

Monday, January 11, 2010

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

These Samples are on:

General Engineering Laboratories, Inc., Charleston, SC.

LANL Request Number: 10-1213

2040 Savage Rd

Per Agreement Number: 126310011

Charleston, SC 29407

Project Cost Code: MR3A05529E00

Please analyse the enclosed samples
according to the schedule indicated:

SHIP DATE: 1/12/2010

TURNAROUND/REPORT DUE: 2/11/2010

TURNAROUND REQ'D: 30 Days

RAD SCREENING: Yes, Below Background

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:



PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
EPA:901.1		1	RE12-10-7256	R	1/8/2010	
		1	RE12-10-7257	R	1/8/2010	
HASL-300:AM-241		1	RE12-10-7256	R	1/8/2010	
		1	RE12-10-7257	R	1/8/2010	
HASL-300:ISOPU		1	RE12-10-7256	R	1/8/2010	
		1	RE12-10-7257	R	1/8/2010	
HASL-300:ISOU		1	RE12-10-7256	R	1/8/2010	
		1	RE12-10-7257	R	1/8/2010	
SW-846:6020		1	RE12-10-7256	R	1/8/2010	

Monday, January 11, 2010

REQUEST NUMBER: 10-1213

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:6020	1	RE12-10-7257	R	1/8/2010	
	SW-846:6850	1	RE12-10-7256	R	1/8/2010	
		1	RE12-10-7257	R	1/8/2010	
	SW-846:7471A	1	RE12-10-7256	R	1/8/2010	
		1	RE12-10-7257	R	1/8/2010	
	SW-846:8270C	1	RE12-10-7256	R	1/8/2010	
		1	RE12-10-7257	R	1/8/2010	
	SW-846:8321A_MOD	1	RE12-10-7256	R	1/8/2010	
		1	RE12-10-7257	R	1/8/2010	
	SW-846:9012A	1	RE12-10-7256	R	1/8/2010	
		1	RE12-10-7257	R	1/8/2010	

Final Page of REQUEST NUMBER 10-1213

Monday, January 11, 2010

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-1213C

LOS ALAMOS

REQUEST NUMBER: 10-1213

NATIONAL LABORATORY

ATTN: Valerie Davis

TURNAROUND/REPORT DUE: 2/11/2010

General Engineering Laboratories, Inc.,
Charleston, SC.

TURNAROUND REQ'D: 30

2040 Savage Rd

Charleston, SC 29407

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
RE12-10-7257	1	AMBER GLASS	8270C+NMED Exp	Ice	R
RE12-10-7257	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE12-10-7257	1	POLY	Met+U+CLO4+CN	Ice	R
RE12-10-7256	1	AMBER GLASS	8270C+NMED Exp	Ice	R
RE12-10-7256	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE12-10-7256	1	POLY	Met+U+CLO4+CN	Ice	R

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

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

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

Printed Name

Signature

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2480

EVENT NAME: 4th Qtr. FY09 - AOC 12-004(a) - Threemile Canyon

SAMPLE ID: RE12-10-7256

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/08/2010		MEDIA: OBT3		Allh	
TIME COLLECTED (HH:MM)		0940		SUB-MEDIA: TUFF 1		NA	
PRS ID:	12-004(a)	ok		SAMPLE TECH CODE: HA		ok	
LOCATION ID:	12-610541	↓		FIELD QC TYPE: NA		↓	
LOCATION TYPE:	GENERIC	↓		FIELD PREP: NA		↓	
TOP DEPTH:	0	0.0		SAMPLE USAGE: INV		↓	
BOTTOM DEPTH:	0	0.6		SCREEN/PORT DESC: NA			
FIELD MATRIX:	R	S		EXCAVATED: YES/NO/NA			
COMPOSITE TYPE: NA		COMPOSITE TIME INTERVAL: NA		WATER FLOWING: YES/NO/NA			
BOREHOLE: YES/NO/NA		BOREHOLE DECLINATION: NA		BOREHOLE DIRECTION: NA			

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Normal	8270C+NMED Exp	500 ML AMBER GLASS	Ice	Y	
1	↓	AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1	↓	Met+U+CLO4+C N	1 GAL POLY 1 L REM 1/7/10	Ice	Y	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC:

Brown silty sand, mostly frozen, few roots and rocks

SAMPLE COMMENTS:

LOCATION DESC: 4a-7, south of bunker entrance

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha = 11 dpm
Beta/Gamma = 2490 dpm

14E neg
PID $\frac{\text{Ambient Reading}}{0.0} = 0.0$ ppm

COLLECTED BY (PRINT)

TLMcFarland

REVIEWED BY (PRINT)

Jon Marin

RELINQUISHED BY (Printed Name) Jon MARIN (Signature) Jon R. Marin	Date/Time 1/8/10 1052	RECEIVED BY (Printed Name) K. Greene (Signature) [Signature]	Date/Time 1/8/10 10:52
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2480

EVENT NAME: 4th Qtr. FY09 - AOC 12-004(a) - Threemile Canyon

SAMPLE ID: RE12-10-7257

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/08/2010		MEDIA:	QBT3		OK
TIME COLLECTED (HH:MM)		0948		SUB-MEDIA:	TUFF 1		↓
PRS ID:	12-004(a)			SAMPLE TECH CODE:	HA		OK
LOCATION ID:	12-610541			FIELD QC TYPE:	NA		↓
LOCATION TYPE:	GENERIC			FIELD PREP:	NA		↓
TOP DEPTH:	0		1.0	SAMPLE USAGE:	INV		↓
BOTTOM DEPTH:	0		2.0	SCREEN/PORT DESC:	NA		
FIELD MATRIX:	R		R	EXCAVATED: YES/NO/NA			
COMPOSITE TYPE:	NA			COMPOSITE TIME INTERVAL:	NA		
BOREHOLE: YES/NO/NA				BOREHOLE DECLINATION:	NA		
				BOREHOLE DIRECTION:	NA		

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Normal	8270C+NMED Exp	500 ML AMBER GLASS	Ice	Y	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1		Met+U+CLO4+C N	1 GAL POLY 1L GRM 1/2/10	Ice	Y	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC:

Gray tuff and brown clayey frozen sand

SAMPLE COMMENTS:

Hit tuff at 1.2 ft

LOCATION DESC:

Ha-7

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha = 33 dpm
Beta/Gamma = 2610 dpm

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

COLLECTED BY (PRINT)

JLMcFarland

REVIEWED BY (PRINT)

Jon MARIN

RELINQUISHED BY (Printed Name) Jon MARIN (Signature) Jon R. Marin	Date/Time 1/8/10 10:52	RECEIVED BY (Printed Name) K. G. ... (Signature) [Signature]	Date/Time 1/8/10 10:52
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time



133 State Road 4, White Rock, NM 87544

505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-10-00013

Request or PO Number:

Client Sample ID: RE12-10-7256

ARS Sample ID: ARS2-10-00013-001

Sample Collection Date: 01/08/10 09:40

Date Received: 01/11/10 00:00

Sample Matrix: Soil/Solid

Report Date: 01/11/10 12:49

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	57.71	36.58	39.18	37.25		pCi/g	EPA 900.0M	1/11/2010	ME	N/A
GROSS BETA	44.08	16.58	19.19	17.44		pCi/g	EPA 900.0M	1/11/2010	ME	N/A
NA-22	0.00	0.00	0.11	0.00		pCi/g	EPA 901.1M	1/11/2010	ME	N/A
K-40	25.73	8.99	1.79	9.02		pCi/g	EPA 901.1M	1/11/2010	ME	N/A
CO-60	0.07	0.14	0.12	0.14		pCi/g	EPA 901.1M	1/11/2010	ME	N/A
CS-134	0.48	0.33	0.09	0.33		pCi/g	EPA 901.1M	1/11/2010	ME	N/A
CS-137	0.40	0.27	0.07	0.27		pCi/g	EPA 901.1M	1/11/2010	ME	N/A
EU-152	0.00	12.20	0.14	12.20		pCi/g	EPA 901.1M	1/11/2010	ME	N/A
PB-212	1.71	0.53	0.10	0.54		pCi/g	EPA 901.1M	1/11/2010	ME	N/A
RA-228	-0.14	182.72	0.41	182.72		pCi/g	EPA 901.1M	1/11/2010	ME	N/A
U-235	2.22	1.10	0.34	1.10		pCi/g	EPA 901.1M	1/11/2010	ME	N/A
U-238	3.57	2.88	1.21	2.99		pCi/g	EPA 901.1M	1/11/2010	ME	N/A
AM-241	0.11	0.18	0.09	0.18		pCi/g	EPA 901.1M	1/11/2010	ME	N/A

NOTES: % Moisture: 1.72

Quality Assurance Review

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

LELAP Certificate# 30658

NELAP Certificate # E87558



133 State Road 4, White Rock, NM 87544

505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-10-00013

Request or PO Number:

Client Sample ID: RE12-10-7257

ARS Sample ID: ARS2-10-00013-002

Sample Collection Date: 01/08/10 09:48

Date Received: 01/11/10 00:00

Sample Matrix: Soil/Solid

Report Date: 01/11/10 12:49

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	41.25	28.73	28.64	29.17		pCi/g	EPA 900.0M	1/11/2010	ME	N/A
GROSS BETA	51.22	16.69	17.99	17.83		pCi/g	EPA 900.0M	1/11/2010	ME	N/A
NA-22	0.00	0.00	0.11	0.00		pCi/g	EPA 901.1M	1/11/2010	ME	N/A
K-40	29.23	9.16	1.66	9.20		pCi/g	EPA 901.1M	1/11/2010	ME	N/A
CO-60	0.00	10.84	0.11	10.84		pCi/g	EPA 901.1M	1/11/2010	ME	N/A
CS-134	0.40	0.22	0.08	0.22		pCi/g	EPA 901.1M	1/11/2010	ME	N/A
CS-137	0.28	0.22	0.07	0.22		pCi/g	EPA 901.1M	1/11/2010	ME	N/A
EU-152	0.00	11.27	0.13	11.27		pCi/g	EPA 901.1M	1/11/2010	ME	N/A
PB-212	1.53	0.57	0.20	0.58		pCi/g	EPA 901.1M	1/11/2010	ME	N/A
RA-228	1.33	0.77	0.29	0.77		pCi/g	EPA 901.1M	1/11/2010	ME	N/A
U-235	1.12	0.71	0.27	0.71		pCi/g	EPA 901.1M	1/11/2010	ME	N/A
U-238	4.28	3.48	1.35	3.61		pCi/g	EPA 901.1M	1/11/2010	ME	N/A
AM-241	0.00	0.04	0.08	0.04		pCi/g	EPA 901.1M	1/11/2010	ME	N/A

NOTES: % Moisture: 0.76

Quality Assurance Review

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

LELAP Certificate# 30658

NELAP Certificate # E87558

Rad Screening Data Release Form

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

RF 12-10-7256
7257
~~7258~~

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

.....

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

Reason:

.....

Print Last Name MAVIN Signature Jan R. Marvin Date 1/8/09

DATA VALIDATION COVER SHEET

5115-1

Data Validation Cover Sheet

Records Use only



Section I.

REQUEST NUMBER: 10-1213 VALIDATION DATE: 02/26/10 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Peter Steves ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

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

Section II. Completeness Check

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

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

- The ICV and/or CCV %Ds were > 20% for pyridine; hexachlorocyclopentadiene; 3-nitroaniline; 4-nitroaniline and 2,4-dinitrotoluene. The associated sample results were NDs and, thus, were qualified UJ,SV7c.
- It should be noted that the parent sample for the QC analyses was from another LANL RN. No sample data were qualified as a result.


Reviewed by: Mary Donovan Level: I Date: 02/26/10

VALIDATOR'S SIGNATURE:


A handwritten signature in black ink, appearing to read 'Peter Steves'.

Mr. Peter Steves


DATE: 02/26/10

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST	
5115-2 Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist	Records Use only 

Yes No N/A (Check One)				Assign Qualifier Listed Below If Criterion = Yes	
				Non-detected Analyte	Detected Analyte
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, SV9	J-, SV9
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2. The holding time was >2 times the applicable holding time requirement.	R, SV9a	J-, SV9a
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3. The affected analytes are regarded as rejected because the analytical holding time was exceeded.	R, SV9b	R, SV9b
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	4. The instrument performance sample did not pass method acceptance criteria.	R, SV16	R, SV16
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	5. Samples were analyzed outside specific method tune time criteria.	N/A	J, SV16b
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	6. The required instrument performance sample information is missing. Contact the SMO or external laboratory for information.	R, SV16c	R, SV16c
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, SV7	J, SV7
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, SV7a	J, SV7a
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9. The affected analytes were analyzed with an RRF of <0.05 in the initial calibration and/or Continuing Calibration Verification (CCV).	R, SV7b	J, SV7b
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10. The Initial Calibration Verification (ICV) and/or CCV were recovered outside the method-specific limits.	UJ, SV7c	J, SV7c
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	11. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, SV7d	J, SV7d

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST	
5115-2 Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist	Records Use only 

Yes No N/A				Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	12. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, SV7f	R, SV7f
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	13. The sample result is $\leq 5X$ (10X for common organic laboratory contaminants) the concentration of the related analyte in the method blank.	U, SV4	J, V4a
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	14. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was greater than 5X (10X for common laboratory contaminants).	N/A	J, SV4a
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	15. The sample result is $\leq 5X$ the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	UJ, SV4d	N/A
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	16. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV4e	R, SV4e
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	17. The IS retention time has shifted by more than 30 seconds.	UJ, SV0	J, SV0
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	18. Analyte is positively confirmed but outside the IS retention time window; however, spectral matches must be provided.	N/A	J, SV0a
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	19. Required IS retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV0b	R, SV0b
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	20. The quantitating IS area count is $<10\%$ of the expected value, which indicates increased potential for false negative results and other possible problems with sample quantitation. Follow method-specific windows.	R, SV1a	J, SV1a

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST	
5115-2 Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist	Records Use only 

Yes No N/A				Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	21. The IS area count for the quantitating IS is <50% but >10% for organics window relation to the previous continuing calibration. Follow method-specific windows.	UJ, SV1b	J, SV1b
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	22. The IS area count for the quantitating IS is >200% of the area count for the previous continuing calibration. Follow method-specific windows.	UJ, SV1c	J, SV1c
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	23. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV1d	R, SV1d
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	24. The surrogate is <10%R. Follow the external laboratory limits located within the associated data package.	R, SV3	J-, SV3
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	25. The surrogate is < the Lower Acceptance Level (LAL) but ≥10%R. Follow the external laboratory limits located within the associated data package.	UJ, SV3a	J-, SV3a
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	26. The surrogate %R value is > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, SV3b
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	27. 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, SV3c	J, SV3c
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	28. Required surrogate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV3d	R, SV3d
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	29. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, SV12	J-, SV12

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST

5115-2

Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist

Records Use only



Yes No N/A				Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	30. The LCS percent recovery was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, SV12a	J-, SV12a
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	31. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, SV12b
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	32. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV12c	R, SV12c
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	33. The affected analyte is considered not detected because mass spectrum did not meet specifications.	N/A	U, SV8
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	34. The mass spectrum column documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV8a	R, SV8a
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	35. Duplicate, dilution, or reanalysis.	UJ, SV88	J, SV88
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	36. The affected analytes have elevated detection limits and may not meet project DQOs 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, SV15	R, SV15
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	37. Qualification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB, NQ, NQ
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	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, SV19	J, R, SV19

Semi-Volatile
Certificate of Analysis
Sample Summary

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SDG Number: 10-1213
Lab Sample ID: 244604002

Date Collected: 01/08/2010 12:00
Date Received: 01/13/2010 08:55
Client: LANL010
Method: SW846 8270C
Inst: MSD1.I
Analyst: AMY
Aliquot: 30.04 g
Column: J&W DB-5MS

Matrix: R
%Moisture: 24.1
Project: LANL01004
SOP Ref: GL-OA-E-009
Dilution: 1
Inj. Vol: .5 uL
Final Volume: 1 mL
Level: LOW

Client ID: RE12-10-7256
Batch ID: 941600
Run Date: 01/15/2010 19:03
Prep Date: 01/14/2010 19:40
Data File: sla1523.d

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	438	ug/kg	87.7	438
108-95-2	Phenol	U	438	ug/kg	87.7	438
95-57-8	2-Chlorophenol	U	438	ug/kg	87.7	438
106-46-7	1,4-Dichlorobenzene	U	438	ug/kg	87.7	438
621-64-7	N-Nitrosodipropylamine	U	438	ug/kg	87.7	438
59-50-7	4-Chloro-3-methylphenol	U	438	ug/kg	87.7	438
83-32-9	Acenaphthene	U	43.8	ug/kg	14.5	43.8
121-14-2	2,4-Dinitrotoluene	U	438	ug/kg	43.8	438 UJ,SV7c
100-02-7	4-Nitrophenol	U	438	ug/kg	145	438
87-86-5	Pentachlorophenol	U	438	ug/kg	110	438
129-00-0	Pyrene	J	42.1	ug/kg	13.2	43.8
110-86-1	Pyridine	U	438	ug/kg	87.7	438 UJ,SV7c
62-53-3	Aniline	U	438	ug/kg	132	438
111-44-4	bis(2-Chloroethyl) ether	U	438	ug/kg	87.7	438
541-73-1	1,3-Dichlorobenzene	U	438	ug/kg	87.7	438
100-51-6	Benzyl alcohol	U	438	ug/kg	132	438
95-50-1	1,2-Dichlorobenzene	U	438	ug/kg	87.7	438
108-60-1	bis(2-Chloroisopropyl)ether	U	438	ug/kg	87.7	438
95-48-7	o-Cresol	U	438	ug/kg	87.7	438
65794-96-9	m,p-Cresols	U	438	ug/kg	132	438
67-72-1	Hexachloroethane	U	438	ug/kg	87.7	438
98-95-3	Nitrobenzene	U	438	ug/kg	87.7	438
78-59-1	Isophorone	U	438	ug/kg	87.7	438
88-75-5	2-Nitrophenol	U	438	ug/kg	87.7	438
105-67-9	2,4-Dimethylphenol	U	438	ug/kg	153	438
111-91-1	bis(2-Chloroethoxy)methane	U	438	ug/kg	87.7	438
120-83-2	2,4-Dichlorophenol	U	438	ug/kg	87.7	438
65-85-0	Benzoic acid	U	877	ug/kg	219	877
91-20-3	Naphthalene	U	43.8	ug/kg	13.2	43.8
106-47-8	4-Chloroaniline	U	438	ug/kg	87.7	438
87-68-3	Hexachlorobutadiene	U	438	ug/kg	87.7	438
91-57-6	2-Methylnaphthalene	U	43.8	ug/kg	8.77	43.8
77-47-4	Hexachlorocyclopentadiene	U	438	ug/kg	87.7	438 UJ,SV7c
88-06-2	2,4,6-Trichlorophenol	U	438	ug/kg	87.7	438
95-95-4	2,4,5-Trichlorophenol	U	438	ug/kg	87.7	438
91-58-7	2-Chloronaphthalene	U	43.8	ug/kg	14.5	43.8
88-74-4	2-Nitroaniline	U	438	ug/kg	87.7	438
	<i>o</i> -Nitroaniline					
99-09-2	3-Nitroaniline	U	438	ug/kg	87.7	438 UJ,SV7c

Semi-Volatile
Certificate of Analysis
Sample Summary

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SDG Number: 10-1213
Lab Sample ID: 244604002

Date Collected: 01/08/2010 12:00
Date Received: 01/13/2010 08:55
Client: LANL010
Method: SW846 8270C
Inst: MSD1.I
Analyst: AMY
Aliquot: 30.04 g
Column: J&W DB-5MS

Matrix: R
%Moisture: 24.1
Project: LANL01004
SOP Ref: GL-OA-E-009
Dilution: 1
Inj. Vol: .5 uL
Final Volume: 1 mL
Level: LOW

Client ID: RE12-10-7256
Batch ID: 941600
Run Date: 01/15/2010 19:03
Prep Date: 01/14/2010 19:40
Data File: s1a1523.d

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
131-11-3	<i>m</i> -Nitroaniline					
	Dimethylphthalate	U	438	ug/kg	87.7	438
606-20-2	2,6-Dinitrotoluene	U	438	ug/kg	43.8	438
208-96-8	Acenaphthylene	U	43.8	ug/kg	13.2	43.8
51-28-5	2,4-Dinitrophenol	U	877	ug/kg	167	877
132-64-9	Dibenzofuran	U	438	ug/kg	87.7	438
84-66-2	Diethylphthalate	U	438	ug/kg	87.7	438
86-73-7	Fluorene	U	43.8	ug/kg	13.2	43.8
7005-72-3	4-Chlorophenylphenylether	U	438	ug/kg	87.7	438
534-52-1	2-Methyl-4,6-dinitrophenol	U	438	ug/kg	87.7	438
100-01-6	4-Nitroaniline	U	438	ug/kg	132	438 UJ,SV7c
	<i>p</i> -Nitroaniline					
122-39-4	Diphenylamine	U	438	ug/kg	87.7	438
122-66-7	Azobenzene	U	438	ug/kg	87.7	438
	<i>1,2</i> -Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	438	ug/kg	87.7	438
118-74-1	Hexachlorobenzene	U	438	ug/kg	87.7	438
85-01-8	Phenanthrene	J	14.8	ug/kg	13.2	43.8
120-12-7	Anthracene	U	43.8	ug/kg	8.77	43.8
84-74-2	Di-n-butylphthalate	U	438	ug/kg	87.7	438
206-44-0	Fluoranthene		58.9	ug/kg	13.2	43.8
85-68-7	Butylbenzylphthalate	U	438	ug/kg	87.7	438
56-55-3	Benzo(a)anthracene	J	18.9	ug/kg	13.2	43.8
91-94-1	3,3'-Dichlorobenzidine	U	438	ug/kg	132	438
218-01-9	Chrysene		52.2	ug/kg	13.2	43.8
117-81-7	bis(2-Ethylhexyl)phthalate	U	438	ug/kg	87.7	438
117-84-0	Di-n-octylphthalate	U	438	ug/kg	87.7	438
205-99-2	Benzo(b)fluoranthene		204	ug/kg	13.2	43.8
207-08-9	Benzo(k)fluoranthene	U	43.8	ug/kg	13.2	43.8
50-32-8	Benzo(a)pyrene	J	27.2	ug/kg	13.2	43.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	43.8	ug/kg	13.2	43.8
53-70-3	Dibenzo(a,h)anthracene	U	43.8	ug/kg	13.2	43.8
191-24-2	Benzo(ghi)perylene	J	15.1	ug/kg	13.2	43.8
120-82-1	1,2,4-Trichlorobenzene	U	438	ug/kg	87.7	438

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	2.82	612	ug/kg		JA
544-64-9	Myristoleic acid	7.12	393	ug/kg	91	NJ

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Certificate of Analysis
Sample Summary

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SDG Number: 10-1213
Lab Sample ID: 244604002

Date Collected: 01/08/2010 12:00
Date Received: 01/13/2010 08:55
Client: LANL010
Method: SW846 8270C
Inst: MSD1.I
Analyst: AMY
Aliquot: 30.04 g
Column: J&W DB-5MS

Matrix: R
%Moisture: 24.1
Project: LANL01004
SOP Ref: GL-OA-E-009
Dilution: 1
Inj. Vol: .5 uL
Final Volume: 1 mL
Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
Tentatively Identified Compound Summary						
CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
57-10-3	n-Hexadecanoic acid	7.13	669	ug/kg	99	NJ
1000130-90-8	Z-7-Hexadecenoic acid	7.55	890	ug/kg	95	NJ
	Unknown	7.85	187	ug/kg		J
33979-03-2	1,1'-Biphenyl, 2,2',4,4',6,6'-hexachloro	8	201	ug/kg	99	NJ
	Unknown	8.03	212	ug/kg		J
1599-67-3	1-Docosene	8.79	208	ug/kg	97	NJ
	Unknown	9.14	219	ug/kg		J
112-95-8	Eicosane	9.3	812	ug/kg	97	NJ
	Unknown	10.07	1030	ug/kg		J
	Unknown	10.18	543	ug/kg		J
	Unknown	10.36	238	ug/kg		J
	Unknown	11.15	404	ug/kg		J
35060-26-5	D:B-Friedo-18,19-secolup-19-ene, 3,10-ep	11.37	224	ug/kg	95	NJ
83-47-6	.gamma.-Sitosterol	11.87	890	ug/kg	92	NJ
	Unknown	12.66	281	ug/kg		J
	Unknown	12.87	673	ug/kg		J

**Semi-Volatile
Certificate of Analysis
Sample Summary**

SDG Number: 10-1213
Lab Sample ID: 244604001

Date Collected: 01/08/2010 12:00
Date Received: 01/13/2010 08:55
Client: LANL010
Method: SW846 8270C
Inst: MSDLI
Analyst: AMY
Aliquot: 30.16 g
Column: J&W DB-5MS

Matrix: R
%Moisture: 10
Project: LANL01004
SOP Ref: GL-OA-E-009
Dilution: 1
Inj. Vol: .5 uL
Final Volume: 1 mL
Level: LOW

Client ID: RE12-10-7257
Batch ID: 941600
Run Date: 01/15/2010 18:39
Prep Date: 01/14/2010 19:40
Data File: sla1522.d

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	368	ug/kg	73.6	368
108-95-2	Phenol	U	368	ug/kg	73.6	368
95-57-8	2-Chlorophenol	U	368	ug/kg	73.6	368
106-46-7	1,4-Dichlorobenzene	U	368	ug/kg	73.6	368
621-64-7	N-Nitrosodipropylamine	U	368	ug/kg	73.6	368
59-50-7	4-Chloro-3-methylphenol	U	368	ug/kg	73.6	368
83-32-9	Acenaphthene	U	36.8	ug/kg	12.2	36.8
121-14-2	2,4-Dinitrotoluene	U	368	ug/kg	36.8	368 UJ,SV7c
100-02-7	4-Nitrophenol	U	368	ug/kg	122	368
87-86-5	Pentachlorophenol	U	368	ug/kg	92.1	368
129-00-0	Pyrene	U	36.8	ug/kg	11.0	36.8
110-86-1	Pyridine	U	368	ug/kg	73.6	368 UJ,SV7c
62-53-3	Aniline	U	368	ug/kg	110	368
111-44-4	bis(2-Chloroethyl) ether	U	368	ug/kg	73.6	368
541-73-1	1,3-Dichlorobenzene	U	368	ug/kg	73.6	368
100-51-6	Benzyl alcohol	U	368	ug/kg	110	368
95-50-1	1,2-Dichlorobenzene	U	368	ug/kg	73.6	368
108-60-1	bis(2-Chloroisopropyl) ether	U	368	ug/kg	73.6	368
95-48-7	o-Cresol	U	368	ug/kg	73.6	368
65794-96-9	m,p-Cresols	U	368	ug/kg	110	368
67-72-1	Hexachloroethane	U	368	ug/kg	73.6	368
98-95-3	Nitrobenzene	U	368	ug/kg	73.6	368
78-59-1	Isophorone	U	368	ug/kg	73.6	368
88-75-5	2-Nitrophenol	U	368	ug/kg	73.6	368
105-67-9	2,4-Dimethylphenol	U	368	ug/kg	129	368
111-91-1	bis(2-Chloroethoxy)methane	U	368	ug/kg	73.6	368
120-83-2	2,4-Dichlorophenol	U	368	ug/kg	73.6	368
65-85-0	Benzoic acid	U	736	ug/kg	184	736
91-20-3	Naphthalene	U	36.8	ug/kg	11.0	36.8
106-47-8	4-Chloroaniline	U	368	ug/kg	73.6	368
87-68-3	Hexachlorobutadiene	U	368	ug/kg	73.6	368
91-57-6	2-Methylnaphthalene	U	36.8	ug/kg	7.36	36.8
77-47-4	Hexachlorocyclopentadiene	U	368	ug/kg	73.6	368 UJ,SV7c
88-06-2	2,4,6-Trichlorophenol	U	368	ug/kg	73.6	368
95-95-4	2,4,5-Trichlorophenol	U	368	ug/kg	73.6	368
91-58-7	2-Chloronaphthalene	U	36.8	ug/kg	12.2	36.8
88-74-4	2-Nitroaniline	U	368	ug/kg	73.6	368
	<i>o</i> -Nitroaniline					
99-09-2	3-Nitroaniline	U	368	ug/kg	73.6	368 UJ,SV7c

Semi-Volatile
Certificate of Analysis
Sample Summary

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SDG Number: 10-1213
Lab Sample ID: 244604001

Date Collected: 01/08/2010 12:00
Date Received: 01/13/2010 08:55
Client: LANL010
Method: SW846 8270C
Inst: MSD1.I
Analyst: AMY
Allquot: 30.16 g
Column: J&W DB-5MS

Matrix: R
%Moisture: 10
Project: LANL01004
SOP Ref: GL-OA-E-009
Dilution: 1
Inj. Vol: .5 uL
Final Volume: 1 mL
Level: LOW

Client ID: RE12-10-7257
Batch ID: 941600
Run Date: 01/15/2010 18:39
Prep Date: 01/14/2010 19:40
Data File: s1a1522.d

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
131-11-3	<i>m</i> -Nitroaniline					
606-20-2	Dimethylphthalate	U	368	ug/kg	73.6	368
208-96-8	2,6-Dinitrotoluene	U	368	ug/kg	36.8	368
51-28-5	Acenaphthylene	U	36.8	ug/kg	11.0	36.8
132-64-9	2,4-Dinitrophenol	U	736	ug/kg	140	736
84-66-2	Dibenzofuran	U	368	ug/kg	73.6	368
86-73-7	Diethylphthalate	U	368	ug/kg	73.6	368
7005-72-3	Fluorene	U	36.8	ug/kg	11.0	36.8
534-52-1	4-Chlorophenylphenylether	U	368	ug/kg	73.6	368
100-01-6	2-Methyl-4,6-dinitrophenol	U	368	ug/kg	73.6	368
122-39-4	4-Nitroaniline	U	368	ug/kg	110	368 UJ,SV7c
122-66-7	<i>p</i> -Nitroaniline					
101-55-3	Diphenylamine	U	368	ug/kg	73.6	368
118-74-1	Azobenzene	U	368	ug/kg	73.6	368
85-01-8	1,2-Diphenylhydrazine					
120-12-7	4-Bromophenylphenylether	U	368	ug/kg	73.6	368
84-74-2	Hexachlorobenzene	U	368	ug/kg	73.6	368
206-44-0	Phenanthrene	U	36.8	ug/kg	11.0	36.8
85-68-7	Anthracene	U	36.8	ug/kg	7.36	36.8
56-55-3	Di-n-butylphthalate	U	368	ug/kg	73.6	368
91-94-1	Fluoranthene	U	36.8	ug/kg	11.0	36.8
218-01-9	Butylbenzylphthalate	U	368	ug/kg	73.6	368
117-81-7	Benzo(a)anthracene	U	36.8	ug/kg	11.0	36.8
117-84-0	3,3'-Dichlorobenzidine	U	368	ug/kg	110	368
205-99-2	Chrysene	U	36.8	ug/kg	11.0	36.8
207-08-9	bis(2-Ethylhexyl)phthalate	U	368	ug/kg	73.6	368
50-32-8	Di-n-octylphthalate	U	368	ug/kg	73.6	368
193-39-5	Benzo(b)fluoranthene	U	36.8	ug/kg	11.0	36.8
53-70-3	Benzo(k)fluoranthene	U	36.8	ug/kg	11.0	36.8
191-24-2	Benzo(a)pyrene	U	36.8	ug/kg	11.0	36.8
120-82-1	Indeno(1,2,3-cd)pyrene	U	36.8	ug/kg	11.0	36.8
	Dibenzo(a,h)anthracene	U	36.8	ug/kg	11.0	36.8
	Benzo(ghi)perylene	U	36.8	ug/kg	11.0	36.8
	1,2,4-Trichlorobenzene	U	368	ug/kg	73.6	368

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	1.96	758	ug/kg		J
	Unknown Aldol Condensate	2.82	566	ug/kg		JA

**Semi-Volatile
Certificate of Analysis
Sample Summary**

SDG Number: 10-1213
Lab Sample ID: 244604001

Date Collected: 01/08/2010 12:00
Date Received: 01/13/2010 08:55
Client: LANL010
Method: SW846 8270C
Inst: MSD1.I
Analyst: AMY
Aliquot: 30.16 g
Column: J&W DB-5MS

Matrix: R
%Moisture: 10
Project: LANL01004
SOP Ref: GL-OA-E-009
Dilution: 1
Inj. Vol: .5 uL
Final Volume: 1 mL
Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
Tentatively Identified Compound Summary						
CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
5131-66-8	2-Propanol, 1-butoxy-	3.32	189	ug/kg	90	NJ
1000131-10-3	Z,E-2,13-Octadecadien-1-ol	7.54	225	ug/kg	86	NJ
	Unknown	7.87	189	ug/kg		J
	Unknown	11.4	433	ug/kg		J
	Unknown	11.87	456	ug/kg		J
	Unknown	12.65	237	ug/kg		J
	Unknown	12.86	166	ug/kg		J

DATA VALIDATION COVER SHEET

5121-1

Data Validation Cover Sheet

Records Use only



Section I.

REQUEST NUMBER: 10-1213 VALIDATION DATE: 02/26/10 LAB CODE: GELCONTRACT LABORATORY NAME: GEL Laboratories LLCVALIDATOR: Peter Steves ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

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

Section II. Completeness Check

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

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


1. It should be noted that the parent sample for the QC analyses was from another LANL RN. No sample data were qualified as a result.

Reviewed by: Mary Donovan Level: I Date: 02/26/10


VALIDATOR'S SIGNATURE: _____

Mr. Peter Steves


DATE: 02/26/10

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

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

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

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

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

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

Form 1

P perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 242314

Extraction Type: Solid Prep

Client Sample No.

RE12-10-7257

Date Received: 13-JAN-10

GEL Job No (SDG): 10-1213

GEL Sample ID: 244604001

Date Filtered: 22-JAN-10

Injection Volume (uL): 20

%Solids: 90

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

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	22-JAN-10 23:18	per0122062a
	Perchlorate Isotope Ratio						1	22-JAN-10 23:18	per0122062a
14797-73-0	Perchlorate-101	.555	2.22	0.555	ug/kg	U	1	22-JAN-10 23:18	per0122062a
	Perchlorate-O(18)			5.72	ug/kg		1	22-JAN-10 23:18	per0122062a

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

*Concentration =

Instrument Value X Concentrated Extract Volume X 1
Aliquot %Solids

P.S. 2/26/10

Form 1

Perchlorate Analysis Data Sheet


Lab Name: GEL Laboratories LLC
 Lab Code: GEL
 Instrument: LCMSMS
 Method: SW846 6850 Modified
 Matrix: SOIL
 Extraction Batch ID: 942314
 Extraction Type: Solid Prep
 Sample Volume/Weight: 2.00 g
 Concentrated Extract Volume: 20.0
 Client Sample No. RE12-10-7256
 Date Received: 13-JAN-10
 GEL Job No (SDG): 10-1213
 GEL Sample ID: 244604002
 Date Filtered: 22-JAN-10
 Injection Volume (uL): 20
 %Solids: 76

CAS No.	Analyte [^]	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.658	2.63	0.780	ug/kg	J	1	22-JAN-10 23:25	per0122063a
	Perchlorate Isotope Ratio			2.92			1	22-JAN-10 23:25	per0122063a
14797-73-0	Perchlorate-101	.658	2.63	0.776	ug/kg	J	1	22-JAN-10 23:25	per0122063a
	Perchlorate-O(18)			6.75	ug/kg		1	22-JAN-10 23:25	per0122063a

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


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


P.S. 2/26/10

DATA VALIDATION COVER SHEET	
5122-1 <p style="text-align: center;">Data Validation Cover Sheet</p>	Records Use only 


Section I.		
REQUEST NUMBER: <u>10-1213</u>	VALIDATION DATE: <u>02/26/10</u>	LAB CODE: <u>GEL</u>
CONTRACT LABORATORY NAME: <u>GEL Laboratories LLC</u>		
VALIDATOR: <u>Peter Steves</u> ORGANIZATION: <u>Analytical Quality Associates, Inc</u>		
ANALYTICAL SUITE (CHECK ALL THAT APPLY):		
<input type="checkbox"/> TPH-GRO	<input type="checkbox"/> HIGH EXPLOSIVES	<input type="checkbox"/> DIOXIN FURANS
<input type="checkbox"/> TPH-DRO	<input type="checkbox"/> METALS	<input type="checkbox"/> PCB CONGENERS
<input type="checkbox"/> GENERAL CHEMISTRY	<input type="checkbox"/> RADIOCHEMISTRY	<input checked="" type="checkbox"/> LCMSMS HIGH EXPLOSIVES
		<input type="checkbox"/> LCMSMS PERCHLORATES
		<input type="checkbox"/> ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
<input type="checkbox"/> OTHER (DESCRIBE): _____		

Section II. Completeness Check							
YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. CHAIN-OF-CUSTODY FORM(S)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6. RAW/BSS DATA
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2. CASE NARRATIVE	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7. QUALITY CONTROL FORMS
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3. SAMPLE RESULT FORMS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8. QUANTITATION REPORTS
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4. SAMPLE CHROMATOGRAMS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	9. TICS FORMS
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	5. STANDARD CHROMATOGRAMS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	10. TICS MASS SPECTRA
Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):							
1. The CCV %Ds were >20% with a positive bias for 4-nitrotoluene, HMX and RDX. The associated sample results were NDs and, thus, were not qualified. 2. It should be noted that the parent sample for the QC analyses was from another LANL RN. No sample data were qualified as a result. 3. It should be noted that the raw ICAL data from the instrument used for the secondary HE analysis were not reported in the data package. Thus, the surrogate RT criteria could not be evaluated. In addition, the raw ICAL data from the instrument used for the primary HE analysis were also not reported. No sample data were qualified as a result.							
Reviewed by: <u>Mary Donovan</u> Level: <u>I</u> Date: <u>02/26/10</u>							


VALIDATOR'S SIGNATURE: <u></u> <div style="text-align: center; font-size: small;">Mr. Peter Steves</div>	DATE: <u>02/26/10</u>
Form 5122-1, Revision 0.0 <div style="float: right; text-align: right;"> LOS ALAMOS Environmental Restoration Project </div>	

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

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

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

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

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

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

LC/MS/MS HIGH EXPLOSIVE ANALYTICAL DATA VALIDATION CHECKLIST

5122-2

LC/MS/MS High Explosive Analytical Data Validation Checklist

Records Use only



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

1
High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7257

Lab Code: GEL

GEL Job No (SDG) 10-1213

Matrix: SOIL

GEL Sample ID: 244604001

Sample Amount 2

Moisture: 10

Amount Units g

Date Received: 13-JAN-10

Extraction Type Sonication

Extraction Batch ID: 941659

Concentrated Extract Volume (mL) 10

Date Extracted: 20-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0118215a

Date Analyzed: 22-JAN-10 23:18

Units: ug/kg

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

*Concentration =

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

1
High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7257

Lab Code: GEL

GEL Job No (SDG) 10-1213

Matrix: SOIL

GEL Sample ID: 244604001

Sample Amount 2

Moisture: 10

Amount Units g

Date Received: 13-JAN-10

Extraction Type Sonication

Extraction Batch ID: 941659

Concentrated Extract Volume (mL) 10

Date Extracted: 20-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS01210029.wiff

Date Analyzed: 21-JAN-10 20:49

Units: ug/kg

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

*Concentration =

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

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7256

Lab Code: GEL

GEL Job No (SDG) 10-1213

Matrix: SOIL

GEL Sample ID: 244604002

Sample Amount 2

Moisture: 24.1

Amount Units g

Date Received: 13-JAN-10

Extraction Type Sonication

Extraction Batch ID: 941659

Concentrated Extract Volume (mL) 10

Date Extracted: 20-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0118216a

Date Analyzed: 22-JAN-10 23:47

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 =

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

1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7256

Lab Code: GEL

GEL Job No (SDG) 10-1213

Matrix: SOIL

GEL Sample ID: 244604002

Sample Amount 2

Moisture: 24.1

Amount Units g

Date Received: 13-JAN-10

Extraction Type Sonication

Extraction Batch ID: 941659

Concentrated Extract Volume (mL) 10

Date Extracted: 20-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS01210030.wiff

Date Analyzed: 21-JAN-10 21:04

Units: ug/kg

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

*Concentration =

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

DATA VALIDATION COVER SHEET**5118-1****Data Validation Cover Sheet**

Records Use only

**Section I.**REQUEST NUMBER: 10-1213 VALIDATION DATE: 02/26/10 LAB CODE: GELCONTRACT LABORATORY NAME: GEL Laboratories LLCVALIDATOR: Peter Steves ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

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



Section II. Completeness Check


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

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


1. In the MB, Fe and Na were detected. The Na result for sample RE12-10-7257 was a detect >5X but ≤50X the MB concentration and, thus, was qualified J,I4a. The Na result for sample -7256 was a detect ≤5X the MB concentration and, thus, was qualified U,I4. The Fe results were detects >50X the MB concentration and, thus, were not qualified, based on professional judgment.
2. In the ICB/CCBs, Be, Sb, Na and Pb were detected. The Sb result for sample -7257 was an ND and, thus, was not qualified. The Sb and Na results for sample -7256 were detects ≤5X the greatest associated blank concentration and, thus, were qualified U,I4b. The remaining associated sample results were detects >5X the greatest associated blank concentrations and, thus, were not qualified.
3. In the FR blank, sample -7286 (from RN 10-1262), which was associated with all the soil samples, K and Mn were detected. The associated sample results were detects >5X the FR blank concentrations and, thus, were not qualified.
4. The solid MS %Rs were > the laboratory UAL for Ca, Mg, Ni and K. The associated sample results were detects and, thus, were qualified J+,I6b. Also, the MS %Rs were > the laboratory UAL for Al and Fe. However, the associated parent sample concentrations were >4X the spike concentrations. Thus, the associated sample results were not qualified, based on professional judgment.
5. It should be noted the matrix QC analyses for Hg were performed on a LANL sample from another RN. No sample data were qualified as a result.

Reviewed by: Mary DonovanLevel: IDate: 02/26/10


DATA VALIDATION COVER SHEET	
5118-1 Data Validation Cover Sheet	Records Use only  Los Alamos NATIONAL LABORATORY EST. 1945
VALIDATOR'S SIGNATURE:  M r. Peter Steves	
DATE: 02/26/10	
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 


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

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

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

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

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

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

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

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 10-1213

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 244604001

BASIS: Dry Weight

DATE COLLECTED 08-JAN-10

CLIENT ID: RE12-10-7257

LEVEL: Low

DATE RECEIVED 13-JAN-10

MATRIX: SOIL

%SOLIDS: 90

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	4600000	ug/Kg	*	7460	21900	21900	1	P	HSC	01/27/10 15:28	012710-1	941749
7440-36-0	Antimony	1100	ug/Kg	U	362	1100	1100	1	P	HSC	01/27/10 15:28	012710-1	941749
7440-38-2	Arsenic	2.68	mg/kg		0.222	1.11	1.11	2	MS	SKJ	01/21/10 19:06	100121-2	941754
7440-39-3	Barium	48400	ug/Kg	N	110	549	549	1	P	HSC	01/27/10 15:28	012710-1	941749
7440-41-7	Beryllium	0.822	mg/kg		0.0222	0.111	0.111	2	MS	SKJ	01/22/10 15:44	100122-3	941754
7440-43-9	Cadmium	549	ug/Kg	U	110	549	549	1	P	HSC	01/27/10 15:28	012710-1	941749
7440-70-2	Calcium J+,16b	1030000	ug/Kg	*N	8780	27400	27400	1	P	HSC	01/27/10 15:28	012710-1	941749
7440-47-3	Chromium	13200	ug/Kg		165	549	549	1	P	HSC	01/27/10 15:28	012710-1	941749
7440-48-4	Cobalt	1810	ug/Kg		165	549	549	1	P	HSC	01/27/10 15:28	012710-1	941749
7440-50-8	Copper	4150	ug/Kg	*	329	1100	1100	1	P	HSC	01/27/10 15:28	012710-1	941749
7439-89-6	Iron	9360000	ug/Kg	*	8780	27400	27400	1	P	HSC	01/27/10 15:28	012710-1	941749
7439-92-1	Lead	7060	ug/Kg	*	274	1100	1100	1	P	HSC	01/27/10 15:28	012710-1	941749
7439-95-4	Magnesium J+,16b	853000	ug/Kg	*N	9330	32900	32900	1	P	HSC	01/27/10 15:28	012710-1	941749
7439-96-5	Manganese	275000	ug/Kg	*	219	1100	1100	1	P	HSC	01/27/10 15:28	012710-1	941749
7439-97-6	Mercury	22.8	ug/kg		4.19	12.3	12.3	1	AV	JXL1	01/28/10 11:46	01281051-4	943299
7440-02-0	Nickel J+,16b	7.01	mg/kg	*N	0.111	0.443	0.443	2	MS	SKJ	01/21/10 19:06	100121-2	941754
7440-09-7	Potassium J+,16b	634000	ug/Kg	*N	7020	27400	27400	1	P	HSC	01/27/10 15:28	012710-1	941749
7782-49-2	Selenium	1.11	mg/kg	U	0.554	1.11	1.11	2	MS	SKJ	01/21/10 19:06	100121-2	941754
7440-22-4	Silver	549	ug/Kg	U	110	549	549	1	P	HSC	01/27/10 15:28	012710-1	941749
7440-23-5	Sodium J,14a	91100	ug/Kg		7680	27400	27400	1	P	HSC	01/27/10 15:28	012710-1	941749
7440-28-0	Thallium	0.157	mg/kg	J	0.0665	0.222	0.222	2	MS	SKJ	01/21/10 19:06	100121-2	941754
7440-61-1	Uranium	0.661	mg/kg		0.0146	0.0443	0.0443	2	MS	SKJ	01/22/10 15:44	100122-3	941754
7440-62-2	Vanadium	9480	ug/Kg	*	110	549	549	1	P	HSC	01/27/10 15:28	012710-1	941749
7440-66-6	Zinc	25300	ug/Kg	N	362	1100	1100	1	P	HSC	01/27/10 15:28	012710-1	941749

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
941749	941746	SW846 3050B	0.506	g	50	mL	01/20/10	AXG2
941754	941751	SW846 3050B	0.501	g	50	mL	01/20/10	AXG2
943299	943296	SW846 7471A Prep	0.541	g	30	mL	01/27/10	TXB3

P.S. 2/26/10

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 10-1213

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 244604002

BASIS: Dry Weight

DATE COLLECTED 08-JAN-10

CLIENT ID: RE12-10-7256

LEVEL: Low

DATE RECEIVED 13-JAN-10

MATRIX: SOIL

%SOLIDS: 76

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	7140000	ug/Kg	*	8580	25200	25200	1	P	HSC	01/27/10 15:46	012710-1	941749
7440-36-0	Antimony U,14b	696	ug/Kg	J	416	1260	1260	1	P	HSC	01/27/10 15:46	012710-1	941749
7440-38-2	Arsenic	2.5	mg/kg		0.251	1.25	1.25	2	MS	SKJ	01/21/10 19:49	100121-2	941754
7440-39-3	Barium	99300	ug/Kg	N	126	631	631	1	P	HSC	01/27/10 15:46	012710-1	941749
7440-41-7	Beryllium	0.847	mg/kg		0.0251	0.125	0.125	2	MS	SKJ	01/22/10 16:00	100122-3	941754
7440-43-9	Cadmium	132	ug/Kg	J	126	631	631	1	P	HSC	01/27/10 15:46	012710-1	941749
7440-70-2	Calcium J+,16b	2690000	ug/Kg	*N	10100	31500	31500	1	P	HSC	01/27/10 15:46	012710-1	941749
7440-47-3	Chromium	33800	ug/Kg		189	631	631	1	P	HSC	01/27/10 15:46	012710-1	941749
7440-48-4	Cobalt	4350	ug/Kg		189	631	631	1	P	HSC	01/27/10 15:46	012710-1	941749
7440-50-8	Copper	7980	ug/Kg	*	378	1260	1260	1	P	HSC	01/27/10 15:46	012710-1	941749
7439-89-6	Iron	12200000	ug/Kg	*	10100	31500	31500	1	P	HSC	01/27/10 15:46	012710-1	941749
7439-92-1	Lead	14600	ug/Kg	*	315	1260	1260	1	P	HSC	01/27/10 15:46	012710-1	941749
7439-95-4	Magnesium J+,16b	1560000	ug/Kg	*N	10700	37800	37800	1	P	HSC	01/27/10 15:46	012710-1	941749
7439-96-5	Manganese	314000	ug/Kg	*	252	1260	1260	1	P	HSC	01/27/10 15:46	012710-1	941749
7439-97-6	Mercury	18.9	ug/kg		4.7	13.8	13.8	1	AV	JXL1	01/28/10 11:47	012810S1-4	943299
7440-02-0	Nickel J+,16b	8.69	mg/kg	*N	0.125	0.502	0.502	2	MS	SKJ	01/21/10 19:49	100121-2	941754
7440-09-7	Potassium J+,16b	1490000	ug/Kg	*N	8070	31500	31500	1	P	HSC	01/27/10 15:46	012710-1	941749
7782-49-2	Selenium	1.25	mg/kg	U	0.627	1.25	1.25	2	MS	SKJ	01/21/10 19:49	100121-2	941754
7440-22-4	Silver	631	ug/Kg	U	126	631	631	1	P	HSC	01/27/10 15:46	012710-1	941749
7440-23-5	Sodium U,14	54300	ug/Kg		8830	31500	31500	1	P	HSC	01/27/10 15:46	012710-1	941749
7440-28-0	Thallium	0.167	mg/kg	J	0.0752	0.251	0.251	2	MS	SKJ	01/21/10 19:49	100121-2	941754
7440-61-1	Uranium	7.12	mg/kg		0.0166	0.0502	0.0502	2	MS	SKJ	01/22/10 16:00	100122-3	941754
7440-62-2	Vanadium	20800	ug/Kg	*	126	631	631	1	P	HSC	01/27/10 15:46	012710-1	941749
7440-66-6	Zinc	60600	ug/Kg	N	416	1260	1260	1	P	HSC	01/27/10 15:46	012710-1	941749

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
941749	941746	SW846 3050B	0.522	g	50	mL	01/20/10	AXG2
941754	941751	SW846 3050B	0.525	g	50	mL	01/20/10	AXG2
943299	943296	SW846 7471A Prep	0.572	g	30	mL	01/27/10	TXB3

P.S. 2/26/10

DATA VALIDATION COVER SHEET

5120-1

Data Validation Cover Sheet

Records Use only



Section I.

REQUEST NUMBER: 10-1213 VALIDATION DATE: 02/26/10 LAB CODE: GELCONTRACT LABORATORY NAME: GEL Laboratories LLCVALIDATOR: Peter Steves ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

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

Section II. Completeness Check

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

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


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

Reviewed by: Mary Donovan Level: I Date: 02/26/10


VALIDATOR'S SIGNATURE: ###

 A handwritten signature of Peter Steves.


Mr. Peter Steves
DATE: 02/26/10

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

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

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

Yes No N/A				Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	14. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J, 14a
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	15. The sample result is ≤5X the concentration of the related analyte in the instrument blank and continuing calibration blank.	U, 14b	N/A
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	16. Continuing calibration blanks were not analyzed at the appropriate method frequency.	UJ, 14c	J, 14c
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	17. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	U, 14d	N/A
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	18. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, 14e	R, 14e
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	19. The associate matrix spike recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, 16	R, 16
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	20. The associated matrix spike recovery was below the Lower Acceptance Limit (LAL) but >10%. Follow the external laboratory limits located within the associated data package.	UJ, 16a	J-, 16a
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	21. The associated matrix spike recovery was above the Upper Acceptance Limit (UAL). Follow the external laboratory limits located within the associated data package.	UJ, 16b	J+, 16b
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	22. Required matrix spike information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. If LCS information is present, do not reject. Qualify data based on LCS information.	R, 16c	R, 16c
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	23. The sample and/or the duplicate sample results RPD is not within the acceptance limits. Follow the external laboratory limits located within the associated data package.	UJ, 110b	J, 110b

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

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

GEL LABORATORIES LLC

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

Certificate of Analysis

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

Report Date: February 1, 2010

Client SDG: 10-1213

Client Sample ID: RE12-10-7257
Sample ID: 244604001
Matrix: R
Collect Date: 08-JAN-10 12:00
Receive Date: 13-JAN-10
Collector: Client
Moisture: 9.96%

Project: LANL01004
Client ID: LANL010

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

SW9012A Cyanide, Total "Dry Weight Corrected"

Cyanide, Total	U	ND	75.5	278	ug/kg	1	AXC2	01/21/10	1214	941967	1
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The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/20/10	1551	941966

The following Analytical Methods were performed

Method	Description	Analyst	Comments
1	SW846 9012A		

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Certificate of Analysis

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

Report Date: February 1, 2010

Client SDG: 10-1213

Client Sample ID: RE12-10-7256
Sample ID: 244604002
Matrix: R
Collect Date: 08-JAN-10 12:00
Receive Date: 13-JAN-10
Collector: Client
Moisture: 24.1%

Project: LANL01004
Client ID: LANL010

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

SW9012A Cyanide, Total "Dry Weight Corrected"

Cyanide, Total	U	ND	89.5	329	ug/kg	1	AXC2	01/21/10	1215	941967	1
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The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/20/10	1551	941966

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

DATA VALIDATION COVER SHEET

5119-1

Data Validation Cover Sheet

Records Use only



Section I.

REQUEST NUMBER: 10-1213 VALIDATION DATE: 02/26/10 LAB CODE: GELCONTRACT LABORATORY NAME: GEL Laboratories LLCVALIDATOR: Peter Steves ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

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

Section II. Completeness Check

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

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


1. All gamma-spec results that were rejected by the laboratory due to interference were qualified R,R5a. In the duplicate and MB samples several results were also rejected by the laboratory. No data were qualified as a result.
2. The alpha spec U tracer %R was > the laboratory UAL but $\leq 125\%$ for the MB. Since this was a QC sample no sample data were qualified.
3. It should be noted that the gamma spec QC analyses were performed on a LANL sample from another RN. No sample data were qualified as a result.

Reviewed by: Mary DonovanLevel: IDate: 02/26/10


VALIDATOR'S SIGNATURE: _____

Mr. Peter Steves


DATE: 02/26/10

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

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

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

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

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

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

GEL LABORATORIES LLC

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Certificate of Analysis

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

Report Date: January 27, 2010

Client Sample ID: RE12-10-7257
Sample ID: 244604001
Matrix: R
Collect Date: 08-JAN-10
Receive Date: 13-JAN-10
Collector: Client
Moisture: 9.96%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids												
<i>"As Received"</i>												
Rad Alpha Spec Analysis												
<i>AM241 "Dry Weight Corrected"</i>												
Americium-241	U	0.00805	0.024	+/-0.00845	0.050	pCi/g		KXM4	01/23/10	1208	941688	2
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.00105	0.0173	+/-0.00105	0.050	pCi/g		KXM4	01/21/10	1659	941690	3
Plutonium-239/240	U	0.00314	0.0198	+/-0.00182	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		0.728	0.142	+/-0.0786	0.100	pCi/g		KXM4	01/23/10	1116	941691	4
Uranium-235/236	U	0.0622	0.0881	+/-0.0224	0.100	pCi/g						
Uranium-238		0.796	0.0823	+/-0.0839	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.0293	0.288	+/-0.0909	0.200	pCi/g		MXR1	01/25/10	0838	941636	5
Bismuth-211	UI	4.49	R,R5a	0.347	+/-0.331	pCi/g						
Bismuth-214		1.18		0.124	+/-0.108	pCi/g						
Cadmium-109	UI	3.31	R,R5a	1.30	+/-0.437	pCi/g						
Cerium-139	U	-0.023		0.0528	+/-0.0152	pCi/g						
Cesium-134	UI	0.135	R,R5a	0.103	+/-0.0418	pCi/g						
Cesium-137	U	0.0252		0.0718	+/-0.0201	pCi/g						
Cobalt-60	U	0.00909		0.069	+/-0.020	pCi/g						
Europium-152	U	0.0234		0.173	+/-0.0611	pCi/g						
Lanthanum-140	U	0.0615		0.172	+/-0.0506	pCi/g						
Lead-212		1.80		0.101	+/-0.109	pCi/g						
Lead-214		1.56		0.121	+/-0.122	pCi/g						
Mercury-203	U	0.0514		0.0825	+/-0.0256	pCi/g						
Potassium-40		31.9		0.491	+/-1.69	pCi/g						
Radium-223	U	0.0331		1.11	+/-0.369	pCi/g						
Radium-224	UI	4.86	R,R5a	1.15	+/-0.729	pCi/g						
Radium-226		1.18		0.124	+/-0.108	pCi/g						
Radium-228		1.82		0.246	+/-0.195	pCi/g						
Ruthenium-106	U	0.170		0.614	+/-0.173	pCi/g						

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 27, 2010

Client Sample ID: RE12-10-7257
Sample ID: 244604001
Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time Batch	Mtd.
Rad Gamma Spec Analysis											
<i>GAMMA SPEC "Dry Weight Corrected"</i>											
Sodium-22	U	-0.00622	0.0784	+/-0.0236	0.080	pCi/g					
Strontium-85	UI	0.112	R,R5a	0.0797	+/-0.0231	pCi/g					
Thallium-208		0.602	0.0582	+/-0.0509	0.080	pCi/g					
Thorium-227	U	-0.359	0.675	+/-0.205		pCi/g					
Thorium-231	U	0.0331	1.11	+/-0.369		pCi/g					
Thorium-234	U	1.47	2.41	+/-0.974	2.00	pCi/g					
Tin-113	U	-0.0248	0.0824	+/-0.0252	0.100	pCi/g					
Uranium-235	U	0.0417	0.392	+/-0.109	0.500	pCi/g					
Yttrium-88	U	0.0144	0.0623	+/-0.0177	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"	78.6	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	94.5	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	80.3	(50%-105%)

Notes:

TPU is calculated at the 67% confidence level (1-sigma).

The Qualifiers in this report are defined as follows :

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

GEL LABORATORIES LLC

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

Certificate of Analysis

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

Report Date: January 27, 2010

Client Sample ID: RE12-10-7256
Sample ID: 244604002
Matrix: R
Collect Date: 08-JAN-10
Receive Date: 13-JAN-10
Collector: Client
Moisture: 24.1%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids												
<i>"As Received"</i>												
Rad Alpha Spec Analysis												
<i>AM241 "Dry Weight Corrected"</i>												
Americium-241	U	0.00194	0.0213	+/-0.00236	0.050	pCi/g		KXM4	01/23/10	1208	941688	2
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.000989	0.0163	+/-0.00099	0.050	pCi/g		KXM4	01/21/10	1659	941690	3
Plutonium-239/240		0.0297	0.0187	+/-0.00561	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		1.33	0.122	+/-0.119	0.100	pCi/g		KXM4	01/23/10	1117	941691	4
Uranium-235/236	U	0.0389	0.0756	+/-0.014	0.100	pCi/g						
Uranium-238		1.98	0.0706	+/-0.166	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.107	0.325	+/-0.0976	0.200	pCi/g		MXR1	01/25/10	0838	941636	5
Bismuth-211	UI	4.21	R,R5a	+/-0.346		pCi/g						
Bismuth-214		1.12	0.114	+/-0.0921	0.200	pCi/g						
Cadmium-109	UI	3.34	R,R5a	+/-0.527		pCi/g						
Cerium-139	U	-0.0219	0.0521	+/-0.0161	0.050	pCi/g						
Cesium-134	U	0.0525	0.0919	+/-0.0257	0.100	pCi/g						
Cesium-137		0.293	0.0751	+/-0.040	0.100	pCi/g						
Cobalt-60	U	0.00914	0.0646	+/-0.019	0.100	pCi/g						
Europium-152	U	0.0265	0.183	+/-0.053	0.200	pCi/g						
Lanthanum-140	U	-0.0785	0.135	+/-0.0469		pCi/g						
Lead-212		1.56	0.0999	+/-0.114	0.100	pCi/g						
Lead-214		1.46	0.121	+/-0.126	0.100	pCi/g						
Mercury-203	U	0.0368	0.0767	+/-0.024	0.100	pCi/g						
Potassium-40		27.7	0.593	+/-1.60	1.00	pCi/g						
Radium-223	U	0.722	1.23	+/-0.389		pCi/g						
Radium-224	UI	4.35	R,R5a	+/-0.718		pCi/g						
Radium-226		1.12	0.114	+/-0.0921		pCi/g						
Radium-228		1.67	0.226	+/-0.204	0.500	pCi/g						
Ruthenium-106	U	0.100	0.582	+/-0.168	0.800	pCi/g						
Sodium-22	U	-0.0128	0.0788	+/-0.0245	0.080	pCi/g						

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 27, 2010

Client Sample ID: RE12-10-7256
Sample ID: 244604002
Project Client ID: LANL01004
LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time Batch	Mtd.
Rad Gamma Spec Analysis											
<i>GAMMA SPEC "Dry Weight Corrected"</i>											
Strontium-85	U	0.0458	0.071	+/-0.0227		pCi/g					
Thallium-208		0.509	0.0608	+/-0.0532	0.080	pCi/g					
Thorium-227	U	0.376	0.705	+/-0.197		pCi/g					
Thorium-231	U	0.722	1.23	+/-0.389		pCi/g					
Thorium-234	U	1.68	2.43	+/-1.13	2.00	pCi/g					
Tin-113	U	-0.0142	0.0809	+/-0.0246	0.100	pCi/g					
Uranium-235	U	-0.00454	0.381	+/-0.113	0.500	pCi/g					
Yttrium-88	U	-0.005	0.0487	+/-0.0154	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"	90.8	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	95.0	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	92.7	(50%-105%)

Notes:

TPU is calculated at the 67% confidence level (1-sigma).

The Qualifiers in this report are defined as follows :

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- 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

Monday, January 11, 2010

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-1213C

LOS ALAMOS

REQUEST NUMBER: 10-1213

NATIONAL LABORATORY

ATTN: Valerie Davis

TURNAROUND/REPORT DUE: 2/11/2010

General Engineering Laboratories, Inc.,
Charleston, SC.

TURNAROUND REQ'D: 30

2040 Savage Rd

Charleston, SC 29407

LAB REQUEST COMMENTS:

244604%

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
RE12-10-7257	1	AMBER GLASS	8270C+NMED Exp	Ice	R
RE12-10-7257	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE12-10-7257	1	POLY	Met+U+CLO4+CN	Ice	R
RE12-10-7256	1	AMBER GLASS	8270C+NMED Exp	Ice	R
RE12-10-7256	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE12-10-7256	1	POLY	Met+U+CLO4+CN	Ice	R

Relinquished By:

Date

Time

Received By:

Date

Time

Printed Name

Signature

1/12/10

1400

Printed Name

Signature

Patricia Dover Vent P. Al-1213-10 08:55

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Received for DISPOSAL By:

Date

Time

Remarks:

Printed Name

Signature

Monday, January 11, 2010

REQUEST NUMBER: 10-1213

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: 10-1213

Per Agreement Number: 126310011

Project Cost Code: MR3A05529E00

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 1/12/2010

TURNAROUND/REPORT DUE: 2/11/2010

TURNAROUND REQ'D: 30 Days

RAD SCREENING: Yes, Below Background

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:901.1	1	RE12-10-7256	R	1/8/2010	
		1	RE12-10-7257	R	1/8/2010	
	HASL-300:AM-241	1	RE12-10-7256	R	1/8/2010	
		1	RE12-10-7257	R	1/8/2010	
	HASL-300:ISOPU	1	RE12-10-7256	R	1/8/2010	
		1	RE12-10-7257	R	1/8/2010	
	HASL-300:ISOU	1	RE12-10-7256	R	1/8/2010	
		1	RE12-10-7257	R	1/8/2010	
	SW-846:6020	1	RE12-10-7256	R	1/8/2010	

Monday, January 11, 2010

REQUEST NUMBER: 10-1213

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:6020	1	RE12-10-7257	R	1/8/2010	
	SW-846:6850	1	RE12-10-7256	R	1/8/2010	
		1	RE12-10-7257	R	1/8/2010	
	SW-846:7471A	1	RE12-10-7256	R	1/8/2010	
		1	RE12-10-7257	R	1/8/2010	
	SW-846:8270C	1	RE12-10-7256	R	1/8/2010	
		1	RE12-10-7257	R	1/8/2010	
	SW-846:8321A_MOD	1	RE12-10-7256	R	1/8/2010	
		1	RE12-10-7257	R	1/8/2010	
	SW-846:9012A	1	RE12-10-7256	R	1/8/2010	
		1	RE12-10-7257	R	1/8/2010	

Final Page of REQUEST NUMBER 10-1213



January 15, 2010

www.gel.com

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

Re: LANL ER Project
Work Order: 244604
SDG: 10-1213

Dear Ms. Valdez:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on January 13, 2010, and analyzed for Explosives by LCMSMS, GC/MS Semivolatile, General Chemistry, Metals, Perchlorates by LCMSMS and Radiochemistry. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

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

Sincerely,

Valerie Davis
Project Manager

Purchase Order: 72733-001-09
Chain of Custody: 10-1213
Enclosures

Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Work Order #: 244604
SDG: 10-1213

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Case Narrative

**Case Narrative for
Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Workorder #: 244604
SDG # : 10-1213**

January 15, 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 13, 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 10,12,13C temperatures. Shipping container temperature was within specification (0 - 6C).

Sample Identification The laboratory received the following samples:

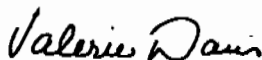
<u>Laboratory ID</u>	<u>Client ID</u>
244604001	RE12-10-7257
244604002	RE12-10-7256

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/MS Semivolatile, General Chemistry, Metals, Perchlorates by LCMSMS and Radiochemistry.

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



Valerie Davis

Project Manager

List of current GEL Certifications as of 15 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

Monday, January 11, 2010

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-1213C

LOS ALAMOS

REQUEST NUMBER: 10-1213

NATIONAL LABORATORY

ATTN: Valerie Davis

TURNAROUND/REPORT DUE: 2/11/2010

General Engineering Laboratories, Inc.,
Charleston, SC.

TURNAROUND REQ'D: 30

2040 Savage Rd

Charleston, SC 29407

LAB REQUEST COMMENTS:

244604-1.

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
RE12-10-7257	1	AMBER GLASS	8270C+NMED Exp	Ice	R
RE12-10-7257	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE12-10-7257	1	POLY	Met+U+CLO4+CN	Ice	R
RE12-10-7256	1	AMBER GLASS	8270C+NMED Exp	Ice	R
RE12-10-7256	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE12-10-7256	1	POLY	Met+U+CLO4+CN	Ice	R

Relinquished By:

Date

Time

Received By:

Date

Time

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Received for DISPOSAL By:

Date

Time

Remarks:

Printed Name

Signature

Monday, January 11, 2010

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

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

Please analyse the enclosed samples
according to the schedule indicated:

SHIP DATE: 1/12/2010

TURNAROUND/REPORT DUE: 2/11/2010

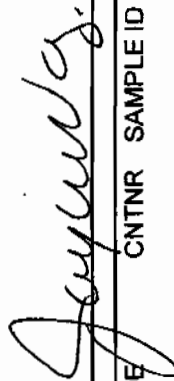
TURNAROUND REQ'D: 30 Days

RAD SCREENING: Yes, Below Background

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:



These Samples are on:
LANL Request Number: 10-1213
Per Agreement Number: 126310011
Project Cost Code: MR3A05529E00

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA-901.1	1	RE12-10-7256	R	1/8/2010	
		1	RE12-10-7257	R	1/8/2010	
	HASL-300:AM-241	1	RE12-10-7256	R	1/8/2010	
		1	RE12-10-7257	R	1/8/2010	
	HASL-300:ISOPU	1	RE12-10-7256	R	1/8/2010	
		1	RE12-10-7257	R	1/8/2010	
	HASL-300:ISOU	1	RE12-10-7256	R	1/8/2010	
		1	RE12-10-7257	R	1/8/2010	
	SW-846:6020	1	RE12-10-7256	R	1/8/2010	

Monday, January 11, 2010

REQUEST NUMBER: 10-1213

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:9020	1	RE12-10-7257	R	1/8/2010	
	SW-846:9850	1	RE12-10-7256	R	1/8/2010	
		1	RE12-10-7257	R	1/8/2010	
	SW-846:7471A	1	RE12-10-7256	R	1/8/2010	
		1	RE12-10-7257	R	1/8/2010	
	SW-846:8270C	1	RE12-10-7256	R	1/8/2010	
		1	RE12-10-7257	R	1/8/2010	
	SW-846:8321A_MOD	1	RE12-10-7256	R	1/8/2010	
		1	RE12-10-7257	R	1/8/2010	
	SW-846:9012A	1	RE12-10-7256	R	1/8/2010	
		1	RE12-10-7257	R	1/8/2010	

Final Page of REQUEST NUMBER 10-1213



Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: LANL			SDG/ARCOC/Work Order: 10-1213		
Received By: Patricia Dover-Dent			Date Received: JANUARY 13, 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*: 60CPM	
Classified Radioactive II by RSO?			X		
COC/Samples marked containing PCBs?			X		
Shipped as a DOT Hazardous?			X	Hazard Class Shipped: UN#:	
Samples identified as Foreign Soil?			X		

Sample Receipt Criteria		Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other (describe)
2	Samples requiring cold preservation within (0 < 6 deg. C?	X			Preservation Method: ice bags BLUE ICE dry ice NONE other (describe) 1-6,10,12,13
3	Chain of custody documents included with shipment?	X			
4	Sample containers intact and sealed?	X			Circle Applicable broken damaged container leaking container other (describe) seals
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 4887 1C 7209 7849 4854 10C

7209 7849 4924 1C 7209 7849 4800 12C

7209 7849 4810 2C 7209 7849 4843 13C

7209 7849 4898 3C

7209 7849 4946 4C

7209 7849 4865 5C

7209 7849 4876 6C

7209 7849 4935 6C

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

SHIP DATE: 12JAN10
ACTWGT: 54.0 LB MAN
CAD: 0014176/CAFE2449

LOS ALAMOS, NM 87545
UNITED STATES US

BILL SENDER

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 556-8171

REF: 6B010AMR3A0352VA00

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

SHIP DATE: 12JAN10
ACTWGT: 47.0 LB MAN
CAD: 0014176/CAFE2449

LOS ALAMOS, NM 87545
UNITED STATES US

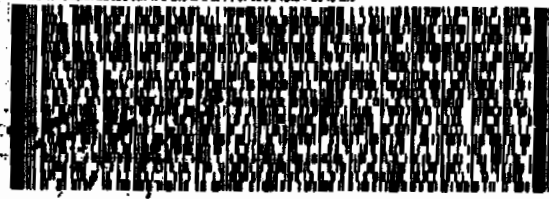
BILL SENDER

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 556-8171

REF: 6B010AMR3A05529E00



2 of 2

WED - 13JAN A1

MPS# 7209 7849 4887

PRIORITY OVERNIGHT

Matr# 7209 7849 4876 0201

XX CHSA

29407
SC-US
CHS



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

SHIP DATE: 12JAN10
ACTWGT: 55.0 LB MAN
CAD: 0014176/CAFE2449

LOS ALAMOS, NM 87545
UNITED STATES US

BILL SENDER

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407

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REF: 6B010AMR2A0515BYDO



3 of 3
MPS# 7209 7849 4810

WED - 13JAN A1
PRIORITY OVERNIGHT

Matr# 7209 7849 4795 0201

XX CHSA

29407
SC-US
CHS



TRKH 7209 7849 4924

WED - 13JAN A1
PRIORITY OVERNIGHT

XX CHSA

29407
SC-US
CHS



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

SHIP DATE: 12JAN10
ACTWGT: 57.0 LB MAN
CAD: 0014176/CAFE2449

LOS ALAMOS, NM 87545
UNITED STATES US

BILL SENDER

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 556-8171

REF: 6B010AMR3A0352VA00



TRKH 7209 7849 4898

WED - 13JAN A1
PRIORITY OVERNIGHT

XX CHSA

29407
SC-US
CHS



JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 12JAN10
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

4°



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TRKH
0201 7209 7849 4946

WED - 13JAN A1
PRIORITY OVERNIGHT

XX CHSA

29407
SC-US
CHS



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

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 12JAN10
ACTWGT: 55.0 LB MAN
CAD: 0014176/CAFE2449

BILL SENDER

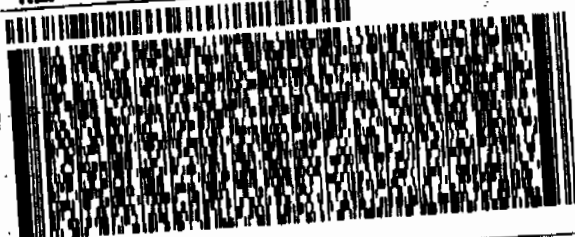
VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 556-8171

REF: 6B010AMR3A0352VA00

6°



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Express



TRKH
0201 7209 7849 4876

NR MASTER NM

WED - 13JAN A1
PRIORITY OVERNIGHT

XX CHSA

29407
SC-US
CHS

JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 12JAN10
ACTWGT: 48.0 LB MAN
CAD: 0014176/CAFE2449

BILL SENDER

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 556-8171

REF: 6B010AMR3A0352VA00

5°



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Express



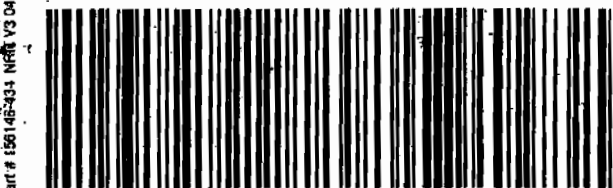
MPSH
0263 7209 7849 4865

MatrN 7209 7849 4843 0201

WED - 13JAN A1
PRIORITY OVERNIGHT

XX CHSA

29407
SC-US
CHS



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

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 12JAN10
ACTWGT: 61.0 LB MAN
CAD: 0014176/CAFE2449

BILL SENDER

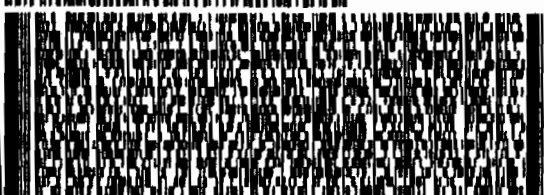
VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 556-8171

REF: 6B010AMR3A05529E00

6°



FedEx
Express



TRKH
0201 7209 7849 4935

WED - 13JAN A1
PRIORITY OVERNIGHT

XX CHSA

29407
SC-US
CHS

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

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 12JAN10
ACTWGT: 45.0 LB MAN
CAD: 0014176/CAFE2449

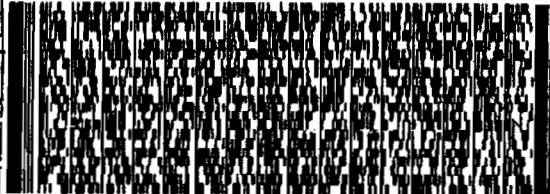
BILL SENDER

° VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 556-8171
REF: 6B010AMR3A0352VA00

10°



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J092009111302223

2 of 3
MPS# 0263 7209 7849 4854
Matr# 7209 7849 4843 0201

WED - 13JAN A1
PRIORITY OVERNIGHT

29407
SC-US
CHS

XX CHSA



Part # 156148-434 NRT V3 04-01

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

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 12JAN10
ACTWGT: 59.0 LB MAN
CAD: 0014176/CAFE2449

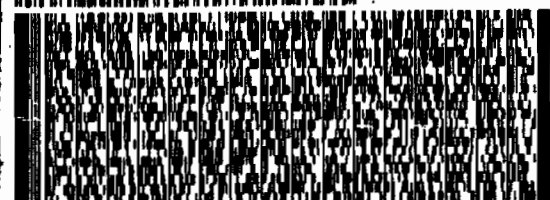
BILL SENDER

° VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 556-8171
REF: 6B010AMR2A0515BYD0

12°



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Express



J092009111302223

2 of 3
MPS# 0263 7209 7849 4800
Matr# 7209 7849 4795 0201

WED - 13JAN A1
PRIORITY OVERNIGHT

29407
SC-US
CHS

XX CHSA



Part # 156148-434 NRT V3 04-01

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

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 12JAN10
ACTWGT: 30.0 LB MAN
CAD: 0014176/CAFE2449

BILL SENDER

° VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 556-8171
REF: 6B010AMR3A0352VA00

13°



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J092009111302223

1 of 3
TRK# 0201 7209 7849 4843
NM MASTER NM

WED - 13JAN A1
PRIORITY OVERNIGHT

29407
SC-US
CHS

XX CHSA

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.

GC/MS Semivolatile Analysis

**Semi-Volatile Case Narrative
Los Alamos National Laboratory (LANL)
SDG 10-1213**

Method/Analysis Information

Procedure:	Analysis of Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry
Analytical Method:	SW846 8270C
Prep Method:	SW846 3550B
Analytical Batch Number:	941600
Prep Batch Number:	941595

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 8270C:

Sample ID	Client ID
244604001	RE12-10-7257
244604002	RE12-10-7256
1202015385	Method Blank (MB)
1202015386	Laboratory Control Sample (LCS)
1202015387	244613001(RE16-10-1286) Matrix Spike (MS)
1202015388	244613001(RE16-10-1286) 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-009 REV# 23.

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 18.2.

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. Please note that the second level of the initial calibration (5 mg/L) is only used for n-Nitrosodipropylamine. The various

calibration mixes may not be calibrated using all of the calibration levels. In addition, not all of the mixes are calibrated using the same levels.

Diphenylamine has now superseded N-Nitroso-diphenylamine as a CCC on Quantitation Reports, Initial Calibration Reports, Calibration Check Standard Reports, etc. Previous versions of EPA Method 8270 (prior to 8270C) listed N-Nitroso-diphenylamine as a CCC. However, as stated in EPA Method 8270C, Revision 3, December, 1996, Section 1.4.5, "N-Nitroso-diphenylamine decomposes in the gas chromatographic inlet and cannot be separated from Diphenylamine." Studies of these two compounds at GEL, both independent of each other and together, show that they not only co-elute, but also have similar mass spectra. N-Nitroso-diphenylamine and Diphenylamine will be reported as Diphenylamine on all reports and forms. 2,4-Toluene diisocyanate rapidly hydrolyzes in water (half-life less than 30 minutes). Therefore, recoveries of this compound from aqueous matrices should not be expected. In addition, in solid matrices, 2,4-Toluene diisocyanate often reacts with alcohols and amines to produce urethane and ureas and consequently cannot usually coexist in a solution containing these materials. 2,4-Toluene diisocyanate is reported as an estimated value.

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 inverted 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.

Initial Calibration

All initial calibration requirements have been met for this sample delivery group (SDG). A second source initial calibration verification (ICV) was included in the standard section directly behind the initial calibration.

CCV Requirements

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

Quality Control (QC) Information

Method Blank (MB) Statement

The MB analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries

All the 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

The non-SDG sample 244613001 (RE16-10-1286) was selected for analysis as the matrix spike and matrix spike duplicate. Please see the associated raw data file located in the Miscellaneous Section of the data report.

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.

Internal Standard (ISTD) Acceptance

The internal standard responses were within the required acceptance criteria for all samples and QC.

Technical Information:**Holding Time Specifications**

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

Preparation/Analytical Method Verification

All procedures were performed as stated in the SOP.

Sample Dilutions

The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis

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

Miscellaneous Information:**Data Exception (DER) Documentation**

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

Manual Integrations

Some initial calibration standards, continuing calibration standards, and/or samples may require manual integrations due to software limitations. Please see the raw data in the Miscellaneous Section.

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.

System Configuration

The samples reported in this SDG were analyzed on one or more of the following instrument systems. Instrument systems are referenced in the raw data and individual form headers by the Instrument ID designations listed below:

Instrument ID	Instrument	System Configuration	Column ID	Column Description
MSD1.I	HP 5973 Mass Spectrometer	HP6890/HP5973	ZB-5ms	25m x 0.2mm, 0.33um (5% Polysilarylene-95% Polydimethylsiloxane)

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.

Reviewer: Alan Benckman Date: 2-8-10

Roadmap for LANL 10-1213 SVOA

This roadmap was analyzed by amy01291 on 01-21-2010, 12:02.

This roadmap was reviewed by bar00895 on 01-21-2010, 15:16.

Sample

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<input type="checkbox"/>	N	/chem/MSD1.i/s011510.b/s1a1522.d	244604001	15-JAN-2010	18:39	all.sub	RE12-10-7257	1	941600	REPORT
<input type="checkbox"/>	N	/chem/MSD1.i/s011510.b/s1a1523.d	244604002	15-JAN-2010	19:03	all.sub	RE12-10-7256	1	941600	REPORT

QC Sample

exclude	manual	datafile	srmpid	sampletype	injdate	injtime	sublist	clientid	dilution	batchid	comment
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<input type="checkbox"/>	N	/chem/MSD1.i/s011510.b/s1a1507-2.d	1202015386	lcs	15-JAN-2010	12:19	10-1213.sub	SBLK01LCS	1	941600	REPORT

Sample Data Summary

**Semi-Volatile
Certificate of Analysis
Sample Summary**

SDG Number: 10-1213
Lab Sample ID: 244604002

Date Collected: 01/08/2010 12:00
Date Received: 01/13/2010 08:55
Client: LANL010
Method: SW846 8270C
Inst: MSD1.1
Analyst: AMY
Aliquot: 30.04 g
Column: J&W DB-5MS

Matrix: R
%Moisture: 24.1
Project: LANL01004
SOP Ref: GL-OA-E-009
Dilution: 1
Inj. Vol: .5 uL
Final Volume: 1 mL
Level: LOW

Client ID: RE12-10-7256
Batch ID: 941600
Run Date: 01/15/2010 19:03
Prep Date: 01/14/2010 19:40
Data File: s1a1523.d

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	438	ug/kg	87.7	438
108-95-2	Phenol	U	438	ug/kg	87.7	438
95-57-8	2-Chlorophenol	U	438	ug/kg	87.7	438
106-46-7	1,4-Dichlorobenzene	U	438	ug/kg	87.7	438
621-64-7	N-Nitrosodipropylamine	U	438	ug/kg	87.7	438
59-50-7	4-Chloro-3-methylphenol	U	438	ug/kg	87.7	438
83-32-9	Acenaphthene	U	43.8	ug/kg	14.5	43.8
121-14-2	2,4-Dinitrotoluene	U	438	ug/kg	43.8	438
100-02-7	4-Nitrophenol	U	438	ug/kg	145	438
87-86-5	Pentachlorophenol	U	438	ug/kg	110	438
129-00-0	Pyrene	J	42.1	ug/kg	13.2	43.8
110-86-1	Pyridine	U	438	ug/kg	87.7	438
62-53-3	Aniline	U	438	ug/kg	132	438
111-44-4	bis(2-Chloroethyl) ether	U	438	ug/kg	87.7	438
541-73-1	1,3-Dichlorobenzene	U	438	ug/kg	87.7	438
100-51-6	Benzyl alcohol	U	438	ug/kg	132	438
95-50-1	1,2-Dichlorobenzene	U	438	ug/kg	87.7	438
108-60-1	bis(2-Chloroisopropyl)ether	U	438	ug/kg	87.7	438
95-48-7	o-Cresol	U	438	ug/kg	87.7	438
65794-96-9	m,p-Cresols	U	438	ug/kg	132	438
67-72-1	Hexachloroethane	U	438	ug/kg	87.7	438
98-95-3	Nitrobenzene	U	438	ug/kg	87.7	438
78-59-1	Isophorone	U	438	ug/kg	87.7	438
88-75-5	2-Nitrophenol	U	438	ug/kg	87.7	438
105-67-9	2,4-Dimethylphenol	U	438	ug/kg	153	438
111-91-1	bis(2-Chloroethoxy)methane	U	438	ug/kg	87.7	438
120-83-2	2,4-Dichlorophenol	U	438	ug/kg	87.7	438
65-85-0	Benzoic acid	U	877	ug/kg	219	877
91-20-3	Naphthalene	U	43.8	ug/kg	13.2	43.8
106-47-8	4-Chloroaniline	U	438	ug/kg	87.7	438
87-68-3	Hexachlorobutadiene	U	438	ug/kg	87.7	438
91-57-6	2-Methylnaphthalene	U	43.8	ug/kg	8.77	43.8
77-47-4	Hexachlorocyclopentadiene	U	438	ug/kg	87.7	438
88-06-2	2,4,6-Trichlorophenol	U	438	ug/kg	87.7	438
95-95-4	2,4,5-Trichlorophenol	U	438	ug/kg	87.7	438
91-58-7	2-Chloronaphthalene	U	43.8	ug/kg	14.5	43.8
88-74-4	2-Nitroaniline	U	438	ug/kg	87.7	438
99-09-2	<i>o</i> -Nitroaniline	U	438	ug/kg	87.7	438
	3-Nitroaniline					

**Semi-Volatile
Certificate of Analysis
Sample Summary**

SDG Number: 10-1213
Lab Sample ID: 244604002

Date Collected: 01/08/2010 12:00
Date Received: 01/13/2010 08:55
Client: LANL010
Method: SW846 8270C
Inst: MSD1.1
Analyst: AMY
Aliquot: 30.04 g
Column: J&W DB-SMS

Matrix: R
%Moisture: 24.1
Project: LANL01004
SOP Ref: GL-OA-E-009
Dilution: 1
Inj. Vol: .5 uL
Final Volume: 1 mL
Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	<i>m</i> -Nitroaniline					
131-11-3	Dimethylphthalate	U	438	ug/kg	87.7	438
606-20-2	2,6-Dinitrotoluene	U	438	ug/kg	43.8	438
208-96-8	Acenaphthylene	U	43.8	ug/kg	13.2	43.8
51-28-5	2,4-Dinitrophenol	U	877	ug/kg	167	877
132-64-9	Dibenzofuran	U	438	ug/kg	87.7	438
84-66-2	Diethylphthalate	U	438	ug/kg	87.7	438
86-73-7	Fluorene	U	43.8	ug/kg	13.2	43.8
7005-72-3	4-Chlorophenylphenylether	U	438	ug/kg	87.7	438
534-52-1	2-Methyl-4,6-dinitrophenol	U	438	ug/kg	87.7	438
100-01-6	4-Nitroaniline	U	438	ug/kg	132	438
	<i>p</i> -Nitroaniline					
122-39-4	Diphenylamine	U	438	ug/kg	87.7	438
122-66-7	Azobenzene	U	438	ug/kg	87.7	438
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	438	ug/kg	87.7	438
118-74-1	Hexachlorobenzene	U	438	ug/kg	87.7	438
85-01-8	Phenanthrene	J	14.8	ug/kg	13.2	43.8
120-12-7	Anthracene	U	43.8	ug/kg	8.77	43.8
84-74-2	Di-n-butylphthalate	U	438	ug/kg	87.7	438
206-44-0	Fluoranthene		58.9	ug/kg	13.2	43.8
85-68-7	Butylbenzylphthalate	U	438	ug/kg	87.7	438
56-55-3	Benzo(a)anthracene	J	18.9	ug/kg	13.2	43.8
91-94-1	3,3'-Dichlorobenzidine	U	438	ug/kg	132	438
218-01-9	Chrysene		52.2	ug/kg	13.2	43.8
117-81-7	bis(2-Ethylhexyl)phthalate	U	438	ug/kg	87.7	438
117-84-0	Di-n-octylphthalate	U	438	ug/kg	87.7	438
205-99-2	Benzo(b)fluoranthene		204	ug/kg	13.2	43.8
207-08-9	Benzo(k)fluoranthene	U	43.8	ug/kg	13.2	43.8
50-32-8	Benzo(a)pyrene	J	27.2	ug/kg	13.2	43.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	43.8	ug/kg	13.2	43.8
53-70-3	Dibenzo(a,h)anthracene	U	43.8	ug/kg	13.2	43.8
191-24-2	Benzo(ghi)perylene	J	15.1	ug/kg	13.2	43.8
120-82-1	1,2,4-Trichlorobenzene	U	438	ug/kg	87.7	438

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	2.82	612	ug/kg		JA
544-64-9	Myristoleic acid	7.12	393	ug/kg	91	NJ

**Semi-Volatile
Certificate of Analysis
Sample Summary**

SDG Number: 10-1213
Lab Sample ID: 244604002

Date Collected: 01/08/2010 12:00
Date Received: 01/13/2010 08:55
Client: LANL010
Method: SW846 8270C
Inst: MSD1.I
Analyst: AMY
Aliquot: 30.04 g
Column: J&W DB-5MS

Matrix: R
%Moisture: 24.1
Project: LANL01004
SOP Ref: GL-OA-E-009
Dilution: 1
Inj. Vol: .5 uL
Final Volume: 1 mL
Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
Tentatively Identified Compound Summary						
CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
57-10-3	n-Hexadecanoic acid	7.13	669	ug/kg	99	NJ
1000130-90-8	Z-7-Hexadecenoic acid	7.55	890	ug/kg	95	NJ
	Unknown	7.85	187	ug/kg		J
33979-03-2	1,1'-Biphenyl, 2,2',4,4',6,6'-hexachloro	8	201	ug/kg	99	NJ
	Unknown	8.03	212	ug/kg		J
1599-67-3	1-Docosene	8.79	208	ug/kg	97	NJ
	Unknown	9.14	219	ug/kg		J
112-95-8	Eicosane	9.3	812	ug/kg	97	NJ
	Unknown	10.07	1030	ug/kg		J
	Unknown	10.18	543	ug/kg		J
	Unknown	10.36	238	ug/kg		J
	Unknown	11.15	404	ug/kg		J
35060-26-5	D:B-Friedo-18,19-secolup-19-ene, 3,10-ep	11.37	224	ug/kg	95	NJ
83-47-6	.gamma.-Sitosterol	11.87	890	ug/kg	92	NJ
	Unknown	12.66	281	ug/kg		J
	Unknown	12.87	673	ug/kg		J

**Semi-Volatile
Certificate of Analysis
Sample Summary**

Page 1 of 3

SDG Number: 10-1213
Lab Sample ID: 244604001

Date Collected: 01/08/2010 12:00
Date Received: 01/13/2010 08:55
Client: LANL010
Method: SW846 8270C
Inst: MSD1.I
Analyst: AMY
Aliquot: 30.16 g
Column: J&W DB-5MS

Matrix: R
%Moisture: 10
Project: LANL01004
SOP Ref: GL-OA-E-009
Dilution: 1
Inj. Vol: .5 uL
Final Volume: 1 mL
Level: LOW

Client ID: RE12-10-7257
Batch ID: 941600
Run Date: 01/15/2010 18:39
Prep Date: 01/14/2010 19:40
Data File: s1a1522.d

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	368	ug/kg	73.6	368
108-95-2	Phenol	U	368	ug/kg	73.6	368
95-57-8	2-Chlorophenol	U	368	ug/kg	73.6	368
106-46-7	1,4-Dichlorobenzene	U	368	ug/kg	73.6	368
621-64-7	N-Nitrosodipropylamine	U	368	ug/kg	73.6	368
59-50-7	4-Chloro-3-methylphenol	U	368	ug/kg	73.6	368
83-32-9	Acenaphthene	U	36.8	ug/kg	12.2	36.8
121-14-2	2,4-Dinitrotoluene	U	368	ug/kg	36.8	368
100-02-7	4-Nitrophenol	U	368	ug/kg	122	368
87-86-5	Pentachlorophenol	U	368	ug/kg	92.1	368
129-00-0	Pyrene	U	36.8	ug/kg	11.0	36.8
110-86-1	Pyridine	U	368	ug/kg	73.6	368
62-53-3	Aniline	U	368	ug/kg	110	368
111-44-4	bis(2-Chloroethyl) ether	U	368	ug/kg	73.6	368
541-73-1	1,3-Dichlorobenzene	U	368	ug/kg	73.6	368
100-51-6	Benzyl alcohol	U	368	ug/kg	110	368
95-50-1	1,2-Dichlorobenzene	U	368	ug/kg	73.6	368
108-60-1	bis(2-Chloroisopropyl)ether	U	368	ug/kg	73.6	368
95-48-7	o-Cresol	U	368	ug/kg	73.6	368
65794-96-9	m,p-Cresols	U	368	ug/kg	110	368
67-72-1	Hexachloroethane	U	368	ug/kg	73.6	368
98-95-3	Nitrobenzene	U	368	ug/kg	73.6	368
78-59-1	Isophorone	U	368	ug/kg	73.6	368
88-75-5	2-Nitrophenol	U	368	ug/kg	73.6	368
105-67-9	2,4-Dimethylphenol	U	368	ug/kg	129	368
111-91-1	bis(2-Chloroethoxy)methane	U	368	ug/kg	73.6	368
120-83-2	2,4-Dichlorophenol	U	368	ug/kg	73.6	368
65-85-0	Benzoic acid	U	736	ug/kg	184	736
91-20-3	Naphthalene	U	36.8	ug/kg	11.0	36.8
106-47-8	4-Chloroaniline	U	368	ug/kg	73.6	368
87-68-3	Hexachlorobutadiene	U	368	ug/kg	73.6	368
91-57-6	2-Methylnaphthalene	U	36.8	ug/kg	7.36	36.8
77-47-4	Hexachlorocyclopentadiene	U	368	ug/kg	73.6	368
88-06-2	2,4,6-Trichlorophenol	U	368	ug/kg	73.6	368
95-95-4	2,4,5-Trichlorophenol	U	368	ug/kg	73.6	368
91-58-7	2-Chloronaphthalene	U	36.8	ug/kg	12.2	36.8
88-74-4	2-Nitroaniline	U	368	ug/kg	73.6	368
	<i>o</i> -Nitroaniline					
99-09-2	3-Nitroaniline	U	368	ug/kg	73.6	368

**Semi-Volatile
Certificate of Analysis
Sample Summary**

SDG Number: 10-1213
Lab Sample ID: 244604001

Date Collected: 01/08/2010 12:00
Date Received: 01/13/2010 08:55
Client: LANL010
Method: SW846 8270C
Inst: MSD1.I
Analyst: AMY
Aliquot: 30.16 g
Column: J&W DB-5MS

Matrix: R
%Moisture: 10
Project: LANL01004
SOP Ref: GL-OA-E-009
Dilution: 1
Inj. Vol: .5 uL
Final Volume: 1 mL
Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	<i>m</i> -Nitroaniline					
131-11-3	Dimethylphthalate	U	368	ug/kg	73.6	368
606-20-2	2,6-Dinitrotoluene	U	368	ug/kg	36.8	368
208-96-8	Acenaphthylene	U	36.8	ug/kg	11.0	36.8
51-28-5	2,4-Dinitrophenol	U	736	ug/kg	140	736
132-64-9	Dibenzofuran	U	368	ug/kg	73.6	368
84-66-2	Diethylphthalate	U	368	ug/kg	73.6	368
86-73-7	Fluorene	U	36.8	ug/kg	11.0	36.8
7005-72-3	4-Chlorophenylphenylether	U	368	ug/kg	73.6	368
534-52-1	2-Methyl-4,6-dinitrophenol	U	368	ug/kg	73.6	368
100-01-6	4-Nitroaniline	U	368	ug/kg	110	368
	<i>p</i> -Nitroaniline					
122-39-4	Diphenylamine	U	368	ug/kg	73.6	368
122-66-7	Azobenzene	U	368	ug/kg	73.6	368
	<i>1,2</i> -Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	368	ug/kg	73.6	368
118-74-1	Hexachlorobenzene	U	368	ug/kg	73.6	368
85-01-8	Phenanthrene	U	36.8	ug/kg	11.0	36.8
120-12-7	Anthracene	U	36.8	ug/kg	7.36	36.8
84-74-2	Di-n-butylphthalate	U	368	ug/kg	73.6	368
206-44-0	Fluoranthene	U	36.8	ug/kg	11.0	36.8
85-68-7	Butylbenzylphthalate	U	368	ug/kg	73.6	368
56-55-3	Benzo(a)anthracene	U	36.8	ug/kg	11.0	36.8
91-94-1	3,3'-Dichlorobenzidine	U	368	ug/kg	110	368
218-01-9	Chrysene	U	36.8	ug/kg	11.0	36.8
117-81-7	bis(2-Ethylhexyl)phthalate	U	368	ug/kg	73.6	368
117-84-0	Di-n-octylphthalate	U	368	ug/kg	73.6	368
205-99-2	Benzo(b)fluoranthene	U	36.8	ug/kg	11.0	36.8
207-08-9	Benzo(k)fluoranthene	U	36.8	ug/kg	11.0	36.8
50-32-8	Benzo(a)pyrene	U	36.8	ug/kg	11.0	36.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	36.8	ug/kg	11.0	36.8
53-70-3	Dibenzo(a,h)anthracene	U	36.8	ug/kg	11.0	36.8
191-24-2	Benzo(ghi)perylene	U	36.8	ug/kg	11.0	36.8
120-82-1	1,2,4-Trichlorobenzene	U	368	ug/kg	73.6	368

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	1.96	758	ug/kg		J
	Unknown Aldol Condensate	2.82	566	ug/kg		JA

**Semi-Volatile
Certificate of Analysis
Sample Summary**

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SDG Number: 10-1213
Lab Sample ID: 244604001

Date Collected: 01/08/2010 12:00
Date Received: 01/13/2010 08:55
Client: LANL010
Method: SW846 8270C
Inst: MSD1.J
Analyst: AMY
Aliquot: 30.16 g
Column: J&W DB-SMS

Matrix: R
%Moisture: 10
Project: LANL01004
SOP Ref: GL-OA-E-009
Dilution: 1
Inj. Vol: .5 uL
Final Volume: 1 mL
Level: LOW

Client ID: RE12-10-7257
Batch ID: 941600
Run Date: 01/15/2010 18:39
Prep Date: 01/14/2010 19:40
Data File: sla1522.d

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
Tentatively Identified Compound Summary						
CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
5131-66-8	2-Propanol, 1-butoxy-	3.32	189	ug/kg	90	NJ
1000131-10-3	Z,E-2,13-Octadecadien-1-ol	7.54	225	ug/kg	86	NJ
	Unknown	7.87	189	ug/kg		J
	Unknown	11.4	433	ug/kg		J
	Unknown	11.87	456	ug/kg		J
	Unknown	12.65	237	ug/kg		J
	Unknown	12.86	166	ug/kg		J

QC Summary

Semi-Volatile
Surrogate Recovery Report

Page 1 of 1

SDG Number: 10-1213

Matrix Type: SOLID

CAP Column (1) : J&W DB-5MS

Sample ID	Client ID	2FP %REC	PHL %REC	NBZ %REC	FBP %REC	TBP %REC	TPH %REC
1202015385	MB for batch 941595	72	73	86	86	82	96
1202015386	LCS for batch 941595	75	74	87	87	94	98
244604001	RE12-10-7257	67	70	83	82	89	96
244604002	RE12-10-7256	57	58	70	69	76	80

Surrogate

Acceptance Limits

2FP	= 2-Fluorophenol	(35%-96%)
PHL	= Phenol-d5	(36%-96%)
NBZ	= Nitrobenzene-d5	(34%-104%)
FBP	= 2-Fluorobiphenyl	(36%-100%)
TBP	= 2,4,6-Tribromophenol	(37%-106%)
TPH	= p-Terphenyl-d14	(40%-124%)

* Recovery outside Acceptance Limits

Column to be used to flag recovery values

D Sample Diluted

Semi-Volatile
Quality Control Summary
Spike Recovery Report

Page 1 of 4

SDG Number: 10-1213

Sample Type: Laboratory Control Sample

Client ID: LCS for batch 941595

Matrix: SOIL

Lab Sample ID: 1202015386

Instrument: MSD1.I

Analysis Date: 01/15/2010 12:19

Dilution: 1

Analyst: AMY

Pren Batch II 941595

Inj. Vol: .5 uL

Batch ID: 941600

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
62-75-9	LCS N-Methyl-N-nitrosomethylam	1670	0.0	1390	84	31-95
108-95-2	LCS Phenol	1670	0.0	1260	75	37-104
95-57-8	LCS 2-Chlorophenol	1670	0.0	1250	75	40-105
106-46-7	LCS 1,4-Dichlorobenzene	1670	0.0	1160	70	34-103
621-64-7	LCS N-Nitrosodipropylamine	1670	0.0	1160	70	36-110
59-50-7	LCS 4-Chloro-3-methylphenol	1670	0.0	1410	84	46-114
83-32-9	LCS Acenaphthene	1670	0.0	1340	80	40-105
121-14-2	LCS 2,4-Dinitrotoluene	1670	0.0	1280	77	49-107
100-02-7	LCS 4-Nitrophenol	1670	0.0	1190	72	33-110
87-86-5	LCS Pentachlorophenol	1670	0.0	1500	90	38-116
129-00-0	LCS Pyrene	1670	0.0	1480	89	43-108
110-86-1	LCS Pyridine	1670	0.0	1150	69	13-129
62-53-3	LCS Aniline	1670	0.0	1070	64	30-121
111-44-4	LCS bis(2-Chloroethyl) ether	1670	0.0	1270	76	37-106
541-73-1	LCS 1,3-Dichlorobenzene	1670	0.0	1150	69	33-103
100-51-6	LCS Benzyl alcohol	1670	0.0	1400	84	31-100
95-50-1	LCS 1,2-Dichlorobenzene	1670	0.0	1210	72	34-108
108-60-1	LCS bis(2-Chloroisopropyl)ether	1670	0.0	1230	74	34-120
95-48-7	LCS o-Cresol	1670	0.0	1330	80	39-111
65794-96-9	LCS m,p-Cresols	1670	0.0	1300	78	43-118
67-72-1	LCS Hexachloroethane	1670	0.0	1150	69	34-105
98-95-3	LCS Nitrobenzene	1670	0.0	1480	89	37-110

Semi-Volatile

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Quality Control Summary
Spike Recovery Report

SDG Number: 10-1213

Sample Type: Laboratory Control Sample

Client ID: LCS for batch 941595

Matrix: SOIL

Lab Sample ID: 1202015386

Instrument: MSD1.I

Analysis Date: 01/15/2010 12:19

Dilution: 1

Analyst: AMY

Preo Batch II 941595

Inj. Vol: .5 uL

Batch ID: 941600

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
78-59-1	LCS Isophorone	1670	0.0	1540	92	41-108
88-75-5	LCS 2-Nitrophenol	1670	0.0	1190	71	35-112
105-67-9	LCS 2,4-Dimethylphenol	1670	0.0	1340	80	35-114
111-91-1	LCS bis(2-Chloroethoxy)methane	1670	0.0	1340	80	40-109
120-83-2	LCS 2,4-Dichlorophenol	1670	0.0	1330	80	45-109
65-85-0	LCS Benzoic acid	3330	0.0	2930	88	27-137
91-20-3	LCS Naphthalene	1670	0.0	1260	76	35-105
106-47-8	LCS 4-Chloroaniline	1670	0.0	1110	67	30-122
87-68-3	LCS Hexachlorobutadiene	1670	0.0	1520	91	37-111
91-57-6	LCS 2-Methylnaphthalene	1670	0.0	1350	81	40-106
77-47-4	LCS Hexachlorocyclopentadiene	1670	0.0	1670	100	24-135
88-06-2	LCS 2,4,6-Trichlorophenol	1670	0.0	1430	86	46-107
95-95-4	LCS 2,4,5-Trichlorophenol	1670	0.0	1530	92	44-110
91-58-7	LCS 2-Chloronaphthalene	1670	0.0	1240	74	44-104
88-74-4	LCS 2-Nitroaniline o-Nitroaniline	1670	0.0	1230	74	44-113
99-09-2	LCS 3-Nitroaniline m-Nitroaniline	1670	0.0	1130	68	48-113
131-11-3	LCS Dimethylphthalate	1670	0.0	1410	85	47-104
606-20-2	LCS 2,6-Dinitrotoluene	1670	0.0	1320	79	47-103
208-96-8	LCS Acenaphthylene	1670	0.0	1350	81	43-104
51-28-5	LCS 2,4-Dinitrophenol	1670	0.0	1430	86	32-114
132-64-9	LCS Dibenzofuran	1670	0.0	1560	93	47-112
84-66-2	LCS Diethylphthalate	1670	0.0	1520	91	50-108

Semi-Volatile
Quality Control Summary
Spike Recovery Report

Page 3 of 4

SDG Number: 10-1213

Sample Type: Laboratory Control Sample

Client ID: LCS for batch 941595

Matrix: SOIL

Lab Sample ID: 1202015386

Instrument: MSD1.I

Analysis Date: 01/15/2010 12:19

Dilution: 1

Analyst: AMY

Pre Batch ID: 941595

Inj. Vol: .5 uL

Batch ID: 941600

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
86-73-7	LCS Fluorene	1670	0.0	1340	80	49-102
7005-72-3	LCS 4-Chlorophenylphenylether	1670	0.0	1520	91	50-109
534-52-1	LCS 2-Methyl-4,6-dinitrophenol	1670	0.0	1260	76	35-114
100-01-6	LCS 4-Nitroaniline <i>p</i> -Nitroaniline	1670	0.0	1170	70	44-139
122-39-4	LCS Diphenylamine	1670	0.0	1330	80	46-111
122-66-7	LCS Azobenzene <i>1,2</i> -Diphenylhydrazine	1670	0.0	1390	83	40-119
101-55-3	LCS 4-Bromophenylphenylether	1670	0.0	1740	105	45-112
118-74-1	LCS Hexachlorobenzene	1670	0.0	1560	94	44-115
85-01-8	LCS Phenanthrene	1670	0.0	1350	81	45-107
120-12-7	LCS Anthracene	1670	0.0	1320	79	46-106
84-74-2	LCS Di-n-butylphthalate	1670	0.0	1650	99	52-115
206-44-0	LCS Fluoranthene	1670	0.0	1520	91	50-115
85-68-7	LCS Butylbenzylphthalate	1670	0.0	1680	101	49-115
56-55-3	LCS Benzo(a)anthracene	1670	0.0	1410	85	48-105
91-94-1	LCS 3,3'-Dichlorobenzidine	1670	0.0	1490	90	45-98
218-01-9	LCS Chrysene	1670	0.0	1420	85	48-105
117-81-7	LCS bis(2-Ethylhexyl)phthalate	1670	0.0	1640	99	50-117
117-84-0	LCS Di-n-octylphthalate	1670	0.0	1620	97	39-123
205-99-2	LCS Benzo(b)fluoranthene	1670	0.0	1470	88	46-111
207-08-9	LCS Benzo(k)fluoranthene	1670	0.0	1460	88	46-114
50-32-8	LCS Benzo(a)pyrene	1670	0.0	1510	91	49-112
193-39-5	LCS Indeno(1,2,3-cd)pyrene	1670	0.0	1490	89	45-128

Semi-Volatile

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Quality Control Summary
Spike Recovery Report

SDG Number: 10-1213

Sample Type: Laboratory Control Sample

Client ID: LCS for batch 941595

Matrix: SOIL

Lab Sample ID:1202015386

Instrument: MSD1.I

Analysis Date: 01/15/2010 12:19

Dilution: 1

Analyst: AMY

Prep Batch ID 941595

Inj. Vol: .5 uL

Batch ID: 941600

CAS No	Paramname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
53-70-3	LCS Dibenzo(a,h)anthracene	1670	0.0	1460	88	44-131
191-24-2	LCS Benzo(ghi)perylene	1670	0.0	1560	93	42-128
120-82-1	LCS 1,2,4-Trichlorobenzene	1670	0.0	1380	83	36-109

Semi-Volatile

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Quality Control Summary
Spike Recovery Report

SDG Number: 10-1213

Sample Type: Matrix Spike

Client ID: RE16-10-1286MS

Matrix: S

Lab Sample ID: 1202015387

%Moisture: 19.7

Instrument: MSD1.I

Analysis Date: 01/15/2010 20:16

Dilution: 1

Analyst: AMY

Preo Batch II 941595

Inj. Vol: .5 uL

Batch ID: 941600

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
62-75-9	MS	N-Methyl-N-nitrosomethylam	2080	0.00	U	1350	65	32-90
108-95-2	MS	Phenol	2080	0.00	U	1440	69	32-105
95-57-8	MS	2-Chlorophenol	2080	0.00	U	1410	68	33-106
106-46-7	MS	1,4-Dichlorobenzene	2080	0.00	U	1240	60	33-95
621-64-7	MS	N-Nitrosodipropylamine	2080	0.00	U	1300	62	31-109
59-50-7	MS	4-Chloro-3-methylphenol	2080	0.00	U	1700	82	38-119
83-32-9	MS	Acenaphthene	2080	13.7	J	1510	72	39-100
121-14-2	MS	2,4-Dinitrotoluene	2080	0.00	U	1400	67	42-107
100-02-7	MS	4-Nitrophenol	2080	0.00	U	1470	71	24-120
87-86-5	MS	Pentachlorophenol	2080	0.00	U	1650	79	26-121
129-00-0	MS	Pyrene	2080	130		1900	85	34-120
110-86-1	MS	Pyridine	2080	0.00	U	1090	52	30-95
62-53-3	MS	Aniline	2080	0.00	U	1100	53	34-111
111-44-4	MS	bis(2-Chloroethyl) ether	2080	0.00	U	1370	66	34-101
541-73-1	MS	1,3-Dichlorobenzene	2080	0.00	U	1230	59	31-97
100-51-6	MS	Benzyl alcohol	2080	0.00	U	1340	64	17-120
95-50-1	MS	1,2-Dichlorobenzene	2080	0.00	U	1310	63	32-102
108-60-1	MS	bis(2-Chloroisopropyl)ether	2080	0.00	U	1320	64	32-113
95-48-7	MS	o-Cresol	2080	0.00	U	1790	86	31-119
65794-96-9	MS	m,p-Cresols	2080	0.00	U	1600	77	35-125
67-72-1	MS	Hexachloroethane	2080	0.00	U	1060	51	30-100
98-95-3	MS	Nitrobenzene	2080	0.00	U	1630	79	33-108

Semi-Volatile

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Quality Control Summary
Spike Recovery Report

SDG Number: 10-1213

Sample Type: Matrix Spike

Client ID: RE16-10-1286MS

Matrix: S

Lab Sample ID: 1202015387

%Moisture: 19.7

Instrument: MSD1.I

Analysis Date: 01/15/2010 20:16

Dilution: 1

Analyst: AMY

Pren Batch II 941595

Inj. Vol: .5 uL

Batch ID: 941600

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
78-59-1	MS Isophorone	2080	0.00 U	1740	84	34-110
88-75-5	MS 2-Nitrophenol	2080	0.00 U	1330	64	32-108
105-67-9	MS 2,4-Dimethylphenol	2080	0.00 U	1610	78	32-115
111-91-1	MS bis(2-Chloroethoxy)methane	2080	0.00 U	1490	72	35-108
120-83-2	MS 2,4-Dichlorophenol	2080	0.00 U	1600	77	38-110
65-85-0	MS Benzoic acid	4150	0.00 U	2880	69	18-134
91-20-3	MS Naphthalene	2080	0.00 U	1400	68	31-105
106-47-8	MS 4-Chloroaniline	2080	0.00 U	1150	55	29-123
87-68-3	MS Hexachlorobutadiene	2080	0.00 U	1660	80	31-109
91-57-6	MS 2-Methylnaphthalene	2080	0.00 U	1540	74	32-110
77-47-4	MS Hexachlorocyclopentadiene	2080	0.00 U	589	28	21-122
88-06-2	MS 2,4,6-Trichlorophenol	2080	0.00 U	1680	81	37-108
95-95-4	MS 2,4,5-Trichlorophenol	2080	0.00 U	1860	90	37-116
91-58-7	MS 2-Chloronaphthalene	2080	0.00 U	1440	70	37-103
88-74-4	MS 2-Nitroaniline o-Nitroaniline	2080	0.00 U	1440	69	36-115
99-09-2	MS 3-Nitroaniline m-Nitroaniline	2080	0.00 U	1260	61	39-117
131-11-3	MS Dimethylphthalate	2080	0.00 U	1610	78	41-105
606-20-2	MS 2,6-Dinitrotoluene	2080	0.00 U	1490	72	41-103
208-96-8	MS Acenaphthylene	2080	0.00 U	1580	76	41-103
51-28-5	MS 2,4-Dinitrophenol	2080	0.00 U	688	33	25-104
132-64-9	MS Dibenzofuran	2080	0.00 U	1820	88	40-114
84-66-2	MS Diethylphthalate	2080	0.00 U	1770	85	43-110

Semi-Volatile
Quality Control Summary
Spike Recovery Report

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SDG Number: 10-1213

Client ID: RE16-10-1286MS

Lab Sample ID: 1202015387

Instrument: MSD1.I

Analyst: AMY

Inj. Vol: .5 uL

Sample Type: Matrix Spike

Matrix: S

% Moisture: 19.7

Analysis Date: 01/15/2010 20:16

Dilution: 1

Prep Batch ID: 941595

Batch ID: 941600

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
86-73-7	MS Fluorene	2080	0.00 U	1590	77	48-99
7005-72-3	MS 4-Chlorophenylphenylether	2080	0.00 U	1800	87	42-111
534-52-1	MS 2-Methyl-4,6-dinitrophenol	2080	0.00 U	739	36	19-118
100-01-6	MS 4-Nitroaniline <i>p</i> -Nitroaniline	2080	0.00 U	1250	60	35-139
122-39-4	MS Diphenylamine	2080	0.00 U	1570	76	41-112
122-66-7	MS Azobenzene <i>1,2</i> -Diphenylhydrazine	2080	0.00 U	1660	80	37-118
101-55-3	MS 4-Bromophenylphenylether	2080	0.00 U	2040	98	39-112
118-74-1	MS Hexachlorobenzene	2080	0.00 U	1750	84	38-113
85-01-8	MS Phenanthrene	2080	94.6	1560	71	38-110
120-12-7	MS Anthracene	2080	21.4 J	1530	73	38-112
84-74-2	MS Di-n-butylphthalate	2080	0.00 U	1870	90	42-119
206-44-0	MS Fluoranthene	2080	138	1660	73	38-119
85-68-7	MS Butylbenzylphthalate	2080	0.00 U	2090	101	39-126
56-55-3	MS Benzo(a)anthracene	2080	65.9	1610	75	39-110
91-94-1	MS 3,3'-Dichlorobenzidine	2080	0.00 U	1090	53	35-106
218-01-9	MS Chrysene	2080	68.8	1600	74	39-109
117-81-7	MS bis(2-Ethylhexyl)phthalate	2080	0.00 U	2000	97	40-125
117-84-0	MS Di-n-octylphthalate	2080	0.00 U	2600	125	30-147
205-99-2	MS Benzo(b)fluoranthene	2080	222	1790	76	38-117
207-08-9	MS Benzo(k)fluoranthene	2080	0.00 U	1890	91	39-120
50-32-8	MS Benzo(a)pyrene	2080	56.1	1670	78	40-115
193-39-5	MS Indeno(1,2,3-cd)pyrene	2080	18.0 J	1230	58	32-120

Semi-Volatile

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Quality Control Summary
Spike Recovery Report

SDG Number: 10-1213

Sample Type: Matrix Spike

Client ID: RE16-10-1286MS

Matrix: S

Lab Sample ID: 1202015387

%Moisture: 19.7

Instrument: MSD1.I

Analysis Date: 01/15/2010 20:16

Dilution: 1

Analyst: AMY

Prep Batch II 941595

Inj. Vol: .5 uL

Batch ID: 941600

CAS No	Paramname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
53-70-3	MS Dibenzo(a,h)anthracene	2080	0.00 U	1250	60	32-124
191-24-2	MS Benzo(ghi)perylene	2080	41.9	1180	55	28-119
120-82-1	MS 1,2,4-Trichlorobenzene	2080	0.00 U	1540	74	31-105

Semi-Volatile
Quality Control Summary
Spike Recovery Report

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SDG Number: 10-1213

Sample Type: Matrix Spike Duplicate

Client ID: RE16-10-1286MSD

Matrix: S

Lab Sample ID: 1202015388

%Moisture: 19.7

Instrument: MSD1.I

Analysis Date: 01/15/2010 20:40

Dilution: 1

Analyst: AMY

Prep Batch ID: 941595

Inj. Vol: .5 uL

Batch ID: 941600

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
62-75-9	MSD N-Methyl-N-nitrosomethylam	2070	0.00	U	1330	64	32-90	2	0-30
108-95-2	MSD Phenol	2070	0.00	U	1290	62	32-105	11	0-30
95-57-8	MSD 2-Chlorophenol	2070	0.00	U	1310	63	33-106	8	0-30
106-46-7	MSD 1,4-Dichlorobenzene	2070	0.00	U	1170	57	33-95	6	0-30
621-64-7	MSD N-Nitrosodipropylamine	2070	0.00	U	1190	58	31-109	8	0-30
59-50-7	MSD 4-Chloro-3-methylphenol	2070	0.00	U	1550	75	38-119	10	0-30
83-32-9	MSD Acenaphthene	2070	13.7	J	1370	66	39-100	10	0-30
121-14-2	MSD 2,4-Dinitrotoluene	2070	0.00	U	1280	62	42-107	9	0-30
100-02-7	MSD 4-Nitrophenol	2070	0.00	U	1330	64	24-120	10	0-30
87-86-5	MSD Pentachlorophenol	2070	0.00	U	1440	69	26-121	14	0-30
129-00-0	MSD Pyrene	2070	130		1720	77	34-120	10	0-30
110-86-1	MSD Pyridine	2070	0.00	U	998	48	30-95	8	0-30
62-53-3	MSD Aniline	2070	0.00	U	1040	50	34-111	6	0-30
111-44-4	MSD bis(2-Chloroethyl) ether	2070	0.00	U	1260	61	34-101	8	0-30
541-73-1	MSD 1,3-Dichlorobenzene	2070	0.00	U	1160	56	31-97	6	0-30
100-51-6	MSD Benzyl alcohol	2070	0.00	U	1200	58	17-120	11	0-30
95-50-1	MSD 1,2-Dichlorobenzene	2070	0.00	U	1220	59	32-102	7	0-30
108-60-1	MSD bis(2-Chloroisopropyl)ether	2070	0.00	U	1200	58	32-113	10	0-30
95-48-7	MSD o-Cresol	2070	0.00	U	1690	81	31-119	6	0-30
65794-96-9	MSD m,p-Cresols	2070	0.00	U	1460	70	35-125	10	0-30
67-72-1	MSD Hexachloroethane	2070	0.00	U	973	47	30-100	8	0-30
98-95-3	MSD Nitrobenzene	2070	0.00	U	1500	72	33-108	9	0-30

Semi-Volatile
Quality Control Summary
Spike Recovery Report

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SDG Number: 10-1213

Sample Type: Matrix Spike Duplicate

Client ID: RE16-10-1286MSD

Matrix: S

Lab Sample ID: 1202015388

% Moisture: 19.7

Instrument: MSD1.I

Analysis Date: 01/15/2010 20:40

Dilution: 1

Analyst: AMY

Pren Batch II 941595

Inj. Vol: .5 uL

Batch ID: 941600

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
78-59-1	MSD Isophorone	2070	0.00 U	1580	76	34-110	9	0-30
88-75-5	MSD 2-Nitrophenol	2070	0.00 U	1250	60	32-108	6	0-30
105-67-9	MSD 2,4-Dimethylphenol	2070	0.00 U	1450	70	32-115	10	0-30
111-91-1	MSD bis(2-Chloroethoxy)methane	2070	0.00 U	1350	65	35-108	10	0-30
120-83-2	MSD 2,4-Dichlorophenol	2070	0.00 U	1460	70	38-110	9	0-30
65-85-0	MSD Benzoic acid	4150	0.00 U	2630	63	18-134	9	0-30
91-20-3	MSD Naphthalene	2070	0.00 U	1300	63	31-105	8	0-30
106-47-8	MSD 4-Chloroaniline	2070	0.00 U	1050	50	29-123	9	0-30
87-68-3	MSD Hexachlorobutadiene	2070	0.00 U	1530	74	31-109	9	0-30
91-57-6	MSD 2-Methylnaphthalene	2070	0.00 U	1410	68	32-110	9	0-30
77-47-4	MSD Hexachlorocyclopentadiene	2070	0.00 U	558	27	21-122	5	0-30
88-06-2	MSD 2,4,6-Trichlorophenol	2070	0.00 U	1560	75	37-108	8	0-30
95-95-4	MSD 2,4,5-Trichlorophenol	2070	0.00 U	1700	82	37-116	9	0-30
91-58-7	MSD 2-Chloronaphthalene	2070	0.00 U	1330	64	37-103	8	0-30
88-74-4	MSD 2-Nitroaniline <i>o</i> -Nitroaniline	2070	0.00 U	1320	64	36-115	8	0-30
99-09-2	MSD 3-Nitroaniline <i>m</i> -Nitroaniline	2070	0.00 U	1170	56	39-117	8	0-30
131-11-3	MSD Dimethylphthalate	2070	0.00 U	1470	71	41-105	9	0-30
606-20-2	MSD 2,6-Dinitrotoluene	2070	0.00 U	1370	66	41-103	8	0-30
208-96-8	MSD Acenaphthylene	2070	0.00 U	1450	70	41-103	9	0-30
51-28-5	MSD 2,4-Dinitrophenol	2070	0.00 U	728	35	25-104	6	0-30
132-64-9	MSD Dibenzofuran	2070	0.00 U	1670	81	40-114	8	0-30
84-66-2	MSD Diethylphthalate	2070	0.00 U	1610	78	43-110	9	0-30

Semi-Volatile

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Quality Control Summary
Spike Recovery Report

SDG Number: 10-1213

Sample Type: Matrix Spike Duplicate

Client ID: RE16-10-1286MSD

Matrix: S

Lab Sample ID: 1202015388

% Moisture: 19.7

Instrument: MSD1.I

Analysis Date: 01/15/2010 20:40

Dilution: 1

Analyst: AMY

Prep Batch ID: 941595

Inj. Vol: .5 uL

Batch ID: 941600

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
86-73-7	MSD Fluorene	2070	0.00 U	1440	70	48-99	10	0-30
7005-72-3	MSD 4-Chlorophenylphenylether	2070	0.00 U	1630	79	42-111	10	0-30
534-52-1	MSD 2-Methyl-4,6-dinitrophenol	2070	0.00 U	696	34	19-118	6	0-30
100-01-6	MSD 4-Nitroaniline <i>p</i> -Nitroaniline	2070	0.00 U	1200	58	35-139	4	0-30
122-39-4	MSD Diphenylamine	2070	0.00 U	1360	66	41-112	14	0-30
122-66-7	MSD Azobenzene <i>1,2</i> -Diphenylhydrazine	2070	0.00 U	1460	70	37-118	13	0-30
101-55-3	MSD 4-Bromophenylphenylether	2070	0.00 U	1790	86	39-112	13	0-30
118-74-1	MSD Hexachlorobenzene	2070	0.00 U	1530	74	38-113	14	0-30
85-01-8	MSD Phenanthrene	2070	94.6	1430	65	38-110	9	0-30
120-12-7	MSD Anthracene	2070	21.4 J	1350	64	38-112	13	0-30
84-74-2	MSD Di-n-butylphthalate	2070	0.00 U	1610	77	42-119	15	0-30
206-44-0	MSD Fluoranthene	2070	138	1590	70	38-119	4	0-30
85-68-7	MSD Butylbenzylphthalate	2070	0.00 U	1750	84	39-126	18	0-30
56-55-3	MSD Benzo(a)anthracene	2070	65.9	1510	70	39-110	7	0-30
91-94-1	MSD 3,3'-Dichlorobenzidine	2070	0.00 U	888	43	35-106	21	0-30
218-01-9	MSD Chrysene	2070	68.8	1420	65	39-109	12	0-30
117-81-7	MSD bis(2-Ethylhexyl)phthalate	2070	0.00 U	1690	81	40-125	17	0-30
117-84-0	MSD Di-n-octylphthalate	2070	0.00 U	2130	103	30-147	20	0-30
205-99-2	MSD Benzo(b)fluoranthene	2070	222	1760	74	38-117	2	0-30
207-08-9	MSD Benzo(k)fluoranthene	2070	0.00 U	1510	73	39-120	22	0-30
50-32-8	MSD Benzo(a)pyrene	2070	56.1	1540	72	40-115	8	0-30
193-39-5	MSD Indeno(1,2,3-cd)pyrene	2070	18.0 J	1140	54	32-120	8	0-30

Semi-Volatile

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Quality Control Summary
Spike Recovery Report

SDG Number: 10-1213

Client ID: RE16-10-1286MSD

Lab Sample ID: 1202015388

Instrument: MSD1.I

Analyst: AMY

Inj. Vol: .5 uL

Sample Type: Matrix Spike Duplicate

Matrix: S

%Moisture: 19.7

Analysis Date: 01/15/2010 20:40

Dilution: 1

Prep Batch II 941595

Batch ID: 941600

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
53-70-3	MSD Dibenzo(a,h)anthracene	2070	0.00	U	1160	56	32-124	8	0-30
191-24-2	MSD Benzo(ghi)perylene	2070	41.9		1090	51	28-119	8	0-30
120-82-1	MSD 1,2,4-Trichlorobenzene	2070	0.00	U	1420	69	31-105	8	0-30

Method Blank Summary

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SDG Number:	10-1213	Client:	LANL010	Matrix:	SOIL
Client ID:	MB for batch 941595	Instrument ID:	MSD1J	Data File:	s1a1506-1.d
Lab Sample ID:	1202015385	Prep Date:	01/14/2010 19:40	Analyzed:	01/15/10 11:54
Column:	J&W DB-5MS	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 941595	1202015386	s1a1507-1.d	01/15/10	1219
02 RE12-10-7257	244604001	s1a1522.d	01/15/10	1839
03 RE12-10-7256	244604002	s1a1523.d	01/15/10	1903

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC

Client SDG: 10-1213

Instrument ID: MSD1.I

Injection Date/Time: 14-NOV-09 17:38

Column Description: J&W DB-5MS

Lab File ID /chem/MSD1.i/s111409.b/s1k1201.d

m/e	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% Relative Abundance	100
51	30 - 60% of mass 198	41.3
68	Less than 2% of mass 69	1.8
69	Mass 69 Relative Abundance	36.7
70	Less than 2% of mass 69	0.6
127	40 - 60% of mass 198	48.3
197	0 - 1% of mass 198	0.7
199	5 - 9% of mass 198	6.6
275	10 - 30% of mass 198	23.3
365	Greater than 1% of mass 198	2.2
441	Present, but less than mass 443	74.2
442	Greater than 40% of mass 198	77.4
443	17 - 23% of mass 442	19.2

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD, BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
MEGA001	WBN091111-16	/chem/MSD1.i/s111409.b/s1k120	14-NOV-09 18:22
MEGA010	WBN091111-15	/chem/MSD1.i/s111409.b/s1k120	14-NOV-09 18:51
MEGA020	WBN091111-14	/chem/MSD1.i/s111409.b/s1k120	14-NOV-09 19:21
MEGA040	WBN091111-13.1	/chem/MSD1.i/s111409.b/s1k120	14-NOV-09 19:50
MEGA050	WBN091111-12	/chem/MSD1.i/s111409.b/s1k120	14-NOV-09 20:19
MEGA080	WBN091111-11	/chem/MSD1.i/s111409.b/s1k120	14-NOV-09 20:47
MEGA100	WBN091111-10	/chem/MSD1.i/s111409.b/s1k120	14-NOV-09 21:16
MEGA120	WBN091111-09	/chem/MSD1.i/s111409.b/s1k121	14-NOV-09 21:45

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC

Client SDG: 10-1213

Instrument ID: MSD1.I

Injection Date/Time: 15-JAN-10 09:39

Column Description: J&W DB-5MS

Lab File ID /chem/MSD1.i/s011510.b/s1a1502.d

m/e	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% Relative Abundance	100
51	30 - 60% of mass 198	40.9
68	Less than 2% of mass 69	1.5
69	Mass 69 Relative Abundance	37.9
70	Less than 2% of mass 69	0.5
127	40 - 60% of mass 198	47.5
197	0 - 1% of mass 198	0.7
199	5 - 9% of mass 198	6.5
275	10 - 30% of mass 198	23.9
365	Greater than 1% of mass 198	2.4
441	Present, but less than mass 443	74.5
442	Greater than 40% of mass 198	71.5
443	17 - 23% of mass 442	19.2

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
MEGACVS	WBN091225-12.2	/chem/MSD1.i/s011510.b/s1a150	15-JAN-10 09:55
APCVS	WBN100103-03.2	/chem/MSD1.i/s011510.b/s1a150	15-JAN-10 11:06
SBLK01	1202015385	/s011510.b/s1a1506-1.d	15-JAN-10 11:54
SBLK01LCS	1202015386	/chem/MSD1.i/s011510.b/s1a150	15-JAN-10 12:19
RE12-10-7257	244604001	/chem/MSD1.i/s011510.b/s1a152	15-JAN-10 18:39
RE12-10-7256	244604002	/chem/MSD1.i/s011510.b/s1a152	15-JAN-10 19:03

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC

Client SDG: 10-1213

Instrument ID: MSD1.I

Injection Date/Time: 15-NOV-09 14:50

Column Description: J&W DB-5MS

Lab File ID /chem/MSD1.i/s111409.b/s1k1213.d

m/e	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% Relative Abundance	100
51	30 - 60% of mass 198	45.1
68	Less than 2% of mass 69	1.8
69	Mass 69 Relative Abundance	39.1
70	Less than 2% of mass 69	0.5
127	40 - 60% of mass 198	50.2
197	0 - 1% of mass 198	0.9
199	5 - 9% of mass 198	6.6
275	10 - 30% of mass 198	22.4
365	Greater than 1% of mass 198	2.3
441	Present, but less than mass 443	72.7
442	Greater than 40% of mass 198	70.7
443	17 - 23% of mass 442	19.3

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
AP010	WBN091111-01	/chem/MSD1.i/s111409.b/s1k121	15-NOV-09 15:28
AP020	WBN091111-02	/chem/MSD1.i/s111409.b/s1k121	15-NOV-09 15:51
AP040	WBN091111-03.1	/chem/MSD1.i/s111409.b/s1k121	15-NOV-09 16:14
AP050	WBN091111-04	/chem/MSD1.i/s111409.b/s1k121	15-NOV-09 16:38
AP080	WBN091111-05	/chem/MSD1.i/s111409.b/s1k121	15-NOV-09 17:01
AP100	WBN091111-06	/chem/MSD1.i/s111409.b/s1k122	15-NOV-09 17:24
AP120	WBN091111-07	/chem/MSD1.i/s111409.b/s1k122	15-NOV-09 17:47
APICV	WBN091111-08.1	/chem/MSD1.i/s111409.b/s1k123	15-NOV-09 23:17

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC

Client SDG: 10-1213

Instrument ID: MSD1.I

Injection Date/Time: 17-NOV-09 15:48

Column Description: J&W DB-5MS

Lab File ID /chem/MSD1.i/s111409.b/s1k1259.d

m/e	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% Relative Abundance	100
51	30 - 60% of mass 198	44.2
68	Less than 2% of mass 69	1.8
69	Mass 69 Relative Abundance	38.5
70	Less than 2% of mass 69	0.6
127	40 - 60% of mass 198	49.6
197	0 - 1% of mass 198	0.7
199	5 - 9% of mass 198	6.7
275	10 - 30% of mass 198	23.8
365	Greater than 1% of mass 198	2.4
441	Present, but less than mass 443	72.4
442	Greater than 40% of mass 198	78.9
443	17 - 23% of mass 442	19.2

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD, BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
MEGAICV	WBN091027-09.3	/chem/MSD1.i/s111409.b/s1k126	17-NOV-09 16:27

Internal Standard Area and RT Summary

Lab Name : GEL Laboratories LLC

Client SDG: 10-1213

Instrument: MSD1.1

STD Analysis Time: 15-JAN-10 09:55

GC Column: J&W DB-5MS

Data File: s1a1503.d

	1,4-Dichlorobenzene-d4			Naphthalene-d8			Acenaphthene-d10			Phenanthrene-d10			Chrysene-d12			Perylene-d12		
	Area	#	RT #	Area	#	RT #	Area	#	RT #	Area	#	RT #	Area	#	RT #	Area	#	RT #
12 Hour STD	386947		3.77	1504644		4.63	803203		5.87	1308635		6.87	1065383		8.49	898076		9.83
Upper Limit	773894		4.27	3009288		5.13	1606406		6.37	2617270		7.37	2130766		8.99	1796152		10.3
Lower Limit	193474		3.27	752322		4.13	401602		5.37	654318		6.37	532692		7.99	449038		9.33
Sample ID																		
BLK01	380552		3.77	1439155		4.63	789584		5.87	1326209		6.86	1102165		8.48	925778		9.83
BLK01LCS	371459		3.77	1422016		4.63	779463		5.87	1292082		6.87	1131988		8.49	1035945		9.84
RE12-10-7257	430867		3.77	1613697		4.63	888468		5.87	1451669		6.87	1096801		8.49	755740		9.85
RE12-10-7256	441015		3.77	1633961		4.63	904825		5.87	1474123		6.87	1082941		8.49	726190		9.85

Area Upper Limit = +100% of internal standard area

Area Lower Limit = - 50% of internal standard area

RT Upper Limit = + 0.50 minutes of internal standard RT

RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk

* Value outside of QC Limits

Sample Data

**Semi-Volatile
Certificate of Analysis
Sample Summary**

SDG Number: 10-1213
Lab Sample ID: 244604002

Date Collected: 01/08/2010 12:00
Date Received: 01/13/2010 08:55
Client: LANL010
Method: SW846 8270C
Inst: MSD1.I
Analyst: AMY
Aliquot: 30.04 g
Column: J&W DB-5MS

Matrix: R
%Moisture: 24.1
Project: LANL01004
SOP Ref: GL-OA-E-009
Dilution: 1
Inj. Vol: .5 uL
Final Volume: 1 mL
Level: LOW

Client ID: RE12-10-7256
Batch ID: 941600
Run Date: 01/15/2010 19:03
Prep Date: 01/14/2010 19:40
Data File: sla1523.d

CAS No.	Parname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	438	ug/kg	87.7	438
108-95-2	Phenol	U	438	ug/kg	87.7	438
95-57-8	2-Chlorophenol	U	438	ug/kg	87.7	438
106-46-7	1,4-Dichlorobenzene	U	438	ug/kg	87.7	438
621-64-7	N-Nitrosodipropylamine	U	438	ug/kg	87.7	438
59-50-7	4-Chloro-3-methylphenol	U	438	ug/kg	87.7	438
83-32-9	Acenaphthene	U	43.8	ug/kg	14.5	43.8
121-14-2	2,4-Dinitrotoluene	U	438	ug/kg	43.8	438
100-02-7	4-Nitrophenol	U	438	ug/kg	145	438
87-86-5	Pentachlorophenol	U	438	ug/kg	110	438
129-00-0	Pyrene	J	42.1	ug/kg	13.2	43.8
110-86-1	Pyridine	U	438	ug/kg	87.7	438
62-53-3	Aniline	U	438	ug/kg	132	438
111-44-4	bis(2-Chloroethyl) ether	U	438	ug/kg	87.7	438
541-73-1	1,3-Dichlorobenzene	U	438	ug/kg	87.7	438
100-51-6	Benzyl alcohol	U	438	ug/kg	132	438
95-50-1	1,2-Dichlorobenzene	U	438	ug/kg	87.7	438
108-60-1	bis(2-Chloroisopropyl)ether	U	438	ug/kg	87.7	438
95-48-7	o-Cresol	U	438	ug/kg	87.7	438
65794-96-9	m,p-Cresols	U	438	ug/kg	132	438
67-72-1	Hexachloroethane	U	438	ug/kg	87.7	438
98-95-3	Nitrobenzene	U	438	ug/kg	87.7	438
78-59-1	Isophorone	U	438	ug/kg	87.7	438
88-75-5	2-Nitrophenol	U	438	ug/kg	87.7	438
105-67-9	2,4-Dimethylphenol	U	438	ug/kg	153	438
111-91-1	bis(2-Chloroethoxy)methane	U	438	ug/kg	87.7	438
120-83-2	2,4-Dichlorophenol	U	438	ug/kg	87.7	438
65-85-0	Benzoic acid	U	877	ug/kg	219	877
91-20-3	Naphthalene	U	43.8	ug/kg	13.2	43.8
106-47-8	4-Chloroaniline	U	438	ug/kg	87.7	438
87-68-3	Hexachlorobutadiene	U	438	ug/kg	87.7	438
91-57-6	2-Methylnaphthalene	U	43.8	ug/kg	8.77	43.8
77-47-4	Hexachlorocyclopentadiene	U	438	ug/kg	87.7	438
88-06-2	2,4,6-Trichlorophenol	U	438	ug/kg	87.7	438
95-95-4	2,4,5-Trichlorophenol	U	438	ug/kg	87.7	438
91-58-7	2-Chloronaphthalene	U	43.8	ug/kg	14.5	43.8
88-74-4	2-Nitroaniline	U	438	ug/kg	87.7	438
	o-Nitroaniline					
99-09-2	3-Nitroaniline	U	438	ug/kg	87.7	438

**Semi-Volatile
Certificate of Analysis
Sample Summary**

SDG Number: 10-1213
Lab Sample ID: 244604002

Date Collected: 01/08/2010 12:00
Date Received: 01/13/2010 08:55
Client: LANL010
Method: SW846 8270C
Inst: MSD1.1
Analyst: AMY
Aliquot: 30.04 g
Column: J&W DB-5MS

Matrix: R
%Moisture: 24.1
Project: LANL01004
SOP Ref: GL-OA-E-009
Dilution: 1
Inj. Vol: .5 uL
Final Volume: 1 mL
Level: LOW

Client ID: RE12-10-7256
Batch ID: 941600
Run Date: 01/15/2010 19:03
Prep Date: 01/14/2010 19:40
Data File: s1a1523.d

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	<i>m</i> -Nitroaniline					
131-11-3	Dimethylphthalate	U	438	ug/kg	87.7	438
606-20-2	2,6-Dinitrotoluene	U	438	ug/kg	43.8	438
208-96-8	Acenaphthylene	U	43.8	ug/kg	13.2	43.8
51-28-5	2,4-Dinitrophenol	U	877	ug/kg	167	877
132-64-9	Dibenzofuran	U	438	ug/kg	87.7	438
84-66-2	Diethylphthalate	U	438	ug/kg	87.7	438
86-73-7	Fluorene	U	43.8	ug/kg	13.2	43.8
7005-72-3	4-Chlorophenylphenylether	U	438	ug/kg	87.7	438
534-52-1	2-Methyl-4,6-dinitrophenol	U	438	ug/kg	87.7	438
100-01-6	4-Nitroaniline	U	438	ug/kg	132	438
	<i>p</i> -Nitroaniline					
122-39-4	Diphenylamine	U	438	ug/kg	87.7	438
122-66-7	Azobenzene	U	438	ug/kg	87.7	438
	<i>1,2</i> -Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	438	ug/kg	87.7	438
118-74-1	Hexachlorobenzene	U	438	ug/kg	87.7	438
85-01-8	Phenanthrene	J	14.8	ug/kg	13.2	43.8
120-12-7	Anthracene	U	43.8	ug/kg	8.77	43.8
84-74-2	Di-n-butylphthalate	U	438	ug/kg	87.7	438
206-44-0	Fluoranthene		58.9	ug/kg	13.2	43.8
85-68-7	Butylbenzylphthalate	U	438	ug/kg	87.7	438
56-55-3	Benzo(a)anthracene	J	18.9	ug/kg	13.2	43.8
91-94-1	3,3'-Dichlorobenzidine	U	438	ug/kg	132	438
218-01-9	Chrysene		52.2	ug/kg	13.2	43.8
117-81-7	bis(2-Ethylhexyl)phthalate	U	438	ug/kg	87.7	438
117-84-0	Di-n-octylphthalate	U	438	ug/kg	87.7	438
205-99-2	Benzo(b)fluoranthene		204	ug/kg	13.2	43.8
207-08-9	Benzo(k)fluoranthene	U	43.8	ug/kg	13.2	43.8
50-32-8	Benzo(a)pyrene	J	27.2	ug/kg	13.2	43.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	43.8	ug/kg	13.2	43.8
53-70-3	Dibenzo(a,h)anthracene	U	43.8	ug/kg	13.2	43.8
191-24-2	Benzo(ghi)perylene	J	15.1	ug/kg	13.2	43.8
120-82-1	1,2,4-Trichlorobenzene	U	438	ug/kg	87.7	438

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	2.82	612	ug/kg		JA
544-64-9	Myristoleic acid	7.12	393	ug/kg	91	NJ

**Semi-Volatile
Certificate of Analysis
Sample Summary**

SDG Number: 10-1213
Lab Sample ID: 244604002

Date Collected: 01/08/2010 12:00
Date Received: 01/13/2010 08:55
Client: LANL010
Method: SW846 8270C
Inst: MSD1.I
Analyst: AMY
Aliquot: 30.04 g
Column: J&W DB-5MS

Matrix: R
%Moisture: 24.1
Project: LANL01004
SOP Ref: GL-OA-E-009
Dilution: 1
Inj. Vol: .5 uL
Final Volume: 1 mL
Level: LOW

Client ID: RE12-10-7256
Batch ID: 941600
Run Date: 01/15/2010 19:03
Prep Date: 01/14/2010 19:40
Data File: sla1523.d

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
Tentatively Identified Compound Summary						
CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
57-10-3	n-Hexadecanoic acid	7.13	669	ug/kg	99	NJ
1000130-90-8	Z-7-Hexadecenoic acid	7.55	890	ug/kg	95	NJ
	Unknown	7.85	187	ug/kg		J
33979-03-2	1,1'-Biphenyl, 2,2',4,4',6,6'-hexachloro	8	201	ug/kg	99	NJ
	Unknown	8.03	212	ug/kg		J
1599-67-3	1-Docosene	8.79	208	ug/kg	97	NJ
	Unknown	9.14	219	ug/kg		J
112-95-8	Eicosane	9.3	812	ug/kg	97	NJ
	Unknown	10.07	1030	ug/kg		J
	Unknown	10.18	543	ug/kg		J
	Unknown	10.36	238	ug/kg		J
	Unknown	11.15	404	ug/kg		J
35060-26-5	D:B-Friedo-18,19-secolup-19-ene, 3,10-ep	11.37	224	ug/kg	95	NJ
83-47-6	.gamma.-Sitosterol	11.87	890	ug/kg	92	NJ
	Unknown	12.66	281	ug/kg		J
	Unknown	12.87	673	ug/kg		J

GEL Laboratories LLC

Data file : /chem/MSD1.i/s011510.b/sla1523.d
Lab Smp Id: 244604002 Client Smp ID: RE12-10-7256
Inj Date : 15-JAN-2010 19:03
Operator : AMY Inst ID: MSD1.i
Smp Info : |244604002|941600|1|SVM|1|LANL
Misc Info : |MSD8270_S|WBN100107-02|
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD1.i/s011810.b/MSD1-M8270AQA-111409.m
Meth Date : 19-Jan-2010 08:24 amy01291 Quant Type: ISTD
Cal Date : 17-NOV-2009 17:42 Cal File: slk1264.d
Als bottle: 22
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 10-1213.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf * Vt / (Vi * Ws * (100 - M) / 100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.04000	weight of sample
M	24.06000	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	3.769	3.704	(1.000)	441015	40.0000	
* 29 Naphthalene-d8	136	4.634	4.563	(1.000)	1633961	40.0000	
* 46 Acenaphthene-d10	164	5.875	5.804	(1.000)	904825	40.0000	
* 67 Phenanthrene-d10	188	6.869	6.804	(1.000)	1474123	40.0000	
* 91 Chrysene-d12	240	8.492	8.404	(1.000)	1082941	40.0000	
* 98 Perylene-d12	264	9.845	9.704	(1.000)	726190	40.0000	
\$ 3 2-Fluorophenol	112	2.987	2.910	(0.792)	651703	56.5757	2480
\$ 5 Phenol-d5	99	3.510	3.440	(0.931)	818709	58.4775	2560
\$ 20 Nitrobenzene-d5	82	4.134	4.069	(0.892)	374859	34.8125	1530
\$ 39 2-Fluorobiphenyl	172	5.375	5.304	(0.915)	744524	34.3565	1510
\$ 60 2,4,6-Tribromophenol	329	6.416	6.351	(1.092)	193252	76.4872	3350
\$ 81 p-Terphenyl-d14	244	7.786	7.716	(0.917)	679024	39.9455	1750

Compounds	QUANT SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
							(ng/ul)	(ug/Kg)
=====	=====	=====	=====	=====	=====	=====	=====	=====
79 Pyrene		202	7.733	7.663	(0.911)	27627	0.96003	42.1(a)
68 Phenanthrene		178	6.881	6.816	(1.002)	11285	0.33686	14.8(a)
76 Fluoranthene		202	7.592	7.528	(1.105)	43477	1.34449	58.9
89 Benzo(a)anthracene		228	8.486	8.398	(0.999)	11169	0.43011	18.8(a)
92 Chrysene		228	8.510	8.428	(1.002)	28889	1.19029	52.2
95 Benzo(b)fluoranthene		252	9.410	9.298	(0.956)	39180	4.64972	204
97 Benzo(a)pyrene		252	9.716	9.651	(0.987)	12231	0.62016	27.2(a)
101 Benzo(ghi)perylene		276	11.804	11.592	(1.199)	4710	0.34516	15.1(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
 Below Limit Of Quantitation(BLOQ).

ION RATIO REPORT

SV REPORT

Data file: slal523.d

Report Date: 01/16/2010 13:46

Lab. ID: 244604002

SampleType: SAMPLE

Injection Date: 15-JAN-2010 19:03

Operator: AMY

Instrument: MSD1.i

Sample Info: |244604002|941600|1|SVM|1|LANL

Miscellaneous Info: |MSD8270_S|WBN100107-02|

Comment:

Method used: /chem/MSD1.i/s011510.b/MSD1-M8270AQA-111409.m

Dilution Factor= 1.0

Integrator: HP RTE

Compound Sublist: 10-1213

Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
=====						
1 N-Methyl-N-nitrosomethylamine				CAS#: 62-75-9		
74	31883	2.09	2.30	80-120	100	(T)
42	8898	2.09	2.30	66-126	28	(QT)
43	60371	2.09	2.30	13- 73	189	(QT)

4 Aniline				CAS#: 62-53-3		
66	39272	3.51	3.56	80-120	100	()
93	22362	3.54	3.56	250-310	57	(Q)

17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	50666	4.13	4.02	80-120	100	(T)
42	30198	4.13	4.02	44-104	60	(T)

22 Isophorone				CAS#: 78-59-1		
82	374837	4.13	4.30	80-120	100	(T)
138	175	4.20	4.30	0- 49	0	(T)

43 Dimethylphthalate				CAS#: 131-11-3		
163	161382	5.88	5.65	80-120	100	(T)
164	904825	5.87	5.65	0- 40	561	(QT)

44 2,6-Dinitrotoluene				CAS#: 606-20-2		
165	117205	5.87	5.71	80-120	100	(T)
63	1393	5.87	5.70	48-108	1	(QT)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
<hr/>						
50	2,4-Dinitrotoluene		CAS#: 121-14-2			
165	117205	5.87	5.99	80-120	100	(T)
89	1596	5.87	5.99	42-102	1	(QT)
63	1393	5.87	5.99	16- 76	1	(QT)
<hr/>						
53	Fluorene		CAS#: 86-73-7			
166	12857	6.42	6.25	80-120	100	(T)
165	11766	6.42	6.25	62-122	92	(T)
167	3843	6.42	6.25	0- 43	30	(T)
<hr/>						
61	4-Bromophenylphenylether		CAS#: 101-55-3			
248	12638	6.42	6.56	80-120	100	(T)
141	82693	6.42	6.56	45-105	654	(QT)
250	25044	6.42	6.56	67-127	198	(QT)
<hr/>						
68	Phenanthrene		CAS#: 85-01-8			
178	11285	6.88	6.88	80-120	100	()
179	2226	6.88	6.88	0- 45	20	()
176	2349	6.88	6.88	0- 49	21	()
<hr/>						
69	Anthracene		CAS#: 120-12-7			
178	11285	6.88	6.92	80-120	100	()
179	2226	6.88	6.92	0- 46	20	()
176	2349	6.88	6.92	0- 48	21	()
<hr/>						
76	Fluoranthene		CAS#: 206-44-0			
202	43477	7.59	7.59	80-120	100	()
203	7363	7.59	7.59	0- 47	17	()
101	8336	7.59	7.59	0- 44	19	()
<hr/>						
79	Pyrene		CAS#: 129-00-0			
202	27627	7.73	7.73	80-120	100	()
200	5771	7.73	7.73	0- 50	21	()
101	4532	7.73	7.73	0- 46	16	()
<hr/>						
89	Benzo(a)anthracene		CAS#: 56-55-3			
228	11169	8.49	8.48	80-120	100	()
226	2885	8.49	8.48	0- 56	26	()
229	3634	8.49	8.48	0- 49	33	()
<hr/>						
92	Chrysene		CAS#: 218-01-9			
228	28889	8.51	8.51	80-120	100	()
229	6639	8.51	8.51	0- 49	23	()
226	8532	8.51	8.51	0- 58	30	()
<hr/>						
95	Benzo(b)fluoranthene		CAS#: 205-99-2			
252	39180	9.41	9.40	80-120	100	()
253	9406	9.41	9.40	0- 52	24	()
125	4939	9.41	9.40	0- 42	13	()
<hr/>						

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
=====						
96 Benzo(k)fluoranthene				CAS#: 207-08-9		
252	39180	9.41	9.43	80-120	100	()
253	10168	9.41	9.43	0- 52	26	()
125	4939	9.41	9.43	0- 45	13	()

97 Benzo(a)pyrene				CAS#: 50-32-8		
252	12231	9.72	9.77	80-120	100	()
253	2604	9.72	9.77	0- 51	21	()
125	2376	9.72	9.77	0- 48	19	()

101 Benzo(ghi)perylene				CAS#: 191-24-2		
276	4710	11.80	11.79	80-120	100	()
138	990	11.80	11.79	7- 67	21	()

Q qualifier indicates ion failed ratio requirement						

Data File: /chem/MSD1.i/s011510.b/sla1523.d
Report Date: 21-Jan-2010 14:47

Page 1

GEL Laboratories LLC

Data file : /chem/MSD1.i/s011510.b/sla1523.d
Lab Smp Id: 244604002 Client Smp ID: RE12-10-7256
Inj Date : 15-JAN-2010 19:03
Operator : AMY Inst ID: MSD1.i
Smp Info : |244604002|941600|1|SVM|1|LANL
Misc Info : |MSD8270 S|WBN100107-02|
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD1.i/s011810.b/MSD1-M8270AQA-111409.m
Meth Date : 19-Jan-2010 08:24 amy01291 Quant Type: ISTD
Cal Date : 17-NOV-2009 17:42 Cal File: slk1264.d
Als bottle: 22
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 10-1213.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: $\text{Amt} * \text{DF} * \text{Uf} * \text{Vt} / (\text{Vi} * \text{Ws} * (100 - \text{M}) / 100) * \text{CpndVariable}$

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.04000	weight of sample
M	24.06000	% moisture

Cpnd Variable

Local Compound Variable

ISTD	RT	AREA	AMOUNT
=====	=====	=====	=====
* 10 1,4-Dichlorobenzene-d4	3.769	2632975	40.000
* 67 Phenanthrene-d10	6.869	3543915	40.000
* 91 Chrysene-d12	8.492	3189271	40.000
* 98 Perylene-d12	9.845	1901241	40.000

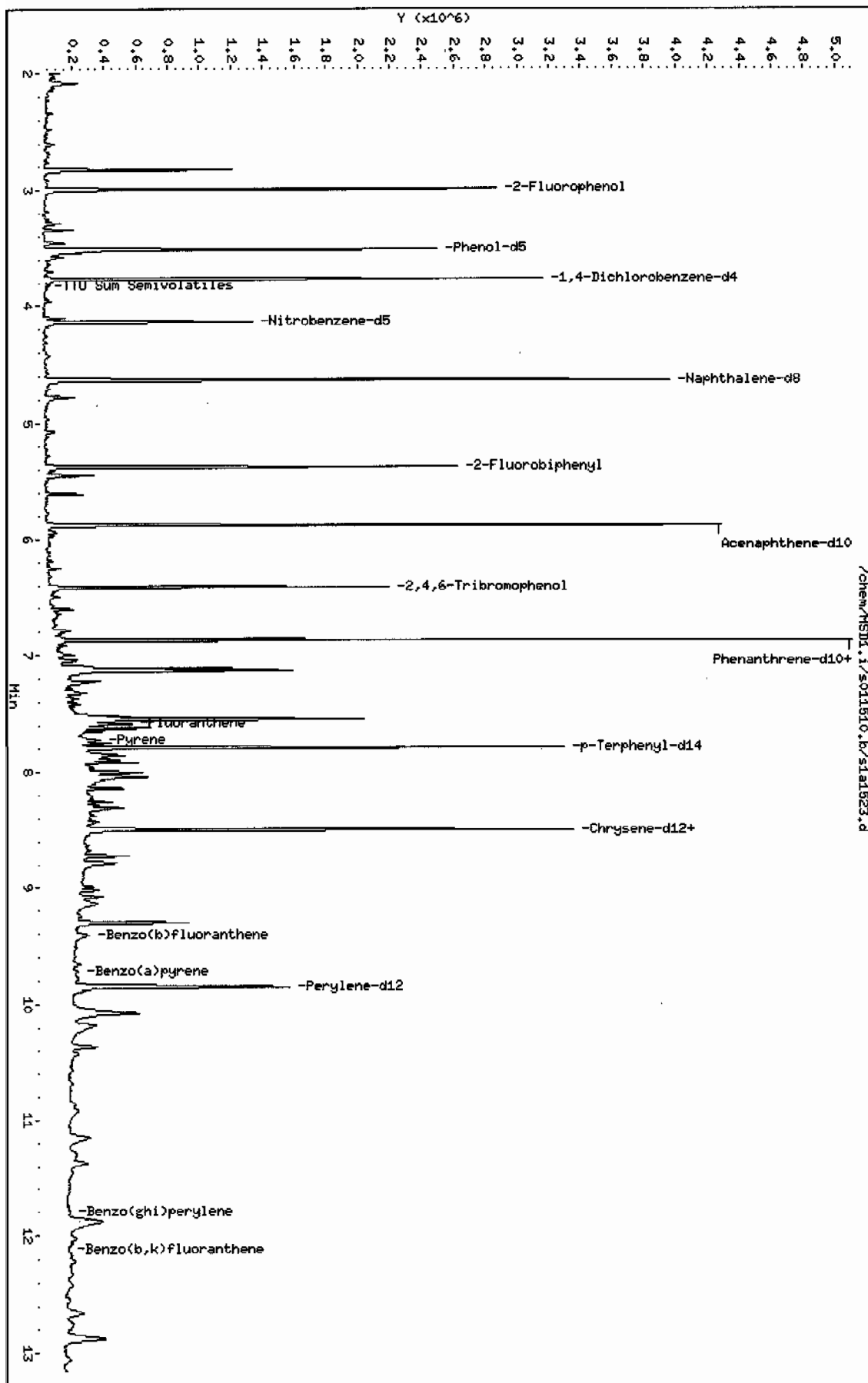
CONCENTRATIONS				QUANT			
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
=====	=====	=====	=====	=====	=====	=====	=====

RT	CONCENTRATIONS			QUAL	QUANT		CPND #
	AREA	ON-COL (ng/ul)	FINAL (ug/Kg)		LIBRARY	LIB ENTRY	
Unknown Aldol Condensate					CAS #:		
2.822	918930	13.9603225	612	0		0	10
Myristoleic acid					CAS #: 544-64-9		
7.116	794731	8.97009458	393	91	NIST05.L	75851	67
n-Hexadecanoic acid					CAS #: 57-10-3		
7.134	1352251	15.2627839	669	99	NIST05.L	96235	67
Z-7-Hexadecenoic acid					CAS #: 1000130-90-8		
7.545	1798545	20.3000881	890	95	NIST05.L	94744	67
Unknown					CAS #:		
7.851	339536	4.25848144	187	0		0	91
1,1'-Biphenyl, 2,2',4,4',6,6'-hexachloro					CAS #: 33979-03-2		
7.998	365033	4.57826014	201	99	NIST05.L	155945	91
Unknown					CAS #:		
8.033	384898	4.82741182	212	0		0	91
1-Docosene					CAS #: 1599-67-3		
8.786	378531	4.74755263	208	97	NIST05.L	129889	91
Unknown					CAS #:		
9.139	398370	4.99637312	219	0		0	91
Eicosane					CAS #: 112-95-8		
9.298	880288	18.5202746	812	97	NIST05.L	113490	98
Unknown					CAS #:		
10.075	1121763	23.6006374	1030	0		0	98
Unknown					CAS #:		
10.180	588751	12.3866595	543	0		0	98
Unknown					CAS #:		
10.363	257907	5.42607468	238	0		0	98
Unknown					CAS #:		
11.151	437789	9.21058417	404	0		0	98
D:B-Friedo-18,19-secolup-19-ene, 3,10-ep					CAS #: 35060-26-5		
11.374	242888	5.11009158	224	95	NIST05.L	176604	98

RT	CONCENTRATIONS			QUAL	QUANT		CPND #
	AREA	ON-COL (ng/ul)	FINAL (ug/Kg)		LIBRARY	LIB ENTRY	
<hr/>							
.gamma.-Sitosterol				CAS #: 83-47-6			
11.874	965348	20.3098349	890	92	NIST05.L	174402	98
<hr/>							
Unknown				CAS #:			
12.657	305098	6.41891185	281	0		0	98
<hr/>							
Unknown				CAS #:			
12.868	729525	15.3483825	673	0		0	98

Data File: /chem/MSD1.i/s011510.b/s1a1523.d
 Date: 15-JAN-2010 19:03
 Client ID: RE12-10-7256
 Sample Info: 1244604002194160011SVH11L6NL
 Volume Injected (uL): 0.5
 Column phase: J&W DB-SMS

Instrument: MSD1.i
 Operator: AMY
 Column diameter: 0.20



Date : 15-JAN-2010 19:03

Client ID: RE12-10-7256

Instrument: HSD1.i

Sample Info: I244604002194160011ISVMI1ILANL

Volume Injected (uL): 0.5

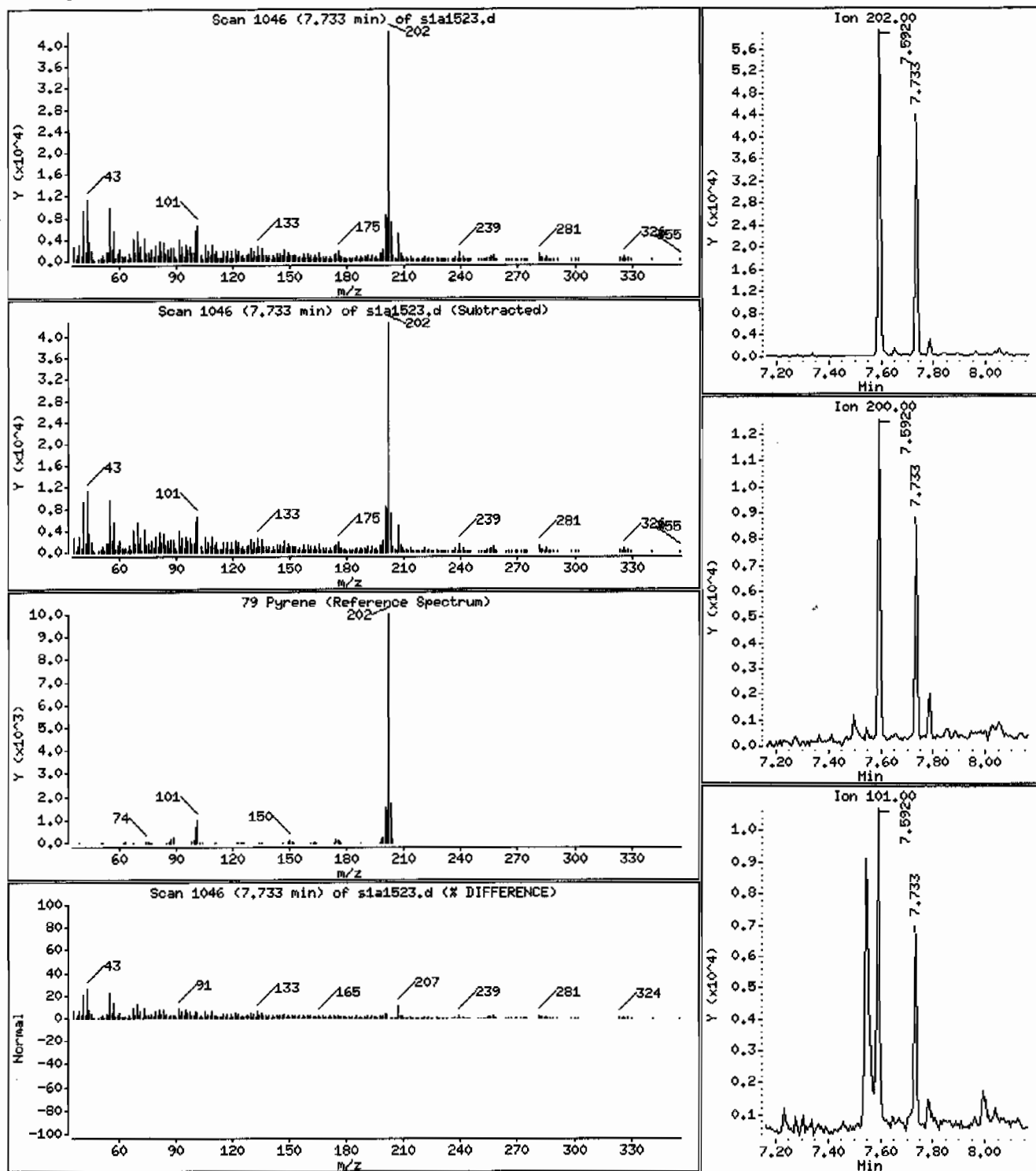
Operator: AMY

Column phase: J&W DB-5MS

Column diameter: 0.20

79 Pyrene

Concentration: 42.1 ug/Kg



Date : 15-JAN-2010 19:03

Client ID: RE12-10-7256

Instrument: MSD1.i

Sample Info: 1244604002194160011ISVH11ILANL

Volume Injected (uL): 0.5

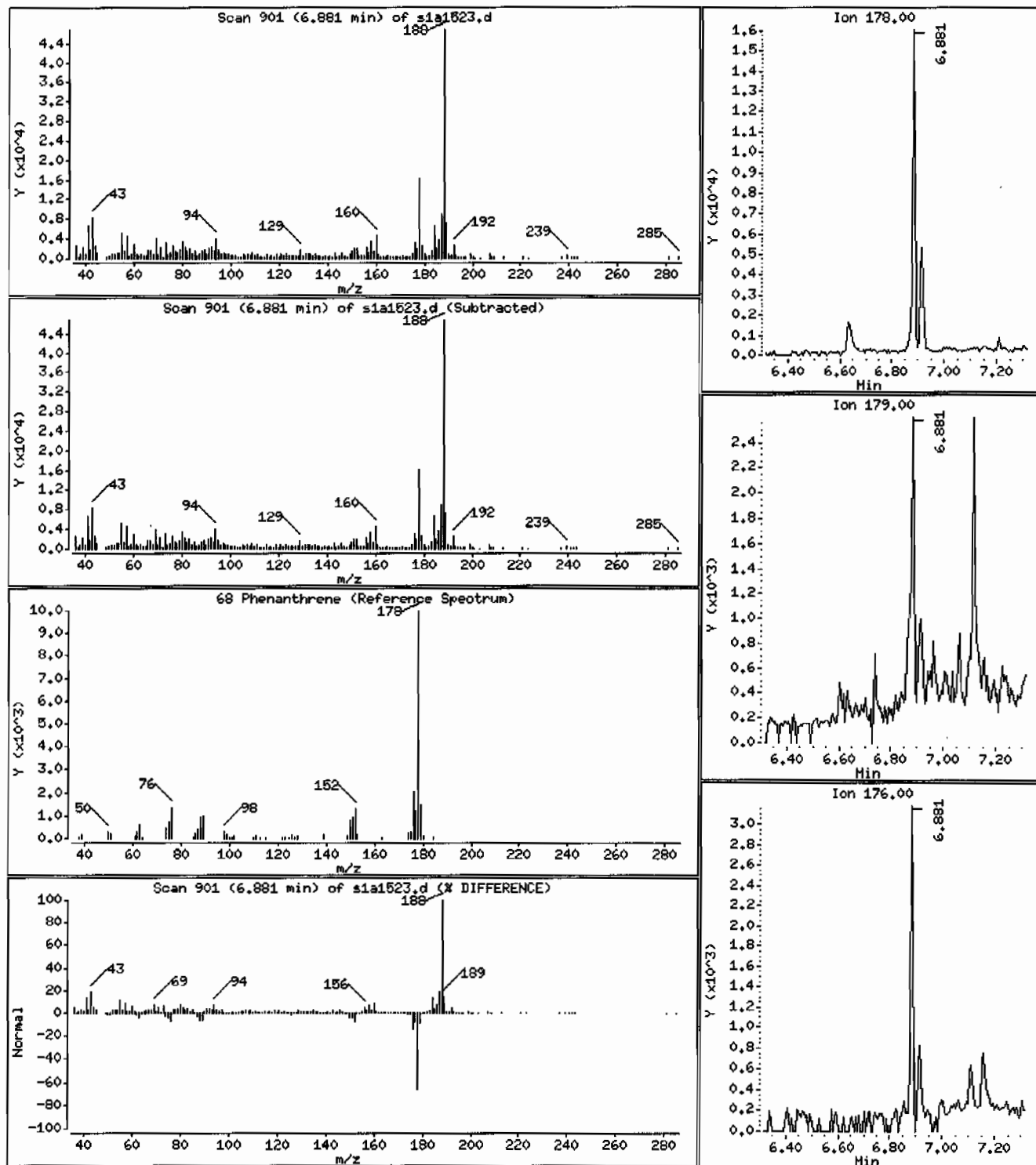
Operator: AMY

Column phase: J&W DB-5MS

Column diameter: 0.20

68 Phenanthrene

Concentration: 14.8 ug/Kg



Date : 15-JAN-2010 19:03

Client ID: RE12-10-7256

Instrument: MSD1.i

Sample Info: I244604002I941600I1ISVMI1ILANL

Volume Injected (uL): 0.5

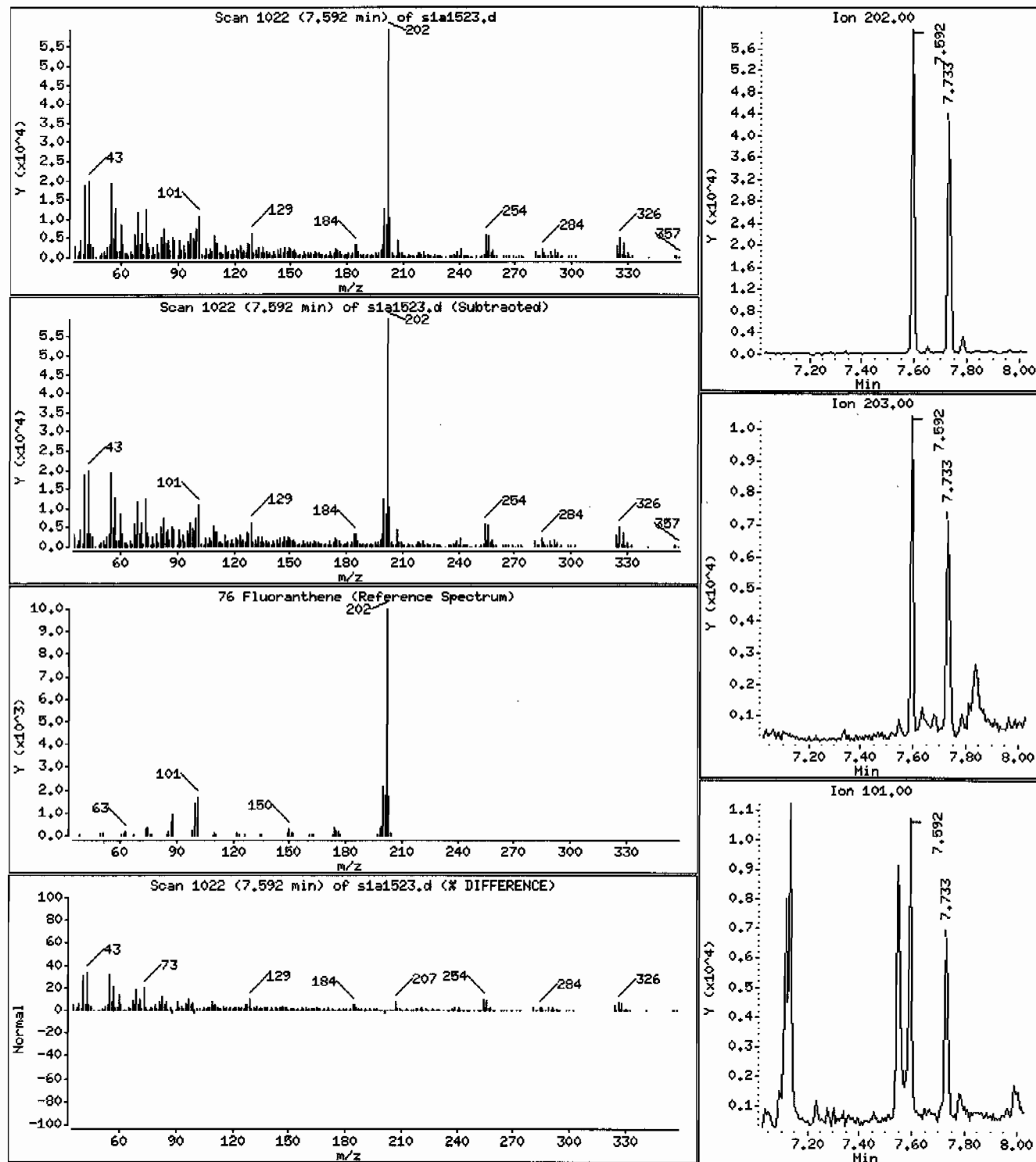
Operator: AMY

Column phase: J&W DB-5MS

Column diameter: 0.20

76 Fluoranthene

Concentration: 58.9 ug/Kg



Date: 15-JAN-2010 19:03

Client ID: RE12-10-7256

Instrument: MSD1.i

Sample Info: 1244604002194160011ISVM111LANL

Volume Injected (uL): 0.5

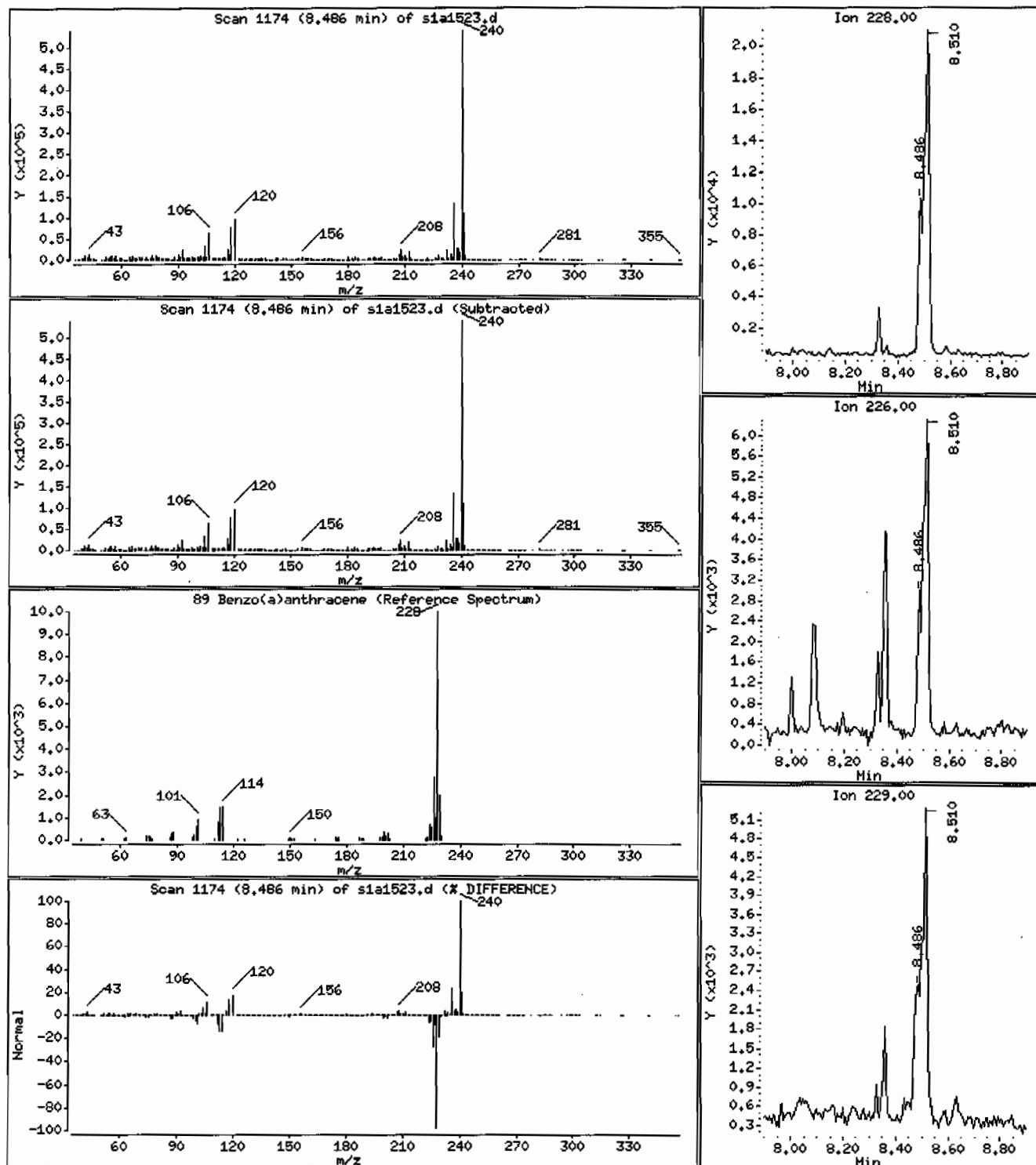
Operator: AMY

Column phase: J&W DB-5MS

Column diameter: 0.20

89 Benzo(a)anthracene

Concentration: 18.8 ug/Kg



Date: 15-JAN-2010 19:03

Client ID: RE12-10-7256

Instrument: MSD1.i

Sample Info: 1244604002194160011SVH111LANL

Volume Injected (uL): 0.5

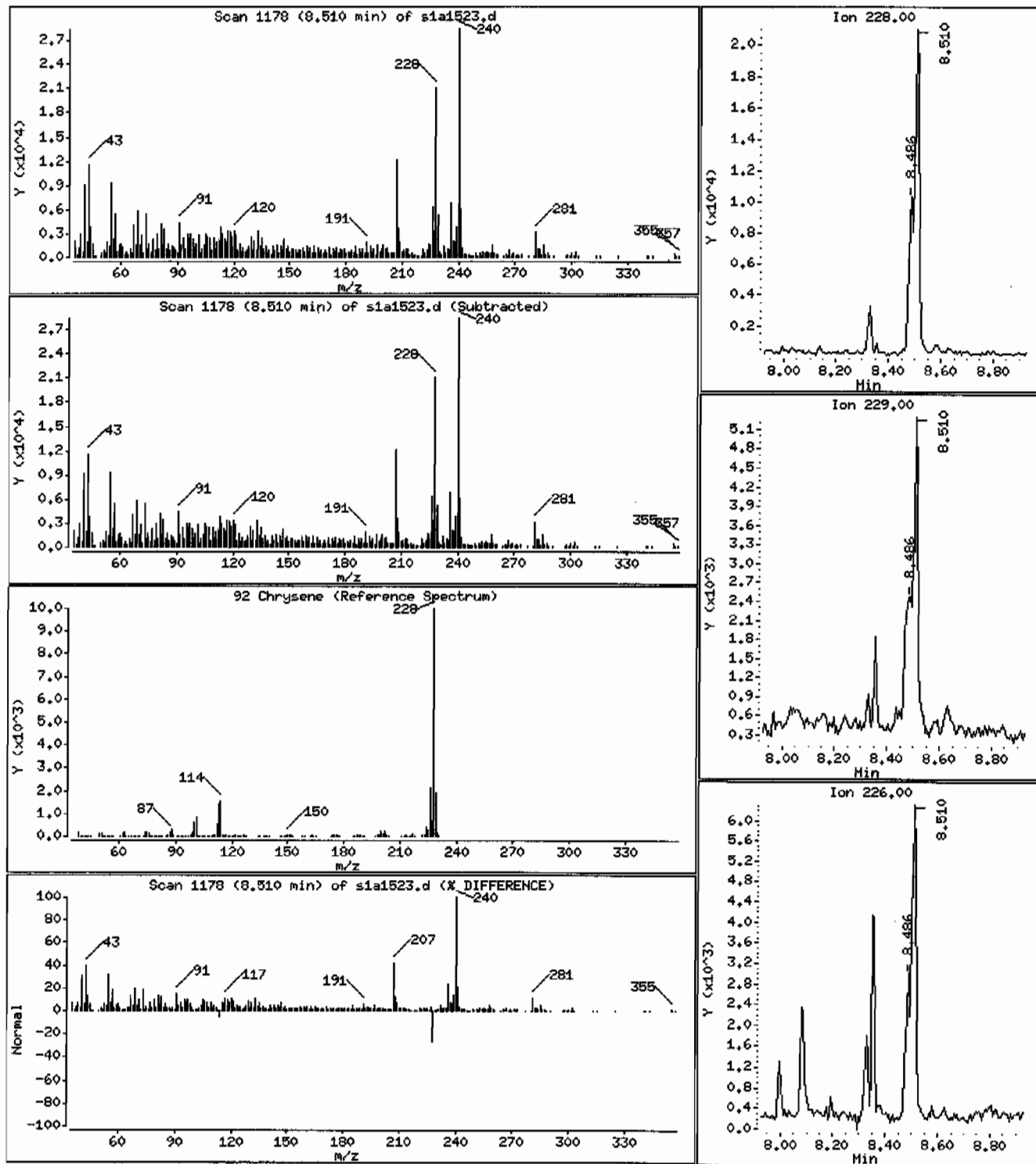
Operator: AMY

Column phase: J&W DB-5MS

Column diameter: 0.20

92 Chrysene

Concentration: 52.2 ug/Kg



Date : 15-JAN-2010 19:03

Client ID: RE12-10-7256

Instrument: MSD1.i

Sample Info: 1244604002194160011SVMI1ILANL

Volume Injected (uL): 0.5

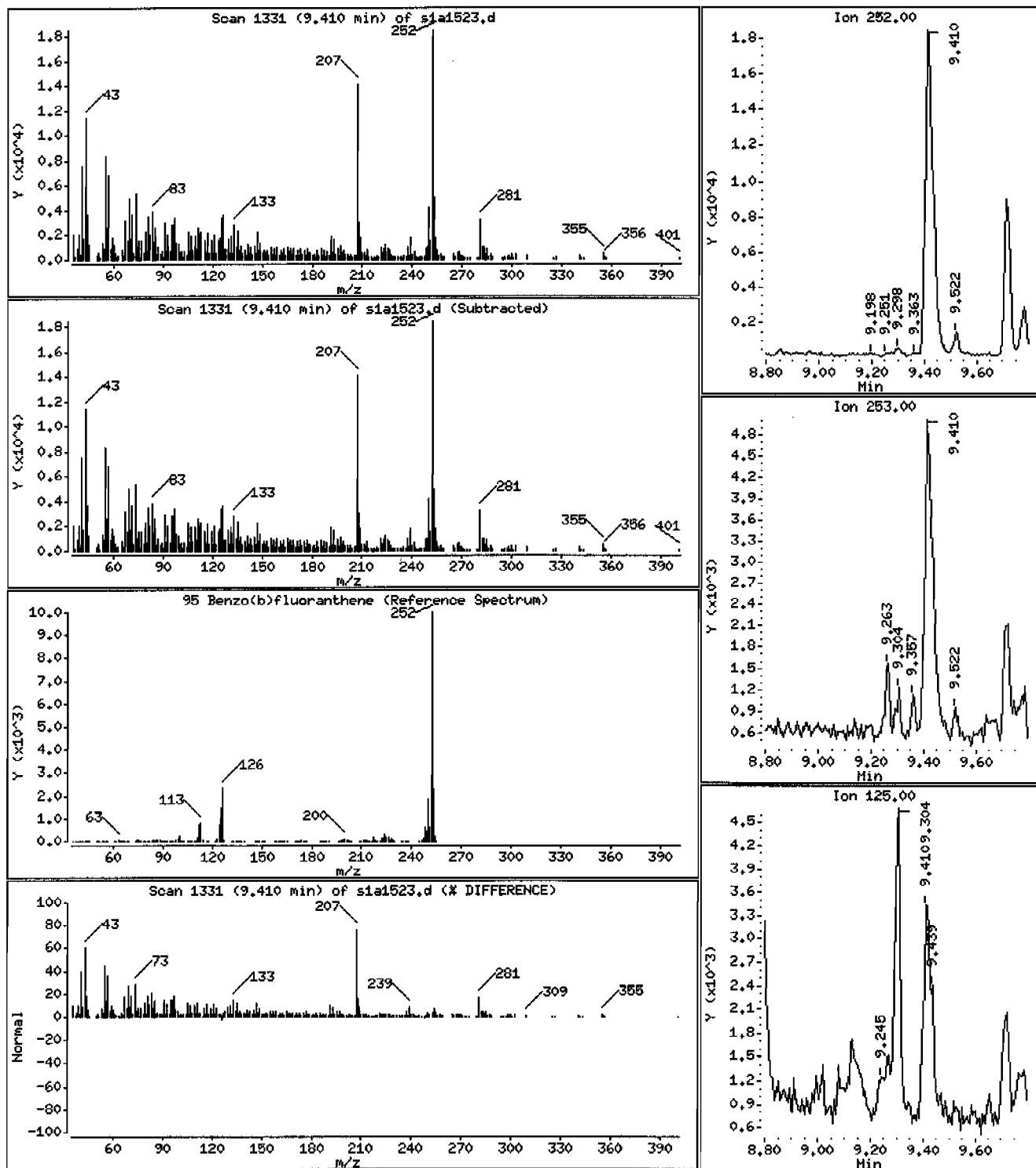
Operator: AMY

Column phase: J&W DB-5MS

Column diameter: 0.20

95 Benzo(b)fluoranthene

Concentration: 204 ug/Kg



Date : 15-JAN-2010 19:03

Client ID: RE12-10-7256

Instrument: HSD1.i

Sample Info: I244604002194160011ISVH11ILANL

Volume Injected (uL): 0.5

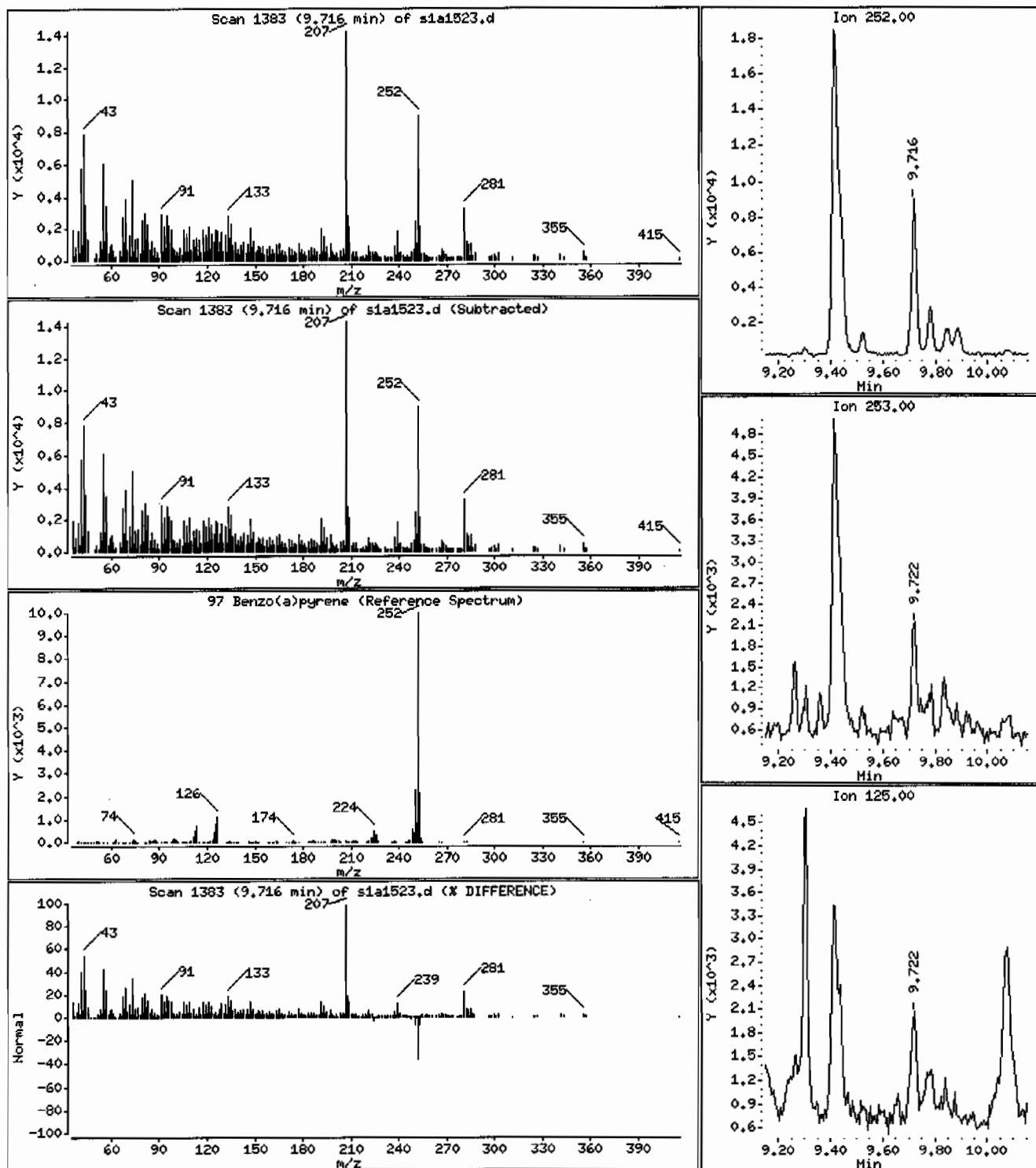
Operator: AMY

Column phase: J&W DB-5MS

Column diameter: 0.20

97 Benzo(a)pyrene

Concentration: 27.2 ug/Kg



Data File: /chem/MSD1.i/s011510.b/s1a1523.d

Page 9

Date : 15-JAN-2010 19:03

Client ID: RE12-10-7256

Instrument: MSD1.i

Sample Info: 1244604002194160011SVMI1ILANL

Volume Injected (uL): 0.5

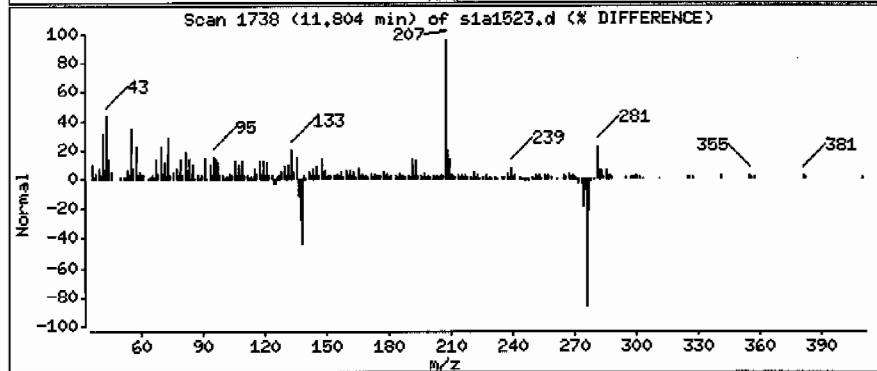
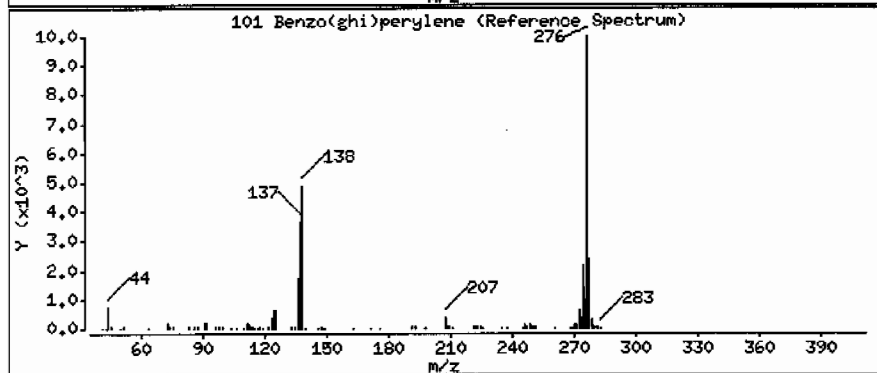
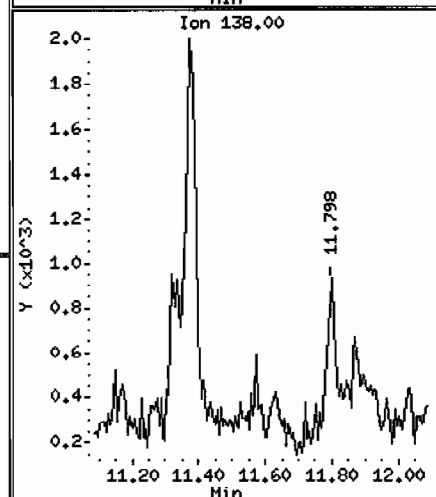
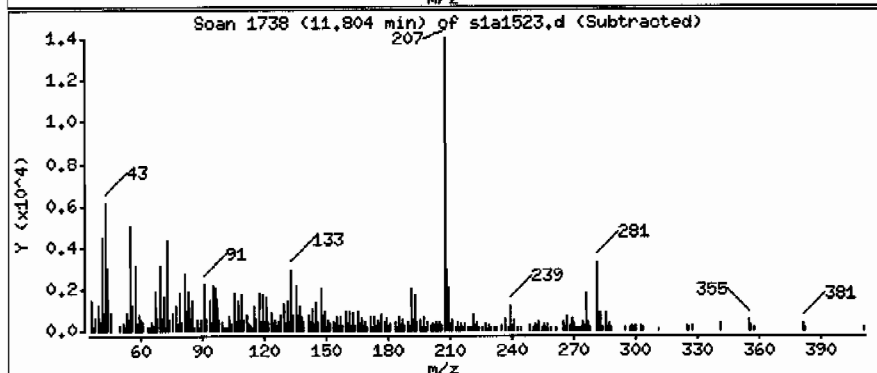
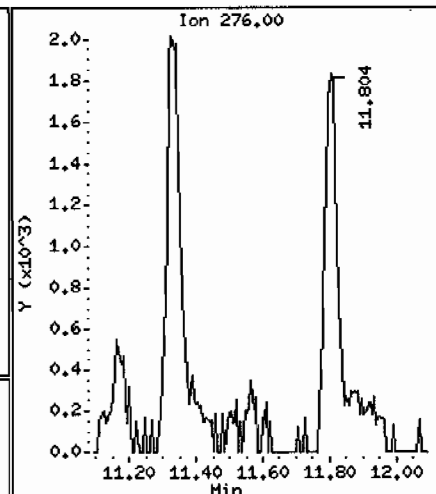
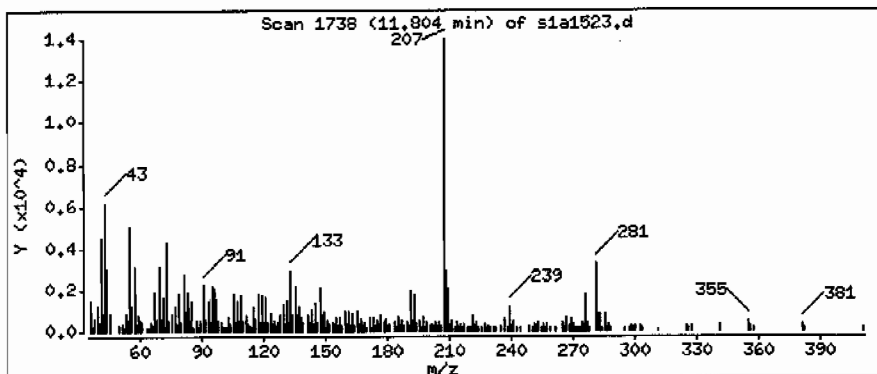
Operator: AMY

Column phase: J&W DB-5MS

Column diameter: 0.20

101 Benzo(ghi)perylene

Concentration: 15.1 ug/Kg



Date : 15-JAN-2010 19:03

Client ID: RE12-10-7256

Instrument: MSD1.i

Sample Info: 1244604002194160011SVH11ILANL

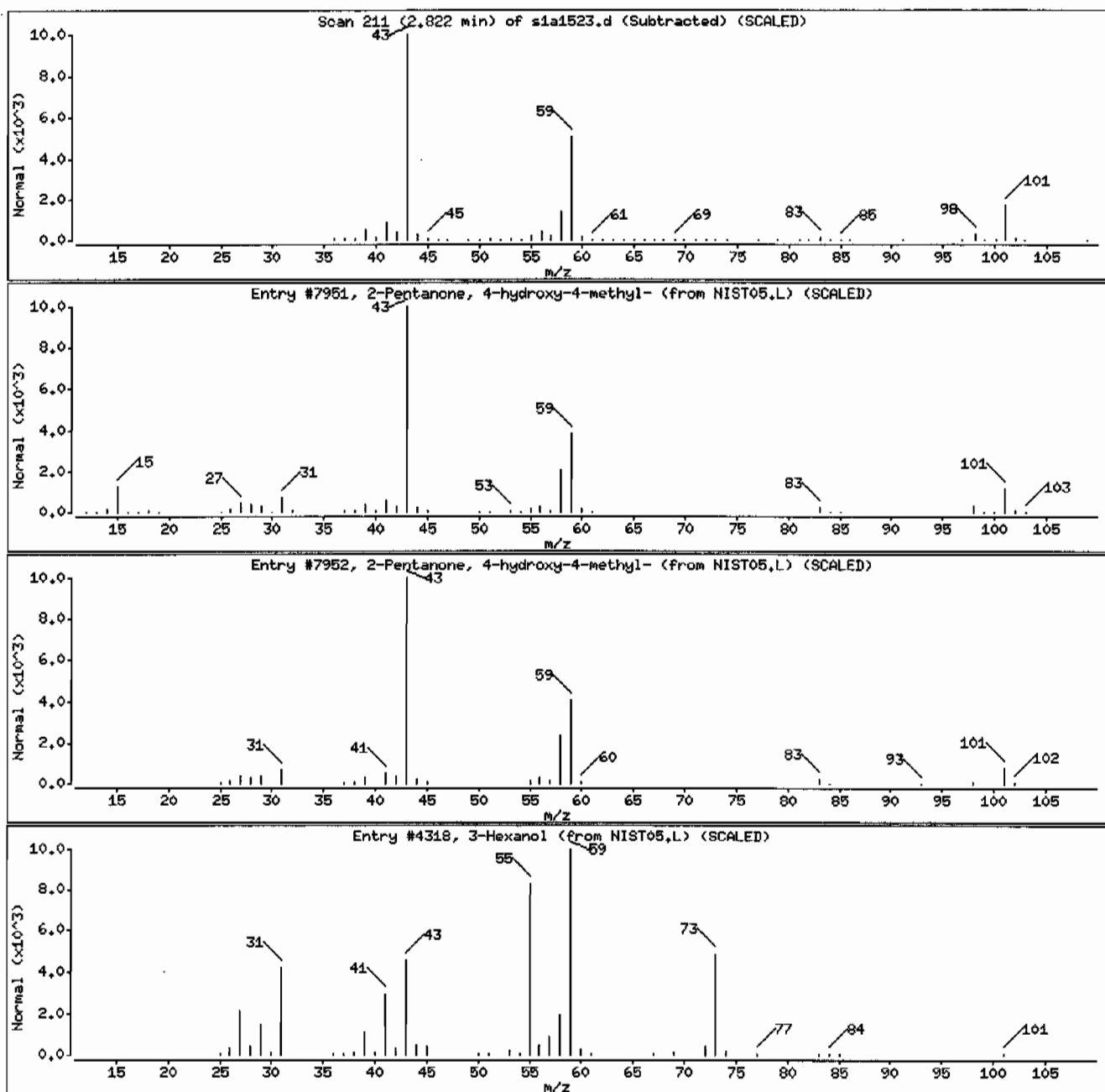
Volume Injected (uL): 0.5

Operator: AMY

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	40	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	38	C6H12O2	116
3-Hexanol	623-37-0	NIST05.L	4318	33	C6H14O	102



Date : 15-JAN-2010 19:03

Client ID: RE12-10-7256

Instrument: MSD1.i

Sample Info: I244604002I941600I1ISVM11ILANL

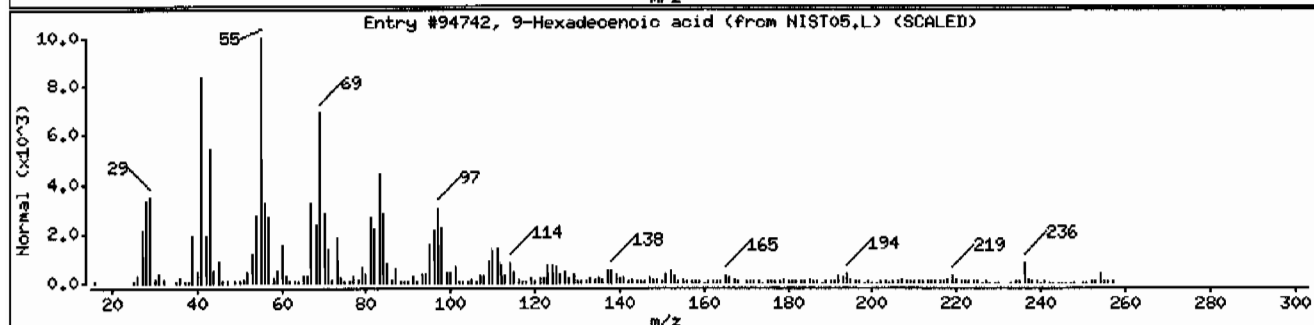
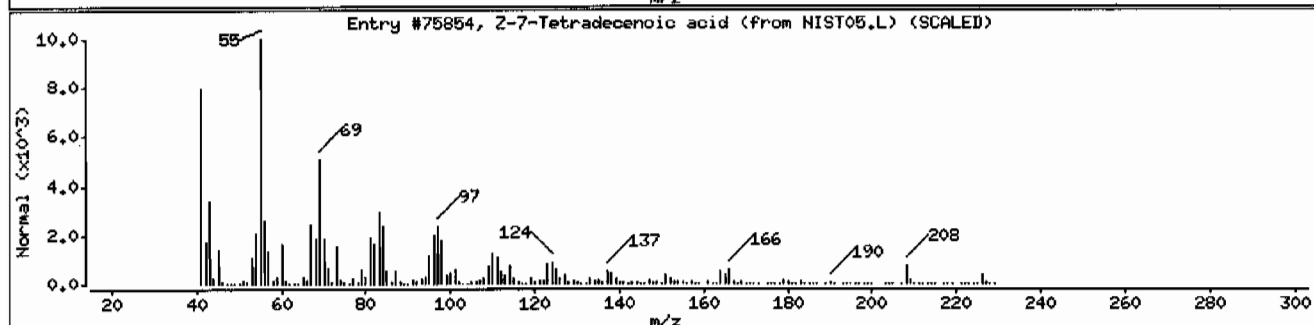
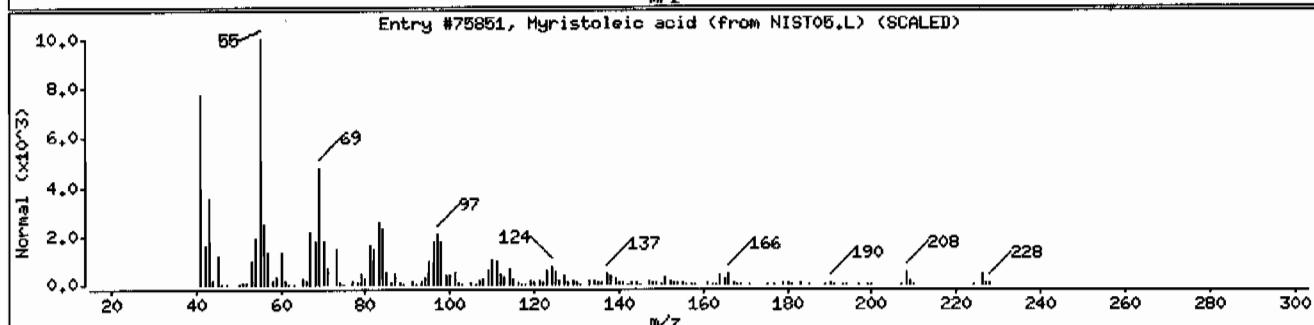
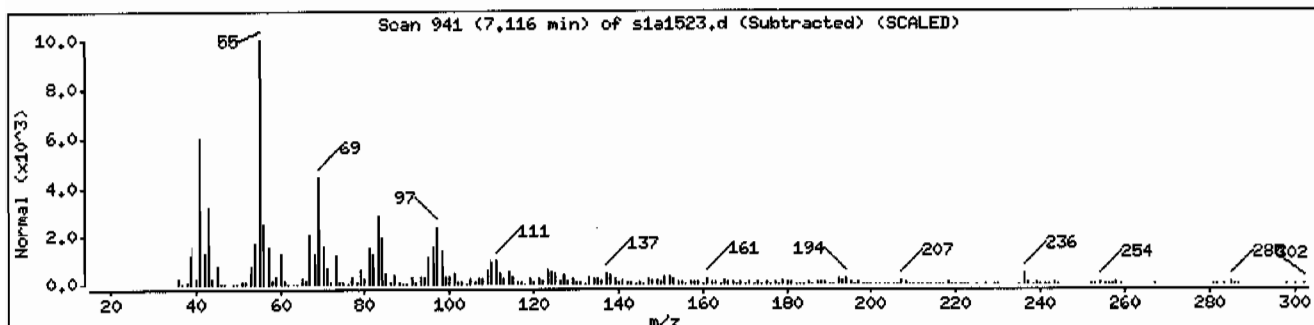
Volume Injected (uL): 0.5

Operator: AHY

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Myristoleic acid	544-64-9	NIST05.L	75851	91	C14H26O2	226
Z-7-Tetradecenoic acid	1000130-98-4	NIST05.L	75854	91	C14H26O2	226
9-Hexadecenoic acid	2091-29-4	NIST05.L	94742	90	C16H30O2	254



Date : 15-JAN-2010 19:03

Client ID: RE12-10-7256

Instrument: MSD1.i

Sample Info: 1244604002194160011SVH11ILANL

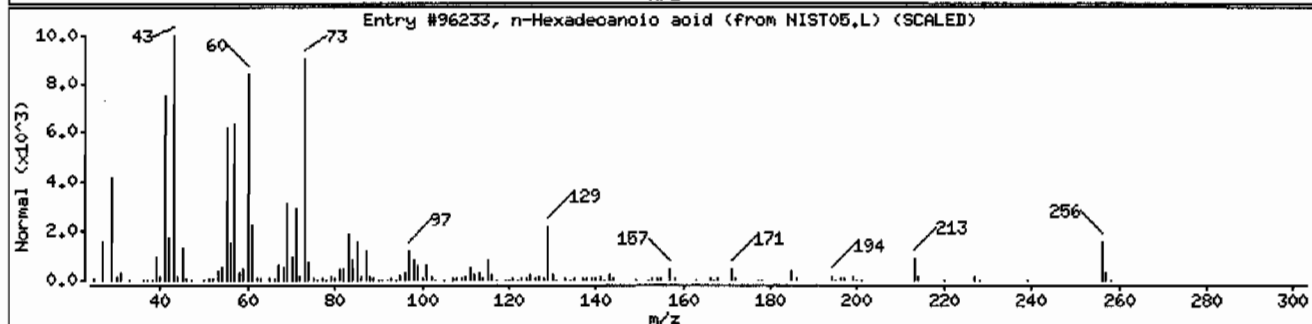
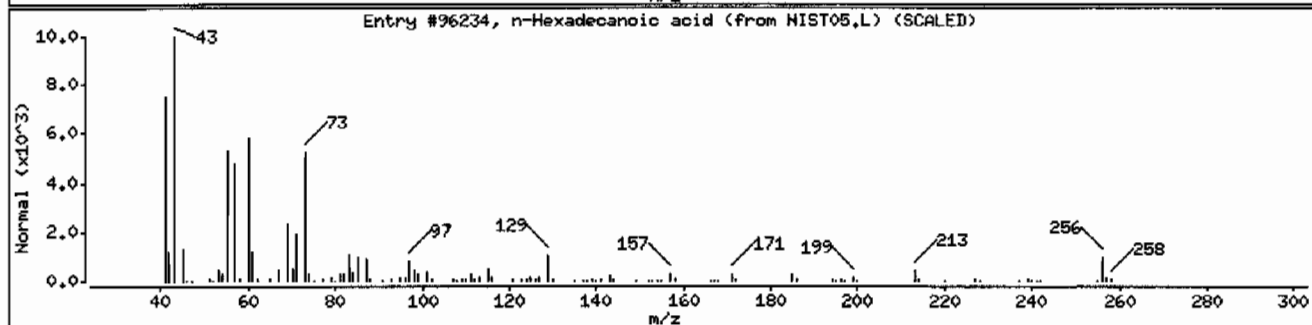
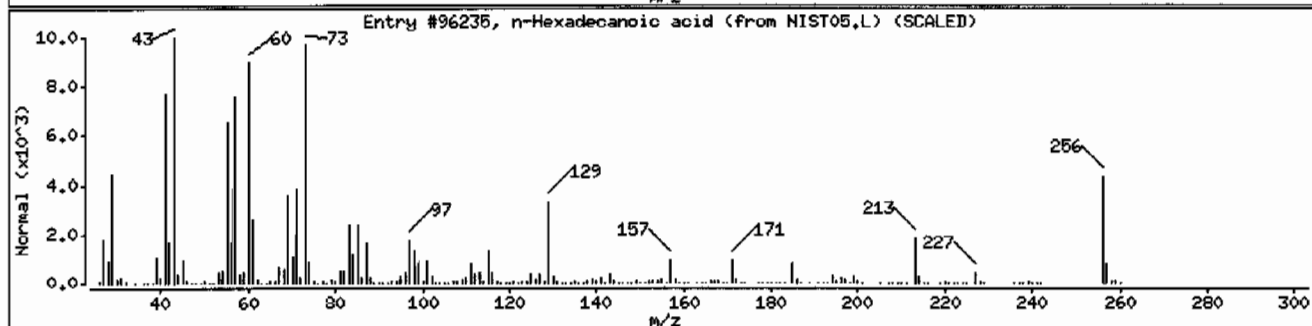
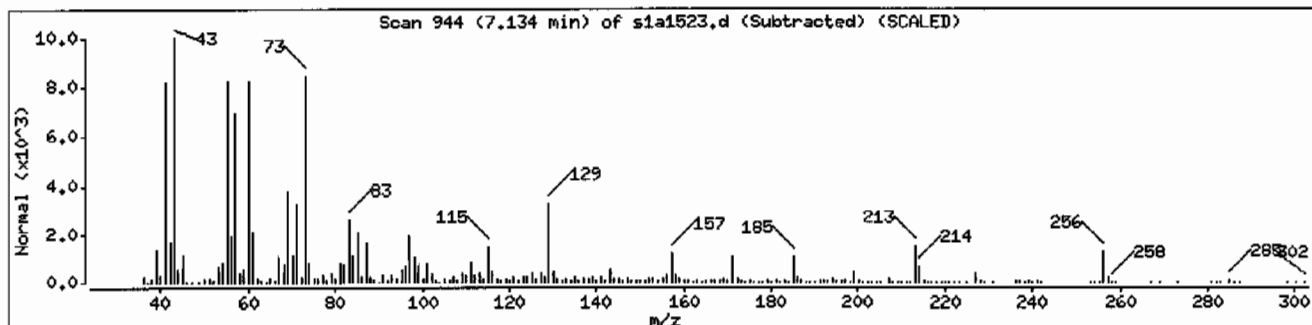
Volume Injected (uL): 0.5

Operator: AMY

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
n-Hexadecanoic acid	57-10-3	NIST05.L	96235	99	C16H32O2	256
n-Hexadecanoic acid	57-10-3	NIST05.L	96234	95	C16H32O2	256
n-Hexadecanoic acid	57-10-3	NIST05.L	96233	94	C16H32O2	256



Date : 15-JAN-2010 19:03

Client ID: RE12-10-7256

Instrument: MSD1.i

Sample Info: 1244604002194160011ISVM11ILANL

Volume Injected (uL): 0.5

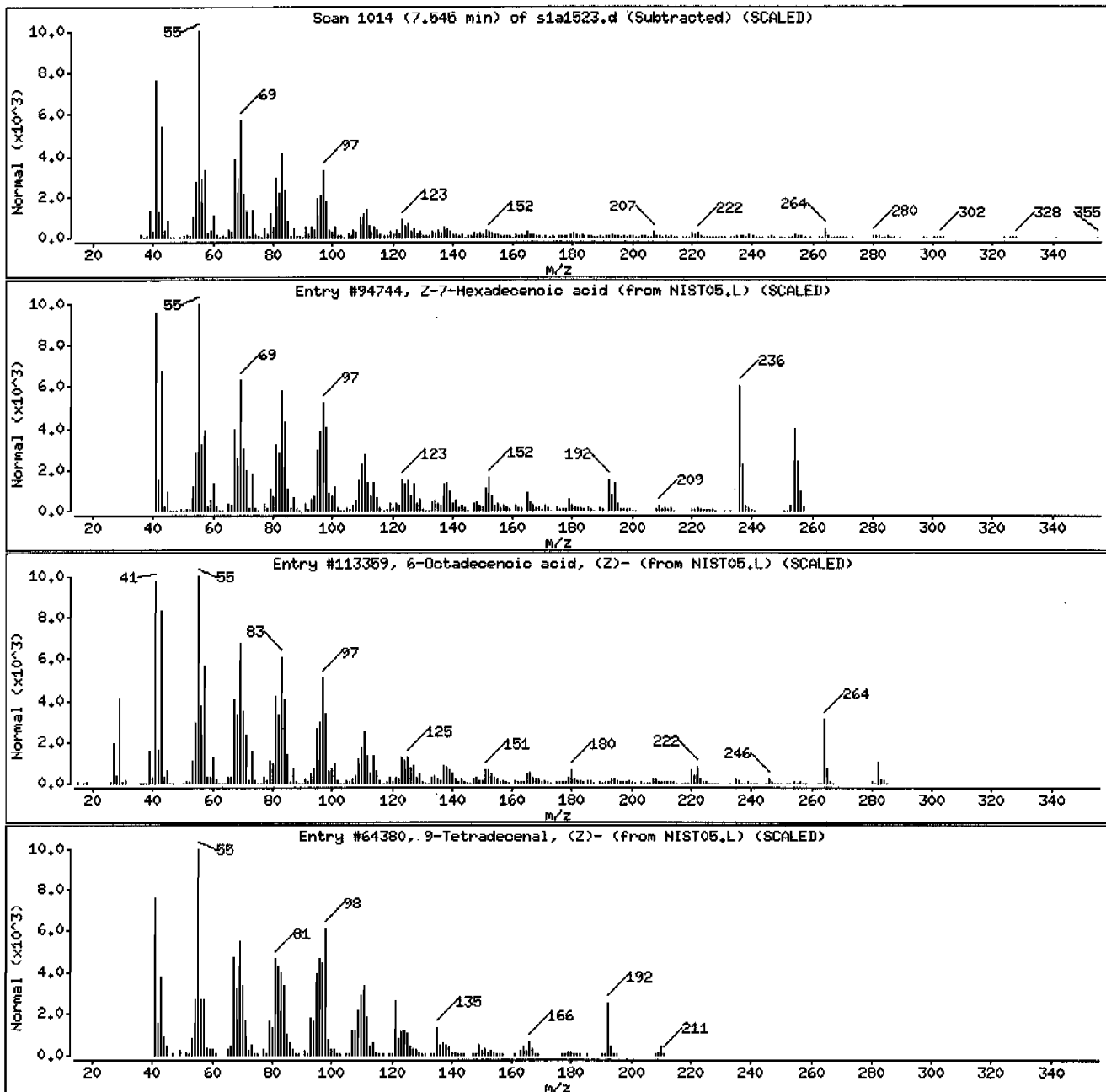
Operator: AMY

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Z-7-Hexadecenoic acid	1000130-90-8	NIST05.L	94744	95	C16H30O2	254
6-Octadecenoic acid, (Z)-	593-39-5	NIST05.L	113359	90	C18H34O2	282
9-Tetradecenal, (Z)-	53939-27-8	NIST05.L	64380	76	C14H26O	210



Date : 15-JAN-2010 19:03

Client ID: RE12-10-7256

Instrument: MSD1.i

Sample Info: 1244604002194160011ISVMI1ILANL

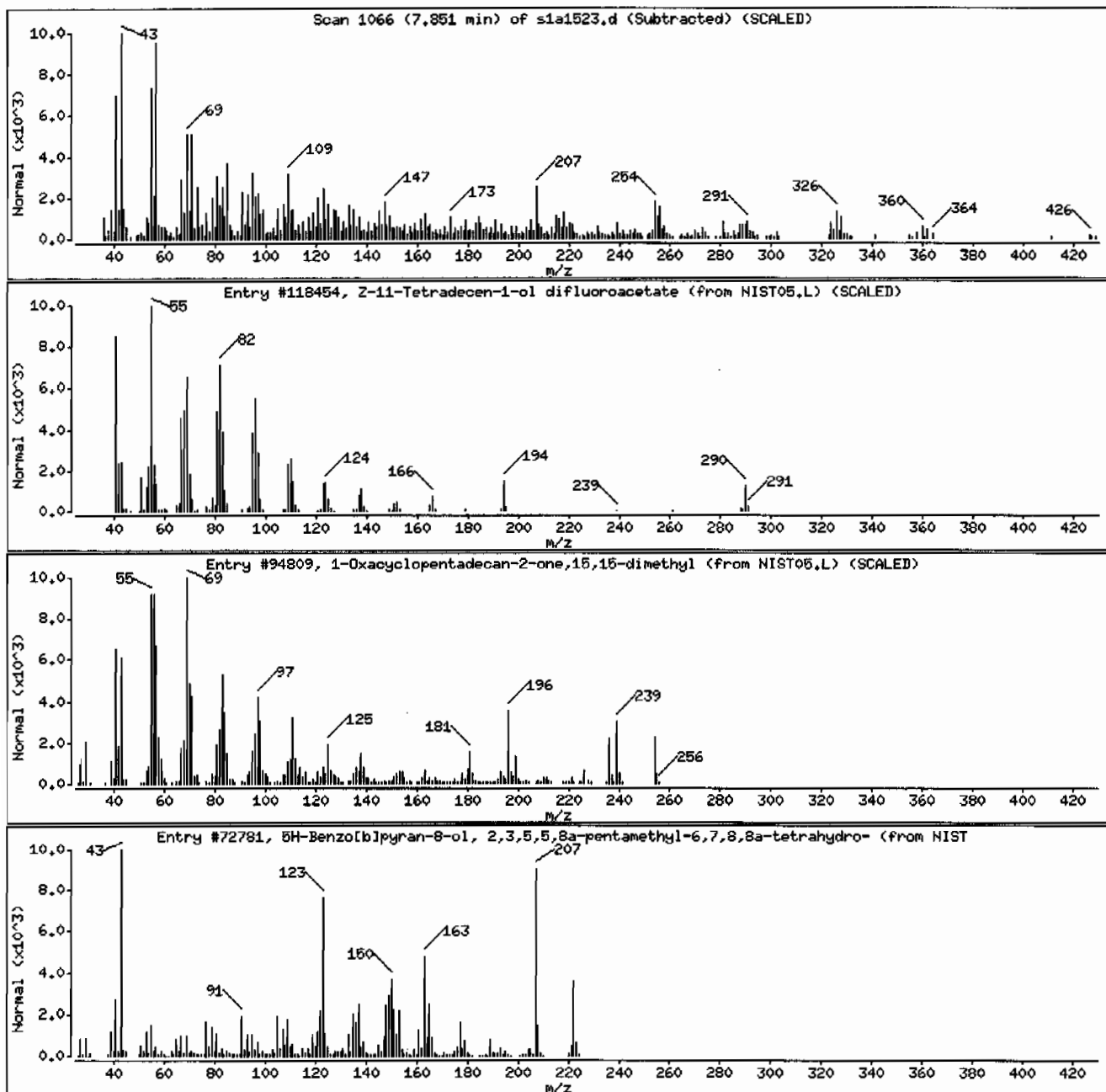
Volume Injected (uL): 0.5

Operator: AMY

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Z-11-Tetradecen-1-ol difluoroacetate	1000130-82-7	NIST05.L	118454	15	C16H28F2O2	290
1-Oxacyclopentadecan-2-one,15,15-dimethyl	1000196-63-1	NIST05.L	94809	15	C16H30O2	254
5H-Benzo[b]pyran-8-ol, 2,3,5,5,8a-pentam	97306-66-6	NIST05.L	72781	14	C14H22O2	222



Date : 15-JAN-2010 19:03

Client ID: RE12-10-7256

Instrument: MSD1.i

Sample Info: 1244604002194160011ISVM11ILANL

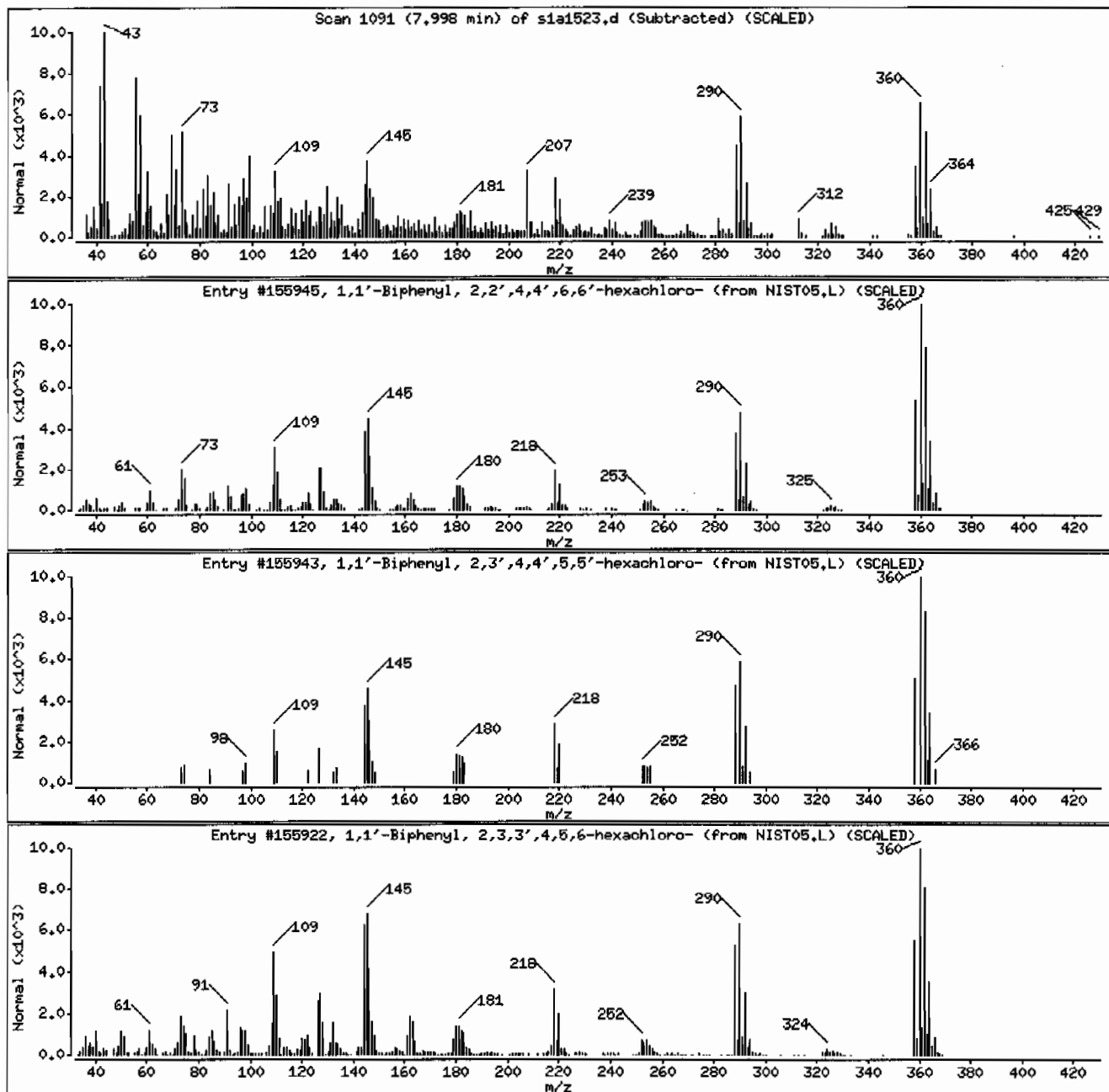
Volume Injected (uL): 0.5

Operator: AMY

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
1,1'-Biphenyl, 2,2',4,4',6,6'-hexachloro	33979-03-2	NIST05.L	155945	99	C12H4Cl6	358
1,1'-Biphenyl, 2,3',4,4',5,5'-hexachloro	52663-72-6	NIST05.L	155943	98	C12H4Cl6	358
1,1'-Biphenyl, 2,3,3',4,5,6-hexachloro-	41411-62-5	NIST05.L	155922	97	C12H4Cl6	358



Date : 15-JAN-2010 19:03

Client ID: RE12-10-7256

Instrument: MSD1.i

Sample Info: 1244604002194160011ISVM11ILANL

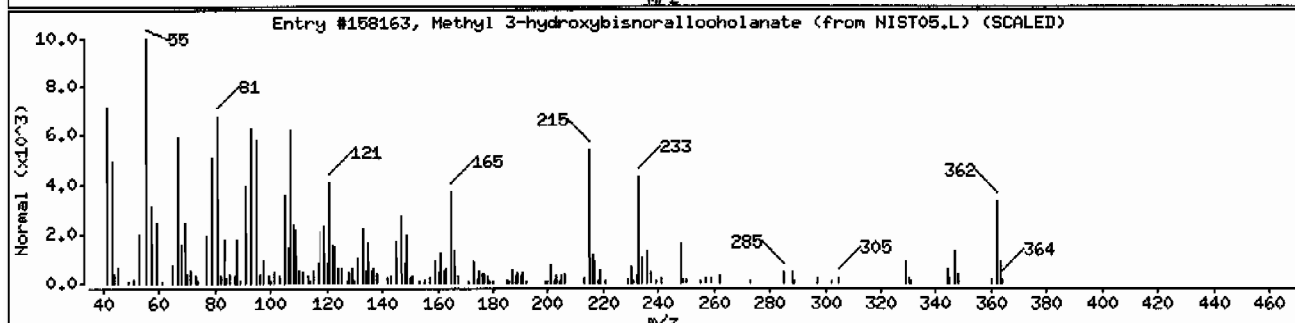
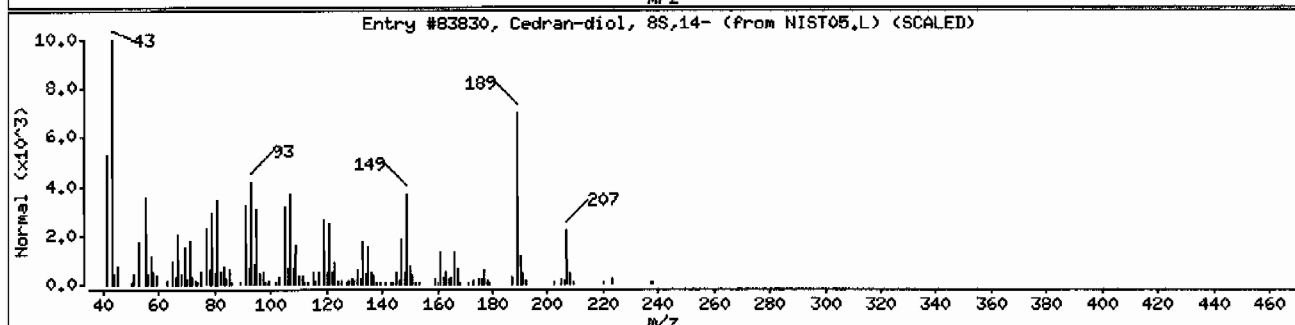
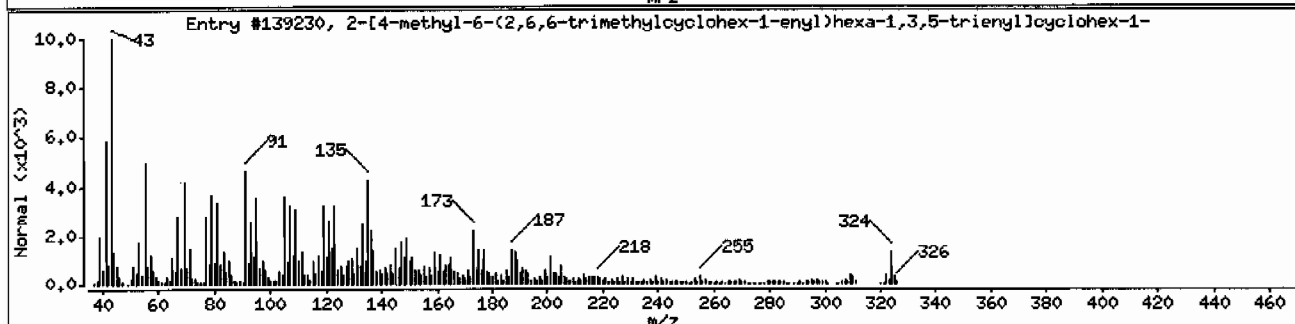
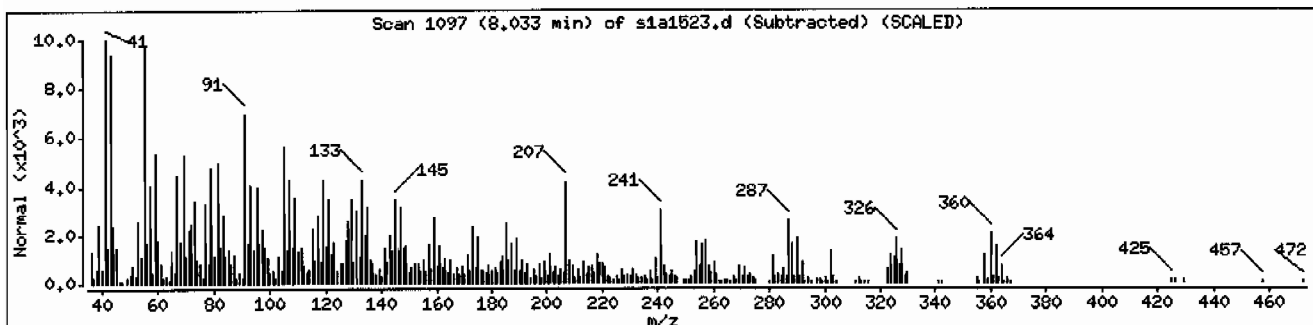
Volume Injected (uL): 0.5

Operator: AMY

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
2-[4-methyl-6-(2,6,6-trimethylcyclohex-1	1000216-09-2	NIST05.L	139230	46	C23H32O	324
Cedran-diol, 8S,14-	62600-05-9	NIST05.L	83830	43	C15H26O2	238
Methyl 3-hydroxybisorallocholanate	1000251-88-5	NIST05.L	158163	27	C23H38O3	362



