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 940263										
Potassium-40		19.4		21.1	pCi/g	0.438		(0-1)		
	TPU:	+/-0.984		+/-1.00						
Radium-223	U	-0.41	U	0.236	pCi/g	0.504		(0-1)		
	TPU:	+/-0.334		+/-0.306						
Radium-224	UI	4.44	UI	4.77	pCi/g	0.133		(0-1)		
	TPU:	+/-0.687		+/-0.555						
Radium-226		1.29		1.03	pCi/g	0.763		(0-1)		
	TPU:	+/-0.0919		+/-0.0819						
Radium-228		1.60		1.77	pCi/g	0.260		(0-1)		
	TPU:	+/-0.176		+/-0.156						
Ruthenium-106	U	0.105	U	0.273	pCi/g	0.310		(0-1)		
	TPU:	+/-0.149		+/-0.122						
Sodium-22	U	0.0319	U	0.0101	pCi/g	0.290		(0-1)		
	TPU:	+/-0.0205		+/-0.0171						
Strontium-85	U	0.0678	UI	0.0968	pCi/g	0.388		(0-1)		
	TPU:	+/-0.0208		+/-0.0166						
Thallium-208		0.579		0.474	pCi/g	0.662		(0-1)		
	TPU:	+/-0.0446		+/-0.0346						
Thorium-227	U	0.125	U	-0.112	pCi/g	0.357		(0-1)		
	TPU:	+/-0.178		+/-0.154						
Thorium-231	U	-0.41	U	0.236	pCi/g	0.504		(0-1)		
	TPU:	+/-0.334		+/-0.306						
Thorium-234		2.69	U	0.958	pCi/g	0.540		(0-1)		
	TPU:	+/-0.907		+/-0.701						
Tin-113	U	-0.0228	U	-0.00968	pCi/g	0.166		(0-1)		
	TPU:	+/-0.0219		+/-0.0175						
Uranium-235	U	0.345	U	0.0566	pCi/g	0.714		(0-1)		
	TPU:	+/-0.110		+/-0.092						
Yttrium-88	U	0.00595	U	-0.0146	pCi/g	0.354		(0-1)		
	TPU:	+/-0.0168		+/-0.0123						
QC1202012146 LCS										
Americium-241	15.9			13.0	pCi/g		81.5	(75%-125%)		01/20/1014:47
	TPU:			+/-0.686						
Bismuth-211				1.60	pCi/g					
	TPU:			+/-0.371						
Bismuth-214				0.508	pCi/g					
	TPU:			+/-0.119						
Cadmium-109				34.9	pCi/g					
	TPU:			+/-1.79						
Cerium-139			U	-0.0146	pCi/g					
	TPU:			+/-0.0234						
Cesium-134			U	0.077	pCi/g					
	TPU:			+/-0.0517						
Cesium-137	5.57			5.42	pCi/g		97.3	(75%-125%)		
	TPU:			+/-0.269						
Cobalt-60	6.46			6.02	pCi/g		93.2	(75%-125%)		
	TPU:			+/-0.240						
Europium-152			U	0.144	pCi/g					
	TPU:			+/-0.0984						
Lanthanum-140			U	-0.052	pCi/g					
	TPU:			+/-0.0459						

QC Summary

Workorder: 244125

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 940263										
Lead-212				0.961	pCi/g					
	TPU:			+/-0.129						
Lead-214				0.555	pCi/g					
	TPU:			+/-0.130						
Mercury-203			U	-0.00809	pCi/g					
	TPU:			+/-0.0316						
Potassium-40			U	0.910	pCi/g					
	TPU:			+/-0.339						
Radium-223			U	-0.35	pCi/g					
	TPU:			+/-0.639						
Radium-224				4.38	pCi/g					
	TPU:			+/-0.716						
Radium-226				0.508	pCi/g					
	TPU:			+/-0.119						
Radium-228				0.907	pCi/g					
	TPU:			+/-0.216						
Ruthenium-106			U	0.0898	pCi/g					
	TPU:			+/-0.346						
Sodium-22			U	0.0101	pCi/g					
	TPU:			+/-0.0368						
Strontium-85			U	0.0685	pCi/g					
	TPU:			+/-0.0396						
Thallium-208				0.355	pCi/g					
	TPU:			+/-0.0839						
Thorium-227			U	-0.0146	pCi/g					
	TPU:			+/-0.343						
Thorium-231			U	-0.35	pCi/g					
	TPU:			+/-0.639						
Thorium-234			U	-0.418	pCi/g					
	TPU:			+/-0.548						
Tin-113			U	-0.0554	pCi/g					
	TPU:			+/-0.0473						
Uranium-235			U	-0.128	pCi/g					
	TPU:			+/-0.161						
Yttrium-88			U	-0.0414	pCi/g					
	TPU:			+/-0.0259						
QC1202012144 MB										
Americium-241			U	0.0145	pCi/g					01/20/1014:09
	TPU:			+/-0.0475						
Bismuth-211			U	-0.028	pCi/g					
	TPU:			+/-0.0552						
Bismuth-214			U	-0.00724	pCi/g					
	TPU:			+/-0.0209						
Cadmium-109			U	0.0282	pCi/g					
	TPU:			+/-0.152						
Cerium-139			U	-0.00626	pCi/g					
	TPU:			+/-0.00699						
Cesium-134			U	0.0092	pCi/g					
	TPU:			+/-0.0116						
Cesium-137			U	-0.00349	pCi/g					
	TPU:			+/-0.0115						

QC Summary

Workorder: 244125

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 940263										
Cobalt-60			U	0.00771	pCi/g					
	TPU:			+/-0.0102						
Europium-152			U	-0.00462	pCi/g					
	TPU:			+/-0.0247						
Lanthanum-140			U	-0.0279	pCi/g					
	TPU:			+/-0.0175						
Lead-212			U	0.0114	pCi/g					
	TPU:			+/-0.0191						
Lead-214			U	0.00516	pCi/g					
	TPU:			+/-0.0188						
Mercury-203			U	-0.00578	pCi/g					
	TPU:			+/-0.0083						
Potassium-40			U	-0.145	pCi/g					
	TPU:			+/-0.121						
Radium-223			U	0.0475	pCi/g					
	TPU:			+/-0.177						
Radium-224			U	-0.0766	pCi/g					
	TPU:			+/-0.179						
Radium-226			U	-0.00724	pCi/g					
	TPU:			+/-0.0209						
Radium-228			U	0.00714	pCi/g					
	TPU:			+/-0.0373						
Ruthenium-106			U	-0.0833	pCi/g					
	TPU:			+/-0.0744						
Sodium-22			U	-0.005	pCi/g					
	TPU:			+/-0.0093						
Strontium-85			U	0.0289	pCi/g					
	TPU:			+/-0.00968						
Thallium-208			U	-0.0155	pCi/g					
	TPU:			+/-0.0116						
Thorium-227			U	-0.174	pCi/g					
	TPU:			+/-0.093						
Thorium-231			U	0.0475	pCi/g					
	TPU:			+/-0.177						
Thorium-234			U	-0.259	pCi/g					
	TPU:			+/-0.374						
Tin-113			U	-0.0105	pCi/g					
	TPU:			+/-0.0113						
Uranium-235			U	0.0348	pCi/g					
	TPU:			+/-0.0495						
Yttrium-88			U	-0.00527	pCi/g					
	TPU:			+/-0.0106						

Notes:
The Qualifiers in this report are defined as follows:

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported

QC Summary

Workorder: 244125

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time

A	The TIC is a suspected aldol-condensation product
B	For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
E	General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
E	Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
E	Organics--Concentration of the target analyte exceeds the instrument calibration range
F	Estimated Value
H	Analytical holding time was exceeded
J	Value is estimated
M	M if above MDC and less than LLD
M	Matrix Related Failure
N	Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	RPD or %Recovery limits do not apply.
ND	Analyte concentration is not detected above the detection limit
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P	Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R	Sample results are rejected
U	Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
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 acceptence criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

RAW DATA

Radiochemistry Batch Checklist, Rev10

Batch# 940222 Product: Am Date: 1/18/10

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			N/A
Samples have been blank corrected (if required)	✓		
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.	✓		
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.			N/A
Smears Taken for Radioactive batches.			N/A
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.			N/A
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			N/A
Batch entered into Case Narrative.	✓		
Batch Data Exception Reports (DER) completed, if applicable.			N/A
Batch Data Exception Reports (DER) second reviewed and disposition verified to be completed.			N/A
Aliquot Correction completed if required.			N/A
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

RADchecklistrev10, revised 1/13/2010

Primary Review Performed By: Jupl M 1/18/10

Secondary Review Performed By: [signature] 1/19/10

1/25 2/5

LANL

P ✓

Am/Cm Que Sheet

11-JAN-10

Batch #: 940222 | Analyst: JXD2 | First Client Due Date: 05-FEB-10 | Internal Due Date25-JAN-10 | Comments:

Tracer(s): Am243/Cm244 | Tracer Code: 445-96-2-SS | Expiration Date: 05/11/10 | Vol: 0.1

LCS Isotope(s): Am241/Cm244 | LCS Code(s): — | Expiration Date: — | Vol(s): —

Spike Isotope(s): Am241/Cm244 | Spike Code(s): — | Expiration Date: — | Vol(s): —

Prep Date: 01/11/10 | Initials: JXD | Pipet ID: 2971058 | Balance ID: 50410272 | Witness: JAKB 1/13/10

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry Aliquot (g/1/f)	Am/Cm Det #
244125001-1	RE12-10-7698	SAMPLE		.05 pCi/g	SOIL	LANL010	05-JAN-10	1	1	1,253	77
244125002-1	RE12-10-7697	SAMPLE		.05 pCi/g	SOIL	LANL010	05-JAN-10	2	2	1,259	78
244125003-1	RE12-10-7704	SAMPLE		.05 pCi/g	SOIL	LANL010	05-JAN-10	3	3	1,266	79
244125004-1	RE12-10-7703	SAMPLE		.05 pCi/g	SOIL	LANL010	05-JAN-10	4	4	1,281	80
244137001-1	RE12-10-7859	SAMPLE		.05 pCi/g	SOIL	LANL010	04-JAN-10	5	5	1,272	81
244137002-1	RE12-10-7851	SAMPLE		.05 pCi/g	SOIL	LANL010	04-JAN-10	6	6	1,262	82
244137003-1	RE12-10-7852	SAMPLE		.05 pCi/g	SOIL	LANL010	04-JAN-10	7	7	1,284	83
244137004-1	RE12-10-7850	SAMPLE		.05 pCi/g	SOIL	LANL010	04-JAN-10	8	8	1,263	84
244137005-1	RE12-10-7853	SAMPLE		.05 pCi/g	SOIL	LANL010	04-JAN-10	9	9	1,282	85
244137006-1	RE12-10-7848	SAMPLE		.05 pCi/g	SOIL	LANL010	04-JAN-10	10	10	1,254	86
244137007-1	RE12-10-7849	SAMPLE		.05 pCi/g	SOIL	LANL010	04-JAN-10	11	11	1,251	87
1202012011-1	MB for batch 940222	MB		.05 pCi/g	SOIL	QC ACCOUNT		12	12	1.00	88
1202012012-1	RE12-10-7697(244125002DUP)	DUP		.05 pCi/g	SOIL	QC ACCOUNT	05-JAN-10	13	13	1,250	89 90
1202012013-1	LCS for batch 940222	LCS		.05 pCi/g	SOIL	QC ACCOUNT		14	14	0.102	90 89

*SRM: 0244-B exp. 04/30/20 0.102g

1/18/10

Choose SOP Used: GL-RAD-A-011 / GL-RAD-A-036

Solid Sample Dissolution by: LEACH or DIGESTION (Circle One)

Data Reviewed By: [signature] 1/18/10

GEL Laboratories LLC, Radiochemistry Division

Blank Correction Report

Batch ID 940222

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1202012012	DUP	Americium-241	1.25 g	-0.000531	0.00183	0.022	-.004552	pCi/g	NO
1202012013	LCS	Americium-241	0.102 g	33.5	2.41	0.275	-.05578431	pCi/g	NO
1202012011	MB	Americium-241	1.00 g	-0.00569	0.00773	0.0289	-.00569	pCi/g	NO
244125001	RE12-10-7698	Americium-241	1.25 g	-0.00182	0.0044	0.0211	-.004552	pCi/g	NO
244125002	RE12-10-7697	Americium-241	1.26 g	0.00513	0.00551	0.0236	-.00451587	pCi/g	NO
244125003	RE12-10-7704	Americium-241	1.27 g	0.00211	0.00166	0.0222	-.00448031	pCi/g	NO
244125004	RE12-10-7703	Americium-241	1.28 g	0.00799	0.00316	0.0208	-.00444531	pCi/g	NO
244137001	RE12-10-7859	Americium-241	1.27 g	-0.00303	0.00248	0.021	-.00448031	pCi/g	NO
244137002	RE12-10-7851	Americium-241	1.26 g	0.00192	0.00234	0.0211	-.00451587	pCi/g	NO
244137003	RE12-10-7852	Americium-241	1.28 g	0.00281	0.00612	0.0195	-.00444531	pCi/g	NO
244137004	RE12-10-7850	Americium-241	1.26 g	0.000657	0.00196	0.0209	-.00451587	pCi/g	NO
244137005	RE12-10-7853	Americium-241	1.28 g	-0.00319	0.002	0.024	-.00444531	pCi/g	NO
244137006	RE12-10-7848	Americium-241	1.25 g	0.00333	0.00331	0.0219	-.004552	pCi/g	NO
244137007	RE12-10-7849	Americium-241	1.25 g	-0.00182	0.00277	0.022	-.004552	pCi/g	NO

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

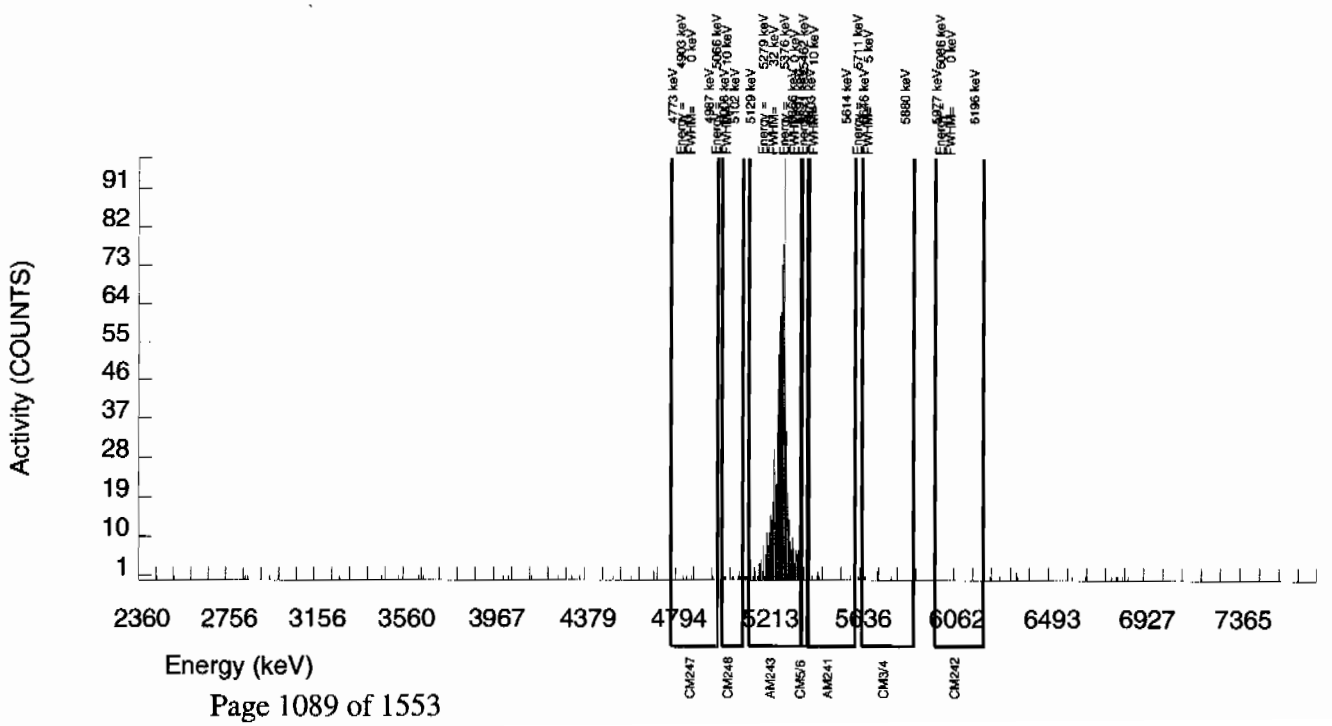
BATCH NUMBER: 940222 SAMPLE DATE : 5-JAN-2010 00:00:00.	SAMPLE ID : S0244125001_AM SAMPLE QTY: 1.253 G
DETECTOR NUMBER :67576 AVERAGE %EFFICIENCY :31.9454 % YIELD : 90.571	COUNT DATE:16-JAN-2010 11:30:05 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :JXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 445-96-2-SS	LIB FILE : ENV_ALPHA_AM.N
ISOTOPE : AM-241	ISOTOPE : AM-241	ISOTOPE : AM243	BKG FILE : B077.CNF;1006
PCI/G : 3.316E+01	PCI/G : 3.316E+01	NOMINAL : 2.91659 dpm	BKG DATE : 10-JAN-2010
		RESULTS : 2.64157 dpm	EFF FILE : W077.CNF;261
			CAL DATE : 11-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
CM-3/4	5795.020	5.000	1.000	4.000	5.2338	100.0000	1.24E-03	3.73E-03	1.51E-02	3.36E-02	3.73E-03
CM-5/6	5386.000	2.000	1.000	1.000	19.8463	86.09000	1.44E-03	2.50E-03	6.66E-02	1.37E-01	2.50E-03
AM-241	5479.150	7.000	-1.465	7.000	3.0704	99.94000	-1.82E-03	4.40E-03	8.88E-03	2.11E-02	4.40E-03
CM-242	6102.000	0.000	0.000	0.000	4.3186	100.0000	0.00E+00	1.31E-03	1.25E-02	2.83E-02	1.31E-03
AM243	5270.000	845.000	842.000	3.000	1.7321	99.78000	1.05E+00	7.28E-02	5.02E-03	1.34E-02	3.63E-02
CM-247	4946.000	5.000	2.000	3.000	15.3366	79.30000	3.13E-03	4.44E-03	5.59E-02	1.16E-01	4.43E-03
CM-248	5078.600	9.000	9.000	0.000	22.1555	91.00000	1.23E-02	4.16E-03	7.04E-02	1.44E-01	4.10E-03

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of AM243 calculated as sqrt(BKG AREA)
NOTE: Corrections made to AM-241 net area due to tracer impurity



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

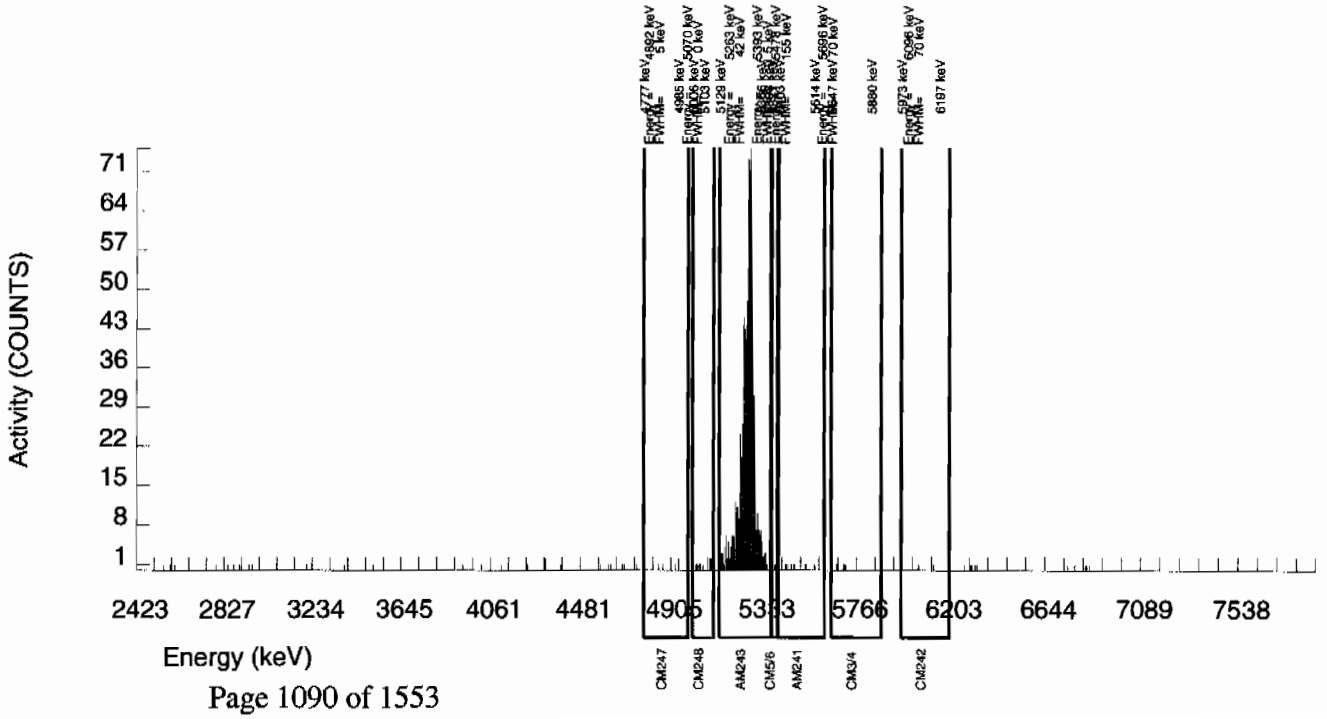
BATCH NUMBER: 940222 SAMPLE DATE : 5-JAN-2010 00:00:00.	SAMPLE ID : S0244125002_AM SAMPLE QTY: 1.259 G
DETECTOR NUMBER :67577 AVERAGE %EFFICIENCY :31.0633 % YIELD : 82.965	COUNT DATE:16-JAN-2010 11:30:05 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :JXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B ISOTOPE : AM-241 PCI/G : 3.316E+01	ID : 0244-B ISOTOPE : AM-241 PCI/G : 3.316E+01	ID : 445-96-2-SS ISOTOPE : AM243 NOMINAL : 2.91659 dpm RESULTS : 2.41975 dpm	LIB FILE : ENV_ALPHA_AM.N BKG FILE : B078.CNF;1006 BKG DATE : 10-JAN-2010 EFF FILE : W078.CNF;251 CAL DATE : 11-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
CM-3/4	5795.020	5.000	1.000	4.000	5.2338	100.0000	1.39E-03	4.17E-03	1.69E-02	3.76E-02	4.17E-03
CM-5/6	5386.000	1.000	1.000	0.000	19.8463	86.09000	1.61E-03	1.62E-03	7.45E-02	1.53E-01	1.61E-03
AM-241	5479.150	11.000	3.695	6.000	3.0704	99.94000	5.13E-03	5.51E-03	9.92E-03	2.36E-02	5.50E-03
CM-242	6102.000	2.000	1.000	1.000	4.3186	100.0000	1.46E-03	2.53E-03	1.39E-02	3.17E-02	2.53E-03
AM243	5270.000	752.000	750.000	2.000	1.4142	99.78000	1.04E+00	7.46E-02	4.58E-03	1.29E-02	3.82E-02
CM-247	4946.000	7.000	5.000	2.000	15.3366	79.30000	8.75E-03	5.28E-03	6.25E-02	1.30E-01	5.25E-03
CM-248	5078.600	12.000	11.000	1.000	22.1555	91.00000	1.68E-02	5.60E-03	7.86E-02	1.61E-01	5.50E-03

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of AM243 calculated as sqrt(BKG AREA)
NOTE: Corrections made to AM-241 net area due to tracer impurity



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 940222
SAMPLE DATE : 5-JAN-2010 00:00:00.

SAMPLE ID : S0244125003_AM
SAMPLE QTY: 1.266 G

DETECTOR NUMBER :79466
AVERAGE %EFFICIENCY :32.2835
% YIELD : 84.513

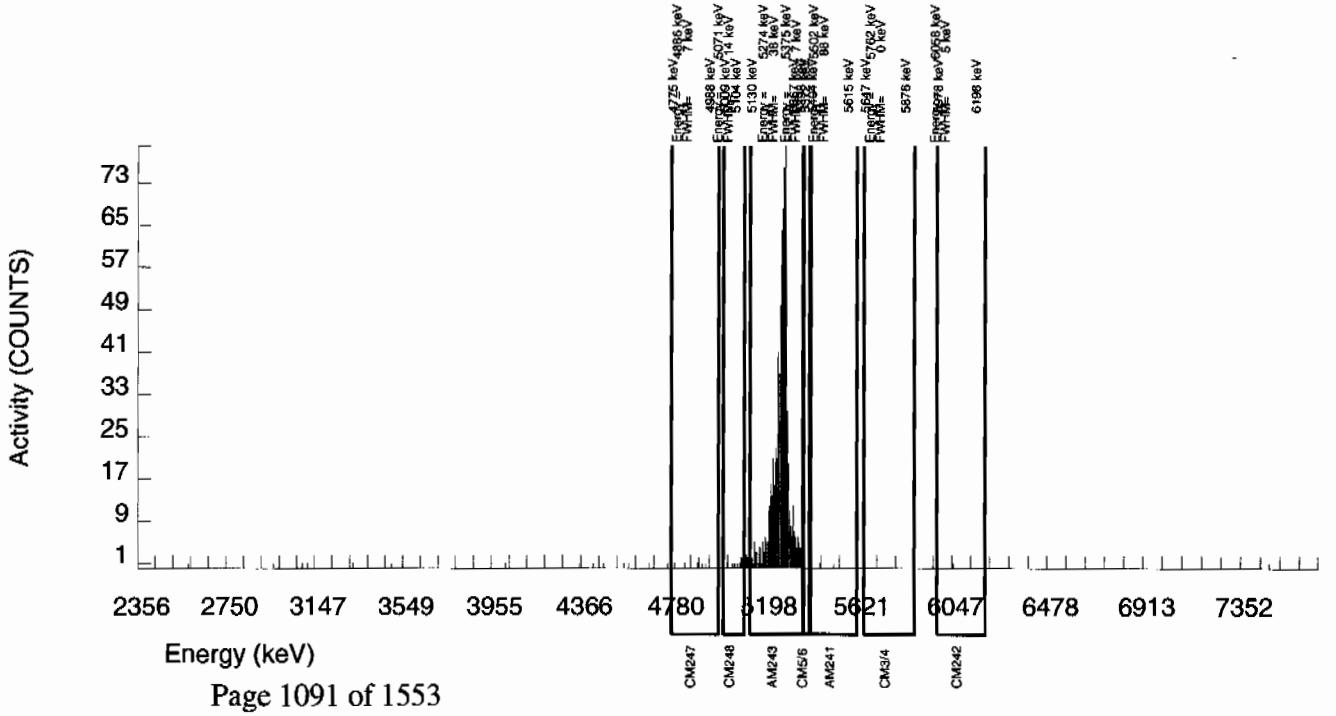
COUNT DATE:16-JAN-2010 11:30:05
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :JXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 445-96-2-SS	LIB FILE : ENV_ALPHA_AM.N
ISOTOPE : AM-241	ISOTOPE : AM-241	ISOTOPE : AM243	BKG FILE : B079.CNF;1008
PCI/G : 3.316E+01	PCI/G : 3.316E+01	NOMINAL : 2.91659 dpm	BKG DATE : 10-JAN-2010
		RESULTS : 2.46489 dpm	EFF FILE : W079.CNF;266
			CAL DATE : 11-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
CM-3/4	5795.020	0.000	-1.000	1.000	5.2338	100.0000	-1.31E-03	1.85E-03	1.59E-02	3.53E-02	1.85E-03
CM-5/6	5386.000	3.000	3.000	0.000	19.8463	86.09000	4.54E-03	2.64E-03	6.99E-02	1.44E-01	2.62E-03
AM-241	5479.150	3.000	1.618	0.000	3.0704	99.94000	2.11E-03	1.66E-03	9.32E-03	2.22E-02	1.66E-03
CM-242	6102.000	1.000	1.000	0.000	4.3186	100.0000	1.37E-03	1.37E-03	1.31E-02	2.97E-02	1.37E-03
AM243	5270.000	794.000	794.000	0.000	0.0000	99.78000	1.04E+00	7.30E-02	0.00E+00	3.54E-03	3.68E-02
CM-247	4946.000	7.000	7.000	0.000	15.3366	79.30000	1.15E-02	4.41E-03	5.87E-02	1.22E-01	4.35E-03
CM-248	5078.600	13.000	13.000	0.000	22.1555	91.00000	1.86E-02	5.29E-03	7.39E-02	1.52E-01	5.17E-03

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of AM243 calculated as sqrt(BKG AREA)
NOTE: Corrections made to AM-241 net area due to tracer impurity



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

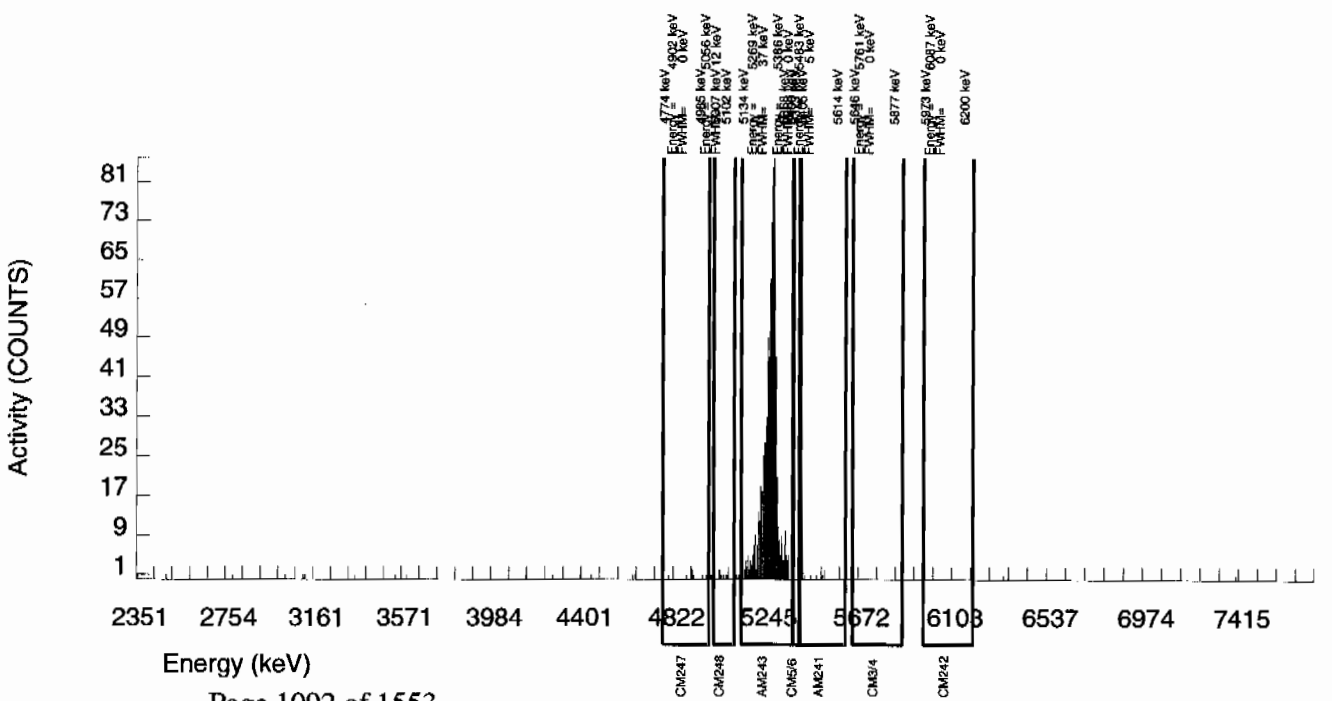
BATCH NUMBER: 940222 SAMPLE DATE : 5-JAN-2010 00:00:00.	SAMPLE ID : S0244125004_AM SAMPLE QTY: 1.281 G
DETECTOR NUMBER :78197 AVERAGE %EFFICIENCY :33.5773 % YIELD : 85.759	COUNT DATE:16-JAN-2010 11:30:05 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :JXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 445-96-2-SS	LIB FILE : ENV_ALPHA_AM.N
ISOTOPE : AM-241	ISOTOPE : AM-241	ISOTOPE : AM243	BKG FILE : B080.CNF;1009
PCI/G : 3.316E+01	PCI/G : 3.316E+01	NOMINAL : 2.91659 dpm	BKG DATE : 10-JAN-2010
		RESULTS : 2.50124 dpm	EFF FILE : W080.CNF;274
			CAL DATE : 11-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
CM-3/4	5795.020	0.000	0.000	0.000	5.2338	100.0000	0.00E+00	1.22E-03	1.49E-02	3.30E-02	1.22E-03
CM-5/6	5386.000	2.000	2.000	0.000	19.8463	86.09000	2.84E-03	2.01E-03	6.55E-02	1.35E-01	2.01E-03
AM-241	5479.150	8.000	6.542	0.000	3.0704	99.94000	7.99E-03	3.16E-03	8.73E-03	2.08E-02	3.13E-03
CM-242	6102.000	0.000	0.000	0.000	4.3186	100.0000	0.00E+00	1.29E-03	1.23E-02	2.78E-02	1.28E-03
AM243	5270.000	841.000	838.000	3.000	1.7321	99.78000	1.03E+00	7.13E-02	4.93E-03	1.32E-02	3.56E-02
CM-247	4946.000	11.000	11.000	0.000	15.3366	79.30000	1.69E-02	5.21E-03	5.49E-02	1.14E-01	5.11E-03
CM-248	5078.600	11.000	11.000	0.000	22.1555	91.00000	1.48E-02	4.54E-03	6.92E-02	1.42E-01	4.45E-03

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of AM243 calculated as sqrt(BKG AREA)
NOTE: Corrections made to AM-241 net area due to tracer impurity



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 940222
SAMPLE DATE : 13-JAN-2010 00:00:00

SAMPLE ID : S1202012011_AM
SAMPLE QTY: 1.000 G

DETECTOR NUMBER :33452
AVERAGE %EFFICIENCY :30.1337
% YIELD : 87.919

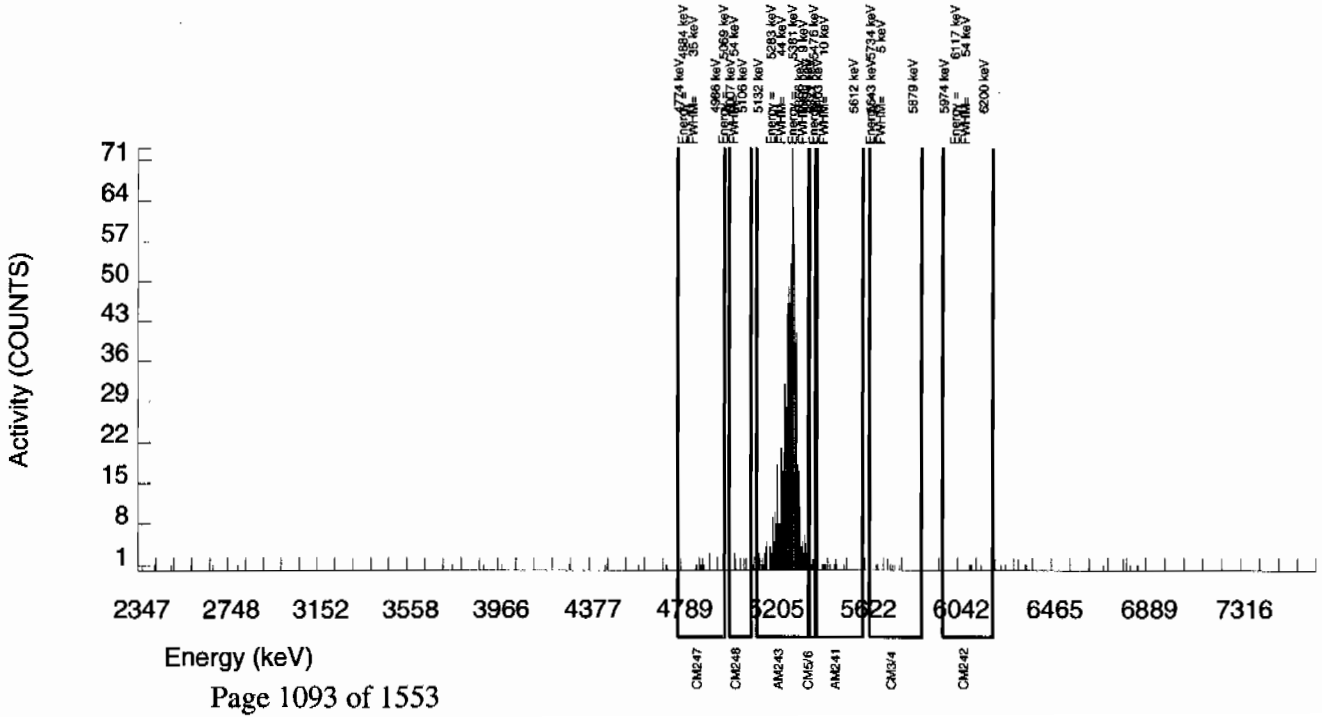
COUNT DATE:16-JAN-2010 11:30:10
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :JXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 445-96-2-SS	LIB FILE : ENV_ALPHA_AM.N
ISOTOPE : AM-241	ISOTOPE : AM-241	ISOTOPE : AM243	BKG FILE : B088.CNF;1008
PCI/G : 3.316E+01	PCI/G : 3.316E+01	NOMINAL : 2.91658 dpm	BKG DATE : 10-JAN-2010
		RESULTS : 2.56424 dpm	EFF FILE : W088.CNF;284
			CAL DATE : 11-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
CM-3/4	5795.020	8.000	0.000	8.000	5.2338	100.0000	-1.62E-09	6.80E-03	2.07E-02	4.60E-02	6.80E-03
CM-5/6	5386.000	15.000	14.000	1.000	19.8463	86.09000	2.76E-02	8.08E-03	9.12E-02	1.88E-01	7.90E-03
AM-241	5479.150	10.000	-3.342	12.000	3.0704	99.94000	-5.69E-03	7.73E-03	1.22E-02	2.89E-02	7.73E-03
CM-242	6102.000	4.000	4.000	0.000	4.3186	100.0000	6.91E-03	3.48E-03	1.71E-02	3.88E-02	3.46E-03
AM243	5270.000	776.000	771.000	5.000	2.2361	99.78000	1.31E+00	9.35E-02	8.86E-03	2.23E-02	4.76E-02
CM-247	4946.000	13.000	10.000	3.000	15.3366	79.30000	2.14E-02	8.68E-03	7.65E-02	1.59E-01	8.58E-03
CM-248	5078.600	10.000	9.000	1.000	22.1555	91.00000	1.68E-02	6.28E-03	9.63E-02	1.98E-01	6.20E-03

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of AM243 calculated as sqrt(BKG AREA)
NOTE: Corrections made to AM-241 net area due to tracer impurity



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

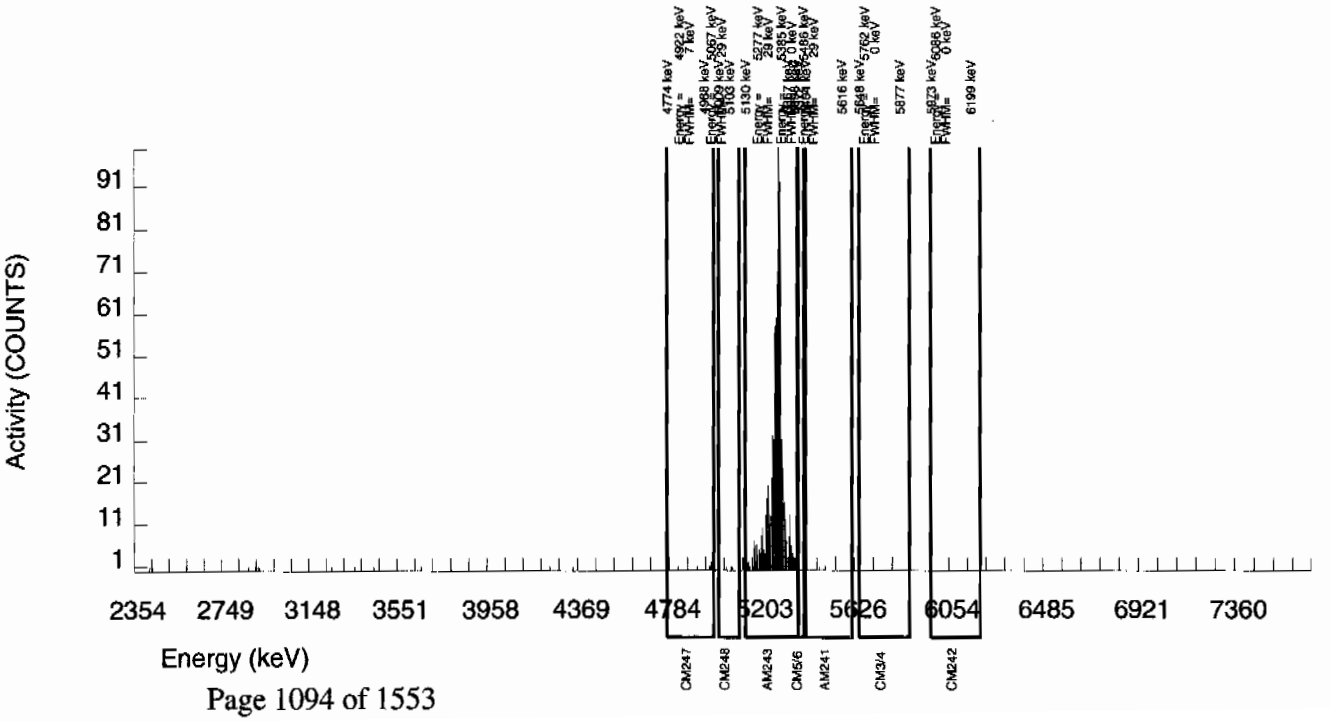
BATCH NUMBER: 940222 SAMPLE DATE : 5-JAN-2010 00:00:00.	SAMPLE ID : S1202012012_AM SAMPLE QTY: 1.250 G
DETECTOR NUMBER :78263 AVERAGE %EFFICIENCY :32.5470 % YIELD : 85.518	COUNT DATE:16-JAN-2010 11:30:14 ELAPSED LIVE TIME(SEC): 59999.99 ANALYST :JXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B ISOTOPE : AM-241 PCI/G : 3.316E+01	ID : 0244-B ISOTOPE : AM-241 PCI/G : 3.316E+01	ID : 445-96-2-SS ISOTOPE : AM243 NOMINAL : 2.91659 dpm RESULTS : 2.49420 dpm	LIB FILE : ENV_ALPHA_AM.N BKG FILE : B090.CNF;715 BKG DATE : 10-JAN-2010 EFF FILE : W090.CNF;199 CAL DATE : 11-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
CM-3/4	5795.020	0.000	-1.000	1.000	5.2338	100.0000	-1.30E-03	1.84E-03	1.58E-02	3.50E-02	1.83E-03
CM-5/6	5386.000	3.000	3.000	0.000	19.8463	86.09000	4.51E-03	2.62E-03	6.94E-02	1.43E-01	2.60E-03
AM-241	5479.150	2.000	-0.410	1.000	3.0704	99.94000	-5.31E-04	1.83E-03	9.25E-03	2.20E-02	1.83E-03
CM-242	6102.000	0.000	-1.000	1.000	4.3186	100.0000	-1.36E-03	1.93E-03	1.30E-02	2.95E-02	1.93E-03
AM243	5270.000	811.000	810.000	1.000	1.0000	99.78000	1.05E+00	7.51E-02	3.02E-03	9.55E-03	3.70E-02
CM-247	4946.000	7.000	7.000	0.000	15.3366	79.30000	1.14E-02	4.38E-03	5.83E-02	1.21E-01	4.32E-03
CM-248	5078.600	3.000	3.000	0.000	22.1555	91.00000	4.27E-03	2.48E-03	7.33E-02	1.51E-01	2.46E-03

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of AM243 calculated as sqrt(BKG AREA)
NOTE: Corrections made to AM-241 net area due to tracer impurity



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

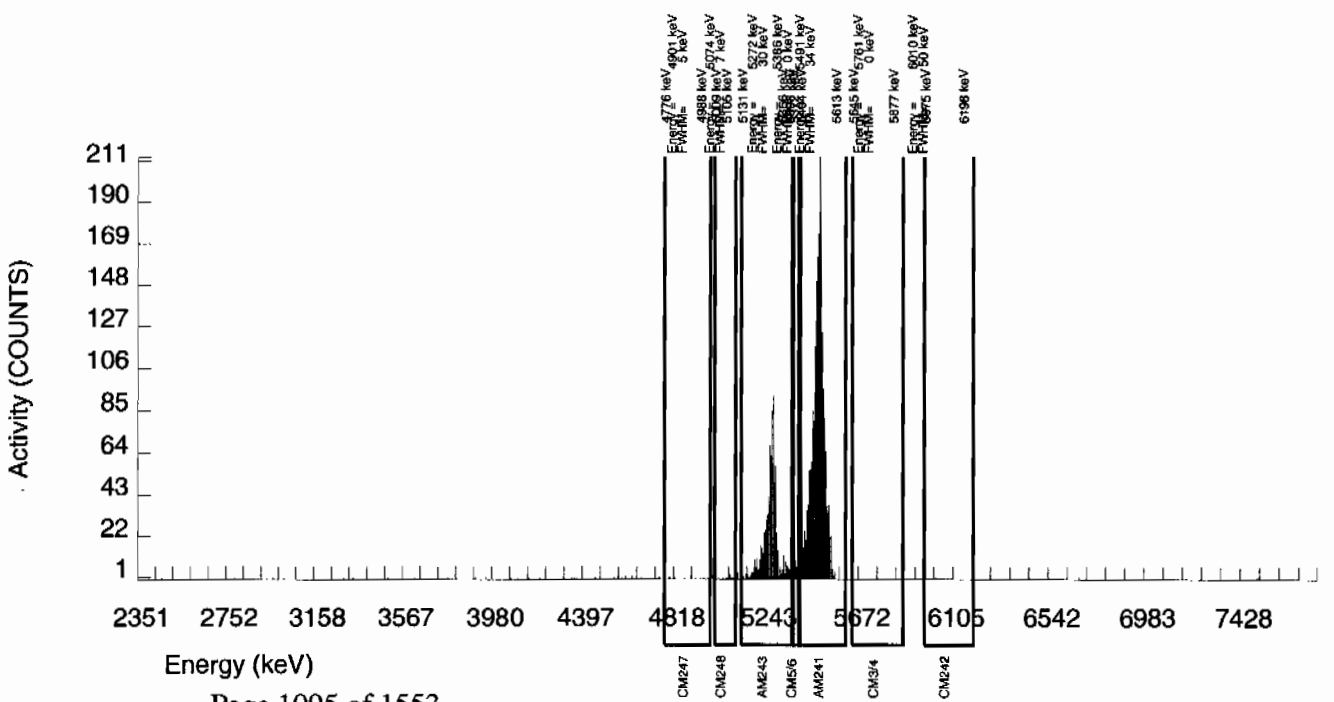
BATCH NUMBER: 940222 SAMPLE DATE : 13-JAN-2010 00:00:00	SAMPLE ID : S1202012013_AM SAMPLE QTY: 0.102 G
DETECTOR NUMBER :78262 AVERAGE %EFFICIENCY :29.3898 % YIELD : 92.834	COUNT DATE:16-JAN-2010 11:30:14 ELAPSED LIVE TIME(SEC): 59999.99 ANALYST :JXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 445-96-2-SS	LIB FILE : ENV_ALPHA_AM.N
ISOTOPE : AM-241	ISOTOPE : AM-241	ISOTOPE : AM243	BKG FILE : B089.CNF;705
PCI/G : 3.316E+01	PCI/G : 3.316E+01	NOMINAL : 2.91658 dpm	BKG DATE : 10-JAN-2010
		RESULTS : 2.70758 dpm	EFF FILE : W089.CNF;193
			CAL DATE : 11-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
CM-3/4	5795.020	0.000	0.000	0.000	5.2338	100.0000	0.00E+00	1.62E-02	1.97E-01	4.38E-01	1.62E-02
CM-5/6	5386.000	46.000	45.000	1.000	19.8463	86.09000	8.46E-01	1.41E-01	8.68E-01	1.79E+00	1.29E-01
AM-241	5479.150	2069.000	2066.618	1.000	3.0704	99.94000	3.35E+01	2.41E+00	1.16E-01	2.75E-01	7.37E-01
CM-242	6102.000	2.000	1.000	1.000	4.3186	100.0000	1.65E-02	2.85E-02	1.63E-01	3.69E-01	2.85E-02
AM243	5270.000	795.000	794.000	1.000	1.0000	99.78000	1.29E+01	9.94E-01	3.77E-02	1.19E-01	4.58E-01
CM-247	4946.000	11.000	11.000	0.000	15.3366	79.30000	2.25E-01	6.94E-02	7.28E-01	1.51E+00	6.77E-02
CM-248	5078.600	13.000	13.000	0.000	22.1555	91.00000	2.31E-01	6.61E-02	9.17E-01	1.88E+00	6.41E-02

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of AM243 calculated as sqrt(BKG AREA)
NOTE: Corrections made to AM-241 net area due to tracer impurity



Radiochemistry Batch Checklist, Rev10

Batch# 940223 Product: Pu Date: 1/18/10

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			N/A
Samples have been blank corrected (if required)	✓		
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.	✓		
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.			N/A
Smears Taken for Radioactive batches.			N/A
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.			N/A
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			N/A
Batch entered into Case Narrative.	✓		
Batch Data Exception Reports (DER) completed, if applicable.			N/A
Batch Data Exception Reports (DER) second reviewed and disposition verified to be completed.			N/A
Aliquot Correction completed if required.			N/A
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

RADchecklistrev10, revised 1/12/2010

Primary Review Performed By: Denise Green 1/18/10

Secondary Review Performed By: Jack McL 1/18/10

2/5

LANL

P

Plutonium Que Sheet

11-JAN-10

Batch #: 940223 **Analyst:** JXD2 **First Client Due Date:** 05-FEB-10 **Internal Due Date:** 25-JAN-10

Tracer Isotope(s): Pu-242/Pu-238 **Tracer Code:** 1374-A **Expiration Date:** 12/18/10 **Vol:** 0.1

LCS Isotope(s): Pu-239/Pu-238 **LCS Code:** — **Expiration Date:** — **Vol:** —

Spike Isotope(s): Pu-239/Pu-238 **Spike Code:** — **Expiration Date:** — **Vol:** —

Prep Date: 01/13/10 **Initials:** JXD **Pipet ID:** 2971058 **Balance ID:** 50410272 **Witness:** JXD 1/13/10

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/ Dry Aliquot (g/l / l)	Pu Det #
244125001-1	RE12-10-7698	SAMPLE		.05 pCi/g	SOIL	LANL010	05-JAN-10	1	1	1.253	47
244125002-1	RE12-10-7697	SAMPLE		.05 pCi/g	SOIL	LANL010	05-JAN-10	2	2	1.259	48
244125003-1	RE12-10-7704	SAMPLE		.05 pCi/g	SOIL	LANL010	05-JAN-10	3	3	1.266	65
244125004-1	RE12-10-7703	SAMPLE		.05 pCi/g	SOIL	LANL010	05-JAN-10	4	4	1.281	66
244137001-1	RE12-10-7859	SAMPLE		.05 pCi/g	SOIL	LANL010	04-JAN-10	5	5	1.272	67
244137002-1	RE12-10-7851	SAMPLE		.05 pCi/g	SOIL	LANL010	04-JAN-10	6	6	1.262	68
244137003-1	RE12-10-7852	SAMPLE		.05 pCi/g	SOIL	LANL010	04-JAN-10	7	7	1.284	69
244137004-1	RE12-10-7850	SAMPLE		.05 pCi/g	SOIL	LANL010	04-JAN-10	8	8	1.263	70
244137005-1	RE12-10-7853	SAMPLE		.05 pCi/g	SOIL	LANL010	04-JAN-10	9	9	1.282	71
244137006-1	RE12-10-7848	SAMPLE		.05 pCi/g	SOIL	LANL010	04-JAN-10	10	10	1.254	72
244137007-1	RE12-10-7849	SAMPLE		.05 pCi/g	SOIL	LANL010	04-JAN-10	11	11	1.251	73
1202012014-1	MB for batch 940223	MB		.05 pCi/g	SOIL	QC ACCOUNT		12	12	/	74
1202012015-1	RE12-10-7697(244125002DUP)	DUP		.05 pCi/g	SOIL	QC ACCOUNT	05-JAN-10	13	13	1.250	75
1202012016-1	LCS for batch 940223	LCS		.05 pCi/g	SOIL	QC ACCOUNT		14	14	0.102	76

* SRM: 0244-B exp 04/30/20 0.102 g

Choose SOP Used: GL-RAD-A-011, GL-RAD-A-036, GL-RAD-A-045, GL-RAD-A-043

Solid Sample Dissolution by: LEACH or DIGESTION (Circle One)

Data Reviewed By: 1/18/10

GEL Laboratories LLC, , Radiochemistry Division

SDM 1/18/10

Blank Correction Report

Batch ID 940223

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1202012015	DUP	Plutonium-238	1.25 g	0.00	0.00132	0.0218	.00136	pCi/g	YES
		Plutonium-239/240	1.25 g	0.0066	0.00297	0.025	.00408	pCi/g	YES
1202012016	LCS	Plutonium-238	0.102 g	8.00	0.618	0.291	.016666667	pCi/g	NO
		Plutonium-239/240	0.102 g	38.1	2.48	0.332	.05	pCi/g	NO
1202012014	MB	Plutonium-238	1.00 g	0.0017	0.0045	0.0281	.0017	pCi/g	YES
		Plutonium-239/240	1.00 g	0.0051	0.00511	0.0321	.0051	pCi/g	YES
244125001	RE12-10-7698	Plutonium-238	1.25 g	0.00	0.0052	0.0202	.00136	pCi/g	YES
		Plutonium-239/240	1.25 g	0.00368	0.00325	0.0232	.00408	pCi/g	YES
244125002	RE12-10-7697	Plutonium-238	1.26 g	0.00	0.00722	0.0234	.001349206	pCi/g	YES
		Plutonium-239/240	1.26 g	0.00142	0.00549	0.0268	.004047619	pCi/g	YES
244125003	RE12-10-7704	Plutonium-238	1.27 g	0.0167	0.00686	0.0229	.001338583	pCi/g	NO
		Plutonium-239/240	1.27 g	-0.00139	0.00368	0.0263	.004015748	pCi/g	YES
244125004	RE12-10-7703	Plutonium-238	1.28 g	0.00565	0.00774	0.0233	.001328125	pCi/g	YES
		Plutonium-239/240	1.28 g	0.0113	0.0045	0.0267	.003984375	pCi/g	YES
244137001	RE12-10-7859	Plutonium-238	1.27 g	0.00427	0.00588	0.0235	.001338583	pCi/g	YES
		Plutonium-239/240	1.27 g	0.00142	0.00247	0.0269	.004015748	pCi/g	YES
244137002	RE12-10-7851	Plutonium-238	1.26 g	0.00429	0.00248	0.0236	.001349206	pCi/g	YES
		Plutonium-239/240	1.26 g	0.00286	0.00404	0.027	.004047619	pCi/g	YES
244137003	RE12-10-7852	Plutonium-238	1.28 g	-3.24E-10	0.00272	0.0225	.001328125	pCi/g	YES
		Plutonium-239/240	1.28 g	0.0231	0.00635	0.0257	.003984375	pCi/g	NO
244137004	RE12-10-7850	Plutonium-238	1.26 g	-0.0118	0.00657	0.0217	.001349206	pCi/g	YES
		Plutonium-239/240	1.26 g	0.0105	0.00495	0.0248	.004047619	pCi/g	YES
244137005	RE12-10-7853	Plutonium-238	1.28 g	-0.00587	0.00689	0.0243	.001328125	pCi/g	YES
		Plutonium-239/240	1.28 g	0.00147	0.00328	0.0277	.003984375	pCi/g	YES
244137006	RE12-10-7848	Plutonium-238	1.25 g	0.00262	0.00693	0.0216	.00136	pCi/g	YES
		Plutonium-239/240	1.25 g	0.00393	0.00472	0.0247	.00408	pCi/g	YES
244137007	RE12-10-7849	Plutonium-238	1.25 g	0.0014	0.0014	0.0231	.00136	pCi/g	YES
		Plutonium-239/240	1.25 g	-0.0056	0.00396	0.0265	.00408	pCi/g	YES

JDM 1/18/10

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

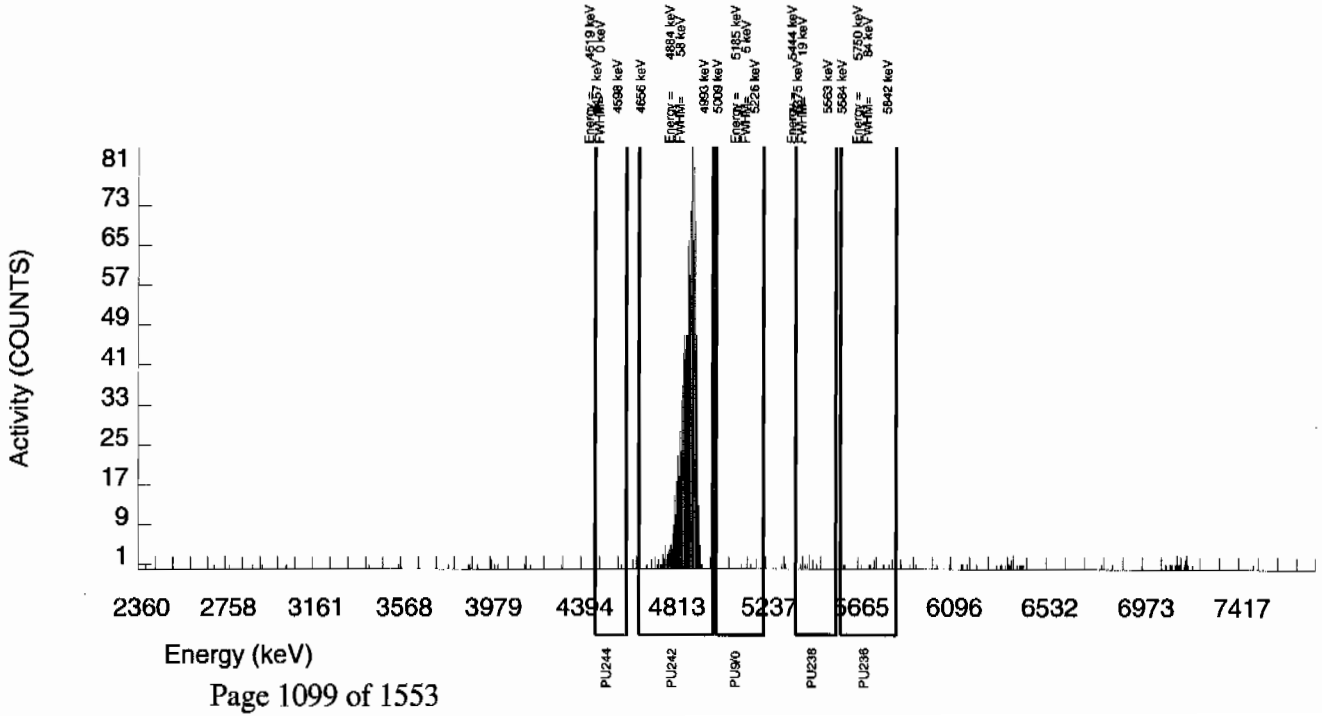
BATCH NUMBER: 940223 SAMPLE DATE : 5-JAN-2010 00:00:00.	SAMPLE ID : S0244125001_PU SAMPLE QTY: 1.253 G
DETECTOR NUMBER :46-089B1 AVERAGE %EFFICIENCY :34.5024 % YIELD : 85.099	COUNT DATE:16-JAN-2010 11:29:55 ELAPSED LIVE TIME(SEC): 59999.99 ANALYST :JXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1374-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B047.CNF;1101
PCI/G : 4.178E+01	PCI/G : 4.178E+01	NOMINAL : 3.38543 dpm	BKG DATE : 10-JAN-2010
		RESULTS : 2.88095 dpm	EFF FILE : W047.CNF;301
			CAL DATE : 4-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	5.000	3.000	2.000	3.4797	99.90000	3.68E-03	3.25E-03	9.92E-03	2.32E-02	3.24E-03
PU-236	5749.000	13.000	3.000	10.000	2.1286	100.0000	3.70E-03	5.92E-03	6.06E-03	1.54E-02	5.92E-03
PU-238	5499.000	9.000	0.000	9.000	2.9680	99.90000	0.00E+00	5.20E-03	8.46E-03	2.02E-02	5.20E-03
PU242	4890.000	997.000	994.000	3.000	1.7321	100.0000	1.22E+00	7.31E-02	4.93E-03	1.32E-02	3.87E-02
PU-244	4589.000	2.000	1.000	1.000	5.2050	99.90000	1.23E-03	2.12E-03	1.48E-02	3.30E-02	2.12E-03

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

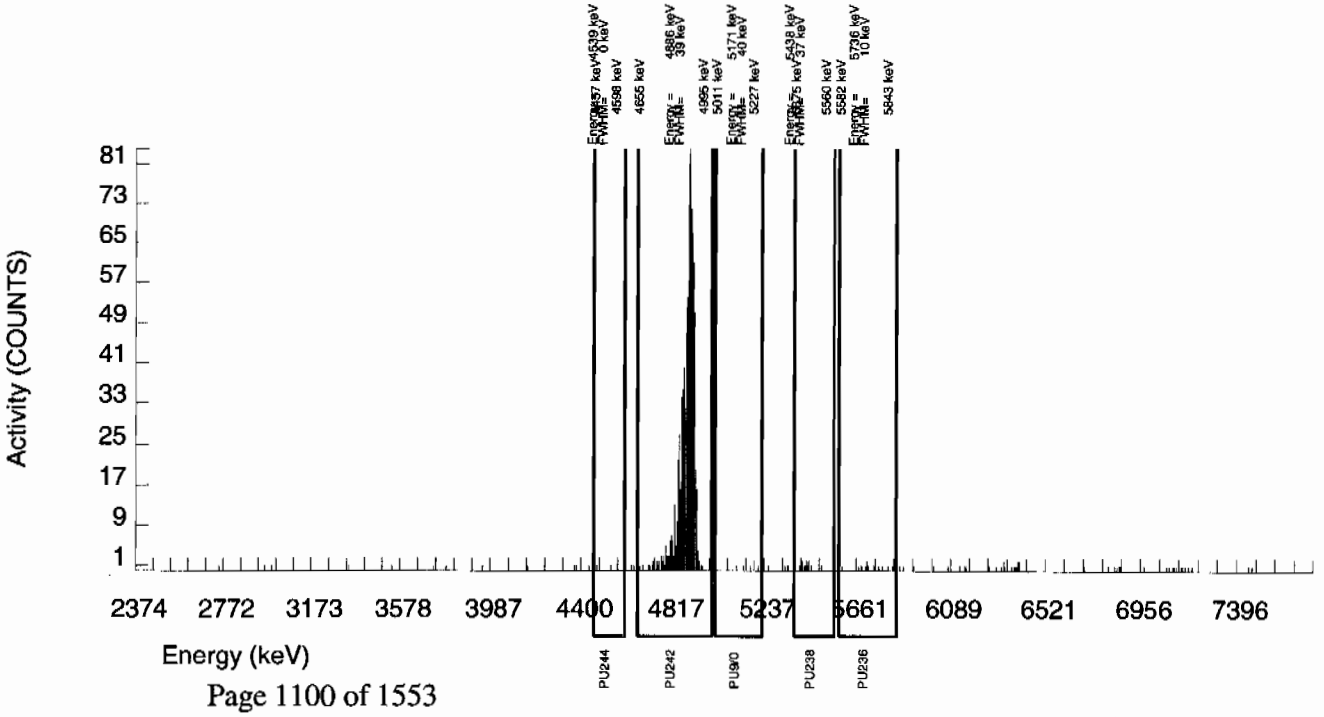
BATCH NUMBER: 940223 SAMPLE DATE : 5-JAN-2010 00:00:00.	SAMPLE ID : S0244125002_PU SAMPLE QTY: 1.259 G
DETECTOR NUMBER :42483 AVERAGE %EFFICIENCY :31.2622 % YIELD : 80.880	COUNT DATE:16-JAN-2010 11:29:55 ELAPSED LIVE TIME(SEC): 59999.99 ANALYST :JXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 4.178E+01	ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 4.178E+01	ID : 1374-A ISOTOPE : PU242 NOMINAL : 3.38543 dpm RESULTS : 2.73813 dpm	LIB FILE : ENV_ALPHA_PU.N BKG FILE : B048.CNF;1102 BKG DATE : 10-JAN-2010 EFF FILE : W048.CNF;314 CAL DATE : 4-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	8.000	1.000	7.000	3.4797	99.90000	1.42E-03	5.49E-03	1.15E-02	2.68E-02	5.49E-03
PU-236	5749.000	14.000	-1.000	15.000	2.1286	100.0000	-1.43E-03	7.68E-03	7.01E-03	1.78E-02	7.68E-03
PU-238	5499.000	13.000	0.000	13.000	2.9680	99.90000	0.00E+00	7.22E-03	9.78E-03	2.34E-02	7.22E-03
PU242	4890.000	859.000	856.000	3.000	1.7321	100.0000	1.21E+00	7.60E-02	5.70E-03	1.52E-02	4.15E-02
PU-244	4589.000	3.000	2.000	1.000	5.2050	99.90000	2.83E-03	2.84E-03	1.72E-02	3.81E-02	2.83E-03

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

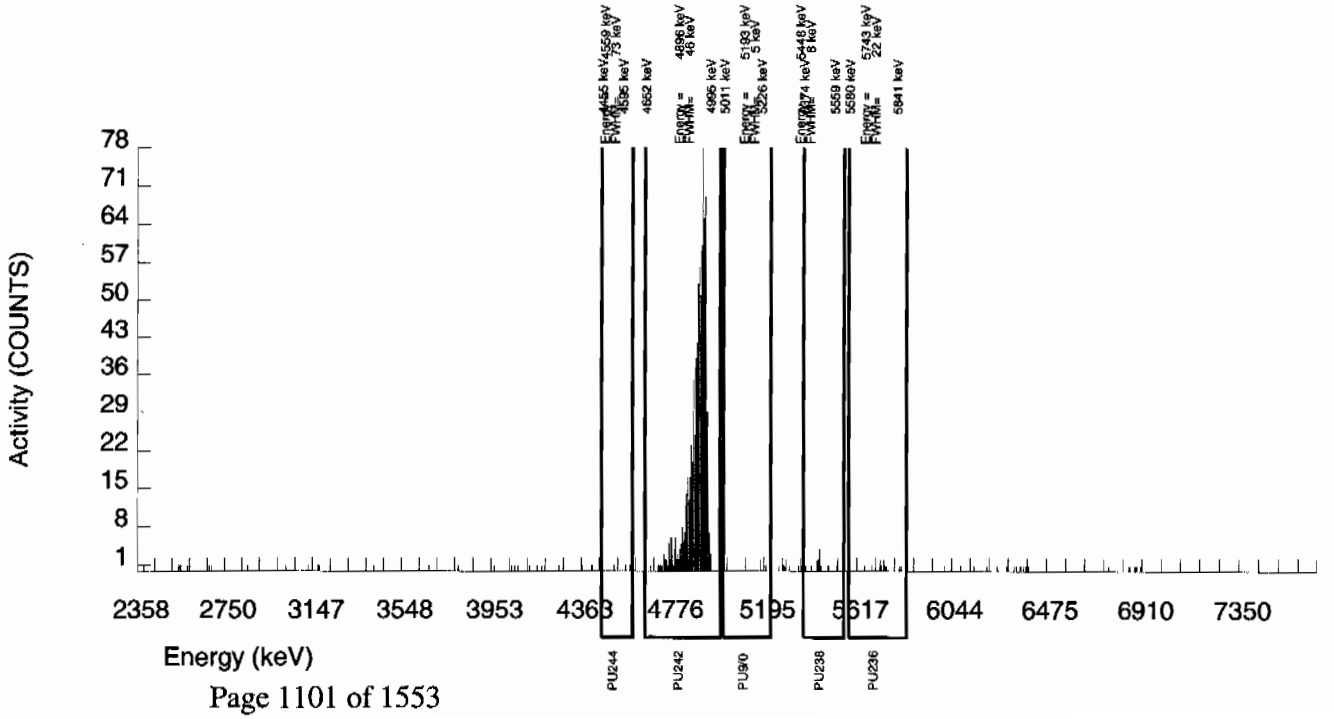
BATCH NUMBER: 940223 SAMPLE DATE : 5-JAN-2010 00:00:00.	SAMPLE ID : S0244125003_PU SAMPLE QTY: 1.266 G
DETECTOR NUMBER :68551 AVERAGE %EFFICIENCY :31.0643 % YIELD : 82.536	COUNT DATE:16-JAN-2010 11:29:57 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :JXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 4.178E+01	ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 4.178E+01	ID : 1374-A ISOTOPE : PU242 NOMINAL : 3.38543 dpm RESULTS : 2.79421 dpm	LIB FILE : ENV_ALPHA_PU.N BKG FILE : B065.CNF;1934 BKG DATE : 10-JAN-2010 EFF FILE : W065.CNF;305 CAL DATE : 11-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	3.000	-1.000	4.000	3.4797	99.90000	-1.39E-03	3.68E-03	1.12E-02	2.63E-02	3.68E-03
PU-236	5749.000	11.000	-2.000	13.000	2.1286	100.0000	-2.80E-03	6.85E-03	6.87E-03	1.75E-02	6.85E-03
PU-238	5499.000	18.000	12.000	6.000	2.9680	99.90000	1.67E-02	6.86E-03	9.59E-03	2.29E-02	6.81E-03
PU242	4890.000	870.000	868.000	2.000	1.4142	100.0000	1.20E+00	7.52E-02	4.57E-03	1.29E-02	4.10E-02
PU-244	4589.000	3.000	1.000	2.000	5.2050	99.90000	1.39E-03	3.11E-03	1.68E-02	3.74E-02	3.11E-03

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

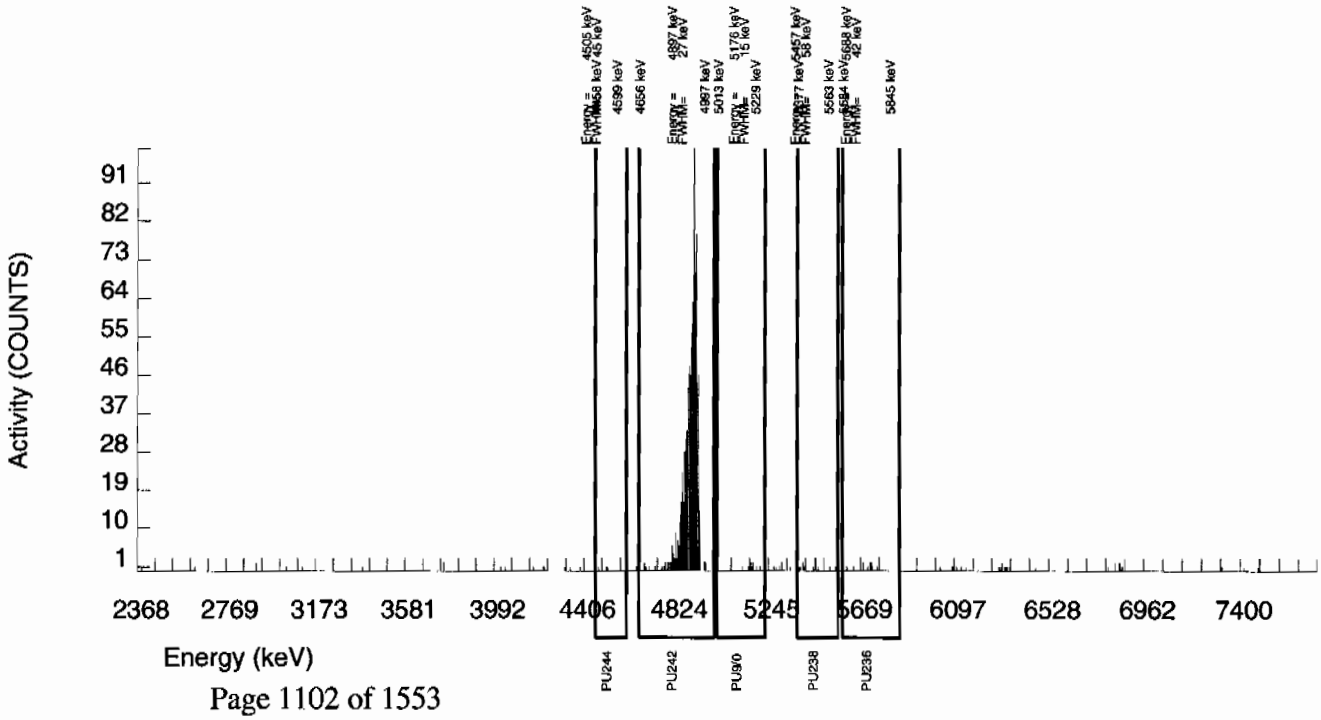
BATCH NUMBER: 940223 SAMPLE DATE : 5-JAN-2010 00:00:00.	SAMPLE ID : S0244125004_PU SAMPLE QTY: 1.281 G
DETECTOR NUMBER :46-089C1 AVERAGE %EFFICIENCY :31.1641 % YIELD : 79.997	COUNT DATE:16-JAN-2010 11:29:57 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :JXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 4.178E+01	ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 4.178E+01	ID : 1374-A ISOTOPE : PU242 NOMINAL : 3.38543 dpm RESULTS : 2.70825 dpm	LIB FILE : ENV_ALPHA_PU.N BKG FILE : B066.CNF;1095 BKG DATE : 10-JAN-2010 EFF FILE : W066.CNF;306 CAL DATE : 11-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	9.000	8.000	1.000	3.4797	99.90000	1.13E-02	4.50E-03	1.14E-02	2.67E-02	4.46E-03
PU-236	5749.000	13.000	6.000	7.000	2.1286	100.0000	8.53E-03	6.37E-03	6.98E-03	1.78E-02	6.36E-03
PU-238	5499.000	17.000	4.000	13.000	2.9680	99.90000	5.65E-03	7.74E-03	9.75E-03	2.33E-02	7.74E-03
PU242	4890.000	850.000	844.000	6.000	2.4495	100.0000	1.19E+00	7.51E-02	8.04E-03	1.99E-02	4.13E-02
PU-244	4589.000	3.000	3.000	0.000	5.2050	99.90000	4.24E-03	2.46E-03	1.71E-02	3.80E-02	2.45E-03

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

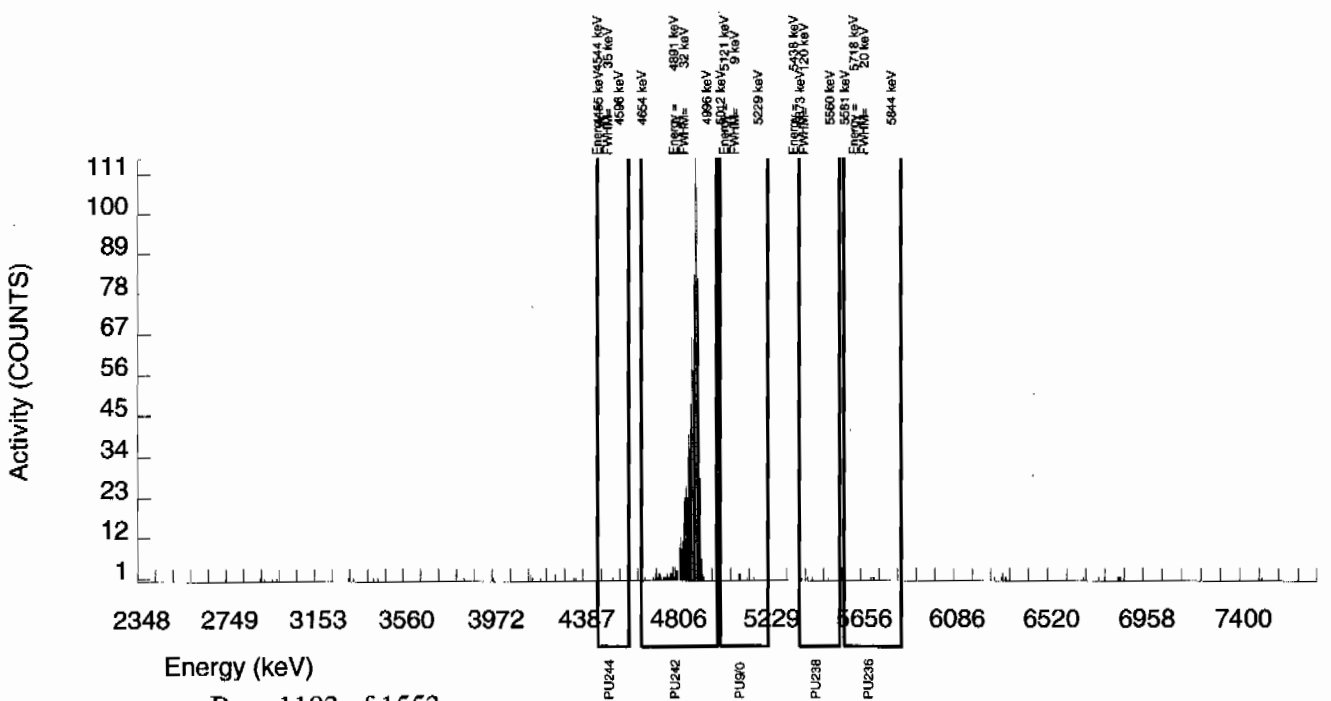
BATCH NUMBER: 940223 SAMPLE DATE : 13-JAN-2010 00:00:00	SAMPLE ID : S1202012014_PU SAMPLE QTY: 1.000 G
DETECTOR NUMBER :78266 AVERAGE %EFFICIENCY :31.6797 % YIELD : 83.730	COUNT DATE:16-JAN-2010 11:29:58 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :JXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 4.178E+01	ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 4.178E+01	ID : 1374-A ISOTOPE : PU242 NOMINAL : 3.38543 dpm RESULTS : 2.83462 dpm	LIB FILE : ENV_ALPHA_PU.N BKG FILE : B074.CNF;1113 BKG DATE : 10-JAN-2010 EFF FILE : W074.CNF;330 CAL DATE : 11-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	6.000	3.000	3.000	3.4797	99.90000	5.10E-03	5.11E-03	1.38E-02	3.21E-02	5.10E-03
PU-236	5749.000	3.000	1.000	2.000	2.1286	100.0000	1.70E-03	3.81E-03	8.41E-03	2.14E-02	3.81E-03
PU-238	5499.000	4.000	1.000	3.000	2.9680	99.90000	1.70E-03	4.50E-03	1.17E-02	2.81E-02	4.50E-03
PU242	4890.000	900.000	898.000	2.000	1.4142	100.0000	1.52E+00	9.42E-02	5.59E-03	1.58E-02	5.10E-02
PU-244	4589.000	2.000	1.000	1.000	5.2050	99.90000	1.70E-03	2.95E-03	2.06E-02	4.58E-02	2.94E-03

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

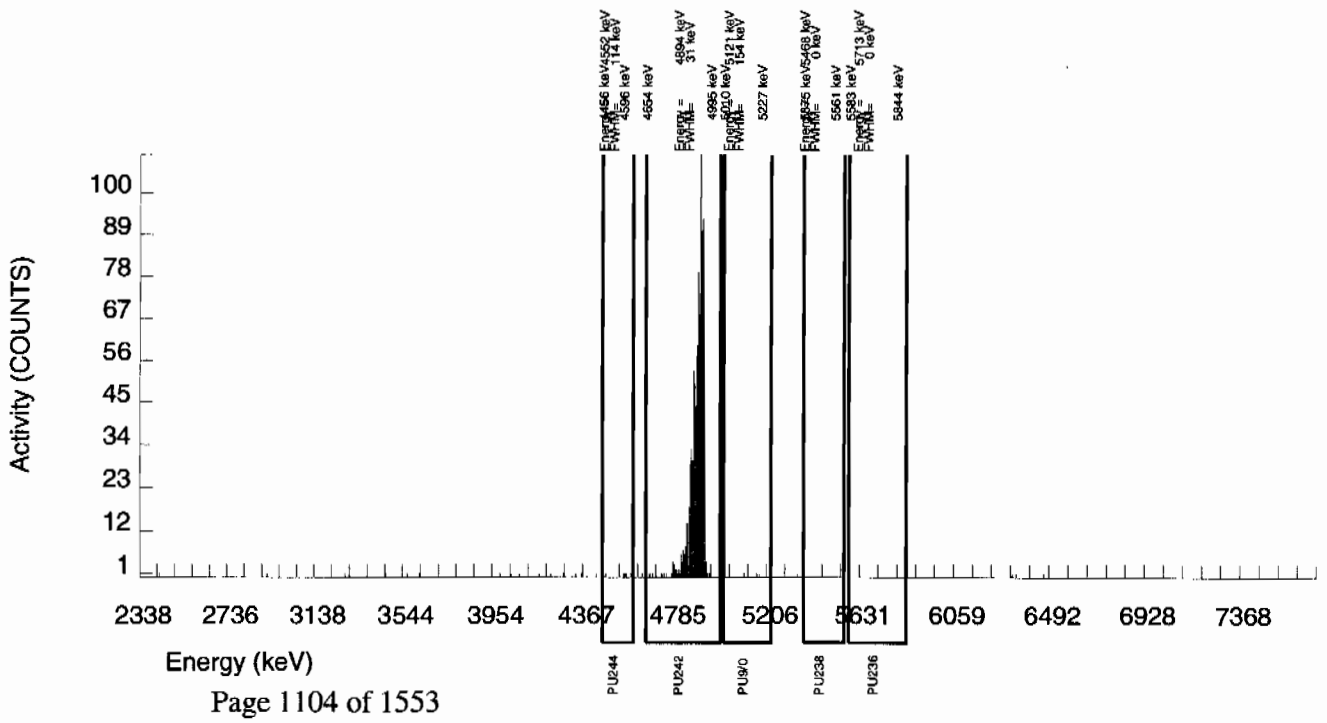
BATCH NUMBER: 940223 SAMPLE DATE : 5-JAN-2010 00:00:00.	SAMPLE ID : S1202012015_PU SAMPLE QTY: 1.250 G
DETECTOR NUMBER :80010 AVERAGE %EFFICIENCY :30.2754 % YIELD : 90.248	COUNT DATE:16-JAN-2010 11:29:58 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :JXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 4.178E+01	ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 4.178E+01	ID : 1374-A ISOTOPE : PU242 NOMINAL : 3.38543 dpm RESULTS : 3.05528 dpm	LIB FILE : ENV_ALPHA_PU.N BKG FILE : B075.CNF;1094 BKG DATE : 10-JAN-2010 EFF FILE : W075.CNF;288 CAL DATE : 12-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	5.000	5.000	0.000	3.4797	99.90000	6.60E-03	2.97E-03	1.07E-02	2.50E-02	2.95E-03
PU-236	5749.000	0.000	0.000	0.000	2.1286	100.0000	0.00E+00	1.33E-03	6.53E-03	1.66E-02	1.33E-03
PU-238	5499.000	0.000	0.000	0.000	2.9680	99.90000	0.00E+00	1.32E-03	9.12E-03	2.18E-02	1.32E-03
PU242	4890.000	925.000	925.000	0.000	0.0000	100.0000	1.22E+00	7.46E-02	0.00E+00	3.57E-03	4.01E-02
PU-244	4589.000	5.000	5.000	0.000	5.2050	99.90000	6.60E-03	2.97E-03	1.60E-02	3.56E-02	2.95E-03

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

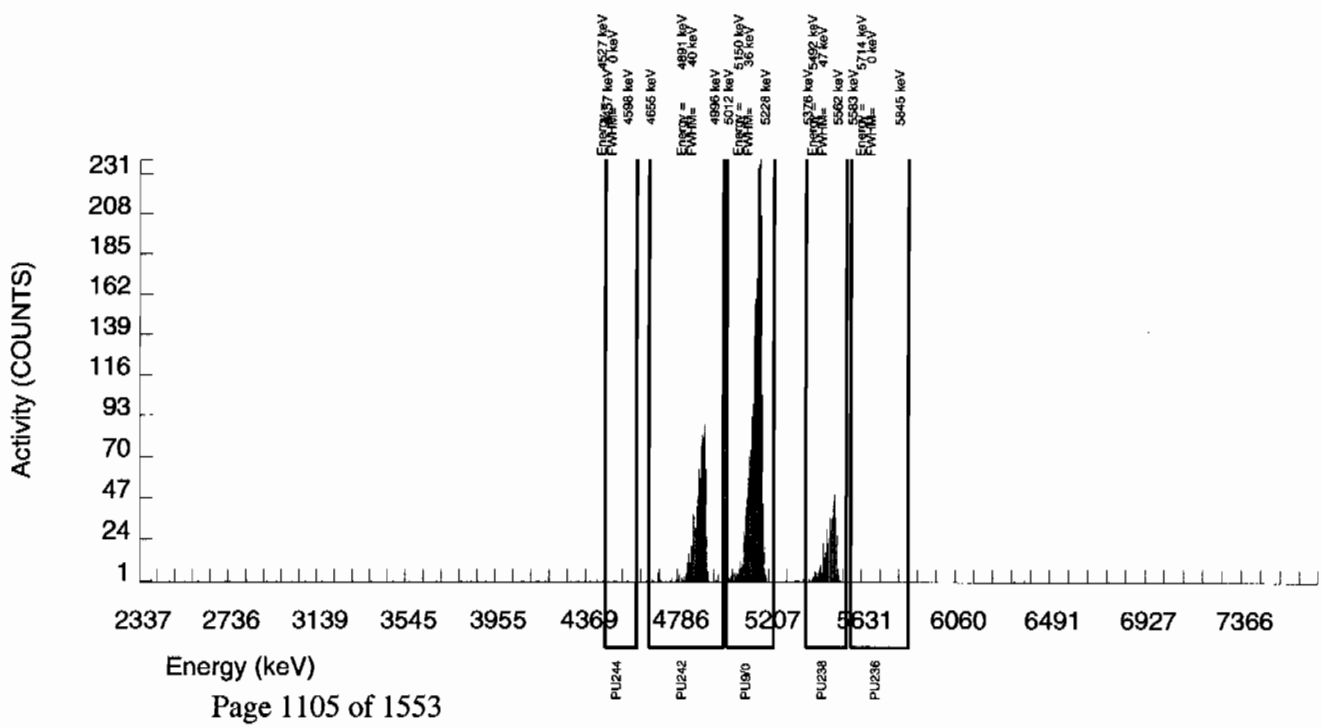
BATCH NUMBER: 940223 SAMPLE DATE : 13-JAN-2010 00:00:00	SAMPLE ID : S1202012016_PU SAMPLE QTY: 0.102 G
DETECTOR NUMBER :78779 AVERAGE %EFFICIENCY :30.8747 % YIELD : 81.417	COUNT DATE:16-JAN-2010 11:29:58 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :JXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 4.178E+01	ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 4.178E+01	ID : 1374-A ISOTOPE : PU242 NOMINAL : 3.38543 dpm RESULTS : 2.75630 dpm	LIB FILE : ENV_ALPHA_PU.N BKG FILE : B076.CNF;1097 BKG DATE : 10-JAN-2010 EFF FILE : W076.CNF;293 CAL DATE : 11-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	2170.000	2169.000	1.000	3.4797	99.90000	3.81E+01	2.48E+00	1.42E-01	3.32E-01	8.19E-01
PU-236	5749.000	0.000	0.000	0.000	2.1286	100.0000	0.00E+00	1.76E-02	8.70E-02	2.22E-01	1.76E-02
PU-238	5499.000	455.000	455.000	0.000	2.9680	99.90000	8.00E+00	6.18E-01	1.21E-01	2.91E-01	3.75E-01
PU242	4890.000	859.000	851.000	8.000	2.8284	100.0000	1.50E+01	1.05E+00	1.16E-01	2.79E-01	5.17E-01
PU-244	4589.000	7.000	7.000	0.000	5.2050	99.90000	1.23E-01	4.71E-02	2.13E-01	4.74E-01	4.65E-02

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)



Radiochemistry Batch Checklist, Rev10

Batch# 940225 Product: U Date: 1/20/10

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			N/A
Samples have been blank corrected (if required)	✓		
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.	✓		
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.			N/A
Smears Taken for Radioactive batches.			N/A
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.			N/A
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			N/A
Batch entered into Case Narrative.	✓		
Batch Data Exception Reports (DER) completed, if applicable.			N/A
Batch Data Exception Reports (DER) second reviewed and disposition verified to be completed.			N/A
Aliquot Correction completed if required.			N/A
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

RADchecklistrev10, revised 1/13/2010

Primary Review Performed By: Denise Green 1/20/10

Secondary Review Performed By: [signature] 1/20/10

2/5

LANL

Uranium Que Sheet

11-JAN-10

Batch #: 940225 **Analyst:** JXD2 **First Client Due Date:** 05-FEB-10 **Internal Due Date:** 25-JAN-10

Tracer Isotope: U-232/U-236 **Tracer Code:** 1283-H **Expiration Date:** 12/09/10 **Vol:** 0.1
LCS Isotope: U-238 **LCS Code:** — **Expiration Date:** — **Vol:** —
Spike Isotope: U-238 **Spike Code:** — **Expiration Date:** — **Vol:** —
Prep Date: 01/11/10 **Initials:** JXD **Pipet ID:** 29710058 **Balance ID:** 50410272 **Witness:** [illegible] 1/13/10

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry Aliquot (g/1/1)	U Det #
244125001-1	RE12-10-7698	SAMPLE		.1 pCi/g	SOIL	LANL010	05-JAN-10	1	1	~~0.532~~ 0.532 1/13/10	159
244125002-1	RE12-10-7697	SAMPLE		.1 pCi/g	SOIL	LANL010	05-JAN-10	2	2	0.517	160
244125003-1	RE12-10-7704	SAMPLE		.1 pCi/g	SOIL	LANL010	05-JAN-10	3	3	0.546	162
244125004-1	RE12-10-7703	SAMPLE		.1 pCi/g	SOIL	LANL010	05-JAN-10	4	4	0.515	163
244137001-1	RE12-10-7859	SAMPLE		.1 pCi/g	SOIL	LANL010	04-JAN-10	5	5	0.545	~~164~~ 164
244137002-1	RE12-10-7851	SAMPLE		.1 pCi/g	SOIL	LANL010	04-JAN-10	6	6	0.512	165
244137003-1	RE12-10-7852	SAMPLE		.1 pCi/g	SOIL	LANL010	04-JAN-10	7	7	0.519	166
244137004-1	RE12-10-7850	SAMPLE		.1 pCi/g	SOIL	LANL010	04-JAN-10	8	8	0.532	167
244137005-1	RE12-10-7853	SAMPLE		.1 pCi/g	SOIL	LANL010	04-JAN-10	9	9	0.510	168
244137006-1	RE12-10-7848	SAMPLE		.1 pCi/g	SOIL	LANL010	04-JAN-10	10	10	0.529	169
244137007-1	RE12-10-7849	SAMPLE		.1 pCi/g	SOIL	LANL010	04-JAN-10	11	11	0.550	170
1202012017-1	MB for batch 940225	MB		.1 pCi/g	SOIL	QC ACCOUNT		12	12	1	171
1202012018-1	RE12-10-7697(244125002DUP)	DUP		.1 pCi/g	SOIL	QC ACCOUNT	05-JAN-10	13	13	0.527	172
1202012019-1	LCS for batch 940225	LCS		.1 pCi/g	SOIL	QC ACCOUNT		14	14	0.102	161

* SRM: 0244-A exp. 10/31/20 0.102g

Choose SOP used: GL-RAD-A-011

Solid Sample Dissolution by: LEACH or DIGESTION (Circle One)

Data Reviewed By: [illegible] 1/20/10

Blank Correction Report

Batch ID 940225

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1202012018	DUP	Uranium-233/234	0.527 g	1.14	0.100	0.101	.018178368	pCi/g	NO
		Uranium-235/236	0.527 g	0.089	0.020	0.063	.009089184	pCi/g	NO
		Uranium-238	0.527 g	1.24	0.108	0.0588	.012258065	pCi/g	NO
1202012019	LCS	Uranium-233/234	0.102 g	5.86	0.534	0.461	.093921569	pCi/g	NO
		Uranium-235/236	0.102 g	0.496	0.103	0.286	.046960784	pCi/g	NO
		Uranium-238	0.102 g	5.47	0.504	0.267	.063333333	pCi/g	NO
1202012017	MB	Uranium-233/234	1.00 g	0.00958	0.00602	0.0401	.00958	pCi/g	YES
		Uranium-235/236	1.00 g	0.00479	0.00424	0.0249	.00479	pCi/g	YES
		Uranium-238	1.00 g	0.00646	0.0039	0.0232	.00646	pCi/g	YES
244125001	RE12-10-7698	Uranium-233/234	0.532 g	0.941	0.0899	0.117	.018007519	pCi/g	NO
		Uranium-235/236	0.532 g	0.0465	0.0165	0.0724	.009003759	pCi/g	NO
		Uranium-238	0.532 g	0.805	0.0796	0.0677	.012142857	pCi/g	NO
244125002	RE12-10-7697	Uranium-233/234	0.517 g	1.20	0.117	0.153	.018529981	pCi/g	NO
		Uranium-235/236	0.517 g	0.0793	0.0227	0.0949	.009264990	pCi/g	NO
		Uranium-238	0.517 g	1.32	0.125	0.0887	.012495164	pCi/g	NO
244125003	RE12-10-7704	Uranium-233/234	0.546 g	1.12	0.0945	0.0821	.017545788	pCi/g	NO
		Uranium-235/236	0.546 g	0.0852	0.0183	0.051	.008772894	pCi/g	NO
		Uranium-238	0.546 g	1.15	0.0969	0.0476	.011831502	pCi/g	NO
244125004	RE12-10-7703	Uranium-233/234	0.515 g	1.82	0.148	0.0976	.018601942	pCi/g	NO
		Uranium-235/236	0.515 g	0.132	0.0251	0.0606	.009300971	pCi/g	NO
		Uranium-238	0.515 g	2.02	0.162	0.0566	.012543689	pCi/g	NO
244137001	RE12-10-7859	Uranium-233/234	0.545 g	1.11	0.0997	0.104	.017577982	pCi/g	NO
		Uranium-235/236	0.545 g	0.121	0.0239	0.0647	.008788991	pCi/g	NO
		Uranium-238	0.545 g	1.26	0.110	0.0604	.011853211	pCi/g	NO
244137002	RE12-10-7851	Uranium-233/234	0.512 g	1.31	0.110	0.0907	.018710938	pCi/g	NO
		Uranium-235/236	0.512 g	0.0904	0.0198	0.0563	.009355469	pCi/g	NO
		Uranium-238	0.512 g	1.14	0.098	0.0526	.012617188	pCi/g	NO
244137003	RE12-10-7852	Uranium-233/234	0.519 g	1.47	0.125	0.106	.018458574	pCi/g	NO
		Uranium-235/236	0.519 g	0.123	0.0251	0.0659	.009229287	pCi/g	NO
		Uranium-238	0.519 g	1.55	0.131	0.0616	.012447013	pCi/g	NO
244137004	RE12-10-7850	Uranium-233/234	0.532 g	1.63	0.133	0.0922	.018007519	pCi/g	NO
		Uranium-235/236	0.532 g	0.154	0.0266	0.0572	.009003759	pCi/g	NO
		Uranium-238	0.532 g	1.78	0.144	0.0535	.012142857	pCi/g	NO
244137005	RE12-10-7853	Uranium-233/234	0.510 g	1.11	0.096	0.0921	.018784314	pCi/g	NO
		Uranium-235/236	0.510 g	0.106	0.0217	0.0572	.009392157	pCi/g	NO
		Uranium-238	0.510 g	1.11	0.0958	0.0534	.012666667	pCi/g	NO
244137006	RE12-10-7848	Uranium-233/234	0.529 g	1.34	0.115	0.101	.018109641	pCi/g	NO
		Uranium-235/236	0.529 g	0.105	0.0218	0.0627	.009054820	pCi/g	NO
		Uranium-238	0.529 g	1.42	0.121	0.0586	.012211720	pCi/g	NO
244137007	RE12-10-7849	Uranium-233/234	0.550 g	1.06	0.0917	0.0883	.017418182	pCi/g	NO
		Uranium-235/236	0.550 g	0.0669	0.016	0.0548	.008709091	pCi/g	NO

Blank Correction Report

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
244137007	RE12-10-7849	Uranium-238	0.550 g	1.04	0.0903	0.0512	.011745455	pCi/g	NO

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 940225
SAMPLE DATE : 5-JAN-2010 00:00:00.

SAMPLE ID : S0244125001_UU
SAMPLE QTY: 0.532 G

DETECTOR NUMBER :76225
AVERAGE %EFFICIENCY :25.0212
% YIELD : 89.913

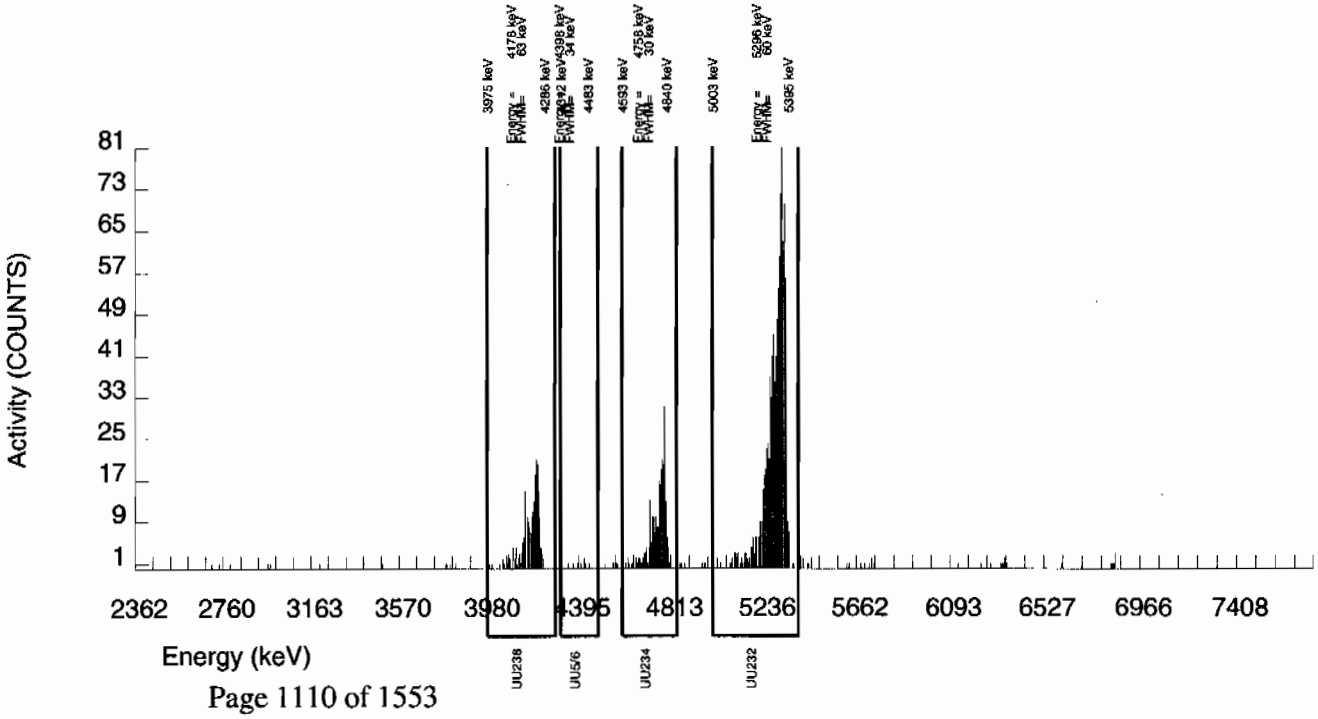
COUNT DATE:19-JAN-2010 10:47:50
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :JXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-H	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B159.CNF;365
PCI/G : 5.750E+00	PCI/G : 5.750E+00	NOMINAL : 4.50902 dpm	BKG DATE : 17-JAN-2010
		RESULTS : 4.05421 dpm	EFF FILE : W159.CNF;104
			CAL DATE : 18-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	253.000	249.975	2.000	6.0782	100.0000	9.41E-01	8.99E-02	5.32E-02	1.17E-01	6.00E-02
U232	5302.100	1018.000	1014.000	4.000	2.0000	100.0000	3.82E+00	2.97E-01	1.75E-02	4.52E-02	1.20E-01
U-235	4391.000	11.000	10.000	1.000	2.7628	80.90000	4.65E-02	1.65E-02	2.99E-02	7.24E-02	1.61E-02
U-238	4184.730	215.000	214.000	1.000	3.2810	100.0000	8.05E-01	7.96E-02	2.87E-02	6.77E-02	5.53E-02

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

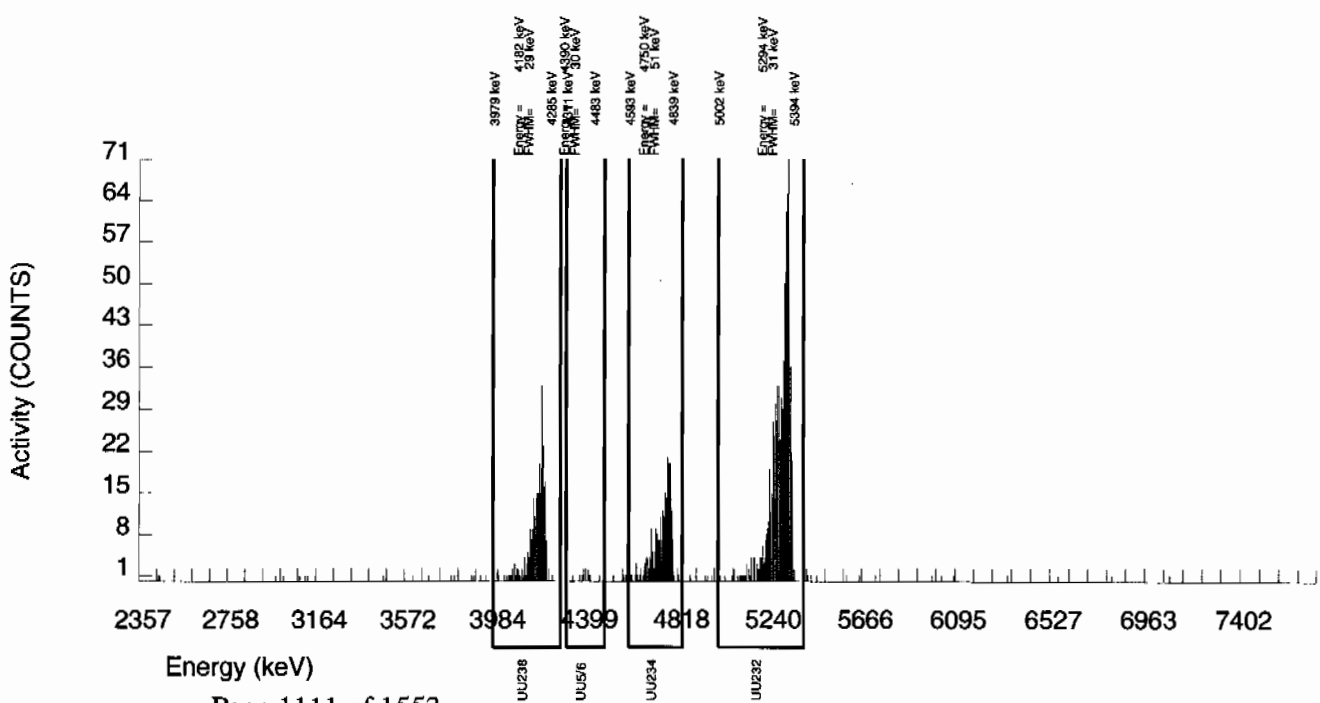
BATCH NUMBER: 940225 SAMPLE DATE : 5-JAN-2010 00:00:00.	SAMPLE ID : S0244125002_UU SAMPLE QTY: 0.517 G
DETECTOR NUMBER :79994 AVERAGE %EFFICIENCY :24.5767 % YIELD : 71.859	COUNT DATE:19-JAN-2010 10:47:52 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :JXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A ISOTOPE : U-238 PCI/G : 5.750E+00	ID : 0244-A ISOTOPE : U-238 PCI/G : 5.750E+00	ID : 1283-H ISOTOPE : U232 NOMINAL : 4.50902 dpm RESULTS : 3.24016 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B160.CNF;367 BKG DATE : 17-JAN-2010 EFF FILE : W160.CNF;116 CAL DATE : 18-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	246.000	244.195	1.000	6.0782	100.0000	1.20E+00	1.17E-01	6.98E-02	1.53E-01	7.74E-02
U232	5302.100	797.000	796.000	1.000	1.0000	100.0000	3.93E+00	3.19E-01	1.15E-02	3.63E-02	1.39E-01
U-235	4391.000	13.000	13.000	0.000	2.7628	80.90000	7.93E-02	2.27E-02	3.92E-02	9.49E-02	2.20E-02
U-238	4184.730	267.000	267.000	0.000	3.2810	100.0000	1.32E+00	1.25E-01	3.77E-02	8.87E-02	8.06E-02

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

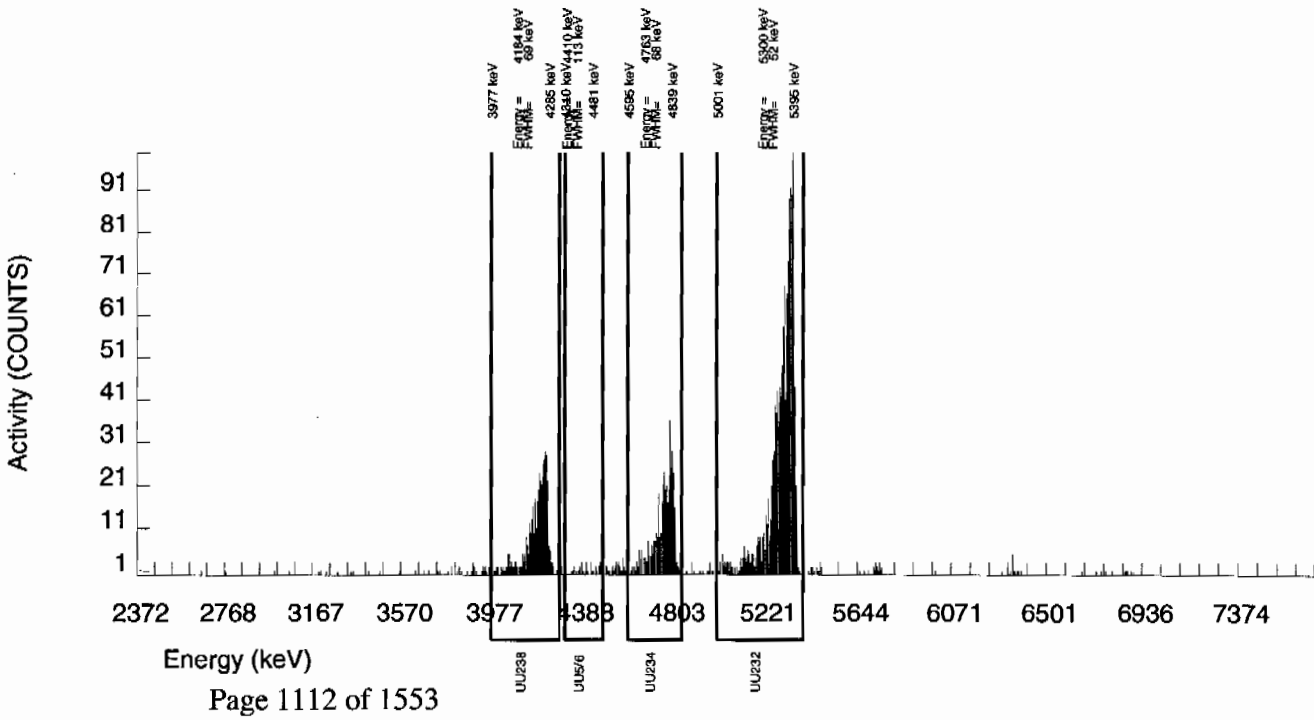
BATCH NUMBER: 940225 SAMPLE DATE : 5-JAN-2010 00:00:00.	SAMPLE ID : S0244125003_UU SAMPLE QTY: 0.546 G
DETECTOR NUMBER :70323 AVERAGE %EFFICIENCY :36.9748 % YIELD : 84.187	COUNT DATE:19-JAN-2010 09:35:10 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :JXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A ISOTOPE : U-238 PCI/G : 5.750E+00	ID : 0244-A ISOTOPE : U-238 PCI/G : 5.750E+00	ID : 1283-H ISOTOPE : U232 NOMINAL : 4.50902 dpm RESULTS : 3.79601 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B162.CNF;162 BKG DATE : 17-JAN-2010 EFF FILE : W162.CNF;63 CAL DATE : 22-DEC-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	424.000	422.581	0.000	6.0782	100.0000	1.12E+00	9.45E-02	3.75E-02	8.21E-02	5.45E-02
U232	5302.100	1409.000	1403.000	6.000	2.4495	100.0000	3.72E+00	2.75E-01	1.51E-02	3.74E-02	9.97E-02
U-235	4391.000	27.000	26.000	1.000	2.7628	80.90000	8.52E-02	1.83E-02	2.11E-02	5.10E-02	1.73E-02
U-238	4184.730	435.000	435.000	0.000	3.2810	100.0000	1.15E+00	9.69E-02	2.02E-02	4.76E-02	5.53E-02

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

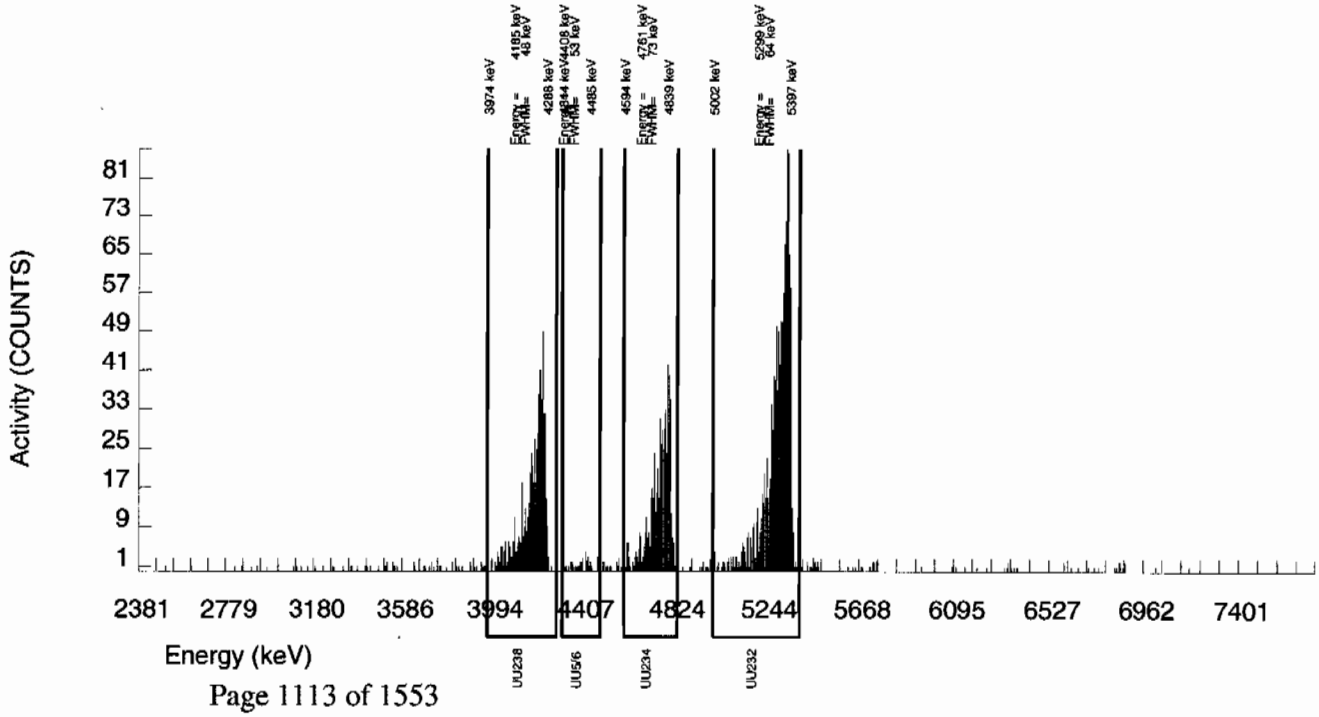
BATCH NUMBER: 940225 SAMPLE DATE : 5-JAN-2010 00:00:00.	SAMPLE ID : S0244125004_UU SAMPLE QTY: 0.515 G
DETECTOR NUMBER :70324 AVERAGE %EFFICIENCY :37.7750 % YIELD : 73.535	COUNT DATE:19-JAN-2010 09:35:13 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :JXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A ISOTOPE : U-238 PCI/G : 5.750E+00	ID : 0244-A ISOTOPE : U-238 PCI/G : 5.750E+00	ID : 1283-H ISOTOPE : U232 NOMINAL : 4.50902 dpm RESULTS : 3.31571 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B163.CNF;163 BKG DATE : 17-JAN-2010 EFF FILE : W163.CNF;52 CAL DATE : 21-DEC-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	580.000	576.734	2.000	6.0782	100.0000	1.82E+00	1.48E-01	4.45E-02	9.76E-02	7.59E-02
U232	5302.100	1260.000	1252.000	8.000	2.8284	100.0000	3.94E+00	2.97E-01	2.07E-02	5.00E-02	1.12E-01
U-235	4391.000	35.000	34.000	1.000	2.7628	80.90000	1.32E-01	2.51E-02	2.50E-02	6.06E-02	2.34E-02
U-238	4184.730	643.000	641.000	2.000	3.2810	100.0000	2.02E+00	1.62E-01	2.40E-02	5.66E-02	8.00E-02

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

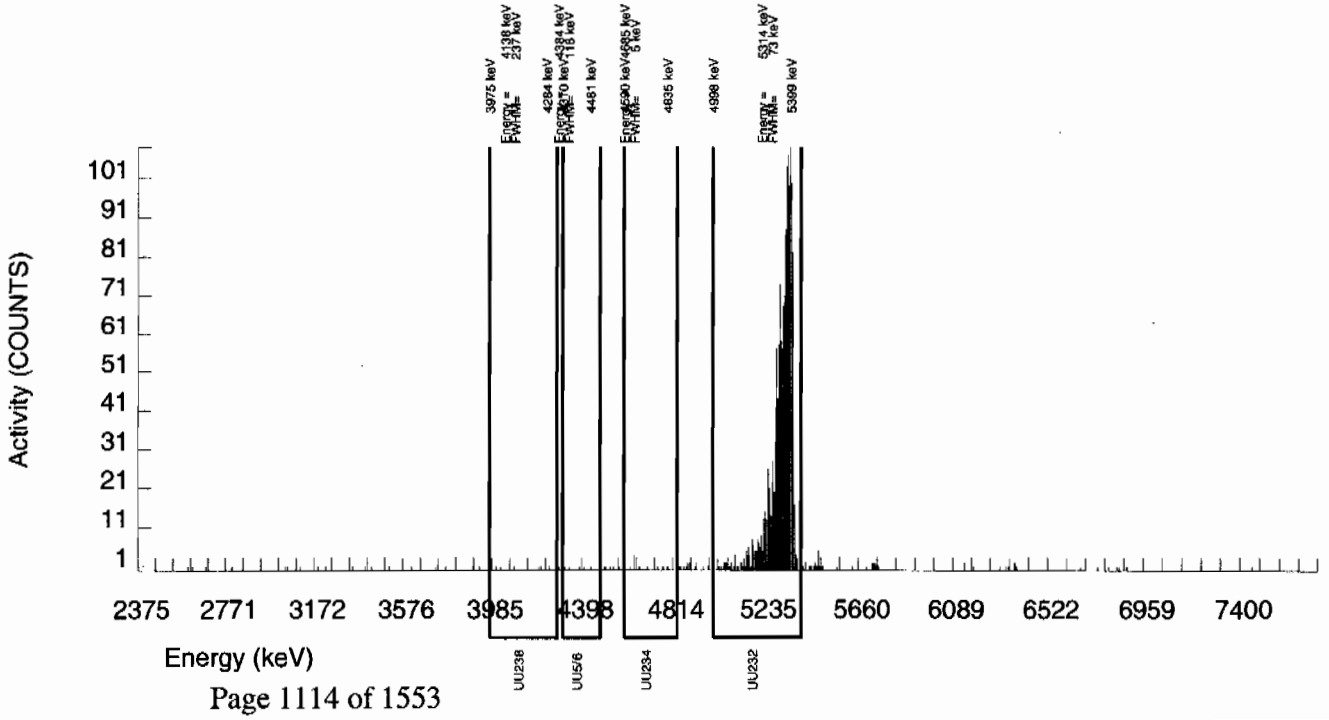
BATCH NUMBER: 940225 SAMPLE DATE : 13-JAN-2010 00:00:00	SAMPLE ID : S1202012017_UU SAMPLE QTY: 1.000 G
DETECTOR NUMBER :78260 AVERAGE %EFFICIENCY :38.3524 % YIELD : 90.882	COUNT DATE:19-JAN-2010 09:35:32 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :JXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-H	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B171.CNF;167
PCI/G : 5.750E+00	PCI/G : 5.750E+00	NOMINAL : 4.50804 dpm	BKG DATE : 17-JAN-2010
		RESULTS : 4.09698 dpm	EFF FILE : W171.CNF;69
			CAL DATE : 21-DEC-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	16.000	7.411	7.000	6.0782	100.0000	9.58E-03	6.02E-03	1.83E-02	4.01E-02	5.98E-03
U232	5302.100	1580.000	1571.000	9.000	3.0000	100.0000	2.03E+00	1.48E-01	9.02E-03	2.15E-02	5.15E-02
U-235	4391.000	5.000	3.000	2.000	2.7628	80.90000	4.79E-03	4.24E-03	1.03E-02	2.49E-02	4.23E-03
U-238	4184.730	7.000	5.000	2.000	3.2810	100.0000	6.46E-03	3.90E-03	9.86E-03	2.32E-02	3.88E-03

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

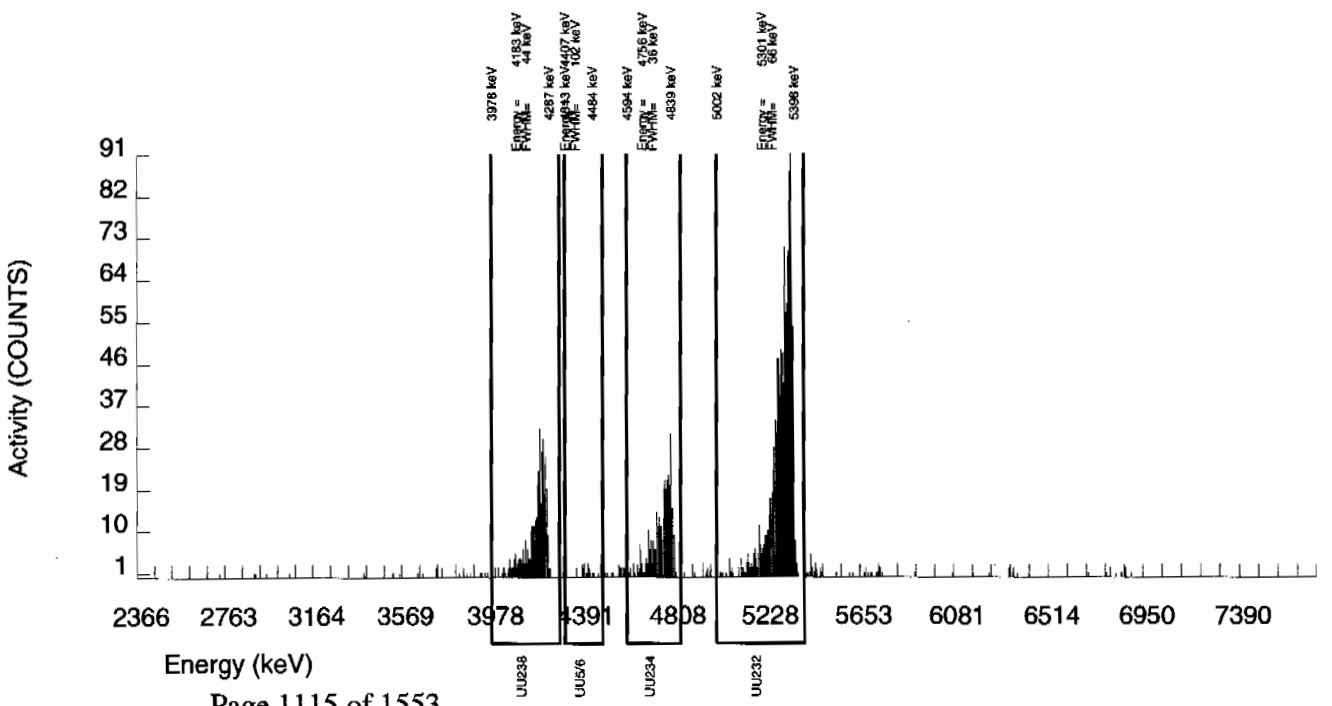
BATCH NUMBER: 940225 SAMPLE DATE : 5-JAN-2010 00:00:00.	SAMPLE ID : S1202012018_UU SAMPLE QTY: 0.527 G
DETECTOR NUMBER :78772 AVERAGE %EFFICIENCY :38.4140 % YIELD : 67.980	COUNT DATE:19-JAN-2010 09:35:34 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :JXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A ISOTOPE : U-238 PCI/G : 5.750E+00	ID : 0244-A ISOTOPE : U-238 PCI/G : 5.750E+00	ID : 1283-H ISOTOPE : U232 NOMINAL : 4.50902 dpm RESULTS : 3.06523 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B172.CNF;165 BKG DATE : 17-JAN-2010 EFF FILE : W172.CNF;62 CAL DATE : 21-DEC-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	349.000	347.810	0.000	6.0782	100.0000	1.14E+00	1.00E-01	4.63E-02	1.01E-01	6.10E-02
U232	5302.100	1180.000	1177.000	3.000	1.7321	100.0000	3.85E+00	2.92E-01	1.32E-02	3.52E-02	1.13E-01
U-235	4391.000	22.000	22.000	0.000	2.7628	80.90000	8.90E-02	2.00E-02	2.60E-02	6.30E-02	1.90E-02
U-238	4184.730	379.000	378.000	1.000	3.2810	100.0000	1.24E+00	1.08E-01	2.50E-02	5.88E-02	6.38E-02

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

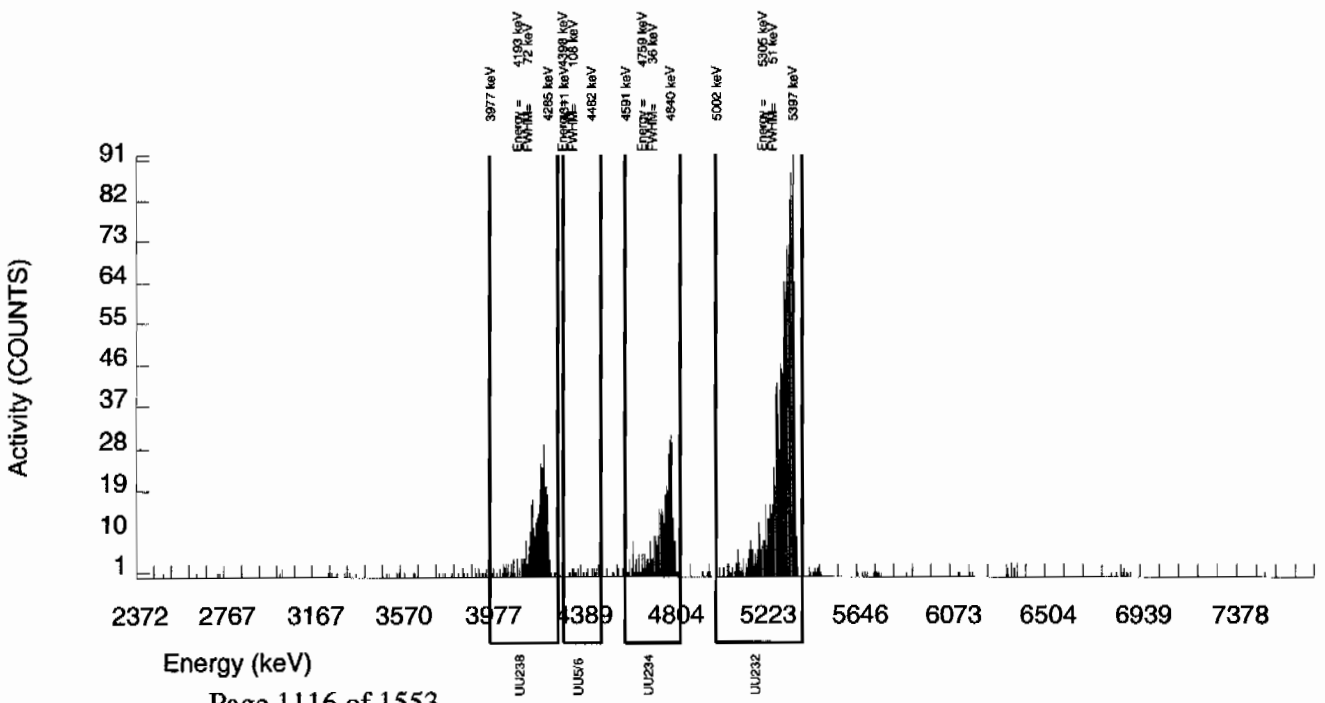
BATCH NUMBER: 940225 SAMPLE DATE : 13-JAN-2010 00:00:00	SAMPLE ID : S1202012019_UU SAMPLE QTY: 0.102 G
DETECTOR NUMBER :SAMPLE AVERAGE %EFFICIENCY :36.6119 % YIELD : 81.082	COUNT DATE:19-JAN-2010 09:35:07 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :JXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-H	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B161.CNF;162
PCI/G : 5.750E+00	PCI/G : 5.750E+00	NOMINAL : 4.50804 dpm	BKG DATE : 17-JAN-2010
		RESULTS : 3.65523 dpm	EFF FILE : W161.CNF;56
			CAL DATE : 23-DEC-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	395.000	393.647	0.000	6.0782	100.0000	5.86E+00	5.34E-01	2.10E-01	4.61E-01	2.95E-01
U232	5302.100	1342.000	1338.000	4.000	2.0000	100.0000	1.99E+01	1.61E+00	6.92E-02	1.79E-01	5.46E-01
U-235	4391.000	27.000	27.000	0.000	2.7628	80.90000	4.96E-01	1.03E-01	1.18E-01	2.86E-01	9.56E-02
U-238	4184.730	368.000	368.000	0.000	3.2810	100.0000	5.47E+00	5.04E-01	1.14E-01	2.67E-01	2.85E-01

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity



Radiochemistry Batch Checklist, Rev10

Batch# 940263 Product: γS/LANL Date: 1/21/10

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			n/a
Samples have been blank corrected (if required)			n/a
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.			NA
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.			NA
Smears Taken for Radioactive batches.			n/a
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.			n/a
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			n/a
Batch entered into Case Narrative.	✓		
Batch Data Exception Reports (DER) completed, if applicable.			n/a
Batch Data Exception Reports (DER) second reviewed and disposition verified to be completed.			n/a
Aliquot Correction completed if required.			n/a
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

RADchecklistrev10, revised 1/13/2010

Primary Review Performed By: M Stamps 1/21/10

Secondary Review Performed By: B Hartley 1/21/10

2/5/10

Gamma Spec Que Sheet 1.G.- 1/20/10

01/11/2010

Batch #:940263 Analyst: MXR1 First Client DueDate02/05/2010 Internal Due Date: 01/25/2010

Gamma Spike Isotope: Mixed Gamma Spike Code: n/a Expiration Date: n/a Vol: n/a Nominal Concentration: n/a

Gamma LCS Isotope: Mixed Gamma LCS Code: 1032-A Expiration Date: 12/2/10 Vol: 1.0mL Nominal Concentration: Cs137-5.569 Co60-6.457

Initials: MS Prep Date: 1/12/10 Library: SOLID Witness: n/a Am241-15.91

Sample ID	Client Description / Container ID	Type	Hazard Code	Client	Matrix	Collect Date		Geometry	Wet/Dry Aliquot (1/g/F)	Detector	Sealing Date/Time (if Applicable)
244125001-1	RE12-10-7698	SAMPLE		LANL010	SOIL	05-JAN-10 12:00:00	RF	can	128.36	14	1/12/10
244125002-1	RE12-10-7697	SAMPLE		LANL010	SOIL	05-JAN-10 12:00:00	RF		120.00	16	
244125003-1	RE12-10-7704	SAMPLE		LANL010	SOIL	05-JAN-10 12:00:00	RF		123.80	18	
244125004-1	RE12-10-7703	SAMPLE		LANL010	SOIL	05-JAN-10 12:00:00	RF		127.18	22	1/13/10
244137001-1	RE12-10-7859	SAMPLE		LANL010	SOIL	04-JAN-10 12:00:00	RF		120.44	23	1/12/10
244137002-1	RE12-10-7851	SAMPLE		LANL010	SOIL	04-JAN-10 12:00:00	RF		137.43	1	
244137003-1	RE12-10-7852	SAMPLE		LANL010	SOIL	04-JAN-10 12:00:00	RF		134.09	11	
244137004-1	RE12-10-7850	SAMPLE		LANL010	SOIL	04-JAN-10 12:00:00	RF		123.28	15	
244137005-1	RE12-10-7853	SAMPLE		LANL010	SOIL	04-JAN-10 12:00:00	RF		126.32	17	
244137006-1	RE12-10-7848	SAMPLE		LANL010	SOIL	04-JAN-10 12:00:00	RF		119.52	20	
244137007-1	RE12-10-7849	SAMPLE		LANL010	SOIL	04-JAN-10 12:00:00	RF		127.96	25	
1202012144-1	MB	MB		QC ACCOUNT	SOIL	1/13/10	RF		134.09	4	1/13/10
1202012145-1	DUP RE12-10-7698(244125001)	DUP		QC ACCOUNT	SOIL	05-JAN-10 12:00:00	RF		128.36	18	1/12/10
1202012146-1	LCS	LCS		QC ACCOUNT	SOIL	1/13/10	RF		155.44	13	1/13/10

GEL Laboratories LLC, Radiochemistry Division

Data Reviewed By: M. Stamps 1/21/10

Failed RDL Report

Batch Id	Samp Id	Sample Type	Run Date	YIELD	Parmname	Result	MDA	RDL
940263	244125001	SAMPLE	20-JAN-10		Americium-241	-0.05805	0.201	0.200
940263	244125002	SAMPLE	20-JAN-10		Americium-241	0.07346	0.2251	0.200
940263	244125003	SAMPLE	20-JAN-10		Americium-241	0.08427	0.2992	0.200
					Thorium-234	0.2714	2.48	2.00
940263	244125004	SAMPLE	20-JAN-10		Americium-241	0.01608	0.2158	0.200
940263	244137001	SAMPLE	20-JAN-10		Americium-241	0.1911	0.3483	0.200
					Cerium-139	-0.00985	0.05763	0.050
					Sodium-22	-0.01607	0.08059	0.080
					Thorium-234	2.742	2.946	2.00
940263	244137002	SAMPLE	20-JAN-10		Americium-241	0.04732	0.2975	0.200
					Cerium-139	0.00862	0.05522	0.050
					Cesium-134	0.07728	0.1025	0.100
					Thorium-234	-0.868	2.52	2.00
940263	244137003	SAMPLE	20-JAN-10					
940263	244137004	SAMPLE	20-JAN-10		Americium-241	-0.4393	0.5123	0.200
					Cerium-139	-0.01072	0.06212	0.050
					Cesium-134	0.07887	0.1005	0.100
					Thorium-234	1.205	4.155	2.00
940263	244137005	SAMPLE	20-JAN-10		Sodium-22	0.04174	0.09516	0.080
940263	244137006	SAMPLE	20-JAN-10					
940263	244137007	SAMPLE	20-JAN-10					
940263	1202012144	MB	20-JAN-10					
940263	1202012145	DUP	20-JAN-10		Americium-241	-0.01353	0.2828	0.200
					Thorium-234	0.9575	2.469	2.00
940263	1202012146	LCS	20-JAN-10		Cerium-139	-0.01457	0.07841	0.050
					Cesium-134	0.07697	0.1855	0.100
					Europium-152	0.1444	0.3378	0.200
					Mercury-203	-0.00809	0.1094	0.100
					Potassium-40	0.9101	1.307	1.00
					Ruthenium-106	0.08981	1.178	0.800
					Sodium-22	0.01008	0.1258	0.080
					Tin-113	-0.05543	0.1534	0.100
					Uranium-235	-0.1277	0.5463	0.500

Gamma Review Report based on Result > MDA for Batch:940263

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
244125001	05-JAN-10 12:00	20-JAN-10 13:29	15.1	SAMPLE	LOAD	1	LANL	LANL01004 GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓ nr		1.598	0.1764	pCi/g	0.217	N	911.9	3	1.896	IDENTIFIED	9.348		
Americium-243 INT		0.3761	0.03658	pCi/g	0.08641	N	74.93	1	1.408	IDENTIFIED	8.969		
Annihilation Rad.		0.1274	0.03204	pCi/g	0.04342	N	511.1	1	2.114	IDENTIFIED	24.97		
Bismuth-211 INT		3.828	0.2602	pCi/g	0.317	Y	351.7	4	1.364	IDENTIFIED	6.015	✓ ul	
Bismuth-212 LA		1.358	0.2455	pCi/g	0.6752	N	0	9	0	FAIL_ABUND	0		
Bismuth-214 ✓		1.291	0.09188	pCi/g	0.1096	0.200	609.5	4	1.443	IDENTIFIED	5.914		
Cadmium-109 INT		3.438	0.4602	pCi/g	1.22	Y	87.25	3	1.562	IDENTIFIED	12.67	✓ ul	
Cerium-143		990.5	138.5	pCi/g	0	N	0	9	0	SHORT_HLIF	0		
Cesium-134 LA		0.1088	0.03086	pCi/g	0.08918	0.100	0	9	0	FAIL_ABUND	0	✓ UI	Data rejected due to low abundance.
Gross Gamma		8.649	1.275	pCi/g	3.819	N		0					
Iodine-135	HE	1.22E+15	2.18E+15	pCi/g	0	N	0	9	0	SHORT_HLIF	0		
Lead-212 ✓		1.676	0.08145	pCi/g	0.08897	0.100	238.6	4	1.37	IDENTIFIED	3.217		
Lead-214 ✓		1.331	0.09695	pCi/g	0.1105	0.100	351.7	4	1.364	IDENTIFIED	6.015		
Lutetium-177	HE	2.886	0.6544	pCi/g	1.981	N	0	9	0	FAIL_ABUND	0		
Neptunium-237 INT		0.9924	0.1677	pCi/g	0.3885	N	87.25	3	1.562	IDENTIFIED	12.67		
Niobium-95m		0.6668	0.07979	pCi/g	0.2728	N	0	9	0	NOT_IDENTI	0		
Polonium-212 nr		1.676	0.08145	pCi/g	0.08897	N	238.6	4	1.37	IDENTIFIED	3.217		
Polonium-214 nr		1.331	0.09695	pCi/g	0.1105	N	351.7	4	1.364	IDENTIFIED	6.015		
Polonium-216 nr		1.676	0.08145	pCi/g	0.08897	N	238.6	4	1.37	IDENTIFIED	3.217		
Polonium-218 nr		1.331	0.09695	pCi/g	0.1105	N	351.7	4	1.364	IDENTIFIED	6.015		
Potassium-40 ✓		19.38	0.9844	pCi/g	0.4994	1.00	1462	1	1.872	IDENTIFIED	3.554		
Radium-224 INT		4.436	0.6867	pCi/g	1.012	Y	241.6	1	2.062	IDENTIFIED	15.21	✓ ul	
Radium-226 ✓		1.291	0.09188	pCi/g	0.1096	Y	609.5	4	1.443	IDENTIFIED	5.914		
Radium-228 ✓		1.598	0.1764	pCi/g	0.217	0.500	911.9	3	1.896	IDENTIFIED	9.348		
Thallium-200	HE	384.2	212.3	pCi/g	0	N	0	9	0	SHORT_HLIF	0		
Thallium-208 ✓		0.5792	0.04457	pCi/g	0.04928	0.080	583.3	1	1.813	IDENTIFIED	6.894		
Thorium-228 nr		1.702	0.08268	pCi/g	0.09031	N	238.6	4	1.37	IDENTIFIED	3.217		
Thorium-230 nr		1.291	0.09187	pCi/g	0.1096	N	609.5	4	1.443	IDENTIFIED	5.914		
Thorium-232 nr		1.598	0.1764	pCi/g	0.217	N	911.9	3	1.896	IDENTIFIED	9.348		
Thorium-234 ✓		2.693	0.9066	pCi/g	1.786	2.00	63.44	2	1.57	IDENTIFIED	32.54		
Tin-126 INT		0.3379	0.04524	pCi/g	0.1203	N	87.25	3	1.562	IDENTIFIED	12.67		
Titanium-44		0.3944	0.02867	pCi/g	0.08224	N	0	9	0	FAIL_ABUND	0		
Total Uranium		8.1724	2.70E-06	ug/g	2.6589	N		0					
Uranium-234 nr		1.291	0.09187	pCi/g	0.1096	N	609.5	4	1.443	IDENTIFIED	5.914		
Uranium-238	HE	2.693	0.9066	pCi/g	1.786	N	63.44	2	1.57	IDENTIFIED	32.54		
Zirconium-97		3.08E+06	9.18E+05	pCi/g	0	N	0	9	0	SHORT_HLIF	0		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
244125002	05-JAN-10 12:00	20-JAN-10 13:30	15.1	SAMPLE	LOAD	1	LANL	LANL01004 GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓ nr		1.785	0.1943	pCi/g	0.184	N	911	3	1.142	IDENTIFIED	9.128		
Americium-243 INT		0.4663	0.03963	pCi/g	0.07878	N	74.77	1	1.007	IDENTIFIED	7.421		
Annihilation Rad.		0.1595	0.03628	pCi/g	0.04543	N	510.4	1	1.66	IDENTIFIED	22.24		
Barium-137m	HE	0.1019	0.03167	pCi/g	0.05771	N	660.8	2	1.466	IDENTIFIED	30.75		

Bismuth-211 INT		4.191	0.3304	pCi/g	0.326	Y	351.8	4	1.071	IDENTIFIED	5.689	☑ UI	
Bismuth-212 ✓		1.2	0.2764	pCi/g	0.4137	N	727.4	1	1.55	IDENTIFIED	22.44	☐	
Bismuth-214 ✓		1.281	0.1143	pCi/g	0.09802	0.200	609.2	4	1.265	IDENTIFIED	7.181	☐	
Cadmium-109 INT		3.921	0.4903	pCi/g	1.092	Y	87.15	3	1.051	IDENTIFIED	11.56	☑ UI	
Cerium-143		529.2	102.8	pCi/g	0	N	0	8	0	SHORT_HLIF	0	☐	
Cesium-134 LA		0.1199	0.03307	pCi/g	0.09116	0.100	0	8	0	FAIL_ABUND	0	☑ UI	Data rejected due to low abundance.
Cesium-137 ✓		0.1077	0.03347	pCi/g	0.061	0.100	660.8	2	1.466	IDENTIFIED	30.75	☐	
Gross Gamma		9.844	1.489	pCi/g	4.14	N		0				☐	
Iodine-123	HE	2.93E+06	2.38E+06	pCi/g	0	N	0	8	0	SHORT_HLIF	0	☐	
Iodine-135	HE	3.71E+15	2.18E+15	pCi/g	0	N	0	8	0	SHORT_HLIF	0	☐	
Lead-212 ✓		1.747	0.1179	pCi/g	0.08397	0.100	238.5	4	0.9786	IDENTIFIED	3.241	☐	
Lead-214 ✓		1.458	0.1211	pCi/g	0.1136	0.100	351.8	4	1.071	IDENTIFIED	5.689	☐	
Lutetium-177	HE	3.023	0.7265	pCi/g	2.054	N	0	8	0	FAIL_ABUND	0	☐	
Neptunium-237 INT		1.132	0.1835	pCi/g	0.3201	N	87.15	3	1.051	IDENTIFIED	11.56	☐	
Polonium-212 nv		1.747	0.1179	pCi/g	0.08397	N	238.5	4	0.9786	IDENTIFIED	3.241	☐	
Polonium-214 nv		1.458	0.1211	pCi/g	0.1136	N	351.8	4	1.071	IDENTIFIED	5.689	☐	
Polonium-216 nv		1.747	0.1179	pCi/g	0.08397	N	238.5	4	0.9786	IDENTIFIED	3.241	☐	
Polonium-218 nv		1.458	0.1211	pCi/g	0.1136	N	351.8	4	1.071	IDENTIFIED	5.689	☐	
Potassium-40 ✓		21.02	1.19	pCi/g	0.4588	1.00	1460	1	1.642	IDENTIFIED	3.567	☐	
Radium-224 INT		4.637	0.6515	pCi/g	0.9557	Y	241.4	1	1.578	IDENTIFIED	12.92	☑ UI	
Radium-226 ✓		1.281	0.1143	pCi/g	0.09802	Y	609.2	4	1.265	IDENTIFIED	7.181	☐	
Radium-228 ✓		1.785	0.1943	pCi/g	0.184	0.500	911	3	1.142	IDENTIFIED	9.128	☐	
Sodium-24	HE	5.73E+05	3.01E+05	pCi/g	0	N	0	8	0	SHORT_HLIF	0	☐	
Thallium-208 ✓		0.5938	0.05001	pCi/g	0.05498	0.080	583	1	1.216	IDENTIFIED	6.808	☐	
Thorium-228 nv		1.773	0.1196	pCi/g	0.08524	N	238.5	4	0.9786	IDENTIFIED	3.241	☐	
Thorium-230 nv		1.281	0.1143	pCi/g	0.09801	N	609.2	4	1.265	IDENTIFIED	7.181	☐	
Thorium-232 nv		1.785	0.1943	pCi/g	0.184	N	911	3	1.142	IDENTIFIED	9.128	☐	
Thorium-234 ✓		2.338	0.8658	pCi/g	1.889	2.00	62.99	2	0.719	IDENTIFIED	35.99	☐	
Tin-126 INT		0.3854	0.0482	pCi/g	0.1078	N	87.15	3	1.051	IDENTIFIED	11.56	☐	
Titanium-44		0.4436	0.02954	pCi/g	0.07435	N	0	8	0	FAIL_ABUND	0	☐	
Total Uranium		7.0287	2.58E-06	ug/g	2.8133	N		0				☐	
Uranium-234 nv		1.281	0.1143	pCi/g	0.09801	N	609.2	4	1.265	IDENTIFIED	7.181	☐	
Uranium-238	HE	2.338	0.8658	pCi/g	1.889	N	62.99	2	0.719	IDENTIFIED	35.99	☐	
Zirconium-97		2.79E+06	9.26E+05	pCi/g	0	N	0	8	0	SHORT_HLIF	0	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
244125003	05-JAN-10 12:00	20-JAN-10 13:30	15.1	SAMPLE	LOAD	1	LANL	LANL01004 GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓ nv		1.81	0.1824	pCi/g	0.161	N	910.8	3	1.915	IDENTIFIED	7.591	☐	
Americium-243 INT		0.408	0.04178	pCi/g	0.08823	N	75.05	1	1.144	IDENTIFIED	9.348	☐	
Annihilation Rad.		0.1565	0.03079	pCi/g	0.03799	N	510.9	1	1.939	IDENTIFIED	19.4	☐	
Bismuth-211 INT		3.956	0.2255	pCi/g	0.2756	Y	352	4	1.466	IDENTIFIED	4.711	☑ UI	
Bismuth-212 ✓		0.8438	0.2242	pCi/g	0.354	N	726.7	1	1.368	IDENTIFIED	26.1	☐	
Bismuth-214 ✓		1.25	0.08428	pCi/g	0.09389	0.200	609.3	4	1.281	IDENTIFIED	5.053	☐	
Cadmium-109 INT		4.806	0.458	pCi/g	1.164	Y	87.47	3	1.35	IDENTIFIED	8.345	☑ UI	
Cerium-143		658.8	104.3	pCi/g	0	N	0	9	0	SHORT_HLIF	0	☐	
Cesium-134 LA		0.126	0.02934	pCi/g	0.0733	0.100	0	9	0	FAIL_ABUND	0	☑ UI	Data rejected due to low abundance.
Gross Gamma		8.878	1.126	pCi/g	2.654	N		0				☐	
Iodine-135	HE	1.18E+15	1.95E+15	pCi/g	0	N	0	9	0	SHORT_HLIF	0	☐	
Krypton-85	HE	18.24	3.434	pCi/g	11.66	N	0	9	0	NOT_IDENTI	0	☐	
Lead-212 ✓		1.744	0.0808	pCi/g	0.07661	0.100	238.8	4	1.264	IDENTIFIED	2.95	☐	

Lead-214 ✓		1.376	0.08628	pCi/g	0.09669	0.100	352	4	1.466	IDENTIFIED	4.711	☐	
Lutetium-177	HE	2.398	0.6025	pCi/g	1.676	N	0	9	0	FAIL_ABUND	0	☐	
Neptunium-237	INT	1.387	0.1949	pCi/g	0.3764	N	87.47	3	1.35	IDENTIFIED	8.345	☐	
Niobium-95	HE	0.06683	0.02555	pCi/g	0.05268	N	767.2	1	1.407	IDENTIFIED	37.96	☐	
Polonium-212	nr	1.744	0.0808	pCi/g	0.07661	N	238.8	4	1.264	IDENTIFIED	2.95	☐	
Polonium-214	nr	1.376	0.08628	pCi/g	0.09669	N	352	4	1.466	IDENTIFIED	4.711	☐	
Polonium-216	nr	1.744	0.0808	pCi/g	0.07661	N	238.8	4	1.264	IDENTIFIED	2.95	☐	
Polonium-218	nr	1.376	0.08628	pCi/g	0.09669	N	352	4	1.466	IDENTIFIED	4.711	☐	
Potassium-40 ✓		20.02	0.9896	pCi/g	0.4595	1.00	1460	1	2.179	IDENTIFIED	3.167	☐	
Radium-224	INT	4.862	0.6014	pCi/g	0.8706	Y	241.8	1	1.767	IDENTIFIED	12.05	☑ ✓ UI	
Radium-226 ✓		1.25	0.08428	pCi/g	0.09389	Y	609.3	4	1.281	IDENTIFIED	5.053	☐	
Radium-228 ✓		1.81	0.1824	pCi/g	0.161	0.500	910.8	3	1.915	IDENTIFIED	7.591	☐	
Strontium-85	LA	0.09349	0.0176	pCi/g	0.05973	Y	0	9	0	NOT_IDENTI	0	☑ UI	Data rejected due to low abundance.
Thallium-200	HE	193.2	171.9	pCi/g	0	N	0	9	0	SHORT_HLIF	0	☐	
Thallium-208 ✓		0.4818	0.03817	pCi/g	0.04684	0.080	583.1	1	1.442	IDENTIFIED	6.885	☐	
Thorium-228	nr	1.771	0.08202	pCi/g	0.07777	N	238.8	4	1.264	IDENTIFIED	2.95	☐	
Thorium-230	nr	1.25	0.08428	pCi/g	0.09389	N	609.3	4	1.281	IDENTIFIED	5.053	☐	
Thorium-232	nr	1.81	0.1824	pCi/g	0.161	N	910.8	3	1.915	IDENTIFIED	7.591	☐	
Tin-126	INT	0.4725	0.04502	pCi/g	0.1152	N	87.47	3	1.35	IDENTIFIED	8.345	☐	
Titanium-44		0.4025	0.02954	pCi/g	0.08497	N	0	9	0	FAIL_ABUND	0	☐	
Uranium-234	nr	1.25	0.08428	pCi/g	0.09389	N	609.3	4	1.281	IDENTIFIED	5.053	☐	
Zirconium-97		3.78E+06	8.14E+05	pCi/g	0	N	0	9	0	SHORT_HLIF	0	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
244125004	05-JAN-10 12:00	20-JAN-10 13:31	15.1	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	nr	1.862	0.1745	pCi/g	0.1912	N	911.5	3	1.91	IDENTIFIED	6.623	☐	
Americium-243	INT	0.3883	0.03728	pCi/g	0.08199	N	74.88	1	1.198	IDENTIFIED	8.688	☐	
Annihilation Rad.		0.1545	0.03035	pCi/g	0.03962	N	510.8	1	2.295	IDENTIFIED	19	☐	
Barium-137m	nr	0.09388	0.02013	pCi/g	0.05124	N	661.7	2	1.873	IDENTIFIED	20.78	☐	
Bismuth-211	INT	4.271	0.3147	pCi/g	0.2945	Y	352	4	1.451	IDENTIFIED	4.529	☑ ✓ UI	
Bismuth-212 ✓		1.171	0.229	pCi/g	0.4029	N	727.1	1	2.274	IDENTIFIED	18.62	☐	
Bismuth-214 ✓		1.156	0.09847	pCi/g	0.09935	0.200	609.4	4	1.83	IDENTIFIED	6.228	☐	
Cadmium-109	INT	3.348	0.5233	pCi/g	1.12	Y	87.3	3	1.288	IDENTIFIED	14.9	☑ ✓ UI	
Cerium-143		876.7	133.3	pCi/g	0	N	0	10	0	SHORT_HLIF	0	☐	
Cesium-134	LA	0.08764	0.02473	pCi/g	0.08016	0.100	0	10	0	FAIL_ABUND	0	☑ UI	Data rejected due to low abundance.
Cesium-137 ✓		0.09924	0.02128	pCi/g	0.05417	0.100	661.7	2	1.873	IDENTIFIED	20.78	☐	
Gross Gamma		8.794	1.336	pCi/g	2.771	N		0				☐	
Iodine-123	HE	1.37E+06	2.44E+06	pCi/g	0	N	0	10	0	SHORT_HLIF	0	☐	
Krypton-85		35.03	4.306	pCi/g	14.22	N	0	10	0	NOT_IDENTI	0	☐	
Lead-212 ✓		1.771	0.1281	pCi/g	0.08904	0.100	238.7	4	1.242	IDENTIFIED	2.948	☐	
Lead-214 ✓		1.486	0.1161	pCi/g	0.1026	0.100	352	4	1.451	IDENTIFIED	4.529	☐	
Lutetium-177	HE	2.255	0.5504	pCi/g	1.93	N	0	10	0	NOT_IDENTI	0	☐	
Neptunium-237	INT	0.9665	0.181	pCi/g	0.3279	N	87.3	3	1.288	IDENTIFIED	14.9	☐	
Niobium-97	HE	1186	46600	pCi/g	0	N	0	10	0	SHORT_HLIF	0	☐	
Polonium-212	nr	1.771	0.1281	pCi/g	0.08904	N	238.7	4	1.242	IDENTIFIED	2.948	☐	
Polonium-214	nr	1.486	0.1161	pCi/g	0.1026	N	352	4	1.451	IDENTIFIED	4.529	☐	
Polonium-216	nr	1.771	0.1281	pCi/g	0.08904	N	238.7	4	1.242	IDENTIFIED	2.948	☐	
Polonium-218	nr	1.486	0.1161	pCi/g	0.1026	N	352	4	1.451	IDENTIFIED	4.529	☐	
Potassium-40 ✓		21.22	1.178	pCi/g	0.4634	1.00	1461	1	2.528	IDENTIFIED	3.135	☐	
Radium-224	INT	5.016	0.77	pCi/g	1.012	Y	241.7	1	2.074	IDENTIFIED	14.01	☑ ✓ UI	

Radium-226 ✓		1.156	0.09847	pCi/g	0.09935	Y	609.4	4	1.83	IDENTIFIED	6.228	☐	
Radium-228 ✓		1.862	0.1745	pCi/g	0.1912	0.500	911.5	3	1.91	IDENTIFIED	6.623	☐	
Sodium-24	HE	2.99E+05	3.40E+05	pCi/g	0	N	0	10	0	SHORT_HLIF	0	☐	
Strontium-85 LA		0.1795	0.02206	pCi/g	0.07287	Y	0	10	0	NOT_IDENTI	0	☑ UI	Data rejected due to low abundance.
Thallium-208 ✓		0.5165	0.04571	pCi/g	0.05416	0.080	583.3	1	1.717	IDENTIFIED	6.994	☐	
Thorium-228 nr		1.797	0.1301	pCi/g	0.09038	N	238.7	4	1.242	IDENTIFIED	2.948	☐	
Thorium-230 nr		1.156	0.09847	pCi/g	0.09935	N	609.4	4	1.83	IDENTIFIED	6.228	☐	
Thorium-232 nr		1.862	0.1745	pCi/g	0.1912	N	911.5	3	1.91	IDENTIFIED	6.623	☐	
Tin-126 INT		0.3291	0.05144	pCi/g	0.1105	N	87.3	3	1.288	IDENTIFIED	14.9	☐	
Titanium-44		0.3589	0.02599	pCi/g	0.0716	N	0	10	0	FAIL_ABUND	0	☐	
Total Uranium		4.5876	2.55E-06	ug/g	2.6315	N		0				☐	
Uranium-234 nr		1.156	0.09847	pCi/g	0.09935	N	609.4	4	1.83	IDENTIFIED	6.228	☐	
Zirconium-97		5.29E+06	9.22E+05	pCi/g	0	N	0	10	0	SHORT_HLIF	0	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
244137001	04-JAN-10 12:00	20-JAN-10 13:31	16.1	SAMPLE	LOAD	1	LANL	LANL01004 GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓ nr		1.5	0.1748	pCi/g	0.2015	N	910.4	3	1.68	IDENTIFIED	10.12	☐	
Americium-243 INT		0.4668	0.05058	pCi/g	0.1138	N	74.76	1	1.389	IDENTIFIED	9.881	☐	
Annihilation Rad.	HE	0.1238	0.03994	pCi/g	0.05003	N	510.5	1	2.445	IDENTIFIED	32.12	☐	
Bismuth-211 INT		4.169	0.2869	pCi/g	0.3336	Y	351.4	4	1.232	IDENTIFIED	6.061	☑ ✓ UI	
Bismuth-212	HE	0.9208	0.2712	pCi/g	0.6971	N	0	9	0	FAIL_ABUND	0	☐	
Bismuth-214 ✓		1.25	0.09993	pCi/g	0.1246	0.200	608.5	4	1.526	IDENTIFIED	7.052	☐	
Cadmium-109 INT		2.833	0.5937	pCi/g	1.441	Y	86.75	3	1.294	IDENTIFIED	20.39	☑ ✓ UI	
Cerium-143		2289	302.7	pCi/g	0	N	0	9	0	SHORT_HLIF	0	☐	
Gold-195	HE	0.5247	0.1364	pCi/g	0.4654	N	0	9	0	FAIL_ABUND	0	☐	
Gross Gamma		7.713	1.298	pCi/g	3.054	N		0				☐	
Iodine-135		2.22E+16	0	pCi/g	0	N	0	9	0	SHORT_HLIF	0	☐	
Lead-212 ✓		1.492	0.07966	pCi/g	0.108	0.100	238.3	4	1.146	IDENTIFIED	3.948	☐	
Lead-214 ✓		1.45	0.1067	pCi/g	0.1163	0.100	351.4	4	1.232	IDENTIFIED	6.061	☐	
Lutetium-177	HE	2.781	0.8693	pCi/g	2.527	N	0	9	0	FAIL_ABUND	0	☐	
Neptunium-237 INT		0.8165	0.1907	pCi/g	0.4241	N	86.75	3	1.294	IDENTIFIED	20.39	☐	
Niobium-95m nr		0.5949	0.09853	pCi/g	0.32	N	0	9	0	NOT_IDENTI	0	☐	
Polonium-212 nr		1.492	0.07966	pCi/g	0.108	N	238.3	4	1.146	IDENTIFIED	3.948	☐	
Polonium-214 nr		1.45	0.1067	pCi/g	0.1163	N	351.4	4	1.232	IDENTIFIED	6.061	☐	
Polonium-216 nr		1.492	0.07966	pCi/g	0.108	N	238.3	4	1.146	IDENTIFIED	3.948	☐	
Polonium-218 nr		1.45	0.1067	pCi/g	0.1163	N	351.4	4	1.232	IDENTIFIED	6.061	☐	
Potassium-40 ✓		18.53	1.084	pCi/g	0.5832	1.00	1459	1	2.465	IDENTIFIED	4.496	☐	
Radium-224 INT		4.417	0.7053	pCi/g	1.229	Y	241.2	1	1.745	IDENTIFIED	15.72	☑ ✓ UI	
Radium-226 ✓		1.25	0.09993	pCi/g	0.1246	Y	608.5	4	1.526	IDENTIFIED	7.052	☐	
Radium-228 ✓		1.5	0.1748	pCi/g	0.2015	0.500	910.4	3	1.68	IDENTIFIED	10.12	☐	
Sodium-24	HE	7.65E+05	1.18E+06	pCi/g	0	N	0	9	0	SHORT_HLIF	0	☐	
Thallium-208 ✓		0.4714	0.04898	pCi/g	0.06854	0.080	582.4	1	1.138	IDENTIFIED	9.87	☐	
Thorium-228 nr		1.516	0.08095	pCi/g	0.1098	N	238.3	4	1.146	IDENTIFIED	3.948	☐	
Thorium-230 nr		1.25	0.09993	pCi/g	0.1246	N	608.5	4	1.526	IDENTIFIED	7.052	☐	
Thorium-232 nr		1.5	0.1748	pCi/g	0.2015	N	910.4	3	1.68	IDENTIFIED	10.12	☐	
Tin-126 INT		0.278	0.05827	pCi/g	0.1423	N	86.75	3	1.294	IDENTIFIED	20.39	☐	
Titanium-44		0.4177	0.03471	pCi/g	0.1001	N	0	9	0	FAIL_ABUND	0	☐	
Total Uranium		8.1054	3.28E-06	ug/g	4.3859	N		0				☐	
Uranium-234 nr		1.25	0.09993	pCi/g	0.1246	N	608.5	4	1.526	IDENTIFIED	7.052	☐	
Zirconium-97		1.57E+07	3.09E+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
244137002	04-JAN-10 12:00	20-JAN-10 13:43	16.1	SAMPLE	LOAD	1	LANL	LANL01004 GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓ nv		1.349	0.1782	pCi/g	0.244	N	911.6	3	1.512	IDENTIFIED	11.88		
Americium-243 int		0.4404	0.04729	pCi/g	0.09662	N	74.92	1	1.298	IDENTIFIED	9.898		
Annihilation Rad.	HE	0.07958	0.03167	pCi/g	0.05723	N	511.4	1	1.79	IDENTIFIED	39.58		
Bismuth-211 int		3.817	0.3342	pCi/g	0.356	Y	352.2	4	1.403	IDENTIFIED	7.486	✓ UI	
Bismuth-212 LA		2.012	0.2556	pCi/g	0.7641	N	0	9	0	FAIL_ABUND	0		
Bismuth-214 ✓		1.174	0.102	pCi/g	0.1148	0.200	609.6	4	1.353	IDENTIFIED	7.153		
Cadmium-109 int		3.111	0.5428	pCi/g	1.378	Y	87.37	3	1.184	IDENTIFIED	16.8	✓ UI	
Cerium-143		547.2	147.8	pCi/g	0	N	0	9	0	SHORT_HLIF	0		
Gross Gamma		7.989	1.133	pCi/g	2.959	N		0					
Iodine-123	HE	1.26E+06	9.89E+06	pCi/g	0	N	0	9	0	SHORT_HLIF	0		
Krypton-85	HE	17.07	4.726	pCi/g	15.6	N	0	9	0	NOT_IDENTI	0		
Lead-212 ✓		1.73	0.1068	pCi/g	0.111	0.100	239.1	4	1.199	IDENTIFIED	3.535		
Lead-214 ✓		1.328	0.1213	pCi/g	0.1241	0.100	352.2	4	1.403	IDENTIFIED	7.486		
Lutetium-177	HE	3.189	0.8104	pCi/g	2.476	N	0	9	0	FAIL_ABUND	0		
Neptunium-237 int		0.8967	0.1818	pCi/g	0.4512	N	87.37	3	1.184	IDENTIFIED	16.8		
Polonium-212 nv		1.73	0.1068	pCi/g	0.111	N	239.1	4	1.199	IDENTIFIED	3.535		
Polonium-214 nv		1.328	0.1213	pCi/g	0.1241	N	352.2	4	1.403	IDENTIFIED	7.486		
Polonium-216 nv		1.73	0.1068	pCi/g	0.111	N	239.1	4	1.199	IDENTIFIED	3.535		
Polonium-218 nv		1.328	0.1213	pCi/g	0.1241	N	352.2	4	1.403	IDENTIFIED	7.486		
Potassium-40 ✓		19.38	1.149	pCi/g	0.5883	1.00	1461	1	1.905	IDENTIFIED	3.92		
Radium-224 int		4.153	0.7371	pCi/g	1.189	Y	241.9	1	1.684	IDENTIFIED	17.15	✓ UI	
Radium-226 ✓		1.174	0.102	pCi/g	0.1148	Y	609.6	4	1.353	IDENTIFIED	7.153		
Radium-228 ✓		1.349	0.1782	pCi/g	0.244	0.500	911.6	3	1.512	IDENTIFIED	11.88		
Sodium-24	HE	9.26E+05	1.18E+06	pCi/g	0	N	0	9	0	SHORT_HLIF	0		
Strontium-85 LA		0.08839	0.02447	pCi/g	0.08079	Y	0	9	0	NOT_IDENTI	0	UI	Data rejected due to low abundance.
Thallium-208 ✓		0.5878	0.05486	pCi/g	0.06301	0.080	583.5	1	1.671	IDENTIFIED	8.154		
Thorium-228 nv		1.758	0.1086	pCi/g	0.1128	N	239.1	4	1.199	IDENTIFIED	3.535		
Thorium-230 nv		1.174	0.102	pCi/g	0.1148	N	609.6	4	1.353	IDENTIFIED	7.153		
Thorium-232 nv		1.349	0.1782	pCi/g	0.244	N	911.6	3	1.512	IDENTIFIED	11.88		
Tin-126 int		0.3054	0.05328	pCi/g	0.1359	N	87.37	3	1.184	IDENTIFIED	16.8		
Titanium-44		0.3879	0.03107	pCi/g	0.08751	N	0	9	0	FAIL_ABUND	0		
Uranium-234 nv		1.174	0.102	pCi/g	0.1148	N	609.6	4	1.353	IDENTIFIED	7.153		
Zirconium-97	HE	2.80E+06	2.86E+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
244137003	04-JAN-10 12:00	20-JAN-10 13:43	16.1	SAMPLE	LOAD	1	LANL	LANL01004 GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓ nv	1.6	0.155	pCi/g	0.1905	N	911.6	3	1.692	IDENTIFIED	7.541		
Americium-243 int	0.338	0.03041	pCi/g	0.0667	N	74.79	1	0.8461	IDENTIFIED	8.033		
Annihilation Rad.	0.1202	0.03203	pCi/g	0.0409	N	511.1	1	1.694	IDENTIFIED	26.12		
Barium-137m nv	0.1171	0.0263	pCi/g	0.05452	N	662.4	2	1.501	IDENTIFIED	21.95		
Bismuth-211 int	4.169	0.3566	pCi/g	0.2627	Y	351.9	4	1.116	IDENTIFIED	5.468	✓ UI	
Bismuth-212 LA	1.32	0.2873	pCi/g	0.6275	N	0	11	0	FAIL_ABUND	0		
Bismuth-214 ✓	1.318	0.1038	pCi/g	0.08765	0.200	609.5	4	1.256	IDENTIFIED	5.485		
Cadmium-109 int	3.163	0.4199	pCi/g	0.9616	Y	87.18	3	1.06	IDENTIFIED	12.42	✓ UI	

Cerium-143		395.4	112.4	pCi/g	0	N	0	11	0	SHORT_HLIF	0	☐	
Cesium-134 LA		0.1206	0.0344	pCi/g	0.08172	0.100	0	11	0	FAIL_ABUND	0	☑ UI	Data rejected due to low abundance.
Cesium-137 ✓		0.1238	0.02781	pCi/g	0.05763	0.100	662.4	2	1.501	IDENTIFIED	21.95	☐	
Gross Gamma		8.848	1.222	pCi/g	3.066	N		0				☐	
Iodine-133	HE	4827	5423	pCi/g	0	N	0	11	0	SHORT_HLIF	0	☐	
Lead-212 ✓		1.653	0.1271	pCi/g	0.08191	0.100	238.7	4	0.9457	IDENTIFIED	3.17	☐	
Lead-214 ✓		1.45	0.1297	pCi/g	0.09156	0.100	351.9	4	1.116	IDENTIFIED	5.468	☐	
Lutetium-177		3.519	0.7014	pCi/g	1.947	N	0	11	0	FAIL_ABUND	0	☐	
Neptunium-237 INT		0.9115	0.1533	pCi/g	0.2803	N	87.18	3	1.06	IDENTIFIED	12.42	☐	
Niobium-97	HE	36110	1.20E+05	pCi/g	0	N	0	11	0	SHORT_HLIF	0	☐	
Polonium-212 nr		1.653	0.1271	pCi/g	0.08191	N	238.7	4	0.9457	IDENTIFIED	3.17	☐	
Polonium-214 nr		1.45	0.1297	pCi/g	0.09156	N	351.9	4	1.116	IDENTIFIED	5.468	☐	
Polonium-216 nr		1.653	0.1271	pCi/g	0.08191	N	238.7	4	0.9457	IDENTIFIED	3.17	☐	
Polonium-218 nr		1.45	0.1297	pCi/g	0.09156	N	351.9	4	1.116	IDENTIFIED	5.468	☐	
Potassium-40 ✓		20.67	1.141	pCi/g	0.418	1.00	1462	1	1.859	IDENTIFIED	3.433	☐	
Radium-224 INT		4.943	0.5607	pCi/g	0.9323	Y	241.6	1	1.607	IDENTIFIED	9.143	☑ UI	
Radium-226 ✓		1.318	0.1038	pCi/g	0.08765	Y	609.5	4	1.256	IDENTIFIED	5.485	☐	
Radium-228 ✓		1.6	0.155	pCi/g	0.1905	0.500	911.6	3	1.692	IDENTIFIED	7.541	☐	
Sodium-24	HE	78030	8.63E+05	pCi/g	0	N	0	11	0	SHORT_HLIF	0	☐	
Technetium-99m		9.11E+16	0	pCi/g	0	N	0	11	0	SHORT_HLIF	0	☐	
Thallium-200	HE	421.5	339.6	pCi/g	0	N	0	11	0	SHORT_HLIF	0	☐	
Thallium-208 ✓		0.5361	0.04805	pCi/g	0.04699	0.080	583.5	1	1.234	IDENTIFIED	7.156	☐	
Thorium-228 nr		1.68	0.1291	pCi/g	0.08323	N	238.7	4	0.9457	IDENTIFIED	3.17	☐	
Thorium-230 nr		1.318	0.1038	pCi/g	0.08765	N	609.5	4	1.256	IDENTIFIED	5.485	☐	
Thorium-232 nr		1.6	0.155	pCi/g	0.1905	N	911.6	3	1.692	IDENTIFIED	7.541	☐	
Thorium-234 1 unc		1.575	0.6382	pCi/g	1.446	2.00	63.12	2	0.9543	IDENTIFIED	39.58	☑ UI	
Tin-126 INT		0.3104	0.04121	pCi/g	0.09469	N	87.18	3	1.06	IDENTIFIED	12.42	☐	
Titanium-44		0.3612	0.02442	pCi/g	0.05681	N	0	11	0	FAIL_ABUND	0	☐	
Total Uranium		4.7426	1.90E-06	ug/g	2.1532	N		0				☐	
Uranium-234 nr		1.318	0.1038	pCi/g	0.08765	N	609.5	4	1.256	IDENTIFIED	5.485	☐	
Uranium-238	HE	1.575	0.6382	pCi/g	1.446	N	63.12	2	0.9543	IDENTIFIED	39.58	☐	
Zirconium-97		5.50E+06	2.06E+06	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
244137004	04-JAN-10 12:00	20-JAN-10 13:44	16.1	SAMPLE	LOAD	1	LANL	LANL01004 GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓ nr		1.636	0.1789	pCi/g	0.1991	N	910.6	3	1.933	IDENTIFIED	9.416	☐	
Americium-243 INT		0.4455	0.07101	pCi/g	0.1331	N	74.2	1	1.719	IDENTIFIED	14.94	☐	
Annihilation Rad.	HE	0.121	0.04196	pCi/g	0.05696	N	510.1	1	1.901	IDENTIFIED	34.55	☐	
Barium-137m nr		0.1492	0.0261	pCi/g	0.07368	N	661	2	1.326	IDENTIFIED	17.31	☐	
Bismuth-211 INT		3.852	0.3352	pCi/g	0.4011	Y	351.2	4	1.633	IDENTIFIED	7.996	☑ UI	
Bismuth-212 LA		1.399	0.2582	pCi/g	0.7844	N	0	12	0	FAIL_ABUND	0	☐	
Bismuth-214 ✓		1.175	0.1097	pCi/g	0.1271	0.200	608.8	4	1.5	IDENTIFIED	8.566	☐	
Cadmium-109 LA		3.366	0.704	pCi/g	2.232	Y	0	12	0	NOT_IDENTI	0	☑ UI	Data rejected due to low abundance.
Cerium-143		2298	315.9	pCi/g	0	N	0	12	0	SHORT_HLIF	0	☐	
Cesium-135 INT		0.5654	0.1051	pCi/g	0.3208	N	269.5	1	1.697	IDENTIFIED	18.1	☐	
Cesium-137 ✓		0.1578	0.02759	pCi/g	0.07789	0.100	661	2	1.326	IDENTIFIED	17.31	☐	
Gross Gamma		7.927	1.26	pCi/g	3.017	N		0				☐	
Iodine-133	HE	2713	8088	pCi/g	0	N	0	12	0	SHORT_HLIF	0	☐	
Lead-212 ✓		1.685	0.09751	pCi/g	0.1128	0.100	238	4	1.327	IDENTIFIED	4.044	☐	
Lead-214 ✓		1.34	0.1217	pCi/g	0.1398	0.100	351.2	4	1.633	IDENTIFIED	7.996	☐	

Lutetium-177	HE	3.124	0.8626	pCi/g	2.74	N	0	12	0	FAIL_ABUND	0	☐
Niobium-95m		1.869	0.1377	pCi/g	0.449	N	0	12	0	NOT_IDENTI	0	☐
Niobium-97	HE	2.70E+05	1.85E+05	pCi/g	0	N	0	12	0	SHORT_HLIF	0	☐
Polonium-212 nr		1.685	0.09751	pCi/g	0.1128	N	238	4	1.327	IDENTIFIED	4.044	☐
Polonium-214 nr		1.34	0.1217	pCi/g	0.1398	N	351.2	4	1.633	IDENTIFIED	7.996	☐
Polonium-216 nr		1.685	0.09751	pCi/g	0.1128	N	238	4	1.327	IDENTIFIED	4.044	☐
Polonium-218 nr		1.34	0.1217	pCi/g	0.1398	N	351.2	4	1.633	IDENTIFIED	7.996	☐
Potassium-40 ✓		19.74	1.105	pCi/g	0.6694	1.00	1460	1	2.261	IDENTIFIED	4.093	☐
Radium-224 INT		5.64	0.8952	pCi/g	1.283	Y	241	1	1.944	IDENTIFIED	15.49	☑ UI
Radium-226 ✓		1.175	0.1097	pCi/g	0.1271	Y	608.8	4	1.5	IDENTIFIED	8.566	☐
Radium-228 ✓		1.636	0.1789	pCi/g	0.1991	0.500	910.6	3	1.933	IDENTIFIED	9.416	☐
Rhenium-188	HE	0.4217	0.1111	pCi/g	0.3952	N	0	12	0	NOT_IDENTI	0	☐
Thallium-200	HE	552.1	515.3	pCi/g	0	N	0	12	0	SHORT_HLIF	0	☐
Thallium-208 ✓		0.5433	0.05051	pCi/g	0.06681	0.080	582.5	1	1.432	IDENTIFIED	8.734	☐
Thorium-228 nr		1.712	0.09908	pCi/g	0.1146	N	238	4	1.327	IDENTIFIED	4.044	☐
Thorium-230 nr		1.175	0.1097	pCi/g	0.127	N	608.8	4	1.5	IDENTIFIED	8.566	☐
Thorium-232 nr		1.636	0.1789	pCi/g	0.1991	N	910.6	3	1.933	IDENTIFIED	9.416	☐
Tin-126	HE	0.2716	0.06998	pCi/g	0.2195	N	0	12	0	NOT_IDENTI	0	☐
Titanium-44		0.1983	0.03135	pCi/g	0.1001	N	0	12	0	NOT_IDENTI	0	☐
Uranium-234 nr		1.175	0.1097	pCi/g	0.127	N	608.8	4	1.5	IDENTIFIED	8.566	☐
Zirconium-97		2.89E+07	3.65E+06	pCi/g	0	N	0	12	0	SHORT_HLIF	0	☐

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
244137005	04-JAN-10 12:00	20-JAN-10 13:44	16.1	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓ nr		1.275	0.1976	pCi/g	0.2728	N	910.4	3	1.407	IDENTIFIED	14.43	☐	
Americium-243 INT		0.3392	0.03076	pCi/g	0.05988	N	74.85	1	0.9528	IDENTIFIED	7.641	☐	
Annihilation Rad.	HE	0.1055	0.03786	pCi/g	0.05627	N	510.7	1	1.342	IDENTIFIED	35.62	☐	
Bismuth-210	HE	1.046	0.3916	pCi/g	0.7673	N	46.68	3	0.9511	IDENTIFIED	37.06	☐	
Bismuth-211 INT		3.846	0.2965	pCi/g	0.3462	Y	351.8	4	1.113	IDENTIFIED	6.141	☑ UI	
Bismuth-212	HE	1.379	0.3031	pCi/g	0.8087	N	0	8	0	FAIL_ABUND	0	☐	
Bismuth-214 ✓		1.522	0.1285	pCi/g	0.1202	0.200	608.7	4	1.539	IDENTIFIED	6.744	☐	
Cadmium-109 INT		2.672	0.6787	pCi/g	0.9471	Y	86.72	3	0.904	IDENTIFIED	24.93	☑ UI	
Cerium-143		1075	194.4	pCi/g	0	N	0	8	0	SHORT_HLIF	0	☐	
Cesium-134 LA		0.123	0.03259	pCi/g	0.1043	0.100	0	8	0	FAIL_ABUND	0	☑ UI	Data rejected due to low abundance.
Gross Gamma		8.211	1.273	pCi/g	3.42	N		0				☐	
Iodine-123	HE	5.18E+06	9.67E+06	pCi/g	0	N	0	8	0	SHORT_HLIF	0	☐	
Iodine-135		3.54E+16	0	pCi/g	0	N	0	8	0	SHORT_HLIF	0	☐	
Lead-210	HE	1.046	0.3916	pCi/g	0.7673	N	46.68	3	0.9511	IDENTIFIED	37.06	☐	
Lead-212 ✓		1.569	0.1001	pCi/g	0.09939	0.100	238.6	4	1.008	IDENTIFIED	3.908	☐	
Lead-214 ✓		1.338	0.1089	pCi/g	0.1207	0.100	351.8	4	1.113	IDENTIFIED	6.141	☐	
Lutetium-177	HE	3.793	0.8196	pCi/g	2.421	N	0	8	0	FAIL_ABUND	0	☐	
Neptunium-237 INT		0.7701	0.2111	pCi/g	0.3104	N	86.72	3	0.904	IDENTIFIED	24.93	☐	
Polonium-210	HE	1.046	0.3911	pCi/g	0.7673	N	46.68	3	0.9511	IDENTIFIED	37.06	☐	
Polonium-212 nr		1.569	0.1001	pCi/g	0.09939	N	238.6	4	1.008	IDENTIFIED	3.908	☐	
Polonium-214 nr		1.338	0.1089	pCi/g	0.1207	N	351.8	4	1.113	IDENTIFIED	6.141	☐	
Polonium-216 nr		1.569	0.1001	pCi/g	0.09939	N	238.6	4	1.008	IDENTIFIED	3.908	☐	
Polonium-218 nr		1.338	0.1089	pCi/g	0.1207	N	351.8	4	1.113	IDENTIFIED	6.141	☐	
Potassium-40 ✓		19.61	1.236	pCi/g	0.4259	1.00	1460	1	1.906	IDENTIFIED	4.471	☐	
Radium-224 INT		4.884	0.6899	pCi/g	1.132	Y	241.5	1	1.749	IDENTIFIED	13.38	☑ UI	
Radium-226 ✓		1.522	0.1285	pCi/g	0.1202	Y	608.7	4	1.539	IDENTIFIED	6.744	☐	

Radium-228 ✓		1.275	0.1976	pCi/g	0.2728	0.500	910.4	3	1.407	IDENTIFIED	14.43	☐
Thallium-208 ✓		0.4933	0.05263	pCi/g	0.07234	0.080	582.9	1	1.315	IDENTIFIED	9.564	☐
Thorium-228 nv		1.594	0.1017	pCi/g	0.101	N	238.6	4	1.008	IDENTIFIED	3.908	☐
Thorium-230 nv		1.522	0.1285	pCi/g	0.1202	N	608.7	4	1.539	IDENTIFIED	6.744	☐
Thorium-232 nv		1.275	0.1976	pCi/g	0.2728	N	910.4	3	1.407	IDENTIFIED	14.43	☐
Thorium-234 ✓		1.655	0.5576	pCi/g	0.9895	2.00	63.35	2	0.9444	IDENTIFIED	32.38	☐
Tin-126 INT		0.2622	0.06661	pCi/g	0.09283	N	86.72	3	0.904	IDENTIFIED	24.93	☐
Titanium-44		0.369	0.02541	pCi/g	0.06461	N	0	8	0	FAIL_ABUND	0	☐
Total Uranium		5.0184	1.66E-06	ug/g	1.4754	N		0				☐
Uranium-234 nv		1.522	0.1285	pCi/g	0.1202	N	608.7	4	1.539	IDENTIFIED	6.744	☐
Uranium-238	HE	1.655	0.5576	pCi/g	0.9895	N	63.35	2	0.9444	IDENTIFIED	32.38	☐
Zirconium-97		7.47E+06	2.86E+06	pCi/g	0	N	0	8	0	SHORT_HLIF	0	☐

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
244137006	04-JAN-10 12:00	20-JAN-10 13:45	16.1	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓ INT		1.532	0.1827	pCi/g	0.1935	N	911.1	3	1.402	IDENTIFIED	10.23	☐	
Americium-243 INT		0.3486	0.0339	pCi/g	0.07823	N	74.9	1	1.007	IDENTIFIED	8.847	☐	
Annihilation Rad.	HE	0.09744	0.02786	pCi/g	0.04727	N	510.9	1	1.32	IDENTIFIED	28.21	☐	
Barium-137m nv		0.1342	0.03254	pCi/g	0.0551	N	661.6	2	1.517	IDENTIFIED	23.73	☐	
Bismuth-211 INT		4.534	0.3111	pCi/g	0.3254	Y	351.8	4	1.151	IDENTIFIED	4.919	☑ ✓ UI	
Bismuth-212	HE	1.192	0.2689	pCi/g	0.6848	N	0	7	0	FAIL_ABUND	0	☐	
Bismuth-214 ✓		1.375	0.112	pCi/g	0.1109	0.200	609.3	4	1.407	IDENTIFIED	5.947	☐	
Cadmium-109 INT		4.008	0.5243	pCi/g	1.057	Y	87.33	3	1.267	IDENTIFIED	12.21	☑ ✓ UI	
Cerium-143		1086	187.8	pCi/g	0	N	0	7	0	SHORT_HLIF	0	☐	
Cesium-134 LA		0.1314	0.03604	pCi/g	0.08754	0.100	0	7	0	FAIL_ABUND	0	☑ UI	Data rejected due to low abundance.
Cesium-137 ✓		0.1418	0.0344	pCi/g	0.05825	0.100	661.6	2	1.517	IDENTIFIED	23.73	☐	
Gross Gamma		9.522	1.567	pCi/g	4.323	N		0				☐	
Lead-212 ✓		1.671	0.1048	pCi/g	0.09038	0.100	238.5	4	1.076	IDENTIFIED	3.32	☐	
Lead-214 ✓		1.577	0.1158	pCi/g	0.1109	0.100	351.8	4	1.151	IDENTIFIED	4.919	☐	
Lutetium-177		4.002	0.8817	pCi/g	2.222	N	0	7	0	FAIL_ABUND	0	☐	
Neptunium-237 INT		1.155	0.1924	pCi/g	0.3079	N	87.33	3	1.267	IDENTIFIED	12.21	☐	
Polonium-212 nv		1.671	0.1048	pCi/g	0.09038	N	238.5	4	1.076	IDENTIFIED	3.32	☐	
Polonium-214 nv		1.577	0.1158	pCi/g	0.1109	N	351.8	4	1.151	IDENTIFIED	4.919	☐	
Polonium-216 nv		1.671	0.1048	pCi/g	0.09038	N	238.5	4	1.076	IDENTIFIED	3.32	☐	
Polonium-218 nv		1.577	0.1158	pCi/g	0.1109	N	351.8	4	1.151	IDENTIFIED	4.919	☐	
Potassium-40 ✓		24.64	1.338	pCi/g	0.5167	1.00	1460	1	1.858	IDENTIFIED	3.233	☐	
Radium-224 INT		5.429	0.6108	pCi/g	1.028	Y	241.6	1	1.52	IDENTIFIED	10.16	☑ ✓ UI	
Radium-226 ✓		1.375	0.112	pCi/g	0.1109	Y	609.3	4	1.407	IDENTIFIED	5.947	☐	
Radium-228 ✓		1.532	0.1827	pCi/g	0.1935	0.500	911.1	3	1.402	IDENTIFIED	10.23	☐	
Thallium-200	HE	280.7	382.1	pCi/g	0	N	0	7	0	SHORT_HLIF	0	☐	
Thallium-208 ✓		0.5325	0.05256	pCi/g	0.05491	0.080	583.1	1	1.357	IDENTIFIED	8.426	☐	
Thorium-228 nv		1.698	0.1065	pCi/g	0.09184	N	238.5	4	1.076	IDENTIFIED	3.32	☐	
Thorium-230 nv		1.375	0.112	pCi/g	0.1109	N	609.3	4	1.407	IDENTIFIED	5.947	☐	
Thorium-232 nv		1.532	0.1827	pCi/g	0.1935	N	911.1	3	1.402	IDENTIFIED	10.23	☐	
Thorium-234 ↑ UNC		1.707	0.73	pCi/g	1.667	2.00	63.43	2	1.023	IDENTIFIED	41.89	☑ ✓ UI	
Tin-126 INT		0.3933	0.05146	pCi/g	0.1041	N	87.33	3	1.267	IDENTIFIED	12.21	☐	
Titanium-44		0.3818	0.02714	pCi/g	0.07535	N	0	7	0	FAIL_ABUND	0	☐	
Total Uranium		5.0807	2.17E-06	ug/g	2.4817	N		0				☐	
Uranium-234 nv		1.375	0.112	pCi/g	0.1109	N	609.3	4	1.407	IDENTIFIED	5.947	☐	
Uranium-238	HE	1.707	0.73	pCi/g	1.667	N	63.43	2	1.023	IDENTIFIED	41.89	☐	

Zirconium-97	HE	4.97E+05	2.36E+06	pCi/g	0	N	0	7	0	SHORT_HLIF	0	☐

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
244137007	04-JAN-10 12:00	20-JAN-10 13:45	16.1	SAMPLE	LOAD	1	LANL	LANL01004 GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228 ✓ nr		1.732	0.1775	pCi/g	0.1958	N	911	3	1.258	IDENTIFIED	8.347	☐	
Americium-243 INT		0.3762	0.02708	pCi/g	0.04236	N	74.84	1	0.8623	IDENTIFIED	5.101	☐	
Annihilation Rad.	HE	0.108	0.03594	pCi/g	0.04465	N	510.6	1	1.311	IDENTIFIED	32.86	☐	
Bismuth-210	HE	0.7979	0.282	pCi/g	0.5671	N	46.46	3	0.9096	IDENTIFIED	34.97	☐	
Bismuth-211 INT		4.316	0.3164	pCi/g	0.2658	Y	351.9	4	1.148	IDENTIFIED	5.106	☑ ✓ UI	
Bismuth-212 ✓		1.216	0.2111	pCi/g	0.4585	N	727.2	1	1.614	IDENTIFIED	16.29	☐	
Bismuth-214 ✓		1.308	0.1121	pCi/g	0.1104	0.200	609.2	4	1.408	IDENTIFIED	6.089	☐	
Cadmium-109 INT		3.533	0.3607	pCi/g	0.7078	Y	87.23	3	1.06	IDENTIFIED	8.694	☑ ✓ UI	
Cerium-143		849.4	154.8	pCi/g	0	N	0	8	0	SHORT_HLIF	0	☐	
Cesium-134 LA		0.09513	0.0287	pCi/g	0.08613	0.100	0	8	0	FAIL_ABUND	0	☑ UI	Data rejected due to low abundance.
Gross Gamma		8.762	1.258	pCi/g	3.649	N		0				☐	
Iodine-135		9.02E+15	0	pCi/g	0	N	0	8	0	SHORT_HLIF	0	☐	
Lead-210	HE	0.7979	0.282	pCi/g	0.5671	N	46.46	3	0.9096	IDENTIFIED	34.97	☐	
Lead-212 ✓		1.652	0.1118	pCi/g	0.09462	0.100	238.6	4	0.963	IDENTIFIED	3.663	☐	
Lead-214 ✓		1.501	0.1168	pCi/g	0.09269	0.100	351.9	4	1.148	IDENTIFIED	5.106	☐	
Lutetium-177		3.692	0.7611	pCi/g	2.057	N	0	8	0	FAIL_ABUND	0	☐	
Neptunium-237 INT		1.018	0.1478	pCi/g	0.2226	N	87.23	3	1.06	IDENTIFIED	8.694	☐	
Polonium-210	HE	0.7979	0.2816	pCi/g	0.5671	N	46.46	3	0.9096	IDENTIFIED	34.97	☐	
Polonium-212 nr		1.652	0.1118	pCi/g	0.09462	N	238.6	4	0.963	IDENTIFIED	3.663	☐	
Polonium-214 nr		1.501	0.1168	pCi/g	0.09269	N	351.9	4	1.148	IDENTIFIED	5.106	☐	
Polonium-216 nr		1.652	0.1118	pCi/g	0.09462	N	238.6	4	0.963	IDENTIFIED	3.663	☐	
Polonium-218 nr		1.501	0.1168	pCi/g	0.09269	N	351.9	4	1.148	IDENTIFIED	5.106	☐	
Potassium-40 ✓		20.63	1.159	pCi/g	0.4106	1.00	1461	1	2.086	IDENTIFIED	3.664	☐	
Radium-224 INT		3.583	0.465	pCi/g	1.229	Y	241.9	1	1.513	IDENTIFIED	11.86	☑ ✓ UI	
Radium-226 ✓		1.308	0.1121	pCi/g	0.1104	Y	609.2	4	1.408	IDENTIFIED	6.089	☐	
Radium-228 ✓		1.732	0.1775	pCi/g	0.1958	0.500	911	3	1.258	IDENTIFIED	8.347	☐	
Technetium-99m		1.99E+16	0	pCi/g	0	N	0	8	0	SHORT_HLIF	0	☐	
Thallium-200	HE	28.24	365.4	pCi/g	0	N	0	8	0	SHORT_HLIF	0	☐	
Thallium-208 ✓		0.5846	0.05144	pCi/g	0.05811	0.080	583.1	1	1.429	IDENTIFIED	6.757	☐	
Thorium-228 nr		1.678	0.1136	pCi/g	0.09614	N	238.6	4	0.963	IDENTIFIED	3.663	☐	
Thorium-230 nr		1.308	0.1121	pCi/g	0.1104	N	609.2	4	1.408	IDENTIFIED	6.089	☐	
Thorium-232 nr		1.732	0.1775	pCi/g	0.1958	N	911	3	1.258	IDENTIFIED	8.347	☐	
Thorium-234 ✓		1.208	0.3541	pCi/g	0.724	2.00	63.36	2	0.8501	IDENTIFIED	27.8	☐	
Tin-126 INT		0.3468	0.03541	pCi/g	0.06933	N	87.23	3	1.06	IDENTIFIED	8.694	☐	
Titanium-44		0.4161	0.02599	pCi/g	0.04669	N	0	8	0	FAIL_ABUND	0	☐	
Total Uranium		3.6335	1.05E-06	ug/g	1.0797	N		0				☐	
Uranium-234 nr		1.308	0.1121	pCi/g	0.1104	N	609.2	4	1.408	IDENTIFIED	6.089	☐	
Uranium-238	HE	1.208	0.3541	pCi/g	0.724	N	63.36	2	0.8501	IDENTIFIED	27.8	☐	
Zirconium-97		5.41E+06	2.52E+06	pCi/g	0	N	0	8	0	SHORT_HLIF	0	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1202012144		20-JAN-10 14:09	0	MB	LOAD	1		GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Annihilation Rad.	HE	0.02435	0.02141	pCi/g	0.02344	N	511.2	1	2.363	IDENTIFIED	87.9	☐	
Iodine-135	HE	1.01E+07	7.54E+06	pCi/g	0	N	0	3	0	SHORT_HLIF	0	☐	