Date : 15-JAN-2010 19:03

Client ID: RE12-10-7256

Instrument: HSD1.i

Sample Info: 1244604002194160011SVH11ILANL

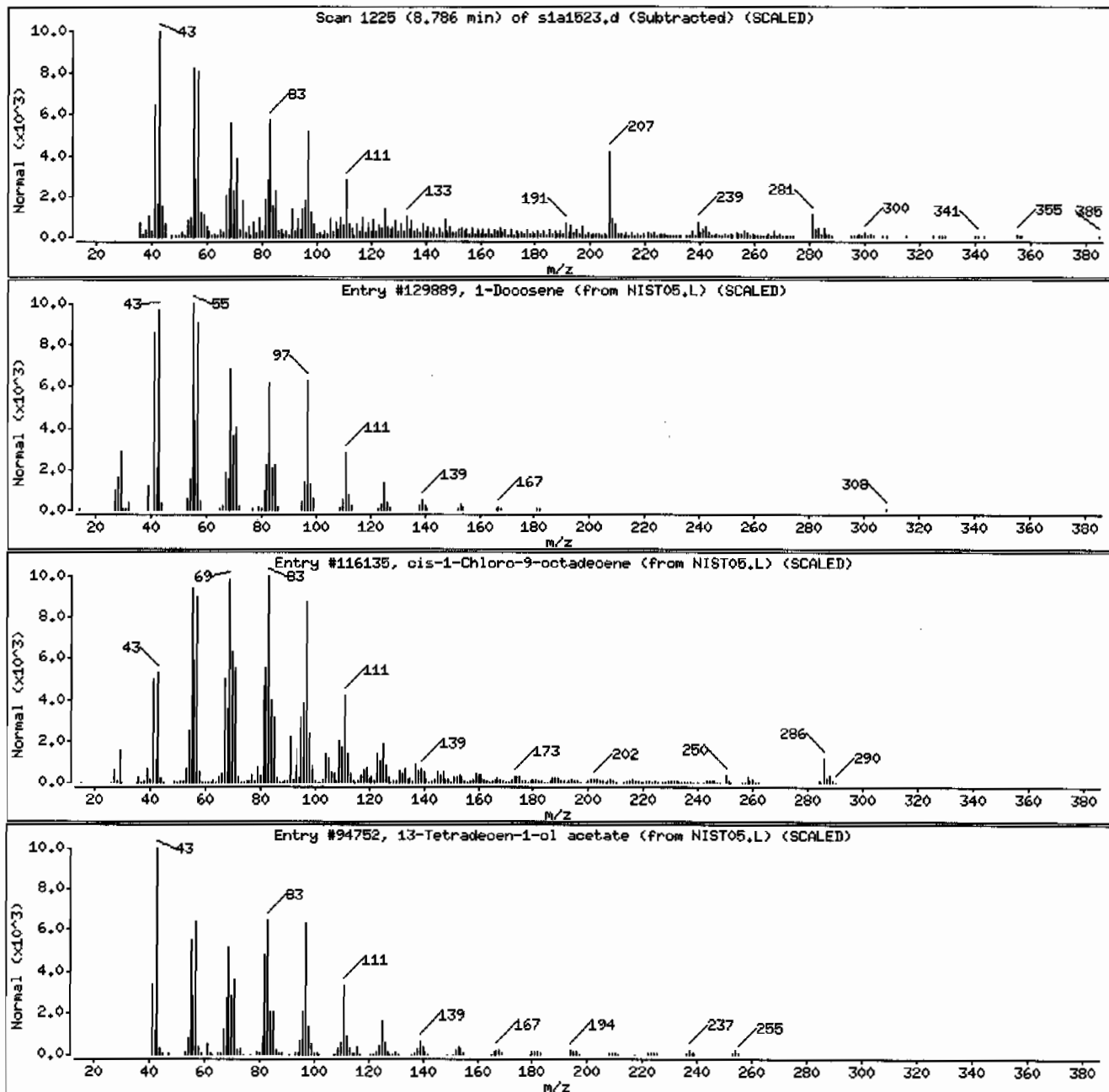
Volume Injected (uL): 0.5

Operator: AMY

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
1-Docosene	1599-67-3	NIST05.L	129889	97	C22H44	308
cis-1-Chloro-9-octadecene	16807-61-2	NIST05.L	116135	95	C18H35Cl	286
13-Tetradecen-1-ol acetate	56221-91-1	NIST05.L	94752	94	C16H30O2	254



Date : 15-JAN-2010 19:03

Client ID: RE12-10-7256

Instrument: MSD1.i

Sample Info: 1244604002194160011SVMI1ILANL

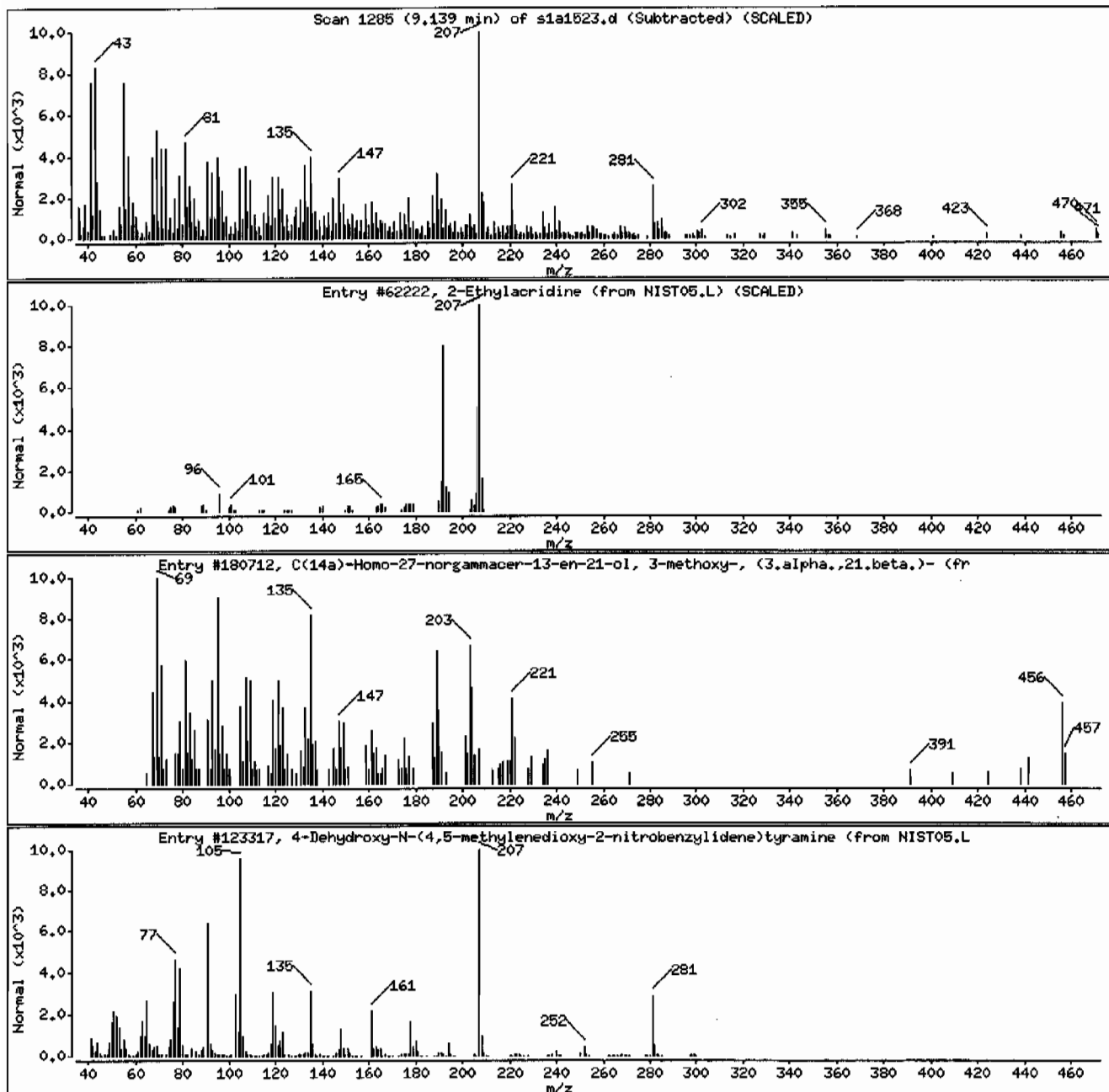
Volume Injected (uL): 0.5

Operator: AMY

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
2-Ethylacridine	55751-83-2	NIST05.L	62222	42	C15H13N	207
C(14a)-Homo-27-norgammacer-13-en-21-ol,	24433-34-9	NIST05.L	180712	38	C31H52O2	456
4-Dehydroxy-N-(4,5-methylenedioxy-2-nitr	1000111-66-9	NIST05.L	123317	38	C16H14N2O4	298



Date : 15-JAN-2010 19:03

Client ID: RE12-10-7256

Instrument: MSD1.i

Sample Info: 1244604002194160011ISVM11ILANL

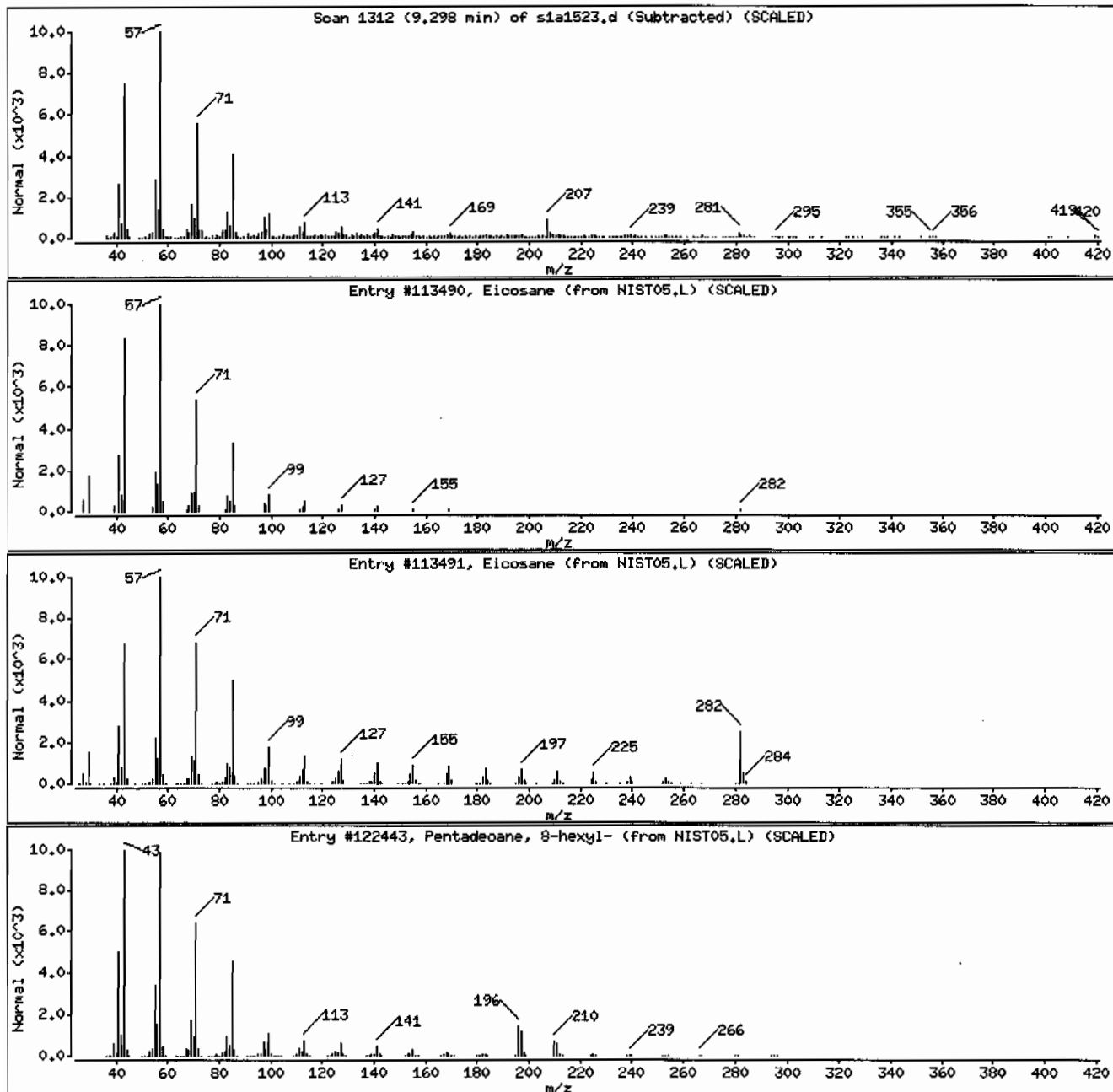
Volume Injected (uL): 0.5

Operator: AMY

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Eicosane	112-95-8	NIST05.L	113490	97	C ₂₀ H ₄₂	282
Eicosane	112-95-8	NIST05.L	113491	93	C ₂₀ H ₄₂	282
Pentadecane, 8-hexyl-	13475-75-7	NIST05.L	122443	93	C ₂₁ H ₄₄	296



Date: 15-JAN-2010 19:03

Client ID: RE12-10-7256

Instrument: MSD1.i

Sample Info: 1244604002194160011SVH111LANL

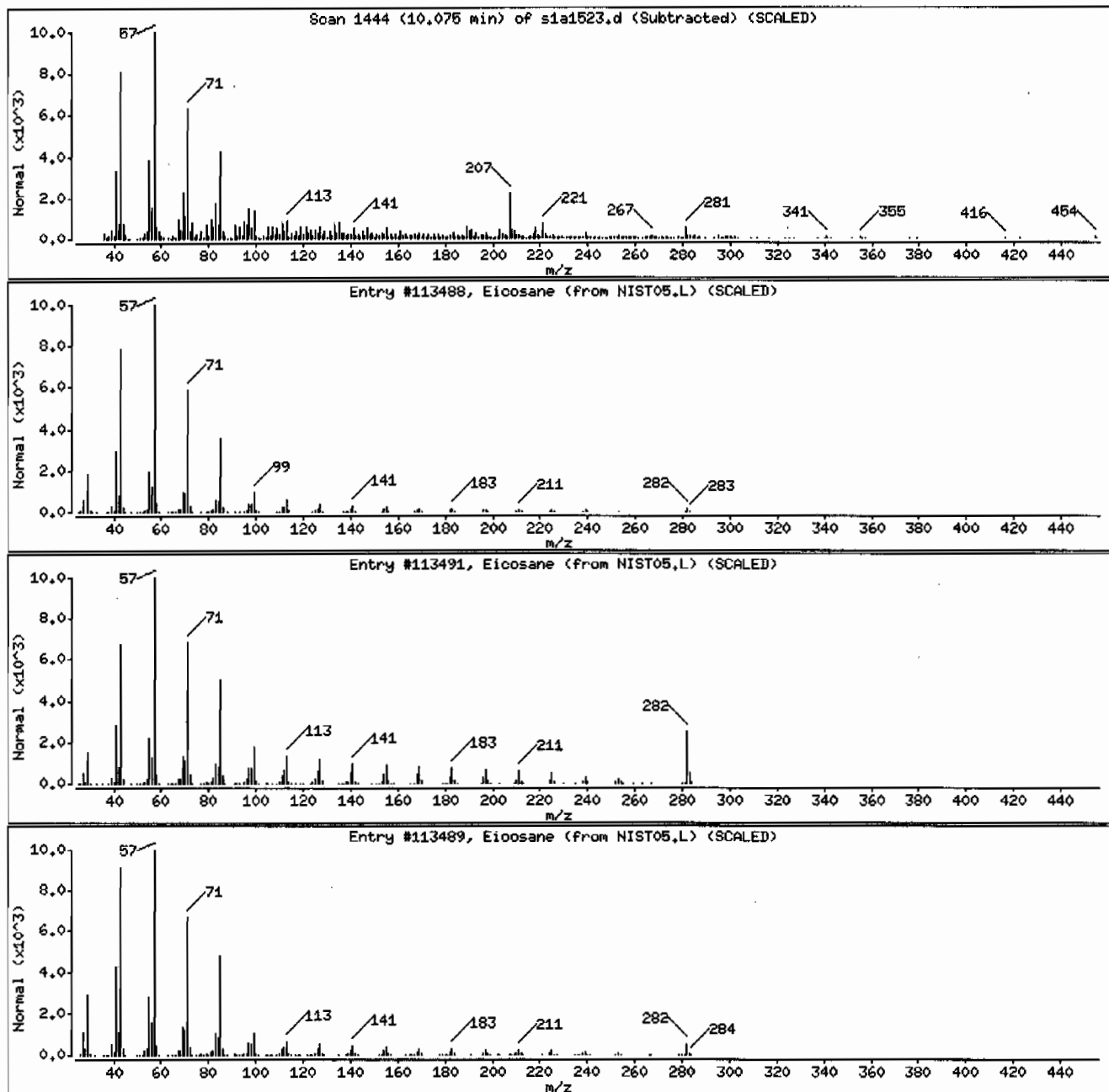
Volume Injected (uL): 0.5

Operator: AMY

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Eicosane	112-95-8	NIST05.L	113488	97	C ₂₀ H ₄₂	282
Eicosane	112-95-8	NIST05.L	113491	95	C ₂₀ H ₄₂	282
Eicosane	112-95-8	NIST05.L	113489	95	C ₂₀ H ₄₂	282



Date: 15-JAN-2010 19:03

Client ID: RE12-10-7256

Instrument: MSD1.i

Sample Info: 1244604002194160011ISVM111LANL

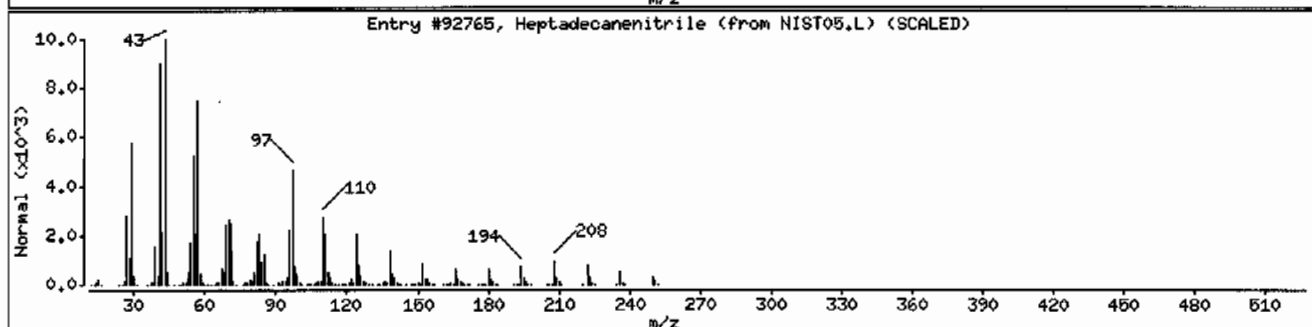
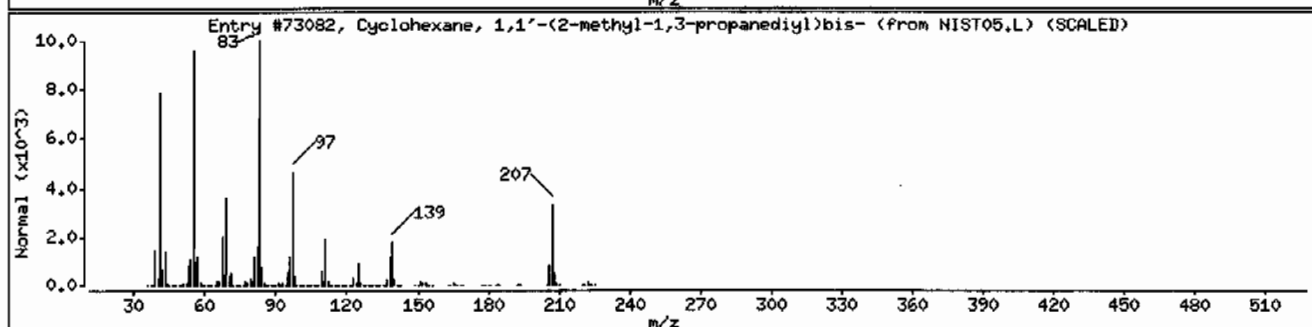
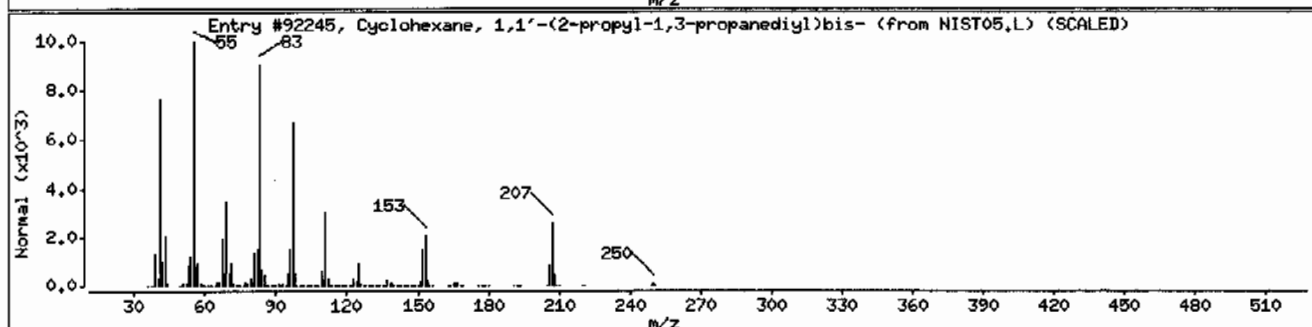
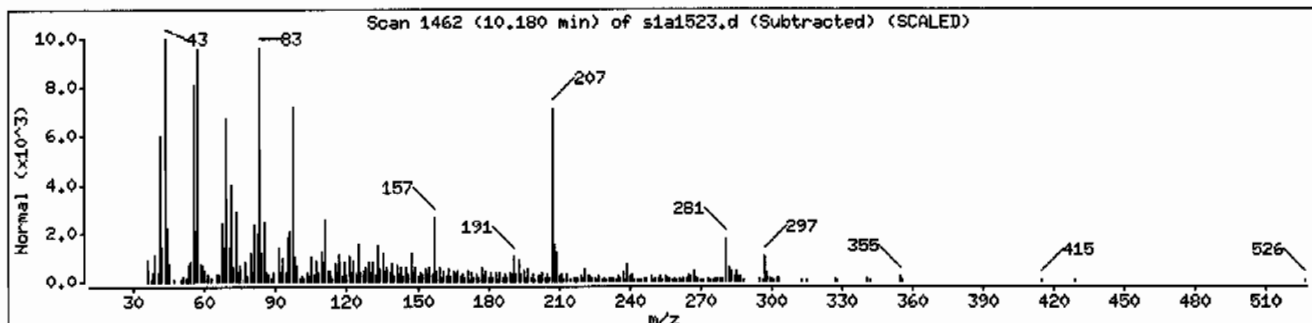
Volume Injected (uL): 0.5

Operator: AMY

Column phase: J&W DB-6MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Cyclohexane, 1,1'-(2-propyl-1,3-propanediol)	55030-21-2	NIST05.L	92245	52	C18H34	260
Cyclohexane, 1,1'-(2-methyl-1,3-propanediol)	2883-08-1	NIST05.L	73082	43	C16H30	222
Heptadecanenitrile	5399-02-0	NIST05.L	92765	42	C17H33N	251



Date : 15-JAN-2010 19:03

Client ID: RE12-10-7256

Instrument: MSD1.i

Sample Info: 1244604002194160011ISVH11ILANL

Volume Injected (uL): 0.5

Operator: AMY

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match

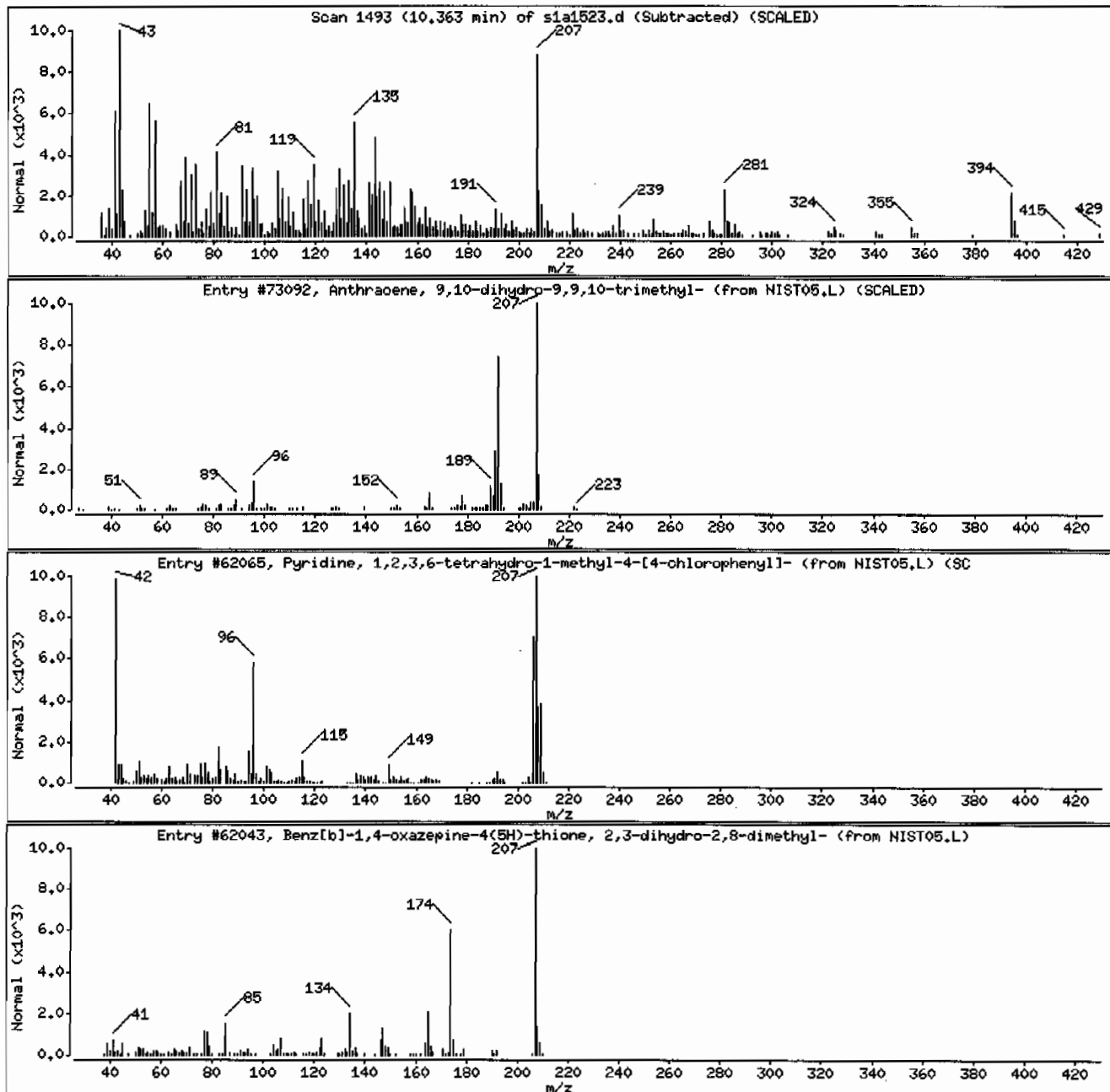
Unknown

Anthracene, 9,10-dihydro-9,9,10-trimethyl-

CAS Number	Library	Entry	Quality	Formula	Weight
14923-29-6	NIST05.L	73092	35	C17H18	222
5048-08-8	NIST05.L	62065	27	C12H14ClN	207
1000258-63-4	NIST05.L	62043	25	C11H13NOS	207

Pyridine, 1,2,3,6-tetrahydro-1-methyl-4-

Benz[b]-1,4-oxazepine-4(5H)-thione, 2,3-



Date : 15-JAN-2010 19:03

Client ID: RE12-10-7256

Instrument: HSD1.i

Sample Info: I244604002I941600I1ISVHI1ILANL

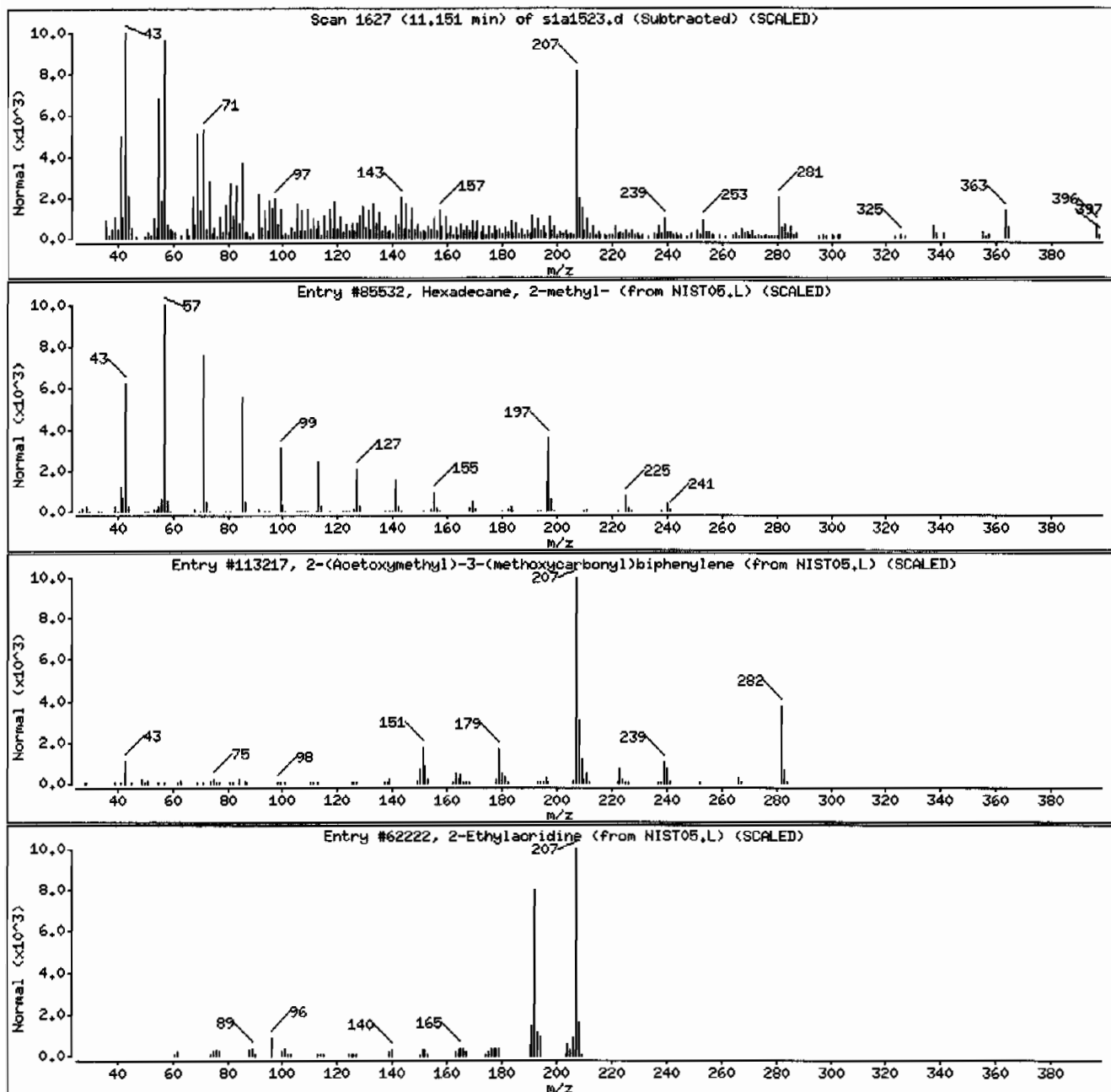
Volume Injected (uL): 0.5

Operator: AMY

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Hexadecane, 2-methyl-	1560-92-5	NIST05.L	85532	40	C17H36	240
2-(Acetoxymethyl)-3-(methoxycarbonyl)bip	93103-70-9	NIST05.L	113217	38	C17H14O4	282
2-Ethylacridine	55751-83-2	NIST05.L	62222	38	C15H13N	207



Date: 15-JAN-2010 19:03

Client ID: RE12-10-7256

Instrument: MSD1.i

Sample Info: 1244604002194160011SVH111LANL

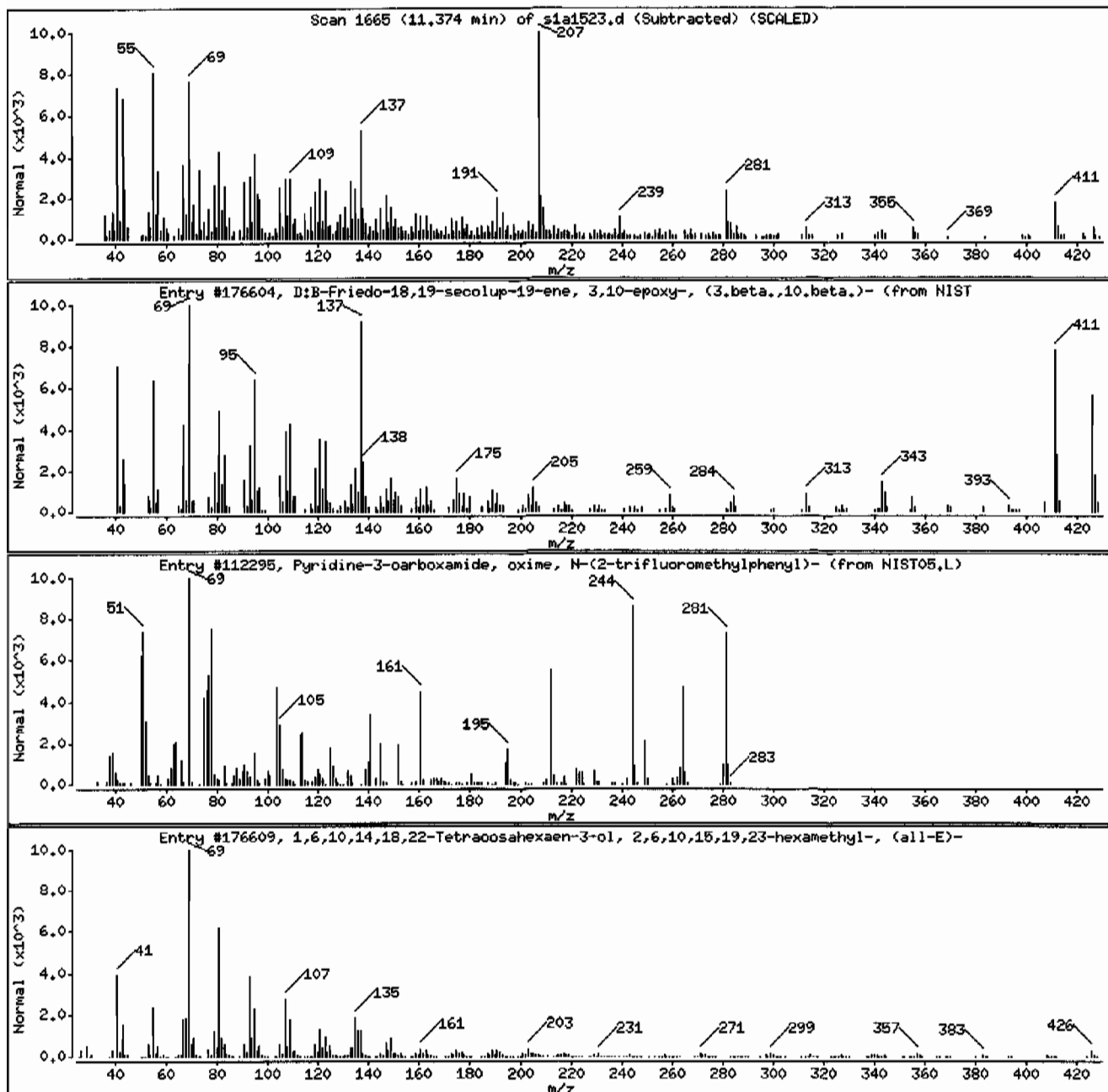
Volume Injected (uL): 0.5

Operator: AMY

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
D;B-Friedo-18,19-secolup-19-ene, 3,10-ep	35060-26-5	NIST05.L	176604	95	C30H50O	426
Pyridine-3-carboxamide, oxime, N-(2-trif	288246-53-7	NIST05.L	112295	92	C13H10F3N3O	281
1,6,10,14,18,22-Tetraosahexaen-3-ol, 2,	54159-46-5	NIST05.L	176609	44	C30H50O	426



Date: 15-JAN-2010 19:03

Client ID: RE12-10-7256

Instrument: MSD1.1

Sample Info: 12446040021941600111SVMI11LANL

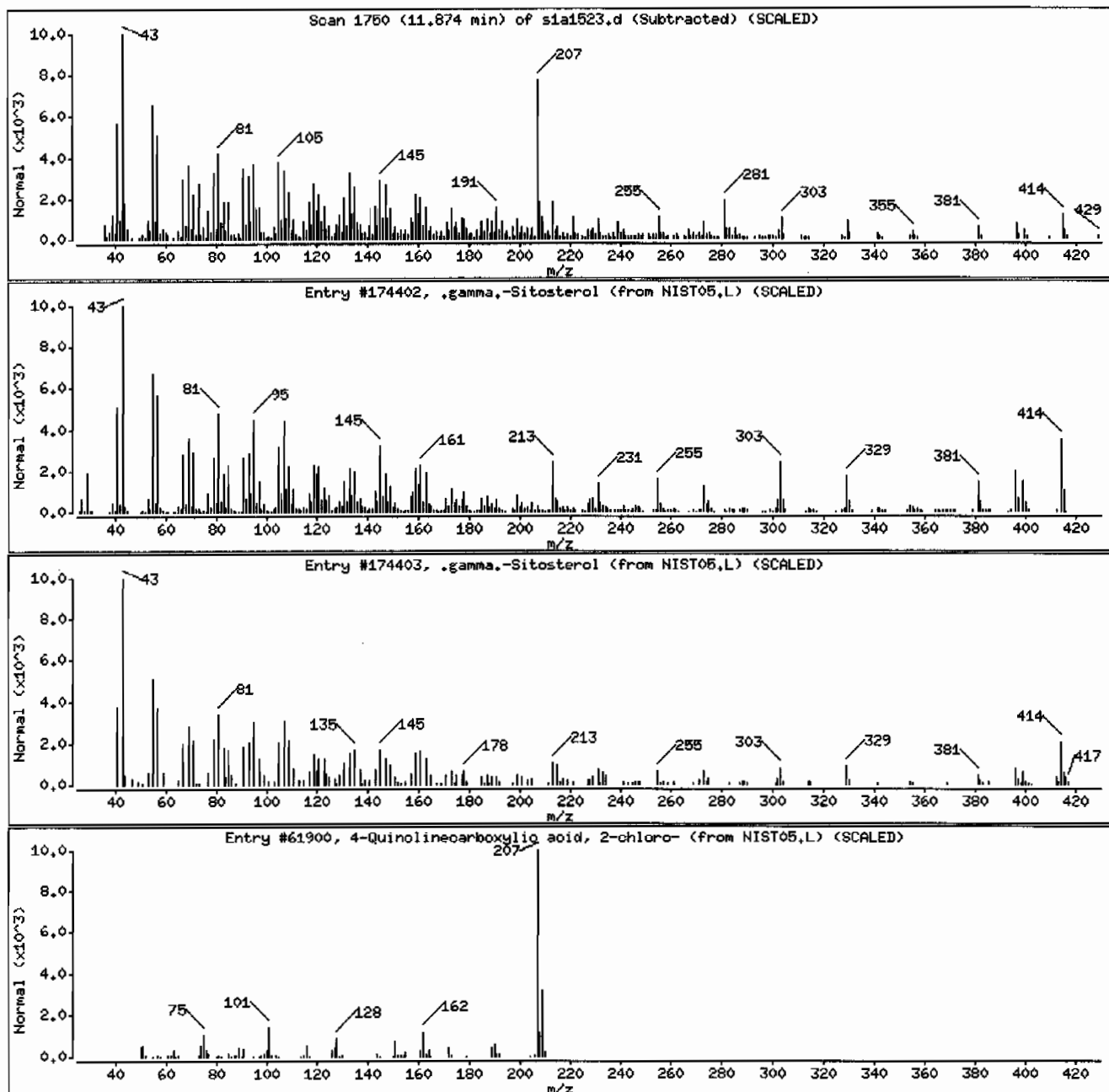
Volume Injected (uL): 0.5

Operator: AMY

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
.gamma.-Sitosterol	83-47-6	NIST05.L	174402	92	C29H50O	414
.gamma.-Sitosterol	83-47-6	NIST05.L	174403	62	C29H50O	414
4-Quinolincarboxylic acid, 2-chloro-	5467-57-2	NIST05.L	61900	42	C10H6ClNO2	207



Date: 15-JAN-2010 19:03

Client ID: RE12-10-7286

Instrument: MSD1.i

Sample Info: 1244604002194160011SVMI11LANL

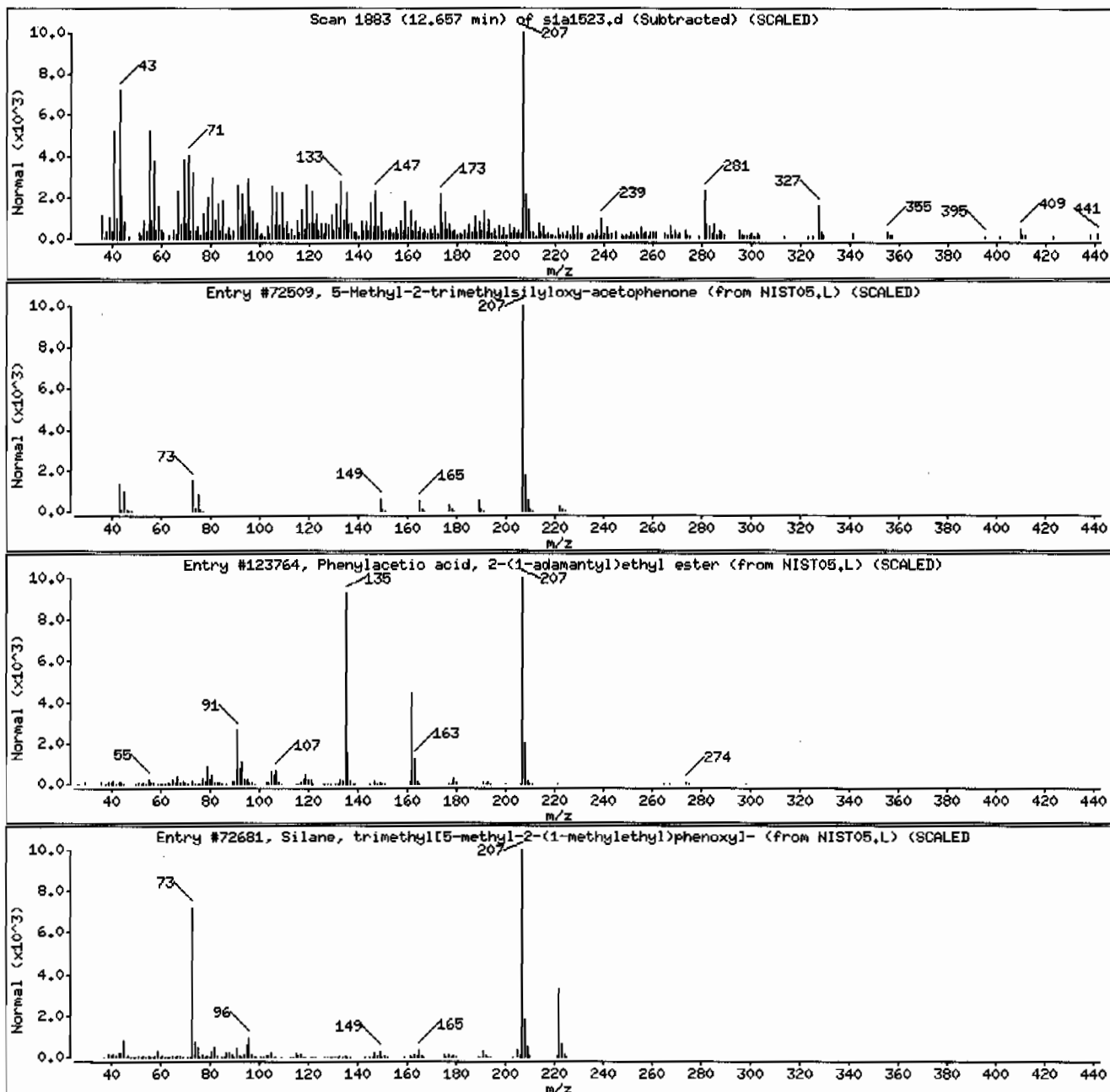
Volume Injected (uL): 0.5

Operator: AMY

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
5-Methyl-2-trimethylsilyloxy-acetophenon	97389-69-0	NIST05.L	72509	38	C12H18O2Si	222
Phenylacetic acid, 2-(1-adamantyl)ethyl	1000282-91-2	NIST05.L	123764	38	C20H26O2	298
Silane, trimethyl[5-methyl-2-(1-methylet	55012-80-1	NIST05.L	72681	35	C13H22OSi	222



Date : 15-JAN-2010 19:03

Client ID: RE12-10-7266

Instrument: MSD1.i

Sample Info: 1244604002194160011SVMI11LANL

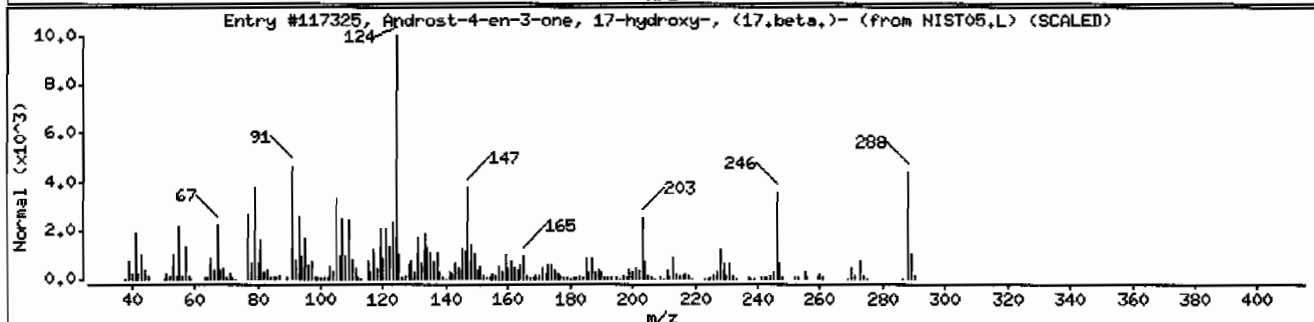
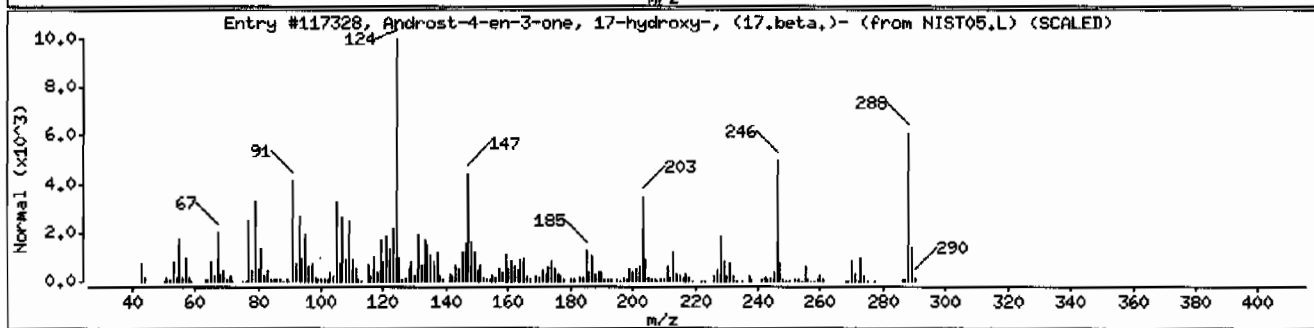
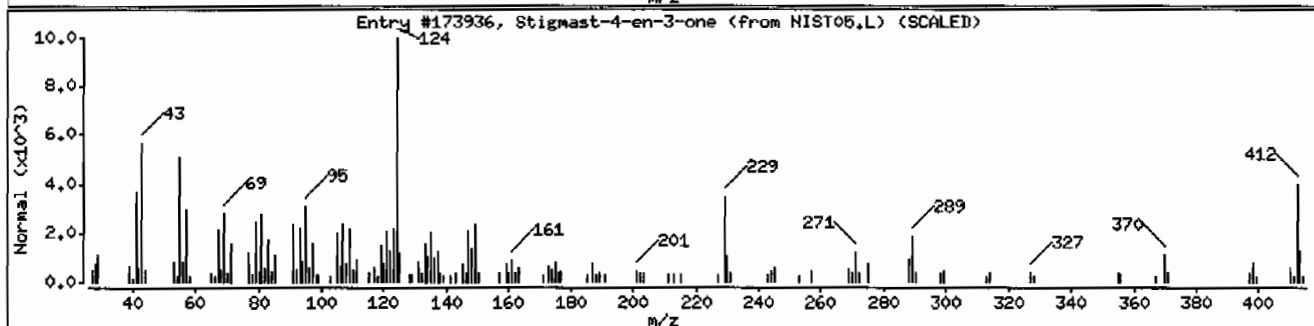
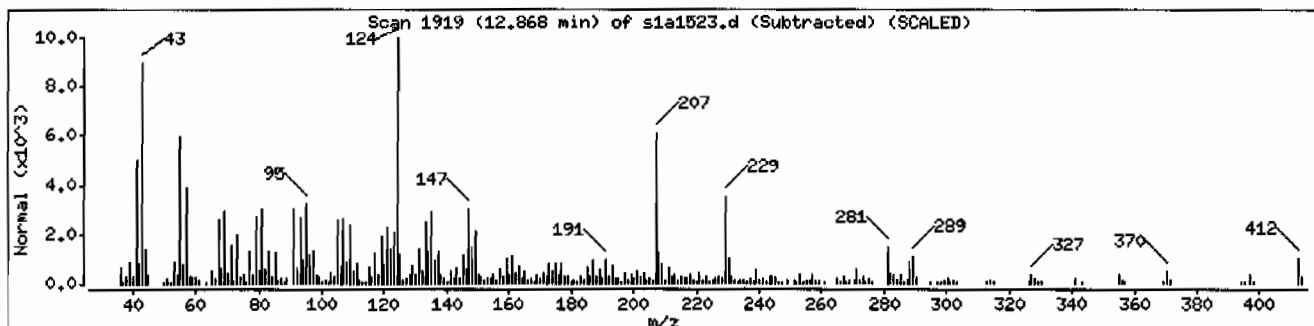
Volume Injected (uL): 0.5

Operator: AMY

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Stigmast-4-en-3-one	1058-61-3	NIST05.L	173936	78	C29H48O	412
Androst-4-en-3-one, 17-hydroxy-, (17.bet	58-22-0	NIST05.L	117328	59	C19H28O2	288
Androst-4-en-3-one, 17-hydroxy-, (17.bet	58-22-0	NIST05.L	117325	46	C19H28O2	288



Semi-Volatile
Certificate of Analysis
Sample Summary

Page 1 of 3

SDG Number: 10-1213
Lab Sample ID: 244604001

Date Collected: 01/08/2010 12:00
Date Received: 01/13/2010 08:55
Client: LANL010
Method: SW846 8270C
Inst: MSD1.I
Analyst: AMY
Aliquot: 30.16 g
Column: J&W DB-5MS

Matrix: R
%Moisture: 10
Project: LANL01004
SOP Ref: GL-OA-E-009
Dilution: 1
Inj. Vol: .5 uL
Final Volume: 1 mL
Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	368	ug/kg	73.6	368
108-95-2	Phenol	U	368	ug/kg	73.6	368
95-57-8	2-Chlorophenol	U	368	ug/kg	73.6	368
106-46-7	1,4-Dichlorobenzene	U	368	ug/kg	73.6	368
621-64-7	N-Nitrosodipropylamine	U	368	ug/kg	73.6	368
59-50-7	4-Chloro-3-methylphenol	U	368	ug/kg	73.6	368
83-32-9	Acenaphthene	U	36.8	ug/kg	12.2	36.8
121-14-2	2,4-Dinitrotoluene	U	368	ug/kg	36.8	368
100-02-7	4-Nitrophenol	U	368	ug/kg	122	368
87-86-5	Pentachlorophenol	U	368	ug/kg	92.1	368
129-00-0	Pyrene	U	36.8	ug/kg	11.0	36.8
110-86-1	Pyridine	U	368	ug/kg	73.6	368
62-53-3	Aniline	U	368	ug/kg	110	368
111-44-4	bis(2-Chloroethyl) ether	U	368	ug/kg	73.6	368
541-73-1	1,3-Dichlorobenzene	U	368	ug/kg	73.6	368
100-51-6	Benzyl alcohol	U	368	ug/kg	110	368
95-50-1	1,2-Dichlorobenzene	U	368	ug/kg	73.6	368
108-60-1	bis(2-Chloroisopropyl)ether	U	368	ug/kg	73.6	368
95-48-7	o-Cresol	U	368	ug/kg	73.6	368
65794-96-9	m,p-Cresols	U	368	ug/kg	110	368
67-72-1	Hexachloroethane	U	368	ug/kg	73.6	368
98-95-3	Nitrobenzene	U	368	ug/kg	73.6	368
78-59-1	Isophorone	U	368	ug/kg	73.6	368
88-75-5	2-Nitrophenol	U	368	ug/kg	73.6	368
105-67-9	2,4-Dimethylphenol	U	368	ug/kg	129	368
111-91-1	bis(2-Chloroethoxy)methane	U	368	ug/kg	73.6	368
120-83-2	2,4-Dichlorophenol	U	368	ug/kg	73.6	368
65-85-0	Benzoic acid	U	736	ug/kg	184	736
91-20-3	Naphthalene	U	36.8	ug/kg	11.0	36.8
106-47-8	4-Chloroaniline	U	368	ug/kg	73.6	368
87-68-3	Hexachlorobutadiene	U	368	ug/kg	73.6	368
91-57-6	2-Methylnaphthalene	U	36.8	ug/kg	7.36	36.8
77-47-4	Hexachlorocyclopentadiene	U	368	ug/kg	73.6	368
88-06-2	2,4,6-Trichlorophenol	U	368	ug/kg	73.6	368
95-95-4	2,4,5-Trichlorophenol	U	368	ug/kg	73.6	368
91-58-7	2-Chloronaphthalene	U	36.8	ug/kg	12.2	36.8
88-74-4	2-Nitroaniline	U	368	ug/kg	73.6	368
	<i>o</i> -Nitroaniline					
99-09-2	3-Nitroaniline	U	368	ug/kg	73.6	368

**Semi-Volatile
Certificate of Analysis
Sample Summary**

SDG Number: 10-1213
Lab Sample ID: 244604001

Date Collected: 01/08/2010 12:00
Date Received: 01/13/2010 08:55
Client: LANL010
Method: SW846 8270C
Inst: MSD1.I
Analyst: AMY
Aliquot: 30.16 g
Column: J&W DB-5MS

Matrix: R
%Moisture: 10
Project: LANL01004
SOP Ref: GL-OA-E-009
Dilution: 1
Inj. Vol: .5 uL
Final Volume: 1 mL
Level: LOW

CAS No.	Parname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
131-11-3	<i>m</i> -Nitroaniline					
	Dimethylphthalate	U	368	ug/kg	73.6	368
606-20-2	2,6-Dinitrotoluene	U	368	ug/kg	36.8	368
208-96-8	Acenaphthylene	U	36.8	ug/kg	11.0	36.8
51-28-5	2,4-Dinitrophenol	U	736	ug/kg	140	736
132-64-9	Dibenzofuran	U	368	ug/kg	73.6	368
84-66-2	Diethylphthalate	U	368	ug/kg	73.6	368
86-73-7	Fluorene	U	36.8	ug/kg	11.0	36.8
7005-72-3	4-Chlorophenylphenylether	U	368	ug/kg	73.6	368
534-52-1	2-Methyl-4,6-dinitrophenol	U	368	ug/kg	73.6	368
100-01-6	4-Nitroaniline	U	368	ug/kg	110	368
	<i>p</i> -Nitroaniline					
122-39-4	Diphenylamine	U	368	ug/kg	73.6	368
122-66-7	Azobenzene	U	368	ug/kg	73.6	368
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	368	ug/kg	73.6	368
118-74-1	Hexachlorobenzene	U	368	ug/kg	73.6	368
85-01-8	Phenanthrene	U	36.8	ug/kg	11.0	36.8
120-12-7	Anthracene	U	36.8	ug/kg	7.36	36.8
84-74-2	Di-n-butylphthalate	U	368	ug/kg	73.6	368
206-44-0	Fluoranthene	U	36.8	ug/kg	11.0	36.8
85-68-7	Butylbenzylphthalate	U	368	ug/kg	73.6	368
56-55-3	Benzo(a)anthracene	U	36.8	ug/kg	11.0	36.8
91-94-1	3,3'-Dichlorobenzidine	U	368	ug/kg	110	368
218-01-9	Chrysene	U	36.8	ug/kg	11.0	36.8
117-81-7	bis(2-Ethylhexyl)phthalate	U	368	ug/kg	73.6	368
117-84-0	Di-n-octylphthalate	U	368	ug/kg	73.6	368
205-99-2	Benzo(b)fluoranthene	U	36.8	ug/kg	11.0	36.8
207-08-9	Benzo(k)fluoranthene	U	36.8	ug/kg	11.0	36.8
50-32-8	Benzo(a)pyrene	U	36.8	ug/kg	11.0	36.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	36.8	ug/kg	11.0	36.8
53-70-3	Dibenzo(a,h)anthracene	U	36.8	ug/kg	11.0	36.8
191-24-2	Benzo(ghi)perylene	U	36.8	ug/kg	11.0	36.8
120-82-1	1,2,4-Trichlorobenzene	U	368	ug/kg	73.6	368

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	1.96	758	ug/kg		J
	Unknown Aldol Condensate	2.82	566	ug/kg		JA

**Semi-Volatile
Certificate of Analysis
Sample Summary**

SDG Number: 10-1213
Lab Sample ID: 244604001

Date Collected: 01/08/2010 12:00
Date Received: 01/13/2010 08:55
Client: LANL010
Method: SW846 8270C
Inst: MSD1.I
Analyst: AMY
Aliquot: 30.16 g
Column: J&W DB-5MS

Matrix: R
%Moisture: 10
Project: LANL01004
SOP Ref: GL-OA-E-009
Dilution: 1
Inj. Vol: .5 uL
Final Volume: 1 mL
Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
Tentatively Identified Compound Summary						
CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
5131-66-8	2-Propanol, 1-butoxy-	3.32	189	ug/kg	90	NJ
1000131-10-3	Z,E-2,13-Octadecadien-1-ol	7.54	225	ug/kg	86	NJ
	Unknown	7.87	189	ug/kg		J
	Unknown	11.4	433	ug/kg		J
	Unknown	11.87	456	ug/kg		J
	Unknown	12.65	237	ug/kg		J
	Unknown	12.86	166	ug/kg		J

Data File: /chem/MSD1.i/s011510.b/s1a1522.d
Report Date: 21-Jan-2010 14:47

Page 1

GEL Laboratories LLC

Data file : /chem/MSD1.i/s011510.b/s1a1522.d
Lab Smp Id: 244604001 Client Smp ID: RE12-10-7257
Inj Date : 15-JAN-2010 18:39
Operator : AMY Inst ID: MSD1.i
Smp Info : |244604001|941600|1|SVM|1|LANL
Misc Info : |MSD8270_S|WBN100107-02|
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD1.i/s011810.b/MSD1-M8270AQA-111409.m
Meth Date : 19-Jan-2010 08:24 amy01291 Quant Type: ISTD
Cal Date : 17-NOV-2009 17:42 Cal File: slk1264.d
Als bottle: 21
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 10-1213.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf * Vt / (Vi * Ws * (100 - M) / 100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.16000	weight of sample
M	9.96000	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
							(ng/ul)	(ug/Kg)
* 10 1,4-Dichlorobenzene-d4		152	3.775	3.704	(1.000)	430867	40.0000	
* 29 Naphthalene-d8		136	4.634	4.563	(1.000)	1613697	40.0000	
* 46 Acenaphthene-d10		164	5.875	5.804	(1.000)	888468	40.0000	
* 67 Phenanthrene-d10		188	6.869	6.804	(1.000)	1451669	40.0000	
* 91 Chrysene-d12		240	8.492	8.404	(1.000)	1096801	40.0000	
* 98 Perylene-d12		264	9.845	9.704	(1.000)	755740	40.0000	
\$ 3 2-Fluorophenol		112	2.993	2.910	(0.793)	749507	66.5987	2450
\$ 5 Phenol-d5		99	3.510	3.440	(0.930)	954173	69.7584	2570
\$ 20 Nitrobenzene-d5		82	4.134	4.069	(0.892)	443574	41.7112	1540
\$ 39 2-Fluorobiphenyl		172	5.375	5.304	(0.915)	873472	41.0490	1510
\$ 60 2,4,6-Tribromophenol		329	6.422	6.351	(1.093)	220097	88.7159	3270
\$ 81 p-Terphenyl-d14		244	7.781	7.716	(0.916)	827051	48.0388	1770

ION RATIO REPORT

SV REPORT

Data file: slal522.d

Report Date: 01/16/2010 13:45

Lab. ID: 244604001

SampleType: SAMPLE

Injection Date: 15-JAN-2010 18:39

Operator: AMY

Instrument: MSD1.i

Sample Info: |244604001|941600|1|SVM|1|LANL

Miscellaneous Info: |MSD8270_S|WBN100107-02|

Comment:

Method used: /chem/MSD1.i/s011510.b/MSD1-M8270AQA-111409.m

Dilution Factor= 1.0

Integrator: HP RTE

Compound Sublist: 10-1213

Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
=====						
1 N-Methyl-N-nitrosomethylamine				CAS#: 62-75-9		
74	24849	2.09	2.30	80-120	100	(T)
42	7126	2.08	2.30	66-126	29	(QT)
43	57717	2.09	2.30	13- 73	232	(QT)

4 Aniline				CAS#: 62-53-3		
66	47433	3.51	3.56	80-120	100	()
93	3009	3.54	3.56	250-310	6	(Q)

17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	60116	4.13	4.02	80-120	100	(T)
42	35169	4.13	4.02	44-104	59	(T)

43 Dimethylphthalate				CAS#: 131-11-3		
163	160249	5.88	5.65	80-120	100	(T)
164	888468	5.87	5.65	0- 40	554	(QT)

44 2,6-Dinitrotoluene				CAS#: 606-20-2		
165	115305	5.87	5.71	80-120	100	(T)
63	1279	5.87	5.70	48-108	1	(QT)

50 2,4-Dinitrotoluene				CAS#: 121-14-2		
165	115305	5.87	5.99	80-120	100	(T)
89	1539	5.87	5.99	42-102	1	(QT)
63	1279	5.87	5.99	16- 76	1	(QT)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
=====						
53 Fluorene		CAS#: 86-73-7				
166	14959	6.42	6.25	80-120	100	(T)
165	14291	6.42	6.25	62-122	96	(T)
167	5190	6.42	6.25	0- 43	35	(T)

61 4-Bromophenylphenylether		CAS#: 101-55-3				
248	14745	6.42	6.56	80-120	100	(T)
141	93753	6.42	6.56	45-105	636	(QT)
250	29003	6.42	6.56	67-127	197	(QT)

95 Benzo(b)fluoranthene		CAS#: 205-99-2				
252	1363	9.40	9.40	80-120	100	()
253	204	9.40	9.40	0- 52	15	()
125	757	9.40	9.40	0- 42	56	(Q)

 Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

Data file : /chem/MSD1.i/s011510.b/s1a1522.d
Lab Smp Id: 244604001 Client Smp ID: RE12-10-7257
Inj Date : 15-JAN-2010 18:39
Operator : AMY Inst ID: MSD1.i
Smp Info : |244604001|941600|1|SVM|1|LANL
Misc Info : |MSD8270 S|WBN100107-02|
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD1.i/s011810.b/MSD1-M8270AQA-111409.m
Meth Date : 19-Jan-2010 08:24 amy01291 Quant Type: ISTD
Cal Date : 17-NOV-2009 17:42 Cal File: slk1264.d
Als bottle: 21
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 10-1213.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.16000	weight of sample
M	9.96000	% moisture

Cpnd Variable

Local Compound Variable

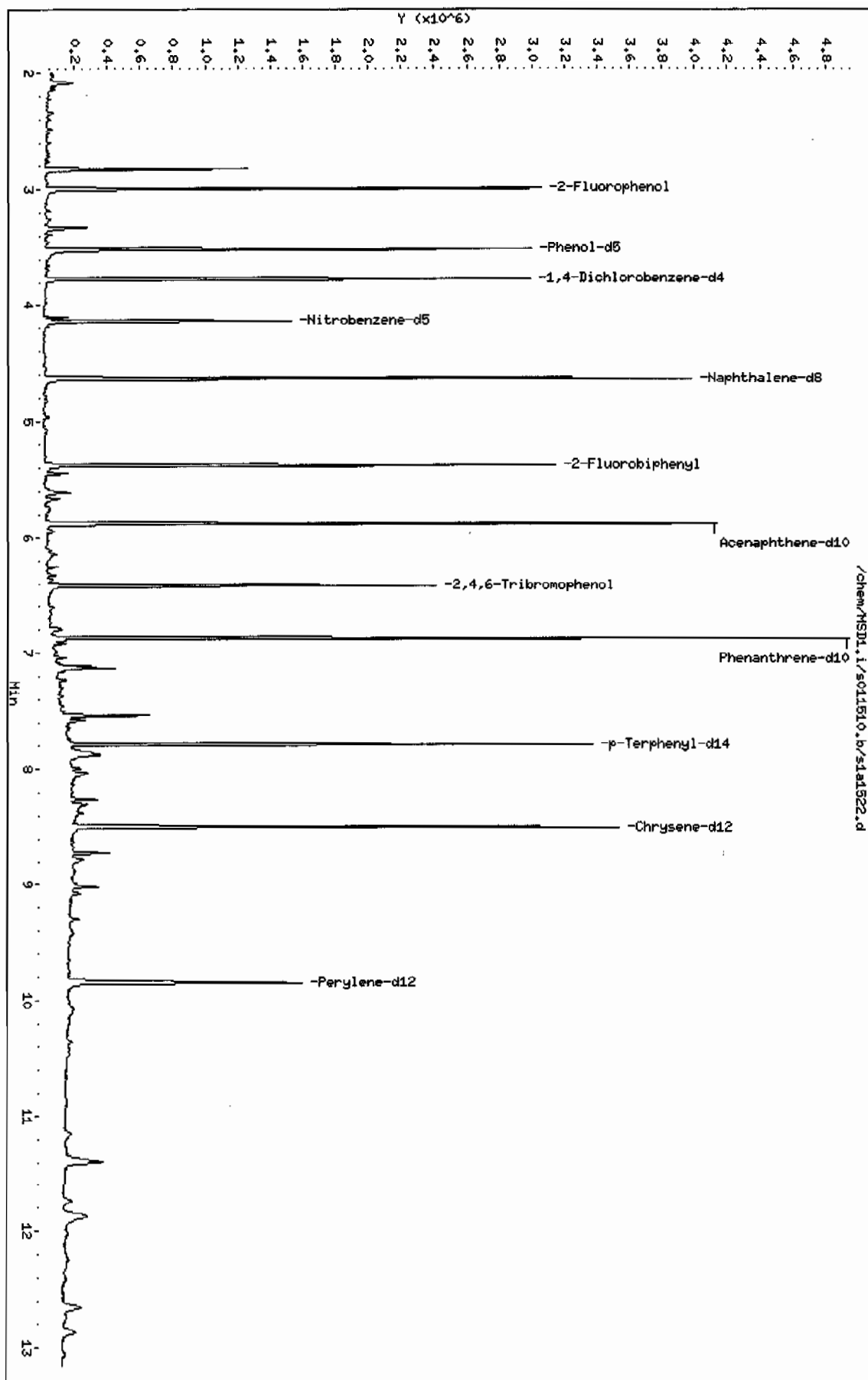
ISTD	RT	AREA	AMOUNT
=====	=====	=====	=====
* 10 1,4-Dichlorobenzene-d4	3.775	2564726	40.000
* 67 Phenanthrene-d10	6.869	3593404	40.000
* 91 Chrysene-d12	8.492	2960372	40.000
* 98 Perylene-d12	9.845	2060254	40.000

CONCENTRATIONS				QUANT			
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
=====	=====	=====	=====	=====	=====	=====	=====

RT	CONCENTRATIONS				QUANT		CPND #
	AREA	ON-COL (ng/ul)	FINAL (ug/Kg)	QUAL	LIBRARY	LIB ENTRY	
=====	=====	=====	=====	=====	=====	=====	=====
Unknown				CAS #:			
1.957	1319539	20.5797950	758	0		0	10
Unknown Aldol Condensate				CAS #:			
2.822	984963	15.3616855	566	0		0	10
2-Propanol, 1-butoxy-				CAS #: 5131-66-8			
3.322	328677	5.12610789	189	90	NIST05.L	13971	10
Z,E-2,13-Octadecadien-1-ol				CAS #: 1000131-10-3			
7.539	549493	6.11668901	225	86	NIST05.L	102829	67
Unknown				CAS #:			
7.875	379333	5.12548215	189	0		0	91
Unknown				CAS #:			
11.398	605344	11.7527960	433	0		0	98
Unknown				CAS #:			
11.869	637982	12.3864636	456	0		0	98
Unknown				CAS #:			
12.651	331470	6.43551322	237	0		0	98
Unknown				CAS #:			
12.863	231672	4.49793242	166	0		0	98

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 Date: 15-JAN-2010 18:39
 Client ID: REL2-10-7257
 Sample Info: 1244604001/94160011/SWH11/LANL
 Volume Injected (uL): 0.5
 Column phase: J&W DB-5MS

Instrument: MSDL.i
 Operator: AMY
 Column diameter: 0.20



Date: 15-JAN-2010 18:39

Client ID: RE12-10-7257

Instrument: MSD1.i

Sample Info: I244604001194160011ISVM11ILANL

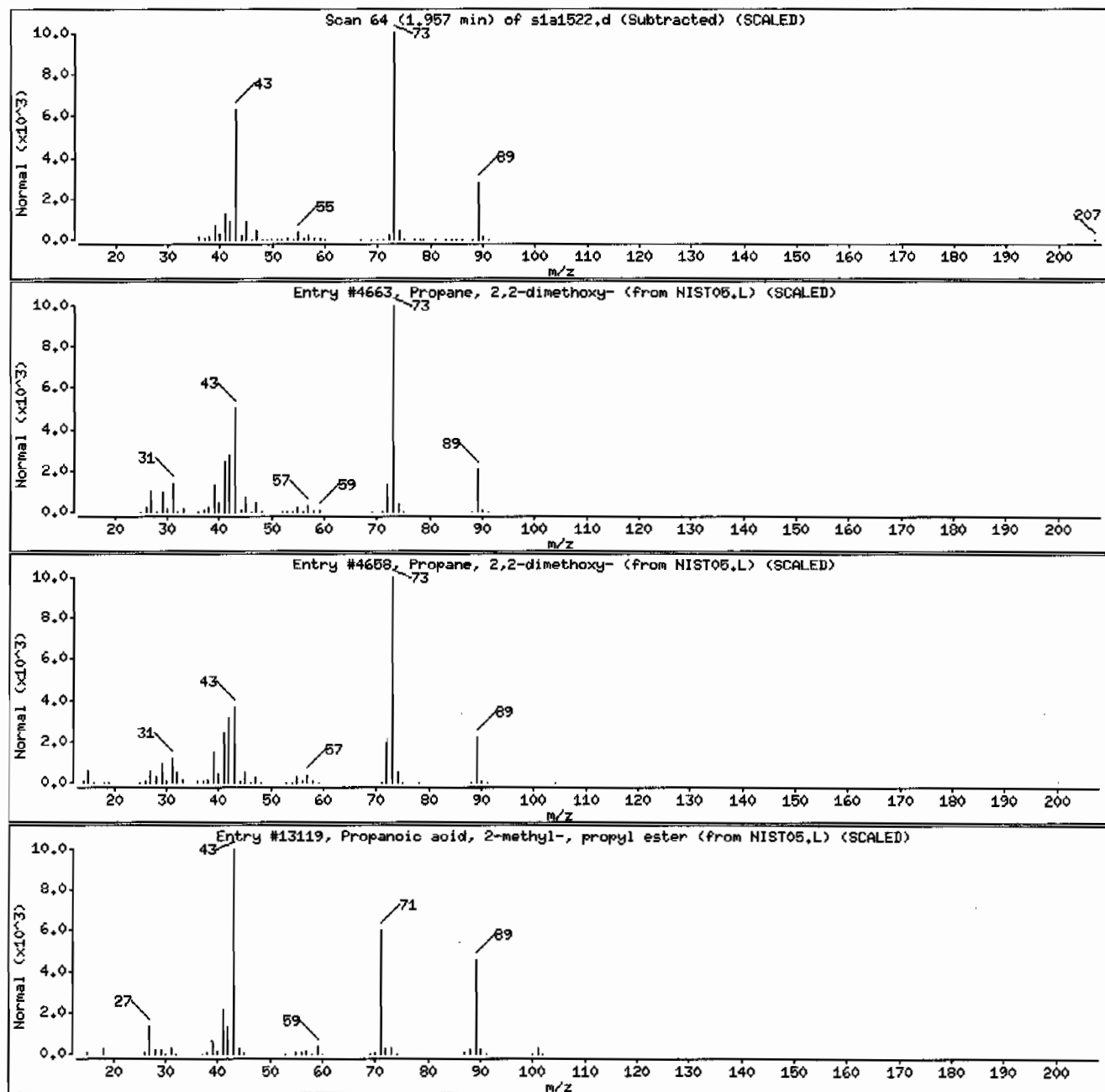
Volume Injected (uL): 0.5

Operator: AMY

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Propane, 2,2-dimethoxy-	77-76-9	NIST05.L	4663	59	C5H12O2	104
Propane, 2,2-dimethoxy-	77-76-9	NIST05.L	4658	38	C5H12O2	104
Propanoic acid, 2-methyl-, propyl ester	644-49-5	NIST05.L	13119	17	C7H14O2	130



Date : 15-JAN-2010 18:39

Client ID: RE12-10-7257

Instrument: MSD1.i

Sample Info: 1244604001194160011ISVMI1ILANL

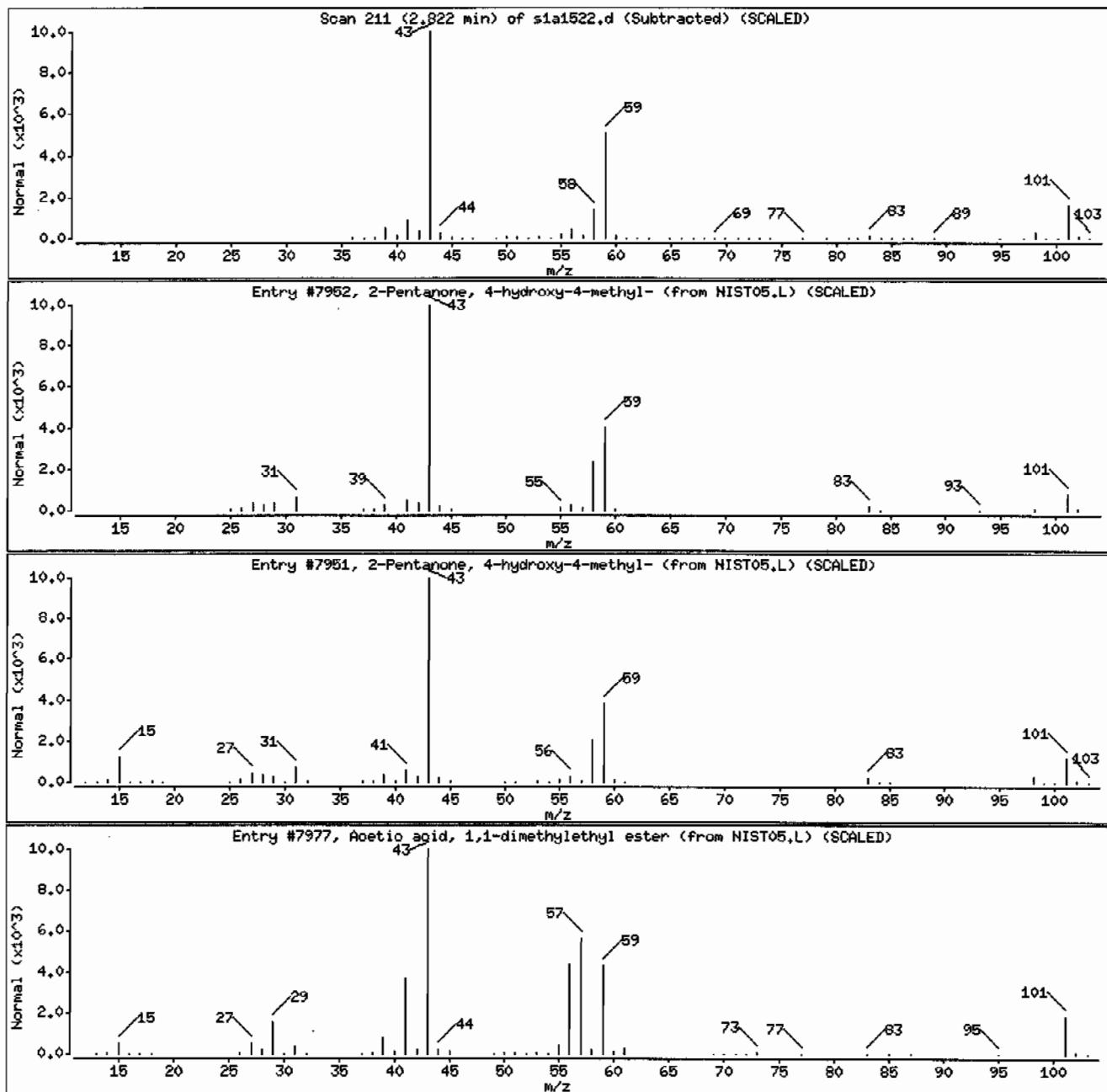
Volume Injected (uL): 0.5

Operator: AMY

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	64	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	50	C6H12O2	116
Acetic acid, 1,1-dimethylethyl ester	540-88-5	NIST05.L	7977	39	C6H12O2	116



Date: 15-JAN-2010 18:39

Client ID: RE12-10-7257

Instrument: MSD1.i

Sample Info: 12446040011941600111SVH111LANL

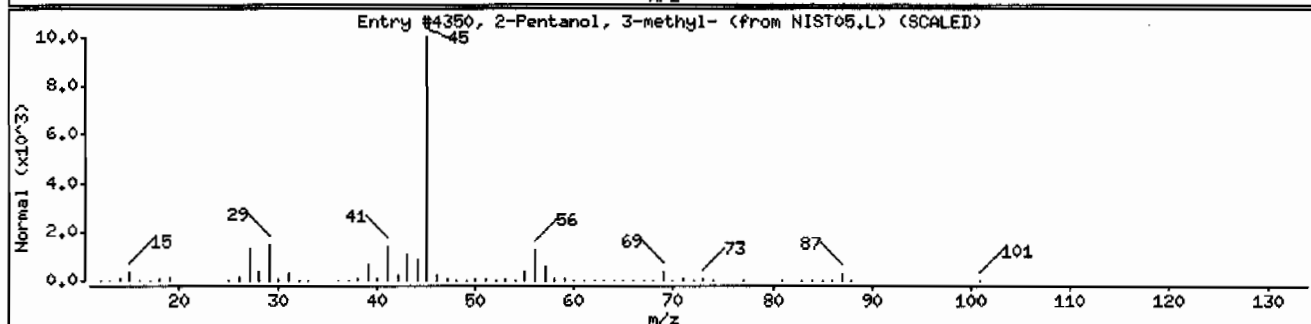
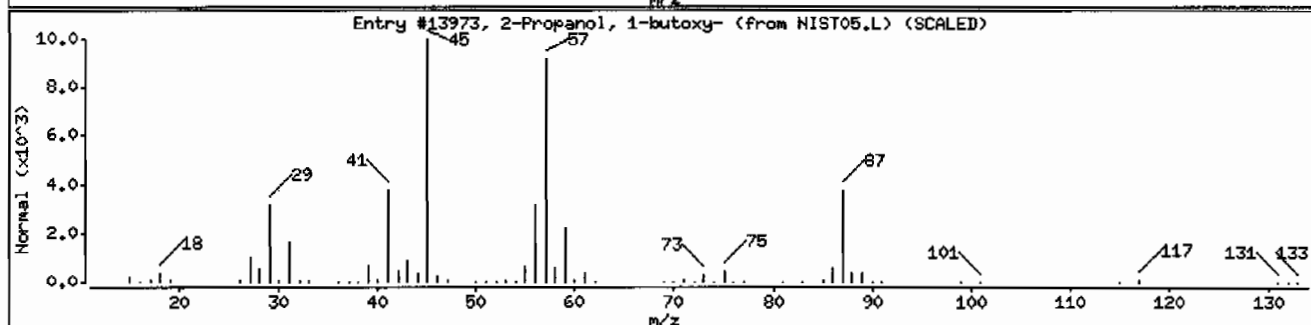
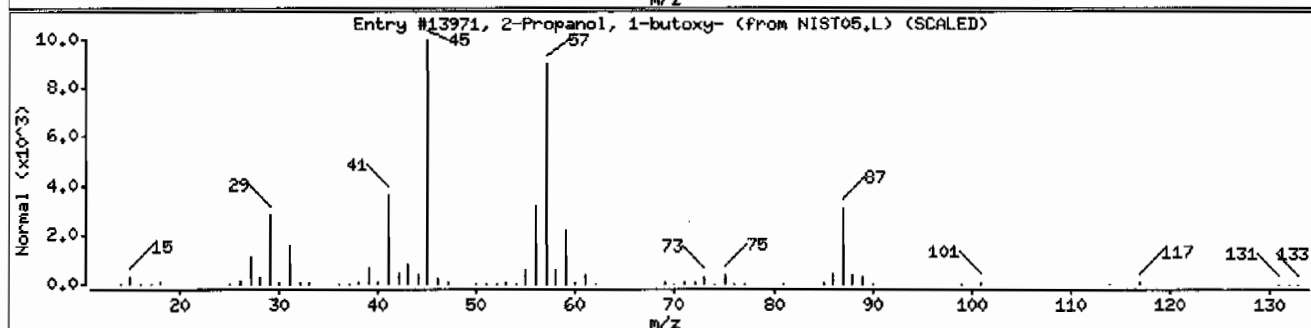
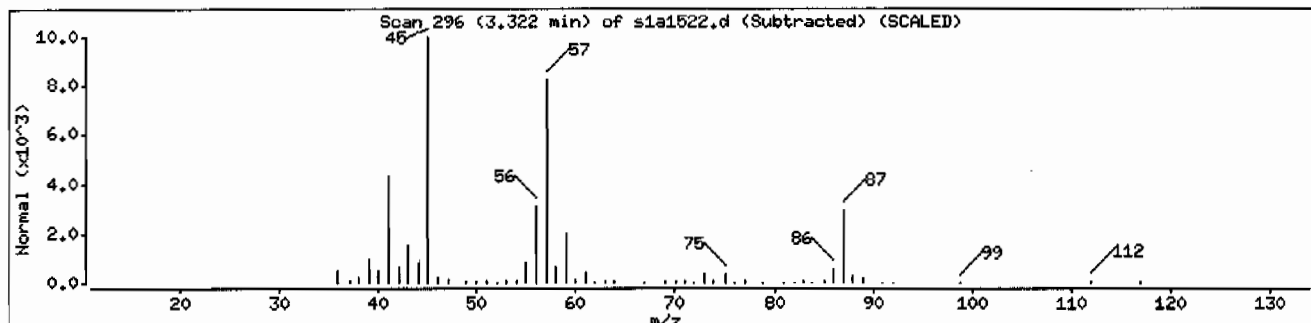
Volume Injected (uL): 0.5

Operator: AMY

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
2-Propanol, 1-butoxy-	5131-66-8	NIST05.L	13971	90	C7H16O2	132
2-Propanol, 1-butoxy-	5131-66-8	NIST05.L	13973	90	C7H16O2	132
2-Pentanol, 3-methyl-	565-60-6	NIST05.L	4350	59	C6H14O	102



Date : 15-JAN-2010 18:39

Client ID: RE12-10-7257

Instrument: MSD1.i

Sample Info: I24460400194160011SVH11ILANL

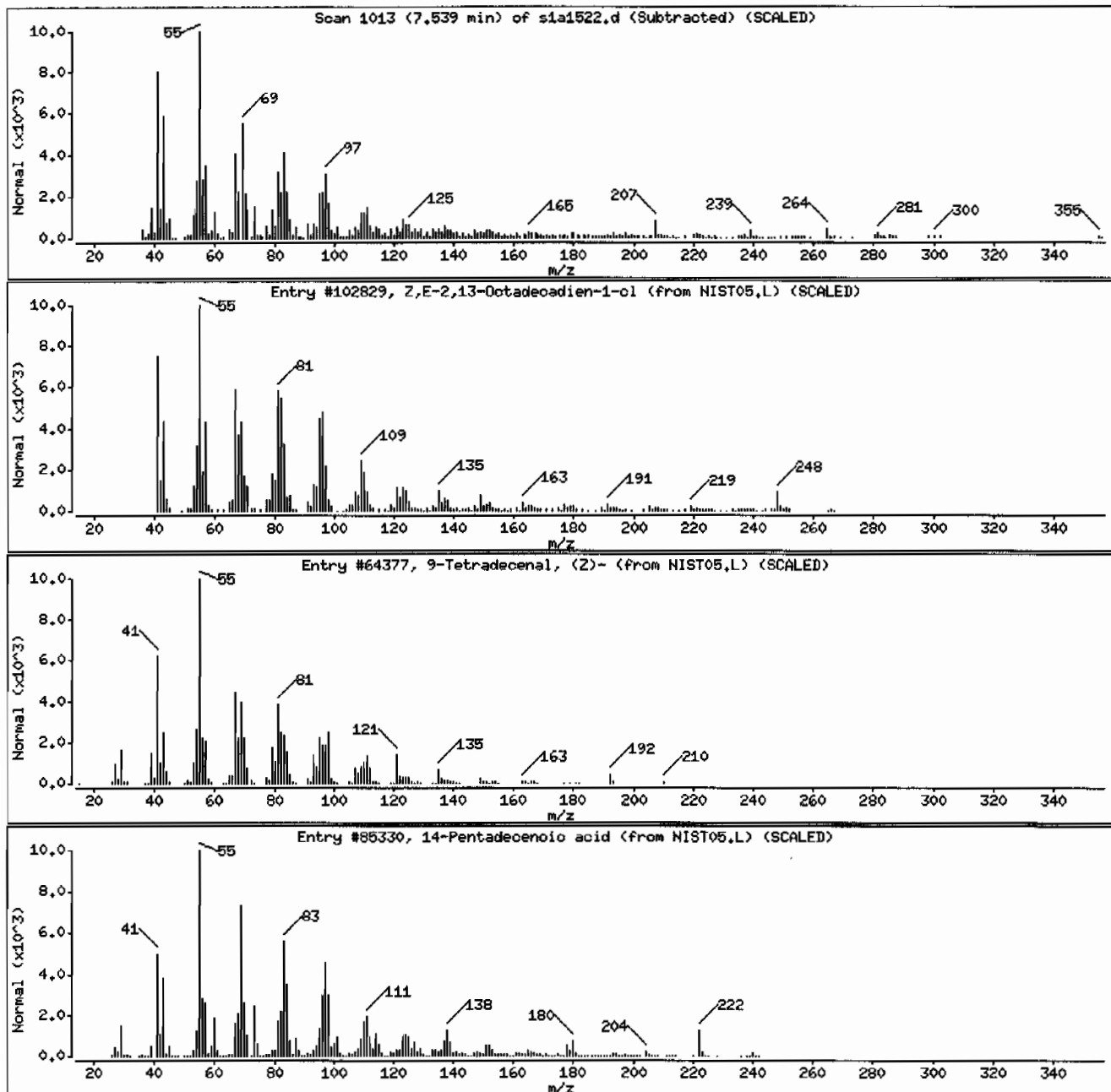
Volume Injected (uL): 0.5

Operator: AMY

Column phase: J&W DB-5HS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Z,E-2,13-Octadecadien-1-ol	1000131-10-3	NIST05.L	102829	86	C18H34O	266
9-Tetradecenal, (Z)-	53939-27-8	NIST05.L	64377	83	C14H26O	210
14-Pentadecenoic acid	17351-34-7	NIST05.L	85330	78	C15H28O2	240



Date : 15-JAN-2010 18:39

Client ID: RE12-10-7257

Instrument: MSD1.i

Sample Info: 1244604001194160011SVH11ILANL

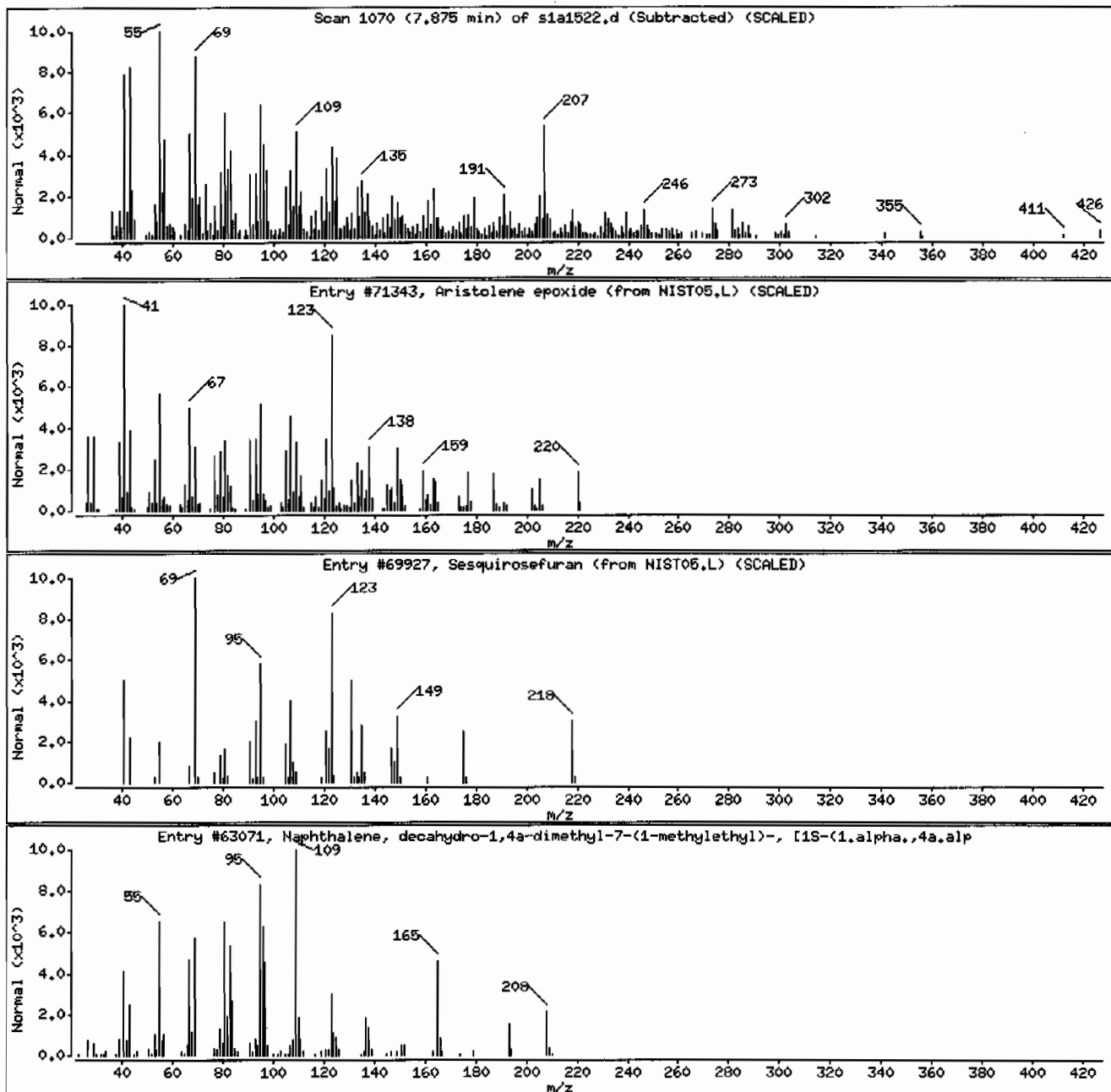
Volume Injected (uL): 0.5

Operator: AMY

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Aristolene epoxide	1000151-48-9	NIST05.L	71343	40	C16H24O	220
Sesquirosefuran	39007-93-7	NIST05.L	69927	38	C15H22O	218
Naphthalene, decahydro-1,4a-dimethyl-7-(	30824-81-8	NIST05.L	63071	30	C15H28	208



Date: 15-JAN-2010 18:39

Client ID: RE12-10-7257

Instrument: MSD1.i

Sample Info: 1244604001194160011SVMI1ILANL

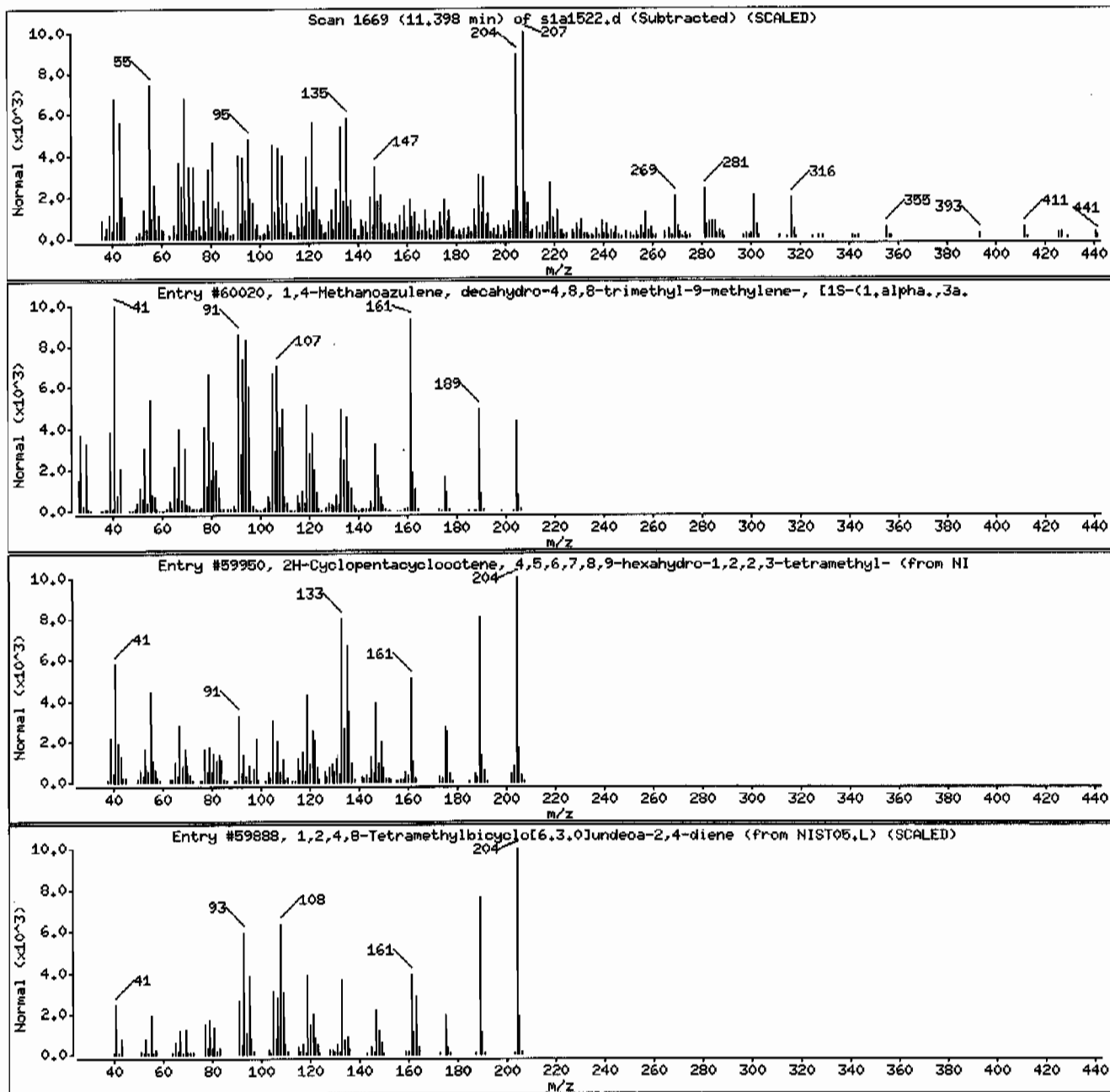
Volume Injected (uL): 0.5

Operator: AMY

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
1,4-Methanoazulene, decahydro-4,8,8-trimethyl-9-methylene-, [1S-(1.alpha.,3a.	475-20-7	NIST05.L	60020	46	C15H24	204
2H-Cyclopentacyclooctene, 4,5,6,7,8,9-hexahydro-1,2,2,3-tetramethyl-	1000221-85-8	NIST05.L	59950	45	C15H24	204
1,2,4,8-Tetramethylbicyclo[6.3.0]undeca-2,4-diene	137235-51-9	NIST05.L	59888	38	C15H24	204



Date : 15-JAN-2010 18:39

Client ID: RE12-10-7257

Instrument: MSD1.i

Sample Info: I24460400194160011SVH11ILANL

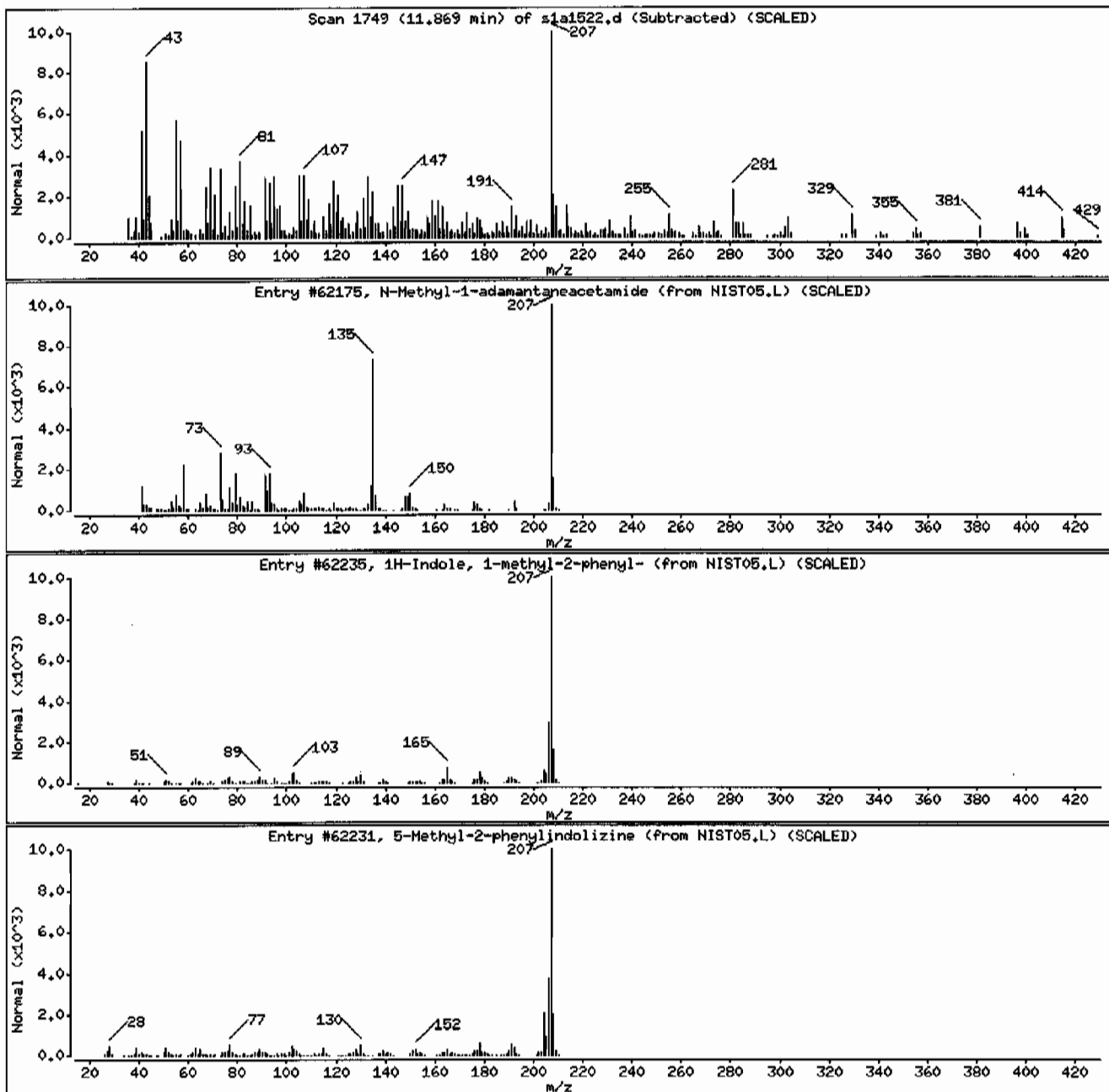
Volume Injected (uL): 0.5

Operator: AMY

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
N-Methyl-1-adamantaneacetamide	31897-93-5	NIST05.L	62175	46	C13H21NO	207
1H-Indole, 1-methyl-2-phenyl-	3558-24-5	NIST05.L	62235	41	C15H13N	207
5-Methyl-2-phenylindolizine	36944-99-7	NIST05.L	62231	41	C15H13N	207



Date: 15-JAN-2010 18:39

Client ID: RE12-10-7257

Instrument: MSD1.i

Sample Info: 1244604001/94160011/SVM11/LANL

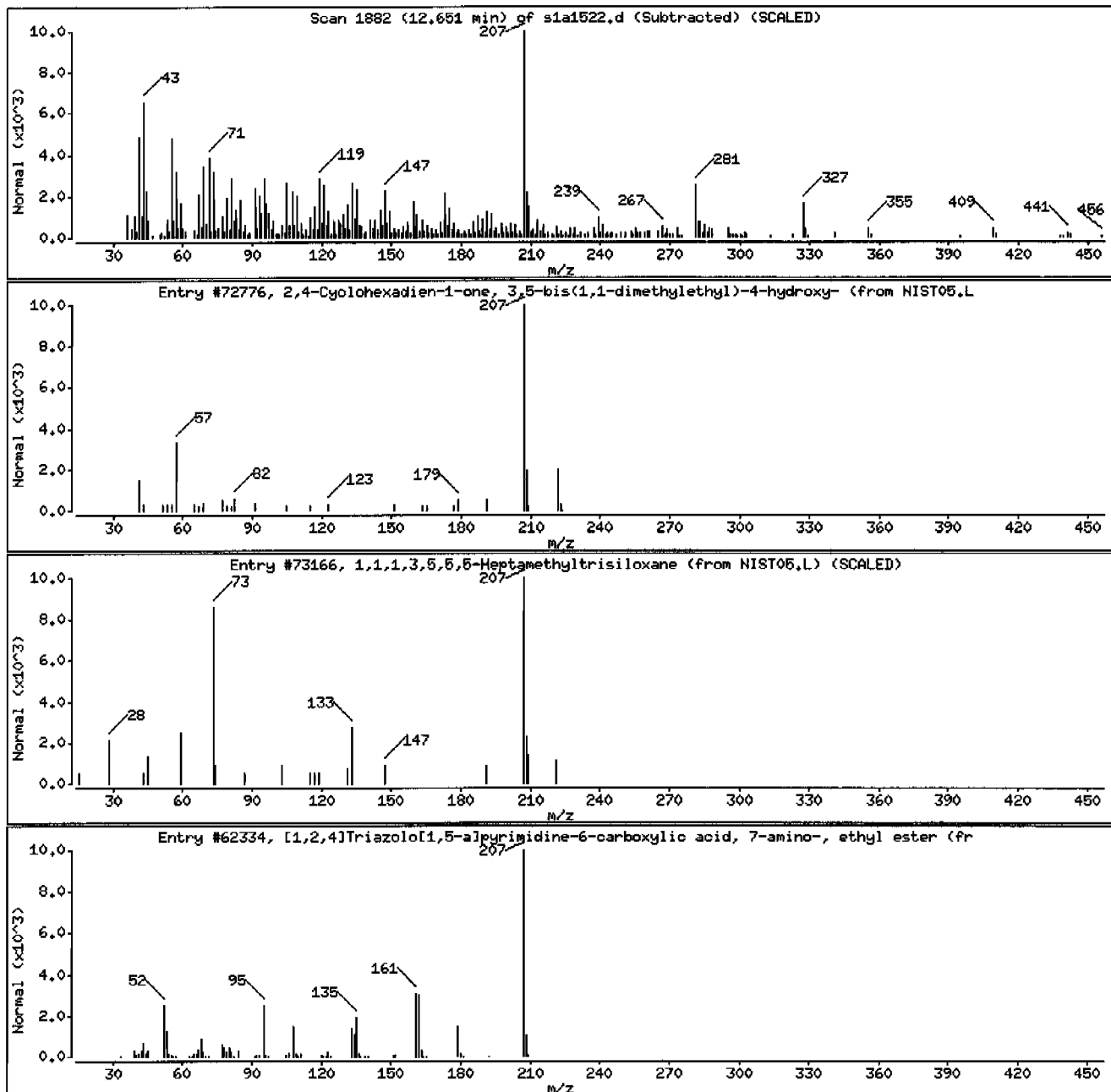
Volume Injected (uL): 0.5

Operator: AMY

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
2,4-Cyclohexadien-1-one, 3,5-bis(1,1-dimethyl-4-hydroxyethyl)-	54965-43-4	NIST05.L	72776	42	C ₁₄ H ₂₂ O ₂	222
1,1,1,3,5,5-Heptamethyltrisiloxane	1873-88-7	NIST05.L	73166	37	C ₇ H ₂₂ O ₂ Si ₃	222
[1,2,4]Triazol[1,5-a]pyrimidine-6-carboxylic acid, 7-amino-, ethyl ester (fr	1000316-75-8	NIST05.L	62334	35	C ₈ H ₉ N ₅ O ₂	207



Date : 15-JAN-2010 18:39

Client ID: RE12-10-7257

Instrument: MSD1.1

Sample Info: 1244604001/941600/11SVH111LANL

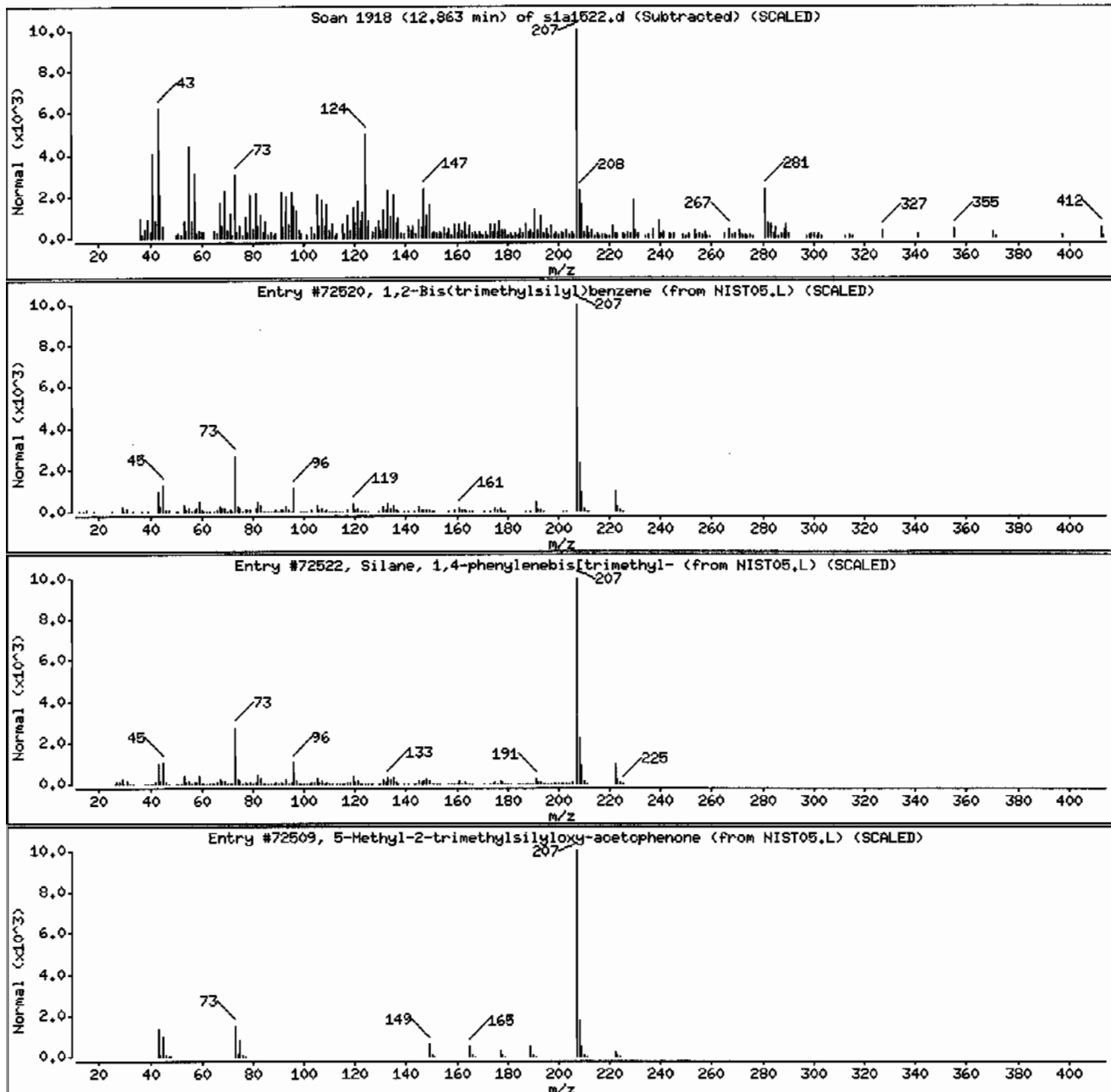
Volume Injected (uL): 0.5

Operator: AMY

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
1,2-Bis(trimethylsilyl)benzene	17151-09-6	NIST05.L	72520	35	C ₁₂ H ₂₂ Si ₂	222
Silane, 1,4-phenylenebis(trimethyl-	13183-70-5	NIST05.L	72522	35	C ₁₂ H ₂₂ Si ₂	222
5-Methyl-2-trimethylsilyloxy-acetophenone	97389-69-0	NIST05.L	72509	35	C ₁₂ H ₁₈ O ₂ Si	222



Standard Data

SW846 8270/EPA 625								
Calibration Standard Concentration Levels*								
MEGA MIX	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
1,4-Dichlorobenzene-d4 (INTERNAL STANDARD)								
Naphthalene-d8 (INTERNAL STANDARD)								
Acenaphthene-d10 (INTERNAL STANDARD)								
Phenanthrene-d10 (INTERNAL STANDARD)								
Chrysene-d12 (INTERNAL STANDARD)								
Perylene-d12 (INTERNAL STANDARD)								
2-Fluorophenol (SURROGATE)		10	20	40	50	80	100	120
Phenol-d5 (SURROGATE)		10	20	40	50	80	100	120
2-Chlorophenol-d4 (CLP SURROGATE)		10	20	40	50	80	100	120
1,2-Dichlorobenzene-d4 (CLP SURROGATE)		10	20	40	50	80	100	120
Nitrobenzene-d5 (SURROGATE)		10	20	40	50	80	100	120
2-Fluorobiphenyl (SURROGATE)		10	20	40	50	80	100	120
2,4,6-Tribromophenol (SURROGATE)		10	20	40	50	80	100	120
p-Terphenyl-d14 (SURROGATE)		10	20	40	50	80	100	120
N-Nitrosodimethylamine	1**	10	20	40	50	80	100	120
Pyridine		10	20	40	50	80	100	120
Aniline		10	20	40	50	80	100	120
Phenol		10	20	40	50	80	100	120
bis(2-Chloroethyl)ether		10	20	40	50	80	100	120
2-Chlorophenol		10	20	40	50	80	100	120
n-Decane		10	20	40	50	80	100	120
1,3-Dichlorobenzene		10	20	40	50	80	100	120
1,4-Dichlorobenzene		10	20	40	50	80	100	120
Benzyl Alcohol		10	20	40	50	80	100	120
1,2-Dichlorobenzene		10	20	40	50	80	100	120
bis(2-Chloroisopropyl)ether		10	20	40	50	80	100	120
o-Cresol (2-Methylphenol)		10	20	40	50	80	100	120
N-Nitrosodipropylamine	1**	10	20	40	50	80	100	120
m,p-Cresols (3-Methylphenol & 4-Methylphenol)		10	20	40	50	80	100	120
Hexachloroethane		10	20	40	50	80	100	120
Nitrobenzene		10	20	40	50	80	100	120
Isophorone		10	20	40	50	80	100	120
2-Nitrophenol		10	20	40	50	80	100	120
2,4-Dimethylphenol		10	20	40	50	80	100	120
bis(2-Chloroethoxy)methane		10	20	40	50	80	100	120
2,4-Dichlorophenol		10	20	40	50	80	100	120
Benzoic Acid			20	40	50	80	100	120
1,2,4-Trichlorobenzene		10	20	40	50	80	100	120
Naphthalene	1	10	20	40	50	80	100	120
alpha-Terpineol		10	20	40	50	80	100	120
4-Chloroaniline		10	20	40	50	80	100	120

SW846 8270/EPA 625								
Calibration Standard Concentration Levels*								
MEGA MIX	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
Hexachlorobutadiene		10	20	40	50	80	100	120
4-Chloro-3-methylphenol		10	20	40	50	80	100	120
2-Methylnaphthalene	1	10	20	40	50	80	100	120

1-Methylnaphthalene	1	10	20	40	50	80	100	120
Hexachlorocyclopentadiene		10	20	40	50	80	100	120
2,3-Dichloroaniline		10	20	40	50	80	100	120
2,4,6-Trichlorophenol		10	20	40	50	80	100	120
2,4,5-Trichlorophenol		10	20	40	50	80	100	120
2-Chloronaphthalene	1	10	20	40	50	80	100	120
o-Nitroaniline		10	20	40	50	80	100	120
m-Nitroaniline		10	20	40	50	80	100	120
Dimethylphthalate	1**	10	20	40	50	80	100	120
2,6-Dinitrotoluene		10	20	40	50	80	100	120
Acenaphthylene	1	10	20	40	50	80	100	120
Acenaphthene	1	10	20	40	50	80	100	120
2,4-Dinitrophenol			20	40	50	80	100	120
Dibenzofuran		10	20	40	50	80	100	120
2,4-Dinitrotoluene		10	20	40	50	80	100	120
Diethylphthalate	1**	10	20	40	50	80	100	120
4-Nitrophenol		10	20	40	50	80	100	120
Fluorene	1	10	20	40	50	80	100	120
4-Chlorophenyl phenyl ether		10	20	40	50	80	100	120
2-Methyl-4,6-dinitrophenol		10	20	40	50	80	100	120
p-Nitroaniline		10	20	40	50	80	100	120
Diphenylamine		10	20	40	50	80	100	120
1,2-Diphenylhydrazine		10	20	40	50	80	100	120
4-Bromophenyl phenylether		10	20	40	50	80	100	120
Hexachlorobenzene		10	20	40	50	80	100	120
Pentachlorophenol		10	20	40	50	80	100	120
n-Octadecane		10	20	40	50	80	100	120
Phenanthrene	1	10	20	40	50	80	100	120
Anthracene	1	10	20	40	50	80	100	120
Di-n-butylphthalate	1**	10	20	40	50	80	100	120
Fluoranthene	1	10	20	40	50	80	100	120
Pyrene	1	10	20	40	50	80	100	120
Butylbenzylphthalate	1**	10	20	40	50	80	100	120
Benzo(a)anthracene	1	10	20	40	50	80	100	120
Chrysene	1	10	20	40	50	80	100	120
bis (2-Ethylhexyl) phthalate	1	10	20	40	50	80	100	120
Di-n-octylphthalate	1**	10	20	40	50	80	100	120

SW846 8270/EPA 625								
Calibration Standard Concentration Levels*								
MEGA MIX	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
Benzo(b)fluoranthene	1	10	20	40	50	80	100	120
Benzo(k)fluoranthene	1	10	20	40	50	80	100	120
Benzo(a)pyrene	1	10	20	40	50	80	100	120
Indeno-(1,2,3-cd)pyrene	1	10	20	40	50	80	100	120
Dibenzo(a,h)anthracene	1	10	20	40	50	80	100	120
Benzo(ghi)perylene	1	10	20	40	50	80	100	120
m-Dinitrobenzene		10	20	40	50	80	100	120
2,3,4,6-Tetrachlorophenol		10	20	40	50	80	100	120
Dinoseb		10	20	40	50	80	100	120
Carbazole	1	10	20	40	50	80	100	120

p-Benzoquinone		10	20	40	50	80	100	120
Methoxychlor	1**	10	20	40	50	80	100	120
p-Toluidine		10	20	40	50	80	100	120
m-Toluidine		10	20	40	50	80	10	120
1,4-Dinitrobenzene		10	20	40	50	80	100	120
2-Ethoxyethanol		10	20	40	50	80	100	120
Phthalic anhydride		10	20	40	50	80	100	120
Methylenebis(2-chloroaniline)		10	20	40	50	80	100	120
Dibenzo(a,e)pyrene		10	20	40	50	80	100	120

SW846 8270/EPA 625

Calibration Standard Concentration Levels*

AP MIX	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
Benzaldehyde	10	20	40	50	80	100	120	
Acetophenone	10	20	40	50	80	100	120	
Caprolactam	10	20	40	50	80	100	120	
1,1'-Biphenyl	10	20	40	50	80	100	120	
Atrazine	10	20	40	50	80	100	120	
Benzidine	10	20	40	50	80	100	120	
3,3'-Dichlorobenzidine	10	20	40	50	80	100	120	
1,4-Dioxane	10	20	40	50	80	100	120	
Methyl methacrylate	10	20	40	50	80	100	120	
Ethyl methacrylate	10	20	40	50	80	100	120	
2-Picoline	10	20	40	50	80	100	120	
N-Nitrosomethylethylamine	10	20	40	50	80	100	120	
Methyl methanesulfonate	10	20	40	50	80	100	120	
N-Nitrosodiethylamine	10	20	40	50	80	100	120	
Ethyl methanesulfonate	10	20	40	50	80	100	120	
Pentachloroethane	10	20	40	50	80	100	120	
N-Nitrosopyrrolidine	10	20	40	50	80	100	120	
N-Nitrosomorpholine	10	20	40	50	80	100	120	
o-Toluidine	10	20	40	50	80	100	120	
N-Nitrosopiperidine	10	20	40	50	80	100	120	
a,a-Dimethylphenethylamine	10	20	40	50	80	100	120	
2,6-Dichlorophenol	10	20	40	50	80	100	120	

SW846 8270/EPA 625

Calibration Standard Concentration Levels*

AP MIX	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
Hexachloropropene	10	20	40	50	80	100	120	
p-Phenylenediamine	10	20	40	50	80	100	120	
N-Nitrosodi-n-butylamine	10	20	40	50	80	100	120	
Safrrole	10	20	40	50	80	100	120	
1,2,4,5-Tetrachlorobenzene	10	20	40	50	80	100	120	
Isosafrole	10	20	40	50	80	100	120	
1,4-Naphthoquinone	10	20	40	50	80	100	120	
Pentachlorobenzene	10	20	40	50	80	100	120	
1-Naphthylamine	10	20	40	50	80	100	120	
2-Naphthylamine	10	20	40	50	80	100	120	
5-Nitro-o-toluidine	10	20	40	50	80	100	120	
1,3,5-Trinitrobenzene	10	20	40	50	80	100	120	
Phenacetin	10	20	40	50	80	100	120	
Diallate	10	20	40	50	80	100	120	
cis-Diallate	1.5	3	6	7.5	12	15	18	
trans-Diallate	8.5	17	34	42	68	85	102	
4-Aminobiphenyl	10	20	40	50	80	100	120	

Pentachloronitrobenzene		10	20	40	50	80	100	120
Pronamide		10	20	40	50	80	100	120
4-Nitroquinoline oxide		10	20	40	50	80	100	120
Methapyrilene	1**	10	20	40	50	80	100	120
Isodrin	1**	10	20	40	50	80	100	120
Aramite		10	20	40	50	80	100	120
Kepone	1**	10	20	40	50	80	100	120
p-(Dimethylamino)azobenzene		10	20	40	50	80	100	120
Chlorobenzilate		10	20	40	50	80	100	120
3,3'-Dimethylbenzidine		10	20	40	50	80	100	120
2-Acetylaminofluorene		10	20	40	50	80	100	120
7,12-Dimethylbenz(a)anthracene		10	20	40	50	80	100	120
3-Methylcholanthrene		10	20	40	50	80	100	120

SW846 8270/EPA 625								
Calibration Standard Concentration Levels*								
	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
Hexachlorophene		500	1000	1250	1500	1750	2000	

SW846 8270/EPA 625								
Calibration Standard Concentration Levels*								
PEST MIX	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
Tributylphosphate		10	20	40	50	80	100	120
Triethylphosphorothioate		10	20	40	50	80	100	120
Thionazin		10	20	40	50	80	100	120
Sulfotepp		10	20	40	50	80	100	120
Phorate		10	20	40	50	80	100	120
Dimethoate		10	20	40	50	80	100	120
Disulfoton		10	20	40	50	80	100	120
Methyl parathion		10	20	40	50	80	100	120
Famphur		10	20	40	50	80	100	120
Parathion		10	20	40	50	80	100	120

SW846 8270/EPA 625								
Calibration Standard Concentration Levels*								
NEVADA MIX	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
bis(Chloromethyl)ether		10	20	40	50	80	100	120
4-Chlorothiophenol		10	20	40	50	80	100	120
4-Chlorothioanisole		10	20	40	50	80	100	120
Phthalic acid		10	20	40	50	80	100	120
Hydroxymethyl phthalimide		10	20	40	50	80	100	120
Diphenyl sulfide		10	20	40	50	80	100	120
Diphenyl disulfide		10	20	40	50	80	100	120
Phenyl sulfone		10	20	40	50	80	100	120
Octachlorostyrene		10	20	40	50	80	100	120
Thiophenol		10	20	40	50	80	100	120
2,2'-Dichlorobenzil		10	20	40	50	80	100	120
bis(p-Chlorophenyl)disulfide		10	20	40	50	80	100	120

bis(p-Chlorophenyl)sulfone		10	20	40	50	80	100	120
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SW846 8270C/8270D/EPA 625								
Calibration Standard Concentration Levels*								
BJCO MIX	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
1-Hexanol		10	20	40	50	80	100	120
Quinoline		10	20	40	50	80	100	120
2,4-Toluene diisocyanate		10	20	40	50	80	100	120
1-Nitropyrene		10	20	40	50	80	100	120
5-Methylchrysene		10	20	40	50	80	100	120
Benzo(i)fluoranthene		10	20	40	50	80	100	120
Dibenzo(a,h)pyrene		10	20	40	50	80	100	120
Dibenzo(a,h)acridine		10	20	40	50	80	100	120
Dibenzo(a,i)acridine		10	20	40	50	80	100	120
Dibenzo(a,i)pyrene		10	20	40	50	80	100	120
Dibenzo(a,l)pyrene		10	20	40	50	80	100	120
7H-Dibenzo(c,g)carbazole		10	20	40	50	80	10	120

All values are mg/L without the prep factor.

Indicates the calibration verification concentration level used

* Usual calibration levels using SCAN methodology

** This analyte included in this level at special client request.

(0210/Full list)

Report Date: 15-Jan-2010 14:53

Calibration History

Method : /chem/MSD1.i/s011510.b/MSD1-M8270AQA-111409.m
Start Cal Date: 14-NOV-2009 18:22
End Cal Date : 17-NOV-2009 19:15

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 1.00000		
14-NOV-2009 18:22	MEGAICARE	/chem/MSD1.i/s111409.b/s1k1203.d
Cal Level: 2 , Cal Amount: 10.00000		
17-NOV-2009 16:56	nev	/chem/MSD1.i/s111409.b/s1k1262.d
15-NOV-2009 20:55	hex	/chem/MSD1.i/s111409.b/s1k1229.d
15-NOV-2009 18:11	pest	/chem/MSD1.i/s111409.b/s1k1222.d
15-NOV-2009 15:28	ap12	/chem/MSD1.i/s111409.b/s1k1215.d
14-NOV-2009 18:51	MEGAICARE	/chem/MSD1.i/s111409.b/s1k1204.d
Cal Level: 3 , Cal Amount: 20.00000		
17-NOV-2009 17:19	nev	/chem/MSD1.i/s111409.b/s1k1263.d
15-NOV-2009 21:18	hex	/chem/MSD1.i/s111409.b/s1k1230.d
15-NOV-2009 18:35	pest	/chem/MSD1.i/s111409.b/s1k1223.d
15-NOV-2009 15:51	ap12	/chem/MSD1.i/s111409.b/s1k1216.d
14-NOV-2009 19:21	MEGAICARE	/chem/MSD1.i/s111409.b/s1k1205.d
Cal Level: 4 , Cal Amount: 40.00000		
17-NOV-2009 17:42	nev	/chem/MSD1.i/s111409.b/s1k1264.d
15-NOV-2009 21:42	hex	/chem/MSD1.i/s111409.b/s1k1231.d
15-NOV-2009 18:58	pest	/chem/MSD1.i/s111409.b/s1k1224.d
15-NOV-2009 16:14	ap12	/chem/MSD1.i/s111409.b/s1k1217.d
14-NOV-2009 19:50	MEGAICARE	/chem/MSD1.i/s111409.b/s1k1206.d
Cal Level: 5 , Cal Amount: 50.00000		
17-NOV-2009 18:05	nev	/chem/MSD1.i/s111409.b/s1k1265.d
15-NOV-2009 22:06	hex	/chem/MSD1.i/s111409.b/s1k1232.d
15-NOV-2009 19:21	pest	/chem/MSD1.i/s111409.b/s1k1225.d
15-NOV-2009 16:38	ap12	/chem/MSD1.i/s111409.b/s1k1218.d
14-NOV-2009 20:19	MEGAICARE	/chem/MSD1.i/s111409.b/s1k1207.d
Cal Level: 6 , Cal Amount: 80.00000		
17-NOV-2009 18:28	nev	/chem/MSD1.i/s111409.b/s1k1266.d
15-NOV-2009 22:30	hex	/chem/MSD1.i/s111409.b/s1k1233.d
15-NOV-2009 19:45	pest	/chem/MSD1.i/s111409.b/s1k1226.d
15-NOV-2009 17:01	ap12	/chem/MSD1.i/s111409.b/s1k1219.d
14-NOV-2009 20:47	MEGAICARE	/chem/MSD1.i/s111409.b/s1k1208.d
Cal Level: 7 , Cal Amount: 100.00000		

17-NOV-2009	18:52	nev	/chem/MSD1.i/s111409.b/slkl267.d
15-NOV-2009	22:53	hex	/chem/MSD1.i/s111409.b/slkl234.d
15-NOV-2009	20:09	pest	/chem/MSD1.i/s111409.b/slkl227.d
15-NOV-2009	17:24	ap12	/chem/MSD1.i/s111409.b/slkl220.d
14-NOV-2009	21:16	MEGAICARE	/chem/MSD1.i/s111409.b/slkl209.d

Cal Level: 8 , Cal Amount: 120.00000			
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17-NOV-2009	19:15	nev	/chem/MSD1.i/s111409.b/slkl268.d
15-NOV-2009	20:31	pest	/chem/MSD1.i/s111409.b/slkl228.d
15-NOV-2009	17:47	ap12	/chem/MSD1.i/s111409.b/slkl221.d
14-NOV-2009	21:45	MEGAICARE	/chem/MSD1.i/s111409.b/slkl210.d

Continuing Calibration

Ccal Level Mode: GLOBAL LEVEL 4

Ccal Level: 4 , Ccal Amount: 40.0			
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15-JAN-2010	11:30	pest	/chem/MSD1.i/s011510.b/sla1505.d
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Ccal Level: 4 , Ccal Amount: 40.0			
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15-JAN-2010	11:06	ap12	/chem/MSD1.i/s011510.b/sla1504.d
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Ccal Level: 4 , Ccal Amount: 40.0			
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15-JAN-2010	09:55	MEGAICARE	/chem/MSD1.i/s011510.b/sla1503.d
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GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 14-NOV-2009 18:22
 End Cal Date : 17-NOV-2009 19:15
 Quant Method : ISTD
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/MSD1.i/s011510.b/MSD1-M8270AQA-111409.m
 Cal Date : 15-Jan-2010 14:51 amy01291

Calibration File Names:

Level 1: /chem/MSD1.i/s111409.b/slkl203.d
 Level 2: /chem/MSD1.i/s111409.b/slkl262.d
 Level 3: /chem/MSD1.i/s111409.b/slkl263.d
 Level 4: /chem/MSD1.i/s111409.b/slkl264.d
 Level 5: /chem/MSD1.i/s111409.b/slkl265.d
 Level 6: /chem/MSD1.i/s111409.b/slkl266.d
 Level 7: /chem/MSD1.i/s111409.b/slkl267.d
 Level 8: /chem/MSD1.i/s111409.b/slkl268.d

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	b	Coefficients m1	m2	%RSD or R^2
1 N-Methyl-N-nitrosomethylamine	++++ 0.58358	0.54039 0.54985	0.59425	0.56483	0.56773	0.57115	AVRG		0.56740		3.25055
2 Pyridine	++++ 1.01434	0.93895 0.86615	1.06231	1.03607	0.88870	0.86312	AVRG		0.95281		8.83991
4 Aniline	++++ 0.57920	0.52437 0.54312	0.56877	0.55954	0.56752	0.56439	AVRG		0.55813		3.31324
209 Benzaldehyde	++++ 0.78498	0.86863 0.73887	0.89515	0.82459	0.84178	++++					
6 Phenol	++++ 1.36293	1.30044 1.27353	1.37922	1.37450	1.34330	1.33206	AVRG		0.82400		6.72378
							AVRG		1.33800		2.93989

GEL Laboratories LLC

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	b	Coefficients ml	m2	%RSD or R^2
7 bis(2-Chloroethyl) ether	0.97066 0.92138	0.92013 0.84393	0.97374 0.84393	0.95071 0.84393	0.94120 0.84393	0.92474 0.84393	AVRG	0.93081	4.39644		
8 2-Chlorophenol	++++ 1.15576	1.10018 1.08633	1.18374 1.08633	1.15316 1.08633	1.14675 1.08633	1.13425 1.08633	AVRG	1.13717	2.96542		
203 n-Decane	++++ 1.27260	1.60577 1.12485	1.68138 1.12485	1.52755 1.12485	1.45137 1.12485	1.35767 1.12485	AVRG	1.43160	13.59167		
9 1,3-Dichlorobenzene	++++ 1.29449	1.34153 1.20929	1.44138 1.20929	1.36782 1.20929	1.35778 1.20929	1.32788 1.20929	AVRG	1.33431	5.33878		
11 1,4-Dichlorobenzene	++++ 1.26993	1.33212 1.16675	1.41388 1.16675	1.35420 1.16675	1.32607 1.16675	1.29299 1.16675	AVRG	1.30799	5.91221		
12 Benzyl alcohol	++++ 0.73179	0.65002 0.69932	0.69243 0.69932	0.70051 0.69932	0.67929 0.69932	0.68651 0.69932	AVRG	0.69141	3.57264		
13 1,2-Dichlorobenzene	++++ 1.13607	1.29605 1.03545	1.34639 1.03545	1.26381 1.03545	1.21944 1.03545	1.15866 1.03545	AVRG	1.20798	8.78247		
14 bis(2-Chloroisopropyl)ether	++++ 2.11135	2.32509 1.93355	2.42028 1.93355	2.31148 1.93355	2.26329 1.93355	2.15456 1.93355	AVRG	2.21709	7.35350		
15 o-Cresol	++++ 0.80779	0.90774 0.74384	0.91911 0.74384	0.87727 0.74384	0.85502 0.74384	0.81471 0.74384	AVRG	0.84650	7.32849		

GEL Laboratories LLC

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 Cal Date : 15-Jan-2010 14:51 am y01291

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	b	Coefficients m1	m2	%RSD or R ²
16 Acetophenone	++++ 1.08411	1.16435 1.04352	1.20208	1.12556	1.15316	++++	AVRG		1.12880		5.09017
17 N-Nitrosodipropylamine	0.81293 0.77452	0.75653 0.67823	0.80116	0.77693	0.78822	0.71050	AVRG		0.76238		6.05014
18 m,p-Cresols	++++ 1.18516	1.13181 1.11948	1.16963	1.17353	1.13669	1.14618	AVRG		1.15179		2.12873
19 Hexachloroethane	++++ 0.46206	0.47556 0.42193	0.50281	0.48245	0.48088	0.46955	AVRG		0.47075		5.31168
21 Nitrobenzene	++++ 0.25822	0.28437 0.23858	0.30442	0.28298	0.28351	0.27052	AVRG		0.27466		7.74785
22 Isophorone	++++ 0.46730	0.49709 0.41658	0.51707	0.49540	0.49196	0.47802	AVRG		0.48049		6.70733
23 2-Nitrophenol	++++ 0.13558	0.14839 0.12065	0.15989	0.15609	0.15578	0.14421	AVRG		0.14580		9.49803
24 2,4-Dimethylphenol	++++ 0.21824	0.25377 0.21248	0.24260	0.23030	0.24361	0.23323	AVRG		0.23346		6.25831
25 bis(2-Chloroethoxy)methane	++++ 0.29085	0.32659 0.27012	0.33857	0.32017	0.31630	0.30271	AVRG		0.30933		7.51487

GEL Laboratories LLC

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 Cal Date : 15-Jan-2010 14:51 am y01291

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	b	Coefficients m1	m2	%RSD or R ²
26 2,4-Dichlorophenol	++++ 0.21025	0.21991 0.19507	0.23451	0.22671	0.22578	0.22138	AVRG		0.21909		5.89795
27 Benzoic acid	++++ 0.17420	++++ 0.15820	0.12652	0.15647	0.17043	0.17939	AVRG		0.16087		11.85426
28 1,2,4-Trichlorobenzene	++++ 0.22476	0.25324 0.20597	0.26639	0.25283	0.25336	0.23817	AVRG		0.24210		8.56147
30 Naphthalene	1.00192 0.73215	0.89427 0.65539	0.93446	0.86563	0.83102	0.76369	AVRG		0.83482		13.59329
204 alpha-Terpineol	++++ 0.18377	0.21791 0.16707	0.22387	0.20802	0.18690	0.18694	AVRG		0.19635		10.50339
31 4-Chloroaniline	++++ 0.36195	0.39677 0.33806	0.40757	0.39487	0.39324	0.37614	AVRG		0.38123		6.35973
189 Caprolactam	++++ 0.06782	0.06846 0.06711	0.07656	0.07363	0.07653	++++	AVRG		0.07169		6.15581
32 Hexachlorobutadiene	++++ 0.11205	0.13511 0.10277	0.14100	0.13045	0.12864	0.12021	AVRG		0.12432		10.80535
33 4-Chloro-3-methylphenol	++++ 0.21204	0.21530 0.17967	0.22699	0.22627	0.22610	0.21202	AVRG		0.21406		7.75567

GEL Laboratories LLC

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 Method file : /chem/MSD1.i/s011510.b/MSD1-M8270AQA-111409.m
 Cal Date : 15-Jan-2010 14:51 amy01291

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	b	Coefficients m1	m2	%RSD or R ²
	100	120									
	Level 7	Level 8									
34 2-Methylnaphthalene	0.63189	0.59091	0.61031	0.56805	0.55492	0.51261	AVRG		0.54880		11.97650
	0.47801	0.44368									
35 1-Methylnaphthalene	0.57039	0.52594	0.54774	0.50754	0.49716	0.46294	AVRG		0.49330		11.71827
	0.43668	0.39804									
36 Hexachlorocyclopentadiene	++++	0.10604	0.13033	0.13014	0.13942	0.12687	AVRG		0.12213		10.70285
	0.11688	0.10523									
208 1,1'-Biphenyl	++++	1.17951	1.24377	1.14549	1.13585	++++	AVRG		1.12050		8.68804
	1.04839	0.97002									
205 2,3-Dichloroaniline	++++	0.46645	0.48933	0.47427	0.46997	0.44649	AVRG		0.45401		6.79831
	0.43405	0.39749									
37 2,4,6-Trichlorophenol	++++	0.26977	0.29094	0.27785	0.27904	0.25743	AVRG		0.26606		7.03474
	0.25024	0.23713									
38 2,4,5-Trichlorophenol	++++	0.26905	0.31036	0.32159	0.23043	0.31171	AVRG		0.28290		11.57703
	0.26900	0.26816									
40 2-Chloronaphthalene	1.06866	1.01017	1.06218	1.02382	1.00740	0.95458	AVRG		0.98748		7.61587
	0.92971	0.84336									
42 o-Nitroaniline	++++	0.29397	0.31274	0.31408	0.31185	0.30784	AVRG		0.30619		3.33957
	0.31350	0.28932									

GEL Laboratories LLC

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Compound	1	10	20	40	50	80	Curve	b	Coefficients	m1	m2	%RSD or R^2
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6						
	100	120										
	Level 7	Level 8										
41 m-Nitroaniline	++++ 0.28219	0.27156 0.24573	0.28234 0.28234	0.28082 0.28082	0.27143 0.27143	0.25979 0.25979	AVRG			0.27055		5.03620
43 Dimethylphthalate	++++ 1.07235	1.09522 0.99634	1.14427 1.14427	1.12702 1.12702	1.11254 1.11254	1.08188 1.08188	AVRG			1.08995		4.43176
44 2,6-Dinitrotoluene	++++ 0.26992	0.26660 0.24768	0.28518 0.28518	0.28098 0.28098	0.27933 0.27933	0.27123 0.27123	AVRG			0.27156		4.59036
45 Acenaphthylene	1.62784 1.44269	1.60004 1.32968	1.67564 1.67564	1.59865 1.59865	1.57380 1.57380	1.47905 1.47905	AVRG			1.54092		7.42836
47 Acenaphthene	1.00456 0.82882	0.99034 0.73816	1.02942 0.73816	0.97302 0.97302	0.94853 0.94853	0.86787 0.86787	AVRG			0.92259		10.97291
48 2,4-Dinitrophenol	++++ 0.11305	++++ 0.10198	0.08843 0.10198	0.11349 0.11349	0.11534 0.11534	0.11082 0.11082	AVRG			0.10718		9.63049
49 Dibenzofuran	++++ 1.24923	1.40383 1.15395	1.45777 1.45777	1.40759 1.40759	1.36431 1.36431	1.30285 1.30285	AVRG			1.33422		7.92638
50 2,4-Dinitrotoluene	++++ 0.36565	0.34056 0.33990	0.36497 0.36497	0.37079 0.37079	0.37131 0.37131	0.36633 0.36633	AVRG			0.35993		3.80091
51 Diethylphthalate	++++ 0.99307	1.04278 0.88837	1.09197 1.09197	1.06193 1.06193	1.04018 1.04018	0.99480 0.99480	AVRG			1.01616		6.53371

GEL Laboratories LLC

INITIAL CALIBRATION DATA

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 Cal Date : 15-Jan-2010 14:51 amy01291

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	b	Coefficients m1	m2	%RSD or R ²
100	120										
Level 7	Level 8										
52 4-Nitrophenol	++++ 0.21665	0.13809 0.20716	0.17287 0.19477	0.18777 0.20369	0.19477 0.20369	0.20369 0.20369	AVRG		0.18871		14.01343
53 Fluorene	1.22796 0.97721	1.15355 0.8428	1.19493 0.8428	1.10753 0.8428	1.06188 0.8428	0.99894 0.8428	AVRG		1.07578		10.93658
54 4-Chlorophenylphenylether	++++ 0.43218	0.47537 0.38915	0.49720 0.38915	0.47503 0.38915	0.46785 0.38915	0.44264 0.38915	AVRG		0.45420		7.92169
55 2-Methyl-4,6-dinitrophenol	++++ 0.10908	0.08375 0.10272	0.09608 0.10272	0.10582 0.10272	0.10320 0.10272	0.10771 0.10272	AVRG		0.10120		8.67983
56 p-Nitroaniline	++++ 0.27465	0.24392 0.25651	0.26348 0.25651	0.26430 0.25651	0.28144 0.25651	0.26774 0.25651	AVRG		0.26458		4.60021
133 Diphenylamine	++++ 0.50269	0.55588 0.46310	0.57977 0.46310	0.55886 0.46310	0.54789 0.46310	0.52659 0.46310	AVRG		0.53354		7.43632
58 1,2-Diphenylhydrazine	++++ 0.61324	0.69850 0.54832	0.71486 0.54832	0.68099 0.54832	0.66427 0.54832	0.63670 0.54832	AVRG		0.65098		8.77582
59 Tributylphosphate	++++ 1.01440	1.23698 0.96114	1.16066 0.96114	1.10479 0.96114	1.12684 0.96114	1.06119 0.96114	AVRG		1.09371		8.21068
61 4-Bromophenylphenylether	++++ 0.13474	0.13960 0.12486	0.14381 0.12486	0.14105 0.12486	0.13893 0.12486	0.13903 0.12486	AVRG		0.13743		4.49074

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 Integrator : HP RTE
 Method file : /chem/MSD1.i/s011510.b/MSD1-M8270AQA-111409.m
 Cal Date : 15-Jan-2010 14:51 amy01291

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	b	Coefficients m1	m2	%RSD or R ²
	100	120									
	Level 7	Level 8									
63 Hexachlorobenzene	++++ 0.15868	0.18056 0.14199	0.18610	0.17775	0.16888	0.16686	AVRG		0.16869		8.86819
207 Atrazine	++++ 0.03698	0.04275 0.03447	0.04402	0.04191	0.04036	++++	AVRG		0.04008		9.14364
65 Pentachlorophenol	++++ 0.10688	0.08713 0.09814	0.10123	0.10564	0.10198	0.10716	AVRG		0.10117		6.93558
206 n-Octadecane	++++ 0.34975	0.49445 ++++	0.50531	0.45683	0.42873	0.36788	AVRG		0.43383		14.85243
68 Phenanthrene	1.08140 0.82329	0.97577 0.75087	0.96718	0.91676	0.90684	0.85016	AVRG		0.90903		11.26824
69 Anthracene	1.05572 0.83261	0.98071 0.73707	1.00934	0.97561	0.92329	0.88140	AVRG		0.92447		11.24280
72 Di-n-butylphthalate	++++ 0.88726	1.06714 0.80148	1.12314	1.06117	1.02135	0.94081	AVRG		0.98605		11.57265
76 Fluoranthene	0.94603 0.79976	0.94387 0.71979	0.96313	0.92832	0.88364	0.83514	AVRG		0.87746		9.80038
77 Benzidine	++++ 0.43187	0.28582 0.36504	0.36970	0.35152	0.36897	++++	AVRG		0.36215		12.90005

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	b	Coefficients ml	m2	%RSD or R^2
79 Pyrene	1.12921 1.02924	1.08043 0.94284	1.13184 0.94284	1.09423 0.94284	1.03887 0.94284	1.05677 0.94284	AVRG	1.06293	5.79953		
85 Butylbenzylphthalate	++++ 0.40529	0.53253 ++++	0.56219 ++++	0.50335 0.50335	0.46569 0.46569	0.43331 0.43331	AVRG	0.48372	12.38419		
89 Benzo(a)anthracene	1.00602 0.95763	0.91134 0.89850	0.98073 0.89850	0.96992 0.96992	0.98002 0.98002	0.96903 0.96903	AVRG	0.95915	3.79585		
90 3,3'-Dichlorobenzidine	++++ 0.28231	0.24634 0.25909	0.28908 0.25909	0.28847 0.25909	0.28710 0.25909	++++	AVRG	0.27540	6.60230		
92 Chrysene	0.98731 0.87955	0.93210 0.82465	0.94599 0.82465	0.88032 0.82465	0.86729 0.82465	0.85456 0.82465	AVRG	0.89647	6.00506		
93 bis(2-Ethylhexyl)phthalate	0.57061 0.68855	0.72394 0.63132	0.78180 0.63132	0.75934 0.63132	0.74451 0.63132	0.72196 0.63132	AVRG	0.70275	10.02985		
94 Di-n-octylphthalate	++++ 1.30766	1.17035 1.16752	1.39716 1.16752	1.40560 1.16752	1.36840 1.16752	1.34274 1.16752	AVRG	1.30849	7.70640		
95 Benzo(b)fluoranthene	21625 3978698	340509 5127789	730849 5127789	1739197 5127789	2305837 5127789	3304287 5127789	AVRG	0.06661	0.99870		
96 Benzo(k)fluoranthene	1.03711 0.97020	1.06722 0.78256	1.12263 0.78256	1.01575 0.78256	1.02623 0.78256	1.00211 0.78256	AVRG	1.00298	9.96839		

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Compound	1	10	20	40	50	80	Curve	b	Coefficients m1	m2	%RSD or R^2
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6					
	100	120									
	Level 7	Level 8									
97 Benzo(a)pyrene	20918	319721	688146	1504125	2094282	2912657					
	3398226	3934490					LINR	-0.00385	0.87033		0.99612
99 Indeno(1,2,3-cd)pyrene	21578	336515	700258	1580353	2201480	3025334					
	3523403	4020592					LINR	-0.01092	0.89653		0.99431
100 Dibenzo(a,h)anthracene	16162	268427	581631	1325626	1846286	2532762					
	2946699	3397425					LINR	-0.00445	0.75511		0.99519
101 Benzo(ghi)perylene	0.56462	0.70452	0.77602	0.81299	0.83023	0.80394					
	0.79303	0.72783					AVRG		0.75165		11.54879
102 1,4-Dioxane	++++	0.32550	0.33716	0.30934	0.31455	++++					
	0.30805	0.28861					AVRG		0.31387		5.27573
103 Methyl methacrylate	++++	0.17774	0.19107	0.17805	0.17495	++++					
	0.17326	0.16336					AVRG		0.17640		5.08144
104 Ethyl methacrylate	++++	0.73346	0.76622	0.70794	0.70643	++++					
	0.69714	0.66675					AVRG		0.71299		4.73943
105 2-Picoline	++++	1.18802	1.23130	1.15065	1.15312	++++					
	1.12223	1.07774					AVRG		1.15384		4.58113
106 N-Nitrosomethylethylamine	++++	0.42951	0.48460	0.44623	0.45222	++++					
	0.46395	0.44906					AVRG		0.45426		4.08577

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	b	Coefficients m1	m2	%RSD or R^2
107 Methyl methanesulfonate	++++ 0.41648	0.43204 0.39202	0.45674 0.43227	0.42468	0.43227	++++	AVRG		0.42570		5.00242
108 N-Nitrosodiethylamine	++++ 0.47830	0.47915 0.46128	0.50719	0.47065	0.48068	++++	AVRG		0.47954		3.20356
109 Ethyl Methanesulfonate	++++ 0.59568	0.59343 0.57362	0.63202	0.58286	0.59990	++++	AVRG		0.59625		3.34808
110 Pentachloroethane	++++ 0.28774	0.30094 0.27522	0.30775	0.28811	0.28717	++++	AVRG		0.29115		3.95122
111 N-Nitrosopyrrolidine	++++ 0.41369	0.47773 0.41806	0.52978	0.49561	0.51566	++++	AVRG		0.47509		10.34926
113 N-Nitrosomorpholine	++++ 0.54487	0.63587 0.53392	0.69755	0.63481	0.65791	++++	AVRG		0.61749		10.47980
124 o-Toluidine	++++ 1.65679	1.64551 1.57817	1.76888	1.61850	1.65178	++++	AVRG		1.65327		3.85302
115 N-Nitrosopiperidine	++++ 0.13244	0.12931 0.12709	0.13922	0.12850	0.13280	++++	AVRG		0.13156		3.32124
116 a,a-Dimethylphenethylamine	++++ 0.79335	0.70597 0.76628	0.78545	0.76293	0.79408	++++	AVRG		0.76801		4.32000

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Compound	1	10	20	40	50	80	Curve	b	Coefficients ml	m2	%RSD or R^2
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6					
	100	120									
	Level 7	Level 8									
117 Triethylphosphorothioate	++++	0.12812	0.12428	0.12751	0.12901	0.12488					
	0.12021	0.11633					AVRG		0.12433		3.70966
118 2,6-Dichlorophenol	++++	0.18796	0.20530	0.19528	0.20193	++++					
	0.20014	0.19147					AVRG		0.19701		3.35416
119 Hexachloropropene	++++	0.07891	0.09539	0.09133	0.09091	++++					
	0.09225	0.08492					AVRG		0.08895		6.72708
120 p-Phenylenediamine	++++	0.17417	0.23091	0.21919	0.22009	++++					
	0.19257	0.17231					AVRG		0.20154		12.55674
121 N-Nitrosodi-n-butylamine	++++	0.16926	0.19309	0.16843	0.17454	++++					
	0.16640	0.15862					AVRG		0.17172		6.79719
122 Safrole	++++	0.18021	0.18852	0.17847	0.18253	++++					
	0.17443	0.16766					AVRG		0.17864		3.98501
123 1,2,4,5-Tetrachlorobenzene	++++	0.38048	0.40351	0.37295	0.37017	++++					
	0.35065	0.32500					AVRG		0.36713		7.29953
124 Isosafrole	++++	0.32136	0.34935	0.32718	0.32927	++++					
	0.32898	0.30952					AVRG		0.32761		3.96520
125 1,4-Naphthoquinone	++++	0.37346	0.38046	0.31457	0.30180	++++					
	0.18844	0.22186					AVRG		0.29676		26.34996

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Compound	1	10	20	40	50	80	Curve	b	Coefficients	m2	%RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6					or R^2
	100	120									
	Level 7	Level 8									
126 m-Dinitrobenzene	++++	0.17349	0.18721	0.19120	0.19440	0.19057	AVRG				
	0.19238	0.17644						0.18653			4.41251
127 Pentachlorobenzene	++++	0.32992	0.34557	0.31675	0.31835	++++	AVRG				
	0.29677	0.27972						0.31451			7.45207
128 1-Naphthylamine	++++	0.82636	0.98891	0.93384	0.93443	++++	AVRG				
	0.87178	0.80990						0.89420			7.80762
129 2-Naphthylamine	++++	0.96588	1.05556	1.00159	1.00599	++++	AVRG				
	0.94403	0.87535						0.97473			6.34557
130 2,3,4,6-Tetrachlorophenol	++++	0.20567	0.22518	0.22987	0.20102	0.22712	AVRG				
	0.21818	0.20523						0.21604			5.51582
131 5-Nitro-o-toluidine	++++	0.25535	0.29363	0.28574	0.29496	++++	AVRG				
	0.29982	0.28219						0.28528			5.60973
132 Thionazin	++++	0.6358	0.16364	0.16630	0.16880	0.16339	AVRG				
	0.15554	0.14821						0.16135			4.38820
134 Sulfotepp	++++	0.08562	0.08304	0.08303	0.08467	0.07953	AVRG				
	0.07427	0.07214						0.08033			6.54838
135 Phorate	++++	0.36567	0.35586	0.35721	0.36683	0.34385	AVRG				
	0.32742	0.31541						0.34747			5.65187

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	b	Coefficients m1	m2	%RSD or R^2
136 1,3,5-Trinitrobenzene	++++ 0.11894	0.10196 0.10898	0.12348	0.12395	0.12006	++++	AVRG		0.11623		7.60291
137 Phenacetin	++++ 0.26599	0.22684 0.25918	0.26317	0.26291	0.26441	++++	AVRG		0.25708		5.83046
138 Diallylate	++++ 0.21802	0.24760 0.20853	0.24927	0.23322	0.23010	++++	AVRG		0.23112		6.94549
139 Dimethoate	++++ 0.23513	0.21461 0.22967	0.21994	0.23007	0.23724	0.23858	AVRG		0.22932		3.92960
140 4-Aminobiphenyl	++++ 0.49840	0.53696 0.45674	0.55369	0.57677	0.59426	++++	AVRG		0.53614		9.53476
141 Pentachloronitrobenzene	++++ 0.04673	0.05720 0.04463	0.06067	0.05490	0.05533	++++	AVRG		0.05324		11.71339
142 Pronamide	++++ 0.17973	0.24822 ++++	0.26125	0.24154	0.23765	++++	AVRG		0.23368		13.46482
143 Dinoseb	++++ 0.13017	0.10297 0.12500	0.12216	0.13126	0.12950	0.13024	AVRG		0.12447		8.06727
144 Disulfoton	++++ 0.27306	0.32280 0.26345	0.31415	0.31231	0.32231	0.30214	AVRG		0.30146		7.92046

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	b	Coefficients ml	m2	%RSD or R^2
145 Methyl parathion	++++ 0.19613	0.18413 0.19053	0.18908 0.19053	0.19611 0.19053	0.20206 0.19053	0.20472 0.19053	AVRG		0.19468		3.74715
146 4-Nitroquinoline-1-oxide	++++ 0.01133	0.00831 0.01046	0.00998 0.01046	0.00800 0.01046	0.01074 0.01046	++++ 0.01046	AVRG		0.00980		13.77700
147 Methapyrilene	++++ 0.36079	0.36466 0.31821	0.38869 0.31821	0.39386 0.31821	0.38311 0.31821	++++ 0.31821	AVRG		0.36822		7.55340
148 Isodrin	++++ 0.07960	0.09085 0.07570	0.09372 0.07570	0.08925 0.07570	0.08743 0.07570	++++ 0.07570	AVRG		0.08609		8.09255
149 Aramite	++++ 0.04204	0.04141 0.03972	0.04570 0.03972	0.04371 0.03972	0.04272 0.03972	++++ 0.03972	AVRG		0.04255		4.79399
150 Kepone	++++ 0.06458	0.06055 0.05876	0.06732 0.05876	0.06349 0.05876	0.06380 0.05876	++++ 0.05876	AVRG		0.06308		4.80408
151 p-(Dimethylamino)azobenzene	++++ 0.26535	0.28782 0.24656	0.31583 0.24656	0.29702 0.24656	0.29097 0.24656	++++ 0.24656	AVRG		0.28392		8.62091
152 Chlorobenzilate	++++ 0.20814	0.21991 0.19524	0.23787 0.19524	0.22800 0.19524	0.23044 0.19524	++++ 0.19524	AVRG		0.21994		7.17760
153 3,3'-Dimethylbenzidine	++++ 0.49372	0.45675 0.43564	0.51768 0.43564	0.48413 0.43564	0.48879 0.43564	++++ 0.43564	AVRG		0.47945		6.05117

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	b	ml	m2	%RSD or R^2
154 Ramphur	++++ 0.30595	0.29819 0.30061	0.30032 0.30345	0.31780 0.31881	0.33430 0.32045	0.32440 ++++	AVRG	0.31165	4.49495		
155 2-Acetylaminofluorene	++++ 0.34822	0.23107 0.32608	0.30345 0.30337	0.31881	0.32045	++++	AVRG	0.30801	13.11206		
157 7,12Dimethylbenz (a)anthracene	++++ 0.40970	0.41118 0.40537	0.44192	0.42666	0.43253	++++	AVRG	0.42123	3.47443		
158 3-Methylcholanthrene	++++ 0.39125	0.29680 0.38204	0.36865	0.37932	0.38459	++++	AVRG	0.36711	9.59696		
26 Phthalic anhydride	++++ 555160	30283 687649	90214	245905	320454	497228	LINR	0.08413	0.10332	0.99692	
173 Carbazole	0.90246	0.82255	0.80875	0.81414	0.83946	0.78812	AVRG	0.80714	7.06036		
174 Hexachlorophene	++++ 0.04905	0.03640 ++++	0.04820	0.05180	0.05353	0.05136	AVRG	0.04839	12.77621		
179 Dibenzo (a,e)pyrene	++++ 1812574	117900	312429	817402	1225621	1557621	LINR	0.07449	0.50549	0.99368	
185 (2,3-Dibromopropyl)phosphate	++++ ++++	++++ ++++	++++	++++	++++	++++	AVRG	0.000e+00	0.000e+00	<-	

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	b	Coefficients ml	m2	%RSD or R^2
184 p-Benzquinone	++++ 96111	2462 113764	14132	46568	48315	83536	LINEAR	0.17192	0.08067		0.99223
191 Parathion	++++ 0.06173	0.06169 0.06112	0.06089	0.06449	0.06621	0.06308	AVRG		0.06274		3.14637
192 Methoxychlor	++++ 0.25594	0.32535 ++++	0.36631	0.33959	0.33867	0.27894	AVRG		0.31747		13.10686
210 m-Toluidine	++++ 0.94351	0.77272 ++++	0.88703	0.90355	0.94226	1.01524	AVRG		0.91072		8.87324
211 p-Toluidine	++++ ++++	0.69169 ++++	0.70617	0.72166	0.71562	0.68688	AVRG		0.70440		2.12367
212 Cis Diallate	++++ 0.24434	0.23437 0.23833	0.24880	0.23465	0.23944	++++	AVRG		0.23999		2.35508
213 Trans Diallate	++++ 0.25649	0.29129 0.24533	0.29326	0.27438	0.27070	++++	AVRG		0.27191		6.94549
214 1,4-Dinitrobenzene	++++ 0.17966	0.16000 0.16860	0.17119	0.17754	0.17866	0.17639	AVRG		0.17315		4.08379
215 2-Ethoxyethanol	++++ 0.62071	0.57555 0.58595	0.62918	0.65385	0.56961	0.58718	AVRG		0.60315		5.24047

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	b	Coefficients ml	m2	%RSD or R^2
100	++++	120									
120	Level 7	Level 8									
216 Methylenedis(2-chloroaniline)	++++	0.11447	0.12909	0.13171	0.13536	0.13420					
	0.13376	0.12587					AVRG		0.12921		5.63660
229 2,2'-Dichlorobenzil	++++	0.67948	0.77608	0.71487	++++	0.73565					
	++++	0.63422					AVRG		0.70806		7.63914
230 4-Chlorothiobenzisole	++++	0.23155	0.23520	0.23685	++++	0.23140					
	++++	0.22159					AVRG		0.23132		2.56050
231 4-Chlorothiophenol	++++	0.15409	0.17482	0.19368	++++	0.19893					
	++++	0.19703					AVRG		0.18371		10.41669
232 bis(p-chlorophenyl)sulfone	++++	0.39430	0.43698	0.38579	++++	0.39600					
	++++	0.34721					AVRG		0.39206		8.15529
233 bis(p-chlorophenyl)disulfide	++++	0.10045	0.11150	0.11707	++++	0.12020					
	++++	0.10635					AVRG		0.11111		7.18003
234 Diphenyl disulfide	++++	0.17804	0.18209	0.18631	++++	0.17491					
	++++	0.16341					AVRG		0.17695		4.91531
235 Diphenyl sulfide	++++	0.71965	0.73103	0.70874	++++	0.65333					
	++++	0.61709					AVRG		0.68595		7.09988
236 Phenyl sulfone	++++	0.43275	0.44078	0.42799	++++	0.41905					
	++++	0.39177					AVRG		0.42247		4.46830

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 14-NOV-2009 18:22
 End Cal Date : 17-NOV-2009 19:15
 Quant Method : ISTD
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/MSD1.i/s011510.b/MSD1-M8270AQA-111409.m
 Cal Date : 15-Jan-2010 14:51 amy01291

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	b	ml	m2	%RSD or R^2
237 Hydroxymethyl phthalimide	++++	0.12384	0.15720	0.10384	++++	0.13032	AVRG		0.12838		14.88299
	++++	0.12669									
238 Phthalic acid	++++	24604	70600	163991	++++	411903	LINR	0.25540	0.11087		0.99102
	++++	634014									
239 Thiophenol	++++	0.94048	1.03561	1.08365	++++	1.12900	AVRG		1.05641		6.89893
	++++	1.09332									
240 bis (Chloromethyl) ether	++++	0.78790	0.79417	0.76917	++++	0.75455	AVRG		0.76831		3.12263
	++++	0.73576									
241 Octachlorostyrene	++++	0.06103	0.06315	0.05827	++++	0.05420	AVRG		0.05705		10.14342
	++++	0.04861									
225 Trichlorophenols	++++	0.26941	0.30065	0.29972	0.25473	0.28457	AVRG		0.27448		7.49129
	0.25962	0.25265									
226 Tetrachlorophenols	++++	0.20567	0.22518	0.22987	0.20102	0.22712	AVRG		0.21604		5.51582
	0.21818	0.20523									
227 Benzo (b, k) fluoranthene	0.78278	0.93887	1.02131	1.01324	1.00976	1.01479	AVRG		0.96552		8.47131
	1.00963	0.93381	++++	++++	++++	++++					
228 TTO Sum Semivolatiles	++++	++++	++++	++++	++++	++++	AVRG		0.000e+00		0.000e+00
	++++	++++									

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 14-NOV-2009 18:22
 End Cal Date : 17-NOV-2009 19:15
 Quant Method : ISTD
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/MSD1.i/s011510.b/MSD1-M8270AQA-111409.m
 Cal Date : 15-Jan-2010 14:51 amy01291

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	b	Coefficients m1	m2	%RSD or R ²
	100	120									
	Level 7	Level 8									
\$ 3 2-Fluorophenol	++++ 1.07136	0.97776 1.00157	1.06271	1.06423	1.06306	1.07281	AVRG		1.04478		3.68308
\$ 5 Phenol-d5	++++ 1.29216	1.21974 1.21764	1.33050	1.28249	1.27680	1.26954	AVRG		1.26984		3.15351
\$ 187 2-Chlorophenol-d4	++++ ++++	++++ ++++	++++	++++	++++	++++	AVRG		0.000e+00		0.000e+00
\$ 188 1,2-Dichlorobenzene-d4	++++ ++++	++++ ++++	++++	++++	++++	++++	AVRG		0.000e+00		0.000e+00
\$ 20 Nitrobenzene-d5	++++ 0.24945	0.27426 0.23400	0.28571	0.27066	0.27231	0.25884	AVRG		0.26360		6.62019
\$ 39 2-Fluorobiphenyl	++++ 0.91199	0.99823 0.81928	1.04801	1.00239	0.98618	0.93991	AVRG		0.95800		7.87748
\$ 60 2,4,6-Tribromophenol	++++ 0.11271	0.10924 0.10874	0.11530	0.11503	0.10898	0.11186	AVRG		0.11169		2.51418
\$ 81 p-Terphenyl-d14	++++ 0.60853	0.64452 0.56112	0.67675	0.65301	0.63863	0.61256	AVRG		0.62787		5.98666

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 14-NOV-2009 18:22
End Cal Date : 17-NOV-2009 19:15
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD1.i/s011510.b/MSD1-M8270AQA-111409.m
Cal Date : 15-Jan-2010 14:51 amy01291

Curve	Formula	Units
Averaged	$Amt. = Rsp/ml$	Response
Linear	$Amt = b + Rsp/ml$	Response

Data File: /chem/MSD1.i/s111409.b/s1k1235.d
Report Date: 17-Nov-2009 13:44

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GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD1.i Injection Date: 15-NOV-2009 23:17
Lab File ID: s1k1235.d Init. Cal. Date(s): 14-NOV-2009 15-NOV-2009
Analysis Type: Init. Cal. Times: 18:22 22:53
Lab Sample ID: WBN091111-08.1 Quant Type: ISTD
Method: /chem/MSD1.i/s111409.b/MSD1-M8270AQA-111409.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
209 Benzaldehyde	0.82400	0.71239	0.71239	0.000	-13.54468	60.00000	Averaged
16 Acetophenone	1.12880	1.15012	1.15012	0.000	1.88924	60.00000	Averaged
189 Caprolactam	0.07169	0.08295	0.08295	0.000	15.71078	60.00000	Averaged
208 1,1'-Biphenyl	1.12050	1.24126	1.24126	0.000	10.77724	60.00000	Averaged
207 Atrazine	0.04008	0.04737	0.04737	0.000	18.18184	60.00000	Averaged
77 Benidine	0.36215	0.33951	0.33951	0.000	-6.25196	60.00000	Averaged
90 3,3'-Dichlorobenzidine	0.27540	0.29917	0.29917	0.000	8.63115	60.00000	Averaged
102 1,4-Dioxane	0.31387	0.37981	0.37981	0.000	21.00923	60.00000	Averaged
103 Methyl methacrylate	0.17640	0.20821	0.20821	0.000	18.03005	60.00000	Averaged
104 Ethyl methacrylate	0.71299	0.86659	0.86659	0.000	21.54329	60.00000	Averaged
105 2-Picoline	1.15384	1.13306	1.13306	0.000	-1.80140	60.00000	Averaged
106 N-Nitrosomethylethylamine	0.45426	0.46463	0.46463	0.000	2.28123	60.00000	Averaged
107 Methyl methanesulfonate	0.42570	0.48978	0.48978	0.000	15.05276	60.00000	Averaged
108 N-Nitrosodiethylamine	0.47954	0.49102	0.49102	0.000	2.39384	60.00000	Averaged
109 Ethyl Methanesulfonate	0.59625	0.74183	0.74183	0.000	24.41607	60.00000	Averaged
110 Pentachloroethane	0.29115	0.40985	0.40985	0.000	40.76840	60.00000	Averaged
111 N-Nitrosopyrrolidine	0.47509	0.50932	0.50932	0.000	7.20593	60.00000	Averaged
113 N-Nitrosomorpholine	0.61749	0.67896	0.67896	0.000	9.95518	60.00000	Averaged
114 o-Toluidine	1.65327	1.64031	1.64031	0.000	-0.78415	60.00000	Averaged
115 N-Nitrosopiperidine	0.13156	0.13273	0.13273	0.000	0.88789	60.00000	Averaged
116 a,a-Dimethylphenethylamine	0.76801	0.79273	0.79273	0.000	3.21891	60.00000	Averaged
118 2,6-Dichlorophenol	0.19701	0.21797	0.21797	0.000	10.63653	60.00000	Averaged
119 Hexachloropropene	0.08895	0.13367	0.13367	0.000	50.27176	60.00000	Averaged
120 p-Phenylenediamine	0.20154	0.18980	0.18980	0.000	-5.82557	60.00000	Averaged
121 N-Nitrosodi-n-butylamine	0.17172	0.17829	0.17829	0.000	3.82057	60.00000	Averaged
122 Saffrole	0.17864	0.21665	0.21665	0.000	21.27785	60.00000	Averaged
123 1,2,4,5-Tetrachlorobenzene	0.36713	0.42376	0.42376	0.000	15.42574	60.00000	Averaged
124 Isosaffrole	0.32761	0.46202	0.46202	0.000	41.02664	60.00000	Averaged
125 1,4-Naphthoquinone	0.29676	0.32067	0.32067	0.000	8.05637	60.00000	Averaged
127 Pentachlorobenzene	0.31451	0.35074	0.35074	0.000	11.51805	60.00000	Averaged
128 1-Naphthylamine	0.89420	0.98926	0.98926	0.000	10.62991	60.00000	Averaged
129 2-Naphthylamine	0.97473	1.09077	1.09077	0.000	11.90459	60.00000	Averaged
131 5-Nitro-o-toluidine	0.28528	0.30775	0.30775	0.000	7.87638	60.00000	Averaged
136 1,3,5-Trinitrobenzene	0.11623	0.15168	0.15168	0.000	30.50015	60.00000	Averaged
137 Phenacetin	0.25708	0.29576	0.29576	0.000	15.04579	60.00000	Averaged
138 Diallate	0.23112	0.23284	0.23284	0.000	0.74457	60.00000	Averaged

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD1.i Injection Date: 15-NOV-2009 23:17
Lab File ID: s1k1235.d Init. Cal. Date(s): 14-NOV-2009 15-NOV-2009
Analysis Type: Init. Cal. Times: 18:22 22:53
Lab Sample ID: WBN091111-08.1 Quant Type: ISTD
Method: /chem/MSD1.i/s111409.b/MSD1-M8270AQA-111409.m

COMPOUND	RRF / AMOUNT	RF40	CCAL	MIN	MAX	CURVE TYPE
			RRF40	RRF	%D / %DRIFT	%D / %DRIFT
212 Cis Diallate	0.23999	0.31739	0.31739	0.000	32.25095	60.00000
213 Trans Diallate	0.27191	0.27393	0.27393	0.000	0.74457	60.00000
140 4-Aminobiphenyl	0.53614	0.62569	0.62569	0.000	16.70322	60.00000
141 Pentachloronitrobenzene	0.05324	0.06215	0.06215	0.000	16.73283	60.00000
142 Pronamide	0.23368	0.26726	0.26726	0.000	14.37225	60.00000
146 4-Nitroquinoline-1-oxide	0.00980	0.00923	0.00923	0.000	-5.86960	60.00000
147 Methapyrilene	0.36822	0.29090	0.29090	0.000	-20.99905	60.00000
148 Isodrin	0.08609	0.08812	0.08812	0.000	2.35297	60.00000
149 Aramite	0.04255	0.04327	0.04327	0.000	1.67534	60.00000
150 Kepone	0.06308	0.07178	0.07178	0.000	13.77677	60.00000
151 p-(Dimethylamino)azobenzene	0.28392	0.29411	0.29411	0.000	3.58893	60.00000
152 Chlorobenzilate	0.21994	0.24578	0.24578	0.000	11.75217	60.00000
153 3,3'-Dimethylbenzidine	0.47945	0.47257	0.47257	0.000	-1.43591	60.00000
155 2-Acetylaminofluorene	0.30801	0.33042	0.33042	0.000	7.27461	60.00000
157 7,12Dimethylbenz(a)anthracene	0.42123	0.42978	0.42978	0.000	2.03140	60.00000
158 3-Methylcholanthrene	0.36711	0.40048	0.40048	0.000	9.08958	60.00000

Data File: /chem/MSD1.i/s111409.b/s1k1235.d
Report Date: 17-Nov-2009 13:44

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GEL Laboratories LLC

Data file : /chem/MSD1.i/s111409.b/s1k1235.d
Lab Smp Id: WBN091111-08.1 Client Smp ID: APICV
Inj Date : 15-NOV-2009 23:17
Operator : amy Inst ID: MSD1.i
Smp Info : |WBN091111-08.1|40 PPM|1|SVMF|1|APICV
Misc Info : |MSD8270|WBN091106-10|
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD1.i/s111409.b/MSD1-M8270AQA-111409.m
Meth Date : 17-Nov-2009 10:44 nat00999 Quant Type: ISTD
Cal Date : 15-NOV-2009 21:42 Cal File: s1k1231.d
Als bottle: 23 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ap12.sub
Target Version: 3.50

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
						CAL-AMT (ng/ul)	ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	3.957	3.940	(1.000)	601939	40.0000	
* 29 Naphthalene-d8	136	4.828	4.810	(1.000)	2374945	40.0000	
* 46 Acenaphthene-d10	164	6.075	6.057	(1.000)	1270499	40.0000	
* 67 Phenanthrene-d10	188	7.057	7.040	(1.000)	2114263	40.0000	
* 91 Chrysene-d12	240	8.739	8.722	(1.000)	1927170	40.0000	
* 98 Perylene-d12	264	10.251	10.222	(1.000)	1696025	40.0000	(H)
209 Benzaldehyde	77	3.681	3.681	(0.930)	428816	40.0000	34.6
16 Acetophenone	105	4.210	4.210	(1.064)	692304	40.0000	40.8
189 Caprolactam	113	5.104	5.122	(1.057)	197001	40.0000	46.3
208 1,1'-Biphenyl	154	5.646	5.651	(0.929)	1577025	40.0000	44.3
207 Atrazine	173	6.822	6.834	(0.967)	100151	40.0000	47.3
77 Benzidine	184	7.828	7.834	(0.896)	654298	40.0000	37.5
90 3,3'-Dichlorobenzidine	252	8.663	8.669	(0.991)	576557	40.0000	43.4
102 1,4-Dioxane	88	2.281	2.287	(0.576)	228622	40.0000	48.4
103 Methyl methacrylate	100	2.275	2.275	(0.575)	125330	40.0000	47.2
104 Ethyl methacrylate	69	2.652	2.652	(0.670)	521635	40.0000	48.6
105 2-Picoline	93	2.846	2.846	(0.719)	682032	40.0000	39.3
106 N-Nitrosomethylethylamine	88	2.887	2.893	(0.729)	279676	40.0000	40.9
107 Methyl methanesulfonate	80	3.046	3.052	(0.770)	294820	40.0000	46.0
108 N-Nitrosodiethylamine	102	3.281	3.287	(0.829)	295564	40.0000	41.0
109 Ethyl Methanesulfonate	79	3.440	3.446	(0.869)	446538	40.0000	49.8
110 Pentachloroethane	167	3.781	3.781	(0.955)	246707	40.0000	56.3
111 N-Nitrosopyrrolidine	100	4.199	4.216	(1.061)	306582	40.0000	42.9
113 N-Nitrosomorpholine	56	4.216	4.228	(1.065)	408692	40.0000	44.0
114 o-Toluidine	106	4.234	4.246	(1.070)	987365	40.0000	39.7
115 N-Nitrosopiperidine	114	4.434	4.446	(0.918)	315224	40.0000	40.4
116 a,a-Dimethylphenethylamine	58	4.681	4.681	(0.970)	1882697	40.0000	41.3

Compounds	QUANT SIG		RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
	MASS						CAL-AMT (ng/ul)	ON-COL (ng/ul)
=====	=====	=====	=====	=====	=====	=====	=====	=====
118 2,6-Dichlorophenol	162		4.869	4.875	(1.009)	517655	40.0000	44.2
119 Hexachloropropene	213		4.899	4.898	(1.015)	317465	40.0000	60.1
120 p-Phenylenediamine	108		5.104	5.116	(1.057)	450756	40.0000	37.7
121 N-Nitrosodi-n-butylamine	84		5.069	5.075	(1.050)	423419	40.0000	41.5 (T)
122 Safrole	162		5.234	5.240	(1.084)	514526	40.0000	48.5
123 1,2,4,5-Tetrachlorobenzene	216		5.440	5.446	(0.895)	538386	40.0000	46.2
124 Isosafrole	162		5.604	5.610	(0.923)	586994	40.0000	56.4
125 1,4-Naphthoquinone	158		5.793	5.793	(0.954)	407413	40.0000	43.2
127 Pentachlorobenzene	250		6.181	6.187	(1.017)	445615	40.0000	44.6
128 1-Naphthylamine	143		6.263	6.269	(1.031)	1256848	40.0000	44.2
129 2-Naphthylamine	143		6.316	6.322	(1.040)	1385825	40.0000	44.8
131 5-Nitro-o-toluidine	152		6.434	6.445	(1.059)	390998	40.0000	43.2
136 1,3,5-Trinitrobenzene	75		6.645	6.651	(0.942)	320686	40.0000	52.2
137 Phenacetin	108		6.687	6.698	(0.947)	625324	40.0000	46.0
138 Diallate	86		6.669	6.675	(0.945)	492291	40.0000	40.3
212 Cis Diallate	86		6.734	6.734	(0.954)	100656	6.00000	7.9
213 Trans Diallate	86		6.669	6.675	(0.945)	492291	34.0000	34.2
140 4-Aminobiphenyl	169		6.910	6.916	(0.979)	1322873	40.0000	46.7
141 Pentachloronitrobenzene	237		6.934	6.940	(0.982)	131405	40.0000	46.7
142 Pronamide	173		6.922	6.928	(0.981)	565063	40.0000	45.7
146 4-Nitroquinoline-1-oxide	101		7.516	7.522	(1.065)	19512	40.0000	37.6
147 Methapyrilene	58		7.534	7.539	(1.067)	615031	40.0000	31.6
148 Isodrin	193		7.692	7.692	(1.090)	186303	40.0000	40.9
149 Aramite	185		7.916	7.916	(1.122)	91474	40.0000	40.7
150 Kepone	272		8.351	8.363	(1.183)	151752	40.0000	45.5
151 p-(Dimethylamino)azobenzene	120		8.045	8.051	(0.921)	566806	40.0000	41.4
152 Chlorobenzilate	251		8.057	8.063	(0.922)	473667	40.0000	44.7
153 3,3'-Dimethylbenzidine	212		8.257	8.263	(0.945)	910722	40.0000	39.4
155 2-Acetylaminofluorene	181		8.445	8.457	(0.966)	636774	40.0000	42.9
157 7,12Dimethylbenz(a)anthracene	256		9.733	9.745	(0.945)	728922	40.0000	40.8
158 3-Methylcholanthrene	268		10.622	10.639	(1.031)	679223	40.0000	43.6

QC Flag Legend

T - Target compound detected outside RT window.
H - Operator selected an alternate compound hit.

Data File: /chem/MSD1.i/s111409.b/s1k1235.d

Date: 15-NOV-2009 23:17

Client ID: APICV

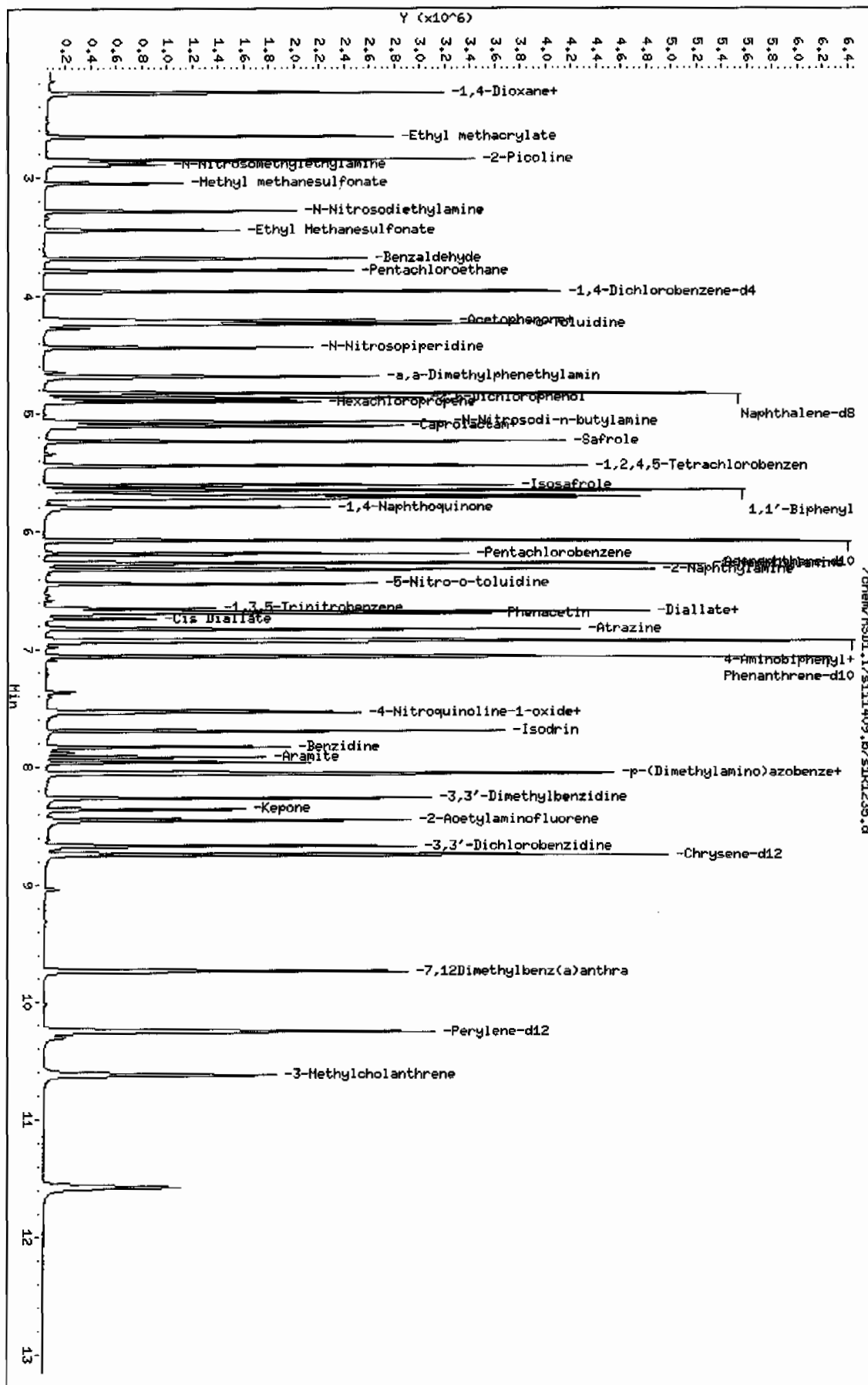
Sample Info: IUBK091111-08.1140 PPH111SWF11APICV

Column phase: 3M DB-SMS

Instrument: MSD1.i

Operator: amy

Column diameter: 0.20



Data File: /chem/MSD1.i/s111409.b/s1k1261.d
Report Date: 17-Nov-2009 16:48

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GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD1.i Injection Date: 17-NOV-2009 16:27
Lab File ID: s1k1261.d Init. Cal. Date(s): 14-NOV-2009 17-NOV-2009
Analysis Type: Init. Cal. Times: 18:22 12:38
Lab Sample ID: WBN091027-09.3 Quant Type: ISTD
Method: /chem/MSD1.i/s111409.b/MSD1-M8270AQA-111409.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
3 2-Fluorophenol	1.04478	0.92701	0.92701	0.000	-11.27306	60.00000	Averaged
5 Phenol-d5	1.26984	1.11829	1.11829	0.000	-11.93416	60.00000	Averaged
20 Nitrobenzene-d5	0.26360	0.25882	0.25882	0.000	-1.81289	60.00000	Averaged
39 2-Fluorobiphenyl	0.95800	0.95545	0.95545	0.000	-0.26619	60.00000	Averaged
60 2,4,6-Tribromophenol	0.11169	0.11397	0.11397	0.000	2.04032	60.00000	Averaged
81 p-Terphenyl-d14	0.62787	0.61091	0.61091	0.000	-2.70233	60.00000	Averaged
1 N-Methyl-N-nitrosomethylami	0.56740	0.52259	0.52259	0.000	-7.89719	60.00000	Averaged
2 Pyridine	0.95281	0.72054	0.72054	0.000	-24.37721	60.00000	Averaged
4 Aniline	0.55813	0.46069	0.46069	0.000	-17.45935	60.00000	Averaged
6 Phenol	1.33800	1.13102	1.13102	0.001	-15.46941	20.00000	Averaged|ccc
7 bis(2-Chloroethyl) ether	0.93081	0.78725	0.78725	0.000	-15.42323	60.00000	Averaged
8 2-Chlorophenol	1.13717	0.96631	0.96631	0.000	-15.02517	60.00000	Averaged
203 n-Decane	1.43160	1.33489	1.33489	0.000	-6.75532	60.00000	Averaged
9 1,3-Dichlorobenzene	1.33431	1.14485	1.14485	0.000	-14.19930	60.00000	Averaged
11 1,4-Dichlorobenzene	1.30799	1.12905	1.12905	0.001	-13.68038	20.00000	Averaged|ccc
13 1,2-Dichlorobenzene	1.20798	1.02631	1.02631	0.000	-15.03923	60.00000	Averaged
14 bis(2-Chloroisopropyl)ether	2.21709	1.93928	1.93928	0.000	-12.53006	60.00000	Averaged
12 Benzyl alcohol	0.69141	0.59629	0.59629	0.000	-13.75808	60.00000	Averaged
15 o-Cresol	0.84650	0.72216	0.72216	0.000	-14.68816	60.00000	Averaged
18 m,p-Cresols	1.15179	1.00178	1.00178	0.000	-13.02332	60.00000	Averaged
17 N-Nitrosodipropylamine	0.76238	0.61385	0.61385	0.050	-19.48192	60.00000	Averaged|spcc
19 Hexachloroethane	0.47075	0.38923	0.38923	0.000	-17.31682	60.00000	Averaged
21 Nitrobenzene	0.27466	0.23975	0.23975	0.000	-12.70858	60.00000	Averaged
22 Isophorone	0.48049	0.42824	0.42824	0.000	-10.87384	60.00000	Averaged
23 2-Nitrophenol	0.14580	0.12443	0.12443	0.001	-14.65471	20.00000	Averaged|ccc
24 2,4-Dimethylphenol	0.23346	0.23407	0.23407	0.000	0.25935	60.00000	Averaged
25 bis(2-Chloroethoxy)methane	0.30933	0.25445	0.25445	0.000	-17.74126	60.00000	Averaged
26 2,4-Dichlorophenol	0.21909	0.18847	0.18847	0.001	-13.97781	20.00000	Averaged|ccc
27 Benzoic acid	0.16087	0.16553	0.16553	0.000	2.89975	60.00000	Averaged
28 1,2,4-Trichlorobenzene	0.24210	0.21218	0.21218	0.000	-12.36169	60.00000	Averaged
30 Naphthalene	0.83482	0.76679	0.76679	0.000	-8.14910	60.00000	Averaged
204 alpha-Terpineol	0.19635	0.19249	0.19249	0.000	-1.96852	60.00000	Averaged
31 4-Chloroaniline	0.38123	0.34324	0.34324	0.000	-9.96471	60.00000	Averaged
32 Hexachlorobutadiene	0.12432	0.10582	0.10582	0.001	-14.87841	20.00000	Averaged|ccc
33 4-Chloro-3-methylphenol	0.21406	0.17276	0.17276	0.001	-19.29025	20.00000	Averaged|ccc
34 2-Methylnaphthalene	0.54880	0.51972	0.51972	0.000	-5.29812	60.00000	Averaged

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD1.i Injection Date: 17-NOV-2009 16:27
Lab File ID: s1k1261.d Init. Cal. Date(s): 14-NOV-2009 17-NOV-2009
Analysis Type: Init. Cal. Times: 18:22 12:38
Lab Sample ID: WBN091027-09.3 Quant Type: ISTD
Method: /chem/MSD1.i/s111409.b/MSD1-M8270AQA-111409.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
35 1-Methylnaphthalene	0.49330	0.47920	0.47920	0.000	-2.85884	60.00000	Averaged
36 Hexachlorocyclopentadiene	0.12213	0.12462	0.12462	0.050	2.03810	60.00000	Averaged|spcc
205 2,3-Dichloroaniline	0.45401	0.44519	0.44519	0.000	-1.94238	60.00000	Averaged
37 2,4,6-Trichlorophenol	0.26606	0.24935	0.24935	0.001	-6.28041	20.00000	Averaged|ccc
38 2,4,5-Trichlorophenol	0.28290	0.25595	0.25595	0.000	-9.52679	60.00000	Averaged
40 2-Chloronaphthalene	0.98748	0.82050	0.82050	0.000	-16.91018	60.00000	Averaged
42 o-Nitroaniline	0.30619	0.24946	0.24946	0.000	-18.52571	60.00000	Averaged
41 m-Nitroaniline	0.27055	0.22438	0.22438	0.000	-17.06469	60.00000	Averaged
43 Dimethylphthalate	1.08995	0.95932	0.95932	0.000	-11.98438	60.00000	Averaged
44 2,6-Dinitrotoluene	0.27156	0.22271	0.22271	0.000	-17.99006	60.00000	Averaged
50 2,4-Dinitrotoluene	0.35993	0.29440	0.29440	0.000	-18.20706	60.00000	Averaged
45 Acenaphthylene	1.54092	1.46812	1.46812	0.000	-4.72441	60.00000	Averaged
47 Acenaphthene	0.92259	0.85781	0.85781	0.001	-7.02192	20.00000	Averaged|ccc
48 2,4-Dinitrophenol	0.10718	0.09229	0.09229	0.050	-13.89853	60.00000	Averaged|spcc
49 Dibenzofuran	1.33422	1.12564	1.12564	0.000	-15.63294	60.00000	Averaged
51 Diethylphthalate	1.01616	0.93320	0.93320	0.000	-8.16403	60.00000	Averaged
52 4-Nitrophenol	0.18871	0.18660	0.18660	0.050	-1.12202	60.00000	Averaged|spcc
53 Fluorene	1.07578	0.99783	0.99783	0.000	-7.24582	60.00000	Averaged
54 4-Chlorophenylphenylether	0.45420	0.42578	0.42578	0.000	-6.25867	60.00000	Averaged
55 2-Methyl-4,6-dinitrophenol	0.10120	0.09844	0.09844	0.000	-2.71965	60.00000	Averaged
56 p-Nitroaniline	0.26458	0.21819	0.21819	0.000	-17.53206	60.00000	Averaged
133 Diphenylamine	0.53354	0.46493	0.46493	0.001	-12.85961	20.00000	Averaged|ccc
58 1,2-Diphenylhydrazine	0.65098	0.55777	0.55777	0.000	-14.31896	60.00000	Averaged
61 4-Bromophenylphenylether	0.13743	0.14126	0.14126	0.000	2.79050	60.00000	Averaged
63 Hexachlorobenzene	0.16869	0.14433	0.14433	0.000	-14.43782	60.00000	Averaged
65 Pentachlorophenol	0.10117	0.09042	0.09042	0.001	-10.61921	20.00000	Averaged|ccc
206 n-Octadecane	0.43383	0.42570	0.42570	0.000	-1.87309	60.00000	Averaged
68 Phenanthrene	0.90903	0.83581	0.83581	0.000	-8.05558	60.00000	Averaged
69 Anthracene	0.92447	0.85110	0.85110	0.000	-7.93592	60.00000	Averaged
72 Di-n-butylphthalate	0.98605	0.95396	0.95396	0.000	-3.25457	60.00000	Averaged
76 Fluoranthene	0.87746	0.81704	0.81704	0.001	-6.88555	20.00000	Averaged|ccc
79 Pyrene	1.06293	0.98267	0.98267	0.000	-7.55079	60.00000	Averaged
85 Butylbenzylphthalate	0.48372	0.46739	0.46739	0.000	-3.37649	60.00000	Averaged
89 Benzo(a)anthracene	0.95915	0.87571	0.87571	0.000	-8.69930	60.00000	Averaged
92 Chrysene	0.89647	0.82199	0.82199	0.000	-8.30767	60.00000	Averaged
93 bis(2-Ethylhexyl)phthalate	0.70275	0.65271	0.65271	0.000	-7.12169	60.00000	Averaged

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD1.i Injection Date: 17-NOV-2009 16:27
Lab File ID: s1k1261.d Init. Cal. Date(s): 14-NOV-2009 17-NOV-2009
Analysis Type: Init. Cal. Times: 18:22 12:38
Lab Sample ID: WBN091027-09.3 Quant Type: ISTD
Method: /chem/MSD1.i/s111409.b/MSD1-M8270AQA-111409.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
94 Di-n-octylphthalate	1.30849	1.19375	1.19375	0.001	-8.76858	20.00000	Averaged|ccc
95 Benzo(b)fluoranthene	34.69168	40.00000	0.87030	0.000	-13.27080	60.00000	Linear|
96 Benzo(k)fluoranthene	1.00298	0.95633	0.95633	0.000	-4.65112	60.00000	Averaged|
97 Benzo(a)pyrene	37.92700	40.00000	0.82858	0.001	-5.18249	20.00000	Linear|ccc
99 Indeno(1,2,3-cd)pyrene	35.83759	40.00000	0.81303	0.000	-10.40601	60.00000	Linear|
100 Dibenzo(a,h)anthracene	35.09981	40.00000	0.66597	0.000	-12.25048	60.00000	Linear|
101 Benzo(ghi)perylene	0.75165	0.69836	0.69836	0.000	-7.08991	60.00000	Averaged|
126 m-Dinitrobenzene	0.18653	0.15696	0.15696	0.000	-15.84920	60.00000	Averaged|
130 2,3,4,6-Tetrachlorophenol	0.21604	0.19708	0.19708	0.000	-8.77777	60.00000	Averaged|
143 Dinoseb	0.12447	0.10965	0.10965	0.000	-11.90708	60.00000	Averaged|
173 Carbazole	0.80714	0.69773	0.69773	0.000	-13.55506	60.00000	Averaged|
184 p-Benzoquinone	40.49777	40.00000	0.06781	0.000	1.24442	60.00000	Linear|
192 Methoxychlor	0.31747	0.36177	0.36177	0.000	13.95477	60.00000	Averaged|
211 p-Toluidine	0.70440	0.95402	0.95402	0.000	35.43664	60.00000	Averaged|
210 m-Toluidine	0.91072	0.95200	0.95200	0.000	4.53333	60.00000	Averaged|
26 Phthalic anhydride	42.71723	40.00000	0.10164	0.000	6.79306	60.00000	Linear|
179 Dibenzo(a,e)pyrene	24.88814	40.00000	0.27687	0.000	-37.77964	60.00000	Linear|
214 1,4-Dinitrobenzene	0.17315	0.14504	0.14504	0.000	-16.23762	60.00000	Averaged|
215 2-Ethoxyethanol	0.60315	0.59707	0.59707	0.000	-1.00765	60.00000	Averaged|
216 Methylenebis(2-chloroanilin	0.12921	0.12373	0.12373	0.000	-4.23543	60.00000	Averaged|
M 225 Trichlorophenols	0.27448	0.25265	0.25265	0.000	-7.95340	60.00000	Averaged|
M 226 Tetrachlorophenols	0.21604	0.19708	0.19708	0.000	-8.77777	60.00000	Averaged|
M 227 Benzo(b,k)fluoranthene	0.96552	0.91331	0.91331	0.000	-5.40733	60.00000	Averaged

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Data file : /chem/MSD1.i/s111409.b/slk1261.d
Lab Smp Id: WBN091027-09.3 Client Smp ID: MEGAICV
Inj Date : 17-NOV-2009 16:27
Operator : amy Inst ID: MSD1.i
Smp Info : |WBN091027-09.3|40 PPM|1|SVMF|1|MEGAICV
Misc Info : |MSD8270|WBN091106-10|
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD1.i/s111409.b/MSD1-M8270AQA-111409.m
Meth Date : 17-Nov-2009 16:47 llo00884 Quant Type: ISTD
Cal Date : 17-NOV-2009 12:38 Cal File: slk1256.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: MEGAICARE.sub
Target Version: 3.50
Processing Host: kilroy

Compounds	QUANT SIG					AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ng/ul)	ON-COL (ng/ul)
=====	=====	==	=====	=====	=====	=====	=====
* 10 1,4-Dichlorobenzene-d4	152	3.928	3.928	(1.000)	530038	40.0000	
* 29 Naphthalene-d8	136	4.793	4.793	(1.000)	2205306	40.0000	
* 46 Acenaphthene-d10	164	6.040	6.040	(1.000)	1135267	40.0000	
* 67 Phenanthrene-d10	188	7.022	7.022	(1.000)	1874551	40.0000	(H)
* 91 Chrysene-d12	240	8.704	8.704	(1.000)	1621760	40.0000	
* 98 Perylene-d12	264	10.198	10.198	(1.000)	1481649	40.0000	
\$ 3 2-Fluorophenol	112	3.104	3.104	(0.790)	491348	40.0000	35.5
\$ 5 Phenol-d5	99	3.640	3.640	(0.927)	592737	40.0000	35.2
\$ 20 Nitrobenzene-d5	82	4.287	4.287	(0.894)	570788	40.0000	39.3
\$ 39 2-Fluorobiphenyl	172	5.534	5.534	(0.916)	1084689	40.0000	39.9
\$ 60 2,4,6-Tribromophenol	329	6.575	6.575	(1.089)	129390	40.0000	40.8
\$ 81 p-Terphenyl-d14	244	7.939	7.939	(0.912)	990744	40.0000	38.9
1 N-Methyl-N-nitrosomethylamine	74	2.410	2.410	(0.614)	276992	40.0000	36.8
2 Pyridine	79	2.446	2.446	(0.623)	381913	40.0000	30.2
4 Aniline	66	3.710	3.710	(0.945)	244181	40.0000	33.0
6 Phenol	94	3.646	3.646	(0.928)	599483	40.0000	33.8
7 bis(2-Chloroethyl) ether	63	3.722	3.722	(0.948)	417273	40.0000	33.8
8 2-Chlorophenol	128	3.787	3.787	(0.964)	512179	40.0000	34.0
203 n-Decane	43	3.775	3.775	(0.961)	707542	40.0000	37.3
9 1,3-Dichlorobenzene	146	3.893	3.893	(0.991)	606813	40.0000	34.3
11 1,4-Dichlorobenzene	146	3.934	3.934	(1.001)	598440	40.0000	34.5
13 1,2-Dichlorobenzene	146	4.040	4.040	(1.028)	543984	40.0000	34.0
14 bis(2-Chloroisopropyl) ether	45	4.069	4.069	(1.036)	1027894	40.0000	35.0
12 Benzyl alcohol	108	3.993	3.993	(1.016)	316054	40.0000	34.5
15 o-Cresol	107	4.040	4.040	(1.028)	382773	40.0000	34.1
18 m,p-Cresols	107	4.146	4.146	(1.055)	530984	40.0000	34.8

Compounds	QUANT SIG	MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
							CAL-AMT (ng/ul)	ON-COL (ng/ul)
17 N-Nitrosodipropylamine		70	4.163	4.163	(1.060)	325364	40.0000	32.2
19 Hexachloroethane		117	4.269	4.269	(1.087)	206306	40.0000	33.1
21 Nitrobenzene		77	4.304	4.304	(0.898)	528723	40.0000	34.9
22 Isophorone		82	4.457	4.457	(0.930)	944401	40.0000	35.6
23 2-Nitrophenol		139	4.516	4.516	(0.942)	274410	40.0000	34.1
24 2,4-Dimethylphenol		122	4.504	4.504	(0.940)	516190	40.0000	40.1
25 bis(2-Chloroethoxy)methane		93	4.575	4.575	(0.955)	561140	40.0000	32.9
26 2,4-Dichlorophenol		162	4.681	4.681	(0.977)	415624	40.0000	34.4
27 Benzoic acid		105	4.575	4.575	(0.955)	365053	40.0000	41.2
28 1,2,4-Trichlorobenzene		180	4.745	4.745	(0.990)	467914	40.0000	35.0
30 Naphthalene		128	4.810	4.810	(1.004)	1690998	40.0000	36.7
204 alpha-Terpineol		59	4.787	4.787	(0.999)	424496	40.0000	39.2
31 4-Chloroaniline		127	4.822	4.822	(1.006)	756952	40.0000	36.0
32 Hexachlorobutadiene		225	4.875	4.875	(1.017)	233369	40.0000	34.0
33 4-Chloro-3-methylphenol		107	5.134	5.134	(1.071)	380998	40.0000	32.3
34 2-Methylnaphthalene		142	5.293	5.293	(1.104)	1146146	40.0000	37.9
35 1-Methylnaphthalene		142	5.363	5.363	(1.119)	1056787	40.0000	38.8
36 Hexachlorocyclopentadiene		237	5.393	5.393	(0.893)	141475	40.0000	40.8
205 2,3-Dichloroaniline		161	5.487	5.487	(0.908)	505408	40.0000	39.2
37 2,4,6-Trichlorophenol		196	5.475	5.475	(0.906)	283075	40.0000	37.5 (H)
38 2,4,5-Trichlorophenol		196	5.504	5.504	(0.911)	290570	40.0000	36.2
40 2-Chloronaphthalene		162	5.645	5.645	(0.935)	931485	40.0000	33.2
42 o-Nitroaniline		65	5.698	5.698	(0.944)	283207	40.0000	32.6
41 m-Nitroaniline		138	5.992	5.992	(0.992)	254734	40.0000	33.2
43 Dimethylphthalate		163	5.810	5.810	(0.962)	1089088	40.0000	35.2
44 2,6-Dinitrotoluene		165	5.863	5.863	(0.971)	252831	40.0000	32.8
50 2,4-Dinitrotoluene		165	6.145	6.145	(1.018)	334220	40.0000	32.7
45 Acenaphthylene		152	5.945	5.945	(0.984)	1666713	40.0000	38.1
47 Acenaphthene		154	6.063	6.063	(1.004)	973838	40.0000	37.2
48 2,4-Dinitrophenol		184	6.057	6.057	(1.003)	104771	40.0000	34.4 (Q)
49 Dibenzofuran		168	6.181	6.181	(1.023)	1277902	40.0000	33.7
51 Diethylphthalate		149	6.287	6.287	(1.041)	1059428	40.0000	36.7
52 4-Nitrophenol		139	6.075	6.075	(1.006)	211838	40.0000	39.6
53 Fluorene		166	6.416	6.416	(1.062)	1132809	40.0000	37.1
54 4-Chlorophenylphenylether		204	6.392	6.392	(1.058)	483371	40.0000	37.5
55 2-Methyl-4,6-dinitrophenol		198	6.428	6.428	(0.911)	184539	40.0000	38.9
56 p-Nitroaniline		138	6.410	6.410	(1.061)	247705	40.0000	33.0
133 Diphenylamine		169	6.469	6.469	(0.917)	871532	40.0000	34.8
58 1,2-Diphenylhydrazine		77	6.498	6.498	(0.921)	1045567	40.0000	34.3
61 4-Bromophenylphenylether		248	6.716	6.716	(0.952)	264808	40.0000	41.1 (H)
63 Hexachlorobenzene		284	6.775	6.775	(0.960)	270561	40.0000	34.2
65 Pentachlorophenol		266	6.892	6.892	(0.977)	169503	40.0000	35.8
206 n-Octadecane		57	6.869	6.869	(0.973)	797995	40.0000	39.2
68 Phenanthrene		178	7.039	7.039	(0.997)	1566761	40.0000	36.8
69 Anthracene		178	7.069	7.069	(1.002)	1595437	40.0000	36.8
72 Di-n-butylphthalate		149	7.310	7.310	(1.036)	1788243	40.0000	38.7
76 Fluoranthene		202	7.751	7.751	(1.098)	1531590	40.0000	37.2

Compounds	QUANT SIG		RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
	MASS						CAL-AMT (ng/ul)	ON-COL (ng/ul)
79 Pyrene	202		7.892	7.892	(0.907)	1593654	40.0000	37.0
85 Butylbenzylphthalate	149		8.204	8.204	(0.943)	757996	40.0000	38.6
89 Benzo (a) anthracene	228		8.692	8.692	(0.999)	1420191	40.0000	36.5 (H)
92 Chrysene	228		8.728	8.728	(1.003)	1333078	40.0000	36.7
93 bis(2-Ethylhexyl)phthalate	149		8.569	8.569	(0.984)	1058534	40.0000	37.2 (H)
94 Di-n-octylphthalate	149		9.110	9.110	(0.893)	1768724	40.0000	36.5
95 Benzo (b) fluoranthene	252		9.716	9.716	(0.953)	1289484	40.0000	34.7 (H)
96 Benzo (k) fluoranthene	252		9.745	9.745	(0.956)	1416940	40.0000	38.1
97 Benzo (a) pyrene	252		10.122	10.122	(0.992)	1227658	40.0000	37.9
99 Indeno (1,2,3-cd) pyrene	276		11.863	11.863	(1.163)	1204623	40.0000	35.8 (H)
100 Dibenzo (a,h) anthracene	278		11.863	11.863	(1.163)	986733	40.0000	35.1
101 Benzo (ghi) perylene	276		12.380	12.380	(1.214)	1034720	40.0000	37.2
126 m-Dinitrobenzene	168		5.845	5.845	(0.968)	178196	40.0000	33.7
130 2,3,4,6-Tetrachlorophenol	232		6.251	6.251	(1.035)	223733	40.0000	36.5
143 Dinoseb	211		6.981	6.981	(0.989)	205546	40.0000	35.2
173 Carbazole	167		7.151	7.151	(1.013)	1307938	40.0000	34.6
184 p-Benzoquinone	54		3.404	3.404	(0.867)	35940	40.0000	40.5
192 Methoxychlor	227		8.557	8.557	(0.983)	586700	40.0000	45.6
211 p-Toluidine	106		4.204	4.204	(1.070)	505668	40.0000	54.2 (H)
210 m-Toluidine	106		4.228	4.228	(1.076)	504598	40.0000	41.8
26 Phthalic anhydride	104		5.322	5.322	(1.110)	224154	40.0000	42.7
179 Dibenzo (a,e) pyrene	302		16.327	16.327	(1.601)	410219	40.0000	24.9 (H)
214 1,4-Dinitrobenzene	168		5.787	5.787	(0.958)	164654	40.0000	33.5
215 2-Ethoxyethanol	59		2.257	2.257	(0.575)	316469	40.0000	39.6
216 Methylenebis (2-chloroaniline)	231		8.622	8.622	(0.991)	200666	40.0000	38.3
M 225 Trichlorophenols	196					573645	80.0000	73.6
M 226 Tetrachlorophenols	232					223733	40.0000	36.5
M 227 Benzo (b,k) fluoranthene	252					2706424	80.0000	75.7

QC Flag Legend

Q - Qualifier signal failed the ratio test.
H - Operator selected an alternate compound hit.