Technetium-99m	HE	1.30E+07	7.86E+06	pCi/g	0	N	0	3	0	SHORT_HLIF	0	☐
Zirconium-97	HE	665	360.7	pCi/g	0	N	0	3	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
1202012145	05-JAN-10 12:00	20-JAN-10 15:47	15.2	DUP	LOAD	1		LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓ nv		1.771	0.1564	pCi/g	0.146	N	910.8	3	1.954	IDENTIFIED	5.839	☐	
Americium-243 INT		0.3722	0.04049	pCi/g	0.0847	N	75.05	1	1.185	IDENTIFIED	10.04	☐	
Annihilation Rad.		0.1381	0.02853	pCi/g	0.03413	N	510.9	1	2.387	IDENTIFIED	20.39	☐	
Bismuth-211 INT		3.779	0.2331	pCi/g	0.2513	Y	351.9	4	1.362	IDENTIFIED	5.267	☑ UI	
Bismuth-212 LA		1.005	0.2213	pCi/g	0.5414	N	0	9	0	FAIL_ABUND	0	☐	
Bismuth-214 ✓		1.026	0.08186	pCi/g	0.09712	0.200	609	4	1.625	IDENTIFIED	6.611	☐	
Cadmium-109 INT		2.684	0.5509	pCi/g	1.145	Y	87.36	3	1.073	IDENTIFIED	20	☑ UI	
Cerium-143		648.4	100.6	pCi/g	0	N	0	9	0	SHORT_HLIF	0	☐	
Cesium-134 LA		0.0785	0.02391	pCi/g	0.06643	0.100	0	9	0	FAIL_ABUND	0	☑ UI	Data rejected due to low abundance.
Europium-155	HE	0.1917	0.06064	pCi/g	0.149	N	105.9	1	1.143	IDENTIFIED	31.43	☐	
Gross Gamma		8.389	1.067	pCi/g	2.263	N		0				☐	
Krypton-85		18.87	3.23	pCi/g	11.19	N	0	9	0	NOT_IDENTI	0	☐	
Lead-212 ✓		1.624	0.07432	pCi/g	0.07136	0.100	238.8	4	1.25	IDENTIFIED	2.861	☐	
Lead-214 ✓		1.315	0.08805	pCi/g	0.08757	0.100	351.9	4	1.362	IDENTIFIED	5.267	☐	
Lutetium-177	HE	3.117	0.8032	pCi/g	1.744	N	0	9	0	FAIL_ABUND	0	☐	
Neptunium-237 INT		0.7747	0.178	pCi/g	0.3907	N	87.36	3	1.073	IDENTIFIED	20	☐	
Polonium-212 nv		1.624	0.07432	pCi/g	0.07136	N	238.8	4	1.25	IDENTIFIED	2.861	☐	
Polonium-214 nv		1.315	0.08805	pCi/g	0.08757	N	351.9	4	1.362	IDENTIFIED	5.267	☐	
Polonium-216 nv		1.624	0.07432	pCi/g	0.07136	N	238.8	4	1.25	IDENTIFIED	2.861	☐	
Polonium-218 nv		1.315	0.08805	pCi/g	0.08757	N	351.9	4	1.362	IDENTIFIED	5.267	☐	
Potassium-40 ✓		21.12	1.001	pCi/g	0.378	1.00	1460	1	2.398	IDENTIFIED	2.84	☐	
Radium-224 INT		4.767	0.5554	pCi/g	0.811	Y	241.8	1	1.767	IDENTIFIED	11.31	☑ UI	
Radium-226 ✓		1.026	0.08186	pCi/g	0.09712	Y	609	4	1.625	IDENTIFIED	6.611	☐	
Radium-228 ✓		1.771	0.1564	pCi/g	0.146	0.500	910.8	3	1.954	IDENTIFIED	5.839	☐	
Strontium-85 LA		0.09679	0.01657	pCi/g	0.0574	Y	0	9	0	NOT_IDENTI	0	☑ UI	Data rejected due to low abundance.
Thallium-200	HE	79.09	174.6	pCi/g	0	N	0	9	0	SHORT_HLIF	0	☐	
Thallium-208 ✓		0.4744	0.03455	pCi/g	0.04409	0.080	583.1	1	1.287	IDENTIFIED	6.138	☐	
Thorium-228 nv		1.649	0.07545	pCi/g	0.07245	N	238.8	4	1.25	IDENTIFIED	2.861	☐	
Thorium-230 nv		1.026	0.08186	pCi/g	0.09712	N	609	4	1.625	IDENTIFIED	6.611	☐	
Thorium-232 nv		1.771	0.1564	pCi/g	0.146	N	910.8	3	1.954	IDENTIFIED	5.839	☐	
Tin-126 INT		0.2638	0.05414	pCi/g	0.1348	N	87.36	3	1.073	IDENTIFIED	20	☐	
Titanium-44		0.402	0.03094	pCi/g	0.08033	N	0	9	0	FAIL_ABUND	0	☐	
Uranium-234 nv		1.026	0.08186	pCi/g	0.09712	N	609	4	1.625	IDENTIFIED	6.611	☐	
Zirconium-97		3.15E+06	8.72E+05	pCi/g	0	N	0	9	0	SHORT_HLIF	0	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1202012146		20-JAN-10 14:47	0	LCS	LOAD	1		GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	HE	0.9065	0.2164	pCi/g	0.7907	N	0	11	0	FAIL_ABUND	0	☐	
Americium-241 ✓		12.96	0.6859	pCi/g	0.2369	0.200	59.41	1	1.133	IDENTIFIED	1.49	☐ 81.5 %	
Americium-243		0.2208	0.0352	pCi/g	0.09863	N	74.7	1	1.024	IDENTIFIED	15.35	☐	
Barium-137m		5.126	0.2537	pCi/g	0.1245	N	661.3	2	1.647	IDENTIFIED	2.806	☐	
Bismuth-211		1.596	0.3712	pCi/g	0.6954	Y	351.8	4	1.554	IDENTIFIED	22.97	☐	
Bismuth-214		0.5079	0.1186	pCi/g	0.2603	0.200	608.9	4	1.487	IDENTIFIED	22.87	☐	

Cadmium-109		**34.85**	1.792	pCi/g	**1.832**	Y	87.85	3	1.171	IDENTIFIED	3.296	☐	
Cerium-143	HE	**12.25**	3.308	pCi/g	**10.49**	N	0	11	0	FAIL_ABUND	0	☐	
Cesium-137 ✓		**5.418**	0.2685	pCi/g	**0.1316**	**0.100**	661.3	2	1.647	IDENTIFIED	2.806	☐	97.3 d
Cobalt-57		**0.1997**	0.04163	pCi/g	**0.06637**	N	122.1	1	1.224	IDENTIFIED	19.87	☐	
Cobalt-60 ✓		**6.019**	0.2395	pCi/g	**0.1023**	**0.100**	1332	1	2.048	IDENTIFIED	2.784	☐	93.2 d
Gross Gamma		**25.54**	2.847	pCi/g	**5.42**	N		0				☐	
Iodine-123	HE	**187.6**	337.1	pCi/g	**0**	N	0	11	0	SHORT_HLIF	0	☐	
Lead-212		**0.9607**	0.1292	pCi/g	**0.1673**	**0.100**	238.5	4	1.29	IDENTIFIED	12.66	☐	
Lead-214		**0.5552**	0.1299	pCi/g	**0.2425**	**0.100**	351.8	4	1.554	IDENTIFIED	22.97	☐	
Neptunium-237		**10.17**	1.173	pCi/g	**0.5737**	N	87.85	3	1.171	IDENTIFIED	3.296	☐	
Niobium-97		**1291**	125.9	pCi/g	**0**	N	0	11	0	SHORT_HLIF	0	☐	
Polonium-212		**0.9607**	0.1292	pCi/g	**0.1673**	N	238.5	4	1.29	IDENTIFIED	12.66	☐	
Polonium-214		**0.5552**	0.1299	pCi/g	**0.2425**	N	351.8	4	1.554	IDENTIFIED	22.97	☐	
Polonium-216		**0.9607**	0.1292	pCi/g	**0.1673**	N	238.5	4	1.29	IDENTIFIED	12.66	☐	
Polonium-218		**0.5552**	0.1299	pCi/g	**0.2425**	N	351.8	4	1.554	IDENTIFIED	22.97	☐	
Radium-224		**4.378**	0.716	pCi/g	**2.519**	Y	0	11	0	NOT_IDENTI	0	☐	
Radium-226		**0.5079**	0.1186	pCi/g	**0.2603**	Y	608.9	4	1.487	IDENTIFIED	22.87	☐	
Radium-228		**0.9065**	0.2164	pCi/g	**0.7907**	**0.500**	0	11	0	FAIL_ABUND	0	☐	
Silver-110m		**0.523**	0.06559	pCi/g	**0.2274**	N	0	11	0	NOT_IDENTI	0	☐	
Sodium-24		**281.4**	137.5	pCi/g	**0**	N	0	11	0	SHORT_HLIF	0	☐	
Thallium-208		**0.3553**	0.08391	pCi/g	**0.1199**	**0.080**	583.2	1	1.697	IDENTIFIED	23.25	☐	
Thorium-228		**0.9681**	0.1302	pCi/g	**0.1686**	N	238.5	4	1.29	IDENTIFIED	12.66	☐	
Thorium-230		**0.5079**	0.1186	pCi/g	**0.2603**	N	608.9	4	1.487	IDENTIFIED	22.87	☐	
Thorium-232	HE	**0.9065**	0.2164	pCi/g	**0.7907**	N	0	11	0	FAIL_ABUND	0	☐	
Tin-126		**3.464**	0.1781	pCi/g	**0.1818**	N	87.85	3	1.171	IDENTIFIED	3.296	☐	
Titanium-44		**0.2163**	0.0305	pCi/g	**0.07392**	N	0	11	0	FAIL_ABUND	0	☐	
Uranium-234		**0.5079**	0.1186	pCi/g	**0.2603**	N	608.9	4	1.487	IDENTIFIED	22.87	☐	
Zirconium-97	HE	**530.2**	1399	pCi/g	**0**	N	0	11	0	SHORT_HLIF	0	☐	

*** = Number of isotopes identified with a keyline at this energy.

GEL QUALS

Batch ID: 940263

Report run on: January 21, 2010 12:39 PM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
244125001-1 20-JAN-2010 13:29	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.828			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.438			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1088		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.436			
244125002-1 20-JAN-2010 13:30	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.191			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.921			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1199		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.637			
244125003-1 20-JAN-2010 13:30	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.956			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		4.806			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.126		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.862			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.09349			
244125004-1 20-JAN-2010 13:31	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.271			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.348			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.08764		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.016			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1795			
244137001-1 20-JAN-2010 13:31	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.169			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.833			

GEL QUALS

Batch ID: 940263

Report run on: January 21, 2010 12:39 PM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
244137001-1 20-JAN-2010 13:31	Radium-224	UI	UI	UI	Data rejected due to interference.		4.417			
244137002-1 20-JAN-2010 13:43	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.817			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.111			
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.153			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.08839			
244137003-1 20-JAN-2010 13:43	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.169			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.163			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1206		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.943			
	Thorium-234	UI	UI	UI	Data rejected due to high counting uncertainty.		1.575		2	2
244137004-1 20-JAN-2010 13:44	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.852			
	Cadmium-109	UI	UI	UI	Data rejected due to low abundance.		3.366			
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.64			
244137005-1 20-JAN-2010 13:44	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.846			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.672			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.123		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.884			
244137006-1 20-JAN-2010 13:45	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.534			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		4.008			

GEL QUALS

Batch ID: 940263

Report run on: January 21, 2010 12:39 PM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
244137006-1 20-JAN-2010 13:45	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1314		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.429			
	Thorium-234	UI	UI	UI	Data rejected due to high counting uncertainty.		1.707		2	2
244137007-1 20-JAN-2010 13:45	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.316			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.533			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.09513		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.583			
1202012145-1 DUP 20-JAN-2010 15:47	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.779			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.684			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.0785		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.767			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.09679			

Result Greater Than DL

Batch Id	Sample Id	Sample Type	Run Date	Parmname	Result	Uncertainty	Units	DL	RDL
940263	244137007	SAMPLE	20-JAN-10	Lead-212	1.652	0.1118	pCi/g	0.04734	0.100
				Lead-214	1.501	0.1168	pCi/g	0.04637	0.100
				Polonium-209	8.705	4.004	pCi/g	7.182	N
				Potassium-40	20.63	1.159	pCi/g	0.2054	1.00
				Radium-224	3.583	0.465	pCi/g	0.6148	Y
				Radium-226	1.308	0.1121	pCi/g	0.05522	Y
				Radium-228	1.732	0.1775	pCi/g	0.09794	0.500
				Strontium-85	0.06838	0.02097	pCi/g	0.03446	Y
				Technetium-99m	1.99E+16	0	pCi/g	0	N
				Thallium-200	28.24	365.4	pCi/g	0	N
				Thallium-208	0.5846	0.05144	pCi/g	0.02907	0.080
				Thorium-234	1.208	0.3541	pCi/g	0.3622	2.00
				Zirconium-97	5.41E+06	2.52E+06	pCi/g	0	N
940263	1202012144	MB	20-JAN-10	Iodine-135	1.01E+07	7.54E+06	pCi/g	0	N
				Krypton-85	6.105	2.043	pCi/g	3.949	N
				Strontium-85	0.02892	0.00968	pCi/g	0.01871	Y
				Technetium-99m	1.30E+07	7.86E+06	pCi/g	0	N
				Zirconium-97	665	360.7	pCi/g	0	N
940263	1202012145	DUP	20-JAN-10	Bismuth-211	3.779	0.2331	pCi/g	0.1257	Y
				Bismuth-214	1.026	0.08186	pCi/g	0.04859	0.200
				Cadmium-109	2.684	0.5509	pCi/g	0.5728	Y
				Cerium-143	648.4	100.6	pCi/g	0	N
				Cesium-134	0.0785	0.02391	pCi/g	0.03324	0.100
				Gross Gamma	8.389	1.067	pCi/g	1.096	N
				Krypton-85	18.87	3.23	pCi/g	5.599	N
				Lead-212	1.624	0.07432	pCi/g	0.0357	0.100
				Lead-214	1.315	0.08805	pCi/g	0.04381	0.100
				Potassium-40	21.12	1.001	pCi/g	0.1891	1.00
				Promethium-149	67.38	36.79	pCi/g	63.7	N
				Radium-224	4.767	0.5554	pCi/g	0.4057	Y
				Radium-226	1.026	0.08186	pCi/g	0.04859	Y
				Radium-228	1.771	0.1564	pCi/g	0.07304	0.500
				Ruthenium-106	0.2727	0.1217	pCi/g	0.2139	0.800
				Strontium-85	0.09679	0.01657	pCi/g	0.02872	Y
				Thallium-200	79.09	174.6	pCi/g	0	N
				Thallium-208	0.4744	0.03455	pCi/g	0.02206	0.080
				Zirconium-97	3.15E+06	8.72E+05	pCi/g	0	N

VAX/VMS Nuclide Identification Report Generated 20-JAN-2010 15:31:01.75

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G244125001.CNF;1
Sample date       : 5-JAN-2010 12:00:00. Acquisition date : 20-JAN-2010 13:29:49
Sample ID         : G244125001           Sample quantity  : 1.28360E+02 GRAM
Detector name     : GAM14                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.39  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 940263               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.44*	163	645	1.57	126.43	121	12	2.26E-02	32.5	
2	3	74.93	517	547	1.41	149.40	145	15	7.18E-02	9.0	7.70E-01
3	3	77.23*	831	486	1.26	153.98	145	15	1.15E-01	6.2	
4	2	87.25	301	459	1.56	174.00	170	22	4.19E-02	12.7	2.16E+00
5	2	89.96	146	480	1.37	179.42	170	22	2.03E-02	27.9	
6	2	93.15*	202	538	1.67	185.80	170	22	2.81E-02	24.2	
7	0	129.01	82	331	1.07	257.45	254	8	1.14E-02	40.0	
8	0	185.90*	214	366	1.48	371.11	366	12	2.97E-02	19.8	
9	0	209.02*	139	249	1.17	417.32	413	9	1.93E-02	22.5	
10	3	238.56*	1423	198	1.37	476.34	468	20	1.98E-01	3.2	4.18E-01
11	3	241.58	331	228	2.06	482.39	468	20	4.59E-02	15.2	
12	0	270.39	137	216	1.53	539.94	534	12	1.90E-02	23.1	
13	0	278.07	33	170	1.26	555.30	549	8	4.62E-03	70.0	
14	0	295.14	414	231	1.26	589.42	584	12	5.75E-02	8.8	
15	0	299.81	71	128	1.03	598.75	596	7	9.83E-03	29.2	
16	0	338.58	337	147	1.77	676.22	671	14	4.68E-02	9.4	
17	0	351.69	708	247	1.36	702.43	696	14	9.83E-02	6.0	
18	0	463.04	63	79	1.50	924.99	921	9	8.74E-03	28.4	
19	0	511.12*	135	136	2.11	1021.10	1013	18	1.87E-02	25.0	
20	0	569.29*	220	121	2.90	1137.38	1128	21	3.06E-02	14.5	
21	0	583.30*	460	107	1.81	1165.39	1156	16	6.39E-02	6.9	
22	0	609.46*	543	98	1.44	1217.70	1210	15	7.54E-02	5.9	
23	0	727.80*	124	68	1.50	1454.30	1447	15	1.72E-02	17.6	
24	0	768.16	78	70	1.50	1535.01	1527	14	1.08E-02	25.5	
25	0	795.60	59	53	2.01	1589.88	1583	12	8.18E-03	28.1	
26	0	861.01	53	57	2.29	1720.68	1715	14	7.36E-03	33.0	
27	0	911.91*	279	83	1.90	1822.47	1814	15	3.87E-02	9.3	
28	0	935.43	70	36	1.01	1869.50	1861	18	9.72E-03	23.4	
29	5	965.49	27	52	1.99	1929.62	1926	17	3.78E-03	44.6	2.27E+00
30	5	969.55*	159	41	1.80	1937.74	1926	17	2.21E-02	11.7	
31	0	1121.59	74	104	1.98	2241.86	2233	16	1.03E-02	32.9	
32	0	1379.24	35	35	1.56	2757.37	2749	15	4.92E-03	41.0	
33	0	1461.54*	856	12	1.87	2922.06	2914	15	1.19E-01	3.6	
34	0	1588.21	23	15	1.64	3175.58	3167	15	3.22E-03	41.8	
35	0	1764.99*	97	0	1.40	3529.46	3523	14	1.34E-02	10.7	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 20-JAN-2010 15:31:04

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G244125001.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 5-JAN-2010 12:00:00
Sample ID : G244125001
Sample type : SOLID
Detector name : GAMMA14
Elapsed live time: 0 02:00:00.00
Peak Width (FWHM): 3.00
Energy tolerance : 1.50 keV
Errors propagated: Yes
Efficiency type : Empirical
Abundance limit : 75.00

Acquisition date : 20-JAN-2010 13:29:49
Sample quantity : 128.36 GRAM
Sample geometry :
Detector geometry: CAN
Elapsed real time: 0 02:00:01.39 0.0%
Confidence level : 5.00 %
Half life ratio : 8.00
Systematic Error : 0.00 %
Efficiencies at : Peak Energy
WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	1.938E+01	1.969E+00	4.994E-01	3.626E-02	38.803
CD-109	+	88.03	*	3.438E+00	9.204E-01	1.168E+00	1.021E-01	2.943
SN-126	+	64.28		1.066E+00	7.103E-01	6.534E-01	9.311E-02	1.632
	+	86.94		1.405E+00	6.815E-01	5.362E-01	2.218E-01	2.620
	+	87.57	*	3.379E-01	9.048E-02	1.152E-01	1.002E-02	2.933
HG-203		70.83		7.431E-01	1.086E+00	1.584E+00	2.022E-01	0.469
		72.87		2.158E+00	7.289E-01	1.076E+00	1.336E-01	2.006
		82.60		3.489E-01	1.652E+00	1.708E+00	2.303E-01	0.204
	+	279.20	*	3.158E-02	4.426E-02	6.180E-02	3.823E-03	0.511
TL-208	+	277.35		2.867E-01	4.026E-01	5.643E-01	5.968E-02	0.508
	+	510.84		5.900E-01	3.007E-01	1.976E-01	2.015E-02	2.986
	+	583.14	*	5.792E-01	8.914E-02	4.856E-02	3.321E-03	11.927
	+	860.37		6.399E-01	4.269E-01	3.605E-01	3.392E-02	1.775
BI-211		72.87		1.086E+01	3.503E+00	5.412E+00	3.989E-01	2.006
	+	351.07	*	3.828E+00	5.204E-01	3.100E-01	1.964E-02	12.348
PB-212	+	74.81		2.320E+00	5.006E-01	5.081E-01	6.094E-02	4.565
	+	77.11		2.137E+00	3.107E-01	2.916E-01	2.246E-02	7.329
	+	87.30		1.563E+00	4.467E-01	5.339E-01	7.067E-02	2.927
	+	238.63	*	1.676E+00	1.629E-01	8.649E-02	6.299E-03	19.381
	+	300.09		1.286E+00	7.570E-01	1.156E+00	9.564E-02	1.112
PO-212	+	74.81		2.320E+00	5.006E-01	5.081E-01	6.094E-02	4.565
	+	77.11		2.137E+00	3.107E-01	2.916E-01	2.246E-02	7.329
	+	87.30		1.563E+00	4.467E-01	5.339E-01	7.067E-02	2.927
		115.19		1.325E+00	3.466E+00	5.668E+00	4.125E-01	0.234
	+	238.63	*	1.676E+00	1.629E-01	8.649E-02	6.299E-03	19.381
	+	300.09		1.286E+00	7.570E-01	1.156E+00	9.564E-02	1.112
BI-214	+	609.31	*	1.291E+00	1.838E-01	1.081E-01	8.557E-03	11.943
	+	1120.29		9.416E-01	6.263E-01	4.660E-01	4.317E-02	2.021
	+	1764.49		1.693E+00	3.753E-01	2.907E-01	1.743E-02	5.824
PB-214	+	74.81		3.997E+00	8.320E-01	8.755E-01	9.239E-02	4.565
	+	77.11		3.664E+00	6.014E-01	5.000E-01	5.416E-02	7.329
	+	87.30		2.678E+00	7.460E-01	9.146E-01	1.061E-01	2.927
	+	241.98		2.339E+00	7.361E-01	4.898E-01	3.935E-02	4.776
	+	295.21		1.319E+00	2.591E-01	2.176E-01	1.860E-02	6.062

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	351.92	*	1.331E+00	1.939E-01	1.081E-01	8.866E-03	12.323
PO-214	+	74.81		3.997E+00	8.320E-01	8.755E-01	9.239E-02	4.565
	+	77.11		3.664E+00	6.014E-01	5.000E-01	5.416E-02	7.329
	+	87.30		2.678E+00	7.460E-01	9.146E-01	1.061E-01	2.927
	+	241.98		2.339E+00	7.361E-01	4.898E-01	3.935E-02	4.776
	+	295.21		1.319E+00	2.591E-01	2.176E-01	1.860E-02	6.062
	+	351.92	*	1.331E+00	1.939E-01	1.081E-01	8.866E-03	12.323
PO-216	+	74.81		2.320E+00	5.006E-01	5.081E-01	6.094E-02	4.565
	+	77.11		2.137E+00	3.107E-01	2.916E-01	2.246E-02	7.329
	+	87.30		1.563E+00	4.467E-01	5.339E-01	7.067E-02	2.927
	+	238.63	*	1.676E+00	1.629E-01	8.649E-02	6.299E-03	19.381
	+	300.09		1.286E+00	7.570E-01	1.156E+00	9.564E-02	1.112
PO-218	+	74.81		3.997E+00	8.320E-01	8.755E-01	9.239E-02	4.565
	+	77.11		3.664E+00	6.014E-01	5.000E-01	5.416E-02	7.329
	+	87.30		2.678E+00	7.460E-01	9.146E-01	1.061E-01	2.927
	+	241.98		2.339E+00	7.361E-01	4.898E-01	3.935E-02	4.776
	+	295.21		1.319E+00	2.591E-01	2.176E-01	1.860E-02	6.062
	+	351.92	*	1.331E+00	1.939E-01	1.081E-01	8.866E-03	12.323
RA-224	+	240.98	*	4.436E+00	1.373E+00	9.837E-01	5.654E-02	4.509
RA-226	+	609.31	*	1.291E+00	1.838E-01	1.081E-01	8.557E-03	11.943
	+	1120.29		9.416E-01	6.263E-01	4.660E-01	4.317E-02	2.021
	+	1764.49		1.693E+00	3.753E-01	2.907E-01	1.743E-02	5.824
AC-228	+	338.32		2.009E+00	9.011E-01	3.433E-01	1.399E-01	5.851
	+	911.07	*	1.598E+00	3.528E-01	2.154E-01	2.530E-02	7.420
	+	969.11		1.609E+00	5.325E-01	3.643E-01	8.507E-02	4.416
RA-228	+	338.32		2.009E+00	9.011E-01	3.433E-01	1.399E-01	5.851
	+	911.07	*	1.598E+00	3.528E-01	2.154E-01	2.530E-02	7.420
	+	969.11		1.609E+00	5.325E-01	3.643E-01	8.507E-02	4.416
TH-228	+	74.81		2.355E+00	4.588E-01	5.158E-01	3.919E-02	4.565
	+	77.11		2.170E+00	3.154E-01	2.960E-01	2.280E-02	7.329
	+	87.30		1.587E+00	4.248E-01	5.420E-01	4.700E-02	2.927
	+	238.63	*	1.702E+00	1.654E-01	8.779E-02	6.395E-03	19.381
	+	300.09		1.305E+00	1.082E+00	1.174E+00	6.919E-01	1.112
TH-230	+	609.31	*	1.291E+00	1.837E-01	1.081E-01	8.557E-03	11.943
	+	1120.29		9.415E-01	6.263E-01	4.660E-01	4.317E-02	2.021
	+	1764.49		1.693E+00	3.753E-01	2.907E-01	1.743E-02	5.824
TH-232	+	338.32		2.009E+00	3.939E-01	3.433E-01	1.972E-02	5.851
	+	911.07	*	1.598E+00	3.528E-01	2.154E-01	2.530E-02	7.420
	+	969.11		1.609E+00	5.325E-01	3.643E-01	8.507E-02	4.416
TH-234	+	63.29	*	2.693E+00	1.813E+00	1.702E+00	2.925E-01	1.583
	+	92.38		1.493E+00	7.707E-01	7.647E-01	1.374E-01	1.952
U-234	+	609.31	*	1.291E+00	1.837E-01	1.081E-01	8.557E-03	11.943
	+	1120.29		9.415E-01	6.263E-01	4.660E-01	4.317E-02	2.021
	+	1764.49		1.693E+00	3.753E-01	2.907E-01	1.743E-02	5.824
NP-237	+	86.50	*	9.924E-01	3.354E-01	3.720E-01	8.315E-02	2.668
		95.87		4.767E-01	1.043E+00	1.498E+00	3.665E-01	0.318
U-238	+	63.29	*	2.693E+00	1.813E+00	1.702E+00	2.925E-01	1.583
	+	92.38		1.493E+00	7.333E-01	7.647E-01	6.397E-02	1.952
AM-243	+	74.67	*	3.761E-01	7.315E-02	8.257E-02	6.196E-03	4.555

Sample ID : G244125001 Acquisition date : 20-JAN-2010 13:29:49

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	86.72		3.721E+01	9.963E+00	1.423E+01	1.225E+00	2.616
		117.66		-1.197E+00	3.693E+00	5.870E+00	4.232E-01	-0.204
		142.18		1.616E+01	1.792E+01	2.969E+01	1.867E+00	0.544
ANH-511	+	511.00	*	1.274E-01	6.408E-02	4.270E-02	2.508E-03	2.985

---- 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	*	1.323E-01	3.001E-01	5.067E-01	3.415E-02	0.261
NA-22		1274.54	*	3.187E-02	4.098E-02	7.270E-02	4.749E-03	0.438
NA-24		1368.53	*	-4.053E-01	4.098E-02	Half-Life too short		
AL-26		1129.67		7.903E-01	1.801E+00	2.893E+00	1.827E-01	0.273
		1808.65	*	-2.209E-03	2.461E-02	3.888E-02	2.254E-03	-0.057
TI-44		67.85		-3.919E-02	4.823E-02	6.565E-02	4.620E-03	-0.597
	+	78.38	*	3.944E-01	5.734E-02	7.864E-02	6.140E-03	5.016
SC-46		889.25	*	-2.424E-02	3.512E-02	5.473E-02	5.057E-03	-0.443
	+	1120.51		1.611E-01	1.066E-01	1.254E-01	8.119E-03	1.285
V-48		944.10		4.710E-02	8.798E-01	1.326E+00	1.185E-01	0.036
		983.50	*	2.225E-02	6.410E-02	1.103E-01	9.363E-03	0.202
		1312.09		-3.031E-02	7.472E-02	1.168E-01	8.070E-03	-0.260
CR-51		320.08	*	-1.875E-01	3.483E-01	5.614E-01	3.628E-02	-0.334
MN-52		744.21		-1.026E-01	2.482E-01	3.855E-01	2.721E-02	-0.266
		848.13		-3.898E+00	6.514E+00	1.035E+01	8.896E-01	-0.376
	+	935.52		7.830E-01	3.730E-01	4.530E-01	4.088E-02	1.729
		1246.25		-1.611E+00	6.894E+00	1.110E+01	6.919E-01	-0.145
		1333.61		1.061E-01	4.699E+00	7.737E+00	5.514E-01	0.014
		1434.06	*	-9.084E-02	2.044E-01	3.104E-01	2.175E-02	-0.293
MN-54		834.83	*	3.929E-02	3.740E-02	6.724E-02	5.640E-03	0.584
CO-56		846.75	*	-4.954E-03	3.731E-02	6.184E-02	5.301E-03	-0.080
		977.42		3.308E-01	2.877E+00	4.744E+00	4.063E-01	0.070
		1037.82		2.146E-01	2.986E-01	5.277E-01	4.372E-02	0.407
		1175.09		7.695E-01	1.958E+00	3.359E+00	1.856E-01	0.229
		1238.25		2.231E-01	9.251E-02	1.768E-01	1.149E-02	1.262
		1360.21		4.306E-01	8.196E-01	1.445E+00	1.027E-01	0.298
		1771.40		-1.683E-01	2.348E-01	2.392E-01	1.428E-02	-0.704
CO-57		122.06	*	-1.789E-02	2.454E-02	3.825E-02	2.721E-03	-0.468
		136.48		1.060E-03	2.017E-01	3.240E-01	2.378E-02	0.003
CO-58		810.76	*	-2.323E-02	4.008E-02	6.075E-02	4.888E-03	-0.382
FE-59		142.65		3.966E+00	2.760E+00	4.651E+00	2.916E-01	0.853
		192.34		-6.676E-01	1.085E+00	1.525E+00	1.781E-01	-0.438
		1099.22	*	3.397E-04	8.644E-02	1.433E-01	1.103E-02	0.002
		1291.56		-1.848E-02	1.089E-01	1.755E-01	1.429E-02	-0.105
CO-60		1173.22		-4.399E-03	3.919E-02	6.402E-02	3.526E-03	-0.069
		1332.49	*	-7.385E-03	3.690E-02	5.909E-02	4.211E-03	-0.125
ZN-65		1115.52	*	2.722E-02	9.874E-02	1.457E-01	9.576E-03	0.187
GE-68		1077.35	*	2.953E-01	1.199E+00	2.034E+00	1.462E-01	0.145
AS-73		53.44	*	3.400E-01	6.200E-01	1.032E+00	6.728E-02	0.329
AS-74		595.88	*	5.119E-03	8.701E-02	1.421E-01	8.499E-03	0.036

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		634.78		-1.850E-01	3.603E-01	5.600E-01	3.345E-02	-0.330
SE-75		66.05		-2.485E+00	4.803E+00	6.688E+00	6.082E-01	-0.372
		96.73		-7.241E-01	8.458E-01	1.134E+00	1.507E-01	-0.638
		121.11		-2.465E-02	1.307E-01	2.087E-01	2.112E-02	-0.118
		136.00		-8.692E-03	3.792E-02	6.030E-02	3.983E-03	-0.144
		198.60		1.723E+00	1.771E+00	3.021E+00	2.092E-01	0.570
		264.65	*	-2.596E-03	4.743E-02	6.774E-02	3.977E-03	-0.038
	+	279.53		8.444E-02	1.184E-01	1.826E-01	1.150E-02	0.462
		303.91		2.423E-01	2.203E+00	3.209E+00	3.067E-01	0.076
		400.65		1.063E-01	2.466E-01	4.167E-01	3.711E-02	0.255
BR-77	+	87.88		7.311E+02	1.957E+02	3.292E+02	2.876E+01	2.221
		200.40		-8.753E+01	1.584E+02	2.609E+02	1.451E+01	-0.335
	+	239.00		2.649E+02	2.284E+01	3.667E+01	2.105E+00	7.225
		249.79		-4.555E+01	6.002E+01	9.671E+01	5.586E+00	-0.471
		281.68		5.945E+01	9.329E+01	1.411E+02	8.230E+00	0.421
		297.23		3.663E+02	9.214E+01	1.244E+02	7.255E+00	2.945
		303.76		-8.877E+00	1.859E+02	2.676E+02	1.560E+01	-0.033
		439.47		-1.337E+02	1.308E+02	1.993E+02	1.127E+01	-0.671
		484.57		-1.459E+02	2.050E+02	3.175E+02	1.844E+01	-0.459
		520.65	*	6.152E+00	1.043E+01	1.730E+01	1.020E+00	0.356
		574.64		8.501E+01	2.763E+02	3.204E+02	1.913E+01	0.265
		578.91		4.310E+01	1.192E+02	1.388E+02	8.293E+00	0.310
		585.48		1.814E+03	2.725E+02	5.114E+02	3.057E+01	3.548
		755.35		1.009E+01	1.632E+02	2.642E+02	1.906E+01	0.038
		817.79		-3.311E+01	1.196E+02	1.959E+02	1.592E+01	-0.169
SR-82		698.33		2.348E+01	3.433E+01	5.830E+01	3.748E+00	0.403
		776.49	*	-1.987E-01	3.824E-01	5.856E-01	4.402E-02	-0.339
		1395.20		-5.112E+00	1.057E+01	1.615E+01	1.141E+00	-0.317
RB-83		520.41	*	4.017E-02	6.992E-02	1.159E-01	6.833E-03	0.347
		529.64		1.810E-02	9.702E-02	1.607E-01	9.501E-03	0.113
		552.65		-2.001E-01	1.925E-01	2.877E-01	1.711E-02	-0.696
RB-84		881.50	*	6.636E-02	6.660E-02	1.203E-01	1.097E-02	0.551
KR-85		513.99	*	1.323E+01	8.107E+00	1.303E+01	7.664E-01	1.015
SR-85		513.99	*	6.780E-02	4.154E-02	6.678E-02	3.928E-03	1.015
RB-86		1076.63	*	5.825E-02	7.664E-01	1.280E+00	9.219E-02	0.045
Y-88		898.02		-8.315E-03	3.597E-02	5.879E-02	5.538E-03	-0.141
		1836.01	*	5.953E-03	3.360E-02	5.612E-02	3.187E-03	0.106
ZR-88		392.90	*	3.044E-03	2.972E-02	4.934E-02	2.687E-03	0.062
Y-91		1204.90	*	1.368E-01	1.815E+01	2.997E+01	1.744E+00	0.005
NB-94		702.63	*	-4.392E-03	3.547E-02	5.672E-02	3.679E-03	-0.077
		871.10		-7.517E-03	3.211E-02	5.263E-02	4.712E-03	-0.143
NB-95		765.79	*	5.941E-02	4.870E-02	7.641E-02	5.627E-03	0.777
NB-95M		235.69	*	6.668E-01	1.596E-01	2.652E-01	1.982E-02	2.515
ZR-95		724.18		7.133E-02	1.021E-01	1.533E-01	1.181E-02	0.465
		756.15	*	-8.254E-03	7.154E-02	1.140E-01	9.402E-03	-0.072
NB-97		657.90	*	-2.066E-02	7.154E-02	Half-Life too short		
		1024.50		2.084E+00	7.154E-02	Half-Life too short		
ZR-97		254.15		4.293E+00	7.154E-02	Half-Life too short		
		355.39		2.661E+00	7.154E-02	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		507.63	*	3.084E+00	7.154E-02	Half-Life too short		
		602.52		-2.674E+00	7.154E-02	Half-Life too short		
		1021.30		-6.888E+00	7.154E-02	Half-Life too short		
		1147.95		2.447E+00	7.154E-02	Half-Life too short		
		1362.66		-1.213E+00	7.154E-02	Half-Life too short		
		1750.46		-2.892E+00	7.154E-02	Half-Life too short		
MO-99		140.51		-2.710E+01	2.693E+01	3.964E+01	1.073E+01	-0.684
		181.06		4.647E+00	1.724E+01	2.570E+01	4.375E+00	0.181
		366.43		8.174E+01	7.996E+01	1.397E+02	7.838E+00	0.585
		739.58	*	2.779E+00	1.120E+01	1.843E+01	2.639E+00	0.151
		778.00		-3.914E+01	3.513E+01	5.062E+01	3.817E+00	-0.773
TC-99M		140.51	*	-3.434E+10	3.513E+01	Half-Life too short		
RH-101		127.23		3.755E-02	3.644E-02	5.383E-02	3.703E-03	0.698
		198.01	*	3.023E-02	3.237E-02	5.519E-02	3.062E-03	0.548
		325.23		-1.385E-01	2.279E-01	3.671E-01	2.124E-02	-0.377
RH-102		418.52		3.359E-01	2.761E-01	4.869E-01	2.710E-02	0.690
		475.06	*	-2.816E-02	2.830E-02	4.308E-02	2.490E-03	-0.654
		631.29		8.095E-03	5.359E-02	8.796E-02	5.255E-03	0.092
		697.49		4.314E-02	7.548E-02	1.273E-01	8.171E-03	0.339
	+	766.84		3.134E-01	1.613E-01	2.102E-01	1.551E-02	1.491
		1046.59		-4.605E-02	1.113E-01	1.776E-01	1.359E-02	-0.259
		1112.84		1.593E-01	2.346E-01	3.764E-01	2.487E-02	0.423
RU-103		497.08	*	-2.050E-03	3.775E-02	6.154E-02	7.794E-03	-0.033
	+	610.33		1.393E+01	2.714E+00	2.938E+00	4.551E-01	4.740
RH-106	+	511.85		6.365E-01	3.200E-01	4.133E-01	2.429E-02	1.540
		621.84	*	1.051E-01	2.982E-01	4.976E-01	5.885E-02	0.211
		1050.47		-2.635E-01	2.351E+00	3.775E+00	2.868E-01	-0.070
RU-106	+	511.85		6.365E-01	3.200E-01	4.133E-01	2.429E-02	1.540
		621.84	*	1.051E-01	2.981E-01	4.976E-01	2.975E-02	0.211
		1050.47		-2.635E-01	2.351E+00	3.775E+00	2.868E-01	-0.070
AG-108M		433.93	*	3.461E-02	3.213E-02	5.621E-02	3.453E-03	0.616
		614.37		6.721E-03	4.161E-02	5.938E-02	3.836E-03	0.113
		722.95		-9.203E-03	4.588E-02	6.218E-02	4.469E-03	-0.148
AG-110M		657.75	*	-7.820E-03	3.252E-02	5.157E-02	3.257E-03	-0.152
		677.61		-1.930E-01	2.888E-01	4.385E-01	2.845E-02	-0.440
		706.67		2.026E-02	2.215E-01	3.600E-01	2.466E-02	0.056
		763.93		5.438E-02	1.751E-01	2.523E-01	1.923E-02	0.216
		884.67		-9.948E-03	4.544E-02	7.451E-02	7.025E-03	-0.134
		937.48		5.991E-02	1.238E-01	1.888E-01	1.756E-02	0.317
		1384.27		-9.209E-02	1.841E-01	2.330E-01	1.718E-02	-0.395
IN-111		171.28		-1.032E+00	1.001E+00	1.523E+00	8.212E-02	-0.678
		245.39	*	8.232E-01	1.029E+00	1.578E+00	9.093E-02	0.522
IN-113M		391.69	*	-2.276E-02	4.388E-02	7.018E-02	4.107E-03	-0.324
SN-113		391.69	*	-2.276E-02	4.388E-02	7.018E-02	4.107E-03	-0.324
IN-114M		190.27	*	8.819E-02	1.925E-01	2.896E-01	1.594E-02	0.305
CD-115		260.90		-9.507E+01	1.203E+02	1.933E+02	1.122E+01	-0.492
		492.35		-6.559E-01	3.256E+01	5.323E+01	3.103E+00	-0.012
		527.90	*	1.527E+00	9.898E+00	1.635E+01	9.664E-01	0.093
SN-117M		156.02		1.890E+00	2.270E+00	3.751E+00	2.159E-01	0.504

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		158.56	*	-1.466E-02	5.572E-02	8.817E-02	4.987E-03	-0.166
SB-122		563.90	*	2.037E+00	2.234E+00	3.439E+00	2.050E-01	0.592
		692.80		-4.052E+01	4.127E+01	6.082E+01	3.864E+00	-0.666
I-123		159.00	*	-1.838E+00	4.127E+01	Half-Life too short		
		528.96		2.362E+02	4.127E+01	Half-Life too short		
TE-123M		159.00	*	-9.727E-03	2.866E-02	4.520E-02	2.585E-03	-0.215
I-124		602.71	*	-3.210E-01	7.488E-01	1.002E+00	5.992E-02	-0.320
		722.78		-1.008E+00	4.745E+00	6.421E+00	4.341E-01	-0.157
		1325.50		5.865E+00	3.150E+01	5.291E+01	3.731E+00	0.111
		1376.25		5.864E+01	3.815E+01	6.512E+01	4.615E+00	0.901
		1509.49		-1.585E+00	1.603E+01	2.580E+01	1.770E+00	-0.061
		1691.02		-8.383E-01	3.436E+00	5.292E+00	3.334E-01	-0.158
SB-124		602.71		-1.881E-02	4.389E-02	5.871E-02	3.513E-03	-0.320
		645.85		-2.203E-02	4.744E-01	7.657E-01	5.122E-02	-0.029
		709.31		1.170E+00	2.823E+00	4.704E+00	3.093E-01	0.249
		713.82		-1.230E+00	1.694E+00	2.534E+00	2.713E-01	-0.486
		722.78		-8.561E-02	4.032E-01	5.456E-01	3.817E-02	-0.157
	+	968.20		1.655E+01	4.139E+00	7.323E+00	6.350E-01	2.260
		1045.16		-1.571E+00	2.443E+00	3.811E+00	2.924E-01	-0.412
		1325.50		5.322E-01	2.858E+00	4.801E+00	3.386E-01	0.111
		1368.21		-5.902E-01	1.361E+00	2.067E+00	2.595E-01	-0.286
		1436.60		2.846E-01	3.237E+00	5.368E+00	3.760E-01	0.053
		1691.02	*	-1.680E-02	6.886E-02	1.061E-01	7.170E-03	-0.158
SB-125		427.89	*	-4.710E-02	8.732E-02	1.385E-01	8.119E-03	-0.340
	+	463.38		5.359E-01	3.064E-01	4.937E-01	3.314E-02	1.085
		600.56		1.073E-01	1.753E-01	2.904E-01	1.994E-02	0.370
		635.90		-1.193E-01	2.769E-01	4.334E-01	3.008E-02	-0.275
TE-125M		109.28	*	-7.586E-01	9.101E+00	1.464E+01	1.374E+00	-0.052
I-126		388.63		1.202E-01	1.991E-01	3.398E-01	1.856E-02	0.354
		666.33	*	7.495E-02	1.769E-01	2.957E-01	1.776E-02	0.253
		753.82		-4.169E-02	1.527E+00	2.452E+00	1.764E-01	-0.017
SB-126		223.80		-2.542E+00	3.860E+00	6.297E+00	3.576E-01	-0.404
	+	278.60		1.890E+00	2.649E+00	4.248E+00	2.477E-01	0.445
	+	296.50		1.309E+01	2.438E+00	3.570E+00	2.083E-01	3.667
		414.70		-1.373E-02	7.379E-02	1.202E-01	6.670E-03	-0.114
		415.30		-5.793E+00	6.237E+00	9.678E+00	5.373E-01	-0.599
		555.20		2.695E+00	3.814E+00	6.537E+00	3.890E-01	0.412
		573.80		4.277E-01	1.319E+00	1.689E+00	1.008E-01	0.253
		593.00		-2.113E-02	8.375E-01	1.359E+00	8.126E-02	-0.016
		656.30		-2.559E+00	3.219E+00	4.852E+00	2.888E-01	-0.527
		666.33		3.132E-02	7.390E-02	1.235E-01	7.420E-03	0.253
		675.00		6.942E-01	1.789E+00	2.993E+00	1.831E-01	0.232
		695.00		1.693E-02	7.443E-02	1.225E-01	7.818E-03	0.138
		697.00		1.150E-01	2.642E-01	4.413E-01	2.829E-02	0.260
		720.50	*	1.896E-02	1.600E-01	2.257E-01	1.519E-02	0.084
		856.80		-3.424E-01	4.873E-01	6.361E-01	5.552E-02	-0.538
		989.30		-6.473E-01	1.104E+00	1.707E+00	1.437E-01	-0.379
		1034.80		5.108E-01	8.322E+00	1.391E+01	1.088E+00	0.037
		1213.00		-3.873E+00	4.575E+00	6.963E+00	4.106E-01	-0.556

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SB-127		61.10		4.596E+01	5.150E+01	7.581E+01	7.377E+00	0.606
		252.40		-1.005E+00	4.013E+00	6.596E+00	2.740E+00	-0.152
		290.80		-1.538E+00	2.290E+01	3.299E+01	3.023E+00	-0.047
		411.60		1.193E+01	1.174E+01	2.029E+01	2.893E+00	0.588
		444.90		5.974E+00	8.967E+00	1.535E+01	1.643E+00	0.389
		473.00		8.954E-01	1.586E+00	2.694E+00	3.002E-01	0.332
		543.00		-2.822E+00	1.570E+01	2.527E+01	3.272E+00	-0.112
		603.60		-7.708E+00	1.279E+01	1.672E+01	1.813E+00	-0.461
		685.20	*	1.469E-01	1.286E+00	2.099E+00	2.035E-01	0.070
		698.50		1.037E+01	1.523E+01	2.575E+01	3.792E+00	0.403
		722.20		-9.084E+00	3.243E+01	4.349E+01	4.249E+00	-0.209
		783.80		3.758E+00	3.696E+00	6.390E+00	7.497E-01	0.588
XE-127		57.60		4.297E-01	5.384E+00	7.726E+00	5.088E-01	0.056
		145.22		7.747E-01	7.145E-01	1.190E+00	7.345E-02	0.651
		172.10		-1.153E-01	1.208E-01	1.845E-01	9.957E-03	-0.625
		202.84	*	5.227E-03	4.922E-02	7.582E-02	4.227E-03	0.069
		374.96		-1.652E-02	1.807E-01	2.896E-01	1.610E-02	-0.057
I-131		80.18		-2.612E+00	4.939E+00	6.845E+00	5.494E-01	-0.382
		284.30		-9.704E-01	1.416E+00	2.277E+00	1.475E-01	-0.426
		364.48	*	3.542E-02	1.081E-01	1.821E-01	1.150E-02	0.194
		636.97		-3.351E-01	1.543E+00	2.457E+00	1.633E-01	-0.136
		722.89		-1.574E+00	7.688E+00	1.041E+01	7.114E-01	-0.151
TE-132		49.72		-1.920E+01	1.358E+01	2.075E+01	1.910E+00	-0.926
		111.76		-1.236E+01	2.879E+01	4.563E+01	4.510E+00	-0.271
		116.30		1.205E+01	2.635E+01	4.319E+01	4.226E+00	0.279
		228.16	*	5.220E-01	6.805E-01	1.168E+00	1.672E-01	0.447
BA-133		53.15		1.387E+00	2.671E+00	4.442E+00	2.894E-01	0.312
		79.62		3.278E+00	1.540E+00	2.256E+00	3.347E-01	1.453
		81.00		-1.271E-01	1.157E-01	1.419E-01	2.210E-02	-0.895
		276.40		2.270E-01	4.079E-01	6.111E-01	7.931E-02	0.372
		302.84		4.521E-02	1.531E-01	2.258E-01	2.635E-02	0.200
		356.01	*	2.694E-02	4.559E-02	6.851E-02	7.874E-03	0.393
		383.85		-2.316E-04	2.872E-01	4.743E-01	5.082E-02	0.000
I-133	+	510.53		1.241E+00	2.872E-01	Half-Life too short		
		529.87	*	-1.571E-05	2.872E-01	Half-Life too short		
		706.58		1.479E-01	2.872E-01	Half-Life too short		
		856.28		-3.202E-01	2.872E-01	Half-Life too short		
		875.33		-2.023E-02	2.872E-01	Half-Life too short		
		1236.41		8.995E-01	2.872E-01	Half-Life too short		
		1298.22		4.169E-02	2.872E-01	Half-Life too short		
CS-134		475.35		-2.876E+00	1.894E+00	2.763E+00	1.597E-01	-1.041
		563.23		2.830E-01	3.970E-01	5.999E-01	3.647E-02	0.472
	+	569.32		1.502E+00	4.458E-01	5.127E-01	3.145E-02	2.930
		604.70		1.808E-03	3.533E-02	4.985E-02	2.998E-03	0.036
	+	795.84	*	1.088E-01	6.172E-02	8.832E-02	6.951E-03	1.231
		801.93		-1.169E-01	4.370E-01	6.137E-01	4.876E-02	-0.191
		1038.57		2.268E+00	3.713E+00	6.507E+00	5.055E-01	0.348
		1167.94		1.032E+00	2.138E+00	3.703E+00	2.077E-01	0.279
		1365.15		-4.653E-01	9.712E-01	1.466E+00	1.110E-01	-0.317

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CS-135		268.24	*	2.172E-01	1.736E-01	2.705E-01	2.075E-02	0.803
I-135		288.45		-8.077E+09	1.736E-01	Half-Life too short		
		417.63		-1.390E+10	1.736E-01	Half-Life too short		
		546.56		-3.477E+09	1.736E-01	Half-Life too short		
		836.80		9.775E+09	1.736E-01	Half-Life too short		
		1038.76		8.840E+09	1.736E-01	Half-Life too short		
		1124.00		5.213E+10	1.736E-01	Half-Life too short		
		1131.51		-1.289E+09	1.736E-01	Half-Life too short		
		1260.41	*	1.223E+09	1.736E-01	Half-Life too short		
		1457.56		1.121E+11	1.736E-01	Half-Life too short		
		1678.03		1.688E+09	1.736E-01	Half-Life too short		
		1706.46		2.412E+09	1.736E-01	Half-Life too short		
		1791.20		-6.954E+09	1.736E-01	Half-Life too short		
CS-136		66.91		-6.495E-01	7.937E-01	1.083E+00	1.580E-01	-0.600
	+	86.29		4.397E+00	1.250E+00	1.964E+00	2.516E-01	2.239
		153.22		5.635E-02	6.560E-01	1.054E+00	7.669E-02	0.053
		163.89		-2.452E-01	1.037E+00	1.640E+00	1.143E-01	-0.150
		176.55		1.473E-01	3.711E-01	5.963E-01	3.688E-02	0.247
		273.65		-1.695E-01	7.077E-01	6.661E-01	4.420E-02	-0.255
		340.57		4.785E-01	1.512E-01	2.559E-01	1.562E-02	1.870
		818.51		-3.769E-02	6.798E-02	1.084E-01	8.834E-03	-0.348
		1048.07	*	5.303E-02	1.019E-01	1.773E-01	1.426E-02	0.299
		1235.34		-6.519E-02	6.085E-01	9.946E-01	1.012E-01	-0.066
BA-137M		661.65	*	9.156E-03	3.623E-02	5.978E-02	3.555E-03	0.153
CS-137		661.65	*	9.678E-03	3.830E-02	6.319E-02	3.773E-03	0.153
CE-139		165.85	*	-6.179E-03	2.939E-02	4.654E-02	2.499E-03	-0.133
BA-140		162.64		-2.792E-01	7.279E-01	1.144E+00	7.155E-02	-0.244
		304.84		-2.516E-01	1.377E+00	1.960E+00	5.351E-01	-0.128
		423.70		-1.389E+00	1.841E+00	2.793E+00	8.866E-01	-0.497
		537.32	*	1.613E-01	2.574E-01	4.301E-01	1.400E-01	0.375
LA-140		328.77		3.466E-01	3.057E-01	5.321E-01	3.446E-02	0.651
		432.53		1.554E+00	1.997E+00	3.440E+00	2.150E-01	0.452
		487.03		8.063E-02	1.201E-01	2.064E-01	1.358E-02	0.391
		751.79		-9.275E-02	1.765E+00	2.829E+00	2.334E-01	-0.033
		815.85		-9.308E-02	2.982E-01	4.870E-01	4.456E-02	-0.191
		867.82		1.581E-01	1.458E+00	2.136E+00	1.996E-01	0.074
		919.63		1.616E-01	2.782E+00	4.342E+00	4.823E-01	0.037
		925.24		-1.520E-01	1.063E+00	1.713E+00	1.651E-01	-0.089
		1596.49	*	-8.327E-02	9.713E-02	1.282E-01	8.500E-03	-0.649
CE-141		145.44	*	3.520E-02	6.534E-02	1.068E-01	6.818E-03	0.329
CE-143		57.37		1.919E-05	6.534E-02	Half-Life too short		
		231.56		-2.485E-03	6.534E-02	Half-Life too short		
		293.26	*	9.905E-04	6.534E-02	Half-Life too short		
	+	350.59		2.952E-02	6.534E-02	Half-Life too short		
		490.36		-1.031E-03	6.534E-02	Half-Life too short		
		664.57		5.699E-04	6.534E-02	Half-Life too short		
		721.93		-2.207E-04	6.534E-02	Half-Life too short		
CE-144		80.11		-1.047E+00	2.287E+00	3.181E+00	2.532E-01	-0.329
		133.54	*	3.035E-01	2.280E-01	3.375E-01	4.913E-02	0.899

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PM-144		476.78		-8.587E-03	6.436E-02	1.045E-01	7.243E-03	-0.082
		618.01		-9.042E-03	3.105E-02	4.922E-02	3.111E-03	-0.184
		696.49	*	3.338E-03	3.381E-02	5.505E-02	3.527E-03	0.061
		778.57		-2.207E+00	2.348E+00	3.442E+00	2.599E-01	-0.641
PR-144		696.49	*	2.262E-01	2.291E+00	3.730E+00	2.388E-01	0.061
		1489.15		-4.080E+00	1.030E+01	1.564E+01	1.080E+00	-0.261
PM-146		453.90	*	-8.462E-04	4.164E-02	6.828E-02	5.845E-03	-0.012
		633.02		-2.970E-01	1.379E+00	2.190E+00	8.071E-01	-0.136
		735.90		-5.435E-02	1.526E-01	2.213E-01	6.228E-02	-0.246
		747.13		-1.043E-02	9.437E-02	1.505E-01	1.981E-02	-0.069
ND-147	+	91.11		5.513E-01	3.114E-01	4.823E-01	4.433E-02	1.143
		319.41		-1.108E+00	3.122E+00	5.086E+00	2.952E-01	-0.218
		439.89		-5.019E+00	5.377E+00	8.252E+00	4.669E-01	-0.608
		531.02	*	-3.300E-01	5.262E-01	8.141E-01	1.105E-01	-0.405
PM-149		285.90	*	4.062E+00	8.524E+01	1.424E+02	2.020E+01	0.029
EU-152		121.78		-5.210E-02	7.102E-02	1.106E-01	9.567E-03	-0.471
		244.69		5.788E-01	3.362E-01	5.401E-01	3.111E-02	1.072
		344.27	*	-1.946E-02	1.190E-01	1.470E-01	9.507E-03	-0.132
		443.98		2.583E-01	8.857E-01	1.484E+00	8.417E-02	0.174
		778.89		-2.030E-01	2.671E-01	3.987E-01	3.012E-02	-0.509
		867.32		7.708E-02	8.572E-01	1.254E+00	1.115E-01	0.061
	+	964.01		3.173E-01	2.847E-01	5.475E-01	4.774E-02	0.580
		1085.78		-1.322E-02	3.806E-01	6.291E-01	4.439E-02	-0.021
		1112.02		2.632E-01	3.102E-01	5.217E-01	3.454E-02	0.505
		1407.95		7.898E-02	1.821E-01	3.139E-01	2.213E-02	0.252
GD-153		69.67		1.710E+00	1.985E+00	2.491E+00	1.781E-01	0.687
		83.37		7.145E+00	1.877E+01	2.286E+01	1.890E+00	0.313
		97.43	*	-2.472E-02	8.325E-02	1.157E-01	9.282E-03	-0.214
		103.18		-9.504E-02	1.030E-01	1.601E-01	1.236E-02	-0.593
EU-154		123.07		-2.948E-03	5.170E-02	8.007E-02	8.192E-03	-0.037
		247.94		-6.686E-02	3.588E-01	5.402E-01	5.144E-02	-0.124
		591.81		2.112E-01	5.278E-01	8.874E-01	8.769E-02	0.238
		723.30		-2.751E-02	1.926E-01	2.629E-01	2.075E-02	-0.105
		756.87		4.214E-01	7.708E-01	1.296E+00	1.429E-01	0.325
		873.19		1.419E-01	2.829E-01	4.931E-01	6.166E-02	0.288
		996.32		1.265E-02	3.179E-01	5.314E-01	9.367E-02	0.024
		1004.76		1.678E-02	1.966E-01	3.298E-01	3.744E-02	0.051
		1274.45	*	9.560E-02	1.154E-01	2.052E-01	2.012E-02	0.466
EU-155		48.70		2.273E-01	1.649E+00	2.695E+00	1.727E-01	0.084
		60.01		-1.119E+00	4.423E+00	6.196E+00	4.119E-01	-0.181
	+	86.54		4.070E-01	1.091E-01	1.807E-01	1.568E-02	2.253
		105.31	*	5.649E-02	1.042E-01	1.716E-01	1.328E-02	0.329
TB-160	+	86.79		1.087E+00	2.909E-01	4.800E-01	4.136E-02	2.264
		197.04		-8.206E-03	5.533E-01	9.130E-01	5.060E-02	-0.009
		215.65		-2.569E-02	7.418E-01	1.212E+00	6.838E-02	-0.021
	+	298.57		1.870E-01	1.095E-01	1.997E-01	1.165E-02	0.936
		879.36	*	1.647E-03	1.376E-01	2.305E-01	2.094E-02	0.007
		962.29		5.787E-01	5.489E-01	8.845E-01	7.729E-02	0.654
	+	966.15		2.178E-01	1.954E-01	4.249E-01	3.694E-02	0.513

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1177.93		2.404E-02	3.211E-01	5.380E-01	2.988E-02	0.045
		1271.85		3.777E-02	6.526E-01	1.081E+00	7.017E-02	0.035
HO-166M		80.57		-2.968E-01	2.910E-01	3.933E-01	3.147E-02	-0.755
	+	184.41		1.331E-01	5.316E-02	6.519E-02	3.565E-03	2.042
		280.46		2.177E-02	9.097E-02	1.340E-01	7.814E-03	0.162
		410.95		3.602E-01	2.339E-01	4.182E-01	2.314E-02	0.861
		711.68	*	-2.115E-02	6.368E-02	9.908E-02	6.547E-03	-0.213
		752.31		-3.880E-02	2.795E-01	4.447E-01	3.189E-02	-0.087
		810.29		-2.108E-02	6.192E-02	9.627E-02	7.718E-03	-0.219
TM-171		51.35		-1.375E+01	2.208E+01	3.527E+01	2.287E+00	-0.390
		52.39		1.949E+00	1.149E+01	1.889E+01	1.229E+00	0.103
		59.40		-5.601E+00	2.339E+01	3.277E+01	2.171E+00	-0.171
		66.72	*	-2.701E+01	2.884E+01	3.937E+01	2.745E+00	-0.686
LU-176	+	88.36		8.015E-01	2.146E-01	3.677E-01	3.204E-02	2.180
		201.83		1.008E-04	2.874E-02	4.712E-02	2.624E-03	0.002
		306.84	*	-2.104E-02	2.383E-02	3.777E-02	2.200E-03	-0.557
		401.10		2.920E+00	6.475E+00	1.096E+01	6.010E-01	0.266
LU-177		112.95		2.657E-01	1.568E+00	2.545E+00	1.869E-01	0.104
	+	208.36	*	2.886E+00	1.309E+00	1.922E+00	1.077E-01	1.501
LU-177M		52.97		7.119E-01	1.203E+00	2.005E+00	1.306E-01	0.355
		54.07		5.448E-01	6.421E-01	1.079E+00	7.041E-02	0.505
		61.30		1.801E+00	1.339E+00	2.021E+00	1.354E-01	0.891
		121.62		-1.482E-01	3.597E-01	5.689E-01	4.046E-02	-0.261
		147.16		-7.402E-01	6.829E-01	1.046E+00	6.376E-02	-0.708
		171.86		-5.323E-01	4.847E-01	7.348E-01	3.965E-02	-0.724
		218.09		2.284E-01	8.133E-01	1.380E+00	7.803E-02	0.165
		268.79		1.352E+00	9.013E-01	1.421E+00	8.266E-02	0.951
		319.02		-3.977E-02	2.390E-01	3.934E-01	2.283E-02	-0.101
		367.43		8.767E-01	8.653E-01	1.511E+00	8.469E-02	0.580
		413.65	*	-1.293E-01	1.739E-01	2.733E-01	1.516E-02	-0.473
HF-181		56.28		-5.854E-02	7.357E-01	1.198E+00	7.861E-02	-0.049
		57.53		4.621E-02	4.532E-01	6.509E-01	4.286E-02	0.071
		65.20		-5.904E-02	9.574E-01	1.362E+00	9.383E-02	-0.043
		133.02		6.710E-02	7.357E-02	1.082E-01	7.186E-03	0.620
		136.25		3.089E-02	4.405E-01	7.094E-01	4.623E-02	0.044
		345.85		1.745E-01	2.907E-01	3.068E-01	1.754E-02	0.569
		482.03	*	-2.521E-02	3.948E-02	6.163E-02	3.574E-03	-0.409
W-181		56.28		-2.322E-02	2.882E-01	4.692E-01	3.079E-02	-0.049
		57.53		1.823E-02	1.776E-01	2.552E-01	1.680E-02	0.071
		65.20	*	-2.296E-02	3.723E-01	5.296E-01	3.649E-02	-0.043
TA-182		67.75		-9.549E-02	1.150E-01	1.564E-01	1.100E-02	-0.611
		100.10		9.960E-02	1.722E-01	2.749E-01	2.163E-02	0.362
		152.43		-1.082E-02	3.394E-01	5.429E-01	3.200E-02	-0.020
		222.10		-5.111E-02	3.264E-01	5.443E-01	3.087E-02	-0.094
		1001.68		5.713E-01	1.808E+00	3.097E+00	2.560E-01	0.184
	+	1121.28		4.450E-01	2.945E-01	3.493E-01	2.257E-02	1.274
		1189.05		1.098E-01	2.822E-01	4.828E-01	2.734E-02	0.227
		1221.42	*	7.261E-02	1.916E-01	3.260E-01	1.950E-02	0.223
		1230.97		-7.603E-02	4.434E-01	7.196E-01	4.373E-02	-0.106

---- 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		-5.956E-03	1.761E-01	2.513E-01	1.657E-02	-0.024
		59.32		-2.142E-02	9.614E-02	1.348E-01	8.931E-03	-0.159
		67.20		-1.505E-01	2.033E-01	2.801E-01	1.961E-02	-0.537
		162.32	*	-2.821E-02	1.064E-01	1.681E-01	9.257E-03	-0.168
	+	208.81		2.608E+00	1.183E+00	1.744E+00	9.775E-02	1.496
		291.72		3.721E-01	1.033E+00	1.530E+00	8.929E-02	0.243
RE-184		57.98		-2.195E-02	6.491E-01	9.261E-01	6.106E-02	-0.024
		59.32		-7.888E-02	3.541E-01	4.966E-01	3.289E-02	-0.159
		67.20		-5.544E-01	7.490E-01	1.032E+00	7.226E-02	-0.537
		161.27		1.017E-01	3.456E-01	5.596E-01	3.106E-02	0.182
		216.55		-1.219E-01	2.598E-01	4.281E-01	2.417E-02	-0.285
		252.85	*	-3.554E-02	2.153E-01	3.572E-01	2.066E-02	-0.100
		318.01		1.244E-01	4.120E-01	6.955E-01	4.037E-02	0.179
		792.07		-1.811E-01	1.186E+00	1.610E+00	1.247E-01	-0.112
		903.28		1.287E-01	9.352E-01	1.428E+00	1.333E-01	0.090
		920.93		-2.817E-01	4.236E-01	6.622E-01	6.073E-02	-0.425
OS-185		59.72		-9.224E-02	2.622E-01	3.654E-01	2.425E-02	-0.252
		61.14		1.409E-01	1.479E-01	2.186E-01	1.464E-02	0.644
		69.30		5.997E-02	3.685E-01	4.428E-01	3.156E-02	0.135
		592.07		1.088E+00	2.172E+00	3.682E+00	2.202E-01	0.296
		646.12	*	-4.132E-03	4.104E-02	6.594E-02	3.932E-03	-0.063
		717.42		-9.123E-02	8.790E-01	1.405E+00	9.396E-02	-0.065
		874.81		-1.439E-01	5.633E-01	9.218E-01	8.306E-02	-0.156
		880.27		5.051E-01	7.572E-01	1.335E+00	1.215E-01	0.378
RE-188		155.03	*	8.082E-02	1.728E-01	2.817E-01	1.633E-02	0.287
		477.96		1.903E+00	2.850E+00	4.885E+00	2.828E-01	0.390
		633.10		-5.832E-01	2.778E+00	4.429E+00	2.646E-01	-0.132
W-188	+	63.58		1.082E+02	7.080E+01	7.840E+01	5.337E+00	1.380
		227.08		1.323E+01	1.248E+01	2.175E+01	1.239E+00	0.608
		290.67	*	-5.834E-01	8.003E+00	1.152E+01	6.724E-01	-0.051
IR-192	+	295.96		1.005E+00	1.875E-01	2.783E-01	1.649E-02	3.613
		308.46		3.300E-03	9.098E-02	1.516E-01	8.923E-03	0.022
		316.51	*	-5.013E-03	3.214E-02	5.295E-02	3.091E-03	-0.095
		468.07		1.542E-02	7.471E-02	1.081E-01	7.189E-03	0.143
		604.41		-7.399E-02	4.901E-01	6.759E-01	7.736E-02	-0.109
		612.46		3.368E+00	9.795E-01	1.691E+00	1.304E-01	1.992
AU-195		65.12		5.384E-03	1.728E-01	2.468E-01	1.699E-02	0.022
		66.83		-8.770E-02	9.542E-02	1.303E-01	9.097E-03	-0.673
	+	75.70		1.217E+00	2.367E-01	4.556E-01	3.456E-02	2.671
		98.88	*	2.012E-02	2.404E-01	3.411E-01	2.707E-02	0.059
	+	129.76		4.118E+00	3.309E+00	5.024E+00	3.404E-01	0.820
TL-200		367.94	*	3.842E-04	3.309E+00	Half-Life too short		
		579.30		2.090E-03	3.309E+00	Half-Life too short		
		828.27		-1.477E-03	3.309E+00	Half-Life too short		
		1205.75		1.267E-03	3.309E+00	Half-Life too short		
TL-201		68.90		-1.188E+00	5.924E+00	6.970E+00	4.950E-01	-0.170
		70.82		1.892E+00	2.754E+00	4.028E+00	2.910E-01	0.470
		80.30		-3.472E+00	5.327E+00	7.339E+00	5.855E-01	-0.473
		135.34		-1.879E+01	2.497E+01	3.883E+01	2.544E+00	-0.484

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		167.43	*	2.911E+00	6.784E+00	1.104E+01	5.929E-01	0.264
TL-202		68.90		-1.079E-01	5.378E-01	6.327E-01	4.493E-02	-0.170
		70.82		1.713E-01	2.494E-01	3.646E-01	2.635E-02	0.470
		80.30		-3.144E-01	4.824E-01	6.646E-01	5.302E-02	-0.473
		439.56	*	-6.402E-02	6.422E-02	9.810E-02	5.547E-03	-0.653
BI-207		72.80		5.879E-01	2.027E-01	3.124E-01	2.300E-02	1.882
	+	74.97		6.750E-01	1.313E-01	2.279E-01	1.715E-02	2.962
		84.90		3.550E-01	2.108E-01	3.152E-01	2.655E-02	1.126
	+	569.67		2.341E-01	6.940E-02	7.952E-02	4.745E-03	2.944
		1063.62	*	4.553E-03	5.290E-02	8.848E-02	6.548E-03	0.051
		1770.23		-2.062E-01	4.517E-01	5.226E-01	3.121E-02	-0.395
TL-207		81.07		-2.783E-01	2.527E-01	3.135E-01	2.523E-02	-0.888
		83.78		5.817E-02	1.453E-01	1.949E-01	1.619E-02	0.299
		94.90		8.566E-01	2.604E-01	4.086E-01	3.343E-02	2.097
		122.32		-5.748E-01	1.677E+00	2.659E+00	2.087E-01	-0.216
		144.24		1.180E+00	6.963E-01	1.179E+00	8.920E-02	1.001
		154.21		8.382E-02	3.983E-01	6.431E-01	4.524E-02	0.130
	+	269.46		5.769E-01	2.693E-01	3.358E-01	2.042E-02	1.718
		323.87	*	-4.101E-01	6.689E-01	1.071E+00	1.769E-01	-0.383
	+	338.28		8.387E+00	1.803E+00	2.353E+00	2.471E-01	3.565
		445.03		1.537E+00	2.119E+00	3.640E+00	3.712E-01	0.422
PO-209		260.50		-3.871E+00	9.041E+00	1.480E+01	8.588E-01	-0.262
		262.80		-8.851E+00	2.615E+01	4.107E+01	2.385E+00	-0.216
		896.60	*	1.357E+00	6.578E+00	1.121E+01	1.049E+00	0.121
BI-210		46.50	*	2.008E-01	2.248E+00	3.714E+00	2.754E-01	0.054
PB-210		46.50	*	2.008E-01	2.248E+00	3.714E+00	2.754E-01	0.054
PO-210		46.50	*	2.008E-01	2.248E+00	3.714E+00	2.330E-01	0.054
PB-211		404.84	*	-3.963E-01	9.604E-01	1.492E+00	9.297E-01	-0.266
		427.08		2.417E-01	1.863E+00	3.083E+00	1.905E+00	0.078
		831.96		-1.603E+00	1.570E+00	1.774E+00	1.111E+00	-0.904
BI-212	+	727.18	*	1.358E+00	4.911E-01	6.677E-01	5.680E-02	2.034
		785.46		2.411E+00	1.837E+00	3.246E+00	2.483E-01	0.743
		1620.62		1.295E+00	1.057E+00	2.071E+00	1.357E-01	0.625
PO-215		81.07		-2.783E-01	2.527E-01	3.135E-01	2.523E-02	-0.888
		83.78		5.817E-02	1.453E-01	1.949E-01	1.619E-02	0.299
		94.90		8.566E-01	2.604E-01	4.086E-01	3.343E-02	2.097
		122.32		-5.748E-01	1.677E+00	2.659E+00	2.087E-01	-0.216
		144.24		1.180E+00	6.963E-01	1.179E+00	8.920E-02	1.001
		154.21		8.382E-02	3.983E-01	6.431E-01	4.524E-02	0.130
	+	269.46		5.769E-01	2.693E-01	3.358E-01	2.042E-02	1.718
		323.87	*	-4.101E-01	6.689E-01	1.071E+00	1.769E-01	-0.383
	+	338.28		8.387E+00	1.803E+00	2.353E+00	2.471E-01	3.565
		445.03		1.537E+00	2.119E+00	3.640E+00	3.712E-01	0.422
RN-219	+	271.23		7.402E-01	3.479E-01	4.394E-01	3.568E-02	1.685
		401.81	*	4.567E-01	4.020E-01	6.984E-01	9.412E-02	0.654
RN-220		549.76	*	2.779E+00	2.381E+01	3.919E+01	2.330E+00	0.071
RA-223		81.07		-2.783E-01	2.527E-01	3.135E-01	2.523E-02	-0.888
		83.78		5.817E-02	1.453E-01	1.949E-01	1.619E-02	0.299
		94.90		8.566E-01	2.604E-01	4.086E-01	3.343E-02	2.097

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		122.32		-5.748E-01	1.677E+00	2.659E+00	2.087E-01	-0.216
		144.24		1.180E+00	6.963E-01	1.179E+00	8.920E-02	1.001
		154.21		8.382E-02	3.983E-01	6.431E-01	4.524E-02	0.130
	+	269.46		5.769E-01	2.693E-01	3.358E-01	2.042E-02	1.718
		323.87	*	-4.101E-01	6.689E-01	1.071E+00	1.769E-01	-0.383
	+	338.28		8.387E+00	1.803E+00	2.353E+00	2.471E-01	3.565
		445.03		1.537E+00	2.119E+00	3.640E+00	3.712E-01	0.422
AC-227		79.80		2.448E+00	1.886E+00	2.714E+00	5.763E-01	0.902
		236.00		2.262E+00	3.923E-01	5.863E-01	6.106E-02	3.858
		256.20	*	1.254E-01	3.562E-01	6.043E-01	8.434E-02	0.207
		286.10		1.548E-01	1.443E+00	2.418E+00	2.799E-01	0.064
	+	299.80		2.382E+00	1.442E+00	2.450E+00	3.992E-01	0.973
		304.40		1.004E+00	1.949E+00	2.912E+00	5.040E-01	0.345
		334.20		-2.449E+00	2.597E+00	3.413E+00	6.253E-01	-0.717
TH-227		79.80		2.448E+00	1.887E+00	2.714E+00	5.839E-01	0.902
	+	94.00		5.769E+00	3.059E+00	3.562E+00	7.706E-01	1.620
		236.00		2.262E+00	3.741E-01	5.863E-01	5.284E-02	3.858
		256.20	*	1.254E-01	3.564E-01	6.043E-01	1.021E-01	0.207
		286.10		1.548E-01	1.452E+00	2.418E+00	2.422E+00	0.064
	+	299.80		2.382E+00	1.442E+00	2.450E+00	3.992E-01	0.973
		304.40		1.004E+00	1.949E+00	2.912E+00	5.040E-01	0.345
		334.20		-2.449E+00	2.597E+00	3.413E+00	6.253E-01	-0.717
TH-229		85.43		6.392E-01	2.149E-01	3.292E-01	2.790E-02	1.942
	+	88.47		4.614E-01	1.235E-01	2.116E-01	1.841E-02	2.181
		100.00		1.021E-01	1.787E-01	2.852E-01	2.246E-02	0.358
		193.63	*	-4.247E-01	5.117E-01	8.008E-01	4.423E-02	-0.530
		210.97		1.617E+00	8.642E-01	1.376E+00	7.732E-02	1.175
PA-231		283.67	*	-9.507E-01	1.467E+00	2.357E+00	3.252E-01	-0.403
	+	301.29		9.530E-01	5.645E-01	9.935E-01	1.040E-01	0.959
TH-231		81.07		-2.783E-01	2.527E-01	3.135E-01	2.523E-02	-0.888
		83.78		5.817E-02	1.453E-01	1.949E-01	1.619E-02	0.299
		94.90		8.566E-01	2.604E-01	4.086E-01	3.343E-02	2.097
		122.32		-5.748E-01	1.677E+00	2.659E+00	2.087E-01	-0.216
		144.24		1.180E+00	6.963E-01	1.179E+00	8.920E-02	1.001
		154.21		8.382E-02	3.983E-01	6.431E-01	4.524E-02	0.130
	+	269.46		5.769E-01	2.693E-01	3.358E-01	2.042E-02	1.718
		323.87	*	-4.101E-01	6.689E-01	1.071E+00	1.769E-01	-0.383
	+	338.28		8.387E+00	1.803E+00	2.353E+00	2.471E-01	3.565
		445.03		1.537E+00	2.119E+00	3.640E+00	3.712E-01	0.422
U-231		84.21		5.233E+00	5.735E+00	8.391E+00	7.009E-01	0.624
	+	92.29		5.646E+00	2.773E+00	3.661E+00	3.065E-01	1.542
		95.87	*	5.354E-01	1.165E+00	1.683E+00	1.366E-01	0.318
		108.00		4.564E-01	1.983E+00	3.229E+00	2.426E-01	0.141
PA-233	+	75.28		1.970E+01	4.576E+00	7.038E+00	1.040E+00	2.799
	+	86.59		6.616E+00	2.441E+00	2.932E+00	7.861E-01	2.257
	+	300.12		6.642E-01	3.974E-01	6.861E-01	9.229E-02	0.968
		311.98	*	1.604E-02	6.005E-02	1.012E-01	6.249E-03	0.159
		340.50		2.467E+00	9.218E-01	1.263E+00	2.898E-01	1.954
		398.62		-1.879E+00	2.075E+00	3.137E+00	8.090E-01	-0.599

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		415.76		-1.862E+00	1.685E+00	2.513E+00	5.156E-01	-0.741
PA-234	+	63.00		3.140E+00	2.094E+00	2.280E+00	3.319E-01	1.377
		94.67		7.551E-01	2.014E-01	3.006E-01	3.642E-02	2.512
		98.44		5.268E-02	1.002E-01	1.393E-01	7.760E-02	0.378
		99.86		3.222E-01	4.496E-01	7.216E-01	5.688E-02	0.447
		111.00		2.912E-02	1.802E-01	2.924E-01	3.290E-02	0.100
		131.20		1.150E-01	1.253E-01	1.837E-01	1.234E-02	0.626
		152.70		-2.333E-02	3.265E-01	5.213E-01	8.258E-02	-0.045
	+	186.00		4.792E+00	2.393E+00	2.445E+00	7.457E-01	1.960
		226.40		2.833E-01	3.991E-01	6.854E-01	7.886E-02	0.413
		227.20		4.301E-01	4.210E-01	7.329E-01	4.174E-02	0.587
		248.90		-6.111E-01	7.851E-01	1.211E+00	2.601E-01	-0.505
	+	293.70		6.332E+00	1.514E+00	1.714E+00	2.759E-01	3.694
		369.80		-3.271E-01	8.150E-01	1.311E+00	2.722E-01	-0.250
	+	568.70		7.619E+00	2.259E+00	2.574E+00	1.536E-01	2.959
	+	569.50		2.078E+00	6.160E-01	7.075E-01	4.221E-02	2.937
		574.00		4.436E-01	1.890E+00	2.393E+00	1.429E-01	0.185
		699.00		2.218E-01	7.193E-01	1.188E+00	2.161E-01	0.187
		706.10		5.407E-01	1.132E+00	1.851E+00	8.188E-01	0.292
		733.00		-1.391E-02	3.798E-01	5.249E-01	1.133E-01	-0.026
		742.81		2.759E-01	1.372E+00	2.228E+00	1.494E+00	0.124
	+	796.30		2.114E+00	1.316E+00	1.697E+00	4.549E-01	1.245
		805.60		6.492E-01	1.036E+00	1.724E+00	5.252E-01	0.377
		819.60		-7.194E-01	1.149E+00	1.764E+00	6.691E-01	-0.408
		826.30		1.323E-01	7.363E-01	1.251E+00	5.590E-01	0.106
		831.60		-7.061E-01	6.583E-01	9.338E-01	2.779E-01	-0.756
		876.40		-8.148E-02	8.205E-01	1.355E+00	1.393E+00	-0.060
		880.51		1.827E-01	2.739E-01	4.830E-01	4.395E-02	0.378
		883.24		1.247E-01	2.865E-01	4.764E-01	3.206E-01	0.262
		899.00		-4.203E-01	7.437E-01	1.135E+00	4.979E-01	-0.370
		925.00		-1.933E-01	1.082E+00	1.776E+00	1.622E-01	-0.109
		926.50		2.351E-02	1.736E-01	2.730E-01	6.949E-02	0.086
		946.00	*	-3.934E-01	2.897E-01	4.023E-01	7.605E-02	-0.978
		949.00		6.264E-02	4.358E-01	7.360E-01	6.539E-02	0.085
		980.50		-3.723E-01	6.852E-01	1.080E+00	9.213E-02	-0.345
		1394.10		-3.959E-01	1.190E+00	1.817E+00	1.180E+00	-0.218
PA-234M		766.42		1.840E+01	1.635E+01	2.134E+01	1.079E+01	0.862
		1001.03	*	1.530E+00	4.127E+00	7.103E+00	6.867E-01	0.215
U-235	+	89.95		2.204E+00	1.403E+00	1.837E+00	5.667E-01	1.199
	+	93.35		1.795E+00	1.003E+00	1.122E+00	3.134E-01	1.599
		105.00		7.360E-01	1.049E+00	1.702E+00	5.033E-01	0.433
		143.76	*	3.448E-01	2.199E-01	3.617E-01	5.955E-02	0.953
		163.35		-2.741E-01	4.655E-01	7.211E-01	1.289E-01	-0.380
	+	185.71		1.775E-01	7.088E-02	9.054E-02	4.959E-03	1.960
		205.31		1.783E-01	5.506E-01	8.195E-01	1.468E-01	0.218
NP-236		94.67		5.743E-01	1.441E-01	2.282E-01	1.871E-02	2.517
		98.44		3.986E-02	7.248E-02	1.053E-01	8.386E-03	0.378
		111.00		2.203E-02	1.363E-01	2.211E-01	1.638E-02	0.100
		160.31	*	4.286E-03	7.848E-02	1.258E-01	7.031E-03	0.034

---- 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		8.664E-02	1.572E-01	2.406E-01	1.900E-02	0.360
		117.00	*	4.701E-02	1.827E-01	2.974E-01	2.149E-02	0.158
	+	209.75		2.058E+00	9.336E-01	1.407E+00	7.893E-02	1.463
		228.18		1.723E-01	2.240E-01	3.864E-01	2.202E-02	0.446
	+	277.60		1.383E-01	1.938E-01	3.042E-01	1.773E-02	0.455
		334.30		-1.467E+00	1.448E+00	1.919E+00	1.105E-01	-0.764
AM-241		59.54	*	-5.805E-02	1.379E-01	1.914E-01	1.421E-02	-0.303
CM-243		99.55		8.915E-02	1.617E-01	2.476E-01	1.955E-02	0.360
		103.76	*	-1.066E-02	9.407E-02	1.513E-01	1.163E-02	-0.070
		117.00		4.836E-02	1.880E-01	3.059E-01	2.211E-02	0.158
	+	209.75		2.029E+00	9.203E-01	1.387E+00	7.781E-02	1.463
		228.18		1.741E-01	2.264E-01	3.905E-01	2.225E-02	0.446
	+	277.60		1.394E-01	1.954E-01	3.067E-01	1.788E-02	0.455
AM-246		798.80		-1.886E-02	1.487E-01	2.020E-01	1.584E-02	-0.093
		1036.00		-1.127E-02	2.870E-01	4.752E-01	3.709E-02	-0.024
		1062.04		2.134E-01	2.214E-01	3.982E-01	2.956E-02	0.536
		1078.86	*	2.188E-02	1.358E-01	2.287E-01	1.639E-02	0.096
CM-247	+	278.00		5.735E-01	8.037E-01	1.275E+00	7.430E-02	0.450
		287.40		-4.530E-01	1.213E+00	1.929E+00	1.126E-01	-0.235
		402.60	*	3.609E-02	3.552E-02	6.193E-02	3.402E-03	0.583
CF-249		252.85		-1.334E-01	8.079E-01	1.341E+00	7.755E-02	-0.100
		333.44		-2.270E-01	1.983E-01	2.610E-01	1.504E-02	-0.870
		387.95	*	1.251E-02	3.978E-02	6.683E-02	3.654E-03	0.187
CF-251		176.60	*	5.317E-02	1.284E-01	2.065E-01	1.120E-02	0.257
		227.00		4.079E-01	3.752E-01	6.545E-01	3.727E-02	0.623
		285.00		-6.465E-01	1.667E+00	2.725E+00	1.590E-01	-0.237

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]G244125001      *
* Acquisition date : 20-JAN-2010 13:29:49 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 02:00:01.39     Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date        :  5-JAN-2010 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G244125001           Analyst initials: MXR1          *
* Batch Number       : 940263               Sample Quantity : 1.2836E+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	1.938E+01	1.929E+00	4.994E-01	0.000E+00
CD-109	3.438E+00	9.020E-01	1.220E+00	0.000E+00
SN-126	3.379E-01	8.867E-02	1.203E-01	0.000E+00
HG-203	3.158E-02	4.337E-02	6.342E-02	0.000E+00
TL-208	5.792E-01	8.736E-02	4.928E-02	0.000E+00
BI-211	3.828E+00	5.100E-01	3.170E-01	0.000E+00
PB-212	1.676E+00	1.596E-01	8.897E-02	0.000E+00
PO-212	1.676E+00	1.596E-01	8.897E-02	0.000E+00
BI-214	1.291E+00	1.801E-01	1.096E-01	0.000E+00
PB-214	1.331E+00	1.900E-01	1.105E-01	0.000E+00
PO-214	1.331E+00	1.900E-01	1.105E-01	0.000E+00
PO-216	1.676E+00	1.596E-01	8.897E-02	0.000E+00
PO-218	1.331E+00	1.900E-01	1.105E-01	0.000E+00
RA-224	4.436E+00	1.346E+00	1.012E+00	0.000E+00
RA-226	1.291E+00	1.801E-01	1.096E-01	0.000E+00
AC-228	1.598E+00	3.457E-01	2.170E-01	0.000E+00
RA-228	1.598E+00	3.457E-01	2.170E-01	0.000E+00
TH-228	1.702E+00	1.620E-01	9.031E-02	0.000E+00
TH-230	1.291E+00	1.801E-01	1.096E-01	0.000E+00
TH-232	1.598E+00	3.457E-01	2.170E-01	0.000E+00
TH-234	2.693E+00	1.777E+00	1.786E+00	0.000E+00
U-234	1.291E+00	1.801E-01	1.096E-01	0.000E+00
NP-237	9.924E-01	3.287E-01	3.885E-01	0.000E+00
U-238	2.693E+00	1.777E+00	1.786E+00	0.000E+00
AM-243	3.761E-01	7.169E-02	8.641E-02	0.000E+00
ANH-511	1.274E-01	6.280E-02	4.342E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	1.323E-01	2.941E-01	5.158E-01	0.000E+00	NOT IDENT.

NA-22	3.187E-02	4.016E-02	7.287E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	5.581E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-2.209E-03	2.412E-02	3.875E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.619E-02	8.224E-02	0.000E+00	FAIL ABUN
SC-46	-2.424E-02	3.442E-02	5.517E-02	0.000E+00	FAIL ABUN
V-48	2.225E-02	6.281E-02	1.110E-01	0.000E+00	NOT IDENT.
CR-51	-1.875E-01	3.414E-01	5.749E-01	0.000E+00	NOT IDENT.
MN-52	-9.084E-02	2.003E-01	3.105E-01	0.000E+00	FAIL ABUN
MN-54	3.929E-02	3.665E-02	6.785E-02	0.000E+00	NOT IDENT.
CO-56	-4.954E-03	3.656E-02	6.239E-02	0.000E+00	NOT IDENT.
CO-57	-1.789E-02	2.405E-02	3.975E-02	0.000E+00	NOT IDENT.
CO-58	-2.323E-02	3.928E-02	6.132E-02	0.000E+00	NOT IDENT.
FE-59	3.397E-04	8.471E-02	1.440E-01	0.000E+00	NOT IDENT.
CO-60	-7.385E-03	3.616E-02	5.918E-02	0.000E+00	NOT IDENT.
ZN-65	2.722E-02	9.677E-02	1.463E-01	0.000E+00	NOT IDENT.
GE-68	2.953E-01	1.175E+00	2.044E+00	0.000E+00	NOT IDENT.
AS-73	3.400E-01	6.076E-01	1.085E+00	0.000E+00	NOT IDENT.
AS-74	5.119E-03	8.527E-02	1.441E-01	0.000E+00	NOT IDENT.
SE-75	-2.596E-03	4.648E-02	6.958E-02	0.000E+00	FAIL ABUN
BR-77	6.152E+00	1.022E+01	1.759E+01	0.000E+00	FAIL ABUN
SR-82	-1.987E-01	3.748E-01	5.915E-01	0.000E+00	NOT IDENT.
RB-83	4.017E-02	6.853E-02	1.178E-01	0.000E+00	NOT IDENT.
RB-84	6.636E-02	6.526E-02	1.213E-01	0.000E+00	NOT IDENT.
KR-85	1.323E+01	7.945E+00	1.325E+01	0.000E+00	NOT IDENT.
SR-85	6.780E-02	4.071E-02	6.789E-02	0.000E+00	NOT IDENT.
RB-86	5.825E-02	7.511E-01	1.287E+00	0.000E+00	NOT IDENT.
Y-88	5.953E-03	3.293E-02	5.593E-02	0.000E+00	NOT IDENT.
ZR-88	3.044E-03	2.913E-02	5.038E-02	0.000E+00	NOT IDENT.
Y-91	1.368E-01	1.779E+01	3.007E+01	0.000E+00	NOT IDENT.
NB-94	-4.392E-03	3.476E-02	5.739E-02	0.000E+00	NOT IDENT.
NB-95	5.941E-02	4.773E-02	7.721E-02	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	1.564E-01	2.728E-01	0.000E+00	NOT IDENT.
ZR-95	-8.254E-03	7.010E-02	1.152E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	8.424E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.800E+06	0.000E+00	0.000E+00	SHORT HLIF
MO-99	2.779E+00	1.098E+01	1.863E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	3.358E+16	0.000E+00	0.000E+00	SHORT HLIF
RH-101	3.023E-02	3.172E-02	5.694E-02	0.000E+00	NOT IDENT.
RH-102	-2.816E-02	2.774E-02	4.385E-02	0.000E+00	FAIL ABUN
RU-103	-2.050E-03	3.699E-02	6.260E-02	0.000E+00	FAIL ABUN
RH-106	1.051E-01	2.923E-01	5.044E-01	0.000E+00	FAIL ABUN
RU-106	1.051E-01	2.921E-01	5.044E-01	0.000E+00	FAIL ABUN
AG-108M	3.461E-02	3.149E-02	5.730E-02	0.000E+00	NOT IDENT.
AG-110M	-7.820E-03	3.187E-02	5.223E-02	0.000E+00	NOT IDENT.
IN-111	8.232E-01	1.009E+00	1.623E+00	0.000E+00	NOT IDENT.
IN-113M	-2.276E-02	4.300E-02	7.165E-02	0.000E+00	NOT IDENT.
SN-113	-2.276E-02	4.300E-02	7.165E-02	0.000E+00	NOT IDENT.
IN-114M	8.819E-02	1.886E-01	2.989E-01	0.000E+00	NOT IDENT.
CD-115	1.527E+00	9.700E+00	1.662E+01	0.000E+00	NOT IDENT.
SN-117M	-1.466E-02	5.460E-02	9.126E-02	0.000E+00	NOT IDENT.
SB-122	2.037E+00	2.189E+00	3.491E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	5.308E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-9.727E-03	2.809E-02	4.678E-02	0.000E+00	NOT IDENT.
I-124	-3.210E-01	7.338E-01	1.016E+00	0.000E+00	NOT IDENT.
SB-124	-1.680E-02	6.748E-02	1.058E-01	0.000E+00	FAIL ABUN
SB-125	-4.710E-02	8.557E-02	1.412E-01	0.000E+00	FAIL ABUN
TE-125M	-7.586E-01	8.919E+00	1.523E+01	0.000E+00	NOT IDENT.
I-126	7.495E-02	1.733E-01	2.994E-01	0.000E+00	NOT IDENT.
SB-126	1.896E-02	1.568E-01	2.283E-01	0.000E+00	FAIL ABUN
SB-127	1.469E-01	1.260E+00	2.124E+00	0.000E+00	NOT IDENT.
XE-127	5.227E-03	4.824E-02	7.819E-02	0.000E+00	NOT IDENT.
I-131	3.542E-02	1.059E-01	1.862E-01	0.000E+00	NOT IDENT.
TE-132	5.220E-01	6.669E-01	1.202E+00	0.000E+00	NOT IDENT.
BA-133	2.694E-02	4.468E-02	7.004E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	5.201E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	6.048E-02	8.918E-02	0.000E+00	FAIL ABUN
CS-135	2.172E-01	1.702E-01	2.777E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	4.275E+15	0.000E+00	0.000E+00	SHORT HLIF
CS-136	5.303E-02	9.988E-02	1.782E-01	0.000E+00	FAIL ABUN
BA-137M	9.156E-03	3.551E-02	6.054E-02	0.000E+00	NOT IDENT.
CS-137	9.678E-03	3.754E-02	6.400E-02	0.000E+00	NOT IDENT.
CE-139	-6.179E-03	2.880E-02	4.814E-02	0.000E+00	NOT IDENT.
BA-140	1.613E-01	2.523E-01	4.370E-01	0.000E+00	NOT IDENT.
LA-140	-8.327E-02	9.519E-02	1.281E-01	0.000E+00	NOT IDENT.
CE-141	3.520E-02	6.403E-02	1.107E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	2.715E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	3.035E-01	2.235E-01	3.502E-01	0.000E+00	NOT IDENT.
PM-144	3.338E-03	3.313E-02	5.570E-02	0.000E+00	NOT IDENT.

PR-144	2.262E-01	2.245E+00	3.775E+00	0.000E+00	NOT IDENT.
PM-146	-8.462E-04	4.080E-02	6.955E-02	0.000E+00	NOT IDENT.
ND-147	-3.300E-01	5.157E-01	8.273E-01	0.000E+00	FAIL ABUN
PM-149	4.062E+00	8.354E+01	1.461E+02	0.000E+00	NOT IDENT.
EU-152	-1.946E-02	1.166E-01	1.503E-01	0.000E+00	FAIL ABUN
GD-153	-2.472E-02	8.159E-02	1.207E-01	0.000E+00	NOT IDENT.
EU-154	9.560E-02	1.131E-01	2.057E-01	0.000E+00	NOT IDENT.
EU-155	5.649E-02	1.021E-01	1.787E-01	0.000E+00	FAIL ABUN
TB-160	1.647E-03	1.348E-01	2.324E-01	0.000E+00	FAIL ABUN
HO-166M	-2.115E-02	6.240E-02	1.002E-01	0.000E+00	FAIL ABUN
TM-171	-2.701E+01	2.827E+01	4.127E+01	0.000E+00	NOT IDENT.
LU-176	-2.104E-02	2.336E-02	3.871E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.283E+00	1.981E+00	0.000E+00	FAIL ABUN
LU-177M	-1.293E-01	1.704E-01	2.788E-01	0.000E+00	NOT IDENT.
HF-181	-2.521E-02	3.869E-02	6.272E-02	0.000E+00	NOT IDENT.
W-181	-2.296E-02	3.648E-01	5.554E-01	0.000E+00	NOT IDENT.
TA-182	7.261E-02	1.877E-01	3.270E-01	0.000E+00	FAIL ABUN
RE-183	-2.821E-02	1.042E-01	1.739E-01	0.000E+00	FAIL ABUN
RE-184	-3.554E-02	2.110E-01	3.671E-01	0.000E+00	NOT IDENT.
OS-185	-4.132E-03	4.022E-02	6.680E-02	0.000E+00	NOT IDENT.
RE-188	8.082E-02	1.693E-01	2.917E-01	0.000E+00	NOT IDENT.
W-188	-5.834E-01	7.843E+00	1.182E+01	0.000E+00	FAIL ABUN
IR-192	-5.013E-03	3.150E-02	5.424E-02	0.000E+00	FAIL ABUN
AU-195	2.012E-02	2.355E-01	3.555E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	4.160E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	2.911E+00	6.648E+00	1.141E+01	0.000E+00	NOT IDENT.
TL-202	-6.402E-02	6.294E-02	9.998E-02	0.000E+00	NOT IDENT.
BI-207	4.553E-03	5.184E-02	8.894E-02	0.000E+00	FAIL ABUN
TL-207	-4.101E-01	6.555E-01	1.097E+00	0.000E+00	FAIL ABUN
PO-209	1.357E+00	6.446E+00	1.130E+01	0.000E+00	NOT IDENT.
BI-210	2.008E-01	2.203E+00	3.914E+00	0.000E+00	NOT IDENT.
PB-210	2.008E-01	2.203E+00	3.914E+00	0.000E+00	NOT IDENT.
PO-210	2.008E-01	2.203E+00	3.914E+00	0.000E+00	NOT IDENT.
PB-211	-3.963E-01	9.412E-01	1.523E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	4.813E-01	6.752E-01	0.000E+00	FAIL ABUN
PO-215	-4.101E-01	6.555E-01	1.097E+00	0.000E+00	FAIL ABUN
RN-219	4.567E-01	3.940E-01	7.128E-01	0.000E+00	FAIL ABUN
RN-220	2.779E+00	2.334E+01	3.980E+01	0.000E+00	NOT IDENT.
RA-223	-4.101E-01	6.555E-01	1.097E+00	0.000E+00	FAIL ABUN
AC-227	1.254E-01	3.491E-01	6.210E-01	0.000E+00	FAIL ABUN
TH-227	1.254E-01	3.493E-01	6.210E-01	0.000E+00	FAIL ABUN
TH-229	-4.247E-01	5.015E-01	8.264E-01	0.000E+00	FAIL ABUN
PA-231	-9.507E-01	1.437E+00	2.419E+00	0.000E+00	FAIL ABUN
TH-231	-4.101E-01	6.555E-01	1.097E+00	0.000E+00	FAIL ABUN
U-231	5.354E-01	1.141E+00	1.755E+00	0.000E+00	FAIL ABUN
PA-233	1.604E-02	5.885E-02	1.037E-01	0.000E+00	FAIL ABUN
PA-234	-3.934E-01	2.839E-01	4.052E-01	0.000E+00	FAIL ABUN
PA-234M	1.530E+00	4.045E+00	7.147E+00	0.000E+00	NOT IDENT.
U-235	3.448E-01	2.155E-01	3.750E-01	0.000E+00	FAIL ABUN
NP-236	4.286E-03	7.691E-02	1.302E-01	0.000E+00	NOT IDENT.
NP-239	4.701E-02	1.790E-01	3.092E-01	0.000E+00	FAIL ABUN
AM-241	-5.805E-02	1.351E-01	2.010E-01	0.000E+00	NOT IDENT.
CM-243	-1.066E-02	9.219E-02	1.576E-01	0.000E+00	FAIL ABUN
AM-246	2.188E-02	1.331E-01	2.299E-01	0.000E+00	NOT IDENT.
CM-247	3.609E-02	3.481E-02	6.320E-02	0.000E+00	FAIL ABUN
CF-249	1.251E-02	3.899E-02	6.824E-02	0.000E+00	NOT IDENT.
CF-251	5.317E-02	1.259E-01	2.134E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 20-JAN-2010 15:31:02.82

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G244125001.CNF;1
Sample date       : 5-JAN-2010 12:00:00. Acquisition date : 20-JAN-2010 13:29:49
Sample ID         : G244125001           Sample quantity  : 1.28360E+02 GRAM
Detector name     : GAM14                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.39  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 940263               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	856	10.67*	1.211E+00	1.938E+01	1.938E+01	10.16
CD-109	88.03	301	3.72*	7.051E+00	3.361E+00	3.438E+00	26.77
SN-126	64.28	163	9.60	4.649E+00	1.066E+00	1.066E+00	66.62
	86.94	301	8.90	7.051E+00	1.405E+00	1.405E+00	48.51
	87.57	301	37.00*	7.051E+00	3.379E-01	3.379E-01	26.77
HG-203	70.83	------	4.75	5.642E+00	------ Line Not Found		------
	72.87	------	8.00	5.875E+00	------ Line Not Found		------
	82.60	------	3.55	6.755E+00	------ Line Not Found		------
	279.20	33	77.30*	4.992E+00	2.522E-02	3.158E-02	140.16
TL-208	277.35	33	6.80	4.992E+00	2.867E-01	2.867E-01	140.42
	510.84	135	21.60	3.087E+00	5.900E-01	5.900E-01	50.96
	583.14	460	84.20*	2.758E+00	5.792E-01	5.792E-01	15.39
	860.37	53	12.46	1.943E+00	6.399E-01	6.399E-01	66.70
BI-211	72.87	------	1.27	5.875E+00	------ Line Not Found		------
	351.07	708	12.94*	4.179E+00	3.828E+00	3.828E+00	13.59
PB-212	74.81	517	10.70	6.094E+00	2.320E+00	2.320E+00	21.58
	77.11	831	18.00	6.316E+00	2.137E+00	2.137E+00	14.54
	87.30	301	8.00	7.051E+00	1.563E+00	1.563E+00	28.58
	238.63	1423	44.60*	5.568E+00	1.676E+00	1.676E+00	9.72
	300.09	71	3.41	4.721E+00	1.286E+00	1.286E+00	58.89
PO-212	74.81	517	10.70	6.094E+00	2.320E+00	2.320E+00	21.58
	77.11	831	18.00	6.316E+00	2.137E+00	2.137E+00	14.54
	87.30	301	8.00	7.051E+00	1.563E+00	1.563E+00	28.58
	115.19	------	0.60	7.689E+00	------ Line Not Found		------
	238.63	1423	44.60*	5.568E+00	1.676E+00	1.676E+00	9.72
	300.09	71	3.41	4.721E+00	1.286E+00	1.286E+00	58.89
BI-214	609.31	543	46.30*	2.654E+00	1.291E+00	1.291E+00	14.23
	1120.29	74	15.10	1.522E+00	9.415E-01	9.416E-01	66.52
	1764.49	97	15.80	1.059E+00	1.693E+00	1.693E+00	22.17
PB-214	74.81	517	6.21	6.094E+00	3.997E+00	3.997E+00	20.82
	77.11	831	10.50	6.316E+00	3.664E+00	3.664E+00	16.41
	87.30	301	4.67	7.051E+00	2.678E+00	2.678E+00	27.86

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	241.98	331	7.49	5.520E+00	2.339E+00	2.339E+00	31.47
	295.21	414	19.20	4.777E+00	1.319E+00	1.319E+00	19.64
	351.92	708	37.20*	4.179E+00	1.331E+00	1.331E+00	14.56
PO-214	74.81	517	6.21	6.094E+00	3.997E+00	3.997E+00	20.82
	77.11	831	10.50	6.316E+00	3.664E+00	3.664E+00	16.41
	87.30	301	4.67	7.051E+00	2.678E+00	2.678E+00	27.86
	241.98	331	7.49	5.520E+00	2.339E+00	2.339E+00	31.47
	295.21	414	19.20	4.777E+00	1.319E+00	1.319E+00	19.64
	351.92	708	37.20*	4.179E+00	1.331E+00	1.331E+00	14.56
PO-216	74.81	517	10.70	6.094E+00	2.320E+00	2.320E+00	21.58
	77.11	831	18.00	6.316E+00	2.137E+00	2.137E+00	14.54
	87.30	301	8.00	7.051E+00	1.563E+00	1.563E+00	28.58
	238.63	1423	44.60*	5.568E+00	1.676E+00	1.676E+00	9.72
	300.09	71	3.41	4.721E+00	1.286E+00	1.286E+00	58.89
PO-218	74.81	517	6.21	6.094E+00	3.997E+00	3.997E+00	20.82
	77.11	831	10.50	6.316E+00	3.664E+00	3.664E+00	16.41
	87.30	301	4.67	7.051E+00	2.678E+00	2.678E+00	27.86
	241.98	331	7.49	5.520E+00	2.339E+00	2.339E+00	31.47
	295.21	414	19.20	4.777E+00	1.319E+00	1.319E+00	19.64
	351.92	708	37.20*	4.179E+00	1.331E+00	1.331E+00	14.56
RA-224	240.98	331	3.95*	5.520E+00	4.436E+00	4.436E+00	30.96
RA-226	609.31	543	46.30*	2.654E+00	1.291E+00	1.291E+00	14.23
	1120.29	74	15.10	1.522E+00	9.415E-01	9.416E-01	66.52
	1764.49	97	15.80	1.059E+00	1.693E+00	1.693E+00	22.17
AC-228	338.32	337	11.40	4.304E+00	2.009E+00	2.009E+00	44.87
	911.07	279	27.70*	1.843E+00	1.598E+00	1.598E+00	22.08
	969.11	159	16.60	1.741E+00	1.609E+00	1.609E+00	33.10
RA-228	338.32	337	11.40	4.304E+00	2.009E+00	2.009E+00	44.87
	911.07	279	27.70*	1.843E+00	1.598E+00	1.598E+00	22.08
	969.11	159	16.60	1.741E+00	1.609E+00	1.609E+00	33.10
TH-228	74.81	517	10.70	6.094E+00	2.320E+00	2.355E+00	19.48
	77.11	831	18.00	6.316E+00	2.137E+00	2.170E+00	14.54
	87.30	301	8.00	7.051E+00	1.563E+00	1.587E+00	26.77
	238.63	1423	44.60*	5.568E+00	1.676E+00	1.702E+00	9.72
	300.09	71	3.41	4.721E+00	1.286E+00	1.305E+00	82.90
TH-230	609.31	543	46.30*	2.654E+00	1.291E+00	1.291E+00	14.23
	1120.29	74	15.10	1.522E+00	9.415E-01	9.415E-01	66.52
	1764.49	97	15.80	1.059E+00	1.693E+00	1.693E+00	22.17
TH-232	338.32	337	11.40	4.304E+00	2.009E+00	2.009E+00	19.61
	911.07	279	27.70*	1.843E+00	1.598E+00	1.598E+00	22.08
	969.11	159	16.60	1.741E+00	1.609E+00	1.609E+00	33.10
TH-234	63.29	163	3.80*	4.649E+00	2.693E+00	2.693E+00	67.32
	92.38	202	5.41	7.329E+00	1.493E+00	1.493E+00	51.62
U-234	609.31	543	46.30*	2.654E+00	1.291E+00	1.291E+00	14.23
	1120.29	74	15.10	1.522E+00	9.415E-01	9.415E-01	66.52
	1764.49	97	15.80	1.059E+00	1.693E+00	1.693E+00	22.17
NP-237	86.50	301	12.60*	7.051E+00	9.924E-01	9.924E-01	33.80
	95.87	------	2.60	7.425E+00	------ Line Not Found		------
U-238	63.29	163	3.80*	4.649E+00	2.693E+00	2.693E+00	67.32

Sample ID : G244125001 Acquisition date : 20-JAN-2010 13:29:49

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	92.38	202	5.41	7.329E+00	1.493E+00	1.493E+00	49.12
AM-243	74.67	517	66.00*	6.094E+00	3.761E-01	3.761E-01	19.45
	86.72	301	0.34	7.051E+00	3.721E+01	3.721E+01	26.77
	117.66	------	0.55	7.685E+00	------ Line Not Found		------
	142.18	------	0.13	7.399E+00	------ Line Not Found		------
ANH-511	511.00	135	100.00*	3.087E+00	1.274E-01	1.274E-01	50.28

Flag: "*" = Keyline

Sample ID : G244125001 Acquisition date : 20-JAN-2010 13:29:49

Total number of lines in spectrum 35
Number of unidentified lines 2
Number of lines tentatively identified by NID 33 94.29%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	1.938E+01	1.938E+01	0.197E+01	10.16	
CD-109	464.00D	1.02	3.361E+00	3.438E+00	0.920E+00	26.77	
SN-126	1.00E+05Y	1.00	3.379E-01	3.379E-01	0.905E-01	26.77	
HG-203	46.60D	1.25	2.522E-02	3.158E-02	4.426E-02	140.16	
TL-208	1.41E+10Y	1.00	5.792E-01	5.792E-01	0.891E-01	15.39	
BI-211	7.04E+08Y	1.00	3.828E+00	3.828E+00	0.520E+00	13.59	
PB-212	1.41E+10Y	1.00	1.676E+00	1.676E+00	0.163E+00	9.72	
PO-212	1.41E+10Y	1.00	1.676E+00	1.676E+00	0.163E+00	9.72	
BI-214	1600.00Y	1.00	1.291E+00	1.291E+00	0.184E+00	14.23	
PB-214	1600.00Y	1.00	1.331E+00	1.331E+00	0.194E+00	14.56	
PO-214	1600.00Y	1.00	1.331E+00	1.331E+00	0.194E+00	14.56	
PO-216	1.41E+10Y	1.00	1.676E+00	1.676E+00	0.163E+00	9.72	
PO-218	1600.00Y	1.00	1.331E+00	1.331E+00	0.194E+00	14.56	
RA-224	1.41E+10Y	1.00	4.436E+00	4.436E+00	1.373E+00	30.96	
RA-226	1600.00Y	1.00	1.291E+00	1.291E+00	0.184E+00	14.23	
AC-228	1.41E+10Y	1.00	1.598E+00	1.598E+00	0.353E+00	22.08	
RA-228	1.41E+10Y	1.00	1.598E+00	1.598E+00	0.353E+00	22.08	
TH-228	1.91Y	1.02	1.676E+00	1.702E+00	0.165E+00	9.72	
TH-230	4.47E+09Y	1.00	1.291E+00	1.291E+00	0.184E+00	14.23	
TH-232	1.41E+10Y	1.00	1.598E+00	1.598E+00	0.353E+00	22.08	
TH-234	4.47E+09Y	1.00	2.693E+00	2.693E+00	1.813E+00	67.32	
U-234	4.47E+09Y	1.00	1.291E+00	1.291E+00	0.184E+00	14.23	
NP-237	2.14E+06Y	1.00	9.924E-01	9.924E-01	3.354E-01	33.80	
U-238	4.47E+09Y	1.00	2.693E+00	2.693E+00	1.813E+00	67.32	
AM-243	7380.00Y	1.00	3.761E-01	3.761E-01	0.732E-01	19.45	
ANH-511	1.00E+09Y	1.00	1.274E-01	1.274E-01	0.641E-01	50.28	
	Total Activity :		5.948E+01	5.959E+01			

Grand Total Activity : 5.948E+01 5.959E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G244125001 Acquisition date : 20-JAN-2010 13:29:49

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
2	89.96	146	480	1.37	179.42	170	22	2.03E-02	55.7	7.19E+00	T
0	129.01	82	331	1.07	257.45	254	8	1.14E-02	80.1	7.60E+00	T
0	185.90	214	366	1.48	371.11	366	12	2.97E-02	39.6	6.53E+00	T
0	209.02	139	249	1.17	417.32	413	9	1.93E-02	45.0	6.08E+00	T
0	270.39	137	216	1.53	539.94	534	12	1.90E-02	46.3	5.10E+00	T
0	463.04	63	79	1.50	924.99	921	9	8.74E-03	56.8	3.35E+00	T
0	569.29	220	121	2.90	1137.38	1128	21	3.06E-02	29.0	2.82E+00	T
0	727.80	124	68	1.50	1454.30	1447	15	1.72E-02	35.1	2.27E+00	T
0	768.16	78	70	1.50	1535.01	1527	14	1.08E-02	50.9	2.16E+00	T
0	795.60	59	53	2.01	1589.88	1583	12	8.18E-03	56.2	2.09E+00	T
0	935.43	70	36	1.01	1869.50	1861	18	9.72E-03	46.8	1.80E+00	T
5	965.49	27	52	1.99	1929.62	1926	17	3.78E-03	89.3	1.75E+00	T
0	1379.24	35	35	1.56	2757.37	2749	15	4.92E-03	82.0	1.27E+00	
0	1588.21	23	15	1.64	3175.58	3167	15	3.22E-03	83.7	1.14E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 20-JAN-2010 15:31:09.22

```
*****************************************************************************
*                            GEL Laboratories LLC                           *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G244125001.CNF;1 *
* Acquisition date  : 20-JAN-2010 13:29:49  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 02:00:01.39          Half life ratio : 8.00000      *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 5-JAN-2010 12:00:00.  Nuclide Library : SOLID        *
* Sample ID         : G244125001            Analyst initials: MXR1         *
* Batch Number      : 940263                Sample Quantity : 1.28360E+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	1.938E+01	1.969E+00	4.994E-01	3.626E-02	38.803
CD-109	3.438E+00	9.204E-01	1.168E+00	1.021E-01	2.943
SN-126	3.379E-01	9.048E-02	1.152E-01	1.002E-02	2.933
HG-203	3.158E-02	4.426E-02	6.180E-02	3.823E-03	0.511
TL-208	5.792E-01	8.914E-02	4.856E-02	3.321E-03	11.927
BI-211	3.828E+00	5.204E-01	3.100E-01	1.964E-02	12.348
PB-212	1.676E+00	1.629E-01	8.649E-02	6.299E-03	19.381
PO-212	1.676E+00	1.629E-01	8.649E-02	6.299E-03	19.381
BI-214	1.291E+00	1.838E-01	1.081E-01	8.557E-03	11.943
PB-214	1.331E+00	1.939E-01	1.081E-01	8.866E-03	12.323
PO-214	1.331E+00	1.939E-01	1.081E-01	8.866E-03	12.323
PO-216	1.676E+00	1.629E-01	8.649E-02	6.299E-03	19.381
PO-218	1.331E+00	1.939E-01	1.081E-01	8.866E-03	12.323
RA-224	4.436E+00	1.373E+00	9.837E-01	5.654E-02	4.509
RA-226	1.291E+00	1.838E-01	1.081E-01	8.557E-03	11.943
AC-228	1.598E+00	3.528E-01	2.154E-01	2.530E-02	7.420
RA-228	1.598E+00	3.528E-01	2.154E-01	2.530E-02	7.420
TH-228	1.702E+00	1.654E-01	8.779E-02	6.395E-03	19.381

Sample ID : G244125001 Acquisition date : 20-JAN-2010 13:29:49

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-230	1.291E+00	1.837E-01	1.081E-01	8.557E-03	11.943
TH-232	1.598E+00	3.528E-01	2.154E-01	2.530E-02	7.420
TH-234	2.693E+00	1.813E+00	1.702E+00	2.925E-01	1.583
U-234	1.291E+00	1.837E-01	1.081E-01	8.557E-03	11.943
NP-237	9.924E-01	3.354E-01	3.720E-01	8.315E-02	2.668
U-238	2.693E+00	1.813E+00	1.702E+00	2.925E-01	1.583
AM-243	3.761E-01	7.315E-02	8.257E-02	6.196E-03	4.555
ANH-511	1.274E-01	6.408E-02	4.270E-02	2.508E-03	2.985

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	1.323E-01		3.001E-01	5.067E-01	3.415E-02	0.261
NA-22	3.187E-02		4.098E-02	7.270E-02	4.749E-03	0.438
NA-24	-4.053E-01		2.848E-01	Half-Life too short		
AL-26	-2.209E-03		2.461E-02	3.888E-02	2.254E-03	-0.057
TI-44	3.944E-01	+	5.734E-02	7.864E-02	6.140E-03	5.016
SC-46	-2.424E-02		3.512E-02	5.473E-02	5.057E-03	-0.443
V-48	2.225E-02		6.410E-02	1.103E-01	9.363E-03	0.202
CR-51	-1.875E-01		3.483E-01	5.614E-01	3.628E-02	-0.334
MN-52	-9.084E-02		2.044E-01	3.104E-01	2.175E-02	-0.293
MN-54	3.929E-02		3.740E-02	6.724E-02	5.640E-03	0.584
CO-56	-4.954E-03		3.731E-02	6.184E-02	5.301E-03	-0.080
CO-57	-1.789E-02		2.454E-02	3.825E-02	2.721E-03	-0.468
CO-58	-2.323E-02		4.008E-02	6.074E-02	4.888E-03	-0.382
FE-59	3.397E-04		8.644E-02	1.433E-01	1.103E-02	0.002
CO-60	-7.385E-03		3.690E-02	5.909E-02	4.211E-03	-0.125
ZN-65	2.722E-02		9.874E-02	1.457E-01	9.576E-03	0.187
GE-68	2.953E-01		1.199E+00	2.034E+00	1.462E-01	0.145
AS-73	3.400E-01		6.200E-01	1.032E+00	6.728E-02	0.329
AS-74	5.119E-03		8.701E-02	1.421E-01	8.499E-03	0.036
SE-75	-2.596E-03		4.743E-02	6.774E-02	3.977E-03	-0.038
BR-77	6.152E+00		1.043E+01	1.730E+01	1.020E+00	0.356
SR-82	-1.987E-01		3.824E-01	5.856E-01	4.402E-02	-0.339
RB-83	4.017E-02		6.992E-02	1.159E-01	6.833E-03	0.347
RB-84	6.636E-02		6.660E-02	1.203E-01	1.097E-02	0.551
KR-85	1.323E+01		8.107E+00	1.303E+01	7.664E-01	1.015
SR-85	6.780E-02		4.154E-02	6.678E-02	3.928E-03	1.015
RB-86	5.825E-02		7.664E-01	1.280E+00	9.219E-02	0.045
Y-88	5.953E-03		3.360E-02	5.612E-02	3.187E-03	0.106
ZR-88	3.044E-03		2.972E-02	4.934E-02	2.687E-03	0.062
Y-91	1.368E-01		1.815E+01	2.997E+01	1.744E+00	0.005
NB-94	-4.392E-03		3.547E-02	5.672E-02	3.679E-03	-0.077
NB-95	5.941E-02		4.870E-02	7.641E-02	5.627E-03	0.777
NB-95M	6.668E-01		1.596E-01	2.652E-01	1.982E-02	2.515
ZR-95	-8.254E-03		7.154E-02	1.140E-01	9.402E-03	-0.072
NB-97	-2.066E-02		4.298E-02	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
ZR-97	3.084E+00		9.183E-01	Half-Life too short		
MO-99	2.779E+00		1.120E+01	1.843E+01	2.639E+00	0.151
TC-99M	-3.434E+10		1.713E+10	Half-Life too short		
RH-101	3.023E-02		3.237E-02	5.519E-02	3.062E-03	0.548
RH-102	-2.816E-02		2.830E-02	4.308E-02	2.490E-03	-0.654
RU-103	-2.050E-03		3.775E-02	6.154E-02	7.794E-03	-0.033
RH-106	1.051E-01		2.982E-01	4.976E-01	5.885E-02	0.211
RU-106	1.051E-01		2.981E-01	4.976E-01	2.975E-02	0.211
AG-108M	3.461E-02		3.213E-02	5.621E-02	3.453E-03	0.616
AG-110M	-7.820E-03		3.252E-02	5.157E-02	3.257E-03	-0.152
IN-111	8.232E-01		1.029E+00	1.578E+00	9.093E-02	0.522
IN-113M	-2.276E-02		4.388E-02	7.018E-02	4.107E-03	-0.324
SN-113	-2.276E-02		4.388E-02	7.018E-02	4.107E-03	-0.324
IN-114M	8.819E-02		1.925E-01	2.896E-01	1.594E-02	0.305
CD-115	1.527E+00		9.898E+00	1.635E+01	9.664E-01	0.093
SN-117M	-1.466E-02		5.572E-02	8.817E-02	4.987E-03	-0.166
SB-122	2.037E+00		2.234E+00	3.439E+00	2.050E-01	0.592
I-123	-1.838E+00		2.708E+00	Half-Life too short		
TE-123M	-9.727E-03		2.866E-02	4.520E-02	2.585E-03	-0.215
I-124	-3.210E-01		7.488E-01	1.002E+00	5.992E-02	-0.320
SB-124	-1.680E-02		6.886E-02	1.061E-01	7.170E-03	-0.158
SB-125	-4.710E-02		8.732E-02	1.385E-01	8.119E-03	-0.340
TE-125M	-7.586E-01		9.101E+00	1.464E+01	1.374E+00	-0.052
I-126	7.495E-02		1.769E-01	2.957E-01	1.776E-02	0.253
SB-126	1.896E-02		1.600E-01	2.257E-01	1.519E-02	0.084
SB-127	1.469E-01		1.286E+00	2.099E+00	2.035E-01	0.070
XE-127	5.227E-03		4.922E-02	7.582E-02	4.227E-03	0.069
I-131	3.542E-02		1.081E-01	1.821E-01	1.150E-02	0.194
TE-132	5.220E-01		6.805E-01	1.168E+00	1.672E-01	0.447
BA-133	2.694E-02		4.559E-02	6.851E-02	7.874E-03	0.393
I-133	-1.571E-05		2.653E-03	Half-Life too short		
CS-134	1.088E-01	+	6.172E-02	8.832E-02	6.951E-03	1.231
CS-135	2.172E-01		1.736E-01	2.705E-01	2.075E-02	0.803
I-135	1.223E+09		2.181E+09	Half-Life too short		
CS-136	5.303E-02		1.019E-01	1.773E-01	1.426E-02	0.299
BA-137M	9.156E-03		3.623E-02	5.978E-02	3.555E-03	0.153
CS-137	9.678E-03		3.830E-02	6.319E-02	3.773E-03	0.153
CE-139	-6.179E-03		2.939E-02	4.654E-02	2.499E-03	-0.133
BA-140	1.613E-01		2.574E-01	4.301E-01	1.400E-01	0.375
LA-140	-8.327E-02		9.713E-02	1.282E-01	8.500E-03	-0.649
CE-141	3.520E-02		6.534E-02	1.068E-01	6.818E-03	0.329
CE-143	9.905E-04		1.385E-04	Half-Life too short		
CE-144	3.035E-01		2.280E-01	3.375E-01	4.913E-02	0.899
PM-144	3.338E-03		3.381E-02	5.505E-02	3.527E-03	0.061
PR-144	2.262E-01		2.291E+00	3.730E+00	2.388E-01	0.061
PM-146	-8.462E-04		4.164E-02	6.828E-02	5.845E-03	-0.012
ND-147	-3.300E-01		5.262E-01	8.141E-01	1.105E-01	-0.405
PM-149	4.062E+00		8.524E+01	1.424E+02	2.020E+01	0.029

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-152	-1.946E-02		1.190E-01	1.470E-01	9.507E-03	-0.132
GD-153	-2.472E-02		8.325E-02	1.157E-01	9.282E-03	-0.214
EU-154	9.560E-02		1.154E-01	2.052E-01	2.012E-02	0.466
EU-155	5.649E-02		1.042E-01	1.716E-01	1.328E-02	0.329
TB-160	1.647E-03		1.376E-01	2.305E-01	2.094E-02	0.007
HO-166M	-2.115E-02		6.368E-02	9.908E-02	6.547E-03	-0.213
TM-171	-2.701E+01		2.884E+01	3.937E+01	2.745E+00	-0.686
LU-176	-2.104E-02		2.383E-02	3.777E-02	2.200E-03	-0.557
LU-177	2.886E+00	+	1.309E+00	1.922E+00	1.077E-01	1.501
LU-177M	-1.293E-01		1.739E-01	2.733E-01	1.516E-02	-0.473
HF-181	-2.521E-02		3.948E-02	6.163E-02	3.574E-03	-0.409
W-181	-2.296E-02		3.723E-01	5.296E-01	3.649E-02	-0.043
TA-182	7.261E-02		1.916E-01	3.260E-01	1.950E-02	0.223
RE-183	-2.821E-02		1.064E-01	1.681E-01	9.257E-03	-0.168
RE-184	-3.554E-02		2.153E-01	3.572E-01	2.066E-02	-0.100
OS-185	-4.132E-03		4.104E-02	6.594E-02	3.932E-03	-0.063
RE-188	8.082E-02		1.728E-01	2.817E-01	1.633E-02	0.287
W-188	-5.834E-01		8.003E+00	1.152E+01	6.724E-01	-0.051
IR-192	-5.013E-03		3.214E-02	5.295E-02	3.091E-03	-0.095
AU-195	2.012E-02		2.404E-01	3.411E-01	2.707E-02	0.059
TL-200	3.842E-04		2.123E-04	Half-Life too short		
TL-201	2.911E+00		6.784E+00	1.104E+01	5.929E-01	0.264
TL-202	-6.402E-02		6.422E-02	9.810E-02	5.547E-03	-0.653
BI-207	4.553E-03		5.290E-02	8.848E-02	6.548E-03	0.051
TL-207	-4.101E-01		6.689E-01	1.071E+00	1.769E-01	-0.383
PO-209	1.357E+00		6.578E+00	1.121E+01	1.049E+00	0.121
BI-210	2.008E-01		2.248E+00	3.714E+00	2.754E-01	0.054
PB-210	2.008E-01		2.248E+00	3.714E+00	2.754E-01	0.054
PO-210	2.008E-01		2.248E+00	3.714E+00	2.330E-01	0.054
PB-211	-3.963E-01		9.604E-01	1.492E+00	9.297E-01	-0.266
BI-212	1.358E+00	+	4.911E-01	6.677E-01	5.680E-02	2.034
PO-215	-4.101E-01		6.689E-01	1.071E+00	1.769E-01	-0.383
RN-219	4.567E-01		4.020E-01	6.984E-01	9.412E-02	0.654
RN-220	2.779E+00		2.381E+01	3.919E+01	2.330E+00	0.071
RA-223	-4.101E-01		6.689E-01	1.071E+00	1.769E-01	-0.383
AC-227	1.254E-01		3.562E-01	6.043E-01	8.434E-02	0.207
TH-227	1.254E-01		3.564E-01	6.043E-01	1.021E-01	0.207
TH-229	-4.247E-01		5.117E-01	8.008E-01	4.423E-02	-0.530
PA-231	-9.507E-01		1.467E+00	2.357E+00	3.252E-01	-0.403
TH-231	-4.101E-01		6.689E-01	1.071E+00	1.769E-01	-0.383
U-231	5.354E-01		1.165E+00	1.683E+00	1.366E-01	0.318
PA-233	1.604E-02		6.005E-02	1.012E-01	6.249E-03	0.159
PA-234	-3.934E-01		2.897E-01	4.023E-01	7.605E-02	-0.978
PA-234M	1.530E+00		4.127E+00	7.103E+00	6.867E-01	0.215
U-235	3.448E-01		2.199E-01	3.617E-01	5.955E-02	0.953
NP-236	4.286E-03		7.848E-02	1.258E-01	7.031E-03	0.034
NP-239	4.701E-02		1.827E-01	2.974E-01	2.149E-02	0.158
AM-241	-5.805E-02		1.379E-01	1.914E-01	1.421E-02	-0.303

Sample ID : G244125001 Acquisition date : 20-JAN-2010 13:29:49

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-1.066E-02		9.407E-02	1.513E-01	1.163E-02	-0.070
AM-246	2.188E-02		1.358E-01	2.287E-01	1.639E-02	0.096
CM-247	3.609E-02		3.552E-02	6.193E-02	3.402E-03	0.583
CF-249	1.251E-02		3.978E-02	6.683E-02	3.654E-03	0.187
CF-251	5.317E-02		1.284E-01	2.065E-01	1.120E-02	0.257

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G244125001           *
* Acquisition date  : 20-JAN-2010 13:29:49 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 02:00:01.39      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       :  5-JAN-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G244125001           Analyst initials: MXR1           *
* Batch Number      : 940263               Sample Quantity : 1.2836E+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	1.938E+01	1.929E+00	2.499E-01	9.844E-01
CD-109	3.438E+00	9.020E-01	6.102E-01	4.602E-01
SN-126	3.379E-01	8.867E-02	6.018E-02	4.524E-02
HG-203	3.158E-02	4.337E-02	3.173E-02	2.213E-02
TL-208	5.792E-01	8.736E-02	2.465E-02	4.457E-02
BI-211	3.828E+00	5.100E-01	1.586E-01	2.602E-01
PB-212	1.676E+00	1.596E-01	4.451E-02	8.145E-02
PO-212	1.676E+00	1.596E-01	4.451E-02	8.145E-02
BI-214	1.291E+00	1.801E-01	5.484E-02	9.188E-02
PB-214	1.331E+00	1.900E-01	5.528E-02	9.695E-02
PO-214	1.331E+00	1.900E-01	5.528E-02	9.695E-02
PO-216	1.676E+00	1.596E-01	4.451E-02	8.145E-02
PO-218	1.331E+00	1.900E-01	5.528E-02	9.695E-02
RA-224	4.436E+00	1.346E+00	5.062E-01	6.867E-01
RA-226	1.291E+00	1.801E-01	5.484E-02	9.188E-02
AC-228	1.598E+00	3.457E-01	1.086E-01	1.764E-01
RA-228	1.598E+00	3.457E-01	1.086E-01	1.764E-01
TH-228	1.702E+00	1.620E-01	4.518E-02	8.268E-02
TH-230	1.291E+00	1.801E-01	5.484E-02	9.187E-02
TH-232	1.598E+00	3.457E-01	1.086E-01	1.764E-01
TH-234	2.693E+00	1.777E+00	8.933E-01	9.066E-01
U-234	1.291E+00	1.801E-01	5.484E-02	9.187E-02
NP-237	9.924E-01	3.287E-01	1.944E-01	1.677E-01
U-238	2.693E+00	1.777E+00	8.933E-01	9.066E-01
AM-243	3.761E-01	7.169E-02	4.323E-02	3.658E-02
ANH-511	1.274E-01	6.280E-02	2.172E-02	3.204E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	1.323E-01	2.941E-01	2.580E-01	1.500E-01 NOT IDENT.

NA-22	3.187E-02	4.016E-02	3.646E-02	2.049E-02	NOT IDENT.
NA-24	-4.053E+05	5.581E+05	0.000E+00	2.848E+05	SHORT HLIF
AL-26	-2.209E-03	2.412E-02	1.939E-02	1.231E-02	NOT IDENT.
TI-44	3.944E-01	5.619E-02	4.115E-02	2.867E-02	FAIL ABUN
SC-46	-2.424E-02	3.442E-02	2.760E-02	1.756E-02	FAIL ABUN
V-48	2.225E-02	6.281E-02	5.552E-02	3.205E-02	NOT IDENT.
CR-51	-1.875E-01	3.414E-01	2.876E-01	1.742E-01	NOT IDENT.
MN-52	-9.084E-02	2.003E-01	1.554E-01	1.022E-01	FAIL ABUN
MN-54	3.929E-02	3.665E-02	3.394E-02	1.870E-02	NOT IDENT.
CO-56	-4.954E-03	3.656E-02	3.121E-02	1.865E-02	NOT IDENT.
CO-57	-1.789E-02	2.405E-02	1.988E-02	1.227E-02	NOT IDENT.
CO-58	-2.323E-02	3.928E-02	3.068E-02	2.004E-02	NOT IDENT.
FE-59	3.397E-04	8.471E-02	7.204E-02	4.322E-02	NOT IDENT.
CO-60	-7.385E-03	3.616E-02	2.961E-02	1.845E-02	NOT IDENT.
ZN-65	2.722E-02	9.677E-02	7.321E-02	4.937E-02	NOT IDENT.
GE-68	2.953E-01	1.175E+00	1.023E+00	5.994E-01	NOT IDENT.
AS-73	3.400E-01	6.076E-01	5.430E-01	3.100E-01	NOT IDENT.
AS-74	5.119E-03	8.527E-02	7.211E-02	4.351E-02	NOT IDENT.
SE-75	-2.596E-03	4.648E-02	3.481E-02	2.371E-02	FAIL ABUN
BR-77	6.152E+00	1.022E+01	8.799E+00	5.213E+00	FAIL ABUN
SR-82	-1.987E-01	3.748E-01	2.959E-01	1.912E-01	NOT IDENT.
RB-83	4.017E-02	6.853E-02	5.895E-02	3.496E-02	NOT IDENT.
RB-84	6.636E-02	6.526E-02	6.070E-02	3.330E-02	NOT IDENT.
KR-85	1.323E+01	7.945E+00	6.628E+00	4.054E+00	NOT IDENT.
SR-85	6.780E-02	4.071E-02	3.397E-02	2.077E-02	NOT IDENT.
RB-86	5.825E-02	7.511E-01	6.438E-01	3.832E-01	NOT IDENT.
Y-88	5.953E-03	3.293E-02	2.798E-02	1.680E-02	NOT IDENT.
ZR-88	3.044E-03	2.913E-02	2.520E-02	1.486E-02	NOT IDENT.
Y-91	1.368E-01	1.779E+01	1.504E+01	9.075E+00	NOT IDENT.
NB-94	-4.392E-03	3.476E-02	2.871E-02	1.773E-02	NOT IDENT.
NB-95	5.941E-02	4.773E-02	3.863E-02	2.435E-02	NOT IDENT.
NB-95M	6.668E-01	1.564E-01	1.365E-01	7.979E-02	NOT IDENT.
ZR-95	-8.254E-03	7.010E-02	5.763E-02	3.577E-02	NOT IDENT.
NB-97	-2.066E+04	8.424E+04	0.000E+00	4.298E+04	SHORT HLIF
ZR-97	3.084E+06	1.800E+06	0.000E+00	9.183E+05	SHORT HLIF
MO-99	2.779E+00	1.098E+01	9.320E+00	5.600E+00	NOT IDENT.
TC-99M	-3.434E+16	3.358E+16	0.000E+00	0.000E+00	SHORT HLIF
RH-101	3.023E-02	3.172E-02	2.849E-02	1.618E-02	NOT IDENT.
RH-102	-2.816E-02	2.774E-02	2.194E-02	1.415E-02	FAIL ABUN
RU-103	-2.050E-03	3.699E-02	3.132E-02	1.887E-02	FAIL ABUN
RH-106	1.051E-01	2.923E-01	2.523E-01	1.491E-01	FAIL ABUN
RU-106	1.051E-01	2.921E-01	2.523E-01	1.490E-01	FAIL ABUN
AG-108M	3.461E-02	3.149E-02	2.867E-02	1.606E-02	NOT IDENT.
AG-110M	-7.820E-03	3.187E-02	2.613E-02	1.626E-02	NOT IDENT.
IN-111	8.232E-01	1.009E+00	8.117E-01	5.146E-01	NOT IDENT.
IN-113M	-2.276E-02	4.300E-02	3.585E-02	2.194E-02	NOT IDENT.
SN-113	-2.276E-02	4.300E-02	3.585E-02	2.194E-02	NOT IDENT.
IN-114M	8.819E-02	1.886E-01	1.495E-01	9.625E-02	NOT IDENT.
CD-115	1.527E+00	9.700E+00	8.315E+00	4.949E+00	NOT IDENT.
SN-117M	-1.466E-02	5.460E-02	4.566E-02	2.786E-02	NOT IDENT.
SB-122	2.037E+00	2.189E+00	1.747E+00	1.117E+00	NOT IDENT.
I-123	-1.838E+06	5.308E+06	0.000E+00	2.708E+06	SHORT HLIF
TE-123M	-9.727E-03	2.809E-02	2.340E-02	1.433E-02	NOT IDENT.
I-124	-3.210E-01	7.338E-01	5.082E-01	3.744E-01	NOT IDENT.
SB-124	-1.680E-02	6.748E-02	5.294E-02	3.443E-02	FAIL ABUN
SB-125	-4.710E-02	8.557E-02	7.066E-02	4.366E-02	FAIL ABUN
TE-125M	-7.586E-01	8.919E+00	7.621E+00	4.550E+00	NOT IDENT.
I-126	7.495E-02	1.733E-01	1.498E-01	8.843E-02	NOT IDENT.
SB-126	1.896E-02	1.568E-01	1.142E-01	8.001E-02	FAIL ABUN
SB-127	1.469E-01	1.260E+00	1.063E+00	6.429E-01	NOT IDENT.
XE-127	5.227E-03	4.824E-02	3.912E-02	2.461E-02	NOT IDENT.
I-131	3.542E-02	1.059E-01	9.314E-02	5.403E-02	NOT IDENT.
TE-132	5.220E-01	6.669E-01	6.015E-01	3.402E-01	NOT IDENT.
BA-133	2.694E-02	4.468E-02	3.504E-02	2.280E-02	NOT IDENT.
I-133	-1.571E+01	5.201E+03	0.000E+00	2.653E+03	SHORT HLIF
CS-134	1.088E-01	6.048E-02	4.462E-02	3.086E-02	FAIL ABUN
CS-135	2.172E-01	1.702E-01	1.390E-01	8.682E-02	NOT IDENT.
I-135	1.223E+15	4.275E+15	0.000E+00	2.181E+15	SHORT HLIF
CS-136	5.303E-02	9.988E-02	8.918E-02	5.096E-02	FAIL ABUN
BA-137M	9.156E-03	3.551E-02	3.029E-02	1.812E-02	NOT IDENT.
CS-137	9.678E-03	3.754E-02	3.202E-02	1.915E-02	NOT IDENT.
CE-139	-6.179E-03	2.880E-02	2.408E-02	1.469E-02	NOT IDENT.
BA-140	1.613E-01	2.523E-01	2.186E-01	1.287E-01	NOT IDENT.
LA-140	-8.327E-02	9.519E-02	6.407E-02	4.857E-02	NOT IDENT.
CE-141	3.520E-02	6.403E-02	5.540E-02	3.267E-02	NOT IDENT.
CE-143	9.905E+02	2.715E+02	0.000E+00	1.385E+02	SHORT HLIF
CE-144	3.035E-01	2.235E-01	1.752E-01	1.140E-01	NOT IDENT.
PM-144	3.338E-03	3.313E-02	2.787E-02	1.691E-02	NOT IDENT.

PR-144	2.262E-01	2.245E+00	1.888E+00	1.146E+00	NOT IDENT.
PM-146	-8.462E-04	4.080E-02	3.480E-02	2.082E-02	NOT IDENT.
ND-147	-3.300E-01	5.157E-01	4.139E-01	2.631E-01	FAIL ABUN
PM-149	4.062E+00	8.354E+01	7.308E+01	4.262E+01	NOT IDENT.
EU-152	-1.946E-02	1.166E-01	7.521E-02	5.949E-02	FAIL ABUN
GD-153	-2.472E-02	8.159E-02	6.037E-02	4.163E-02	NOT IDENT.
EU-154	9.560E-02	1.131E-01	1.029E-01	5.769E-02	NOT IDENT.
EU-155	5.649E-02	1.021E-01	8.941E-02	5.212E-02	FAIL ABUN
TB-160	1.647E-03	1.348E-01	1.163E-01	6.879E-02	FAIL ABUN
HO-166M	-2.115E-02	6.240E-02	5.015E-02	3.184E-02	FAIL ABUN
TM-171	-2.701E+01	2.827E+01	2.065E+01	1.442E+01	NOT IDENT.
LU-176	-2.104E-02	2.336E-02	1.937E-02	1.192E-02	FAIL ABUN
LU-177	2.886E+00	1.283E+00	9.912E-01	6.544E-01	FAIL ABUN
LU-177M	-1.293E-01	1.704E-01	1.395E-01	8.694E-02	NOT IDENT.
HF-181	-2.521E-02	3.869E-02	3.138E-02	1.974E-02	NOT IDENT.
W-181	-2.296E-02	3.648E-01	2.778E-01	1.861E-01	NOT IDENT.
TA-182	7.261E-02	1.877E-01	1.636E-01	9.578E-02	FAIL ABUN
RE-183	-2.821E-02	1.042E-01	8.700E-02	5.318E-02	FAIL ABUN
RE-184	-3.554E-02	2.110E-01	1.837E-01	1.076E-01	NOT IDENT.
OS-185	-4.132E-03	4.022E-02	3.342E-02	2.052E-02	NOT IDENT.
RE-188	8.082E-02	1.693E-01	1.459E-01	8.640E-02	NOT IDENT.
W-188	-5.834E-01	7.843E+00	5.914E+00	4.002E+00	FAIL ABUN
IR-192	-5.013E-03	3.150E-02	2.714E-02	1.607E-02	FAIL ABUN
AU-195	2.012E-02	2.355E-01	1.779E-01	1.202E-01	FAIL ABUN
TL-200	3.842E+02	4.160E+02	0.000E+00	2.123E+02	SHORT HLIF
TL-201	2.911E+00	6.648E+00	5.711E+00	3.392E+00	NOT IDENT.
TL-202	-6.402E-02	6.294E-02	5.002E-02	3.211E-02	NOT IDENT.
BI-207	4.553E-03	5.184E-02	4.450E-02	2.645E-02	FAIL ABUN
TL-207	-4.101E-01	6.555E-01	5.487E-01	3.344E-01	FAIL ABUN
PO-209	1.357E+00	6.446E+00	5.653E+00	3.289E+00	NOT IDENT.
BI-210	2.008E-01	2.203E+00	1.958E+00	1.124E+00	NOT IDENT.
PB-210	2.008E-01	2.203E+00	1.958E+00	1.124E+00	NOT IDENT.
PO-210	2.008E-01	2.203E+00	1.958E+00	1.124E+00	NOT IDENT.
PB-211	-3.963E-01	9.412E-01	7.617E-01	4.802E-01	NOT IDENT.
BI-212	1.358E+00	4.813E-01	3.378E-01	2.455E-01	FAIL ABUN
PO-215	-4.101E-01	6.555E-01	5.487E-01	3.344E-01	FAIL ABUN
RN-219	4.567E-01	3.940E-01	3.566E-01	2.010E-01	FAIL ABUN
RN-220	2.779E+00	2.334E+01	1.991E+01	1.191E+01	NOT IDENT.
RA-223	-4.101E-01	6.555E-01	5.487E-01	3.344E-01	FAIL ABUN
AC-227	1.254E-01	3.491E-01	3.107E-01	1.781E-01	FAIL ABUN
TH-227	1.254E-01	3.493E-01	3.107E-01	1.782E-01	FAIL ABUN
TH-229	-4.247E-01	5.015E-01	4.135E-01	2.559E-01	FAIL ABUN
PA-231	-9.507E-01	1.437E+00	1.210E+00	7.333E-01	FAIL ABUN
TH-231	-4.101E-01	6.555E-01	5.487E-01	3.344E-01	FAIL ABUN
U-231	5.354E-01	1.141E+00	8.778E-01	5.823E-01	FAIL ABUN
PA-233	1.604E-02	5.885E-02	5.187E-02	3.003E-02	FAIL ABUN
PA-234	-3.934E-01	2.839E-01	2.027E-01	1.449E-01	FAIL ABUN
PA-234M	1.530E+00	4.045E+00	3.576E+00	2.064E+00	NOT IDENT.
U-235	3.448E-01	2.155E-01	1.876E-01	1.099E-01	FAIL ABUN
NP-236	4.286E-03	7.691E-02	6.514E-02	3.924E-02	NOT IDENT.
NP-239	4.701E-02	1.790E-01	1.547E-01	9.135E-02	FAIL ABUN
AM-241	-5.805E-02	1.351E-01	1.006E-01	6.893E-02	NOT IDENT.
CM-243	-1.066E-02	9.219E-02	7.883E-02	4.703E-02	FAIL ABUN
AM-246	2.188E-02	1.331E-01	1.150E-01	6.792E-02	NOT IDENT.
CM-247	3.609E-02	3.481E-02	3.162E-02	1.776E-02	FAIL ABUN
CF-249	1.251E-02	3.899E-02	3.414E-02	1.989E-02	NOT IDENT.
CF-251	5.317E-02	1.259E-01	1.068E-01	6.422E-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	348.5131
46.50	348.5131
46.50	348.5131
48.70	379.9792
49.72	436.5235
51.35	420.9859
52.39	395.9027
52.97	392.0642
53.15	396.2379
53.44	395.3406
54.07	386.3911
56.28	433.5495
56.28	433.5507
57.37	0.0000
57.53	426.3106
57.53	426.3114
57.60	426.3422
57.98	426.5137
57.98	426.5137
59.32	418.8682
59.32	418.8682
59.40	418.9031
59.54	435.4590
59.72	435.5404
60.01	435.6709
61.10	427.9001
61.14	427.9175
61.30	427.9879
63.00	484.1795
63.29	484.3210
63.29	484.3210
63.58	484.4616
64.28	484.8013
65.12	572.2933
65.20	572.3391
65.20	572.3391
66.05	556.2142
66.72	588.1448
66.83	588.2096
66.91	581.6080
67.20	581.7725
67.20	581.7725
67.75	608.6917
67.85	608.7498
68.90	610.4763
68.90	610.4763
69.30	588.5014
69.67	535.9489
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70.83	567.1156
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72.87	604.9647
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74.67	591.1136
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74.81	591.1891
74.81	591.1891
74.81	591.1891
74.81	591.1891
74.81	591.1891
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81.07	614.4962
82.60	556.3110
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83.78	540.0000
83.78	540.0000
83.78	540.0000
84.21	518.2537
84.90	532.0720
85.43	506.9623
86.29	583.4299
86.50	583.5331
86.54	583.5541
86.59	583.5773
86.72	609.0183
86.79	609.0513
86.94	609.1304
87.30	490.8353
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87.30	490.8353
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87.30	490.8353
87.57	490.9468
87.88	491.0742
88.03	491.1344
88.36	491.2707
88.47	491.3149
89.95	491.9167
91.11	492.3840
92.29	492.8566
92.38	492.8938
92.38	492.8938
93.35	493.2797
94.00	350.5822
94.67	357.5793
94.67	357.5806
94.90	376.3799
94.90	376.3799
94.90	376.3799
94.90	376.3799
95.87	420.9855
95.87	420.9855
96.73	434.9179
97.43	382.2547
98.44	346.6921
98.44	346.6921
98.88	370.7291
99.55	350.4106
99.55	350.4106
99.86	343.1670
100.00	351.7546
100.10	351.7822
103.18	414.5963
103.76	384.7694
105.00	361.5284
105.31	362.6849
108.00	375.2405
109.28	385.2818

111.00	370.6808
111.00	370.6808
111.76	392.4486
112.95	364.7305
115.19	351.2659
116.30	338.5635
117.00	334.4030
117.00	334.4030
117.66	355.1302
121.11	334.2796
121.62	335.4840
121.78	350.7221
122.06	352.9619
122.32	335.6454
122.32	335.6454
122.32	335.6454
122.32	335.6454
123.07	334.1109
127.23	347.0135
129.76	393.0167
131.20	374.1604
133.02	325.5954
133.54	297.6868
135.34	373.6426
136.00	337.6270
136.25	327.8137
136.48	331.1535
140.51	383.6785
140.51	0.0000
142.18	356.5701
142.65	342.3653
143.76	332.6903
144.24	331.6874
144.24	331.6874
144.24	331.6874
144.24	331.6874
145.22	356.1472
145.44	378.2520
147.16	421.7091
152.43	356.6193
152.70	356.6783
153.22	347.9245
154.21	347.0242
154.21	347.0242
154.21	347.0242
154.21	347.0242
155.03	340.5406
156.02	325.2034
158.56	352.3708
159.00	0.0000
159.00	346.9034
160.31	321.5773
161.27	307.2867
162.32	318.6145
162.64	323.1303
163.35	334.4124
163.89	318.9047
165.85	323.7321
167.43	301.6798
171.28	344.8904
171.86	342.7629
172.10	342.8096
176.55	298.7406
176.60	298.7487
181.06	283.7192
184.41	281.2285
185.71	304.3017
186.00	304.3490
190.27	286.6371
192.34	339.8094
193.63	331.4766
197.04	315.2122
198.01	286.2868
198.60	286.3743
200.40	341.2376
201.83	321.7567
202.84	305.8701
205.31	285.8383

208.36	322.5197
208.81	318.9375
209.75	297.1437
209.75	297.1437
210.97	289.7005
215.65	292.4108
216.55	307.3192
218.09	271.7458
222.10	270.4373
223.80	289.0701
226.40	270.9954
227.00	254.4762
227.08	254.4864
227.20	254.4998
228.16	268.4539
228.18	268.4575
228.18	268.4575
231.56	0.0000
235.69	268.4801
236.00	274.6919
236.00	274.6919
238.63	249.3783
238.63	249.3783
238.63	249.3783
238.63	249.3783
239.00	249.4210
240.98	249.6492
241.98	221.2904
241.98	221.2904
241.98	221.2904
244.69	182.8289
245.39	181.3379
247.94	208.8127
248.90	227.6792
249.79	225.4925
252.40	216.4267
252.85	213.6714
252.85	213.6714
254.15	0.0000
256.20	205.5793
256.20	205.5793
260.50	220.0113
260.90	225.6698
262.80	210.3400
264.65	198.5253
268.24	205.0953
268.79	214.5419
269.46	209.9039
269.46	209.9039
269.46	209.9039
269.46	209.9039
271.23	216.3325
273.65	216.5571
276.40	213.6676
277.35	199.2125
277.60	190.1974
277.60	190.1974
278.00	190.2294
278.60	183.9860
279.20	195.0442
279.53	198.2157
280.46	195.1451
281.68	177.9258
283.67	211.7965
284.30	209.9597
285.00	204.3457
285.90	193.0654
286.10	189.2944
286.10	189.2944
287.40	206.2323
288.45	0.0000
290.67	200.7138
290.80	200.7242
291.72	202.3802
293.26	0.0000
293.70	202.5443
295.21	215.3361
295.21	215.3361

295.21	215.3361
295.96	185.3071
296.50	185.3476
297.23	185.4023
298.57	185.5047
299.80	201.4580
299.80	201.4580
300.09	187.2030
300.09	187.2030
300.09	187.2030
300.09	187.2030
300.12	187.2054
301.29	163.4857
302.84	177.8802
303.76	177.9463
303.91	173.1887
304.40	160.5105
304.40	160.5105
304.84	185.9689
306.84	199.4787
308.46	174.7748
311.98	163.5417
316.51	166.7040
318.01	153.3809
319.02	163.9884
319.41	174.5640
320.08	175.5679
323.87	209.4524
323.87	209.4524
323.87	209.4524
323.87	209.4524
325.23	221.0970
328.77	195.4048
333.44	220.1778
334.20	199.3430
334.20	199.3430
334.30	199.3506
338.28	153.5984
338.28	153.5984
338.28	153.5984
338.28	153.5984
338.32	153.6023
338.32	153.6023
338.32	153.6023
340.50	157.9161
340.57	157.9201
344.27	154.9082
345.85	130.7796
350.59	0.0000
351.07	152.3831
351.92	152.4310
351.92	152.4310
351.92	152.4310
355.39	0.0000
356.01	132.8846
364.48	133.6135
366.43	125.8994
367.43	124.9672
367.94	0.0000
369.80	148.5228
374.96	117.4673
383.85	139.4311
387.95	146.5100
388.63	135.7258
391.69	155.5583
391.69	155.5583
392.90	138.8778
398.62	153.9491
400.65	131.3407
401.10	132.3479
401.81	119.5362
402.60	120.5569
404.84	156.2468
410.95	110.9814
411.60	120.9173
413.65	153.7266
414.70	140.8820
415.30	156.7868

415.76	157.8044
417.63	0.0000
418.52	108.2775
423.70	133.3359
427.08	107.5808
427.89	128.5339
432.53	110.7629
433.93	107.8167
439.47	126.0077
439.56	126.0123
439.89	124.0242
443.98	104.1549
444.90	98.1735
445.03	98.1782
445.03	98.1782
445.03	98.1782
445.03	98.1782
453.90	114.5218
463.38	109.8183
468.07	114.3474
473.00	99.0240
475.06	125.3744
475.35	138.5302
476.78	109.2524
477.59	96.1249
477.96	91.0767
482.03	108.4106
484.57	104.4371
487.03	78.1307
490.36	0.0000
492.35	93.4981
497.08	96.6804
507.63	0.0000
510.53	0.0000
510.84	94.0007
511.00	94.0052
511.85	94.0277
511.85	94.0277
513.99	102.2662
513.99	102.2662
520.41	94.4850
520.65	94.4918
527.90	87.2703
528.96	0.0000
529.64	85.2574
529.87	0.0000
531.02	98.6484
537.32	88.5279
543.00	94.8525
546.56	0.0000
549.76	81.6018
552.65	107.5090
555.20	81.7233
563.23	84.6654
563.90	81.2230
568.70	101.7468
569.32	101.7635
569.50	101.7683
569.67	101.7731
573.80	88.3701
574.00	88.3743
574.64	79.7232
578.91	90.2256
579.30	0.0000
583.14	68.7860
585.48	66.0470
591.81	63.7194
592.07	63.7239
593.00	77.3224
595.88	86.7913
600.56	84.9191
602.52	0.0000
602.71	104.7534
602.71	104.7534
603.60	104.7778
604.41	94.3198
604.70	87.3393
609.31	95.4878

609.31	95.4878
609.31	95.4878
609.31	95.4878
610.33	96.2120
612.46	91.0127
614.37	84.0527
618.01	90.4407
621.84	73.6863
621.84	73.6863
631.29	81.2467
633.02	87.6140
633.10	87.6161
634.78	95.0449
635.90	95.0713
636.97	88.7578
645.85	76.2451
646.12	79.4275
656.30	90.2419
657.75	78.5907
657.90	0.0000
661.65	88.2341
661.65	88.2341
664.57	0.0000
666.33	79.8193
666.33	79.8193
675.00	62.9208
677.61	80.0354
685.20	72.6966
692.80	91.0326
695.00	77.1504
696.49	82.5363
696.49	82.5363
697.00	79.3296
697.49	77.1943
698.33	80.4272
698.50	80.4309
699.00	84.7302
702.63	98.7562
706.10	89.1662
706.58	0.0000
706.67	94.5506
709.31	80.6323
711.68	83.9033
713.82	85.0214
717.42	77.5512
720.50	73.6535
721.93	0.0000
722.20	79.0750
722.78	79.0840
722.78	79.0840
722.89	79.0876
722.95	79.0876
723.30	79.0947
724.18	70.1210
727.18	70.1686
733.00	59.4513
735.90	73.0107
739.58	68.2003
742.81	71.4995
744.21	86.6934
747.13	80.2438
751.79	80.3269
752.31	79.2503
753.82	81.4490
755.35	73.8720
756.15	77.1449
756.87	67.3766
763.93	65.3057
765.79	68.9616
766.42	74.4159
766.84	83.8616
776.49	79.6727
778.00	91.7089
778.57	86.2597
778.89	81.8994
783.80	66.6815
785.46	64.5183
792.07	82.1320

795.84	56.6252
796.30	62.1120
798.80	62.1452
801.93	72.1157
805.60	63.6995
810.29	76.9556
810.76	75.8629
815.85	64.2037
817.79	61.4780
818.51	65.1584
819.60	64.2550
826.30	54.2334
828.27	0.0000
831.60	82.8204
831.96	85.5887
834.83	65.3795
836.80	0.0000
846.75	64.6181
848.13	72.0237
856.28	0.0000
856.80	65.0149
860.37	41.2589
867.32	52.4407
867.82	54.0357
871.10	60.3001
873.19	52.9006
874.81	63.1302
875.33	0.0000
876.40	63.1510
879.36	63.1883
880.27	53.9054
880.51	53.9077
881.50	47.4109
883.24	53.9372
884.67	56.7432
889.25	58.6575
896.60	48.4866
898.02	51.2973
899.00	54.1060
903.28	46.2159
911.07	65.4555
911.07	65.4555
911.07	65.4555
919.63	53.7010
920.93	61.8334
925.00	54.3821
925.24	54.2140
926.50	51.2711
935.52	56.3708
937.48	54.7816
944.10	47.9941
946.00	68.7227
949.00	58.4000
962.29	51.8025
964.01	58.2966
966.15	74.5190
968.20	66.1747
969.11	59.9727
969.11	59.9727
969.11	59.9727
977.42	53.7196
980.50	57.7993
983.50	45.5068
989.30	47.4538
996.32	45.6152
1001.03	47.5566
1001.68	47.5622
1004.76	51.3962
1021.30	0.0000
1024.50	0.0000
1034.80	50.7183
1036.00	53.6006
1037.82	45.9590
1038.57	46.9224
1038.76	0.0000
1045.16	64.2356
1046.59	59.4570
1048.07	47.0022

1050.47	49.9010
1050.47	49.9010
1062.04	44.2331
1063.62	58.6743
1076.63	53.9880
1077.35	51.1022
1078.86	51.1152
1085.78	53.1089
1099.22	53.2320
1112.02	42.6787
1112.84	48.0196
1115.52	56.5686
1120.29	62.1641
1120.29	62.1641
1120.29	62.1641
1120.29	62.1641
1120.51	62.1667
1121.28	62.1745
1124.00	0.0000
1129.67	54.4801
1131.51	0.0000
1147.95	0.0000
1167.94	41.1216
1173.22	48.9970
1175.09	44.1119
1177.93	47.0742
1189.05	50.1077
1204.90	62.0566
1205.75	0.0000
1213.00	74.9578
1221.42	61.2331
1230.97	64.2938
1235.34	85.1252
1236.41	0.0000
1238.25	50.5040
1246.25	58.5006
1260.41	0.0000
1271.85	41.8120
1274.45	36.8494
1274.54	36.8494
1291.56	37.9443
1298.22	0.0000
1312.09	40.0667
1325.50	31.1148
1325.50	31.1148
1332.49	35.1666
1333.61	33.1638
1360.21	19.1701
1362.66	0.0000
1365.15	23.2227
1368.21	22.2229
1368.53	0.0000
1376.25	31.2074
1384.27	34.7154
1394.10	32.4479
1395.20	32.4531
1407.95	28.4489
1434.06	24.4766
1436.60	20.4045
1457.56	0.0000
1460.81	22.5219
1489.15	20.5558
1509.49	29.8897
1596.49	33.7882
1620.62	8.3695
1678.03	0.0000
1691.02	14.7799
1691.02	14.7799
1706.46	0.0000
1750.46	0.0000
1764.49	12.7856
1764.49	12.7856
1764.49	12.7856
1764.49	12.7856
1770.23	12.7944
1771.40	14.6244
1791.20	0.0000
1808.65	9.6412

1836.01	12.8970

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G244125001

Total Uranium Activity	8.1724E+00	ug/g
Total Uranium Counting Unc.	5.2871E+00	ug/g
Total Uranium Tpu	2.6975E-06	ug/g
Total Uranium Mda	2.6589E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 940263                    SAMPLE ID   : G244125001      *
*   ANALYST       : MXR1                      DETECTOR    : GAM14           *
*   SAMPLE DATE   :  5-JAN-2010 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE: 20-JAN-2010 13:29:49.67    SAMPLE ALQT:  128.360 GRAM    *
*                                                                           *
*****************************************************************************


        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 8.649E+00
        GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.275E+00
        GROSS GAMMA MDA     (pCi/GRAM  )  : 3.819E+00
        GROSS GAMMA DLC     (pCi/GRAM  )  : 1.859E+00
```

VAX/VMS Nuclide Identification Report Generated 20-JAN-2010 15:32:02.61

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G244125002.CNF;1
Sample date       : 5-JAN-2010 12:00:00. Acquisition date : 20-JAN-2010 13:30:19
Sample ID         : G244125002           Sample quantity  : 1.20000E+02 GRAM
Detector name     : GAM16                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.91  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 940263               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	62.99*	99	396	0.72	126.17	123	7	1.37E-02	36.0	
2	3	74.77	502	356	1.01	149.73	144	14	6.97E-02	7.4	2.64E+00
3	3	77.14*	742	296	0.90	154.46	144	14	1.03E-01	5.1	
4	5	87.15	285	338	1.05	174.50	164	28	3.96E-02	11.6	2.07E+00
5	5	89.95	197	362	1.10	180.08	164	28	2.73E-02	17.8	
6	5	92.85*	242	381	1.33	185.90	164	28	3.36E-02	16.8	
7	0	129.25	115	352	1.01	258.70	255	9	1.60E-02	30.8	
8	0	185.64*	286	428	0.98	371.47	365	12	3.97E-02	16.0	
9	0	209.05	128	258	1.05	418.29	415	8	1.77E-02	23.5	
10	4	238.52*	1301	169	0.98	477.23	473	16	1.81E-01	3.2	2.81E+00
11	4	241.40	303	191	1.58	483.00	473	16	4.21E-02	12.9	
12	0	270.21	97	241	1.22	540.60	535	11	1.34E-02	32.7	
13	0	277.46	88	155	0.94	555.11	551	9	1.22E-02	27.8	
14	0	295.18*	425	249	1.16	590.55	584	12	5.90E-02	8.9	
15	0	300.14*	108	185	1.17	600.48	596	11	1.51E-02	26.6	
16	0	327.62	57	165	1.07	655.42	651	9	7.89E-03	42.8	
17	0	338.22	312	199	1.21	676.63	670	14	4.33E-02	11.2	
18	0	351.80*	683	197	1.07	703.78	698	12	9.49E-02	5.7	
19	0	409.52	43	121	1.02	819.22	815	9	5.97E-03	48.6	
20	0	462.57	90	99	1.10	925.31	921	12	1.24E-02	24.4	
21	0	510.40*	151	151	1.66	1020.96	1014	16	2.10E-02	22.2	
22	0	582.98*	426	88	1.22	1166.09	1160	13	5.92E-02	6.8	
23	0	609.23*	488	158	1.26	1218.59	1212	14	6.78E-02	7.2	
24	0	660.76	71	93	1.47	1321.64	1317	13	9.79E-03	30.8	
25	0	727.40	100	90	1.55	1454.90	1450	14	1.40E-02	22.4	
26	0	768.08	39	63	1.80	1536.23	1531	9	5.45E-03	39.8	
27	0	794.90	60	51	1.93	1589.86	1584	12	8.30E-03	27.2	
28	0	839.10	74	103	8.75	1678.24	1665	26	1.03E-02	39.5	
29	0	860.65	73	50	1.14	1721.32	1717	11	1.01E-02	21.4	
30	0	910.98*	288	91	1.14	1821.96	1815	13	4.01E-02	9.1	
31	1	964.67	67	25	1.76	1929.32	1923	22	9.24E-03	19.0	1.52E+00
32	1	968.67*	184	17	1.77	1937.32	1923	22	2.55E-02	9.4	
33	0	1001.13*	15	23	0.67	2002.22	1999	8	2.09E-03	67.5	
34	0	1120.09*	95	68	1.28	2240.05	2233	13	1.32E-02	21.0	
35	3	1234.02	35	31	2.11	2467.84	2464	21	4.81E-03	30.2	5.17E+00
36	3	1237.66	63	45	2.32	2475.12	2464	21	8.73E-03	26.9	
37	0	1378.11	45	29	0.74	2755.90	2750	16	6.27E-03	30.2	
38	0	1460.44*	866	13	1.64	2920.48	2911	17	1.20E-01	3.6	

Sample ID : G244125002 Acquisition date : 20-JAN-2010 13:30:19

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	1620.28	12	8	1.28	3240.01	3233	11	1.70E-03	53.2	
40	0	1764.52*	94	24	1.56	3528.33	3519	14	1.31E-02	15.1	
41	0	1958.44	19	7	1.23	3915.92	3909	14	2.64E-03	37.4	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 20-JAN-2010 15:32:06

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G244125002.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 5-JAN-2010 12:00:00 Acquisition date : 20-JAN-2010 13:30:19
Sample ID : G244125002 Sample quantity : 120.00 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA16 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.91 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	2.102E+01	2.379E+00	4.599E-01	4.043E-02	45.700
CD-109	+	88.03	*	3.921E+00	9.806E-01	1.059E+00	1.020E-01	3.703
SN-126	+	64.28		9.254E-01	6.795E-01	7.713E-01	1.124E-01	1.200
	+	86.94		1.602E+00	7.620E-01	4.375E-01	1.818E-01	3.663
	+	87.57	*	3.854E-01	9.639E-02	1.046E-01	1.003E-02	3.686
BA-137M	+	661.65	*	1.019E-01	6.333E-02	5.730E-02	5.085E-03	1.778
CS-137	+	661.65	*	1.077E-01	6.695E-02	6.057E-02	5.385E-03	1.778
TL-208	+	277.35		8.579E-01	4.939E-01	5.273E-01	7.839E-02	1.627
	+	510.84		7.385E-01	3.415E-01	2.082E-01	2.632E-02	3.547
	+	583.14	*	5.938E-01	1.000E-01	5.451E-02	5.403E-03	10.893
	+	860.37		9.544E-01	4.197E-01	3.928E-01	3.932E-02	2.430
BI-211		72.87		1.152E+00	2.841E+00	4.468E+00	3.632E-01	0.258
	+	351.07	*	4.191E+00	6.608E-01	3.213E-01	3.513E-02	13.045
BI-212	+	727.18	*	1.200E+00	5.528E-01	4.113E-01	4.297E-02	2.917
		785.46		2.215E+00	1.765E+00	3.236E+00	3.008E-01	0.685
	+	1620.62		1.250E+00	1.335E+00	1.918E+00	1.629E-01	0.652
PB-212	+	74.81		2.876E+00	5.579E-01	4.691E-01	5.861E-02	6.131
	+	77.11		2.404E+00	3.202E-01	2.661E-01	2.261E-02	9.032
	+	87.30		1.783E+00	4.801E-01	4.849E-01	6.707E-02	3.676
	+	238.63	*	1.747E+00	2.357E-01	8.239E-02	9.755E-03	21.199
	+	300.09		2.243E+00	1.228E+00	1.082E+00	1.418E-01	2.073
PO-212	+	74.81		2.876E+00	5.579E-01	4.691E-01	5.861E-02	6.131
	+	77.11		2.404E+00	3.202E-01	2.661E-01	2.261E-02	9.032
	+	87.30		1.783E+00	4.801E-01	4.849E-01	6.707E-02	3.676
		115.19		3.709E-01	3.098E+00	5.229E+00	4.363E-01	0.071
	+	238.63	*	1.747E+00	2.357E-01	8.239E-02	9.755E-03	21.199
	+	300.09		2.243E+00	1.228E+00	1.082E+00	1.418E-01	2.073
BI-214	+	609.31	*	1.281E+00	2.285E-01	9.723E-02	1.028E-02	13.179
	+	1120.29		1.298E+00	5.621E-01	4.205E-01	4.514E-02	3.087
	+	1764.49		1.763E+00	5.518E-01	2.268E-01	1.877E-02	7.773
PB-214	+	74.81		4.955E+00	9.189E-01	8.083E-01	8.986E-02	6.131
	+	77.11		4.121E+00	6.323E-01	4.563E-01	5.206E-02	9.032
	+	87.30		3.054E+00	7.992E-01	8.307E-01	1.020E-01	3.676
	+	241.98		2.445E+00	7.007E-01	4.963E-01	6.148E-02	4.927

Sample ID : G244125002 Acquisition date : 20-JAN-2010 13:30:19

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	295.21		1.543E+00	3.445E-01	2.054E-01	2.742E-02	7.513
	+	351.92	*	1.458E+00	2.421E-01	1.120E-01	1.355E-02	13.017
PO-214	+	74.81		4.955E+00	9.189E-01	8.083E-01	8.986E-02	6.131
	+	77.11		4.121E+00	6.323E-01	4.563E-01	5.206E-02	9.032
	+	87.30		3.054E+00	7.992E-01	8.307E-01	1.020E-01	3.676
	+	241.98		2.445E+00	7.007E-01	4.963E-01	6.148E-02	4.927
	+	295.21		1.543E+00	3.445E-01	2.054E-01	2.742E-02	7.513
	+	351.92	*	1.458E+00	2.421E-01	1.120E-01	1.355E-02	13.017
PO-216	+	74.81		2.876E+00	5.579E-01	4.691E-01	5.861E-02	6.131
	+	77.11		2.404E+00	3.202E-01	2.661E-01	2.261E-02	9.032
	+	87.30		1.783E+00	4.801E-01	4.849E-01	6.707E-02	3.676
	+	238.63	*	1.747E+00	2.357E-01	8.239E-02	9.755E-03	21.199
	+	300.09		2.243E+00	1.228E+00	1.082E+00	1.418E-01	2.073
PO-218	+	74.81		4.955E+00	9.189E-01	8.083E-01	8.986E-02	6.131
	+	77.11		4.121E+00	6.323E-01	4.563E-01	5.206E-02	9.032
	+	87.30		3.054E+00	7.992E-01	8.307E-01	1.020E-01	3.676
	+	241.98		2.445E+00	7.007E-01	4.963E-01	6.148E-02	4.927
	+	295.21		1.543E+00	3.445E-01	2.054E-01	2.742E-02	7.513
	+	351.92	*	1.458E+00	2.421E-01	1.120E-01	1.355E-02	13.017
RA-224	+	240.98	*	4.637E+00	1.303E+00	9.378E-01	1.033E-01	4.944
RA-226	+	609.31	*	1.281E+00	2.285E-01	9.723E-02	1.028E-02	13.179
	+	1120.29		1.298E+00	5.621E-01	4.205E-01	4.514E-02	3.087
	+	1764.49		1.763E+00	5.518E-01	2.268E-01	1.877E-02	7.773
AC-228	+	338.32		2.108E+00	9.988E-01	3.288E-01	1.374E-01	6.412
	+	911.07	*	1.785E+00	3.887E-01	1.834E-01	2.178E-02	9.732
	+	969.11		2.003E+00	6.043E-01	3.557E-01	8.388E-02	5.632
RA-228	+	338.32		2.108E+00	9.988E-01	3.288E-01	1.374E-01	6.412
	+	911.07	*	1.785E+00	3.887E-01	1.834E-01	2.178E-02	9.732
	+	969.11		2.003E+00	6.043E-01	3.557E-01	8.388E-02	5.632
TH-228	+	74.81		2.919E+00	4.974E-01	4.762E-01	3.984E-02	6.131
	+	77.11		2.440E+00	3.250E-01	2.702E-01	2.295E-02	9.032
	+	87.30		1.810E+00	4.526E-01	4.923E-01	4.704E-02	3.676
	+	238.63	*	1.773E+00	2.393E-01	8.364E-02	9.903E-03	21.199
	+	300.09		2.277E+00	1.822E+00	1.098E+00	6.569E-01	2.073
TH-230	+	609.31	*	1.281E+00	2.285E-01	9.723E-02	1.028E-02	13.179
	+	1120.29		1.298E+00	5.621E-01	4.205E-01	4.514E-02	3.087
	+	1764.49		1.762E+00	5.518E-01	2.268E-01	1.877E-02	7.773
TH-232	+	338.32		2.108E+00	5.236E-01	3.288E-01	3.588E-02	6.412
	+	911.07	*	1.785E+00	3.887E-01	1.834E-01	2.178E-02	9.732
	+	969.11		2.003E+00	6.043E-01	3.557E-01	8.388E-02	5.632
TH-234	+	63.29	*	2.338E+00	1.732E+00	1.826E+00	3.185E-01	1.280
	+	92.38		2.119E+00	8.102E-01	6.866E-01	1.262E-01	3.085
U-234	+	609.31	*	1.281E+00	2.285E-01	9.723E-02	1.028E-02	13.179
	+	1120.29		1.298E+00	5.621E-01	4.205E-01	4.514E-02	3.087
	+	1764.49		1.762E+00	5.518E-01	2.268E-01	1.877E-02	7.773
NP-237	+	86.50	*	1.132E+00	3.670E-01	3.105E-01	7.048E-02	3.646
		95.87		-3.858E-01	8.805E-01	1.302E+00	3.224E-01	-0.296
U-238	+	63.29	*	2.338E+00	1.732E+00	1.826E+00	3.185E-01	1.280
	+	92.38		2.119E+00	7.369E-01	6.866E-01	6.336E-02	3.085

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AM-243	+	74.67	*	4.663E-01	7.926E-02	7.628E-02	6.315E-03	6.112
	+	86.72		4.245E+01	1.061E+01	1.161E+01	1.102E+00	3.654
		117.66		-3.546E+00	3.290E+00	5.230E+00	4.351E-01	-0.678
		142.18		-1.042E+01	1.639E+01	2.647E+01	2.257E+00	-0.394
ANH-511	+	511.00	*	1.595E-01	7.256E-02	4.498E-02	4.278E-03	3.546

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	3.944E-02	3.144E-01	5.255E-01	5.316E-02	0.075
NA-22		1274.54	*	-1.659E-02	3.823E-02	5.836E-02	4.856E-03	-0.284
NA-24		1368.53	*	5.732E-01	3.823E-02	Half-Life too short		
AL-26		1129.67		-1.163E+00	1.599E+00	2.405E+00	2.016E-01	-0.484
		1808.65	*	1.802E-02	2.822E-02	5.232E-02	4.278E-03	0.344
TI-44		67.85		-4.128E-03	4.229E-02	6.529E-02	5.056E-03	-0.063
	+	78.38	*	4.436E-01	5.908E-02	7.203E-02	6.203E-03	6.158
SC-46		889.25	*	-1.667E-02	3.808E-02	6.090E-02	5.757E-03	-0.274
	+	1120.51		2.221E-01	9.505E-02	1.368E-01	1.155E-02	1.624
V-48		944.10		-2.256E-01	7.990E-01	1.288E+00	1.203E-01	-0.175
		983.50	*	-2.602E-02	6.635E-02	1.053E-01	9.696E-03	-0.247
		1312.09		-7.898E-03	7.770E-02	1.240E-01	1.041E-02	-0.064
CR-51		320.08	*	-1.976E-02	3.664E-01	5.777E-01	6.754E-02	-0.034
MN-52		744.21		-4.251E-02	2.270E-01	3.565E-01	3.274E-02	-0.119
		848.13		-4.630E-01	6.427E+00	9.278E+00	8.732E-01	-0.050
		935.52		2.629E-01	2.682E-01	4.807E-01	4.503E-02	0.547
		1246.25		-4.998E-01	6.988E+00	1.017E+01	8.383E-01	-0.049
		1333.61		-4.621E+00	4.837E+00	6.702E+00	5.654E-01	-0.690
		1434.06	*	1.661E-01	2.223E-01	3.974E-01	3.391E-02	0.418
MN-54		834.83	*	3.553E-02	3.454E-02	6.273E-02	5.892E-03	0.566
CO-56		846.75	*	9.960E-03	3.508E-02	5.348E-02	5.032E-03	0.186
		977.42		8.599E-01	2.531E+00	4.353E+00	4.017E-01	0.198
		1037.82		7.659E-02	2.578E-01	4.401E-01	4.137E-02	0.174
		1175.09		-1.427E+00	2.059E+00	3.096E+00	2.491E-01	-0.461
	+	1238.25		2.414E-01	1.314E-01	1.819E-01	1.543E-02	1.327
		1360.21		-8.212E-02	9.235E-01	1.469E+00	1.244E-01	-0.056
		1771.40		8.159E-02	1.747E-01	3.050E-01	2.520E-02	0.267
CO-57		122.06	*	1.160E-02	2.221E-02	3.801E-02	3.159E-03	0.305
		136.48		-9.700E-02	1.883E-01	3.062E-01	2.783E-02	-0.317
CO-58		810.76	*	2.201E-02	3.336E-02	5.956E-02	5.580E-03	0.370
FE-59		142.65		-9.180E-01	2.599E+00	4.168E+00	3.558E-01	-0.220
		192.34		2.258E-01	8.403E-01	1.392E+00	1.970E-01	0.162
		1099.22	*	-6.747E-02	8.626E-02	1.290E-01	1.199E-02	-0.523
		1291.56		7.909E-03	1.223E-01	1.996E-01	1.906E-02	0.040
CO-60		1173.22		7.948E-03	3.932E-02	6.566E-02	5.280E-03	0.121
		1332.49	*	-2.681E-02	3.624E-02	5.199E-02	4.385E-03	-0.516
ZN-65		1115.52	*	-1.481E-02	9.541E-02	1.323E-01	1.123E-02	-0.112
GE-68		1077.35	*	6.153E-01	1.121E+00	1.953E+00	1.705E-01	0.315
AS-73		53.44	*	1.039E-03	7.929E-01	1.243E+00	9.482E-02	0.001

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AS-74		595.88	*	-4.168E-02	9.307E-02	1.397E-01	1.296E-02	-0.298
		634.78		4.012E-02	3.575E-01	5.856E-01	5.309E-02	0.069
SE-75		66.05		4.919E-01	4.914E+00	7.050E+00	6.783E-01	0.070
		96.73		-8.910E-01	7.530E-01	1.058E+00	1.462E-01	-0.842
		121.11		3.598E-02	1.215E-01	2.061E-01	2.263E-02	0.175
		136.00		-4.085E-02	3.569E-02	5.613E-02	4.764E-03	-0.728
		198.60		1.907E+00	1.745E+00	2.959E+00	3.172E-01	0.645
		264.65	*	1.341E-02	4.508E-02	6.593E-02	7.693E-03	0.203
		279.53		9.150E-02	1.071E-01	1.628E-01	1.993E-02	0.562
		303.91		-3.985E-01	2.179E+00	3.022E+00	4.199E-01	-0.132
		400.65		2.496E-01	2.439E-01	4.320E-01	5.029E-02	0.578
BR-77	+	87.88		8.340E+02	2.086E+02	3.186E+02	3.067E+01	2.617
		200.40		-4.050E+01	1.569E+02	2.527E+02	2.511E+01	-0.160
	+	239.00		2.761E+02	3.514E+01	3.885E+01	4.261E+00	7.106
		249.79		-1.199E+01	6.204E+01	9.866E+01	1.110E+01	-0.122
		281.68		1.965E+01	8.908E+01	1.290E+02	1.545E+01	0.152
		297.23		1.343E+02	7.224E+01	9.586E+01	1.128E+01	1.401
		303.76		-3.276E+01	1.828E+02	2.536E+02	2.955E+01	-0.129
		439.47		7.987E+01	1.305E+02	2.264E+02	2.136E+01	0.353
		484.57		-2.638E+02	2.281E+02	3.428E+02	3.261E+01	-0.769
		520.65	*	-6.597E+00	9.905E+00	1.540E+01	1.463E+00	-0.428
		574.64		-4.630E+01	1.935E+02	3.098E+02	2.903E+01	-0.149
		578.91		2.956E+01	8.178E+01	1.223E+02	1.144E+01	0.242
		585.48		6.982E+02	2.120E+02	3.752E+02	3.500E+01	1.861
		755.35		9.626E+01	1.619E+02	2.734E+02	2.519E+01	0.352
		817.79		1.287E+02	1.082E+02	2.020E+02	1.892E+01	0.637
SR-82		698.33		-2.088E+01	3.507E+01	5.345E+01	4.823E+00	-0.391
		776.49	*	-1.717E-02	3.569E-01	5.668E-01	5.255E-02	-0.030
		1395.20		-4.795E+00	1.057E+01	1.577E+01	1.341E+00	-0.304
RB-83		520.41	*	-4.554E-02	6.640E-02	1.030E-01	9.790E-03	-0.442
		529.64		-1.670E-02	9.211E-02	1.491E-01	1.414E-02	-0.112
		552.65		-5.490E-02	1.852E-01	2.958E-01	2.793E-02	-0.186
RB-84		881.50	*	-3.735E-02	6.492E-02	1.021E-01	9.648E-03	-0.366
KR-85		513.99	*	6.815E+00	7.942E+00	1.238E+01	1.177E+00	0.551
SR-85		513.99	*	3.492E-02	4.070E-02	6.343E-02	6.031E-03	0.551
RB-86		1076.63	*	5.671E-01	6.948E-01	1.242E+00	1.086E-01	0.456
Y-88		898.02		-2.567E-02	3.707E-02	5.723E-02	5.436E-03	-0.449
		1836.01	*	5.760E-03	3.279E-02	5.581E-02	4.531E-03	0.103
ZR-88		392.90	*	-1.354E-02	2.815E-02	4.570E-02	4.227E-03	-0.296
Y-91		1204.90	*	3.254E+00	1.743E+01	2.894E+01	2.354E+00	0.112
NB-94		702.63	*	7.981E-03	3.462E-02	5.680E-02	5.134E-03	0.141
		871.10		-1.891E-02	3.053E-02	4.770E-02	4.502E-03	-0.396
NB-95		765.79	*	1.296E-02	5.113E-02	7.336E-02	6.781E-03	0.177
NB-95M		235.69	*	3.260E-02	1.270E-01	1.860E-01	2.212E-02	0.175
ZR-95		724.18		8.006E-02	9.497E-02	1.475E-01	1.449E-02	0.543
		756.15	*	4.724E-02	6.967E-02	1.185E-01	1.189E-02	0.399
NB-97		657.90	*	-4.375E-02	6.967E-02	Half-Life too short		
		1024.50		-3.257E+00	6.967E-02	Half-Life too short		
ZR-97		254.15		-7.661E-01	6.967E-02	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		355.39		4.974E-01	6.967E-02	Half-Life too short		
		507.63	*	2.792E+00	6.967E-02	Half-Life too short		
		602.52		-2.810E+00	6.967E-02	Half-Life too short		
		1021.30		2.812E+00	6.967E-02	Half-Life too short		
		1147.95		-7.309E-01	6.967E-02	Half-Life too short		
		1362.66		5.851E-01	6.967E-02	Half-Life too short		
		1750.46		-1.564E+00	6.967E-02	Half-Life too short		
MO-99		140.51		-1.793E+01	2.452E+01	3.798E+01	1.050E+01	-0.472
		181.06		-4.654E+00	1.804E+01	2.601E+01	4.861E+00	-0.179
		366.43		-4.565E+01	7.148E+01	1.150E+02	1.163E+01	-0.397
		739.58	*	-2.696E+00	1.058E+01	1.648E+01	2.554E+00	-0.164
		778.00		3.556E-01	3.225E+01	5.153E+01	4.780E+00	0.007
TC-99M		140.51	*	-2.274E+10	3.225E+01	Half-Life too short		
RH-101		127.23		1.588E-02	3.094E-02	4.776E-02	3.976E-03	0.332
		198.01	*	2.044E-02	3.149E-02	5.262E-02	5.195E-03	0.389
		325.23		-1.342E-01	2.504E-01	3.335E-01	3.745E-02	-0.402
RH-102		418.52		2.116E-01	2.845E-01	4.966E-01	4.652E-02	0.426
		475.06	*	-1.375E-02	2.827E-02	4.512E-02	4.288E-03	-0.305
		631.29		-2.633E-02	5.333E-02	8.258E-02	7.504E-03	-0.319
		697.49		-3.869E-02	7.886E-02	1.214E-01	1.095E-02	-0.319
	+	766.84		1.719E-01	1.378E-01	2.043E-01	1.889E-02	0.841
		1046.59		-1.304E-03	1.008E-01	1.659E-01	1.479E-02	-0.008
		1112.84		-1.930E-01	2.458E-01	3.045E-01	2.589E-02	-0.634
RU-103		497.08	*	-6.377E-03	3.818E-02	6.224E-02	9.164E-03	-0.102
	+	610.33		1.382E+01	3.077E+00	3.210E+00	5.455E-01	4.307
RH-106	+	511.85		7.966E-01	3.624E-01	4.377E-01	4.162E-02	1.820
		621.84	*	-1.907E-01	3.053E-01	4.658E-01	6.383E-02	-0.409
		1050.47		1.368E+00	2.110E+00	3.709E+00	3.297E-01	0.369
RU-106	+	511.85		7.966E-01	3.624E-01	4.377E-01	4.162E-02	1.820
		621.84	*	-1.907E-01	3.047E-01	4.658E-01	4.260E-02	-0.409
		1050.47		1.368E+00	2.110E+00	3.709E+00	3.297E-01	0.369
AG-108M		433.93	*	2.200E-02	3.180E-02	5.535E-02	5.388E-03	0.398
		614.37		-2.679E-02	4.325E-02	5.688E-02	5.407E-03	-0.471
		722.95		-1.339E-02	4.404E-02	5.906E-02	5.570E-03	-0.227
AG-110M		657.75	*	-2.491E-02	3.801E-02	4.892E-02	4.477E-03	-0.509
		677.61		7.164E-03	3.077E-01	4.977E-01	4.567E-02	0.014
		706.67		1.393E-01	2.112E-01	3.584E-01	3.326E-02	0.389
		763.93		1.397E-01	1.742E-01	2.681E-01	2.538E-02	0.521
		884.67		4.034E-03	4.696E-02	7.913E-02	7.678E-03	0.051
		937.48		-3.099E-02	1.161E-01	1.884E-01	1.818E-02	-0.164
		1384.27		8.631E-02	1.491E-01	2.355E-01	2.058E-02	0.367
IN-111		171.28		2.230E-01	8.994E-01	1.498E+00	1.377E-01	0.149
		245.39	*	-2.799E-01	1.032E+00	1.447E+00	1.611E-01	-0.194
IN-113M		391.69	*	-3.359E-02	4.173E-02	6.616E-02	6.280E-03	-0.508
SN-113		391.69	*	-3.359E-02	4.173E-02	6.616E-02	6.280E-03	-0.508
IN-114M		190.27	*	1.794E-02	1.807E-01	2.659E-01	2.571E-02	0.067
CD-115		260.90		-7.001E+01	1.178E+02	1.812E+02	2.092E+01	-0.386
		492.35		2.093E+01	3.349E+01	5.789E+01	5.509E+00	0.362
		527.90	*	-1.036E+00	9.222E+00	1.502E+01	1.426E+00	-0.069

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SN-117M		156.02		-1.166E+00	2.117E+00	3.413E+00	3.010E-01	-0.342
		158.56	*	1.966E-02	4.972E-02	8.362E-02	7.427E-03	0.235
SB-122		563.90	*	6.511E-01	1.900E+00	3.197E+00	3.007E-01	0.204
		692.80		-6.543E+00	4.527E+01	7.070E+01	6.365E+00	-0.093
I-123		159.00	*	2.934E+00	4.527E+01	Half-Life too short		
		528.96		-2.376E+01	4.527E+01	Half-Life too short		
TE-123M		159.00	*	1.552E-02	2.518E-02	4.275E-02	3.823E-03	0.363
I-124		602.71	*	-4.832E-01	8.000E-01	1.030E+00	9.530E-02	-0.469
		722.78		3.708E-01	4.357E+00	6.178E+00	5.629E-01	0.060
		1325.50		6.327E-01	2.927E+01	4.746E+01	3.997E+00	0.013
		1376.25		8.497E+01	3.535E+01	6.716E+01	5.700E+00	1.265
		1509.49		1.971E+01	1.411E+01	2.790E+01	2.386E+00	0.706
		1691.02		7.004E-02	3.759E+00	6.245E+00	5.251E-01	0.011
SB-124		602.71		-2.832E-02	4.689E-02	6.039E-02	5.586E-03	-0.469
		645.85		-1.245E-01	4.948E-01	7.833E-01	7.431E-02	-0.159
		709.31		-2.304E-01	2.925E+00	4.574E+00	4.146E-01	-0.050
		713.82		-1.675E-02	1.632E+00	2.575E+00	3.186E-01	-0.007
		722.78		3.150E-02	3.702E-01	5.249E-01	4.875E-02	0.060
	+	968.20		2.061E+01	4.321E+00	7.796E+00	7.221E-01	2.644
		1045.16		2.588E-01	2.144E+00	3.585E+00	3.197E-01	0.072
		1325.50		5.741E-02	2.656E+00	4.306E+00	3.627E-01	0.013
		1368.21		1.443E+00	1.515E+00	2.784E+00	3.727E-01	0.518
		1436.60		-2.314E+00	3.403E+00	5.115E+00	4.365E-01	-0.452
		1691.02	*	1.403E-03	7.533E-02	1.252E-01	1.096E-02	0.011
SB-125		427.89	*	-1.673E-02	8.519E-02	1.402E-01	1.340E-02	-0.119
	+	463.38		8.538E-01	4.254E-01	5.424E-01	5.482E-02	1.574
		600.56		6.457E-02	1.832E-01	3.063E-01	3.019E-02	0.211
		635.90		-2.440E-01	2.853E-01	4.270E-01	4.151E-02	-0.571
TE-125M		109.28	*	4.856E-01	7.978E+00	1.347E+01	1.371E+00	0.036
I-126		388.63		1.796E-01	1.958E-01	3.460E-01	3.237E-02	0.519
		666.33	*	3.068E-01	2.012E-01	3.314E-01	2.948E-02	0.926
		753.82		2.557E-01	1.463E+00	2.380E+00	2.192E-01	0.107
SB-126		223.80		1.213E+00	3.872E+00	6.373E+00	6.731E-01	0.190
	+	278.60		5.655E+00	3.217E+00	4.072E+00	4.884E-01	1.389
	+	296.50		1.532E+01	3.283E+00	3.571E+00	4.205E-01	4.290
		414.70		-2.777E-02	7.493E-02	1.127E-01	1.053E-02	-0.247
		415.30		-4.409E+00	6.106E+00	9.321E+00	8.719E-01	-0.473
		555.20		-2.911E-01	3.681E+00	5.993E+00	5.653E-01	-0.049
		573.80		5.645E-02	9.646E-01	1.585E+00	1.486E-01	0.036
		593.00		-1.531E-01	8.066E-01	1.291E+00	1.200E-01	-0.119
		656.30		-4.921E-02	3.480E+00	4.911E+00	4.379E-01	-0.010
		666.33		1.282E-01	8.406E-02	1.385E-01	1.232E-02	0.926
		675.00		1.250E+00	1.822E+00	3.129E+00	2.794E-01	0.399
		695.00		4.511E-02	7.813E-02	1.319E-01	1.189E-02	0.342
		697.00		-1.276E-01	2.779E-01	4.293E-01	3.872E-02	-0.297
		720.50	*	-5.497E-02	1.342E-01	2.029E-01	1.847E-02	-0.271
		856.80		2.684E-01	4.520E-01	7.132E-01	6.720E-02	0.376
		989.30		-5.567E-01	1.164E+00	1.827E+00	1.677E-01	-0.305
		1034.80		-4.065E-01	7.552E+00	1.239E+01	1.111E+00	-0.033

---- Non-Identified Nuclides ----

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		1213.00		-1.458E+00	4.291E+00	6.733E+00	5.491E-01	-0.217
SB-127		61.10		8.592E+01	5.218E+01	8.148E+01	8.240E+00	1.054
		252.40		7.379E-01	4.062E+00	6.584E+00	2.809E+00	0.112
		290.80		-8.065E+00	2.396E+01	3.296E+01	4.549E+00	-0.245
		411.60		5.432E+00	1.244E+01	1.904E+01	3.069E+00	0.285
		444.90		-8.055E-01	9.096E+00	1.505E+01	1.972E+00	-0.054
		473.00		2.720E-02	1.526E+00	2.533E+00	3.410E-01	0.011
		543.00		-1.021E+01	1.584E+01	2.448E+01	3.648E+00	-0.417
		603.60		-1.403E+01	1.423E+01	1.738E+01	2.248E+00	-0.807
		685.20	*	9.441E-02	1.423E+00	2.308E+00	2.686E-01	0.041
		698.50		-5.729E+00	1.523E+01	2.366E+01	3.793E+00	-0.242
		722.20		6.596E+00	2.880E+01	4.168E+01	4.805E+00	0.158
		783.80		4.571E+00	3.645E+00	6.405E+00	8.248E-01	0.714
XE-127		57.60		-2.215E+00	5.535E+00	8.459E+00	6.115E-01	-0.262
		145.22		5.122E-02	6.811E-01	1.113E+00	9.551E-02	0.046
		172.10		2.943E-02	1.088E-01	1.813E-01	1.670E-02	0.162
		202.84	*	-2.492E-03	4.313E-02	7.010E-02	7.011E-03	-0.036
		374.96		7.798E-02	1.846E-01	3.188E-01	3.136E-02	0.245
I-131		80.18		-1.180E+00	5.095E+00	6.157E+00	5.442E-01	-0.192
		284.30		-1.623E+00	1.423E+00	2.072E+00	2.543E-01	-0.784
		364.48	*	5.339E-02	9.828E-02	1.715E-01	1.814E-02	0.311
		636.97		3.902E-01	1.604E+00	2.654E+00	2.524E-01	0.147
		722.89		2.855E-01	7.030E+00	9.906E+00	9.078E-01	0.029
TE-132		49.72		-2.419E+00	1.780E+01	2.777E+01	2.895E+00	-0.087
		111.76		-3.650E+00	2.516E+01	4.205E+01	4.483E+00	-0.087
		116.30		-5.443E-02	2.330E+01	3.912E+01	4.152E+00	-0.001
		228.16	*	4.665E-01	6.457E-01	1.078E+00	1.824E-01	0.433
BA-133		53.15		4.389E-01	3.409E+00	5.380E+00	4.122E-01	0.082
		79.62		-5.381E-01	1.454E+00	1.735E+00	2.653E-01	-0.310
		81.00		-5.483E-02	9.656E-02	1.311E-01	2.099E-02	-0.418
	+	276.40		8.478E-01	4.922E-01	6.075E-01	1.011E-01	1.395
		302.84		-2.308E-02	1.492E-01	2.075E-01	3.205E-02	-0.111
		356.01	*	7.276E-04	4.466E-02	6.671E-02	9.640E-03	0.011
		383.85		-1.678E-01	2.858E-01	4.613E-01	6.108E-02	-0.364
I-133	+	510.53		1.554E+00	2.858E-01	Half-Life too short		
		529.87	*	-4.304E-04	2.858E-01	Half-Life too short		
		706.58		2.431E-01	2.858E-01	Half-Life too short		
		856.28		1.582E-01	2.858E-01	Half-Life too short		
		875.33		2.857E-02	2.858E-01	Half-Life too short		
	+	1236.41		1.676E+00	2.858E-01	Half-Life too short		
		1298.22		-1.100E-01	2.858E-01	Half-Life too short		
CS-134		475.35		-5.234E-01	1.825E+00	2.959E+00	2.813E-01	-0.177
		563.23		1.149E-01	3.425E-01	5.756E-01	5.460E-02	0.200
		569.32		-1.248E-01	1.958E-01	2.986E-01	2.836E-02	-0.418
		604.70		-4.463E-03	3.625E-02	5.092E-02	4.715E-03	-0.088
	+	795.84	*	1.199E-01	6.615E-02	9.072E-02	8.505E-03	1.321
		801.93		-2.128E-01	3.816E-01	5.750E-01	5.391E-02	-0.370
		1038.57		5.666E-01	3.212E+00	5.410E+00	4.843E-01	0.105
		1167.94		-1.508E-01	2.290E+00	3.714E+00	3.002E-01	-0.041

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		1365.15		-8.771E-01	1.210E+00	1.726E+00	1.532E-01	-0.508
CS-135		268.24	*	9.194E-02	1.731E-01	2.562E-01	3.267E-02	0.359
I-135		288.45		4.848E+09	1.731E-01	Half-Life too short		
		417.63		1.065E+09	1.731E-01	Half-Life too short		
		546.56		5.585E+09	1.731E-01	Half-Life too short		
		836.80		1.831E+10	1.731E-01	Half-Life too short		
		1038.76		2.318E+09	1.731E-01	Half-Life too short		
		1124.00		1.341E+10	1.731E-01	Half-Life too short		
		1131.51		3.129E+08	1.731E-01	Half-Life too short		
		1260.41	*	3.708E+09	1.731E-01	Half-Life too short		
		1457.56		3.489E+11	1.731E-01	Half-Life too short		
		1678.03		5.179E+09	1.731E-01	Half-Life too short		
		1706.46		-9.259E+09	1.731E-01	Half-Life too short		
		1791.20		1.058E+10	1.731E-01	Half-Life too short		
CS-136		66.91		1.990E-01	7.299E-01	1.141E+00	1.704E-01	0.174
	+	86.29		5.016E+00	1.342E+00	1.893E+00	2.540E-01	2.649
		153.22		6.140E-01	6.044E-01	1.040E+00	1.015E-01	0.590
		163.89		-2.968E-01	9.587E-01	1.558E+00	1.560E-01	-0.191
		176.55		-1.669E-01	3.427E-01	5.493E-01	5.375E-02	-0.304
		273.65		-7.560E-03	5.759E-01	6.418E-01	7.887E-02	-0.012
		340.57		1.048E-01	1.303E-01	2.061E-01	2.279E-02	0.509
		818.51		1.215E-02	6.411E-02	1.098E-01	1.029E-02	0.111
		1048.07	*	-2.934E-02	9.979E-02	1.592E-01	1.474E-02	-0.184
	+	1235.34		8.761E-01	5.394E-01	1.083E+00	1.252E-01	0.809
CE-139		165.85	*	1.661E-04	2.768E-02	4.565E-02	4.140E-03	0.004
BA-140		162.64		3.249E-01	6.461E-01	1.091E+00	1.033E-01	0.298
		304.84		1.647E+00	1.320E+00	1.955E+00	5.689E-01	0.842
		423.70		-1.917E+00	1.930E+00	2.829E+00	9.231E-01	-0.677
		537.32	*	1.281E-01	2.423E-01	4.091E-01	1.365E-01	0.313
LA-140	+	328.77		4.730E-01	4.087E-01	5.458E-01	6.290E-02	0.867
		432.53		2.331E+00	2.034E+00	3.568E+00	3.497E-01	0.653
		487.03		1.277E-01	1.355E-01	2.381E-01	2.381E-02	0.536
		751.79		-1.416E+00	1.760E+00	2.584E+00	2.603E-01	-0.548
		815.85		1.018E-01	2.714E-01	4.731E-01	4.864E-02	0.215
		867.82		-7.413E-02	1.284E+00	2.017E+00	1.988E-01	-0.037
		919.63		1.722E-01	2.471E+00	4.147E+00	4.684E-01	0.042
		925.24		1.395E-01	1.029E+00	1.738E+00	1.720E-01	0.080
		1596.49	*	-1.360E-01	9.369E-02	1.204E-01	1.026E-02	-1.129
CE-141		145.44	*	1.083E-02	5.941E-02	9.938E-02	8.693E-03	0.109
CE-143		57.37		3.715E-04	5.941E-02	Half-Life too short		
		231.56		-1.274E-03	5.941E-02	Half-Life too short		
		293.26	*	5.292E-04	5.941E-02	Half-Life too short		
	+	350.59		3.233E-02	5.941E-02	Half-Life too short		
		490.36		-1.270E-03	5.941E-02	Half-Life too short		
		664.57		1.277E-03	5.941E-02	Half-Life too short		
		721.93		-7.058E-04	5.941E-02	Half-Life too short		
CE-144		80.11		-5.507E-01	2.356E+00	2.847E+00	2.499E-01	-0.193
		133.54	*	2.368E-01	2.007E-01	3.161E-01	4.881E-02	0.749
PM-144		476.78		2.922E-02	6.506E-02	1.112E-01	1.139E-02	0.263

---- Non-Identified Nuclides ----

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		618.01		2.378E-02	3.026E-02	5.238E-02	4.919E-03	0.454
		696.49	*	-4.690E-03	3.495E-02	5.563E-02	5.017E-03	-0.084
		778.57		8.457E-01	2.189E+00	3.630E+00	3.368E-01	0.233
PR-144		696.49	*	-3.178E-01	2.368E+00	3.769E+00	3.399E-01	-0.084
		1489.15		-4.229E-01	1.109E+01	1.845E+01	1.578E+00	-0.023
PM-146		453.90	*	1.245E-02	4.142E-02	7.029E-02	8.027E-03	0.177
		633.02		6.039E-01	1.344E+00	2.237E+00	8.385E-01	0.270
		735.90		6.181E-02	1.352E-01	2.187E-01	6.292E-02	0.283
		747.13		3.128E-02	8.884E-02	1.470E-01	2.117E-02	0.213
ND-147	+	91.11		8.860E-01	3.273E-01	4.491E-01	4.489E-02	1.973
		319.41		-1.207E+00	3.275E+00	5.046E+00	5.729E-01	-0.239
		439.89		2.719E+00	5.362E+00	9.246E+00	8.728E-01	0.294
		531.02	*	1.969E-02	4.814E-01	7.945E-01	1.229E-01	0.025
PM-149		285.90	*	4.776E+01	8.575E+01	1.410E+02	2.481E+01	0.339
EU-152		121.78		3.958E-02	6.477E-02	1.112E-01	1.073E-02	0.356
		244.69		-2.577E-01	3.197E-01	4.252E-01	4.728E-02	-0.606
		344.27	*	3.858E-02	9.713E-02	1.500E-01	1.677E-02	0.257
		443.98		-3.219E-01	9.087E-01	1.474E+00	1.393E-01	-0.218
		778.89		6.004E-02	2.491E-01	4.075E-01	3.781E-02	0.147
		867.32		3.278E-01	7.705E-01	1.240E+00	1.169E-01	0.264
	+	964.01		8.354E-01	3.269E-01	5.689E-01	5.278E-02	1.468
		1085.78		8.191E-02	3.367E-01	5.693E-01	4.942E-02	0.144
		1112.02		-3.152E-01	3.259E-01	4.401E-01	3.744E-02	-0.716
		1407.95		2.044E-01	2.149E-01	3.875E-01	3.300E-02	0.527
GD-153		69.67		2.107E-01	1.514E+00	2.361E+00	1.860E-01	0.089
		83.37		2.469E+01	1.307E+01	2.296E+01	2.092E+00	1.076
		97.43	*	1.486E-02	7.621E-02	1.155E-01	1.026E-02	0.129
		103.18		-1.040E-01	9.095E-02	1.453E-01	1.252E-02	-0.716
EU-154		123.07		5.663E-03	4.654E-02	7.833E-02	8.715E-03	0.072
		247.94		2.518E-01	3.333E-01	5.580E-01	7.547E-02	0.451
		591.81		3.694E-02	5.231E-01	8.590E-01	1.046E-01	0.043
		723.30		-3.536E-02	1.857E-01	2.533E-01	2.527E-02	-0.140
		756.87		6.182E-01	7.271E-01	1.255E+00	1.558E-01	0.493
		873.19		-1.920E-02	2.628E-01	4.363E-01	5.600E-02	-0.044
		996.32		7.802E-02	3.877E-01	5.732E-01	1.034E-01	0.136
		1004.76		-5.670E-02	2.066E-01	2.827E-01	3.395E-02	-0.201
		1274.45	*	-5.332E-02	1.077E-01	1.630E-01	1.806E-02	-0.327
EU-155		48.70		-1.534E+00	2.324E+00	3.520E+00	2.892E-01	-0.436
		60.01		9.524E-02	4.734E+00	6.796E+00	4.854E-01	0.014
	+	86.54		4.642E-01	1.162E-01	1.781E-01	1.700E-02	2.607
		105.31	*	9.791E-02	9.494E-02	1.661E-01	1.437E-02	0.589
TB-160	+	86.79		1.239E+00	3.099E-01	4.804E-01	4.562E-02	2.580
		197.04		-3.660E-01	5.362E-01	8.398E-01	8.270E-02	-0.436
		215.65		-6.784E-02	7.062E-01	1.141E+00	1.180E-01	-0.059
		298.57		1.791E-01	1.531E-01	1.922E-01	2.257E-02	0.932
		879.36	*	5.850E-02	1.266E-01	2.210E-01	2.087E-02	0.265
		962.29		5.111E-01	5.785E-01	9.208E-01	8.548E-02	0.555
	+	966.15		5.733E-01	2.244E-01	5.225E-01	4.843E-02	1.097
		1177.93		1.866E-01	3.173E-01	5.506E-01	4.434E-02	0.339

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		1271.85		-4.125E-02	5.990E-01	9.624E-01	7.993E-02	-0.043
HO-166M		80.57		-1.055E-01	3.044E-01	3.642E-01	3.214E-02	-0.290
	+	184.41		2.021E-01	6.769E-02	6.883E-02	6.552E-03	2.937
		280.46		6.672E-02	8.301E-02	1.259E-01	1.510E-02	0.530
	+	410.95		3.416E-01	3.339E-01	4.226E-01	3.945E-02	0.808
		711.68	*	-6.034E-02	6.233E-02	9.069E-02	8.228E-03	-0.665
		752.31		-9.517E-02	2.785E-01	4.308E-01	3.966E-02	-0.221
		810.29		4.693E-02	5.079E-02	9.254E-02	8.651E-03	0.507
TM-171		51.35		9.183E+00	2.860E+01	4.566E+01	3.598E+00	0.201
		52.39		-3.920E-01	1.508E+01	2.362E+01	1.831E+00	-0.017
		59.40		2.540E+01	2.464E+01	3.763E+01	2.672E+00	0.675
		66.72	*	4.362E-01	2.905E+01	4.146E+01	3.176E+00	0.011
LU-176	+	88.36		9.142E-01	2.286E-01	3.279E-01	3.148E-02	2.788
		201.83		-1.053E-02	2.671E-02	4.265E-02	4.254E-03	-0.247
		306.84	*	1.002E-02	2.248E-02	3.679E-02	4.267E-03	0.272
		401.10		1.327E+00	6.349E+00	1.079E+01	1.002E+00	0.123
LU-177		112.95		-4.103E-01	1.417E+00	2.353E+00	1.970E-01	-0.174
	+	208.36	*	3.023E+00	1.453E+00	2.012E+00	2.042E-01	1.502
LU-177M		52.97		2.112E-01	1.544E+00	2.439E+00	1.874E-01	0.087
		54.07		-1.218E-01	8.272E-01	1.286E+00	9.720E-02	-0.095
		61.30		2.403E+00	1.358E+00	2.145E+00	1.556E-01	1.120
		121.62		1.041E-01	3.369E-01	5.717E-01	4.746E-02	0.182
		147.16		8.357E-02	6.080E-01	1.015E+00	8.750E-02	0.082
		171.86		8.299E-02	4.370E-01	7.255E-01	6.681E-02	0.114
		218.09		-2.814E-01	8.048E-01	1.281E+00	1.334E-01	-0.220
	+	268.79		1.987E+00	1.322E+00	1.411E+00	1.657E-01	1.409
		319.02		-8.162E-02	2.591E-01	4.010E-01	4.556E-02	-0.204
		367.43		-6.861E-01	7.564E-01	1.187E+00	1.196E-01	-0.578
		413.65	*	2.453E-02	1.772E-01	2.646E-01	2.473E-02	0.093
HF-181		56.28		-3.190E-01	8.938E-01	1.371E+00	1.006E-01	-0.233
		57.53		-1.574E-01	4.672E-01	7.167E-01	5.185E-02	-0.220
		65.20		-1.631E-01	9.761E-01	1.380E+00	1.042E-01	-0.118
		133.02		7.759E-02	6.399E-02	1.020E-01	8.554E-03	0.761
		136.25		-2.518E-01	4.104E-01	6.641E-01	5.598E-02	-0.379
		345.85		-9.061E-02	1.894E-01	2.828E-01	3.032E-02	-0.320
		482.03	*	2.737E-03	4.205E-02	6.995E-02	6.653E-03	0.039
W-181		56.28		-1.257E-01	3.500E-01	5.369E-01	3.941E-02	-0.234
		57.53		-6.137E-02	1.832E-01	2.810E-01	2.033E-02	-0.218
		65.20	*	-6.342E-02	3.796E-01	5.367E-01	4.053E-02	-0.118
TA-182		67.75		-2.542E-02	1.031E-01	1.574E-01	1.217E-02	-0.162
		100.10		3.708E-02	1.526E-01	2.604E-01	2.278E-02	0.142
		152.43		1.646E-01	3.069E-01	5.198E-01	4.541E-02	0.317
		222.10		6.717E-03	3.326E-01	5.397E-01	5.676E-02	0.012
	+	1001.68		1.470E+00	1.988E+00	3.331E+00	3.041E-01	0.441
	+	1121.28		6.135E-01	2.625E-01	3.723E-01	3.143E-02	1.648
		1189.05		3.265E-01	3.140E-01	5.594E-01	4.524E-02	0.584
		1221.42	*	3.949E-02	2.051E-01	3.396E-01	2.777E-02	0.116
		1230.97		-4.726E-02	4.982E-01	6.898E-01	5.659E-02	-0.069
RE-183		57.98		-2.933E-01	1.887E-01	2.685E-01	1.933E-02	-1.092

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		59.32		1.303E-01	9.919E-02	1.540E-01	1.095E-02	0.846
		67.20		3.131E-02	1.881E-01	2.930E-01	2.255E-02	0.107
		162.32	*	1.887E-02	9.449E-02	1.575E-01	1.413E-02	0.120
	+	208.81		2.731E+00	1.313E+00	1.830E+00	1.859E-01	1.493
		291.72		-5.729E-01	1.058E+00	1.428E+00	1.691E-01	-0.401
RE-184		57.98		-1.081E+00	6.956E-01	9.897E-01	7.125E-02	-1.092
		59.32		4.800E-01	3.653E-01	5.673E-01	4.032E-02	0.846
		67.20		1.154E-01	6.932E-01	1.080E+00	8.309E-02	0.107
		161.27		-2.604E-01	3.111E-01	4.911E-01	4.395E-02	-0.530
		216.55		-1.531E-01	2.522E-01	3.955E-01	4.101E-02	-0.387
		252.85	*	-2.170E-02	2.225E-01	3.556E-01	4.030E-02	-0.061
		318.01		8.289E-02	4.288E-01	6.881E-01	7.832E-02	0.120
		792.07		3.561E-01	1.014E+00	1.553E+00	1.446E-01	0.229
		903.28		3.431E-01	9.458E-01	1.552E+00	1.466E-01	0.221
		920.93		8.022E-02	4.218E-01	7.159E-01	6.734E-02	0.112
OS-185		59.72		1.088E-01	2.770E-01	4.072E-01	2.898E-02	0.267
		61.14		2.502E-01	1.489E-01	2.344E-01	1.697E-02	1.068
		69.30		-2.071E-01	2.631E-01	4.181E-01	3.283E-02	-0.495
		592.07		3.079E-01	2.149E+00	3.554E+00	3.305E-01	0.087
		646.12	*	-2.636E-02	4.280E-02	6.537E-02	5.876E-03	-0.403
		717.42		2.866E-01	7.946E-01	1.324E+00	1.204E-01	0.217
		874.81		1.139E-01	5.161E-01	8.824E-01	8.332E-02	0.129
		880.27		-5.260E-01	7.453E-01	1.157E+00	1.093E-01	-0.454
RE-188		155.03	*	5.824E-02	1.594E-01	2.679E-01	2.356E-02	0.217
		477.96		-9.037E-01	3.030E+00	4.910E+00	4.668E-01	-0.184
		633.10		1.484E+00	2.659E+00	4.525E+00	4.107E-01	0.328
W-188	+	63.58		9.392E+01	6.796E+01	8.797E+01	6.538E+00	1.068
		227.08		-2.420E+00	1.227E+01	1.964E+01	2.092E+00	-0.123
		290.67	*	-2.924E+00	8.367E+00	1.150E+01	1.364E+00	-0.254
IR-192	+	295.96		1.176E+00	2.523E-01	3.034E-01	3.588E-02	3.877
		308.46		-1.104E-01	8.991E-02	1.280E-01	1.485E-02	-0.863
		316.51	*	-1.977E-02	3.371E-02	5.104E-02	5.833E-03	-0.387
		468.07		-4.111E-02	7.040E-02	9.608E-02	9.668E-03	-0.428
		604.41		-2.378E-02	4.924E-01	6.979E-01	9.378E-02	-0.034
		612.46		5.017E-01	7.733E-01	1.177E+00	1.225E-01	0.426
AU-195		65.12		-3.472E-02	1.757E-01	2.480E-01	1.872E-02	-0.140
		66.83		4.373E-03	9.607E-02	1.373E-01	1.053E-02	0.032
	+	75.70		1.509E+00	2.564E-01	4.235E-01	3.543E-02	3.562
		98.88	*	7.101E-02	2.029E-01	3.406E-01	2.999E-02	0.208
	+	129.76		6.613E+00	4.112E+00	4.911E+00	4.100E-01	1.346
TL-200		367.94	*	-4.339E-04	4.112E+00	Half-Life too short		
		579.30		3.567E-03	4.112E+00	Half-Life too short		
		828.27		2.424E-03	4.112E+00	Half-Life too short		
		1205.75		5.283E-04	4.112E+00	Half-Life too short		
TL-201		68.90		-1.980E+00	3.971E+00	6.695E+00	5.237E-01	-0.296
		70.82		9.715E-01	2.420E+00	3.815E+00	3.039E-01	0.255
		80.30		-1.255E+00	5.509E+00	6.658E+00	5.857E-01	-0.188
		135.34		-2.470E+01	2.255E+01	3.556E+01	2.993E+00	-0.695
		167.43	*	7.686E+00	6.293E+00	1.089E+01	9.915E-01	0.706

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TL-202		68.90		-1.797E-01	3.605E-01	6.078E-01	4.754E-02	-0.296
		70.82		8.795E-02	2.191E-01	3.453E-01	2.751E-02	0.255
		80.30		-1.136E-01	4.989E-01	6.029E-01	5.304E-02	-0.188
		439.56	*	3.181E-02	6.438E-02	1.109E-01	1.046E-02	0.287
HG-203		70.83		3.780E-01	9.523E-01	1.499E+00	1.979E-01	0.252
		72.87		2.289E-01	5.650E-01	8.880E-01	1.144E-01	0.258
		82.60		9.652E-01	1.036E+00	1.631E+00	2.284E-01	0.592
		279.20	*	1.605E-03	4.391E-02	6.259E-02	7.628E-03	0.026
BI-207		72.80		5.734E-02	1.655E-01	2.597E-01	2.110E-02	0.221
	+	74.97		8.369E-01	1.423E-01	2.176E-01	1.807E-02	3.845
		84.90		2.152E-01	1.609E-01	2.795E-01	2.595E-02	0.770
		569.67		-1.466E-02	3.050E-02	4.722E-02	4.433E-03	-0.310
		1063.62	*	3.102E-02	4.918E-02	8.613E-02	7.593E-03	0.360
		1770.23		6.027E-02	3.849E-01	5.769E-01	4.768E-02	0.104
TL-207		81.07		-1.149E-01	2.126E-01	2.900E-01	2.574E-02	-0.396
		83.78		2.284E-01	1.120E-01	1.970E-01	1.804E-02	1.160
		94.90		2.049E-01	1.992E-01	3.195E-01	2.888E-02	0.641
		122.32		5.241E-01	1.541E+00	2.618E+00	2.344E-01	0.200
		144.24		2.316E-01	6.710E-01	1.108E+00	1.063E-01	0.209
		154.21		3.231E-01	3.720E-01	6.364E-01	6.124E-02	0.508
	+	269.46		4.654E-01	3.096E-01	3.548E-01	4.221E-02	1.312
		323.87	*	2.449E-01	7.086E-01	1.025E+00	1.960E-01	0.239
	+	338.28		8.802E+00	2.319E+00	2.622E+00	3.674E-01	3.358
		445.03		-2.528E-01	2.135E+00	3.525E+00	4.474E-01	-0.072
PO-209		260.50		-3.630E+00	8.795E+00	1.372E+01	1.583E+00	-0.265
		262.80		-1.790E+01	2.424E+01	3.682E+01	4.268E+00	-0.486
		896.60	*	-1.741E-01	6.197E+00	1.031E+01	9.755E-01	-0.017
BI-210		46.50	*	-2.837E+00	3.465E+00	5.200E+00	4.849E-01	-0.546
PB-210		46.50	*	-2.837E+00	3.465E+00	5.200E+00	4.849E-01	-0.546
PO-210		46.50	*	-2.837E+00	3.463E+00	5.200E+00	4.392E-01	-0.546
PB-211		404.84	*	-4.663E-01	1.050E+00	1.426E+00	8.948E-01	-0.327
		427.08		8.775E-01	1.982E+00	3.282E+00	2.043E+00	0.267
		831.96		3.033E-01	1.199E+00	1.792E+00	1.125E+00	0.169
PO-215		81.07		-1.149E-01	2.126E-01	2.900E-01	2.574E-02	-0.396
		83.78		2.284E-01	1.120E-01	1.970E-01	1.804E-02	1.160
		94.90		2.049E-01	1.992E-01	3.195E-01	2.888E-02	0.641
		122.32		5.241E-01	1.541E+00	2.618E+00	2.344E-01	0.200
		144.24		2.316E-01	6.710E-01	1.108E+00	1.063E-01	0.209
		154.21		3.231E-01	3.720E-01	6.364E-01	6.124E-02	0.508
	+	269.46		4.654E-01	3.096E-01	3.548E-01	4.221E-02	1.312
		323.87	*	2.449E-01	7.086E-01	1.025E+00	1.960E-01	0.239
	+	338.28		8.802E+00	2.319E+00	2.622E+00	3.674E-01	3.358
		445.03		-2.528E-01	2.135E+00	3.525E+00	4.474E-01	-0.072
RN-219	+	271.23		5.971E-01	3.985E-01	4.407E-01	5.771E-02	1.355
		401.81	*	-4.371E-02	3.893E-01	6.479E-01	9.993E-02	-0.067
RN-220		549.76	*	1.609E-01	2.441E+01	4.007E+01	3.785E+00	0.004
RA-223		81.07		-1.149E-01	2.126E-01	2.900E-01	2.574E-02	-0.396
		83.78		2.284E-01	1.120E-01	1.970E-01	1.804E-02	1.160
		94.90		2.049E-01	1.992E-01	3.195E-01	2.888E-02	0.641

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		122.32		5.241E-01	1.541E+00	2.618E+00	2.344E-01	0.200
		144.24		2.316E-01	6.710E-01	1.108E+00	1.063E-01	0.209
		154.21		3.231E-01	3.720E-01	6.364E-01	6.124E-02	0.508
	+	269.46		4.654E-01	3.096E-01	3.548E-01	4.221E-02	1.312
		323.87	*	2.449E-01	7.086E-01	1.025E+00	1.960E-01	0.239
	+	338.28		8.802E+00	2.319E+00	2.622E+00	3.674E-01	3.358
		445.03		-2.528E-01	2.135E+00	3.525E+00	4.474E-01	-0.072
AC-227		79.80		-6.723E-01	1.846E+00	2.202E+00	4.746E-01	-0.305
		236.00		4.181E-02	2.432E-01	3.541E-01	4.934E-02	0.118
		256.20	*	9.531E-03	3.722E-01	5.989E-01	1.023E-01	0.016
		286.10		7.720E-01	1.463E+00	2.405E+00	3.743E-01	0.321
	+	299.80		4.157E+00	2.350E+00	2.672E+00	5.132E-01	1.556
		304.40		1.305E+00	1.902E+00	2.830E+00	5.667E-01	0.461
		334.20		-9.872E-01	2.230E+00	3.202E+00	6.592E-01	-0.308
TH-227		79.80		-6.723E-01	1.847E+00	2.202E+00	4.806E-01	-0.305
	+	94.00		8.187E+00	3.285E+00	3.312E+00	7.279E-01	2.471
		236.00		4.181E-02	2.432E-01	3.541E-01	4.575E-02	0.118
		256.20	*	9.531E-03	3.722E-01	5.989E-01	1.171E-01	0.016
		286.10		7.720E-01	1.653E+00	2.405E+00	2.422E+00	0.321
	+	299.80		4.157E+00	2.350E+00	2.672E+00	5.132E-01	1.556
		304.40		1.305E+00	1.902E+00	2.830E+00	5.667E-01	0.461
		334.20		-9.872E-01	2.230E+00	3.202E+00	6.592E-01	-0.308
TH-229		85.43		2.567E-01	1.603E-01	2.797E-01	2.613E-02	0.918
	+	88.47		5.263E-01	1.316E-01	1.876E-01	1.799E-02	2.806
		100.00		1.359E-02	1.630E-01	2.703E-01	2.365E-02	0.050
		193.63	*	2.212E-01	4.436E-01	7.428E-01	7.249E-02	0.298
		210.97		5.890E-01	8.134E-01	1.232E+00	1.259E-01	0.478
PA-231		283.67	*	-1.861E+00	1.499E+00	2.135E+00	3.694E-01	-0.871
	+	301.29		1.663E+00	9.167E-01	1.010E+00	1.472E-01	1.647
TH-231		81.07		-1.149E-01	2.126E-01	2.900E-01	2.574E-02	-0.396
		83.78		2.284E-01	1.120E-01	1.970E-01	1.804E-02	1.160
		94.90		2.049E-01	1.992E-01	3.195E-01	2.888E-02	0.641
		122.32		5.241E-01	1.541E+00	2.618E+00	2.344E-01	0.200
		144.24		2.316E-01	6.710E-01	1.108E+00	1.063E-01	0.209
		154.21		3.231E-01	3.720E-01	6.364E-01	6.124E-02	0.508
	+	269.46		4.654E-01	3.096E-01	3.548E-01	4.221E-02	1.312
		323.87	*	2.449E-01	7.086E-01	1.025E+00	1.960E-01	0.239
	+	338.28		8.802E+00	2.319E+00	2.622E+00	3.674E-01	3.358
		445.03		-2.528E-01	2.135E+00	3.525E+00	4.474E-01	-0.072
U-231		84.21		9.210E+00	4.728E+00	8.303E+00	7.643E-01	1.109
	+	92.29		8.013E+00	2.787E+00	3.724E+00	3.439E-01	2.151
		95.87	*	-4.333E-01	9.838E-01	1.462E+00	1.313E-01	-0.296
		108.00		-1.771E-01	1.825E+00	3.063E+00	2.594E-01	-0.058
PA-233	+	75.28		2.442E+01	5.182E+00	6.423E+00	9.755E-01	3.802
	+	86.59		7.546E+00	2.690E+00	2.901E+00	7.863E-01	2.601
	+	300.12		1.159E+00	6.463E-01	7.427E-01	1.252E-01	1.560
		311.98	*	5.363E-02	6.053E-02	1.014E-01	1.185E-02	0.529
		340.50		6.084E-01	6.543E-01	1.020E+00	2.524E-01	0.596
		398.62		2.364E-01	1.951E+00	3.296E+00	8.850E-01	0.072

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		415.76		-1.214E+00	1.578E+00	2.464E+00	5.385E-01	-0.493
PA-234	+	63.00		2.725E+00	2.003E+00	2.627E+00	3.901E-01	1.038
		94.67		1.980E-01	1.515E-01	2.433E-01	3.093E-02	0.814
		98.44		3.580E-02	8.786E-02	1.385E-01	7.729E-02	0.259
		99.86		2.841E-01	4.070E-01	6.907E-01	6.049E-02	0.411
		111.00		-1.444E-01	1.609E-01	2.586E-01	3.087E-02	-0.558
		131.20		-1.105E-01	1.091E-01	1.533E-01	1.282E-02	-0.721
		152.70		2.938E-01	2.981E-01	5.079E-01	8.690E-02	0.578
	+	186.00		7.277E+00	3.272E+00	2.727E+00	8.587E-01	2.668
		226.40		-2.439E-01	3.936E-01	6.137E-01	8.958E-02	-0.397
		227.20		-6.716E-02	4.153E-01	6.664E-01	7.099E-02	-0.101
		248.90		-1.284E-02	7.809E-01	1.256E+00	2.956E-01	-0.010
	+	293.70		7.408E+00	1.938E+00	1.722E+00	3.288E-01	4.303
		369.80		-2.009E-01	7.484E-01	1.237E+00	2.766E-01	-0.162
		568.70		-4.568E-01	9.801E-01	1.518E+00	1.426E-01	-0.301
		569.50		-1.614E-01	2.717E-01	4.163E-01	3.909E-02	-0.388
		574.00		3.498E-02	1.386E+00	2.270E+00	2.128E-01	0.015
		699.00		-1.440E-01	7.288E-01	1.152E+00	2.220E-01	-0.125
		706.10		4.888E-02	1.102E+00	1.780E+00	7.951E-01	0.027
		733.00		-2.850E-01	4.158E-01	5.175E-01	1.159E-01	-0.551
		742.81		-1.184E-01	1.241E+00	1.965E+00	1.322E+00	-0.060
	+	796.30		2.330E+00	1.417E+00	1.704E+00	4.648E-01	1.367
		805.60		-2.890E-01	9.212E-01	1.499E+00	4.627E-01	-0.193
		819.60		5.795E-01	1.068E+00	1.852E+00	7.076E-01	0.313
		826.30		-3.209E-01	6.905E-01	1.077E+00	4.836E-01	-0.298
		831.60		1.324E-01	6.115E-01	9.193E-01	2.765E-01	0.144
		876.40		2.436E-01	7.946E-01	1.301E+00	1.339E+00	0.187
		880.51		-1.411E-01	2.643E-01	4.181E-01	3.949E-02	-0.338
		883.24		2.842E-02	2.706E-01	4.557E-01	3.068E-01	0.062
		899.00		-6.894E-01	8.032E-01	1.118E+00	4.909E-01	-0.616
		925.00		6.378E-03	1.081E+00	1.801E+00	1.692E-01	0.004
		926.50		-9.053E-03	1.631E-01	2.701E-01	6.902E-02	-0.034
		946.00	*	8.358E-03	2.628E-01	4.383E-01	8.374E-02	0.019
		949.00		-4.010E-02	3.865E-01	6.352E-01	5.924E-02	-0.063
		980.50		-5.812E-01	6.770E-01	1.013E+00	9.334E-02	-0.574
		1394.10		-4.161E-01	1.084E+00	1.574E+00	1.024E+00	-0.264
PA-234M		766.42		9.602E+00	1.465E+01	2.077E+01	1.056E+01	0.462
	+	1001.03	*	3.338E+00	4.518E+00	7.637E+00	7.951E-01	0.437
U-235	+	89.95		3.541E+00	1.672E+00	1.809E+00	5.625E-01	1.958
	+	93.35		2.547E+00	1.116E+00	1.160E+00	3.271E-01	2.195
		105.00		6.511E-01	9.561E-01	1.623E+00	4.842E-01	0.401
		143.76	*	1.583E-01	2.067E-01	3.443E-01	6.017E-02	0.460
		163.35		-1.218E-01	4.215E-01	6.850E-01	1.319E-01	-0.178
	+	185.71		2.695E-01	9.025E-02	1.018E-01	9.723E-03	2.648
		205.31		1.850E-01	5.129E-01	7.626E-01	1.508E-01	0.243
NP-236		94.67		1.521E-01	1.142E-01	1.848E-01	1.674E-02	0.823
		98.44		2.707E-02	6.473E-02	1.047E-01	9.241E-03	0.259
		111.00		-1.093E-01	1.213E-01	1.956E-01	1.644E-02	-0.558
		160.31	*	-5.653E-02	7.212E-02	1.144E-01	1.021E-02	-0.494

---- 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		1.089E-01	1.391E-01	2.369E-01	2.078E-02	0.460
		117.00	*	-6.357E-02	1.589E-01	2.617E-01	2.179E-02	-0.243
	+	209.75		2.156E+00	1.036E+00	1.461E+00	1.488E-01	1.476
		228.18		1.522E-01	2.126E-01	3.562E-01	3.804E-02	0.427
	+	277.60		4.137E-01	2.354E-01	3.135E-01	3.753E-02	1.320
		334.30		-5.217E-01	1.262E+00	1.823E+00	2.008E-01	-0.286
AM-241		59.54	*	7.346E-02	1.469E-01	2.174E-01	1.706E-02	0.338
CM-243		99.55		1.120E-01	1.431E-01	2.437E-01	2.138E-02	0.460
		103.76	*	-7.829E-02	8.473E-02	1.370E-01	1.178E-02	-0.572
		117.00		-6.541E-02	1.635E-01	2.693E-01	2.242E-02	-0.243
	+	209.75		2.125E+00	1.022E+00	1.440E+00	1.466E-01	1.476
		228.18		1.538E-01	2.148E-01	3.599E-01	3.844E-02	0.427
	+	277.60		4.171E-01	2.373E-01	3.161E-01	3.784E-02	1.320
AM-246		798.80		-4.930E-02	1.395E-01	1.948E-01	1.816E-02	-0.253
		1036.00		-1.099E-01	2.622E-01	4.113E-01	3.688E-02	-0.267
		1062.04		1.116E-02	2.183E-01	3.614E-01	3.189E-02	0.031
		1078.86	*	4.330E-02	1.299E-01	2.212E-01	1.930E-02	0.196
CM-247	+	278.00		1.716E+00	9.760E-01	1.296E+00	1.553E-01	1.324
		287.40		7.903E-01	1.218E+00	2.014E+00	2.398E-01	0.392
		402.60	*	-5.980E-03	3.508E-02	5.815E-02	5.407E-03	-0.103
CF-249		252.85		-8.143E-02	8.349E-01	1.335E+00	1.513E-01	-0.061
		333.44		-9.457E-02	1.684E-01	2.400E-01	2.649E-02	-0.394
		387.95	*	3.272E-02	3.833E-02	6.752E-02	6.334E-03	0.485
CF-251		176.60	*	-5.689E-02	1.185E-01	1.901E-01	1.772E-02	-0.299
		227.00		-1.326E-01	3.715E-01	5.895E-01	6.277E-02	-0.225
		285.00		-9.991E-02	1.637E+00	2.601E+00	3.106E-01	-0.038

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]G244125002      *
* Acquisition date : 20-JAN-2010 13:30:19 Detector SN#     :               *
* Detector ID        : GAM16                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 02:00:01.91      Half life ratio :  8.000       *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        :  5-JAN-2010 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G244125002           Analyst initials: MXR1          *
* Batch Number       : 940263               Sample Quantity : 1.2000E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000    *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :    0.00000                                             *
* CALIB. DATE/TIME : 16-NOV-2009 11:22:16 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	2.102E+01	2.332E+00	4.588E-01	0.000E+00
CD-109	3.921E+00	9.610E-01	1.092E+00	0.000E+00
SN-126	3.854E-01	9.447E-02	1.078E-01	0.000E+00
BA-137M	1.019E-01	6.206E-02	5.771E-02	0.000E+00
CS-137	1.077E-01	6.561E-02	6.100E-02	0.000E+00
TL-208	5.938E-01	9.801E-02	5.498E-02	0.000E+00
BI-211	4.191E+00	6.476E-01	3.260E-01	0.000E+00
BI-212	1.200E+00	5.417E-01	4.137E-01	0.000E+00
PB-212	1.747E+00	2.310E-01	8.397E-02	0.000E+00
PO-212	1.747E+00	2.310E-01	8.397E-02	0.000E+00
BI-214	1.281E+00	2.240E-01	9.802E-02	0.000E+00
PB-214	1.458E+00	2.373E-01	1.136E-01	0.000E+00
PO-214	1.458E+00	2.373E-01	1.136E-01	0.000E+00
PO-216	1.747E+00	2.310E-01	8.397E-02	0.000E+00
PO-218	1.458E+00	2.373E-01	1.136E-01	0.000E+00
RA-224	4.637E+00	1.277E+00	9.557E-01	0.000E+00
RA-226	1.281E+00	2.240E-01	9.802E-02	0.000E+00
AC-228	1.785E+00	3.809E-01	1.840E-01	0.000E+00
RA-228	1.785E+00	3.809E-01	1.840E-01	0.000E+00
TH-228	1.773E+00	2.345E-01	8.524E-02	0.000E+00
TH-230	1.281E+00	2.240E-01	9.801E-02	0.000E+00
TH-232	1.785E+00	3.809E-01	1.840E-01	0.000E+00
TH-234	2.338E+00	1.697E+00	1.889E+00	0.000E+00
U-234	1.281E+00	2.240E-01	9.801E-02	0.000E+00
NP-237	1.132E+00	3.596E-01	3.201E-01	0.000E+00
U-238	2.338E+00	1.697E+00	1.889E+00	0.000E+00
AM-243	4.663E-01	7.767E-02	7.878E-02	0.000E+00
ANH-511	1.595E-01	7.111E-02	4.543E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)

BE-7	3.944E-02	3.081E-01	5.313E-01	0.000E+00	NOT IDENT.
NA-22	-1.659E-02	3.746E-02	5.832E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	5.892E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.802E-02	2.766E-02	5.206E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.790E-02	7.435E-02	0.000E+00	FAIL ABUN
SC-46	-1.667E-02	3.732E-02	6.111E-02	0.000E+00	FAIL ABUN
V-48	-2.602E-02	6.502E-02	1.056E-01	0.000E+00	NOT IDENT.
CR-51	-1.976E-02	3.591E-01	5.868E-01	0.000E+00	NOT IDENT.
MN-52	1.661E-01	2.178E-01	3.965E-01	0.000E+00	NOT IDENT.
MN-54	3.553E-02	3.385E-02	6.300E-02	0.000E+00	NOT IDENT.
CO-56	9.960E-03	3.438E-02	5.370E-02	0.000E+00	FAIL ABUN
CO-57	1.160E-02	2.176E-02	3.904E-02	0.000E+00	NOT IDENT.
CO-58	2.201E-02	3.269E-02	5.983E-02	0.000E+00	NOT IDENT.
FE-59	-6.747E-02	8.454E-02	1.291E-01	0.000E+00	NOT IDENT.
CO-60	-2.681E-02	3.551E-02	5.192E-02	0.000E+00	NOT IDENT.
ZN-65	-1.481E-02	9.350E-02	1.324E-01	0.000E+00	NOT IDENT.
GE-68	6.153E-01	1.099E+00	1.955E+00	0.000E+00	NOT IDENT.
AS-73	1.039E-03	7.770E-01	1.288E+00	0.000E+00	NOT IDENT.
AS-74	-4.168E-02	9.121E-02	1.408E-01	0.000E+00	NOT IDENT.
SE-75	1.341E-02	4.418E-02	6.711E-02	0.000E+00	NOT IDENT.
BR-77	-6.597E+00	9.707E+00	1.555E+01	0.000E+00	FAIL ABUN
SR-82	-1.717E-02	3.498E-01	5.698E-01	0.000E+00	NOT IDENT.
RB-83	-4.554E-02	6.507E-02	1.041E-01	0.000E+00	NOT IDENT.
RB-84	-3.735E-02	6.363E-02	1.025E-01	0.000E+00	NOT IDENT.
KR-85	6.815E+00	7.783E+00	1.250E+01	0.000E+00	NOT IDENT.
SR-85	3.492E-02	3.988E-02	6.407E-02	0.000E+00	NOT IDENT.
RB-86	5.671E-01	6.809E-01	1.244E+00	0.000E+00	NOT IDENT.
Y-88	5.760E-03	3.214E-02	5.552E-02	0.000E+00	NOT IDENT.
ZR-88	-1.354E-02	2.759E-02	4.631E-02	0.000E+00	NOT IDENT.
Y-91	3.254E+00	1.708E+01	2.894E+01	0.000E+00	NOT IDENT.
NB-94	7.981E-03	3.393E-02	5.716E-02	0.000E+00	NOT IDENT.
NB-95	1.296E-02	5.011E-02	7.375E-02	0.000E+00	NOT IDENT.
NB-95M	3.260E-02	1.244E-01	1.896E-01	0.000E+00	NOT IDENT.
ZR-95	4.724E-02	6.828E-02	1.191E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	9.613E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.814E+06	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-2.696E+00	1.036E+01	1.657E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	3.055E+16	0.000E+00	0.000E+00	SHORT HLIF
RH-101	2.044E-02	3.086E-02	5.374E-02	0.000E+00	NOT IDENT.
RH-102	-1.375E-02	2.770E-02	4.561E-02	0.000E+00	FAIL ABUN
RU-103	-6.377E-03	3.742E-02	6.289E-02	0.000E+00	FAIL ABUN
RH-106	-1.907E-01	2.992E-01	4.694E-01	0.000E+00	FAIL ABUN
RU-106	-1.907E-01	2.986E-01	4.694E-01	0.000E+00	FAIL ABUN
AG-108M	2.200E-02	3.116E-02	5.602E-02	0.000E+00	NOT IDENT.
AG-110M	-2.491E-02	3.725E-02	4.927E-02	0.000E+00	NOT IDENT.
IN-111	-2.799E-01	1.011E+00	1.474E+00	0.000E+00	NOT IDENT.
IN-113M	-3.359E-02	4.089E-02	6.705E-02	0.000E+00	NOT IDENT.
SN-113	-3.359E-02	4.089E-02	6.705E-02	0.000E+00	NOT IDENT.
IN-114M	1.794E-02	1.771E-01	2.717E-01	0.000E+00	NOT IDENT.
CD-115	-1.036E+00	9.037E+00	1.516E+01	0.000E+00	NOT IDENT.
SN-117M	1.966E-02	4.873E-02	8.562E-02	0.000E+00	NOT IDENT.
SB-122	6.511E-01	1.862E+00	3.225E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	4.665E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	1.552E-02	2.468E-02	4.377E-02	0.000E+00	NOT IDENT.
I-124	-4.832E-01	7.840E-01	1.039E+00	0.000E+00	NOT IDENT.
SB-124	1.403E-03	7.382E-02	1.246E-01	0.000E+00	FAIL ABUN
SB-125	-1.673E-02	8.349E-02	1.420E-01	0.000E+00	FAIL ABUN
TE-125M	4.856E-01	7.818E+00	1.385E+01	0.000E+00	NOT IDENT.
I-126	3.068E-01	1.972E-01	3.338E-01	0.000E+00	NOT IDENT.
SB-126	-5.497E-02	1.315E-01	2.041E-01	0.000E+00	FAIL ABUN
SB-127	9.441E-02	1.395E+00	2.323E+00	0.000E+00	NOT IDENT.
XE-127	-2.492E-03	4.227E-02	7.158E-02	0.000E+00	NOT IDENT.
I-131	5.339E-02	9.631E-02	1.740E-01	0.000E+00	NOT IDENT.
TE-132	4.665E-01	6.328E-01	1.099E+00	0.000E+00	NOT IDENT.
BA-133	7.276E-04	4.376E-02	6.767E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	4.839E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	6.482E-02	9.116E-02	0.000E+00	FAIL ABUN
CS-135	9.194E-02	1.696E-01	2.607E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	4.278E+15	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-2.934E-02	9.779E-02	1.594E-01	0.000E+00	FAIL ABUN
CE-139	1.661E-04	2.713E-02	4.672E-02	0.000E+00	NOT IDENT.
BA-140	1.281E-01	2.375E-01	4.130E-01	0.000E+00	NOT IDENT.
LA-140	-1.360E-01	9.182E-02	1.200E-01	0.000E+00	FAIL ABUN
CE-141	1.083E-02	5.822E-02	1.019E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	2.014E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	2.368E-01	1.967E-01	3.243E-01	0.000E+00	NOT IDENT.
PM-144	-4.690E-03	3.425E-02	5.598E-02	0.000E+00	NOT IDENT.

PR-144	-3.178E-01	2.321E+00	3.794E+00	0.000E+00	NOT IDENT.
PM-146	1.245E-02	4.059E-02	7.110E-02	0.000E+00	NOT IDENT.
ND-147	1.969E-02	4.718E-01	8.022E-01	0.000E+00	FAIL ABUN
PM-149	4.776E+01	8.403E+01	1.434E+02	0.000E+00	NOT IDENT.
EU-152	3.858E-02	9.518E-02	1.522E-01	0.000E+00	FAIL ABUN
GD-153	1.486E-02	7.469E-02	1.189E-01	0.000E+00	NOT IDENT.
EU-154	-5.332E-02	1.056E-01	1.629E-01	0.000E+00	NOT IDENT.
EU-155	9.791E-02	9.304E-02	1.709E-01	0.000E+00	FAIL ABUN
TB-160	5.850E-02	1.241E-01	2.218E-01	0.000E+00	FAIL ABUN
HO-166M	-6.034E-02	6.108E-02	9.125E-02	0.000E+00	FAIL ABUN
TM-171	4.362E-01	2.847E+01	4.287E+01	0.000E+00	NOT IDENT.
LU-176	1.002E-02	2.203E-02	3.738E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.424E+00	2.054E+00	0.000E+00	FAIL ABUN
LU-177M	2.453E-02	1.736E-01	2.679E-01	0.000E+00	FAIL ABUN
HF-181	2.737E-03	4.120E-02	7.070E-02	0.000E+00	NOT IDENT.
W-181	-6.342E-02	3.720E-01	5.551E-01	0.000E+00	NOT IDENT.
TA-182	3.949E-02	2.010E-01	3.395E-01	0.000E+00	FAIL ABUN
RE-183	1.887E-02	9.260E-02	1.612E-01	0.000E+00	FAIL ABUN
RE-184	-2.170E-02	2.180E-01	3.622E-01	0.000E+00	NOT IDENT.
OS-185	-2.636E-02	4.195E-02	6.585E-02	0.000E+00	NOT IDENT.
RE-188	5.824E-02	1.562E-01	2.743E-01	0.000E+00	NOT IDENT.
W-188	-2.924E+00	8.200E+00	1.169E+01	0.000E+00	FAIL ABUN
IR-192	-1.977E-02	3.304E-02	5.185E-02	0.000E+00	FAIL ABUN
AU-195	7.101E-02	1.989E-01	3.506E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	3.671E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	7.686E+00	6.167E+00	1.114E+01	0.000E+00	NOT IDENT.
TL-202	3.181E-02	6.309E-02	1.122E-01	0.000E+00	NOT IDENT.
HG-203	1.605E-03	4.303E-02	6.367E-02	0.000E+00	NOT IDENT.
BI-207	3.102E-02	4.820E-02	8.625E-02	0.000E+00	FAIL ABUN
TL-207	2.449E-01	6.944E-01	1.041E+00	0.000E+00	FAIL ABUN
PO-209	-1.741E-01	6.073E+00	1.035E+01	0.000E+00	NOT IDENT.
BI-210	-2.837E+00	3.396E+00	5.399E+00	0.000E+00	NOT IDENT.
PB-210	-2.837E+00	3.396E+00	5.399E+00	0.000E+00	NOT IDENT.
PO-210	-2.837E+00	3.394E+00	5.399E+00	0.000E+00	NOT IDENT.
PB-211	-4.663E-01	1.029E+00	1.444E+00	0.000E+00	NOT IDENT.
PO-215	2.449E-01	6.944E-01	1.041E+00	0.000E+00	FAIL ABUN
RN-219	-4.371E-02	3.815E-01	6.563E-01	0.000E+00	FAIL ABUN
RN-220	1.609E-01	2.393E+01	4.044E+01	0.000E+00	NOT IDENT.
RA-223	2.449E-01	6.944E-01	1.041E+00	0.000E+00	FAIL ABUN
AC-227	9.531E-03	3.648E-01	6.099E-01	0.000E+00	FAIL ABUN
TH-227	9.531E-03	3.648E-01	6.099E-01	0.000E+00	FAIL ABUN
TH-229	2.212E-01	4.347E-01	7.589E-01	0.000E+00	FAIL ABUN
PA-231	-1.861E+00	1.469E+00	2.172E+00	0.000E+00	FAIL ABUN
TH-231	2.449E-01	6.944E-01	1.041E+00	0.000E+00	FAIL ABUN
U-231	-4.333E-01	9.641E-01	1.506E+00	0.000E+00	FAIL ABUN
PA-233	5.363E-02	5.932E-02	1.030E-01	0.000E+00	FAIL ABUN
PA-234	8.358E-03	2.575E-01	4.396E-01	0.000E+00	FAIL ABUN
PA-234M	3.338E+00	4.428E+00	7.653E+00	0.000E+00	FAIL ABUN
U-235	1.583E-01	2.026E-01	3.530E-01	0.000E+00	FAIL ABUN
NP-236	-5.653E-02	7.068E-02	1.171E-01	0.000E+00	NOT IDENT.
NP-239	-6.357E-02	1.558E-01	2.689E-01	0.000E+00	FAIL ABUN
AM-241	7.346E-02	1.440E-01	2.251E-01	0.000E+00	NOT IDENT.
CM-243	-7.829E-02	8.304E-02	1.410E-01	0.000E+00	FAIL ABUN
AM-246	4.330E-02	1.273E-01	2.215E-01	0.000E+00	NOT IDENT.
CM-247	-5.980E-03	3.437E-02	5.891E-02	0.000E+00	FAIL ABUN
CF-249	3.272E-02	3.756E-02	6.843E-02	0.000E+00	NOT IDENT.
CF-251	-5.689E-02	1.162E-01	1.944E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 20-JAN-2010 15:32:03.76

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*************************************************************************
*                          GEL Laboratories LLC                         *
*                            2040 Savage Road                           *
*                          Charleston, SC 29414                         *
*************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G244125002.CNF;1
Sample date       : 5-JAN-2010 12:00:00. Acquisition date : 20-JAN-2010 13:30:19
Sample ID         : G244125002           Sample quantity  : 1.20000E+02 GRAM
Detector name     : GAM16                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.91  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 940263               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	866	10.67*	1.208E+00	2.102E+01	2.102E+01	11.32
CD-109	88.03	285	3.72*	6.252E+00	3.834E+00	3.921E+00	25.01
SN-126	64.28	99	9.60	3.485E+00	9.254E-01	9.254E-01	73.43
	86.94	285	8.90	6.252E+00	1.602E+00	1.602E+00	47.56
	87.57	285	37.00*	6.252E+00	3.854E-01	3.854E-01	25.01
BA-137M	661.65	71	89.98*	2.408E+00	1.018E-01	1.019E-01	62.14
CS-137	661.65	71	85.12*	2.408E+00	1.076E-01	1.077E-01	62.14
TL-208	277.35	88	6.80	4.693E+00	8.579E-01	8.579E-01	57.56
	510.84	151	21.60	2.966E+00	7.385E-01	7.385E-01	46.25
	583.14	426	84.20*	2.668E+00	5.938E-01	5.938E-01	16.84
	860.37	73	12.46	1.919E+00	9.544E-01	9.544E-01	43.98
BI-211	72.87	------	1.27	4.872E+00	------ Line Not Found		------
	351.07	683	12.94*	3.941E+00	4.191E+00	4.191E+00	15.77
BI-212	727.18	100	11.80*	2.221E+00	1.200E+00	1.200E+00	46.08
	785.46	------	1.97	2.079E+00	------ Line Not Found		------
	1620.62	12	2.75	1.117E+00	1.250E+00	1.250E+00	106.79
PB-212	74.81	502	10.70	5.100E+00	2.876E+00	2.876E+00	19.40
	77.11	742	18.00	5.366E+00	2.404E+00	2.404E+00	13.32
	87.30	285	8.00	6.252E+00	1.783E+00	1.783E+00	26.93
	238.63	1301	44.60*	5.226E+00	1.747E+00	1.747E+00	13.50
	300.09	108	3.41	4.432E+00	2.243E+00	2.243E+00	54.76
PO-212	74.81	502	10.70	5.100E+00	2.876E+00	2.876E+00	19.40
	77.11	742	18.00	5.366E+00	2.404E+00	2.404E+00	13.32
	87.30	285	8.00	6.252E+00	1.783E+00	1.783E+00	26.93
	115.19	------	0.60	7.166E+00	------ Line Not Found		------
	238.63	1301	44.60*	5.226E+00	1.747E+00	1.747E+00	13.50
	300.09	108	3.41	4.432E+00	2.243E+00	2.243E+00	54.76
BI-214	609.31	488	46.30*	2.575E+00	1.281E+00	1.281E+00	17.83
	1120.29	95	15.10	1.516E+00	1.298E+00	1.298E+00	43.31
	1764.49	94	15.80	1.056E+00	1.762E+00	1.763E+00	31.31
PB-214	74.81	502	6.21	5.100E+00	4.955E+00	4.955E+00	18.54
	77.11	742	10.50	5.366E+00	4.121E+00	4.121E+00	15.34

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	87.30	285	4.67	6.252E+00	3.054E+00	3.054E+00	26.17
	241.98	303	7.49	5.183E+00	2.445E+00	2.445E+00	28.66
	295.21	425	19.20	4.486E+00	1.543E+00	1.543E+00	22.32
	351.92	683	37.20*	3.941E+00	1.458E+00	1.458E+00	16.61
PO-214	74.81	502	6.21	5.100E+00	4.955E+00	4.955E+00	18.54
	77.11	742	10.50	5.366E+00	4.121E+00	4.121E+00	15.34
	87.30	285	4.67	6.252E+00	3.054E+00	3.054E+00	26.17
	241.98	303	7.49	5.183E+00	2.445E+00	2.445E+00	28.66
	295.21	425	19.20	4.486E+00	1.543E+00	1.543E+00	22.32
	351.92	683	37.20*	3.941E+00	1.458E+00	1.458E+00	16.61
PO-216	74.81	502	10.70	5.100E+00	2.876E+00	2.876E+00	19.40
	77.11	742	18.00	5.366E+00	2.404E+00	2.404E+00	13.32
	87.30	285	8.00	6.252E+00	1.783E+00	1.783E+00	26.93
	238.63	1301	44.60*	5.226E+00	1.747E+00	1.747E+00	13.50
	300.09	108	3.41	4.432E+00	2.243E+00	2.243E+00	54.76
PO-218	74.81	502	6.21	5.100E+00	4.955E+00	4.955E+00	18.54
	77.11	742	10.50	5.366E+00	4.121E+00	4.121E+00	15.34
	87.30	285	4.67	6.252E+00	3.054E+00	3.054E+00	26.17
	241.98	303	7.49	5.183E+00	2.445E+00	2.445E+00	28.66
	295.21	425	19.20	4.486E+00	1.543E+00	1.543E+00	22.32
	351.92	683	37.20*	3.941E+00	1.458E+00	1.458E+00	16.61
RA-224	240.98	303	3.95*	5.183E+00	4.637E+00	4.637E+00	28.10
RA-226	609.31	488	46.30*	2.575E+00	1.281E+00	1.281E+00	17.83
	1120.29	95	15.10	1.516E+00	1.298E+00	1.298E+00	43.31
	1764.49	94	15.80	1.056E+00	1.762E+00	1.763E+00	31.31
AC-228	338.32	312	11.40	4.058E+00	2.108E+00	2.108E+00	47.38
	911.07	288	27.70*	1.825E+00	1.785E+00	1.785E+00	21.78
	969.11	184	16.60	1.727E+00	2.003E+00	2.003E+00	30.16
RA-228	338.32	312	11.40	4.058E+00	2.108E+00	2.108E+00	47.38
	911.07	288	27.70*	1.825E+00	1.785E+00	1.785E+00	21.78
	969.11	184	16.60	1.727E+00	2.003E+00	2.003E+00	30.16
TH-228	74.81	502	10.70	5.100E+00	2.876E+00	2.919E+00	17.04
	77.11	742	18.00	5.366E+00	2.404E+00	2.440E+00	13.32
	87.30	285	8.00	6.252E+00	1.783E+00	1.810E+00	25.01
	238.63	1301	44.60*	5.226E+00	1.747E+00	1.773E+00	13.50
	300.09	108	3.41	4.432E+00	2.243E+00	2.277E+00	80.02
TH-230	609.31	488	46.30*	2.575E+00	1.281E+00	1.281E+00	17.83
	1120.29	95	15.10	1.516E+00	1.298E+00	1.298E+00	43.31
	1764.49	94	15.80	1.056E+00	1.762E+00	1.762E+00	31.31
TH-232	338.32	312	11.40	4.058E+00	2.108E+00	2.108E+00	24.84
	911.07	288	27.70*	1.825E+00	1.785E+00	1.785E+00	21.78
	969.11	184	16.60	1.727E+00	2.003E+00	2.003E+00	30.16
TH-234	63.29	99	3.80*	3.485E+00	2.338E+00	2.338E+00	74.06
	92.38	242	5.41	6.599E+00	2.119E+00	2.119E+00	38.24
U-234	609.31	488	46.30*	2.575E+00	1.281E+00	1.281E+00	17.83
	1120.29	95	15.10	1.516E+00	1.298E+00	1.298E+00	43.31
	1764.49	94	15.80	1.056E+00	1.762E+00	1.762E+00	31.31
NP-237	86.50	285	12.60*	6.252E+00	1.132E+00	1.132E+00	32.42
	95.87	------	2.60	6.742E+00	------ Line Not Found		------

Sample ID : G244125002 Acquisition date : 20-JAN-2010 13:30:19

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
U-238	63.29	99	3.80*	3.485E+00	2.338E+00	2.338E+00	74.06
	92.38	242	5.41	6.599E+00	2.119E+00	2.119E+00	34.78
AM-243	74.67	502	66.00*	5.100E+00	4.663E-01	4.663E-01	17.00
	86.72	285	0.34	6.252E+00	4.245E+01	4.245E+01	25.01
	117.66	------	0.55	7.175E+00	------	Line Not Found	------
	142.18	------	0.13	6.968E+00	------	Line Not Found	------
ANH-511	511.00	151	100.00*	2.966E+00	1.595E-01	1.595E-01	45.49

Flag: "*" = Keyline

Sample ID : G244125002 Acquisition date : 20-JAN-2010 13:30:19

Total number of lines in spectrum 41
Number of unidentified lines 3
Number of lines tentatively identified by NID 38 92.68%

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	2.102E+01	2.102E+01	0.238E+01	11.32	
CD-109	464.00D	1.02	3.834E+00	3.921E+00	0.981E+00	25.01	
SN-126	1.00E+05Y	1.00	3.854E-01	3.854E-01	0.964E-01	25.01	
BA-137M	30.17Y	1.00	1.018E-01	1.019E-01	0.633E-01	62.14	
CS-137	30.17Y	1.00	1.076E-01	1.077E-01	0.669E-01	62.14	
TL-208	1.41E+10Y	1.00	5.938E-01	5.938E-01	1.000E-01	16.84	
BI-211	7.04E+08Y	1.00	4.191E+00	4.191E+00	0.661E+00	15.77	
BI-212	1.41E+10Y	1.00	1.200E+00	1.200E+00	0.553E+00	46.08	
PB-212	1.41E+10Y	1.00	1.747E+00	1.747E+00	0.236E+00	13.50	
PO-212	1.41E+10Y	1.00	1.747E+00	1.747E+00	0.236E+00	13.50	
BI-214	1600.00Y	1.00	1.281E+00	1.281E+00	0.229E+00	17.83	
PB-214	1600.00Y	1.00	1.458E+00	1.458E+00	0.242E+00	16.61	
PO-214	1600.00Y	1.00	1.458E+00	1.458E+00	0.242E+00	16.61	
PO-216	1.41E+10Y	1.00	1.747E+00	1.747E+00	0.236E+00	13.50	
PO-218	1600.00Y	1.00	1.458E+00	1.458E+00	0.242E+00	16.61	
RA-224	1.41E+10Y	1.00	4.637E+00	4.637E+00	1.303E+00	28.10	
RA-226	1600.00Y	1.00	1.281E+00	1.281E+00	0.229E+00	17.83	
AC-228	1.41E+10Y	1.00	1.785E+00	1.785E+00	0.389E+00	21.78	
RA-228	1.41E+10Y	1.00	1.785E+00	1.785E+00	0.389E+00	21.78	
TH-228	1.91Y	1.02	1.747E+00	1.773E+00	0.239E+00	13.50	
TH-230	4.47E+09Y	1.00	1.281E+00	1.281E+00	0.229E+00	17.83	
TH-232	1.41E+10Y	1.00	1.785E+00	1.785E+00	0.389E+00	21.78	
TH-234	4.47E+09Y	1.00	2.338E+00	2.338E+00	1.732E+00	74.06	
U-234	4.47E+09Y	1.00	1.281E+00	1.281E+00	0.229E+00	17.83	
NP-237	2.14E+06Y	1.00	1.132E+00	1.132E+00	0.367E+00	32.42	
U-238	4.47E+09Y	1.00	2.338E+00	2.338E+00	1.732E+00	74.06	
AM-243	7380.00Y	1.00	4.663E-01	4.663E-01	0.793E-01	17.00	
ANH-511	1.00E+09Y	1.00	1.595E-01	1.595E-01	0.726E-01	45.49	
	Total Activity :		6.434E+01	6.446E+01			

Grand Total Activity : 6.434E+01 6.446E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G244125002 Acquisition date : 20-JAN-2010 13:30:19

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
5	89.95	197	362	1.10	180.08	164	28	2.73E-02	35.5	6.43E+00	T
0	129.25	115	352	1.01	258.70	255	9	1.60E-02	61.6	7.13E+00	T
0	185.64	286	428	0.98	371.47	365	12	3.97E-02	32.1	6.15E+00	T
0	209.05	128	258	1.05	418.29	415	8	1.77E-02	47.0	5.71E+00	T
0	270.21	97	241	1.22	540.60	535	11	1.34E-02	65.5	4.78E+00	T
0	327.62	57	165	1.07	655.42	651	9	7.89E-03	85.6	4.15E+00	T
0	409.52	43	121	1.02	819.22	815	9	5.97E-03	97.3	3.52E+00	T
0	462.57	90	99	1.10	925.31	921	12	1.24E-02	48.8	3.20E+00	T
0	768.08	39	63	1.80	1536.23	1531	9	5.45E-03	79.6	2.12E+00	T
0	794.90	60	51	1.93	1589.86	1584	12	8.30E-03	54.4	2.06E+00	T
0	839.10	74	103	8.75	1678.24	1665	26	1.03E-02	79.1	1.96E+00	
1	964.67	67	25	1.76	1929.32	1923	22	9.24E-03	38.0	1.73E+00	T
0	1001.13	15	23	0.67	2002.22	1999	8	2.09E-03	****	1.68E+00	T
3	1234.02	35	31	2.11	2467.84	2464	21	4.81E-03	60.5	1.39E+00	T
3	1237.66	63	45	2.32	2475.12	2464	21	8.73E-03	53.8	1.39E+00	T
0	1378.11	45	29	0.74	2755.90	2750	16	6.27E-03	60.5	1.27E+00	
0	1958.44	19	7	1.23	3915.92	3909	14	2.64E-03	74.8	9.99E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 20-JAN-2010 15:32:10.38

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*******************************************************************************
*                              GEL Laboratories LLC                           *
*                                2040 Savage Road                             *
*                              Charleston, SC 29414                           *
*******************************************************************************
*                                                                             *
*                                 DETECTOR DATA                               *
*                                                                             *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G244125002.CNF;1   *
* Acquisition date  : 20-JAN-2010 13:30:19  Detector SN#     :                *
* Detector ID       : GAM16                 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 02:00:01.91          Half life ratio : 8.00000        *
*******************************************************************************
*                                                                             *
*                                 SAMPLE DATA                                 *
*                                                                             *
* Sample date       : 5-JAN-2010 12:00:00.  Nuclide Library : SOLID           *
* Sample ID         : G244125002            Analyst initials: MXR1            *
* Batch Number      : 940263                Sample Quantity : 1.20000E+02 GRAM *
*******************************************************************************
*                                                                             *
*                                   QC DATA                                   *
*                                                                             *
* CALIB. DATE/TIME : 16-NOV-2009 11:22:16.1MS 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	2.102E+01	2.379E+00	4.599E-01	4.043E-02	45.700
CD-109	3.921E+00	9.806E-01	1.059E+00	1.020E-01	3.703
SN-126	3.854E-01	9.639E-02	1.046E-01	1.003E-02	3.686
BA-137M	1.019E-01	6.333E-02	5.730E-02	5.085E-03	1.778
CS-137	1.077E-01	6.695E-02	6.057E-02	5.385E-03	1.778
TL-208	5.938E-01	1.000E-01	5.451E-02	5.403E-03	10.893
BI-211	4.191E+00	6.608E-01	3.213E-01	3.513E-02	13.045
BI-212	1.200E+00	5.528E-01	4.113E-01	4.297E-02	2.917
PB-212	1.747E+00	2.357E-01	8.239E-02	9.755E-03	21.199
PO-212	1.747E+00	2.357E-01	8.239E-02	9.755E-03	21.199
BI-214	1.281E+00	2.285E-01	9.723E-02	1.028E-02	13.179
PB-214	1.458E+00	2.421E-01	1.120E-01	1.355E-02	13.017
PO-214	1.458E+00	2.421E-01	1.120E-01	1.355E-02	13.017
PO-216	1.747E+00	2.357E-01	8.239E-02	9.755E-03	21.199
PO-218	1.458E+00	2.421E-01	1.120E-01	1.355E-02	13.017
RA-224	4.637E+00	1.303E+00	9.378E-01	1.033E-01	4.944
RA-226	1.281E+00	2.285E-01	9.723E-02	1.028E-02	13.179
AC-228	1.785E+00	3.887E-01	1.834E-01	2.178E-02	9.732

Sample ID : G244125002 Acquisition date : 20-JAN-2010 13:30:19

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-228	1.785E+00	3.887E-01	1.834E-01	2.178E-02	9.732
TH-228	1.773E+00	2.393E-01	8.364E-02	9.903E-03	21.199
TH-230	1.281E+00	2.285E-01	9.723E-02	1.028E-02	13.179
TH-232	1.785E+00	3.887E-01	1.834E-01	2.178E-02	9.732
TH-234	2.338E+00	1.732E+00	1.826E+00	3.185E-01	1.280
U-234	1.281E+00	2.285E-01	9.723E-02	1.028E-02	13.179
NP-237	1.132E+00	3.670E-01	3.105E-01	7.048E-02	3.646
U-238	2.338E+00	1.732E+00	1.826E+00	3.185E-01	1.280
AM-243	4.663E-01	7.926E-02	7.628E-02	6.315E-03	6.112
ANH-511	1.595E-01	7.256E-02	4.498E-02	4.278E-03	3.546

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	3.944E-02		3.144E-01	5.255E-01	5.316E-02	0.075
NA-22	-1.659E-02		3.823E-02	5.836E-02	4.856E-03	-0.284
NA-24	5.732E-01		3.006E-01	Half-Life too short		
AL-26	1.802E-02		2.822E-02	5.232E-02	4.278E-03	0.344
TI-44	4.436E-01	+	5.908E-02	7.203E-02	6.203E-03	6.158
SC-46	-1.667E-02		3.808E-02	6.090E-02	5.757E-03	-0.274
V-48	-2.602E-02		6.635E-02	1.053E-01	9.696E-03	-0.247
CR-51	-1.976E-02		3.664E-01	5.777E-01	6.754E-02	-0.034
MN-52	1.661E-01		2.223E-01	3.974E-01	3.391E-02	0.418
MN-54	3.553E-02		3.454E-02	6.273E-02	5.892E-03	0.566
CO-56	9.960E-03		3.508E-02	5.348E-02	5.032E-03	0.186
CO-57	1.160E-02		2.221E-02	3.801E-02	3.159E-03	0.305
CO-58	2.201E-02		3.336E-02	5.956E-02	5.580E-03	0.370
FE-59	-6.747E-02		8.626E-02	1.290E-01	1.199E-02	-0.523
CO-60	-2.681E-02		3.624E-02	5.199E-02	4.385E-03	-0.516
ZN-65	-1.481E-02		9.541E-02	1.323E-01	1.123E-02	-0.112
GE-68	6.153E-01		1.121E+00	1.953E+00	1.705E-01	0.315
AS-73	1.039E-03		7.929E-01	1.243E+00	9.482E-02	0.001
AS-74	-4.168E-02		9.307E-02	1.397E-01	1.296E-02	-0.298
SE-75	1.341E-02		4.508E-02	6.593E-02	7.693E-03	0.203
BR-77	-6.597E+00		9.905E+00	1.540E+01	1.463E+00	-0.428
SR-82	-1.717E-02		3.569E-01	5.668E-01	5.255E-02	-0.030
RB-83	-4.554E-02		6.640E-02	1.030E-01	9.790E-03	-0.442
RB-84	-3.735E-02		6.492E-02	1.021E-01	9.648E-03	-0.366
KR-85	6.815E+00		7.942E+00	1.238E+01	1.177E+00	0.551
SR-85	3.492E-02		4.070E-02	6.343E-02	6.031E-03	0.551
RB-86	5.671E-01		6.948E-01	1.242E+00	1.086E-01	0.456
Y-88	5.760E-03		3.279E-02	5.581E-02	4.531E-03	0.103
ZR-88	-1.354E-02		2.815E-02	4.570E-02	4.227E-03	-0.296
Y-91	3.254E+00		1.743E+01	2.894E+01	2.354E+00	0.112
NB-94	7.981E-03		3.462E-02	5.680E-02	5.134E-03	0.141
NB-95	1.296E-02		5.113E-02	7.336E-02	6.781E-03	0.177
NB-95M	3.260E-02		1.270E-01	1.860E-01	2.212E-02	0.175

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-95	4.724E-02		6.967E-02	1.185E-01	1.189E-02	0.399
NB-97	-4.375E-02		4.905E-02	Half-Life too short		
ZR-97	2.792E+00		9.257E-01	Half-Life too short		
MO-99	-2.696E+00		1.058E+01	1.648E+01	2.554E+00	-0.164
TC-99M	-2.274E+10		1.558E+10	Half-Life too short		
RH-101	2.044E-02		3.149E-02	5.262E-02	5.195E-03	0.389
RH-102	-1.375E-02		2.827E-02	4.512E-02	4.288E-03	-0.305
RU-103	-6.377E-03		3.818E-02	6.224E-02	9.164E-03	-0.102
RH-106	-1.907E-01		3.053E-01	4.658E-01	6.383E-02	-0.409
RU-106	-1.907E-01		3.047E-01	4.658E-01	4.260E-02	-0.409
AG-108M	2.200E-02		3.180E-02	5.535E-02	5.388E-03	0.398
AG-110M	-2.491E-02		3.801E-02	4.892E-02	4.477E-03	-0.509
IN-111	-2.799E-01		1.032E+00	1.447E+00	1.611E-01	-0.194
IN-113M	-3.359E-02		4.173E-02	6.616E-02	6.280E-03	-0.508
SN-113	-3.359E-02		4.173E-02	6.616E-02	6.280E-03	-0.508
IN-114M	1.794E-02		1.807E-01	2.659E-01	2.571E-02	0.067
CD-115	-1.036E+00		9.222E+00	1.502E+01	1.426E+00	-0.069
SN-117M	1.966E-02		4.972E-02	8.362E-02	7.427E-03	0.235
SB-122	6.511E-01		1.900E+00	3.197E+00	3.007E-01	0.204
I-123	2.934E+00		2.380E+00	Half-Life too short		
TE-123M	1.552E-02		2.518E-02	4.275E-02	3.823E-03	0.363
I-124	-4.832E-01		8.000E-01	1.030E+00	9.530E-02	-0.469
SB-124	1.403E-03		7.533E-02	1.252E-01	1.096E-02	0.011
SB-125	-1.673E-02		8.519E-02	1.402E-01	1.340E-02	-0.119
TE-125M	4.856E-01		7.978E+00	1.347E+01	1.371E+00	0.036
I-126	3.068E-01		2.012E-01	3.314E-01	2.948E-02	0.926
SB-126	-5.497E-02		1.342E-01	2.029E-01	1.847E-02	-0.271
SB-127	9.441E-02		1.423E+00	2.308E+00	2.686E-01	0.041
XE-127	-2.492E-03		4.313E-02	7.010E-02	7.011E-03	-0.036
I-131	5.339E-02		9.828E-02	1.715E-01	1.814E-02	0.311
TE-132	4.665E-01		6.457E-01	1.078E+00	1.824E-01	0.433
BA-133	7.276E-04		4.466E-02	6.671E-02	9.640E-03	0.011
I-133	-4.304E-04		2.469E-03	Half-Life too short		
CS-134	1.199E-01	+	6.615E-02	9.072E-02	8.505E-03	1.321
CS-135	9.194E-02		1.731E-01	2.562E-01	3.267E-02	0.359
I-135	3.708E+09		2.183E+09	Half-Life too short		
CS-136	-2.934E-02		9.979E-02	1.592E-01	1.474E-02	-0.184
CE-139	1.661E-04		2.768E-02	4.565E-02	4.140E-03	0.004
BA-140	1.281E-01		2.423E-01	4.091E-01	1.365E-01	0.313
LA-140	-1.360E-01		9.369E-02	1.204E-01	1.026E-02	-1.129
CE-141	1.083E-02		5.941E-02	9.938E-02	8.693E-03	0.109
CE-143	5.292E-04		1.028E-04	Half-Life too short		
CE-144	2.368E-01		2.007E-01	3.161E-01	4.881E-02	0.749
PM-144	-4.690E-03		3.495E-02	5.563E-02	5.017E-03	-0.084
PR-144	-3.178E-01		2.368E+00	3.769E+00	3.399E-01	-0.084
PM-146	1.245E-02		4.142E-02	7.029E-02	8.027E-03	0.177
ND-147	1.969E-02		4.814E-01	7.945E-01	1.229E-01	0.025
PM-149	4.776E+01		8.575E+01	1.410E+02	2.481E+01	0.339

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-152	3.858E-02		9.713E-02	1.500E-01	1.677E-02	0.257
GD-153	1.486E-02		7.621E-02	1.155E-01	1.026E-02	0.129
EU-154	-5.332E-02		1.077E-01	1.630E-01	1.806E-02	-0.327
EU-155	9.791E-02		9.494E-02	1.661E-01	1.437E-02	0.589
TB-160	5.850E-02		1.266E-01	2.210E-01	2.087E-02	0.265
HO-166M	-6.034E-02		6.233E-02	9.069E-02	8.228E-03	-0.665
TM-171	4.362E-01		2.905E+01	4.146E+01	3.176E+00	0.011
LU-176	1.002E-02		2.248E-02	3.679E-02	4.267E-03	0.272
LU-177	3.023E+00	+	1.453E+00	2.012E+00	2.042E-01	1.502
LU-177M	2.453E-02		1.772E-01	2.646E-01	2.473E-02	0.093
HF-181	2.737E-03		4.205E-02	6.995E-02	6.653E-03	0.039
W-181	-6.342E-02		3.796E-01	5.367E-01	4.053E-02	-0.118
TA-182	3.949E-02		2.051E-01	3.396E-01	2.777E-02	0.116
RE-183	1.887E-02		9.449E-02	1.575E-01	1.413E-02	0.120
RE-184	-2.170E-02		2.225E-01	3.556E-01	4.030E-02	-0.061
OS-185	-2.636E-02		4.280E-02	6.537E-02	5.876E-03	-0.403
RE-188	5.824E-02		1.594E-01	2.679E-01	2.356E-02	0.217
W-188	-2.924E+00		8.367E+00	1.150E+01	1.364E+00	-0.254
IR-192	-1.977E-02		3.371E-02	5.104E-02	5.833E-03	-0.387
AU-195	7.101E-02		2.029E-01	3.406E-01	2.999E-02	0.208
TL-200	-4.339E-04		1.873E-04	Half-Life too short		
TL-201	7.686E+00		6.293E+00	1.089E+01	9.915E-01	0.706
TL-202	3.181E-02		6.438E-02	1.109E-01	1.046E-02	0.287
HG-203	1.605E-03		4.391E-02	6.259E-02	7.628E-03	0.026
BI-207	3.102E-02		4.918E-02	8.613E-02	7.593E-03	0.360
TL-207	2.449E-01		7.086E-01	1.025E+00	1.960E-01	0.239
PO-209	-1.741E-01		6.197E+00	1.031E+01	9.755E-01	-0.017
BI-210	-2.837E+00		3.465E+00	5.200E+00	4.849E-01	-0.546
PB-210	-2.837E+00		3.465E+00	5.200E+00	4.849E-01	-0.546
PO-210	-2.837E+00		3.463E+00	5.200E+00	4.392E-01	-0.546
PB-211	-4.663E-01		1.050E+00	1.426E+00	8.948E-01	-0.327
PO-215	2.449E-01		7.086E-01	1.025E+00	1.960E-01	0.239
RN-219	-4.371E-02		3.893E-01	6.479E-01	9.993E-02	-0.067
RN-220	1.609E-01		2.441E+01	4.007E+01	3.785E+00	0.004
RA-223	2.449E-01		7.086E-01	1.025E+00	1.960E-01	0.239
AC-227	9.531E-03		3.722E-01	5.989E-01	1.023E-01	0.016
TH-227	9.531E-03		3.722E-01	5.989E-01	1.171E-01	0.016
TH-229	2.212E-01		4.436E-01	7.428E-01	7.249E-02	0.298
PA-231	-1.861E+00		1.499E+00	2.135E+00	3.694E-01	-0.871
TH-231	2.449E-01		7.086E-01	1.025E+00	1.960E-01	0.239
U-231	-4.333E-01		9.838E-01	1.462E+00	1.313E-01	-0.296
PA-233	5.363E-02		6.053E-02	1.014E-01	1.185E-02	0.529
PA-234	8.358E-03		2.628E-01	4.383E-01	8.374E-02	0.019
PA-234M	3.338E+00	+	4.518E+00	7.637E+00	7.951E-01	0.437
U-235	1.583E-01		2.067E-01	3.443E-01	6.017E-02	0.460
NP-236	-5.653E-02		7.212E-02	1.144E-01	1.021E-02	-0.494
NP-239	-6.357E-02		1.589E-01	2.617E-01	2.179E-02	-0.243
AM-241	7.346E-02		1.469E-01	2.174E-01	1.706E-02	0.338

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-7.829E-02		8.473E-02	1.370E-01	1.178E-02	-0.572
AM-246	4.330E-02		1.299E-01	2.212E-01	1.930E-02	0.196
CM-247	-5.980E-03		3.508E-02	5.815E-02	5.407E-03	-0.103
CF-249	3.272E-02		3.833E-02	6.752E-02	6.334E-03	0.485
CF-251	-5.689E-02		1.185E-01	1.901E-01	1.772E-02	-0.299

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G244125002           *
* Acquisition date  : 20-JAN-2010 13:30:19 Detector SN#     :               *
* Detector ID       : GAM16                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 02:00:01.91      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       :  5-JAN-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G244125002           Analyst initials: MXR1           *
* Batch Number      : 940263               Sample Quantity : 1.2000E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 16-NOV-2009 11:22:16 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	2.102E+01	2.332E+00	2.295E-01	1.190E+00
CD-109	3.921E+00	9.610E-01	5.462E-01	4.903E-01
SN-126	3.854E-01	9.447E-02	5.393E-02	4.820E-02
BA-137M	1.019E-01	6.206E-02	2.887E-02	3.167E-02
CS-137	1.077E-01	6.561E-02	3.052E-02	3.347E-02
TL-208	5.938E-01	9.801E-02	2.751E-02	5.001E-02
BI-211	4.191E+00	6.476E-01	1.631E-01	3.304E-01
BI-212	1.200E+00	5.417E-01	2.070E-01	2.764E-01
PB-212	1.747E+00	2.310E-01	4.201E-02	1.179E-01
PO-212	1.747E+00	2.310E-01	4.201E-02	1.179E-01
BI-214	1.281E+00	2.240E-01	4.904E-02	1.143E-01
PB-214	1.458E+00	2.373E-01	5.685E-02	1.211E-01
PO-214	1.458E+00	2.373E-01	5.685E-02	1.211E-01
PO-216	1.747E+00	2.310E-01	4.201E-02	1.179E-01
PO-218	1.458E+00	2.373E-01	5.685E-02	1.211E-01
RA-224	4.637E+00	1.277E+00	4.781E-01	6.515E-01
RA-226	1.281E+00	2.240E-01	4.904E-02	1.143E-01
AC-228	1.785E+00	3.809E-01	9.204E-02	1.943E-01
RA-228	1.785E+00	3.809E-01	9.204E-02	1.943E-01
TH-228	1.773E+00	2.345E-01	4.265E-02	1.196E-01
TH-230	1.281E+00	2.240E-01	4.904E-02	1.143E-01
TH-232	1.785E+00	3.809E-01	9.204E-02	1.943E-01
TH-234	2.338E+00	1.697E+00	9.453E-01	8.658E-01
U-234	1.281E+00	2.240E-01	4.904E-02	1.143E-01
NP-237	1.132E+00	3.596E-01	1.601E-01	1.835E-01
U-238	2.338E+00	1.697E+00	9.453E-01	8.658E-01
AM-243	4.663E-01	7.767E-02	3.942E-02	3.963E-02
ANH-511	1.595E-01	7.111E-02	2.273E-02	3.628E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU

BE-7	3.944E-02	3.081E-01	2.658E-01	1.572E-01	NOT IDENT.
NA-22	-1.659E-02	3.746E-02	2.917E-02	1.911E-02	NOT IDENT.
NA-24	5.732E+05	5.892E+05	0.000E+00	3.006E+05	SHORT HLIF
AL-26	1.802E-02	2.766E-02	2.604E-02	1.411E-02	NOT IDENT.
TI-44	4.436E-01	5.790E-02	3.720E-02	2.954E-02	FAIL ABUN
SC-46	-1.667E-02	3.732E-02	3.057E-02	1.904E-02	FAIL ABUN
V-48	-2.602E-02	6.502E-02	5.282E-02	3.317E-02	NOT IDENT.
CR-51	-1.976E-02	3.591E-01	2.936E-01	1.832E-01	NOT IDENT.
MN-52	1.661E-01	2.178E-01	1.984E-01	1.111E-01	NOT IDENT.
MN-54	3.553E-02	3.385E-02	3.152E-02	1.727E-02	NOT IDENT.
CO-56	9.960E-03	3.438E-02	2.686E-02	1.754E-02	FAIL ABUN
CO-57	1.160E-02	2.176E-02	1.953E-02	1.110E-02	NOT IDENT.
CO-58	2.201E-02	3.269E-02	2.993E-02	1.668E-02	NOT IDENT.
FE-59	-6.747E-02	8.454E-02	6.461E-02	4.313E-02	NOT IDENT.
CO-60	-2.681E-02	3.551E-02	2.597E-02	1.812E-02	NOT IDENT.
ZN-65	-1.481E-02	9.350E-02	6.622E-02	4.770E-02	NOT IDENT.
GE-68	6.153E-01	1.099E+00	9.781E-01	5.607E-01	NOT IDENT.
AS-73	1.039E-03	7.770E-01	6.446E-01	3.964E-01	NOT IDENT.
AS-74	-4.168E-02	9.121E-02	7.045E-02	4.654E-02	NOT IDENT.
SE-75	1.341E-02	4.418E-02	3.357E-02	2.254E-02	NOT IDENT.
BR-77	-6.597E+00	9.707E+00	7.781E+00	4.952E+00	FAIL ABUN
SR-82	-1.717E-02	3.498E-01	2.850E-01	1.785E-01	NOT IDENT.
RB-83	-4.554E-02	6.507E-02	5.206E-02	3.320E-02	NOT IDENT.
RB-84	-3.735E-02	6.363E-02	5.127E-02	3.246E-02	NOT IDENT.
KR-85	6.815E+00	7.783E+00	6.255E+00	3.971E+00	NOT IDENT.
SR-85	3.492E-02	3.988E-02	3.205E-02	2.035E-02	NOT IDENT.
RB-86	5.671E-01	6.809E-01	6.223E-01	3.474E-01	NOT IDENT.
Y-88	5.760E-03	3.214E-02	2.778E-02	1.640E-02	NOT IDENT.
ZR-88	-1.354E-02	2.759E-02	2.317E-02	1.407E-02	NOT IDENT.
Y-91	3.254E+00	1.708E+01	1.448E+01	8.714E+00	NOT IDENT.
NB-94	7.981E-03	3.393E-02	2.860E-02	1.731E-02	NOT IDENT.
NB-95	1.296E-02	5.011E-02	3.689E-02	2.556E-02	NOT IDENT.
NB-95M	3.260E-02	1.244E-01	9.486E-02	6.349E-02	NOT IDENT.
ZR-95	4.724E-02	6.828E-02	5.959E-02	3.484E-02	NOT IDENT.
NB-97	-4.375E+04	9.613E+04	0.000E+00	4.905E+04	SHORT HLIF
ZR-97	2.792E+06	1.814E+06	0.000E+00	9.257E+05	SHORT HLIF
MO-99	-2.696E+00	1.036E+01	8.291E+00	5.288E+00	NOT IDENT.
TC-99M	-2.274E+16	3.055E+16	0.000E+00	0.000E+00	SHORT HLIF
RH-101	2.044E-02	3.086E-02	2.689E-02	1.574E-02	NOT IDENT.
RH-102	-1.375E-02	2.770E-02	2.282E-02	1.413E-02	FAIL ABUN
RU-103	-6.377E-03	3.742E-02	3.146E-02	1.909E-02	FAIL ABUN
RH-106	-1.907E-01	2.992E-01	2.349E-01	1.526E-01	FAIL ABUN
RU-106	-1.907E-01	2.986E-01	2.349E-01	1.523E-01	FAIL ABUN
AG-108M	2.200E-02	3.116E-02	2.803E-02	1.590E-02	NOT IDENT.
AG-110M	-2.491E-02	3.725E-02	2.465E-02	1.901E-02	NOT IDENT.
IN-111	-2.799E-01	1.011E+00	7.374E-01	5.159E-01	NOT IDENT.
IN-113M	-3.359E-02	4.089E-02	3.354E-02	2.086E-02	NOT IDENT.
SN-113	-3.359E-02	4.089E-02	3.354E-02	2.086E-02	NOT IDENT.
IN-114M	1.794E-02	1.771E-01	1.359E-01	9.034E-02	NOT IDENT.
CD-115	-1.036E+00	9.037E+00	7.587E+00	4.611E+00	NOT IDENT.
SN-117M	1.966E-02	4.873E-02	4.284E-02	2.486E-02	NOT IDENT.
SB-122	6.511E-01	1.862E+00	1.614E+00	9.499E-01	NOT IDENT.
I-123	2.934E+06	4.665E+06	0.000E+00	2.380E+06	SHORT HLIF
TE-123M	1.552E-02	2.468E-02	2.190E-02	1.259E-02	NOT IDENT.
I-124	-4.832E-01	7.840E-01	5.197E-01	4.000E-01	NOT IDENT.
SB-124	1.403E-03	7.382E-02	6.235E-02	3.766E-02	FAIL ABUN
SB-125	-1.673E-02	8.349E-02	7.102E-02	4.260E-02	FAIL ABUN
TE-125M	4.856E-01	7.818E+00	6.929E+00	3.989E+00	NOT IDENT.
I-126	3.068E-01	1.972E-01	1.670E-01	1.006E-01	NOT IDENT.
SB-126	-5.497E-02	1.315E-01	1.021E-01	6.709E-02	FAIL ABUN
SB-127	9.441E-02	1.395E+00	1.162E+00	7.115E-01	NOT IDENT.
XE-127	-2.492E-03	4.227E-02	3.581E-02	2.157E-02	NOT IDENT.
I-131	5.339E-02	9.631E-02	8.703E-02	4.914E-02	NOT IDENT.
TE-132	4.665E-01	6.328E-01	5.497E-01	3.229E-01	NOT IDENT.
BA-133	7.276E-04	4.376E-02	3.386E-02	2.233E-02	FAIL ABUN
I-133	-4.304E+02	4.839E+03	0.000E+00	2.469E+03	SHORT HLIF
CS-134	1.199E-01	6.482E-02	4.561E-02	3.307E-02	FAIL ABUN
CS-135	9.194E-02	1.696E-01	1.304E-01	8.653E-02	NOT IDENT.
I-135	3.708E+15	4.278E+15	0.000E+00	2.183E+15	SHORT HLIF
CS-136	-2.934E-02	9.779E-02	7.977E-02	4.990E-02	FAIL ABUN
CE-139	1.661E-04	2.713E-02	2.338E-02	1.384E-02	NOT IDENT.
BA-140	1.281E-01	2.375E-01	2.066E-01	1.212E-01	NOT IDENT.
LA-140	-1.360E-01	9.182E-02	6.005E-02	4.685E-02	FAIL ABUN
CE-141	1.083E-02	5.822E-02	5.096E-02	2.970E-02	NOT IDENT.
CE-143	5.292E+02	2.014E+02	0.000E+00	1.028E+02	SHORT HLIF
CE-144	2.368E-01	1.967E-01	1.622E-01	1.004E-01	NOT IDENT.
PM-144	-4.690E-03	3.425E-02	2.801E-02	1.748E-02	NOT IDENT.

PR-144	-3.178E-01	2.321E+00	1.898E+00	1.184E+00	NOT IDENT.
PM-146	1.245E-02	4.059E-02	3.557E-02	2.071E-02	NOT IDENT.
ND-147	1.969E-02	4.718E-01	4.013E-01	2.407E-01	FAIL ABUN
PM-149	4.776E+01	8.403E+01	7.176E+01	4.287E+01	NOT IDENT.
EU-152	3.858E-02	9.518E-02	7.617E-02	4.856E-02	FAIL ABUN
GD-153	1.486E-02	7.469E-02	5.950E-02	3.811E-02	NOT IDENT.
EU-154	-5.332E-02	1.056E-01	8.148E-02	5.387E-02	NOT IDENT.
EU-155	9.791E-02	9.304E-02	8.551E-02	4.747E-02	FAIL ABUN
TB-160	5.850E-02	1.241E-01	1.110E-01	6.329E-02	FAIL ABUN
HO-166M	-6.034E-02	6.108E-02	4.565E-02	3.116E-02	FAIL ABUN
TM-171	4.362E-01	2.847E+01	2.145E+01	1.452E+01	NOT IDENT.
LU-176	1.002E-02	2.203E-02	1.870E-02	1.124E-02	FAIL ABUN
LU-177	3.023E+00	1.424E+00	1.028E+00	7.265E-01	FAIL ABUN
LU-177M	2.453E-02	1.736E-01	1.340E-01	8.858E-02	FAIL ABUN
HF-181	2.737E-03	4.120E-02	3.537E-02	2.102E-02	NOT IDENT.
W-181	-6.342E-02	3.720E-01	2.777E-01	1.898E-01	NOT IDENT.
TA-182	3.949E-02	2.010E-01	1.699E-01	1.026E-01	FAIL ABUN
RE-183	1.887E-02	9.260E-02	8.065E-02	4.725E-02	FAIL ABUN
RE-184	-2.170E-02	2.180E-01	1.812E-01	1.112E-01	NOT IDENT.
OS-185	-2.636E-02	4.195E-02	3.294E-02	2.140E-02	NOT IDENT.
RE-188	5.824E-02	1.562E-01	1.373E-01	7.970E-02	NOT IDENT.
W-188	-2.924E+00	8.200E+00	5.850E+00	4.184E+00	FAIL ABUN
IR-192	-1.977E-02	3.304E-02	2.594E-02	1.686E-02	FAIL ABUN
AU-195	7.101E-02	1.989E-01	1.754E-01	1.015E-01	FAIL ABUN
TL-200	-4.339E+02	3.671E+02	0.000E+00	1.873E+02	SHORT HLIF
TL-201	7.686E+00	6.167E+00	5.576E+00	3.147E+00	NOT IDENT.
TL-202	3.181E-02	6.309E-02	5.614E-02	3.219E-02	NOT IDENT.
HG-203	1.605E-03	4.303E-02	3.186E-02	2.196E-02	NOT IDENT.
BI-207	3.102E-02	4.820E-02	4.315E-02	2.459E-02	FAIL ABUN
TL-207	2.449E-01	6.944E-01	5.207E-01	3.543E-01	FAIL ABUN
PO-209	-1.741E-01	6.073E+00	5.178E+00	3.098E+00	NOT IDENT.
BI-210	-2.837E+00	3.396E+00	2.701E+00	1.732E+00	NOT IDENT.
PB-210	-2.837E+00	3.396E+00	2.701E+00	1.732E+00	NOT IDENT.
PO-210	-2.837E+00	3.394E+00	2.701E+00	1.732E+00	NOT IDENT.
PB-211	-4.663E-01	1.029E+00	7.225E-01	5.249E-01	NOT IDENT.
PO-215	2.449E-01	6.944E-01	5.207E-01	3.543E-01	FAIL ABUN
RN-219	-4.371E-02	3.815E-01	3.284E-01	1.947E-01	FAIL ABUN
RN-220	1.609E-01	2.393E+01	2.023E+01	1.221E+01	NOT IDENT.
RA-223	2.449E-01	6.944E-01	5.207E-01	3.543E-01	FAIL ABUN
AC-227	9.531E-03	3.648E-01	3.051E-01	1.861E-01	FAIL ABUN
TH-227	9.531E-03	3.648E-01	3.051E-01	1.861E-01	FAIL ABUN
TH-229	2.212E-01	4.347E-01	3.797E-01	2.218E-01	FAIL ABUN
PA-231	-1.861E+00	1.469E+00	1.087E+00	7.496E-01	FAIL ABUN
TH-231	2.449E-01	6.944E-01	5.207E-01	3.543E-01	FAIL ABUN
U-231	-4.333E-01	9.641E-01	7.535E-01	4.919E-01	FAIL ABUN
PA-233	5.363E-02	5.932E-02	5.153E-02	3.027E-02	FAIL ABUN
PA-234	8.358E-03	2.575E-01	2.199E-01	1.314E-01	FAIL ABUN
PA-234M	3.338E+00	4.428E+00	3.829E+00	2.259E+00	FAIL ABUN
U-235	1.583E-01	2.026E-01	1.766E-01	1.034E-01	FAIL ABUN
NP-236	-5.653E-02	7.068E-02	5.861E-02	3.606E-02	NOT IDENT.
NP-239	-6.357E-02	1.558E-01	1.345E-01	7.947E-02	FAIL ABUN
AM-241	7.346E-02	1.440E-01	1.126E-01	7.347E-02	NOT IDENT.
CM-243	-7.829E-02	8.304E-02	7.052E-02	4.237E-02	FAIL ABUN
AM-246	4.330E-02	1.273E-01	1.108E-01	6.493E-02	NOT IDENT.
CM-247	-5.980E-03	3.437E-02	2.947E-02	1.754E-02	FAIL ABUN
CF-249	3.272E-02	3.756E-02	3.423E-02	1.916E-02	NOT IDENT.
CF-251	-5.689E-02	1.162E-01	9.727E-02	5.927E-02	NOT IDENT.

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                            CHARLESTON ,SC 29417                           *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
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ENERGY	MDA COUNTS
46.50	223.3405
46.50	223.3405
46.50	223.3405
48.70	236.7119
49.72	216.0792
51.35	211.1720
52.39	232.1637
52.97	228.9608
53.15	229.0807
53.44	235.2749
54.07	247.7274
56.28	252.9097
56.28	252.9113
57.37	0.0000
57.53	245.2894
57.53	245.2906
57.60	245.3368
57.98	289.3616
57.98	289.3616
59.32	187.1037
59.32	187.1037
59.40	201.7901
59.54	224.6578
59.72	224.7663
60.01	241.2415
61.10	197.8042
61.14	197.8248
61.30	197.9082
63.00	283.3996
63.29	283.6128
63.29	283.6128
63.58	297.8107
64.28	351.0917
65.12	313.8521
65.20	313.9144
65.20	313.9144
66.05	299.6873
66.72	306.8240
66.83	306.9087
66.91	296.1854
67.20	302.6247
67.20	302.6247
67.75	305.5304
67.85	305.6070
68.90	334.3258
68.90	334.3258
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69.67	309.4774
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70.82	304.0528
70.83	304.0602
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72.87	338.3635
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77.11	311.9410

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86.72	278.6056
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88.47	279.6211
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92.29	281.8008
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94.00	282.7624
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94.90	222.3752
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98.88	250.7762
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111.00	262.7823
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116.30	226.6679
117.00	221.4266
117.00	221.4266
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121.62	229.6303
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122.06	215.8990
122.32	221.5535
122.32	221.5535
122.32	221.5535
122.32	221.5535
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144.24	262.7980
144.24	262.7980
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153.22	221.5175
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163.35	224.6207
163.89	227.7408
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184.41	240.9004
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186.00	241.3701
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192.34	190.0831
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205.31	186.7493

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209.75	222.0960
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216.55	212.2167
218.09	203.1031
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227.20	198.7179
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228.18	171.2656
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236.00	209.1255
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238.63	174.2031
238.63	174.2031
238.63	174.2031
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241.98	174.7947
241.98	174.7947
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249.79	163.1088
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268.79	161.1180
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269.46	160.6647
269.46	160.6647
269.46	160.6647
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273.65	143.4899
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277.60	133.9624
278.00	150.7626
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286.10	129.3633
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295.21	147.9781

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300.09	126.3971
300.09	126.3971
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303.91	128.5240
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319.02	137.6712
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323.87	118.4708
323.87	118.4708
323.87	118.4708
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334.20	122.2630
334.30	122.2737
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338.28	109.2625
338.28	109.2625
338.28	109.2625
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338.32	109.2663
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351.92	127.3354
351.92	127.3354
351.92	127.3354
355.39	0.0000
356.01	114.3311
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367.43	99.9908
367.94	0.0000
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374.96	103.2586
383.85	120.3259
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391.69	119.1594
392.90	109.1693
398.62	103.1560
400.65	93.1541
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415.30	112.8450

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443.98	97.7522
444.90	92.1112
445.03	92.1201
445.03	92.1201
445.03	92.1201
445.03	92.1201
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476.78	83.2849
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513.99	90.2537
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574.00	70.5351
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602.71	94.5983
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609.31	63.4796
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911.07	40.5949
911.07	40.5949
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969.11	49.1273
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1048.07	45.4699

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1077.35	34.9163
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1120.29	43.7988
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1368.53	0.0000
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1395.20	27.2363
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1457.56	0.0000
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1489.15	19.5046
1509.49	11.1987
1596.49	36.1724
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1678.03	0.0000
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1691.02	14.5740
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1750.46	0.0000
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1764.49	6.7648
1764.49	6.7648
1764.49	6.7648
1770.23	6.7726
1771.40	5.2689
1791.20	0.0000
1808.65	7.9629

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G244125002

Total Uranium Activity	7.0287E+00	ug/g
Total Uranium Counting Unc.	5.0491E+00	ug/g
Total Uranium Tpu	2.5761E-06	ug/g
Total Uranium Mda	2.8133E+00	ug/g

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*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 940263                    SAMPLE ID  : G244125002       *
*   ANALYST       : MXR1                      DETECTOR   : GAM16            *
*   SAMPLE DATE   :  5-JAN-2010 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE: 20-JAN-2010 13:30:19.16    SAMPLE ALQT:  120.000 GRAM    *
*                                                                           *
*****************************************************************************


        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 9.844E+00
        GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.489E+00
        GROSS GAMMA MDA     (pCi/GRAM  )  : 4.140E+00
        GROSS GAMMA DLC     (pCi/GRAM  )  : 1.999E+00
```

VAX/VMS Nuclide Identification Report Generated 20-JAN-2010 15:32:59.53

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G244125003.CNF;1
Sample date       : 5-JAN-2010 12:00:00. Acquisition date : 20-JAN-2010 13:30:46
Sample ID         : G244125003           Sample quantity  : 1.23800E+02 GRAM
Detector name     : GAM18                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.59  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 940263               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	2	75.05*	439	423	1.14	149.21	142	18	6.10E-02	9.3	2.02E+00
2	2	77.36*	682	350	1.02	153.84	142	18	9.48E-02	6.0	
3	3	87.47	373	236	1.35	174.06	171	23	5.18E-02	8.3	1.73E+00
4	3	90.34	214	328	1.36	179.79	171	23	2.98E-02	16.7	
5	3	92.94*	262	339	1.37	184.99	171	23	3.64E-02	14.9	
6	0	105.37	52	294	0.96	209.84	207	7	7.17E-03	56.7	
7	0	186.08*	312	529	1.35	371.20	364	15	4.34E-02	17.4	
8	0	209.53	133	295	1.18	418.08	414	9	1.84E-02	25.0	
9	3	238.76*	1742	262	1.26	476.51	469	20	2.42E-01	2.9	1.86E+00
10	3	241.81	427	330	1.77	482.61	469	20	5.93E-02	12.1	
11	0	270.34	172	273	1.93	539.66	532	13	2.39E-02	21.2	
12	3	295.33*	522	185	1.17	589.62	582	23	7.25E-02	6.4	1.49E+00
13	3	300.09	134	223	1.59	599.14	582	23	1.86E-02	23.3	
14	0	327.90	71	164	1.21	654.74	652	8	9.83E-03	33.4	
15	0	338.23*	341	226	1.41	675.40	670	11	4.74E-02	10.2	
16	0	352.01*	920	219	1.47	702.95	698	12	1.28E-01	4.7	
17	0	462.78	131	137	0.94	924.42	918	13	1.81E-02	20.4	
18	0	510.93*	222	214	1.94	1020.69	1011	20	3.09E-02	19.4	
19	0	583.11*	526	147	1.44	1165.01	1157	16	7.31E-02	6.9	
20	0	609.26*	727	136	1.28	1217.30	1212	12	1.01E-01	5.1	
21	0	726.68*	110	145	1.37	1452.08	1446	15	1.52E-02	26.1	
22	0	767.23	60	106	1.41	1533.17	1525	13	8.30E-03	38.0	
23	0	785.45	91	105	4.16	1569.60	1559	22	1.27E-02	30.4	
24	0	794.67	98	80	1.90	1588.03	1581	16	1.36E-02	22.8	
25	0	860.46	88	83	1.79	1719.59	1711	16	1.22E-02	25.7	
26	0	910.76*	460	110	1.91	1820.17	1809	22	6.38E-02	7.6	
27	0	933.87*	75	56	1.52	1866.38	1858	16	1.05E-02	26.0	
28	2	964.06	72	75	2.55	1926.73	1918	25	9.96E-03	29.4	1.19E+00
29	2	968.84*	241	55	1.81	1936.30	1918	25	3.35E-02	9.1	
30	0	1120.16*	170	70	1.99	2238.89	2231	13	2.36E-02	12.9	
31	0	1237.38	72	63	1.83	2473.29	2465	14	1.01E-02	26.0	
32	0	1378.34	71	33	3.62	2755.19	2749	16	9.88E-03	23.5	
33	0	1460.17*	1334	66	2.18	2918.83	2909	22	1.85E-01	3.2	
34	0	1482.26	23	16	1.41	2963.00	2955	13	3.15E-03	42.2	
35	0	1729.43	36	21	0.96	3457.31	3448	17	4.96E-03	34.0	
36	0	1763.68*	136	14	2.47	3525.82	3516	18	1.89E-02	11.3	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 20-JAN-2010 15:33:02

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G244125003.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 5-JAN-2010 12:00:00 Acquisition date : 20-JAN-2010 13:30:46
Sample ID : G244125003 Sample quantity : 123.80 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA18 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.59 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	2.002E+01	1.979E+00	4.601E-01	3.491E-02	43.513
NB-95	+	765.79	*	6.683E-02	5.111E-02	5.228E-02	4.782E-03	1.278
CD-109	+	88.03	*	4.806E+00	9.161E-01	1.123E+00	1.038E-01	4.281
SN-126		64.28		-2.419E-01	5.435E-01	8.817E-01	1.303E-01	-0.274
	+	86.94		1.964E+00	8.783E-01	5.231E-01	2.169E-01	3.755
	+	87.57	*	4.725E-01	9.005E-02	1.111E-01	1.023E-02	4.254
EU-155		48.70		-7.772E-01	3.345E+00	5.598E+00	4.246E-01	-0.139
		60.01		-7.830E-01	5.464E+00	9.088E+00	6.935E-01	-0.086
	+	86.54		5.690E-01	1.087E-01	1.488E-01	1.370E-02	3.825
	+	105.31	*	9.850E-02	1.119E-01	1.544E-01	1.104E-02	0.638
TL-208		277.35		3.079E-01	3.085E-01	5.234E-01	5.497E-02	0.588
	+	510.84		7.244E-01	2.915E-01	1.735E-01	1.845E-02	4.175
	+	583.14	*	4.818E-01	7.633E-02	4.631E-02	3.630E-03	10.403
	+	860.37		7.328E-01	3.848E-01	3.535E-01	3.954E-02	2.073
BI-211		72.87		2.951E+00	2.928E+00	4.996E+00	4.125E-01	0.591
	+	351.07	*	3.956E+00	4.511E-01	2.707E-01	1.737E-02	14.617
BI-212	+	727.18	*	8.438E-01	4.484E-01	3.510E-01	3.496E-02	2.404
	+	785.46		4.472E+00	2.755E+00	2.088E+00	1.973E-01	2.142
		1620.62		1.261E+00	9.845E-01	1.866E+00	1.262E-01	0.676
PB-212	+	74.81		2.517E+00	5.666E-01	5.217E-01	6.538E-02	4.824
	+	77.11		2.181E+00	3.201E-01	2.918E-01	2.474E-02	7.474
	+	87.30		2.185E+00	4.703E-01	5.156E-01	7.003E-02	4.238
	+	238.63	*	1.744E+00	1.616E-01	7.485E-02	5.347E-03	23.302
	+	300.09		1.987E+00	9.419E-01	1.094E+00	8.983E-02	1.816
PO-212	+	74.81		2.517E+00	5.666E-01	5.217E-01	6.538E-02	4.824
	+	77.11		2.181E+00	3.201E-01	2.918E-01	2.474E-02	7.474
	+	87.30		2.185E+00	4.703E-01	5.156E-01	7.003E-02	4.238
		115.19		-1.869E+00	3.254E+00	5.111E+00	3.220E-01	-0.366
	+	238.63	*	1.744E+00	1.616E-01	7.485E-02	5.347E-03	23.302
	+	300.09		1.987E+00	9.419E-01	1.094E+00	8.983E-02	1.816
BI-214	+	609.31	*	1.250E+00	1.686E-01	9.289E-02	8.298E-03	13.454
	+	1120.29		1.464E+00	4.022E-01	3.586E-01	3.433E-02	4.082
	+	1764.49		1.538E+00	3.600E-01	1.569E-01	9.540E-03	9.805
PB-214	+	74.81		4.336E+00	9.444E-01	8.989E-01	1.003E-01	4.824

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	77.11		3.739E+00	6.183E-01	5.003E-01	5.702E-02	7.474
	+	87.30		3.743E+00	7.696E-01	8.833E-01	1.060E-01	4.238
	+	241.98		2.564E+00	6.505E-01	4.499E-01	3.558E-02	5.698
	+	295.21		1.365E+00	2.093E-01	1.920E-01	1.629E-02	7.108
	+	351.92	*	1.376E+00	1.726E-01	9.496E-02	7.855E-03	14.494
PO-214	+	74.81		4.336E+00	9.444E-01	8.989E-01	1.003E-01	4.824
	+	77.11		3.739E+00	6.183E-01	5.003E-01	5.702E-02	7.474
	+	87.30		3.743E+00	7.696E-01	8.833E-01	1.060E-01	4.238
	+	241.98		2.564E+00	6.505E-01	4.499E-01	3.558E-02	5.698
	+	295.21		1.365E+00	2.093E-01	1.920E-01	1.629E-02	7.108
	+	351.92	*	1.376E+00	1.726E-01	9.496E-02	7.855E-03	14.494
PO-216	+	74.81		2.517E+00	5.666E-01	5.217E-01	6.538E-02	4.824
	+	77.11		2.181E+00	3.201E-01	2.918E-01	2.474E-02	7.474
	+	87.30		2.185E+00	4.703E-01	5.156E-01	7.003E-02	4.238
	+	238.63	*	1.744E+00	1.616E-01	7.485E-02	5.347E-03	23.302
	+	300.09		1.987E+00	9.419E-01	1.094E+00	8.983E-02	1.816
PO-218	+	74.81		4.336E+00	9.444E-01	8.989E-01	1.003E-01	4.824
	+	77.11		3.739E+00	6.183E-01	5.003E-01	5.702E-02	7.474
	+	87.30		3.743E+00	7.696E-01	8.833E-01	1.060E-01	4.238
	+	241.98		2.564E+00	6.505E-01	4.499E-01	3.558E-02	5.698
	+	295.21		1.365E+00	2.093E-01	1.920E-01	1.629E-02	7.108
	+	351.92	*	1.376E+00	1.726E-01	9.496E-02	7.855E-03	14.494
RA-224	+	240.98	*	4.862E+00	1.203E+00	8.508E-01	4.739E-02	5.714
RA-226	+	609.31	*	1.250E+00	1.686E-01	9.289E-02	8.298E-03	13.454
	+	1120.29		1.464E+00	4.022E-01	3.586E-01	3.433E-02	4.082
	+	1764.49		1.538E+00	3.600E-01	1.569E-01	9.540E-03	9.805
AC-228	+	338.32		1.627E+00	7.420E-01	3.225E-01	1.315E-01	5.044
	+	911.07	*	1.810E+00	3.648E-01	1.601E-01	2.121E-02	11.304
	+	969.11		1.669E+00	5.027E-01	2.740E-01	6.562E-02	6.089
RA-228	+	338.32		1.627E+00	7.420E-01	3.225E-01	1.315E-01	5.044
	+	911.07	*	1.810E+00	3.648E-01	1.601E-01	2.121E-02	11.304
	+	969.11		1.669E+00	5.027E-01	2.740E-01	6.562E-02	6.089
TH-228	+	74.81		2.555E+00	5.240E-01	5.296E-01	4.462E-02	4.824
	+	77.11		2.214E+00	3.249E-01	2.963E-01	2.511E-02	7.474
	+	87.30		2.218E+00	4.228E-01	5.234E-01	4.811E-02	4.238
	+	238.63	*	1.771E+00	1.640E-01	7.598E-02	5.428E-03	23.302
	+	300.09		2.017E+00	1.516E+00	1.111E+00	6.544E-01	1.816
TH-230	+	609.31	*	1.250E+00	1.686E-01	9.289E-02	8.298E-03	13.454
	+	1120.29		1.464E+00	4.022E-01	3.586E-01	3.433E-02	4.082
	+	1764.49		1.538E+00	3.600E-01	1.569E-01	9.540E-03	9.805
TH-232	+	338.32		1.627E+00	3.459E-01	3.225E-01	1.866E-02	5.044
	+	911.07	*	1.810E+00	3.648E-01	1.601E-01	2.121E-02	11.304
	+	969.11		1.669E+00	5.027E-01	2.740E-01	6.562E-02	6.089
U-234	+	609.31	*	1.250E+00	1.686E-01	9.289E-02	8.298E-03	13.454
	+	1120.29		1.464E+00	4.022E-01	3.586E-01	3.433E-02	4.082
	+	1764.49		1.538E+00	3.600E-01	1.569E-01	9.540E-03	9.805
U-235	+	89.95		3.571E+00	1.626E+00	1.475E+00	4.563E-01	2.421
	+	93.35		2.537E+00	1.035E+00	8.520E-01	2.381E-01	2.978
	+	105.00		9.653E-01	1.131E+00	1.469E+00	4.322E-01	0.657

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		143.76	*	1.918E-01	1.944E-01	3.136E-01	5.078E-02	0.612
		163.35		3.960E-02	3.856E-01	6.545E-01	1.166E-01	0.061
	+	185.71		2.294E-01	8.068E-02	5.760E-02	3.064E-03	3.982
		205.31		2.160E-01	4.694E-01	7.033E-01	1.256E-01	0.307
NP-237	+	86.50	*	1.387E+00	3.897E-01	3.629E-01	8.189E-02	3.823
		95.87		5.944E-02	9.198E-01	1.343E+00	3.280E-01	0.044
AM-243	+	74.67	*	4.080E-01	8.356E-02	8.491E-02	7.085E-03	4.805
	+	86.72		5.203E+01	9.916E+00	1.390E+01	1.271E+00	3.743
		117.66		-1.662E+00	3.385E+00	5.324E+00	3.275E-01	-0.312
		142.18		7.519E+00	1.554E+01	2.518E+01	1.387E+00	0.299
ANH-511	+	511.00	*	1.565E-01	6.159E-02	3.749E-02	2.476E-03	4.174

---- 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	*	-5.308E-03	2.600E-01	4.283E-01	3.104E-02	-0.012
NA-22		1274.54	*	-1.045E-02	3.483E-02	5.572E-02	3.791E-03	-0.188
NA-24		1368.53	*	-6.623E-01	3.483E-02	Half-Life too short		
AL-26		1129.67		-3.396E-01	1.304E+00	2.122E+00	1.417E-01	-0.160
		1808.65	*	-1.466E-03	1.971E-02	3.189E-02	1.862E-03	-0.046
TI-44		67.85		3.708E-02	4.551E-02	7.768E-02	6.246E-03	0.477
	+	78.38	*	4.025E-01	5.907E-02	8.182E-02	6.996E-03	4.919
SC-46		889.25	*	3.245E-03	3.164E-02	5.212E-02	5.813E-03	0.062
	+	1120.51		2.505E-01	6.678E-02	1.082E-01	7.475E-03	2.315
V-48		944.10		2.029E-01	7.372E-01	1.223E+00	1.295E-01	0.166
		983.50	*	3.855E-02	5.677E-02	9.681E-02	9.575E-03	0.398
		1312.09		2.811E-02	6.464E-02	1.099E-01	8.008E-03	0.256
CR-51		320.08	*	-1.813E-01	3.086E-01	4.805E-01	3.093E-02	-0.377
MN-52		744.21		6.775E-02	1.773E-01	3.024E-01	2.667E-02	0.224
		848.13		7.638E-01	5.116E+00	8.495E+00	8.888E-01	0.090
		935.52		4.059E-01	2.420E-01	3.845E-01	4.124E-02	1.056
		1246.25		-3.473E+00	5.596E+00	8.325E+00	5.353E-01	-0.417
		1333.61		-1.916E+00	4.032E+00	6.275E+00	4.740E-01	-0.305
		1434.06	*	7.162E-02	1.819E-01	3.087E-01	2.275E-02	0.232
MN-54		834.83	*	3.148E-02	3.349E-02	5.796E-02	5.937E-03	0.543
CO-56		846.75	*	7.539E-03	3.040E-02	5.084E-02	5.307E-03	0.148
		977.42		-4.688E-01	2.354E+00	3.556E+00	3.557E-01	-0.132
		1037.82		-1.595E-02	2.534E-01	4.222E-01	3.912E-02	-0.038
		1175.09		-3.124E-01	1.856E+00	3.034E+00	1.684E-01	-0.103
	+	1238.25		1.741E-01	9.143E-02	1.285E-01	8.565E-03	1.355
		1360.21		1.014E+00	8.229E-01	1.496E+00	1.124E-01	0.678
		1771.40		-1.228E-01	1.773E-01	1.966E-01	1.188E-02	-0.625
CO-57		122.06	*	-5.003E-03	2.182E-02	3.464E-02	2.052E-03	-0.144
		136.48		-8.767E-02	1.794E-01	2.791E-01	1.827E-02	-0.314
CO-58		810.76	*	-3.822E-02	3.087E-02	4.555E-02	4.496E-03	-0.839
FE-59		142.65		1.712E+00	2.479E+00	3.999E+00	2.200E-01	0.428
		192.34		-3.949E-01	8.774E-01	1.258E+00	1.459E-01	-0.314
		1099.22	*	-7.732E-03	6.493E-02	1.070E-01	8.810E-03	-0.072

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1291.56		-5.827E-02	9.623E-02	1.488E-01	1.250E-02	-0.392
CO-60		1173.22		2.798E-02	3.647E-02	6.357E-02	3.513E-03	0.440
		1332.49	*	-1.210E-02	3.184E-02	5.008E-02	3.784E-03	-0.242
ZN-65		1115.52	*	5.836E-02	7.959E-02	1.220E-01	8.594E-03	0.478
GE-68		1077.35	*	1.395E+00	1.019E+00	1.853E+00	1.472E-01	0.753
AS-73		53.44	*	6.690E-01	1.003E+00	1.729E+00	1.370E-01	0.387
AS-74		595.88	*	3.875E-05	7.523E-02	1.217E-01	8.747E-03	0.000
		634.78		1.443E-01	2.875E-01	4.787E-01	3.564E-02	0.301
SE-75		66.05		-7.123E+00	5.269E+00	8.032E+00	7.955E-01	-0.887
		96.73		-1.061E+00	8.042E-01	1.067E+00	1.407E-01	-0.995
		121.11		-1.167E-01	1.180E-01	1.800E-01	1.680E-02	-0.648
		136.00		-1.466E-02	3.370E-02	5.259E-02	2.995E-03	-0.279
		198.60		1.599E-02	1.499E+00	2.471E+00	1.677E-01	0.006
		264.65	*	-1.226E-02	4.043E-02	5.665E-02	3.240E-03	-0.216
		279.53		4.184E-03	8.892E-02	1.451E-01	8.964E-03	0.029
		303.91		1.442E+00	1.970E+00	2.923E+00	2.780E-01	0.493
		400.65		3.715E-02	2.013E-01	3.400E-01	3.098E-02	0.109
BR-77	+	87.88		1.022E+03	1.949E+02	3.173E+02	2.932E+01	3.222
		200.40		4.016E+01	1.288E+02	2.175E+02	1.171E+01	0.185
	+	239.00		2.757E+02	2.236E+01	3.371E+01	1.875E+00	8.180
		249.79		8.947E+00	5.273E+01	8.728E+01	4.893E+00	0.103
		281.68		-7.661E+01	7.354E+01	1.131E+02	6.453E+00	-0.677
		297.23		3.102E+02	5.977E+01	1.094E+02	6.281E+00	2.836
		303.76		1.165E+02	1.648E+02	2.445E+02	1.407E+01	0.477
		439.47		7.103E+01	1.160E+02	1.989E+02	1.213E+01	0.357
		484.57		-7.284E+01	1.779E+02	2.854E+02	1.832E+01	-0.255
		520.65	*	1.168E+00	8.544E+00	1.374E+01	9.167E-01	0.085
		574.64		-9.680E+01	1.698E+02	2.471E+02	1.740E+01	-0.392
		578.91		6.364E+01	7.666E+01	1.155E+02	8.167E+00	0.551
		585.48		1.339E+03	2.312E+02	4.017E+02	2.858E+01	3.333
		755.35		-1.584E+01	1.271E+02	2.090E+02	1.878E+01	-0.076
		817.79		8.682E+01	9.870E+01	1.729E+02	1.723E+01	0.502
SR-82		698.33		-1.067E+01	2.739E+01	4.462E+01	3.633E+00	-0.239
		776.49	*	-5.695E-01	4.084E-01	4.989E-01	4.646E-02	-1.141
		1395.20		-9.943E+00	9.046E+00	1.283E+01	9.564E-01	-0.775
RB-83		520.41	*	9.519E-03	5.746E-02	9.259E-02	6.175E-03	0.103
		529.64		-2.774E-02	8.529E-02	1.348E-01	9.078E-03	-0.206
		552.65		1.908E-02	1.585E-01	2.602E-01	1.793E-02	0.073
RB-84		881.50	*	1.049E-02	5.618E-02	9.321E-02	1.027E-02	0.113
KR-85		513.99	*	1.824E+01	6.868E+00	1.151E+01	7.623E-01	1.586
SR-85		513.99	*	9.349E-02	3.519E-02	5.896E-02	3.906E-03	1.586
RB-86		1076.63	*	4.404E-01	6.467E-01	1.130E+00	8.994E-02	0.390
Y-88		898.02		-1.171E-03	3.319E-02	5.404E-02	6.126E-03	-0.022
		1836.01	*	1.498E-02	2.747E-02	4.850E-02	2.762E-03	0.309
ZR-88		392.90	*	1.132E-02	2.477E-02	4.245E-02	2.442E-03	0.267
Y-91		1204.90	*	-3.749E+00	1.502E+01	2.435E+01	1.440E+00	-0.154
NB-94		702.63	*	-9.651E-05	2.595E-02	4.331E-02	3.553E-03	-0.002
		871.10		-1.539E-02	2.520E-02	3.897E-02	4.226E-03	-0.395
NB-95M		235.69	*	1.620E-01	1.160E-01	1.799E-01	1.320E-02	0.901

---- 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		1.259E-01	8.654E-02	1.387E-01	1.286E-02	0.908
		756.15	*	-2.805E-02	5.627E-02	8.997E-02	8.853E-03	-0.312
NB-97		657.90	*	-2.753E-02	5.627E-02	Half-Life too short		
		1024.50		-1.911E+00	5.627E-02	Half-Life too short		
ZR-97		254.15		2.877E+00	5.627E-02	Half-Life too short		
		355.39		2.635E+00	5.627E-02	Half-Life too short		
		507.63	*	3.778E+00	5.627E-02	Half-Life too short		
		602.52		-4.151E+00	5.627E-02	Half-Life too short		
		1021.30		7.939E+00	5.627E-02	Half-Life too short		
		1147.95		-1.630E+00	5.627E-02	Half-Life too short		
		1362.66		-2.199E+00	5.627E-02	Half-Life too short		
		1750.46		-8.304E-01	5.627E-02	Half-Life too short		
MO-99		140.51		-2.968E+01	2.522E+01	3.545E+01	9.534E+00	-0.837
		181.06		-2.486E+00	1.533E+01	2.248E+01	3.817E+00	-0.111
		366.43		3.919E+01	6.542E+01	1.135E+02	6.558E+00	0.345
		739.58	*	-6.553E+00	8.921E+00	1.395E+01	2.129E+00	-0.470
		778.00		-2.976E+01	3.301E+01	4.248E+01	3.966E+00	-0.701
TC-99M		140.51	*	-3.768E+10	3.301E+01	Half-Life too short		
RH-101		127.23		-9.523E-03	2.906E-02	4.585E-02	2.649E-03	-0.208
		198.01	*	3.985E-03	2.724E-02	4.515E-02	2.427E-03	0.088
		325.23		1.393E-01	2.010E-01	2.969E-01	1.716E-02	0.469
RH-102		418.52		-3.271E-02	2.216E-01	3.663E-01	2.177E-02	-0.089
		475.06	*	6.500E-03	2.357E-02	3.952E-02	2.510E-03	0.164
		631.29		8.433E-03	4.444E-02	7.250E-02	5.381E-03	0.116
		697.49		-6.668E-03	6.211E-02	1.031E-01	8.378E-03	-0.065
	+	766.84		1.683E-01	1.287E-01	1.621E-01	1.486E-02	1.038
		1046.59		-1.223E-02	9.130E-02	1.512E-01	1.304E-02	-0.081
		1112.84		1.721E-01	1.852E-01	2.918E-01	2.071E-02	0.590
RU-103		497.08	*	2.588E-02	3.180E-02	5.464E-02	7.095E-03	0.474
	+	610.33		1.348E+01	2.555E+00	2.526E+00	4.050E-01	5.337
RH-106	+	511.85		7.815E-01	3.076E-01	3.764E-01	2.488E-02	2.076
		621.84	*	2.504E-01	2.600E-01	4.438E-01	5.583E-02	0.564
		1050.47		2.676E-01	1.715E+00	2.902E+00	2.480E-01	0.092
RU-106	+	511.85		7.815E-01	3.076E-01	3.764E-01	2.488E-02	2.076
		621.84	*	2.504E-01	2.588E-01	4.438E-01	3.266E-02	0.564
		1050.47		2.676E-01	1.715E+00	2.902E+00	2.480E-01	0.092
AG-108M		433.93	*	-3.398E-02	2.579E-02	3.932E-02	2.569E-03	-0.864
		614.37		1.144E-02	3.479E-02	4.996E-02	3.849E-03	0.229
		722.95		6.605E-03	3.631E-02	5.300E-02	4.687E-03	0.125
AG-110M		657.75	*	-1.013E-02	2.540E-02	4.145E-02	3.269E-03	-0.244
		677.61		-9.035E-03	2.297E-01	3.836E-01	3.111E-02	-0.024
		706.67		-3.342E-02	1.553E-01	2.552E-01	2.172E-02	-0.131
		763.93		1.275E-01	1.402E-01	2.174E-01	2.033E-02	0.586
		884.67		2.023E-02	4.068E-02	6.892E-02	7.782E-03	0.294
		937.48		-1.537E-03	1.020E-01	1.418E-01	1.552E-02	-0.011
		1384.27		8.069E-02	1.320E-01	2.020E-01	1.566E-02	0.399
IN-111		171.28		4.736E-01	8.167E-01	1.406E+00	7.400E-02	0.337
		245.39	*	-2.190E-01	9.411E-01	1.336E+00	7.466E-02	-0.164
IN-113M		391.69	*	6.846E-03	3.574E-02	6.048E-02	3.710E-03	0.113

---- Non-Identified Nuclides ----

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SN-113		391.69	*	6.846E-03	3.574E-02	6.048E-02	3.710E-03	0.113
IN-114M		190.27	*	7.605E-02	1.642E-01	2.483E-01	1.326E-02	0.306
CD-115		260.90		5.433E+01	1.038E+02	1.741E+02	9.828E+00	0.312
		492.35		-9.018E+00	2.813E+01	4.533E+01	2.935E+00	-0.199
		527.90	*	-2.686E+00	8.487E+00	1.342E+01	9.019E-01	-0.200
SN-117M		156.02		-2.272E-01	1.926E+00	3.253E+00	1.737E-01	-0.070
		158.56	*	-1.110E-02	4.486E-02	7.530E-02	4.002E-03	-0.147
SB-122		563.90	*	1.945E+00	1.660E+00	2.888E+00	2.012E-01	0.674
		692.80		-5.087E+00	3.500E+01	5.797E+01	4.674E+00	-0.088
I-123		159.00	*	-1.962E+00	3.500E+01	Half-Life too short		
		528.96		-6.408E+01	3.500E+01	Half-Life too short		
TE-123M		159.00	*	-1.037E-02	2.306E-02	3.839E-02	2.071E-03	-0.270
I-124		602.71	*	-4.531E-01	6.776E-01	8.778E-01	6.348E-02	-0.516
		722.78		4.122E-01	3.742E+00	5.425E+00	4.611E-01	0.076
		1325.50		6.750E+00	2.762E+01	4.623E+01	3.450E+00	0.146
		1376.25		6.114E+01	3.272E+01	5.482E+01	4.105E+00	1.115
		1509.49		1.433E+01	1.201E+01	2.242E+01	1.606E+00	0.639
		1691.02		-1.352E-01	2.629E+00	4.307E+00	2.778E-01	-0.031
SB-124		602.71		-2.656E-02	3.971E-02	5.145E-02	3.721E-03	-0.516
		645.85		9.317E-02	3.911E-01	6.394E-01	5.183E-02	0.146
		709.31		-9.693E-01	2.093E+00	3.377E+00	2.803E-01	-0.287
		713.82		4.688E-01	1.256E+00	2.143E+00	2.542E-01	0.219
		722.78		3.502E-02	3.179E-01	4.609E-01	4.004E-02	0.076
	+	968.20		1.717E+01	3.590E+00	5.992E+00	6.093E-01	2.865
		1045.16		-3.367E-01	1.935E+00	3.193E+00	2.765E-01	-0.105
		1325.50		6.125E-01	2.506E+00	4.195E+00	3.130E-01	0.146
		1368.21		-1.416E+00	1.559E+00	2.229E+00	2.850E-01	-0.635
		1436.60		1.378E+00	2.869E+00	4.918E+00	3.621E-01	0.280
		1691.02	*	-2.709E-03	5.269E-02	8.630E-02	5.954E-03	-0.031
SB-125		427.89	*	8.023E-04	6.947E-02	1.157E-01	7.229E-03	0.007
	+	463.38		8.398E-01	3.483E-01	4.500E-01	3.226E-02	1.866
		600.56		-4.796E-02	1.509E-01	2.390E-01	1.904E-02	-0.201
		635.90		4.057E-02	2.204E-01	3.591E-01	2.962E-02	0.113
TE-125M		109.28	*	8.642E-02	9.416E+00	1.357E+01	1.193E+00	0.006
I-126		388.63		-1.047E-01	1.667E-01	2.703E-01	1.554E-02	-0.388
		666.33	*	3.159E-02	1.385E-01	2.355E-01	1.810E-02	0.134
		753.82		8.239E-01	1.128E+00	1.961E+00	1.758E-01	0.420
SB-126		223.80		-8.540E-01	3.433E+00	5.623E+00	3.091E-01	-0.152
		278.60		1.886E+00	2.007E+00	3.410E+00	1.943E-01	0.553
	+	296.50		1.355E+01	1.897E+00	3.259E+00	1.871E-01	4.157
		414.70		-3.848E-02	5.894E-02	9.467E-02	5.599E-03	-0.406
		415.30		-1.581E+00	4.761E+00	7.790E+00	4.611E-01	-0.203
		555.20		6.973E-01	3.189E+00	5.268E+00	3.640E-01	0.132
		573.80		-6.055E-01	8.301E-01	1.236E+00	8.695E-02	-0.490
		593.00		-4.182E-01	7.694E-01	1.198E+00	8.588E-02	-0.349
		656.30		-4.061E-01	2.454E+00	4.074E+00	3.092E-01	-0.100
		666.33		1.320E-02	5.786E-02	9.840E-02	7.565E-03	0.134
		675.00		-6.546E-01	1.515E+00	2.462E+00	1.923E-01	-0.266
		695.00		4.202E-02	6.163E-02	1.071E-01	8.669E-03	0.392

---- Non-Identified Nuclides ----

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		697.00		-1.048E-02	2.186E-01	3.640E-01	2.957E-02	-0.029
		720.50	*	1.018E-02	1.234E-01	1.786E-01	1.512E-02	0.057
		856.80		4.362E-01	4.186E-01	6.515E-01	6.910E-02	0.670
		989.30		-2.472E-02	9.546E-01	1.541E+00	1.507E-01	-0.016
		1034.80		6.614E-01	7.403E+00	1.201E+01	1.067E+00	0.055
		1213.00		5.196E-01	3.485E+00	5.815E+00	3.496E-01	0.089
SB-127		61.10		-5.736E+01	6.243E+01	1.003E+02	1.049E+01	-0.572
		252.40		-1.169E+00	3.645E+00	5.837E+00	2.423E+00	-0.200
		290.80		4.256E+00	2.036E+01	2.930E+01	2.665E+00	0.145
		411.60		3.893E+00	9.710E+00	1.652E+01	2.379E+00	0.236
		444.90		1.967E+00	8.120E+00	1.320E+01	1.446E+00	0.149
		473.00		-1.291E-01	1.334E+00	2.189E+00	2.505E-01	-0.059
		543.00		7.277E-01	1.324E+01	2.168E+01	2.901E+00	0.034
		603.60		2.407E-01	1.116E+01	1.543E+01	1.787E+00	0.016
		685.20	*	6.223E-01	1.065E+00	1.844E+00	2.005E-01	0.337
		698.50		-4.446E+00	1.213E+01	1.977E+01	3.074E+00	-0.225
		722.20		-2.926E+00	2.575E+01	3.651E+01	4.032E+00	-0.080
		783.80		4.111E+00	3.287E+00	5.176E+00	6.716E-01	0.794
XE-127		57.60		-1.272E+00	6.826E+00	1.135E+01	8.751E-01	-0.112
		145.22		4.360E-01	6.331E-01	1.020E+00	5.576E-02	0.427
		172.10		6.850E-02	9.804E-02	1.695E-01	8.923E-03	0.404
		202.84	*	-2.310E-02	3.823E-02	6.214E-02	3.354E-03	-0.372
		374.96		3.055E-02	1.479E-01	2.514E-01	1.450E-02	0.122
I-131		80.18		5.083E+00	4.444E+00	6.885E+00	6.002E-01	0.738
		284.30		5.530E-02	1.203E+00	1.960E+00	1.249E-01	0.028
		364.48	*	-4.943E-02	9.253E-02	1.516E-01	9.785E-03	-0.326
		636.97		6.697E-01	1.232E+00	2.058E+00	1.649E-01	0.325
		722.89		9.520E-01	6.077E+00	8.850E+00	7.571E-01	0.108
TE-132		49.72		-2.095E+01	2.513E+01	4.082E+01	4.159E+00	-0.513
		111.76		1.496E+00	2.701E+01	4.369E+01	4.047E+00	0.034
		116.30		4.824E+00	2.449E+01	3.975E+01	3.601E+00	0.121
		228.16	*	1.951E-01	5.944E-01	9.946E-01	1.416E-01	0.196
BA-133		53.15		2.471E+00	4.371E+00	7.510E+00	5.960E-01	0.329
		79.62		6.188E-01	1.311E+00	1.972E+00	3.003E-01	0.314
		81.00		3.418E-03	9.788E-02	1.443E-01	2.299E-02	0.024
		276.40		2.869E-01	3.151E-01	5.158E-01	6.662E-02	0.556
		302.84		1.471E-01	1.356E-01	2.047E-01	2.381E-02	0.719
		356.01	*	-9.111E-03	4.108E-02	5.608E-02	6.478E-03	-0.162
		383.85		7.807E-02	2.419E-01	4.124E-01	4.474E-02	0.189
I-133	+	510.53		1.525E+00	2.419E-01	Half-Life too short		
		529.87	*	-1.610E-03	2.419E-01	Half-Life too short		
		706.58		-5.192E-02	2.419E-01	Half-Life too short		
		856.28		2.850E-01	2.419E-01	Half-Life too short		
		875.33		-6.004E-02	2.419E-01	Half-Life too short		
	+	1236.41		1.209E+00	2.419E-01	Half-Life too short		
		1298.22		-6.374E-02	2.419E-01	Half-Life too short		
CS-134		475.35		5.950E-01	1.540E+00	2.598E+00	1.651E-01	0.229
		563.23		2.230E-01	2.947E-01	5.015E-01	3.543E-02	0.445
		569.32		-2.955E-02	1.518E-01	2.433E-01	1.740E-02	-0.121

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		604.70		2.342E-02	3.208E-02	4.709E-02	3.424E-03	0.497
	+	795.84	*	1.260E-01	5.868E-02	7.278E-02	7.040E-03	1.732
		801.93		-2.123E-01	3.860E-01	5.298E-01	5.168E-02	-0.401
		1038.57		-6.650E-01	3.123E+00	5.144E+00	4.526E-01	-0.129
		1167.94		2.175E-01	1.963E+00	3.276E+00	1.858E-01	0.066
		1365.15		8.894E-01	9.940E-01	1.764E+00	1.403E-01	0.504
CS-135		268.24	*	1.871E-01	1.454E-01	2.243E-01	1.695E-02	0.834
I-135		288.45		-5.240E+09	1.454E-01	Half-Life too short		
		417.63		2.450E+09	1.454E-01	Half-Life too short		
		546.56		-6.315E+09	1.454E-01	Half-Life too short		
		836.80		1.570E+10	1.454E-01	Half-Life too short		
		1038.76		-6.999E+09	1.454E-01	Half-Life too short		
		1124.00		3.346E+10	1.454E-01	Half-Life too short		
		1131.51		1.525E+09	1.454E-01	Half-Life too short		
		1260.41	*	1.179E+09	1.454E-01	Half-Life too short		
		1457.56		6.895E+11	1.454E-01	Half-Life too short		
		1678.03		4.169E+09	1.454E-01	Half-Life too short		
		1706.46		1.410E+09	1.454E-01	Half-Life too short		
		1791.20		3.831E+09	1.454E-01	Half-Life too short		
CS-136		66.91		-5.612E-01	8.340E-01	1.309E+00	1.977E-01	-0.429
	+	86.29		6.148E+00	1.310E+00	1.820E+00	2.400E-01	3.378
		153.22		2.949E-01	5.628E-01	9.721E-01	6.691E-02	0.303
		163.89		4.612E-01	8.718E-01	1.502E+00	1.026E-01	0.307
		176.55		1.760E-02	3.024E-01	5.100E-01	3.090E-02	0.035
		273.65		-1.679E-01	4.087E-01	5.667E-01	3.692E-02	-0.296
		340.57		3.691E-01	1.357E-01	2.183E-01	1.343E-02	1.691
		818.51		4.867E-02	5.609E-02	9.814E-02	9.799E-03	0.496
		1048.07	*	-7.483E-03	8.200E-02	1.361E-01	1.220E-02	-0.055
		1235.34		6.133E-01	5.554E-01	8.378E-01	8.613E-02	0.732
BA-137M		661.65	*	-6.126E-04	2.629E-02	4.405E-02	3.358E-03	-0.014
CS-137		661.65	*	-6.476E-04	2.780E-02	4.656E-02	3.558E-03	-0.014
CE-139		165.85	*	1.010E-03	2.460E-02	4.162E-02	2.185E-03	0.024
BA-140		162.64		7.676E-02	6.098E-01	1.036E+00	6.282E-02	0.074
		304.84		7.457E-01	1.247E+00	1.812E+00	4.943E-01	0.412
		423.70		1.014E+00	1.488E+00	2.515E+00	8.003E-01	0.403
		537.32	*	9.205E-02	2.124E-01	3.529E-01	1.154E-01	0.261
LA-140	+	328.77		4.175E-01	2.803E-01	4.442E-01	2.878E-02	0.940
		432.53		-1.946E-01	1.522E+00	2.511E+00	1.665E-01	-0.077
		487.03		-7.941E-03	1.068E-01	1.751E-01	1.249E-02	-0.045
		751.79		4.931E-01	1.299E+00	2.211E+00	2.173E-01	0.223
		815.85		3.109E-01	2.489E-01	4.441E-01	4.800E-02	0.700
		867.82		5.543E-01	1.118E+00	1.668E+00	1.861E-01	0.332
		919.63		-7.676E-01	2.440E+00	3.264E+00	4.123E-01	-0.235
		925.24		5.653E-01	8.950E-01	1.395E+00	1.580E-01	0.405
		1596.49	*	-7.510E-02	7.020E-02	1.016E-01	6.968E-03	-0.739
CE-141		145.44	*	2.889E-02	5.703E-02	9.122E-02	5.207E-03	0.317
CE-143		57.37		-4.223E-04	5.703E-02	Half-Life too short		
		231.56		-8.266E-04	5.703E-02	Half-Life too short		
		293.26	*	6.588E-04	5.703E-02	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	350.59		3.052E-02	5.703E-02	Half-Life too short		
		490.36		7.054E-04	5.703E-02	Half-Life too short		
		664.57		1.229E-04	5.703E-02	Half-Life too short		
		721.93		-2.274E-04	5.703E-02	Half-Life too short		
CE-144		80.11		2.317E+00	2.054E+00	3.181E+00	2.754E-01	0.728
		133.54	*	-1.542E-01	1.866E-01	2.849E-01	4.029E-02	-0.541
PM-144		476.78		-2.897E-03	5.536E-02	9.104E-02	6.755E-03	-0.032
		618.01		2.858E-03	2.723E-02	4.422E-02	3.366E-03	0.065
		696.49	*	6.560E-03	2.761E-02	4.679E-02	3.798E-03	0.140
		778.57		-7.792E-01	2.130E+00	2.911E+00	2.721E-01	-0.268
PR-144		696.49	*	4.445E-01	1.871E+00	3.170E+00	2.573E-01	0.140
		1489.15		-1.232E+01	1.376E+01	1.606E+01	1.160E+00	-0.767
PM-146		453.90	*	-6.662E-03	3.602E-02	5.903E-02	5.251E-03	-0.113
		633.02		1.076E-01	1.117E+00	1.809E+00	6.714E-01	0.060
		735.90		6.039E-02	1.188E-01	1.941E-01	5.557E-02	0.311
		747.13		-4.228E-02	6.953E-02	1.099E-01	1.559E-02	-0.385
ND-147	+	91.11		8.936E-01	3.106E-01	4.534E-01	4.265E-02	1.971
		319.41		-5.079E-01	2.730E+00	4.353E+00	2.514E-01	-0.117
		439.89		1.312E+00	4.746E+00	8.001E+00	4.882E-01	0.164
		531.02	*	1.739E-01	4.400E-01	7.368E-01	1.028E-01	0.236
PM-149		285.90	*	-1.952E+01	7.414E+01	1.188E+02	1.680E+01	-0.164
EU-152		121.78		-3.097E-02	6.382E-02	1.001E-01	7.712E-03	-0.309
		244.69		3.375E-01	2.928E-01	4.526E-01	2.528E-02	0.746
		344.27	*	5.333E-04	9.332E-02	1.360E-01	8.874E-03	0.004
		443.98		-1.240E-01	8.157E-01	1.298E+00	7.956E-02	-0.096
		778.89		-1.231E-02	2.380E-01	3.366E-01	3.147E-02	-0.037
		867.32		3.236E-01	6.769E-01	1.007E+00	1.086E-01	0.321
	+	964.01		5.707E-01	3.411E-01	4.548E-01	4.658E-02	1.255
		1085.78		-2.118E-01	3.079E-01	4.842E-01	3.752E-02	-0.437
		1112.02		1.436E-01	2.577E-01	3.913E-01	2.786E-02	0.367
		1407.95		8.175E-02	1.639E-01	2.788E-01	2.071E-02	0.293
GD-153		69.67		-6.980E-01	1.802E+00	2.627E+00	2.132E-01	-0.266
		83.37		8.477E+00	1.514E+01	2.250E+01	1.998E+00	0.377
		97.43	*	-7.664E-02	8.086E-02	1.110E-01	8.680E-03	-0.690
		103.18		-7.619E-02	1.033E-01	1.428E-01	1.030E-02	-0.533
EU-154		123.07		-3.114E-03	4.510E-02	7.210E-02	6.819E-03	-0.043
		247.94		-3.947E-02	3.117E-01	4.705E-01	4.432E-02	-0.084
		591.81		-1.337E-01	5.315E-01	8.214E-01	8.737E-02	-0.163
		723.30		4.486E-02	1.553E-01	2.287E-01	2.156E-02	0.196
		756.87		-2.691E-01	6.038E-01	9.683E-01	1.187E-01	-0.278
		873.19		6.349E-02	2.178E-01	3.650E-01	5.084E-02	0.174
		996.32		-3.200E-01	2.666E-01	3.687E-01	6.743E-02	-0.868
		1004.76		1.274E-02	1.642E-01	2.670E-01	3.283E-02	0.048
		1274.45	*	-3.847E-03	9.524E-02	1.559E-01	1.557E-02	-0.025
TB-160	+	86.79		1.519E+00	2.895E-01	4.629E-01	4.235E-02	3.282
		197.04		-1.617E-01	4.614E-01	7.495E-01	4.025E-02	-0.216
		215.65		1.292E-01	6.388E-01	1.034E+00	5.645E-02	0.125
		298.57		1.029E-01	1.025E-01	1.730E-01	9.935E-03	0.595
		879.36	*	-2.353E-02	1.091E-01	1.754E-01	1.927E-02	-0.134

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		962.29		1.109E+00	4.805E-01	8.037E-01	8.257E-02	1.379
		966.15		1.355E+00	2.578E-01	4.549E-01	4.642E-02	2.979
		1177.93		8.497E-02	2.832E-01	4.789E-01	2.674E-02	0.177
		1271.85		-4.828E-01	5.327E-01	7.987E-01	5.398E-02	-0.604
HO-166M		80.57		2.081E-01	2.654E-01	4.050E-01	3.519E-02	0.514
		184.41		7.091E-02	3.127E-02	5.639E-02	2.996E-03	1.257
		280.46		-7.690E-02	7.046E-02	1.081E-01	6.168E-03	-0.711
		410.95		1.887E-01	1.991E-01	3.477E-01	2.047E-02	0.543
		711.68	*	-1.478E-02	4.678E-02	7.630E-02	6.360E-03	-0.194
		752.31		2.168E-01	2.086E-01	3.695E-01	3.303E-02	0.587
		810.29		-4.787E-02	4.633E-02	6.982E-02	6.874E-03	-0.686
TM-171		51.35		-1.892E+01	3.768E+01	6.211E+01	4.923E+00	-0.305
		52.39		4.159E+00	1.944E+01	3.301E+01	2.622E+00	0.126
		59.40		1.339E+01	2.904E+01	4.941E+01	3.752E+00	0.271
		66.72	*	-1.386E+01	3.015E+01	4.790E+01	3.830E+00	-0.289
LU-176	+	88.36		1.121E+00	2.136E-01	3.453E-01	3.170E-02	3.246
		201.83		-2.221E-02	2.354E-02	3.770E-02	2.033E-03	-0.589
		306.84	*	-1.237E-02	2.182E-02	3.288E-02	1.893E-03	-0.376
		401.10		-8.783E-01	5.217E+00	8.648E+00	5.027E-01	-0.102
LU-177		112.95		2.285E-01	1.478E+00	2.399E+00	1.546E-01	0.095
	+	208.36	*	2.398E+00	1.205E+00	1.635E+00	8.867E-02	1.467
LU-177M		52.97		1.071E+00	1.990E+00	3.416E+00	2.712E-01	0.314
		54.07		1.195E+00	1.018E+00	1.783E+00	1.410E-01	0.670
		61.30		-8.718E-01	1.604E+00	2.623E+00	2.027E-01	-0.332
		121.62		-1.846E-01	3.262E-01	5.096E-01	3.023E-02	-0.362
		147.16		-8.114E-01	5.851E-01	8.665E-01	4.715E-02	-0.936
		171.86		1.368E-01	4.003E-01	6.833E-01	3.597E-02	0.200
		218.09		1.093E+00	7.190E-01	1.260E+00	6.894E-02	0.867
		268.79		1.743E+00	6.825E-01	1.225E+00	6.948E-02	1.423
		319.02		-3.385E-03	2.123E-01	3.416E-01	1.972E-02	-0.010
		367.43		4.746E-01	7.077E-01	1.232E+00	7.115E-02	0.385
		413.65	*	-1.242E-01	1.423E-01	2.259E-01	1.334E-02	-0.550
HF-181		56.28		-5.345E-01	1.088E+00	1.788E+00	1.393E-01	-0.299
		57.53		-1.368E-01	5.740E-01	9.528E-01	7.347E-02	-0.144
		65.20		-1.632E+00	1.042E+00	1.578E+00	1.251E-01	-1.034
		133.02		3.784E-03	5.916E-02	9.464E-02	5.354E-03	0.040
		136.25		-2.225E-01	3.946E-01	6.120E-01	3.427E-02	-0.364
		345.85		-3.712E-02	1.808E-01	2.632E-01	1.523E-02	-0.141
		482.03	*	7.513E-03	3.397E-02	5.674E-02	3.632E-03	0.132
W-181		56.28		-2.087E-01	4.260E-01	7.003E-01	5.455E-02	-0.298
		57.53		-5.398E-02	2.250E-01	3.734E-01	2.880E-02	-0.145
		65.20	*	-6.344E-01	4.050E-01	6.135E-01	4.866E-02	-1.034
TA-182		67.75		4.572E-03	1.150E-01	1.859E-01	1.494E-02	0.025
		100.10		2.209E-01	1.666E-01	2.725E-01	2.048E-02	0.811
		152.43		2.128E-01	3.058E-01	4.972E-01	2.675E-02	0.428
		222.10		-2.058E-01	2.916E-01	4.683E-01	2.570E-02	-0.439
		1001.68		1.480E+00	1.562E+00	2.622E+00	2.503E-01	0.564
	+	1121.28		6.920E-01	1.845E-01	3.000E-01	2.067E-02	2.306
		1189.05		1.125E-01	2.332E-01	3.994E-01	2.284E-02	0.282

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1221.42	*	1.302E-02	1.381E-01	2.294E-01	1.403E-02	0.057
		1230.97		1.144E-01	3.903E-01	5.675E-01	3.539E-02	0.202
RE-183		57.98		6.854E-03	2.244E-01	3.764E-01	2.892E-02	0.018
		59.32		5.239E-02	1.195E-01	2.031E-01	1.543E-02	0.258
		67.20		-9.037E-02	2.103E-01	3.343E-01	2.680E-02	-0.270
		162.32	*	-6.364E-03	8.887E-02	1.499E-01	7.915E-03	-0.042
	+	208.81		2.167E+00	1.089E+00	1.498E+00	8.127E-02	1.447
		291.72		2.435E-01	9.093E-01	1.313E+00	7.525E-02	0.185
RE-184		57.98		2.527E-02	8.273E-01	1.388E+00	1.066E-01	0.018
		59.32		1.930E-01	4.400E-01	7.480E-01	5.683E-02	0.258
		67.20		-3.330E-01	7.749E-01	1.232E+00	9.875E-02	-0.270
		161.27		-1.908E-01	2.846E-01	4.689E-01	2.480E-02	-0.407
		216.55		2.431E-01	2.226E-01	3.847E-01	2.102E-02	0.632
		252.85	*	-2.889E-02	1.918E-01	3.124E-01	1.754E-02	-0.092
		318.01		2.261E-01	3.629E-01	6.047E-01	3.490E-02	0.374
		792.07		1.862E+00	1.207E+00	1.437E+00	1.373E-01	1.296
		903.28		-1.409E-02	9.226E-01	1.288E+00	1.446E-01	-0.011
		920.93		1.913E-02	3.601E-01	5.455E-01	5.977E-02	0.035
OS-185		59.72		1.159E-01	3.210E-01	5.440E-01	4.137E-02	0.213
		61.14		-1.624E-01	1.788E-01	2.881E-01	2.223E-02	-0.564
		69.30		-2.163E-01	3.278E-01	4.714E-01	3.819E-02	-0.459
		592.07		-2.467E-01	2.089E+00	3.356E+00	2.402E-01	-0.074
		646.12	*	9.716E-03	3.304E-02	5.424E-02	4.079E-03	0.179
		717.42		1.003E-01	6.963E-01	1.171E+00	9.861E-02	0.086
		874.81		-3.163E-02	4.298E-01	6.990E-01	7.625E-02	-0.045
		880.27		-3.029E-01	6.230E-01	9.780E-01	1.076E-01	-0.310
RE-188		155.03	*	1.693E-01	1.458E-01	2.567E-01	1.374E-02	0.659
		477.96		4.506E-01	2.478E+00	4.131E+00	2.632E-01	0.109
		633.10		-3.664E-01	2.296E+00	3.652E+00	2.715E-01	-0.100
W-188		63.58		5.963E+00	5.650E+01	9.368E+01	7.360E+00	0.064
		227.08		1.720E+00	1.114E+01	1.854E+01	1.022E+00	0.093
		290.67	*	1.449E+00	7.113E+00	1.024E+01	5.863E-01	0.142
IR-192	+	295.96		1.040E+00	1.461E-01	2.550E-01	1.487E-02	4.078
		308.46		-9.199E-02	8.120E-02	1.228E-01	7.154E-03	-0.749
		316.51	*	-1.331E-02	2.881E-02	4.524E-02	2.624E-03	-0.294
		468.07		1.383E-02	5.793E-02	8.473E-02	6.038E-03	0.163
		604.41		1.951E-01	4.359E-01	6.247E-01	7.590E-02	0.312
		612.46		2.863E+00	8.111E-01	1.355E+00	1.189E-01	2.113
AU-195		65.12		-2.949E-01	1.878E-01	2.845E-01	2.256E-02	-1.036
		66.83		-6.626E-02	1.003E-01	1.580E-01	1.264E-02	-0.419
	+	75.70		1.320E+00	2.704E-01	4.351E-01	3.654E-02	3.034
		98.88	*	3.193E-01	2.224E-01	3.461E-01	2.648E-02	0.923
		129.76		5.412E+00	2.648E+00	4.541E+00	2.598E-01	1.192
TL-200		367.94	*	1.932E-04	2.648E+00	Half-Life too short		
		579.30		4.667E-03	2.648E+00	Half-Life too short		
		828.27		9.223E-05	2.648E+00	Half-Life too short		
		1205.75		-5.456E-04	2.648E+00	Half-Life too short		
TL-201		68.90		-1.174E+00	5.194E+00	7.644E+00	6.180E-01	-0.154
		70.82		2.850E-01	2.811E+00	4.195E+00	3.425E-01	0.068

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		80.30		4.029E+00	4.864E+00	7.438E+00	6.449E-01	0.542
		135.34		-1.076E+01	2.171E+01	3.380E+01	1.898E+00	-0.318
		167.43	*	4.803E-01	5.747E+00	9.733E+00	5.109E-01	0.049
TL-202		68.90		-1.065E-01	4.715E-01	6.938E-01	5.609E-02	-0.154
		70.82		2.580E-02	2.544E-01	3.798E-01	3.101E-02	0.068
		80.30		3.648E-01	4.404E-01	6.735E-01	5.839E-02	0.542
		439.56	*	3.305E-02	5.675E-02	9.719E-02	5.925E-03	0.340
HG-203		70.83		1.154E-01	1.105E+00	1.650E+00	2.198E-01	0.070
		72.87		5.865E-01	5.849E-01	9.929E-01	1.288E-01	0.591
		82.60		-1.113E-01	1.131E+00	1.655E+00	2.296E-01	-0.067
		279.20	*	1.309E-02	3.338E-02	5.537E-02	3.358E-03	0.236
BI-207		72.80		1.343E-01	1.695E-01	2.876E-01	2.374E-02	0.467
	+	74.97		7.324E-01	1.500E-01	2.230E-01	1.865E-02	3.284
		84.90		2.307E-01	1.835E-01	2.800E-01	2.519E-02	0.824
		569.67		-3.131E-03	2.355E-02	3.791E-02	2.657E-03	-0.083
		1063.62	*	1.519E-02	3.985E-02	6.848E-02	5.653E-03	0.222
		1770.23		-3.284E-01	3.774E-01	3.967E-01	2.400E-02	-0.828
TL-207		81.07		1.598E-03	2.157E-01	3.176E-01	2.770E-02	0.005
		83.78		1.224E-01	1.285E-01	1.938E-01	1.728E-02	0.631
		94.90		1.890E-01	2.143E-01	3.596E-01	2.927E-02	0.526
		122.32		-3.290E-01	1.509E+00	2.397E+00	1.628E-01	-0.137
		144.24		6.507E-01	6.254E-01	1.020E+00	7.121E-02	0.638
		154.21		3.559E-01	3.394E-01	5.952E-01	3.960E-02	0.598
	+	269.46		6.041E-01	2.589E-01	3.019E-01	1.793E-02	2.001
		323.87	*	1.772E-01	6.137E-01	8.800E-01	1.453E-01	0.201
	+	338.28		6.793E+00	1.563E+00	2.137E+00	2.249E-01	3.178
		445.03		5.516E-01	1.904E+00	3.102E+00	3.246E-01	0.178
PO-209		260.50		2.374E+00	7.871E+00	1.307E+01	7.375E-01	0.182
		262.80		3.478E+00	2.355E+01	3.595E+01	2.032E+00	0.097
		896.60	*	2.677E-01	5.822E+00	9.542E+00	1.076E+00	0.028
BI-210		46.50	*	7.063E+00	5.276E+00	9.319E+00	7.210E-01	0.758
PB-210		46.50	*	7.063E+00	5.276E+00	9.319E+00	7.210E-01	0.758
PO-210		46.50	*	7.063E+00	5.268E+00	9.319E+00	6.199E-01	0.758
PB-211		404.84	*	-2.186E-01	7.663E-01	1.241E+00	7.739E-01	-0.176
		427.08		-8.185E-01	1.690E+00	2.605E+00	1.611E+00	-0.314
		831.96		3.749E-01	1.085E+00	1.782E+00	1.121E+00	0.210
PO-215		81.07		1.598E-03	2.157E-01	3.176E-01	2.770E-02	0.005
		83.78		1.224E-01	1.285E-01	1.938E-01	1.728E-02	0.631
		94.90		1.890E-01	2.143E-01	3.596E-01	2.927E-02	0.526
		122.32		-3.290E-01	1.509E+00	2.397E+00	1.628E-01	-0.137
		144.24		6.507E-01	6.254E-01	1.020E+00	7.121E-02	0.638
		154.21		3.559E-01	3.394E-01	5.952E-01	3.960E-02	0.598
	+	269.46		6.041E-01	2.589E-01	3.019E-01	1.793E-02	2.001
		323.87	*	1.772E-01	6.137E-01	8.800E-01	1.453E-01	0.201
	+	338.28		6.793E+00	1.563E+00	2.137E+00	2.249E-01	3.178
		445.03		5.516E-01	1.904E+00	3.102E+00	3.246E-01	0.178
RN-219	+	271.23		7.751E-01	3.347E-01	3.787E-01	3.036E-02	2.047
		401.81	*	-2.266E-01	3.303E-01	5.297E-01	7.212E-02	-0.428
RN-220		549.76	*	-1.050E+01	2.136E+01	3.366E+01	2.313E+00	-0.312

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-223		81.07		1.598E-03	2.157E-01	3.176E-01	2.770E-02	0.005
		83.78		1.224E-01	1.285E-01	1.938E-01	1.728E-02	0.631
		94.90		1.890E-01	2.143E-01	3.596E-01	2.927E-02	0.526
		122.32		-3.290E-01	1.509E+00	2.397E+00	1.628E-01	-0.137
		144.24		6.507E-01	6.254E-01	1.020E+00	7.121E-02	0.638
		154.21		3.559E-01	3.394E-01	5.952E-01	3.960E-02	0.598
	+	269.46		6.041E-01	2.589E-01	3.019E-01	1.793E-02	2.001
		323.87	*	1.772E-01	6.137E-01	8.800E-01	1.453E-01	0.201
	+	338.28		6.793E+00	1.563E+00	2.137E+00	2.249E-01	3.178
		445.03		5.516E-01	1.904E+00	3.102E+00	3.246E-01	0.178
AC-227		79.80		1.677E+00	1.623E+00	2.455E+00	5.281E-01	0.683
		236.00		7.331E-01	2.380E-01	3.796E-01	3.916E-02	1.931
		256.20	*	-1.390E-01	3.156E-01	5.053E-01	7.019E-02	-0.275
		286.10		-3.327E-01	1.263E+00	2.025E+00	2.332E-01	-0.164
	+	299.80		3.682E+00	1.821E+00	2.219E+00	3.610E-01	1.659
		304.40		1.191E+00	1.800E+00	2.646E+00	4.573E-01	0.450
		334.20		4.546E-01	2.365E+00	3.125E+00	5.727E-01	0.145
TH-227		79.80		1.677E+00	1.624E+00	2.455E+00	5.348E-01	0.683
	+	94.00		8.156E+00	3.000E+00	3.469E+00	7.507E-01	2.351
		236.00		7.331E-01	2.349E-01	3.796E-01	3.378E-02	1.931
		256.20	*	-1.390E-01	3.158E-01	5.053E-01	8.510E-02	-0.275
		286.10		-3.327E-01	1.306E+00	2.025E+00	2.028E+00	-0.164
	+	299.80		3.682E+00	1.821E+00	2.219E+00	3.610E-01	1.659
		304.40		1.191E+00	1.800E+00	2.646E+00	4.573E-01	0.450
		334.20		4.546E-01	2.365E+00	3.125E+00	5.727E-01	0.145
TH-229		85.43		2.412E-01	1.846E-01	2.819E-01	2.548E-02	0.856
	+	88.47		6.451E-01	1.229E-01	1.978E-01	1.812E-02	3.261
		100.00		2.349E-01	1.733E-01	2.837E-01	2.136E-02	0.828
		193.63	*	7.416E-02	4.079E-01	6.870E-01	3.679E-02	0.108
	+	210.97		1.698E+00	8.531E-01	1.121E+00	6.093E-02	1.515
PA-231		283.67	*	1.948E-01	1.226E+00	2.009E+00	2.761E-01	0.097
	+	301.29		1.473E+00	7.046E-01	8.876E-01	9.252E-02	1.659
TH-231		81.07		1.598E-03	2.157E-01	3.176E-01	2.770E-02	0.005
		83.78		1.224E-01	1.285E-01	1.938E-01	1.728E-02	0.631
		94.90		1.890E-01	2.143E-01	3.596E-01	2.927E-02	0.526
		122.32		-3.290E-01	1.509E+00	2.397E+00	1.628E-01	-0.137
		144.24		6.507E-01	6.254E-01	1.020E+00	7.121E-02	0.638
		154.21		3.559E-01	3.394E-01	5.952E-01	3.960E-02	0.598
	+	269.46		6.041E-01	2.589E-01	3.019E-01	1.793E-02	2.001
		323.87	*	1.772E-01	6.137E-01	8.800E-01	1.453E-01	0.201
	+	338.28		6.793E+00	1.563E+00	2.137E+00	2.249E-01	3.178
		445.03		5.516E-01	1.904E+00	3.102E+00	3.246E-01	0.178
U-231		84.21		3.667E+00	5.428E+00	8.098E+00	7.244E-01	0.453
	+	92.29		7.983E+00	2.465E+00	3.603E+00	3.068E-01	2.215
		95.87	*	6.676E-02	1.033E+00	1.508E+00	1.208E-01	0.044
		108.00		3.627E-01	2.016E+00	2.937E+00	1.997E-01	0.123
PA-233	+	75.28		2.137E+01	5.150E+00	6.597E+00	1.004E+00	3.240
	+	86.59		9.249E+00	2.937E+00	2.800E+00	7.558E-01	3.303
	+	300.12		1.026E+00	4.987E-01	6.144E-01	8.241E-02	1.671

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		311.98	*	2.811E-02	5.299E-02	8.791E-02	5.385E-03	0.320
		340.50		1.963E+00	7.968E-01	1.082E+00	2.486E-01	1.813
		398.62		1.034E-01	1.632E+00	2.740E+00	7.085E-01	0.038
		415.76		-2.089E-01	1.265E+00	2.089E+00	4.308E-01	-0.100
PA-234		63.00		1.028E+00	1.672E+00	2.810E+00	4.237E-01	0.366
		94.67		2.578E-01	1.601E-01	2.708E-01	3.275E-02	0.952
		98.44		1.035E-01	1.069E-01	1.390E-01	7.736E-02	0.745
		99.86		6.137E-01	4.397E-01	7.209E-01	5.439E-02	0.851
		111.00		-2.595E-02	1.685E-01	2.703E-01	2.900E-02	-0.096
		131.20		3.708E-02	9.956E-02	1.613E-01	9.182E-03	0.230
		152.70		1.313E-01	2.974E-01	4.776E-01	7.478E-02	0.275
	+	186.00		6.194E+00	2.863E+00	2.283E+00	6.955E-01	2.713
		226.40		1.577E-01	3.460E-01	5.820E-01	6.645E-02	0.271
		227.20		1.150E-01	3.739E-01	6.259E-01	3.450E-02	0.184
		248.90		-1.801E-01	6.653E-01	1.077E+00	2.308E-01	-0.167
		293.70		5.328E+00	1.176E+00	1.539E+00	2.471E-01	3.463
		369.80		-8.222E-02	6.528E-01	1.091E+00	2.271E-01	-0.075
		568.70		1.775E-01	7.695E-01	1.270E+00	8.890E-02	0.140
		569.50		-3.012E-02	2.089E-01	3.359E-01	2.353E-02	-0.090
		574.00		-7.509E-01	1.191E+00	1.788E+00	1.258E-01	-0.420
		699.00		-7.275E-02	5.765E-01	9.550E-01	1.802E-01	-0.076
		706.10		-5.297E-02	7.874E-01	1.307E+00	5.821E-01	-0.041
		733.00		-9.646E-02	3.428E-01	4.760E-01	1.057E-01	-0.203
		742.81		4.414E-01	1.071E+00	1.761E+00	1.184E+00	0.251
		796.30		1.210E+00	9.249E-01	1.383E+00	3.787E-01	0.875
		805.60		9.060E-01	8.436E-01	1.415E+00	4.387E-01	0.640
		819.60		-3.891E-02	9.233E-01	1.515E+00	5.812E-01	-0.026
		826.30		-3.871E-01	6.656E-01	1.007E+00	4.538E-01	-0.384
		831.60		-6.361E-02	5.460E-01	8.903E-01	2.701E-01	-0.071
		876.40		-2.744E-01	6.947E-01	1.001E+00	1.031E+00	-0.274
		880.51		-6.222E-03	2.206E-01	3.600E-01	3.962E-02	-0.017
		883.24		3.954E-02	2.378E-01	3.913E-01	2.644E-01	0.101
		899.00		8.263E-02	6.796E-01	1.094E+00	4.850E-01	0.076
		925.00		7.350E-01	9.336E-01	1.478E+00	1.610E-01	0.497
		926.50		-6.777E-02	1.543E-01	2.013E-01	5.260E-02	-0.337
		946.00	*	2.133E-01	2.548E-01	4.345E-01	8.572E-02	0.491
		949.00		2.672E-01	3.593E-01	6.160E-01	6.469E-02	0.434
		980.50		-3.232E-01	5.861E-01	9.026E-01	8.977E-02	-0.358
		1394.10		-5.200E-01	9.923E-01	1.421E+00	9.231E-01	-0.366
PA-234M	+	766.42		1.770E+01	1.617E+01	1.713E+01	8.706E+00	1.034
		1001.03	*	3.149E+00	3.555E+00	5.936E+00	6.404E-01	0.530
TH-234		63.29	*	2.714E-01	1.433E+00	2.382E+00	4.199E-01	0.114
	+	92.38		2.111E+00	7.329E-01	9.522E-01	1.717E-01	2.216
NP-236		94.67		1.980E-01	1.203E-01	2.056E-01	1.680E-02	0.963
		98.44		7.823E-02	6.836E-02	1.051E-01	8.092E-03	0.744
		111.00		-1.963E-02	1.274E-01	2.044E-01	1.345E-02	-0.096
		160.31	*	-4.852E-02	6.472E-02	1.064E-01	5.635E-03	-0.456
U-238		63.29	*	2.714E-01	1.433E+00	2.382E+00	4.199E-01	0.114
	+	92.38		2.111E+00	6.517E-01	9.522E-01	8.094E-02	2.216

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NP-239		99.55		2.078E-01	1.560E-01	2.415E-01	1.830E-02	0.861
		117.00	*	6.553E-03	1.676E-01	2.702E-01	1.672E-02	0.024
	+	209.75		1.711E+00	8.594E-01	1.180E+00	6.406E-02	1.450
		228.18		6.747E-02	1.966E-01	3.294E-01	1.817E-02	0.205
		277.60		1.280E-01	1.473E-01	2.495E-01	1.421E-02	0.513
		334.30		3.267E-01	1.342E+00	1.782E+00	1.031E-01	0.183
AM-241		59.54	*	8.427E-02	1.686E-01	2.871E-01	2.381E-02	0.294
CM-243		99.55		2.139E-01	1.605E-01	2.485E-01	1.883E-02	0.861
		103.76	*	1.798E-02	9.431E-02	1.379E-01	9.870E-03	0.130
		117.00		6.741E-03	1.725E-01	2.780E-01	1.721E-02	0.024
	+	209.75		1.686E+00	8.472E-01	1.163E+00	6.315E-02	1.450
		228.18		6.817E-02	1.987E-01	3.329E-01	1.836E-02	0.205
		277.60		1.290E-01	1.485E-01	2.516E-01	1.433E-02	0.513
AM-246		798.80		-1.103E-01	1.283E-01	1.642E-01	1.587E-02	-0.672
		1036.00		-2.195E-02	2.428E-01	4.037E-01	3.574E-02	-0.054
		1062.04		5.261E-02	1.696E-01	2.901E-01	2.405E-02	0.181
		1078.86	*	1.282E-01	1.151E-01	2.065E-01	1.633E-02	0.621
CM-247		278.00		4.483E-01	6.088E-01	1.026E+00	5.843E-02	0.437
		287.40		-2.896E-02	1.066E+00	1.669E+00	9.547E-02	-0.017
		402.60	*	-6.880E-03	2.949E-02	4.871E-02	2.837E-03	-0.141
CF-249		252.85		-1.084E-01	7.198E-01	1.172E+00	6.585E-02	-0.092
		333.44		2.175E-02	2.276E-01	2.308E-01	1.335E-02	0.094
		387.95	*	-1.330E-02	3.286E-02	5.397E-02	3.103E-03	-0.246
CF-251		176.60	*	5.202E-03	1.046E-01	1.763E-01	9.308E-03	0.030
		227.00		5.394E-02	3.346E-01	5.568E-01	3.069E-02	0.097
		285.00		2.990E-01	1.424E+00	2.340E+00	1.337E-01	0.128

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]G244125003      *
* Acquisition date : 20-JAN-2010 13:30:46 Detector SN#     :               *
* Detector ID        : GAM18               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 02:00:01.59     Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        :  5-JAN-2010 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G244125003           Analyst initials: MXR1          *
* Batch Number       : 940263               Sample Quantity : 1.2380E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :    0.00000                                             *
* CALIB. DATE/TIME : 23-APR-2009 11:59:23 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	2.002E+01	1.940E+00	4.595E-01	0.000E+00
NB-95	6.683E-02	5.008E-02	5.268E-02	0.000E+00
CD-109	4.806E+00	8.978E-01	1.164E+00	0.000E+00
SN-126	4.725E-01	8.825E-02	1.152E-01	0.000E+00
EU-155	9.850E-02	1.097E-01	1.598E-01	0.000E+00
TL-208	4.818E-01	7.481E-02	4.684E-02	0.000E+00
BI-211	3.956E+00	4.421E-01	2.756E-01	0.000E+00
BI-212	8.438E-01	4.394E-01	3.540E-01	0.000E+00
PB-212	1.744E+00	1.584E-01	7.661E-02	0.000E+00
PO-212	1.744E+00	1.584E-01	7.661E-02	0.000E+00
BI-214	1.250E+00	1.652E-01	9.389E-02	0.000E+00
PB-214	1.376E+00	1.691E-01	9.669E-02	0.000E+00
PO-214	1.376E+00	1.691E-01	9.669E-02	0.000E+00
PO-216	1.744E+00	1.584E-01	7.661E-02	0.000E+00
PO-218	1.376E+00	1.691E-01	9.669E-02	0.000E+00
RA-224	4.862E+00	1.179E+00	8.706E-01	0.000E+00
RA-226	1.250E+00	1.652E-01	9.389E-02	0.000E+00
AC-228	1.810E+00	3.575E-01	1.610E-01	0.000E+00
RA-228	1.810E+00	3.575E-01	1.610E-01	0.000E+00
TH-228	1.771E+00	1.608E-01	7.777E-02	0.000E+00
TH-230	1.250E+00	1.652E-01	9.389E-02	0.000E+00
TH-232	1.810E+00	3.575E-01	1.610E-01	0.000E+00
U-234	1.250E+00	1.652E-01	9.389E-02	0.000E+00
U-235	1.918E-01	1.906E-01	3.231E-01	0.000E+00
NP-237	1.387E+00	3.819E-01	3.764E-01	0.000E+00
AM-243	4.080E-01	8.189E-02	8.823E-02	0.000E+00
ANH-511	1.565E-01	6.036E-02	3.799E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)

BE-7	-5.308E-03	2.548E-01	4.344E-01	0.000E+00	NOT IDENT.
NA-22	-1.045E-02	3.414E-02	5.576E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	6.302E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-1.466E-03	1.932E-02	3.176E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.789E-02	8.497E-02	0.000E+00	FAIL ABUN
SC-46	3.245E-03	3.101E-02	5.241E-02	0.000E+00	FAIL ABUN
V-48	3.855E-02	5.564E-02	9.721E-02	0.000E+00	NOT IDENT.
CR-51	-1.813E-01	3.025E-01	4.899E-01	0.000E+00	NOT IDENT.
MN-52	7.162E-02	1.783E-01	3.084E-01	0.000E+00	NOT IDENT.
MN-54	3.148E-02	3.282E-02	5.834E-02	0.000E+00	NOT IDENT.
CO-56	7.539E-03	2.979E-02	5.116E-02	0.000E+00	FAIL ABUN
CO-57	-5.003E-03	2.138E-02	3.577E-02	0.000E+00	NOT IDENT.
CO-58	-3.822E-02	3.025E-02	4.586E-02	0.000E+00	NOT IDENT.
FE-59	-7.732E-03	6.364E-02	1.073E-01	0.000E+00	NOT IDENT.
CO-60	-1.210E-02	3.120E-02	5.008E-02	0.000E+00	NOT IDENT.
ZN-65	5.836E-02	7.799E-02	1.223E-01	0.000E+00	NOT IDENT.
GE-68	1.395E+00	9.985E-01	1.859E+00	0.000E+00	NOT IDENT.
AS-73	6.690E-01	9.826E-01	1.804E+00	0.000E+00	NOT IDENT.
AS-74	3.875E-05	7.373E-02	1.231E-01	0.000E+00	NOT IDENT.
SE-75	-1.226E-02	3.962E-02	5.791E-02	0.000E+00	NOT IDENT.
BR-77	1.168E+00	8.373E+00	1.392E+01	0.000E+00	FAIL ABUN
SR-82	-5.695E-01	4.002E-01	5.026E-01	0.000E+00	NOT IDENT.
RB-83	9.519E-03	5.631E-02	9.378E-02	0.000E+00	NOT IDENT.
RB-84	1.049E-02	5.506E-02	9.374E-02	0.000E+00	NOT IDENT.
KR-85	0.000E+00	6.730E+00	1.166E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	3.449E-02	5.973E-02	0.000E+00	NOT IDENT.
RB-86	4.404E-01	6.338E-01	1.133E+00	0.000E+00	NOT IDENT.
Y-88	1.498E-02	2.692E-02	4.828E-02	0.000E+00	NOT IDENT.
ZR-88	1.132E-02	2.427E-02	4.316E-02	0.000E+00	NOT IDENT.
Y-91	-3.749E+00	1.472E+01	2.438E+01	0.000E+00	NOT IDENT.
NB-94	-9.651E-05	2.543E-02	4.369E-02	0.000E+00	NOT IDENT.
NB-95M	1.620E-01	1.137E-01	1.842E-01	0.000E+00	NOT IDENT.
ZR-95	-2.805E-02	5.514E-02	9.067E-02	0.000E+00	NOT IDENT.
NB-97	0.000E+00	6.577E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.595E+06	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-6.553E+00	8.743E+00	1.406E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	3.155E+16	0.000E+00	0.000E+00	SHORT HLIF
RH-101	3.985E-03	2.670E-02	4.632E-02	0.000E+00	NOT IDENT.
RH-102	6.500E-03	2.310E-02	4.008E-02	0.000E+00	FAIL ABUN
RU-103	2.588E-02	3.117E-02	5.538E-02	0.000E+00	FAIL ABUN
RH-106	2.504E-01	2.548E-01	4.484E-01	0.000E+00	FAIL ABUN
RU-106	2.504E-01	2.536E-01	4.484E-01	0.000E+00	FAIL ABUN
AG-108M	-3.398E-02	2.528E-02	3.993E-02	0.000E+00	NOT IDENT.
AG-110M	-1.013E-02	2.489E-02	4.185E-02	0.000E+00	NOT IDENT.
IN-111	-2.190E-01	9.223E-01	1.367E+00	0.000E+00	NOT IDENT.
IN-113M	6.846E-03	3.502E-02	6.150E-02	0.000E+00	NOT IDENT.
SN-113	6.846E-03	3.502E-02	6.150E-02	0.000E+00	NOT IDENT.
IN-114M	7.605E-02	1.609E-01	2.549E-01	0.000E+00	NOT IDENT.
CD-115	-2.686E+00	8.318E+00	1.359E+01	0.000E+00	NOT IDENT.
SN-117M	-1.110E-02	4.396E-02	7.748E-02	0.000E+00	NOT IDENT.
SB-122	1.945E+00	1.626E+00	2.922E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	4.275E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-1.037E-02	2.260E-02	3.951E-02	0.000E+00	NOT IDENT.
I-124	-4.531E-01	6.640E-01	8.874E-01	0.000E+00	NOT IDENT.
SB-124	-2.709E-03	5.163E-02	8.602E-02	0.000E+00	FAIL ABUN
SB-125	8.023E-04	6.808E-02	1.175E-01	0.000E+00	FAIL ABUN
TE-125M	8.642E-02	9.228E+00	1.403E+01	0.000E+00	NOT IDENT.
I-126	3.159E-02	1.357E-01	2.378E-01	0.000E+00	NOT IDENT.
SB-126	1.018E-02	1.210E-01	1.801E-01	0.000E+00	FAIL ABUN
SB-127	6.223E-01	1.044E+00	1.861E+00	0.000E+00	NOT IDENT.
XE-127	-2.310E-02	3.747E-02	6.374E-02	0.000E+00	NOT IDENT.
I-131	-4.943E-02	9.068E-02	1.543E-01	0.000E+00	NOT IDENT.
TE-132	1.951E-01	5.826E-01	1.019E+00	0.000E+00	NOT IDENT.
BA-133	-9.111E-03	4.026E-02	5.710E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	4.640E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	5.751E-02	7.330E-02	0.000E+00	FAIL ABUN
CS-135	1.871E-01	1.425E-01	2.292E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	3.820E+15	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-7.483E-03	8.036E-02	1.366E-01	0.000E+00	FAIL ABUN
BA-137M	-6.126E-04	2.577E-02	4.447E-02	0.000E+00	NOT IDENT.
CS-137	-6.476E-04	2.724E-02	4.701E-02	0.000E+00	NOT IDENT.
CE-139	1.010E-03	2.411E-02	4.280E-02	0.000E+00	NOT IDENT.
BA-140	9.205E-02	2.081E-01	3.573E-01	0.000E+00	NOT IDENT.
LA-140	-7.510E-02	6.880E-02	1.013E-01	0.000E+00	FAIL ABUN
CE-141	2.889E-02	5.589E-02	9.397E-02	0.000E+00	NOT IDENT.
CE-143	0.000E+00	2.044E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-1.542E-01	1.829E-01	2.938E-01	0.000E+00	NOT IDENT.
PM-144	6.560E-03	2.706E-02	4.721E-02	0.000E+00	NOT IDENT.

PR-144	4.445E-01	1.834E+00	3.199E+00	0.000E+00	NOT IDENT.
PM-146	-6.662E-03	3.530E-02	5.990E-02	0.000E+00	NOT IDENT.
ND-147	1.739E-01	4.312E-01	7.461E-01	0.000E+00	FAIL ABUN
PM-149	-1.952E+01	7.266E+01	1.213E+02	0.000E+00	NOT IDENT.
EU-152	5.333E-04	9.145E-02	1.385E-01	0.000E+00	FAIL ABUN
GD-153	-7.664E-02	7.924E-02	1.150E-01	0.000E+00	NOT IDENT.
EU-154	-3.847E-03	9.334E-02	1.559E-01	0.000E+00	NOT IDENT.
TB-160	-2.353E-02	1.070E-01	1.764E-01	0.000E+00	FAIL ABUN
HO-166M	-1.478E-02	4.584E-02	7.696E-02	0.000E+00	NOT IDENT.
TM-171	-1.386E+01	2.955E+01	4.985E+01	0.000E+00	NOT IDENT.
LU-176	-1.237E-02	2.138E-02	3.354E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.181E+00	1.676E+00	0.000E+00	FAIL ABUN
LU-177M	-1.242E-01	1.394E-01	2.295E-01	0.000E+00	NOT IDENT.
HF-181	7.513E-03	3.329E-02	5.753E-02	0.000E+00	NOT IDENT.
W-181	-6.344E-01	3.969E-01	6.386E-01	0.000E+00	NOT IDENT.
TA-182	1.302E-02	1.353E-01	2.297E-01	0.000E+00	FAIL ABUN
RE-183	-6.364E-03	8.709E-02	1.542E-01	0.000E+00	FAIL ABUN
RE-184	-2.889E-02	1.879E-01	3.195E-01	0.000E+00	NOT IDENT.
OS-185	9.716E-03	3.238E-02	5.478E-02	0.000E+00	NOT IDENT.
RE-188	1.693E-01	1.428E-01	2.642E-01	0.000E+00	NOT IDENT.
W-188	1.449E+00	6.971E+00	1.045E+01	0.000E+00	NOT IDENT.
IR-192	-1.331E-02	2.823E-02	4.613E-02	0.000E+00	FAIL ABUN
AU-195	3.193E-01	2.179E-01	3.583E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	3.369E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	4.803E-01	5.632E+00	1.001E+01	0.000E+00	NOT IDENT.
TL-202	3.305E-02	5.562E-02	9.867E-02	0.000E+00	NOT IDENT.
HG-203	1.309E-02	3.271E-02	5.655E-02	0.000E+00	NOT IDENT.
BI-207	1.519E-02	3.905E-02	6.869E-02	0.000E+00	FAIL ABUN
TL-207	1.772E-01	6.014E-01	8.971E-01	0.000E+00	FAIL ABUN
PO-209	2.677E-01	5.705E+00	9.595E+00	0.000E+00	NOT IDENT.
BI-210	7.063E+00	5.170E+00	9.742E+00	0.000E+00	NOT IDENT.
PB-210	7.063E+00	5.170E+00	9.742E+00	0.000E+00	NOT IDENT.
PO-210	7.063E+00	5.163E+00	9.742E+00	0.000E+00	NOT IDENT.
PB-211	-2.186E-01	7.510E-01	1.262E+00	0.000E+00	NOT IDENT.
PO-215	1.772E-01	6.014E-01	8.971E-01	0.000E+00	FAIL ABUN
RN-219	-2.266E-01	3.237E-01	5.385E-01	0.000E+00	FAIL ABUN
RN-220	-1.050E+01	2.093E+01	3.407E+01	0.000E+00	NOT IDENT.
RA-223	1.772E-01	6.014E-01	8.971E-01	0.000E+00	FAIL ABUN
AC-227	-1.390E-01	3.093E-01	5.167E-01	0.000E+00	FAIL ABUN
TH-227	-1.390E-01	3.095E-01	5.167E-01	0.000E+00	FAIL ABUN
TH-229	7.416E-02	3.997E-01	7.051E-01	0.000E+00	FAIL ABUN
PA-231	1.948E-01	1.201E+00	2.052E+00	0.000E+00	FAIL ABUN
TH-231	1.772E-01	6.014E-01	8.971E-01	0.000E+00	FAIL ABUN
U-231	6.676E-02	1.012E+00	1.562E+00	0.000E+00	FAIL ABUN
PA-233	2.811E-02	5.193E-02	8.966E-02	0.000E+00	FAIL ABUN
PA-234	2.133E-01	2.497E-01	4.366E-01	0.000E+00	FAIL ABUN
PA-234M	3.149E+00	3.484E+00	5.960E+00	0.000E+00	FAIL ABUN
TH-234	2.714E-01	1.404E+00	2.480E+00	0.000E+00	FAIL ABUN
NP-236	-4.852E-02	6.342E-02	1.094E-01	0.000E+00	NOT IDENT.
U-238	2.714E-01	1.404E+00	2.480E+00	0.000E+00	FAIL ABUN
NP-239	6.553E-03	1.643E-01	2.791E-01	0.000E+00	FAIL ABUN
AM-241	8.427E-02	1.652E-01	2.992E-01	0.000E+00	NOT IDENT.
CM-243	1.798E-02	9.242E-02	1.427E-01	0.000E+00	FAIL ABUN
AM-246	1.282E-01	1.128E-01	2.071E-01	0.000E+00	NOT IDENT.
CM-247	-6.880E-03	2.890E-02	4.951E-02	0.000E+00	NOT IDENT.
CF-249	-1.330E-02	3.221E-02	5.489E-02	0.000E+00	NOT IDENT.
CF-251	5.202E-03	1.025E-01	1.811E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 20-JAN-2010 15:33:00.58

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*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
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Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G244125003.CNF;1
Sample date       : 5-JAN-2010 12:00:00. Acquisition date : 20-JAN-2010 13:30:46
Sample ID         : G244125003           Sample quantity  : 1.23800E+02 GRAM
Detector name     : GAM18                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.59  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 940263               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	1334	10.67*	1.893E+00	2.002E+01	2.002E+01	9.89
NB-95	765.79	60	99.81*	3.199E+00	5.675E-02	6.683E-02	76.47
CD-109	88.03	373	3.72*	6.465E+00	4.699E+00	4.806E+00	19.06
SN-126	64.28	------	9.60	3.245E+00	------ Line Not Found		------
	86.94	373	8.90	6.465E+00	1.964E+00	1.964E+00	44.72
	87.57	373	37.00*	6.465E+00	4.725E-01	4.725E-01	19.06
EU-155	48.70	------	4.60	9.095E-01	------ Line Not Found		------
	60.01	------	1.11	2.537E+00	------ Line Not Found		------
	86.54	373	30.90	6.465E+00	5.657E-01	5.690E-01	19.10
	105.31	52	20.70*	7.726E+00	9.793E-02	9.850E-02	113.60
TL-208	277.35	------	6.80	6.258E+00	------ Line Not Found		------
	510.84	222	21.60	4.309E+00	7.244E-01	7.244E-01	40.23
	583.14	526	84.20*	3.934E+00	4.818E-01	4.818E-01	15.84
	860.37	88	12.46	2.915E+00	7.328E-01	7.328E-01	52.51
BI-211	72.87	------	1.27	4.622E+00	------ Line Not Found		------
	351.07	920	12.94*	5.450E+00	3.956E+00	3.956E+00	11.40
BI-212	727.18	110	11.80*	3.339E+00	8.438E-01	8.438E-01	53.14
	785.46	91	1.97	3.140E+00	4.472E+00	4.472E+00	61.60
	1620.62	------	2.75	1.770E+00	------ Line Not Found		------
PB-212	74.81	439	10.70	4.943E+00	2.517E+00	2.517E+00	22.51
	77.11	682	18.00	5.269E+00	2.181E+00	2.181E+00	14.68
	87.30	373	8.00	6.465E+00	2.185E+00	2.185E+00	21.52
	238.63	1742	44.60*	6.792E+00	1.744E+00	1.744E+00	9.27
	300.09	134	3.41	5.984E+00	1.987E+00	1.987E+00	47.41
PO-212	74.81	439	10.70	4.943E+00	2.517E+00	2.517E+00	22.51
	77.11	682	18.00	5.269E+00	2.181E+00	2.181E+00	14.68
	87.30	373	8.00	6.465E+00	2.185E+00	2.185E+00	21.52
	115.19	------	0.60	8.058E+00	------ Line Not Found		------
	238.63	1742	44.60*	6.792E+00	1.744E+00	1.744E+00	9.27
	300.09	134	3.41	5.984E+00	1.987E+00	1.987E+00	47.41
BI-214	609.31	727	46.30*	3.812E+00	1.250E+00	1.250E+00	13.49
	1120.29	170	15.10	2.334E+00	1.464E+00	1.464E+00	27.47

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	1764.49	136	15.80	1.695E+00	1.538E+00	1.538E+00	23.40
PB-214	74.81	439	6.21	4.943E+00	4.336E+00	4.336E+00	21.78
	77.11	682	10.50	5.269E+00	3.739E+00	3.739E+00	16.54
	87.30	373	4.67	6.465E+00	3.743E+00	3.743E+00	20.56
	241.98	427	7.49	6.746E+00	2.564E+00	2.564E+00	25.37
	295.21	522	19.20	6.040E+00	1.365E+00	1.365E+00	15.34
	351.92	920	37.20*	5.450E+00	1.376E+00	1.376E+00	12.54
PO-214	74.81	439	6.21	4.943E+00	4.336E+00	4.336E+00	21.78
	77.11	682	10.50	5.269E+00	3.739E+00	3.739E+00	16.54
	87.30	373	4.67	6.465E+00	3.743E+00	3.743E+00	20.56
	241.98	427	7.49	6.746E+00	2.564E+00	2.564E+00	25.37
	295.21	522	19.20	6.040E+00	1.365E+00	1.365E+00	15.34
	351.92	920	37.20*	5.450E+00	1.376E+00	1.376E+00	12.54
PO-216	74.81	439	10.70	4.943E+00	2.517E+00	2.517E+00	22.51
	77.11	682	18.00	5.269E+00	2.181E+00	2.181E+00	14.68
	87.30	373	8.00	6.465E+00	2.185E+00	2.185E+00	21.52
	238.63	1742	44.60*	6.792E+00	1.744E+00	1.744E+00	9.27
	300.09	134	3.41	5.984E+00	1.987E+00	1.987E+00	47.41
PO-218	74.81	439	6.21	4.943E+00	4.336E+00	4.336E+00	21.78
	77.11	682	10.50	5.269E+00	3.739E+00	3.739E+00	16.54
	87.30	373	4.67	6.465E+00	3.743E+00	3.743E+00	20.56
	241.98	427	7.49	6.746E+00	2.564E+00	2.564E+00	25.37
	295.21	522	19.20	6.040E+00	1.365E+00	1.365E+00	15.34
	351.92	920	37.20*	5.450E+00	1.376E+00	1.376E+00	12.54
RA-224	240.98	427	3.95*	6.746E+00	4.862E+00	4.862E+00	24.74
RA-226	609.31	727	46.30*	3.812E+00	1.250E+00	1.250E+00	13.49
	1120.29	170	15.10	2.334E+00	1.464E+00	1.464E+00	27.47
	1764.49	136	15.80	1.695E+00	1.538E+00	1.538E+00	23.40
AC-228	338.32	341	11.40	5.581E+00	1.627E+00	1.627E+00	45.61
	911.07	460	27.70*	2.780E+00	1.810E+00	1.810E+00	20.15
	969.11	241	16.60	2.639E+00	1.669E+00	1.669E+00	30.13
RA-228	338.32	341	11.40	5.581E+00	1.627E+00	1.627E+00	45.61
	911.07	460	27.70*	2.780E+00	1.810E+00	1.810E+00	20.15
	969.11	241	16.60	2.639E+00	1.669E+00	1.669E+00	30.13
TH-228	74.81	439	10.70	4.943E+00	2.517E+00	2.555E+00	20.51
	77.11	682	18.00	5.269E+00	2.181E+00	2.214E+00	14.68
	87.30	373	8.00	6.465E+00	2.185E+00	2.218E+00	19.06
	238.63	1742	44.60*	6.792E+00	1.744E+00	1.771E+00	9.27
	300.09	134	3.41	5.984E+00	1.987E+00	2.017E+00	75.19
TH-230	609.31	727	46.30*	3.812E+00	1.250E+00	1.250E+00	13.49
	1120.29	170	15.10	2.334E+00	1.464E+00	1.464E+00	27.47
	1764.49	136	15.80	1.695E+00	1.538E+00	1.538E+00	23.40
TH-232	338.32	341	11.40	5.581E+00	1.627E+00	1.627E+00	21.26
	911.07	460	27.70*	2.780E+00	1.810E+00	1.810E+00	20.15
	969.11	241	16.60	2.639E+00	1.669E+00	1.669E+00	30.13
U-234	609.31	727	46.30*	3.812E+00	1.250E+00	1.250E+00	13.49
	1120.29	170	15.10	2.334E+00	1.464E+00	1.464E+00	27.47
	1764.49	136	15.80	1.695E+00	1.538E+00	1.538E+00	23.40
U-235	89.95	214	2.70	6.736E+00	3.571E+00	3.571E+00	45.53

Sample ID : G244125003 Acquisition date : 20-JAN-2010 13:30:46

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	93.35	262	4.50	6.958E+00	2.537E+00	2.537E+00	40.80
	105.00	52	2.10	7.726E+00	9.653E-01	9.653E-01	117.13
	143.76	------	10.50*	8.222E+00	------ Line Not Found		------
	163.35	------	4.70	8.004E+00	------ Line Not Found		------
	185.71	312	54.00	7.646E+00	2.294E-01	2.294E-01	35.17
	205.31	------	4.70	7.323E+00	------ Line Not Found		------
NP-237	86.50	373	12.60*	6.465E+00	1.387E+00	1.387E+00	28.09
	95.87	------	2.60	7.180E+00	------ Line Not Found		------
AM-243	74.67	439	66.00*	4.943E+00	4.080E-01	4.080E-01	20.48
	86.72	373	0.34	6.465E+00	5.203E+01	5.203E+01	19.06
	117.66	------	0.55	8.112E+00	------ Line Not Found		------
	142.18	------	0.13	8.232E+00	------ Line Not Found		------
ANH-511	511.00	222	100.00*	4.309E+00	1.565E-01	1.565E-01	39.36

Flag: "*" = Keyline

Sample ID : G244125003 Acquisition date : 20-JAN-2010 13:30:46

Total number of lines in spectrum 36
Number of unidentified lines 4
Number of lines tentatively identified by NID 32 88.89%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.002E+01	2.002E+01	0.198E+01	9.89	
NB-95	64.02D	1.18	5.675E-02	6.683E-02	5.111E-02	76.47	
CD-109	464.00D	1.02	4.699E+00	4.806E+00	0.916E+00	19.06	
SN-126	1.00E+05Y	1.00	4.725E-01	4.725E-01	0.900E-01	19.06	
EU-155	4.96Y	1.01	9.793E-02	9.850E-02	11.19E-02	113.60	
TL-208	1.41E+10Y	1.00	4.818E-01	4.818E-01	0.763E-01	15.84	
BI-211	7.04E+08Y	1.00	3.956E+00	3.956E+00	0.451E+00	11.40	
BI-212	1.41E+10Y	1.00	8.438E-01	8.438E-01	4.484E-01	53.14	
PB-212	1.41E+10Y	1.00	1.744E+00	1.744E+00	0.162E+00	9.27	
PO-212	1.41E+10Y	1.00	1.744E+00	1.744E+00	0.162E+00	9.27	
BI-214	1600.00Y	1.00	1.250E+00	1.250E+00	0.169E+00	13.49	
PB-214	1600.00Y	1.00	1.376E+00	1.376E+00	0.173E+00	12.54	
PO-214	1600.00Y	1.00	1.376E+00	1.376E+00	0.173E+00	12.54	
PO-216	1.41E+10Y	1.00	1.744E+00	1.744E+00	0.162E+00	9.27	
PO-218	1600.00Y	1.00	1.376E+00	1.376E+00	0.173E+00	12.54	
RA-224	1.41E+10Y	1.00	4.862E+00	4.862E+00	1.203E+00	24.74	
RA-226	1600.00Y	1.00	1.250E+00	1.250E+00	0.169E+00	13.49	
AC-228	1.41E+10Y	1.00	1.810E+00	1.810E+00	0.365E+00	20.15	
RA-228	1.41E+10Y	1.00	1.810E+00	1.810E+00	0.365E+00	20.15	
TH-228	1.91Y	1.02	1.744E+00	1.771E+00	0.164E+00	9.27	
TH-230	4.47E+09Y	1.00	1.250E+00	1.250E+00	0.169E+00	13.49	
TH-232	1.41E+10Y	1.00	1.810E+00	1.810E+00	0.365E+00	20.15	
U-234	4.47E+09Y	1.00	1.250E+00	1.250E+00	0.169E+00	13.49	
U-235	7.04E+08Y	1.00	2.294E-01	2.294E-01	0.807E-01	35.17	K
NP-237	2.14E+06Y	1.00	1.387E+00	1.387E+00	0.390E+00	28.09	
AM-243	7380.00Y	1.00	4.080E-01	4.080E-01	0.836E-01	20.48	
ANH-511	1.00E+09Y	1.00	1.565E-01	1.565E-01	0.616E-01	39.36	
	Total Activity :		5.920E+01	5.935E+01			

Grand Total Activity : 5.920E+01 5.935E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G244125003 Acquisition date : 20-JAN-2010 13:30:46

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	209.53	133	295	1.18	418.08	414	9	1.84E-02	49.9	7.25E+00	T
0	270.34	172	273	1.93	539.66	532	13	2.39E-02	42.4	6.35E+00	T
0	327.90	71	164	1.21	654.74	652	8	9.83E-03	66.8	5.68E+00	T
0	462.78	131	137	0.94	924.42	918	13	1.81E-02	40.9	4.60E+00	T
0	794.67	98	80	1.90	1588.03	1581	16	1.36E-02	45.5	3.11E+00	T
0	933.87	75	56	1.52	1866.38	1858	16	1.05E-02	51.9	2.72E+00	
2	964.06	72	75	2.55	1926.73	1918	25	9.96E-03	58.9	2.65E+00	T
0	1237.38	72	63	1.83	2473.29	2465	14	1.01E-02	52.1	2.15E+00	T
0	1378.34	71	33	3.62	2755.19	2749	16	9.88E-03	47.1	1.97E+00	
0	1482.26	23	16	1.41	2963.00	2955	13	3.15E-03	84.5	1.87E+00	
0	1729.43	36	21	0.96	3457.31	3448	17	4.96E-03	67.9	1.71E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 20-JAN-2010 15:33:06.05

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G244125003.CNF;1 *
* Acquisition date  : 20-JAN-2010 13:30:46  Detector SN#     :             *
* Detector ID       : GAM18                 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 02:00:01.59          Half life ratio : 8.00000      *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 5-JAN-2010 12:00:00.  Nuclide Library : SOLID        *
* Sample ID         : G244125003            Analyst initials: MXR1         *
* Batch Number      : 940263                Sample Quantity : 1.23800E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 23-APR-2009 11:59:23.2MS 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	2.002E+01	1.979E+00	4.601E-01	3.491E-02	43.513
NB-95	6.683E-02	5.111E-02	5.228E-02	4.782E-03	1.278
CD-109	4.806E+00	9.161E-01	1.123E+00	1.038E-01	4.281
SN-126	4.725E-01	9.005E-02	1.111E-01	1.023E-02	4.254
EU-155	9.850E-02	1.119E-01	1.544E-01	1.104E-02	0.638
TL-208	4.818E-01	7.633E-02	4.631E-02	3.630E-03	10.403
BI-211	3.956E+00	4.511E-01	2.707E-01	1.737E-02	14.617
BI-212	8.438E-01	4.484E-01	3.510E-01	3.496E-02	2.404
PB-212	1.744E+00	1.616E-01	7.485E-02	5.347E-03	23.302
PO-212	1.744E+00	1.616E-01	7.485E-02	5.347E-03	23.302
BI-214	1.250E+00	1.686E-01	9.289E-02	8.298E-03	13.454
PB-214	1.376E+00	1.726E-01	9.496E-02	7.855E-03	14.494
PO-214	1.376E+00	1.726E-01	9.496E-02	7.855E-03	14.494
PO-216	1.744E+00	1.616E-01	7.485E-02	5.347E-03	23.302
PO-218	1.376E+00	1.726E-01	9.496E-02	7.855E-03	14.494
RA-224	4.862E+00	1.203E+00	8.508E-01	4.739E-02	5.714
RA-226	1.250E+00	1.686E-01	9.289E-02	8.298E-03	13.454
AC-228	1.810E+00	3.648E-01	1.601E-01	2.121E-02	11.304

Sample ID : G244125003 Acquisition date : 20-JAN-2010 13:30:46

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-228	1.810E+00	3.648E-01	1.601E-01	2.121E-02	11.304
TH-228	1.771E+00	1.640E-01	7.598E-02	5.428E-03	23.302
TH-230	1.250E+00	1.686E-01	9.289E-02	8.298E-03	13.454
TH-232	1.810E+00	3.648E-01	1.601E-01	2.121E-02	11.304
U-234	1.250E+00	1.686E-01	9.289E-02	8.298E-03	13.454
U-235	2.294E-01	8.068E-02	3.136E-01	5.078E-02	0.732
NP-237	1.387E+00	3.897E-01	3.629E-01	8.189E-02	3.823
AM-243	4.080E-01	8.356E-02	8.491E-02	7.085E-03	4.805
ANH-511	1.565E-01	6.159E-02	3.749E-02	2.476E-03	4.174

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-5.308E-03		2.600E-01	4.283E-01	3.104E-02	-0.012
NA-22	-1.045E-02		3.483E-02	5.572E-02	3.791E-03	-0.188
NA-24	-6.623E-01		3.215E-01	Half-Life too short		
AL-26	-1.466E-03		1.971E-02	3.189E-02	1.862E-03	-0.046
TI-44	4.025E-01	+	5.907E-02	8.182E-02	6.996E-03	4.919
SC-46	3.245E-03		3.164E-02	5.212E-02	5.813E-03	0.062
V-48	3.855E-02		5.677E-02	9.681E-02	9.575E-03	0.398
CR-51	-1.813E-01		3.086E-01	4.805E-01	3.093E-02	-0.377
MN-52	7.162E-02		1.819E-01	3.087E-01	2.275E-02	0.232
MN-54	3.148E-02		3.349E-02	5.796E-02	5.937E-03	0.543
CO-56	7.539E-03		3.040E-02	5.084E-02	5.307E-03	0.148
CO-57	-5.003E-03		2.182E-02	3.464E-02	2.052E-03	-0.144
CO-58	-3.822E-02		3.087E-02	4.555E-02	4.496E-03	-0.839
FE-59	-7.732E-03		6.493E-02	1.070E-01	8.810E-03	-0.072
CO-60	-1.210E-02		3.184E-02	5.008E-02	3.784E-03	-0.242
ZN-65	5.836E-02		7.959E-02	1.220E-01	8.594E-03	0.478
GE-68	1.395E+00		1.019E+00	1.853E+00	1.472E-01	0.753
AS-73	6.690E-01		1.003E+00	1.729E+00	1.370E-01	0.387
AS-74	3.875E-05		7.523E-02	1.217E-01	8.747E-03	0.000
SE-75	-1.226E-02		4.043E-02	5.665E-02	3.240E-03	-0.216
BR-77	1.168E+00		8.544E+00	1.374E+01	9.167E-01	0.085
SR-82	-5.695E-01		4.084E-01	4.989E-01	4.646E-02	-1.141
RB-83	9.519E-03		5.746E-02	9.259E-02	6.175E-03	0.103
RB-84	1.049E-02		5.618E-02	9.321E-02	1.027E-02	0.113
KR-85	1.824E+01		6.868E+00	1.151E+01	7.623E-01	1.586
SR-85	9.349E-02		3.519E-02	5.896E-02	3.906E-03	1.586
RB-86	4.404E-01		6.467E-01	1.130E+00	8.994E-02	0.390
Y-88	1.498E-02		2.747E-02	4.850E-02	2.762E-03	0.309
ZR-88	1.132E-02		2.477E-02	4.245E-02	2.442E-03	0.267
Y-91	-3.749E+00		1.502E+01	2.435E+01	1.440E+00	-0.154
NB-94	-9.651E-05		2.595E-02	4.331E-02	3.553E-03	-0.002
NB-95M	1.620E-01		1.160E-01	1.799E-01	1.320E-02	0.901
ZR-95	-2.805E-02		5.627E-02	8.997E-02	8.853E-03	-0.312
NB-97	-2.753E-02		3.356E-02	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
ZR-97	3.778E+00		8.136E-01	Half-Life too short		
MO-99	-6.553E+00		8.921E+00	1.395E+01	2.129E+00	-0.470
TC-99M	-3.768E+10		1.610E+10	Half-Life too short		
RH-101	3.985E-03		2.724E-02	4.515E-02	2.427E-03	0.088
RH-102	6.500E-03		2.357E-02	3.952E-02	2.510E-03	0.164
RU-103	2.588E-02		3.180E-02	5.464E-02	7.095E-03	0.474
RH-106	2.504E-01		2.600E-01	4.438E-01	5.583E-02	0.564
RU-106	2.504E-01		2.588E-01	4.438E-01	3.266E-02	0.564
AG-108M	-3.398E-02		2.579E-02	3.932E-02	2.569E-03	-0.864
AG-110M	-1.013E-02		2.540E-02	4.145E-02	3.269E-03	-0.244
IN-111	-2.190E-01		9.411E-01	1.336E+00	7.466E-02	-0.164
IN-113M	6.846E-03		3.574E-02	6.048E-02	3.710E-03	0.113
SN-113	6.846E-03		3.574E-02	6.048E-02	3.710E-03	0.113
IN-114M	7.605E-02		1.642E-01	2.483E-01	1.326E-02	0.306
CD-115	-2.686E+00		8.487E+00	1.342E+01	9.019E-01	-0.200
SN-117M	-1.110E-02		4.486E-02	7.530E-02	4.002E-03	-0.147
SB-122	1.945E+00		1.660E+00	2.888E+00	2.012E-01	0.674
I-123	-1.962E+00		2.181E+00	Half-Life too short		
TE-123M	-1.037E-02		2.306E-02	3.839E-02	2.071E-03	-0.270
I-124	-4.531E-01		6.776E-01	8.778E-01	6.348E-02	-0.516
SB-124	-2.709E-03		5.269E-02	8.630E-02	5.954E-03	-0.031
SB-125	8.023E-04		6.947E-02	1.157E-01	7.229E-03	0.007
TE-125M	8.642E-02		9.416E+00	1.357E+01	1.193E+00	0.006
I-126	3.159E-02		1.385E-01	2.355E-01	1.810E-02	0.134
SB-126	1.018E-02		1.234E-01	1.786E-01	1.512E-02	0.057
SB-127	6.223E-01		1.065E+00	1.844E+00	2.005E-01	0.337
XE-127	-2.310E-02		3.823E-02	6.214E-02	3.354E-03	-0.372
I-131	-4.943E-02		9.253E-02	1.516E-01	9.785E-03	-0.326
TE-132	1.951E-01		5.944E-01	9.946E-01	1.416E-01	0.196
BA-133	-9.111E-03		4.108E-02	5.608E-02	6.478E-03	-0.162
I-133	-1.610E-03		2.367E-03	Half-Life too short		
CS-134	1.260E-01	+	5.868E-02	7.278E-02	7.040E-03	1.732
CS-135	1.871E-01		1.454E-01	2.243E-01	1.695E-02	0.834
I-135	1.179E+09		1.949E+09	Half-Life too short		
CS-136	-7.483E-03		8.200E-02	1.361E-01	1.220E-02	-0.055
BA-137M	-6.126E-04		2.629E-02	4.405E-02	3.358E-03	-0.014
CS-137	-6.476E-04		2.780E-02	4.656E-02	3.558E-03	-0.014
CE-139	1.010E-03		2.460E-02	4.162E-02	2.185E-03	0.024
BA-140	9.205E-02		2.124E-01	3.529E-01	1.154E-01	0.261
LA-140	-7.510E-02		7.020E-02	1.016E-01	6.968E-03	-0.739
CE-141	2.889E-02		5.703E-02	9.122E-02	5.207E-03	0.317
CE-143	6.588E-04		1.043E-04	Half-Life too short		
CE-144	-1.542E-01		1.866E-01	2.849E-01	4.029E-02	-0.541
PM-144	6.560E-03		2.761E-02	4.679E-02	3.798E-03	0.140
PR-144	4.445E-01		1.871E+00	3.170E+00	2.573E-01	0.140
PM-146	-6.662E-03		3.602E-02	5.903E-02	5.251E-03	-0.113
ND-147	1.739E-01		4.400E-01	7.368E-01	1.028E-01	0.236
PM-149	-1.952E+01		7.414E+01	1.188E+02	1.680E+01	-0.164

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-152	5.333E-04		9.332E-02	1.360E-01	8.874E-03	0.004
GD-153	-7.664E-02		8.086E-02	1.110E-01	8.680E-03	-0.690
EU-154	-3.847E-03		9.524E-02	1.559E-01	1.557E-02	-0.025
TB-160	-2.353E-02		1.091E-01	1.754E-01	1.927E-02	-0.134
HO-166M	-1.478E-02		4.678E-02	7.630E-02	6.360E-03	-0.194
TM-171	-1.386E+01		3.015E+01	4.790E+01	3.830E+00	-0.289
LU-176	-1.237E-02		2.182E-02	3.288E-02	1.893E-03	-0.376
LU-177	2.398E+00	+	1.205E+00	1.635E+00	8.867E-02	1.467
LU-177M	-1.242E-01		1.423E-01	2.259E-01	1.334E-02	-0.550
HF-181	7.513E-03		3.397E-02	5.674E-02	3.632E-03	0.132
W-181	-6.344E-01		4.050E-01	6.135E-01	4.866E-02	-1.034
TA-182	1.302E-02		1.381E-01	2.294E-01	1.403E-02	0.057
RE-183	-6.364E-03		8.887E-02	1.499E-01	7.915E-03	-0.042
RE-184	-2.889E-02		1.918E-01	3.124E-01	1.754E-02	-0.092
OS-185	9.716E-03		3.304E-02	5.424E-02	4.079E-03	0.179
RE-188	1.693E-01		1.458E-01	2.567E-01	1.374E-02	0.659
W-188	1.449E+00		7.113E+00	1.024E+01	5.863E-01	0.142
IR-192	-1.331E-02		2.881E-02	4.524E-02	2.624E-03	-0.294
AU-195	3.193E-01		2.224E-01	3.461E-01	2.648E-02	0.923
TL-200	1.932E-04		1.719E-04	Half-Life too short		
TL-201	4.803E-01		5.747E+00	9.733E+00	5.109E-01	0.049
TL-202	3.305E-02		5.675E-02	9.719E-02	5.925E-03	0.340
HG-203	1.309E-02		3.338E-02	5.537E-02	3.358E-03	0.236
BI-207	1.519E-02		3.985E-02	6.848E-02	5.653E-03	0.222
TL-207	1.772E-01		6.137E-01	8.800E-01	1.453E-01	0.201
PO-209	2.677E-01		5.822E+00	9.542E+00	1.076E+00	0.028
BI-210	7.063E+00		5.276E+00	9.319E+00	7.210E-01	0.758
PB-210	7.063E+00		5.276E+00	9.319E+00	7.210E-01	0.758
PO-210	7.063E+00		5.268E+00	9.319E+00	6.199E-01	0.758
PB-211	-2.186E-01		7.663E-01	1.241E+00	7.739E-01	-0.176
PO-215	1.772E-01		6.137E-01	8.800E-01	1.453E-01	0.201
RN-219	-2.266E-01		3.303E-01	5.297E-01	7.212E-02	-0.428
RN-220	-1.050E+01		2.136E+01	3.366E+01	2.313E+00	-0.312
RA-223	1.772E-01		6.137E-01	8.800E-01	1.453E-01	0.201
AC-227	-1.390E-01		3.156E-01	5.053E-01	7.019E-02	-0.275
TH-227	-1.390E-01		3.158E-01	5.053E-01	8.510E-02	-0.275
TH-229	7.416E-02		4.079E-01	6.870E-01	3.679E-02	0.108
PA-231	1.948E-01		1.226E+00	2.009E+00	2.761E-01	0.097
TH-231	1.772E-01		6.137E-01	8.800E-01	1.453E-01	0.201
U-231	6.676E-02		1.033E+00	1.508E+00	1.208E-01	0.044
PA-233	2.811E-02		5.299E-02	8.791E-02	5.385E-03	0.320
PA-234	2.133E-01		2.548E-01	4.345E-01	8.572E-02	0.491
PA-234M	3.149E+00		3.555E+00	5.936E+00	6.404E-01	0.530
TH-234	2.714E-01		1.433E+00	2.382E+00	4.199E-01	0.114
NP-236	-4.852E-02		6.472E-02	1.064E-01	5.635E-03	-0.456
U-238	2.714E-01		1.433E+00	2.382E+00	4.199E-01	0.114
NP-239	6.553E-03		1.676E-01	2.702E-01	1.672E-02	0.024
AM-241	8.427E-02		1.686E-01	2.871E-01	2.381E-02	0.294

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	1.798E-02		9.431E-02	1.379E-01	9.870E-03	0.130
AM-246	1.282E-01		1.151E-01	2.065E-01	1.633E-02	0.621
CM-247	-6.880E-03		2.949E-02	4.871E-02	2.837E-03	-0.141
CF-249	-1.330E-02		3.286E-02	5.397E-02	3.103E-03	-0.246
CF-251	5.202E-03		1.046E-01	1.763E-01	9.308E-03	0.030

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]G244125003            *
* Acquisition date : 20-JAN-2010 13:30:46 Detector SN#     :                *
* Detector ID      : GAM18                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 02:00:01.59     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date      :  5-JAN-2010 12:00:00 Nuclide Library : SOLID           *
* Sample ID        : G244125003           Analyst initials: MXR1            *
* Batch Number     : 940263               Sample Quantity : 1.2380E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 23-APR-2009 11:59:23 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	2.002E+01	1.940E+00	2.299E-01	9.896E-01
NB-95	6.683E-02	5.008E-02	2.636E-02	2.555E-02
CD-109	4.806E+00	8.978E-01	5.823E-01	4.580E-01
SN-126	4.725E-01	8.825E-02	5.761E-02	4.502E-02
EU-155	9.850E-02	1.097E-01	7.993E-02	5.595E-02
TL-208	4.818E-01	7.481E-02	2.343E-02	3.817E-02
BI-211	3.956E+00	4.421E-01	1.379E-01	2.255E-01
BI-212	8.438E-01	4.394E-01	1.771E-01	2.242E-01
PB-212	1.744E+00	1.584E-01	3.833E-02	8.080E-02
PO-212	1.744E+00	1.584E-01	3.833E-02	8.080E-02
BI-214	1.250E+00	1.652E-01	4.697E-02	8.428E-02
PB-214	1.376E+00	1.691E-01	4.837E-02	8.628E-02
PO-214	1.376E+00	1.691E-01	4.837E-02	8.628E-02
PO-216	1.744E+00	1.584E-01	3.833E-02	8.080E-02
PO-218	1.376E+00	1.691E-01	4.837E-02	8.628E-02
RA-224	4.862E+00	1.179E+00	4.356E-01	6.014E-01
RA-226	1.250E+00	1.652E-01	4.697E-02	8.428E-02
AC-228	1.810E+00	3.575E-01	8.053E-02	1.824E-01
RA-228	1.810E+00	3.575E-01	8.053E-02	1.824E-01
TH-228	1.771E+00	1.608E-01	3.891E-02	8.202E-02
TH-230	1.250E+00	1.652E-01	4.697E-02	8.428E-02
TH-232	1.810E+00	3.575E-01	8.053E-02	1.824E-01
U-234	1.250E+00	1.652E-01	4.697E-02	8.428E-02
U-235	1.918E-01	1.906E-01	1.616E-01	9.722E-02
NP-237	1.387E+00	3.819E-01	1.883E-01	1.949E-01
AM-243	4.080E-01	8.189E-02	4.414E-02	4.178E-02
ANH-511	1.565E-01	6.036E-02	1.900E-02	3.079E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU

BE-7	-5.308E-03	2.548E-01	2.173E-01	1.300E-01	NOT IDENT.
NA-22	-1.045E-02	3.414E-02	2.789E-02	1.742E-02	NOT IDENT.
NA-24	-6.623E+05	6.302E+05	0.000E+00	3.215E+05	SHORT HLIF
AL-26	-1.466E-03	1.932E-02	1.589E-02	9.856E-03	NOT IDENT.
TI-44	4.025E-01	5.789E-02	4.251E-02	2.954E-02	FAIL ABUN
SC-46	3.245E-03	3.101E-02	2.622E-02	1.582E-02	FAIL ABUN
V-48	3.855E-02	5.564E-02	4.864E-02	2.839E-02	NOT IDENT.
CR-51	-1.813E-01	3.025E-01	2.451E-01	1.543E-01	NOT IDENT.
MN-52	7.162E-02	1.783E-01	1.543E-01	9.097E-02	NOT IDENT.
MN-54	3.148E-02	3.282E-02	2.919E-02	1.674E-02	NOT IDENT.
CO-56	7.539E-03	2.979E-02	2.559E-02	1.520E-02	FAIL ABUN
CO-57	-5.003E-03	2.138E-02	1.789E-02	1.091E-02	NOT IDENT.
CO-58	-3.822E-02	3.025E-02	2.294E-02	1.543E-02	NOT IDENT.
FE-59	-7.732E-03	6.364E-02	5.369E-02	3.247E-02	NOT IDENT.
CO-60	-1.210E-02	3.120E-02	2.506E-02	1.592E-02	NOT IDENT.
ZN-65	5.836E-02	7.799E-02	6.119E-02	3.979E-02	NOT IDENT.
GE-68	1.395E+00	9.985E-01	9.299E-01	5.094E-01	NOT IDENT.
AS-73	6.690E-01	9.826E-01	9.025E-01	5.013E-01	NOT IDENT.
AS-74	3.875E-05	7.373E-02	6.158E-02	3.762E-02	NOT IDENT.
SE-75	-1.226E-02	3.962E-02	2.897E-02	2.021E-02	NOT IDENT.
BR-77	1.168E+00	8.373E+00	6.963E+00	4.272E+00	FAIL ABUN
SR-82	-5.695E-01	4.002E-01	2.515E-01	2.042E-01	NOT IDENT.
RB-83	9.519E-03	5.631E-02	4.692E-02	2.873E-02	NOT IDENT.
RB-84	1.049E-02	5.506E-02	4.690E-02	2.809E-02	NOT IDENT.
KR-85	1.824E+01	6.730E+00	5.832E+00	3.434E+00	NOT IDENT.
SR-85	9.349E-02	3.449E-02	2.988E-02	1.760E-02	NOT IDENT.
RB-86	4.404E-01	6.338E-01	5.669E-01	3.234E-01	NOT IDENT.
Y-88	1.498E-02	2.692E-02	2.416E-02	1.373E-02	NOT IDENT.
ZR-88	1.132E-02	2.427E-02	2.159E-02	1.238E-02	NOT IDENT.
Y-91	-3.749E+00	1.472E+01	1.220E+01	7.511E+00	NOT IDENT.
NB-94	-9.651E-05	2.543E-02	2.186E-02	1.298E-02	NOT IDENT.
NB-95M	1.620E-01	1.137E-01	9.214E-02	5.799E-02	NOT IDENT.
ZR-95	-2.805E-02	5.514E-02	4.536E-02	2.813E-02	NOT IDENT.
NB-97	-2.753E+04	6.577E+04	0.000E+00	3.356E+04	SHORT HLIF
ZR-97	3.778E+06	1.595E+06	0.000E+00	8.136E+05	SHORT HLIF
MO-99	-6.553E+00	8.743E+00	7.036E+00	4.461E+00	NOT IDENT.
TC-99M	-3.768E+16	3.155E+16	0.000E+00	0.000E+00	SHORT HLIF
RH-101	3.985E-03	2.670E-02	2.318E-02	1.362E-02	NOT IDENT.
RH-102	6.500E-03	2.310E-02	2.005E-02	1.178E-02	FAIL ABUN
RU-103	2.588E-02	3.117E-02	2.771E-02	1.590E-02	FAIL ABUN
RH-106	2.504E-01	2.548E-01	2.243E-01	1.300E-01	FAIL ABUN
RU-106	2.504E-01	2.536E-01	2.243E-01	1.294E-01	FAIL ABUN
AG-108M	-3.398E-02	2.528E-02	1.998E-02	1.290E-02	NOT IDENT.
AG-110M	-1.013E-02	2.489E-02	2.094E-02	1.270E-02	NOT IDENT.
IN-111	-2.190E-01	9.223E-01	6.838E-01	4.705E-01	NOT IDENT.
IN-113M	6.846E-03	3.502E-02	3.077E-02	1.787E-02	NOT IDENT.
SN-113	6.846E-03	3.502E-02	3.077E-02	1.787E-02	NOT IDENT.
IN-114M	7.605E-02	1.609E-01	1.275E-01	8.211E-02	NOT IDENT.
CD-115	-2.686E+00	8.318E+00	6.799E+00	4.244E+00	NOT IDENT.
SN-117M	-1.110E-02	4.396E-02	3.876E-02	2.243E-02	NOT IDENT.
SB-122	1.945E+00	1.626E+00	1.462E+00	8.298E-01	NOT IDENT.
I-123	-1.962E+06	4.275E+06	0.000E+00	2.181E+06	SHORT HLIF
TE-123M	-1.037E-02	2.260E-02	1.977E-02	1.153E-02	NOT IDENT.
I-124	-4.531E-01	6.640E-01	4.440E-01	3.388E-01	NOT IDENT.
SB-124	-2.709E-03	5.163E-02	4.304E-02	2.634E-02	FAIL ABUN
SB-125	8.023E-04	6.808E-02	5.878E-02	3.473E-02	FAIL ABUN
TE-125M	8.642E-02	9.228E+00	7.021E+00	4.708E+00	NOT IDENT.
I-126	3.159E-02	1.357E-01	1.189E-01	6.924E-02	NOT IDENT.
SB-126	1.018E-02	1.210E-01	9.010E-02	6.171E-02	FAIL ABUN
SB-127	6.223E-01	1.044E+00	9.311E-01	5.326E-01	NOT IDENT.
XE-127	-2.310E-02	3.747E-02	3.189E-02	1.912E-02	NOT IDENT.
I-131	-4.943E-02	9.068E-02	7.719E-02	4.626E-02	NOT IDENT.
TE-132	1.951E-01	5.826E-01	5.096E-01	2.972E-01	NOT IDENT.
BA-133	-9.111E-03	4.026E-02	2.857E-02	2.054E-02	NOT IDENT.
I-133	-1.610E+03	4.640E+03	0.000E+00	2.367E+03	SHORT HLIF
CS-134	1.260E-01	5.751E-02	3.667E-02	2.934E-02	FAIL ABUN
CS-135	1.871E-01	1.425E-01	1.147E-01	7.268E-02	NOT IDENT.
I-135	1.179E+15	3.820E+15	0.000E+00	1.949E+15	SHORT HLIF
CS-136	-7.483E-03	8.036E-02	6.834E-02	4.100E-02	FAIL ABUN
BA-137M	-6.126E-04	2.577E-02	2.225E-02	1.315E-02	NOT IDENT.
CS-137	-6.476E-04	2.724E-02	2.352E-02	1.390E-02	NOT IDENT.
CE-139	1.010E-03	2.411E-02	2.142E-02	1.230E-02	NOT IDENT.
BA-140	9.205E-02	2.081E-01	1.787E-01	1.062E-01	NOT IDENT.
LA-140	-7.510E-02	6.880E-02	5.069E-02	3.510E-02	FAIL ABUN
CE-141	2.889E-02	5.589E-02	4.701E-02	2.851E-02	NOT IDENT.
CE-143	6.588E+02	2.044E+02	0.000E+00	1.043E+02	SHORT HLIF
CE-144	-1.542E-01	1.829E-01	1.470E-01	9.332E-02	NOT IDENT.
PM-144	6.560E-03	2.706E-02	2.362E-02	1.381E-02	NOT IDENT.

PR-144	4.445E-01	1.834E+00	1.600E+00	9.355E-01	NOT IDENT.
PM-146	-6.662E-03	3.530E-02	2.997E-02	1.801E-02	NOT IDENT.
ND-147	1.739E-01	4.312E-01	3.733E-01	2.200E-01	FAIL ABUN
PM-149	-1.952E+01	7.266E+01	6.068E+01	3.707E+01	NOT IDENT.
EU-152	5.333E-04	9.145E-02	6.929E-02	4.666E-02	FAIL ABUN
GD-153	-7.664E-02	7.924E-02	5.752E-02	4.043E-02	NOT IDENT.
EU-154	-3.847E-03	9.334E-02	7.802E-02	4.762E-02	NOT IDENT.
TB-160	-2.353E-02	1.070E-01	8.825E-02	5.457E-02	FAIL ABUN
HO-166M	-1.478E-02	4.584E-02	3.850E-02	2.339E-02	NOT IDENT.
TM-171	-1.386E+01	2.955E+01	2.494E+01	1.507E+01	NOT IDENT.
LU-176	-1.237E-02	2.138E-02	1.678E-02	1.091E-02	FAIL ABUN
LU-177	2.398E+00	1.181E+00	8.386E-01	6.025E-01	FAIL ABUN
LU-177M	-1.242E-01	1.394E-01	1.148E-01	7.114E-02	NOT IDENT.
HF-181	7.513E-03	3.329E-02	2.878E-02	1.699E-02	NOT IDENT.
W-181	-6.344E-01	3.969E-01	3.195E-01	2.025E-01	NOT IDENT.
TA-182	1.302E-02	1.353E-01	1.149E-01	6.905E-02	FAIL ABUN
RE-183	-6.364E-03	8.709E-02	7.717E-02	4.444E-02	FAIL ABUN
RE-184	-2.889E-02	1.879E-01	1.598E-01	9.589E-02	NOT IDENT.
OS-185	9.716E-03	3.238E-02	2.741E-02	1.652E-02	NOT IDENT.
RE-188	1.693E-01	1.428E-01	1.322E-01	7.288E-02	NOT IDENT.
W-188	1.449E+00	6.971E+00	5.228E+00	3.556E+00	NOT IDENT.
IR-192	-1.331E-02	2.823E-02	2.308E-02	1.440E-02	FAIL ABUN
AU-195	3.193E-01	2.179E-01	1.792E-01	1.112E-01	FAIL ABUN
TL-200	1.932E+02	3.369E+02	0.000E+00	1.719E+02	SHORT HLIF
TL-201	4.803E-01	5.632E+00	5.007E+00	2.873E+00	NOT IDENT.
TL-202	3.305E-02	5.562E-02	4.936E-02	2.838E-02	NOT IDENT.
HG-203	1.309E-02	3.271E-02	2.829E-02	1.669E-02	NOT IDENT.
BI-207	1.519E-02	3.905E-02	3.437E-02	1.992E-02	FAIL ABUN
TL-207	1.772E-01	6.014E-01	4.488E-01	3.069E-01	FAIL ABUN
PO-209	2.677E-01	5.705E+00	4.800E+00	2.911E+00	NOT IDENT.
BI-210	7.063E+00	5.170E+00	4.874E+00	2.638E+00	NOT IDENT.
PB-210	7.063E+00	5.170E+00	4.874E+00	2.638E+00	NOT IDENT.
PO-210	7.063E+00	5.163E+00	4.874E+00	2.634E+00	NOT IDENT.
PB-211	-2.186E-01	7.510E-01	6.312E-01	3.831E-01	NOT IDENT.
PO-215	1.772E-01	6.014E-01	4.488E-01	3.069E-01	FAIL ABUN
RN-219	-2.266E-01	3.237E-01	2.694E-01	1.652E-01	FAIL ABUN
RN-220	-1.050E+01	2.093E+01	1.704E+01	1.068E+01	NOT IDENT.
RA-223	1.772E-01	6.014E-01	4.488E-01	3.069E-01	FAIL ABUN
AC-227	-1.390E-01	3.093E-01	2.585E-01	1.578E-01	FAIL ABUN
TH-227	-1.390E-01	3.095E-01	2.585E-01	1.579E-01	FAIL ABUN
TH-229	7.416E-02	3.997E-01	3.528E-01	2.040E-01	FAIL ABUN
PA-231	1.948E-01	1.201E+00	1.026E+00	6.128E-01	FAIL ABUN
TH-231	1.772E-01	6.014E-01	4.488E-01	3.069E-01	FAIL ABUN
U-231	6.676E-02	1.012E+00	7.814E-01	5.165E-01	FAIL ABUN
PA-233	2.811E-02	5.193E-02	4.486E-02	2.649E-02	FAIL ABUN
PA-234	2.133E-01	2.497E-01	2.184E-01	1.274E-01	FAIL ABUN
PA-234M	3.149E+00	3.484E+00	2.982E+00	1.777E+00	FAIL ABUN
TH-234	2.714E-01	1.404E+00	1.241E+00	7.163E-01	FAIL ABUN
NP-236	-4.852E-02	6.342E-02	5.475E-02	3.236E-02	NOT IDENT.
U-238	2.714E-01	1.404E+00	1.241E+00	7.163E-01	FAIL ABUN
NP-239	6.553E-03	1.643E-01	1.396E-01	8.381E-02	FAIL ABUN
AM-241	8.427E-02	1.652E-01	1.497E-01	8.429E-02	NOT IDENT.
CM-243	1.798E-02	9.242E-02	7.138E-02	4.715E-02	FAIL ABUN
AM-246	1.282E-01	1.128E-01	1.036E-01	5.753E-02	NOT IDENT.
CM-247	-6.880E-03	2.890E-02	2.477E-02	1.475E-02	NOT IDENT.
CF-249	-1.330E-02	3.221E-02	2.746E-02	1.643E-02	NOT IDENT.
CF-251	5.202E-03	1.025E-01	9.061E-02	5.228E-02	NOT IDENT.