Data File: /chem/MSD1.i/s111409.b/s1k1261.d

Date: 17-NOV-2009 16:27

Client ID: MECAICV

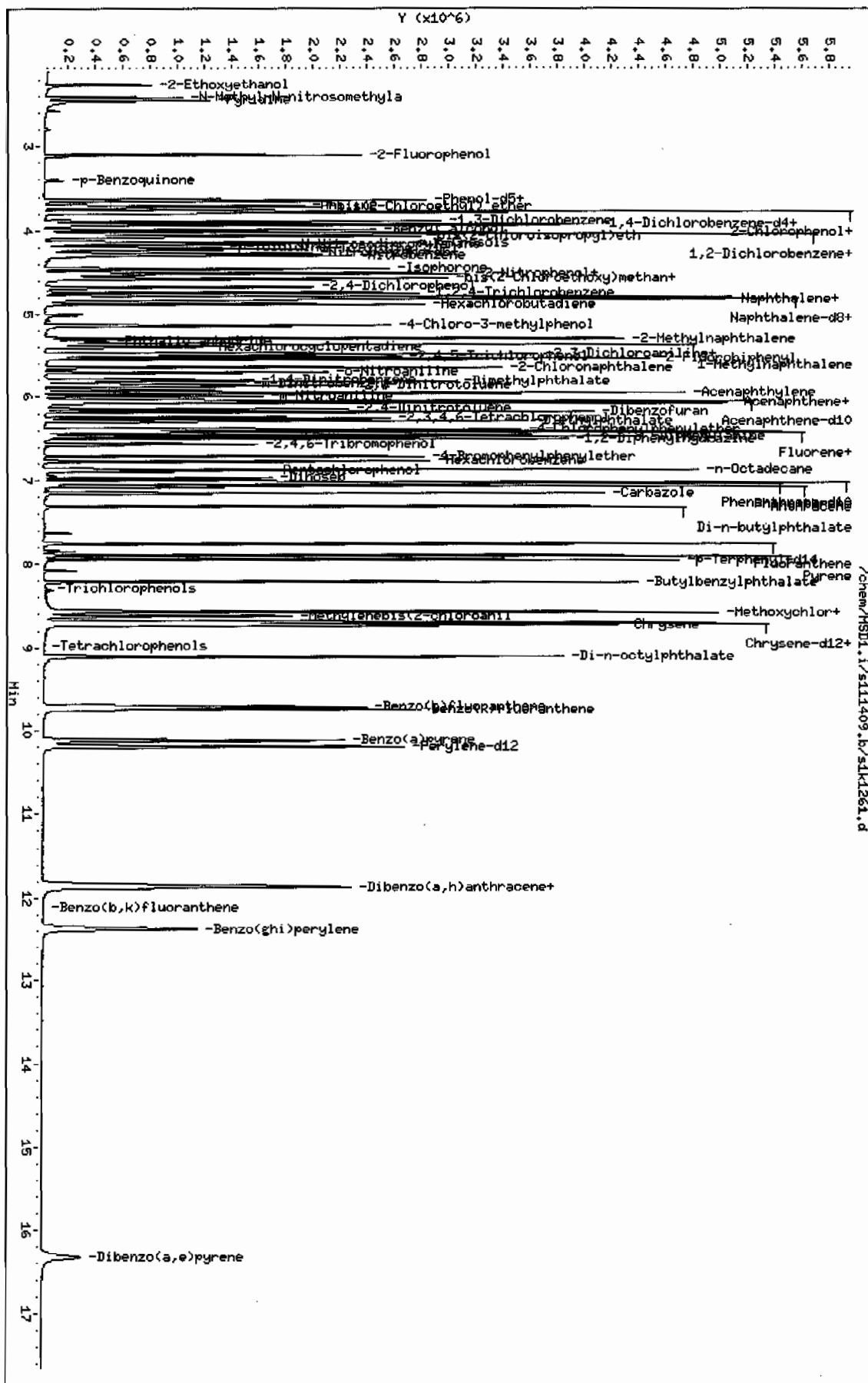
Sample Info: IUBN091027-09.3140 PPH111SMF11MECAICV

Column phase: 3M DB-SMS

Instrument: MSD1.i

Operator: any

Column diameter: 0.20



GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD1.i Injection Date: 15-JAN-2010 09:55
Lab File ID: sla1503.d Init. Cal. Date(s): 14-NOV-2009 17-NOV-2009
Analysis Type: Init. Cal. Times: 18:22 19:15
Lab Sample ID: WBN091225-12.2 Quant Type: ISTD
Method: /chem/MSD1.i/s011510.b/MSD1-M8270AQA-111409.m

COMPOUND	RRF / AMOUNT	RF40	CCAL	MIN	MAX	CURVE TYPE
			RRF40	RRF	%D / %DRIFT	
3 2-Fluorophenol	1.04478	0.95611	0.95611	0.000	-8.48756	Averaged
5 Phenol-d5	1.26984	1.20256	1.20256	0.000	-5.29818	Averaged
20 Nitrobenzene-d5	0.26360	0.26966	0.26966	0.000	2.29919	Averaged
39 2-Fluorobiphenyl	0.95800	1.01750	1.01750	0.000	6.21141	Averaged
60 2,4,6-Tribromophenol	0.11169	0.12481	0.12481	0.000	11.74613	Averaged
81 p-Terphenyl-d14	0.62787	0.62810	0.62810	0.000	0.03586	Averaged
1 N-Methyl-N-nitrosomethylami	0.56740	0.60793	0.60793	0.000	7.14328	Averaged
2 Pyridine	0.95281	0.74178	0.74178	0.000	-22.14804	Averaged
4 Aniline	0.55813	0.47997	0.47997	0.000	-14.00467	Averaged
6 Phenol	1.33800	1.26846	1.26846	0.001	-5.19724	Averaged|ccc
7 bis(2-Chloroethyl) ether	0.93081	0.89468	0.89468	0.000	-3.88147	Averaged
8 2-Chlorophenol	1.13717	1.05687	1.05687	0.000	-7.06088	Averaged
203 n-Decane	1.43160	1.42567	1.42567	0.000	-0.41388	Averaged
9 1,3-Dichlorobenzene	1.33431	1.17962	1.17962	0.000	-11.59321	Averaged
11 1,4-Dichlorobenzene	1.30799	1.16878	1.16878	0.001	-10.64336	Averaged|ccc
13 1,2-Dichlorobenzene	1.20798	1.12075	1.12075	0.000	-7.22153	Averaged
14 bis(2-Chloroisopropyl) ether	2.21709	2.01049	2.01049	0.000	-9.31812	Averaged
12 Benzyl alcohol	0.69141	0.67480	0.67480	0.000	-2.40194	Averaged
15 o-Cresol	0.84650	0.78879	0.78879	0.000	-6.81734	Averaged
18 m,p-Cresols	1.15179	1.03615	1.03615	0.000	-10.03925	Averaged
17 N-Nitrosodipropylamine	0.76238	0.68009	0.68009	0.050	-10.79326	Averaged|spcc
19 Hexachloroethane	0.47075	0.42989	0.42989	0.000	-8.67847	Averaged
21 Nitrobenzene	0.27466	0.27825	0.27825	0.000	1.31001	Averaged
22 Isophorone	0.48049	0.51415	0.51415	0.000	7.00560	Averaged
23 2-Nitrophenol	0.14580	0.12769	0.12769	0.001	-12.42310	Averaged|ccc
24 2,4-Dimethylphenol	0.23346	0.22840	0.22840	0.000	-2.16778	Averaged
25 bis(2-Chloroethoxy)methane	0.30933	0.29905	0.29905	0.000	-3.32439	Averaged
26 2,4-Dichlorophenol	0.21909	0.21369	0.21369	0.001	-2.46487	Averaged|ccc
27 Benzoic acid	0.16087	0.15278	0.15278	0.000	-5.02820	Averaged
28 1,2,4-Trichlorobenzene	0.24210	0.25182	0.25182	0.000	4.01301	Averaged
30 Naphthalene	0.83482	0.76068	0.76068	0.000	-8.88034	Averaged
204 alpha-Terpineol	0.19635	0.22945	0.22945	0.000	16.85421	Averaged
31 4-Chloroaniline	0.38123	0.33885	0.33885	0.000	-11.11598	Averaged
32 Hexachlorobutadiene	0.12432	0.13861	0.13861	0.001	11.49366	Averaged|ccc
33 4-Chloro-3-methylphenol	0.21406	0.21164	0.21164	0.001	-1.12749	Averaged|ccc
34 2-Methylnaphthalene	0.54880	0.49999	0.49999	0.000	-8.89288	Averaged

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD1.i Injection Date: 15-JAN-2010 09:55
Lab File ID: sla1503.d Init. Cal. Date(s): 14-NOV-2009 17-NOV-2009
Analysis Type: Init. Cal. Times: 18:22 19:15
Lab Sample ID: WBN091225-12.2 Quant Type: ISTD
Method: /chem/MSD1.i/s011510.b/MSD1-M8270QA-111409.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
35 1-Methylnaphthalene	0.49330	0.48765	0.48765	0.000	-1.14599	60.00000	Averaged
36 Hexachlorocyclopentadiene	0.12213	0.15256	0.15256	0.050	24.91935	60.00000	Averaged|spcc
205 2,3-Dichloroaniline	0.45401	0.46645	0.46645	0.000	2.74147	60.00000	Averaged
37 2,4,6-Trichlorophenol	0.26606	0.27444	0.27444	0.001	3.15259	20.00000	Averaged|ccc
38 2,4,5-Trichlorophenol	0.28290	0.29760	0.29760	0.000	5.19525	60.00000	Averaged
40 2-Chloronaphthalene	0.98748	0.87835	0.87835	0.000	-11.05138	60.00000	Averaged
42 o-Nitroaniline	0.30619	0.26619	0.26619	0.000	-13.06372	60.00000	Averaged
41 m-Nitroaniline	0.27055	0.16509	0.16509	0.000	-38.98095	60.00000	Averaged
43 Dimethylphthalate	1.08995	1.00299	1.00299	0.000	-7.97778	60.00000	Averaged
44 2,6-Dinitrotoluene	0.27156	0.23035	0.23035	0.000	-15.17612	60.00000	Averaged
50 2,4-Dinitrotoluene	0.35993	0.28547	0.28547	0.000	-20.68689	60.00000	Averaged
45 Acenaphthylene	1.54092	1.41859	1.41859	0.000	-7.93880	60.00000	Averaged
47 Acenaphthene	0.92259	0.86093	0.86093	0.001	-6.68330	20.00000	Averaged|ccc
48 2,4-Dinitrophenol	0.10718	0.09110	0.09110	0.050	-15.00972	60.00000	Averaged|spcc
49 Dibenzofuran	1.33422	1.19967	1.19967	0.000	-10.08452	60.00000	Averaged
51 Diethylphthalate	1.01616	1.02476	1.02476	0.000	0.84626	60.00000	Averaged
52 4-Nitrophenol	0.18871	0.16771	0.16771	0.050	-11.13063	60.00000	Averaged|spcc
53 Fluorene	1.07578	0.98913	0.98913	0.000	-8.05512	60.00000	Averaged
54 4-Chlorophenylphenylether	0.45420	0.46647	0.46647	0.000	2.70122	60.00000	Averaged
55 2-Methyl-4,6-dinitrophenol	0.10120	0.08492	0.08492	0.000	-16.08508	60.00000	Averaged
56 p-Nitroaniline	0.26458	0.15615	0.15615	0.000	-40.97986	60.00000	Averaged
133 Diphenylamine	0.53354	0.46085	0.46085	0.001	-13.62479	20.00000	Averaged|ccc
58 1,2-Diphenylhydrazine	0.65098	0.61408	0.61408	0.000	-5.66858	60.00000	Averaged
61 4-Bromophenylphenylether	0.13743	0.16367	0.16367	0.000	19.09393	60.00000	Averaged
63 Hexachlorobenzene	0.16869	0.17752	0.17752	0.000	5.23257	60.00000	Averaged
65 Pentachlorophenol	0.10117	0.09950	0.09950	0.001	-1.65102	20.00000	Averaged|ccc
206 n-Octadecane	0.43383	0.47670	0.47670	0.000	9.88361	60.00000	Averaged
68 Phenanthrene	0.90903	0.80793	0.80793	0.000	-11.12243	60.00000	Averaged
69 Anthracene	0.92447	0.79858	0.79858	0.000	-13.61771	60.00000	Averaged
72 Di-n-butylphthalate	0.98605	1.04711	1.04711	0.000	6.19219	60.00000	Averaged
76 Fluoranthene	0.87746	0.81223	0.81223	0.001	-7.43428	20.00000	Averaged|ccc
79 Pyrene	1.06293	1.04156	1.04156	0.000	-2.01086	60.00000	Averaged
85 Butylbenzylphthalate	0.48372	0.49727	0.49727	0.000	2.80136	60.00000	Averaged
89 Benzo(a)anthracene	0.95915	0.84862	0.84862	0.000	-11.52408	60.00000	Averaged
92 Chrysene	0.89647	0.81525	0.81525	0.000	-9.06028	60.00000	Averaged
93 bis(2-Ethylhexyl)phthalate	0.70275	0.77500	0.77500	0.000	10.27975	60.00000	Averaged

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD1.i Injection Date: 15-JAN-2010 09:55
Lab File ID: s1a1503.d Init. Cal. Date(s): 14-NOV-2009 17-NOV-2009
Analysis Type: Init. Cal. Times: 18:22 19:15
Lab Sample ID: WBN091225-12.2 Quant Type: ISTD
Method: /chem/MSD1.i/s011510.b/MSD1-M8270AQA-111409.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
94 Di-n-octylphthalate	1.30849	1.56832	1.56832	0.001	19.85731	20.00000	Averaged|ccc
95 Benzo(b)fluoranthene	39.07364	40.00000	0.98938	0.000	-2.31590	60.00000	Linear|
96 Benzo(k)fluoranthene	1.00298	0.89516	0.89516	0.000	-10.75002	60.00000	Averaged|
97 Benzo(a)pyrene	37.00233	40.00000	0.80846	0.001	-7.49418	20.00000	Linear|ccc
99 Indeno(1,2,3-cd)pyrene	33.56253	40.00000	0.76204	0.000	-16.09368	60.00000	Linear|
100 Dibenzo(a,h)anthracene	32.29134	40.00000	0.61295	0.000	-19.27166	60.00000	Linear|
101 Benzo(ghi)perylene	0.75165	0.65778	0.65778	0.000	-12.48808	60.00000	Averaged|
126 m-Dinitrobenzene	0.18653	0.15909	0.15909	0.000	-14.70977	60.00000	Averaged|
130 2,3,4,6-Tetrachlorophenol	0.21604	0.23115	0.23115	0.000	6.99282	60.00000	Averaged|
143 Dinoseb	0.12447	0.12274	0.12274	0.000	-1.39058	60.00000	Averaged|
173 Carbazole	0.80714	0.58143	0.58143	0.000	-27.96409	60.00000	Averaged|
184 p-Benzoquinone	35.36767	40.00000	0.05746	0.000	-11.58083	60.00000	Linear|
192 Methoxychlor	0.31747	0.50475	0.50475	0.000	58.99376	60.00000	Averaged|
211 p-Toluidine	0.70440	0.91062	0.91062	0.000	29.27558	60.00000	Averaged|
210 m-Toluidine	0.91072	1.03339	1.03339	0.000	13.47010	60.00000	Averaged|
26 Phthalic anhydride	32.25364	40.00000	0.07462	0.000	-19.36591	60.00000	Linear|
179 Dibenzo(a,e)pyrene	32.99247	40.00000	0.37928	0.000	-17.51883	60.00000	Linear|
214 1,4-Dinitrobenzene	0.17315	0.14254	0.14254	0.000	-17.67852	60.00000	Averaged|
215 2-Ethoxyethanol	0.60315	0.62854	0.62854	0.000	4.20952	60.00000	Averaged|
216 Methylenebis(2-chloroanilin	0.12921	0.06641	0.06641	0.000	-48.60511	60.00000	Averaged|
M 225 Trichlorophenols	0.27448	0.28602	0.28602	0.000	4.20526	60.00000	Averaged|
M 226 Tetrachlorophenols	0.21604	0.23115	0.23115	0.000	6.99282	60.00000	Averaged|
M 227 Benzo(b,k)fluoranthene	0.96552	0.94227	0.94227	0.000	-2.40878	60.00000	Averaged

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Data file : /chem/MSD1.i/s011510.b/s1a1503.d
Lab Smp Id: WBN091225-12.2 Client Smp ID: MEGACVS
Inj Date : 15-JAN-2010 09:55
Operator : AMY Inst ID: MSD1.i
Smp Info : |WBN091225-12.2|40 PPM|1|SVMF|1|MEGACVS
Misc Info : |MSD8270|WBN100107-02|
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD1.i/s011510.b/MSD1-M8270AQA-111409.m
Meth Date : 18-Jan-2010 12:17 amy01291 Quant Type: ISTD
Cal Date : 17-NOV-2009 17:42 Cal File: slk1264.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: MEGAICARE.sub
Target Version: 3.50
Processing Host: hpc1p1

Compounds	QUANT SIG	MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
							CAL-AMT	ON-COL
							(ng/ul)	(ng/ul)
* 10 1,4-Dichlorobenzene-d4		152	3.775	3.775	(1.000)	386947	40.0000	
* 29 Naphthalene-d8		136	4.634	4.634	(1.000)	1504644	40.0000	
* 46 Acenaphthene-d10		164	5.875	5.875	(1.000)	803203	40.0000	
* 67 Phenanthrene-d10		188	6.869	6.869	(1.000)	1308635	40.0000	
* 91 Chrysene-d12		240	8.492	8.492	(1.000)	1065383	40.0000	
* 98 Perylene-d12		264	9.833	9.833	(1.000)	898076	40.0000	
\$ 3 2-Fluorophenol		112	2.981	2.981	(0.790)	369963	40.0000	36.6
\$ 5 Phenol-d5		99	3.510	3.510	(0.930)	465326	40.0000	37.9
\$ 20 Nitrobenzene-d5		82	4.140	4.140	(0.893)	405749	40.0000	40.9
\$ 39 2-Fluorobiphenyl		172	5.375	5.375	(0.915)	817262	40.0000	42.5
\$ 60 2,4,6-Tribromophenol		329	6.416	6.416	(1.092)	100251	40.0000	44.7
\$ 81 p-Terphenyl-d14		244	7.780	7.780	(0.916)	669166	40.0000	40.0
1 N-Methyl-N-nitrosomethylamine		74	2.304	2.304	(0.610)	235236	40.0000	42.8
2 Pyridine		79	2.334	2.334	(0.618)	287029	40.0000	31.1
4 Aniline		66	3.563	3.563	(0.944)	185722	40.0000	34.4
6 Phenol		94	3.516	3.516	(0.931)	490827	40.0000	37.9
7 bis(2-Chloroethyl) ether		63	3.581	3.581	(0.949)	346195	40.0000	38.4
8 2-Chlorophenol		128	3.645	3.645	(0.966)	408954	40.0000	37.2
203 n-Decane		43	3.622	3.622	(0.959)	551660	40.0000	39.8
9 1,3-Dichlorobenzene		146	3.740	3.740	(0.991)	456451	40.0000	35.4
11 1,4-Dichlorobenzene		146	3.787	3.787	(1.003)	452254	40.0000	35.7
13 1,2-Dichlorobenzene		146	3.887	3.887	(1.030)	433670	40.0000	37.1
14 bis(2-Chloroisopropyl)ether		45	3.922	3.922	(1.039)	777955	40.0000	36.3
12 Benzyl alcohol		108	3.845	3.845	(1.019)	261113	40.0000	39.0
15 o-Cresol		107	3.904	3.904	(1.034)	305219	40.0000	37.3
18 m,p-Cresols		107	4.004	4.004	(1.061)	400937	40.0000	36.0

Compounds	QUANT SIG						AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE		CAL-AMT (ng/ul)	ON-COL (ng/ul)
=====	=====	==	=====	=====	=====		=====	=====
17 N-Nitrosodipropylamine	70	4.016	4.016	(1.064)	263159		40.0000	35.7
19 Hexachloroethane	117	4.110	4.110	(1.089)	166346		40.0000	36.5
21 Nitrobenzene	77	4.151	4.151	(0.896)	418672		40.0000	40.5
22 Isophorone	82	4.304	4.304	(0.929)	773611		40.0000	42.8
23 2-Nitrophenol	139	4.363	4.363	(0.942)	192121		40.0000	35.0
24 2,4-Dimethylphenol	122	4.363	4.363	(0.942)	343662		40.0000	39.1
25 bis(2-Chloroethoxy)methane	93	4.428	4.428	(0.956)	449957		40.0000	38.7
26 2,4-Dichlorophenol	162	4.528	4.528	(0.977)	321526		40.0000	39.0
27 Benzoic acid	105	4.434	4.434	(0.957)	229880		40.0000	38.0
28 1,2,4-Trichlorobenzene	180	4.587	4.587	(0.990)	378900		40.0000	41.6
30 Naphthalene	128	4.651	4.651	(1.004)	1144555		40.0000	36.4 (Q)
204 alpha-Terpineol	59	4.628	4.628	(0.999)	345237		40.0000	46.7
31 4-Chloroaniline	127	4.675	4.675	(1.009)	509852		40.0000	35.6
32 Hexachlorobutadiene	225	4.716	4.716	(1.018)	208554		40.0000	44.6
33 4-Chloro-3-methylphenol	107	4.992	4.992	(1.077)	318447		40.0000	39.5
34 2-Methylnaphthalene	142	5.128	5.128	(1.107)	752313		40.0000	36.4
35 1-Methylnaphthalene	142	5.198	5.198	(1.122)	733742		40.0000	39.5
36 Hexachlorocyclopentadiene	237	5.228	5.228	(0.890)	122539		40.0000	50.0
205 2,3-Dichloroaniline	161	5.328	5.328	(0.907)	374657		40.0000	41.1
37 2,4,6-Trichlorophenol	196	5.322	5.322	(0.906)	220434		40.0000	41.3
38 2,4,5-Trichlorophenol	196	5.351	5.351	(0.911)	239031		40.0000	42.1
40 2-Chloronaphthalene	162	5.481	5.481	(0.933)	705496		40.0000	35.6
42 o-Nitroaniline	65	5.545	5.545	(0.944)	213802		40.0000	34.8
41 m-Nitroaniline	138	5.839	5.839	(0.994)	132599		40.0000	24.4
43 Dimethylphthalate	163	5.651	5.651	(0.962)	805607		40.0000	36.8
44 2,6-Dinitrotoluene	165	5.710	5.710	(0.972)	185016		40.0000	33.9
50 2,4-Dinitrotoluene	165	5.992	5.992	(1.020)	229292		40.0000	31.7
45 Acenaphthylene	152	5.781	5.781	(0.984)	1139418		40.0000	36.8
47 Acenaphthene	154	5.898	5.898	(1.004)	691501		40.0000	37.3
48 2,4-Dinitrophenol	184	5.910	5.910	(1.006)	73169		40.0000	34.0 (Q)
49 Dibenzofuran	168	6.016	6.016	(1.024)	963577		40.0000	36.0
51 Diethylphthalate	149	6.134	6.134	(1.044)	823087		40.0000	40.3
52 4-Nitrophenol	139	5.939	5.939	(1.011)	134705		40.0000	35.5
53 Fluorene	166	6.251	6.251	(1.064)	794471		40.0000	36.8
54 4-Chlorophenylphenylether	204	6.234	6.234	(1.061)	374673		40.0000	41.1
55 2-Methyl-4,6-dinitrophenol	198	6.275	6.275	(0.914)	111128		40.0000	33.6
56 p-Nitroaniline	138	6.263	6.263	(1.066)	125423		40.0000	23.6
133 Diphenylamine	169	6.316	6.316	(0.920)	603079		40.0000	34.6
58 1,2-Diphenylhydrazine	77	6.339	6.339	(0.923)	803609		40.0000	37.7
61 4-Bromophenylphenylether	248	6.557	6.557	(0.955)	214185		40.0000	47.6
63 Hexachlorobenzene	284	6.616	6.616	(0.963)	232303		40.0000	42.1
65 Pentachlorophenol	266	6.739	6.739	(0.981)	130204		40.0000	39.3
206 n-Octadecane	57	6.716	6.716	(0.978)	623830		40.0000	44.0
68 Phenanthrene	178	6.881	6.881	(1.002)	1057282		40.0000	35.6
69 Anthracene	178	6.916	6.916	(1.007)	1045046		40.0000	34.6
72 Di-n-butylphthalate	149	7.157	7.157	(1.042)	1370282		40.0000	42.5
76 Fluoranthene	202	7.592	7.592	(1.105)	1062911		40.0000	37.0

Compounds	QUANT SIG					AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ng/ul)	ON-COL (ng/ul)
79 Pyrene	202	7.728	7.728	(0.910)	1109655	40.0000	39.2
85 Butylbenzylphthalate	149	8.033	8.033	(0.946)	529788	40.0000	41.1
89 Benzo (a)anthracene	228	8.480	8.480	(0.999)	904101	40.0000	35.4
92 Chrysene	228	8.510	8.510	(1.002)	868551	40.0000	36.4
93 bis(2-Ethylhexyl)phthalate	149	8.369	8.369	(0.985)	825668	40.0000	44.1
94 Di-n-octylphthalate	149	8.857	8.857	(0.901)	1408471	40.0000	47.9
95 Benzo (b)fluoranthene	252	9.404	9.404	(0.956)	888536	40.0000	39.1
96 Benzo (k)fluoranthene	252	9.433	9.433	(0.959)	803918	40.0000	35.7
97 Benzo (a)pyrene	252	9.774	9.774	(0.994)	726055	40.0000	37.0
99 Indeno (1,2,3-cd)pyrene	276	11.321	11.321	(1.151)	684367	40.0000	33.6
100 Dibenzo (a,h)anthracene	278	11.321	11.321	(1.151)	550477	40.0000	32.3
101 Benzo (ghi)perylene	276	11.786	11.786	(1.199)	590738	40.0000	35.0
126 m-Dinitrobenzene	168	5.698	5.698	(0.970)	127781	40.0000	34.1
130 2,3,4,6-Tetrachlorophenol	232	6.069	6.069	(1.033)	185657	40.0000	42.8
143 Dinoseb	211	6.828	6.828	(0.994)	160623	40.0000	39.4
173 Carbazole	167	7.004	7.004	(1.020)	760883	40.0000	28.8
184 p-Benzoquinone	54	3.275	3.275	(0.868)	22234	40.0000	35.4
192 Methoxychlor	227	8.357	8.357	(0.984)	537753	40.0000	63.6
211 p-Toluidine	106	4.057	4.057	(1.075)	352363	40.0000	51.7
210 m-Toluidine	106	4.081	4.081	(1.081)	399868	40.0000	45.4
26 Phthalic anhydride	104	5.169	5.169	(1.116)	112271	40.0000	32.2
179 Dibenzo (a,e)pyrene	302	15.292	15.292	(1.555)	340625	40.0000	33.0
214 1,4-Dinitrobenzene	168	5.639	5.639	(0.960)	114489	40.0000	32.9
215 2-Ethoxyethanol	59	2.151	2.151	(0.570)	243210	40.0000	41.7
216 Methylenebis(2-chloroaniline)	231	8.422	8.422	(0.992)	70747	40.0000	20.6
M 225 Trichlorophenols	196				459465	80.0000	83.4
M 226 Tetrachlorophenols	232				185657	40.0000	42.8
M 227 Benzo (b,k)fluoranthene	252				1692454	80.0000	78.1

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: /chem/MSD1.i/s011510,b/s1a1503,d

Date : 15-JAN-2010 09:55

Client ID: MEGACVS

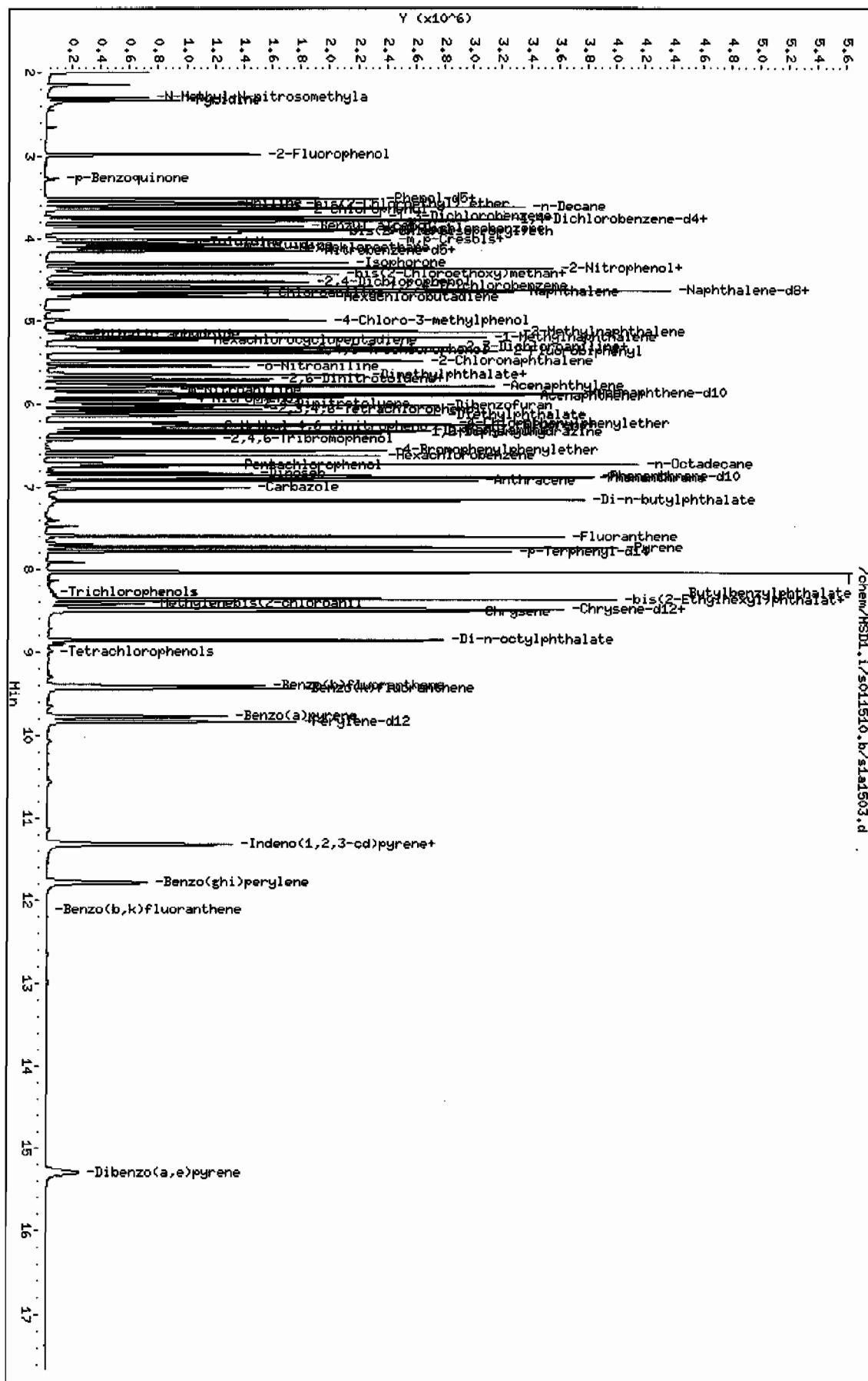
Sample Info: IWBNO91225-12.2140 PPM11SVMF11HEGACVS

Column phase: J&W DB-5MS

Instrument: HSD1, i

Operator: AMY

Column diameter: 0.20



GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD1.i Injection Date: 15-JAN-2010 11:06
Lab File ID: sla1504.d Init. Cal. Date(s): 14-NOV-2009 17-NOV-2009
Analysis Type: Init. Cal. Times: 18:22 19:15
Lab Sample ID: WBN100103-03.2 Quant Type: ISTD
Method: /chem/MSD1.i/s011510.b/MSD1-M8270AQA-111409.m

COMPOUND	RRF / AMOUNT	RF40	CCAL	MIN	MAX	CURVE TYPE
				RRF %D / %DRIFT	%D / %DRIFT	
209 Benzaldehyde	0.82400	0.85647	0.85647	0.000	3.94060	Averaged
16 Acetophenone	1.12880	1.12777	1.12777	0.000	-0.09060	Averaged
189 Caprolactam	0.07169	0.07730	0.07730	0.000	7.82288	Averaged
208 1,1'-Biphenyl	1.12050	1.16492	1.16492	0.000	3.96349	Averaged
207 Atrazine	0.04008	0.03430	0.03430	0.000	-14.42960	Averaged
77 Benzidine	0.36215	0.19850	0.19850	0.000	-45.18870	Averaged
90 3,3'-Dichlorobenzidine	0.27540	0.28495	0.28495	0.000	3.46606	Averaged
102 1,4-Dioxane	0.31387	0.32713	0.32713	0.000	4.22559	Averaged
103 Methyl methacrylate	0.17640	0.17331	0.17331	0.000	-1.75533	Averaged
104 Ethyl methacrylate	0.71299	0.74794	0.74794	0.000	4.90182	Averaged
105 2-Picoline	1.15384	1.15846	1.15846	0.000	0.39989	Averaged
106 N-Nitrosomethylethylamine	0.45426	0.44612	0.44612	0.000	-1.79185	Averaged
107 Methyl methanesulfonate	0.42570	0.44337	0.44337	0.000	4.15047	Averaged
108 N-Nitrosodiethylamine	0.47954	0.45038	0.45038	0.000	-6.07991	Averaged
109 Ethyl Methanesulfonate	0.59625	0.59171	0.59171	0.000	-0.76093	Averaged
110 Pentachloroethane	0.29115	0.30808	0.30808	0.000	5.81160	Averaged
111 N-Nitrosopyrrolidine	0.47509	0.46791	0.46791	0.000	-1.51153	Averaged
113 N-Nitrosomorpholine	0.61749	0.58962	0.58962	0.000	-4.51330	Averaged
114 o-Toluidine	1.65327	1.56337	1.56337	0.000	-5.43786	Averaged
115 N-Nitrosopiperidine	0.13156	0.13118	0.13118	0.000	-0.28686	Averaged
116 a,a-Dimethylphenethylamine	0.76801	0.57351	0.57351	0.000	-25.32524	Averaged
118 2,6-Dichlorophenol	0.19701	0.20651	0.20651	0.000	4.82339	Averaged
119 Hexachloropropene	0.08895	0.09698	0.09698	0.000	9.02207	Averaged
120 p-Phenylenediamine	0.20154	0.09271	0.09271	0.000	-53.99730	Averaged
121 N-Nitrosodi-n-butylamine	0.17172	0.16479	0.16479	0.000	-4.03627	Averaged
122 Safrole	0.17864	0.18523	0.18523	0.000	3.68886	Averaged
123 1,2,4,5-Tetrachlorobenzene	0.36713	0.41973	0.41973	0.000	14.32826	Averaged
124 Isosafrole	0.32761	0.33218	0.33218	0.000	1.39535	Averaged
125 1,4-Naphthoquinone	0.29676	0.33047	0.33047	0.000	11.35647	Averaged
127 Pentachlorobenzene	0.31451	0.37655	0.37655	0.000	19.72509	Averaged
128 1-Naphthylamine	0.89420	0.79226	0.79226	0.000	-11.40038	Averaged
129 2-Naphthylamine	0.97473	0.63325	0.63325	0.000	-35.03347	Averaged
131 5-Nitro-o-toluidine	0.28528	0.26860	0.26860	0.000	-5.84623	Averaged
136 1,3,5-Trinitrobenzene	0.11623	0.11198	0.11198	0.000	-3.65264	Averaged
137 Phenacetin	0.25708	0.26690	0.26690	0.000	3.81751	Averaged
138 Diallate	0.23112	0.24686	0.24686	0.000	6.80777	Averaged

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD1.i Injection Date: 15-JAN-2010 11:06
Lab File ID: s1a1504.d Init. Cal. Date(s): 14-NOV-2009 17-NOV-2009
Analysis Type: Init. Cal. Times: 18:22 19:15
Lab Sample ID: WBN100103-03.2 Quant Type: ISTD
Method: /chem/MSD1.i/s011510.b/MSD1-M8270AQA-111409.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
212 Cis Diallate	0.23999	0.26133	0.26133	0.000	8.89310	60.00000	Averaged
213 Trans Diallate	0.27191	0.29042	0.29042	0.000	6.80777	60.00000	Averaged
140 4-Aminobiphenyl	0.53614	0.43749	0.43749	0.000	-18.39975	60.00000	Averaged
141 Pentachloronitrobenzene	0.05324	0.06509	0.06509	0.000	22.24593	60.00000	Averaged
142 Pronamide	0.23368	0.25159	0.25159	0.000	7.66745	60.00000	Averaged
146 4-Nitroquinoline-1-oxide	0.00980	0.00929	0.00929	0.000	-5.21278	60.00000	Averaged
147 Methapyrilene	0.36822	0.40751	0.40751	0.000	10.66972	60.00000	Averaged
148 Isodrin	0.08609	0.10204	0.10204	0.000	18.52922	60.00000	Averaged
149 Aramite	0.04255	0.04807	0.04807	0.000	12.97692	60.00000	Averaged
150 Kepone	0.06308	0.06823	0.06823	0.000	8.16325	60.00000	Averaged
151 p-(Dimethylamino)azobenzene	0.28392	0.28319	0.28319	0.000	-0.25990	60.00000	Averaged
152 Chlorobenzilate	0.21994	0.30919	0.30919	0.000	40.58045	60.00000	Averaged
153 3,3'-Dimethylbenzidine	0.47945	0.43779	0.43779	0.000	-8.68981	60.00000	Averaged
155 2-Acetylaminofluorene	0.30801	0.33383	0.33383	0.000	8.38124	60.00000	Averaged
157 7,12Dimethylbenz(a)anthracene	0.42123	0.48279	0.48279	0.000	14.61440	60.00000	Averaged
158 3-Methylcholanthrene	0.36711	0.38106	0.38106	0.000	3.80101	60.00000	Averaged

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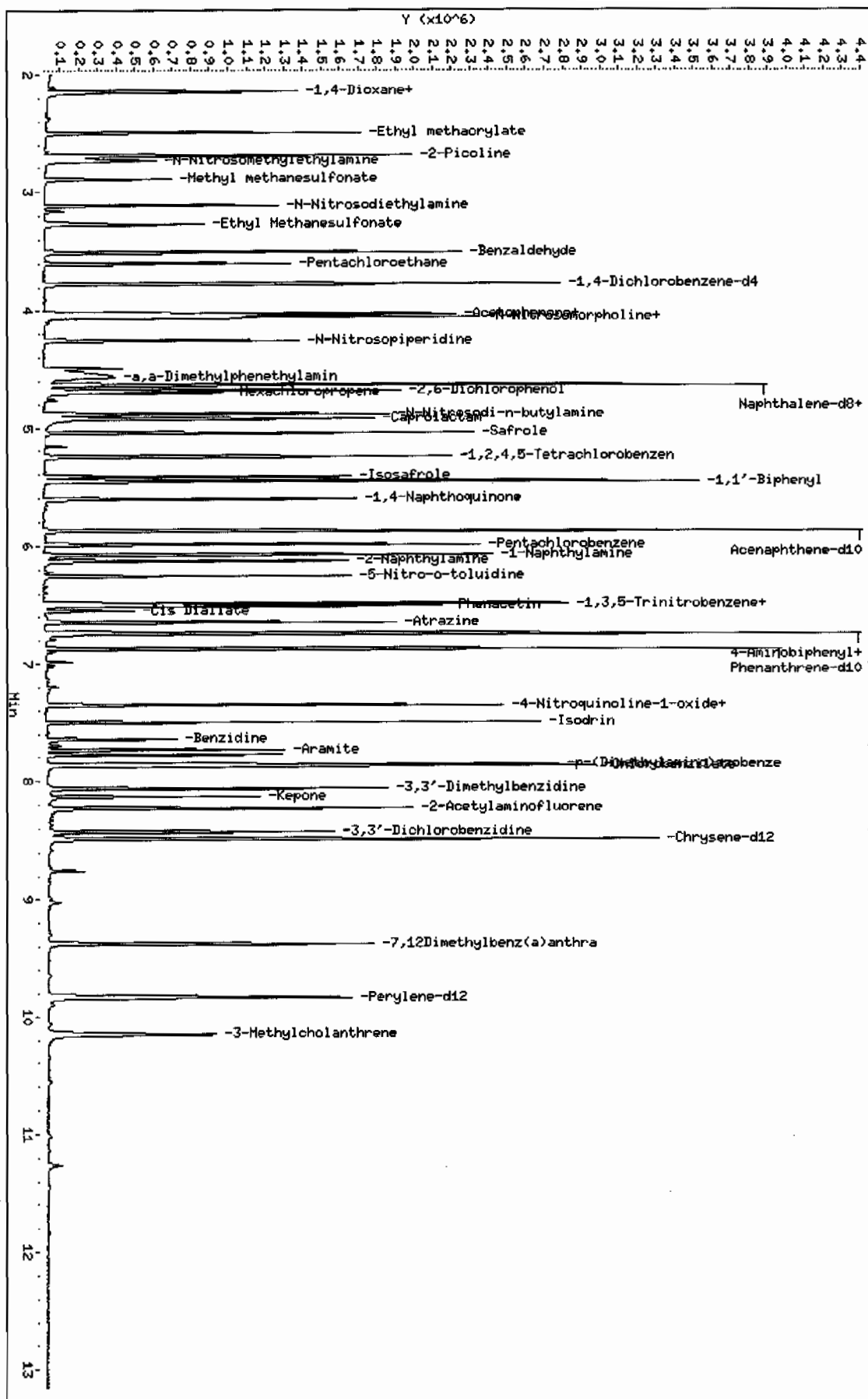
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Inj Date : 15-JAN-2010 11:06
Operator : AMY Inst ID: MSD1.i
Smp Info : |WBN100103-03.2|40 PPM|1|SVMF|1|APCVS
Misc Info : |MSD8270|WBN100107-02|
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD1.i/s011510.b/MSD1-M8270AQA-111409.m
Meth Date : 15-Jan-2010 11:50 amy01291 Quant Type: ISTD
Cal Date : 17-NOV-2009 17:42 Cal File: slk1264.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ap12.sub
Target Version: 3.50
Processing Host: hpclpl

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
						CAL-AMT (ng/ul)	ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	3.775	3.775	(1.000)	402145	40.0000	
* 29 Naphthalene-d8	136	4.634	4.634	(1.000)	1475087	40.0000	
* 46 Acenaphthene-d10	164	5.875	5.875	(1.000)	808400	40.0000	
* 67 Phenanthrene-d10	188	6.869	6.869	(1.000)	1342818	40.0000	
* 91 Chrysene-d12	240	8.486	8.486	(1.000)	1105675	40.0000	
* 98 Perylene-d12	264	9.833	9.833	(1.000)	868769	40.0000	
209 Benzaldehyde	77	3.504	3.504	(0.928)	344425	40.0000	41.6
16 Acetophenone	105	4.028	4.028	(1.067)	453529	40.0000	40.0
189 Caprolactam	113	4.922	4.922	(1.062)	114017	40.0000	43.1
208 1,1'-Biphenyl	154	5.451	5.451	(0.928)	941718	40.0000	41.6
207 Atrazine	173	6.640	6.640	(0.967)	46056	40.0000	34.2
77 Benzidine	184	7.645	7.645	(0.901)	219478	40.0000	21.9
90 3,3'-Dichlorobenzidine	252	8.428	8.428	(0.993)	315060	40.0000	41.4
102 1,4-Dioxane	88	2.152	2.152	(0.570)	131554	40.0000	41.7
103 Methyl methacrylate	100	2.140	2.140	(0.567)	69695	40.0000	39.3
104 Ethyl methacrylate	69	2.499	2.499	(0.662)	300780	40.0000	42.0
105 2-Picoline	93	2.693	2.693	(0.713)	465868	40.0000	40.2
106 N-Nitrosomethylethylamine	88	2.734	2.734	(0.724)	179406	40.0000	39.3
107 Methyl methanesulfonate	80	2.893	2.893	(0.766)	178300	40.0000	41.7
108 N-Nitrosodiethylamine	102	3.116	3.116	(0.825)	181120	40.0000	37.6
109 Ethyl Methanesulfonate	79	3.275	3.275	(0.868)	237955	40.0000	39.7
110 Pentachloroethane	167	3.599	3.599	(0.953)	123891	40.0000	42.3
111 N-Nitrosopyrrolidine	100	4.022	4.022	(1.065)	188167	40.0000	39.4
113 N-Nitrosomorpholine	56	4.040	4.040	(1.070)	237112	40.0000	38.2
114 o-Toluidine	106	4.051	4.051	(1.073)	628701	40.0000	37.8
115 N-Nitrosopiperidine	114	4.251	4.251	(0.917)	193507	40.0000	39.9

Compounds	QUANT SIG					AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ng/ul)	ON-COL (ng/ul)
=====	=====	==	=====	=====	=====	=====	=====
116 a,a-Dimethylphenethylamine	58	4.569	4.569	(0.986)	845978	40.0000	29.9
118 2,6-Dichlorophenol	162	4.681	4.681	(1.010)	304624	40.0000	41.9
119 Hexachloropropene	213	4.704	4.704	(1.015)	143053	40.0000	43.6
120 p-Phenylenediamine	108	4.634	4.634	(1.000)	136759	40.0000	18.4
121 N-Nitrosodi-n-butylamine	84	4.881	4.881	(1.053)	243085	40.0000	38.4 (Q)
122 Safrole	162	5.045	5.045	(1.089)	273226	40.0000	41.5
123 1,2,4,5-Tetrachlorobenzene	216	5.245	5.245	(0.893)	339310	40.0000	45.7
124 Isosafrole	162	5.416	5.416	(0.922)	268536	40.0000	40.6
125 1,4-Naphthoquinone	158	5.598	5.598	(0.953)	267148	40.0000	44.5
127 Pentachlorobenzene	250	5.987	5.987	(1.019)	304405	40.0000	47.9
128 1-Naphthylamine	143	6.075	6.075	(1.034)	640463	40.0000	35.4
129 2-Naphthylamine	143	6.122	6.122	(1.042)	511920	40.0000	26.0
131 5-Nitro-o-toluidine	152	6.251	6.251	(1.064)	217139	40.0000	37.7
136 1,3,5-Trinitrobenzene	75	6.481	6.481	(0.943)	150372	40.0000	38.5
137 Phenacetin	108	6.504	6.504	(0.947)	358396	40.0000	41.5
138 Diallate	86	6.487	6.487	(0.944)	331483	40.0000	42.7
212 Cis Diallate	86	6.545	6.545	(0.953)	52638	6.00000	6.5
213 Trans Diallate	86	6.487	6.487	(0.944)	331483	34.0000	36.3
140 4-Aminobiphenyl	169	6.728	6.728	(0.979)	587469	40.0000	32.6
141 Pentachloronitrobenzene	237	6.745	6.745	(0.982)	87400	40.0000	48.9
142 Pronamide	173	6.740	6.740	(0.981)	337846	40.0000	43.1
146 4-Nitroquinoline-1-oxide	101	7.339	7.339	(1.068)	12479	40.0000	37.9
147 Methapyrilene	58	7.351	7.351	(1.070)	547207	40.0000	44.3
148 Isodrin	193	7.498	7.498	(1.092)	137026	40.0000	47.4
149 Aramite	185	7.734	7.734	(1.126)	64555	40.0000	45.2
150 Kepone	272	8.128	8.128	(1.183)	91626	40.0000	43.3
151 p-(Dimethylamino)azobenzene	120	7.857	7.857	(0.926)	313111	40.0000	39.9
152 Chlorobenzilate	251	7.869	7.869	(0.927)	341861	40.0000	56.2
153 3,3'-Dimethylbenzidine	212	8.057	8.057	(0.949)	484054	40.0000	36.5
155 2-Acetylaminofluorene	181	8.228	8.228	(0.970)	369105	40.0000	43.4
157 7,12Dimethylbenz(a)anthracene	256	9.375	9.375	(0.953)	419429	40.0000	45.8
158 3-Methylcholanthrene	268	10.157	10.157	(1.033)	331057	40.0000	41.5

QC Flag Legend

Q - Qualifier signal failed the ratio test.



QC Data

Data File: /chem/MSD1.i/s111409,b/s1k1201,d

Page 1

Date : 14-NOV-2009 17:38

Client ID: DFTPP

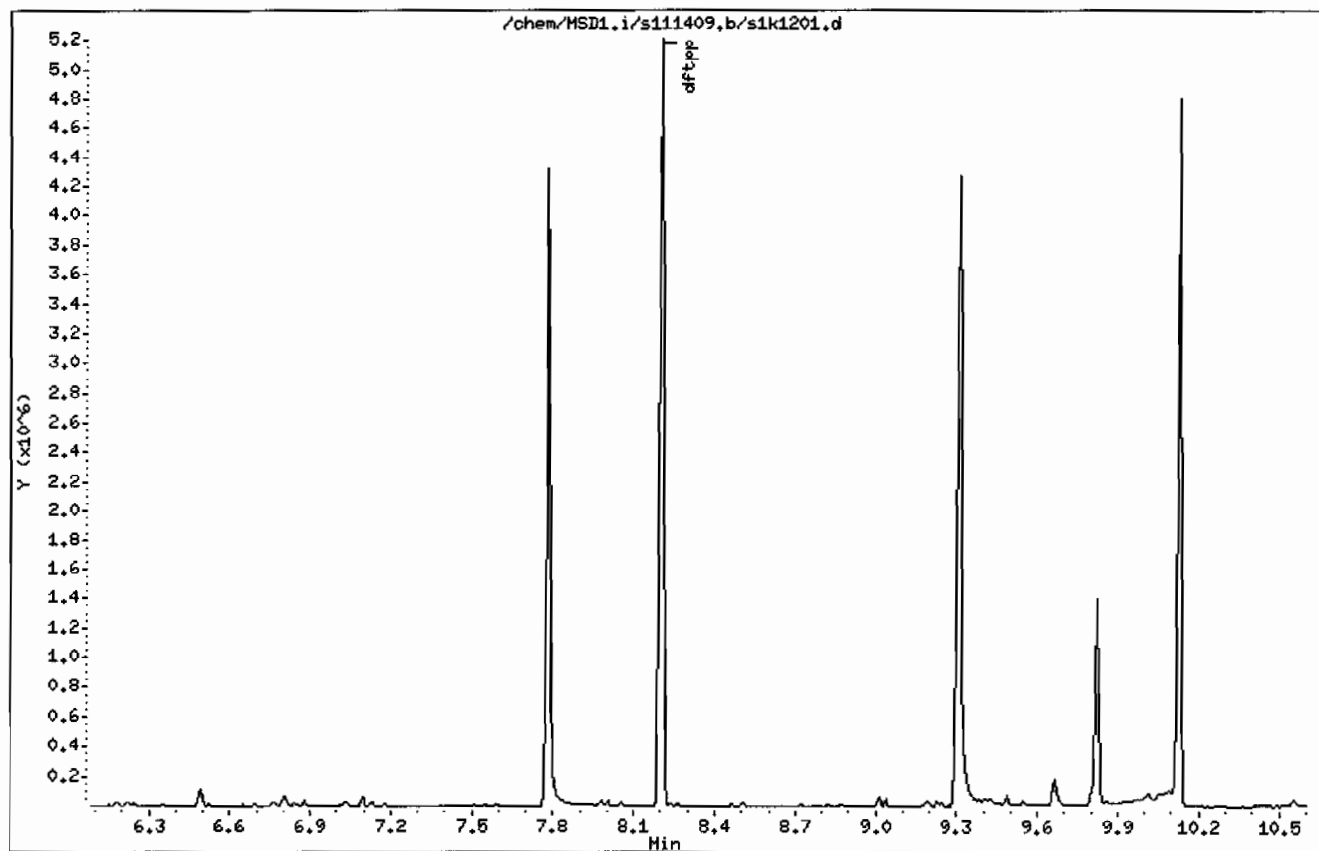
Instrument: MSD1.i

Sample Info: IWBNO91101-01150 PPH11SVMF111DFTPP

Operator: AMY

Column phase: J&W DB-5MS

Column diameter: 0.20



Date : 14-NOV-2009 17:38

Client ID: DFTPP

Instrument: MSD1.i

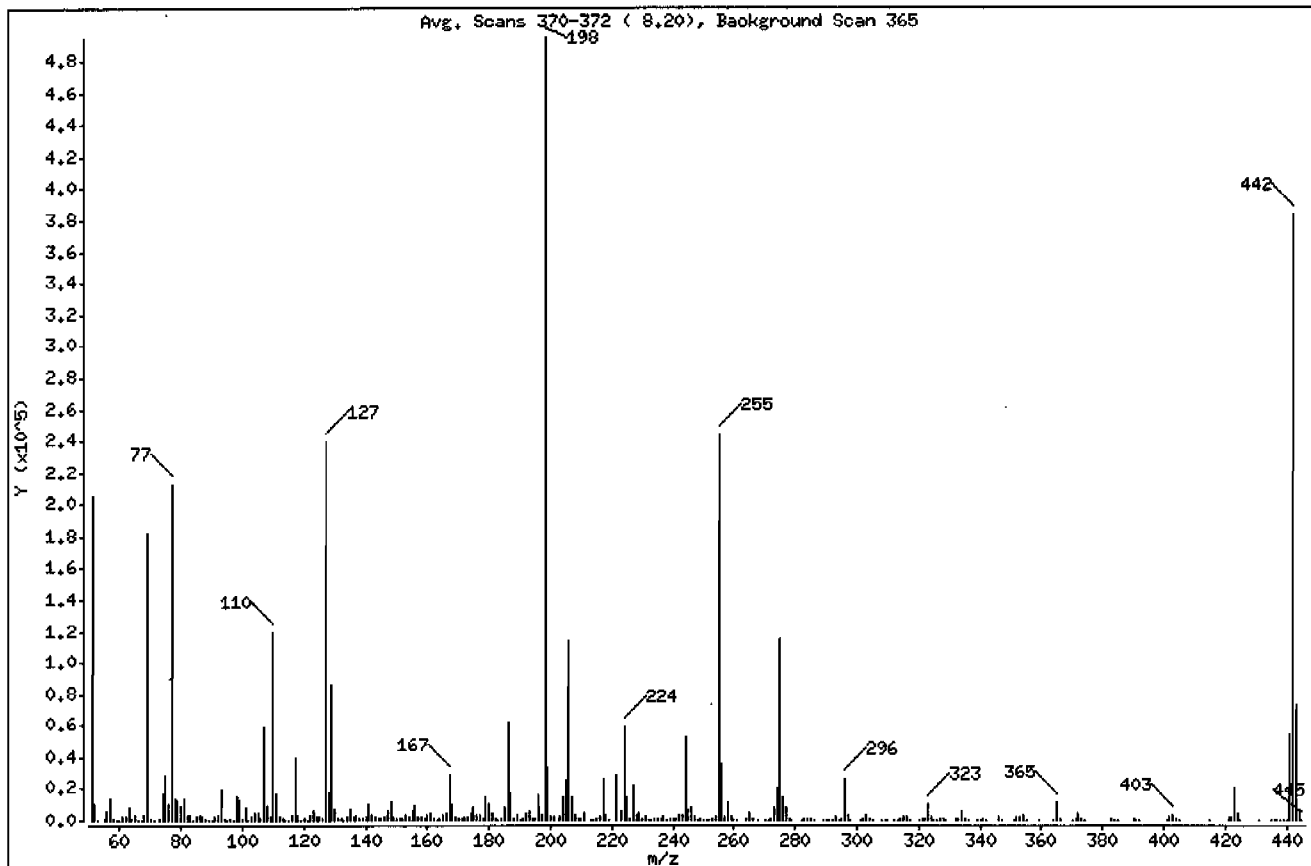
Sample Info: IWBNO91101-01150 PPM11SVNF11IDFTPP

Operator: AMY

Column phase: J&W DB-5MS

Column diameter: 0.20

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	41.33
68	Less than 2.00% of mass 69	0.66 (1.81)
69	Mass 69 relative abundance	36.68
70	Less than 2.00% of mass 69	0.20 (0.55)
127	40.00 - 60.00% of mass 198	48.32
197	Less than 1.00% of mass 198	0.69
199	5.00 - 9.00% of mass 198	6.57
275	10.00 - 30.00% of mass 198	23.31
365	Greater than 1.00% of mass 198	2.23
441	Present, but less than mass 443	11.00
442	Greater than 40.00% of mass 198	77.37
443	17.00 - 23.00% of mass 442	14.83 (19.16)

Date : 14-NOV-2009 17:38

Client ID: DFTPP

Instrument: MSD1.i

Sample Info: INBN091101-01150 PPH11SVHF11DFTPP

Operator: AMY

Column phase: J&W DB-5MS

Column diameter: 0.20

Data File: sik1201.d

Spectrum: Avg. Scans 370-372 (8.20), Background Scan 365

Location of Maximum: 198.00

Number of points: 312

m/z	Y	m/z	Y	m/z	Y	m/z	Y
51.00	204544	132.00	849	213.00	322	304.00	857
52.00	10058	133.00	398	214.00	81	305.00	126
53.00	476	134.00	2213	215.00	1065	308.00	339
55.00	808	135.00	6445	216.00	2209	309.00	249
56.00	5675	136.00	2682	217.00	25976	310.00	361
57.00	13163	137.00	3409	218.00	3600	312.00	52
58.00	676	138.00	864	219.00	390	313.00	288
59.00	142	139.00	1285	221.00	28416	314.00	1372
60.00	58	140.00	1711	223.00	5970	315.00	2833
61.00	2414	141.00	10495	224.00	59288	316.00	1731
62.00	2627	142.00	3783	225.00	15318	317.00	279
63.00	7561	143.00	2378	226.00	1533	320.00	54
64.00	1048	144.00	706	227.00	21184	321.00	903
65.00	3902	145.00	666	228.00	3165	322.00	596
66.00	253	146.00	1908	229.00	4804	323.00	9908
67.00	264	147.00	5356	230.00	759	324.00	1942
68.00	3280	148.00	10849	231.00	2133	325.00	119
69.00	181568	149.00	2326	232.00	408	326.00	93
70.00	999	150.00	640	233.00	460	327.00	1701
71.00	119	151.00	1554	234.00	1483	328.00	891
73.00	1219	152.00	808	235.00	1658	329.00	88
74.00	17536	153.00	3187	236.00	1183	332.00	578
75.00	28056	154.00	2701	237.00	1728	333.00	855
76.00	9746	155.00	5991	238.00	324	334.00	5817
77.00	212736	156.00	9066	239.00	813	335.00	1475
78.00	13840	157.00	1942	240.00	775	336.00	75
79.00	12099	158.00	1971	241.00	1214	339.00	62
80.00	9416	159.00	1574	242.00	3186	340.00	77
81.00	13432	160.00	3233	243.00	3508	341.00	1027
82.00	3448	161.00	4832	244.00	51832	342.00	243
83.00	3440	162.00	1519	245.00	6691	346.00	2015
84.00	276	163.00	414	246.00	8221	347.00	283
85.00	2469	164.00	763	247.00	1725	351.00	182
86.00	3499	165.00	3823	248.00	403	352.00	2745
87.00	1914	166.00	4542	249.00	1698	353.00	2043

Date : 14-NOV-2009 17:38

Client ID: DFTPP

Instrument: MSD1.i

Sample Info: IWBEN091101-01150 PPH11ISVHF11IDFTPP

Operator: AMY

Column phase: J&W DB-5MS

Column diameter: 0.20

Data File: s1k1201.d

Spectrum: Avg. Scans 370-372 (8.20), Background Scan 365

Location of Maximum: 198.00

Number of points: 312

m/z	Y	m/z	Y	m/z	Y	m/z	Y
88.00	945	167.00	28056	250.00	338	354.00	3347
89.00	408	168.00	9882	251.00	378	355.00	568
90.00	81	169.00	1949	252.00	461	359.00	68
91.00	2811	170.00	666	253.00	965	364.00	82
92.00	3305	171.00	868	254.00	2194	365.00	11049
93.00	19392	172.00	1736	255.00	243712	366.00	1525
94.00	1530	173.00	2151	256.00	34792	370.00	312
95.00	401	174.00	4365	257.00	2654	371.00	749
96.00	1021	175.00	8331	258.00	11699	372.00	5103
97.00	481	176.00	2950	259.00	1976	373.00	1317
98.00	14829	177.00	3734	260.00	354	374.00	211
99.00	12143	178.00	1429	261.00	488	383.00	1475
100.00	1081	179.00	14903	264.00	588	384.00	413
101.00	7582	180.00	10676	265.00	4651	385.00	112
102.00	501	181.00	5074	266.00	630	390.00	664
103.00	2806	182.00	848	268.00	97	391.00	481
104.00	4764	183.00	484	270.00	316	392.00	349
105.00	4470	184.00	1118	271.00	565	401.00	323
106.00	1531	185.00	7578	272.00	574	402.00	2059
107.00	58720	186.00	61632	273.00	7763	403.00	3027
108.00	9198	187.00	16824	274.00	20360	404.00	981
109.00	1983	188.00	1678	275.00	115400	405.00	157
110.00	119360	189.00	3368	276.00	14998	415.00	61
111.00	17336	190.00	542	277.00	8371	421.00	2728
112.00	2224	191.00	1652	278.00	1328	422.00	2498
113.00	793	192.00	4637	279.00	337	423.00	19928
114.00	277	193.00	5425	282.00	172	424.00	3991
115.00	405	194.00	1196	283.00	908	425.00	403
116.00	3276	195.00	960	284.00	671	431.00	50
117.00	39312	196.00	15938	285.00	1513	435.00	182
118.00	2868	197.00	3428	286.00	245	436.00	64
119.00	376	198.00	494976	289.00	275	437.00	123
120.00	724	199.00	32528	290.00	365	438.00	300
121.00	279	200.00	2387	291.00	237	439.00	370
122.00	3763	201.00	2747	292.00	481	440.00	354

Date : 14-NOV-2009 17:38

Client ID: DFTPP

Instrument: MSD1.i

Sample Info: IWBEN091101-01150 PPH11ISVHF111DFTPP

Operator: AMY

Column phase: J&W DB-5MS

Column diameter: 0.20

Data File: s1k1201.d

Spectrum: Avg. Scans 370-372 (8.20), Background Scan 365

Location of Maximum: 198.00

Number of points: 312

m/z	Y	m/z	Y	m/z	Y	m/z	Y
123.00	6008	203.00	2693	293.00	2054	441.00	54440
124.00	2602	204.00	14604	294.00	532	442.00	382976
125.00	2647	205.00	25208	295.00	657	443.00	73384
126.00	904	206.00	113680	296.00	26240	444.00	6543
127.00	239168	207.00	14454	297.00	3789	445.00	363
128.00	17576	208.00	3160	298.00	253		
129.00	85072	209.00	1021	301.00	417		
130.00	7156	210.00	801	302.00	580		
131.00	1445	211.00	4362	303.00	3041		

Data File: /chem/HSD1.i/s111409,b/s1k1213.d

Page 1

Date : 15-NOV-2009 14:50

Client ID: DFTPP

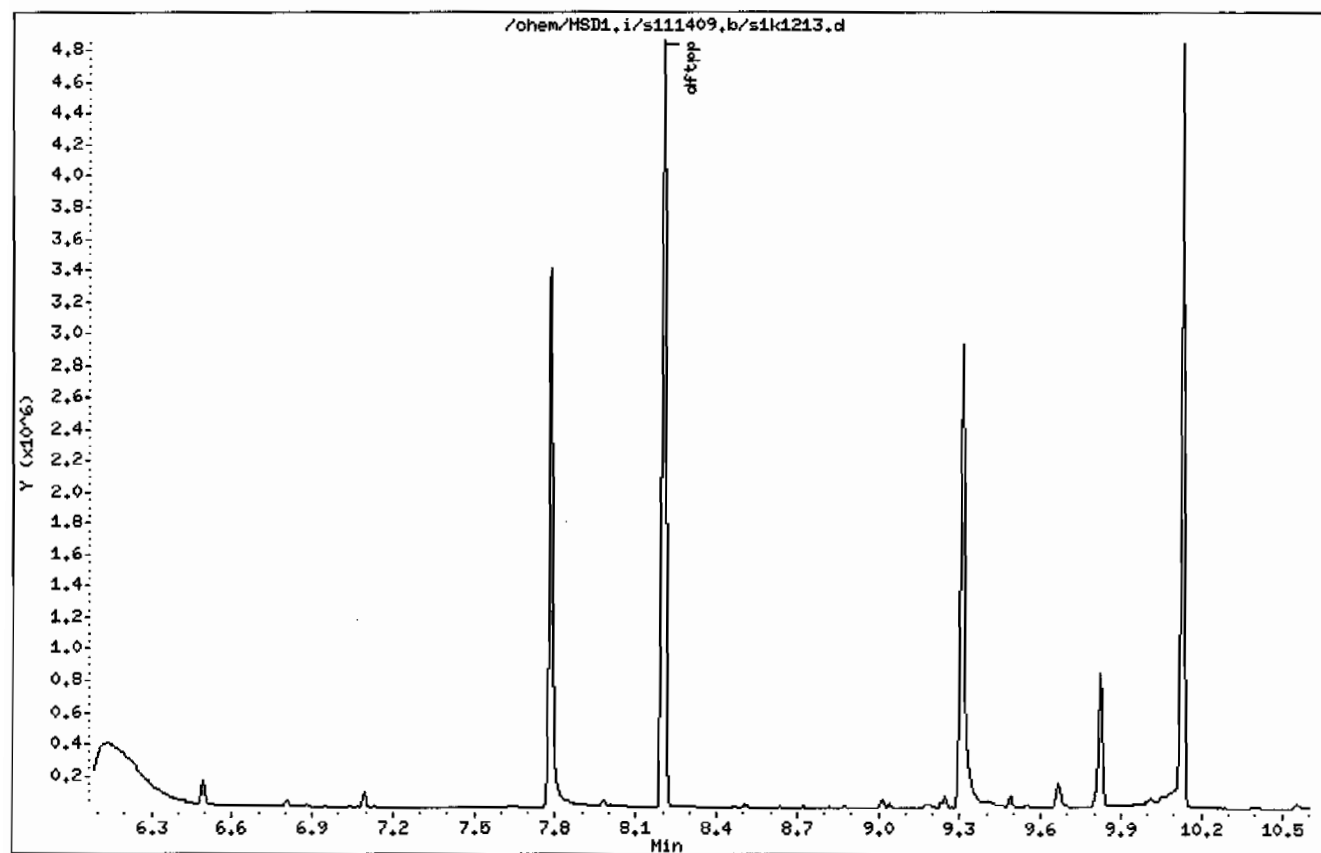
Instrument: HSD1.i

Sample Info: IWB091101-01150 PPH11SVHF11IDFTPP

Operator: AMY

Column phase: J&W DB-5MS

Column diameter: 0,20



Date : 15-NOV-2009 14:50

Client ID: DFTTP

Instrument: MSD1.1

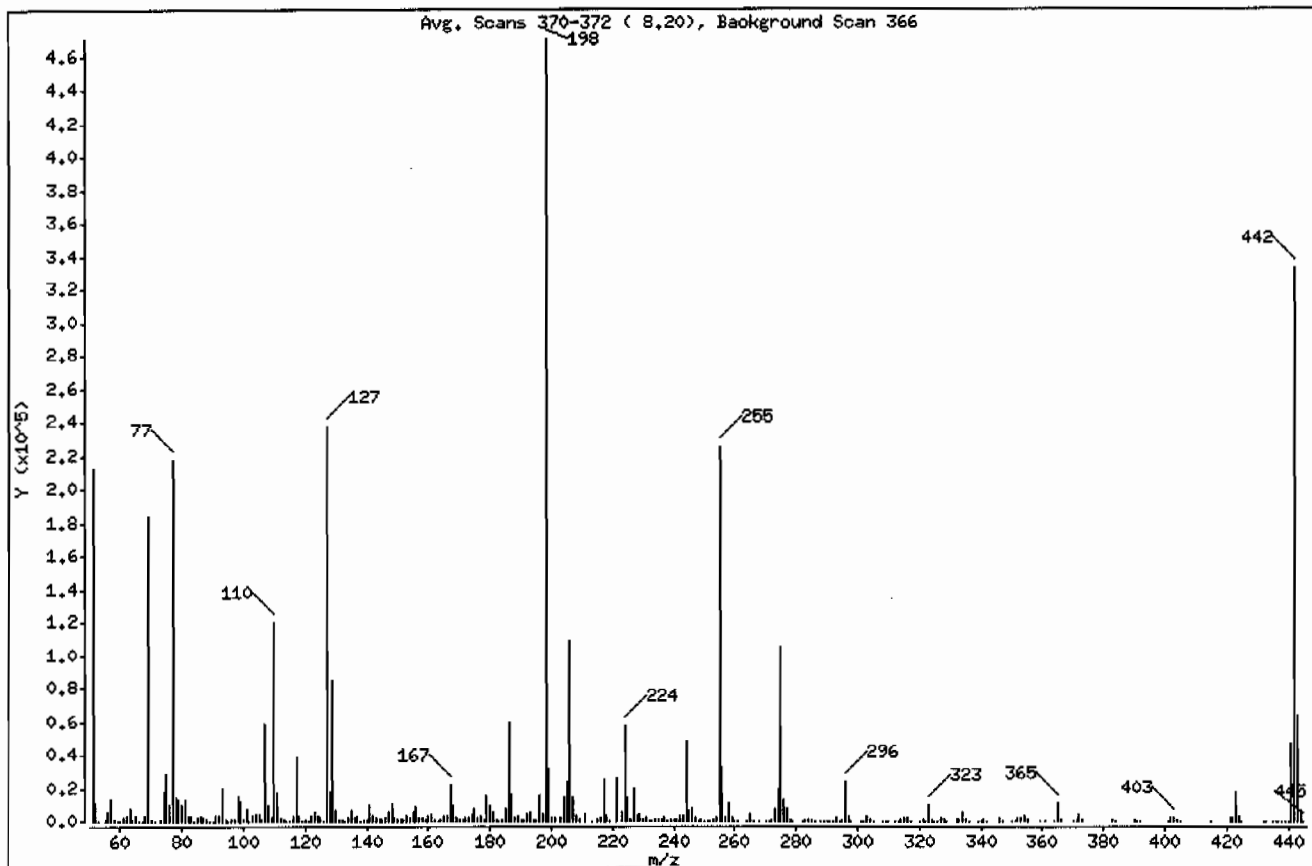
Sample Info: IWBNO91101-01150 PPH11SVMF111DFTTP

Operator: AMY

Column phase: J&W DB-5MS

Column diameter: 0.20

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	45.07
68	Less than 2.00% of mass 69	0.69 (1.77)
69	Mass 69 relative abundance	39.06
70	Less than 2.00% of mass 69	0.20 (0.51)
127	40.00 - 60.00% of mass 198	50.24
197	Less than 1.00% of mass 198	0.94
199	5.00 - 9.00% of mass 198	6.64
275	10.00 - 30.00% of mass 198	22.36
365	Greater than 1.00% of mass 198	2.27
441	Present, but less than mass 443	9.91
442	Greater than 40.00% of mass 198	70.70
443	17.00 - 23.00% of mass 442	13.63 (19.28)

Date : 15-NOV-2009 14:50

Client ID: DFTPP

Instrument: MSD1.i

Sample Info: IWBNO91101-01150 PPH11SVHF111DFTPP

Operator: AMY

Column phase: J&W DB-5MS

Column diameter: 0.20

Data File: s1k1213.d

Spectrum: Avg. Scans 370-372 (8.20), Background Scan 366

Location of Maximum: 198.00

Number of points: 312

m/z	Y	m/z	Y	m/z	Y	m/z	Y
51.00	212096	132.00	898	215.00	1069	305.00	54
52.00	10563	133.00	158	216.00	2175	308.00	369
53.00	539	134.00	2246	217.00	25096	309.00	234
55.00	827	135.00	6673	218.00	3427	310.00	330
56.00	5710	136.00	2589	219.00	310	312.00	53
57.00	13040	137.00	3388	221.00	26264	313.00	225
58.00	622	138.00	481	223.00	5732	314.00	1148
59.00	197	139.00	738	224.00	57128	315.00	2673
60.00	264	140.00	1183	225.00	14268	316.00	1636
61.00	2458	141.00	10022	226.00	1583	317.00	257
62.00	2719	142.00	3500	227.00	19912	320.00	120
63.00	7568	143.00	2527	228.00	3016	321.00	868
64.00	1100	144.00	604	229.00	4436	322.00	443
65.00	3684	145.00	642	230.00	645	323.00	9345
66.00	306	146.00	1966	231.00	2162	324.00	1574
67.00	172	147.00	5499	232.00	373	325.00	117
68.00	3245	148.00	10590	233.00	410	326.00	63
69.00	183808	149.00	2267	234.00	1277	327.00	1667
70.00	937	150.00	711	235.00	1617	328.00	859
71.00	201	151.00	1389	236.00	1067	329.00	66
73.00	1312	152.00	1009	237.00	1713	332.00	666
74.00	16976	153.00	3123	238.00	252	333.00	761
75.00	27896	154.00	2582	239.00	815	334.00	5270
76.00	9904	155.00	5732	240.00	635	335.00	1342
77.00	217344	156.00	8806	241.00	1337	336.00	127
78.00	14484	157.00	1860	242.00	2922	339.00	65
79.00	12543	158.00	1872	243.00	3255	340.00	61
80.00	9582	159.00	1459	244.00	47840	341.00	1023
81.00	13483	160.00	3146	245.00	6361	342.00	289
82.00	3494	161.00	4861	246.00	7662	346.00	1844
83.00	3404	162.00	1440	247.00	1632	347.00	399
84.00	268	163.00	441	248.00	425	350.00	54
85.00	2429	164.00	756	249.00	1557	351.00	146
86.00	3717	165.00	3644	250.00	323	352.00	2683
87.00	1777	166.00	3330	251.00	376	353.00	1903

Date : 15-NOV-2009 14:50

Client ID: DFTPP

Instrument: MSD1.i

Sample Info: IWBNO91101-01150 PPH11SVMF11DFTPP

Operator: AMY

Column phase: J&W DB-5MS

Column diameter: 0.20

Data File: s1k1213.d

Spectrum: Avg. Scans 370-372 (8.20), Background Scan 366

Location of Maximum: 198.00

Number of points: 312

m/z	Y	m/z	Y	m/z	Y	m/z	Y
88.00	868	167.00	21384	262.00	497	354.00	2848
89.00	353	168.00	9329	253.00	1026	355.00	645
90.00	52	169.00	1925	264.00	2307	359.00	128
91.00	2960	170.00	698	255.00	224896	361.00	54
92.00	3280	171.00	771	256.00	32856	364.00	139
93.00	19472	172.00	1741	257.00	2457	365.00	10703
94.00	1413	173.00	2444	258.00	11321	366.00	1552
95.00	284	174.00	4219	259.00	1877	370.00	274
96.00	1152	175.00	8099	260.00	305	371.00	720
97.00	591	176.00	2630	261.00	356	372.00	4645
98.00	14679	177.00	3711	264.00	230	373.00	1151
99.00	12313	178.00	1199	265.00	4470	383.00	1268
100.00	1108	179.00	14622	266.00	429	384.00	380
101.00	7679	180.00	10168	268.00	129	390.00	651
102.00	505	181.00	5015	270.00	325	391.00	487
103.00	2879	182.00	784	271.00	443	392.00	279
104.00	4625	183.00	540	272.00	688	401.00	276
105.00	4311	184.00	1176	273.00	7045	402.00	1862
106.00	1512	185.00	7084	274.00	19240	403.00	2656
107.00	58544	186.00	59904	275.00	105256	404.00	848
108.00	9265	187.00	16158	276.00	13094	405.00	140
109.00	1897	188.00	1716	277.00	7627	415.00	133
110.00	119952	189.00	3108	278.00	1312	421.00	2323
111.00	16904	190.00	572	279.00	308	422.00	2190
112.00	2240	191.00	1592	282.00	136	423.00	16944
113.00	758	192.00	4599	283.00	867	424.00	3191
114.00	126	193.00	5084	284.00	734	425.00	414
115.00	267	194.00	1198	285.00	1299	432.00	51
116.00	3229	195.00	880	286.00	172	433.00	63
117.00	38800	196.00	15085	288.00	53	435.00	138
118.00	2837	197.00	4415	289.00	263	436.00	193
119.00	448	198.00	470656	290.00	271	437.00	144
120.00	769	199.00	31248	291.00	161	438.00	208
121.00	319	200.00	2323	292.00	403	439.00	422
122.00	3761	201.00	2603	293.00	1968	440.00	420

Date : 15-NOV-2009 14:50

Client ID: DFTPP

Instrument: MSD1.i

Sample Info: IWBNO91101-01150 PPM11SVMF11IDFTPP

Operator: AMY

Column phase: J&W DB-5MS

Column diameter: 0.20

Data File: s1k1213.d

Spectrum: Avg. Scans 370-372 (8,20), Background Scan 366

Location of Maximum: 198.00

Number of points: 312

m/z	Y	m/z	Y	m/z	Y	m/z	Y
123.00	5880	203.00	2606	294.00	491	441.00	46632
124.00	2783	204.00	13871	295.00	593	442.00	332736
125.00	2563	205.00	24136	296.00	24248	443.00	64136
126.00	365	206.00	107936	297.00	3568	444.00	5493
127.00	236480	207.00	13718	298.00	201	445.00	305
128.00	17448	208.00	3264	301.00	372		
129.00	84656	209.00	932	302.00	462		
130.00	6942	211.00	4014	303.00	2821		
131.00	1354	213.00	308	304.00	785		

Data File: /chem/MSD1.i/s111409.b/s1k1259.d

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Date : 17-NOV-2009 15:48

Client ID: DFTPP

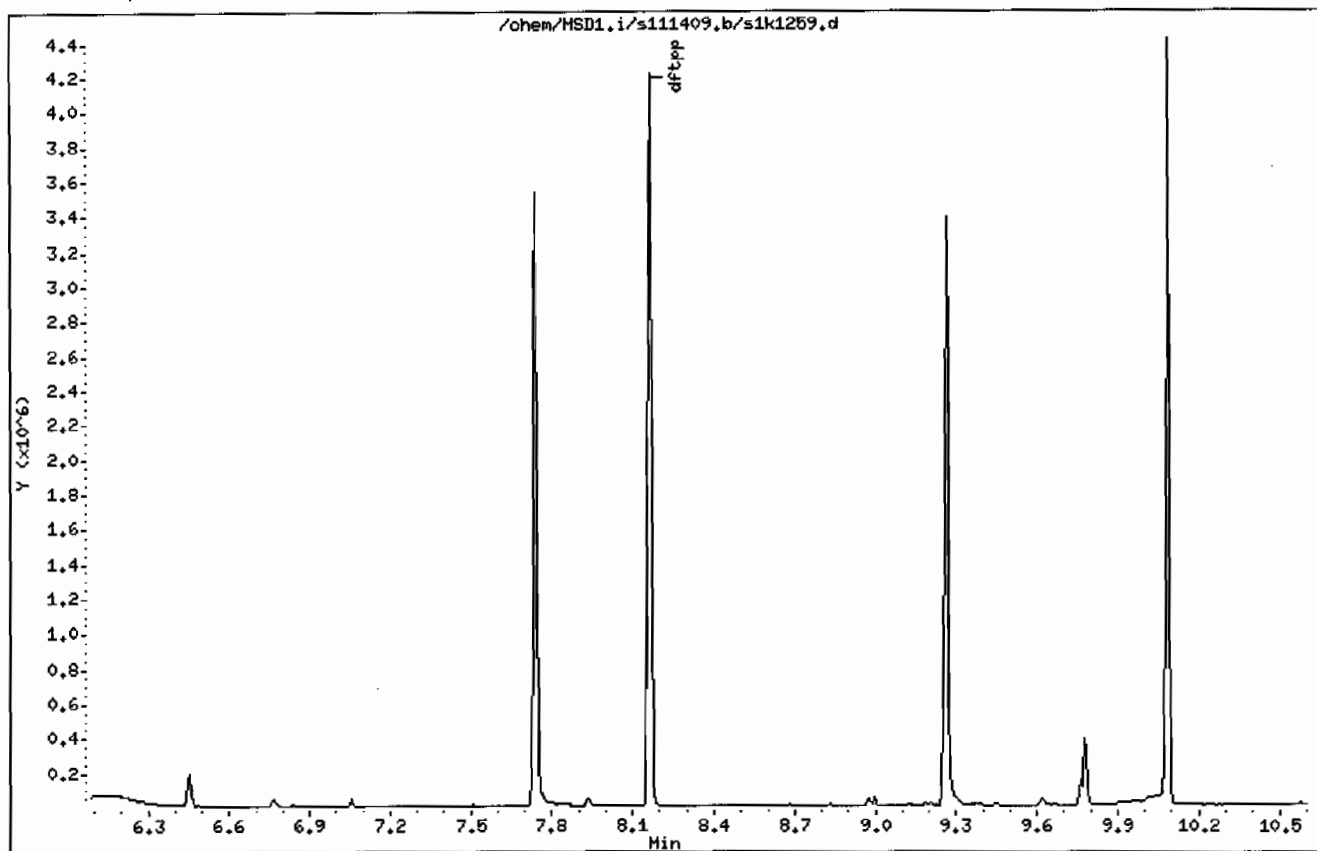
Instrument: MSD1.i

Sample Info: INBN091101-01150 PPH111SVHF111DFTPP

Operator: AMY

Column phase: J&W DB-5MS

Column diameter: 0.20



Date : 17-NOV-2009 15:48

Client ID: DFTPP

Instrument: HSD1.i

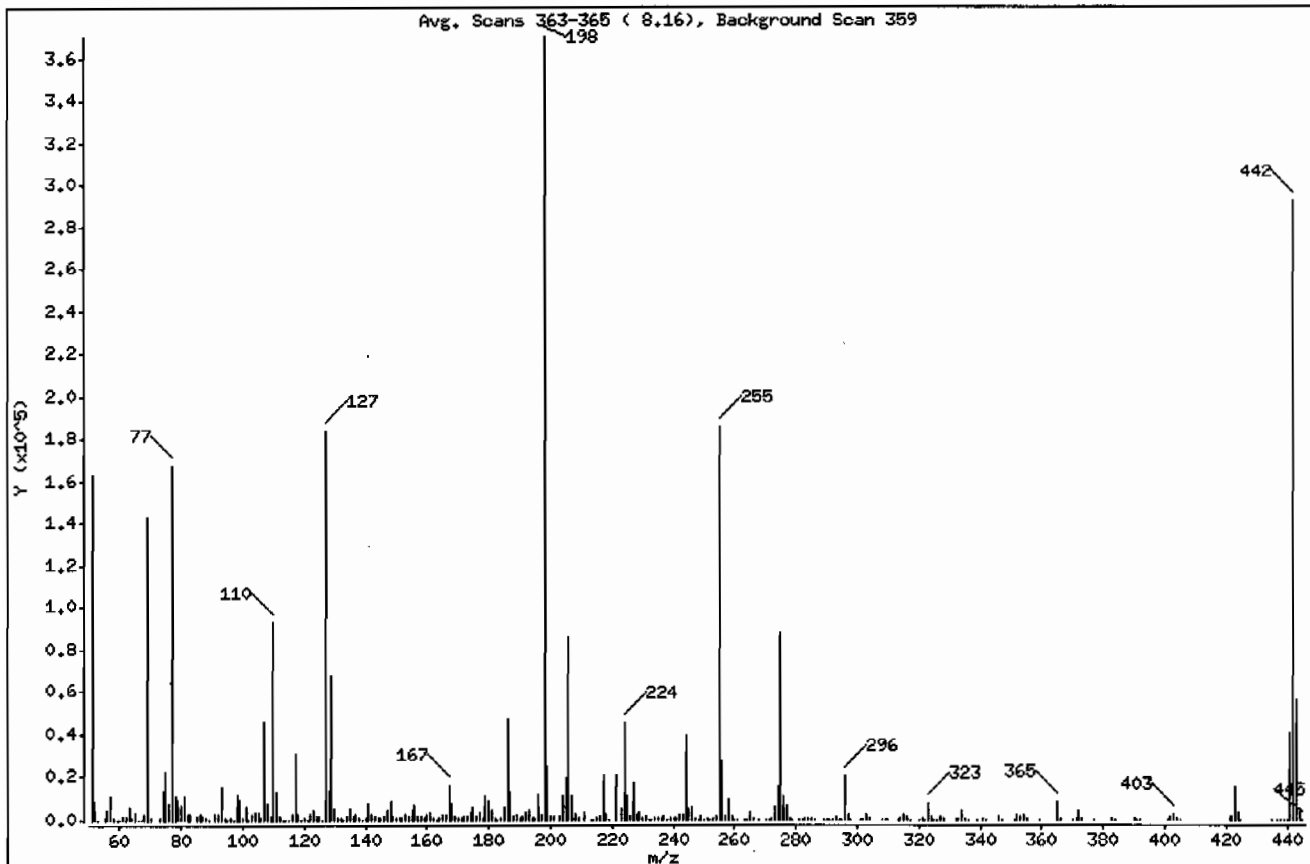
Sample Info: INBN091101-01150 PPM11SVMF111DFTPP

Operator: AMY

Column phase: J&W DB-5HS

Column diameter: 0.20

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	44.19
69	Less than 2.00% of mass 69	0.70 (1.82)
69	Mass 69 relative abundance	38.52
70	Less than 2.00% of mass 69	0.22 (0.58)
127	40.00 - 60.00% of mass 198	49.61
197	Less than 1.00% of mass 198	0.73
199	5.00 - 9.00% of mass 198	6.68
275	10.00 - 30.00% of mass 198	23.76
365	Greater than 1.00% of mass 198	2.39
441	Present, but less than mass 443	10.94
442	Greater than 40.00% of mass 198	78.91
443	17.00 - 23.00% of mass 442	15.11 (19.15)

Date : 17-NOV-2009 15:48

Client ID: DFTPP

Instrument: MSD1.i

Sample Info: IWBH091101-01150 PPH11SVMF11IDFTPP

Operator: AMY

Column phase: J&W DB-5MS

Column diameter: 0.20

Data File: s1k1259.d

Spectrum: Avg. Scans 363-365 (8.16), Background Scan 359

Location of Maximum: 198.00

Number of points: 301

m/z	Y	m/z	Y	m/z	Y	m/z	Y
51.00	163520	132.00	696	209.00	894	295.00	409
52.00	8218	133.00	165	211.00	3176	296.00	20504
53.00	278	134.00	1736	213.00	157	297.00	2961
55.00	768	135.00	5284	214.00	60	298.00	242
56.00	4517	136.00	1990	215.00	896	301.00	228
57.00	10646	137.00	2882	216.00	1633	302.00	377
58.00	485	138.00	608	217.00	20280	303.00	2440
59.00	173	139.00	322	218.00	2791	304.00	779
60.00	130	140.00	728	219.00	287	308.00	333
61.00	1880	141.00	8017	221.00	20640	309.00	180
62.00	1926	142.00	2864	223.00	4752	310.00	288
63.00	5930	143.00	1765	224.00	45496	313.00	172
64.00	771	144.00	446	225.00	11459	314.00	1000
65.00	3009	145.00	462	226.00	1320	315.00	2189
66.00	190	146.00	1638	227.00	16640	316.00	1304
67.00	147	147.00	4131	228.00	2433	317.00	255
68.00	2590	148.00	8419	229.00	3596	320.00	58
69.00	142592	149.00	1752	230.00	541	321.00	701
70.00	823	150.00	512	231.00	1631	322.00	395
73.00	1236	151.00	1272	232.00	323	323.00	7827
74.00	13875	152.00	886	233.00	236	324.00	1465
75.00	21824	153.00	2474	234.00	1059	325.00	55
76.00	7905	154.00	2034	235.00	1215	326.00	117
77.00	167296	155.00	4599	236.00	846	327.00	1319
78.00	11034	156.00	6876	237.00	1279	328.00	683
79.00	9492	157.00	1450	238.00	168	332.00	545
80.00	7131	158.00	1509	239.00	670	333.00	652
81.00	10804	159.00	1113	240.00	518	334.00	4627
82.00	2610	160.00	2655	241.00	1019	335.00	1148
83.00	2719	161.00	3658	242.00	2369	336.00	50
85.00	1896	162.00	1109	243.00	2744	339.00	57
86.00	2616	163.00	339	244.00	39256	341.00	855
87.00	1519	164.00	493	245.00	4982	342.00	192
88.00	684	165.00	2904	246.00	6349	346.00	1554
89.00	219	166.00	2427	247.00	1255	347.00	356

Date : 17-NOV-2009 15:48

Client ID: DFTPP

Instrument: MSD1.i

Sample Info: IWBH091101-01150 PPH11SVHF111DFTPP

Operator: AMY

Column phase: J&W DB-5MS

Column diameter: 0.20

Data File: s1k1259.d

Spectrum: Avg. Scans 363-365 (8.16), Background Scan 359

Location of Maximum: 198.00

Number of points: 301

m/z	Y	m/z	Y	m/z	Y	m/z	Y

91.00	2379	167.00	16175	248.00	341	351.00	56
92.00	2447	168.00	7387	249.00	1305	352.00	2339
93.00	14969	169.00	1311	250.00	210	353.00	1624
94.00	1153	170.00	539	251.00	450	354.00	2500
95.00	287	171.00	706	252.00	278	355.00	434

96.00	810	172.00	1473	253.00	769	359.00	83
97.00	388	173.00	1748	254.00	1972	365.00	8863
98.00	11810	174.00	3414	255.00	185216	366.00	1195
99.00	9686	175.00	6350	256.00	27176	370.00	215
100.00	914	176.00	2063	257.00	2039	371.00	581

101.00	5933	177.00	3047	258.00	9022	372.00	4002
102.00	375	178.00	995	259.00	1444	373.00	996
103.00	2163	179.00	11274	260.00	214	377.00	51
104.00	3736	180.00	8159	261.00	279	383.00	974
105.00	3394	181.00	4009	263.00	55	384.00	323

106.00	1190	182.00	670	264.00	157	390.00	592
107.00	46232	183.00	413	265.00	3712	391.00	375
108.00	7538	184.00	909	266.00	481	392.00	323
109.00	1503	185.00	5852	268.00	53	401.00	231
110.00	92872	186.00	47008	270.00	282	402.00	1478

111.00	12963	187.00	12615	271.00	380	403.00	2390
112.00	1503	188.00	1316	272.00	540	404.00	821
113.00	406	189.00	2602	273.00	5676	405.00	134
114.00	121	190.00	427	274.00	15599	421.00	2054
115.00	133	191.00	1281	275.00	87936	422.00	1867

116.00	2637	192.00	3712	276.00	11240	423.00	15373
117.00	30336	193.00	4225	277.00	6439	424.00	3047
118.00	2397	194.00	901	278.00	950	425.00	291
119.00	332	195.00	603	279.00	182	435.00	71
120.00	620	196.00	12028	281.00	60	437.00	71

121.00	175	197.00	2717	282.00	68	438.00	134
122.00	2801	198.00	370176	283.00	713	439.00	238
123.00	4622	199.00	24728	284.00	493	440.00	191
124.00	2083	200.00	1826	285.00	1250	441.00	40480
125.00	1949	201.00	2072	286.00	254	442.00	292096

Date : 17-NOV-2009 15:48

Client ID: DFTPP

Instrument: MSD1.i

Sample Info: IWBNO91101-01/50 PPH11/SVHF11/DFTPP

Operator: AMY

Column phase: J&W DB-5MS

Column diameter: 0.20

Data File: s1k1259.d

Spectrum: Avg. Scans 363-365 (8.16), Background Scan 359

Location of Maximum: 198.00

Number of points: 301

m/z	Y	m/z	Y	m/z	Y	m/z	Y
126.00	135	203.00	2082	289.00	243	443.00	55944
127.00	183616	204.00	10956	290.00	235	444.00	5034
128.00	13544	205.00	19552	291.00	131	445.00	311
129.00	66872	206.00	85904	292.00	339		
130.00	5516	207.00	10725	293.00	1482		
131.00	1048	208.00	2576	294.00	389		

Data File: /chem/MSD1.i/s011510,b/s1a1502.d

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Date : 15-JAN-2010 09:39

Client ID: DFTPP

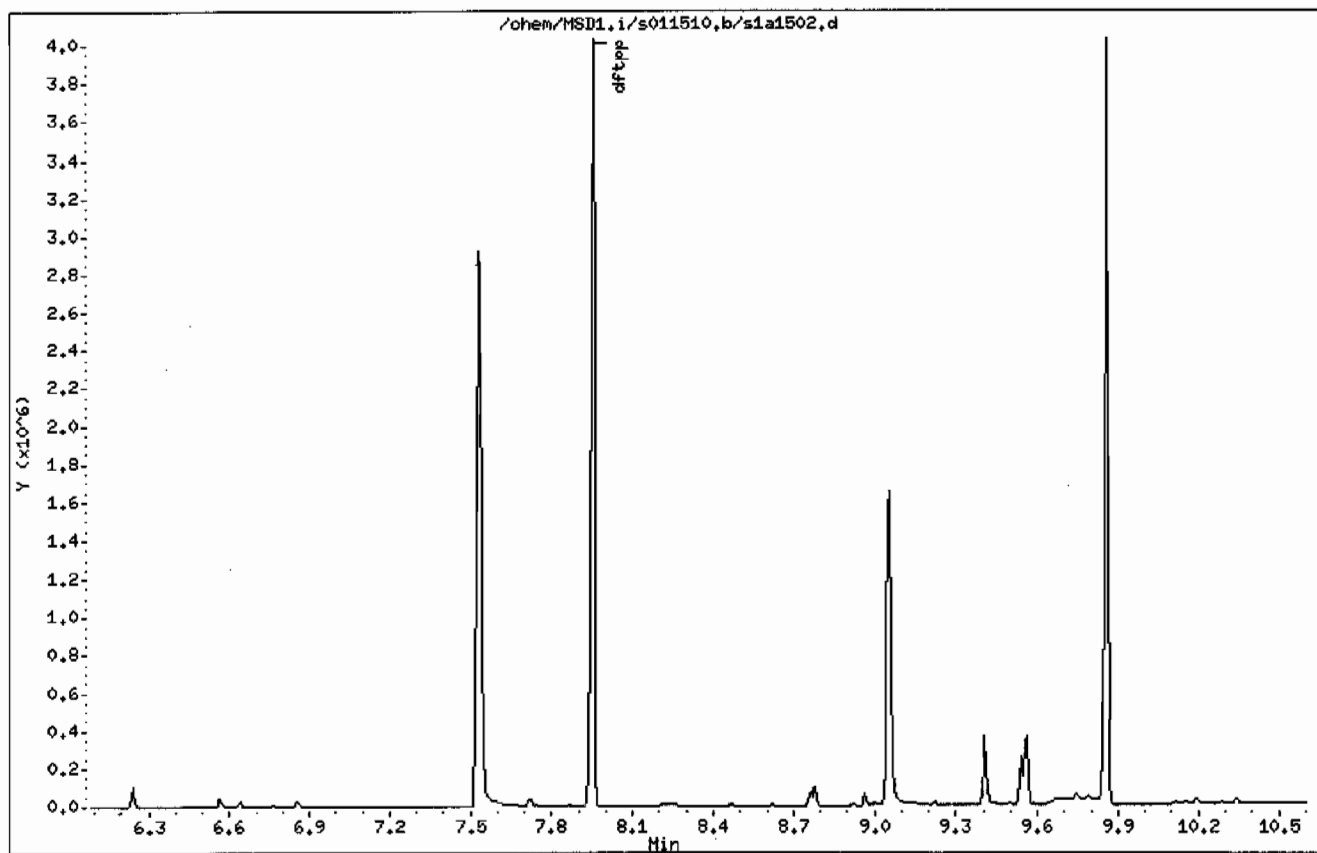
Instrument: MSD1.i

Sample Info: IWBNO91213-01150 PPM11ISVMFI11DFTPP

Operator: AMY

Column phase: J&W DB-5MS

Column diameter: 0.20



Date : 15-JAN-2010 09:39

Client ID: DFTPP

Instrument: MSD1.i

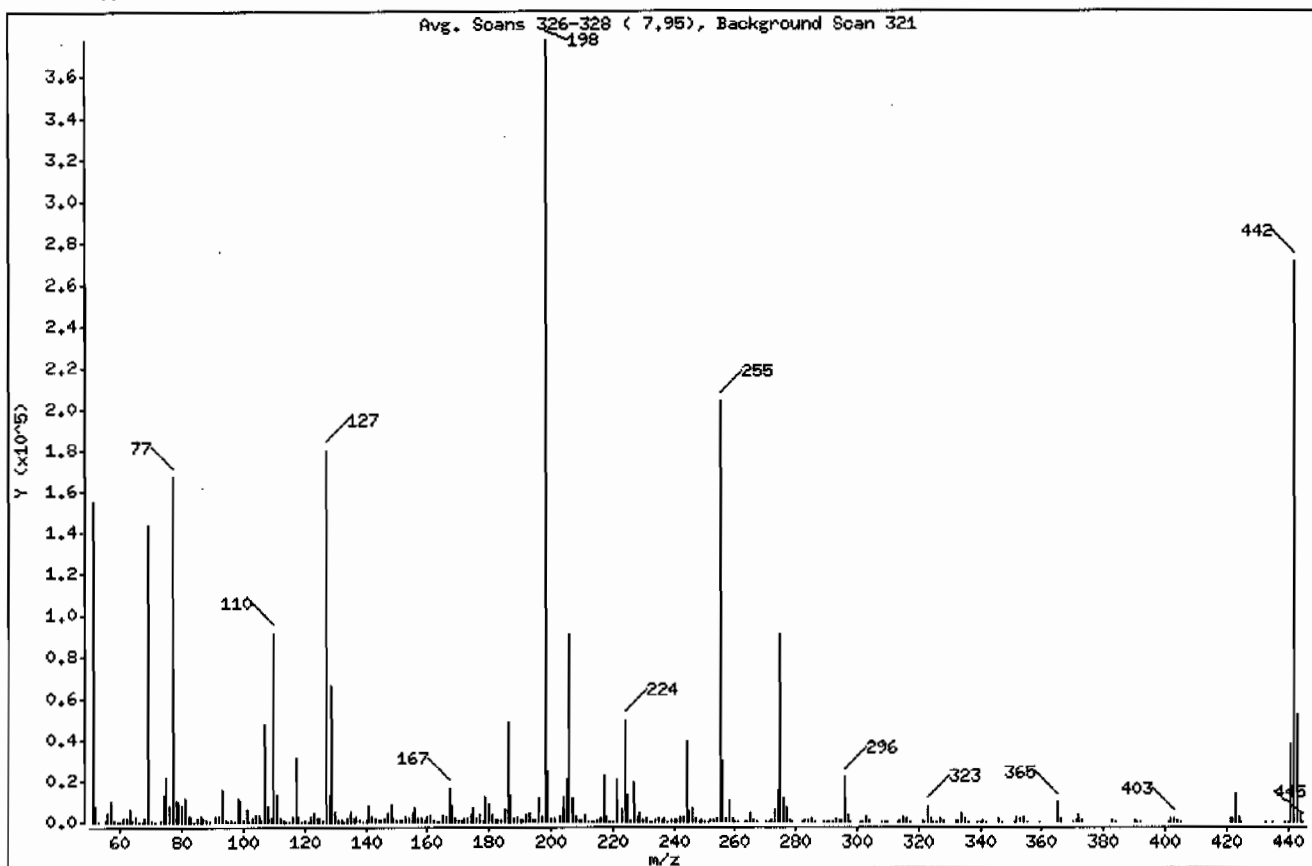
Sample Info: IWBNO91213-04150 PPH11SVHF111DFTPP

Operator: AHY

Column phase: J&W DB-5MS

Column diameter: 0.20

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	40.85
68	Less than 2.00% of mass 69	0.57 (1.49)
69	Mass 69 relative abundance	37.89
70	Less than 2.00% of mass 69	0.20 (0.54)
127	40.00 - 60.00% of mass 198	47.50
197	Less than 1.00% of mass 198	0.67
199	5.00 - 9.00% of mass 198	6.53
275	10.00 - 30.00% of mass 198	23.87
365	Greater than 1.00% of mass 198	2.42
441	Present, but less than mass 443	10.22
442	Greater than 40.00% of mass 198	71.53
443	17.00 - 23.00% of mass 442	13.72 (19.18)

Date : 15-JAN-2010 09:39

Client ID: DFTPP

Instrument: MSD1.i

Sample Info: IWBNO91213-01150 PPH11SVMF111DFTPP

Operator: AMY

Column phase: J&W DB-5MS

Column diameter: 0.20

Data File: s1a1502.d

Spectrum: Avg. Scans 326-328 (7.95), Background Scan 321

Location of Maximum: 198.00

Number of points: 303

m/z	Y	m/z	Y	m/z	Y	m/z	Y
51.00	154304	130.00	5441	207.00	11307	291.00	81
52.00	7799	131.00	1024	208.00	2849	292.00	359
53.00	322	132.00	610	209.00	850	293.00	1571
55.00	596	133.00	267	210.00	1075	294.00	487
56.00	4186	134.00	1773	211.00	3310	295.00	489
57.00	10578	135.00	5221	212.00	214	296.00	21600
58.00	484	136.00	2152	213.00	251	297.00	3153
59.00	120	137.00	2593	214.00	74	298.00	168
60.00	127	138.00	611	215.00	996	301.00	282
61.00	1796	139.00	419	216.00	1849	302.00	378
62.00	2147	140.00	831	217.00	22512	303.00	2768
63.00	5646	141.00	7965	218.00	2827	304.00	798
64.00	864	142.00	2657	219.00	300	308.00	352
65.00	2971	143.00	1939	220.00	202	309.00	214
66.00	161	144.00	564	221.00	20440	310.00	242
67.00	66	145.00	437	223.00	5729	313.00	131
68.00	2139	146.00	1458	224.00	49456	314.00	1092
69.00	143104	147.00	4308	225.00	12872	315.00	2499
70.00	771	148.00	8501	226.00	1253	316.00	1380
71.00	51	149.00	1926	227.00	18840	317.00	202
73.00	1063	150.00	626	228.00	2690	321.00	741
74.00	13394	151.00	1151	229.00	4233	322.00	385
75.00	21768	152.00	631	230.00	591	323.00	7534
76.00	7594	153.00	2496	231.00	1952	324.00	1433
77.00	166336	154.00	1831	232.00	376	325.00	64
78.00	10786	155.00	4718	233.00	387	326.00	71
79.00	9830	156.00	7170	234.00	1158	327.00	1329
80.00	7462	157.00	1549	235.00	1458	328.00	725
81.00	11013	158.00	1369	236.00	911	332.00	520
82.00	2754	159.00	1221	237.00	1652	333.00	710
83.00	2660	160.00	2721	238.00	269	334.00	4745
84.00	318	161.00	3867	239.00	761	335.00	1307
85.00	1789	162.00	1105	240.00	645	336.00	51
86.00	2869	163.00	316	241.00	1132	339.00	126
87.00	1401	164.00	416	242.00	2666	340.00	103

Date : 15-JAN-2010 09:39

Client ID: DFTPP

Instrument: HSD1.i

Sample Info: IWBK091213-01150 PPH111SVHF111DFTPP

Operator: AMY

Column phase: J&W DB-5MS

Column diameter: 0.20

Data File: s1a1502.d

Spectrum: Avg. Scans 326-328 (7.95), Background Scan 321

Location of Maximum: 198.00

Number of points: 303

m/z	Y	m/z	Y	m/z	Y	m/z	Y

| 88.00	615	| 165.00	3127	| 243.00	2863	| 341.00	790
| 89.00	201	| 166.00	2706	| 244.00	39328	| 342.00	223
| 91.00	2298	| 167.00	16712	| 245.00	5217	| 346.00	1473
| 92.00	2567	| 168.00	7830	| 246.00	6933	| 347.00	237
| 93.00	15309	| 169.00	1455	| 247.00	1435	| 351.00	67

| 94.00	1100	| 170.00	481	| 248.00	319	| 352.00	2199
| 95.00	366	| 171.00	692	| 249.00	1298	| 353.00	1373
| 96.00	881	| 172.00	1397	| 250.00	293	| 354.00	2244
| 97.00	385	| 173.00	1903	| 251.00	390	| 355.00	369
| 98.00	11334	| 174.00	3510	| 252.00	475	| 359.00	122

| 99.00	10372	| 175.00	6762	| 253.00	964	| 365.00	9143
| 100.00	910	| 176.00	1998	| 254.00	1662	| 366.00	1316
| 101.00	5976	| 177.00	3049	| 255.00	203456	| 370.00	168
| 102.00	293	| 178.00	1067	| 256.00	29368	| 371.00	496
| 103.00	2020	| 179.00	12246	| 257.00	2137	| 372.00	3833

| 104.00	3726	| 180.00	8372	| 258.00	10237	| 373.00	805
| 105.00	3495	| 181.00	3906	| 259.00	1648	| 383.00	944
| 106.00	1191	| 182.00	689	| 260.00	260	| 384.00	308
| 107.00	47432	| 183.00	454	| 261.00	298	| 390.00	504
| 108.00	7717	| 184.00	1034	| 263.00	55	| 391.00	308

| 109.00	1329	| 185.00	5863	| 264.00	406	| 392.00	187
| 110.00	90960	| 186.00	48648	| 265.00	4154	| 401.00	153
| 111.00	12767	| 187.00	13409	| 266.00	549	| 402.00	1474
| 112.00	1765	| 188.00	1428	| 267.00	56	| 403.00	2036
| 113.00	473	| 189.00	2758	| 270.00	261	| 404.00	785

| 114.00	53	| 190.00	450	| 271.00	385	| 405.00	57
| 115.00	250	| 191.00	1229	| 272.00	546	| 421.00	2022
| 116.00	2462	| 192.00	3701	| 273.00	5899	| 422.00	1928
| 117.00	31208	| 193.00	4452	| 274.00	15610	| 423.00	13981
| 118.00	2353	| 194.00	924	| 275.00	90184	| 424.00	2776

| 119.00	305	| 195.00	603	| 276.00	11700	| 425.00	266
| 120.00	563	| 196.00	11680	| 277.00	6897	| 433.00	56
| 121.00	184	| 197.00	2515	| 278.00	1086	| 435.00	50
| 122.00	2850	| 198.00	377792	| 279.00	160	| 439.00	51
| 123.00	4440	| 199.00	24664	| 282.00	214	| 440.00	51

Date : 15-JAN-2010 09:39

Client ID: DFTPP

Instrument: MSD1.i

Sample Info: IWBNO91213-01150 PPM11SVMF111DFTPP

Operator: AMY

Column phase: J&W DB-5MS

Column diameter: 0.20

Data File: s1a1502.d

Spectrum: Avg. Scans 326-328 (7.95), Background Scan 321

Location of Maximum: 198.00

Number of points: 303

m/z	Y	m/z	Y	m/z	Y	m/z	Y
124.00	2003	200.00	1873	283.00	817	441.00	38616
125.00	1991	201.00	1753	284.00	640	442.00	270208
126.00	820	203.00	2280	285.00	1383	443.00	51832
127.00	179392	204.00	12288	286.00	282	444.00	4662
128.00	12868	205.00	20696	289.00	320	445.00	350
129.00	65720	206.00	90240	290.00	258		

**Semi-Volatile
Certificate of Analysis
Sample Summary**

SDG Number: 10-1213
Lab Sample ID: 1202015385
Client Sample: QC for batch 941595
Client ID: MB for batch 941595
Batch ID: 941600
Run Date: 01/15/2010 11:54
Prep Date: 01/14/2010 19:40
Data File: sla1506-1.d

Client: LANL010
Method: SW846 8270C
Inst: MSD1.I
Analyst: AMY
Aliquot: 30 g
Column: J&W DB-5MS

Matrix: SOIL
Project: QC
SOP Ref: GL-OA-E-009
Dilution: 1
Inj. Vol: .5 uL
Final Volume: 1 mL
Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	333	ug/kg	66.7	333
108-95-2	Phenol	U	333	ug/kg	66.7	333
95-57-8	2-Chlorophenol	U	333	ug/kg	66.7	333
106-46-7	1,4-Dichlorobenzene	U	333	ug/kg	66.7	333
621-64-7	N-Nitrosodipropylamine	U	333	ug/kg	66.7	333
59-50-7	4-Chloro-3-methylphenol	U	333	ug/kg	66.7	333
83-32-9	Acenaphthene	U	33.3	ug/kg	11.0	33.3
121-14-2	2,4-Dinitrotoluene	U	333	ug/kg	33.3	333
100-02-7	4-Nitrophenol	U	333	ug/kg	110	333
87-86-5	Pentachlorophenol	U	333	ug/kg	83.3	333
129-00-0	Pyrene	U	33.3	ug/kg	10.0	33.3
110-86-1	Pyridine	U	333	ug/kg	66.7	333
62-53-3	Aniline	U	333	ug/kg	100	333
111-44-4	bis(2-Chloroethyl) ether	U	333	ug/kg	66.7	333
541-73-1	1,3-Dichlorobenzene	U	333	ug/kg	66.7	333
100-51-6	Benzyl alcohol	U	333	ug/kg	100	333
95-50-1	1,2-Dichlorobenzene	U	333	ug/kg	66.7	333
108-60-1	bis(2-Chloroisopropyl)ether	U	333	ug/kg	66.7	333
95-48-7	o-Cresol	U	333	ug/kg	66.7	333
65794-96-9	m,p-Cresols	U	333	ug/kg	100	333
67-72-1	Hexachloroethane	U	333	ug/kg	66.7	333
98-95-3	Nitrobenzene	U	333	ug/kg	66.7	333
78-59-1	Isophorone	U	333	ug/kg	66.7	333
88-75-5	2-Nitrophenol	U	333	ug/kg	66.7	333
105-67-9	2,4-Dimethylphenol	U	333	ug/kg	117	333
111-91-1	bis(2-Chloroethoxy)methane	U	333	ug/kg	66.7	333
120-83-2	2,4-Dichlorophenol	U	333	ug/kg	66.7	333
65-85-0	Benzoic acid	U	667	ug/kg	167	667
91-20-3	Naphthalene	U	33.3	ug/kg	10.0	33.3
106-47-8	4-Chloroaniline	U	333	ug/kg	66.7	333
87-68-3	Hexachlorobutadiene	U	333	ug/kg	66.7	333
91-57-6	2-Methylnaphthalene	U	33.3	ug/kg	6.67	33.3
77-47-4	Hexachlorocyclopentadiene	U	333	ug/kg	66.7	333
88-06-2	2,4,6-Trichlorophenol	U	333	ug/kg	66.7	333
95-95-4	2,4,5-Trichlorophenol	U	333	ug/kg	66.7	333
91-58-7	2-Chloronaphthalene	U	33.3	ug/kg	11.0	33.3
88-74-4	2-Nitroaniline	U	333	ug/kg	66.7	333
	<i>o</i> -Nitroaniline					
99-09-2	3-Nitroaniline	U	333	ug/kg	66.7	333

Semi-Volatile
Certificate of Analysis
Sample Summary

Page 2 of 2

SDG Number: 10-1213		Matrix: SOIL
Lab Sample ID: 1202015385		
Client Sample: QC for batch 941595	Client: LANL010	Project: QC
Client ID: MB for batch 941595	Method: SW846 8270C	SOP Ref: GL-OA-E-009
Batch ID: 941600	Inst: MSD1.I	Dilution: 1
Run Date: 01/15/2010 11:54	Analyst: AMY	Inj. Vol: .5 uL
Prep Date: 01/14/2010 19:40	Aliquot: 30 g	Final Volume: 1 mL
Data File: s1a1506-1.d	Column: J&W DB-5MS	Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	<i>m</i> -Nitroaniline					
131-11-3	Dimethylphthalate	U	333	ug/kg	66.7	333
606-20-2	2,6-Dinitrotoluene	U	333	ug/kg	33.3	333
208-96-8	Acenaphthylene	U	33.3	ug/kg	10.0	33.3
51-28-5	2,4-Dinitrophenol	U	667	ug/kg	127	667
132-64-9	Dibenzofuran	U	333	ug/kg	66.7	333
84-66-2	Diethylphthalate	U	333	ug/kg	66.7	333
86-73-7	Fluorene	U	33.3	ug/kg	10.0	33.3
7005-72-3	4-Chlorophenylphenylether	U	333	ug/kg	66.7	333
534-52-1	2-Methyl-4,6-dinitrophenol	U	333	ug/kg	66.7	333
100-01-6	4-Nitroaniline	U	333	ug/kg	100	333
	<i>p</i> -Nitroaniline					
122-39-4	Diphenylamine	U	333	ug/kg	66.7	333
122-66-7	Azobenzene	U	333	ug/kg	66.7	333
	<i>1,2</i> -Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	333	ug/kg	66.7	333
118-74-1	Hexachlorobenzene	U	333	ug/kg	66.7	333
85-01-8	Phenanthrene	U	33.3	ug/kg	10.0	33.3
120-12-7	Anthracene	U	33.3	ug/kg	6.67	33.3
84-74-2	Di-n-butylphthalate	U	333	ug/kg	66.7	333
206-44-0	Fluoranthene	U	33.3	ug/kg	10.0	33.3
85-68-7	Butylbenzylphthalate	U	333	ug/kg	66.7	333
56-55-3	Benzo(a)anthracene	U	33.3	ug/kg	10.0	33.3
91-94-1	3,3'-Dichlorobenzidine	U	333	ug/kg	100	333
218-01-9	Chrysene	U	33.3	ug/kg	10.0	33.3
117-81-7	bis(2-Ethylhexyl)phthalate	U	333	ug/kg	66.7	333
117-84-0	Di-n-octylphthalate	U	333	ug/kg	66.7	333
205-99-2	Benzo(b)fluoranthene	U	33.3	ug/kg	10.0	33.3
207-08-9	Benzo(k)fluoranthene	U	33.3	ug/kg	10.0	33.3
50-32-8	Benzo(a)pyrene	U	33.3	ug/kg	10.0	33.3
193-39-5	Indeno(1,2,3-cd)pyrene	U	33.3	ug/kg	10.0	33.3
53-70-3	Dibenzo(a,h)anthracene	U	33.3	ug/kg	10.0	33.3
191-24-2	Benzo(ghi)perylene	U	33.3	ug/kg	10.0	33.3
120-82-1	1,2,4-Trichlorobenzene	U	333	ug/kg	66.7	333

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	1.96	3730	ug/kg		J
	Unknown Aldol Condensate	2.82	496	ug/kg		JA

GEL Laboratories LLC

Data file : /chem/MSD1.i/s011510.b/s1a1506-2.d
Lab Smp Id: 1202015385 Client Smp ID: SBLK01
Inj Date : 15-JAN-2010 11:54
Operator : AMY Inst ID: MSD1.i
Smp Info : |1202015385|941600|1|SVM|1|SBLK01
Misc Info : |MSD8270_S|WBN100107-02|
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD1.i/s011510.b/MSD1-M8270AQA-111409.m
Meth Date : 16-Jan-2010 13:32 llo00884 Quant Type: ISTD
Cal Date : 17-NOV-2009 17:42 Cal File: slk1264.d
Als bottle: 5 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 10-1213.sub
Target Version: 3.50
Processing Host: hpc1p1

Concentration Formula: $\text{Amt} * \text{DF} * \text{Uf} * \text{Vt} / (\text{Vi} * \text{Ws} * (100 - \text{M}) / 100) * \text{CpndVariable}$

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	0.00000	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG						CONCENTRATIONS	
	MASS	RT	EXP RT	REL RT	RESPONSE		ON-COLUMN	FINAL
	=====	==	=====	=====	=====		(ng/ul)	(ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	3.769	3.775	(1.000)	380552	40.0000		
* 29 Naphthalene-d8	136	4.628	4.634	(1.000)	1439155	40.0000		
* 46 Acenaphthene-d10	164	5.875	5.875	(1.000)	789584	40.0000		
* 67 Phenanthrene-d10	188	6.863	6.869	(1.000)	1326209	40.0000		
* 91 Chrysene-d12	240	8.480	8.492	(1.000)	1102165	40.0000		
* 98 Perylene-d12	264	9.827	9.833	(1.000)	925778	40.0000		
\$ 3 2-Fluorophenol	112	2.987	2.981	(0.792)	710756	71.5056		2380
\$ 5 Phenol-d5	99	3.504	3.510	(0.930)	882445	73.0443		2430
\$ 20 Nitrobenzene-d5	82	4.134	4.140	(0.893)	409197	43.1453		1440
\$ 39 2-Fluorobiphenyl	172	5.369	5.375	(0.914)	809309	42.7968		1430
\$ 60 2,4,6-Tribromophenol	329	6.416	6.416	(1.092)	181644	82.3857		2750
\$ 81 p-Terphenyl-d14	244	7.780	7.780	(0.917)	833095	48.1543		1600

Data File: /chem/MSD1.i/s011510.b/sla1506-2.d
Report Date: 16-Jan-2010 14:02

Page 1

GEL Laboratories LLC

Data file : /chem/MSD1.i/s011510.b/sla1506-2.d
Lab Smp Id: 1202015385 Client Smp ID: SBLK01
Inj Date : 15-JAN-2010 11:54
Operator : AMY Inst ID: MSD1.i
Smp Info : |1202015385|941600|1|SVM|1|SBLK01
Misc Info : |MSD8270_S|WBN100107-02|
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD1.i/s011510.b/MSD1-M8270AQA-111409.m
Meth Date : 16-Jan-2010 13:32 11o00884 Quant Type: ISTD
Cal Date : 17-NOV-2009 17:42 Cal File: slk1264.d
Als bottle: 5 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 10-1213.sub
Target Version: 3.50
Processing Host: hpc1p1

Concentration Formula: Amt * DF * Uf * Vt / (Vi * Ws * (100 - M) / 100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	0.00000	% moisture

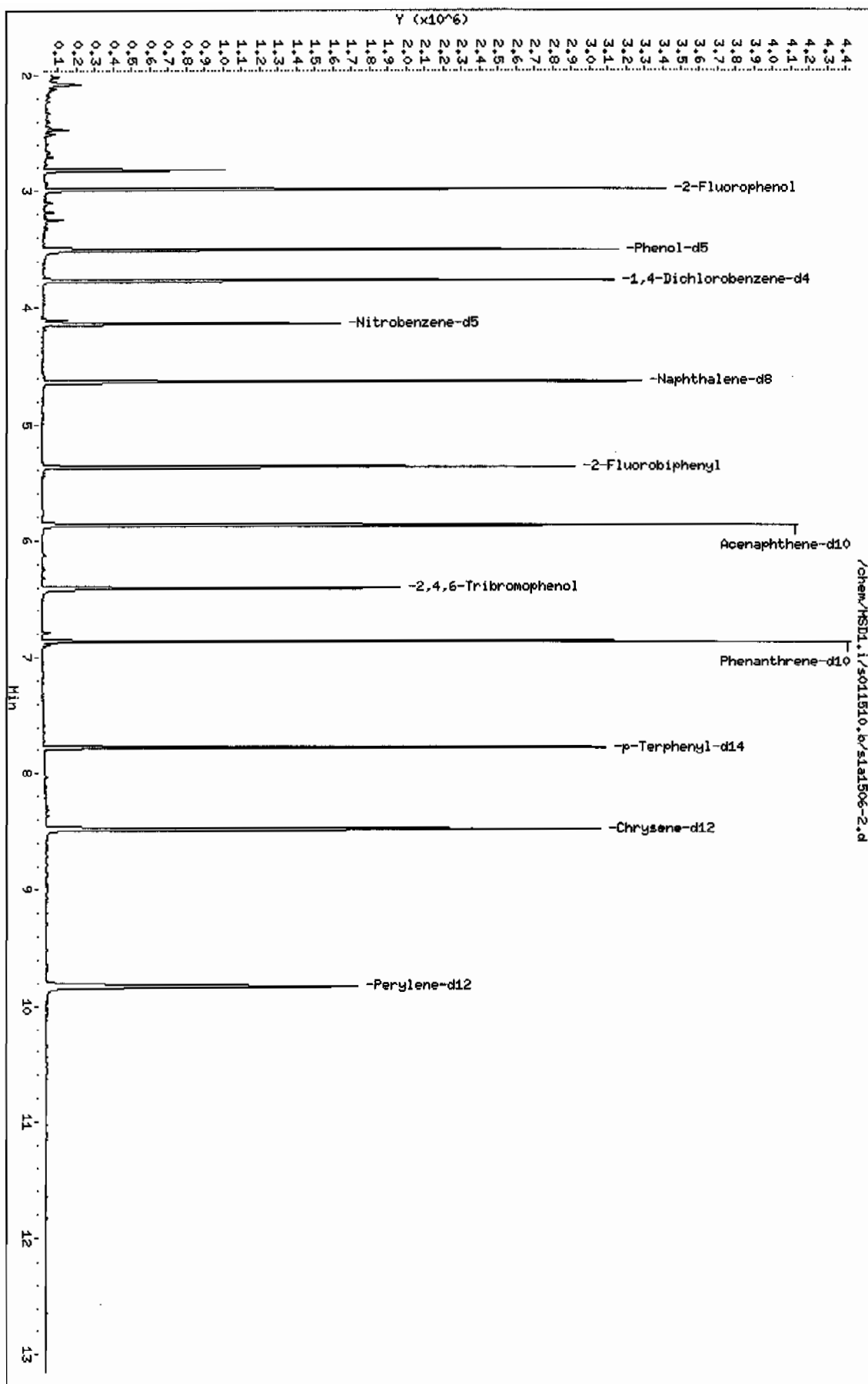
Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
=====	=====	=====	=====
* 10 1,4-Dichlorobenzene-d4	3.769	2258383	40.000

CONCENTRATIONS				QUANT		
RT	AREA	ON-COL (ng/ul)	FINAL (ug/Kg)	QUAL	LIBRARY	LIB ENTRY
=====	=====	=====	=====	=====	=====	=====
Unknown				CAS #:		
1.957	6323487	112.000257	3730	0		0 10
Unknown Aldol Condensate				CAS #:		
2.822	839959	14.8771777	496	0		0 10

Data File: /chem/MSD1.i/s011510.b/s1a1506-2.d
 Date: 15-JAN-2010 11:54
 Client ID: SRLK01
 Sample Info: 11202015385194160011SVN111SRLK01
 Volume Injected (uL): 0.5
 Column phase: J&W DB-5MS

Instrument: MSD1.i
 Operator: AMY
 Column diameter: 0.20



Date : 15-JAN-2010 11:54

Client ID: SBLK01

Instrument: MSD1.1

Sample Info: I1202015385194160011SVH111SBLK01

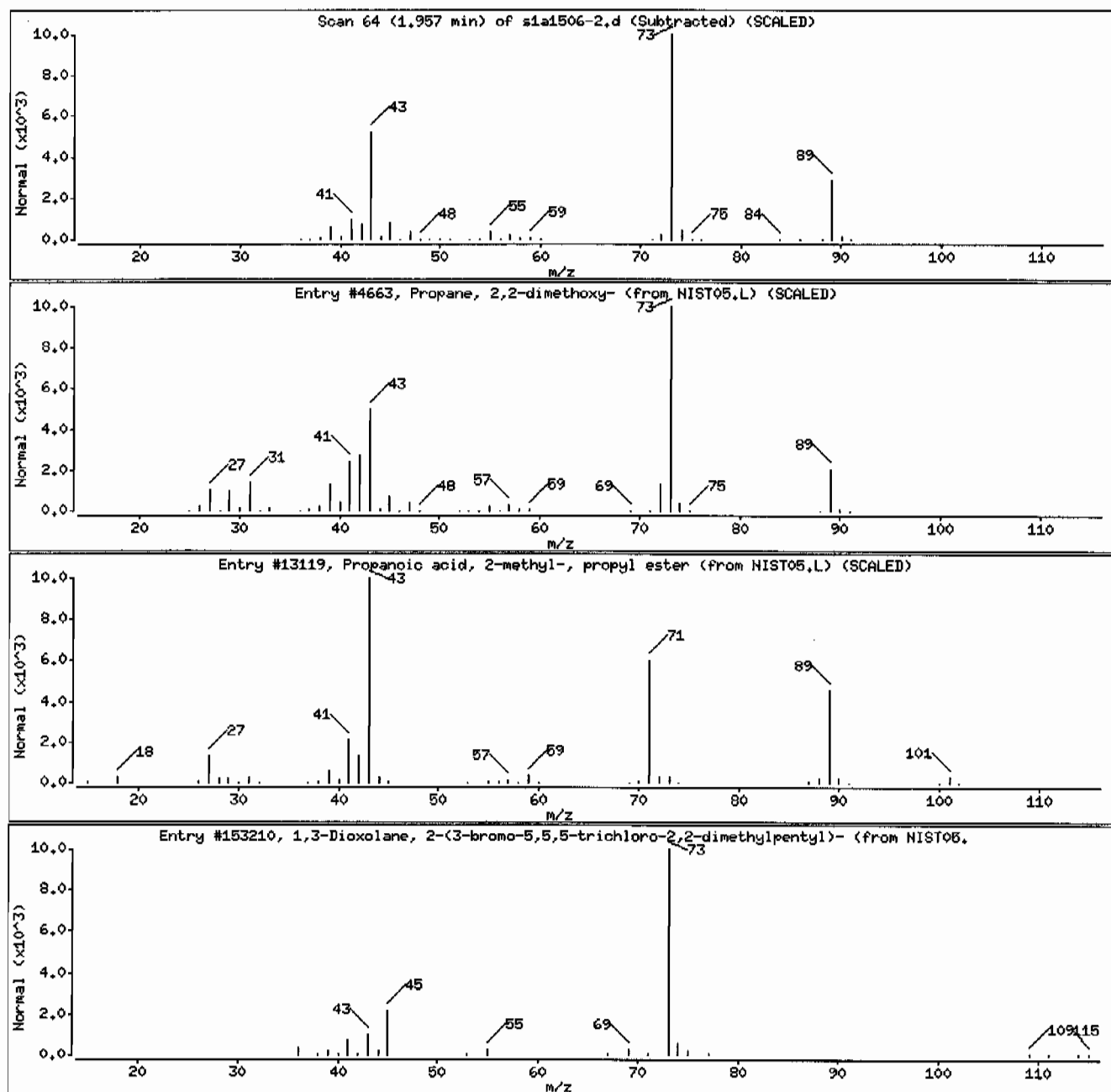
Volume Injected (uL): 0.5

Operator: AMY

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Propane, 2,2-dimethoxy-	77-76-9	NIST05.L	4663	56	C5H12O2	104
Propanoic acid, 2-methyl-, propyl ester	644-49-5	NIST05.L	13119	9	C7H14O2	130
1,3-Dioxolane, 2-(3-bromo-5,5,5-trichloro	1000115-31-4	NIST05.L	153210	9	C10H16BrC13O2S2	



Date : 15-JAN-2010 11:54

Client ID: SBLK01

Instrument: MSD1.1

Sample Info: I1202015385194160011SVMI11SBLK01

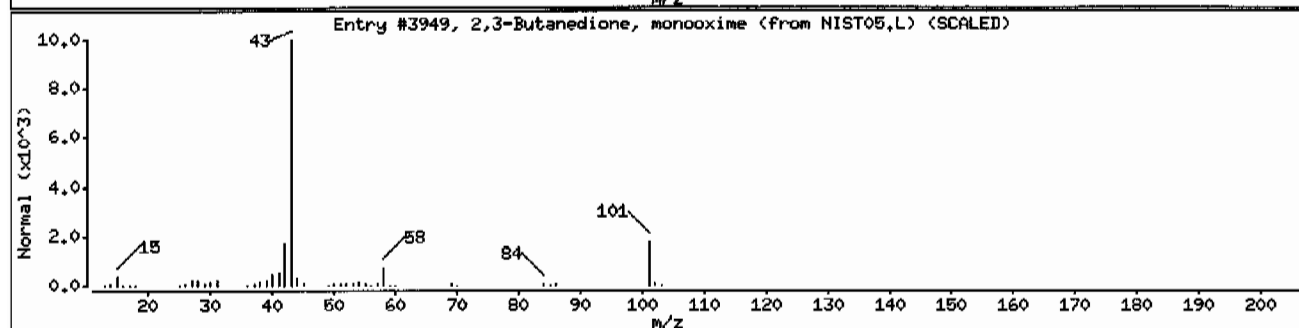
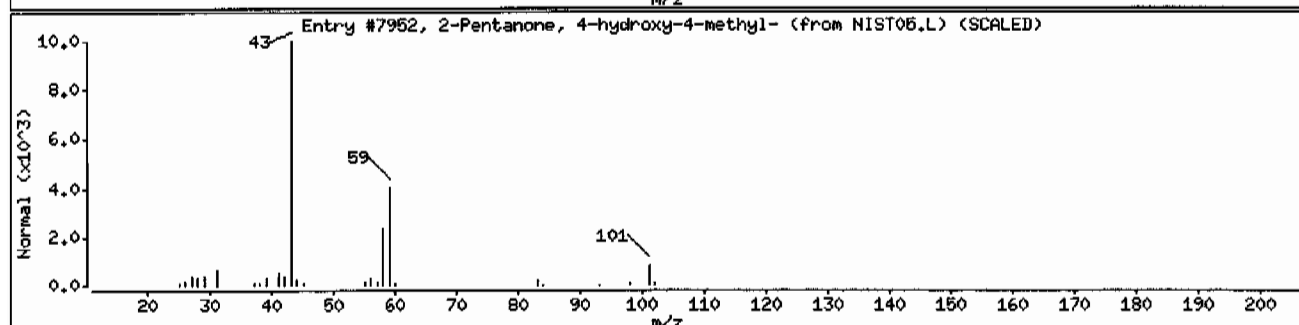
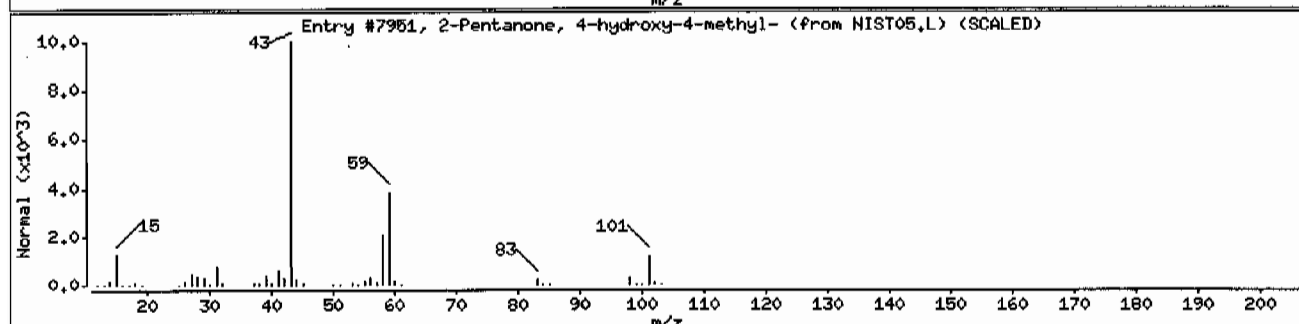
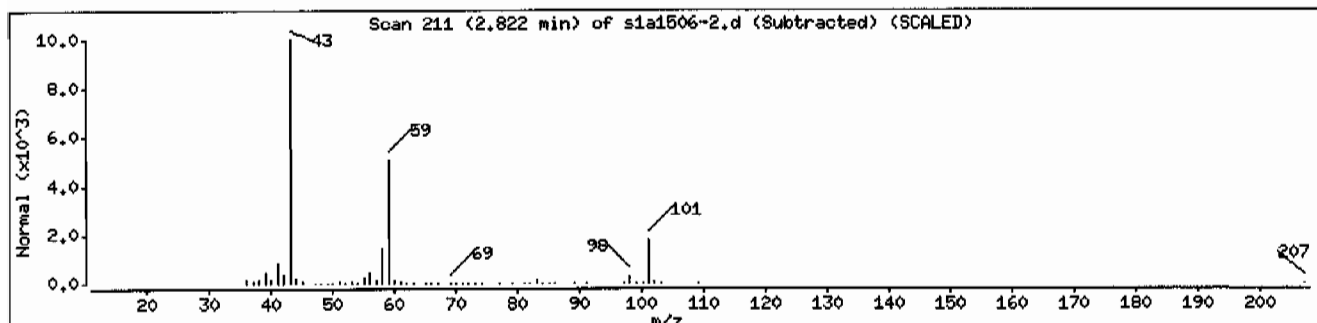
Volume Injected (uL): 0.5

Operator: AMY

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	56	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	38	C6H12O2	116
2,3-Butanedione, monooxime	57-71-6	NIST05.L	3949	27	C4H7NO2	101



Semi-Volatile
Certificate of Analysis
Sample Summary

Page 1 of 2

SDG Number: 10-1213

Matrix: SOIL

Lab Sample ID: 1202015386

Client Sample: QC for batch 941595

Client: LANL010

Project: QC

Client ID: LCS for batch 941595

Method: SW846 8270C

SOP Ref: GL-OA-E-009

Batch ID: 941600

Inst: MSD1J

Dilution: 1

Run Date: 01/15/2010 12:19

Analyst: AMY

Inj. Vol: .5 uL

Prep Date: 01/14/2010 19:40

Aliquot: 30 g

Final Volume: 1 mL

Data File: sla1507-1.d

Column: J&W DB-5MS

Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine		1390	ug/kg	66.7	333
108-95-2	Phenol		1260	ug/kg	66.7	333
95-57-8	2-Chlorophenol		1250	ug/kg	66.7	333
106-46-7	1,4-Dichlorobenzene		1160	ug/kg	66.7	333
621-64-7	N-Nitrosodipropylamine		1160	ug/kg	66.7	333
59-50-7	4-Chloro-3-methylphenol		1410	ug/kg	66.7	333
83-32-9	Acenaphthene		1340	ug/kg	11.0	33.3
121-14-2	2,4-Dinitrotoluene		1280	ug/kg	33.3	333
100-02-7	4-Nitrophenol		1190	ug/kg	110	333
87-86-5	Pentachlorophenol		1500	ug/kg	83.3	333
129-00-0	Pyrene		1480	ug/kg	10.0	33.3
110-86-1	Pyridine		1150	ug/kg	66.7	333
62-53-3	Aniline		1070	ug/kg	100	333
111-44-4	bis(2-Chloroethyl) ether		1270	ug/kg	66.7	333
541-73-1	1,3-Dichlorobenzene		1150	ug/kg	66.7	333
100-51-6	Benzyl alcohol		1400	ug/kg	100	333
95-50-1	1,2-Dichlorobenzene		1210	ug/kg	66.7	333
108-60-1	bis(2-Chloroisopropyl)ether		1230	ug/kg	66.7	333
95-48-7	o-Cresol		1330	ug/kg	66.7	333
65794-96-9	m,p-Cresols		1300	ug/kg	100	333
67-72-1	Hexachloroethane		1150	ug/kg	66.7	333
98-95-3	Nitrobenzene		1480	ug/kg	66.7	333
78-59-1	Isophorone		1540	ug/kg	66.7	333
88-75-5	2-Nitrophenol		1190	ug/kg	66.7	333
105-67-9	2,4-Dimethylphenol		1340	ug/kg	117	333
111-91-1	bis(2-Chloroethoxy)methane		1340	ug/kg	66.7	333
120-83-2	2,4-Dichlorophenol		1330	ug/kg	66.7	333
65-85-0	Benzoic acid		2930	ug/kg	167	667
91-20-3	Naphthalene		1260	ug/kg	10.0	33.3
106-47-8	4-Chloroaniline		1110	ug/kg	66.7	333
87-68-3	Hexachlorobutadiene		1520	ug/kg	66.7	333
91-57-6	2-Methylnaphthalene		1350	ug/kg	6.67	33.3
77-47-4	Hexachlorocyclopentadiene		1670	ug/kg	66.7	333
88-06-2	2,4,6-Trichlorophenol		1430	ug/kg	66.7	333
95-95-4	2,4,5-Trichlorophenol		1530	ug/kg	66.7	333
91-58-7	2-Chloronaphthalene		1240	ug/kg	11.0	33.3
88-74-4	2-Nitroaniline		1230	ug/kg	66.7	333
	o-Nitroaniline					
99-09-2	3-Nitroaniline		1130	ug/kg	66.7	333

**Semi-Volatile
Certificate of Analysis
Sample Summary**

Page 2 of 2

SDG Number: 10-1213

Matrix: SOIL

Lab Sample ID: 1202015386

Client Sample: QC for batch 941595

Client: LANL010

Project: QC

Client ID: LCS for batch 941595

Method: SW846 8270C

SOP Ref: GL-OA-E-009

Batch ID: 941600

Inst: MSD1.I

Dilution: 1

Run Date: 01/15/2010 12:19

Analyst: AMY

Inj. Vol: .5 uL

Prep Date: 01/14/2010 19:40

Aliquot: 30 g

Final Volume: 1 mL

Data File: s1a1507-1.d

Column: J&W DB-5MS

Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	<i>m</i> -Nitroaniline					
131-11-3	Dimethylphthalate		1410	ug/kg	66.7	333
606-20-2	2,6-Dinitrotoluene		1320	ug/kg	33.3	333
208-96-8	Acenaphthylene		1350	ug/kg	10.0	33.3
51-28-5	2,4-Dinitrophenol		1430	ug/kg	127	667
132-64-9	Dibenzofuran		1560	ug/kg	66.7	333
84-66-2	Diethylphthalate		1520	ug/kg	66.7	333
86-73-7	Fluorene		1340	ug/kg	10.0	33.3
7005-72-3	4-Chlorophenylphenylether		1520	ug/kg	66.7	333
534-52-1	2-Methyl-4,6-dinitrophenol		1260	ug/kg	66.7	333
100-01-6	4-Nitroaniline		1170	ug/kg	100	333
	<i>p</i> -Nitroaniline					
122-39-4	Diphenylamine		1330	ug/kg	66.7	333
122-66-7	Azobenzene		1390	ug/kg	66.7	333
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether		1740	ug/kg	66.7	333
118-74-1	Hexachlorobenzene		1560	ug/kg	66.7	333
85-01-8	Phenanthrene		1350	ug/kg	10.0	33.3
120-12-7	Anthracene		1320	ug/kg	6.67	33.3
84-74-2	Di-n-butylphthalate		1650	ug/kg	66.7	333
206-44-0	Fluoranthene		1520	ug/kg	10.0	33.3
85-68-7	Butylbenzylphthalate		1680	ug/kg	66.7	333
56-55-3	Benzo(a)anthracene		1410	ug/kg	10.0	33.3
91-94-1	3,3'-Dichlorobenzidine		1490	ug/kg	100	333
218-01-9	Chrysene		1420	ug/kg	10.0	33.3
117-81-7	bis(2-Ethylhexyl)phthalate		1640	ug/kg	66.7	333
117-84-0	Di-n-octylphthalate		1620	ug/kg	66.7	333
205-99-2	Benzo(b)fluoranthene		1470	ug/kg	10.0	33.3
207-08-9	Benzo(k)fluoranthene		1460	ug/kg	10.0	33.3
50-32-8	Benzo(a)pyrene		1510	ug/kg	10.0	33.3
193-39-5	Indeno(1,2,3-cd)pyrene		1490	ug/kg	10.0	33.3
53-70-3	Dibenzo(a,h)anthracene		1460	ug/kg	10.0	33.3
191-24-2	Benzo(ghi)perylene		1560	ug/kg	10.0	33.3
120-82-1	1,2,4-Trichlorobenzene		1380	ug/kg	66.7	333

Data File: /chem/MSD1.i/s011510.b/sla1507-2.d
Report Date: 16-Jan-2010 13:40

Page 1

GEL Laboratories LLC

Data file : /chem/MSD1.i/s011510.b/sla1507-2.d
Lab Smp Id: 1202015386 Client Smp ID: SBLK01LCS
Inj Date : 15-JAN-2010 12:19
Operator : AMY Inst ID: MSD1.i
Smp Info : |1202015386|941600|1|SVM|1|SBLK01LCS
Misc Info : |MSD8270_S|WBN100107-02|
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD1.i/s011510.b/MSD1-M8270AQA-111409.m
Meth Date : 16-Jan-2010 13:32 llo00884 Quant Type: ISTD
Cal Date : 17-NOV-2009 17:42 Cal File: slk1264.d
Als bottle: 6 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 10-1213.sub
Target Version: 3.50
Processing Host: hpc1p1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	0.00000	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
							(ng/ul)	(ug/Kg)
* 10 1,4-Dichlorobenzene-d4		152	3.775	3.775	(1.000)	371459	40.0000	
* 29 Naphthalene-d8		136	4.634	4.634	(1.000)	1422016	40.0000	
* 46 Acenaphthene-d10		164	5.875	5.875	(1.000)	779463	40.0000	
* 67 Phenanthrene-d10		188	6.869	6.869	(1.000)	1292082	40.0000	
* 91 Chrysene-d12		240	8.492	8.492	(1.000)	1131988	40.0000	
* 98 Perylene-d12		264	9.839	9.833	(1.000)	1035945	40.0000	
\$ 3 2-Fluorophenol		112	2.987	2.981	(0.791)	727859	75.0187	2500
\$ 5 Phenol-d5		99	3.510	3.510	(0.930)	868729	73.6692	2460
\$ 20 Nitrobenzene-d5		82	4.140	4.140	(0.893)	406321	43.3584	1440
\$ 39 2-Fluorobiphenyl		172	5.375	5.375	(0.915)	808435	43.3057	1440
\$ 60 2,4,6-Tribromophenol		329	6.416	6.416	(1.092)	205668	94.4931	3150
\$ 81 p-Terphenyl-d14		244	7.781	7.780	(0.916)	869279	48.9221	1630

Compounds	QUANT SIG					CONCENTRATIONS	
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ng/ul)	FINAL (ug/Kg)
=====	=====	==	=====	=====	=====	=====	=====
6 Phenol	94	3.522	3.516	(0.933)	468492	37.7047	1260
8 2-Chlorophenol	128	3.646	3.645	(0.966)	395644	37.4653	1250
11 1,4-Dichlorobenzene	146	3.781	3.787	(1.002)	424151	34.9193	1160
17 N-Nitrosodipropylamine	70	4.016	4.016	(1.064)	246662	34.8403	1160 (Q)
28 1,2,4-Trichlorobenzene	180	4.587	4.587	(0.990)	355975	41.3592	1380
33 4-Chloro-3-methylphenol	107	4.998	4.992	(1.079)	320930	42.1733	1400
47 Acenaphthene	154	5.898	5.898	(1.004)	723060	40.2189	1340
50 2,4-Dinitrotoluene	165	5.992	5.992	(1.020)	270371	38.5484	1280
52 4-Nitrophenol	139	5.945	5.939	(1.012)	131548	35.7719	1190
65 Pentachlorophenol	266	6.739	6.739	(0.981)	147313	45.0791	1500
79 Pyrene	202	7.728	7.728	(0.910)	1335293	44.3905	1480
2 Pyridine	79	2.357	2.334	(0.624)	304036	34.3613	1140
4 Aniline	66	3.563	3.563	(0.944)	166227	32.0711	1070 (Q)
7 bis(2-Chloroethyl) ether	63	3.581	3.581	(0.949)	330469	38.2312	1270 (Q)
9 1,3-Dichlorobenzene	146	3.740	3.740	(0.991)	427692	34.5162	1150
12 Benzyl alcohol	108	3.851	3.845	(1.020)	269365	41.9522	1400
13 1,2-Dichlorobenzene	146	3.887	3.887	(1.030)	406081	36.1994	1210
14 bis(2-Chloroisopropyl) ether	45	3.916	3.922	(1.037)	757751	36.8038	1230
15 o-Cresol	107	3.904	3.904	(1.034)	313793	39.9179	1330
18 m,p-Cresols	107	4.004	4.004	(1.061)	418525	39.1290	1300
19 Hexachloroethane	117	4.110	4.110	(1.089)	151212	34.5898	1150
21 Nitrobenzene	77	4.151	4.151	(0.896)	432767	44.3223	1480
22 Isophorone	82	4.298	4.304	(0.928)	788618	46.1679	1540
23 2-Nitrophenol	139	4.363	4.363	(0.942)	184566	35.6087	1190
24 2,4-Dimethylphenol	122	4.363	4.363	(0.942)	333379	40.1678	1340
25 bis(2-Chloroethoxy)methane	93	4.422	4.428	(0.954)	440923	40.0957	1340
26 2,4-Dichlorophenol	162	4.528	4.528	(0.977)	309695	39.7620	1320
27 Benzoic acid	105	4.457	4.434	(0.962)	503483	88.0375	2930
30 Naphthalene	128	4.651	4.651	(1.004)	1124443	37.8880	1260 (Q)
31 4-Chloroaniline	127	4.675	4.675	(1.009)	453103	33.4323	1110
32 Hexachlorobutadiene	225	4.710	4.716	(1.016)	201167	45.5174	1520
34 2-Methylnaphthalene	142	5.128	5.128	(1.107)	787533	40.3656	1340
36 Hexachlorocyclopentadiene	237	5.228	5.228	(0.890)	119375	50.1601	1670
37 2,4,6-Trichlorophenol	196	5.322	5.322	(0.906)	223046	43.0215	1430
38 2,4,5-Trichlorophenol	196	5.357	5.351	(0.912)	253529	45.9896	1530
40 2-Chloronaphthalene	162	5.481	5.481	(0.933)	716322	37.2257	1240
42 o-Nitroaniline	65	5.545	5.545	(0.944)	219352	36.7638	1220
41 m-Nitroaniline	138	5.840	5.839	(0.994)	178778	33.9101	1130
43 Dimethylphthalate	163	5.645	5.651	(0.961)	898329	42.2956	1410
44 2,6-Dinitrotoluene	165	5.704	5.710	(0.971)	208791	39.4558	1320
45 Acenaphthylene	152	5.781	5.781	(0.984)	1215617	40.4837	1350
48 2,4-Dinitrophenol	184	5.910	5.910	(1.006)	89319	42.7638	1420 (Q)
49 Dibenzofuran	168	6.016	6.016	(1.024)	1214635	46.7179	1560
51 Diethylphthalate	149	6.134	6.134	(1.044)	903172	45.6115	1520
53 Fluorene	166	6.251	6.251	(1.064)	839937	40.0669	1340
54 4-Chlorophenylphenylether	204	6.234	6.234	(1.061)	404183	45.6658	1520
55 2-Methyl-4,6-dinitrophenol	198	6.275	6.275	(0.914)	123673	37.8337	1260

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN	FINAL
	MASS					(ng/ul)	(ug/Kg)
=====	=====	==	=====	=====	=====	=====	=====
56 p-Nitroaniline	138	6.269	6.263	(1.067)	180367	34.9840	1170
133 Diphenylamine	169	6.316	6.316	(0.920)	685239	39.7599	1320
58 1,2-Diphenylhydrazine	77	6.340	6.339	(0.923)	875380	41.6291	1390
61 4-Bromophenylphenylether	248	6.557	6.557	(0.955)	232136	52.2916	1740
63 Hexachlorobenzene	284	6.616	6.616	(0.963)	254925	46.7839	1560
68 Phenanthrene	178	6.881	6.881	(1.002)	1193607	40.6491	1350
69 Anthracene	178	6.916	6.916	(1.007)	1185120	39.6862	1320
72 Di-n-butylphthalate	149	7.157	7.157	(1.042)	1572904	49.3825	1650
76 Fluoranthene	202	7.592	7.592	(1.105)	1289946	45.5107	1520
85 Butylbenzylphthalate	149	8.034	8.033	(0.946)	688683	50.3083	1680
89 Benzo (a) anthracene	228	8.481	8.480	(0.999)	1148481	42.3113	1410
90 3,3'-Dichlorobenzidine	252	8.428	8.428	(0.992)	348832	44.7576	1490
92 Chrysene	228	8.510	8.510	(1.002)	1084124	42.7328	1420
93 bis (2-Ethylhexyl)phthalate	149	8.369	8.369	(0.985)	980126	49.2829	1640
94 Di-n-octylphthalate	149	8.857	8.857	(0.900)	1648835	48.6553	1620
95 Benzo (b) fluoranthene	252	9.410	9.404	(0.956)	1163252	43.9869	1470
96 Benzo (k) fluoranthene	252	9.433	9.433	(0.959)	1140278	43.8979	1460
97 Benzo (a) pyrene	252	9.775	9.774	(0.993)	1025267	45.3319	1510
99 Indeno (1,2,3-cd) pyrene	276	11.327	11.321	(1.151)	1045143	44.5757	1480
100 Dibenzo (a,h) anthracene	278	11.327	11.321	(1.151)	862569	43.9287	1460
101 Benzo (ghi) perylene	276	11.792	11.786	(1.198)	909913	46.7421	1560
1 N-Methyl-N-nitrosomethylamine	74	2.322	2.304	(0.615)	220408	41.8301	1390

QC Flag Legend

Q - Qualifier signal failed the ratio test.

```
Instrument: MSD1.1
Operator: AMY
Column diameter: 0.20
```

Y (x10⁶)

2 3 4 5 6 7 8 9 10 11 12 13

0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0 2.2 2.4 2.6 2.8 3.0 3.2 3.4 3.6 3.8 4.0 4.2 4.4 4.6

-N-Methyl-N-nitrosomethylamine

-2-Fluorophenol

-Phenol-d5+

-Aniline+

-2-Chlorophenol

-1,3-Dichlorobenzene

-1,4-Dichlorobenzene-d4+

-Benzyl alcohol

-1,2-Dichloroethane

-Isopropylamine

-Hexachloroethane

-Nitrobenzene-d5+

-Isophorone

-Benzoin acid

-Bis(2-chloroethoxy)methane

-2-Nitrophenol+

-2,4-Dichlorophenol

-1,2,4-Trichlorobenzene

-Hexachlorocyclopentadiene

-Naphthalene-d8

-4-Chloro-3-methylphenol

-2-Methylnaphthalene

-Hexachlorocyclopentadiene

-2,4,6-Trichlorophenol

-2-Chloronaphthalene

-o-Nitroaniline

-Dinethylphthalate

-2,6-Dinitrotoluene

-Acenaphthylene

-Acenaphthene

-4-Nitrophenol

-m-Nitroaniline

-2,4-Dinitrotoluene

-Dibenzofuran

-Diethylphthalate

-4-Chlorophenylphenylether

-1,2-Bisphenol A

-2,4,6-Tribromophenol

-4-Bromophenylphenylether

-Hexachlorobenzene

-Pentachlorophenol

-Phenanthrene-d10

-Phenanthrene

-Di-n-butylphthalate

-p-Toluenesulfonate

-Butylbenzylphthalate

-3,3'-Dichlorobenzidine

-Bis(2-chloroethoxy)methane

-Di-n-octylphthalate

-Benzo(b)fluoranthene

-Benzo(a)fluoranthene

-Benzo(a)pyrene

-Perylene-d12

-Indeno(1,2,3-cd)pyrene+

-Benzo(ghi)perylene

Miscellaneous Data

Prep Logbook

Extraction of Semivolatile and Nonvolatile Organic Compounds from Soil, Sludge, and Other Miscellaneous Solid Samples

Batch ID: 941595 Verified by: _____
Analyst: Alberto Velasco
Method: SW846 3550B Lab SOP: GL-OA-E-010 REV# 18
Instrument: Semi-Volatiles Manual

Sample ID	Run Date	Aliquot (g)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1202015385 MB	14-JAN-2010 19:40:09	30	1	0.03333
1202015386 LCS	14-JAN-2010 19:40:09	30	1	0.03333
2445080001	14-JAN-2010 19:40:09	30.17	1	0.03315
2445080002	14-JAN-2010 19:40:09	30.06	1	0.03327
2445080003	14-JAN-2010 19:40:09	30.05	1	0.03328
2445080004	14-JAN-2010 19:40:09	30.14	1	0.03318
2445080005	14-JAN-2010 19:40:09	30.08	1	0.03324
2445080006	14-JAN-2010 19:40:09	30.01	1	0.03332
2445080007	14-JAN-2010 19:40:09	30.01	1	0.03332
2445080008	14-JAN-2010 19:40:09	30.08	1	0.03324
2445140001	14-JAN-2010 19:40:09	30.12	1	0.0332
2445140002	14-JAN-2010 19:40:09	30.12	1	0.0332
2445140003	14-JAN-2010 19:40:09	30.18	1	0.03313
2445140005	14-JAN-2010 19:40:09	30.04	1	0.03329
2445140006	14-JAN-2010 19:40:09	30.11	1	0.03321
2446040001	14-JAN-2010 19:40:09	30.16	1	0.03316
2446040002	14-JAN-2010 19:40:09	30.04	1	0.03329
2446120001	14-JAN-2010 19:40:09	30.12	1	0.0332
2446130001	14-JAN-2010 19:40:09	30.13	1	0.03319
1202015387 MS (2446130001)	14-JAN-2010 19:40:09	30.01	1	0.03332
1202015388 MSD (2446130001)	14-JAN-2010 19:40:09	30.04	1	0.03329

Type	Sample Id	Description	Serial Number	Spike Amt	Units	Comments:
LCS	1202015386	BNA LCS w/o Benzidine 50ppm	UE091130-11	1	mL	Verified By: AV
LCS	1202015386	BENZIDINE LCS	UE100108-21	1	mL	Final Solvent: CH2Cl2
MS	1202015387	BNA LCS w/o Benzidine 50ppm	UE091130-11	1	mL	
MS	1202015387	BENZIDINE LCS	UE100108-21	1	mL	
MSD	1202015388	BNA LCS w/o Benzidine 50ppm	UE091130-11	1	mL	
MSD	1202015388	BENZIDINE LCS	UE100108-21	1	mL	
SURR	All	BNA for all Surrogate	UE100108-10	1	mL	
REGNT	All	Methylene Chloride	1253574-D	150	mL	
REGNT	All	Acetone	1255284	150	mL	
SOURC	All	SODIUM SULFATE	1248200	30	g	

GEL ORGANIC RUN LOG

INSTRUMENT ID: MSD1

DATE: 11/14/2009

METHOD: See raw data

OPERATOR: AMY

REVIEWED BY:

DATE:

SOLVENT LOT: 116462-D

No. 1 on pg. 1

Multiplier Voltage: 1400 Emv

Extr. Injection Volume: 0.5, 1.0 ul

DFTPP Solution ID: WBN091101-01

Internal Std ID: WBN091024-01

CALIBRATION & QC INFORMATION:

Initial Calibration Dates: See Calibration History and Standard Logbook.

Initial Calibration Std ID's: See Calibration History and Standard Logbook.

SOP: GL-OA-E-009 Rev. 22 Sequence Number: /chem/MSD1.i/s111409.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
s1k1201-D.d	WBN091101-01	AMY	14-NOV-2009 17:38	150 PPM	s111409	1.0	DFTPP	TUNE-MEGA ICAL
s1k1201.d	WBN091101-01	AMY	14-NOV-2009 17:38	150 PPM	s111409	1.0	DFTPP	TUNE-MEGA ICAL
s1k1202.d	INST BLK	AMY	14-NOV-2009 17:53	-----	s111409	1.0	INST BLK	
s1k1203.d	WBN091111-16	AMY	14-NOV-2009 18:22	11 PPM	s111409	1.0	MEGA001	
s1k1204.d	WBN091111-15	AMY	14-NOV-2009 18:51	110 PPM	s111409	1.0	MEGA010	
s1k1204MRQ.d	WBN091111-15	AMY	14-NOV-2009 18:51	110 PPM	s111409	1.0	MEGA010	pass linearity for c26 and c184
s1k1205.d	WBN091111-14	AMY	14-NOV-2009 19:21	120 PPM	s111409	1.0	MEGA020	
s1k1206.d	WBN091111-13.1	AMY	14-NOV-2009 19:50	140 PPM	s111409	1.0	MEGA040	
s1k1207.d	WBN091111-12	AMY	14-NOV-2009 20:19	150 PPM	s111409	1.0	MEGA050	
s1k1208.d	WBN091111-11	AMY	14-NOV-2009 20:47	180 PPM	s111409	1.0	MEGA080	
s1k1209.d	WBN091111-10	AMY	14-NOV-2009 21:16	1100 PPM	s111409	1.0	MEGA100	
s1k1210.d	WBN091111-09	AMY	14-NOV-2009 21:45	1120 PPM	s111409	1.0	MEGA120	
s1k1211.d	INST BLK	AMY	14-NOV-2009 22:14	-----	s111409	1.0	INST BLK	
s1k1212-BOE.d	WBN091111-17.1	AMY	14-NOV-2009 22:43	140 PPM	s111409	1.0	MEGA1CV	DOSE-fail c65
s1k1212-D.d	WBN091111-17.1	AMY	14-NOV-2009 22:43	140 PPM	s111409	1.0	MEGA1CV	DOSE-fail c65
s1k1212.d	WBN091111-17.1	AMY	14-NOV-2009 22:43	140 PPM	s111409	1.0	MEGA1CV	DOSE: fails c65
s1k1213-D.d	WBN091101-01	AMY	15-NOV-2009 14:50	150 PPM	s111409	1.0	DFTPP	TUNE-AP/PEST/HEX ICALS
s1k1213.d	WBN091101-01	AMY	15-NOV-2009 14:50	150 PPM	s111409	1.0	DFTPP	TUNE-AP/PEST/HEX ICALS
s1k1214.d	INST BLK	AMY	15-NOV-2009 15:05	-----	s111409	1.0	INST BLK	

|slk1215.d	|WBN091111-01	|amy	|15-NOV-2009 15:28	|10 PPM	|sl11409	|	1.0|AP010	|
+	+	+	+	+	+	+	+	+
|slk1216.d	|WBN091111-02	|amy	|15-NOV-2009 15:51	|20 PPM	|sl11409	|	1.0|AP020	|
+	+	+	+	+	+	+	+	+
|slk1217.d	|WBN091111-03.1	|amy	|15-NOV-2009 16:14	|40 PPM	|sl11409	|	1.0|AP040	|
+	+	+	+	+	+	+	+	+
|slk1218.d	|WBN091111-04	|amy	|15-NOV-2009 16:38	|50 PPM	|sl11409	|	1.0|AP050	|
+	+	+	+	+	+	+	+	+
|slk1219.d	|WBN091111-05	|amy	|15-NOV-2009 17:01	|80 PPM	|sl11409	|	1.0|AP080	|
+	+	+	+	+	+	+	+	+
|slk1220.d	|WBN091111-06	|amy	|15-NOV-2009 17:24	|100 PPM	|sl11409	|	1.0|AP100	|
+	+	+	+	+	+	+	+	+
|slk1221.d	|WBN091111-07	|amy	|15-NOV-2009 17:47	|120 PPM	|sl11409	|	1.0|AP120	|
+	+	+	+	+	+	+	+	+
|slk1222.d	|WBN091029-25	|amy	|15-NOV-2009 18:11	|10 PPM	|sl11409	|	1.0|PEST010	|
+	+	+	+	+	+	+	+	+
|slk1223.d	|WBN091029-24	|amy	|15-NOV-2009 18:35	|20 PPM	|sl11409	|	1.0|PEST020	|
+	+	+	+	+	+	+	+	+
|slk1224.d	|WBN091029-23.1	|amy	|15-NOV-2009 18:58	|40 PPM	|sl11409	|	1.0|PEST040	|
+	+	+	+	+	+	+	+	+
|slk1225.d	|WBN091029-22	|amy	|15-NOV-2009 19:21	|50 PPM	|sl11409	|	1.0|PEST050	|
+	+	+	+	+	+	+	+	+
|slk1226.d	|WBN091029-21	|amy	|15-NOV-2009 19:45	|80 PPM	|sl11409	|	1.0|PEST080	|
+	+	+	+	+	+	+	+	+
|slk1227.d	|WBN091029-20	|amy	|15-NOV-2009 20:09	|100 PPM	|sl11409	|	1.0|PEST100	|
+	+	+	+	+	+	+	+	+
|slk1228.d	|WBN091029-19	|amy	|15-NOV-2009 20:31	|120 PPM	|sl11409	|	1.0|PEST120	|
+	+	+	+	+	+	+	+	+
|slk1229.d	|WBN091016-16	|amy	|15-NOV-2009 20:55	|500 PPM	|sl11409	|	1.0|HEX500	|
+	+	+	+	+	+	+	+	+
|slk1230.d	|WBN091016-15	|amy	|15-NOV-2009 21:18	|1000 PPM	|sl11409	|	1.0|HEX1000	|
+	+	+	+	+	+	+	+	+
|slk1231.d	|WBN091016-14	|amy	|15-NOV-2009 21:42	|1250 PPM	|sl11409	|	1.0|HEX1250	|
+	+	+	+	+	+	+	+	+
|slk1232.d	|WBN091016-13	|amy	|15-NOV-2009 22:06	|1500 PPM	|sl11409	|	1.0|HEX503	|
+	+	+	+	+	+	+	+	+
|slk1233.d	|WBN091016-12	|amy	|15-NOV-2009 22:30	|1750 PPM	|sl11409	|	1.0|HEX504	|
+	+	+	+	+	+	+	+	+
|slk1234.d	|WBN090825-02.4	|amy	|15-NOV-2009 22:53	|2000 PPM	|sl11409	|	1.0|HEX2000	|
+	+	+	+	+	+	+	+	+
|slk1235-D.d	|WBN091111-08.1	|amy	|15-NOV-2009 23:17	|40 PPM	|sl11409	|	1.0|APICV	|
+	+	+	+	+	+	+	+	+
|slk1235.d	|WBN091111-08.1	|amy	|15-NOV-2009 23:17	|40 PPM	|sl11409	|	1.0|APICV	|
+	+	+	+	+	+	+	+	+
|slk1236-D.d	|WBN091029-26.1	|amy	|15-NOV-2009 23:40	|40 PPM	|sl11409	|	1.0|PESTICV	|
+	+	+	+	+	+	+	+	+
|slk1236.d	|WBN091029-26.1	|amy	|15-NOV-2009 23:40	|40 PPM	|sl11409	|	1.0|PESTICV	|
+	+	+	+	+	+	+	+	+
|slk1237-D.d	|WBN091016-10.2	|amy	|16-NOV-2009 00:03	|1250 PPM	|sl11409	|	1.0|HEXICV	|
+	+	+	+	+	+	+	+	+
|slk1237.d	|WBN091016-10.2	|amy	|16-NOV-2009 00:03	|1250 PPM	|sl11409	|	1.0|HEXICV	|
+	+	+	+	+	+	+	+	+
|slk1238-D.d	|WBN091101-01	|AMY	|16-NOV-2009 00:27	|50 PPM	|sl11409	|	1.0|DFTPP	| DUSE: fails breakdown
+	+	+	+	+	+	+	+	+

slk1238.d	WBNO91101-C1	AMY	16-NOV-2009 00:27	50 PPM	sl11409	1.0|DFTPP	DUSE: fails breakdown
slk1239.d	INST BLK	amy	16-NOV-2009 00:43	-----	sl11409	1.0|INST BLK	
slk1240.d	UBNO90924-01	amy	16-NOV-2009 01:05	10 PPM	sl11409	1.0|NEV010	DUSE
slk1241.d	UBNO90924-02	amy	16-NOV-2009 01:28	20 PPM	sl11409	1.0|NEV020	DUSE
slk1242.d	UBNO90924-03	amy	16-NOV-2009 01:51	40 PPM	sl11409	1.0|NEV040	DUSE
slk1243.d	UBNO90924-04	amy	16-NOV-2009 02:14	50 PPM	sl11409	1.0|NEV050	DUSE
slk1244.d	UBNO90924-05	amy	16-NOV-2009 02:38	80 PPM	sl11409	1.0|NEV080	DUSE
slk1245.d	UBNO90924-06	amy	16-NOV-2009 03:01	100 PPM	sl11409	1.0|NEV100	DUSE
slk1246.d	UBNO90924-07	amy	16-NOV-2009 03:23	120 PPM	sl11409	1.0|NEV120	DUSE
slk1247-D.d	WBNO91101-01	AMY	17-NOV-2009 09:05	50 PPM	sl11409	1.0|DFTPP	DUSE
slk1247.d	WBNO91101-01	AMY	17-NOV-2009 09:05	50 PPM	sl11409	1.0|DFTPP	DUSE
slk1248.d	INST BLK	amy	17-NOV-2009 09:20	-----	sl11409	1.0|INST BLK	
slk1249.d	WBNO91027-09.2	amy	17-NOV-2009 09:48	40 PPM	sl11409	1.0|MEGAICV	DUSE: c65 fails
slk1250.d	UBNO90924-01	amy	17-NOV-2009 10:17	10 PPM	sl11409	1.0|NEV010	DUSE
slk1251.d	UBNO90924-02	amy	17-NOV-2009 10:41	20 PPM	sl11409	1.0|NEV020	DUSE
slk1252.d	UBNO90924-03	amy	17-NOV-2009 11:04	40 PPM	sl11409	1.0|NEV040	DUSE
slk1253.d	UBNO90924-04	amy	17-NOV-2009 11:27	50 PPM	sl11409	1.0|NEV050	DUSE
slk1254.d	UBNO90924-05	amy	17-NOV-2009 11:50	80 PPM	sl11409	1.0|NEV080	DUSE
slk1255.d	UBNO90924-06	amy	17-NOV-2009 12:14	100 PPM	sl11409	1.0|NEV100	DUSE
slk1256.d	UBNO90924-07	amy	17-NOV-2009 12:38	120 PPM	sl11409	1.0|NEV120	DUSE
slk1257.d	WBNO91027-09.1	amy	17-NOV-2009 13:02	40 PPM	sl11409	1.0|MEGAICV	DUSE: c65 fails /clean inj port
slk1259-D.d	WBNO91101-C1	AMY	17-NOV-2009 15:48	50 PPM	sl11409	1.0|DFTPP	TUNE-MEGAICV/NEV ICAL
slk1259.d	WBNO91101-01	AMY	17-NOV-2009 15:48	50 PPM	sl11409	1.0|DFTPP	TUNE-MEGAICV/NEV ICAL
slk1260.d	INST BLK	amy	17-NOV-2009 16:04	-----	sl11409	1.0|INST BLK	
slk1261-BOE.d	WBNO91027-09.3	amy	17-NOV-2009 16:27	40 PPM	sl11409	1.0|MEGAICV	
slk1261-D.d	WBNO91027-09.3	amy	17-NOV-2009 16:27	40 PPM	sl11409	1.0|MEGAICV	
slk1261.d	WBNO91027-09.3	amy	17-NOV-2009 16:27	40 PPM	sl11409	1.0|MEGAICV	'pass 530038

slk1262.d	UBN091117-01	amy	17-NOV-2009 16:56	110 PPM	sl11409	1.0|NEV010	
slk1263.d	UBN091117-02	amy	17-NOV-2009 17:19	120 PPM	sl11409	1.0|NEV020	
slk1264.d	UBN091117-03	amy	17-NOV-2009 17:42	140 PPM	sl11409	1.0|NEV040	
slk1265.d	UBN091117-04	amy	17-NOV-2009 18:05	150 PPM	sl11409	1.0|NEV050	DUSE
slk1266.d	UBN091117-05	amy	17-NOV-2009 18:28	180 PPM	sl11409	1.0|NEV080	
slk1267.d	UBN091117-06	amy	17-NOV-2009 18:52	1100 PPM	sl11409	1.0|NEV100	DUSE
slk1268.d	UBN091117-07	amy	17-NOV-2009 19:15	1120 PPM	sl11409	1.0|NEV120	

GEL ORGANIC RUN LOG

INSTRUMENT ID: MSD1

DATE: 01/15/2010 METHOD: See raw data OPERATOR: AMY REVIEWED BY: _____ DATE: _____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 1 on pg. 1 SOLVENT LOT: 1202440-D
Multiplier Voltage: 1318 Emv Extr. Injection Volume: 0.5, 1.0 ul
DFTPP Solution ID: WBN091213-01 Internal Std ID: WBN100107-02
CALIBRATION & QC INFORMATION:
Initial Calibration Dates: See Calibration History and Standard Logbook.
Initial Calibration Std ID's: See Calibration History and Standard Logbook.

SOP: GL-OA-E-009 Rev. 23 Sequence Number: /chem/MSD1.i/s011510.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
slal501.d	INSTBLK	AMY	15-JAN-2010 09:14		MEGALICARE	1.0	INSTBLK	DUSE
slal502.d	WBN091213-01	AMY	15-JAN-2010 09:39	150 PPM	s011510	1.0	DFTPP	PASSING
slal503.d	WBN091225-12.2	AMY	15-JAN-2010 09:55	140 PPM	MEGALICARE	1.0	MEGACVS	pass 386947
slal504.d	WBN100103-03.2	AMY	15-JAN-2010 11:06	140 PPM	lap12	1.0	APCVS	PASSING
slal505.d	WBN100103-26.2	AMY	15-JAN-2010 11:30	140 PPM	pest	1.0	PESTCVS	DUSE-not needed
slal506-2.d	1202015385	AMY	15-JAN-2010 11:54	1941600	10-1182	1.0	SELK01	REPORT
slal506-2.d	1202015385	AMY	15-JAN-2010 11:54	1941600	10-1213	1.0	SELK01	REPORT
slal506-3.d	1202015385	AMY	15-JAN-2010 11:54	1941600	10-1216	1.0	SELK01	REPORT
slal506-4.d	1202015385	AMY	15-JAN-2010 11:54	1941600	10-1218	1.0	SELK01	REPORT
slal506.d	1202015385	AMY	15-JAN-2010 11:54	1941600	10-1186	1.0	SELK01	REPORT
slal507-1.d	1202015386	AMY	15-JAN-2010 12:19	1941600	10-1182	1.0	SELK01LCS	REPORT
slal507-2.d	1202015386	AMY	15-JAN-2010 12:19	1941600	10-1213	1.0	SELK01LCS	REPORT
slal507-3.d	1202015386	AMY	15-JAN-2010 12:19	1941600	10-1216	1.0	SELK01LCS	REPORT
slal507-4.d	1202015386	AMY	15-JAN-2010 12:19	1941600	10-1218	1.0	SELK01LCS	REPORT
slal507.d	1202015386	AMY	15-JAN-2010 12:19	1941600	10-1186	1.0	SELK01LCS	REPORT
slal508.d	124241014	AMY	15-JAN-2010 12:44	1941310	10-1173	1.0	LANLRR	REPORT-RR of slal428 due to 1std failure.
slal509.d	1244508001	AMY	15-JAN-2010 13:08	1941600	10-1186	1.0	LANL	REPORT
slal510.d	1244508002	AMY	15-JAN-2010 13:33	1941600	10-1186	1.0	LANL	REPORT
slal511.d	1244508003	AMY	15-JAN-2010 13:56	1941600	10-1186	1.0	LANL	REPORT

slal512.d	1244508004	AMY	15-JAN-2010 14:21	941600	10-1186	1.0	LANL	REPORT
slal513.d	1244508005	AMY	15-JAN-2010 14:46	941600	10-1186	1.0	LANL	REPORT
slal514.d	1244508006	AMY	15-JAN-2010 15:11	941600	10-1186	1.0	LANL	REPORT
slal515.d	1244508007	AMY	15-JAN-2010 15:35	941600	10-1186	1.0	LANL	REPORT
slal516.d	1244508008	AMY	15-JAN-2010 15:59	941600	10-1186	1.0	LANL	REPORT
slal517.d	1244514001	AMY	15-JAN-2010 16:34	941600	10-1182	1.0	LANL	REPORT
slal518.d	1244514002	AMY	15-JAN-2010 17:00	941600	10-1182	1.0	LANL	REPORT
slal519.d	1244514003	AMY	15-JAN-2010 17:26	941600	10-1182	1.0	LANL	DUSE-FAIL \$. RR & REPORT s5a1906
slal520.d	1244514005	AMY	15-JAN-2010 17:51	941600	10-1182	1.0	LANL	REPORT
slal521.d	1244514006	AMY	15-JAN-2010 18:15	941600	10-1182	1.0	LANL	REPORT
slal522.d	1244604001	AMY	15-JAN-2010 18:39	941600	10-1213	1.0	LANL	REPORT
slal523.d	1244604002	AMY	15-JAN-2010 19:03	941600	10-1213	1.0	LANL	REPORT
slal524.d	1244612001	AMY	15-JAN-2010 19:27	941600	10-1216	1.0	LANL	REPORT
slal525.d	1244613001	AMY	15-JAN-2010 19:52	941600	10-1218	1.0	LANL	REPORT
slal526.d	1202015387	AMY	15-JAN-2010 20:16	941600	10-1218	1.0	LANLMS	REPORT
slal527.d	11202015388	AMY	15-JAN-2010 20:40	941600	10-1218	1.0	LANLMSD	REPORT

Data File: /chem/MSD1.i/s011510.b/sla1526.d
Report Date: 21-Jan-2010 14:37

Page 1

GEL Laboratories LLC

Data file : /chem/MSD1.i/s011510.b/sla1526.d
Lab Smp Id: 1202015387 Client Smp ID: RE16-10-1286MS
Inj Date : 15-JAN-2010 20:16
Operator : AMY Inst ID: MSD1.i
Smp Info : |1202015387|941600|1|SVM|1|LANLMS
Misc Info : |MSD8270_S|WBN100107-02|
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD1.i/s011810.b/MSD1-M8270AQA-111409.m
Meth Date : 19-Jan-2010 08:24 amy01291 Quant Type: ISTD
Cal Date : 17-NOV-2009 17:42 Cal File: slk1264.d
Als bottle: 25 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 10-1218.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: $\text{Amt} * \text{DF} * \text{Uf} * \text{Vt} / (\text{Vi} * \text{Ws} * (100 - \text{M}) / 100) * \text{CpndVariable}$

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.01000	weight of sample
M	19.72000	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG			RESPONSE	CONCENTRATIONS	
	MASS	RT	EXP RT REL RT		ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	3.775	3.704 (1.000)	336449	40.0000	
* 29 Naphthalene-d8	136	4.634	4.563 (1.000)	1315681	40.0000	
* 46 Acenaphthene-d10	164	5.881	5.804 (1.000)	728002	40.0000	
* 67 Phenanthrene-d10	188	6.869	6.804 (1.000)	1190443	40.0000	
* 91 Chrysene-d12	240	8.492	8.404 (1.000)	884604	40.0000	
* 98 Perylene-d12	264	9.845	9.704 (1.000)	581976	40.0000	
\$ 3 2-Fluorophenol	112	2.987	2.910 (0.791)	581443	66.1639	2750
\$ 5 Phenol-d5	99	3.516	3.440 (0.931)	730852	68.4262	2840
\$ 20 Nitrobenzene-d5	82	4.140	4.069 (0.893)	328335	37.8682	1570
\$ 39 2-Fluorobiphenyl	172	5.375	5.304 (0.914)	697998	40.0329	1660
\$ 60 2,4,6-Tribromophenol	329	6.422	6.351 (1.092)	179368	88.2351	3660
\$ 81 p-Terphenyl-d14	244	7.780	7.716 (0.916)	677794	48.8131	2030

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ng/ul)	FINAL (ug/Kg)
6 Phenol	94	3.528	3.446	(0.935)	390492	34.6974	1440
8 2-Chlorophenol	128	3.651	3.575	(0.967)	325646	34.0457	1410
11 1,4-Dichlorobenzene	146	3.787	3.716	(1.003)	329232	29.9253	1240
17 N-Nitrosodipropylamine	70	4.016	3.946	(1.064)	200112	31.2065	1300 (Q)
28 1,2,4-Trichlorobenzene	180	4.587	4.516	(0.990)	295255	37.0769	1540
33 4-Chloro-3-methylphenol	107	5.010	4.922	(1.081)	288926	41.0363	1700
47 Acenaphthene	154	5.904	5.828	(1.004)	612717	36.4905	1510
50 2,4-Dinitrotoluene	165	5.998	5.922	(1.020)	220735	33.6961	1400
52 4-Nitrophenol	139	5.963	5.875	(1.014)	121419	35.3515	1470
65 Pentachlorophenol	266	6.751	6.675	(0.983)	119479	39.6832	1650
79 Pyrene	202	7.733	7.663	(0.911)	1073161	45.6533	1890
2 Pyridine	79	2.357	2.257	(0.624)	209733	26.1699	1090
4 Aniline	66	3.569	3.498	(0.945)	124850	26.5945	1100 (Q)
7 bis(2-Chloroethyl) ether	63	3.581	3.510	(0.949)	258592	33.0289	1370 (Q)
9 1,3-Dichlorobenzene	146	3.740	3.669	(0.991)	332443	29.6211	1230
12 Benzyl alcohol	108	3.857	3.781	(1.022)	187117	32.1750	1340
13 1,2-Dichlorobenzene	146	3.887	3.816	(1.030)	320303	31.5240	1310
14 bis(2-Chloroisopropyl) ether	45	3.922	3.851	(1.039)	594130	31.8596	1320 (Q)
15 o-Cresol	107	3.916	3.834	(1.037)	307393	43.1728	1790
18 m,p-Cresols	107	4.010	3.934	(1.062)	374039	38.6088	1600
19 Hexachloroethane	117	4.110	4.040	(1.089)	101007	25.5097	1060
21 Nitrobenzene	77	4.151	4.081	(0.896)	354930	39.2884	1630
22 Isophorone	82	4.304	4.234	(0.929)	662146	41.8968	1740
23 2-Nitrophenol	139	4.363	4.293	(0.942)	153814	32.0740	1330
24 2,4-Dimethylphenol	122	4.369	4.293	(0.943)	297692	38.7669	1610
25 bis(2-Chloroethoxy)methane	93	4.428	4.357	(0.956)	366421	36.0138	1490
26 2,4-Dichlorophenol	162	4.534	4.457	(0.978)	277919	38.5662	1600
27 Benzoic acid	105	4.457	4.357	(0.962)	366918	69.3435	2880
30 Naphthalene	128	4.651	4.581	(1.004)	926863	33.7547	1400 (Q)
31 4-Chloroaniline	127	4.681	4.581	(1.010)	346231	27.6114	1150
32 Hexachlorobutadiene	225	4.716	4.645	(1.018)	163936	40.0912	1660
34 2-Methylnaphthalene	142	5.128	5.057	(1.107)	669188	37.0719	1540
36 Hexachlorocyclopentadiene	237	5.228	5.157	(0.889)	31514	14.1779	588
37 2,4,6-Trichlorophenol	196	5.328	5.251	(0.906)	196454	40.5710	1680
38 2,4,5-Trichlorophenol	196	5.363	5.281	(0.912)	230425	44.7532	1860
40 2-Chloronaphthalene	162	5.481	5.404	(0.932)	624863	34.7682	1440
42 o-Nitroaniline	65	5.551	5.475	(0.944)	192726	34.5846	1440
41 m-Nitroaniline	138	5.845	5.769	(0.994)	149279	30.3163	1260
43 Dimethylphthalate	163	5.651	5.581	(0.961)	769628	38.7974	1610
44 2,6-Dinitrotoluene	165	5.710	5.634	(0.971)	177302	35.8736	1490
45 Acenaphthylene	152	5.781	5.710	(0.983)	1069002	38.1175	1580
48 2,4-Dinitrophenol	184	5.916	5.845	(1.006)	32352	16.5843	688 (aQ)
49 Dibenzofuran	168	6.022	5.945	(1.024)	1066098	43.9034	1820
51 Diethylphthalate	149	6.139	6.069	(1.044)	789184	42.6722	1770
53 Fluorene	166	6.257	6.187	(1.064)	750454	38.3289	1590
54 4-Chlorophenylphenylether	204	6.234	6.163	(1.060)	358125	43.3222	1800
55 2-Methyl-4,6-dinitrophenol	198	6.281	6.210	(0.914)	53624	17.8051	739

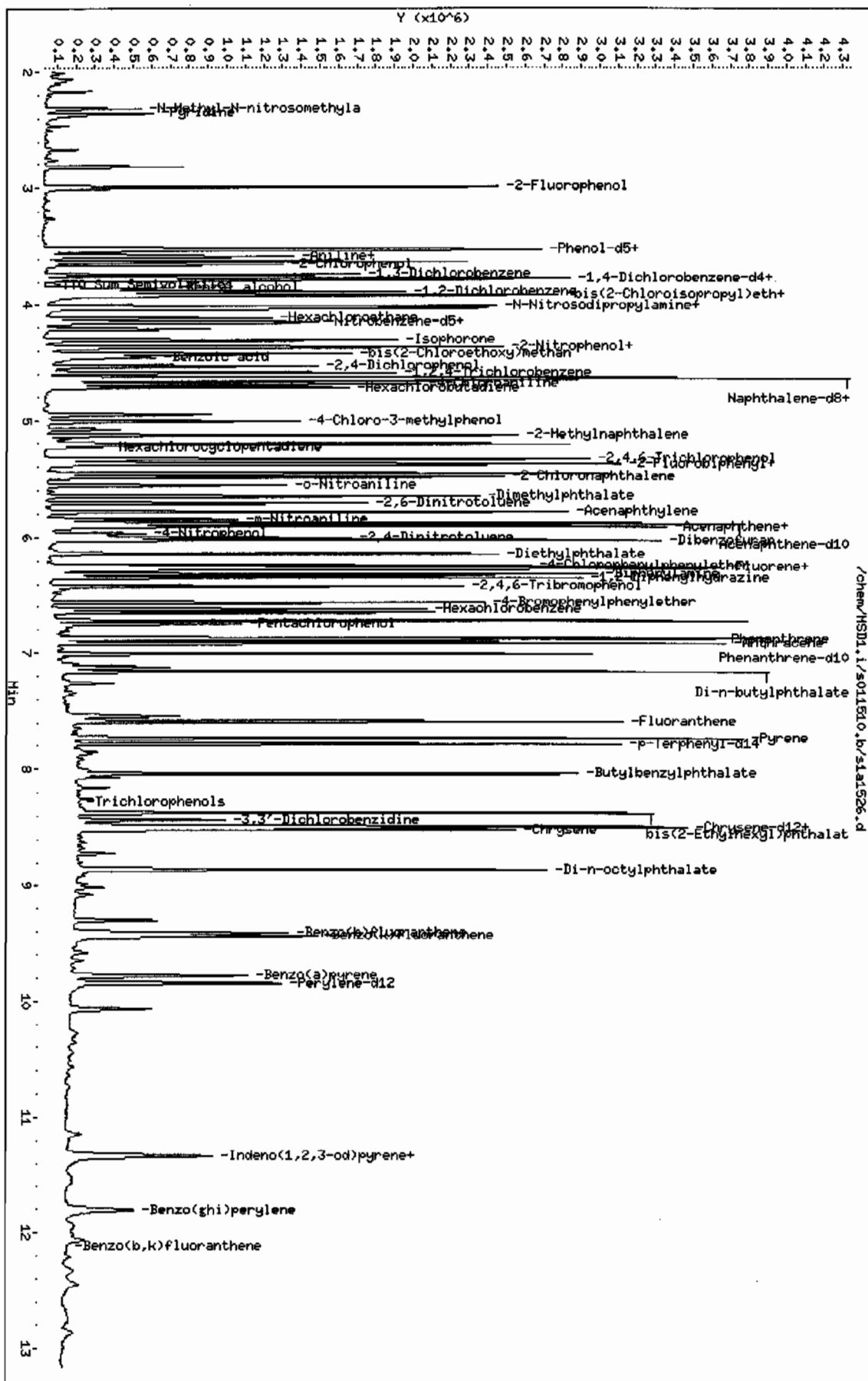
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ng/ul)	FINAL (ug/Kg)
56 p-Nitroaniline	138	6.275	6.198	(1.067)	145251	30.1644	1250
133 Diphenylamine	169	6.316	6.245	(0.920)	600711	37.8312	1570
58 1,2-Diphenylhydrazine	77	6.345	6.275	(0.924)	772532	39.8748	1660
61 4-Bromophenylphenylether	248	6.563	6.492	(0.955)	200534	49.0296	2040
63 Hexachlorobenzene	284	6.622	6.551	(0.964)	211921	42.2123	1750
68 Phenanthrene	178	6.886	6.816	(1.003)	1017257	37.6012	1560
69 Anthracene	178	6.916	6.845	(1.007)	1017149	36.9695	1530
72 Di-n-butylphthalate	149	7.163	7.098	(1.043)	1319191	44.9532	1860
76 Fluoranthene	202	7.598	7.528	(1.106)	1043326	39.9524	1660
85 Butylbenzylphthalate	149	8.039	7.969	(0.947)	539063	50.3910	2090
89 Benzo(a)anthracene	228	8.486	8.398	(0.999)	824493	38.8698	1610
90 3,3'-Dichlorobenzidine	252	8.433	8.351	(0.993)	160550	26.3605	1090
92 Chrysene	228	8.516	8.428	(1.003)	766447	38.6596	1600
93 bis(2-Ethylhexyl)phthalate	149	8.375	8.298	(0.986)	749912	48.2522	2000
94 Di-n-octylphthalate	149	8.863	8.775	(0.900)	1192979	62.6639	2600
95 Benzo(b)fluoranthene	252	9.416	9.298	(0.956)	640919	43.1917	1790
96 Benzo(k)fluoranthene	252	9.439	9.322	(0.959)	663145	45.4436	1890
97 Benzo(a)pyrene	252	9.780	9.651	(0.993)	511234	40.2190	1670
99 Indeno(1,2,3-cd)pyrene	276	11.339	11.145	(1.152)	392008	29.6159	1230
100 Dibenzo(a,h)anthracene	278	11.333	11.139	(1.151)	333198	30.1501	1250
101 Benzo(ghi)perylene	276	11.804	11.592	(1.199)	310878	28.4270	1180
1 N-Methyl-N-nitrosomethylamine	74	2.316	2.228	(0.614)	155771	32.6392	1350

QC Flag Legend

- a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
- Q - Qualifier signal failed the ratio test.

Data File: /chem/MSD1.i/s011510.b/s1a1526.d
 Date: 15-JAN-2010 20:16
 Client ID: RE16-10-1286HS
 Sample Info: 1202015387/1941600121SVH11.LANLUS
 Volume Injected (uL): 0.5
 Column Phase: J&W DB-SHS

Instrument: MSD1.i
 Operator: AHY
 Column diameter: 0.20



Data File: /chem/MSD1.i/s011510.b/s1a1527.d
Report Date: 21-Jan-2010 14:38

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GEL Laboratories LLC

Data file : /chem/MSD1.i/s011510.b/s1a1527.d
Lab Smp Id: 1202015388 Client Smp ID: RE16-10-1286MSD
Inj Date : 15-JAN-2010 20:40
Operator : AMY Inst ID: MSD1.i
Smp Info : |1202015388|941600|1|SVM|1|LANLMSD
Misc Info : |MSD8270_S|WBN100107-02|
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD1.i/s011810.b/MSD1-M8270AQA-111409.m
Meth Date : 19-Jan-2010 08:24 amy01291 Quant Type: ISTD
Cal Date : 17-NOV-2009 17:42 Cal File: s1k1264.d
Als bottle: 26 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 10-1218.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf * Vt / (Vi * Ws * (100 - M) / 100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.04000	weight of sample
M	19.72000	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG						CONCENTRATIONS	
	MASS	RT	EXP RT	REL RT	RESPONSE		ON-COLUMN	FINAL
	=====	==	=====	=====	=====		(ng/ul)	(ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	3.775	3.704	(1.000)	391183		40.0000	
* 29 Naphthalene-d8	136	4.634	4.563	(1.000)	1530989		40.0000	
* 46 Acenaphthene-d10	164	5.881	5.804	(1.000)	839606		40.0000	
* 67 Phenanthrene-d10	188	6.869	6.804	(1.000)	1433255		40.0000	
* 91 Chrysene-d12	240	8.498	8.404	(1.000)	1108802		40.0000	
* 98 Perylene-d12	264	9.845	9.704	(1.000)	756566		40.0000	
\$ 3 2-Fluorophenol	112	2.987	2.910	(0.791)	622253		60.9004	2520
\$ 5 Phenol-d5	99	3.516	3.440	(0.931)	769517		61.9656	2570
\$ 20 Nitrobenzene-d5	82	4.140	4.069	(0.893)	350479		34.7375	1440
\$ 39 2-Fluorobiphenyl	172	5.375	5.304	(0.914)	745936		37.0955	1540
\$ 60 2,4,6-Tribromophenol	329	6.422	6.351	(1.092)	190989		81.4633	3380
\$ 81 p-Terphenyl-d14	244	7.781	7.716	(0.916)	721971		41.4814	1720

Compounds	QUANT SIG					CONCENTRATIONS	
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ng/ul)	FINAL (ug/Kg)
=====	=====	==	=====	=====	=====	=====	=====
6 Phenol	94	3.528	3.446	(0.935)	407628	31.1522	1290
8 2-Chlorophenol	128	3.646	3.575	(0.966)	350061	31.4774	1300
11 1,4-Dichlorobenzene	146	3.787	3.716	(1.003)	361397	28.2527	1170
17 N-Nitrosodipropylamine	70	4.016	3.946	(1.064)	214500	28.7699	1190 (Q)
28 1,2,4-Trichlorobenzene	180	4.587	4.516	(0.990)	317734	34.2885	1420
33 4-Chloro-3-methylphenol	107	5.010	4.922	(1.081)	305559	37.2954	1550
47 Acenaphthene	154	5.904	5.828	(1.004)	642095	33.1570	1370
50 2,4-Dinitrotoluene	165	5.998	5.922	(1.020)	233701	30.9333	1280
52 4-Nitrophenol	139	5.969	5.875	(1.015)	127363	32.1530	1330
65 Pentachlorophenol	266	6.751	6.675	(0.983)	125813	34.7077	1440
79 Pyrene	202	7.734	7.663	(0.910)	1222798	41.5008	1720
2 Pyridine	79	2.363	2.257	(0.626)	224302	24.0718	998
4 Aniline	66	3.563	3.498	(0.944)	137323	25.1586	1040 (Q)
7 bis(2-Chloroethyl) ether	63	3.581	3.510	(0.949)	276965	30.4259	1260 (Q)
9 1,3-Dichlorobenzene	146	3.740	3.669	(0.991)	365525	28.0117	1160
12 Benzyl alcohol	108	3.857	3.781	(1.022)	195877	28.9686	1200
13 1,2-Dichlorobenzene	146	3.887	3.816	(1.030)	348786	29.5242	1220
14 bis(2-Chloroisopropyl) ether	45	3.922	3.851	(1.039)	627656	28.9480	1200 (Q)
15 o-Cresol	107	3.916	3.834	(1.037)	336699	40.6721	1690
18 m,p-Cresols	107	4.010	3.934	(1.062)	395847	35.1428	1460 (Q)
19 Hexachloroethane	117	4.110	4.040	(1.089)	108030	23.4659	973
21 Nitrobenzene	77	4.151	4.081	(0.896)	379412	36.0920	1500
22 Isophorone	82	4.304	4.234	(0.929)	702179	38.1815	1580
23 2-Nitrophenol	139	4.363	4.293	(0.942)	168591	30.2114	1250
24 2,4-Dimethylphenol	122	4.369	4.293	(0.943)	312912	35.0182	1450
25 bis(2-Chloroethoxy) methane	93	4.428	4.357	(0.956)	385929	32.5968	1350
26 2,4-Dichlorophenol	162	4.534	4.457	(0.978)	295015	35.1812	1460
27 Benzoic acid	105	4.463	4.357	(0.963)	390748	63.4617	2630
30 Naphthalene	128	4.651	4.581	(1.004)	999999	31.2966	1300 (Q)
31 4-Chloroaniline	127	4.681	4.581	(1.010)	367710	25.2004	1040
32 Hexachlorobutadiene	225	4.716	4.645	(1.018)	175098	36.7989	1520
34 2-Methylnaphthalene	142	5.128	5.057	(1.107)	713783	33.9814	1410
36 Hexachlorocyclopentadiene	237	5.228	5.157	(0.889)	34482	13.4511	558
37 2,4,6-Trichlorophenol	196	5.328	5.251	(0.906)	209900	37.5858	1560
38 2,4,5-Trichlorophenol	196	5.363	5.281	(0.912)	243780	41.0535	1700
40 2-Chloronaphthalene	162	5.481	5.404	(0.932)	665475	32.1060	1330
42 o-Nitroaniline	65	5.551	5.475	(0.944)	205259	31.9375	1320
41 m-Nitroaniline	138	5.845	5.769	(0.994)	159775	28.1348	1170
43 Dimethylphthalate	163	5.651	5.581	(0.961)	809386	35.3781	1470
44 2,6-Dinitrotoluene	165	5.710	5.634	(0.971)	188341	33.0418	1370
45 Acenaphthylene	152	5.781	5.710	(0.983)	1127115	34.8475	1440
48 2,4-Dinitrophenol	184	5.922	5.845	(1.007)	39485	17.5503	728 (aQ)
49 Dibenzofuran	168	6.022	5.945	(1.024)	1130895	40.3813	1670
51 Diethylphthalate	149	6.139	6.069	(1.044)	830172	38.9217	1610
53 Fluorene	166	6.257	6.187	(1.064)	786306	34.8218	1440
54 4-Chlorophenylphenylether	204	6.234	6.163	(1.060)	375231	39.3579	1630
55 2-Methyl-4,6-dinitrophenol	198	6.287	6.210	(0.915)	60890	16.7926	696

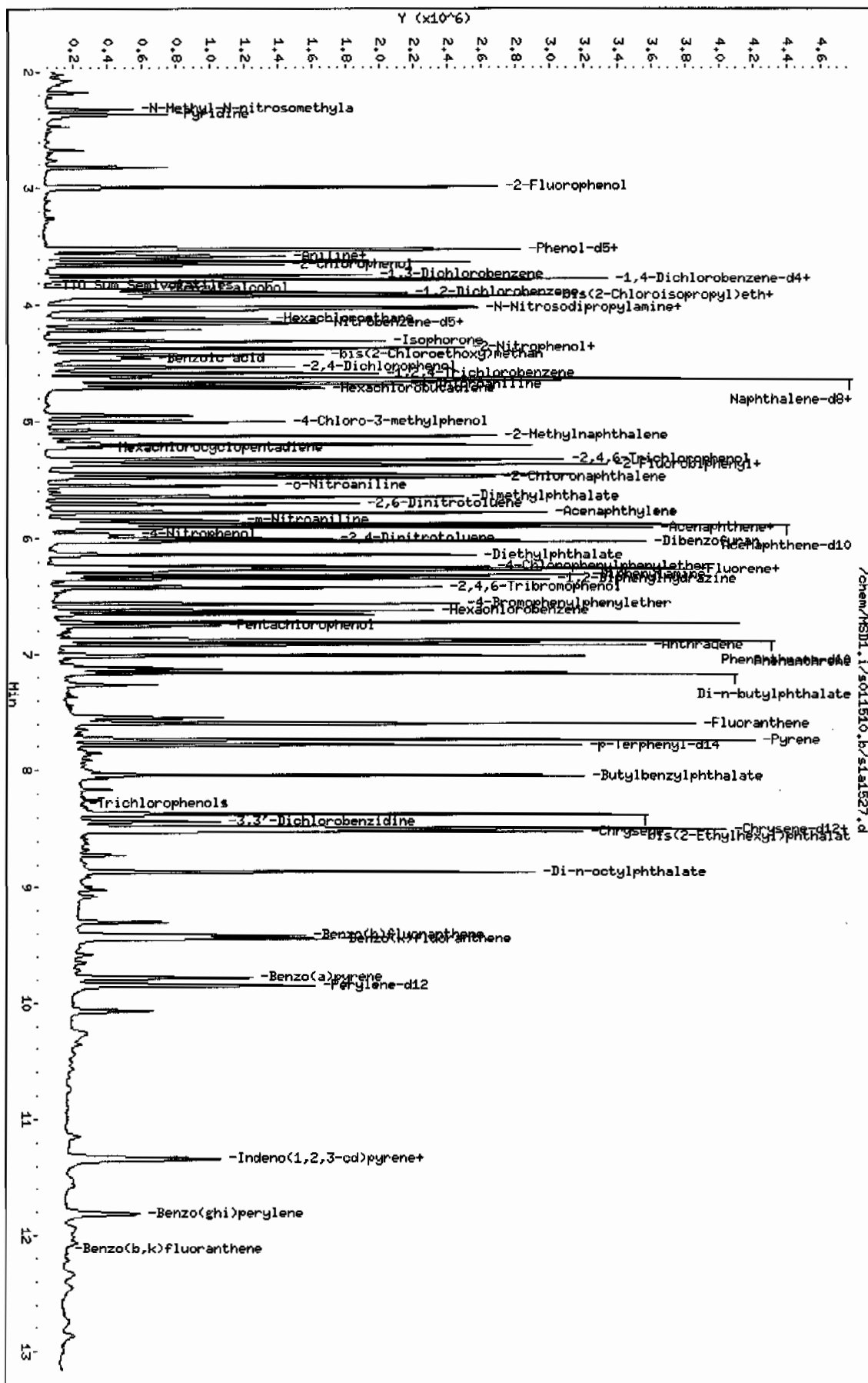
Compounds	QUANT SIG						CONCENTRATIONS	
	MASS	RT	EXP RT	REL RT	RESPONSE		ON-COLUMN (ng/ul)	FINAL (ug/Kg)
=====	=====	==	=====	=====	=====		=====	=====
56 p-Nitroaniline	138	6.275	6.198	(1.067)	160594		28.9176	1200
133 Diphenylamine	169	6.316	6.245	(0.920)	626564		32.7744	1360
58 1,2-Diphenylhydrazine	77	6.345	6.275	(0.924)	819013		35.1122	1460
61 4-Bromophenylphenylether	248	6.563	6.492	(0.955)	212149		43.0821	1790
63 Hexachlorobenzene	284	6.622	6.551	(0.964)	222466		36.8056	1530
68 Phenanthrene	178	6.886	6.816	(1.003)	1126062		34.5715	1430
69 Anthracene	178	6.916	6.845	(1.007)	1075428		32.4658	1350
72 Di-n-butylphthalate	149	7.163	7.098	(1.043)	1368770		38.7408	1610
76 Fluoranthene	202	7.598	7.528	(1.106)	1206135		38.3623	1590
85 Butylbenzylphthalate	149	8.039	7.969	(0.946)	565478		42.1720	1750
89 Benzo(a)anthracene	228	8.486	8.398	(0.999)	968758		36.4364	1510
90 3,3'-Dichlorobenzidine	252	8.433	8.351	(0.992)	163504		21.4174	888
92 Chrysene	228	8.516	8.428	(1.002)	850638		34.2306	1420
93 bis(2-Ethylhexyl)phthalate	149	8.375	8.298	(0.985)	792322		40.6728	1690
94 Di-n-octylphthalate	149	8.863	8.775	(0.900)	1271288		51.3673	2130
95 Benzo(b)fluoranthene	252	9.416	9.298	(0.956)	817059		42.4070	1760
96 Benzo(k)fluoranthene	252	9.445	9.322	(0.959)	691087		36.4297	1510
97 Benzo(a)pyrene	252	9.786	9.651	(0.994)	615849		37.2574	1540
99 Indeno(1,2,3-cd)pyrene	276	11.345	11.145	(1.152)	471865		27.3901	1140
100 Dibenzo(a,h)anthracene	278	11.339	11.139	(1.152)	401793		27.9541	1160
101 Benzo(ghi)perylene	276	11.810	11.592	(1.200)	374365		26.3326	1090
1 N-Methyl-N-nitrosomethylamine	74	2.322	2.228	(0.615)	178044		32.0863	1330

QC Flag Legend

- a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
- Q - Qualifier signal failed the ratio test.

Data File: /chem/MSD1.1/s011510.b/stat527.d
 Date: 15-JAN-2010 20:40
 Client ID: RE16-10-1286MSD
 Sample Info: 112020153861941600111SVH11L6NLMSD
 Volume Injected (uL): 0.5
 Column phase: 3uM DB-SMS

Instrument: MSD1.1
 Operator: AMY
 Column diameter: 0.20



LC/MS/MS PERCHLORATE ANALYSIS

**Perchlorate by LC/MSMS
Los Alamos National Laboratory (LANL)
SDG 10-1213**

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: 942315

Prep Batch Number: 942314

Sample Analysis

Sample ID	Client ID
244604001	RE12-10-7257
244604002	RE12-10-7256
1202017256	Interference Check Sample (ICS)
1202017252	Method Blank (MB)
1202017253	Laboratory Control Sample (LCS)
1202017254	244601001(RE12-10-7243) Matrix Spike (MS)
1202017255	244601001(RE12-10-7243) Matrix Spike Duplicate (MSD)

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

Preparation/Analytical Method Verification

SOP Reference

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

Calibration Information

Initial Calibration

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

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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. The Perchlorate Isotope Ratio (PIR) for the CCV analyzed on 01/22/10 at 21:25:38 has 2.99 as the PIR on the raw data and 2.98 as the PIR on the LIMS form. The value is 2.985. The difference is due to the rounding rules and/or the number of significant figures used in the calculation.

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 244601001 (RE12-10-7243) from SDG 10-1212 was chosen for matrix spike and matrix spike duplicate analysis. Please see the raw data in the Miscellaneous Section.

Matrix Spike (MS) Recovery Statement

The MS recoveries were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement

The MSD recoveries were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement

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

Retention Time Standard Area Acceptance

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

Retention Time

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

Technical Information

Holding Time Specifications

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

Preparation/Analytical Method Verification

All procedures were performed as stated in the SOP.

Sample Dilutions

The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis

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

Miscellaneous Information

Data Exception (DER) Documentation

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

Manual Integrations

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

Method Comments

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

Additional Comments

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

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

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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 Mauer Date: 01/27/10

SAMPLE DATA SUMMARY

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 942314

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE12-10-7257

Date Received: 13-JAN-10

GEL Job No (SDG): 10-1213

GEL Sample ID: 244604001

Date Filtered: 22-JAN-10

Injection Volume (uL): 20

%Solids: 90

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	22-JAN-10 23:18	per0122062a
	Perchlorate Isotope Ratio						1	22-JAN-10 23:18	per0122062a
14797-73-0	Perchlorate-101	.555	2.22	0.555	ug/kg	U	1	22-JAN-10 23:18	per0122062a
	Perchlorate-Q(18)			5.72	ug/kg		1	22-JAN-10 23:18	per0122062a

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

*Concentration =

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

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC
 Lab Code: GEL
 Instrument: LCMSMS
 Method: SW846 6850 Modified
 Matrix: SOIL
 Extraction Batch ID: 942314
 Extraction Type: Solid Prep
 Sample Volume/Weight: 2.00 g
 Concentrated Extract Volume: 20.0
 Client Sample No. RE12-10-7256
 Date Received: 13-JAN-10
 GEL Job No (SDG): 10-1213
 GEL Sample ID: 244604002
 Date Filtered: 22-JAN-10
 Injection Volume (uL): 20
 %Solids: 76

CAS No.	Analyte [^]	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.658	2.63	0.780	ug/kg	J	1	22-JAN-10 23:25	per0122063a
	Perchlorate Isotope Ratio			2.92			1	22-JAN-10 23:25	per0122063a
14797-73-0	Perchlorate-101	.658	2.63	0.776	ug/kg	J	1	22-JAN-10 23:25	per0122063a
	Perchlorate-O(18)			6.75	ug/kg		1	22-JAN-10 23:25	per0122063a

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

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

QUALITY CONTROL SUMMARY

Perchlorate Laboratory Control Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL GEL Job No. (SDG): 10-1213

Extract Batch Code: 942314 Date Filtered: 22-JAN-10

Matrix: SOIL Sample ID: 1202017253

Analyte^	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	2.00	2.09	ug/kg	105		70 - 130
Perchlorate Isotope Ratio		2.9				-
Perchlorate-101	2.00	2.09	ug/kg	105		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.

Perchlorate Interference Check Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 10-1213

Extract Batch Code: 942314

Date Filtered: 22-JAN-10

Matrix: SOIL

Sample ID: 1202017256

Analyte^	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	2.00	2.02	ug/kg	101		70 - 130
Perchlorate Isotope Ratio		3.08				
Perchlorate-101	2.00	1.91	ug/kg	95.5		70 - 130
Perchlorate-O(18)		4.76	ug/kg			

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

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

Dataset: C:\MassLynx\Perchlorate.PRO\per012210a.qld

Last Altered: Saturday, January 23, 2010 9:20:32 AM Eastern Standard Time
Printed: Saturday, January 23, 2010 9:27:21 AM Eastern Standard Time

Name: per0122040a

Date: 22-Jan-2010

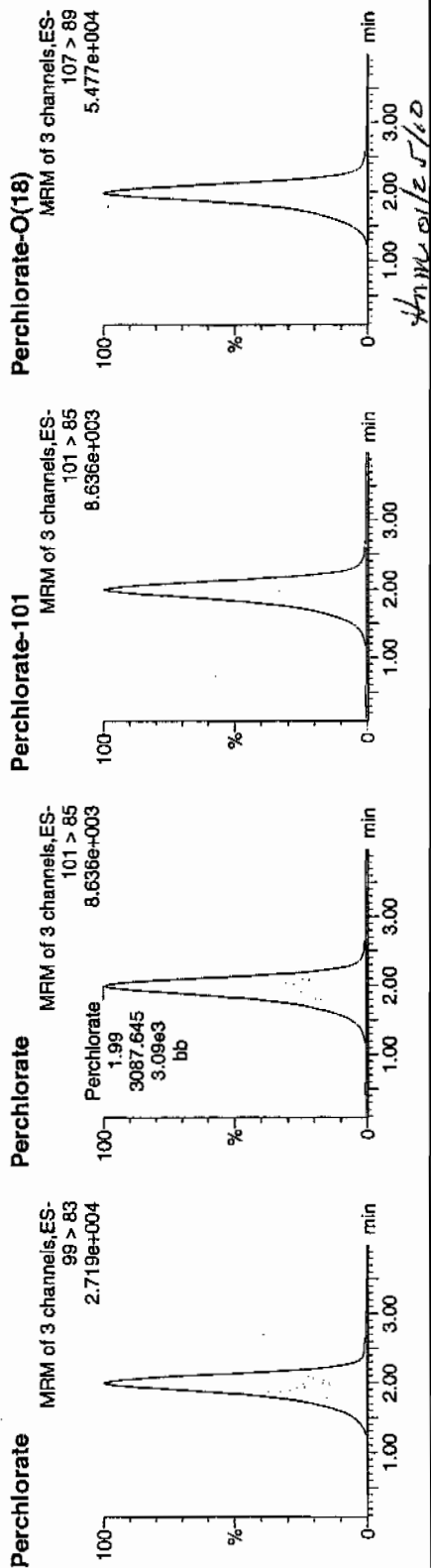
Time: 20:43:28

ID: 1202017256

Vial: 2:1,C

01-23-10

1202017256 | 3087.645 | 3.09e3 | bb



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202017256	Perchlorate	99 > 83	1.99	9498.153	9498.153	bb			0.2021	101.07	1.07	1921.3...	3.08
1202017256	Perchlorate-101	101 > 85	1.98	3087.645	3087.645	bb			0.1910	95.48	-4.52	582.582	
1202017256	Perchlorate-O(18)	107 > 89	1.98	19369.814	19369.814	bb			0.4758	95.17	-4.83	3521.9...	

Perchlorate Spike/Spike Duplicate Summary

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No (SDG): 10-1213

Extract Batch Code: 942314

Date Extracted: 22-JAN-10

GEL MS/PS ID: 1202017254

Client ID: RE12-10-7243

GEL MSD/PSD ID: 1202017255

QC Type: MS

Compound^	Spike Added	Sample Conc	Units	MS Conc	MS Rec	#	MSD Conc	MSD Rec	#	RPD	#	RPD Limit	Recovery Limit
Perchlorate	2.12	0.0835	ug/kg	2.23	101		2.22	100		.731		30	75 - 125
Perchlorate Isotope Ratio	0	0.00		2.84			2.95			0			-
Perchlorate-101	2.12	0.0697	ug/kg	2.29	104		2.18	99.5		4.7		30	75 - 125
Perchlorate-O(18)	0	5.28	ug/kg	5.23			5.21			.346			-

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

Comments:

Perchlorate Initial Calibration Blank

GEL Job No.(SDG): 10-1213

Lab Name: General Engineering Laboratories

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	22-JAN-10	per0122001a	IPB001
Perchlorate-101	0.00	0	NA	22-JAN-10	per0122001a	IPB001
Perchlorate	0.00	0	NA	22-JAN-10	per0122002a	IPB001
Perchlorate-101	0.00	0	NA	22-JAN-10	per0122002a	IPB001

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

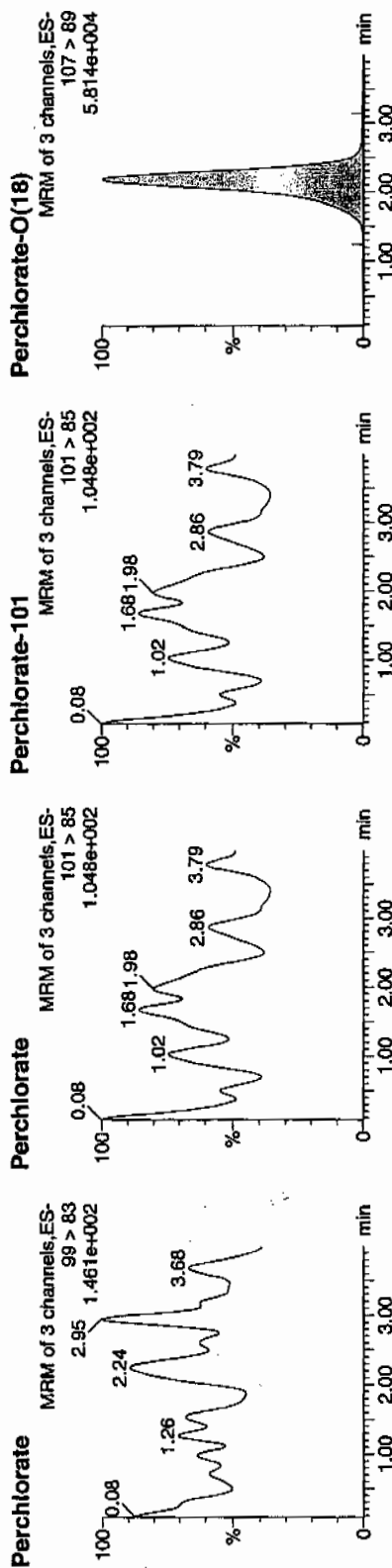
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Printed: Saturday, January 23, 2010 9:27:21 AM Eastern Standard Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per012210a.mdb 23 Jan 2010 08:53:00
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per012210a.cdb 23 Jan 2010 09:20:31

Name: per0122001a
Date: 22-Jan-2010
Time: 16:08:41
ID: IPB001
Vial: 1:1,A

01-23-10



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	2.18	20425.830	20425.830	bb			0.5018	100.36	0.36	4888.7...	
IPB001	Perchlorate-O(18)	107 > 89											

Quantify Sample Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per012210a.qld

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 Printed: Saturday, January 23, 2010 9:27:21 AM Eastern Standard Time

File Name: per0122002a

Date: 22-Jan-2010

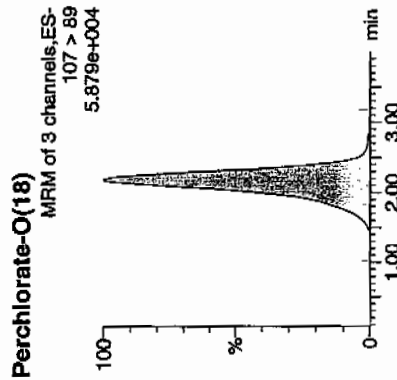
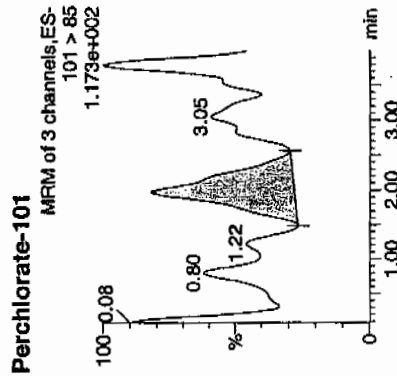
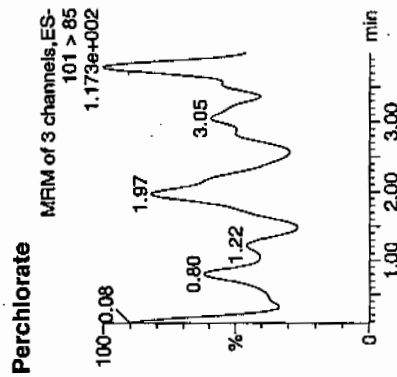
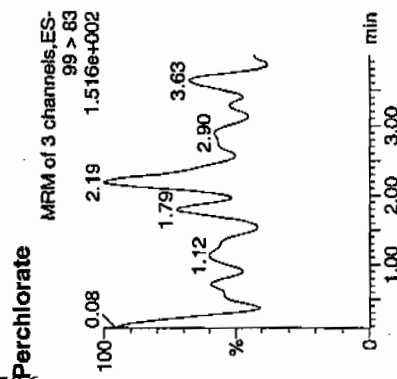
Time: 16:15:54

ID: IPB001

Vial: 1:1,A

Sample Name: Perchlorate

01-23-10



ID	Name	Trace	RT	Area	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	SN	Ion Ratio
IPB001	Perchlorate	99 > 83											0.00
IPB001	Perchlorate-101	101 > 85	1.97	28.933	28.933	bb			0.0018				5.588
IPB001	Perchlorate-O(18)	107 > 89	2.18	20822.545	20822.545	bb			0.5115	102.30	2.30	3049.5...	

Perchlorate Continuing Calibration Blank

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

GEL Job No.(SDG): 10-1213

Lab Name: General Engineering Laboratories

Lab Code: GEL

Reporting Units: $\mu\text{g/kg}$

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	22-JAN-10	per0122008a	IPB002
Perchlorate-101	0.00	0	NA	22-JAN-10	per0122008a	IPB002
Perchlorate	0.00	0	NA	22-JAN-10	per0122010a	IPB003
Perchlorate-101	0.00	0	NA	22-JAN-10	per0122010a	IPB003
Perchlorate	0.00	0	NA	22-JAN-10	per0122023a	IPB004
Perchlorate-101	0.00	0	NA	22-JAN-10	per0122023a	IPB004
Perchlorate	0.00	0	NA	22-JAN-10	per0122036a	IPB005
Perchlorate-101	0.00	0	NA	22-JAN-10	per0122036a	IPB005
Perchlorate	0.00	0	NA	22-JAN-10	per0122047a	IPB006
Perchlorate-101	0.00	0	NA	22-JAN-10	per0122047a	IPB006
Perchlorate	0.00	0	NA	22-JAN-10	per0122057a	IPB007
Perchlorate-101	0.00	0	NA	22-JAN-10	per0122057a	IPB007
Perchlorate	0.00	0	NA	22-JAN-10	per0122067a	IPB008

Form 4

Perchlorate Continuing Calibration Blank

GEL Job No.(SDG): 10-1213

Lab Name: General Engineering Laboratories

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate-101	0.00	0	NA	22-JAN-10	per0122067a	IPB008

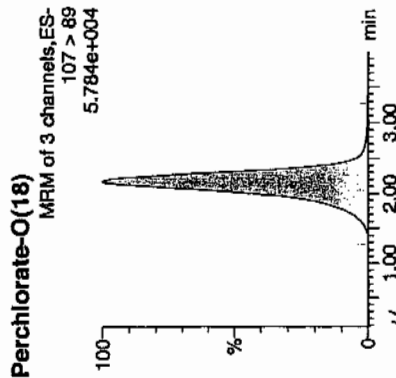
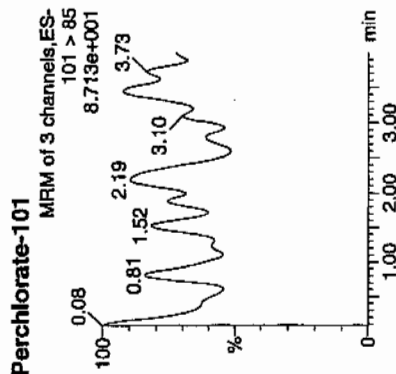
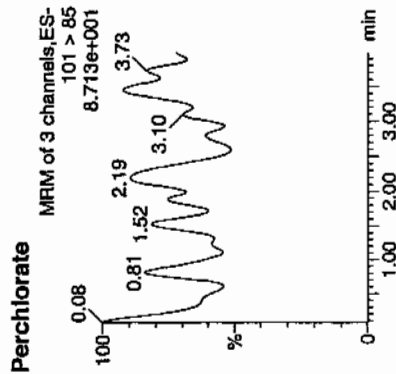
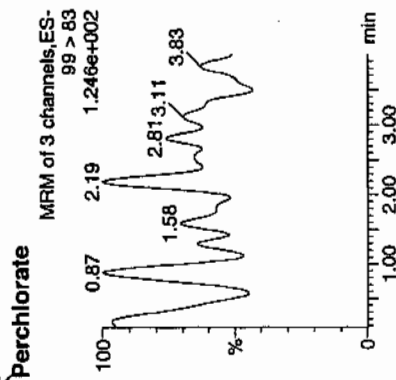
Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per012210a.qld

Last Altered: Saturday, January 23, 2010 9:20:32 AM Eastern Standard Time
Printed: Saturday, January 23, 2010 9:27:21 AM Eastern Standard Time

Page Name: per0122008a
Date: 22-Jan-2010
Time: 16:58:00
QID: IPB002
Vial: 1:1,A
1580

0.23-10



ID	Name	Trace	RT	Area	Response	Flags	Mod Date	Mod Time	ng/mL	% Rec	% Dev	S/N	Ion Ratio
IPB002	Perchlorate	99 > 83											
IPB002	Perchlorate-101	101 > 85											
IPB002	Perchlorate-O(18)	107 > 89	2.18	20238.355	20238.355	bb			0.4972	99.43	-0.57	4458.4...	

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

Dataset: C:\MassLynx\Perchlorate.PRO\per012210a.qld

Last Altered: Saturday, January 23, 2010 9:20:32 AM Eastern Standard Time
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Page Name: per0122010a

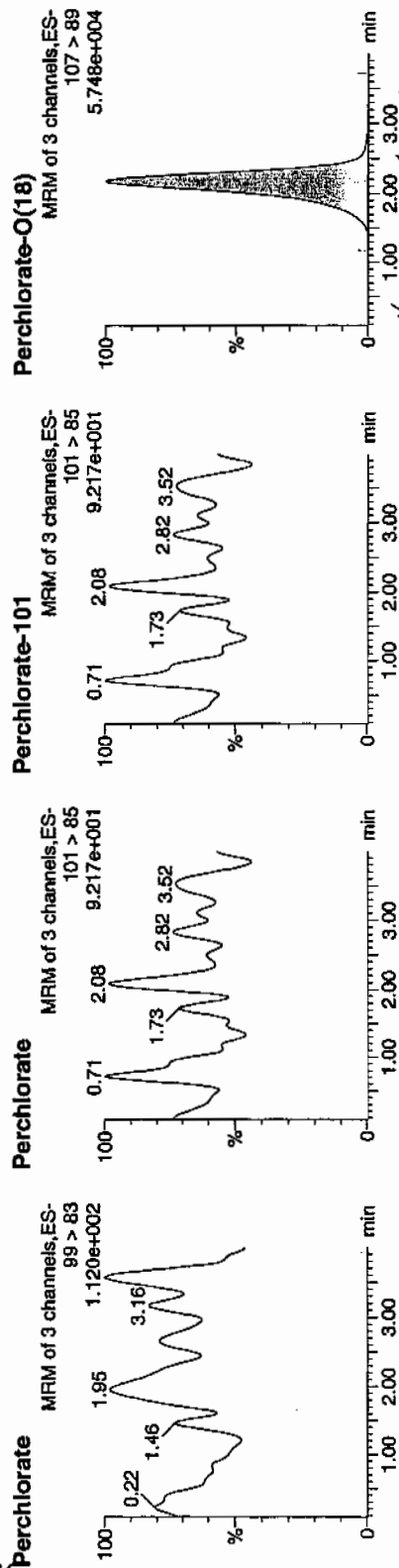
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Time: 17:12:04

ID: IPB003

Vial: 1:1,A

Q1-23-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB003	Perchlorate	99 > 83											
IPB003	Perchlorate-101	101 > 85	2.18	20366.254	20366.254	bb			0.5003	100.06	✓	0.06	963.014
IPB003	Perchlorate-O(18)	107 > 89											0.00

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

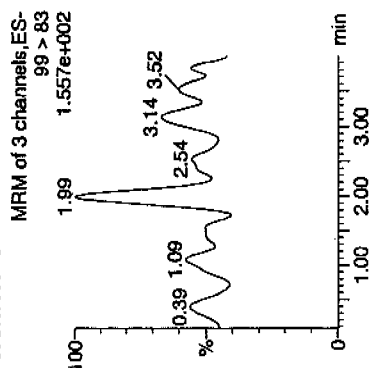
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Printed: Saturday, January 23, 2010 9:27:21 AM Eastern Standard Time

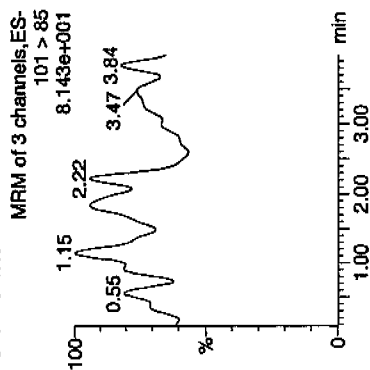
Page 23
Name: per0122023a
Date: 22-Jan-2010
Time: 18:43:35
ID: IPB004
Vial: 1:1,A
1580

01-23-10

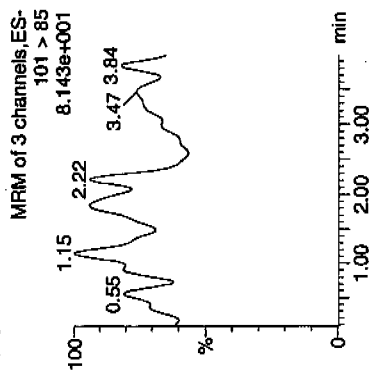
Perchlorate



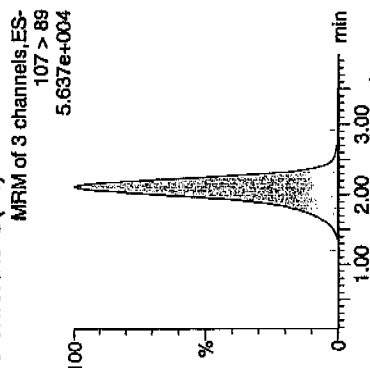
Perchlorate



Perchlorate-101



Perchlorate-O(18)



ID	Name	Trace	RT	Area	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	SN	Ion Ratio
IPB004	Perchlorate	99 > 83											
IPB004	Perchlorate-101	101 > 85											
IPB004	Perchlorate-O(18)	107 > 89	2.12	19424.762	19424.762	bb			0.4772	95.44	-4.56	2516.8...	

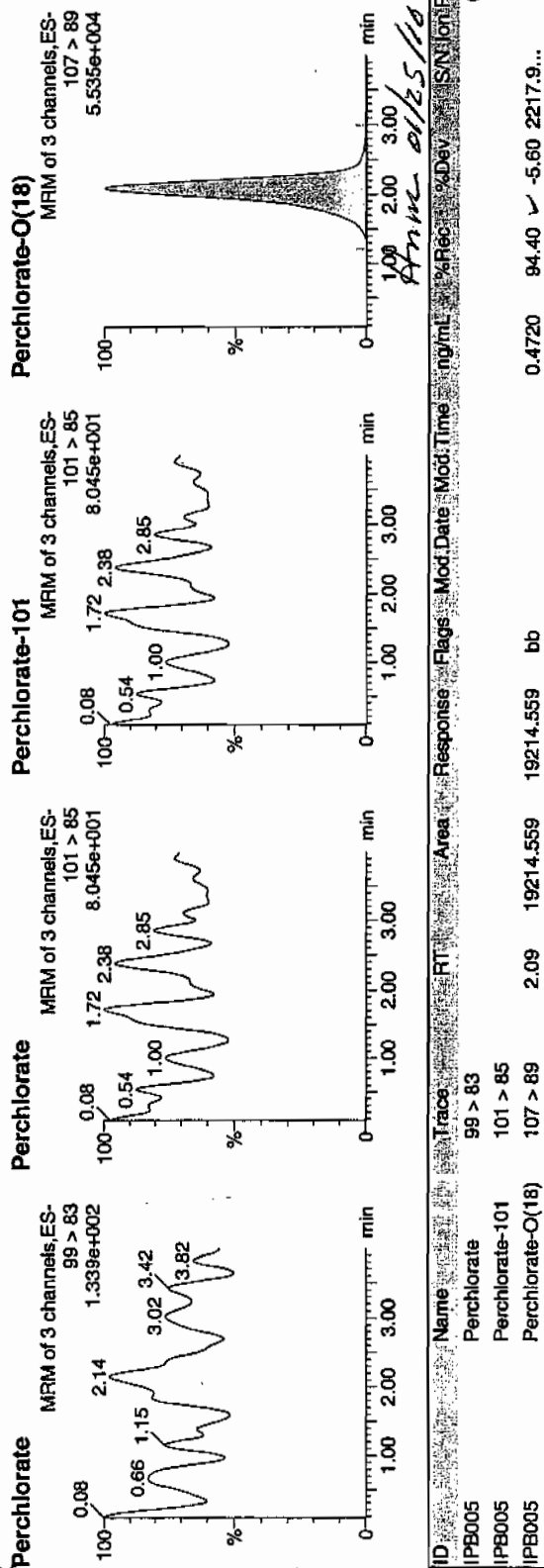
Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per012210a.qld

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Printed: Saturday, January 23, 2010 9:27:21 AM Eastern Standard Time

Page Name: per0122036a
Date: 22-Jan-2010
Time: 20:15:07
QID: IPB005
Vial: 1:1,A
1580

01-L3-10



ID	Name	Trace	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	IS/N	Ion Ratio
IPB005	Perchlorate	99 > 83										0.00
IPB005	Perchlorate-101	101 > 85										
IPB005	Perchlorate-O(18)	107 > 89	2.09	19214.559	19214.559	bb		0.4720	94.40	✓	-5.60	2217.9...

Quantify Sample Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per012210a.qld

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 Printed: Saturday, January 23, 2010 9:27:21 AM Eastern Standard Time

Name: per0122047a

Date: 22-Jan-2010

Time: 21:32:54

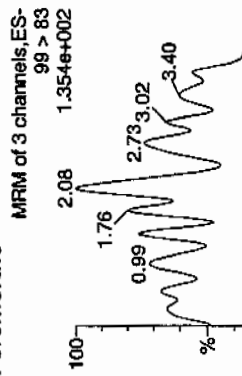
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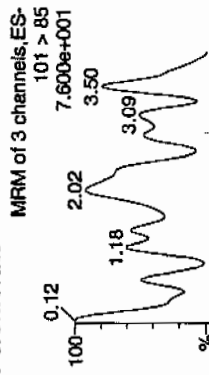
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01-23-10

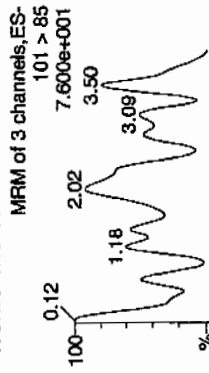
Perchlorate



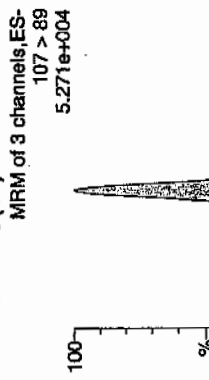
Perchlorate



Perchlorate-101



Perchlorate-O(18)



ID	Name	Trace	RT	Area	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	Ratio
IPB006	Perchlorate	99 > 83										
IPB006	Perchlorate-101	101 > 85										
IPB006	Perchlorate-O(18)	107 > 89	2.05	18730.654	18730.654	bb			0.4601	92.03	-7.97	2938.9...

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

Dataset: C:\MassLynx\Perchlorate.PRO\per012210a.qld

Last Altered: Saturday, January 23, 2010 9:20:32 AM Eastern Standard Time
Printed: Saturday, January 23, 2010 9:27:21 AM Eastern Standard Time

File Name: per0122057a

Date: 22-Jan-2010

Time: 22:43:37

ID: IPB007

Vial: 1:1,A

Sample

Perchlorate

MRM of 3 channels, ES-

99 > 83

1.506e+002

2.02 1.11 1.51 2.80 3.26 3.81

min

100

%

0

1.00 2.00 3.00

min

Perchlorate

MRM of 3 channels, ES-

101 > 85

7.874e+001

0.84 1.73 2.03 1.35 2.91 3.30 3.59

min

100

%

0

1.00 2.00 3.00

min

Perchlorate-101

MRM of 3 channels, ES-

107 > 89

5.499e+004

1.00 2.00 3.00

min

100

%

0

1.00 2.00 3.00

min

Perchlorate-O(18)

MRM of 3 channels, ES-

107 > 89

5.499e+004

1.00 2.00 3.00

min

ID	Name	Trace	RT	Area	Response	Flags	Mod	Date	Mod	Time	ng/mL	%Rec	%Dev	SN	Ion Ratio
IPB007	Perchlorate	99 > 83													0.00
IPB007	Perchlorate-101	101 > 85													
IPB007	Perchlorate-O(18)	107 > 89	2.00	19568.719	19568.719	bb					0.4812	96.24	-3.76	2254.3...	

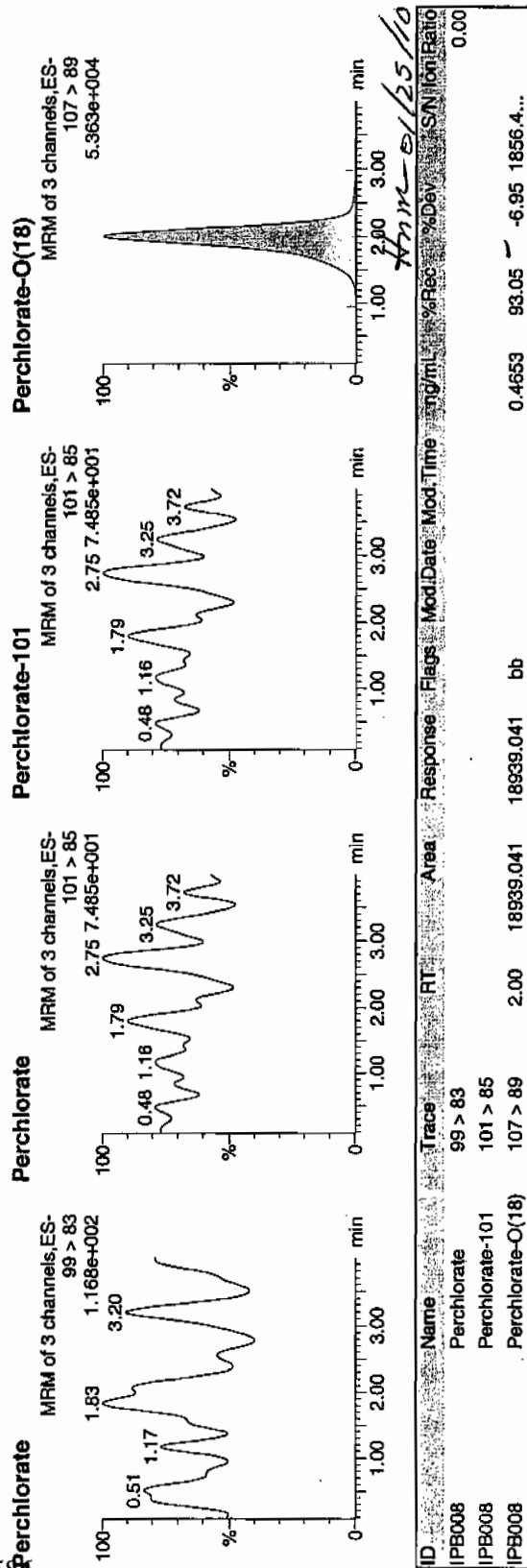
Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per012210a.qld

Last Altered: Saturday, January 23, 2010 9:20:32 AM Eastern Standard Time
Printed: Saturday, January 23, 2010 9:27:21 AM Eastern Standard Time

Per Name: per0122067a
Date: 22-Jan-2010
Time: 23:54:23
ID: IPB008
Vial: 1:1,A

01-23-10



Nairb.ref

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

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

QUANTO ULTIMA: nairb_01_08_08.cal

Calibration Report - MS1 Static

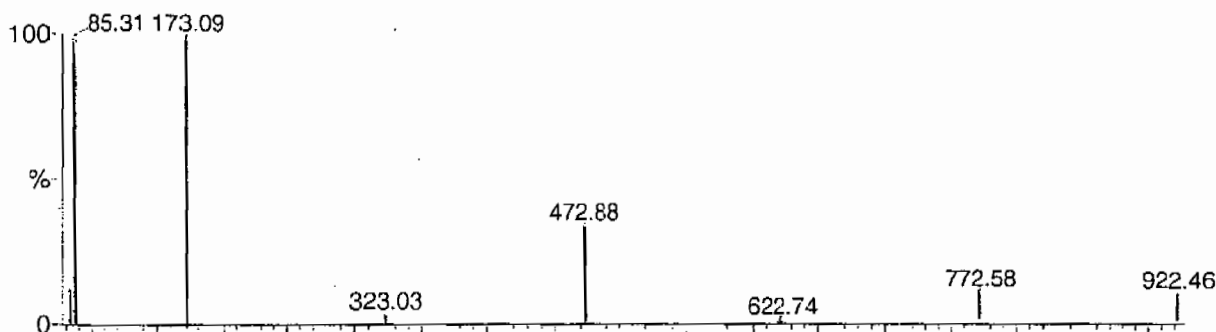
Page 1 of 1

Printed: Tue Jan 08 12:19:12 2008

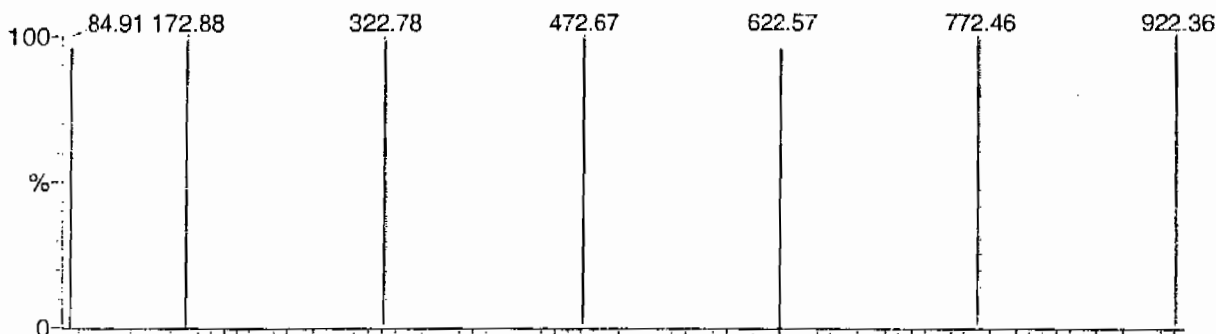
POINTS HIGHLIGHTED BY CURVE 01-07-03

Data file: STATMS1 - Uncalibrated

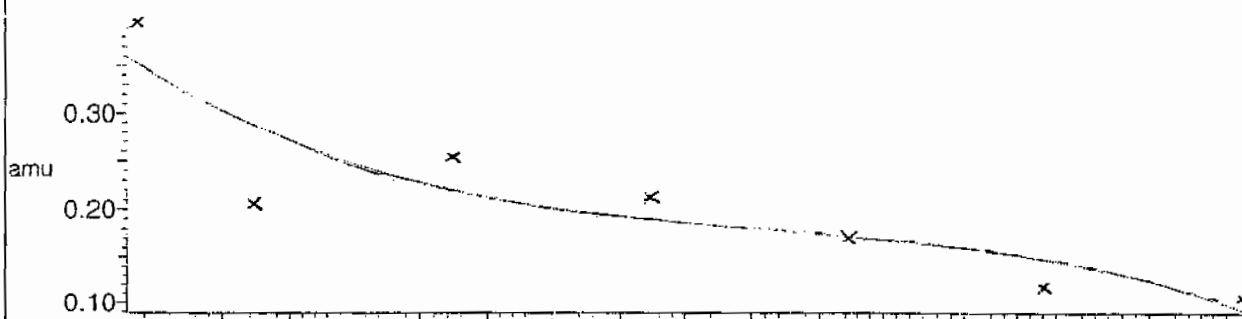
7 matches of 7 tested references



Reference file: Nairb

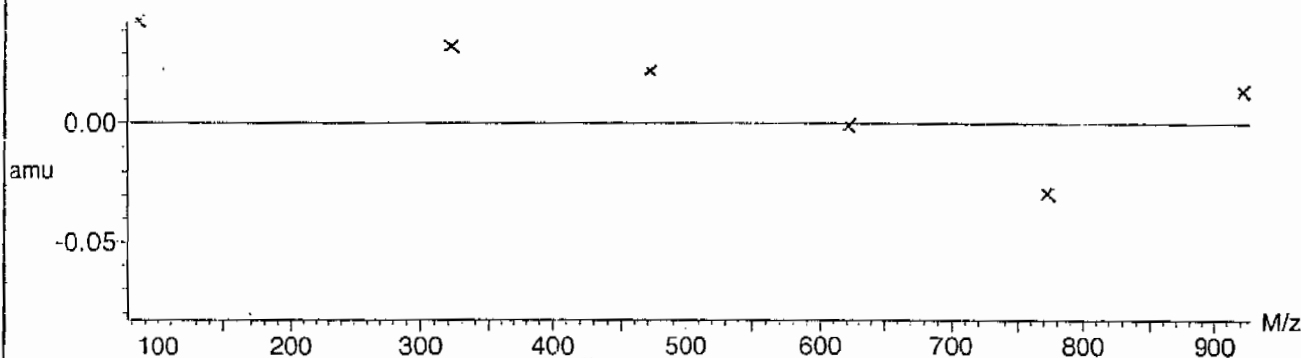


Mass difference (Raw - Ref mass)



Residuals

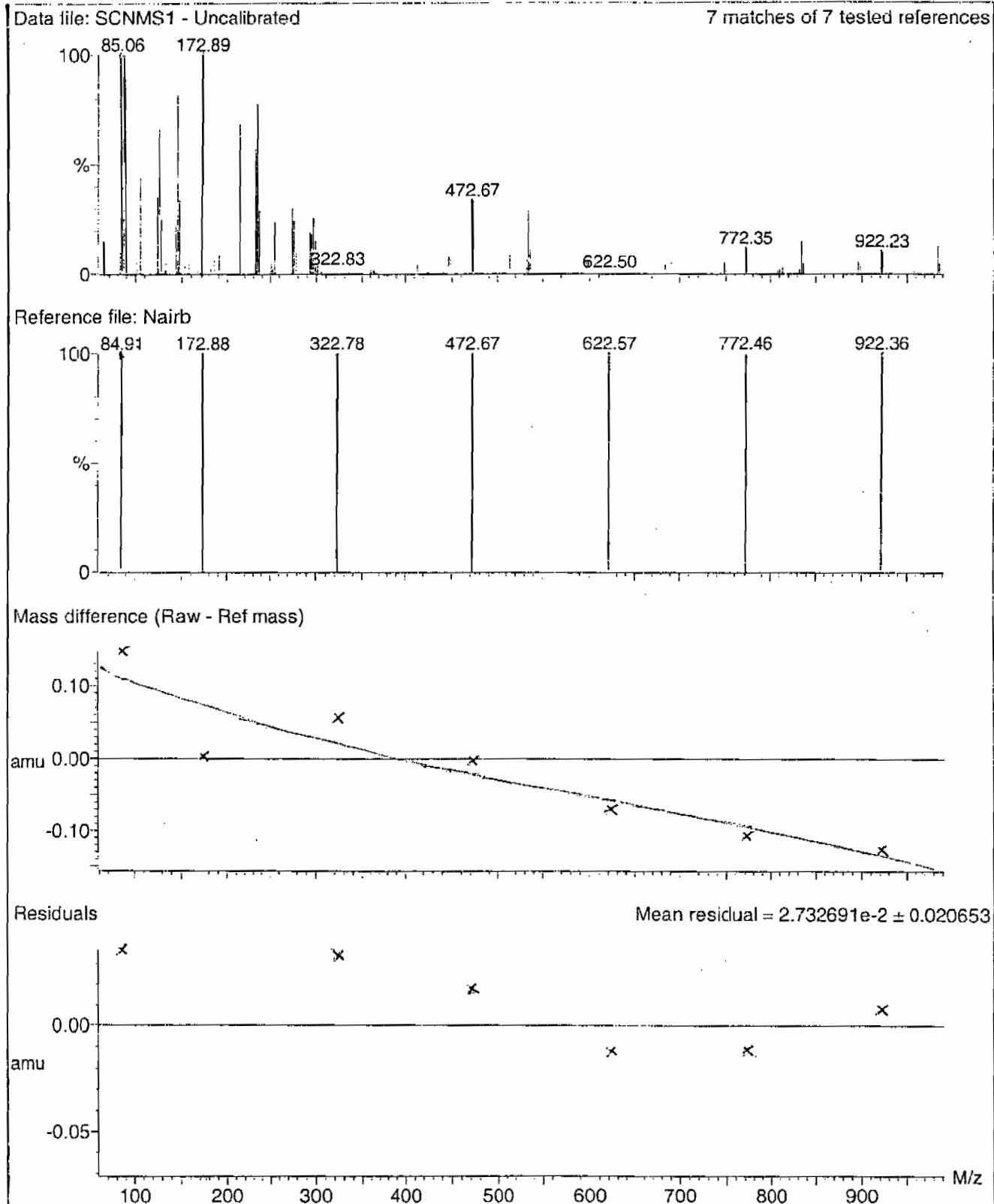
Mean residual = $3.212012 \times 10^{-2} \pm 0.024108$



Calibration Report - MS1 Scanning

Page 1 of 1

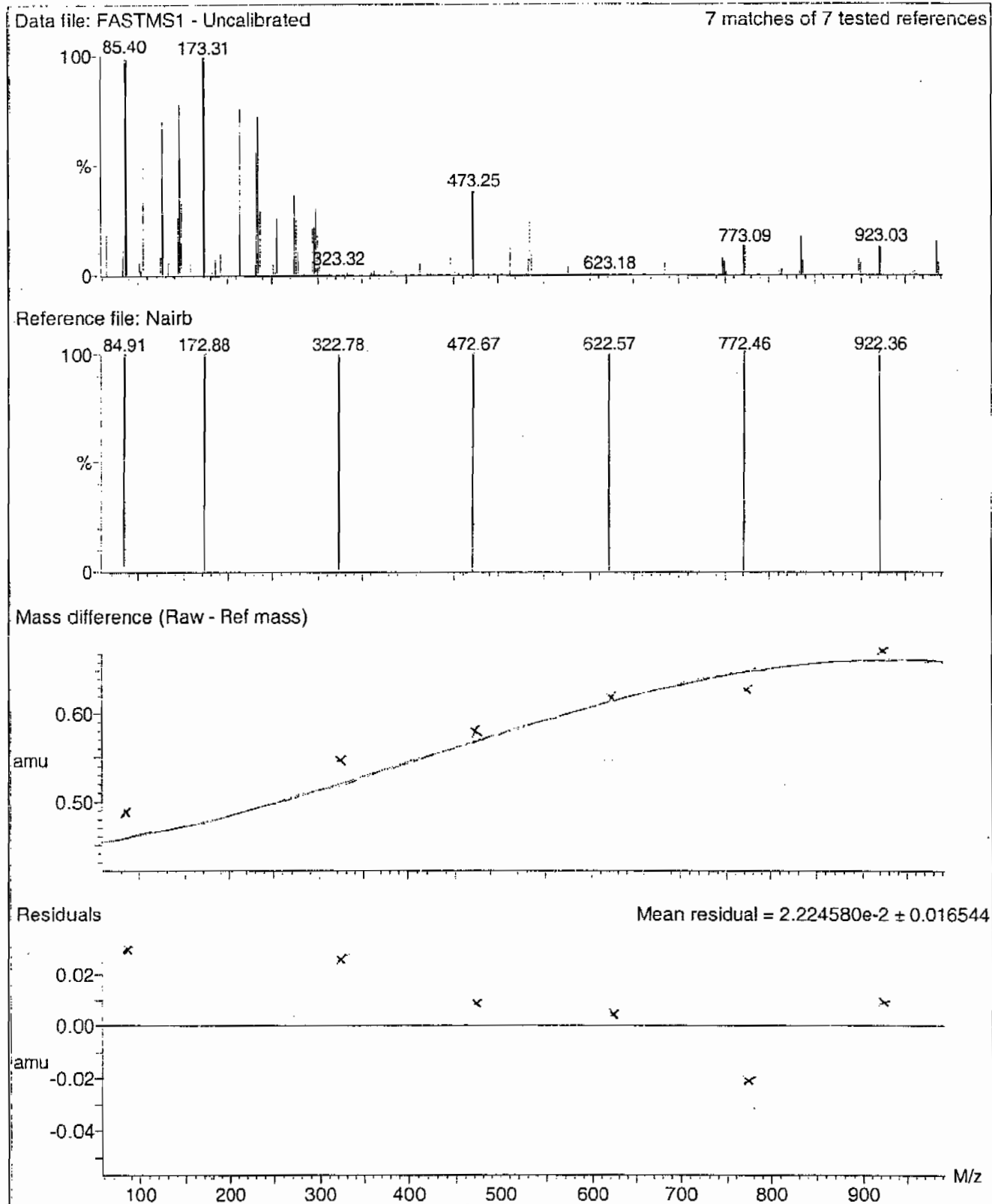
Printed: Tue Jan 08 12:20:09 2008



Calibration Report - MS1 Scan Speed Compensation

Page 1 of 1

Printed: Tue Jan 08 12:21:04 2008



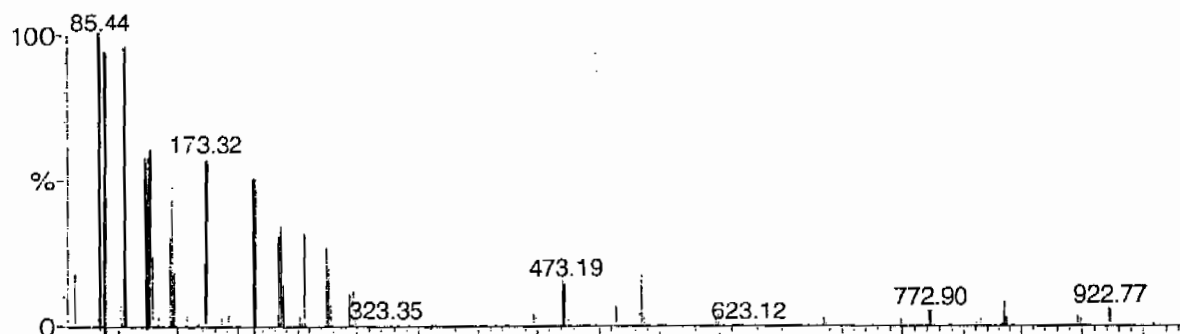
Calibration Report - MS2 Scan Speed Compensation

Page 1 of 1

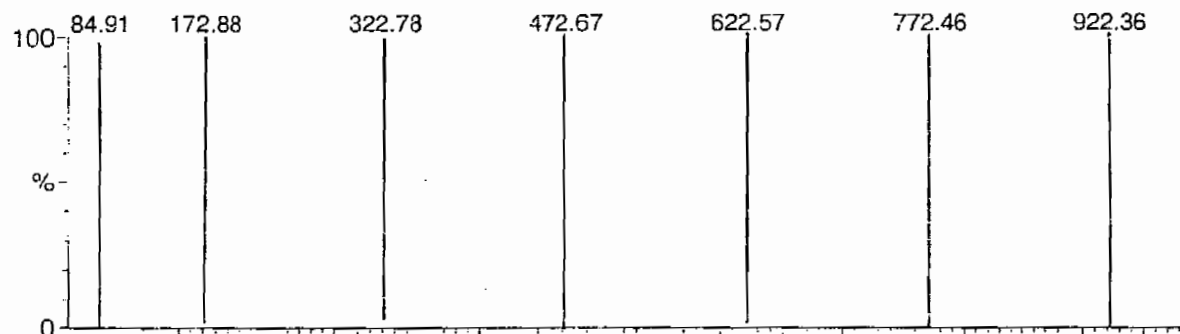
Printed: Tue Jan 08 12:23:51 2008

Data file: FASTMS2 - Uncalibrated

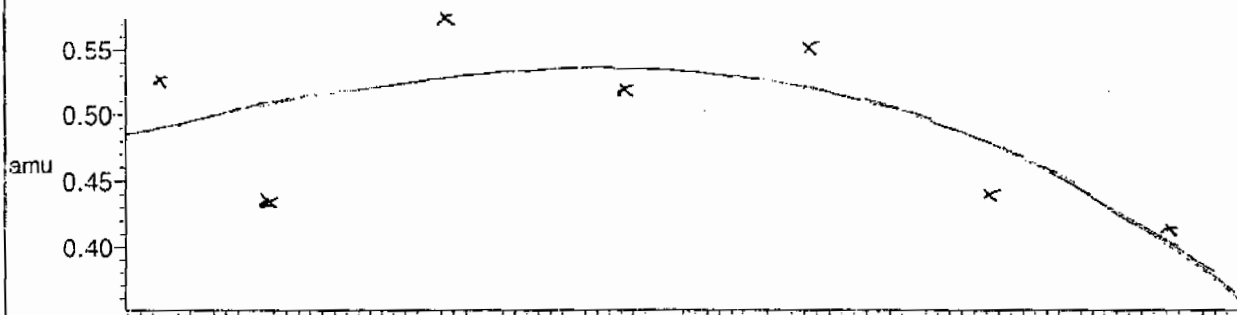
7 matches of 7 tested references



Reference file: Nairb

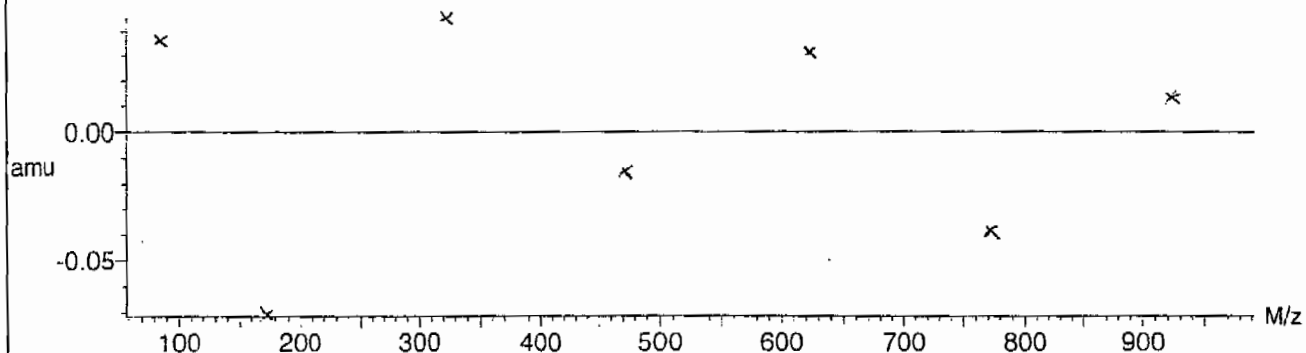


Mass difference (Raw - Ref mass)



Residuals

Mean residual = $3.598289 \times 10^{-2} \pm 0.017899$



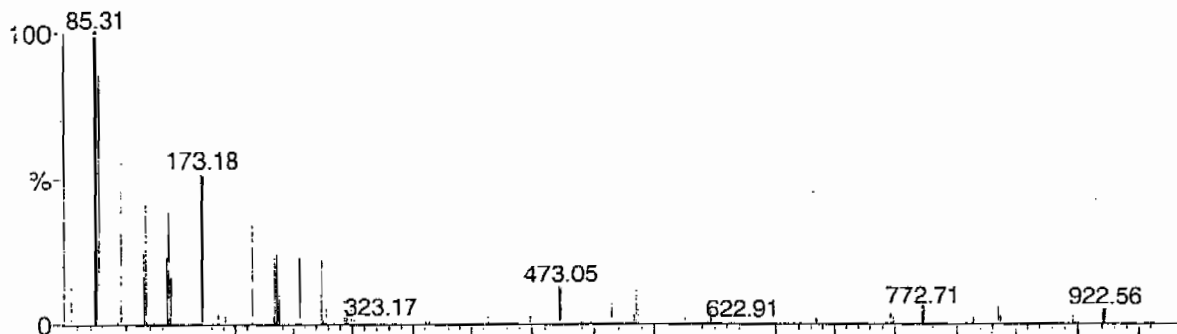
Calibration Report - MS2 Scanning

Page 1 of 1

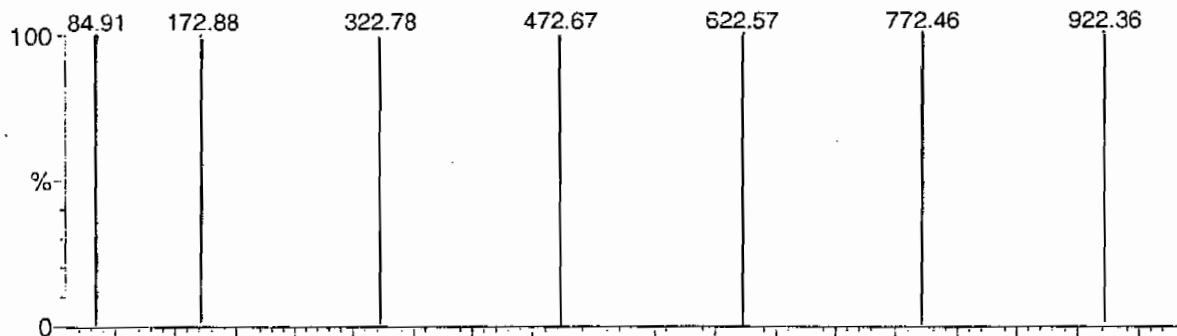
Printed: Tue Jan 08 12:22:56 2008

Data file: SCNMS2 - Uncalibrated

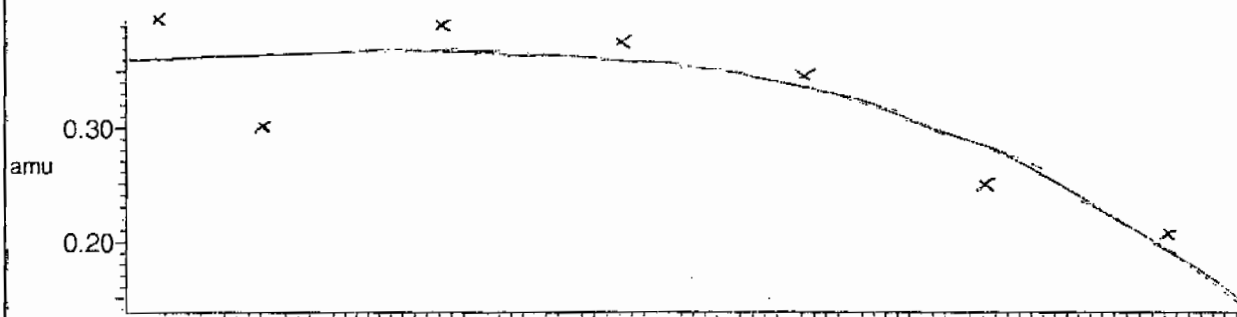
7 matches of 7 tested references



Reference file: Nairb

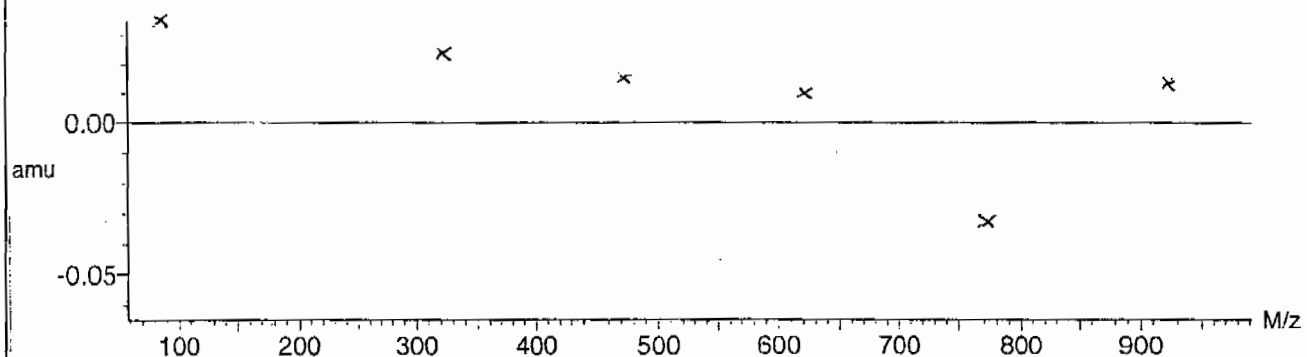


Mass difference (Raw - Ref mass)



Residuals

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



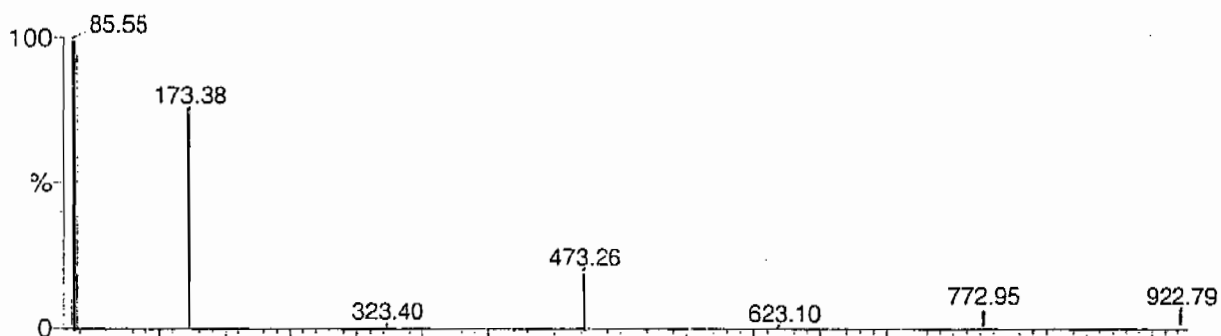
Calibration Report - MS2 Static

Page 1 of 1

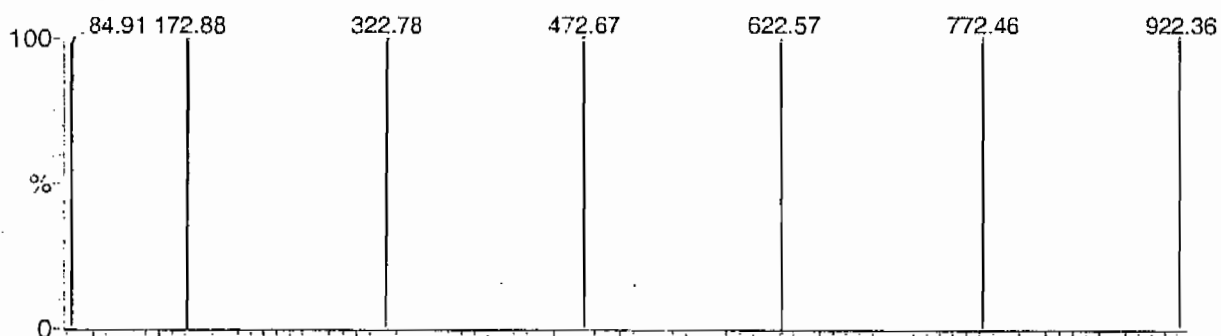
Printed: Tue Jan 08 12:21:59 2008

Data file: STATMS2 - Uncalibrated

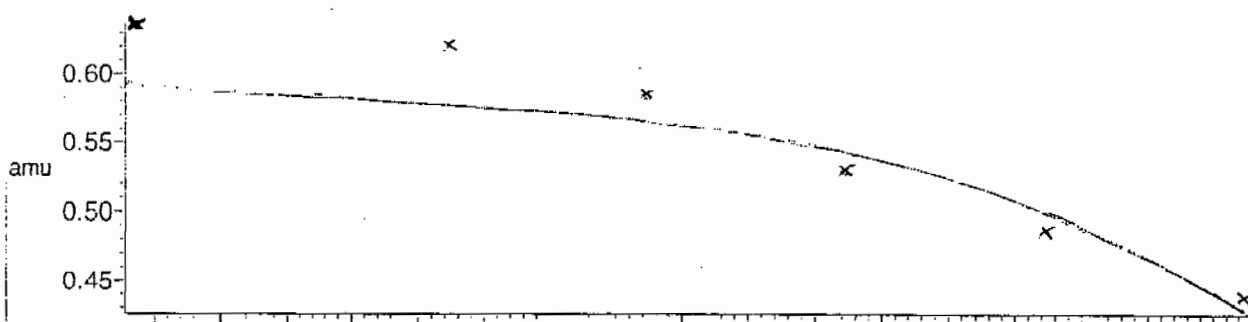
7 matches of 7 tested references



Reference file: Nairb

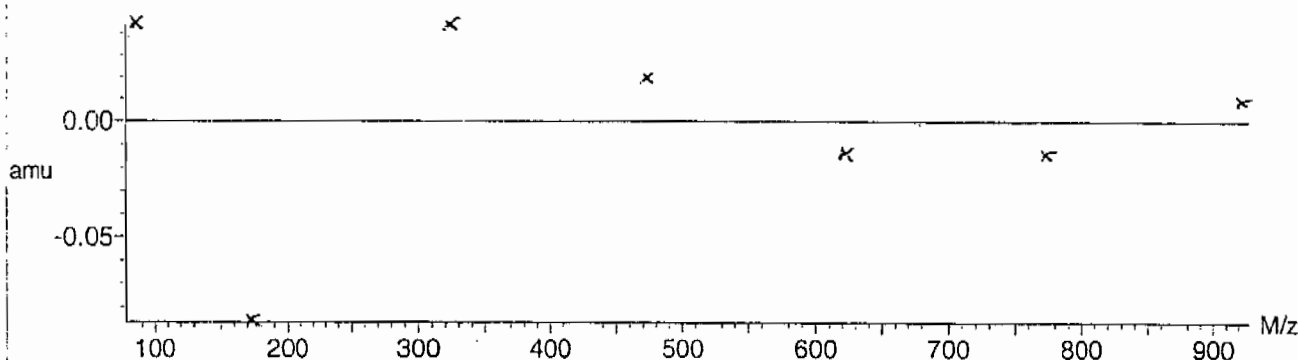


Mass difference (Raw - Ref mass)



Residuals

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



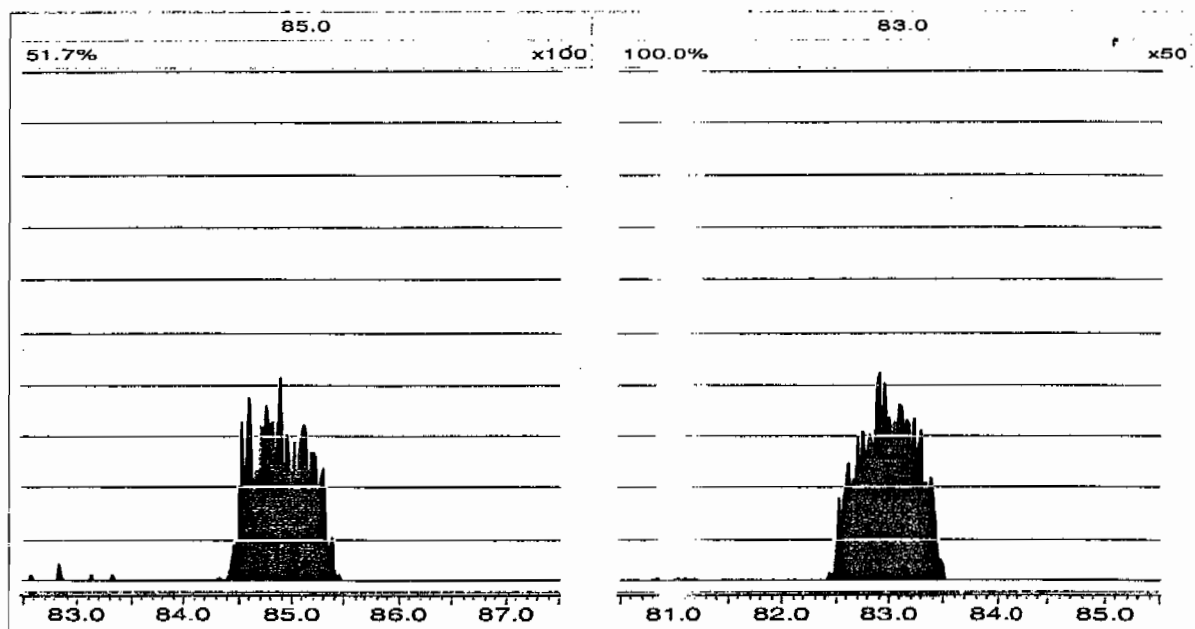
Tune Parameters

MassLynx 4.0 SP4

Page 1 of 1

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

Printed: Friday, January 22, 2010 14:19:41 Eastern Standard Time



Perchlorate RT And Area Summary

GEL Job No.(SDG): 10-1213

Lab Name: General Engineering Laboratories

Lab Code: GEL

Instrument ID: LCMSMS

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

Sample ID	Datafile	Run Date	Area	RT	RT CLO4	RRT	Q 0.98-1.02
MidLevel Standard Area	per0122006a	22-JAN-10	20096.8				
Lower Area Limit			10048.4				
Upper Area Limit			40193.6				
1202017252	per0122038a	22-JAN-10 20:29	19875.1	2.09	2.10388	1.007	
1202017253	per0122039a	22-JAN-10 20:36	20536.5	2.08	2.09155	1.006	
1202017256	per0122040a	22-JAN-10 20:43	19369.8	1.98	1.99208	1.006	
244604001	per0122062a	22-JAN-10 23:18	20968.3	2.02	2.02935	1.005	
244604002	per0122063a	22-JAN-10 23:25	20872.5	2	2.017	1.009	

7

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: 942314
Extraction Type: Solid Prep
Client Sample No. RE12-10-7257
Date Received: 13-JAN-10
GEL Job No (SDG): 10-1213
GEL Sample ID: 244604001
Date Filtered: 22-JAN-10
Injection Volume (uL): 20
%Solids: 90

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

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	22-JAN-10 23:18	per0122062a
	Perchlorate Isotope Ratio						1	22-JAN-10 23:18	per0122062a
14797-73-0	Perchlorate-101	.555	2.22	0.555	ug/kg	U	1	22-JAN-10 23:18	per0122062a
	Perchlorate-O(18)			5.72	ug/kg		1	22-JAN-10 23:18	per0122062a

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

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

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

Dataset: C:\MassLynx\Perchlorate.PRO\per012210a.qld

Last Altered: Saturday, January 23, 2010 9:20:32 AM Eastern Standard Time
Printed: Saturday, January 23, 2010 9:27:21 AM Eastern Standard Time

Name: per0122062a

Date: 22-Jan-2010

Time: 23:18:55

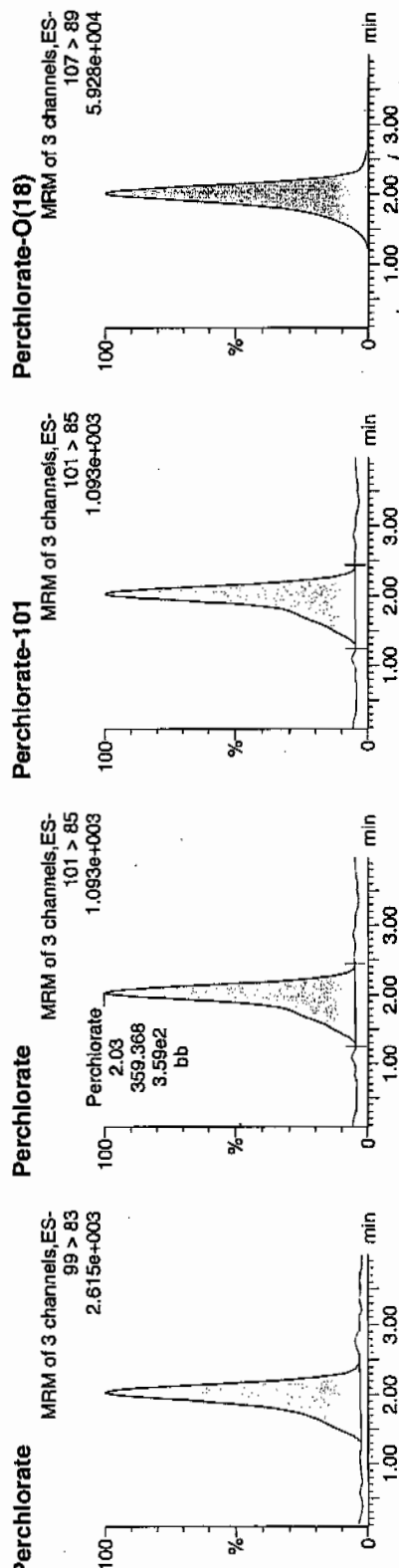
ID: 244604001

Vial: 2:4,A

Q-23-10

122210a | 942315 | 50220 | 11

Page 244 of 1586



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/ml	%Rec	%Dev	S/N	Ion Ratio
244604001	Perchlorate	99 > 83	2.03	938.620	938.620	bb			0.0200			157.295	2.61
244604001	Perchlorate-101	101 > 85	2.03	359.368	359.368	bb			0.0222			279.095	
244604001	Perchlorate-O(18)	107 > 89	2.02	20968.260	20968.260	bb			0.5151	103.02	3.02	1685.6...	

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC
 Lab Code: GEL
 Instrument: LCMSMS
 Method: SW846 6850 Modified
 Matrix: SOIL
 Extraction Batch ID: 942314
 Extraction Type: Solid Prep
 Sample Volume/Weight: 2.00 g
 Concentrated Extract Volume: 20.0
 Client Sample No. RE12-10-7256
 Date Received: 13-JAN-10
 GEL Job No (SDG): 10-1213
 GEL Sample ID: 244604002
 Date Filtered: 22-JAN-10
 Injection Volume (uL): 20
 %Solids: 76

CAS No.	Analyte [^]	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.658	2.63	0.780	ug/kg	J	1	22-JAN-10 23:25	per0122063a
	Perchlorate Isotope Ratio			2.92			1	22-JAN-10 23:25	per0122063a
14797-73-0	Perchlorate-101	.658	2.63	0.776	ug/kg	J	1	22-JAN-10 23:25	per0122063a
	Perchlorate-O(18)			6.75	ug/kg		1	22-JAN-10 23:25	per0122063a

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

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

Quantify Sample Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per012210a.qld

Last Altered: Saturday, January 23, 2010 9:20:32 AM Eastern Standard Time
 Printed: Saturday, January 23, 2010 9:27:21 AM Eastern Standard Time

Name: per0122063a

Date: 22-Jan-2010

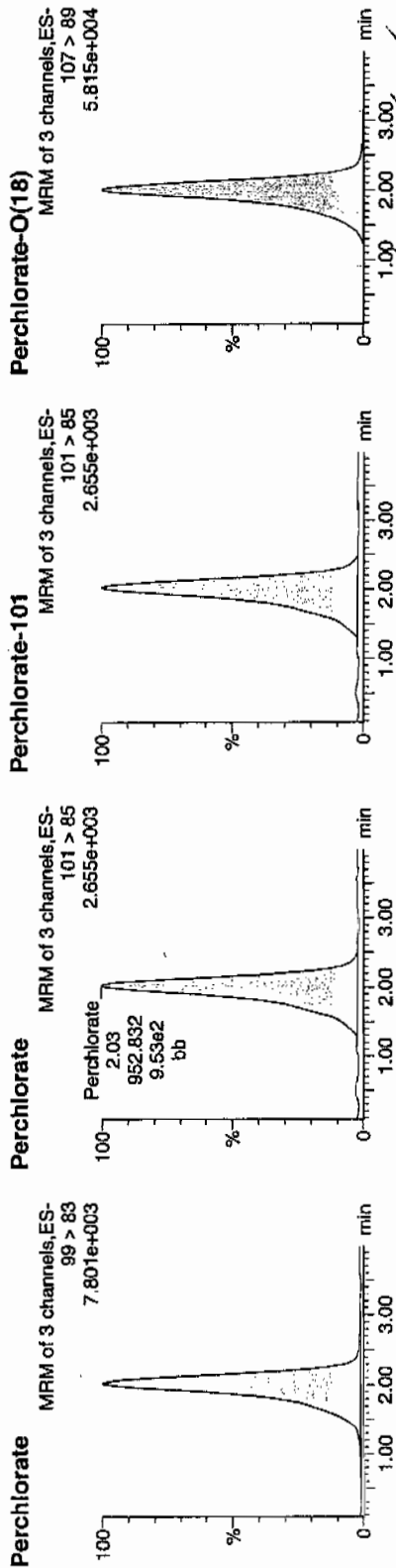
Time: 23:25:59

ID: 244604002

Vial: 2:4,B

333
0123-10

142061942315 | 3020 | 11



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
244604002	Perchlorate	99 > 83	2.02	2783.014	2783.014	bb			0.0592			666.281	2.92
244604002	Perchlorate-101	101 > 85	2.03	952.832	952.832	bb			0.0589			342.022	
244604002	Perchlorate-O(18)	107 > 89	2.00	20872.498	20872.498	bb			0.5127	102.55	2.55	249.754	

STANDARDS DATA

Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories GEL Job No.(SDG): 10-1213

Lab Code: GEL

Instrument ID: LCMSMS Date Analyzed: 22-JAN-10

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

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

Parname Perchlorate

Coefficient of Determination:

Calibration Curve: 46988.72

Response Type: External Standard

Curve Type: RF

Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories GEL Job No.(SDG): 10-1213

Lab Code: GEL

Instrument ID: LCMSMS Date Analyzed: 22-JAN-10

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

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

Parname Perchlorate-101

Coefficient of Determination:

Calibration Curve: 16168.38

Response Type: External Standard

Curve Type: RF

Quantify Calibration Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per012210a.qld

Last Altered: Saturday, January 23, 2010 9:20:32 AM Eastern Standard Time

Printed: Saturday, January 23, 2010 9:27:21 AM Eastern Standard Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per012210a.mdb 23 Jan 2010 08:53:00
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per012210a.cdb 23 Jan 2010 09:20:31

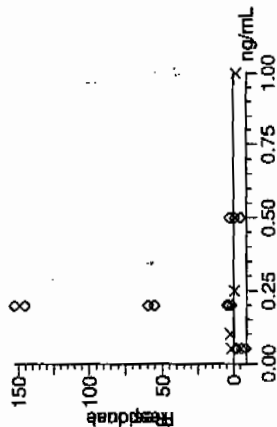
Compound name: Perchlorate

Response Factor: 46988.7

RRF SD: 965.161, % Relative SD: 2.05403

Response type: External Std, Area

Curve type: RF



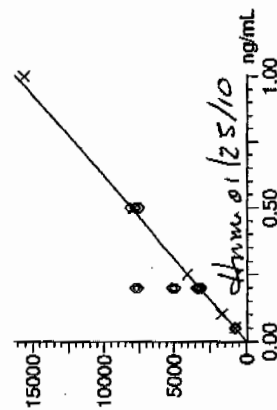
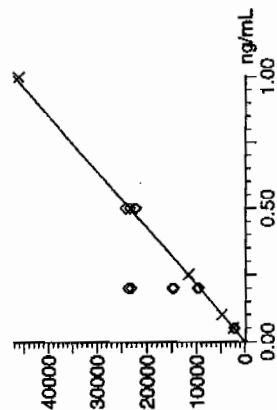
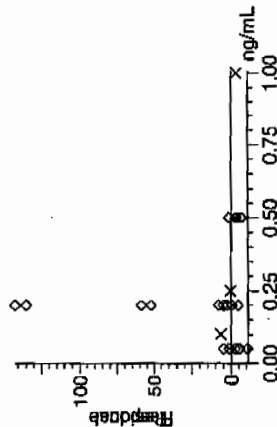
Compound name: Perchlorate-101

Response Factor: 16168.4

RRF SD: 634.993, % Relative SD: 3.92737

Response type: External Std, Area

Curve type: RF



01-23-10

01/25/10

Quantify Calibration Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per012210a.qld

Last Altered: Saturday, January 23, 2010 9:20:32 AM Eastern Standard Time

Printed: Saturday, January 23, 2010 9:27:21 AM Eastern Standard Time

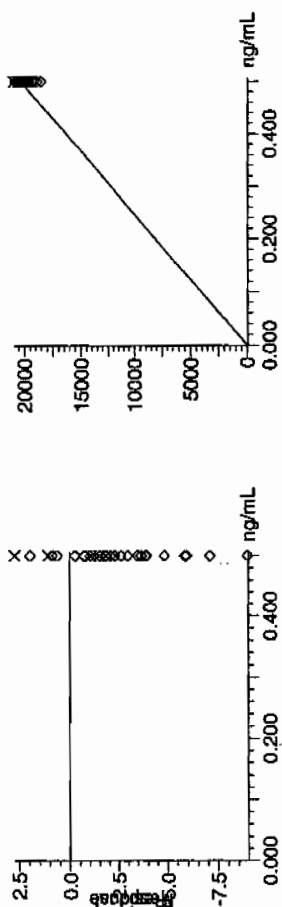
Compound name: Perchlorate-O(18)

Response Factor: 40707

RRF SD: 744.722, % Relative SD: 1.82947

Response type: External Std, Area

Curve type: RF



Perchlorate Initial Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-1213

Lab Code: GEL

Reporting Units: ug/kg

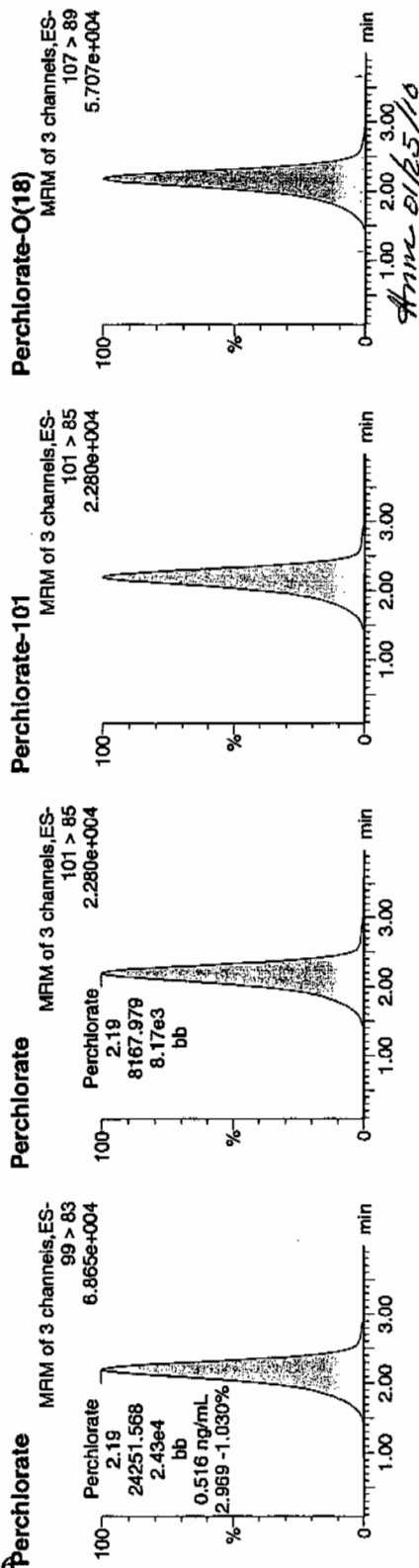
Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.52	103.22	22-JAN-10 17:05	per0122009a
Perchlorate Isotope Ratio		2.97		22-JAN-10 17:05	per0122009a
Perchlorate-101	.5	.51	101.04	22-JAN-10 17:05	per0122009a

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

Dataset: C:\MassLynx\Perchlorate.PRO\per012210a.qld

Last Altered: Saturday, January 23, 2010 9:20:32 AM Eastern Standard Time
Printed: Saturday, January 23, 2010 9:27:21 AM Eastern Standard Time

Perchlorate
Name: per0122009a
Date: 22-Jan-2010
Time: 17:05:01
ID: WCL100118-06ICV
Vial: 1:2,A



ID	Name	Trace	RT	Area	Response	Flags	Mod Time	Mod Date	ng/ml	%Rec	%Dev	SN	Ion Ratio
WCL100118-06ICV	Perchlorate	99 > 83	2.19	24251.568	24251.568	bb			0.5161	103.22	3.22	8416.6...	2.97
WCL100118-06ICV	Perchlorate-101	101 > 85	2.19	8167.979	8167.979	bb			0.5052	101.04	1.04	2947.7...	
WCL100118-06ICV	Perchlorate-O(18)	107 > 89	2.18	20208.422	20208.422	bb			0.4964	99.29	-0.71	18211.0...	

Perchlorate Continuing Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-1213

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.47	94.52	22-JAN-10 18:36	per0122022a
Perchlorate Isotope Ratio		2.94		22-JAN-10 18:36	per0122022a
Perchlorate-101	.5	.47	93.57	22-JAN-10 18:36	per0122022a
Perchlorate	.5	.48	95.03	22-JAN-10 20:08	per0122035a
Perchlorate Isotope Ratio		2.84		22-JAN-10 20:08	per0122035a
Perchlorate-101	.5	.49	97.22	22-JAN-10 20:08	per0122035a
Perchlorate	.5	.48	95.15	22-JAN-10 21:25	per0122046a
Perchlorate Isotope Ratio		2.98		22-JAN-10 21:25	per0122046a
Perchlorate-101	.5	.46	92.64	22-JAN-10 21:25	per0122046a
Perchlorate	.5	.5	99.41	22-JAN-10 22:36	per0122056a
Perchlorate Isotope Ratio		3		22-JAN-10 22:36	per0122056a
Perchlorate-101	.5	.48	96.35	22-JAN-10 22:36	per0122056a
Perchlorate	.5	.5	99.14	22-JAN-10 23:47	per0122066a

Perchlorate Continuing Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-1213

Lab Code: GEL

Reporting Units: ug/kg

Perchlorate Isotope Ratio		2.98		22-JAN-10 23:47	per0122066a
Perchlorate-101	.5	.48	96.63	22-JAN-10 23:47	per0122066a

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

Dataset: C:\MassLynx\Perchlorate.PRO\per012210a.qld

Last Altered: Saturday, January 23, 2010 9:20:32 AM Eastern Standard Time
Printed: Saturday, January 23, 2010 9:27:21 AM Eastern Standard Time

Name: per0122022a

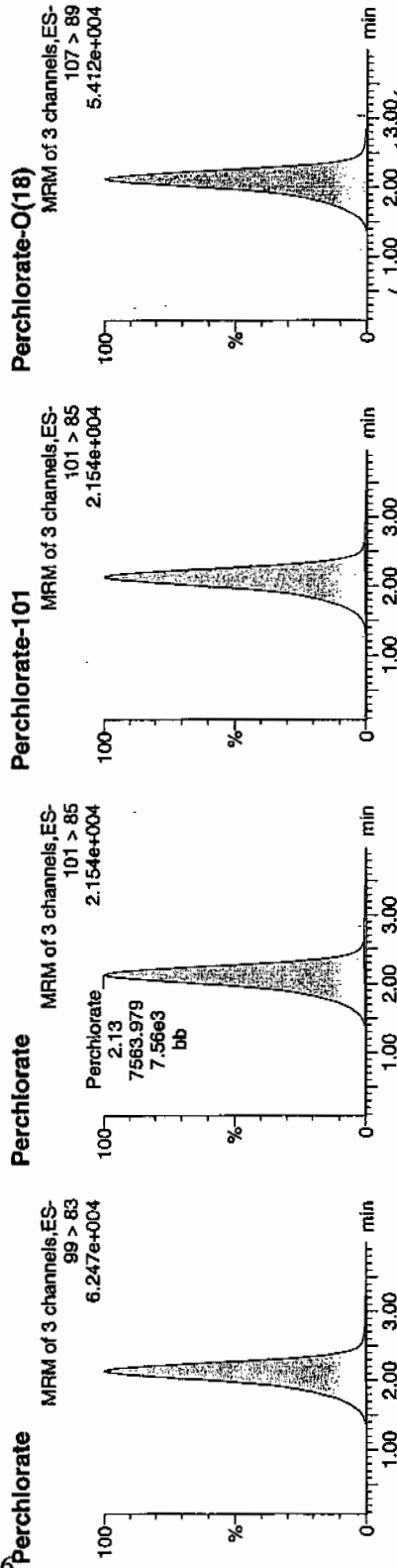
Date: 22-Jan-2010

Time: 18:36:33

ID: WCL100118-06CCV

Vial: 1:2,A

Pure and
01-23-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100118-06CCV	Perchlorate	99 > 83	2.13	22207.250	22207.250	bb			0.4726	94.52	-5.48	1162.3...	2.94
WCL100118-06CCV	Perchlorate-101	101 > 85	2.13	7563.979	7563.979	bb			0.4678	93.57	-6.43	3226.0...	
WCL100118-06CCV	Perchlorate-O(18)	107 > 89	2.12	18912.758	18912.758	bb			0.4646	92.92	-7.08	1824.3...	

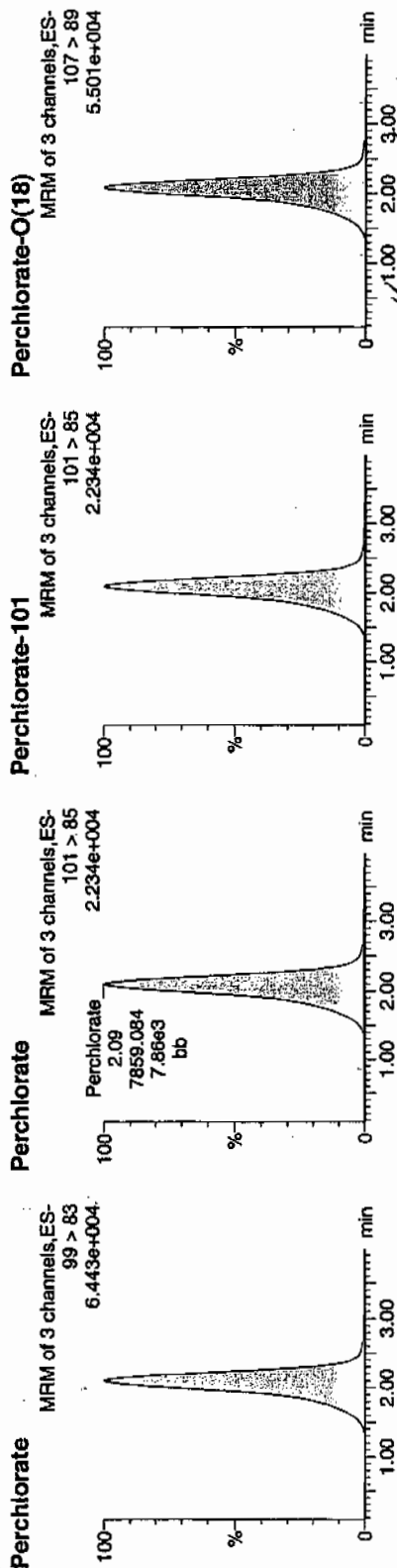
Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per012210a.qld

Last Altered: Saturday, January 23, 2010 9:20:32 AM Eastern Standard Time
Printed: Saturday, January 23, 2010 9:27:21 AM Eastern Standard Time

*Purs
and
01-23-10*

Page Name: per0122035a
Date: 22-Jan-2010
Time: 20:08:04
ID: WCL100118-06CCV
Vial: 1:2,A



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100118-06CCV	Perchlorate	99 > 83	2.10	22326.107	22326.107	bb			0.4751	95.03	-4.97	4174.8...	2.84
WCL100118-06CCV	Perchlorate-101	101 > 85	2.09	7859.084	7859.084	bb			0.4861	97.22	-2.78	682.216	
WCL100118-06CCV	Perchlorate-O(18)	107 > 89	2.08	19144.617	19144.617	bb			0.4703	94.06	-5.94	4864.8...	

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

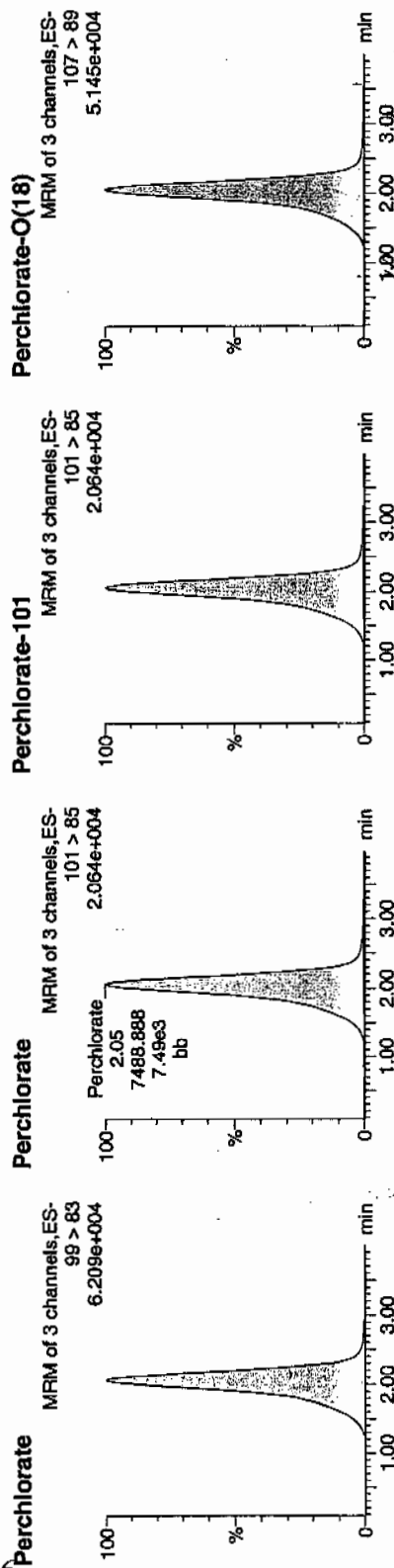
Dataset: C:\MassLynx\Perchlorate.PRO\per012210a.qld

Last Altered: Saturday, January 23, 2010 9:20:32 AM Eastern Standard Time
Printed: Saturday, January 23, 2010 9:27:21 AM Eastern Standard Time

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Name: per0122046a
Date: 22-Jan-2010
Time: 21:25:38
ID: WCL100118-06CCV
Vial: 1:2,A

Pass and 01-23-10



ID	Name	Trace	RT	Area	Response	Flags	Mod Time	ng/ml	%Rec	%Dev	S/N	Ion Ratio
WCL100118-06CCV	Perchlorate	99 > 83	2.05	22354.334	22354.334	bb		0.4757	95.15	-4.85	2696.7...	2.99
WCL100118-06CCV	Perchlorate-101	101 > 85	2.05	7488.888	7488.888	bb		0.4632	92.64	-7.36	245.138	
WCL100118-06CCV	Perchlorate-O(18)	107 > 89	2.05	18535.990	18535.990	bb		0.4554	91.07	-8.93	1942.3...	

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

Dataset: C:\MassLynx\Perchlorate.PRO\per012210a.qld

Last Altered: Saturday, January 23, 2010 9:20:32 AM Eastern Standard Time
Printed: Saturday, January 23, 2010 9:27:21 AM Eastern Standard Time

Name: per0122056a

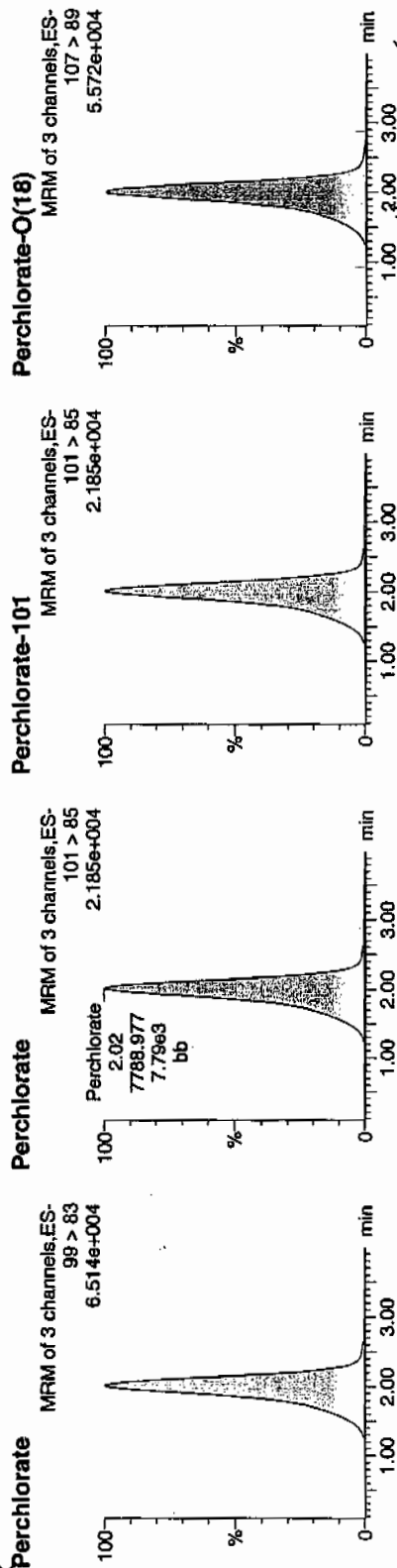
Date: 22-Jan-2010

Time: 22:36:21

QID: WCL100118-06CCV

Vial: 1:2,A

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aws
Q1-23-10*



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	SN	Ion Ratio
WCL100118-06CCV	Perchlorate	99 > 83	2.02	23355.424	23355.424	bb			0.4970	99.41	-0.59	4132.8...	3.00
WCL100118-06CCV	Perchlorate-101	101 > 85	2.02	7788.977	7788.977	bb			0.4817	96.35	-3.65	1988.2...	
WCL100118-06CCV	Perchlorate-O(18)	107 > 89	2.00	19817.961	19817.961	bb			0.4868	97.37	-2.63	4286.0...	

Amr-01/25/10

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

Dataset: C:\MassLynx\Perchlorate.PRO\per012210a.qld

Last Altered: Saturday, January 23, 2010 9:20:32 AM Eastern Standard Time
Printed: Saturday, January 23, 2010 9:27:21 AM Eastern Standard Time

Name: per0122066a

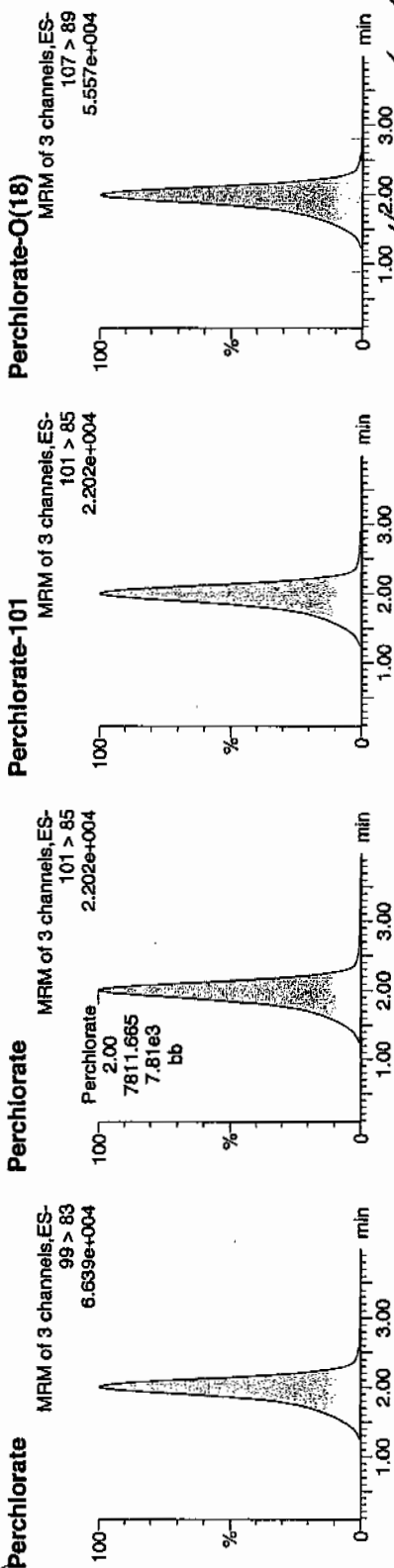
Date: 22-Jan-2010

Time: 23:47:06

ID: WCL100118-06CCV

Vial: 1:2,A

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and
01-23-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	SN	Ion Ratio
WCL100118-06CCV	Perchlorate	99 > 83	2.00	23291.490	23291.490	bb			0.4957	99.14	-0.86	504.875	2.98
WCL100118-06CCV	Perchlorate-101	101 > 85	2.00	7811.665	7811.665	bb			0.4831	96.63	-3.37	1735.0...	
WCL100118-06CCV	Perchlorate-O(18)	107 > 89	1.99	19549.516	19549.516	bb			0.4802	96.05	-3.95	4871.9...	

Perchlorate MDL Verification

GEL Job No.(SDG): 10-1213

Lab Name: General Engineering Laboratories

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.05	.05	99.27	22-JAN-10 17:19	per0122011a
Perchlorate Isotope Ratio		2.75		22-JAN-10 17:19	per0122011a
Perchlorate-101	.05	.05	104.82	22-JAN-10 17:19	per0122011a
Perchlorate	.05	.05	91.06	22-JAN-10 18:50	per0122024a
Perchlorate Isotope Ratio		2.8		22-JAN-10 18:50	per0122024a
Perchlorate-101	.05	.05	94.51	22-JAN-10 18:50	per0122024a
Perchlorate	.05	.05	97.57	22-JAN-10 20:22	per0122037a
Perchlorate Isotope Ratio		2.98		22-JAN-10 20:22	per0122037a
Perchlorate-101	.05	.05	95.12	22-JAN-10 20:22	per0122037a
Perchlorate	.05	.05	98.69	22-JAN-10 21:39	per0122048a
Perchlorate Isotope Ratio		3.21		22-JAN-10 21:39	per0122048a

Form 3

Perchlorate MDL Verification

GEL Job No.(SDG): 10-1213

Lab Name: General Engineering Laboratories

Lab Code: GEL

Reporting Units: ug/kg

Perchlorate-101	.05	.04	89.3	22-JAN-10 21:39	per0122048a
Perchlorate	.05	.05	94.56	22-JAN-10 22:50	per0122058a
Perchlorate Isotope Ratio		2.82		22-JAN-10 22:50	per0122058a
Perchlorate-101	.05	.05	97.38	22-JAN-10 22:50	per0122058a
Perchlorate	.05	.05	97.93	23-JAN-10 00:01	per0122068a
Perchlorate Isotope Ratio		2.82		23-JAN-10 00:01	per0122068a
Perchlorate-101	.05	.05	101.07	23-JAN-10 00:01	per0122068a

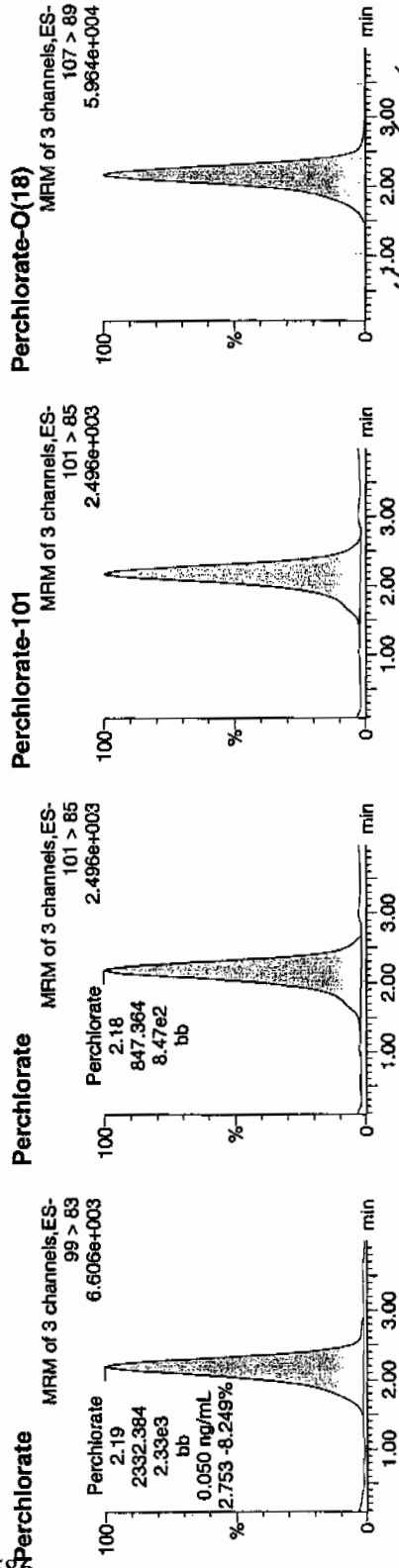
Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per012210a.qld

Last Altered: Saturday, January 23, 2010 9:20:32 AM Eastern Standard Time
Printed: Saturday, January 23, 2010 9:27:21 AM Eastern Standard Time

Name: per0122011a
Date: 22-Jan-2010
Time: 17:19:06
ID: WCL100118-07CRI
Vial: 1:2, B

Per
01-23-10



ID	Name	Trace	RT	Area	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	SN	Ion Ratio
WCL100118-07CRI	Perchlorate	99 > 83	2.19	2332.384	2332.384	bb			0.0496	99.27	-0.73	494.593	2.75
WCL100118-07CRI	Perchlorate-101	101 > 85	2.18	847.364	847.364	bb			0.0524	104.82	4.82	123.159	
WCL100118-07CRI	Perchlorate-O(18)	107 > 89	2.17	20753.727	20753.727	bb			0.5098	101.97	1.97	2734.4...	

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

Dataset: C:\MassLynx\P perchlorate.PRO\per012210a.qld

Last Altered: Saturday, January 23, 2010 9:20:32 AM Eastern Standard Time
Printed: Saturday, January 23, 2010 9:27:21 AM Eastern Standard Time

Name: per0122024a

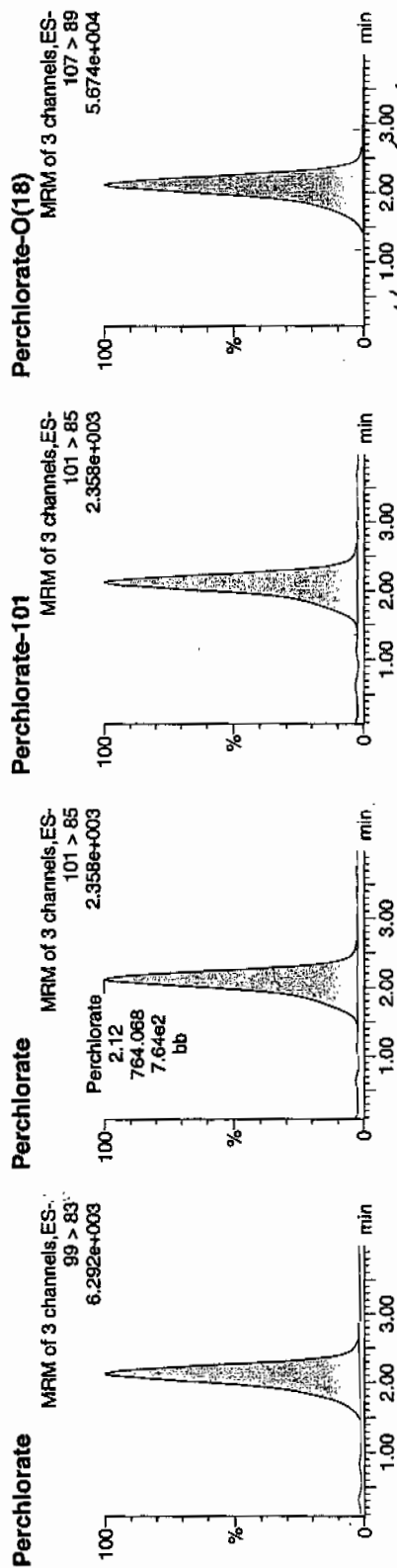
Date: 22-Jan-2010

Time: 18:50:37

ID: WCL100118-07CRI

Vial: 1:2,B

01-23-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100118-07CRI	Perchlorate	99 > 83	2.13	2139.427	2139.427	bb			0.0455	91.06	-8.94	395.228	2.80
WCL100118-07CRI	Perchlorate-101	101 > 85	2.12	764.068	764.068	bb			0.0473	94.51	-5.49	421.978	
WCL100118-07CRI	Perchlorate-O(18)	107 > 89	2.12	19644.518	19644.518	bb			0.4826	96.52	-3.48	5557.7...	

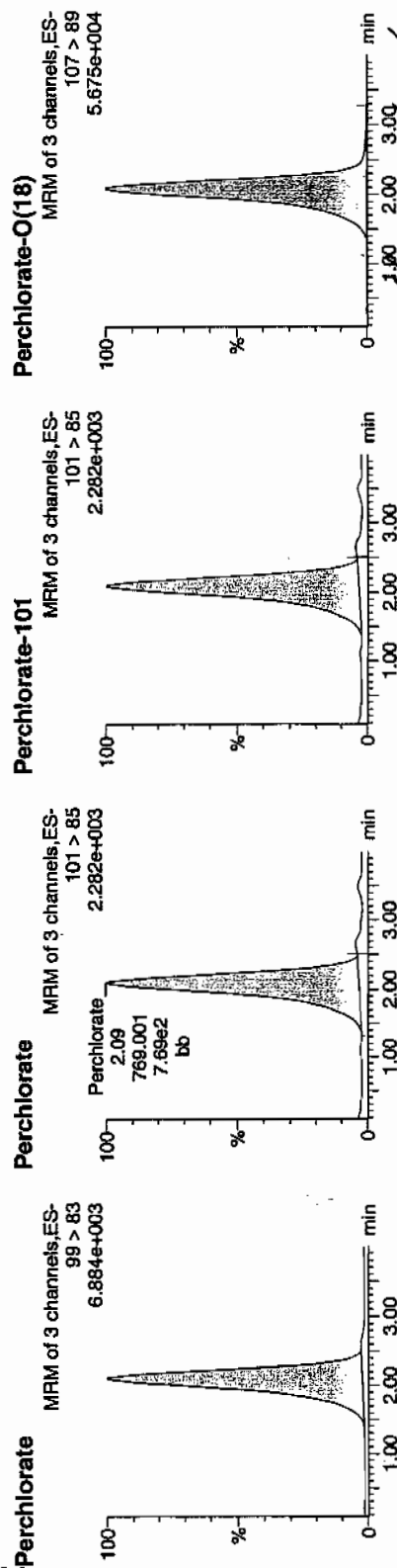
Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per012210a.qld

Last Altered: Saturday, January 23, 2010 9:20:32 AM Eastern Standard Time
Printed: Saturday, January 23, 2010 9:27:21 AM Eastern Standard Time

Name: per0122037a
Date: 22-Jan-2010
Time: 20:22:10
ID: WCL100118-07CRI
Vial: 1:2,B

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ID	Name	Trace	RT	Area	Response	Flags	Mod	Date	Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100118-07CRI	Perchlorate	99 > 83	2.10	2292.452	2292.452	bb				0.0488	97.57	-2.43	480.540	2.98
WCL100118-07CRI	Perchlorate-101	101 > 85	2.09	769.001	769.001	bb				0.0476	95.12	-4.88	152.312	
WCL100118-07CRI	Perchlorate-O(18)	107 > 89	2.08	1988.643	1988.643	bb				0.4886	97.72	-2.28	5026.5...	

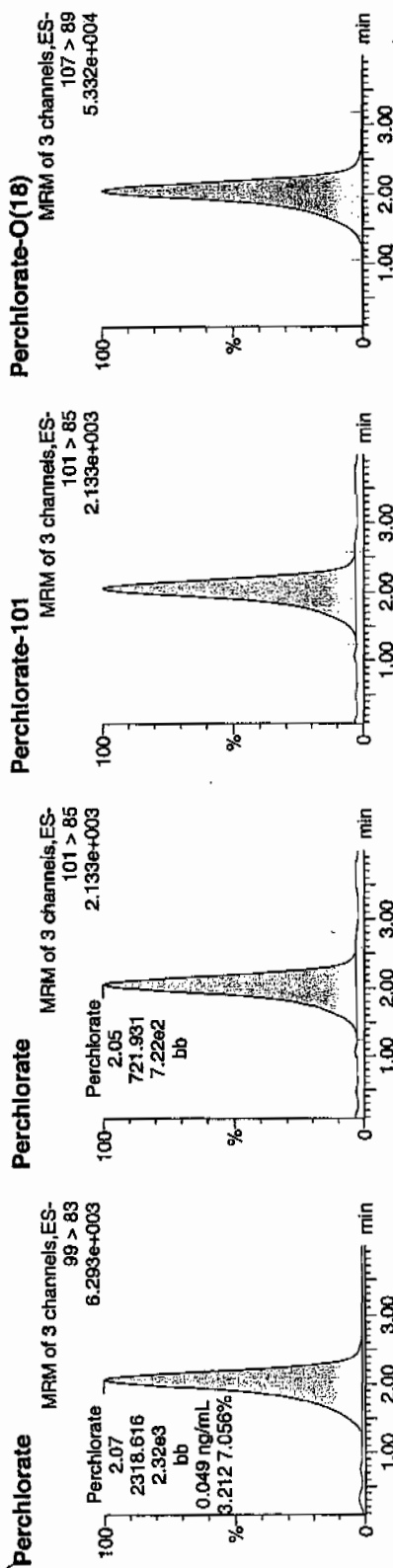
Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charters W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per012210a.qld

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Printed: Saturday, January 23, 2010 9:27:21 AM Eastern Standard Time

Per Name: per0122048a
Date: 22-Jan-2010
Time: 21:39:55
ID: WCL100118-07CRI
Vial: 1:2,B

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ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Det	SN	on Ratio
WCL100118-07CRI	Perchlorate	99 > 83	2.07	2318.616	2318.616	bb			0.0493	98.69	-1.31	860.624	3.21
WCL100118-07CRI	Perchlorate-101	101 > 85	2.05	721.931	721.931	bb			0.0447	89.30	-10.70	83.102	
WCL100118-07CRI	Perchlorate-O(18)	107 > 89	2.05	19165.344	19165.344	bb			0.4708	94.16	-5.84	19316.000	

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

Dataset: C:\MassLynx\Perchlorate.PRO\per012210a.qld

Last Altered: Saturday, January 23, 2010 9:20:32 AM Eastern Standard Time
Printed: Saturday, January 23, 2010 9:27:21 AM Eastern Standard Time

Name: per0122058a

Date: 22-Jan-2010

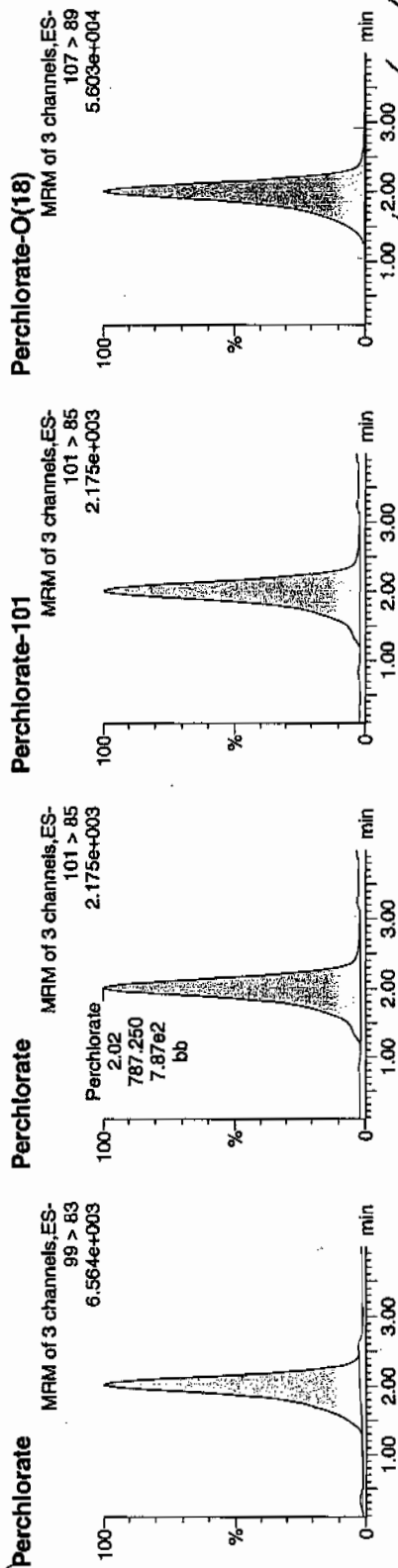
Time: 22:50:38

ID: WCL100118-07CRI

Vial: 1:2,B

Page 267 of 1586

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ID	Name	Trace	RT	Area	Response	Flags	Mod Date	Mod Time	ng/ml	%Rec	%Dev	S/N	Ion Ratio
WCL100118-07CRI	Perchlorate	99 > 83	2.03	2221.527	2221.527	bb			0.0473	94.56	-5.44	351.231	2.82
WCL100118-07CRI	Perchlorate-101	101 > 85	2.02	787.250	787.250	bb			0.0487	97.38	-2.62	97.394	
WCL100118-07CRI	Perchlorate-O(18)	107 > 89	2.00	19983.105	19983.105	bb			0.4909	98.18	-1.82	3199.6...	

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

Dataset: C:\MassLynx\Perchlorate.PRO\per012210a.qld

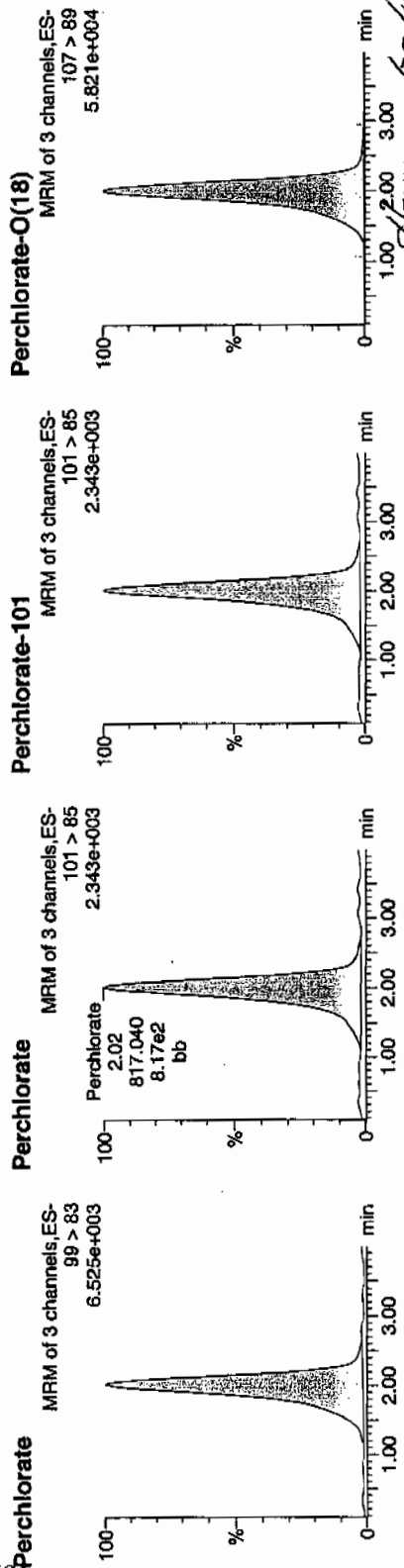
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Printed: Saturday, January 23, 2010 9:27:21 AM Eastern Standard Time

Name: per0122068a
Date: 23-Jan-2010

Time: 00:01:24
ID: WCL100118-07CRI

Vial: 1:2,B

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01-23-10*



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/ml	%Rec	%Dev	S/N	Ion Ratio
WCL100118-07CRI	Perchlorate	99 > 83	2.02	2300.814	2300.814	bb			0.0490	97.93	-2.07	379.395	2.82
WCL100118-07CRI	Perchlorate-101	101 > 85	2.02	817.040	817.040	bb			0.0505	101.07	1.07	178.792	
WCL100118-07CRI	Perchlorate-O(18)	107 > 89	2.00	20483.701	20483.701	bb			0.5032	100.64	0.64	6420.6...	

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: 942314
 Extraction Type: Solid Prep
 Client Sample No. MB
 Date Received: 22-JAN-10
 GEL Job No (SDG): 10-1213
 GEL Sample ID: 1202017252
 Date Filtered: 22-JAN-10
 Injection Volume (uL): 20
 %Solids: 100

Sample Volume/Weight: 2.00 g
 Concentrated Extract Volume: 20.0

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	22-JAN-10 20:29	per0122038a
	Perchlorate Isotope Ratio						1	22-JAN-10 20:29	per0122038a
14797-73-0	Perchlorate-101	.5	2	0.500	ug/kg	U	1	22-JAN-10 20:29	per0122038a
	Perchlorate-O(18)			4.88	ug/kg		1	22-JAN-10 20:29	per0122038a

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

*Concentration =

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

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

Dataset: C:\MassLynx\Perchlorate.PRO\per012210a.qld

Last Altered: Saturday, January 23, 2010 9:20:32 AM Eastern Standard Time
Printed: Saturday, January 23, 2010 9:27:21 AM Eastern Standard Time

Name: per0122038a

Date: 22-Jan-2010

Time: 20:29:13

ID: 1202017252

Vial: 2:1,A

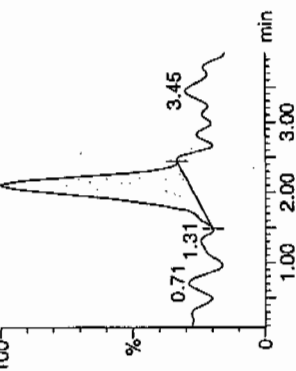
LAJL | 942315 | 5070 | MS | 1 |

Perchlorate

MRM of 3 channels, ES-

99 > 83

3.078e+002

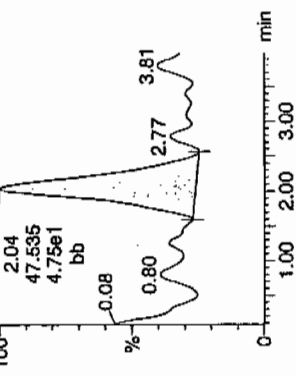


Perchlorate

MRM of 3 channels, ES-

101 > 85

1.621e+002

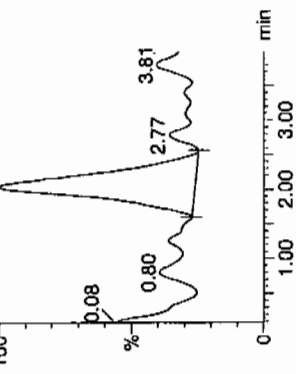


Perchlorate-101

MRM of 3 channels, ES-

101 > 85

1.621e+002

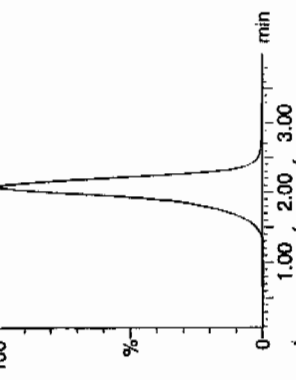


Perchlorate-O(18)

MRM of 3 channels, ES-

107 > 89

5.665e+004



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202017252	Perchlorate	99 > 83	2.10	75.341	75.341	bb			0.0016			10.042	1.58
1202017252	Perchlorate-101	101 > 85	2.04	47.535	47.535	bb			0.0029			31.422	
1202017252	Perchlorate-O(18)	107 > 89	2.09	19875.137	19875.137	bb			0.4882	97.65	-2.35	565.994	

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Handwritten: 22.0370

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: SOIL

Extraction Batch ID: 942314

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

LCS

Date Received: 22-JAN-10

GEL Job No (SDG): 10-1213

GEL Sample ID: 1202017253

Date Filtered: 22-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	2.09	ug/kg		1	22-JAN-10 20:36	per0122039a
	Perchlorate Isotope Ratio			2.9			1	22-JAN-10 20:36	per0122039a
14797-73-0	Perchlorate-101	.5	2	2.09	ug/kg		1	22-JAN-10 20:36	per0122039a
	Perchlorate-O(18)			5.04	ug/kg		1	22-JAN-10 20:36	per0122039a

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

*Concentration =

Instrument Value X Concentrated Extract Volume X 1 %Solids
Aliquot

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

Dataset: C:\MassLynx\Perchlorate.PRO\per012210a.qld

Last Altered: Saturday, January 23, 2010 9:20:32 AM Eastern Standard Time
Printed: Saturday, January 23, 2010 9:27:21 AM Eastern Standard Time

Name: per0122039a

Date: 22-Jan-2010

Time: 20:36:26

ID: 1202017253

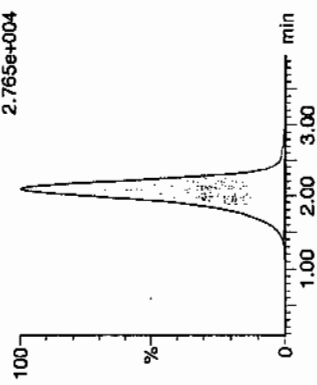
Vial: 2:1,B

01-23-10

1444-1942315 | 5000 | 1.1

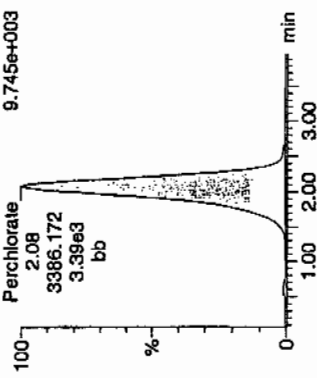
Perchlorate

MRM of 3 channels, ES-
89 > 83
2.765e+004



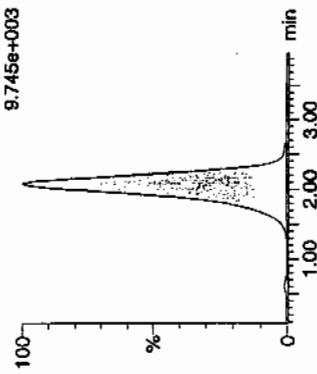
Perchlorate

MRM of 3 channels, ES-
101 > 85
9.745e+003



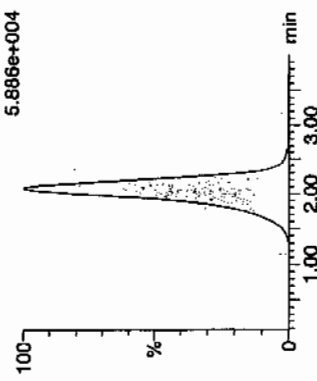
Perchlorate-101

MRM of 3 channels, ES-
101 > 85
9.745e+003



Perchlorate-O(18)

MRM of 3 channels, ES-
107 > 89
5.886e+004



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202017253	Perchlorate	99 > 83	2.09	9828.313	9828.313	bb			0.2092	104.58	4.58	1190.6...	2.90
1202017253	Perchlorate-101	101 > 85	2.08	3386.172	3386.172	bb			0.2094	104.72	4.72	557.536	
1202017253	Perchlorate-O(18)	107 > 89	2.08	20536.463	20536.463	bb			0.5045	100.90	0.90	2424.2...	

9828.313

46928.7 = 0.2092

41111 81/25/10

MISCELLANEOUS DATA

Prep Logbook

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

Batch ID: 942314 Verified by: Lab SOP: GL-OA-E-067 REV# 6
 Analyst: Jareth Shirley Instrument: MicroMass Quattro Ultima
 Method: SW846 6850 Modified

Sample ID	Run Date	Aliquot (g)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1202017252 MB	22-JAN-2010 16:06:39	2	20	10
1202017253 LCS	22-JAN-2010 16:06:39	2	20	10
244601001	22-JAN-2010 16:06:39	2	20	10
1202017254 MS (244601001)	22-JAN-2010 16:06:39	2	20	10
1202017255 MSD (244601001)	22-JAN-2010 16:06:39	2	20	10
244601002	22-JAN-2010 16:06:39	2	20	10
244601003	22-JAN-2010 16:06:39	2	20	10
244601004	22-JAN-2010 16:06:39	2	20	10
244601005	22-JAN-2010 16:06:39	2	20	10
244601006	22-JAN-2010 16:06:39	2	20	10
244601007	22-JAN-2010 16:06:39	2	20	10
244601008	22-JAN-2010 16:06:39	2	20	10
244601009	22-JAN-2010 16:06:39	2	20	10
244601010	22-JAN-2010 16:06:39	2	20	10
244601011	22-JAN-2010 16:06:39	2	20	10
244601012	22-JAN-2010 16:06:39	2	20	10
244601013	22-JAN-2010 16:06:39	2	20	10
244604001	22-JAN-2010 16:06:39	2	20	10
244604002	22-JAN-2010 16:06:39	2	20	10
244613001	22-JAN-2010 16:06:39	2	20	10
244613001	22-JAN-2010 16:06:39	2	20	10
1202017256 ICS	22-JAN-2010 16:06:39	2	20	10

Comments:

Type	Sample Id	Description	Serial Number	Spike Amt	Units
ICS	1202017256	10 ug/L ICV/CCV Second Source	UCL091230-01.1	.4	mL
LCS	1202017253	10 ug/L ICV/CCV Second Source	UCL091230-01.1	.4	mL
MS	1202017254	10 ug/L ICV/CCV Second Source	UCL091230-01.1	.4	mL
MSD	1202017255	10 ug/L ICV/CCV Second Source	UCL091230-01.1	.4	mL

Desalting cartridges used: B101/0211609 & B1000311609

GEL ORGANIC RUN LOG

INSTRUMENT ID: LCMSMS#2

Date: 01/22/10

Extr. Injection Volume: 20uL

Sequence Number: per012210a

Initial Calibration Date: 01/22/10

Method: EPA 6850-Modified

Int. Std.: UCL091019-03.2

Mobile Phase Lot#: 1254342, 1246195

Standard-Samp Reagent Lot#: 1233976

Reviewed BY: *hnm*

Date: 01/25/10

SOP: GL-OA-E-067 Rev.6

Alt Check Std. ID: WCL100118-06

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC_Flag
per0122001a	IPB001	CWW	1/22/2010 16:08			1		USE	B
per0122002a	IPB001	CWW	1/22/2010 16:15			1		USE	B
per0122003a	WCLICAL-01	CWW	1/22/2010 16:22			1		USE	I
per0122004a	WCLICAL-02	CWW	1/22/2010 16:29			1		USE	I
per0122005a	WCLICAL-03	CWW	1/22/2010 16:36			1		USE	I
per0122006a	WCLICAL-04	CWW	1/22/2010 16:43			1		USE	I
per0122007a	WCLICAL-05	CWW	1/22/2010 16:51			1		USE	I
per0122008a	IPB002	CWW	1/22/2010 16:58			1		USE	B
per0122009a	WCLICV	CWW	1/22/2010 17:05			1		USE	C
per0122010a	IPB003	CWW	1/22/2010 17:12			1		USE	B
per0122011a	WCLCRI	CWW	1/22/2010 17:19			1		USE	C
per0122012a	1202021811	CWW	1/22/2010 17:26	944216	VARIOUS	1	LANL	USE	S
per0122013a	1202021812	CWW	1/22/2010 17:33	944216	VARIOUS	1	LANL	USE	S
per0122014a	1202021817	CWW	1/22/2010 17:40	944216	VARIOUS	1	LANL	USE	S
per0122015a	244510002	CWW	1/22/2010 17:47	944216	10-1189	10	LANL	USE	S
per0122016a	244510004	CWW	1/22/2010 17:54	944216	10-1189	1	LANL	USE	S
per0122017a	1202021813	CWW	1/22/2010 18:01	944216	10-1189	1	LANL	USE	S
per0122018a	1202021814	CWW	1/22/2010 18:08	944216	10-1189	1	LANL	USE	S
per0122019a	244510006	CWW	1/22/2010 18:15	944216	10-1189	1	LANL	USE	S
per0122020a	244521002	CWW	1/22/2010 18:22	944216	10-1193	1	LANL	USE	S
per0122021a	244521004	CWW	1/22/2010 18:29	944216	10-1193	5	LANL	USE	S
per0122022a	WCLCCV	CWW	1/22/2010 18:36			1		USE	C
per0122023a	IPB004	CWW	1/22/2010 18:43			1		USE	B
per0122024a	WCLCRI	CWW	1/22/2010 18:50			1		USE	C
per0122025a	244525002	CWW	1/22/2010 18:57	944216	10-1185	5	LANL	USE	S
per0122026a	244525004	CWW	1/22/2010 19:04	944216	10-1185	10	LANL	USE	S
per0122027a	244844002	CWW	1/22/2010 19:11	944216	10-1252	1	LANL	USE	S
per0122028a	244844004	CWW	1/22/2010 19:18	944216	10-1252	1	LANL	USE	S
per0122029a	244855002	CWW	1/22/2010 19:25	944216	10-1250	1	LANL	USE	S

per0122030a	244855004	CWW	1/22/2010 19:32	944216	10-1250	1	LANL	USE	S
per0122031a	1202021815	CWW	1/22/2010 19:39	944216	10-1250	1	LANL	USE	S
per0122032a	1202021816	CWW	1/22/2010 19:46	944216	10-1250	1	LANL	USE	S
per0122033a	244896002	CWW	1/22/2010 19:53	944216	10-1276	1	LANL	USE	S
per0122034a	244896003	CWW	1/22/2010 20:01	944216	10-1276	1	LANL	USE	S
per0122035a	WCLCCV	CWW	1/22/2010 20:08			1		USE	C
per0122036a	IPB005	CWW	1/22/2010 20:15			1		USE	B
per0122037a	WCLCRI	CWW	1/22/2010 20:22			1		USE	C
per0122038a	1202017252	CWW	1/22/2010 20:29	942315	VARIOUS	1	LANL	USE	S
per0122039a	1202017253	CWW	1/22/2010 20:36	942315	VARIOUS	1	LANL	USE	S
per0122040a	1202017256	CWW	1/22/2010 20:43	942315	VARIOUS	1	LANL	USE	S
per0122041a	244601001	CWW	1/22/2010 20:50	942315	10-1212	1	LANL	USE	S
per0122042a	1202017254	CWW	1/22/2010 20:57	942315	10-1212	1	LANL	USE	S
per0122043a	1202017255	CWW	1/22/2010 21:04	942315	10-1212	1	LANL	USE	S
per0122044a	244601002	CWW	1/22/2010 21:11	942315	10-1212	1	LANL	USE	S
per0122045a	244601003	CWW	1/22/2010 21:18	942315	10-1212	1	LANL	USE	S
per0122046a	WCLCCV	CWW	1/22/2010 21:25			1		USE	C
per0122047a	IPB006	CWW	1/22/2010 21:32			1		USE	B
per0122048a	WCLCRI	CWW	1/22/2010 21:39			1		USE	C
per0122049a	244601004	CWW	1/22/2010 21:46	942315	10-1212	1	LANL	USE	S
per0122050a	244601005	CWW	1/22/2010 21:54	942315	10-1212	1	LANL	USE	S
per0122051a	244601006	CWW	1/22/2010 22:01	942315	10-1212	1	LANL	USE	S
per0122052a	244601007	CWW	1/22/2010 22:08	942315	10-1212	1	LANL	USE	S
per0122053a	244601008	CWW	1/22/2010 22:15	942315	10-1212	1	LANL	USE	S
per0122054a	244601009	CWW	1/22/2010 22:22	942315	10-1212	1	LANL	USE	S
per0122055a	244601010	CWW	1/22/2010 22:29	942315	10-1212	1	LANL	USE	S
per0122056a	WCLCCV	CWW	1/22/2010 22:36			1		USE	C
per0122057a	IPB007	CWW	1/22/2010 22:43			1		USE	B
per0122058a	WCLCRI	CWW	1/22/2010 22:50			1		USE	C
per0122059a	244601011	CWW	1/22/2010 22:57	942315	10-1212	1	LANL	USE	S
per0122060a	244601012	CWW	1/22/2010 23:04	942315	10-1212	1	LANL	USE	S
per0122061a	244601013	CWW	1/22/2010 23:11	942315	10-1212	1	LANL	USE	S
per0122062a	244604001	CWW	1/22/2010 23:18	942315	10-1213	1	LANL	USE	S
per0122063a	244604002	CWW	1/22/2010 23:25	942315	10-1213	1	LANL	USE	S
per0122064a	244612001	CWW	1/22/2010 23:33	942315	10-1216	1	LANL	USE	S
per0122065a	244613001	CWW	1/22/2010 23:40	942315	10-1218	1	LANL	USE	S
per0122066a	WCLCCV	CWW	1/22/2010 23:47			1		USE	C

B C

USE
USE

1
1

1/22/2010 23:54
1/23/2010 0:01

CWW
CWW

IPB008
WCLCRI

per0122067a
per0122068a

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

Dataset: C:\MassLynx\Perchlorate.PRO\per012210a.qld

Last Altered: Saturday, January 23, 2010 9:20:32 AM Eastern Standard Time
Printed: Saturday, January 23, 2010 9:27:21 AM Eastern Standard Time

Name: per0122042a

Date: 22-Jan-2010

Time: 20:57:31

ID: 1202017254

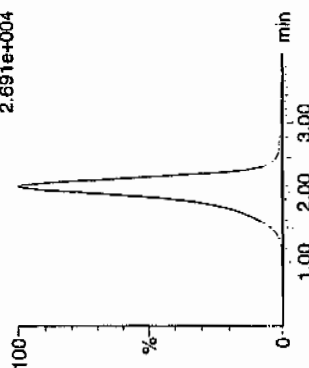
Vial: 2:1,E

Q1-13-ID

1202017254 | 50020 | MS | 1 | 1

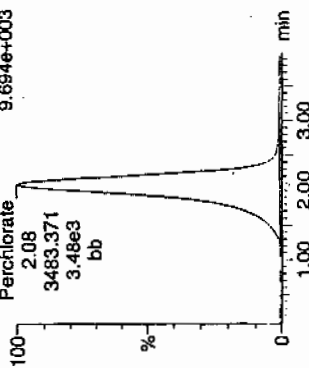
Perchlorate

MRM of 3 channels, ES-
99 > 83
2.691e+004



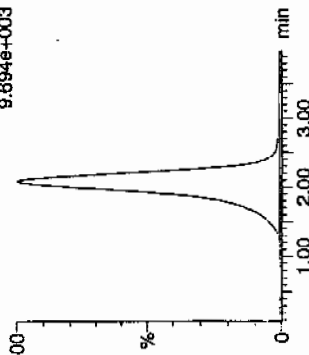
Perchlorate

MRM of 3 channels, ES-
101 > 85
9.694e+003



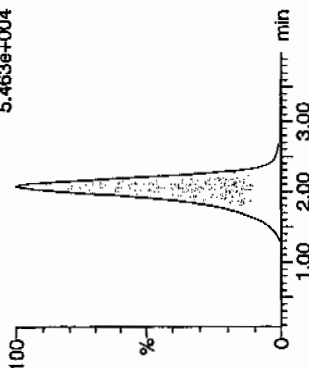
Perchlorate-101

MRM of 3 channels, ES-
101 > 85
9.694e+003



Perchlorate-O(18)

MRM of 3 channels, ES-
107 > 89
5.463e+004



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202017254	Perchlorate	99 > 83	2.08	9882.326	9882.326	bb			0.2103	105.16	5.16	2325.2...	2.84
1202017254	Perchlorate-101	101 > 85	2.08	3483.371	3483.371	bb			0.2154	107.72	7.72	146.597	
1202017254	Perchlorate-O(18)	107 > 89	2.08	20041.691	20041.691	bb			0.4923	98.47	-1.53	1353.2...	

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

Dataset: C:\MassLynx\Perchlorate.PRO\per012210a.qld

Last Altered: Saturday, January 23, 2010 9:20:32 AM Eastern Standard Time
Printed: Saturday, January 23, 2010 9:27:21 AM Eastern Standard Time

Name: per0122043a

Date: 22-Jan-2010

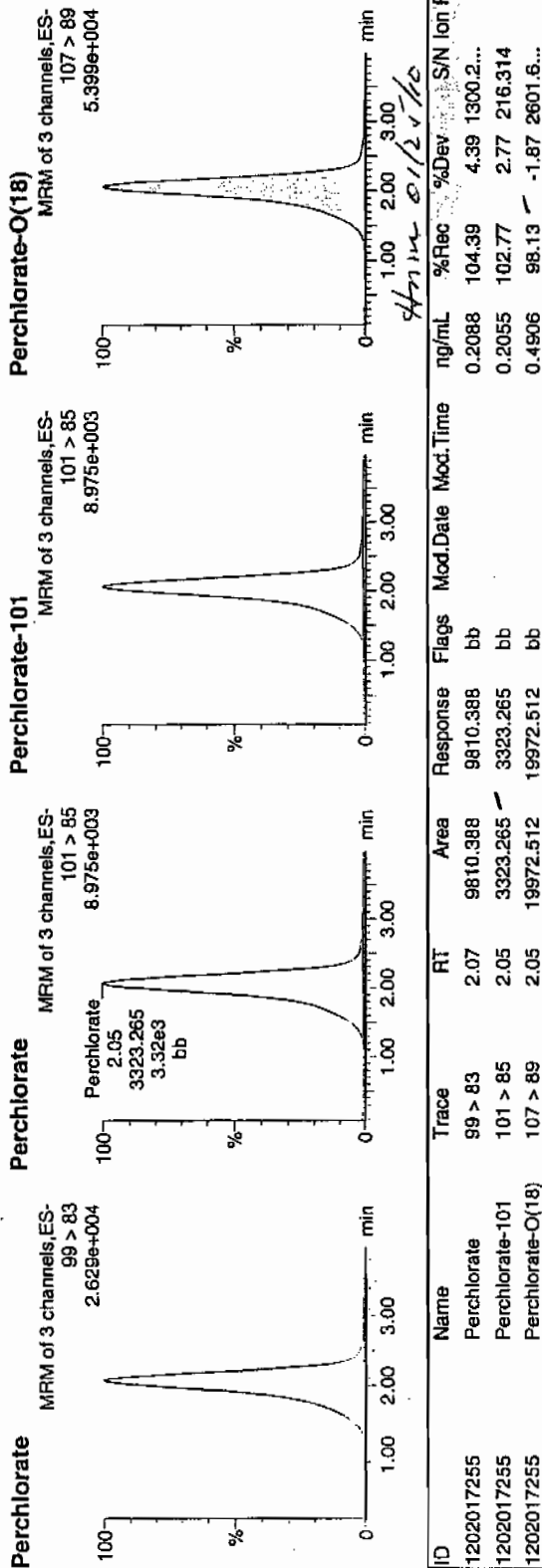
Time: 21:04:32

ID: 1202017255

Vial: 2:1,F

01-23-10

17200-942315 | 50200 | MS0 | 11



Isotope Ratio Criteria

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

2.31-3.85

Tune Criteria

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

LC/MS/MS EXPLOSIVES ANALYSIS

**LC/MS/MS Case Narrative
Los Alamos National Laboratory (LANL)
SDG 10-1213**

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: 941660

Prep Batch Number: 941659

Sample Analysis

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

Sample ID	Client ID
244604001	RE12-10-7257
244604002	RE12-10-7256
1202015502	Method Blank (MB)
1202015503	Laboratory Control Sample (LCS)
1202015504	244606002(RE16-10-1525) Matrix Spike (MS)
1202015505	244606002(RE16-10-1525) Matrix Spike Duplicate (MSD)

Preparation/Analytical Method Verification

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-056 REV# 12.

Primary Analyte Analysis

Calibration Information

Initial Calibration

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

10-1213-EXPLCMS

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Calibration Verification Standard Requirements

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

Calibration Blank Requirements

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

CRI Requirements

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

Quality Control (QC) Information

Method Blank (MB) Statement

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

Surrogate Recoveries

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

Laboratory Control Sample (LCS) Recovery

The LCS spike recoveries were within the established acceptance limits.

QC Sample Designation

Client sample 244606002 (RE16-10-1525) from SDG 10-1214 was chosen for matrix spike and matrix spike duplicate analysis. Please see the raw data in the Miscellaneous Section.

Matrix Spike (MS) Recovery Statement

The MS spike recoveries were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement

The MSD spike recoveries were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement

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

Internal Standard (ISTD) Acceptance

The internal standard responses were within the required acceptance criteria for all samples and QC.

Technical Information

Holding Time Specifications

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

Preparation/Analytical Method Verification

All procedures were performed as stated in the SOP.

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Sample Dilutions

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

Sample Re-extraction/Re-analysis

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

Secondary Analyte Analysis**Calibration Information****Initial Calibration**

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

Calibration Verification Standard Requirements

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

Calibration Blank Requirements

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

CRI Requirements

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

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

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

Surrogate Recoveries

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

Laboratory Control Sample (LCS) Recovery

The LCS spike recoveries were within the established acceptance limits.

QC Sample Designation

Client sample 244606002 (RE16-10-1525) from SDG 10-1214 was chosen for matrix spike and matrix spike duplicate analysis. Please see the raw data in the Miscellaneous Section.

Matrix Spike (MS) Recovery Statement

The MS spike recoveries were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement

The MSD spike recoveries were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement

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

10-1213-EXPLCMS

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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

QC sample 1202015503 (LCS) failed acceptance criteria. It was re-analyzed and passed acceptance criteria. The re-analysis is reported.

Miscellaneous Information

Data Exception (DER) Documentation

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

Manual Integrations

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

Flagging Convention

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

Additional Comments

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

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

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

System Configuration

The laboratory utilizes a Waters LC 2795 liquid chromatography instrument for primary analyte analysis. It is coupled with either a Micromass Quattro Micro Mass Spectrometer/ Mass Spectrometer, or a Micromass Quattro Ultima Mass Spectrometer/ Mass Spectrometer. Each being designated as LCMSMS #1, and LCMSMS #2, respectively. It is fitted with an APCI (Atmospheric Pressure chemical Ionization) probe that is operated in the negative ionization mode for the primary analyte analysis. The laboratory also utilizes an Agilent 1100 liquid chromatography instrument for either primary or secondary analyte analysis. It is coupled with a Applied Biosystems 4000 Mass Spectrometer/ Mass Spectrometer, designated as either LCMSMS #3 or LCMSMS #4. It is fitted with a APCI (Atmospheric Pressure chemical Ionization) probe that is operated in the negative ionization mode for both the primary and secondary analyte analysis.

Chromatographic Columns

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

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

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

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

Certification Statement

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

Review Validation:

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

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

Reviewer: Herbert M. Mauer

Date: 01/29/10

10-1213-BXPLCMS

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SAMPLE DATA SUMMARY

1
High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7257

Lab Code: GEL

GEL Job No (SDG) 10-1213

Matrix: SOIL

GEL Sample ID: 244604001

Sample Amount 2

Moisture: 10

Amount Units g

Date Received: 13-JAN-10

Extraction Type Sonication

Extraction Batch ID: 941659

Concentrated Extract Volume (mL) 10

Date Extracted: 20-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0118215a

Date Analyzed: 22-JAN-10 23:18

Units: ug/kg

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

*Concentration =

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

1
High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7257

Lab Code: GEL

GEL Job No (SDG) 10-1213

Matrix: SOIL

GEL Sample ID: 244604001

Sample Amount 2

Moisture: 10

Amount Units g

Date Received: 13-JAN-10

Extraction Type Sonication

Extraction Batch ID: 941659

Concentrated Extract Volume (mL) 10

Date Extracted: 20-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS01210029.wiff

Date Analyzed: 21-JAN-10 20:49

Units: ug/kg

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

*Concentration =

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

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7256

Lab Code: GEL

GEL Job No (SDG) 10-1213

Matrix: SOIL

GEL Sample ID: 244604002

Sample Amount 2

Moisture: 24.1

Amount Units g

Date Received: 13-JAN-10

Extraction Type Sonication

Extraction Batch ID: 941659

Concentrated Extract Volume (mL) 10

Date Extracted: 20-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0118216a

Date Analyzed: 22-JAN-10 23:47

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 =

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

1
High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7256

Lab Code: GEL

GEL Job No (SDG) 10-1213

Matrix: SOIL

GEL Sample ID: 244604002

Sample Amount 2

Moisture: 24.1

Amount Units g

Date Received: 13-JAN-10

Extraction Type Sonication

Extraction Batch ID: 941659

Concentrated Extract Volume (mL) 10

Date Extracted: 20-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS01210030.wiff

Date Analyzed: 21-JAN-10 21:04

Units: ug/kg

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

*Concentration =

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

High Explosives Surrogate Recovery Summary

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1213

Lab Code: GEL

HPLC Column: Phenomenex Ultracarb 5u ODS(20)

Lab Sample ID	Client Sample ID	DNT	QC Limits	Flg
244604001	RE12-10-7257	104	73.7 - 133.3	
244604001	RE12-10-7257	116	73.7 - 133.3	
244604002	RE12-10-7256	112	73.7 - 133.3	
244604002	RE12-10-7256	74	73.7 - 133.3	
1202015502	MB for batch 941659	113	73.7 - 133.3	
1202015502	MB for batch 941659	104	73.7 - 133.3	
1202015503	LCS for batch 941659	108	73.7 - 133.3	
1202015503	LCS for batch 941659	93.6	73.7 - 133.3	

DNT = 3,4-Dinitrotoluene

3B
High Explosives LCS/LCS Duplicate Summary

Lab Name: GEL Laboratories LLC

Client ID: LCS

Lab Code: GEL

GEL Job No (SDG) 10-1213

Extract Batch Code: 941659

Date Extracted: 20-JAN-10

GEL LCS ID: 1202015503

GEL LCSDUP ID:

Analysis Date/Time: 22-JAN-10 22:48

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	5310	106					75 - 123
p-Nitrotoluene	5000	5640	113					73.7 - 124
1,3,5-Trinitrobenzene	5000	5040	101					62.1 - 124
2,6-Dinitrotoluene	5000	5130	103					86.9 - 122
2,4-Dinitrotoluene	5000	5330	107					82.7 - 132
2,4,6-Trinitrotoluene	5000	5020	100					78.3 - 132
2-Amino-4,6-dinitrotoluene	5000	5590	112					84.2 - 149
HMX	5000	5330	107					66.5 - 142
PETN	5000	5020	100					64.6 - 147
m-Nitrotoluene	5000	5250	105					71.9 - 126
m-Dinitrobenzene	5000	5350	107					80.9 - 127
Tetryl	5000	3390	67.7					31.2 - 119
RDX	5000	6260	125					78.7 - 144
Nitrobenzene	5000	5290	106					71.8 - 126
4-Amino-2,6-dinitrotoluene	5000	5540	111					85.6 - 133

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

* Values outside of QC limits

3B
High Explosives LCS/LCS Duplicate Summary

Lab Name: GEL Laboratories LLC

Client ID: LCS

Lab Code: GEL

GEL Job No (SDG) 10-1213

Extract Batch Code: 941659

Date Extracted: 20-JAN-10

GEL LCS ID: 1202015503

GEL LCSDUP ID:

Analysis Date/Time: 25-JAN-10 13:56

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	4640	92.8					64.8 - 128
2,6-Diamino-4-nitrotoluene	5000	4330	86.6					69.6 - 133
3,5-Dinitroaniline	5000	4540	90.8					77.3 - 123
TATB	5000	4900	98					46.8 - 166
tris(o-cresyl) phosphate	5000	4320	86.4					84.3 - 120

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

* Values outside of QC limits

High Explosives MS/MSD Summary

Lab Name: GEL Laboratories LLC

Client ID: RE16-10-1525

Lab Code: GEL

GEL Job No (SDG) 10-1213

Extract Batch Code: 941659

Date Extracted: 20-JAN-10

GEL Spike ID: 1202015504

GEL SpikeDup ID: 1202015505

Analysis Date/Time: 23-JAN-10 00:46

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	4990	99.7	4960	99.3	.471	30	70.7 - 130
2,4,6-Trinitrotoluene	5000	0	5200	104	5190	104	.375	30	83.4 - 138
2,4-Dinitrotoluene	5000	0	4690	93.9	4900	98	4.33	30	79.1 - 137
2,6-Dinitrotoluene	5000	0	4900	98.1	5110	102	4.21	30	85.4 - 125
2-Amino-4,6-dinitrotoluene	5000	0	5480	110	6010	120	9.31	30	77.4 - 154
4-Amino-2,6-dinitrotoluene	5000	0	5400	108	5590	112	3.34	30	77.3 - 140
HMX	5000	0	5330	107	5740	115	7.41	30	66.7 - 144
Nitrobenzene	5000	0	4720	94.4	4640	92.8	1.69	30	70.4 - 129
PETN	5000	0	5250	105	4810	96.2	8.69	30	61.9 - 153
RDX	5000	0	5600	112	5920	118	5.6	30	73 - 140
Tetryl	5000	0	4200	83.9	4390	87.8	4.54	30	46.8 - 138
m-Dinitrobenzene	5000	0	4890	97.7	5030	101	2.9	30	83.5 - 126
m-Nitrotoluene	5000	0	5130	103	5130	103	.136	30	68.6 - 135
o-Nitrotoluene	5000	0	5660	113	5120	102	10	30	71.2 - 131
p-Nitrotoluene	5000	0	5720	114	5630	113	1.65	30	69.3 - 133

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

High Explosives MS/MSD Summary

Lab Name: GEL Laboratories LLC

Client ID: RE16-10-1525

Lab Code: GEL

GEL Job No (SDG) 10-1213

Extract Batch Code: 941659

Date Extracted: 20-JAN-10

GEL Spike ID: 1202015504

GEL SpikeDup ID: 1202015505

Analysis Date/Time: 25-JAN-10 14:12

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	3990	79.8	4410	88.2	10	30	51.6 - 127
2,6-Diamino-4-nitrotoluene	5000	0	4340	86.8	5180	104	17.6	30	58.9 - 135
3,5-Dinitroaniline	5000	0	4740	94.8	4910	98.2	3.52	30	72.8 - 125
TATB	5000	0	6110	122	6890	138	12	30	43.9 - 166
tris(o-cresyl) phosphate	5000	0	4430	88.6	4640	92.8	4.63	30	79.1 - 124

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

Explosives Initial Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1213

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

Method: C:\MASSLYN\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:\MASSLYN\NEW_EXP.PRO\Data\EXP0118001a

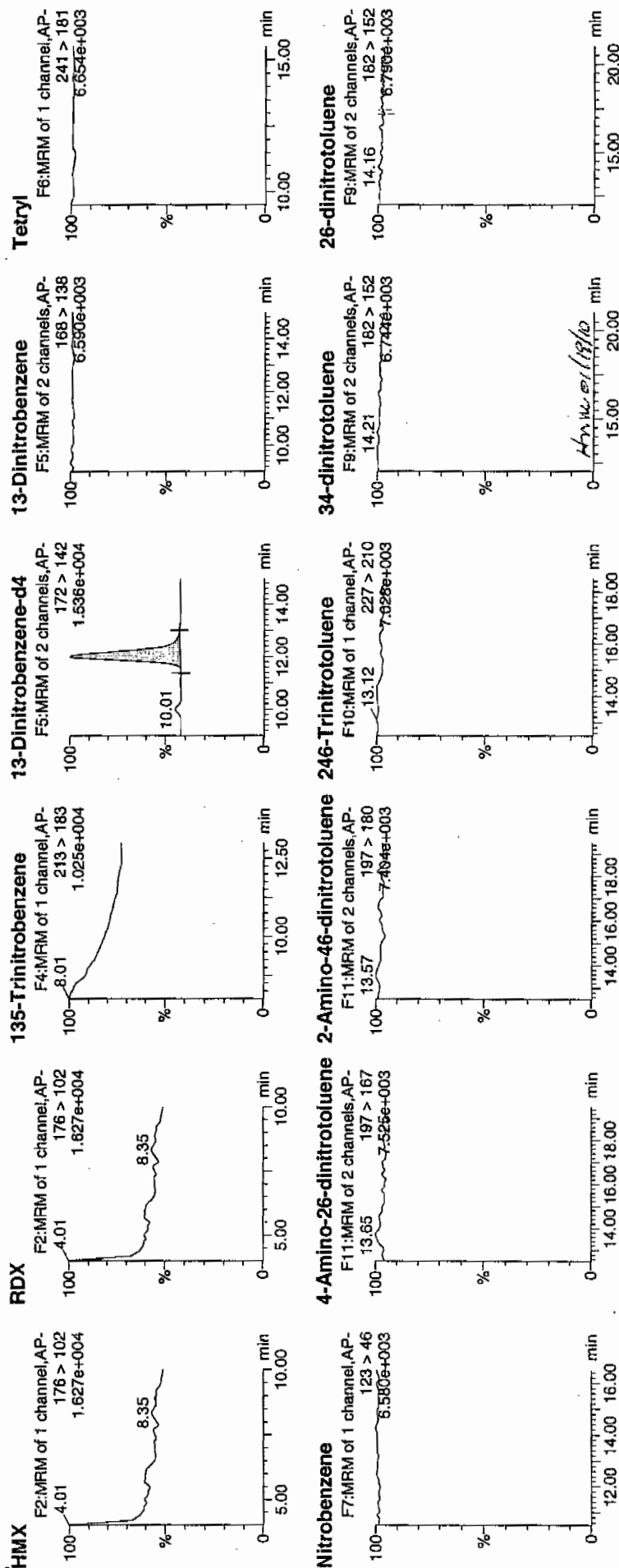
Date: 18-Jan-2010

Time: 14:03:34

ID: XIBLK01

Vial: 1:1,A

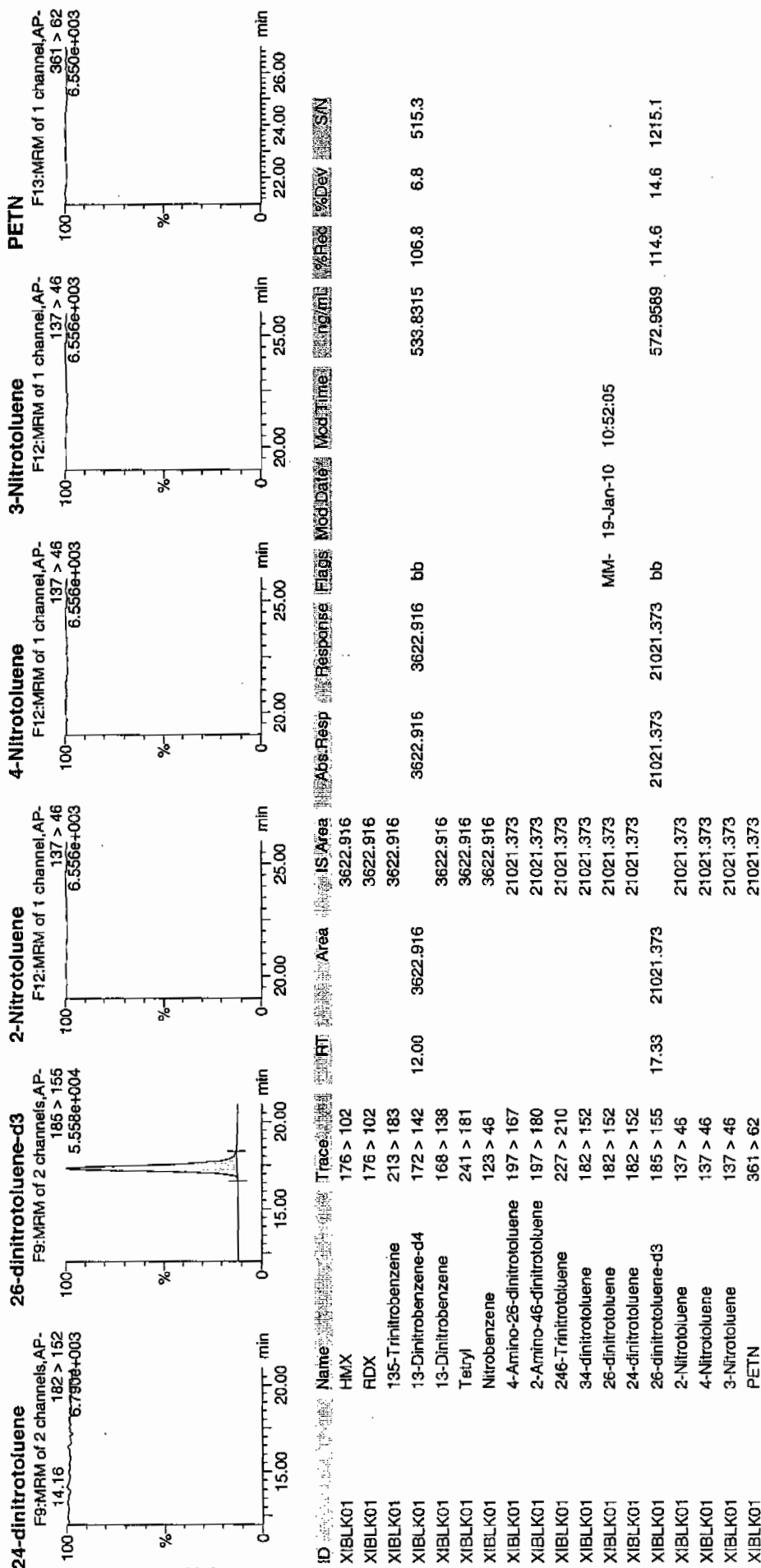
Page 300 of 386



Printed: Tue Jan 19 11:02:03 2010, Page 2 of 85

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



Explosives Initial Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1213

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

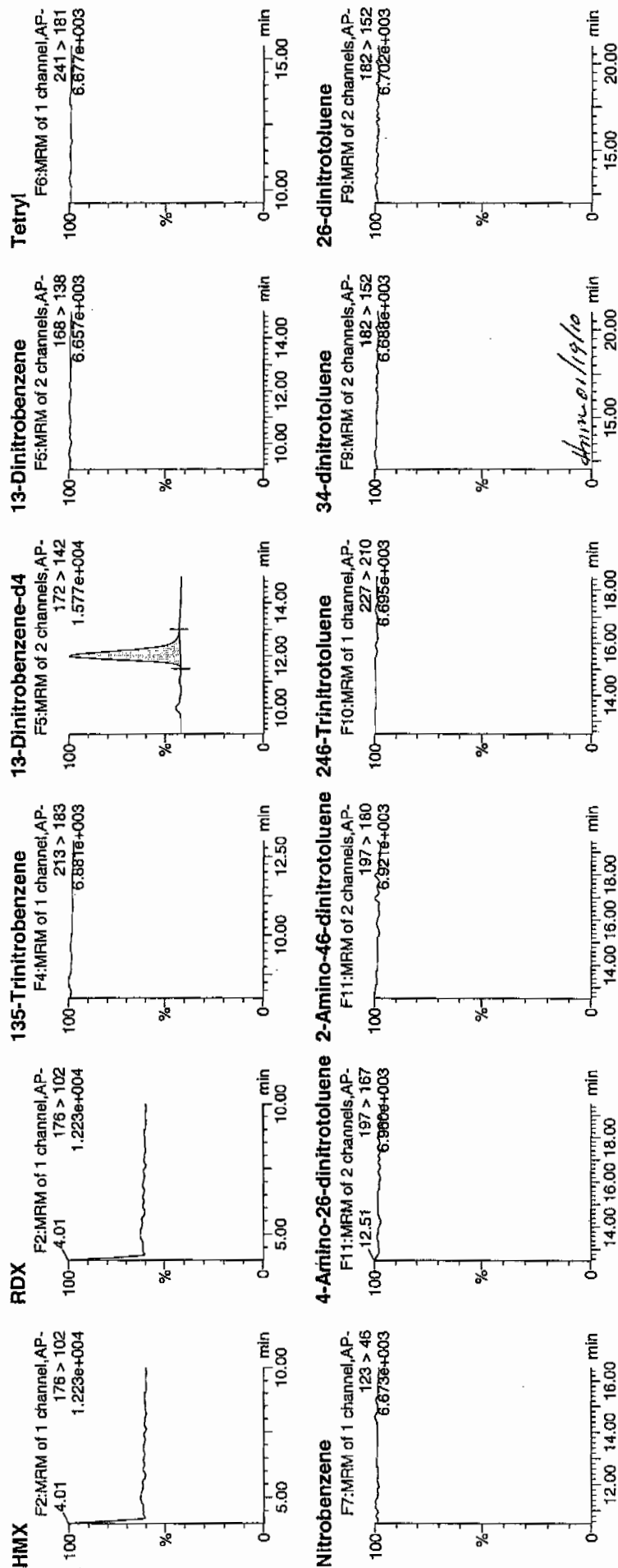
Date: 18-Jan-2010

Time: 14:33:05

ID: XIBLK01

Vial: 1:1,A

10/10

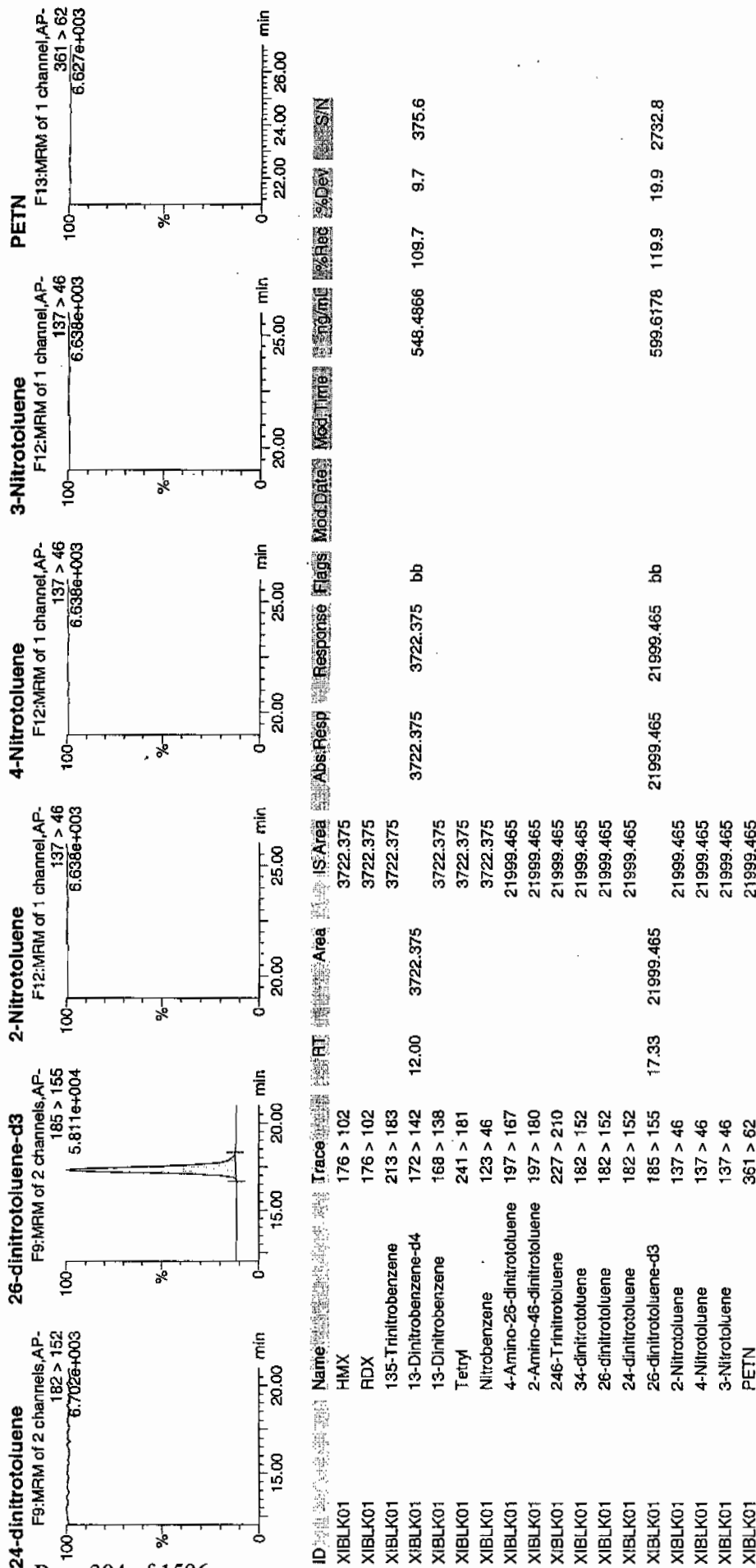


Quantify Sample Report

GEL Laboratories, LLC / Analyst: Michael A. Penny

Printed: Tue Jan 19 11:02:03 2010, Page 4 of 85

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



Explosives Initial Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1213

Lab Code: GEL

Lab Sample ID: XIBLK01

Analysis Date: 21-JAN-10 13:29

GEL Data File: EXS01210001.wiff

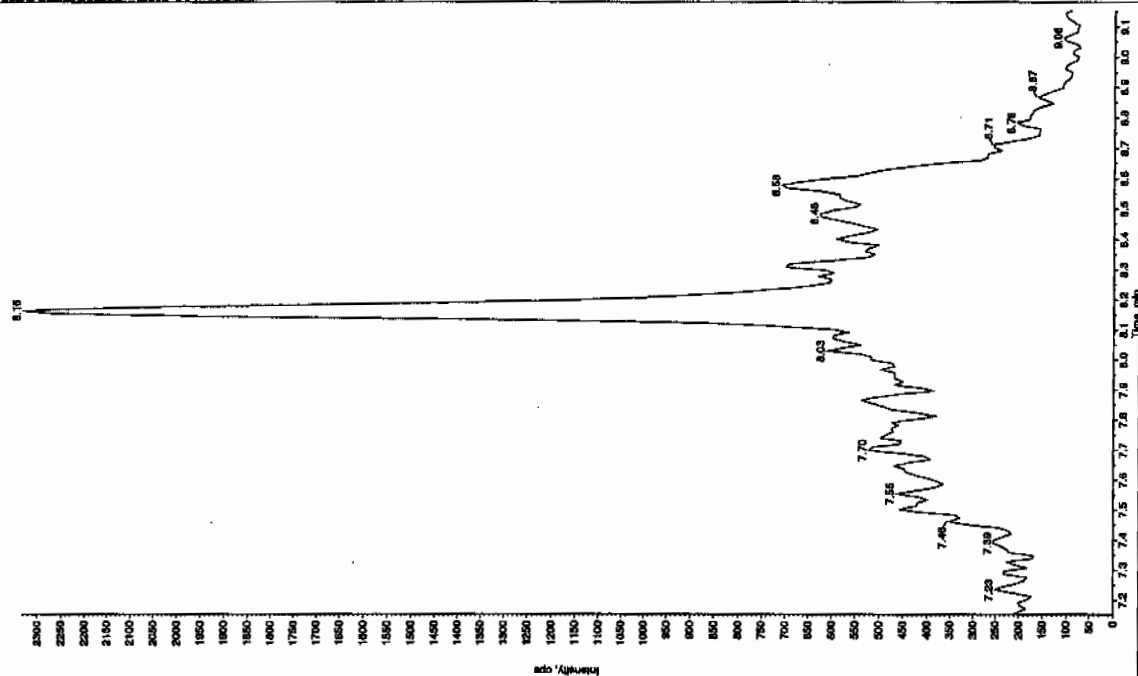
Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
tris(o-cresyl) phosphate	0	5.65
TATB	0	0
3,5-Dinitroaniline	0	0
2,4-Diamino-6-nitrotoluene	0	0
2,6-Diamino-4-nitrotoluene	0	0

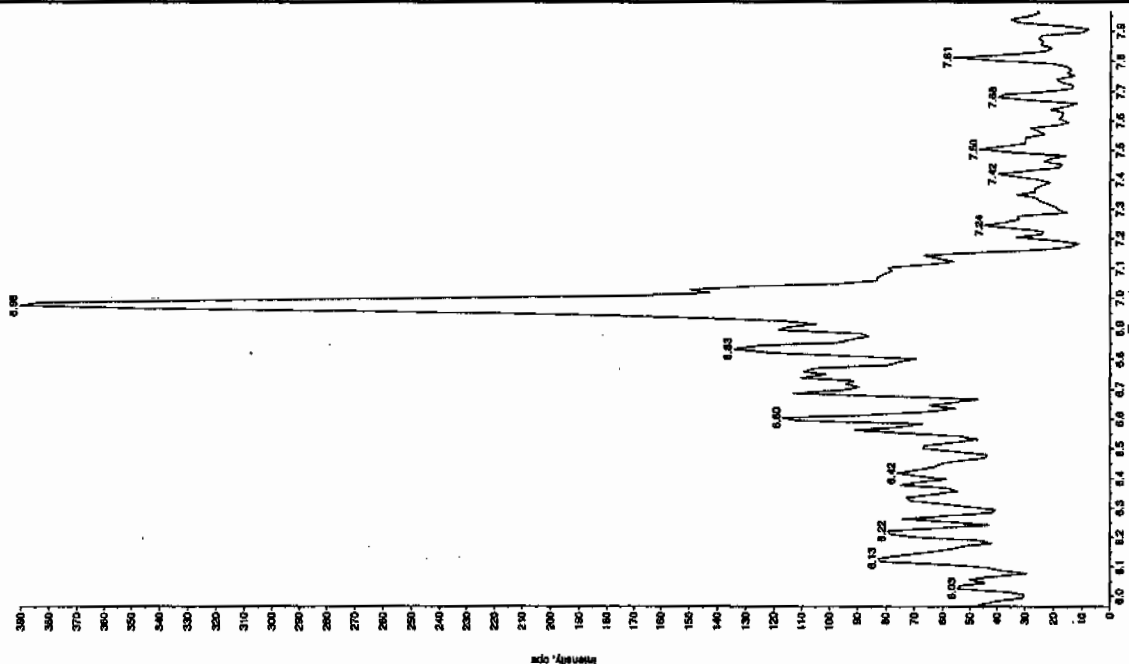
802
01/22/10

Sample Name: "XBL001" Sample ID: "11111" File: "EX051210001.wif"
 Peak Name: "35-Dinitroaniline" Mass(es): "182.048.0 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: 1:29:40 PM
 Modified: No



HW 01/22/10

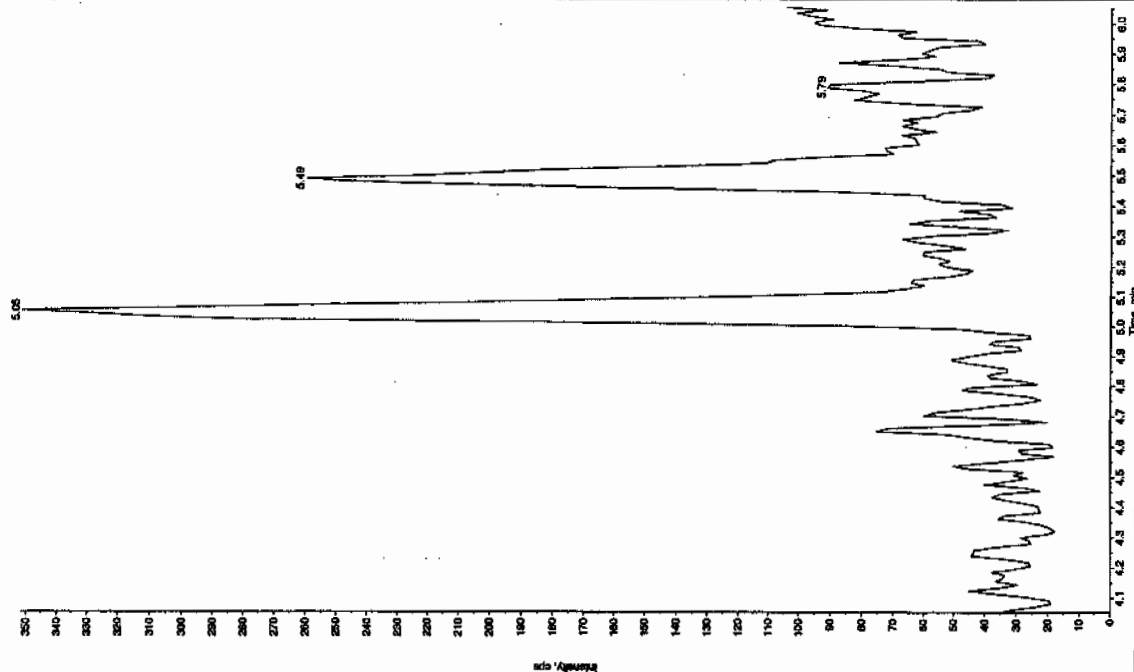
Sample Name: "XBL001" Sample ID: "11111" File: "EX051210001.wif"
 Peak Name: "TATB" Mass(es): "257.2204.9 amu"
 Comment: "LCMSEXP_B" Annotation: ""
 Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A
 Calculated Conc: 0.00 ng/mL
 Acq. Date: 1/21/2010
 Acq. Time: 1:29:40 PM
 Modified: No



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

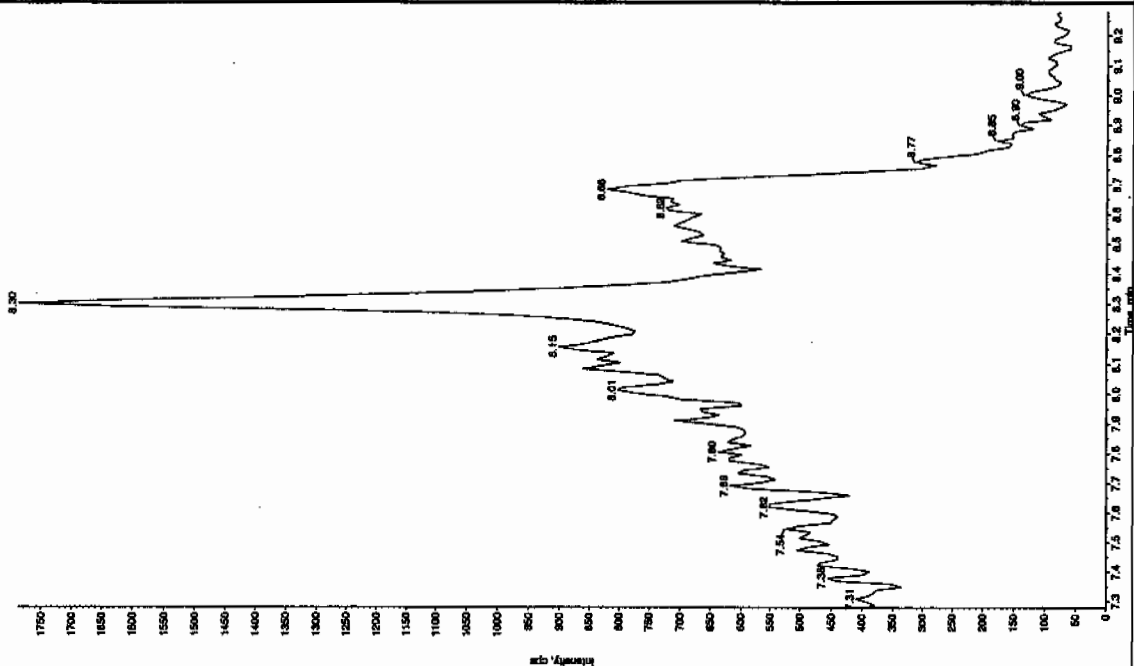
Sample Name: "XIBLK01" Sample ID: "JILLER" File: "EXS01210001.wif"
 Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.046 0 amu"
 Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A
 Calculated Conc: 0.00 ng/mL
 Acq. Date: 1/21/2010
 Acq. Time: 1:29:40 PM
 Modified: No



Sample Name: "XIBLK01" Sample ID: "JILLER" File: "EXS01210001.wif"
 Peak Name: "34-Dinitrotoluene" Mass(es): "182.17151 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: 1:29:40 PM
 Modified: No

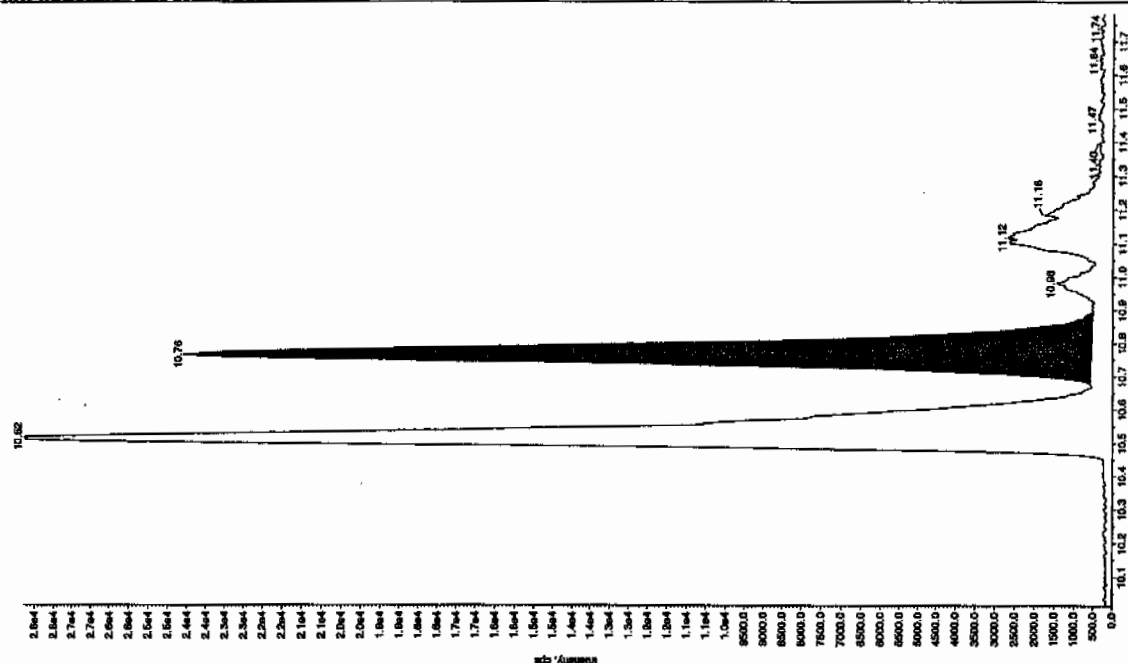
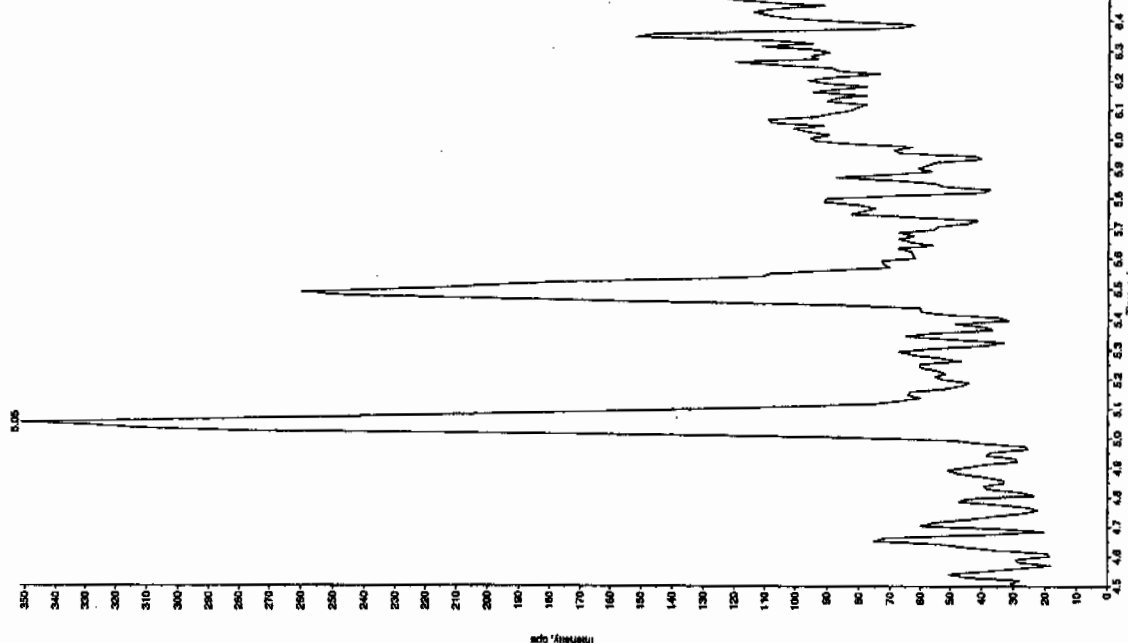


Sample Name: "XIBLX01" Sample ID: "11LER" File: "EXS01210001.wif"
 Peak Name: "24-Dinitro-6-nitrofluorene" Mass(es): "166.046.0 amu"
 Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A
 Calculated Conc: 0.00 ng/mL
 Acq. Date: 1/21/2010
 Acq. Time: 1:23:40 PM

Modified: No

Proc. Algorithm: IntelliQuan - IQA
 Min. Peak Height: 1.00e4 cps
 Min. Peak Width: 0.00 sec
 Smoothing Width: 3 points
 RT Window: 30.0 sec
 Expected RT: 10.8 min
 Use Relative RT: No
 Int. Type: Valley
 Retention Time: 10.8 min
 Area: 9.96e-004 counts
 Height: 23535.883 cps
 Start Time: 10.7 min
 End Time: 10.9 min



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

Explosives Initial Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1213

Lab Code: GEL

Lab Sample ID: XIBLK01

Analysis Date: 21-JAN-10 13:45

GEL Data File: EXS01210002.wiff

Instrument ID: LCMSMS

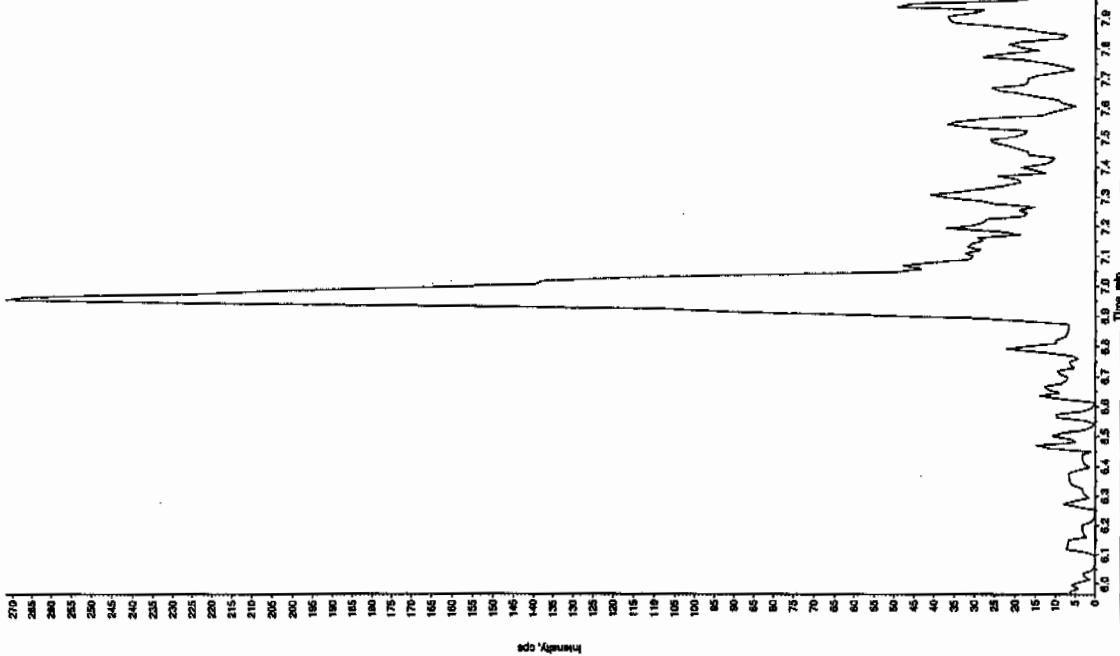
Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
tris(o-cresyl) phosphate	0	4.71
TATB	0	0
3,5-Dinitroaniline	0	0
2,4-Diamino-6-nitrotoluene	0	0
2,6-Diamino-4-nitrotoluene	0	0

See 1/22/10

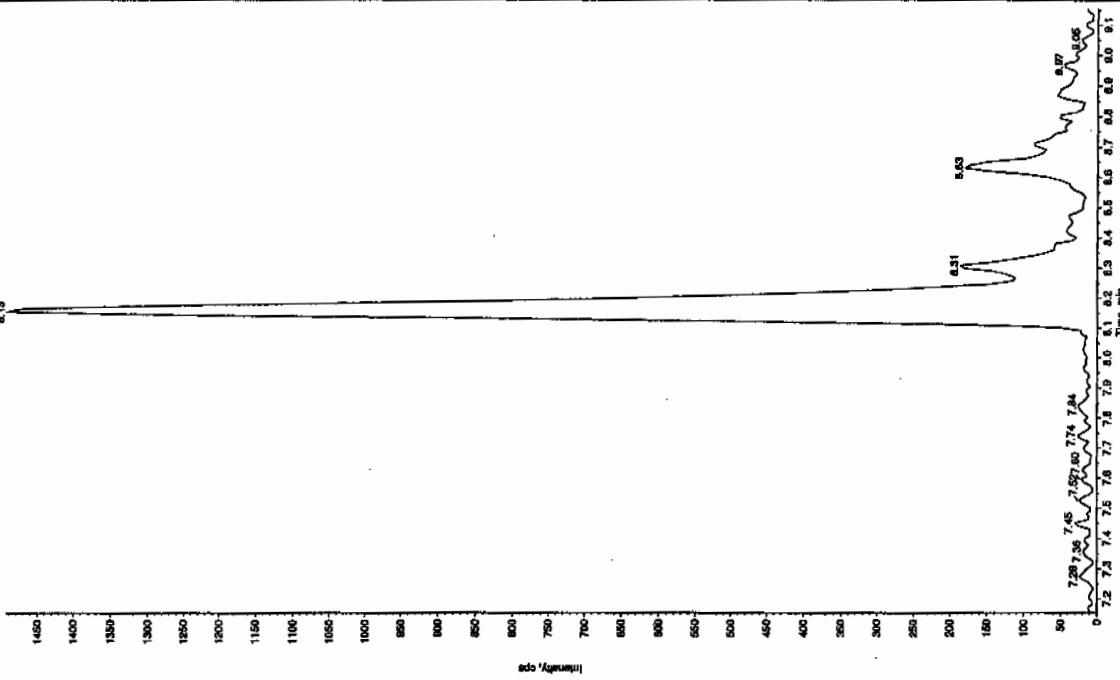
Sample Name: "WBLVOT" Sample ID: "11LEF" File: "EX501210002.wif"
 Peak Name: "35-Carboxyphenol" Mass(es): 257.22043 amu
 Comment: "LCMS-EXP-B" Annotation: "

Sample Index: 1
 Sample Type: Unknown
 Sample Origin: N/A
 Calculated Conc: 0.00 ng/mL
 Acq. Date: 1/21/2010
 Acq. Time: 1:45:26 PM
 Modified: No



Sample Name: "WBLVOT" Sample ID: "11LEF" File: "EX501210002.wif"
 Peak Name: "35-Carboxyphenol" Mass(es): 257.22043 amu
 Comment: "LCMS-EXP-B" Annotation: "

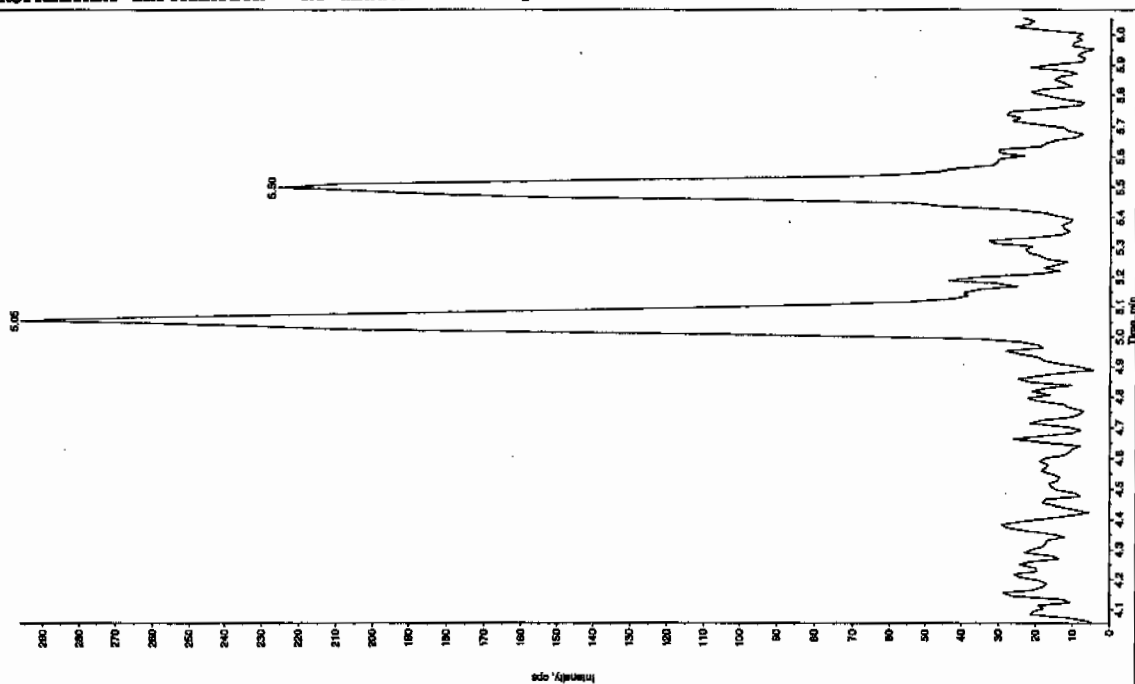
Sample Index: 1
 Sample Type: Unknown
 Sample Origin: N/A
 Calculated Conc: 0.00 ng/mL
 Acq. Date: 1/21/2010
 Acq. Time: 1:45:26 PM
 Modified: No



See 01/22/10

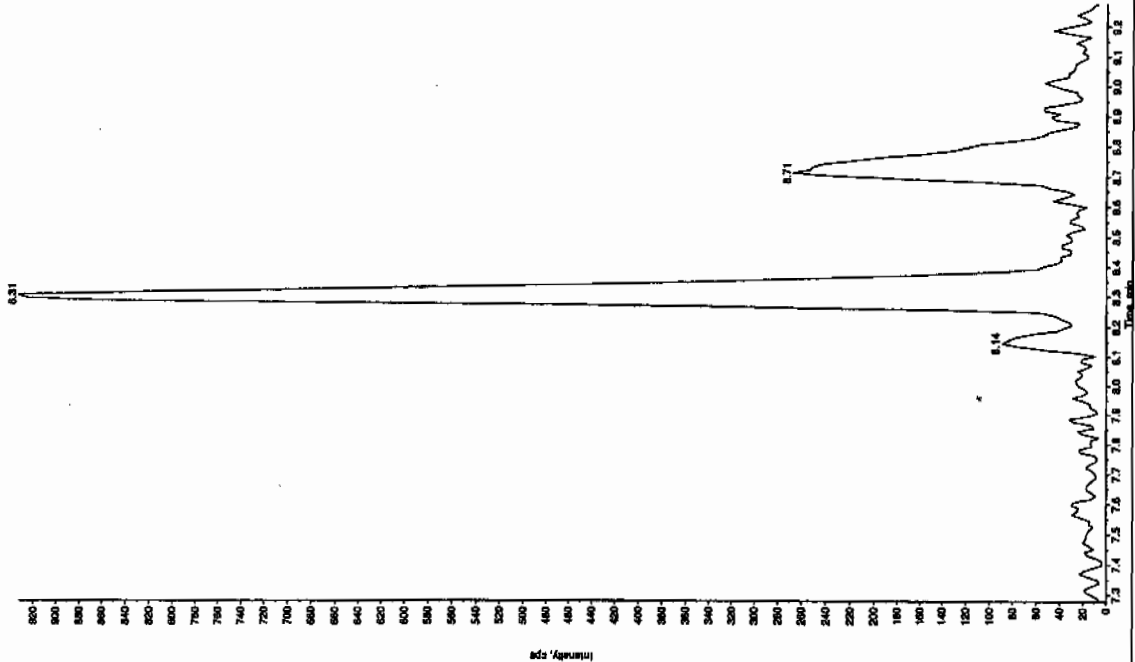
Sample Name: "XBLK01" Sample ID: "1111" File: "EXS01210002.wif"
 Peak Name: "28-Diamino-4-nitrofluorene" Mass(es): "166.046.0 amu"
 Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A
 Calculated Conc: 0.00 ng/mL
 Acq. Date: 1/21/2010
 Acq. Time: 1:45:25 PM
 Modified: No



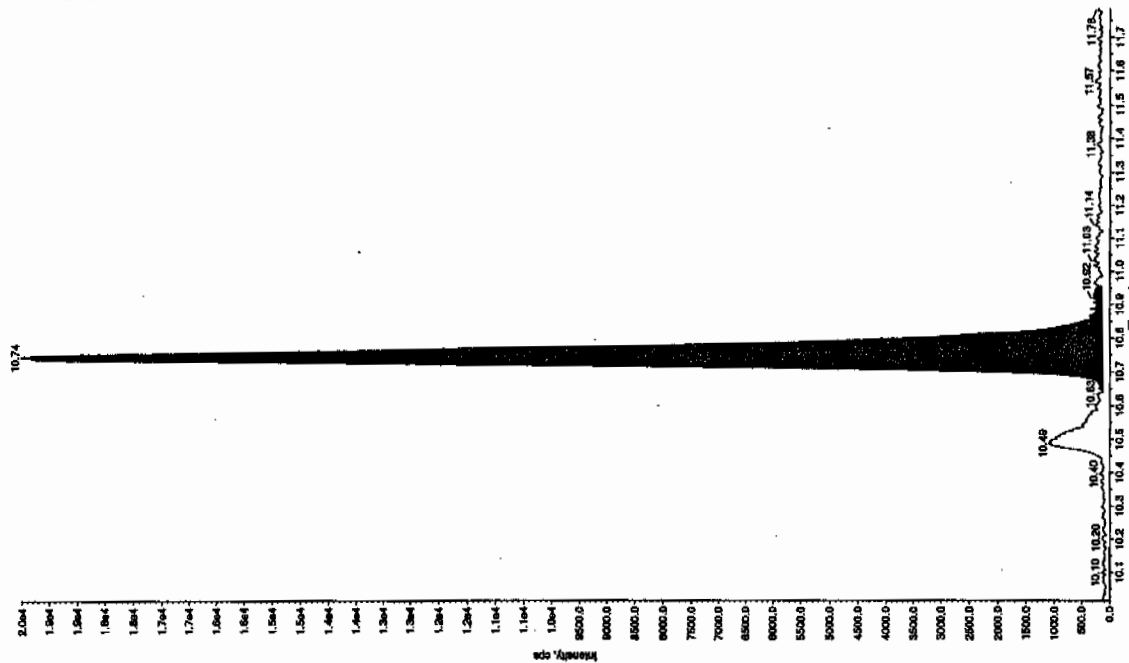
Sample Name: "XBLK01" Sample ID: "1111" File: "EXS01210002.wif"
 Peak Name: "34-Dinitrofluorene" Mass(es): "182.151.9 amu"
 Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A
 Calculated Conc: 0.00 ng/mL
 Acq. Date: 1/21/2010
 Acq. Time: 1:45:25 PM
 Modified: No



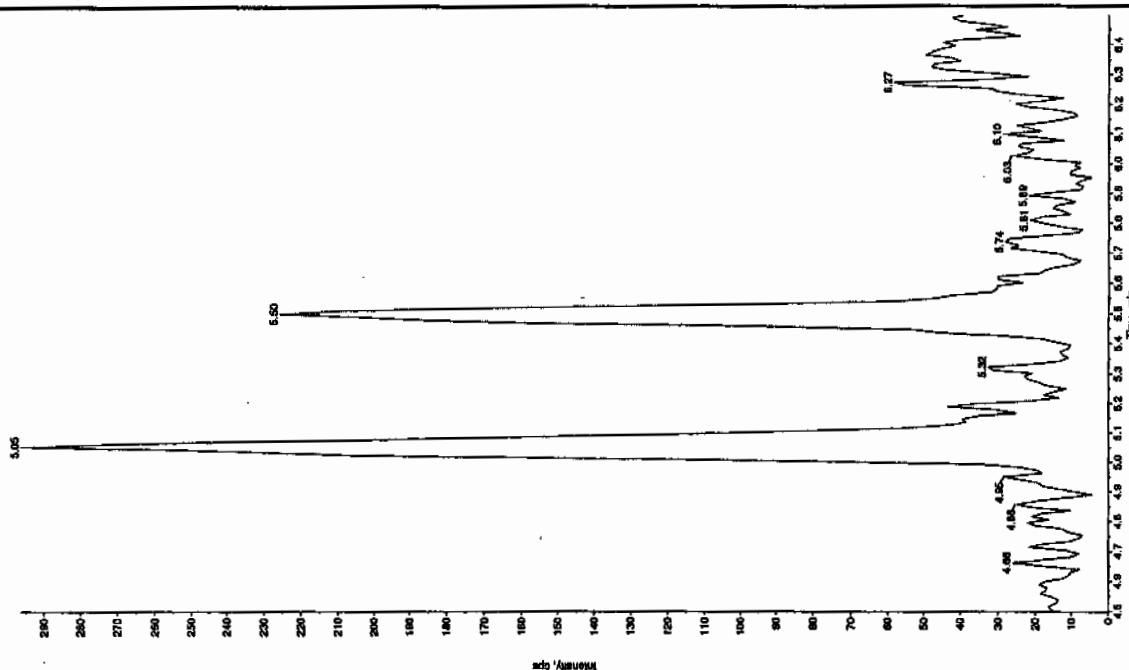
Sample Name: 'XBLK01' Sample ID: '111EP' File: 'EX501210002.wif'
 Peak Name: 'tri(o-ary) phosphite' Mass(es): '369.181.0 amu'
 Comment: 'LCMSEXP_B' Annotation: ''

Sample Index: 1
 Sample Type: Unknown
 Concentration: 4.71 ng/mL
 Calculated Conc: 1/21/2010
 Acq. Date: 1:45:26 PM
 Acq. Time: 1:45:26 PM
 Modified: No
 Proc. Algorithm: IntallQuan - IOA
 Min. Peak Height: 1.00e4 cps
 Min. Peak Width: 3.00 sec
 Ret. Width: 30.0 points
 Expected RT: 10.8 min
 Use Relative RT: No
 Int. Type: Valley
 Retention Time: 10.7 min
 Area: 7.53e+004 counts
 Height: 19387.062 cps
 Start Time: 10.6 min
 End Time: 11.0 min



Sample Name: 'XBLK01' Sample ID: '111EP' File: 'EX501210002.wif'
 Peak Name: '24-Cumino-6-nitrofluorene' Mass(es): '186.046.0 amu'
 Comment: 'LCMSEXP_B' Annotation: ''

Sample Index: 1
 Sample Type: Unknown
 Concentration: 0.00 ng/mL
 Calculated Conc: 1/21/2010
 Acq. Date: 1:45:26 PM
 Acq. Time: 1:45:26 PM
 Modified: No



Explosives Initial Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1213

Lab Code: GEL

Lab Sample ID: XIBLK01

Analysis Date: 25-JAN-10 10:28

GEL Data File: EXS01250001.wiff

Instrument ID: LCMSMS

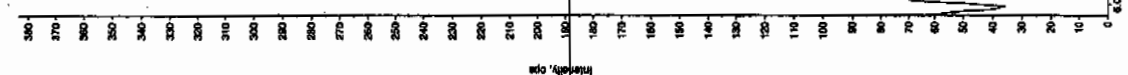
Column: Phenomenex Ultracarb 5u ODS(20)

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

See 1/27/10

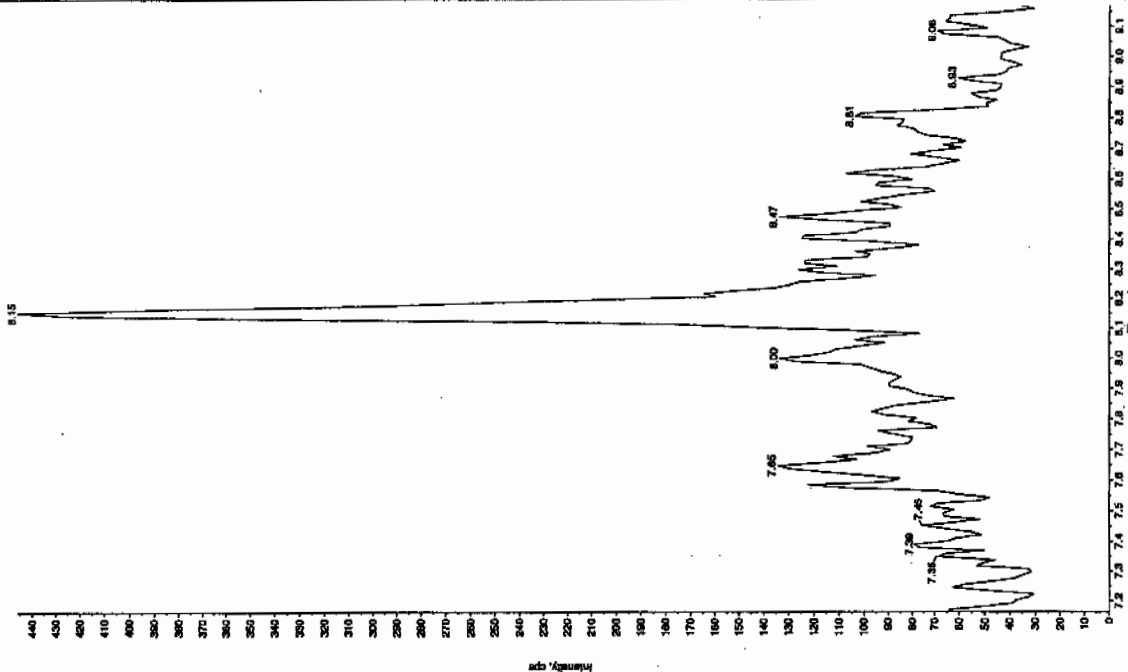
Sample Name: "XIBLX01" Sample ID: "1111ER" File: "EXS01250001.wif"
 Peak Name: "TATB" Mass(es): "257.22049 amu"
 Comment: "LOMSEXP_B" Annotation: "

Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A
 Calculated Conc: 1.75/20.0 ng/mL
 Acq. Date: 1/25/2010
 Acq. Time: 10:28:30 AM
 Modified: No



Sample Name: "XIBLX01" Sample ID: "1111ER" File: "EXS01250001.wif"
 Peak Name: "SS-Dinitroaniline" Mass(es): "182.046.0 amu"
 Comment: "LOMSEXP_B" Annotation: "

Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A
 Calculated Conc: 1.75/20.0 ng/mL
 Acq. Date: 1/25/2010
 Acq. Time: 10:28:30 AM
 Modified: No



See 1/27/10

Sample Name: "XIBLK01" Sample ID: "JILER" File: "EXS01250001.wif"

Peak Name: "25-Dinitro-4-nitrotoluene" Mass(es): "186.04610 amu"

Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1

Sample Type: Unknown

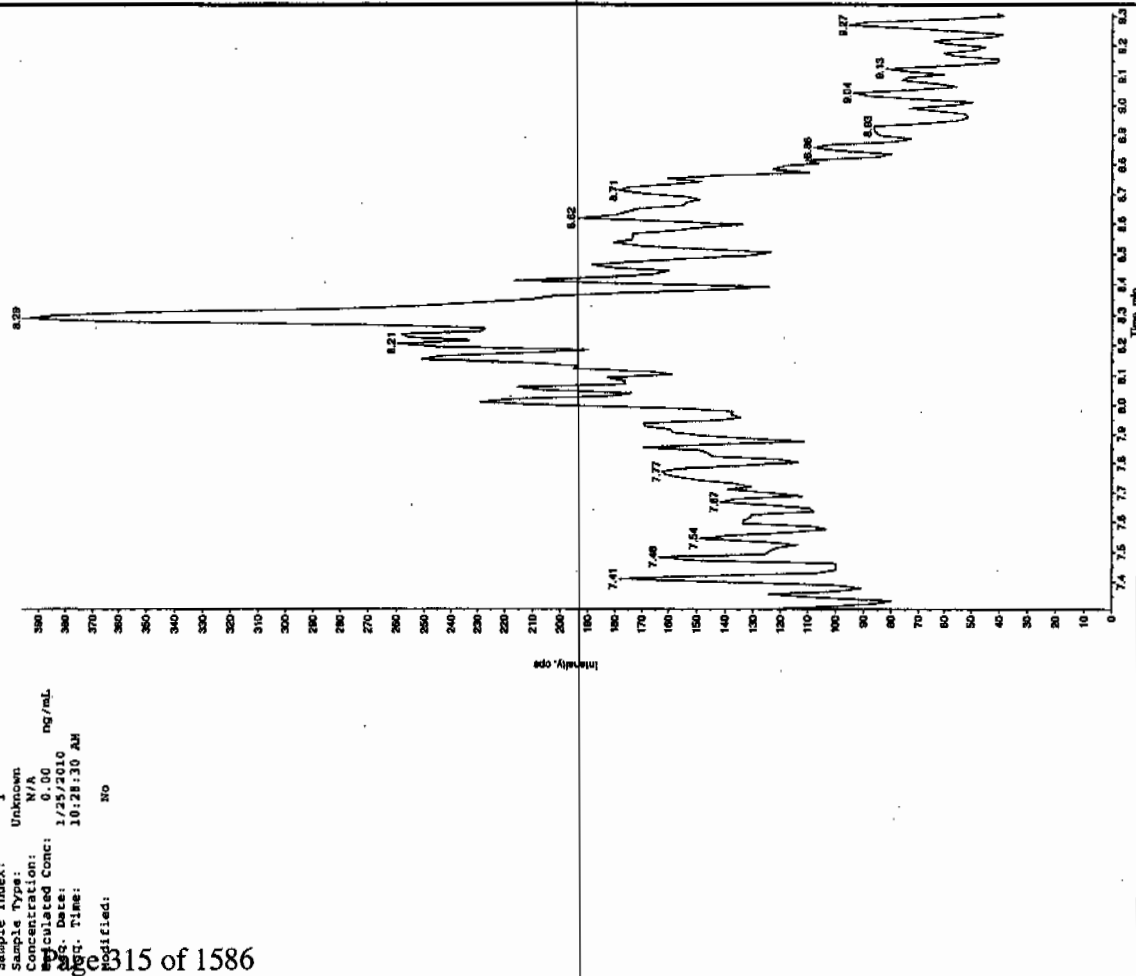
Concentration: 0.00 ng/mL

Calculated Conc: 1/25/2010

Acq. Date: 10:28:30 AM

Acq. Time: 10:28:30 AM

Modified: NO



Sample Name: "XIBLK01" Sample ID: "JILER" File: "EXS01250001.wif"

Peak Name: "34-Dinitrotoluene" Mass(es): "182.17151 amu"

Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1

Sample Type: Unknown

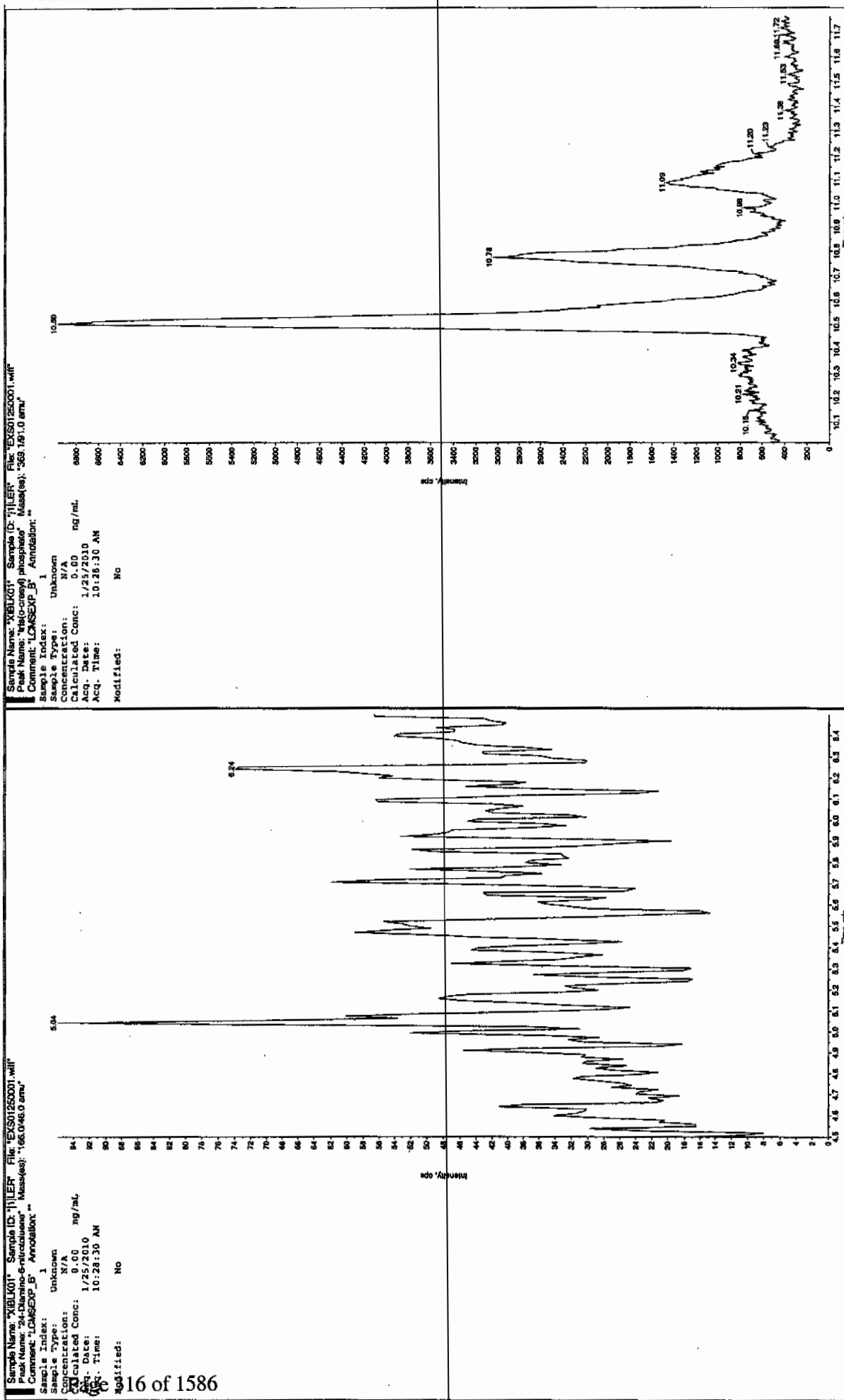
Concentration: 0.00 ng/mL

Calculated Conc: 1/25/2010

Acq. Date: 10:28:30 AM

Acq. Time: 10:28:30 AM

Modified: NO



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

Explosives Initial Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1213

Lab Code: GEL

Lab Sample ID: XIBLK01

Analysis Date: 25-JAN-10 10:46

GEL Data File: EXS01250002.wiff

Instrument ID: LCMSMS

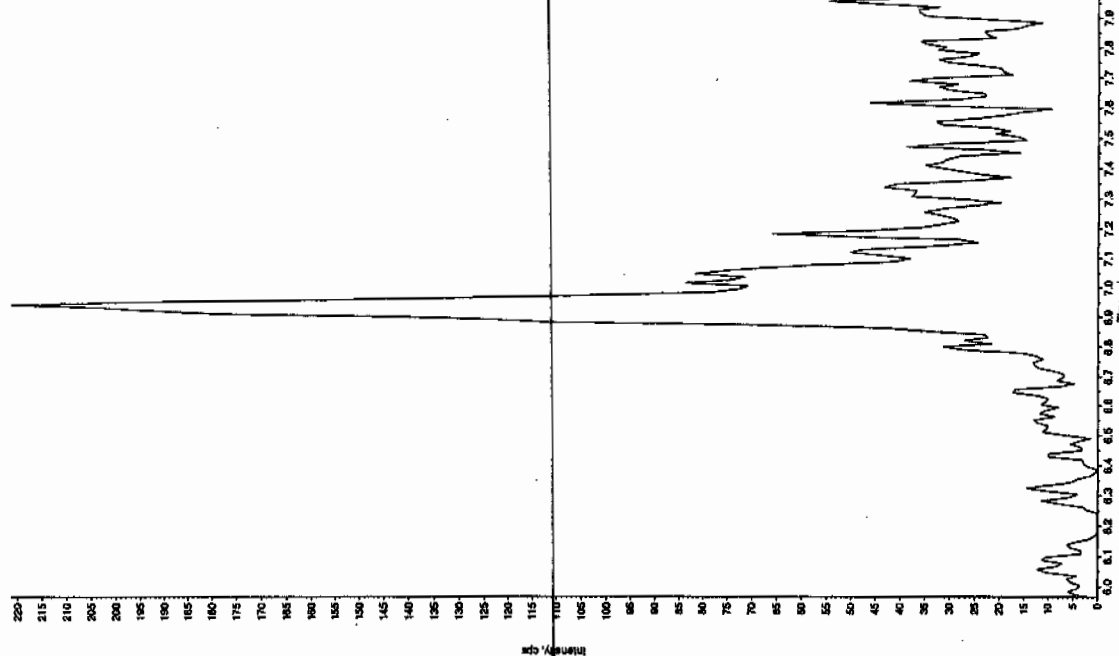
Column: Phenomenex Ultracarb 5u ODS(20)

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

Scan 1127110

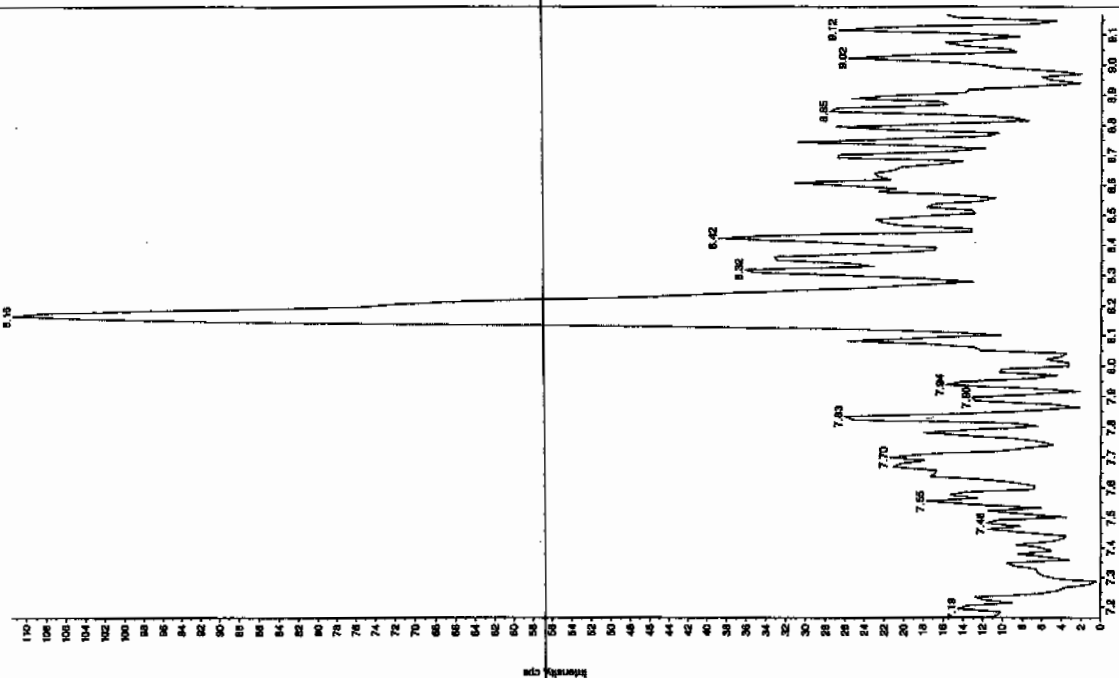
Sample Name: "XBLK01" Sample ID: "TILER" File: "EX501250002.will"
 Peak Name: "TATB" Mass(es): "257.2204.9 amu"
 Comment: "LCMSXP_B" Annotation: "

Sample Index: 1
 Sample Type: Unknown
 Concentration: 0.00 ng/mL
 Calculated Conc: 1/25/2010
 Acq. Date: 10:46:38 AM
 Acq. Time: 10:46:38 AM
 Modified: No

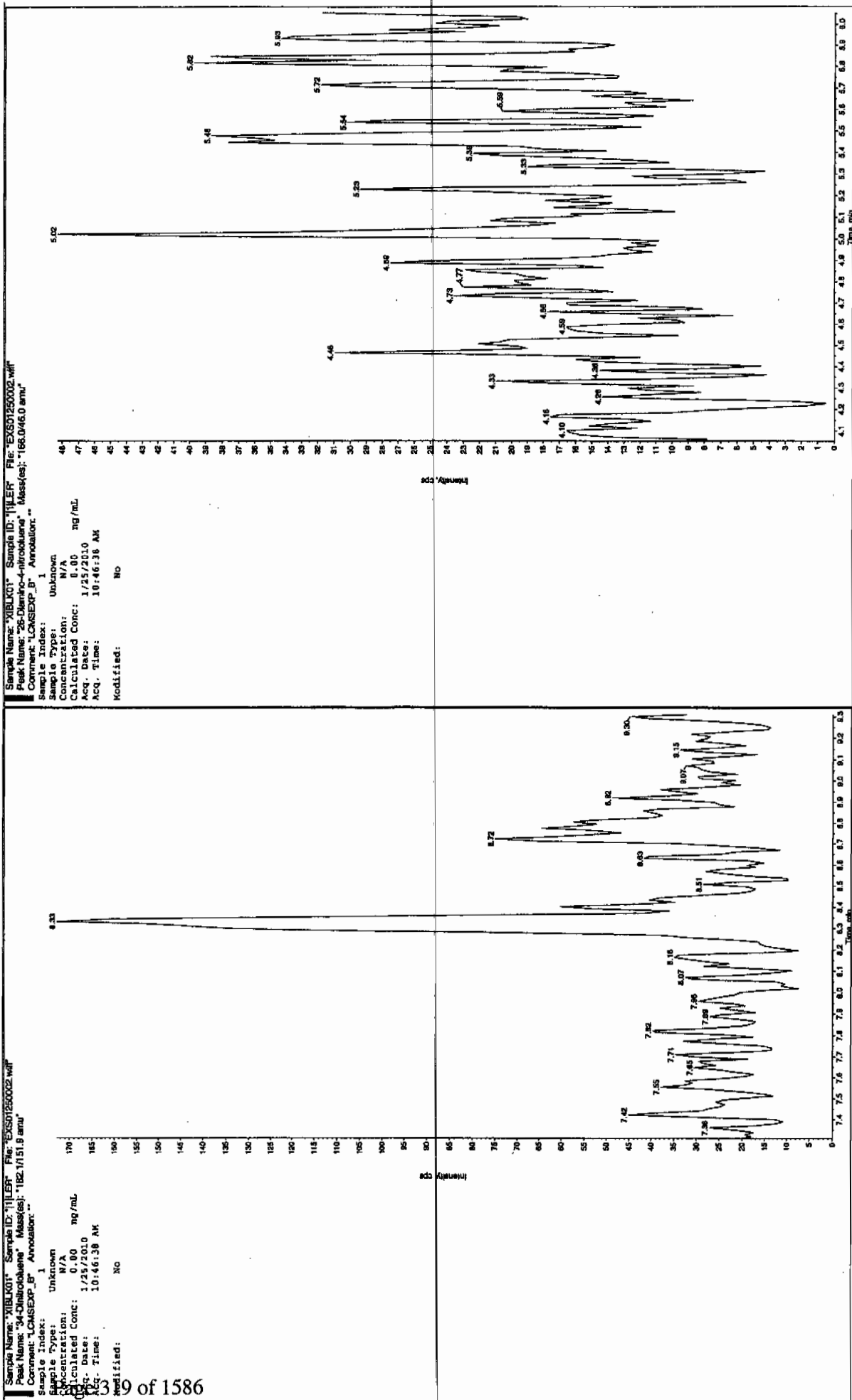


Sample Name: "XBLK01" Sample ID: "TILER" File: "EX501250002.will"
 Peak Name: "3,5-Dinitroaniline" Mass(es): "182.046.0 amu"
 Comment: "LCMSXP_B" Annotation: "

Sample Index: 1
 Sample Type: Unknown
 Concentration: 0.00 ng/mL
 Calculated Conc: 1/25/2010
 Acq. Date: 10:46:38 AM
 Acq. Time: 10:46:38 AM
 Modified: No

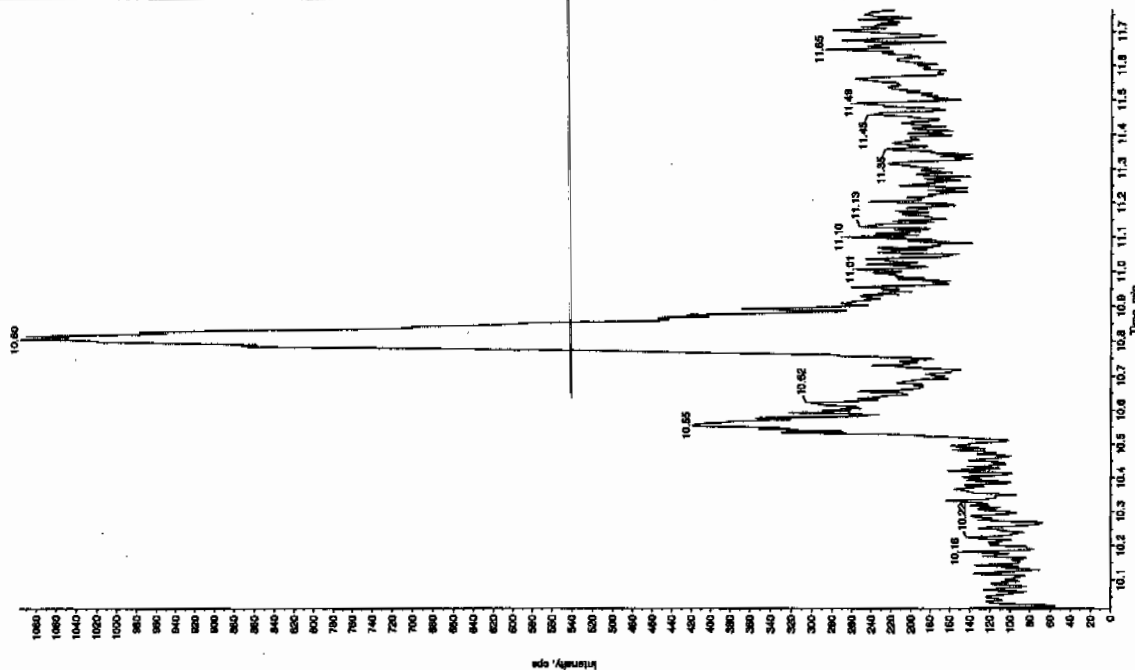


Ann. 6/12/10



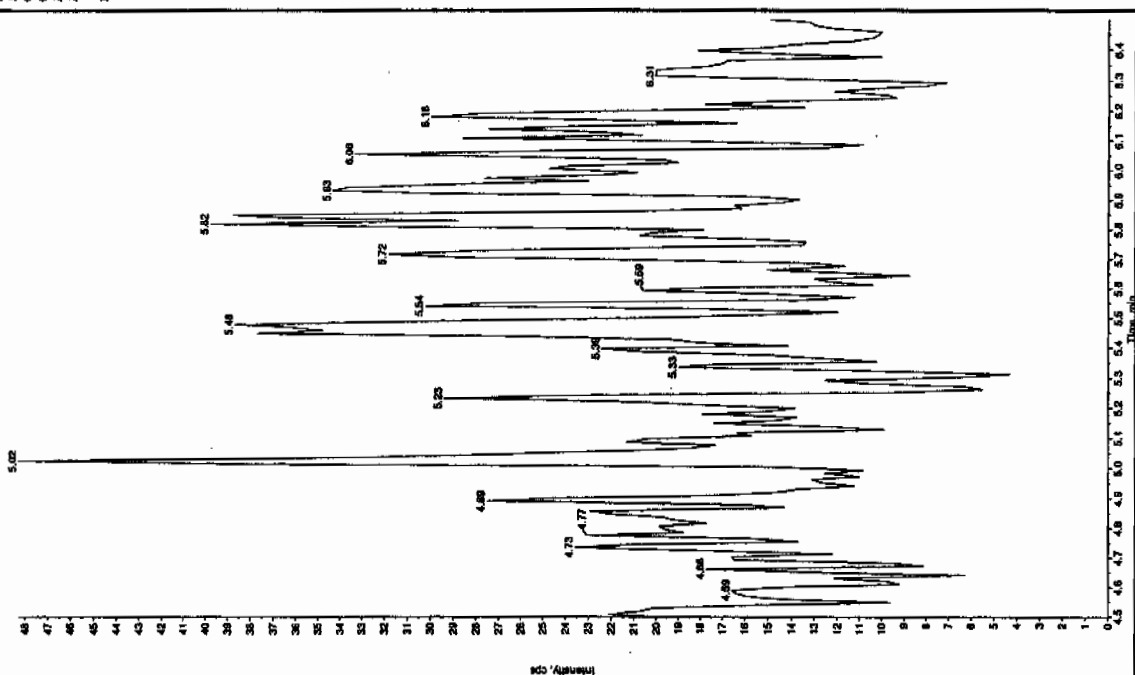
Sample Name: "XBLK01" Sample ID: "HILF" File: "EXS0125002.wif"
 Peak Name: "tris(2-oxoethyl) phosphite" Mass(es): "359.181.0 amu"
 Comment: "LCMSEXP_B" Annotation: "

Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A
 Calculated Conc: 0.00 ng/mL
 Acq. Date: 1/25/2010
 Acq. Time: 10:46:38 AM
 Modified: No



Sample Name: "XBLK01" Sample ID: "HILF" File: "EXS0125002.wif"
 Peak Name: "24-Diamino-6-methylthiouracil" Mass(es): "166.046.0 amu"
 Comment: "LCMSEXP_B" Annotation: "

Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A
 Calculated Conc: 0.00 ng/mL
 Acq. Date: 1/25/2010
 Acq. Time: 10:46:38 AM
 Modified: No



4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1213

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

Printed: Tue Jan 19 11:02:03 2010, Page 17 of 85

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

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118009a

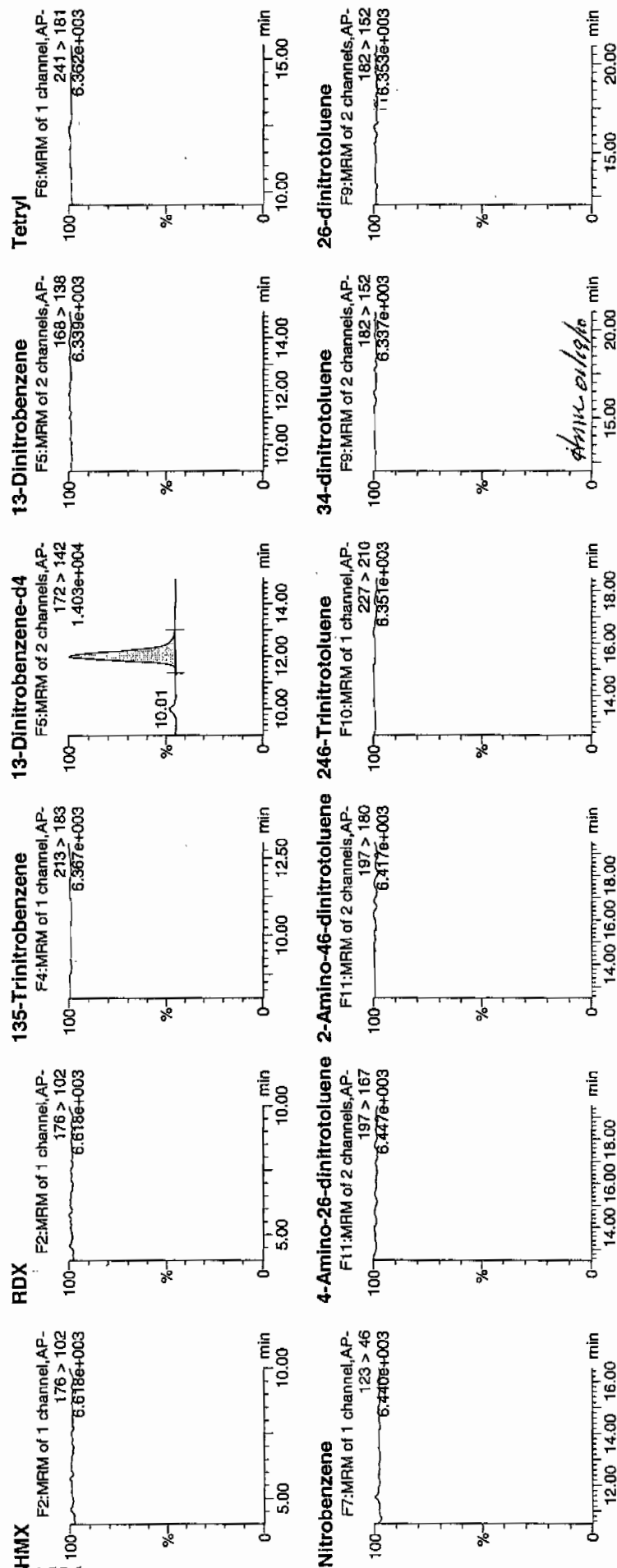
Date: 18-Jan-2010

Time: 17:59:22

ID: XIBLK02

Vial: 1:1,A

WAT
1/19/10

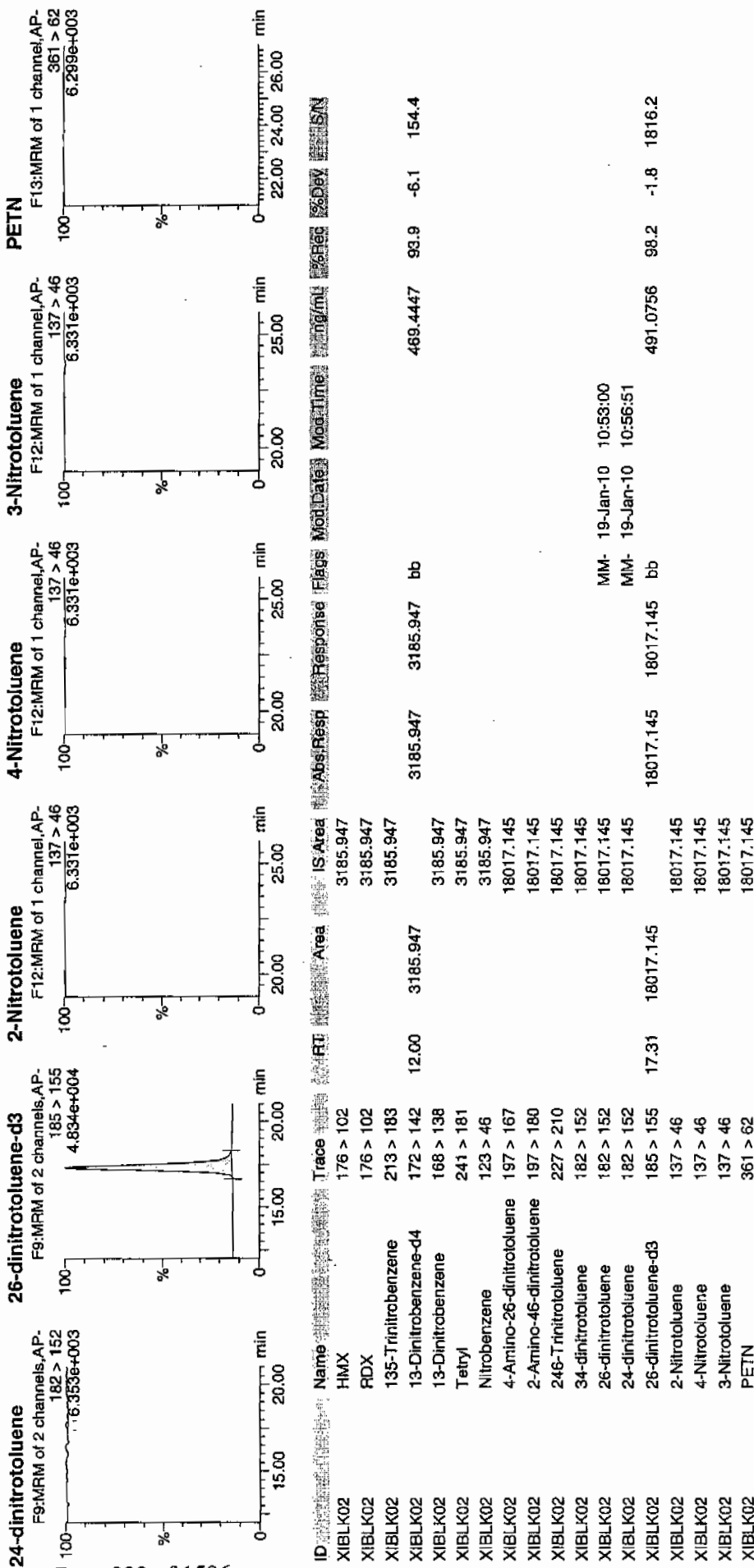


Quantify Sample Report

GEL Laboratories, LLC / Analyst : Michael A. Penny

Printed: Tue Jan 19 11:02:03 2010, Page 18 of 85

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



4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1213

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)
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
m-Nitrotoluene	0	0
o-Nitrotoluene	0	0
p-Nitrotoluene	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\EXP0118011a

Date: 18-Jan-2010

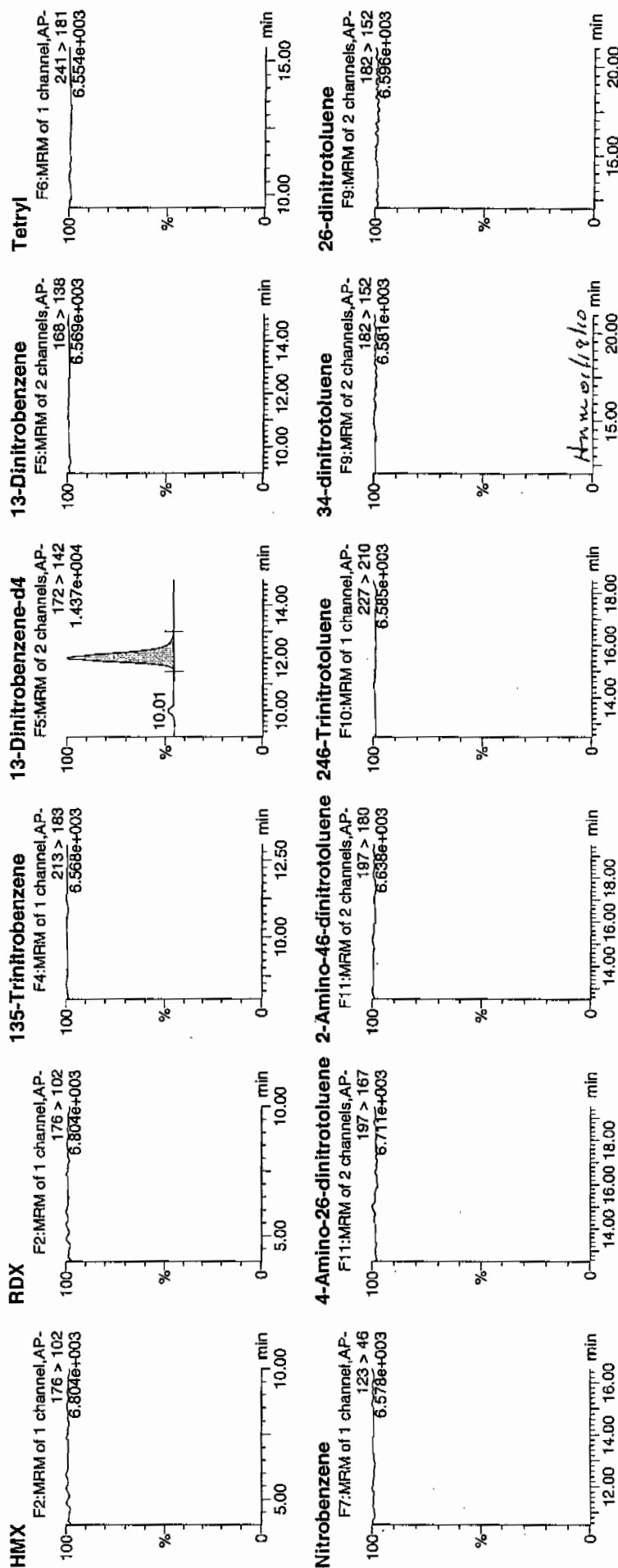
Time: 18:58:20

ID: XIBLK03

Vial: 1:1,A

1/19/10

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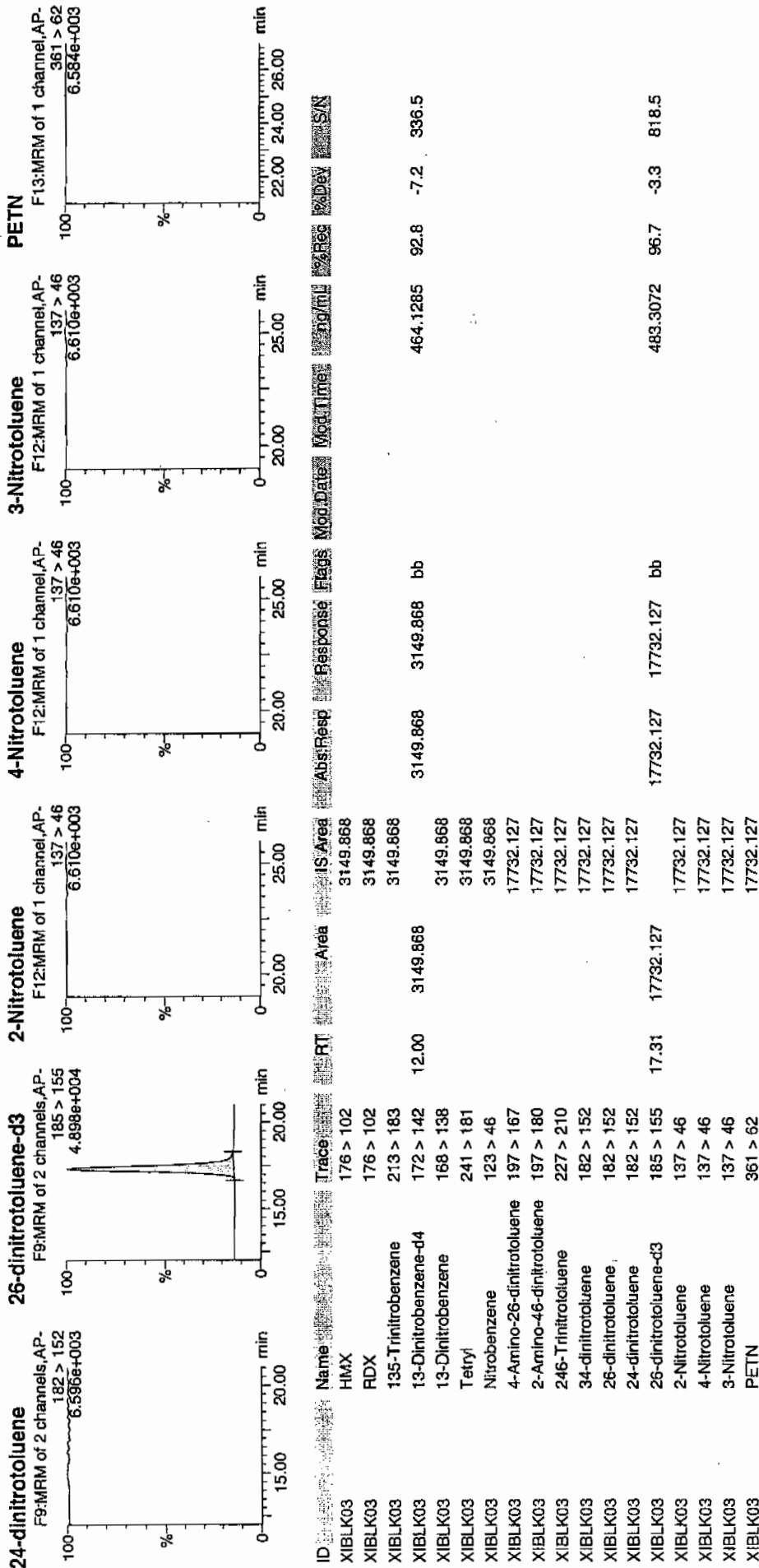


Quantify Sample Report

GEL Laboratories, LLC / Analyst : Michael A. Penny

Printed: Tue Jan 19 11:02:03 2010, Page 22 of 85

Dataset: C:\MASSLYNX\New_Exp\PRO1011810expA.qld, Time: Tue Jan 19 10:59:58 2010



4A
Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1213

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

Printed: Tue Jan 19 11:02:03 2010, Page 39 of 85

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

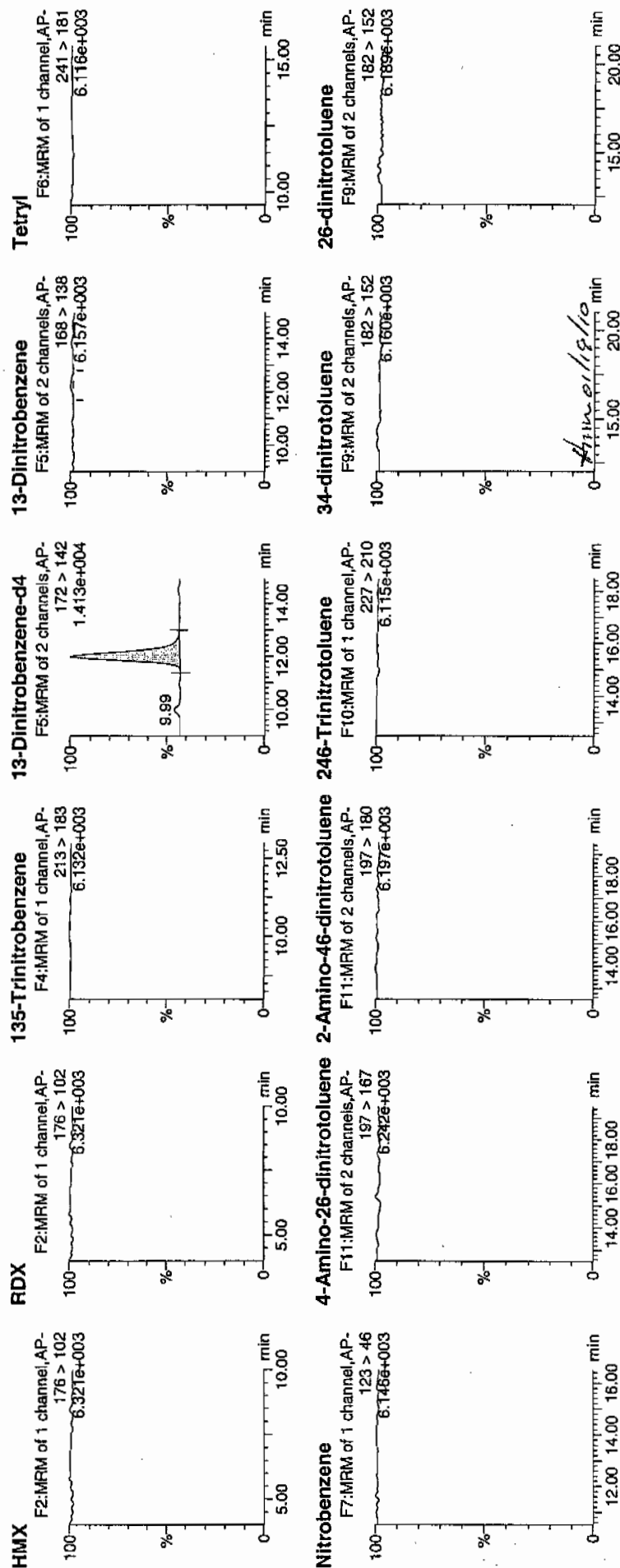
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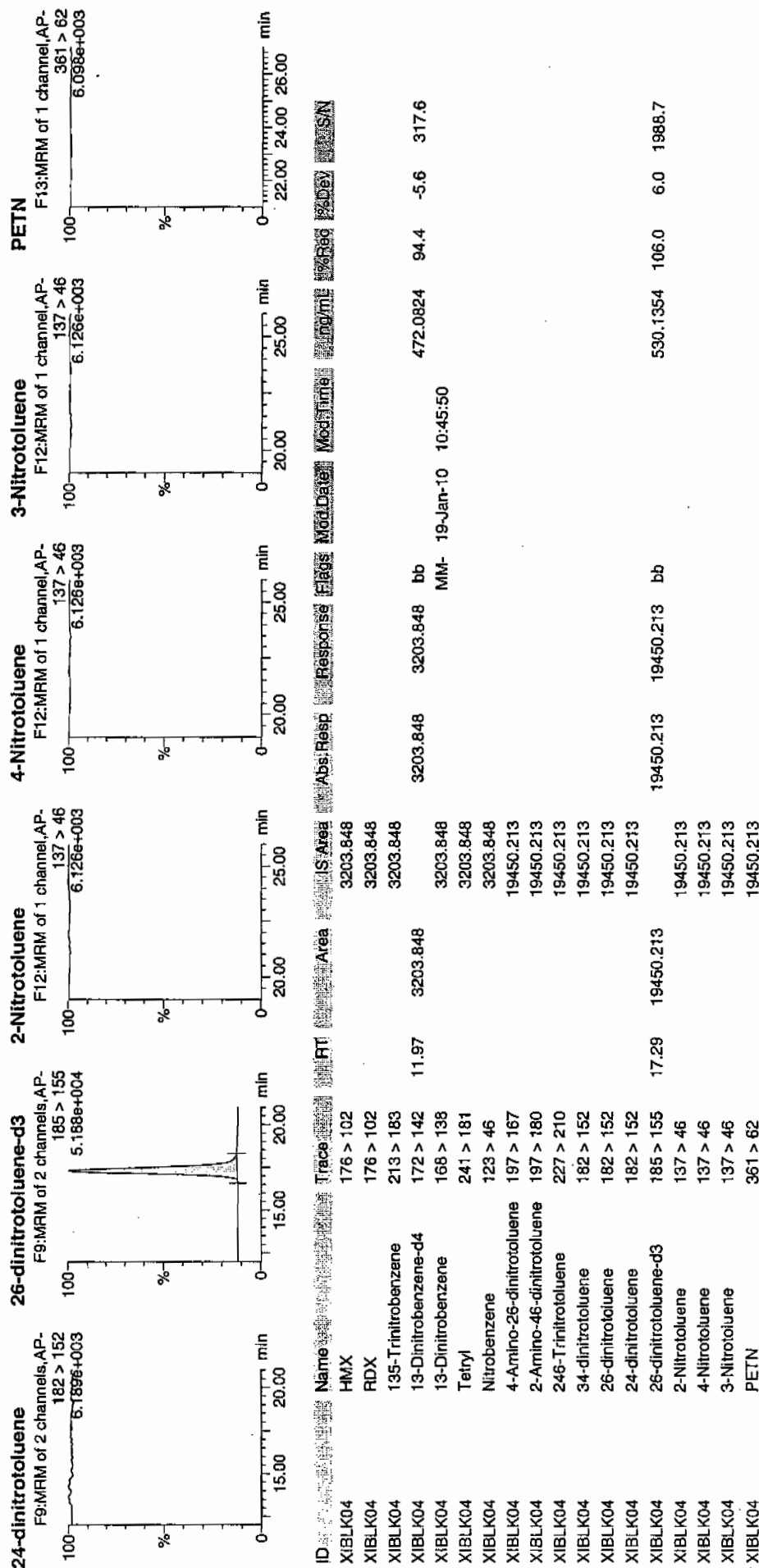
Vial: 1:1,A

WAT
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Dataset: C:\MASSLYNX\New_Exp\PROJ011810expA.qld, Time: Tue Jan 19 10:59:58 2010



4A
Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1213

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)
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
m-Dinitrobenzene	0	0
m-Nitrotoluene	0	0
o-Nitrotoluene	0	0
p-Nitrotoluene	0	0

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

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118033a

Date: 19-Jan-2010

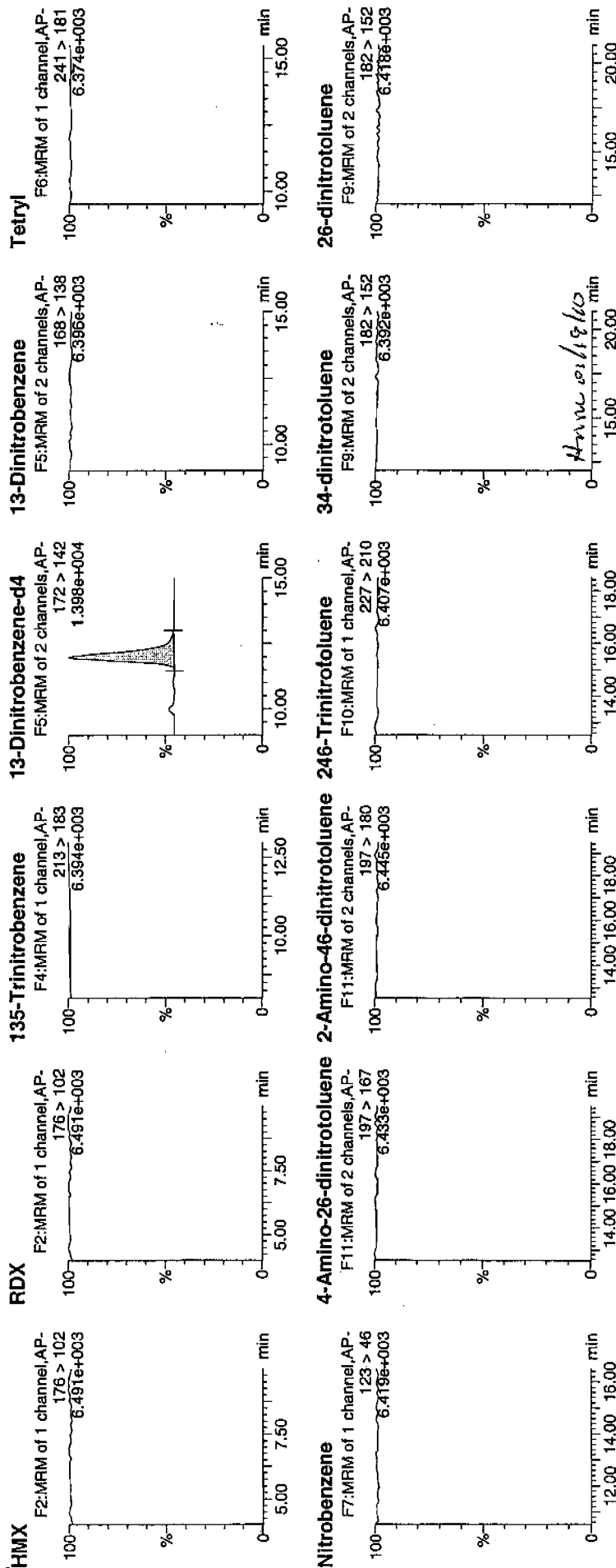
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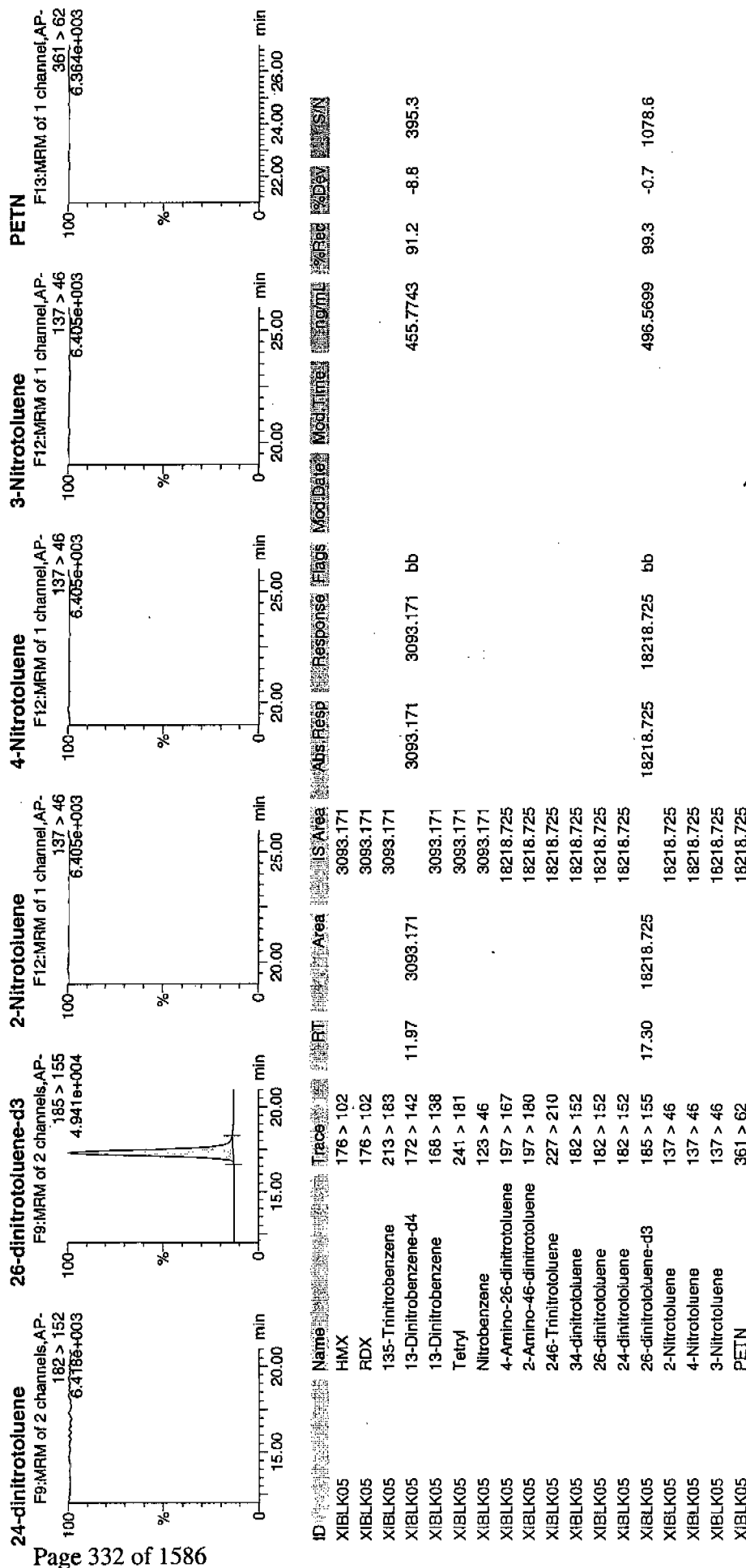
Vial: 1:1,A

of 1586

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1213

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

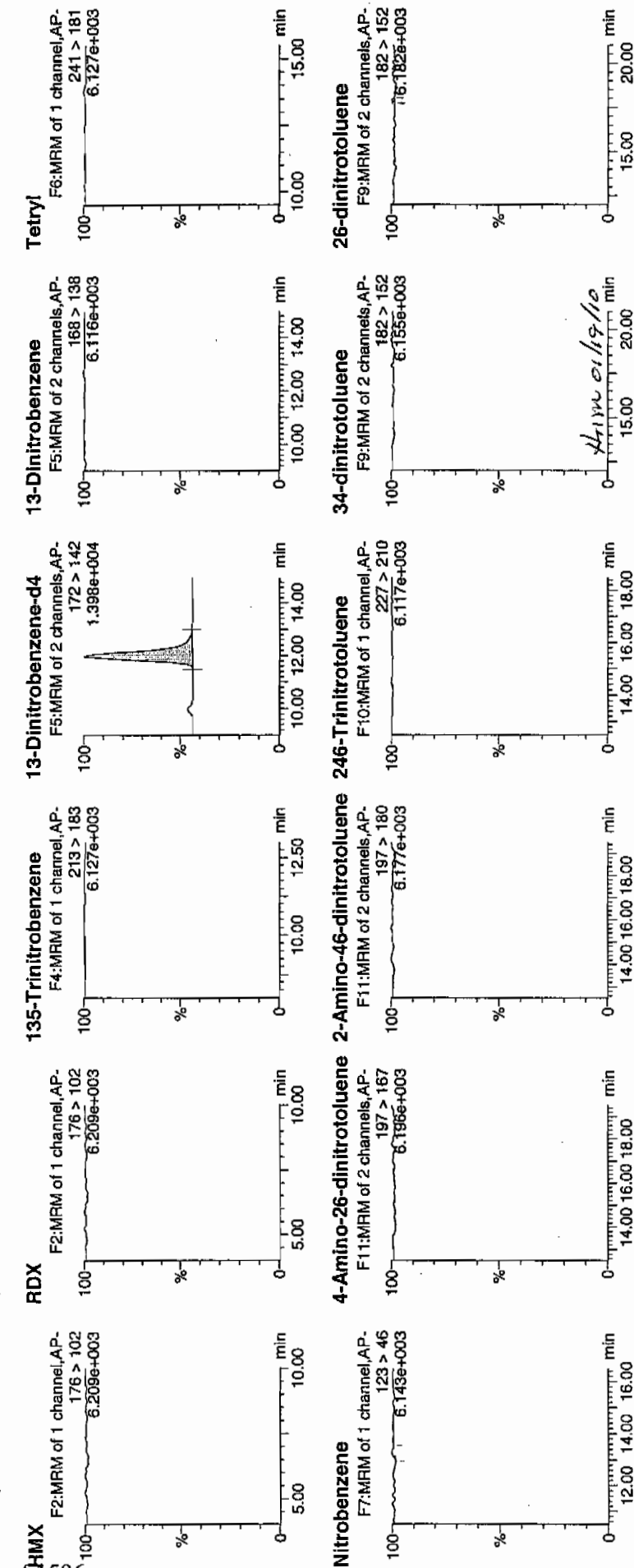
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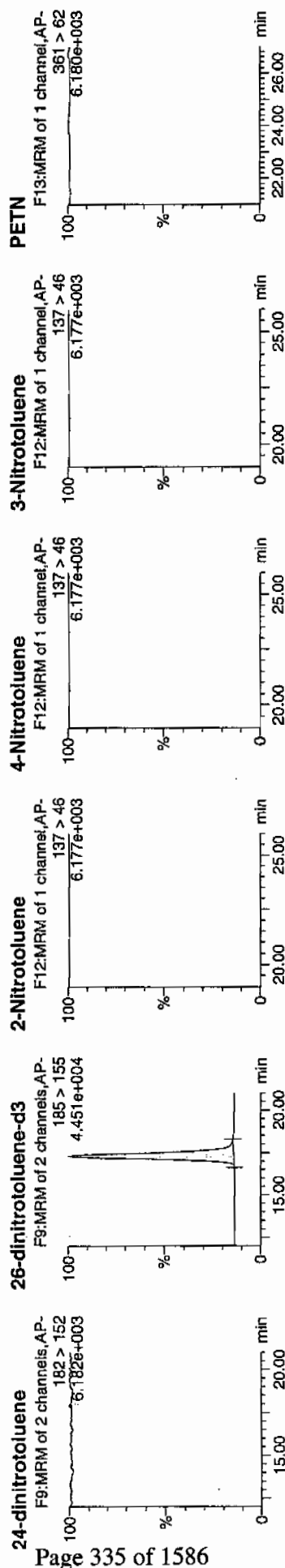
JD: XIBLK06

Vial: 1:1,A

1/19/10



Dataset: C:\MASSLYNX\New_Exp_PRO\011810expA.qtd, Time: Tue Jan 19 10:59:58 2010



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flag	Mod Date	Mod Time	Conc (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								
XIBLK06	4-Amino-26-dinitrotoluene	197 > 167				16121.945			MM-	19-Jan-10	10:46:25			
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								

4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1213

Lab Code: GEL

Lab Sample ID: XTBLK07

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)
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
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\EXP0118054a

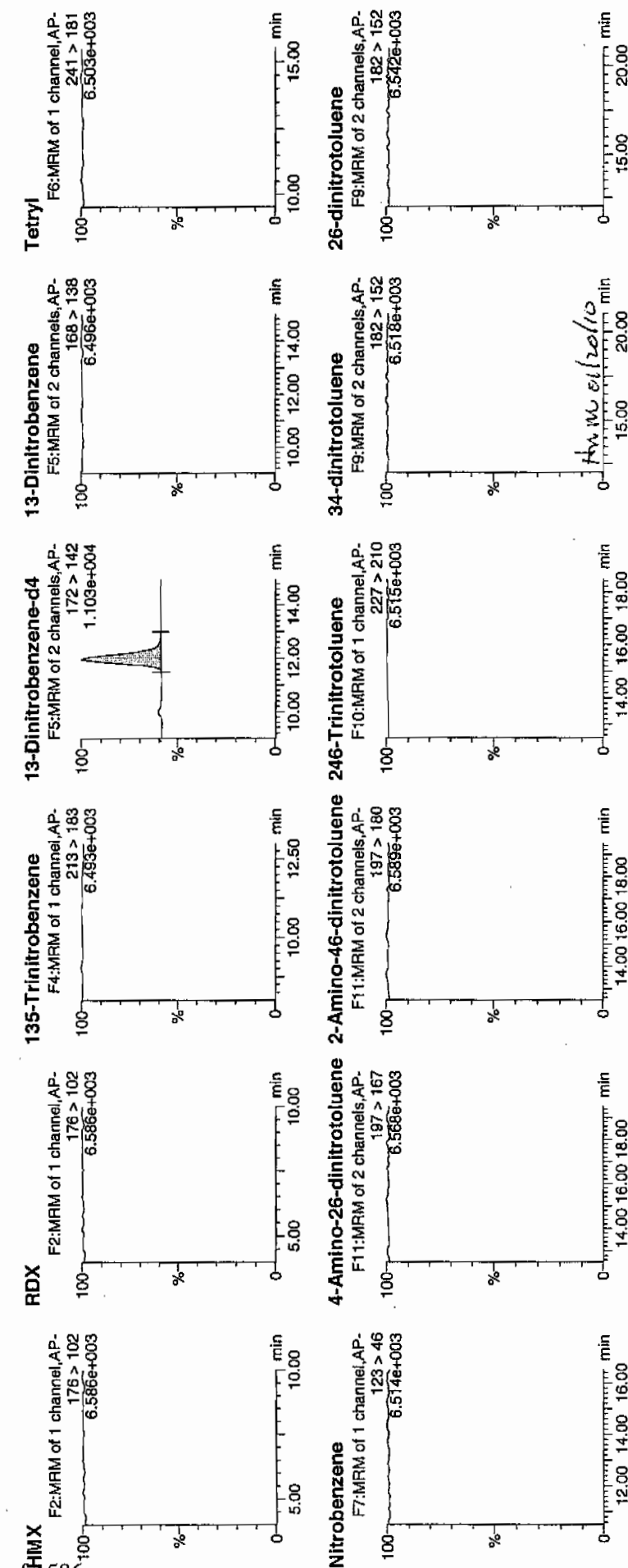
Date: 19-Jan-2010

Time: 16:07:15

ID: XIBLK07

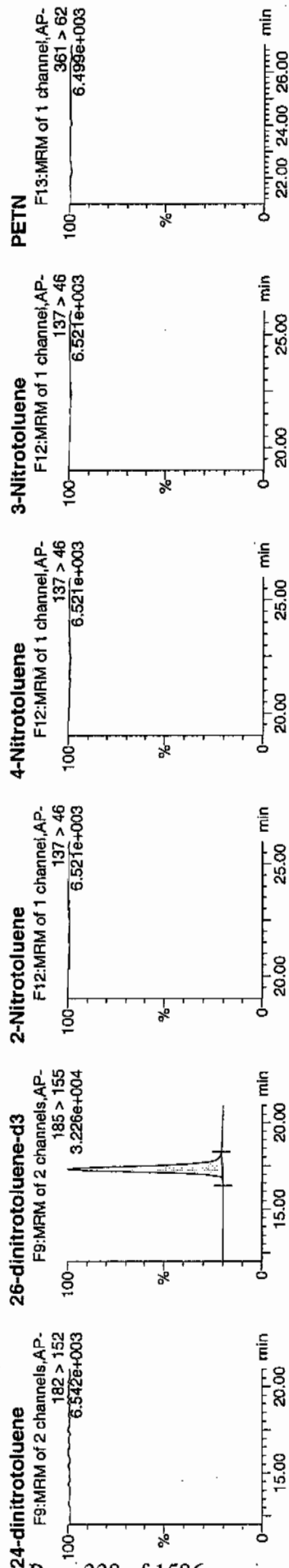
Vial: 1:1,A

1/20/10



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



ID	Name	RT	Area	IS Area	Abs. Resp	Response	Flags	Mod. Date	Mod. Time	ng/mL	% Rec	% Dev	S/N
XIBLK07	HMZ	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									

4A
Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1213

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

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118064a

Date: 19-Jan-2010

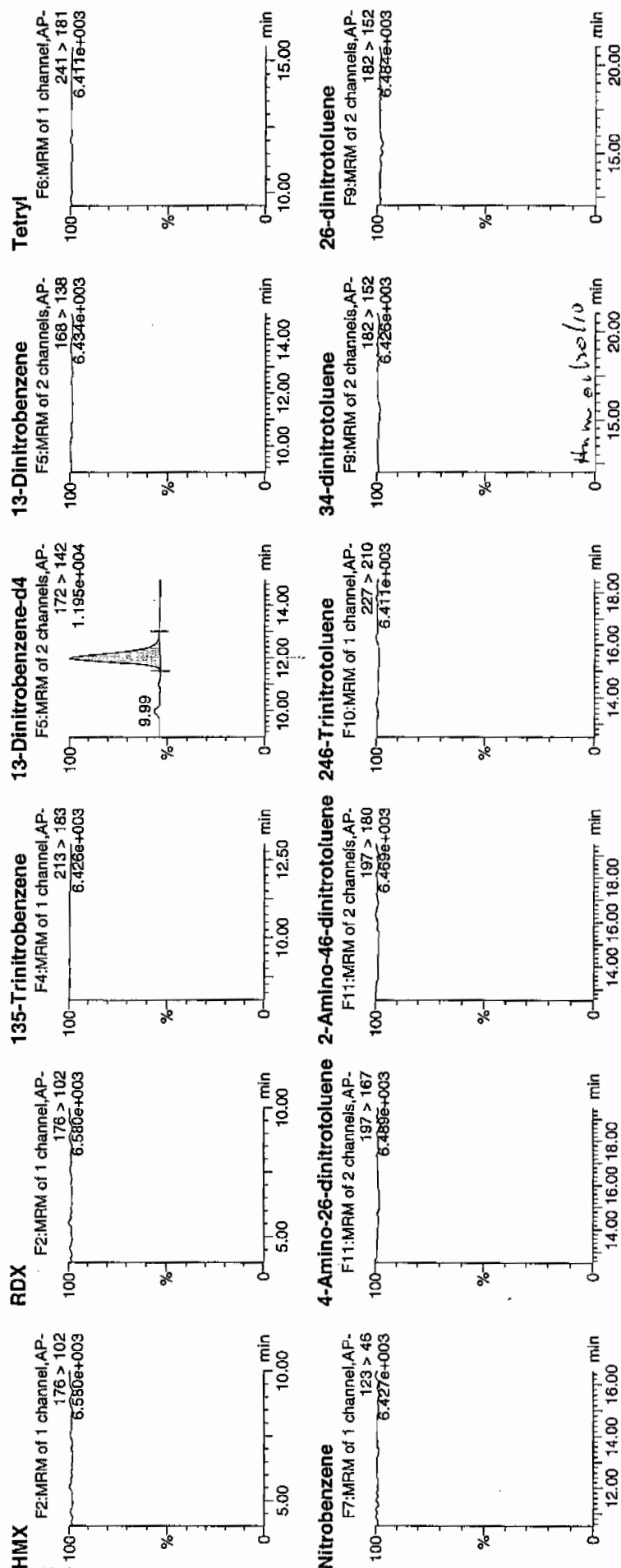
Time: 21:02:17

ID: XIBLK08

Vial: 1:1,A

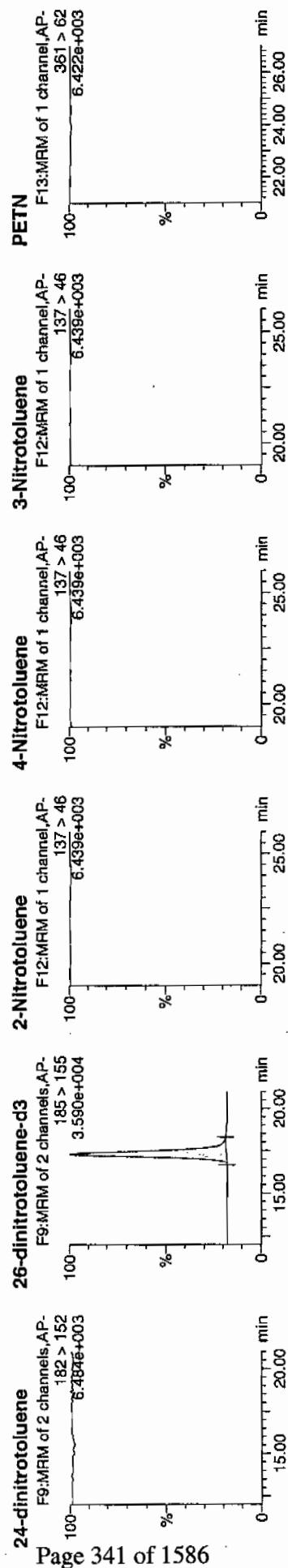
1/20/10

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

Dataset: C:\MASSLYNX\New_Exp\PROV011810expA1.qld, Time: Wed Jan 20 09:06:02 2010



ID	Name	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	%Rec	%Dev	S/N
XIBLK08	HMx	176 > 102	2248.805	2248.805								
XIBLK08	RDX	176 > 102	2248.805	2248.805								
XIBLK08	135-Trinitrobenzene	213 > 183	2248.805	2248.805								
XIBLK08	13-Dinitrobenzene-d4	172 > 142	11.97	2248.805	2248.805	2248.805	bb			331.3582	66.3	-33.7
XIBLK08	13-Dinitrobenzene	168 > 138		2248.805	2248.805							
XIBLK08	Tetryl	241 > 181		2248.805	2248.805							
XIBLK08	Nitrobenzene	123 > 46		2248.805	2248.805							
XIBLK08	4-Amino-26-dinitrotoluene	197 > 167		12465.129	12465.129							
XIBLK08	2-Amino-46-dinitrotoluene	197 > 180		12465.129	12465.129							
XIBLK08	246-Trinitrotoluene	227 > 210		12465.129	12465.129							
XIBLK08	34-dinitrotoluene	182 > 152		12465.129	12465.129							
XIBLK08	26-dinitrotoluene	182 > 152		12465.129	12465.129							
XIBLK08	24-dinitrotoluene	182 > 152		12465.129	12465.129							
XIBLK08	26-dinitrotoluene-d3	185 > 155	17.29	12465.129	12465.129	12465.129	bb	MM- 20-Jan-10	09:01:58	339.7498	67.9	-32.1
XIBLK08	2-Nitrotoluene	137 > 46		12465.129	12465.129							
XIBLK08	4-Nitrotoluene	137 > 46		12465.129	12465.129							
XIBLK08	3-Nitrotoluene	137 > 46		12465.129	12465.129							
XIBLK08	PETN	361 > 62		12465.129	12465.129							

4A
Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1213

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)
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
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\EXP0118077a

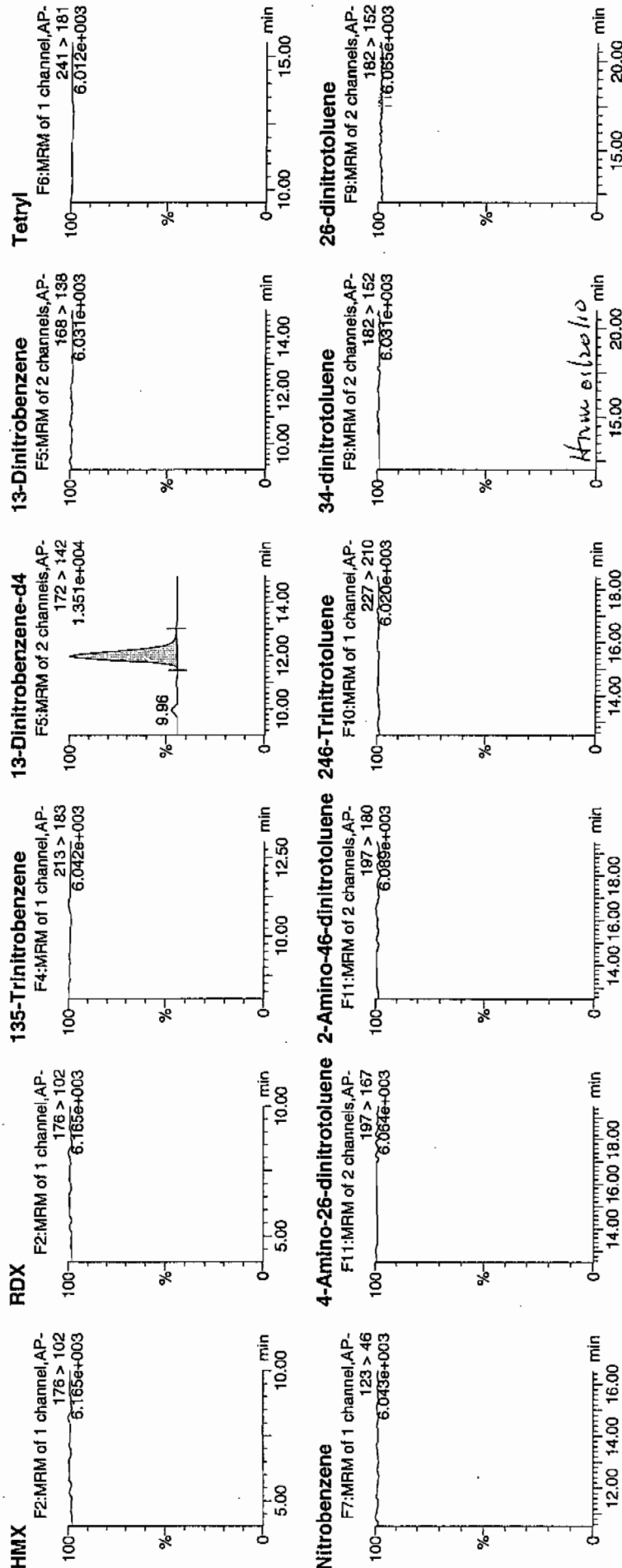
Date: 20-Jan-2010

Time: 03:25:38

ID: XIBLK09

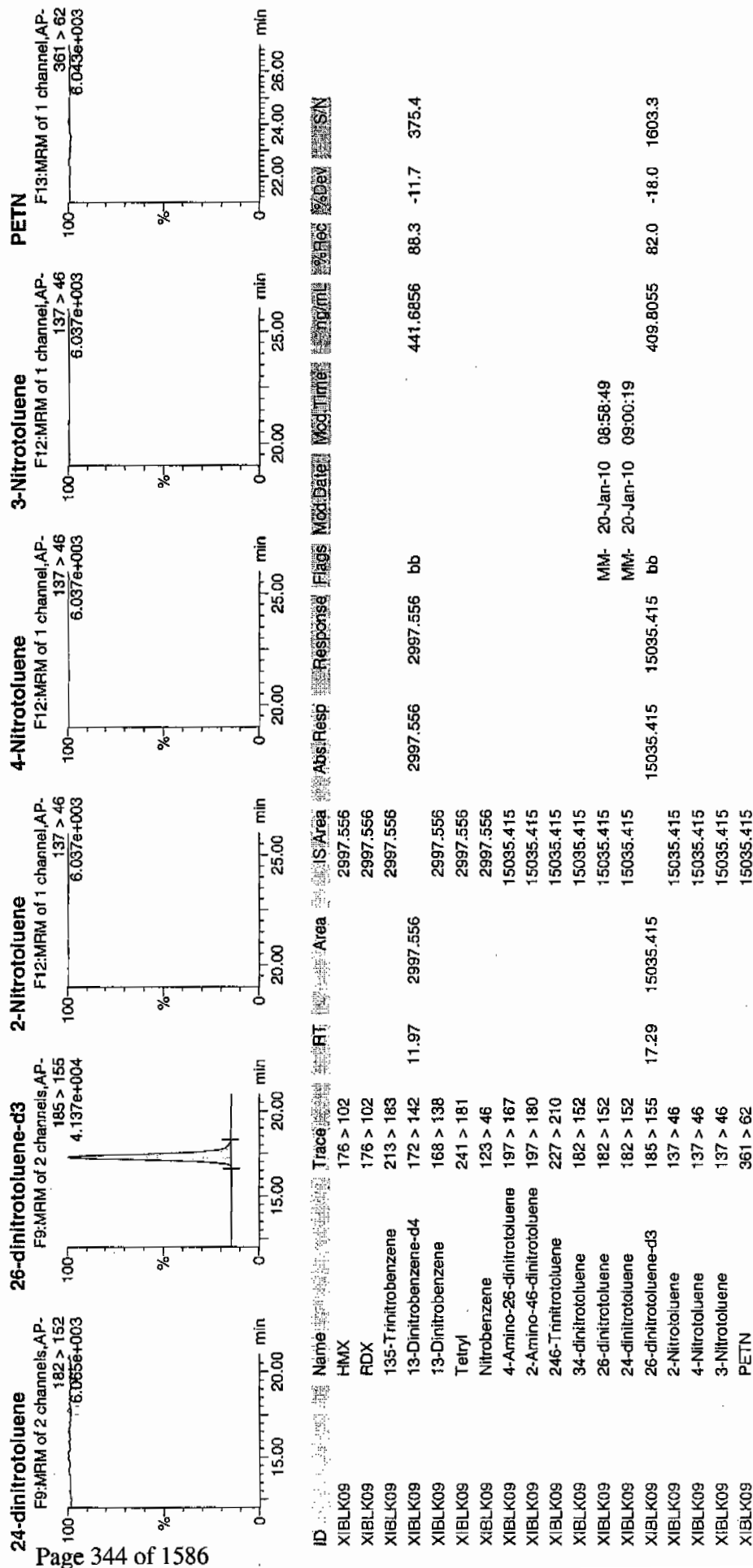
Vial: 1:1,A

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

Dataset: C:\MASSLYN\New_Exp_PRO\011810expA1.qld, Time: Wed Jan 20 09:06:02 2010



4A
Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1213

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

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\EXP0118086a

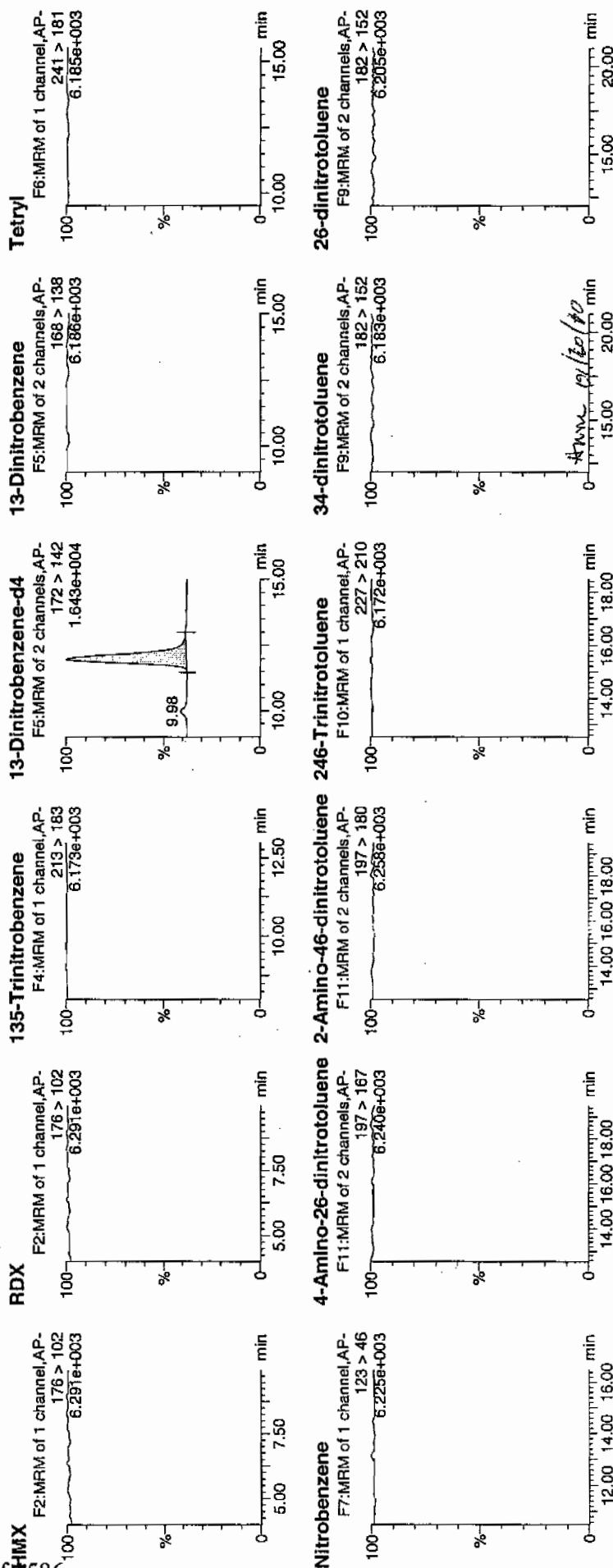
Date: 20-Jan-2010

Time: 07:51:19

ID: XIBLK10

Vial: 1:1,A

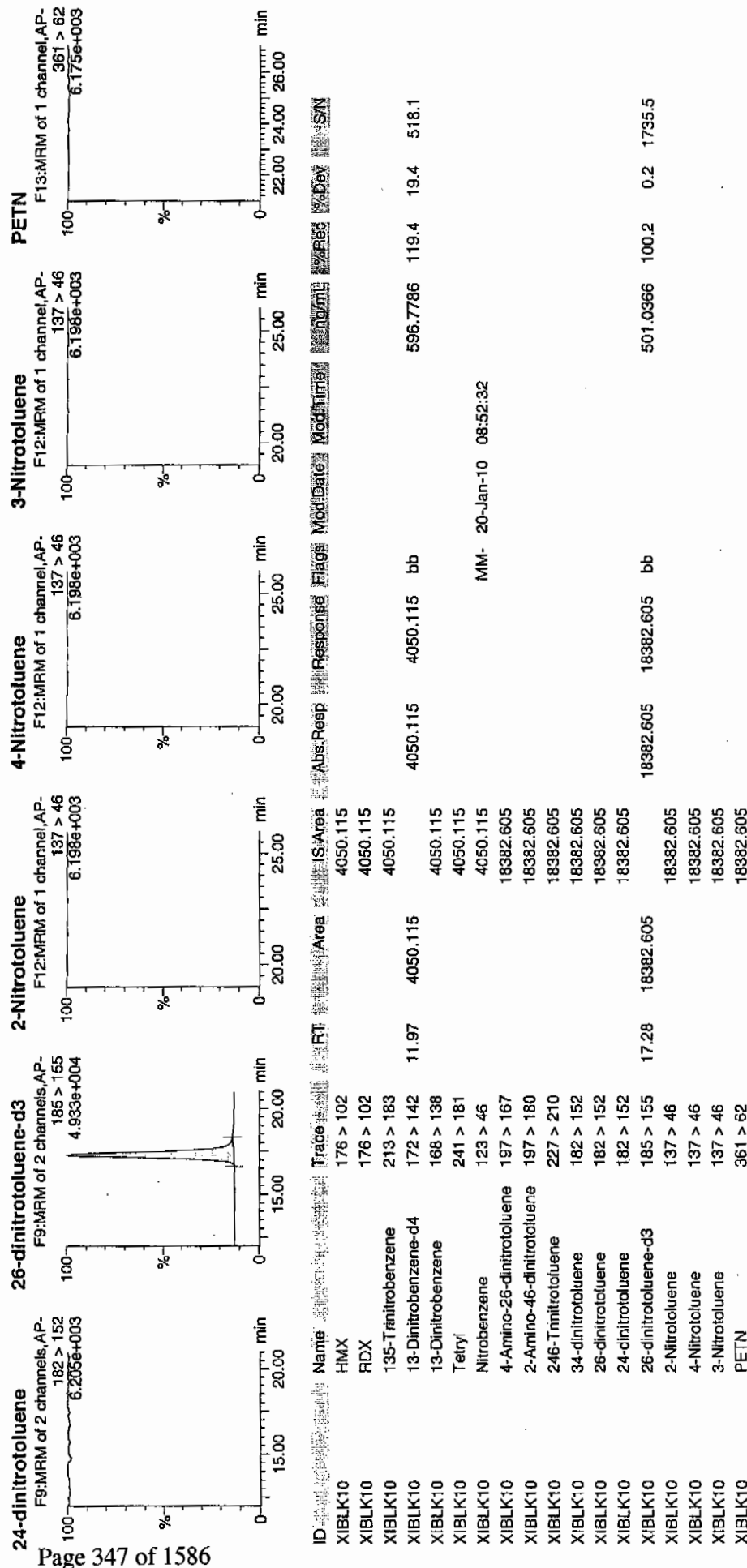
11/20/10



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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