```
*****************************************************************************
*                         GEL Laboratories LLC                              *
*                            2040 SAVAGE ROAD                               *
*                         CHARLESTON ,SC 29417                              *
*                   GAMMA SPECTROSCOPY BACKGROUND REPORT                    *
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```

ENERGY	MDA COUNTS
46.50	264.9266
46.50	264.9266
46.50	264.9266
48.70	283.4277
49.72	283.6941
51.35	262.9343
52.39	261.2739
52.97	258.2179
53.15	256.5751
53.44	253.2150
54.07	241.0359
56.28	296.4065
56.28	296.4098
57.37	0.0000
57.53	297.7568
57.53	297.7585
57.60	297.8313
57.98	300.0907
57.98	300.0907
59.32	298.7301
59.32	298.7301
59.40	298.8142
59.54	298.9611
59.72	307.5371
60.01	333.0370
61.10	375.5021
61.14	375.5541
61.30	359.8311
63.00	317.6241
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63.29	343.4069
63.58	343.7411
64.28	367.2638
65.12	398.6607
65.20	398.7659
65.20	398.7659
66.05	391.3100
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66.83	368.4403
66.91	368.5345
67.20	353.5897
67.20	353.5897
67.75	334.1104
67.85	333.2610
68.90	377.6145
68.90	377.6145
69.30	395.4094
69.67	381.4255
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70.82	359.5936
70.83	359.6049
72.80	375.4041
72.87	375.4846
72.87	375.4846
74.67	377.5264
74.81	377.6845
74.81	377.6845
74.81	377.6845
74.81	377.6845
74.81	377.6845
74.81	377.6845
74.81	377.6845
74.97	377.8641
75.28	378.2136
75.70	378.6848
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77.11	380.2554

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77.11	380.2554
77.11	380.2554
77.11	380.2554
77.11	380.2554
78.38	381.6591
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79.80	317.1957
80.11	317.4752
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80.30	335.5414
80.57	335.7988
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81.07	372.1417
81.07	372.1417
81.07	372.1417
82.60	396.2498
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83.78	352.3693
83.78	352.3693
83.78	352.3693
83.78	352.3693
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84.90	312.6668
85.43	331.2686
86.29	426.0407
86.50	426.2808
86.54	426.3258
86.59	426.3837
86.72	447.7823
86.79	447.8633
86.94	448.0457
87.30	355.7417
87.30	355.7417
87.30	355.7417
87.30	355.7417
87.30	355.7417
87.30	355.7417
87.30	355.7417
87.57	355.9970
87.88	356.2898
88.03	356.4326
88.36	356.7433
88.47	356.8468
89.95	358.2357
91.11	359.3158
92.29	360.4084
92.38	360.4923
92.38	360.4923
93.35	361.3832
94.00	361.9795
94.67	362.5847
94.67	362.5900
94.90	362.7989
94.90	362.7989
94.90	362.7989
94.90	362.7989
95.87	312.3910
95.87	312.3910
96.73	372.2468
97.43	351.0441
98.44	275.2739
98.44	275.2739
98.88	267.7407
99.55	274.4496
99.55	274.4496
99.86	273.7135
100.00	273.8066
100.10	273.8745
103.18	310.0602
103.76	285.1378
105.00	284.3758
105.31	303.1302
108.00	302.3435
109.28	320.8710

111.00	330.7027
111.00	330.7027
111.76	334.4886
112.95	326.7428
115.19	339.1836
116.30	306.3255
117.00	294.8197
117.00	294.8197
117.66	312.6684
121.11	302.8843
121.62	294.4186
121.78	294.5168
122.06	284.7922
122.32	284.9451
122.32	284.9451
122.32	284.9451
122.32	284.9451
123.07	289.7965
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129.76	300.4489
131.20	350.5903
133.02	322.6151
133.54	345.4437
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136.25	306.5318
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144.24	301.9641
144.24	301.9641
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145.44	307.2303
147.16	362.4364
152.43	315.7504
152.70	327.5561
153.22	329.8980
154.21	312.9361
154.21	312.9361
154.21	312.9361
154.21	312.9361
155.03	304.6046
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161.27	306.0891
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162.64	297.0101
163.35	300.0327
163.89	288.7182
165.85	304.8531
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171.86	290.6873
172.10	274.5421
176.55	295.5826
176.60	295.6049
181.06	297.4748
184.41	284.4539
185.71	285.0126
186.00	285.1376
190.27	270.4295
192.34	298.0811
193.63	274.3801
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198.01	268.6072
198.60	277.2940
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202.84	303.5531
205.31	270.2527

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209.75	273.0607
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223.80	291.8495
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228.18	285.6776
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236.00	257.6880
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238.63	258.7299
238.63	258.7299
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241.98	259.7973
241.98	259.7973
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256.20	236.9145
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269.46	194.2804
269.46	194.2804
269.46	194.2804
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273.65	229.6860
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277.60	206.4151
277.60	206.4151
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279.53	217.2438
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284.30	197.4729
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286.10	210.4157
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293.26	0.0000
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295.21	249.4464

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300.09	250.7104
300.09	250.7104
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303.91	187.7009
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304.40	194.6238
304.84	199.8369
306.84	213.9313
308.46	220.7107
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323.87	179.2743
323.87	179.2743
323.87	179.2743
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334.20	195.5512
334.30	195.5702
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338.28	211.7402
338.28	211.7402
338.28	211.7402
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338.32	211.7490
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351.92	186.4939
351.92	186.4939
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388.63	185.3803
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391.69	161.8109
392.90	157.3455
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445.03	136.9107
445.03	136.9107
445.03	136.9107
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511.85	131.3608
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513.99	118.0538
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569.50	114.2344
569.67	114.2477
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574.64	120.8988
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591.81	127.4473
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595.88	123.4936
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602.71	154.9794
603.60	131.8878
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604.70	117.7048
609.31	135.1824

609.31	135.1824
609.31	135.1824
609.31	135.1824
610.33	112.7186
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614.37	109.3910
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621.84	97.2466
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661.65	102.1520
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666.33	107.0177
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696.49	115.2700
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697.49	123.7688
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722.78	100.9316
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724.18	97.7427
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742.81	85.3478
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755.35	99.3684
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792.07	58.8843

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798.80	108.0045
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884.67	80.7214
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899.00	80.7331
903.28	84.7249
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911.07	76.4360
911.07	76.4360
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925.24	56.0962
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966.15	71.7824
968.20	71.8377
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969.11	72.4679
969.11	72.4679
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983.50	69.0704
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1077.35	65.9717
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1099.22	67.4242
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1120.29	80.3438
1120.29	80.3438
1120.29	80.3438
1120.51	80.3496
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1129.67	82.5176
1131.51	0.0000
1147.95	0.0000
1167.94	83.5675
1173.22	80.7913
1175.09	97.3982
1177.93	81.8906
1189.05	75.3350
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1205.75	0.0000
1213.00	81.8276
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1236.41	0.0000
1238.25	85.2057
1246.25	82.5126
1260.41	0.0000
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1274.54	74.3510
1291.56	69.6810
1298.22	0.0000
1312.09	55.8824
1325.50	53.0410
1325.50	53.0410
1332.49	59.2825
1333.61	59.3007
1360.21	38.1201
1362.66	0.0000
1365.15	38.1743
1368.21	63.3864
1368.53	0.0000
1376.25	50.7141
1384.27	30.8602
1394.10	47.8482
1395.20	57.2271
1407.95	52.2077
1434.06	34.7046
1436.60	32.6240
1457.56	0.0000
1460.81	43.4295
1489.15	59.7656
1509.49	28.1644
1596.49	47.9858
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1678.03	0.0000
1691.02	19.6362
1691.02	19.6362
1706.46	0.0000
1750.46	0.0000
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1764.49	8.8759
1764.49	8.8759
1764.49	8.8759
1770.23	23.1069
1771.40	19.5573
1791.20	0.0000
1808.65	15.1263

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G244125003

Total Uranium Activity	8.9629E-01	ug/g
Total Uranium Counting Unc.	4.1778E+00	ug/g
Total Uranium Tpu	2.1315E-06	ug/g
Total Uranium Mda	3.6920E+00	ug/g

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*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 940263                    SAMPLE ID   : G244125003      *
*   ANALYST       : MXR1                      DETECTOR    : GAM18           *
*   SAMPLE DATE   :  5-JAN-2010 12:00:00.00   COUNT TIME  :    0 02:00:00.00 *
*   ANALYSIS DATE: 20-JAN-2010 13:30:46.08    SAMPLE ALQT:  123.800 GRAM    *
*                                                                           *
*****************************************************************************


        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 8.878E+00
        GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.126E+00
        GROSS GAMMA MDA     (pCi/GRAM  )  : 2.654E+00
        GROSS GAMMA DLC     (pCi/GRAM  )  : 1.286E+00
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VAX/VMS Nuclide Identification Report Generated 20-JAN-2010 15:33:55.34

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G244125004.CNF;1
Sample date       : 5-JAN-2010 12:00:00. Acquisition date : 20-JAN-2010 13:31:14
Sample ID         : G244125004           Sample quantity  : 1.27180E+02 GRAM
Detector name     : GAM22                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:02.15  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 940263                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	63.32*	86	612	1.18	126.89	123	9	1.19E-02	54.9	
2	4	74.88*	536	598	1.20	149.99	146	12	7.45E-02	8.7	1.74E+00
3	4	77.14*	767	462	0.96	154.51	146	12	1.07E-01	5.9	
4	3	84.36*	132	539	1.25	168.94	163	29	1.83E-02	30.6	2.65E+00
5	3	87.30*	309	593	1.29	174.80	163	29	4.29E-02	14.9	
6	3	89.92*	183	430	1.00	180.05	163	29	2.54E-02	19.8	
7	3	92.65*	295	552	1.35	185.50	163	29	4.09E-02	16.4	
8	0	129.04	119	434	0.86	258.21	255	8	1.65E-02	31.8	
9	0	186.14*	281	612	1.28	372.30	367	12	3.90E-02	19.2	
10	0	209.88	137	468	1.38	419.73	413	10	1.90E-02	31.0	
11	4	238.73*	1795	318	1.24	477.38	472	19	2.49E-01	2.9	1.87E+00
12	4	241.68	447	426	2.07	483.27	472	19	6.21E-02	14.0	
13	0	269.80	168	427	1.23	539.47	532	14	2.33E-02	27.2	
14	0	295.29*	560	297	1.26	590.40	584	11	7.78E-02	7.4	
15	0	300.17	88	351	1.22	600.15	596	12	1.23E-02	43.6	
16	0	338.11*	400	361	1.38	675.97	669	15	5.56E-02	11.7	
17	0	352.00*	1011	249	1.45	703.74	697	12	1.40E-01	4.5	
18	0	410.07	35	181	0.95	819.79	815	9	4.92E-03	70.6	
19	0	463.49	94	242	1.63	926.55	918	14	1.31E-02	36.4	
20	0	510.76*	225	218	2.30	1021.03	1013	17	3.13E-02	19.0	
21	0	583.25*	579	188	1.72	1165.92	1160	16	8.04E-02	7.0	
22	0	609.41*	691	202	1.83	1218.21	1211	17	9.59E-02	6.2	
23	0	661.66	103	102	1.87	1322.64	1319	10	1.43E-02	20.8	
24	0	727.13*	156	125	2.27	1453.51	1446	17	2.17E-02	18.6	
25	0	786.00	50	78	1.36	1571.20	1567	9	6.89E-03	35.2	
26	0	795.01	70	88	0.97	1589.23	1585	10	9.74E-03	27.7	
27	0	861.20	62	114	1.78	1721.56	1714	15	8.68E-03	39.1	
28	0	911.45*	487	86	1.91	1822.03	1815	18	6.77E-02	6.6	
29	4	964.79	102	112	3.32	1928.66	1922	23	1.41E-02	23.6	2.11E+00
30	4	969.22*	215	89	2.09	1937.51	1922	23	2.98E-02	12.2	
31	0	1121.15*	121	117	2.02	2241.32	2236	17	1.68E-02	23.8	
32	0	1238.86*	46	97	1.82	2476.72	2467	16	6.46E-03	51.7	
33	0	1378.32*	42	55	2.38	2755.65	2745	17	5.89E-03	44.0	
34	0	1460.86*	1464	86	2.53	2920.75	2909	23	2.03E-01	3.1	
35	0	1588.10	59	52	2.12	3175.28	3166	22	8.18E-03	33.2	
36	0	1729.66	54	14	3.39	3458.49	3448	18	7.52E-03	21.0	
37	0	1765.15*	121	37	3.00	3529.49	3517	20	1.68E-02	16.2	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 20-JAN-2010 15:33:58

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G244125004.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 5-JAN-2010 12:00:00 Acquisition date : 20-JAN-2010 13:31:14
Sample ID : G244125004 Sample quantity : 127.18 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA22 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:02.15 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	2.122E+01	2.356E+00	4.635E-01	4.246E-02	45.783
CD-109	+	88.03	*	3.348E+00	1.047E+00	1.075E+00	1.020E-01	3.116
SN-126	+	64.28		6.094E-01	6.747E-01	6.565E-01	9.535E-02	0.928
	+	86.94		1.368E+00	6.994E-01	4.434E-01	1.841E-01	3.086
	+	87.57	*	3.291E-01	1.029E-01	1.061E-01	1.001E-02	3.103
BA-137M	+	661.65	*	9.388E-02	4.026E-02	5.064E-02	5.340E-03	1.854
CS-137	+	661.65	*	9.924E-02	4.256E-02	5.353E-02	5.652E-03	1.854
TL-208		277.35		6.310E-01	3.733E-01	6.162E-01	1.016E-01	1.024
	+	510.84		7.152E-01	2.872E-01	1.805E-01	2.353E-02	3.962
	+	583.14	*	5.165E-01	9.142E-02	5.342E-02	5.793E-03	9.669
	+	860.37		5.065E-01	4.009E-01	3.982E-01	4.640E-02	1.272
BI-211		72.87		5.929E+00	3.021E+00	4.664E+00	3.733E-01	1.271
	+	351.07	*	4.271E+00	6.294E-01	2.883E-01	3.364E-02	14.812
BI-212	+	727.18	*	1.171E+00	4.580E-01	3.987E-01	4.762E-02	2.937
	+	785.46		2.362E+00	1.685E+00	2.543E+00	2.796E-01	0.929
		1620.62		1.194E+00	1.182E+00	2.143E+00	1.868E-01	0.557
PB-212	+	74.81		2.395E+00	5.115E-01	4.828E-01	5.991E-02	4.961
	+	77.11		1.945E+00	2.817E-01	2.749E-01	2.299E-02	7.075
	+	87.30		1.522E+00	4.995E-01	4.917E-01	6.752E-02	3.096
	+	238.63	*	1.771E+00	2.562E-01	8.667E-02	1.145E-02	20.430
	+	300.09		1.293E+00	1.143E+00	1.067E+00	1.556E-01	1.212
PO-212	+	74.81		2.395E+00	5.115E-01	4.828E-01	5.991E-02	4.961
	+	77.11		1.945E+00	2.817E-01	2.749E-01	2.299E-02	7.075
	+	87.30		1.522E+00	4.995E-01	4.917E-01	6.752E-02	3.096
		115.19		3.196E+00	3.370E+00	5.542E+00	4.591E-01	0.577
	+	238.63	*	1.771E+00	2.562E-01	8.667E-02	1.145E-02	20.430
	+	300.09		1.293E+00	1.143E+00	1.067E+00	1.556E-01	1.212
BI-214	+	609.31	*	1.156E+00	1.969E-01	9.806E-02	1.140E-02	11.786
	+	1120.29		1.008E+00	4.926E-01	3.688E-01	4.075E-02	2.733
	+	1764.49		1.318E+00	4.421E-01	2.526E-01	2.104E-02	5.218
PB-214	+	74.81		4.127E+00	8.493E-01	8.319E-01	9.169E-02	4.961
	+	77.11		3.334E+00	5.456E-01	4.713E-01	5.331E-02	7.075
	+	87.30		2.608E+00	8.395E-01	8.423E-01	1.025E-01	3.096
	+	241.98		2.645E+00	8.256E-01	5.211E-01	7.166E-02	5.076

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	295.21		1.442E+00	3.030E-01	1.873E-01	2.788E-02	7.701
	+	351.92	*	1.486E+00	2.323E-01	1.005E-01	1.281E-02	14.785
PO-214	+	74.81		4.127E+00	8.493E-01	8.319E-01	9.169E-02	4.961
	+	77.11		3.334E+00	5.456E-01	4.713E-01	5.331E-02	7.075
	+	87.30		2.608E+00	8.395E-01	8.423E-01	1.025E-01	3.096
	+	241.98		2.645E+00	8.256E-01	5.211E-01	7.166E-02	5.076
	+	295.21		1.442E+00	3.030E-01	1.873E-01	2.788E-02	7.701
	+	351.92	*	1.486E+00	2.323E-01	1.005E-01	1.281E-02	14.785
PO-216	+	74.81		2.395E+00	5.115E-01	4.828E-01	5.991E-02	4.961
	+	77.11		1.945E+00	2.817E-01	2.749E-01	2.299E-02	7.075
	+	87.30		1.522E+00	4.995E-01	4.917E-01	6.752E-02	3.096
	+	238.63	*	1.771E+00	2.562E-01	8.667E-02	1.145E-02	20.430
	+	300.09		1.293E+00	1.143E+00	1.067E+00	1.556E-01	1.212
PO-218	+	74.81		4.127E+00	8.493E-01	8.319E-01	9.169E-02	4.961
	+	77.11		3.334E+00	5.456E-01	4.713E-01	5.331E-02	7.075
	+	87.30		2.608E+00	8.395E-01	8.423E-01	1.025E-01	3.096
	+	241.98		2.645E+00	8.256E-01	5.211E-01	7.166E-02	5.076
	+	295.21		1.442E+00	3.030E-01	1.873E-01	2.788E-02	7.701
	+	351.92	*	1.486E+00	2.323E-01	1.005E-01	1.281E-02	14.785
RA-224	+	240.98	*	5.016E+00	1.540E+00	9.853E-01	1.233E-01	5.091
RA-226	+	609.31	*	1.156E+00	1.969E-01	9.806E-02	1.140E-02	11.786
	+	1120.29		1.008E+00	4.926E-01	3.688E-01	4.075E-02	2.733
	+	1764.49		1.318E+00	4.421E-01	2.526E-01	2.104E-02	5.218
AC-228	+	338.32		1.875E+00	9.017E-01	3.422E-01	1.440E-01	5.478
	+	911.07	*	1.862E+00	3.489E-01	1.899E-01	2.515E-02	9.810
	+	969.11		1.441E+00	4.937E-01	2.908E-01	7.023E-02	4.955
RA-228	+	338.32		1.875E+00	9.017E-01	3.422E-01	1.440E-01	5.478
	+	911.07	*	1.862E+00	3.489E-01	1.899E-01	2.515E-02	9.810
	+	969.11		1.441E+00	4.937E-01	2.908E-01	7.023E-02	4.955
TH-228	+	74.81		2.432E+00	4.676E-01	4.901E-01	4.038E-02	4.961
	+	77.11		1.974E+00	2.859E-01	2.791E-01	2.334E-02	7.075
	+	87.30		1.545E+00	4.830E-01	4.991E-01	4.697E-02	3.096
	+	238.63	*	1.797E+00	2.601E-01	8.798E-02	1.162E-02	20.430
	+	300.09		1.313E+00	1.390E+00	1.083E+00	6.516E-01	1.212
TH-230	+	609.31	*	1.156E+00	1.969E-01	9.806E-02	1.140E-02	11.786
	+	1120.29		1.008E+00	4.926E-01	3.688E-01	4.075E-02	2.733
	+	1764.49		1.318E+00	4.421E-01	2.526E-01	2.104E-02	5.218
TH-232	+	338.32		1.875E+00	4.908E-01	3.422E-01	4.070E-02	5.478
	+	911.07	*	1.862E+00	3.489E-01	1.899E-01	2.515E-02	9.810
	+	969.11		1.441E+00	4.937E-01	2.908E-01	7.023E-02	4.955
TH-234	+	63.29	*	1.540E+00	1.711E+00	1.688E+00	2.938E-01	0.912
	+	92.38		2.046E+00	7.688E-01	6.994E-01	1.282E-01	2.926
U-234	+	609.31	*	1.156E+00	1.969E-01	9.806E-02	1.140E-02	11.786
	+	1120.29		1.008E+00	4.926E-01	3.688E-01	4.075E-02	2.733
	+	1764.49		1.318E+00	4.421E-01	2.526E-01	2.104E-02	5.218
NP-237	+	86.50	*	9.665E-01	3.620E-01	3.145E-01	7.121E-02	3.073
		95.87		-3.063E-01	9.595E-01	1.354E+00	3.347E-01	-0.226
U-238	+	63.29	*	1.540E+00	1.711E+00	1.688E+00	2.938E-01	0.912
	+	92.38		2.046E+00	6.966E-01	6.994E-01	6.373E-02	2.926

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AM-243	+	74.67	*	3.883E-01	7.456E-02	7.849E-02	6.398E-03	4.948
	+	86.72		3.624E+01	1.133E+01	1.177E+01	1.100E+00	3.079
		117.66		-2.514E+00	3.637E+00	5.614E+00	4.637E-01	-0.448
		142.18		2.008E+00	1.606E+01	2.718E+01	2.400E+00	0.074
ANH-511	+	511.00	*	1.545E-01	6.069E-02	3.901E-02	3.908E-03	3.960

---- 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	*	8.236E-02	2.845E-01	4.671E-01	4.875E-02	0.176
NA-22		1274.54	*	-1.727E-02	3.651E-02	5.818E-02	5.014E-03	-0.297
NA-24		1368.53	*	2.988E-01	3.651E-02	Half-Life too short		
AL-26		1129.67		1.425E+00	1.575E+00	2.384E+00	2.076E-01	0.598
		1808.65	*	-1.723E-02	2.260E-02	3.244E-02	2.653E-03	-0.531
TI-44		67.85		-1.203E-02	4.309E-02	6.264E-02	4.782E-03	-0.192
	+	78.38	*	3.589E-01	5.198E-02	6.859E-02	5.816E-03	5.232
SC-46		889.25	*	-3.176E-02	3.204E-02	4.892E-02	5.476E-03	-0.649
	+	1120.51		1.725E-01	8.352E-02	1.031E-01	9.118E-03	1.673
V-48		944.10		-3.671E-01	7.710E-01	1.227E+00	1.331E-01	-0.299
		983.50	*	-2.385E-02	5.219E-02	8.228E-02	8.629E-03	-0.290
		1312.09		1.955E-02	6.588E-02	1.114E-01	9.812E-03	0.176
CR-51		320.08	*	-4.711E-02	3.275E-01	5.444E-01	7.049E-02	-0.087
MN-52		744.21		-1.825E-03	2.265E-01	3.385E-01	3.679E-02	-0.005
		848.13		-5.068E+00	6.010E+00	9.433E+00	1.050E+00	-0.537
		935.52		5.657E-01	2.324E-01	4.266E-01	4.658E-02	1.326
		1246.25		4.815E-01	6.880E+00	9.780E+00	8.268E-01	0.049
		1333.61		-1.604E+00	4.099E+00	6.508E+00	5.804E-01	-0.247
		1434.06	*	2.895E-01	1.996E-01	3.690E-01	3.298E-02	0.785
MN-54		834.83	*	1.795E-02	3.203E-02	5.511E-02	6.122E-03	0.326
CO-56		846.75	*	8.006E-05	3.471E-02	5.784E-02	6.439E-03	0.001
		977.42		2.610E-01	2.410E+00	3.547E+00	3.741E-01	0.074
		1037.82		1.532E-01	2.612E-01	4.445E-01	4.583E-02	0.345
		1175.09		5.438E-01	1.788E+00	3.044E+00	2.452E-01	0.179
	+	1238.25		1.083E-01	1.123E-01	1.333E-01	1.155E-02	0.812
		1360.21		1.602E-01	8.353E-01	1.398E+00	1.248E-01	0.115
		1771.40		-3.318E-02	2.293E-01	3.103E-01	2.578E-02	-0.107
CO-57		122.06	*	-9.065E-03	2.501E-02	3.807E-02	3.140E-03	-0.238
		136.48		-1.753E-02	1.921E-01	3.239E-01	3.005E-02	-0.054
CO-58		810.76	*	-2.740E-02	3.370E-02	5.323E-02	5.894E-03	-0.515
FE-59		142.65		3.593E-02	2.561E+00	4.180E+00	3.699E-01	0.009
		192.34		4.953E-01	9.757E-01	1.519E+00	2.255E-01	0.326
		1099.22	*	1.566E-02	7.297E-02	1.205E-01	1.181E-02	0.130
		1291.56		-5.441E-02	9.652E-02	1.516E-01	1.494E-02	-0.359
CO-60		1173.22		4.217E-03	3.568E-02	6.002E-02	4.827E-03	0.070
		1332.49	*	1.101E-03	3.253E-02	5.376E-02	4.794E-03	0.020
ZN-65		1115.52	*	-7.911E-03	9.187E-02	1.255E-01	1.119E-02	-0.063
GE-68		1077.35	*	3.455E-01	9.643E-01	1.615E+00	1.522E-01	0.214
AS-73		53.44	*	-1.419E-01	6.793E-01	1.114E+00	8.420E-02	-0.127

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AS-74		595.88	*	-2.942E-02	7.500E-02	1.213E-01	1.257E-02	-0.242
		634.78		1.942E-01	3.157E-01	5.378E-01	5.636E-02	0.361
SE-75		66.05		-2.946E+00	4.367E+00	6.228E+00	5.942E-01	-0.473
		96.73		-8.779E-01	8.118E-01	1.092E+00	1.503E-01	-0.804
		121.11		6.357E-02	1.306E-01	2.055E-01	2.247E-02	0.309
		136.00		2.255E-02	3.600E-02	6.200E-02	5.380E-03	0.364
		198.60		1.054E+00	1.898E+00	3.089E+00	3.610E-01	0.341
		264.65	*	2.438E-02	4.645E-02	6.714E-02	9.037E-03	0.363
		279.53		4.092E-02	1.054E-01	1.713E-01	2.431E-02	0.239
		303.91		3.233E-01	2.133E+00	3.148E+00	4.797E-01	0.103
		400.65		2.561E-02	2.247E-01	3.710E-01	4.343E-02	0.069
BR-77	+	87.88		7.122E+02	2.226E+02	2.984E+02	2.828E+01	2.387
		200.40		8.427E+01	1.636E+02	2.731E+02	3.003E+01	0.309
	+	239.00		2.799E+02	3.852E+01	3.505E+01	4.362E+00	7.986
		249.79		-3.047E+01	6.290E+01	9.928E+01	1.277E+01	-0.307
		281.68		-8.137E+01	8.637E+01	1.309E+02	1.824E+01	-0.622
		297.23		3.969E+02	1.008E+02	1.183E+02	1.591E+01	3.354
		303.76		3.968E+01	1.795E+02	2.659E+02	3.517E+01	0.149
		439.47		-2.954E+01	1.261E+02	2.026E+02	1.950E+01	-0.146
		484.57		1.397E+02	2.011E+02	3.366E+02	3.327E+01	0.415
		520.65	*	-1.840E+00	8.933E+00	1.449E+01	1.459E+00	-0.127
		574.64		-2.000E+02	1.918E+02	2.916E+02	3.001E+01	-0.686
		578.91		8.257E+01	8.653E+01	1.322E+02	1.362E+01	0.625
		585.48		2.010E+03	3.106E+02	4.639E+02	4.791E+01	4.333
		755.35		3.062E+01	1.412E+02	2.321E+02	2.530E+01	0.132
		817.79		1.470E+00	1.133E+02	1.896E+02	2.100E+01	0.008
SR-82		698.33		-2.923E+01	3.057E+01	4.680E+01	5.007E+00	-0.625
		776.49	*	-2.377E-01	3.485E-01	5.365E-01	5.883E-02	-0.443
		1395.20		-1.165E+01	8.879E+00	1.236E+01	1.105E+00	-0.943
RB-83		520.41	*	-4.976E-03	6.036E-02	9.867E-02	9.931E-03	-0.050
		529.64		-5.116E-03	8.962E-02	1.497E-01	1.513E-02	-0.034
		552.65		7.003E-02	1.671E-01	2.851E-01	2.909E-02	0.246
RB-84		881.50	*	1.565E-02	6.026E-02	1.017E-01	1.138E-02	0.154
KR-85		513.99	*	3.503E+01	8.612E+00	1.400E+01	1.405E+00	2.502
SR-85		513.99	*	1.795E-01	4.413E-02	7.174E-02	7.199E-03	2.502
RB-86		1076.63	*	4.194E-01	6.148E-01	1.053E+00	9.940E-02	0.398
Y-88		898.02		-8.646E-03	3.314E-02	5.386E-02	6.051E-03	-0.161
		1836.01	*	3.676E-02	3.146E-02	5.845E-02	4.725E-03	0.629
ZR-88		392.90	*	-3.065E-02	2.806E-02	4.338E-02	4.039E-03	-0.707
Y-91		1204.90	*	-2.301E+00	1.679E+01	2.770E+01	2.278E+00	-0.083
NB-94		702.63	*	2.105E-02	3.079E-02	5.207E-02	5.579E-03	0.404
		871.10		-1.450E-02	2.854E-02	4.470E-02	4.994E-03	-0.324
NB-95		765.79	*	4.598E-02	4.009E-02	6.856E-02	7.498E-03	0.671
NB-95M		235.69	*	1.606E-01	1.365E-01	2.027E-01	2.679E-02	0.792
ZR-95		724.18		1.522E-01	1.017E-01	1.566E-01	1.785E-02	0.972
		756.15	*	6.043E-04	6.268E-02	1.017E-01	1.180E-02	0.006
NB-97		657.90	*	1.186E-03	6.268E-02	Half-Life too short		
		1024.50		5.451E+00	6.268E-02	Half-Life too short		
ZR-97		254.15		2.887E+00	6.268E-02	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		355.39		6.333E+00	6.268E-02	Half-Life too short		
		507.63	*	5.291E+00	6.268E-02	Half-Life too short		
		602.52		5.978E-01	6.268E-02	Half-Life too short		
		1021.30		3.389E+00	6.268E-02	Half-Life too short		
		1147.95		-2.628E+00	6.268E-02	Half-Life too short		
		1362.66		-1.820E+00	6.268E-02	Half-Life too short		
		1750.46		-3.057E-01	6.268E-02	Half-Life too short		
MO-99		140.51		-2.143E+01	2.534E+01	3.950E+01	1.096E+01	-0.542
		181.06		-1.863E+01	1.836E+01	2.489E+01	4.764E+00	-0.749
		366.43		-8.307E+00	7.470E+01	1.229E+02	1.304E+01	-0.068
		739.58	*	-8.759E-01	9.608E+00	1.551E+01	2.567E+00	-0.056
		778.00		6.869E+00	3.193E+01	4.991E+01	5.476E+00	0.138
TC-99M		140.51	*	-2.722E+10	3.193E+01	Half-Life too short		
RH-101		127.23		6.060E-02	3.506E-02	5.287E-02	4.419E-03	1.146
		198.01	*	3.105E-02	3.479E-02	5.709E-02	6.228E-03	0.544
		325.23		-2.606E-01	2.134E-01	3.347E-01	4.160E-02	-0.779
RH-102		418.52		3.532E-02	2.527E-01	4.162E-01	3.950E-02	0.085
		475.06	*	-9.586E-03	2.701E-02	4.189E-02	4.120E-03	-0.229
		631.29		-3.737E-02	4.729E-02	7.391E-02	7.740E-03	-0.506
		697.49		-8.829E-02	6.957E-02	1.038E-01	1.111E-02	-0.850
		766.84		1.332E-01	1.026E-01	1.763E-01	1.928E-02	0.756
		1046.59		-1.023E-01	1.005E-01	1.506E-01	1.477E-02	-0.680
		1112.84		-4.185E-02	2.070E-01	2.999E-01	2.684E-02	-0.140
RU-103		497.08	*	-5.725E-03	3.516E-02	5.602E-02	8.408E-03	-0.102
	+	610.33		1.247E+01	2.696E+00	2.480E+00	4.385E-01	5.026
RH-106	+	511.85		7.715E-01	3.031E-01	4.055E-01	4.065E-02	1.903
		621.84	*	1.549E-01	2.759E-01	4.690E-01	6.848E-02	0.330
		1050.47		1.249E-01	1.976E+00	3.239E+00	3.162E-01	0.039
RU-106	+	511.85		7.715E-01	3.031E-01	4.055E-01	4.065E-02	1.903
		621.84	*	1.549E-01	2.755E-01	4.690E-01	4.898E-02	0.330
		1050.47		1.249E-01	1.976E+00	3.239E+00	3.162E-01	0.039
AG-108M		433.93	*	1.984E-02	3.031E-02	5.095E-02	5.044E-03	0.389
		614.37		1.337E-02	3.696E-02	5.410E-02	5.792E-03	0.247
		722.95		-4.350E-03	4.386E-02	6.088E-02	6.735E-03	-0.071
AG-110M		657.75	*	-3.080E-03	3.505E-02	4.902E-02	5.268E-03	-0.063
		677.61		-4.922E-01	2.849E-01	4.080E-01	4.411E-02	-1.207
		706.67		-7.079E-02	1.970E-01	3.146E-01	3.437E-02	-0.225
		763.93		-1.553E-01	1.573E-01	2.381E-01	2.649E-02	-0.652
		884.67		1.453E-02	4.086E-02	6.943E-02	7.917E-03	0.209
		937.48		6.910E-02	1.014E-01	1.740E-01	1.940E-02	0.397
		1384.27		5.494E-02	1.506E-01	2.208E-01	2.026E-02	0.249
IN-111		171.28		6.102E-01	9.185E-01	1.560E+00	1.557E-01	0.391
		245.39	*	-8.006E-01	1.118E+00	1.505E+00	1.910E-01	-0.532
IN-113M		391.69	*	-3.228E-02	4.026E-02	6.338E-02	6.053E-03	-0.509
SN-113		391.69	*	-3.228E-02	4.026E-02	6.338E-02	6.053E-03	-0.509
IN-114M		190.27	*	-2.169E-02	1.980E-01	2.853E-01	3.034E-02	-0.076
CD-115		260.90		-1.258E+01	1.240E+02	1.987E+02	2.640E+01	-0.063
		492.35		-2.092E+00	3.081E+01	4.943E+01	4.906E+00	-0.042
		527.90	*	4.679E+00	9.074E+00	1.560E+01	1.576E+00	0.300

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SN-117M		156.02		1.746E+00	2.093E+00	3.591E+00	3.366E-01	0.486
		158.56	*	-4.046E-03	5.086E-02	8.487E-02	8.048E-03	-0.048
SB-122		563.90	*	1.914E+00	1.746E+00	3.060E+00	3.136E-01	0.626
		692.80		1.758E+01	3.673E+01	6.172E+01	6.590E+00	0.285
I-123		159.00	*	1.367E+00	3.673E+01	Half-Life too short		
		528.96		2.419E+02	3.673E+01	Half-Life too short		
TE-123M		159.00	*	7.227E-03	2.581E-02	4.357E-02	4.161E-03	0.166
I-124		602.71	*	-1.788E-01	6.735E-01	9.386E-01	9.749E-02	-0.190
		722.78		-6.012E-01	4.533E+00	6.274E+00	6.771E-01	-0.096
		1325.50		5.845E+00	2.835E+01	4.757E+01	4.224E+00	0.123
		1376.25		4.279E+01	3.223E+01	5.164E+01	4.615E+00	0.829
		1509.49		2.201E+01	1.433E+01	2.636E+01	2.343E+00	0.835
		1691.02		1.689E+00	2.960E+00	5.259E+00	4.497E-01	0.321
SB-124		602.71		-1.048E-02	3.947E-02	5.500E-02	5.714E-03	-0.190
		645.85		-1.771E-01	4.323E-01	6.879E-01	7.524E-02	-0.257
		709.31		-1.383E+00	2.579E+00	4.066E+00	4.367E-01	-0.340
		713.82		5.128E-02	1.503E+00	2.454E+00	3.351E-01	0.021
		722.78		-5.107E-02	3.851E-01	5.330E-01	5.832E-02	-0.096
	+	968.20		1.482E+01	3.932E+00	6.391E+00	6.796E-01	2.319
		1045.16		-1.178E+00	2.147E+00	3.358E+00	3.298E-01	-0.351
		1325.50		5.303E-01	2.572E+00	4.316E+00	3.833E-01	0.123
		1368.21		3.208E-01	1.760E+00	2.515E+00	3.441E-01	0.128
		1436.60		1.869E+00	3.269E+00	5.635E+00	5.035E-01	0.332
		1691.02	*	3.384E-02	5.932E-02	1.054E-01	9.373E-03	0.321
SB-125		427.89	*	2.450E-02	8.419E-02	1.394E-01	1.353E-02	0.176
	+	463.38		5.949E-01	4.372E-01	4.981E-01	5.165E-02	1.194
		600.56		2.463E-02	1.588E-01	2.535E-01	2.767E-02	0.097
		635.90		3.190E-01	2.401E-01	4.214E-01	4.662E-02	0.757
TE-125M		109.28	*	-3.300E-01	9.302E+00	1.451E+01	1.470E+00	-0.023
I-126		388.63		1.505E-01	1.896E-01	3.227E-01	3.055E-02	0.467
		666.33	*	-8.602E-02	1.958E-01	2.653E-01	2.803E-02	-0.324
		753.82		9.293E-01	1.256E+00	2.129E+00	2.320E-01	0.436
SB-126		223.80		-3.707E-02	3.957E+00	6.446E+00	7.648E-01	-0.006
		278.60		2.329E+00	2.398E+00	3.960E+00	5.535E-01	0.588
	+	296.50		1.432E+01	2.871E+00	3.351E+00	4.514E-01	4.273
		414.70		4.623E-02	7.560E-02	1.117E-01	1.057E-02	0.414
		415.30		6.427E+00	6.180E+00	9.384E+00	8.885E-01	0.685
		555.20		1.283E+00	3.369E+00	5.734E+00	5.858E-01	0.224
		573.80		-1.086E+00	9.255E-01	1.428E+00	1.469E-01	-0.761
		593.00		-4.465E-01	7.916E-01	1.201E+00	1.243E-01	-0.372
		656.30		-7.367E-01	3.382E+00	4.676E+00	4.925E-01	-0.158
		666.33		-3.594E-02	8.183E-02	1.108E-01	1.171E-02	-0.324
		675.00		3.412E-01	1.717E+00	2.847E+00	3.019E-01	0.120
		695.00		-8.538E-03	6.616E-02	1.072E-01	1.146E-02	-0.080
		697.00		-3.087E-01	2.430E-01	3.626E-01	3.878E-02	-0.851
		720.50	*	-1.532E-02	1.520E-01	2.100E-01	2.265E-02	-0.073
		856.80		7.781E-02	4.630E-01	6.700E-01	7.469E-02	0.116
		989.30		3.402E-01	9.379E-01	1.584E+00	1.653E-01	0.215
		1034.80		-3.320E+00	7.198E+00	1.132E+01	1.126E+00	-0.293

---- Non-Identified Nuclides ----

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		1213.00		4.938E-01	3.945E+00	6.613E+00	5.468E-01	0.075
SB-127		61.10		2.037E+01	5.026E+01	7.609E+01	7.664E+00	0.268
		252.40		1.221E-01	4.128E+00	6.669E+00	2.876E+00	0.018
		290.80		-1.480E+01	2.187E+01	3.072E+01	4.723E+00	-0.482
		411.60		9.632E+00	1.280E+01	1.894E+01	3.065E+00	0.508
		444.90		4.506E+00	8.809E+00	1.468E+01	1.946E+00	0.307
		473.00		-7.685E-01	1.494E+00	2.339E+00	3.201E-01	-0.329
		543.00		3.475E+00	1.384E+01	2.344E+01	3.600E+00	0.148
		603.60		-6.964E-01	1.137E+01	1.611E+01	2.218E+00	-0.043
		685.20	*	4.610E-01	1.198E+00	2.003E+00	2.598E-01	0.230
		698.50		-1.174E+01	1.365E+01	2.091E+01	3.561E+00	-0.562
		722.20		1.526E+00	2.989E+01	4.207E+01	5.425E+00	0.036
		783.80		3.598E+00	4.057E+00	5.978E+00	8.458E-01	0.602
XE-127		57.60		4.213E+00	4.918E+00	8.421E+00	6.049E-01	0.500
		145.22		2.962E-01	6.559E-01	1.083E+00	9.688E-02	0.273
		172.10		5.818E-03	1.106E-01	1.842E-01	1.844E-02	0.032
		202.84	*	-2.004E-02	5.124E-02	7.656E-02	8.487E-03	-0.262
		374.96		-5.485E-03	1.841E-01	3.036E-01	3.091E-02	-0.018
I-131		80.18		-3.319E+00	5.660E+00	6.244E+00	5.435E-01	-0.532
		284.30		-3.717E-01	1.409E+00	2.222E+00	3.141E-01	-0.167
		364.48	*	-6.113E-02	1.013E-01	1.623E-01	1.798E-02	-0.377
		636.97		1.719E+00	1.376E+00	2.407E+00	2.620E-01	0.714
		722.89		-8.155E-01	7.348E+00	1.019E+01	1.104E+00	-0.080
TE-132		49.72		1.383E+01	1.515E+01	2.618E+01	2.713E+00	0.528
		111.76		-1.197E+00	2.853E+01	4.545E+01	4.824E+00	-0.026
		116.30		1.864E+01	2.599E+01	4.237E+01	4.477E+00	0.440
		228.16	*	3.249E-01	6.633E-01	1.095E+00	1.950E-01	0.297
BA-133		53.15		-9.138E-01	2.932E+00	4.790E+00	3.635E-01	-0.191
		79.62		-8.981E-01	1.602E+00	1.768E+00	2.689E-01	-0.508
		81.00		-8.058E-02	1.216E-01	1.326E-01	2.114E-02	-0.608
		276.40		5.978E-01	3.924E-01	6.032E-01	1.091E-01	0.991
		302.84		1.000E-01	1.480E-01	2.236E-01	3.729E-02	0.447
		356.01	*	2.040E-02	4.425E-02	6.548E-02	9.785E-03	0.312
		383.85		-1.721E-01	2.751E-01	4.379E-01	5.860E-02	-0.393
I-133	+	510.53		1.506E+00	2.751E-01	Half-Life too short		
		529.87	*	-3.111E-03	2.751E-01	Half-Life too short		
		706.58		-1.230E-01	2.751E-01	Half-Life too short		
		856.28		-2.828E-01	2.751E-01	Half-Life too short		
		875.33		5.813E-02	2.751E-01	Half-Life too short		
		1236.41		8.100E-01	2.751E-01	Half-Life too short		
		1298.22		-9.569E-02	2.751E-01	Half-Life too short		
CS-134		475.35		-1.435E-01	1.748E+00	2.755E+00	2.710E-01	-0.052
		563.23		2.059E-01	3.022E-01	5.211E-01	5.376E-02	0.395
		569.32		3.418E-02	1.682E-01	2.830E-01	2.935E-02	0.121
		604.70		2.871E-03	3.388E-02	4.856E-02	5.056E-03	0.059
	+	795.84	*	8.764E-02	4.946E-02	7.943E-02	8.792E-03	1.103
		801.93		-3.642E-01	4.288E-01	5.737E-01	6.352E-02	-0.635
		1038.57		1.839E+00	3.232E+00	5.495E+00	5.440E-01	0.335
		1167.94		-1.264E+00	2.029E+00	3.235E+00	2.629E-01	-0.391

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		1365.15		-4.101E-01	1.085E+00	1.689E+00	1.573E-01	-0.243
CS-135		268.24	*	2.681E-01	1.577E-01	2.629E-01	3.803E-02	1.020
I-135		288.45		1.467E+10	1.577E-01	Half-Life too short		
		417.63		-3.700E+09	1.577E-01	Half-Life too short		
		546.56		-5.471E+09	1.577E-01	Half-Life too short		
		836.80		7.506E+09	1.577E-01	Half-Life too short		
		1038.76		8.576E+09	1.577E-01	Half-Life too short		
		1124.00		7.759E+10	1.577E-01	Half-Life too short		
		1131.51		8.772E+08	1.577E-01	Half-Life too short		
		1260.41	*	-7.030E+08	1.577E-01	Half-Life too short		
		1457.56		6.386E+11	1.577E-01	Half-Life too short		
		1678.03		6.068E+08	1.577E-01	Half-Life too short		
		1706.46		2.750E+09	1.577E-01	Half-Life too short		
		1791.20		-4.211E+09	1.577E-01	Half-Life too short		
CS-136		66.91		-5.010E-01	7.191E-01	1.021E+00	1.519E-01	-0.491
	+	86.29		4.283E+00	1.400E+00	1.781E+00	2.371E-01	2.405
		153.22		5.179E-01	6.198E-01	1.063E+00	1.085E-01	0.487
		163.89		1.017E-01	1.021E+00	1.666E+00	1.774E-01	0.061
		176.55		4.293E-01	3.412E-01	5.860E-01	6.201E-02	0.733
		273.65		-6.807E-01	5.190E-01	6.558E-01	9.277E-02	-1.038
		340.57		5.904E-01	1.647E-01	2.558E-01	3.064E-02	2.309
		818.51		2.715E-03	6.495E-02	1.089E-01	1.206E-02	0.025
		1048.07	*	-5.347E-02	9.161E-02	1.426E-01	1.442E-02	-0.375
		1235.34		8.838E-01	5.860E-01	9.214E-01	1.077E-01	0.959
CE-139		165.85	*	7.738E-03	2.732E-02	4.599E-02	4.510E-03	0.168
BA-140		162.64		2.818E-01	7.108E-01	1.171E+00	1.185E-01	0.241
		304.84		-4.604E-01	1.319E+00	1.878E+00	5.587E-01	-0.245
		423.70		-1.396E+00	1.713E+00	2.572E+00	8.401E-01	-0.543
		537.32	*	3.525E-02	2.242E-01	3.777E-01	1.268E-01	0.093
LA-140		328.77		4.520E-01	2.846E-01	4.941E-01	6.242E-02	0.915
		432.53		-1.601E-01	1.901E+00	3.086E+00	3.074E-01	-0.052
		487.03		-5.201E-02	1.221E-01	1.918E-01	1.988E-02	-0.271
		751.79		-9.132E-01	1.510E+00	2.344E+00	2.727E-01	-0.390
		815.85		-1.275E-01	2.720E-01	4.402E-01	5.220E-02	-0.290
		867.82		4.068E-02	1.263E+00	1.803E+00	2.077E-01	0.023
		919.63		-8.379E-01	2.729E+00	3.724E+00	4.725E-01	-0.225
		925.24		3.869E-01	9.061E-01	1.542E+00	1.763E-01	0.251
		1596.49	*	2.113E-02	8.380E-02	1.230E-01	1.078E-02	0.172
CE-141		145.44	*	3.183E-02	5.675E-02	9.712E-02	8.841E-03	0.328
CE-143		57.37		9.547E-04	5.675E-02	Half-Life too short		
		231.56		-1.906E-03	5.675E-02	Half-Life too short		
		293.26	*	8.767E-04	5.675E-02	Half-Life too short		
	+	350.59		3.295E-02	5.675E-02	Half-Life too short		
		490.36		8.168E-05	5.675E-02	Half-Life too short		
		664.57		2.304E-03	5.675E-02	Half-Life too short		
		721.93		-1.971E-05	5.675E-02	Half-Life too short		
CE-144		80.11		-1.581E+00	2.616E+00	2.882E+00	2.491E-01	-0.549
		133.54	*	-5.944E-02	2.095E-01	3.089E-01	4.796E-02	-0.192
PM-144		476.78		-1.963E-02	6.130E-02	9.513E-02	1.004E-02	-0.206

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		618.01		1.786E-02	3.008E-02	4.648E-02	4.941E-03	0.384
		696.49	*	-3.146E-02	3.073E-02	4.676E-02	5.001E-03	-0.673
		778.57		1.229E+00	2.189E+00	3.410E+00	3.743E-01	0.360
PR-144		696.49	*	-2.132E+00	2.082E+00	3.169E+00	3.388E-01	-0.673
		1489.15		-6.032E+00	1.100E+01	1.687E+01	1.502E+00	-0.358
PM-146		453.90	*	3.263E-02	4.005E-02	6.596E-02	7.665E-03	0.495
		633.02		-1.115E+00	1.276E+00	1.873E+00	7.087E-01	-0.595
		735.90		-8.629E-03	1.383E-01	1.994E-01	5.852E-02	-0.043
		747.13		3.199E-02	7.859E-02	1.307E-01	2.030E-02	0.245
ND-147	+	91.11		6.508E-01	2.658E-01	4.719E-01	4.663E-02	1.379
		319.41		1.439E-01	2.884E+00	4.836E+00	6.122E-01	0.030
		439.89		-1.550E+00	5.256E+00	8.418E+00	8.106E-01	-0.184
		531.02	*	-3.397E-01	4.870E-01	7.796E-01	1.236E-01	-0.436
PM-149		285.90	*	6.538E+00	8.592E+01	1.376E+02	2.604E+01	0.048
EU-152		121.78		3.994E-02	7.040E-02	1.110E-01	1.066E-02	0.360
		244.69		1.068E-01	3.504E-01	5.037E-01	6.377E-02	0.212
		344.27	*	4.583E-02	1.142E-01	1.490E-01	1.791E-02	0.308
		443.98		5.474E-01	8.676E-01	1.456E+00	1.405E-01	0.376
		778.89		1.571E-01	2.522E-01	3.946E-01	4.330E-02	0.398
		867.32		-1.230E-01	7.668E-01	1.072E+00	1.196E-01	-0.115
	+	964.01		7.848E-01	3.796E-01	4.932E-01	5.263E-02	1.591
		1085.78		-5.744E-02	3.103E-01	4.969E-01	4.630E-02	-0.116
		1112.02		-2.384E-02	2.756E-01	4.261E-01	3.818E-02	-0.056
		1407.95		1.374E-01	1.936E-01	3.175E-01	2.839E-02	0.433
GD-153		69.67		-1.287E+00	1.474E+00	2.236E+00	1.736E-01	-0.576
	+	83.37		2.548E+01	1.575E+01	2.201E+01	1.975E+00	1.158
		97.43	*	-3.912E-02	8.251E-02	1.156E-01	1.017E-02	-0.338
		103.18		-1.264E-01	1.007E-01	1.531E-01	1.308E-02	-0.826
EU-154		123.07		-5.913E-02	5.161E-02	7.741E-02	8.587E-03	-0.764
		247.94		2.025E-01	3.839E-01	5.576E-01	8.287E-02	0.363
		591.81		-3.903E-01	6.013E-01	8.052E-01	1.047E-01	-0.485
		723.30		9.238E-02	1.826E-01	2.662E-01	3.070E-02	0.347
		756.87		1.475E-01	6.746E-01	1.109E+00	1.520E-01	0.133
		873.19		-1.540E-01	2.497E-01	3.954E-01	5.599E-02	-0.389
		996.32		-3.973E-01	3.047E-01	4.326E-01	8.078E-02	-0.918
		1004.76		3.702E-02	1.761E-01	2.930E-01	3.783E-02	0.126
		1274.45	*	-4.964E-02	1.019E-01	1.621E-01	1.832E-02	-0.306
EU-155		48.70		-3.882E-01	1.945E+00	3.245E+00	2.643E-01	-0.120
		60.01		-2.637E+00	4.491E+00	6.500E+00	4.616E-01	-0.406
	+	86.54		3.964E-01	1.240E-01	1.671E-01	1.571E-02	2.373
		105.31	*	1.099E-01	1.040E-01	1.696E-01	1.456E-02	0.648
TB-160	+	86.79		1.058E+00	3.308E-01	4.452E-01	4.164E-02	2.377
		197.04		2.961E-02	5.856E-01	9.394E-01	1.022E-01	0.032
		215.65		2.961E-01	7.259E-01	1.203E+00	1.390E-01	0.246
		298.57		1.716E-01	1.710E-01	1.856E-01	2.487E-02	0.925
		879.36	*	8.458E-02	1.197E-01	2.073E-01	2.319E-02	0.408
		962.29		9.228E-01	5.458E-01	8.653E-01	9.247E-02	1.066
	+	966.15		5.386E-01	2.605E-01	4.648E-01	4.951E-02	1.159
		1177.93		-9.089E-02	2.841E-01	4.630E-01	3.736E-02	-0.196

---- Non-Identified Nuclides ----

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		1271.85		-5.623E-01	5.702E-01	8.641E-01	7.426E-02	-0.651
HO-166M		80.57		4.512E-02	3.150E-01	3.658E-01	3.178E-02	0.123
		184.41		1.185E-01	4.084E-02	6.489E-02	6.765E-03	1.827
		280.46		-8.550E-02	8.424E-02	1.272E-01	1.777E-02	-0.672
	+	410.95		1.893E-01	2.679E-01	3.819E-01	3.605E-02	0.496
		711.68	*	-6.651E-03	5.528E-02	8.947E-02	9.619E-03	-0.074
		752.31		-2.242E-03	2.386E-01	3.867E-01	4.212E-02	-0.006
		810.29		-2.528E-02	5.047E-02	8.163E-02	9.025E-03	-0.310
TM-171		51.35		-6.489E+00	2.460E+01	4.083E+01	3.185E+00	-0.159
		52.39		8.342E-01	1.294E+01	2.146E+01	1.647E+00	0.039
		59.40		2.214E+00	2.365E+01	3.540E+01	2.502E+00	0.063
		66.72	*	-1.795E+01	2.612E+01	3.727E+01	2.816E+00	-0.482
LU-176	+	88.36		7.806E-01	2.440E-01	3.311E-01	3.131E-02	2.358
		201.83		-2.574E-02	2.923E-02	4.637E-02	5.123E-03	-0.555
		306.84	*	-5.638E-03	2.548E-02	3.672E-02	4.818E-03	-0.154
		401.10		-3.528E+00	5.957E+00	9.469E+00	8.872E-01	-0.373
LU-177		112.95		-1.025E+00	1.585E+00	2.463E+00	2.048E-01	-0.416
		208.36	*	2.255E+00	1.101E+00	1.875E+00	2.117E-01	1.202
LU-177M		52.97		-4.655E-01	1.327E+00	2.165E+00	1.647E-01	-0.215
		54.07		-3.722E-01	7.000E-01	1.133E+00	8.485E-02	-0.329
		61.30		8.533E-01	1.321E+00	2.019E+00	1.453E-01	0.423
		121.62		2.145E-01	3.611E-01	5.705E-01	4.699E-02	0.376
		147.16		-4.376E-01	6.056E-01	9.928E-01	8.952E-02	-0.441
		171.86		6.267E-02	4.473E-01	7.476E-01	7.476E-02	0.084
		218.09		-1.930E-01	8.464E-01	1.370E+00	1.596E-01	-0.141
	+	268.79		2.478E+00	1.391E+00	1.384E+00	1.882E-01	1.790
		319.02		-5.376E-02	2.276E-01	3.767E-01	4.774E-02	-0.143
		367.43		-2.719E-01	8.330E-01	1.356E+00	1.431E-01	-0.201
		413.65	*	1.057E-01	1.773E-01	2.617E-01	2.475E-02	0.404
HF-181		56.28		6.493E-02	7.590E-01	1.270E+00	9.250E-02	0.051
		57.53		4.525E-01	4.106E-01	7.083E-01	5.091E-02	0.639
		65.20		-5.710E-01	8.500E-01	1.215E+00	9.054E-02	-0.470
		133.02		-3.043E-02	6.742E-02	9.763E-02	8.322E-03	-0.312
		136.25		1.956E-01	4.171E-01	7.152E-01	6.170E-02	0.274
		345.85		-4.127E-02	2.267E-01	2.817E-01	3.258E-02	-0.147
		482.03	*	1.099E-02	3.872E-02	6.348E-02	6.267E-03	0.173
W-181		56.28		2.594E-02	2.973E-01	4.974E-01	3.623E-02	0.052
		57.53		1.774E-01	1.610E-01	2.777E-01	1.996E-02	0.639
		65.20	*	-2.220E-01	3.305E-01	4.723E-01	3.521E-02	-0.470
TA-182		67.75		-3.536E-02	1.026E-01	1.488E-01	1.135E-02	-0.238
		100.10		1.317E-01	1.637E-01	2.704E-01	2.343E-02	0.487
		152.43		1.153E-01	3.131E-01	5.313E-01	4.902E-02	0.217
		222.10		-9.518E-02	3.412E-01	5.503E-01	6.494E-02	-0.173
		1001.68		1.177E+00	1.799E+00	2.920E+00	3.009E-01	0.403
	+	1121.28		4.765E-01	2.307E-01	2.841E-01	2.509E-02	1.677
		1189.05		-2.328E-01	2.464E-01	3.819E-01	3.106E-02	-0.610
		1221.42	*	-6.211E-02	1.691E-01	2.745E-01	2.282E-02	-0.226
		1230.97		-4.015E-01	4.998E-01	6.526E-01	5.461E-02	-0.615
RE-183		57.98		6.740E-02	1.628E-01	2.749E-01	1.967E-02	0.245

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		59.32		7.797E-03	9.719E-02	1.454E-01	1.029E-02	0.054
		67.20		-1.000E-01	1.825E-01	2.620E-01	1.989E-02	-0.382
		162.32	*	-1.047E-02	1.040E-01	1.686E-01	1.627E-02	-0.062
	+	208.81		2.196E+00	1.383E+00	1.692E+00	1.912E-01	1.298
		291.72		-1.703E-01	9.386E-01	1.364E+00	1.858E-01	-0.125
RE-184		57.98		2.484E-01	6.002E-01	1.013E+00	7.251E-02	0.245
		59.32		2.872E-02	3.579E-01	5.356E-01	3.788E-02	0.054
		67.20		-3.686E-01	6.726E-01	9.656E-01	7.327E-02	-0.382
		161.27		-3.492E-01	3.291E-01	5.270E-01	5.060E-02	-0.663
		216.55		1.174E-01	2.581E-01	4.282E-01	4.964E-02	0.274
		252.85	*	-3.190E-03	2.231E-01	3.597E-01	4.667E-02	-0.009
		318.01		-4.019E-01	4.068E-01	6.462E-01	8.214E-02	-0.622
		792.07		1.015E+00	1.730E+00	1.633E+00	1.798E-01	0.621
		903.28		3.062E-01	9.034E-01	1.368E+00	1.528E-01	0.224
		920.93		5.514E-03	4.377E-01	6.189E-01	6.829E-02	0.009
OS-185		59.72		-1.350E-01	2.682E-01	3.901E-01	2.762E-02	-0.346
		61.14		6.107E-02	1.443E-01	2.187E-01	1.571E-02	0.279
		69.30		-2.064E-01	2.497E-01	3.996E-01	3.091E-02	-0.516
		592.07		-1.403E+00	2.324E+00	3.275E+00	3.391E-01	-0.428
		646.12	*	-1.283E-02	3.651E-02	5.831E-02	6.129E-03	-0.220
		717.42		1.674E-01	8.954E-01	1.388E+00	1.495E-01	0.121
		874.81		-1.318E-02	4.929E-01	8.173E-01	9.134E-02	-0.016
		880.27		2.831E-01	6.744E-01	1.149E+00	1.285E-01	0.246
RE-188		155.03	*	1.324E-01	1.617E-01	2.772E-01	2.587E-02	0.478
		477.96		7.045E-01	2.765E+00	4.531E+00	4.463E-01	0.155
		633.10		-2.417E+00	2.471E+00	3.810E+00	3.991E-01	-0.634
W-188	+	63.58		6.185E+01	6.803E+01	7.898E+01	5.803E+00	0.783
		227.08		1.056E+00	1.236E+01	2.019E+01	2.421E+00	0.052
		290.67	*	-5.246E+00	7.634E+00	1.073E+01	1.465E+00	-0.489
IR-192	+	295.96		1.099E+00	2.207E-01	2.603E-01	3.522E-02	4.223
		308.46		1.877E-02	8.828E-02	1.457E-01	1.907E-02	0.129
		316.51	*	-2.525E-03	3.024E-02	5.044E-02	6.447E-03	-0.050
		468.07		3.308E-02	6.976E-02	1.009E-01	1.044E-02	0.328
		604.41		-7.388E-02	4.572E-01	6.425E-01	9.159E-02	-0.115
		612.46		5.264E+00	1.059E+00	1.650E+00	1.898E-01	3.190
AU-195		65.12		-1.651E-01	1.566E-01	2.195E-01	1.635E-02	-0.752
		66.83		-5.994E-02	8.632E-02	1.231E-01	9.310E-03	-0.487
	+	75.70		1.256E+00	2.412E-01	4.041E-01	3.329E-02	3.109
		98.88	*	2.925E-01	2.065E-01	3.469E-01	3.025E-02	0.843
	+	129.76		5.373E+00	3.445E+00	4.714E+00	3.973E-01	1.140
TL-200		367.94	*	-7.469E-06	3.445E+00	Half-Life too short		
		579.30		5.534E-03	3.445E+00	Half-Life too short		
		828.27		-1.843E-03	3.445E+00	Half-Life too short		
		1205.75		2.042E-03	3.445E+00	Half-Life too short		
TL-201		68.90		-2.214E+00	3.941E+00	6.372E+00	4.911E-01	-0.347
		70.82		1.866E+00	2.512E+00	3.805E+00	2.986E-01	0.490
		80.30		1.284E+00	5.763E+00	6.731E+00	5.830E-01	0.191
		135.34		1.606E+01	2.267E+01	3.915E+01	3.366E+00	0.410
		167.43	*	-6.109E+00	6.509E+00	1.045E+01	1.030E+00	-0.585

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TL-202		68.90		-2.009E-01	3.577E-01	5.784E-01	4.457E-02	-0.347
		70.82		1.689E-01	2.274E-01	3.445E-01	2.703E-02	0.490
		80.30		1.162E-01	5.218E-01	6.094E-01	5.279E-02	0.191
		439.56	*	-2.626E-02	6.247E-02	9.930E-02	9.559E-03	-0.264
HG-203		70.83		7.338E-01	9.907E-01	1.496E+00	1.964E-01	0.490
		72.87		1.178E+00	6.119E-01	9.270E-01	1.187E-01	1.271
		82.60		-1.905E-01	1.086E+00	1.543E+00	2.147E-01	-0.124
		279.20	*	2.341E-02	3.979E-02	6.505E-02	9.207E-03	0.360
BI-207		72.80		3.139E-01	1.752E-01	2.694E-01	2.155E-02	1.165
	+	74.97		6.971E-01	1.338E-01	1.987E-01	1.625E-02	3.508
	+	84.90		3.296E-01	2.037E-01	2.845E-01	2.600E-02	1.159
		569.67		4.055E-03	2.607E-02	4.376E-02	4.495E-03	0.093
		1063.62	*	-3.276E-04	4.552E-02	7.416E-02	7.119E-03	-0.004
		1770.23		4.481E-01	5.575E-01	8.704E-01	7.235E-02	0.515
TL-207		81.07		-1.746E-01	2.672E-01	2.930E-01	2.560E-02	-0.596
	+	83.78		2.173E-01	1.343E-01	1.883E-01	1.698E-02	1.154
		94.90		5.491E-01	2.325E-01	3.621E-01	3.237E-02	1.517
		122.32		-8.679E-01	1.723E+00	2.604E+00	2.318E-01	-0.333
		144.24		1.978E-01	6.500E-01	1.070E+00	1.059E-01	0.185
		154.21		1.766E-01	3.763E-01	6.395E-01	6.460E-02	0.276
	+	269.46		5.802E-01	3.260E-01	3.311E-01	4.548E-02	1.752
		323.87	*	-6.884E-01	6.380E-01	9.941E-01	1.976E-01	-0.692
	+	338.28		7.828E+00	2.162E+00	2.284E+00	3.379E-01	3.427
		445.03		9.900E-01	2.068E+00	3.442E+00	4.423E-01	0.288
PO-209		260.50		-2.326E+00	9.265E+00	1.474E+01	1.956E+00	-0.158
		262.80		-1.067E+01	2.957E+01	4.053E+01	5.415E+00	-0.263
		896.60	*	2.329E+00	5.842E+00	9.954E+00	1.115E+00	0.234
BI-210		46.50	*	-9.337E-01	2.874E+00	4.617E+00	4.290E-01	-0.202
PB-210		46.50	*	-9.337E-01	2.874E+00	4.617E+00	4.290E-01	-0.202
PO-210		46.50	*	-9.337E-01	2.874E+00	4.617E+00	3.882E-01	-0.202
PB-211		404.84	*	-3.751E-01	9.734E-01	1.301E+00	8.169E-01	-0.288
		427.08		1.013E+00	1.950E+00	3.097E+00	1.929E+00	0.327
		831.96		-1.000E-01	1.055E+00	1.747E+00	1.102E+00	-0.057
PO-215		81.07		-1.746E-01	2.672E-01	2.930E-01	2.560E-02	-0.596
	+	83.78		2.173E-01	1.343E-01	1.883E-01	1.698E-02	1.154
		94.90		5.491E-01	2.325E-01	3.621E-01	3.237E-02	1.517
		122.32		-8.679E-01	1.723E+00	2.604E+00	2.318E-01	-0.333
		144.24		1.978E-01	6.500E-01	1.070E+00	1.059E-01	0.185
		154.21		1.766E-01	3.763E-01	6.395E-01	6.460E-02	0.276
	+	269.46		5.802E-01	3.260E-01	3.311E-01	4.548E-02	1.752
		323.87	*	-6.884E-01	6.380E-01	9.941E-01	1.976E-01	-0.692
	+	338.28		7.828E+00	2.162E+00	2.284E+00	3.379E-01	3.427
		445.03		9.900E-01	2.068E+00	3.442E+00	4.423E-01	0.288
RN-219	+	271.23		7.444E-01	4.202E-01	4.093E-01	6.063E-02	1.819
		401.81	*	-5.558E-02	3.637E-01	5.922E-01	9.162E-02	-0.094
RN-220		549.76	*	-2.372E+00	2.209E+01	3.667E+01	3.738E+00	-0.065
RA-223		81.07		-1.746E-01	2.672E-01	2.930E-01	2.560E-02	-0.596
	+	83.78		2.173E-01	1.343E-01	1.883E-01	1.698E-02	1.154
		94.90		5.491E-01	2.325E-01	3.621E-01	3.237E-02	1.517

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		122.32		-8.679E-01	1.723E+00	2.604E+00	2.318E-01	-0.333
		144.24		1.978E-01	6.500E-01	1.070E+00	1.059E-01	0.185
		154.21		1.766E-01	3.763E-01	6.395E-01	6.460E-02	0.276
	+	269.46		5.802E-01	3.260E-01	3.311E-01	4.548E-02	1.752
		323.87	*	-6.884E-01	6.380E-01	9.941E-01	1.976E-01	-0.692
	+	338.28		7.828E+00	2.162E+00	2.284E+00	3.379E-01	3.427
		445.03		9.900E-01	2.068E+00	3.442E+00	4.423E-01	0.288
AC-227		79.80		-1.319E+00	2.041E+00	2.223E+00	4.779E-01	-0.594
		236.00		1.026E+00	3.138E-01	4.504E-01	6.795E-02	2.279
		256.20	*	-2.564E-01	3.750E-01	5.820E-01	1.062E-01	-0.441
		286.10		3.112E-01	1.458E+00	2.350E+00	4.005E-01	0.132
	+	299.80		2.397E+00	2.144E+00	2.360E+00	4.779E-01	1.016
		304.40		1.502E-01	1.891E+00	2.779E+00	5.829E-01	0.054
		334.20		-7.441E-01	2.333E+00	3.305E+00	6.995E-01	-0.225
TH-227		79.80		-1.319E+00	2.041E+00	2.223E+00	4.840E-01	-0.594
	+	94.00		7.907E+00	3.122E+00	3.524E+00	7.729E-01	2.244
		236.00		1.026E+00	3.091E-01	4.504E-01	6.376E-02	2.279
		256.20	*	-2.564E-01	3.758E-01	5.820E-01	1.198E-01	-0.441
		286.10		3.112E-01	1.491E+00	2.350E+00	2.372E+00	0.132
	+	299.80		2.397E+00	2.144E+00	2.360E+00	4.779E-01	1.016
		304.40		1.502E-01	1.891E+00	2.779E+00	5.829E-01	0.054
		334.20		-7.441E-01	2.333E+00	3.305E+00	6.995E-01	-0.225
TH-229	+	85.43		3.253E-01	2.011E-01	2.900E-01	2.668E-02	1.122
	+	88.47		4.494E-01	1.405E-01	1.906E-01	1.800E-02	2.358
		100.00		1.740E-01	1.697E-01	2.821E-01	2.446E-02	0.617
		193.63	*	-4.360E-01	4.978E-01	7.918E-01	8.513E-02	-0.551
	+	210.97		1.721E+00	1.083E+00	1.293E+00	1.472E-01	1.331
PA-231		283.67	*	-6.156E-01	1.455E+00	2.271E+00	4.241E-01	-0.271
	+	301.29		9.587E-01	8.493E-01	9.567E-01	1.521E-01	1.002
TH-231		81.07		-1.746E-01	2.672E-01	2.930E-01	2.560E-02	-0.596
	+	83.78		2.173E-01	1.343E-01	1.883E-01	1.698E-02	1.154
		94.90		5.491E-01	2.325E-01	3.621E-01	3.237E-02	1.517
		122.32		-8.679E-01	1.723E+00	2.604E+00	2.318E-01	-0.333
		144.24		1.978E-01	6.500E-01	1.070E+00	1.059E-01	0.185
		154.21		1.766E-01	3.763E-01	6.395E-01	6.460E-02	0.276
	+	269.46		5.802E-01	3.260E-01	3.311E-01	4.548E-02	1.752
		323.87	*	-6.884E-01	6.380E-01	9.941E-01	1.976E-01	-0.692
	+	338.28		7.828E+00	2.162E+00	2.284E+00	3.379E-01	3.427
		445.03		9.900E-01	2.068E+00	3.442E+00	4.423E-01	0.288
U-231	+	84.21		9.275E+00	5.733E+00	8.033E+00	7.282E-01	1.155
	+	92.29		7.740E+00	2.635E+00	3.710E+00	3.383E-01	2.086
		95.87	*	-3.440E-01	1.075E+00	1.521E+00	1.350E-01	-0.226
		108.00		-2.191E+00	1.992E+00	3.043E+00	2.558E-01	-0.720
PA-233	+	75.28		2.034E+01	4.682E+00	6.042E+00	9.133E-01	3.367
	+	86.59		6.443E+00	2.595E+00	2.720E+00	7.358E-01	2.369
	+	300.12		6.682E-01	5.946E-01	6.595E-01	1.189E-01	1.013
		311.98	*	1.283E-02	5.685E-02	9.619E-02	1.260E-02	0.133
		340.50		3.071E+00	1.063E+00	1.264E+00	3.181E-01	2.429
		398.62		8.291E-02	1.921E+00	3.065E+00	8.237E-01	0.027

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		415.76		7.041E-01	1.627E+00	2.471E+00	5.414E-01	0.285
PA-234	+	63.00		1.795E+00	1.988E+00	2.331E+00	3.453E-01	0.770
		94.67		5.230E-01	1.787E-01	2.712E-01	3.427E-02	1.928
		98.44		8.589E-02	1.000E-01	1.400E-01	7.811E-02	0.614
		99.86		4.817E-01	4.313E-01	7.188E-01	6.236E-02	0.670
		111.00		1.183E-02	1.844E-01	2.883E-01	3.429E-02	0.041
		131.20		-4.509E-02	1.083E-01	1.574E-01	1.333E-02	-0.287
		152.70		1.765E-01	3.053E-01	5.190E-01	9.013E-02	0.340
	+	186.00		5.453E+00	2.719E+00	2.498E+00	7.940E-01	2.183
		226.40		1.577E-01	3.910E-01	6.450E-01	1.006E-01	0.244
		227.20		1.936E-01	4.105E-01	6.793E-01	8.147E-02	0.285
		248.90		2.134E-01	8.448E-01	1.275E+00	3.103E-01	0.167
		293.70		5.713E+00	1.431E+00	1.553E+00	3.140E-01	3.679
		369.80		5.652E-01	8.124E-01	1.368E+00	3.087E-01	0.413
		568.70		3.898E-01	8.654E-01	1.474E+00	1.513E-01	0.264
		569.50		4.282E-02	2.318E-01	3.896E-01	4.002E-02	0.110
		574.00		-1.721E+00	1.342E+00	2.054E+00	2.114E-01	-0.838
		699.00		-1.729E-01	6.437E-01	1.033E+00	2.077E-01	-0.167
		706.10		2.566E-01	9.677E-01	1.592E+00	7.170E-01	0.161
		733.00		-1.007E-01	3.648E-01	4.925E-01	1.140E-01	-0.205
		742.81		-6.718E-01	1.374E+00	1.866E+00	1.260E+00	-0.360
	+	796.30		1.703E+00	1.056E+00	1.547E+00	4.319E-01	1.101
		805.60		8.536E-01	9.092E-01	1.538E+00	4.832E-01	0.555
		819.60		9.872E-01	1.143E+00	1.901E+00	7.349E-01	0.519
		826.30		-5.175E-01	7.664E-01	1.165E+00	5.274E-01	-0.444
		831.60		-1.521E-01	5.425E-01	8.866E-01	2.718E-01	-0.172
		876.40		4.603E-01	8.580E-01	1.238E+00	1.276E+00	0.372
		880.51		9.517E-02	2.434E-01	4.141E-01	4.631E-02	0.230
		883.24		-8.389E-02	2.551E-01	4.034E-01	2.727E-01	-0.208
		899.00		-2.742E-01	7.032E-01	1.116E+00	4.942E-01	-0.246
		925.00		6.454E-01	9.483E-01	1.640E+00	1.804E-01	0.394
		926.50		-1.603E-01	1.542E-01	2.258E-01	5.912E-02	-0.710
		946.00	*	1.379E-01	2.588E-01	4.399E-01	8.743E-02	0.313
		949.00		6.714E-02	3.795E-01	6.332E-01	6.841E-02	0.106
		980.50		1.536E-01	5.238E-01	8.817E-01	9.272E-02	0.174
		1394.10		-5.425E-01	9.918E-01	1.423E+00	9.271E-01	-0.381
PA-234M		766.42		1.375E+01	1.283E+01	1.859E+01	9.516E+00	0.740
		1001.03	*	1.268E+00	4.037E+00	6.403E+00	7.337E-01	0.198
U-235	+	89.95		2.601E+00	1.309E+00	1.697E+00	5.272E-01	1.532
	+	93.35		2.460E+00	1.064E+00	1.173E+00	3.302E-01	2.098
		105.00		1.334E+00	1.080E+00	1.661E+00	4.950E-01	0.803
		143.76	*	1.590E-02	2.004E-01	3.278E-01	5.782E-02	0.049
		163.35		3.335E-02	4.501E-01	7.343E-01	1.438E-01	0.045
	+	185.71		2.020E-01	8.046E-02	9.203E-02	9.637E-03	2.195
		205.31		-3.854E-01	6.047E-01	8.211E-01	1.672E-01	-0.469
NP-236		94.67		3.993E-01	1.310E-01	2.060E-01	1.844E-02	1.939
		98.44		6.491E-02	6.659E-02	1.058E-01	9.249E-03	0.614
		111.00		8.948E-03	1.394E-01	2.181E-01	1.820E-02	0.041
		160.31	*	-8.691E-02	7.390E-02	1.178E-01	1.126E-02	-0.738

---- 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		1.701E-01	1.449E-01	2.418E-01	2.101E-02	0.704
		117.00	*	3.029E-02	1.820E-01	2.913E-01	2.408E-02	0.104
	+	209.75		1.733E+00	1.091E+00	1.328E+00	1.505E-01	1.306
		228.18		1.080E-01	2.190E-01	3.624E-01	4.360E-02	0.298
		277.60		2.804E-01	1.783E-01	2.972E-01	4.142E-02	0.944
		334.30		-4.511E-01	1.310E+00	1.856E+00	2.238E-01	-0.243
AM-241		59.54	*	1.608E-02	1.374E-01	2.059E-01	1.609E-02	0.078
CM-243		99.55		1.750E-01	1.491E-01	2.488E-01	2.162E-02	0.704
		103.76	*	-1.017E-02	9.063E-02	1.448E-01	1.234E-02	-0.070
		117.00		3.117E-02	1.873E-01	2.997E-01	2.477E-02	0.104
	+	209.75		1.709E+00	1.076E+00	1.309E+00	1.484E-01	1.306
		228.18		1.091E-01	2.213E-01	3.662E-01	4.405E-02	0.298
		277.60		2.827E-01	1.797E-01	2.996E-01	4.176E-02	0.944
AM-246		798.80		-2.345E-02	1.472E-01	1.995E-01	2.200E-02	-0.118
		1036.00		2.712E-03	2.466E-01	4.033E-01	4.005E-02	0.007
		1062.04		-2.790E-02	2.033E-01	3.281E-01	3.156E-02	-0.085
		1078.86	*	3.778E-02	1.108E-01	1.853E-01	1.743E-02	0.204
CM-247		278.00		1.065E+00	7.360E-01	1.225E+00	1.710E-01	0.870
		287.40		-1.762E-02	1.171E+00	1.868E+00	2.570E-01	-0.009
		402.60	*	-4.022E-03	3.367E-02	5.343E-02	5.012E-03	-0.075
CF-249		252.85		-1.197E-02	8.373E-01	1.350E+00	1.752E-01	-0.009
		333.44		-1.271E-01	1.757E-01	2.420E-01	2.928E-02	-0.525
		387.95	*	4.421E-02	3.724E-02	6.425E-02	6.107E-03	0.688
CF-251		176.60	*	1.519E-01	1.181E-01	2.030E-01	2.063E-02	0.748
		227.00		4.732E-02	3.718E-01	6.081E-01	7.289E-02	0.078
		285.00		-2.500E-01	1.653E+00	2.620E+00	3.624E-01	-0.095

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]G244125004      *
* Acquisition date : 20-JAN-2010 13:31:14 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 02:00:02.15      Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        :  5-JAN-2010 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G244125004           Analyst initials: MXR1          *
* Batch Number       : 940263               Sample Quantity : 1.2718E+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	2.122E+01	2.309E+00	4.634E-01	0.000E+00
CD-109	3.348E+00	1.026E+00	1.120E+00	0.000E+00
SN-126	3.291E-01	1.008E-01	1.105E-01	0.000E+00
BA-137M	9.388E-02	3.945E-02	5.124E-02	0.000E+00
CS-137	9.924E-02	4.171E-02	5.417E-02	0.000E+00
TL-208	5.165E-01	8.959E-02	5.416E-02	0.000E+00
BI-211	4.271E+00	6.168E-01	2.945E-01	0.000E+00
BI-212	1.171E+00	4.488E-01	4.029E-01	0.000E+00
PB-212	1.771E+00	2.511E-01	8.904E-02	0.000E+00
PO-212	1.771E+00	2.511E-01	8.904E-02	0.000E+00
BI-214	1.156E+00	1.930E-01	9.935E-02	0.000E+00
PB-214	1.486E+00	2.276E-01	1.026E-01	0.000E+00
PO-214	1.486E+00	2.276E-01	1.026E-01	0.000E+00
PO-216	1.771E+00	2.511E-01	8.904E-02	0.000E+00
PO-218	1.486E+00	2.276E-01	1.026E-01	0.000E+00
RA-224	5.016E+00	1.509E+00	1.012E+00	0.000E+00
RA-226	1.156E+00	1.930E-01	9.935E-02	0.000E+00
AC-228	1.862E+00	3.419E-01	1.912E-01	0.000E+00
RA-228	1.862E+00	3.419E-01	1.912E-01	0.000E+00
TH-228	1.797E+00	2.549E-01	9.038E-02	0.000E+00
TH-230	1.156E+00	1.930E-01	9.935E-02	0.000E+00
TH-232	1.862E+00	3.419E-01	1.912E-01	0.000E+00
TH-234	1.540E+00	1.677E+00	1.767E+00	0.000E+00
U-234	1.156E+00	1.930E-01	9.935E-02	0.000E+00
NP-237	9.665E-01	3.547E-01	3.279E-01	0.000E+00
U-238	1.540E+00	1.677E+00	1.767E+00	0.000E+00
AM-243	3.883E-01	7.307E-02	8.199E-02	0.000E+00
ANH-511	1.545E-01	5.948E-02	3.962E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)

BE-7	8.236E-02	2.788E-01	4.750E-01	0.000E+00	NOT IDENT.
NA-22	-1.727E-02	3.578E-02	5.829E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	6.673E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-1.723E-02	2.215E-02	3.232E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.094E-02	7.160E-02	0.000E+00	FAIL ABUN
SC-46	-3.176E-02	3.140E-02	4.928E-02	0.000E+00	FAIL ABUN
V-48	-2.385E-02	5.114E-02	8.276E-02	0.000E+00	NOT IDENT.
CR-51	-4.711E-02	3.210E-01	5.569E-01	0.000E+00	NOT IDENT.
MN-52	2.895E-01	1.956E-01	3.691E-01	0.000E+00	NOT IDENT.
MN-54	1.795E-02	3.139E-02	5.557E-02	0.000E+00	NOT IDENT.
CO-56	8.006E-05	3.401E-02	5.831E-02	0.000E+00	FAIL ABUN
CO-57	-9.065E-03	2.451E-02	3.950E-02	0.000E+00	NOT IDENT.
CO-58	-2.740E-02	3.303E-02	5.370E-02	0.000E+00	NOT IDENT.
FE-59	1.566E-02	7.151E-02	1.210E-01	0.000E+00	NOT IDENT.
CO-60	1.101E-03	3.188E-02	5.382E-02	0.000E+00	NOT IDENT.
ZN-65	-7.911E-03	9.004E-02	1.260E-01	0.000E+00	NOT IDENT.
GE-68	3.455E-01	9.450E-01	1.622E+00	0.000E+00	NOT IDENT.
AS-73	-1.419E-01	6.657E-01	1.170E+00	0.000E+00	NOT IDENT.
AS-74	-2.942E-02	7.350E-02	1.230E-01	0.000E+00	NOT IDENT.
SE-75	2.438E-02	4.553E-02	6.888E-02	0.000E+00	NOT IDENT.
BR-77	-1.840E+00	8.754E+00	1.472E+01	0.000E+00	FAIL ABUN
SR-82	-2.377E-01	3.415E-01	5.416E-01	0.000E+00	NOT IDENT.
RB-83	-4.976E-03	5.916E-02	1.002E-01	0.000E+00	NOT IDENT.
RB-84	1.565E-02	5.905E-02	1.025E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	8.439E+00	1.422E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	4.325E-02	7.287E-02	0.000E+00	NOT IDENT.
RB-86	4.194E-01	6.025E-01	1.058E+00	0.000E+00	NOT IDENT.
Y-88	3.676E-02	3.083E-02	5.823E-02	0.000E+00	NOT IDENT.
ZR-88	-3.065E-02	2.750E-02	4.424E-02	0.000E+00	NOT IDENT.
Y-91	-2.301E+00	1.645E+01	2.778E+01	0.000E+00	NOT IDENT.
NB-94	2.105E-02	3.017E-02	5.264E-02	0.000E+00	NOT IDENT.
NB-95	4.598E-02	3.929E-02	6.923E-02	0.000E+00	NOT IDENT.
NB-95M	1.606E-01	1.337E-01	2.083E-01	0.000E+00	NOT IDENT.
ZR-95	6.043E-04	6.143E-02	1.027E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	9.133E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.807E+06	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-8.759E-01	9.416E+00	1.567E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	3.164E+16	0.000E+00	0.000E+00	SHORT HLIF
RH-101	3.105E-02	3.409E-02	5.881E-02	0.000E+00	NOT IDENT.
RH-102	-9.586E-03	2.647E-02	4.260E-02	0.000E+00	NOT IDENT.
RU-103	-5.725E-03	3.446E-02	5.694E-02	0.000E+00	FAIL ABUN
RH-106	1.549E-01	2.704E-01	4.750E-01	0.000E+00	FAIL ABUN
RU-106	1.549E-01	2.700E-01	4.750E-01	0.000E+00	FAIL ABUN
AG-108M	1.984E-02	2.970E-02	5.189E-02	0.000E+00	NOT IDENT.
AG-110M	-3.080E-03	3.435E-02	4.961E-02	0.000E+00	NOT IDENT.
IN-111	-8.006E-01	1.095E+00	1.546E+00	0.000E+00	NOT IDENT.
IN-113M	-3.228E-02	3.946E-02	6.465E-02	0.000E+00	NOT IDENT.
SN-113	-3.228E-02	3.946E-02	6.465E-02	0.000E+00	NOT IDENT.
IN-114M	-2.169E-02	1.940E-01	2.941E-01	0.000E+00	NOT IDENT.
CD-115	4.679E+00	8.892E+00	1.584E+01	0.000E+00	NOT IDENT.
SN-117M	-4.046E-03	4.984E-02	8.771E-02	0.000E+00	NOT IDENT.
SB-122	1.914E+00	1.711E+00	3.104E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	4.786E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	7.227E-03	2.530E-02	4.503E-02	0.000E+00	NOT IDENT.
I-124	-1.788E-01	6.600E-01	9.511E-01	0.000E+00	NOT IDENT.
SB-124	3.384E-02	5.813E-02	1.051E-01	0.000E+00	FAIL ABUN
SB-125	2.450E-02	8.251E-02	1.420E-01	0.000E+00	FAIL ABUN
TE-125M	-3.300E-01	9.116E+00	1.508E+01	0.000E+00	NOT IDENT.
I-126	-8.602E-02	1.919E-01	2.684E-01	0.000E+00	NOT IDENT.
SB-126	-1.532E-02	1.489E-01	2.122E-01	0.000E+00	FAIL ABUN
SB-127	4.610E-01	1.174E+00	2.026E+00	0.000E+00	NOT IDENT.
XE-127	-2.004E-02	5.021E-02	7.884E-02	0.000E+00	NOT IDENT.
I-131	-6.113E-02	9.928E-02	1.657E-01	0.000E+00	NOT IDENT.
TE-132	3.249E-01	6.500E-01	1.126E+00	0.000E+00	NOT IDENT.
BA-133	2.040E-02	4.337E-02	6.688E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	4.929E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	4.847E-02	8.016E-02	0.000E+00	FAIL ABUN
CS-135	2.681E-01	1.546E-01	2.696E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	3.987E+15	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-5.347E-02	8.978E-02	1.433E-01	0.000E+00	FAIL ABUN
CE-139	7.738E-03	2.677E-02	4.749E-02	0.000E+00	NOT IDENT.
BA-140	3.525E-02	2.197E-01	3.834E-01	0.000E+00	NOT IDENT.
LA-140	2.113E-02	8.213E-02	1.228E-01	0.000E+00	NOT IDENT.
CE-141	3.183E-02	5.561E-02	1.005E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	2.612E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-5.944E-02	2.053E-01	3.201E-01	0.000E+00	NOT IDENT.
PM-144	-3.146E-02	3.012E-02	4.728E-02	0.000E+00	NOT IDENT.

PR-144	-2.132E+00	2.041E+00	3.204E+00	0.000E+00	NOT IDENT.
PM-146	3.263E-02	3.924E-02	6.712E-02	0.000E+00	NOT IDENT.
ND-147	-3.397E-01	4.772E-01	7.915E-01	0.000E+00	FAIL ABUN
PM-149	6.538E+00	8.420E+01	1.410E+02	0.000E+00	NOT IDENT.
EU-152	4.583E-02	1.120E-01	1.523E-01	0.000E+00	FAIL ABUN
GD-153	-3.912E-02	8.086E-02	1.203E-01	0.000E+00	FAIL ABUN
EU-154	-4.964E-02	9.990E-02	1.624E-01	0.000E+00	NOT IDENT.
EU-155	1.099E-01	1.019E-01	1.763E-01	0.000E+00	FAIL ABUN
TB-160	8.458E-02	1.173E-01	2.089E-01	0.000E+00	FAIL ABUN
HO-166M	-6.651E-03	5.417E-02	9.044E-02	0.000E+00	FAIL ABUN
TM-171	-1.795E+01	2.560E+01	3.900E+01	0.000E+00	NOT IDENT.
LU-176	-5.638E-03	2.497E-02	3.759E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.079E+00	1.930E+00	0.000E+00	NOT IDENT.
LU-177M	1.057E-01	1.738E-01	2.667E-01	0.000E+00	FAIL ABUN
HF-181	1.099E-02	3.795E-02	6.455E-02	0.000E+00	NOT IDENT.
W-181	-2.220E-01	3.239E-01	4.943E-01	0.000E+00	NOT IDENT.
TA-182	-6.211E-02	1.657E-01	2.752E-01	0.000E+00	FAIL ABUN
RE-183	-1.047E-02	1.019E-01	1.742E-01	0.000E+00	FAIL ABUN
RE-184	-3.190E-03	2.186E-01	3.692E-01	0.000E+00	NOT IDENT.
OS-185	-1.283E-02	3.578E-02	5.903E-02	0.000E+00	NOT IDENT.
RE-188	1.324E-01	1.585E-01	2.866E-01	0.000E+00	NOT IDENT.
W-188	-5.246E+00	7.481E+00	1.099E+01	0.000E+00	FAIL ABUN
IR-192	-2.525E-03	2.963E-02	5.161E-02	0.000E+00	FAIL ABUN
AU-195	2.925E-01	2.023E-01	3.609E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	4.014E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-6.109E+00	6.379E+00	1.079E+01	0.000E+00	NOT IDENT.
TL-202	-2.626E-02	6.122E-02	1.011E-01	0.000E+00	NOT IDENT.
HG-203	2.341E-02	3.899E-02	6.667E-02	0.000E+00	NOT IDENT.
BI-207	-3.276E-04	4.461E-02	7.450E-02	0.000E+00	FAIL ABUN
TL-207	-6.884E-01	6.252E-01	1.017E+00	0.000E+00	FAIL ABUN
PO-209	2.329E+00	5.726E+00	1.003E+01	0.000E+00	NOT IDENT.
BI-210	-9.337E-01	2.816E+00	4.855E+00	0.000E+00	NOT IDENT.
PB-210	-9.337E-01	2.816E+00	4.855E+00	0.000E+00	NOT IDENT.
PO-210	-9.337E-01	2.816E+00	4.855E+00	0.000E+00	NOT IDENT.
PB-211	-3.751E-01	9.539E-01	1.326E+00	0.000E+00	NOT IDENT.
PO-215	-6.884E-01	6.252E-01	1.017E+00	0.000E+00	FAIL ABUN
RN-219	-5.558E-02	3.565E-01	6.037E-01	0.000E+00	FAIL ABUN
RN-220	-2.372E+00	2.165E+01	3.721E+01	0.000E+00	NOT IDENT.
RA-223	-6.884E-01	6.252E-01	1.017E+00	0.000E+00	FAIL ABUN
AC-227	-2.564E-01	3.675E-01	5.973E-01	0.000E+00	FAIL ABUN
TH-227	-2.564E-01	3.683E-01	5.973E-01	0.000E+00	FAIL ABUN
TH-229	-4.360E-01	4.878E-01	8.160E-01	0.000E+00	FAIL ABUN
PA-231	-6.156E-01	1.426E+00	2.328E+00	0.000E+00	FAIL ABUN
TH-231	-6.884E-01	6.252E-01	1.017E+00	0.000E+00	FAIL ABUN
U-231	-3.440E-01	1.053E+00	1.583E+00	0.000E+00	FAIL ABUN
PA-233	1.283E-02	5.571E-02	9.843E-02	0.000E+00	FAIL ABUN
PA-234	1.379E-01	2.536E-01	4.427E-01	0.000E+00	FAIL ABUN
PA-234M	1.268E+00	3.956E+00	6.439E+00	0.000E+00	NOT IDENT.
U-235	1.590E-02	1.964E-01	3.392E-01	0.000E+00	FAIL ABUN
NP-236	-8.691E-02	7.242E-02	1.217E-01	0.000E+00	NOT IDENT.
NP-239	3.029E-02	1.784E-01	3.024E-01	0.000E+00	FAIL ABUN
AM-241	1.608E-02	1.346E-01	2.158E-01	0.000E+00	NOT IDENT.
CM-243	-1.017E-02	8.882E-02	1.505E-01	0.000E+00	FAIL ABUN
AM-246	3.778E-02	1.086E-01	1.861E-01	0.000E+00	NOT IDENT.
CM-247	-4.022E-03	3.300E-02	5.447E-02	0.000E+00	NOT IDENT.
CF-249	4.421E-02	3.649E-02	6.554E-02	0.000E+00	NOT IDENT.
CF-251	1.519E-01	1.157E-01	2.095E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 20-JAN-2010 15:33:56.42

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G244125004.CNF;1
Sample date       : 5-JAN-2010 12:00:00. Acquisition date : 20-JAN-2010 13:31:14
Sample ID         : G244125004           Sample quantity  : 1.27180E+02 GRAM
Detector name     : GAM22                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:02.15  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 940263               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	1464	10.67*	1.909E+00	2.122E+01	2.122E+01	11.10
CD-109	88.03	309	3.72*	7.486E+00	3.274E+00	3.348E+00	31.26
SN-126	64.28	86	9.60	4.339E+00	6.094E-01	6.094E-01	110.71
	86.94	309	8.90	7.486E+00	1.368E+00	1.368E+00	51.12
	87.57	309	37.00*	7.486E+00	3.291E-01	3.291E-01	31.26
BA-137M	661.65	103	89.98*	3.590E+00	9.379E-02	9.388E-02	42.88
CS-137	661.65	103	85.12*	3.590E+00	9.915E-02	9.924E-02	42.88
TL-208	277.35	------	6.80	6.182E+00	------ Line Not Found		------
	510.84	225	21.60	4.299E+00	7.152E-01	7.152E-01	40.16
	583.14	579	84.20*	3.930E+00	5.165E-01	5.165E-01	17.70
	860.37	62	12.46	2.921E+00	5.065E-01	5.065E-01	79.15
BI-211	72.87	------	1.27	5.897E+00	------ Line Not Found		------
	351.07	1011	12.94*	5.401E+00	4.271E+00	4.271E+00	14.74
BI-212	727.18	156	11.80*	3.343E+00	1.171E+00	1.171E+00	39.11
	785.46	50	1.97	3.145E+00	2.362E+00	2.362E+00	71.31
	1620.62	------	2.75	1.789E+00	------ Line Not Found		------
PB-212	74.81	536	10.70	6.175E+00	2.395E+00	2.395E+00	21.35
	77.11	767	18.00	6.466E+00	1.945E+00	1.945E+00	14.48
	87.30	309	8.00	7.486E+00	1.522E+00	1.522E+00	32.82
	238.63	1795	44.60*	6.709E+00	1.771E+00	1.771E+00	14.47
	300.09	88	3.41	5.915E+00	1.293E+00	1.293E+00	88.36
PO-212	74.81	536	10.70	6.175E+00	2.395E+00	2.395E+00	21.35
	77.11	767	18.00	6.466E+00	1.945E+00	1.945E+00	14.48
	87.30	309	8.00	7.486E+00	1.522E+00	1.522E+00	32.82
	115.19	------	0.60	8.535E+00	------ Line Not Found		------
	238.63	1795	44.60*	6.709E+00	1.771E+00	1.771E+00	14.47
	300.09	88	3.41	5.915E+00	1.293E+00	1.293E+00	88.36
BI-214	609.31	691	46.30*	3.811E+00	1.156E+00	1.156E+00	17.04
	1120.29	121	15.10	2.344E+00	1.008E+00	1.008E+00	48.87
	1764.49	121	15.80	1.716E+00	1.318E+00	1.318E+00	33.55
PB-214	74.81	536	6.21	6.175E+00	4.127E+00	4.127E+00	20.58
	77.11	767	10.50	6.466E+00	3.334E+00	3.334E+00	16.37

Sample ID : G244125004 Acquisition date : 20-JAN-2010 13:31:14

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	87.30	309	4.67	7.486E+00	2.608E+00	2.608E+00	32.19
	241.98	447	7.49	6.665E+00	2.645E+00	2.645E+00	31.21
	295.21	560	19.20	5.970E+00	1.442E+00	1.442E+00	21.01
	351.92	1011	37.20*	5.401E+00	1.486E+00	1.486E+00	15.63
PO-214	74.81	536	6.21	6.175E+00	4.127E+00	4.127E+00	20.58
	77.11	767	10.50	6.466E+00	3.334E+00	3.334E+00	16.37
	87.30	309	4.67	7.486E+00	2.608E+00	2.608E+00	32.19
	241.98	447	7.49	6.665E+00	2.645E+00	2.645E+00	31.21
	295.21	560	19.20	5.970E+00	1.442E+00	1.442E+00	21.01
	351.92	1011	37.20*	5.401E+00	1.486E+00	1.486E+00	15.63
PO-216	74.81	536	10.70	6.175E+00	2.395E+00	2.395E+00	21.35
	77.11	767	18.00	6.466E+00	1.945E+00	1.945E+00	14.48
	87.30	309	8.00	7.486E+00	1.522E+00	1.522E+00	32.82
	238.63	1795	44.60*	6.709E+00	1.771E+00	1.771E+00	14.47
	300.09	88	3.41	5.915E+00	1.293E+00	1.293E+00	88.36
PO-218	74.81	536	6.21	6.175E+00	4.127E+00	4.127E+00	20.58
	77.11	767	10.50	6.466E+00	3.334E+00	3.334E+00	16.37
	87.30	309	4.67	7.486E+00	2.608E+00	2.608E+00	32.19
	241.98	447	7.49	6.665E+00	2.645E+00	2.645E+00	31.21
	295.21	560	19.20	5.970E+00	1.442E+00	1.442E+00	21.01
	351.92	1011	37.20*	5.401E+00	1.486E+00	1.486E+00	15.63
RA-224	240.98	447	3.95*	6.665E+00	5.016E+00	5.016E+00	30.70
RA-226	609.31	691	46.30*	3.811E+00	1.156E+00	1.156E+00	17.04
	1120.29	121	15.10	2.344E+00	1.008E+00	1.008E+00	48.87
	1764.49	121	15.80	1.716E+00	1.318E+00	1.318E+00	33.55
AC-228	338.32	400	11.40	5.528E+00	1.875E+00	1.875E+00	48.10
	911.07	487	27.70*	2.788E+00	1.862E+00	1.862E+00	18.73
	969.11	215	16.60	2.648E+00	1.441E+00	1.441E+00	34.26
RA-228	338.32	400	11.40	5.528E+00	1.875E+00	1.875E+00	48.10
	911.07	487	27.70*	2.788E+00	1.862E+00	1.862E+00	18.73
	969.11	215	16.60	2.648E+00	1.441E+00	1.441E+00	34.26
TH-228	74.81	536	10.70	6.175E+00	2.395E+00	2.432E+00	19.23
	77.11	767	18.00	6.466E+00	1.945E+00	1.974E+00	14.48
	87.30	309	8.00	7.486E+00	1.522E+00	1.545E+00	31.26
	238.63	1795	44.60*	6.709E+00	1.771E+00	1.797E+00	14.47
	300.09	88	3.41	5.915E+00	1.293E+00	1.313E+00	105.89
TH-230	609.31	691	46.30*	3.811E+00	1.156E+00	1.156E+00	17.04
	1120.29	121	15.10	2.344E+00	1.008E+00	1.008E+00	48.87
	1764.49	121	15.80	1.716E+00	1.318E+00	1.318E+00	33.55
TH-232	338.32	400	11.40	5.528E+00	1.875E+00	1.875E+00	26.18
	911.07	487	27.70*	2.788E+00	1.862E+00	1.862E+00	18.73
	969.11	215	16.60	2.648E+00	1.441E+00	1.441E+00	34.26
TH-234	63.29	86	3.80*	4.339E+00	1.540E+00	1.540E+00	111.13
	92.38	295	5.41	7.857E+00	2.046E+00	2.046E+00	37.57
U-234	609.31	691	46.30*	3.811E+00	1.156E+00	1.156E+00	17.04
	1120.29	121	15.10	2.344E+00	1.008E+00	1.008E+00	48.87
	1764.49	121	15.80	1.716E+00	1.318E+00	1.318E+00	33.55
NP-237	86.50	309	12.60*	7.486E+00	9.665E-01	9.665E-01	37.45
	95.87	------	2.60	8.032E+00	------ Line Not Found		------

Sample ID : G244125004 Acquisition date : 20-JAN-2010 13:31:14

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
U-238	63.29	86	3.80*	4.339E+00	1.540E+00	1.540E+00	111.13
	92.38	295	5.41	7.857E+00	2.046E+00	2.046E+00	34.04
AM-243	74.67	536	66.00*	6.175E+00	3.883E-01	3.883E-01	19.20
	86.72	309	0.34	7.486E+00	3.624E+01	3.624E+01	31.26
	117.66	------	0.55	8.550E+00	------ Line Not Found		------
	142.18	------	0.13	8.387E+00	------ Line Not Found		------
ANH-511	511.00	225	100.00*	4.299E+00	1.545E-01	1.545E-01	39.29

Flag: "*" = Keyline

Sample ID : G244125004 Acquisition date : 20-JAN-2010 13:31:14

Total number of lines in spectrum 37
Number of unidentified lines 3
Number of lines tentatively identified by NID 34 91.89%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.122E+01	2.122E+01	0.236E+01	11.10	
CD-109	464.00D	1.02	3.274E+00	3.348E+00	1.047E+00	31.26	
SN-126	1.00E+05Y	1.00	3.291E-01	3.291E-01	1.029E-01	31.26	
BA-137M	30.17Y	1.00	9.379E-02	9.388E-02	4.026E-02	42.88	
CS-137	30.17Y	1.00	9.915E-02	9.924E-02	4.256E-02	42.88	
TL-208	1.41E+10Y	1.00	5.165E-01	5.165E-01	0.914E-01	17.70	
BI-211	7.04E+08Y	1.00	4.271E+00	4.271E+00	0.629E+00	14.74	
BI-212	1.41E+10Y	1.00	1.171E+00	1.171E+00	0.458E+00	39.11	
PB-212	1.41E+10Y	1.00	1.771E+00	1.771E+00	0.256E+00	14.47	
PO-212	1.41E+10Y	1.00	1.771E+00	1.771E+00	0.256E+00	14.47	
BI-214	1600.00Y	1.00	1.156E+00	1.156E+00	0.197E+00	17.04	
PB-214	1600.00Y	1.00	1.486E+00	1.486E+00	0.232E+00	15.63	
PO-214	1600.00Y	1.00	1.486E+00	1.486E+00	0.232E+00	15.63	
PO-216	1.41E+10Y	1.00	1.771E+00	1.771E+00	0.256E+00	14.47	
PO-218	1600.00Y	1.00	1.486E+00	1.486E+00	0.232E+00	15.63	
RA-224	1.41E+10Y	1.00	5.016E+00	5.016E+00	1.540E+00	30.70	
RA-226	1600.00Y	1.00	1.156E+00	1.156E+00	0.197E+00	17.04	
AC-228	1.41E+10Y	1.00	1.862E+00	1.862E+00	0.349E+00	18.73	
RA-228	1.41E+10Y	1.00	1.862E+00	1.862E+00	0.349E+00	18.73	
TH-228	1.91Y	1.02	1.771E+00	1.797E+00	0.260E+00	14.47	
TH-230	4.47E+09Y	1.00	1.156E+00	1.156E+00	0.197E+00	17.04	
TH-232	1.41E+10Y	1.00	1.862E+00	1.862E+00	0.349E+00	18.73	
TH-234	4.47E+09Y	1.00	1.540E+00	1.540E+00	1.711E+00	111.13	
U-234	4.47E+09Y	1.00	1.156E+00	1.156E+00	0.197E+00	17.04	
NP-237	2.14E+06Y	1.00	9.665E-01	9.665E-01	3.620E-01	37.45	
U-238	4.47E+09Y	1.00	1.540E+00	1.540E+00	1.711E+00	111.13	
AM-243	7380.00Y	1.00	3.883E-01	3.883E-01	0.746E-01	19.20	
ANH-511	1.00E+09Y	1.00	1.545E-01	1.545E-01	0.607E-01	39.29	
	Total Activity :		6.233E+01	6.243E+01			

Grand Total Activity : 6.233E+01 6.243E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G244125004 Acquisition date : 20-JAN-2010 13:31:14

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
3	84.36	132	539	1.25	168.94	163	29	1.83E-02	61.1	7.24E+00	T
3	89.92	183	430	1.00	180.05	163	29	2.54E-02	39.6	7.68E+00	T
0	129.04	119	434	0.86	258.21	255	8	1.65E-02	63.6	8.53E+00	T
0	186.14	281	612	1.28	372.30	367	12	3.90E-02	38.4	7.60E+00	T
0	209.88	137	468	1.38	419.73	413	10	1.90E-02	61.9	7.17E+00	T
0	269.80	168	427	1.23	539.47	532	14	2.33E-02	54.5	6.28E+00	T
0	410.07	35	181	0.95	819.79	815	9	4.92E-03	****	4.93E+00	T
0	463.49	94	242	1.63	926.55	918	14	1.31E-02	72.8	4.58E+00	T
0	795.01	70	88	0.97	1589.23	1585	10	9.74E-03	55.3	3.12E+00	T
4	964.79	102	112	3.32	1928.66	1922	23	1.41E-02	47.2	2.66E+00	T
0	1238.86	46	97	1.82	2476.72	2467	16	6.46E-03	****	2.16E+00	T
0	1378.32	42	55	2.38	2755.65	2745	17	5.89E-03	88.1	1.99E+00	
0	1588.10	59	52	2.12	3175.28	3166	22	8.18E-03	66.5	1.81E+00	
0	1729.66	54	14	3.39	3458.49	3448	18	7.52E-03	41.9	1.73E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 20-JAN-2010 15:34:01.95

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
*                                                                           *
*                                DETECTOR DATA                              *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G244125004.CNF;1 *
* Acquisition date  : 20-JAN-2010 13:31:14  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 02:00:02.15          Half life ratio : 8.00000      *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date       : 5-JAN-2010 12:00:00.  Nuclide Library : SOLID        *
* Sample ID         : G244125004            Analyst initials: MXR1         *
* Batch Number      : 940263                Sample Quantity : 1.27180E+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	2.122E+01	2.356E+00	4.635E-01	4.246E-02	45.783
CD-109	3.348E+00	1.047E+00	1.075E+00	1.020E-01	3.116
SN-126	3.291E-01	1.029E-01	1.061E-01	1.001E-02	3.103
BA-137M	9.388E-02	4.026E-02	5.064E-02	5.340E-03	1.854
CS-137	9.924E-02	4.256E-02	5.353E-02	5.652E-03	1.854
TL-208	5.165E-01	9.142E-02	5.342E-02	5.793E-03	9.669
BI-211	4.271E+00	6.294E-01	2.883E-01	3.364E-02	14.812
BI-212	1.171E+00	4.580E-01	3.987E-01	4.762E-02	2.937
PB-212	1.771E+00	2.562E-01	8.667E-02	1.145E-02	20.430
PO-212	1.771E+00	2.562E-01	8.667E-02	1.145E-02	20.430
BI-214	1.156E+00	1.969E-01	9.806E-02	1.140E-02	11.786
PB-214	1.486E+00	2.323E-01	1.005E-01	1.281E-02	14.785
PO-214	1.486E+00	2.323E-01	1.005E-01	1.281E-02	14.785
PO-216	1.771E+00	2.562E-01	8.667E-02	1.145E-02	20.430
PO-218	1.486E+00	2.323E-01	1.005E-01	1.281E-02	14.785
RA-224	5.016E+00	1.540E+00	9.853E-01	1.233E-01	5.091
RA-226	1.156E+00	1.969E-01	9.806E-02	1.140E-02	11.786
AC-228	1.862E+00	3.489E-01	1.899E-01	2.515E-02	9.810

Sample ID : G244125004 Acquisition date : 20-JAN-2010 13:31:14

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-228	1.862E+00	3.489E-01	1.899E-01	2.515E-02	9.810
TH-228	1.797E+00	2.601E-01	8.798E-02	1.162E-02	20.430
TH-230	1.156E+00	1.969E-01	9.806E-02	1.140E-02	11.786
TH-232	1.862E+00	3.489E-01	1.899E-01	2.515E-02	9.810
TH-234	1.540E+00	1.711E+00	1.688E+00	2.938E-01	0.912
U-234	1.156E+00	1.969E-01	9.806E-02	1.140E-02	11.786
NP-237	9.665E-01	3.620E-01	3.145E-01	7.121E-02	3.073
U-238	1.540E+00	1.711E+00	1.688E+00	2.938E-01	0.912
AM-243	3.883E-01	7.456E-02	7.849E-02	6.398E-03	4.948
ANH-511	1.545E-01	6.069E-02	3.901E-02	3.908E-03	3.960

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	8.236E-02		2.845E-01	4.671E-01	4.875E-02	0.176
NA-22	-1.727E-02		3.651E-02	5.818E-02	5.014E-03	-0.297
NA-24	2.988E-01		3.404E-01	Half-Life too short		
AL-26	-1.723E-02		2.260E-02	3.244E-02	2.653E-03	-0.531
TI-44	3.589E-01	+	5.198E-02	6.859E-02	5.816E-03	5.232
SC-46	-3.176E-02		3.204E-02	4.892E-02	5.476E-03	-0.649
V-48	-2.385E-02		5.219E-02	8.228E-02	8.629E-03	-0.290
CR-51	-4.711E-02		3.275E-01	5.444E-01	7.049E-02	-0.087
MN-52	2.895E-01		1.996E-01	3.690E-01	3.298E-02	0.785
MN-54	1.795E-02		3.203E-02	5.511E-02	6.122E-03	0.326
CO-56	8.006E-05		3.471E-02	5.784E-02	6.439E-03	0.001
CO-57	-9.065E-03		2.501E-02	3.807E-02	3.140E-03	-0.238
CO-58	-2.740E-02		3.370E-02	5.323E-02	5.894E-03	-0.515
FE-59	1.566E-02		7.297E-02	1.205E-01	1.181E-02	0.130
CO-60	1.101E-03		3.253E-02	5.376E-02	4.794E-03	0.020
ZN-65	-7.911E-03		9.187E-02	1.255E-01	1.119E-02	-0.063
GE-68	3.455E-01		9.643E-01	1.615E+00	1.522E-01	0.214
AS-73	-1.419E-01		6.793E-01	1.114E+00	8.420E-02	-0.127
AS-74	-2.942E-02		7.500E-02	1.213E-01	1.257E-02	-0.242
SE-75	2.438E-02		4.645E-02	6.714E-02	9.037E-03	0.363
BR-77	-1.840E+00		8.933E+00	1.449E+01	1.459E+00	-0.127
SR-82	-2.377E-01		3.485E-01	5.365E-01	5.883E-02	-0.443
RB-83	-4.976E-03		6.036E-02	9.867E-02	9.931E-03	-0.050
RB-84	1.565E-02		6.026E-02	1.017E-01	1.138E-02	0.154
KR-85	3.503E+01		8.612E+00	1.400E+01	1.405E+00	2.502
SR-85	1.795E-01		4.413E-02	7.174E-02	7.199E-03	2.502
RB-86	4.194E-01		6.148E-01	1.053E+00	9.940E-02	0.398
Y-88	3.676E-02		3.146E-02	5.845E-02	4.725E-03	0.629
ZR-88	-3.065E-02		2.806E-02	4.338E-02	4.039E-03	-0.707
Y-91	-2.301E+00		1.679E+01	2.770E+01	2.278E+00	-0.083
NB-94	2.105E-02		3.079E-02	5.207E-02	5.579E-03	0.404
NB-95	4.598E-02		4.009E-02	6.856E-02	7.498E-03	0.671
NB-95M	1.606E-01		1.365E-01	2.027E-01	2.679E-02	0.792

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-95	6.043E-04		6.268E-02	1.017E-01	1.180E-02	0.006
NB-97	1.186E-03		4.660E-02	Half-Life too short		
ZR-97	5.291E+00		9.220E-01	Half-Life too short		
MO-99	-8.759E-01		9.608E+00	1.551E+01	2.567E+00	-0.056
TC-99M	-2.722E+10		1.614E+10	Half-Life too short		
RH-101	3.105E-02		3.479E-02	5.709E-02	6.228E-03	0.544
RH-102	-9.586E-03		2.701E-02	4.189E-02	4.120E-03	-0.229
RU-103	-5.725E-03		3.516E-02	5.602E-02	8.408E-03	-0.102
RH-106	1.549E-01		2.759E-01	4.690E-01	6.848E-02	0.330
RU-106	1.549E-01		2.755E-01	4.690E-01	4.898E-02	0.330
AG-108M	1.984E-02		3.031E-02	5.095E-02	5.044E-03	0.389
AG-110M	-3.080E-03		3.505E-02	4.902E-02	5.268E-03	-0.063
IN-111	-8.006E-01		1.118E+00	1.505E+00	1.910E-01	-0.532
IN-113M	-3.228E-02		4.026E-02	6.338E-02	6.053E-03	-0.509
SN-113	-3.228E-02		4.026E-02	6.338E-02	6.053E-03	-0.509
IN-114M	-2.169E-02		1.980E-01	2.853E-01	3.034E-02	-0.076
CD-115	4.679E+00		9.074E+00	1.560E+01	1.576E+00	0.300
SN-117M	-4.046E-03		5.086E-02	8.487E-02	8.048E-03	-0.048
SB-122	1.914E+00		1.746E+00	3.060E+00	3.136E-01	0.626
I-123	1.367E+00		2.442E+00	Half-Life too short		
TE-123M	7.227E-03		2.581E-02	4.357E-02	4.161E-03	0.166
I-124	-1.788E-01		6.735E-01	9.386E-01	9.749E-02	-0.190
SB-124	3.384E-02		5.932E-02	1.054E-01	9.373E-03	0.321
SB-125	2.450E-02		8.419E-02	1.394E-01	1.353E-02	0.176
TE-125M	-3.300E-01		9.302E+00	1.451E+01	1.470E+00	-0.023
I-126	-8.602E-02		1.958E-01	2.653E-01	2.803E-02	-0.324
SB-126	-1.532E-02		1.520E-01	2.100E-01	2.265E-02	-0.073
SB-127	4.610E-01		1.198E+00	2.003E+00	2.598E-01	0.230
XE-127	-2.004E-02		5.124E-02	7.656E-02	8.487E-03	-0.262
I-131	-6.113E-02		1.013E-01	1.623E-01	1.798E-02	-0.377
TE-132	3.249E-01		6.633E-01	1.095E+00	1.950E-01	0.297
BA-133	2.040E-02		4.425E-02	6.548E-02	9.785E-03	0.312
I-133	-3.111E-03		2.515E-03	Half-Life too short		
CS-134	8.764E-02	+	4.946E-02	7.943E-02	8.792E-03	1.103
CS-135	2.681E-01		1.577E-01	2.629E-01	3.803E-02	1.020
I-135	-7.030E+08		2.034E+09	Half-Life too short		
CS-136	-5.347E-02		9.161E-02	1.426E-01	1.442E-02	-0.375
CE-139	7.738E-03		2.732E-02	4.599E-02	4.510E-03	0.168
BA-140	3.525E-02		2.242E-01	3.777E-01	1.268E-01	0.093
LA-140	2.113E-02		8.380E-02	1.230E-01	1.078E-02	0.172
CE-141	3.183E-02		5.675E-02	9.712E-02	8.841E-03	0.328
CE-143	8.767E-04		1.333E-04	Half-Life too short		
CE-144	-5.944E-02		2.095E-01	3.089E-01	4.796E-02	-0.192
PM-144	-3.146E-02		3.073E-02	4.676E-02	5.001E-03	-0.673
PR-144	-2.132E+00		2.082E+00	3.169E+00	3.388E-01	-0.673
PM-146	3.263E-02		4.005E-02	6.596E-02	7.665E-03	0.495
ND-147	-3.397E-01		4.870E-01	7.796E-01	1.236E-01	-0.436
PM-149	6.538E+00		8.592E+01	1.376E+02	2.604E+01	0.048

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-152	4.583E-02		1.142E-01	1.490E-01	1.791E-02	0.308
GD-153	-3.912E-02		8.251E-02	1.156E-01	1.017E-02	-0.338
EU-154	-4.964E-02		1.019E-01	1.621E-01	1.832E-02	-0.306
EU-155	1.099E-01		1.040E-01	1.696E-01	1.456E-02	0.648
TB-160	8.458E-02		1.197E-01	2.073E-01	2.319E-02	0.408
HO-166M	-6.651E-03		5.528E-02	8.947E-02	9.619E-03	-0.074
TM-171	-1.795E+01		2.612E+01	3.727E+01	2.816E+00	-0.482
LU-176	-5.638E-03		2.548E-02	3.672E-02	4.818E-03	-0.154
LU-177	2.255E+00		1.101E+00	1.875E+00	2.117E-01	1.202
LU-177M	1.057E-01		1.773E-01	2.617E-01	2.475E-02	0.404
HF-181	1.099E-02		3.872E-02	6.348E-02	6.267E-03	0.173
W-181	-2.220E-01		3.305E-01	4.723E-01	3.521E-02	-0.470
TA-182	-6.211E-02		1.691E-01	2.745E-01	2.282E-02	-0.226
RE-183	-1.047E-02		1.040E-01	1.686E-01	1.627E-02	-0.062
RE-184	-3.190E-03		2.231E-01	3.597E-01	4.667E-02	-0.009
OS-185	-1.283E-02		3.651E-02	5.831E-02	6.129E-03	-0.220
RE-188	1.324E-01		1.617E-01	2.772E-01	2.587E-02	0.478
W-188	-5.246E+00		7.634E+00	1.073E+01	1.465E+00	-0.489
IR-192	-2.525E-03		3.024E-02	5.044E-02	6.447E-03	-0.050
AU-195	2.925E-01		2.065E-01	3.469E-01	3.025E-02	0.843
TL-200	-7.469E-06		2.048E-04	Half-Life too short		
TL-201	-6.109E+00		6.509E+00	1.045E+01	1.030E+00	-0.585
TL-202	-2.626E-02		6.247E-02	9.930E-02	9.559E-03	-0.264
HG-203	2.341E-02		3.979E-02	6.505E-02	9.207E-03	0.360
BI-207	-3.276E-04		4.552E-02	7.416E-02	7.119E-03	-0.004
TL-207	-6.884E-01		6.380E-01	9.941E-01	1.976E-01	-0.692
PO-209	2.329E+00		5.842E+00	9.954E+00	1.115E+00	0.234
BI-210	-9.337E-01		2.874E+00	4.617E+00	4.290E-01	-0.202
PB-210	-9.337E-01		2.874E+00	4.617E+00	4.290E-01	-0.202
PO-210	-9.337E-01		2.874E+00	4.617E+00	3.882E-01	-0.202
PB-211	-3.751E-01		9.734E-01	1.301E+00	8.169E-01	-0.288
PO-215	-6.884E-01		6.380E-01	9.941E-01	1.976E-01	-0.692
RN-219	-5.558E-02		3.637E-01	5.922E-01	9.162E-02	-0.094
RN-220	-2.372E+00		2.209E+01	3.667E+01	3.738E+00	-0.065
RA-223	-6.884E-01		6.380E-01	9.941E-01	1.976E-01	-0.692
AC-227	-2.564E-01		3.750E-01	5.820E-01	1.062E-01	-0.441
TH-227	-2.564E-01		3.758E-01	5.820E-01	1.198E-01	-0.441
TH-229	-4.360E-01		4.978E-01	7.918E-01	8.513E-02	-0.551
PA-231	-6.156E-01		1.455E+00	2.271E+00	4.241E-01	-0.271
TH-231	-6.884E-01		6.380E-01	9.941E-01	1.976E-01	-0.692
U-231	-3.440E-01		1.075E+00	1.521E+00	1.350E-01	-0.226
PA-233	1.283E-02		5.685E-02	9.619E-02	1.260E-02	0.133
PA-234	1.379E-01		2.588E-01	4.399E-01	8.743E-02	0.313
PA-234M	1.268E+00		4.037E+00	6.403E+00	7.337E-01	0.198
U-235	1.590E-02		2.004E-01	3.278E-01	5.782E-02	0.049
NP-236	-8.691E-02		7.390E-02	1.178E-01	1.126E-02	-0.738
NP-239	3.029E-02		1.820E-01	2.913E-01	2.408E-02	0.104
AM-241	1.608E-02		1.374E-01	2.059E-01	1.609E-02	0.078

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-1.017E-02		9.063E-02	1.448E-01	1.234E-02	-0.070
AM-246	3.778E-02		1.108E-01	1.853E-01	1.743E-02	0.204
CM-247	-4.022E-03		3.367E-02	5.343E-02	5.012E-03	-0.075
CF-249	4.421E-02		3.724E-02	6.425E-02	6.107E-03	0.688
CF-251	1.519E-01		1.181E-01	2.030E-01	2.063E-02	0.748

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]G244125004       *
* Acquisition date  : 20-JAN-2010 13:31:14 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 02:00:02.15     Half life ratio : 8.000      *
*************************************************************************
*                                                                       *
*                              SAMPLE DATA                              *
*                                                                       *
* Sample date       :  5-JAN-2010 12:00:00 Nuclide Library : SOLID      *
* Sample ID         : G244125004           Analyst initials: MXR1       *
* Batch Number      : 940263               Sample Quantity : 1.2718E+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	2.122E+01	2.309E+00	2.319E-01	1.178E+00
CD-109	3.348E+00	1.026E+00	5.603E-01	5.233E-01
SN-126	3.291E-01	1.008E-01	5.530E-02	5.144E-02
BA-137M	9.388E-02	3.945E-02	2.564E-02	2.013E-02
CS-137	9.924E-02	4.171E-02	2.710E-02	2.128E-02
TL-208	5.165E-01	8.959E-02	2.710E-02	4.571E-02
BI-211	4.271E+00	6.168E-01	1.474E-01	3.147E-01
BI-212	1.171E+00	4.488E-01	2.016E-01	2.290E-01
PB-212	1.771E+00	2.511E-01	4.455E-02	1.281E-01
PO-212	1.771E+00	2.511E-01	4.455E-02	1.281E-01
BI-214	1.156E+00	1.930E-01	4.971E-02	9.847E-02
PB-214	1.486E+00	2.276E-01	5.135E-02	1.161E-01
PO-214	1.486E+00	2.276E-01	5.135E-02	1.161E-01
PO-216	1.771E+00	2.511E-01	4.455E-02	1.281E-01
PO-218	1.486E+00	2.276E-01	5.135E-02	1.161E-01
RA-224	5.016E+00	1.509E+00	5.063E-01	7.700E-01
RA-226	1.156E+00	1.930E-01	4.971E-02	9.847E-02
AC-228	1.862E+00	3.419E-01	9.566E-02	1.745E-01
RA-228	1.862E+00	3.419E-01	9.566E-02	1.745E-01
TH-228	1.797E+00	2.549E-01	4.522E-02	1.301E-01
TH-230	1.156E+00	1.930E-01	4.970E-02	9.847E-02
TH-232	1.862E+00	3.419E-01	9.566E-02	1.745E-01
TH-234	1.540E+00	1.677E+00	8.842E-01	8.555E-01
U-234	1.156E+00	1.930E-01	4.970E-02	9.847E-02
NP-237	9.665E-01	3.547E-01	1.640E-01	1.810E-01
U-238	1.540E+00	1.677E+00	8.842E-01	8.555E-01
AM-243	3.883E-01	7.307E-02	4.102E-02	3.728E-02
ANH-511	1.545E-01	5.948E-02	1.982E-02	3.035E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU

BE-7	8.236E-02	2.788E-01	2.376E-01	1.422E-01	NOT IDENT.
NA-22	-1.727E-02	3.578E-02	2.916E-02	1.825E-02	NOT IDENT.
NA-24	2.988E+05	6.673E+05	0.000E+00	3.404E+05	SHORT HLIF
AL-26	-1.723E-02	2.215E-02	1.617E-02	1.130E-02	NOT IDENT.
TI-44	3.589E-01	5.094E-02	3.582E-02	2.599E-02	FAIL ABUN
SC-46	-3.176E-02	3.140E-02	2.465E-02	1.602E-02	FAIL ABUN
V-48	-2.385E-02	5.114E-02	4.141E-02	2.609E-02	NOT IDENT.
CR-51	-4.711E-02	3.210E-01	2.786E-01	1.638E-01	NOT IDENT.
MN-52	2.895E-01	1.956E-01	1.846E-01	9.981E-02	NOT IDENT.
MN-54	1.795E-02	3.139E-02	2.780E-02	1.602E-02	NOT IDENT.
CO-56	8.006E-05	3.401E-02	2.917E-02	1.735E-02	FAIL ABUN
CO-57	-9.065E-03	2.451E-02	1.976E-02	1.251E-02	NOT IDENT.
CO-58	-2.740E-02	3.303E-02	2.686E-02	1.685E-02	NOT IDENT.
FE-59	1.566E-02	7.151E-02	6.054E-02	3.648E-02	NOT IDENT.
CO-60	1.101E-03	3.188E-02	2.693E-02	1.626E-02	NOT IDENT.
ZN-65	-7.911E-03	9.004E-02	6.303E-02	4.594E-02	NOT IDENT.
GE-68	3.455E-01	9.450E-01	8.114E-01	4.821E-01	NOT IDENT.
AS-73	-1.419E-01	6.657E-01	5.851E-01	3.397E-01	NOT IDENT.
AS-74	-2.942E-02	7.350E-02	6.151E-02	3.750E-02	NOT IDENT.
SE-75	2.438E-02	4.553E-02	3.446E-02	2.323E-02	NOT IDENT.
BR-77	-1.840E+00	8.754E+00	7.364E+00	4.466E+00	FAIL ABUN
SR-82	-2.377E-01	3.415E-01	2.709E-01	1.742E-01	NOT IDENT.
RB-83	-4.976E-03	5.916E-02	5.014E-02	3.018E-02	NOT IDENT.
RB-84	1.565E-02	5.905E-02	5.127E-02	3.013E-02	NOT IDENT.
KR-85	3.503E+01	8.439E+00	7.115E+00	4.306E+00	NOT IDENT.
SR-85	1.795E-01	4.325E-02	3.646E-02	2.206E-02	NOT IDENT.
RB-86	4.194E-01	6.025E-01	5.294E-01	3.074E-01	NOT IDENT.
Y-88	3.676E-02	3.083E-02	2.913E-02	1.573E-02	NOT IDENT.
ZR-88	-3.065E-02	2.750E-02	2.213E-02	1.403E-02	NOT IDENT.
Y-91	-2.301E+00	1.645E+01	1.390E+01	8.393E+00	NOT IDENT.
NB-94	2.105E-02	3.017E-02	2.634E-02	1.539E-02	NOT IDENT.
NB-95	4.598E-02	3.929E-02	3.464E-02	2.004E-02	NOT IDENT.
NB-95M	1.606E-01	1.337E-01	1.042E-01	6.823E-02	NOT IDENT.
ZR-95	6.043E-04	6.143E-02	5.137E-02	3.134E-02	NOT IDENT.
NB-97	1.186E+03	9.133E+04	0.000E+00	4.660E+04	SHORT HLIF
ZR-97	5.291E+06	1.807E+06	0.000E+00	9.220E+05	SHORT HLIF
MO-99	-8.759E-01	9.416E+00	7.838E+00	4.804E+00	NOT IDENT.
TC-99M	-2.722E+16	3.164E+16	0.000E+00	0.000E+00	SHORT HLIF
RH-101	3.105E-02	3.409E-02	2.942E-02	1.739E-02	NOT IDENT.
RH-102	-9.586E-03	2.647E-02	2.131E-02	1.351E-02	NOT IDENT.
RU-103	-5.725E-03	3.446E-02	2.848E-02	1.758E-02	FAIL ABUN
RH-106	1.549E-01	2.704E-01	2.376E-01	1.380E-01	FAIL ABUN
RU-106	1.549E-01	2.700E-01	2.376E-01	1.377E-01	FAIL ABUN
AG-108M	1.984E-02	2.970E-02	2.596E-02	1.516E-02	NOT IDENT.
AG-110M	-3.080E-03	3.435E-02	2.482E-02	1.752E-02	NOT IDENT.
IN-111	-8.006E-01	1.095E+00	7.734E-01	5.589E-01	NOT IDENT.
IN-113M	-3.228E-02	3.946E-02	3.234E-02	2.013E-02	NOT IDENT.
SN-113	-3.228E-02	3.946E-02	3.234E-02	2.013E-02	NOT IDENT.
IN-114M	-2.169E-02	1.940E-01	1.471E-01	9.898E-02	NOT IDENT.
CD-115	4.679E+00	8.892E+00	7.926E+00	4.537E+00	NOT IDENT.
SN-117M	-4.046E-03	4.984E-02	4.388E-02	2.543E-02	NOT IDENT.
SB-122	1.914E+00	1.711E+00	1.553E+00	8.728E-01	NOT IDENT.
I-123	1.367E+06	4.786E+06	0.000E+00	2.442E+06	SHORT HLIF
TE-123M	7.227E-03	2.530E-02	2.253E-02	1.291E-02	NOT IDENT.
I-124	-1.788E-01	6.600E-01	4.758E-01	3.367E-01	NOT IDENT.
SB-124	3.384E-02	5.813E-02	5.259E-02	2.966E-02	FAIL ABUN
SB-125	2.450E-02	8.251E-02	7.104E-02	4.209E-02	FAIL ABUN
TE-125M	-3.300E-01	9.116E+00	7.544E+00	4.651E+00	NOT IDENT.
I-126	-8.602E-02	1.919E-01	1.343E-01	9.792E-02	NOT IDENT.
SB-126	-1.532E-02	1.489E-01	1.062E-01	7.599E-02	FAIL ABUN
SB-127	4.610E-01	1.174E+00	1.014E+00	5.989E-01	NOT IDENT.
XE-127	-2.004E-02	5.021E-02	3.945E-02	2.562E-02	NOT IDENT.
I-131	-6.113E-02	9.928E-02	8.290E-02	5.065E-02	NOT IDENT.
TE-132	3.249E-01	6.500E-01	5.633E-01	3.316E-01	NOT IDENT.
BA-133	2.040E-02	4.337E-02	3.346E-02	2.213E-02	NOT IDENT.
I-133	-3.111E+03	4.929E+03	0.000E+00	2.515E+03	SHORT HLIF
CS-134	8.764E-02	4.847E-02	4.010E-02	2.473E-02	FAIL ABUN
CS-135	2.681E-01	1.546E-01	1.349E-01	7.886E-02	NOT IDENT.
I-135	-7.030E+14	3.987E+15	0.000E+00	2.034E+15	SHORT HLIF
CS-136	-5.347E-02	8.978E-02	7.170E-02	4.581E-02	FAIL ABUN
CE-139	7.738E-03	2.677E-02	2.376E-02	1.366E-02	NOT IDENT.
BA-140	3.525E-02	2.197E-01	1.918E-01	1.121E-01	NOT IDENT.
LA-140	2.113E-02	8.213E-02	6.145E-02	4.190E-02	NOT IDENT.
CE-141	3.183E-02	5.561E-02	5.028E-02	2.837E-02	NOT IDENT.
CE-143	8.767E+02	2.612E+02	0.000E+00	1.333E+02	SHORT HLIF
CE-144	-5.944E-02	2.053E-01	1.601E-01	1.047E-01	NOT IDENT.
PM-144	-3.146E-02	3.012E-02	2.366E-02	1.537E-02	NOT IDENT.

PR-144	-2.132E+00	2.041E+00	1.603E+00	1.041E+00	NOT IDENT.
PM-146	3.263E-02	3.924E-02	3.358E-02	2.002E-02	NOT IDENT.
ND-147	-3.397E-01	4.772E-01	3.960E-01	2.435E-01	FAIL ABUN
PM-149	6.538E+00	8.420E+01	7.056E+01	4.296E+01	NOT IDENT.
EU-152	4.583E-02	1.120E-01	7.619E-02	5.712E-02	FAIL ABUN
GD-153	-3.912E-02	8.086E-02	6.020E-02	4.126E-02	FAIL ABUN
EU-154	-4.964E-02	9.990E-02	8.127E-02	5.097E-02	NOT IDENT.
EU-155	1.099E-01	1.019E-01	8.821E-02	5.201E-02	FAIL ABUN
TB-160	8.458E-02	1.173E-01	1.045E-01	5.985E-02	FAIL ABUN
HO-166M	-6.651E-03	5.417E-02	4.525E-02	2.764E-02	FAIL ABUN
TM-171	-1.795E+01	2.560E+01	1.951E+01	1.306E+01	NOT IDENT.
LU-176	-5.638E-03	2.497E-02	1.881E-02	1.274E-02	FAIL ABUN
LU-177	2.255E+00	1.079E+00	9.657E-01	5.504E-01	NOT IDENT.
LU-177M	1.057E-01	1.738E-01	1.334E-01	8.866E-02	FAIL ABUN
HF-181	1.099E-02	3.795E-02	3.229E-02	1.936E-02	NOT IDENT.
W-181	-2.220E-01	3.239E-01	2.473E-01	1.653E-01	NOT IDENT.
TA-182	-6.211E-02	1.657E-01	1.377E-01	8.456E-02	FAIL ABUN
RE-183	-1.047E-02	1.019E-01	8.715E-02	5.198E-02	FAIL ABUN
RE-184	-3.190E-03	2.186E-01	1.847E-01	1.115E-01	NOT IDENT.
OS-185	-1.283E-02	3.578E-02	2.953E-02	1.825E-02	NOT IDENT.
RE-188	1.324E-01	1.585E-01	1.434E-01	8.085E-02	NOT IDENT.
W-188	-5.246E+00	7.481E+00	5.497E+00	3.817E+00	FAIL ABUN
IR-192	-2.525E-03	2.963E-02	2.582E-02	1.512E-02	FAIL ABUN
AU-195	2.925E-01	2.023E-01	1.806E-01	1.032E-01	FAIL ABUN
TL-200	-7.469E+00	4.014E+02	0.000E+00	2.048E+02	SHORT HLIF
TL-201	-6.109E+00	6.379E+00	5.400E+00	3.255E+00	NOT IDENT.
TL-202	-2.626E-02	6.122E-02	5.058E-02	3.123E-02	NOT IDENT.
HG-203	2.341E-02	3.899E-02	3.336E-02	1.990E-02	NOT IDENT.
BI-207	-3.276E-04	4.461E-02	3.727E-02	2.276E-02	FAIL ABUN
TL-207	-6.884E-01	6.252E-01	5.087E-01	3.190E-01	FAIL ABUN
PO-209	2.329E+00	5.726E+00	5.016E+00	2.921E+00	NOT IDENT.
BI-210	-9.337E-01	2.816E+00	2.429E+00	1.437E+00	NOT IDENT.
PB-210	-9.337E-01	2.816E+00	2.429E+00	1.437E+00	NOT IDENT.
PO-210	-9.337E-01	2.816E+00	2.429E+00	1.437E+00	NOT IDENT.
PB-211	-3.751E-01	9.539E-01	6.636E-01	4.867E-01	NOT IDENT.
PO-215	-6.884E-01	6.252E-01	5.087E-01	3.190E-01	FAIL ABUN
RN-219	-5.558E-02	3.565E-01	3.020E-01	1.819E-01	FAIL ABUN
RN-220	-2.372E+00	2.165E+01	1.862E+01	1.105E+01	NOT IDENT.
RA-223	-6.884E-01	6.252E-01	5.087E-01	3.190E-01	FAIL ABUN
AC-227	-2.564E-01	3.675E-01	2.988E-01	1.875E-01	FAIL ABUN
TH-227	-2.564E-01	3.683E-01	2.988E-01	1.879E-01	FAIL ABUN
TH-229	-4.360E-01	4.878E-01	4.082E-01	2.489E-01	FAIL ABUN
PA-231	-6.156E-01	1.426E+00	1.165E+00	7.276E-01	FAIL ABUN
TH-231	-6.884E-01	6.252E-01	5.087E-01	3.190E-01	FAIL ABUN
U-231	-3.440E-01	1.053E+00	7.919E-01	5.374E-01	FAIL ABUN
PA-233	1.283E-02	5.571E-02	4.924E-02	2.842E-02	FAIL ABUN
PA-234	1.379E-01	2.536E-01	2.215E-01	1.294E-01	FAIL ABUN
PA-234M	1.268E+00	3.956E+00	3.221E+00	2.018E+00	NOT IDENT.
U-235	1.590E-02	1.964E-01	1.697E-01	1.002E-01	FAIL ABUN
NP-236	-8.691E-02	7.242E-02	6.088E-02	3.695E-02	NOT IDENT.
NP-239	3.029E-02	1.784E-01	1.513E-01	9.102E-02	FAIL ABUN
AM-241	1.608E-02	1.346E-01	1.079E-01	6.869E-02	NOT IDENT.
CM-243	-1.017E-02	8.882E-02	7.531E-02	4.532E-02	FAIL ABUN
AM-246	3.778E-02	1.086E-01	9.310E-02	5.541E-02	NOT IDENT.
CM-247	-4.022E-03	3.300E-02	2.725E-02	1.684E-02	NOT IDENT.
CF-249	4.421E-02	3.649E-02	3.279E-02	1.862E-02	NOT IDENT.
CF-251	1.519E-01	1.157E-01	1.048E-01	5.905E-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	317.0137
46.50	317.0137
46.50	317.0137
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49.72	289.7020
51.35	333.3826
52.39	318.2103
52.97	329.2444
53.15	328.5702
53.44	328.0485
54.07	340.1484
56.28	348.0339
56.28	348.0377
57.37	0.0000
57.53	329.9201
57.53	329.9228
57.60	343.2913
57.98	366.6164
57.98	366.6164
59.32	376.7121
59.32	376.7121
59.40	376.8315
59.54	377.0412
59.72	416.0464
60.01	416.5243
61.10	390.9033
61.14	390.9638
61.30	391.2072
63.00	409.7592
63.29	410.2121
63.29	410.2121
63.58	410.6628
64.28	429.2689
65.12	462.8418
65.20	433.6773
65.20	433.6773
66.05	437.9808
66.72	456.7363
66.83	456.9208
66.91	457.0556
67.20	447.2066
67.20	447.2066
67.75	455.4909
67.85	455.6566
68.90	501.9250
68.90	501.9250
69.30	519.4932
69.67	530.1052
70.82	482.9105
70.82	482.9105
70.83	482.9278
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72.87	493.8743
72.87	493.8743
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74.81	538.5548
74.81	538.5548
74.81	538.5548
74.81	538.5548
74.81	538.5548
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74.81	538.5548
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77.11	542.6755

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81.07	544.4758
81.07	544.4758
82.60	500.4644
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83.78	455.4970
83.78	455.4970
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84.90	457.0631
85.43	457.8005
86.29	458.9902
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86.59	459.4045
86.72	459.5850
86.79	459.6786
86.94	459.8880
87.30	460.3825
87.30	460.3825
87.30	460.3825
87.30	460.3825
87.30	460.3825
87.30	460.3825
87.30	460.3825
87.57	460.7523
87.88	461.1779
88.03	461.3828
88.36	461.8328
88.47	461.9843
89.95	463.9938
91.11	465.5599
92.29	467.1416
92.38	467.2619
92.38	467.2619
93.35	468.5518
94.00	469.4140
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94.67	389.7697
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94.90	390.0208
94.90	390.0208
94.90	390.0208
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96.73	477.8648
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98.44	385.3853
98.44	385.3872
98.88	368.2501
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99.55	380.8899
99.86	377.9393
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100.10	386.9072
103.18	464.7991
103.76	414.8845
105.00	358.8145
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108.00	478.4025
109.28	440.8832

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111.00	430.4492
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117.00	395.8259
117.66	415.8139
121.11	350.2827
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121.78	346.2247
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136.25	395.4680
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140.51	0.0000
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144.24	413.8215
144.24	413.8215
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145.44	396.6714
147.16	452.6851
152.43	413.2128
152.70	413.4286
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154.21	426.6359
154.21	426.6359
154.21	426.6359
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162.64	367.7662
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163.89	383.6517
165.85	381.2466
167.43	430.5997
171.28	363.0447
171.86	379.6292
172.10	379.7901
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176.60	344.3024
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208.81	389.9171
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209.75	331.0343
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228.18	349.9684
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236.00	379.0283
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238.63	357.1317
238.63	357.1317
238.63	357.1317
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241.98	358.7382
241.98	358.7382
241.98	358.7382
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249.79	321.6888
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252.85	305.7368
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256.20	332.9966
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264.65	260.4917
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268.79	281.1484
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269.46	281.3789
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277.60	273.0451
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295.21	244.6875

295.21	244.6875
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323.87	304.7773
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334.30	250.4269
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338.28	246.6921
338.28	246.6921
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351.92	216.3895
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391.69	225.5476
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445.03	174.3266
445.03	174.3266
445.03	174.3266
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513.99	137.4084
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602.71	171.4703
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609.31	158.9310
609.31	158.9310
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661.65	141.7688
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696.49	165.0322
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911.07	114.1850
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969.11	86.7952
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1099.22	81.7814
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1112.84	100.3033
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1120.29	90.5860
1120.29	90.5860
1120.29	90.5860
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1129.67	74.1943
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1147.95	0.0000
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1333.61	65.4280
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1362.66	0.0000
1365.15	62.9813
1368.21	55.2036
1368.53	0.0000
1376.25	53.5498
1384.27	46.5199
1394.10	51.4763
1395.20	61.5883
1407.95	59.7904
1434.06	34.7139
1436.60	45.9792
1457.56	0.0000
1460.81	47.3224
1489.15	55.9891
1509.49	39.6189
1596.49	40.9676
1620.62	39.1226
1678.03	0.0000
1691.02	22.3355
1691.02	22.3355
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	37.4104
1771.40	30.2929
1791.20	0.0000
1808.65	25.9626

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G244125004

Total Uranium Activity	4.5876E+00	ug/g
Total Uranium Counting Unc.	4.9891E+00	ug/g
Total Uranium Tpu	2.5455E-06	ug/g
Total Uranium Mda	2.6315E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 940263                    SAMPLE ID  : G244125004       *
*   ANALYST       : MXR1                      DETECTOR   : GAM22            *
*   SAMPLE DATE   :  5-JAN-2010 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE: 20-JAN-2010 13:31:14.32    SAMPLE ALQT:  127.180 GRAM    *
*                                                                           *
*****************************************************************************


        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 8.794E+00
        GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.336E+00
        GROSS GAMMA MDA     (pCi/GRAM  )  : 2.771E+00
        GROSS GAMMA DLC     (pCi/GRAM  )  : 1.346E+00
```

VAX/VMS Nuclide Identification Report Generated 20-JAN-2010 16:10:10.95

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202012144.CNF;1
Sample date       : 13-JAN-2010 00:00:00 Acquisition date : 20-JAN-2010 14:09:39
Sample ID         : G1202012144          Sample quantity  : 1.34090E+02 GRAM
Detector name     : GAM04                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:00.42  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 940263                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	238.89*	9	50	0.94	477.86	474	9	1.22E-03	167.5	
2	0	511.20*	24	33	2.36	1022.49	1014	19	3.30E-03	87.9	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 20-JAN-2010 16:10:14

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202012144.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 13-JAN-2010 00:00:00 Acquisition date : 20-JAN-2010 14:09:39
Sample ID : G1202012144 Sample quantity : 134.09 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA4 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:00.42 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ANH-511	+	511.00	*	2.435E-02	4.282E-02	2.295E-02	1.284E-03	1.061

---- 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	*	-5.024E-02	1.359E-01	2.083E-01	1.380E-02	-0.241
NA-22		1274.54	*	-4.999E-03	1.860E-02	2.909E-02	1.902E-03	-0.172
NA-24		1368.53	*	-7.867E-06	1.860E-02	Half-Life too short		
AL-26		1129.67		-3.080E-01	8.350E-01	1.237E+00	7.981E-02	-0.249
		1808.65	*	-4.433E-04	1.495E-02	2.397E-02	1.422E-03	-0.018
K-40		1460.81	*	-1.445E-01	2.417E-01	3.738E-01	2.657E-02	-0.387
TI-44		67.85		-5.655E-03	2.256E-02	3.714E-02	4.319E-03	-0.152
		78.38	*	6.240E-04	1.541E-02	2.503E-02	2.879E-03	0.025
SC-46		889.25	*	7.051E-03	2.049E-02	3.566E-02	2.884E-03	0.198
		1120.51		1.170E-02	2.007E-02	3.657E-02	2.396E-03	0.320
V-48		944.10		6.812E-02	3.118E-01	5.333E-01	4.263E-02	0.128
		983.50	*	-1.727E-02	2.508E-02	3.455E-02	2.677E-03	-0.500
		1312.09		-5.059E-03	2.464E-02	3.887E-02	2.619E-03	-0.130
CR-51		320.08	*	-1.668E-01	1.605E-01	2.375E-01	1.672E-02	-0.703
MN-52		744.21		5.221E-03	4.308E-02	7.341E-02	4.357E-03	0.071
		848.13		8.963E-01	1.443E+00	2.618E+00	1.948E-01	0.342
		935.52		2.628E-02	4.818E-02	8.708E-02	7.003E-03	0.302
		1246.25		-2.127E-02	1.169E+00	1.952E+00	1.242E-01	-0.011
		1333.61		3.402E-01	1.027E+00	1.835E+00	1.258E-01	0.185
		1434.06	*	2.109E-02	5.061E-02	9.226E-02	6.296E-03	0.229
MN-54		834.83	*	5.811E-03	1.811E-02	3.156E-02	2.284E-03	0.184
CO-56		846.75	*	1.754E-04	2.000E-02	3.312E-02	2.457E-03	0.005
		977.42		4.859E-01	1.160E+00	2.077E+00	1.618E-01	0.234
		1037.82		3.554E-02	1.661E-01	2.806E-01	2.208E-02	0.127
		1175.09		-1.813E-02	8.576E-01	1.373E+00	8.178E-02	-0.013
		1238.25		-1.417E-02	3.159E-02	4.769E-02	3.174E-03	-0.297
		1360.21		-2.356E-01	4.398E-01	6.188E-01	4.241E-02	-0.381
		1771.40		-1.074E-01	1.259E-01	1.334E-01	8.102E-03	-0.805

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57		122.06	*	-3.437E-03	1.097E-02	1.748E-02	1.214E-03	-0.197
		136.48		3.911E-02	8.769E-02	1.493E-01	1.111E-02	0.262
CO-58		810.76	*	-9.833E-03	2.023E-02	3.085E-02	2.130E-03	-0.319
FE-59		142.65		2.034E-01	1.149E+00	1.902E+00	1.243E-01	0.107
		192.34		-2.383E-01	3.886E-01	5.810E-01	7.066E-02	-0.410
		1099.22	*	8.510E-03	3.374E-02	5.800E-02	4.432E-03	0.147
		1291.56		1.657E-02	4.804E-02	8.662E-02	6.999E-03	0.191
CO-60		1173.22		-6.158E-03	1.999E-02	3.175E-02	1.888E-03	-0.194
		1332.49	*	7.714E-03	2.049E-02	3.691E-02	2.529E-03	0.209
ZN-65		1115.52	*	-1.238E-02	4.197E-02	6.348E-02	4.199E-03	-0.195
GE-68		1077.35	*	-2.634E-01	6.292E-01	9.272E-01	6.476E-02	-0.284
AS-73		53.44	*	1.034E-01	6.404E-01	1.104E+00	1.445E-01	0.094
AS-74		595.88	*	2.256E-02	3.868E-02	6.719E-02	3.547E-03	0.336
		634.78		1.952E-02	1.179E-01	1.945E-01	9.839E-03	0.100
SE-75		66.05		-1.230E+00	2.570E+00	3.947E+00	5.180E-01	-0.312
		96.73		-4.640E-02	3.393E-01	5.570E-01	8.078E-02	-0.083
		121.11		4.241E-02	5.573E-02	9.792E-02	9.827E-03	0.433
		136.00		1.925E-02	1.561E-02	2.842E-02	1.905E-03	0.678
		198.60		-6.373E-01	1.065E+00	1.484E+00	1.146E-01	-0.429
		264.65	*	6.844E-03	1.975E-02	3.453E-02	2.323E-03	0.198
		279.53		-2.819E-02	4.885E-02	7.748E-02	5.470E-03	-0.364
		303.91		-2.799E-01	9.099E-01	1.474E+00	1.476E-01	-0.190
		400.65		-1.120E-01	1.152E-01	1.627E-01	1.465E-02	-0.688
BR-77		87.88		1.561E+00	7.481E+00	1.271E+01	1.528E+00	0.123
		200.40		-5.157E+00	9.976E+00	1.522E+01	9.930E-01	-0.339
	+	239.00		2.039E-01	6.832E-01	8.915E-01	5.941E-02	0.229
		249.79		-8.152E-01	3.646E+00	6.065E+00	4.049E-01	-0.134
		281.68		3.404E+00	4.627E+00	8.364E+00	5.554E-01	0.407
		297.23		-4.324E+00	2.837E+00	3.970E+00	2.612E-01	-1.089
		303.76		-2.812E+00	9.007E+00	1.459E+01	9.549E-01	-0.193
		439.47		-2.697E+00	8.104E+00	1.268E+01	7.190E-01	-0.213
		484.57		-1.152E+01	1.062E+01	1.352E+01	7.628E-01	-0.852
		520.65	*	-1.687E-01	5.987E-01	9.275E-01	5.165E-02	-0.182
		574.64		-8.418E+00	1.235E+01	1.764E+01	9.488E-01	-0.477
		578.91		4.035E+00	4.153E+00	7.785E+00	4.174E-01	0.518
		585.48		8.653E+00	8.825E+00	1.632E+01	8.700E-01	0.530
		755.35		-5.569E+00	7.775E+00	1.102E+01	6.710E-01	-0.505
		817.79		-1.192E+00	7.778E+00	1.255E+01	8.761E-01	-0.095
SR-82		698.33		4.046E+00	1.625E+01	2.808E+01	1.497E+00	0.144
		776.49	*	-1.851E-02	1.276E-01	2.061E-01	1.316E-02	-0.090
		1395.20		-2.236E+00	4.105E+00	5.658E+00	3.873E-01	-0.395
RB-83		520.41	*	1.691E-03	3.201E-02	5.230E-02	2.913E-03	0.032
		529.64		-1.201E-02	4.971E-02	7.730E-02	4.285E-03	-0.155
		552.65		1.019E-02	9.848E-02	1.614E-01	8.825E-03	0.063
RB-84		881.50	*	-1.848E-02	3.229E-02	4.379E-02	3.488E-03	-0.422
KR-85		513.99	*	6.105E+00	4.086E+00	7.728E+00	4.317E-01	0.790
SR-85		513.99	*	2.892E-02	1.936E-02	3.661E-02	2.045E-03	0.790
RB-86		1076.63	*	-7.858E-02	2.909E-01	4.428E-01	3.096E-02	-0.177
Y-88		898.02		4.901E-03	2.143E-02	3.663E-02	3.031E-03	0.134

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1836.01	*	-5.270E-03	2.128E-02	3.171E-02	1.851E-03	-0.166
ZR-88		392.90	*	1.478E-02	1.478E-02	2.720E-02	1.531E-03	0.543
Y-91		1204.90	*	2.185E+00	6.984E+00	1.207E+01	7.396E-01	0.181
NB-94		702.63	*	9.856E-03	1.924E-02	3.429E-02	1.847E-03	0.287
		871.10		-7.537E-03	1.618E-02	2.408E-02	1.877E-03	-0.313
NB-95		765.79	*	2.859E-03	1.759E-02	3.009E-02	1.875E-03	0.095
NB-95M		235.69	*	-3.707E-02	5.931E-02	7.542E-02	6.189E-03	-0.491
ZR-95		724.18		-8.551E-03	4.353E-02	7.068E-02	4.769E-03	-0.121
		756.15	*	-3.879E-03	2.657E-02	4.299E-02	3.130E-03	-0.090
NB-97		657.90	*	-5.874E-06	2.657E-02	Half-Life too short		
		1024.50		6.920E-04	2.657E-02	Half-Life too short		
ZR-97		254.15		1.109E-03	2.657E-02	Half-Life too short		
		355.39		-4.823E-04	2.657E-02	Half-Life too short		
		507.63	*	6.650E-04	2.657E-02	Half-Life too short		
		602.52		1.009E-03	2.657E-02	Half-Life too short		
		1021.30		-1.582E-04	2.657E-02	Half-Life too short		
		1147.95		-4.921E-04	2.657E-02	Half-Life too short		
		1362.66		7.354E-04	2.657E-02	Half-Life too short		
		1750.46		-1.295E-03	2.657E-02	Half-Life too short		
MO-99		140.51		1.451E+00	1.781E+00	3.047E+00	8.264E-01	0.476
		181.06		-3.612E-01	1.149E+00	1.787E+00	3.103E-01	-0.202
		366.43		4.717E-01	6.700E+00	1.121E+01	6.699E-01	0.042
		739.58	*	-5.518E-02	7.959E-01	1.313E+00	1.813E-01	-0.042
		778.00		-1.030E+00	2.061E+00	3.053E+00	1.955E-01	-0.337
TC-99M		140.51	*	1.302E+01	2.061E+00	Half-Life too short		
RH-101		127.23		-5.086E-03	1.331E-02	2.101E-02	1.427E-03	-0.242
		198.01	*	-9.388E-03	2.013E-02	2.839E-02	1.849E-03	-0.331
		325.23		-2.250E-02	1.165E-01	1.911E-01	1.223E-02	-0.118
RH-102		418.52		-2.190E-02	1.295E-01	2.078E-01	1.176E-02	-0.105
		475.06	*	2.769E-03	1.463E-02	2.450E-02	1.385E-03	0.113
		631.29		7.319E-03	2.810E-02	4.687E-02	2.381E-03	0.156
		697.49		8.099E-03	4.310E-02	7.401E-02	3.939E-03	0.109
		766.84		1.407E-02	4.896E-02	8.532E-02	5.330E-03	0.165
		1046.59		5.289E-02	5.120E-02	1.011E-01	7.344E-03	0.523
		1112.84		6.723E-02	1.010E-01	1.864E-01	1.236E-02	0.361
RU-103		497.08	*	1.482E-03	1.868E-02	3.072E-02	3.859E-03	0.048
		610.33		-3.483E-02	3.867E-01	5.996E-01	9.116E-02	-0.058
RH-106	+	511.85		1.199E-01	2.109E-01	2.762E-01	1.544E-02	0.434
		621.84	*	-8.330E-02	1.491E-01	2.117E-01	2.418E-02	-0.394
		1050.47		3.673E-01	1.028E+00	1.802E+00	1.303E-01	0.204
RU-106	+	511.85		1.199E-01	2.109E-01	2.762E-01	1.544E-02	0.434
		621.84	*	-8.330E-02	1.489E-01	2.117E-01	1.087E-02	-0.394
		1050.47		3.673E-01	1.028E+00	1.802E+00	1.303E-01	0.204
AG-108M		433.93	*	1.715E-02	1.776E-02	3.245E-02	2.005E-03	0.529
		614.37		-8.869E-03	1.801E-02	2.615E-02	1.497E-03	-0.339
		722.95		-9.357E-03	2.236E-02	3.513E-02	2.162E-03	-0.266
CD-109		88.03	*	2.819E-02	3.032E-01	5.101E-01	6.130E-02	0.055
AG-110M		657.75	*	-4.226E-03	1.801E-02	2.934E-02	1.568E-03	-0.144
		677.61		1.093E-01	1.184E-01	2.312E-01	1.266E-02	0.473

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		706.67		-1.815E-01	1.159E-01	1.478E-01	8.587E-03	-1.227
		763.93		6.713E-02	7.515E-02	1.424E-01	9.314E-03	0.471
		884.67		9.150E-03	2.258E-02	4.014E-02	3.336E-03	0.228
		937.48		1.506E-02	5.009E-02	8.714E-02	7.290E-03	0.173
		1384.27		4.751E-02	8.346E-02	1.565E-01	1.119E-02	0.304
IN-111		171.28		-5.988E-02	7.052E-02	1.033E-01	6.586E-03	-0.580
		245.39	*	-3.421E-03	8.745E-02	1.377E-01	9.188E-03	-0.025
IN-113M		391.69	*	-1.051E-02	2.255E-02	3.516E-02	2.118E-03	-0.299
SN-113		391.69	*	-1.051E-02	2.255E-02	3.516E-02	2.118E-03	-0.299
IN-114M		190.27	*	-3.161E-02	7.411E-02	1.136E-01	7.352E-03	-0.278
CD-115		260.90		1.711E+00	5.905E+00	1.028E+01	6.862E-01	0.167
		492.35		-8.565E-01	1.868E+00	2.835E+00	1.596E-01	-0.302
		527.90	*	-2.632E-01	5.511E-01	8.255E-01	4.581E-02	-0.319
SN-117M		156.02		5.251E-02	7.140E-01	1.167E+00	7.485E-02	0.045
		158.56	*	3.255E-03	1.777E-02	2.930E-02	1.874E-03	0.111
SB-122		563.90	*	-8.685E-02	1.481E-01	2.145E-01	1.164E-02	-0.405
		692.80		7.855E-03	3.227E+00	5.415E+00	2.849E-01	0.001
I-123		159.00	*	-1.050E-05	3.227E+00	Half-Life too short		
		528.96		-7.327E-03	3.227E+00	Half-Life too short		
TE-123M		159.00	*	-6.880E-04	1.300E-02	2.099E-02	1.357E-03	-0.033
I-124		602.71	*	5.675E-02	1.125E-01	1.925E-01	1.009E-02	0.295
		722.78		-2.922E-01	6.686E-01	1.047E+00	5.917E-02	-0.279
		1325.50		-2.313E+00	4.642E+00	6.717E+00	4.576E-01	-0.344
		1376.25		-1.977E+00	3.654E+00	5.052E+00	3.462E-01	-0.391
		1509.49		-1.641E+00	2.309E+00	2.959E+00	1.995E-01	-0.554
		1691.02		1.942E-01	5.764E-01	1.049E+00	6.650E-02	0.185
SB-124		602.71		1.054E-02	2.089E-02	3.574E-02	1.875E-03	0.295
		645.85		9.160E-02	2.180E-01	3.906E-01	2.279E-02	0.235
		709.31		8.794E-01	1.406E+00	2.546E+00	1.394E-01	0.345
		713.82		-3.684E-01	8.759E-01	1.381E+00	1.390E-01	-0.267
		722.78		-7.866E-02	1.800E-01	2.819E-01	1.672E-02	-0.279
		968.20		1.151E-01	1.150E+00	1.917E+00	1.504E-01	0.060
		1045.16		7.662E-01	1.058E+00	1.978E+00	1.439E-01	0.387
		1325.50		-6.650E-01	1.335E+00	1.931E+00	1.316E-01	-0.344
		1368.21		-7.214E-02	7.556E-01	1.224E+00	1.520E-01	-0.059
		1436.60		5.920E-01	1.833E+00	3.283E+00	2.239E-01	0.180
		1691.02	*	1.233E-02	3.659E-02	6.661E-02	4.526E-03	0.185
SB-125		427.89	*	-4.059E-03	4.542E-02	7.371E-02	4.363E-03	-0.055
		463.38		1.460E-02	1.241E-01	2.063E-01	1.371E-02	0.071
		600.56		3.276E-02	1.122E-01	1.865E-01	1.164E-02	0.176
		635.90		-6.036E-02	1.196E-01	1.700E-01	1.048E-02	-0.355
TE-125M		109.28	*	2.607E-01	4.228E+00	6.382E+00	6.324E-01	0.041
I-126		388.63		-2.944E-02	6.604E-02	1.028E-01	5.828E-03	-0.287
		666.33	*	-1.730E-02	5.620E-02	8.993E-02	4.436E-03	-0.192
		753.82		-5.366E-02	3.989E-01	6.471E-01	3.926E-02	-0.083
SB-126		223.80		-9.614E-02	1.226E+00	1.932E+00	1.280E-01	-0.050
		278.60		-4.765E-01	7.369E-01	1.158E+00	7.701E-02	-0.411
		296.50		-5.761E-02	4.347E-01	7.214E-01	4.750E-02	-0.080
		414.70		1.700E-03	2.099E-02	3.498E-02	1.979E-03	0.049

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		415.30		1.554E-01	1.793E+00	2.990E+00	1.692E-01	0.052
		555.20		7.661E-01	1.278E+00	2.257E+00	1.232E-01	0.339
		573.80		2.965E-02	3.681E-01	5.995E-01	3.227E-02	0.049
		593.00		-3.318E-02	3.159E-01	4.981E-01	2.637E-02	-0.067
		656.30		-2.007E+00	1.133E+00	1.341E+00	6.591E-02	-1.497
		666.33		-7.107E-03	2.308E-02	3.694E-02	1.822E-03	-0.192
		675.00		-5.200E-01	4.780E-01	5.975E-01	3.011E-02	-0.870
		695.00		-9.679E-03	2.882E-02	4.617E-02	2.442E-03	-0.210
		697.00		-7.145E-03	1.012E-01	1.682E-01	8.938E-03	-0.042
		720.50	*	-2.924E-02	4.985E-02	7.591E-02	4.266E-03	-0.385
		856.80		-5.732E-02	1.548E-01	2.383E-01	1.805E-02	-0.241
		989.30		2.367E-01	4.089E-01	7.429E-01	5.725E-02	0.319
		1034.80		1.437E+00	3.454E+00	6.016E+00	4.429E-01	0.239
		1213.00		6.395E-01	1.140E+00	2.092E+00	1.292E-01	0.306
SN-126		64.28		4.251E-02	2.829E-01	4.610E-01	7.941E-02	0.092
		86.94		1.029E-01	1.410E-01	2.385E-01	1.006E-01	0.432
		87.57	*	1.928E-02	3.072E-02	5.399E-02	6.475E-03	0.357
SB-127		61.10		-3.338E+00	8.714E+00	1.421E+01	1.790E+00	-0.235
		252.40		9.201E-02	5.572E-01	9.572E-01	3.946E-01	0.096
		290.80		-2.681E+00	2.778E+00	4.212E+00	3.163E-01	-0.636
		411.60		-4.165E-01	1.376E+00	2.163E+00	2.800E-01	-0.193
		444.90		-6.459E-01	1.470E+00	2.177E+00	1.915E-01	-0.297
		473.00		8.822E-02	2.328E-01	3.985E-01	3.689E-02	0.221
		543.00		9.588E-01	2.434E+00	4.143E+00	4.644E-01	0.231
		603.60		6.057E-01	1.741E+00	2.921E+00	2.480E-01	0.207
		685.20	*	1.339E-02	1.462E-01	2.495E-01	1.664E-02	0.054
		698.50		7.783E-01	2.293E+00	4.001E+00	5.167E-01	0.195
		722.20		-2.205E+00	4.067E+00	6.255E+00	4.176E-01	-0.352
		783.80		1.609E-01	3.621E-01	6.550E-01	6.018E-02	0.246
XE-127		57.60		2.699E+00	3.429E+00	6.209E+00	7.774E-01	0.435
		145.22		3.788E-02	2.681E-01	4.425E-01	2.880E-02	0.086
		172.10		-5.588E-02	4.501E-02	6.222E-02	3.969E-03	-0.898
		202.84	*	7.650E-04	2.133E-02	3.424E-02	2.238E-03	0.022
		374.96		3.220E-02	8.807E-02	1.521E-01	8.922E-03	0.212
I-131		80.18		-4.932E-02	9.399E-01	1.566E+00	1.811E-01	-0.031
		284.30		-8.473E-02	3.806E-01	6.271E-01	4.488E-02	-0.135
		364.48	*	-8.457E-03	3.045E-02	4.885E-02	3.225E-03	-0.173
		636.97		-2.300E-01	3.641E-01	5.013E-01	2.892E-02	-0.459
		722.89		-8.060E-01	1.970E+00	3.102E+00	1.759E-01	-0.260
TE-132		49.72		-7.347E-01	3.631E+00	6.064E+00	7.741E-01	-0.121
		111.76		-2.283E+00	2.636E+00	3.982E+00	3.399E-01	-0.573
		116.30		1.209E-01	2.470E+00	4.087E+00	3.323E-01	0.030
		228.16	*	4.478E-03	7.062E-02	1.129E-01	1.533E-02	0.040
BA-133		53.15		7.430E-01	2.825E+00	4.920E+00	6.441E-01	0.151
		79.62		-4.225E-01	5.559E-01	8.592E-01	1.465E-01	-0.492
		81.00		9.530E-03	3.627E-02	6.221E-02	1.099E-02	0.153
		276.40		8.208E-03	1.648E-01	2.797E-01	3.739E-02	0.029
		302.84		-3.097E-02	6.399E-02	1.013E-01	1.221E-02	-0.306
		356.01	*	4.381E-03	2.126E-02	3.619E-02	4.239E-03	0.121

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		383.85		-8.461E-02	1.632E-01	2.532E-01	2.745E-02	-0.334
I-133	+	510.53		6.018E-04	1.632E-01	Half-Life too short		
		529.87	*	-4.232E-06	1.632E-01	Half-Life too short		
		706.58		-8.825E-04	1.632E-01	Half-Life too short		
		856.28		-3.237E-04	1.632E-01	Half-Life too short		
		875.33		-6.139E-05	1.632E-01	Half-Life too short		
		1236.41		4.081E-04	1.632E-01	Half-Life too short		
		1298.22		-4.724E-05	1.632E-01	Half-Life too short		
CS-134		475.35		-9.182E-02	9.554E-01	1.536E+00	8.687E-02	-0.060
		563.23		-1.061E-01	1.766E-01	2.549E-01	1.417E-02	-0.416
		569.32		7.677E-02	1.113E-01	1.959E-01	1.095E-02	0.392
		604.70		-6.028E-03	1.917E-02	2.934E-02	1.546E-03	-0.205
		795.84	*	9.200E-03	2.310E-02	4.075E-02	2.747E-03	0.226
		801.93		-2.525E-01	2.669E-01	3.951E-01	2.691E-02	-0.639
		1038.57		1.273E+00	1.965E+00	3.592E+00	2.633E-01	0.354
		1167.94		-9.147E-02	1.062E+00	1.674E+00	1.006E-01	-0.055
		1365.15		-5.442E-02	5.741E-01	9.304E-01	6.830E-02	-0.058
CS-135		268.24	*	-1.492E-02	7.507E-02	1.246E-01	1.038E-02	-0.120
I-135		288.45		6.965E+01	7.507E-02	Half-Life too short		
		417.63		-1.180E+01	7.507E-02	Half-Life too short		
		546.56		-1.069E+00	7.507E-02	Half-Life too short		
		836.80		4.585E+01	7.507E-02	Half-Life too short		
		1038.76		1.784E+01	7.507E-02	Half-Life too short		
		1124.00		-2.876E+01	7.507E-02	Half-Life too short		
		1131.51		6.528E+00	7.507E-02	Half-Life too short		
		1260.41	*	1.011E+01	7.507E-02	Half-Life too short		
		1457.56		1.730E+01	7.507E-02	Half-Life too short		
		1678.03		-5.910E-01	7.507E-02	Half-Life too short		
		1706.46		-3.156E+00	7.507E-02	Half-Life too short		
		1791.20		2.017E+01	7.507E-02	Half-Life too short		
CS-136		66.91		-9.666E-02	2.641E-01	4.297E-01	7.446E-02	-0.225
		86.29		3.161E-01	2.833E-01	5.117E-01	7.798E-02	0.618
		153.22		-7.661E-02	2.081E-01	3.266E-01	2.526E-02	-0.235
		163.89		2.294E-01	3.334E-01	5.732E-01	4.416E-02	0.400
		176.55		2.485E-03	1.116E-01	1.804E-01	1.272E-02	0.014
		273.65		-2.997E-02	1.416E-01	2.342E-01	1.727E-02	-0.128
		340.57		6.306E-03	4.102E-02	6.951E-02	4.586E-03	0.091
		818.51		-4.459E-03	2.614E-02	4.205E-02	2.941E-03	-0.106
		1048.07	*	-4.323E-02	3.917E-02	4.780E-02	3.669E-03	-0.904
		1235.34		8.025E-02	1.490E-01	2.766E-01	2.844E-02	0.290
BA-137M		661.65	*	-3.303E-03	2.181E-02	3.635E-02	1.773E-03	-0.091
CS-137		661.65	*	-3.492E-03	2.306E-02	3.842E-02	1.885E-03	-0.091
CE-139		165.85	*	-6.263E-03	1.398E-02	2.167E-02	1.377E-03	-0.289
BA-140		162.64		-6.963E-02	2.345E-01	3.690E-01	2.596E-02	-0.189
		304.84		5.492E-02	3.735E-01	6.369E-01	1.749E-01	0.086
		423.70		-1.581E-04	6.389E-01	1.050E+00	3.336E-01	0.000
		537.32	*	4.648E-03	9.673E-02	1.536E-01	4.986E-02	0.030
LA-140		328.77		2.562E-02	9.517E-02	1.635E-01	1.146E-02	0.157
		432.53		1.365E-01	7.389E-01	1.241E+00	7.805E-02	0.110

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		487.03		-3.660E-03	4.428E-02	7.118E-02	4.572E-03	-0.051
		751.79		2.621E-01	4.564E-01	8.441E-01	6.157E-02	0.310
		815.85		-3.997E-02	1.081E-01	1.670E-01	1.361E-02	-0.239
		867.82		-3.008E-02	4.151E-01	6.746E-01	5.566E-02	-0.045
		919.63		-3.284E-02	8.752E-01	1.426E+00	1.462E-01	-0.023
		925.24		-2.576E-01	3.692E-01	5.134E-01	4.452E-02	-0.502
		1596.49	*	-2.789E-02	3.502E-02	4.438E-02	2.923E-03	-0.629
CE-141		145.44	*	3.420E-03	2.412E-02	3.980E-02	2.672E-03	0.086
CE-143		57.37		3.218E+00	1.621E+01	2.798E+01	3.749E+00	0.115
		231.56		-8.413E-01	2.915E+01	4.611E+01	1.433E+01	-0.018
		293.26	*	8.242E-01	1.458E+00	2.564E+00	5.304E-01	0.321
		350.59		-1.079E+01	2.056E+01	3.114E+01	9.469E+00	-0.346
		490.36		6.212E-02	3.525E+01	5.738E+01	1.772E+01	0.001
		664.57		-8.977E+00	1.460E+01	2.180E+01	6.869E+00	-0.412
		721.93		-1.067E+01	1.689E+01	2.516E+01	7.148E+00	-0.424
CE-144		80.11		-3.314E-01	8.452E-01	1.362E+00	1.574E-01	-0.243
		133.54	*	-4.449E-02	9.191E-02	1.433E-01	2.089E-02	-0.310
PM-144		476.78		-2.055E-02	3.181E-02	4.643E-02	3.165E-03	-0.443
		618.01		-9.858E-03	1.492E-02	2.075E-02	1.150E-03	-0.475
		696.49	*	9.504E-04	1.918E-02	3.237E-02	1.719E-03	0.029
		778.57		-9.907E-01	9.920E-01	1.297E+00	8.320E-02	-0.764
PR-144		696.49	*	6.415E-02	1.294E+00	2.185E+00	1.160E-01	0.029
		1489.15		4.160E+00	6.331E+00	1.221E+01	8.267E-01	0.341
PM-146		453.90	*	-2.703E-03	2.269E-02	3.513E-02	2.998E-03	-0.077
		633.02		1.739E-01	6.742E-01	1.122E+00	4.120E-01	0.155
		735.90		-3.977E-02	6.611E-02	9.600E-02	2.677E-02	-0.414
		747.13		-3.526E-02	4.137E-02	5.711E-02	7.190E-03	-0.617
ND-147		91.11		1.645E-02	6.940E-02	1.178E-01	1.381E-02	0.140
		319.41		-4.372E-01	1.053E+00	1.684E+00	1.085E-01	-0.260
		439.89		-8.608E-01	1.977E+00	2.985E+00	1.693E-01	-0.288
		531.02	*	-5.632E-02	1.861E-01	2.869E-01	3.848E-02	-0.196
PM-149		285.90	*	-4.368E+00	4.295E+00	6.385E+00	9.267E-01	-0.684
EU-152		121.78		-6.749E-03	3.273E-02	5.276E-02	4.496E-03	-0.128
		244.69		6.382E-04	1.679E-01	2.656E-01	1.772E-02	0.002
		344.27	*	-4.623E-03	4.936E-02	8.139E-02	5.633E-03	-0.057
		443.98		-1.579E-02	5.275E-01	8.233E-01	4.670E-02	-0.019
		778.89		-5.978E-02	1.004E-01	1.436E-01	9.213E-03	-0.416
		867.32		-4.269E-02	3.841E-01	6.195E-01	4.794E-02	-0.069
		964.01		-4.750E-02	1.433E-01	2.202E-01	1.734E-02	-0.216
		1085.78		-6.534E-02	1.510E-01	2.127E-01	1.469E-02	-0.307
		1112.02		9.234E-02	1.429E-01	2.630E-01	1.746E-02	0.351
		1407.95		-1.325E-02	1.137E-01	1.840E-01	1.259E-02	-0.072
GD-153		69.67		-4.480E-02	7.706E-01	1.291E+00	1.491E-01	-0.035
		83.37		-2.956E+00	5.558E+00	8.794E+00	1.029E+00	-0.336
		97.43	*	4.177E-03	3.514E-02	5.895E-02	5.786E-03	0.071
		103.18		-5.268E-04	4.068E-02	6.729E-02	5.988E-03	-0.008
EU-154		123.07		-1.543E-02	2.303E-02	3.530E-02	3.573E-03	-0.437
		247.94		7.143E-02	1.932E-01	3.172E-01	3.203E-02	0.225
		591.81		-7.560E-02	2.964E-01	4.536E-01	4.303E-02	-0.167

---- Non-Identified Nuclides ----

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		723.30		-4.028E-02	9.317E-02	1.461E-01	1.017E-02	-0.276
		756.87		-1.016E-01	3.270E-01	5.114E-01	5.276E-02	-0.199
		873.19		-1.370E-03	1.373E-01	2.260E-01	2.645E-02	-0.006
		996.32		2.923E-02	1.704E-01	2.881E-01	4.989E-02	0.101
		1004.76		3.189E-02	9.280E-02	1.628E-01	1.775E-02	0.196
		1274.45	*	-2.047E-02	5.350E-02	8.127E-02	7.972E-03	-0.252
EU-155		48.70		-1.864E+00	2.515E+00	3.972E+00	4.576E-01	-0.469
		60.01		-4.268E-01	3.039E+00	5.078E+00	6.169E-01	-0.084
		86.54		4.316E-02	3.838E-02	6.972E-02	8.350E-03	0.619
		105.31	*	-1.622E-02	4.464E-02	7.121E-02	6.206E-03	-0.228
TB-160		86.79		9.986E-02	9.603E-02	1.734E-01	2.069E-02	0.576
		197.04		-9.922E-03	3.151E-01	4.621E-01	3.007E-02	-0.021
		215.65		-1.352E-01	3.201E-01	4.856E-01	3.202E-02	-0.278
		298.57		-5.350E-02	4.703E-02	6.865E-02	4.513E-03	-0.779
		879.36	*	1.109E-02	6.705E-02	1.138E-01	9.022E-03	0.097
		962.29		6.214E-02	2.241E-01	3.859E-01	3.043E-02	0.161
		966.15		1.810E-02	8.885E-02	1.506E-01	1.184E-02	0.120
		1177.93		-8.710E-03	1.266E-01	1.997E-01	1.193E-02	-0.044
		1271.85		8.376E-02	2.399E-01	4.384E-01	2.854E-02	0.191
HO-166M		80.57		5.217E-03	1.026E-01	1.727E-01	1.998E-02	0.030
		184.41		-1.400E-03	1.845E-02	2.881E-02	1.856E-03	-0.049
		280.46		-2.136E-04	4.024E-02	6.783E-02	4.507E-03	-0.003
		410.95		-3.954E-03	1.038E-01	1.701E-01	9.616E-03	-0.023
		711.68	*	3.702E-02	3.495E-02	6.614E-02	3.640E-03	0.560
		752.31		2.517E-03	1.106E-01	1.853E-01	1.120E-02	0.014
		810.29		-2.609E-02	3.361E-02	4.857E-02	3.336E-03	-0.537
TM-171		51.35		-1.157E+01	2.596E+01	4.216E+01	5.460E+00	-0.274
		52.39		-7.914E-01	1.272E+01	2.150E+01	2.812E+00	-0.037
		59.40		-9.181E-01	1.640E+01	2.763E+01	3.369E+00	-0.033
		66.72	*	-2.731E+00	1.385E+01	2.292E+01	2.680E+00	-0.119
LU-176		88.36		-3.562E-02	7.276E-02	1.156E-01	1.378E-02	-0.308
		201.83		2.075E-03	1.503E-02	2.435E-02	1.590E-03	0.085
		306.84	*	-1.813E-03	1.135E-02	1.870E-02	1.221E-03	-0.097
		401.10		-4.161E+00	3.378E+00	4.627E+00	2.611E-01	-0.899
LU-177		112.95		-4.224E-01	3.341E-01	4.820E-01	3.732E-02	-0.876
		208.36	*	6.215E-02	2.265E-01	3.720E-01	2.441E-02	0.167
LU-177M		52.97		4.079E-01	1.208E+00	2.120E+00	2.776E-01	0.192
		54.07		3.349E-01	6.323E-01	1.125E+00	1.467E-01	0.298
		61.30		-3.047E-01	8.412E-01	1.375E+00	1.659E-01	-0.222
		121.62		-1.630E-02	1.629E-01	2.652E-01	1.847E-02	-0.061
		147.16		-3.508E-01	3.041E-01	4.416E-01	2.865E-02	-0.795
		171.86		-2.135E-01	2.061E-01	2.943E-01	1.877E-02	-0.725
		218.09		-1.186E-01	3.838E-01	5.899E-01	3.895E-02	-0.201
		268.79		6.419E-02	3.666E-01	6.299E-01	4.201E-02	0.102
		319.02		-3.708E-02	1.295E-01	2.103E-01	1.356E-02	-0.176
		367.43		3.390E-01	4.379E-01	7.910E-01	4.717E-02	0.429
		413.65	*	1.548E-02	7.484E-02	1.269E-01	7.179E-03	0.122
HF-181		56.28		-3.747E-01	6.053E-01	9.639E-01	1.229E-01	-0.389
		57.53		1.427E-01	3.017E-01	5.329E-01	6.678E-02	0.268

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		65.20		-1.835E-01	4.700E-01	7.284E-01	8.586E-02	-0.252
		133.02		-1.243E-02	2.664E-02	4.171E-02	2.784E-03	-0.298
		136.25		1.409E-01	1.680E-01	2.964E-01	1.963E-02	0.475
		345.85		3.076E-02	8.558E-02	1.481E-01	9.200E-03	0.208
		482.03	*	-5.336E-03	1.463E-02	2.212E-02	1.249E-03	-0.241
W-181		56.28		-1.584E-01	2.567E-01	4.088E-01	5.212E-02	-0.387
		57.53		6.042E-02	1.280E-01	2.261E-01	2.834E-02	0.267
		65.20	*	-7.725E-02	1.979E-01	3.067E-01	3.614E-02	-0.252
TA-182		67.75		-1.085E-02	5.179E-02	8.561E-02	9.960E-03	-0.127
		100.10		-2.762E-02	7.233E-02	1.155E-01	1.081E-02	-0.239
		152.43		-2.255E-02	1.517E-01	2.432E-01	1.566E-02	-0.093
		222.10		-1.084E-01	1.643E-01	2.424E-01	1.604E-02	-0.447
		1001.68		-2.095E-01	8.891E-01	1.374E+00	1.047E-01	-0.152
		1121.28		4.020E-03	6.178E-02	1.012E-01	6.621E-03	0.040
		1189.05		3.061E-02	1.194E-01	2.041E-01	1.233E-02	0.150
		1221.42	*	3.320E-02	8.000E-02	1.449E-01	9.018E-03	0.229
		1230.97		-2.486E-01	2.093E-01	2.499E-01	1.569E-02	-0.995
RE-183		57.98		4.677E-02	1.222E-01	2.141E-01	2.666E-02	0.218
		59.32		-3.536E-03	6.324E-02	1.066E-01	1.301E-02	-0.033
		67.20		-2.879E-02	9.235E-02	1.512E-01	1.763E-02	-0.190
		162.32	*	-1.872E-02	4.824E-02	7.526E-02	4.796E-03	-0.249
		208.81		-1.846E-01	4.100E-01	6.227E-01	4.088E-02	-0.297
		291.72		-5.119E-01	4.599E-01	6.895E-01	4.554E-02	-0.742
RE-184		57.98		1.800E-01	4.702E-01	8.241E-01	1.026E-01	0.218
		59.32		-1.360E-02	2.432E-01	4.098E-01	5.003E-02	-0.033
		67.20		-1.108E-01	3.554E-01	5.818E-01	6.786E-02	-0.190
		161.27		-1.228E-01	1.606E-01	2.405E-01	1.534E-02	-0.511
		216.55		-1.458E-01	1.224E-01	1.674E-01	1.105E-02	-0.871
		252.85	*	4.790E-02	1.101E-01	1.940E-01	1.296E-02	0.247
		318.01		-7.134E-03	2.264E-01	3.779E-01	2.440E-02	-0.019
		792.07		-5.343E-01	4.188E-01	5.007E-01	3.307E-02	-1.067
		903.28		-1.531E-01	4.500E-01	6.872E-01	5.639E-02	-0.223
		920.93		2.117E-02	2.047E-01	3.433E-01	2.788E-02	0.062
OS-185		59.72		5.406E-02	1.678E-01	2.923E-01	3.556E-02	0.185
		61.14		-3.441E-02	9.081E-02	1.482E-01	1.789E-02	-0.232
		69.30		-2.506E-02	1.373E-01	2.275E-01	2.630E-02	-0.110
		592.07		-4.332E-01	1.224E+00	1.846E+00	9.779E-02	-0.235
		646.12	*	4.198E-03	1.943E-02	3.382E-02	1.686E-03	0.124
		717.42		1.767E-01	4.414E-01	7.813E-01	4.359E-02	0.226
		874.81		-1.756E-01	2.732E-01	3.907E-01	3.070E-02	-0.449
		880.27		-2.364E-02	4.200E-01	6.469E-01	5.139E-02	-0.037
RE-188		155.03	*	1.927E-02	7.443E-02	1.237E-01	7.941E-03	0.156
		477.96		-5.172E-01	1.296E+00	1.971E+00	1.114E-01	-0.262
		633.10		3.102E-01	1.259E+00	2.100E+00	1.065E-01	0.148
W-188		63.58		-8.473E+00	2.762E+01	4.581E+01	5.452E+00	-0.185
		227.08		-1.106E+00	5.722E+00	8.896E+00	5.902E-01	-0.124
		290.67	*	-3.291E+00	3.462E+00	5.263E+00	3.478E-01	-0.625
IR-192		295.96		2.869E-02	4.674E-02	8.313E-02	5.542E-03	0.345
		308.46		-1.620E-02	4.231E-02	6.789E-02	4.465E-03	-0.239

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		316.51	*	1.041E-02	1.702E-02	3.019E-02	1.960E-03	0.345
		468.07		1.061E-02	3.111E-02	5.318E-02	3.492E-03	0.200
		604.41		4.208E-02	2.401E-01	3.942E-01	4.364E-02	0.107
		612.46		-2.336E-01	3.258E-01	4.559E-01	3.245E-02	-0.512
AU-195		65.12		-3.982E-02	9.290E-02	1.433E-01	1.690E-02	-0.278
		66.83		-7.293E-03	4.486E-02	7.451E-02	8.706E-03	-0.098
		75.70		5.659E-02	8.641E-02	1.446E-01	1.656E-02	0.391
		98.88	*	8.040E-02	9.519E-02	1.693E-01	1.618E-02	0.475
		129.76		1.018E+00	1.152E+00	2.038E+00	1.373E-01	0.500
TL-200		367.94	*	8.441E-01	1.949E+00	3.393E+00	2.022E-01	0.249
		579.30		9.701E+00	1.328E+01	2.391E+01	1.282E+00	0.406
		828.27		-3.344E+00	2.126E+01	3.424E+01	2.444E+00	-0.098
		1205.75		2.096E-01	8.245E+00	1.332E+01	8.173E-01	0.016
TL-201		68.90		-2.341E-02	4.234E-01	7.097E-01	8.218E-02	-0.033
		70.82		1.428E-01	2.281E-01	4.034E-01	4.642E-02	0.354
		80.30		-3.578E-02	3.508E-01	5.816E-01	6.724E-02	-0.062
		135.34		1.410E+00	1.930E+00	3.371E+00	2.237E-01	0.418
		167.43	*	-2.038E-01	6.045E-01	9.461E-01	6.015E-02	-0.215
TL-202		68.90		-7.627E-03	1.380E-01	2.313E-01	2.678E-02	-0.033
		70.82		4.641E-02	7.411E-02	1.311E-01	1.508E-02	0.354
		80.30		-1.163E-02	1.140E-01	1.891E-01	2.186E-02	-0.062
		439.56	*	-7.654E-03	2.300E-02	3.597E-02	2.040E-03	-0.213
HG-203		70.83		2.776E-01	4.410E-01	7.785E-01	1.214E-01	0.357
		72.87		-1.860E-01	2.774E-01	4.130E-01	6.282E-02	-0.450
		82.60		2.610E-03	3.682E-01	6.162E-01	9.756E-02	0.004
		279.20	*	-5.782E-03	1.660E-02	2.698E-02	1.878E-03	-0.214
BI-207		72.80		-4.450E-02	8.454E-02	1.355E-01	1.554E-02	-0.328
		74.97		9.392E-03	5.113E-02	8.278E-02	9.480E-03	0.113
		84.90		-1.227E-02	7.299E-02	1.200E-01	1.416E-02	-0.102
		569.67		1.551E-02	1.655E-02	3.013E-02	1.627E-03	0.515
		1063.62	*	1.905E-02	2.362E-02	4.492E-02	3.195E-03	0.424
		1770.23		-1.430E-01	2.646E-01	3.424E-01	2.080E-02	-0.418
TL-207		81.07		2.165E-02	8.011E-02	1.376E-01	1.595E-02	0.157
		83.78		-4.156E-02	4.876E-02	7.433E-02	8.719E-03	-0.559
		94.90		-1.402E-01	1.125E-01	1.669E-01	1.720E-02	-0.840
		122.32		-6.642E-01	7.959E-01	1.201E+00	9.241E-02	-0.553
		144.24		2.185E-02	3.299E-01	5.407E-01	4.229E-02	0.040
		154.21		-1.349E-01	1.872E-01	2.832E-01	2.135E-02	-0.476
		269.46		4.160E-02	8.751E-02	1.544E-01	1.065E-02	0.269
		323.87	*	4.750E-02	3.531E-01	5.982E-01	1.001E-01	0.079
		338.28		7.446E-02	5.576E-01	8.820E-01	9.532E-02	0.084
		445.03		-5.834E-01	1.328E+00	1.966E+00	2.005E-01	-0.297
TL-208		277.35		-9.694E-02	1.688E-01	2.672E-01	2.953E-02	-0.363
	+	510.84		1.127E-01	1.985E-01	2.672E-01	2.681E-02	0.422
		583.14	*	-1.546E-02	2.315E-02	3.180E-02	2.001E-03	-0.486
		860.37		1.565E-01	1.410E-01	2.745E-01	2.290E-02	0.570
PO-209		260.50		1.904E+00	4.587E+00	8.068E+00	5.388E-01	0.236
		262.80		-5.932E+00	1.287E+01	2.081E+01	1.389E+00	-0.285
		896.60	*	-2.381E+00	4.088E+00	6.002E+00	4.925E-01	-0.397

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BI-210		46.50	*	4.554E-01	4.562E+00	7.775E+00	6.776E-01	0.059
PB-210		46.50	*	4.554E-01	4.562E+00	7.775E+00	6.776E-01	0.059
PO-210		46.50	*	4.554E-01	4.562E+00	7.775E+00	6.039E-01	0.059
BI-211		72.87		-1.046E+00	1.556E+00	2.322E+00	2.662E-01	-0.450
		351.07	*	-2.796E-02	1.104E-01	1.743E-01	1.177E-02	-0.160
PB-211		404.84	*	3.190E-01	4.850E-01	7.960E-01	4.961E-01	0.401
		427.08		3.668E-02	1.035E+00	1.708E+00	1.055E+00	0.021
		831.96		-4.998E-01	6.903E-01	8.675E-01	5.420E-01	-0.576
BI-212		727.18	*	7.810E-02	1.462E-01	2.630E-01	2.011E-02	0.297
		785.46		1.709E-01	6.863E-01	1.199E+00	7.803E-02	0.143
		1620.62		3.200E-01	8.496E-01	1.515E+00	9.889E-02	0.211
PB-212		74.81		-1.205E-02	1.793E-01	2.848E-01	4.210E-02	-0.042
		77.11		-6.401E-02	9.394E-02	1.436E-01	1.647E-02	-0.446
		87.30		8.261E-02	1.459E-01	2.546E-01	3.972E-02	0.324
	+	238.63	*	1.140E-02	3.821E-02	4.972E-02	3.993E-03	0.229
		300.09		1.816E-01	3.161E-01	5.648E-01	4.973E-02	0.321
PO-212		74.81		-1.205E-02	1.793E-01	2.848E-01	4.210E-02	-0.042
		77.11		-6.401E-02	9.394E-02	1.436E-01	1.647E-02	-0.446
		87.30		8.261E-02	1.459E-01	2.546E-01	3.972E-02	0.324
		115.19		1.669E+00	1.525E+00	2.753E+00	2.072E-01	0.606
	+	238.63	*	1.140E-02	3.821E-02	4.972E-02	3.993E-03	0.229
		300.09		1.816E-01	3.161E-01	5.648E-01	4.973E-02	0.321
BI-214		609.31	*	-7.242E-03	4.185E-02	6.420E-02	4.718E-03	-0.113
		1120.29		9.336E-02	1.228E-01	2.312E-01	2.154E-02	0.404
		1764.49		-4.448E-02	1.679E-01	2.806E-01	1.710E-02	-0.159
PB-214		74.81		-2.076E-02	3.089E-01	4.907E-01	6.693E-02	-0.042
		77.11		-1.097E-01	1.613E-01	2.461E-01	3.390E-02	-0.446
		87.30		1.415E-01	2.498E-01	4.362E-01	6.211E-02	0.324
		241.98		-6.184E-02	1.880E-01	2.512E-01	2.189E-02	-0.246
		295.21		1.080E-01	6.696E-02	1.278E-01	1.161E-02	0.845
		351.92	*	5.157E-03	3.757E-02	6.186E-02	5.277E-03	0.083
PO-214		74.81		-2.076E-02	3.089E-01	4.907E-01	6.693E-02	-0.042
		77.11		-1.097E-01	1.613E-01	2.461E-01	3.390E-02	-0.446
		87.30		1.415E-01	2.498E-01	4.362E-01	6.211E-02	0.324
		241.98		-6.184E-02	1.880E-01	2.512E-01	2.189E-02	-0.246
		295.21		1.080E-01	6.696E-02	1.278E-01	1.161E-02	0.845
		351.92	*	5.157E-03	3.757E-02	6.186E-02	5.277E-03	0.083
PO-215		81.07		2.165E-02	8.011E-02	1.376E-01	1.595E-02	0.157
		83.78		-4.156E-02	4.876E-02	7.433E-02	8.719E-03	-0.559
		94.90		-1.402E-01	1.125E-01	1.669E-01	1.720E-02	-0.840
		122.32		-6.642E-01	7.959E-01	1.201E+00	9.241E-02	-0.553
		144.24		2.185E-02	3.299E-01	5.407E-01	4.229E-02	0.040
		154.21		-1.349E-01	1.872E-01	2.832E-01	2.135E-02	-0.476
		269.46		4.160E-02	8.751E-02	1.544E-01	1.065E-02	0.269
		323.87	*	4.750E-02	3.531E-01	5.982E-01	1.001E-01	0.079
		338.28		7.446E-02	5.576E-01	8.820E-01	9.532E-02	0.084
		445.03		-5.834E-01	1.328E+00	1.966E+00	2.005E-01	-0.297
PO-216		74.81		-1.205E-02	1.793E-01	2.848E-01	4.210E-02	-0.042
		77.11		-6.401E-02	9.394E-02	1.436E-01	1.647E-02	-0.446

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		87.30		8.261E-02	1.459E-01	2.546E-01	3.972E-02	0.324
	+	238.63	*	1.140E-02	3.821E-02	4.972E-02	3.993E-03	0.229
		300.09		1.816E-01	3.161E-01	5.648E-01	4.973E-02	0.321
PO-218		74.81		-2.076E-02	3.089E-01	4.907E-01	6.693E-02	-0.042
		77.11		-1.097E-01	1.613E-01	2.461E-01	3.390E-02	-0.446
		87.30		1.415E-01	2.498E-01	4.362E-01	6.211E-02	0.324
		241.98		-6.184E-02	1.880E-01	2.512E-01	2.189E-02	-0.246
		295.21		1.080E-01	6.696E-02	1.278E-01	1.161E-02	0.845
		351.92	*	5.157E-03	3.757E-02	6.186E-02	5.277E-03	0.083
RN-219		271.23		4.736E-02	1.134E-01	1.989E-01	1.739E-02	0.238
		401.81	*	-1.350E-01	2.077E-01	3.122E-01	4.227E-02	-0.432
RN-220		549.76	*	-9.631E+00	1.466E+01	2.127E+01	1.165E+00	-0.453
RA-223		81.07		2.165E-02	8.011E-02	1.376E-01	1.595E-02	0.157
		83.78		-4.156E-02	4.876E-02	7.433E-02	8.719E-03	-0.559
		94.90		-1.402E-01	1.125E-01	1.669E-01	1.720E-02	-0.840
		122.32		-6.642E-01	7.959E-01	1.201E+00	9.241E-02	-0.553
		144.24		2.185E-02	3.299E-01	5.407E-01	4.229E-02	0.040
		154.21		-1.349E-01	1.872E-01	2.832E-01	2.135E-02	-0.476
		269.46		4.160E-02	8.751E-02	1.544E-01	1.065E-02	0.269
		323.87	*	4.750E-02	3.531E-01	5.982E-01	1.001E-01	0.079
		338.28		7.446E-02	5.576E-01	8.820E-01	9.532E-02	0.084
		445.03		-5.834E-01	1.328E+00	1.966E+00	2.005E-01	-0.297
RA-224		240.98	*	-7.661E-02	3.584E-01	4.881E-01	3.254E-02	-0.157
RA-226		609.31	*	-7.242E-03	4.185E-02	6.420E-02	4.718E-03	-0.113
		1120.29		9.336E-02	1.228E-01	2.312E-01	2.154E-02	0.404
		1764.49		-4.448E-02	1.679E-01	2.806E-01	1.710E-02	-0.159
AC-227		79.80		-3.640E-01	6.863E-01	1.085E+00	2.477E-01	-0.335
		236.00		-1.125E-01	1.220E-01	1.467E-01	1.606E-02	-0.767
		256.20	*	-1.740E-01	1.853E-01	2.825E-01	4.053E-02	-0.616
		286.10		-7.381E-01	7.625E-01	1.147E+00	1.375E-01	-0.644
		299.80		1.348E-01	6.006E-01	1.034E+00	1.714E-01	0.130
		304.40		7.354E-02	8.269E-01	1.402E+00	2.462E-01	0.052
		334.20		-6.012E-01	1.080E+00	1.675E+00	3.101E-01	-0.359
TH-227		79.80		-3.640E-01	6.864E-01	1.085E+00	2.505E-01	-0.335
		94.00		-8.994E-01	1.006E+00	1.509E+00	3.407E-01	-0.596
		236.00		-1.125E-01	1.219E-01	1.467E-01	1.412E-02	-0.767
		256.20	*	-1.740E-01	1.860E-01	2.825E-01	4.864E-02	-0.616
		286.10		-7.381E-01	1.059E+00	1.147E+00	1.149E+00	-0.644
		299.80		1.348E-01	6.006E-01	1.034E+00	1.714E-01	0.130
		304.40		7.354E-02	8.269E-01	1.402E+00	2.462E-01	0.052
		334.20		-6.012E-01	1.080E+00	1.675E+00	3.101E-01	-0.359
AC-228		338.32		1.783E-02	1.337E-01	2.112E-01	8.626E-02	0.084
		911.07	*	7.138E-03	7.451E-02	1.303E-01	1.421E-02	0.055
		969.11		-2.308E-03	1.233E-01	2.013E-01	4.641E-02	-0.011
RA-228		338.32		1.783E-02	1.337E-01	2.112E-01	8.626E-02	0.084
		911.07	*	7.138E-03	7.451E-02	1.303E-01	1.421E-02	0.055
		969.11		-2.308E-03	1.233E-01	2.013E-01	4.641E-02	-0.011
TH-228		74.81		-1.214E-02	1.806E-01	2.870E-01	3.302E-02	-0.042
		77.11		-6.450E-02	9.466E-02	1.447E-01	1.660E-02	-0.446

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		87.30		8.324E-02	1.468E-01	2.566E-01	3.072E-02	0.324
	+	238.63	*	1.149E-02	3.851E-02	5.009E-02	4.023E-03	0.229
		300.09		1.830E-01	3.359E-01	5.691E-01	3.359E-01	0.321
TH-229		85.43		6.282E-02	7.096E-02	1.272E-01	1.506E-02	0.494
		88.47		-2.224E-02	4.165E-02	6.584E-02	7.827E-03	-0.338
		100.00		-2.605E-02	7.897E-02	1.268E-01	1.189E-02	-0.205
		193.63	*	-5.852E-02	2.401E-01	3.754E-01	2.436E-02	-0.156
		210.97		-2.158E-01	3.435E-01	5.097E-01	3.351E-02	-0.423
TH-230		609.31	*	-7.242E-03	4.185E-02	6.420E-02	4.718E-03	-0.113
		1120.29		9.336E-02	1.228E-01	2.312E-01	2.154E-02	0.404
		1764.49		-4.448E-02	1.679E-01	2.806E-01	1.710E-02	-0.159
PA-231		283.67	*	9.648E-02	7.338E-01	1.253E+00	1.773E-01	0.077
		301.29		2.189E-01	2.400E-01	4.413E-01	4.807E-02	0.496
TH-231		81.07		2.165E-02	8.011E-02	1.376E-01	1.595E-02	0.157
		83.78		-4.156E-02	4.876E-02	7.433E-02	8.719E-03	-0.559
		94.90		-1.402E-01	1.125E-01	1.669E-01	1.720E-02	-0.840
		122.32		-6.642E-01	7.959E-01	1.201E+00	9.241E-02	-0.553
		144.24		2.185E-02	3.299E-01	5.407E-01	4.229E-02	0.040
		154.21		-1.349E-01	1.872E-01	2.832E-01	2.135E-02	-0.476
		269.46		4.160E-02	8.751E-02	1.544E-01	1.065E-02	0.269
		323.87	*	4.750E-02	3.531E-01	5.982E-01	1.001E-01	0.079
		338.28		7.446E-02	5.576E-01	8.820E-01	9.532E-02	0.084
		445.03		-5.834E-01	1.328E+00	1.966E+00	2.005E-01	-0.297
U-231		84.21		-8.266E-01	6.226E-01	8.935E-01	1.050E-01	-0.925
		92.29		1.689E-02	2.903E-01	4.787E-01	5.208E-02	0.035
		95.87	*	-6.750E-02	1.455E-01	2.321E-01	2.347E-02	-0.291
		108.00		-3.126E-01	3.036E-01	4.097E-01	3.392E-02	-0.763
TH-232		338.32		1.783E-02	1.335E-01	2.112E-01	1.328E-02	0.084
		911.07	*	7.138E-03	7.451E-02	1.303E-01	1.421E-02	0.055
		969.11		-2.308E-03	1.233E-01	2.013E-01	4.641E-02	-0.011
PA-233		75.28		6.316E-01	1.459E+00	2.399E+00	4.103E-01	0.263
		86.59		7.029E-01	6.501E-01	1.135E+00	3.185E-01	0.619
		300.12		9.507E-02	1.638E-01	2.923E-01	4.030E-02	0.325
		311.98	*	8.595E-03	3.185E-02	5.488E-02	3.742E-03	0.157
		340.50		5.483E-02	2.970E-01	5.044E-01	1.165E-01	0.109
		398.62		-8.815E-02	1.044E+00	1.704E+00	4.401E-01	-0.052
		415.76		4.880E-02	7.371E-01	1.225E+00	2.517E-01	0.040
PA-234		63.00		-4.145E-01	8.993E-01	1.468E+00	2.578E-01	-0.282
		94.67		-8.473E-02	8.046E-02	1.212E-01	1.656E-02	-0.699
		98.44		3.956E-02	4.623E-02	7.303E-02	4.086E-02	0.542
		99.86		-5.246E-02	2.013E-01	3.257E-01	3.062E-02	-0.161
		111.00		6.227E-02	7.772E-02	1.372E-01	1.594E-02	0.454
		131.20		4.154E-02	4.672E-02	8.240E-02	5.527E-03	0.504
		152.70		-6.847E-03	1.542E-01	2.496E-01	4.007E-02	-0.027
		186.00		-3.236E-02	6.818E-01	1.068E+00	3.277E-01	-0.030
		226.40		1.061E-02	1.941E-01	3.103E-01	3.724E-02	0.034
		227.20		-4.264E-02	2.082E-01	3.232E-01	2.144E-02	-0.132
		248.90		5.106E-02	4.347E-01	6.954E-01	1.512E-01	0.073
		293.70		3.511E-01	3.319E-01	6.029E-01	9.879E-02	0.582

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		369.80		-2.781E-01	4.716E-01	7.237E-01	1.510E-01	-0.384
		568.70		4.997E-01	5.602E-01	1.010E+00	5.461E-02	0.495
		569.50		7.982E-02	1.545E-01	2.664E-01	1.439E-02	0.300
		574.00		3.825E-01	7.399E-01	1.288E+00	6.932E-02	0.297
		699.00		6.397E-02	4.478E-01	7.630E-01	1.361E-01	0.084
		706.10		-4.193E-01	6.143E-01	8.835E-01	3.895E-01	-0.475
		733.00		8.025E-02	1.528E-01	2.786E-01	5.921E-02	0.288
		742.81		2.389E-01	6.368E-01	1.098E+00	7.347E-01	0.218
		796.30		2.153E-01	4.616E-01	8.161E-01	2.162E-01	0.264
		805.60		1.382E-01	5.956E-01	1.018E+00	3.074E-01	0.136
		819.60		4.399E-02	6.550E-01	1.097E+00	4.136E-01	0.040
		826.30		2.430E-01	4.357E-01	7.656E-01	3.405E-01	0.317
		831.60		-2.147E-01	3.140E-01	4.423E-01	1.303E-01	-0.485
		876.40		3.054E-01	5.094E-01	7.539E-01	7.746E-01	0.405
		880.51		-1.547E-02	1.595E-01	2.435E-01	1.935E-02	-0.064
		883.24		-4.166E-02	1.492E-01	2.283E-01	1.533E-01	-0.183
		899.00		2.740E-01	4.713E-01	8.249E-01	3.600E-01	0.332
		925.00		-1.221E-01	5.384E-01	8.397E-01	6.801E-02	-0.145
		926.50		9.081E-04	8.407E-02	1.383E-01	3.471E-02	0.007
		946.00	*	1.377E-01	1.447E-01	2.764E-01	5.107E-02	0.498
		949.00		-6.933E-02	2.261E-01	3.476E-01	2.769E-02	-0.199
		980.50		7.709E-02	3.314E-01	5.690E-01	4.419E-02	0.135
		1394.10		-4.260E-01	6.178E-01	6.909E-01	4.483E-01	-0.617
PA-234M		766.42		2.920E+00	5.195E+00	9.095E+00	4.583E+00	0.321
		1001.03	*	-2.735E-01	2.060E+00	3.260E+00	2.973E-01	-0.084
TH-234		63.29	*	-2.589E-01	7.478E-01	1.234E+00	2.441E-01	-0.210
		92.38		-1.962E-02	2.657E-01	4.342E-01	8.359E-02	-0.045
U-234		609.31	*	-7.242E-03	4.185E-02	6.420E-02	4.718E-03	-0.113
		1120.29		9.336E-02	1.228E-01	2.312E-01	2.154E-02	0.404
		1764.49		-4.448E-02	1.679E-01	2.806E-01	1.710E-02	-0.159
U-235		89.95		-8.759E-01	5.384E-01	6.388E-01	2.030E-01	-1.371
		93.35		-2.998E-02	3.107E-01	5.063E-01	1.454E-01	-0.059
		105.00		-3.841E-02	4.306E-01	7.061E-01	2.108E-01	-0.054
		143.76	*	3.477E-02	9.906E-02	1.661E-01	2.753E-02	0.209
		163.35		1.089E-01	2.152E-01	3.637E-01	6.609E-02	0.299
		185.71		-1.982E-03	2.517E-02	3.932E-02	2.535E-03	-0.050
		205.31		7.942E-04	2.559E-01	4.092E-01	7.463E-02	0.002
NP-236		94.67		-6.419E-02	6.077E-02	9.193E-02	9.518E-03	-0.698
		98.44		2.992E-02	3.082E-02	5.521E-02	5.321E-03	0.542
		111.00		4.710E-02	5.865E-02	1.038E-01	8.245E-03	0.454
		160.31	*	-3.267E-03	3.704E-02	5.955E-02	3.802E-03	-0.055
NP-237		86.50	*	1.056E-01	9.641E-02	1.706E-01	4.065E-02	0.619
		95.87		-2.063E-01	4.471E-01	7.095E-01	1.787E-01	-0.291
U-238		63.29	*	-2.589E-01	7.478E-01	1.234E+00	2.441E-01	-0.210
		92.38		-1.962E-02	2.657E-01	4.342E-01	4.715E-02	-0.045
NP-239		99.55		1.410E-02	6.676E-02	1.129E-01	1.067E-02	0.125
		117.00	*	-4.779E-02	8.464E-02	1.318E-01	9.701E-03	-0.362
		209.75		-2.105E-01	3.486E-01	5.194E-01	3.412E-02	-0.405
		228.18		7.893E-03	1.146E-01	1.833E-01	1.217E-02	0.043

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		277.60		-3.121E-02	8.045E-02	1.302E-01	8.662E-03	-0.240
		334.30		-3.553E-01	6.073E-01	9.433E-01	5.965E-02	-0.377
AM-241		59.54	*	1.448E-02	9.498E-02	1.631E-01	2.059E-02	0.089
AM-243		74.67	*	-1.957E-03	2.920E-02	4.640E-02	5.313E-03	-0.042
		86.72		3.656E+00	3.535E+00	6.380E+00	7.609E-01	0.573
		117.66		-1.768E+00	1.710E+00	2.527E+00	1.844E-01	-0.700
		142.18		3.034E+00	8.344E+00	1.403E+01	9.176E-01	0.216
CM-243		99.55		1.450E-02	6.867E-02	1.161E-01	1.097E-02	0.125
		103.76	*	-4.096E-03	3.873E-02	6.345E-02	5.595E-03	-0.065
		117.00		-4.914E-02	8.704E-02	1.356E-01	9.976E-03	-0.362
		209.75		-2.074E-01	3.435E-01	5.118E-01	3.362E-02	-0.405
		228.18		7.971E-03	1.157E-01	1.852E-01	1.229E-02	0.043
		277.60		-3.145E-02	8.106E-02	1.312E-01	8.728E-03	-0.240
AM-246		798.80		-1.922E-02	8.011E-02	1.283E-01	8.597E-03	-0.150
		1036.00		1.875E-02	1.792E-01	2.968E-01	2.182E-02	0.063
		1062.04		-1.073E-02	1.194E-01	1.902E-01	1.355E-02	-0.056
		1078.86	*	1.501E-02	6.663E-02	1.134E-01	7.904E-03	0.132
CM-247		278.00		-1.308E-01	3.413E-01	5.531E-01	3.679E-02	-0.236
		287.40		3.334E-01	6.099E-01	1.081E+00	7.156E-02	0.309
		402.60	*	2.536E-03	1.777E-02	2.985E-02	1.684E-03	0.085
CF-249		252.85		1.854E-01	4.262E-01	7.509E-01	5.015E-02	0.247
		333.44		-5.526E-03	7.573E-02	1.253E-01	7.934E-03	-0.044
		387.95	*	-6.176E-03	1.993E-02	3.166E-02	1.799E-03	-0.195
CF-251		176.60	*	7.368E-04	5.718E-02	9.232E-02	5.909E-03	0.008
		227.00		-3.433E-02	1.852E-01	2.883E-01	1.912E-02	-0.119
		285.00		-6.808E-01	8.809E-01	1.367E+00	9.063E-02	-0.498

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]G1202012144    *
* Acquisition date : 20-JAN-2010 14:09:39 Detector SN#     :               *
* Detector ID        : GAM04                Sensitivity      : 5.000       *
* Geometry           : CAN                  Energy tolerance: 1.500        *
* Elapsed live time:    0 02:00:00.00       Abundance limit : 75.000       *
* Elapsed real time:    0 02:00:00.42       Half life ratio :  8.000       *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        : 13-JAN-2010 00:00:00 Nuclide Library : SOLID        *
* Sample ID          : G1202012144          Analyst initials: MXR1         *
* Batch Number       : 940263               Sample Quantity : 1.3409E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000    *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  5-MAY-2009 14:25:41 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)	
ANH-511	2.435E-02	4.197E-02	2.344E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	-5.024E-02	1.332E-01	2.130E-01	0.000E+00	NOT IDENT.
NA-22	-4.999E-03	1.823E-02	2.922E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	8.068E+01	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-4.433E-04	1.465E-02	2.392E-02	0.000E+00	NOT IDENT.
K-40	-1.445E-01	2.369E-01	3.746E-01	0.000E+00	NOT IDENT.
TI-44	6.240E-04	1.510E-02	2.641E-02	0.000E+00	NOT IDENT.
SC-46	7.051E-03	2.008E-02	3.605E-02	0.000E+00	NOT IDENT.
V-48	-1.727E-02	2.458E-02	3.487E-02	0.000E+00	NOT IDENT.
CR-51	-1.668E-01	1.573E-01	2.446E-01	0.000E+00	NOT IDENT.
MN-52	2.109E-02	4.959E-02	9.247E-02	0.000E+00	NOT IDENT.
MN-54	5.811E-03	1.775E-02	3.195E-02	0.000E+00	NOT IDENT.
CO-56	1.754E-04	1.960E-02	3.351E-02	0.000E+00	NOT IDENT.
CO-57	-3.437E-03	1.075E-02	1.831E-02	0.000E+00	NOT IDENT.
CO-58	-9.833E-03	1.982E-02	3.125E-02	0.000E+00	NOT IDENT.
FE-59	8.510E-03	3.306E-02	5.842E-02	0.000E+00	NOT IDENT.
CO-60	7.714E-03	2.008E-02	3.705E-02	0.000E+00	NOT IDENT.
ZN-65	-1.238E-02	4.113E-02	6.392E-02	0.000E+00	NOT IDENT.
GE-68	-2.634E-01	6.166E-01	9.343E-01	0.000E+00	NOT IDENT.
AS-73	1.034E-01	6.276E-01	1.173E+00	0.000E+00	NOT IDENT.
AS-74	2.256E-02	3.791E-02	6.844E-02	0.000E+00	NOT IDENT.
SE-75	6.844E-03	1.935E-02	3.568E-02	0.000E+00	NOT IDENT.
BR-77	-1.687E-01	5.867E-01	9.469E-01	0.000E+00	FAIL ABUN
SR-82	-1.851E-02	1.251E-01	2.090E-01	0.000E+00	NOT IDENT.
RB-83	1.691E-03	3.137E-02	5.340E-02	0.000E+00	NOT IDENT.
RB-84	-1.848E-02	3.165E-02	4.429E-02	0.000E+00	NOT IDENT.
KR-85	6.105E+00	4.005E+00	7.893E+00	0.000E+00	NOT IDENT.

SR-85	2.892E-02	1.897E-02	3.739E-02	0.000E+00	NOT IDENT.
RB-86	-7.858E-02	2.850E-01	4.462E-01	0.000E+00	NOT IDENT.
Y-88	-5.270E-03	2.085E-02	3.164E-02	0.000E+00	NOT IDENT.
ZR-88	1.478E-02	1.449E-02	2.791E-02	0.000E+00	NOT IDENT.
Y-91	2.185E+00	6.844E+00	1.213E+01	0.000E+00	NOT IDENT.
NB-94	9.856E-03	1.886E-02	3.482E-02	0.000E+00	NOT IDENT.
NB-95	2.859E-03	1.724E-02	3.051E-02	0.000E+00	NOT IDENT.
NB-95M	-3.707E-02	5.813E-02	7.809E-02	0.000E+00	NOT IDENT.
ZR-95	-3.879E-03	2.604E-02	4.360E-02	0.000E+00	NOT IDENT.
NB-97	0.000E+00	3.065E+01	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	7.069E+02	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-5.518E-02	7.800E-01	1.332E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.540E+07	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-9.388E-03	1.973E-02	2.948E-02	0.000E+00	NOT IDENT.
RH-102	2.769E-03	1.434E-02	2.506E-02	0.000E+00	NOT IDENT.
RU-103	1.482E-03	1.831E-02	3.139E-02	0.000E+00	NOT IDENT.
RH-106	-8.330E-02	1.461E-01	2.154E-01	0.000E+00	FAIL ABUN
RU-106	-8.330E-02	1.459E-01	2.154E-01	0.000E+00	FAIL ABUN
AG-108M	1.715E-02	1.741E-02	3.324E-02	0.000E+00	NOT IDENT.
CD-109	2.819E-02	2.971E-01	5.371E-01	0.000E+00	NOT IDENT.
AG-110M	-4.226E-03	1.765E-02	2.983E-02	0.000E+00	NOT IDENT.
IN-111	-3.421E-03	8.570E-02	1.425E-01	0.000E+00	NOT IDENT.
IN-113M	-1.051E-02	2.210E-02	3.608E-02	0.000E+00	NOT IDENT.
SN-113	-1.051E-02	2.210E-02	3.608E-02	0.000E+00	NOT IDENT.
IN-114M	-3.161E-02	7.263E-02	1.181E-01	0.000E+00	NOT IDENT.
CD-115	-2.632E-01	5.401E-01	8.426E-01	0.000E+00	NOT IDENT.
SN-117M	3.255E-03	1.741E-02	3.055E-02	0.000E+00	NOT IDENT.
SB-122	-8.685E-02	1.452E-01	2.187E-01	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.945E+02	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-6.880E-04	1.274E-02	2.188E-02	0.000E+00	NOT IDENT.
I-124	5.675E-02	1.103E-01	1.960E-01	0.000E+00	NOT IDENT.
SB-124	1.233E-02	3.586E-02	6.656E-02	0.000E+00	NOT IDENT.
SB-125	-4.059E-03	4.451E-02	7.552E-02	0.000E+00	NOT IDENT.
TE-125M	2.607E-01	4.144E+00	6.696E+00	0.000E+00	NOT IDENT.
I-126	-1.730E-02	5.508E-02	9.141E-02	0.000E+00	NOT IDENT.
SB-126	-2.924E-02	4.885E-02	7.706E-02	0.000E+00	NOT IDENT.
SN-126	1.928E-02	3.010E-02	5.686E-02	0.000E+00	NOT IDENT.
SB-127	1.339E-02	1.433E-01	2.535E-01	0.000E+00	NOT IDENT.
XE-127	7.650E-04	2.091E-02	3.554E-02	0.000E+00	NOT IDENT.
I-131	-8.457E-03	2.984E-02	5.019E-02	0.000E+00	NOT IDENT.
TE-132	4.478E-03	6.921E-02	1.170E-01	0.000E+00	NOT IDENT.
BA-133	4.381E-03	2.084E-02	3.720E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	7.373E+00	0.000E+00	0.000E+00	SHORT HLIF
CS-134	9.200E-03	2.263E-02	4.129E-02	0.000E+00	NOT IDENT.
CS-135	-1.492E-02	7.357E-02	1.287E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.478E+07	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-4.323E-02	3.839E-02	4.819E-02	0.000E+00	NOT IDENT.
BA-137M	-3.303E-03	2.138E-02	3.695E-02	0.000E+00	NOT IDENT.
CS-137	-3.492E-03	2.260E-02	3.906E-02	0.000E+00	NOT IDENT.
CE-139	-6.263E-03	1.370E-02	2.258E-02	0.000E+00	NOT IDENT.
BA-140	4.648E-03	9.479E-02	1.567E-01	0.000E+00	NOT IDENT.
LA-140	-2.789E-02	3.432E-02	4.439E-02	0.000E+00	NOT IDENT.
CE-141	3.420E-03	2.364E-02	4.156E-02	0.000E+00	NOT IDENT.
CE-143	8.242E-01	1.429E+00	2.644E+00	0.000E+00	NOT IDENT.
CE-144	-4.449E-02	9.007E-02	1.498E-01	0.000E+00	NOT IDENT.
PM-144	9.504E-04	1.879E-02	3.287E-02	0.000E+00	NOT IDENT.
PR-144	6.415E-02	1.268E+00	2.219E+00	0.000E+00	NOT IDENT.
PM-146	-2.703E-03	2.224E-02	3.595E-02	0.000E+00	NOT IDENT.
ND-147	-5.632E-02	1.824E-01	2.928E-01	0.000E+00	NOT IDENT.
PM-149	-4.368E+00	4.209E+00	6.589E+00	0.000E+00	NOT IDENT.
EU-152	-4.623E-03	4.837E-02	8.371E-02	0.000E+00	NOT IDENT.
GD-153	4.177E-03	3.443E-02	6.197E-02	0.000E+00	NOT IDENT.
EU-154	-2.047E-02	5.243E-02	8.163E-02	0.000E+00	NOT IDENT.
EU-155	-1.622E-02	4.375E-02	7.476E-02	0.000E+00	NOT IDENT.
TB-160	1.109E-02	6.571E-02	1.151E-01	0.000E+00	NOT IDENT.
HO-166M	3.702E-02	3.425E-02	6.715E-02	0.000E+00	NOT IDENT.
TM-171	-2.731E+00	1.357E+01	2.425E+01	0.000E+00	NOT IDENT.
LU-176	-1.813E-03	1.113E-02	1.928E-02	0.000E+00	NOT IDENT.
LU-177	6.215E-02	2.220E-01	3.860E-01	0.000E+00	NOT IDENT.
LU-177M	1.548E-02	7.335E-02	1.301E-01	0.000E+00	NOT IDENT.
HF-181	-5.336E-03	1.434E-02	2.262E-02	0.000E+00	NOT IDENT.
W-181	-7.725E-02	1.939E-01	3.245E-01	0.000E+00	NOT IDENT.
TA-182	3.320E-02	7.840E-02	1.457E-01	0.000E+00	NOT IDENT.
RE-183	-1.872E-02	4.728E-02	7.843E-02	0.000E+00	NOT IDENT.
RE-184	4.790E-02	1.079E-01	2.007E-01	0.000E+00	NOT IDENT.
OS-185	4.198E-03	1.904E-02	3.440E-02	0.000E+00	NOT IDENT.
RE-188	1.927E-02	7.294E-02	1.290E-01	0.000E+00	NOT IDENT.
W-188	-3.291E+00	3.393E+00	5.429E+00	0.000E+00	NOT IDENT.

IR-192	1.041E-02	1.668E-02	3.109E-02	0.000E+00	NOT IDENT.
AU-195	8.040E-02	9.329E-02	1.779E-01	0.000E+00	NOT IDENT.
TL-200	8.441E-01	1.910E+00	3.486E+00	0.000E+00	NOT IDENT.
TL-201	-2.038E-01	5.924E-01	9.855E-01	0.000E+00	NOT IDENT.
TL-202	-7.654E-03	2.254E-02	3.684E-02	0.000E+00	NOT IDENT.
HG-203	-5.782E-03	1.626E-02	2.785E-02	0.000E+00	NOT IDENT.
BI-207	1.905E-02	2.315E-02	4.528E-02	0.000E+00	NOT IDENT.
TL-207	4.750E-02	3.460E-01	6.159E-01	0.000E+00	NOT IDENT.
TL-208	-1.546E-02	2.269E-02	3.240E-02	0.000E+00	FAIL ABUN
PO-209	-2.381E+00	4.006E+00	6.068E+00	0.000E+00	NOT IDENT.
BI-210	4.554E-01	4.471E+00	8.275E+00	0.000E+00	NOT IDENT.
PB-210	4.554E-01	4.471E+00	8.275E+00	0.000E+00	NOT IDENT.
PO-210	4.554E-01	4.471E+00	8.275E+00	0.000E+00	NOT IDENT.
BI-211	-2.796E-02	1.082E-01	1.792E-01	0.000E+00	NOT IDENT.
PB-211	3.190E-01	4.753E-01	8.163E-01	0.000E+00	NOT IDENT.
BI-212	7.810E-02	1.433E-01	2.669E-01	0.000E+00	NOT IDENT.
PB-212	1.140E-02	3.745E-02	5.147E-02	0.000E+00	FAIL ABUN
PO-212	1.140E-02	3.745E-02	5.147E-02	0.000E+00	FAIL ABUN
BI-214	-7.242E-03	4.102E-02	6.537E-02	0.000E+00	NOT IDENT.
PB-214	5.157E-03	3.682E-02	6.360E-02	0.000E+00	NOT IDENT.
PO-214	5.157E-03	3.682E-02	6.360E-02	0.000E+00	NOT IDENT.
PO-215	4.750E-02	3.460E-01	6.159E-01	0.000E+00	NOT IDENT.
PO-216	1.140E-02	3.745E-02	5.147E-02	0.000E+00	FAIL ABUN
PO-218	5.157E-03	3.682E-02	6.360E-02	0.000E+00	NOT IDENT.
RN-219	-1.350E-01	2.035E-01	3.202E-01	0.000E+00	NOT IDENT.
RN-220	-9.631E+00	1.437E+01	2.170E+01	0.000E+00	NOT IDENT.
RA-223	4.750E-02	3.460E-01	6.159E-01	0.000E+00	NOT IDENT.
RA-224	-7.661E-02	3.512E-01	5.052E-01	0.000E+00	NOT IDENT.
RA-226	-7.242E-03	4.102E-02	6.537E-02	0.000E+00	NOT IDENT.
AC-227	-1.740E-01	1.815E-01	2.920E-01	0.000E+00	NOT IDENT.
TH-227	-1.740E-01	1.823E-01	2.920E-01	0.000E+00	NOT IDENT.
AC-228	7.138E-03	7.302E-02	1.317E-01	0.000E+00	NOT IDENT.
RA-228	7.138E-03	7.302E-02	1.317E-01	0.000E+00	NOT IDENT.
TH-228	1.149E-02	3.774E-02	5.186E-02	0.000E+00	FAIL ABUN
TH-229	-5.852E-02	2.353E-01	3.901E-01	0.000E+00	NOT IDENT.
TH-230	-7.242E-03	4.102E-02	6.537E-02	0.000E+00	NOT IDENT.
PA-231	9.648E-02	7.191E-01	1.293E+00	0.000E+00	NOT IDENT.
TH-231	4.750E-02	3.460E-01	6.159E-01	0.000E+00	NOT IDENT.
U-231	-6.750E-02	1.426E-01	2.441E-01	0.000E+00	NOT IDENT.
TH-232	7.138E-03	7.302E-02	1.317E-01	0.000E+00	NOT IDENT.
PA-233	8.595E-03	3.121E-02	5.654E-02	0.000E+00	NOT IDENT.
PA-234	1.377E-01	1.418E-01	2.791E-01	0.000E+00	NOT IDENT.
PA-234M	-2.735E-01	2.019E+00	3.290E+00	0.000E+00	NOT IDENT.
TH-234	-2.589E-01	7.328E-01	1.306E+00	0.000E+00	NOT IDENT.
U-234	-7.242E-03	4.102E-02	6.537E-02	0.000E+00	NOT IDENT.
U-235	3.477E-02	9.708E-02	1.734E-01	0.000E+00	NOT IDENT.
NP-236	-3.267E-03	3.630E-02	6.207E-02	0.000E+00	NOT IDENT.
NP-237	1.056E-01	9.448E-02	1.797E-01	0.000E+00	NOT IDENT.
U-238	-2.589E-01	7.328E-01	1.306E+00	0.000E+00	NOT IDENT.
NP-239	-4.779E-02	8.295E-02	1.382E-01	0.000E+00	NOT IDENT.
AM-241	1.448E-02	9.308E-02	1.728E-01	0.000E+00	NOT IDENT.
AM-243	-1.957E-03	2.862E-02	4.899E-02	0.000E+00	NOT IDENT.
CM-243	-4.096E-03	3.796E-02	6.663E-02	0.000E+00	NOT IDENT.
AM-246	1.501E-02	6.530E-02	1.143E-01	0.000E+00	NOT IDENT.
CM-247	2.536E-03	1.741E-02	3.061E-02	0.000E+00	NOT IDENT.
CF-249	-6.176E-03	1.953E-02	3.250E-02	0.000E+00	NOT IDENT.
CF-251	7.368E-04	5.604E-02	9.607E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 20-JAN-2010 16:10:11.98

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*****************************************************************************
*                            GEL Laboratories LLC                           *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202012144.CNF;1
Sample date       : 13-JAN-2010 00:00:00 Acquisition date : 20-JAN-2010 14:09:39
Sample ID         : G1202012144          Sample quantity  : 1.34090E+02 GRAM
Detector name     : GAM04                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:00.42  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 940263                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
ANH-511	511.00	24	100.00*	2.729E+00	2.435E-02	2.435E-02	175.89

Flag: "*" = Keyline

Sample ID : G1202012144 Acquisition date : 20-JAN-2010 14:09:39

Total number of lines in spectrum	2	
Number of unidentified lines	0	
Number of lines tentatively identified by NID	2	100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
ANH-511	1.00E+09Y	1.00	2.435E-02	2.435E-02	4.282E-02	175.89	
		Total Activity :	2.435E-02	2.435E-02			
		Grand Total Activity :	2.435E-02	2.435E-02			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G1202012144 Acquisition date : 20-JAN-2010 14:09:39

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	238.89	9	50	0.94	477.86	474	9	1.22E-03	****	4.82E+00	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 20-JAN-2010 16:10:17.57

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                             DETECTOR DATA                                 *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202012144.CNF;1  *
* Acquisition date  : 20-JAN-2010 14:09:39  Detector SN#     :             *
* Detector ID       : GAM04                 Sensitivity     : 5.00000       *
* Geometry          : CAN                   Energy tolerance: 1.50000       *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000      *
* Elapsed real time: 0 02:00:00.42          Half life ratio : 8.00000       *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 13-JAN-2010 00:00:00  Nuclide Library : SOLID         *
* Sample ID         : G1202012144           Analyst initials: MXR1          *
* Batch Number      : 940263                Sample Quantity : 1.34090E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 5-MAY-2009 14:25:41.36MS 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
ANH-511	2.435E-02	4.282E-02	2.295E-02	1.284E-03	1.061

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-5.024E-02		1.359E-01	2.083E-01	1.380E-02	-0.241
NA-22	-4.999E-03		1.860E-02	2.909E-02	1.902E-03	-0.172
NA-24	-7.867E-06		4.116E-05	Half-Life too short		
AL-26	-4.433E-04		1.495E-02	2.397E-02	1.422E-03	-0.018
K-40	-1.445E-01		2.417E-01	3.738E-01	2.657E-02	-0.387
TI-44	6.240E-04		1.541E-02	2.503E-02	2.879E-03	0.025
SC-46	7.051E-03		2.049E-02	3.566E-02	2.884E-03	0.198
V-48	-1.727E-02		2.508E-02	3.455E-02	2.677E-03	-0.500
CR-51	-1.668E-01		1.605E-01	2.375E-01	1.672E-02	-0.703
MN-52	2.109E-02		5.061E-02	9.226E-02	6.296E-03	0.229
MN-54	5.811E-03		1.811E-02	3.156E-02	2.284E-03	0.184

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-56	1.754E-04		2.000E-02	3.312E-02	2.457E-03	0.005
CO-57	-3.437E-03		1.097E-02	1.748E-02	1.214E-03	-0.197
CO-58	-9.833E-03		2.023E-02	3.085E-02	2.130E-03	-0.319
FE-59	8.510E-03		3.374E-02	5.800E-02	4.432E-03	0.147
CO-60	7.714E-03		2.049E-02	3.691E-02	2.529E-03	0.209
ZN-65	-1.238E-02		4.197E-02	6.348E-02	4.199E-03	-0.195
GE-68	-2.634E-01		6.292E-01	9.272E-01	6.476E-02	-0.284
AS-73	1.034E-01		6.404E-01	1.104E+00	1.445E-01	0.094
AS-74	2.256E-02		3.868E-02	6.719E-02	3.547E-03	0.336
SE-75	6.844E-03		1.975E-02	3.453E-02	2.323E-03	0.198
BR-77	-1.687E-01		5.987E-01	9.275E-01	5.165E-02	-0.182
SR-82	-1.851E-02		1.276E-01	2.061E-01	1.316E-02	-0.090
RB-83	1.691E-03		3.201E-02	5.230E-02	2.913E-03	0.032
RB-84	-1.848E-02		3.229E-02	4.379E-02	3.488E-03	-0.422
KR-85	6.105E+00		4.086E+00	7.728E+00	4.317E-01	0.790
SR-85	2.892E-02		1.936E-02	3.661E-02	2.045E-03	0.790
RB-86	-7.858E-02		2.909E-01	4.428E-01	3.096E-02	-0.177
Y-88	-5.270E-03		2.128E-02	3.171E-02	1.851E-03	-0.166
ZR-88	1.478E-02		1.478E-02	2.720E-02	1.531E-03	0.543
Y-91	2.185E+00		6.984E+00	1.207E+01	7.396E-01	0.181
NB-94	9.856E-03		1.924E-02	3.429E-02	1.847E-03	0.287
NB-95	2.859E-03		1.759E-02	3.009E-02	1.875E-03	0.095
NB-95M	-3.707E-02		5.931E-02	7.542E-02	6.189E-03	-0.491
ZR-95	-3.879E-03		2.657E-02	4.299E-02	3.130E-03	-0.090
NB-97	-5.874E-06		1.564E-05	Half-Life too short		
ZR-97	6.650E-04		3.607E-04	Half-Life too short		
MO-99	-5.518E-02		7.959E-01	1.313E+00	1.813E-01	-0.042
TC-99M	1.302E+01		7.858E+00	Half-Life too short		
RH-101	-9.388E-03		2.013E-02	2.839E-02	1.849E-03	-0.331
RH-102	2.769E-03		1.463E-02	2.450E-02	1.385E-03	0.113
RU-103	1.482E-03		1.868E-02	3.072E-02	3.859E-03	0.048
RH-106	-8.330E-02		1.491E-01	2.117E-01	2.418E-02	-0.394
RU-106	-8.330E-02		1.489E-01	2.117E-01	1.087E-02	-0.394
AG-108M	1.715E-02		1.776E-02	3.245E-02	2.005E-03	0.529
CD-109	2.819E-02		3.032E-01	5.101E-01	6.130E-02	0.055
AG-110M	-4.226E-03		1.801E-02	2.934E-02	1.568E-03	-0.144
IN-111	-3.421E-03		8.745E-02	1.377E-01	9.188E-03	-0.025
IN-113M	-1.051E-02		2.255E-02	3.516E-02	2.118E-03	-0.299
SN-113	-1.051E-02		2.255E-02	3.516E-02	2.118E-03	-0.299
IN-114M	-3.161E-02		7.411E-02	1.136E-01	7.352E-03	-0.278
CD-115	-2.632E-01		5.511E-01	8.255E-01	4.581E-02	-0.319
SN-117M	3.255E-03		1.777E-02	2.930E-02	1.874E-03	0.111
SB-122	-8.685E-02		1.481E-01	2.145E-01	1.164E-02	-0.405
I-123	-1.050E-05		9.922E-05	Half-Life too short		
TE-123M	-6.880E-04		1.300E-02	2.099E-02	1.357E-03	-0.033
I-124	5.675E-02		1.125E-01	1.925E-01	1.009E-02	0.295
SB-124	1.233E-02		3.659E-02	6.661E-02	4.526E-03	0.185
SB-125	-4.059E-03		4.542E-02	7.371E-02	4.363E-03	-0.055

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TE-125M	2.607E-01		4.228E+00	6.382E+00	6.324E-01	0.041
I-126	-1.730E-02		5.620E-02	8.993E-02	4.436E-03	-0.192
SB-126	-2.924E-02		4.985E-02	7.591E-02	4.266E-03	-0.385
SN-126	1.928E-02		3.072E-02	5.399E-02	6.475E-03	0.357
SB-127	1.339E-02		1.462E-01	2.495E-01	1.664E-02	0.054
XE-127	7.650E-04		2.133E-02	3.424E-02	2.238E-03	0.022
I-131	-8.457E-03		3.045E-02	4.885E-02	3.225E-03	-0.173
TE-132	4.478E-03		7.062E-02	1.129E-01	1.533E-02	0.040
BA-133	4.381E-03		2.126E-02	3.619E-02	4.239E-03	0.121
I-133	-4.232E-06		3.762E-06	Half-Life too short		
CS-134	9.200E-03		2.310E-02	4.075E-02	2.747E-03	0.226
CS-135	-1.492E-02		7.507E-02	1.246E-01	1.038E-02	-0.120
I-135	1.011E+01		7.539E+00	Half-Life too short		
CS-136	-4.323E-02		3.917E-02	4.780E-02	3.669E-03	-0.904
BA-137M	-3.303E-03		2.181E-02	3.635E-02	1.773E-03	-0.091
CS-137	-3.492E-03		2.306E-02	3.842E-02	1.885E-03	-0.091
CE-139	-6.263E-03		1.398E-02	2.167E-02	1.377E-03	-0.289
BA-140	4.648E-03		9.673E-02	1.536E-01	4.986E-02	0.030
LA-140	-2.789E-02		3.502E-02	4.438E-02	2.923E-03	-0.629
CE-141	3.420E-03		2.412E-02	3.980E-02	2.672E-03	0.086
CE-143	8.242E-01		1.458E+00	2.564E+00	5.304E-01	0.321
CE-144	-4.449E-02		9.191E-02	1.433E-01	2.089E-02	-0.310
PM-144	9.504E-04		1.918E-02	3.237E-02	1.719E-03	0.029
PR-144	6.415E-02		1.294E+00	2.185E+00	1.160E-01	0.029
PM-146	-2.703E-03		2.269E-02	3.513E-02	2.998E-03	-0.077
ND-147	-5.632E-02		1.861E-01	2.869E-01	3.848E-02	-0.196
PM-149	-4.368E+00		4.295E+00	6.385E+00	9.267E-01	-0.684
EU-152	-4.623E-03		4.936E-02	8.139E-02	5.633E-03	-0.057
GD-153	4.177E-03		3.514E-02	5.895E-02	5.786E-03	0.071
EU-154	-2.047E-02		5.350E-02	8.127E-02	7.972E-03	-0.252
EU-155	-1.622E-02		4.464E-02	7.121E-02	6.206E-03	-0.228
TB-160	1.109E-02		6.705E-02	1.138E-01	9.022E-03	0.097
HO-166M	3.702E-02		3.495E-02	6.614E-02	3.640E-03	0.560
TM-171	-2.731E+00		1.385E+01	2.292E+01	2.680E+00	-0.119
LU-176	-1.813E-03		1.135E-02	1.870E-02	1.221E-03	-0.097
LU-177	6.215E-02		2.265E-01	3.720E-01	2.441E-02	0.167
LU-177M	1.548E-02		7.484E-02	1.269E-01	7.179E-03	0.122
HF-181	-5.336E-03		1.463E-02	2.212E-02	1.249E-03	-0.241
W-181	-7.725E-02		1.979E-01	3.067E-01	3.614E-02	-0.252
TA-182	3.320E-02		8.000E-02	1.449E-01	9.018E-03	0.229
RE-183	-1.872E-02		4.824E-02	7.526E-02	4.796E-03	-0.249
RE-184	4.790E-02		1.101E-01	1.940E-01	1.296E-02	0.247
OS-185	4.198E-03		1.943E-02	3.382E-02	1.686E-03	0.124
RE-188	1.927E-02		7.443E-02	1.237E-01	7.941E-03	0.156
W-188	-3.291E+00		3.462E+00	5.263E+00	3.478E-01	-0.625
IR-192	1.041E-02		1.702E-02	3.019E-02	1.960E-03	0.345
AU-195	8.040E-02		9.519E-02	1.693E-01	1.618E-02	0.475
TL-200	8.441E-01		1.949E+00	3.393E+00	2.022E-01	0.249

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TL-201	-2.038E-01		6.045E-01	9.461E-01	6.015E-02	-0.215
TL-202	-7.654E-03		2.300E-02	3.597E-02	2.040E-03	-0.213
HG-203	-5.782E-03		1.660E-02	2.698E-02	1.878E-03	-0.214
BI-207	1.905E-02		2.362E-02	4.492E-02	3.195E-03	0.424
TL-207	4.750E-02		3.531E-01	5.982E-01	1.001E-01	0.079
TL-208	-1.546E-02		2.315E-02	3.180E-02	2.001E-03	-0.486
PO-209	-2.381E+00		4.088E+00	6.002E+00	4.925E-01	-0.397
BI-210	4.554E-01		4.562E+00	7.775E+00	6.776E-01	0.059
PB-210	4.554E-01		4.562E+00	7.775E+00	6.776E-01	0.059
PO-210	4.554E-01		4.562E+00	7.775E+00	6.039E-01	0.059
BI-211	-2.796E-02		1.104E-01	1.743E-01	1.177E-02	-0.160
PB-211	3.190E-01		4.850E-01	7.960E-01	4.961E-01	0.401
BI-212	7.810E-02		1.462E-01	2.630E-01	2.011E-02	0.297
PB-212	1.140E-02	+	3.821E-02	4.972E-02	3.993E-03	0.229
PO-212	1.140E-02	+	3.821E-02	4.972E-02	3.993E-03	0.229
BI-214	-7.242E-03		4.185E-02	6.420E-02	4.718E-03	-0.113
PB-214	5.157E-03		3.757E-02	6.186E-02	5.277E-03	0.083
PO-214	5.157E-03		3.757E-02	6.186E-02	5.277E-03	0.083
PO-215	4.750E-02		3.531E-01	5.982E-01	1.001E-01	0.079
PO-216	1.140E-02	+	3.821E-02	4.972E-02	3.993E-03	0.229
PO-218	5.157E-03		3.757E-02	6.186E-02	5.277E-03	0.083
RN-219	-1.350E-01		2.077E-01	3.122E-01	4.227E-02	-0.432
RN-220	-9.631E+00		1.466E+01	2.127E+01	1.165E+00	-0.453
RA-223	4.750E-02		3.531E-01	5.982E-01	1.001E-01	0.079
RA-224	-7.661E-02		3.584E-01	4.881E-01	3.254E-02	-0.157
RA-226	-7.242E-03		4.185E-02	6.420E-02	4.718E-03	-0.113
AC-227	-1.740E-01		1.853E-01	2.825E-01	4.053E-02	-0.616
TH-227	-1.740E-01		1.860E-01	2.825E-01	4.864E-02	-0.616
AC-228	7.138E-03		7.451E-02	1.303E-01	1.421E-02	0.055
RA-228	7.138E-03		7.451E-02	1.303E-01	1.421E-02	0.055
TH-228	1.149E-02	+	3.851E-02	5.009E-02	4.023E-03	0.229
TH-229	-5.852E-02		2.401E-01	3.754E-01	2.436E-02	-0.156
TH-230	-7.242E-03		4.185E-02	6.420E-02	4.718E-03	-0.113
PA-231	9.648E-02		7.338E-01	1.253E+00	1.773E-01	0.077
TH-231	4.750E-02		3.531E-01	5.982E-01	1.001E-01	0.079
U-231	-6.750E-02		1.455E-01	2.321E-01	2.347E-02	-0.291
TH-232	7.138E-03		7.451E-02	1.303E-01	1.421E-02	0.055
PA-233	8.595E-03		3.185E-02	5.488E-02	3.742E-03	0.157
PA-234	1.377E-01		1.447E-01	2.764E-01	5.107E-02	0.498
PA-234M	-2.735E-01		2.060E+00	3.260E+00	2.973E-01	-0.084
TH-234	-2.589E-01		7.478E-01	1.234E+00	2.441E-01	-0.210
U-234	-7.242E-03		4.185E-02	6.420E-02	4.718E-03	-0.113
U-235	3.477E-02		9.906E-02	1.661E-01	2.753E-02	0.209
NP-236	-3.267E-03		3.704E-02	5.955E-02	3.802E-03	-0.055
NP-237	1.056E-01		9.641E-02	1.706E-01	4.065E-02	0.619
U-238	-2.589E-01		7.478E-01	1.234E+00	2.441E-01	-0.210
NP-239	-4.779E-02		8.464E-02	1.318E-01	9.701E-03	-0.362
AM-241	1.448E-02		9.498E-02	1.631E-01	2.059E-02	0.089

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AM-243	-1.957E-03		2.920E-02	4.640E-02	5.313E-03	-0.042
CM-243	-4.096E-03		3.873E-02	6.345E-02	5.595E-03	-0.065
AM-246	1.501E-02		6.663E-02	1.134E-01	7.904E-03	0.132
CM-247	2.536E-03		1.777E-02	2.985E-02	1.684E-03	0.085
CF-249	-6.176E-03		1.993E-02	3.166E-02	1.799E-03	-0.195
CF-251	7.368E-04		5.718E-02	9.232E-02	5.909E-03	0.008

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]G1202012144          *
* Acquisition date  : 20-JAN-2010 14:09:39 Detector SN#     :               *
* Detector ID       : GAM04                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:00.42      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 13-JAN-2010 00:00:00 Nuclide Library : SOLID          *
* Sample ID         : G1202012144          Analyst initials: MXR1           *
* Batch Number      : 940263               Sample Quantity : 1.3409E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME :  5-MAY-2009 14:25:41 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
ANH-511	2.435E-02	4.197E-02	1.173E-02	2.141E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	-5.024E-02	1.332E-01	1.066E-01	6.797E-02	NOT IDENT.
NA-22	-4.999E-03	1.823E-02	1.462E-02	9.299E-03	NOT IDENT.
NA-24	-7.867E+00	8.068E+01	0.000E+00	4.116E+01	SHORT HLIF
AL-26	-4.433E-04	1.465E-02	1.197E-02	7.474E-03	NOT IDENT.
K-40	-1.445E-01	2.369E-01	1.874E-01	1.209E-01	NOT IDENT.
TI-44	6.240E-04	1.510E-02	1.321E-02	7.704E-03	NOT IDENT.
SC-46	7.051E-03	2.008E-02	1.804E-02	1.024E-02	NOT IDENT.
V-48	-1.727E-02	2.458E-02	1.745E-02	1.254E-02	NOT IDENT.
CR-51	-1.668E-01	1.573E-01	1.224E-01	8.026E-02	NOT IDENT.
MN-52	2.109E-02	4.959E-02	4.626E-02	2.530E-02	NOT IDENT.
MN-54	5.811E-03	1.775E-02	1.598E-02	9.055E-03	NOT IDENT.
CO-56	1.754E-04	1.960E-02	1.677E-02	1.000E-02	NOT IDENT.
CO-57	-3.437E-03	1.075E-02	9.160E-03	5.484E-03	NOT IDENT.
CO-58	-9.833E-03	1.982E-02	1.563E-02	1.011E-02	NOT IDENT.
FE-59	8.510E-03	3.306E-02	2.923E-02	1.687E-02	NOT IDENT.
CO-60	7.714E-03	2.008E-02	1.853E-02	1.024E-02	NOT IDENT.
ZN-65	-1.238E-02	4.113E-02	3.198E-02	2.098E-02	NOT IDENT.
GE-68	-2.634E-01	6.166E-01	4.674E-01	3.146E-01	NOT IDENT.
AS-73	1.034E-01	6.276E-01	5.867E-01	3.202E-01	NOT IDENT.
AS-74	2.256E-02	3.791E-02	3.424E-02	1.934E-02	NOT IDENT.
SE-75	6.844E-03	1.935E-02	1.785E-02	9.875E-03	NOT IDENT.
BR-77	-1.687E-01	5.867E-01	4.737E-01	2.993E-01	FAIL ABUN
SR-82	-1.851E-02	1.251E-01	1.045E-01	6.382E-02	NOT IDENT.
RB-83	1.691E-03	3.137E-02	2.672E-02	1.600E-02	NOT IDENT.
RB-84	-1.848E-02	3.165E-02	2.216E-02	1.615E-02	NOT IDENT.
KR-85	6.105E+00	4.005E+00	3.949E+00	2.043E+00	NOT IDENT.

SR-85	2.892E-02	1.897E-02	1.871E-02	9.679E-03	NOT IDENT.
RB-86	-7.858E-02	2.850E-01	2.232E-01	1.454E-01	NOT IDENT.
Y-88	-5.270E-03	2.085E-02	1.583E-02	1.064E-02	NOT IDENT.
ZR-88	1.478E-02	1.449E-02	1.396E-02	7.391E-03	NOT IDENT.
Y-91	2.185E+00	6.844E+00	6.071E+00	3.492E+00	NOT IDENT.
NB-94	9.856E-03	1.886E-02	1.742E-02	9.621E-03	NOT IDENT.
NB-95	2.859E-03	1.724E-02	1.526E-02	8.794E-03	NOT IDENT.
NB-95M	-3.707E-02	5.813E-02	3.907E-02	2.966E-02	NOT IDENT.
ZR-95	-3.879E-03	2.604E-02	2.181E-02	1.329E-02	NOT IDENT.
NB-97	-5.874E+00	3.065E+01	0.000E+00	1.564E+01	SHORT HLIF
ZR-97	6.650E+02	7.069E+02	0.000E+00	3.607E+02	SHORT HLIF
MO-99	-5.518E-02	7.800E-01	6.663E-01	3.980E-01	NOT IDENT.
TC-99M	1.302E+07	1.540E+07	0.000E+00	7.858E+06	SHORT HLIF
RH-101	-9.388E-03	1.973E-02	1.475E-02	1.006E-02	NOT IDENT.
RH-102	2.769E-03	1.434E-02	1.254E-02	7.314E-03	NOT IDENT.
RU-103	1.482E-03	1.831E-02	1.570E-02	9.340E-03	NOT IDENT.
RH-106	-8.330E-02	1.461E-01	1.078E-01	7.456E-02	FAIL ABUN
RU-106	-8.330E-02	1.459E-01	1.078E-01	7.443E-02	FAIL ABUN
AG-108M	1.715E-02	1.741E-02	1.663E-02	8.880E-03	NOT IDENT.
CD-109	2.819E-02	2.971E-01	2.687E-01	1.516E-01	NOT IDENT.
AG-110M	-4.226E-03	1.765E-02	1.492E-02	9.007E-03	NOT IDENT.
IN-111	-3.421E-03	8.570E-02	7.127E-02	4.373E-02	NOT IDENT.
IN-113M	-1.051E-02	2.210E-02	1.805E-02	1.128E-02	NOT IDENT.
SN-113	-1.051E-02	2.210E-02	1.805E-02	1.128E-02	NOT IDENT.
IN-114M	-3.161E-02	7.263E-02	5.906E-02	3.706E-02	NOT IDENT.
CD-115	-2.632E-01	5.401E-01	4.216E-01	2.756E-01	NOT IDENT.
SN-117M	3.255E-03	1.741E-02	1.528E-02	8.885E-03	NOT IDENT.
SB-122	-8.685E-02	1.452E-01	1.094E-01	7.407E-02	NOT IDENT.
I-123	-1.050E+01	1.945E+02	0.000E+00	9.922E+01	SHORT HLIF
TE-123M	-6.880E-04	1.274E-02	1.095E-02	6.502E-03	NOT IDENT.
I-124	5.675E-02	1.103E-01	9.805E-02	5.626E-02	NOT IDENT.
SB-124	1.233E-02	3.586E-02	3.330E-02	1.830E-02	NOT IDENT.
SB-125	-4.059E-03	4.451E-02	3.778E-02	2.271E-02	NOT IDENT.
TE-125M	2.607E-01	4.144E+00	3.350E+00	2.114E+00	NOT IDENT.
I-126	-1.730E-02	5.508E-02	4.573E-02	2.810E-02	NOT IDENT.
SB-126	-2.924E-02	4.885E-02	3.855E-02	2.493E-02	NOT IDENT.
SN-126	1.928E-02	3.010E-02	2.844E-02	1.536E-02	NOT IDENT.
SB-127	1.339E-02	1.433E-01	1.268E-01	7.310E-02	NOT IDENT.
XE-127	7.650E-04	2.091E-02	1.778E-02	1.067E-02	NOT IDENT.
I-131	-8.457E-03	2.984E-02	2.511E-02	1.523E-02	NOT IDENT.
TE-132	4.478E-03	6.921E-02	5.852E-02	3.531E-02	NOT IDENT.
BA-133	4.381E-03	2.084E-02	1.861E-02	1.063E-02	NOT IDENT.
I-133	-4.232E+00	7.373E+00	0.000E+00	3.762E+00	SHORT HLIF
CS-134	9.200E-03	2.263E-02	2.066E-02	1.155E-02	NOT IDENT.
CS-135	-1.492E-02	7.357E-02	6.437E-02	3.754E-02	NOT IDENT.
I-135	1.011E+07	1.478E+07	0.000E+00	7.539E+06	SHORT HLIF
CS-136	-4.323E-02	3.839E-02	2.411E-02	1.959E-02	NOT IDENT.
BA-137M	-3.303E-03	2.138E-02	1.849E-02	1.091E-02	NOT IDENT.
CS-137	-3.492E-03	2.260E-02	1.954E-02	1.153E-02	NOT IDENT.
CE-139	-6.263E-03	1.370E-02	1.130E-02	6.991E-03	NOT IDENT.
BA-140	4.648E-03	9.479E-02	7.839E-02	4.836E-02	NOT IDENT.
LA-140	-2.789E-02	3.432E-02	2.221E-02	1.751E-02	NOT IDENT.
CE-141	3.420E-03	2.364E-02	2.079E-02	1.206E-02	NOT IDENT.
CE-143	8.242E-01	1.429E+00	1.323E+00	7.289E-01	NOT IDENT.
CE-144	-4.449E-02	9.007E-02	7.495E-02	4.595E-02	NOT IDENT.
PM-144	9.504E-04	1.879E-02	1.645E-02	9.588E-03	NOT IDENT.
PR-144	6.415E-02	1.268E+00	1.110E+00	6.471E-01	NOT IDENT.
PM-146	-2.703E-03	2.224E-02	1.799E-02	1.135E-02	NOT IDENT.
ND-147	-5.632E-02	1.824E-01	1.465E-01	9.305E-02	NOT IDENT.
PM-149	-4.368E+00	4.209E+00	3.296E+00	2.148E+00	NOT IDENT.
EU-152	-4.623E-03	4.837E-02	4.188E-02	2.468E-02	NOT IDENT.
GD-153	4.177E-03	3.443E-02	3.100E-02	1.757E-02	NOT IDENT.
EU-154	-2.047E-02	5.243E-02	4.084E-02	2.675E-02	NOT IDENT.
EU-155	-1.622E-02	4.375E-02	3.740E-02	2.232E-02	NOT IDENT.
TB-160	1.109E-02	6.571E-02	5.757E-02	3.352E-02	NOT IDENT.
HO-166M	3.702E-02	3.425E-02	3.360E-02	1.747E-02	NOT IDENT.
TM-171	-2.731E+00	1.357E+01	1.213E+01	6.924E+00	NOT IDENT.
LU-176	-1.813E-03	1.113E-02	9.644E-03	5.677E-03	NOT IDENT.
LU-177	6.215E-02	2.220E-01	1.931E-01	1.133E-01	NOT IDENT.
LU-177M	1.548E-02	7.335E-02	6.508E-02	3.742E-02	NOT IDENT.
HF-181	-5.336E-03	1.434E-02	1.132E-02	7.316E-03	NOT IDENT.
W-181	-7.725E-02	1.939E-01	1.624E-01	9.893E-02	NOT IDENT.
TA-182	3.320E-02	7.840E-02	7.287E-02	4.000E-02	NOT IDENT.
RE-183	-1.872E-02	4.728E-02	3.924E-02	2.412E-02	NOT IDENT.
RE-184	4.790E-02	1.079E-01	1.004E-01	5.506E-02	NOT IDENT.
OS-185	4.198E-03	1.904E-02	1.721E-02	9.716E-03	NOT IDENT.
RE-188	1.927E-02	7.294E-02	6.452E-02	3.721E-02	NOT IDENT.
W-188	-3.291E+00	3.393E+00	2.716E+00	1.731E+00	NOT IDENT.

IR-192	1.041E-02	1.668E-02	1.556E-02	8.510E-03	NOT IDENT.
AU-195	8.040E-02	9.329E-02	8.899E-02	4.760E-02	NOT IDENT.
TL-200	8.441E-01	1.910E+00	1.744E+00	9.747E-01	NOT IDENT.
TL-201	-2.038E-01	5.924E-01	4.930E-01	3.022E-01	NOT IDENT.
TL-202	-7.654E-03	2.254E-02	1.843E-02	1.150E-02	NOT IDENT.
HG-203	-5.782E-03	1.626E-02	1.393E-02	8.298E-03	NOT IDENT.
BI-207	1.905E-02	2.315E-02	2.265E-02	1.181E-02	NOT IDENT.
TL-207	4.750E-02	3.460E-01	3.081E-01	1.765E-01	NOT IDENT.
TL-208	-1.546E-02	2.269E-02	1.621E-02	1.158E-02	FAIL ABUN
PO-209	-2.381E+00	4.006E+00	3.036E+00	2.044E+00	NOT IDENT.
BI-210	4.554E-01	4.471E+00	4.140E+00	2.281E+00	NOT IDENT.
PB-210	4.554E-01	4.471E+00	4.140E+00	2.281E+00	NOT IDENT.
PO-210	4.554E-01	4.471E+00	4.140E+00	2.281E+00	NOT IDENT.
BI-211	-2.796E-02	1.082E-01	8.965E-02	5.519E-02	NOT IDENT.
PB-211	3.190E-01	4.753E-01	4.084E-01	2.425E-01	NOT IDENT.
BI-212	7.810E-02	1.433E-01	1.335E-01	7.311E-02	NOT IDENT.
PB-212	1.140E-02	3.745E-02	2.575E-02	1.911E-02	FAIL ABUN
PO-212	1.140E-02	3.745E-02	2.575E-02	1.911E-02	FAIL ABUN
BI-214	-7.242E-03	4.102E-02	3.270E-02	2.093E-02	NOT IDENT.
PB-214	5.157E-03	3.682E-02	3.182E-02	1.879E-02	NOT IDENT.
PO-214	5.157E-03	3.682E-02	3.182E-02	1.879E-02	NOT IDENT.
PO-215	4.750E-02	3.460E-01	3.081E-01	1.765E-01	NOT IDENT.
PO-216	1.140E-02	3.745E-02	2.575E-02	1.911E-02	FAIL ABUN
PO-218	5.157E-03	3.682E-02	3.182E-02	1.879E-02	NOT IDENT.
RN-219	-1.350E-01	2.035E-01	1.602E-01	1.038E-01	NOT IDENT.
RN-220	-9.631E+00	1.437E+01	1.086E+01	7.330E+00	NOT IDENT.
RA-223	4.750E-02	3.460E-01	3.081E-01	1.765E-01	NOT IDENT.
RA-224	-7.661E-02	3.512E-01	2.527E-01	1.792E-01	NOT IDENT.
RA-226	-7.242E-03	4.102E-02	3.270E-02	2.093E-02	NOT IDENT.
AC-227	-1.740E-01	1.815E-01	1.461E-01	9.263E-02	NOT IDENT.
TH-227	-1.740E-01	1.823E-01	1.461E-01	9.299E-02	NOT IDENT.
AC-228	7.138E-03	7.302E-02	6.589E-02	3.725E-02	NOT IDENT.
RA-228	7.138E-03	7.302E-02	6.589E-02	3.725E-02	NOT IDENT.
TH-228	1.149E-02	3.774E-02	2.594E-02	1.925E-02	FAIL ABUN
TH-229	-5.852E-02	2.353E-01	1.951E-01	1.200E-01	NOT IDENT.
TH-230	-7.242E-03	4.102E-02	3.270E-02	2.093E-02	NOT IDENT.
PA-231	9.648E-02	7.191E-01	6.470E-01	3.669E-01	NOT IDENT.
TH-231	4.750E-02	3.460E-01	3.081E-01	1.765E-01	NOT IDENT.
U-231	-6.750E-02	1.426E-01	1.221E-01	7.273E-02	NOT IDENT.
TH-232	7.138E-03	7.302E-02	6.589E-02	3.725E-02	NOT IDENT.
PA-233	8.595E-03	3.121E-02	2.829E-02	1.592E-02	NOT IDENT.
PA-234	1.377E-01	1.418E-01	1.396E-01	7.233E-02	NOT IDENT.
PA-234M	-2.735E-01	2.019E+00	1.646E+00	1.030E+00	NOT IDENT.
TH-234	-2.589E-01	7.328E-01	6.536E-01	3.739E-01	NOT IDENT.
U-234	-7.242E-03	4.102E-02	3.270E-02	2.093E-02	NOT IDENT.
U-235	3.477E-02	9.708E-02	8.677E-02	4.953E-02	NOT IDENT.
NP-236	-3.267E-03	3.630E-02	3.105E-02	1.852E-02	NOT IDENT.
NP-237	1.056E-01	9.448E-02	8.990E-02	4.821E-02	NOT IDENT.
U-238	-2.589E-01	7.328E-01	6.536E-01	3.739E-01	NOT IDENT.
NP-239	-4.779E-02	8.295E-02	6.912E-02	4.232E-02	NOT IDENT.
AM-241	1.448E-02	9.308E-02	8.647E-02	4.749E-02	NOT IDENT.
AM-243	-1.957E-03	2.862E-02	2.451E-02	1.460E-02	NOT IDENT.
CM-243	-4.096E-03	3.796E-02	3.334E-02	1.937E-02	NOT IDENT.
AM-246	1.501E-02	6.530E-02	5.716E-02	3.332E-02	NOT IDENT.
CM-247	2.536E-03	1.741E-02	1.532E-02	8.883E-03	NOT IDENT.
CF-249	-6.176E-03	1.953E-02	1.626E-02	9.965E-03	NOT IDENT.
CF-251	7.368E-04	5.604E-02	4.806E-02	2.859E-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	45.2339
46.50	45.2339
46.50	45.2339
48.70	54.9780
49.72	44.8016
51.35	46.7408
52.39	43.4044
52.97	37.3877
53.15	40.8859
53.44	47.0127
54.07	39.2448
56.28	55.2692
56.28	55.2697
57.37	45.7505
57.53	42.2489
57.53	42.2491
57.60	36.9746
57.98	44.0610
57.98	44.0610
59.32	49.5192
59.32	49.5192
59.40	49.5294
59.54	46.8927
59.72	44.2588
60.01	52.2639
61.10	55.9612
61.14	55.9668
61.30	55.9894
63.00	52.6563
63.29	50.0146
63.29	50.0146
63.58	50.9439
64.28	46.5545
65.12	54.7232
65.20	54.7337
65.20	54.7337
66.05	56.6435
66.72	53.1314
66.83	53.1456
66.91	57.6605
67.20	56.7983
67.20	56.7983
67.75	55.0666
67.85	55.0796
68.90	57.0249
68.90	57.0249
69.30	58.8897
69.67	55.3135
70.82	49.0949
70.82	49.0949
70.83	49.0960
72.80	70.3198
72.87	66.6772
72.87	66.6772
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74.81	66.0472
74.97	60.5645
75.28	55.0961
75.70	52.3895
77.11	70.9883
77.11	70.9883

77.11	70.9883
77.11	70.9883
77.11	70.9883
77.11	70.9883
77.11	70.9883
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79.80	61.1969
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80.18	50.1102
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80.30	50.1227
80.57	46.4363
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81.07	42.7659
81.07	42.7659
81.07	42.7659
81.07	42.7659
82.60	46.6324
83.37	56.0468
83.78	60.7686
83.78	60.7686
83.78	60.7686
83.78	60.7686
84.21	69.2433
84.90	55.2849
85.43	43.1493
86.29	43.2240
86.50	43.2420
86.54	43.2455
86.59	43.2497
86.72	45.1418
86.79	45.1479
86.94	49.8660
87.30	49.9018
87.30	49.9018
87.30	49.9018
87.30	49.9018
87.30	49.9018
87.30	49.9018
87.30	49.9018
87.57	47.1024
87.88	51.8442
88.03	51.8596
88.36	60.3851
88.47	60.3981
89.95	92.7523
91.11	64.5033
92.29	54.1916
92.38	58.0044
92.38	58.0044
93.35	55.2535
94.00	65.8137
94.67	93.5912
94.67	93.5922
94.90	96.4989
94.90	96.4989
94.90	96.4989
94.90	96.4989
95.87	75.6163
95.87	75.6163
96.73	67.1090
97.43	61.4359
98.44	48.0858
98.44	48.0858
98.88	47.1620
99.55	52.0378
99.55	52.0378
99.86	57.8522
100.00	57.8668
100.10	57.8778
103.18	46.5576
103.76	48.5474
105.00	50.5993
105.31	55.4948
108.00	65.5350
109.28	48.0335

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111.00	45.2244
111.76	68.9073
112.95	74.9629
115.19	43.5605
116.30	58.5169
117.00	64.5411
117.00	64.5411
117.66	70.5742
121.11	44.9780
121.62	59.0189
121.78	60.0342
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122.32	69.0983
122.32	69.0983
122.32	69.0983
123.07	65.1693
127.23	58.5273
129.76	45.5846
131.20	50.7594
133.02	69.2202
133.54	68.2554
135.34	45.9650
136.00	38.8524
136.25	42.9579
136.48	50.1342
140.51	51.4562
140.51	0.0000
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142.65	69.1612
143.76	65.1341
144.24	72.4203
144.24	72.4203
144.24	72.4203
144.24	72.4203
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145.44	61.1426
147.16	84.1426
152.43	68.0098
152.70	68.0350
153.22	70.1774
154.21	74.4653
154.21	74.4653
154.21	74.4653
154.21	74.4653
155.03	61.9481
156.02	62.0297
158.56	62.2380
159.00	0.0000
159.00	65.4404
160.31	62.3808
161.27	69.8692
162.32	67.8438
162.64	65.7507
163.35	53.0736
163.89	53.1102
165.85	71.3463
167.43	67.2214
171.28	61.1133
171.86	62.2304
172.10	62.2486
176.55	53.9566
176.60	53.9602
181.06	58.5912
184.41	56.6460
185.71	60.0057
186.00	60.0259
190.27	58.1310
192.34	60.4684
193.63	59.4564
197.04	61.8966
198.01	70.8164
198.60	74.1843
200.40	82.0998
201.83	67.7842
202.84	68.9724
205.31	62.4662

208.36	51.4819
208.81	58.2249
209.75	59.4050
209.75	59.4050
210.97	58.3604
215.65	53.0113
216.55	63.2222
218.09	52.0167
222.10	61.3174
223.80	47.7747
226.40	50.1830
227.00	52.4959
227.08	52.5001
227.20	52.5067
228.16	54.8428
228.18	54.8438
228.18	54.8438
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235.69	56.9836
236.00	62.1826
236.00	62.1826
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238.63	42.7169
238.63	42.7169
238.63	42.7169
239.00	42.7323
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241.98	55.5977
241.98	55.5977
244.69	52.2592
245.39	53.4561
247.94	48.9269
248.90	50.1374
249.79	53.3890
252.40	49.1333
252.85	44.7655
252.85	44.7655
254.15	0.0000
256.20	57.2323
256.20	57.2323
260.50	41.5481
260.90	41.5632
262.80	50.4943
264.65	39.9305
268.24	49.8528
268.79	46.3149
269.46	41.8866
269.46	41.8866
269.46	41.8866
269.46	41.8866
271.23	42.8452
273.65	48.3047
276.40	40.3514
277.35	46.6672
277.60	43.9846
277.60	43.9846
278.00	45.7954
278.60	47.6164
279.20	44.0459
279.53	48.5544
280.46	43.1946
281.68	33.3308
283.67	40.6068
284.30	45.1439
285.00	53.3013
285.90	53.3427
286.10	53.3517
286.10	53.3517
287.40	38.9268
288.45	0.0000
290.67	57.1908
290.80	57.1966
291.72	64.5095
293.26	42.7594
293.70	38.2246
295.21	30.0714
295.21	30.0714

295.21	30.0714
295.96	39.2089
296.50	47.4360
297.23	60.2445
298.57	49.3454
299.80	32.0157
299.80	32.0157
300.09	27.4489
300.09	27.4489
300.09	27.4489
300.09	27.4489
300.12	27.4493
301.29	25.6442
302.84	39.4320
303.76	38.5444
303.91	38.5489
304.40	33.0551
304.40	33.0551
304.84	32.1487
306.84	35.8811
308.46	39.6131
311.98	36.9537
316.51	38.0152
318.01	42.7018
319.02	44.5935
319.41	44.6074
320.08	52.0693
323.87	44.7634
323.87	44.7634
323.87	44.7634
323.87	44.7634
325.23	47.6117
328.77	37.4451
333.44	32.8819
334.20	40.4214
334.20	40.4214
334.30	40.4240
338.28	31.1168
338.28	31.1168
338.28	31.1168
338.28	31.1168
338.32	31.1178
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340.57	38.7272
344.27	38.8341
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351.07	32.3663
351.92	26.6713
351.92	26.6713
351.92	26.6713
355.39	0.0000
356.01	32.4830
364.48	35.5654
366.43	35.6145
367.43	26.0075
367.94	30.8350
369.80	44.3835
374.96	30.9873
383.85	41.8964
387.95	34.1973
388.63	33.2353
391.69	39.1815
391.69	39.1815
392.90	24.5083
398.62	31.4912
400.65	34.4900
401.10	41.4001
401.81	36.4891
402.60	27.6274
404.84	22.7277
410.95	22.8186
411.60	25.8060
413.65	21.8647
414.70	20.8853
415.30	21.8882

415.76	22.8898
417.63	0.0000
418.52	24.9245
423.70	29.0084
427.08	28.0679
427.89	28.0825
432.53	30.1762
433.93	24.1619
439.47	30.3062
439.56	30.3081
439.89	25.2621
443.98	26.3384
444.90	33.4487
445.03	33.4512
445.03	33.4512
445.03	33.4512
445.03	33.4512
453.90	23.4404
463.38	21.5236
468.07	23.6391
473.00	25.7690
475.06	23.7359
475.35	25.8041
476.78	26.8585
477.59	23.7707
477.96	22.7422
482.03	16.5786
484.57	22.8288
487.03	22.8611
490.36	28.1099
492.35	30.2262
497.08	25.0814
507.63	0.0000
510.53	0.0000
510.84	23.1677
511.00	23.1699
511.85	23.1806
511.85	23.1806
513.99	23.2078
513.99	23.2078
520.41	21.1719
520.65	25.4099
527.90	27.6345
528.96	0.0000
529.64	23.4052
529.87	0.0000
531.02	26.6159
537.32	21.3641
543.00	24.6425
546.56	0.0000
549.76	31.1807
552.65	22.6131
555.20	16.1732
563.23	24.9015
563.90	24.9099
568.70	20.6276
569.32	22.8066
569.50	23.8947
569.67	18.4656
573.80	23.9464
574.00	17.4175
574.64	28.3121
578.91	10.9125
579.30	14.1890
583.14	24.0578
585.48	14.2326
591.81	19.7682
592.07	23.0655
593.00	21.9775
595.88	22.0081
600.56	31.9843
602.52	0.0000
602.71	26.4976
602.71	26.4976
603.60	27.6138
604.41	27.6245
604.70	32.0489
609.31	22.1515

609.31	22.1515
609.31	22.1515
609.31	22.1515
610.33	19.9462
612.46	26.6221
614.37	21.0949
618.01	21.1315
621.84	20.0550
621.84	20.0550
631.29	17.9058
633.02	15.6804
633.10	15.6808
634.78	13.4513
635.90	16.8228
636.97	17.9531
645.85	15.3224
646.12	17.1274
656.30	33.5078
657.75	24.4674
657.90	0.0000
661.65	17.2480
661.65	17.2480
664.57	24.5426
666.33	20.0132
666.33	20.0132
675.00	15.5245
677.61	7.3141
685.20	12.8420
692.80	21.1672
695.00	28.5569
696.49	25.8101
696.49	25.8101
697.00	27.6599
697.49	24.8992
698.33	26.7528
698.50	25.8323
699.00	31.3745
702.63	23.1055
706.10	30.5443
706.58	0.0000
706.67	37.0322
709.31	19.4640
711.68	17.6279
713.82	28.7870
717.42	17.6706
720.50	25.1431
721.93	27.0218
722.20	26.0928
722.78	26.0996
722.78	26.0996
722.89	26.1003
722.95	26.1010
723.30	26.1051
724.18	22.3840
727.18	16.8091
733.00	9.3608
735.90	16.8697
739.58	15.0180
742.81	12.2183
744.21	14.1061
747.13	18.8306
751.79	8.4898
752.31	11.3221
753.82	12.2729
755.35	16.0591
756.15	12.2846
756.87	14.1786
763.93	11.3751
765.79	15.1781
766.42	12.3351
766.84	15.1844
776.49	12.3846
778.00	13.3451
778.57	18.1154
778.89	12.3963
783.80	8.5986
785.46	9.5601
792.07	20.1279

795.84	15.3582
796.30	15.3609
798.80	24.0247
801.93	25.0155
805.60	21.1968
810.29	25.0955
810.76	22.2038
815.85	17.4107
817.79	17.4234
818.51	17.4283
819.60	16.4667
826.30	12.6239
828.27	17.4924
831.60	19.4600
831.96	21.4086
834.83	14.6125
836.80	0.0000
846.75	17.6124
848.13	13.7057
856.28	0.0000
856.80	17.6774
860.37	8.8501
867.32	12.8159
867.82	11.8321
871.10	14.8077
873.19	11.8550
874.81	16.8041
875.33	0.0000
876.40	8.9013
879.36	13.8612
880.27	14.8561
880.51	14.8575
881.50	15.8535
883.24	15.8633
884.67	9.9197
889.25	14.9037
896.60	19.9229
898.02	14.9498
899.00	12.9610
903.28	13.9788
911.07	11.0132
911.07	11.0132
911.07	11.0132
919.63	12.0498
920.93	11.0505
925.00	12.0721
925.24	16.0973
926.50	12.0782
935.52	10.0962
937.48	10.1028
944.10	11.1380
946.00	7.0923
949.00	15.2131
962.29	12.2244
964.01	18.3472
966.15	14.2799
968.20	10.2070
969.11	11.2310
969.11	11.2310
969.11	11.2310
977.42	7.1665
980.50	9.2235
983.50	15.3875
989.30	9.2498
996.32	10.3008
1001.03	11.3480
1001.68	12.3823
1004.76	8.2631
1021.30	0.0000
1024.50	0.0000
1034.80	14.5981
1036.00	16.6898
1037.82	14.6118
1038.57	9.3955
1038.76	0.0000
1045.16	7.3227
1046.59	5.2327
1048.07	19.8934

1050.47	8.3824
1050.47	8.3824
1062.04	13.6697
1063.62	6.3123
1076.63	12.6744
1077.35	14.7902
1078.86	9.5124
1085.78	8.4730
1099.22	7.4437
1112.02	7.4717
1112.84	7.4737
1115.52	13.8906
1120.29	6.4198
1120.29	6.4198
1120.29	6.4198
1120.29	6.4198
1120.51	7.4905
1121.28	11.7734
1124.00	0.0000
1129.67	13.9477
1131.51	0.0000
1147.95	0.0000
1167.94	9.7625
1173.22	6.5180
1175.09	8.6953
1177.93	7.6146
1189.05	7.6381
1204.90	7.6716
1205.75	8.7699
1213.00	5.4919
1221.42	9.1744
1230.97	13.7976
1235.34	7.3672
1236.41	0.0000
1238.25	11.9812
1246.25	9.2362
1260.41	0.0000
1271.85	4.6495
1274.45	10.2360
1274.54	9.3054
1291.56	6.5428
1298.22	0.0000
1312.09	7.5173
1325.50	9.4287
1325.50	9.4287
1332.49	7.5565
1333.61	7.5586
1360.21	8.5602
1362.66	0.0000
1365.15	6.6662
1368.21	6.6713
1368.53	0.0000
1376.25	7.6393
1384.27	5.7410
1394.10	8.6320
1395.20	7.6751
1407.95	11.5483
1434.06	5.8103
1436.60	5.8137
1457.56	0.0000
1460.81	8.7708
1489.15	3.9238
1509.49	8.8696
1596.49	11.0528
1620.62	7.0704
1678.03	0.0000
1691.02	3.0754
1691.02	3.0754
1706.46	0.0000
1750.46	0.0000
1764.49	4.1623
1764.49	4.1623
1764.49	4.1623
1764.49	4.1623
1770.23	6.2505
1771.40	7.2939
1791.20	0.0000
1808.65	3.1489

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1202012144

Total Uranium Activity	-7.5402E-01	ug/g
Total Uranium Counting Unc.	2.1806E+00	ug/g
Total Uranium Tpu	1.1126E-06	ug/g
Total Uranium Mda	1.9448E+00	ug/g

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*******************************************************************************
*                                                                             *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                              *
*                             CHARLESTON ,SC 29417                            *
*                              GROSS GAMMA REPORT                             *
*                                                                             *
*                                                                             *
*******************************************************************************
*                                                                             *
*   BATCH ID      : 940263                    SAMPLE ID  : G1202012144        *
*   ANALYST       : MXR1                      DETECTOR   : GAM04              *
*   SAMPLE DATE   : 13-JAN-2010 00:00:00.00   COUNT TIME :    0 02:00:00.00   *
*   ANALYSIS DATE: 20-JAN-2010 14:09:39.04    SAMPLE ALQT:  134.090 GRAM      *
*                                                                             *
*******************************************************************************


        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 2.943E-02
        GROSS GAMMA ERROR   (pCi/GRAM  )  : 3.382E-02
        GROSS GAMMA MDA     (pCi/GRAM  )  : 5.459E-02
        GROSS GAMMA DLC     (pCi/GRAM  )  : 2.513E-02
```

VAX/VMS Nuclide Identification Report Generated 20-JAN-2010 17:48:05.99

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202012145.CNF;1
Sample date       : 5-JAN-2010 12:00:00. Acquisition date : 20-JAN-2010 15:47:39
Sample ID         : G1202012145          Sample quantity  : 1.28360E+02 GRAM
Detector name     : GAM18                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.58  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 940263                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	2	75.05*	415	447	1.18	149.22	143	17	5.77E-02	10.0	1.52E+00
2	2	77.32*	706	405	1.14	153.75	143	17	9.80E-02	6.4	
3	0	87.36	215	549	1.07	173.82	170	8	2.99E-02	20.0	
4	5	90.20	150	254	1.07	179.50	177	13	2.09E-02	16.3	2.33E+00
5	5	93.07*	253	474	1.57	185.24	177	13	3.51E-02	18.1	
6	0	105.93	105	323	1.14	210.94	207	8	1.45E-02	31.4	
7	0	129.20	134	369	1.28	257.49	253	9	1.86E-02	27.2	
8	0	186.45*	267	427	1.46	371.93	366	12	3.71E-02	17.3	
9	0	209.36	177	443	1.42	417.75	412	13	2.46E-02	25.6	
10	3	238.76*	1682	204	1.25	476.52	471	19	2.34E-01	2.9	8.54E-01
11	3	241.77	434	254	1.77	482.53	471	19	6.03E-02	11.3	
12	0	270.25	168	256	1.63	539.49	534	12	2.33E-02	20.6	
13	2	295.32*	508	179	1.32	589.61	584	21	7.05E-02	6.6	2.78E+00
14	2	300.18	169	197	1.61	599.33	584	21	2.35E-02	17.6	
15	0	327.51	59	189	1.50	653.96	650	9	8.23E-03	43.6	
16	0	338.35*	366	239	1.09	675.64	670	11	5.08E-02	9.8	
17	0	351.92*	912	264	1.36	702.77	695	16	1.27E-01	5.3	
18	0	463.00	107	137	1.49	924.87	919	11	1.48E-02	23.4	
19	0	510.91*	204	194	2.39	1020.65	1011	20	2.83E-02	20.4	
20	0	583.14*	537	125	1.29	1165.07	1159	12	7.46E-02	6.1	
21	0	609.03*	619	200	1.62	1216.84	1210	16	8.60E-02	6.6	
22	0	727.60*	135	132	1.75	1453.91	1448	16	1.88E-02	21.4	
23	0	767.67	68	91	1.07	1534.03	1529	11	9.41E-03	29.8	
24	0	794.96	63	74	1.17	1588.61	1583	12	8.79E-03	30.1	
25	0	860.47	80	123	0.84	1719.59	1710	20	1.11E-02	35.6	
26	0	910.82*	466	49	1.95	1820.29	1812	15	6.48E-02	5.8	
27	2	964.17	68	72	2.13	1926.96	1918	53	9.40E-03	28.5	1.99E+00
28	2	968.55	264	64	2.36	1935.73	1918	53	3.67E-02	9.0	
29	0	1119.99*	190	63	1.28	2238.54	2230	19	2.63E-02	12.5	
30	0	1238.15	55	73	1.28	2474.84	2471	11	7.58E-03	34.2	
31	0	1378.02	63	31	2.09	2754.54	2745	18	8.76E-03	24.3	
32	0	1460.11*	1459	37	2.40	2918.71	2907	20	2.03E-01	2.8	
33	0	1729.38	50	3	2.39	3457.21	3450	13	6.88E-03	16.1	
34	0	1763.94*	110	37	2.63	3526.33	3517	22	1.53E-02	17.8	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 20-JAN-2010 17:48:08

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202012145.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 5-JAN-2010 12:00:00 Acquisition date : 20-JAN-2010 15:47:39
Sample ID : G1202012145 Sample quantity : 128.36 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA18 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.58 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	2.112E+01	2.003E+00	3.780E-01	2.868E-02	55.883
CD-109	+	88.03	*	2.684E+00	1.102E+00	1.097E+00	1.014E-01	2.448
SN-126		64.28		3.516E-01	5.353E-01	8.997E-01	1.330E-01	0.391
	+	86.94		1.097E+00	6.320E-01	5.416E-01	2.246E-01	2.025
	+	87.57	*	2.638E-01	1.083E-01	1.291E-01	1.190E-02	2.043
EU-155		48.70		-2.032E+00	3.162E+00	5.197E+00	3.942E-01	-0.391
		60.01		-1.102E+00	5.097E+00	8.452E+00	6.449E-01	-0.130
	+	86.54		3.177E-01	1.305E-01	1.534E-01	1.413E-02	2.072
	+	105.31	*	1.917E-01	1.213E-01	1.431E-01	1.023E-02	1.340
TL-208		277.35		2.587E-01	3.027E-01	5.107E-01	5.363E-02	0.507
	+	510.84		6.394E-01	2.695E-01	1.553E-01	1.652E-02	4.116
	+	583.14	*	4.744E-01	6.910E-02	4.345E-02	3.406E-03	10.918
	+	860.37		6.412E-01	4.620E-01	3.128E-01	3.499E-02	2.050
BI-211		72.87		4.417E+00	3.261E+00	5.089E+00	4.202E-01	0.868
	+	351.07	*	3.779E+00	4.662E-01	2.457E-01	1.577E-02	15.382
PB-212	+	74.81		2.296E+00	5.436E-01	4.972E-01	6.232E-02	4.617
	+	77.11		2.179E+00	3.354E-01	2.782E-01	2.358E-02	7.832
	+	87.30		1.220E+00	5.155E-01	5.994E-01	8.141E-02	2.035
	+	238.63	*	1.624E+00	1.486E-01	6.937E-02	4.956E-03	23.408
	+	300.09		2.423E+00	8.746E-01	9.492E-01	7.794E-02	2.552
PO-212	+	74.81		2.296E+00	5.436E-01	4.972E-01	6.232E-02	4.617
	+	77.11		2.179E+00	3.354E-01	2.782E-01	2.358E-02	7.832
	+	87.30		1.220E+00	5.155E-01	5.994E-01	8.141E-02	2.035
		115.19		-6.176E-01	3.077E+00	4.914E+00	3.095E-01	-0.126
	+	238.63	*	1.624E+00	1.486E-01	6.937E-02	4.956E-03	23.408
	+	300.09		2.423E+00	8.746E-01	9.492E-01	7.794E-02	2.552
BI-214	+	609.31	*	1.026E+00	1.637E-01	9.578E-02	8.556E-03	10.714
	+	1120.29		1.573E+00	4.220E-01	3.268E-01	3.129E-02	4.814
	+	1764.49		1.203E+00	4.346E-01	2.733E-01	1.662E-02	4.402
PB-214	+	74.81		3.956E+00	9.092E-01	8.568E-01	9.564E-02	4.617
	+	77.11		3.735E+00	6.415E-01	4.769E-01	5.435E-02	7.832
	+	87.30		2.090E+00	8.730E-01	1.027E+00	1.232E-01	2.035
	+	241.98		2.514E+00	6.026E-01	4.170E-01	3.297E-02	6.029
	+	295.21		1.281E+00	2.008E-01	1.666E-01	1.413E-02	7.688

Sample ID : G1202012145 Acquisition date : 20-JAN-2010 15:47:39

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	351.92	*	1.315E+00	1.761E-01	8.563E-02	7.084E-03	15.353
PO-214	+	74.81		3.956E+00	9.092E-01	8.568E-01	9.564E-02	4.617
	+	77.11		3.735E+00	6.415E-01	4.769E-01	5.435E-02	7.832
	+	87.30		2.090E+00	8.730E-01	1.027E+00	1.232E-01	2.035
	+	241.98		2.514E+00	6.026E-01	4.170E-01	3.297E-02	6.029
	+	295.21		1.281E+00	2.008E-01	1.666E-01	1.413E-02	7.688
	+	351.92	*	1.315E+00	1.761E-01	8.563E-02	7.084E-03	15.353
PO-216	+	74.81		2.296E+00	5.436E-01	4.972E-01	6.232E-02	4.617
	+	77.11		2.179E+00	3.354E-01	2.782E-01	2.358E-02	7.832
	+	87.30		1.220E+00	5.155E-01	5.994E-01	8.141E-02	2.035
	+	238.63	*	1.624E+00	1.486E-01	6.937E-02	4.956E-03	23.408
	+	300.09		2.423E+00	8.746E-01	9.492E-01	7.794E-02	2.552
PO-218	+	74.81		3.956E+00	9.092E-01	8.568E-01	9.564E-02	4.617
	+	77.11		3.735E+00	6.415E-01	4.769E-01	5.435E-02	7.832
	+	87.30		2.090E+00	8.730E-01	1.027E+00	1.232E-01	2.035
	+	241.98		2.514E+00	6.026E-01	4.170E-01	3.297E-02	6.029
	+	295.21		1.281E+00	2.008E-01	1.666E-01	1.413E-02	7.688
	+	351.92	*	1.315E+00	1.761E-01	8.563E-02	7.084E-03	15.353
RA-224	+	240.98	*	4.767E+00	1.111E+00	7.885E-01	4.392E-02	6.046
RA-226	+	609.31	*	1.026E+00	1.637E-01	9.578E-02	8.556E-03	10.714
	+	1120.29		1.573E+00	4.220E-01	3.268E-01	3.129E-02	4.814
	+	1764.49		1.203E+00	4.346E-01	2.733E-01	1.662E-02	4.402
AC-228	+	338.32		1.682E+00	7.614E-01	3.094E-01	1.261E-01	5.437
	+	911.07	*	1.771E+00	3.128E-01	1.449E-01	1.920E-02	12.223
	+	969.11		1.761E+00	5.269E-01	2.908E-01	6.963E-02	6.057
RA-228	+	338.32		1.682E+00	7.614E-01	3.094E-01	1.261E-01	5.437
	+	911.07	*	1.771E+00	3.128E-01	1.449E-01	1.920E-02	12.223
	+	969.11		1.761E+00	5.269E-01	2.908E-01	6.963E-02	6.057
TH-228	+	74.81		2.331E+00	5.078E-01	5.048E-01	4.254E-02	4.617
	+	77.11		2.212E+00	3.405E-01	2.824E-01	2.394E-02	7.832
	+	87.30		1.239E+00	5.085E-01	6.085E-01	5.593E-02	2.035
	+	238.63	*	1.649E+00	1.509E-01	7.043E-02	5.031E-03	23.408
	+	300.09		2.459E+00	1.688E+00	9.636E-01	5.679E-01	2.552
TH-230	+	609.31	*	1.026E+00	1.637E-01	9.577E-02	8.555E-03	10.714
	+	1120.29		1.573E+00	4.220E-01	3.268E-01	3.129E-02	4.814
	+	1764.49		1.203E+00	4.346E-01	2.733E-01	1.662E-02	4.402
TH-232	+	338.32		1.682E+00	3.448E-01	3.094E-01	1.790E-02	5.437
	+	911.07	*	1.771E+00	3.128E-01	1.449E-01	1.920E-02	12.223
	+	969.11		1.761E+00	5.269E-01	2.908E-01	6.963E-02	6.057
U-234	+	609.31	*	1.026E+00	1.637E-01	9.577E-02	8.555E-03	10.714
	+	1120.29		1.573E+00	4.220E-01	3.268E-01	3.129E-02	4.814
	+	1764.49		1.203E+00	4.346E-01	2.733E-01	1.662E-02	4.402
U-235	+	89.95		2.422E+00	1.090E+00	1.441E+00	4.457E-01	1.681
	+	93.35		2.355E+00	1.076E+00	7.463E-01	2.086E-01	3.156
	+	105.00		1.879E+00	1.304E+00	1.409E+00	4.145E-01	1.334
		143.76	*	5.655E-02	1.840E-01	2.919E-01	4.727E-02	0.194
		163.35		2.534E-01	3.818E-01	6.566E-01	1.170E-01	0.386
	+	185.71		1.891E-01	6.623E-02	5.565E-02	2.960E-03	3.398
		205.31		9.312E-03	4.486E-01	6.580E-01	1.175E-01	0.014

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NP-237	+	86.50	*	7.747E-01	3.559E-01	3.741E-01	8.441E-02	2.071
		95.87		-9.319E-02	8.618E-01	1.246E+00	3.043E-01	-0.075
AM-243	+	74.67	*	3.722E-01	8.098E-02	8.093E-02	6.753E-03	4.599
	+	86.72		2.905E+01	1.192E+01	1.439E+01	1.316E+00	2.018
		117.66		-3.651E-01	3.212E+00	5.140E+00	3.161E-01	-0.071
		142.18		9.490E+00	1.473E+01	2.403E+01	1.324E+00	0.395
ANH-511	+	511.00	*	1.381E-01	5.706E-02	3.356E-02	2.217E-03	4.115

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	3.851E-02	2.409E-01	4.013E-01	2.908E-02	0.096
NA-22		1274.54	*	1.007E-02	3.409E-02	5.733E-02	3.901E-03	0.176
NA-24		1368.53	*	-3.847E-01	3.409E-02	Half-Life too short		
AL-26		1129.67		-1.560E-01	1.510E+00	2.201E+00	1.470E-01	-0.071
		1808.65	*	1.895E-03	2.362E-02	3.921E-02	2.289E-03	0.048
TI-44		67.85		-3.176E-02	4.415E-02	7.131E-02	5.735E-03	-0.445
	+	78.38	*	4.020E-01	6.189E-02	7.681E-02	6.567E-03	5.234
SC-46		889.25	*	-1.994E-02	3.126E-02	4.839E-02	5.397E-03	-0.412
	+	1120.51		2.694E-01	7.003E-02	1.002E-01	6.923E-03	2.689
V-48		944.10		1.210E-01	6.432E-01	1.062E+00	1.124E-01	0.114
		983.50	*	3.280E-03	6.624E-02	9.223E-02	9.122E-03	0.036
		1312.09		-2.069E-03	6.409E-02	1.046E-01	7.622E-03	-0.020
CR-51		320.08	*	2.242E-03	3.095E-01	4.987E-01	3.211E-02	0.004
MN-52		744.21		1.333E-02	1.852E-01	3.091E-01	2.726E-02	0.043
		848.13		8.447E-02	5.126E+00	8.425E+00	8.814E-01	0.010
		935.52		2.443E-01	2.120E-01	3.575E-01	3.834E-02	0.683
		1246.25		1.258E+00	6.045E+00	9.000E+00	5.787E-01	0.140
		1333.61		-5.736E-02	3.769E+00	6.152E+00	4.648E-01	-0.009
		1434.06	*	2.628E-03	1.821E-01	2.960E-01	2.181E-02	0.009
MN-54		834.83	*	1.789E-02	2.966E-02	5.064E-02	5.187E-03	0.353
CO-56		846.75	*	-2.899E-02	3.071E-02	4.649E-02	4.853E-03	-0.624
		977.42		-1.549E+00	2.307E+00	3.515E+00	3.516E-01	-0.441
		1037.82		2.477E-02	2.181E-01	3.685E-01	3.414E-02	0.067
		1175.09		1.156E-01	1.738E+00	2.891E+00	1.604E-01	0.040
	+	1238.25		1.267E-01	8.699E-02	1.331E-01	8.872E-03	0.952
		1360.21		-5.020E-01	7.989E-01	1.217E+00	9.144E-02	-0.413
		1771.40		1.166E-02	1.977E-01	2.795E-01	1.689E-02	0.042
CO-57		122.06	*	-1.806E-02	2.148E-02	3.310E-02	1.961E-03	-0.546
		136.48		8.241E-02	1.734E-01	2.819E-01	1.845E-02	0.292
CO-58		810.76	*	-2.413E-02	2.931E-02	4.504E-02	4.446E-03	-0.536
FE-59		142.65		1.223E+00	2.338E+00	3.747E+00	2.062E-01	0.326
		192.34		3.050E-01	7.787E-01	1.232E+00	1.428E-01	0.248
		1099.22	*	-5.958E-02	6.100E-02	9.228E-02	7.596E-03	-0.646
		1291.56		3.518E-03	9.367E-02	1.541E-01	1.295E-02	0.023
CO-60		1173.22		3.436E-03	3.545E-02	5.908E-02	3.265E-03	0.058
		1332.49	*	-5.652E-03	2.864E-02	4.586E-02	3.465E-03	-0.123
ZN-65		1115.52	*	5.673E-03	7.321E-02	1.051E-01	7.402E-03	0.054

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GE-68		1077.35	*	7.776E-01	9.104E-01	1.615E+00	1.283E-01	0.482
AS-73		53.44	*	-2.594E-01	1.008E+00	1.678E+00	1.330E-01	-0.155
AS-74		595.88	*	-9.556E-02	7.679E-02	1.135E-01	8.156E-03	-0.842
		634.78		7.408E-02	2.590E-01	4.258E-01	3.170E-02	0.174
SE-75		66.05		-4.334E+00	5.088E+00	7.958E+00	7.882E-01	-0.545
		96.73		9.850E-02	6.983E-01	1.023E+00	1.349E-01	0.096
		121.11		-7.864E-03	1.137E-01	1.820E-01	1.699E-02	-0.043
		136.00		-9.876E-03	3.325E-02	5.225E-02	2.975E-03	-0.189
		198.60		1.651E-01	1.446E+00	2.394E+00	1.624E-01	0.069
		264.65	*	9.846E-04	3.848E-02	5.521E-02	3.157E-03	0.018
		279.53		2.207E-02	8.767E-02	1.444E-01	8.924E-03	0.153
		303.91		-1.637E+00	1.996E+00	2.646E+00	2.517E-01	-0.619
		400.65		7.875E-03	2.011E-01	3.371E-01	3.071E-02	0.023
BR-77	+	87.88		5.869E+02	2.409E+02	3.202E+02	2.958E+01	1.833
		200.40		-1.323E+01	1.305E+02	2.169E+02	1.168E+01	-0.061
	+	239.00		2.639E+02	2.106E+01	3.276E+01	1.822E+00	8.057
		249.79		-3.894E+01	5.013E+01	7.897E+01	4.427E+00	-0.493
		281.68		-6.413E+01	7.413E+01	1.153E+02	6.578E+00	-0.556
		297.23		3.189E+02	5.658E+01	1.049E+02	6.024E+00	3.039
		303.76		-1.342E+02	1.720E+02	2.292E+02	1.319E+01	-0.586
		439.47		1.519E+01	1.032E+02	1.729E+02	1.054E+01	0.088
		484.57		-6.243E+01	1.770E+02	2.851E+02	1.830E+01	-0.219
		520.65	*	-2.591E+00	8.164E+00	1.271E+01	8.477E-01	-0.204
		574.64		2.506E+01	1.627E+02	2.668E+02	1.879E+01	0.094
		578.91		-2.811E+01	7.871E+01	1.064E+02	7.524E+00	-0.264
		585.48		1.515E+03	2.329E+02	4.085E+02	2.907E+01	3.708
		755.35		1.862E+01	1.285E+02	2.153E+02	1.935E+01	0.086
		817.79		1.547E+01	9.923E+01	1.654E+02	1.648E+01	0.094
SR-82		698.33		-8.808E+00	2.617E+01	4.277E+01	3.482E+00	-0.206
		776.49	*	-2.859E-01	2.970E-01	4.558E-01	4.245E-02	-0.627
		1395.20		-6.968E+00	8.416E+00	1.235E+01	9.207E-01	-0.564
RB-83		520.41	*	-1.936E-02	5.319E-02	8.249E-02	5.502E-03	-0.235
		529.64		-7.497E-02	8.280E-02	1.254E-01	8.442E-03	-0.598
		552.65		-1.195E-02	1.476E-01	2.390E-01	1.647E-02	-0.050
RB-84		881.50	*	2.046E-02	5.347E-02	9.000E-02	9.919E-03	0.227
KR-85		513.99	*	1.887E+01	6.461E+00	1.101E+01	7.292E-01	1.714
SR-85		513.99	*	9.679E-02	3.314E-02	5.646E-02	3.741E-03	1.714
RB-86		1076.63	*	6.014E-01	5.876E-01	1.053E+00	8.379E-02	0.571
Y-88		898.02		-8.984E-03	3.357E-02	5.367E-02	6.084E-03	-0.167
		1836.01	*	-1.459E-02	2.451E-02	3.606E-02	2.054E-03	-0.405
ZR-88		392.90	*	-6.094E-03	2.447E-02	4.048E-02	2.328E-03	-0.151
Y-91		1204.90	*	4.755E+00	1.341E+01	2.273E+01	1.344E+00	0.209
NB-94		702.63	*	3.092E-03	2.597E-02	4.367E-02	3.583E-03	0.071
		871.10		1.142E-03	2.489E-02	4.001E-02	4.339E-03	0.029
NB-95		765.79	*	5.558E-02	3.792E-02	6.063E-02	5.546E-03	0.917
NB-95M		235.69	*	4.677E-02	1.128E-01	1.670E-01	1.225E-02	0.280
ZR-95		724.18		1.624E-01	8.803E-02	1.435E-01	1.331E-02	1.131
		756.15	*	1.014E-02	5.432E-02	9.122E-02	8.976E-03	0.111
NB-97		657.90	*	-2.750E-02	5.432E-02	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1024.50		-3.006E+00	5.432E-02	Half-Life too short		
ZR-97		254.15		2.155E+00	5.432E-02	Half-Life too short		
		355.39		3.714E+00	5.432E-02	Half-Life too short		
		507.63	*	3.148E+00	5.432E-02	Half-Life too short		
		602.52		4.717E+00	5.432E-02	Half-Life too short		
		1021.30		4.669E-01	5.432E-02	Half-Life too short		
		1147.95		-3.764E+00	5.432E-02	Half-Life too short		
		1362.66		2.092E+00	5.432E-02	Half-Life too short		
		1750.46		8.387E-01	5.432E-02	Half-Life too short		
MO-99		140.51		-3.228E+01	2.515E+01	3.476E+01	9.347E+00	-0.929
		181.06		1.081E+01	1.510E+01	2.305E+01	3.914E+00	0.469
		366.43		-3.353E+01	6.432E+01	1.053E+02	6.084E+00	-0.318
		739.58	*	-1.639E+00	8.808E+00	1.444E+01	2.203E+00	-0.113
		778.00		-1.083E+01	2.602E+01	4.173E+01	3.896E+00	-0.260
TC-99M		140.51	*	-5.203E+10	2.602E+01	Half-Life too short		
RH-101		127.23		-5.962E-03	3.114E-02	4.384E-02	2.533E-03	-0.136
		198.01	*	4.840E-03	2.668E-02	4.429E-02	2.381E-03	0.109
		325.23		-5.668E-02	2.126E-01	2.926E-01	1.691E-02	-0.194
RH-102		418.52		-6.399E-02	2.229E-01	3.657E-01	2.173E-02	-0.175
		475.06	*	-6.986E-03	2.140E-02	3.457E-02	2.196E-03	-0.202
		631.29		3.232E-02	3.856E-02	6.599E-02	4.898E-03	0.490
		697.49		-1.705E-02	5.946E-02	9.752E-02	7.928E-03	-0.175
	+	766.84		1.841E-01	1.111E-01	1.578E-01	1.446E-02	1.167
		1046.59		-9.065E-03	8.777E-02	1.457E-01	1.257E-02	-0.062
		1112.84		8.319E-02	1.721E-01	2.595E-01	1.842E-02	0.321
RU-103		497.08	*	-2.938E-03	2.976E-02	4.859E-02	6.309E-03	-0.060
	+	610.33		1.109E+01	2.304E+00	2.314E+00	3.711E-01	4.792
RH-106	+	511.85		6.899E-01	2.850E-01	3.508E-01	2.319E-02	1.967
		621.84	*	2.727E-01	2.449E-01	4.217E-01	5.305E-02	0.647
		1050.47		1.266E+00	1.812E+00	3.175E+00	2.713E-01	0.399
RU-106	+	511.85		6.899E-01	2.850E-01	3.508E-01	2.319E-02	1.967
		621.84	*	2.727E-01	2.433E-01	4.217E-01	3.103E-02	0.647
		1050.47		1.266E+00	1.812E+00	3.175E+00	2.713E-01	0.399
AG-108M		433.93	*	8.889E-03	2.391E-02	4.061E-02	2.653E-03	0.219
		614.37		-6.803E-03	3.591E-02	4.905E-02	3.779E-03	-0.139
		722.95		1.228E-02	3.539E-02	5.243E-02	4.636E-03	0.234
AG-110M		657.75	*	-8.934E-03	2.750E-02	4.524E-02	3.568E-03	-0.197
		677.61		1.563E-01	2.377E-01	4.137E-01	3.356E-02	0.378
		706.67		3.123E-02	1.596E-01	2.696E-01	2.294E-02	0.116
		763.93		3.256E-02	1.363E-01	1.989E-01	1.860E-02	0.164
		884.67		1.676E-02	3.925E-02	6.618E-02	7.474E-03	0.253
		937.48		-2.794E-02	8.541E-02	1.351E-01	1.479E-02	-0.207
		1384.27		1.563E-01	1.443E-01	2.316E-01	1.795E-02	0.675
IN-111		171.28		1.269E-01	8.001E-01	1.357E+00	7.140E-02	0.093
		245.39	*	4.458E-01	8.362E-01	1.252E+00	6.995E-02	0.356
IN-113M		391.69	*	-9.680E-03	3.502E-02	5.785E-02	3.549E-03	-0.167
SN-113		391.69	*	-9.680E-03	3.502E-02	5.785E-02	3.549E-03	-0.167
IN-114M		190.27	*	1.096E-01	1.510E-01	2.319E-01	1.238E-02	0.473
CD-115		260.90		1.495E+01	1.039E+02	1.712E+02	9.665E+00	0.087

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		492.35		-1.067E+01	2.762E+01	4.429E+01	2.867E+00	-0.241
		527.90	*	-6.429E+00	8.556E+00	1.311E+01	8.811E-01	-0.490
SN-117M		156.02		-3.898E-01	1.820E+00	3.063E+00	1.636E-01	-0.127
		158.56	*	-1.690E-03	4.334E-02	7.333E-02	3.897E-03	-0.023
SB-122		563.90	*	5.403E-01	1.603E+00	2.663E+00	1.856E-01	0.203
		692.80		1.829E+01	3.332E+01	5.754E+01	4.639E+00	0.318
I-123		159.00	*	-4.212E-01	3.332E+01	Half-Life too short		
		528.96		-3.837E+02	3.332E+01	Half-Life too short		
TE-123M		159.00	*	-1.975E-03	2.239E-02	3.780E-02	2.040E-03	-0.052
I-124		602.71	*	1.617E-01	6.694E-01	9.436E-01	6.823E-02	0.171
		722.78		1.406E+00	3.729E+00	5.539E+00	4.707E-01	0.254
		1325.50		-2.578E+00	2.513E+01	4.067E+01	3.035E+00	-0.063
		1376.25		5.251E+01	2.791E+01	4.795E+01	3.590E+00	1.095
		1509.49		2.129E+01	1.289E+01	2.464E+01	1.765E+00	0.864
		1691.02		7.124E-02	3.028E+00	5.017E+00	3.236E-01	0.014
SB-124		602.71		9.340E-03	3.866E-02	5.450E-02	3.942E-03	0.171
		645.85		-9.739E-02	3.599E-01	5.654E-01	4.583E-02	-0.172
		709.31		-5.958E-01	2.162E+00	3.541E+00	2.939E-01	-0.168
		713.82		1.046E+00	1.297E+00	2.259E+00	2.679E-01	0.463
		722.78		1.177E-01	3.122E-01	4.637E-01	4.029E-02	0.254
	+	968.20		1.814E+01	3.738E+00	5.786E+00	5.884E-01	3.135
		1045.16		-9.383E-01	1.853E+00	2.975E+00	2.576E-01	-0.315
		1325.50		-2.305E-01	2.247E+00	3.637E+00	2.714E-01	-0.063
		1368.21		-1.013E+00	1.560E+00	2.017E+00	2.580E-01	-0.502
		1436.60		-2.019E-01	2.670E+00	4.292E+00	3.160E-01	-0.047
		1691.02	*	1.407E-03	5.979E-02	9.906E-02	6.834E-03	0.014
SB-125		427.89	*	-7.304E-03	7.119E-02	1.178E-01	7.360E-03	-0.062
	+	463.38		6.623E-01	3.134E-01	4.353E-01	3.120E-02	1.522
		600.56		1.891E-02	1.581E-01	2.505E-01	1.995E-02	0.076
		635.90		7.273E-02	1.960E-01	3.243E-01	2.675E-02	0.224
TE-125M		109.28	*	-6.905E-01	8.717E+00	1.250E+01	1.099E+00	-0.055
I-126		388.63		1.355E-01	1.579E-01	2.759E-01	1.586E-02	0.491
		666.33	*	4.212E-02	1.378E-01	2.353E-01	1.809E-02	0.179
		753.82		5.024E-01	1.136E+00	1.938E+00	1.737E-01	0.259
SB-126		223.80		-7.784E-01	3.330E+00	5.459E+00	3.001E-01	-0.143
		278.60		1.753E+00	2.013E+00	3.406E+00	1.941E-01	0.515
	+	296.50		1.278E+01	1.837E+00	3.050E+00	1.751E-01	4.190
		414.70		4.193E-02	5.891E-02	1.019E-01	6.024E-03	0.412
		415.30		1.556E+00	4.828E+00	8.192E+00	4.849E-01	0.190
		555.20		9.120E-01	2.998E+00	4.982E+00	3.442E-01	0.183
		573.80		3.108E-01	8.173E-01	1.359E+00	9.563E-02	0.229
		593.00		-9.085E-04	7.220E-01	1.169E+00	8.374E-02	-0.001
		656.30		1.549E+00	2.592E+00	4.504E+00	3.417E-01	0.344
		666.33		1.760E-02	5.759E-02	9.835E-02	7.561E-03	0.179
		675.00		1.885E+00	1.577E+00	2.819E+00	2.201E-01	0.669
		695.00		4.851E-02	5.959E-02	1.043E-01	8.442E-03	0.465
		697.00		-8.514E-02	2.088E-01	3.397E-01	2.759E-02	-0.251
		720.50	*	-6.288E-02	1.297E-01	1.857E-01	1.572E-02	-0.339
		856.80		1.014E-01	4.153E-01	5.996E-01	6.359E-02	0.169

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		989.30		9.561E-01	1.101E+00	1.680E+00	1.643E-01	0.569
		1034.80		-8.709E-01	6.667E+00	1.061E+01	9.424E-01	-0.082
		1213.00		-1.445E+00	3.600E+00	5.764E+00	3.466E-01	-0.251
SB-127		61.10		-7.205E+01	6.140E+01	9.738E+01	1.021E+01	-0.740
		252.40		8.383E-01	3.367E+00	5.562E+00	2.310E+00	0.151
		290.80		-1.785E+01	1.974E+01	2.610E+01	2.382E+00	-0.684
		411.60		6.590E+00	9.920E+00	1.703E+01	2.456E+00	0.387
		444.90		2.050E+00	7.850E+00	1.276E+01	1.402E+00	0.161
		473.00		-1.511E-01	1.229E+00	2.013E+00	2.309E-01	-0.075
		543.00		-1.750E+01	1.212E+01	1.724E+01	2.311E+00	-1.015
		603.60		-9.086E+00	1.219E+01	1.572E+01	1.825E+00	-0.578
		685.20	*	-3.690E-01	9.782E-01	1.592E+00	1.735E-01	-0.232
		698.50		-3.684E+00	1.176E+01	1.923E+01	2.994E+00	-0.192
		722.20		-4.025E+00	2.694E+01	3.809E+01	4.218E+00	-0.106
		783.80		4.446E+00	2.887E+00	5.149E+00	6.694E-01	0.864
XE-127		57.60		-1.399E+00	6.568E+00	1.091E+01	8.410E-01	-0.128
		145.22		-7.578E-03	6.005E-01	9.397E-01	5.137E-02	-0.008
		172.10		-4.589E-02	9.652E-02	1.597E-01	8.406E-03	-0.287
		202.84	*	-9.028E-03	3.816E-02	6.085E-02	3.285E-03	-0.148
		374.96		2.379E-02	1.430E-01	2.426E-01	1.399E-02	0.098
I-131		80.18		4.461E-01	4.249E+00	6.293E+00	5.486E-01	0.071
		284.30		-5.339E-01	1.208E+00	1.919E+00	1.223E-01	-0.278
		364.48	*	-3.651E-03	8.458E-02	1.422E-01	9.180E-03	-0.026
		636.97		-5.334E-01	1.135E+00	1.756E+00	1.407E-01	-0.304
		722.89		2.141E+00	5.985E+00	8.875E+00	7.594E-01	0.241
TE-132		49.72		2.378E+00	2.529E+01	4.283E+01	4.375E+00	0.056
		111.76		1.241E+01	2.595E+01	4.267E+01	3.965E+00	0.291
		116.30		2.120E+01	2.347E+01	3.912E+01	3.556E+00	0.542
		228.16	*	1.786E-01	5.696E-01	9.529E-01	1.359E-01	0.187
BA-133		53.15		-7.596E-01	4.361E+00	7.287E+00	5.783E-01	-0.104
		79.62		5.710E-01	1.220E+00	1.836E+00	2.796E-01	0.311
		81.00		-9.360E-02	9.561E-02	1.321E-01	2.105E-02	-0.708
		276.40		4.621E-01	3.221E-01	5.164E-01	6.670E-02	0.895
		302.84		-6.618E-02	1.351E-01	1.840E-01	2.141E-02	-0.360
		356.01	*	3.507E-02	3.721E-02	5.556E-02	6.418E-03	0.631
		383.85		-4.654E-02	2.189E-01	3.630E-01	3.938E-02	-0.128
I-133	+	510.53		1.452E+00	2.189E-01	Half-Life too short		
		529.87	*	-4.872E-03	2.189E-01	Half-Life too short		
		706.58		6.772E-02	2.189E-01	Half-Life too short		
		856.28		-2.382E-01	2.189E-01	Half-Life too short		
		875.33		-5.348E-02	2.189E-01	Half-Life too short		
		1236.41		9.648E-01	2.189E-01	Half-Life too short		
		1298.22		3.055E-02	2.189E-01	Half-Life too short		
CS-134		475.35		-6.495E-01	1.415E+00	2.266E+00	1.440E-01	-0.287
		563.23		1.267E-01	2.761E-01	4.623E-01	3.266E-02	0.274
		569.32		3.407E-02	1.505E-01	2.482E-01	1.774E-02	0.137
		604.70		-2.424E-02	3.477E-02	4.512E-02	3.281E-03	-0.537
	+	795.84	*	7.850E-02	4.783E-02	6.579E-02	6.363E-03	1.193
		801.93		-4.310E-01	3.387E-01	4.436E-01	4.328E-02	-0.972

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1038.57		1.531E-01	2.685E+00	4.515E+00	3.972E-01	0.034
		1167.94		4.483E-01	1.911E+00	3.219E+00	1.825E-01	0.139
		1365.15		5.600E-01	9.154E-01	1.589E+00	1.264E-01	0.352
CS-135		268.24	*	1.434E-01	1.430E-01	2.171E-01	1.641E-02	0.660
I-135		288.45		-1.746E+10	1.430E-01	Half-Life too short		
		417.63		-1.594E+10	1.430E-01	Half-Life too short		
		546.56		1.098E+10	1.430E-01	Half-Life too short		
		836.80		2.321E+10	1.430E-01	Half-Life too short		
		1038.76		-7.400E+08	1.430E-01	Half-Life too short		
		1124.00		3.513E+10	1.430E-01	Half-Life too short		
		1131.51		5.172E+09	1.430E-01	Half-Life too short		
		1260.41	*	-2.694E+09	1.430E-01	Half-Life too short		
		1457.56		9.161E+11	1.430E-01	Half-Life too short		
		1678.03		6.569E+08	1.430E-01	Half-Life too short		
		1706.46		-1.039E+10	1.430E-01	Half-Life too short		
		1791.20		-3.352E+09	1.430E-01	Half-Life too short		
CS-136		66.91		-1.118E+00	8.274E-01	1.245E+00	1.880E-01	-0.898
	+	86.29		3.450E+00	1.454E+00	1.850E+00	2.439E-01	1.865
		153.22		1.436E-01	5.211E-01	8.934E-01	6.150E-02	0.161
		163.89		6.443E-01	8.612E-01	1.493E+00	1.020E-01	0.431
		176.55		5.209E-02	2.982E-01	5.050E-01	3.060E-02	0.103
		273.65		-2.389E-01	4.049E-01	5.544E-01	3.611E-02	-0.431
		340.57		5.628E-01	1.335E-01	2.264E-01	1.393E-02	2.486
		818.51		-1.251E-02	5.551E-02	8.979E-02	8.965E-03	-0.139
		1048.07	*	4.857E-02	8.364E-02	1.456E-01	1.305E-02	0.334
		1235.34		7.586E-01	5.737E-01	8.759E-01	9.005E-02	0.866
BA-137M		661.65	*	-4.518E-03	2.783E-02	4.623E-02	3.524E-03	-0.098
CS-137		661.65	*	-4.776E-03	2.942E-02	4.887E-02	3.734E-03	-0.098
CE-139		165.85	*	1.800E-03	2.384E-02	4.039E-02	2.120E-03	0.045
BA-140		162.64		2.788E-01	5.973E-01	1.027E+00	6.227E-02	0.271
		304.84		-4.472E-01	1.227E+00	1.680E+00	4.583E-01	-0.266
		423.70		4.615E-02	1.480E+00	2.469E+00	7.854E-01	0.019
		537.32	*	-4.261E-03	1.899E-01	3.097E-01	1.013E-01	-0.014
LA-140	+	328.77		3.385E-01	2.963E-01	4.304E-01	2.789E-02	0.787
		432.53		4.212E-01	1.552E+00	2.621E+00	1.738E-01	0.161
		487.03		2.113E-02	1.029E-01	1.716E-01	1.224E-02	0.123
		751.79		-4.808E-01	1.317E+00	2.129E+00	2.092E-01	-0.226
		815.85		-4.528E-03	2.339E-01	3.847E-01	4.158E-02	-0.012
		867.82		6.516E-01	1.164E+00	1.741E+00	1.942E-01	0.374
		919.63		3.784E-01	2.066E+00	3.345E+00	4.226E-01	0.113
		925.24		3.217E-01	8.495E-01	1.425E+00	1.614E-01	0.226
		1596.49	*	2.767E-02	6.930E-02	1.199E-01	8.228E-03	0.231
CE-141		145.44	*	-2.911E-03	5.441E-02	8.498E-02	4.851E-03	-0.034
CE-143		57.37		-2.110E-04	5.441E-02	Half-Life too short		
		231.56		-7.804E-04	5.441E-02	Half-Life too short		
		293.26	*	6.484E-04	5.441E-02	Half-Life too short		
	+	350.59		3.059E-02	5.441E-02	Half-Life too short		
		490.36		-1.046E-03	5.441E-02	Half-Life too short		
		664.57		8.996E-04	5.441E-02	Half-Life too short		

---- Non-Identified Nuclides ----

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		721.93		-2.882E-04	5.441E-02	Half-Life too short		
CE-144		80.11		2.705E-01	1.952E+00	2.897E+00	2.508E-01	0.093
		133.54	*	2.281E-01	1.866E-01	2.801E-01	3.961E-02	0.814
PM-144		476.78		-4.912E-03	4.962E-02	8.134E-02	6.036E-03	-0.060
		618.01		-4.291E-03	2.752E-02	4.123E-02	3.139E-03	-0.104
		696.49	*	-9.032E-03	2.668E-02	4.361E-02	3.540E-03	-0.207
		778.57		-1.533E+00	1.777E+00	2.748E+00	2.569E-01	-0.558
PR-144		696.49	*	-6.121E-01	1.808E+00	2.955E+00	2.398E-01	-0.207
		1489.15		-5.719E+00	9.557E+00	1.428E+01	1.031E+00	-0.401
PM-146		453.90	*	2.221E-02	3.467E-02	5.937E-02	5.281E-03	0.374
		633.02		5.870E-01	1.026E+00	1.685E+00	6.255E-01	0.348
		735.90		-1.405E-01	1.372E-01	1.663E-01	4.760E-02	-0.845
		747.13		5.691E-03	6.986E-02	1.166E-01	1.655E-02	0.049
ND-147	+	91.11		6.097E-01	2.075E-01	4.448E-01	4.183E-02	1.371
		319.41		-1.249E+00	2.757E+00	4.331E+00	2.502E-01	-0.288
		439.89		-8.737E-01	4.166E+00	6.827E+00	4.165E-01	-0.128
		531.02	*	5.830E-02	4.191E-01	6.913E-01	9.645E-02	0.084
PM-149		285.90	*	6.738E+01	7.359E+01	1.241E+02	1.755E+01	0.543
EU-152		121.78		-2.967E-02	6.180E-02	9.694E-02	7.471E-03	-0.306
		244.69		3.064E-01	2.692E-01	4.172E-01	2.330E-02	0.735
		344.27	*	-9.615E-02	9.927E-02	1.155E-01	7.536E-03	-0.833
		443.98		-2.061E-01	7.531E-01	1.185E+00	7.263E-02	-0.174
		778.89		-1.887E-01	2.054E-01	3.161E-01	2.955E-02	-0.597
		867.32		5.970E-01	6.676E-01	1.035E+00	1.116E-01	0.577
	+	964.01		5.197E-01	3.007E-01	4.638E-01	4.751E-02	1.120
		1085.78		-3.866E-02	2.859E-01	4.713E-01	3.652E-02	-0.082
		1112.02		8.013E-02	2.503E-01	3.701E-01	2.635E-02	0.216
		1407.95		1.514E-01	1.535E-01	2.723E-01	2.023E-02	0.556
GD-153		69.67		-7.019E-01	1.747E+00	2.547E+00	2.067E-01	-0.276
		83.37		1.402E+01	1.464E+01	2.209E+01	1.963E+00	0.635
		97.43	*	-1.935E-03	7.563E-02	1.097E-01	8.581E-03	-0.018
		103.18		-5.271E-02	9.982E-02	1.399E-01	1.009E-02	-0.377
EU-154		123.07		-9.245E-03	4.392E-02	6.976E-02	6.597E-03	-0.133
		247.94		-2.956E-02	2.952E-01	4.222E-01	3.977E-02	-0.070
		591.81		-1.428E-01	4.865E-01	7.714E-01	8.204E-02	-0.185
		723.30		9.173E-02	1.494E-01	2.264E-01	2.134E-02	0.405
		756.87		4.732E-01	5.913E-01	1.028E+00	1.261E-01	0.460
		873.19		-1.290E-01	2.189E-01	3.393E-01	4.726E-02	-0.380
		996.32		-3.052E-01	3.035E-01	4.416E-01	8.075E-02	-0.691
		1004.76		-1.718E-01	1.697E-01	2.484E-01	3.054E-02	-0.692
		1274.45	*	3.948E-02	9.426E-02	1.600E-01	1.598E-02	0.247
TB-160	+	86.79		8.490E-01	3.485E-01	4.671E-01	4.273E-02	1.818
		197.04		-4.684E-02	4.478E-01	7.349E-01	3.947E-02	-0.064
		215.65		4.208E-03	6.897E-01	1.006E+00	5.494E-02	0.004
		298.57		2.204E-01	9.601E-02	1.699E-01	9.758E-03	1.297
		879.36	*	-2.782E-02	1.050E-01	1.680E-01	1.845E-02	-0.166
		962.29		8.079E-01	4.980E-01	7.896E-01	8.112E-02	1.023
		966.15		1.320E+00	2.573E-01	4.514E-01	4.607E-02	2.925
		1177.93		1.327E-01	2.712E-01	4.647E-01	2.595E-02	0.286

---- Non-Identified Nuclides ----

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		1271.85		-4.461E-01	5.670E-01	8.681E-01	5.867E-02	-0.514
HO-166M		80.57		-5.438E-02	2.522E-01	3.672E-01	3.191E-02	-0.148
		184.41		3.459E-02	3.368E-02	5.344E-02	2.839E-03	0.647
		280.46		-6.180E-02	6.960E-02	1.082E-01	6.172E-03	-0.571
		410.95		2.550E-01	1.957E-01	3.467E-01	2.041E-02	0.736
		711.68	*	-1.565E-02	4.724E-02	7.706E-02	6.423E-03	-0.203
		752.31		-9.767E-03	2.079E-01	3.439E-01	3.075E-02	-0.028
		810.29		-3.816E-02	4.371E-02	6.681E-02	6.578E-03	-0.571
TM-171		51.35		2.727E+01	3.852E+01	6.658E+01	5.277E+00	0.410
		52.39		-5.405E+00	1.938E+01	3.226E+01	2.563E+00	-0.168
		59.40		-4.081E+00	2.781E+01	4.626E+01	3.513E+00	-0.088
		66.72	*	-2.493E+01	2.930E+01	4.582E+01	3.663E+00	-0.544
LU-176	+	88.36		6.257E-01	2.568E-01	3.420E-01	3.140E-02	1.830
		201.83		-1.585E-02	2.256E-02	3.652E-02	1.969E-03	-0.434
		306.84	*	1.986E-02	2.135E-02	3.497E-02	2.013E-03	0.568
		401.10		-4.278E-01	5.276E+00	8.789E+00	5.109E-01	-0.049
LU-177		112.95		-1.879E-02	1.402E+00	2.259E+00	1.456E-01	-0.008
	+	208.36	*	3.117E+00	1.606E+00	1.692E+00	9.178E-02	1.842
LU-177M		52.97		-5.783E-01	1.985E+00	3.301E+00	2.621E-01	-0.175
		54.07		-2.991E-01	1.002E+00	1.664E+00	1.316E-01	-0.180
		61.30		-1.898E+00	1.564E+00	2.485E+00	1.920E-01	-0.764
		121.62		-1.356E-01	3.176E-01	4.997E-01	2.964E-02	-0.271
		147.16		-3.249E-01	5.556E-01	8.567E-01	4.662E-02	-0.379
		171.86		-1.606E-01	3.863E-01	6.406E-01	3.372E-02	-0.251
		218.09		3.388E-01	6.942E-01	1.174E+00	6.419E-02	0.289
	+	268.79		2.428E+00	1.011E+00	1.188E+00	6.736E-02	2.044
		319.02		-1.999E-01	2.137E-01	3.261E-01	1.883E-02	-0.613
		367.43		8.990E-02	6.669E-01	1.131E+00	6.533E-02	0.079
		413.65	*	-9.554E-02	1.440E-01	2.319E-01	1.369E-02	-0.412
HF-181		56.28		1.754E-01	1.056E+00	1.783E+00	1.389E-01	0.098
		57.53		-9.884E-02	5.523E-01	9.190E-01	7.087E-02	-0.108
		65.20		-7.719E-01	1.013E+00	1.595E+00	1.265E-01	-0.484
		133.02		-3.048E-03	6.208E-02	8.781E-02	4.967E-03	-0.035
		136.25		7.736E-02	3.825E-01	6.146E-01	3.442E-02	0.126
		345.85		-1.881E-01	1.756E-01	2.225E-01	1.287E-02	-0.845
		482.03	*	2.139E-02	3.148E-02	5.402E-02	3.458E-03	0.396
W-181		56.28		6.881E-02	4.131E-01	6.975E-01	5.434E-02	0.099
		57.53		-3.871E-02	2.163E-01	3.599E-01	2.775E-02	-0.108
		65.20	*	-2.998E-01	3.937E-01	6.198E-01	4.916E-02	-0.484
TA-182		67.75		-1.977E-01	1.134E-01	1.695E-01	1.363E-02	-1.166
		100.10		3.131E-02	1.533E-01	2.512E-01	1.889E-02	0.125
		152.43		-1.407E-01	2.882E-01	4.452E-01	2.395E-02	-0.316
		222.10		1.396E-02	2.834E-01	4.703E-01	2.582E-02	0.030
		1001.68		1.130E+00	1.624E+00	2.679E+00	2.557E-01	0.422
	+	1121.28		7.441E-01	1.934E-01	2.755E-01	1.898E-02	2.700
		1189.05		1.516E-01	2.204E-01	3.832E-01	2.191E-02	0.396
		1221.42	*	9.901E-02	1.507E-01	2.597E-01	1.589E-02	0.381
		1230.97		-3.033E-01	4.020E-01	5.619E-01	3.505E-02	-0.540
RE-183		57.98		-3.670E-02	2.135E-01	3.553E-01	2.729E-02	-0.103

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		59.32		-2.093E-02	1.144E-01	1.901E-01	1.444E-02	-0.110
		67.20		-2.915E-01	2.046E-01	3.112E-01	2.494E-02	-0.937
		162.32	*	-8.409E-03	8.748E-02	1.475E-01	7.784E-03	-0.057
	+	208.81		2.791E+00	1.439E+00	1.524E+00	8.269E-02	1.832
		291.72		-4.109E-01	8.350E-01	1.142E+00	6.544E-02	-0.360
RE-184		57.98		-1.352E-01	7.866E-01	1.309E+00	1.005E-01	-0.103
		59.32		-7.703E-02	4.212E-01	6.997E-01	5.316E-02	-0.110
		67.20		-1.074E+00	7.536E-01	1.146E+00	9.186E-02	-0.937
		161.27		-1.393E-01	2.830E-01	4.701E-01	2.486E-02	-0.296
		216.55		-3.790E-02	2.243E-01	3.570E-01	1.950E-02	-0.106
		252.85	*	4.682E-02	1.790E-01	2.973E-01	1.670E-02	0.157
		318.01		-1.263E-01	3.659E-01	5.785E-01	3.339E-02	-0.218
		792.07		-4.262E-02	9.587E-01	1.355E+00	1.295E-01	-0.031
		903.28		-3.306E-01	9.072E-01	1.214E+00	1.363E-01	-0.272
		920.93		9.218E-02	3.364E-01	5.603E-01	6.140E-02	0.165
OS-185		59.72		2.488E-02	3.029E-01	5.083E-01	3.866E-02	0.049
		61.14		-2.044E-01	1.727E-01	2.747E-01	2.120E-02	-0.744
		69.30		-1.370E-01	3.143E-01	4.574E-01	3.705E-02	-0.299
		592.07		-5.254E-02	1.966E+00	3.177E+00	2.274E-01	-0.017
		646.12	*	-2.891E-03	3.082E-02	4.914E-02	3.695E-03	-0.059
		717.42		-8.948E-02	7.193E-01	1.189E+00	1.001E-01	-0.075
		874.81		-2.649E-01	4.201E-01	6.483E-01	7.072E-02	-0.409
		880.27		-9.356E-02	5.938E-01	9.589E-01	1.055E-01	-0.098
RE-188		155.03	*	1.487E-01	1.356E-01	2.386E-01	1.277E-02	0.623
		477.96		9.810E-01	2.285E+00	3.867E+00	2.464E-01	0.254
		633.10		1.064E+00	2.043E+00	3.416E+00	2.539E-01	0.311
W-188		63.58		3.450E+01	5.505E+01	9.281E+01	7.292E+00	0.372
		227.08		7.150E+00	1.049E+01	1.782E+01	9.818E-01	0.401
		290.67	*	-6.210E+00	6.771E+00	8.962E+00	5.133E-01	-0.693
IR-192	+	295.96		9.769E-01	1.408E-01	2.390E-01	1.394E-02	4.087
		308.46		1.932E-02	7.932E-02	1.297E-01	7.560E-03	0.149
		316.51	*	-1.138E-02	2.796E-02	4.406E-02	2.555E-03	-0.258
		468.07		4.628E-04	5.520E-02	7.913E-02	5.639E-03	0.006
		604.41		-3.884E-01	4.741E-01	6.061E-01	7.365E-02	-0.641
		612.46		1.987E+00	7.525E-01	1.223E+00	1.073E-01	1.625
AU-195		65.12		-1.249E-01	1.830E-01	2.891E-01	2.292E-02	-0.432
		66.83		-1.277E-01	9.800E-02	1.503E-01	1.202E-02	-0.850
	+	75.70		1.205E+00	2.621E-01	4.241E-01	3.562E-02	2.841
		98.88	*	2.647E-01	1.924E-01	3.287E-01	2.515E-02	0.805
	+	129.76		6.214E+00	3.405E+00	4.329E+00	2.477E-01	1.435
TL-200		367.94	*	7.909E-05	3.405E+00	Half-Life too short		
		579.30		1.665E-03	3.405E+00	Half-Life too short		
		828.27		1.674E-03	3.405E+00	Half-Life too short		
		1205.75		8.371E-04	3.405E+00	Half-Life too short		
TL-201		68.90		-1.655E+00	4.745E+00	7.406E+00	5.987E-01	-0.223
		70.82		2.945E+00	2.770E+00	4.308E+00	3.517E-01	0.684
		80.30		-8.860E-01	4.719E+00	6.883E+00	5.968E-01	-0.129
		135.34		-1.874E+01	2.202E+01	3.372E+01	1.893E+00	-0.556
		167.43	*	-4.680E+00	5.646E+00	9.224E+00	4.842E-01	-0.507

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TL-202		68.90		-1.478E-01	4.237E-01	6.614E-01	5.347E-02	-0.223
		70.82		2.623E-01	2.467E-01	3.836E-01	3.132E-02	0.684
		80.30		-7.893E-02	4.204E-01	6.132E-01	5.317E-02	-0.129
		439.56	*	4.138E-03	4.927E-02	8.225E-02	5.014E-03	0.050
HG-203		70.83		1.138E+00	1.074E+00	1.660E+00	2.211E-01	0.686
		72.87		8.791E-01	6.549E-01	1.013E+00	1.314E-01	0.868
		82.60		-1.153E+00	1.246E+00	1.569E+00	2.177E-01	-0.735
		279.20	*	2.247E-02	3.287E-02	5.521E-02	3.348E-03	0.407
BI-207		72.80		2.307E-01	1.894E-01	2.945E-01	2.431E-02	0.783
	+	74.97		6.681E-01	1.454E-01	2.178E-01	1.821E-02	3.068
		84.90		2.317E-01	1.885E-01	2.868E-01	2.581E-02	0.808
		569.67		3.302E-03	2.375E-02	3.893E-02	2.728E-03	0.085
		1063.62	*	2.590E-02	3.916E-02	6.855E-02	5.659E-03	0.378
		1770.23		2.685E-02	4.085E-01	5.781E-01	3.497E-02	0.046
TL-207		81.07		-2.069E-01	2.091E-01	2.913E-01	2.541E-02	-0.710
		83.78		1.073E-01	1.260E-01	1.894E-01	1.688E-02	0.567
		94.90		3.999E-01	2.189E-01	3.443E-01	2.803E-02	1.161
		122.32		-1.108E+00	1.490E+00	2.307E+00	1.567E-01	-0.480
		144.24		4.526E-01	5.869E-01	9.488E-01	6.621E-02	0.477
		154.21		3.706E-01	3.079E-01	5.436E-01	3.617E-02	0.682
	+	269.46		5.682E-01	2.368E-01	2.898E-01	1.721E-02	1.961
		323.87	*	2.358E-01	6.118E-01	8.820E-01	1.456E-01	0.267
	+	338.28		7.025E+00	1.567E+00	2.126E+00	2.237E-01	3.304
		445.03		7.057E-01	1.806E+00	2.957E+00	3.094E-01	0.239
PO-209		260.50		1.624E+00	7.647E+00	1.264E+01	7.135E-01	0.128
		262.80		-7.665E+00	2.106E+01	3.382E+01	1.911E+00	-0.227
		896.60	*	1.823E+00	5.811E+00	9.713E+00	1.096E+00	0.188
BI-210		46.50	*	2.185E+00	4.746E+00	8.176E+00	6.326E-01	0.267
PB-210		46.50	*	2.185E+00	4.746E+00	8.176E+00	6.326E-01	0.267
PO-210		46.50	*	2.185E+00	4.746E+00	8.176E+00	5.439E-01	0.267
PB-211		404.84	*	-4.032E-01	7.897E-01	1.217E+00	7.587E-01	-0.331
		427.08		-2.878E-01	1.609E+00	2.636E+00	1.630E+00	-0.109
		831.96		-8.868E-01	1.110E+00	1.472E+00	9.262E-01	-0.602
BI-212	+	727.18	*	1.005E+00	4.425E-01	5.354E-01	5.332E-02	1.877
		785.46		1.318E+00	1.425E+00	2.484E+00	2.348E-01	0.531
		1620.62		1.618E+00	1.130E+00	2.124E+00	1.436E-01	0.762
PO-215		81.07		-2.069E-01	2.091E-01	2.913E-01	2.541E-02	-0.710
		83.78		1.073E-01	1.260E-01	1.894E-01	1.688E-02	0.567
		94.90		3.999E-01	2.189E-01	3.443E-01	2.803E-02	1.161
		122.32		-1.108E+00	1.490E+00	2.307E+00	1.567E-01	-0.480
		144.24		4.526E-01	5.869E-01	9.488E-01	6.621E-02	0.477
		154.21		3.706E-01	3.079E-01	5.436E-01	3.617E-02	0.682
	+	269.46		5.682E-01	2.368E-01	2.898E-01	1.721E-02	1.961
		323.87	*	2.358E-01	6.118E-01	8.820E-01	1.456E-01	0.267
	+	338.28		7.025E+00	1.567E+00	2.126E+00	2.237E-01	3.304
		445.03		7.057E-01	1.806E+00	2.957E+00	3.094E-01	0.239
RN-219	+	271.23		7.291E-01	3.064E-01	3.652E-01	2.928E-02	1.996
		401.81	*	-7.016E-02	3.220E-01	5.322E-01	7.246E-02	-0.132
RN-220		549.76	*	-1.239E+01	1.994E+01	3.107E+01	2.135E+00	-0.399

---- Non-Identified Nuclides ----

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RA-223		81.07		-2.069E-01	2.091E-01	2.913E-01	2.541E-02	-0.710
		83.78		1.073E-01	1.260E-01	1.894E-01	1.688E-02	0.567
		94.90		3.999E-01	2.189E-01	3.443E-01	2.803E-02	1.161
		122.32		-1.108E+00	1.490E+00	2.307E+00	1.567E-01	-0.480
		144.24		4.526E-01	5.869E-01	9.488E-01	6.621E-02	0.477
		154.21		3.706E-01	3.079E-01	5.436E-01	3.617E-02	0.682
	+	269.46		5.682E-01	2.368E-01	2.898E-01	1.721E-02	1.961
		323.87	*	2.358E-01	6.118E-01	8.820E-01	1.456E-01	0.267
	+	338.28		7.025E+00	1.567E+00	2.126E+00	2.237E-01	3.304
		445.03		7.057E-01	1.806E+00	2.957E+00	3.094E-01	0.239
AC-227		79.80		4.358E-01	1.525E+00	2.276E+00	4.896E-01	0.191
		236.00		4.253E-01	2.302E-01	3.577E-01	3.690E-02	1.189
		256.20	*	-1.122E-01	3.085E-01	4.964E-01	6.895E-02	-0.226
		286.10		1.162E+00	1.217E+00	2.061E+00	2.374E-01	0.564
	+	299.80		4.490E+00	1.739E+00	2.208E+00	3.592E-01	2.033
		304.40		-1.769E+00	1.832E+00	2.374E+00	4.103E-01	-0.745
		334.20		-6.330E-02	2.171E+00	3.032E+00	5.558E-01	-0.021
TH-227		79.80		4.358E-01	1.525E+00	2.276E+00	4.958E-01	0.191
	+	94.00		7.570E+00	3.190E+00	3.354E+00	7.258E-01	2.257
		236.00		4.253E-01	2.292E-01	3.577E-01	3.183E-02	1.189
		256.20	*	-1.122E-01	3.087E-01	4.964E-01	8.360E-02	-0.226
		286.10		1.162E+00	1.679E+00	2.061E+00	2.064E+00	0.564
	+	299.80		4.490E+00	1.739E+00	2.208E+00	3.592E-01	2.033
		304.40		-1.769E+00	1.832E+00	2.374E+00	4.103E-01	-0.745
		334.20		-6.330E-02	2.171E+00	3.032E+00	5.558E-01	-0.021
TH-229		85.43		2.526E-01	1.892E-01	2.886E-01	2.609E-02	0.875
	+	88.47		3.602E-01	1.478E-01	1.961E-01	1.797E-02	1.836
		100.00		3.575E-02	1.593E-01	2.612E-01	1.967E-02	0.137
		193.63	*	-1.550E-01	3.949E-01	6.498E-01	3.479E-02	-0.238
		210.97		1.534E+00	6.947E-01	1.125E+00	6.114E-02	1.364
PA-231		283.67	*	-8.513E-01	1.241E+00	1.939E+00	2.665E-01	-0.439
	+	301.29		1.796E+00	6.585E-01	8.790E-01	9.162E-02	2.043
TH-231		81.07		-2.069E-01	2.091E-01	2.913E-01	2.541E-02	-0.710
		83.78		1.073E-01	1.260E-01	1.894E-01	1.688E-02	0.567
		94.90		3.999E-01	2.189E-01	3.443E-01	2.803E-02	1.161
		122.32		-1.108E+00	1.490E+00	2.307E+00	1.567E-01	-0.480
		144.24		4.526E-01	5.869E-01	9.488E-01	6.621E-02	0.477
		154.21		3.706E-01	3.079E-01	5.436E-01	3.617E-02	0.682
	+	269.46		5.682E-01	2.368E-01	2.898E-01	1.721E-02	1.961
		323.87	*	2.358E-01	6.118E-01	8.820E-01	1.456E-01	0.267
	+	338.28		7.025E+00	1.567E+00	2.126E+00	2.237E-01	3.304
		445.03		7.057E-01	1.806E+00	2.957E+00	3.094E-01	0.239
U-231		84.21		4.903E+00	5.407E+00	8.138E+00	7.280E-01	0.602
	+	92.29		7.527E+00	2.792E+00	3.560E+00	3.031E-01	2.114
		95.87	*	-1.063E-01	9.830E-01	1.421E+00	1.139E-01	-0.075
		108.00		-1.257E-01	1.932E+00	2.776E+00	1.887E-01	-0.045
PA-233	+	75.28		1.950E+01	4.912E+00	6.453E+00	9.817E-01	3.021
	+	86.59		5.164E+00	2.493E+00	2.824E+00	7.623E-01	1.828
	+	300.12		1.252E+00	4.710E-01	6.155E-01	8.256E-02	2.034

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		311.98	*	-4.722E-03	5.151E-02	8.273E-02	5.068E-03	-0.057
		340.50		2.983E+00	9.333E-01	1.125E+00	2.584E-01	2.651
		398.62		-6.183E-01	1.638E+00	2.675E+00	6.915E-01	-0.231
		415.76		-6.182E-01	1.292E+00	2.088E+00	4.306E-01	-0.296
PA-234		63.00		8.219E-01	1.655E+00	2.775E+00	4.184E-01	0.296
		94.67		4.204E-01	1.671E-01	2.612E-01	3.159E-02	1.609
		98.44		7.033E-02	8.725E-02	1.315E-01	7.321E-02	0.535
		99.86		1.017E-01	4.039E-01	6.631E-01	5.003E-02	0.153
		111.00		6.193E-02	1.568E-01	2.572E-01	2.759E-02	0.241
		131.20		9.699E-02	9.833E-02	1.474E-01	8.389E-03	0.658
		152.70		-8.672E-02	2.780E-01	4.325E-01	6.772E-02	-0.200
	+	186.00		5.106E+00	2.355E+00	2.154E+00	6.563E-01	2.370
		226.40		1.576E-01	3.277E-01	5.519E-01	6.301E-02	0.286
		227.20		2.505E-01	3.540E-01	6.018E-01	3.317E-02	0.416
		248.90		-2.319E-01	6.229E-01	9.643E-01	2.067E-01	-0.240
		293.70		4.787E+00	1.096E+00	1.404E+00	2.254E-01	3.411
		369.80		1.975E-01	6.320E-01	1.079E+00	2.246E-01	0.183
		568.70		-1.191E-01	7.738E-01	1.244E+00	8.712E-02	-0.096
		569.50		2.251E-02	2.103E-01	3.440E-01	2.411E-02	0.065
		574.00		6.336E-01	1.148E+00	1.931E+00	1.359E-01	0.328
		699.00		-1.398E-01	5.476E-01	8.988E-01	1.696E-01	-0.156
		706.10		1.760E-01	7.922E-01	1.334E+00	5.939E-01	0.132
		733.00		3.170E-01	3.007E-01	4.668E-01	1.037E-01	0.679
		742.81		7.538E-01	1.154E+00	1.806E+00	1.215E+00	0.417
	+	796.30		1.526E+00	1.008E+00	1.264E+00	3.461E-01	1.207
		805.60		4.621E-01	7.422E-01	1.258E+00	3.897E-01	0.367
		819.60		-3.291E-01	9.478E-01	1.505E+00	5.775E-01	-0.219
		826.30		4.013E-01	6.606E-01	1.093E+00	4.926E-01	0.367
		831.60		-7.027E-01	5.450E-01	7.404E-01	2.246E-01	-0.949
		876.40		2.048E-01	6.443E-01	1.024E+00	1.055E+00	0.200
		880.51		5.717E-02	2.110E-01	3.525E-01	3.879E-02	0.162
		883.24		7.812E-02	2.291E-01	3.744E-01	2.530E-01	0.209
		899.00		-7.445E-02	6.815E-01	1.102E+00	4.885E-01	-0.068
		925.00		1.485E-01	8.894E-01	1.468E+00	1.599E-01	0.101
		926.50		7.963E-03	1.294E-01	2.117E-01	5.532E-02	0.038
		946.00	*	1.403E-01	2.142E-01	3.649E-01	7.199E-02	0.384
		949.00		1.346E-01	3.269E-01	5.489E-01	5.764E-02	0.245
		980.50		-1.881E-01	5.896E-01	9.293E-01	9.243E-02	-0.202
		1394.10		-1.135E+00	1.203E+00	1.339E+00	8.698E-01	-0.848
PA-234M	+	766.42		1.936E+01	1.518E+01	1.666E+01	8.469E+00	1.162
		1001.03	*	2.164E+00	3.741E+00	6.120E+00	6.602E-01	0.354
TH-234		63.29	*	9.575E-01	1.401E+00	2.353E+00	4.149E-01	0.407
	+	92.38		1.959E+00	7.906E-01	9.259E-01	1.669E-01	2.116
NP-236		94.67		3.211E-01	1.236E-01	1.984E-01	1.621E-02	1.619
		98.44		5.314E-02	5.909E-02	9.944E-02	7.658E-03	0.534
		111.00		4.684E-02	1.185E-01	1.945E-01	1.279E-02	0.241
		160.31	*	-1.323E-02	6.267E-02	1.053E-01	5.577E-03	-0.126
U-238		63.29	*	9.575E-01	1.401E+00	2.353E+00	4.149E-01	0.407
	+	92.38		1.959E+00	7.266E-01	9.259E-01	7.870E-02	2.116

---- 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		6.474E-02	1.346E-01	2.230E-01	1.690E-02	0.290
		117.00	*	7.269E-02	1.611E-01	2.643E-01	1.636E-02	0.275
	+	209.75		2.201E+00	1.134E+00	1.191E+00	6.467E-02	1.849
		228.18		5.650E-02	1.845E-01	3.088E-01	1.703E-02	0.183
		277.60		1.083E-01	1.449E-01	2.440E-01	1.390E-02	0.444
		334.30		2.049E-02	1.232E+00	1.727E+00	9.990E-02	0.012
AM-241		59.54	*	-1.353E-02	1.615E-01	2.693E-01	2.234E-02	-0.050
CM-243		99.55		6.661E-02	1.385E-01	2.294E-01	1.739E-02	0.290
		103.76	*	-2.574E-02	9.310E-02	1.325E-01	9.485E-03	-0.194
		117.00		7.478E-02	1.658E-01	2.719E-01	1.683E-02	0.275
	+	209.75		2.170E+00	1.118E+00	1.174E+00	6.375E-02	1.849
		228.18		5.709E-02	1.864E-01	3.120E-01	1.721E-02	0.183
		277.60		1.092E-01	1.461E-01	2.460E-01	1.401E-02	0.444
AM-246		798.80		-1.741E-02	1.076E-01	1.496E-01	1.445E-02	-0.116
		1036.00		-4.948E-02	2.156E-01	3.541E-01	3.135E-02	-0.140
		1062.04		1.060E-01	1.705E-01	2.977E-01	2.468E-02	0.356
		1078.86	*	5.977E-02	1.074E-01	1.865E-01	1.475E-02	0.320
CM-247		278.00		2.888E-01	6.084E-01	1.012E+00	5.768E-02	0.285
		287.40		1.094E-01	9.784E-01	1.598E+00	9.144E-02	0.068
		402.60	*	2.515E-02	2.840E-02	4.960E-02	2.889E-03	0.507
CF-249		252.85		1.756E-01	6.715E-01	1.116E+00	6.266E-02	0.157
		333.44		-1.845E-01	2.039E-01	2.170E-01	1.255E-02	-0.850
		387.95	*	8.300E-03	3.109E-02	5.284E-02	3.038E-03	0.157
CF-251		176.60	*	1.601E-02	1.025E-01	1.735E-01	9.163E-03	0.092
		227.00		2.134E-01	3.146E-01	5.342E-01	2.944E-02	0.399
		285.00		1.797E-01	1.386E+00	2.268E+00	1.296E-01	0.079

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]G1202012145    *
* Acquisition date : 20-JAN-2010 15:47:39 Detector SN#     :               *
* Detector ID        : GAM18               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 02:00:01.58      Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        :  5-JAN-2010 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G1202012145          Analyst initials: MXR1          *
* Batch Number       : 940263               Sample Quantity : 1.2836E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 23-APR-2009 11:59:23 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	2.112E+01	1.962E+00	3.780E-01	0.000E+00
CD-109	2.684E+00	1.080E+00	1.145E+00	0.000E+00
SN-126	2.638E-01	1.061E-01	1.348E-01	0.000E+00
EU-155	1.917E-01	1.188E-01	1.490E-01	0.000E+00
TL-208	4.744E-01	6.772E-02	4.409E-02	0.000E+00
BI-211	3.779E+00	4.569E-01	2.513E-01	0.000E+00
PB-212	1.624E+00	1.457E-01	7.136E-02	0.000E+00
PO-212	1.624E+00	1.457E-01	7.136E-02	0.000E+00
BI-214	1.026E+00	1.604E-01	9.712E-02	0.000E+00
PB-214	1.315E+00	1.726E-01	8.757E-02	0.000E+00
PO-214	1.315E+00	1.726E-01	8.757E-02	0.000E+00
PO-216	1.624E+00	1.457E-01	7.136E-02	0.000E+00
PO-218	1.315E+00	1.726E-01	8.757E-02	0.000E+00
RA-224	4.767E+00	1.089E+00	8.110E-01	0.000E+00
RA-226	1.026E+00	1.604E-01	9.712E-02	0.000E+00
AC-228	1.771E+00	3.066E-01	1.460E-01	0.000E+00
RA-228	1.771E+00	3.066E-01	1.460E-01	0.000E+00
TH-228	1.649E+00	1.479E-01	7.245E-02	0.000E+00
TH-230	1.026E+00	1.604E-01	9.712E-02	0.000E+00
TH-232	1.771E+00	3.066E-01	1.460E-01	0.000E+00
U-234	1.026E+00	1.604E-01	9.712E-02	0.000E+00
U-235	5.655E-02	1.803E-01	3.025E-01	0.000E+00
NP-237	7.747E-01	3.488E-01	3.907E-01	0.000E+00
AM-243	3.722E-01	7.936E-02	8.470E-02	0.000E+00
ANH-511	1.381E-01	5.592E-02	3.413E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	3.851E-02	2.361E-01	4.085E-01	0.000E+00	NOT IDENT.
NA-22	1.007E-02	3.341E-02	5.747E-02	0.000E+00	NOT IDENT.