4A
Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1213

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

Quantify Sample Report

GEL Laboratories, LLC / Analyst: Michael A. Penny

Printed: Thu Jan 21 11:15:44 2010, Page 21 of 101

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

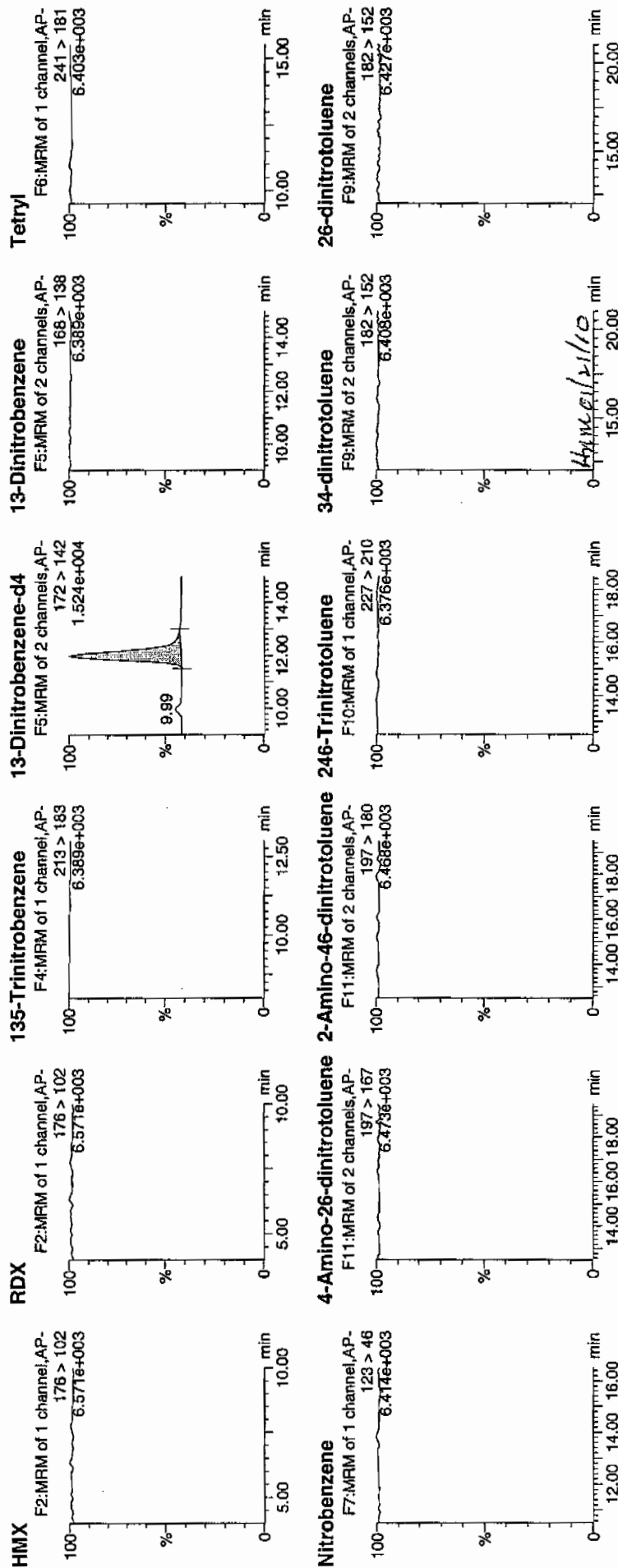
Time: 13:45:19

ID: XIBLK11

Vial: 1:1,A

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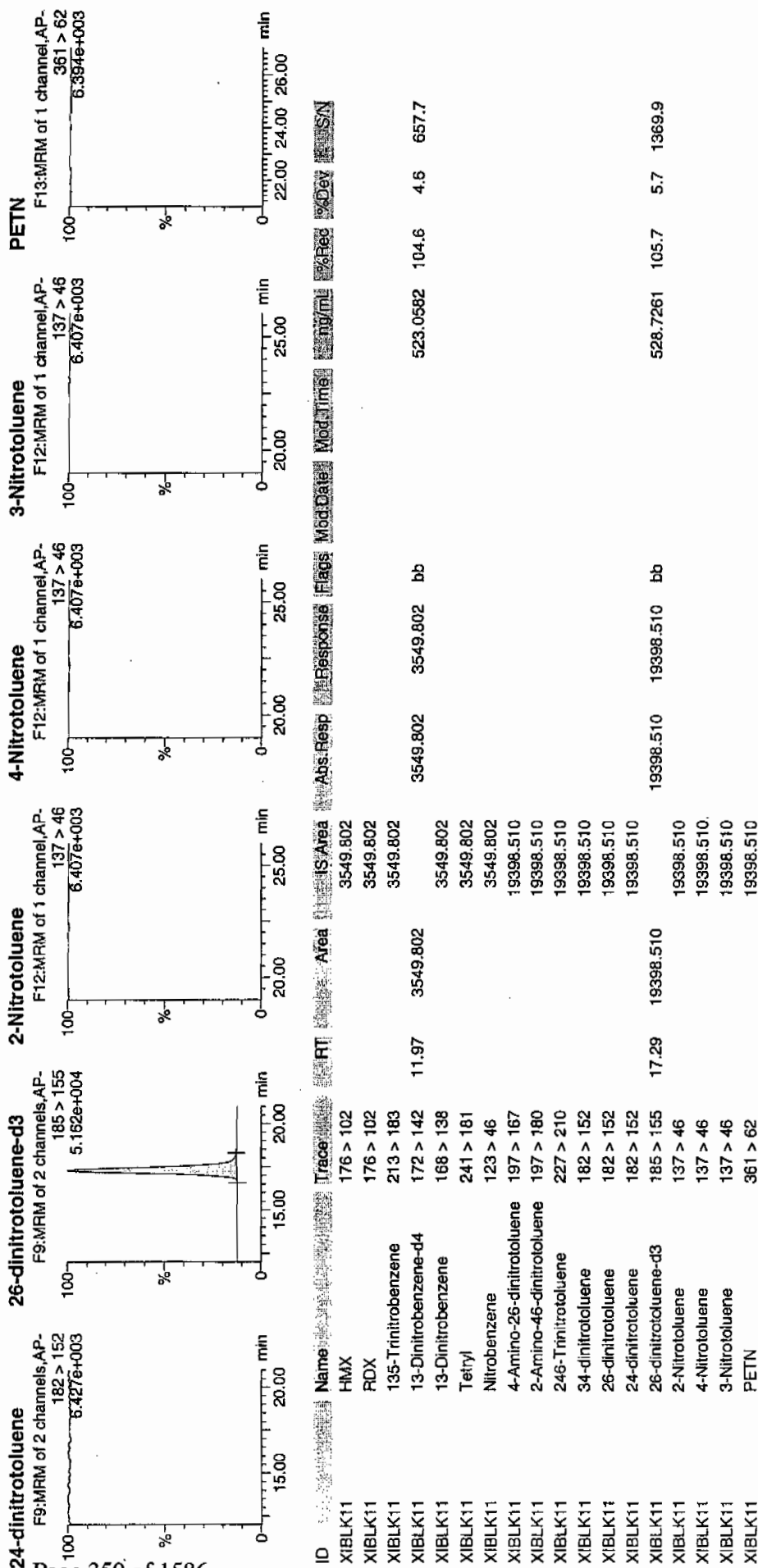


Quantify Sample Report

GEL Laboratories, LLC / Analyst : Michael A. Penny

Printed: Thu Jan 21 11:15:44 2010, Page 22 of 101

Dataset: C:\MASSLYN\New_Exp.PRO\011810expA2.qld, Time: Thu Jan 21 11:10:12 2010



4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1213

Lab Code: GEL

Lab Sample ID: XIBLK12

Analysis Date: 20-JAN-10 19:39

GEL Data File: EXP0118110a

Instrument ID: LCMSMS

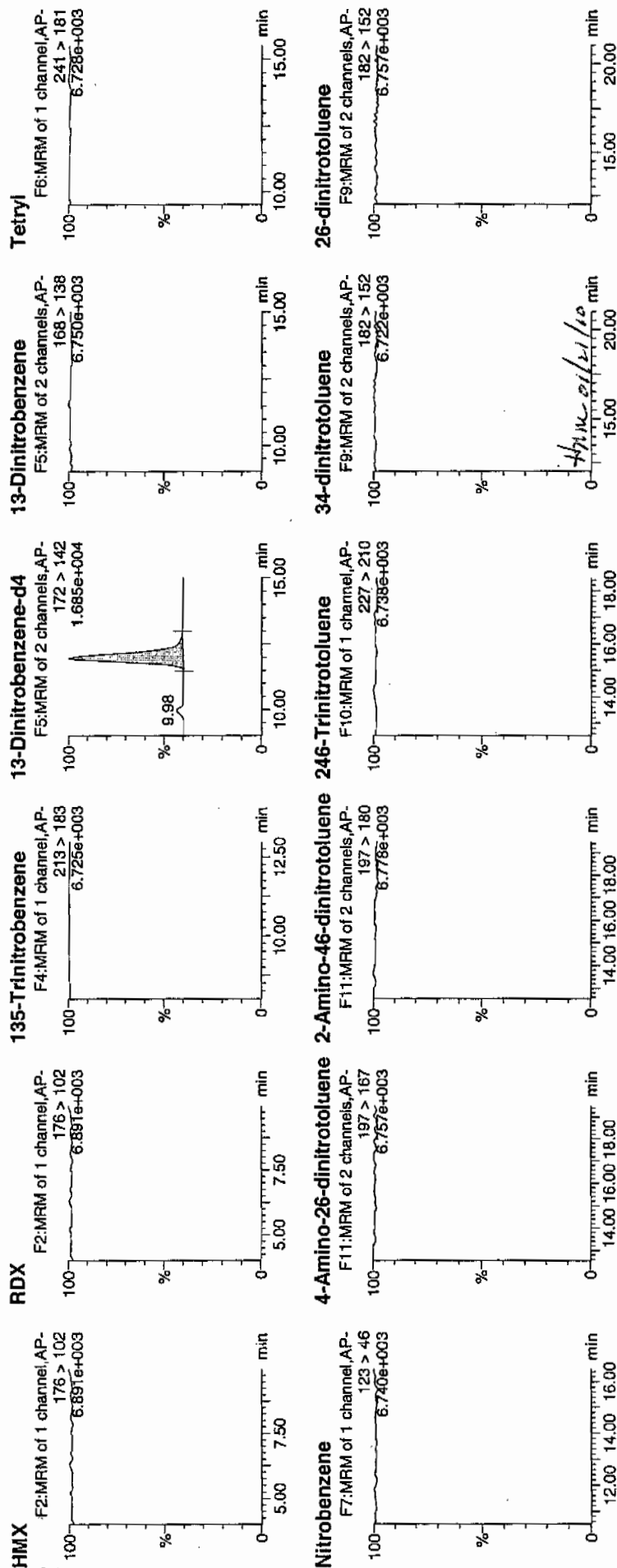
Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
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
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

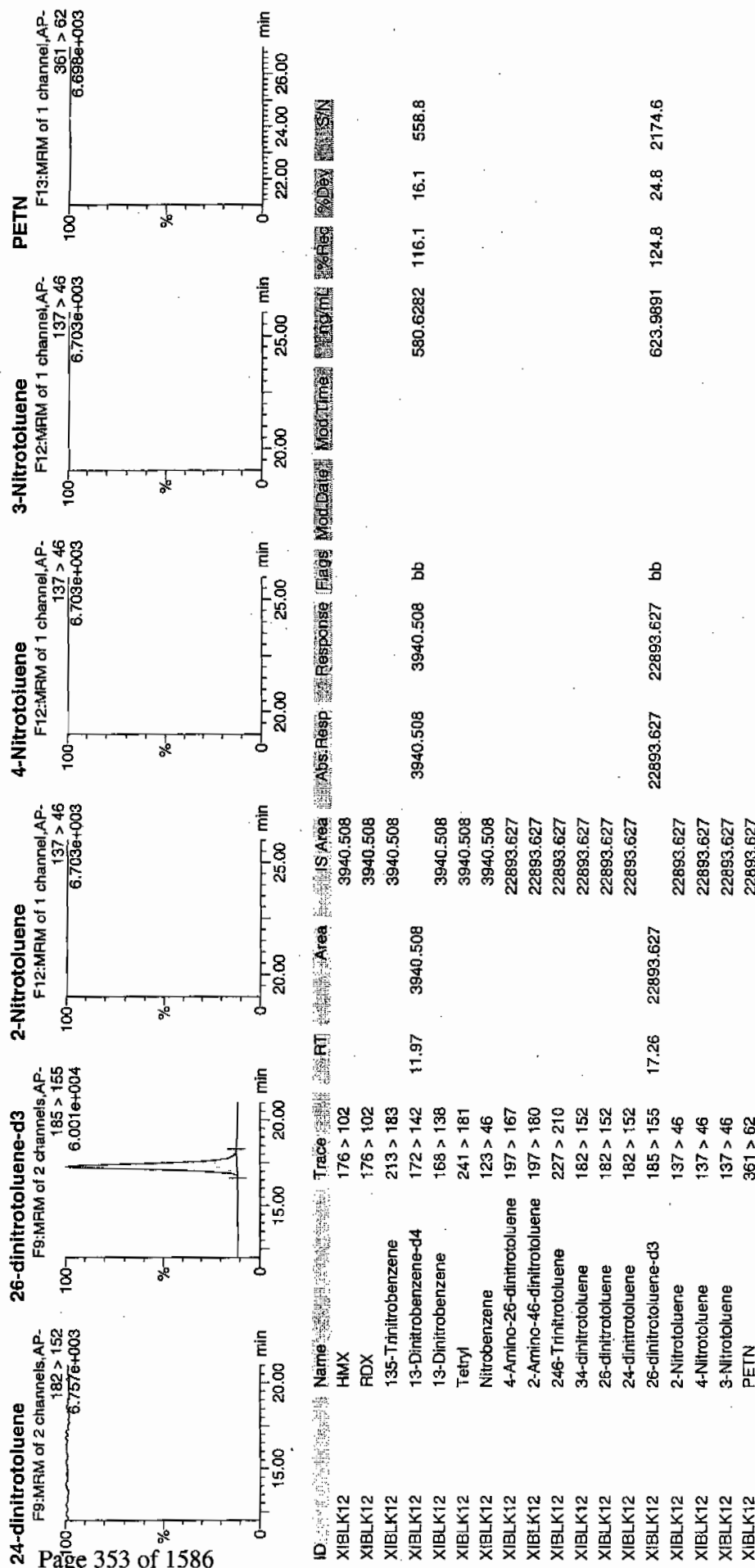
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Dataset: C:\MASSLYNX\New_Exp\PRO\011810expA2.qld, Time: Thu Jan 21 11:10:12 2010



4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1213

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.qid, Time: Thu Jan 21 11:10:12 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118115a

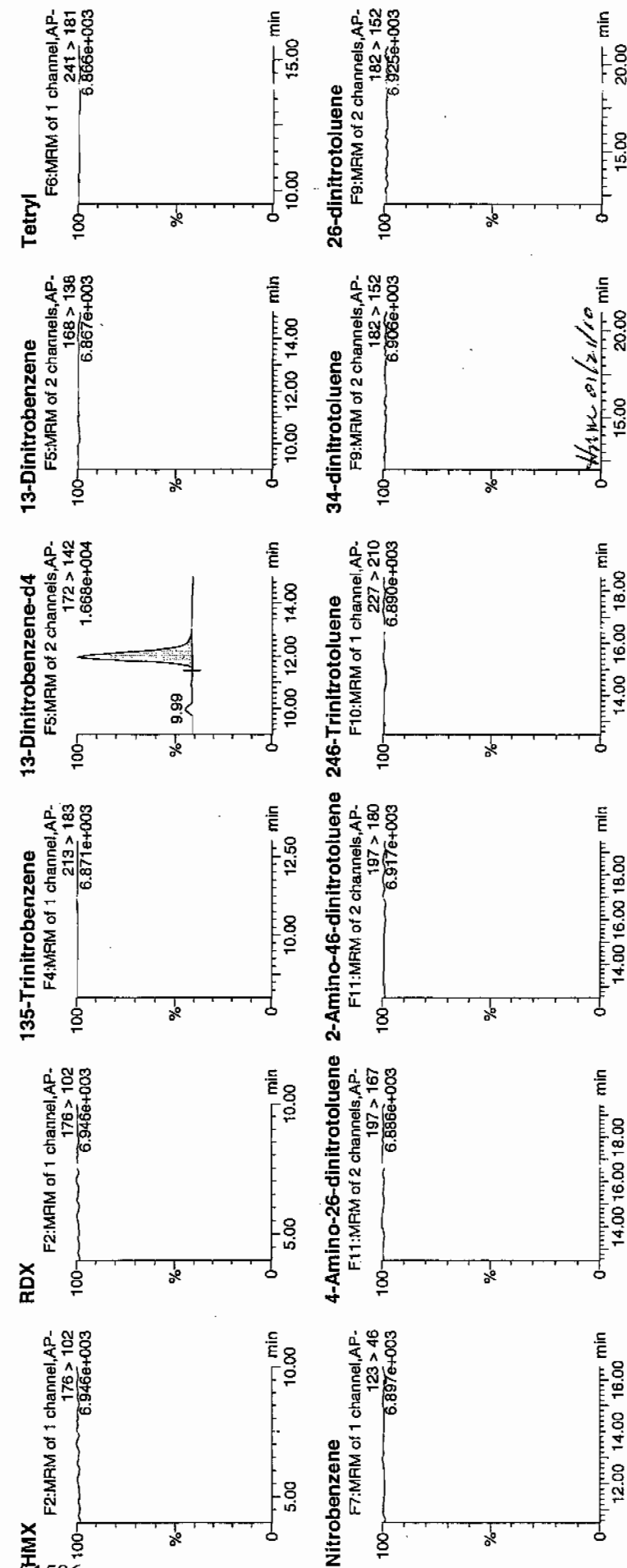
Date: 20-Jan-2010

Time: 22:07:13

ID: XIBLK13

Vial: 1:1,A

1/21/10

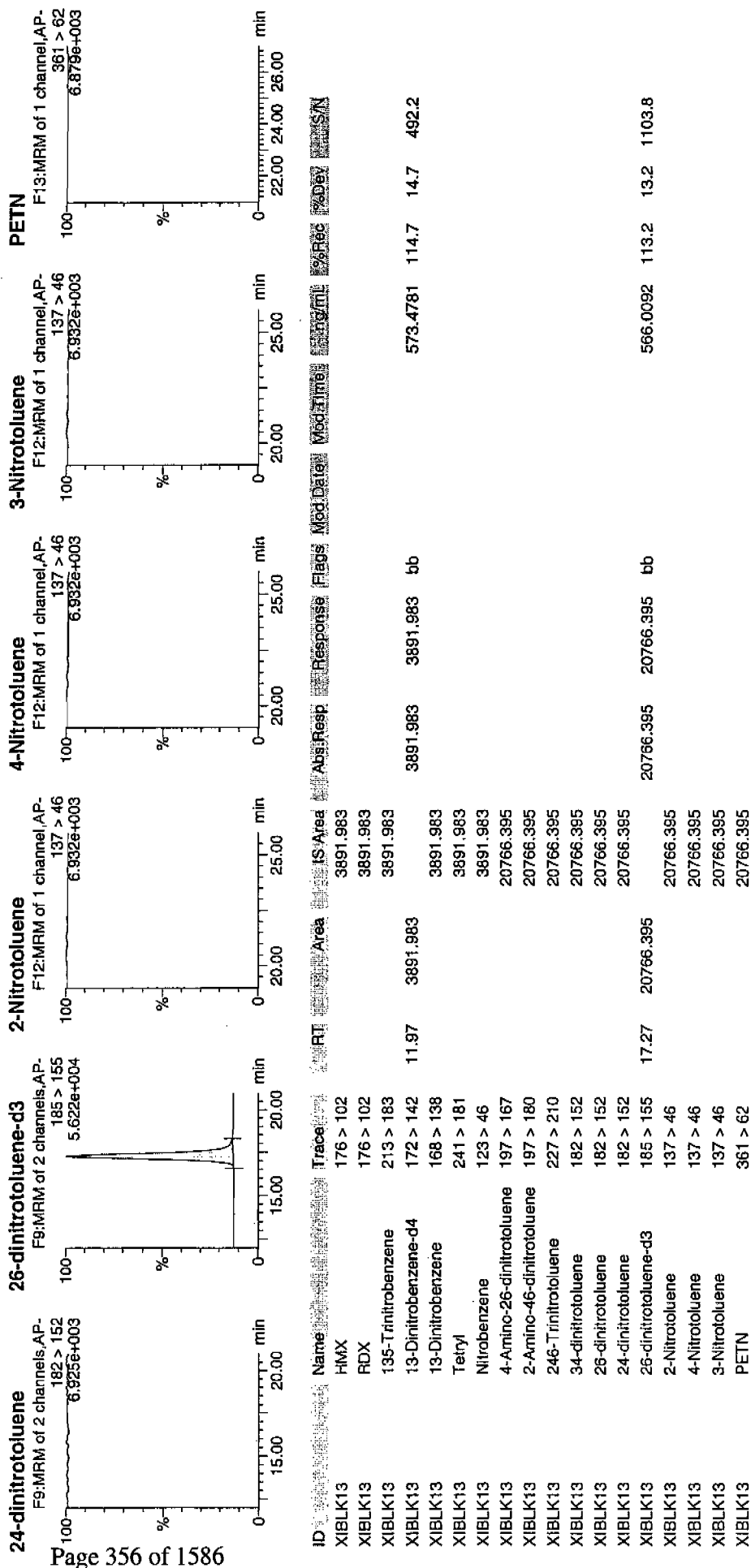


Quantify Sample Report

GEL Laboratories, LLC / Analyst : Michael A. Penny

Printed: Thu Jan 21 11:15:44 2010, Page 56 of 101

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA2.qld, Time: Thu Jan 21 11:10:12 2010



4A
Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1213

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

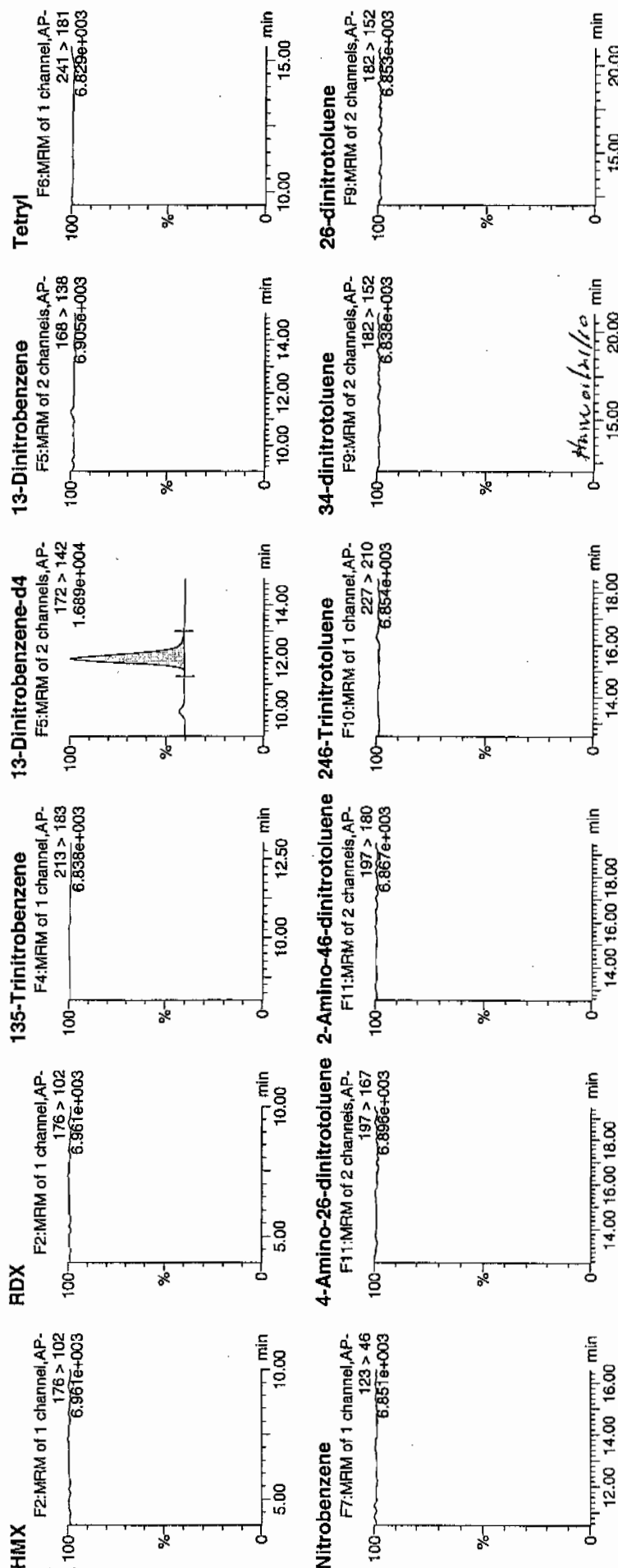
Date: 21-Jan-2010

Time: 02:03:12

ID: XIBLK14

Vial: 1:1,A

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1/21/10

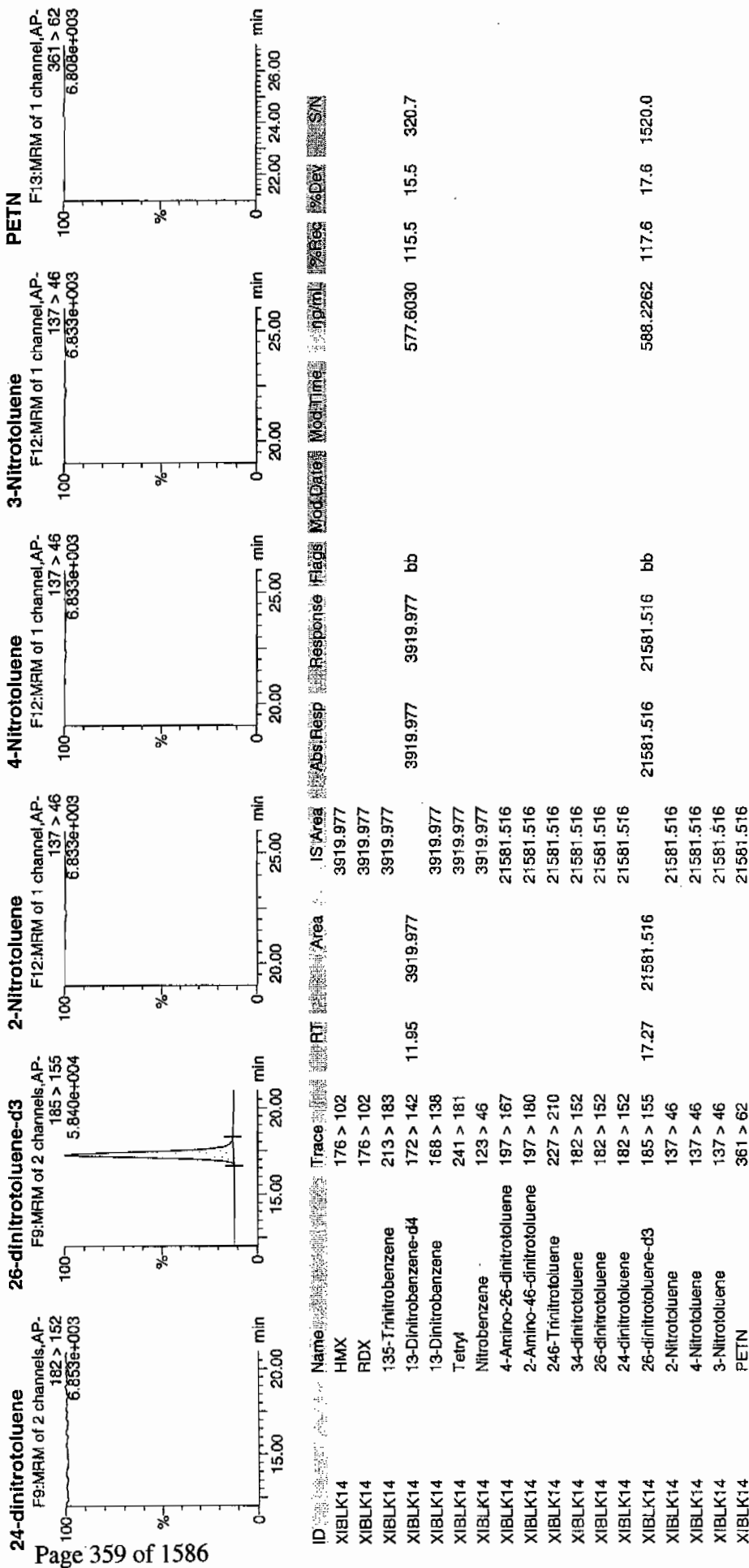


Quantify Sample Report

GEL Laboratories, LLC / Analyst : Michael A. Penny

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Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA2.qld, Time: Thu Jan 21 11:10:12 2010



4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1213

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)
3,4-Dinitrotoluene	0	0
1,3,5-Trinitrobenzene	0	0
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

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\EXP0118136a

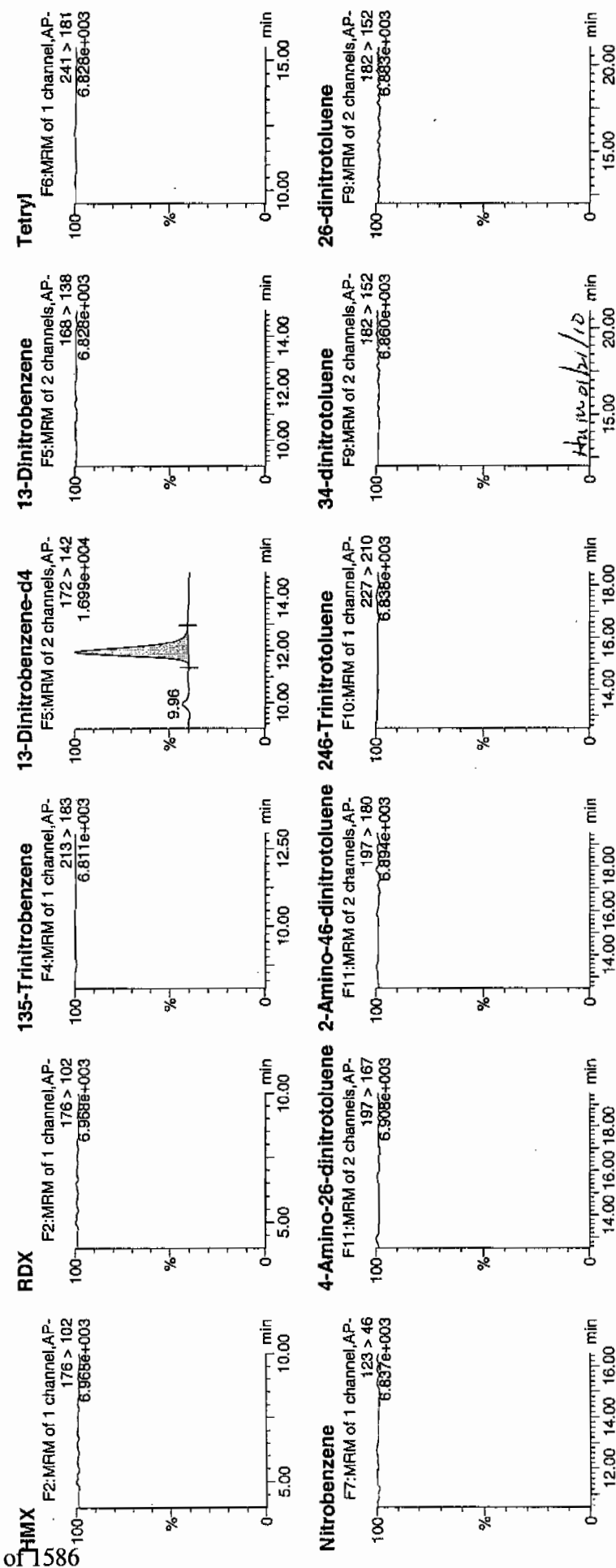
Date: 21-Jan-2010

Time: 08:26:32

ID: XIBLK15

Vial: 1:1,A

1/21/10
 11:10

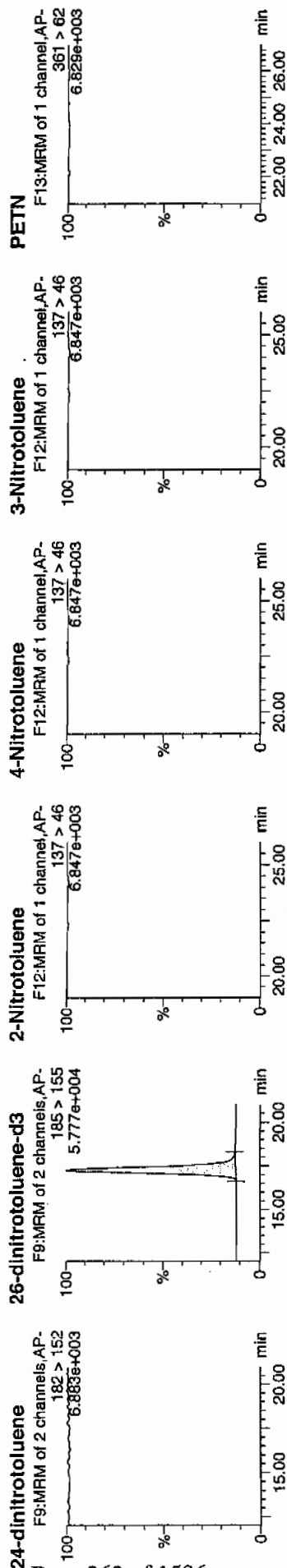


Quantify Sample Report

GEL Laboratories, LLC / Analyst: Michael A. Penny

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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
XIBLK15	HMZ	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									

4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1213

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 QDS(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

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\EXP0118148a

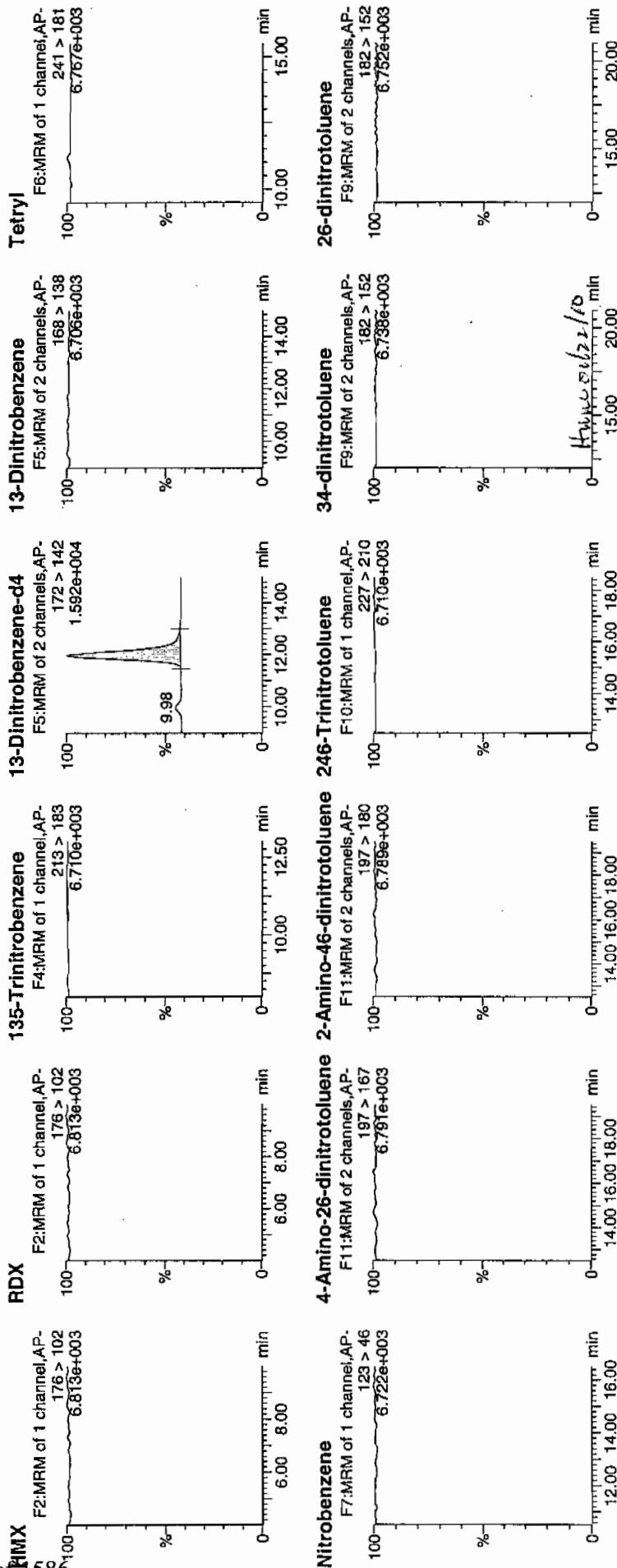
Date: 21-Jan-2010

Time: 14:50:30

ID: XIBLK16

Vial: 1:1,A

Handwritten: 1/21/10

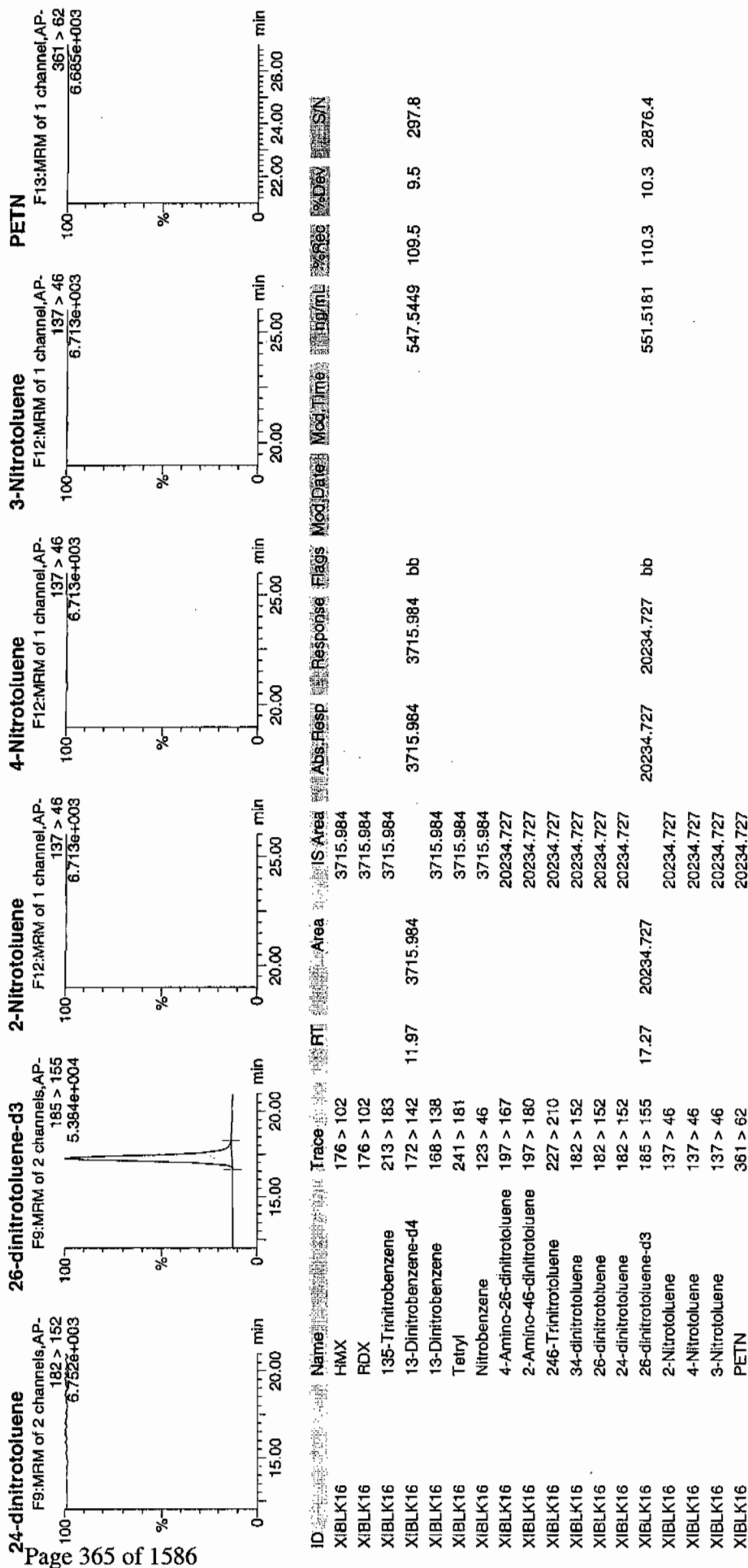


Quantify Sample Report

GEL Laboratories, LLC / Analyst : Michael A. Penny

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Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA3.qld, Time: Fri Jan 22 10:11:48 2010



4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1213

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)
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
m-Nitrotoluene	0	0
o-Nitrotoluene	0	0
p-Nitrotoluene	0	0

Quantify Sample Report

GEL Laboratories, LLC / Analyst: Michael A. Penny

Printed: Fri Jan 22 10:16:13 2010, Page 33 of 99

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA3.qld, Time: Fri Jan 22 10:11:48 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118154a

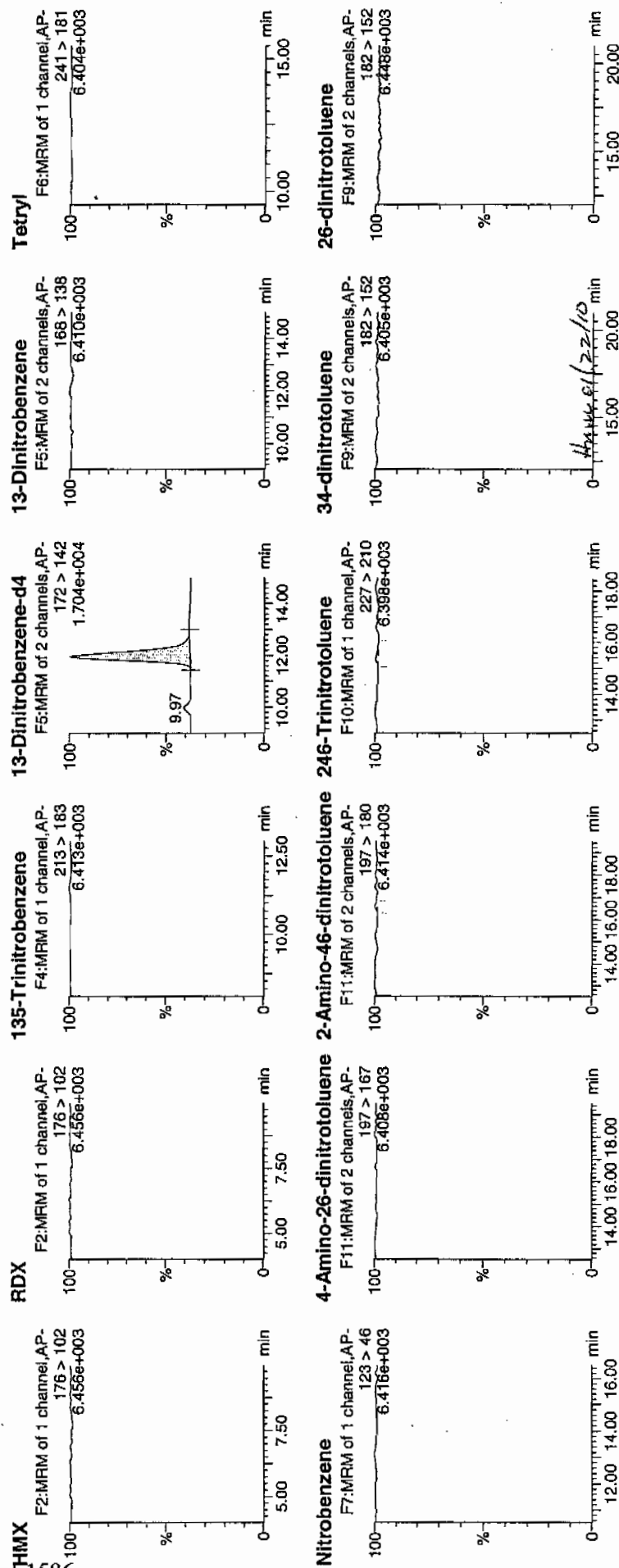
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Time: 17:18:08

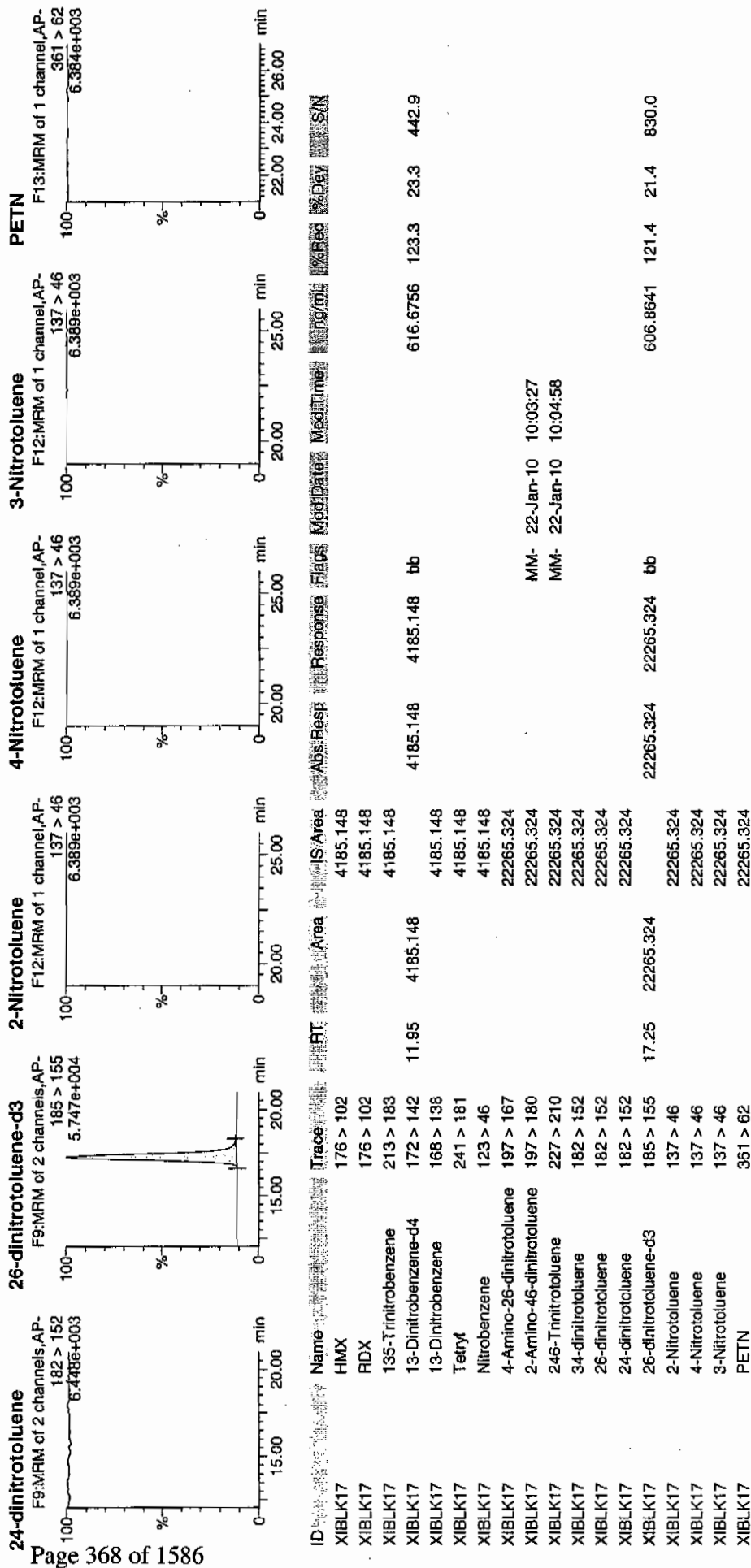
ID: XIBLK17

Vial: 1:1,A

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1/22/10



Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA3.qld, Time: Fri Jan 22 10:11:48 2010



4A
Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1213

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

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\EXP0118162a

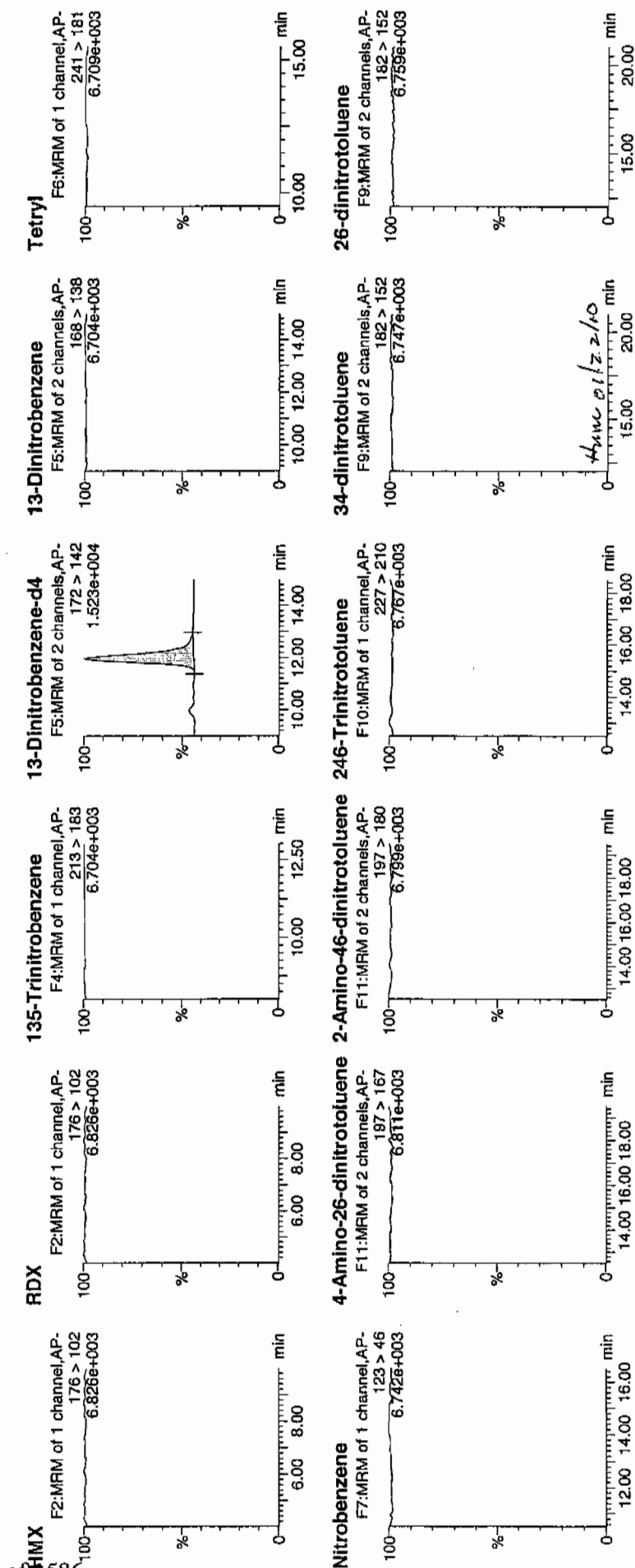
Date: 21-Jan-2010

Time: 21:14:13

ID: XIBLK18

Vial: 1:1,A

1/21/10

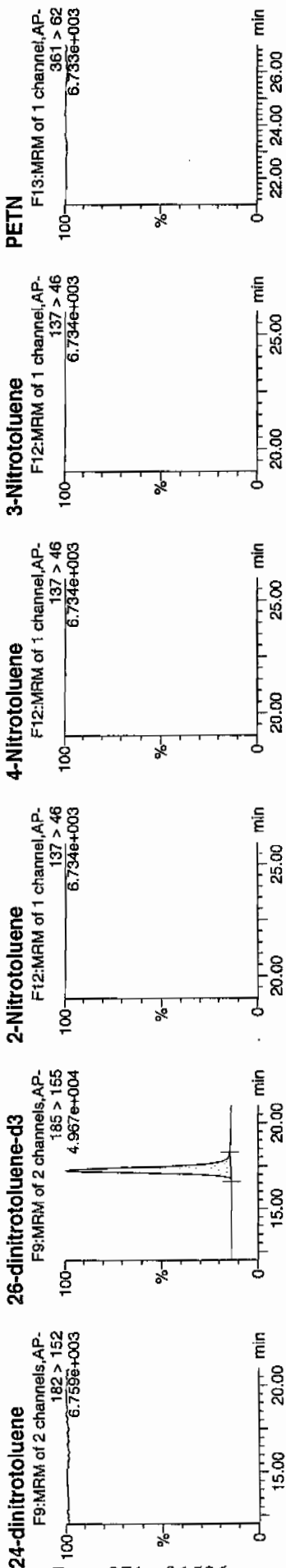


Quantify Sample Report

GEL Laboratories, LLC / Analyst : Michael A. Penny

Printed: Fri Jan 22 10:16:13 2010, Page 50 of 99

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
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XIBLK18	RDX	176 > 102		3436.145										
XIBLK18	135-Trinitrobenzene	213 > 183		3436.145										
XIBLK18	13-Dinitrobenzene-d4	172 > 142	11.97	3436.145							506.3110	101.3	1.3	262.1
XIBLK18	13-Dinitrobenzene	168 > 138												
XIBLK18	Tetryl	241 > 181												
XIBLK18	Nitrobenzene	123 > 46												
XIBLK18	4-Amino-26-dinitrotoluene	197 > 167												
XIBLK18	2-Amino-46-dinitrotoluene	197 > 180												
XIBLK18	246-Trinitrotoluene	227 > 210												
XIBLK18	34-dinitrotoluene	182 > 152												
XIBLK18	26-dinitrotoluene	182 > 152												
XIBLK18	24-dinitrotoluene	182 > 152												
XIBLK18	26-dinitrotoluene-d3	185 > 155	17.26	18454.170							502.9872	100.6	0.6	1942.9
XIBLK18	2-Nitrotoluene	137 > 46												
XIBLK18	4-Nitrotoluene	137 > 46												
XIBLK18	3-Nitrotoluene	137 > 46												
XIBLK18	PETN	361 > 62												

4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1213

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

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\EXP0118173a

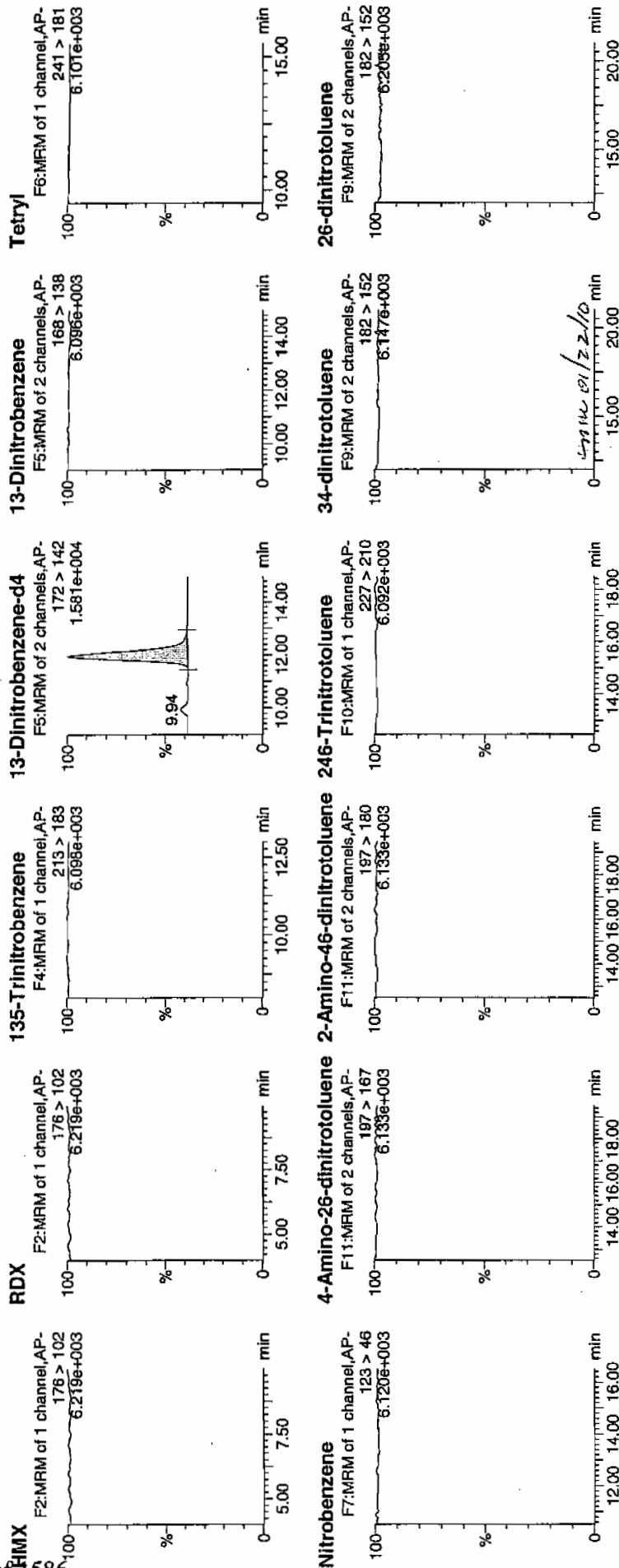
Date: 22-Jan-2010

Time: 02:38:46

ID: XIBLK19

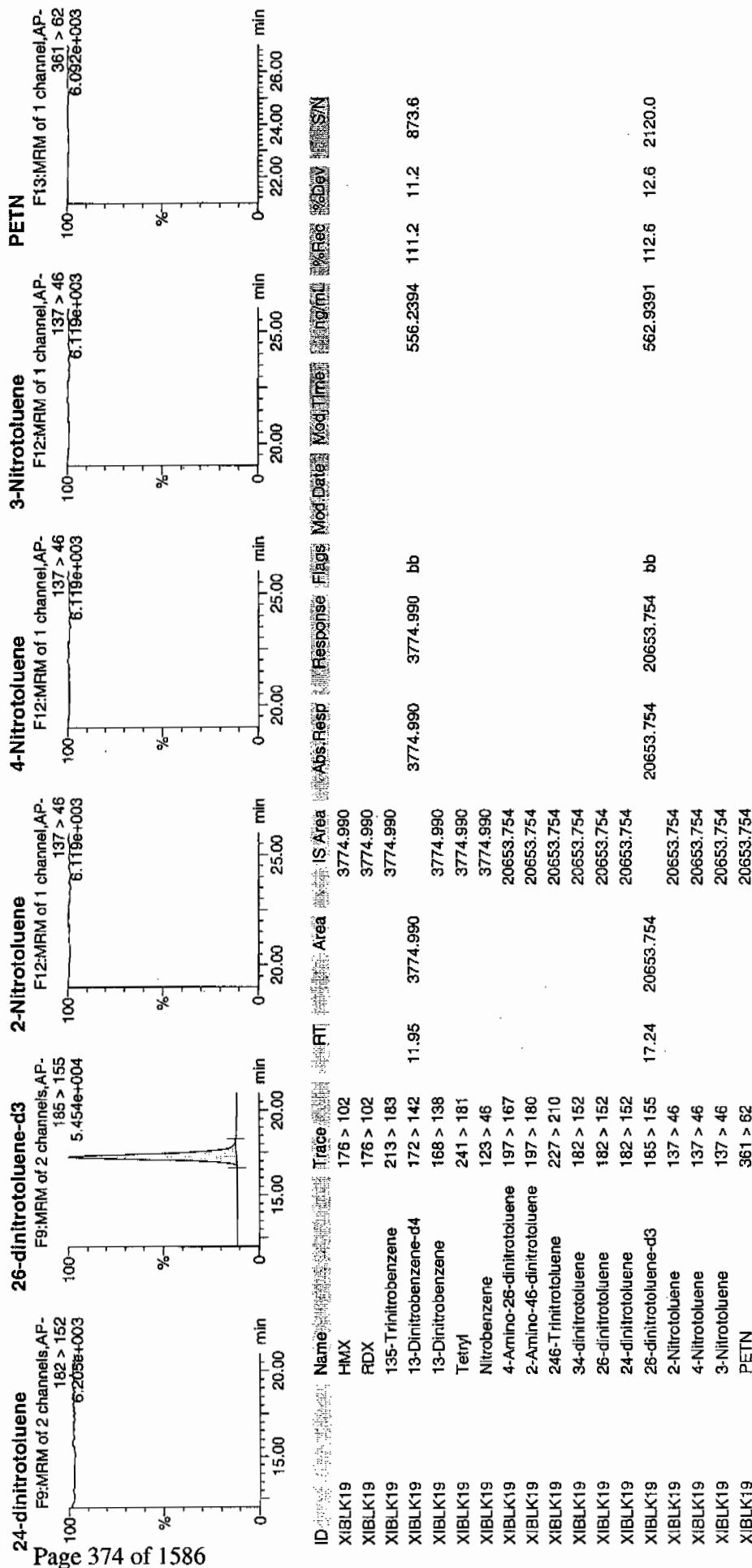
Vial: 1:1,A

1/22/10



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



4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1213

Lab Code: GEL

Lab Sample ID: XIBLK20

Analysis Date: 22-JAN-10 08:32

GEL Data File: EXP0118185a

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	500.462
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	501.409
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\011810expA3.qld, Time: Fri Jan 22 10:11:48 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118185a

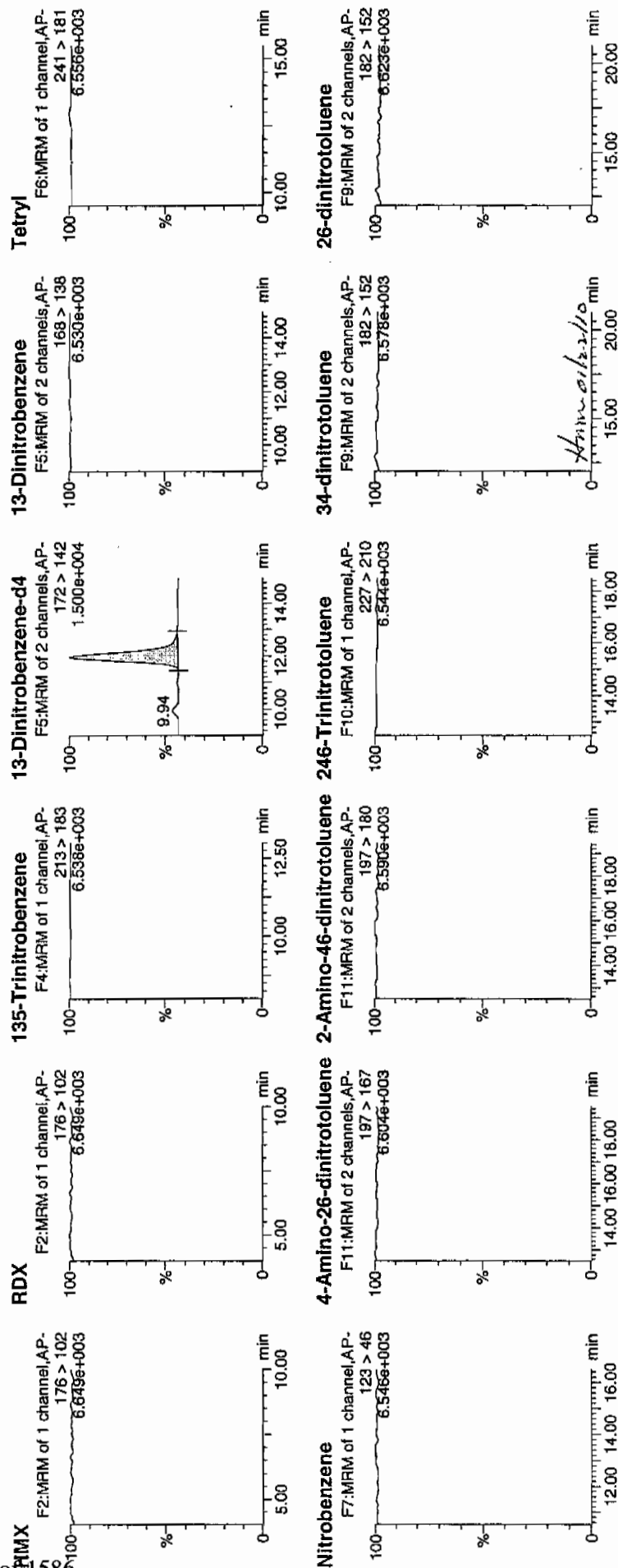
Date: 22-Jan-2010

Time: 08:32:36

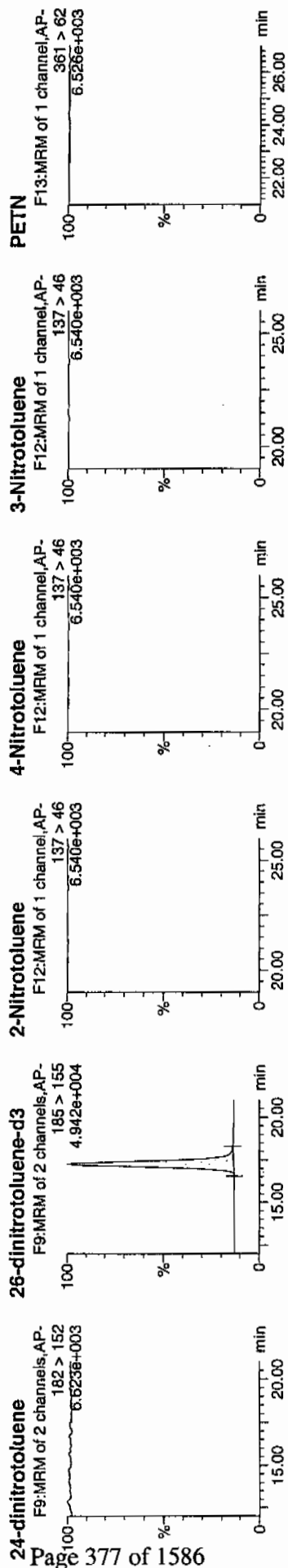
ID: XIBLK20

Vial: 1:1,A

11/22/10



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	Inj/mL	%Rec	%Dev	S/N
XIBLK20	HMX	176 > 102			3396.453									
XIBLK20	RDX	176 > 102			3396.453									
XIBLK20	135-Trinitrobenzene	213 > 183			3396.453									
XIBLK20	13-Dinitrobenzene-d4	172 > 142	11.95	3396.453		3396.453	3396.453	bb			500.4625	100.1	0.1	206.9
XIBLK20	13-Dinitrobenzene	168 > 138			3396.453									
XIBLK20	Tetryl	241 > 181			3396.453									
XIBLK20	Nitrobenzene	123 > 46			3396.453									
XIBLK20	4-Amino-26-dinitrotoluene	197 > 167			18396.256									
XIBLK20	2-Amino-46-dinitrotoluene	197 > 180			18396.256									
XIBLK20	246-Trinitrotoluene	227 > 210			18396.256									
XIBLK20	34-dinitrotoluene	182 > 152			18396.256									
XIBLK20	26-dinitrotoluene	182 > 152			18396.256									
XIBLK20	24-dinitrotoluene	182 > 152			18396.256									
XIBLK20	26-dinitrotoluene-d3	185 > 155	17.24	18396.256		18396.256	18396.256	bb			501.4087	100.3	0.3	1315.3
XIBLK20	2-Nitrotoluene	137 > 46			18396.256									
XIBLK20	4-Nitrotoluene	137 > 46			18396.256									
XIBLK20	3-Nitrotoluene	137 > 46			18396.256									
XIBLK20	PETN	361 > 62			18396.256									

4A
Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1213

Lab Code: GEL

Lab Sample ID: XTBLK21

Analysis Date: 22-JAN-10 12:29

GEL Data File: EXP0118193a

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	580.53
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	601.795
2-Amino-4,6-dinitrotoluene	0	0
4-Amino-2,6-dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m-Dinitrobenzene	0	0
m-Nitrotoluene	0	0
o-Nitrotoluene	0	0
p-Nitrotoluene	0	0

Name: C:\MASSLYNX\NEW_EXP_PRO\Data\EXP0118193a

Date: 22-Jan-2010

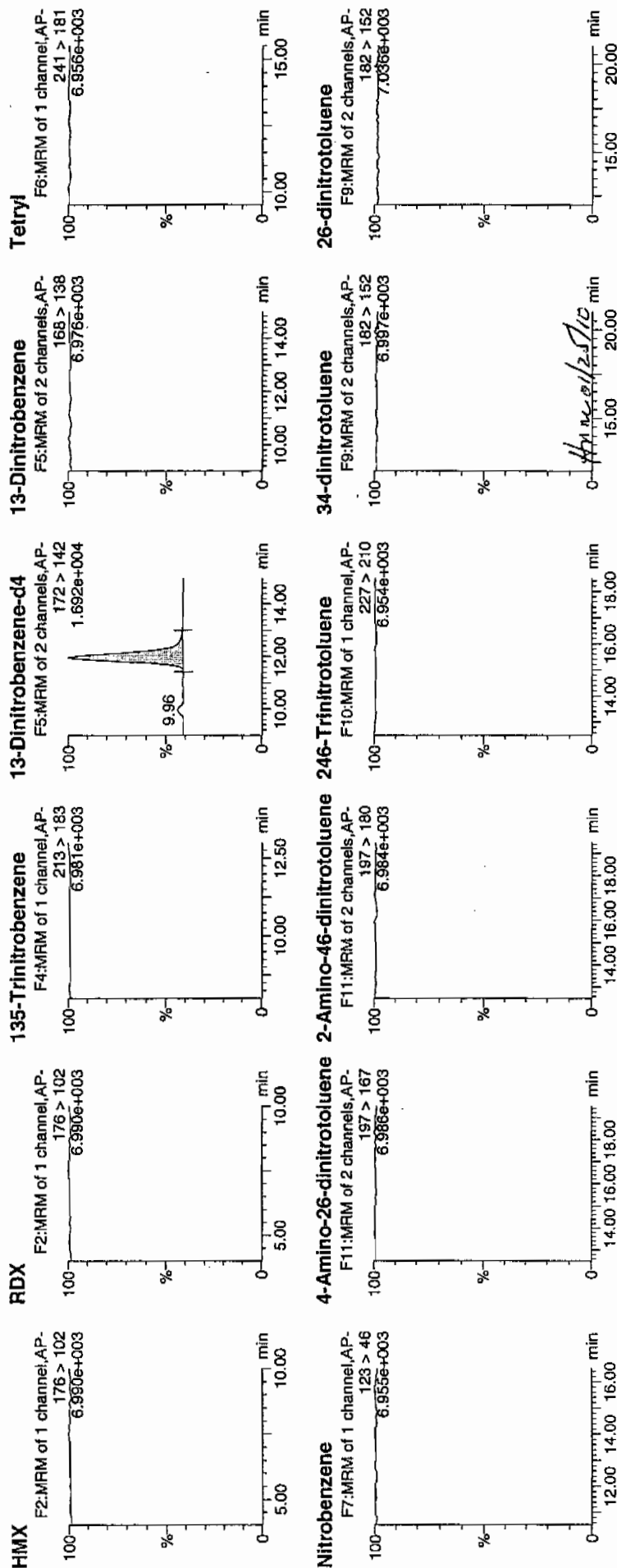
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ID: XIBLK21

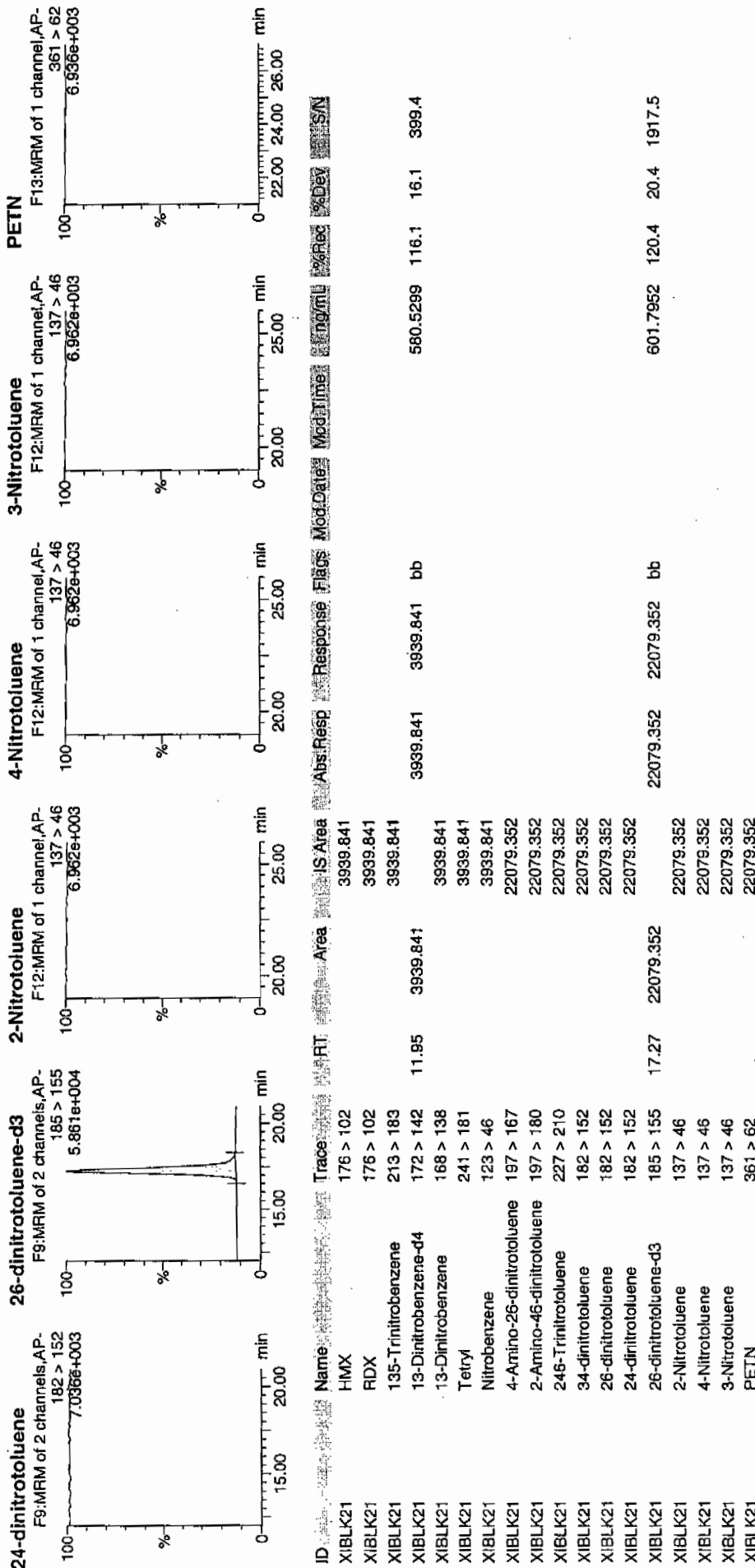
Vial: 1:1,A

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11/21/10

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Dataset: C:\MASSLYNX\New_Exp\PRO1011810expA4.qld, Time: Sat Jan 23 10:08:29 2010



4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1213

Lab Code: GEL

Lab Sample ID: XIBLK22

Analysis Date: 22-JAN-10 14:56

GEL Data File: EXP0118198a

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	590.208
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	570.948
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\PROV011810expA4.qld, Time: Sat Jan 23 10:08:29 2010

Name: C:\MASSLYNX\NEW_EXP\PROV011810expA4.qld\EXP0118198a

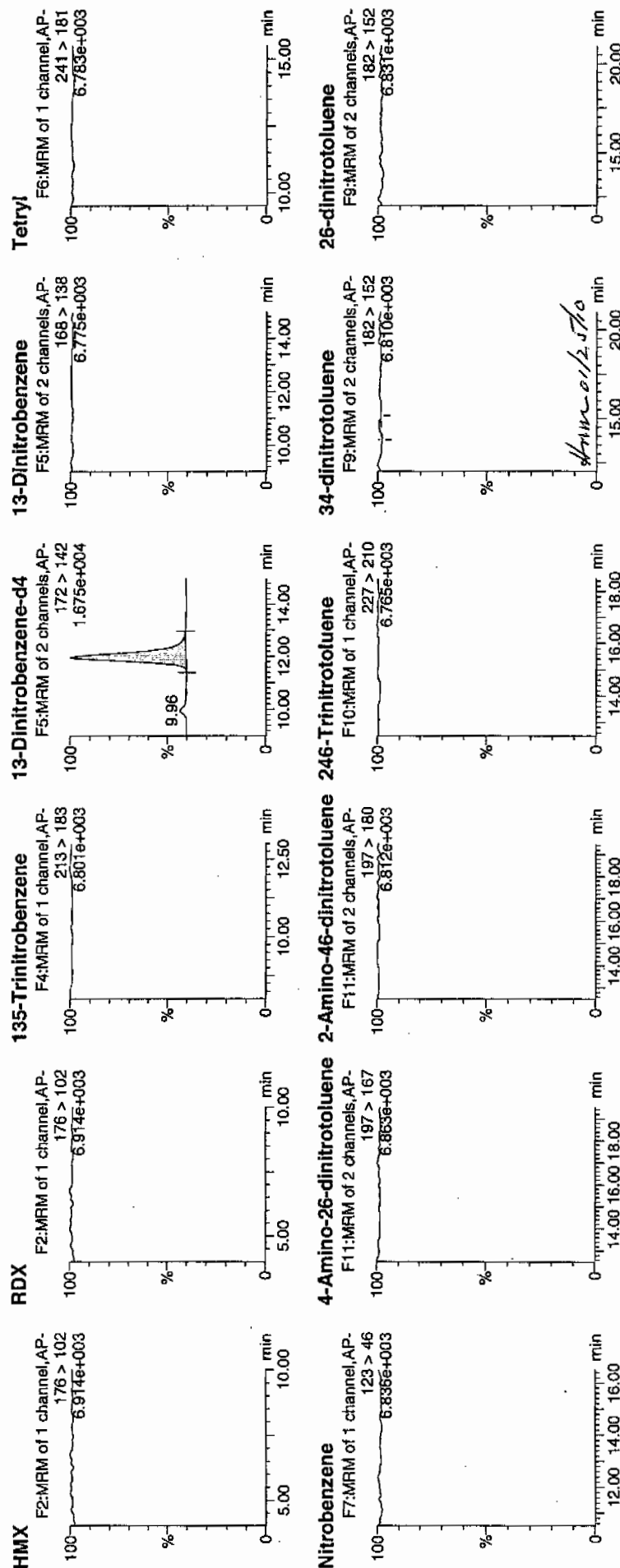
Date: 22-Jan-2010

Time: 14:56:53

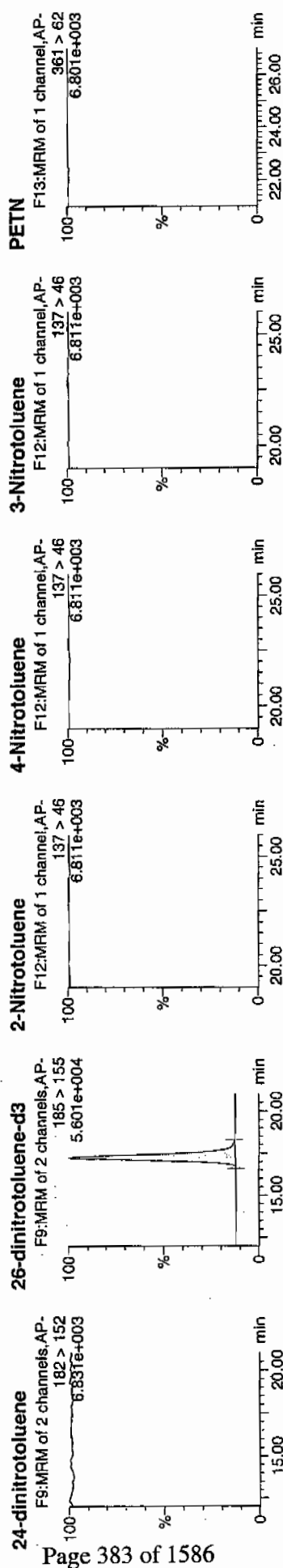
ID: XIBLK22

Vial: 1:1,A

1/23/10



Dataset: C:\MASSLYN\New_Exp\PRO\011810expA4.qld, Time: Sat Jan 23 10:08:29 2010



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	Var Rec	Day	SN
XIBLK22	HMX	176 > 102			4005.523								
XIBLK22	RDX	176 > 102			4005.523								
XIBLK22	135-Trinitrobenzene	213 > 183			4005.523								
XIBLK22	13-Dinitrobenzene-d4	172 > 142	11.95	4005.523			4005.523	bb	590.2081	118.0	18.0	800.6	
XIBLK22	13-Dinitrobenzene	168 > 138			4005.523								
XIBLK22	Tetryl	241 > 181			4005.523								
XIBLK22	Nitrobenzene	123 > 46			4005.523								
XIBLK22	4-Amino-26-dinitrotoluene	197 > 167			20947.586								
XIBLK22	2-Amino-46-dinitrotoluene	197 > 180			20947.586								
XIBLK22	246-Trinitrotoluene	227 > 210			20947.586								
XIBLK22	34-dinitrotoluene	182 > 152			20947.586								
XIBLK22	26-dinitrotoluene	182 > 152			20947.586								
XIBLK22	24-dinitrotoluene	182 > 152			20947.586								
XIBLK22	26-dinitrotoluene-d3	185 > 155	17.24	20947.586			20947.586	bb	570.9478	114.2	14.2	2500.2	
XIBLK22	2-Nitrotoluene	137 > 46			20947.586								
XIBLK22	4-Nitrotoluene	137 > 46			20947.586								
XIBLK22	3-Nitrotoluene	137 > 46			20947.586								
XIBLK22	PETN	361 > 62			20947.586								

4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1213

Lab Code: GEL

Lab Sample ID: XIBLK23

Analysis Date: 22-JAN-10 21:20

GEL Data File: EXP0118211a

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	531.783
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	508.054
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\011810expA4.qld, Time: Sat Jan 23 10:08:29 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118211a

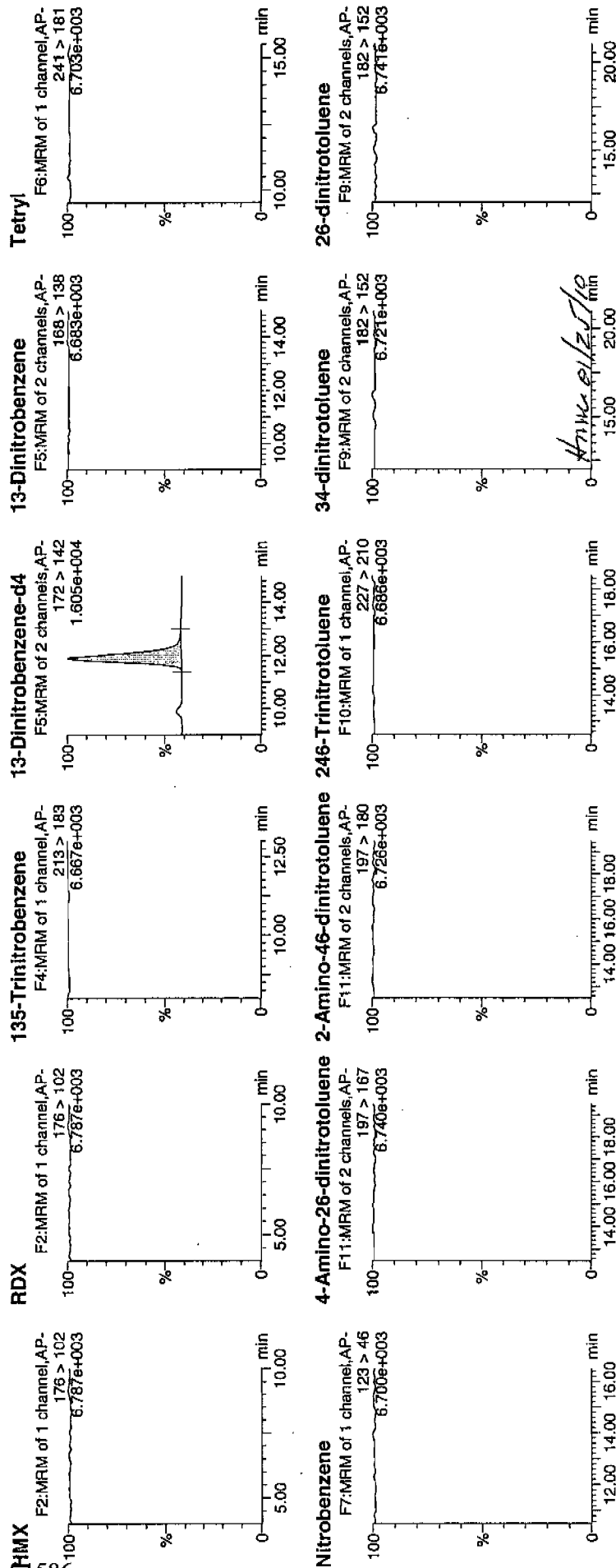
Date: 22-Jan-2010

Time: 21:20:24

ID: XIBLK23

Ratio: 1:1,A

1/23/10
1/23/10

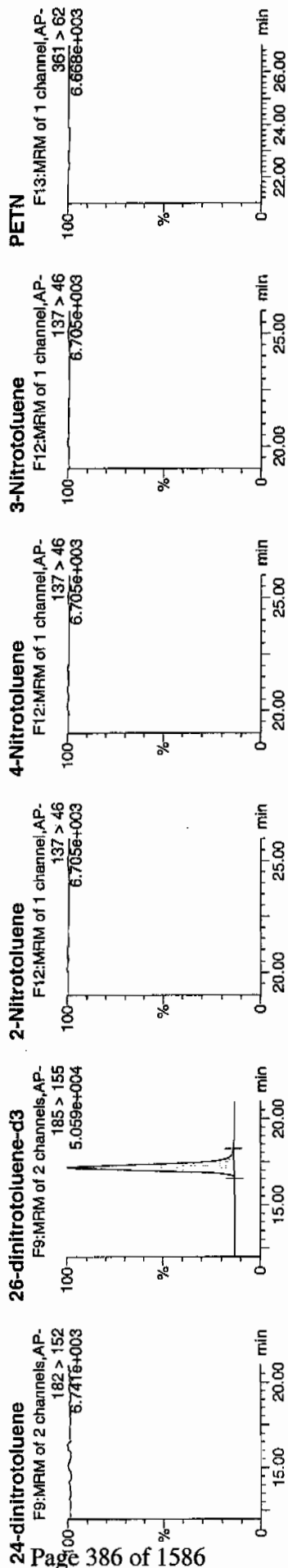


Quantify Sample Report

GEL Laboratories, LLC / Analyst : Michael A. Penny

Printed: Sat Jan 23 10:12:36 2010, Page 50 of 79

Dataset: C:\MASSLYNX\New_Exp_PRO\011810expA4.qld, Time: Sat Jan 23 10:08:29 2010



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	Conc (ng/ml)	% Rec	% Dev	SN
XIBLK23	HMX	176 > 102			3609.017									
XIBLK23	RDX	176 > 102			3609.017									
XIBLK23	135-Trinitrobenzene	213 > 183			3609.017									
XIBLK23	13-Dinitrobenzene-d4	172 > 142	11.92	3609.017		3609.017	3609.017	bb			531.7835	106.4	6.4	291.0
XIBLK23	13-Dinitrobenzene	168 > 138			3609.017									
XIBLK23	Tetryl	241 > 181			3609.017									
XIBLK23	Nitrobenzene	123 > 46			3609.017									
XIBLK23	4-Amino-26-dinitrotoluene	197 > 167			18640.082									
XIBLK23	2-Amino-46-dinitrotoluene	197 > 180			18640.082									
XIBLK23	246-Trinitrotoluene	227 > 210			18640.082									
XIBLK23	34-dinitrotoluene	182 > 152			18640.082									
XIBLK23	26-dinitrotoluene	182 > 152			18640.082									
XIBLK23	24-dinitrotoluene	182 > 152			18640.082									
XIBLK23	26-dinitrotoluene-d3	185 > 155	17.16	18640.082		18640.082	18640.082	bb			508.0544	101.6	1.6	1911.6
XIBLK23	2-Nitrotoluene	137 > 46			18640.082									
XIBLK23	4-Nitrotoluene	137 > 46			18640.082									
XIBLK23	3-Nitrotoluene	137 > 46			18640.082									
XIBLK23	PETN	361 > 62			18640.082									

4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1213

Lab Code: GEL

Lab Sample ID: XIBLK24

Analysis Date: 23-JAN-10 03:43

GEL Data File: EXP0118224a

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	494.474
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	523.153
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\011810expA4.qld, Time: Sat Jan 23 10:08:29 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118224a

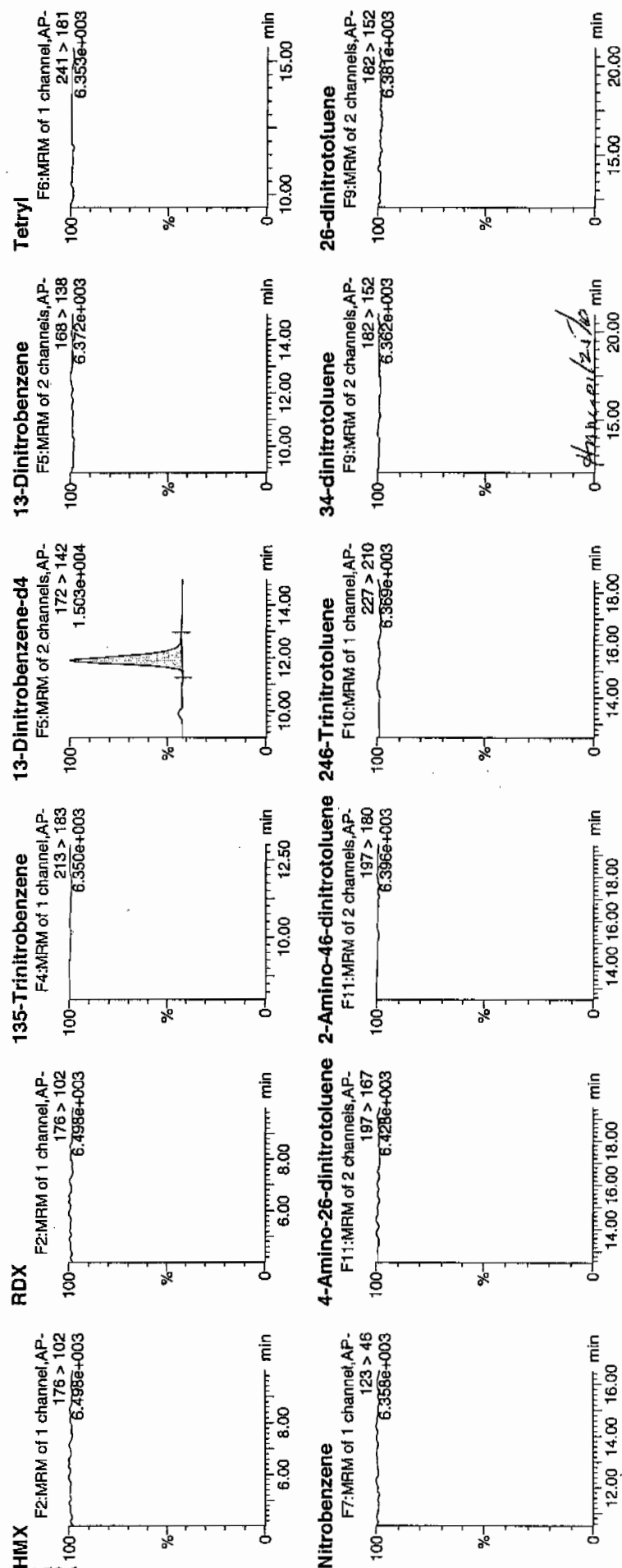
Date: 23-Jan-2010

Time: 03:43:43

ID: XIBLK24

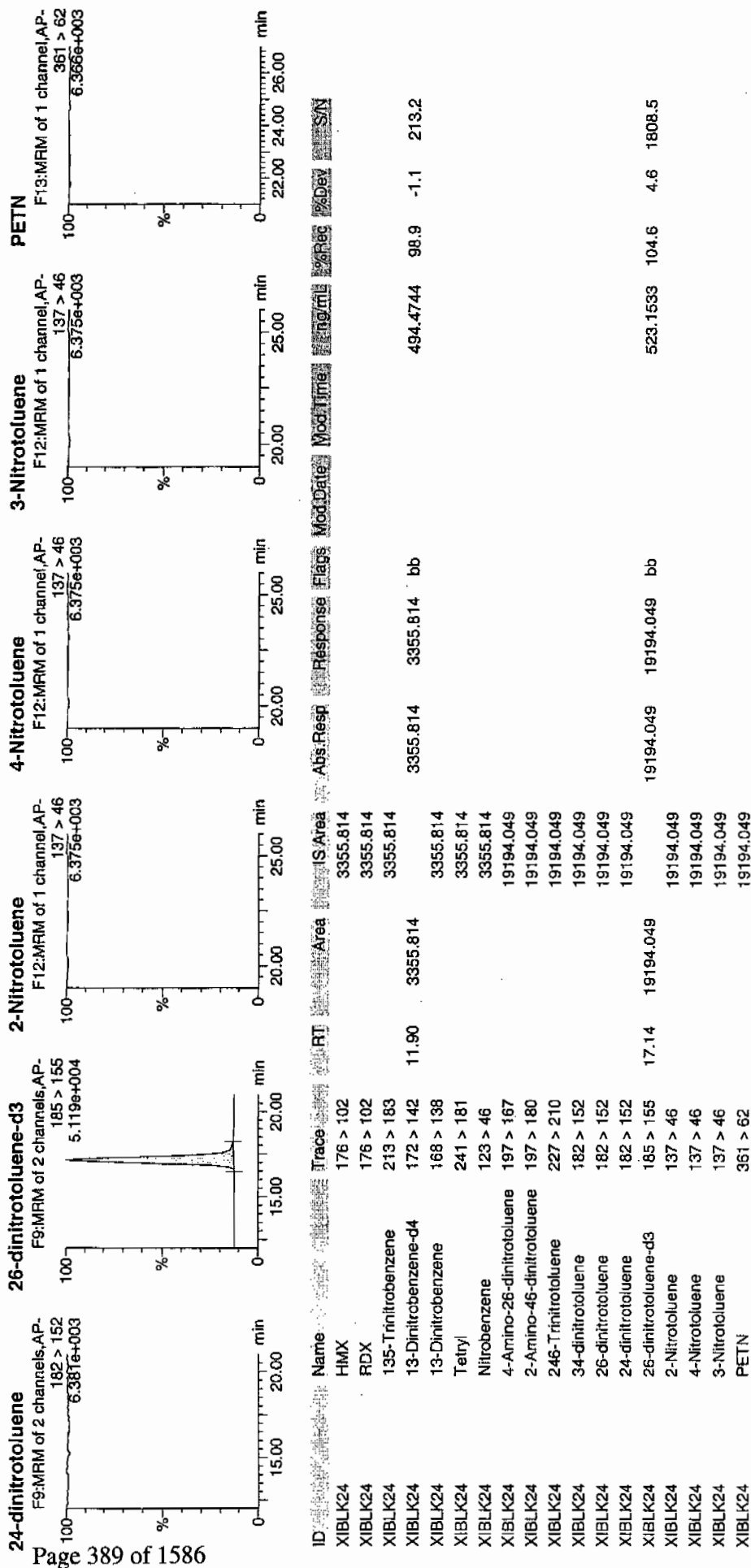
Vial: 1:1,A

11/23/10



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

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA4.qld, Time: Sat Jan 23 10:08:29 2010



4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1213

Lab Code: GEL

Lab Sample ID: XIBLK02

Analysis Date: 21-JAN-10 15:50

GEL Data File: EXS01210010.wiff

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	.583
tris(o-cresyl) phosphate	0	7.47
TATB	0	0
3,5-Dinitroaniline	0	0
2,4-Diamino-6-nitrotoluene	0	0
2,6-Diamino-4-nitrotoluene	0	0

Jan 11/22/10

Sample Name: "XBLK02" Sample ID: "111ER" File: "EX501210010.wif"
 Peak Name: "TATB" Mass(es): "257.2204.9 amu"
 Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
 Sample Type: Unknown
 Concentration: 0.00 ng/mL
 Acq. Date: 1/21/2010
 Acq. Time: 3:50:58 PM
 Modified: No

Proc. Algorithm: InCellQuan - IQA
 Min. Peak Width: 2.000 sec
 Min. Peak Width: 3.000 sec
 Smoothing Width: 15.0 sec
 RT Window: 8.15 min
 Expected RT: No
 Use Relative RT: No

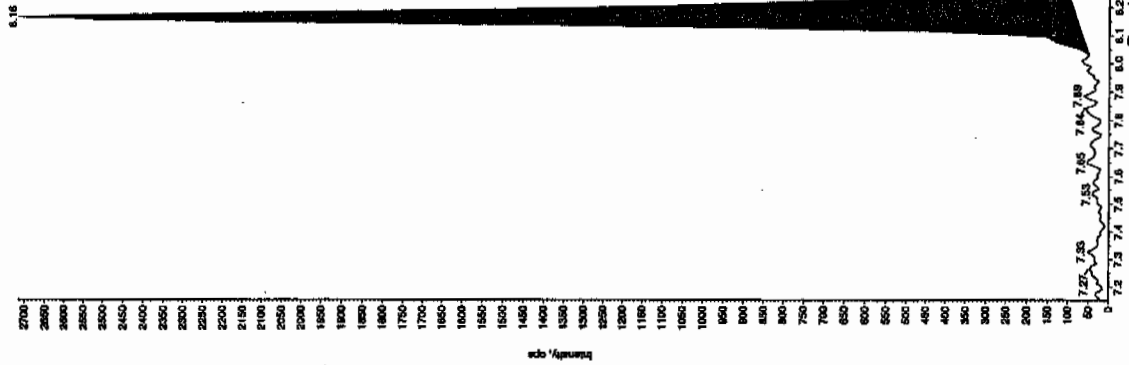
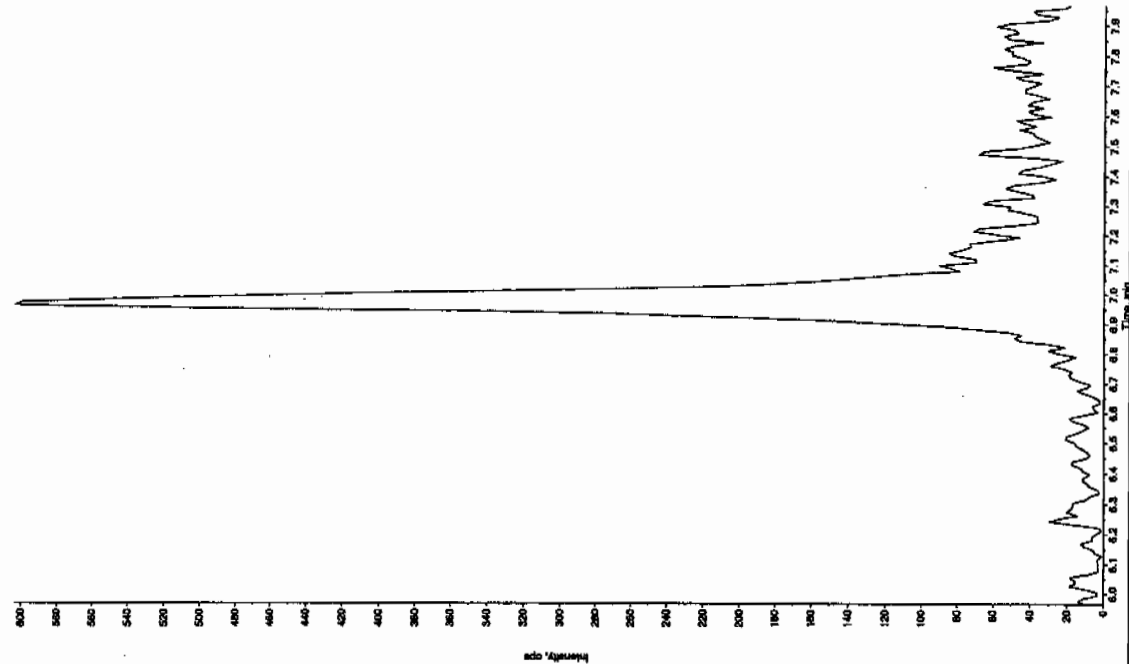
Int. Type: Valley
 Retention Time: 8.16 min
 Area: 1.30e+004 counts
 Height: 2633.214 cps
 Start Time: 8.03 min
 End Time: 8.40 min

Sample Name: "XBLK02" Sample ID: "111ER" File: "EX501210010.wif"
 Peak Name: "35-Dihydrocortisol" Mass(es): "182.046.0 amu"
 Comment: "LCMSEXP_B" Annotation: ""

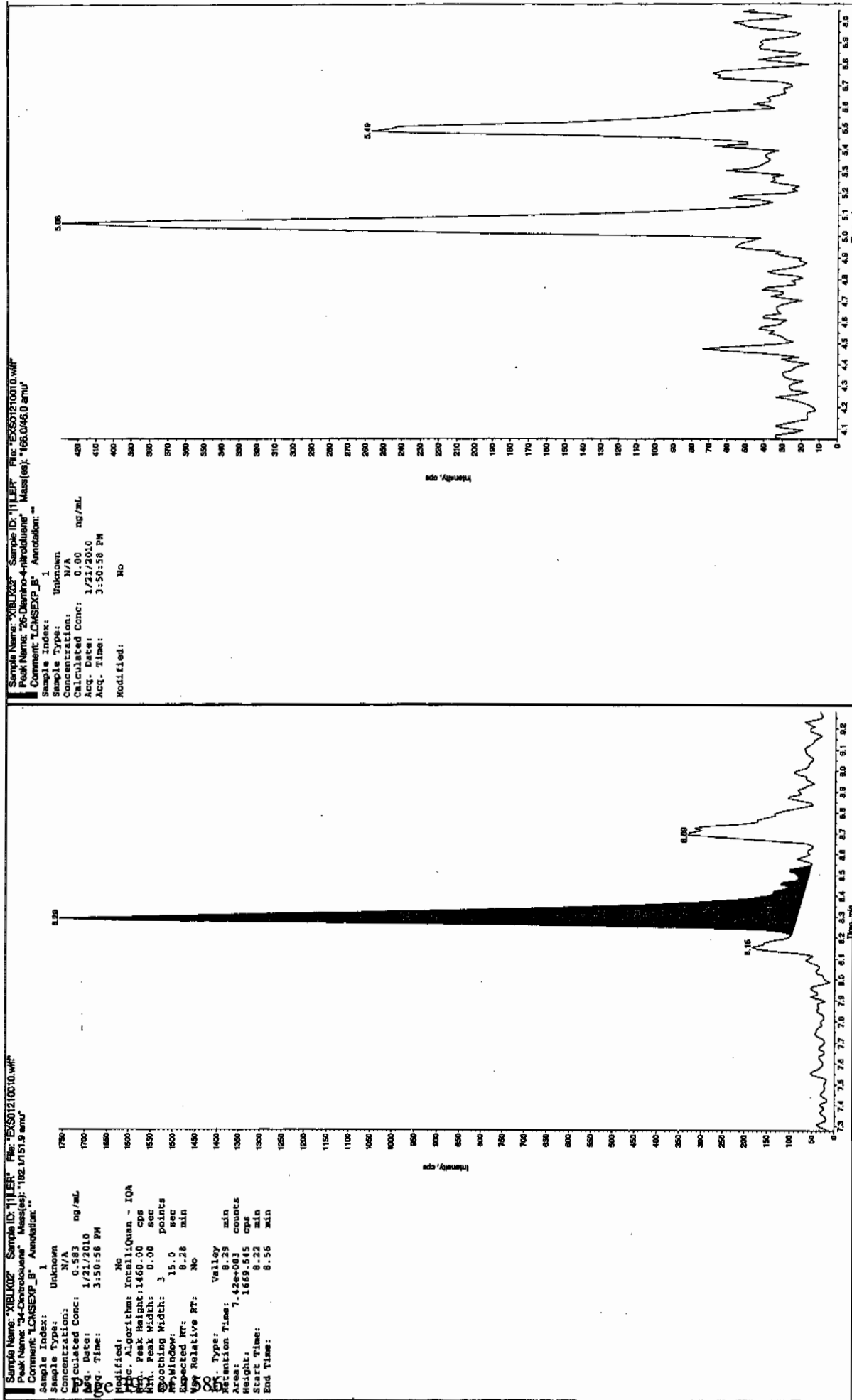
Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A
 Calculated Conc: No Intercept
 Acq. Date: 1/21/2010
 Acq. Time: 3:50:58 PM

Proc. Algorithm: InCellQuan - IQA
 Min. Peak Width: 2.000 sec
 Min. Peak Width: 3.000 sec
 Smoothing Width: 15.0 sec
 RT Window: 8.15 min
 Expected RT: No
 Use Relative RT: No

Int. Type: Valley
 Retention Time: 8.16 min
 Area: 1.30e+004 counts
 Height: 2633.214 cps
 Start Time: 8.03 min
 End Time: 8.40 min



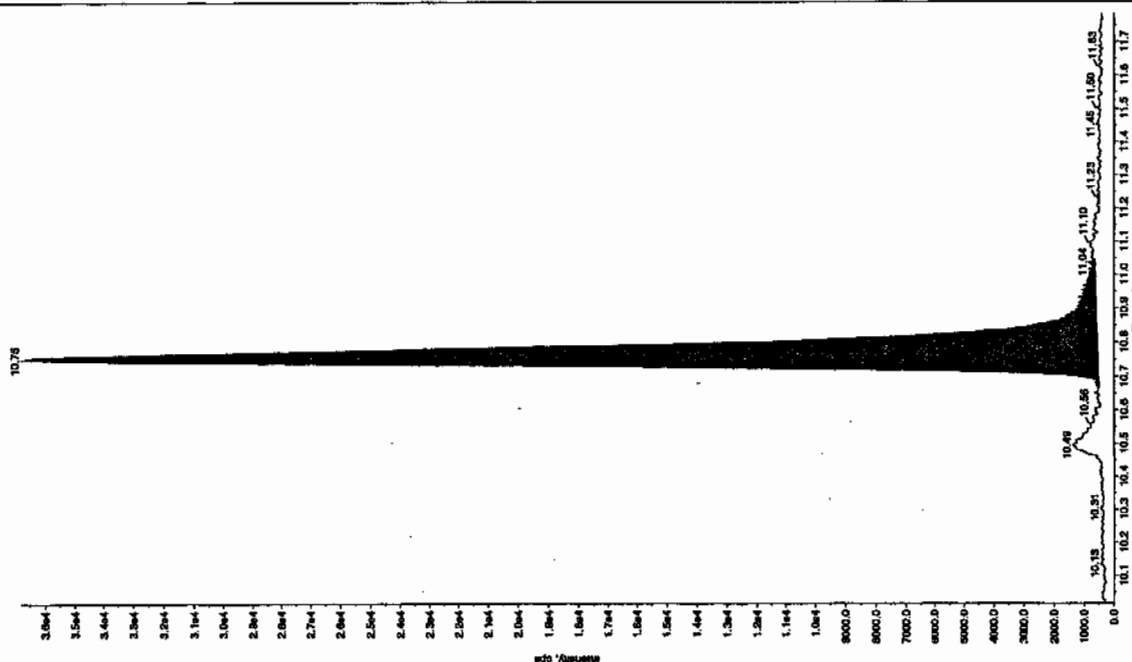
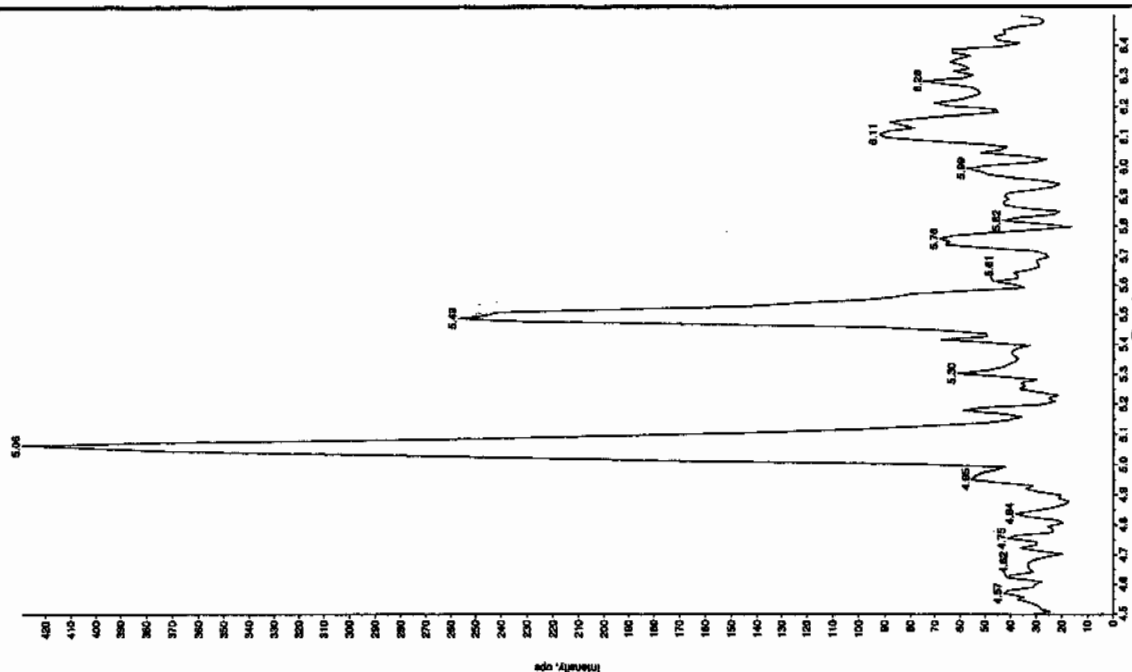
Jan 11/22/10



Sample Name: "XBLX02" Sample ID: "11111" File: "EX50121010.wif"
 Peak Name: "24-Diurino-5-pikotoluene" Mass(es): "166.046.0 amu"
 Comment: "LCMSXP_B" Annotation: ""

Sample Index: 1
 Sample Type: Unknown
 Concentration: 0.00 mg/mL
 Acq. Date: 1/21/2010
 Acq. Time: 3:50:58 PM
 Modified: No

Proc. Algorithm: IntelliQuan - IQA
 Min. Peak Height: 1.08e4 cps
 Min. Peak Width: 0.00 sec
 Smoothing Width: 3 points
 RT Window: 30.0 sec
 Expected RT: 10.8 min
 Use Relative RT: No
 Int. Type: Valley
 Retention Time: 10.8 min
 Area: 1.47e+005 counts
 Height: 36286.469 cps
 Start Time: 10.7 min
 End Time: 11.0 min



4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1213

Lab Code: GEL

Lab Sample ID: XIBLK03

Analysis Date: 21-JAN-10 16:22

GEL Data File: EXS01210012.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 1/22/10

Sample Name: XBL003 Sample ID: 11111111 File: EX501210012.wif
Peak Name: TATB Mass(es): 257.2204.9 amu
Comment: LCMSEXP_B7 Annotation: "

Sample Index: 1
Sample Type: Unknown
Concentration: 0.00 ng/mL
Acq. Date: 1/21/2010
Acq. Time: 4:22:21 PM
Modified: No

Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 35.0 points
RT Window: 15.0 sec
Expected RT: 8.15 min
Use Relative RT: No

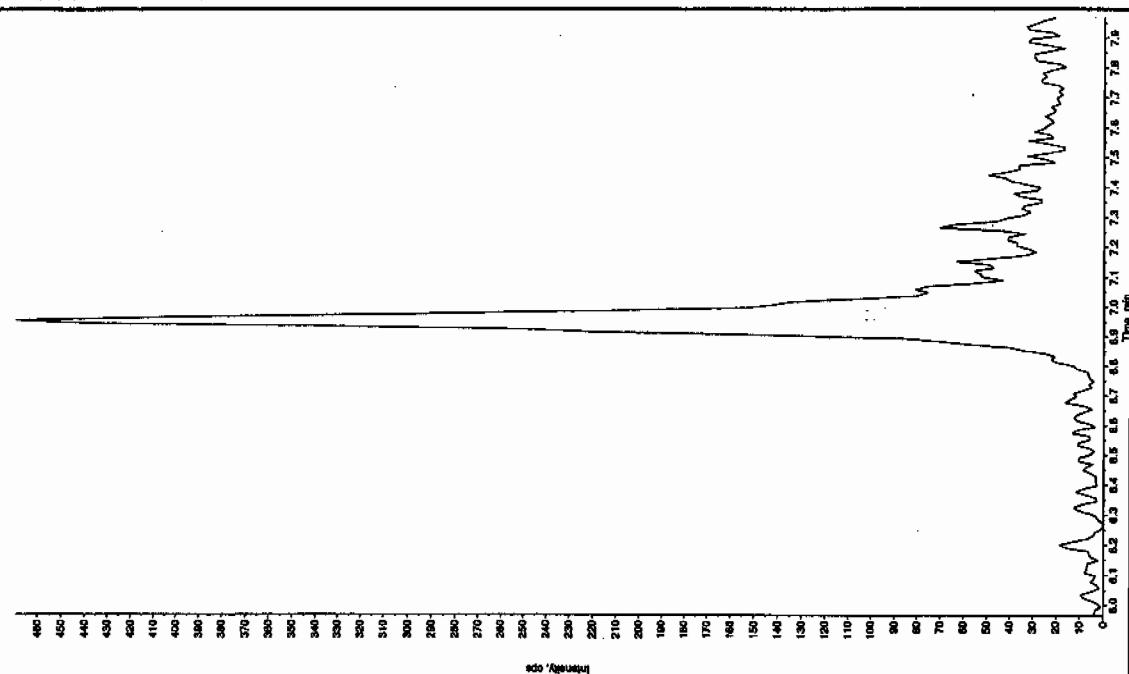
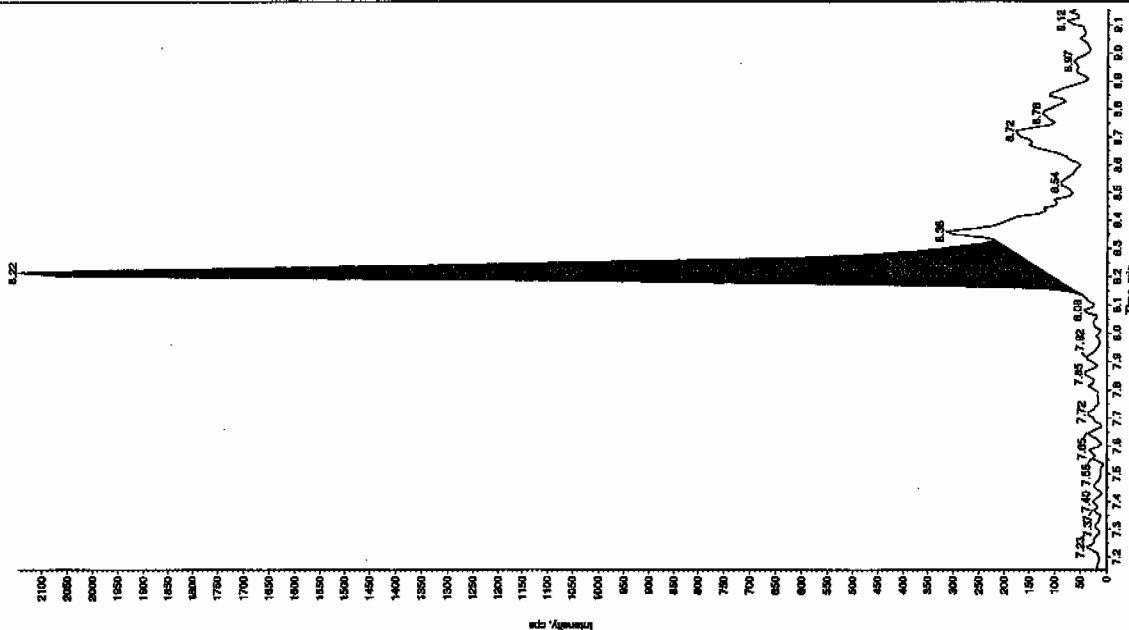
Int. Type: Valley
Retention Time: 8.22 min
Area: 8.43e+003 counts
Height: 2028.158 cps
Start Time: 8.13 min
End Time: 8.33 min

Sample Name: XBL003 Sample ID: 11111111 File: EX501210012.wif
Peak Name: 35-Dinitroresorcinol Mass(es): 182.0460.0 amu
Comment: LCMSEXP_B7 Annotation: "

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Acq. Date: 1/21/2010
Acq. Time: 4:22:21 PM
Modified: No

Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 35.0 points
RT Window: 15.0 sec
Expected RT: 8.15 min
Use Relative RT: No

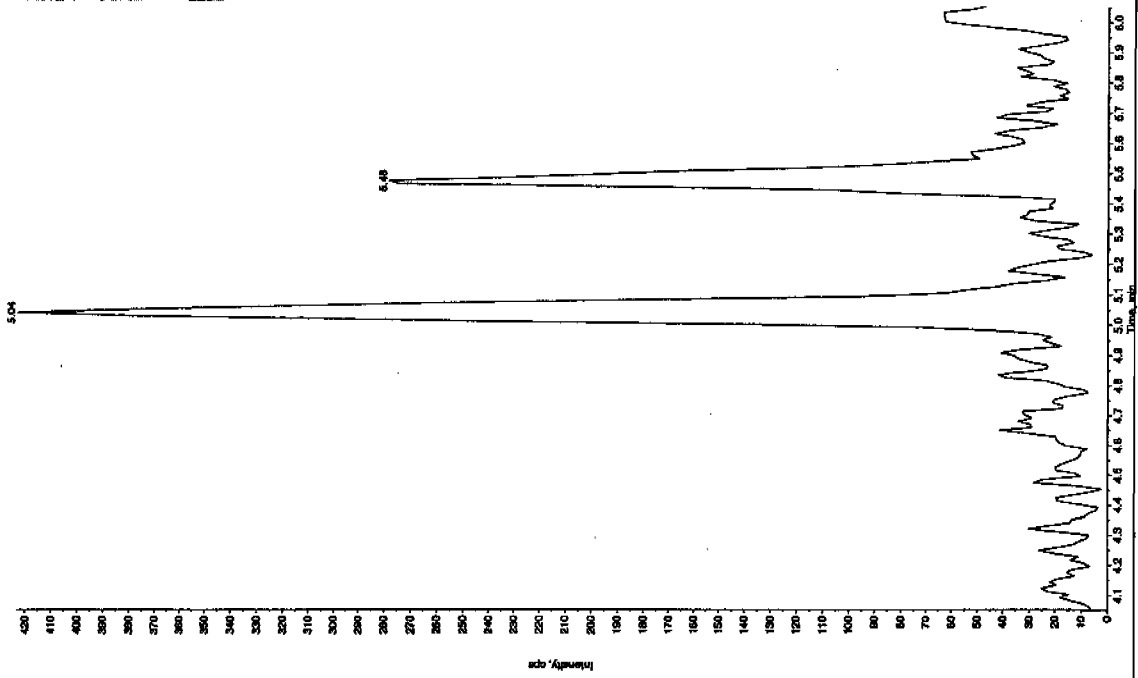
Int. Type: Valley
Retention Time: 8.22 min
Area: 8.43e+003 counts
Height: 2028.158 cps
Start Time: 8.13 min
End Time: 8.33 min



dan 01/22/10

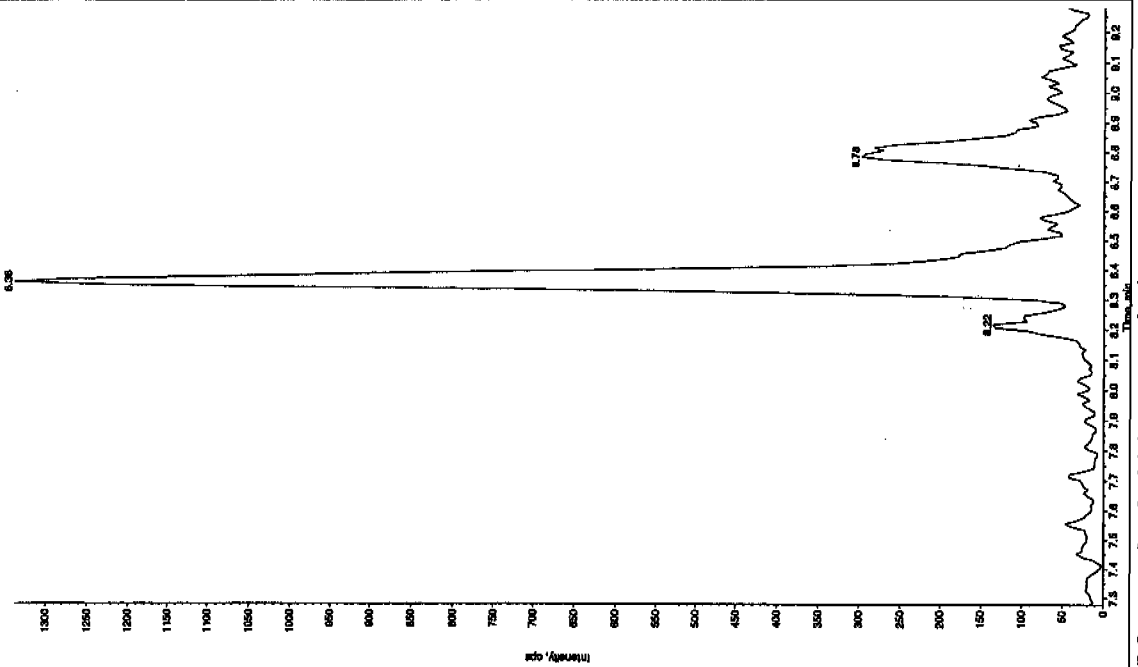
Sample Name: "YBLK03" Sample ID: "TJLER" File: "EXS01210012.wif"
 Peak Name: "26-Diamino-4-nitrobenzene" Mass(es): "166.046.0 amu"
 Comment: "LCMS EXP_B" Annotation: ""

Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A
 Calculated Conc: 0.00 ng/mL
 Acq. Date: 1/21/2010
 Acq. Time: 4:22:21 PM
 Modified: No

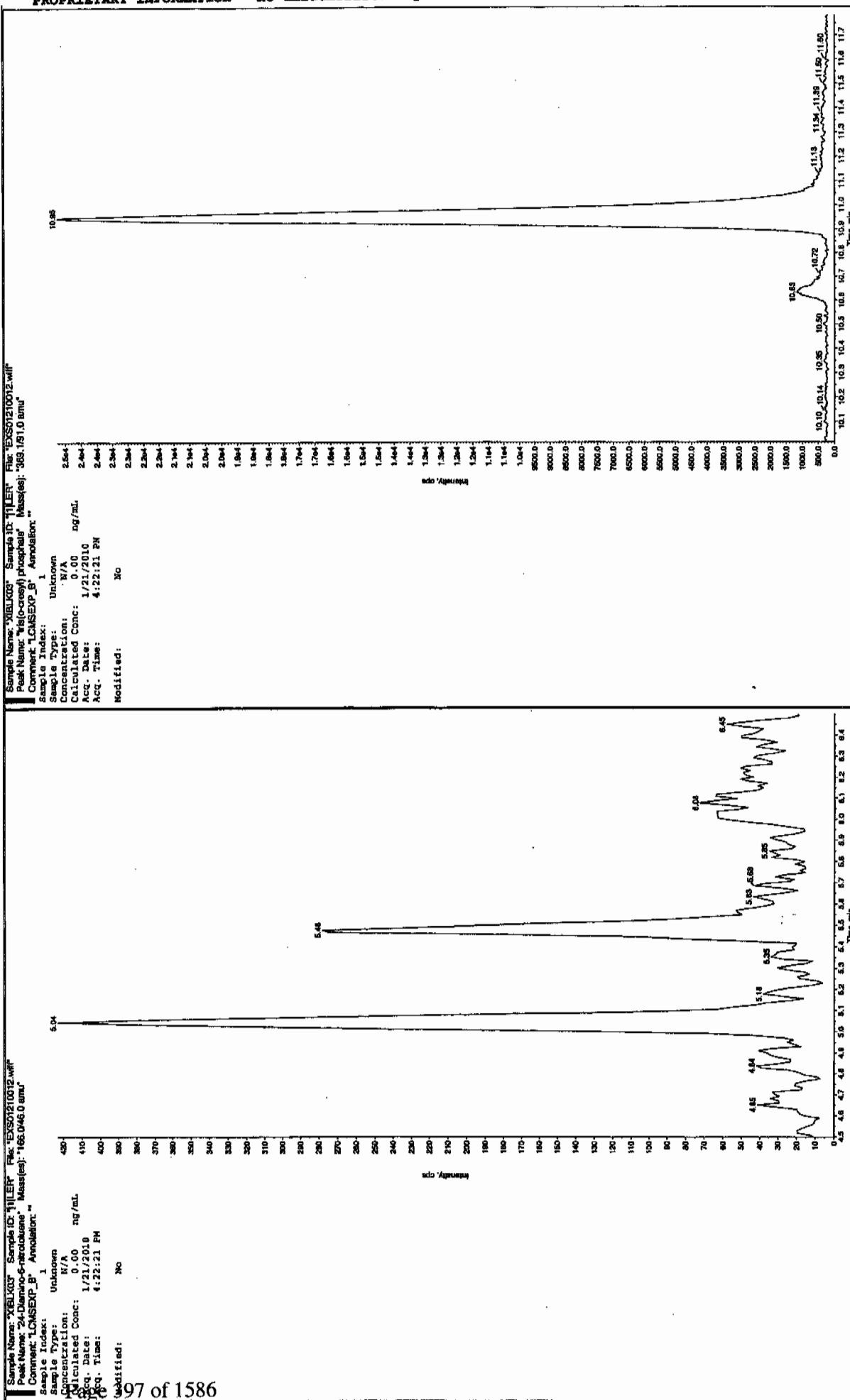


Sample Name: "YBLK03" Sample ID: "TJLER" File: "EXS01210012.wif"
 Peak Name: "34-Diaminobenzene" Mass(es): "152.151.9 amu"
 Comment: "LCMS EXP_B" Annotation: ""

Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A
 Calculated Conc: 0.00 ng/mL
 Acq. Date: 1/21/2010
 Acq. Time: 4:22:21 PM
 Modified: No



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



4A
Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1213

Lab Code: GEL

Lab Sample ID: XIBLK04

Analysis Date: 21-JAN-10 19:46

GEL Data File: EXS01210025.wiff

Instrument ID: LCMSMS

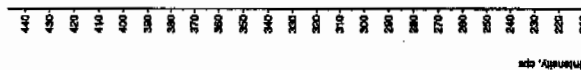
Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
tris(o-cresyl) phosphate	0	5.4
TATB	0	0
3,5-Dinitroaniline	0	0
2,4-Diamino-6-nitrotoluene	0	0
2,6-Diamino-4-nitrotoluene	0	0

See 1/22/10

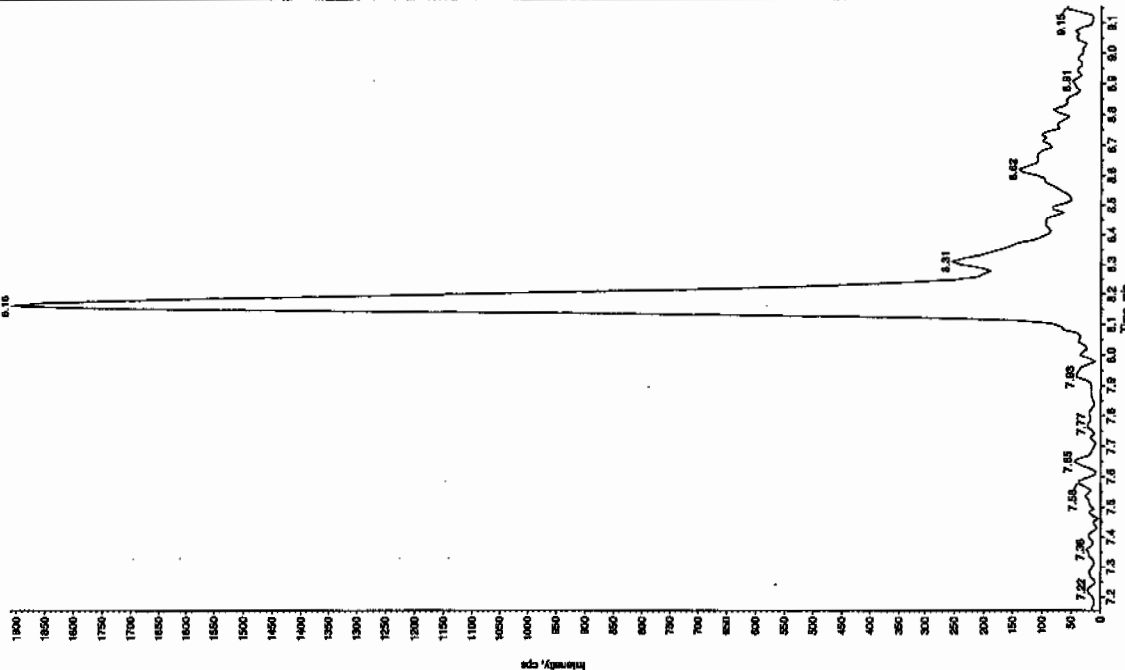
Sample Name: "XBLU04" Sample ID: "TJL" File: "EX01210025.wif"
 Peak Name: "TATB" Mass(es): "257.2204.9 amu"
 Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A ng/mL
 Calculated Conc: 0.00
 Acq. Date: 1/21/2010
 Acq. Time: 7:46:23 PM
 Modified: No

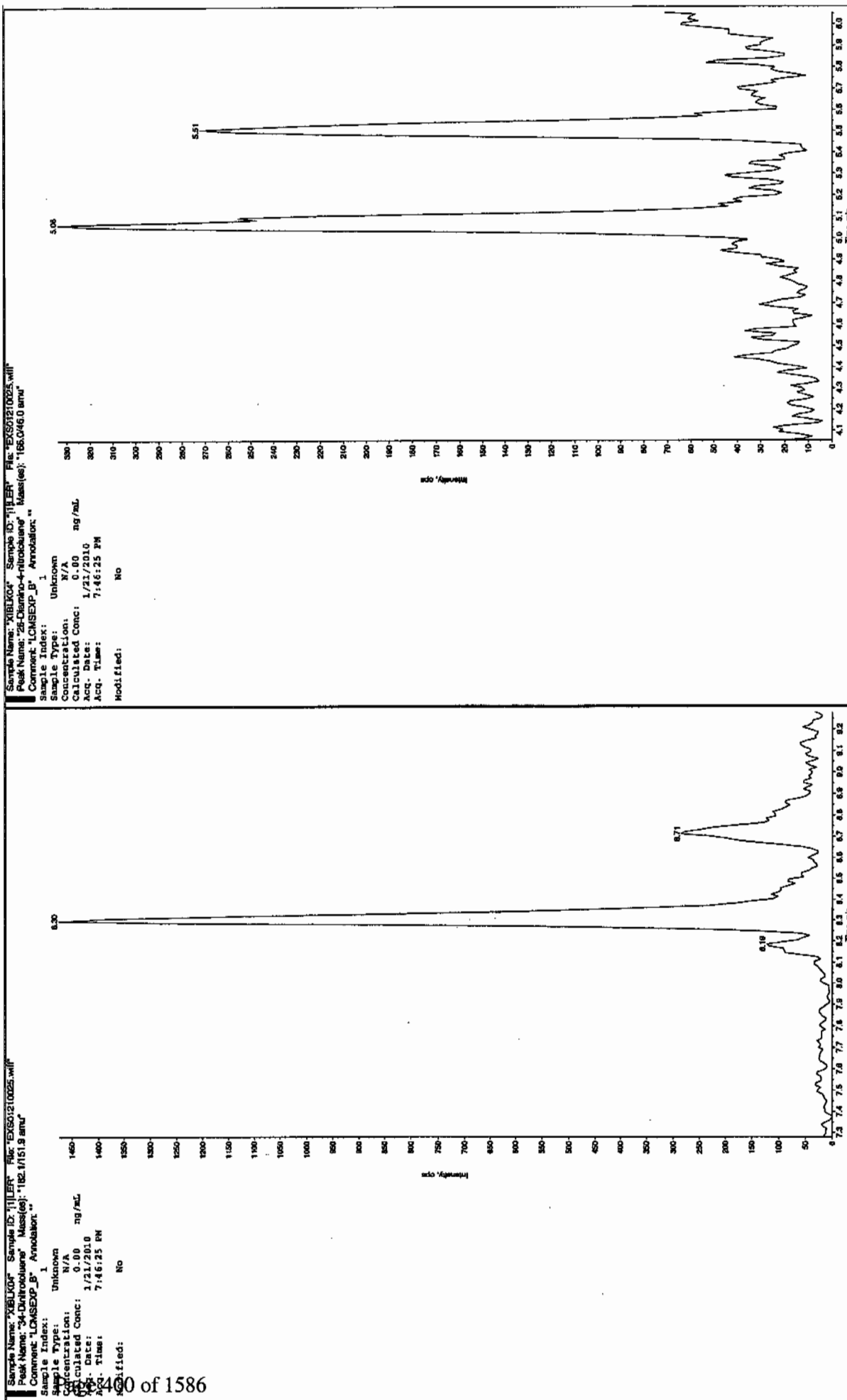


Sample Name: "XBLU04" Sample ID: "TJL" File: "EX01210025.wif"
 Peak Name: "35-Dichloroaniline" Mass(es): "182.046.0 amu"
 Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A ng/mL
 Calculated Conc: 0.00
 Acq. Date: 1/21/2010
 Acq. Time: 7:46:23 PM
 Modified: No



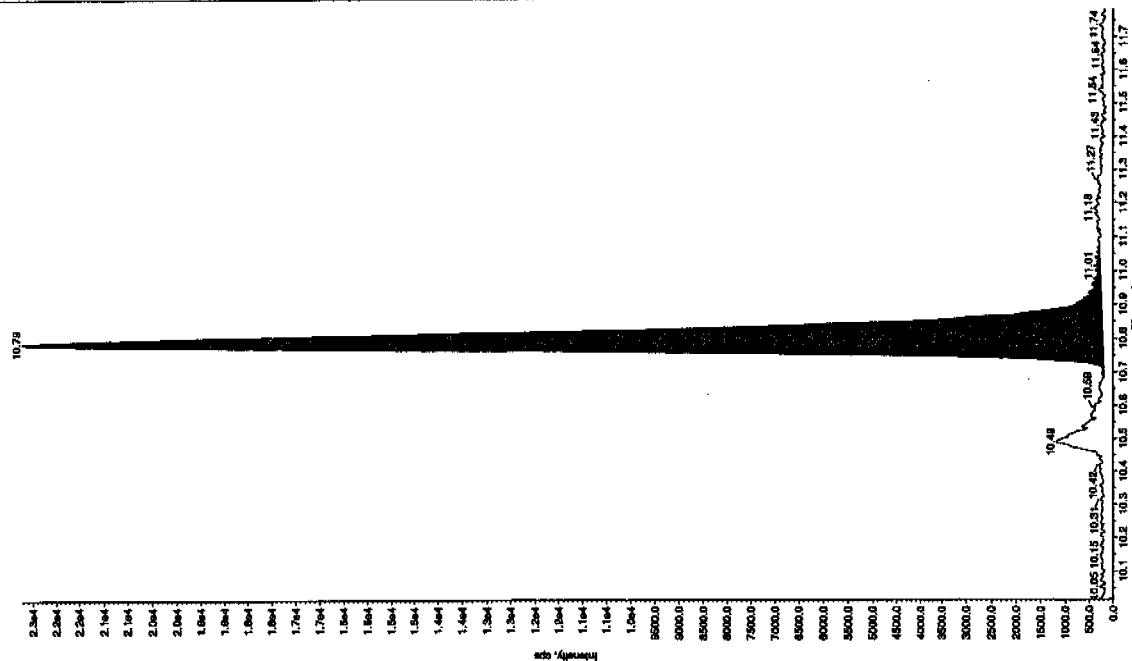
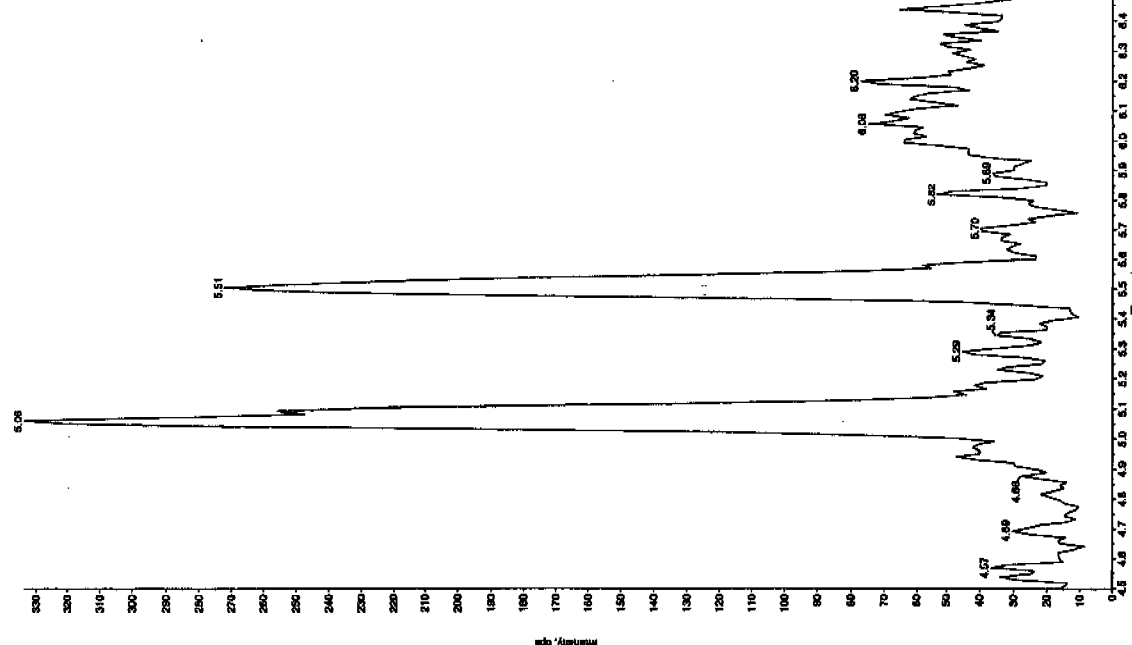
See 01/22/10



Sample Name: YELUO4 Sample ID: YELUO4 File: EX501210025.wif
 Peak Name: 24-Diamino-6-hydroxynorepinephrine Mass(es): 160.046.0 amu
 Comment: LCMSEXP_5 Annotation: "

Sample Index: 1
 Sample Type: Unknown
 Concentration: 5.40 ng/mL
 Calculated Conc: 1/21/2010
 Acq. Date: 7:46:25 PM
 Acq. Time: 7:46:25 PM
 Modified: No

Proc. Algorithm: IntelliQuan - IOA
 Min. Peak Height: 1.00e4 cps
 Min. Peak Width: 0.00 sec
 Smoothing Width: 3 points
 RT Window: 30.0 sec
 Expected RT: 10.8 min
 Use Relative RT: No
 Int. Type: Valley
 Retention Time: 10.8 min
 Area: 9.33e+004 counts
 Height: 22511.242 cps
 Start Time: 10.7 min
 End Time: 11.1 min



4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1213

Lab Code: GEL

Lab Sample ID: XIBLK05

Analysis Date: 21-JAN-10 23:10

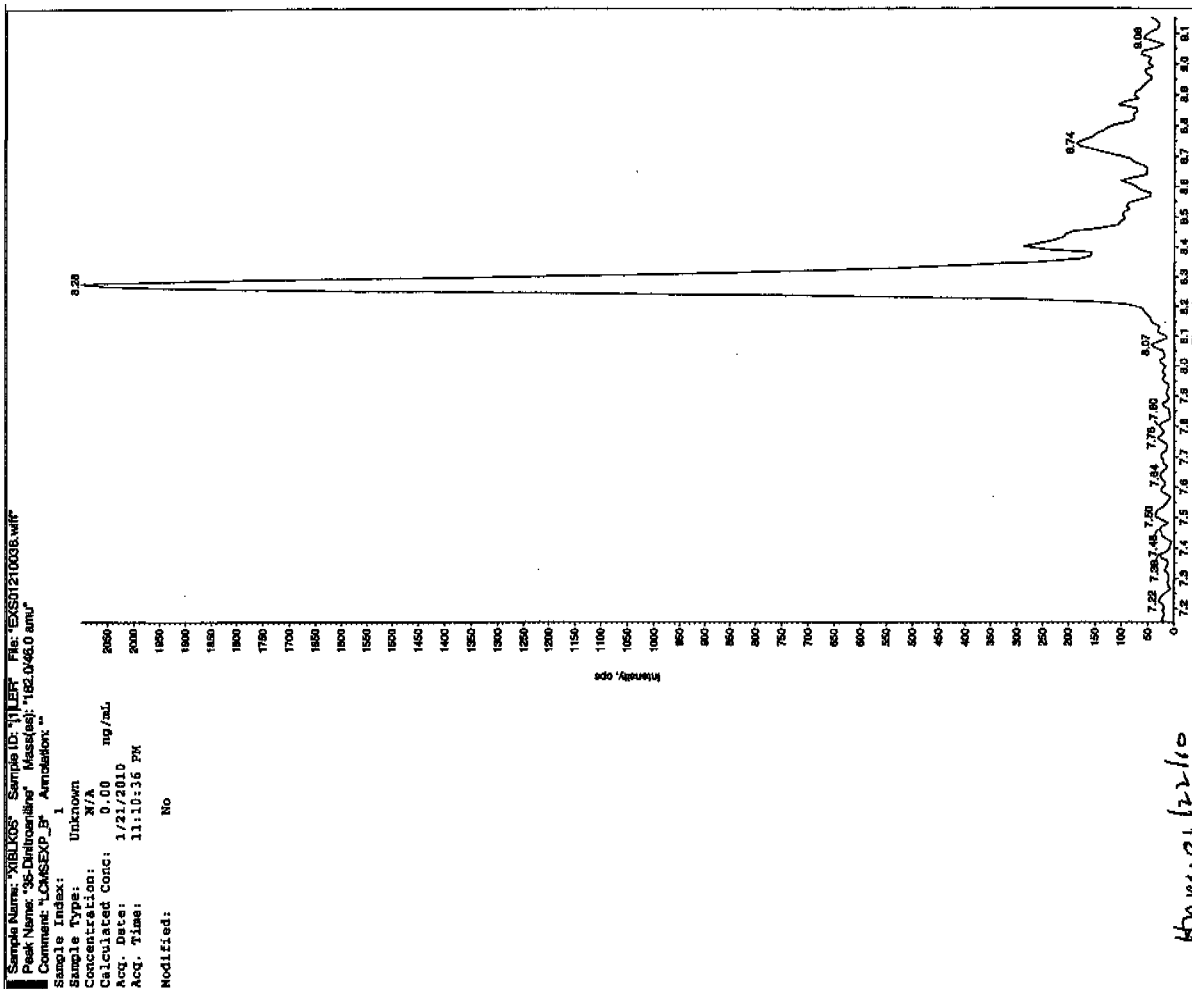
GEL Data File: EXS01210038.wiff

Instrument ID: LCMSMS

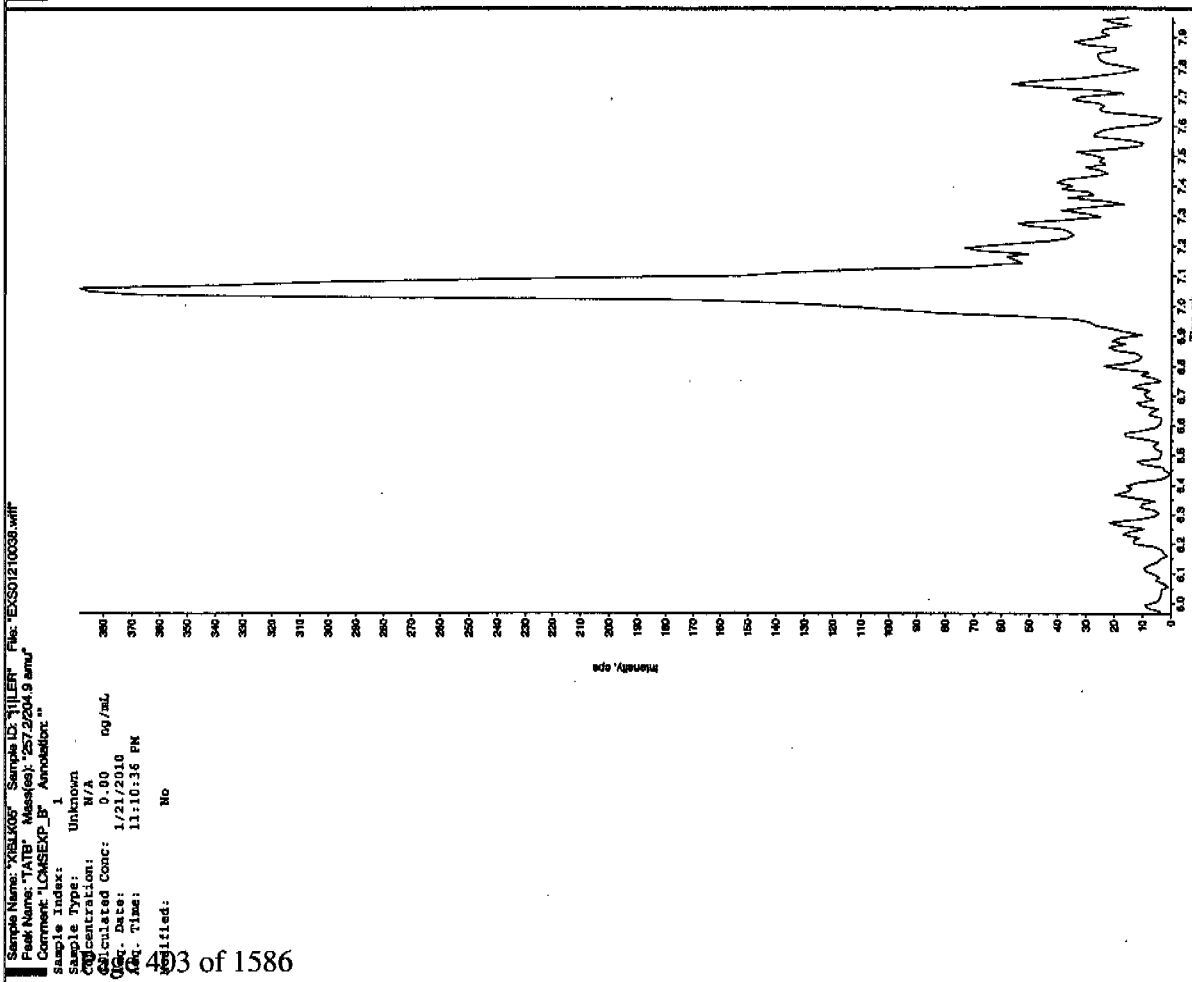
Column: Phenomenex Ultracarb 5u ODS(20)

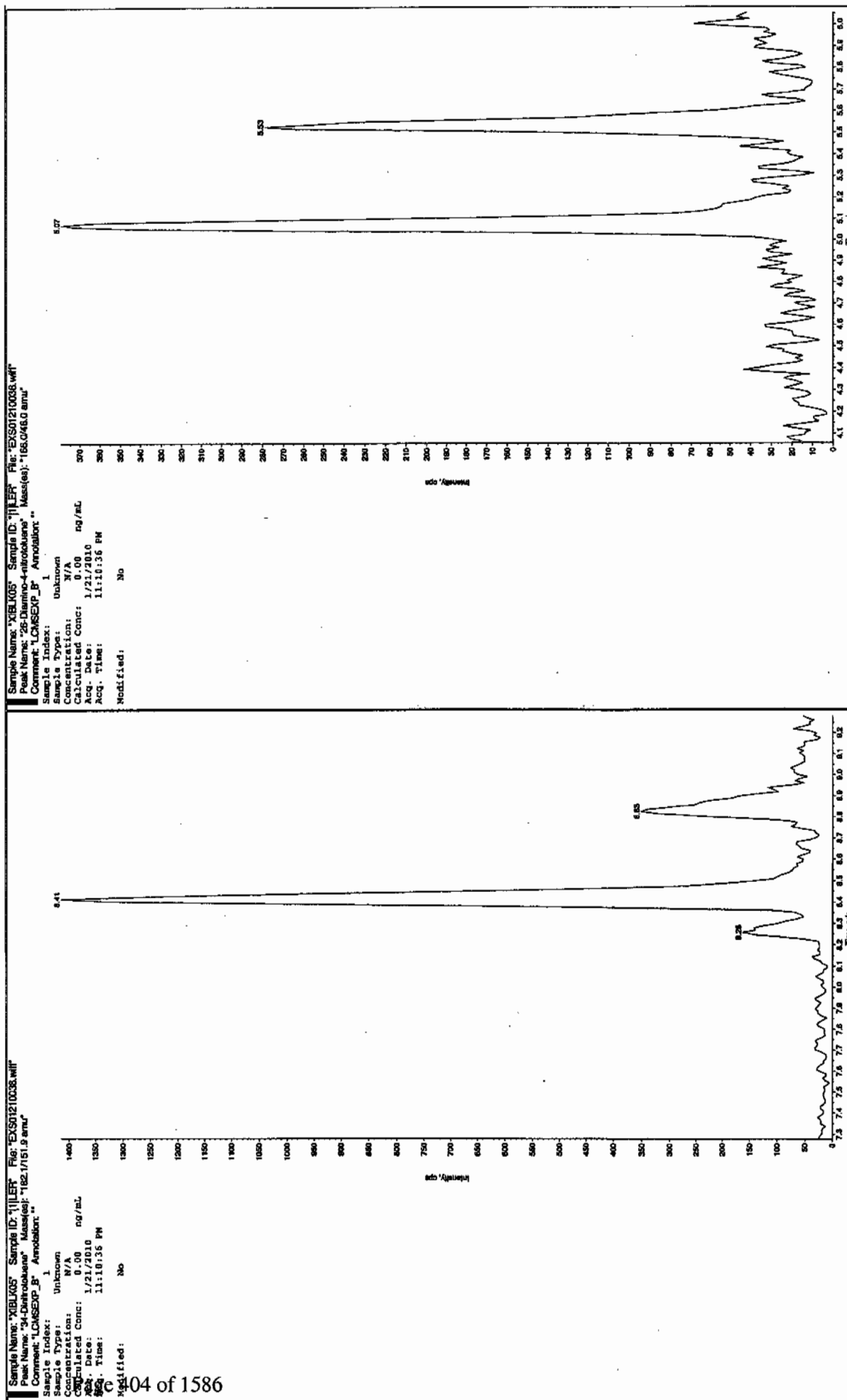
Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
tris(o-cresyl) phosphate	0	0
TATB	0	0
3,5-Dinitroaniline	0	0
2,4-Diamino-6-nitrotoluene	0	0
2,6-Diamino-4-nitrotoluene	0	0

Res 1/22/10

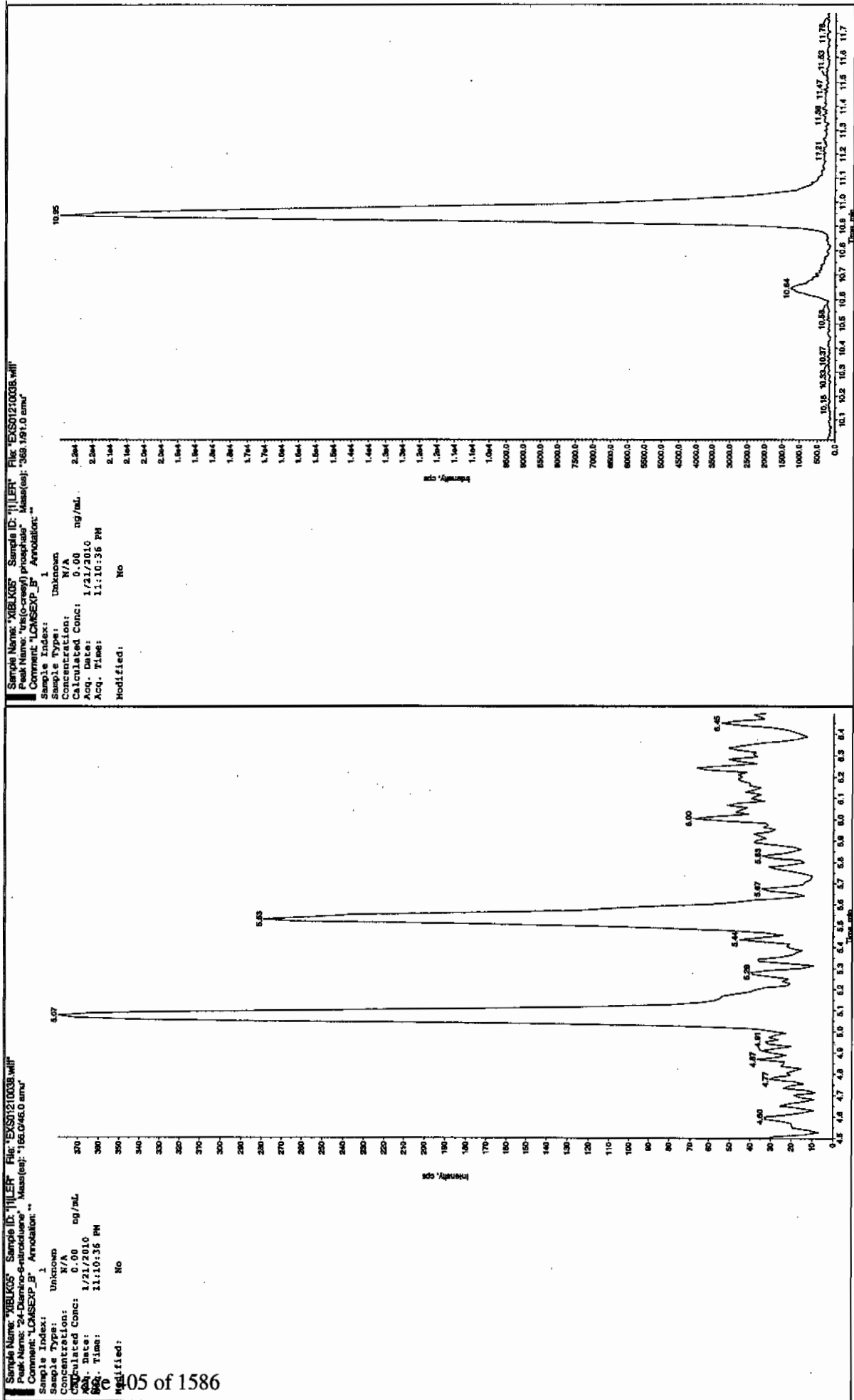


Hyne 01/22/10





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



4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1213

Lab Code: GEL

Lab Sample ID: XIBLK02

Analysis Date: 25-JAN-10 12:54

GEL Data File: EXS01250010.wiff

Instrument ID: LCMSMS

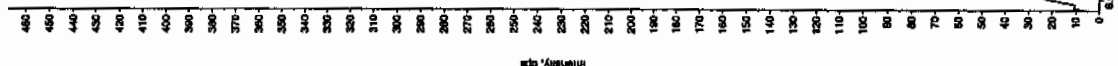
Column: Phenomenex Ultracarb 5u ODS(20)

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

Scan 1127110

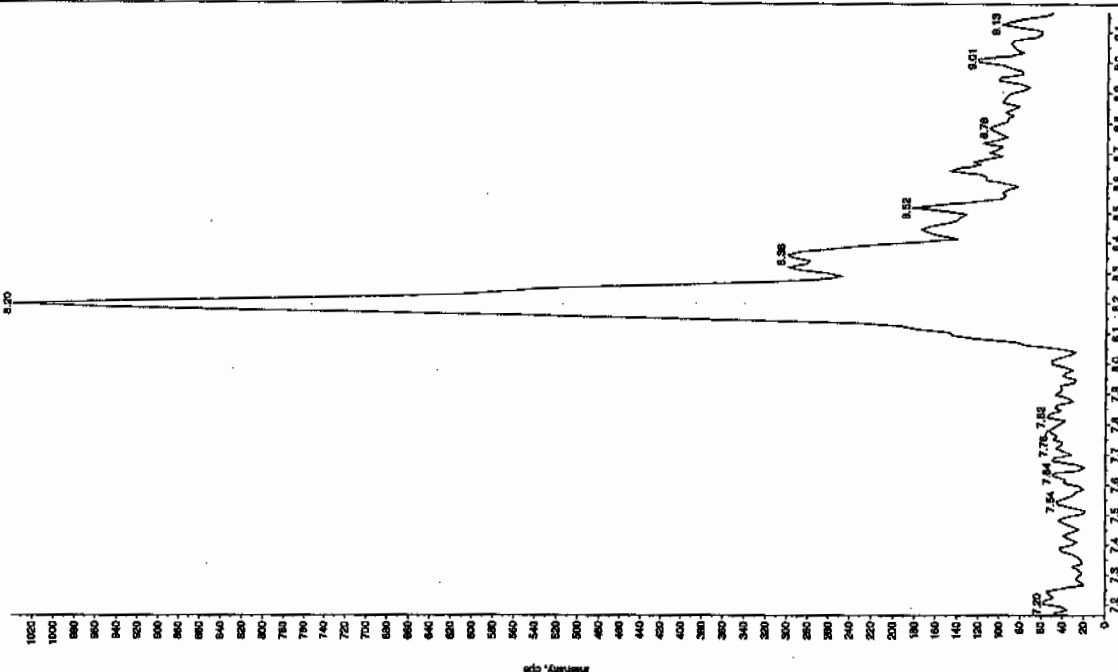
Sample Name: "XIBLK02" Sample ID: "11LER" File: "EX501250010.wif"
 Peak Name: "TATE" Mass(es): "257.22049 amu"
 Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
 Sample Type: Unknown
 Concentration: 0.00 ng/mL
 Acq. Date: 1/25/2010
 Acq. Time: 12:54:10 PM
 Modified: No



Sample Name: "XIBLK02" Sample ID: "11LER" File: "EX501250010.wif"
 Peak Name: "3S-Dinitroaniline" Mass(es): "182.0460 amu"
 Comment: "LCMSEXP_B" Annotation: ""

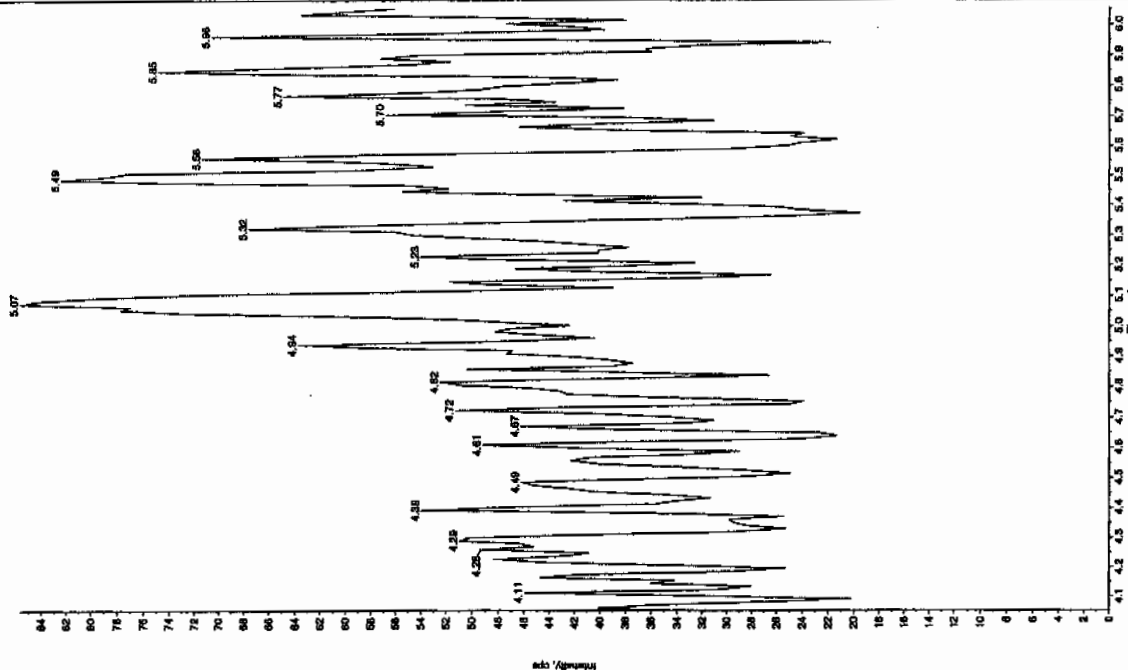
Sample Index: 1
 Sample Type: Unknown
 Concentration: 0.00 ng/mL
 Acq. Date: 1/25/2010
 Acq. Time: 12:54:10 PM
 Modified: No



Scan 01127110

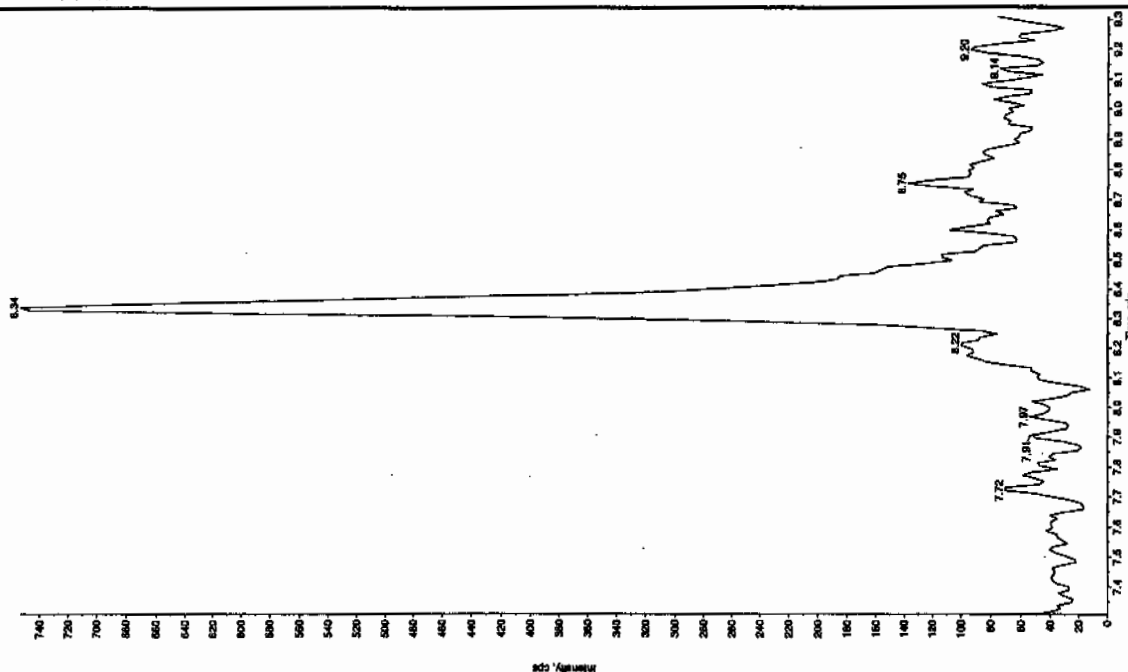
Sample Name: "XBLK02" Sample ID: "111ER" File: "EX507250010.wif"
 Peak Name: "28-Diamino-4-nitrobenzene" Mass(es): "166.046.0 amu"
 Comment: "LCMSEXP_B" Annotation: "

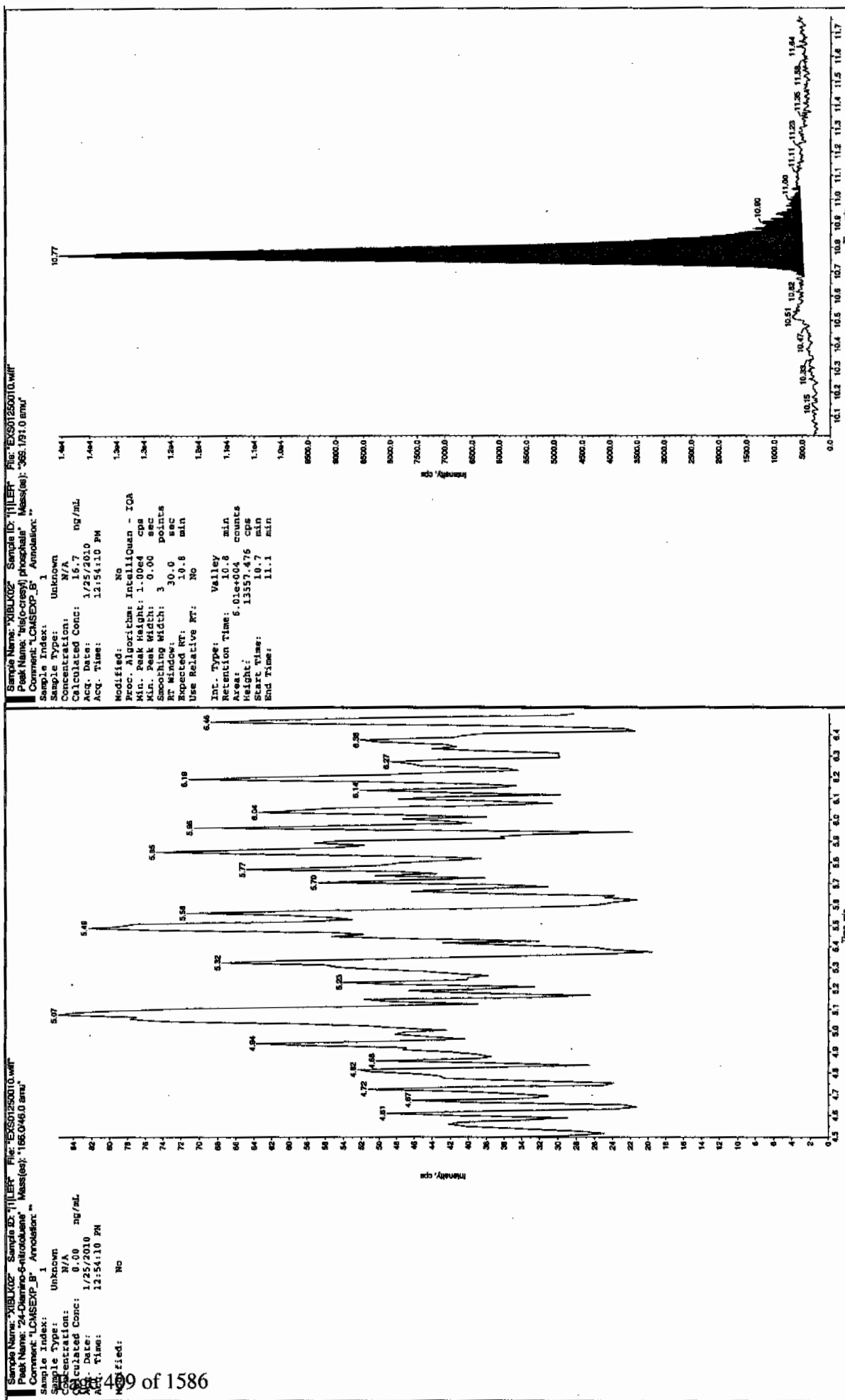
Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A
 Calculated Conc: 0.00 ng/mL
 Acq. Date: 1/25/2010
 Acq. Time: 12:54:10 PM
 Modified: No



Sample Name: "XBLK02" Sample ID: "111ER" File: "EX507250010.wif"
 Peak Name: "34-Dinitrobenzene" Mass(es): "182.051.8 amu"
 Comment: "LCMSEXP_B" Annotation: "

Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A
 Calculated Conc: 0.00 ng/mL
 Acq. Date: 1/25/2010
 Acq. Time: 12:54:10 PM
 Modified: No





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

4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1213

Lab Code: GEL

Lab Sample ID: XIBLK03

Analysis Date: 25-JAN-10 13:25

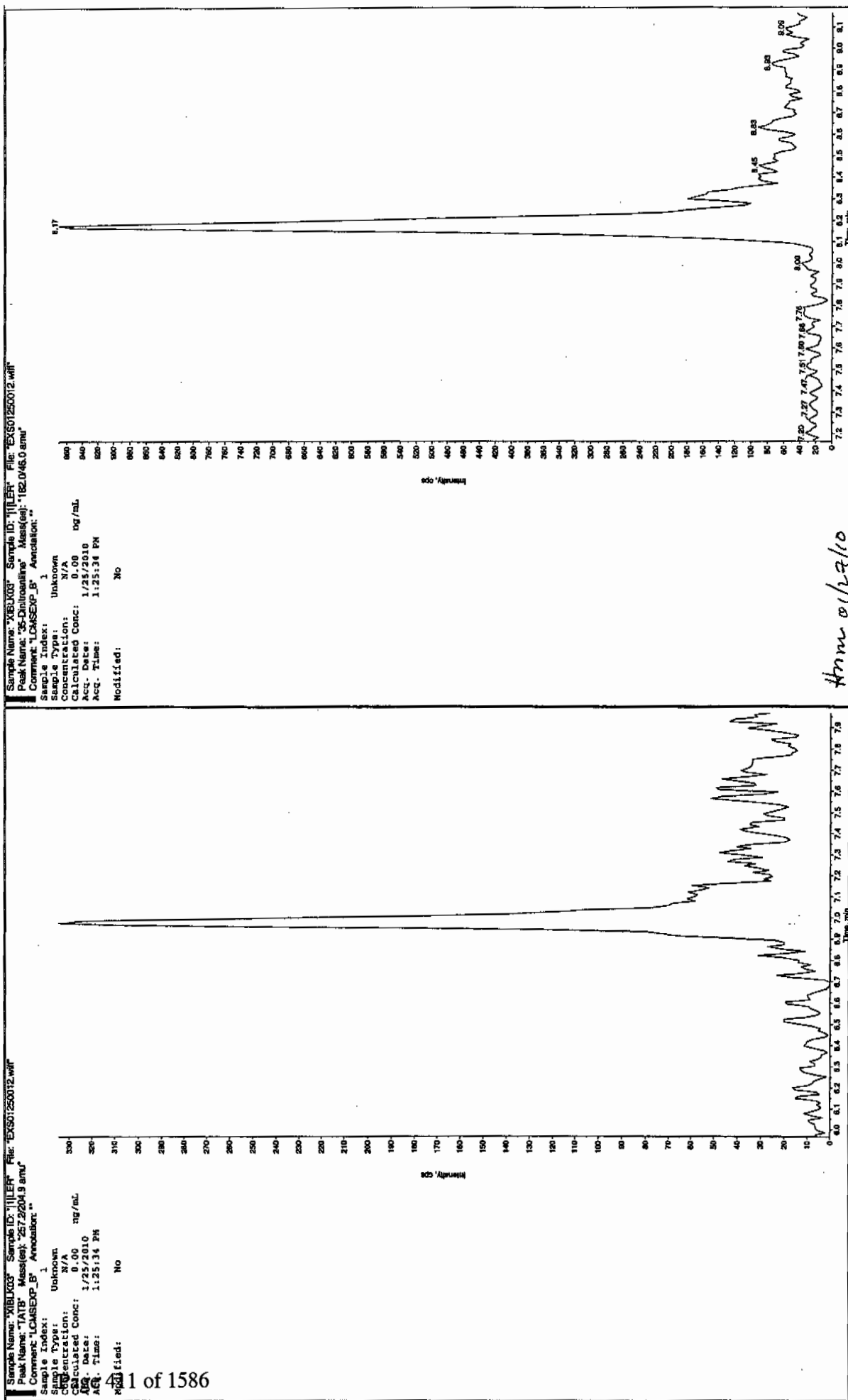
GEL Data File: EXS01250012.wiff

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

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

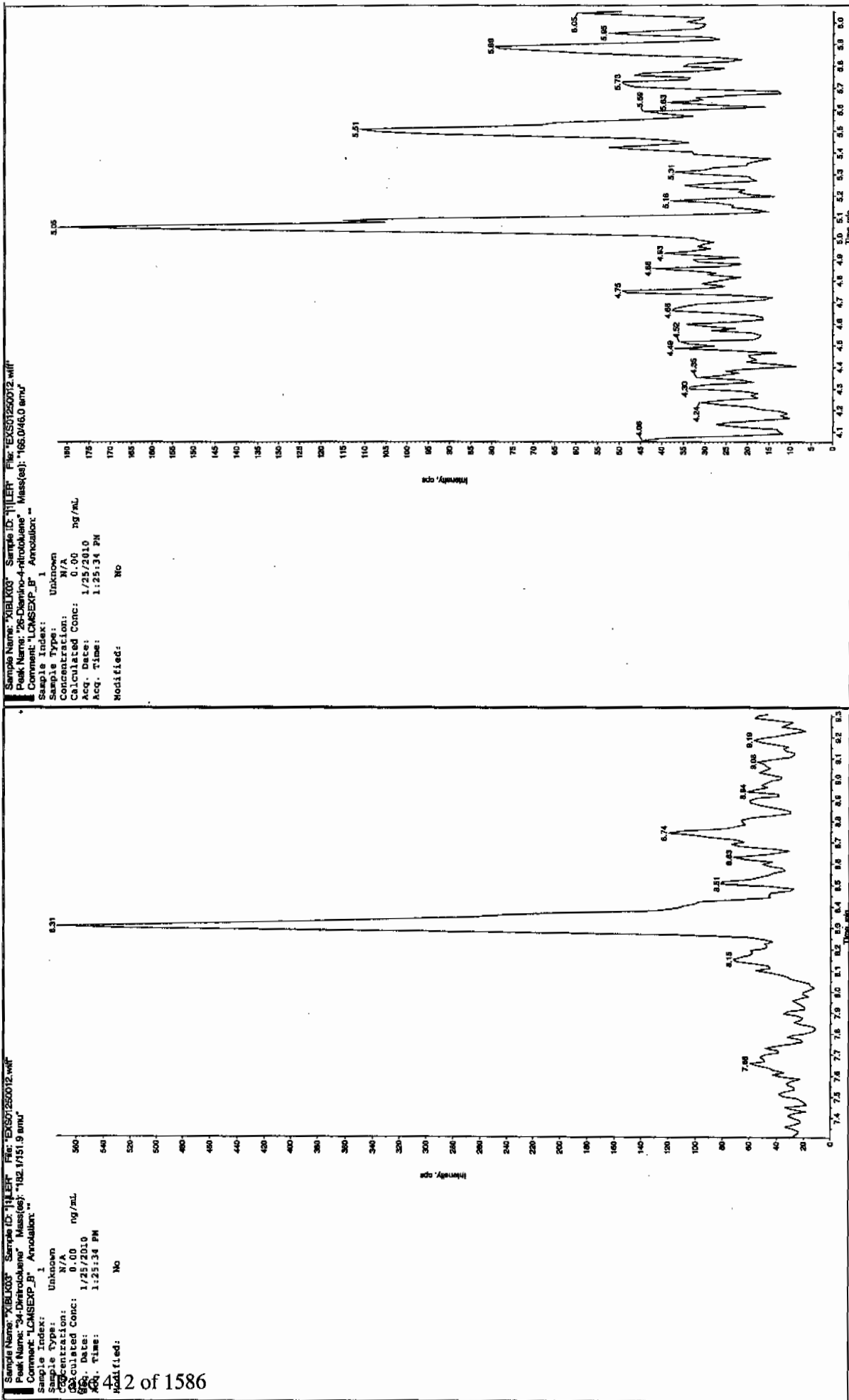
Jan 1/27/10



Jan 01/27/10

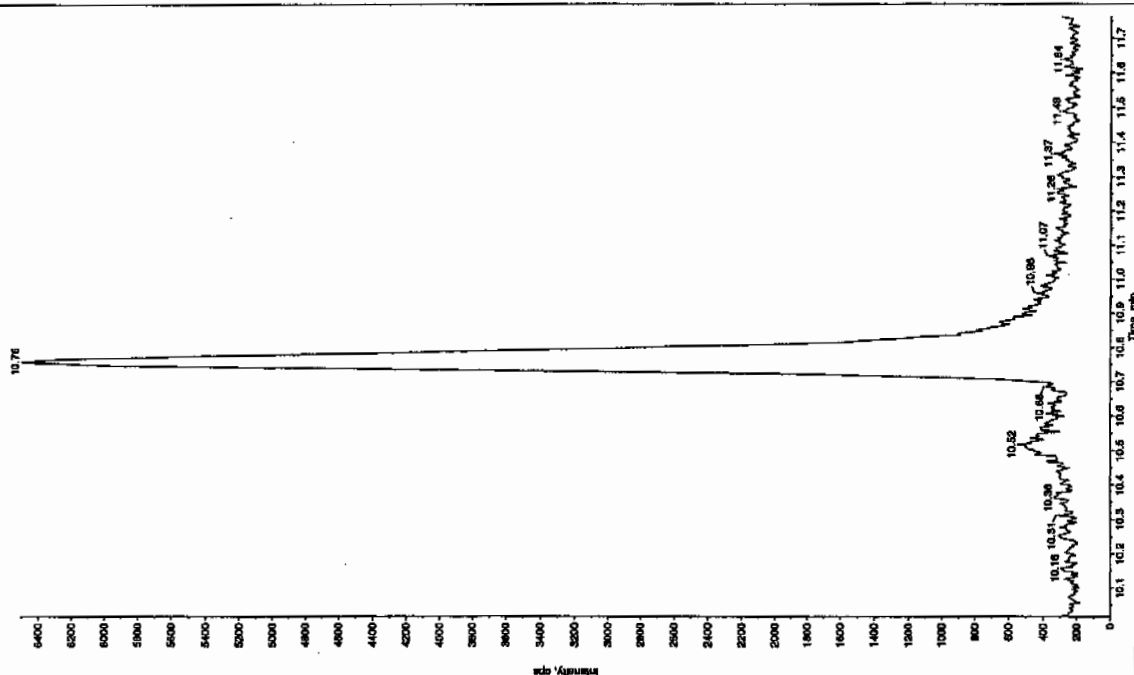
Sample Name: "XIBL003" Sample ID: "TILER" File: "EX501250012.wif"
 Peak Name: "35-Dinitroanisole" Mass(es): "182.046.0 amu"
 Comment: "LCMSEXP_B" Annotation: ""
 Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A
 Calculated Conc: 0.00 ng/mL
 Acq. Date: 1/25/2010
 Acq. Time: 1:25:34 PM
 Modified: No

Sample Name: "XIBL003" Sample ID: "TILER" File: "EX501250012.wif"
 Peak Name: "TAIB" Mass(es): "257.2204.9 amu"
 Comment: "LCMSEXP_B" Annotation: ""
 Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A
 Calculated Conc: 0.00 ng/mL
 Acq. Date: 1/25/2010
 Acq. Time: 1:25:34 PM
 Modified: No



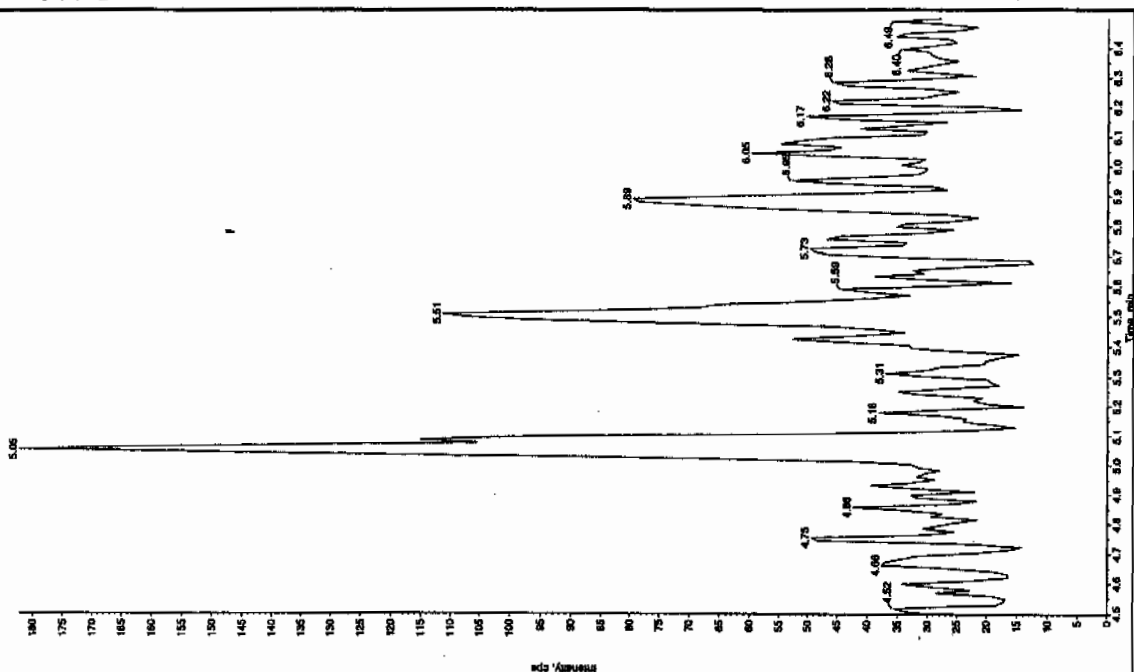
Sample Name: "XBLK03" Sample ID: "11LRF" File: "EX501250012.wif"
 Peak Name: "1100-0000" Mass(es): "353.191.0 amu"
 Comment: "LCMSXP_B" Annotation: "1"

Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A
 Calculated Conc: 0.00 ng/mL
 Acq. Date: 1/25/2010
 Acq. Time: 1:25:34 PM
 Modified: No



Sample Name: "XBLK03" Sample ID: "11LRF" File: "EX501250012.wif"
 Peak Name: "24-Oximin-6-nitrobenz" Mass(es): "166.046.0 amu"
 Comment: "LCMSXP_B" Annotation: "1"

Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A
 Calculated Conc: 0.00 ng/mL
 Acq. Date: 1/25/2010
 Acq. Time: 1:25:34 PM
 Modified: No



4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1213

Lab Code: GEL

Lab Sample ID: XIBLK04

Analysis Date: 25-JAN-10 14:28

GEL Data File: EXS01250016.wiff

Instrument ID: LCMSMS

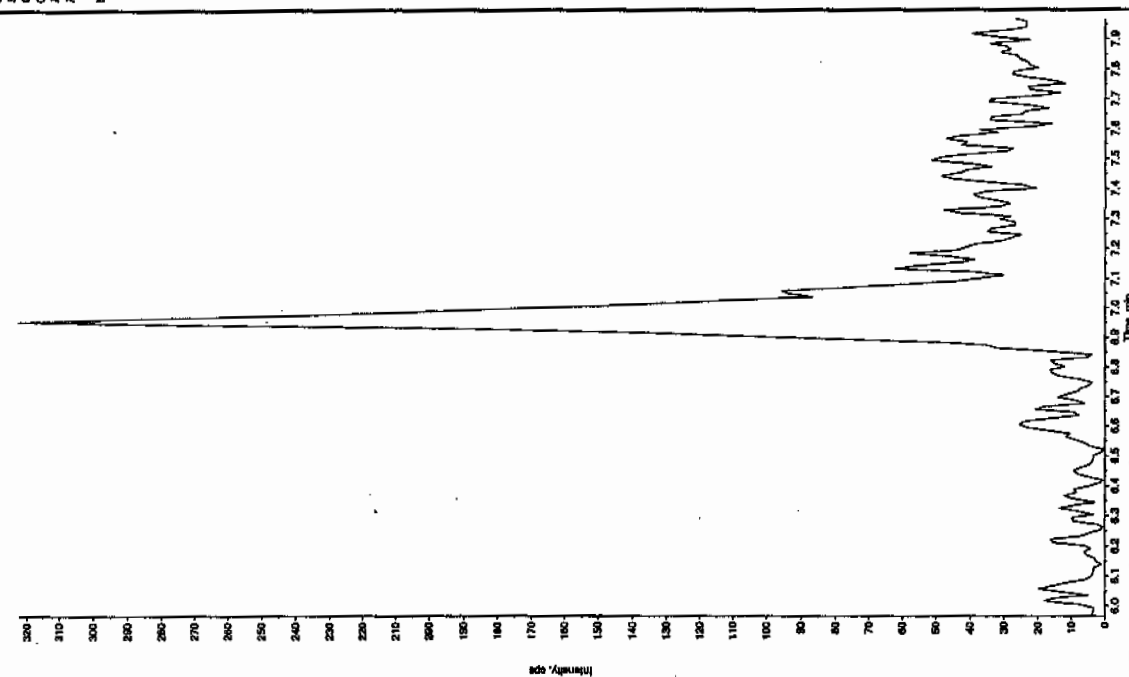
Column: Phenomenex Ultracarb 5u ODS(20)

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

See 112710

Sample Name: "XBL004" Sample ID: "11LRF" File: "EX501250016.wif"
 Peak Name: "35-Dinitrochlorine" Mass(es): "182.046.0 amu"
 Comment: "LCMSEXP_B" Annotation: "

Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A
 Calculated Conc: 0.00 ng/mL
 Acq. Date: 1/25/2010
 Acq. Time: 2:28:22 PM
 Modified: No

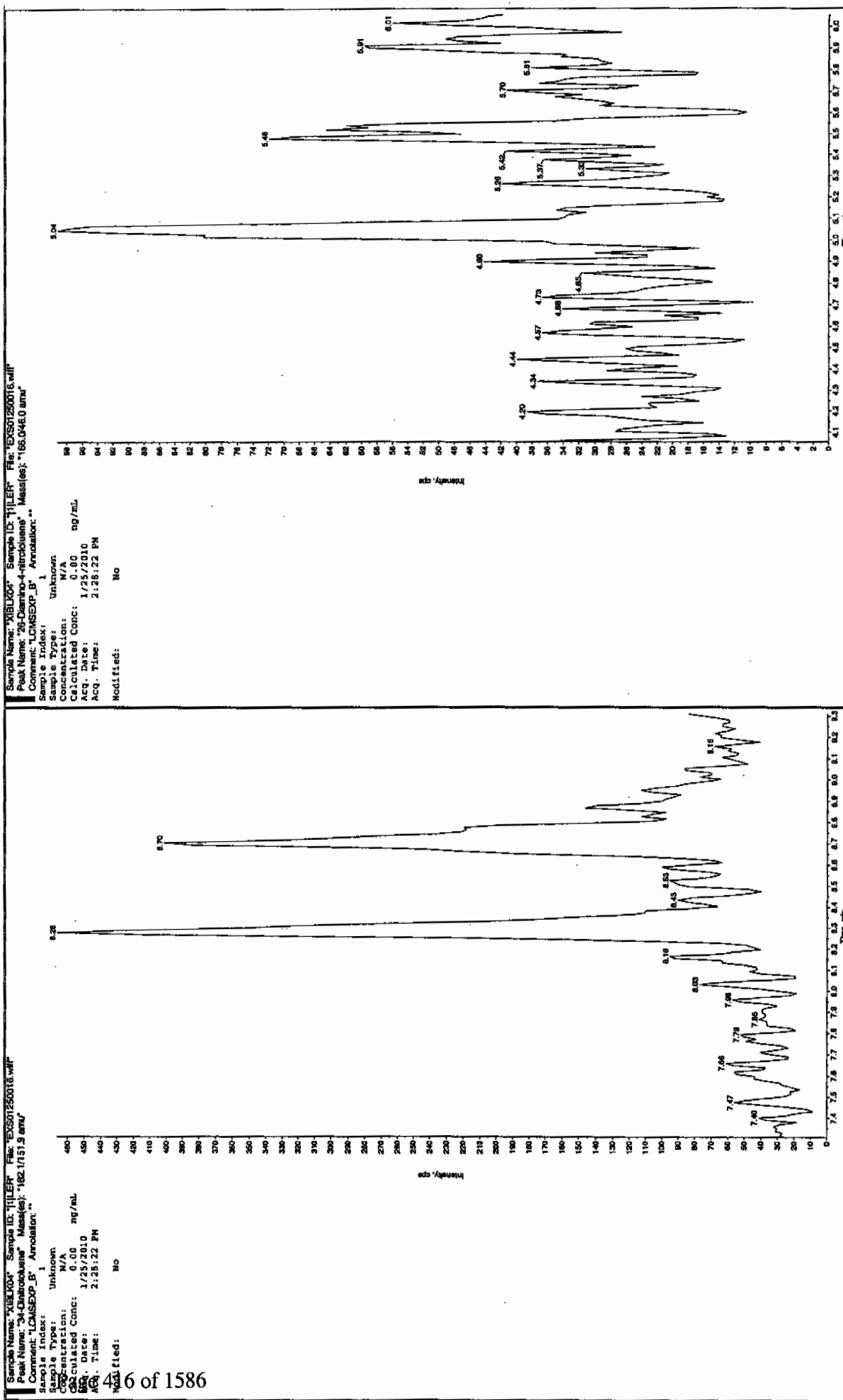


Sample Name: "XBL004" Sample ID: "11LRF" File: "EX501250016.wif"
 Peak Name: "TATB" Mass(es): "257.2204.9 amu"
 Comment: "LCMSEXP_B" Annotation: "

Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A
 Calculated Conc: 0.00 ng/mL
 Acq. Date: 1/25/2010
 Acq. Time: 2:28:22 PM
 Modified: No

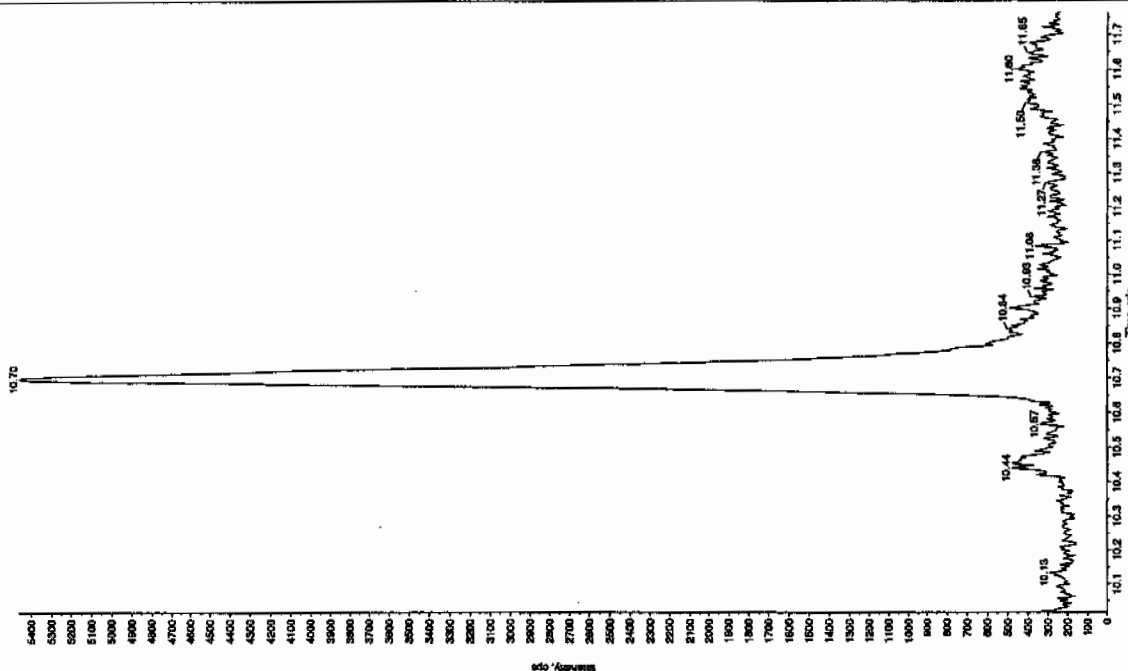


See 012710



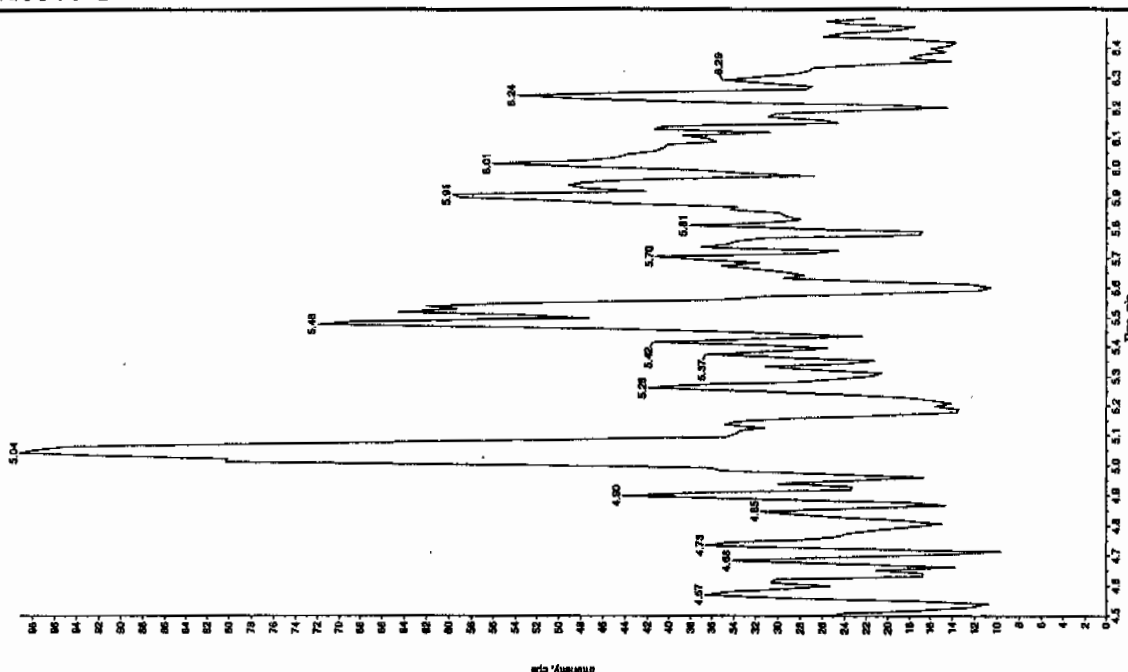
Sample Name: "XBLK04" Sample ID: "11L1F" File: "EXS01250016.will"
 Peak Name: "bis(o-cresyl) phosphite" Mass(es): "359.101.0 amu"
 Comment: "LCMSXP_B" Annotation: "1"

Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A
 Calculated Conc: 0.00 ng/mL
 Acq. Date: 1/25/2010
 Acq. Time: 2:28:22 PM
 Modified: No



Sample Name: "XBLK04" Sample ID: "11L1F" File: "EXS01250016.will"
 Peak Name: "24-Diamino-6-nitrochlorine" Mass(es): "166.046.0 amu"
 Comment: "LCMSXP_B" Annotation: "1"

Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A
 Calculated Conc: 0.00 ng/mL
 Acq. Date: 1/25/2010
 Acq. Time: 2:28:22 PM
 Modified: No



4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1213

Lab Code: GEL

Lab Sample ID: XIBLK05

Analysis Date: 25-JAN-10 16:49

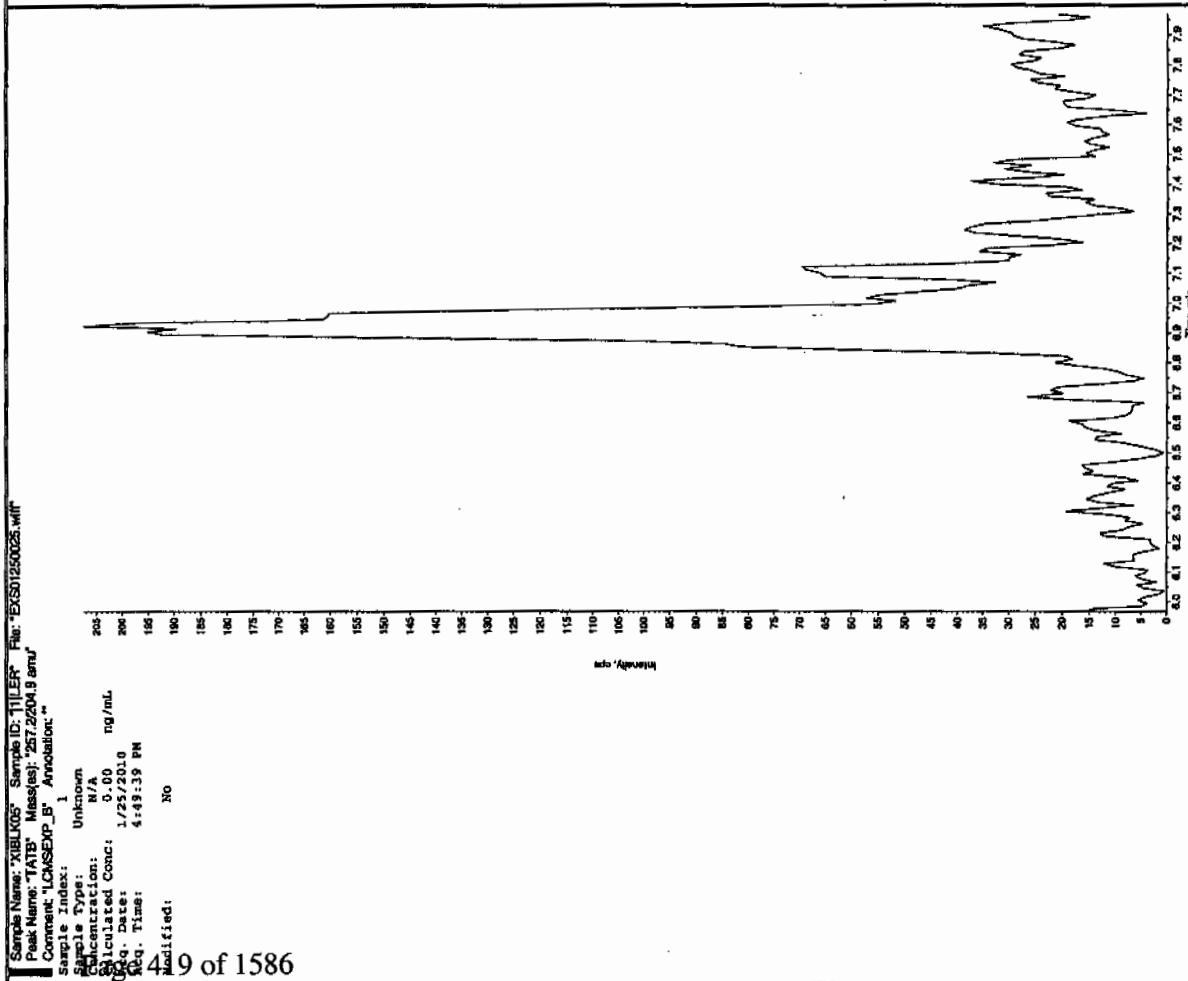
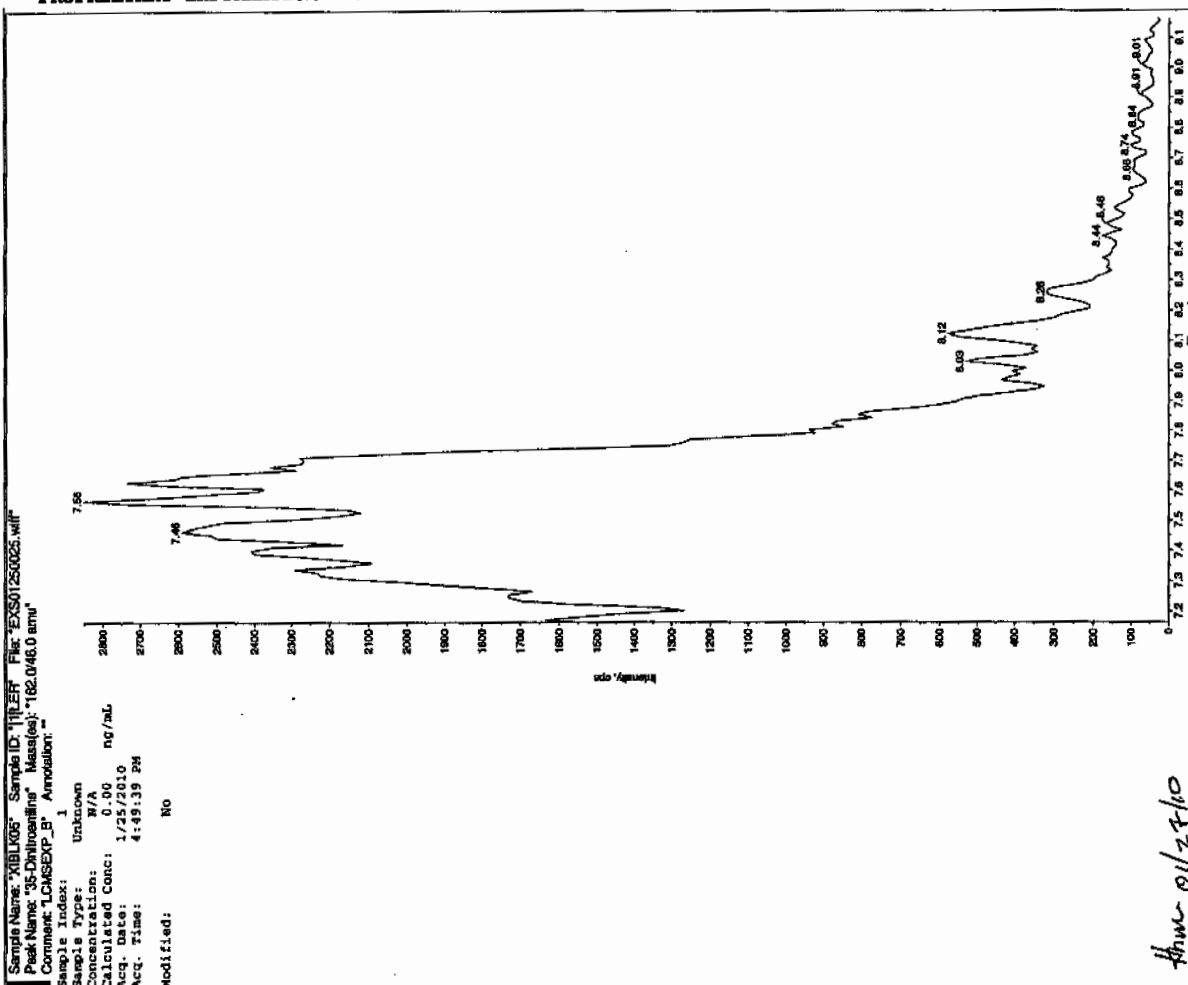
GEL Data File: EXS01250025.wiff

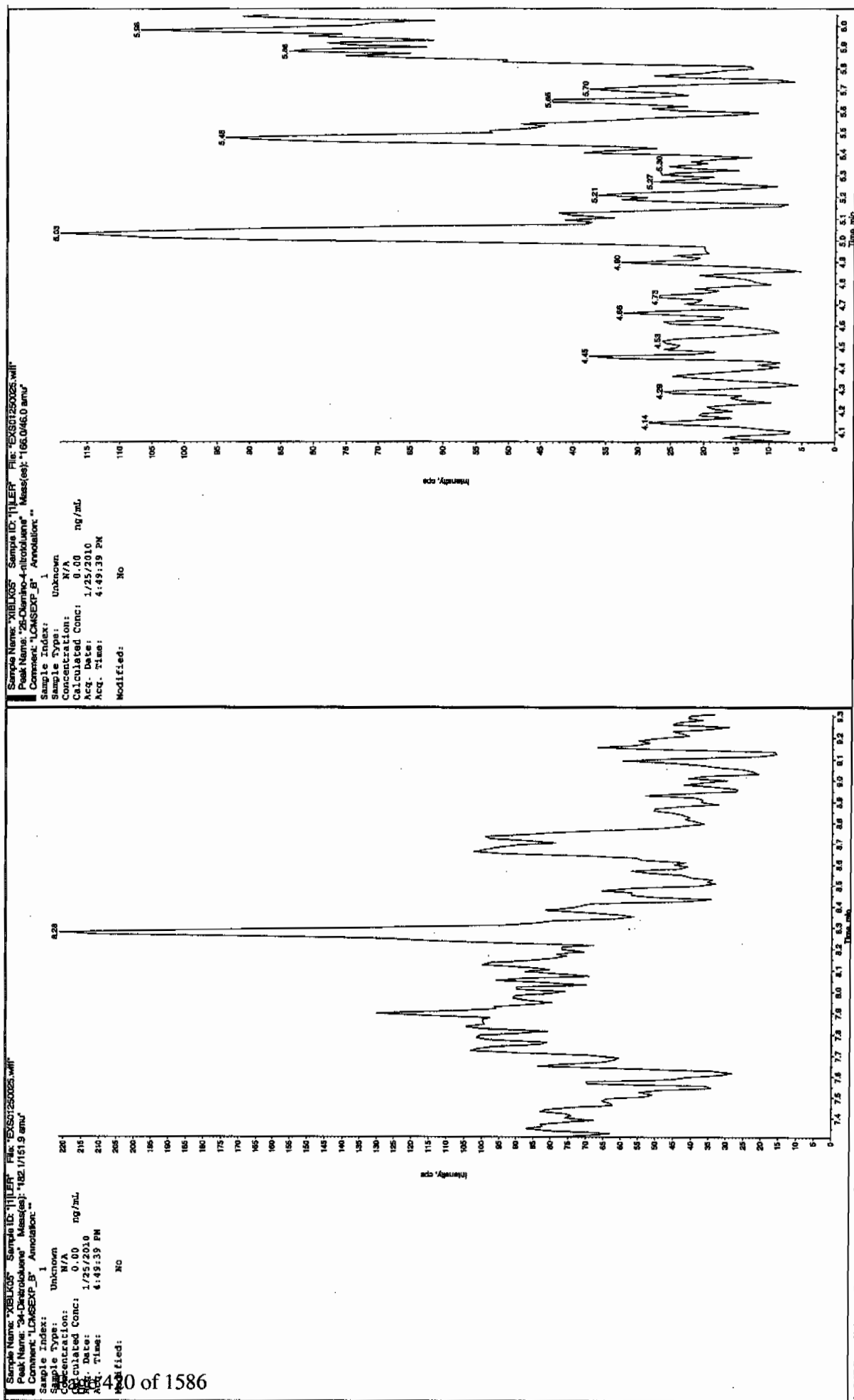
Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

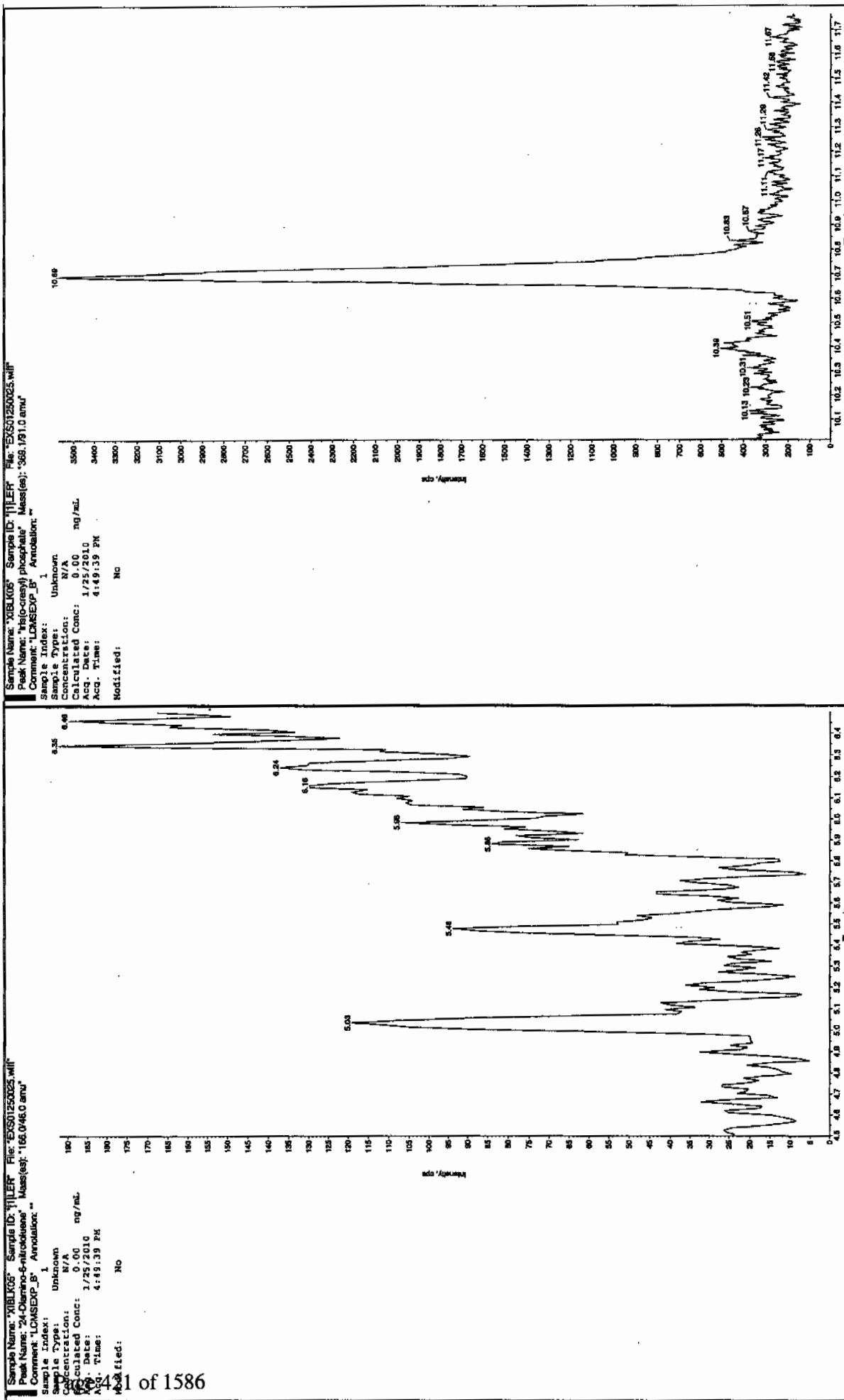
Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
tris(o-cresyl) phosphate	0	0
TATB	0	0
3,5-Dinitroaniline	0	0
2,4-Diamino-6-nitrotoluene	0	0
2,6-Diamino-4-nitrotoluene	0	0

See 11/27/10





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



Nairb.ref

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

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

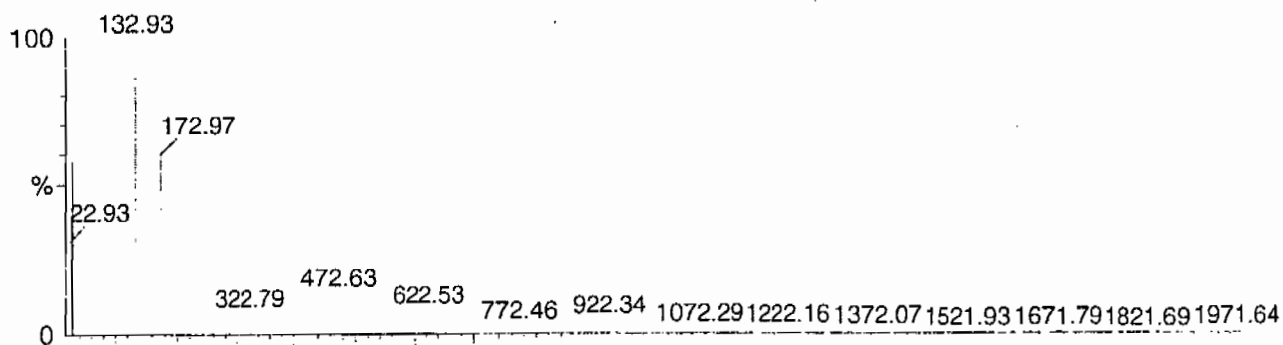
Calibration Report - MS1 Static

Page 1 of 1

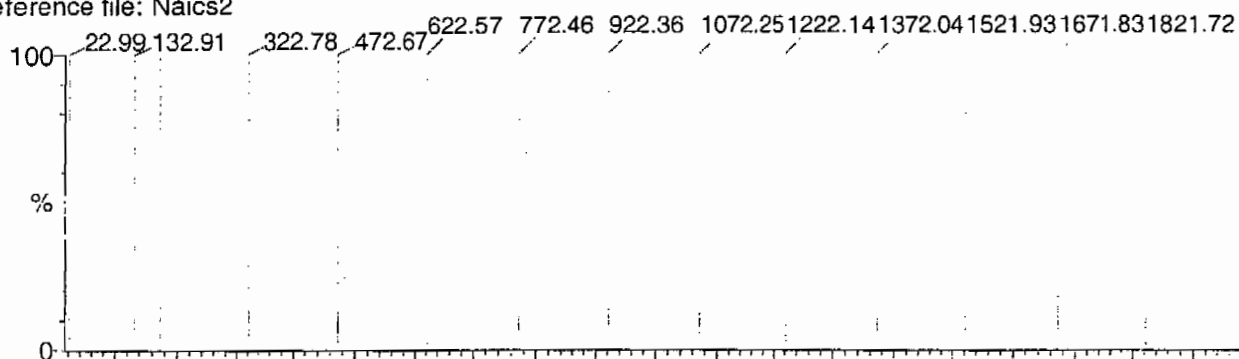
Printed: Fri Aug 25 10:50:01 2006

Data file: STATMS1 - Calibrated

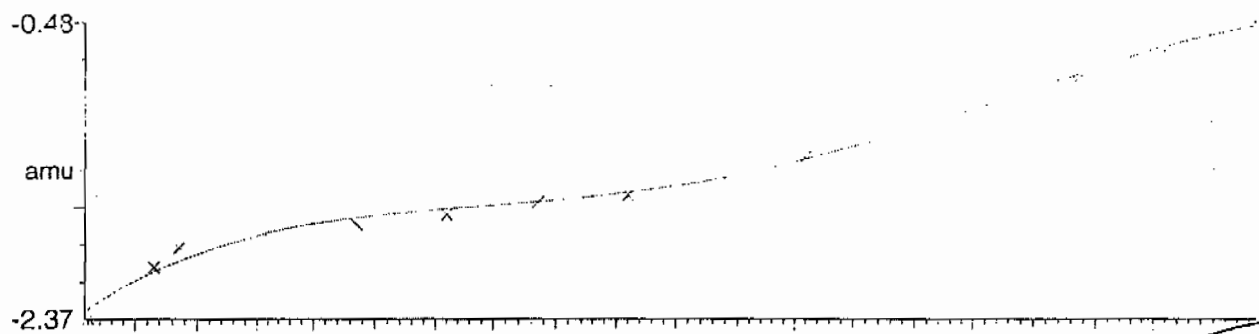
15 matches of 15 tested references



Reference file: Naics2

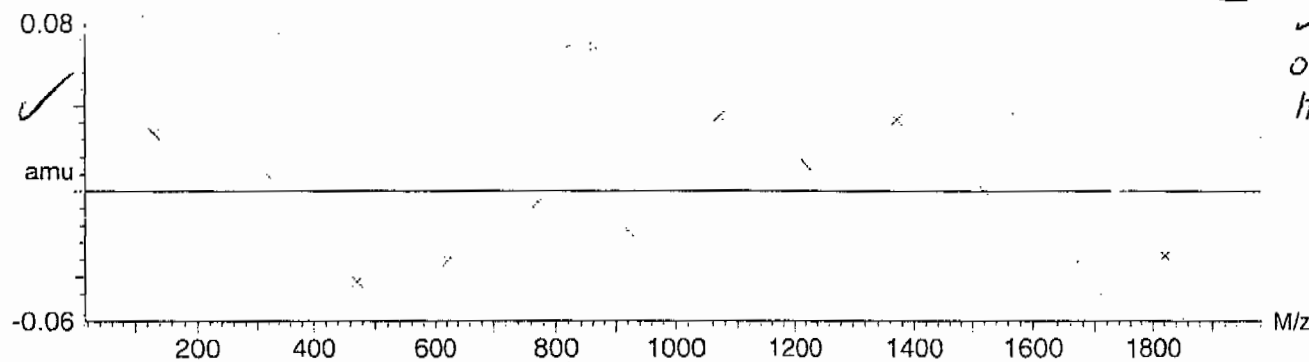


Mass difference (Raw - Ref mass)



Residuals

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



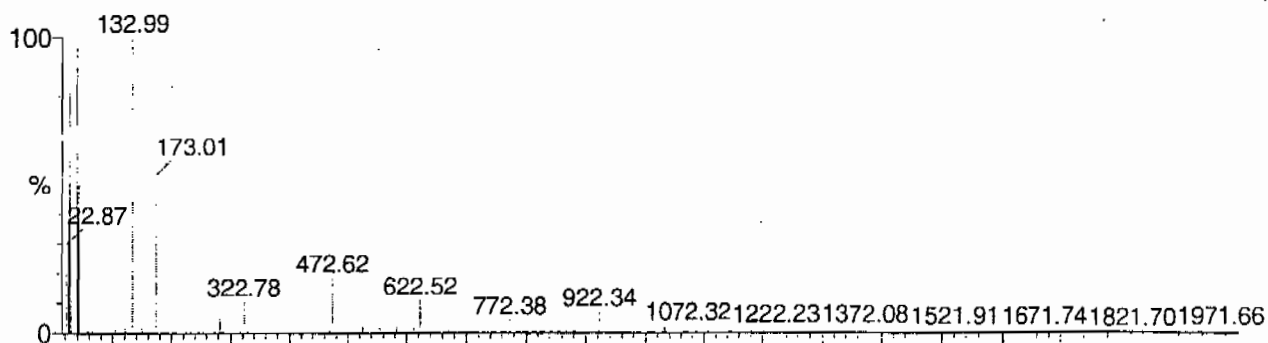
Calibration Report - MS1 Scanning

Page 1 of 1

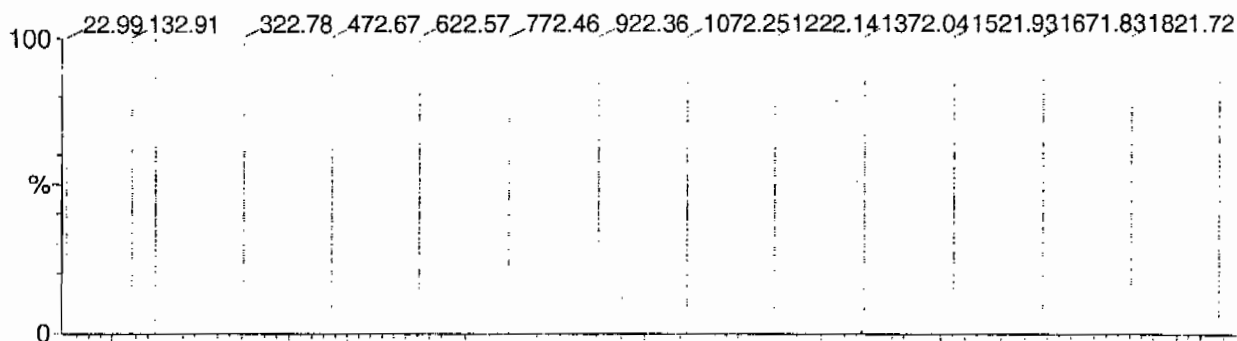
Printed: Fri Aug 25 10:51:06 2006

Data file: SCNMS1 - Calibrated

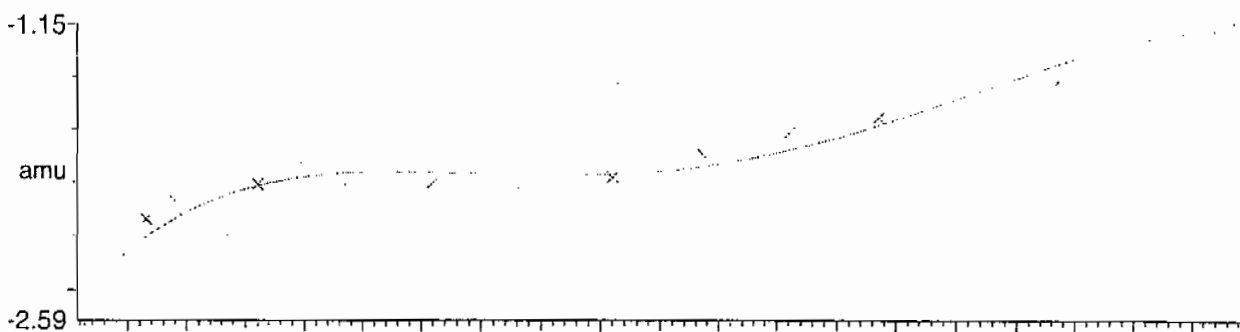
15 matches of 15 tested references



Reference file: Naics2

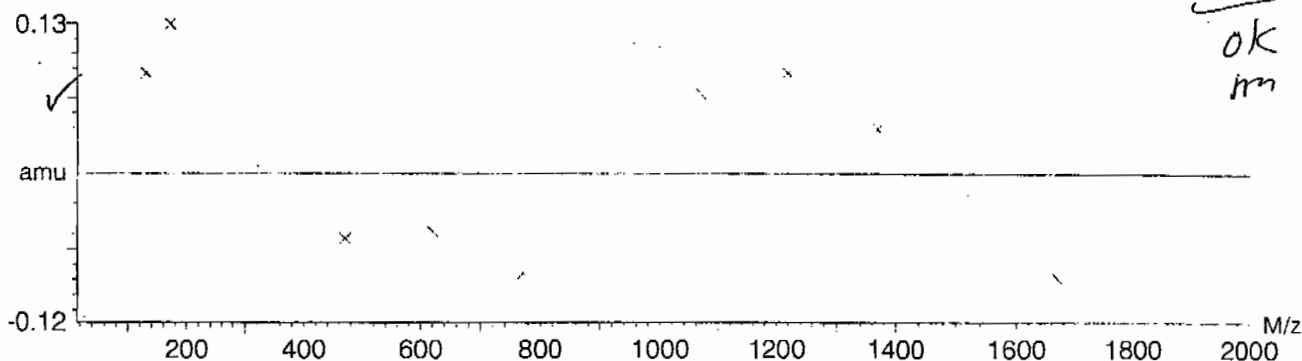


Mass difference (Raw - Ref mass)