NA-24	0.000E+00	6.893E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.895E-03	2.315E-02	3.908E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	6.065E-02	8.033E-02	0.000E+00	FAIL ABUN
SC-46	-1.994E-02	3.063E-02	4.878E-02	0.000E+00	FAIL ABUN
V-48	3.280E-03	6.492E-02	9.282E-02	0.000E+00	NOT IDENT.
CR-51	2.242E-03	3.033E-01	5.108E-01	0.000E+00	NOT IDENT.
MN-52	2.628E-03	1.784E-01	2.961E-01	0.000E+00	NOT IDENT.
MN-54	1.789E-02	2.907E-02	5.110E-02	0.000E+00	NOT IDENT.
CO-56	-2.899E-02	3.010E-02	4.690E-02	0.000E+00	FAIL ABUN
CO-57	-1.806E-02	2.105E-02	3.439E-02	0.000E+00	NOT IDENT.
CO-58	-2.413E-02	2.872E-02	4.547E-02	0.000E+00	NOT IDENT.
FE-59	-5.958E-02	5.978E-02	9.271E-02	0.000E+00	NOT IDENT.
CO-60	-5.652E-03	2.807E-02	4.594E-02	0.000E+00	NOT IDENT.
ZN-65	5.673E-03	7.174E-02	1.056E-01	0.000E+00	NOT IDENT.
GE-68	7.776E-01	8.922E-01	1.623E+00	0.000E+00	NOT IDENT.
AS-73	-2.594E-01	9.876E-01	1.764E+00	0.000E+00	NOT IDENT.
AS-74	-9.556E-02	7.525E-02	1.151E-01	0.000E+00	NOT IDENT.
SE-75	9.846E-04	3.771E-02	5.671E-02	0.000E+00	NOT IDENT.
BR-77	-2.591E+00	8.001E+00	1.292E+01	0.000E+00	FAIL ABUN
SR-82	-2.859E-01	2.911E-01	4.605E-01	0.000E+00	NOT IDENT.
RB-83	-1.936E-02	5.213E-02	8.385E-02	0.000E+00	NOT IDENT.
RB-84	2.046E-02	5.240E-02	9.074E-02	0.000E+00	NOT IDENT.
KR-85	0.000E+00	6.331E+00	1.119E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	3.248E-02	5.740E-02	0.000E+00	NOT IDENT.
RB-86	6.014E-01	5.759E-01	1.058E+00	0.000E+00	NOT IDENT.
Y-88	-1.459E-02	2.402E-02	3.593E-02	0.000E+00	NOT IDENT.
ZR-88	-6.094E-03	2.398E-02	4.133E-02	0.000E+00	NOT IDENT.
Y-91	4.755E+00	1.314E+01	2.281E+01	0.000E+00	NOT IDENT.
NB-94	3.092E-03	2.545E-02	4.419E-02	0.000E+00	NOT IDENT.
NB-95	5.558E-02	3.716E-02	6.127E-02	0.000E+00	NOT IDENT.
NB-95M	4.677E-02	1.106E-01	1.718E-01	0.000E+00	NOT IDENT.
ZR-95	1.014E-02	5.323E-02	9.219E-02	0.000E+00	NOT IDENT.
NB-97	0.000E+00	7.814E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.708E+06	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-1.639E+00	8.632E+00	1.460E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	4.001E+16	0.000E+00	0.000E+00	SHORT HLIF
RH-101	4.840E-03	2.615E-02	4.569E-02	0.000E+00	NOT IDENT.
RH-102	-6.986E-03	2.098E-02	3.520E-02	0.000E+00	FAIL ABUN
RU-103	-2.938E-03	2.916E-02	4.943E-02	0.000E+00	FAIL ABUN
RH-106	2.727E-01	2.400E-01	4.275E-01	0.000E+00	FAIL ABUN
RU-106	2.727E-01	2.385E-01	4.275E-01	0.000E+00	FAIL ABUN
AG-108M	8.889E-03	2.343E-02	4.140E-02	0.000E+00	NOT IDENT.
AG-110M	-8.934E-03	2.695E-02	4.582E-02	0.000E+00	NOT IDENT.
IN-111	4.458E-01	8.195E-01	1.287E+00	0.000E+00	NOT IDENT.
IN-113M	-9.680E-03	3.432E-02	5.906E-02	0.000E+00	NOT IDENT.
SN-113	-9.680E-03	3.432E-02	5.906E-02	0.000E+00	NOT IDENT.
IN-114M	1.096E-01	1.480E-01	2.394E-01	0.000E+00	NOT IDENT.
CD-115	-6.429E+00	8.385E+00	1.332E+01	0.000E+00	NOT IDENT.
SN-117M	-1.690E-03	4.248E-02	7.590E-02	0.000E+00	NOT IDENT.
SB-122	5.403E-01	1.571E+00	2.704E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	4.678E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-1.975E-03	2.194E-02	3.913E-02	0.000E+00	NOT IDENT.
I-124	1.617E-01	6.560E-01	9.570E-01	0.000E+00	NOT IDENT.
SB-124	1.407E-03	5.859E-02	9.884E-02	0.000E+00	FAIL ABUN
SB-125	-7.304E-03	6.976E-02	1.201E-01	0.000E+00	FAIL ABUN
TE-125M	-6.905E-01	8.542E+00	1.301E+01	0.000E+00	NOT IDENT.
I-126	4.212E-02	1.351E-01	2.383E-01	0.000E+00	NOT IDENT.
SB-126	-6.288E-02	1.271E-01	1.878E-01	0.000E+00	FAIL ABUN
SB-127	-3.690E-01	9.587E-01	1.611E+00	0.000E+00	NOT IDENT.
XE-127	-9.028E-03	3.739E-02	6.275E-02	0.000E+00	NOT IDENT.
I-131	-3.651E-03	8.288E-02	1.453E-01	0.000E+00	NOT IDENT.
TE-132	1.786E-01	5.582E-01	9.809E-01	0.000E+00	NOT IDENT.
BA-133	3.507E-02	3.646E-02	5.681E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	4.865E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	4.687E-02	6.643E-02	0.000E+00	FAIL ABUN
CS-135	1.434E-01	1.401E-01	2.229E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	4.834E+15	0.000E+00	0.000E+00	SHORT HLIF
CS-136	4.857E-02	8.197E-02	1.464E-01	0.000E+00	FAIL ABUN
BA-137M	-4.518E-03	2.727E-02	4.682E-02	0.000E+00	NOT IDENT.
CS-137	-4.776E-03	2.883E-02	4.949E-02	0.000E+00	NOT IDENT.
CE-139	1.800E-03	2.336E-02	4.178E-02	0.000E+00	NOT IDENT.
BA-140	-4.261E-03	1.861E-01	3.146E-01	0.000E+00	NOT IDENT.
LA-140	2.767E-02	6.791E-02	1.198E-01	0.000E+00	FAIL ABUN
CE-141	-2.911E-03	5.332E-02	8.807E-02	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.971E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	2.281E-01	1.829E-01	2.907E-01	0.000E+00	NOT IDENT.
PM-144	-9.032E-03	2.614E-02	4.413E-02	0.000E+00	NOT IDENT.
PR-144	-6.121E-01	1.772E+00	2.990E+00	0.000E+00	NOT IDENT.

PM-146	2.221E-02	3.397E-02	6.047E-02	0.000E+00	NOT IDENT.
ND-147	5.830E-02	4.107E-01	7.025E-01	0.000E+00	FAIL ABUN
PM-149	6.738E+01	7.212E+01	1.273E+02	0.000E+00	NOT IDENT.
EU-152	-9.615E-02	9.728E-02	1.181E-01	0.000E+00	FAIL ABUN
GD-153	-1.935E-03	7.412E-02	1.144E-01	0.000E+00	NOT IDENT.
EU-154	3.948E-02	9.237E-02	1.604E-01	0.000E+00	NOT IDENT.
TB-160	-2.782E-02	1.029E-01	1.693E-01	0.000E+00	FAIL ABUN
HO-166M	-1.565E-02	4.630E-02	7.795E-02	0.000E+00	NOT IDENT.
TM-171	-2.493E+01	2.871E+01	4.803E+01	0.000E+00	NOT IDENT.
LU-176	1.986E-02	2.093E-02	3.584E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.574E+00	1.744E+00	0.000E+00	FAIL ABUN
LU-177M	-9.554E-02	1.411E-01	2.365E-01	0.000E+00	FAIL ABUN
HF-181	2.139E-02	3.085E-02	5.498E-02	0.000E+00	NOT IDENT.
W-181	-2.998E-01	3.858E-01	6.499E-01	0.000E+00	NOT IDENT.
TA-182	9.901E-02	1.477E-01	2.605E-01	0.000E+00	FAIL ABUN
RE-183	-8.409E-03	8.573E-02	1.526E-01	0.000E+00	FAIL ABUN
RE-184	4.682E-02	1.754E-01	3.056E-01	0.000E+00	NOT IDENT.
OS-185	-2.891E-03	3.021E-02	4.978E-02	0.000E+00	NOT IDENT.
RE-188	1.487E-01	1.329E-01	2.471E-01	0.000E+00	NOT IDENT.
W-188	-6.210E+00	6.635E+00	9.192E+00	0.000E+00	NOT IDENT.
IR-192	-1.138E-02	2.740E-02	4.513E-02	0.000E+00	FAIL ABUN
AU-195	2.647E-01	1.885E-01	3.426E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	3.423E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-4.680E+00	5.533E+00	9.539E+00	0.000E+00	NOT IDENT.
TL-202	4.138E-03	4.829E-02	8.382E-02	0.000E+00	NOT IDENT.
HG-203	2.247E-02	3.221E-02	5.666E-02	0.000E+00	NOT IDENT.
BI-207	2.590E-02	3.838E-02	6.891E-02	0.000E+00	FAIL ABUN
TL-207	2.358E-01	5.996E-01	9.032E-01	0.000E+00	FAIL ABUN
PO-209	1.823E+00	5.694E+00	9.790E+00	0.000E+00	NOT IDENT.
BI-210	2.185E+00	4.652E+00	8.616E+00	0.000E+00	NOT IDENT.
PB-210	2.185E+00	4.652E+00	8.616E+00	0.000E+00	NOT IDENT.
PO-210	2.185E+00	4.651E+00	8.616E+00	0.000E+00	NOT IDENT.
PB-211	-4.032E-01	7.739E-01	1.242E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	4.337E-01	5.414E-01	0.000E+00	FAIL ABUN
PO-215	2.358E-01	5.996E-01	9.032E-01	0.000E+00	FAIL ABUN
RN-219	-7.016E-02	3.156E-01	5.432E-01	0.000E+00	FAIL ABUN
RN-220	-1.239E+01	1.954E+01	3.156E+01	0.000E+00	NOT IDENT.
RA-223	2.358E-01	5.996E-01	9.032E-01	0.000E+00	FAIL ABUN
AC-227	-1.122E-01	3.024E-01	5.101E-01	0.000E+00	FAIL ABUN
TH-227	-1.122E-01	3.026E-01	5.101E-01	0.000E+00	FAIL ABUN
TH-229	-1.550E-01	3.870E-01	6.705E-01	0.000E+00	FAIL ABUN
PA-231	-8.513E-01	1.217E+00	1.990E+00	0.000E+00	FAIL ABUN
TH-231	2.358E-01	5.996E-01	9.032E-01	0.000E+00	FAIL ABUN
U-231	-1.063E-01	9.633E-01	1.482E+00	0.000E+00	FAIL ABUN
PA-233	-4.722E-03	5.048E-02	8.475E-02	0.000E+00	FAIL ABUN
PA-234	1.403E-01	2.099E-01	3.675E-01	0.000E+00	FAIL ABUN
PA-234M	2.164E+00	3.666E+00	6.158E+00	0.000E+00	FAIL ABUN
TH-234	9.575E-01	1.373E+00	2.469E+00	0.000E+00	FAIL ABUN
NP-236	-1.323E-02	6.142E-02	1.089E-01	0.000E+00	NOT IDENT.
U-238	9.575E-01	1.373E+00	2.469E+00	0.000E+00	FAIL ABUN
NP-239	7.269E-02	1.579E-01	2.748E-01	0.000E+00	FAIL ABUN
AM-241	-1.353E-02	1.583E-01	2.828E-01	0.000E+00	NOT IDENT.
CM-243	-2.574E-02	9.124E-02	1.380E-01	0.000E+00	FAIL ABUN
AM-246	5.977E-02	1.053E-01	1.875E-01	0.000E+00	NOT IDENT.
CM-247	2.515E-02	2.783E-02	5.061E-02	0.000E+00	NOT IDENT.
CF-249	8.300E-03	3.047E-02	5.396E-02	0.000E+00	NOT IDENT.
CF-251	1.601E-02	1.005E-01	1.793E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 20-JAN-2010 17:48:07.03

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202012145.CNF;1
Sample date       : 5-JAN-2010 12:00:00. Acquisition date : 20-JAN-2010 15:47:39
Sample ID         : G1202012145          Sample quantity  : 1.28360E+02 GRAM
Detector name     : GAM18                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.58  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 940263                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1459	10.67*	1.893E+00	2.112E+01	2.112E+01	9.48
CD-109	88.03	215	3.72*	6.453E+00	2.624E+00	2.684E+00	41.05
SN-126	64.28	------	9.60	3.245E+00	------ Line Not Found		------
	86.94	215	8.90	6.453E+00	1.097E+00	1.097E+00	57.63
	87.57	215	37.00*	6.453E+00	2.638E-01	2.638E-01	41.05
EU-155	48.70	------	4.60	9.095E-01	------ Line Not Found		------
	60.01	------	1.11	2.537E+00	------ Line Not Found		------
	86.54	215	30.90	6.453E+00	3.159E-01	3.177E-01	41.07
	105.31	105	20.70*	7.750E+00	1.906E-01	1.917E-01	63.26
TL-208	277.35	------	6.80	6.258E+00	------ Line Not Found		------
	510.84	204	21.60	4.309E+00	6.394E-01	6.394E-01	42.15
	583.14	537	84.20*	3.934E+00	4.744E-01	4.744E-01	14.57
	860.37	80	12.46	2.915E+00	6.412E-01	6.412E-01	72.05
BI-211	72.87	------	1.27	4.622E+00	------ Line Not Found		------
	351.07	912	12.94*	5.451E+00	3.779E+00	3.779E+00	12.34
PB-212	74.81	415	10.70	4.944E+00	2.296E+00	2.296E+00	23.68
	77.11	706	18.00	5.262E+00	2.179E+00	2.179E+00	15.39
	87.30	215	8.00	6.453E+00	1.220E+00	1.220E+00	42.25
	238.63	1682	44.60*	6.792E+00	1.624E+00	1.624E+00	9.15
	300.09	169	3.41	5.983E+00	2.423E+00	2.423E+00	36.10
PO-212	74.81	415	10.70	4.944E+00	2.296E+00	2.296E+00	23.68
	77.11	706	18.00	5.262E+00	2.179E+00	2.179E+00	15.39
	87.30	215	8.00	6.453E+00	1.220E+00	1.220E+00	42.25
	115.19	------	0.60	8.058E+00	------ Line Not Found		------
	238.63	1682	44.60*	6.792E+00	1.624E+00	1.624E+00	9.15
	300.09	169	3.41	5.983E+00	2.423E+00	2.423E+00	36.10
BI-214	609.31	619	46.30*	3.813E+00	1.026E+00	1.026E+00	15.96
	1120.29	190	15.10	2.334E+00	1.573E+00	1.573E+00	26.82
	1764.49	110	15.80	1.695E+00	1.203E+00	1.203E+00	36.12
PB-214	74.81	415	6.21	4.944E+00	3.956E+00	3.956E+00	22.98
	77.11	706	10.50	5.262E+00	3.735E+00	3.735E+00	17.18
	87.30	215	4.67	6.453E+00	2.090E+00	2.090E+00	41.77

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	241.98	434	7.49	6.747E+00	2.514E+00	2.514E+00	23.97
	295.21	508	19.20	6.040E+00	1.281E+00	1.281E+00	15.68
	351.92	912	37.20*	5.451E+00	1.315E+00	1.315E+00	13.39
PO-214	74.81	415	6.21	4.944E+00	3.956E+00	3.956E+00	22.98
	77.11	706	10.50	5.262E+00	3.735E+00	3.735E+00	17.18
	87.30	215	4.67	6.453E+00	2.090E+00	2.090E+00	41.77
	241.98	434	7.49	6.747E+00	2.514E+00	2.514E+00	23.97
	295.21	508	19.20	6.040E+00	1.281E+00	1.281E+00	15.68
	351.92	912	37.20*	5.451E+00	1.315E+00	1.315E+00	13.39
PO-216	74.81	415	10.70	4.944E+00	2.296E+00	2.296E+00	23.68
	77.11	706	18.00	5.262E+00	2.179E+00	2.179E+00	15.39
	87.30	215	8.00	6.453E+00	1.220E+00	1.220E+00	42.25
	238.63	1682	44.60*	6.792E+00	1.624E+00	1.624E+00	9.15
	300.09	169	3.41	5.983E+00	2.423E+00	2.423E+00	36.10
PO-218	74.81	415	6.21	4.944E+00	3.956E+00	3.956E+00	22.98
	77.11	706	10.50	5.262E+00	3.735E+00	3.735E+00	17.18
	87.30	215	4.67	6.453E+00	2.090E+00	2.090E+00	41.77
	241.98	434	7.49	6.747E+00	2.514E+00	2.514E+00	23.97
	295.21	508	19.20	6.040E+00	1.281E+00	1.281E+00	15.68
	351.92	912	37.20*	5.451E+00	1.315E+00	1.315E+00	13.39
RA-224	240.98	434	3.95*	6.747E+00	4.767E+00	4.767E+00	23.30
RA-226	609.31	619	46.30*	3.813E+00	1.026E+00	1.026E+00	15.96
	1120.29	190	15.10	2.334E+00	1.573E+00	1.573E+00	26.82
	1764.49	110	15.80	1.695E+00	1.203E+00	1.203E+00	36.12
AC-228	338.32	366	11.40	5.580E+00	1.682E+00	1.682E+00	45.26
	911.07	466	27.70*	2.780E+00	1.771E+00	1.771E+00	17.66
	969.11	264	16.60	2.640E+00	1.761E+00	1.761E+00	29.91
RA-228	338.32	366	11.40	5.580E+00	1.682E+00	1.682E+00	45.26
	911.07	466	27.70*	2.780E+00	1.771E+00	1.771E+00	17.66
	969.11	264	16.60	2.640E+00	1.761E+00	1.761E+00	29.91
TH-228	74.81	415	10.70	4.944E+00	2.296E+00	2.331E+00	21.78
	77.11	706	18.00	5.262E+00	2.179E+00	2.212E+00	15.39
	87.30	215	8.00	6.453E+00	1.220E+00	1.239E+00	41.05
	238.63	1682	44.60*	6.792E+00	1.624E+00	1.649E+00	9.15
	300.09	169	3.41	5.983E+00	2.423E+00	2.459E+00	68.62
TH-230	609.31	619	46.30*	3.813E+00	1.026E+00	1.026E+00	15.96
	1120.29	190	15.10	2.334E+00	1.573E+00	1.573E+00	26.82
	1764.49	110	15.80	1.695E+00	1.203E+00	1.203E+00	36.12
TH-232	338.32	366	11.40	5.580E+00	1.682E+00	1.682E+00	20.49
	911.07	466	27.70*	2.780E+00	1.771E+00	1.771E+00	17.66
	969.11	264	16.60	2.640E+00	1.761E+00	1.761E+00	29.91
U-234	609.31	619	46.30*	3.813E+00	1.026E+00	1.026E+00	15.96
	1120.29	190	15.10	2.334E+00	1.573E+00	1.573E+00	26.82
	1764.49	110	15.80	1.695E+00	1.203E+00	1.203E+00	36.12
U-235	89.95	150	2.70	6.723E+00	2.422E+00	2.422E+00	44.98
	93.35	253	4.50	6.968E+00	2.355E+00	2.355E+00	45.68
	105.00	105	2.10	7.750E+00	1.879E+00	1.879E+00	69.40
	143.76	------	10.50*	8.222E+00	------ Line Not Found		------
	163.35	------	4.70	8.004E+00	------ Line Not Found		------

Sample ID : G1202012145 Acquisition date : 20-JAN-2010 15:47:39

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	185.71	267	54.00	7.640E+00	1.891E-01	1.891E-01	35.02
	205.31	------	4.70	7.323E+00	------ Line Not Found		------
NP-237	86.50	215	12.60*	6.453E+00	7.747E-01	7.747E-01	45.94
	95.87	------	2.60	7.180E+00	------ Line Not Found		------
AM-243	74.67	415	66.00*	4.944E+00	3.722E-01	3.722E-01	21.76
	86.72	215	0.34	6.453E+00	2.905E+01	2.905E+01	41.05
	117.66	------	0.55	8.112E+00	------ Line Not Found		------
	142.18	------	0.13	8.232E+00	------ Line Not Found		------
ANH-511	511.00	204	100.00*	4.309E+00	1.381E-01	1.381E-01	41.31

Flag: "*" = Keyline

Sample ID : G1202012145 Acquisition date : 20-JAN-2010 15:47:39

Total number of lines in spectrum 34
Number of unidentified lines 2
Number of lines tentatively identified by NID 32 94.12%

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	2.112E+01	2.112E+01	0.200E+01	9.48	
CD-109	464.00D	1.02	2.624E+00	2.684E+00	1.102E+00	41.05	
SN-126	1.00E+05Y	1.00	2.638E-01	2.638E-01	1.083E-01	41.05	
EU-155	4.96Y	1.01	1.906E-01	1.917E-01	1.213E-01	63.26	
TL-208	1.41E+10Y	1.00	4.744E-01	4.744E-01	0.691E-01	14.57	
BI-211	7.04E+08Y	1.00	3.779E+00	3.779E+00	0.466E+00	12.34	
PB-212	1.41E+10Y	1.00	1.624E+00	1.624E+00	0.149E+00	9.15	
PO-212	1.41E+10Y	1.00	1.624E+00	1.624E+00	0.149E+00	9.15	
BI-214	1600.00Y	1.00	1.026E+00	1.026E+00	0.164E+00	15.96	
PB-214	1600.00Y	1.00	1.315E+00	1.315E+00	0.176E+00	13.39	
PO-214	1600.00Y	1.00	1.315E+00	1.315E+00	0.176E+00	13.39	
PO-216	1.41E+10Y	1.00	1.624E+00	1.624E+00	0.149E+00	9.15	
PO-218	1600.00Y	1.00	1.315E+00	1.315E+00	0.176E+00	13.39	
RA-224	1.41E+10Y	1.00	4.767E+00	4.767E+00	1.111E+00	23.30	
RA-226	1600.00Y	1.00	1.026E+00	1.026E+00	0.164E+00	15.96	
AC-228	1.41E+10Y	1.00	1.771E+00	1.771E+00	0.313E+00	17.66	
RA-228	1.41E+10Y	1.00	1.771E+00	1.771E+00	0.313E+00	17.66	
TH-228	1.91Y	1.02	1.624E+00	1.649E+00	0.151E+00	9.15	
TH-230	4.47E+09Y	1.00	1.026E+00	1.026E+00	0.164E+00	15.96	
TH-232	1.41E+10Y	1.00	1.771E+00	1.771E+00	0.313E+00	17.66	
U-234	4.47E+09Y	1.00	1.026E+00	1.026E+00	0.164E+00	15.96	
U-235	7.04E+08Y	1.00	1.891E-01	1.891E-01	0.662E-01	35.02	K
NP-237	2.14E+06Y	1.00	7.747E-01	7.747E-01	3.559E-01	45.94	
AM-243	7380.00Y	1.00	3.722E-01	3.722E-01	0.810E-01	21.76	
ANH-511	1.00E+09Y	1.00	1.381E-01	1.381E-01	0.571E-01	41.31	
	Total Activity :		5.455E+01	5.464E+01			

Grand Total Activity : 5.455E+01 5.464E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G1202012145 Acquisition date : 20-JAN-2010 15:47:39

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	129.20	134	369	1.28	257.49	253	9	1.86E-02	54.5	8.25E+00	T
0	209.36	177	443	1.42	417.75	412	13	2.46E-02	51.3	7.26E+00	T
0	270.25	168	256	1.63	539.49	534	12	2.33E-02	41.3	6.35E+00	T
0	327.51	59	189	1.50	653.96	650	9	8.23E-03	87.3	5.69E+00	T
0	463.00	107	137	1.49	924.87	919	11	1.48E-02	46.8	4.60E+00	T
0	727.60	135	132	1.75	1453.91	1448	16	1.88E-02	42.9	3.34E+00	T
0	767.67	68	91	1.07	1534.03	1529	11	9.41E-03	59.7	3.20E+00	T
0	794.96	63	74	1.17	1588.61	1583	12	8.79E-03	60.2	3.11E+00	T
2	964.17	68	72	2.13	1926.96	1918	53	9.40E-03	56.9	2.65E+00	T
0	1238.15	55	73	1.28	2474.84	2471	11	7.58E-03	68.3	2.15E+00	T
0	1378.02	63	31	2.09	2754.54	2745	18	8.76E-03	48.7	1.97E+00	
0	1729.38	50	3	2.39	3457.21	3450	13	6.88E-03	32.2	1.71E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 20-JAN-2010 17:48:12.23

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
*                                                                           *
*                                DETECTOR DATA                              *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202012145.CNF;1  *
* Acquisition date  : 20-JAN-2010 15:47:39  Detector SN#     :              *
* Detector ID       : GAM18                 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 02:00:01.58          Half life ratio : 8.00000       *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date       : 5-JAN-2010 12:00:00.  Nuclide Library : SOLID         *
* Sample ID         : G1202012145           Analyst initials: MXR1          *
* Batch Number      : 940263                Sample Quantity : 1.28360E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 23-APR-2009 11:59:23.2MS 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	2.112E+01	2.003E+00	3.780E-01	2.868E-02	55.883
CD-109	2.684E+00	1.102E+00	1.097E+00	1.014E-01	2.448
SN-126	2.638E-01	1.083E-01	1.291E-01	1.190E-02	2.043
EU-155	1.917E-01	1.213E-01	1.431E-01	1.023E-02	1.340
TL-208	4.744E-01	6.910E-02	4.345E-02	3.406E-03	10.918
BI-211	3.779E+00	4.662E-01	2.457E-01	1.577E-02	15.382
PB-212	1.624E+00	1.486E-01	6.937E-02	4.956E-03	23.408
PO-212	1.624E+00	1.486E-01	6.937E-02	4.956E-03	23.408
BI-214	1.026E+00	1.637E-01	9.578E-02	8.556E-03	10.714
PB-214	1.315E+00	1.761E-01	8.563E-02	7.084E-03	15.353
PO-214	1.315E+00	1.761E-01	8.563E-02	7.084E-03	15.353
PO-216	1.624E+00	1.486E-01	6.937E-02	4.956E-03	23.408
PO-218	1.315E+00	1.761E-01	8.563E-02	7.084E-03	15.353
RA-224	4.767E+00	1.111E+00	7.885E-01	4.392E-02	6.046
RA-226	1.026E+00	1.637E-01	9.578E-02	8.556E-03	10.714
AC-228	1.771E+00	3.128E-01	1.449E-01	1.920E-02	12.223
RA-228	1.771E+00	3.128E-01	1.449E-01	1.920E-02	12.223
TH-228	1.649E+00	1.509E-01	7.043E-02	5.031E-03	23.408

Sample ID : G1202012145 Acquisition date : 20-JAN-2010 15:47:39

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-230	1.026E+00	1.637E-01	9.577E-02	8.555E-03	10.714
TH-232	1.771E+00	3.128E-01	1.449E-01	1.920E-02	12.223
U-234	1.026E+00	1.637E-01	9.577E-02	8.555E-03	10.714
U-235	1.891E-01	6.623E-02	2.919E-01	4.727E-02	0.648
NP-237	7.747E-01	3.559E-01	3.741E-01	8.441E-02	2.071
AM-243	3.722E-01	8.098E-02	8.093E-02	6.753E-03	4.599
ANH-511	1.381E-01	5.706E-02	3.356E-02	2.217E-03	4.115

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	3.851E-02		2.409E-01	4.013E-01	2.908E-02	0.096
NA-22	1.007E-02		3.409E-02	5.733E-02	3.901E-03	0.176
NA-24	-3.847E-01		3.517E-01	Half-Life too short		
AL-26	1.895E-03		2.362E-02	3.921E-02	2.289E-03	0.048
TI-44	4.020E-01	+	6.189E-02	7.681E-02	6.567E-03	5.234
SC-46	-1.994E-02		3.126E-02	4.839E-02	5.397E-03	-0.412
V-48	3.280E-03		6.624E-02	9.223E-02	9.122E-03	0.036
CR-51	2.242E-03		3.095E-01	4.987E-01	3.211E-02	0.004
MN-52	2.628E-03		1.821E-01	2.960E-01	2.181E-02	0.009
MN-54	1.789E-02		2.966E-02	5.064E-02	5.187E-03	0.353
CO-56	-2.899E-02		3.071E-02	4.649E-02	4.853E-03	-0.624
CO-57	-1.806E-02		2.148E-02	3.310E-02	1.961E-03	-0.546
CO-58	-2.413E-02		2.931E-02	4.504E-02	4.446E-03	-0.536
FE-59	-5.958E-02		6.100E-02	9.228E-02	7.596E-03	-0.646
CO-60	-5.652E-03		2.864E-02	4.586E-02	3.465E-03	-0.123
ZN-65	5.673E-03		7.321E-02	1.051E-01	7.402E-03	0.054
GE-68	7.776E-01		9.104E-01	1.615E+00	1.283E-01	0.482
AS-73	-2.594E-01		1.008E+00	1.678E+00	1.330E-01	-0.155
AS-74	-9.556E-02		7.679E-02	1.135E-01	8.156E-03	-0.842
SE-75	9.846E-04		3.848E-02	5.521E-02	3.157E-03	0.018
BR-77	-2.591E+00		8.164E+00	1.271E+01	8.477E-01	-0.204
SR-82	-2.859E-01		2.970E-01	4.558E-01	4.245E-02	-0.627
RB-83	-1.936E-02		5.319E-02	8.249E-02	5.502E-03	-0.235
RB-84	2.046E-02		5.347E-02	9.000E-02	9.919E-03	0.227
KR-85	1.887E+01		6.461E+00	1.101E+01	7.292E-01	1.714
SR-85	9.679E-02		3.314E-02	5.646E-02	3.741E-03	1.714
RB-86	6.014E-01		5.876E-01	1.053E+00	8.379E-02	0.571
Y-88	-1.459E-02		2.451E-02	3.606E-02	2.054E-03	-0.405
ZR-88	-6.094E-03		2.447E-02	4.048E-02	2.328E-03	-0.151
Y-91	4.755E+00		1.341E+01	2.273E+01	1.344E+00	0.209
NB-94	3.092E-03		2.597E-02	4.367E-02	3.583E-03	0.071
NB-95	5.558E-02		3.792E-02	6.063E-02	5.546E-03	0.917
NB-95M	4.677E-02		1.128E-01	1.670E-01	1.225E-02	0.280
ZR-95	1.014E-02		5.432E-02	9.122E-02	8.976E-03	0.111
NB-97	-2.750E-02		3.987E-02	Half-Life too short		
ZR-97	3.148E+00		8.715E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
MO-99	-1.639E+00		8.808E+00	1.444E+01	2.203E+00	-0.113
TC-99M	-5.203E+10		2.041E+10	Half-Life too short		
RH-101	4.840E-03		2.668E-02	4.429E-02	2.381E-03	0.109
RH-102	-6.986E-03		2.140E-02	3.457E-02	2.196E-03	-0.202
RU-103	-2.938E-03		2.976E-02	4.859E-02	6.309E-03	-0.060
RH-106	2.727E-01		2.449E-01	4.217E-01	5.305E-02	0.647
RU-106	2.727E-01		2.433E-01	4.217E-01	3.103E-02	0.647
AG-108M	8.889E-03		2.391E-02	4.061E-02	2.653E-03	0.219
AG-110M	-8.934E-03		2.750E-02	4.524E-02	3.568E-03	-0.197
IN-111	4.458E-01		8.362E-01	1.252E+00	6.995E-02	0.356
IN-113M	-9.680E-03		3.502E-02	5.785E-02	3.549E-03	-0.167
SN-113	-9.680E-03		3.502E-02	5.785E-02	3.549E-03	-0.167
IN-114M	1.096E-01		1.510E-01	2.319E-01	1.238E-02	0.473
CD-115	-6.429E+00		8.556E+00	1.311E+01	8.811E-01	-0.490
SN-117M	-1.690E-03		4.334E-02	7.333E-02	3.897E-03	-0.023
SB-122	5.403E-01		1.603E+00	2.663E+00	1.856E-01	0.203
I-123	-4.212E-01		2.387E+00	Half-Life too short		
TE-123M	-1.975E-03		2.239E-02	3.780E-02	2.040E-03	-0.052
I-124	1.617E-01		6.694E-01	9.436E-01	6.823E-02	0.171
SB-124	1.407E-03		5.979E-02	9.906E-02	6.834E-03	0.014
SB-125	-7.304E-03		7.119E-02	1.178E-01	7.360E-03	-0.062
TE-125M	-6.905E-01		8.717E+00	1.250E+01	1.099E+00	-0.055
I-126	4.212E-02		1.378E-01	2.353E-01	1.809E-02	0.179
SB-126	-6.288E-02		1.297E-01	1.857E-01	1.572E-02	-0.339
SB-127	-3.690E-01		9.782E-01	1.592E+00	1.735E-01	-0.232
XE-127	-9.028E-03		3.816E-02	6.085E-02	3.285E-03	-0.148
I-131	-3.651E-03		8.458E-02	1.422E-01	9.180E-03	-0.026
TE-132	1.786E-01		5.696E-01	9.529E-01	1.359E-01	0.187
BA-133	3.507E-02		3.721E-02	5.556E-02	6.418E-03	0.631
I-133	-4.872E-03		2.482E-03	Half-Life too short		
CS-134	7.850E-02	+	4.783E-02	6.579E-02	6.363E-03	1.193
CS-135	1.434E-01		1.430E-01	2.171E-01	1.641E-02	0.660
I-135	-2.694E+09		2.466E+09	Half-Life too short		
CS-136	4.857E-02		8.364E-02	1.456E-01	1.305E-02	0.334
BA-137M	-4.518E-03		2.783E-02	4.623E-02	3.524E-03	-0.098
CS-137	-4.776E-03		2.942E-02	4.887E-02	3.734E-03	-0.098
CE-139	1.800E-03		2.384E-02	4.039E-02	2.120E-03	0.045
BA-140	-4.261E-03		1.899E-01	3.097E-01	1.013E-01	-0.014
LA-140	2.767E-02		6.930E-02	1.199E-01	8.228E-03	0.231
CE-141	-2.911E-03		5.441E-02	8.498E-02	4.851E-03	-0.034
CE-143	6.484E-04		1.006E-04	Half-Life too short		
CE-144	2.281E-01		1.866E-01	2.801E-01	3.961E-02	0.814
PM-144	-9.032E-03		2.668E-02	4.361E-02	3.540E-03	-0.207
PR-144	-6.121E-01		1.808E+00	2.955E+00	2.398E-01	-0.207
PM-146	2.221E-02		3.467E-02	5.937E-02	5.281E-03	0.374
ND-147	5.830E-02		4.191E-01	6.913E-01	9.645E-02	0.084
PM-149	6.738E+01		7.359E+01	1.241E+02	1.755E+01	0.543
EU-152	-9.615E-02		9.927E-02	1.155E-01	7.536E-03	-0.833

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GD-153	-1.935E-03		7.563E-02	1.097E-01	8.581E-03	-0.018
EU-154	3.948E-02		9.426E-02	1.600E-01	1.598E-02	0.247
TB-160	-2.782E-02		1.050E-01	1.680E-01	1.845E-02	-0.166
HO-166M	-1.565E-02		4.724E-02	7.706E-02	6.423E-03	-0.203
TM-171	-2.493E+01		2.930E+01	4.582E+01	3.663E+00	-0.544
LU-176	1.986E-02		2.135E-02	3.497E-02	2.013E-03	0.568
LU-177	3.117E+00	+	1.606E+00	1.692E+00	9.178E-02	1.842
LU-177M	-9.554E-02		1.440E-01	2.319E-01	1.369E-02	-0.412
HF-181	2.139E-02		3.148E-02	5.402E-02	3.458E-03	0.396
W-181	-2.998E-01		3.937E-01	6.198E-01	4.916E-02	-0.484
TA-182	9.901E-02		1.507E-01	2.597E-01	1.589E-02	0.381
RE-183	-8.409E-03		8.748E-02	1.475E-01	7.784E-03	-0.057
RE-184	4.682E-02		1.790E-01	2.973E-01	1.670E-02	0.157
OS-185	-2.891E-03		3.082E-02	4.914E-02	3.695E-03	-0.059
RE-188	1.487E-01		1.356E-01	2.386E-01	1.277E-02	0.623
W-188	-6.210E+00		6.771E+00	8.962E+00	5.133E-01	-0.693
IR-192	-1.138E-02		2.796E-02	4.406E-02	2.555E-03	-0.258
AU-195	2.647E-01		1.924E-01	3.287E-01	2.515E-02	0.805
TL-200	7.909E-05		1.746E-04	Half-Life too short		
TL-201	-4.680E+00		5.646E+00	9.224E+00	4.842E-01	-0.507
TL-202	4.138E-03		4.927E-02	8.225E-02	5.014E-03	0.050
HG-203	2.247E-02		3.287E-02	5.521E-02	3.348E-03	0.407
BI-207	2.590E-02		3.916E-02	6.855E-02	5.659E-03	0.378
TL-207	2.358E-01		6.118E-01	8.820E-01	1.456E-01	0.267
PO-209	1.823E+00		5.811E+00	9.713E+00	1.096E+00	0.188
BI-210	2.185E+00		4.746E+00	8.176E+00	6.326E-01	0.267
PB-210	2.185E+00		4.746E+00	8.176E+00	6.326E-01	0.267
PO-210	2.185E+00		4.746E+00	8.176E+00	5.439E-01	0.267
PB-211	-4.032E-01		7.897E-01	1.217E+00	7.587E-01	-0.331
BI-212	1.005E+00	+	4.425E-01	5.354E-01	5.332E-02	1.877
PO-215	2.358E-01		6.118E-01	8.820E-01	1.456E-01	0.267
RN-219	-7.016E-02		3.220E-01	5.322E-01	7.246E-02	-0.132
RN-220	-1.239E+01		1.994E+01	3.107E+01	2.135E+00	-0.399
RA-223	2.358E-01		6.118E-01	8.820E-01	1.456E-01	0.267
AC-227	-1.122E-01		3.085E-01	4.964E-01	6.895E-02	-0.226
TH-227	-1.122E-01		3.087E-01	4.964E-01	8.360E-02	-0.226
TH-229	-1.550E-01		3.949E-01	6.498E-01	3.479E-02	-0.238
PA-231	-8.513E-01		1.241E+00	1.939E+00	2.665E-01	-0.439
TH-231	2.358E-01		6.118E-01	8.820E-01	1.456E-01	0.267
U-231	-1.063E-01		9.830E-01	1.421E+00	1.139E-01	-0.075
PA-233	-4.722E-03		5.151E-02	8.273E-02	5.068E-03	-0.057
PA-234	1.403E-01		2.142E-01	3.649E-01	7.199E-02	0.384
PA-234M	2.164E+00		3.741E+00	6.120E+00	6.602E-01	0.354
TH-234	9.575E-01		1.401E+00	2.353E+00	4.149E-01	0.407
NP-236	-1.323E-02		6.267E-02	1.053E-01	5.577E-03	-0.126
U-238	9.575E-01		1.401E+00	2.353E+00	4.149E-01	0.407
NP-239	7.269E-02		1.611E-01	2.643E-01	1.636E-02	0.275
AM-241	-1.353E-02		1.615E-01	2.693E-01	2.234E-02	-0.050

Sample ID : G1202012145 Acquisition date : 20-JAN-2010 15:47:39

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-2.574E-02		9.310E-02	1.325E-01	9.485E-03	-0.194
AM-246	5.977E-02		1.074E-01	1.865E-01	1.475E-02	0.320
CM-247	2.515E-02		2.840E-02	4.960E-02	2.889E-03	0.507
CF-249	8.300E-03		3.109E-02	5.284E-02	3.038E-03	0.157
CF-251	1.601E-02		1.025E-01	1.735E-01	9.163E-03	0.092

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]G1202012145          *
* Acquisition date  : 20-JAN-2010 15:47:39 Detector SN#     :               *
* Detector ID       : GAM18                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 02:00:01.58      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       :  5-JAN-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G1202012145          Analyst initials: MXR1           *
* Batch Number      : 940263               Sample Quantity : 1.2836E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 23-APR-2009 11:59:23 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	2.112E+01	1.962E+00	1.891E-01	1.001E+00
CD-109	2.684E+00	1.080E+00	5.728E-01	5.509E-01
SN-126	2.638E-01	1.061E-01	6.744E-02	5.414E-02
EU-155	1.917E-01	1.188E-01	7.456E-02	6.064E-02
TL-208	4.744E-01	6.772E-02	2.206E-02	3.455E-02
BI-211	3.779E+00	4.569E-01	1.257E-01	2.331E-01
PB-212	1.624E+00	1.457E-01	3.570E-02	7.432E-02
PO-212	1.624E+00	1.457E-01	3.570E-02	7.432E-02
BI-214	1.026E+00	1.604E-01	4.859E-02	8.186E-02
PB-214	1.315E+00	1.726E-01	4.381E-02	8.805E-02
PO-214	1.315E+00	1.726E-01	4.381E-02	8.805E-02
PO-216	1.624E+00	1.457E-01	3.570E-02	7.432E-02
PO-218	1.315E+00	1.726E-01	4.381E-02	8.805E-02
RA-224	4.767E+00	1.089E+00	4.057E-01	5.554E-01
RA-226	1.026E+00	1.604E-01	4.859E-02	8.186E-02
AC-228	1.771E+00	3.066E-01	7.304E-02	1.564E-01
RA-228	1.771E+00	3.066E-01	7.304E-02	1.564E-01
TH-228	1.649E+00	1.479E-01	3.624E-02	7.545E-02
TH-230	1.026E+00	1.604E-01	4.859E-02	8.186E-02
TH-232	1.771E+00	3.066E-01	7.304E-02	1.564E-01
U-234	1.026E+00	1.604E-01	4.859E-02	8.186E-02
U-235	5.655E-02	1.803E-01	1.514E-01	9.200E-02
NP-237	7.747E-01	3.488E-01	1.955E-01	1.780E-01
AM-243	3.722E-01	7.936E-02	4.238E-02	4.049E-02
ANH-511	1.381E-01	5.592E-02	1.707E-02	2.853E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	3.851E-02	2.361E-01	2.044E-01	1.205E-01 NOT IDENT.
NA-22	1.007E-02	3.341E-02	2.875E-02	1.705E-02 NOT IDENT.

NA-24	-3.847E+05	6.893E+05	0.000E+00	3.517E+05	SHORT HLIF
AL-26	1.895E-03	2.315E-02	1.955E-02	1.181E-02	NOT IDENT.
TI-44	4.020E-01	6.065E-02	4.019E-02	3.094E-02	FAIL ABUN
SC-46	-1.994E-02	3.063E-02	2.440E-02	1.563E-02	FAIL ABUN
V-48	3.280E-03	6.492E-02	4.644E-02	3.312E-02	NOT IDENT.
CR-51	2.242E-03	3.033E-01	2.555E-01	1.548E-01	NOT IDENT.
MN-52	2.628E-03	1.784E-01	1.482E-01	9.103E-02	NOT IDENT.
MN-54	1.789E-02	2.907E-02	2.557E-02	1.483E-02	NOT IDENT.
CO-56	-2.899E-02	3.010E-02	2.347E-02	1.535E-02	FAIL ABUN
CO-57	-1.806E-02	2.105E-02	1.721E-02	1.074E-02	NOT IDENT.
CO-58	-2.413E-02	2.872E-02	2.275E-02	1.465E-02	NOT IDENT.
FE-59	-5.958E-02	5.978E-02	4.638E-02	3.050E-02	NOT IDENT.
CO-60	-5.652E-03	2.807E-02	2.298E-02	1.432E-02	NOT IDENT.
ZN-65	5.673E-03	7.174E-02	5.281E-02	3.660E-02	NOT IDENT.
GE-68	7.776E-01	8.922E-01	8.119E-01	4.552E-01	NOT IDENT.
AS-73	-2.594E-01	9.876E-01	8.827E-01	5.039E-01	NOT IDENT.
AS-74	-9.556E-02	7.525E-02	5.761E-02	3.839E-02	NOT IDENT.
SE-75	9.846E-04	3.771E-02	2.837E-02	1.924E-02	NOT IDENT.
BR-77	-2.591E+00	8.001E+00	6.462E+00	4.082E+00	FAIL ABUN
SR-82	-2.859E-01	2.911E-01	2.304E-01	1.485E-01	NOT IDENT.
RB-83	-1.936E-02	5.213E-02	4.195E-02	2.660E-02	NOT IDENT.
RB-84	2.046E-02	5.240E-02	4.539E-02	2.673E-02	NOT IDENT.
KR-85	1.887E+01	6.331E+00	5.599E+00	3.230E+00	NOT IDENT.
SR-85	9.679E-02	3.248E-02	2.872E-02	1.657E-02	NOT IDENT.
RB-86	6.014E-01	5.759E-01	5.292E-01	2.938E-01	NOT IDENT.
Y-88	-1.459E-02	2.402E-02	1.798E-02	1.225E-02	NOT IDENT.
ZR-88	-6.094E-03	2.398E-02	2.068E-02	1.224E-02	NOT IDENT.
Y-91	4.755E+00	1.314E+01	1.141E+01	6.704E+00	NOT IDENT.
NB-94	3.092E-03	2.545E-02	2.211E-02	1.299E-02	NOT IDENT.
NB-95	5.558E-02	3.716E-02	3.065E-02	1.896E-02	NOT IDENT.
NB-95M	4.677E-02	1.106E-01	8.596E-02	5.641E-02	NOT IDENT.
ZR-95	1.014E-02	5.323E-02	4.612E-02	2.716E-02	NOT IDENT.
NB-97	-2.750E+04	7.814E+04	0.000E+00	3.987E+04	SHORT HLIF
ZR-97	3.148E+06	1.708E+06	0.000E+00	8.715E+05	SHORT HLIF
MO-99	-1.639E+00	8.632E+00	7.304E+00	4.404E+00	NOT IDENT.
TC-99M	-5.203E+16	4.001E+16	0.000E+00	0.000E+00	SHORT HLIF
RH-101	4.840E-03	2.615E-02	2.286E-02	1.334E-02	NOT IDENT.
RH-102	-6.986E-03	2.098E-02	1.761E-02	1.070E-02	FAIL ABUN
RU-103	-2.938E-03	2.916E-02	2.473E-02	1.488E-02	FAIL ABUN
RH-106	2.727E-01	2.400E-01	2.139E-01	1.225E-01	FAIL ABUN
RU-106	2.727E-01	2.385E-01	2.139E-01	1.217E-01	FAIL ABUN
AG-108M	8.889E-03	2.343E-02	2.071E-02	1.196E-02	NOT IDENT.
AG-110M	-8.934E-03	2.695E-02	2.292E-02	1.375E-02	NOT IDENT.
IN-111	4.458E-01	8.195E-01	6.439E-01	4.181E-01	NOT IDENT.
IN-113M	-9.680E-03	3.432E-02	2.955E-02	1.751E-02	NOT IDENT.
SN-113	-9.680E-03	3.432E-02	2.955E-02	1.751E-02	NOT IDENT.
IN-114M	1.096E-01	1.480E-01	1.198E-01	7.552E-02	NOT IDENT.
CD-115	-6.429E+00	8.385E+00	6.665E+00	4.278E+00	NOT IDENT.
SN-117M	-1.690E-03	4.248E-02	3.797E-02	2.167E-02	NOT IDENT.
SB-122	5.403E-01	1.571E+00	1.353E+00	8.014E-01	NOT IDENT.
I-123	-4.212E+05	4.678E+06	0.000E+00	2.387E+06	SHORT HLIF
TE-123M	-1.975E-03	2.194E-02	1.958E-02	1.120E-02	NOT IDENT.
I-124	1.617E-01	6.560E-01	4.788E-01	3.347E-01	NOT IDENT.
SB-124	1.407E-03	5.859E-02	4.945E-02	2.990E-02	FAIL ABUN
SB-125	-7.304E-03	6.976E-02	6.008E-02	3.559E-02	FAIL ABUN
TE-125M	-6.905E-01	8.542E+00	6.509E+00	4.358E+00	NOT IDENT.
I-126	4.212E-02	1.351E-01	1.192E-01	6.890E-02	NOT IDENT.
SB-126	-6.288E-02	1.271E-01	9.394E-02	6.487E-02	FAIL ABUN
SB-127	-3.690E-01	9.587E-01	8.061E-01	4.891E-01	NOT IDENT.
XE-127	-9.028E-03	3.739E-02	3.139E-02	1.908E-02	NOT IDENT.
I-131	-3.651E-03	8.288E-02	7.271E-02	4.229E-02	NOT IDENT.
TE-132	1.786E-01	5.582E-01	4.907E-01	2.848E-01	NOT IDENT.
BA-133	3.507E-02	3.646E-02	2.842E-02	1.860E-02	NOT IDENT.
I-133	-4.872E+03	4.865E+03	0.000E+00	2.482E+03	SHORT HLIF
CS-134	7.850E-02	4.687E-02	3.324E-02	2.391E-02	FAIL ABUN
CS-135	1.434E-01	1.401E-01	1.115E-01	7.150E-02	NOT IDENT.
I-135	-2.694E+15	4.834E+15	0.000E+00	2.466E+15	SHORT HLIF
CS-136	4.857E-02	8.197E-02	7.323E-02	4.182E-02	FAIL ABUN
BA-137M	-4.518E-03	2.727E-02	2.342E-02	1.391E-02	NOT IDENT.
CS-137	-4.776E-03	2.883E-02	2.476E-02	1.471E-02	NOT IDENT.
CE-139	1.800E-03	2.336E-02	2.090E-02	1.192E-02	NOT IDENT.
BA-140	-4.261E-03	1.861E-01	1.574E-01	9.497E-02	NOT IDENT.
LA-140	2.767E-02	6.791E-02	5.992E-02	3.465E-02	FAIL ABUN
CE-141	-2.911E-03	5.332E-02	4.406E-02	2.721E-02	NOT IDENT.
CE-143	6.484E+02	1.971E+02	0.000E+00	1.006E+02	SHORT HLIF
CE-144	2.281E-01	1.829E-01	1.454E-01	9.330E-02	NOT IDENT.
PM-144	-9.032E-03	2.614E-02	2.208E-02	1.334E-02	NOT IDENT.
PR-144	-6.121E-01	1.772E+00	1.496E+00	9.039E-01	NOT IDENT.

PM-146	2.221E-02	3.397E-02	3.026E-02	1.733E-02	NOT IDENT.
ND-147	5.830E-02	4.107E-01	3.514E-01	2.095E-01	FAIL ABUN
PM-149	6.738E+01	7.212E+01	6.370E+01	3.679E+01	NOT IDENT.
EU-152	-9.615E-02	9.728E-02	5.910E-02	4.963E-02	FAIL ABUN
GD-153	-1.935E-03	7.412E-02	5.724E-02	3.782E-02	NOT IDENT.
EU-154	3.948E-02	9.237E-02	8.023E-02	4.713E-02	NOT IDENT.
TB-160	-2.782E-02	1.029E-01	8.472E-02	5.249E-02	FAIL ABUN
HO-166M	-1.565E-02	4.630E-02	3.900E-02	2.362E-02	NOT IDENT.
TM-171	-2.493E+01	2.871E+01	2.403E+01	1.465E+01	NOT IDENT.
LU-176	1.986E-02	2.093E-02	1.793E-02	1.068E-02	FAIL ABUN
LU-177	3.117E+00	1.574E+00	8.726E-01	8.032E-01	FAIL ABUN
LU-177M	-9.554E-02	1.411E-01	1.183E-01	7.198E-02	FAIL ABUN
HF-181	2.139E-02	3.085E-02	2.751E-02	1.574E-02	NOT IDENT.
W-181	-2.998E-01	3.858E-01	3.252E-01	1.969E-01	NOT IDENT.
TA-182	9.901E-02	1.477E-01	1.303E-01	7.535E-02	FAIL ABUN
RE-183	-8.409E-03	8.573E-02	7.633E-02	4.374E-02	FAIL ABUN
RE-184	4.682E-02	1.754E-01	1.529E-01	8.949E-02	NOT IDENT.
OS-185	-2.891E-03	3.021E-02	2.491E-02	1.541E-02	NOT IDENT.
RE-188	1.487E-01	1.329E-01	1.236E-01	6.780E-02	NOT IDENT.
W-188	-6.210E+00	6.635E+00	4.599E+00	3.385E+00	NOT IDENT.
IR-192	-1.138E-02	2.740E-02	2.258E-02	1.398E-02	FAIL ABUN
AU-195	2.647E-01	1.885E-01	1.714E-01	9.618E-02	FAIL ABUN
TL-200	7.909E+01	3.423E+02	0.000E+00	1.746E+02	SHORT HLIF
TL-201	-4.680E+00	5.533E+00	4.772E+00	2.823E+00	NOT IDENT.
TL-202	4.138E-03	4.829E-02	4.194E-02	2.464E-02	NOT IDENT.
HG-203	2.247E-02	3.221E-02	2.834E-02	1.643E-02	NOT IDENT.
BI-207	2.590E-02	3.838E-02	3.448E-02	1.958E-02	FAIL ABUN
TL-207	2.358E-01	5.996E-01	4.519E-01	3.059E-01	FAIL ABUN
PO-209	1.823E+00	5.694E+00	4.898E+00	2.905E+00	NOT IDENT.
BI-210	2.185E+00	4.652E+00	4.311E+00	2.373E+00	NOT IDENT.
PB-210	2.185E+00	4.652E+00	4.311E+00	2.373E+00	NOT IDENT.
PO-210	2.185E+00	4.651E+00	4.311E+00	2.373E+00	NOT IDENT.
PB-211	-4.032E-01	7.739E-01	6.213E-01	3.948E-01	NOT IDENT.
BI-212	1.005E+00	4.337E-01	2.709E-01	2.213E-01	FAIL ABUN
PO-215	2.358E-01	5.996E-01	4.519E-01	3.059E-01	FAIL ABUN
RN-219	-7.016E-02	3.156E-01	2.718E-01	1.610E-01	FAIL ABUN
RN-220	-1.239E+01	1.954E+01	1.579E+01	9.970E+00	NOT IDENT.
RA-223	2.358E-01	5.996E-01	4.519E-01	3.059E-01	FAIL ABUN
AC-227	-1.122E-01	3.024E-01	2.552E-01	1.543E-01	FAIL ABUN
TH-227	-1.122E-01	3.026E-01	2.552E-01	1.544E-01	FAIL ABUN
TH-229	-1.550E-01	3.870E-01	3.355E-01	1.975E-01	FAIL ABUN
PA-231	-8.513E-01	1.217E+00	9.955E-01	6.207E-01	FAIL ABUN
TH-231	2.358E-01	5.996E-01	4.519E-01	3.059E-01	FAIL ABUN
U-231	-1.063E-01	9.633E-01	7.414E-01	4.915E-01	FAIL ABUN
PA-233	-4.722E-03	5.048E-02	4.240E-02	2.576E-02	FAIL ABUN
PA-234	1.403E-01	2.099E-01	1.839E-01	1.071E-01	FAIL ABUN
PA-234M	2.164E+00	3.666E+00	3.081E+00	1.871E+00	FAIL ABUN
TH-234	9.575E-01	1.373E+00	1.235E+00	7.007E-01	FAIL ABUN
NP-236	-1.323E-02	6.142E-02	5.450E-02	3.134E-02	NOT IDENT.
U-238	9.575E-01	1.373E+00	1.235E+00	7.007E-01	FAIL ABUN
NP-239	7.269E-02	1.579E-01	1.375E-01	8.057E-02	FAIL ABUN
AM-241	-1.353E-02	1.583E-01	1.415E-01	8.075E-02	NOT IDENT.
CM-243	-2.574E-02	9.124E-02	6.905E-02	4.655E-02	FAIL ABUN
AM-246	5.977E-02	1.053E-01	9.379E-02	5.372E-02	NOT IDENT.
CM-247	2.515E-02	2.783E-02	2.532E-02	1.420E-02	NOT IDENT.
CF-249	8.300E-03	3.047E-02	2.700E-02	1.555E-02	NOT IDENT.
CF-251	1.601E-02	1.005E-01	8.970E-02	5.126E-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	251.6360
46.50	251.6360
46.50	251.6360
48.70	281.6396
49.72	275.6142
51.35	264.7414
52.39	291.2116
52.97	297.3142
53.15	293.8786
53.44	298.7573
54.07	289.4257
56.28	283.5192
56.28	283.5223
57.37	0.0000
57.53	294.0580
57.53	294.0596
57.60	295.9814
57.98	296.3859
57.98	296.3859
59.32	309.8976
59.32	309.8976
59.40	309.9848
59.54	310.1372
59.72	301.0135
60.01	313.4465
61.10	382.0569
61.14	382.1099
61.30	383.2575
63.00	342.1293
63.29	334.9160
63.29	334.9160
63.58	335.2420
64.28	350.2258
65.12	386.3212
65.20	386.4231
65.20	386.4231
66.05	381.7891
66.72	373.0776
66.83	395.1665
66.91	395.2676
67.20	384.1704
67.20	384.1704
67.75	395.3799
67.85	379.2281
68.90	371.2729
68.90	371.2729
69.30	385.3077
69.67	385.7599
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74.81	368.8783
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74.81	368.8783
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83.78	368.9337
83.78	368.9337
83.78	368.9337
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85.43	378.1605
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86.50	486.9614
86.54	487.0128
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86.72	516.0881
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86.94	516.3916
87.30	516.8896
87.30	516.8896
87.30	516.8896
87.30	516.8896
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87.57	517.2606
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88.36	365.8905
88.47	365.9967
89.95	367.4213
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92.29	297.2599
92.38	297.3291
92.38	297.3291
93.35	298.0639
94.00	249.0542
94.67	297.5054
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98.44	281.5302
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99.55	295.8828
99.55	295.8828
99.86	303.4285
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100.10	303.6070
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105.00	281.1984
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108.00	294.3450
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111.00	294.1966
111.76	307.6004
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117.00	282.8529
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122.32	310.2491
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122.32	310.2491
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144.24	291.6308
144.24	291.6308
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145.44	312.9837
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153.22	307.1464
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154.21	270.8607
154.21	270.8607
154.21	270.8607
155.03	283.5368
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163.35	297.3617
163.89	294.0649
165.85	306.6411
167.43	326.2592
171.28	286.8094
171.86	309.6452
172.10	315.1816
176.55	302.8585
176.60	302.8813
181.06	272.5631
184.41	331.4026
185.71	285.9350
186.00	286.0603
190.27	239.2261
192.34	262.0629
193.63	290.2456
197.04	274.7993
198.01	277.0599
198.60	274.4740
200.40	293.0858
201.83	305.9550
202.84	293.9615
205.31	276.3259

208.36	271.5884
208.81	271.7559
209.75	272.1060
209.75	272.1060
210.97	257.0675
215.65	287.9554
216.55	294.0287
218.09	274.2193
222.10	283.4386
223.80	291.8495
226.40	266.4787
227.00	265.7080
227.08	265.7350
227.20	264.7994
228.16	270.9960
228.18	271.0023
228.18	271.0023
231.56	0.0000
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236.00	313.0198
236.00	313.0198
238.63	238.9039
238.63	238.9039
238.63	238.9039
238.63	238.9039
239.00	239.0124
240.98	239.5952
241.98	239.8894
241.98	239.8894
241.98	239.8894
244.69	183.7571
245.39	172.7183
247.94	189.2912
248.90	201.8979
249.79	217.0415
252.40	204.6123
252.85	206.7376
252.85	206.7376
254.15	0.0000
256.20	241.9767
256.20	241.9767
260.50	217.7487
260.90	213.7779
262.80	223.4277
264.65	202.8381
268.24	215.1617
268.79	203.7917
269.46	211.7554
269.46	211.7554
269.46	211.7554
269.46	211.7554
271.23	235.6602
273.65	242.9053
276.40	200.2747
277.35	217.7673
277.60	217.8250
277.60	217.8250
278.00	229.3361
278.60	219.1037
279.20	214.0500
279.53	222.4410
280.46	249.7229
281.68	241.7174
283.67	227.6200
284.30	220.4592
285.00	201.8054
285.90	183.1604
286.10	183.1978
286.10	183.1978
287.40	203.3720
288.45	0.0000
290.67	233.9517
290.80	233.9856
291.72	217.3631
293.26	0.0000
293.70	204.3057
295.21	201.8825
295.21	201.8825

295.21	201.8825
295.96	202.0399
296.50	202.1535
297.23	202.3051
298.57	202.5878
299.80	202.8442
299.80	202.8442
300.09	202.9054
300.09	202.9054
300.09	202.9054
300.09	202.9054
300.12	202.9113
301.29	229.7439
302.84	228.4052
303.76	235.4457
303.91	235.4794
304.40	244.1334
304.40	244.1334
304.84	227.1650
306.84	190.7045
308.46	199.2825
311.98	192.4600
316.51	198.7260
318.01	200.1024
319.02	216.5405
319.41	209.0411
320.08	201.5899
323.87	189.7175
323.87	189.7175
323.87	189.7175
323.87	189.7175
325.23	219.5925
328.77	209.8477
333.44	248.8401
334.20	209.1739
334.20	209.1739
334.30	209.1942
338.28	209.5346
338.28	209.5346
338.28	209.5346
338.28	209.5346
338.32	209.5433
338.32	209.5433
338.32	209.5433
340.50	173.2801
340.57	173.2920
344.27	197.3954
345.85	193.6826
350.59	0.0000
351.07	162.9156
351.92	163.0425
351.92	163.0425
351.92	163.0425
355.39	0.0000
356.01	136.2935
364.48	150.8728
366.43	168.3264
367.43	149.4527
367.94	0.0000
369.80	147.9456
374.96	143.1360
383.85	150.6510
387.95	164.0742
388.63	149.4110
391.69	175.6804
391.69	175.6804
392.90	178.6334
398.62	172.9650
400.65	168.5916
401.10	172.3829
401.81	171.5488
402.60	145.5359
404.84	188.7931
410.95	152.1499
411.60	165.3846
413.65	192.0070
414.70	147.8928
415.30	149.8486

415.76	166.8731
417.63	0.0000
418.52	160.6201
423.70	152.7338
427.08	155.0350
427.89	151.3256
432.53	133.7161
433.93	124.2982
439.47	120.9797
439.56	120.9874
439.89	126.7809
443.98	139.6935
444.90	134.0047
445.03	130.1616
445.03	130.1616
445.03	130.1616
445.03	130.1616
453.90	138.7809
463.38	125.4070
468.07	122.5616
473.00	122.0080
475.06	127.1119
475.35	132.0665
476.78	124.3066
477.59	124.3773
477.96	117.4980
482.03	110.9021
484.57	134.9043
487.03	119.2368
490.36	0.0000
492.35	128.6488
497.08	117.0586
507.63	0.0000
510.53	0.0000
510.84	113.0965
511.00	113.1081
511.85	113.1724
511.85	113.1724
513.99	106.2484
513.99	106.2484
520.41	121.9395
520.65	121.9600
527.90	128.6609
528.96	0.0000
529.64	132.8945
529.87	0.0000
531.02	110.5023
537.32	108.8959
543.00	122.6897
546.56	0.0000
549.76	125.2835
552.65	110.9864
555.20	107.0058
563.23	113.8007
563.90	115.9348
568.70	125.7041
569.32	116.3197
569.50	120.5226
569.67	120.5366
573.80	117.6848
574.00	110.3423
574.64	116.6936
578.91	131.7474
579.30	0.0000
583.14	112.0039
585.48	104.0470
591.81	122.1370
592.07	115.7832
593.00	114.7816
595.88	156.4961
600.56	151.8194
602.52	0.0000
602.71	144.2911
602.71	144.2911
603.60	176.4445
604.41	178.3122
604.70	174.7738
609.31	154.4941

609.31	154.4941
609.31	154.4941
609.31	154.4941
610.33	154.5855
612.46	130.7679
614.37	132.7038
618.01	125.3405
621.84	89.6830
621.84	89.6830
631.29	77.1241
633.02	84.8079
633.10	86.9863
634.78	89.2451
635.90	87.1211
636.97	100.2499
645.85	93.0725
646.12	91.9919
656.30	107.3643
657.75	127.6514
657.90	0.0000
661.65	125.1592
661.65	125.1592
664.57	0.0000
666.33	111.6306
666.33	111.6306
675.00	98.2406
677.61	101.1585
685.20	99.6964
692.80	103.8276
695.00	103.0086
696.49	124.6415
696.49	124.6415
697.00	126.5488
697.49	124.7064
698.33	123.8198
698.50	123.8306
699.00	121.9861
702.63	117.5105
706.10	108.2991
706.58	0.0000
706.67	111.1580
709.31	119.7937
711.68	118.0471
713.82	102.1025
717.42	119.3350
720.50	128.0539
721.93	0.0000
722.20	118.8032
722.78	100.9316
722.78	100.9316
722.89	100.9360
722.95	100.9381
723.30	99.3292
724.18	102.6299
727.18	117.4646
733.00	68.7173
735.90	113.0515
739.58	99.5757
742.81	89.1837
744.21	101.7170
747.13	98.9787
751.79	106.9034
752.31	100.1872
753.82	96.4030
755.35	99.3684
756.15	98.4410
756.87	88.8199
763.93	92.9922
765.79	94.7363
766.42	81.4639
766.84	93.1191
776.49	115.9519
778.00	101.4059
778.57	112.1620
778.89	113.1538
783.80	83.1029
785.46	99.8003
792.07	122.8158

795.84	72.4680
796.30	75.8543
798.80	75.9406
801.93	99.0749
805.60	77.0209
810.29	95.9837
810.76	96.9951
815.85	79.3587
817.79	79.4287
818.51	86.4053
819.60	91.4160
826.30	81.7214
828.27	0.0000
831.60	123.8663
831.96	114.8947
834.83	98.0319
836.80	0.0000
846.75	103.5679
848.13	84.5144
856.28	0.0000
856.80	86.5601
860.37	69.7875
867.32	59.1241
867.82	67.8338
871.10	70.9361
873.19	82.3694
874.81	79.3727
875.33	0.0000
876.40	70.2606
879.36	82.5820
880.27	83.6333
880.51	75.4814
881.50	76.5335
883.24	79.6520
884.67	81.7432
889.25	96.2318
896.60	81.1200
898.02	95.5524
899.00	94.5624
903.28	91.7853
911.07	67.2872
911.07	67.2872
911.07	67.2872
919.63	68.9729
920.93	71.5549
925.00	74.7876
925.24	70.6396
926.50	72.7543
935.52	66.7565
937.48	86.6424
944.10	66.9831
946.00	59.7009
949.00	68.1606
962.29	86.7321
964.01	87.5441
966.15	87.6167
968.20	87.6843
969.11	87.7164
969.11	87.7164
969.11	87.7164
977.42	87.9950
980.50	88.0980
983.50	81.9737
989.30	62.0721
996.32	101.4381
1001.03	70.5977
1001.68	66.3341
1004.76	96.4032
1021.30	0.0000
1024.50	0.0000
1034.80	72.5615
1036.00	73.3682
1037.82	65.9806
1038.57	65.0684
1038.76	0.0000
1045.16	83.8602
1046.59	82.0396
1048.07	74.6205

1050.47	75.6183
1050.47	75.6183
1062.04	68.4299
1063.62	68.4681
1076.63	62.1881
1077.35	62.2019
1078.86	70.7232
1085.78	71.8384
1099.22	73.1221
1112.02	63.4269
1112.84	58.4366
1115.52	75.2014
1120.29	71.7355
1120.29	71.7355
1120.29	71.7355
1120.29	71.7355
1120.51	71.7407
1121.28	71.7590
1124.00	0.0000
1129.67	91.0466
1131.51	0.0000
1147.95	0.0000
1167.94	83.5675
1173.22	91.4985
1175.09	88.6323
1177.93	77.9911
1189.05	69.4647
1204.90	75.7163
1205.75	0.0000
1213.00	100.5592
1221.42	86.9841
1230.97	111.0391
1235.34	97.2925
1236.41	0.0000
1238.25	87.4414
1246.25	75.9271
1260.41	0.0000
1271.85	85.3350
1274.45	66.3108
1274.54	69.3273
1291.56	63.6218
1298.22	0.0000
1312.09	64.0107
1325.50	48.9609
1325.50	48.9609
1332.49	50.0835
1333.61	50.0989
1360.21	57.6953
1362.66	0.0000
1365.15	37.1426
1368.21	53.0073
1368.53	0.0000
1376.25	36.2244
1384.27	36.3062
1394.10	59.2902
1395.20	50.9841
1407.95	43.8545
1434.06	39.9628
1436.60	34.7287
1457.56	0.0000
1460.81	31.5129
1489.15	42.6897
1509.49	30.0420
1596.49	36.4692
1620.62	30.8936
1678.03	0.0000
1691.02	26.5089
1691.02	26.5089
1706.46	0.0000
1750.46	0.0000
1764.49	28.9575
1764.49	28.9575
1764.49	28.9575
1764.49	28.9575
1770.23	23.1069
1771.40	21.3353
1791.20	0.0000
1808.65	22.1853

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1202012145

Total Uranium Activity	2.8747E+00	ug/g
Total Uranium Counting Unc.	4.0866E+00	ug/g
Total Uranium Tpu	2.0850E-06	ug/g
Total Uranium Mda	3.6752E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 940263                    SAMPLE ID  : G1202012145      *
*   ANALYST       : MXR1                      DETECTOR   : GAM18            *
*   SAMPLE DATE   :  5-JAN-2010 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE: 20-JAN-2010 15:47:39.52    SAMPLE ALQT:  128.360 GRAM    *
*                                                                           *
*****************************************************************************
```

```
GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 8.389E+00
GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.067E+00
GROSS GAMMA MDA     (pCi/GRAM  )  : 2.263E+00
GROSS GAMMA DLC     (pCi/GRAM  )  : 1.096E+00
```

VAX/VMS Nuclide Identification Report Generated 20-JAN-2010 15:51:09.19

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202012146.CNF;1
Sample date       : 13-JAN-2010 00:00:00 Acquisition date : 20-JAN-2010 14:47:02
Sample ID         : G1202012146          Sample quantity  : 1.55440E+02 GRAM
Detector name     : GAM13                Detector geometry: CAN
Elapsed live time: 0 01:00:00.00         Elapsed real time: 0 01:00:01.63  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 940263                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	59.41	7113	1202	1.13	118.58	113	10	1.98E+00	1.5	
2	4	74.70	222	393	1.02	149.17	146	13	6.17E-02	15.3	9.81E-01
3	4	76.99*	321	465	1.35	153.76	146	13	8.91E-02	13.4	
4	0	87.85	1921	594	1.17	175.47	171	10	5.34E-01	3.3	
5	0	92.71*	52	445	1.39	185.21	181	9	1.45E-02	81.2	
6	0	122.11	232	474	1.22	244.02	237	12	6.45E-02	19.9	
7	0	185.71*	89	259	1.31	371.25	367	10	2.46E-02	38.0	
8	0	238.51*	418	526	1.29	476.87	471	14	1.16E-01	12.7	
9	0	294.83*	132	247	1.61	589.55	584	12	3.67E-02	25.5	
10	0	338.06*	85	146	1.27	676.02	672	9	2.36E-02	28.2	
11	0	351.82*	150	270	1.55	703.55	698	11	4.15E-02	23.0	
12	0	510.64*	25	202	1.60	1021.29	1015	14	6.96E-03	129.5	
13	0	583.18*	140	169	1.70	1166.41	1158	17	3.88E-02	23.3	
14	0	608.89*	106	132	1.49	1217.86	1214	10	2.94E-02	22.9	
15	0	661.25	1927	196	1.65	1322.61	1316	16	5.35E-01	2.8	
16	0	725.83	38	136	1.62	1451.81	1451	15	1.06E-02	66.9	
17	0	968.85*	69	131	2.01	1938.03	1931	14	1.93E-02	37.4	
18	0	1068.07	38	73	1.89	2136.56	2128	14	1.05E-02	50.9	
19	0	1172.54	1618	80	1.89	2345.59	2336	20	4.50E-01	2.8	
20	0	1331.70	1392	19	2.05	2664.05	2654	19	3.87E-01	2.8	
21	0	1764.66	18	12	1.48	3530.41	3524	12	4.94E-03	45.7	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 20-JAN-2010 15:51:13

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202012146.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 13-JAN-2010 00:00:00 Acquisition date : 20-JAN-2010 14:47:02
Sample ID : G1202012146 Sample quantity : 155.44 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA13 Detector geometry: CAN
Elapsed live time: 0 01:00:00.00 Elapsed real time: 0 01:00:01.63 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

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	*	1.997E-01	8.327E-02	6.162E-02	7.794E-03	3.240
		136.48		9.954E-02	3.376E-01	5.533E-01	6.476E-02	0.180
CO-60	+	1173.22		6.320E+00	4.989E-01	1.266E-01	6.960E-03	49.913
	+	1332.49	*	6.019E+00	4.791E-01	1.012E-01	5.754E-03	59.493
CD-109	+	88.03	*	3.485E+01	3.584E+00	1.687E+00	1.331E-01	20.656
SN-126		64.28		-6.408E-01	4.051E-01	6.783E-01	1.056E-01	-0.945
	+	86.94		1.440E+01	6.010E+00	6.949E-01	2.865E-01	20.723
	+	87.57	*	3.464E+00	3.563E-01	1.675E-01	1.325E-02	20.684
BA-137M	+	661.65	*	5.126E+00	5.073E-01	1.208E-01	9.852E-03	42.433
CS-137	+	661.65	*	5.418E+00	5.371E-01	1.277E-01	1.044E-02	42.433
TL-208		277.35		5.484E-01	6.600E-01	1.117E+00	1.308E-01	0.491
	+	510.84		2.209E-01	5.726E-01	5.038E-01	5.476E-02	0.438
	+	583.14	*	3.553E-01	1.678E-01	1.159E-01	9.594E-03	3.066
		860.37		2.762E-01	6.826E-01	1.164E+00	9.812E-02	0.237
BI-211		72.87		9.146E-01	3.202E+00	4.899E+00	4.284E-01	0.187
	+	351.07	*	1.596E+00	7.424E-01	6.633E-01	4.835E-02	2.406
PB-212	+	74.81		1.362E+00	4.526E-01	5.583E-01	7.102E-02	2.440
	+	77.11		1.172E+00	3.306E-01	3.337E-01	2.835E-02	3.513
	+	87.30		1.602E+01	2.298E+00	7.739E-01	9.875E-02	20.700
	+	238.63	*	9.607E-01	2.584E-01	1.580E-01	1.435E-02	6.080
		300.09		1.262E+00	1.556E+00	2.365E+00	2.250E-01	0.533
PO-212	+	74.81		1.362E+00	4.526E-01	5.583E-01	7.102E-02	2.440
	+	77.11		1.172E+00	3.306E-01	3.337E-01	2.835E-02	3.513
	+	87.30		1.602E+01	2.298E+00	7.739E-01	9.875E-02	20.700
		115.19		6.099E-01	5.061E+00	8.331E+00	9.661E-01	0.073
	+	238.63	*	9.607E-01	2.584E-01	1.580E-01	1.435E-02	6.080
		300.09		1.262E+00	1.556E+00	2.365E+00	2.250E-01	0.533
BI-214	+	609.31	*	5.079E-01	2.371E-01	2.520E-01	2.356E-02	2.016
		1120.29		1.067E+00	7.195E-01	1.273E+00	1.139E-01	0.838
	+	1764.49		6.044E-01	5.538E-01	4.877E-01	2.770E-02	1.239
PB-214	+	74.81		2.347E+00	7.682E-01	9.619E-01	1.094E-01	2.440
	+	77.11		2.010E+00	5.871E-01	5.721E-01	6.528E-02	3.513
	+	87.30		2.744E+01	3.528E+00	1.326E+00	1.466E-01	20.701
		241.98		8.683E-01	7.249E-01	1.130E+00	1.093E-01	0.769

Sample ID : G1202012146 Acquisition date : 20-JAN-2010 14:47:02

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	295.21		8.242E-01	4.284E-01	3.989E-01	3.907E-02	2.066
	+	351.92	*	5.552E-01	2.599E-01	2.313E-01	2.071E-02	2.401
PO-214	+	74.81		2.347E+00	7.682E-01	9.619E-01	1.094E-01	2.440
	+	77.11		2.010E+00	5.871E-01	5.721E-01	6.528E-02	3.513
	+	87.30		2.744E+01	3.528E+00	1.326E+00	1.466E-01	20.701
		241.98		8.683E-01	7.249E-01	1.130E+00	1.093E-01	0.769
	+	295.21		8.242E-01	4.284E-01	3.989E-01	3.907E-02	2.066
	+	351.92	*	5.552E-01	2.599E-01	2.313E-01	2.071E-02	2.401
PO-216	+	74.81		1.362E+00	4.526E-01	5.583E-01	7.102E-02	2.440
	+	77.11		1.172E+00	3.306E-01	3.337E-01	2.835E-02	3.513
	+	87.30		1.602E+01	2.298E+00	7.739E-01	9.875E-02	20.700
	+	238.63	*	9.607E-01	2.584E-01	1.580E-01	1.435E-02	6.080
		300.09		1.262E+00	1.556E+00	2.365E+00	2.250E-01	0.533
PO-218	+	74.81		2.347E+00	7.682E-01	9.619E-01	1.094E-01	2.440
	+	77.11		2.010E+00	5.871E-01	5.721E-01	6.528E-02	3.513
	+	87.30		2.744E+01	3.528E+00	1.326E+00	1.466E-01	20.701
		241.98		8.683E-01	7.249E-01	1.130E+00	1.093E-01	0.769
	+	295.21		8.242E-01	4.284E-01	3.989E-01	3.907E-02	2.066
	+	351.92	*	5.552E-01	2.599E-01	2.313E-01	2.071E-02	2.401
RA-226	+	609.31	*	5.079E-01	2.371E-01	2.520E-01	2.356E-02	2.016
		1120.29		1.067E+00	7.195E-01	1.273E+00	1.139E-01	0.838
	+	1764.49		6.044E-01	5.538E-01	4.877E-01	2.770E-02	1.239
TH-228	+	74.81		1.372E+00	4.379E-01	5.625E-01	4.895E-02	2.440
	+	77.11		1.181E+00	3.331E-01	3.363E-01	2.857E-02	3.513
	+	87.30		1.614E+01	1.660E+00	7.798E-01	6.180E-02	20.701
	+	238.63	*	9.681E-01	2.604E-01	1.592E-01	1.446E-02	6.080
		300.09		1.271E+00	1.735E+00	2.383E+00	1.409E+00	0.533
TH-230	+	609.31	*	5.079E-01	2.371E-01	2.520E-01	2.356E-02	2.016
		1120.29		1.067E+00	7.195E-01	1.273E+00	1.139E-01	0.838
	+	1764.49		6.044E-01	5.538E-01	4.877E-01	2.770E-02	1.239
U-234	+	609.31	*	5.079E-01	2.371E-01	2.520E-01	2.356E-02	2.016
		1120.29		1.067E+00	7.195E-01	1.273E+00	1.139E-01	0.838
	+	1764.49		6.044E-01	5.538E-01	4.877E-01	2.770E-02	1.239
NP-237	+	86.50	*	1.017E+01	2.345E+00	5.281E-01	1.168E-01	19.259
		95.87		-4.008E-02	1.245E+00	1.843E+00	4.557E-01	-0.022
AM-241	+	59.54	*	1.296E+01	1.372E+00	2.161E-01	2.198E-02	59.974
AM-243	+	74.67	*	2.208E-01	7.041E-02	9.048E-02	7.815E-03	2.441
	+	86.72		3.814E+02	3.923E+01	1.982E+01	1.577E+00	19.247
		117.66		-3.049E+00	6.445E+00	9.121E+00	1.091E+00	-0.334
		142.18		-1.478E+01	2.738E+01	4.310E+01	4.567E+00	-0.343
ANH-511	+	511.00	*	4.771E-02	1.236E-01	1.089E-01	7.597E-03	0.438

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	3.665E-01	6.972E-01	1.195E+00	8.988E-02	0.307
NA-22		1274.54	*	1.008E-02	7.362E-02	1.242E-01	7.011E-03	0.081
NA-24		1368.53	*	2.814E-04	7.362E-02	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AL-26		1129.67		-2.385E+00	3.877E+00	5.941E+00	3.521E-01	-0.401
		1808.65	*	1.844E-02	4.949E-02	8.845E-02	4.991E-03	0.208
K-40		1460.81	*	9.101E-01	6.789E-01	1.296E+00	7.923E-02	0.702
TI-44		67.85		-6.715E-03	3.881E-02	6.514E-02	5.897E-03	-0.103
	+	78.38	*	2.163E-01	6.100E-02	6.789E-02	5.718E-03	3.185
SC-46		889.25	*	4.081E-02	1.051E-01	1.780E-01	1.348E-02	0.229
		1120.51		1.749E-01	1.142E-01	2.038E-01	1.225E-02	0.858
V-48		944.10		-6.215E-01	1.959E+00	3.163E+00	2.309E-01	-0.197
		983.50	*	-5.015E-02	1.355E-01	2.164E-01	1.531E-02	-0.232
		1312.09		-4.154E-02	9.413E-02	1.472E-01	8.342E-03	-0.282
CR-51		320.08	*	3.453E-01	5.732E-01	9.670E-01	7.526E-02	0.357
MN-52		744.21		-1.610E-01	2.181E-01	3.295E-01	2.675E-02	-0.489
		848.13		1.296E+00	7.460E+00	1.253E+01	9.758E-01	0.103
		935.52		4.059E-01	3.028E-01	5.340E-01	3.922E-02	0.760
		1246.25		2.728E+00	3.964E+00	7.123E+00	3.987E-01	0.383
		1333.61		2.790E+02	2.254E+01	3.670E+01	2.088E+00	7.602
		1434.06	*	-9.571E-02	1.490E-01	2.185E-01	1.256E-02	-0.438
MN-54		834.83	*	-4.669E-03	8.821E-02	1.464E-01	1.149E-02	-0.032
CO-56		846.75	*	-9.813E-03	1.027E-01	1.699E-01	1.324E-02	-0.058
		977.42		-1.018E+00	8.227E+00	1.275E+01	9.068E-01	-0.080
		1037.82		4.763E-01	7.948E-01	1.349E+00	9.824E-02	0.353
		1175.09		2.323E+02	1.877E+01	3.091E+01	1.700E+00	7.515
		1238.25		3.611E-02	1.072E-01	1.854E-01	1.106E-02	0.195
		1360.21		-1.861E+00	1.305E+00	1.562E+00	8.918E-02	-1.191
		1771.40		-8.140E-01	4.468E-01	4.772E-01	2.708E-02	-1.706
CO-58		810.76	*	-4.085E-02	9.236E-02	1.497E-01	1.193E-02	-0.273
FE-59		142.65		-1.025E+00	3.714E+00	5.929E+00	6.252E-01	-0.173
		192.34		8.244E-01	1.300E+00	2.258E+00	2.930E-01	0.365
		1099.22	*	1.122E-01	2.167E-01	3.642E-01	2.602E-02	0.308
		1291.56		-3.822E-02	1.932E-01	3.137E-01	2.291E-02	-0.122
ZN-65		1115.52	*	-2.817E-01	2.378E-01	3.524E-01	2.139E-02	-0.799
GE-68		1077.35	*	2.279E+00	3.183E+00	5.437E+00	3.475E-01	0.419
AS-73		53.44	*	-2.748E-01	5.488E-01	9.236E-01	7.801E-02	-0.298
AS-74		595.88	*	-1.413E-01	1.539E-01	2.365E-01	1.816E-02	-0.598
		634.78		4.670E-01	6.169E-01	1.055E+00	8.405E-02	0.443
SE-75		66.05		-8.671E+00	3.940E+00	5.993E+00	6.528E-01	-1.447
		96.73		-9.832E-01	1.041E+00	1.438E+00	1.995E-01	-0.684
	+	121.11		1.048E+00	4.434E-01	4.446E-01	6.409E-02	2.357
		136.00		3.928E-02	6.160E-02	1.023E-01	1.156E-02	0.384
		198.60		4.587E-01	2.737E+00	4.642E+00	4.148E-01	0.099
		264.65	*	-1.808E-03	7.408E-02	1.227E-01	9.614E-03	-0.015
		279.53		-9.192E-02	1.854E-01	2.983E-01	2.400E-02	-0.308
		303.91		-2.288E+00	3.686E+00	5.833E+00	6.197E-01	-0.392
		400.65		7.586E-02	5.300E-01	8.530E-01	7.839E-02	0.089
BR-77	+	87.88		8.490E+02	8.732E+01	9.627E+01	7.599E+00	8.819
		200.40		5.037E+00	2.943E+01	5.015E+01	3.973E+00	0.100
	+	239.00		1.720E+01	4.563E+00	5.161E+00	4.077E-01	3.333
		249.79		1.911E+00	1.319E+01	2.212E+01	1.739E+00	0.086
		281.68		-7.156E+00	1.829E+01	2.958E+01	2.268E+00	-0.242

---- Non-Identified Nuclides ----

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		297.23		4.765E+00	1.266E+01	1.871E+01	1.407E+00	0.255
		303.76		-3.446E+01	3.709E+01	5.768E+01	4.297E+00	-0.597
		439.47		-8.251E+00	3.575E+01	5.946E+01	3.756E+00	-0.139
		484.57		-5.326E+00	5.759E+01	9.567E+01	6.450E+00	-0.056
		520.65	*	9.970E-01	2.401E+00	4.088E+00	2.887E-01	0.244
		574.64		-1.485E+01	5.446E+01	8.273E+01	6.216E+00	-0.180
		578.91		-1.066E+01	2.271E+01	3.081E+01	2.325E+00	-0.346
		585.48		8.291E+01	4.582E+01	7.478E+01	5.682E+00	1.109
		755.35		6.409E+00	4.484E+01	7.272E+01	5.888E+00	0.088
		817.79		1.588E+01	3.788E+01	6.483E+01	5.132E+00	0.245
SR-82		698.33		2.481E+00	5.911E+01	9.587E+01	7.827E+00	0.026
		776.49	*	-5.462E-01	7.061E-01	1.119E+00	9.005E-02	-0.488
		1395.20		1.079E+01	1.613E+01	2.884E+01	1.652E+00	0.374
RB-83		520.41	*	3.197E-02	1.363E-01	2.295E-01	1.620E-02	0.139
		529.64		-1.564E-01	2.055E-01	3.228E-01	2.305E-02	-0.484
		552.65		5.624E-03	4.017E-01	6.639E-01	4.869E-02	0.008
RB-84		881.50	*	-4.664E-03	1.636E-01	2.706E-01	2.061E-02	-0.017
KR-85		513.99	*	1.445E+01	1.670E+01	2.576E+01	1.804E+00	0.561
SR-85		513.99	*	6.845E-02	7.913E-02	1.220E-01	8.548E-03	0.561
RB-86		1076.63	*	2.973E-01	1.611E+00	2.598E+00	1.662E-01	0.114
Y-88		898.02		-5.518E-02	1.072E-01	1.713E-01	1.297E-02	-0.322
		1836.01	*	-4.142E-02	5.185E-02	6.925E-02	3.900E-03	-0.598
ZR-88		392.90	*	1.044E-02	6.427E-02	1.042E-01	6.103E-03	0.100
Y-91		1204.90	*	-5.921E+00	2.643E+01	4.315E+01	2.392E+00	-0.137
NB-94		702.63	*	8.877E-05	7.623E-02	1.232E-01	1.006E-02	0.001
		871.10		6.142E-02	9.542E-02	1.642E-01	1.260E-02	0.374
NB-95		765.79	*	4.092E-02	8.402E-02	1.453E-01	1.173E-02	0.282
NB-95M		235.69	*	-3.627E-02	2.110E-01	3.077E-01	2.846E-02	-0.118
ZR-95		724.18		1.305E-01	2.170E-01	3.198E-01	2.856E-02	0.408
		756.15	*	5.043E-02	1.591E-01	2.610E-01	2.355E-02	0.193
NB-97		657.90	*	1.291E-03	1.591E-01	Half-Life too short		
		1024.50		3.918E-03	1.591E-01	Half-Life too short		
ZR-97		254.15		-1.341E-03	1.591E-01	Half-Life too short		
		355.39		7.295E-04	1.591E-01	Half-Life too short		
		507.63	*	5.302E-04	1.591E-01	Half-Life too short		
		602.52		8.114E-04	1.591E-01	Half-Life too short		
		1021.30		4.812E-03	1.591E-01	Half-Life too short		
		1147.95		-3.175E-03	1.591E-01	Half-Life too short		
		1362.66		-4.245E-03	1.591E-01	Half-Life too short		
		1750.46		-7.658E-04	1.591E-01	Half-Life too short		
MO-99		140.51		-2.154E+00	6.236E+00	9.859E+00	2.803E+00	-0.218
		181.06		-4.363E-01	4.702E+00	6.579E+00	1.181E+00	-0.066
		366.43		-1.199E+01	2.590E+01	4.068E+01	2.617E+00	-0.295
		739.58	*	1.098E+00	3.967E+00	6.510E+00	9.705E-01	0.169
		778.00		3.648E+00	1.154E+01	1.973E+01	1.587E+00	0.185
TC-99M		140.51	*	-1.961E+01	1.154E+01	Half-Life too short		
RH-101		127.23		1.373E-02	5.194E-02	8.151E-02	9.898E-03	0.168
		198.01	*	1.427E-02	5.319E-02	9.057E-02	7.172E-03	0.158
		325.23		7.581E-02	4.242E-01	6.989E-01	5.010E-02	0.108

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RH-102		418.52		4.730E-01	6.486E-01	1.079E+00	6.596E-02	0.438
		475.06	*	-5.112E-02	7.091E-02	1.136E-01	7.559E-03	-0.450
		631.29		-8.687E-02	1.228E-01	1.901E-01	1.510E-02	-0.457
		697.49		-4.866E-02	1.651E-01	2.610E-01	2.131E-02	-0.186
		766.84		6.156E-02	2.339E-01	3.988E-01	3.219E-02	0.154
		1046.59		6.852E-02	3.073E-01	5.088E-01	3.377E-02	0.135
		1112.84		1.007E-03	6.110E-01	9.904E-01	6.025E-02	0.001
RU-103		497.08	*	8.376E-02	7.593E-02	1.333E-01	1.755E-02	0.628
	+	610.33		4.804E+00	2.332E+00	3.310E+00	5.386E-01	1.451
RH-106	+	511.85		2.349E-01	6.088E-01	6.714E-01	4.691E-02	0.350
		621.84	*	8.981E-02	6.917E-01	1.140E+00	1.470E-01	0.079
		1050.47		2.426E+00	5.765E+00	9.684E+00	6.398E-01	0.250
RU-106	+	511.85		2.349E-01	6.088E-01	6.714E-01	4.691E-02	0.350
		621.84	*	8.981E-02	6.917E-01	1.140E+00	8.980E-02	0.079
		1050.47		2.426E+00	5.765E+00	9.684E+00	6.398E-01	0.250
AG-108M		433.93	*	4.926E-03	6.917E-02	1.170E-01	7.869E-03	0.042
		614.37		1.741E-02	9.546E-02	1.374E-01	1.126E-02	0.127
		722.95		-1.162E-02	1.024E-01	1.404E-01	1.194E-02	-0.083
AG-110M		657.75	*	5.230E-01	1.312E-01	2.205E-01	1.853E-02	2.372
		677.61		1.788E-01	6.735E-01	1.113E+00	9.370E-02	0.161
		706.67		3.147E-01	4.427E-01	7.511E-01	6.317E-02	0.419
		763.93		-1.678E-01	3.553E-01	5.774E-01	4.815E-02	-0.291
		884.67		3.161E-02	1.355E-01	2.276E-01	1.801E-02	0.139
		937.48		1.661E-01	3.334E-01	5.636E-01	4.339E-02	0.295
		1384.27		-3.873E-02	2.342E-01	3.761E-01	2.288E-02	-0.103
IN-111		171.28		-1.036E-01	2.594E-01	4.041E-01	3.172E-02	-0.256
		245.39	*	-1.286E-01	3.131E-01	4.726E-01	3.724E-02	-0.272
IN-113M		391.69	*	-5.543E-02	9.453E-02	1.467E-01	9.141E-03	-0.378
SN-113		391.69	*	-5.543E-02	9.453E-02	1.467E-01	9.141E-03	-0.378
IN-114M		190.27	*	4.686E-02	3.022E-01	4.285E-01	3.386E-02	0.109
CD-115		260.90		-1.052E+01	2.190E+01	3.546E+01	2.769E+00	-0.297
		492.35		-3.412E+00	7.382E+00	1.196E+01	8.146E-01	-0.285
		527.90	*	-3.354E-01	2.141E+00	3.513E+00	2.503E-01	-0.095
SN-117M		156.02		2.332E-01	2.417E+00	3.894E+00	3.518E-01	0.060
		158.56	*	-8.789E-03	6.135E-02	9.754E-02	8.518E-03	-0.090
SB-122		563.90	*	3.156E-01	6.176E-01	1.052E+00	7.810E-02	0.300
		692.80		-7.836E+00	1.395E+01	2.161E+01	1.764E+00	-0.363
I-123		159.00	*	1.876E-04	1.395E+01	Half-Life too short		
		528.96		-1.053E-02	1.395E+01	Half-Life too short		
TE-123M		159.00	*	1.221E-02	4.389E-02	7.123E-02	6.220E-03	0.171
I-124		602.71	*	8.717E-02	4.729E-01	7.132E-01	5.515E-02	0.122
		722.78		-1.241E-01	3.087E+00	4.269E+00	3.478E-01	-0.029
		1325.50		1.915E+01	2.026E+01	3.323E+01	1.888E+00	0.576
		1376.25		8.880E-01	1.256E+01	2.095E+01	1.198E+00	0.042
		1509.49		-1.597E+00	7.940E+00	1.259E+01	7.257E-01	-0.127
		1691.02		-1.307E-01	1.774E+00	2.822E+00	1.616E-01	-0.046
SB-124		602.71		1.617E-02	8.774E-02	1.323E-01	1.023E-02	0.122
		645.85		3.092E-01	1.016E+00	1.690E+00	1.453E-01	0.183
		709.31		-2.405E+00	5.648E+00	8.820E+00	7.196E-01	-0.273

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		713.82		-1.514E+00	3.374E+00	5.251E+00	6.149E-01	-0.288
		722.78		-3.337E-02	8.303E-01	1.148E+00	9.581E-02	-0.029
	+	968.20		1.312E+01	9.872E+00	1.185E+01	8.492E-01	1.107
		1045.16		3.638E+00	6.137E+00	1.028E+01	6.833E-01	0.354
		1325.50		5.502E+00	5.820E+00	9.545E+00	5.423E-01	0.576
		1368.21		2.060E+00	2.494E+00	4.586E+00	5.425E-01	0.449
		1436.60		-9.099E-01	5.408E+00	8.642E+00	4.967E-01	-0.105
		1691.02	*	-8.294E-03	1.126E-01	1.790E-01	1.115E-02	-0.046
SB-125		427.89	*	-7.578E-02	1.941E-01	3.205E-01	2.062E-02	-0.236
		463.38		3.234E-01	6.548E-01	1.122E+00	8.319E-02	0.288
		600.56		4.924E-01	3.940E-01	6.921E-01	5.827E-02	0.711
		635.90		5.274E-01	6.316E-01	1.084E+00	9.454E-02	0.487
TE-125M		109.28	*	8.626E+00	1.176E+01	1.988E+01	2.413E+00	0.434
I-126		388.63		1.362E-01	2.909E-01	4.802E-01	2.844E-02	0.284
		666.33	*	-2.122E-01	3.098E-01	4.023E-01	3.282E-02	-0.527
		753.82		7.263E-01	2.369E+00	3.886E+00	3.148E-01	0.187
SB-126		223.80		-1.864E+00	4.592E+00	7.571E+00	6.002E-01	-0.246
		278.60		1.463E-01	2.872E+00	4.757E+00	3.659E-01	0.031
		296.50		2.532E+00	2.020E+00	3.129E+00	2.356E-01	0.809
		414.70		-1.525E-01	1.136E-01	1.665E-01	1.012E-02	-0.916
		415.30		-6.610E+00	9.209E+00	1.407E+01	8.559E-01	-0.470
		555.20		3.160E+00	5.544E+00	9.480E+00	6.973E-01	0.333
		573.80		5.204E-01	1.536E+00	2.518E+00	1.890E-01	0.207
		593.00		5.549E-01	1.326E+00	2.235E+00	1.712E-01	0.248
		656.30		-1.848E+00	6.192E+00	8.449E+00	6.860E-01	-0.219
		666.33		-8.714E-02	1.273E-01	1.652E-01	1.348E-02	-0.527
		675.00		-1.635E-01	2.929E+00	4.732E+00	3.863E-01	-0.035
		695.00		6.109E-03	1.075E-01	1.746E-01	1.426E-02	0.035
		697.00		9.756E-02	3.759E-01	6.195E-01	5.058E-02	0.157
		720.50	*	7.236E-02	2.238E-01	3.490E-01	2.844E-02	0.207
		856.80		-8.927E-01	7.389E-01	1.117E+00	8.650E-02	-0.799
		989.30		5.268E-01	2.246E+00	3.740E+00	2.632E-01	0.141
		1034.80		-2.907E-01	1.578E+01	2.572E+01	1.730E+00	-0.011
		1213.00		2.067E+00	4.454E+00	7.802E+00	4.333E-01	0.265
SB-127		61.10		2.482E+02	3.125E+01	3.681E+01	3.735E+00	6.744
		252.40		3.315E-01	2.042E+00	3.418E+00	1.416E+00	0.097
		290.80		-6.965E+00	1.153E+01	1.591E+01	1.334E+00	-0.438
		411.60		1.692E+00	7.002E+00	1.135E+01	1.489E+00	0.149
		444.90		-6.710E-01	5.793E+00	9.683E+00	8.971E-01	-0.069
		473.00		6.574E-02	1.022E+00	1.716E+00	1.696E-01	0.038
		543.00		4.807E+00	9.154E+00	1.561E+01	1.899E+00	0.308
		603.60		-1.698E+00	7.840E+00	1.090E+01	1.114E+00	-0.156
		685.20	*	5.953E-01	7.854E-01	1.339E+00	1.230E-01	0.445
		698.50		2.099E+00	8.363E+00	1.377E+01	1.971E+00	0.153
		722.20		2.266E+00	1.942E+01	2.732E+01	2.430E+00	0.083
		783.80		1.381E+00	2.178E+00	3.783E+00	3.910E-01	0.365
XE-127		57.60		5.107E+01	7.813E+00	1.128E+01	1.043E+00	4.527
		145.22		-3.226E-01	9.109E-01	1.441E+00	1.479E-01	-0.224
		172.10		3.716E-02	1.653E-01	2.663E-01	2.091E-02	0.140

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		202.84	*	-1.542E-02	6.521E-02	1.091E-01	8.648E-03	-0.141
		374.96		-3.680E-01	3.543E-01	5.342E-01	3.336E-02	-0.689
I-131		80.18		-1.606E+00	2.908E+00	4.248E+00	3.540E-01	-0.378
		284.30		-3.797E-02	1.470E+00	2.423E+00	1.964E-01	-0.016
		364.48	*	3.023E-02	1.190E-01	1.953E-01	1.374E-02	0.155
		636.97		2.007E+00	1.867E+00	3.248E+00	2.748E-01	0.618
		722.89		-9.232E-01	9.025E+00	1.239E+01	1.012E+00	-0.074
TE-132		49.72		3.120E+00	1.970E+00	3.464E+00	2.918E-01	0.901
		111.76		-4.906E+00	8.580E+00	1.357E+01	1.571E+00	-0.362
		116.30		-1.106E+00	8.968E+00	1.300E+01	1.590E+00	-0.085
		228.16	*	-3.752E-02	2.386E-01	3.973E-01	5.659E-02	-0.094
BA-133		53.15		-1.095E+00	2.478E+00	4.178E+00	3.506E-01	-0.262
		79.62		-4.113E-01	1.513E+00	2.242E+00	3.380E-01	-0.183
		81.00		-1.528E-01	1.286E-01	1.791E-01	2.810E-02	-0.853
		276.40		6.358E-01	6.473E-01	1.099E+00	1.530E-01	0.579
		302.84		-1.794E-01	2.705E-01	4.271E-01	5.368E-02	-0.420
		356.01	*	-4.270E-02	1.054E-01	1.464E-01	1.758E-02	-0.292
		383.85		3.858E-01	6.274E-01	1.044E+00	1.148E-01	0.370
I-133	+	510.53		1.184E-03	6.274E-01	Half-Life too short		
		529.87	*	-2.508E-05	6.274E-01	Half-Life too short		
		706.58		1.604E-03	6.274E-01	Half-Life too short		
		856.28		-4.837E-03	6.274E-01	Half-Life too short		
		875.33		5.309E-05	6.274E-01	Half-Life too short		
		1236.41		2.281E-03	6.274E-01	Half-Life too short		
		1298.22		1.460E-03	6.274E-01	Half-Life too short		
CS-134		475.35		-2.882E+00	4.566E+00	7.348E+00	4.892E-01	-0.392
		563.23		5.459E-01	7.288E-01	1.259E+00	9.464E-02	0.434
		569.32		1.601E-01	4.262E-01	7.165E-01	5.449E-02	0.223
		604.70		-5.768E-02	9.107E-02	1.218E-01	9.466E-03	-0.474
		795.84	*	7.697E-02	1.033E-01	1.809E-01	1.458E-02	0.426
		801.93		-9.203E-01	9.480E-01	1.459E+00	1.171E-01	-0.631
		1038.57		1.095E-01	1.053E+01	1.720E+01	1.152E+00	0.006
		1167.94		2.582E+01	7.566E+00	1.354E+01	7.518E-01	1.907
		1365.15		1.404E+00	1.818E+00	3.344E+00	2.103E-01	0.420
CS-135		268.24	*	2.571E-01	2.814E-01	4.848E-01	4.478E-02	0.530
I-135		288.45		-2.371E+02	2.814E-01	Half-Life too short		
		417.63		3.214E+02	2.814E-01	Half-Life too short		
		546.56		1.795E+02	2.814E-01	Half-Life too short		
		836.80		-1.996E+02	2.814E-01	Half-Life too short		
		1038.76		-2.844E+01	2.814E-01	Half-Life too short		
		1124.00		-4.753E+02	2.814E-01	Half-Life too short		
		1131.51		-2.614E+00	2.814E-01	Half-Life too short		
		1260.41	*	-8.062E+00	2.814E-01	Half-Life too short		
		1457.56		1.550E+02	2.814E-01	Half-Life too short		
		1678.03		1.147E+02	2.814E-01	Half-Life too short		
		1706.46		-6.017E+00	2.814E-01	Half-Life too short		
		1791.20		5.801E+01	2.814E-01	Half-Life too short		
CS-136		66.91		1.831E-01	4.182E-01	7.153E-01	1.124E-01	0.256
		86.29		1.066E+01	1.883E+00	2.476E+00	3.077E-01	4.305

---- Non-Identified Nuclides ----

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		153.22		-2.291E-01	6.825E-01	1.076E+00	1.108E-01	-0.213
		163.89		-6.749E-01	1.186E+00	1.825E+00	1.674E-01	-0.370
		176.55		-9.025E-02	3.993E-01	6.265E-01	5.265E-02	-0.144
		273.65		-5.794E-01	5.376E-01	8.379E-01	6.999E-02	-0.692
		340.57		6.317E-02	1.755E-01	2.566E-01	1.855E-02	0.246
		818.51		5.972E-02	1.280E-01	2.196E-01	1.738E-02	0.272
		1048.07	*	-1.108E-01	1.947E-01	3.041E-01	2.156E-02	-0.364
		1235.34		4.884E-01	5.146E-01	9.424E-01	9.290E-02	0.518
CE-139		165.85	*	-1.457E-02	4.672E-02	7.336E-02	5.752E-03	-0.199
BA-140		162.64		-6.011E-01	8.212E-01	1.252E+00	1.097E-01	-0.480
		304.84		-6.201E-01	1.568E+00	2.502E+00	6.927E-01	-0.248
		423.70		7.197E-01	2.925E+00	4.722E+00	1.504E+00	0.152
		537.32	*	-1.341E-02	3.709E-01	6.125E-01	2.009E-01	-0.022
LA-140		328.77		-2.835E-01	3.626E-01	5.643E-01	4.342E-02	-0.502
		432.53		-1.404E+00	2.858E+00	4.685E+00	3.194E-01	-0.300
		487.03		-2.772E-02	2.052E-01	3.399E-01	2.525E-02	-0.082
		751.79		-8.175E-01	2.794E+00	4.388E+00	3.984E-01	-0.186
		815.85		5.582E-02	5.403E-01	9.074E-01	8.161E-02	0.062
		867.82		9.147E-02	2.510E+00	4.174E+00	3.422E-01	0.022
		919.63		3.541E-01	5.472E+00	9.067E+00	8.799E-01	0.039
		925.24		1.417E-01	2.222E+00	3.679E+00	2.951E-01	0.039
		1596.49	*	-5.203E-02	9.184E-02	1.333E-01	7.679E-03	-0.390
CE-141		145.44	*	-2.369E-02	8.053E-02	1.278E-01	1.325E-02	-0.185
CE-143		57.37		1.295E+02	2.934E+01	4.494E+01	4.635E+00	2.881
		231.56		3.757E+01	1.009E+02	1.654E+02	5.190E+01	0.227
		293.26	*	1.225E+01	6.617E+00	9.958E+00	2.093E+00	1.230
	+	350.59		2.854E+02	1.574E+02	1.678E+02	5.122E+01	1.701
		490.36		-8.300E+00	1.401E+02	2.329E+02	7.247E+01	-0.036
		664.57		7.010E+02	2.479E+02	2.045E+02	6.579E+01	3.428
		721.93		-1.897E+00	7.990E+01	1.107E+02	3.212E+01	-0.017
CE-144		80.11		-1.440E+00	2.509E+00	3.661E+00	3.048E-01	-0.393
		133.54	*	-6.880E-02	3.121E-01	5.002E-01	8.670E-02	-0.138
PM-144		476.78		2.796E-02	1.602E-01	2.689E-01	2.066E-02	0.104
		618.01		-5.049E-03	6.959E-02	1.132E-01	9.177E-03	-0.045
		696.49	*	3.022E-02	7.252E-02	1.208E-01	9.868E-03	0.250
		778.57		1.987E+00	5.148E+00	8.841E+00	7.112E-01	0.225
PR-144		696.49	*	2.040E+00	4.895E+00	8.156E+00	6.659E-01	0.250
		1489.15		1.455E+00	1.856E+01	3.081E+01	1.775E+00	0.047
PM-146		453.90	*	3.126E-02	9.765E-02	1.665E-01	1.512E-02	0.188
		633.02		-1.305E+00	3.292E+00	5.169E+00	1.924E+00	-0.253
		735.90		-3.499E-01	4.450E-01	5.505E-01	1.567E-01	-0.636
		747.13		-2.340E-02	2.108E-01	3.357E-01	4.610E-02	-0.070
ND-147		91.11		-3.926E-01	2.955E-01	3.848E-01	3.470E-02	-1.020
		319.41		1.060E+00	3.825E+00	6.348E+00	4.604E-01	0.167
		439.89		-1.273E+00	8.114E+00	1.354E+01	8.564E-01	-0.094
		531.02	*	-3.762E-01	7.419E-01	1.186E+00	1.678E-01	-0.317
PM-149		285.90	*	1.413E+01	1.617E+01	2.759E+01	4.138E+00	0.512
EU-152	+	121.78		5.902E-01	2.478E-01	2.568E-01	3.474E-02	2.298
		244.69		-4.148E-02	6.347E-01	9.280E-01	7.315E-02	-0.045

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		344.27	*	1.444E-01	1.968E-01	3.220E-01	2.414E-02	0.448
		443.98		-1.400E-01	2.158E+00	3.616E+00	2.300E-01	-0.039
		778.89		2.517E-01	5.953E-01	1.025E+00	8.243E-02	0.246
		867.32		1.666E-01	2.225E+00	3.709E+00	2.853E-01	0.045
		964.01		3.999E-01	8.373E-01	1.232E+00	8.862E-02	0.324
		1085.78		-9.890E-03	1.034E+00	1.678E+00	1.061E-01	-0.006
		1112.02		4.132E-01	8.772E-01	1.470E+00	8.954E-02	0.281
		1407.95		4.271E-03	2.537E-01	4.190E-01	2.403E-02	0.010
GD-153		69.67		4.303E-01	1.447E+00	2.462E+00	2.201E-01	0.175
		83.37		9.650E+00	2.022E+01	3.068E+01	2.497E+00	0.315
		97.43	*	-5.467E-02	1.017E-01	1.550E-01	1.410E-02	-0.353
		103.18		2.698E-02	1.397E-01	2.323E-01	2.294E-02	0.116
EU-154	+	123.07		4.141E-01	1.754E-01	1.720E-01	2.507E-02	2.408
		247.94		-1.329E-01	6.290E-01	1.037E+00	1.133E-01	-0.128
		591.81		6.311E-01	1.365E+00	2.250E+00	2.469E-01	0.280
		723.30		1.027E-02	4.312E-01	6.005E-01	5.466E-02	0.017
		756.87		1.015E+00	1.849E+00	3.079E+00	3.573E-01	0.329
		873.19		6.068E-01	8.270E-01	1.428E+00	1.655E-01	0.425
		996.32		2.053E-01	1.012E+00	1.678E+00	2.859E-01	0.122
		1004.76		4.051E-01	5.300E-01	9.125E-01	9.539E-02	0.444
		1274.45	*	2.615E-02	2.062E-01	3.475E-01	3.210E-02	0.075
EU-155		48.70		4.309E-01	1.072E+00	1.855E+00	1.400E-01	0.232
	+	60.01		4.204E+02	4.222E+01	2.295E+01	2.197E+00	18.317
	+	86.54		4.160E+00	4.309E-01	3.855E-01	3.107E-02	10.792
		105.31	*	1.896E-02	1.455E-01	2.395E-01	2.458E-02	0.079
TB-160	+	86.79		1.037E+01	1.066E+00	1.062E+00	8.442E-02	9.767
		197.04		3.313E-02	8.298E-01	1.400E+00	1.109E-01	0.024
		215.65		-4.365E-01	1.215E+00	2.015E+00	1.598E-01	-0.217
		298.57		5.271E-02	2.119E-01	3.108E-01	2.333E-02	0.170
		879.36	*	-2.745E-01	3.513E-01	5.513E-01	4.206E-02	-0.498
		962.29		5.122E-01	1.505E+00	2.183E+00	1.572E-01	0.235
		966.15		8.646E-01	5.899E-01	9.266E-01	6.652E-02	0.933
		1177.93		6.197E-01	7.118E-01	1.101E+00	6.059E-02	0.563
		1271.85		-3.364E-01	1.036E+00	1.655E+00	9.313E-02	-0.203
HO-166M		80.57		-4.030E-01	3.434E-01	4.851E-01	4.025E-02	-0.831
	+	184.41		1.076E-01	8.218E-02	1.025E-01	8.088E-03	1.050
		280.46		-1.282E-01	1.553E-01	2.453E-01	1.883E-02	-0.523
		410.95		3.390E-01	5.351E-01	8.869E-01	5.355E-02	0.382
		711.68	*	-6.804E-02	1.319E-01	2.041E-01	1.665E-02	-0.333
		752.31		1.154E-02	6.654E-01	1.070E+00	8.669E-02	0.011
		810.29		-5.665E-02	1.496E-01	2.437E-01	1.936E-02	-0.232
TM-171		51.35		-5.440E+00	1.809E+01	3.077E+01	2.477E+00	-0.177
		52.39		-2.179E+00	1.017E+01	1.725E+01	1.423E+00	-0.126
	+	59.40		2.201E+03	2.210E+02	1.249E+02	1.198E+01	17.616
		66.72	*	1.039E+01	2.228E+01	3.820E+01	3.486E+00	0.272
LU-176	+	88.36		8.216E+00	8.450E-01	9.190E-01	7.290E-02	8.939
		201.83		-1.980E-02	4.665E-02	7.743E-02	6.135E-03	-0.256
		306.84	*	5.982E-03	4.617E-02	7.571E-02	5.613E-03	0.079
		401.10		2.951E+00	1.480E+01	2.389E+01	1.419E+00	0.124

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LU-177		112.95		-7.637E-01	1.064E+00	1.666E+00	1.877E-01	-0.458
		208.36	*	3.006E-01	8.208E-01	1.405E+00	1.114E-01	0.214
LU-177M		52.97		-5.320E-01	1.073E+00	1.806E+00	1.510E-01	-0.295
		54.07		-2.147E-01	6.362E-01	1.028E+00	8.806E-02	-0.209
		61.30		1.192E+01	1.915E+00	2.861E+00	2.713E-01	4.166
	+	121.62		2.933E+00	1.223E+00	1.274E+00	1.602E-01	2.302
		147.16		-1.555E-01	9.614E-01	1.535E+00	1.543E-01	-0.101
		171.86		5.792E-02	7.509E-01	1.200E+00	9.425E-02	0.048
		218.09		-1.187E-01	1.434E+00	2.404E+00	1.906E-01	-0.049
		268.79		1.564E+00	1.362E+00	2.370E+00	1.840E-01	0.660
		319.02		-4.250E-02	4.676E-01	7.605E-01	5.519E-02	-0.056
		367.43		2.961E-01	1.827E+00	2.979E+00	1.910E-01	0.099
		413.65	*	-4.132E-01	3.848E-01	5.747E-01	3.486E-02	-0.719
HF-181		56.28		9.177E-01	7.808E-01	1.232E+00	1.108E-01	0.745
		57.53		3.443E+00	6.053E-01	9.124E-01	8.420E-02	3.774
		65.20		-2.021E+00	6.915E-01	1.014E+00	9.351E-02	-1.994
		133.02		-9.437E-02	8.990E-02	1.372E-01	1.585E-02	-0.688
		136.25		4.021E-01	6.629E-01	1.100E+00	1.235E-01	0.366
		345.85		-2.228E-01	3.836E-01	5.189E-01	3.546E-02	-0.429
		482.03	*	-2.697E-02	8.727E-02	1.433E-01	9.629E-03	-0.188
W-181		56.28		3.896E-01	3.311E-01	5.227E-01	4.698E-02	0.745
		57.53		1.456E+00	2.565E-01	3.868E-01	3.569E-02	3.763
		65.20	*	-8.509E-01	2.911E-01	4.268E-01	3.936E-02	-1.994
TA-182		67.75		-1.922E-02	8.812E-02	1.477E-01	1.338E-02	-0.130
		100.10		1.520E-01	2.235E-01	3.794E-01	3.588E-02	0.401
		152.43		-5.890E-02	4.918E-01	7.849E-01	7.419E-02	-0.075
		222.10		-1.424E-01	5.740E-01	9.540E-01	7.564E-02	-0.149
		1001.68		-5.803E+00	5.121E+00	7.673E+00	5.338E-01	-0.756
		1121.28		3.684E-01	3.205E-01	5.591E-01	3.358E-02	0.659
		1189.05		4.488E-01	5.120E-01	9.224E-01	5.092E-02	0.487
		1221.42	*	-3.054E-02	2.587E-01	4.260E-01	2.371E-02	-0.072
		1230.97		-1.590E-01	6.126E-01	9.911E-01	5.528E-02	-0.160
RE-183	+	57.98		1.467E+01	1.474E+00	5.704E-01	5.313E-02	25.723
	+	59.32		8.434E+00	8.470E-01	4.793E-01	4.588E-02	17.597
		67.20		2.665E-02	1.490E-01	2.531E-01	2.302E-02	0.105
		162.32	*	-6.106E-02	1.663E-01	2.591E-01	2.145E-02	-0.236
		208.81		-1.074E-01	1.507E+00	2.535E+00	2.011E-01	-0.042
		291.72		1.342E-01	1.759E+00	2.555E+00	1.936E-01	0.053
RE-184	+	57.98		5.648E+01	5.672E+00	2.196E+00	2.045E-01	25.723
	+	59.32		3.244E+01	3.258E+00	1.843E+00	1.765E-01	17.597
		67.20		1.026E-01	5.733E-01	9.741E-01	8.859E-02	0.105
		161.27		1.565E-01	5.440E-01	8.827E-01	7.419E-02	0.177
		216.55		-6.446E-02	4.507E-01	7.540E-01	5.980E-02	-0.085
		252.85	*	-1.676E-01	4.170E-01	6.807E-01	5.344E-02	-0.246
		318.01		-4.340E-01	8.081E-01	1.280E+00	9.306E-02	-0.339
		792.07		2.195E-01	2.133E+00	3.593E+00	2.876E-01	0.061
		903.28		-1.109E+00	2.605E+00	4.187E+00	3.139E-01	-0.265
		920.93		4.667E-02	1.295E+00	2.142E+00	1.589E-01	0.022
OS-185	+	59.72		2.344E+01	2.354E+00	1.318E+00	1.264E-01	17.786

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		61.14		2.160E+00	2.759E-01	3.604E-01	3.422E-02	5.994
		69.30		1.612E-01	2.464E-01	4.236E-01	3.797E-02	0.381
		592.07		2.531E+00	5.281E+00	8.723E+00	6.673E-01	0.290
		646.12	*	2.693E-02	8.869E-02	1.475E-01	1.187E-02	0.183
		717.42		4.322E-01	1.923E+00	3.153E+00	2.571E-01	0.137
		874.81		4.329E-01	1.544E+00	2.603E+00	1.992E-01	0.166
		880.27		-5.168E-01	1.983E+00	3.230E+00	2.462E-01	-0.160
RE-188		155.03	*	-9.002E-02	2.497E-01	3.930E-01	3.596E-02	-0.229
		477.96		2.325E+00	6.780E+00	1.153E+01	7.702E-01	0.202
		633.10		-2.170E+00	6.141E+00	9.778E+00	7.780E-01	-0.222
W-188		63.58		-3.353E+01	4.148E+01	6.664E+01	6.218E+00	-0.503
		227.08		4.407E+00	2.020E+01	3.420E+01	2.710E+00	0.129
		290.67	*	-6.726E+00	1.413E+01	1.968E+01	1.494E+00	-0.342
IR-192	+	295.96		5.857E-01	3.023E-01	3.512E-01	2.671E-02	1.668
		308.46		7.387E-02	1.689E-01	2.813E-01	2.094E-02	0.263
		316.51	*	3.261E-03	5.852E-02	9.603E-02	7.024E-03	0.034
		468.07		-1.151E-01	1.480E-01	2.376E-01	1.754E-02	-0.484
		604.41		-6.751E-01	1.160E+00	1.557E+00	1.939E-01	-0.434
		612.46		4.925E-01	1.638E+00	2.382E+00	2.192E-01	0.207
AU-195		65.12		-2.042E-01	1.282E-01	2.030E-01	1.873E-02	-1.006
		66.83		3.256E-02	7.233E-02	1.239E-01	1.130E-02	0.263
	+	75.70		6.946E-01	2.214E-01	3.856E-01	3.308E-02	1.801
		98.88	*	5.322E-02	2.865E-01	4.742E-01	4.406E-02	0.112
		129.76		2.170E+00	4.070E+00	6.764E+00	8.043E-01	0.321
TL-200		367.94	*	-3.850E+00	8.116E+00	1.275E+01	8.160E-01	-0.302
		579.30		-1.978E+01	6.856E+01	9.484E+01	7.160E+00	-0.209
		828.27		-9.965E+01	1.026E+02	1.593E+02	1.255E+01	-0.625
		1205.75		4.983E-01	3.263E+01	5.461E+01	3.028E+00	0.009
TL-201		68.90		2.888E-01	7.491E-01	1.279E+00	1.149E-01	0.226
		70.82		-1.091E-01	4.980E-01	7.467E-01	6.623E-02	-0.146
		80.30		-5.684E-01	1.096E+00	1.605E+00	1.334E-01	-0.354
		135.34		6.624E+00	7.464E+00	1.251E+01	1.416E+00	0.530
		167.43	*	3.486E-01	2.007E+00	3.230E+00	2.531E-01	0.108
TL-202		68.90		9.401E-02	2.438E-01	4.163E-01	3.741E-02	0.226
		70.82		-3.542E-02	1.617E-01	2.424E-01	2.150E-02	-0.146
		80.30		-1.846E-01	3.561E-01	5.211E-01	4.332E-02	-0.354
		439.56	*	-1.771E-02	1.011E-01	1.686E-01	1.066E-02	-0.105
HG-203		70.83		-2.146E-01	9.599E-01	1.439E+00	1.980E-01	-0.149
		72.87		1.627E-01	5.697E-01	8.712E-01	1.157E-01	0.187
		82.60		4.441E-01	1.276E+00	2.033E+00	2.739E-01	0.219
		279.20	*	-8.094E-03	6.322E-02	1.037E-01	8.259E-03	-0.078
BI-207		72.80		4.144E-02	1.862E-01	2.841E-01	2.486E-02	0.146
	+	74.97		3.962E-01	1.263E-01	2.033E-01	1.752E-02	1.949
		84.90		5.172E-02	2.636E-01	3.977E-01	3.204E-02	0.130
		569.67		2.515E-02	6.691E-02	1.125E-01	8.405E-03	0.224
		1063.62	*	-1.026E-01	1.479E-01	1.886E-01	1.227E-02	-0.544
		1770.23		-2.601E-01	8.430E-01	1.071E+00	6.079E-02	-0.243
TL-207		81.07		-3.139E-01	2.814E-01	3.990E-01	3.300E-02	-0.787
		83.78		2.268E-01	1.727E-01	2.699E-01	2.191E-02	0.840

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		94.90		2.446E-01	2.938E-01	4.562E-01	3.999E-02	0.536
	+	122.32		1.407E+01	5.886E+00	6.174E+00	8.067E-01	2.279
		144.24		-3.148E-01	1.036E+00	1.649E+00	1.853E-01	-0.191
		154.21		-3.564E-01	6.188E-01	9.620E-01	9.670E-02	-0.370
		269.46		4.149E-01	3.307E-01	5.775E-01	4.595E-02	0.718
		323.87	*	-3.495E-01	1.279E+00	2.055E+00	3.504E-01	-0.170
	+	338.28		4.152E+00	2.390E+00	3.421E+00	3.836E-01	1.214
		445.03		6.747E-01	5.161E+00	8.734E+00	9.260E-01	0.077
PO-209		260.50		-1.563E+01	1.702E+01	2.688E+01	2.100E+00	-0.581
		262.80		2.403E+00	4.636E+01	7.715E+01	6.017E+00	0.031
		896.60	*	-1.204E+01	2.023E+01	3.213E+01	2.419E+00	-0.375
BI-210		46.50	*	-1.327E-01	1.154E+00	1.818E+00	1.482E-01	-0.073
PB-210		46.50	*	-1.327E-01	1.154E+00	1.818E+00	1.482E-01	-0.073
PO-210		46.50	*	-1.327E-01	1.154E+00	1.818E+00	1.296E-01	-0.073
PB-211		404.84	*	9.355E-02	2.041E+00	3.279E+00	2.044E+00	0.029
		427.08		-2.152E+00	4.922E+00	7.351E+00	4.547E+00	-0.293
		831.96		6.868E-01	2.965E+00	4.961E+00	3.104E+00	0.138
BI-212	+	727.18	*	8.399E-01	1.127E+00	1.168E+00	1.121E-01	0.719
		785.46		2.370E-01	4.015E+00	6.748E+00	5.414E-01	0.035
		1620.62		4.937E-01	2.476E+00	4.142E+00	2.384E-01	0.119
PO-215		81.07		-3.139E-01	2.814E-01	3.990E-01	3.300E-02	-0.787
		83.78		2.268E-01	1.727E-01	2.699E-01	2.191E-02	0.840
		94.90		2.446E-01	2.938E-01	4.562E-01	3.999E-02	0.536
	+	122.32		1.407E+01	5.886E+00	6.174E+00	8.067E-01	2.279
		144.24		-3.148E-01	1.036E+00	1.649E+00	1.853E-01	-0.191
		154.21		-3.564E-01	6.188E-01	9.620E-01	9.670E-02	-0.370
		269.46		4.149E-01	3.307E-01	5.775E-01	4.595E-02	0.718
		323.87	*	-3.495E-01	1.279E+00	2.055E+00	3.504E-01	-0.170
	+	338.28		4.152E+00	2.390E+00	3.421E+00	3.836E-01	1.214
		445.03		6.747E-01	5.161E+00	8.734E+00	9.260E-01	0.077
RN-219		271.23		1.489E-01	4.271E-01	7.185E-01	6.894E-02	0.207
		401.81	*	-3.644E-01	9.140E-01	1.422E+00	1.944E-01	-0.256
RN-220		549.76	*	-2.522E+01	5.548E+01	8.884E+01	6.494E+00	-0.284
RA-223		81.07		-3.139E-01	2.814E-01	3.990E-01	3.300E-02	-0.787
		83.78		2.268E-01	1.727E-01	2.699E-01	2.191E-02	0.840
		94.90		2.446E-01	2.938E-01	4.562E-01	3.999E-02	0.536
	+	122.32		1.407E+01	5.886E+00	6.174E+00	8.067E-01	2.279
		144.24		-3.148E-01	1.036E+00	1.649E+00	1.853E-01	-0.191
		154.21		-3.564E-01	6.188E-01	9.620E-01	9.670E-02	-0.370
		269.46		4.149E-01	3.307E-01	5.775E-01	4.595E-02	0.718
		323.87	*	-3.495E-01	1.279E+00	2.055E+00	3.504E-01	-0.170
	+	338.28		4.152E+00	2.390E+00	3.421E+00	3.836E-01	1.214
		445.03		6.747E-01	5.161E+00	8.734E+00	9.260E-01	0.077
RA-224		240.98	*	4.378E+00	1.432E+00	2.379E+00	1.878E-01	1.840
AC-227		79.80		-5.218E-01	1.930E+00	2.857E+00	6.111E-01	-0.183
		236.00		2.488E-01	4.341E-01	6.600E-01	7.757E-02	0.377
		256.20	*	-1.463E-02	6.865E-01	1.140E+00	1.701E-01	-0.013
		286.10		2.531E+00	2.857E+00	4.889E+00	6.149E-01	0.518
		299.80		1.846E+00	2.930E+00	4.386E+00	7.440E-01	0.421

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		304.40		-1.884E+00	3.496E+00	5.545E+00	9.933E-01	-0.340
		334.20		-1.709E+00	4.719E+00	6.510E+00	1.221E+00	-0.263
TH-227		79.80		-5.218E-01	1.930E+00	2.857E+00	6.190E-01	-0.183
	+	94.00		2.500E+00	4.095E+00	4.570E+00	9.958E-01	0.547
		236.00		2.488E-01	4.339E-01	6.600E-01	6.951E-02	0.377
		256.20	*	-1.463E-02	6.865E-01	1.140E+00	2.018E-01	-0.013
		286.10		2.531E+00	3.808E+00	4.889E+00	4.903E+00	0.518
		299.80		1.846E+00	2.930E+00	4.386E+00	7.440E-01	0.421
		304.40		-1.884E+00	3.496E+00	5.545E+00	9.933E-01	-0.340
		334.20		-1.709E+00	4.719E+00	6.510E+00	1.221E+00	-0.263
AC-228	+	338.32		9.943E-01	6.935E-01	8.198E-01	3.357E-01	1.213
		911.07	*	9.065E-01	4.328E-01	7.737E-01	8.034E-02	1.172
	+	969.11		1.390E+00	1.088E+00	1.252E+00	2.860E-01	1.110
RA-228	+	338.32		9.943E-01	6.935E-01	8.198E-01	3.357E-01	1.213
		911.07	*	9.065E-01	4.328E-01	7.737E-01	8.034E-02	1.172
	+	969.11		1.390E+00	1.088E+00	1.252E+00	2.860E-01	1.110
TH-229		85.43		-1.505E-03	2.725E-01	4.074E-01	3.271E-02	-0.004
	+	88.47		4.729E+00	4.864E-01	5.237E-01	4.161E-02	9.030
		100.00		1.592E-01	2.423E-01	4.110E-01	3.881E-02	0.387
		193.63	*	1.413E-01	7.930E-01	1.355E+00	1.072E-01	0.104
		210.97		3.157E-01	1.270E+00	2.163E+00	1.715E-01	0.146
PA-231		283.67	*	1.078E+00	2.834E+00	4.757E+00	6.972E-01	0.227
		301.29		1.250E+00	1.087E+00	1.759E+00	2.017E-01	0.711
TH-231		81.07		-3.139E-01	2.814E-01	3.990E-01	3.300E-02	-0.787
		83.78		2.268E-01	1.727E-01	2.699E-01	2.191E-02	0.840
		94.90		2.446E-01	2.938E-01	4.562E-01	3.999E-02	0.536
	+	122.32		1.407E+01	5.886E+00	6.174E+00	8.067E-01	2.279
		144.24		-3.148E-01	1.036E+00	1.649E+00	1.853E-01	-0.191
		154.21		-3.564E-01	6.188E-01	9.620E-01	9.670E-02	-0.370
		269.46		4.149E-01	3.307E-01	5.775E-01	4.595E-02	0.718
		323.87	*	-3.495E-01	1.279E+00	2.055E+00	3.504E-01	-0.170
	+	338.28		4.152E+00	2.390E+00	3.421E+00	3.836E-01	1.214
		445.03		6.747E-01	5.161E+00	8.734E+00	9.260E-01	0.077
U-231		84.21		2.478E+00	2.100E+00	3.292E+00	2.665E-01	0.753
	+	92.29		7.135E-01	1.160E+00	1.522E+00	1.283E-01	0.469
		95.87	*	-1.312E-02	4.077E-01	6.035E-01	5.367E-02	-0.022
		108.00		-6.160E-02	8.197E-01	1.343E+00	1.417E-01	-0.046
TH-232	+	338.32		9.943E-01	5.657E-01	8.198E-01	5.709E-02	1.213
		911.07	*	9.065E-01	4.328E-01	7.737E-01	8.034E-02	1.172
	+	969.11		1.390E+00	1.088E+00	1.252E+00	2.860E-01	1.110
PA-233	+	75.28		1.157E+01	3.970E+00	6.187E+00	9.489E-01	1.870
	+	86.59		6.781E+01	1.858E+01	6.422E+00	1.709E+00	10.560
		300.12		6.509E-01	8.070E-01	1.222E+00	1.741E-01	0.533
		311.98	*	-4.668E-02	1.186E-01	1.898E-01	1.449E-02	-0.246
		340.50		5.095E-01	1.273E+00	1.859E+00	4.327E-01	0.274
		398.62		-2.964E+00	4.710E+00	7.181E+00	1.859E+00	-0.413
		415.76		-2.391E+00	3.782E+00	5.767E+00	1.192E+00	-0.415
PA-234		63.00		6.241E-01	1.241E+00	2.104E+00	3.352E-01	0.297
		94.67		2.847E-01	2.163E-01	3.406E-01	4.252E-02	0.836

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		98.44		1.468E-02	1.185E-01	1.951E-01	1.090E-01	0.075
		99.86		3.572E-01	6.130E-01	1.037E+00	9.773E-02	0.344
		111.00		-1.187E-02	2.578E-01	4.221E-01	5.855E-02	-0.028
		131.20		-2.272E-01	1.607E-01	2.387E-01	2.804E-02	-0.952
		152.70		1.643E-02	4.955E-01	7.971E-01	1.392E-01	0.021
	+	186.00		3.873E+00	3.178E+00	3.861E+00	1.198E+00	1.003
		226.40		6.446E-02	6.859E-01	1.155E+00	1.474E-01	0.056
		227.20		6.983E-02	7.387E-01	1.244E+00	9.858E-02	0.056
		248.90		-3.118E-01	1.462E+00	2.409E+00	5.332E-01	-0.129
	+	293.70		3.956E+00	2.126E+00	2.341E+00	3.933E-01	1.690
		369.80		1.402E+00	1.766E+00	2.943E+00	6.177E-01	0.476
		568.70		-1.593E+00	2.251E+00	3.527E+00	2.633E-01	-0.452
		569.50		2.232E-01	5.939E-01	9.984E-01	7.460E-02	0.224
		574.00		9.691E-01	3.349E+00	5.470E+00	4.107E-01	0.177
		699.00		2.439E-01	1.549E+00	2.533E+00	4.782E-01	0.096
		706.10		8.063E-01	2.359E+00	3.860E+00	1.718E+00	0.209
		733.00		4.136E-01	1.006E+00	1.450E+00	3.193E-01	0.285
		742.81		-1.375E+00	3.289E+00	4.903E+00	3.293E+00	-0.280
		796.30		1.815E+00	2.081E+00	3.579E+00	9.613E-01	0.507
		805.60		2.077E+00	2.453E+00	4.183E+00	1.274E+00	0.497
		819.60		-6.233E-01	3.162E+00	5.193E+00	1.967E+00	-0.120
		826.30		-1.182E-01	2.055E+00	3.410E+00	1.521E+00	-0.035
		831.60		6.802E-01	1.521E+00	2.585E+00	7.660E-01	0.263
		876.40		-1.185E-01	2.303E+00	3.800E+00	3.904E+00	-0.031
		880.51		-1.495E-01	7.611E-01	1.245E+00	9.491E-02	-0.120
		883.24		1.411E-01	7.847E-01	1.305E+00	8.759E-01	0.108
		899.00		-1.190E+00	2.327E+00	3.625E+00	1.577E+00	-0.328
		925.00		9.098E-01	3.461E+00	5.799E+00	4.290E-01	0.157
		926.50		-1.126E-01	5.214E-01	8.475E-01	2.109E-01	-0.133
		946.00	*	4.562E-01	9.364E-01	1.578E+00	2.871E-01	0.289
		949.00		-1.699E-01	1.420E+00	2.320E+00	1.688E-01	-0.073
		980.50		3.462E-01	1.974E+00	3.278E+00	2.325E-01	0.106
		1394.10		4.268E-01	2.141E+00	3.593E+00	2.327E+00	0.119
PA-234M		766.42		6.502E+00	2.492E+01	4.214E+01	2.134E+01	0.154
		1001.03	*	-1.464E+01	1.246E+01	1.860E+01	1.595E+00	-0.787
TH-234		63.29	*	-4.177E-01	1.097E+00	1.794E+00	3.292E-01	-0.233
	+	92.38		6.470E-01	1.057E+00	1.385E+00	2.493E-01	0.467
U-235		89.95		4.602E+00	2.354E+00	2.604E+00	8.000E-01	1.767
	+	93.35		7.778E-01	1.281E+00	1.632E+00	4.570E-01	0.477
		105.00		3.901E-01	1.442E+00	2.382E+00	7.220E-01	0.164
		143.76	*	-1.277E-01	3.219E-01	5.093E-01	9.403E-02	-0.251
		163.35		-8.284E-01	7.861E-01	1.154E+00	2.178E-01	-0.718
	+	185.71		1.435E-01	1.096E-01	1.427E-01	1.127E-02	1.005
		205.31		-3.559E-01	8.557E-01	1.411E+00	2.649E-01	-0.252
NP-236		94.67		2.184E-01	1.631E-01	2.587E-01	2.260E-02	0.844
		98.44		1.107E-02	8.935E-02	1.475E-01	1.362E-02	0.075
		111.00		-8.980E-03	1.950E-01	3.193E-01	3.506E-02	-0.028
		160.31	*	-4.932E-02	1.314E-01	2.062E-01	1.757E-02	-0.239
U-238		63.29	*	-4.177E-01	1.097E+00	1.794E+00	3.292E-01	-0.233

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	92.38		6.470E-01	1.052E+00	1.385E+00	1.169E-01	0.467
NP-239		99.55		9.767E-02	2.053E-01	3.437E-01	3.225E-02	0.284
		117.00	*	-7.257E-02	3.155E-01	4.542E-01	5.390E-02	-0.160
		209.75		1.033E-01	1.279E+00	2.164E+00	1.716E-01	0.048
		228.18		-1.397E-01	3.900E-01	6.434E-01	5.097E-02	-0.217
		277.60		1.651E-01	3.211E-01	5.370E-01	4.135E-02	0.307
		334.30		-9.511E-01	2.670E+00	3.692E+00	2.596E-01	-0.258
CM-243		99.55		1.005E-01	2.112E-01	3.535E-01	3.317E-02	0.284
		103.76	*	6.422E-02	1.315E-01	2.212E-01	2.203E-02	0.290
		117.00		-7.463E-02	3.244E-01	4.670E-01	5.542E-02	-0.160
		209.75		1.018E-01	1.260E+00	2.132E+00	1.691E-01	0.048
		228.18		-1.410E-01	3.939E-01	6.498E-01	5.148E-02	-0.217
		277.60		1.664E-01	3.235E-01	5.412E-01	4.167E-02	0.307
AM-246		798.80		-1.062E-01	3.207E-01	5.241E-01	4.184E-02	-0.203
		1036.00		2.978E-01	8.096E-01	1.355E+00	9.099E-02	0.220
		1062.04		3.921E-02	6.298E-01	8.845E-01	5.764E-02	0.044
		1078.86	*	2.606E-01	3.641E-01	6.224E-01	3.970E-02	0.419
CM-247		278.00		4.349E-01	1.322E+00	2.220E+00	1.709E-01	0.196
		287.40		-3.686E-01	2.295E+00	3.751E+00	2.858E-01	-0.098
		402.60	*	-8.597E-03	8.036E-02	1.280E-01	7.624E-03	-0.067
CF-249		252.85		-6.487E-01	1.614E+00	2.634E+00	2.068E-01	-0.246
		333.44		1.339E-01	3.353E-01	4.937E-01	3.477E-02	0.271
		387.95	*	-1.361E-02	8.788E-02	1.401E-01	8.320E-03	-0.097
CF-251		176.60	*	-4.929E-02	2.050E-01	3.215E-01	2.529E-02	-0.153
		227.00		1.503E-01	6.537E-01	1.108E+00	8.776E-02	0.136
		285.00		-1.174E-01	3.279E+00	5.399E+00	4.125E-01	-0.022

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]G1202012146    *
* Acquisition date : 20-JAN-2010 14:47:02 Detector SN#     :               *
* Detector ID        : GAM13                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 01:00:01.63       Half life ratio :  8.000       *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        : 13-JAN-2010 00:00:00 Nuclide Library : SOLID        *
* Sample ID          : G1202012146          Analyst initials: MXR1         *
* Batch Number       : 940263               Sample Quantity : 1.5544E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000    *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  2-FEB-2009 10:41:22 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)	
CO-57	1.997E-01	8.160E-02	6.637E-02	0.000E+00
CO-60	6.019E+00	4.695E-01	1.023E-01	0.000E+00
CD-109	3.485E+01	3.512E+00	1.832E+00	0.000E+00
SN-126	3.464E+00	3.491E-01	1.818E-01	0.000E+00
BA-137M	5.126E+00	4.972E-01	1.245E-01	0.000E+00
CS-137	5.418E+00	5.263E-01	1.316E-01	0.000E+00
TL-208	3.553E-01	1.645E-01	1.199E-01	0.000E+00
BI-211	1.596E+00	7.275E-01	6.954E-01	0.000E+00
PB-212	9.607E-01	2.533E-01	1.673E-01	0.000E+00
PO-212	9.607E-01	2.533E-01	1.673E-01	0.000E+00
BI-214	5.079E-01	2.324E-01	2.603E-01	0.000E+00
PB-214	5.552E-01	2.547E-01	2.425E-01	0.000E+00
PO-214	5.552E-01	2.547E-01	2.425E-01	0.000E+00
PO-216	9.607E-01	2.533E-01	1.673E-01	0.000E+00
PO-218	5.552E-01	2.547E-01	2.425E-01	0.000E+00
RA-226	5.079E-01	2.324E-01	2.603E-01	0.000E+00
TH-228	9.681E-01	2.552E-01	1.686E-01	0.000E+00
TH-230	5.079E-01	2.324E-01	2.603E-01	0.000E+00
U-234	5.079E-01	2.324E-01	2.603E-01	0.000E+00
NP-237	1.017E+01	2.298E+00	5.737E-01	0.000E+00
AM-241	1.296E+01	1.344E+00	2.369E-01	0.000E+00
AM-243	2.208E-01	6.900E-02	9.863E-02	0.000E+00
ANH-511	4.771E-02	1.211E-01	1.130E-01	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	3.665E-01	6.833E-01	1.243E+00	0.000E+00	NOT IDENT.
NA-22	1.008E-02	7.215E-02	1.258E-01	0.000E+00	NOT IDENT.
NA-24	0.000E+00	2.695E+02	0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.844E-02	4.850E-02	8.867E-02	0.000E+00	NOT IDENT.

K-40	9.101E-01	6.653E-01	1.307E+00	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.978E-02	7.392E-02	0.000E+00	FAIL ABUN
SC-46	4.081E-02	1.030E-01	1.820E-01	0.000E+00	NOT IDENT.
V-48	-5.015E-02	1.328E-01	2.207E-01	0.000E+00	NOT IDENT.
CR-51	3.453E-01	5.617E-01	1.016E+00	0.000E+00	NOT IDENT.
MN-52	-9.571E-02	1.461E-01	2.205E-01	0.000E+00	NOT IDENT.
MN-54	-4.669E-03	8.644E-02	1.500E-01	0.000E+00	NOT IDENT.
CO-56	-9.813E-03	1.007E-01	1.740E-01	0.000E+00	NOT IDENT.
CO-58	-4.085E-02	9.051E-02	1.535E-01	0.000E+00	NOT IDENT.
FE-59	1.122E-01	2.124E-01	3.702E-01	0.000E+00	NOT IDENT.
ZN-65	-2.817E-01	2.331E-01	3.581E-01	0.000E+00	NOT IDENT.
GE-68	2.279E+00	3.120E+00	5.531E+00	0.000E+00	NOT IDENT.
AS-73	-2.748E-01	5.378E-01	1.015E+00	0.000E+00	NOT IDENT.
AS-74	-1.413E-01	1.508E-01	2.444E-01	0.000E+00	NOT IDENT.
SE-75	-1.808E-03	7.259E-02	1.296E-01	0.000E+00	FAIL ABUN
BR-77	9.970E-01	2.353E+00	4.241E+00	0.000E+00	FAIL ABUN
SR-82	-5.462E-01	6.919E-01	1.148E+00	0.000E+00	NOT IDENT.
RB-83	3.197E-02	1.335E-01	2.381E-01	0.000E+00	NOT IDENT.
RB-84	-4.664E-03	1.603E-01	2.768E-01	0.000E+00	NOT IDENT.
KR-85	1.445E+01	1.637E+01	2.674E+01	0.000E+00	NOT IDENT.
SR-85	6.845E-02	7.755E-02	1.267E-01	0.000E+00	NOT IDENT.
RB-86	2.973E-01	1.579E+00	2.642E+00	0.000E+00	NOT IDENT.
Y-88	-4.142E-02	5.081E-02	6.939E-02	0.000E+00	NOT IDENT.
ZR-88	1.044E-02	6.298E-02	1.089E-01	0.000E+00	NOT IDENT.
Y-91	-5.921E+00	2.590E+01	4.375E+01	0.000E+00	NOT IDENT.
NB-94	8.877E-05	7.470E-02	1.268E-01	0.000E+00	NOT IDENT.
NB-95	4.092E-02	8.234E-02	1.491E-01	0.000E+00	NOT IDENT.
NB-95M	-3.627E-02	2.068E-01	3.259E-01	0.000E+00	NOT IDENT.
ZR-95	5.043E-02	1.559E-01	2.681E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	2.468E+02	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	2.742E+03	0.000E+00	0.000E+00	SHORT HLIF
MO-99	1.098E+00	3.887E+00	6.690E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	5.547E+07	0.000E+00	0.000E+00	SHORT HLIF
RH-101	1.427E-02	5.212E-02	9.637E-02	0.000E+00	NOT IDENT.
RH-102	-5.112E-02	6.950E-02	1.182E-01	0.000E+00	NOT IDENT.
RU-103	8.376E-02	7.441E-02	1.385E-01	0.000E+00	FAIL ABUN
RH-106	8.981E-02	6.779E-01	1.178E+00	0.000E+00	FAIL ABUN
RU-106	8.981E-02	6.778E-01	1.178E+00	0.000E+00	FAIL ABUN
AG-108M	4.926E-03	6.779E-02	1.220E-01	0.000E+00	NOT IDENT.
AG-110M	0.000E+00	1.285E-01	2.274E-01	0.000E+00	NOT IDENT.
IN-111	-1.286E-01	3.068E-01	5.001E-01	0.000E+00	NOT IDENT.
IN-113M	-5.543E-02	9.264E-02	1.534E-01	0.000E+00	NOT IDENT.
SN-113	-5.543E-02	9.264E-02	1.534E-01	0.000E+00	NOT IDENT.
IN-114M	4.686E-02	2.962E-01	4.564E-01	0.000E+00	NOT IDENT.
CD-115	-3.354E-01	2.098E+00	3.643E+00	0.000E+00	NOT IDENT.
SN-117M	-8.789E-03	6.012E-02	1.044E-01	0.000E+00	NOT IDENT.
SB-122	3.156E-01	6.053E-01	1.089E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	6.608E+02	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	1.221E-02	4.301E-02	7.621E-02	0.000E+00	NOT IDENT.
I-124	8.717E-02	4.634E-01	7.371E-01	0.000E+00	NOT IDENT.
SB-124	-8.294E-03	1.103E-01	1.798E-01	0.000E+00	FAIL ABUN
SB-125	-7.578E-02	1.902E-01	3.343E-01	0.000E+00	NOT IDENT.
TE-125M	8.626E+00	1.153E+01	2.147E+01	0.000E+00	NOT IDENT.
I-126	-2.122E-01	3.037E-01	4.146E-01	0.000E+00	NOT IDENT.
SB-126	7.236E-02	2.193E-01	3.589E-01	0.000E+00	NOT IDENT.
SB-127	5.953E-01	7.697E-01	1.379E+00	0.000E+00	NOT IDENT.
XE-127	-1.542E-02	6.391E-02	1.160E-01	0.000E+00	NOT IDENT.
I-131	3.023E-02	1.166E-01	2.046E-01	0.000E+00	NOT IDENT.
TE-132	-3.752E-02	2.339E-01	4.212E-01	0.000E+00	NOT IDENT.
BA-133	-4.270E-02	1.033E-01	1.535E-01	0.000E+00	NOT IDENT.
I-133	0.000E+00	3.020E+01	0.000E+00	0.000E+00	SHORT HLIF
CS-134	7.697E-02	1.013E-01	1.855E-01	0.000E+00	NOT IDENT.
CS-135	2.571E-01	2.758E-01	5.118E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	5.187E+07	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-1.108E-01	1.909E-01	3.096E-01	0.000E+00	NOT IDENT.
CE-139	-1.457E-02	4.579E-02	7.841E-02	0.000E+00	NOT IDENT.
BA-140	-1.341E-02	3.635E-01	6.350E-01	0.000E+00	NOT IDENT.
LA-140	-5.203E-02	9.000E-02	1.341E-01	0.000E+00	NOT IDENT.
CE-141	-2.369E-02	7.892E-02	1.370E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	6.484E+00	1.049E+01	0.000E+00	FAIL ABUN
CE-144	-6.880E-02	3.059E-01	5.375E-01	0.000E+00	NOT IDENT.
PM-144	3.022E-02	7.107E-02	1.244E-01	0.000E+00	NOT IDENT.
PR-144	2.040E+00	4.797E+00	8.397E+00	0.000E+00	NOT IDENT.
PM-146	3.126E-02	9.570E-02	1.734E-01	0.000E+00	NOT IDENT.
ND-147	-3.762E-01	7.270E-01	1.229E+00	0.000E+00	NOT IDENT.
PM-149	1.413E+01	1.584E+01	2.908E+01	0.000E+00	NOT IDENT.
EU-152	1.444E-01	1.929E-01	3.378E-01	0.000E+00	FAIL ABUN
GD-153	-5.467E-02	9.967E-02	1.679E-01	0.000E+00	NOT IDENT.

EU-154	2.615E-02	2.021E-01	3.518E-01	0.000E+00	FAIL ABUN
EU-155	1.896E-02	1.426E-01	2.589E-01	0.000E+00	FAIL ABUN
TB-160	-2.745E-01	3.443E-01	5.640E-01	0.000E+00	FAIL ABUN
HO-166M	-6.804E-02	1.293E-01	2.100E-01	0.000E+00	FAIL ABUN
TM-171	1.039E+01	2.183E+01	4.175E+01	0.000E+00	FAIL ABUN
LU-176	5.982E-03	4.524E-02	7.965E-02	0.000E+00	FAIL ABUN
LU-177	3.006E-01	8.044E-01	1.493E+00	0.000E+00	NOT IDENT.
LU-177M	-4.132E-01	3.771E-01	5.999E-01	0.000E+00	FAIL ABUN
HF-181	-2.697E-02	8.552E-02	1.490E-01	0.000E+00	NOT IDENT.
W-181	-8.509E-01	2.853E-01	4.667E-01	0.000E+00	NOT IDENT.
TA-182	-3.054E-02	2.535E-01	4.318E-01	0.000E+00	NOT IDENT.
RE-183	-6.106E-02	1.630E-01	2.771E-01	0.000E+00	FAIL ABUN
RE-184	-1.676E-01	4.087E-01	7.198E-01	0.000E+00	FAIL ABUN
OS-185	2.693E-02	8.692E-02	1.522E-01	0.000E+00	FAIL ABUN
RE-188	-9.002E-02	2.447E-01	4.207E-01	0.000E+00	NOT IDENT.
W-188	-6.726E+00	1.384E+01	2.074E+01	0.000E+00	NOT IDENT.
IR-192	3.261E-03	5.735E-02	1.010E-01	0.000E+00	FAIL ABUN
AU-195	5.322E-02	2.808E-01	5.133E-01	0.000E+00	FAIL ABUN
TL-200	-3.850E+00	7.954E+00	1.335E+01	0.000E+00	NOT IDENT.
TL-201	3.486E-01	1.967E+00	3.452E+00	0.000E+00	NOT IDENT.
TL-202	-1.771E-02	9.908E-02	1.758E-01	0.000E+00	NOT IDENT.
HG-203	-8.094E-03	6.195E-02	1.094E-01	0.000E+00	NOT IDENT.
BI-207	-1.026E-01	1.449E-01	1.919E-01	0.000E+00	FAIL ABUN
TL-207	-3.495E-01	1.253E+00	2.159E+00	0.000E+00	FAIL ABUN
PO-209	-1.204E+01	1.982E+01	3.285E+01	0.000E+00	NOT IDENT.
BI-210	-1.327E-01	1.131E+00	2.005E+00	0.000E+00	NOT IDENT.
PB-210	-1.327E-01	1.131E+00	2.005E+00	0.000E+00	NOT IDENT.
PO-210	-1.327E-01	1.131E+00	2.005E+00	0.000E+00	NOT IDENT.
PB-211	9.355E-02	2.001E+00	3.425E+00	0.000E+00	NOT IDENT.
BI-212	8.399E-01	1.104E+00	1.201E+00	0.000E+00	FAIL ABUN
PO-215	-3.495E-01	1.253E+00	2.159E+00	0.000E+00	FAIL ABUN
RN-219	-3.644E-01	8.957E-01	1.486E+00	0.000E+00	NOT IDENT.
RN-220	-2.522E+01	5.437E+01	9.204E+01	0.000E+00	NOT IDENT.
RA-223	-3.495E-01	1.253E+00	2.159E+00	0.000E+00	FAIL ABUN
RA-224	0.000E+00	1.403E+00	2.519E+00	0.000E+00	NOT IDENT.
AC-227	-1.463E-02	6.727E-01	1.205E+00	0.000E+00	NOT IDENT.
TH-227	-1.463E-02	6.727E-01	1.205E+00	0.000E+00	FAIL ABUN
AC-228	0.000E+00	4.242E-01	7.907E-01	0.000E+00	FAIL ABUN
RA-228	0.000E+00	4.242E-01	7.907E-01	0.000E+00	FAIL ABUN
TH-229	1.413E-01	7.772E-01	1.443E+00	0.000E+00	FAIL ABUN
PA-231	1.078E+00	2.777E+00	5.015E+00	0.000E+00	NOT IDENT.
TH-231	-3.495E-01	1.253E+00	2.159E+00	0.000E+00	FAIL ABUN
U-231	-1.312E-02	3.995E-01	6.538E-01	0.000E+00	FAIL ABUN
TH-232	0.000E+00	4.242E-01	7.907E-01	0.000E+00	FAIL ABUN
PA-233	-4.668E-02	1.162E-01	1.996E-01	0.000E+00	FAIL ABUN
PA-234	4.562E-01	9.177E-01	1.611E+00	0.000E+00	FAIL ABUN
PA-234M	-1.464E+01	1.221E+01	1.896E+01	0.000E+00	NOT IDENT.
TH-234	-4.177E-01	1.075E+00	1.964E+00	0.000E+00	FAIL ABUN
U-235	-1.277E-01	3.155E-01	5.463E-01	0.000E+00	FAIL ABUN
NP-236	-4.932E-02	1.287E-01	2.205E-01	0.000E+00	NOT IDENT.
U-238	-4.177E-01	1.075E+00	1.964E+00	0.000E+00	FAIL ABUN
NP-239	-7.257E-02	3.092E-01	4.897E-01	0.000E+00	NOT IDENT.
CM-243	6.422E-02	1.289E-01	2.392E-01	0.000E+00	NOT IDENT.
AM-246	2.606E-01	3.568E-01	6.330E-01	0.000E+00	NOT IDENT.
CM-247	-8.597E-03	7.875E-02	1.337E-01	0.000E+00	NOT IDENT.
CF-249	-1.361E-02	8.612E-02	1.465E-01	0.000E+00	NOT IDENT.
CF-251	-4.929E-02	2.009E-01	3.431E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 20-JAN-2010 15:51:10.37

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202012146.CNF;1
Sample date       : 13-JAN-2010 00:00:00 Acquisition date : 20-JAN-2010 14:47:02
Sample ID         : G1202012146          Sample quantity  : 1.55440E+02 GRAM
Detector name     : GAM13                Detector geometry: CAN
Elapsed live time: 0 01:00:00.00         Elapsed real time: 0 01:00:01.63  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 940263                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
CO-57	122.06	232	85.51*	6.698E+00	1.958E-01	1.997E-01	41.70
	136.48	------	10.60	6.430E+00	------ Line Not Found		------
CO-60	1173.22	1618	100.00	1.240E+00	6.303E+00	6.320E+00	7.89
	1332.49	1392	100.00*	1.120E+00	6.002E+00	6.019E+00	7.96
CD-109	88.03	1921	3.72*	7.239E+00	3.445E+01	3.485E+01	10.29
SN-126	64.28	------	9.60	7.391E+00	------ Line Not Found		------
	86.94	1921	8.90	7.239E+00	1.440E+01	1.440E+01	41.74
	87.57	1921	37.00*	7.239E+00	3.464E+00	3.464E+00	10.29
BA-137M	661.65	1927	89.98*	2.019E+00	5.123E+00	5.126E+00	9.90
CS-137	661.65	1927	85.12*	2.019E+00	5.416E+00	5.418E+00	9.91
TL-208	277.35	------	6.80	4.225E+00	------ Line Not Found		------
	510.84	25	21.60	2.537E+00	2.209E-01	2.209E-01	259.26
	583.14	140	84.20*	2.256E+00	3.553E-01	3.553E-01	47.23
	860.37	------	12.46	1.606E+00	------ Line Not Found		------
BI-211	72.87	------	1.27	7.369E+00	------ Line Not Found		------
	351.07	150	12.94*	3.497E+00	1.596E+00	1.596E+00	46.51
PB-212	74.81	222	10.70	7.359E+00	1.362E+00	1.362E+00	33.23
	77.11	321	18.00	7.344E+00	1.172E+00	1.172E+00	28.21
	87.30	1921	8.00	7.239E+00	1.602E+01	1.602E+01	14.35
	238.63	418	44.60*	4.715E+00	9.607E-01	9.607E-01	26.90
	300.09	------	3.41	3.976E+00	------ Line Not Found		------
PO-212	74.81	222	10.70	7.359E+00	1.362E+00	1.362E+00	33.23
	77.11	321	18.00	7.344E+00	1.172E+00	1.172E+00	28.21
	87.30	1921	8.00	7.239E+00	1.602E+01	1.602E+01	14.35
	115.19	------	0.60	6.822E+00	------ Line Not Found		------
	238.63	418	44.60*	4.715E+00	9.607E-01	9.607E-01	26.90
	300.09	------	3.41	3.976E+00	------ Line Not Found		------
BI-214	609.31	106	46.30*	2.172E+00	5.079E-01	5.079E-01	46.68
	1120.29	------	15.10	1.287E+00	------ Line Not Found		------
	1764.49	18	15.80	8.986E-01	6.044E-01	6.044E-01	91.63
PB-214	74.81	222	6.21	7.359E+00	2.347E+00	2.347E+00	32.73
	77.11	321	10.50	7.344E+00	2.010E+00	2.010E+00	29.22

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	87.30	1921	4.67	7.239E+00	2.744E+01	2.744E+01	12.85
	241.98	------	7.49	4.668E+00	------ Line Not Found		------
	295.21	132	19.20	4.031E+00	8.242E-01	8.242E-01	51.98
	351.92	150	37.20*	3.497E+00	5.552E-01	5.552E-01	46.80
PO-214	74.81	222	6.21	7.359E+00	2.347E+00	2.347E+00	32.73
	77.11	321	10.50	7.344E+00	2.010E+00	2.010E+00	29.22
	87.30	1921	4.67	7.239E+00	2.744E+01	2.744E+01	12.85
	241.98	------	7.49	4.668E+00	------ Line Not Found		------
	295.21	132	19.20	4.031E+00	8.242E-01	8.242E-01	51.98
	351.92	150	37.20*	3.497E+00	5.552E-01	5.552E-01	46.80
PO-216	74.81	222	10.70	7.359E+00	1.362E+00	1.362E+00	33.23
	77.11	321	18.00	7.344E+00	1.172E+00	1.172E+00	28.21
	87.30	1921	8.00	7.239E+00	1.602E+01	1.602E+01	14.35
	238.63	418	44.60*	4.715E+00	9.607E-01	9.607E-01	26.90
	300.09	------	3.41	3.976E+00	------ Line Not Found		------
PO-218	74.81	222	6.21	7.359E+00	2.347E+00	2.347E+00	32.73
	77.11	321	10.50	7.344E+00	2.010E+00	2.010E+00	29.22
	87.30	1921	4.67	7.239E+00	2.744E+01	2.744E+01	12.85
	241.98	------	7.49	4.668E+00	------ Line Not Found		------
	295.21	132	19.20	4.031E+00	8.242E-01	8.242E-01	51.98
	351.92	150	37.20*	3.497E+00	5.552E-01	5.552E-01	46.80
RA-226	609.31	106	46.30*	2.172E+00	5.079E-01	5.079E-01	46.68
	1120.29	------	15.10	1.287E+00	------ Line Not Found		------
	1764.49	18	15.80	8.986E-01	6.044E-01	6.044E-01	91.63
TH-228	74.81	222	10.70	7.359E+00	1.362E+00	1.372E+00	31.90
	77.11	321	18.00	7.344E+00	1.172E+00	1.181E+00	28.21
	87.30	1921	8.00	7.239E+00	1.602E+01	1.614E+01	10.29
	238.63	418	44.60*	4.715E+00	9.607E-01	9.681E-01	26.90
	300.09	------	3.41	3.976E+00	------ Line Not Found		------
TH-230	609.31	106	46.30*	2.172E+00	5.079E-01	5.079E-01	46.68
	1120.29	------	15.10	1.287E+00	------ Line Not Found		------
	1764.49	18	15.80	8.986E-01	6.044E-01	6.044E-01	91.63
U-234	609.31	106	46.30*	2.172E+00	5.079E-01	5.079E-01	46.68
	1120.29	------	15.10	1.287E+00	------ Line Not Found		------
	1764.49	18	15.80	8.986E-01	6.044E-01	6.044E-01	91.63
NP-237	86.50	1921	12.60*	7.239E+00	1.017E+01	1.017E+01	23.06
	95.87	------	2.60	7.135E+00	------ Line Not Found		------
AM-241	59.54	7113	35.90*	7.384E+00	1.296E+01	1.296E+01	10.58
AM-243	74.67	222	66.00*	7.359E+00	2.208E-01	2.208E-01	31.88
	86.72	1921	0.34	7.239E+00	3.814E+02	3.814E+02	10.29
	117.66	------	0.55	6.778E+00	------ Line Not Found		------
	142.18	------	0.13	6.323E+00	------ Line Not Found		------
ANH-511	511.00	25	100.00*	2.537E+00	4.771E-02	4.771E-02	259.13

Flag: "*" = Keyline

Sample ID : G1202012146 Acquisition date : 20-JAN-2010 14:47:02

Total number of lines in spectrum 21
Number of unidentified lines 1
Number of lines tentatively identified by NID 20 95.24%

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	1.958E-01	1.997E-01	0.833E-01	41.70	
CO-60	5.27Y	1.00	6.002E+00	6.019E+00	0.479E+00	7.96	
CD-109	464.00D	1.01	3.445E+01	3.485E+01	0.358E+01	10.29	
SN-126	1.00E+05Y	1.00	3.464E+00	3.464E+00	0.356E+00	10.29	
BA-137M	30.17Y	1.00	5.123E+00	5.126E+00	0.507E+00	9.90	
CS-137	30.17Y	1.00	5.416E+00	5.418E+00	0.537E+00	9.91	
TL-208	1.41E+10Y	1.00	3.553E-01	3.553E-01	1.678E-01	47.23	
BI-211	7.04E+08Y	1.00	1.596E+00	1.596E+00	0.742E+00	46.51	
PB-212	1.41E+10Y	1.00	9.607E-01	9.607E-01	2.584E-01	26.90	
PO-212	1.41E+10Y	1.00	9.607E-01	9.607E-01	2.584E-01	26.90	
BI-214	1600.00Y	1.00	5.079E-01	5.079E-01	2.371E-01	46.68	
PB-214	1600.00Y	1.00	5.552E-01	5.552E-01	2.599E-01	46.80	
PO-214	1600.00Y	1.00	5.552E-01	5.552E-01	2.599E-01	46.80	
PO-216	1.41E+10Y	1.00	9.607E-01	9.607E-01	2.584E-01	26.90	
PO-218	1600.00Y	1.00	5.552E-01	5.552E-01	2.599E-01	46.80	
RA-226	1600.00Y	1.00	5.079E-01	5.079E-01	2.371E-01	46.68	
TH-228	1.91Y	1.01	9.607E-01	9.681E-01	2.604E-01	26.90	
TH-230	4.47E+09Y	1.00	5.079E-01	5.079E-01	2.371E-01	46.68	
U-234	4.47E+09Y	1.00	5.079E-01	5.079E-01	2.371E-01	46.68	
NP-237	2.14E+06Y	1.00	1.017E+01	1.017E+01	0.235E+01	23.06	
AM-241	432.20Y	1.00	1.296E+01	1.296E+01	0.137E+01	10.58	
AM-243	7380.00Y	1.00	2.208E-01	2.208E-01	0.704E-01	31.88	
ANH-511	1.00E+09Y	1.00	4.771E-02	4.771E-02	12.36E-02	259.13	
			---	---			
	Total Activity :		8.755E+01	8.797E+01			

Grand Total Activity : 8.755E+01 8.797E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G1202012146 Acquisition date : 20-JAN-2010 14:47:02

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	92.71	52	445	1.39	185.21	181	9	1.45E-02	****	7.18E+00	T
0	185.71	89	259	1.31	371.25	367	10	2.46E-02	76.0	5.53E+00	T
0	338.06	85	146	1.27	676.02	672	9	2.36E-02	56.5	3.61E+00	T
0	725.83	38	136	1.62	1451.81	1451	15	1.06E-02	****	1.86E+00	T
0	968.85	69	131	2.01	1938.03	1931	14	1.93E-02	74.9	1.45E+00	T
0	1068.07	38	73	1.89	2136.56	2128	14	1.05E-02	****	1.34E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 20-JAN-2010 15:51:19.45

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202012146.CNF;1  *
* Acquisition date  : 20-JAN-2010 14:47:02  Detector SN#     :             *
* Detector ID       : GAM13                 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 01:00:01.63          Half life ratio : 8.00000      *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 13-JAN-2010 00:00:00  Nuclide Library : SOLID        *
* Sample ID         : G1202012146           Analyst initials: MXR1         *
* Batch Number      : 940263                Sample Quantity : 1.55440E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 2-FEB-2009 10:41:22.03MS 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	1.997E-01	8.327E-02	6.162E-02	7.794E-03	3.240
CO-60	6.019E+00	4.791E-01	1.012E-01	5.754E-03	59.493
CD-109	3.485E+01	3.584E+00	1.687E+00	1.331E-01	20.656
SN-126	3.464E+00	3.563E-01	1.675E-01	1.325E-02	20.684
BA-137M	5.126E+00	5.073E-01	1.208E-01	9.852E-03	42.433
CS-137	5.418E+00	5.371E-01	1.277E-01	1.044E-02	42.433
TL-208	3.553E-01	1.678E-01	1.159E-01	9.594E-03	3.066
BI-211	1.596E+00	7.424E-01	6.633E-01	4.835E-02	2.406
PB-212	9.607E-01	2.584E-01	1.580E-01	1.435E-02	6.080
PO-212	9.607E-01	2.584E-01	1.580E-01	1.435E-02	6.080
BI-214	5.079E-01	2.371E-01	2.520E-01	2.356E-02	2.016
PB-214	5.552E-01	2.599E-01	2.313E-01	2.071E-02	2.401
PO-214	5.552E-01	2.599E-01	2.313E-01	2.071E-02	2.401
PO-216	9.607E-01	2.584E-01	1.580E-01	1.435E-02	6.080
PO-218	5.552E-01	2.599E-01	2.313E-01	2.071E-02	2.401
RA-226	5.079E-01	2.371E-01	2.520E-01	2.356E-02	2.016
TH-228	9.681E-01	2.604E-01	1.592E-01	1.446E-02	6.080
TH-230	5.079E-01	2.371E-01	2.520E-01	2.356E-02	2.016

Sample ID : G1202012146 Acquisition date : 20-JAN-2010 14:47:02

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
U-234	5.079E-01	2.371E-01	2.520E-01	2.356E-02	2.016
NP-237	1.017E+01	2.345E+00	5.281E-01	1.168E-01	19.259
AM-241	1.296E+01	1.372E+00	2.161E-01	2.198E-02	59.974
AM-243	2.208E-01	7.041E-02	9.048E-02	7.815E-03	2.441
ANH-511	4.771E-02	1.236E-01	1.089E-01	7.597E-03	0.438

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	3.665E-01		6.972E-01	1.195E+00	8.988E-02	0.307
NA-22	1.008E-02		7.362E-02	1.242E-01	7.011E-03	0.081
NA-24	2.814E-04		1.375E-04	Half-Life too short		
AL-26	1.844E-02		4.949E-02	8.845E-02	4.991E-03	0.208
K-40	9.101E-01		6.789E-01	1.296E+00	7.923E-02	0.702
TI-44	2.163E-01	+	6.100E-02	6.789E-02	5.718E-03	3.185
SC-46	4.081E-02		1.051E-01	1.780E-01	1.348E-02	0.229
V-48	-5.015E-02		1.355E-01	2.164E-01	1.531E-02	-0.232
CR-51	3.453E-01		5.732E-01	9.670E-01	7.526E-02	0.357
MN-52	-9.571E-02		1.490E-01	2.185E-01	1.256E-02	-0.438
MN-54	-4.669E-03		8.821E-02	1.464E-01	1.149E-02	-0.032
CO-56	-9.813E-03		1.027E-01	1.699E-01	1.324E-02	-0.058
CO-58	-4.085E-02		9.236E-02	1.497E-01	1.193E-02	-0.273
FE-59	1.122E-01		2.167E-01	3.642E-01	2.602E-02	0.308
ZN-65	-2.817E-01		2.378E-01	3.524E-01	2.139E-02	-0.799
GE-68	2.279E+00		3.183E+00	5.437E+00	3.475E-01	0.419
AS-73	-2.748E-01		5.488E-01	9.236E-01	7.801E-02	-0.298
AS-74	-1.413E-01		1.539E-01	2.365E-01	1.816E-02	-0.598
SE-75	-1.808E-03		7.408E-02	1.227E-01	9.614E-03	-0.015
BR-77	9.970E-01		2.401E+00	4.088E+00	2.887E-01	0.244
SR-82	-5.462E-01		7.061E-01	1.119E+00	9.005E-02	-0.488
RB-83	3.197E-02		1.363E-01	2.295E-01	1.620E-02	0.139
RB-84	-4.664E-03		1.636E-01	2.706E-01	2.061E-02	-0.017
KR-85	1.445E+01		1.670E+01	2.576E+01	1.804E+00	0.561
SR-85	6.845E-02		7.913E-02	1.220E-01	8.548E-03	0.561
RB-86	2.973E-01		1.611E+00	2.598E+00	1.662E-01	0.114
Y-88	-4.142E-02		5.185E-02	6.925E-02	3.900E-03	-0.598
ZR-88	1.044E-02		6.427E-02	1.042E-01	6.103E-03	0.100
Y-91	-5.921E+00		2.643E+01	4.315E+01	2.392E+00	-0.137
NB-94	8.877E-05		7.623E-02	1.232E-01	1.006E-02	0.001
NB-95	4.092E-02		8.402E-02	1.453E-01	1.173E-02	0.282
NB-95M	-3.627E-02		2.110E-01	3.077E-01	2.846E-02	-0.118
ZR-95	5.043E-02		1.591E-01	2.610E-01	2.355E-02	0.193
NB-97	1.291E-03		1.259E-04	Half-Life too short		
ZR-97	5.302E-04		1.399E-03	Half-Life too short		
MO-99	1.098E+00		3.967E+00	6.510E+00	9.705E-01	0.169
TC-99M	-1.961E+01		2.830E+01	Half-Life too short		
RH-101	1.427E-02		5.319E-02	9.057E-02	7.172E-03	0.158

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RH-102	-5.112E-02		7.091E-02	1.136E-01	7.559E-03	-0.450
RU-103	8.376E-02		7.593E-02	1.333E-01	1.755E-02	0.628
RH-106	8.981E-02		6.917E-01	1.140E+00	1.470E-01	0.079
RU-106	8.981E-02		6.917E-01	1.140E+00	8.980E-02	0.079
AG-108M	4.926E-03		6.917E-02	1.170E-01	7.869E-03	0.042
AG-110M	5.230E-01		1.312E-01	2.205E-01	1.853E-02	2.372
IN-111	-1.286E-01		3.131E-01	4.726E-01	3.724E-02	-0.272
IN-113M	-5.543E-02		9.453E-02	1.467E-01	9.141E-03	-0.378
SN-113	-5.543E-02		9.453E-02	1.467E-01	9.141E-03	-0.378
IN-114M	4.686E-02		3.022E-01	4.285E-01	3.386E-02	0.109
CD-115	-3.354E-01		2.141E+00	3.513E+00	2.503E-01	-0.095
SN-117M	-8.789E-03		6.135E-02	9.754E-02	8.518E-03	-0.090
SB-122	3.156E-01		6.176E-01	1.052E+00	7.810E-02	0.300
I-123	1.876E-04		3.371E-04	Half-Life too short		
TE-123M	1.221E-02		4.389E-02	7.123E-02	6.220E-03	0.171
I-124	8.717E-02		4.729E-01	7.132E-01	5.515E-02	0.122
SB-124	-8.294E-03		1.126E-01	1.790E-01	1.115E-02	-0.046
SB-125	-7.578E-02		1.941E-01	3.205E-01	2.062E-02	-0.236
TE-125M	8.626E+00		1.176E+01	1.988E+01	2.413E+00	0.434
I-126	-2.122E-01		3.098E-01	4.023E-01	3.282E-02	-0.527
SB-126	7.236E-02		2.238E-01	3.490E-01	2.844E-02	0.207
SB-127	5.953E-01		7.854E-01	1.339E+00	1.230E-01	0.445
XE-127	-1.542E-02		6.521E-02	1.091E-01	8.648E-03	-0.141
I-131	3.023E-02		1.190E-01	1.953E-01	1.374E-02	0.155
TE-132	-3.752E-02		2.386E-01	3.973E-01	5.659E-02	-0.094
BA-133	-4.270E-02		1.054E-01	1.464E-01	1.758E-02	-0.292
I-133	-2.508E-05		1.541E-05	Half-Life too short		
CS-134	7.697E-02		1.033E-01	1.809E-01	1.458E-02	0.426
CS-135	2.571E-01		2.814E-01	4.848E-01	4.478E-02	0.530
I-135	-8.062E+00		2.646E+01	Half-Life too short		
CS-136	-1.108E-01		1.947E-01	3.041E-01	2.156E-02	-0.364
CE-139	-1.457E-02		4.672E-02	7.336E-02	5.752E-03	-0.199
BA-140	-1.341E-02		3.709E-01	6.125E-01	2.009E-01	-0.022
LA-140	-5.203E-02		9.184E-02	1.333E-01	7.679E-03	-0.390
CE-141	-2.369E-02		8.053E-02	1.278E-01	1.325E-02	-0.185
CE-143	1.225E+01		6.617E+00	9.958E+00	2.093E+00	1.230
CE-144	-6.880E-02		3.121E-01	5.002E-01	8.670E-02	-0.138
PM-144	3.022E-02		7.252E-02	1.208E-01	9.868E-03	0.250
PR-144	2.040E+00		4.895E+00	8.156E+00	6.659E-01	0.250
PM-146	3.126E-02		9.765E-02	1.665E-01	1.512E-02	0.188
ND-147	-3.762E-01		7.419E-01	1.186E+00	1.678E-01	-0.317
PM-149	1.413E+01		1.617E+01	2.759E+01	4.138E+00	0.512
EU-152	1.444E-01		1.968E-01	3.220E-01	2.414E-02	0.448
GD-153	-5.467E-02		1.017E-01	1.550E-01	1.410E-02	-0.353
EU-154	2.615E-02		2.062E-01	3.475E-01	3.210E-02	0.075
EU-155	1.896E-02		1.455E-01	2.395E-01	2.458E-02	0.079
TB-160	-2.745E-01		3.513E-01	5.513E-01	4.206E-02	-0.498
HO-166M	-6.804E-02		1.319E-01	2.041E-01	1.665E-02	-0.333

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TM-171	1.039E+01		2.228E+01	3.820E+01	3.486E+00	0.272
LU-176	5.982E-03		4.617E-02	7.571E-02	5.613E-03	0.079
LU-177	3.006E-01		8.208E-01	1.405E+00	1.114E-01	0.214
LU-177M	-4.132E-01		3.848E-01	5.747E-01	3.486E-02	-0.719
HF-181	-2.697E-02		8.727E-02	1.433E-01	9.629E-03	-0.188
W-181	-8.509E-01		2.911E-01	4.268E-01	3.936E-02	-1.994
TA-182	-3.054E-02		2.587E-01	4.260E-01	2.371E-02	-0.072
RE-183	-6.106E-02		1.663E-01	2.591E-01	2.145E-02	-0.236
RE-184	-1.676E-01		4.170E-01	6.807E-01	5.344E-02	-0.246
OS-185	2.693E-02		8.869E-02	1.475E-01	1.187E-02	0.183
RE-188	-9.002E-02		2.497E-01	3.930E-01	3.596E-02	-0.229
W-188	-6.726E+00		1.413E+01	1.968E+01	1.494E+00	-0.342
IR-192	3.261E-03		5.852E-02	9.603E-02	7.024E-03	0.034
AU-195	5.322E-02		2.865E-01	4.742E-01	4.406E-02	0.112
TL-200	-3.850E+00		8.116E+00	1.275E+01	8.160E-01	-0.302
TL-201	3.486E-01		2.007E+00	3.230E+00	2.531E-01	0.108
TL-202	-1.771E-02		1.011E-01	1.686E-01	1.066E-02	-0.105
HG-203	-8.094E-03		6.322E-02	1.037E-01	8.259E-03	-0.078
BI-207	-1.026E-01		1.479E-01	1.886E-01	1.227E-02	-0.544
TL-207	-3.495E-01		1.279E+00	2.055E+00	3.504E-01	-0.170
PO-209	-1.204E+01		2.023E+01	3.213E+01	2.419E+00	-0.375
BI-210	-1.327E-01		1.154E+00	1.818E+00	1.482E-01	-0.073
PB-210	-1.327E-01		1.154E+00	1.818E+00	1.482E-01	-0.073
PO-210	-1.327E-01		1.154E+00	1.818E+00	1.296E-01	-0.073
PB-211	9.355E-02		2.041E+00	3.279E+00	2.044E+00	0.029
BI-212	8.399E-01	+	1.127E+00	1.168E+00	1.121E-01	0.719
PO-215	-3.495E-01		1.279E+00	2.055E+00	3.504E-01	-0.170
RN-219	-3.644E-01		9.140E-01	1.422E+00	1.944E-01	-0.256
RN-220	-2.522E+01		5.548E+01	8.884E+01	6.494E+00	-0.284
RA-223	-3.495E-01		1.279E+00	2.055E+00	3.504E-01	-0.170
RA-224	4.378E+00		1.432E+00	2.379E+00	1.878E-01	1.840
AC-227	-1.463E-02		6.865E-01	1.140E+00	1.701E-01	-0.013
TH-227	-1.463E-02		6.865E-01	1.140E+00	2.018E-01	-0.013
AC-228	9.065E-01		4.328E-01	7.737E-01	8.034E-02	1.172
RA-228	9.065E-01		4.328E-01	7.737E-01	8.034E-02	1.172
TH-229	1.413E-01		7.930E-01	1.355E+00	1.072E-01	0.104
PA-231	1.078E+00		2.834E+00	4.757E+00	6.972E-01	0.227
TH-231	-3.495E-01		1.279E+00	2.055E+00	3.504E-01	-0.170
U-231	-1.312E-02		4.077E-01	6.035E-01	5.367E-02	-0.022
TH-232	9.065E-01		4.328E-01	7.737E-01	8.034E-02	1.172
PA-233	-4.668E-02		1.186E-01	1.898E-01	1.449E-02	-0.246
PA-234	4.562E-01		9.364E-01	1.578E+00	2.871E-01	0.289
PA-234M	-1.464E+01		1.246E+01	1.860E+01	1.595E+00	-0.787
TH-234	-4.177E-01		1.097E+00	1.794E+00	3.292E-01	-0.233
U-235	-1.277E-01		3.219E-01	5.093E-01	9.403E-02	-0.251
NP-236	-4.932E-02		1.314E-01	2.062E-01	1.757E-02	-0.239
U-238	-4.177E-01		1.097E+00	1.794E+00	3.292E-01	-0.233
NP-239	-7.257E-02		3.155E-01	4.542E-01	5.390E-02	-0.160

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	6.422E-02		1.315E-01	2.212E-01	2.203E-02	0.290
AM-246	2.606E-01		3.641E-01	6.224E-01	3.970E-02	0.419
CM-247	-8.597E-03		8.036E-02	1.280E-01	7.624E-03	-0.067
CF-249	-1.361E-02		8.788E-02	1.401E-01	8.320E-03	-0.097
CF-251	-4.929E-02		2.050E-01	3.215E-01	2.529E-02	-0.153

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]G1202012146           *
* Acquisition date : 20-JAN-2010 14:47:02 Detector SN#    :                 *
* Detector ID      : GAM13                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 01:00:01.63     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date      : 13-JAN-2010 00:00:00 Nuclide Library : SOLID           *
* Sample ID        : G1202012146          Analyst initials: MXR1            *
* Batch Number     : 940263               Sample Quantity : 1.5544E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME :  2-FEB-2009 10:41:22 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
CO-57	1.997E-01	8.160E-02	3.320E-02	4.163E-02
CO-60	6.019E+00	4.695E-01	5.118E-02	2.395E-01
CD-109	3.485E+01	3.512E+00	9.164E-01	1.792E+00
SN-126	3.464E+00	3.491E-01	9.098E-02	1.781E-01
BA-137M	5.126E+00	4.972E-01	6.230E-02	2.537E-01
CS-137	5.418E+00	5.263E-01	6.586E-02	2.685E-01
TL-208	3.553E-01	1.645E-01	5.998E-02	8.391E-02
BI-211	1.596E+00	7.275E-01	3.479E-01	3.712E-01
PB-212	9.607E-01	2.533E-01	8.371E-02	1.292E-01
PO-212	9.607E-01	2.533E-01	8.371E-02	1.292E-01
BI-214	5.079E-01	2.324E-01	1.302E-01	1.186E-01
PB-214	5.552E-01	2.547E-01	1.213E-01	1.299E-01
PO-214	5.552E-01	2.547E-01	1.213E-01	1.299E-01
PO-216	9.607E-01	2.533E-01	8.371E-02	1.292E-01
PO-218	5.552E-01	2.547E-01	1.213E-01	1.299E-01
RA-226	5.079E-01	2.324E-01	1.302E-01	1.186E-01
TH-228	9.681E-01	2.552E-01	8.435E-02	1.302E-01
TH-230	5.079E-01	2.324E-01	1.302E-01	1.186E-01
U-234	5.079E-01	2.324E-01	1.302E-01	1.186E-01
NP-237	1.017E+01	2.298E+00	2.870E-01	1.173E+00
AM-241	1.296E+01	1.344E+00	1.185E-01	6.859E-01
AM-243	2.208E-01	6.900E-02	4.934E-02	3.520E-02
ANH-511	4.771E-02	1.211E-01	5.654E-02	6.181E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	3.665E-01	6.833E-01	6.220E-01	3.486E-01	NOT IDENT.
NA-22	1.008E-02	7.215E-02	6.291E-02	3.681E-02	NOT IDENT.
NA-24	2.814E+02	2.695E+02	0.000E+00	1.375E+02	SHORT HLIF
AL-26	1.844E-02	4.850E-02	4.436E-02	2.475E-02	NOT IDENT.

K-40	9.101E-01	6.653E-01	6.539E-01	3.394E-01	NOT IDENT.
TI-44	2.163E-01	5.978E-02	3.698E-02	3.050E-02	FAIL ABUN
SC-46	4.081E-02	1.030E-01	9.106E-02	5.255E-02	NOT IDENT.
V-48	-5.015E-02	1.328E-01	1.104E-01	6.776E-02	NOT IDENT.
CR-51	3.453E-01	5.617E-01	5.084E-01	2.866E-01	NOT IDENT.
MN-52	-9.571E-02	1.461E-01	1.103E-01	7.452E-02	NOT IDENT.
MN-54	-4.669E-03	8.644E-02	7.502E-02	4.410E-02	NOT IDENT.
CO-56	-9.813E-03	1.007E-01	8.704E-02	5.137E-02	NOT IDENT.
CO-58	-4.085E-02	9.051E-02	7.680E-02	4.618E-02	NOT IDENT.
FE-59	1.122E-01	2.124E-01	1.852E-01	1.083E-01	NOT IDENT.
ZN-65	-2.817E-01	2.331E-01	1.792E-01	1.189E-01	NOT IDENT.
GE-68	2.279E+00	3.120E+00	2.767E+00	1.592E+00	NOT IDENT.
AS-73	-2.748E-01	5.378E-01	5.077E-01	2.744E-01	NOT IDENT.
AS-74	-1.413E-01	1.508E-01	1.223E-01	7.696E-02	NOT IDENT.
SE-75	-1.808E-03	7.259E-02	6.485E-02	3.704E-02	FAIL ABUN
BR-77	9.970E-01	2.353E+00	2.122E+00	1.200E+00	FAIL ABUN
SR-82	-5.462E-01	6.919E-01	5.745E-01	3.530E-01	NOT IDENT.
RB-83	3.197E-02	1.335E-01	1.191E-01	6.814E-02	NOT IDENT.
RB-84	-4.664E-03	1.603E-01	1.385E-01	8.179E-02	NOT IDENT.
KR-85	1.445E+01	1.637E+01	1.338E+01	8.352E+00	NOT IDENT.
SR-85	6.845E-02	7.755E-02	6.337E-02	3.957E-02	NOT IDENT.
RB-86	2.973E-01	1.579E+00	1.322E+00	8.057E-01	NOT IDENT.
Y-88	-4.142E-02	5.081E-02	3.472E-02	2.592E-02	NOT IDENT.
ZR-88	1.044E-02	6.298E-02	5.449E-02	3.213E-02	NOT IDENT.
Y-91	-5.921E+00	2.590E+01	2.189E+01	1.322E+01	NOT IDENT.
NB-94	8.877E-05	7.470E-02	6.343E-02	3.811E-02	NOT IDENT.
NB-95	4.092E-02	8.234E-02	7.462E-02	4.201E-02	NOT IDENT.
NB-95M	-3.627E-02	2.068E-01	1.631E-01	1.055E-01	NOT IDENT.
ZR-95	5.043E-02	1.559E-01	1.341E-01	7.954E-02	NOT IDENT.
NB-97	1.291E+03	2.468E+02	0.000E+00	1.259E+02	SHORT HLIF
ZR-97	5.302E+02	2.742E+03	0.000E+00	1.399E+03	SHORT HLIF
MO-99	1.098E+00	3.887E+00	3.347E+00	1.983E+00	NOT IDENT.
TC-99M	-1.961E+07	5.547E+07	0.000E+00	2.830E+07	SHORT HLIF
RH-101	1.427E-02	5.212E-02	4.821E-02	2.659E-02	NOT IDENT.
RH-102	-5.112E-02	6.950E-02	5.911E-02	3.546E-02	NOT IDENT.
RU-103	8.376E-02	7.441E-02	6.929E-02	3.797E-02	FAIL ABUN
RH-106	8.981E-02	6.779E-01	5.891E-01	3.459E-01	FAIL ABUN
RU-106	8.981E-02	6.778E-01	5.891E-01	3.458E-01	FAIL ABUN
AG-108M	4.926E-03	6.779E-02	6.101E-02	3.458E-02	NOT IDENT.
AG-110M	5.230E-01	1.285E-01	1.137E-01	6.559E-02	NOT IDENT.
IN-111	-1.286E-01	3.068E-01	2.502E-01	1.565E-01	NOT IDENT.
IN-113M	-5.543E-02	9.264E-02	7.673E-02	4.727E-02	NOT IDENT.
SN-113	-5.543E-02	9.264E-02	7.673E-02	4.727E-02	NOT IDENT.
IN-114M	4.686E-02	2.962E-01	2.283E-01	1.511E-01	NOT IDENT.
CD-115	-3.354E-01	2.098E+00	1.823E+00	1.071E+00	NOT IDENT.
SN-117M	-8.789E-03	6.012E-02	5.222E-02	3.067E-02	NOT IDENT.
SB-122	3.156E-01	6.053E-01	5.447E-01	3.088E-01	NOT IDENT.
I-123	1.876E+02	6.608E+02	0.000E+00	3.371E+02	SHORT HLIF
TE-123M	1.221E-02	4.301E-02	3.813E-02	2.194E-02	NOT IDENT.
I-124	8.717E-02	4.634E-01	3.688E-01	2.364E-01	NOT IDENT.
SB-124	-8.294E-03	1.103E-01	8.994E-02	5.628E-02	FAIL ABUN
SB-125	-7.578E-02	1.902E-01	1.672E-01	9.703E-02	NOT IDENT.
TE-125M	8.626E+00	1.153E+01	1.074E+01	5.880E+00	NOT IDENT.
I-126	-2.122E-01	3.037E-01	2.074E-01	1.549E-01	NOT IDENT.
SB-126	7.236E-02	2.193E-01	1.796E-01	1.119E-01	NOT IDENT.
SB-127	5.953E-01	7.697E-01	6.897E-01	3.927E-01	NOT IDENT.
XE-127	-1.542E-02	6.391E-02	5.805E-02	3.261E-02	NOT IDENT.
I-131	3.023E-02	1.166E-01	1.023E-01	5.949E-02	NOT IDENT.
TE-132	-3.752E-02	2.339E-01	2.107E-01	1.193E-01	NOT IDENT.
BA-133	-4.270E-02	1.033E-01	7.678E-02	5.271E-02	NOT IDENT.
I-133	-2.508E+01	3.020E+01	0.000E+00	1.541E+01	SHORT HLIF
CS-134	7.697E-02	1.013E-01	9.281E-02	5.166E-02	NOT IDENT.
CS-135	2.571E-01	2.758E-01	2.560E-01	1.407E-01	NOT IDENT.
I-135	-8.062E+06	5.187E+07	0.000E+00	2.646E+07	SHORT HLIF
CS-136	-1.108E-01	1.909E-01	1.549E-01	9.737E-02	NOT IDENT.
CE-139	-1.457E-02	4.579E-02	3.923E-02	2.336E-02	NOT IDENT.
BA-140	-1.341E-02	3.635E-01	3.177E-01	1.855E-01	NOT IDENT.
LA-140	-5.203E-02	9.000E-02	6.706E-02	4.592E-02	NOT IDENT.
CE-141	-2.369E-02	7.892E-02	6.854E-02	4.026E-02	NOT IDENT.
CE-143	1.225E+01	6.484E+00	5.248E+00	3.308E+00	FAIL ABUN
CE-144	-6.880E-02	3.059E-01	2.689E-01	1.561E-01	NOT IDENT.
PM-144	3.022E-02	7.107E-02	6.224E-02	3.626E-02	NOT IDENT.
PR-144	2.040E+00	4.797E+00	4.201E+00	2.447E+00	NOT IDENT.
PM-146	3.126E-02	9.570E-02	8.676E-02	4.882E-02	NOT IDENT.
ND-147	-3.762E-01	7.270E-01	6.151E-01	3.709E-01	NOT IDENT.
PM-149	1.413E+01	1.584E+01	1.455E+01	8.083E+00	NOT IDENT.
EU-152	1.444E-01	1.929E-01	1.690E-01	9.841E-02	FAIL ABUN
GD-153	-5.467E-02	9.967E-02	8.398E-02	5.085E-02	NOT IDENT.

EU-154	2.615E-02	2.021E-01	1.760E-01	1.031E-01	FAIL ABUN
EU-155	1.896E-02	1.426E-01	1.295E-01	7.273E-02	FAIL ABUN
TB-160	-2.745E-01	3.443E-01	2.822E-01	1.756E-01	FAIL ABUN
HO-166M	-6.804E-02	1.293E-01	1.051E-01	6.596E-02	FAIL ABUN
TM-171	1.039E+01	2.183E+01	2.089E+01	1.114E+01	FAIL ABUN
LU-176	5.982E-03	4.524E-02	3.985E-02	2.308E-02	FAIL ABUN
LU-177	3.006E-01	8.044E-01	7.471E-01	4.104E-01	NOT IDENT.
LU-177M	-4.132E-01	3.771E-01	3.001E-01	1.924E-01	FAIL ABUN
HF-181	-2.697E-02	8.552E-02	7.455E-02	4.363E-02	NOT IDENT.
W-181	-8.509E-01	2.853E-01	2.335E-01	1.456E-01	NOT IDENT.
TA-182	-3.054E-02	2.535E-01	2.160E-01	1.293E-01	NOT IDENT.
RE-183	-6.106E-02	1.630E-01	1.386E-01	8.317E-02	FAIL ABUN
RE-184	-1.676E-01	4.087E-01	3.601E-01	2.085E-01	FAIL ABUN
OS-185	2.693E-02	8.692E-02	7.614E-02	4.435E-02	FAIL ABUN
RE-188	-9.002E-02	2.447E-01	2.105E-01	1.249E-01	NOT IDENT.
W-188	-6.726E+00	1.384E+01	1.038E+01	7.063E+00	NOT IDENT.
IR-192	3.261E-03	5.735E-02	5.051E-02	2.926E-02	FAIL ABUN
AU-195	5.322E-02	2.808E-01	2.568E-01	1.433E-01	FAIL ABUN
TL-200	-3.850E+00	7.954E+00	6.681E+00	4.058E+00	NOT IDENT.
TL-201	3.486E-01	1.967E+00	1.727E+00	1.004E+00	NOT IDENT.
TL-202	-1.771E-02	9.908E-02	8.793E-02	5.055E-02	NOT IDENT.
HG-203	-8.094E-03	6.195E-02	5.474E-02	3.161E-02	NOT IDENT.
BI-207	-1.026E-01	1.449E-01	9.601E-02	7.394E-02	FAIL ABUN
TL-207	-3.495E-01	1.253E+00	1.080E+00	6.394E-01	FAIL ABUN
PO-209	-1.204E+01	1.982E+01	1.643E+01	1.011E+01	NOT IDENT.
BI-210	-1.327E-01	1.131E+00	1.003E+00	5.772E-01	NOT IDENT.
PB-210	-1.327E-01	1.131E+00	1.003E+00	5.772E-01	NOT IDENT.
PO-210	-1.327E-01	1.131E+00	1.003E+00	5.772E-01	NOT IDENT.
PB-211	9.355E-02	2.001E+00	1.713E+00	1.021E+00	NOT IDENT.
BI-212	8.399E-01	1.104E+00	6.007E-01	5.633E-01	FAIL ABUN
PO-215	-3.495E-01	1.253E+00	1.080E+00	6.394E-01	FAIL ABUN
RN-219	-3.644E-01	8.957E-01	7.434E-01	4.570E-01	NOT IDENT.
RN-220	-2.522E+01	5.437E+01	4.605E+01	2.774E+01	NOT IDENT.
RA-223	-3.495E-01	1.253E+00	1.080E+00	6.394E-01	FAIL ABUN
RA-224	4.378E+00	1.403E+00	1.260E+00	7.160E-01	NOT IDENT.
AC-227	-1.463E-02	6.727E-01	6.030E-01	3.432E-01	NOT IDENT.
TH-227	-1.463E-02	6.727E-01	6.030E-01	3.432E-01	FAIL ABUN
AC-228	9.065E-01	4.242E-01	3.956E-01	2.164E-01	FAIL ABUN
RA-228	9.065E-01	4.242E-01	3.956E-01	2.164E-01	FAIL ABUN
TH-229	1.413E-01	7.772E-01	7.219E-01	3.965E-01	FAIL ABUN
PA-231	1.078E+00	2.777E+00	2.509E+00	1.417E+00	NOT IDENT.
TH-231	-3.495E-01	1.253E+00	1.080E+00	6.394E-01	FAIL ABUN
U-231	-1.312E-02	3.995E-01	3.271E-01	2.038E-01	FAIL ABUN
TH-232	9.065E-01	4.242E-01	3.956E-01	2.164E-01	FAIL ABUN
PA-233	-4.668E-02	1.162E-01	9.986E-02	5.928E-02	FAIL ABUN
PA-234	4.562E-01	9.177E-01	8.061E-01	4.682E-01	FAIL ABUN
PA-234M	-1.464E+01	1.221E+01	9.487E+00	6.229E+00	NOT IDENT.
TH-234	-4.177E-01	1.075E+00	9.824E-01	5.483E-01	FAIL ABUN
U-235	-1.277E-01	3.155E-01	2.733E-01	1.610E-01	FAIL ABUN
NP-236	-4.932E-02	1.287E-01	1.103E-01	6.568E-02	NOT IDENT.
U-238	-4.177E-01	1.075E+00	9.824E-01	5.483E-01	FAIL ABUN
NP-239	-7.257E-02	3.092E-01	2.450E-01	1.578E-01	NOT IDENT.
CM-243	6.422E-02	1.289E-01	1.197E-01	6.577E-02	NOT IDENT.
AM-246	2.606E-01	3.568E-01	3.167E-01	1.821E-01	NOT IDENT.
CM-247	-8.597E-03	7.875E-02	6.691E-02	4.018E-02	NOT IDENT.
CF-249	-1.361E-02	8.612E-02	7.329E-02	4.394E-02	NOT IDENT.
CF-251	-4.929E-02	2.009E-01	1.716E-01	1.025E-01	NOT IDENT.

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*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                          CHARLESTON ,SC 29417                             *
*                   GAMMA SPECTROSCOPY BACKGROUND REPORT                    *
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ENERGY	MDA COUNTS
46.50	526.2767
46.50	526.2767
46.50	526.2767
48.70	738.3348
49.72	728.0330
51.35	861.2009
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52.97	876.9491
53.15	875.8678
53.44	876.8605
54.07	874.5707
56.28	836.5213
56.28	836.5312
57.37	877.5324
57.53	878.0515
57.53	878.0593
57.60	878.2788
57.98	646.9665
57.98	646.9665
59.32	650.1390
59.32	650.1390
59.40	650.3271
59.54	650.6558
59.72	651.0794
60.01	651.7595
61.10	526.8540
61.14	526.9290
61.30	527.2272
63.00	312.1416
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63.29	361.4414
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64.28	387.0293
65.12	442.3154
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65.20	516.1743
66.05	499.8347
66.72	363.4346
66.83	363.5712
66.91	363.6664
67.20	372.0658
67.20	372.0658
67.75	396.9330
67.85	397.0660
68.90	388.5381
68.90	388.5381
69.30	380.0357
69.67	397.6252
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70.82	415.3804
70.83	415.3944
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72.87	398.9470
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74.81	383.0200
74.81	383.0200
74.81	383.0200
74.81	383.0200
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77.11	385.6988

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77.11	385.6988
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77.11	385.6988
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81.07	445.2939
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81.07	445.2939
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83.78	351.3797
83.78	351.3797
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84.90	427.5123
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86.59	462.2309
86.72	462.3945
86.79	398.4454
86.94	398.6121
87.30	399.0051
87.30	399.0051
87.30	399.0051
87.30	399.0051
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88.47	400.2783
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92.38	262.9052
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94.90	223.9175
94.90	223.9175
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98.44	232.7826
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100.00	228.7787
100.10	228.8367
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103.76	230.8846
105.00	226.6026
105.31	226.7696
108.00	241.2231
109.28	218.8515

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111.00	235.8448
111.76	245.3397
112.95	240.9404
115.19	226.8904
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117.00	243.6325
117.00	243.6325
117.66	256.2615
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121.62	237.3115
121.78	237.3922
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144.24	215.8895
144.24	215.8895
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145.44	227.1924
147.16	226.8312
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152.70	217.0681
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154.21	237.4387
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156.02	221.6594
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162.64	238.7211
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165.85	234.4128
167.43	211.4178
171.28	226.3489
171.86	210.7050
172.10	203.9868
176.55	216.8734
176.60	218.0323
181.06	225.9018
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185.71	218.8542
186.00	218.9523
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192.34	200.8904
193.63	216.2203
197.04	219.9628
198.01	223.8129
198.60	216.9227
200.40	229.9190
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202.84	235.1834
205.31	246.7432

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208.81	259.6440
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209.75	253.6886
210.97	247.8130
215.65	259.3926
216.55	253.3546
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223.80	243.9159
226.40	223.5929
227.00	220.0856
227.08	220.1093
227.20	224.7476
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228.18	237.0258
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235.69	229.4622
236.00	229.5525
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238.63	218.7269
238.63	218.7269
238.63	218.7269
239.00	218.8287
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241.98	246.3063
241.98	246.3063
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248.90	211.1160
249.79	202.8144
252.40	207.2590
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252.85	226.3971
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256.20	206.2944
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269.46	177.5018
269.46	177.5018
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277.60	181.0988
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284.30	197.2382
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286.10	171.9344
287.40	194.9379
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290.80	203.4016
291.72	181.3340
293.26	165.6992
293.70	176.9361
295.21	188.5963
295.21	188.5963

295.21	188.5963
295.96	193.3400
296.50	207.8381
297.23	206.4000
298.57	182.6588
299.80	176.4753
299.80	176.4753
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300.09	168.5050
300.09	168.5050
300.12	168.5101
301.29	156.6665
302.84	204.1956
303.76	201.3702
303.91	190.3237
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304.40	192.4368
304.84	184.4604
306.84	165.6516
308.46	161.8799
311.98	172.6147
316.51	156.0653
318.01	172.6438
319.02	166.6835
319.41	157.5412
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323.87	187.0099
323.87	187.0099
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338.28	161.4993
338.28	161.4993
338.28	161.4993
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340.57	162.0606
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351.92	179.4006
351.92	179.4006
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367.94	183.0861
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383.85	149.8152
387.95	181.9326
388.63	159.1461
391.69	190.1585
391.69	190.1585
392.90	176.1306
398.62	187.9654
400.65	160.7524
401.10	167.4224
401.81	178.5421
402.60	170.9385
404.84	171.2531
410.95	159.8928
411.60	171.0858
413.65	194.7361
414.70	202.6977
415.30	181.6240

415.76	183.9205
417.63	0.0000
418.52	156.3977
423.70	167.1362
427.08	176.5795
427.89	165.6606
432.53	158.1281
433.93	151.9670
439.47	174.4195
439.56	172.6143
439.89	172.6583
443.98	170.4617
444.90	176.9658
445.03	167.8596
445.03	167.8596
445.03	167.8596
445.03	167.8596
453.90	158.8783
463.38	183.1137
468.07	197.6620
473.00	169.4964
475.06	192.1317
475.35	185.6394
476.78	169.9563
477.59	163.5135
477.96	164.4908
482.03	165.9051
484.57	152.1182
487.03	149.5594
490.36	136.7075
492.35	135.9527
497.08	108.9299
507.63	0.0000
510.53	0.0000
510.84	151.0701
511.00	151.0865
511.85	151.1743
511.85	151.1743
513.99	124.5624
513.99	124.5624
520.41	114.5114
520.65	107.7918
527.90	113.1438
528.96	0.0000
529.64	123.9219
529.87	0.0000
531.02	125.0034
537.32	120.6518
543.00	108.3957
546.56	0.0000
549.76	120.6337
552.65	115.9402
555.20	103.3337
563.23	95.9414
563.90	101.9162
568.70	133.9783
569.32	108.2150
569.50	108.2283
569.67	108.2389
573.80	115.0393
574.00	115.0534
574.64	125.7507
578.91	114.8428
579.30	113.2061
583.14	96.1148
585.48	95.2458
591.81	101.7579
592.07	101.7727
593.00	104.7389
595.88	136.1931
600.56	104.1970
602.52	0.0000
602.71	127.3348
602.71	127.3348
603.60	138.5018
604.41	157.1532
604.70	157.1797
609.31	127.0996

609.31	127.0996
609.31	127.0996
609.31	127.0996
610.33	130.5673
612.46	118.8428
614.37	110.4757
618.01	112.4089
621.84	105.4870
621.84	105.4870
631.29	119.4381
633.02	124.7074
633.10	124.7133
634.78	103.1665
635.90	103.2324
636.97	96.0629
645.85	97.5755
646.12	96.5511
656.30	130.4993
657.75	135.8271
657.90	0.0000
661.65	95.2812
661.65	95.2812
664.57	87.3901
666.33	115.4651
666.33	115.4651
675.00	103.3474
677.61	97.1525
685.20	89.0613
692.80	110.7057
695.00	93.7793
696.49	91.7193
696.49	91.7193
697.00	93.8781
697.49	104.5724
698.33	98.2127
698.50	95.0166
699.00	99.3143
702.63	110.1994
706.10	99.6776
706.58	0.0000
706.67	87.9118
709.31	106.2800
711.68	101.0362
713.82	105.4481
717.42	97.0181
720.50	94.4684
721.93	100.8392
722.20	97.2510
722.78	95.4781
722.78	95.4781
722.89	95.4824
722.95	95.4867
723.30	95.5018
724.18	93.7422
727.18	104.7144
733.00	95.9655
735.90	126.9291
739.58	90.4631
742.81	103.7068
744.21	108.1483
747.13	98.4551
751.79	114.0293
752.31	107.4770
753.82	102.0684
755.35	105.4383
756.15	103.2830
756.87	96.7227
763.93	113.0428
765.79	97.5052
766.42	105.8167
766.84	105.8378
776.49	112.7939
778.00	93.4443
778.57	94.3944
778.89	91.6322
783.80	100.1931
785.46	103.9837
792.07	98.7172

795.84	90.4935
796.30	88.6450
798.80	107.4311
801.93	116.0053
805.60	90.8980
810.29	120.2057
810.76	121.1711
815.85	108.2687
817.79	105.5378
818.51	105.5719
819.60	115.0526
826.30	108.7788
828.27	124.0198
831.60	100.5007
831.96	105.2594
834.83	112.9885
836.80	0.0000
846.75	135.5344
848.13	130.8429
856.28	0.0000
856.80	118.8737
860.37	96.0124
867.32	117.4851
867.82	120.4020
871.10	114.7825
873.19	111.0225
874.81	119.7945
875.33	0.0000
876.40	121.8087
879.36	128.7382
880.27	120.0720
880.51	120.0846
881.50	120.1326
883.24	114.4037
884.67	120.2940
889.25	122.4701
896.60	126.7468
898.02	125.8453
899.00	125.8952
903.28	126.1183
911.07	122.6018
911.07	122.6018
911.07	122.6018
919.63	133.8556
920.93	133.9276
925.00	128.2306
925.24	132.1898
926.50	139.1641
935.52	123.8225
937.48	138.7895
944.10	146.1147
946.00	139.2594
949.00	159.3457
962.29	126.9991
964.01	115.0628
966.15	123.7525
968.20	140.4785
969.11	142.8241
969.11	142.8241
969.11	142.8241
977.42	122.0507
980.50	104.8527
983.50	109.0129
989.30	104.1965
996.32	112.5898
1001.03	124.9819
1001.68	118.9162
1004.76	83.4397
1021.30	0.0000
1024.50	0.0000
1034.80	105.9840
1036.00	99.8536
1037.82	98.8906
1038.57	108.1915
1038.76	0.0000
1045.16	93.9919
1046.59	102.3073
1048.07	112.7034

1050.47	87.9641
1050.47	87.9641
1062.04	80.1657
1063.62	92.6867
1076.63	98.0021
1077.35	87.7666
1078.86	84.6782
1085.78	97.4615
1099.22	97.9194
1112.02	107.8728
1112.84	116.3648
1115.52	138.7078
1120.29	76.3623
1120.29	76.3623
1120.29	76.3623
1120.29	76.3623
1120.51	74.2468
1121.28	79.5715
1124.00	0.0000
1129.67	87.2451
1131.51	0.0000
1147.95	0.0000
1167.94	60.9658
1173.22	48.5797
1175.09	49.9978
1177.93	44.4844
1189.05	43.7150
1204.90	44.8744
1205.75	45.8213
1213.00	34.6798
1221.42	36.6523
1230.97	37.7065
1235.34	27.3746
1236.41	0.0000
1238.25	32.1240
1246.25	26.5205
1260.41	0.0000
1271.85	36.2771
1274.45	38.2171
1274.54	38.2185
1291.56	41.2978
1298.22	0.0000
1312.09	33.8208
1325.50	25.4663
1325.50	25.4663
1332.49	25.2764
1333.61	20.4221
1360.21	26.4604
1362.66	0.0000
1365.15	14.7212
1368.21	15.7160
1368.53	0.0000
1376.25	20.6748
1384.27	20.7224
1394.10	25.7271
1395.20	22.7658
1407.95	16.8873
1434.06	24.0134
1436.60	20.0251
1457.56	0.0000
1460.81	16.1261
1489.15	16.2489
1509.49	24.5047
1596.49	19.8356
1620.62	21.0045
1678.03	0.0000
1691.02	11.7504
1691.02	11.7504
1706.46	0.0000
1750.46	0.0000
1764.49	9.5081
1764.49	9.5081
1764.49	9.5081
1764.49	9.5081
1770.23	11.8474
1771.40	29.5213
1791.20	0.0000
1808.65	8.6427

1836.01 13.5258

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1202012146

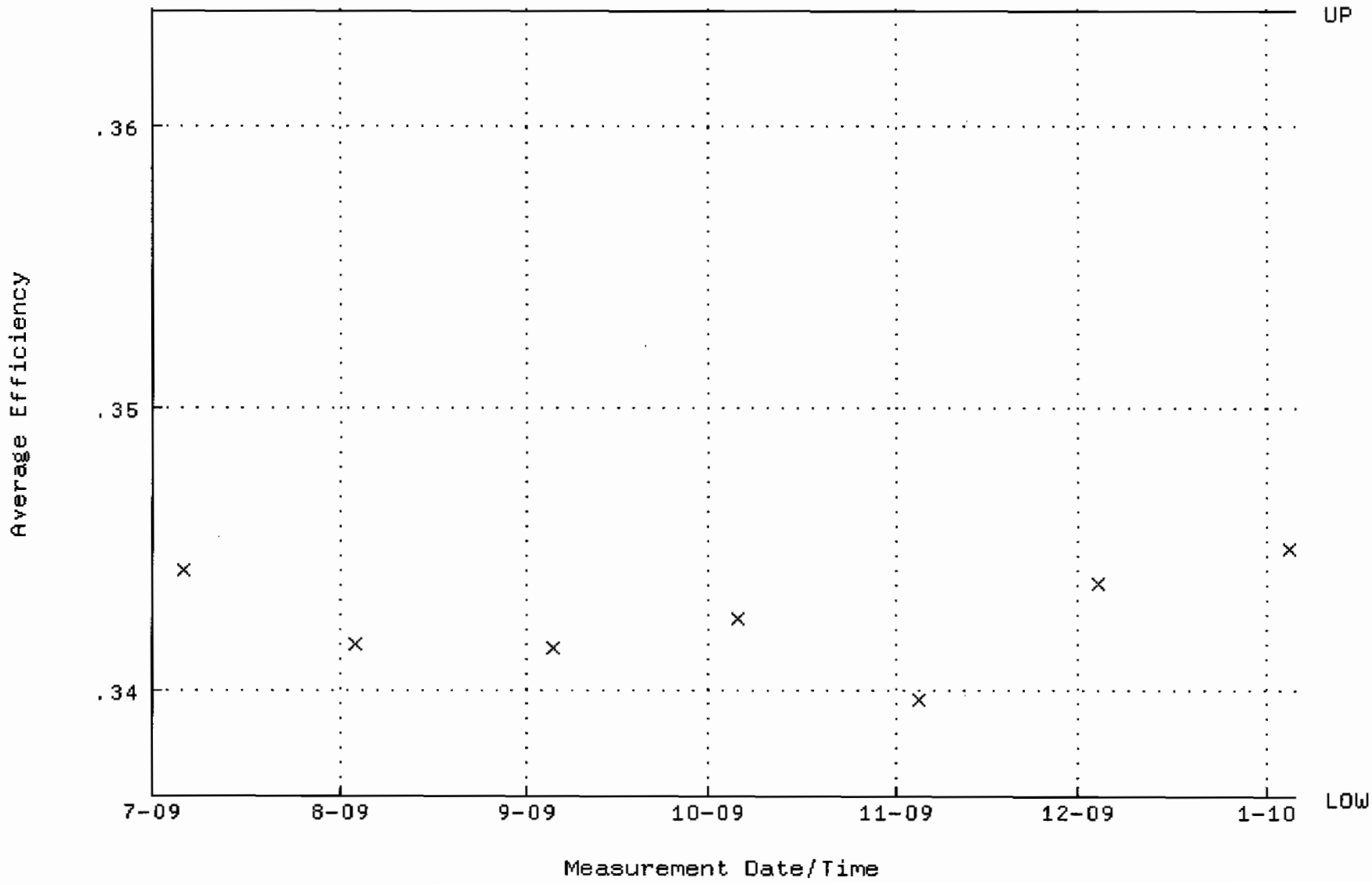
Total Uranium Activity	-1.3016E+00	ug/g
Total Uranium Counting Unc.	3.2006E+00	ug/g
Total Uranium Tpu	1.6330E-06	ug/g
Total Uranium Mda	2.9255E+00	ug/g