Residuals

Mean residual = $-5.432715 \times 10^{-9} \pm 0.069858$



ok
m

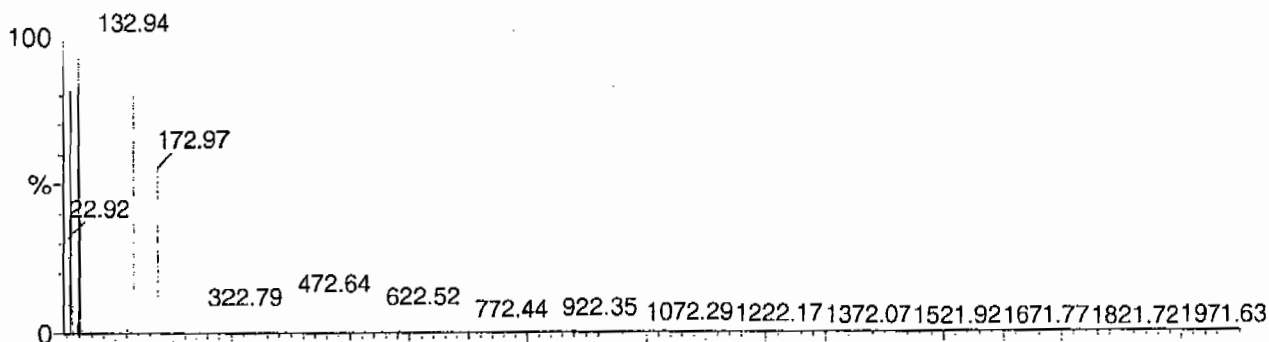
Calibration Report - MS1 Scan Speed Compensation

Page 1 of 1

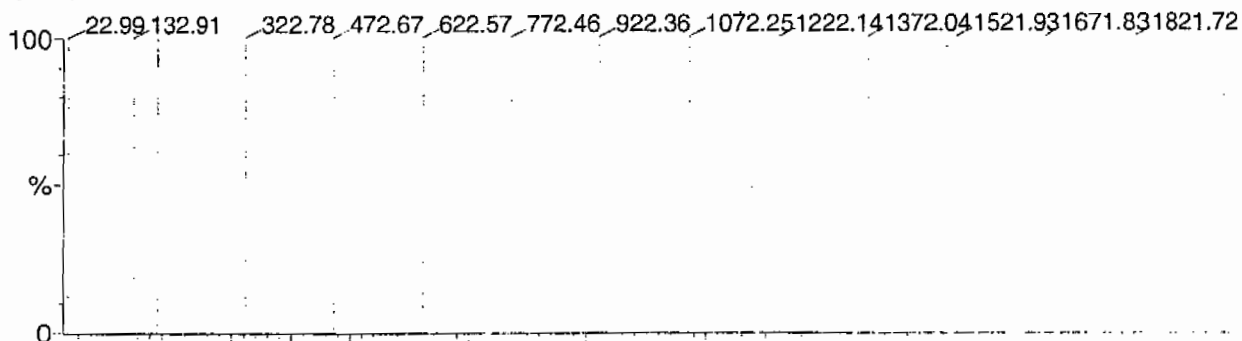
Printed: Fri Aug 25 10:52:01 2006

Data file: FASTMS1 - Calibrated

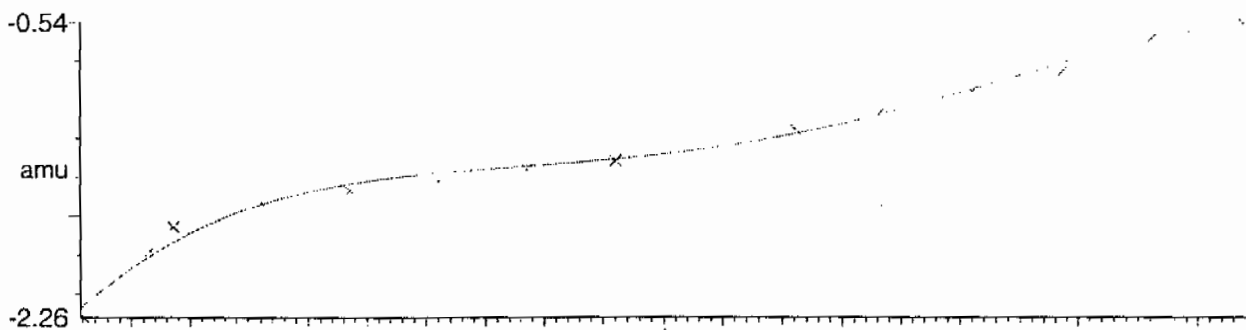
15 matches of 15 tested references



Reference file: Naics2

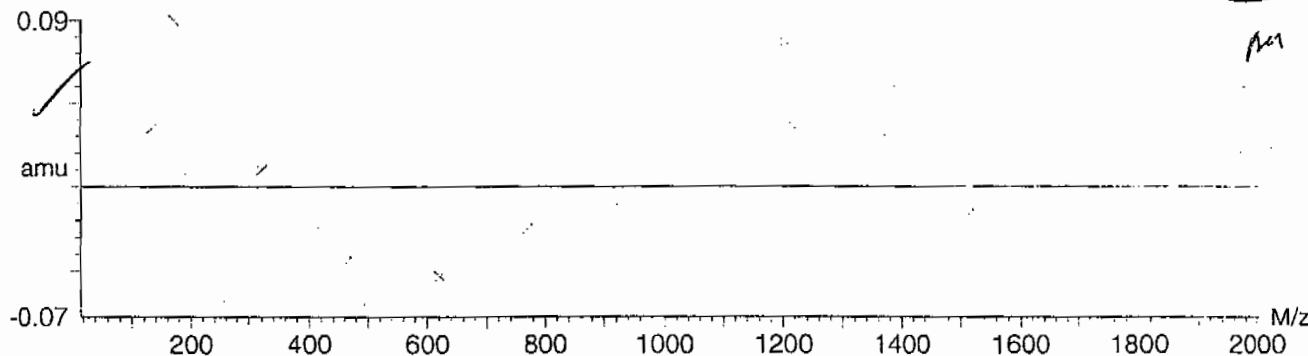


Mass difference (Raw - Ref mass)



Residuals

Mean residual = $3.486639 \times 10^{-9} \pm 0.040487$



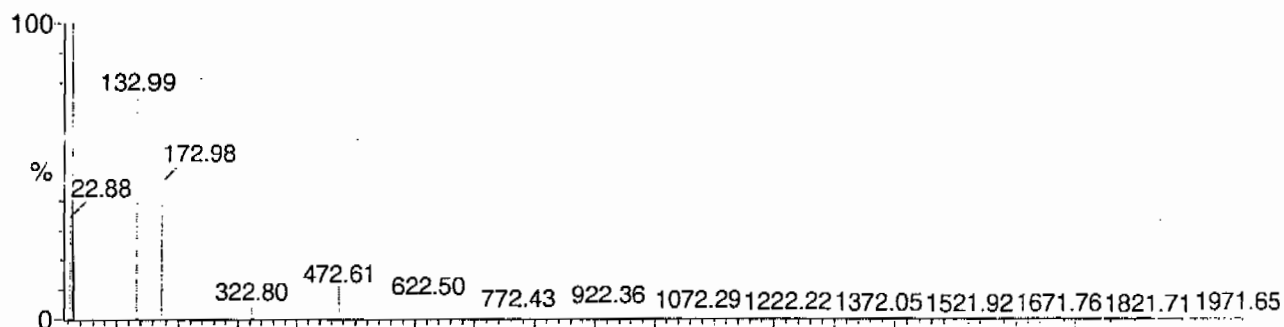
Calibration Report - MS2 Static

Page 1 of 1

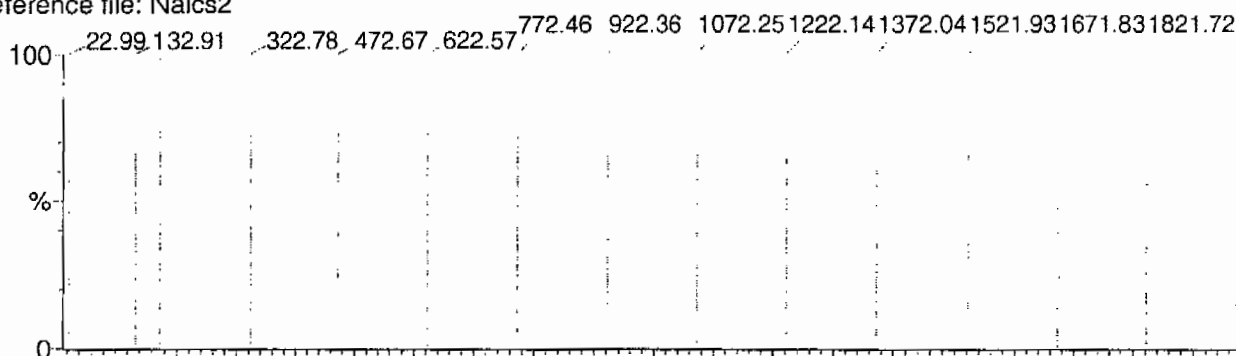
Printed: Fri Aug 25 10:52:54 2006

Data file: STATMS2 - Calibrated

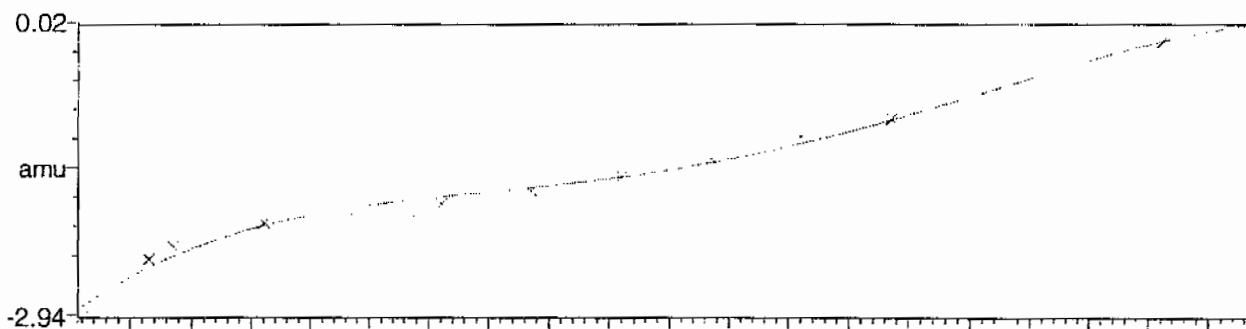
15 matches of 15 tested references



Reference file: Naics2

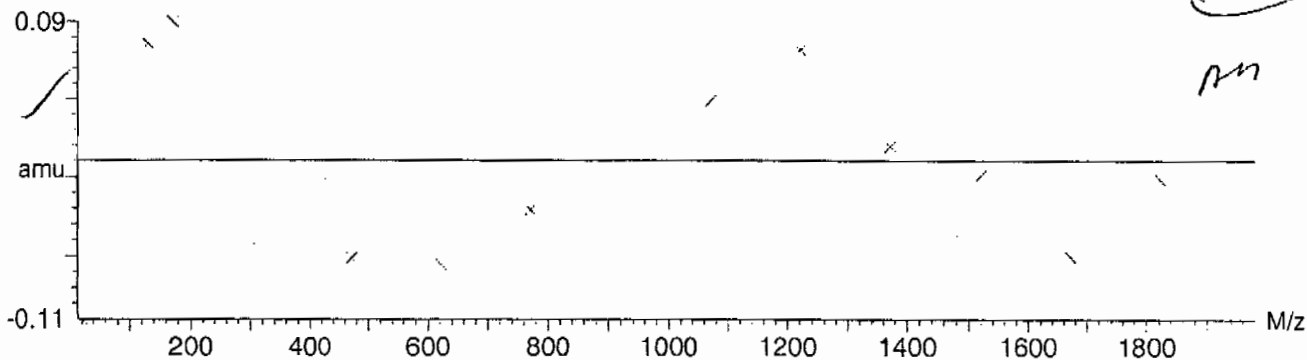


Mass difference (Raw - Ref mass)



Residuals

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



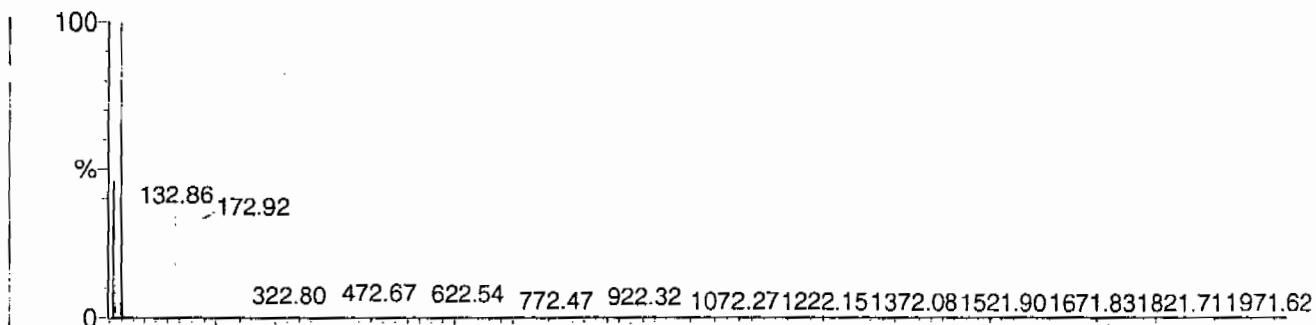
Calibration Report - MS2 Scanning

Page 1 of 1

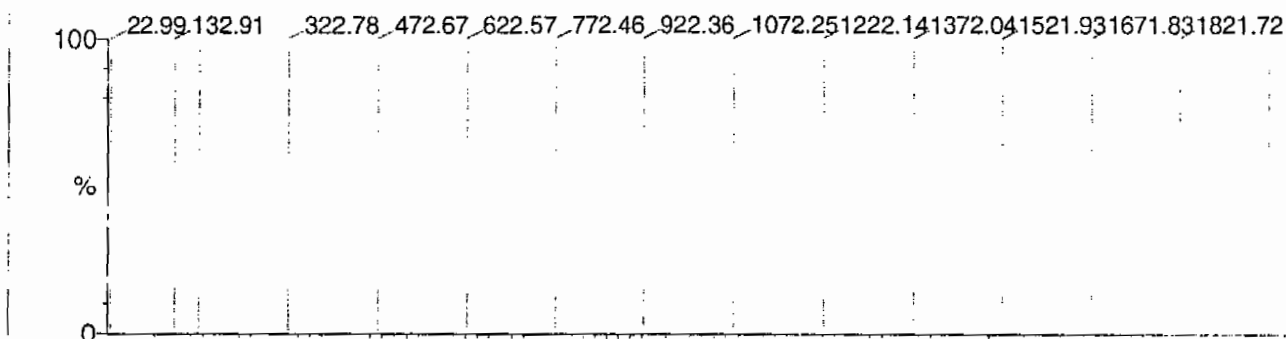
Printed: Fri Aug 25 10:54:00 2006

Data file: SCNMS2 - Calibrated

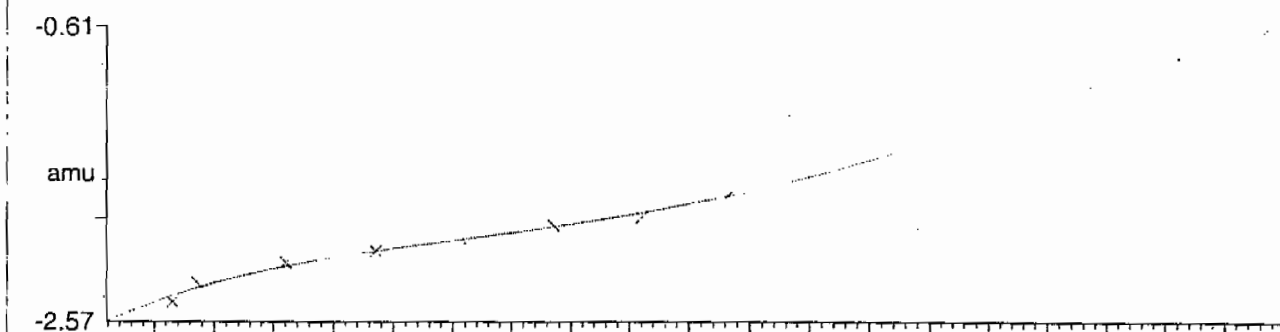
14 matches of 15 tested references



Reference file: Naics2

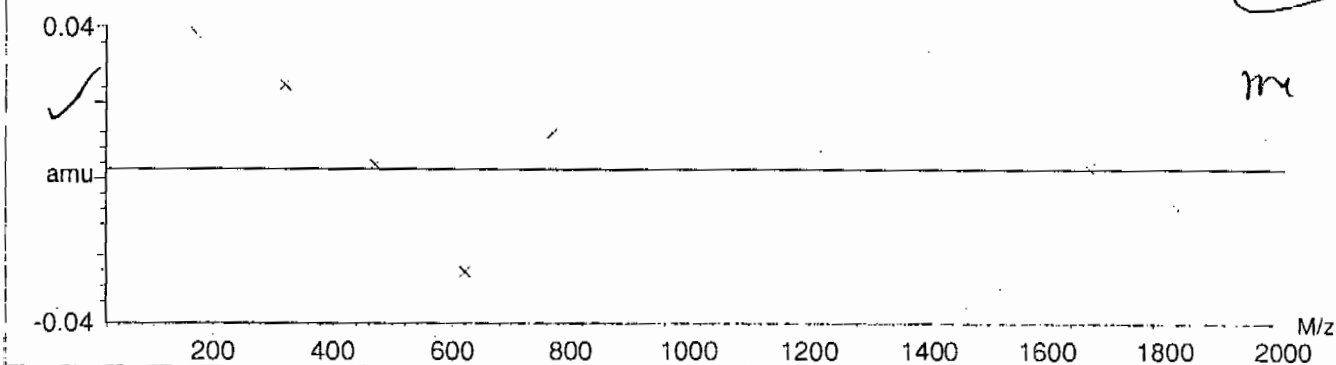


Mass difference (Raw - Ref mass)



Residuals

Mean residual = $-2.623502e-9 \pm 0.025622$



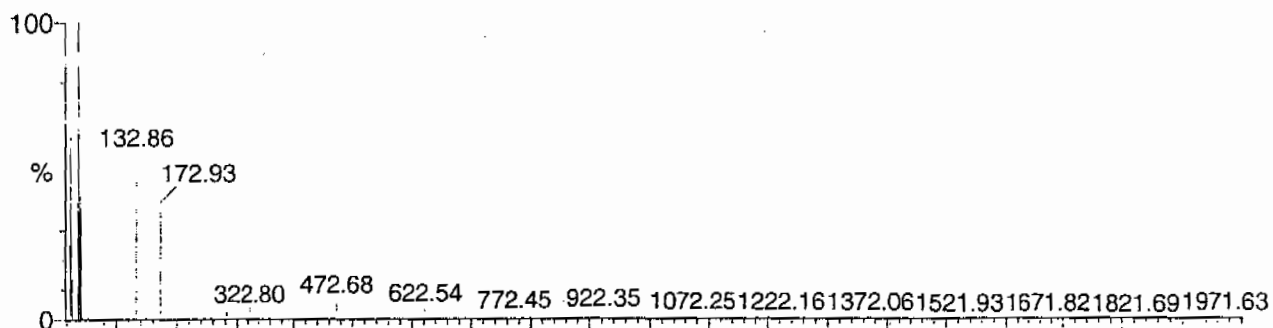
Calibration Report - MS2 Scan Speed Compensation

Page 1 of 1

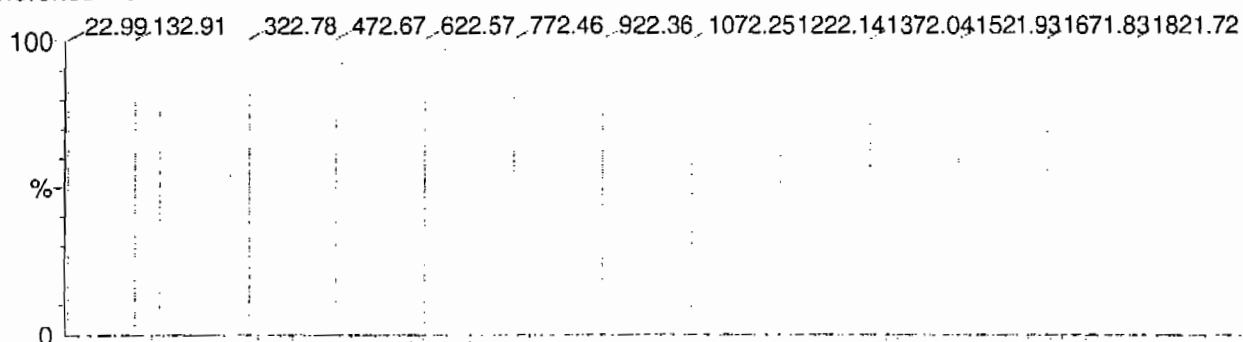
Printed: Fri Aug 25 10:54:54 2006

Data file: FASTMS2 - Calibrated

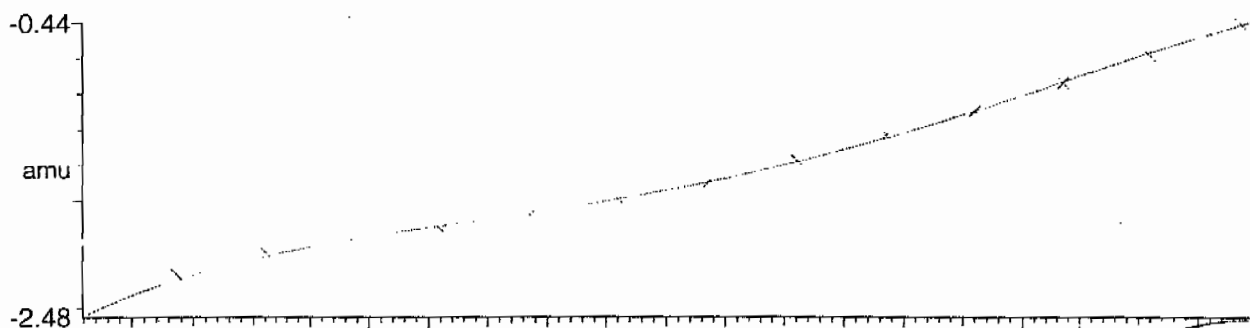
14 matches of 15 tested references



Reference file: Naics2

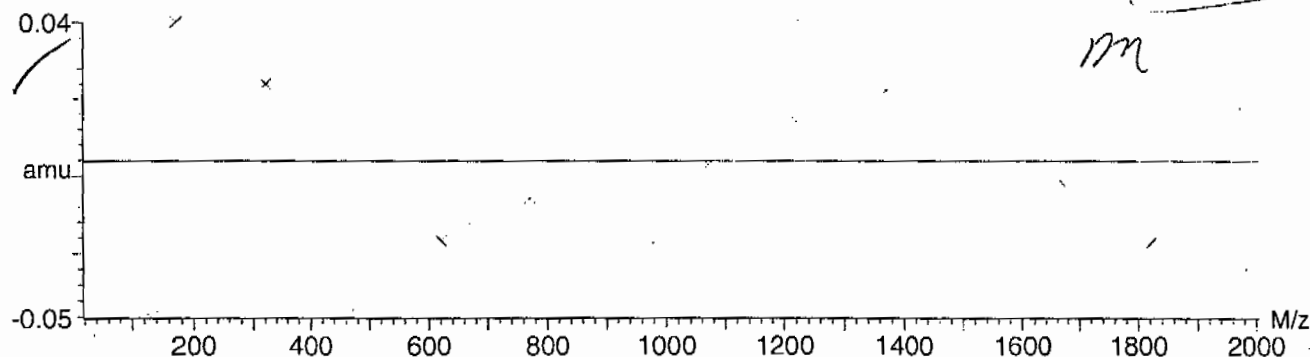


Mass difference (Raw - Ref mass)



Residuals

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

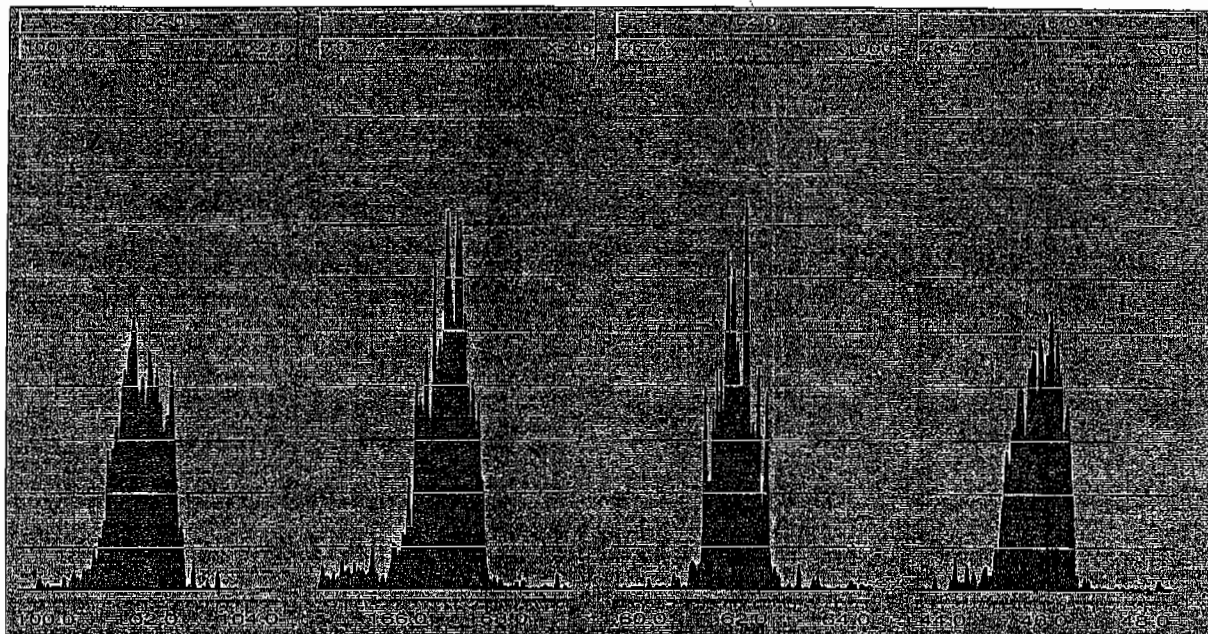


Quattro Micro Tune Parameters

Page 1

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

Printed : Mon Jan 18 14:02:19 2010



High Explosives Internal Standard Summary

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1213

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 941659	22-jan-10 22:19	EXP0118213a	3773.81	11.9	19377.2	17.159
LCS for batch 941659	22-jan-10 22:48	EXP0118214a	3556.69	11.918	19868.8	17.15
RE12-10-7257	22-jan-10 23:18	EXP0118215a	3459.53	11.918	20341.5	17.15
RE12-10-7256	22-jan-10 23:47	EXP0118216a	3591.62	11.9	20633.5	17.159

IS1 (DNB) = 1,3-Dinitrobenzene-d4

IS2 (DNT) = 2,6-Dinitrotoluene-d3

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

Area Lower Limit = - 30% of average IS area from multipoint calibration

RT Upper Limit = +0.5 of average multipoint RT

RT Lower Limit = -0.5 of average multipoint RT

Column used to flag values outside QC limits with an asterisk

* Values outside of QC limits

SAMPLE DATA

1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7257

Lab Code: GEL

GEL Job No (SDG) 10-1213

Matrix: SOIL

GEL Sample ID: 244604001

Sample Amount 2

Moisture: 10

Amount Units g

Date Received: 13-JAN-10

Extraction Type Sonication

Extraction Batch ID: 941659

Concentrated Extract Volume (mL) 10

Date Extracted: 20-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0118215a

Date Analyzed: 22-JAN-10 23:18

Units: ug/kg

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

*Concentration =

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

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA4.qid, Time: Sat Jan 23 10:08:29 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118215a

Date: 22-Jan-2010

Time: 23:18:23

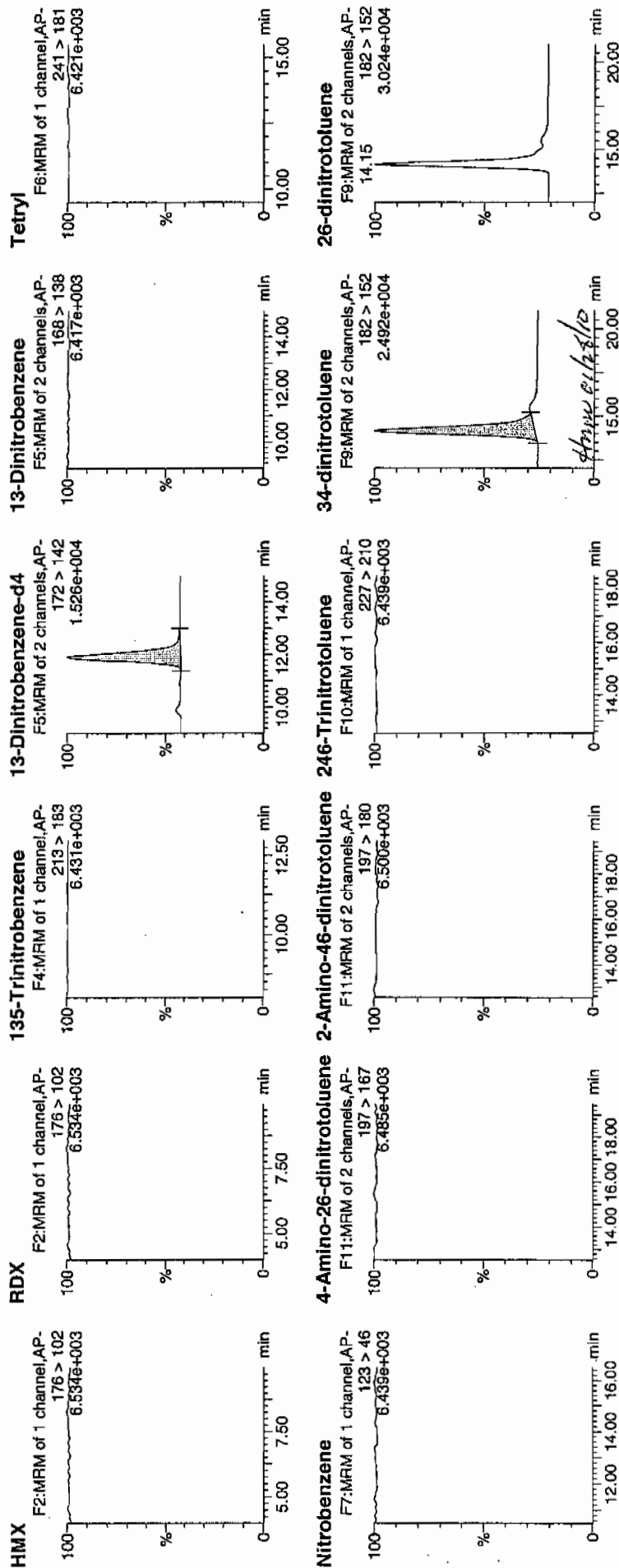
ID: 244604001

Vial: 2:1,C

1/23/10

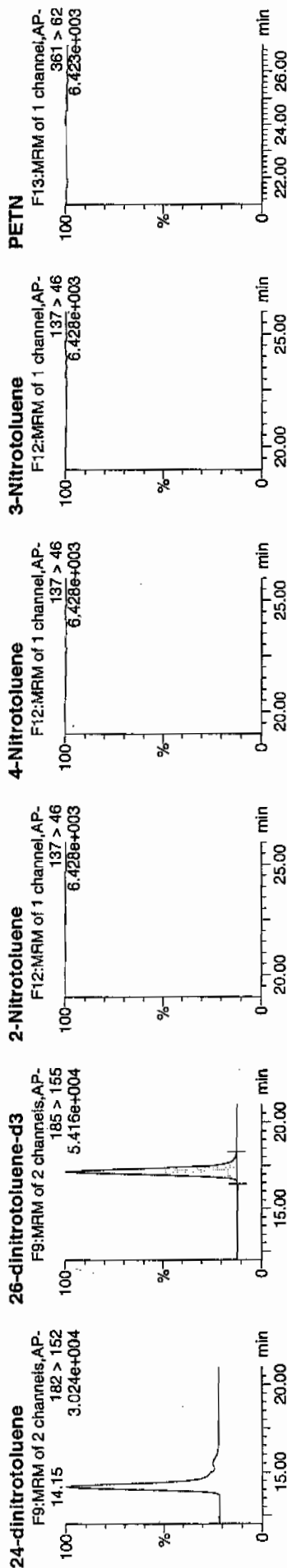
941660 | 21

Page 433 of 1586



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

Dataset: C:\MASSLYNX\New_Exp\PRO1011810expA4.qld, Time: Sat Jan 23 10:08:29 2010



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	Conc	%Dev	S/N
244604001	HMX	176 > 102			3459.529								
244604001	RDX	176 > 102			3459.529								
244604001	135-Trinitrobenzene	213 > 183			3459.529								
244604001	13-Dinitrobenzene-d4	172 > 142	11.92	3459.529		3459.529	3459.529	bb			509.7566	102.0	2.0
244604001	13-Dinitrobenzene	168 > 138			3459.529								
244604001	Tetryl	241 > 181			3459.529								
244604001	Nitrobenzene	123 > 46			3459.529								
244604001	4-Amino-26-dinitrotoluene	197 > 167			20341.547								
244604001	2-Amino-46-dinitrotoluene	197 > 180			20341.547								
244604001	246-Trinitrotoluene	227 > 210			20341.547								
244604001	34-dinitrotoluene	182 > 152	14.15	9828.743	20341.547	9828.743	241.593	bb			259.1524	103.7	3.7
244604001	26-dinitrotoluene	182 > 152			20341.547								
244604001	24-dinitrotoluene	182 > 152			20341.547								
244604001	26-dinitrotoluene-d3	185 > 155	17.15	20341.547	20341.547	20341.547	20341.547	bb			554.4296	110.9	10.9
244604001	2-Nitrotoluene	137 > 46			20341.547								
244604001	4-Nitrotoluene	137 > 46			20341.547								
244604001	3-Nitrotoluene	137 > 46			20341.547								
244604001	PETN	361 > 62			20341.547								

1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7257

Lab Code: GEL

GEL Job No (SDG) 10-1213

Matrix: SOIL

GEL Sample ID: 244604001

Sample Amount 2

Moisture: 10

Amount Units g

Date Received: 13-JAN-10

Extraction Type Sonication

Extraction Batch ID: 941659

Concentrated Extract Volume (mL) 10

Date Extracted: 20-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS01210029.wiff

Date Analyzed: 21-JAN-10 20:49

Units: ug/kg

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

*Concentration =

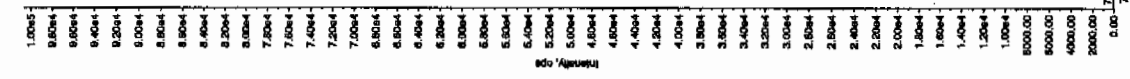
Instrument Value X $\frac{\text{Concentrated Extract Volume}}{\text{Sample Amount}}$ X Dilution Factor

See 11/22/10

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

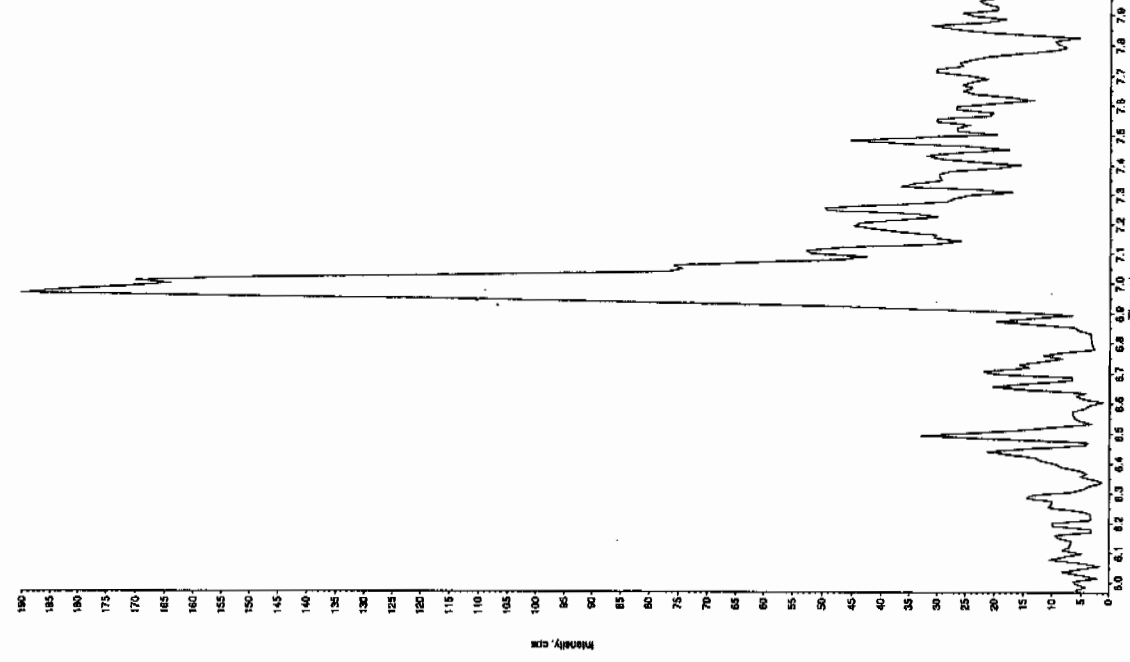
Sample Name: "2446504001" Sample ID: "9416504001" File: "EXS01210028.wif"
 Peak Name: "3S-Dinitrophenyl" Mass(es): "182.046.0 amu"
 Comment: "LCX83212S" Annotation: "1"

Sample Index: 1
 Sample Type: Unknown
 Concentration: 0.00 ng/mL
 Acq. Date: 1/21/2010
 Acq. Time: 8:49:14 PM
 Modified: No



Sample Name: "2446504001" Sample ID: "9416504001" File: "EXS01210028.wif"
 Peak Name: "TATB" Mass(es): "257.2204.9 amu"
 Comment: "LCX83212S" Annotation: "1"

Sample Index: 1
 Sample Type: Unknown
 Concentration: 0.00 ng/mL
 Acq. Date: 1/21/2010
 Acq. Time: 8:49:14 PM
 Modified: No



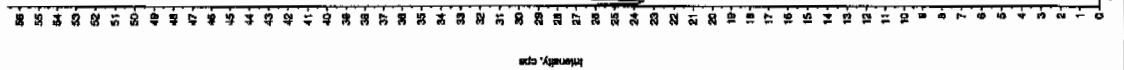
Amu 01/22/10

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

Sample Name: 244604001 Sample ID: 94166021LER File: EX501210029.wif
 Peak Name: 28-Diamino-4-nitrofluorene Mass(es): 196.0460 amu
 Comment: LCM832125 Annotation: *

Sample Index: 1
 Sample Type: Unknown
 Concentration: 0.00 ng/mL
 Calculated Conc: 1.21/2010
 Acq. Date: 8:49:14 PM
 Modified: No

Intensity, cps

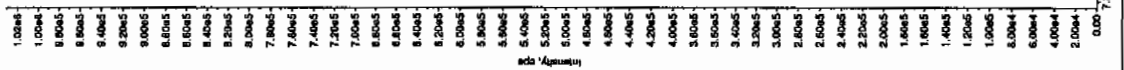


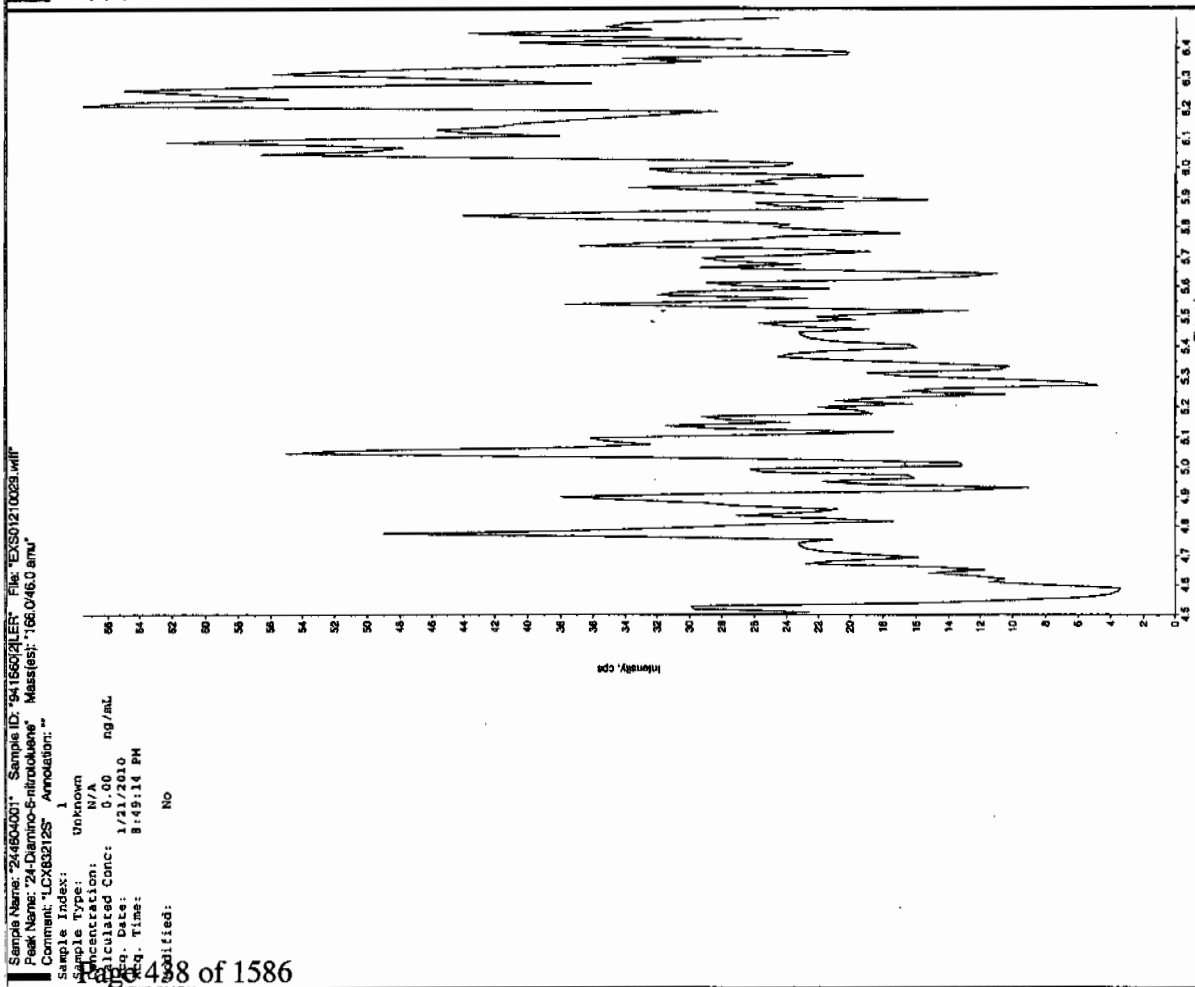
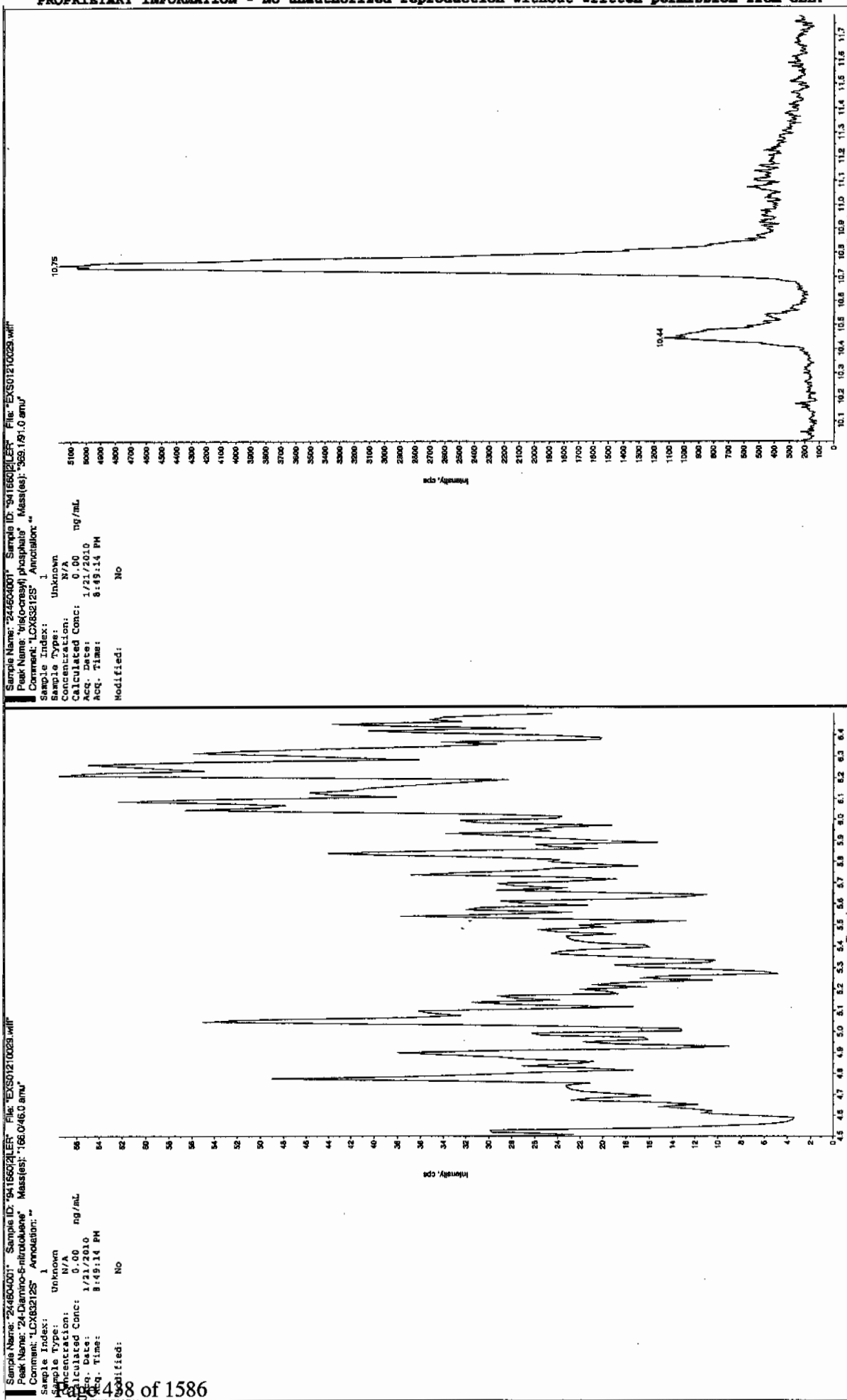
Sample Name: 244604001 Sample ID: 94166021LER File: EX501210029.wif
 Peak Name: 34-Diamino-4-nitrofluorene Mass(es): 192.1519 amu
 Comment: LCM832125 Annotation: *

Sample Index: 1
 Sample Type: Unknown
 Concentration: 0.00 ng/mL
 Calculated Conc: 1.21/2010
 Acq. Date: 8:49:14 PM
 Modified: No

Int. Type: Valley
 Retention Time: 3.98 min
 Peak: 3.98 min
 Height: 103157.026 cps
 Width: 8.19 min
 End Time: 8.64 min

Intensity, cps





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

1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7256

Lab Code: GEL

GEL Job No (SDG) 10-1213

Matrix: SOIL

GEL Sample ID: 244604002

Sample Amount 2

Moisture: 24.1

Amount Units g

Date Received: 13-JAN-10

Extraction Type Sonication

Extraction Batch ID: 941659

Concentrated Extract Volume (mL) 10

Date Extracted: 20-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0118216a

Date Analyzed: 22-JAN-10 23:47

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 =

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

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA4.qld, Time: Sat Jan 23 10:08:29 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118216a

Date: 22-Jan-2010

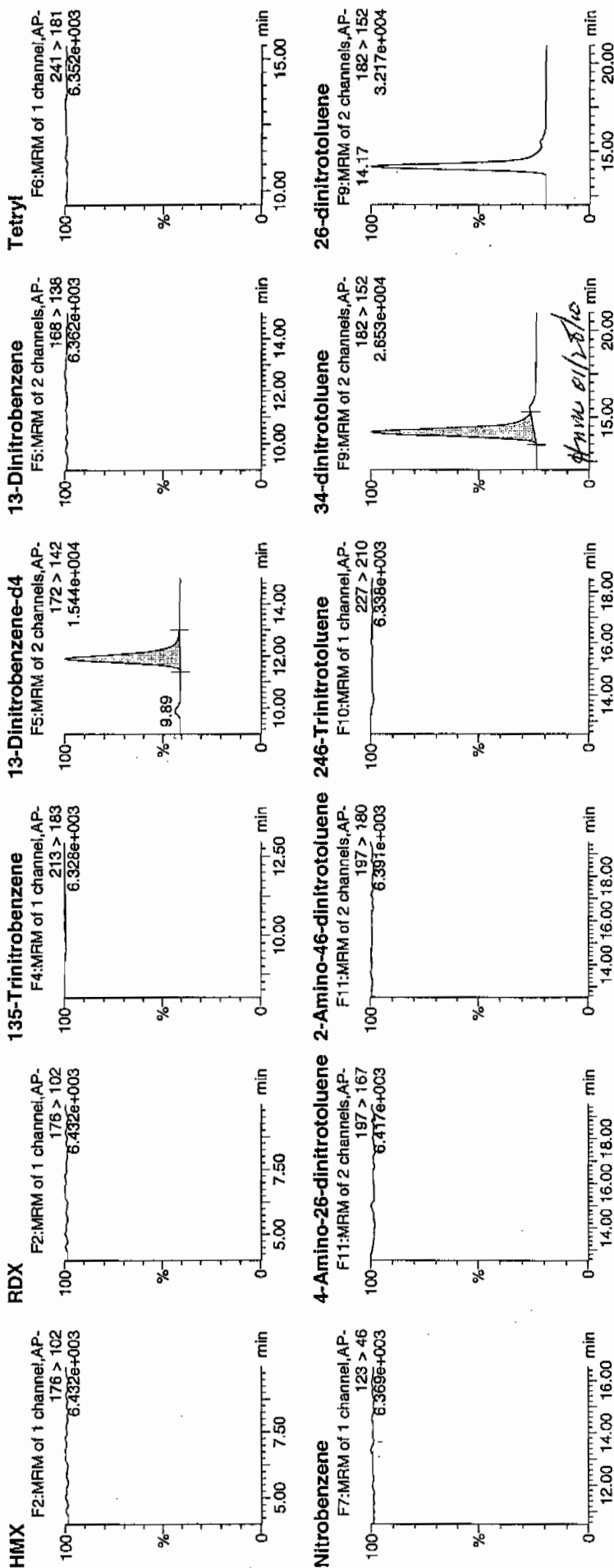
Time: 23:47:51

ID: 244604002

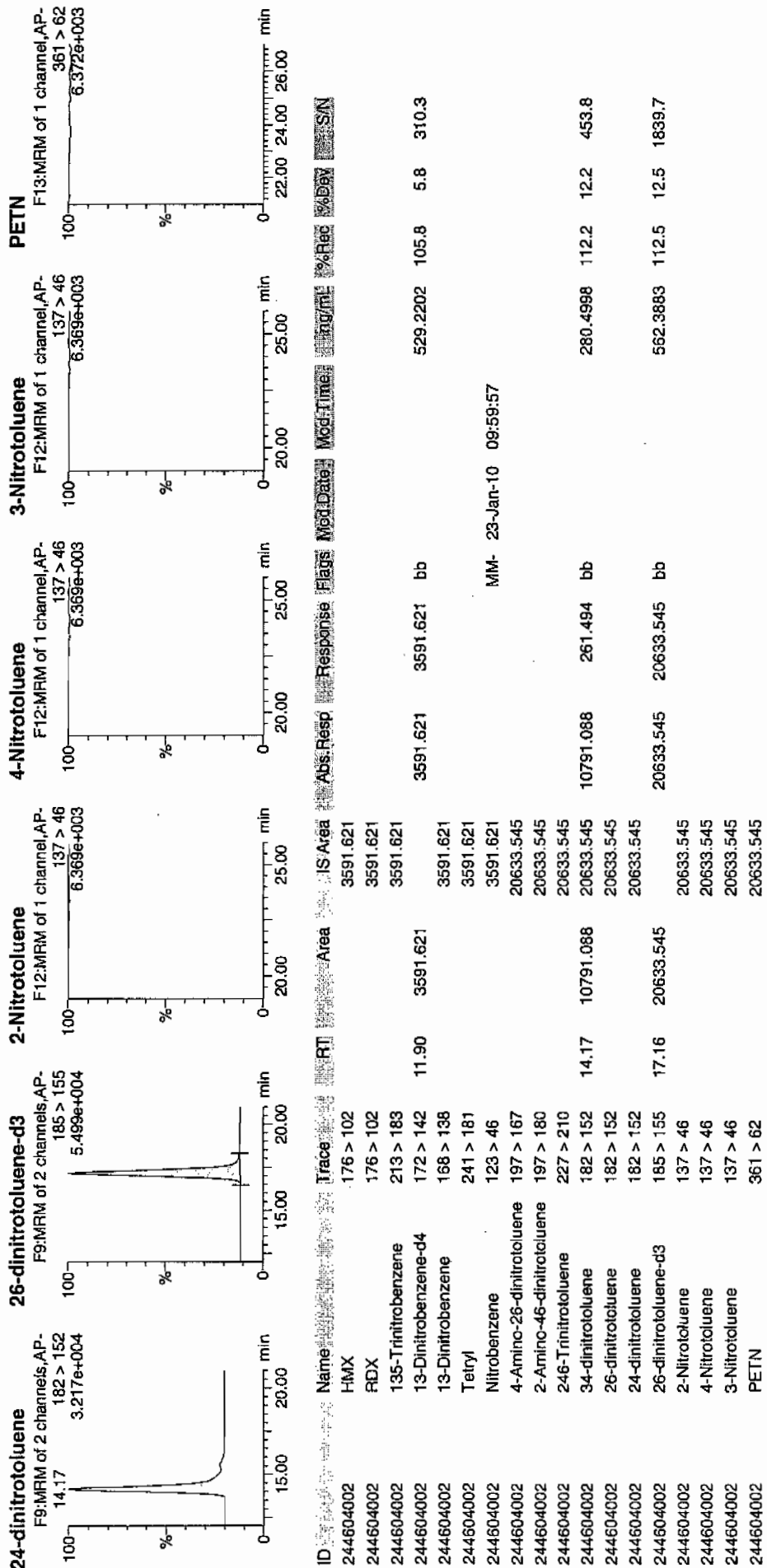
Vial: 2:1,D

1/23/10

WAW 941660 / 8022 / 21



Dataset: C:\MASSLYNX\New_Exp\PRO1011810expA4.qld, Time: Sat Jan 23 10:08:29 2010



1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7256

Lab Code: GEL

GEL Job No (SDG) 10-1213

Matrix: SOIL

GEL Sample ID: 244604002

Sample Amount 2

Moisture: 24.1

Amount Units g

Date Received: 13-JAN-10

Extraction Type Sonication

Extraction Batch ID: 941659

Concentrated Extract Volume (mL) 10

Date Extracted: 20-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS01210030.wiff

Date Analyzed: 21-JAN-10 21:04

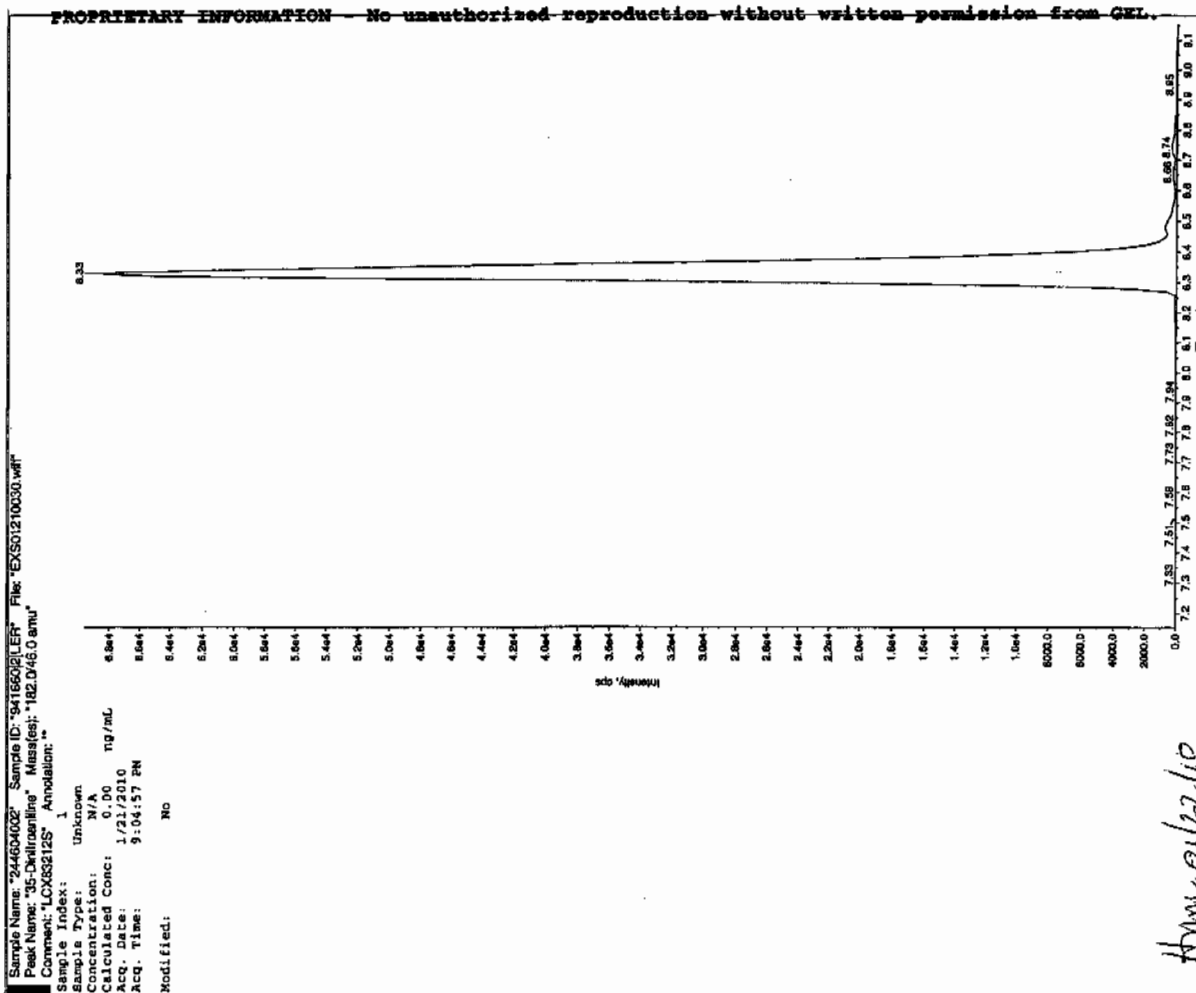
Units: ug/kg

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

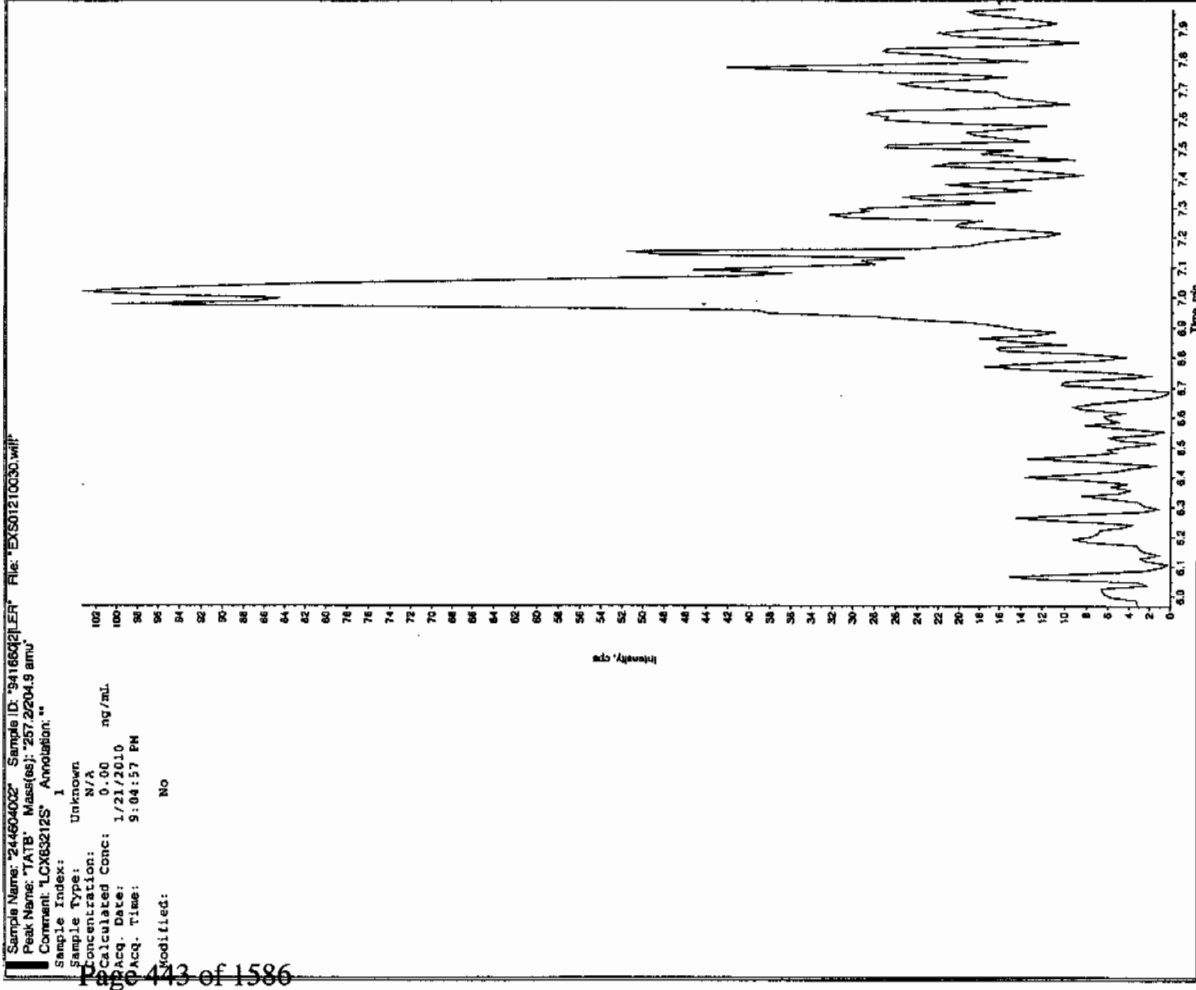
*Concentration =

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

Scan 1128110



Scan 1128110



Sample Name: "24460402" Sample ID: "94166021ER" File: "EX501210030.wif"

Peak Name: "34-Dinitrofluorene" Mass(es): "162.1/151.9 amu"

Comment: "LCX832125" Annotation: "

Sample Index: 1

Sample Type: Unknown

Concentration: N/A

Calculated Conc: 162.10 ng/mL

Acq. Date: 1/21/2010

Acq. Time: 9:04:57 PM

Modified: No

Proc. Algorithm: IntelligQuan - IQA

Min. Peak Height: 1460.00 cps

Min. Peak Width: 0.00 sec

Smoothing Width: 3 points

ET Window: 15.0 sec

Expected RT: 8.28 min

Use Relative RT: No

Tot. Type: Valley

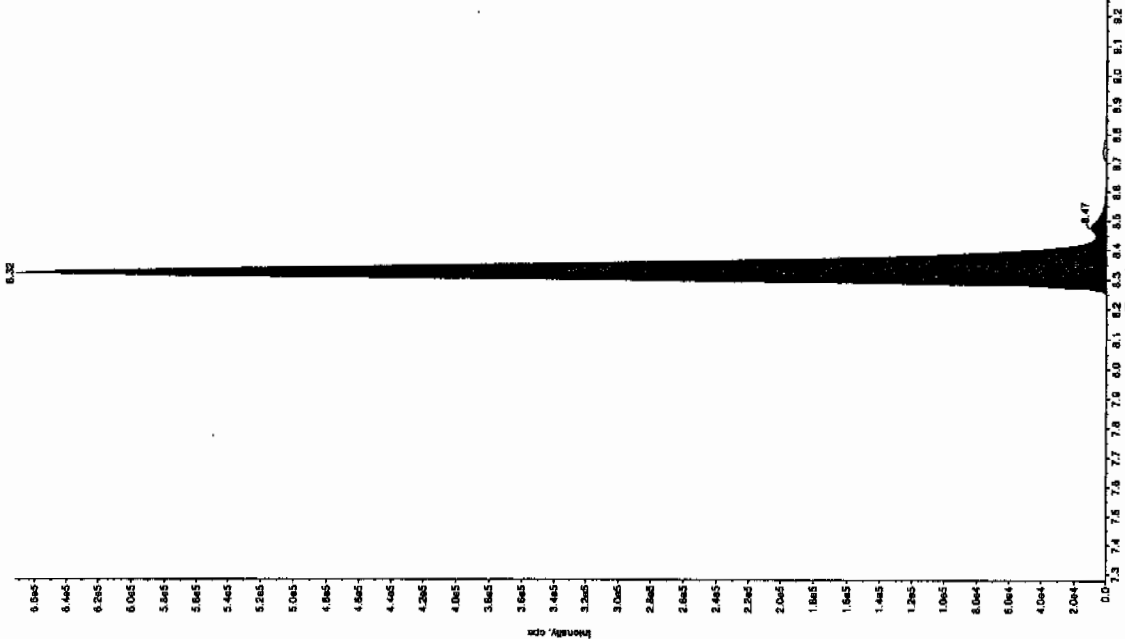
Retention Time: 8.32 min

Area: 2.59e+006 counts

Height: 672531.067 cps

Start Time: 8.15 min

End Time: 8.56 min



Sample Name: "24460402" Sample ID: "94166021ER" File: "EX501210030.wif"

Peak Name: "26-Diamino-4-nitrofluorene" Mass(es): "186.046.0 amu"

Comment: "LCX832125" Annotation: "

Sample Index: 1

Sample Type: Unknown

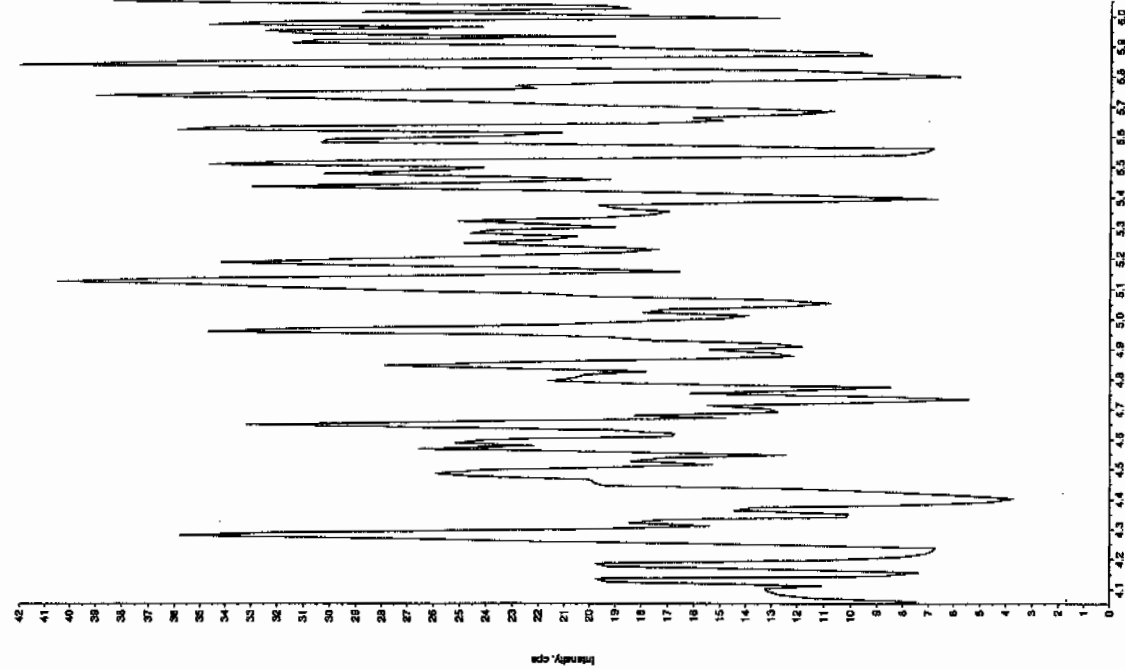
Concentration: N/A

Calculated Conc: 0.00 ng/mL

Acq. Date: 1/21/2010

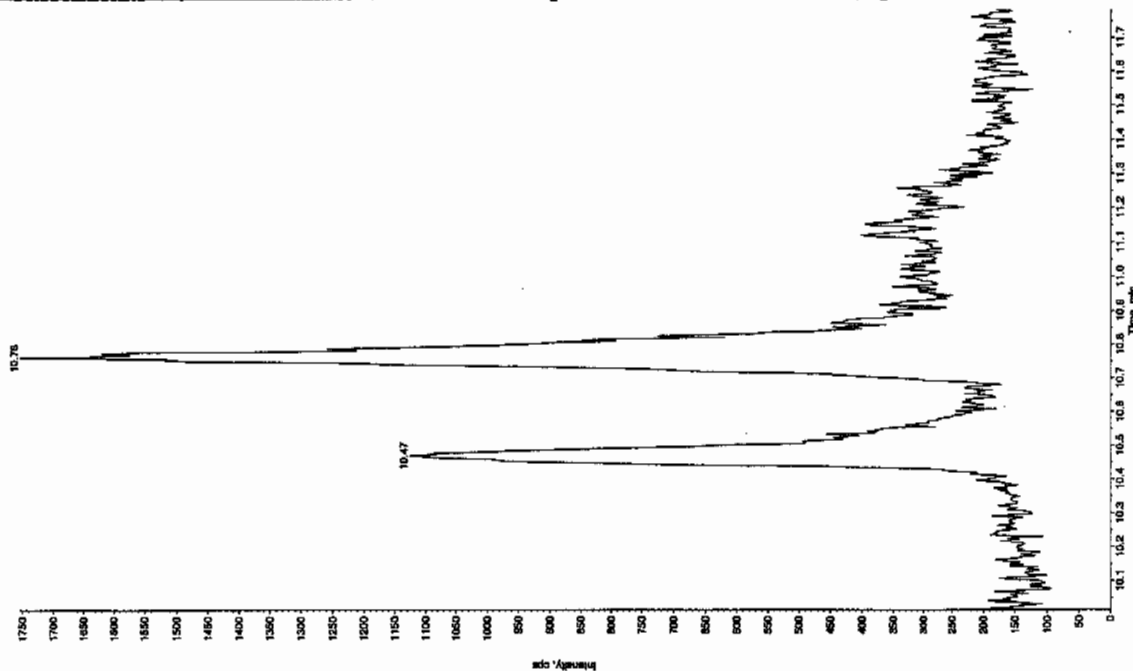
Acq. Time: 9:04:57 PM

Modified: No



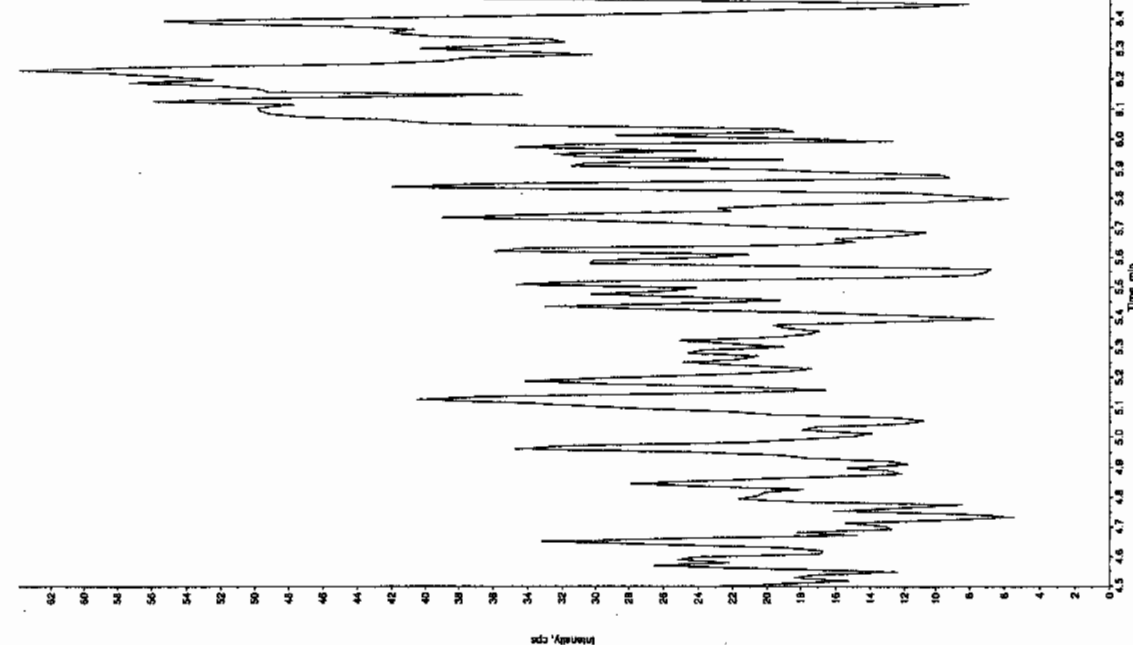
Sample Name: "24460002" Sample ID: "94166021ER" File: "EXS01210030.wif"
 Peak Name: "tris(o-cresyl) phosphate" Mass(es): "353.191.0 amu"
 Comment: "LCX632125" Annotation: ""

Sample Index: 1
 Sample Type: Unknown
 Concentration: R/A
 Calculated Conc: 1/21/2010 ng/mL
 Acq. Date: 9/04/17 PM
 Acq. Time: 9:04:57 PM
 Modified: No



Sample Name: "24460002" Sample ID: "94166021ER" File: "EXS01210030.wif"
 Peak Name: "2,4-Diamino-5-nitrotoluene" Mass(es): "168.046.0 amu"
 Comment: "LCX632125" Annotation: ""

Sample Index: 1
 Sample Type: Unknown
 Concentration: R/A
 Calculated Conc: 1/21/2010 ng/mL
 Acq. Date: 9/04/17 PM
 Acq. Time: 9:04:57 PM
 Modified: No



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

STANDARDS DATA

**SW846 8321A Modified-Explosives
Calibration Standard Concentration Levels**

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

All values are ug/L without the prep factor

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

Calibration Levels 8321A-Modified-EXPL.xls

Explosives Initial Calibration

Lab Name: GEL Laboratories LLC

GEL Job No: 10-1213

Lab Code: GEL

Run Date: 18-JAN-10.21-JAN-10.25-JAN-10

LCMSMS Instrument ID: LCMSMS

Method: 8321A Modified

HPLC Column: Phenomenex Ultracarb 5 ODS(20)

Calibration Type: Average RF

Parname	1	2	3	4	5	6	Ave RF	RSD	Q
Calibration Level:	EXP0118003a	EXP0118004a	EXP0118005a	EXP0118006a	EXP0118007a	EXP0118008a			
Data File:									
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

Quantify Calibration Report

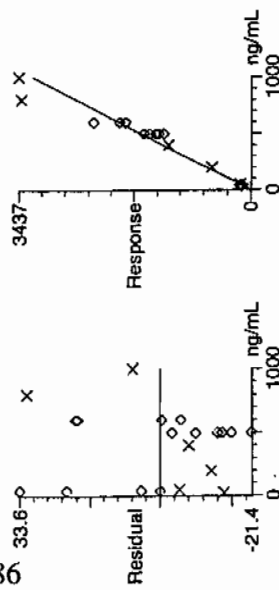
GEL Laboratories, LLC / Analyst: Michael A. Penny

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

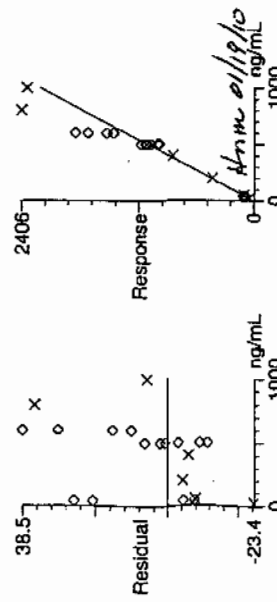
Method: C:\MASSLYNX\New_Exp.PRO\MethDB\011810expa.mdb, Time: Tue Jan 19 09:10:36 2010

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



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



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

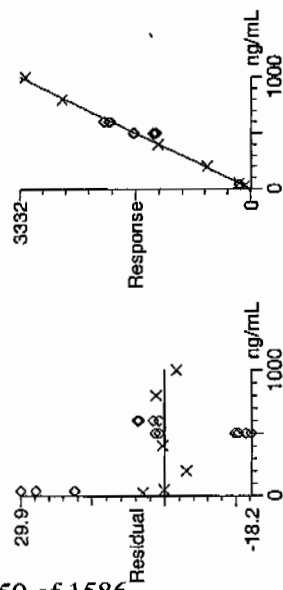
Compound name: 135-Trinitrobenzene

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



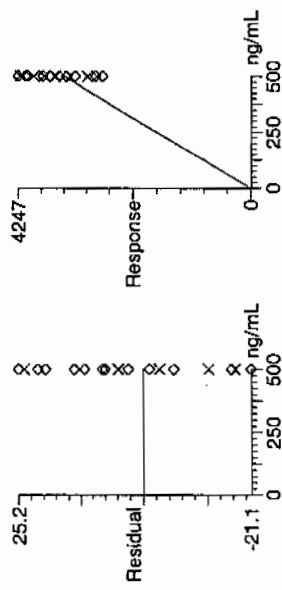
Compound name: 13-Dinitrobenzene-d4

Response Factor: 6.78663

RRF SD: 1.01627, % Relative SD: 14.9747

Response type: External Std, Area

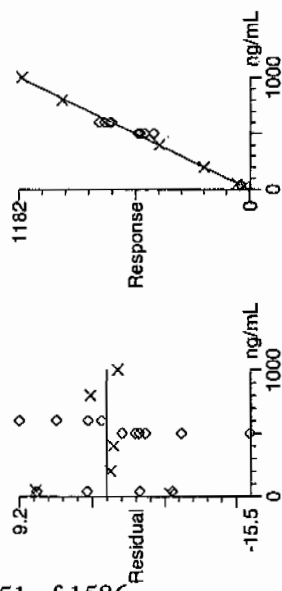
Curve type: RF



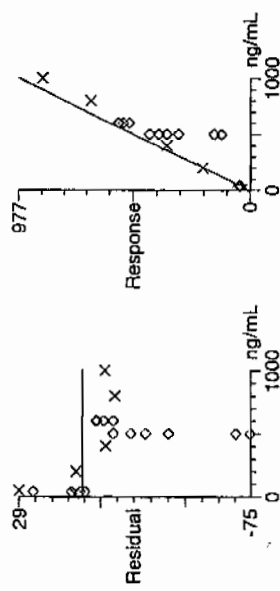
Quantify Calibration Report GEL Laboratories, LLC / Analyst: Michael A. Penny

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

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



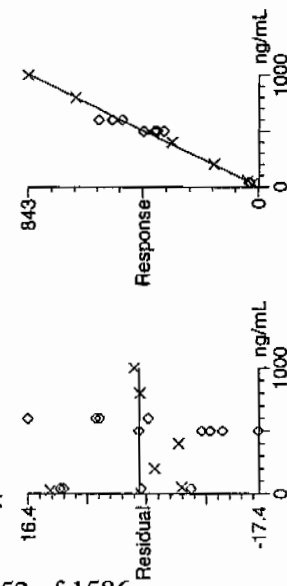
Compound name: Tetraol
Response Factor: 0.976612
RRF SD: 0.158443, % Relative SD: 16.2237
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF



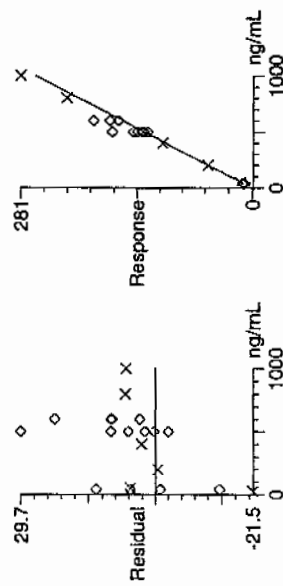
Quantify Calibration Report
 GEL Laboratories, LLC / Analyst : Michael A. Penny

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

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



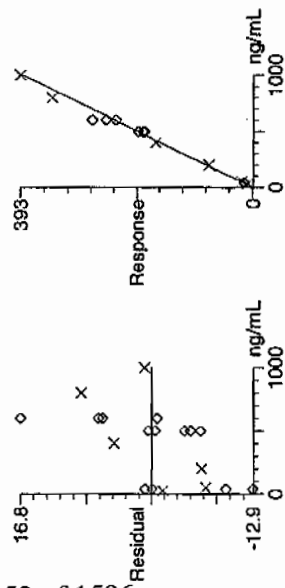
Quantify Calibration Report

GEL Laboratories, LLC / Analyst : Michael A. Penny

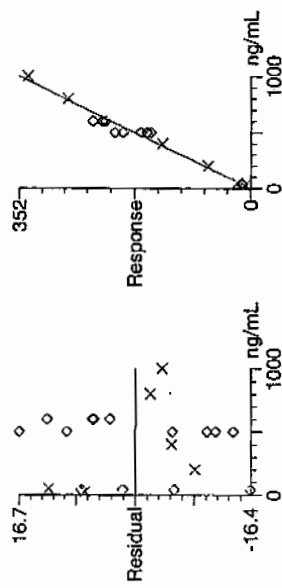
Printed: Tue Jan 19 11:02:03 2010, Page 5 of 9

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



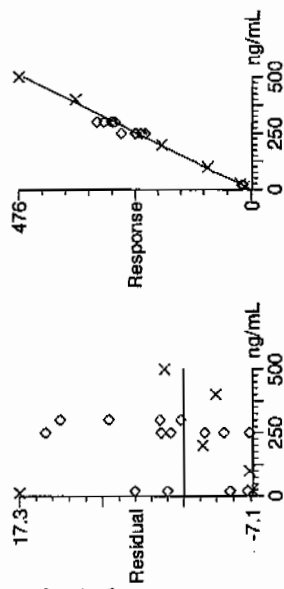
Compound name: 246-Trinitrotoluene
 Response Factor: 0.352125
 RRF SD: 0.0281482, % Relative SD: 7.99381
 Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
 Curve type: RF



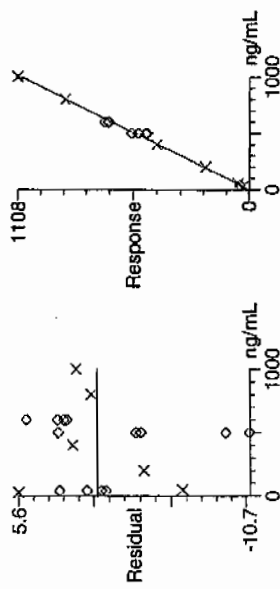
Quantify Calibration Report GEL Laboratories, LLC / Analyst: Michael A. Penny

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

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



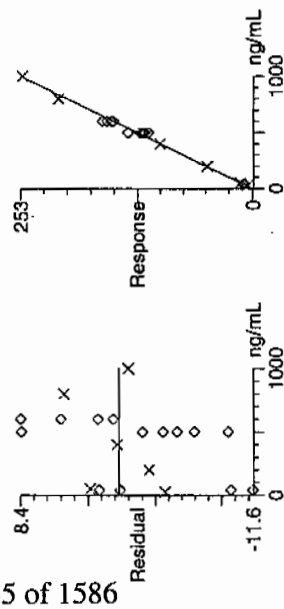
Compound name: 26-dinitrotoluene
Response Factor: 1.09228
RRF SD: 0.0441813, % Relative SD: 4.04489
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF



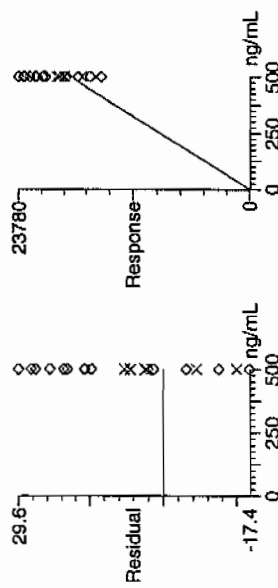
Quantify Calibration Report
 GEL Laboratories, LLC / Analyst : Michael A. Penny

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

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

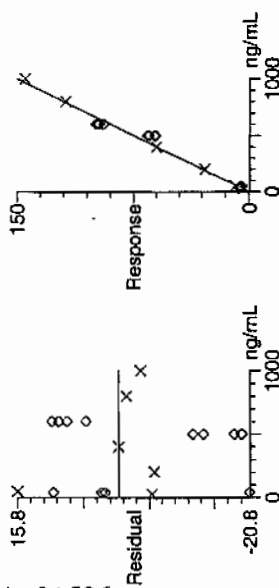


Quantify Calibration Report

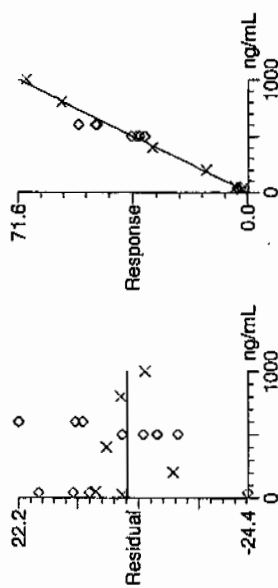
GEL Laboratories, LLC / Analyst: Michael A. Penny

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

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



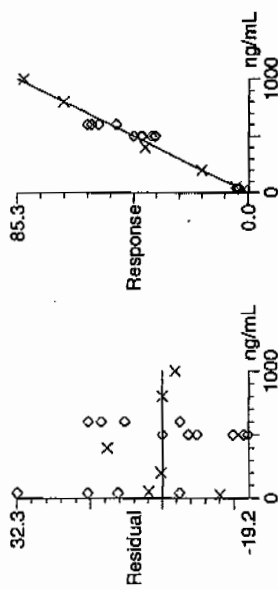
Compound name: 4-Nitrotoluene
 Response Factor: 0.0715991
 RRF SD: 0.00396681, % Relative SD: 5.5403
 Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
 Curve type: RF



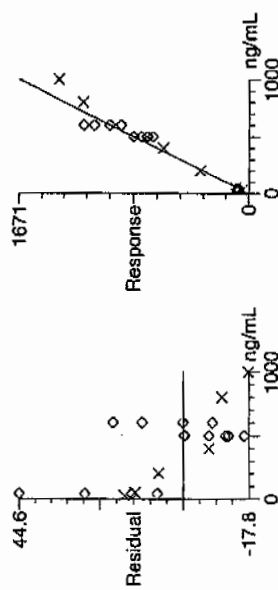
Quantify Calibration Report GEL Laboratories, LLC / Analyst: Michael A. Penny

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

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



Explosives Initial Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1213

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
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	
m-Nitrotoluene	600	682.223	114	
o-Nitrotoluene	600	662.222	110	
p-Nitrotoluene	600	732.953	122	*

Recovery Limits:

3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,
2,4-Diamino-6-nitrotoluene 70-130%

Other Target Analytes 80-120%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

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

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

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118010a

Date: 18-Jan-2010

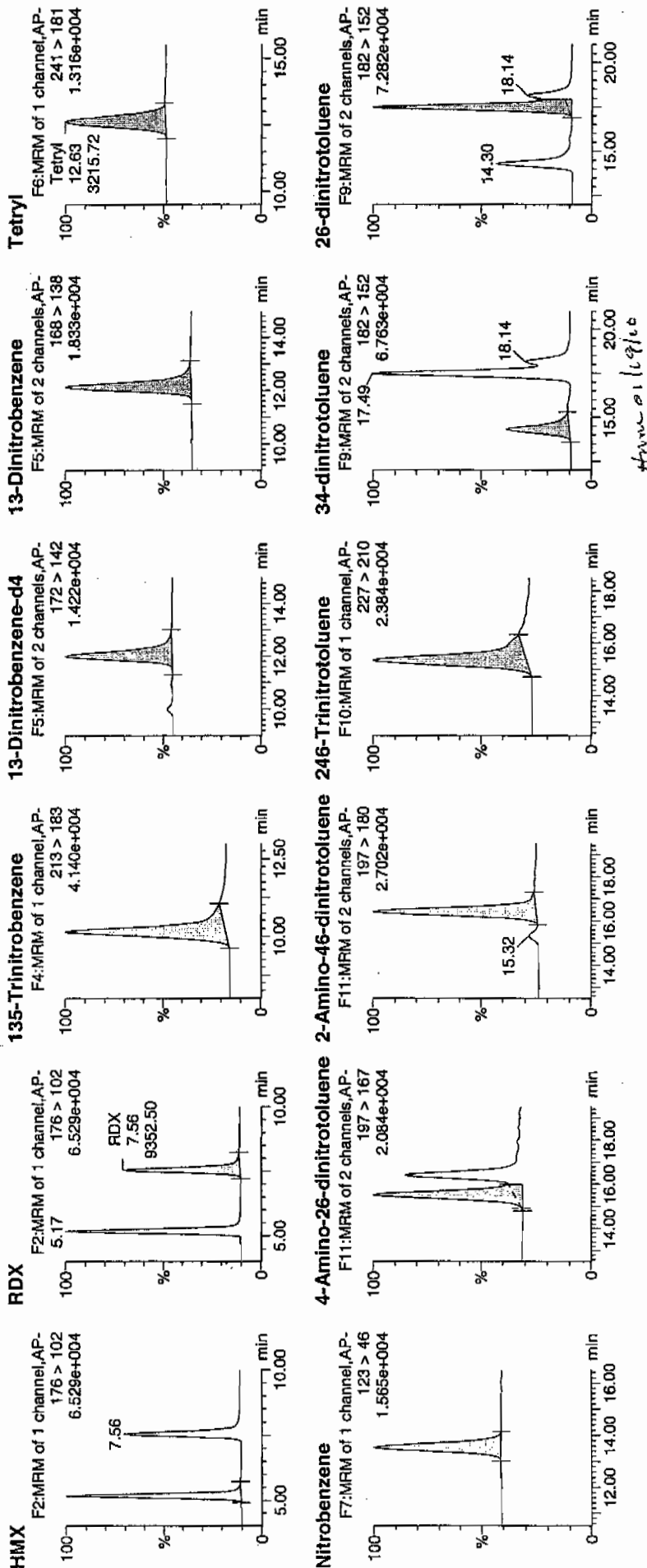
Time: 18:28:52

ID: WXX100118-07ICV

Vial: 1:1,B

1/19/10
11:01:10

Page 459 of 1586

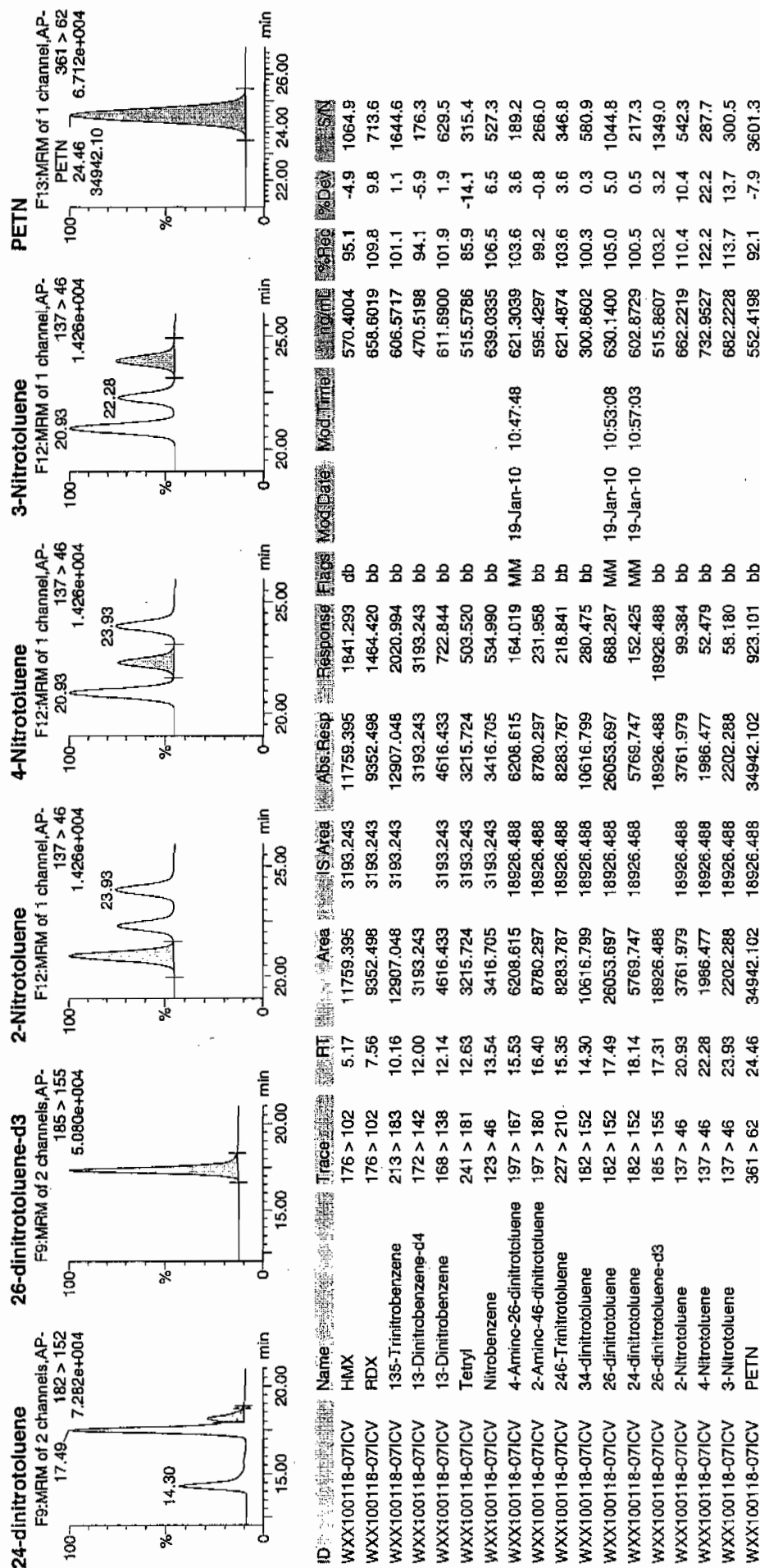


Quantify Sample Report

GEL Laboratories, LLC / Analyst: Michael A. Penny

Printed: Tue Jan 19 11:02:03 2010, Page 20 of 85

Dataset: C:\MASSLYN\New_Exp\PRO1011810expA.qld, Time: Tue Jan 19 10:59:58 2010



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

*WXX
1/19/10*

Total 1650.9

WXX 01/19/10

Average 103.2

ICV Limits 85-115%

CRI Limits 70-130%

CCV Limits 85-115%

No single analyte > +/- 60%

Explosives Initial Calibration

Lab Name: GEL Laboratories LLC

GEL Job No: 10-1213

Lab Code: GEL

Run Date: 18-JAN-10.21-JAN-10.25-JAN-10

LCMSMS Instrument ID: LCMSMS4

Method: 8321A Modified

HPLC Column: YMC J-Sphere ODS-H8Q

Calibration Type: 2nd Order

Calibration Level:	19	20	21	22	23	24	25	X	X^2	Intercept	COD	Q
Data File:	EXS01210003.wif	EXS01210004.wif	EXS01210005.wif	EXS01210006.wif	EXS01210007.wif	EXS01210008.wif	EXS01210009.wif					
Paraname:												
2,4-Diamino-6-nitrotoluene	139000	282000	729000	1390000	2090000	2770000	5400000	3440	2830	-069	1	
2,6-Diamino-4-nitrotoluene	220000	421000	1080000	2020000	3130000	4070000	8540000	43200	3910	.166	.9999	
3,4-Dinitrotoluene	360000	683000	1710000	3300000	5020000	6290000	12100000	-1010	14500	-2.44	.9977	
3,5-Dinitroaniline	523000	1040000	2500000	4780000	7010000	8800000	15500000	54900	10000	-1.15	.9999	
TATB	73100	143000	367000	717000	1100000	1420000	2780000	-1980	1480	-045	.9999	
tris(o-cresyl) phosphate	1290000	2580000	6080000	11500000	16400000	21000000	31300000	-47100	26000	-5.17	.9999	

Quadratic Fit: $y = Ax^2 + Bx + C$
 where X^2 column above is coefficient A
 X column above is coefficient B
 intercept is C

COD is Coefficient of Determination

Q column used to flag COD outside of Limit (<0.990)

* Values outside of QC Limit

012110ICAL

Peak Name: TATB
No Internal Standard
Q1/Q3 Masses: 257.20/204.90 amu

Fit	Quadratic	Weighting	None	Iterate No
a0	-1.98e+003			
a1	1.48e+003			
a2	-0.0445			
Correlation coefficient 0.9999				
Use Area				

Peak Name: 35-Dinitroaniline
No Internal Standard
Q1/Q3 Masses: 182.00/46.00 amu

Fit	Quadratic	Weighting	None	Iterate No
a0	5.49e+004			
a1	1e+004			
a2	-1.15			
Correlation coefficient 0.9999				
Use Area				

Peak Name: 34-Dinitrotoluene
No Internal Standard
Q1/Q3 Masses: 182.08/151.90 amu

Fit	Quadratic	Weighting	None	Iterate No
a0	-1.01e+003			
a1	1.45e+004			
a2	-2.44			
Correlation coefficient 0.9977				
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	4.32e+004			
a1	3.91e+003			
a2	0.166			
Correlation coefficient 0.9999				
Use Area				

01/22/10

01/22/10

012110ICAL

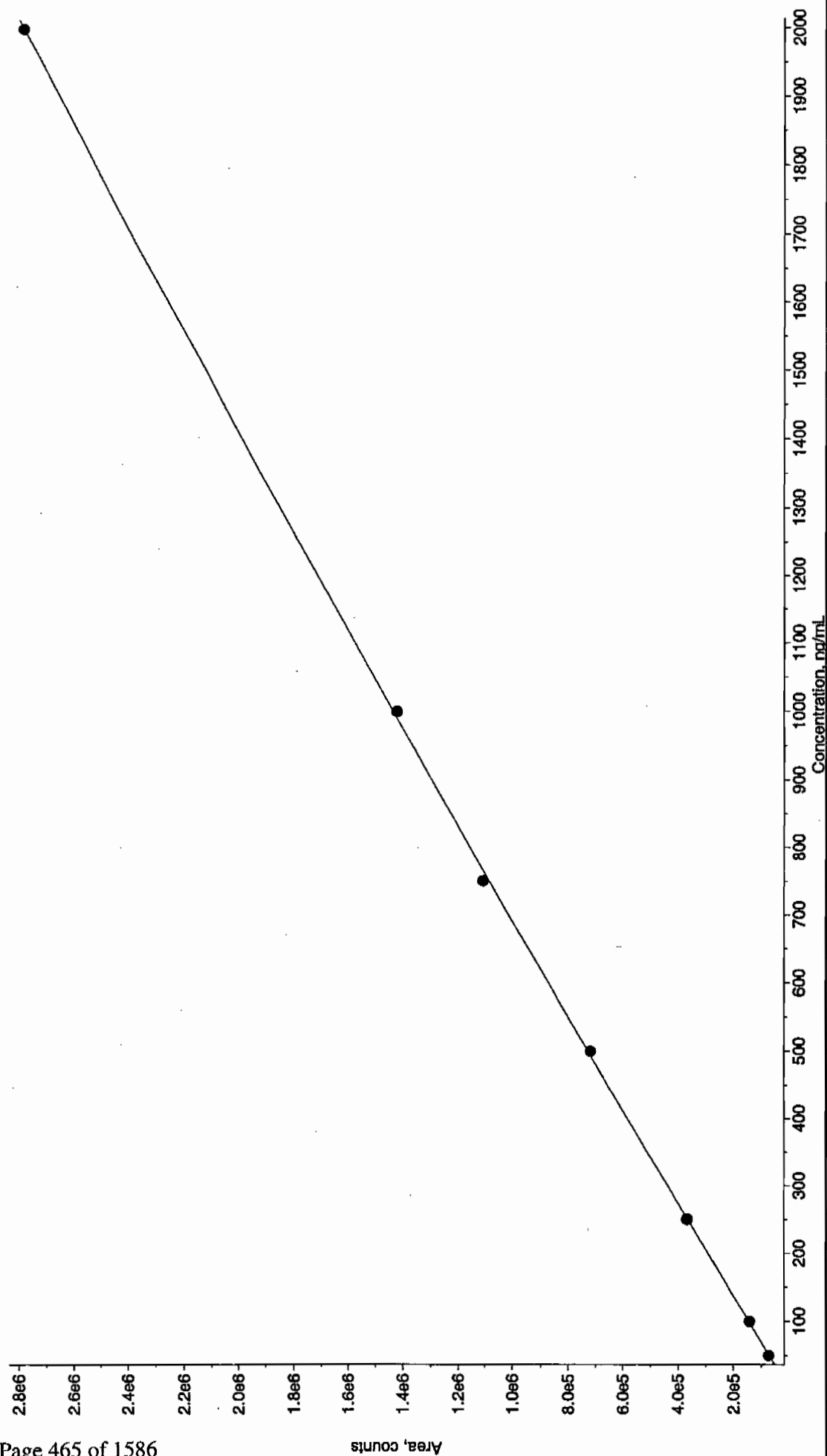
Peak Name: 24-Diamino-6-nitrotoluene
No Internal Standard
Q1/Q3 Masses: 165.97/46.00 amu

Fit	Quadratic	Weighting	None	Iterate No
a0	3.44e+003			
a1	2.83e+003			
a2	-0.0685			
Correlation coefficient 1.0000				
Use Area				

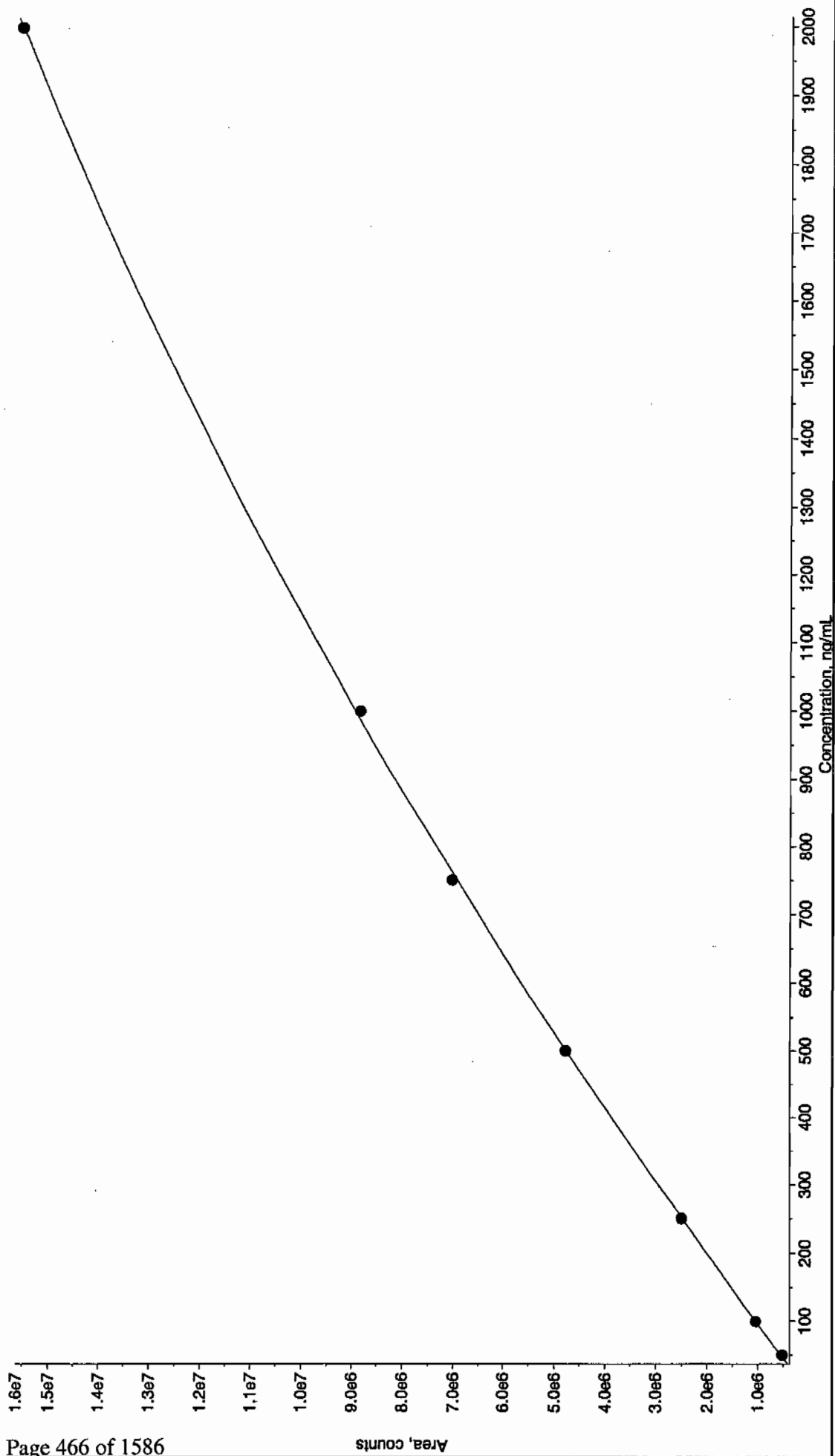
Peak Name: tris(o-cresyl) phosphate
No Internal Standard
Q1/Q3 Masses: 369.15/91.00 amu

Fit	Quadratic	Weighting	None	Iterate No
a0	-4.71e+004			
a1	2.6e+004			
a2	-5.17			
Correlation coefficient 0.9999				
Use Area				

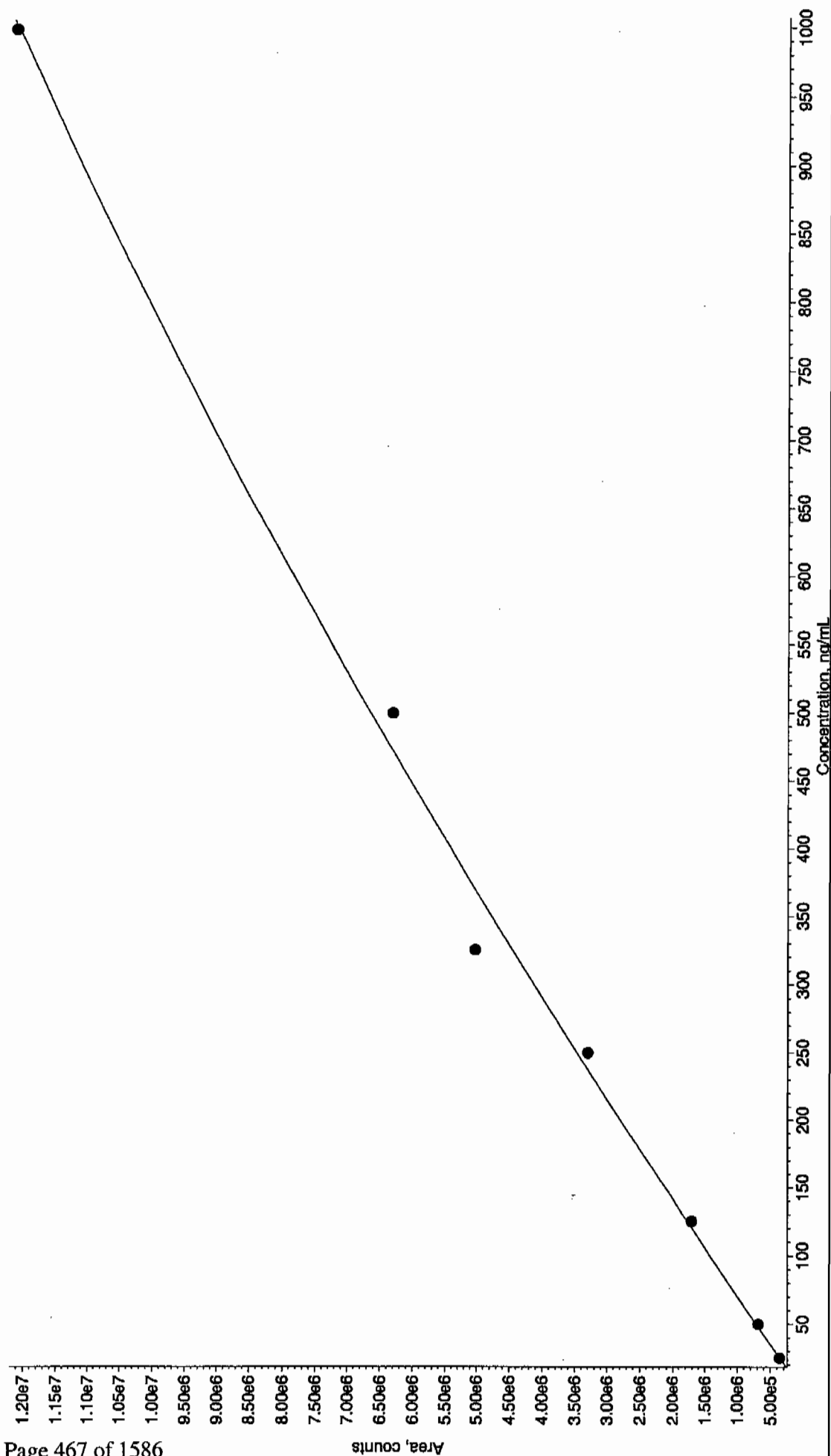
012110.rdb (TATB): "Quadratic" Regression ("No" weighting): $y = -0.0445 x^2 + 1.48e+003 x + -1.98e+003$ ($r = 0.9999$)



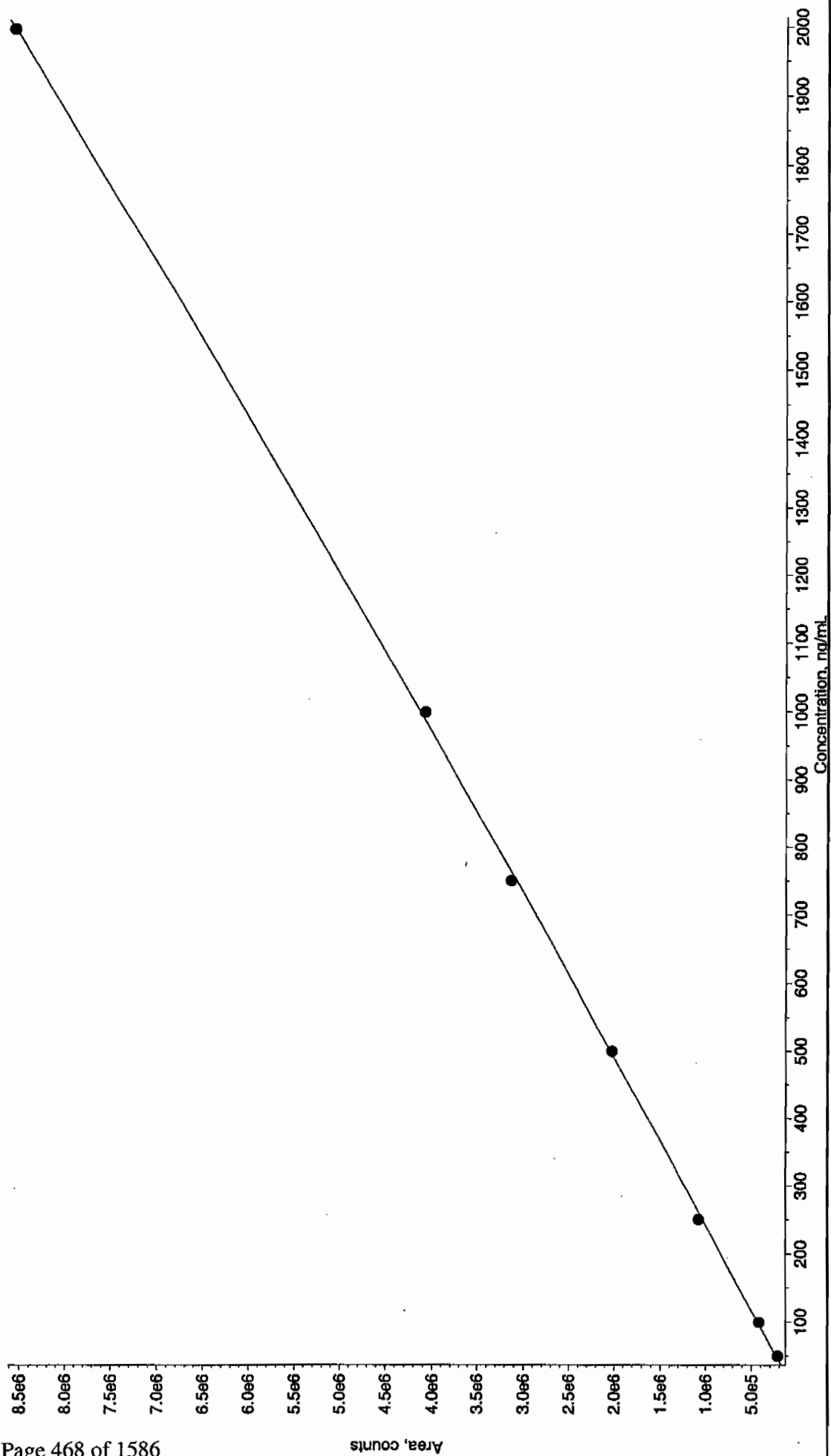
012110.rdb (35-Dinitroaniline): "Quadratic" Regression ("No" weighting): $y = -1.15 x^2 + 1e+004 x + 5.49e+004$ ($r = 0.9999$)



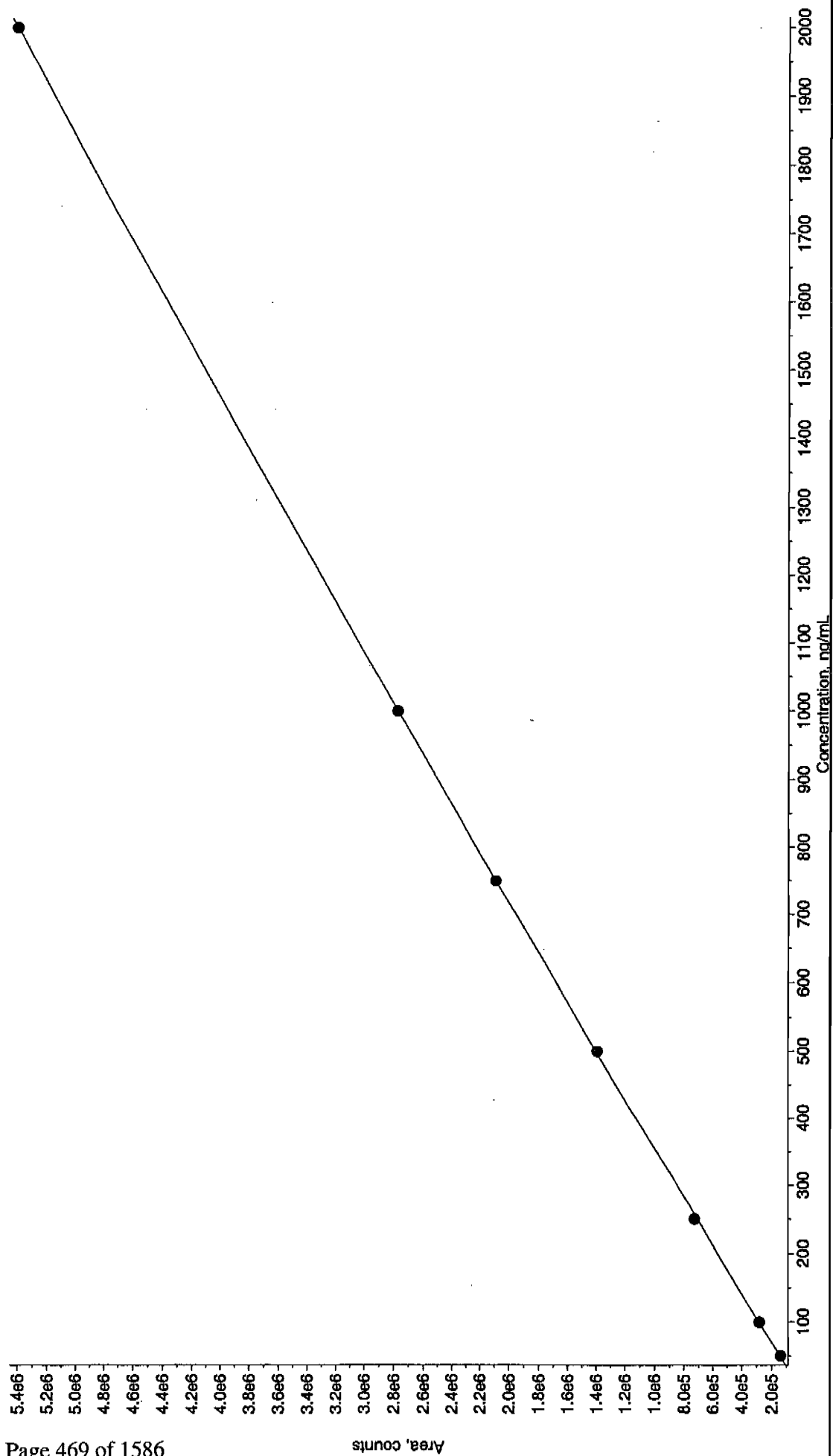
012110.rdb (34-Dinitrotoluene): "Quadratic" Regression ("No" weighting): $y = -2.44 x^2 + 1.45e+004 x + -1.01e+003$ ($r = 0.9977$)



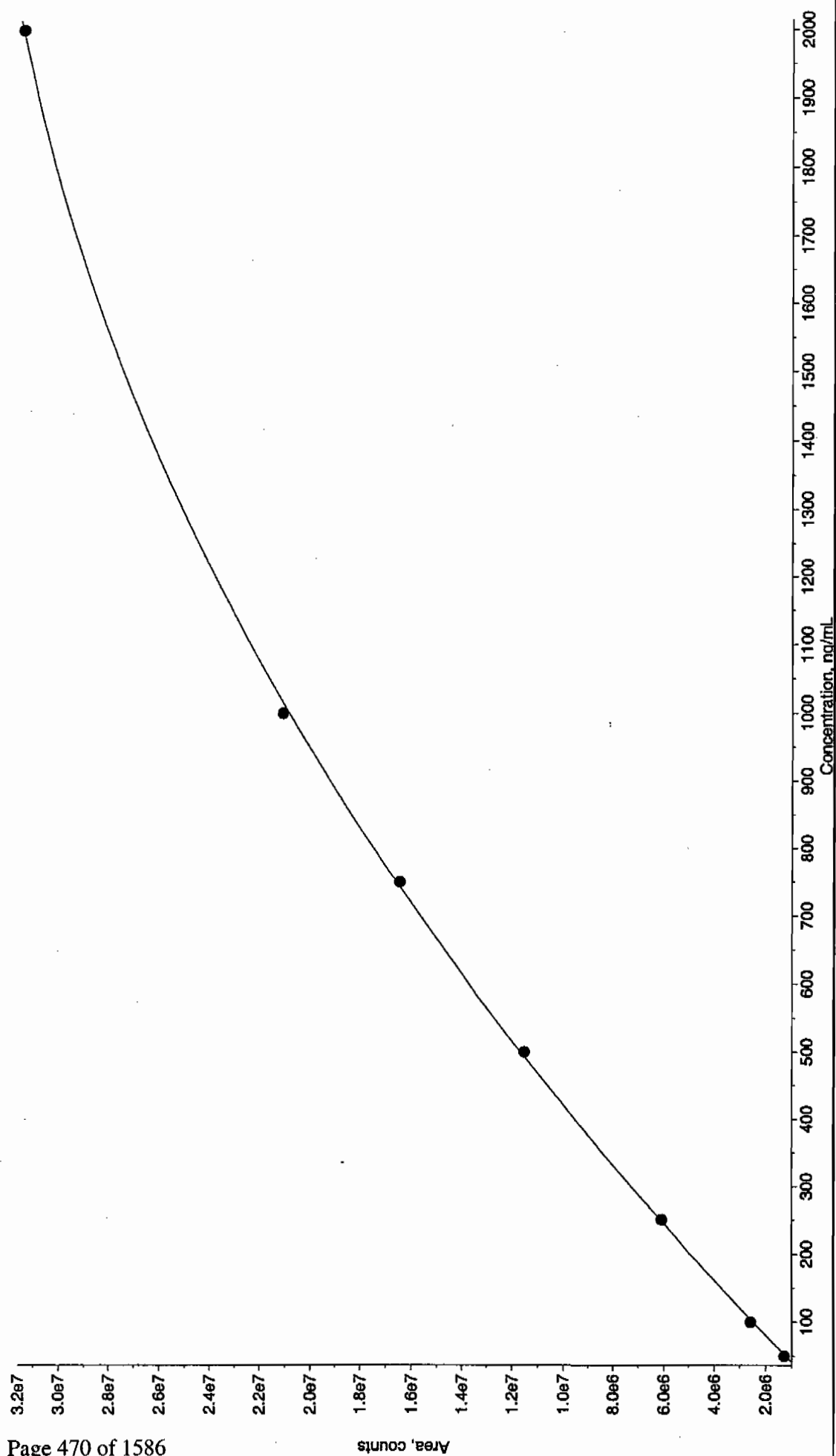
0121110.rdb (26-Diamino-4-nitrotoluene): "Quadratic" Regression ("No" weighting): $y = 0.166 x^2 + 3.91e+003 x + 4.32e+004$ ($r = 0.9999$)



012110.rdb (24-Diamino-6-nitrotoluene): "Quadratic" Regression ("No" weighting): $y = -0.0685 x^2 + 2.83e+003 x + 3.44e+003$ ($r = 1.0000$)



012110.rdb (tris(o-cresyl) phosphate): "Quadratic" Regression ("No" weighting): $y = -5.17 x^2 + 2.6e+004 x + -4.71e+004$ ($r = 0.9999$)



Explosives Initial Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1213

Lab Code: GEL

GEL Sample ID: WXXICV

GEL Data File EXS01210011.wiff

Analysis Date: 21-JAN-10 16:06

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	500	496	99	
2,6-Diamino-4-nitrotoluene	500	547	109	
3,4-Dinitrotoluene	250	240	96	
3,5-Dinitroaniline	500	511	102	
TATB	500	479	96	
tris(o-cresyl) phosphate	500	475	95	

Recovery Limits:

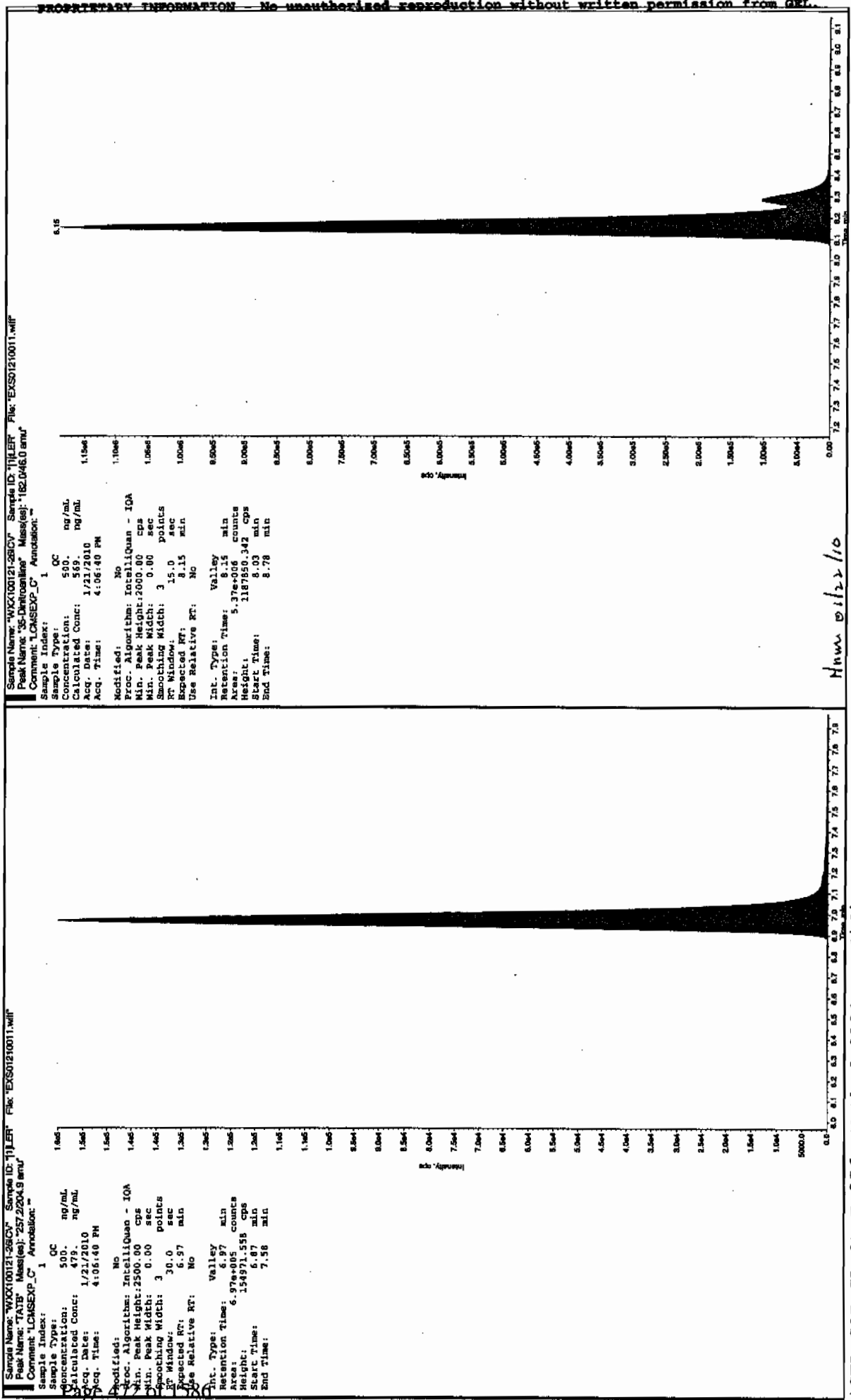
3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,
2,4-Diamino-6-nitrotoluene 70-130%

Other Target Analytes 80-120%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

Before Scan 112110

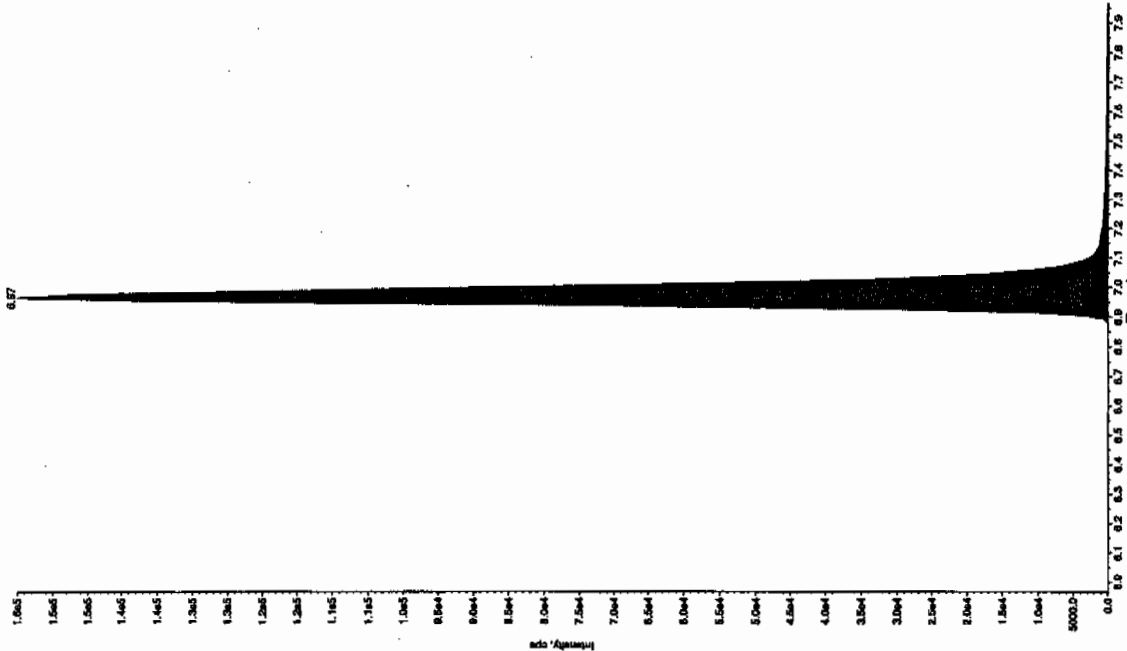


*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

after scan 1122/10

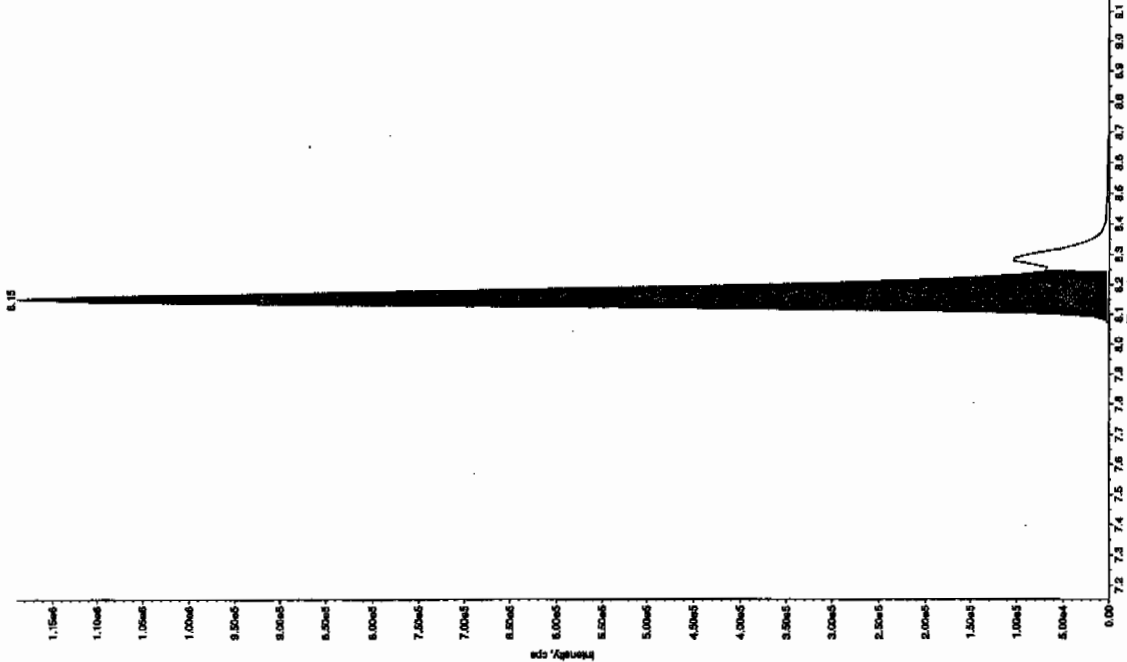
Sample Name: "WXX100121-256CV" Sample ID: "TJLER" File: "EX501210011.wif"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSXP_C" Annotation: ""

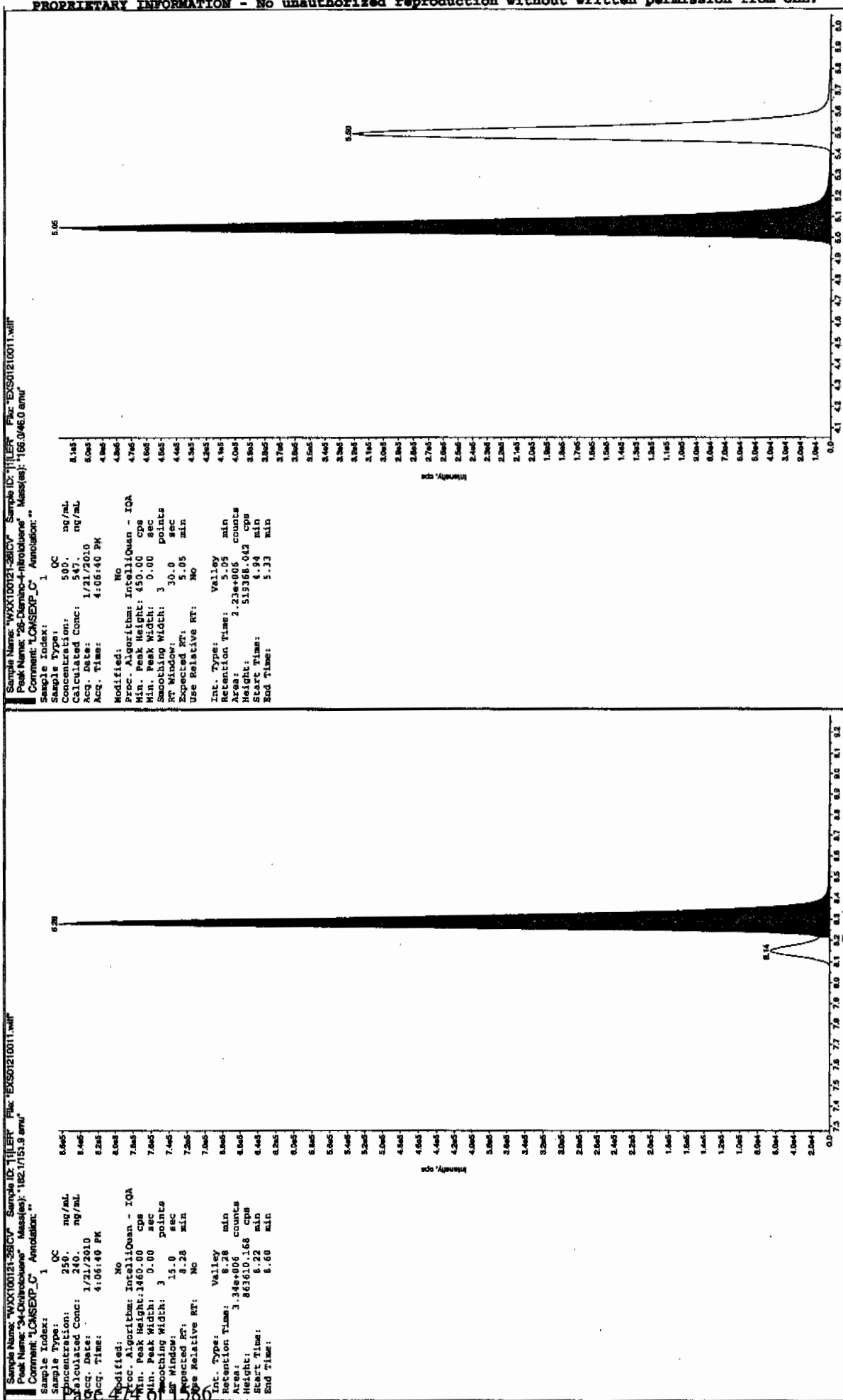
Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 479. ng/mL
Acq. Date: 1/21/2010
Acq. Time: 4:06:40 PM
Modified: No
Acq. Algorithm: Intelliclean - IQA
Min. Peak Width: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
Scan Window: 30.0 sec
Expected RT: 6.97 min
Use Relative RT: No
Int. Type: Valley
Retention Time: 6.97 min
Area: 6.97e+005 counts
Height: 154971.558 cps
Start Time: 6.87 min
End Time: 7.58 min



Sample Name: "WXX100121-256CV" Sample ID: "TJLER" File: "EX501210011.wif"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/166.0 amu"
Comment: "LCMSXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 511. ng/mL
Acq. Date: 1/21/2010
Acq. Time: 4:06:40 PM
Modified: Yes
Acq. Algorithm: Intelliclean - IQA
Min. Peak Width: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
Scan Window: 30.0 sec
Expected RT: 8.15 min
Use Relative RT: No
Int. Type: Manual
Retention Time: 8.15 min
Area: 4.86e+006 counts
Height: 1185461.538 cps
Start Time: 8.07 min
End Time: 8.25 min





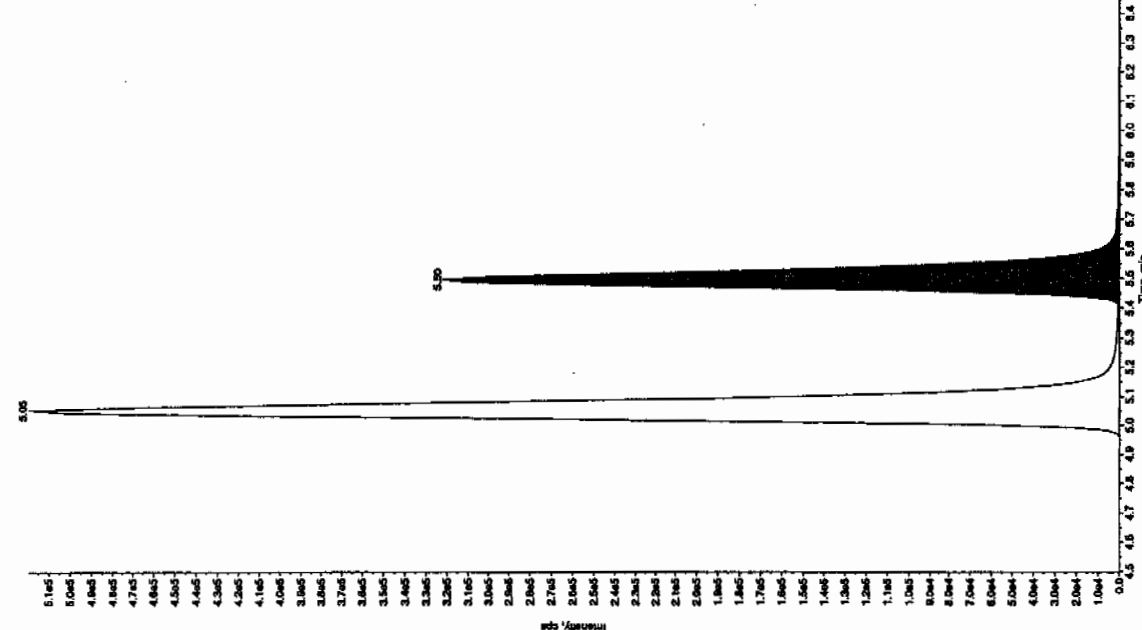
Sample Name: "WXX100121-261V" Sample ID: "HILER" File: "EXSD1210011.wif"
 Peak Name: "24-Dimethyl phosphine" Mass(es): "369.191.0 amu"
 Comment: "LCMSXP_C" Annotation:

Sample Index: 1
 Sample Type: QC
 Concentration: 500 ng/mL
 Calculated Conc: 475 ng/mL
 Acq. Date: 1/21/2010
 Acq. Time: 4:06:40 PM
 Modified: No
 Proc. Algorithm: IntelliQuan - IQA
 Min. Peak Height: 1.00e3 cps
 Min. Peak Width: 0.00 sec
 Smoothing Width: 3 points
 RT Window: 30.0 sec
 Expected RT: 10.8 min
 Use Relative RT: No
 Int. Type: Valley
 Retention Time: 10.8 min
 Area: 1.11e+007 counts
 Height: 258305.176 cps
 Start Time: 10.7 min
 End Time: 11.1 min



Sample Name: "WXX100121-261V" Sample ID: "HILER" File: "EXSD1210011.wif"
 Peak Name: "24-Dimethyl phosphine" Mass(es): "166.046.0 amu"
 Comment: "LCMSXP_C" Annotation:

Sample Index: 1
 Sample Type: QC
 Concentration: 500 ng/mL
 Calculated Conc: 496 ng/mL
 Acq. Date: 1/21/2010
 Acq. Time: 4:06:40 PM
 Modified: No
 Proc. Algorithm: IntelliQuan - IQA
 Min. Peak Height: 350.00 cps
 Min. Peak Width: 0.00 sec
 Smoothing Width: 3 points
 RT Window: 30.0 sec
 Expected RT: 5.50 min
 Use Relative RT: No
 Int. Type: Valley
 Retention Time: 5.50 min
 Area: 1.39e+006 counts
 Height: 321253.326 cps
 Start Time: 5.4 min
 End Time: 5.93 min



Form 6

Explosives Initial Calibration

Lab Name: GEL Laboratories LLC

GEL Job No: 10-1213

Lab Code: GEL

Run Date: 18-JAN-10.21-JAN-10.25-JAN-10

LCMSMS Instrument ID: LCMSMS4

Method: 8321A.Modified

HPLC Column: YMC J-Sphere ODS-H8Q

Calibration Type: 2nd Order

Calibration Level:	19	20	21	22	23	24	25	X	X^2	Intercept	COD	Q
Data File:	EXS01250003.wiff	EXS01250004.wiff	EXS01250005.wiff	EXS01250006.wiff	EXS01250007.wiff	EXS01250008.wiff	EXS01250009.wiff					
Parname:												
2,4-Diamino-6-nitrotoluene	124000	243000	556000	1130000	1930000	2390000	4860000	-20500	2450	-0.006	.9993	
2,6-Diamino-4-nitrotoluene	196000	379000	859000	1770000	2910000	3810000	7350000	-50100	3930	-0.114	.9996	
3,4-Dinitrotoluene	318000	666000	1460000	3270000	4740000	5910000	10800000	-61500	14400	-3.5	.9975	
3,5-Dinitroaniline	504000	1060000	2200000	4760000	6820000	8600000	14400000	-27700	10200	-1.48	.9998	
TATB	71000	141000	345000	692000	1070000	1350000	2660000	-94.4	1410	-0.043	.9998	
tris(o-cresyl) phosphate	456000	2410000	5510000	10100000	15300000	19000000	29700000	-337000	23800	-4.41	.9996	

Quadratic Fit: $y = Ax^2 + Bx + C$
 where X^2 column above is coefficient A
 X column above is coefficient B
 intercept is C

COD is Coefficient of Determinization

Q column used to flag COD outside of Limit (<0.990)

* Values outside of QC Limit

012510ICAL

Peak Name: TATB
No Internal Standard
Q1/Q3 Masses: 257.20/204.90 amu

Fit	Quadratic	Weighting	None	Iterate No
a0	-94.4			
a1	1.41e+003			
a2	-0.043			
Correlation coefficient 0.9998				
Use Area				

Peak Name: 35-Dinitroaniline
No Internal Standard
Q1/Q3 Masses: 182.00/46.00 amu

Fit	Quadratic	Weighting	None	Iterate No
a0	-2.77e+004			
a1	1.02e+004			
a2	-1.48			
Correlation coefficient 0.9998				
Use Area				

Peak Name: 34-Dinitrotoluene
No Internal Standard
Q1/Q3 Masses: 182.08/151.90 amu

Fit	Quadratic	Weighting	None	Iterate No
a0	-6.15e+004			
a1	1.44e+004			
a2	-3.5			
Correlation coefficient 0.9975				
Use Area				

Peak Name: 26-Diamino-4-nitrotoluene
No Internal Standard
Q1/Q3 Masses: 165.97/46.00 amu

Fit	Quadratic	Weighting	None	Iterate No
a0	-5.01e+004			
a1	3.93e+003			
a2	-0.114			
Correlation coefficient 0.9996				
Use Area				

See
1/27/10

Amw
01/27/10

012510ICAL

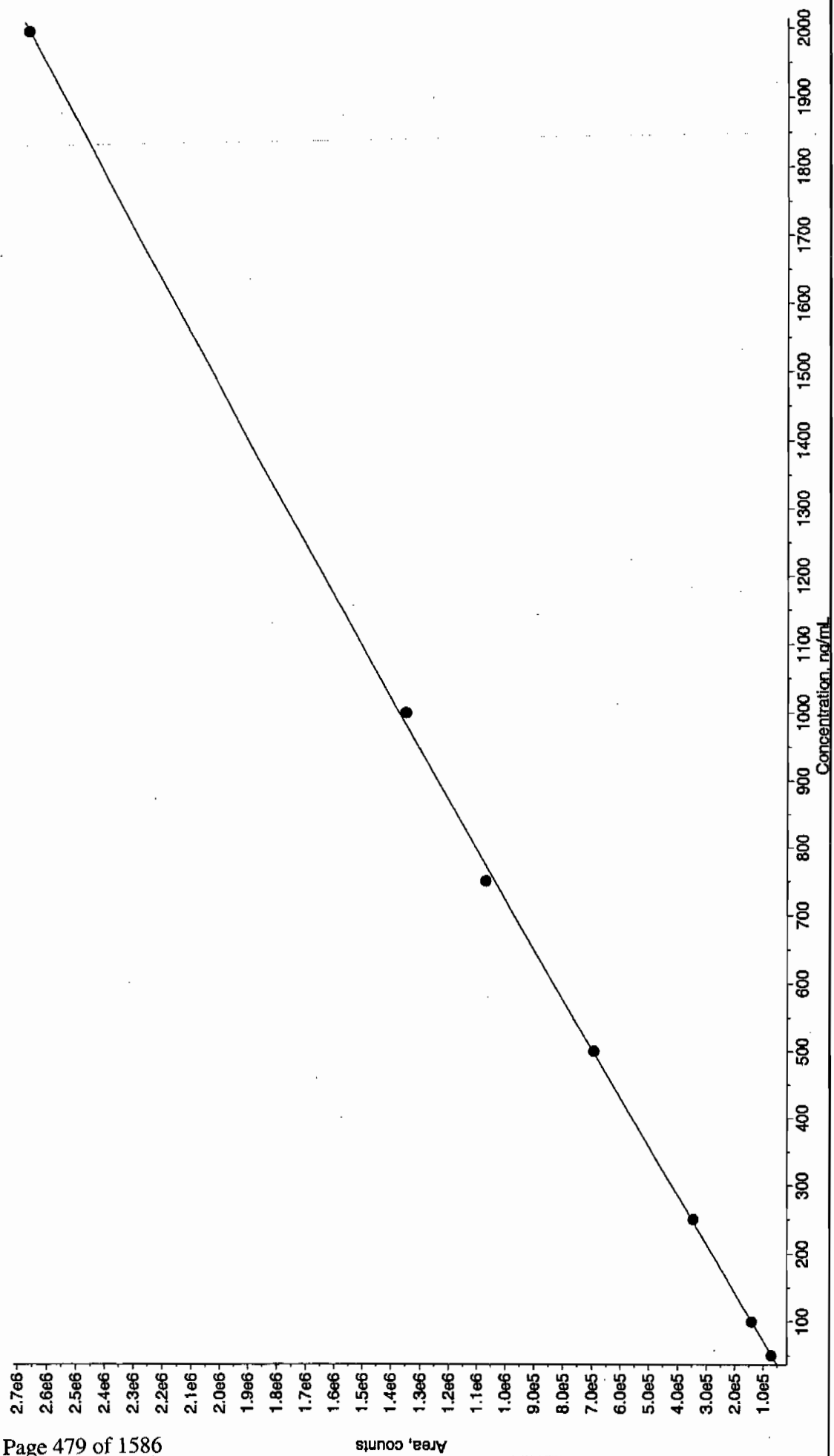
Peak Name: 24-Diamino-6-nitrotoluene
No Internal Standard
Q1/Q3 Masses: 165.97/46.00 amu

Fit	Quadratic	Weighting	None	Iterate No
a0	-2.05e+004			
a1	2.45e+003			
a2	-0.00578			
Correlation coefficient 0.9993				
Use Area				

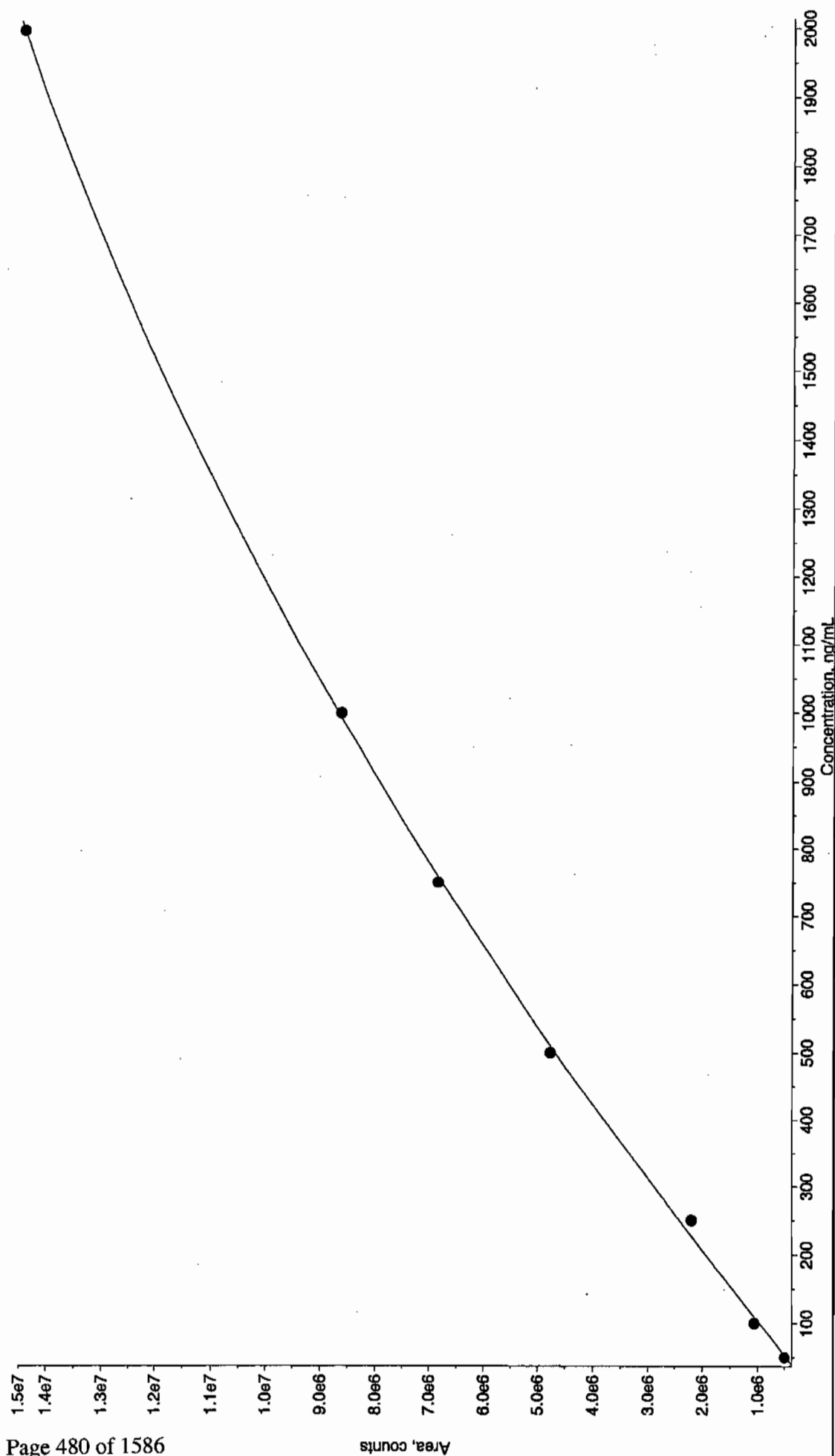
Peak Name: tris(o-cresyl) phosphate
No Internal Standard
Q1/Q3 Masses: 369.15/91.00 amu

Fit	Quadratic	Weighting	None	Iterate No
a0	-3.37e+005			
a1	2.38e+004			
a2	-4.41			
Correlation coefficient 0.9996				
Use Area				

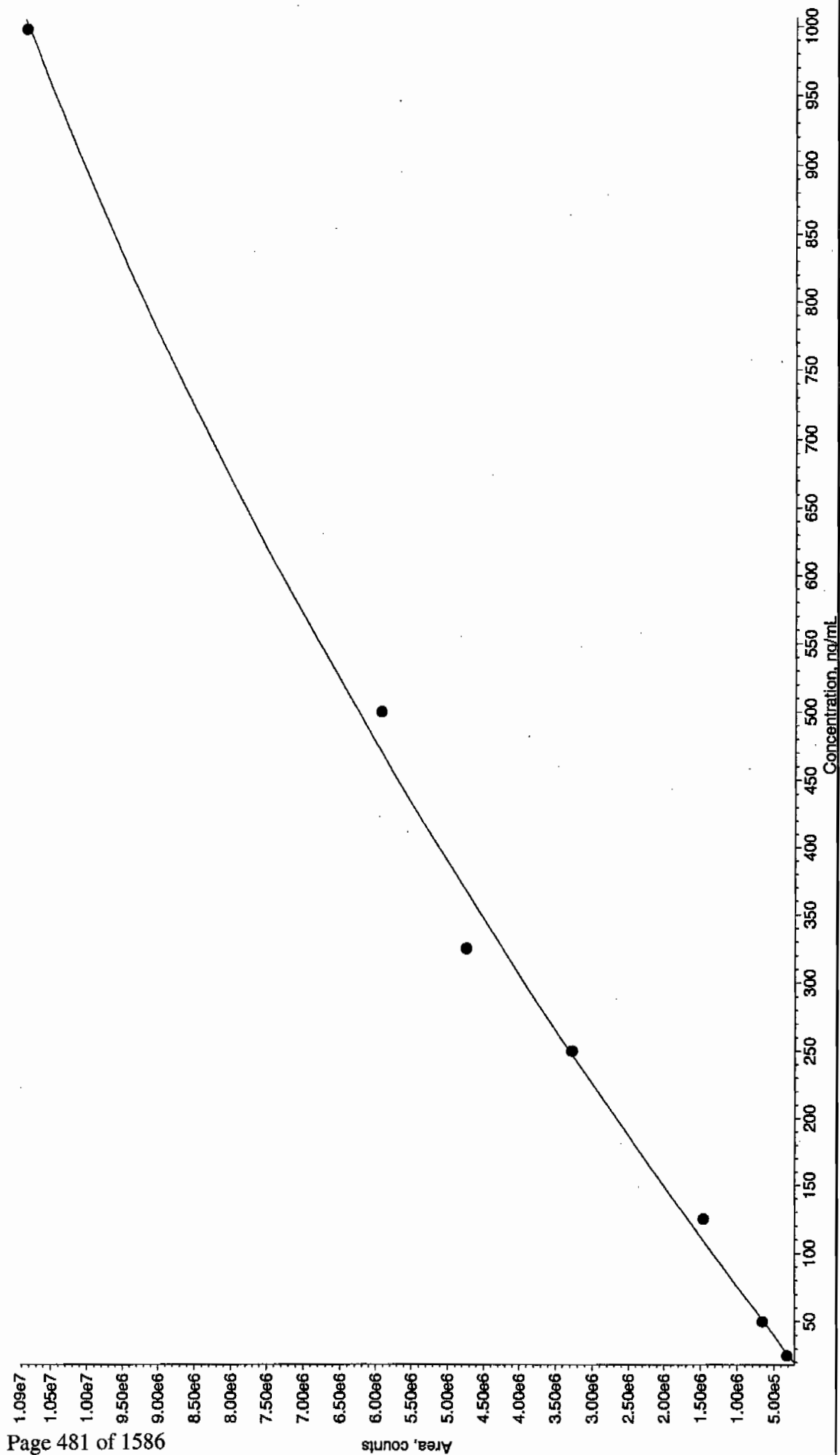
012510.rdb (TATB): "Quadratic" Regression ("No" weighting): $y = -0.043 x^2 + 1.41e+003 x + -94.4$ ($r = 0.9998$)



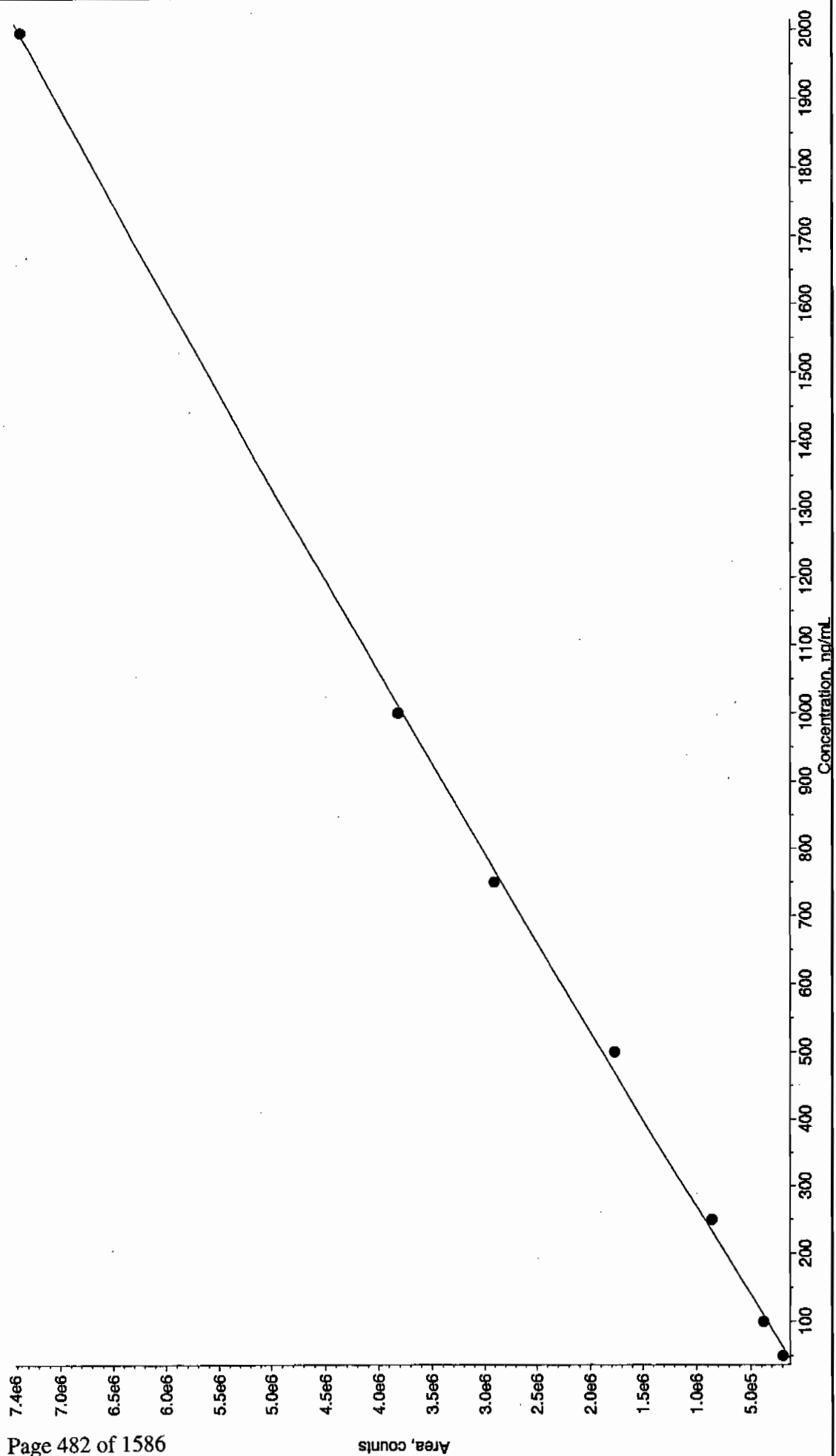
012510.rdb (35-Dinitroaniline): "Quadratic" Regression ("No" weighting): $y = -1.48 x^2 + 1.02e+004 x + -2.77e+004$ ($r = 0.9998$)



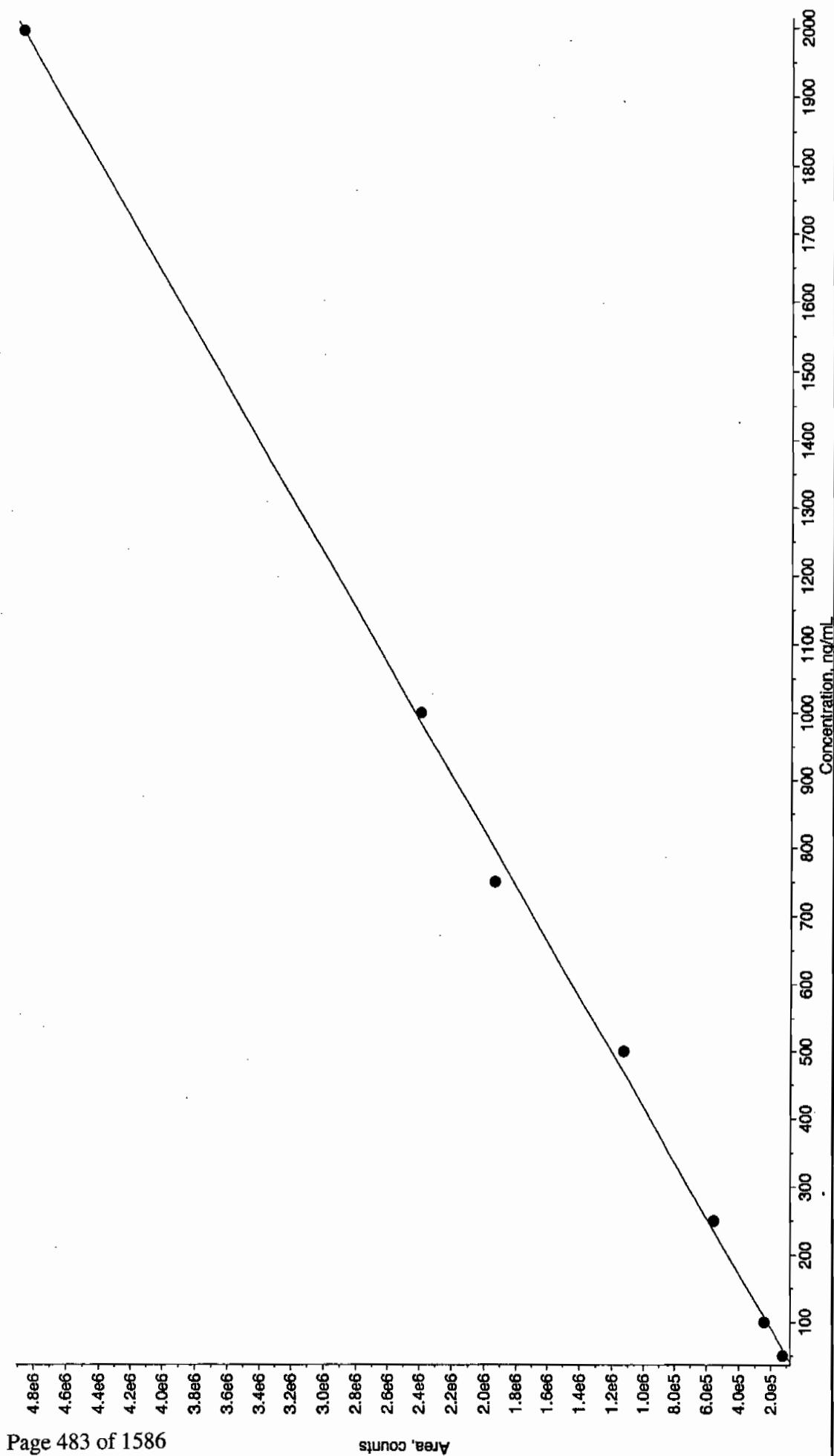
012510.rdb (34-Dinitrotoluene): "Quadratic" Regression ("No" weighting): $y = -3.5 \times 10^{-4} x^2 + 1.44 \times 10^{-4} x + 6.15 \times 10^4$ ($r = 0.9975$)



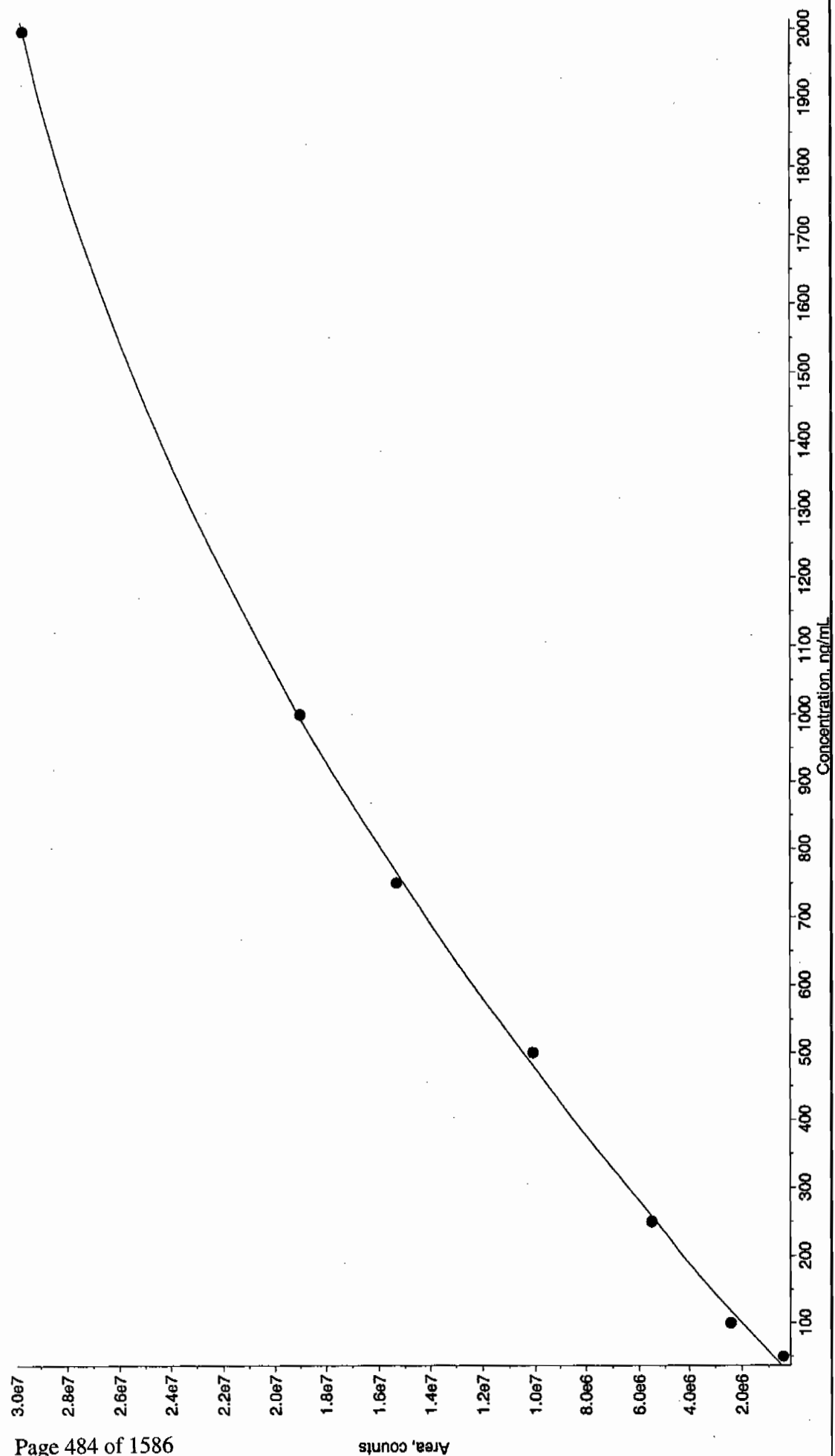
012510.rdb (26-Diamino-4-nitrotoluene): "Quadratic" Regression ("No" weighting): $y = -0.114 x^2 + 3.93e+003 x + -5.01e+004$ ($r = 0.9996$)



012510.rdb (24-Diamino-6-nitrotoluene): "Quadratic" Regression ("No" weighting): $y = -0.00578 x^2 + 2.45e+003 x + -2.05e+004$ ($r = 0.9993$)



012510.rdb (tris(o-cresyl) phosphate): "Quadratic" Regression ("No" weighting): $y = -4.41 x^2 + 2.38e+004 x + -3.37e+005$ ($r = 0.9996$)



Explosives Initial Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1213

Lab Code: GEL

GEL Sample ID: WXXICV

GEL Data File EXS01250011.wiff

Analysis Date: 25-JAN-10 13:09

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	500	486	97	
2,6-Diamino-4-nitrotoluene	500	478	96	
3,4-Dinitrotoluene	250	228	91	
3,5-Dinitroaniline	500	485	97	
TATB	500	478	96	
tris(o-cresyl) phosphate	500	509	102	

Recovery Limits:

3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,

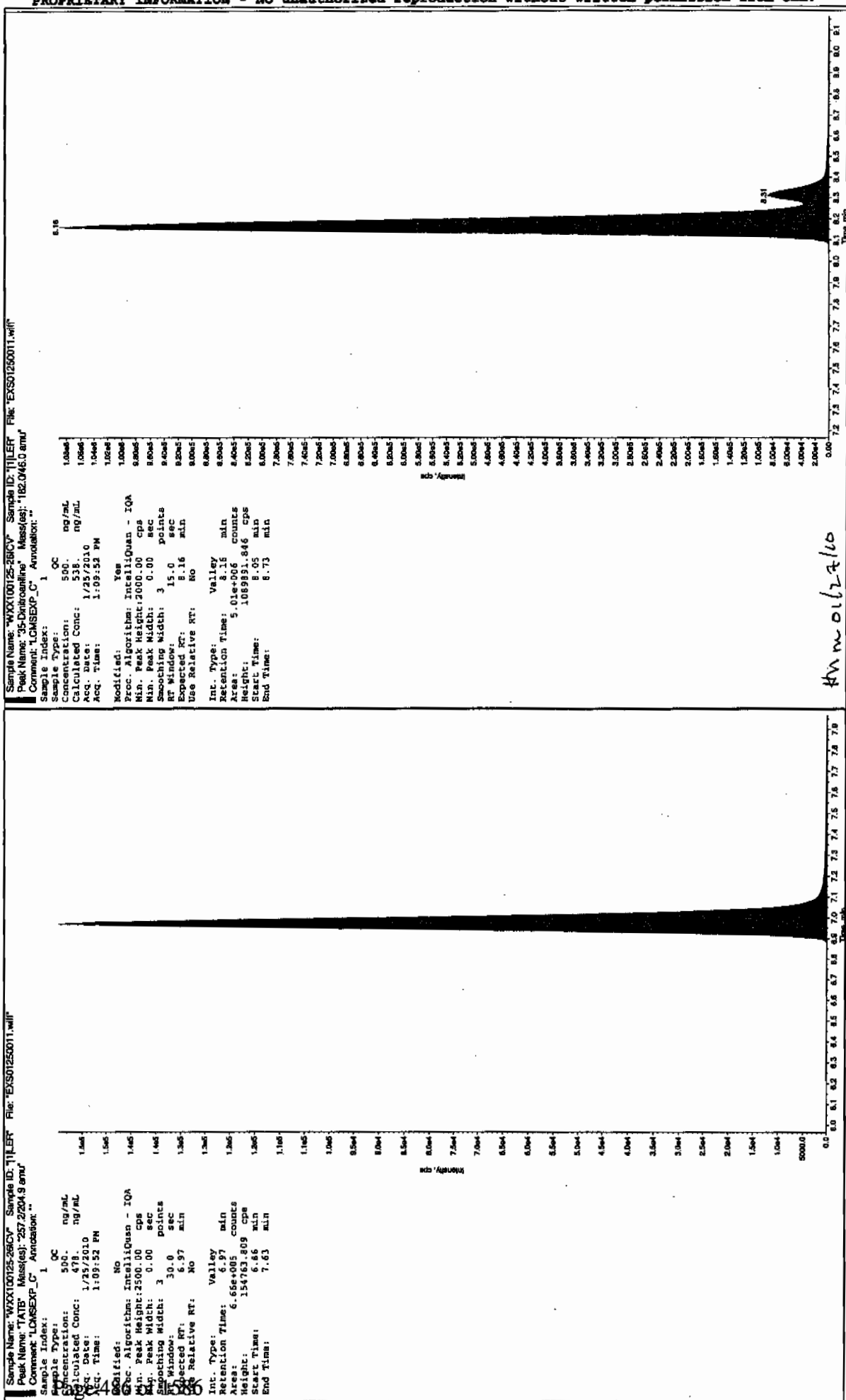
2,4-Diamino-6-nitrotoluene 70-130%

Other Target Analytes 80-120%

Column used to flag Recovery outside of Limits

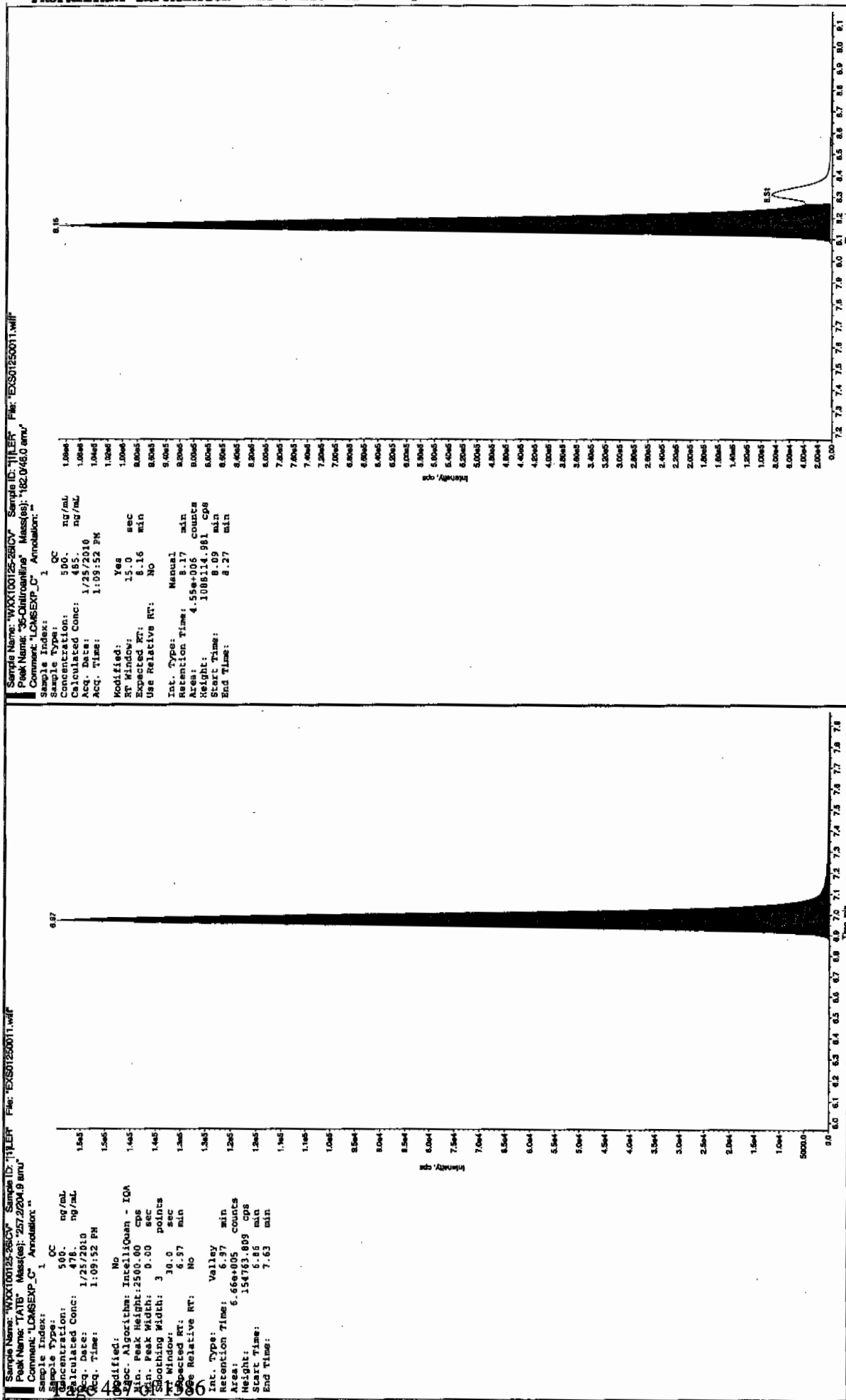
* Value outside of Recovery Limits

Before scan 167110

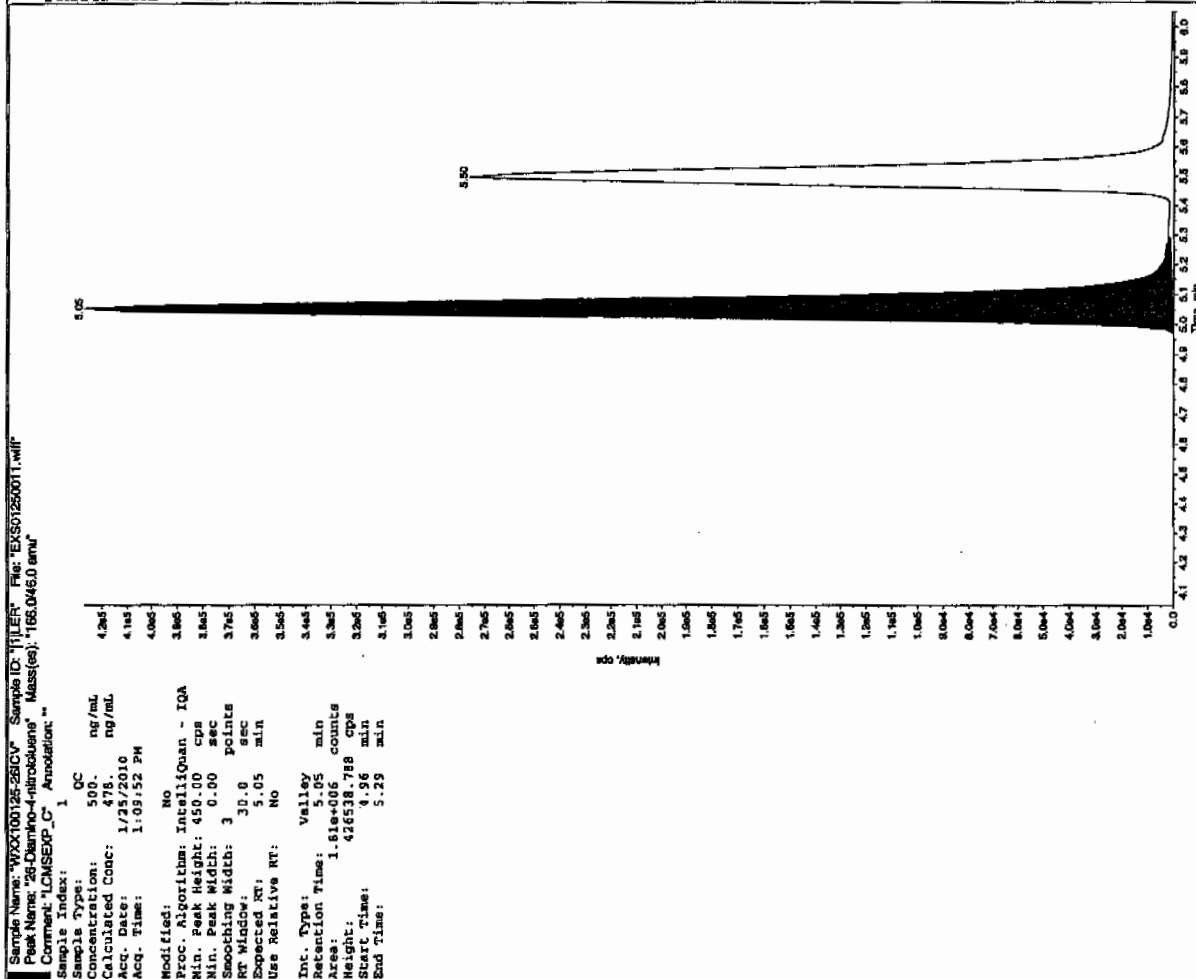


*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

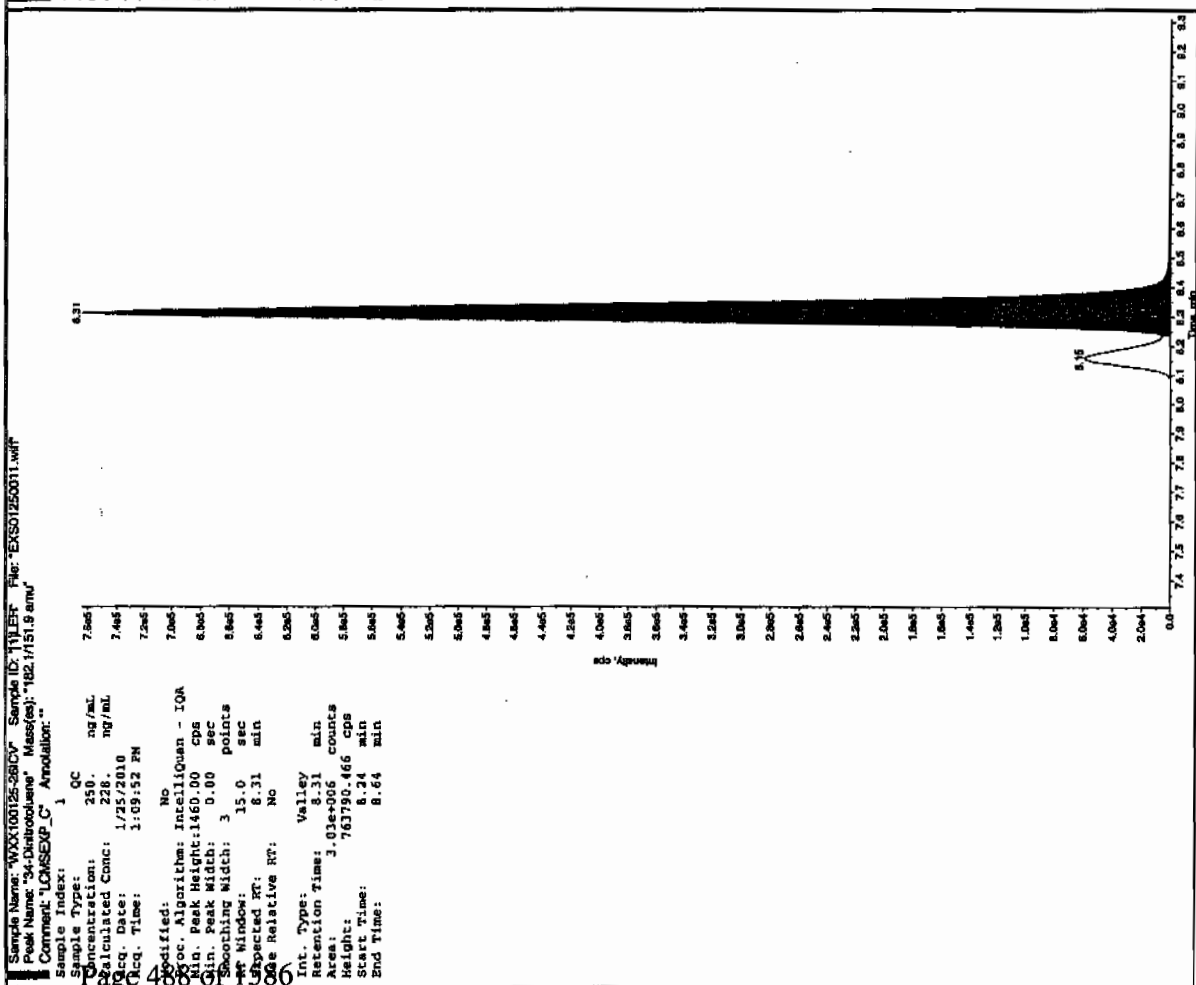
after for 1/27/10



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

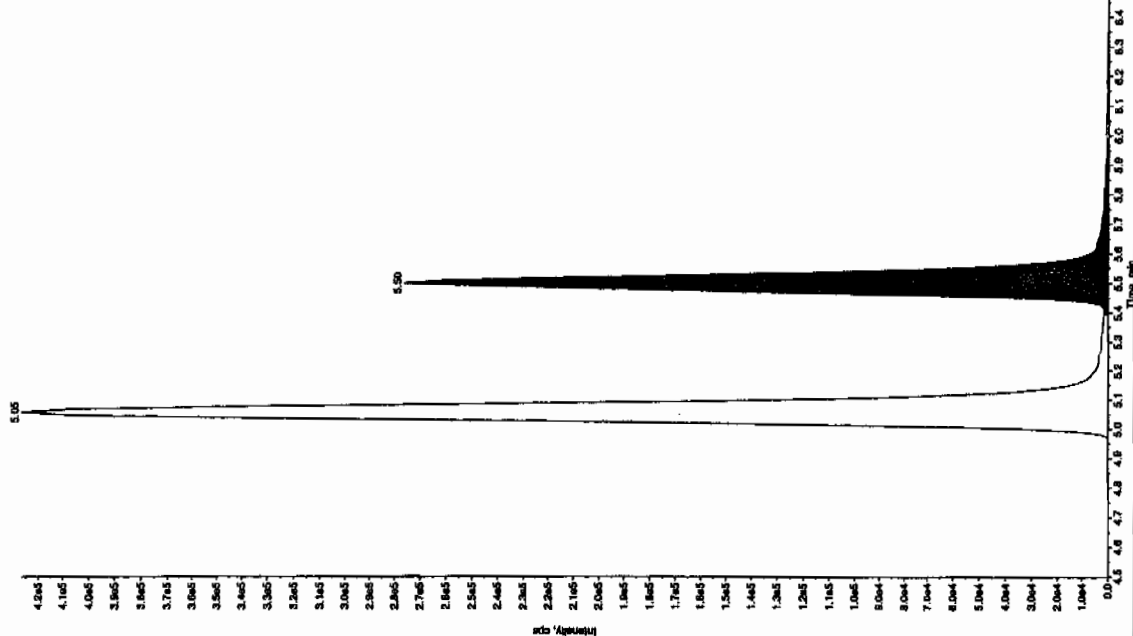


Sample Name: "WXX100126-26CV" Sample ID: "1111EF" File: "EXS01250011.wiff"
Peak Name: "3,4-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LOWSEXP_C" Annotation: ""



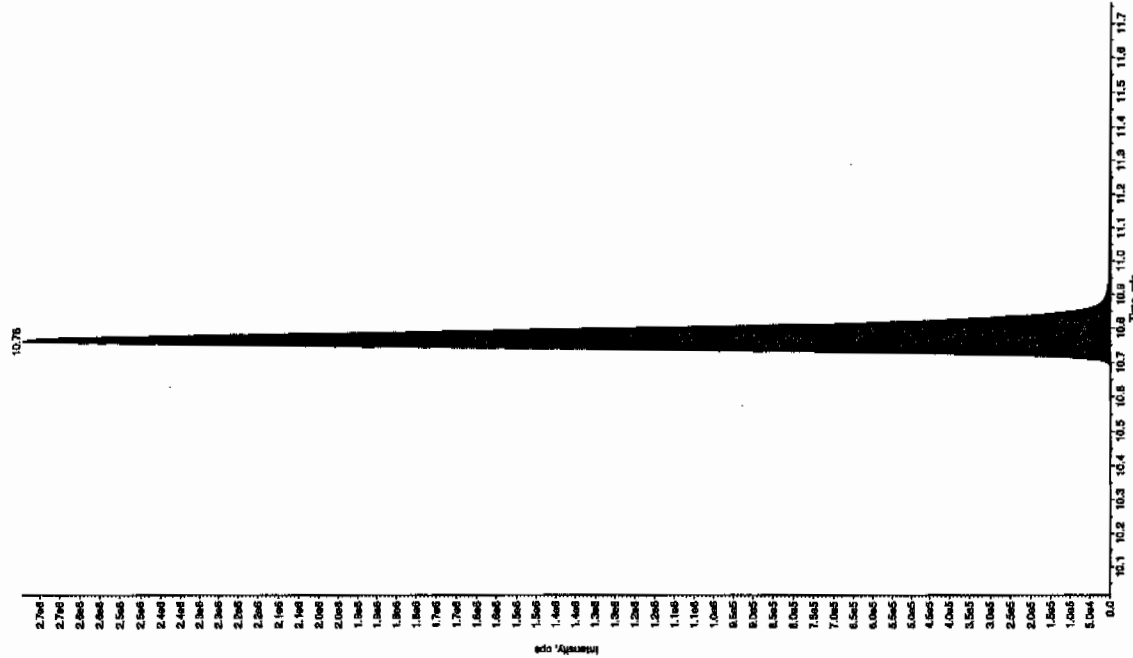
Sample Name: "WXX100125-250V" Sample ID: "HLEP" File: "EX01250011.wif"
 Peak Name: "24-Diamino-6-nitrobenzene" Mass(es): "163.046.0 amu"
 Comment: "LONSEXP_C" Annotation: "

Sample Index: 1
 Sample Type: 500
 Calculated Conc: 486 ng/mL
 Acq. Date: 1/25/2010
 Acq. Time: 1:09:52 PM
 Modified: No
 Proc. Algorithm: IntelliQuan - IQA
 Min. Peak Height: 350.00 cps
 Min. Peak Width: 0.00 sec
 Smoothing Width: 3 points
 RT Window: 30.0 sec
 Expected RT: 5.50 min
 Use Relative RT: No
 Int. Type: Valley
 Retention Time: 5.50 min
 Area: 1.17e+006 counts
 Height: 275916.610 cps
 Start Time: 5.39 min
 End Time: 5.58 min



Sample Name: "WXX100125-250V" Sample ID: "HLEP" File: "EX01250011.wif"
 Peak Name: "Tris(o-cresyl) phosphite" Mass(es): "369.191.0 amu"
 Comment: "LONSEXP_C" Annotation: "

Sample Index: 1
 Sample Type: 500
 Calculated Conc: 509 ng/mL
 Acq. Date: 1/25/2010
 Acq. Time: 1:09:52 PM
 Modified: No
 Proc. Algorithm: IntelliQuan - IQA
 Min. Peak Height: 1.00e4 cps
 Min. Peak Width: 0.00 sec
 Smoothing Width: 3 points
 RT Window: 30.0 sec
 Expected RT: 10.8 min
 Use Relative RT: No
 Int. Type: Valley
 Retention Time: 10.8 min
 Area: 1.06e+007 counts
 Height: 2745726.563 cps
 Start Time: 10.7 min
 End Time: 11.1 min



7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1213

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%

Other Target Analytes 70-130%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

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

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

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118012a

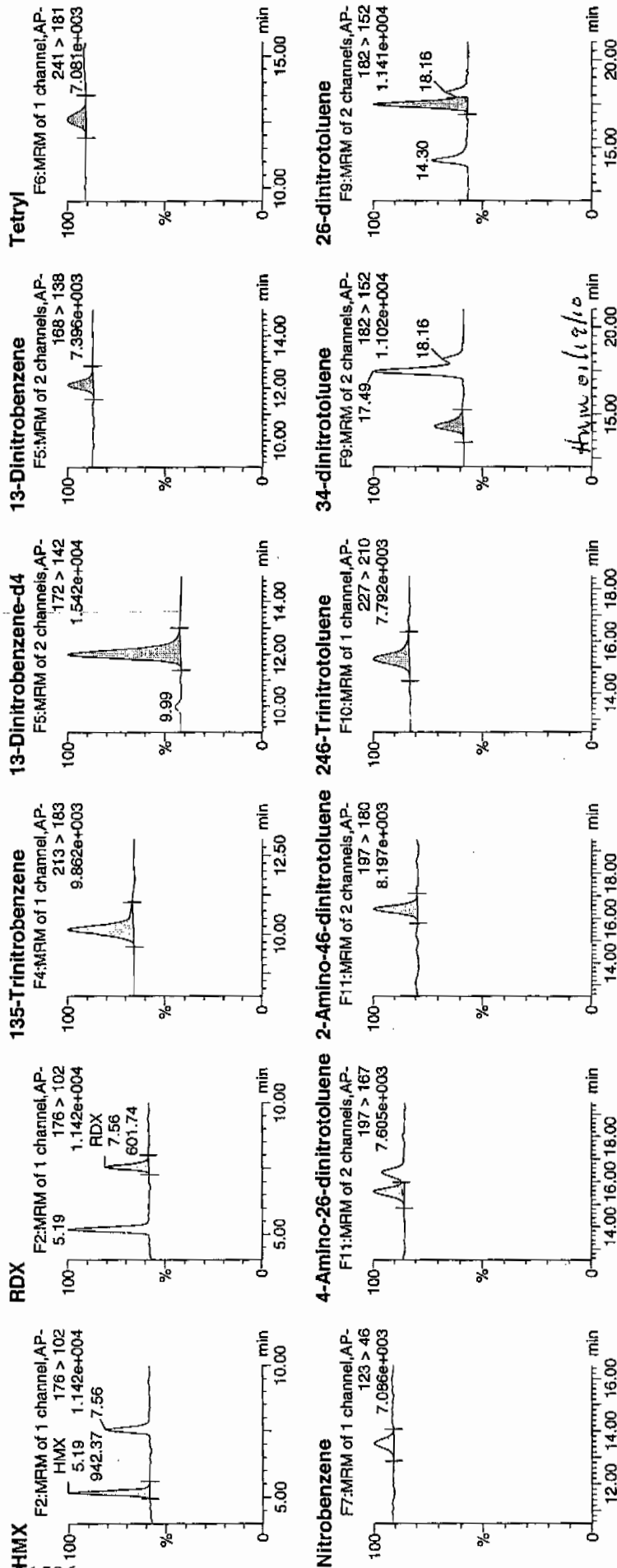
Date: 18-Jan-2010

Time: 19:27:49

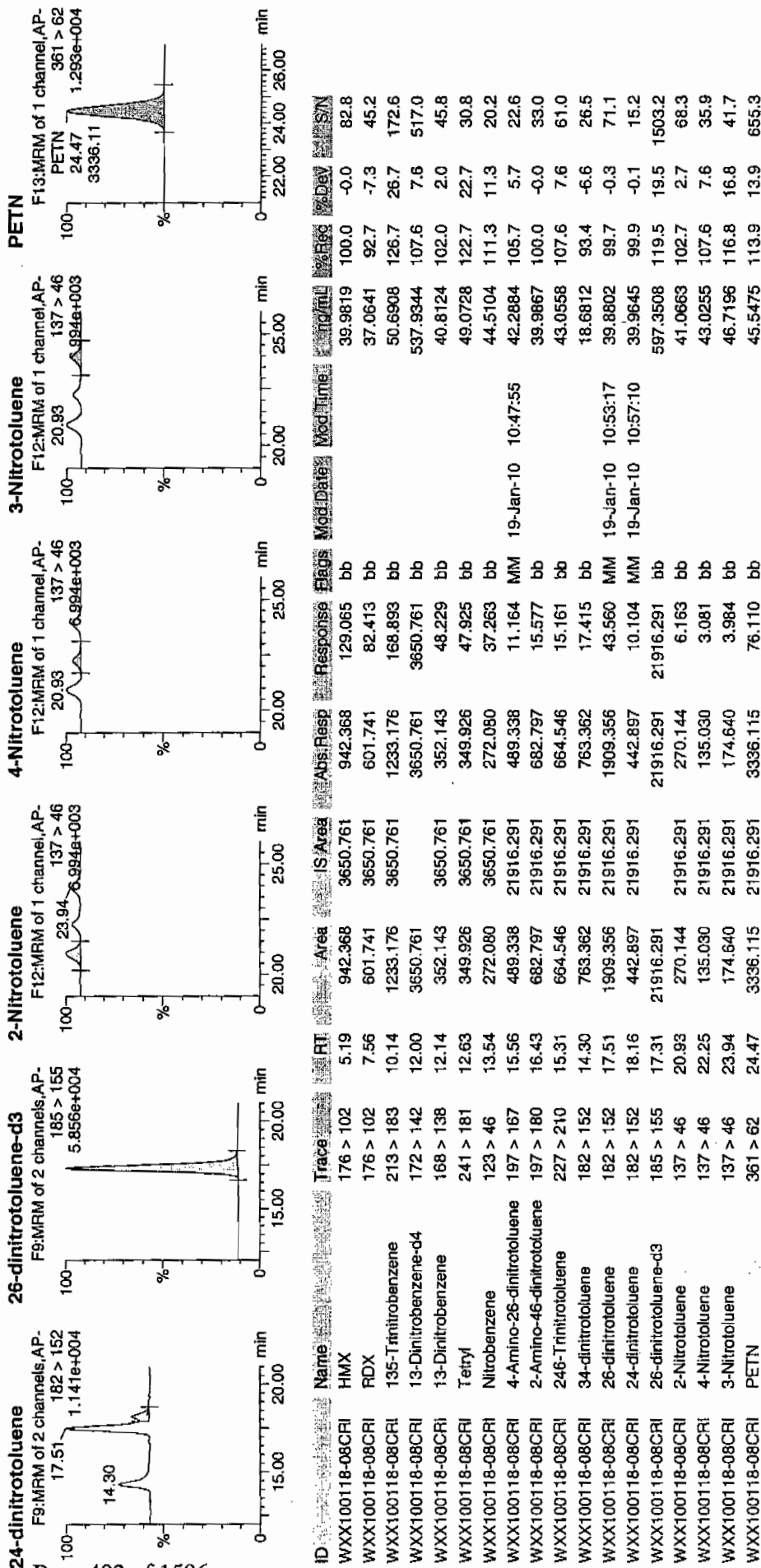
ID: WXX100118-08CRI

Vial: 1:1,C

1/19/10
11:02



Dataset: C:\MASSLYNX\New_Exp\PROX011810expA.qld, Time: Tue Jan 19 10:59:58 2010



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

ICV Limits 85-115%
 CRI Limits 70-130%
 CCV Limits 85-115%

No single analyte > +/- 60%

1/19/10

1/19/10

7A

Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1213

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%

Other Target Analytes 80-120%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

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

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

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118019a

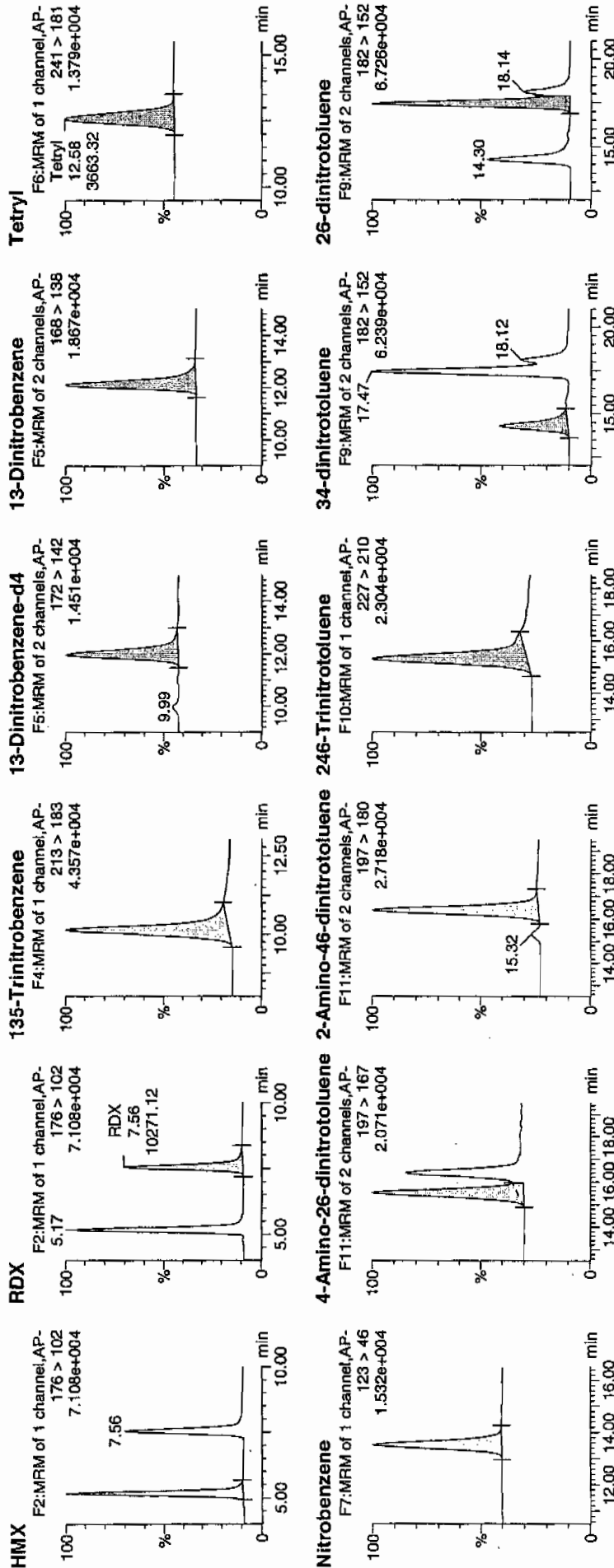
Date: 18-Jan-2010

Time: 22:54:11

ID: WXX100118-07CCV

Vial: 1:1,B

1/19/10



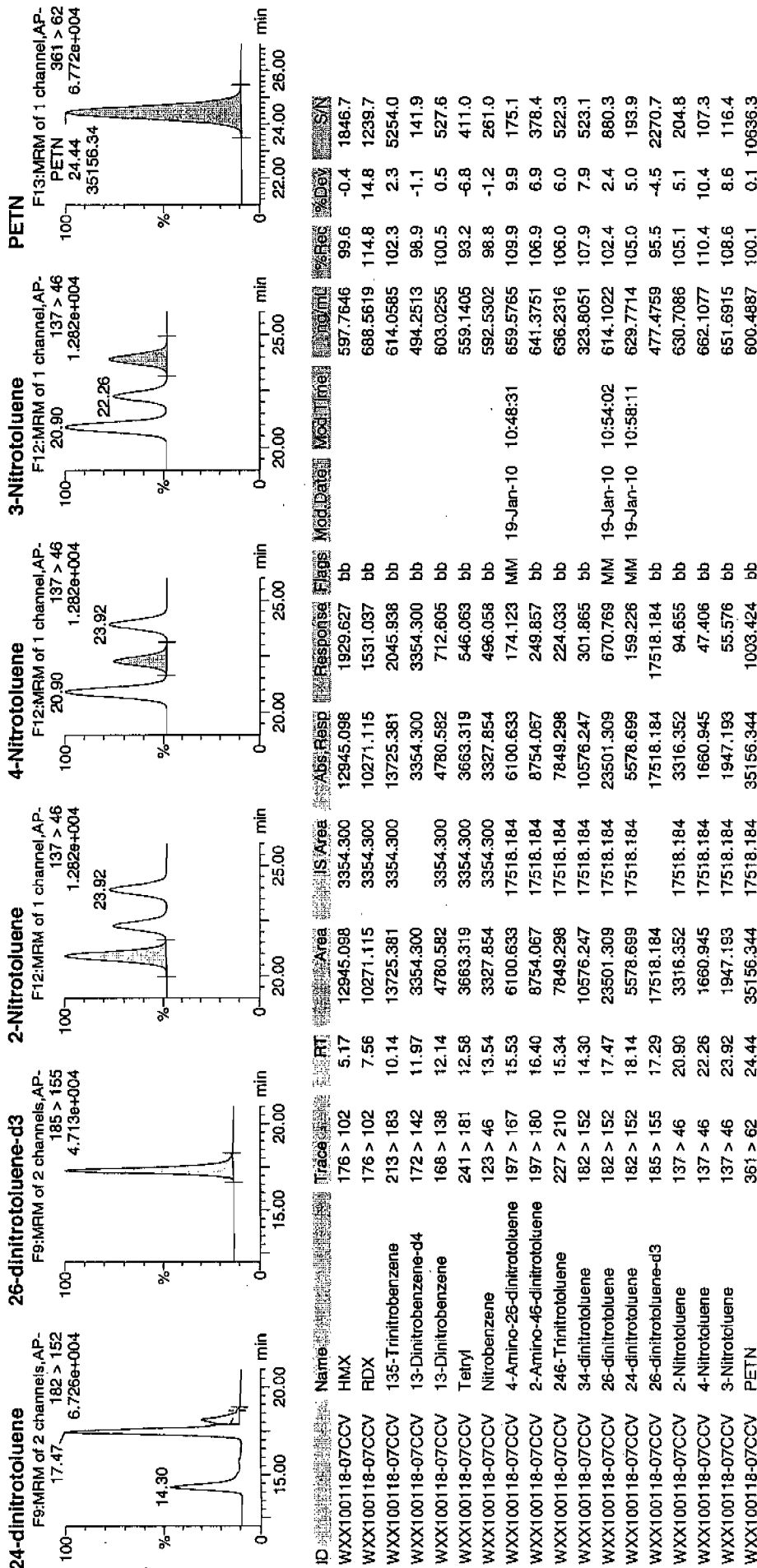
1/19/10

Quantify Sample Report

GEL Laboratories, LLC / Analyst : Michael A. Penny

Printed: Tue Jan 19 11:02:03 2010, Page 38 of 85

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



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

11/18/10

Total 1671.5

Average 104.5

Amesville

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%

No single analyte > +/- 60%

7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1213

Lab Code: GEL

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
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	
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	

Recovery Limits:

3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,
2,4-Diamino-6-nitrotoluene 50-150%

Other Target Analytes 70-130%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

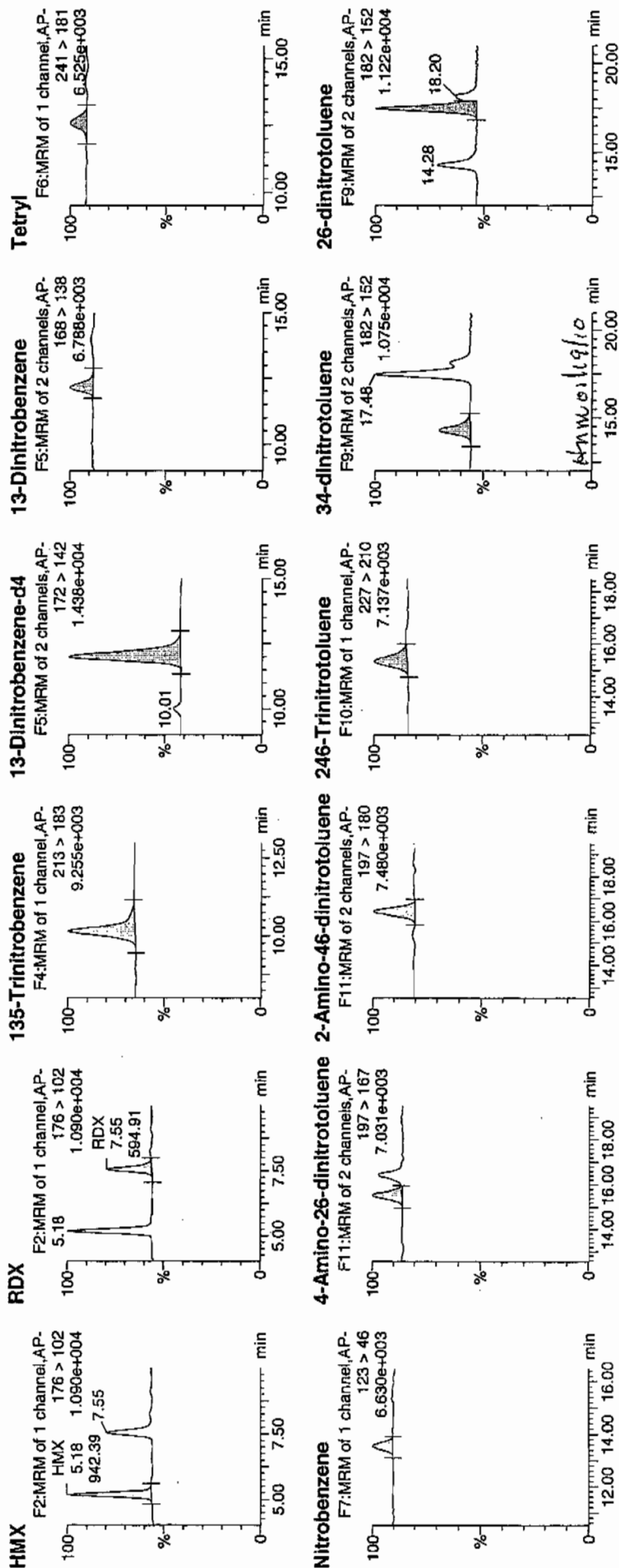
Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA.qld, Time: Tue Jan 19 10:59:58 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118021a

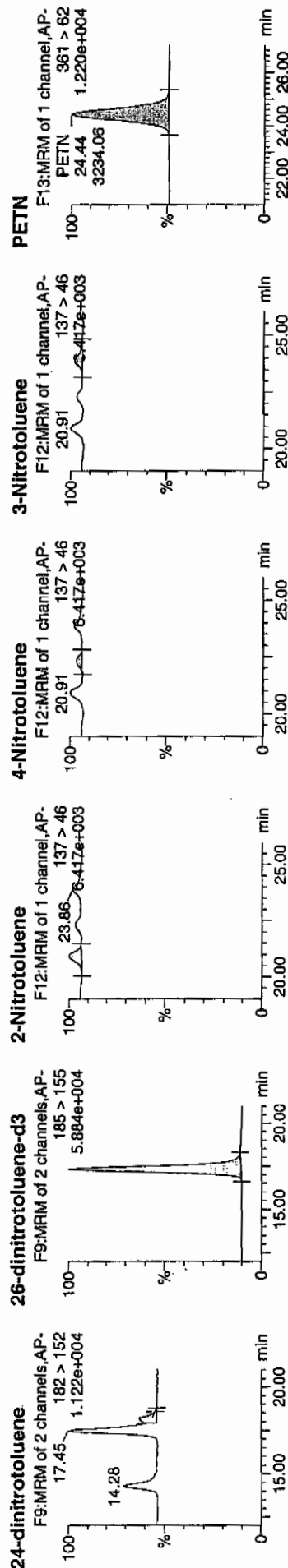
Date: 18-Jan-2010
Time: 23:53:08
ID: WXX100118-08CRI
Vial: 1:1,C

1/19/10

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Dataset: C:\MASSLYNX\New_Exp\PRO1011810expA.qld, Time: Tue Jan 19 10:59:58 2010



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	% Rec	% Dev	SN
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	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	88.4	
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	41.0738	102.7	2.7	55.3	
WXX100118-08CRI	26-dinitrotoluene	182 > 152	18.20	464.880	22606.063	464.880	10.282	MM	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	2.185	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	

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

*not
1/19/10*

Total 1537.3

Average 96.1

CHIN 01/18/10

ICV Limits 85-115%

CRI Limits 70-130%

CCV Limits 85-115%

No single analyte > +/- 60%

7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1213

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
1,3,5-Trinitrobenzene	600	634.051	106	
1,3-Dinitrobenzene-d4	500	394.416	79	*
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	*

Recovery Limits:

3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,

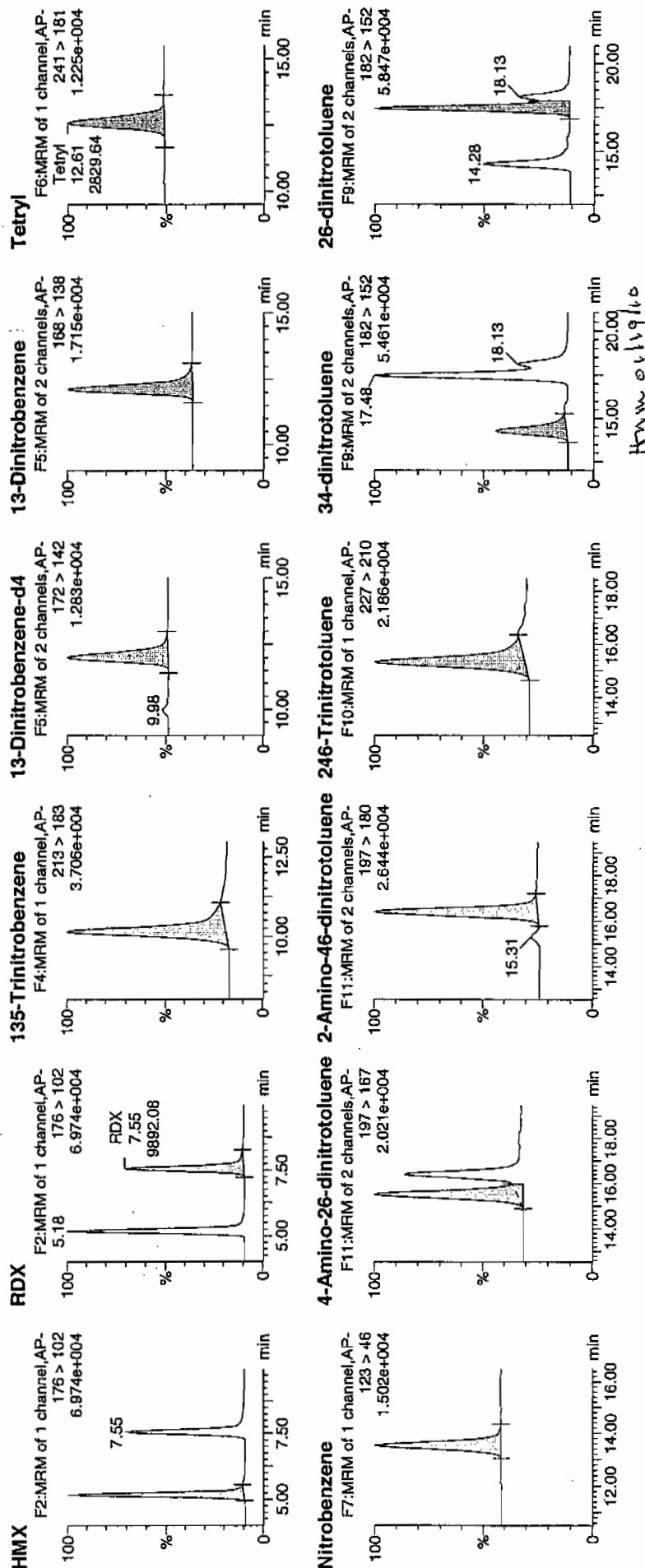
2,4-Diamino-6-nitrotoluene 70-130%

Other Target Analytes 80-120%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

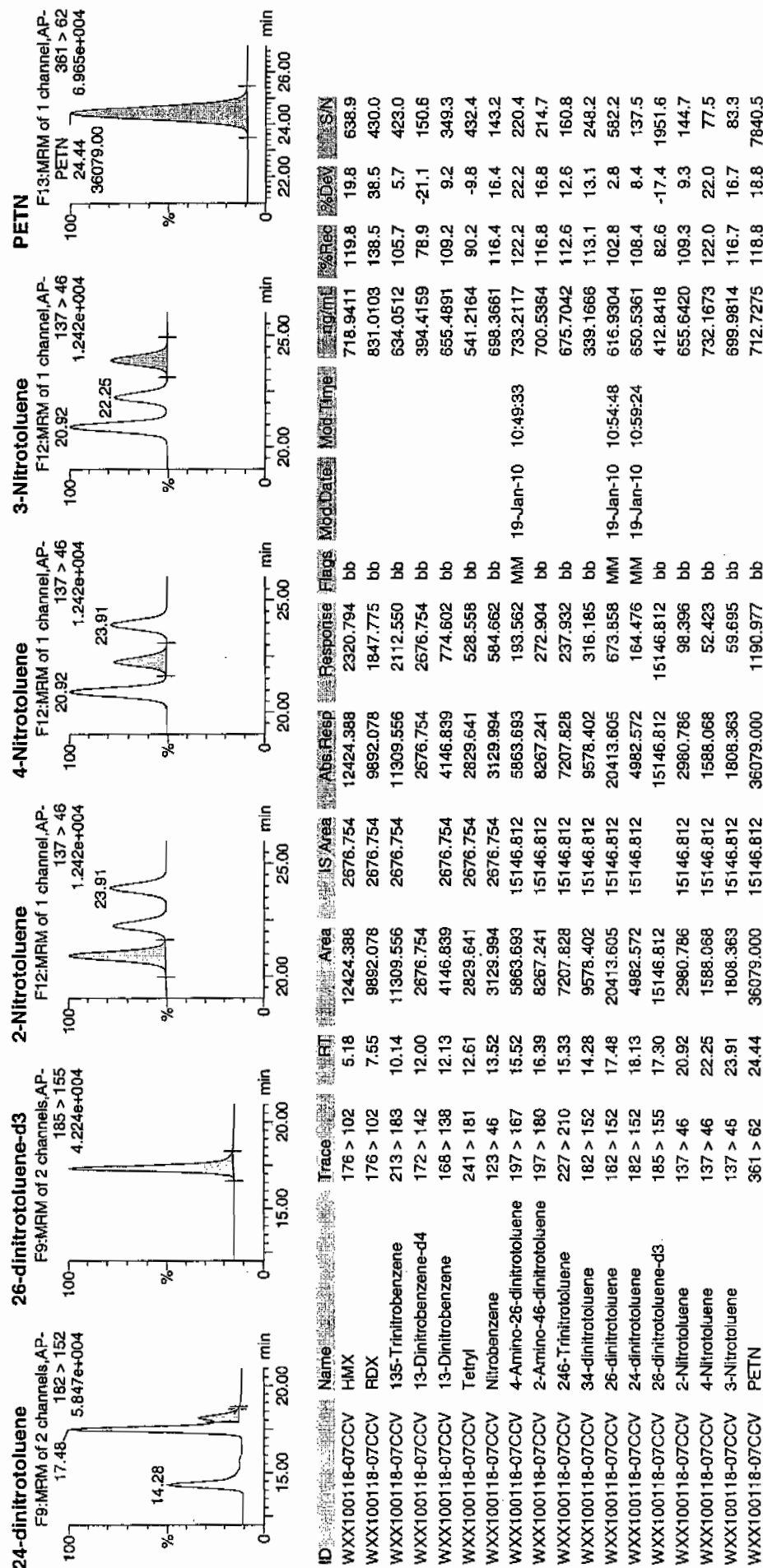
1/1/10



Printed: Tue Jan 19 11:02:03 2010, Page 64 of 85

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



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

Handwritten: MAY 11/19/10

Total 1822.5

Average 113.9

Handwritten: sum 01/19/10

ICV Limits 85-115%

CRI Limits 70-130%

CCV Limits 85-115%

No single analyte > +/- 60%

7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1213

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%

Other Target Analytes 70-130%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

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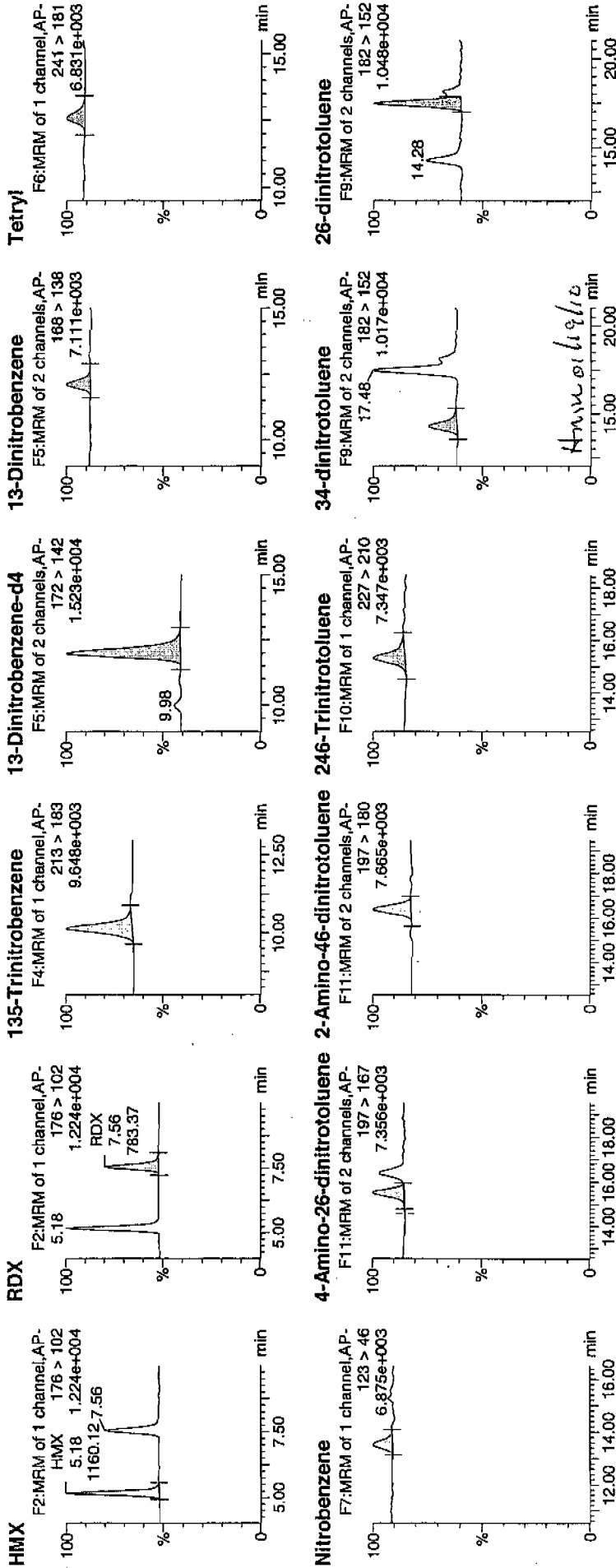
Date: 19-Jan-2010

Time: 06:16:41

ID: WXX100118-08CRI

Vial: 1:1,C

1/19/10
MMP



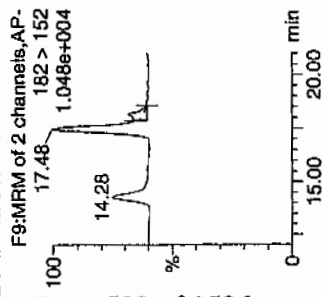
Quantify Sample Report

GEL Laboratories, LLC / Analyst: Michael A. Penny

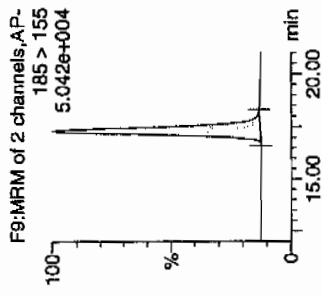
Printed: Tue Jan 19 11:02:03 2010, Page 68 of 85

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

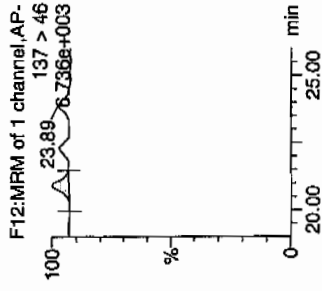
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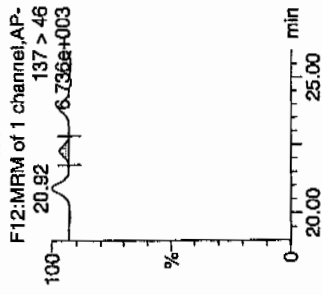
26-dinitrotoluene-d3



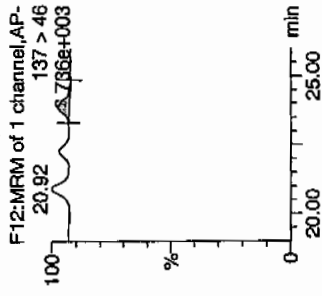
2-Nitrotoluene



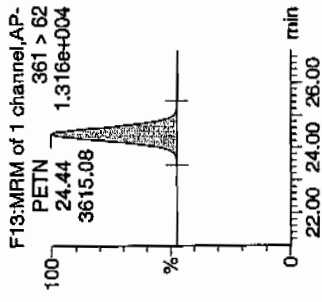
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	Intg/pt	% Rec	% Dev	SN
WXX100118-08C1	HMX	176 > 102	5.18	1160.117	3670.280	1160.117	158.042	bb			48.9586	122.4	22.4	287.5
WXX100118-08C1	RDX	176 > 102	7.56	783.367	3670.280	783.367	106.718	bb			47.9947	120.0	20.0	164.9
WXX100118-08C1	135-Trinitrobenzene	213 > 183	10.14	1160.259	3670.280	1160.259	158.061	bb			47.4398	118.6	18.6	165.9
WXX100118-08C1	13-Dinitrobenzene-d4	172 > 142	11.97	3670.280		3670.280	3670.280	bb			540.8105	108.2	8.2	1095.7
WXX100118-08C1	13-Dinitrobenzene	168 > 138	12.10	334.676	3670.280	334.676	45.593	bb			38.5818	96.5	-3.5	27.1
WXX100118-08C1	Tetryl	241 > 181	12.56	301.671	3670.280	301.671	41.096	bb			42.0807	105.2	5.2	11.1
WXX100118-08C1	Nitrobenzene	123 > 46	13.52	245.293	3670.280	245.293	33.416	bb			39.9148	99.8	-0.2	18.5
WXX100118-08C1	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
WXX100118-08C1	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
WXX100118-08C1	246-Trinitrotoluene	227 > 210	15.30	536.462	18705.123	536.462	14.340	bb			40.7241	101.8	1.8	78.4
WXX100118-08C1	34-dinitrotoluene	182 > 152	14.28	734.146	18705.123	734.146	19.624	bb			21.0505	105.3	5.3	37.4
WXX100118-08C1	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
WXX100118-08C1	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
WXX100118-08C1	26-dinitrotoluene-d3	185 > 155	17.30	18705.123		18705.123	18705.123	bb			509.8272	102.0	2.0	1813.3
WXX100118-08C1	2-Nitrotoluene	137 > 46	20.92	229.474	18705.123	229.474	6.134	bb			40.8724	102.2	2.2	59.8
WXX100118-08C1	4-Nitrotoluene	137 > 46	22.29	118.820	18705.123	118.820	3.176	bb			44.3600	110.9	10.9	32.6
WXX100118-08C1	3-Nitrotoluene	137 > 46	23.89	168.877	18705.123	168.877	4.514	bb			52.9337	132.3	32.3	37.6
WXX100118-08C1	PETN	361 > 62	24.44	3615.083	18705.123	3615.083	96.633	bb			57.8293	144.6	44.6	643.2

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

Handwritten: 11/19/10

Total 1764.7

Average 110.3

Handwritten: 11/19/10

ICV Limits 85-115%

CRI Limits 70-130%

CCV Limits 85-115%

No single analyte > +/- 60%

7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1213

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
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	
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	

Recovery Limits:

3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene, 2,4-Diamino-6-nitrotoluene 70-130%

Other Target Analytes 80-120%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

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

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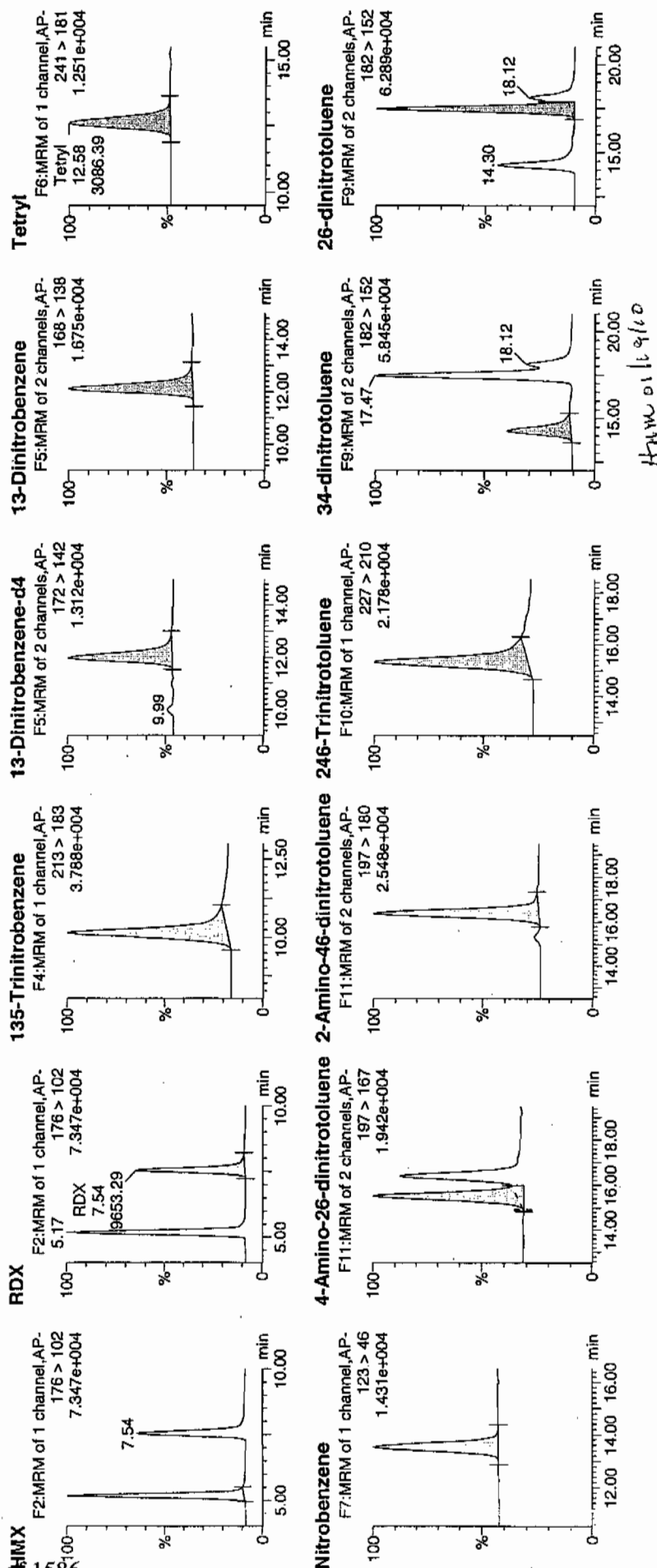
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1/19/10

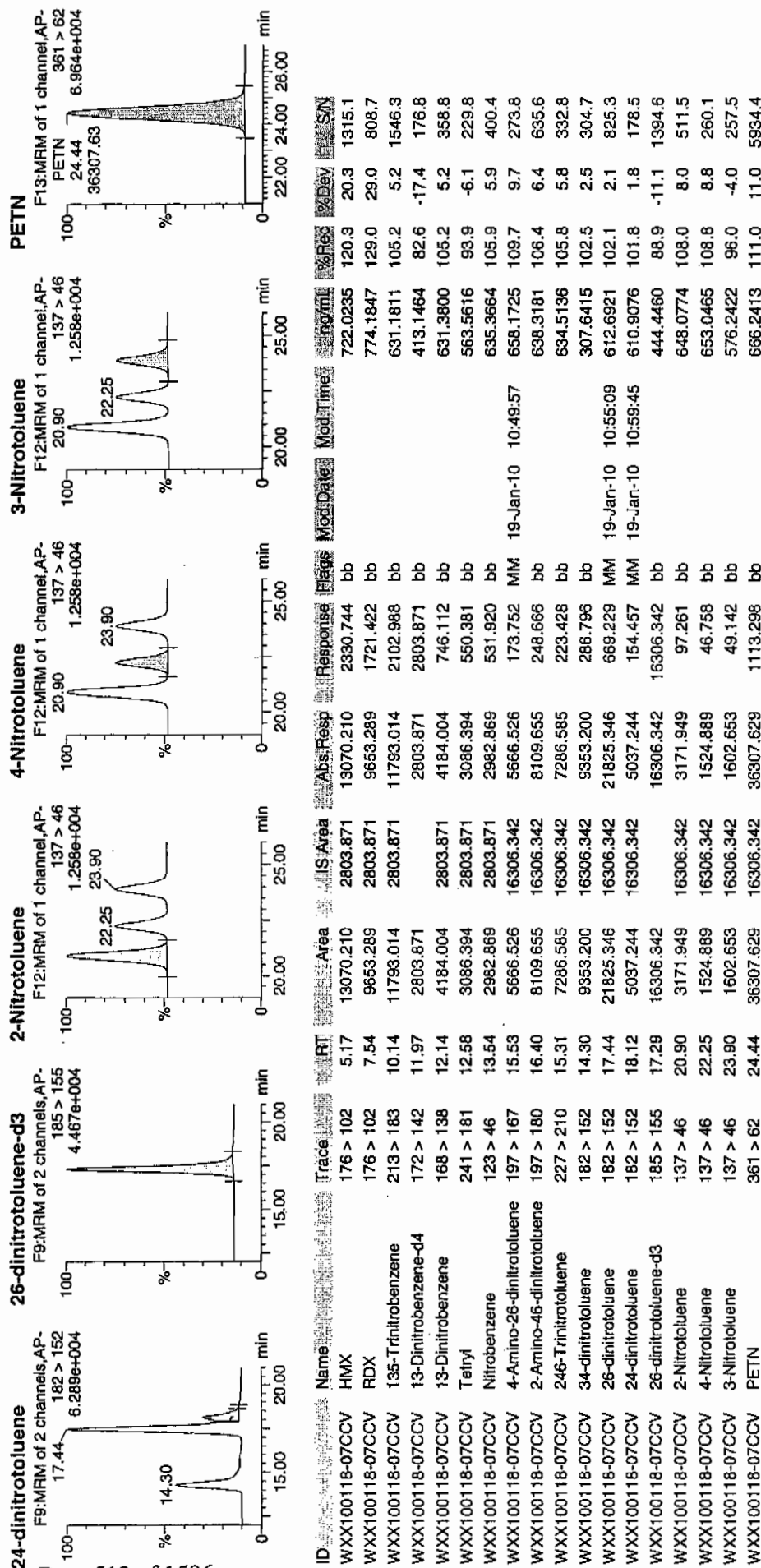


Quantify Sample Report

GEL Laboratories, LLC / Analyst: Michael A. Penny

Printed: Tue Jan 19 11:02:03 2010, Page 80 of 85

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



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

*WXX
01/19/10*

Total 1711.6

Average 107.0

done 01/19/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%

No single analyte > +/- 60%

7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1213

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
1,3,5-Trinitrobenzene	40	47.396	118	
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	

Recovery Limits:

3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,
2,4-Diamino-6-nitrotoluene 50-150%

Other Target Analytes 70-130%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

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

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

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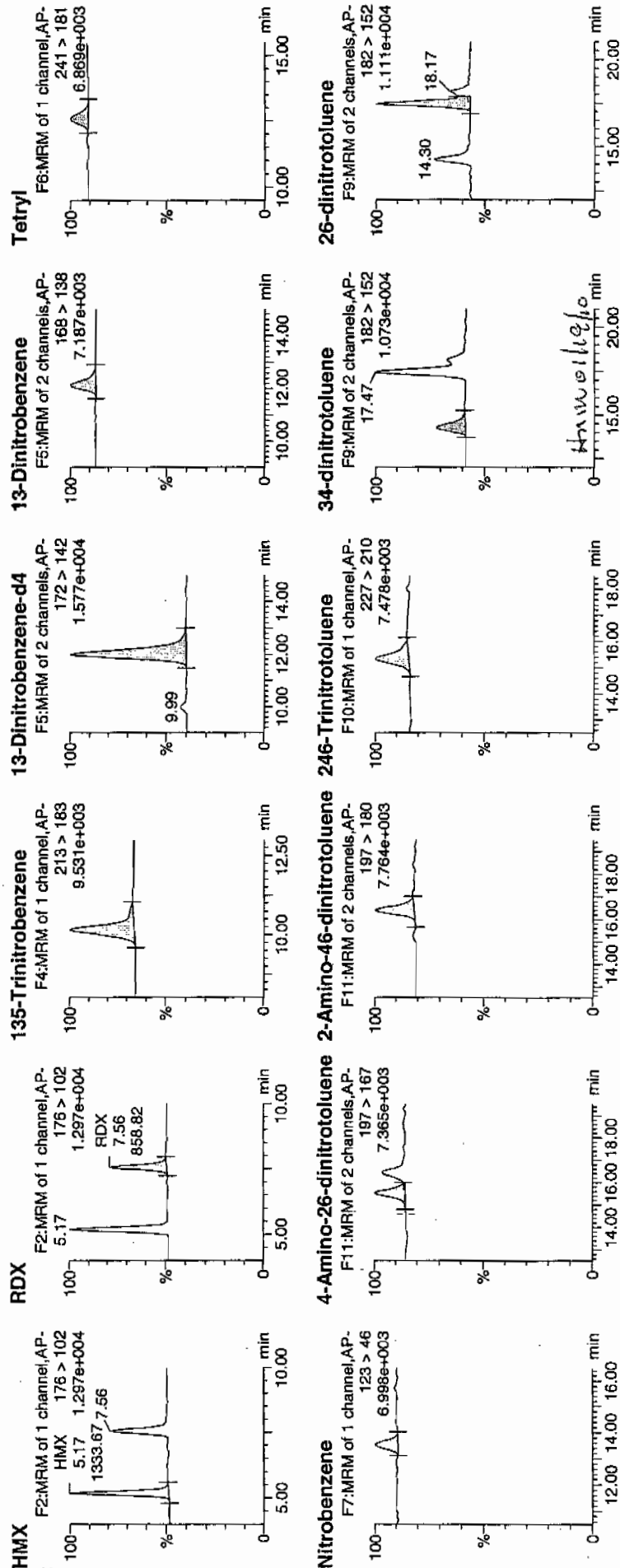
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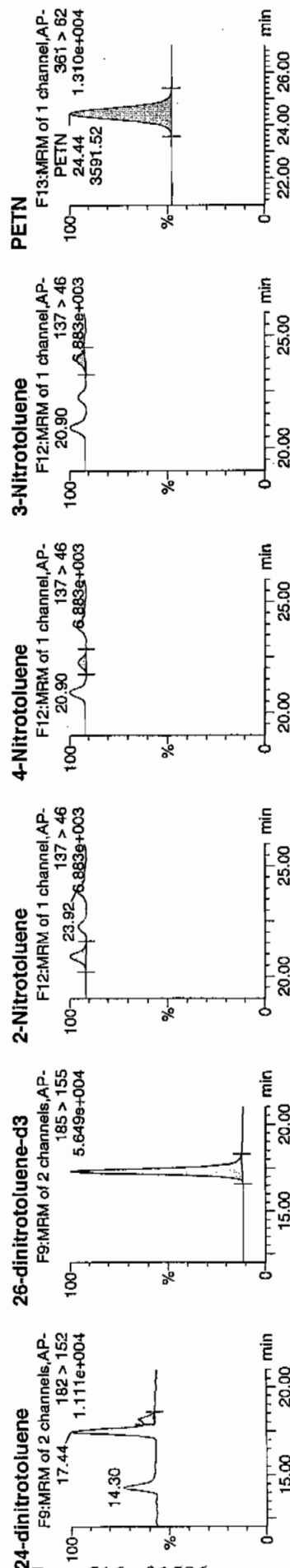
ID: WXX100118-08CRI

Vial: 1:1,C

1/19/10



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	Conc. (ng/mL)	% Rec	% Dev	SN
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	37.493	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	26-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 > 82	24.44	3591.523	21249.145	3591.523	84.510	bb			50.5740	126.4	26.4	1221.5

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

*not
1/19/10*

Total 1726.7

Average 107.9

done 01/19/10

ICV Limits 85-115%

CRI Limits 70-130%

CCV Limits 85-115%

No single analyte > +/- 60%

7A

Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1213

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%

Other Target Analytes 80-120%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

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

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

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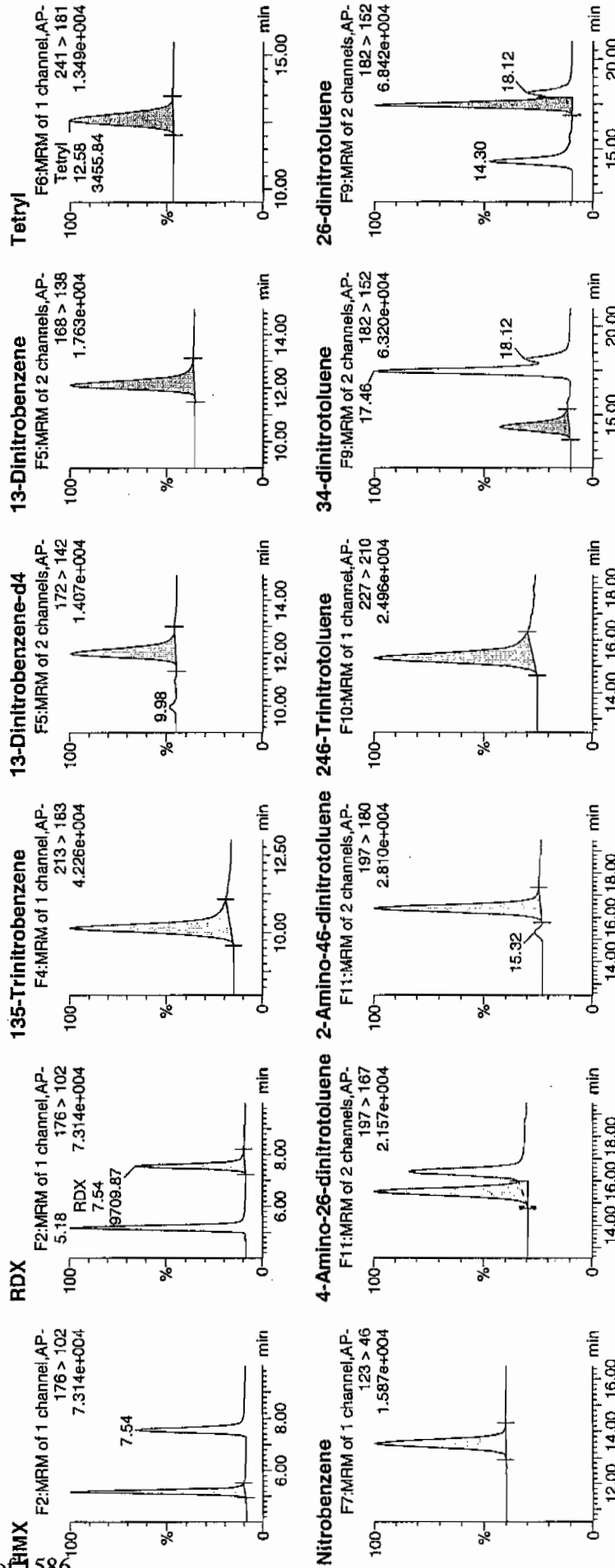
Date: 19-Jan-2010

Time: 15:37:40

ID: WXX100118-07CCV

Vial: 1:1,B

1/20/10
MTP



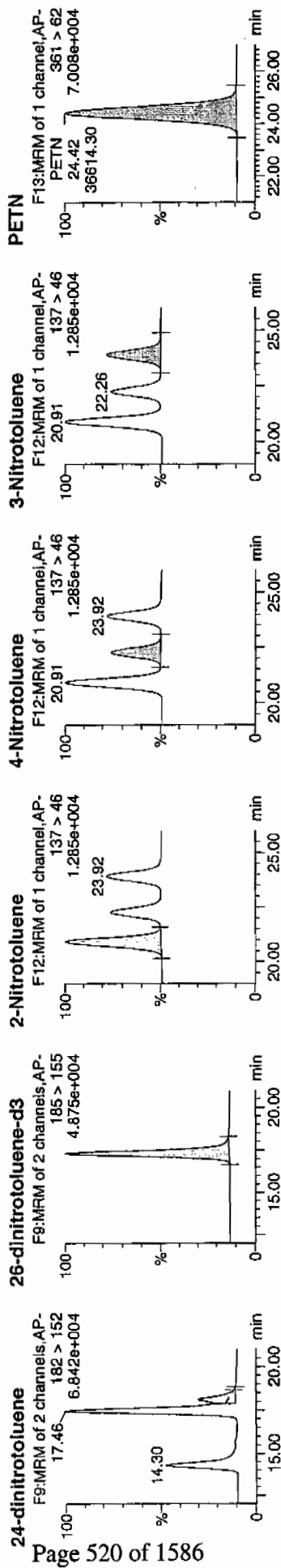
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Quantify Sample Report

GEL Laboratories, LLC / Analyst : Michael A. Penny

Printed: Wed Jan 20 09:07:58 2010, Page 22 of 91

Dataset: C:\MASSLYNX\New_Exp\PRO011810expA1.qld, Time: Wed Jan 20 09:06:02 2010



ID	Name	Trace	RT	Area	IS Area	Abs. Resp	Response	Flags	Mod Date	Mod Time	Conc (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

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

*WTT
1/20/10*

Total 1707.9

Average 106.7

Ann 01/20/10

ICV Limits 85-115%

CRI Limits 70-130%

CCV Limits 85-115%

No single analyte > +/- 60%

7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1213

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
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	*
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	

Recovery Limits:

3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,
2,4-Diamino-6-nitrotoluene 50-150%

Other Target Analytes 70-130%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

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

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

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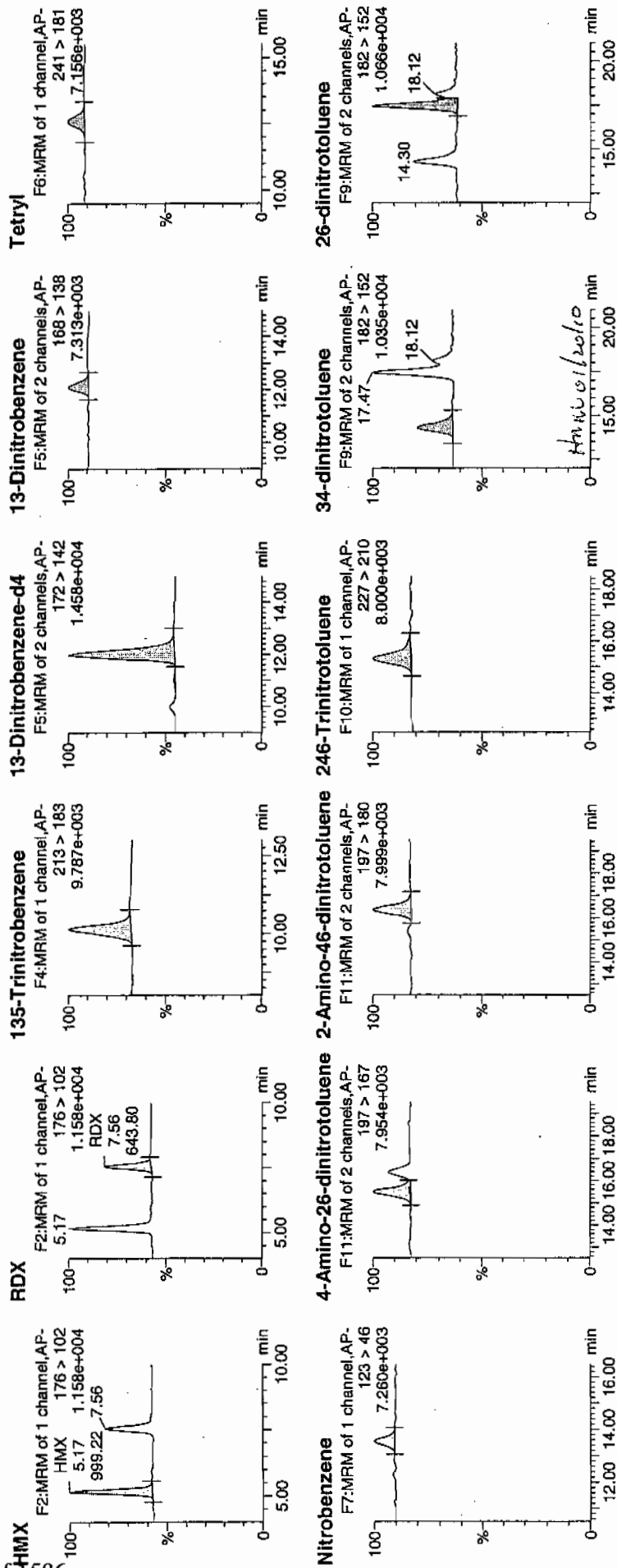
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Time: 16:36:45

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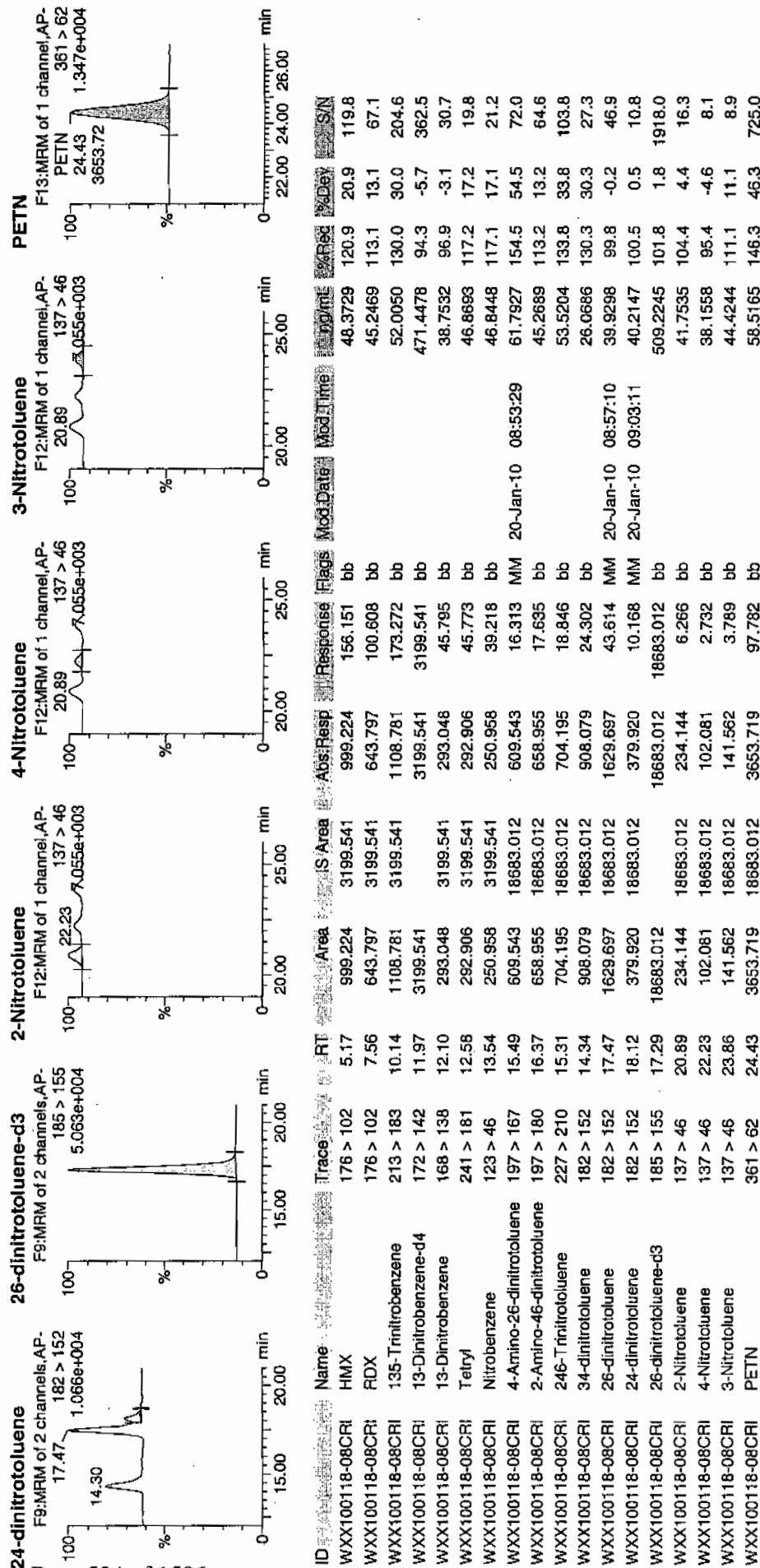


Quantify Sample Report

GEL Laboratories, LLC / Analyst: Michael A. Penny

Printed: Wed Jan 20 09:07:58 2010, Page 26 of 91

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



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

ICV Limits 85-115%

CRI Limits 70-130%

CCV Limits 85-115%

No single analyte > +/- 60%

*WWT
1/20/10*

HMM 01/20/10

7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1213

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
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	
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	

Recovery Limits:

3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,
2,4-Diamino-6-nitrotoluene 70-130%

Other Target Analytes 80-120%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

Quantify Sample Report

GEL Laboratories, LLC / Analyst: Michael A. Penny

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

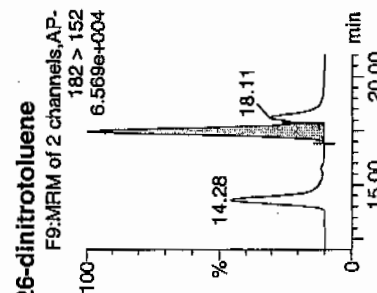
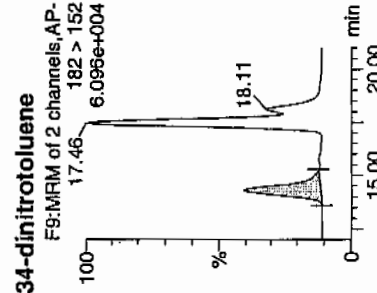
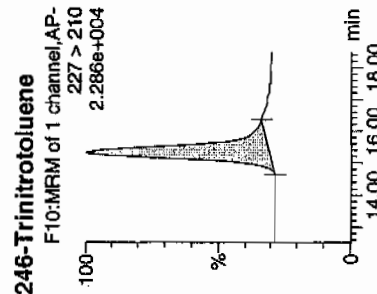
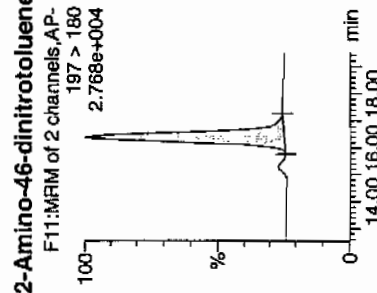
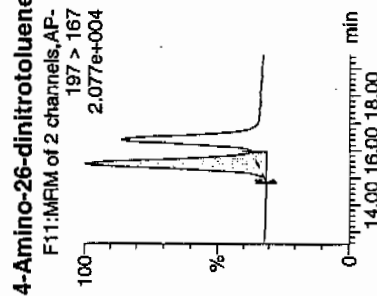
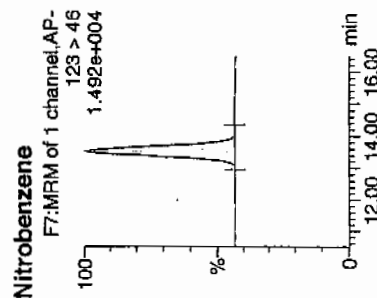
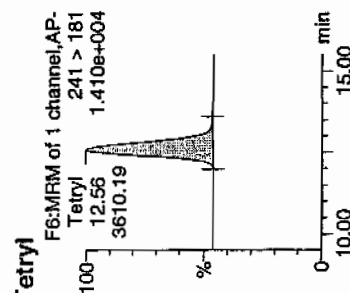
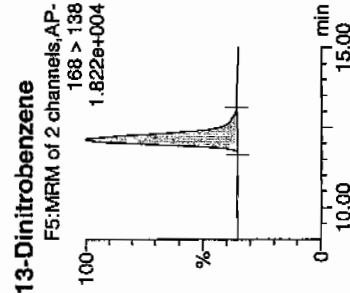
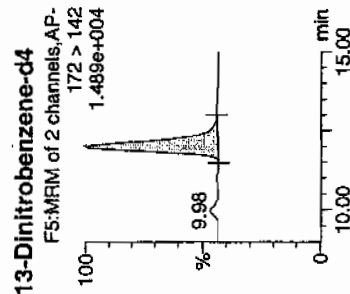
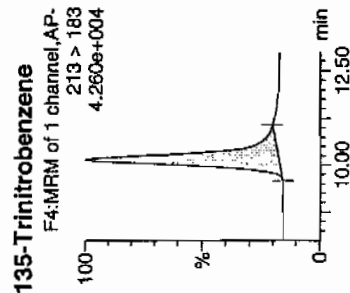
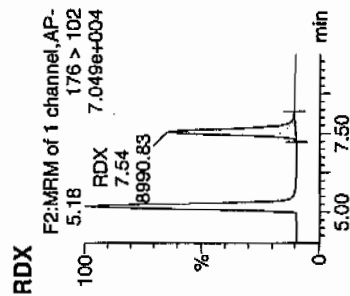
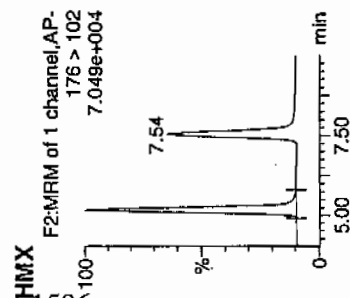
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Date: 19-Jan-2010

Time: 20:32:42

ID: WXX100118-07CCV

Vial: 1:1.B

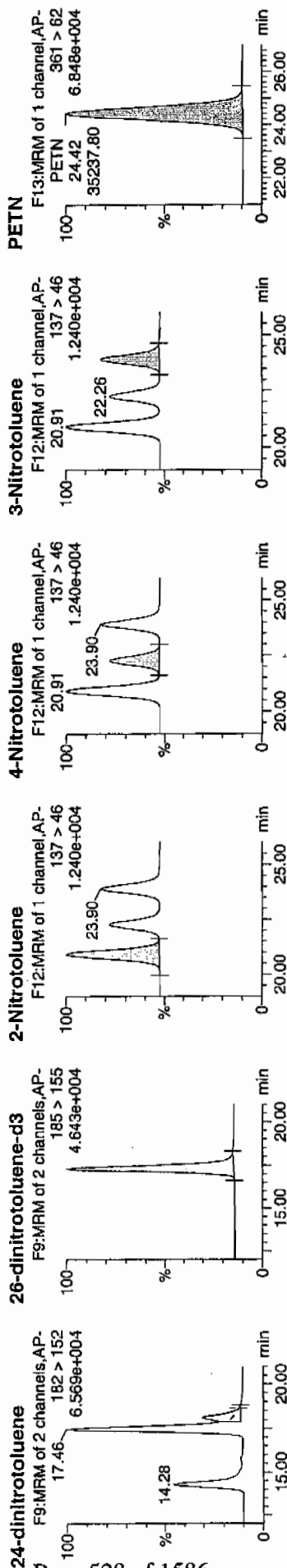


10:00 44m 01/20/10 20:00

Printed: Wed Jan 20 09:07:58 2010, Page 42 of 91

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

Dataset: C:\MASSLYNX\New_Exp_PROV011810expA1.qld, Time: Wed Jan 20 09:06:02 2010



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	Conc	Area	%Dev	S/N
WXX100118-07CCV	HM	176 > 102	5.18	12743.064	3350.884	12743.064	1901.448	db			589.0352	98.2	-1.8	2926.4
WXX100118-07CCV	FDX	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	493.7480	bb			493.7480	98.7	-1.3	335.0
WXX100118-07CCV	13-Dinitrobenzene	166 > 138	12.13	4655.647	3350.884	4655.647	694.889	bb			587.8648	98.0	-2.0	579.2
WXX100118-07CCV	Tetryl	241 > 181	12.56	3610.188	3350.884	3610.188	538.592	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	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			629.4477	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

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

*100%
1/20/10*

Total 1632.9

Home 01/20/10

Average 102.1

ICV Limits 85-115%

CRI Limits 70-130%

CCV Limits 85-115%

No single analyte > +/- 60%

7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1213

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%

Other Target Analytes 70-130%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

Quantify Sample Report

GEL Laboratories, LLC / Analyst : Michael A. Penny

Printed: Wed Jan 20 09:07:58 2010, Page 45 of 91

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

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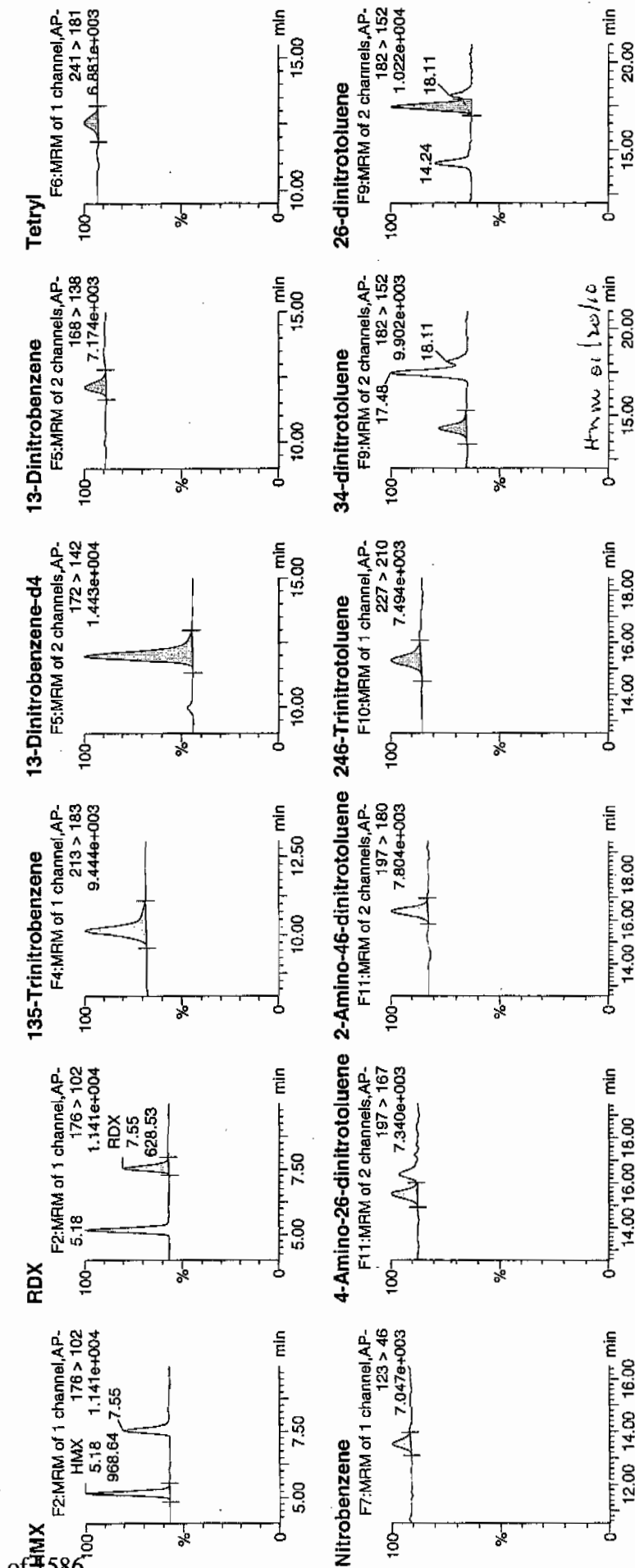
Date: 19-Jan-2010

Time: 21:31:46

ID: WXX100118-08CRI

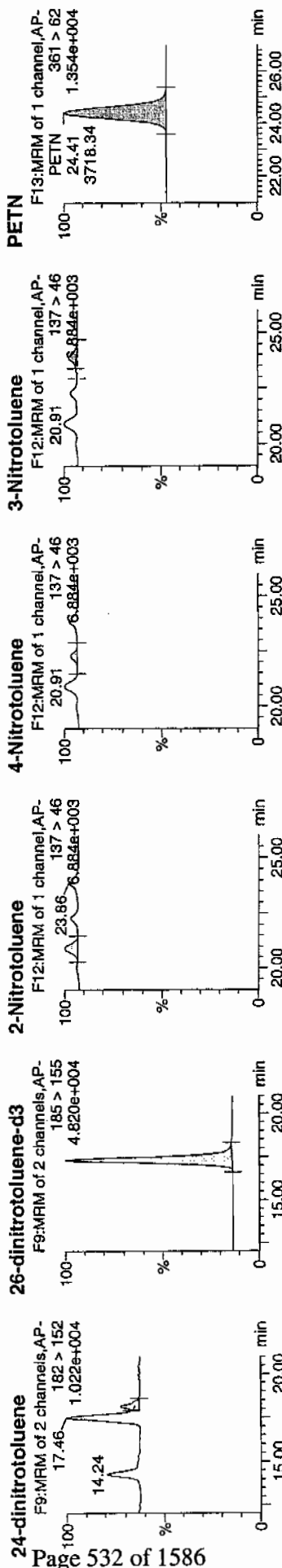
Vial: 1:1,C

1/20/10



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

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



ID	Name	Trace	RT	Area	IS Area	Abs/Resp	Response	Flags	Mod Date	Mod Time	Conc	%Rec	%Dev	S/N
WXX100118-08CRI	HMZ	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	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	Tetyl	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	14.364	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	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

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

MATP
1/20/10

Total 1731.4

from 01/20/10

Average 108.2

ICV Limits 85-115%

CRI Limits 70-130%

CCV Limits 85-115%

No single analyte > +/- 60%

7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1213

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
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	
m-Dinitrobenzene	600	608.053	101	
m-Nitrotoluene	600	591.079	99	
o-Nitrotoluene	600	567.32	95	
p-Nitrotoluene	600	592.52	99	

Recovery Limits:

3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,
2,4-Diamino-6-nitrotoluene 70-130%

Other Target Analytes 80-120%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

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

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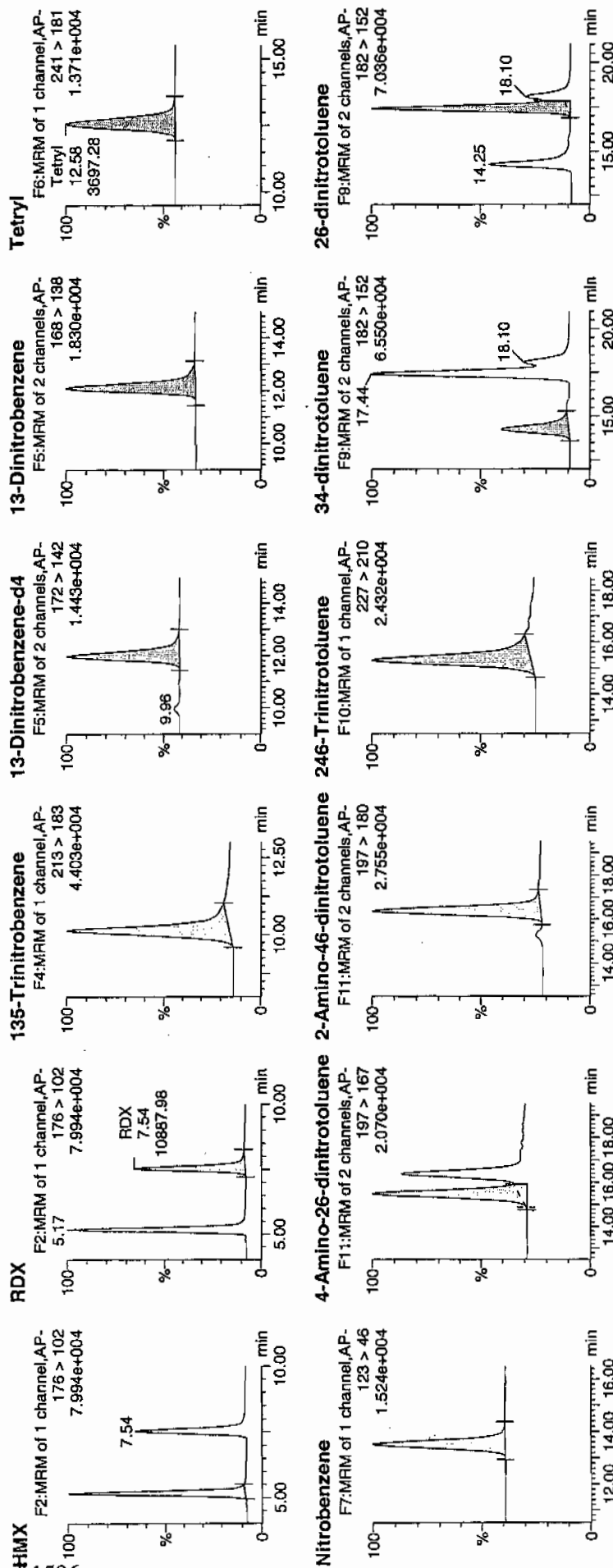
Date: 20-Jan-2010

Time: 02:56:03

ID: WXX100118-07CCV

Vial: 1:1,B

1/20/10

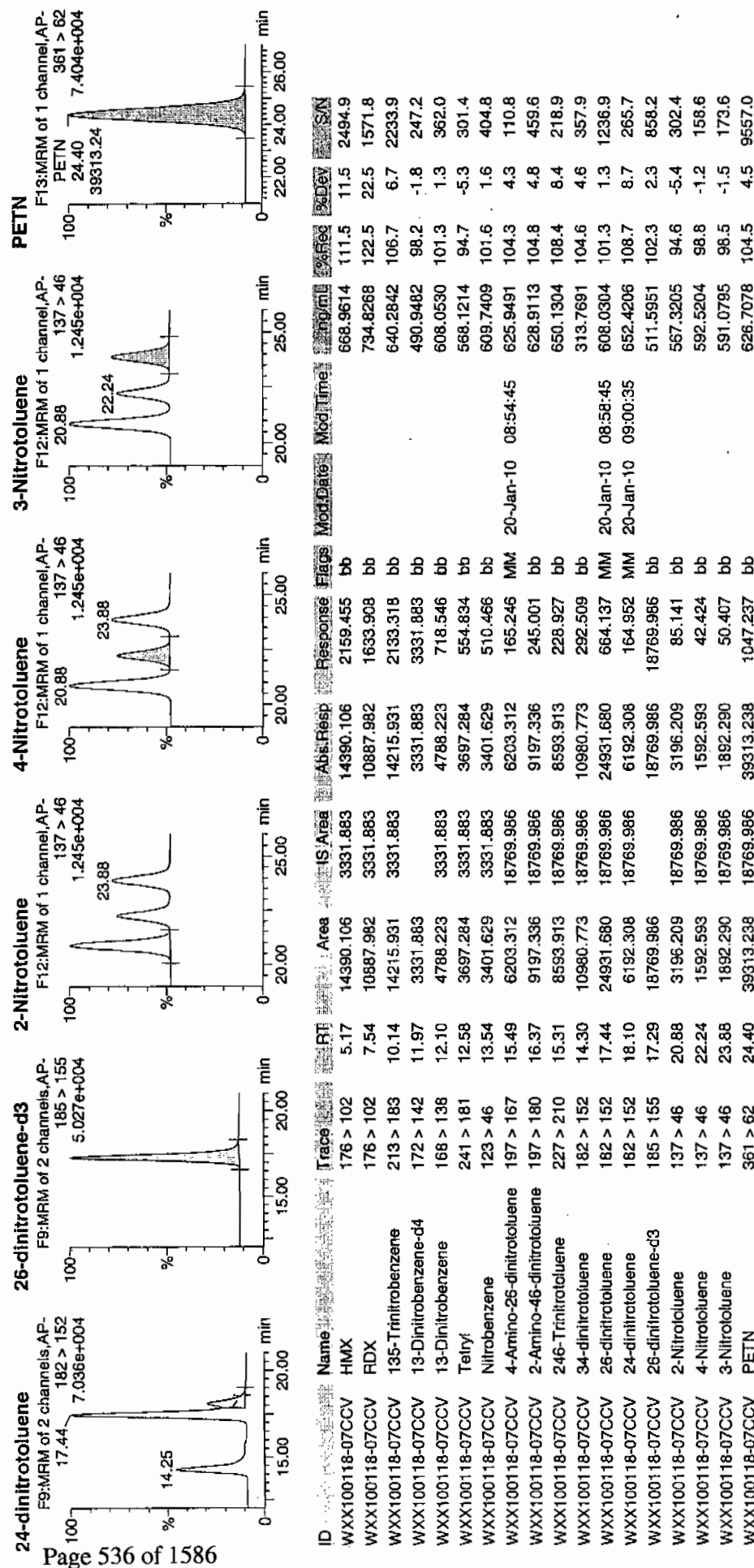


thru 1/20/10

Printed: Wed Jan 20 09:07:58 2010, Page 68 of 91

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

Dataset: C:\MASSLYNX\New_Exp\PROV011810expA1.qld, Time: Wed Jan 20 09:06:02 2010



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

*NAF
1/20/10*

Total 1666.8

NAF 01/20/10

Average 104.2

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%

No single analyte > +/- 60%

7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1213

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
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	
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	

Recovery Limits:

3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,
2,4-Diamino-6-nitrotoluene 50-150%

Other Target Analytes 70-130%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

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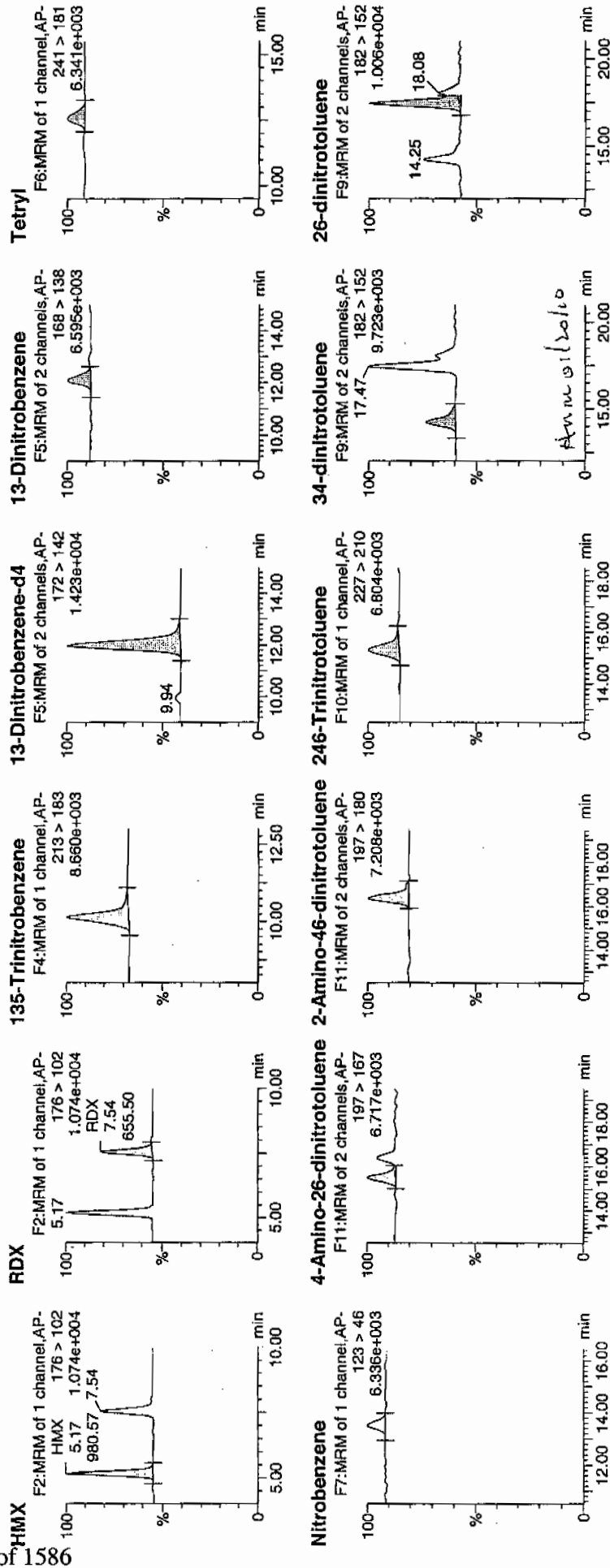
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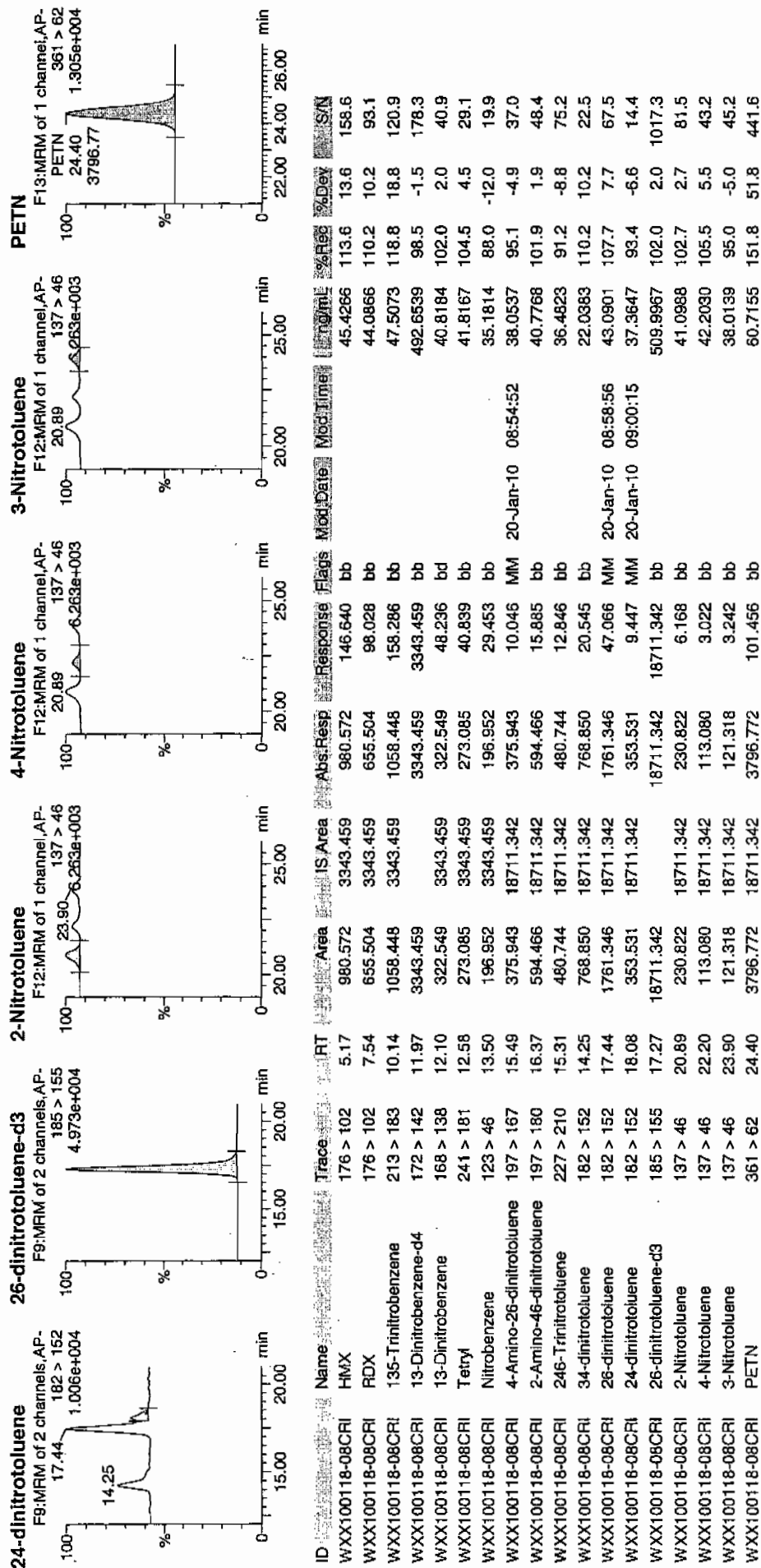
ID: WXX100118-08CRI

Vial: 1:1,C

1/20/10



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



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

WAT
1/20/10

Total 1691.6

Average 105.7

Time 01/20/10

ICV Limits 85-115%

CRI Limits 70-130%

CCV Limits 85-115%

No single analyte > +/- 60%

7A

Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1213

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%

Other Target Analytes 80-120%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

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

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

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118085a

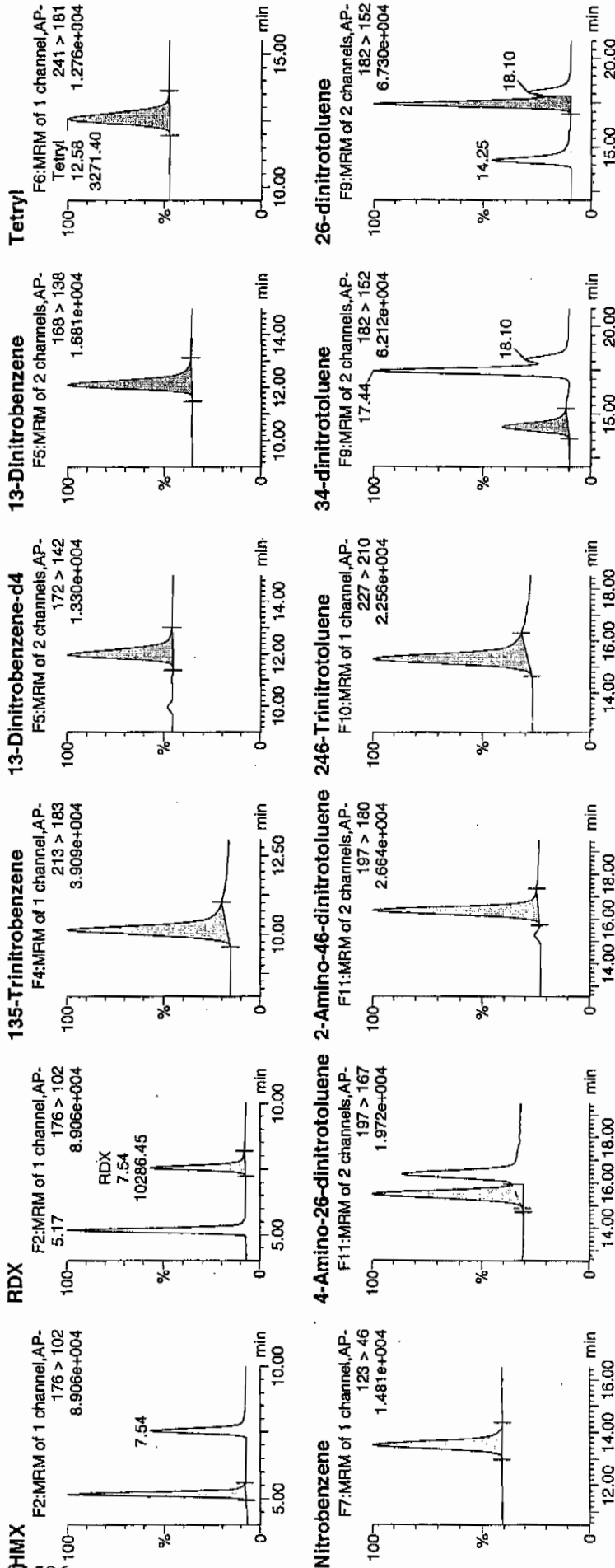
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Alt: 1:1,B

11/10/10

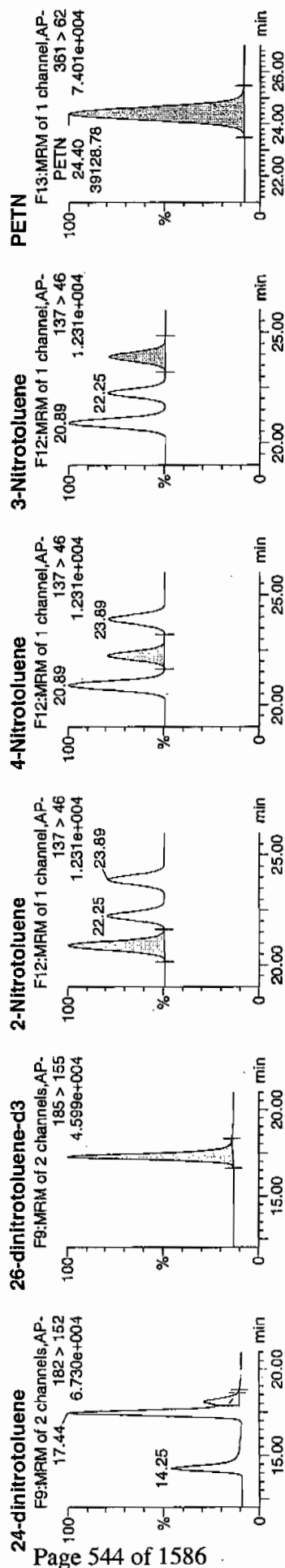


11/10/10

Printed: Wed Jan 20 09:07:58 2010, Page 86 of 91

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



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	Conc	%Rec	%Dev	S/N
WXX100118-07CCV	HMX	176 > 102	5.17	16430.898	2894.977	16430.898	2837.829	bb	20-Jan-10	08:55:12	879.1095	146.5	46.5	2178.1
WXX100118-07CCV	RDX	176 > 102	7.54	10286.454	2894.977	10286.454	1776.604	bb	20-Jan-10	08:55:12	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	20-Jan-10	08:55:12	632.6986	105.4	5.4	2422.2
WXX100118-07CCV	13-Dinitrobenzene-d4	172 > 142	11.97	2894.977	2894.977	2894.977	2894.977	bb	20-Jan-10	08:55:12	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	20-Jan-10	08:55:12	606.9370	101.2	1.2	367.6
WXX100118-07CCV	Tetryl	241 > 181	12.58	3271.397	2894.977	3271.397	565.013	bb	20-Jan-10	08:55:12	578.5438	96.4	-3.6	302.9
WXX100118-07CCV	Nitrobenzene	123 > 46	13.50	3189.989	2894.977	3189.989	550.952	bb	20-Jan-10	08:55:12	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	20-Jan-10	08:55:12	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	20-Jan-10	08:55:12	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	20-Jan-10	08:55:12	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	08:55:12	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	08:55:12	599.0379	99.8	-0.2	165.9
WXX100118-07CCV	26-dinitrotoluene-d3	185 > 155	17.27	17135.229	17135.229	17135.229	17135.229	bb	20-Jan-10	08:55:12	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	20-Jan-10	08:55:12	597.1936	99.5	-0.5	206.5
WXX100118-07CCV	4-Nitrotoluene	137 > 46	22.25	1574.397	17135.229	1574.397	48.858	bb	20-Jan-10	08:55:12	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	20-Jan-10	08:55:12	611.1201	101.9	1.9	118.3
WXX100118-07CCV	PETN	361 > 62	24.40	39128.781	17135.229	39128.781	1141.764	bb	20-Jan-10	08:55:12	683.2767	113.9	13.9	9499.0

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

*WTT
1/20/10*

Total 1755.1

Average 109.7

Home 01/20/10

ICV Limits 85-115%

CRI Limits 70-130%

CCV Limits 85-115%

No single analyte > +/- 60%

7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1213

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
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	
m-Nitrotoluene	40	38.841	97	
o-Nitrotoluene	40	37.33	93	
p-Nitrotoluene	40	40.237	101	

Recovery Limits:

3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,
2,4-Diamino-6-nitrotoluene 50-150%

Other Target Analytes 70-130%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

Quantify Sample Report
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\EXP0118087a

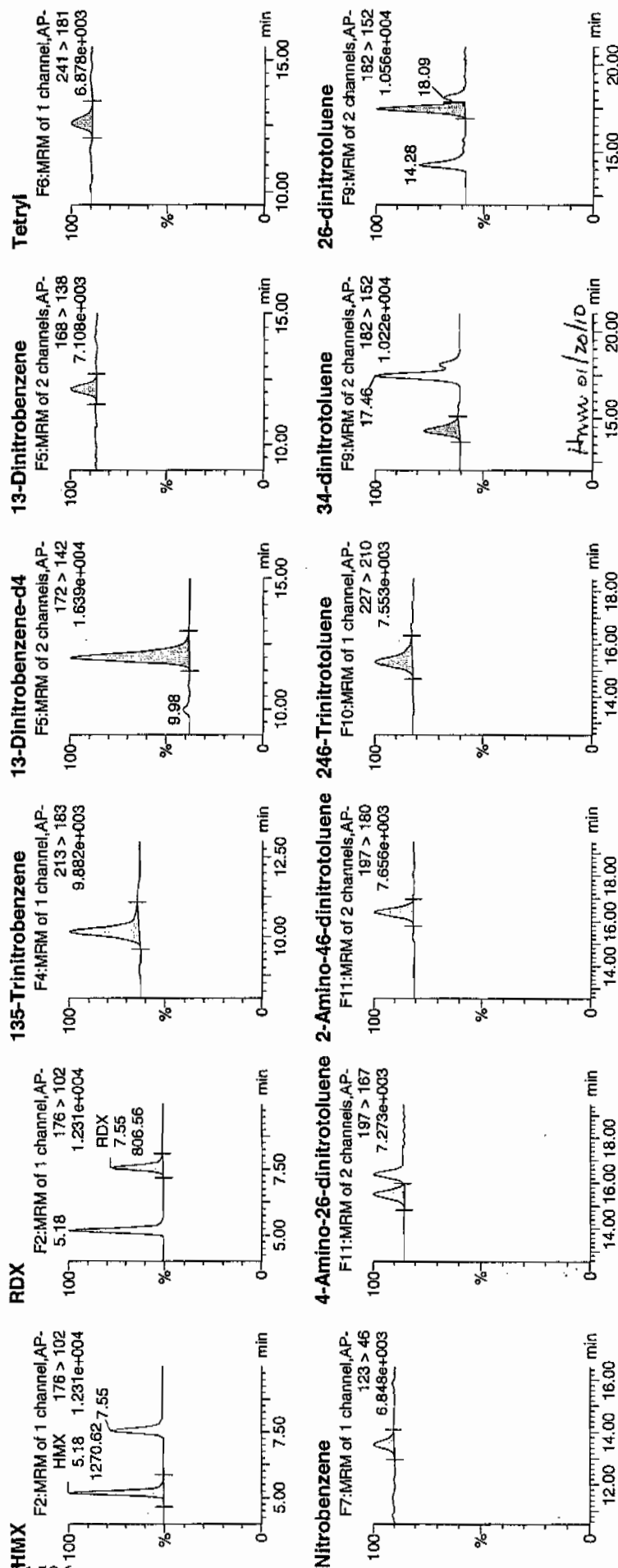
Date: 20-Jan-2010

Time: 08:20:48

ID: WXX100118-08CRI

Vial: 1:1,C

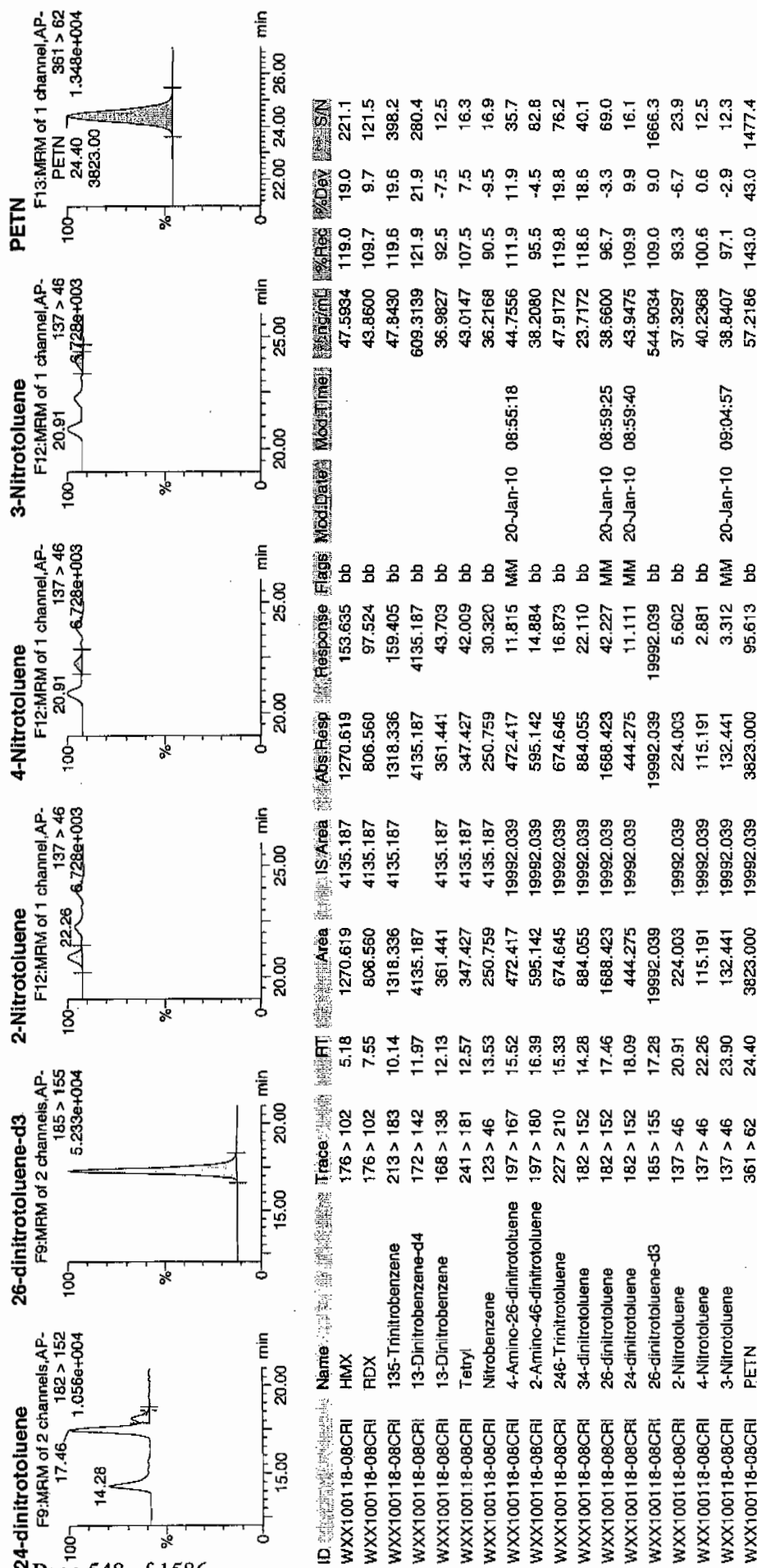
1.18/0.10



Printed: Wed Jan 20 09:07:58 2010, Page 90 of 91

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



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

*WAT
1/20/10*

Total 1725.2

Average 107.8

WAT 01/20/10

ICV Limits 85-115%

CRI Limits 70-130%

CCV Limits 85-115%

No single analyte > +/- 60%

7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1213

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
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	
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	

Recovery Limits:

3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,
2,4-Diamino-6-nitrotoluene 70-130%

Other Target Analytes 80-120%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

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

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA2.qld, Time: Thu Jan 21 11:10:12 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118097a

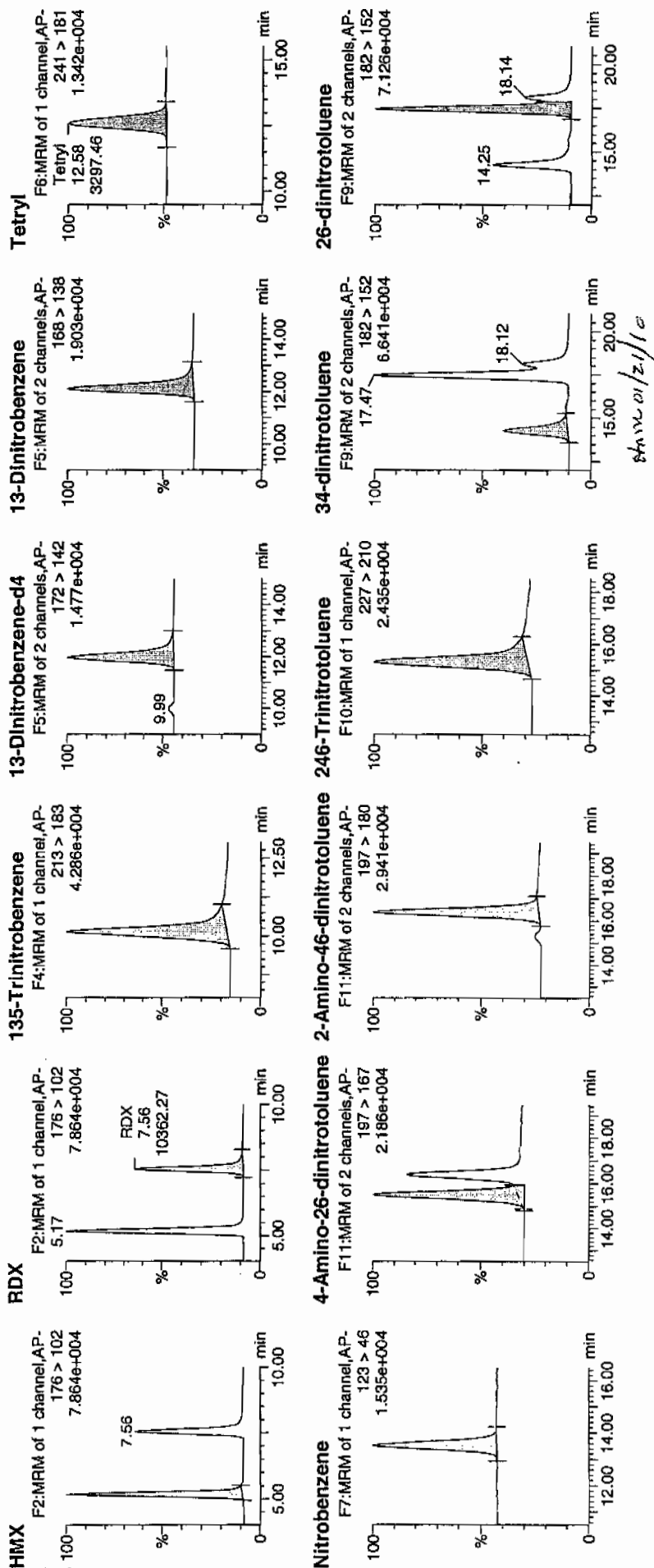
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Time: 13:15:45

ID: WXX100118-07CCV

Vial: 1:1,B

WHT
1/21/10

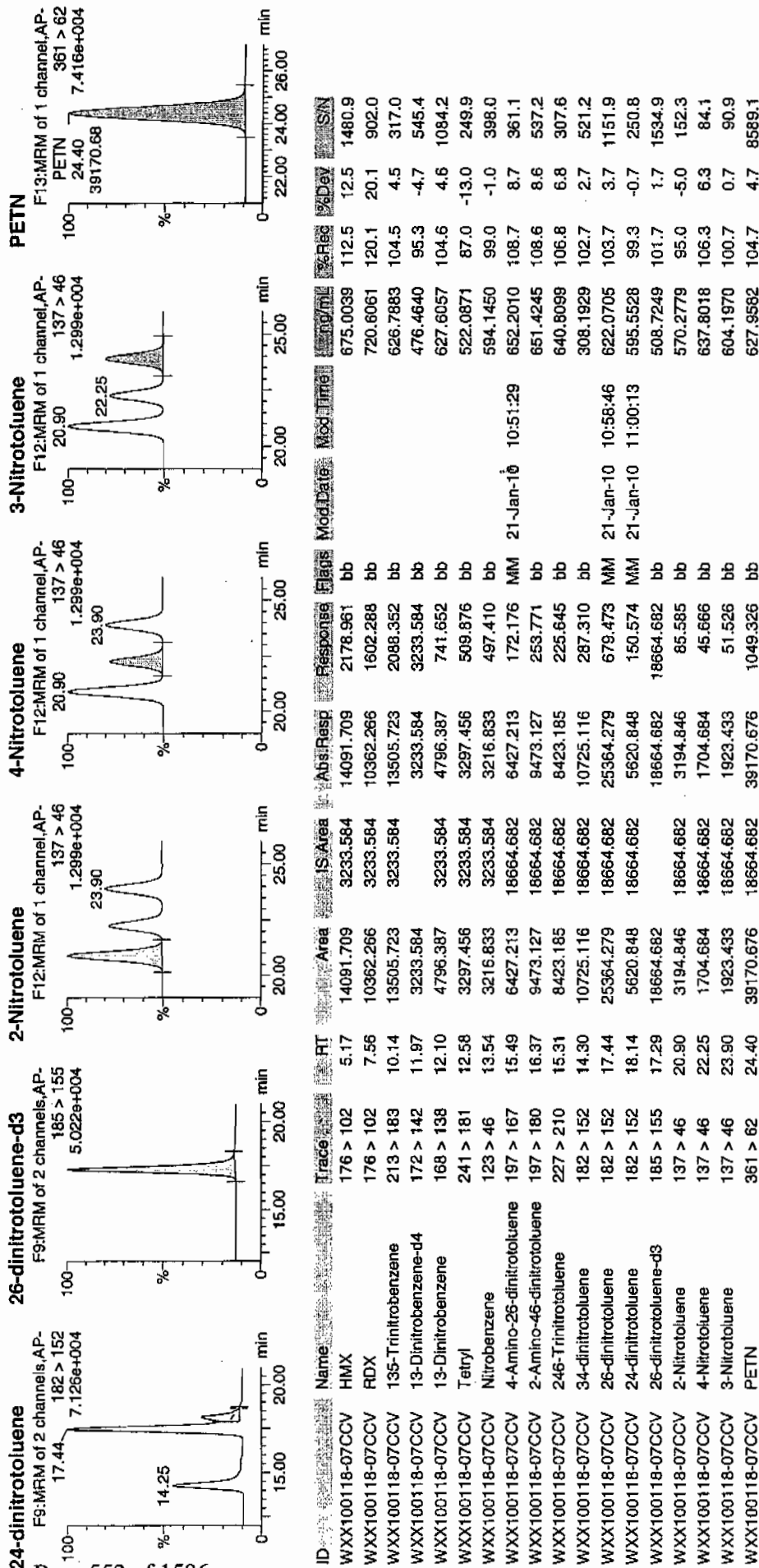


Quantify Sample Report

GEL Laboratories, LLC / Analyst : Michael A. Penny

Printed: Thu Jan 21 11:15:44 2010, Page 20 of 101

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA2.qld, Time: Thu Jan 21 11:10:12 2010



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

*MTT
1/21/10*

HMC 01/21/10

ICV Limits 85-115%

CRI Limits 70-130%

CCV Limits 85-115%

No single analyte > +/- 60%

7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1213

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%

Other Target Analytes 70-130%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

Quantity 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

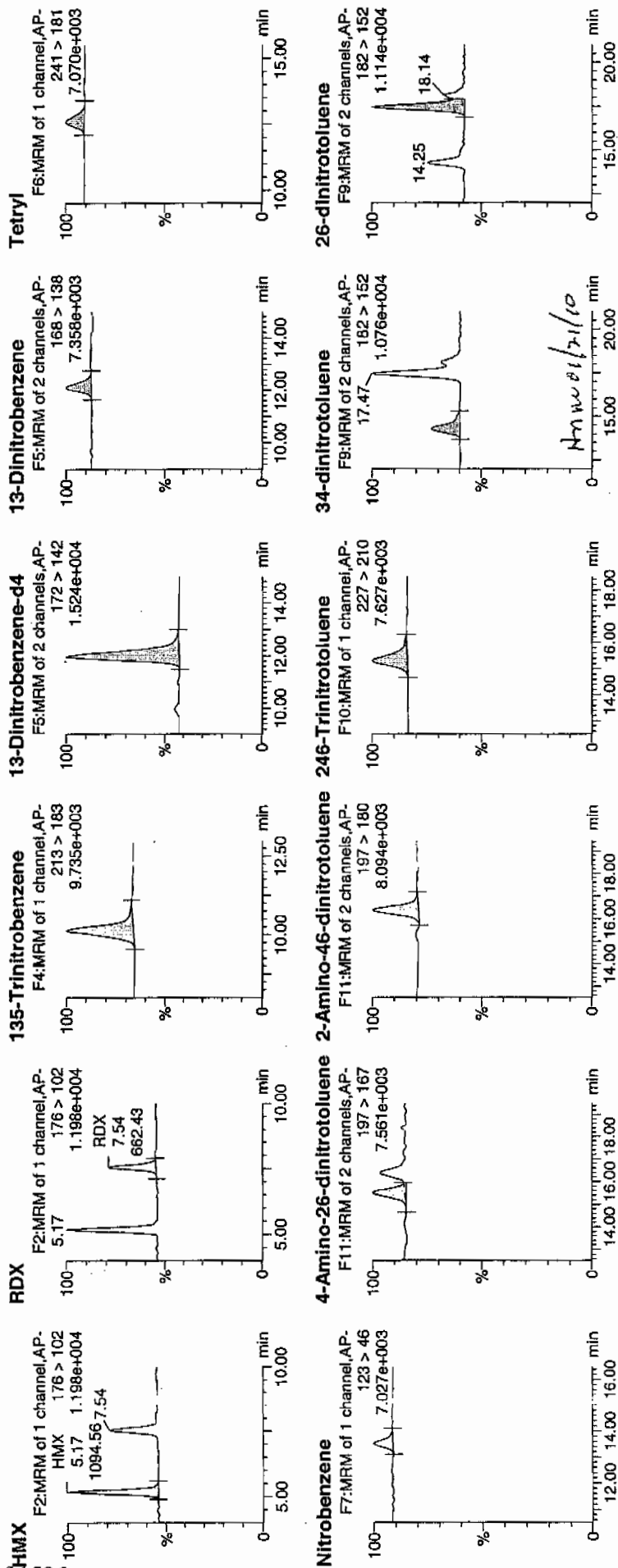
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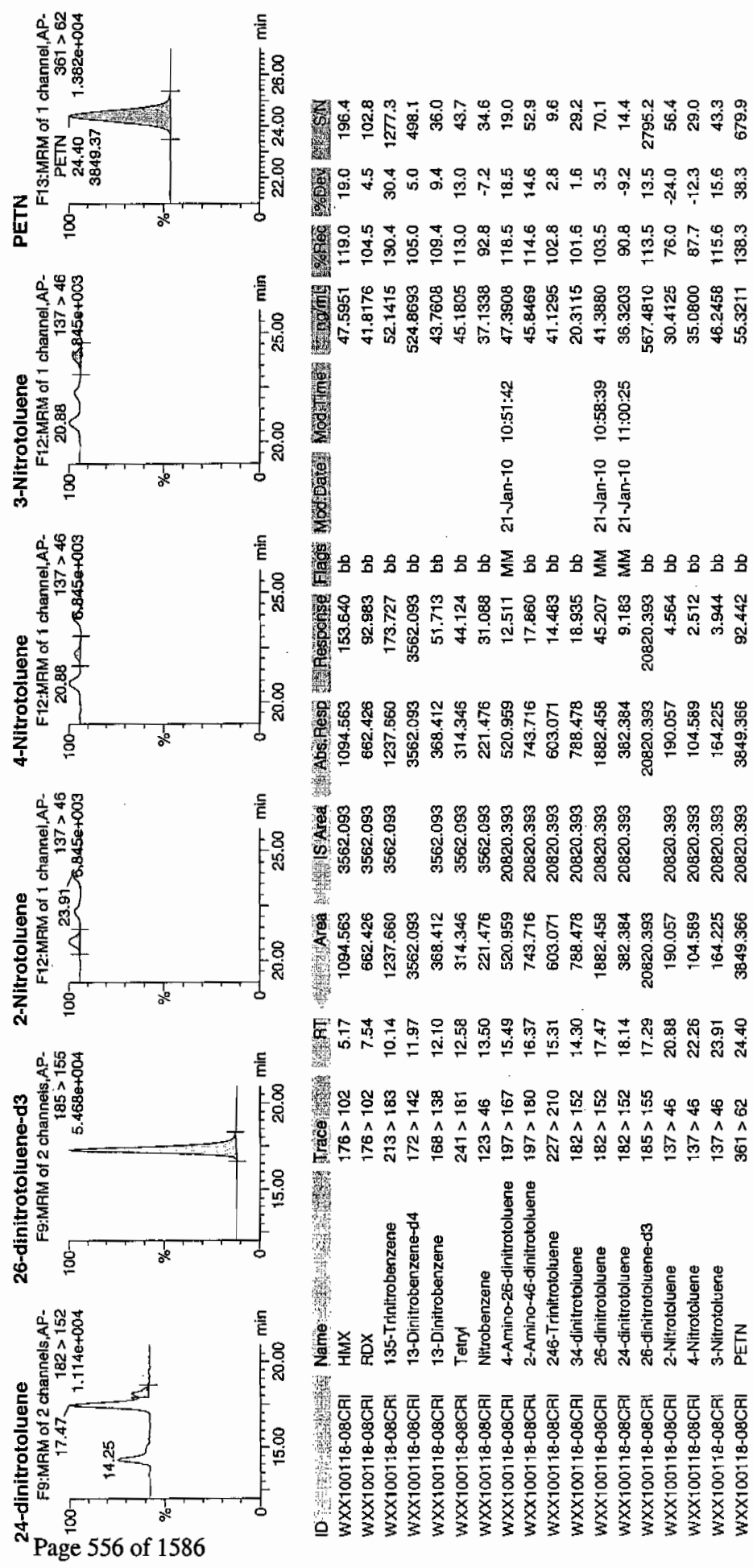
ID: WXX100118-08CRI

Vial: 1:1,C

of 1586



Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA2.qld, Time: Thu Jan 21 11:10:12 2010



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

Handwritten: 107.4
1/21/10

ICV Limits 85-115%

CRI Limits 70-130%

CCV Limits 85-115%

No single analyte > +/- 60%

7A

Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1213

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
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	
o-Nitrotoluene	600	577.581	96	
p-Nitrotoluene	600	584.574	97	

Recovery Limits:

3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene, 2,4-Diamino-6-nitrotoluene 70-130%

Other Target Analytes 80-120%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

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

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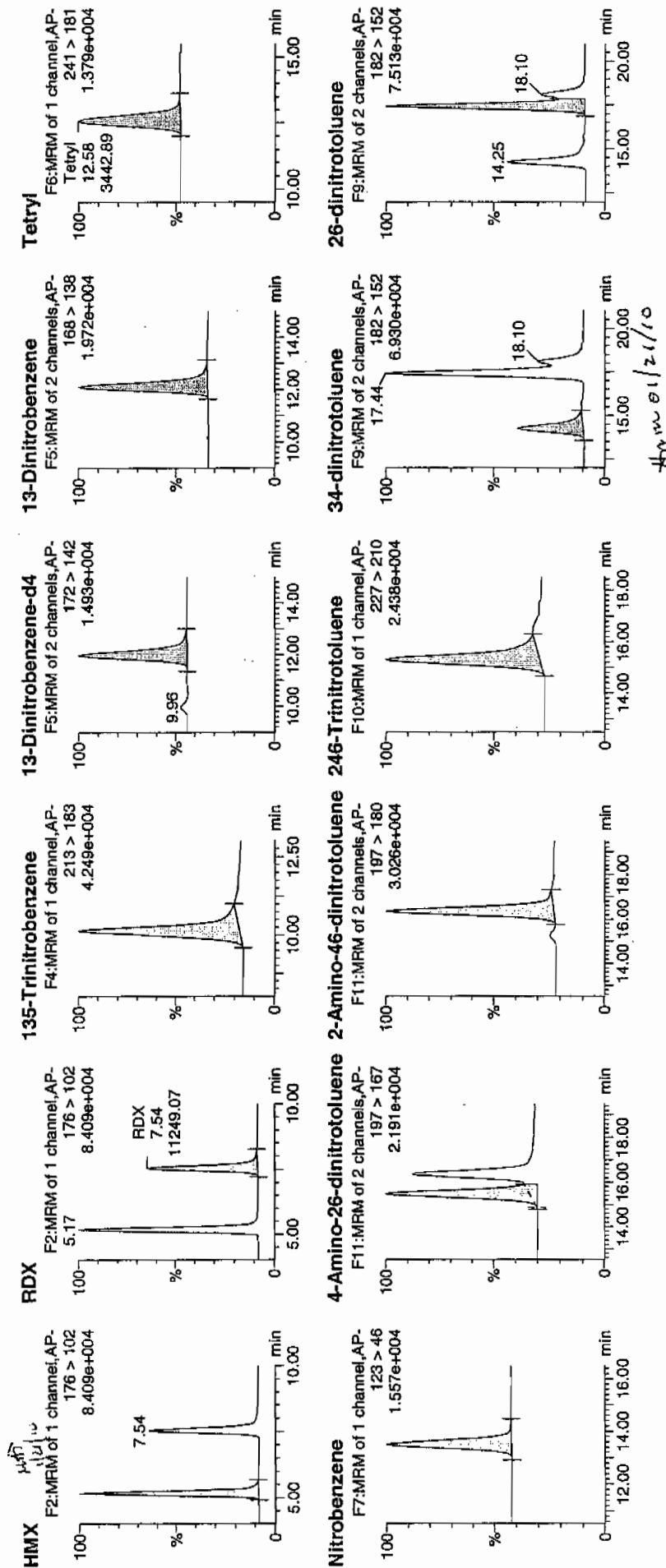
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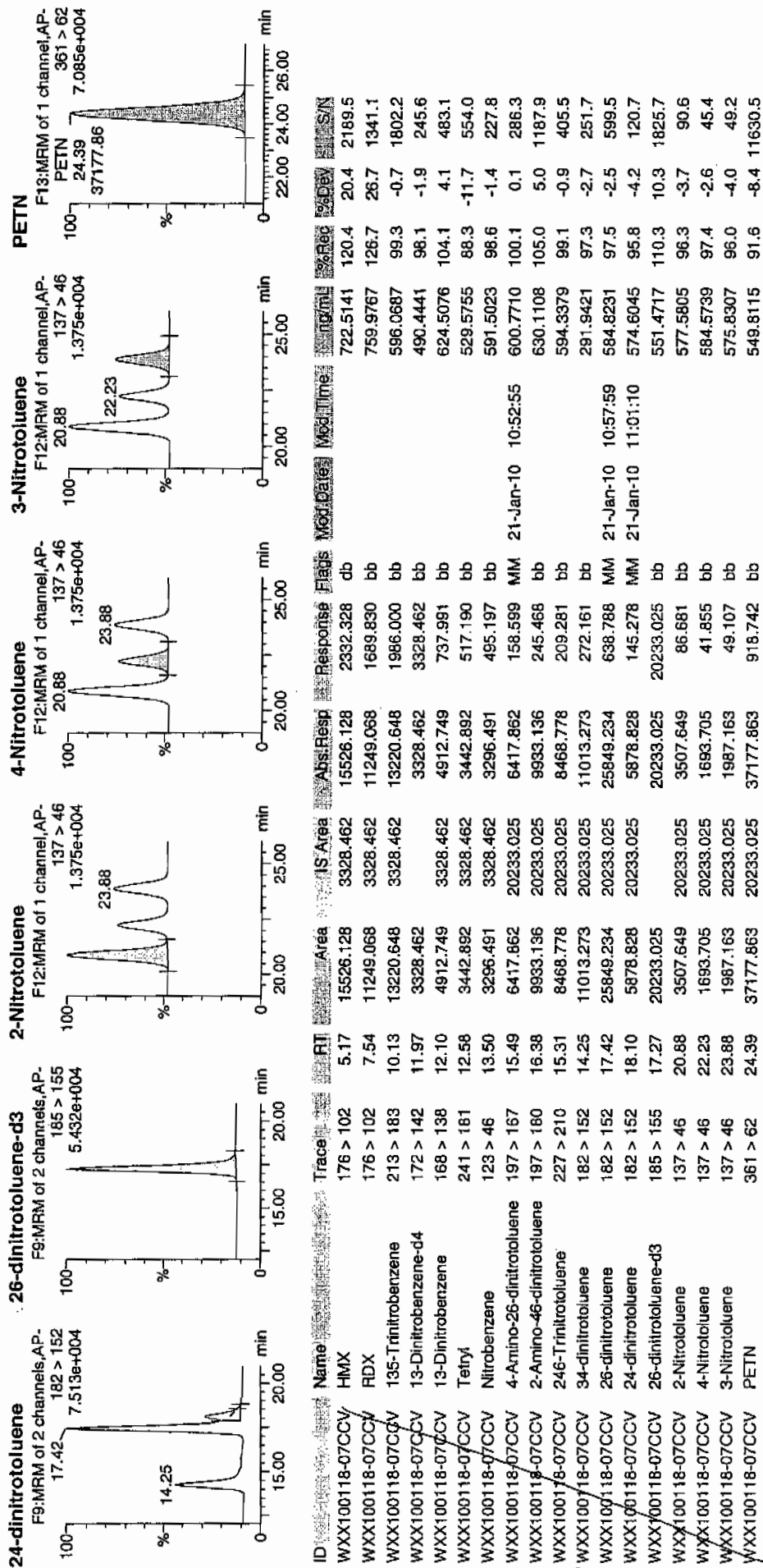
ID: WXX100118-07CCV

Vial: 1:1, B 12/10

Page 559 of 1586



Dataset: C:\MASSLYNX\New_Exp\PRO\011810expA2.cld, Time: Thu Jan 21 11:10:12 2010



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

*WXX
1/21/10*

done 1/21/10

ICV Limits 85-115%

CRI Limits 70-130%

CCV Limits 85-115%

No single analyte > +/- 60%

7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1213

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
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	
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	

Recovery Limits:

3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,
2,4-Diamino-6-nitrotoluene 50-150%

Other Target Analytes 70-130%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

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

Dataset: C:\MASSLYNX\New_Exp_PRO\011810expA2.qld, Time: Thu Jan 21 11:10:12 2010

Name: C:\MASSLYNX\NEW_EXP_PRO\Data\EXP0118111a

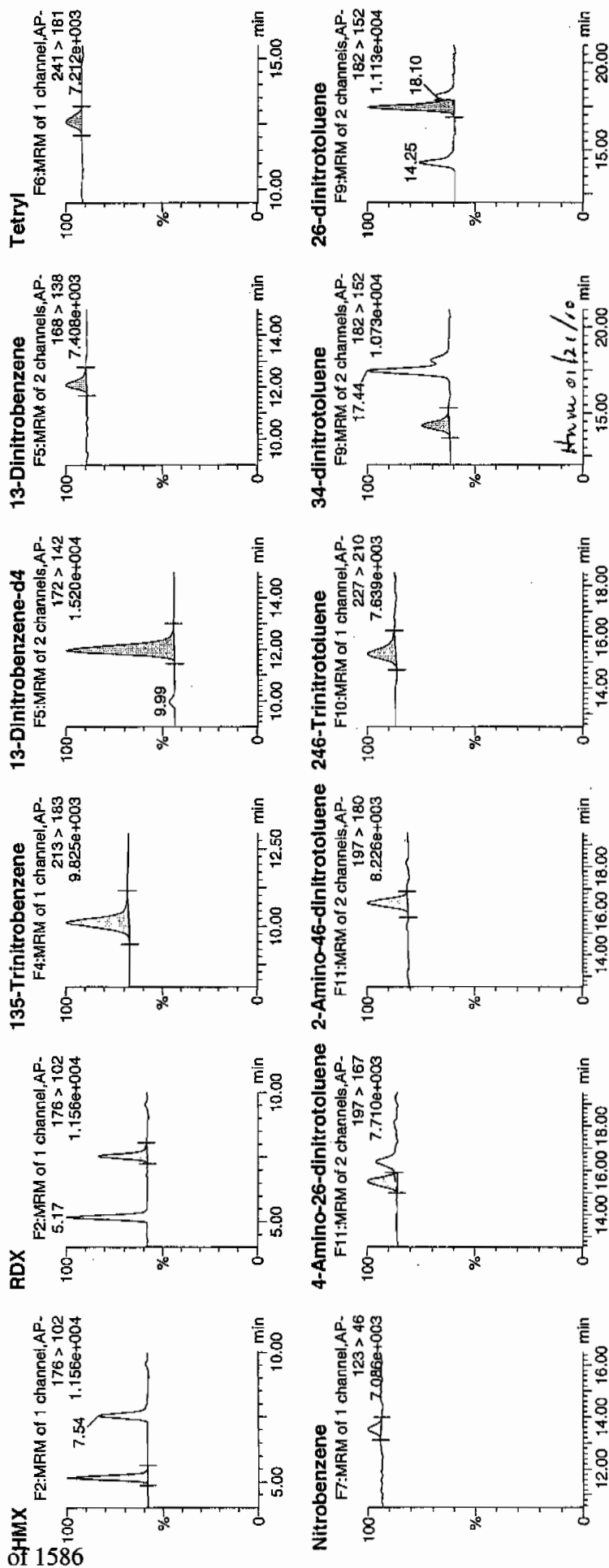
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Time: 20:09:11

ID: WXX100120-08CRI

Vial: 1:1,C

WXX
1/21/10

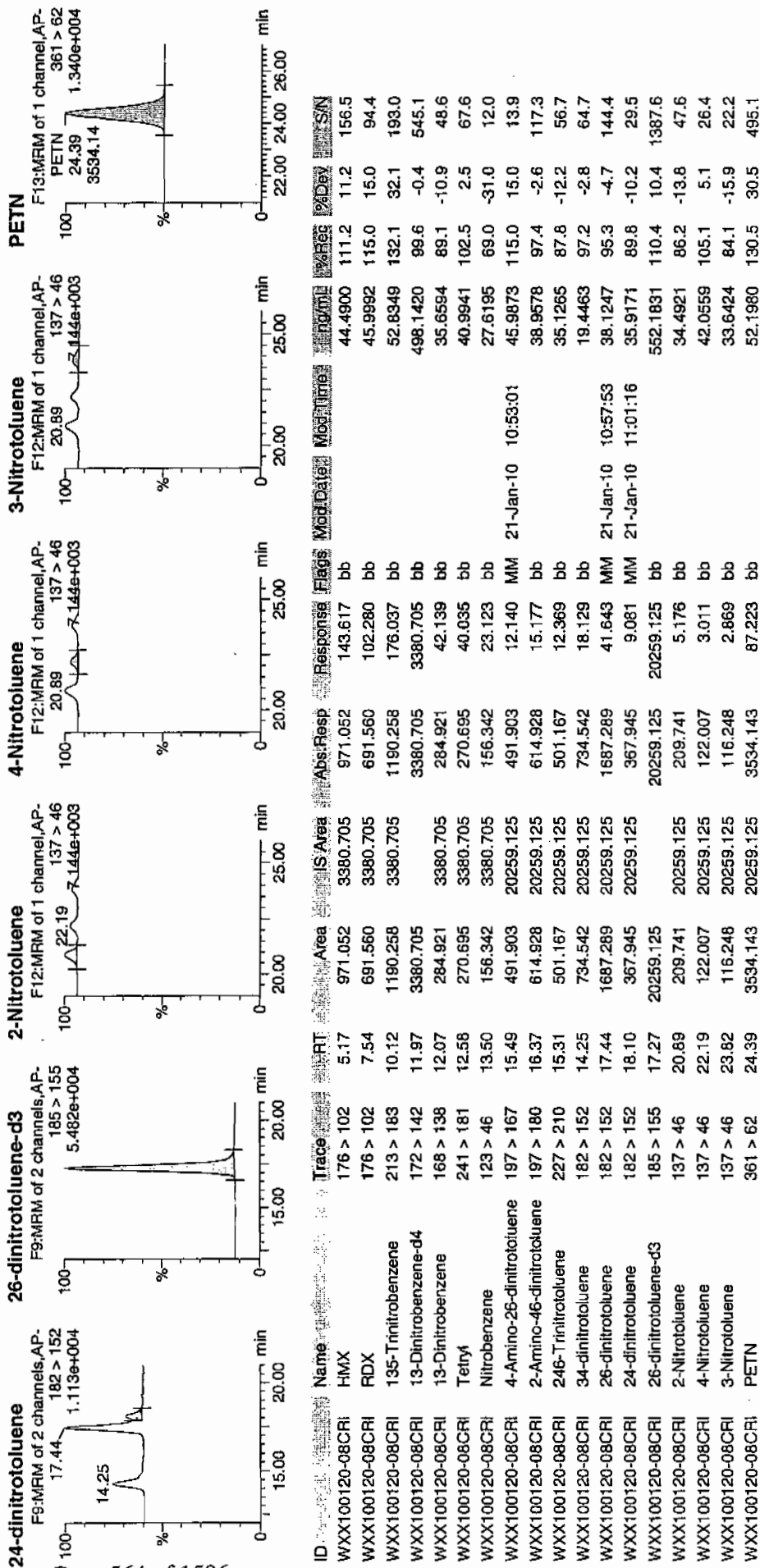


Quantify Sample Report

GEL Laboratories, LLC / Analyst: Michael A. Penny

Printed: Thu Jan 21 11:15:44 2010, Page 48 of 101

Dataset: C:\MASSLYNX\New_Exp_PROV011810expA2.qld, Time: Thu Jan 21 11:10:12 2010



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

1/21/10

Total 1607.3

Average 100.5

1/21/10

ICV Limits 85-115%

CRI Limits 70-130%

CCV Limits 85-115%

No single analyte > +/- 60%

7A

Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1213

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%

Other Target 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

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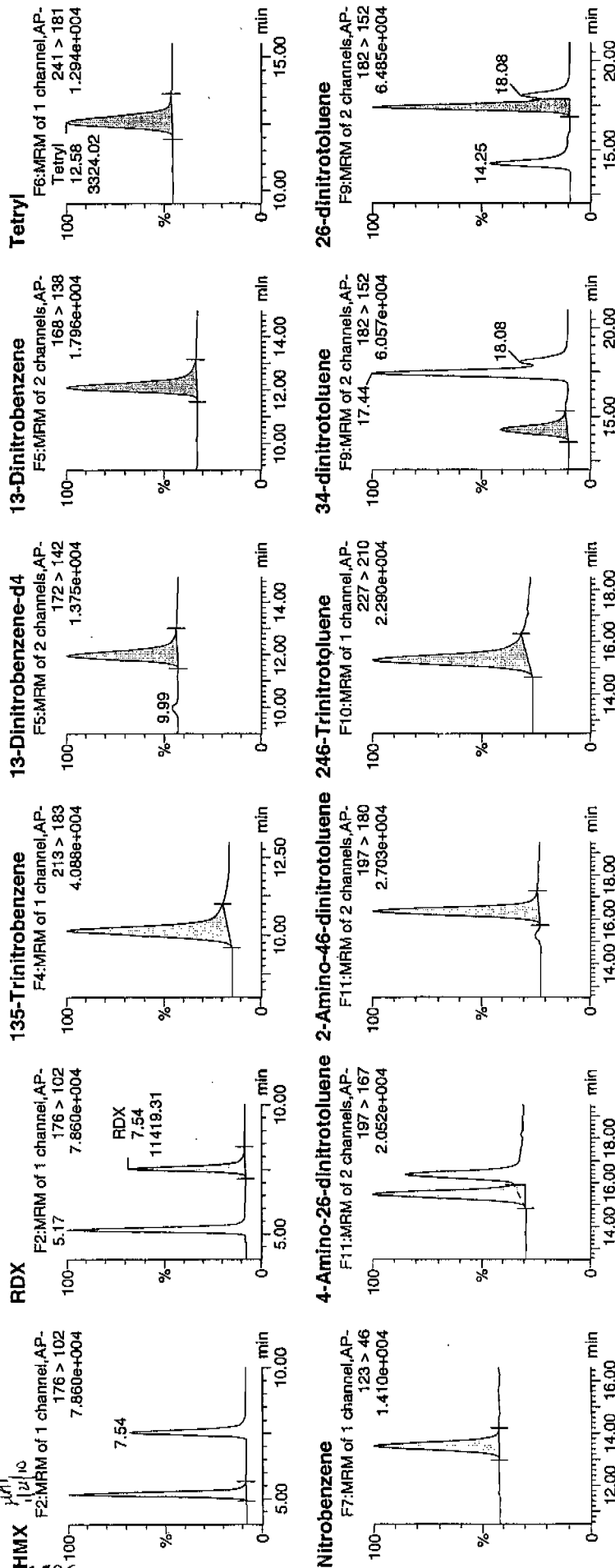
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Time: 01:33:40

ID: WXX100116-07CCV

Vial: 1:1,B 20

1/21/10



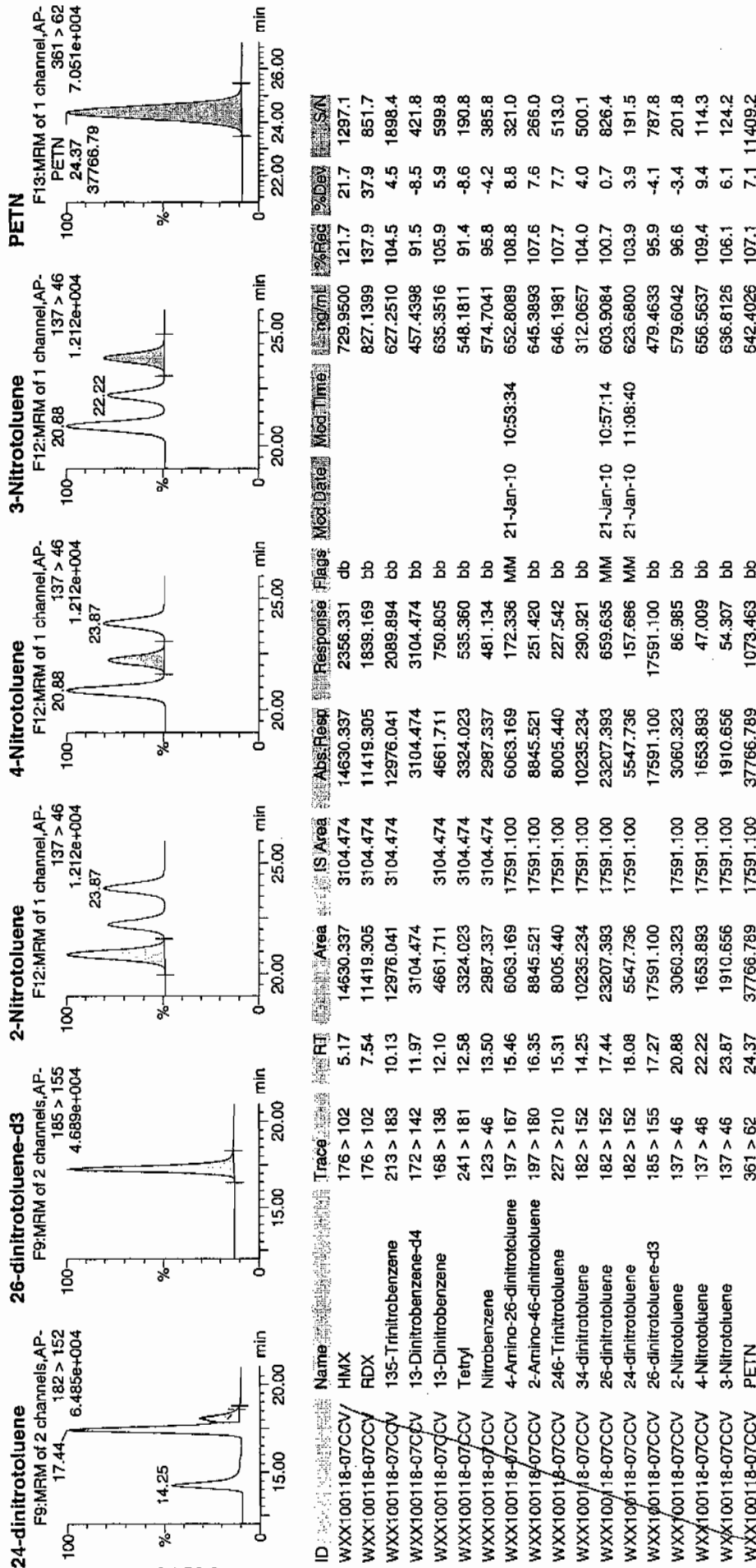
Handwritten: 1/21/10

Quantify Sample Report

GEL Laboratories, LLC / Analyst : Michael A. Penny

Printed: Thu Jan 21 11:15:44 2010, Page 70 of 101

Dataset: C:\MASSLYNX\New_Exp\PROV011810expA2.qld, Time: Thu Jan 21 11:10:12 2010



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

*Auth
1/21/10*

Total 1709.1

Average 106.8

Auth 01/21/10

ICV Limits 85-115%

CRI Limits 70-130%

CCV Limits 85-115%

No single analyte > +/- 60%

7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1213

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%

Other Target Analytes 70-130%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

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

Dataset: C:\MASSLYNX\New_Exp_PRO\011810expA2.qtd, Time: Thu Jan 21 11:10:12 2010

Name: C:\MASSLYNX\NEW_EXP_PRO\Data\EXP0118124a

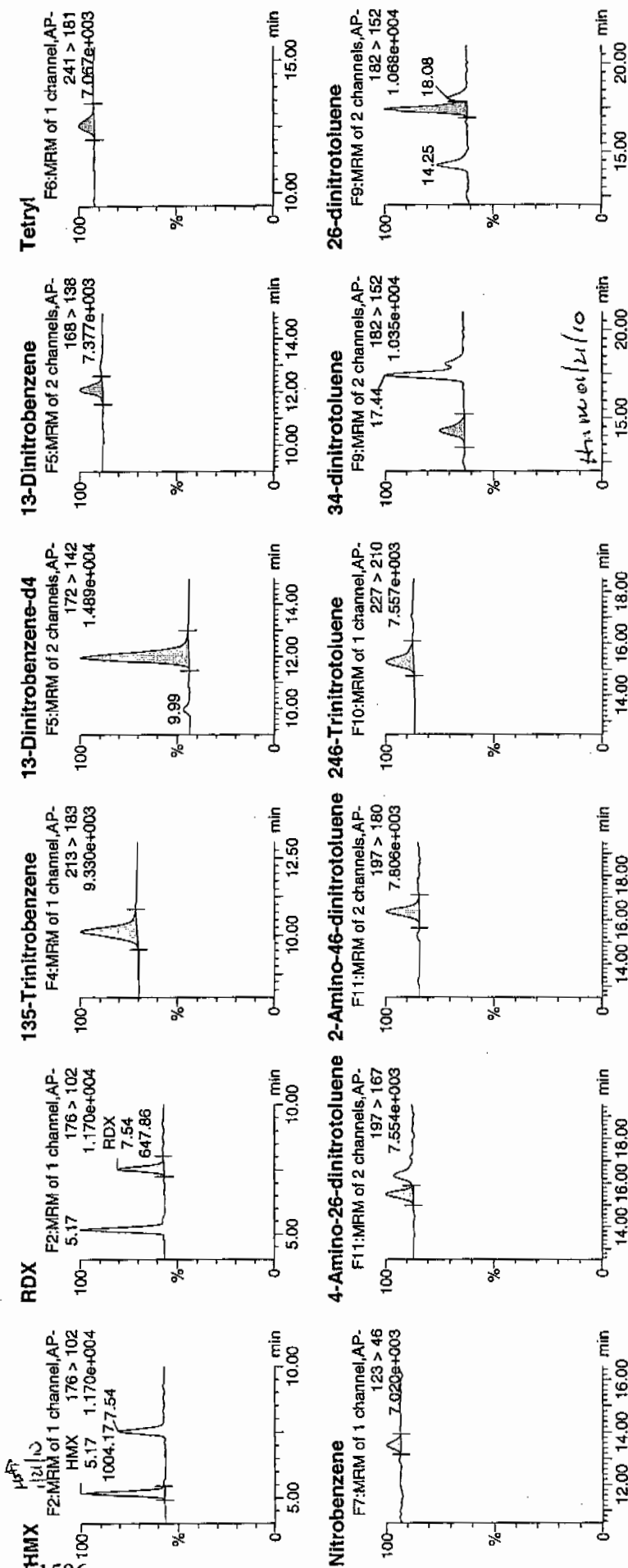
Date: 21-Jan-2010

Time: 02:32:41

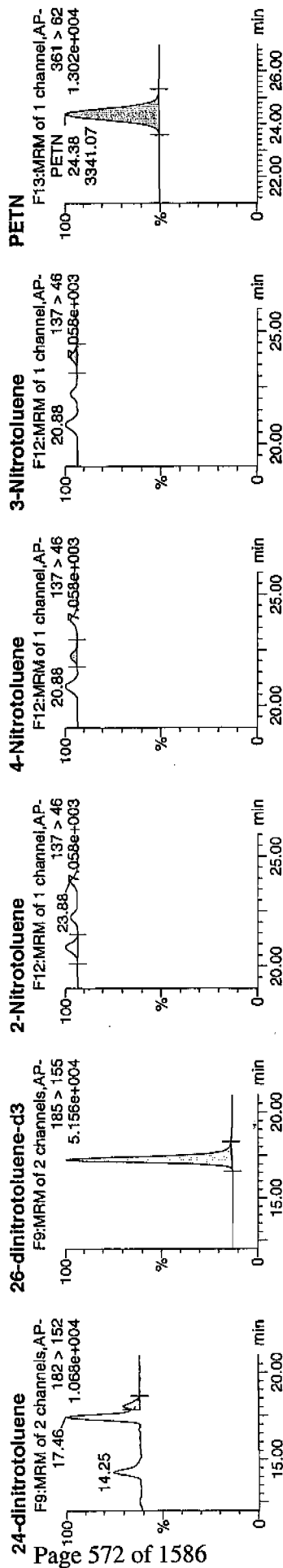
ID: WXX100118-08CRI

Vial: 1:1,C 20

1/21/10



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	Flags	Mod Date	Mod Time	Norm	Rec	Dev	SN
WXX100118-08CPI	HMX	176 > 102	5.17	1004.165	3278.461	1004.165	bd			47.4419	118.6	18.6	106.0
WXX100118-08CPI	RDX	176 > 102	7.54	647.857	3278.461	647.857	bb			44.4362	111.1	11.1	58.5
WXX100118-08CPI	135-Trinitrobenzene	213 > 183	10.13	1019.701	3278.461	1019.701	bb			46.6756	116.7	16.7	143.4
WXX100118-08CPI	13-Dinitrobenzene-d4	172 > 142	11.97	3278.461	3278.461	3278.461	bb			483.0765	96.6	-3.4	117.1
WXX100118-08CPI	13-Dinitrobenzene	168 > 138	12.10	301.779	3278.461	301.779	bb			38.9472	97.4	-2.6	25.1
WXX100118-08CPI	Tetryl	241 > 181	12.58	257.571	3278.461	257.571	bb			40.2231	100.6	0.6	25.3
WXX100118-08CPI	Nitrobenzene	123 > 46	13.50	165.085	3278.461	165.085	bb			30.0736	75.2	-24.8	15.8
WXX100118-08CPI	4-Amino-26-dinitrotoluene	197 > 167	15.49	369.820	18968.854	369.820	MM	21-Jan-10	10:53:40	36.9257	92.3	-7.7	36.3
WXX100118-08CPI	2-Amino-46-dinitrotoluene	197 > 180	16.38	539.596	18968.854	539.596	bb			36.5106	91.3	-8.7	72.4
WXX100118-08CPI	246-Trinitrotoluene	227 > 210	15.28	454.289	18968.854	454.289	bb			34.0067	85.0	-15.0	41.2
WXX100118-08CPI	34-dinitrotoluene	182 > 152	14.25	694.035	18968.854	694.035	bb			19.6237	98.1	-1.9	34.6
WXX100118-08CPI	26-dinitrotoluene	182 > 152	17.46	1564.271	18968.854	1564.271	MM	21-Jan-10	10:57:03	37.7493	94.4	-5.6	77.0
WXX100118-08CPI	26-dinitrotoluene	182 > 152	18.08	385.781	18968.854	385.781	MM	21-Jan-10	11:08:48	40.2197	100.5	0.5	17.6
WXX100118-08CPI	26-dinitrotoluene-d3	185 > 155	17.27	18968.854	18968.854	18968.854	bb			517.0154	103.4	3.4	2171.2
WXX100118-08CPI	2-Nitrotoluene	137 > 46	20.88	236.515	18968.854	236.515	bb			41.5408	103.9	3.9	49.1
WXX100118-08CPI	4-Nitrotoluene	137 > 46	22.25	114.249	18968.854	114.249	bb			42.0604	105.2	5.2	25.6
WXX100118-08CPI	3-Nitrotoluene	137 > 46	23.88	120.201	18968.854	120.201	bb			37.1526	92.9	-7.1	26.1
WXX100118-08CPI	PETN	361 > 82	24.38	3341.068	18968.854	3341.068	bb			52.7029	131.8	31.8	371.4

WXX100118-08CPI

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

*WAP
1/21/10*

Total 1615.0

Average 100.9

Home 01/21/10

ICV Limits 85-115%
 CRI Limits 70-130%
 CCV Limits 85-115%

No single analyte > +/- 60%

7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1213

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
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	
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	

Recovery Limits:

3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene, 2,4-Diamino-6-nitrotoluene 70-130%

Other Target Analytes 80-120%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

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

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA2.qld, Time: Thu Jan 21 11:10:12 2010

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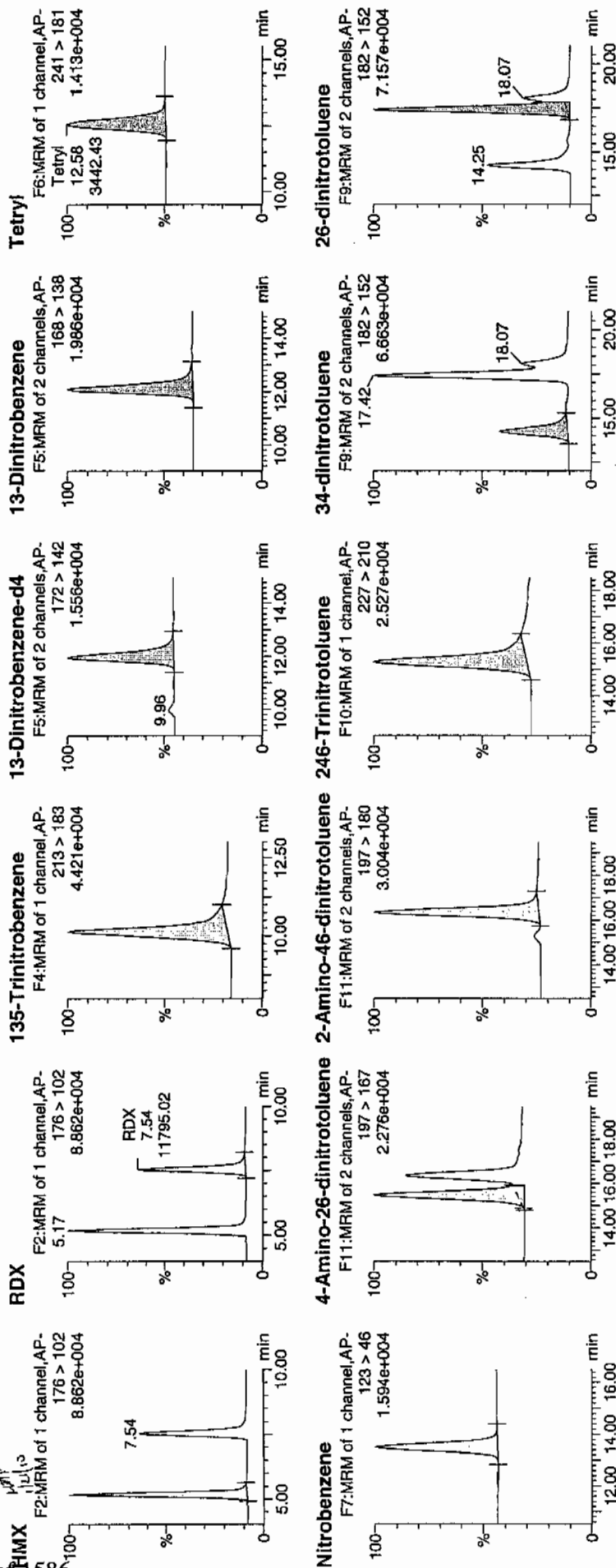
Date: 21-Jan-2010

Time: 07:57:00

ID: WXX100118-07CCV

Vial: 1:1,B

1/21/10



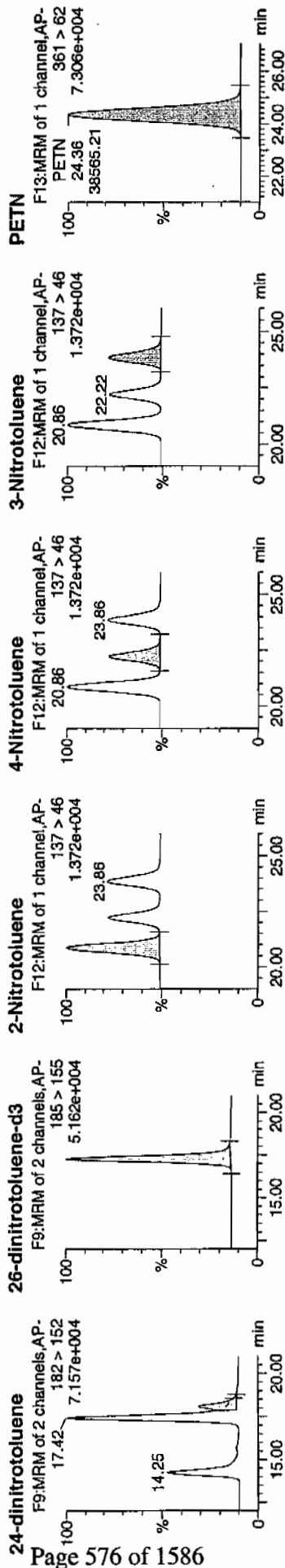
1/21/10

Quantify Sample Report

GEL Laboratories, LLC / Analyst : Michael A. Penny

Printed: Thu Jan 21 11:15:44 2010, Page 96 of 101

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	%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

WXX100118-07CCV

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

*WXX
1/21/10*

Total 1669.5

Average 104.3

WXX 01/21/10

ICV Limits 85-115%

CRI Limits 70-130%

CCV Limits 85-115%

No single analyte > +/- 60%

7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1213

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
1,3,5-Trinitrobenzene	40	57.143	143	*
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	

Recovery Limits:

3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,
2,4-Diamino-6-nitrotoluene 50-150%

Other Target Analytes 70-130%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

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

Dataset: C:\MASSLYNX\New_Exp.PRO\1011810expA2.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: 11, C 20

OF HMX

58

80

RDX

135-Trinitrobenzene

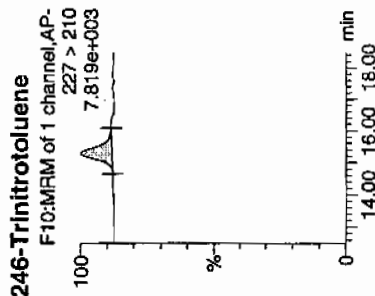
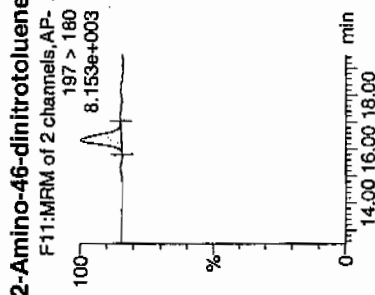
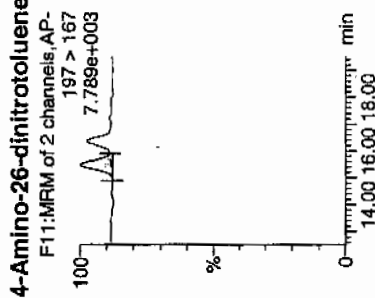
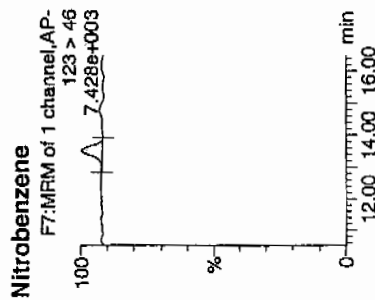
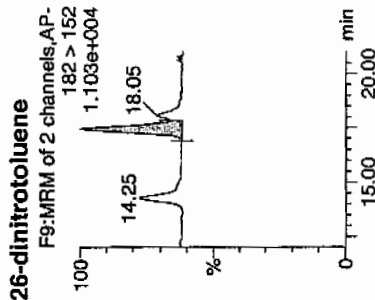
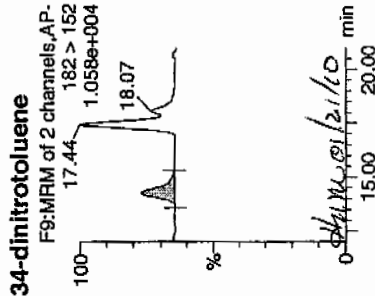
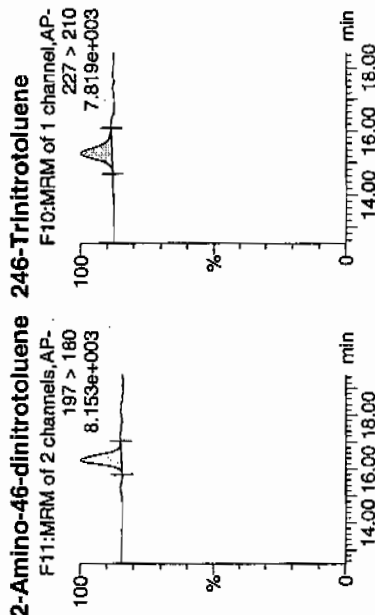
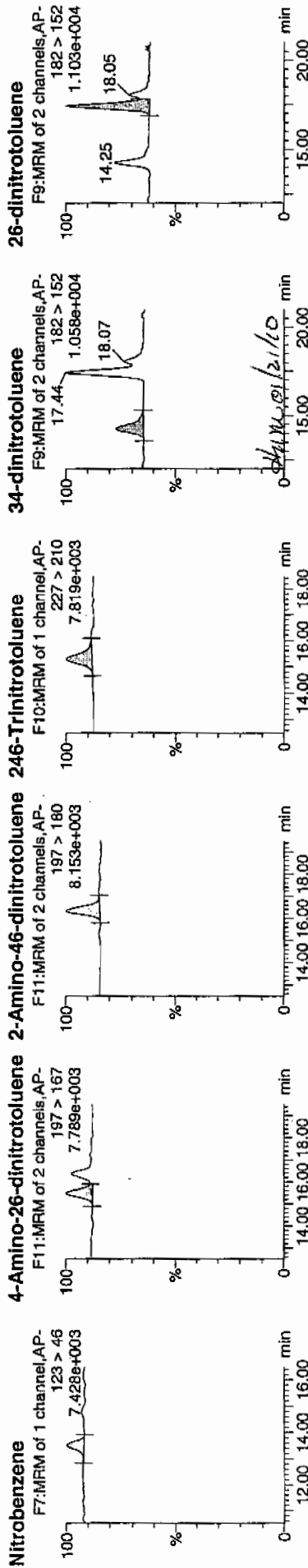
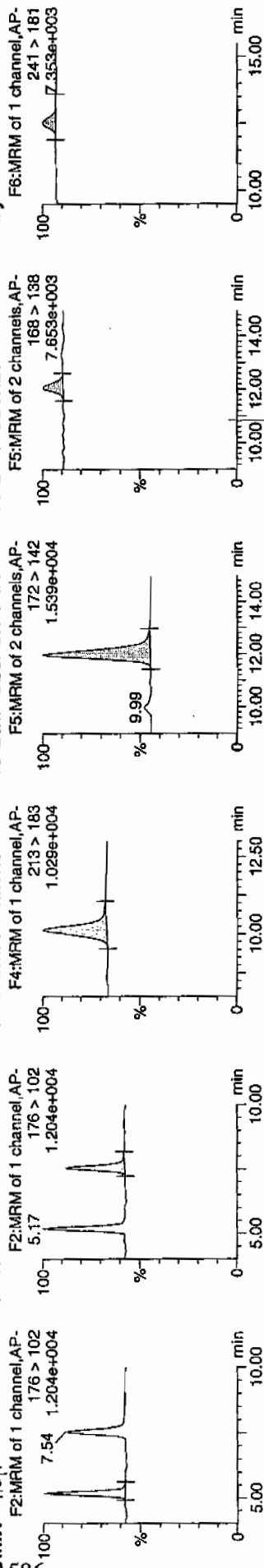
13-Dinitrobenzene-d4

13-Dinitrobenzene

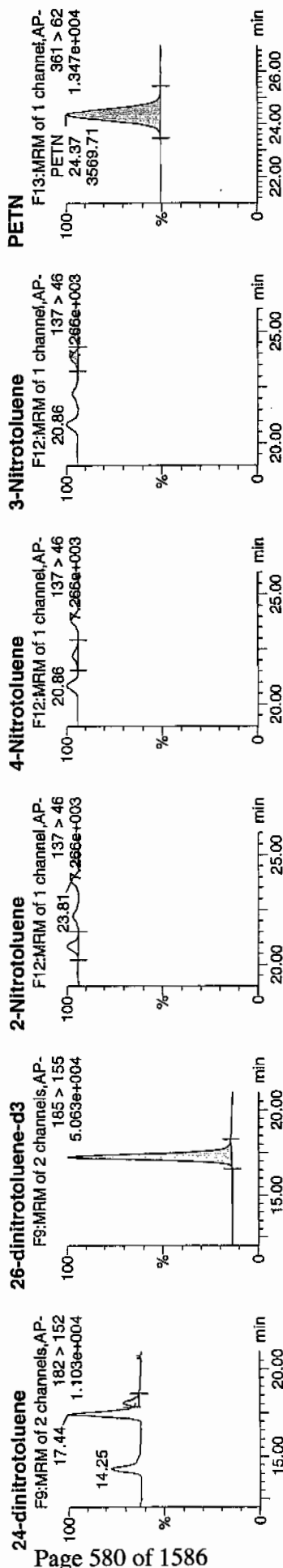
Tetryl

26-dinitrotoluene

Nitrobenzene



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	Conc	Rec	Dev	S/N
WXX100118-08CRI	HMZ	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			34.9376	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

WXX100120-05CCT

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

*M77
1/21/10*

Total 1689.8

Average 105.6

Sum 01/21/10

ICV Limits 85-115%
 CRI Limits 70-130%
 CCV Limits 85-115%

No single analyte > +/- 60%

7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1213

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%

Other Target Analytes 80-120%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

Printed: Fri Jan 22 10:16:13 2010, Page 21 of 99

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

Dataset: C:\MASSLYNX\New_Exp\PRO1011810expA3.qld, Time: Fri Jan 22 10:11:48 2010

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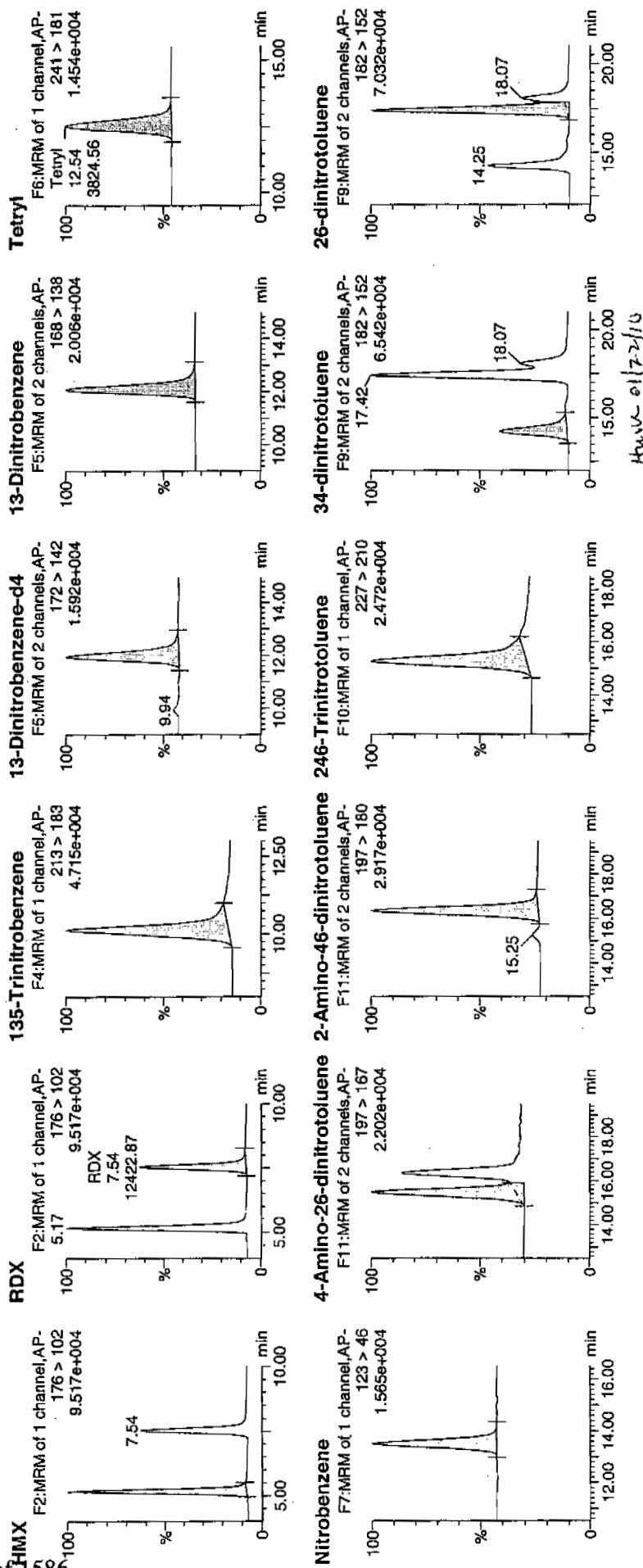
Date: 21-Jan-2010

Time: 14:20:48

ID: WXX100120-07CCV

Vial: 1:1,B

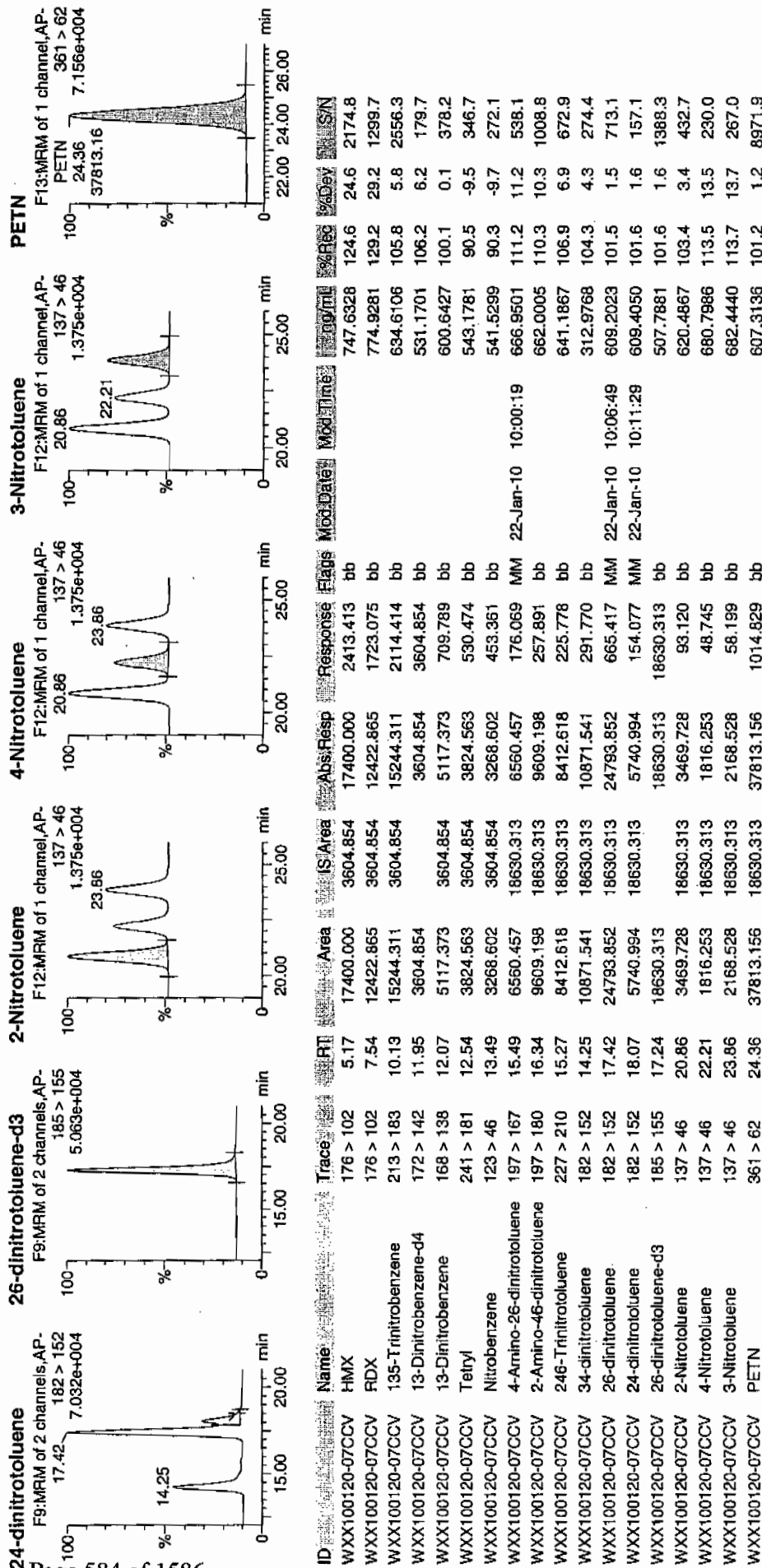
1/21/10



Printed: Fri Jan 22 10:16:13 2010, Page 22 of 99

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

Dataset: C:\MASSLYNX\New_Exp\PRO011810expA3.qld, Time: Fri Jan 22 10:11:48 2010



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

ICV Limits 85-115%

CRI Limits 70-130%

CCV Limits 85-115%

No single analyte > +/- 60%

WXX
1/22/10

ANAL 01/22/10

7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1213

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
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	
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	

Recovery Limits:

3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene, 2,4-Diamino-6-nitrotoluene 50-150%

Other Target Analytes 70-130%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

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

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA3.qld, Time: Fri Jan 22 10:11:48 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118150a

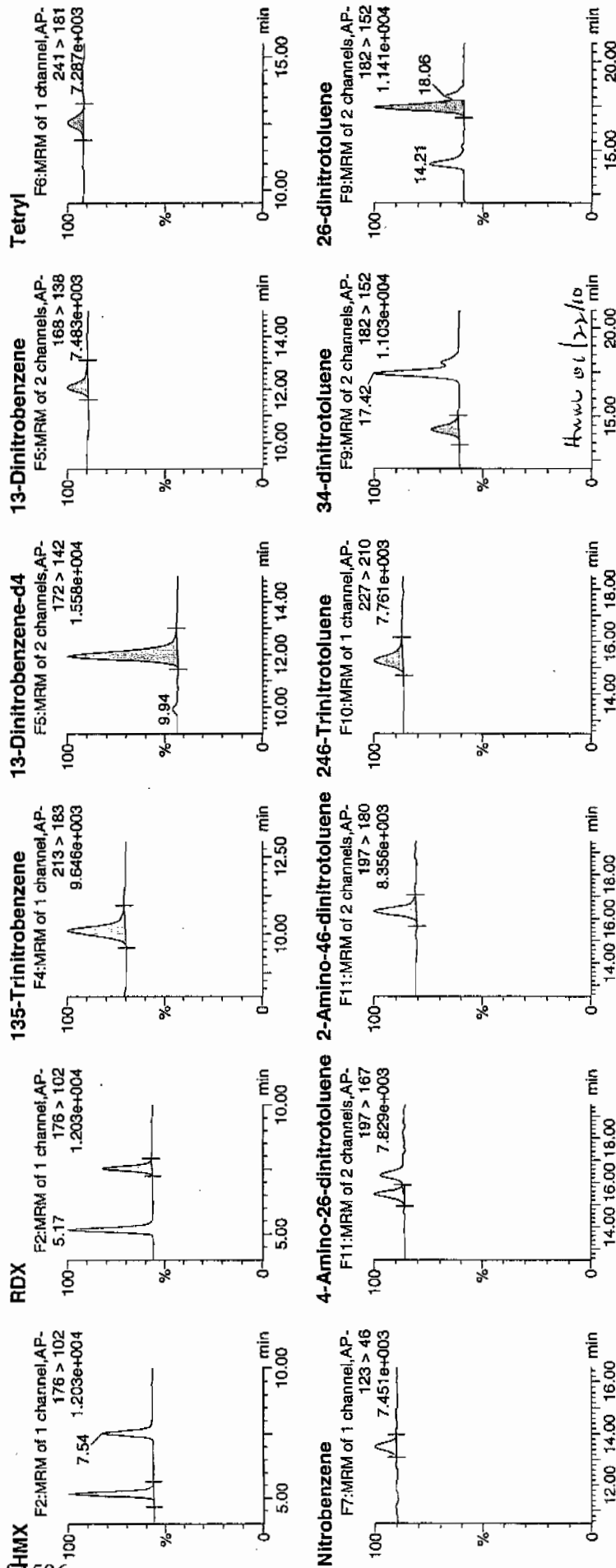
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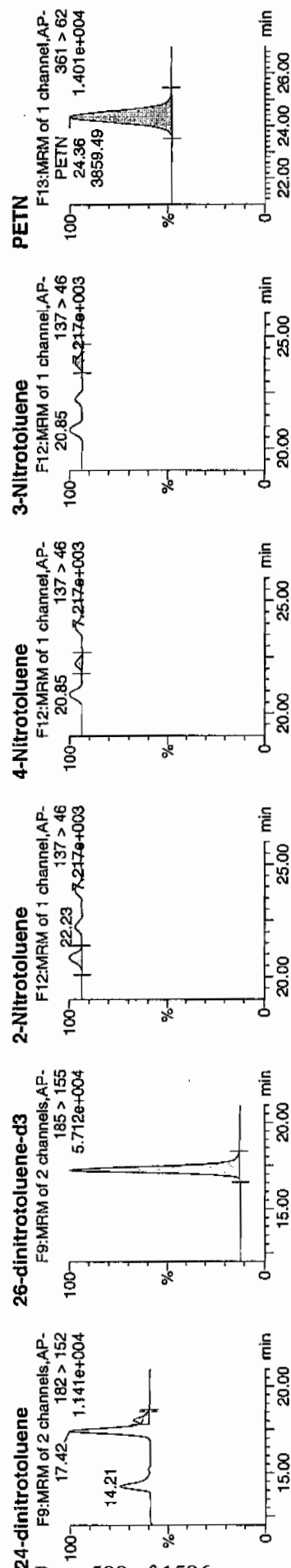
ID: WXX100120-08CRI

37 of 586
Vial: 1:1,C

WXX
1/21/10



Dataset: C:\MASSLYNX\New_Exp\PRO\01810expA3.qld, Time: Fri Jan 22 10:11:48 2010



ID	Name	Trace	Area	IS Area	Resp	Flag	Mod Time	Conc (ng/ml)	% Rec	% Dev	SN
WXX100120-08CRI	HMX	176 > 102	5.17	1086.624	3570.529	1086.624	152.166	bb	47.1363	117.8	165.1
WXX100120-08CRI	RDX	176 > 102	7.54	693.767	3570.529	693.767	97.152	bb	43.6927	109.2	9.2
WXX100120-08CRI	135-Trinitrobenzene	213 > 183	10.11	1086.334	3570.529	1086.334	152.125	bb	45.6581	114.1	279.5
WXX100120-08CRI	13-Dinitrobenzene-d4	172 > 142	11.95	3570.529		3570.529	3570.529	bb	526.1123	105.2	5.2
WXX100120-08CRI	13-Dinitrobenzene	168 > 138	12.10	340.333	3570.529	340.333	47.659	bb	40.3300	100.8	0.8
WXX100120-08CRI	Tetryl	241 > 181	12.53	280.637	3570.529	280.637	39.299	bb	40.2402	100.6	0.6
WXX100120-08CRI	Nitrobenzene	123 > 46	13.50	265.386	3570.529	265.386	37.163	bb	44.3909	111.0	21.2
WXX100120-08CRI	4-Amino-26-dinitrotoluene	197 > 167	15.46	418.011	21472.699	418.011	9.734	MM	36.8706	92.2	-7.8
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
WXX100120-08CRI	246-Trinitrotoluene	227 > 210	15.28	485.791	21472.699	485.791	11.312	bb	32.1245	80.3	-19.7
WXX100120-08CRI	34-dinitrotoluene	182 > 152	14.25	758.667	21472.699	758.667	17.666	bb	18.9498	94.7	-5.3
WXX100120-08CRI	26-dinitrotoluene	182 > 152	17.42	1804.812	21472.699	1804.812	42.026	MM	38.4754	96.2	-3.8
WXX100120-08CRI	24-dinitrotoluene	182 > 152	18.06	400.543	21472.699	400.543	9.327	MM	36.8894	92.2	-7.8
WXX100120-08CRI	26-dinitrotoluene-d3	185 > 155	17.25	21472.699		21472.699	21472.699	bb	585.2603	117.1	17.1
WXX100120-08CRI	2-Nitrotoluene	137 > 46	20.85	230.419	21472.699	230.419	5.365	bb	35.7511	89.4	-10.6
WXX100120-08CRI	4-Nitrotoluene	137 > 46	22.23	106.133	21472.699	106.133	2.471	bb	34.5165	86.3	-13.7
WXX100120-08CRI	3-Nitrotoluene	137 > 46	23.89	128.871	21472.699	128.871	3.001	bb	35.1877	88.0	-12.0
WXX100120-08CRI	PETN	361 > 62	24.36	3859.488	21472.699	3859.488	89.870	bb	53.7815	134.5	34.5

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

Handwritten: 1/22/10

Total 1609.2

Average 100.6

Handwritten: 1/22/10

ICV Limits 85-115%

CRI Limits 70-130%

CCV Limits 85-115%

No single analyte > +/- 60%

7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1213

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%

Other Target Analytes 80-120%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

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

Dataset: C:\MASSLYNX\New_Exp_PRO\011810expA3.qld, Time: Fri Jan 22 10:11:48 2010

Name: C:\MASSLYNX\NEW_EXP_PRO\Data\EXP0118161a

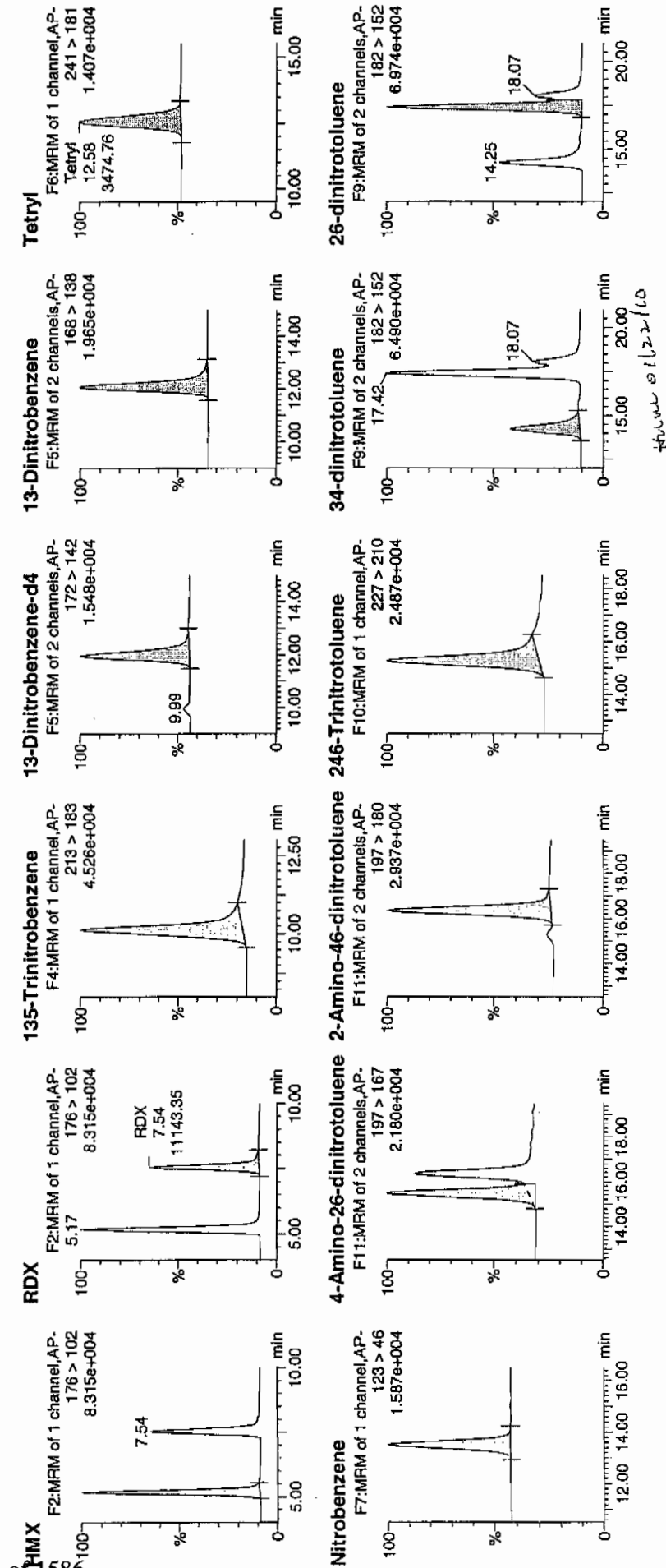
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Time: 20:44:42

ID: WXX100120-07CCV

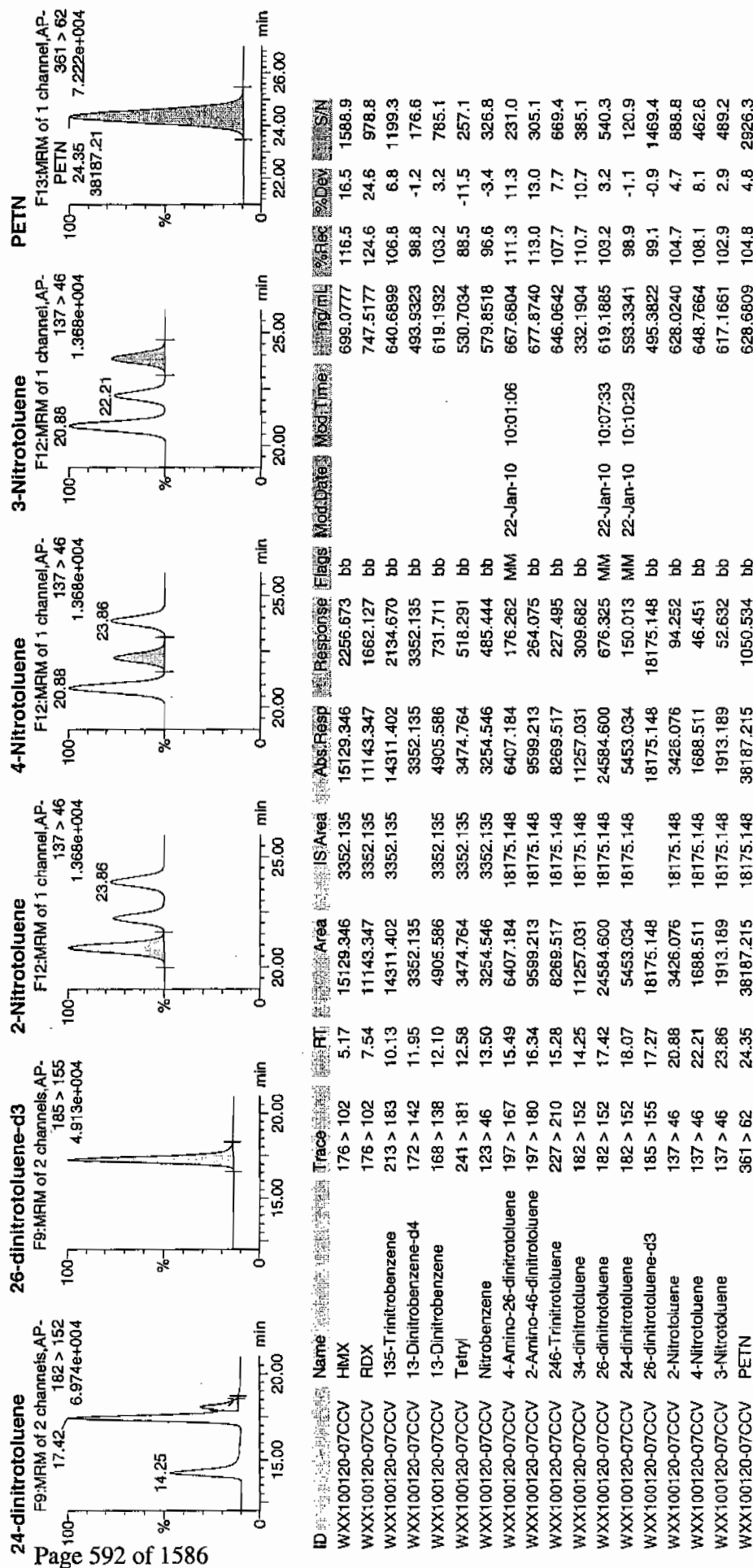
Vial: 1:1,B

1/22/10



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



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

Handwritten: 11/21/10

Total 1701.5

Average 106.3

Handwritten: 01/22/10

ICV Limits 85-115%

CRI Limits 70-130%

CCV Limits 85-115%

No single analyte > +/- 60%

7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1213

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%

Other Target 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

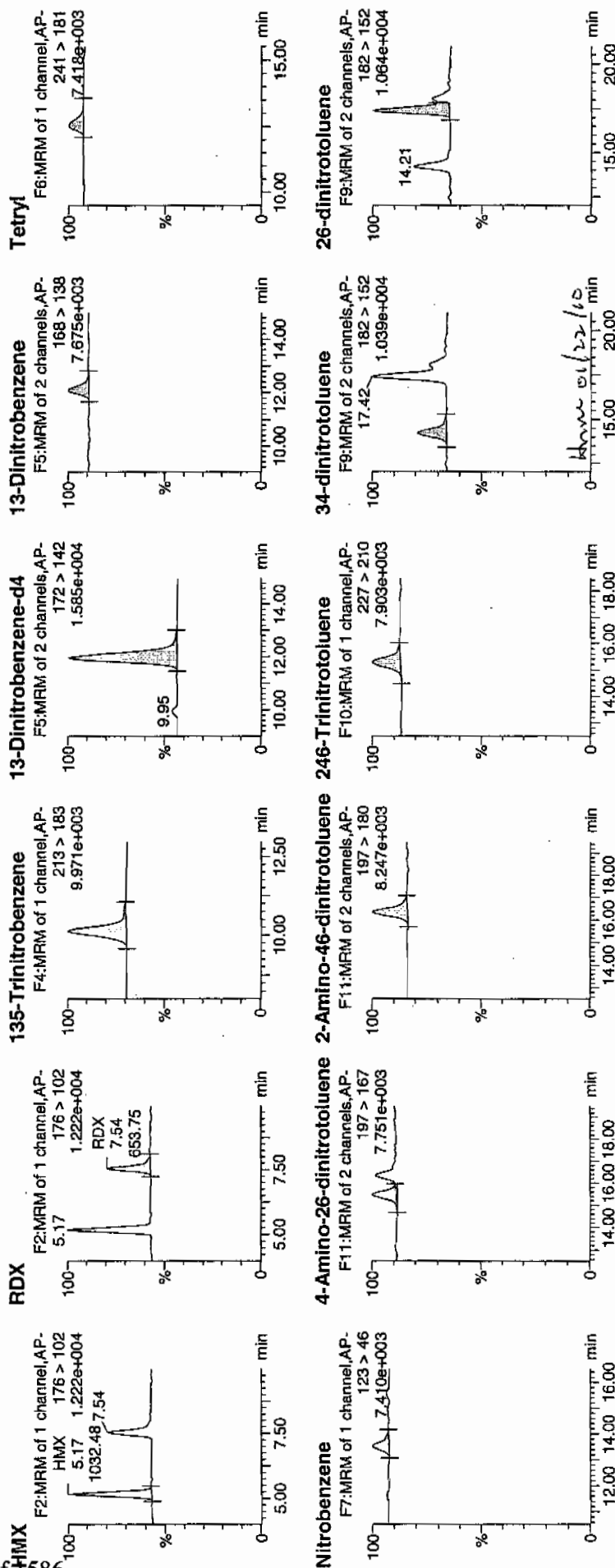
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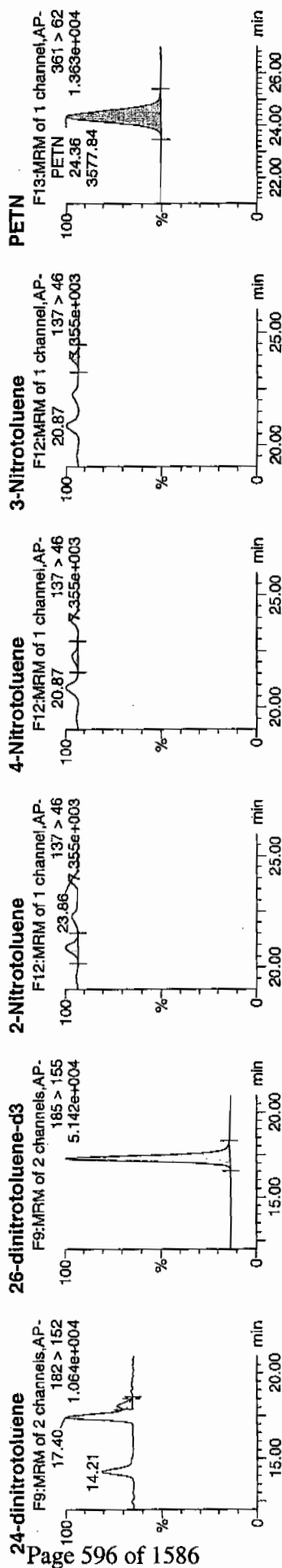
ID: WXX100120-08CRI

Vial: 1;1,C

1/22/10
M.A.P.



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	Conc (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	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	-8.8	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	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

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

*MHT
1/22/10*

Total 1654.5

Average 103.4

Home 01/22/10

ICV Limits 85-115%

CRI Limits 70-130%

CCV Limits 85-115%

No single analyte > +/- 60%

7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1213

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
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	*
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	

Recovery Limits:

3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,
2,4-Diamino-6-nitrotoluene 70-130%

Other Target Analytes 80-120%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp_PRO\011810expA3.qld, Time: Fri Jan 22 10:11:48 2010

Name: C:\MASSLYNX\NEW_EXP_PRO\Data\EXP0118172a

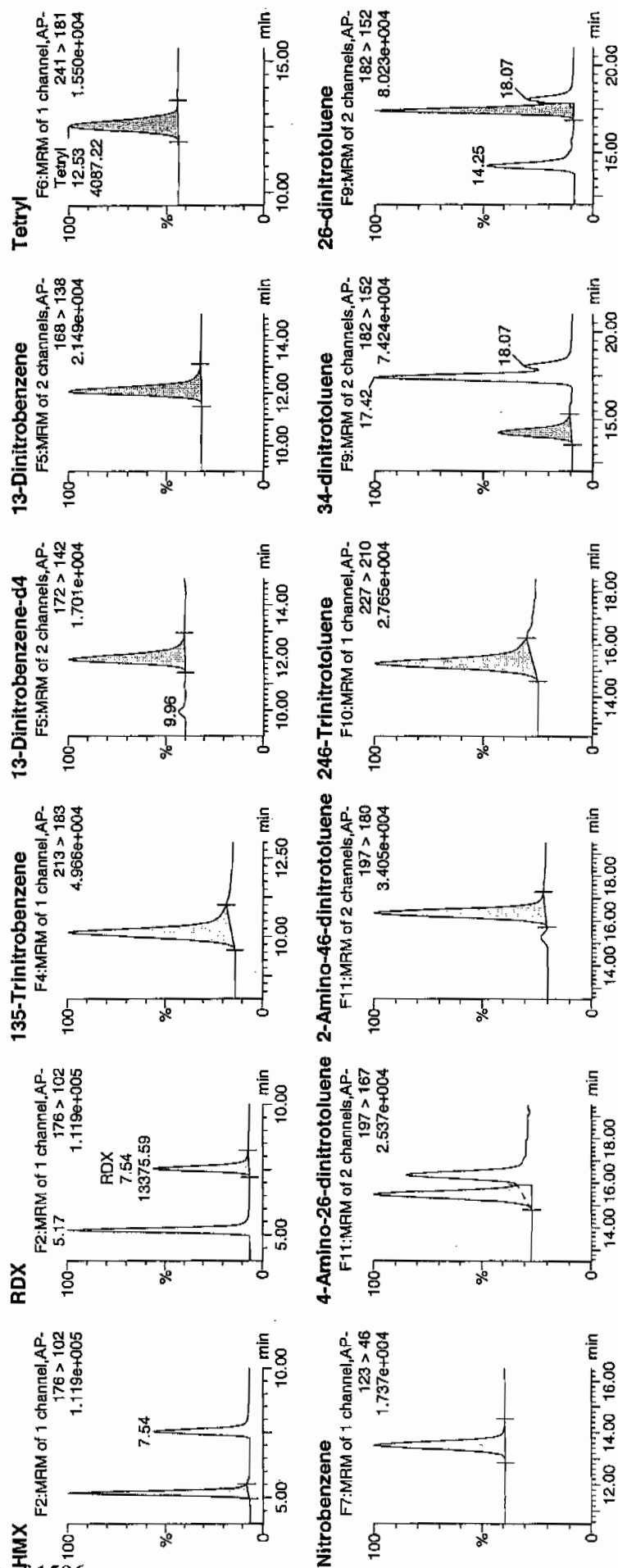
Date: 22-Jan-2010

Time: 02:09:14

ID: WXX100120-07CCV

Vial: 1:1,B

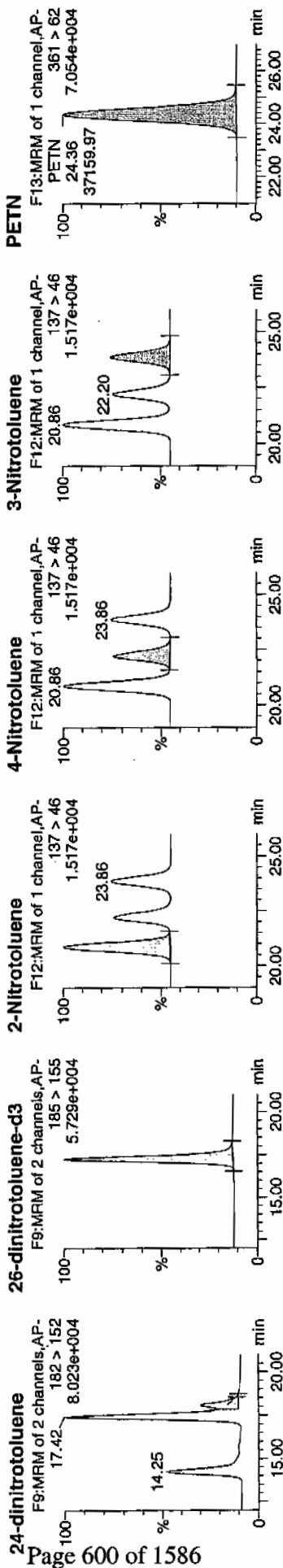
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Handwritten: 1/22/10

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

Dataset: C:\MASSLYNX\New_Exp\PRO011810expA3.qld, Time: Fri Jan 22 10:11:48 2010



ID	Name	Trace	RT	Area	IS-Area	Abs. Resp	Response	Flags	Mod Date	Mod Time	%Rat	%Dev	S/N
WXX100120-07CCV	HMX	176 > 102	5.17	20601.672	4102.185	20601.672	2511.061	bb	22-Jan-10	10:01:53	777.8825	129.6	29.6
WXX100120-07CCV	RDX	176 > 102	7.54	13375.591	4102.185	13375.591	1630.301	bb	22-Jan-10	10:01:53	733.2044	122.2	22.2
WXX100120-07CCV	135-Trinitrobenzene	213 > 183	10.13	15954.365	4102.185	15954.365	1944.618	bb	22-Jan-10	10:01:53	583.6487	97.3	-2.7
WXX100120-07CCV	13-Dinitrobenzene-d4	172 > 142	11.95	4102.185	4102.185	4102.185	4102.185	bb	22-Jan-10	10:01:53	604.4511	120.9	20.9
WXX100120-07CCV	13-Dinitrobenzene	168 > 138	12.10	5634.133	4102.185	5634.133	686.723	bb	22-Jan-10	10:01:53	581.1238	96.9	-3.1
WXX100120-07CCV	Tetryl	241 > 181	12.53	4087.221	4102.185	4087.221	498.176	bb	22-Jan-10	10:01:53	510.1066	85.0	-15.0
WXX100120-07CCV	Nitrobenzene	123 > 46	13.49	3876.756	4102.185	3876.756	472.523	bb	22-Jan-10	10:01:53	564.4186	94.1	-5.9
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
WXX100120-07CCV	2-Amino-46-dinitrotoluene	197 > 180	16.34	11588.305	21560.088	11588.305	268.744	bb	22-Jan-10	10:01:53	689.8596	115.0	15.0
WXX100120-07CCV	246-Trinitrotoluene	227 > 210	15.27	9846.999	21560.088	9846.999	228.362	bb	22-Jan-10	10:01:53	648.5252	108.1	8.1
WXX100120-07CCV	34-dinitrotoluene	182 > 152	14.25	13378.389	21560.088	13378.389	310.258	bb	22-Jan-10	10:01:53	332.8086	110.9	10.9
WXX100120-07CCV	26-dinitrotoluene	182 > 152	17.42	28129.924	21560.088	28129.924	652.361	MM	22-Jan-10	10:01:53	597.2494	99.5	-0.5
WXX100120-07CCV	24-dinitrotoluene	182 > 152	18.07	6397.870	21560.088	6397.870	148.373	MM	22-Jan-10	10:01:53	586.8457	97.8	-2.2
WXX100120-07CCV	26-dinitrotoluene-d3	185 > 155	17.24	21560.088	21560.088	21560.088	21560.088	bb	22-Jan-10	10:01:53	587.6421	117.5	17.5
WXX100120-07CCV	2-Nitrotoluene	137 > 46	20.86	4064.517	21560.088	4064.517	94.260	bb	22-Jan-10	10:01:53	628.0810	104.7	4.7
WXX100120-07CCV	4-Nitrotoluene	137 > 46	22.20	2141.064	21560.088	2141.064	49.653	bb	22-Jan-10	10:01:53	693.4922	115.6	15.6
WXX100120-07CCV	3-Nitrotoluene	137 > 46	23.86	2390.041	21560.088	2390.041	55.427	bb	22-Jan-10	10:01:53	649.9455	108.3	8.3
WXX100120-07CCV	PETN	361 > 62	24.36	37159.969	21560.088	37159.969	861.777	bb	22-Jan-10	10:01:53	515.7213	86.0	-14.0

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

Handwritten: 11/22/10

Total 1687.6

Average 105.5

Handwritten: 01/22/10

ICV Limits 85-115%

CRI Limits 70-130%

CCV Limits 85-115%

No single analyte > +/- 60%

7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1213

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
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	
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	

Recovery Limits:

3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,
2,4-Diamino-6-nitrotoluene 50-150%

Other Target Analytes 70-130%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

Quantify Sample Report

GEL Laboratories, LLC / Analyst: Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA3.qld, Time: Fri Jan 22 10:11:48 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118174a

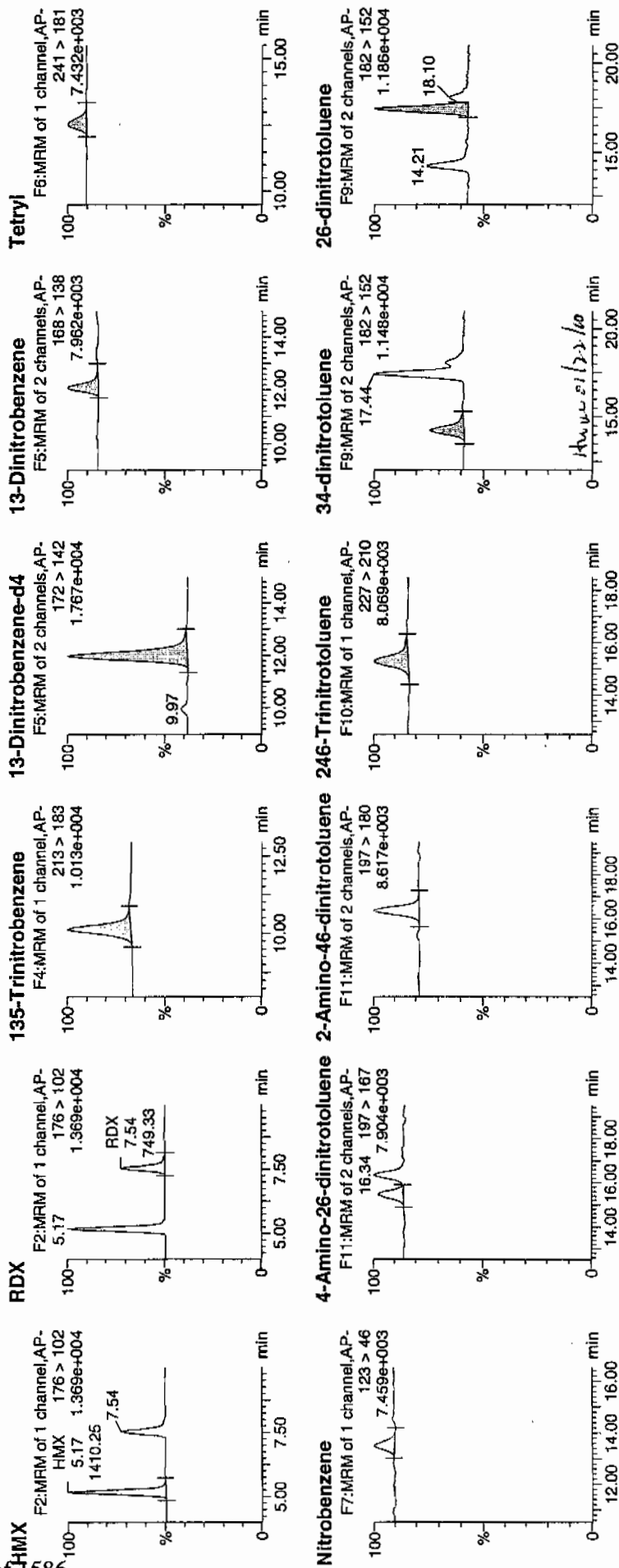
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Time: 03:08:14

ID: WXX100120-08CRI

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11/21/10

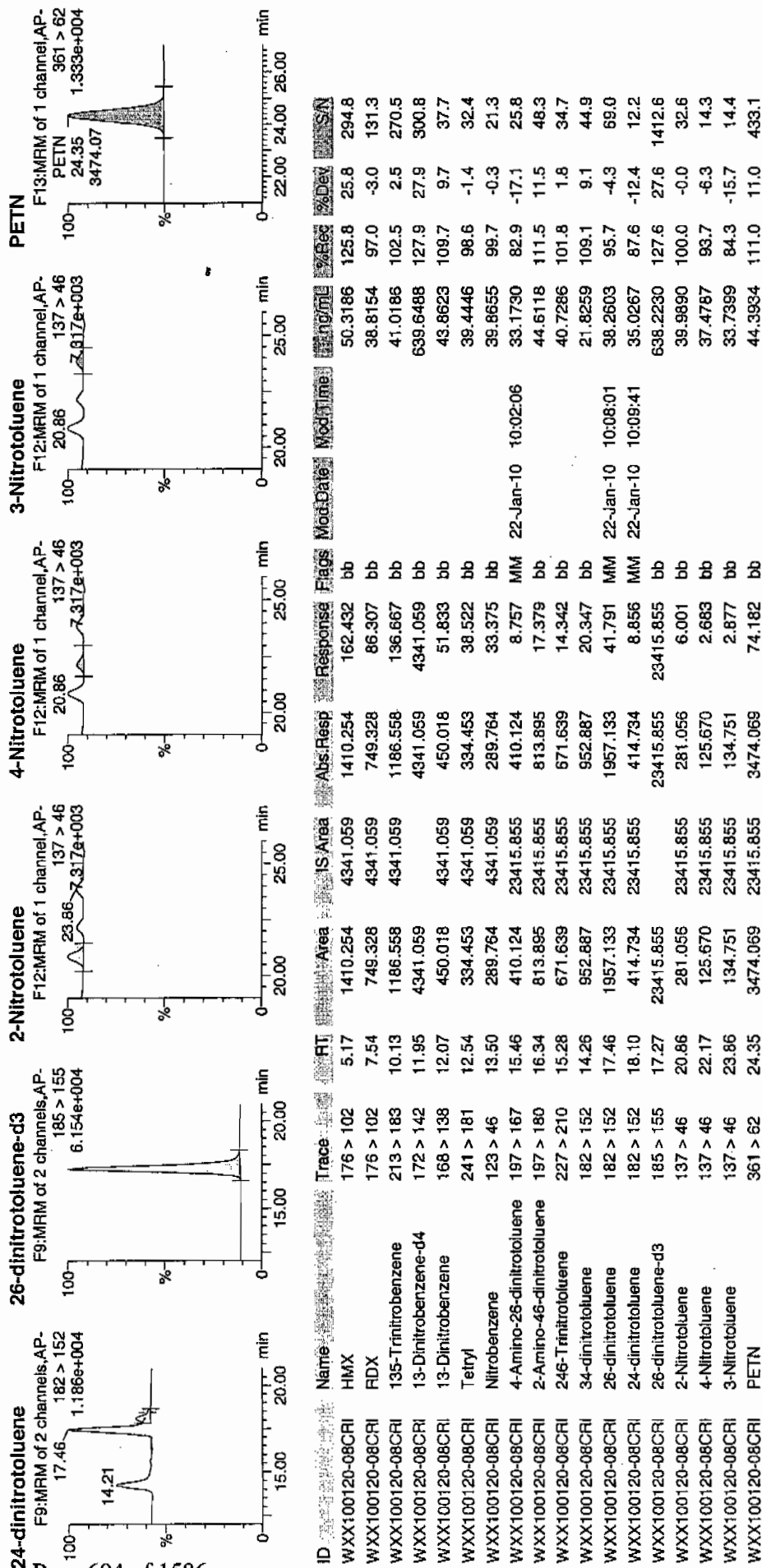


Quantify Sample Report

GEL Laboratories, LLC / Analyst: Michael A. Penny

Printed: Fri Jan 22 10:16:13 2010, Page 74 of 99

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA3.qld, Time: Fri Jan 22 10:11:48 2010



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

100.7
1/22/10

Total 1610.9

Average 100.7

100.7 01/22/10

ICV Limits 85-115%

CRI Limits 70-130%

CCV Limits 85-115%

No single analyte > +/- 60%

7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1213

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXP0118184a

Analysis Date: 22-JAN-10 08:03

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	600	660.363	110	
1,3-Dinitrobenzene-d4	500	491.115	98	
2,4,6-Trinitrotoluene	600	624.467	104	
2,4-Dinitrotoluene	600	611.592	102	
2,6-Dinitrotoluene	600	598.868	100	
2,6-Dinitrotoluene-d3	500	523.754	105	
2-Amino-4,6-dinitrotoluene	600	674.906	112	
3,4-Dinitrotoluene	300	310.724	104	
4-Amino-2,6-dinitrotoluene	600	640.499	107	
HMX	600	705.769	118	
Nitrobenzene	600	596.336	99	
PETN	600	604.722	101	
RDX	600	873.45	146	*
Tetryl	600	513.169	86	
m-Dinitrobenzene	600	624.01	104	
m-Nitrotoluene	600	636.582	106	
o-Nitrotoluene	600	586.826	98	
p-Nitrotoluene	600	626.153	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%

Other Target Analytes 80-120%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

Quantify Sample Report

GEL Laboratories, LLC / Analyst : Michael A. Penny

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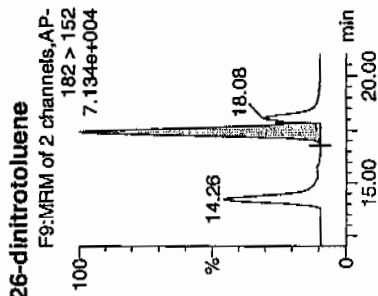
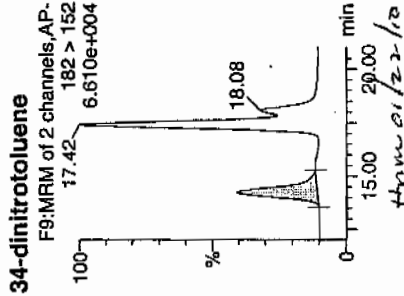
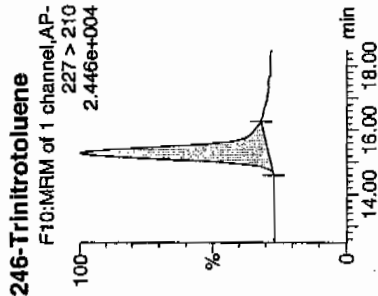
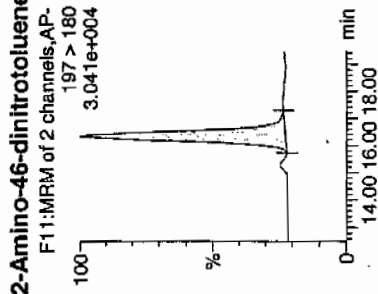
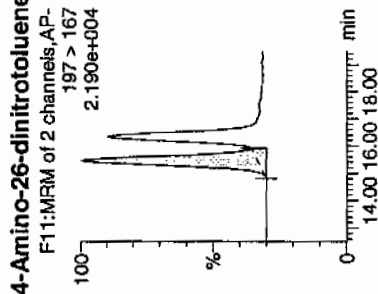
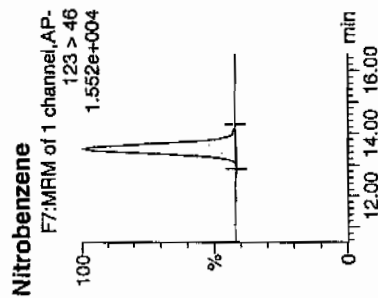
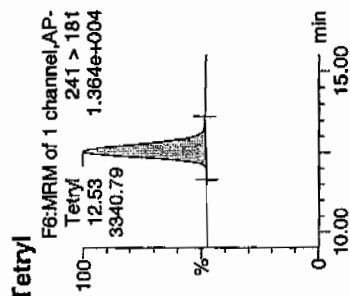
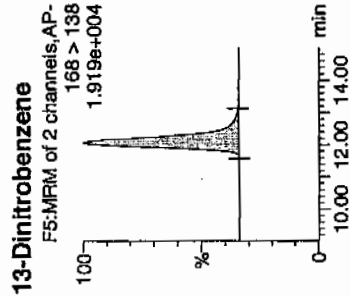
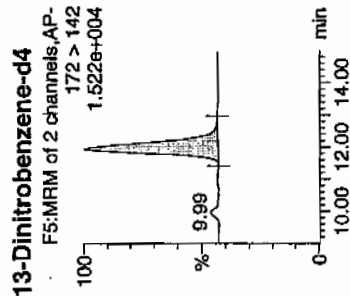
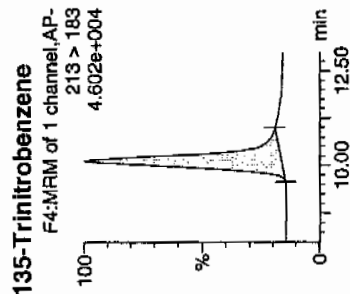
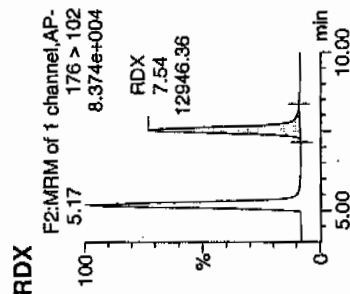
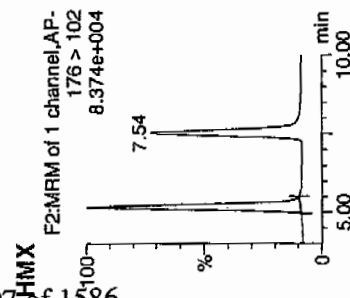
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Date: 22-Jan-2010

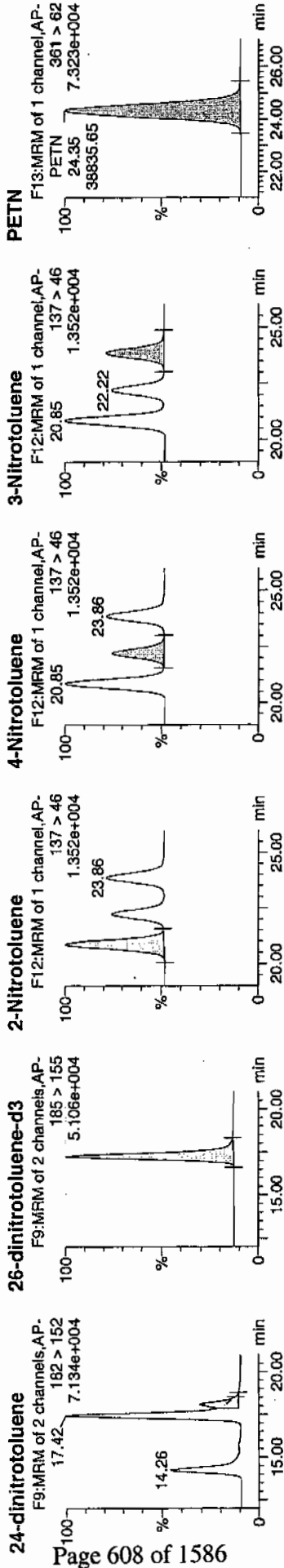
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ID: WXX100120-07CCV

Vial: 1:1,B



Dataset: C:\MASSLYNX\New_Exp\PRO011810expA3.qld, Time: Fri Jan 22 10:11:48 2010



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	Int/ML	%Rec	%Dev	SN
WXX100120-07CCV	HMX	176 > 102	5.17	15187.025	3333.013	15187.025	2278.273	bb			705.7689	117.6	17.6	3252.6
WXX100120-07CCV	RDX	176 > 102	7.54	12946.364	3333.013	12946.364	1942.141	bb			873.4502	145.6	45.6	2291.8
WXX100120-07CCV	135-Trinitrobenzene	213 > 183	10.13	14666.703	3333.013	14666.703	2200.217	bb			660.3630	110.1	10.1	522.3
WXX100120-07CCV	13-Dinitrobenzene-d4	172 > 142	11.95	3333.013	3333.013	3333.013	3933.013	bb			491.1147	98.2	-1.8	158.0
WXX100120-07CCV	13-Dinitrobenzene	168 > 138	12.07	4915.543	3333.013	4915.543	737.402	bb			624.0096	104.0	4.0	262.5
WXX100120-07CCV	Tetryl	241 > 181	12.53	3340.794	3333.013	3340.794	501.167	bb			513.1694	85.5	-14.5	427.0
WXX100120-07CCV	Nitrobenzene	123 > 46	13.50	3327.973	3333.013	3327.973	499.244	bb			596.3358	99.4	-0.6	333.6
WXX100120-07CCV	4-Amino-26-dinitrotoluene	197 > 167	15.46	6498.370	19216.098	6498.370	169.087	MM	22-Jan-10	10:03:05	640.4992	106.7	6.7	298.1
WXX100120-07CCV	2-Amino-46-dinitrotoluene	197 > 180	16.35	10104.556	19216.098	10104.556	262.919	bb			674.9061	112.5	12.5	368.6
WXX100120-07CCV	246-Trinitrotoluene	227 > 210	15.28	8450.865	19216.098	8450.865	219.890	bb			624.4669	104.1	4.1	371.0
WXX100120-07CCV	34-dinitrotoluene	182 > 152	14.26	11132.644	19216.098	11132.644	289.670	bb			310.7237	103.6	3.6	212.3
WXX100120-07CCV	26-dinitrotoluene	182 > 152	17.42	25139.633	19216.098	25139.633	654.129	MM	22-Jan-10	10:08:30	598.8684	99.8	-0.2	501.8
WXX100120-07CCV	24-dinitrotoluene	182 > 152	18.08	5942.755	19216.098	5942.755	154.630	MM	22-Jan-10	10:08:59	611.5918	101.9	1.9	111.8
WXX100120-07CCV	26-dinitrotoluene-d3	185 > 155	17.25	19216.098	19216.098	19216.098	19216.098	bb			523.7543	104.8	4.8	1083.1
WXX100120-07CCV	2-Nitrotoluene	137 > 46	20.85	3384.676	19216.098	3384.676	88.069	bb			586.8257	97.8	-2.2	153.2
WXX100120-07CCV	4-Nitrotoluene	137 > 46	22.22	1722.991	19216.098	1722.991	44.832	bb			626.1527	104.4	4.4	79.9
WXX100120-07CCV	3-Nitrotoluene	137 > 46	23.86	2086.399	19216.098	2086.399	54.288	bb			636.5819	106.1	6.1	88.7
WXX100120-07CCV	PETN	361 > 62	24.35	38835.652	19216.098	38835.652	1010.498	bb			604.7218	100.8	0.8	3852.0

GRAND MEAN AVERAGE

Vendor: Restek
 Date of Analysis: 01/22/10
 Time of Injection: 0803
 Standard Number: WXX100120-07CCV
 Data File: EXP0118184a

HMX	117.6
RDX	145.6
135-TNB	110.1
13-DNB	104.0
Tetryl	85.5
Nitrobenzene	99.4
4A-26-DNT	106.7
2A-46-DNT	112.5
246-TNT	104.1
34-DNT(surr)	103.6
26-DNT	99.8
24-DNT	101.9
2-NT	97.8
4-NT	104.4
3-NT	106.1
PETN	100.8

*WXX
1/22/10*

Total 1699.9

Average 106.2

WXX 01/22/10

ICV Limits 85-115%

CRI Limits 70-130%

CCV Limits 85-115%

No single analyte > +/- 60%

7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1213

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP0118186a

Analysis Date: 22-JAN-10 09:02

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	40	44.361	111	
1,3-Dinitrobenzene-d4	500	533.601	107	
2,4,6-Trinitrotoluene	40	32.217	81	
2,4-Dinitrotoluene	40	40.072	100	
2,6-Dinitrotoluene	40	39.746	99	
2,6-Dinitrotoluene-d3	500	539.47	108	
2-Amino-4,6-dinitrotoluene	40	38.82	97	
3,4-Dinitrotoluene	20	20.061	100	
4-Amino-2,6-dinitrotoluene	40	40.762	102	
HMX	40	40.621	102	
Nitrobenzene	40	36.86	92	
PETN	40	52.079	130	*
RDX	40	47.879	120	
Tetryl	40	33.481	84	
m-Dinitrobenzene	40	36.591	91	
m-Nitrotoluene	40	39.156	98	
o-Nitrotoluene	40	41.659	104	
p-Nitrotoluene	40	48.41	121	

Recovery Limits:

3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,
2,4-Diamino-6-nitrotoluene 50-150%

Other Target Analytes 70-130%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

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

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA3.qld, Time: Fri Jan 22 10:11:48 2010

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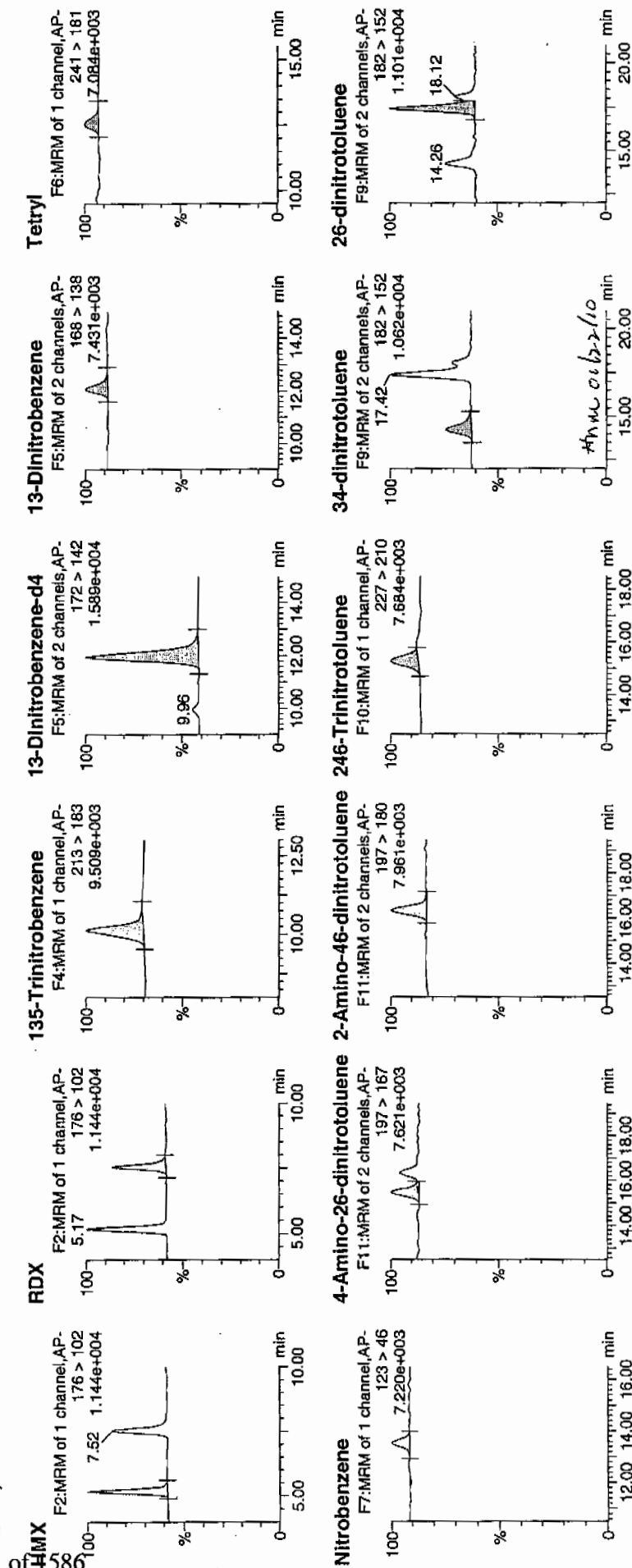
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Time: 09:02:05

ID: WXX100120-08CRI

Trial: 1:1,C

1/22/10
M.A. Penny



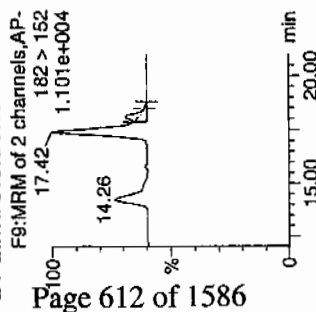
Quantify Sample Report

GEL Laboratories, LLC / Analyst : Michael A. Penny

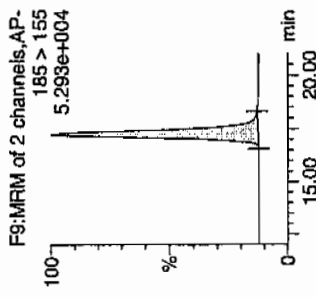
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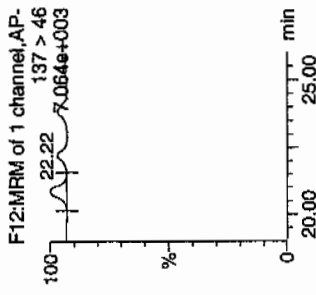
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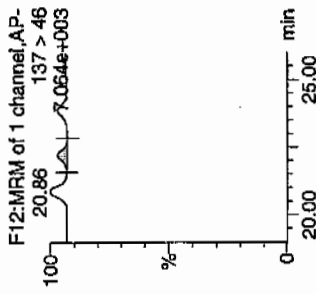
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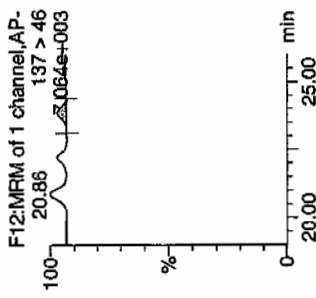
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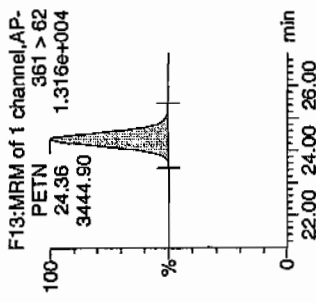
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	App. Resp	Response	Flags	Mod Date	Mod Time	Area (mL)	% Rec	% Dev	SN
WXX100120-08CRI	HMX	176 > 102	5.17	949.708	3621.349	949.708	131.126	bb			40.6206	101.6	1.6	123.9
WXX100120-08CRI	RDX	176 > 102	7.52	771.053	3621.349	771.053	106.459	bb			47.8788	119.7	19.7	84.1
WXX100120-08CRI	135-Trinitrobenzene	213 > 183	10.13	1070.500	3621.349	1070.500	147.804	bb			44.3612	110.9	10.9	103.0
WXX100120-08CRI	13-Dinitrobenzene-d4	172 > 142	11.95	3621.349	3621.349	3621.349	3621.349	bb			533.6008	106.7	6.7	208.9
WXX100120-08CRI	13-Dinitrobenzene	168 > 138	12.10	313.171	3621.349	313.171	43.240	bb			36.5905	91.5	-8.5	32.8
WXX100120-08CRI	Tetryl	241 > 181	12.58	236.824	3621.349	236.824	32.698	bb			33.4814	83.7	-16.3	43.5
WXX100120-08CRI	Nitrobenzene	123 > 46	13.54	223.498	3621.349	223.498	30.858	bb			36.8597	92.1	-7.9	19.2
WXX100120-08CRI	4-Amino-26-dinitrotoluene	197 > 167	15.50	425.968	19792.697	425.968	10.761	MM	22-Jan-10	10:03:11	40.7616	101.9	1.9	35.1
WXX100120-08CRI	2-Amino-46-dinitrotoluene	197 > 180	16.35	598.647	19792.697	598.647	15.123	bb			38.8201	97.1	-2.9	31.1
WXX100120-08CRI	246-Trinitrotoluene	227 > 210	15.28	449.066	19792.697	449.066	11.344	bb			32.2165	80.5	-19.5	9.1
WXX100120-08CRI	34-dinitrotoluene	182 > 152	14.26	740.308	19792.697	740.308	18.702	bb			20.0608	100.3	0.3	45.3
WXX100120-08CRI	26-dinitrotoluene	182 > 152	17.42	1718.555	19792.697	1718.555	43.414	MM	22-Jan-10	10:08:38	39.7462	99.4	-0.6	112.0
WXX100120-08CRI	24-dinitrotoluene	182 > 152	18.12	401.055	19792.697	401.055	10.131	MM	22-Jan-10	10:08:49	40.0717	100.2	0.2	24.8
WXX100120-08CRI	26-dinitrotoluene-d3	185 > 155	17.25	19792.697	19792.697	19792.697	19792.697	bb			539.4701	107.9	7.9	483.2
WXX100120-08CRI	2-Nitrotoluene	137 > 46	20.86	247.487	19792.697	247.487	6.252	bb			41.6586	104.1	4.1	38.8
WXX100120-08CRI	4-Nitrotoluene	137 > 46	22.22	137.208	19792.697	137.208	3.466	bb			48.4102	121.0	21.0	22.6
WXX100120-08CRI	3-Nitrotoluene	137 > 46	23.85	132.186	19792.697	132.186	3.339	bb			39.1564	97.9	-2.1	20.3
WXX100120-08CRI	PETN	361 > 82	24.36	3444.897	19792.697	3444.897	87.024	bb			52.0789	130.2	30.2	832.4

GRAND MEAN AVERAGE

Vendor: UltraScientific
 Date of Analysis 01/22/10
 Time of Injection 0902
 Standard Number WXX100120-08CRI
 Data File EXP0118186a

HMX	101.6
RDX	119.7
135-TNB	110.9
13-DNB	91.5
Tetryl	83.7
Nitrobenzene	92.1
4A-26-DNT	101.9
2A-46-DNT	97.1
246-TNT	80.5
34-DNT(surr)	100.3
26-DNT	99.4
24-DNT	100.2
2-NT	104.1
4-NT	121.0
3-NT	97.9
PETN	130.2

*MTT
1/22/10*

Total 1632.1

Average 102.0

done 01/22/10

ICV Limits 85-115%

CRI Limits 70-130%

CCV Limits 85-115%

No single analyte > +/- 60%

7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1213

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXP0118197a

Analysis Date: 22-JAN-10 14:27

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	600	569.644	95	
1,3-Dinitrobenzene-d4	500	635.644	127	*
2,4,6-Trinitrotoluene	600	609.577	102	
2,4-Dinitrotoluene	600	618.592	103	
2,6-Dinitrotoluene	600	603.04	101	
2,6-Dinitrotoluene-d3	500	634.336	127	*
2-Amino-4,6-dinitrotoluene	600	656.181	109	
3,4-Dinitrotoluene	300	316.493	105	
4-Amino-2,6-dinitrotoluene	600	617.22	103	
HMX	600	708.033	118	
Nitrobenzene	600	589.875	98	
PETN	600	485.429	81	
RDX	600	790.747	132	*
Tetryl	600	476.03	79	*
m-Dinitrobenzene	600	582.178	97	
m-Nitrotoluene	600	666.641	111	
o-Nitrotoluene	600	746.246	124	*
p-Nitrotoluene	600	686.778	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%

Other Target Analytes 80-120%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

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

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA4.qld, Time: Sat Jan 23 10:08:29 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118197a

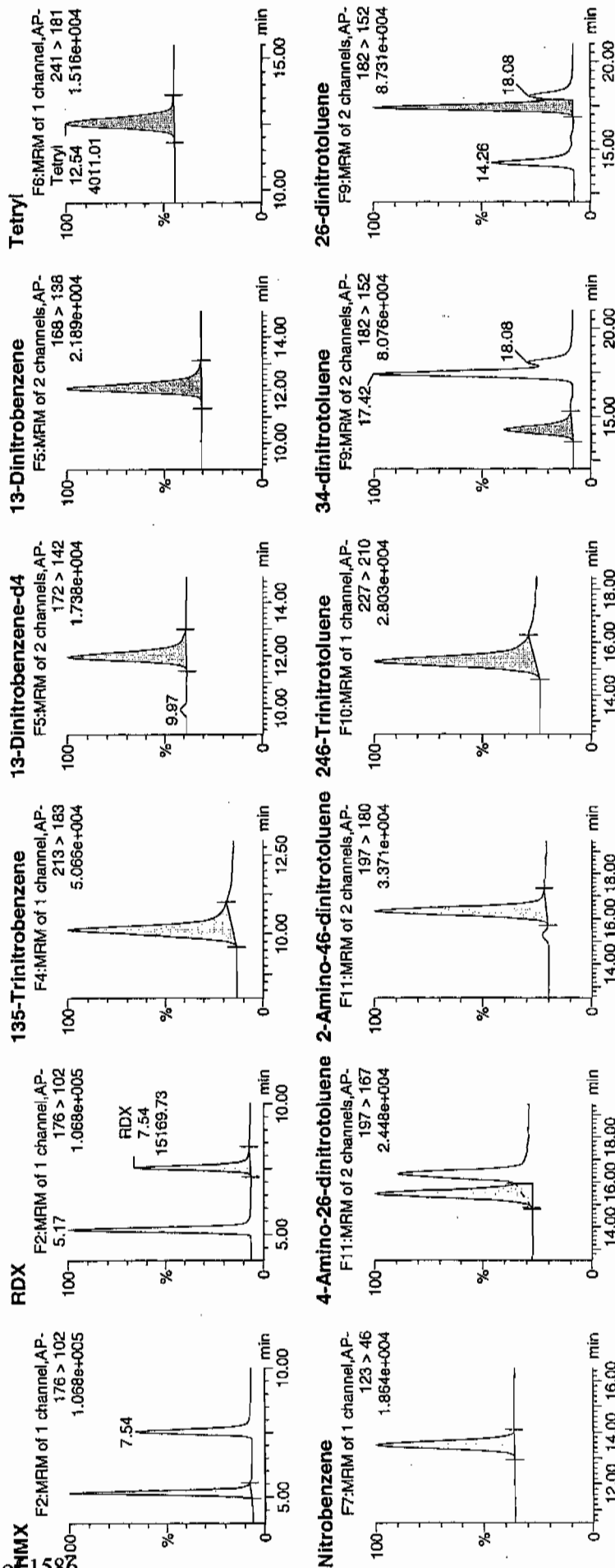
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Time: 14:27:25

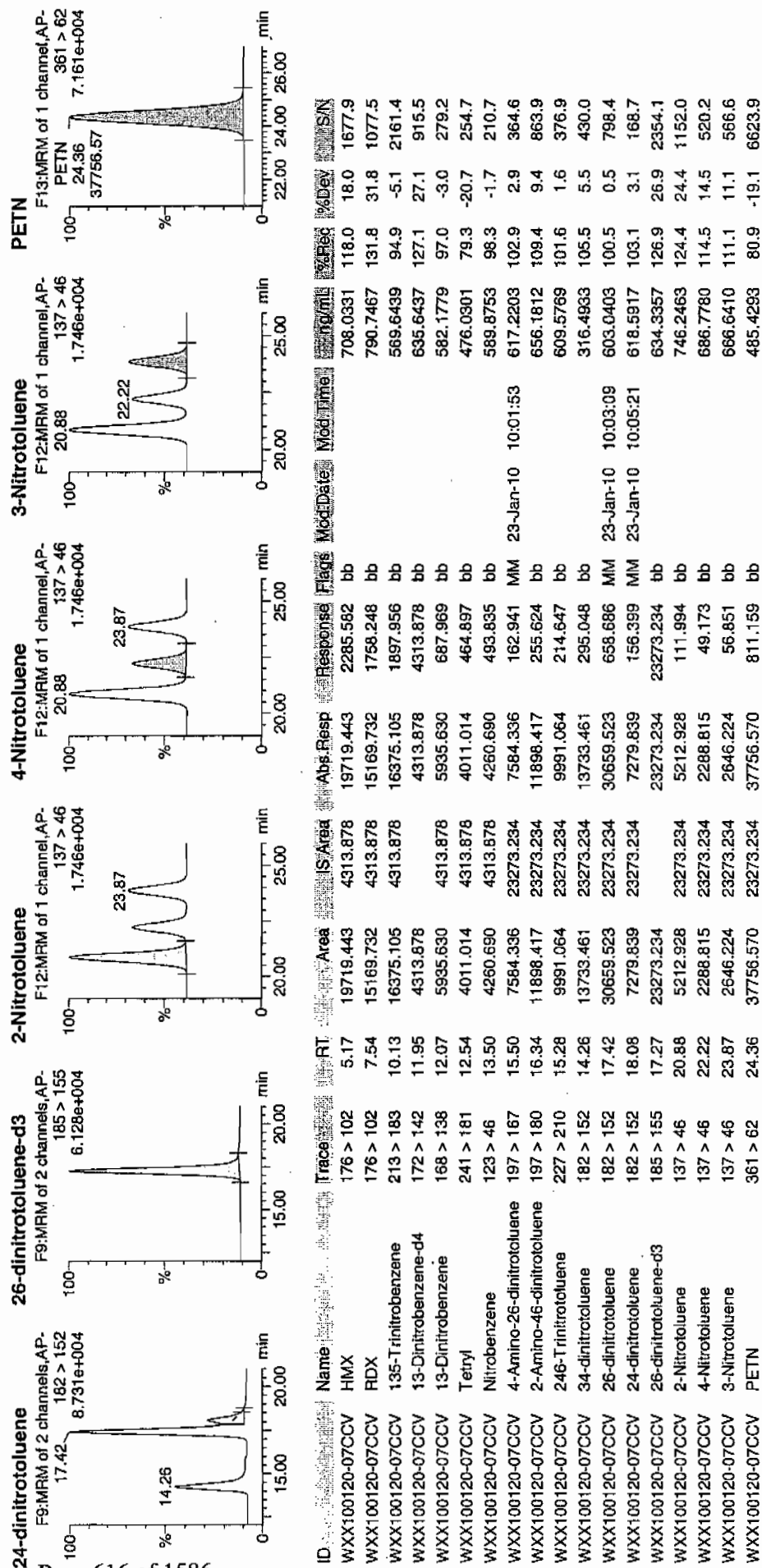
ID: WXX100120-07CCV

Vial: 1:1,B

1/23/10



Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA4.qld, Time: Sat Jan 23 10:08:29 2010



GRAND MEAN AVERAGE

Vendor: Restek
 Date of Analysis: 01/22/10
 Time of Injection: 1427
 Standard Number: WXX100120-07CCV
 Data File: EXP0118197a

HMX	118.0
RDX	131.8
135-TNB	94.9
13-DNB	97.0
Tetryl	79.3
Nitrobenzene	98.3
4A-26-DNT	102.9
2A-46-DNT	109.4
246-TNT	101.6
34-DNT(surr)	105.5
26-DNT	100.5
24-DNT	103.1
2-NT	124.4
4-NT	114.5
3-NT	111.1
PETN	80.9

*1007
1/23/10*

Total 1673.2

Average 104.6

1007 01/25/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%

No single analyte > +/- 60%

7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1213

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP0118199a

Analysis Date: 22-JAN-10 15:26

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	40	48.465	121	
1,3-Dinitrobenzene-d4	500	574.074	115	
2,4,6-Trinitrotoluene	40	38.615	97	
2,4-Dinitrotoluene	40	32.309	81	
2,6-Dinitrotoluene	40	40.751	102	
2,6-Dinitrotoluene-d3	500	593.316	119	
2-Amino-4,6-dinitrotoluene	40	38.266	96	
3,4-Dinitrotoluene	20	19.204	96	
4-Amino-2,6-dinitrotoluene	40	39.79	99	
HMX	40	45.669	114	
Nitrobenzene	40	40.245	101	
PETN	40	51.477	129	
RDX	40	41.761	104	
Tetryl	40	38.757	97	
m-Dinitrobenzene	40	41.134	103	
m-Nitrotoluene	40	45.631	114	
o-Nitrotoluene	40	36.581	91	
p-Nitrotoluene	40	43.718	109	

Recovery Limits:

3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,

2,4-Diamino-6-nitrotoluene 50-150%

Other Target Analytes 70-130%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

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

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA4.qld, Time: Sat Jan 23 10:08:29 2010

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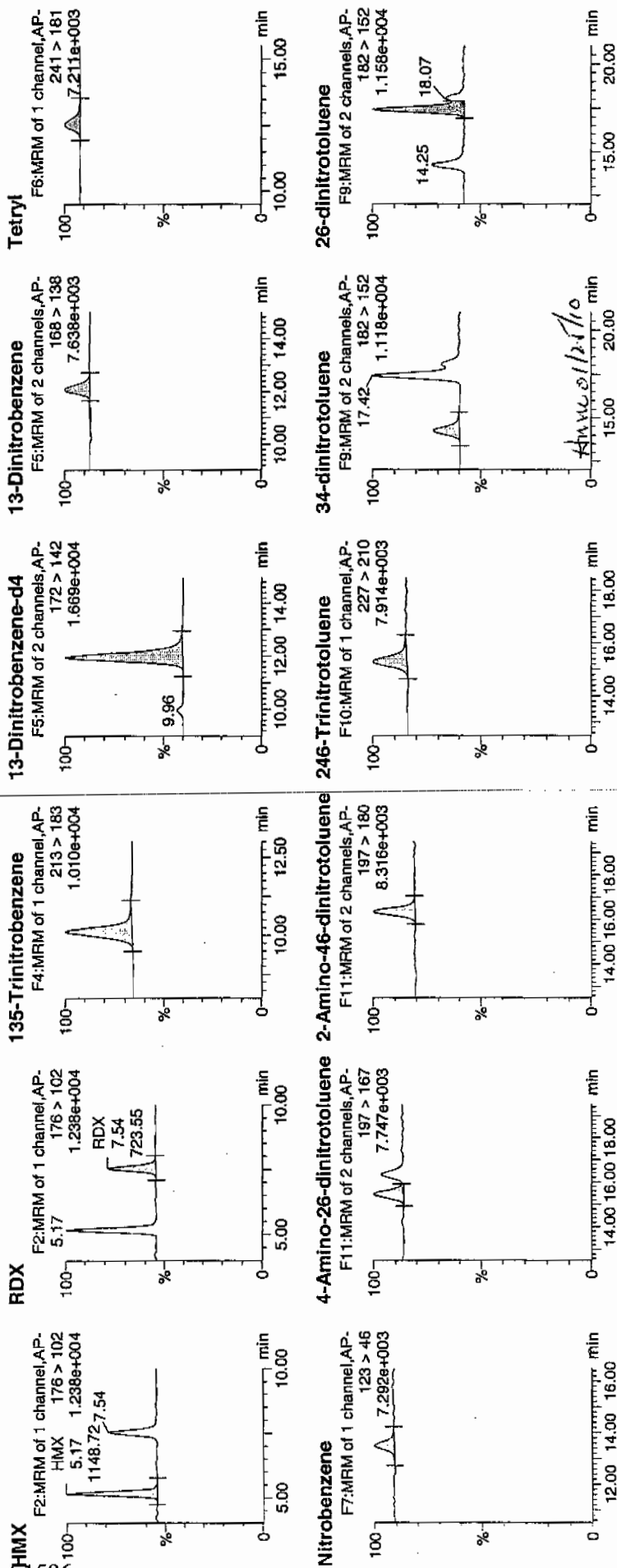
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Time: 15:26:22

ID: WXX100120-08CRI

Vial: 1:1,C

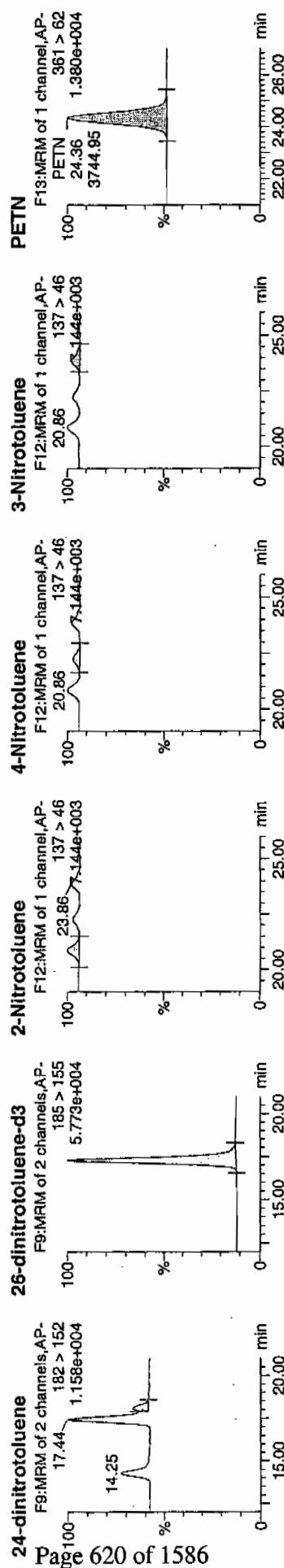
11/23/10
MKT



Printed: Sat Jan 23 10:12:36 2010, Page 26 of 79

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

Dataset: C:\MASSL\YXXNew_Exp.PRO\011810expA4.qld, Time: Sat Jan 23 10:08:29 2010



ID	Name	Trace	RT	Area	IS-Area	Abs Resp	Response	Flags	Mod Date	Mod Time	Conc (ng/ml)	% Rec	% Dev	SN
WXX100120-08CRI	HMX	176 > 102	5.17	1148.719	3896.029	1148.719	147.422	bb			45.6687	114.2	14.2	178.3
WXX100120-08CRI	RDX	176 > 102	7.54	723.550	3896.029	723.550	92.857	bb			41.7613	104.4	4.4	93.6
WXX100120-08CRI	135-Trinitrobenzene	213 > 183	10.13	1258.244	3896.029	1258.244	161.478	bb			48.4652	121.2	21.2	313.3
WXX100120-08CRI	13-Dinitrobenzene-d4	172 > 142	11.95	3896.029		3896.029	3896.029	bb			574.0743	114.8	14.8	214.5
WXX100120-08CRI	13-Dinitrobenzene	168 > 138	12.10	378.761	3896.029	378.761	48.609	bb			41.1339	102.8	2.8	41.9
WXX100120-08CRI	Tetryl	241 > 181	12.53	294.935	3896.029	294.935	37.851	bb			38.7572	96.9	-3.1	21.4
WXX100120-08CRI	Nitrobenzene	123 > 46	13.49	262.531	3896.029	262.531	33.692	bb			40.2445	100.6	0.6	25.3
WXX100120-08CRI	4-Amino-26-dinitrotoluene	197 > 167	15.45	457.312	21768.256	457.312	10.504	MM	23-Jan-10	10:01:43	39.7895	99.5	-0.5	48.6
WXX100120-08CRI	2-Amino-46-dinitrotoluene	197 > 180	16.34	648.999	21768.256	648.999	14.907	bb			38.2659	95.7	-4.3	60.5
WXX100120-08CRI	246-Trinitrotoluene	227 > 210	15.31	591.975	21768.256	591.975	13.597	bb			38.6147	96.5	-3.5	53.1
WXX100120-08CRI	34-dinitrotoluene	182 > 152	14.25	779.410	21768.256	779.410	17.902	bb			19.2036	96.0	-4.0	63.6
WXX100120-08CRI	26-dinitrotoluene	182 > 152	17.44	1937.884	21768.256	1937.884	44.512	MM	23-Jan-10	10:03:16	40.7513	101.9	1.9	52.7
WXX100120-08CRI	24-dinitrotoluene	182 > 152	18.07	355.841	21768.256	355.841	8.169	MM	23-Jan-10	10:05:30	32.3093	80.8	-19.2	10.4
WXX100120-08CRI	26-dinitrotoluene-d3	185 > 155	17.27	21768.256		21768.256	21768.256	bb			593.3160	118.7	18.7	805.5
WXX100120-08CRI	2-Nitrotoluene	137 > 46	20.86	239.015	21768.256	239.015	5.490	bb			36.5813	91.5	-8.5	25.1
WXX100120-08CRI	4-Nitrotoluene	137 > 46	22.23	136.278	21768.256	136.278	3.130	bb			43.7184	109.3	9.3	13.5
WXX100120-08CRI	3-Nitrotoluene	137 > 46	23.86	169.418	21768.256	169.418	3.891	bb			45.6308	114.1	14.1	17.1
WXX100120-08CRI	PETN	361 > 62	24.36	3744.954	21768.256	3744.954	86.019	bb			51.4770	128.7	28.7	1819.0

GRAND MEAN AVERAGE

Vendor: UltraScientific
 Date of Analysis 01/22/10
 Time of Injection 1526
 Standard Number WXX100120-08CRI
 Data File EXP0118199a

HMX	114.2
RDX	104.4
135-TNB	121.2
13-DNB	102.8
Tetryl	96.9
Nitrobenzene	100.6
4A-26-DNT	99.5
2A-46-DNT	95.7
246-TNT	96.5
34-DNT(surr)	96.0
26-DNT	101.9
24-DNT	80.8
2-NT	91.5
4-NT	109.3
3-NT	114.1
PETN	128.7

*1477
1/23/10*

Total 1654.1

Average 103.4

47116 01/25/10

ICV Limits 85-115%

CRI Limits 70-130%

CCV Limits 85-115%

No single analyte > +/- 60%

7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1213

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXP0118210a

Analysis Date: 22-JAN-10 20:50

LCMSMS ID: 903

Column ID Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	600	614.287	102	
1,3-Dinitrobenzene-d4	500	501.189	100	
2,4,6-Trinitrotoluene	600	620.06	103	
2,4-Dinitrotoluene	600	614.866	102	
2,6-Dinitrotoluene	600	597.075	100	
2,6-Dinitrotoluene-d3	500	540.04	108	
2-Amino-4,6-dinitrotoluene	600	615.867	103	
3,4-Dinitrotoluene	300	296.695	99	
4-Amino-2,6-dinitrotoluene	600	606.121	101	
HMX	600	689.538	115	
Nitrobenzene	600	595.912	99	
PETN	600	599.729	100	
RDX	600	712.372	119	
Tetryl	600	542.132	90	
m-Dinitrobenzene	600	603.883	101	
m-Nitrotoluene	600	649.369	108	
o-Nitrotoluene	600	636.634	106	
p-Nitrotoluene	600	678.759	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%

Other Target Analytes 80-120%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

Quantify Sample Report

GEL Laboratories, LLC / Analyst: Michael A. Penny

Printed: Sat Jan 23 10:12:36 2010, Page 47 of 79

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA4.qld, Time: Sat Jan 23 10:08:29 2010

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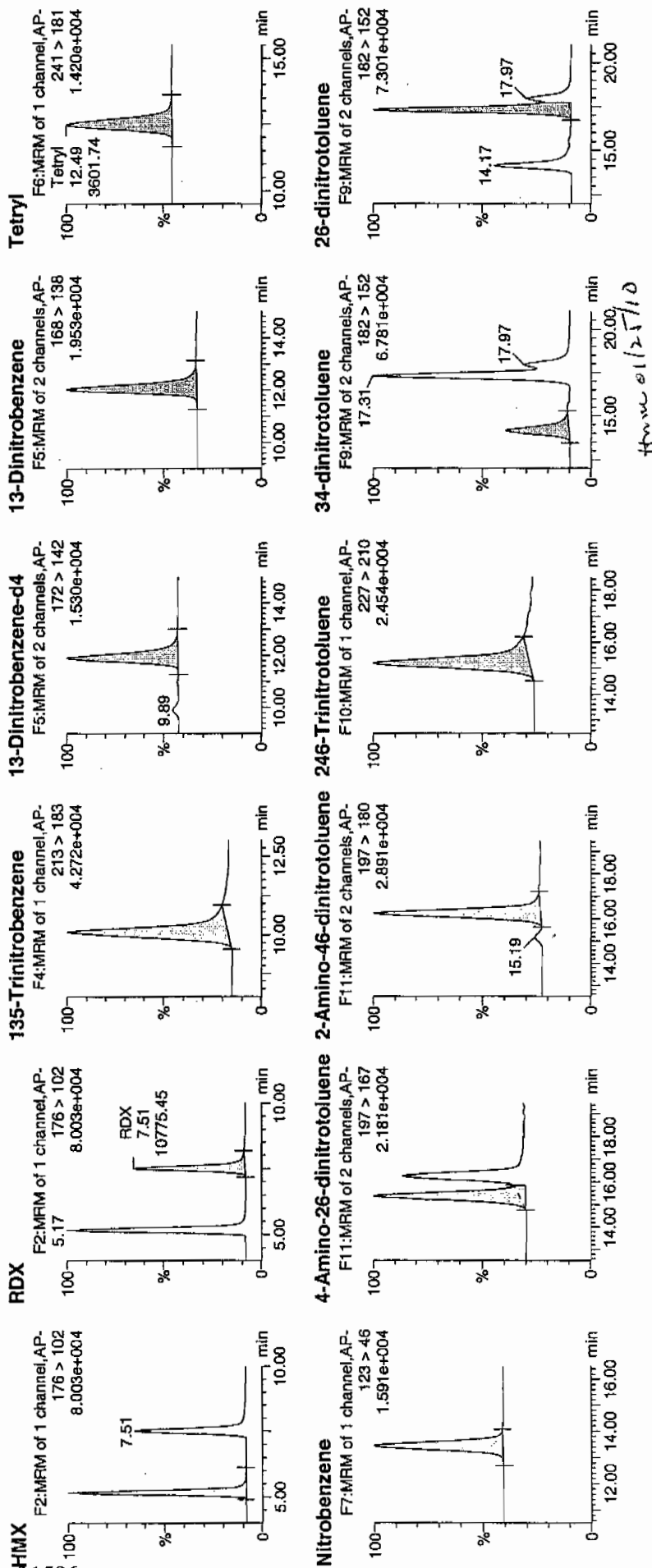
Date: 22-Jan-2010

Time: 20:50:56

ID: WXX100120-07CCV

Vial: 1:1,B

1/23/10

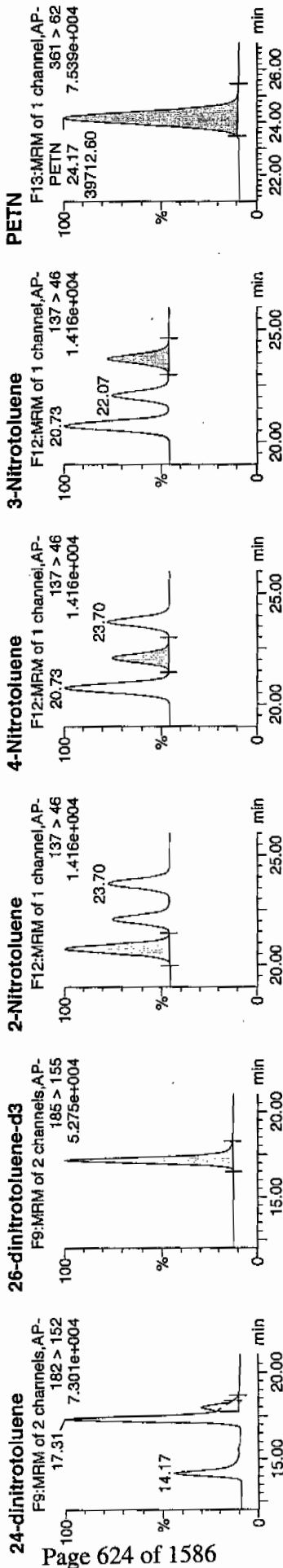


Quantify Sample Report

GEL Laboratories, LLC / Analyst: Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp\PRO\011810expA4.qld, Time: Sat Jan 23 10:08:29 2010

Printed: Sat Jan 23 10:12:36 2010, Page 48 of 79



ID	Name	Trace	RT	Area	IS Area	Abs. Resp	Response	Flags	Mod. Time	Mod. Date	% Rec	% Dev	S/N
WXX100120-07CCV	HMX	176 > 102	5.17	15142.148	3401.385	15142.148	2225.880	db	689.5384	114.9	14.9	1637.4	
WXX100120-07CCV	RDX	176 > 102	7.51	10775.446	3401.385	10775.446	1583.979	bb	712.3719	118.7	18.7	1011.4	
WXX100120-07CCV	135-Trinitrobenzene	213 > 183	10.09	13923.227	3401.385	13923.227	2046.700	bb	614.2870	102.4	2.4	766.2	
WXX100120-07CCV	13-Dinitrobenzene-d4	172 > 142	11.89	3401.385	3401.385	3401.385	3401.385	bb	501.1892	100.2	0.2	77.6	
WXX100120-07CCV	13-Dinitrobenzene	168 > 138	12.03	4854.584	3401.385	4854.584	713.619	bb	503.8833	100.6	0.6	305.3	
WXX100120-07CCV	Tetryl	241 > 181	12.49	3601.743	3401.385	3601.743	529.452	bb	542.1320	90.4	-9.6	359.2	
WXX100120-07CCV	Nitrobenzene	123 > 46	13.46	3393.830	3401.385	3393.830	498.889	bb	595.9124	99.3	-0.7	352.0	
WXX100120-07CCV	4-Amino-26-dinitrotoluene	197 > 167	15.36	6340.799	19813.613	6340.799	160.011	MM	606.1215	101.0	1.0	196.9	
WXX100120-07CCV	2-Amino-46-dinitrotoluene	197 > 180	16.25	9507.353	19813.613	9507.353	239.920	bb	615.8675	102.6	2.6	413.9	
WXX100120-07CCV	246-Trinitrotoluene	227 > 210	15.21	8652.144	19813.613	8652.144	218.338	bb	620.0597	103.3	3.3	834.9	
WXX100120-07CCV	34-dinitrotoluene	182 > 152	14.17	10960.543	19813.613	10960.543	276.591	bb	296.6946	98.9	-1.1	279.7	
WXX100120-07CCV	26-dinitrotoluene	182 > 152	17.31	25843.719	19813.613	25843.719	652.171	MM	597.0752	99.5	-0.5	696.1	
WXX100120-07CCV	24-dinitrotoluene	182 > 152	17.97	6160.350	19813.613	6160.350	155.458	MM	614.8664	102.5	2.5	152.6	
WXX100120-07CCV	26-dinitrotoluene-d3	185 > 155	17.16	19813.613	19813.613	19813.613	19813.613	bb	540.0402	108.0	8.0	1574.3	
WXX100120-07CCV	2-Nitrotoluene	137 > 46	20.73	3786.134	19813.613	3786.134	95.544	bb	636.6336	106.1	6.1	226.3	
WXX100120-07CCV	4-Nitrotoluene	137 > 46	22.07	1925.826	19813.613	1925.826	48.599	bb	678.7593	113.1	13.1	120.5	
WXX100120-07CCV	3-Nitrotoluene	137 > 46	23.70	2194.489	19813.613	2194.489	55.378	bb	649.3695	108.2	8.2	130.7	
WXX100120-07CCV	PETN	361 > 62	24.17	39712.598	19813.613	39712.598	1002.154	bb	599.7287	100.0	-0.0	8605.2	

GRAND MEAN AVERAGE

Vendor: Restek
 Date of Analysis: 01/22/10
 Time of Injection: 2050
 Standard Number: WXX100120-07CCV
 Data File: EXP0118210a

HMX	114.9
RDX	118.7
135-TNB	102.4
13-DNB	100.6
Tetryl	90.4
Nitrobenzene	99.3
4A-26-DNT	101.0
2A-46-DNT	102.6
246-TNT	103.3
34-DNT(surr)	98.9
26-DNT	99.5
24-DNT	102.5
2-NT	106.1
4-NT	113.1
3-NT	108.2
PETN	100.0

sum
1/23/10

Total 1661.5

Average 103.8

sum 01/25/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1213

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP0118212a

Analysis Date: 22-JAN-10 21:49

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	40	54.528	136	*
1,3-Dinitrobenzene-d4	500	552.266	110	
2,4,6-Trinitrotoluene	40	34.578	86	
2,4-Dinitrotoluene	40	32.365	81	
2,6-Dinitrotoluene	40	36.885	92	
2,6-Dinitrotoluene-d3	500	573.603	115	
2-Amino-4,6-dinitrotoluene	40	38.232	96	
3,4-Dinitrotoluene	20	19.79	99	
4-Amino-2,6-dinitrotoluene	40	51.792	129	
HMX	40	41.634	104	
Nitrobenzene	40	43.132	108	
PETN	40	55.801	140	*
RDX	40	37.291	93	
Tetryl	40	42.103	105	
m-Dinitrobenzene	40	35.108	88	
m-Nitrotoluene	40	39.426	99	
o-Nitrotoluene	40	33.088	83	
p-Nitrotoluene	40	43.861	110	

Recovery Limits:

3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,
2,4-Diamino-6-nitrotoluene 50-150%

Other Target Analytes 70-130%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

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

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA4.qtd, Time: Sat Jan 23 10:08:29 2010

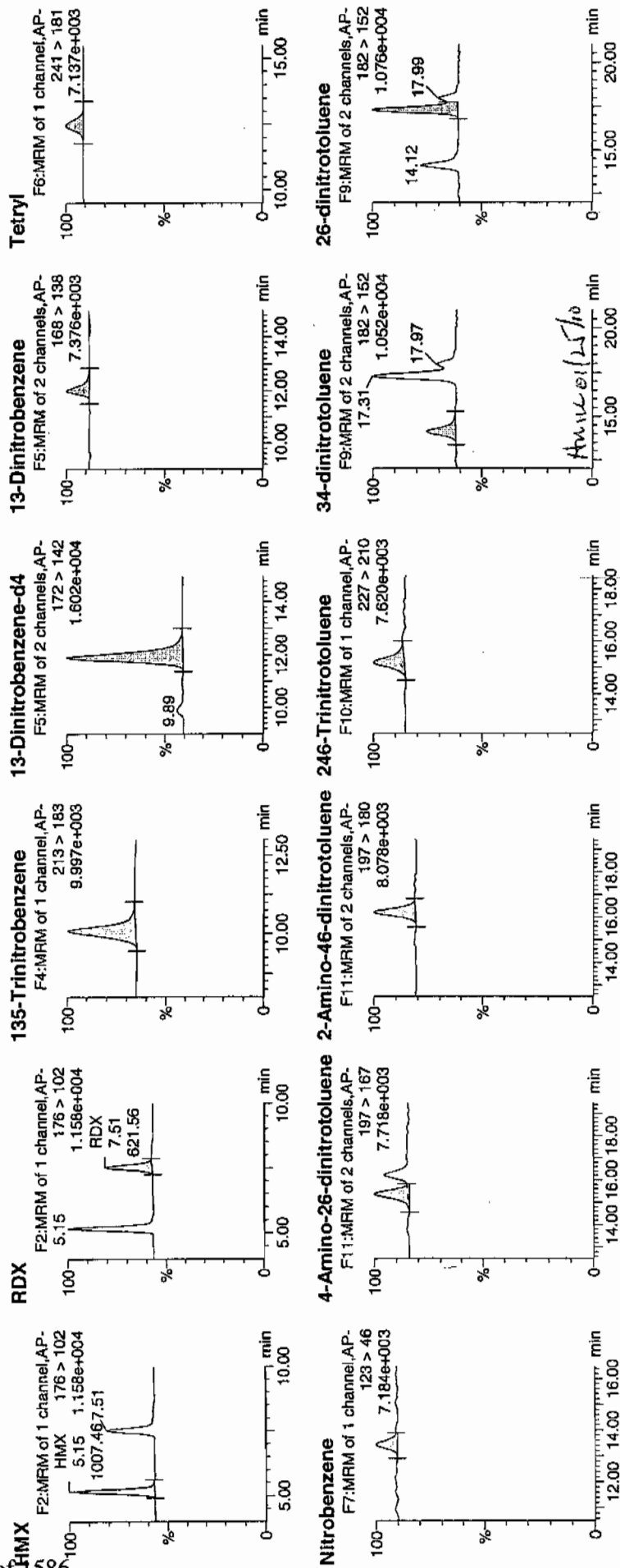
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Date: 22-Jan-2010

Time: 21:49:53

ID: WXX100120-08CRI

Vial: 1:1,C

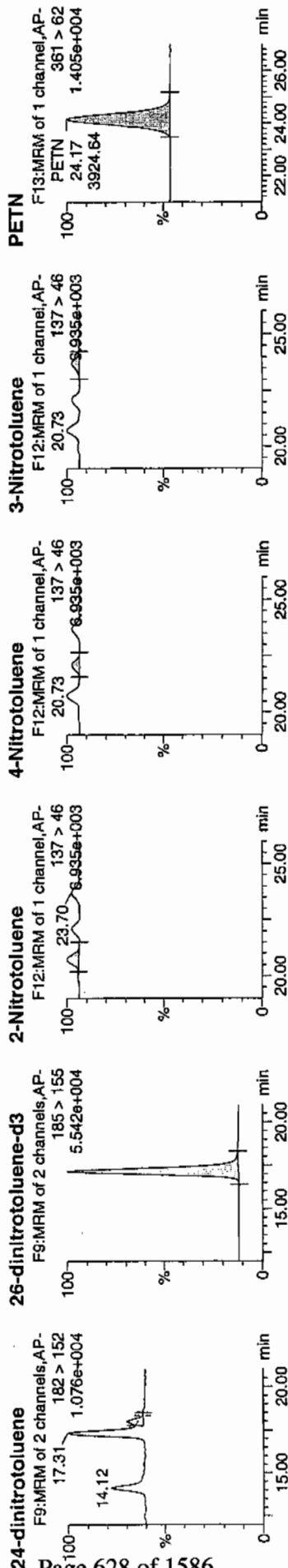


Quantify Sample Report

GEL Laboratories, LLC / Analyst : Michael A. Penny

Printed: Sat Jan 23 10:12:36 2010, Page 52 of 79

Dataset: C:\MASSLYN\New_Exp.PRO\011810expA4.qld, Time: Sat Jan 23 10:08:29 2010



ID	Name	Trace	RT	Area	IS Area	Abs. Resp	Response	Flags	Mod Date	Mod Time	Log File	% Rec	% Dev	SN
WXX100120-08CRI	HMX	176 > 102	5.15	1007.458	3748.021	1007.458	134.399	bb			41.6343	104.1	4.1	269.3
WXX100120-08CRI	RDX	176 > 102	7.51	621.561	3748.021	621.561	82.919	bb			37.2914	93.2	-6.8	147.7
WXX100120-08CRI	135-Trinitrobenzene	213 > 183	10.09	1361.863	3748.021	1361.863	181.678	bb			54.5279	136.3	36.3	91.5
WXX100120-08CRI	13-Dinitrobenzene-d4	172 > 142	11.89	3748.021		3748.021	3748.021	bb			552.2655	110.5	10.5	269.9
WXX100120-08CRI	13-Dinitrobenzene	168 > 138	12.00	310.990	3748.021	310.990	41.487	bb			35.1076	87.8	-12.2	25.3
WXX100120-08CRI	Tetryl	241 > 181	12.45	308.223	3748.021	308.223	41.118	bb			42.1028	105.3	5.3	35.6
WXX100120-08CRI	Nitrobenzene	123 > 46	13.46	270.676	3748.021	270.676	36.109	bd			43.1316	107.8	7.8	21.5
WXX100120-08CRI	4-Amino-26-dinitrotoluene	197 > 167	15.39	575.479	21044.996	575.479	13.673	MM	23-Jan-10	10:00:56	51.7917	129.5	29.5	36.8
WXX100120-08CRI	2-Amino-46-dinitrotoluene	197 > 180	16.23	626.881	21044.996	626.881	14.894	bb			38.2321	95.6	-4.4	63.9
WXX100120-08CRI	246-Trinitrotoluene	227 > 210	15.21	512.477	21044.996	512.477	12.176	bb			34.5779	86.4	-13.6	22.8
WXX100120-08CRI	34-dinitrotoluene	182 > 152	14.12	776.503	21044.996	776.503	18.449	bb			19.7895	98.9	-1.1	38.8
WXX100120-08CRI	26-dinitrotoluene	182 > 152	17.31	1695.726	21044.996	1695.726	40.288	MM	23-Jan-10	10:03:58	36.8846	92.2	-7.8	35.9
WXX100120-08CRI	24-dinitrotoluene	182 > 152	17.99	344.420	21044.996	344.420	8.183	MM	23-Jan-10	10:06:38	32.3652	80.9	-19.1	8.0
WXX100120-08CRI	26-dinitrotoluene-d3	185 > 155	17.14	21044.996		21044.996	21044.996	bb			573.6028	114.7	14.7	1616.5
WXX100120-08CRI	2-Nitrotoluene	137 > 46	20.73	209.006	21044.996	209.006	4.966	bb			33.0877	82.7	-17.3	37.6
WXX100120-08CRI	4-Nitrotoluene	137 > 46	22.11	132.181	21044.996	132.181	3.140	bb			43.8614	109.7	9.7	25.0
WXX100120-08CRI	3-Nitrotoluene	137 > 46	23.70	141.516	21044.996	141.516	3.362	bb			39.4256	98.6	-1.4	25.0
WXX100120-08CRI	PETN	361 > 62	24.17	3924.641	21044.996	3924.641	93.244	bb			55.8009	139.5	39.5	1112.1