```
*******************************************************************************
*                                                                             *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                              *
*                             CHARLESTON ,SC 29417                            *
*                              GROSS GAMMA REPORT                             *
*                                                                             *
*                                                                             *
*******************************************************************************
*                                                                             *
*   BATCH ID      : 940263                    SAMPLE ID  : G1202012146        *
*   ANALYST       : MXR1                      DETECTOR   : GAM13              *
*   SAMPLE DATE   : 13-JAN-2010 00:00:00.00   COUNT TIME :    0 01:00:00.00   *
*   ANALYSIS DATE: 20-JAN-2010 14:47:02.42    SAMPLE ALQT:  155.440 GRAM      *
*                                                                             *
*******************************************************************************

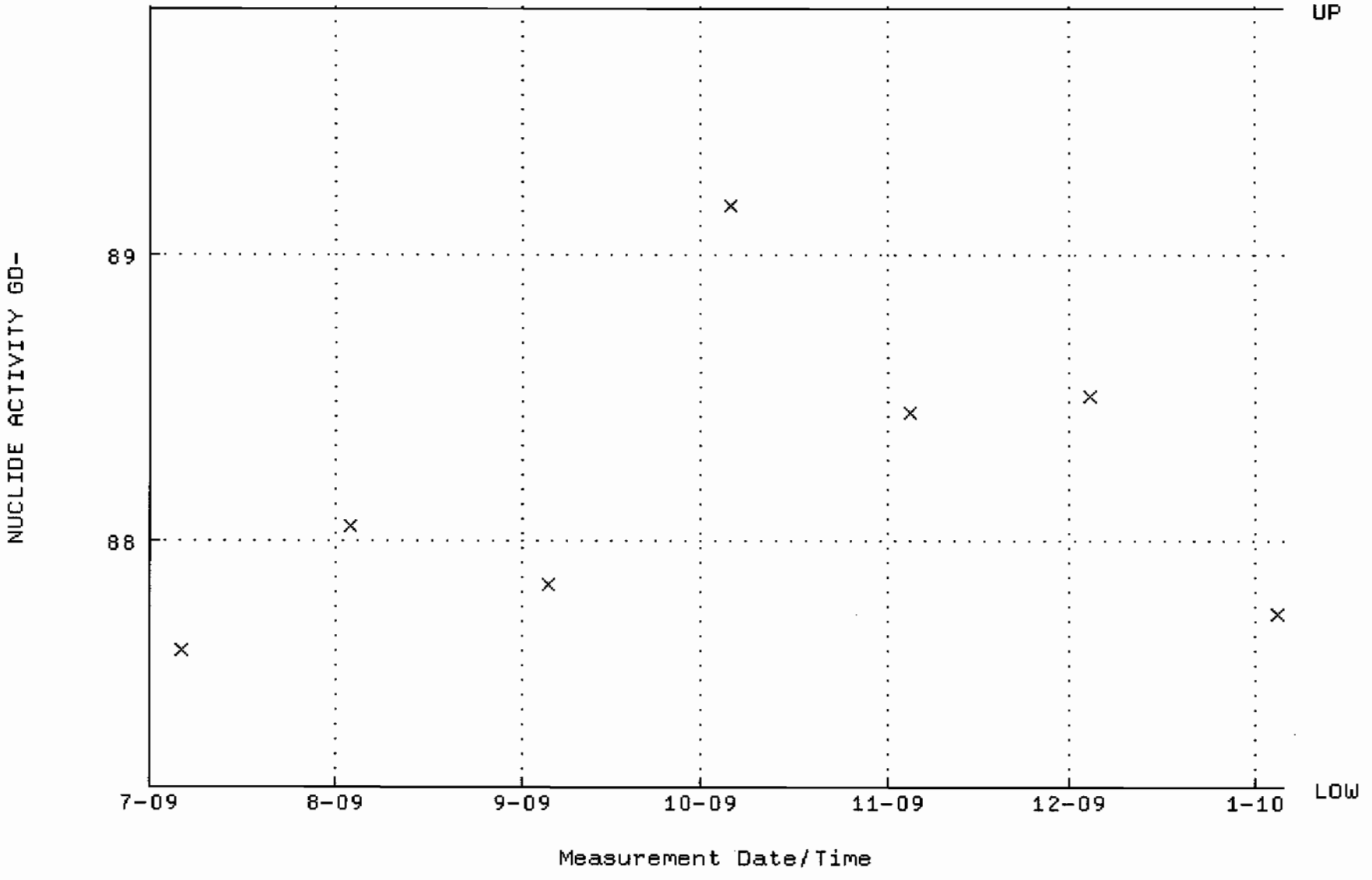

        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 2.554E+01
        GROSS GAMMA ERROR   (pCi/GRAM  )  : 2.847E+00
        GROSS GAMMA MDA     (pCi/GRAM  )  : 5.420E+00
        GROSS GAMMA DLC     (pCi/GRAM  )  : 2.655E+00
```

BACKGROUND AND EFFICIENCY DATA

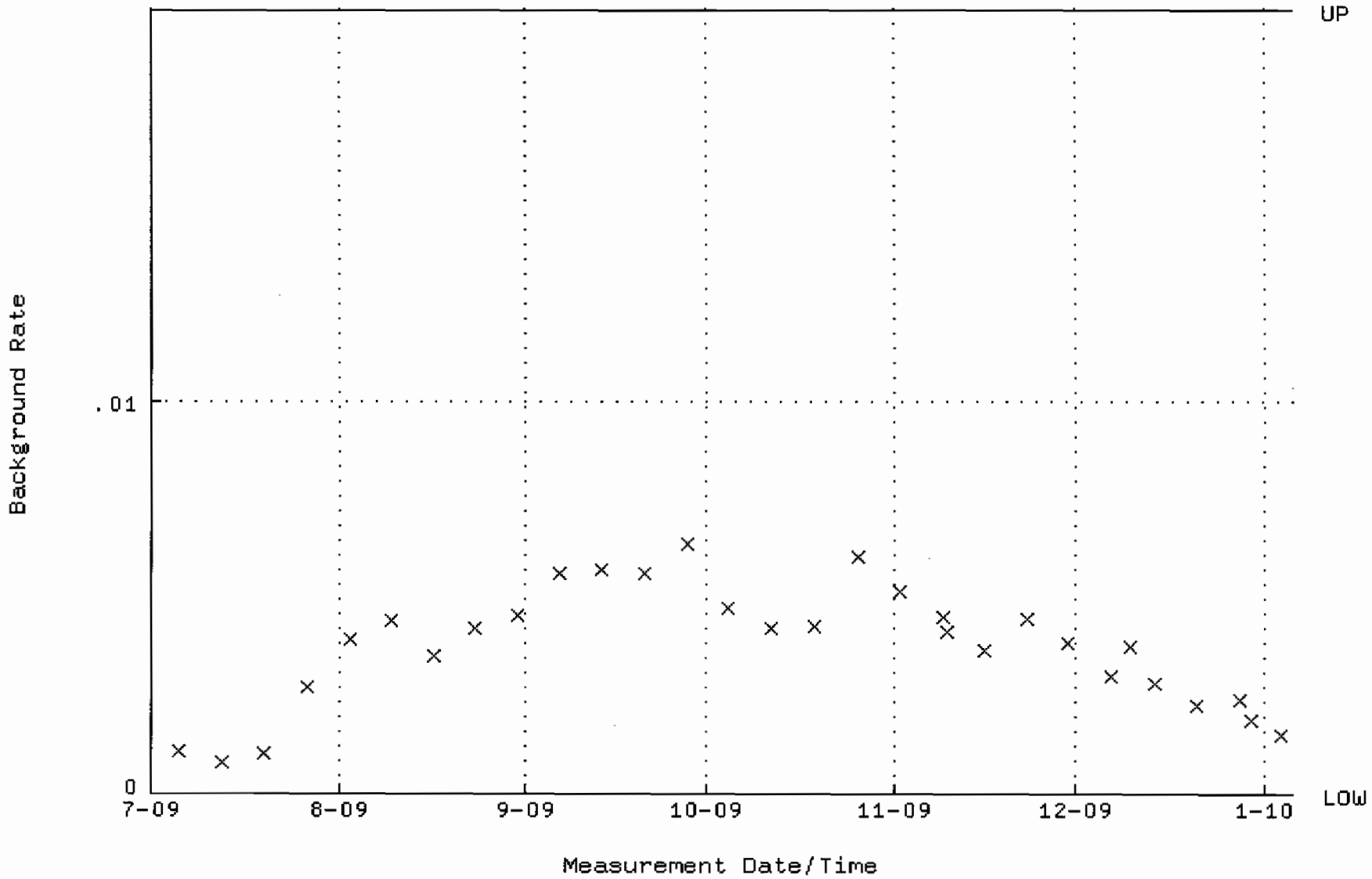
QA filename : DKA100:[ENV_ALPHA.QA.W]W047.QAF;5
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 6-JUL-2009 09:46:17 through 5-JAN-2010 12:00:00
Lower/Upper Lmts: 0.336276 through 0.364038



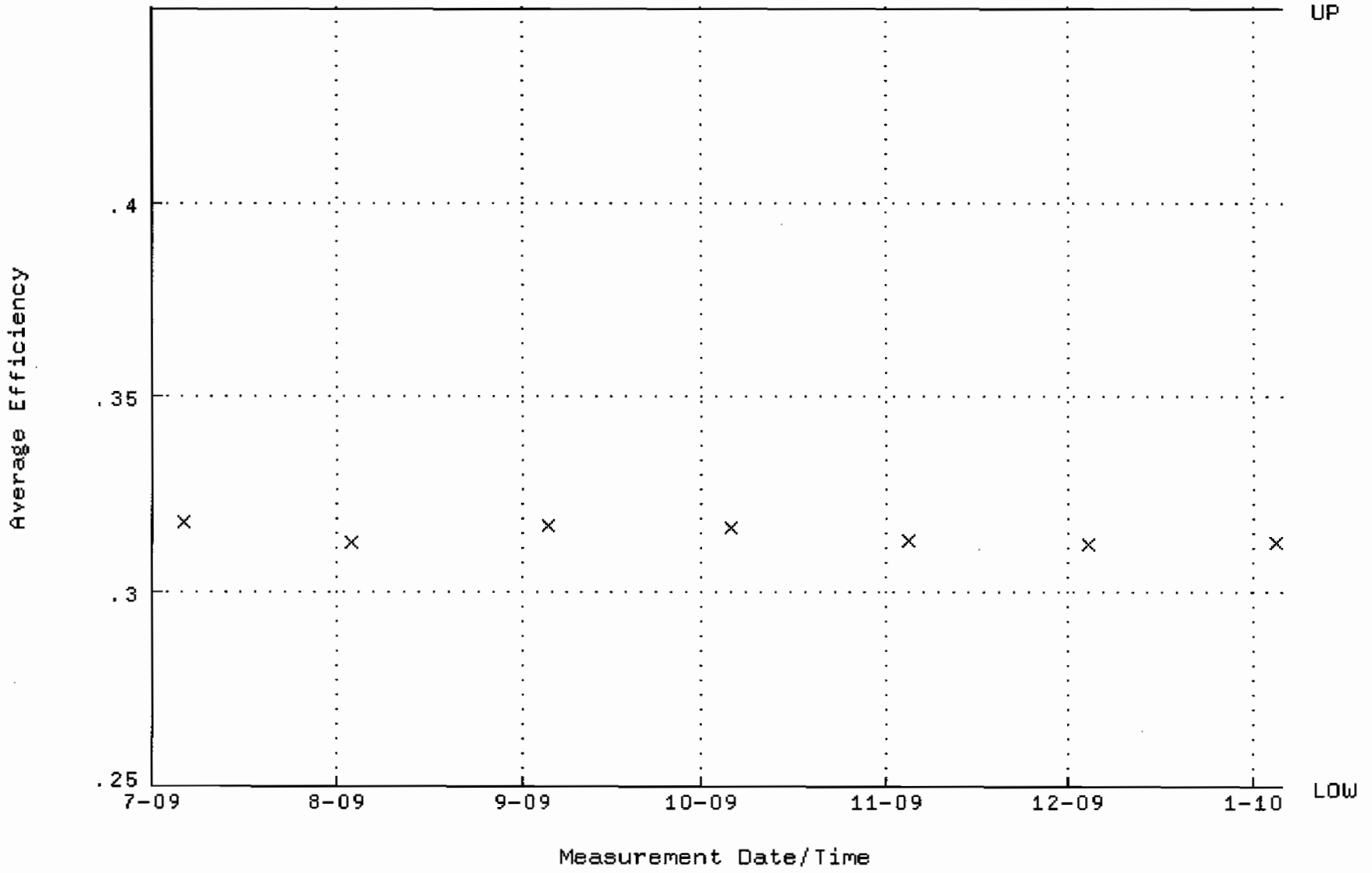
QA filename : DKA100:[ENV_ALPHA.QA.W]W047.QAF;5
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 6-JUL-2009 09:46:17 through 5-JAN-2010 12:00:00
Lower/Upper Lmts: 87.1403 through 89.8631



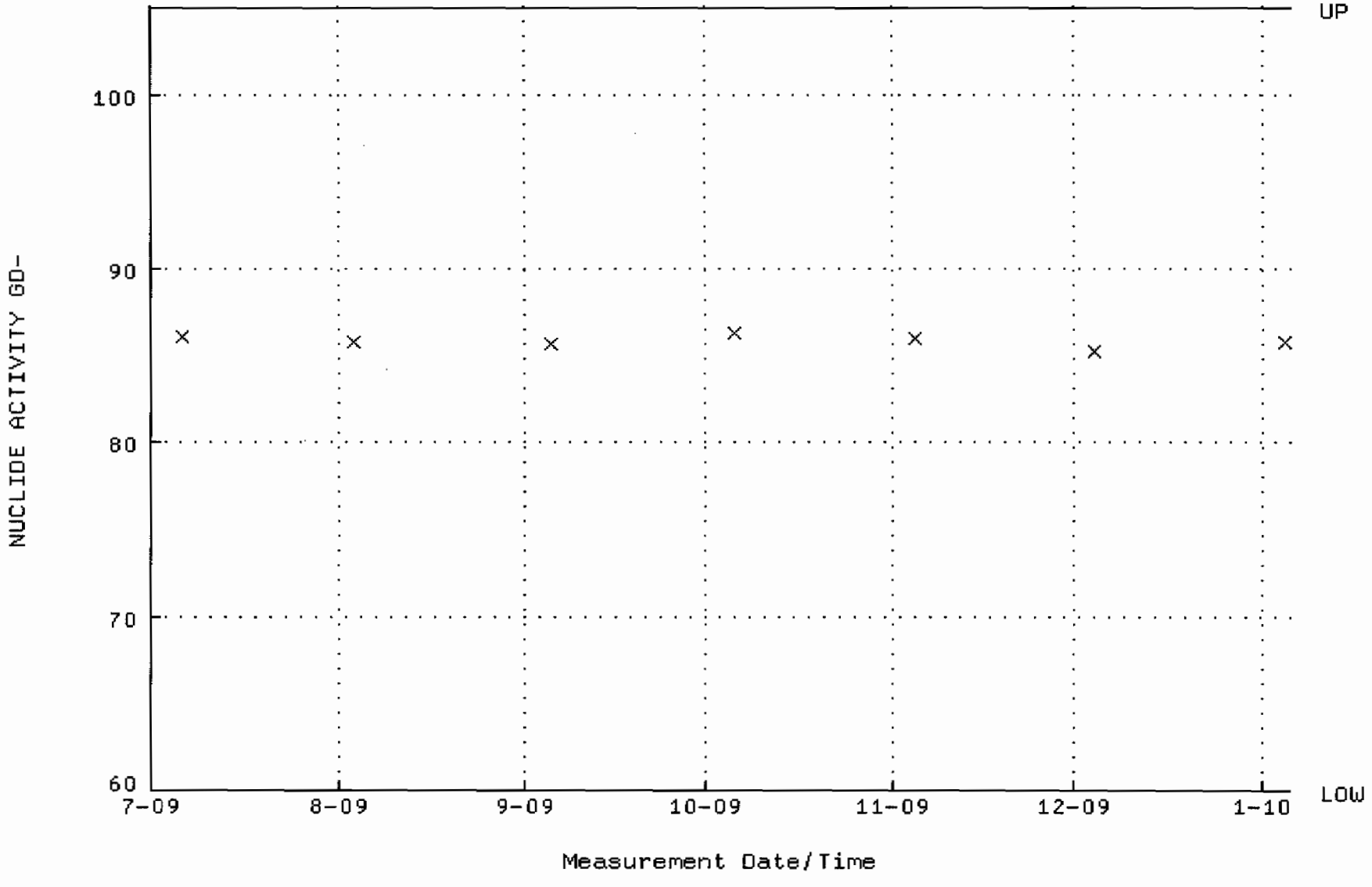
QA filename : DKA100:[ENV_ALPHA.QA.B]B047.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 15:12:00 through 5-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



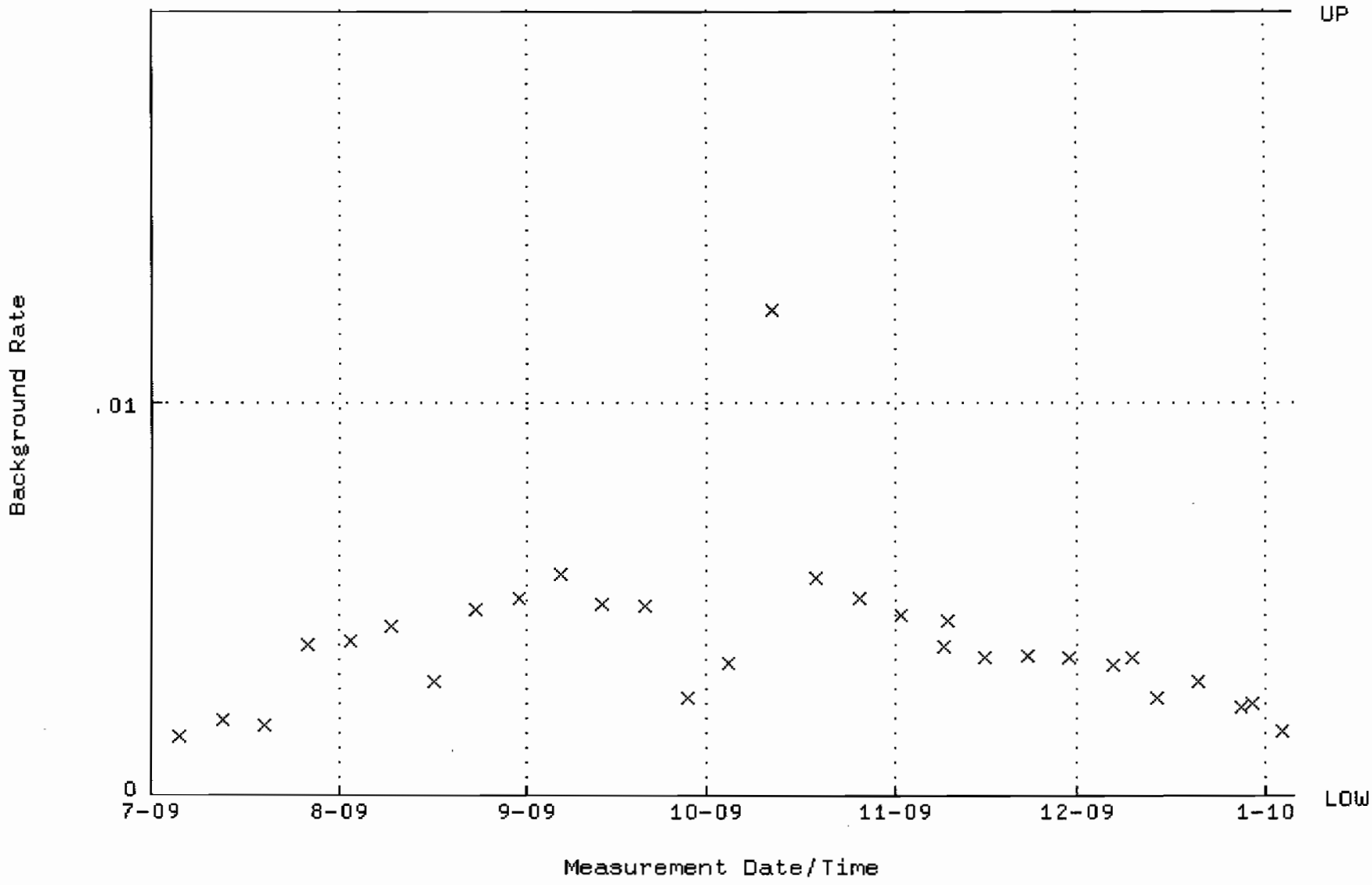
QA filename : DKA100:[ENV_ALPHA.QA.W]W048.QAF;6
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 6-JUL-2009 09:46:17 through 5-JAN-2010 12:00:00
Lower/Upper Lmts: 0.250000 through 0.450000



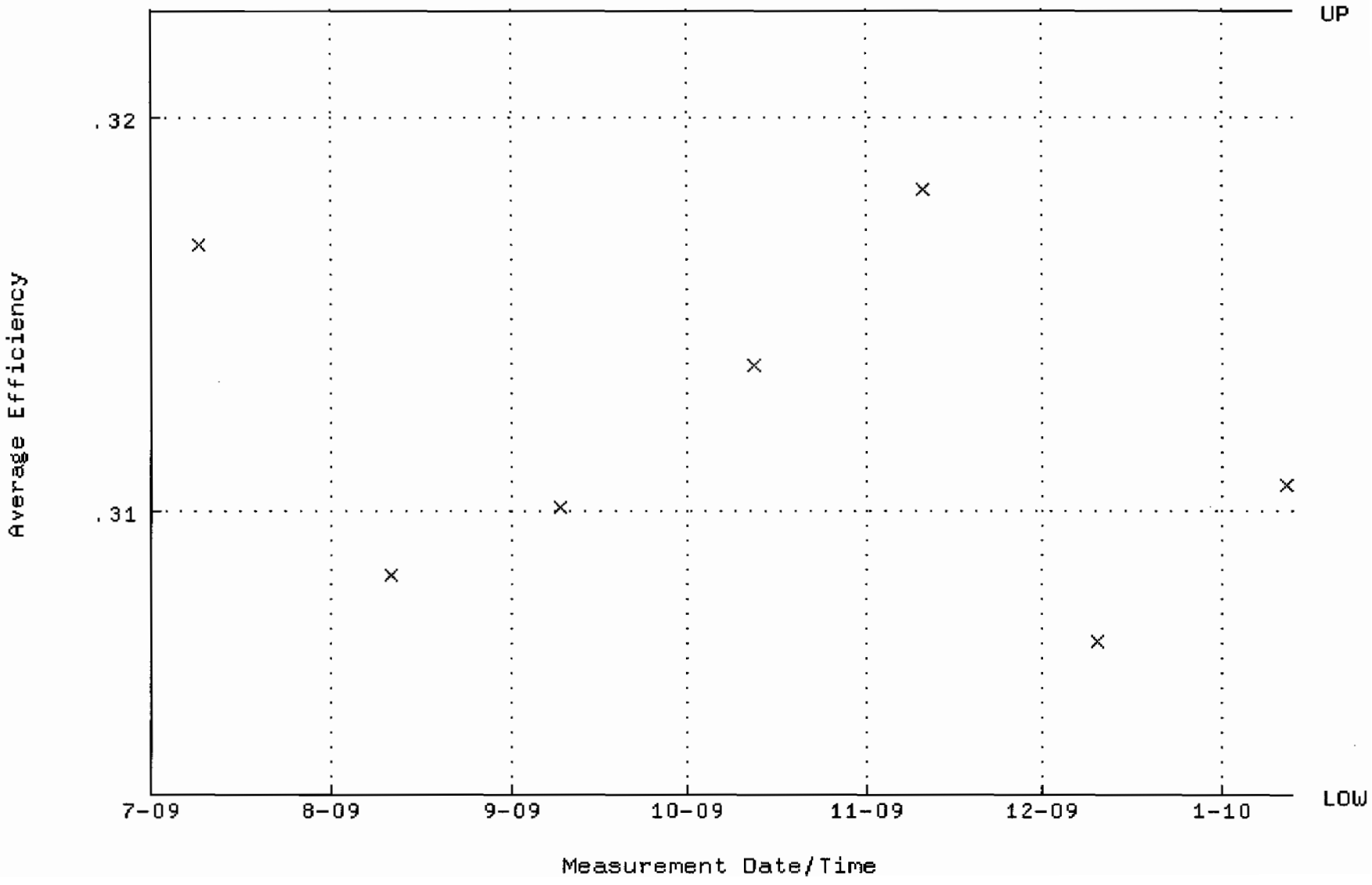
QA filename : DKA100:[ENV_ALPHA.QA.W]W048.QAF;6
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 6-JUL-2009 09:46:17 through 5-JAN-2010 12:00:00
Lower/Upper Lmts: 60.0000 through 105.000



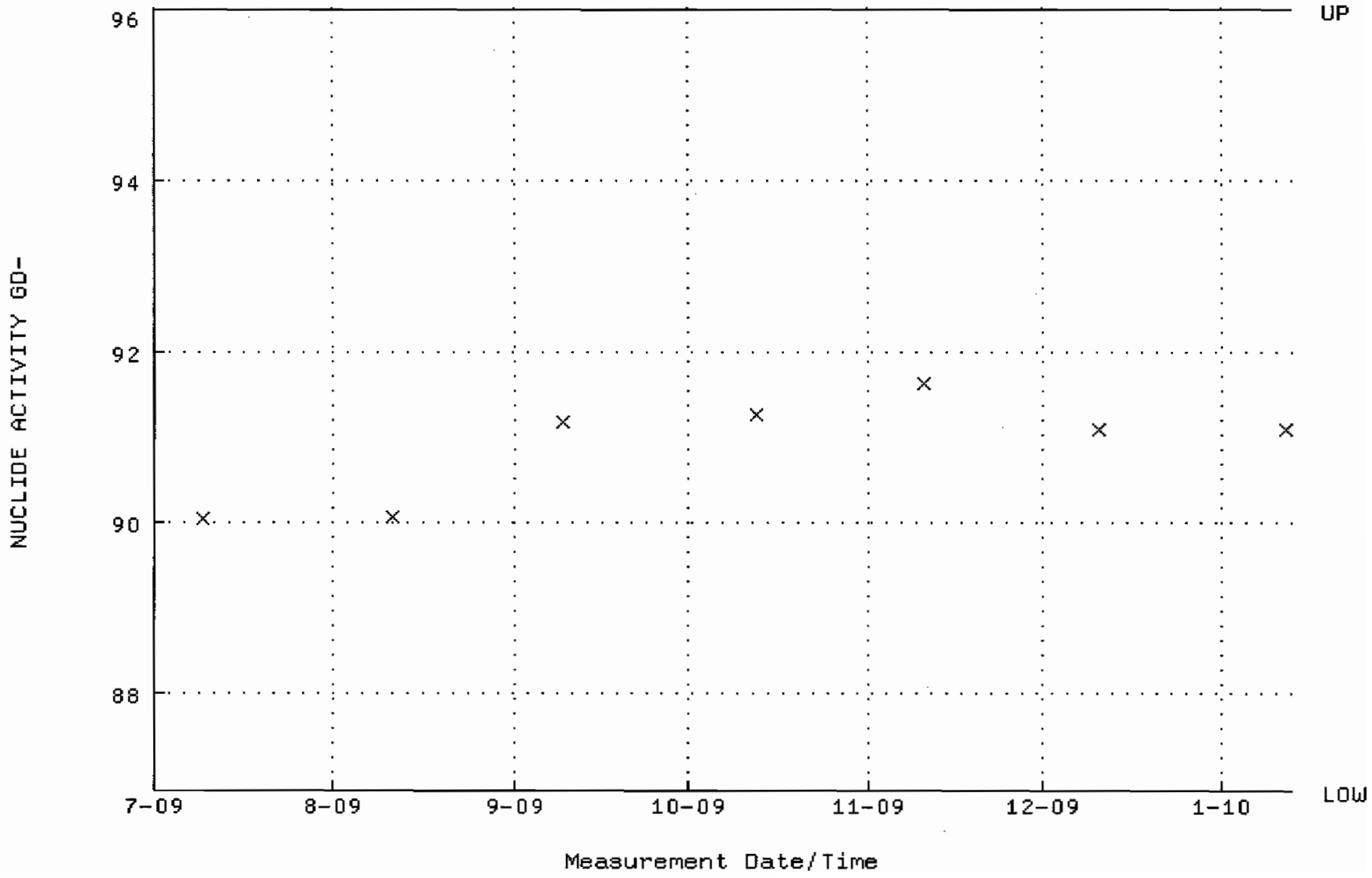
QA filename : DKA100:[ENV_ALPHA.QA.B]B048.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 15:12:00 through 5-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



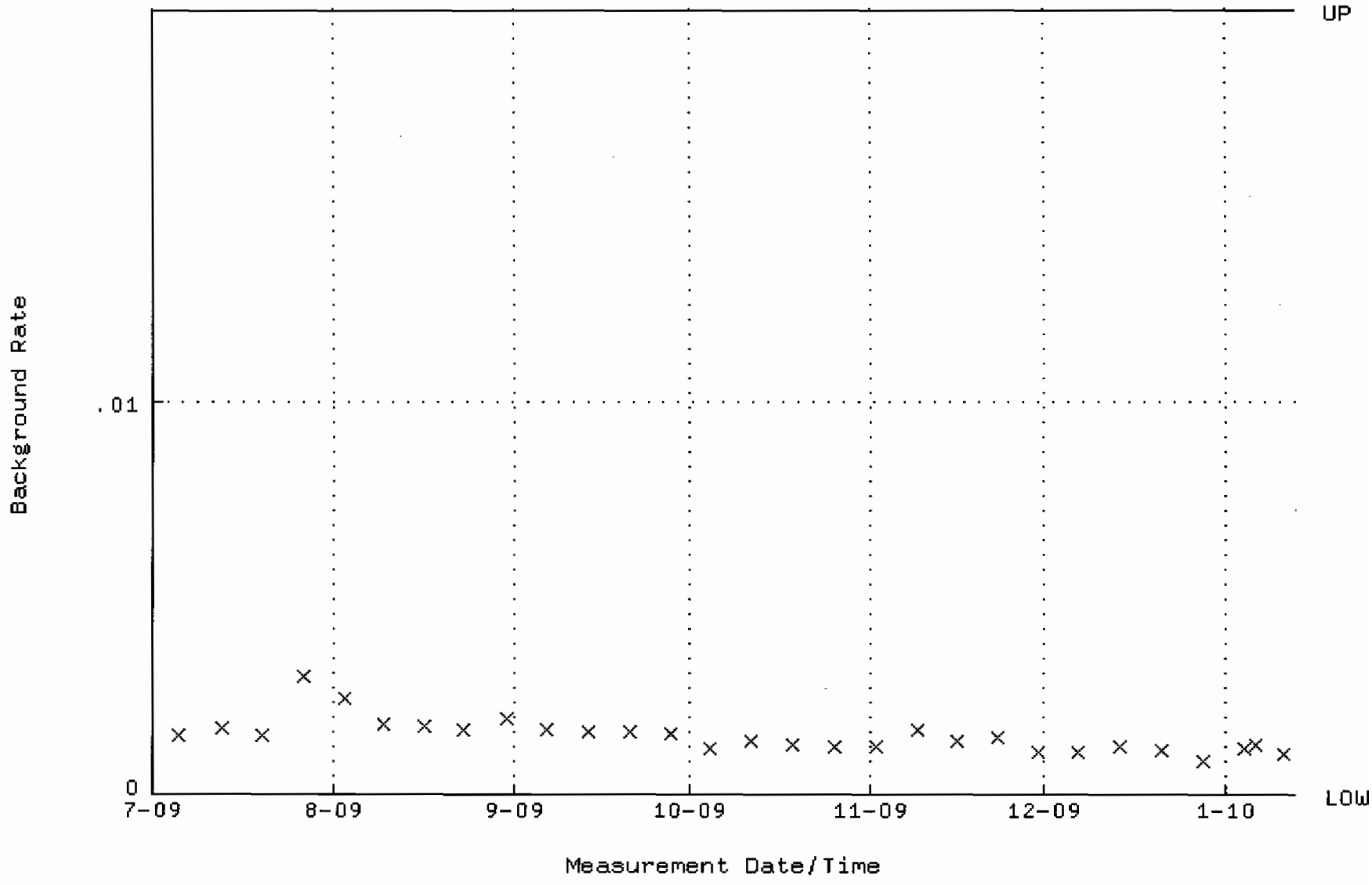
QA filename : DKA100:[ENV_ALPHA.QA.W]W065.QAF;3
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 9-JUL-2009 08:08:10 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.302750 through 0.322750



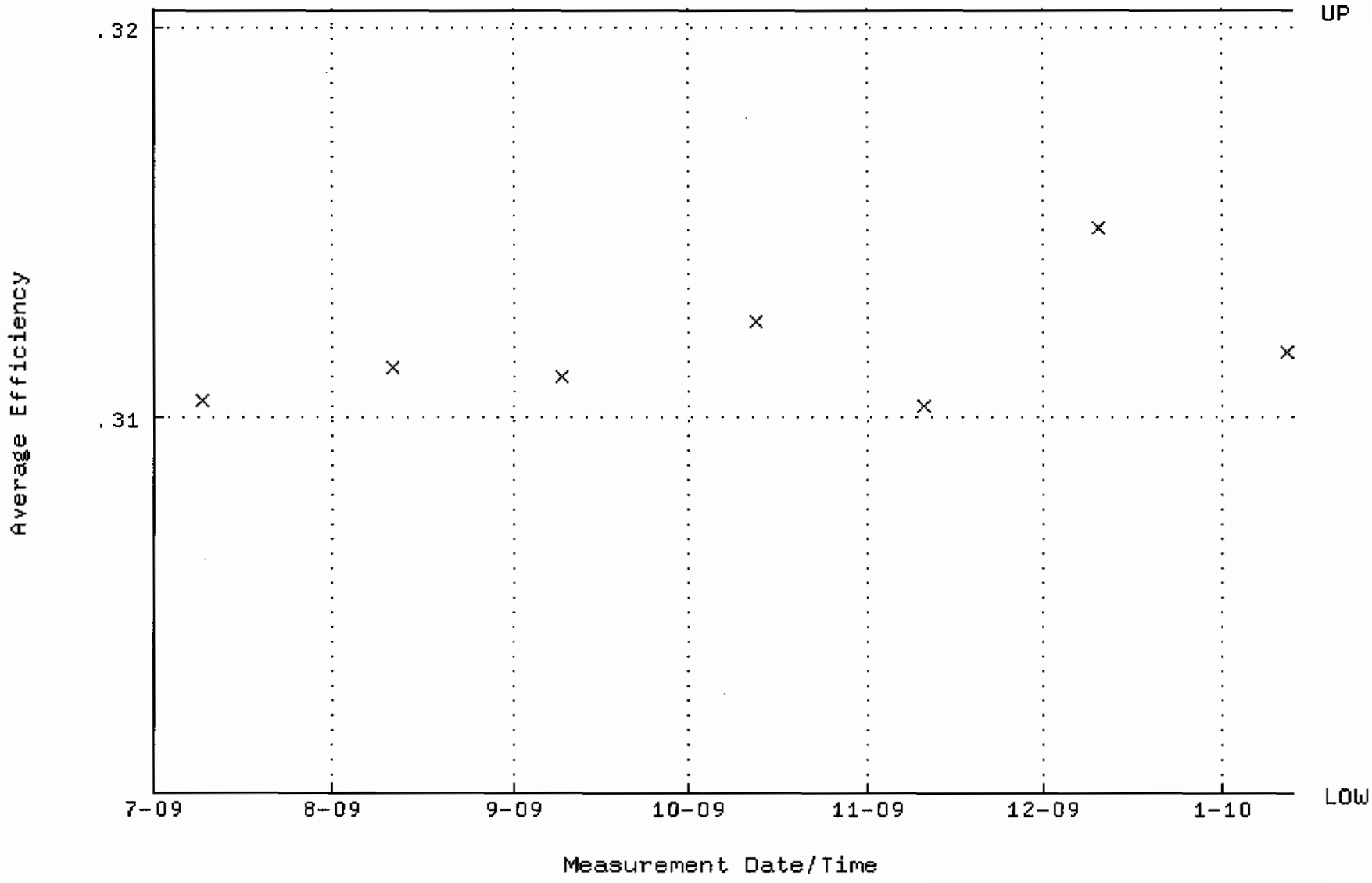
QA filename : DKA100:[ENV_ALPHA.QA.W]W065.QAF;3
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 9-JUL-2009 08:08:10 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 86.8638 through 96.0074



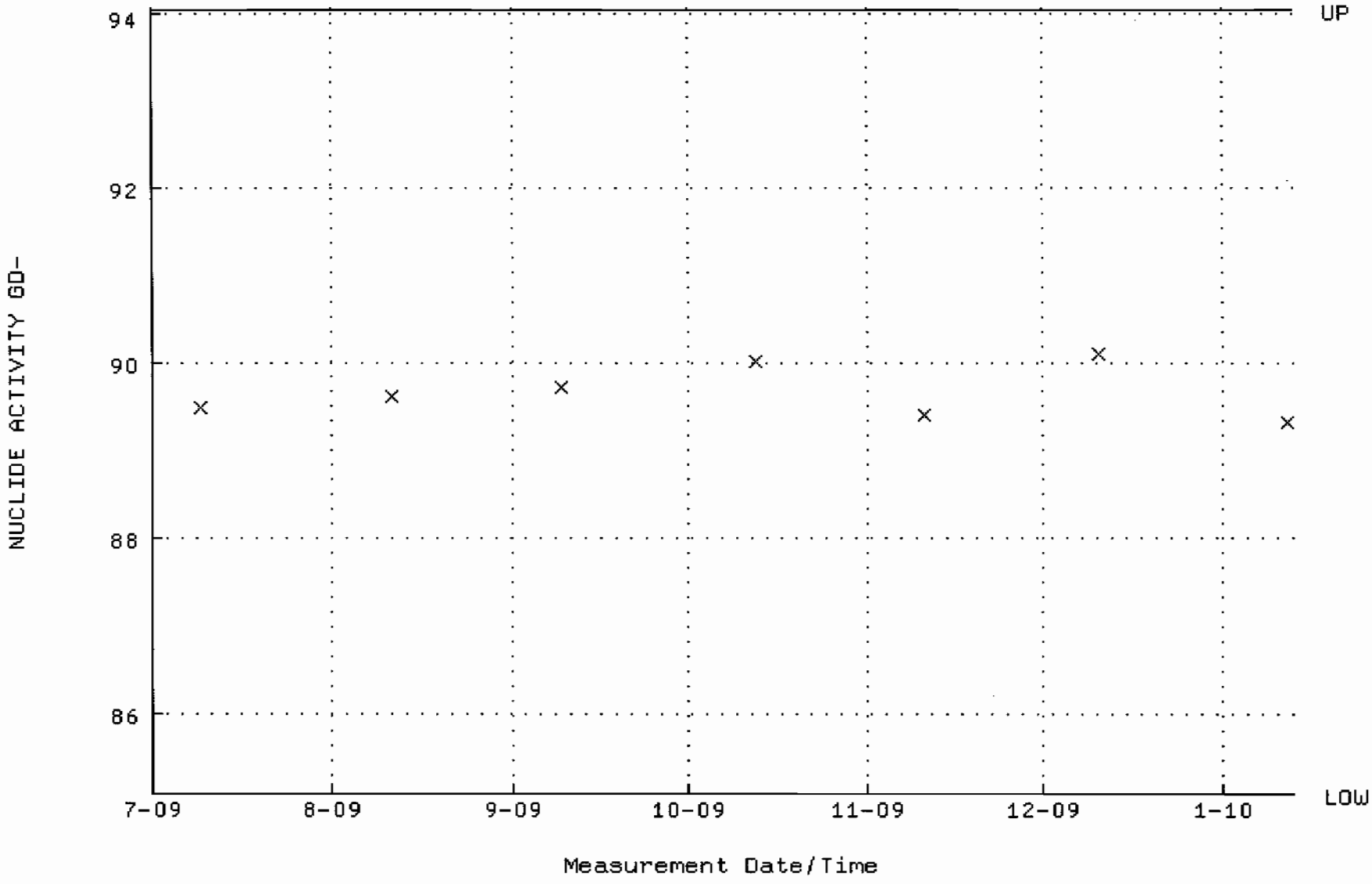
QA filename : DKA100:[ENV_ALPHA.QA.B]B065.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 15:12:01 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



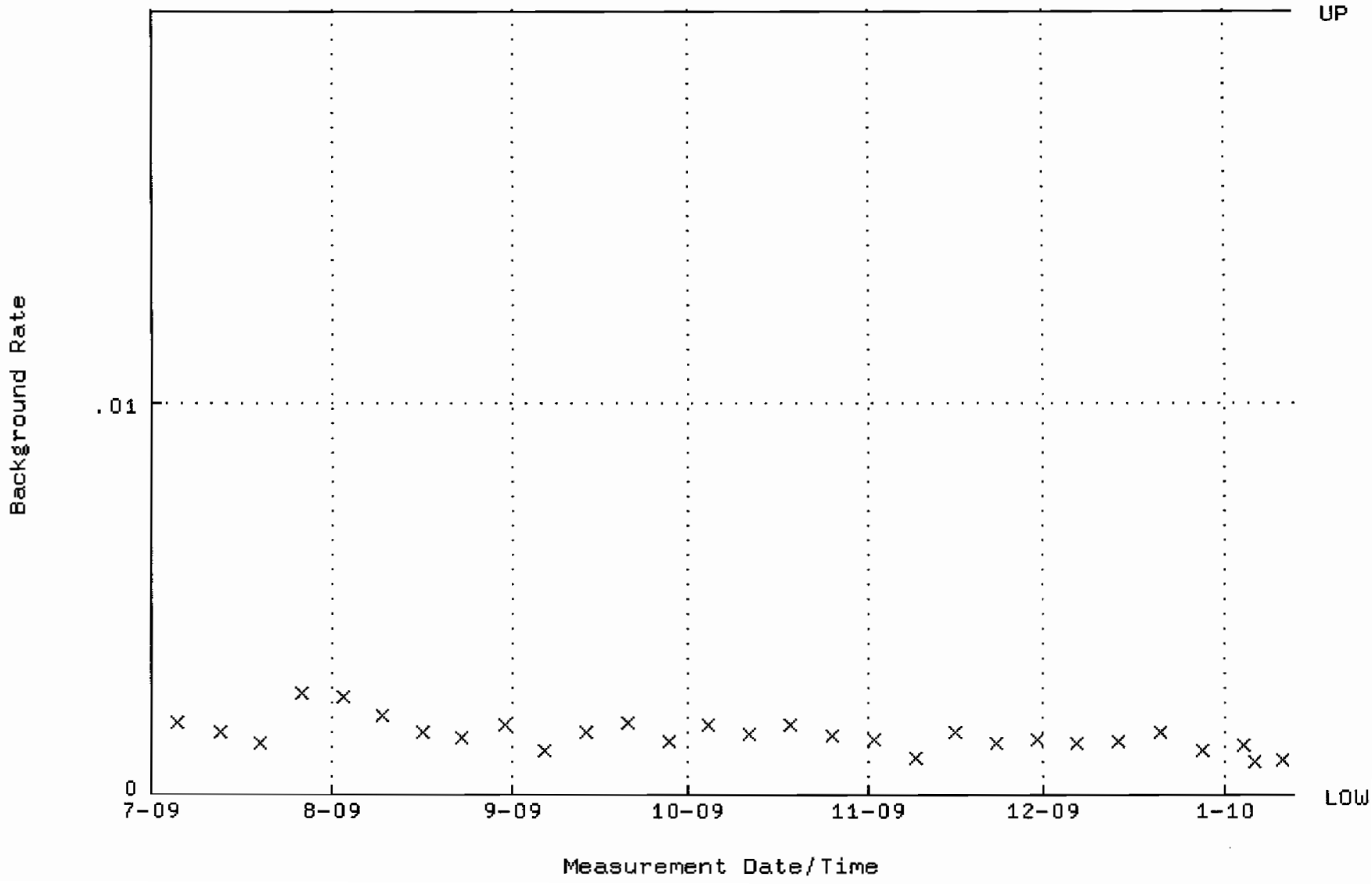
QA filename : DKA100:[ENV_ALPHA.QA.W]W066.QAF;4
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 9-JUL-2009 08:08:10 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.300416 through 0.320416



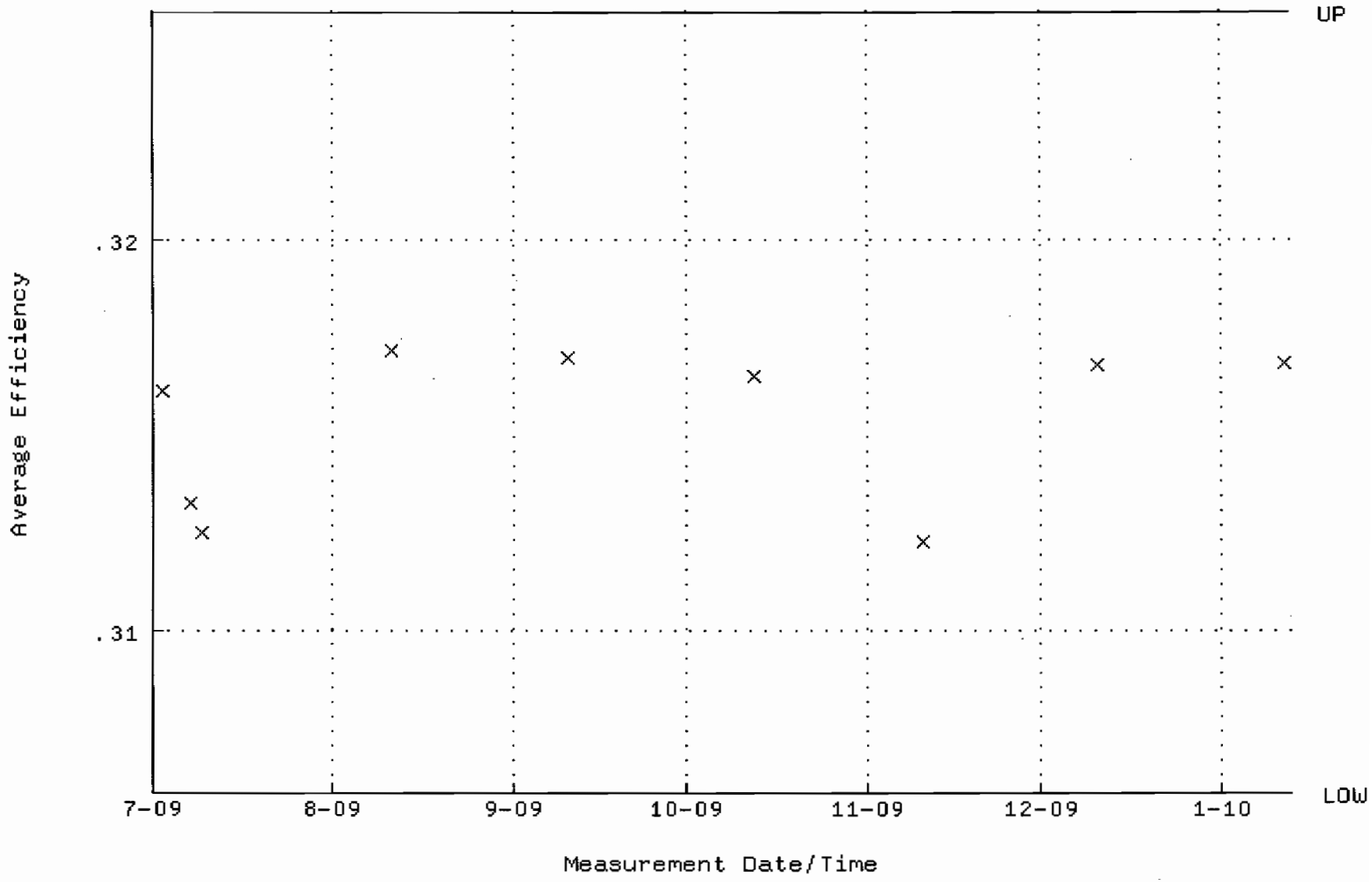
QA filename : DKA100:[ENV_ALPHA.QA.W]W066.QAF;4
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 9-JUL-2009 08:08:10 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 85.0864 through 94.0428



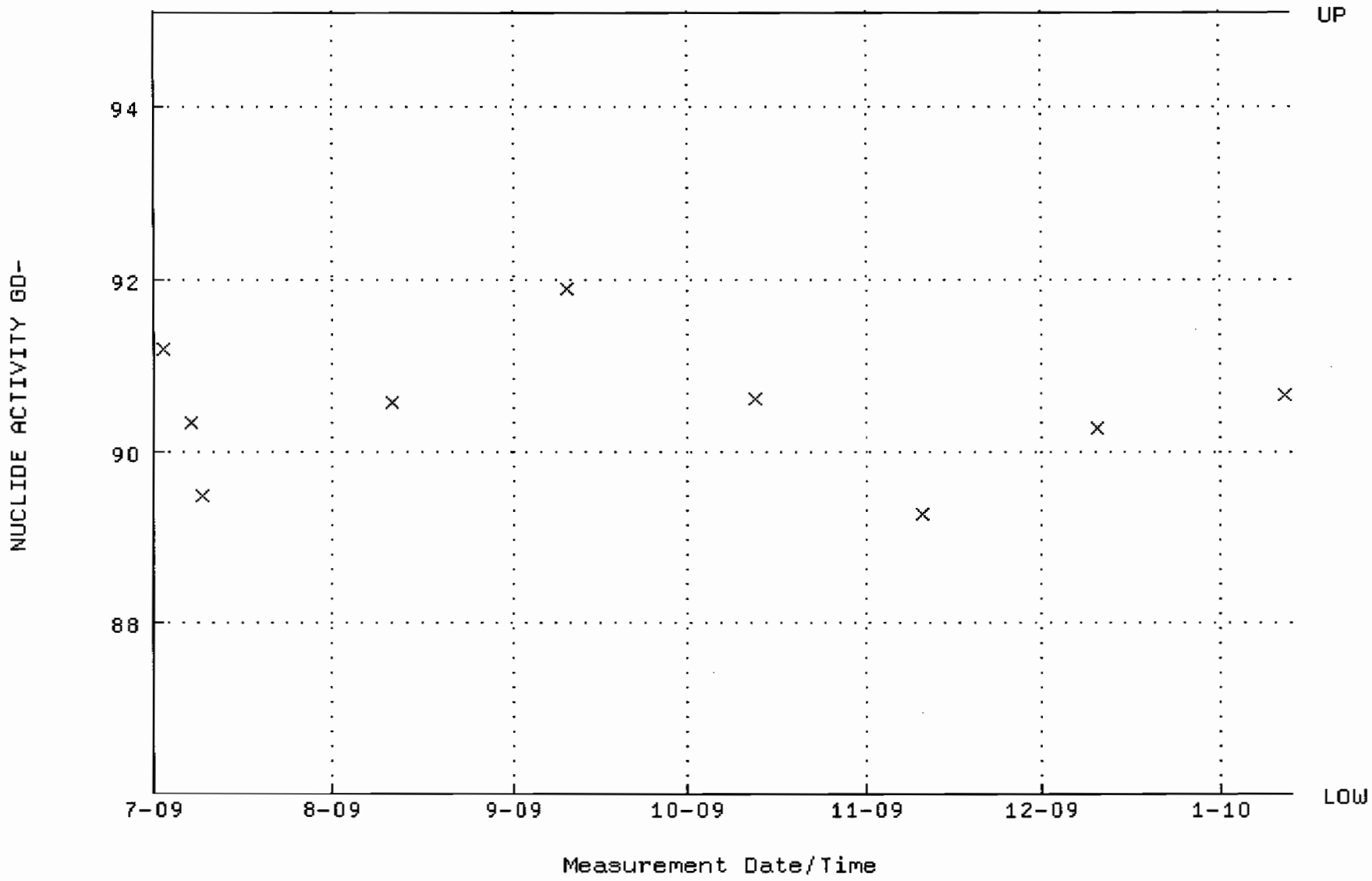
QA filename : DKA100:[ENV_ALPHA.QA.B]B066.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 15:12:01 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



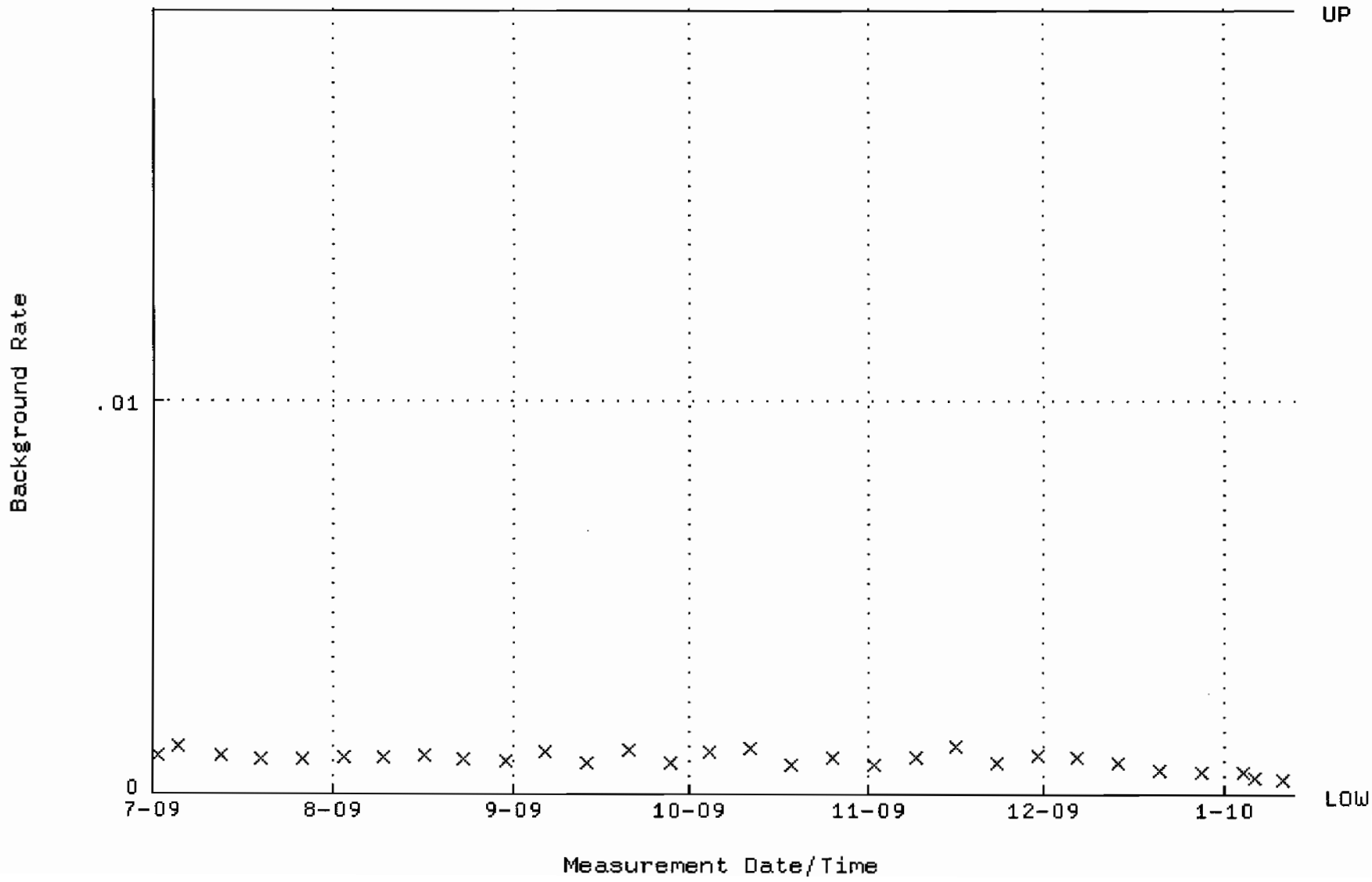
QA filename : DKA100:[ENV_ALPHA.QA.W]W074.QAF;4
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JUL-2009 15:04:13 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.305830 through 0.325830



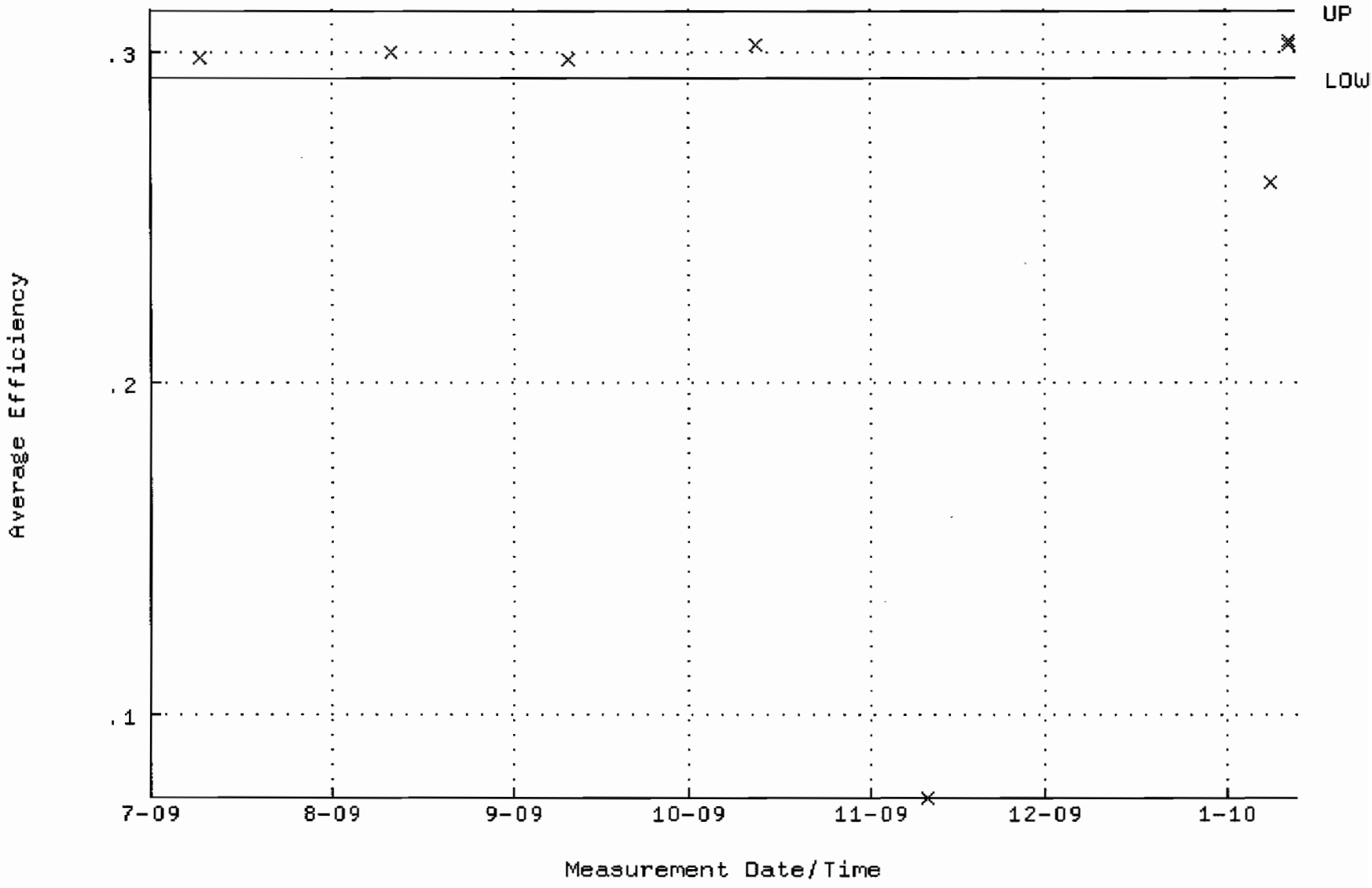
QA filename : DKA100:[ENV_ALPHA.QA.W]W074.QAF;4
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JUL-2009 15:04:13 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 86.0289 through 95.0845



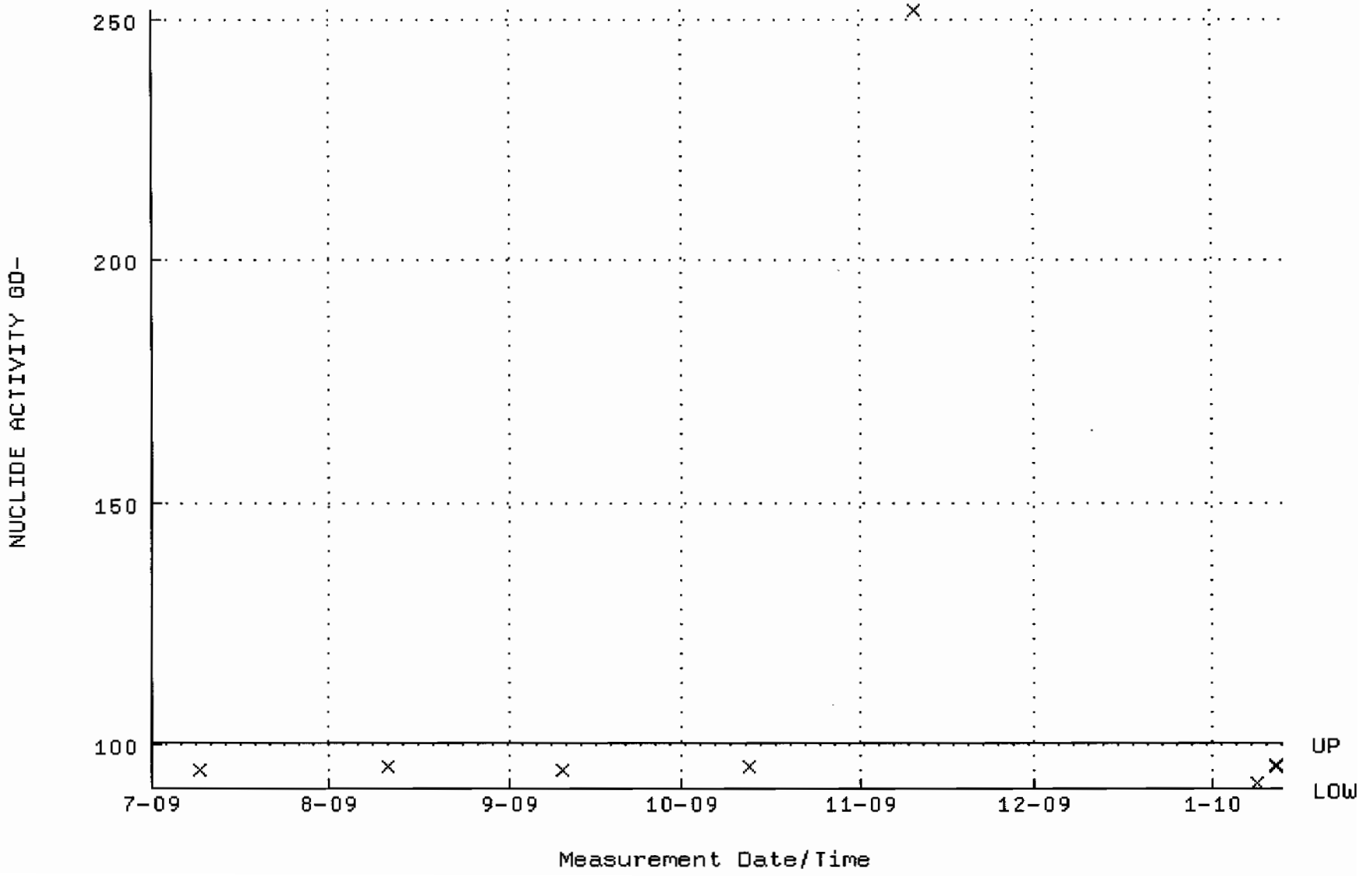
QA filename : DKA100:[ENV_ALPHA.QA.B]B074.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 1-JUL-2009 21:39:57 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



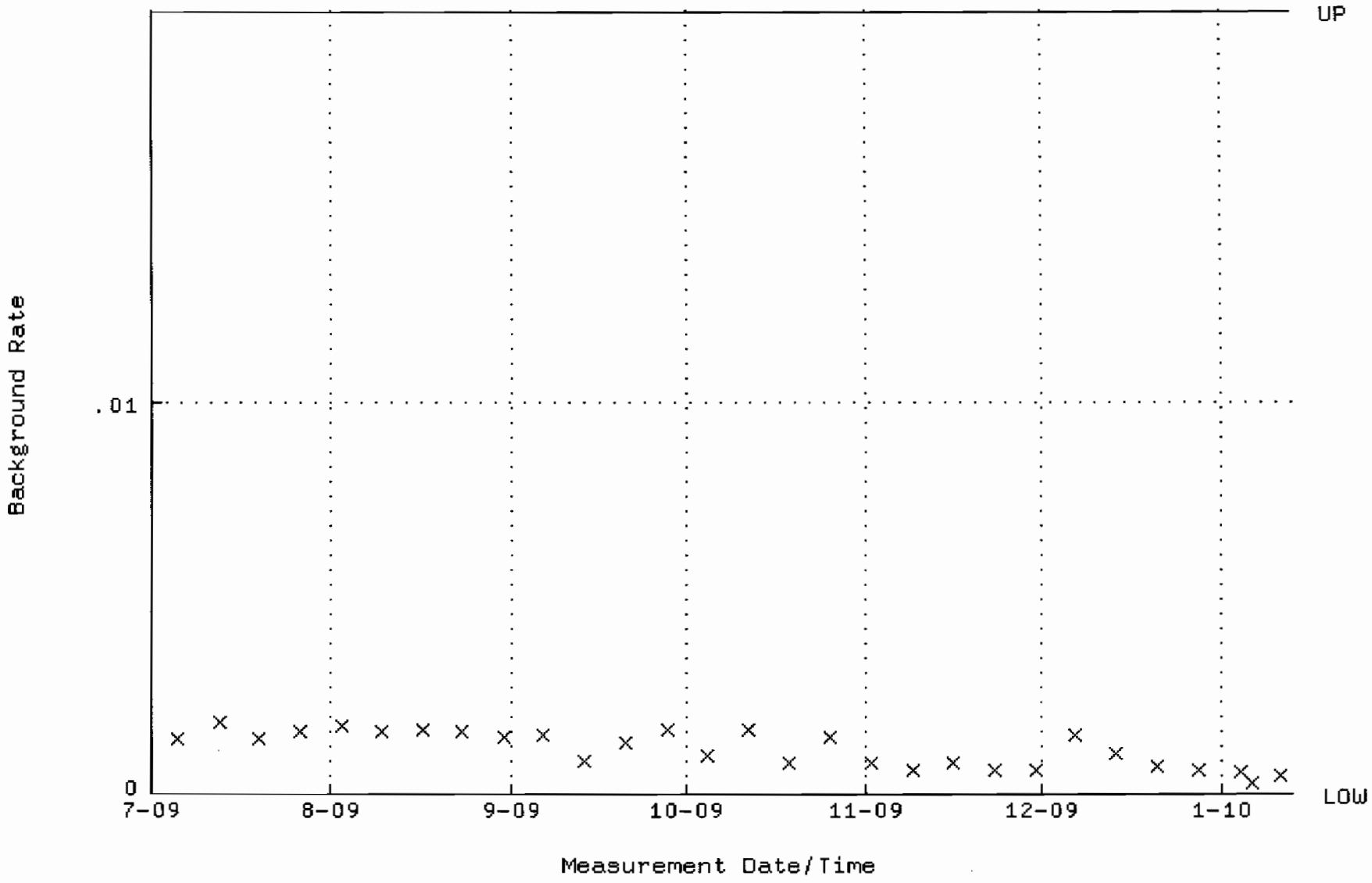
QA filename : DKA100:[ENV_ALPHA.QA.W]W075.QAF;3
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 9-JUL-2009 08:08:11 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.292134 through 0.312134



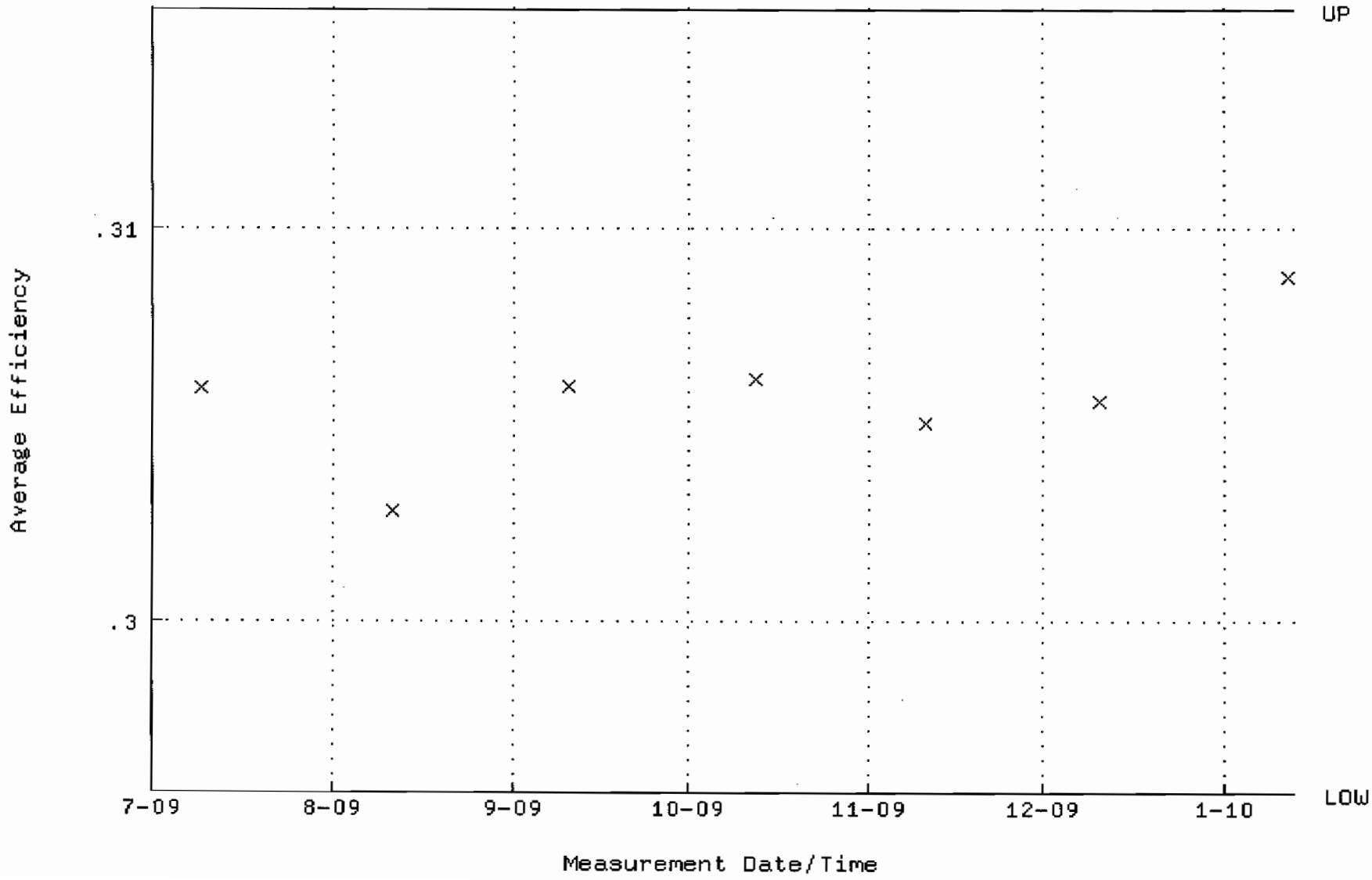
QA filename : DKA100:[ENV_ALPHA.QA.W]W075.QAF;3
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 9-JUL-2009 08:08:11 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 91.1212 through 100.713



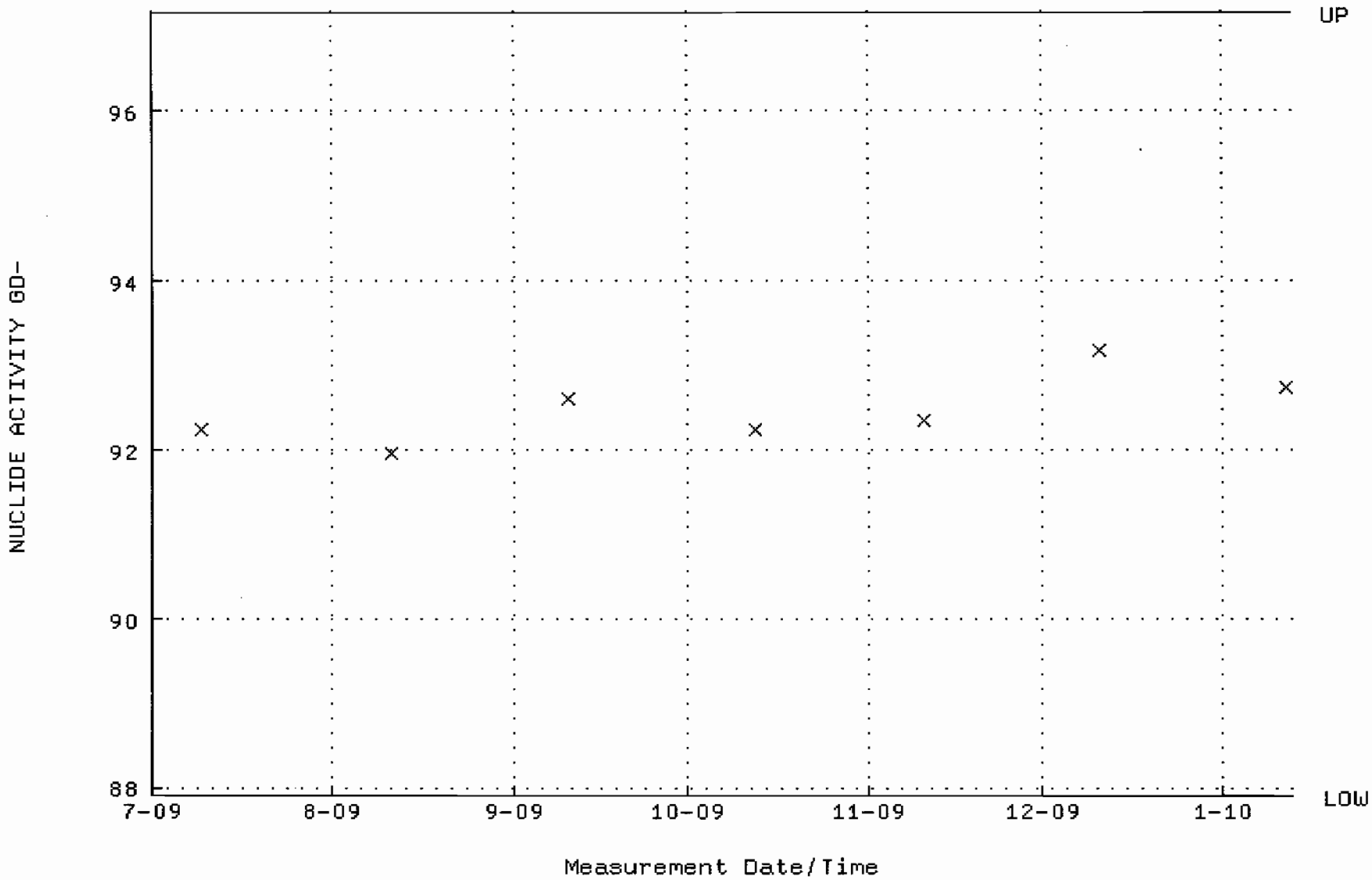
QA filename : DKA100:[ENV_ALPHA.QA.B]B075.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 15:12:02 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



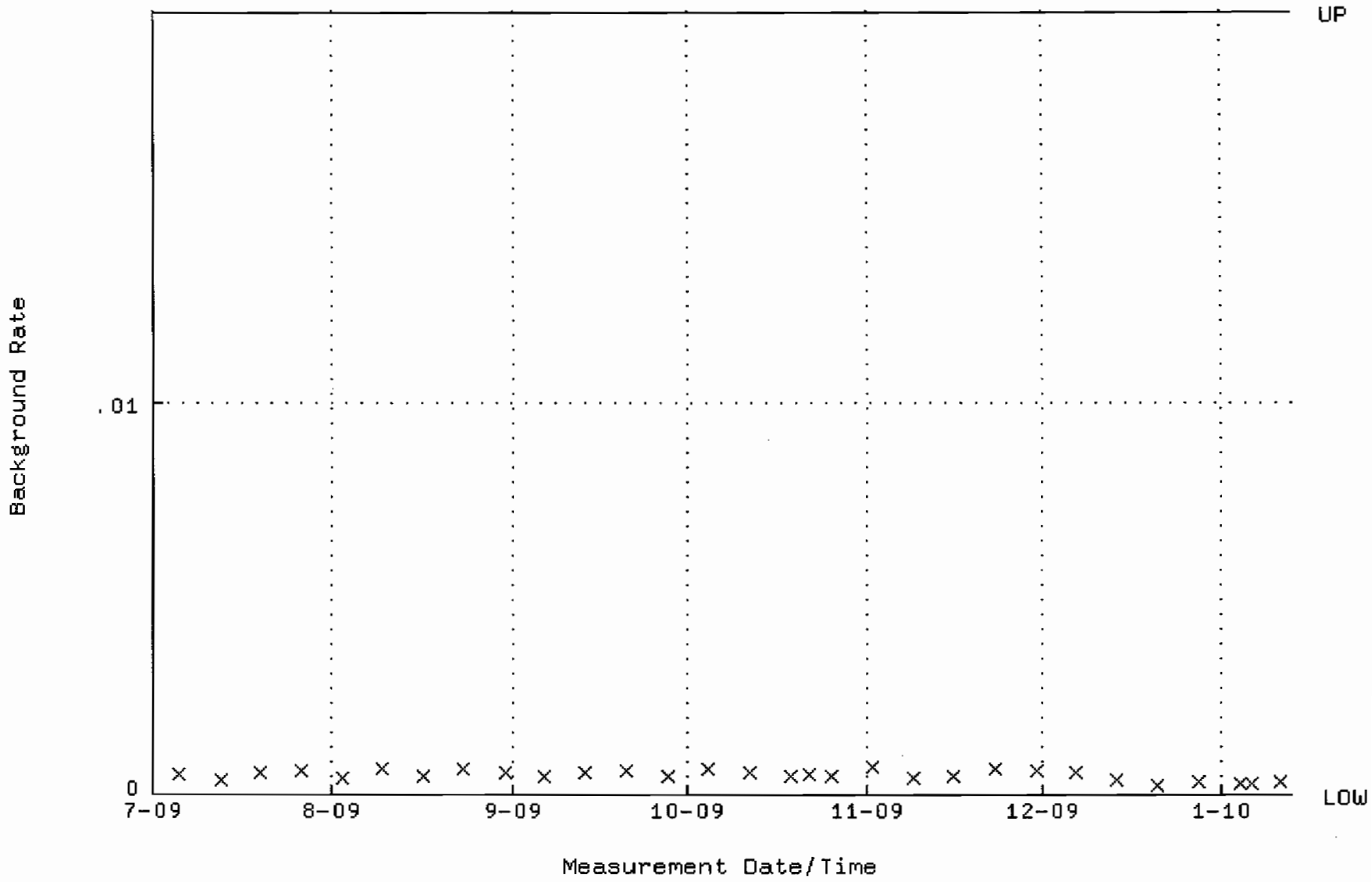
QA filename : DKA100:[ENV_ALPHA.QA.W]W076.QAF;2
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 9-JUL-2009 08:08:11 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.295613 through 0.315613



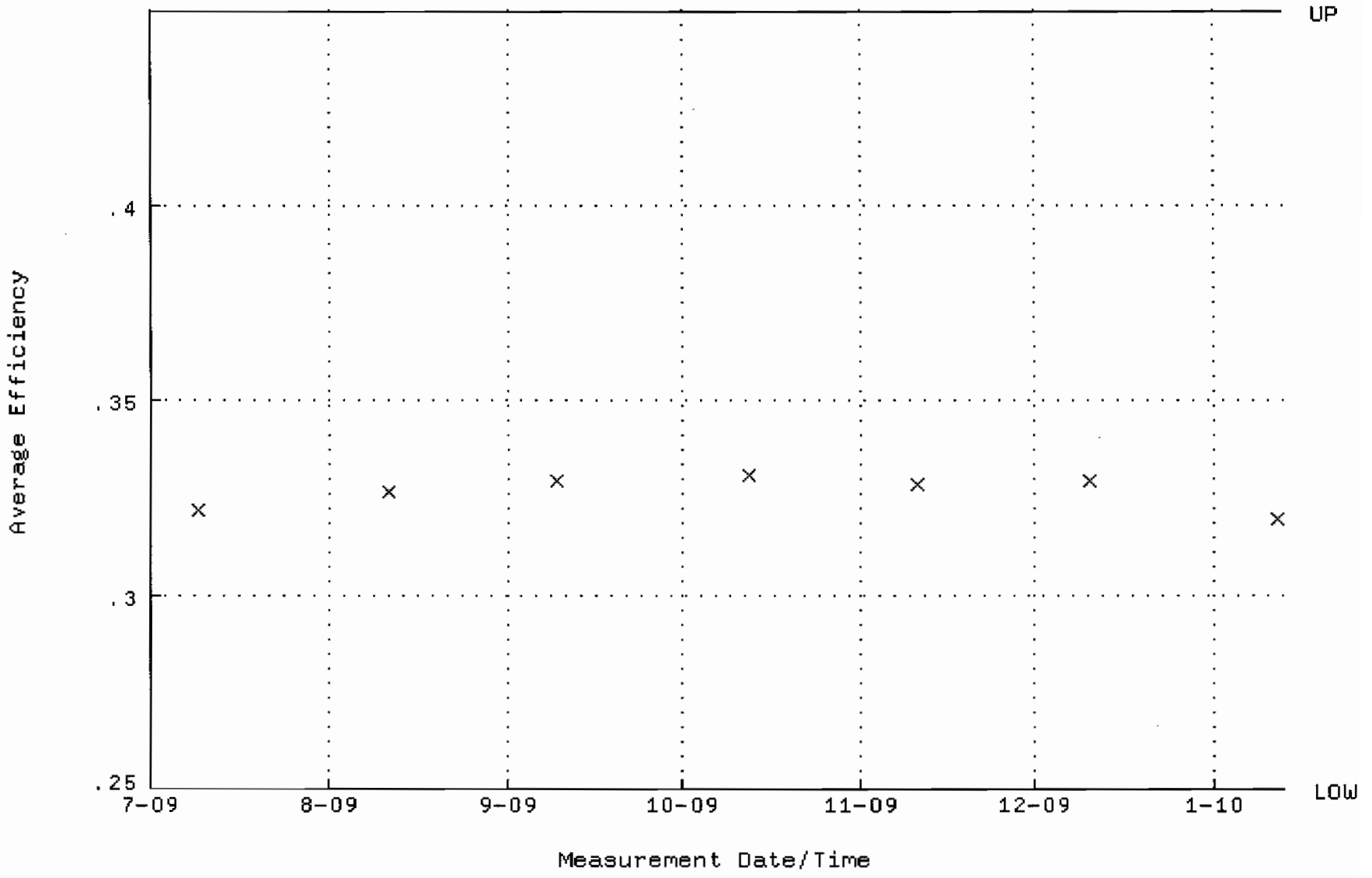
QA filename : DKA100:[ENV_ALPHA.QA.W]W076.QAF;2
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 9-JUL-2009 08:08:11 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 87.9031 through 97.1561



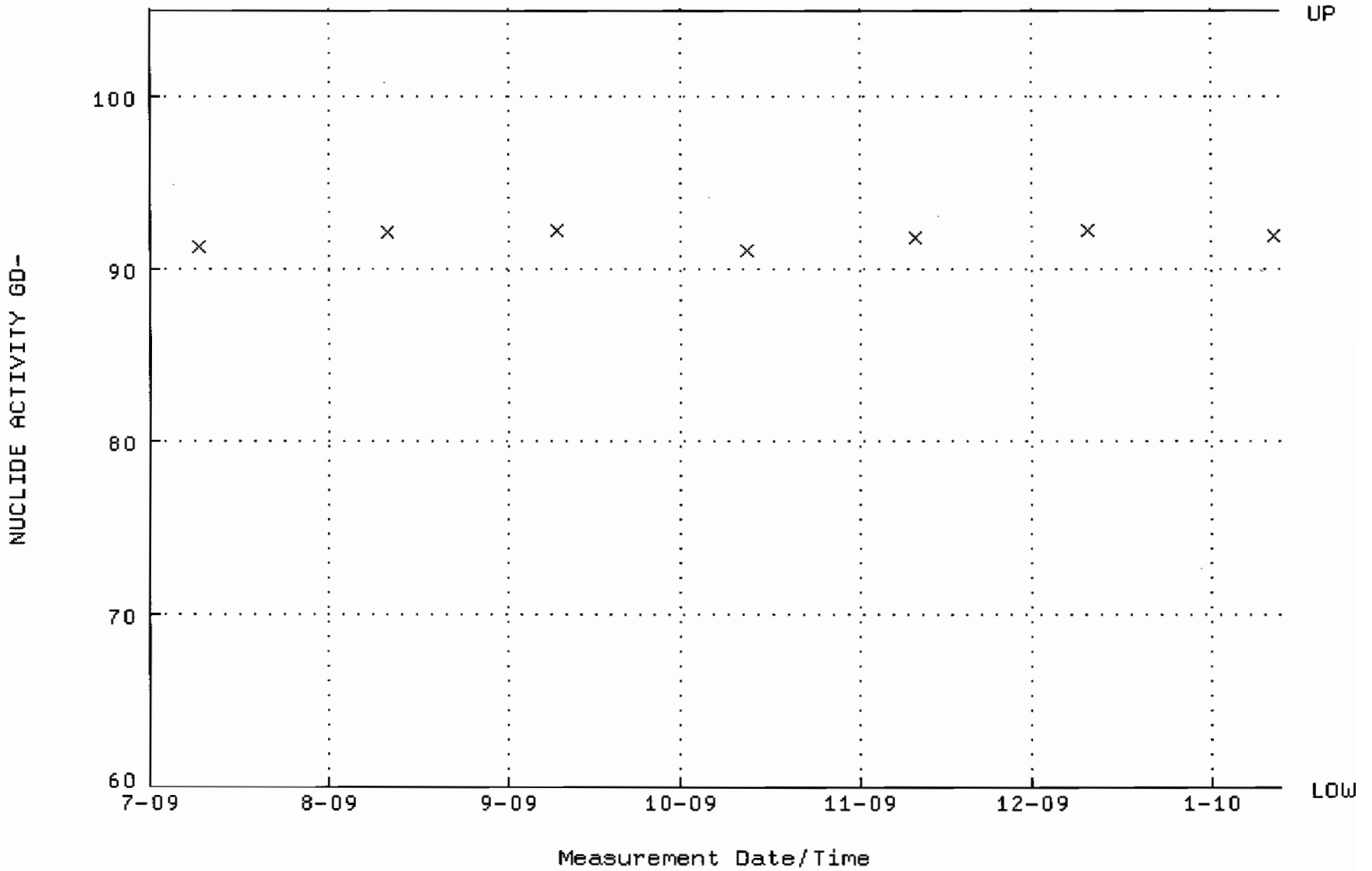
QA filename : DKA100:[ENV_ALPHA.QA.B]B076.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 15:12:02 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



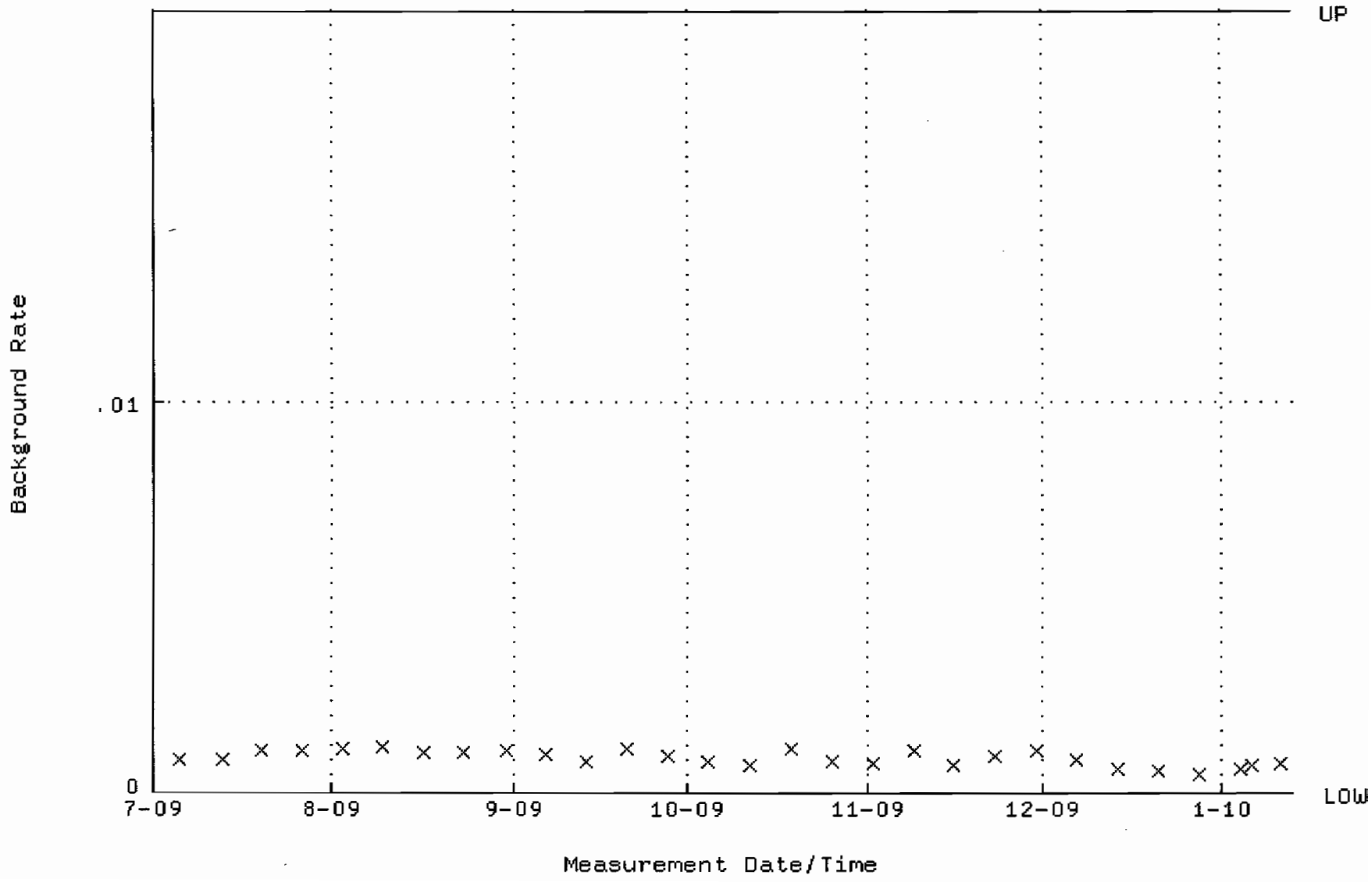
QA filename : DKA100:[ENV_ALPHA.QA.W]W077.QAF;5
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 9-JUL-2009 08:08:11 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.250000 through 0.450000



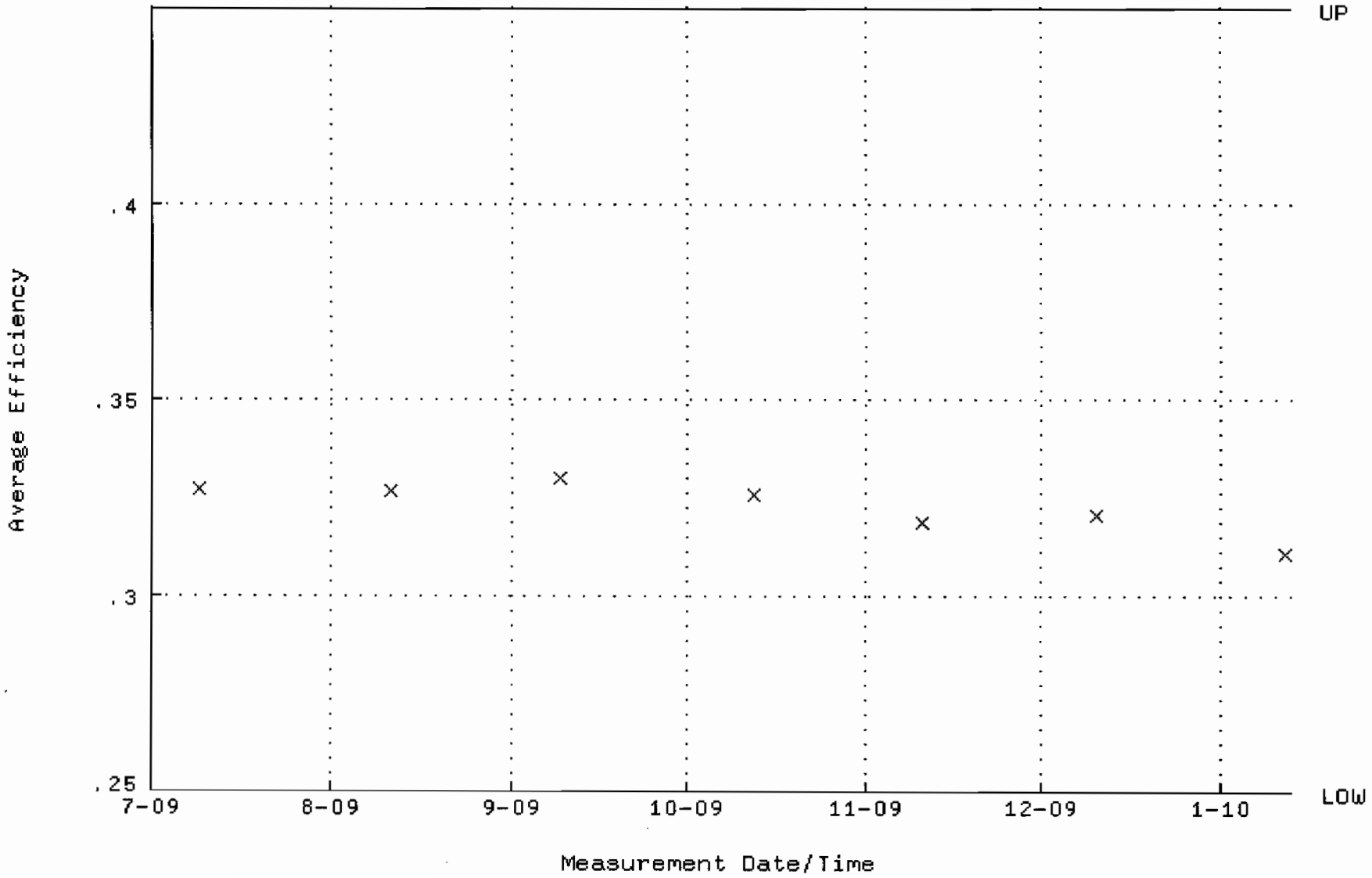
QA filename : DKA100:[ENV_ALPHA.QA.W]W077.QAF;5
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 9-JUL-2009 08:08:11 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 60.0000 through 105.000



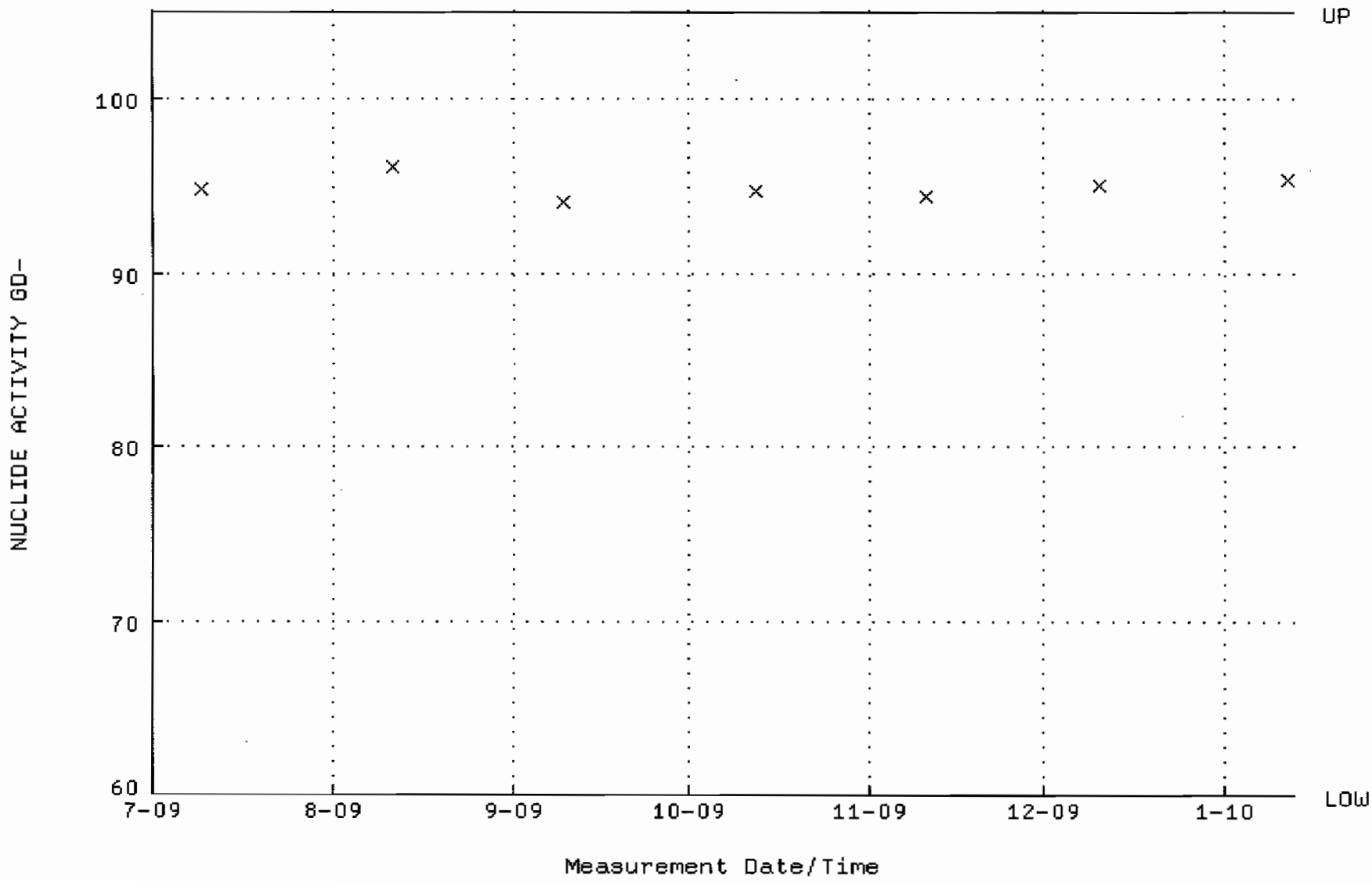
QA filename : DKA100:[ENV_ALPHA.QA.B]B077.QAF;3
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 15:12:03 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



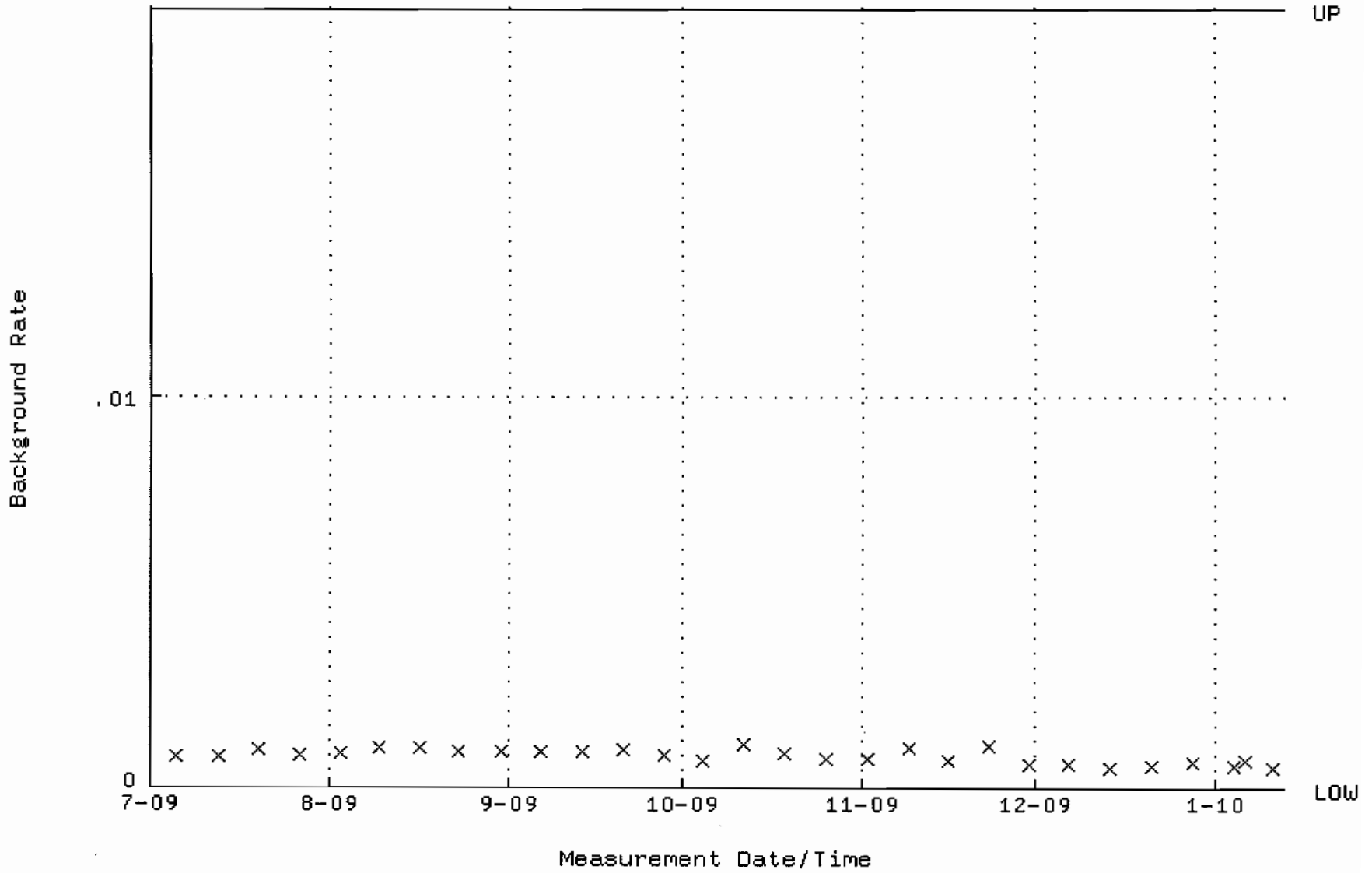
QA filename : DKA100:[ENV_ALPHA.QA.W]W078.QAF;6
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 9-JUL-2009 08:08:11 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.250000 through 0.450000



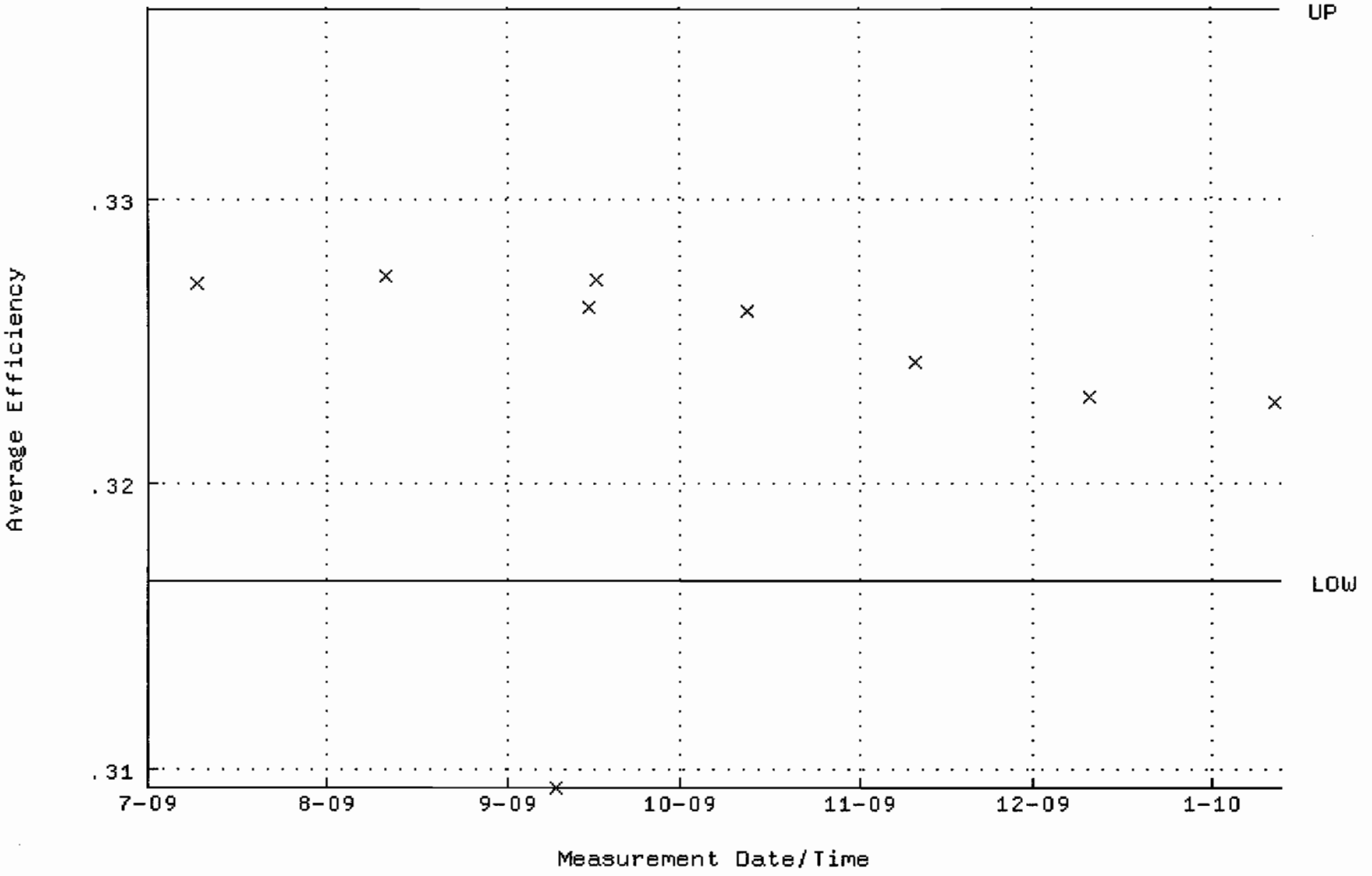
QA filename : DKA100:[ENV_ALPHA.QA.W]W078.QAF;6
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 9-JUL-2009 08:08:11 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 60.0000 through 105.000



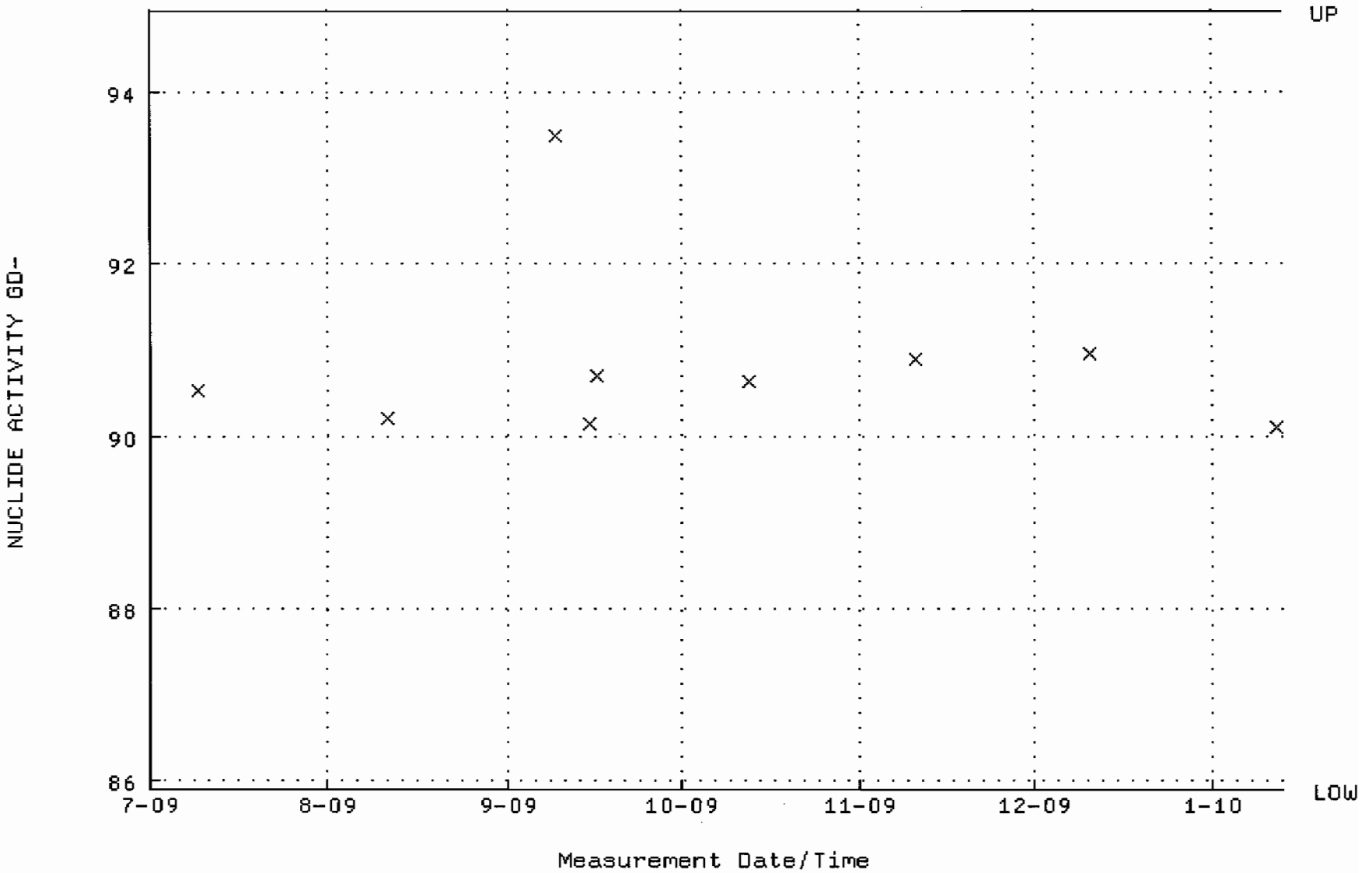
QA filename : DKA100:[ENV_ALPHA.QA.B]B078.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 15:12:03 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



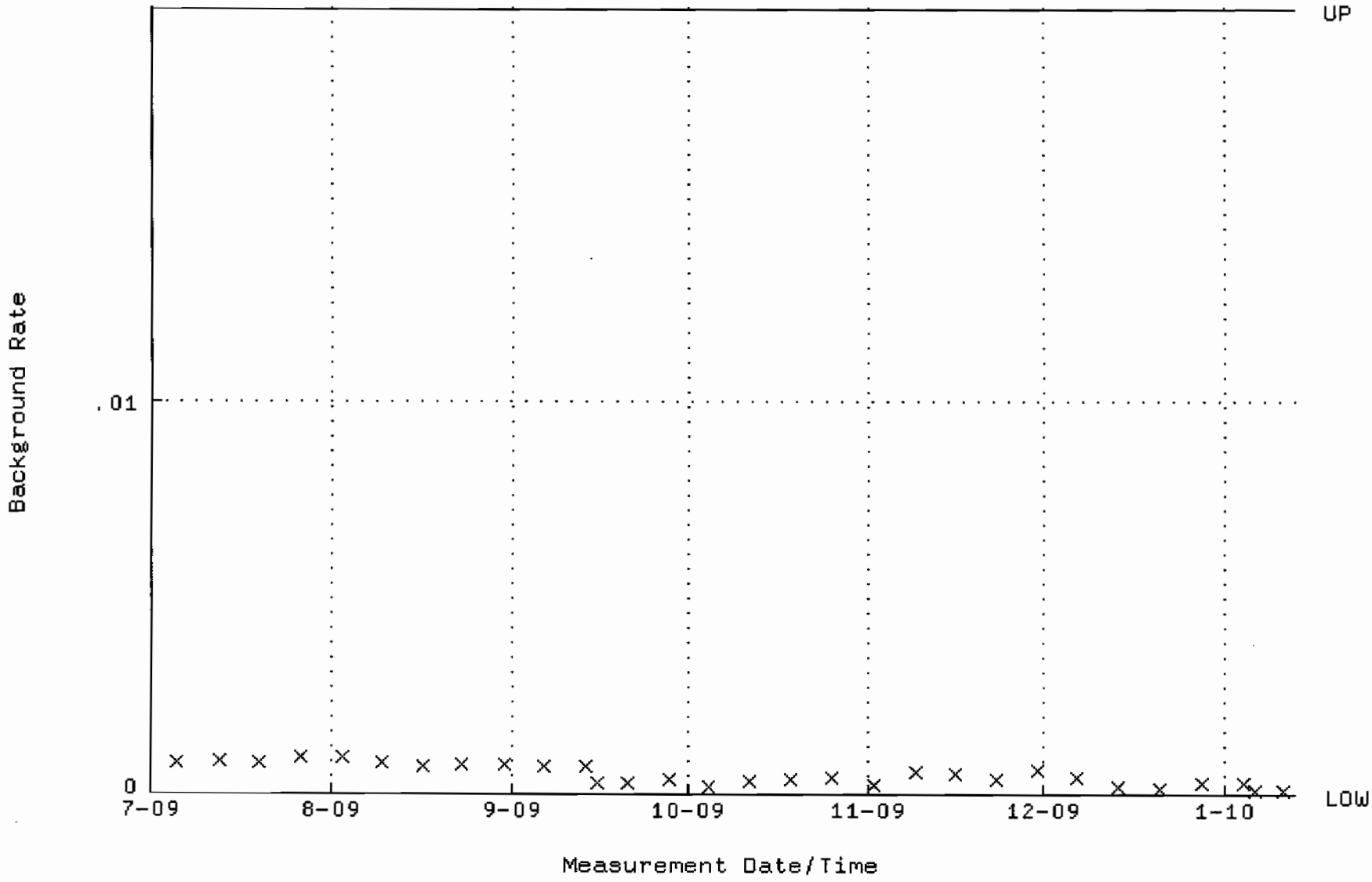
QA filename : DKA100:[ENV_ALPHA.QA.W]W079.QAF;4
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 9-JUL-2009 08:08:11 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.316654 through 0.336654



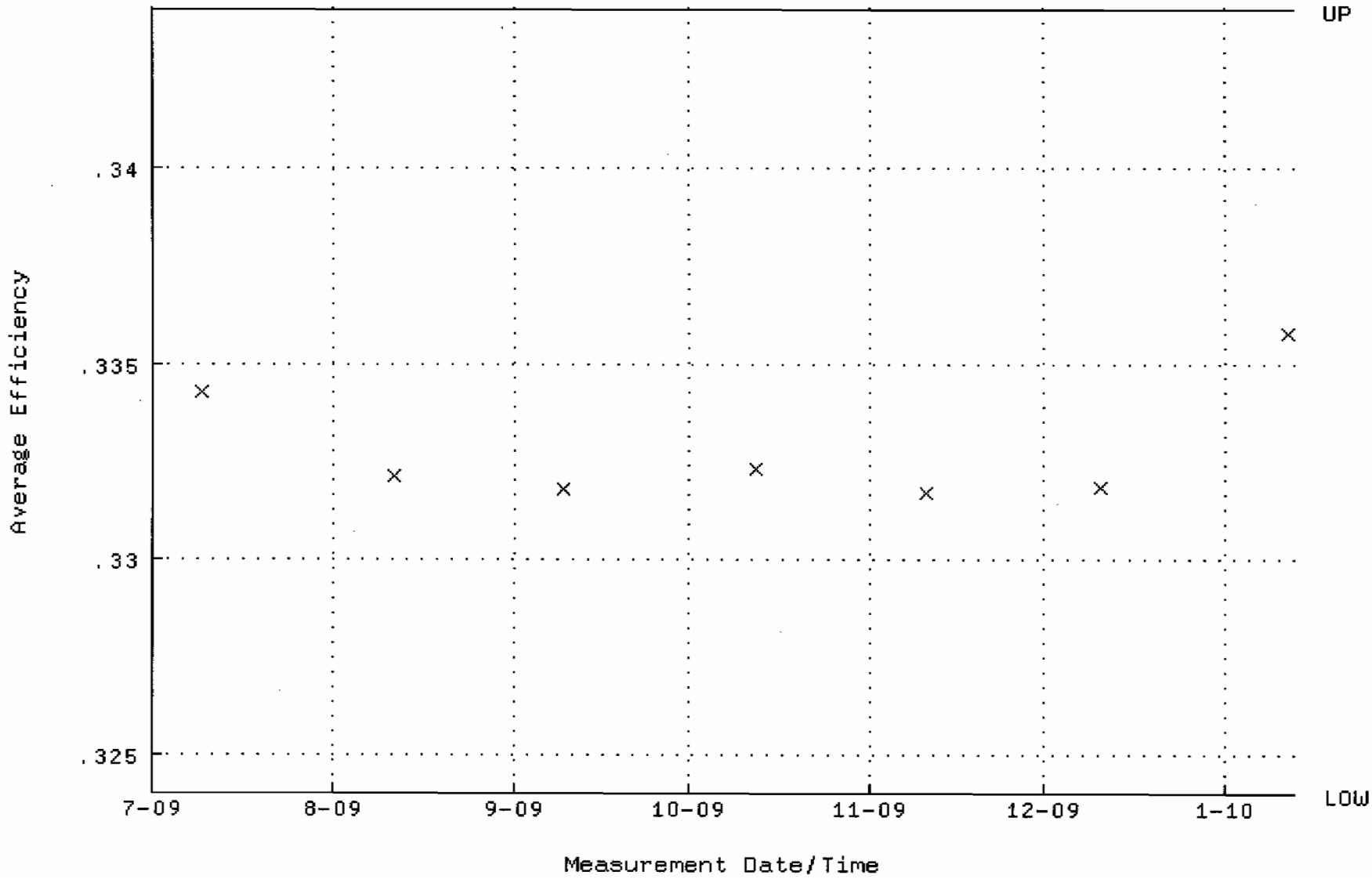
QA filename : DKA100:[ENV_ALPHA.QA.W]W079.QAF;4
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 9-JUL-2009 08:08:11 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 85.8913 through 94.9325



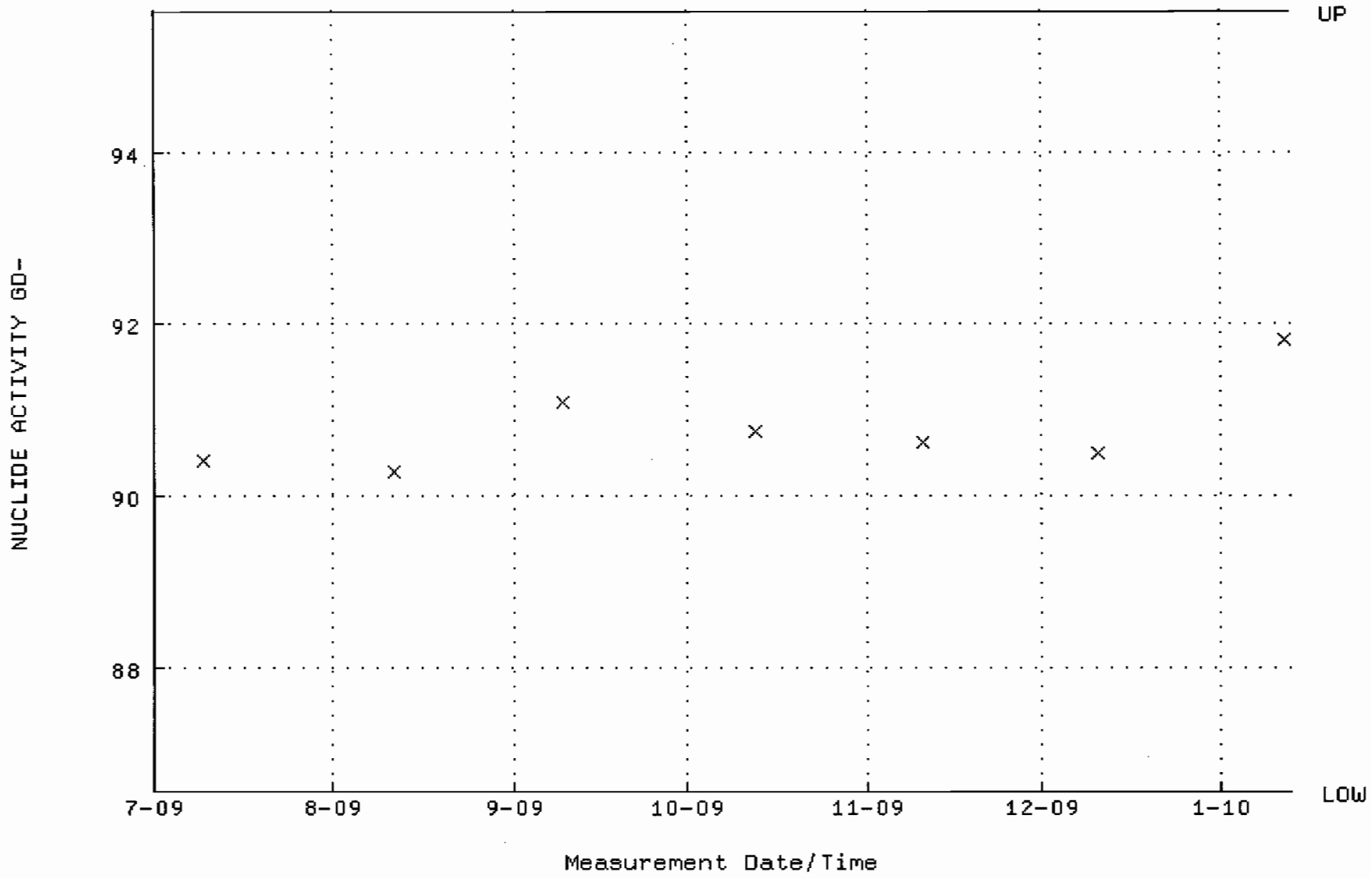
QA filename : DKA100:[ENV_ALPHA.QA.B]B079.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 15:12:03 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



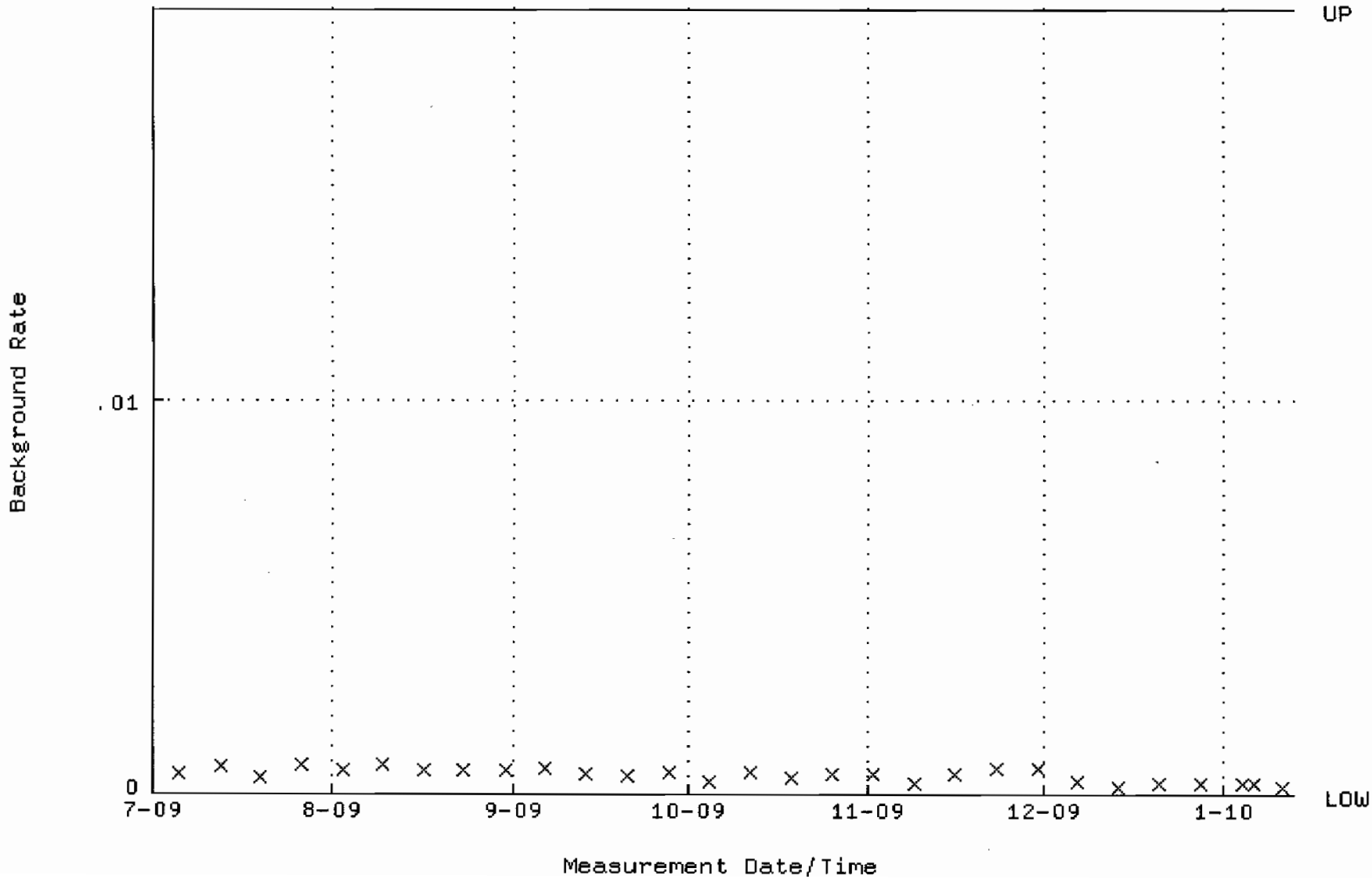
QA filename : DKA100:[ENV_ALPHA.QA.W]W080.QAF;4
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 9-JUL-2009 08:08:11 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.324032 through 0.344032



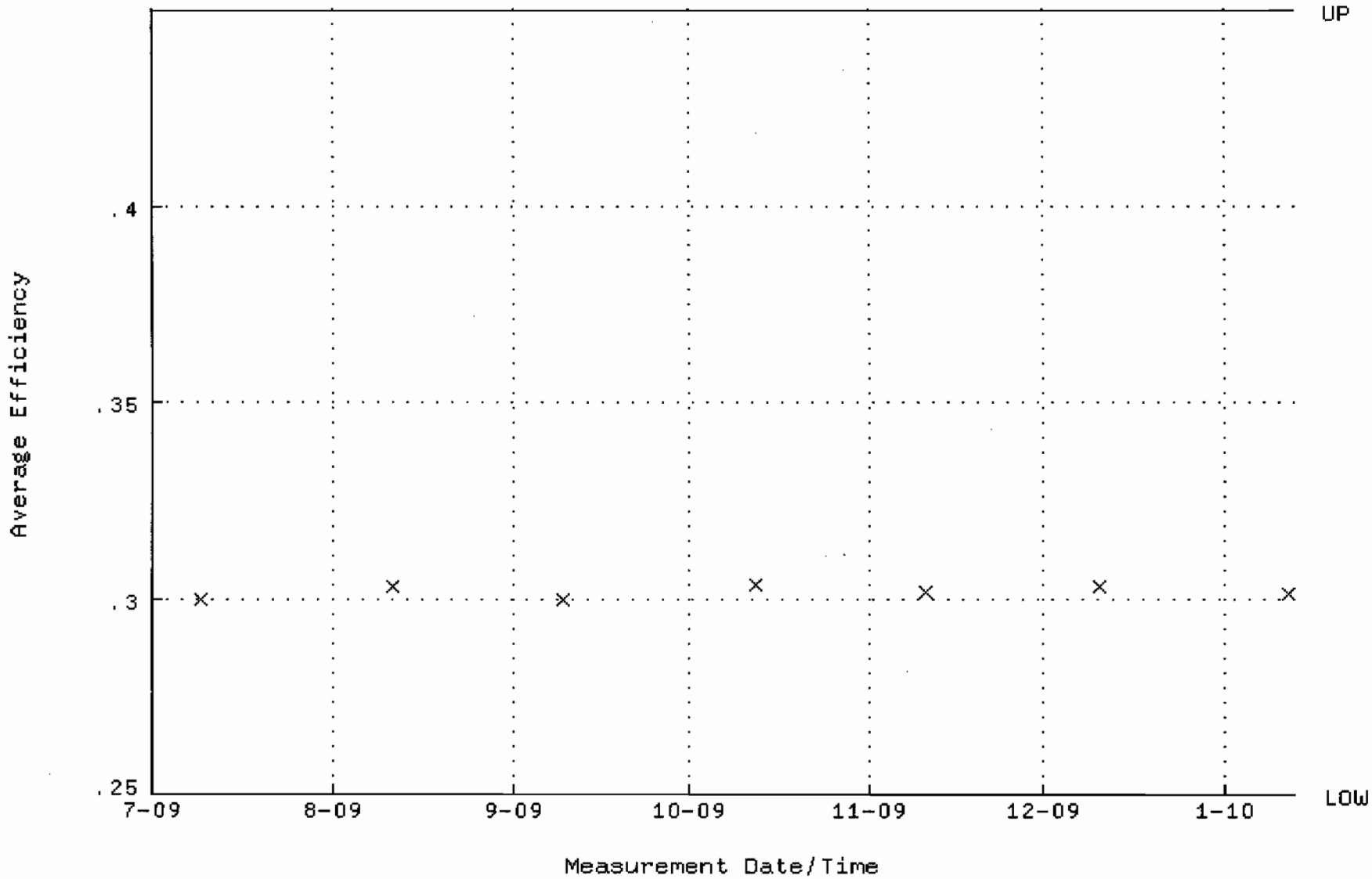
QA filename : DKA100:[ENV_ALPHA.QA.W]W080.QAF;4
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 9-JUL-2009 08:08:11 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 86.5393 through 95.6487



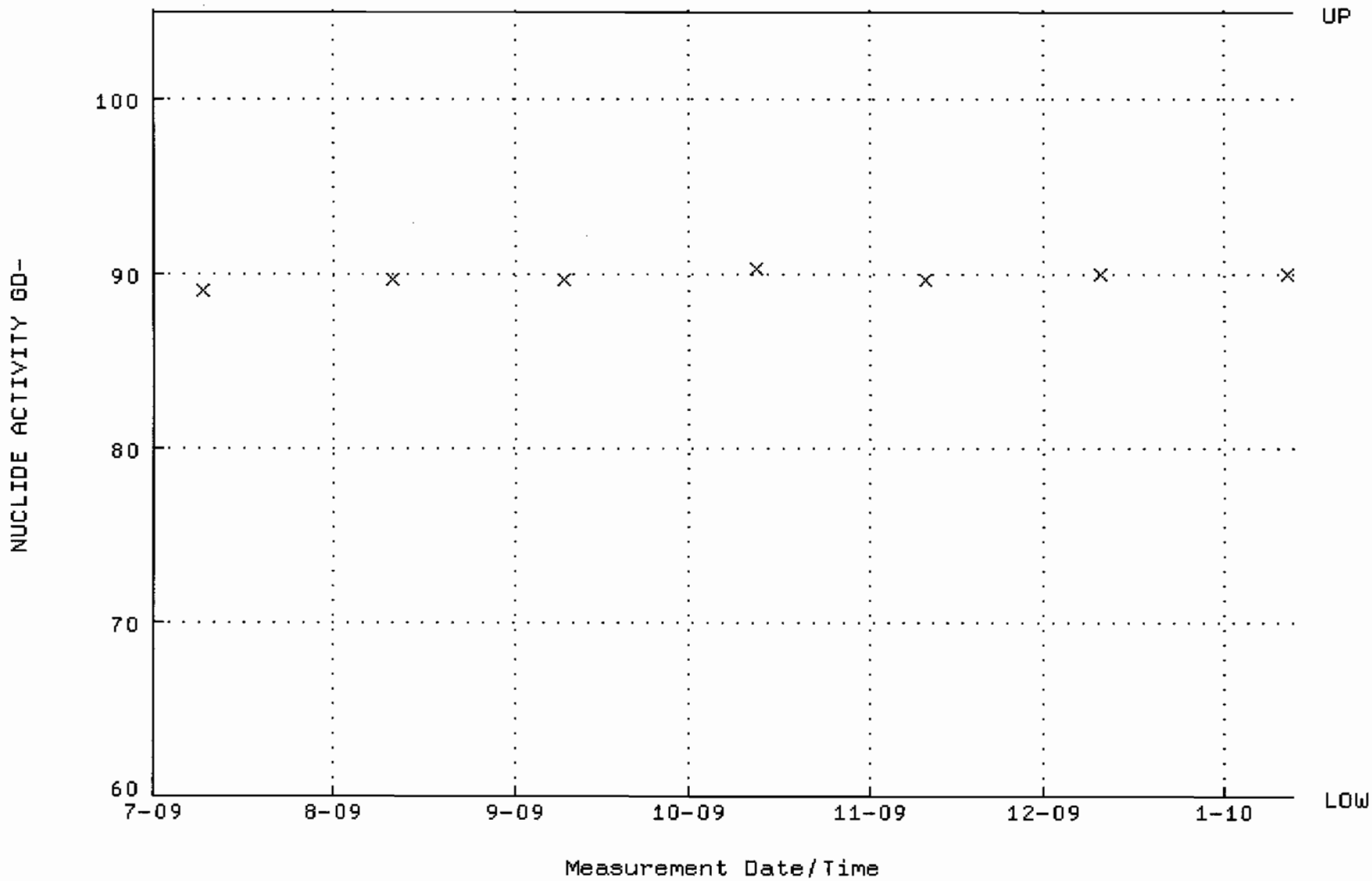
QA filename : DKA100:[ENV_ALPHA.QA.B]B080.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 15:12:03 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



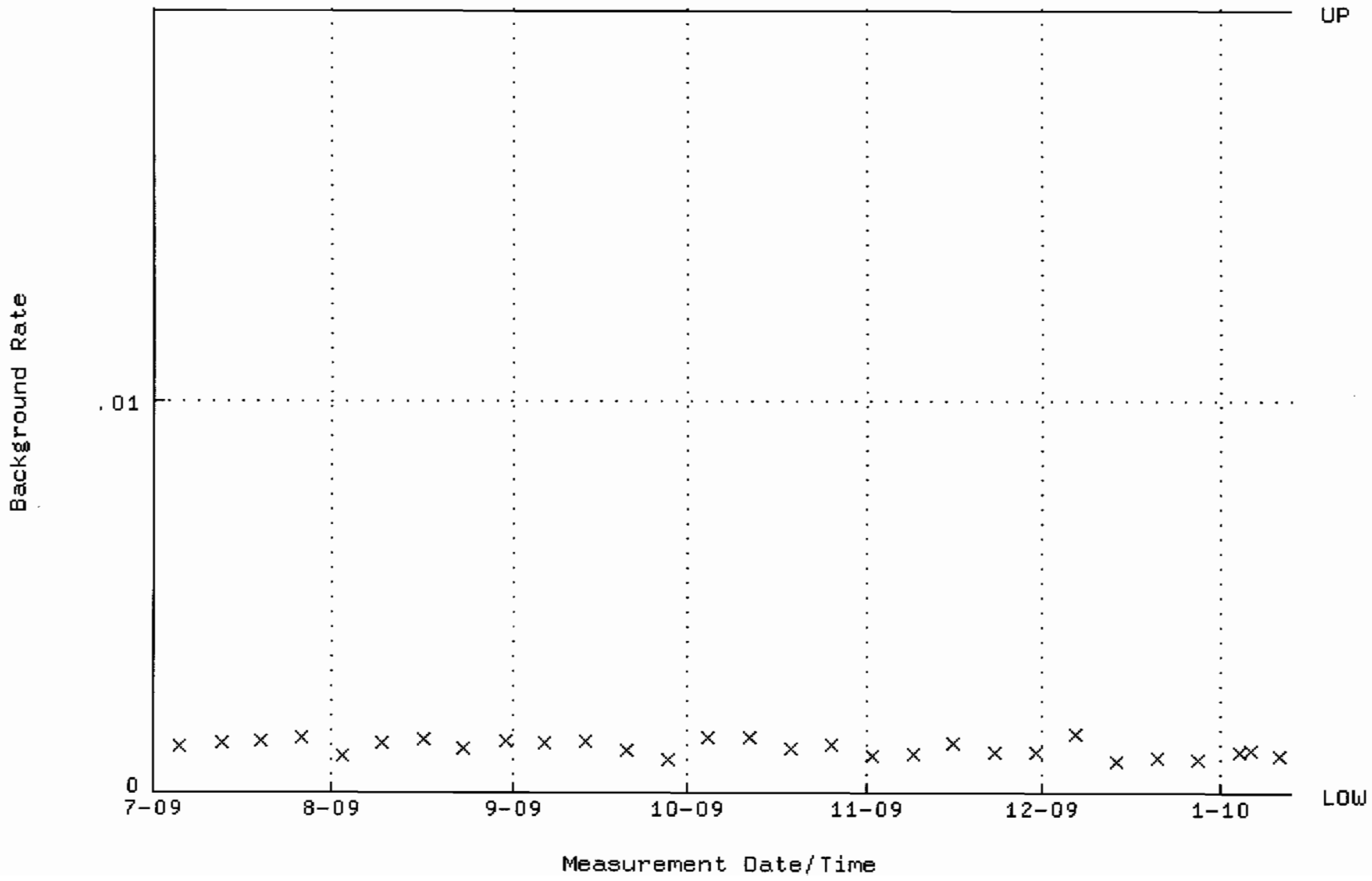
QA filename : DKA100:[ENV_ALPHA.QA.W]W088.QAF;4
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 9-JUL-2009 08:08:12 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.250000 through 0.450000



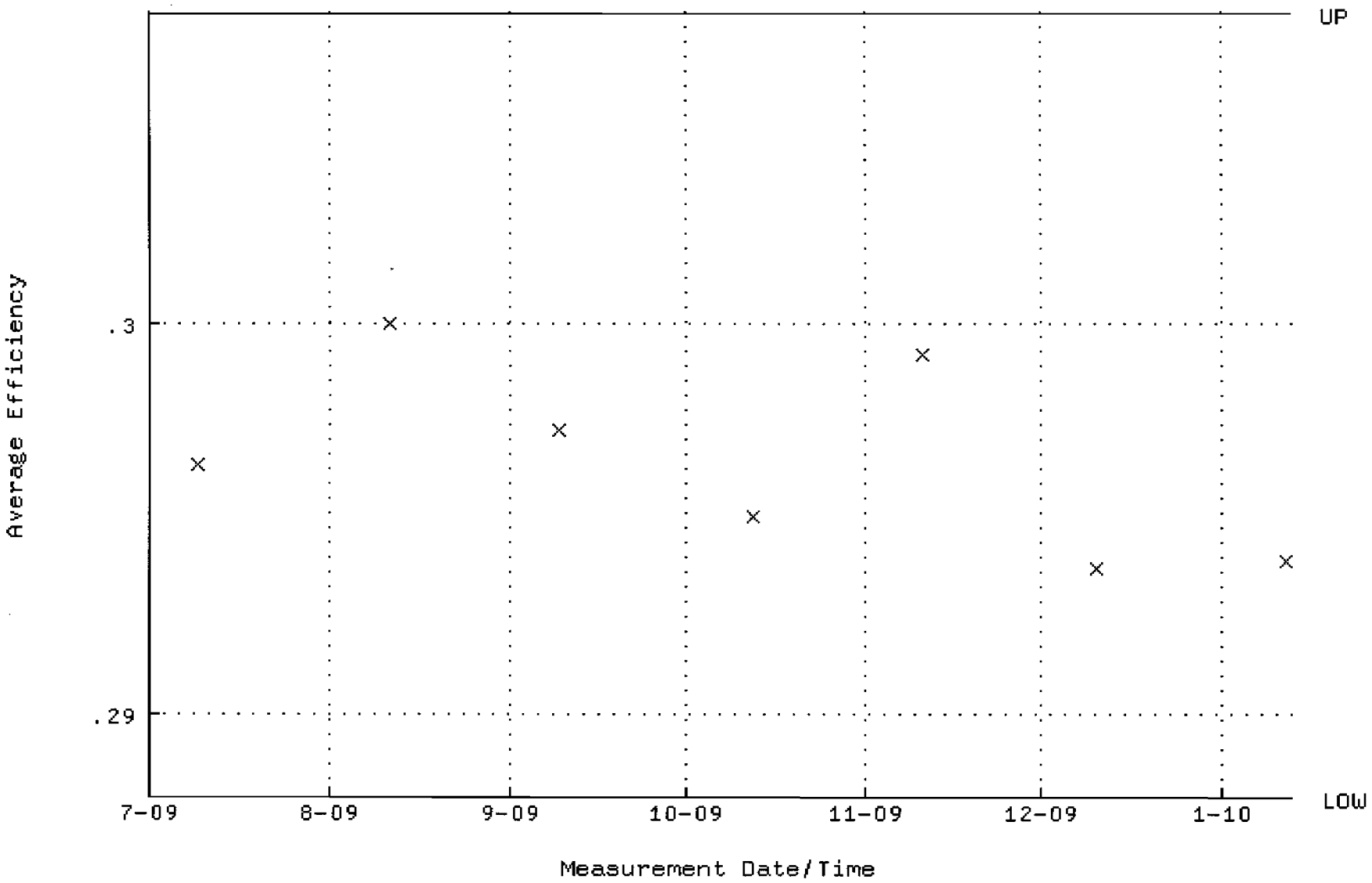
QA filename : DKA100:[ENV_ALPHA.QA.W]W088.QAF;4
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 9-JUL-2009 08:08:12 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 60.0000 through 105.000



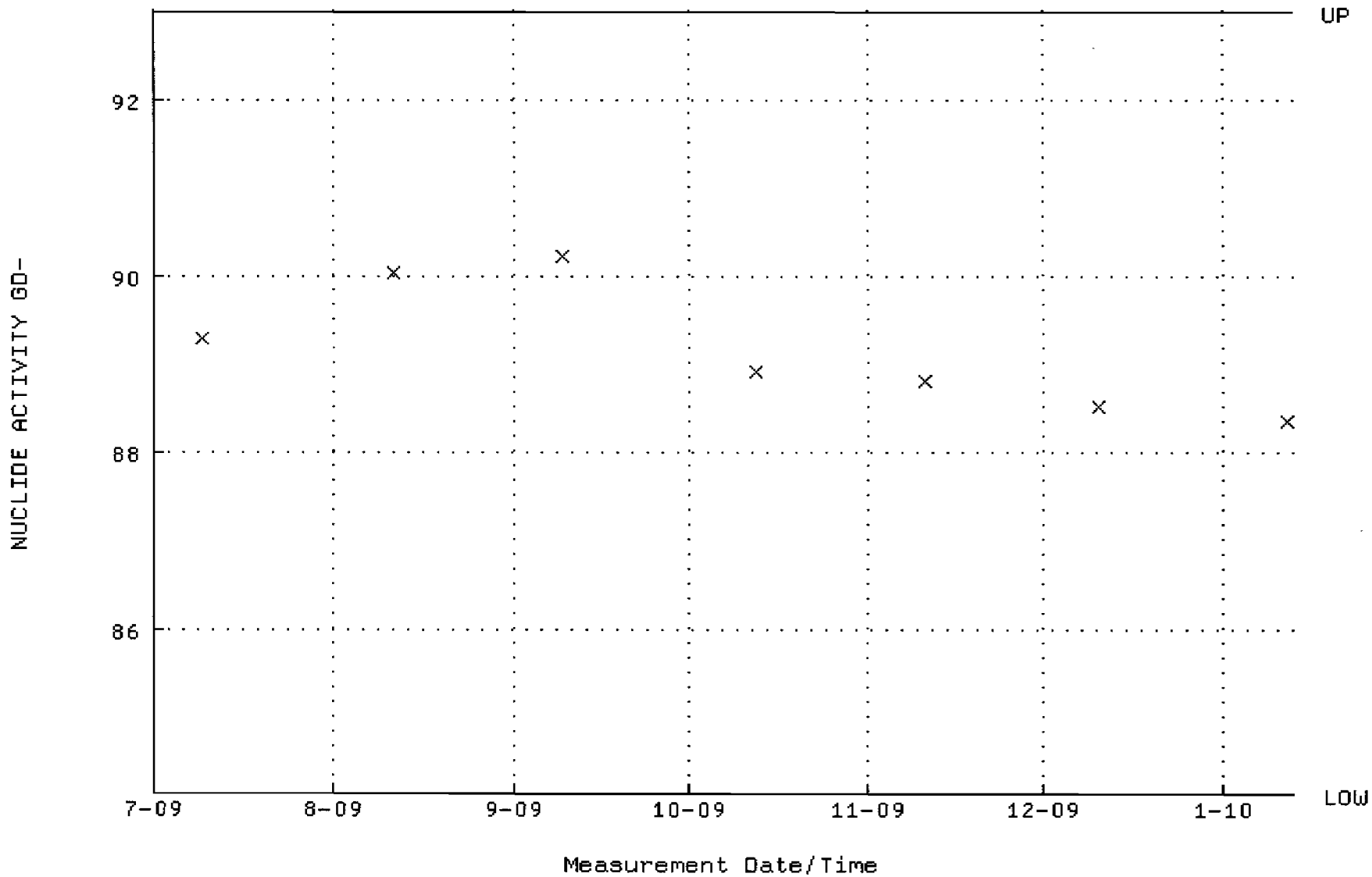
QA filename : DKA100:[ENV_ALPHA.QA.B]B088.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 15:12:04 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



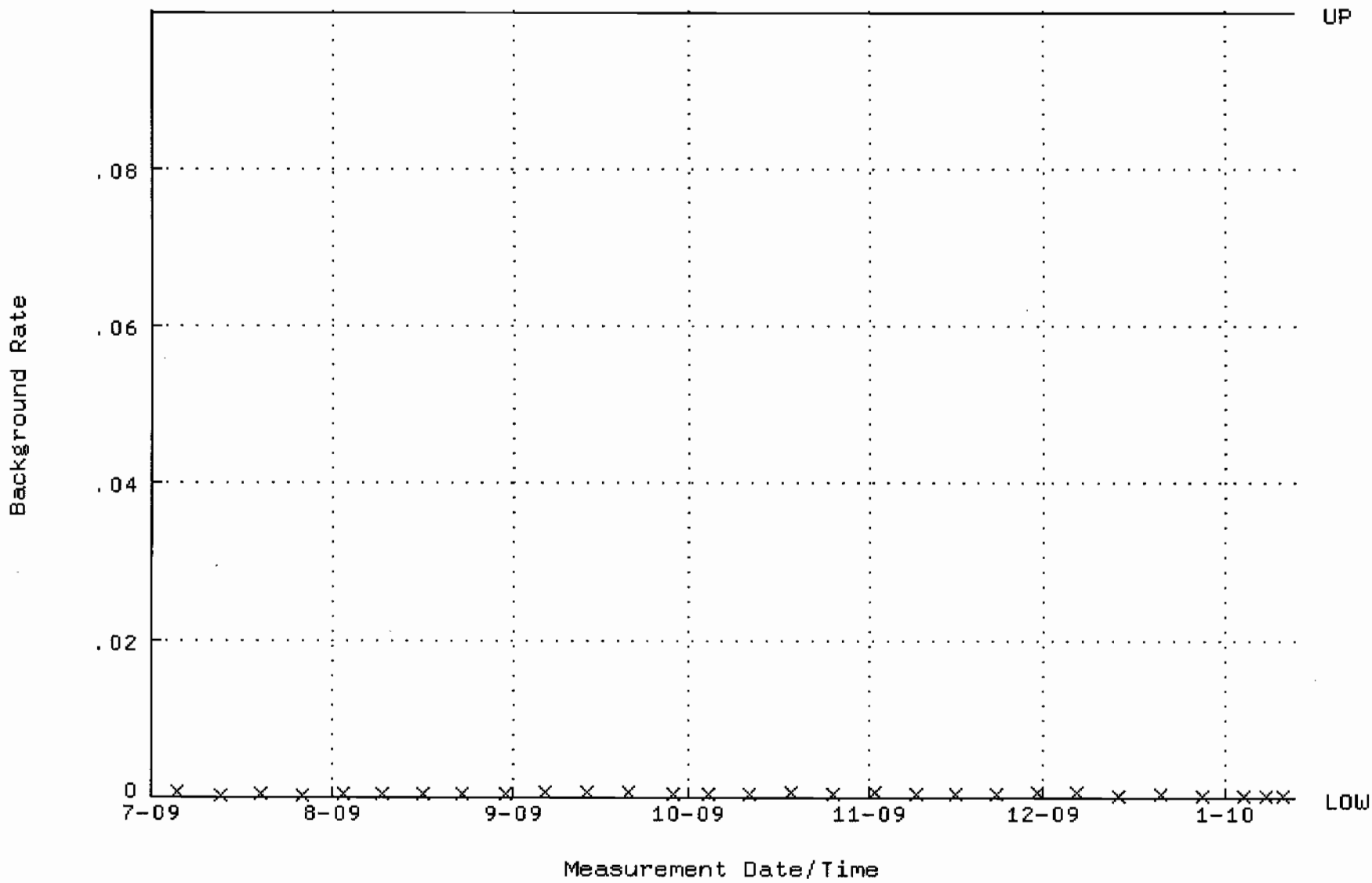
QA filename : DKA100:[ENV_ALPHA.QA.W]W089.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 9-JUL-2009 08:08:13 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.287888 through 0.307888



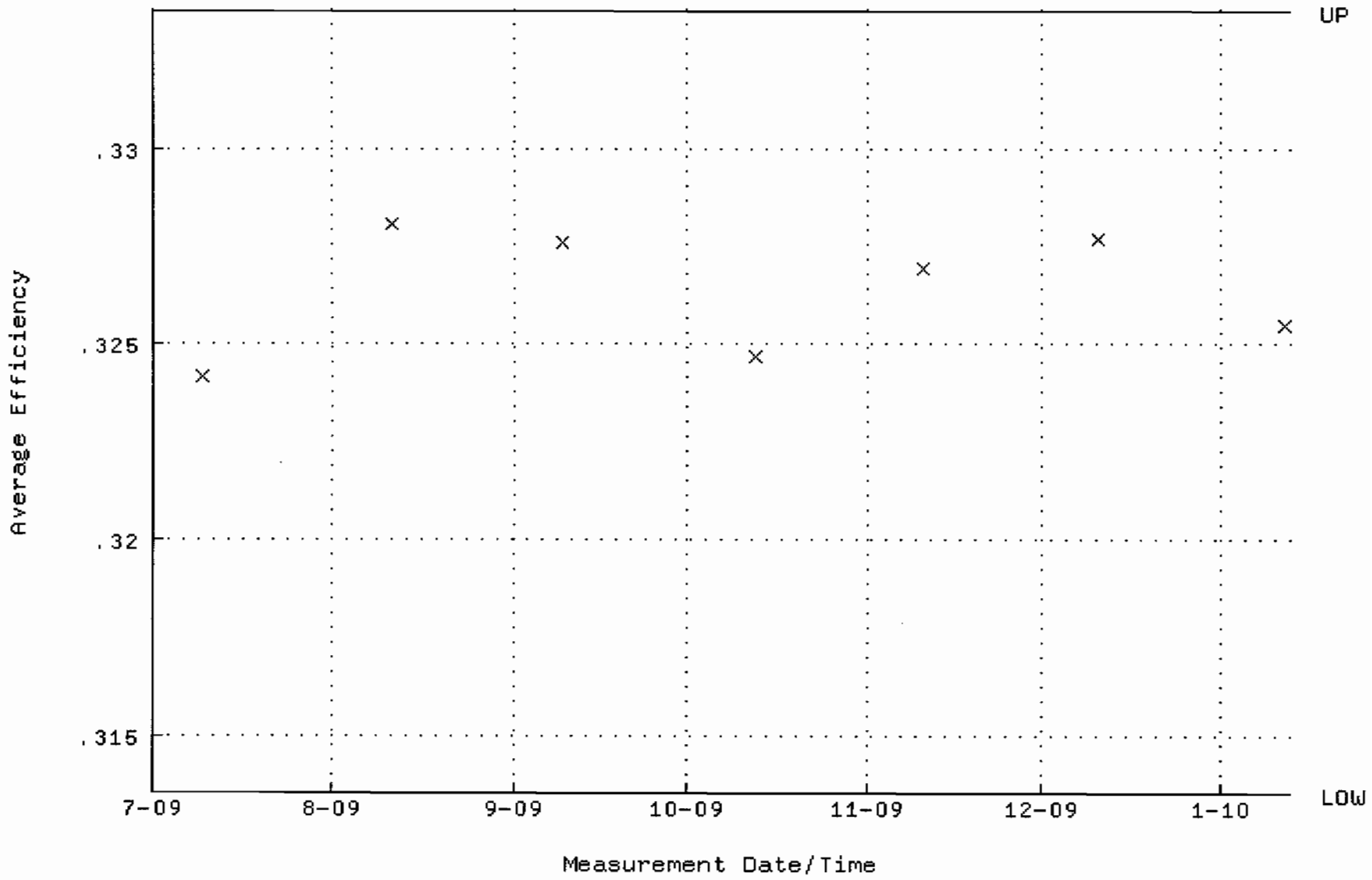
QA filename : DKA100:[ENV_ALPHA.QA.W]W089.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 9-JUL-2009 08:08:13 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 84.1413 through 92.9983



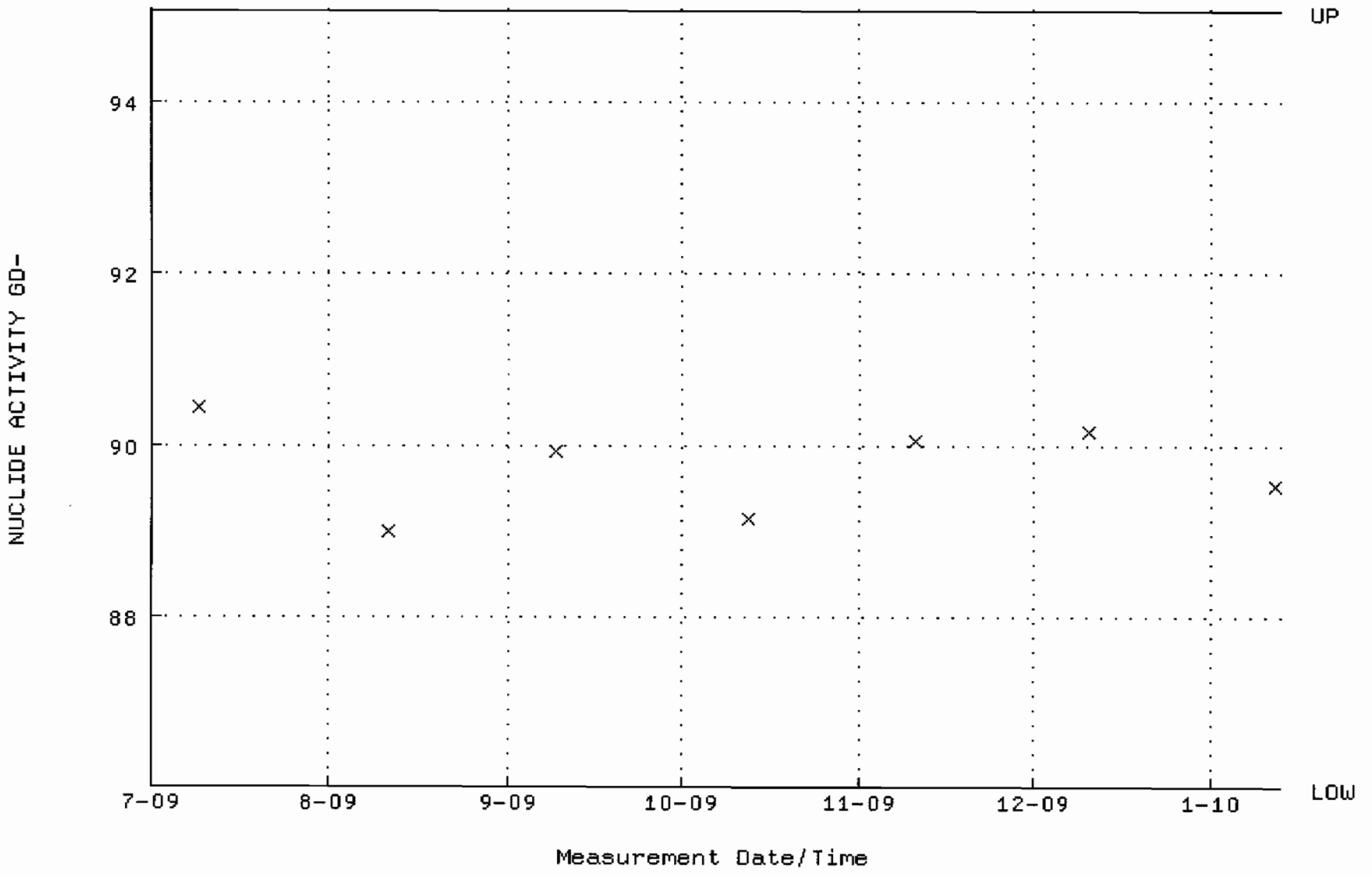
QA filename : DKA100:[ENV_ALPHA.QA.B]B089.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 15:12:04 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



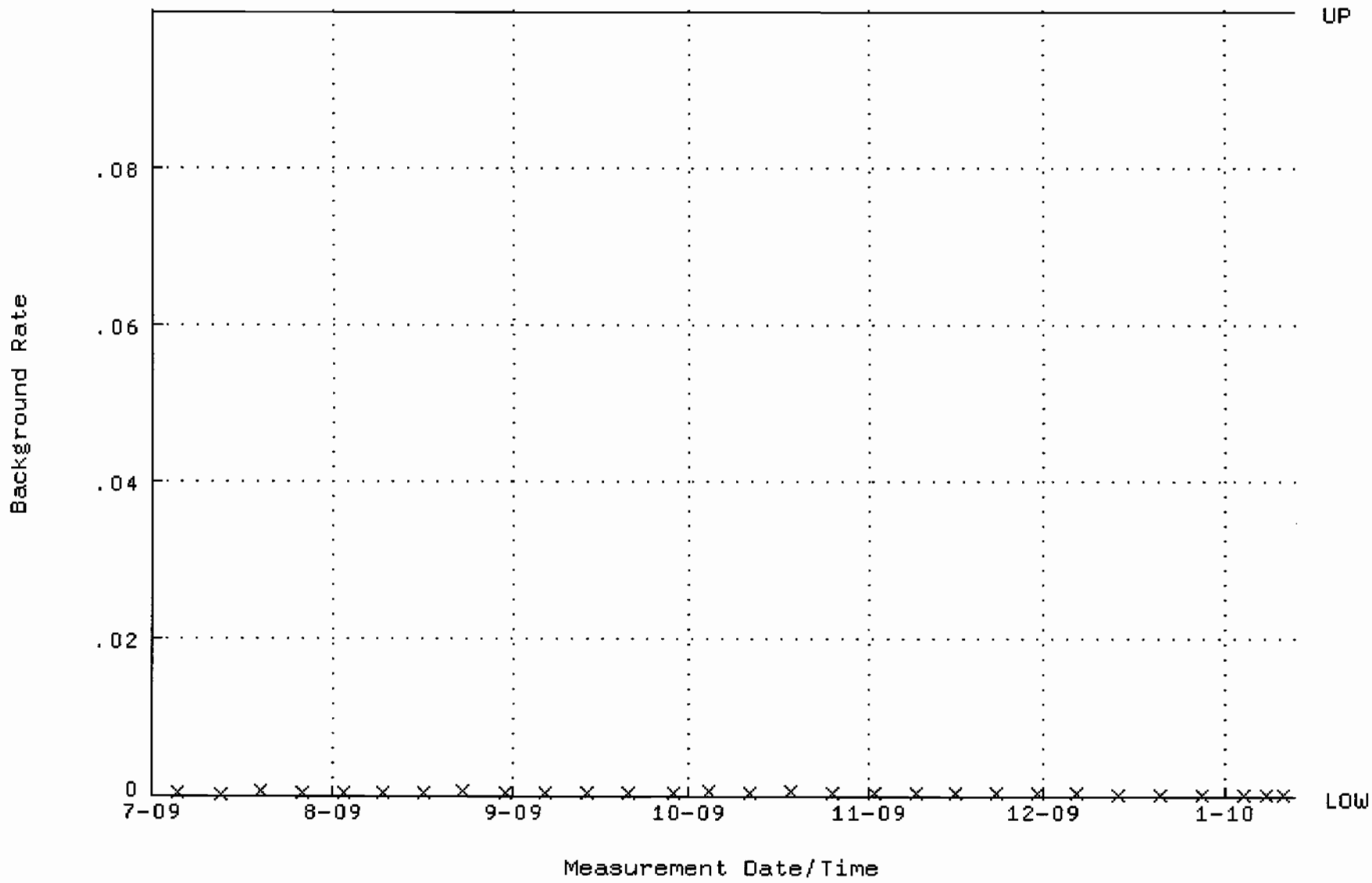
QA filename : DKA100:[ENV_ALPHA.QA.W]W090.QAF;3
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 9-JUL-2009 08:08:13 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.313529 through 0.333529



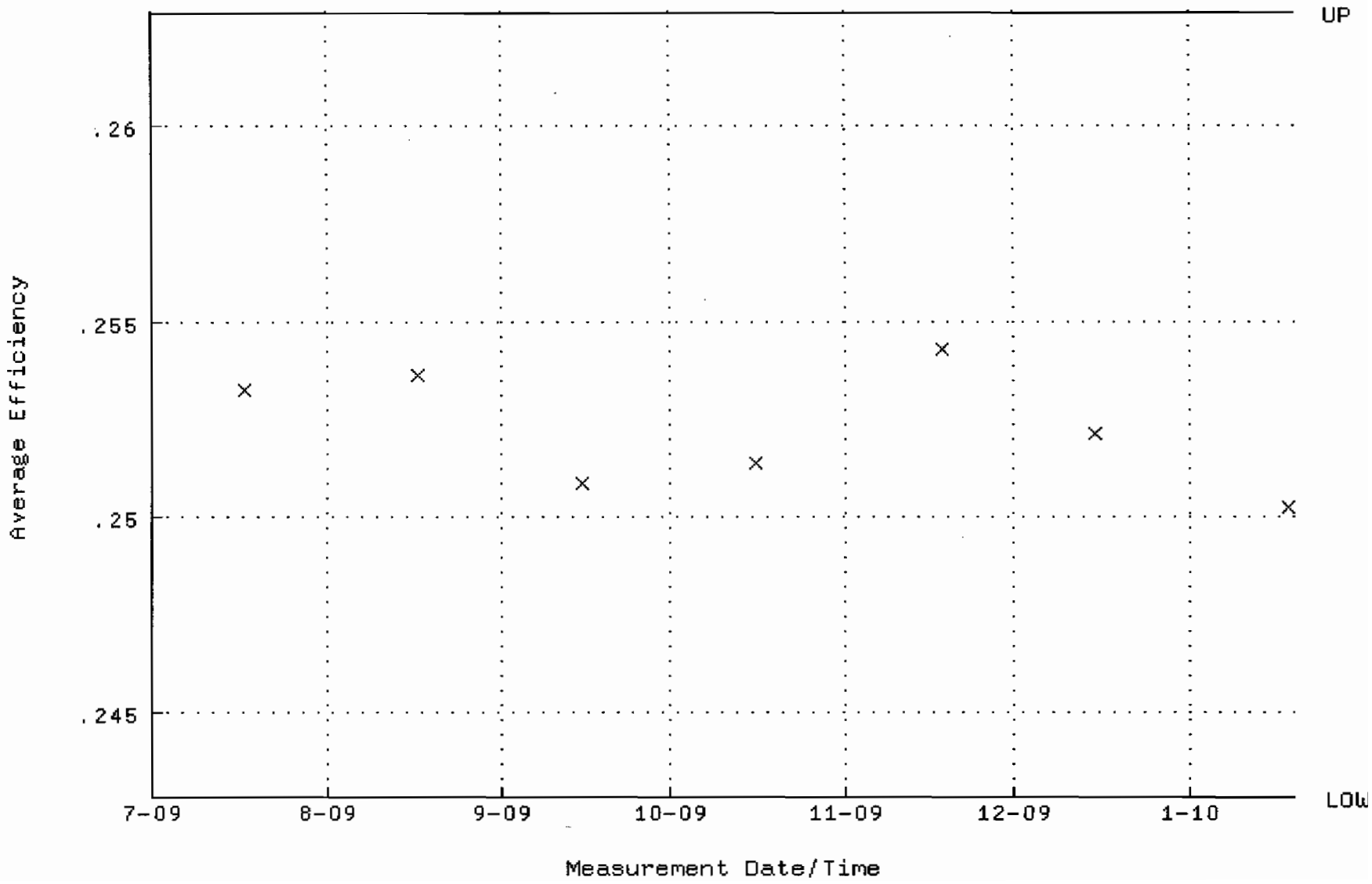
QA filename : DKA100:[ENV_ALPHA.QA.W]W090.QAF;3
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 9-JUL-2009 08:08:13 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 86.0139 through 95.0680



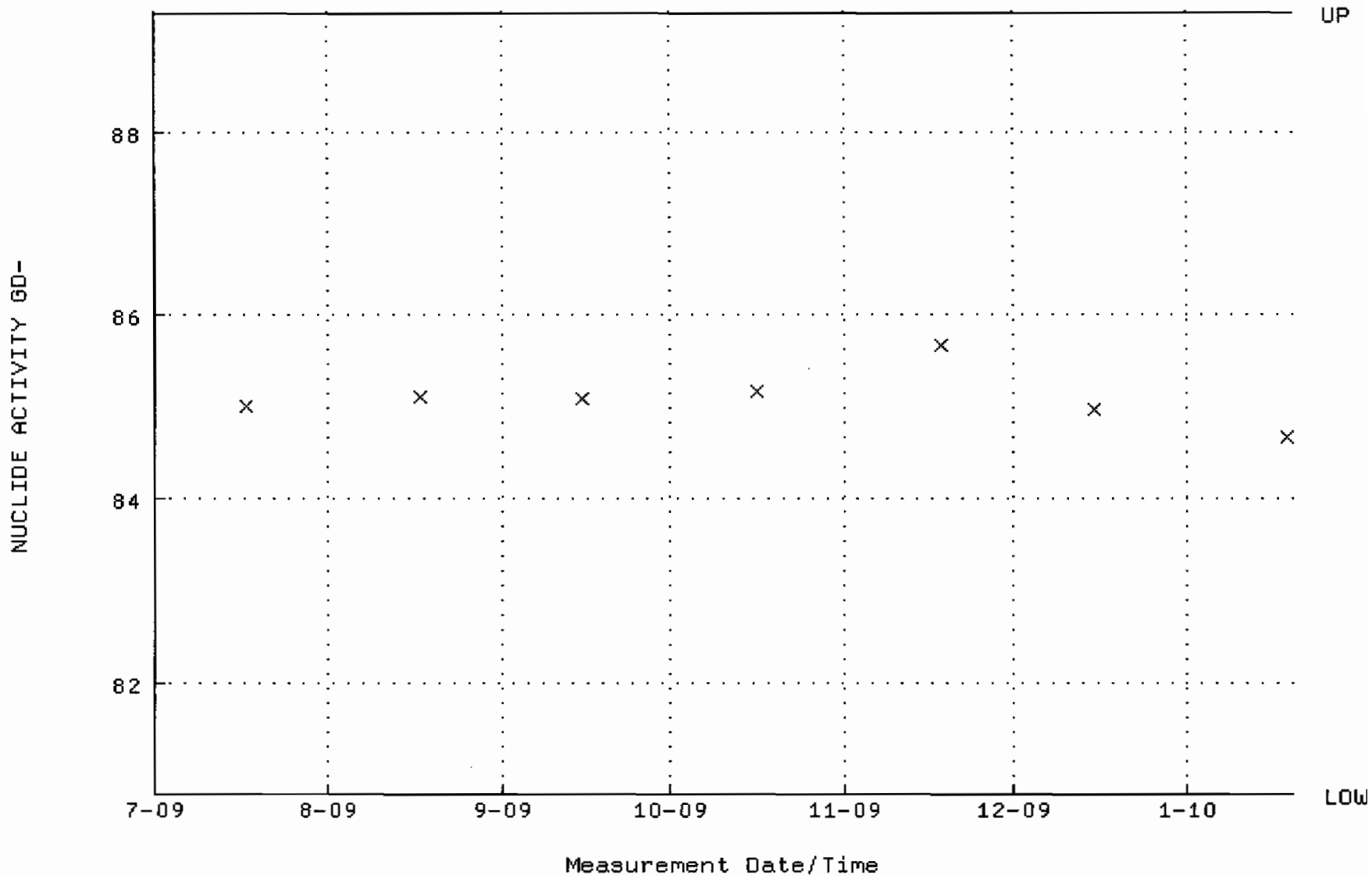
QA filename : DKA100:[ENV_ALPHA.QA.B]B090.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 15:12:04 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



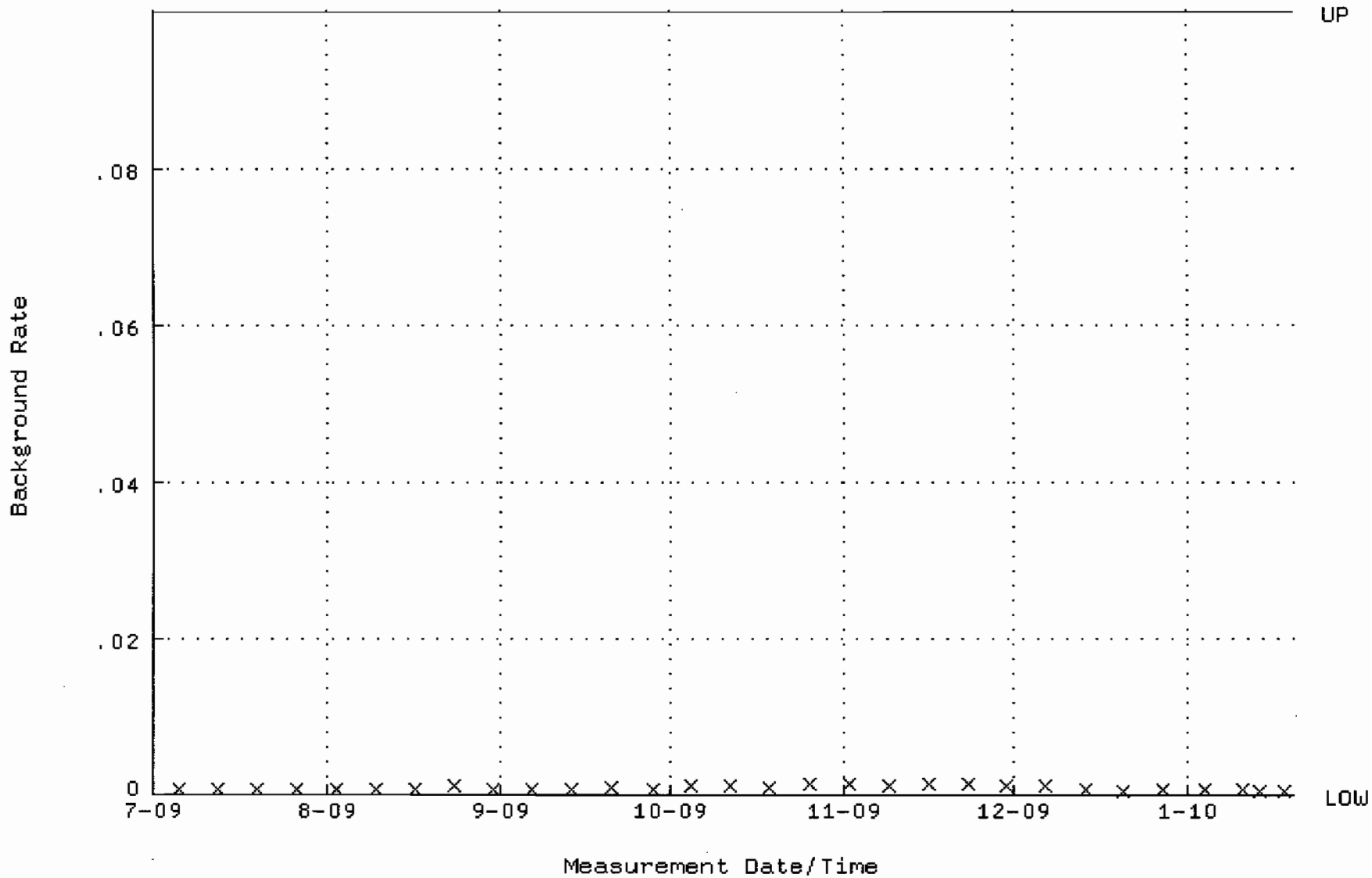
QA filename : DKA100:[ENV_ALPHA.QA.W]W159.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 17-JUL-2009 09:14:28 through 19-JAN-2010 12:00:00
Lower/Upper Lmts: 0.242851 through 0.262851



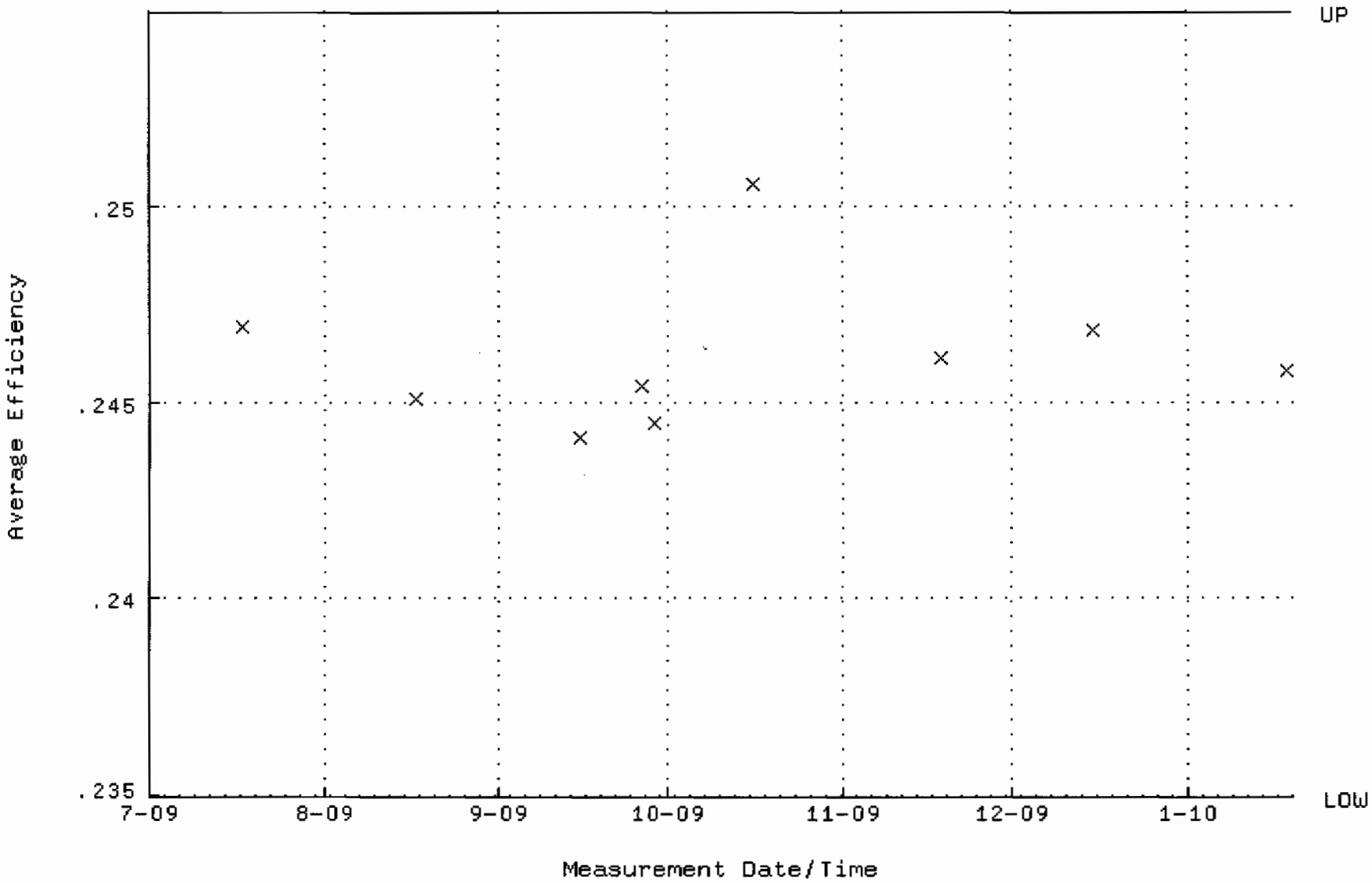
QA filename : DKA100:[ENV_ALPHA.QA.W]W159.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 17-JUL-2009 09:14:28 through 19-JAN-2010 12:00:00
Lower/Upper Lmts: 80.7870 through 89.2909



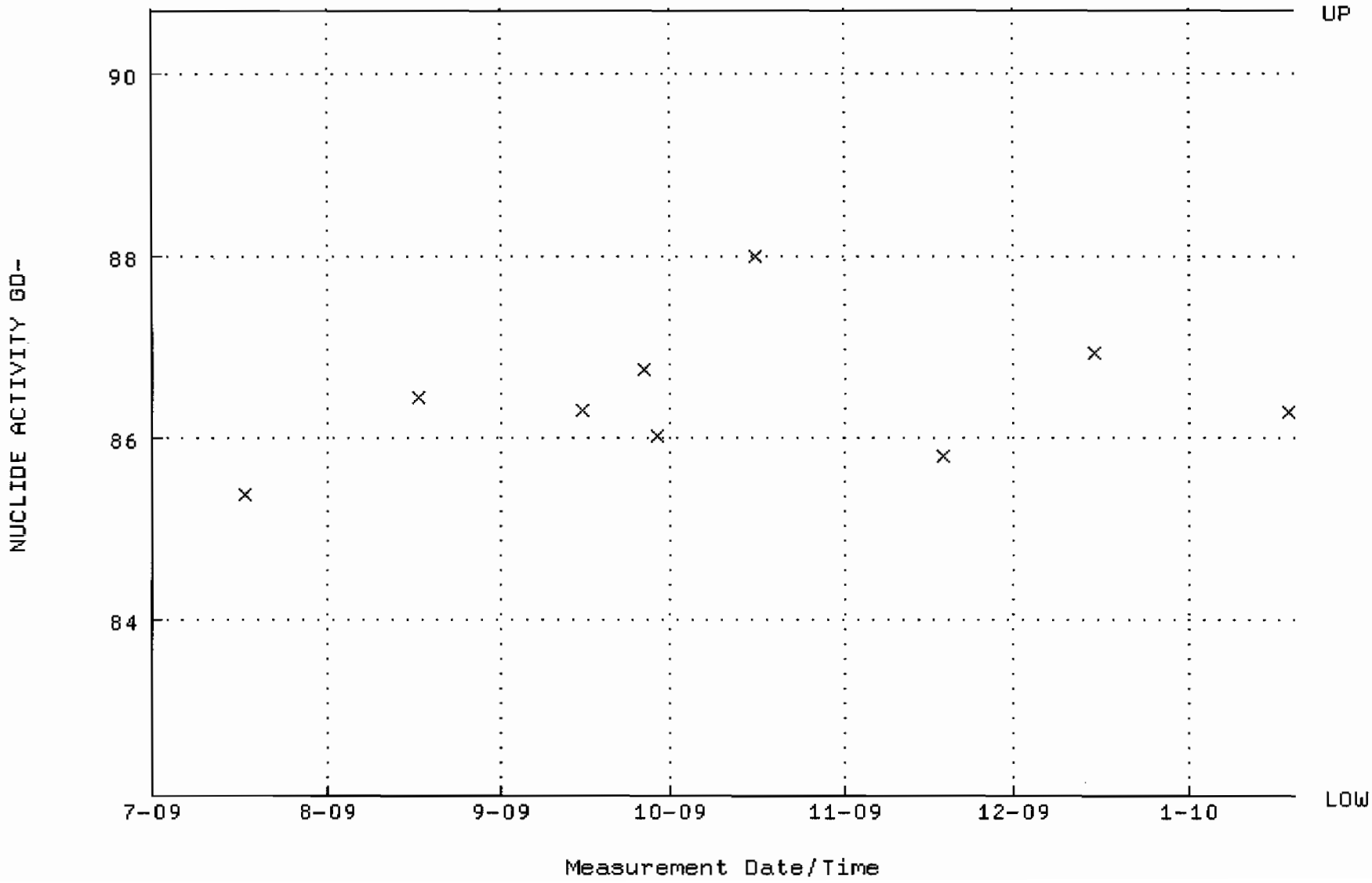
QA filename : DKA100:[ENV_ALPHA.QA.B]B159.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 14:58:31 through 19-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



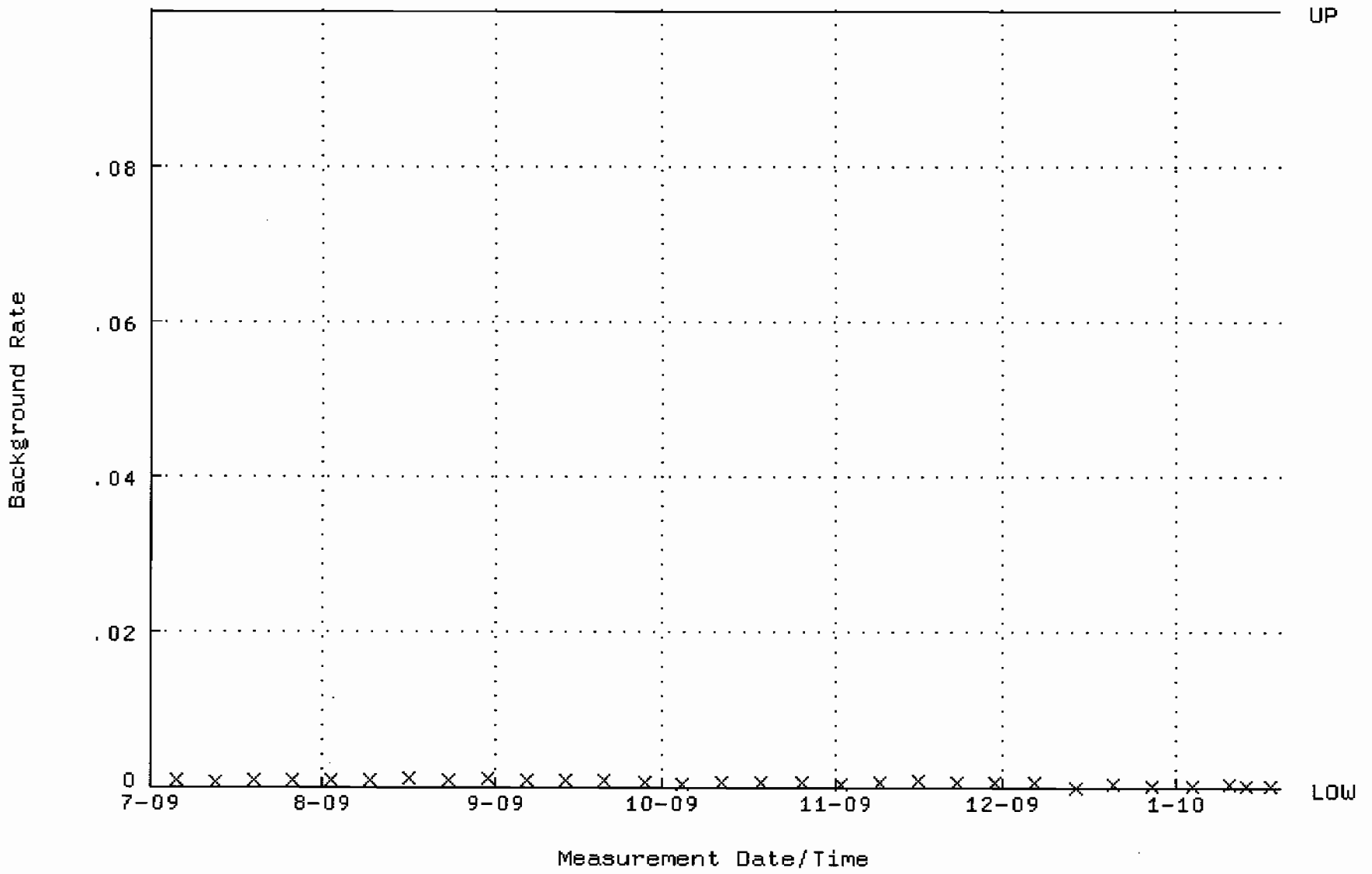
QA filename : DKA100:[ENV_ALPHA.QA.W]W160.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 17-JUL-2009 09:14:34 through 19-JAN-2010 12:00:00
Lower/Upper Lmts: 0.234941 through 0.254941



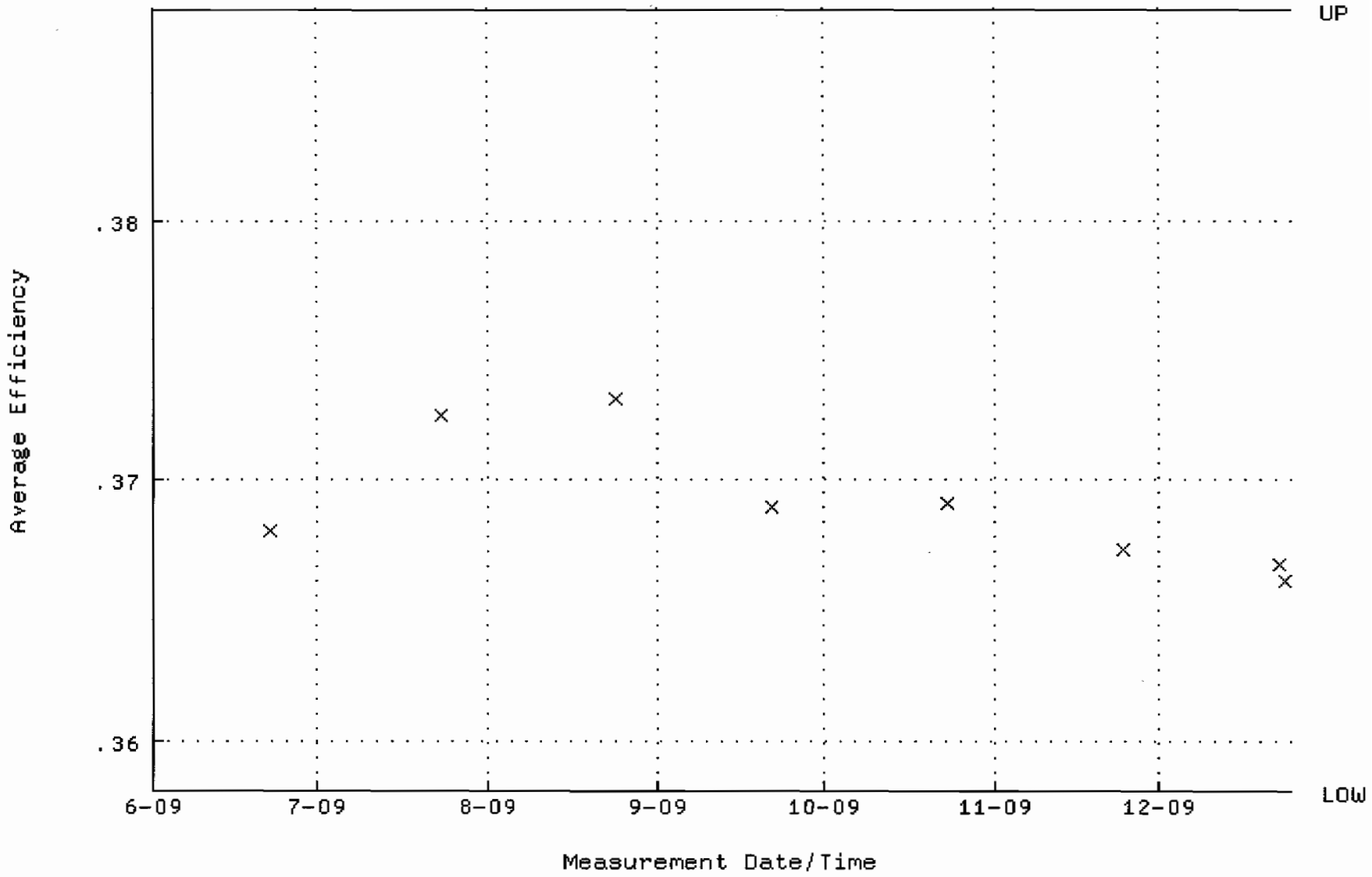
QA filename : DKA100:[ENV_ALPHA.QA.W]W160.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 17-JUL-2009 09:14:34 through 19-JAN-2010 12:00:00
Lower/Upper Lmts: 82.0594 through 90.6972



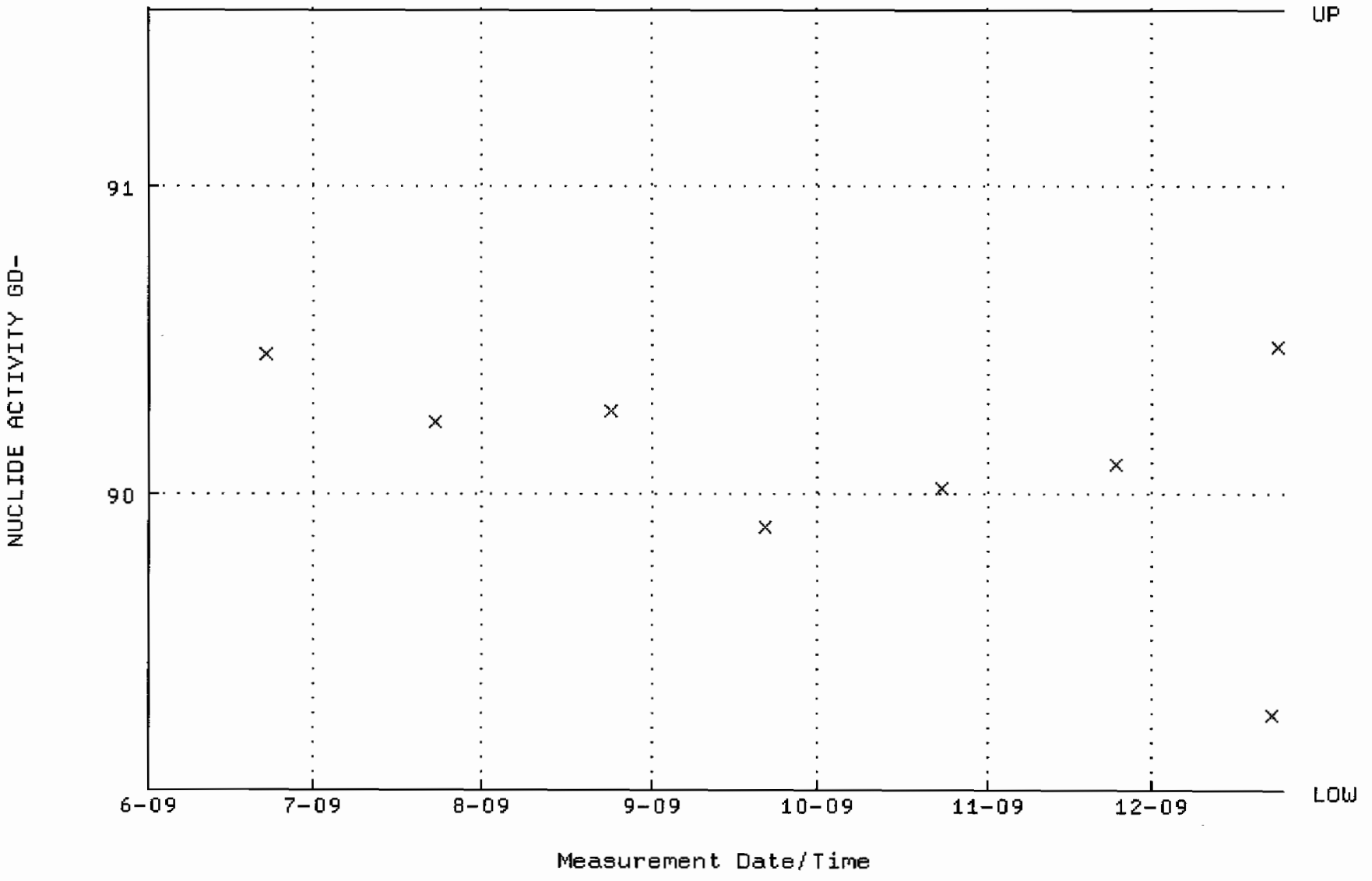
QA filename : DKA100:[ENV_ALPHA.QA.B]B160.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 14:58:36 through 19-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



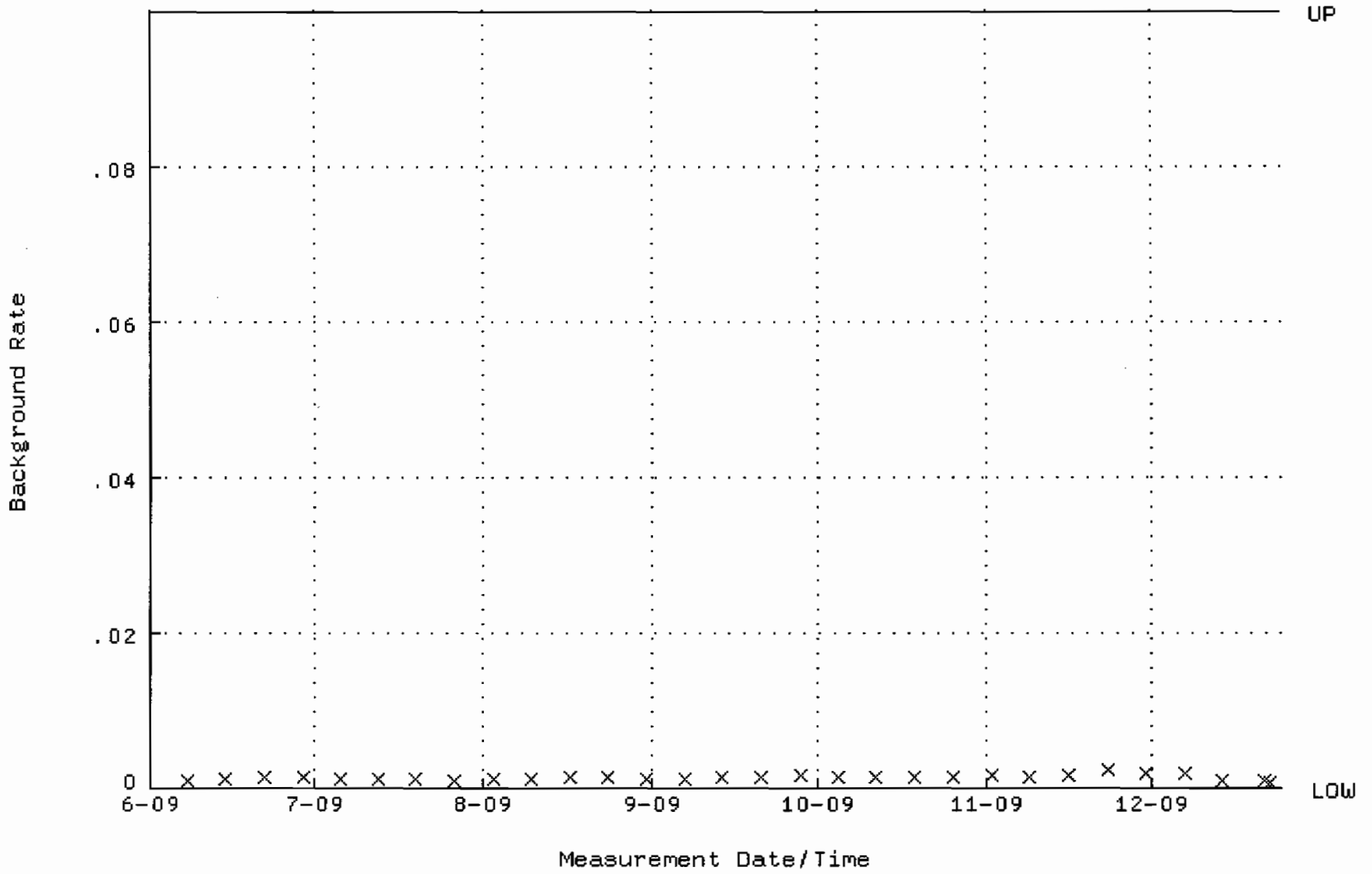
QA filename : DKA100:[ENV_ALPHA.QA.W]W161.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 22-JUN-2009 09:48:54 through 24-DEC-2009 12:00:00
Lower/Upper Lmts: 0.358070 through 0.388144



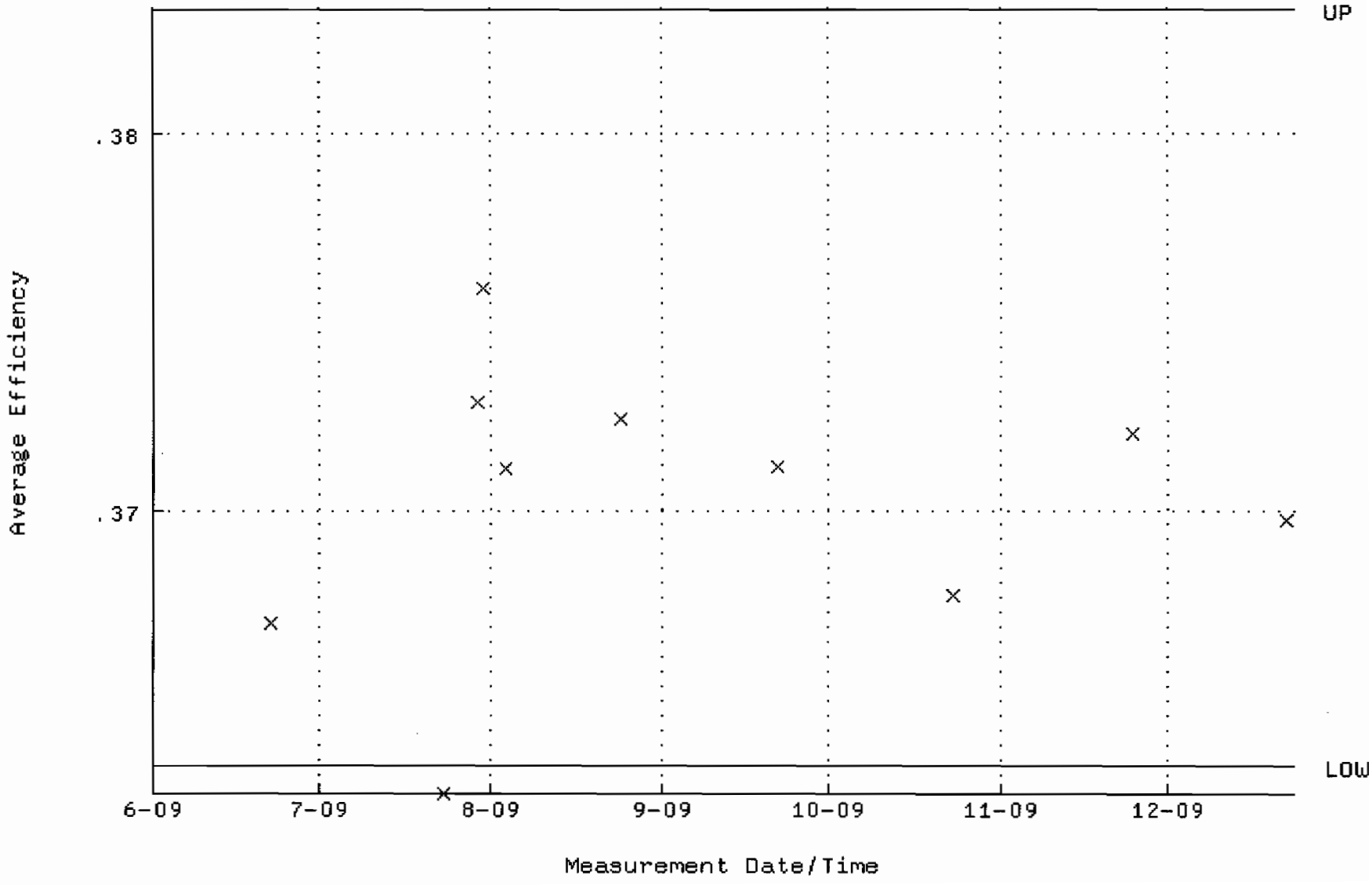
QA filename : DKA100:[ENV_ALPHA.QA.W]W161.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 22-JUN-2009 09:48:54 through 24-DEC-2009 12:00:00
Lower/Upper Lmts: 89.0418 through 91.5702



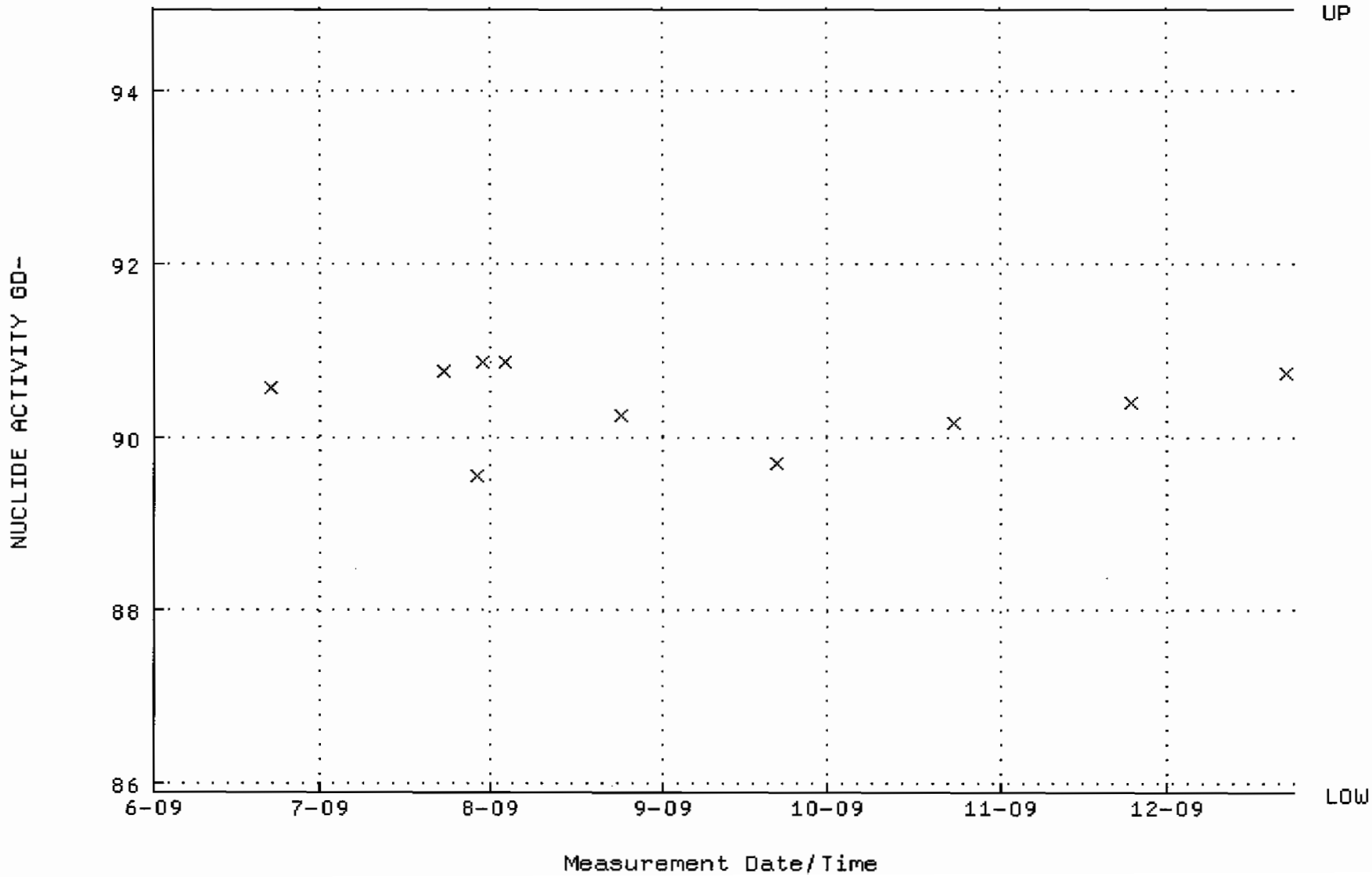
QA filename : DKA100:[ENV_ALPHA.QA.B]B161.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 7-JUN-2009 17:12:00 through 24-DEC-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



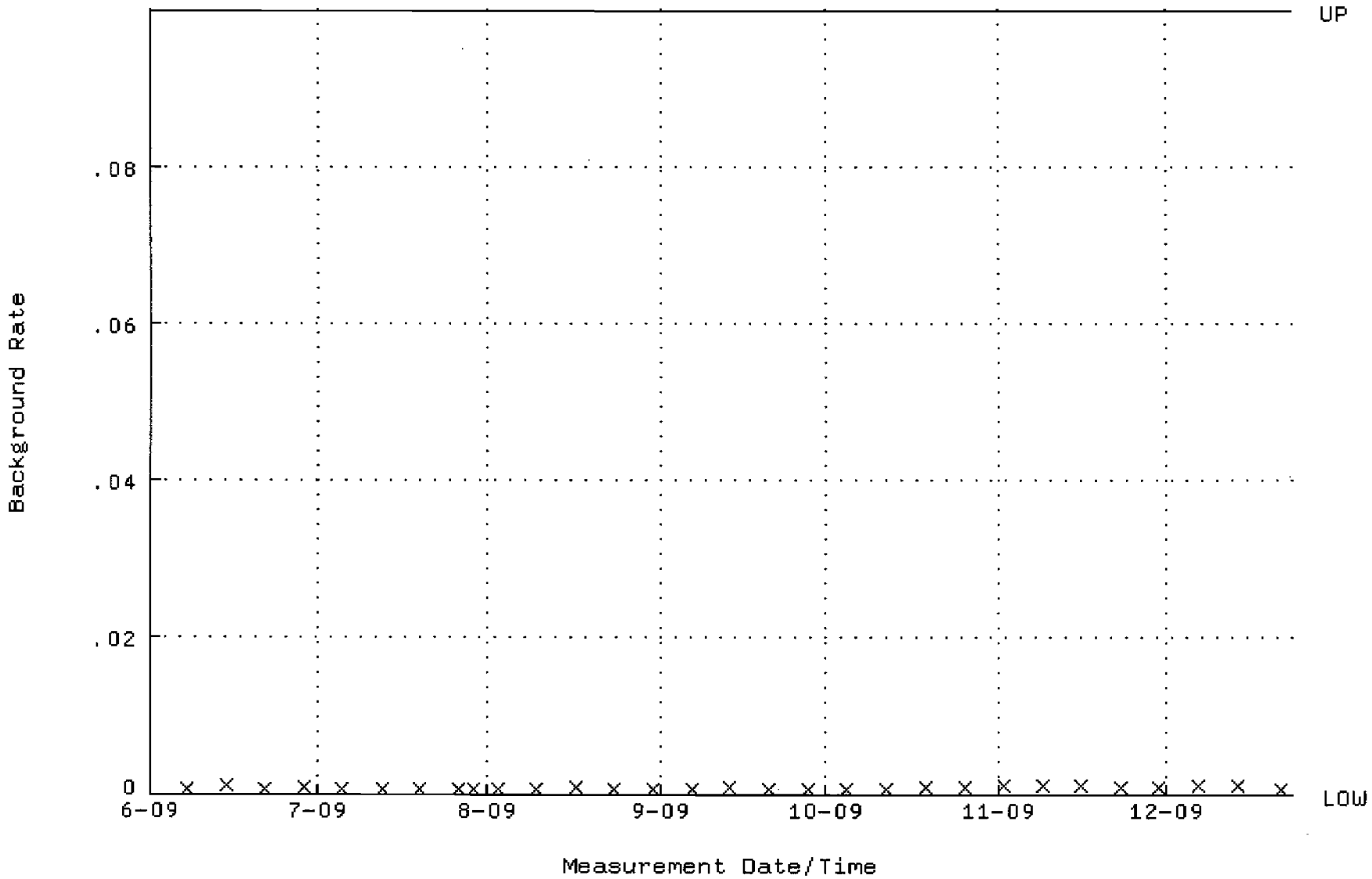
QA filename : DKA100:[ENV_ALPHA.QA.W]W162.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 22-JUN-2009 09:49:01 through 23-DEC-2009 12:00:00
Lower/Upper Lmts: 0.363287 through 0.383287



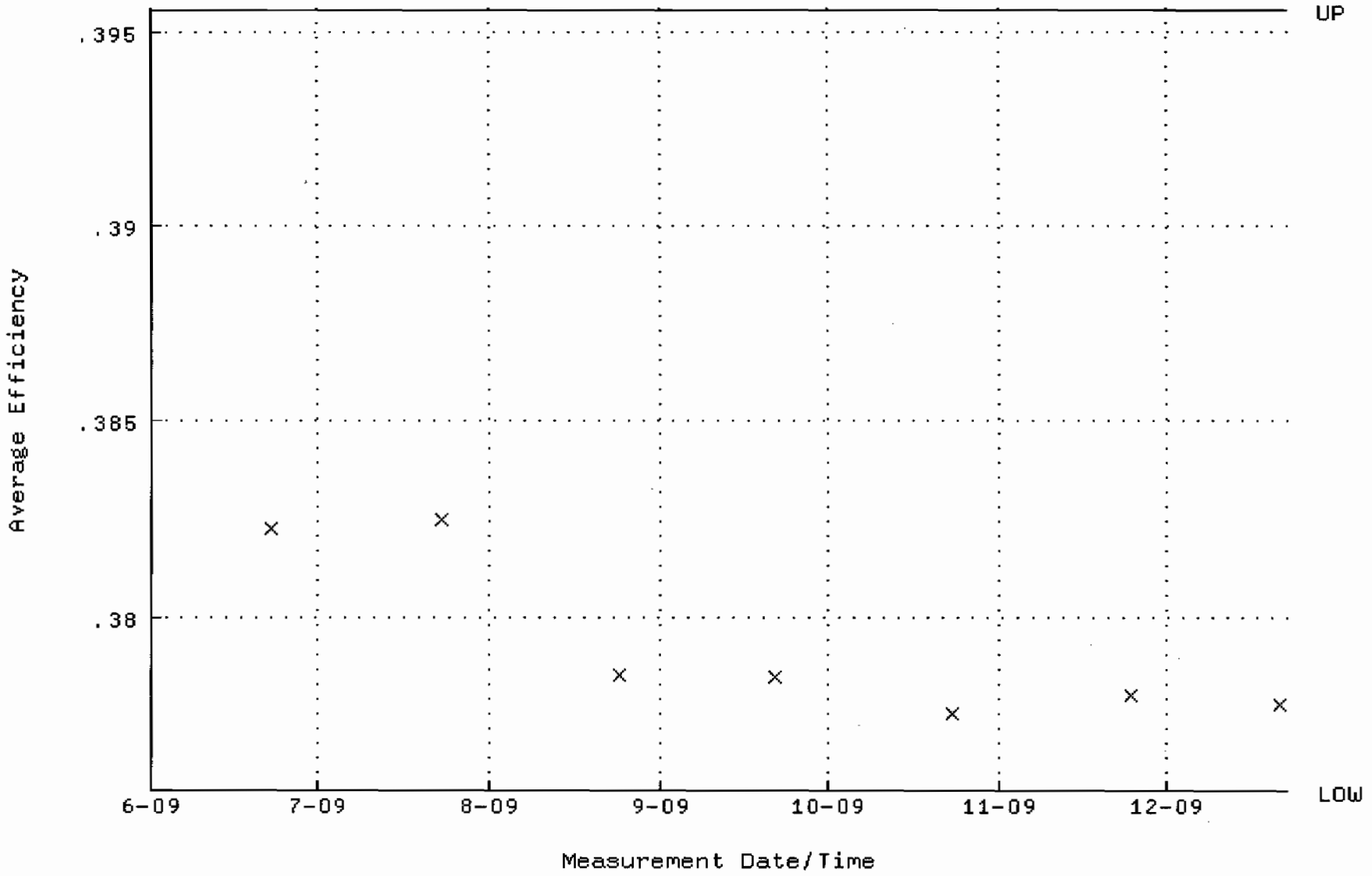
QA filename : DKA100:[ENV_ALPHA.QA.W]W162.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 22-JUN-2009 09:49:01 through 23-DEC-2009 12:00:00
Lower/Upper Lmts: 85.8969 through 94.9387



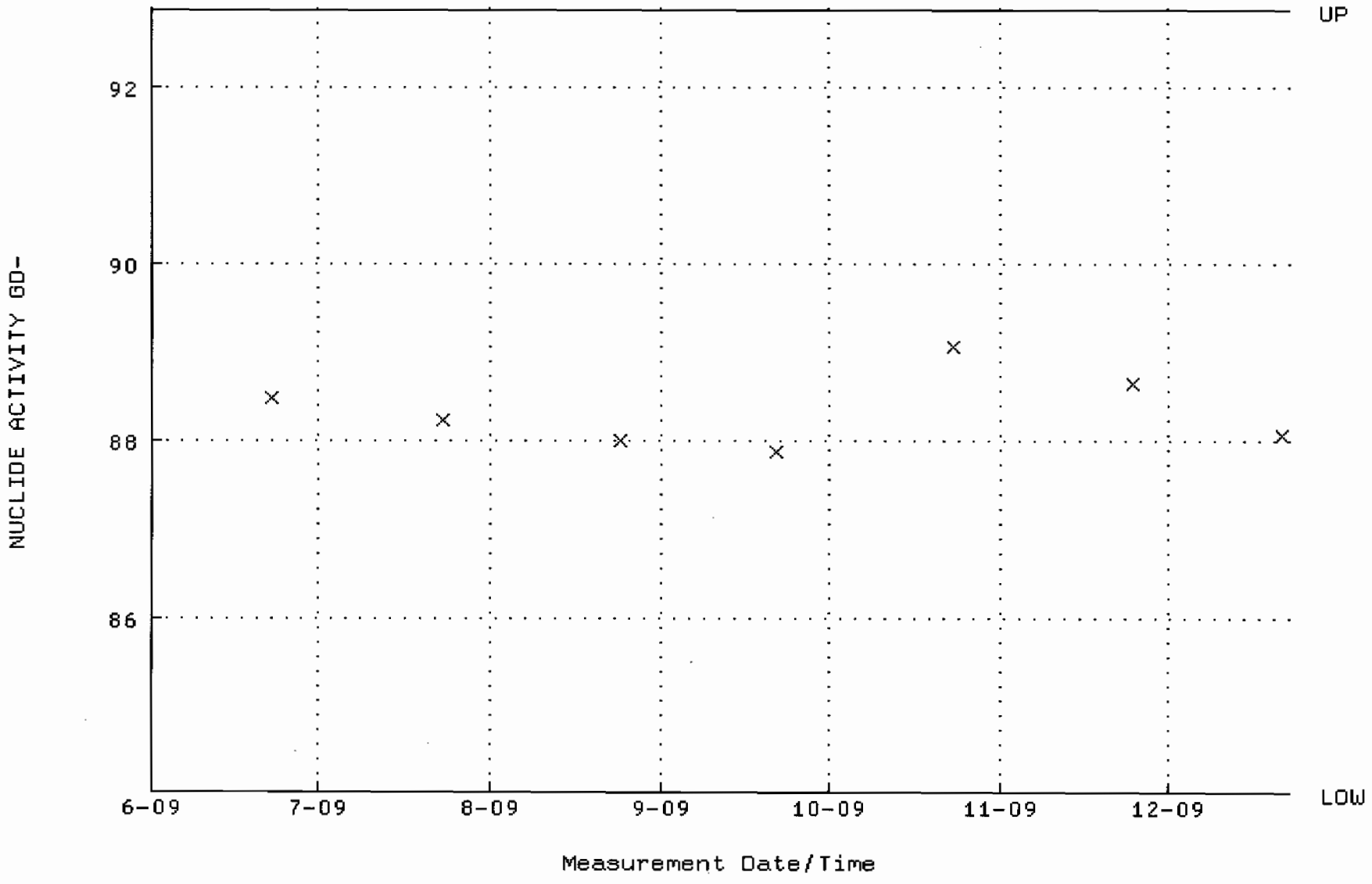
QA filename : DKA100:[ENV_ALPHA.QA.B]B162.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 7-JUN-2009 17:12:04 through 23-DEC-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



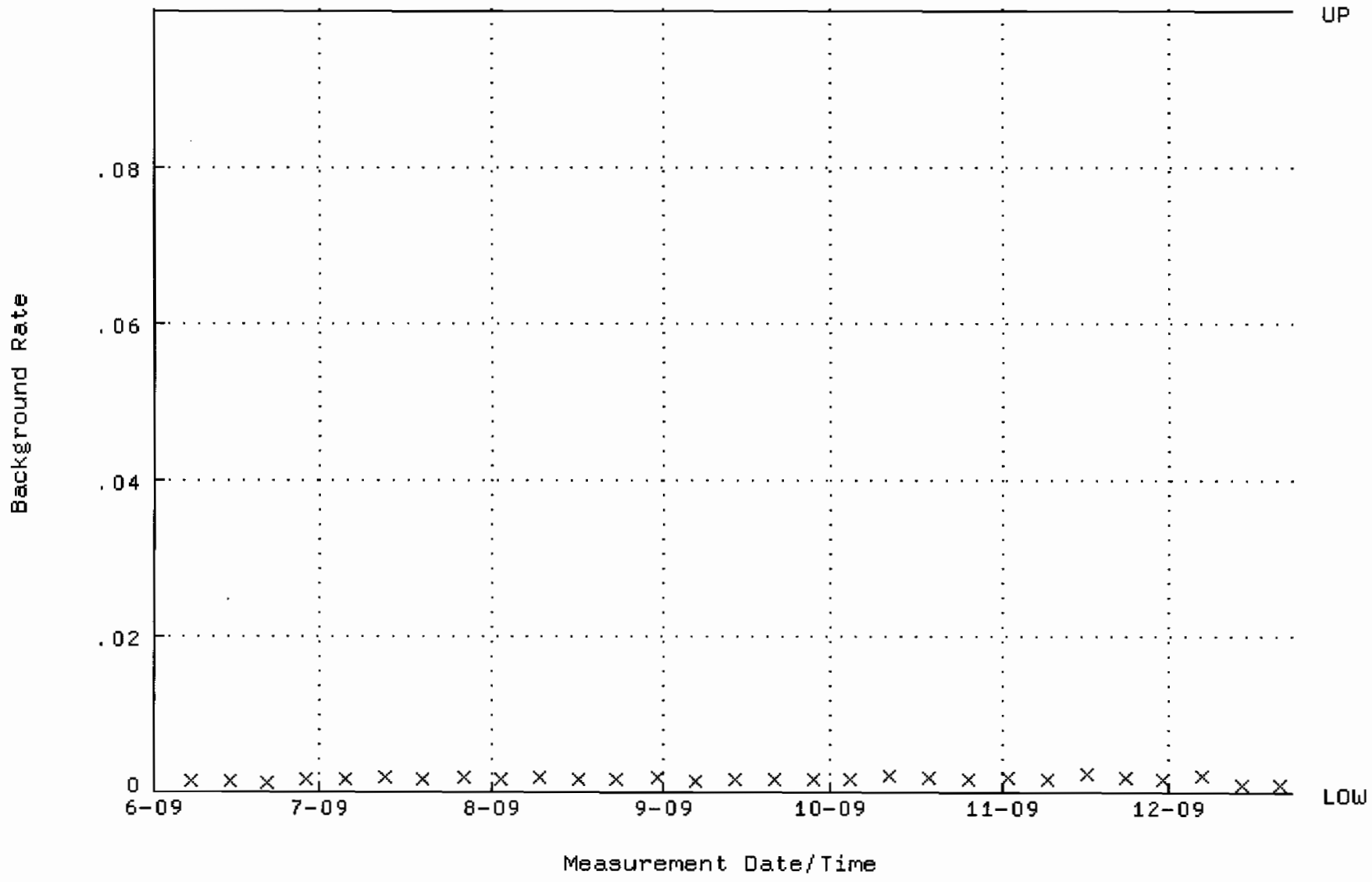
QA filename : DKA100:[ENV_ALPHA.QA.W]W163.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 22-JUN-2009 09:49:05 through 22-DEC-2009 12:00:00
Lower/Upper Lmts: 0.375557 through 0.395557



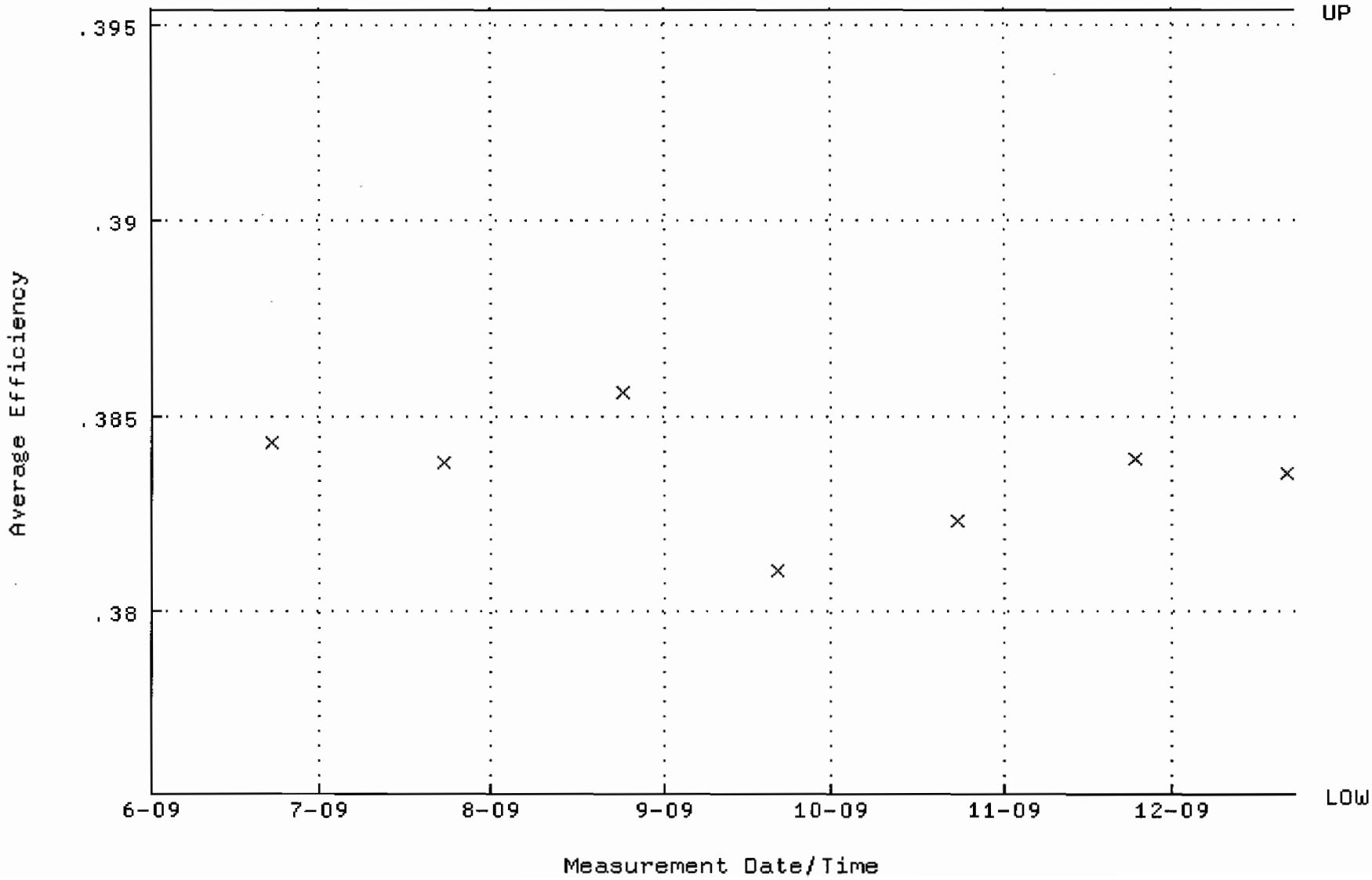
QA filename : DKA100:[ENV_ALPHA.QA.W]W163.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 22-JUN-2009 09:49:05 through 22-DEC-2009 12:00:00
Lower/Upper Lmts: 84.0322 through 92.8777



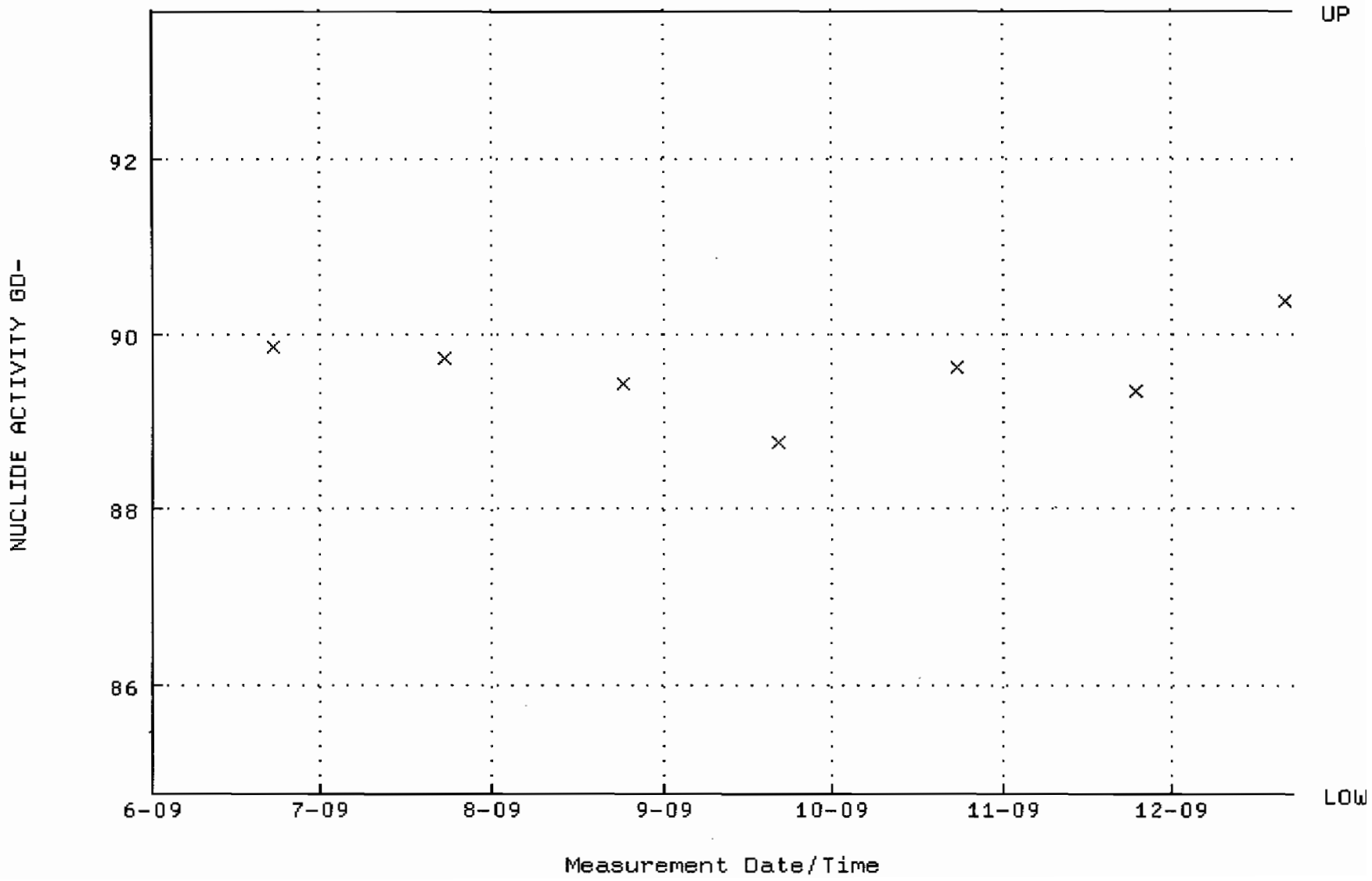
QA filename : DKA100:[ENV_ALPHA.QA.B]B163.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 7-JUN-2009 17:12:08 through 22-DEC-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



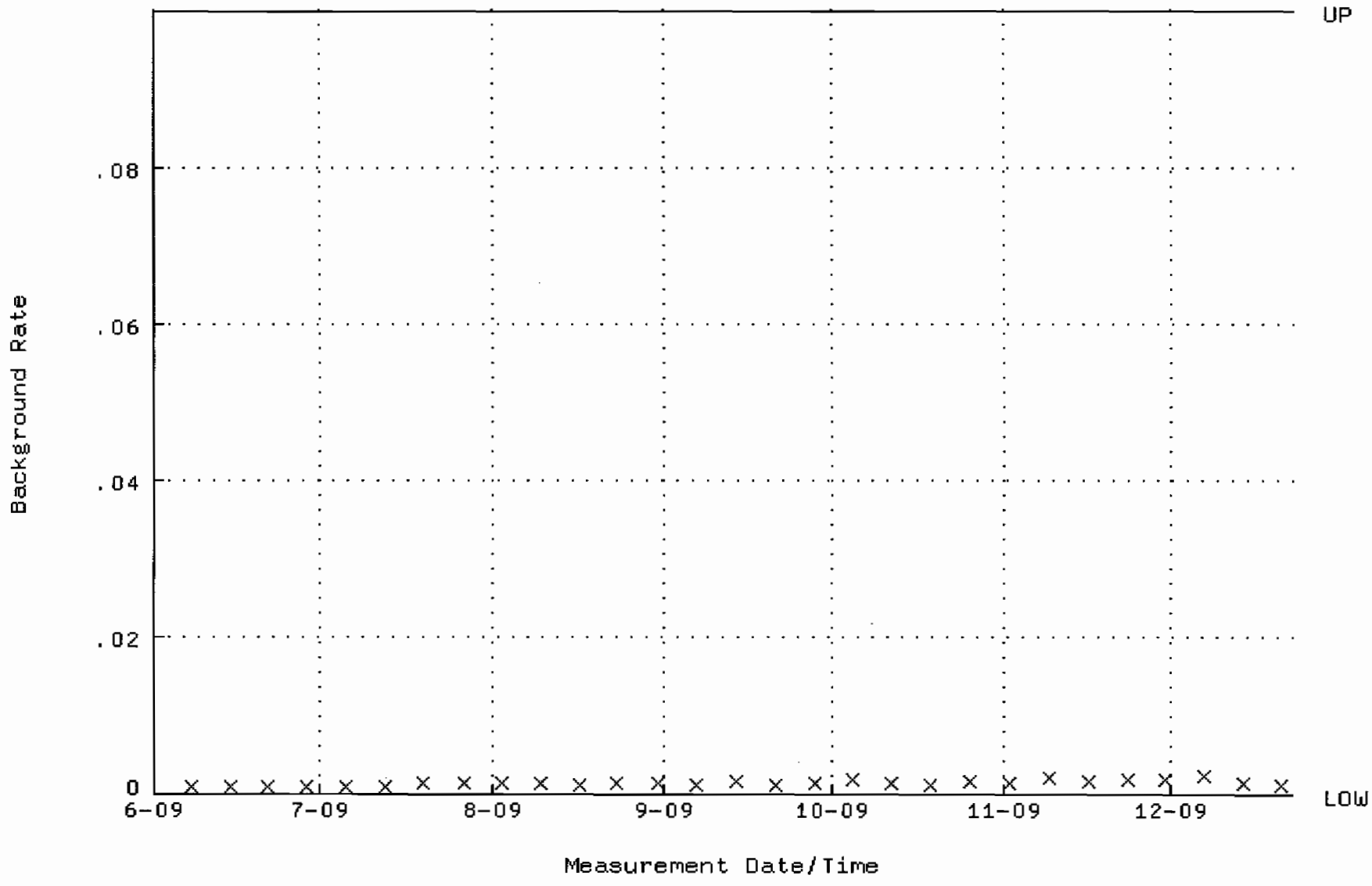
QA filename : DKA100:[ENV_ALPHA.QA.W]W171.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 22-JUN-2009 09:49:50 through 22-DEC-2009 12:00:00
Lower/Upper Lmts: 0.375364 through 0.395364



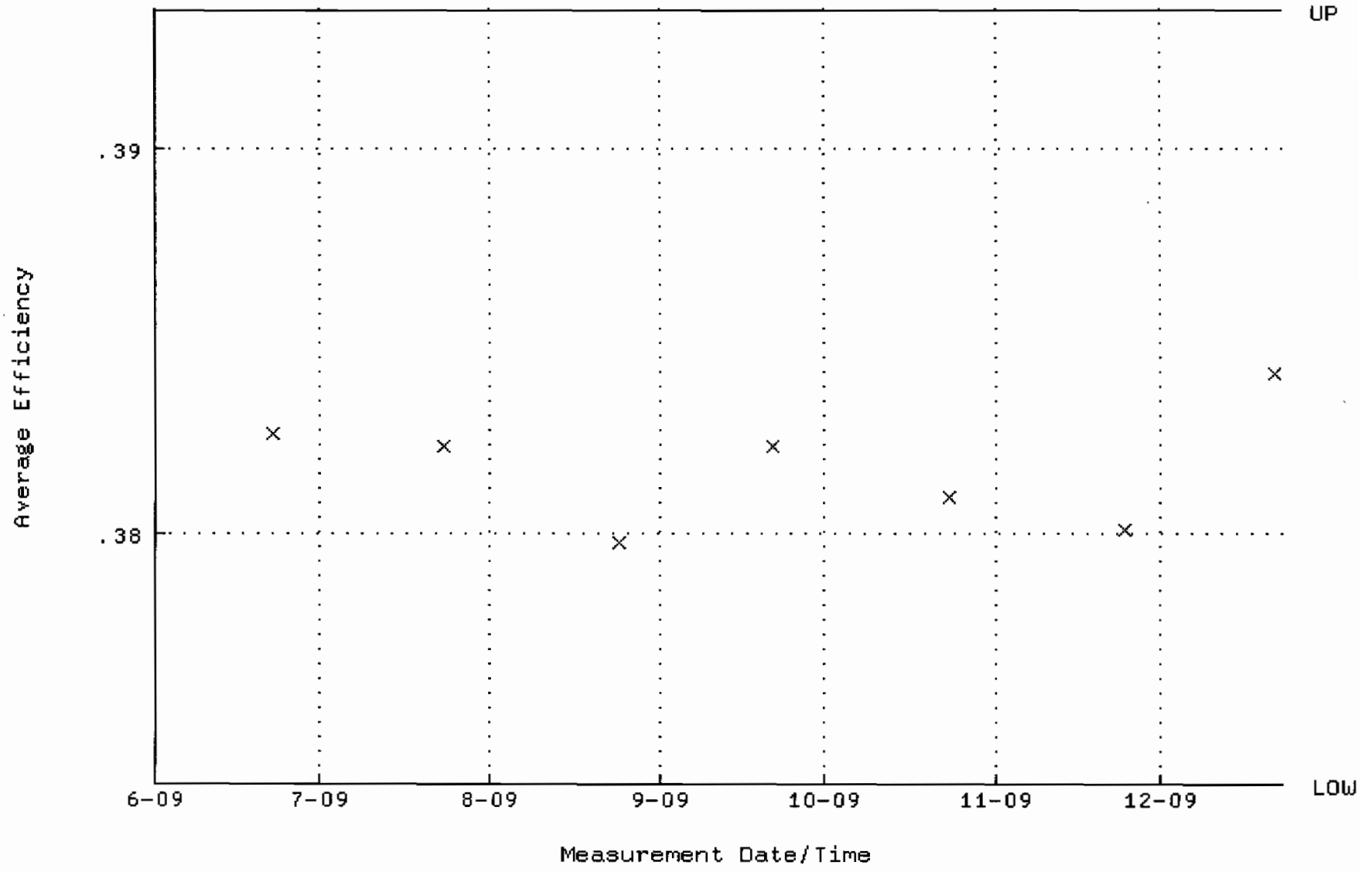
QA filename : DKA100:[ENV_ALPHA.QA.W]W171.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 22-JUN-2009 09:49:50 through 22-DEC-2009 12:00:00
Lower/Upper Lmts: 84.7539 through 93.6753



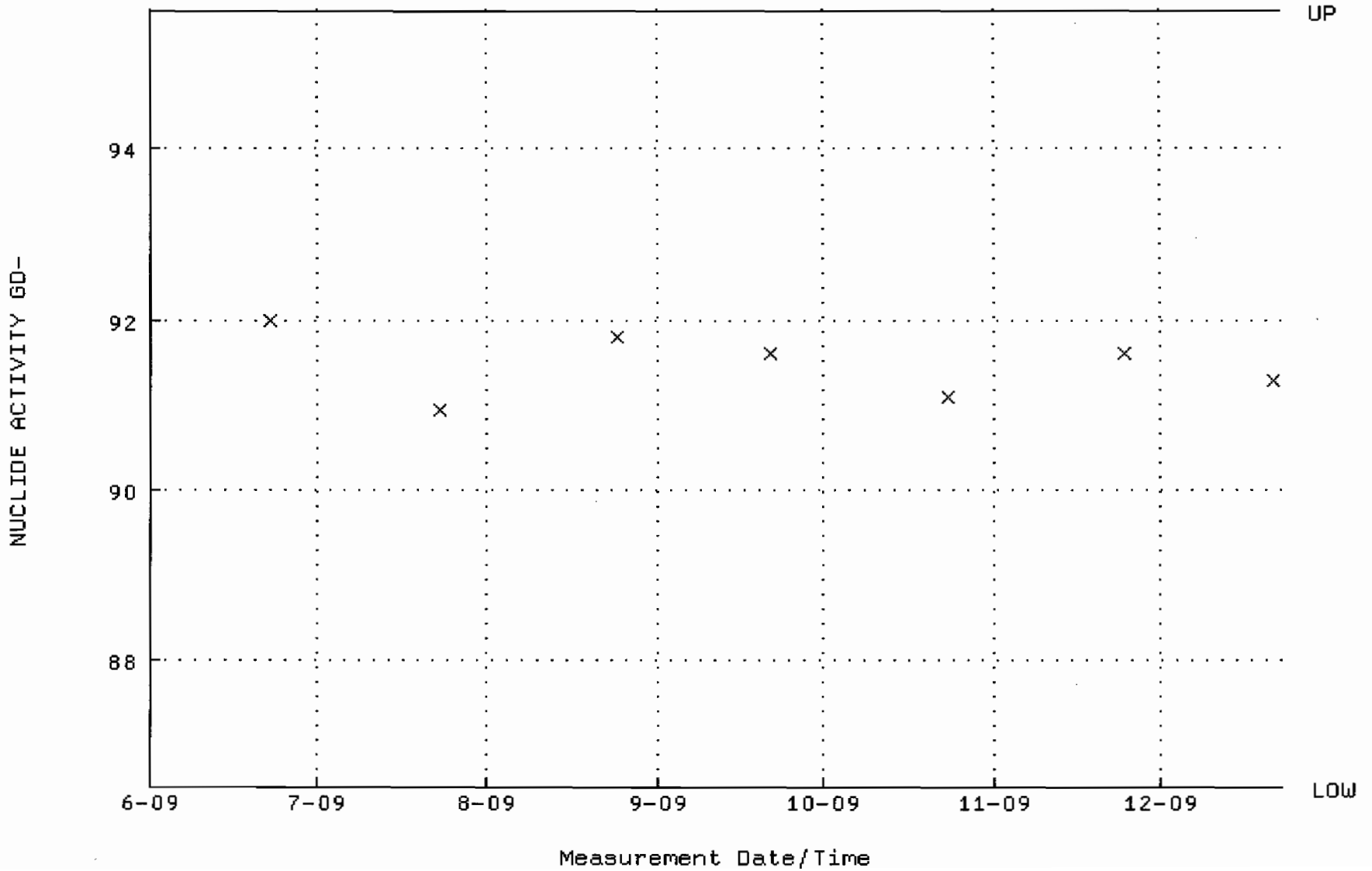
QA filename : DKA100:[ENV_ALPHA.QA.B]B171.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 7-JUN-2009 17:12:40 through 22-DEC-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



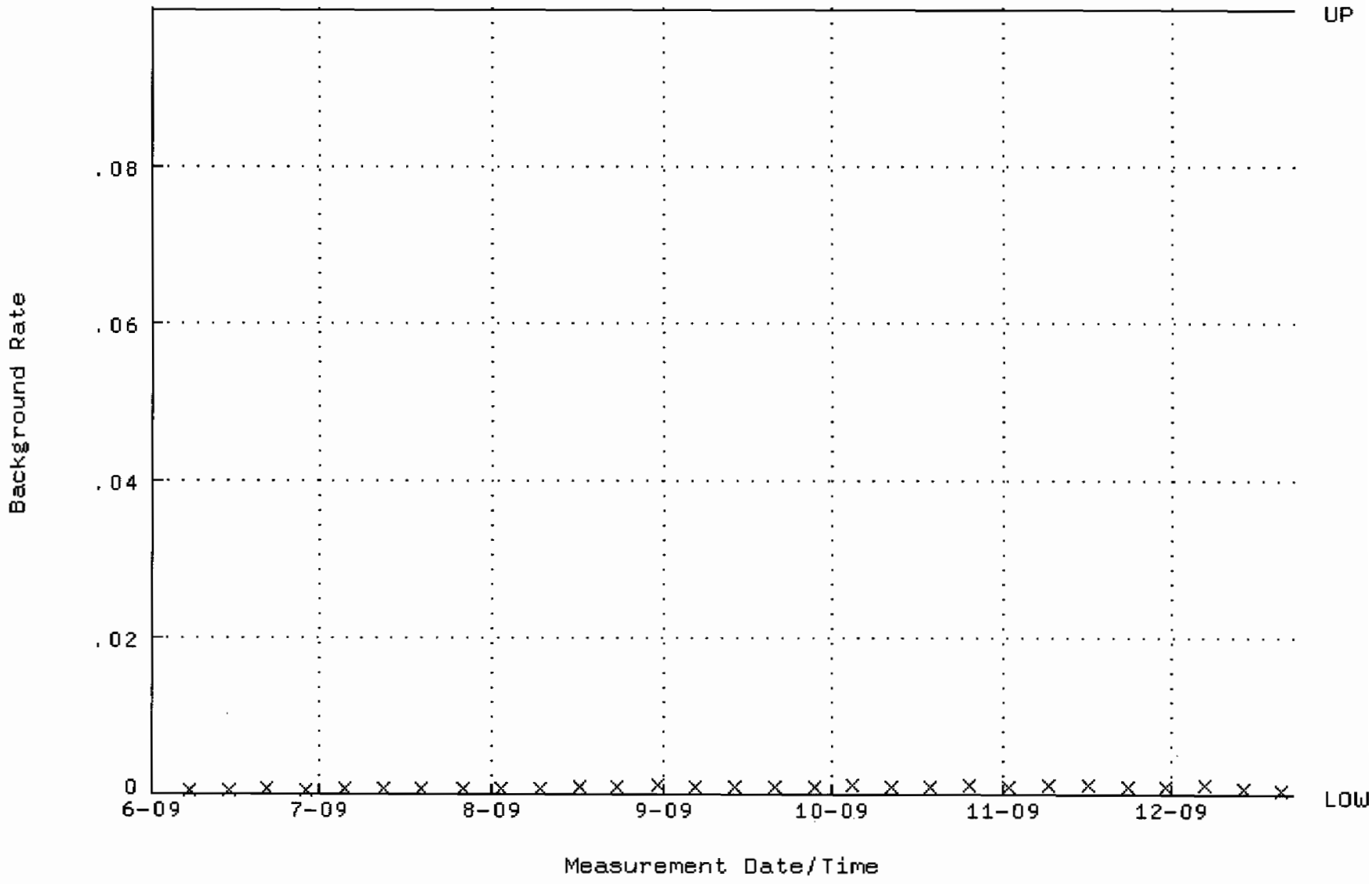
QA filename : DKA100:[ENV_ALPHA.QA.W]W172.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 22-JUN-2009 09:49:55 through 22-DEC-2009 12:00:00
Lower/Upper Lmts: 0.373575 through 0.393575



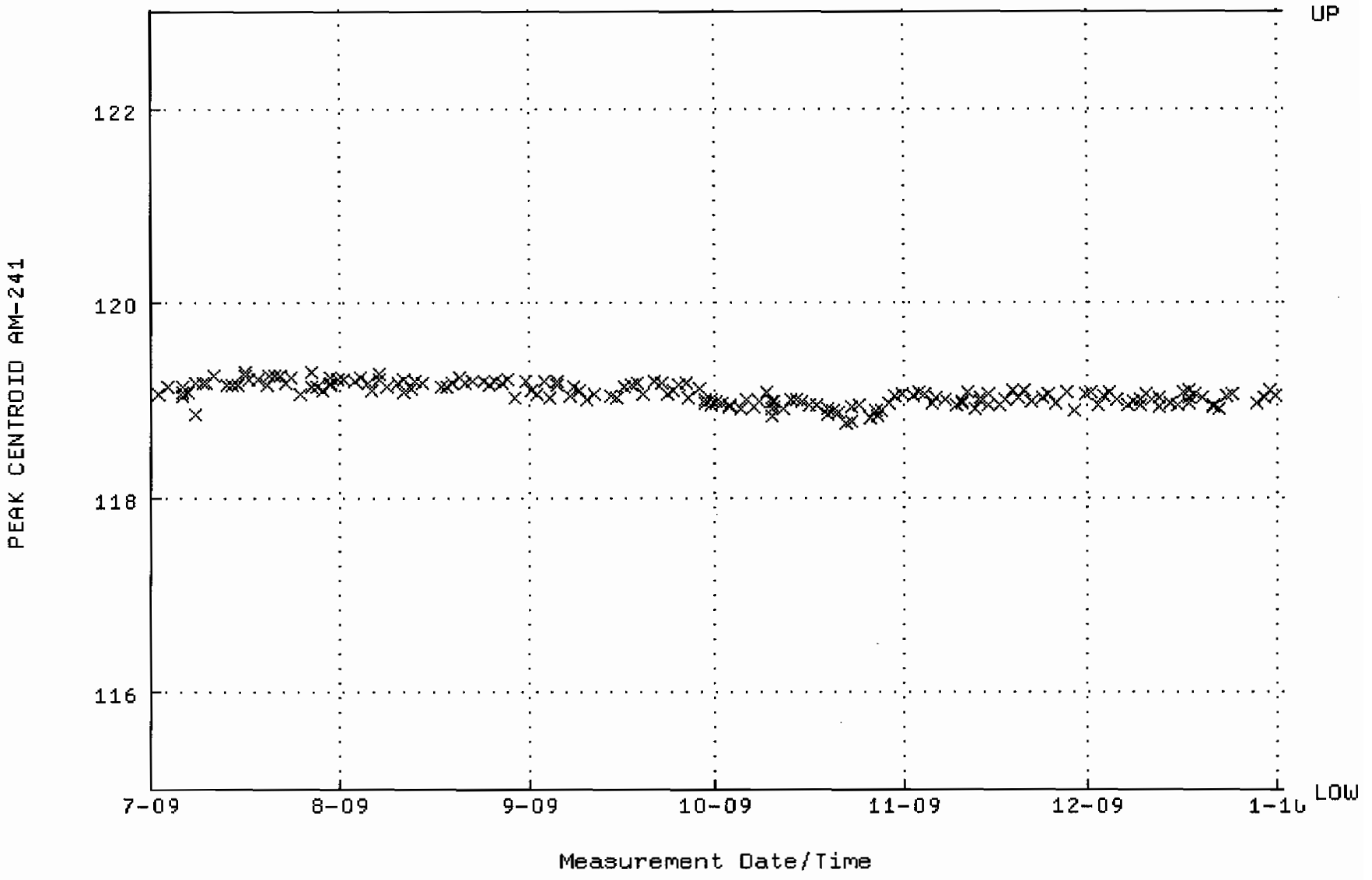
QA filename : DKA100:[ENV_ALPHA.QA.W]W172.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 22-JUN-2009 09:49:55 through 22-DEC-2009 12:00:00
Lower/Upper Lmts: 86.5089 through 95.6151



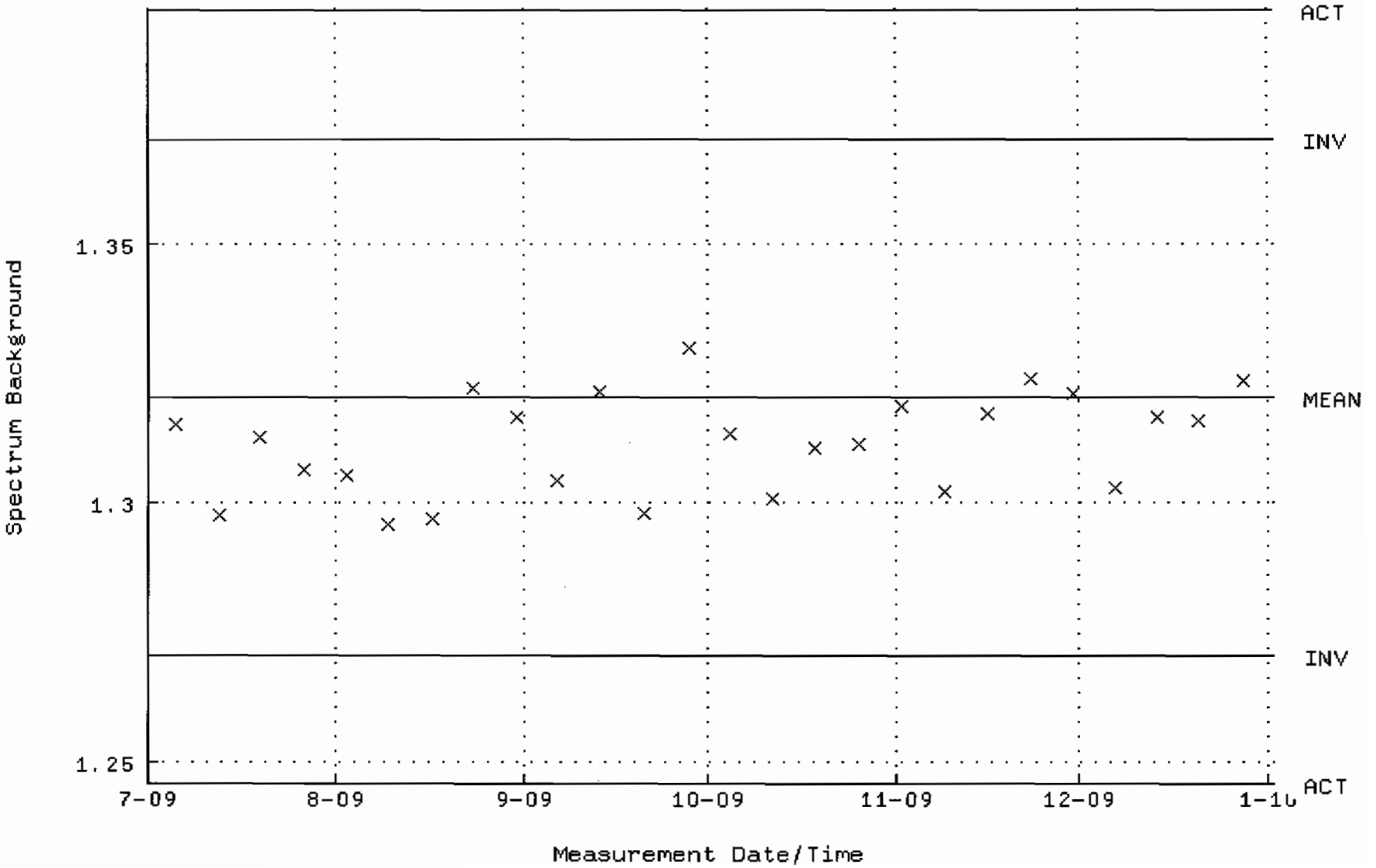
QA filename : DKA100:[ENV_ALPHA.QA.B]B172.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 7-JUN-2009 17:12:44 through 22-DEC-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



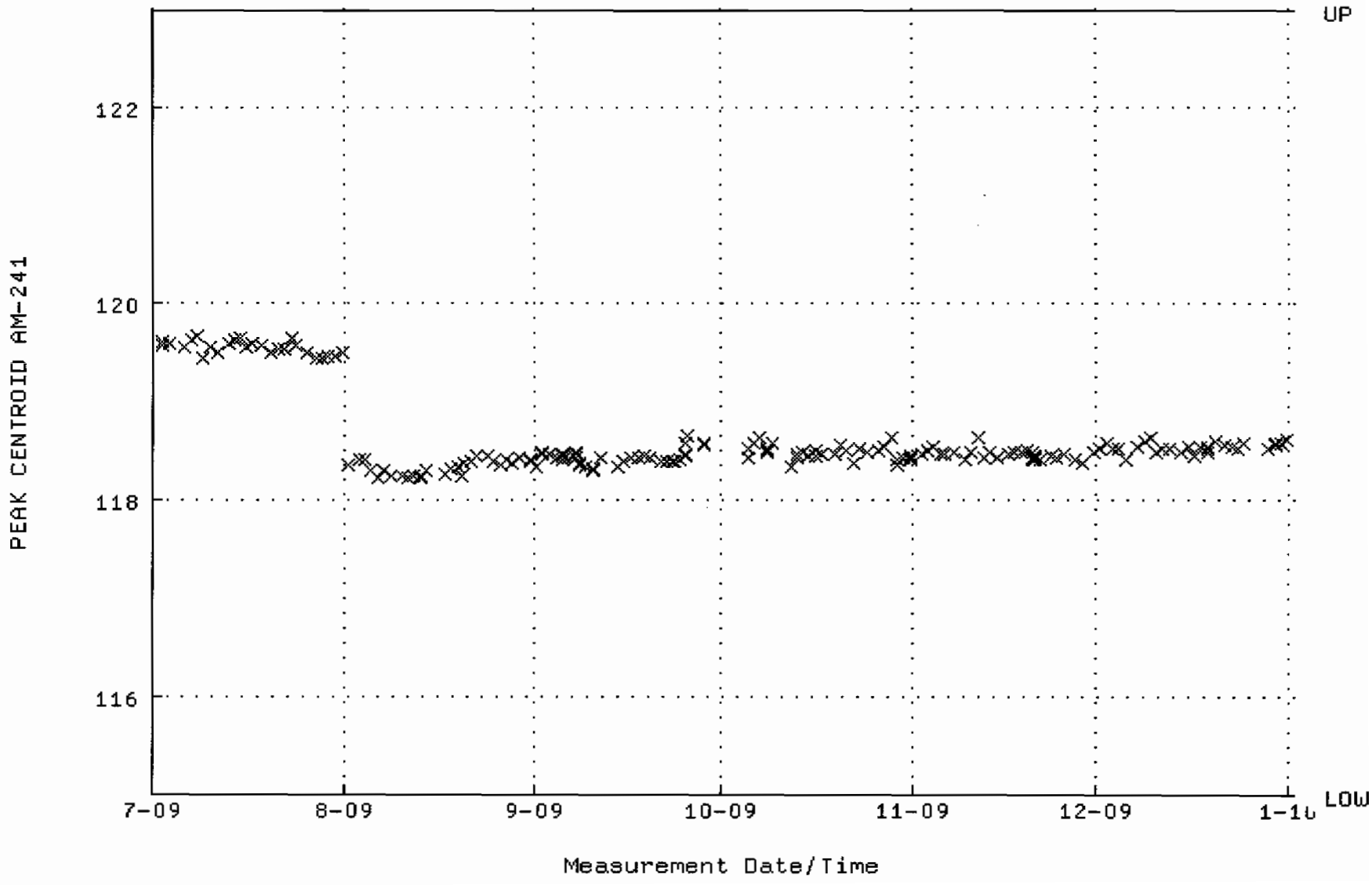
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM04_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-JUL-2009 04:59:00 through 1-JAN-2010 12:00:00
Lower/Upper Lmts: 115.000 through 123.000



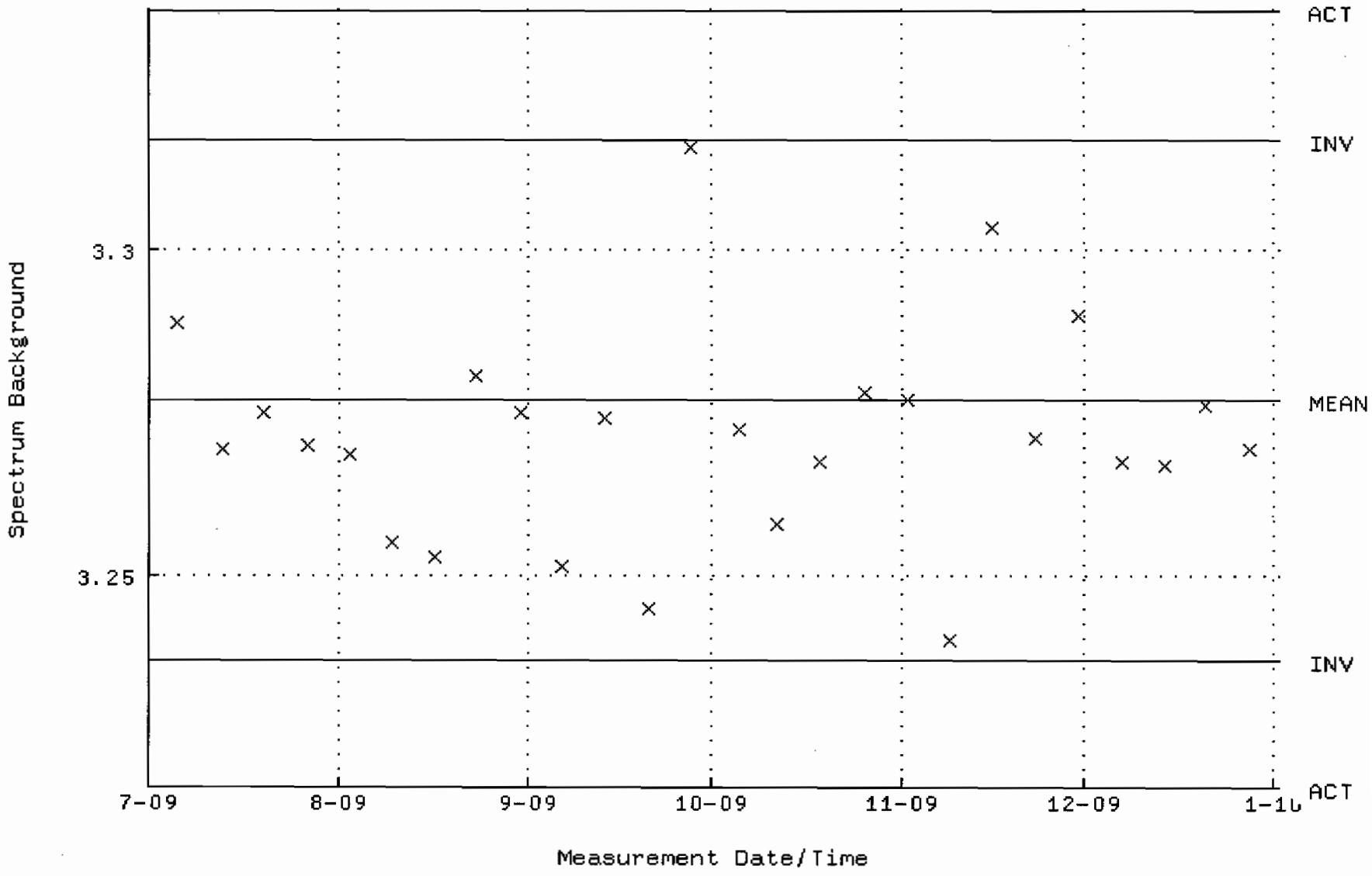
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM04.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 5-JUL-2009 13:49:51 through 1-JAN-2010 12:00:00
Mean +- Std Dev : 1.32050 +- 2.495234E-02 (1.89 %)



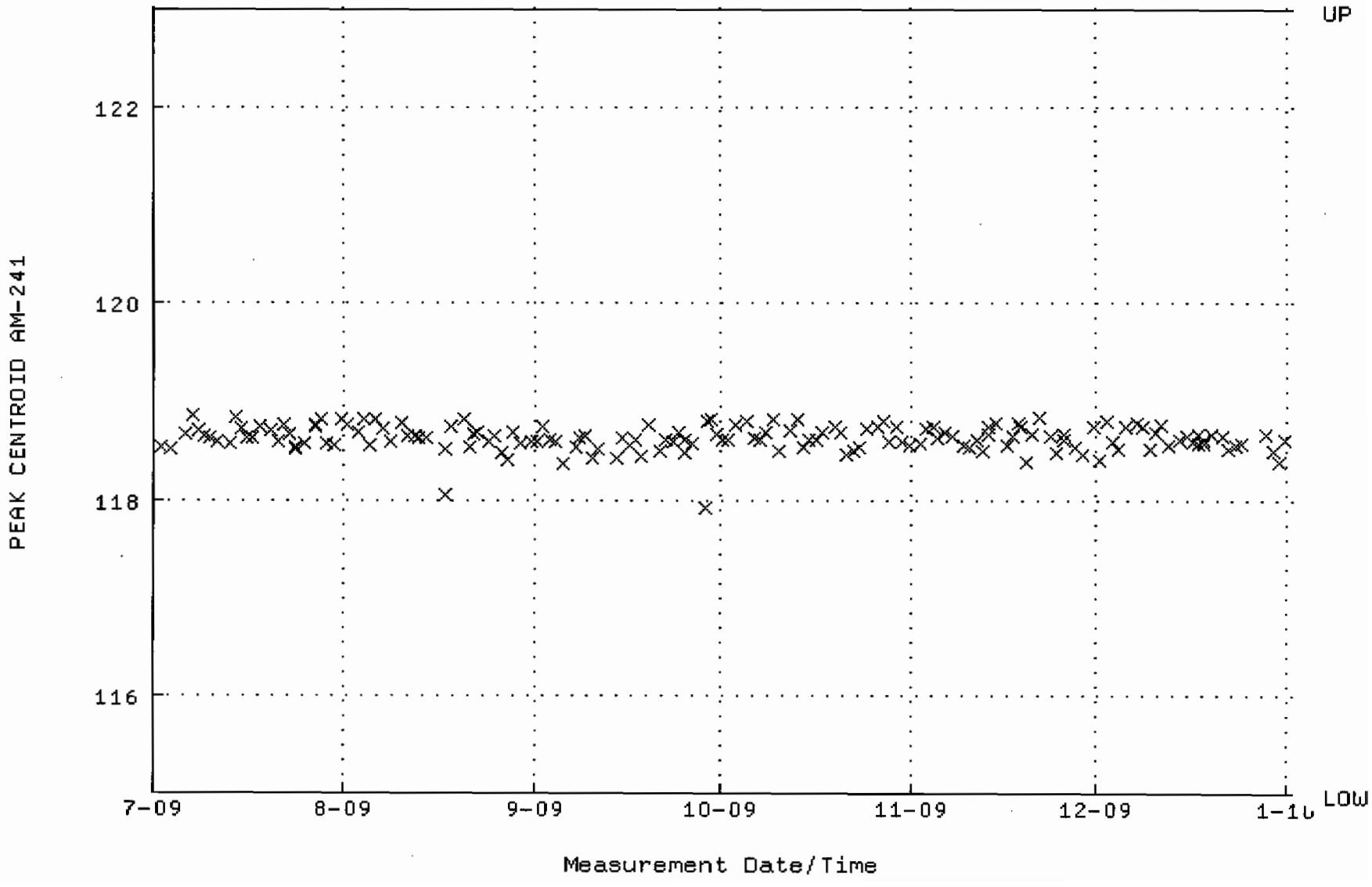
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM13_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-JUL-2009 10:47:30 through 1-JAN-2010 12:00:00
Lower/Upper Lmts: 115.000 through 123.000



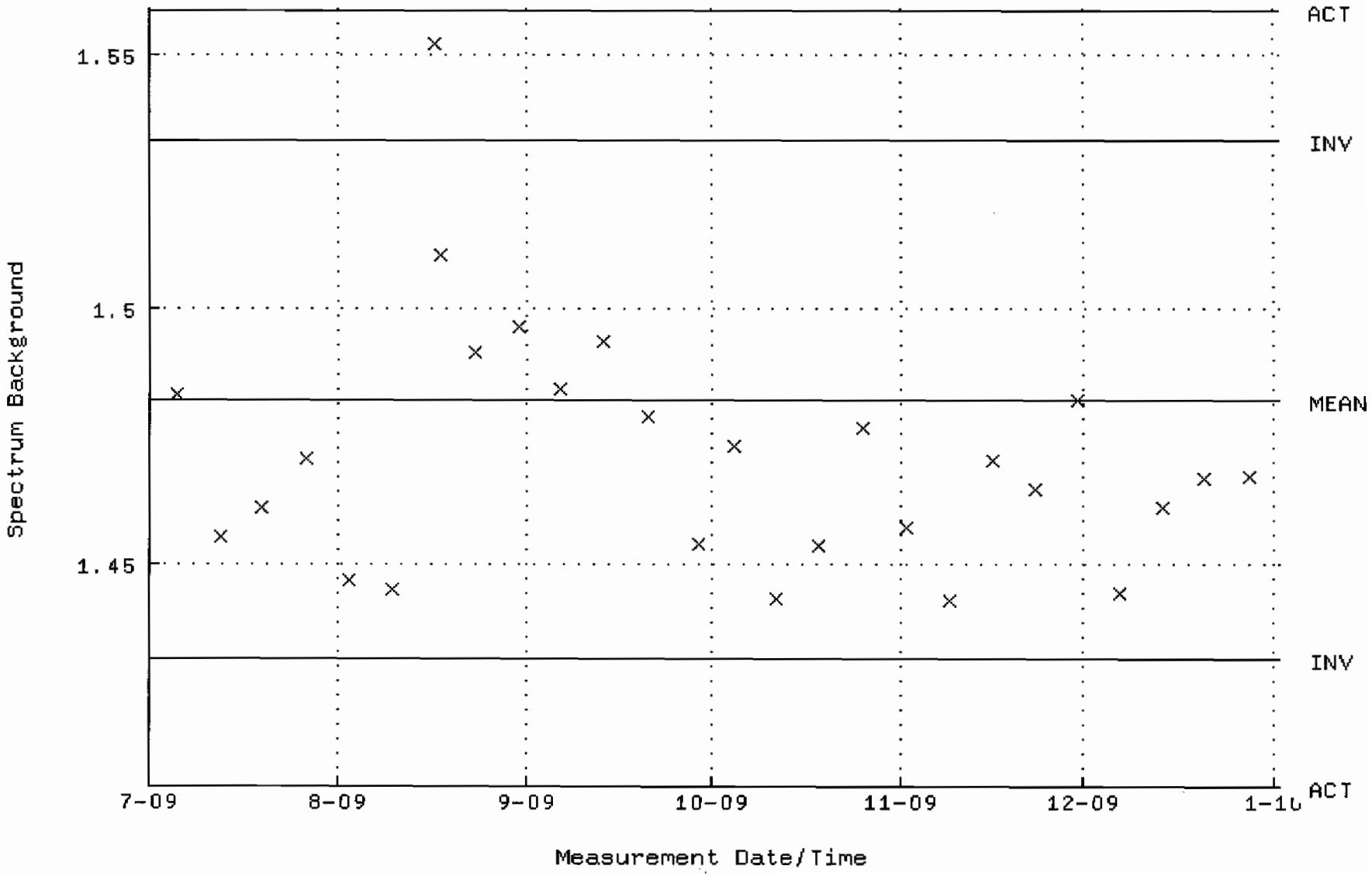
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM13.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 5-JUL-2009 13:52:16 through 1-JAN-2010 12:00:00
Mean +- Std Dev : 3.27712 +- 1.999120E-02 (0.61 %)



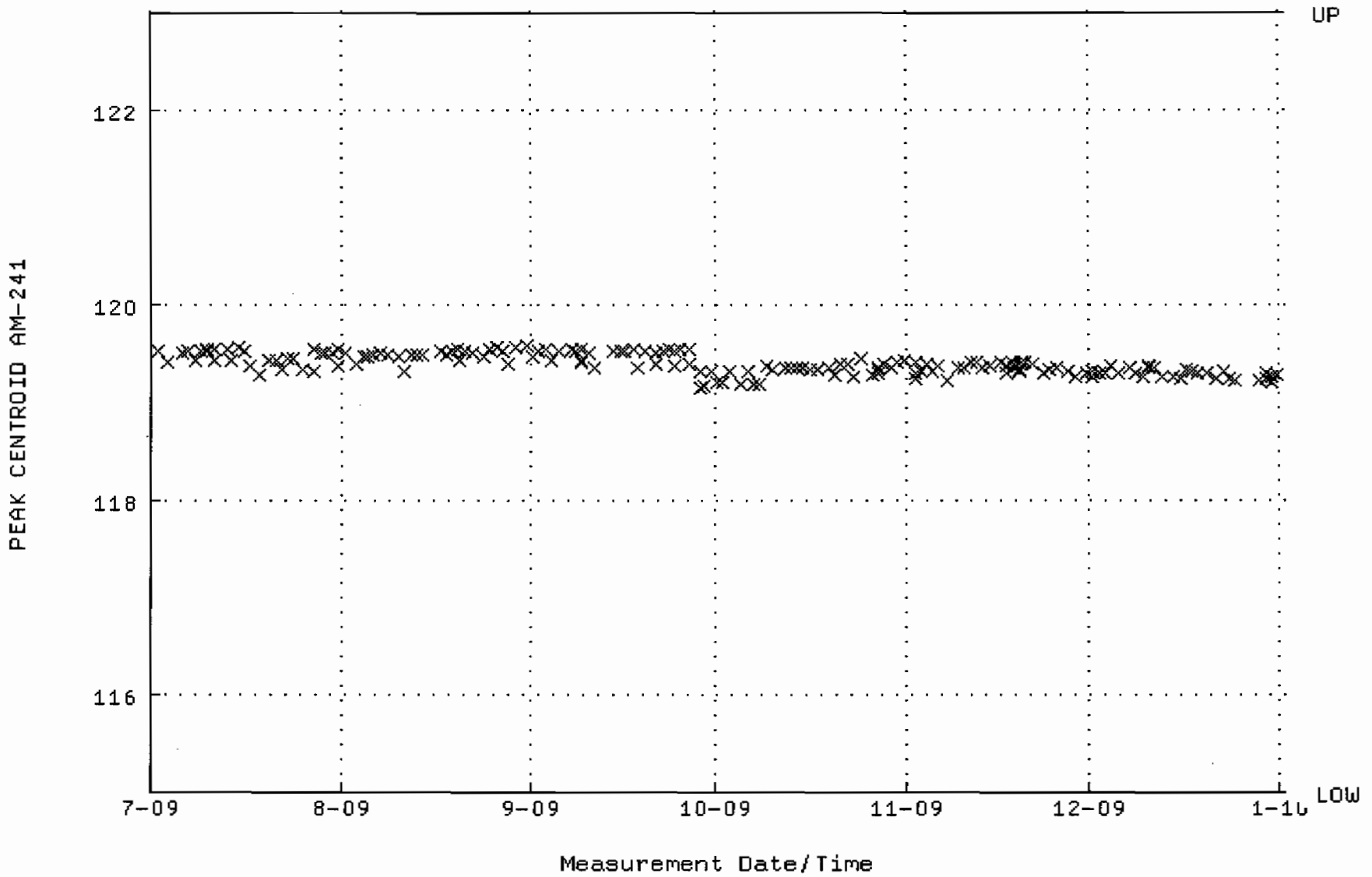
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM14_2LMB.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-JUL-2009 04:59:23 through 1-JAN-2010 12:00:00
Lower/Upper Lmts: 115.000 through 123.000



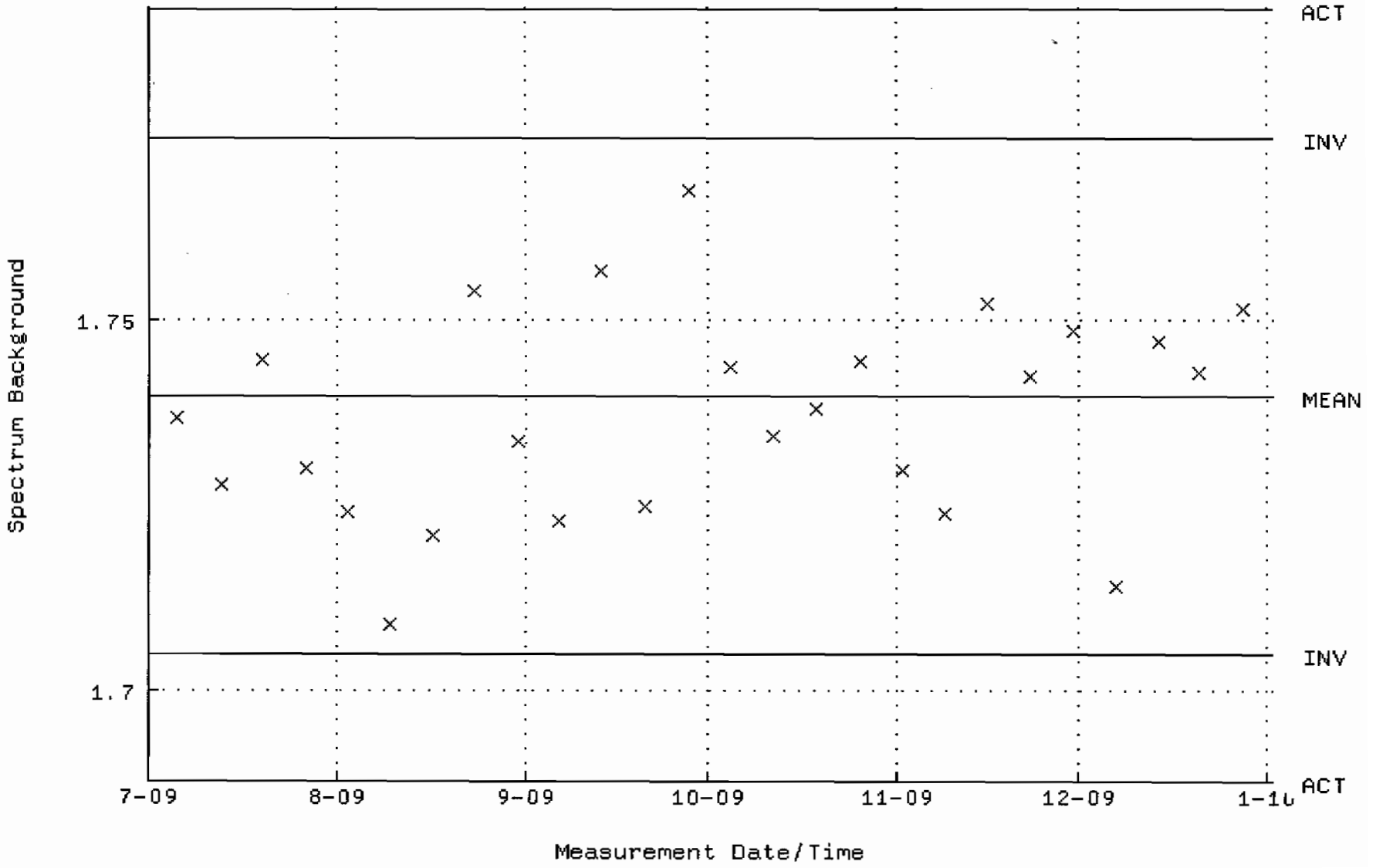
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM14.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 5-JUL-2009 13:52:31 through 1-JAN-2010 12:00:00
Mean +- Std Dev : 1.48240 +- 2.535500E-02 (1.71 %)



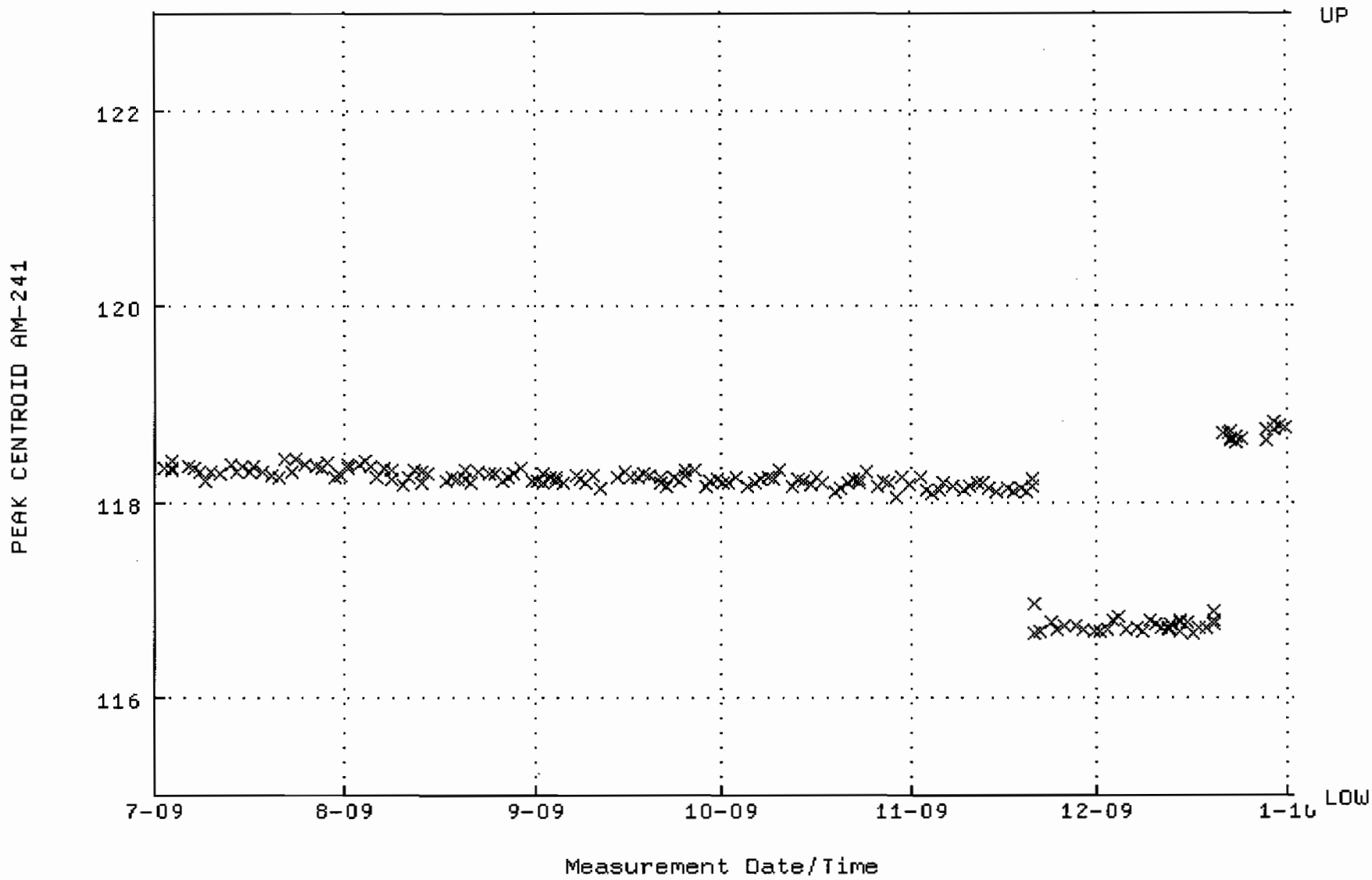
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM16_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-JUL-2009 05:29:19 through 1-JAN-2010 12:00:00
Lower/Upper Lmts: 115.000 through 123.000



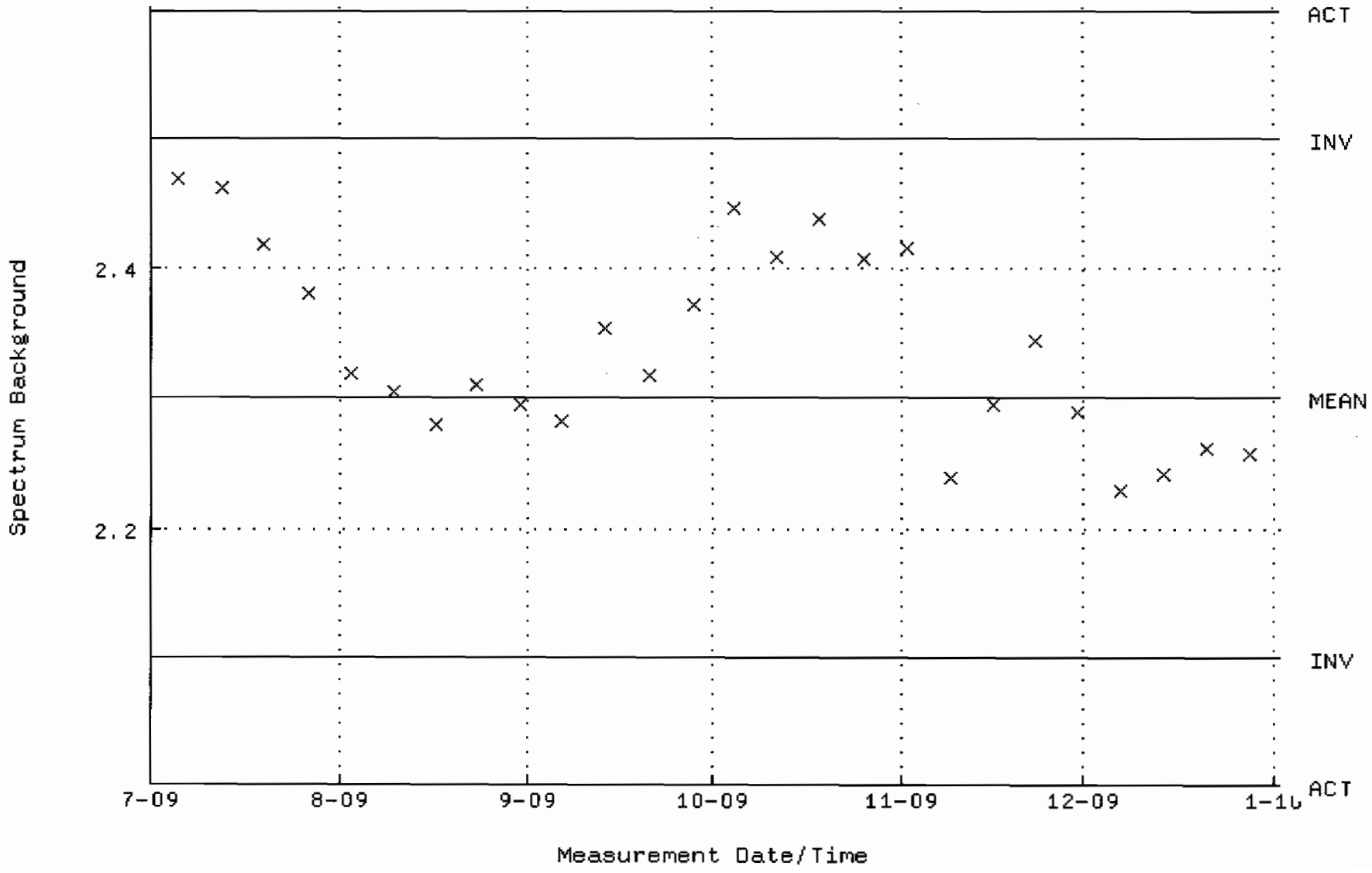
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM16.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 5-JUL-2009 13:52:58 through 1-JAN-2010 12:00:00
Mean +- Std Dev : 1.73980 +- 1.729897E-02 (0.99 %)



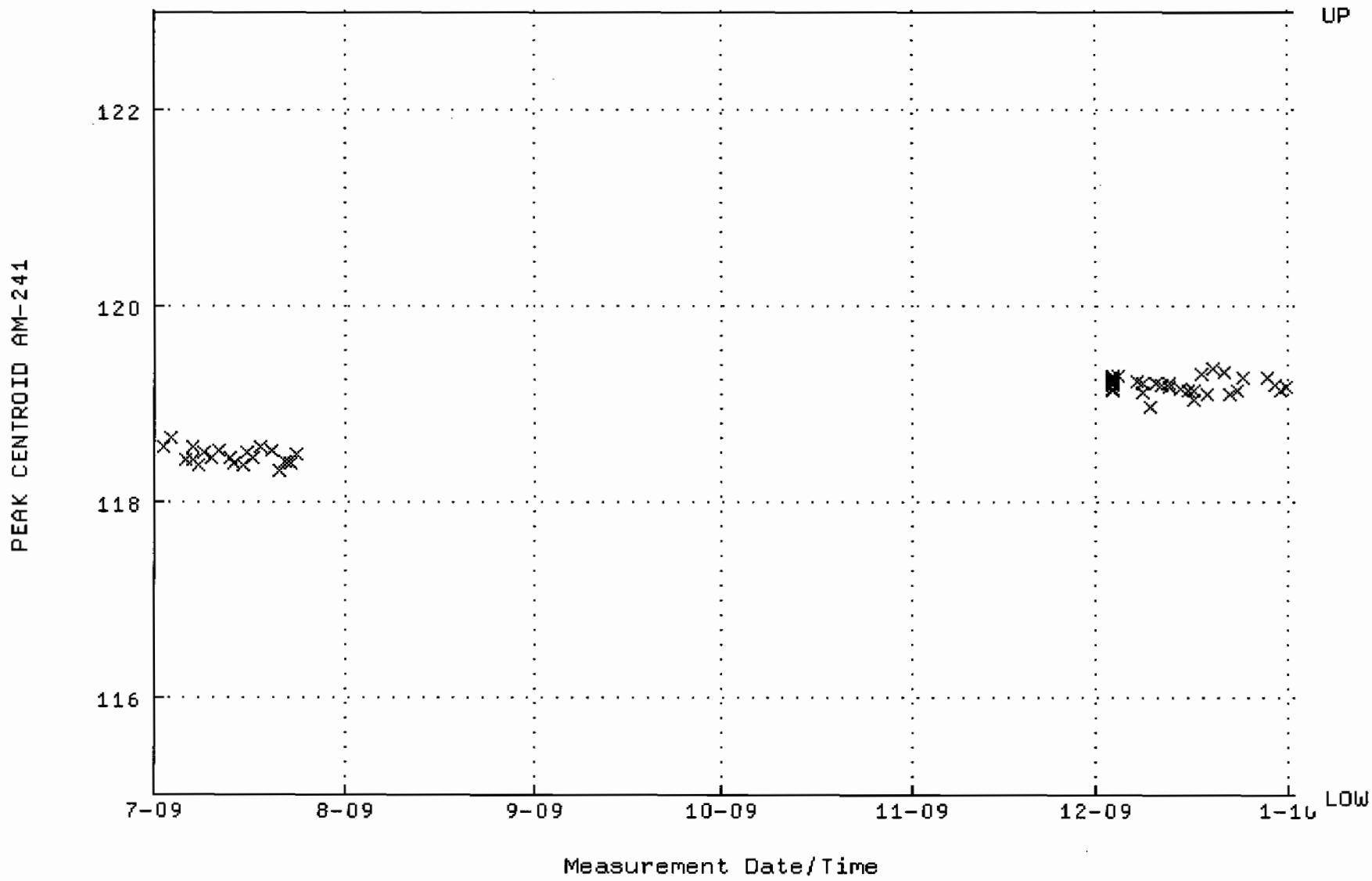
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM18_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-JUL-2009 11:04:02 through 1-JAN-2010 12:00:00
Lower/Upper Lmts: 115.000 through 123.000



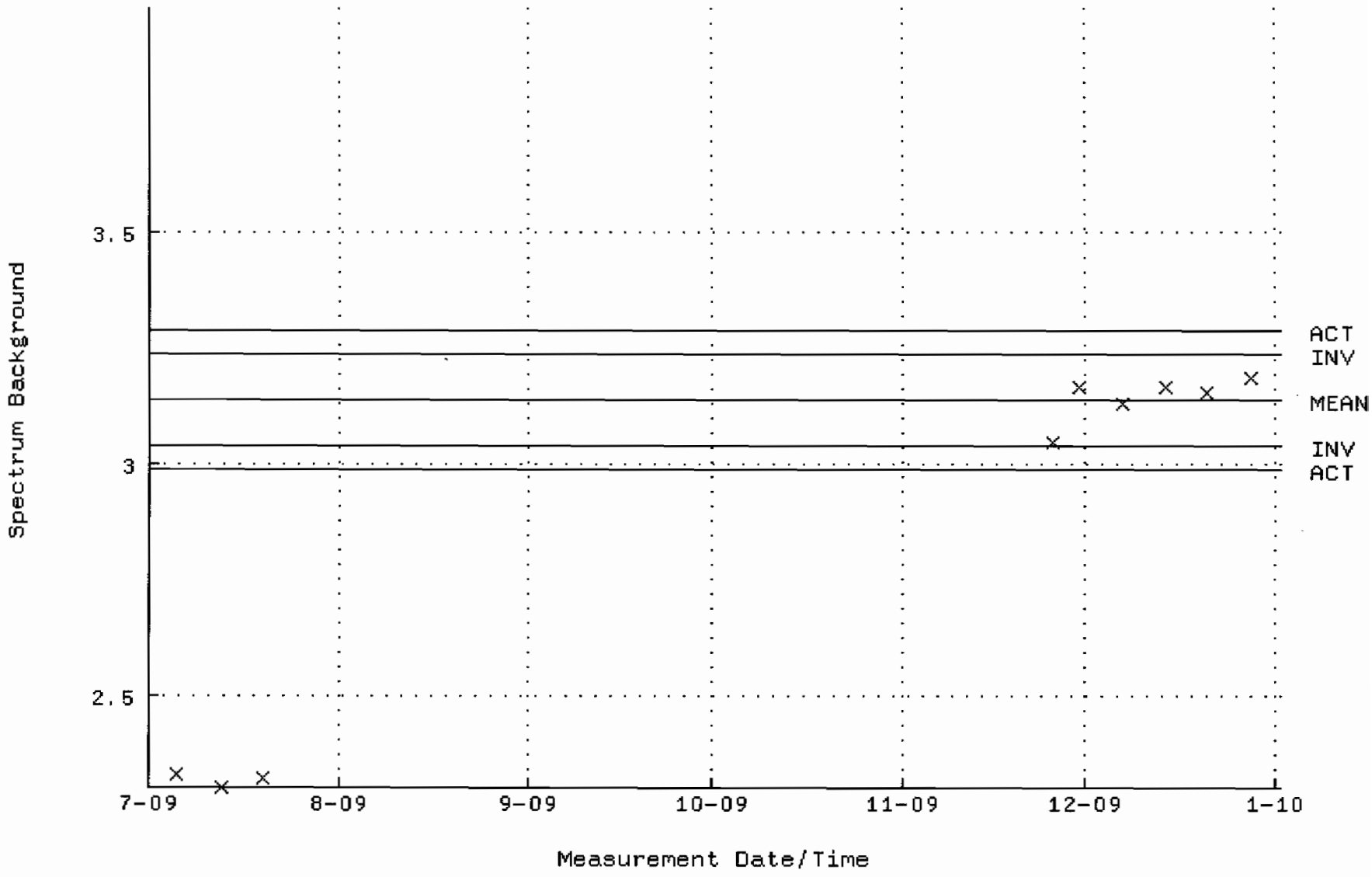
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM18.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 5-JUL-2009 13:53:23 through 1-JAN-2010 12:00:00
Mean +- Std Dev : 2.30164 +- 9.930626E-02 (4.31 %)



QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM22_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-JUL-2009 10:47:50 through 1-JAN-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 : 5-JUL-2009 13:54:18 through 1-JAN-2010 12:00:00
Mean +- Std Dev : 3.13961 +- 4.985064E-02 (1.59 %)



STANDARDS DATA

ANALYTICS
An Isotope Products Laboratories Company

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318
Tel 404•352•8677
Fax 404•352•2837
www.analyticsinc.com

1032

CERTIFICATE OF CALIBRATION
Standard Radionuclide Source

74047-278

5 mL Liquid in Flame Sealed Vial

This standard radionuclide source was prepared using aliquots measured gravimetrically from master radionuclide solution sources. The Am-241 was calibrated by 4 pi alpha liquid scintillation counting. All other radionuclides were calibrated using a germanium gamma spectrometer system. Calibration and purity were checked using a germanium gamma spectrometer system. At the time of calibration no interfering gamma-ray emitting impurities were detected. The gamma-ray emission rates for the most intense gamma-ray lines are given. Analytics maintains traceability to the National Institute of Standards and Technology through a Measurements Assurance Program as described in USNRC Regulatory Guide 4.15, Rev. 1, February, 1979.

Calibration date: October 1, 2006 12:00 EST

ISOTOPE	GAMMA-RAY ENERGY	HALF-LIFE		GAMMA-RAYS PER SECOND	TOTAL UNCERTAINTY %
Am-241	59.5	432	y	3339	3.0
Cd-109	88	462.6	d	4815	3.3
Co-57	122	271.79	d	2409	3.0
Ce-139	166	137.6	d	3408	2.8
Hg-203	279	46.61	d	7522	2.7
Sn-113	392	115.1	d	4728	2.6
Cs-137	662	30.07	y	2973	3.0
Y-88	898	106.6	d	11600	2.6
Co-60	1173	5.2714	y	5780	2.7
Co-60	1332	5.2714	y	5783	2.6
Y-88	1836	106.6	d	12260	2.6

5.31725 grams 4M HCl solution.
P O NUMBER 2734RD, Item 1

SOURCE PREPARED BY: M. Dimitrova
M. Dimitrova, Radiochemist

Q A APPROVED: [signature] 11-28-06

This standard will expire one year after the calibration date.

rec'd 11/30/06
RC-S-045-073-0

Corporate Office
24937 Avenue [illegible]

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ANALYSIS OF UNCERTAINTY FOR MIXED GAMMA STANDARDS
BATCH 127
CALIBRATION DATE: October 1, 2006 12:00 EST

Isotope	Energy (keV)	Calibration Method[1]	Statistics[2]	Calibration[2]	Peak Fitting[2]	Geometry[2]	Impurities[2]	Weighing	Combined Standard Uncertainty	Relative Expanded Uncertinty (k=2)
Cd-109	88	HPGe	0.16	1.1	0.88	0.8	0	0.2	1.64	3.3
Co-57	122	HPGe	0.23	1.1	0.71	0.7	0	0.2	1.52	3.0
Ce-139	166	HPGe	0.17	1.0	0.58	0.7	0	0.2	1.38	2.8
Hg-203	279	HPGe	0.11	1.1	0.34	0.7	0	0.2	1.37	2.7
Sn-113	392	HPGe	0.21	1.0	0.35	0.7	0	0.2	1.30	2.6
Cs-137	662	HPGe	0.36	1.1	0.60	0.7	0	0.2	1.49	3.0
Y-88	898	HPGe	0.19	1.0	0.33	0.7	0	0.2	1.29	2.6
Co-60	1173	HPGe	0.31	.97	0.46	0.7	0	0.2	1.33	2.7
Co-60	1332	HPGe	0.33	.93	0.48	0.7	0	0.2	1.32	2.6
Y-88	1836	HPGe	0.24	1.0	0.35	0.7	0	0.2	1.31	2.6

Optional Additional Isotopes

Pb-210	46.5	4π LS	0.33	1.1	0	0.9	0.30	0.2	1.50	3.0
Am-241	59.5	4π LS	0.33	1.1	0	0.9	0.30	0.2	1.50	3.0
Sr-85	514	IC	0.30	1.1	0	0.7	0.17	0.2	1.36	2.7
Cs-134	605	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Cs-134	796	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Mn-54	835	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Zn-65	1116	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7

[1]Calibration Methods:

4π LS (4 pi Liquid Scintillation Counting)
HPGe (High Purity Germanium Gamma Ray Spectrometer)
IC (Gamma Ray Ionization Chamber)

[2]As Percent (%)from counting data

No interfering gamma emitting impurities were detected during calibration. Depending on the resolution and energy dispersion (keV/channel) of the measuring system, the following spectral conflicts may occur: (1) between the 88 keV gamma-ray and the X-rays emitted in the decay of Hg-203, (2) between the 1333 keV gamma-ray and the 1325 keV single escape peak from the 1836 keV gamma-ray.

Operations Manual Forms, ANA-QA-06 Form 1, Rev. 2, 6/7/2005

Standard Traceability Log Rad

Source Material Info	
Parent Code:	1032
Prepared By:	Daniel Roy
Carrier Conc:	4 M HCL
Reference Date:	10/01/2006
Ampoule Mass (g):	5.31725 g
Uncertainty:	+/- 2.81 %
LogBook No:	RC-S-045-073

A Solution Material Info	
Isotope:	Mixed Gamma
Prepared By:	Daniel Roy
Prep Date:	11/30/2006
Verification Date:	12/02/2009
Expiration Date:	12/02/2010
Primary Code:	1032-A
Dilution(mL):	100 mL
Mass of Parent(g):	5.2579 g
Density(g/mL):	1.0611
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (dpm)) * (conversion dpm to dpm) / (Ampoule Mass(g) *(Dilution Vol)) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (dpm)) * (conversion dpm to dpm) / Density / (Ampoule Mass (g) * (Dilution Vol)) = Parent Activity (dpm/g)
(5.2579 g) * (218817 dpm) * (1 dpm/dpm) / (5.31725 g * 100 mL) = 2163.7461 dpm/mL
(5.2579 g) * (218817 dpm) * (1 dpm/dpm) / (1.0611 g/mL)/ (5.31725 g * 100 mL) = 2039.2400 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Mixed Gamma Standard 1032-A

M. Stamps
12/2/2009

Am-241	Isotope	Result		
	Mixed Gamma N1	2534	pCi/L	- VER. JAR-1
	Mixed Gamma N2	2510	pCi/L	- VER. JAR-3
	Mixed Gamma N3	2413	pCi/L	- VER. JAR. 5
Mean Value (Counting) =	2485.67	**100.00**	**Pass**	
Stdev =	64.065		**Rule 3 (Pass/Fail)**	
Certificate Value =	2485.68018	pCi/L		
Lower Limit =	2357.536524	pCi/L		
Upper Limit =	2613.796809	pCi/L		
Rule 1 (Pass/Fail)	**Pass**			
Two sigma =	128.1301422			
10 % of Mean =	248.56666667			
Rule 2 (Pass/Fail)	**Pass**			

M. Stamps 12/2/09 verification 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

Cs-137	Isotope	Result		
	Mixed Gamma N1	854.2	pCi/L	- VER-JAR-1
	Mixed Gamma N2	907.6	pCi/L	- VER-JAR-3
	Mixed Gamma N3	898.9	pCi/L	- VER-JAR-2
Mean Value (Counting) =	886.90	**95.01**	**Pass**	
Stdev =	28.651	**Rule 3 (Pass/Fail)**		
Certificate Value =	933.44144	pCi/L		
Lower Limit =	829.597644	pCi/L		
Upper Limit =	944.202356	pCi/L		
Rule 1 (Pass/Fail)	**Pass**			
Two sigma =	57.30235597			
10 % of Mean =	88.69000000			
Rule 2 (Pass/Fail)	**Pass**			

M. Stamps 12/2/09

12/4/09

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

Verification for Mixed Gamma Standard 1032-A

M. Stamps
12/2/2009

Co-60 (1332.5)	Isotope	Result	
	Mixed Gamma N1	1572	pCi/L - VER-JAR-5
	Mixed Gamma N2	1495	pCi/L - VER-JAR-2
	Mixed Gamma N3	1501	pCi/L - VER-JAR-3
Mean Value (Counting) =	1522.67	**98.50**	**Pass**
Stdev =	42.829	**Rule 3 (Pass/Fail)**	
Certificate Value =	1545.8378	pCi/L	
Lower Limit =	1437.008431	pCi/L	
Upper Limit =	1608.324902	pCi/L	
Rule 1 (Pass/Fail)	**Pass**		
Two sigma =	85.65823564		
10 % of Mean =	152.26666667		
Rule 2 (Pass/Fail)	**Pass**		

M. Stamps 12/2/09 [illegible] 12/2/09

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.

0244-A Characterization

Sample #	Uranium-233/234 Result (pCi/g)	Uranium-238 Result (pCi/g)	Thorium-230 Result (pCi/g)
0244-A 1	6.59	6.12	25.3
0244-A 2	6.36	6.07	28.5
0244-A 3	5.78	5.53	26.5
0244-A 4	6.48	5.97	25.5
0244-A 5	5.65	5.59	26.2
0244-A 6	6.96	5.78	27.0
0244-A 7	5.95	5.75	24.2
0244-A 8	5.29	5.67	27.2
0244-A 9	5.51	6.05	24.3
0244-A 10	6.37	5.57	25.6
0244-A 11	6.50	5.80	25.8
0244-A 12	6.13	5.42	22.4
0244-A 13	5.49	5.24	24.7
0244-A 14	6.19	5.21	26.9
0244-A 15	6.50	6.27	27.6
0244-A 16	6.50	5.24	24.9
0244-A 17	6.25	6.05	24.7
0244-A 18	6.14	6.00	25.4
0244-A 19	6.19	6.14	26.4
0244-A 20	5.67	5.61	23.2
Mean Value	6.13	5.75	25.62
1 sigma	0.439	0.325	1.493
2 sigma	0.878	0.650	2.986
75% Limit	4.60	4.31	19.22
125% Limit	7.66	7.19	32.03
Expected Result	6.2 +/- 4.0	6.0 +/- 4.0	24.5 +/- 0.6
Achieved Results	6.13 +/- 0.439	5.75 +/- 0.325	25.62 +/- 1.493

REFERENCE DATE 4/14/2000 [signature] 12/1/04

Angela A. Johnson 12/3/04

TRM

Invoice:

5 boxes of TRM-1
10 " " TRM-2 and 3
5 " each of NRM-1 through 6
7 " baghouse dirt

Use 1/4 gm x 10 Samples WITH Together for TRM-2

Table 7. Recommended Concentrations of Tailings Reference Materials (pCi/g)

	TRM–1	TRM–2	TRM–3	TRM–4
U–238	99 ± 6	6.0 ± 4.0	19.6 ± 1.4	44.9 ± 1.6
U–234	105 ± 6	6.2 ± 4.0	19.6 ± 1.9	44.6 ± 1.2
Th–230	471 ± 11	24.5 ± 0.6	58.5 ± 2.1	44.0 ± 1.6
Ra–225	489 ± 17	25.4 ± 0.9	60.3 ± 2.3	42.9 ± 1.2
Pb–210	425 ± 24	22.1 ± 1.2	56.0 ± 2.1	38.9 ± 2.0

Attention Nancy Slater At GEL
Not For Log-In

9911627-01 -> 0

SF 2001-COC (10-97)
Supersedes (5-97) issue

Internal Lab Batch No.

ANALYSIS REQUEST AND CHAIN OF CUSTODY

SAR/WR No. N/A

Press F1 for instructions for each field.

AR/COC- 602945

Dept. No./Mail Stop: 7132 / 1042
Project/Task Manager: PAM PUISSANT
Project Name:
Record Center Code: N/A
Logbook Ref. No.: N/A
Service Order No.:

Date Samples Shipped: 11-16-99 SMO USE
Carrier/Waybill No.: E 72 6494
Lab Contact: EDIE KENT
Lab Destination: G.E.L.
SMO Contact/Phone: Doug Salmi / 844-3110
Send Report to SMO: Suzi Jensen/844-3184

Contract No.: AJ-2480A
Case No.: 10204 1.3
SMO Authorization: Doug Salmi
Bill to: Sandia National Laboratories
Supplier Services, Dept.
P.O. Box 5800 MS 0154

Location — Tech Area VI
Building N/A — Room N/A

Sample No. - Fraction	ER Sample ID or Sample Location Detail	Beginning Depth in Ft.	ER Site No.	Date/Time Collected	Sample Matrix	Container Type	Container Volume	Preservative	Sample Collection Method	Sample Type	Parameter & Method Requested	LAB USE Lab Sample ID
050484 - 001	PEM-1	N/A	N/A	11/15/9 1100	S	P	1 L	4 C	G	SA	See Special	
050485 - 001	TRM-2	N/A	N/A	11/15/9 1100	S	G	1 L	4 C	G	SA	Instructions	
050486 - 001	~~NRM-2~~ NBHD	N/A	N/A	11/15/9 1100	S	G	1 L	4 C	G	SA	Below	
-												
-												
-												
-												
-												
-												
-												

RMMA ☐Yes ☒No Ref. No.
Sample Disposal ☐Return to Client ☒Disposal by lab
Turnaround Time ☒Normal ☐Rush Required Report Date

Sample Tracking (SMO USE)
Date Entered (mm/dd/yy)
Entered by

QC Limits

Sample Team Members	Name	Signature	Init	Company/Organization/Phone
	Douglas E. Perry	Douglas E. Perry	DEP	Weston / 7577 / 845-0887

Special Instructions/QC Requirements
EDD ☐Yes ☒No
Raw data package ☐Yes ☒No
These "samples" are well characterized and materials being sent to GEL on behalf of Hank Mintzer
Please list as separate report.

Abnormal Conditions on Receipt (LAB USE)

1. Relinquished by	Douglas E. Perry SMO	Org. 7577	Date 11-16-99	Time 0900	4. Relinquished by	Org.	Date
1. Received by		Org.	Date	Time	4. Received by	Org.	Date
2. Relinquished by		Org.	Date	Time	5. Relinquished by	Org.	Date
2. Received by		Org.	Date	Time	5. Received by	Org.	Date
3. Relinquished by		Org.	Date	Time	6. Relinquished by	Org.	Date
3. Received by		Org.	Date	Time	6. Received by	Org.	Date

Original — To Accompany Samples, Laboratory Copy (White)
1st Copy — To Accompany Samples, Return to SMO (Blue)
2nd Copy — SMO Suspense Copy (Yellow)
3rd Copy — Field Copy (Pink)

0244-B Characterization

Sample #	Plutonium-239 Result (pCi/g)	Plutonium-238 Result (pCi/g)	Americium-241 Result (pCi/g)
0244-B 1	39.9	7.88	38.4
0244-B 2	44.1	7.97	40.6
0244-B 3	45.8	6.56	31.8
0244-B 4	43.6	7.69	31.5
0244-B 5	43	7.9	40.2
0244-B 6	43.5	7.84	29.4
0244-B 7	41.3	7.67	36
0244-B 8	44.3	6.95	33.2
0244-B 9	42.7	7.2	29.2
0244-B 10	44.9	7.69	30
0244-B 11	41.4	7.22	30.2
0244-B 12	41.3	7.74	36
0244-B 13	39.2	6.65	33.8
0244-B 14	39.6	7.78	31.1
0244-B 15	45.3	8.41	37.3
0244-B 16	38.1	6.74	33.6
0244-B 17	48.5	8.51	30.5
0244-B 18	36.5	7.23	38.6
0244-B 19	35.3	6.98	30.9
0244-B 20	37.4	8.55	31.3
Mean Value	41.79	7.56	33.68
1 sigma	3.418	0.596	3.724
2 sigma	6.835	1.193	7.448
75% Limit	30.75	6.02	24.38
125% Limit	51.25	10.04	40.63
Expected Result	41.0 +/- 3.0	8.03 +/- 0.37	32.5 +/- 1.1
Achieved Results	41.79 +/- 3.418	7.56 +/- .596	33.68 +/- 3.724

REFERENCE DATA 4/14/2000

Amanda L. Fehr 4/30/04
[illegible] 5/1/04

PEM-1

PREPARATION AND CHARACTERIZATION OF THE PERFORMANCE EVALUATION SOIL SAMPLE PEM-1

INTRODUCTION

Rust Geotech (Rust) was contracted by Los Alamos National Laboratory (LANL) to prepare and characterize a soil performance evaluation sample designated PEM-1. This report describes sample preparation, homogeneity assessment, and determination of the concentrations of 28 elements and radioactive isotopes in the sample.

SAMPLE PREPARATION

Rust received nine five-gallon buckets of soil from LANL. The soils were dried overnight in ovens at 103 °C. The large pieces of leaves and sticks were removed and the soils were ground with ceramic-plate grinders to a particle size that passed through a 325 mesh screen. The samples were blended at the proportions specified by LANL for 48 hours in a 3-cubic-foot cross-flow blender. The sample identifications and the amounts used are listed in Table 1.

Table 1. Sample Identifications and Amounts Used to Prepare PEM-1

LANL Sample ID	Amount Used (kg)
AAA 1592	1.7
AAA 2505-1	10.9
AAA 2505-2	12.8
AAA 2750-1	8.4
AAA 2750-2	8.4
AAA 3205	12.6
AAA 8581	4.2
AAB 3417	12.8
AAB 3475	12.6

The blended sample was transferred to three five-gallon plastic containers. While the sample was being transferred, 10 samples were taken at pre-determined time intervals to be used for homogeneity assessment and sample characterization. These samples are believed to be representative of the bulk material.

Attention Nancy Slater At GEL
Not For Log-In

9911627-01-70

SF 2001-COC (10-97)
Supersedes (5-97) issue

Internal Lab Batch No.

ANALYSIS REQUEST AND CHAIN OF CUSTODY

SAR/WR No. N/A

Press F1 for instructions for each field.

AR/COC- 602945

Dept. No./Mail Stop: 7132 / 1042
Project/Task Manager: PAM PUISSANT
Project Name:
Record Center Code: N/A
Logbook Ref. No.: N/A
Service Order No.:

Date Samples Shipped: 11-16-99 SMO USE
Carrier/Waybill No.: 726494
Lab Contact: EDIE KENT
Lab Destination: G.E.L.
SMO Contact/Phone: Doug Salmi / 844-3110
Send Report to SMO: Suzi Jensen/844-3184

Contract No.: AJ-2480A
Case No.: 10204 1.3
SMO Authorization: Doug Salmi
Bill to: Sandia National Laboratories
Supplier Services, Dept.
P.O. Box 5800 MS 0154

Location Tech Area VI
Building N/A Room N/A

Reference LOV (available at SMO)

Sample No. - Fraction	ER Sample ID or Sample Location Detail	Beginning Depth in Ft.	ER Site No.	Date/Time Collected	Sample Matrix	Container Type	Container Volume	Preservative	Sample Collection Method	Sample Type	Parameter & Method Requested	Lab Sample ID (LAB USE)
050484 - 001	PEM-1	N/A	N/A	11/15/9 1100	S	P	1 L	4 C	G	SA	See Special	
050485 - 001	TRM-2	N/A	N/A	11/15/9 1100	S	G	1 L	4 C	G	SA	Instructions	
050486 - 001	~~NRM-2~~ NBHD	N/A	N/A	11/15/9 1100	S	G	1 L	4 C	G	SA	Below	
-												
-												
-												
-												
-												
-												
-												

RMMA ☐Yes ☒No Ref. No.
Sample Disposal ☐Return to Client ☒Disposal by lab
Turnaround Time ☒Normal ☐Rush Required Report Date

Sample Tracking SMO USE
Date Entered (mm/dd/yy)
Entered by
QC limits

Special Instructions/QC Requirements
EDD ☐Yes ☒No
Raw data package ☐Yes ☒No
These "samples" are well characterized rad materials being sent to GEL on behalf of Mark Mintzer
Please list as separate report.

Abnormal Conditions on Receipt LAB USE

Sample Team Members	Name	Signature	Init	Company/Organization/Phone
	Douglas E. Perry	Douglas E. Perry	DEP	Weston / 7577 / 845-0867

1. Relinquished by	Douglas E. Perry	Org. 7577	Date 11-16-99	Time 0900	4. Relinquished by	Org.	Date
1. Received by		Org.	Date	Time	4. Received by	Org.	Date
2. Relinquished by		Org.	Date	Time	5. Relinquished by	Org.	Date
2. Received by		Org.	Date	Time	5. Received by	Org.	Date
3. Relinquished by		Org.	Date	Time	6. Relinquished by	Org.	Date
3. Received by		Org.	Date	Time	6. Received by	Org.	Date

Original To Accompany Samples, Laboratory Copy (White)
1st Copy To Accompany Samples, Return to SMO (Blue)
2nd Copy SMO Suspense Copy (Yellow)
3rd Copy Field Copy (Pink)

CERTIFICATE OF CALIBRATION
ALPHA STANDARD SOLUTION

Radionuclide	Am-243	Customer:	GENERAL ENGINEERING LABS
Half Life:	7380 ± 40 years	P.O.No.:	9290-RAD
Catalog No.:	7243	Reference Date:	January 1 1994 12:00 PST.
Source No.:	445-96-2	Contained Radioactivity:	(Am-243) 101.2 μCi
		Contained Radioactivity:	(Am-243) 3750 kBq

Description of Solution

a. Mass of solution: 5.3739 g (in a 5 ml Flame Sealed Ampoule)

b. Chemical form: Am(NO3)3 in 2N HNO3

c. Carrier content: None added

d. Density: 1.0651 g/ml @ 20°C.

Radioimpurities None detected

Radioactive Daughters

Np-239 (beta active) in equilibrium

Radionuclide Concentration

(Am-243) 18.84 μCi/g

Method of Calibration

Weighed aliquots of the solution were assayed using gamma spectrometry for Np-239:

Energy peak(s) intergrated under: 228, 278 keV.

Branching ratio(s) used: 0.108, 0.1420 gamma rays per decay.

Uncertainty of Measurement

a. Systematic uncertainty in instrument calibration: ±3.0%

b. Random uncertainty in assay: ±0.4%

c. Random uncertainty in weighing(s): ±0.0%

d. Total uncertainty at the 99% confidence level: ±3.0%

NIST Traceability

This calibration is implicitly traceable to the National Institute of Standards and Technology.

Leak Test(s)

See reverse side for Leak Test(s) applied to this source.

Notes

1. Nuclear data were taken from "Table of Radioactive Isotopes", edited by Virginia S. Shirley, 1986.
2. IPL participates in an NIST measurement assurance program to establish and maintain implicit traceability for a number of nuclides, based on the blind assay (and later NIST certification) of Standard Reference Materials (As in NRC Regulatory Guide 4.15).

Anna U. Khan
QUALITY CONTROL

Jan 3, 1994
Date Signed

ISOTOPE PRODUCTS LABORATORIES
1800 North Keystone Street
Burbank, California 91504
(818) 843 - 7000

RC-S-005-32

THE LEAK TEST(S) INDICATED BY THE CHECKED BOX(ES) WAS(WERE) APPLIED TO DETERMINE THE INTEGRITY OF THE SOURCE DESCRIBED ON THE FRONT SIDE

☑ **1. STANDARD WIPE TEST**

The source is wiped over its entire surface with a moistened filter paper disk. After drying, the disk is checked for activity using a windowless proportional counter or end-window G.M. tube. Activity levels exceeding 0.001 μCi beta-gamma or 0.0001 μCi alpha are cause for rejection of the source.

☐ **2. SOAK TEST**

The source is immersed in distilled water and maintained at 50 ± 10° C for a minimum of four hours. After removal of the source, the liquid is a) checked for activity using a liquid scintillation counter, or b) evaporated in a planchet and the residue is checked for activity using a windowless proportional counter or end-window G.M. tube. Activity levels exceeding 0.001 μCi beta-gamma or 0.0001 μCi alpha are cause for rejection of the source.

☐ **3. SOAK TEST -- BERYLLIUM WINDOW**

The source is immersed in distilled water and maintained at 50 ± 10° C for 20 minutes. The entire surface of the source is then wiped with a moistened cotton swab or filter paper disk. After drying, the swab or disk is checked for activity using a windowless proportional counter or end-window G.M. tube. Activity levels exceeding 0.001 μCi beta-gamma or 0.0001 μCi alpha are cause for rejection of the source.

☐ **4. GAS SOURCE TEST (Radioactive Gas)**

The source is placed in a vacuum desiccator and maintained at a pressure of less than 1 mm Hg for not less than 12 hours. The activity is checked by introducing air into the desiccator and monitoring the air with an end-window G.M. tube. Activity levels exceeding 1000 cpm are cause for rejection of the source.

☑ **5. OTHER LEAK TEST**

The ampoule is kept in an inverted position on a filter paper disk for a minimum of 16 hours. The filter paper disk is then checked for activity using a windowless proportional counter or end-window G.M. tube. Activity levels exceeding 0.001 μCi beta-gamma or 0.0001 μCi alpha are cause for rejection of the source.

☐ **6. LEAK TEST NOT APPLICABLE**

The active area of this source is uncovered or is protected by a very thin coating. Although the deposit is adherent, it is not designed or certified to pass a standard leak test. The inactive portions of the source have been checked using the standard wipe test. Levels of removable activity did not exceed 0.001 μCi beta-gamma or 0.0001 μCi alpha at the time of shipment.

Standard Traceability Log Rad

Source Material Info	
Parent Code:	445-96-2
Prepared By:	Genie Bost
Carrier Conc:	2M HNO3
Reference Date:	01/01/1994
Ampoule Mass (g):	5.3739 g
Uncertainty:	+/- 3 %
LogBook No:	RC S 005 032

A Solution Material Info	
Isotope:	Americium-243
Prepared By:	Angela Johnson
Prep Date:	01/05/1994
Verification Date:	05/11/2009
Expiration Date:	05/11/2010
Primary Code:	445-96-2-A
Dilution(mL):	100 mL
Mass of Parent(g):	5.3419 g
Density(g/mL):	1.0785
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (uCi/g)) * (conversion dpm to uCi) / (Dilution Vol) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (uCi/g)) * (conversion dpm to uCi) / Density (g/mL)/ (Dilution Vol) = Parent Activity (dpm/g)
(5.3419 g) * (18.84 uCi/g) * (2220000 dpm/uCi) / (100 mL) = 2234238.9912 dpm/mL
(5.3419 g) * (18.84 uCi/g) * (2220000 dpm/uCi) / (1.0785 g/mL) / (100 mL) = 2071617.0528 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
01/05/1994	Genie Bost	.0058	100	445-96-2-B	120.1 dpm/ml	01/05/1995	01/05/1996
09/10/2004	Amanda Fehr	.0325	1000	445-96-2-BB	67.328 dpm/mL	09/10/2005	09/10/2006
01/05/1994	Genie Bost	.0025	100	445-96-2-C	51.77 dpm/ml	01/05/1995	01/05/1996
05/27/2005	Brenda Burke	.000246	100	445-96-2-CC	5.10613 dpm/mL	05/31/2005	05/31/2006
03/25/1994	Genie Bost	.0064	100	445-96-2-D	132.53 dpm/ml	01/05/1995	01/05/1996
08/16/2005	Brenda Burke	.001224	500	445-96-2-DD	5.07144 dpm/mL	08/18/2007	08/18/2008
08/04/1994	Genie Bost	.0094	100	445-96-2-E	194.65 dpm/ml	01/05/1995	01/05/1996
10/13/2005	Brenda Burke	.0017	500	445-96-2-EE	7.0435 dpm/mL	11/15/2005	11/15/2006
08/04/1994	Genie Bost	.0046	100	445-96-2-F	95.25 dpm/ml	01/05/1995	01/05/1996
10/14/2005	Mary Aders	.0141	500	445-96-2-FF	58.4196 dpm/mL	10/14/2005	10/14/2006
09/01/1994	Genie Bost	.0031	100	445-96-2-G	64.19 dpm/ml	01/05/1995	01/05/1996
05/10/2006	Mary Aders	2.0753	1000	445-96-2-GG	4299.227 dpm/mL	09/30/2008	09/30/2009
10/17/1994	Genie Bost	.0969	100	445-96-2-H	2006.52 dpm/ml	01/05/1995	01/05/1996
06/07/2006	Mary Aders	.0365	1000	445-96-2-HH	75.614 dpm/mL	06/19/2006	06/19/2007
02/06/1995	Genie Bost	.0043	100	445-96-2-I	89.04 dpm/ml	01/05/1995	01/05/1996
05/11/2006	Brenda Burke	.000009739	100	445-96-2-II	.201761 dpm/mL	07/26/2006	07/26/2007
07/20/1995	Theresa Austin	.0041	100	445-96-2-J	84.9 dpm/ml	01/05/1995	01/05/1996
05/01/2007	Daniel Roy	.0352	1000	445-96-2-JJ	72.9209 dpm/ml	04/30/2008	04/30/2009
08/10/1995	Garret Ray	.0952	100	445-96-2-K	1971.32 dpm/ml	01/05/1995	01/05/1996
06/12/2007	Julie Strock	.01038	250	445-96-2-KK	22.1496 dpm/mL	05/28/2008	05/28/2009

09/11/1995	Theresa Austin	1.0525	100	445-96-2-L	21794.23 dpm/ml	01/05/1995	01/05/1996
09/11/1995	Theresa Austin	.5107	100	445-96-2-L-1	111.3 dpm/ml	01/05/1995	01/05/1996
04/28/1998	Richard Kinney	.1264	100	445-96-2-M	2617.4 dpm/ml	04/28/1998	04/28/1999
11/01/2007	Eric Williamson	.001274	500	445-96-2-MM	5.27945 dpm/mL	04/06/2008	04/06/2010
10/12/1998	Gregory Smith	.1348	100	445-96-2-N	2791.32 dpm/mL	01/05/1995	01/05/1996
01/25/1999	Gregory Smith	1.9382	100	445-96-2-N-1	50.16 dpm/ml	01/05/1995	01/05/1996
04/19/2008	Daniel Roy	.0424	1000	445-96-2-NN	87.8366 dpm/ml	04/16/2009	04/16/2010
04/21/1999	Greg Smith	.1645	100	445-96-2-O	3406.32 dpm/mL	04/21/1999	04/21/2000
07/27/1999	Gregory Smith	1.567	100	445-96-2-O-2	50.56 dpm/ml	05/13/1999	05/13/2000
10/12/1999	Richard Kinney	1.5589	100	445-96-2-O-3	50.31 dpm/mL	05/13/1999	05/13/2000
04/21/1999	Greg Smith	1.5309	100	445-96-2-O-1	49.4 dpm/mL	04/21/1999	04/21/2000
11/10/1999	Joe Davis	.1809	100	445-96-2-P	3745.92 dpm/mL	05/13/1999	05/13/2000
01/04/2008	Julie Strock	.00001005	100	445-96-2-PP	.20819 dpm/mL	12/29/2008	12/29/2009
01/28/2000	Angela Johnson	.0354	1000	445-96-2-Q	73.3 dpm/mL	02/08/2001	02/08/2002
09/29/2008	Julie Strock	.0025219	250	445-96-2-QQ	20.8977 dpm/mL	09/30/2008	09/29/2009
04/18/2000	Robert Timm	.429	250	445-96-2-R	3553.34 dpm/mL	04/18/2000	04/18/2001
04/23/2009	Tina Schoneman	.001251	500	445-96-2-RR	4.8075 dpm/mL	04/23/2009	04/23/2010
04/13/2001	Angela Johnson	.1869	100	445-96-2-S	3870.16 dpm/mL	04/13/2001	04/13/2002
05/08/2009	Mary Aders	.0141	1000	445-96-2-SS	29.2098 dpm/ml	05/11/2009	05/11/2010
07/03/2001	Lonnie Morris	2.0057	1000	445-96-2-T-103	4153.225 dpm/mL	07/03/2002	07/03/2003
07/03/2001	Lonnie Morris	2.0057	1000	445-96-2-T-203	4153.225 dpm/mL	07/03/2002	07/03/2003

07/03/2001	Lonnie Morris	2.0057	1000	445-96-2-T-303	4153.225 dpm/mL	07/03/2002	07/03/2003
06/03/2009	Julie Strock	.00000927	100	445-96-2-TT	.1923 dpm/mL	06/05/2009	06/03/2010
08/23/2001	Angela Johnson	.0194	500	445-96-2-U-103	80.34 dpm/mL	08/23/2001	08/23/2002
08/23/2001	Angela Johnson	.0194	500	445-96-2-U-203	80.34 dpm/mL	08/23/2001	08/23/2002
08/23/2001	Angela Johnson	.0194	500	445-96-2-U-303	80.34 dpm/ml	08/23/2001	08/23/2002
06/02/2009	Mary Aders	2.1177	1000	445-96-2-UU	4385.1449 dpm/ml	06/04/2009	06/04/2010
08/27/2001	Angela Johnson	.0394	1000	445-96-2-V-103	81.586 dpm/mL	08/27/2002	08/27/2003
08/27/2001	Angela Johnson	.0394	1000	445-96-2-V-203	81.586 dpm/mL	08/27/2002	08/27/2003
08/27/2001	Angela Johnson	.0394	1000	445-96-2-V-303	81.586 dpm/mL	08/27/2002	08/27/2003
03/17/2003	Angela Johnson	2.1108	1000	445-96-2-W	4370.857 dpm/mL	03/14/2006	03/14/2007
04/14/2003	Lonnie Morris	.0315	1000	445-96-2-X	65.2559 dpm/mL	04/14/2004	04/14/2005
05/03/2003	Tim Chandler	.0103	1000	445-96-2-Y	21.3376 dpm/mL	05/05/2003	05/05/2004
05/05/2003	Eric Williamson	.011	1000	445-96-2-Z	22.7877 dpm/mL	04/03/2007	04/03/2008

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Am-243 Standard *445-96-2-SS*

M. Aders	Isotope	Value	Uncertainty
5/15/2009	445-96-2-SS #1	1.360	0.1690
	445-96-2-SS #2	1.370	0.1690
	445-96-2-SS #3	1.290	0.1590

Mean Value (Counting) =	1.340	101.99	**Pass**
Stdev =	0.043588989		**Rule 3 (Pass/Fail)**

Target =	1.314
Lower Limit =	1.252822021
Upper Limit =	1.427177979
Rule 1 Pass/Fail	**Pass**
Two sigma =	0.087177979
10 % of Mean =	0.134
Rule 2 (Pass/Fail)	**Pass**

The analyst prepared three standard verification sources for standard ***445-96-2-SS*** using 0.1 mL for each source. Each standard was combined with 0.1 mL of ***Cm-244*** standard ***0533-O*** and 50 micrograms of neodymium carrier in a disposable centrifuge tube. Each standard was diluted with 4 mL of 2 M HCl and 6 mL of DI Water. Two mL of 48% HF was added to precipitate Nd(and Americium) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for Am-243 were calculated by comparison to Am-241certified values.

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

Mary Lindeau 5/15/09

[signature] 007509

1374

National Institute of Standards & Technology

Certificate

Standard Reference Material 4334H
Plutonium-242 Radioactivity Standard

This Standard Reference Material (SRM) consists of radioactive plutonium-242 nitrate and nitric acid dissolved in 5 mL of distilled water. The solution is contained in a flame-sealed NIST borosilicate-glass ampoule. The SRM is intended for the calibration of alpha-particle counting instruments and for the monitoring of radiochemical procedures.

Radiological Hazard: The SRM ampoule contains plutonium-242 with a total activity of approximately 150 Bq. Plutonium-242 decays by alpha-particle emission. None of the alpha particles escape from the SRM ampoule. During the decay process, X-rays and gamma rays with energies from 10 keV to 160 keV are also emitted. Most of these photons escape from the SRM ampoule but their intensities are so small that they do not represent a radiation hazard. Approximate unshielded dose rates at several distances (as of the reference time) are given in note [a]*. The SRM should be used only by persons qualified to handle radioactive material.

Chemical Hazard: The SRM ampoule contains nitric acid (HNO_3) with a concentration of 3 moles per liter of water. The solution is corrosive and represents a health hazard if it comes in contact with eyes or skin. If the ampoule is to be opened to transfer the solution, the recommended procedure is given on page 2. The ampoule should be opened only by persons qualified to handle both radioactive material and strong acid solution.

Storage and Handling: The SRM should be stored and used at a temperature between 5 °C and 65 °C. The solution in an unopened ampoule should remain stable and homogeneous until at least January 2015. The ampoule (or any subsequent container) should always be clearly marked as containing radioactive material. If the ampoule is transported it should be packed, marked, labeled, and shipped in accordance with the applicable national, international, and carrier regulations. The solution in the ampoule is a dangerous good (hazardous material) both because of the radioactivity and because of the strong acid.

Preparation: This Standard Reference Material was prepared in the Physics Laboratory, Ionizing Radiation Division, Radioactivity Group, M.P. Unterweger, Acting Group Leader. The overall technical direction and physical measurements leading to certification were provided by L.L. Lucas of the Radioactivity Group. The support aspects involved in the preparation, certification, and issuance of this SRM were coordinated through the Standard Reference Materials Program.

RECEIVED 2/12/04

Lisa R. Karam, Acting Chief
Ionizing Radiation Division

Gaithersburg, Maryland 20899
January 2005

Robert L. Watters, Jr., Chief
Measurement Services Division

*Notes and references are on pages 5 to 7.

DC-S-051-C513

Recommended Procedure for Opening the SRM Ampoule

1) If the SRM solution is to be diluted, it is recommended that the diluting solution have a composition comparable to that of the SRM solution.

2) Wear eye protection, gloves, and protective clothing and work over a tray with absorbent paper in it. Work in a fume hood. In addition to the radioactive material, the solution contains strong acid and is corrosive.

3) Shake the ampoule to wet all of the inside surface of the ampoule. Return the ampoule to the upright position.

4) Check that all of the liquid has drained out of the neck of the ampoule. If necessary, gently tap the neck to speed the process.

5) Holding the ampoule upright, score the narrowest part of the neck with a scribe or diamond pencil.

6) Lightly wet the scored line. This reduces the crack propagation velocity and makes for a cleaner break.

7) Hold the ampoule upright with a paper towel, a wiper, or a support jig. Position the scored line away from you. Using a paper towel or wiper to avoid contamination, snap off the top of the ampoule by pressing the narrowest part of the neck away from you while pulling the tip of the ampoule towards you.

8) Transfer the solution from the ampoule using a pycnometer or a pipet with dispenser handle. NEVER PIPETTE BY MOUTH.

9) Seal any unused SRM solution in a flame-sealed glass ampoule, if possible, to minimize the evaporation loss.

See also reference [4]*.

*Notes and references are on pages 5 to 7.

PROPERTIES OF SRM 4334H

Certified values

Radionuclide	**Plutonium-242**
Reference time	**1200 EST, 07 June 1994 [b]***
Massic activity of the solution [c]	**26.31 $Bq \cdot g^{-1}$**
Relative expanded uncertainty (k=2)	**0.72% [d] [e]**
Solution density	**(1.105 ± 0.002) $g \cdot mL^{-1}$ at 20 °C [f]**

Uncertified values

Physical Properties:			
Source description	Liquid in flame-sealed NIST borosilicate-glass ampoule		
Ampoule specifications	Body outside diameter Wall thickness Barium content Lead-oxide content Other heavy elements	(16.5 ± 0.5) mm (0.60 ± 0.04) mm Less than 2.5% Less than 0.02% Trace quantities	
Solution mass	Approximately 5.5 g		
Chemical Properties:			
Solution composition	Chemical Formula	Concentration ($mol \cdot L^{-1}$)	Mass Fraction ($g \cdot g^{-1}$)
	H_2O HNO_3 $^{242}Pu^{+6}$	50 3.2 8×10^{-7}	0.81 0.19 2×10^{-7}
Radiological Properties:			
Alpha-particle-emitting impurities	None detected [g] [h]. See table on page 5.		
Beta-particle-emitting impurities	Plutonium-241: (0.092 ± 0.018) $Bq \cdot g^{-1}$ [f] [h]		
Photon-emitting impurities	None detected [i]		
Half lives used	Plutonium-242: (373 500 ± 1100) a [j] [5] Plutonium-241: (14.35 ± 0.10) a [j] [5] Americium-241: (432.2 ± 0.7) a [j] [5]		
Calibration method and measuring instrument(s)	Three $4\pi\alpha$ liquid-scintillation counters, a calibrated germanium detector system, and a silicon surface-barrier detector		

*Notes and references are on pages 5 to 7.

EVALUATION OF THE UNCERTAINTY OF THE MASSIC ACTIVITY [d] [e]*

Input Quantity x_i, the source of uncertainty (and individual uncertainty components where appropriate)	Method Used To Evaluate $u(x_i)$, the standard uncertainty of x_i (A) denotes evaluation by statistical methods (B) denotes evaluation by other methods	Relative Uncertainty Of Input Quantity, $u(x_i)/x_i$, (%) [k]	Relative Sensitivity Factor, $\lvert\partial y/\partial x_i\rvert \cdot (x_i/y)$ [m]	Relative Uncertainty Of Output Quantity, $u_i(y)/y$, (%) [n]
Massic alpha-particle emission rate, corrected for background and decay	Standard deviation of the mean for 80 sets of $4\pi\alpha$ liquid-scintillation measurements (A)	0.05	1.0	0.05
Half life of Pu-242	Standard uncertainty of the half life (A)	0.32 [p]	0.00001 [q]	0.000003
Decay-scheme data	Standard uncertainty of the probability of decay by alpha-particle emission (A)	0.001	1.0	0.001
Extrapolation of alpha-particle-count-rate-versus-energy to zero energy	Estimated (B)	0.25	1.0	0.25
Gravimetric measurements	Estimated (B)	0.10	1.0	0.10
Live time [r]	Estimated (B)	0.10	1.0	0.10
Alpha-particle detection efficiency of scintillators	Estimated (B)	0.15	1.0	0.15
Alpha-particle-emitting impurities	Limit of detection (B) [s]	100.	0.001	0.10
Photon-emitting impurities	Limit of detection (B) [s]	100.	0.001	0.10
Relative Combined Standard Uncertainty of the Output Quantity, $u_c(y)/y$, (%)				0.36
Coverage Factor, k				x 2
Relative Expanded Uncertainty of the Output Quantity, U/y, (%)				0.72

*Notes and references are on pages 5 to 7.

RELATIVE ACTIVITIES OF RADIONUCLIDIC IMPURITIES AT THE REFERENCE TIME [b]

Radionuclide	Half Life (years) [j] [5]	Relative Activity As Determined By	
		LLNL	NIST
Plutonium-242	373 500 ± 1100	1.000 000	1.000 000
Plutonium-241	14.35 ± 0.10	- -	0.0035 ± 0.0004 [t]
Plutonium-240	6 564 ± 11	^{239}Pu + ^{240}Pu <0.000 001 [u]	^{239}Pu + ^{240}Pu 0.000 020 ± 0.000 021 [v]
Plutonium-239	24 110 ± 30		
Plutonium-238	87.7 ± 0.1	^{238}Pu + ^{241}Am <0.000 016 [u]	0.000 009 ± 0.000 016 [v]
Americium-241	432.2 ± 0.7		0.000 000 assumed [t]

NOTES

[a] The Sievert is the SI unit for dose equivalent. See reference [1]. One μSv is equal to 0.1 mrem.

Distance from Ampoule (cm):	1	30	100
Approximate Dose Rate (μSv/h):	<0.1	-	-

[b] The plutonium-242 master solution was chemically purified at 1200 EST, 07 June 1994.

[c] **Massic activity** is the preferred name for the quantity activity divided by the total mass of the sample. See reference [1].

[d] The reported value, y, of massic activity (activity per unit mass) at the reference time was not measured directly but was derived from measurements and calculations of other quantities. This can be expressed as $y = f(x_1, x_2, x_3, \ldots x_n)$, where f is a mathematical function derived from the assumed model of the measurement process. The value, x_i, used for each input quantity i has a **standard uncertainty**, $u(x_i)$, that generates a corresponding uncertainty in y, $u_i(y) \equiv |\partial y/\partial x_i| \cdot u(x_i)$, called a **component of combined standard uncertainty** of y. The **combined standard uncertainty** of y, $u_c(y)$, is the positive square root of the sum of the squares of the components of combined standard uncertainty. The combined standard uncertainty is multiplied by a **coverage factor** of $k = 2$ to obtain U, the **expanded uncertainty** of y.

Since it can be assumed that the possible estimated values of the massic activity are approximately normally distributed with approximate standard deviation $u_c(y)$, the unknown value of the massic activity is believed to lie in the interval $y \pm U$ with a level of confidence of approximately 95 percent.

For further information on the expression of uncertainties, see references [2] and [3].

[e] The value of each component of combined standard uncertainty, and hence the value of the expanded uncertainty itself, is a best estimate based upon all available information, but is only approximately known. That is to say, the "uncertainty of the uncertainty" is large and not well known. This is true for uncertainties evaluated by statistical methods (e.g., the relative standard deviation of the standard deviation of the mean for the massic response is approximately 50%) and for uncertainties evaluated by other methods (which could easily be over estimated or under estimated by substantial amounts). The unknown value of the expanded uncertainty is believed to lie in the interval $U/2$ to $2U$ (i.e., within a factor of 2 of the estimated value).

[f] The stated uncertainty is two times the standard uncertainty.

[g] Estimated limits of detection for alpha-particle-emitting impurities, expressed as massic alpha-particle emission rates (numbers of alpha particles per second per gram), are:
0.003 $s^{-1} \cdot g^{-1}$ for energies less than 3.1 MeV,
0.03 $s^{-1} \cdot g^{-1}$ for energies between 3.1 and 4.4 MeV, and
0.003 $s^{-1} \cdot g^{-1}$ for energies greater than 5.0 MeV.

[h] The plutonium-242 master solution was chemically purified at 1200 EST, 07 June 1994. Americium-241, the daughter of plutonium-241, was removed but has been growing in since that time.

[i] Estimated limits of detection for photon-emitting impurities, expressed as massic photon emission rates (numbers of photons per second per gram), are:
5×10^{-5} $s^{-1} \cdot g^{-1}$ for energies between 19 and 39 keV,
7×10^{-5} $s^{-1} \cdot g^{-1}$ for energies between 49 and 92 keV,
2×10^{-5} $s^{-1} \cdot g^{-1}$ for energies between 106 and 507 keV,
1×10^{-5} $s^{-1} \cdot g^{-1}$ for energies between 515 and 1456 keV, and
5×10^{-6} $s^{-1} \cdot g^{-1}$ for energies between 1465 and 2750 keV,
provided that the photons are separated in energy by 4 keV or more from photons emitted in the decay of plutonium-242, plutonium-241, or americium-241.

[j] The stated uncertainty is the standard uncertainty.

[k] Relative standard uncertainty of the input quantity x_i.

[m] The relative change in the output quantity y divided by the relative change in the input quantity x_i. If $|\partial y/\partial x_i| \cdot (x_i/y) = 1.0$, then a 1% change in x_i results in a 1% change in y. If $|\partial y/\partial x_i| \cdot (x_i/y) = 0.05$, then a 1% change in x_i results in a 0.05% change in y.

[n] Relative component of combined standard uncertainty of output quantity y, rounded to two significant figures or less. The relative component of combined standard uncertainty of y is given by $u_i(y)/y \equiv |\partial y/\partial x_i| \cdot u(x_i)/y = |\partial y/\partial x_i| \cdot (x_i/y) \cdot u(x_i)/x_i$. The numerical values of $u(x_i)/x_i$, $|\partial y/\partial x_i| \cdot (x_i/y)$, and $u_i(y)/y$, all dimensionless quantities, are listed in columns 3, 4, and 5, respectively. Thus, the value in column 5 is equal to the value in column 4 multiplied by the value in column 3. The input quantities are independent, or very nearly so. Hence the covariances are zero or negligible.

[p] The relative standard uncertainty of $\lambda \cdot t$ is determined by the relative standard uncertainty of λ (i.e., of the half life). The relative standard uncertainty of t is negligible.

[q] $|\partial y/\partial x_i| \cdot (x_i/y) = |\lambda \cdot t|$

[r] The live time is determined by counting the pulses from a gated crystal-controlled oscillator.

[s] The standard uncertainty for each undetected impurity that might reasonably be expected to be present is estimated to be equal to the estimated limit of detection for that impurity, i.e. $u(x_i)/x_i$ = 100%. $|\partial y/\partial x_i| \cdot (x_i/y)$ = {(response per Bq of impurity)/(response per Bq of Pu-242)}•{(Bq of impurity)/(Bq of Pu-242)}. Thus $u_i(y)/y$ is the relative change in y if the impurity were present with a massic activity equal to the estimated limit of detection.

[t] The stated uncertainty is the standard uncertainty. The plutonium-241 activity was calculated from a gamma-ray measurement of the americium-241 ingrowth as of 25 November 1998, assuming that americium-241 was completely removed at the time of chemical purification.

[u] Using alpha-particle spectrometry, no alpha-particle emission was detected that could reliably be ascribed to these radionuclides. The value shown is an estimated upper limit based upon background and counting statistics. Measurements were made at the Lawrence Livermore National Laboratory (LLNL) in July of 1994.

[v] Using alpha-particle spectrometry, no alpha-particle emission was detected that could reliably be ascribed to these radionuclides. The stated uncertainty is the standard uncertainty. Measurements were made at the National Institute of Standards and Technology (NIST) in June and July of 1999.

REFERENCES

[1] International Organization for Standardization (ISO), *ISO Standards Handbook - Quantities and Units*, 1993. Available from Global Engineering Documents, 12 Inverness Way East, Englewood, CO 80112, U.S.A. Telephone 1-800-854-7179.

[2] International Organization for Standardization (ISO), *Guide to the Expression of Uncertainty in Measurement*, 1993 (corrected and reprinted, 1995). Available from Global Engineering Documents, 12 Inverness Way East, Englewood, CO 80112, U.S.A. Telephone 1-800-854-7179.

[3] B.N. Taylor and C.E. Kuyatt, *Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Results*, NIST Technical Note 1297, 1994. Available from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20407, U.S.A.

[4] National Council on Radiation Protection and Measurements Report No. 58, *A Handbook of Radioactivity Measurements Procedures*, Second Edition, 1985. Available from the National Council on Radiation Protection and Measurements, 7910 Woodmont Avenue, Bethesda, MD 20814 U.S.A.

[5] Evaluated Nuclear Structure Data File (ENSDF), January 2005.

Standard Traceability Log Rad

Source Material Info	
Parent Code:	1374
Prepared By:	Mary Aders
Carrier Conc:	0.5M HNO3
Reference Date:	06/07/1994
Ampoule Mass (g):	5.5 g
Uncertainty:	+/- .72 %
LogBook No:	RC-S-051-093

A Solution Material Info	
Isotope:	Plutonium-242
Prepared By:	Ashley Drochter
Prep Date:	12/02/2009
Verification Date:	12/08/2009
Expiration Date:	12/08/2010
Primary Code:	1374-A
Dilution(mL):	250 mL
Mass of Parent(g):	5.3616 g
Density(g/mL):	1.0136
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (Bq/g)) * (conversion dpm to Bq) / (Dilution Vol) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (Bq/g)) * (conversion dpm to Bq) / Density (g/mL)/ (Dilution Vol) = Parent Activity (dpm/g)
(5.3616 g) * (26.31 Bq/g) * (60 dpm/Bq) / (250 mL) = 33.8553 dpm/mL
(5.3616 g) * (26.31 Bq/g) * (60 dpm/Bq) / (1.0136 g/mL) / (250 mL) = 33.4010 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Pu-242 Standard 1374-*A*

A.Drochter	Isotope	Value	Uncertainty
12/8/2009	1374-A	1.610	0.2480
	1374-A	1.580	0.2510
	1374-A	1.530	0.2440

Mean Value (Counting) =	1.573	103.17	**Pass**
Stdev =	0.040414519		**Rule 3 (Pass/Fail)**

Target =	1.52
Lower Limit =	1.492504296
Upper Limit =	1.654162371
Rule 1 Pass/Fail	**Pass**
Two sigma =	0.080829038
10 % of Mean =	0.157333333
Rule 2 (Pass/Fail)	**Pass**

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

The analyst prepared three standard verification sources for standard 1374-A using 0.1 mL for each source. Each standard was combined with 0.1 mL of Pu239 standard 0338-BB and 50 micrograms of neodymium carrier in a disposable centrifuge tube containing 4 mL of 2 M HCl and 6 mL of DI water. Four drops of 25% Hydrazine dihydrochloride were added to each centrifuge tube and swirled. Two mL of 49% HF was added to precipitate neodymium(and plutonium) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for Pu-242 were calculated by comparison to Pu-239 certified values.

12/9/09

Eckert & Ziegler
Analytics

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318
Tel 404-352-8677
Fax 404-352-2837
www.analyticsinc.com

CERTIFICATE OF CALIBRATION
Standard Radionuclide Source

1283

78747-278

U-232 5 mL Liquid in Flame Sealed Vial

Customer: GEL Laboratories, LLC
P.O. No.: 7319 RD, Item 1

This standard radionuclide source was prepared gravimetrically from a calibrated master solution. The master solution was calibrated using a germanium gamma spectrometer system.

Radionuclide purity and calibration were checked using a germanium gamma spectrometer system. The nuclear decay rate and assay date for this source are given below.

ANALYTICS maintains traceability to the National Institute of Standards and Technology through Measurements Assurance Programs as described in USNRC Reg. Guide 4.15, Revision 1.

Isotope:	U-232
Activity (Bq):	3.754 E3
Half-Life:	68.9 years
Calibration Date:	December 9, 2008 12:00 EST
Relative Expanded Uncertainty (k=2):	5.0%

Comments:
Impurities: U-233 <0.3%, Am-241 <0.16%
5.20453 grams 1M HNO_3 solution.

Source Prepared By: _____
W. Mao, Radiochemist

QA Approved: _____ Date: 12-11-08
D. M. Montgomery, QA Manager

RECEIVED 12/15/08
RC-S-OE

End of Certificate

Standard Traceability Log Rad

Source Material Info	
Parent Code:	1283
Prepared By:	Daniel Roy
Carrier Conc:	1M HNO3
Reference Date:	12/09/2008
Ampoule Mass (g):	5.20453 g
Uncertainty:	+/- 5 %
LogBook No:	RC-S-051-002

A Solution Material Info	
Isotope:	Uranium-232
Prepared By:	Daniel Roy
Prep Date:	12/16/2008
Verification Date:	12/30/2008
Expiration Date:	12/30/2009
Primary Code:	1283-A
Dilution(mL):	100 mL
Mass of Parent(g):	5.0245 g
Density(g/mL):	1.0285
Balance ID:	

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (Bq)) * (conversion dpm to Bq) / (Ampoule Mass(g) *(Dilution Vol)) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (Bq)) * (conversion dpm to Bq) / Density / (Ampoule Mass (g) * (Dilution Vol)) = Parent Activity (dpm/g)
(5.0245 g) * (3754 Bq) * (60 dpm/Bq) / (5.20453 g * 100 mL) = 2174.4872 dpm/mL
(5.0245 g) * (3754 Bq) * (60 dpm/Bq) / (1.0285 g/mL)/ (5.20453 g * 100 mL) = 2114.1700 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
12/16/2008	Daniel Roy	25.1813	1000	1283-B	53.2375 dpm/ml	12/16/2008	12/16/2009
12/30/2008	Tina Schoneman	2.05	250	1283-C	17.336 dpm/mL	12/30/2008	12/30/2009
12/30/2008	Tina Schoneman	.49	250	1283-D	4.1438 dpm/mL	01/09/2009	01/09/2010
01/14/2009	Mary Aders	25.0528	1000	1283-E	52.9659 dpm/ml	01/15/2009	01/15/2010
12/02/2009	Julie Strock	2.076	250	1283-F	17.5561 dpm/mL	01/09/2009	12/30/2009
12/02/2009	Julie Strock	.517	250	1283-G	4.3721 dpm/mL	01/09/2009	12/30/2009
12/09/2009	Ashley Drochter	21.56	1000	1283-H	45.58 dpm/mL	12/09/2009	12/09/2010

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Uranium-232 Standard *1283-H*

Analyst: A. Drochter	Serial #	Value		Uncertainty	
Date: 12/10/09	1283-H N1	2.020	pCi/L	0.238	pCi/L
	1283-H N2	2.000	pCi/L	0.234	pCi/L
	1283-H N3	2.060	pCi/L	0.242	pCi/L

Mean Value (Counting) =	2.027	pCi/L	99.66904	**Pass**
Stdev =	0.030550505	pCi/L		**Rule 3 (Pass/Fail)**

Target =	2.033	pCi/L
Lower Limit =	1.965565657	pCi/L
Upper Limit =	2.087767676	pCi/L
Rule 1 Pass/Fail	**Pass**	
Two sigma =	0.061101009	
10 % of Mean =	0.202666667	
Rule 2 (Pass/Fail)	**Pass**	

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 10% of the certificate value.

The analyst prepared three standard verification sources for standard **1283-H** using 0.1 mL for each source. Each standard was combined with 0.1 mL of **U-238** standard **1163-G** and was diluted to 10 mL with DI water. 50 micrograms of neodymium carrier and 1ml of Titanium Chloride were added. The solution was allowed to sit for 30 seconds. One mL of 49% HF was then added to precipitate neodymium (and uranium) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for U-238 were calculated by comparison to U-232 certified values.

A calculation AMS 12/14/09

RUNLOGS

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER **Batch ID: 940222**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
244125001	SAMPLE	JXD2	1077	16-JAN-10 11:30	DONE		
244125002	SAMPLE	JXD2	1078	16-JAN-10 11:30	DONE		
244125003	SAMPLE	JXD2	1079	16-JAN-10 11:30	DONE		
244125004	SAMPLE	JXD2	1080	16-JAN-10 11:30	DONE		
244137001	SAMPLE	JXD2	1081	16-JAN-10 11:30	DONE		
244137002	SAMPLE	JXD2	1082	16-JAN-10 11:30	DONE		
244137003	SAMPLE	JXD2	1083	16-JAN-10 11:30	DONE		
244137004	SAMPLE	JXD2	1084	16-JAN-10 11:30	DONE		
244137005	SAMPLE	JXD2	1085	16-JAN-10 11:30	DONE		
244137006	SAMPLE	JXD2	1086	16-JAN-10 11:30	DONE		
244137007	SAMPLE	JXD2	1087	16-JAN-10 11:30	DONE		
1202012011	MB	JXD2	1088	16-JAN-10 11:30	DONE		
1202012013	LCS	JXD2	1089	16-JAN-10 11:30	DONE		
1202012012	DUP	JXD2	1090	16-JAN-10 11:30	DONE		

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER **Batch ID: 940223**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
244125001	SAMPLE	JXD2	1047	16-JAN-10 11:29	DONE		
244125002	SAMPLE	JXD2	1048	16-JAN-10 11:29	DONE		
244125003	SAMPLE	JXD2	1065	16-JAN-10 11:29	DONE		
244125004	SAMPLE	JXD2	1066	16-JAN-10 11:29	DONE		
244137001	SAMPLE	JXD2	1067	16-JAN-10 11:29	DONE		
244137002	SAMPLE	JXD2	1068	16-JAN-10 11:29	DONE		
244137003	SAMPLE	JXD2	1069	16-JAN-10 11:29	DONE		
244137004	SAMPLE	JXD2	1070	16-JAN-10 11:29	DONE		
244137005	SAMPLE	JXD2	1071	16-JAN-10 11:29	DONE		
244137006	SAMPLE	JXD2	1072	16-JAN-10 11:29	DONE		
244137007	SAMPLE	JXD2	1073	16-JAN-10 11:29	DONE		
1202012014	MB	JXD2	1074	16-JAN-10 11:29	DONE		
1202012015	DUP	JXD2	1075	16-JAN-10 11:29	DONE		
1202012016	LCS	JXD2	1076	16-JAN-10 11:29	DONE		

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER **Batch ID: 940225**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
1202012019	LCS	JXD2	1161	19-JAN-10 09:35	DONE		
244125003	SAMPLE	JXD2	1162	19-JAN-10 09:35	DONE		
244125004	SAMPLE	JXD2	1163	19-JAN-10 09:35	DONE		
244137001	SAMPLE	JXD2	1164	19-JAN-10 09:35	DONE		
244137002	SAMPLE	JXD2	1165	19-JAN-10 09:35	DONE		
244137003	SAMPLE	JXD2	1166	19-JAN-10 09:35	DONE		
244137004	SAMPLE	JXD2	1167	19-JAN-10 09:35	DONE		
244137005	SAMPLE	JXD2	1168	19-JAN-10 09:35	DONE		
244137006	SAMPLE	JXD2	1169	19-JAN-10 09:35	DONE		
244137007	SAMPLE	JXD2	1170	19-JAN-10 09:35	DONE		
1202012017	MB	JXD2	1171	19-JAN-10 09:35	DONE		
1202012018	DUP	JXD2	1172	19-JAN-10 09:35	DONE		
244125001	SAMPLE	JXD2	1159	19-JAN-10 10:47	DONE		
244125002	SAMPLE	JXD2	1160	19-JAN-10 10:47	DONE		

Instrument Run Log

Instrument Type: GAMMA SPECTROMETER **Batch ID: 940263**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
244125001	SAMPLE	MXR1	GAM14	20-JAN-10 13:29	DONE	CAN	06-MAR-09 00:00
244125002	SAMPLE	MXR1	GAM16	20-JAN-10 13:30	DONE	CAN	16-NOV-09 00:00
244125003	SAMPLE	MXR1	GAM18	20-JAN-10 13:30	DONE	CAN	23-APR-09 00:00
244125004	SAMPLE	MXR1	GAM22	20-JAN-10 13:31	DONE	CAN	02-DEC-09 00:00
244137001	SAMPLE	MXR1	GAM23	20-JAN-10 13:31	DONE	CAN	02-JUN-09 00:00
244137002	SAMPLE	MXR1	GAM01	20-JAN-10 13:43	DONE	CAN	30-JAN-09 00:00
244137003	SAMPLE	MXR1	GAM11	20-JAN-10 13:43	DONE	CAN	18-NOV-09 00:00
244137004	SAMPLE	MXR1	GAM15	20-JAN-10 13:44	DONE	CAN	16-FEB-09 00:00
244137005	SAMPLE	MXR1	GAM17	20-JAN-10 13:44	DONE	CAN	06-JAN-10 00:00
244137006	SAMPLE	MXR1	GAM20	20-JAN-10 13:45	DONE	CAN	26-AUG-09 00:00
244137007	SAMPLE	MXR1	GAM25	20-JAN-10 13:45	DONE	CAN	07-OCT-09 00:00
1202012144	MB	MXR1	GAM04	20-JAN-10 14:09	DONE	CAN	05-MAY-09 00:00
1202012146	LCS	MXR1	GAM13	20-JAN-10 14:47	DONE	CAN	02-FEB-09 00:00
1202012145	DUP	MXR1	GAM18	20-JAN-10 15:47	DONE	CAN	23-APR-09 00:00