GRAND MEAN AVERAGE

Vendor: UltraScientific
 Date of Analysis 01/22/10
 Time of Injection 2149
 Standard Number WXX100120-08CRI
 Data File EXP0118212a

HMX	104.1
RDX	93.2
135-TNB	136.3
13-DNB	87.8
Tetryl	105.3
Nitrobenzene	107.8
4A-26-DNT	129.5
2A-46-DNT	95.6
246-TNT	86.4
34-DNT(surr)	98.9
26-DNT	92.2
24-DNT	80.9
2-NT	92.7
4-NT	109.7
3-NT	98.6
PETN	139.5

MAF
1/23/10

Total 1658.5

Average 103.7

Handwritten: 1012.5/10

ICV Limits 85-115%

CRI Limits 70-130%

CCV Limits 85-115%

No single analyte > +/- 60%

7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1213

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXP0118223a

Analysis Date: 23-JAN-10 03:14

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	600	621.808	104	
1,3-Dinitrobenzene-d4	500	520.889	104	
2,4,6-Trinitrotoluene	600	609.867	102	
2,4-Dinitrotoluene	600	592.35	99	
2,6-Dinitrotoluene	600	593.742	99	
2,6-Dinitrotoluene-d3	500	560.123	112	
2-Amino-4,6-dinitrotoluene	600	671.359	112	
3,4-Dinitrotoluene	300	307.75	103	
4-Amino-2,6-dinitrotoluene	600	634.732	106	
HMX	600	786.303	131	*
Nitrobenzene	600	608.067	101	
PETN	600	595.742	99	
RDX	600	835.969	139	*
Tetryl	600	575.475	96	
m-Dinitrobenzene	600	599.075	100	
m-Nitrotoluene	600	612.954	102	
o-Nitrotoluene	600	605.518	101	
p-Nitrotoluene	600	659.777	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%

Other Target Analytes 80-120%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

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

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA4.qld, Time: Sat Jan 23 10:08:29 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118223a

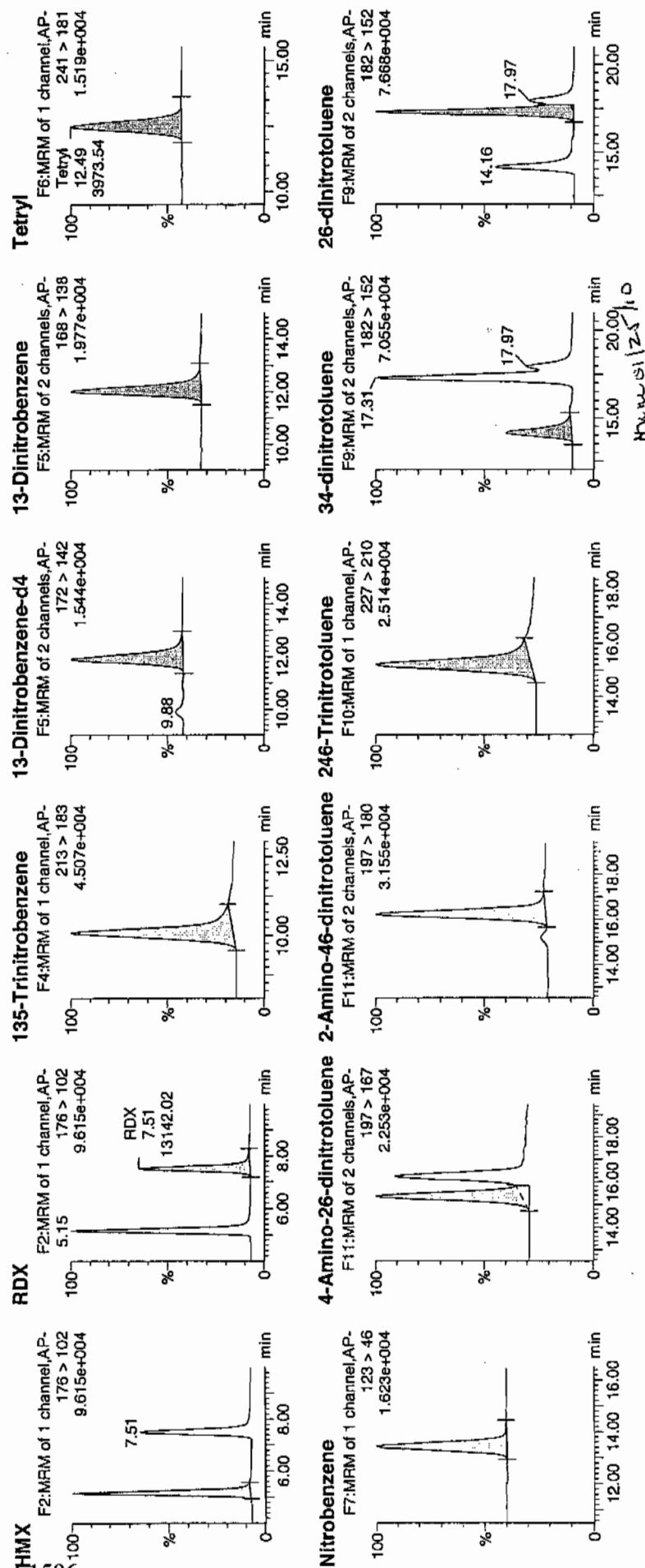
Date: 23-Jan-2010

Time: 03:14:07

ID: WXX100120-07CCV

Vial: 1:1,B

11/2/10

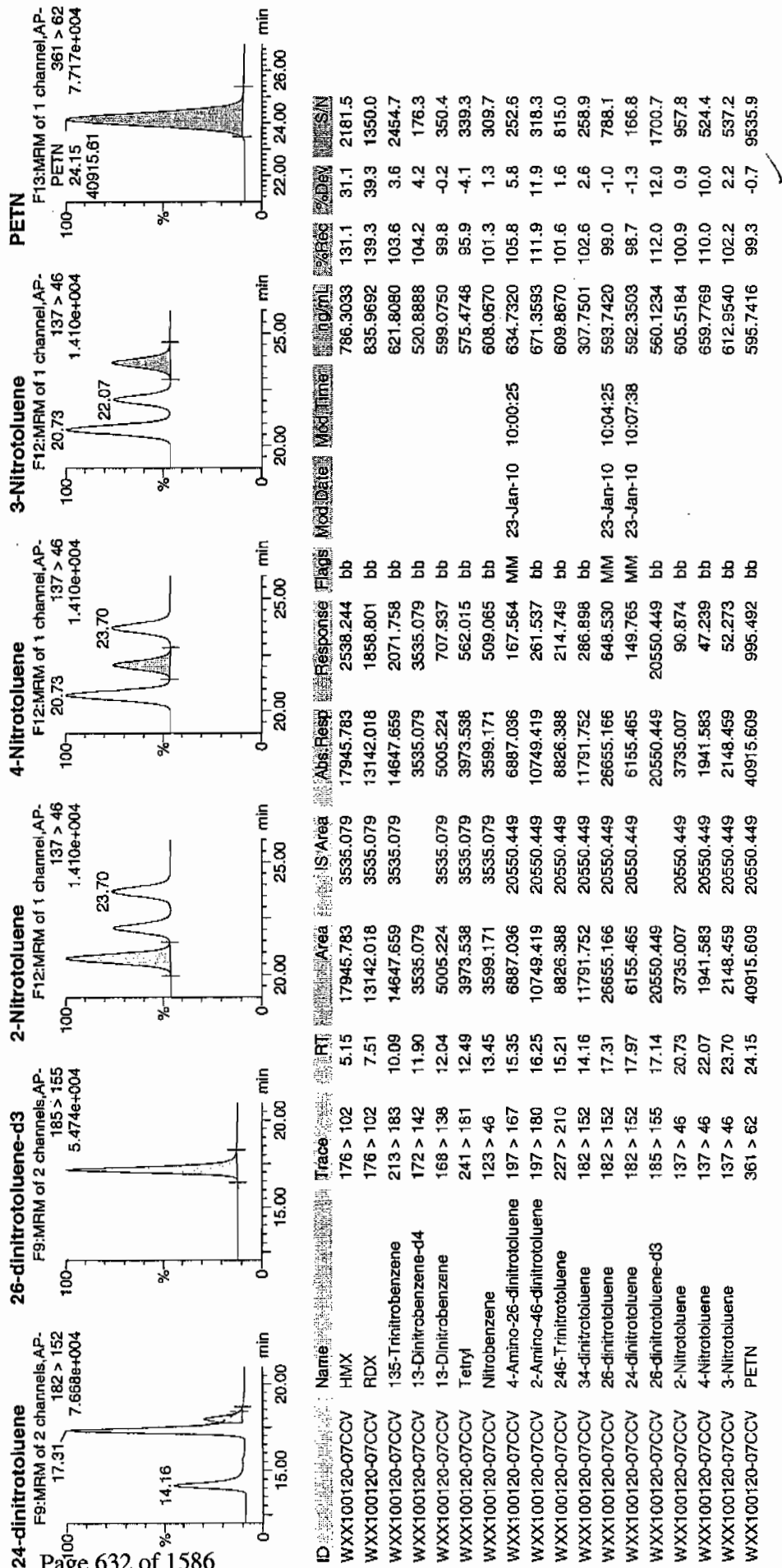


Quantify Sample Report

GEL Laboratories, LLC / Analyst: Michael A. Penny

Printed: Sat Jan 23 10:12:36 2010, Page 74 of 79

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA4.qld, Time: Sat Jan 23 10:08:29 2010



GRAND MEAN AVERAGE

Vendor: Restek
 Date of Analysis: 01/23/10
 Time of Injection: 0314
 Standard Number: WXX100120-07CCV
 Data File: EXP0118223a

HMX	131.1
RDX	139.3
135-TNB	103.6
13-DNB	99.8
Tetryl	95.9
Nitrobenzene	101.3
4A-26-DNT	105.8
2A-46-DNT	111.9
246-TNT	101.6
34-DNT(surr)	102.6
26-DNT	99.0
24-DNT	98.7
2-NT	100.9
4-NT	110.0
3-NT	102.2
PETN	99.3

*WAT
1/23/10*

Total 1703.0

Handwritten: 1703.0

Average

106.4

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1213

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP0118225a

Analysis Date: 23-JAN-10 04:13

LCMSMS ID: 903

Column ID Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	40	49.549	124	
1,3-Dinitrobenzene-d4	500	530.278	106	
2,4,6-Trinitrotoluene	40	34.221	86	
2,4-Dinitrotoluene	40	32.367	81	
2,6-Dinitrotoluene	40	37.103	93	
2,6-Dinitrotoluene-d3	500	574.547	115	
2-Amino-4,6-dinitrotoluene	40	35.882	90	
3,4-Dinitrotoluene	20	18.414	92	
4-Amino-2,6-dinitrotoluene	40	42.578	106	
HMX	40	47.421	119	
Nitrobenzene	40	37.893	95	
PETN	40	57.138	143	*
RDX	40	38.474	96	
Tetryl	40	39.878	100	
m-Dinitrobenzene	40	36.849	92	
m-Nitrotoluene	40	44.19	110	
o-Nitrotoluene	40	31.38	78	
p-Nitrotoluene	40	37.948	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 50-150%

Other Target Analytes 70-130%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

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

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA4.qld, Time: Sat Jan 23 10:08:29 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118225a

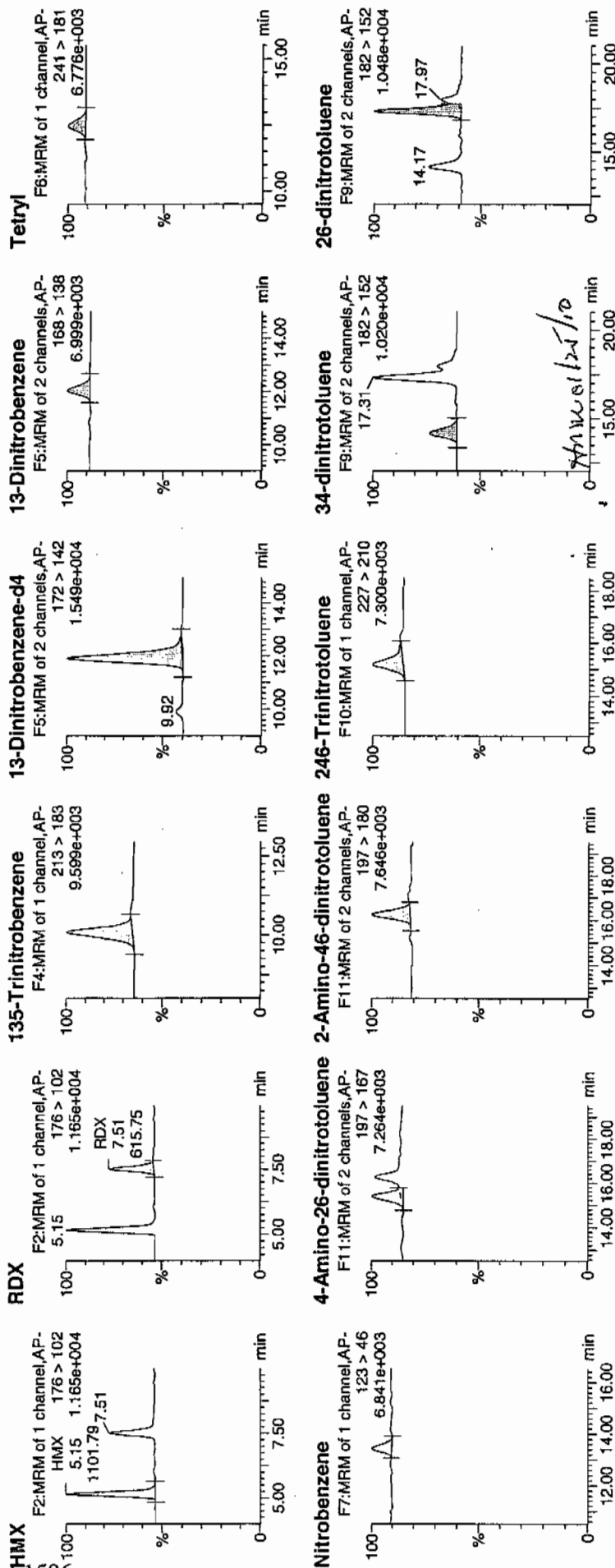
Date: 23-Jan-2010

Time: 04:13:11

ID: WXX100120-08CRI

Ratio: 1:1,C

1/23/10

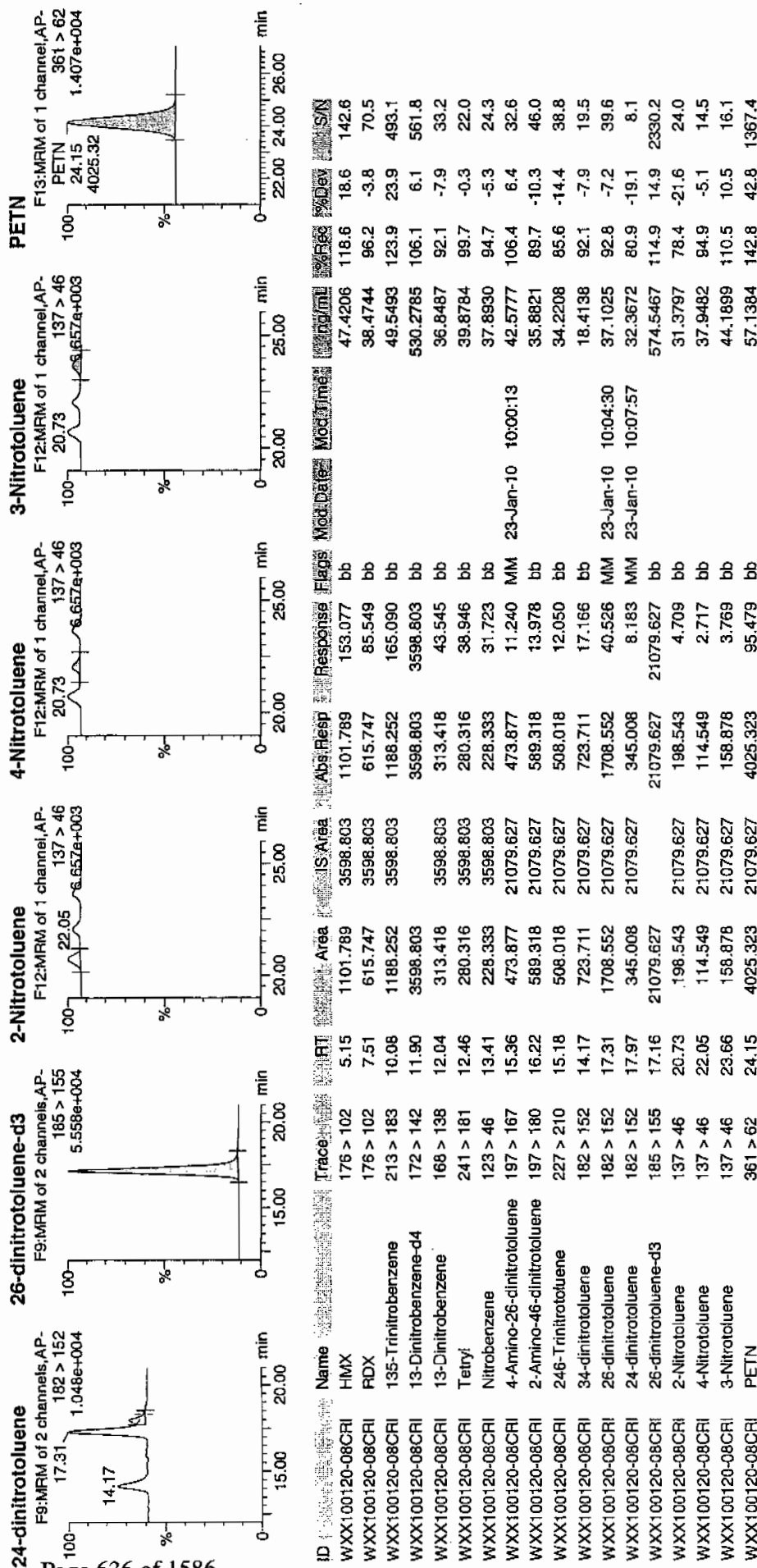


Quantify Sample Report

GEL Laboratories, LLC / Analyst: Michael A. Penny

Printed: Sat Jan 23 10:12:36 2010, Page 78 of 79

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA4.qld, Time: Sat Jan 23 10:08:29 2010



GRAND MEAN AVERAGE

Vendor: UltraScientific
 Date of Analysis 01/23/10
 Time of Injection 0413
 Standard Number WXX100120-08CRI
 Data File EXP0118225a

HMX	118.6
RDX	96.2
135-TNB	123.9
13-DNB	92.1
Tetryl	99.7
Nitrobenzene	94.7
4A-26-DNT	106.4
2A-46-DNT	89.7
246-TNT	85.6
34-DNT(surr)	92.1
26-DNT	92.8
24-DNT	80.9
2-NT	78.4
4-NT	94.9
3-NT	110.5
PETN	142.8

*MTT
1/23/10*

Total 1599.3

Handwritten signature

Average 100.0

ICV Limits 85-115%
 CRI Limits 70-130%
 CCV Limits 85-115%

No single analyte > +/- 60%

7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1213

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXS01210013.wiff

Analysis Date: 21-JAN-10 16:38

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	100	98.7	99	
2,6-Diamino-4-nitrotoluene	100	100	100	
3,4-Dinitrotoluene	50	48.8	98	
3,5-Dinitroaniline	100	101	101	
TATB	100	98	98	
tris(o-cresyl) phosphate	100	99.5	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 50-150%

Other Target Analytes 70-130%

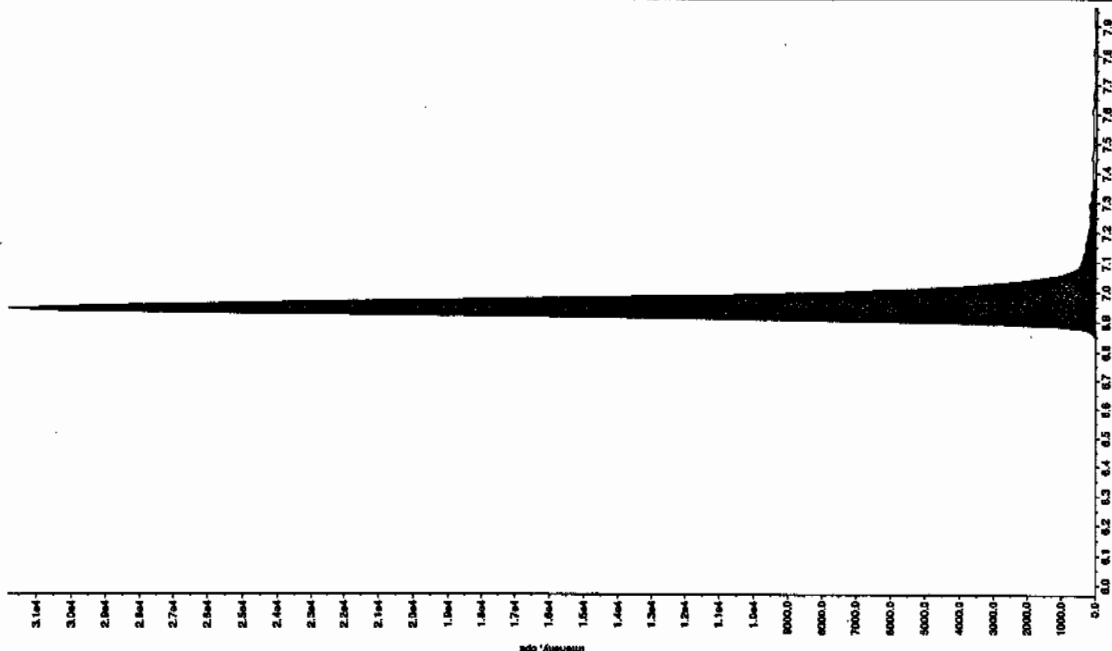
Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

Before Jan 11/2010

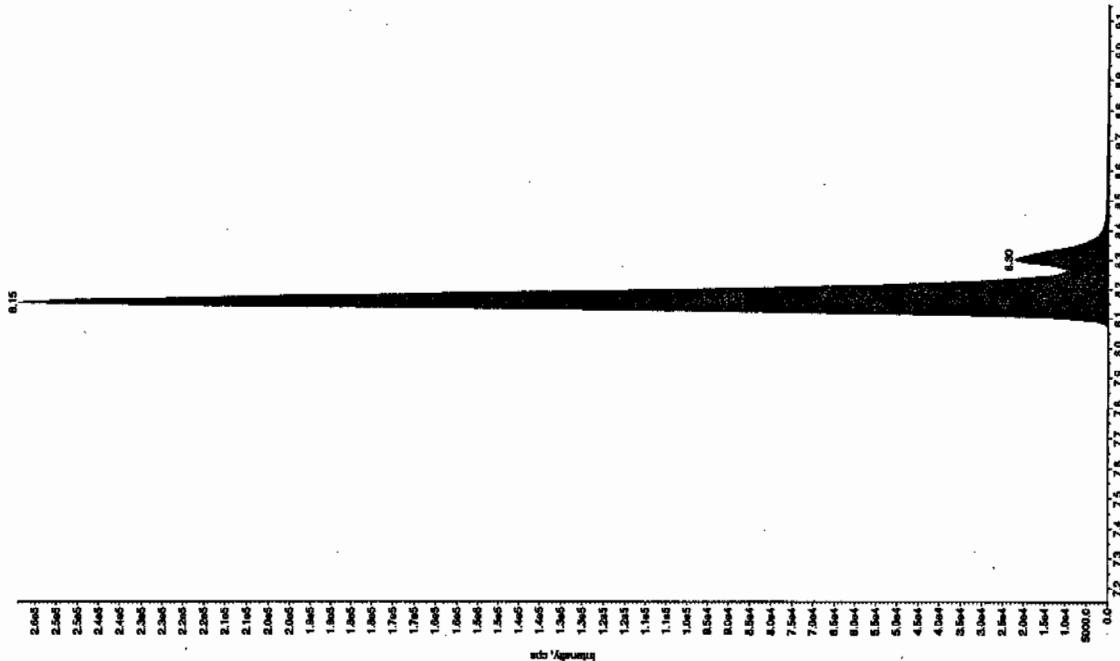
Sample Name: "WXX100121-2703P" Sample ID: "111EP" File: "EXS01210013.wif"
 Peak Name: "ATB" Mass(es): "257.2204.9 amu"
 Comment: "LCMSXP_C" Annotation: "

Sample Index: 1
 Sample Type: QC
 Concentration: 100. ng/mL
 Calculated Conc: 98.0 ng/mL
 Acq. Date: 1/21/2010
 Acq. Time: 4:38:03 PM
 Modified: No
 Proc. Algorithm: IntelliQuan - IQA
 Min. Peak Height: 2500.00 cps
 Min. Peak Width: 3.00 sec
 Smoothing Width: 3.00 points
 RT Window: 30.0 sec
 Expected RT: 6.97 min
 Use Relative RT: No
 Int. Type: Valley
 Retention Time: 6.94 min
 Area: 1.43e+005 counts
 Height: 31823.231 cps
 Start Time: 6.81 min
 End Time: 7.38 min



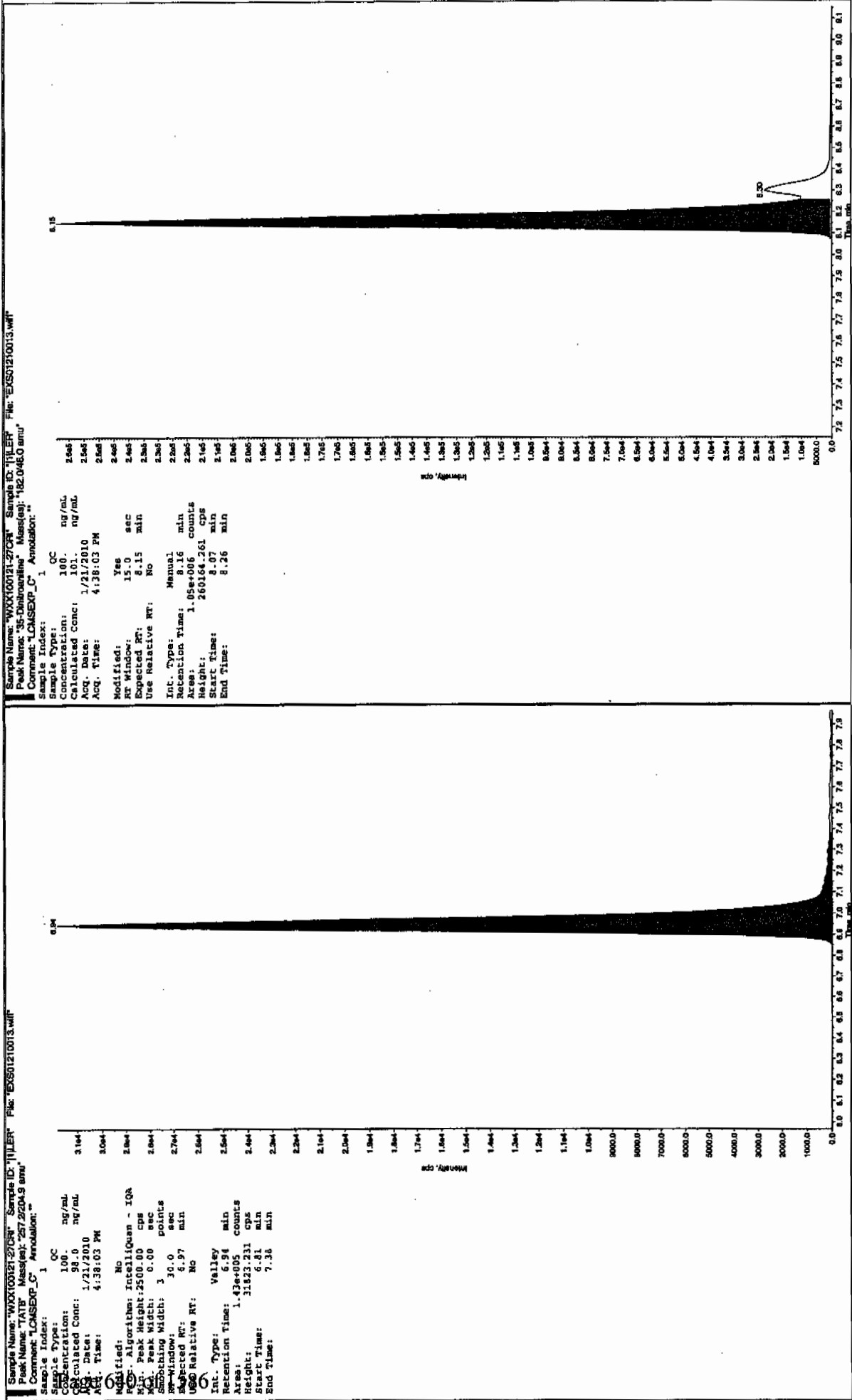
Sample Name: "WXX100121-2703P" Sample ID: "111EP" File: "EXS01210013.wif"
 Peak Name: "SS-Delutamide" Mass(es): "182.046.0 amu"
 Comment: "LCMSXP_C" Annotation: "

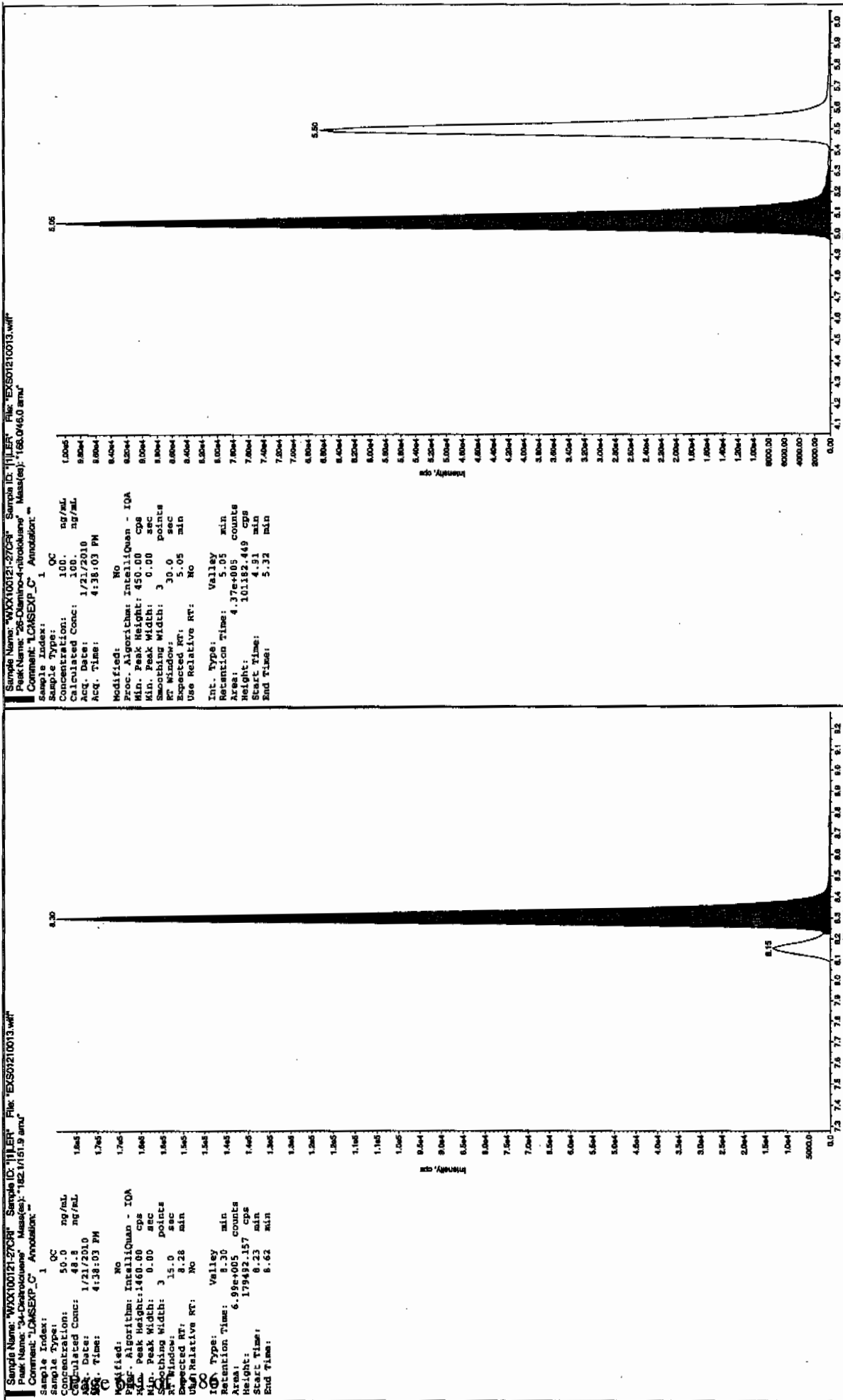
Sample Index: 1
 Sample Type: QC
 Concentration: 100. ng/mL
 Calculated Conc: 112. ng/mL
 Acq. Date: 1/21/2010
 Acq. Time: 4:38:03 PM
 Modified: No
 Proc. Algorithm: IntelliQuan - IQA
 Min. Peak Height: 2000.00 cps
 Min. Peak Width: 3.00 sec
 Smoothing Width: 3.00 points
 RT Window: 15.0 sec
 Expected RT: 8.15 min
 Use Relative RT: No
 Int. Type: Valley
 Retention Time: 8.15 min
 Area: 1.15e+004 counts
 Height: 259033.203 cps
 Start Time: 8.02 min
 End Time: 8.50 min

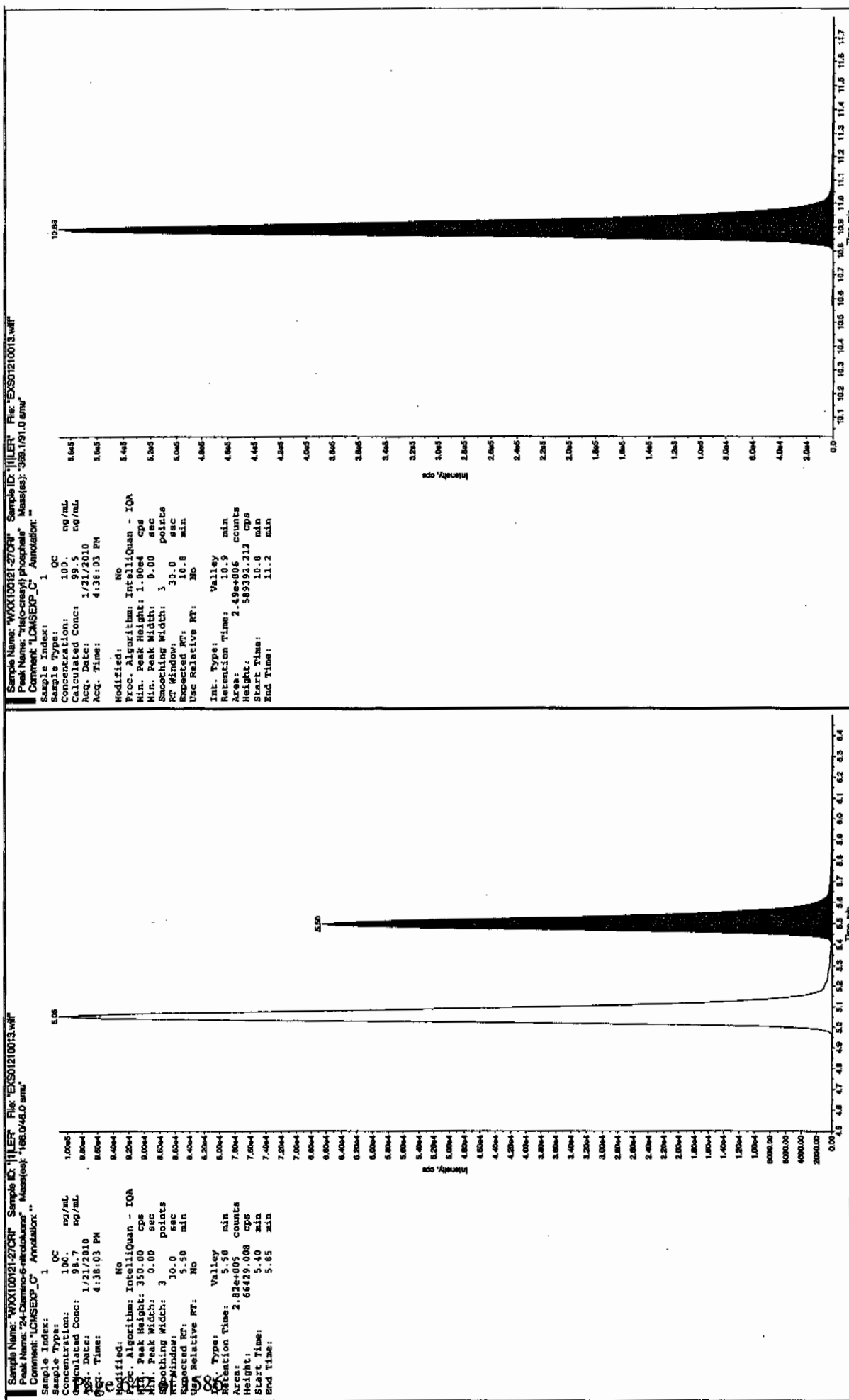


After 01/21/10

after clear 11/22/10







7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1213

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXS01210024.wiff

Analysis Date: 21-JAN-10 19:30

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	500	528	106	
2,6-Diamino-4-nitrotoluene	500	552	110	
3,4-Dinitrotoluene	250	233	93	
3,5-Dinitroaniline	500	517	103	
TATB	500	466	93	
tris(o-cresyl) phosphate	500	489	98	

Recovery Limits:

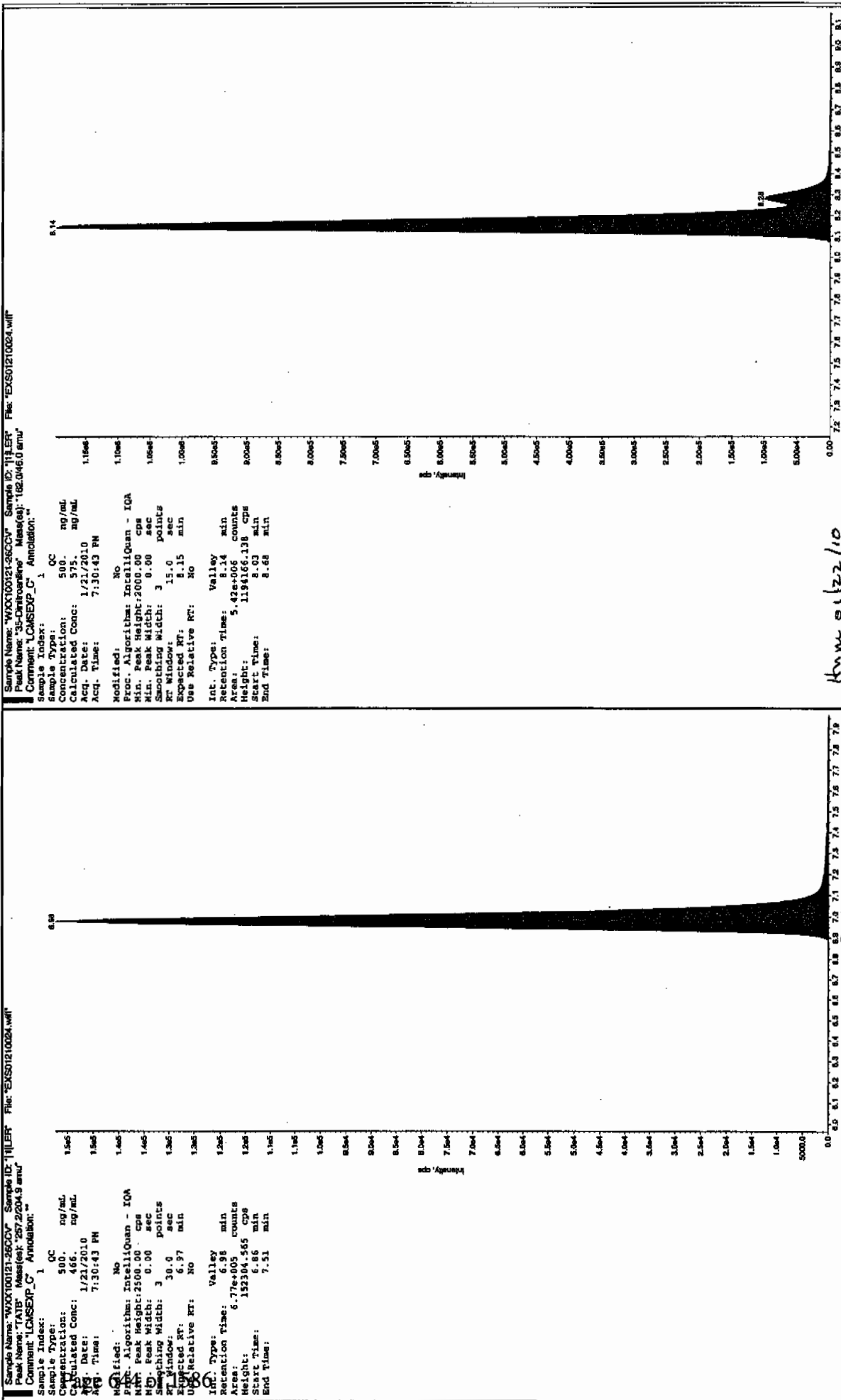
3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,
2,4-Diamino-6-nitrotoluene 70-130%

Other Target Analytes 80-120%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

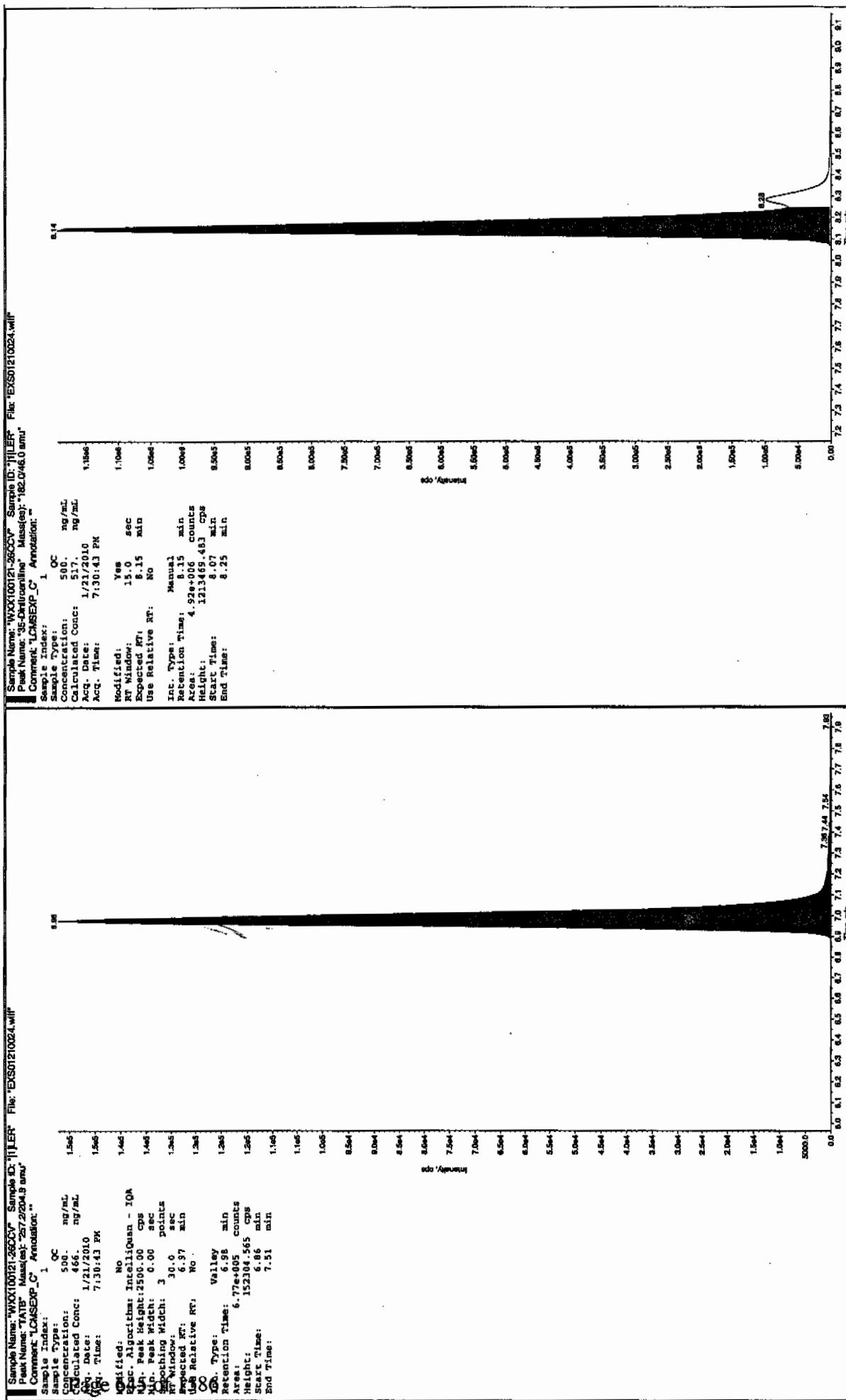
Before Scan 1122110



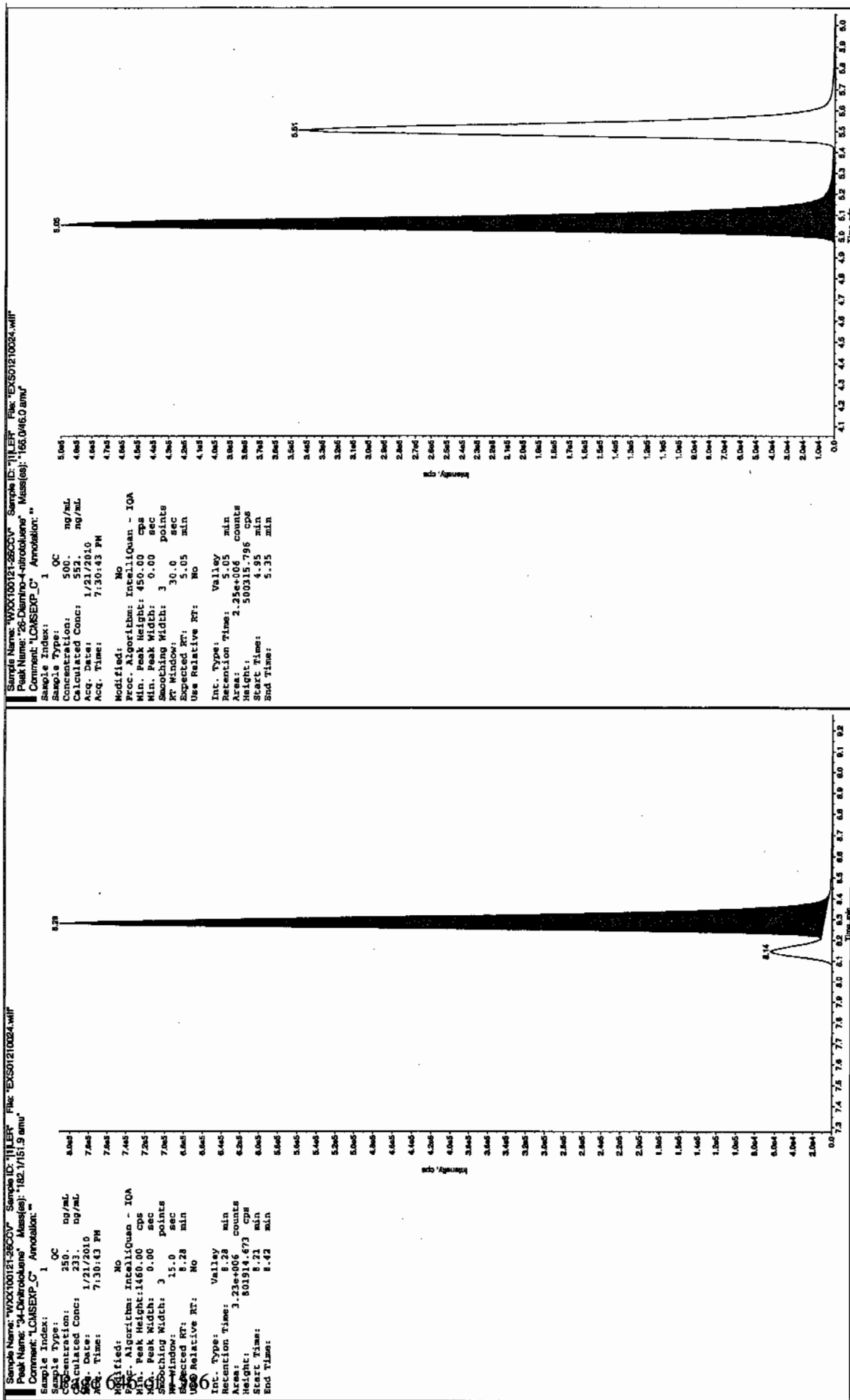
*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

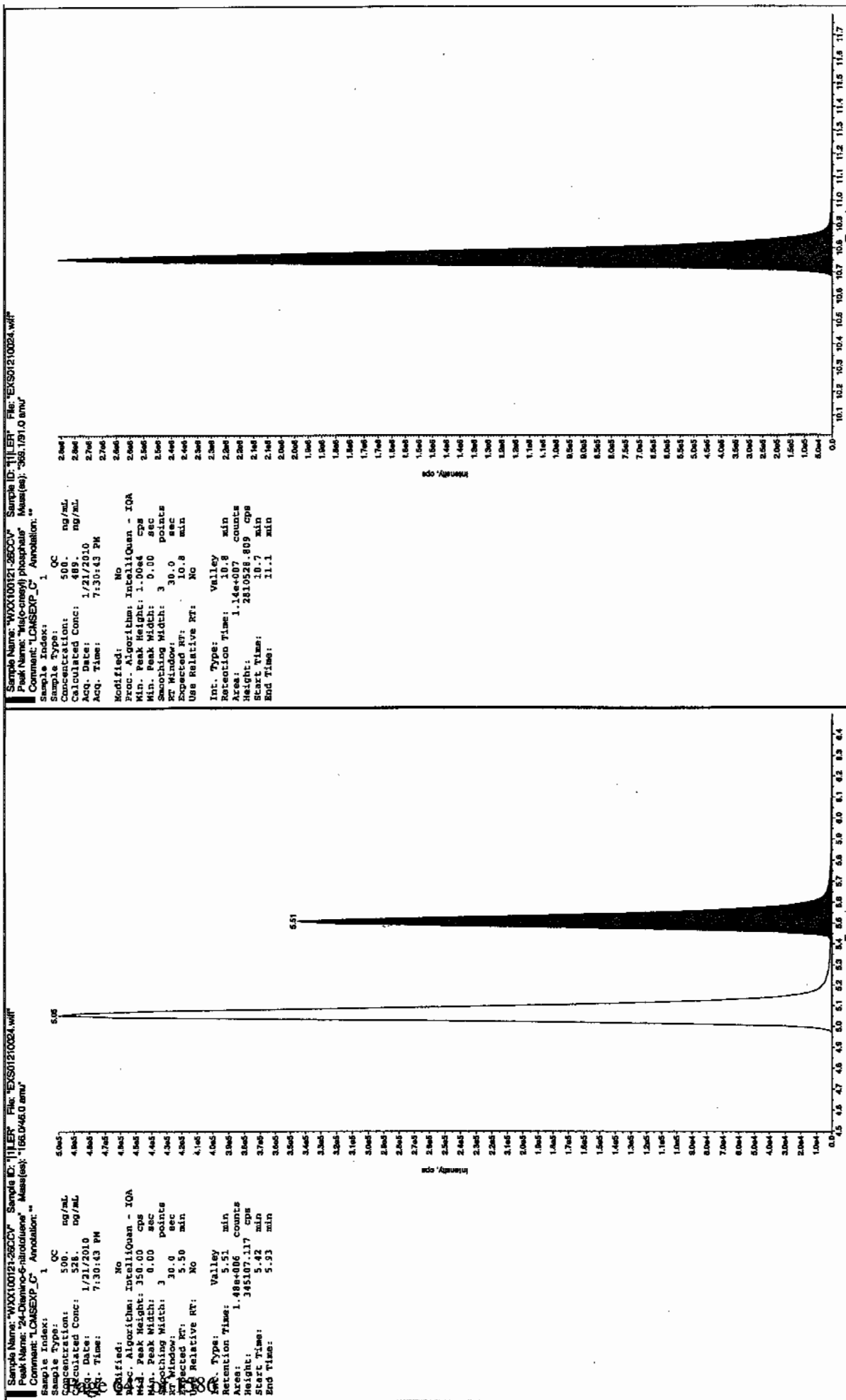
Run 8122110

after Jan 11/22/10



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





7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1213

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXS01210026.wiff

Analysis Date: 21-JAN-10 20:02

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	100	104	104	
2,6-Diamino-4-nitrotoluene	100	103	103	
3,4-Dinitrotoluene	50	47.4	95	
3,5-Dinitroaniline	100	97.6	98	
TATB	100	95.1	95	
tris(o-cresyl) phosphate	100	102	102	

Recovery Limits:

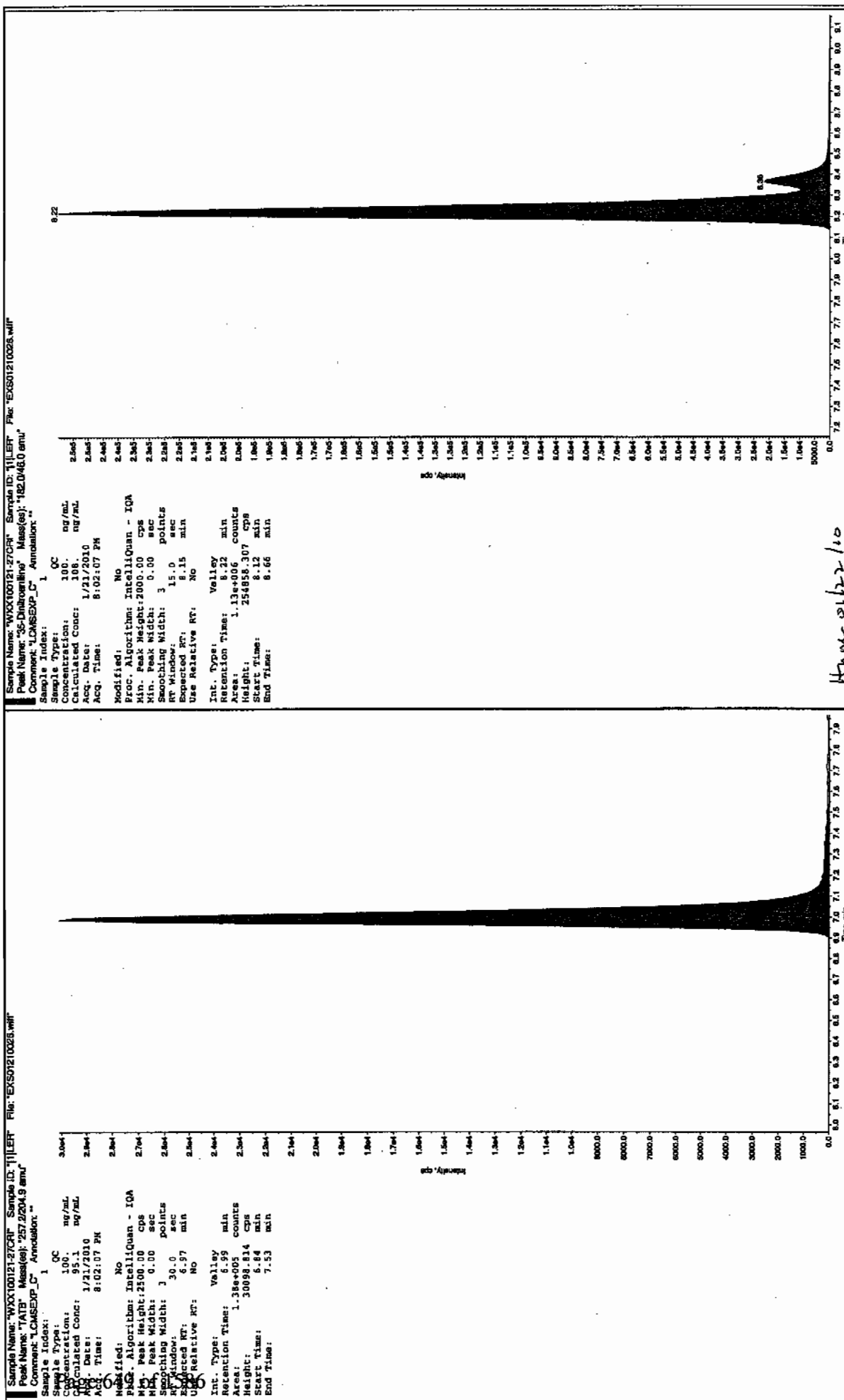
3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,
2,4-Diamino-6-nitrotoluene 50-150%

Other Target Analytes 70-130%

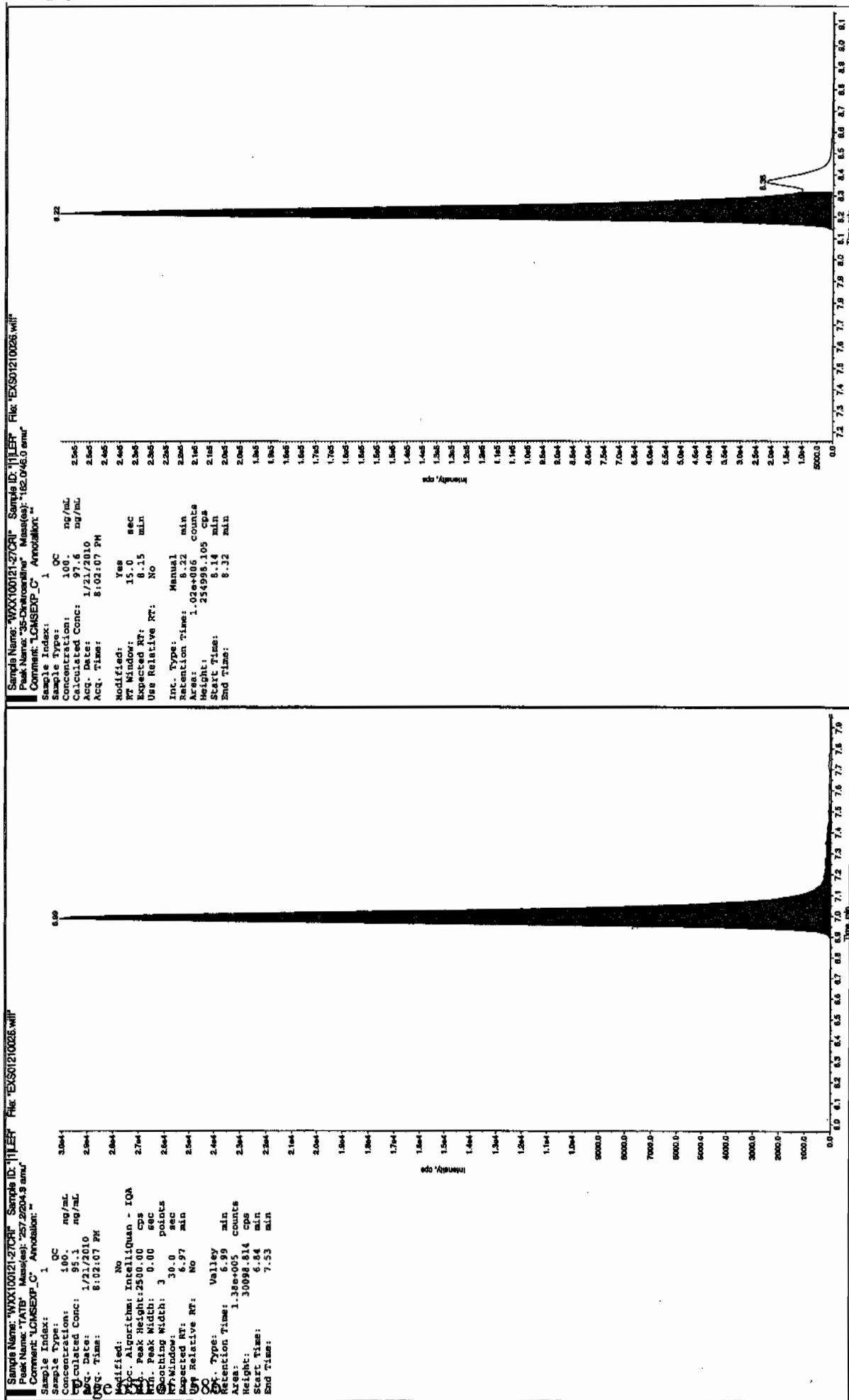
Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

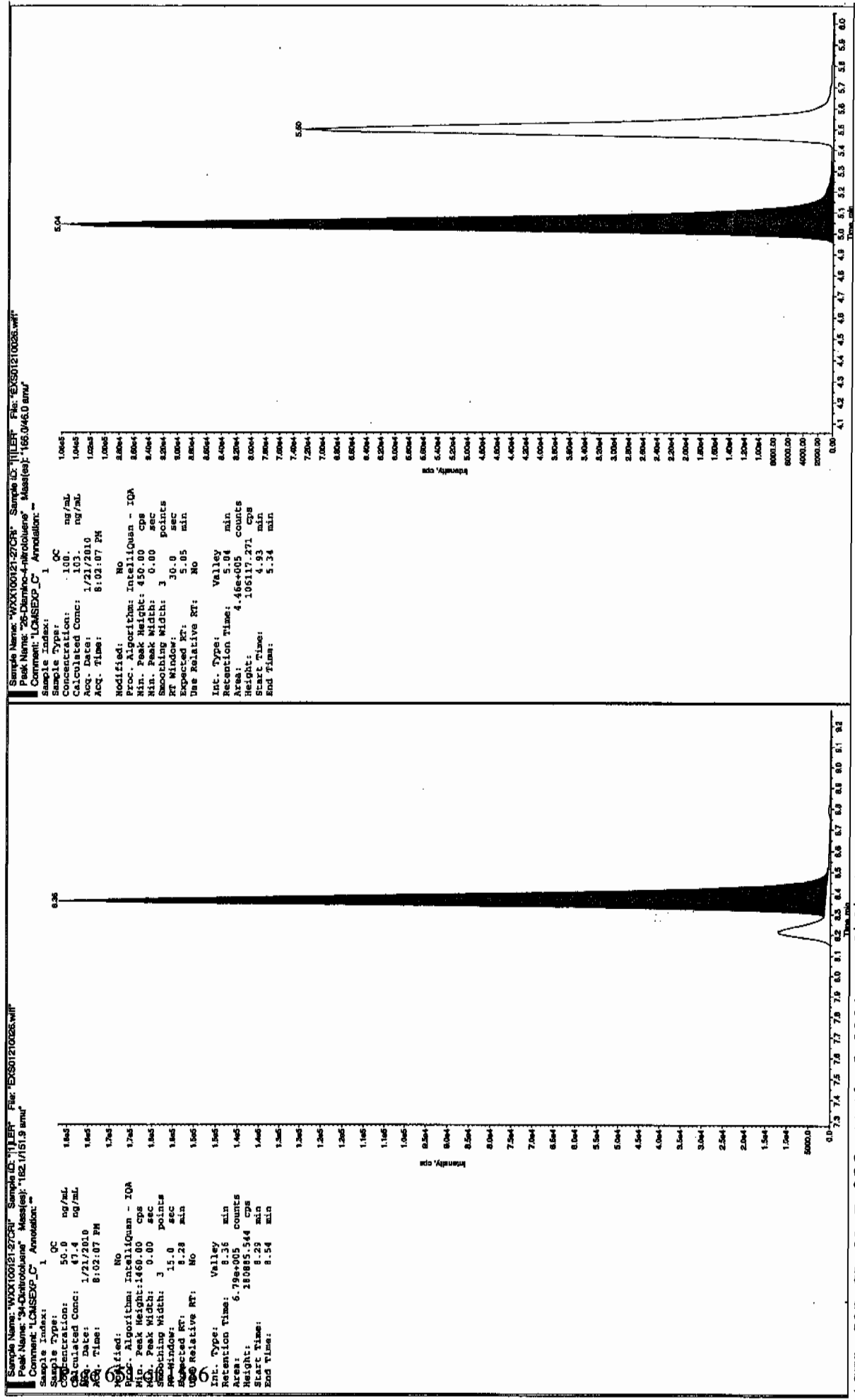
Before Jan 11 2010



after Jan 11/2010

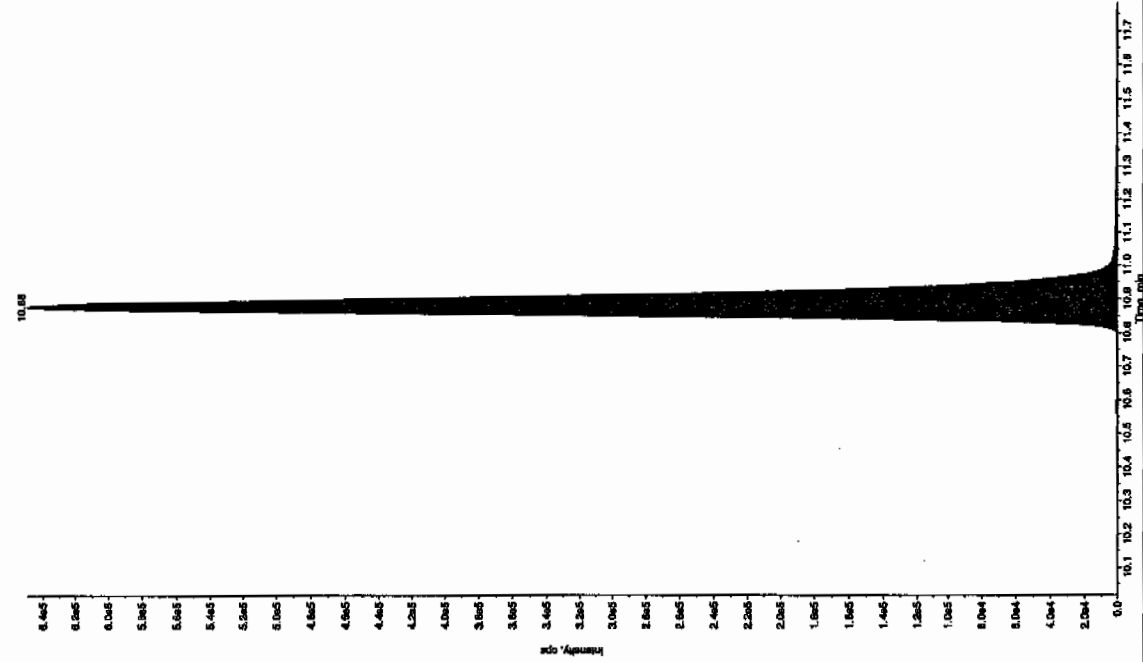


*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4



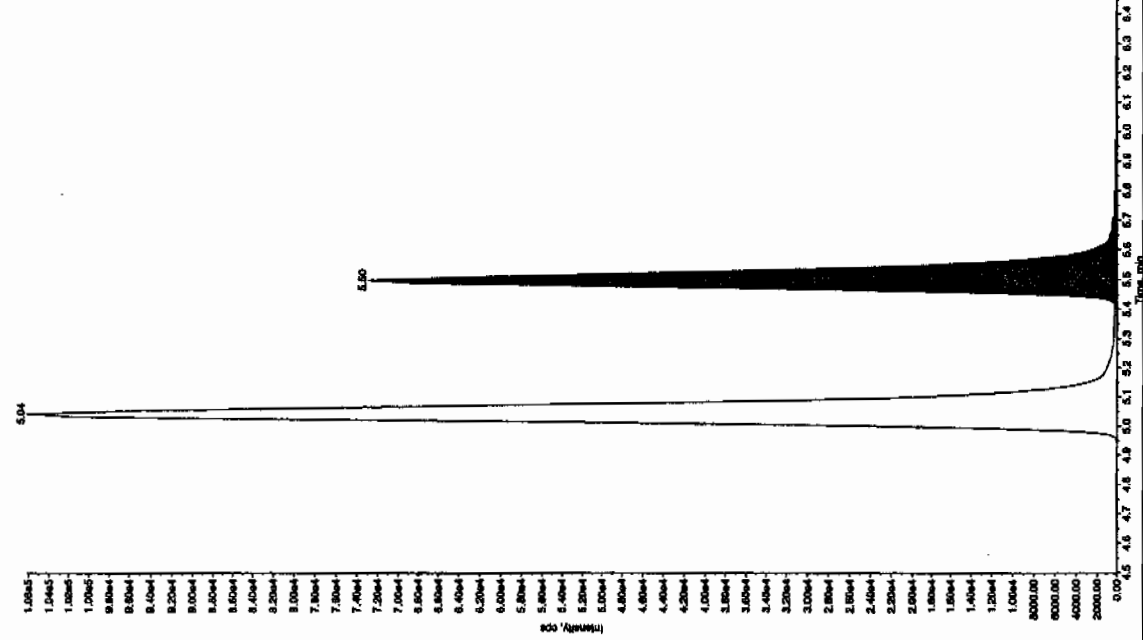
Sample Name: "WXX100121-27CR" Sample ID: "HILLER" File: "EXS01210028.wif"
 Peak Name: "bis(2-oxo-1,3-dioxol-5-yl) phosphine" Mass(es): "365.191.0 amu"
 Comment: "LOMSEXP_C" Annotation: "

Sample Index: 1
 Sample Type: QC
 Concentration: 100.00
 Calculated Conc: 102.00
 Acq. Date: 1/21/2010
 Acq. Time: 8:02:07 PM
 Modified: No
 Proc. Algorithm: IntelliQuan - IQA
 Min. Peak Height: 1.00e4 cps
 Min. Peak Width: 0.00 sec
 Smoothing Width: 3 points
 RT Window: 30.0 sec
 Expected RT: 10.8 min
 Use Relative RT: No
 Int. Type: Valley
 Retention Time: 10.9 min
 Area: 2.56e+06 counts
 Height: 649065.063 cps
 Start Time: 10.8 min
 End Time: 11.2 min



Sample Name: "WXX100121-27CR" Sample ID: "HILLER" File: "EXS01210028.wif"
 Peak Name: "24-Oxolipo-6-neurosterone" Mass(es): "186.046.0 amu"
 Comment: "LOMSEXP_C" Annotation: "

Sample Index: 1
 Sample Type: QC
 Concentration: 100.00
 Calculated Conc: 104.00
 Acq. Date: 1/21/2010
 Acq. Time: 8:02:07 PM
 Modified: No
 Proc. Algorithm: IntelliQuan - IQA
 Min. Peak Height: 350.00 cps
 Min. Peak Width: 0.00 sec
 Smoothing Width: 3 points
 RT Window: 30.0 sec
 Expected RT: 5.50 min
 Use Relative RT: No
 Int. Type: Valley
 Retention Time: 5.50 min
 Area: 2.98e+06 counts
 Height: 72802.063 cps
 Start Time: 5.41 min
 End Time: 5.66 min



7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1213

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXS01210037.wiff

Analysis Date: 21-JAN-10 22:54

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	500	539	108	
2,6-Diamino-4-nitrotoluene	500	576	115	
3,4-Dinitrotoluene	250	245	98	
3,5-Dinitroaniline	500	509	102	
TATB	500	478	96	
tris(o-cresyl) phosphate	500	481	96	

Recovery Limits:

3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,

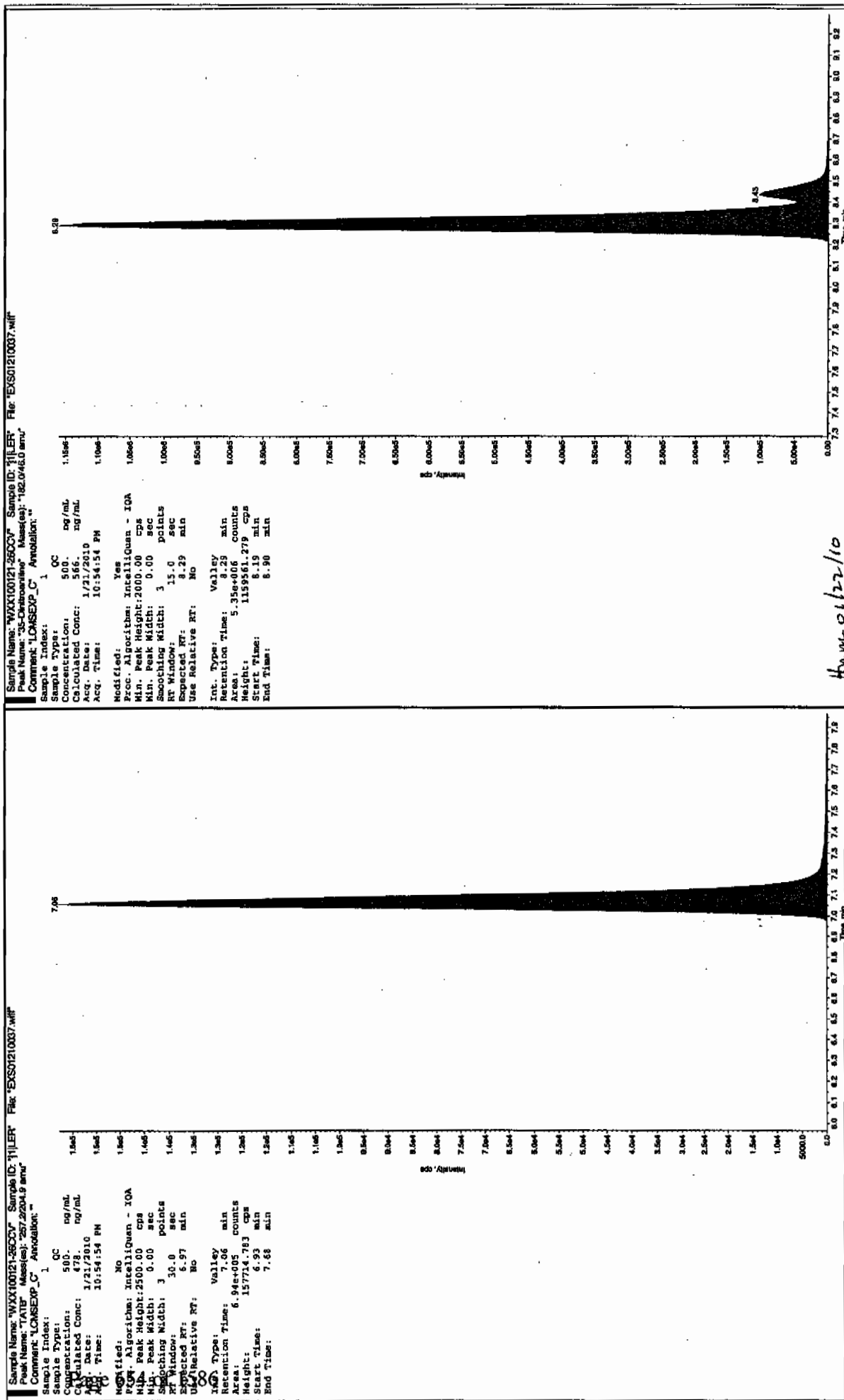
2,4-Diamino-6-nitrotoluene 70-130%

Other Target Analytes 80-120%

Column used to flag Recovery outside of Limits

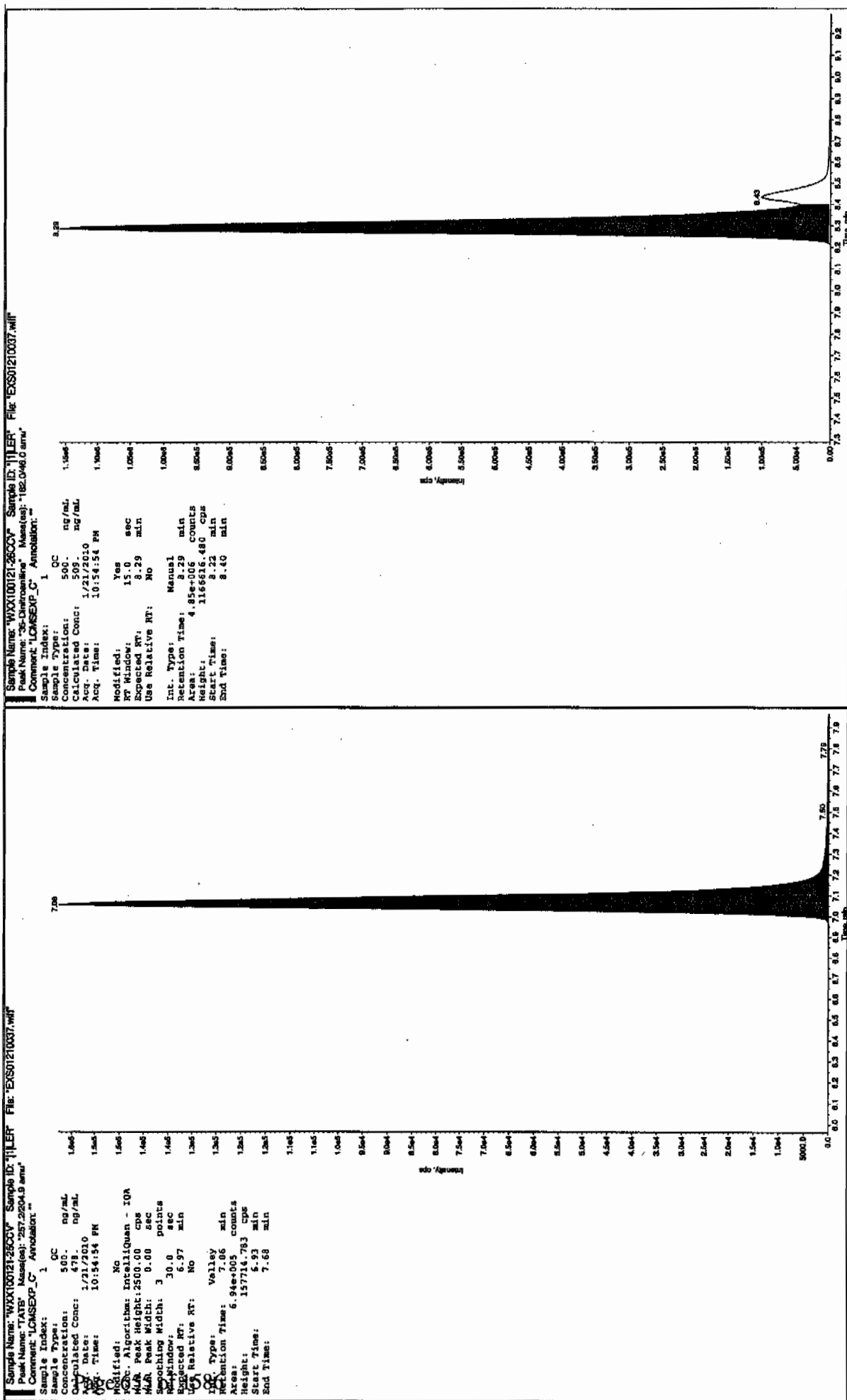
* Value outside of Recovery Limits

Before Dec 18/110

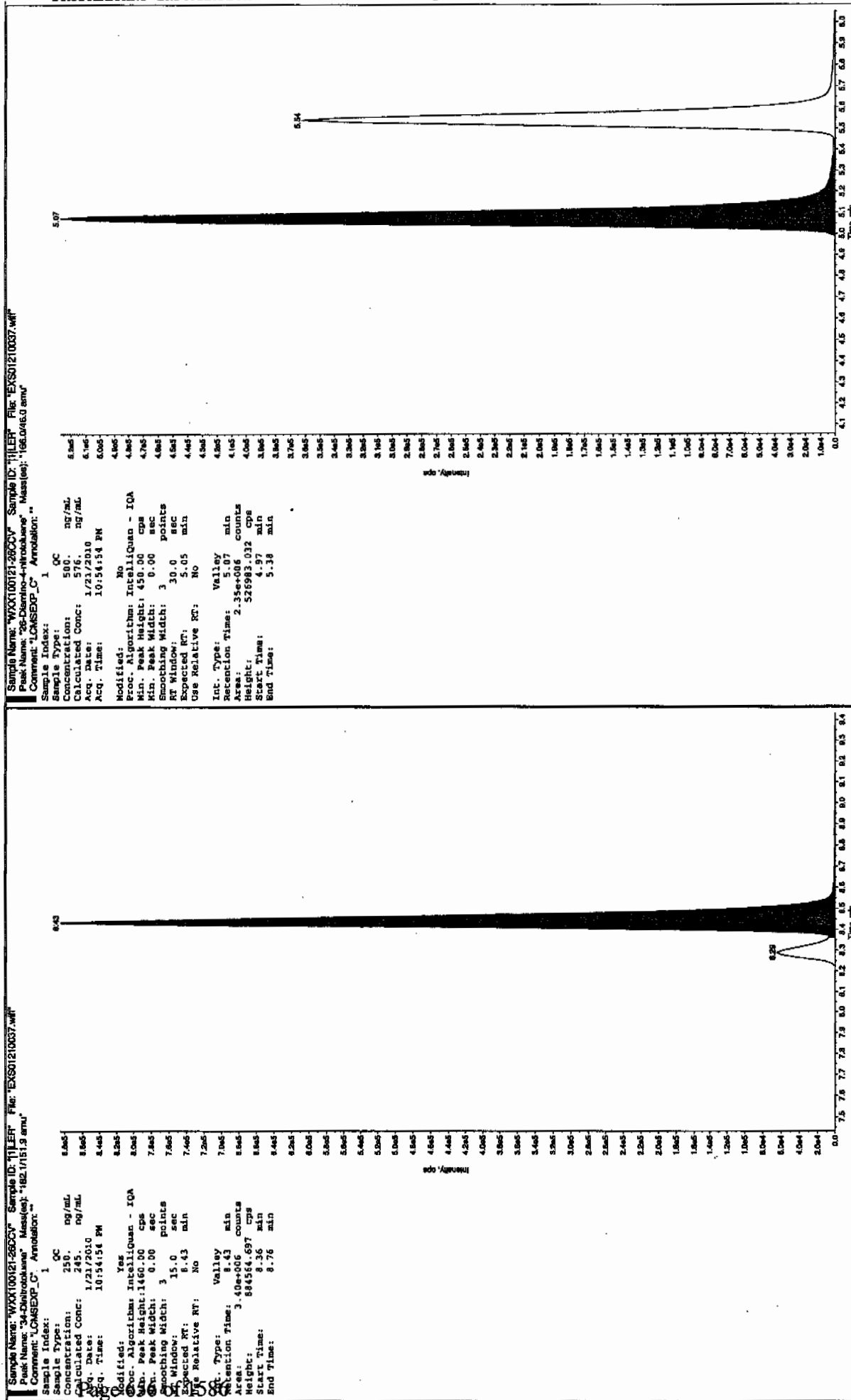


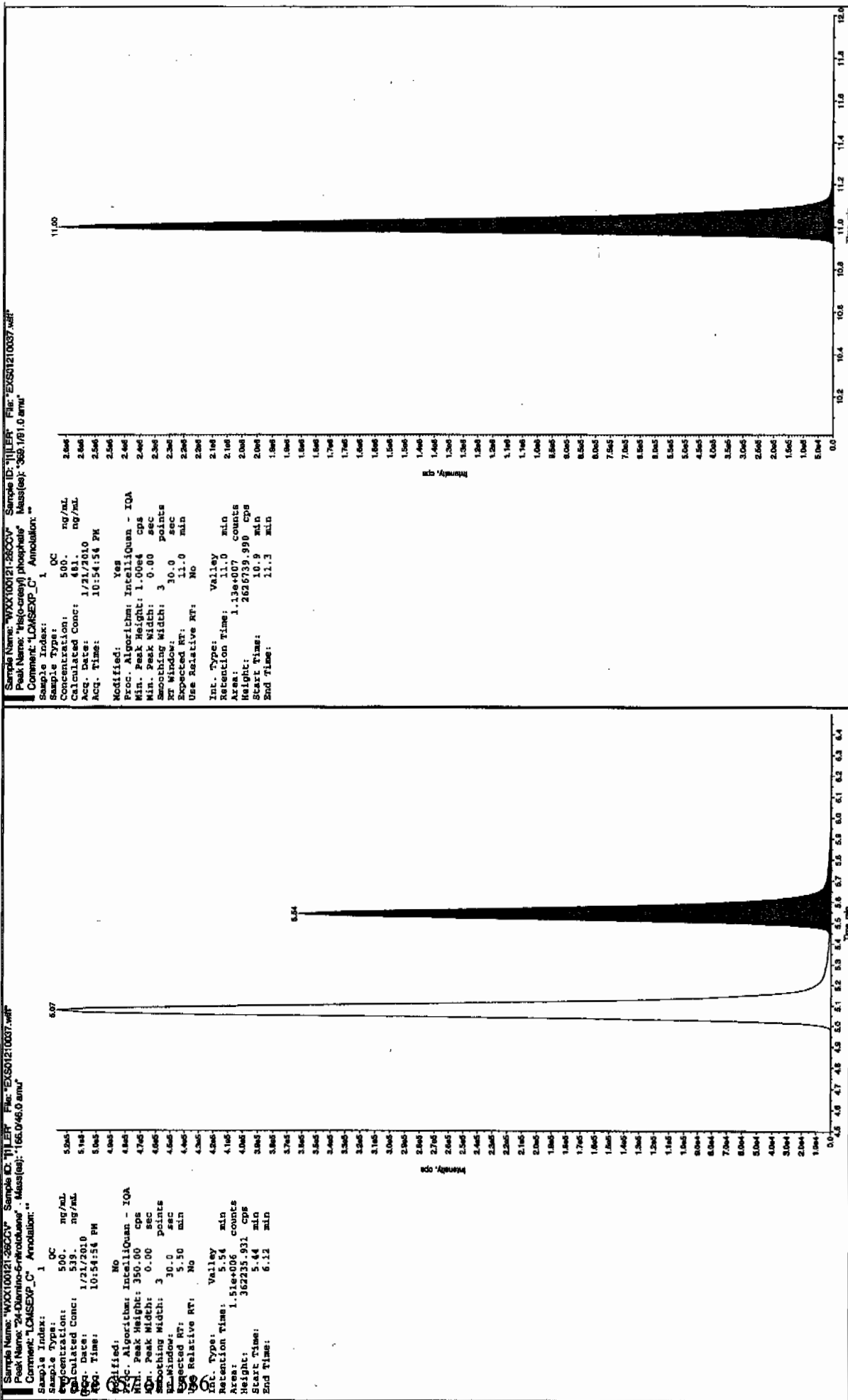
How-01/22/10

after Jan 11/2010



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





7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1213

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXS01210039.wiff

Analysis Date: 21-JAN-10 23:26

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	100	104	104	
2,6-Diamino-4-nitrotoluene	100	106	106	
3,4-Dinitrotoluene	50	47.7	96	
3,5-Dinitroaniline	100	103	103	
TATB	100	96.5	97	
tris(o-cresyl) phosphate	100	102	102	

Recovery Limits:

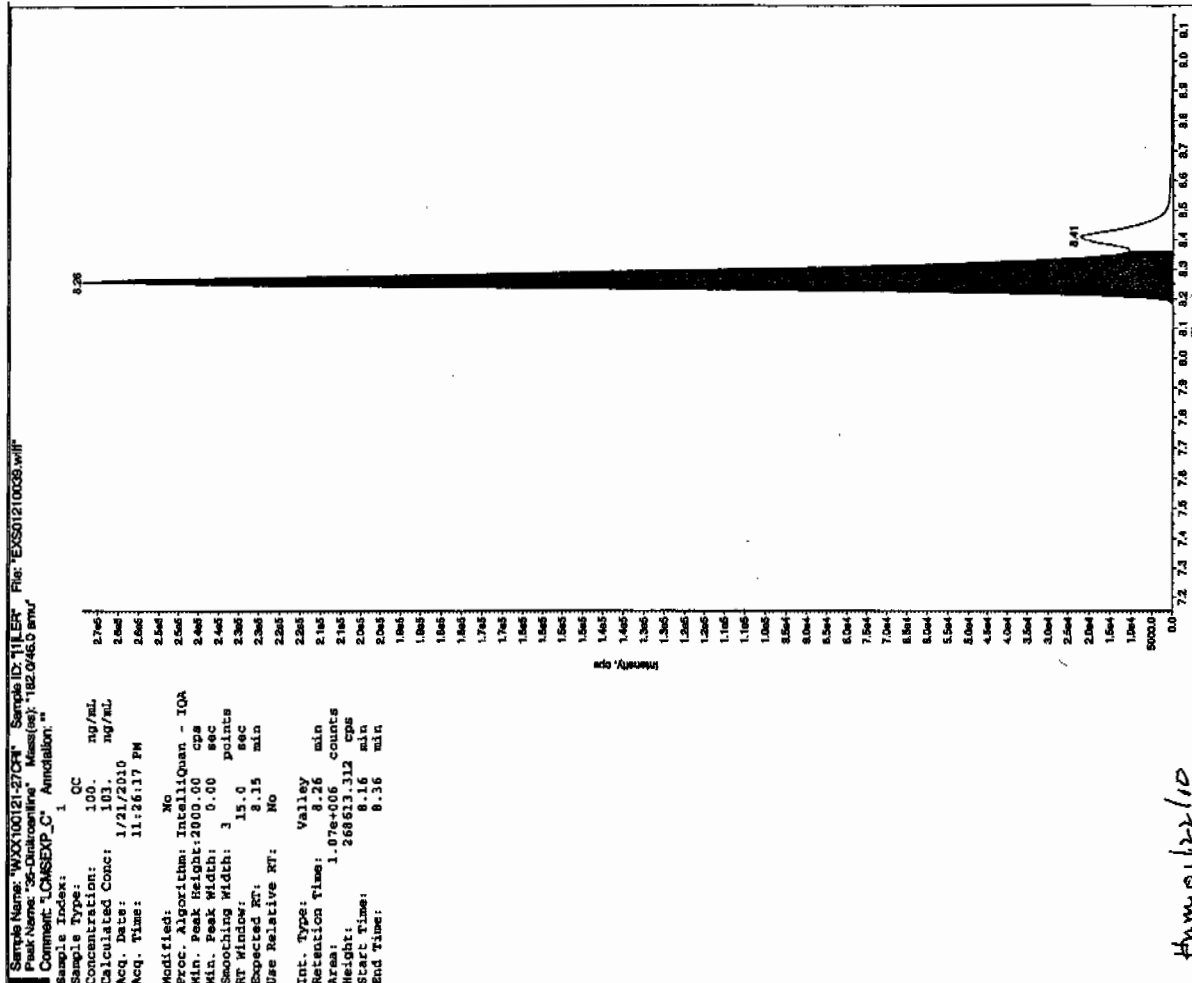
3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,
2,4-Diamino-6-nitrotoluene 50-150%

Other Target Analytes 70-130%

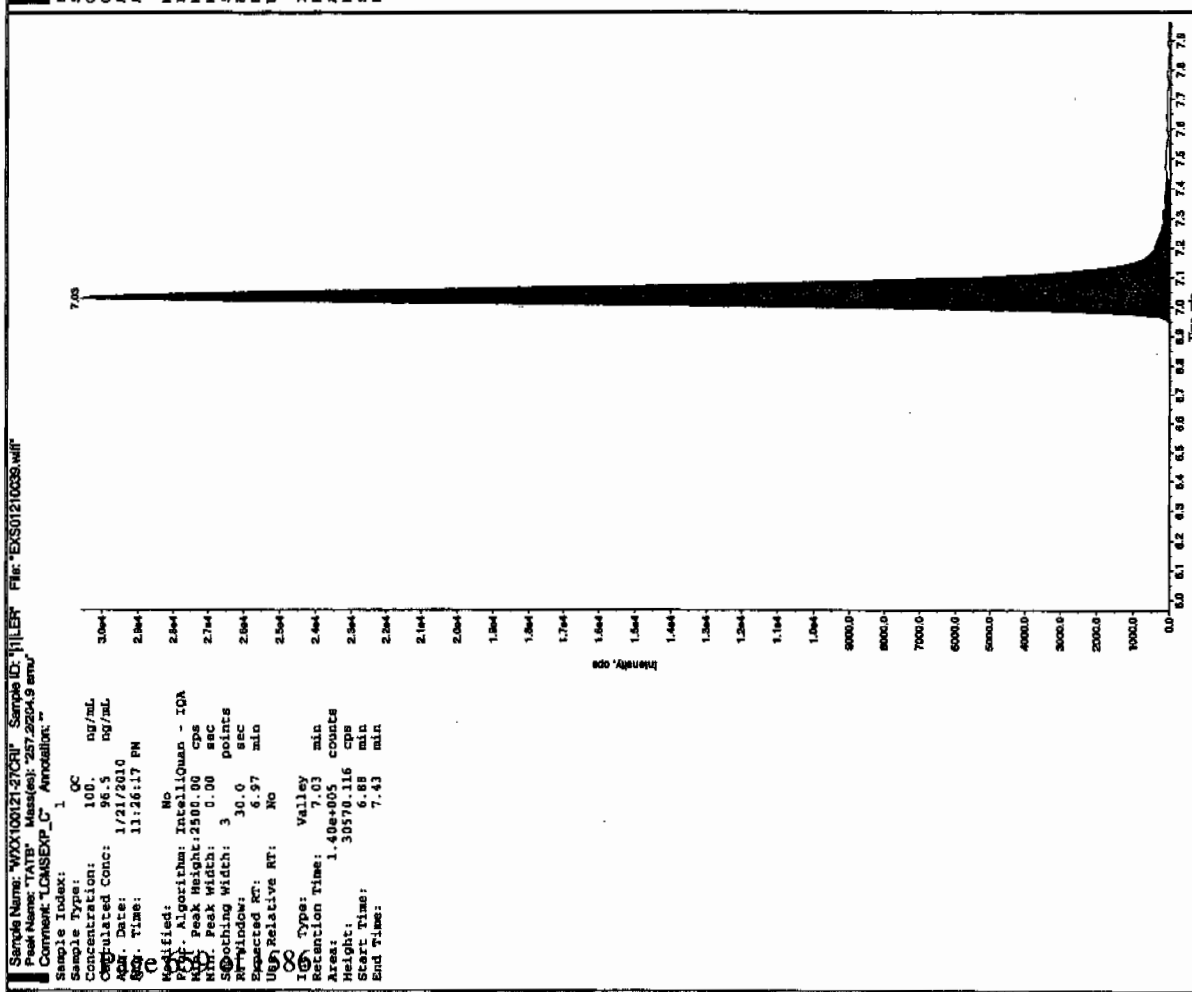
Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

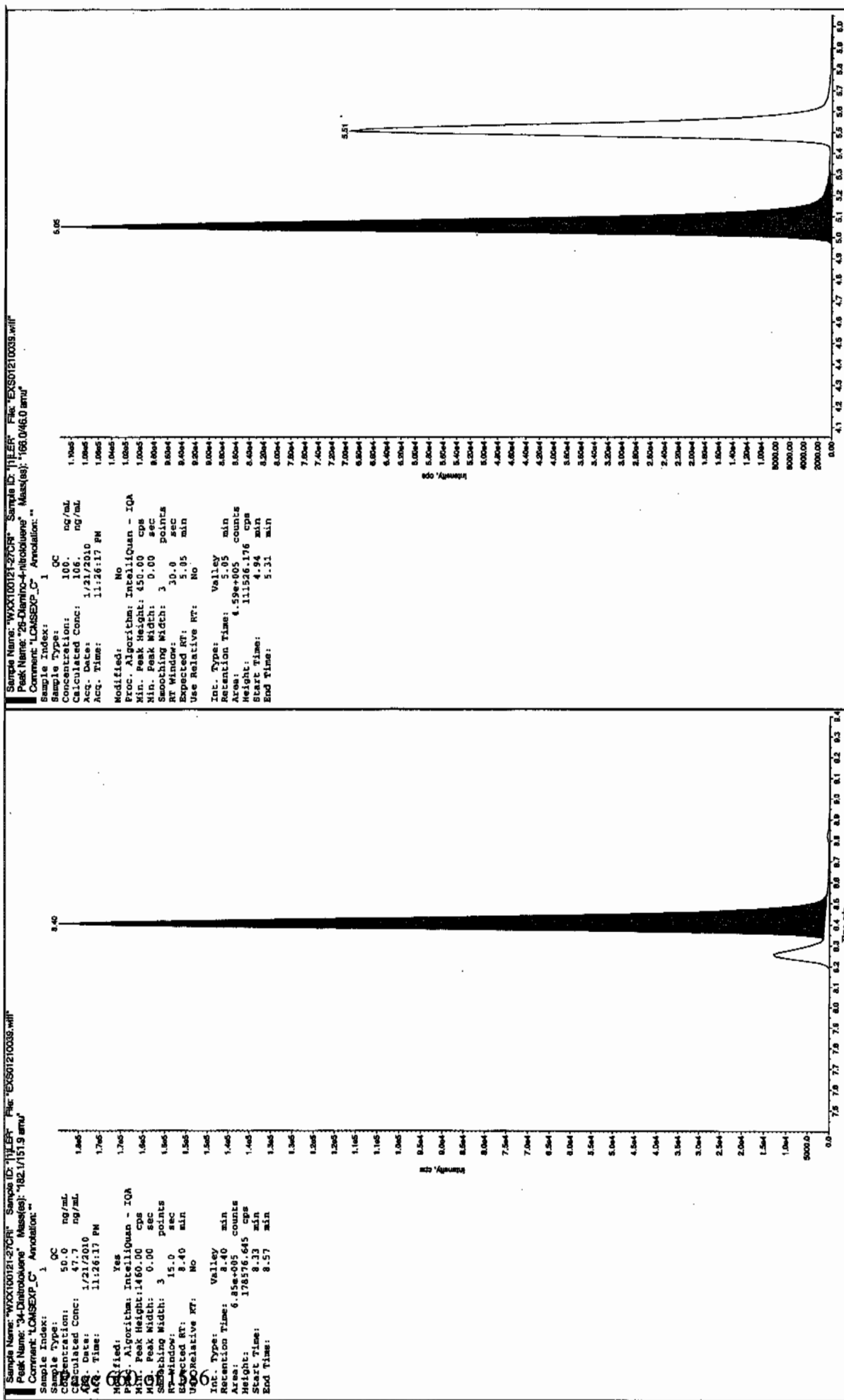
1/22/10
vgr



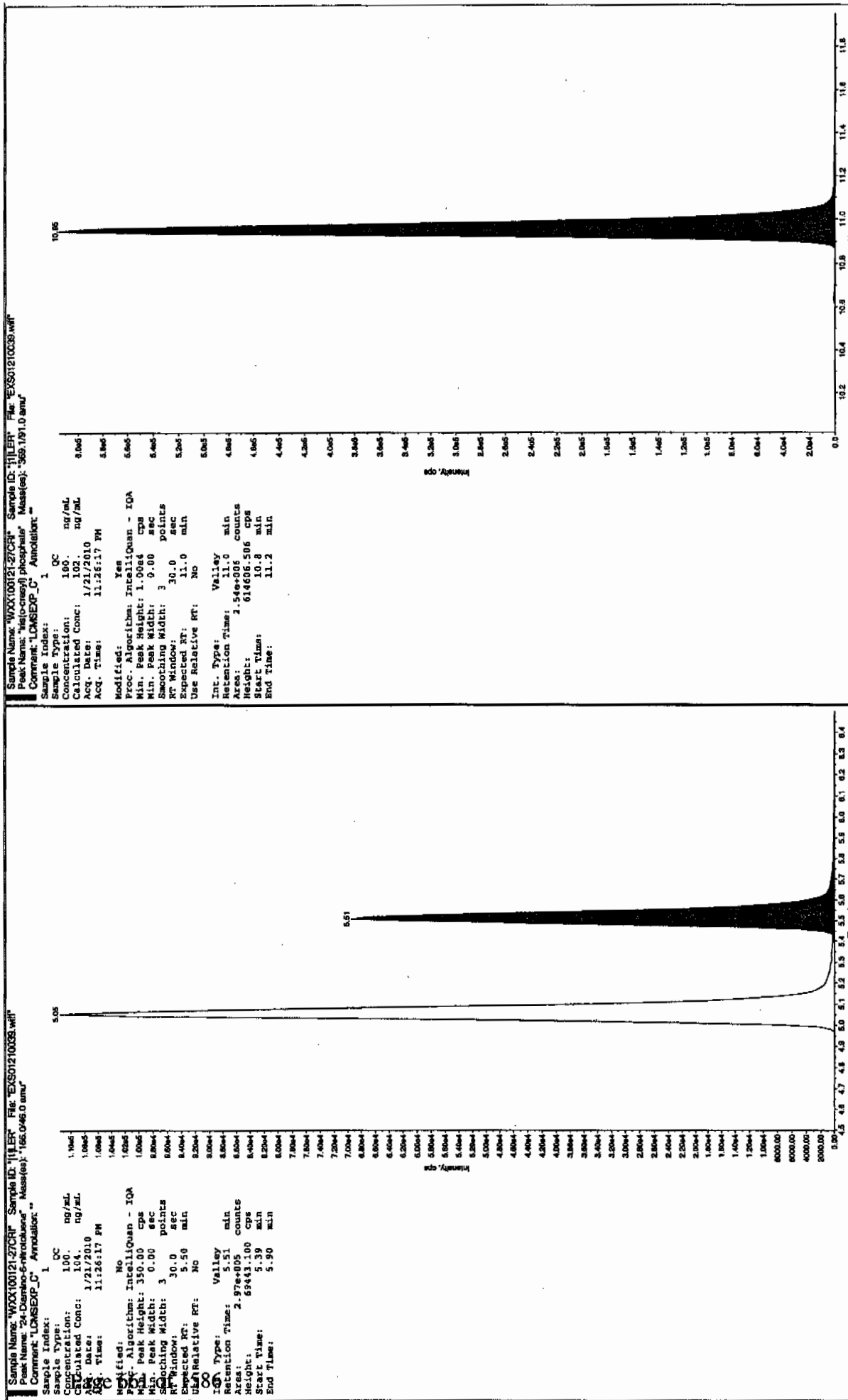
1/22/10



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



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



7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1213

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXS01250013.wiff

Analysis Date: 25-JAN-10 13:41

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	100	104	104	
2,6-Diamino-4-nitrotoluene	100	106	106	
3,4-Dinitrotoluene	50	46.7	94	
3,5-Dinitroaniline	100	104	104	
TATB	100	96.4	96	
tris(o-cresyl) phosphate	100	117	117	

Recovery Limits:

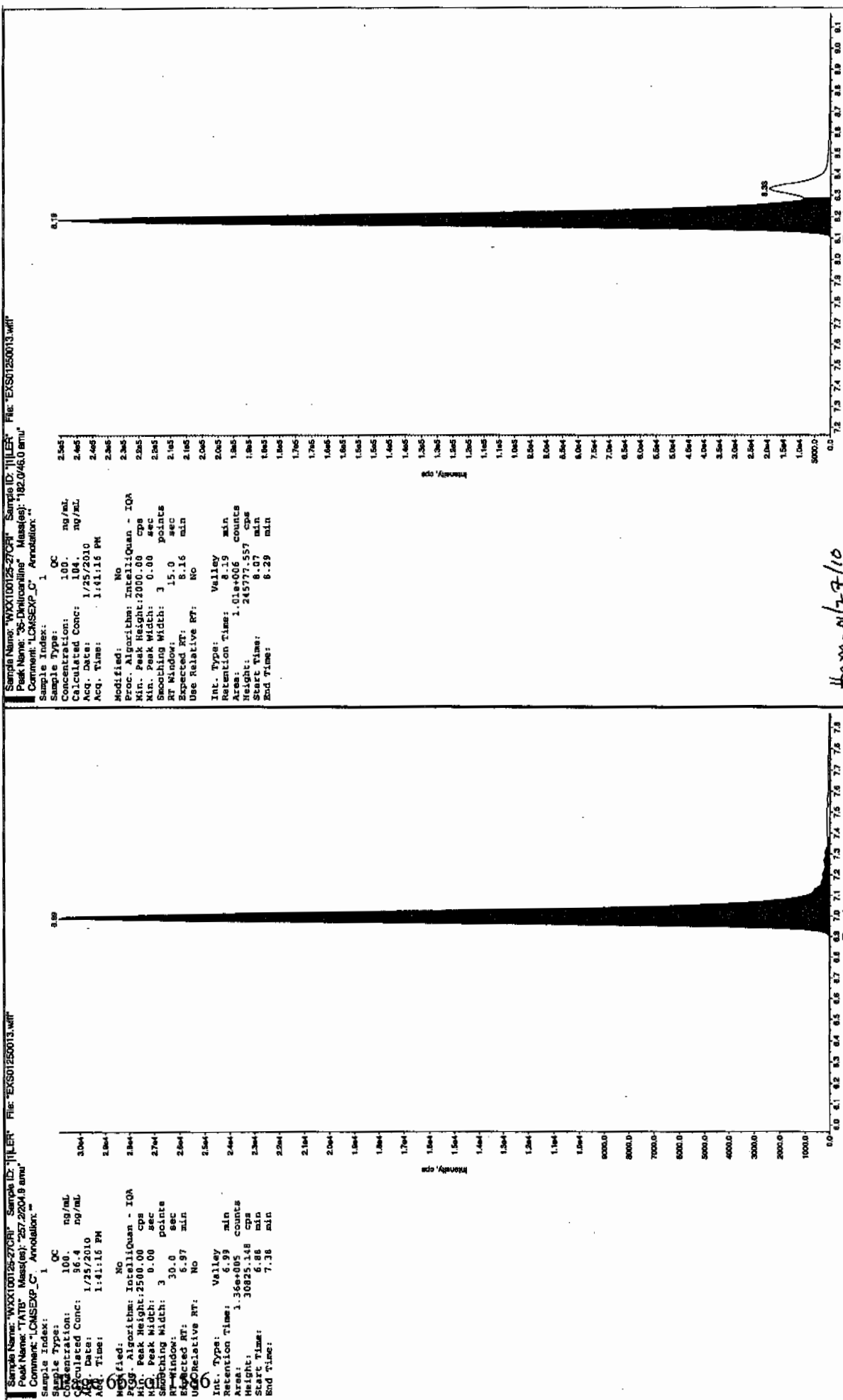
3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,
2,4-Diamino-6-nitrotoluene 50-150%

Other Target Analytes 70-130%

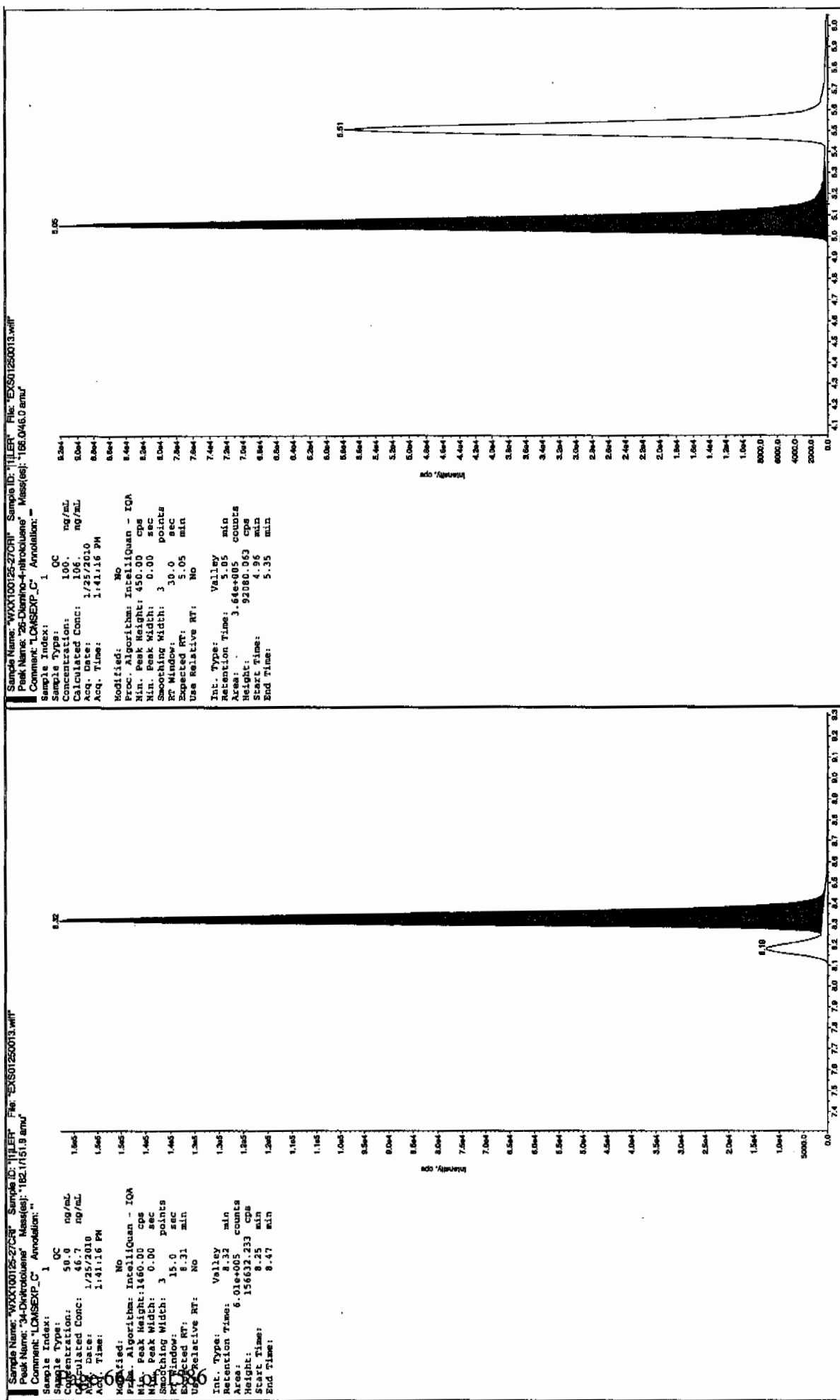
Column used to flag Recovery outside of Limits

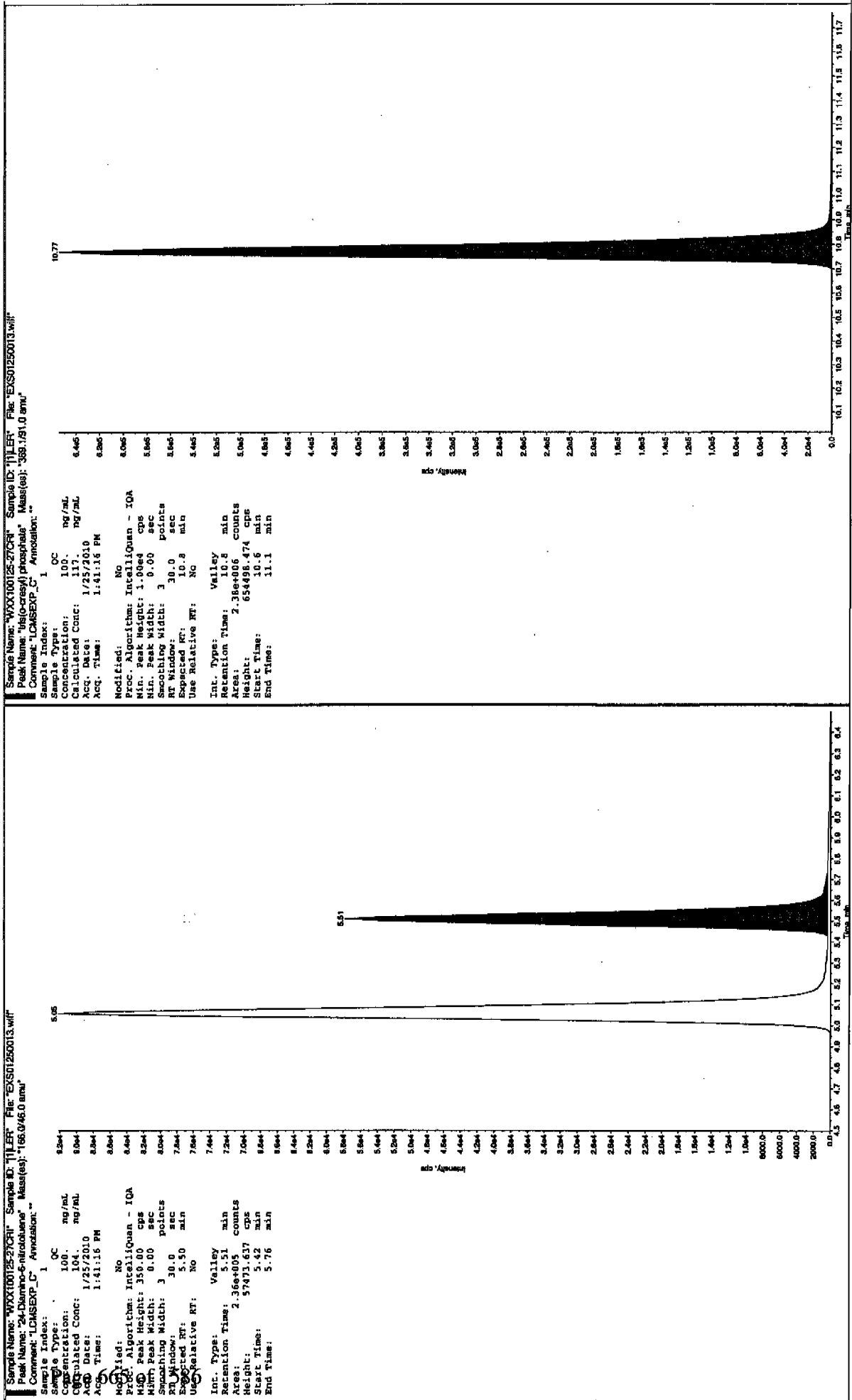
* Value outside of Recovery Limits

Lat 1/27/10



Lat 1/27/10





7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1213

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXS01250024.wiff

Analysis Date: 25-JAN-10 16:33

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	500	456	91	
2,6-Diamino-4-nitrotoluene	500	429	86	
3,4-Dinitrotoluene	250	232	93	
3,5-Dinitroaniline	500	523	105	
TATB	500	534	107	
tris(o-cresyl) phosphate	500	455	91	

Recovery Limits:

3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,

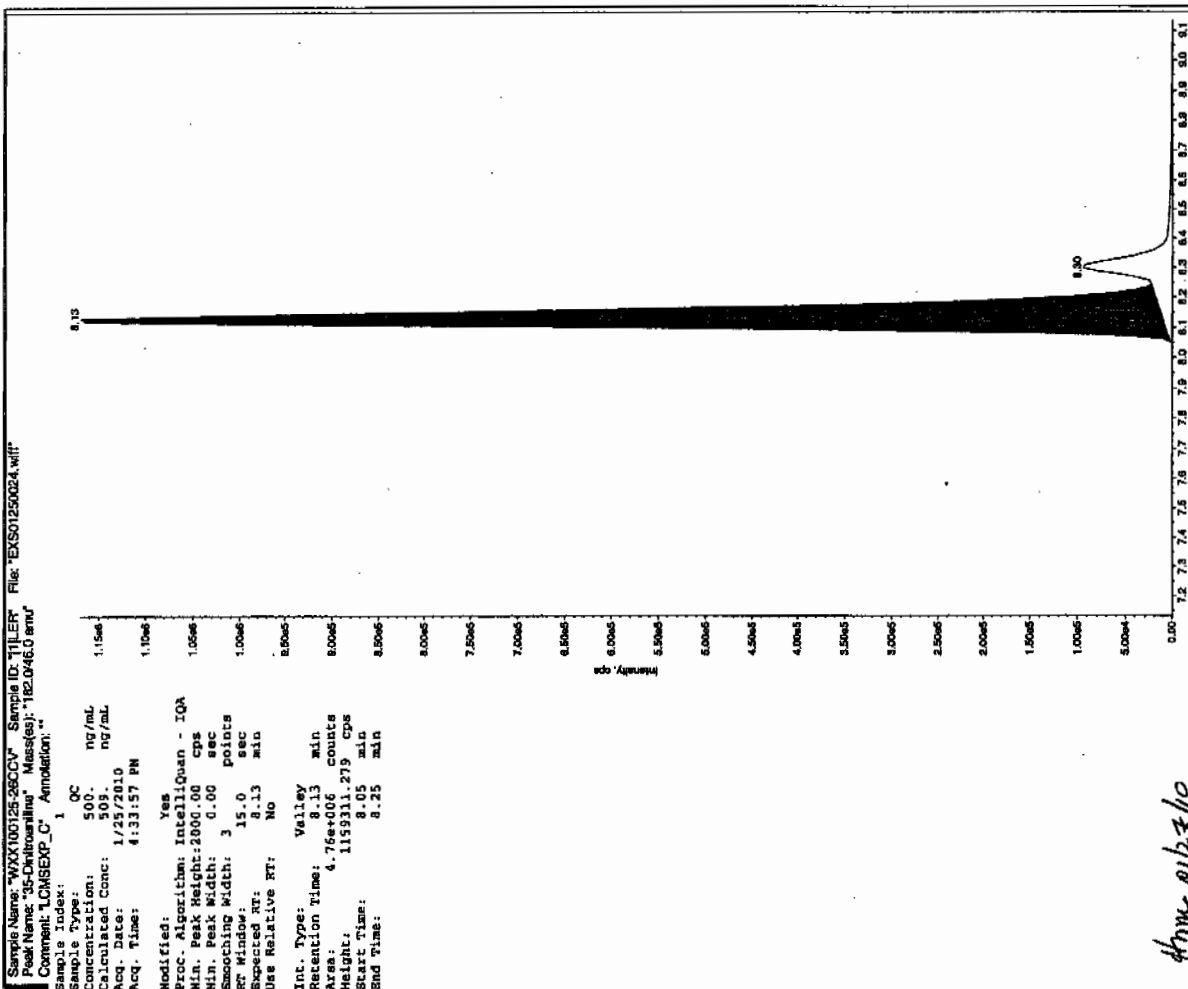
2,4-Diamino-6-nitrotoluene 70-130%

Other Target Analytes 80-120%

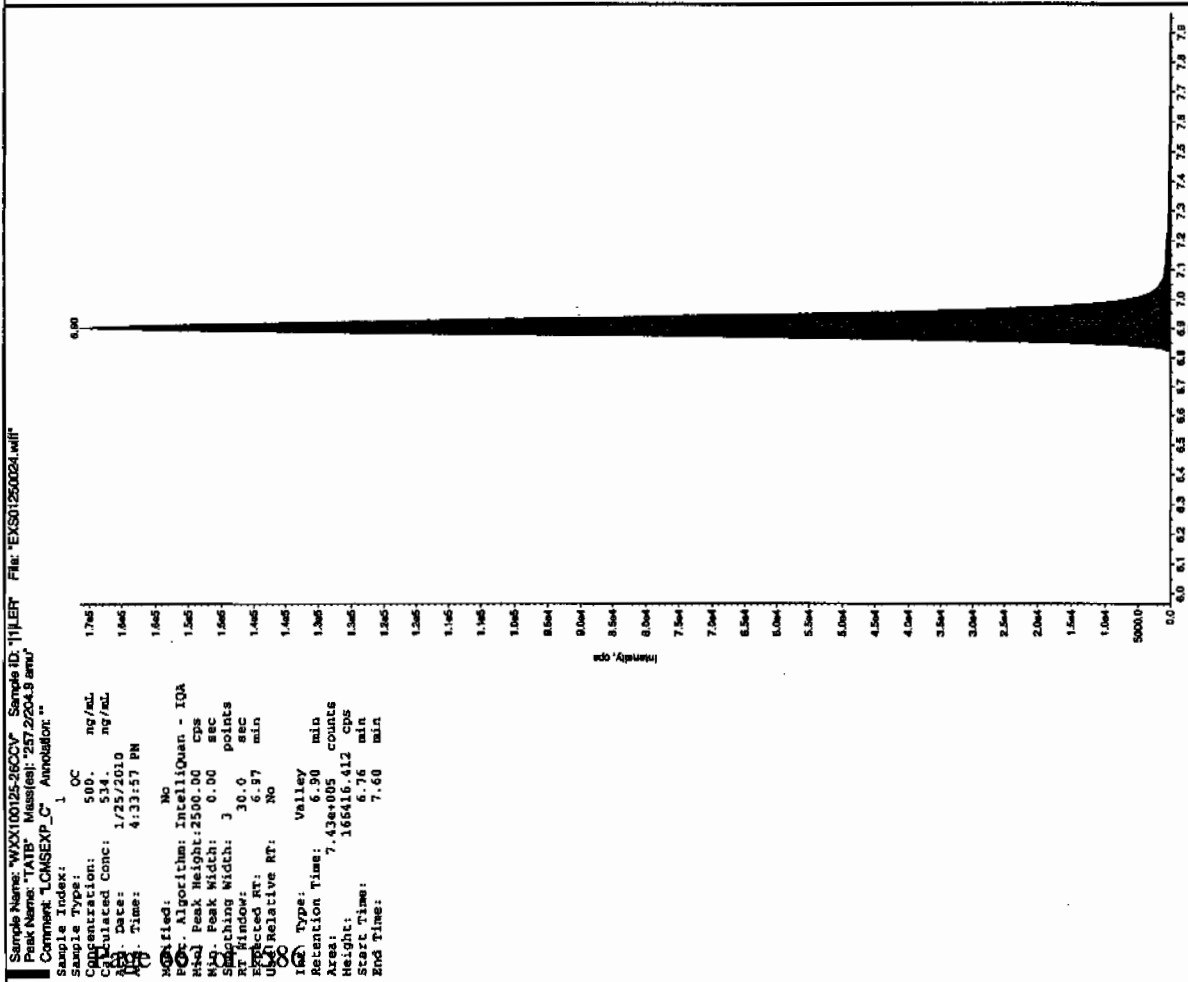
Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

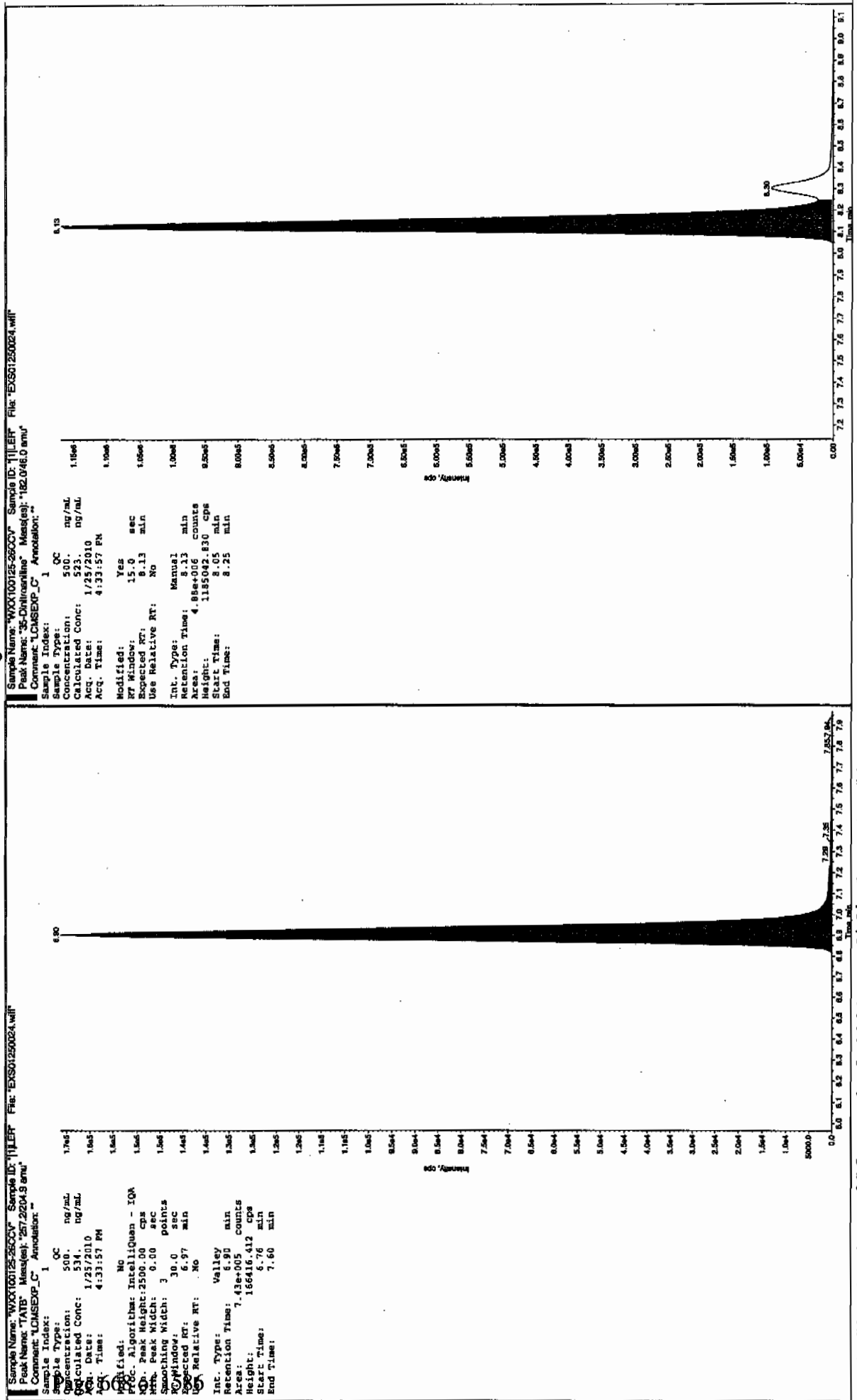
Before scan 1127110

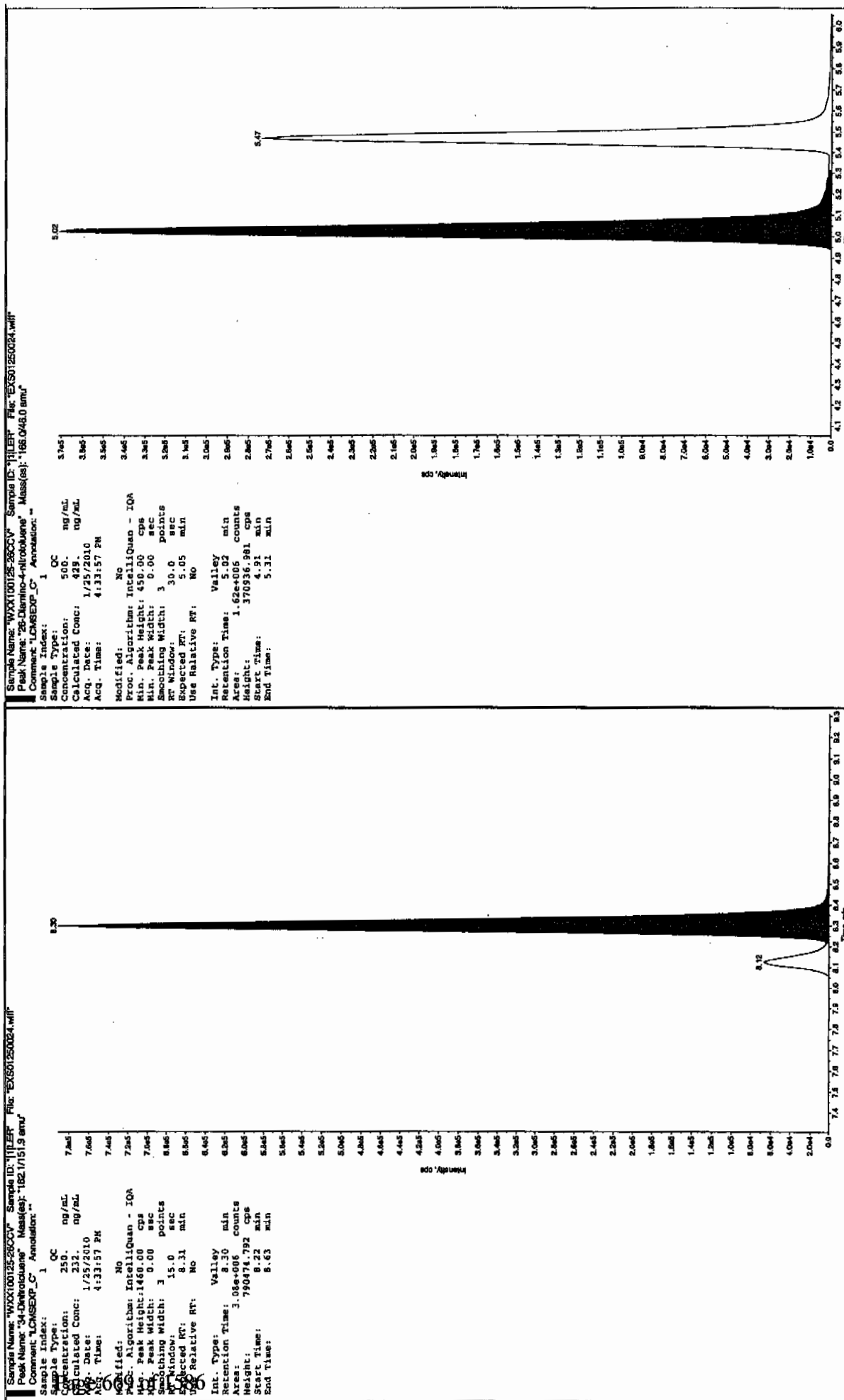


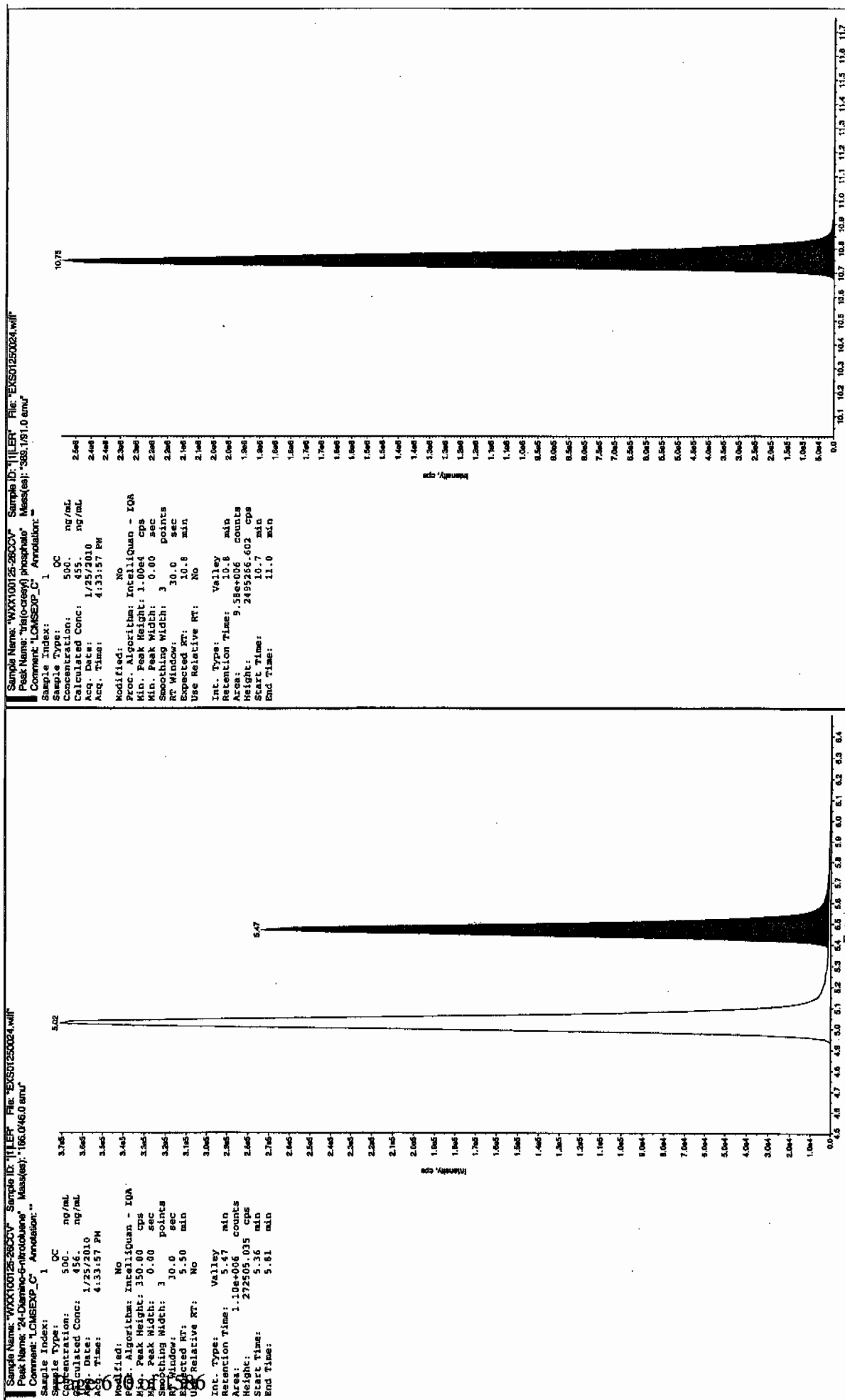
After 8/12/10



after Jan 11 2010







7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1213

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXS01250026.wiff

Analysis Date: 25-JAN-10 17:05

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	100	104	104	
2,6-Diamino-4-nitrotoluene	100	108	108	
3,4-Dinitrotoluene	50	46.3	93	
3,5-Dinitroaniline	100	105	105	
TATB	100	99.8	100	
tris(o-cresyl) phosphate	100	110	110	

Recovery Limits:

3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,

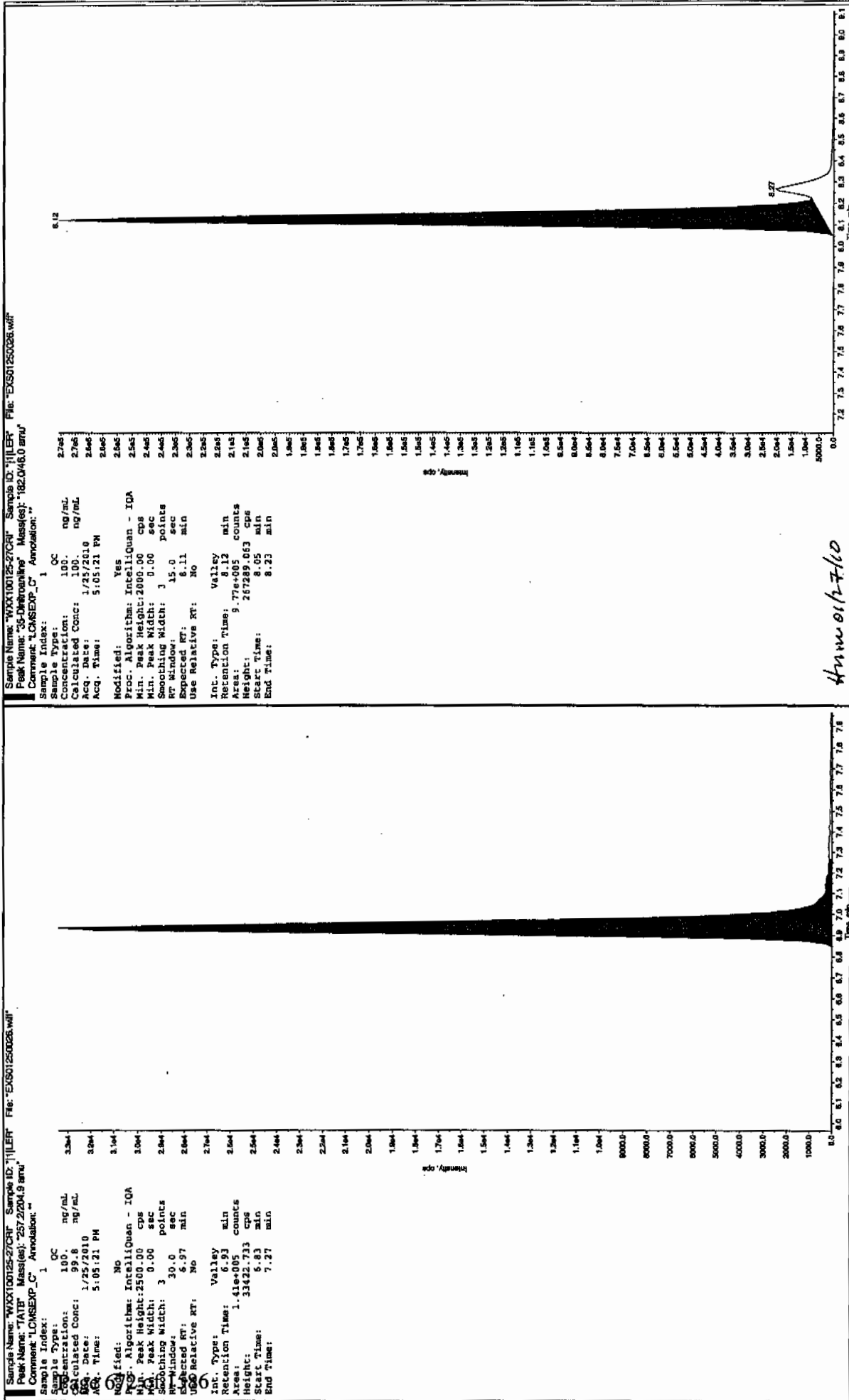
2,4-Diamino-6-nitrotoluene 50-150%

Other Target Analytes 70-130%

Column used to flag Recovery outside of Limits

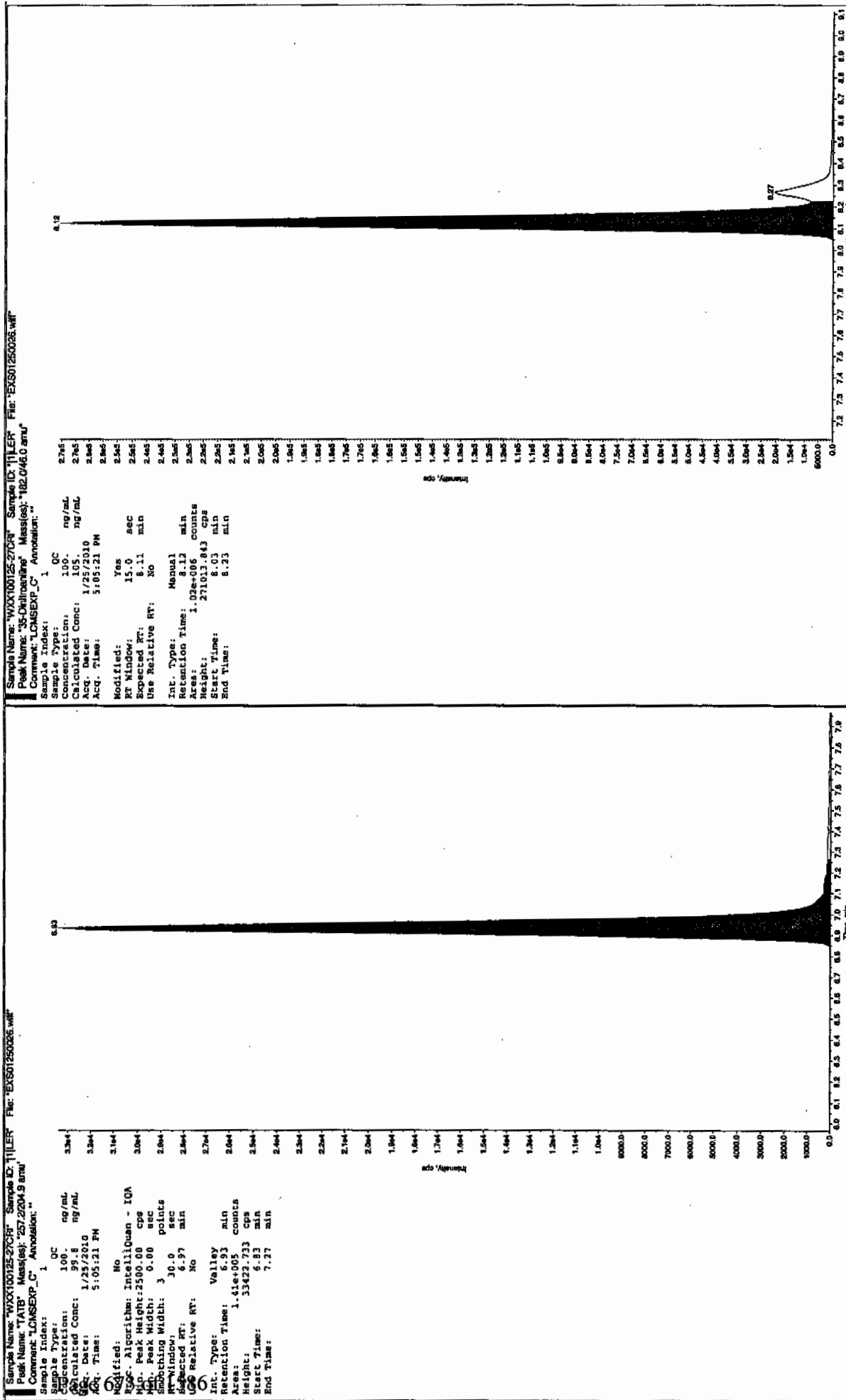
* Value outside of Recovery Limits

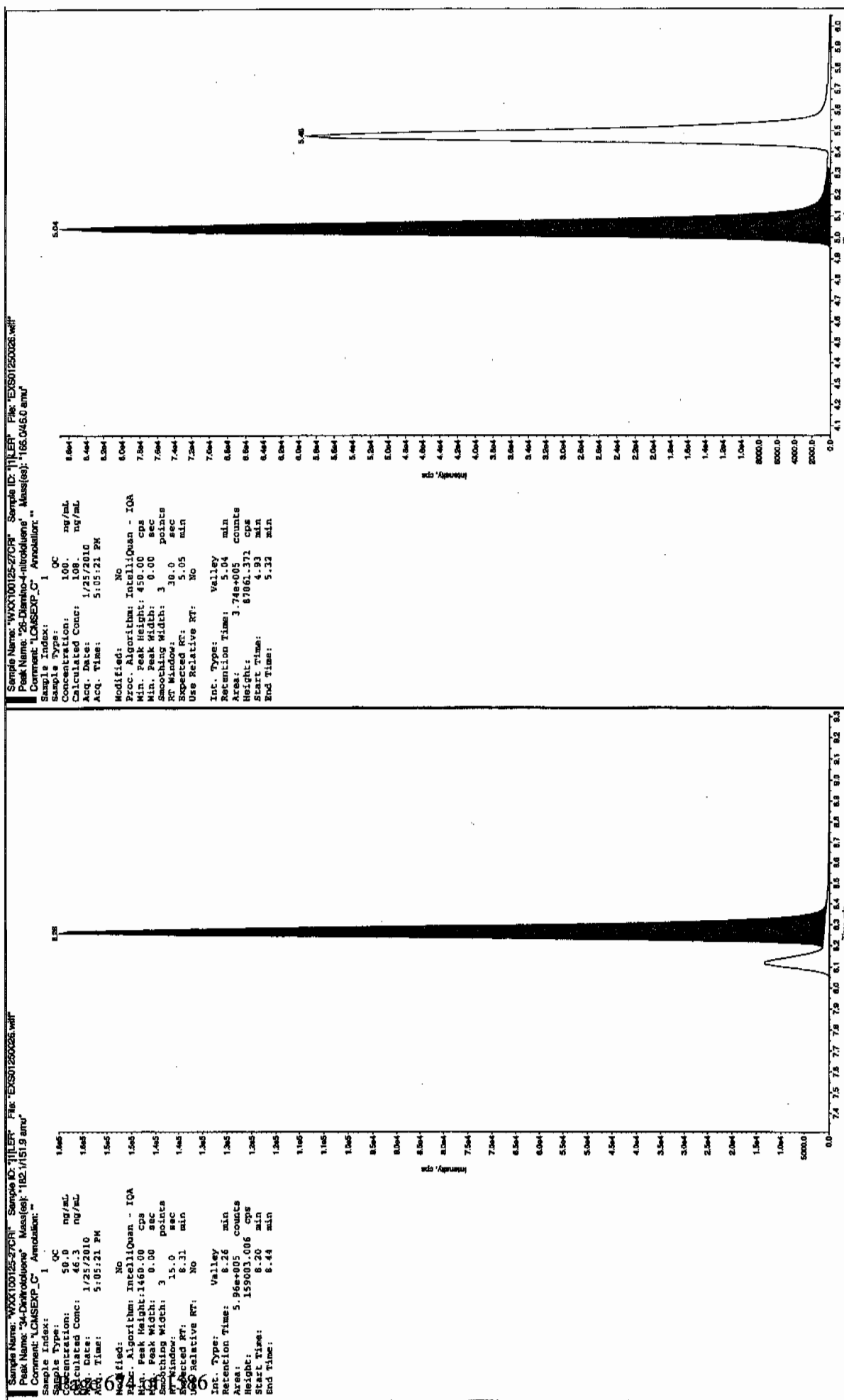
Before Jan 11/27/10

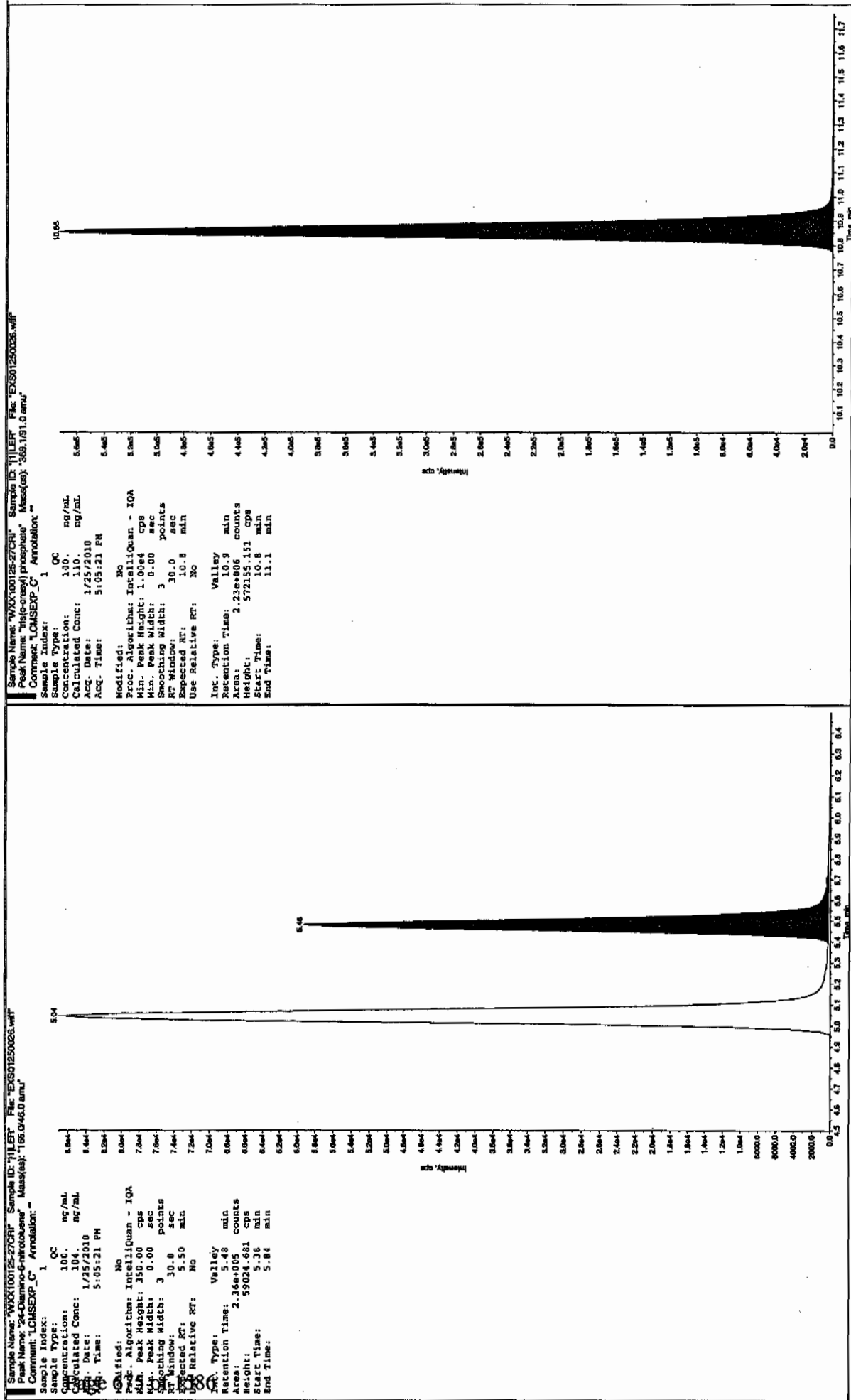


After 11/27/10

after Len 1b7/10







QUALITY CONTROL DATA

1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: MB for batch 941659

Lab Code: GEL

GEL Job No (SDG) 10-1213

Matrix: SOIL

GEL Sample ID: 1202015502

Sample Amount 2

Moisture:

Amount Units g

Date Received: 14-JAN-10

Extraction Type Sonication

Extraction Batch ID: 941659

Concentrated Extract Volume (mL) 10

Date Extracted: 20-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0118213a

Date Analyzed: 22-JAN-10 22:19

Units: ug/kg

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

*Concentration =

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

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

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA4.qld, Time: Sat Jan 23 10:08:29 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0118213a

Date: 22-Jan-2010

Time: 22:19:22

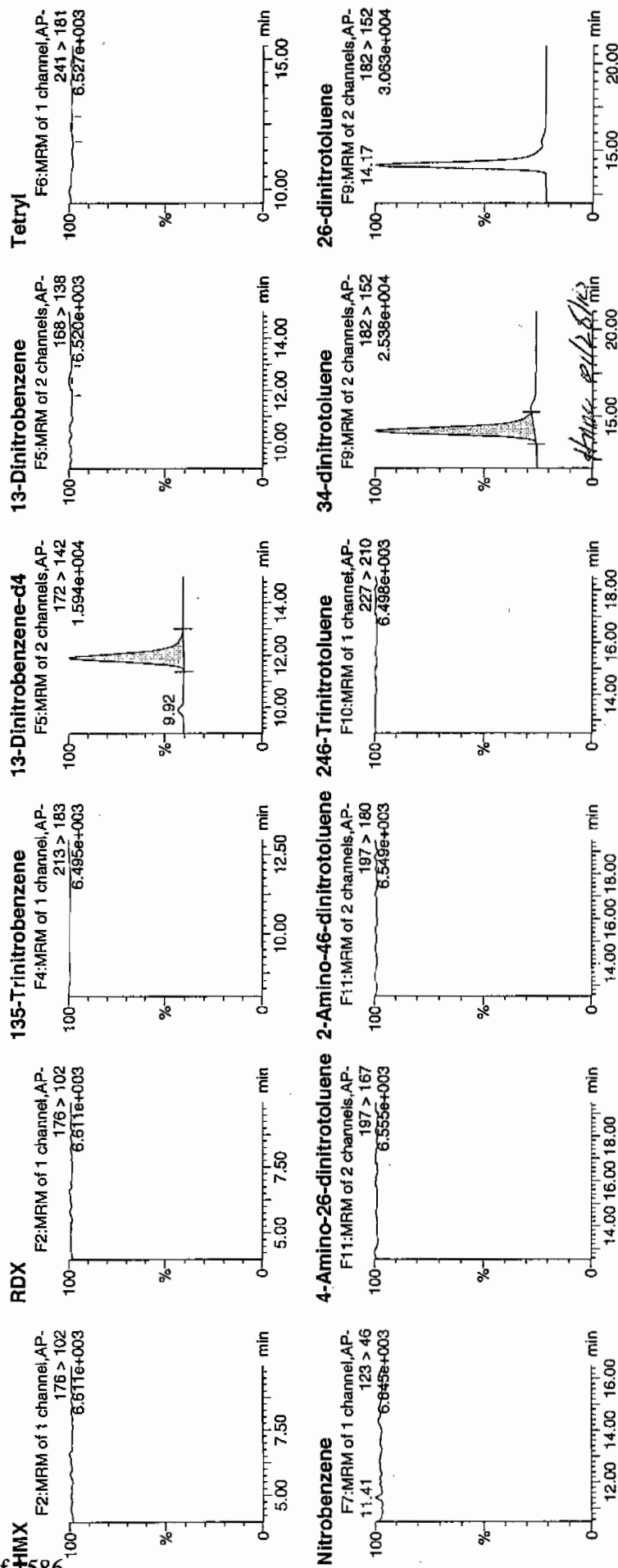
ID: 1202015502

Vial: 2:1,A

1677
 1/23/10

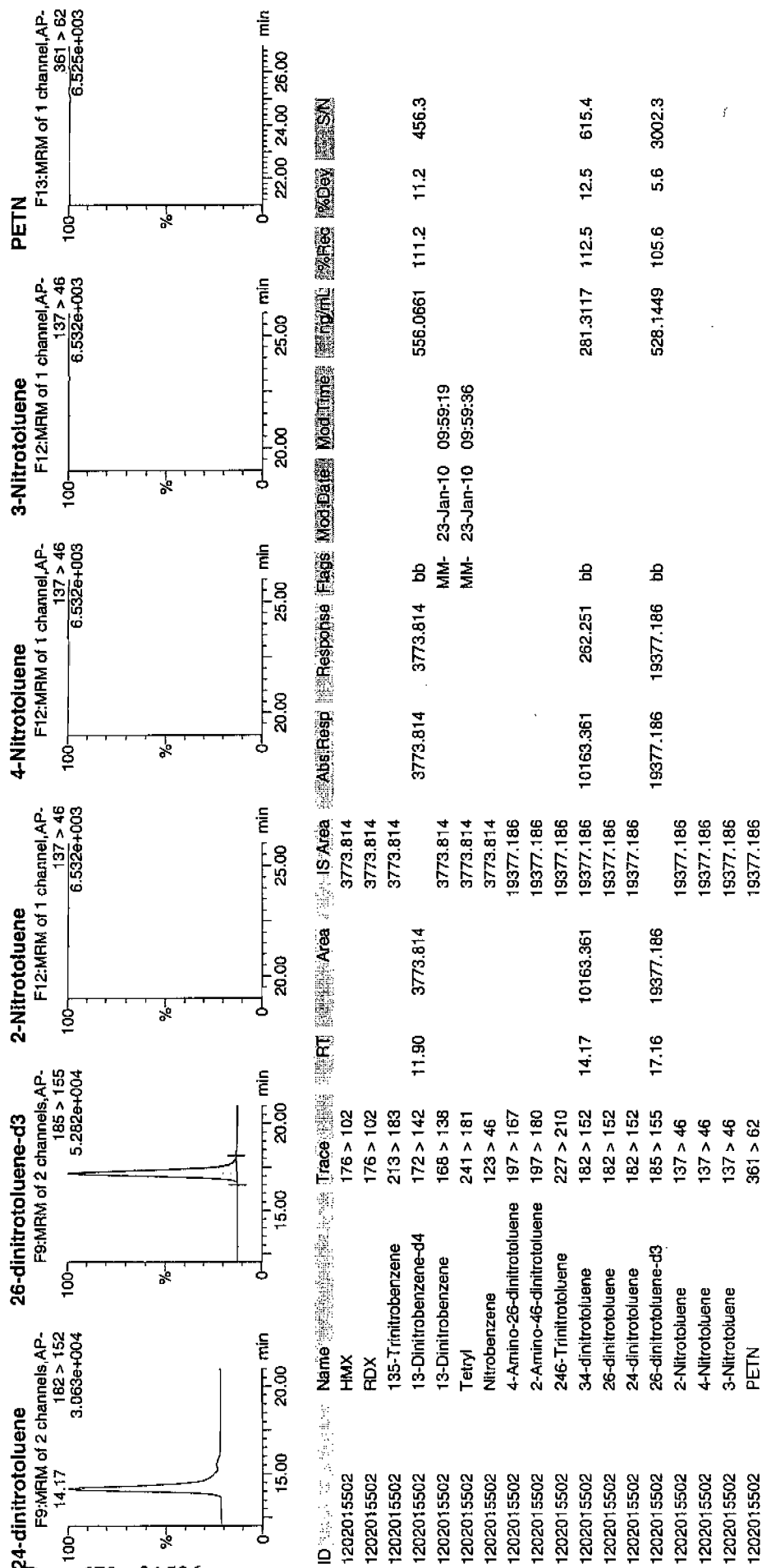
WAW 94160 | 5000 | MB | 2 |

HM
 586



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

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA4.qld, Time: Sat Jan 23 10:08:29 2010



1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: MB for batch 941659

Lab Code: GEL

GEL Job No (SDG) 10-1213

Matrix: SOIL

GEL Sample ID: 1202015502

Sample Amount 2

Moisture:

Amount Units g

Date Received: 14-JAN-10

Extraction Type Sonication

Extraction Batch ID: 941659

Concentrated Extract Volume (mL) 10

Date Extracted: 20-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS01210027.wiff

Date Analyzed: 21-JAN-10 20:17

Units: ug/kg

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

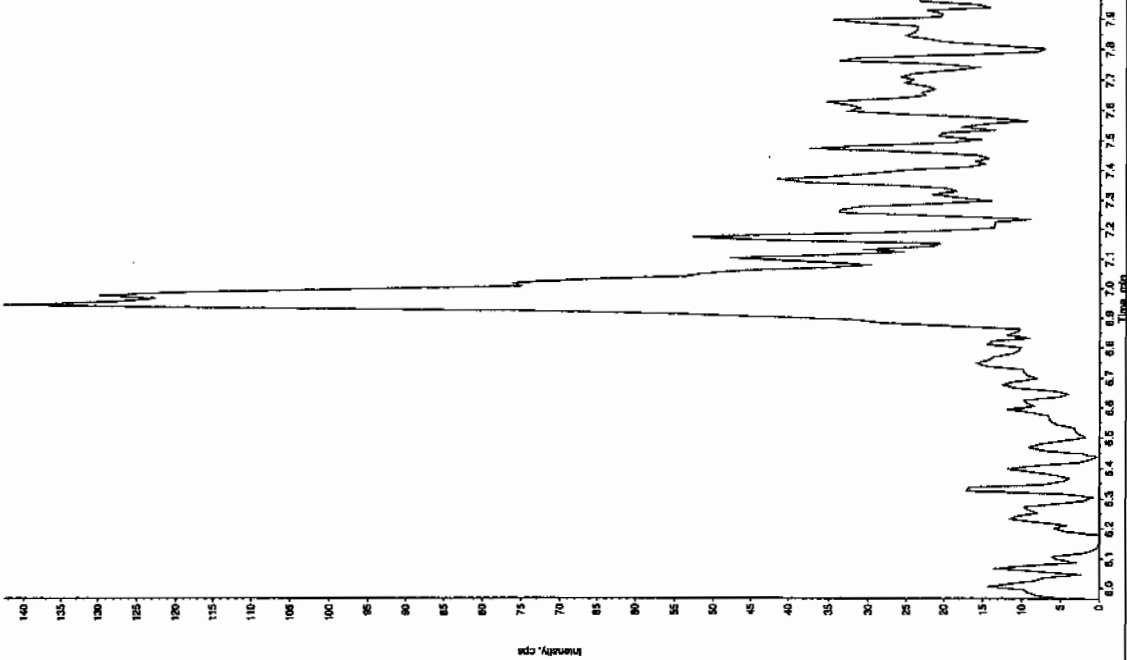
*Concentration =

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

Hand 1/22/10

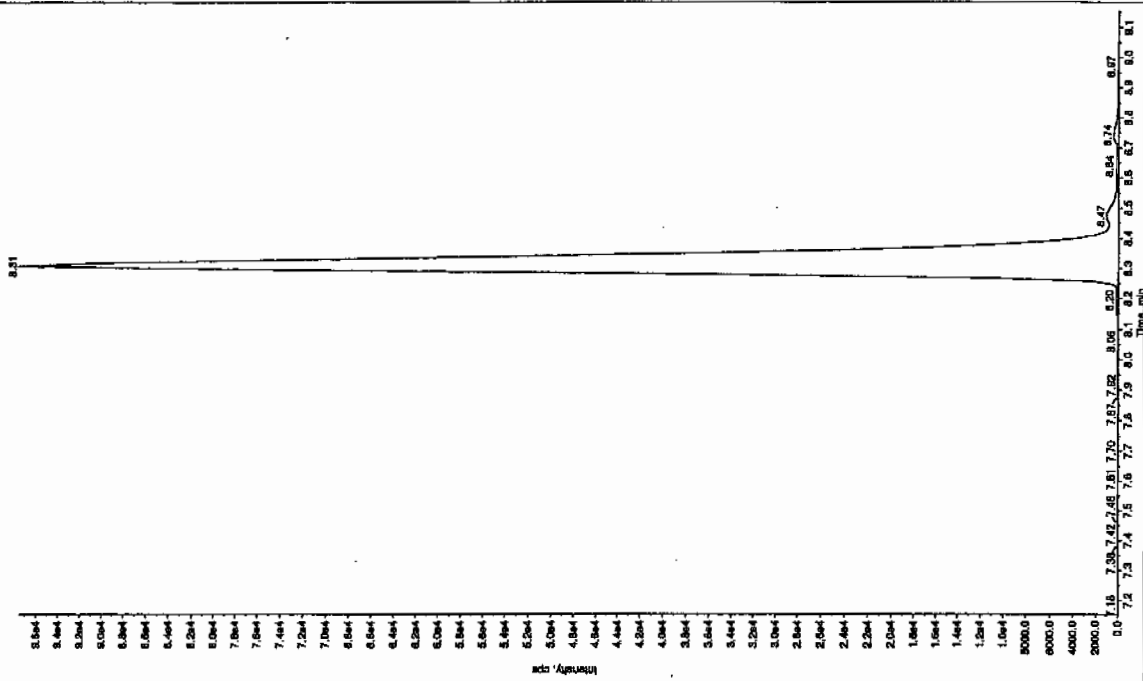
Sample Name: "1202015502" Sample ID: "94156021.ER" File: "EXS01210027.wif"
 Peak Name: "1ATB" Mass(es): "257.2204.9 amu"
 Comment: "LCX83212S" Annotation: ""

Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A
 Calculated Conc: 0.00 ng/mL
 Acq. Date: 1/21/2010
 Acq. Time: 8:17:49 PM
 Modified: No



Sample Name: "1202015502" Sample ID: "941662021.ER" File: "EXS01210027.wif"
 Peak Name: "3S-Dihydroquinoline" Mass(es): "182.046.0 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: 8:17:49 PM
 Modified: No

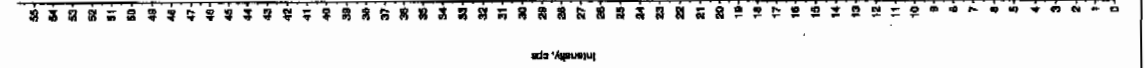


Hand 01/22/10

Sample Name: '1202015502' Sample ID: '941600JLER' File: 'EX301210027.wif'
 Peak Name: '34-Dinitrofluorene' Mass(es): '150.046.0 amu'
 Comment: 'LCX632125' Annotation: ''

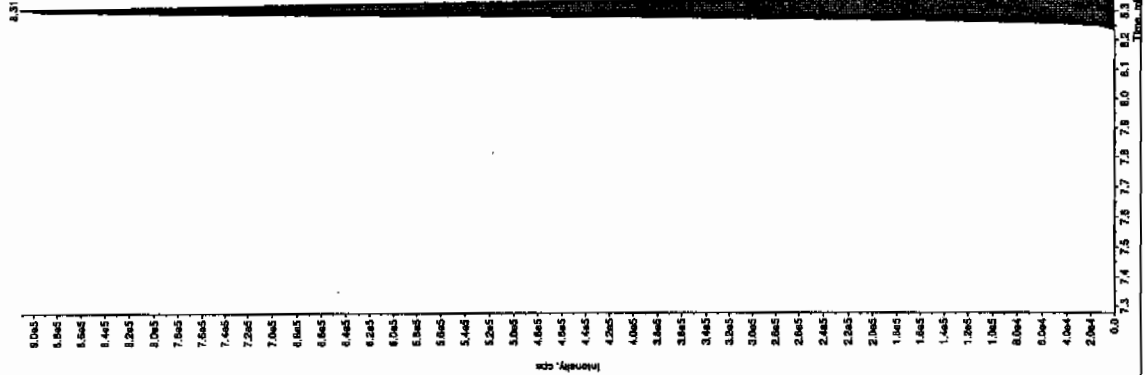
Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A
 Calculated Conc: 0.00 ng/mL
 Acq. Date: 1/21/2010
 Acq. Time: 8:17:49 PM
 Modified: No

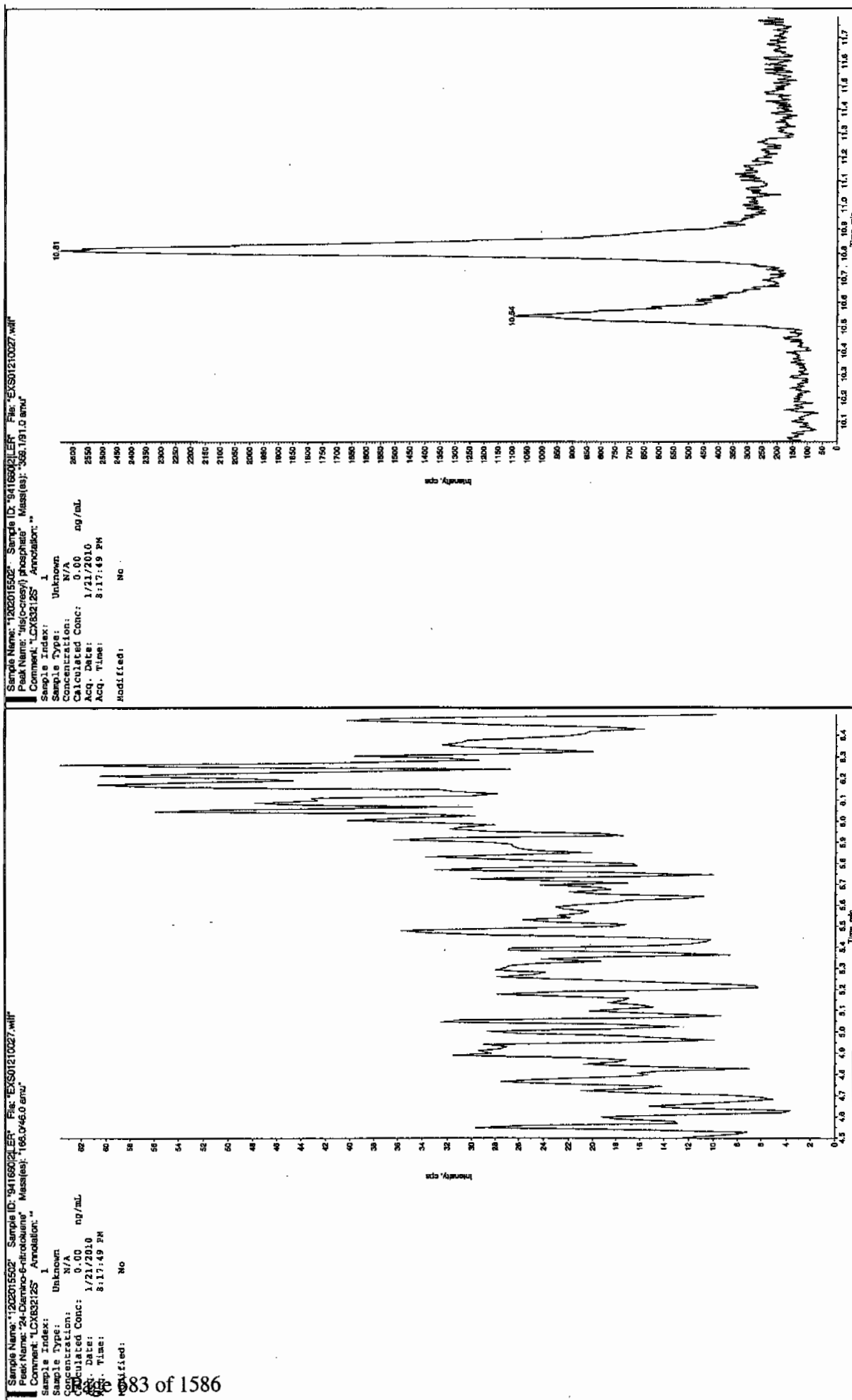
Intensity, cps



Sample Name: '1202015502' Sample ID: '941600JLER' File: 'EX301210027.wif'
 Peak Name: '34-Dinitrofluorene' Mass(es): '150.046.0 amu'
 Comment: 'LCX632125' Annotation: ''

Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A
 Calculated Conc: 0.00 ng/mL
 Acq. Date: 1/21/2010
 Acq. Time: 8:17:49 PM
 Modified: No
 Proc. Algorithm: IntelliQuan - IOA
 Min. Peak Height: 1460.00 cps
 Min. Peak Width: 0.09 sec
 Smoothing Width: 3 points
 RT Window: 15.0 sec
 Expected RT: 8.28 min
 Relative RT: No
 GC. Type: Valley
 Retention Time: 8.31 min
 Area: 3.58e+006 counts
 Height: 910766.832 cps
 Start Time: 8.22 min
 End Time: 8.43 min





1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: LCS for batch 941659

Lab Code: GEL

GEL Job No (SDG) 10-1213

Matrix: SOIL

GEL Sample ID: 1202015503

Sample Amount 2

Moisture:

Amount Units g

Date Received: 14-JAN-10

Extraction Type Sonication

Extraction Batch ID: 941659

Concentrated Extract Volume (mL) 10

Date Extracted: 20-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0118214a

Date Analyzed: 22-JAN-10 22:48

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	5020	
121-14-2	2,4-Dinitrotoluene	5330	
121-82-4	RDX	6260	
19406-51-0	4-Amino-2,6-dinitrotoluene	5540	
2691-41-0	HMX	5330	
35572-78-2	2-Amino-4,6-dinitrotoluene	5590	
479-45-8	Tetryl	3390	
606-20-2	2,6-Dinitrotoluene	5130	
78-11-5	PETN	5020	
88-72-2	o-Nitrotoluene	5310	
98-95-3	Nitrobenzene	5290	
99-08-1	m-Nitrotoluene	5250	
99-35-4	1,3,5-Trinitrobenzene	5040	
99-65-0	m-Dinitrobenzene	5350	
99-99-0	p-Nitrotoluene	5640	

*Concentration =

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

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

Dataset: C:\MASSLYNX\New_Exp_PRO\011810expA4.qld, Time: Sat Jan 23 10:08:29 2010

Name: C:\MASSLYNX\NEW_EXP_PRO\Data\EXP0118214a

Date: 22-Jan-2010

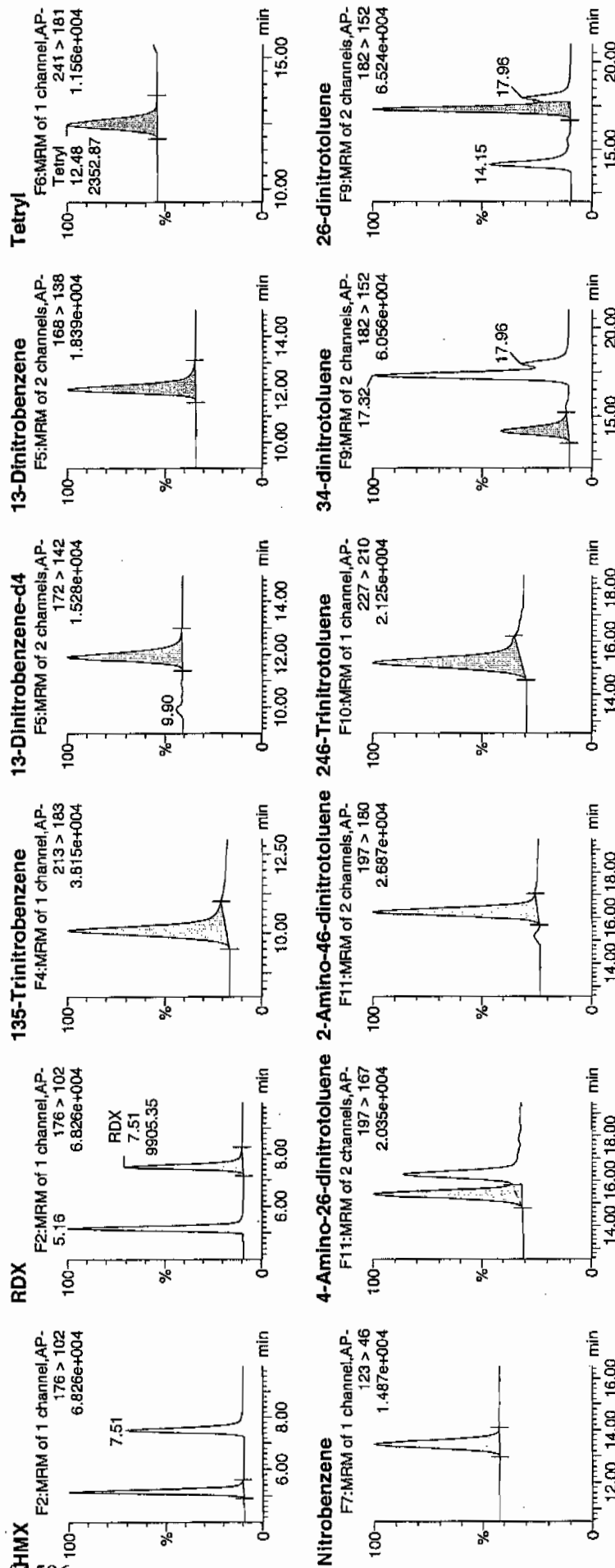
Time: 22:48:55

ID: 1202015503

Vial: 2:1,B

11/23/10

1941660 | 1002 | 2 |

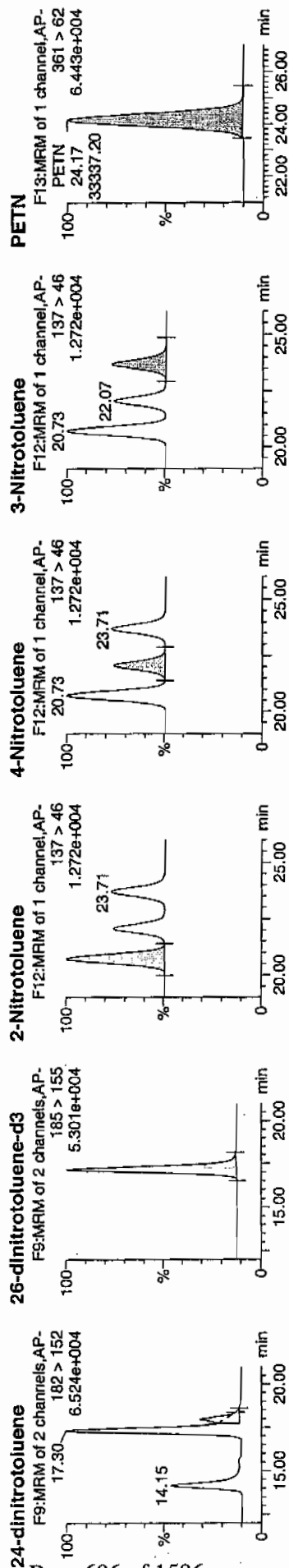


shape 01/23/10

Quantify Sample Report

GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYN\New_Exp.PRO\011810expA4.qld, Time: Sat Jan 23 10:08:29 2010



ID	Name	Trace	RT	Area	IS Area	Abs. Resp	Response	Flags	Mod. Time	Int. (mL)	%Sec	%Dev	S/N
1202015503	HMX	176 > 102	5.16	12249.054	3556.689	12249.054	1721.974	bb		533.4374	106.7	6.7	1912.0
1202015503	RDX	176 > 102	7.51	9905.353	3556.689	9905.353	1392.496	bb		626.2553	125.3	25.3	1298.9
1202015503	135-Trinitrobenzene	213 > 183	10.09	11945.816	3556.689	11945.816	1679.345	bb		504.0309	100.8	0.8	1092.8
1202015503	13-Dinitrobenzene-d4	172 > 142	11.92	3556.689		3556.689	3556.689	bb		524.0730	104.8	4.8	361.0
1202015503	13-Dinitrobenzene	168 > 138	12.03	4497.111	3556.689	4497.111	632.205	bb		534.9886	107.0	7.0	461.1
1202015503	Tetryl	241 > 181	12.48	2352.871	3556.689	2352.871	330.767	bb		338.6884	67.7	-32.3	234.6
1202015503	Nitrobenzene	123 > 46	13.44	3148.367	3556.689	3148.367	442.598	bb		528.6735	105.7	5.7	307.8
1202015503	4-Amino-26-dinitrotoluene	197 > 167	15.38	5811.823	19868.787	5811.823	146.255	MM	23-Jan-10 10:00:50	554.0136	110.8	10.8	217.1
1202015503	2-Amino-46-dinitrotoluene	197 > 180	16.24	8654.923	19868.787	8654.923	217.802	bb		559.0919	111.8	11.8	184.0
1202015503	246-Trinitrotoluene	227 > 210	15.20	7020.421	19868.787	7020.421	176.670	bb		501.7245	100.3	0.3	328.0
1202015503	34-dinitrotoluene	182 > 152	14.15	9956.799	19868.787	9956.799	250.564	bb		268.7755	107.5	7.5	450.3
1202015503	26-dinitrotoluene	182 > 152	17.30	22284.309	19868.787	22284.309	560.787	MM	23-Jan-10 10:04:04	513.4114	102.7	2.7	727.4
1202015503	24-dinitrotoluene	182 > 152	17.96	5354.021	19868.787	5354.021	134.734	MM	23-Jan-10 10:06:50	532.9025	106.6	6.6	164.3
1202015503	26-dinitrotoluene-d3	185 > 155	17.15	19868.787		19868.787	19868.787	bb		541.5440	108.3	8.3	1519.0
1202015503	2-Nitrotoluene	137 > 46	20.73	3169.377	19868.787	3169.377	79.758	bb		531.4468	106.3	6.3	125.4
1202015503	4-Nitrotoluene	137 > 46	22.07	1605.698	19868.787	1605.698	40.408	bb		564.3583	112.9	12.9	65.2
1202015503	3-Nitrotoluene	137 > 46	23.71	1780.132	19868.787	1780.132	44.797	bb		525.2947	105.1	5.1	68.4
1202015503	PETN	361 > 62	24.17	33337.195	19868.787	33337.195	838.934	bb		502.0511	100.4	0.4	6557.4

1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: LCS for batch 941659

Lab Code: GEL

GEL Job No (SDG) 10-1213

Matrix: SOIL

GEL Sample ID: 1202015503

Sample Amount 2

Moisture:

Amount Units g

Date Received: 14-JAN-10

Extraction Type Sonication

Extraction Batch ID: 941659

Concentrated Extract Volume (mL) 10

Date Extracted: 20-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS01250014.wiff

Date Analyzed: 25-JAN-10 13:56

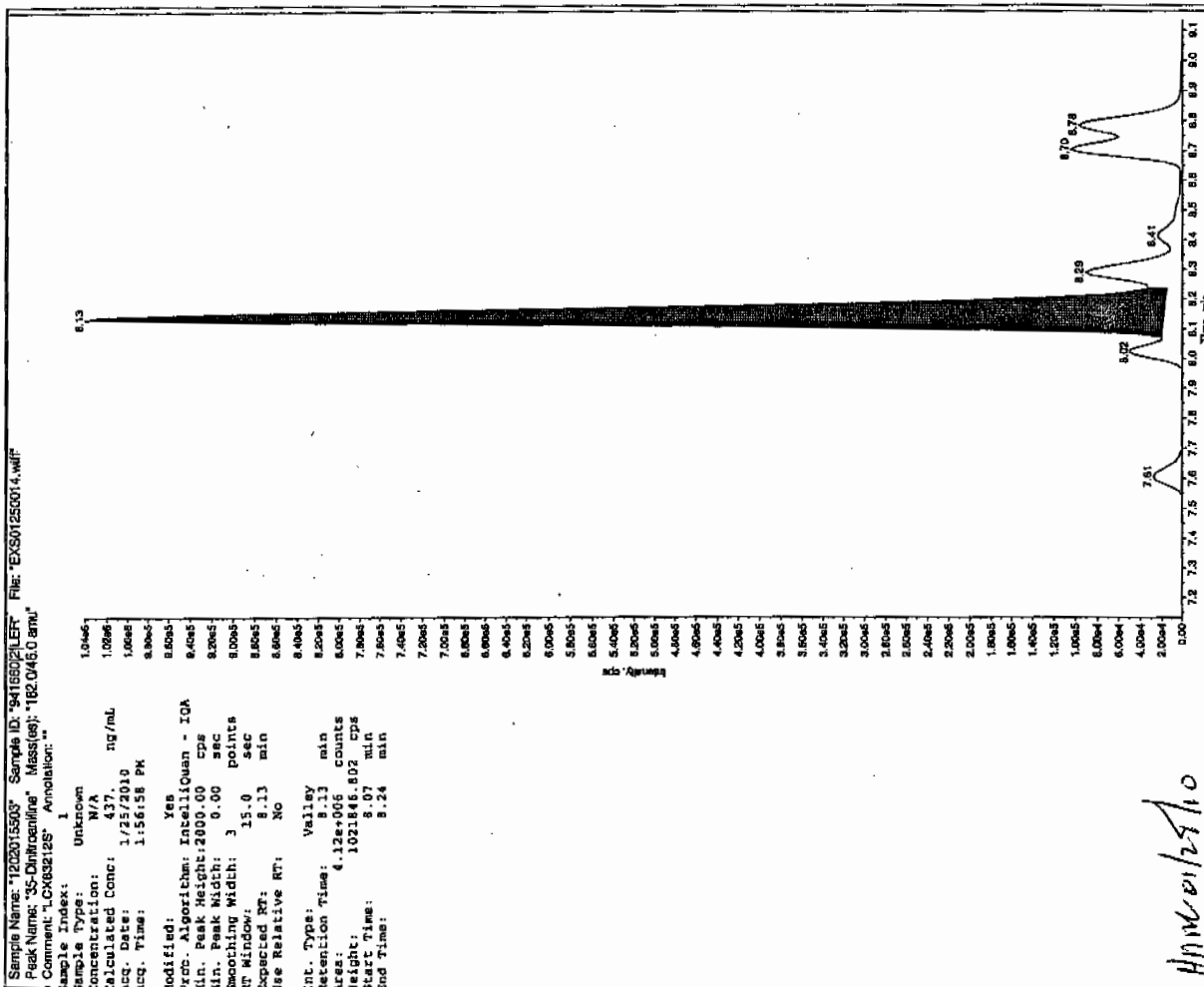
Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB	4900	
59229-75-3	2,6-Diamino-4-nitrotoluene	4330	
618-87-1	3,5-Dinitroaniline	4540	
6629-29-4	2,4-Diamino-6-nitrotoluene	4640	
78-30-8	tris(o-cresyl) phosphate	4320	

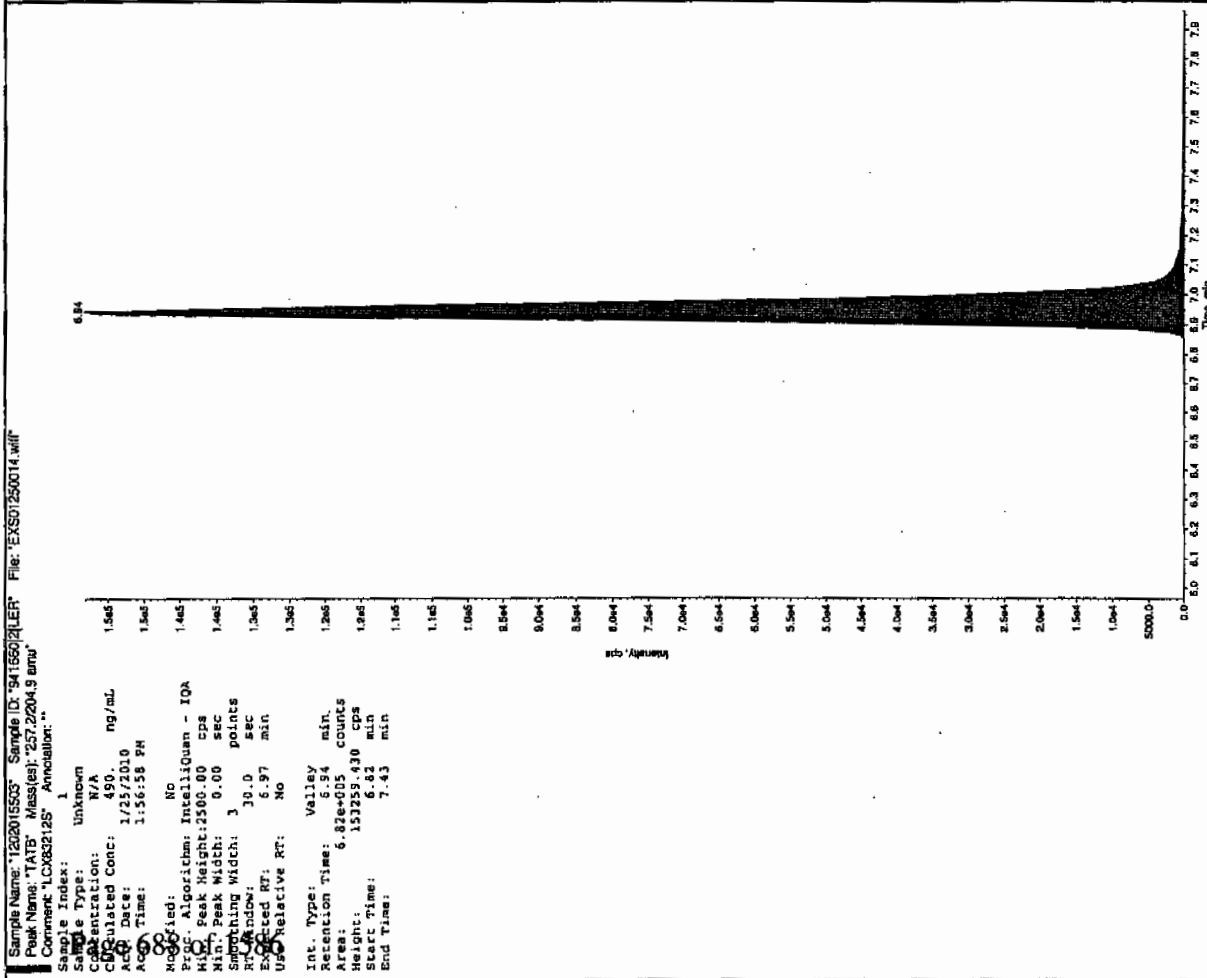
*Concentration =

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

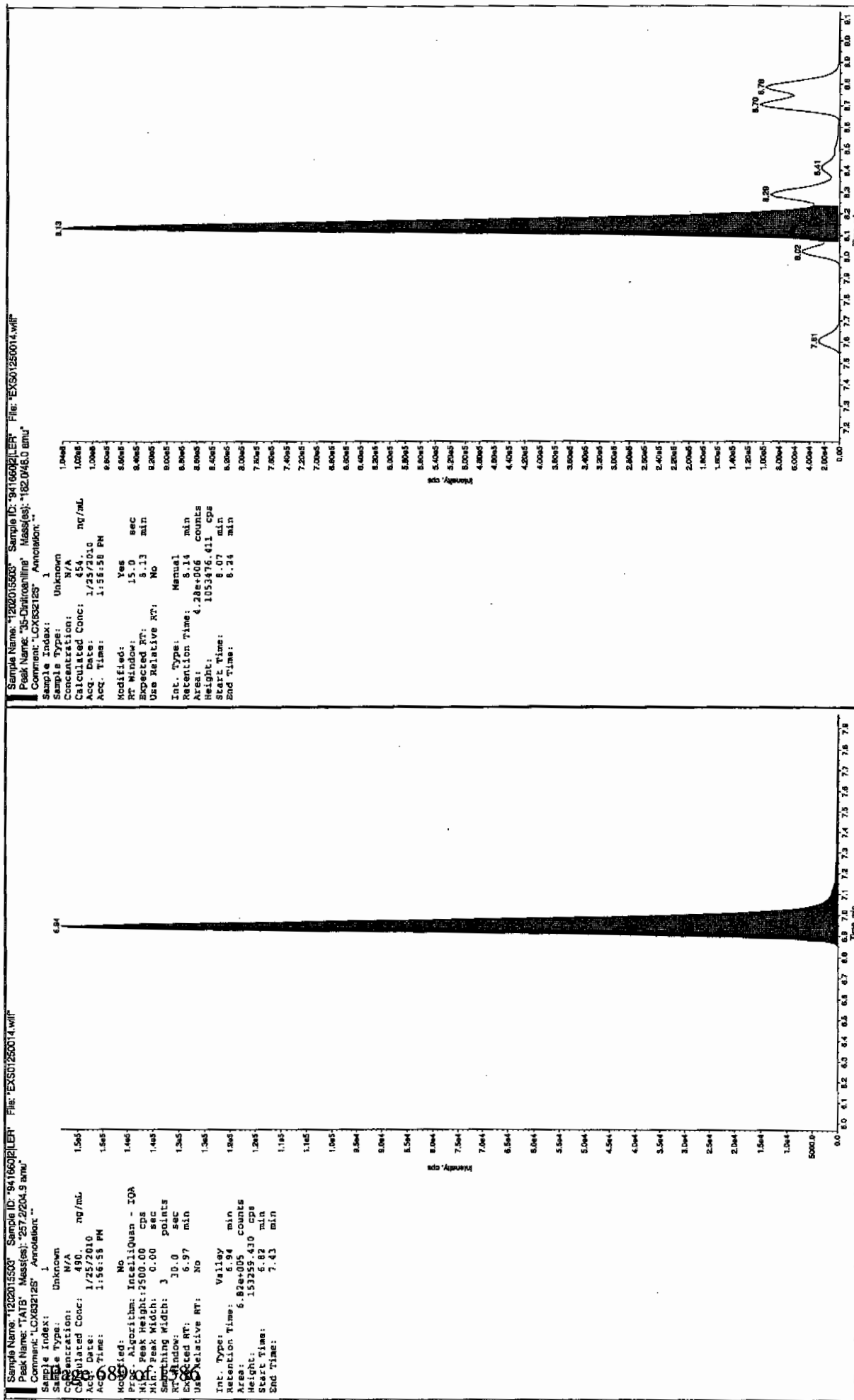
Before Jan 11/27/10



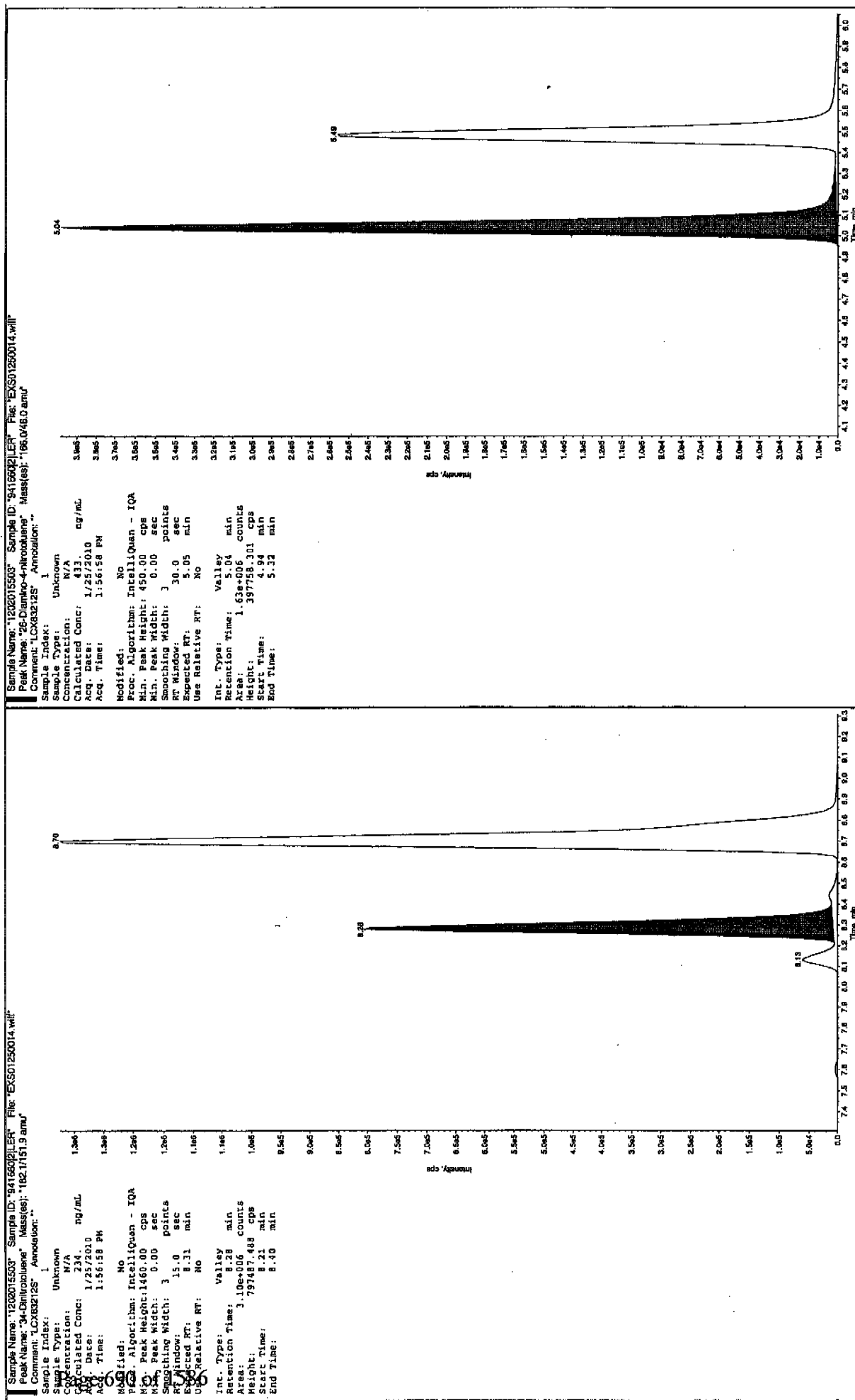
After Jan 11/27/10



after LAR 1/27/10

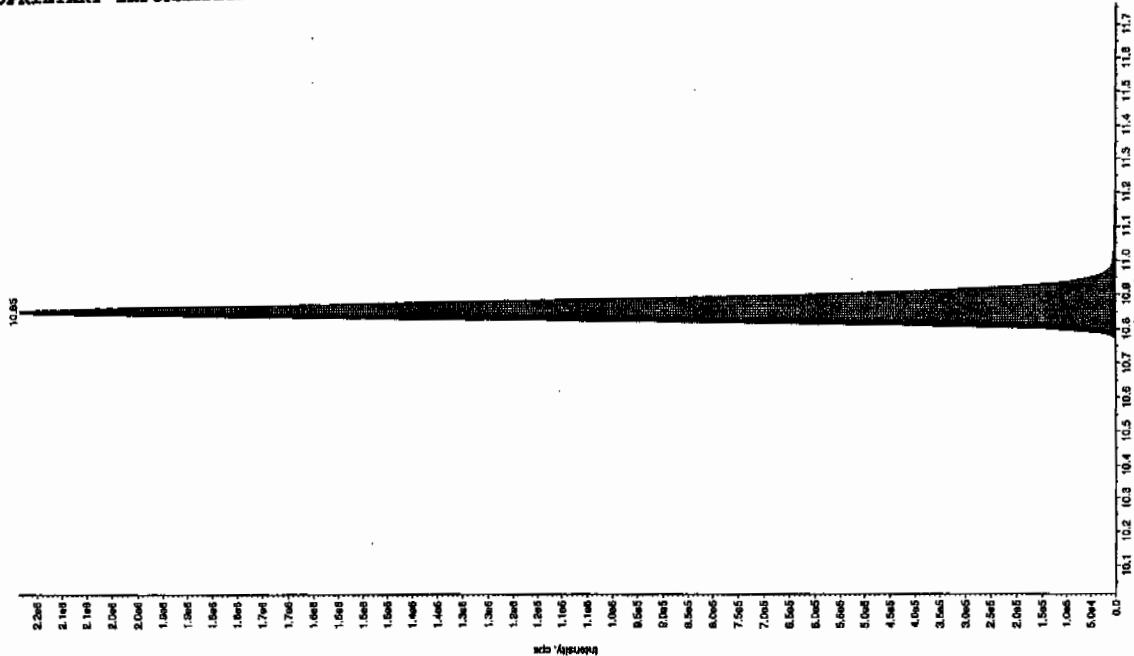


*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4



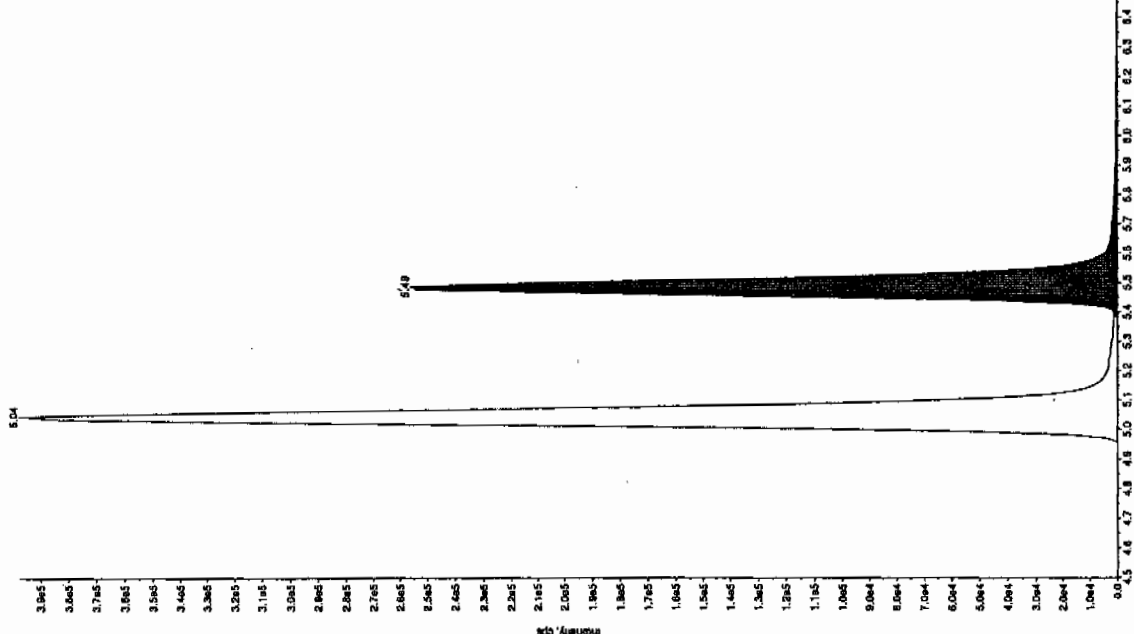
Sample Name: "1202015503" Sample ID: "94168021ER" File: "EXS01250014.wif"
 Peak Name: "bis(O-cresyl) phosphite" Mass(es): "389.1/91.0 amu"
 Comment: "LCX832125" Annotation: ""

Sample Index: 1
 Sample Type: Unknown
 Concentration: 412 ng/mL
 Calculated Conc: 1/25/2010
 Acq. Date: 1/25/2010
 Acq. Time: 1:56:18 PM
 Modified: No
 Proc. Algorithm: IntelliQuan - IQA
 Min. Peak Height: 1.00e4 cps
 Min. Peak Width: 0.00 sec
 Smoothing Width: 3 points
 RT Window: 30.0 sec
 Expected RT: 10.8 min
 Use Relative RT: No
 Int. Type: Valley
 Retention Time: 10.9 min
 Area: 9.13e+006 counts
 Height: 2187779.508 cps
 Start Time: 10.7 min
 End Time: 11.1 min



Sample Name: "1202015503" Sample ID: "94168021ER" File: "EXS01250014.wif"
 Peak Name: "24-Diamino-6-nitrofluorene" Mass(es): "166.0/46.0 amu"
 Comment: "LCX832125" Annotation: ""

Sample Index: 1
 Sample Type: Unknown
 Concentration: 414 ng/mL
 Calculated Conc: 1/23/2010
 Acq. Date: 1/23/2010
 Acq. Time: 1:56:18 PM
 Modified: No
 Proc. Algorithm: IntelliQuan - IQA
 Min. Peak Height: 350.00 cps
 Min. Peak Width: 0.00 sec
 Smoothing Width: 1 point
 RT Window: 30.0 sec
 Expected RT: 5.50 min
 Use Relative RT: No
 Int. Type: Valley
 Retention Time: 5.49 min
 Area: 1.12e+006 counts
 Height: 255603.806 cps
 Start Time: 5.38 min
 End Time: 6.04 min



MISCELLANEOUS DATA

Prep Logbook Nitroaromatics and Nitramines by High Performance Liquid Chromatography (HPLC)

Batch ID: 941659 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)
1202015502 MB	20-JAN-2010 14:01:48	2	10	5
1202015503 LCS	20-JAN-2010 14:01:48	2	10	5
244604001	20-JAN-2010 14:01:48	2	10	5
244604002	20-JAN-2010 14:01:48	2	10	5
244606002	20-JAN-2010 14:01:48	2	10	5
1202015504 MS (244606002)	20-JAN-2010 14:01:48	2	10	5
1202015505 MSD (244606002)	20-JAN-2010 14:01:48	2	10	5
244606003	20-JAN-2010 14:01:48	2	10	5
244606004	20-JAN-2010 14:01:48	2	10	5
244606005	20-JAN-2010 14:01:48	2	10	5
244606006	20-JAN-2010 14:01:48	2	10	5
244606007	20-JAN-2010 14:01:48	2	10	5
244606008	20-JAN-2010 14:01:48	2	10	5
244606009	20-JAN-2010 14:01:48	2	10	5

Type	Sample Id	Description	Serial Number	Spike Amt	Units	Comments
LCS	1202015503	8321 Explosives LCS	DCX091230-03	.1	mL	Final Solvent: ACN
LCS	1202015503	8321 LANL Explosives Mix 10mg/L	UXX100108-01.1	1	mL	
MS	1202015504	8321 Explosives LCS	DCX091230-03	.1	mL	
MS	1202015504	8321 LANL Explosives Mix 10mg/L	UXX100108-01.1	1	mL	
MSD	1202015505	8321 Explosives LCS	DCX091230-03	.1	mL	
MSD	1202015505	8321 LANL Explosives Mix 10mg/L	UXX100108-01.1	1	mL	
SURR	AJ	3,4-Dinitrotoluene (8330 Sur.) 100ppm	EXP100114-02	.05	mL	

GEL ORGANIC RUN LOG

INSTRUMENT ID: LOMSMS #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: *hane*
 Date: *2/28/10*
 SOP: GL-OA-E-056 Rev.12
 Alt Check Std. ID: WXX100118-07 & WXX100120-07

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

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

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	WXGCCV	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	WXGCCV	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	USE	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	WXGCCV	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	WXXCVC	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	WXXCVC	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	WXXCVC	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

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

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
EXP0118187a	244414001	MAP	1/22/10 9:31	940796	10-1194	2	LANL	USE	S
EXP0118188a	244414002	MAP	1/22/10 10:01	940796	10-1194	2	LANL	USE	S
EXP0118189a	244414003	MAP	1/22/10 10:30	940796	10-1194	2	LANL	USE	S
EXP0118190a	244414004	MAP	1/22/10 11:00	940796	10-1194	2	LANL	USE	S
EXP0118191a	244414005	MAP	1/22/10 11:30	940796	10-1194	2	LANL	USE	S
EXP0118192a	244414006	MAP	1/22/10 11:59	940796	10-1194	2	LANL	USE	S
EXP0118193a	XIBLK21	MAP	1/22/10 12:29			1		USE	B
EXP0118194a	244223013	MAP	1/22/10 12:58	940099	10-1155	5	LANL	USE	S
EXP0118195a	244223015	MAP	1/22/10 13:28	940099	10-1155	5	LANL	USE	S
EXP0118196a	IXP100121-02	MAP	1/22/10 13:57	SCREEN	NA	1	GEL	USE	S
EXP0118197a	WXXCCV	MAP	1/22/10 14:27			1		USE	C
EXP0118198a	XIBLK22	MAP	1/22/10 14:56			1		USE	B
EXP0118199a	WXXCRI	MAP	1/22/10 15:26			1		USE	C
EXP0118200a	1202014488	MAP	1/22/10 15:55	941229	10-1182	2	LANL	USE	S
EXP0118201a	1202014489	MAP	1/22/10 16:25	941229	10-1182	2	LANL	USE	S
EXP0118202a	244514001	MAP	1/22/10 16:54	941229	10-1182	2	LANL	USE	S
EXP0118203a	1202014490	MAP	1/22/10 17:24	941229	10-1182	2	LANL	USE	S
EXP0118204a	1202014491	MAP	1/22/10 17:53	941229	10-1182	2	LANL	USE	S
EXP0118205a	244514002	MAP	1/22/10 18:23	941229	10-1182	2	LANL	USE	S
EXP0118206a	244514003	MAP	1/22/10 18:52	941229	10-1182	2	LANL	USE	S
EXP0118207a	244514004	MAP	1/22/10 19:22	941229	10-1182	2	LANL	USE	S
EXP0118208a	244514005	MAP	1/22/10 19:51	941229	10-1182	2	LANL	USE	S
EXP0118209a	244514006	MAP	1/22/10 20:21	941229	10-1182	2	LANL	USE	S
EXP0118210a	WXXCCV	MAP	1/22/10 20:50			1		USE	C
EXP0118211a	XIBLK23	MAP	1/22/10 21:20			1		USE	B
EXP0118212a	WXXCRI	MAP	1/22/10 21:49			1		USE	C
EXP0118213a	1202015502	MAP	1/22/10 22:19	941660	Various	2	LANL	USE	S
EXP0118214a	1202015503	MAP	1/22/10 22:48	941660	Various	2	LANL	USE	S

EXP0118215a	244604001	MAP	1/22/10 23:18	941660	10-1213	2	LANL	USE	S
EXP0118216a	244604002	MAP	1/22/10 23:47	941660	10-1213	2	LANL	USE	S
EXP0118217a	244606002	MAP	1/23/10 0:17	941660	10-1214	2	LANL	USE	S
EXP0118218a	1202015504	MAP	1/23/10 0:46	941660	10-1214	2	LANL	USE	S
EXP0118219a	1202015505	MAP	1/23/10 1:16	941660	10-1214	2	LANL	USE	S
EXP0118220a	244606003	MAP	1/23/10 1:45	941660	10-1214	2	LANL	USE	S
EXP0118221a	244606004	MAP	1/23/10 2:15	941660	10-1214	2	LANL	USE	S
EXP0118222a	244606005	MAP	1/23/10 2:44	941660	10-1214	2	LANL	USE	S
EXP0118223a	WXXCCV	MAP	1/23/10 3:14			1		USE	C
EXP0118224a	XIBLK24	MAP	1/23/10 3:43			1		USE	B
EXP0118225a	WXXCRI	MAP	1/23/10 4:13			1		USE	C
EXP0118226a	244606006	MAP	1/23/10 4:42	941660	10-1214	2	LANL	USE	S
EXP0118227a	244606007	MAP	1/23/10 5:12	941660	10-1214	2	LANL	USE	S
EXP0118228a	244606008	MAP	1/23/10 5:41	941660	10-1214	2	LANL	USE	S
EXP0118229a	244606009	MAP	1/23/10 6:11	941660	10-1214	2	LANL	USE	S
EXP0118230a	XIBLK25	MAP	1/23/10 6:40			1		USE	B
EXP0118231a	1202015506	MAP	1/23/10 7:10	941662	Various	2	LANL	USE	S
EXP0118232a	1202015507	MAP	1/23/10 7:40	941662	Various	2	LANL	USE	S
EXP0118233a	244612001	MAP	1/23/10 8:09	941662	10-1216	2	LANL	USE	S
EXP0118234a	1202015508	MAP	1/23/10 8:38	941662	10-1216	2	LANL	USE	S
EXP0118235a	1202015509	MAP	1/23/10 9:08	941662	10-1216	2	LANL	USE	S
EXP0118236a	WXXCCV	MAP	1/23/10 9:37			1		USE	C
EXP0118237a	XIBLK26	MAP	1/23/10 10:07			1		USE	B
EXP0118238a	WXXCRI	MAP	1/23/10 10:36			1		USE	C

GEL ORGANIC RUN LOG

INSTRUMENT ID: LCMSMS4

Date: 01/21/10
 Exlr. Injection Volume: 10uL
 Sequence Number: 012110exs
 Initial Calibration Date: 012110
 Method: 8321A-Modified
 Int. Std.: N/A
 Mobile Phase Lot#: 1236350, 1246467
 Standard-Samp Reagent Lot#: 1246195, 1253092
 SOP: GL-OA-E-056 Rev.12
 Alt Check Std. ID: WXX100121-26

Reviewed By: *HMC*
 Date: *01/23/10*

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC Flag
EXS01210001.wiff	XIBLK01	LER	1/21/2010 13:29			1		USE	B
EXS01210002.wiff	XIBLK01	LER	1/21/2010 13:45			1		USE	B
EXS01210003.wiff	WXXICAL-19	LER	1/21/2010 14:01			1		USE	I
EXS01210004.wiff	WXXICAL-20	LER	1/21/2010 14:16			1		USE	I
EXS01210005.wiff	WXXICAL-21	LER	1/21/2010 14:32			1		USE	I
EXS01210006.wiff	WXXICAL-22	LER	1/21/2010 14:48			1		USE	I
EXS01210007.wiff	WXXICAL-23	LER	1/21/2010 15:03			1		USE	I
EXS01210008.wiff	WXXICAL-24	LER	1/21/2010 15:19			1		USE	I
EXS01210009.wiff	WXXICAL-25	LER	1/21/2010 15:35			1		USE	I
EXS01210010.wiff	XIBLK02	LER	1/21/2010 15:50			1		USE	B
EXS01210011.wiff	WXXICV	LER	1/21/2010 16:06			1		USE	C
EXS01210012.wiff	XIBLK03	LER	1/21/2010 16:22			1		USE	B
EXS01210013.wiff	WXXCRI	LER	1/21/2010 16:38			1		USE	C
EXS01210014.wiff	1202014488	LER	1/21/2010 16:53	941229	10-1182	2	LANL	USE	S
EXS01210015.wiff	1202014489	LER	1/21/2010 17:09	941229	10-1182	2	LANL	USE	S
EXS01210016.wiff	244514001	LER	1/21/2010 17:25	941229	10-1182	2	LANL	USE	S
EXS01210017.wiff	1202014490	LER	1/21/2010 17:40	941229	10-1182	2	LANL	USE	S
EXS01210018.wiff	1202014491	LER	1/21/2010 17:56	941229	10-1182	2	LANL	USE	S
EXS01210019.wiff	244514002	LER	1/21/2010 18:12	941229	10-1182	2	LANL	USE	S
EXS01210020.wiff	244514003	LER	1/21/2010 18:27	941229	10-1182	2	LANL	USE	S
EXS01210021.wiff	244514004	LER	1/21/2010 18:43	941229	10-1182	2	LANL	USE	S
EXS01210022.wiff	244514005	LER	1/21/2010 18:59	941229	10-1182	2	LANL	USE	S
EXS01210023.wiff	244514006	LER	1/21/2010 19:15	941229	10-1182	2	LANL	USE	S
EXS01210024.wiff	WXXCCV	LER	1/21/2010 19:30			1		USE	C
EXS01210025.wiff	XIBLK04	LER	1/21/2010 19:46			1		USE	B
EXS01210026.wiff	WXXCRI	LER	1/21/2010 20:02			1		USE	C
EXS01210027.wiff	1202015502	LER	1/21/2010 20:17	941660	VARIOUS	2	LANL	USE	S
EXS01210028.wiff	1202015503	LER	1/21/2010 20:33	941660	VARIOUS	2	LANL	DUSE-RA	S

EXS01210029.wiff	244604001	LER	1/21/2010 20:49	941660	10-1213	2	LANL	USE	S
EXS01210030.wiff	244604002	LER	1/21/2010 21:04	941660	10-1213	2	LANL	USE	S
EXS01210031.wiff	244606002	LER	1/21/2010 21:20	941660	10-1214	2	LANL	USE	S
EXS01210032.wiff	1202015504	LER	1/21/2010 21:36	941660	10-1214	2	LANL	DUSE-RA	S
EXS01210033.wiff	1202015505	LER	1/21/2010 21:52	941660	10-1214	2	LANL	USE	S
EXS01210034.wiff	244606003	LER	1/21/2010 22:07	941660	10-1214	2	LANL	USE	S
EXS01210035.wiff	244606004	LER	1/21/2010 22:23	941660	10-1214	2	LANL	USE	S
EXS01210036.wiff	244606005	LER	1/21/2010 22:39	941660	10-1214	2	LANL	USE	S
EXS01210037.wiff	WXXCCV	LER	1/21/2010 22:54			1		USE	C
EXS01210038.wiff	XIBLK05	LER	1/21/2010 23:10			1		USE	B
EXS01210039.wiff	WXXCRI	LER	1/21/2010 23:26			1		USE	C
EXS01210040.wiff	244606006	LER	1/21/2010 23:41	941660	10-1214	2	LANL	USE	S
EXS01210041.wiff	244606007	LER	1/21/2010 23:57	941660	10-1214	2	LANL	USE	S
EXS01210042.wiff	244606008	LER	1/22/2010 0:13	941660	10-1214	2	LANL	USE	S
EXS01210043.wiff	244606009	LER	1/22/2010 0:29	941660	10-1214	2	LANL	USE	S
EXS01210044.wiff	UXX100108-01.1	LER	1/22/2010 0:44	SCREEN	SOLID	2	O2SI	USE	S
EXS01210045.wiff	WXXCCV	LER	1/22/2010 1:00			1		USE	C
EXS01210046.wiff	XIBLK06	LER	1/22/2010 1:16			1		USE	B
EXS01210047.wiff	WXXCRI	LER	1/22/2010 1:32			1		USE	C
EXS01210048.wiff	1202013482	LER	1/22/2010 1:47	940796	VARIOUS	2	LANL	USE	S
EXS01210049.wiff	1202013483	LER	1/22/2010 2:03	940796	VARIOUS	2	LANL	USE	S
EXS01210050.wiff	244413001	LER	1/22/2010 2:19	940796	10-1202	2	LANL	USE	S
EXS01210051.wiff	1202013484	LER	1/22/2010 2:34	940796	10-1202	2	LANL	USE	S
EXS01210052.wiff	1202013485	LER	1/22/2010 2:50	940796	10-1202	2	LANL	USE	S
EXS01210053.wiff	244413002	LER	1/22/2010 3:06	940796	10-1202	2	LANL	USE	S
EXS01210054.wiff	244413003	LER	1/22/2010 3:22	940796	10-1202	2	LANL	USE	S
EXS01210055.wiff	244413004	LER	1/22/2010 3:37	940796	10-1202	2	LANL	USE	S
EXS01210056.wiff	244413005	LER	1/22/2010 3:53	940796	10-1202	2	LANL	USE	S
EXS01210057.wiff	WXXCCV	LER	1/22/2010 4:09			1		USE	C
EXS01210058.wiff	XIBLK07	LER	1/22/2010 4:24			1		USE	B
EXS01210059.wiff	WXXCRI	LER	1/22/2010 4:40			1		USE	C
EXS01210060.wiff	244414001	LER	1/22/2010 4:56	940796	10-1194	2	LANL	USE	S
EXS01210061.wiff	244414002	LER	1/22/2010 5:11	940796	10-1194	2	LANL	USE	S
EXS01210062.wiff	244414003	LER	1/22/2010 5:27	940796	10-1194	2	LANL	USE	S
EXS01210063.wiff	244414004	LER	1/22/2010 5:43	940796	10-1194	2	LANL	USE	S
EXS01210064.wiff	244414005	LER	1/22/2010 5:59	940796	10-1194	2	LANL	USE	S
EXS01210065.wiff	244414006	LER	1/22/2010 6:14	940796	10-1194	2	LANL	USE	S

C B C

USE
USE
USE

1
1
1

1/22/2010 6:30
1/22/2010 6:46
1/22/2010 7:01

LER
LER
LER

WXXCCV
XIBLK08
WXXCRI

EXS01210066.wiff
EXS01210067.wiff
EXS01210068.wiff

GEL ORGANIC RUN LOG

INSTRUMENT ID: LCMSMS4

Date: 01/25/10
 Extr. Injection Volume: 10uL
 Sequence Number: 012510exs
 Initial Calibration Date: 012510
 Method: 8321A-Modified
 Int. Std.: N/A
 Mobile Phase Lot#: 1250738, 1246467
 Standard-Samp Reagent Lot#: 1246195, 1253092
 Reviewed By: *Amc*
 Date: *01/28/10*
 SOP: GL-OA-E-056 Rev.12
 Alt Check Std. ID: WXX100125-26

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC Flag
EXS01250001.wiff	XIBLK01	LER	1/25/2010 10:28			1		USE	B
EXS01250002.wiff	XIBLK01	LER	1/25/2010 10:46			1		USE	B
EXS01250003.wiff	WXXICAL-19	LER	1/25/2010 11:02			1		USE	I
EXS01250004.wiff	WXXICAL-20	LER	1/25/2010 11:18			1		USE	I
EXS01250005.wiff	WXXICAL-21	LER	1/25/2010 11:33			1		USE	I
EXS01250006.wiff	WXXICAL-22	LER	1/25/2010 11:51			1		USE	I
EXS01250007.wiff	WXXICAL-23	LER	1/25/2010 12:07			1		USE	I
EXS01250008.wiff	WXXICAL-24	LER	1/25/2010 12:22			1		USE	I
EXS01250009.wiff	WXXICAL-25	LER	1/25/2010 12:38			1		USE	I
EXS01250010.wiff	XIBLK02	LER	1/25/2010 12:54			1		USE	B
EXS01250011.wiff	WXXICV	LER	1/25/2010 13:09			1		USE	C
EXS01250012.wiff	XIBLK03	LER	1/25/2010 13:25			1		USE	B
EXS01250013.wiff	WXXCRI	LER	1/25/2010 13:41			1		USE	C
EXS01250014.wiff	1202015503	LER	1/25/2010 13:56	941660	VARIOUS	2	LANL	USE	S
EXS01250015.wiff	1202015504	LER	1/25/2010 14:12	941660	10-1214	2	LANL	USE	S
EXS01250016.wiff	XIBLK04	LER	1/25/2010 14:28			1		USE	B
EXS01250017.wiff	1202017300	LER	1/25/2010 14:44	942335	VARIOUS	2	LANL	USE	S
EXS01250018.wiff	1202017301	LER	1/25/2010 14:59	942335	VARIOUS	2	LANL	USE	S
EXS01250019.wiff	244847001	LER	1/25/2010 15:15	942335	10-1262	2	LANL	USE	S
EXS01250020.wiff	1202017302	LER	1/25/2010 15:31	942335	10-1262	2	LANL	USE	S
EXS01250021.wiff	1202017303	LER	1/25/2010 15:46	942335	10-1262	2	LANL	USE	S
EXS01250022.wiff	244847002	LER	1/25/2010 16:02	942335	10-1262	2	LANL	USE	S
EXS01250023.wiff	244847003	LER	1/25/2010 16:18	942335	10-1262	2	LANL	DUSE-RA	S
EXS01250024.wiff	WXXCCV	LER	1/25/2010 16:33			1		USE	S
EXS01250025.wiff	XIBLK05	LER	1/25/2010 16:49			1		USE	C
EXS01250026.wiff	WXXCRI	LER	1/25/2010 17:05			1		USE	B
EXS01250027.wiff	244847004	LER	1/25/2010 17:21	942335	10-1262	2	LANL	USE	C
EXS01250028.wiff	244852001	LER	1/25/2010 17:36	942335	10-1263	2	LANL	USE	S
EXS01250029.wiff	244852002	LER	1/25/2010 17:52	942335	10-1263	2	LANL	USE	S
EXS01250030.wiff	244852003	LER	1/25/2010 18:08	942335	10-1263	2	LANL	USE	S

EXS01250031.wiff	244852004	LER	1/25/2010 18:24	942335	10-1263	2	LANL	USE	S
EXS01250032.wiff	244881001	LER	1/25/2010 18:39	942335	10-1264-1	2	LANL	USE	S
EXS01250033.wiff	244881002	LER	1/25/2010 18:55	942335	10-1264-1	2	LANL	USE	S
EXS01250034.wiff	244881003	LER	1/25/2010 19:11	942335	10-1264-1	2	LANL	USE	S
EXS01250035.wiff	244881004	LER	1/25/2010 19:26	942335	10-1264-1	2	LANL	USE	S
EXS01250036.wiff	244905001	LER	1/25/2010 19:42	942335	10-1277	2	LANL	USE	S
EXS01250037.wiff	WXXCCV	LER	1/25/2010 19:58			1		USE	C
EXS01250038.wiff	XIBLK06	LER	1/25/2010 20:14			1		USE	B
EXS01250039.wiff	WXXCRI	LER	1/25/2010 20:29			1		USE	C
EXS01250040.wiff	244905002	LER	1/25/2010 20:45	942335	10-1277	2	LANL	USE	S
EXS01250041.wiff	244905003	LER	1/25/2010 21:01	942335	10-1277	2	LANL	USE	S
EXS01250042.wiff	244905004	LER	1/25/2010 21:16	942335	10-1277	2	LANL	USE	S
EXS01250043.wiff	244905005	LER	1/25/2010 21:32	942335	10-1277	2	LANL	USE	S
EXS01250044.wiff	244905006	LER	1/25/2010 21:48	942335	10-1277	2	LANL	USE	S
EXS01250045.wiff	WXXCCV	LER	1/25/2010 22:04			1		USE	C
EXS01250046.wiff	XIBLK07	LER	1/25/2010 22:19			1		USE	B
EXS01250047.wiff	WXXCRI	LER	1/25/2010 22:35			1		USE	C
EXS01250048.wiff	1202017304	LER	1/25/2010 22:51	942337	VARIOUS	2	LANL	USE	S
EXS01250049.wiff	1202017305	LER	1/25/2010 23:06	942337	VARIOUS	2	LANL	USE	S
EXS01250050.wiff	244909001	LER	1/25/2010 23:22	942337	10-1279	2	LANL	USE	S
EXS01250051.wiff	244909002	LER	1/25/2010 23:38	942337	10-1279	2	LANL	USE	S
EXS01250052.wiff	244909003	LER	1/25/2010 23:54	942337	10-1279	2	LANL	USE	S
EXS01250053.wiff	244909004	LER	1/26/2010 0:09	942337	10-1279	2	LANL	USE	S
EXS01250054.wiff	244910002	LER	1/26/2010 0:25	942337	10-1281	2	LANL	USE	S
EXS01250055.wiff	1202017306	LER	1/26/2010 0:41	942337	10-1281	2	LANL	USE	S
EXS01250056.wiff	1202017307	LER	1/26/2010 0:56	942337	10-1281	2	LANL	USE	S
EXS01250057.wiff	244910003	LER	1/26/2010 1:12	942337	10-1281	2	LANL	USE	S
EXS01250058.wiff	WXXCCV	LER	1/26/2010 1:28			1		USE	C
EXS01250059.wiff	XIBLK08	LER	1/26/2010 1:44			1		USE	B
EXS01250060.wiff	WXXCRI	LER	1/26/2010 1:59			1		USE	C
EXS01250061.wiff	244910004	LER	1/26/2010 2:15	942337	10-1281	2	LANL	USE	S
EXS01250062.wiff	244910005	LER	1/26/2010 2:31	942337	10-1281	2	LANL	USE	S
EXS01250063.wiff	244910006	LER	1/26/2010 2:46	942337	10-1281	2	LANL	USE	S
EXS01250064.wiff	244910007	LER	1/26/2010 3:02	942337	10-1281	2	LANL	USE	S
EXS01250065.wiff	244910008	LER	1/26/2010 3:18	942337	10-1281	2	LANL	USE	S
EXS01250066.wiff	244910009	LER	1/26/2010 3:33	942337	10-1281	2	LANL	USE	S
EXS01250067.wiff	WXXCCV	LER	1/26/2010 3:49			1		USE	C

EXS01250105.wiff	244599003	LER	1/26/2010 13:46	941658	10-1210	2	LANL	USE	S
EXS01250106.wiff	WXXCCV	LER	1/26/2010 14:02			1		USE	C
EXS01250107.wiff	XIBLK13	LER	1/26/2010 14:17			1		USE	B
EXS01250108.wiff	WXXCRI	LER	1/26/2010 14:33			1		USE	C
EXS01250109.wiff	244599004	LER	1/26/2010 14:49	941658	10-1210	2	LANL	USE	S
EXS01250110.wiff	244599005	LER	1/26/2010 15:05	941658	10-1210	2	LANL	DUSE-RA	S
EXS01250111.wiff	244599006	LER	1/26/2010 15:20	941658	10-1210	2	LANL	USE	S
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EXS01250114.wiff	244599009	LER	1/26/2010 16:07	941658	10-1210	2	LANL	USE	S
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EXS01250119.wiff	WXXCCV	LER	1/26/2010 17:26			1		USE	C
EXS01250120.wiff	XIBLK14	LER	1/26/2010 17:42			1		USE	B
EXS01250121.wiff	WXXCRI	LER	1/26/2010 17:57			1		USE	C
EXS01250122.wiff	1202017308	LER	1/26/2010 18:13	942339	VARIOUS	2	LANL	USE	S
EXS01250123.wiff	1202017309	LER	1/26/2010 18:29	942339	VARIOUS	2	LANL	USE	S
EXS01250124.wiff	244916002	LER	1/26/2010 18:45	942339	10-1284	2	LANL	USE	S
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EXS01250130.wiff	1202017310	LER	1/26/2010 20:19	942339	10-1287	2	LANL	USE	S
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EXS01250132.wiff	WXXCCV	LER	1/26/2010 20:50			1		USE	C
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EXS01250144.wiff	WXXCCV	LER	1/26/2010 23:59			1		USE	C
EXS01250145.wiff	XIBLK16	LER	1/27/2010 0:14			1		USE	B
EXS01250146.wiff	WXXCRI	LER	1/27/2010 0:30			1		USE	C
EXS01250147.wiff	UXX100108-01.2	LER	1/27/2010 0:46	SCREEN	SOLID	2	O2SI	USE	S
EXS01250148.wiff	244599005	LER	1/27/2010 1:02	941658	10-1210	2	LANL	USE	S
EXS01250149.wiff	244599010	LER	1/27/2010 1:17	941658	10-1210	2	LANL	USE	S
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EXS01250151.wiff	XIBLK17	LER	1/27/2010 1:49			1		USE	B
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Quantify Sample Report
GEL Laboratories, LLC / Analyst: Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA4.qld, Time: Sat Jan 23 10:08:29 2010

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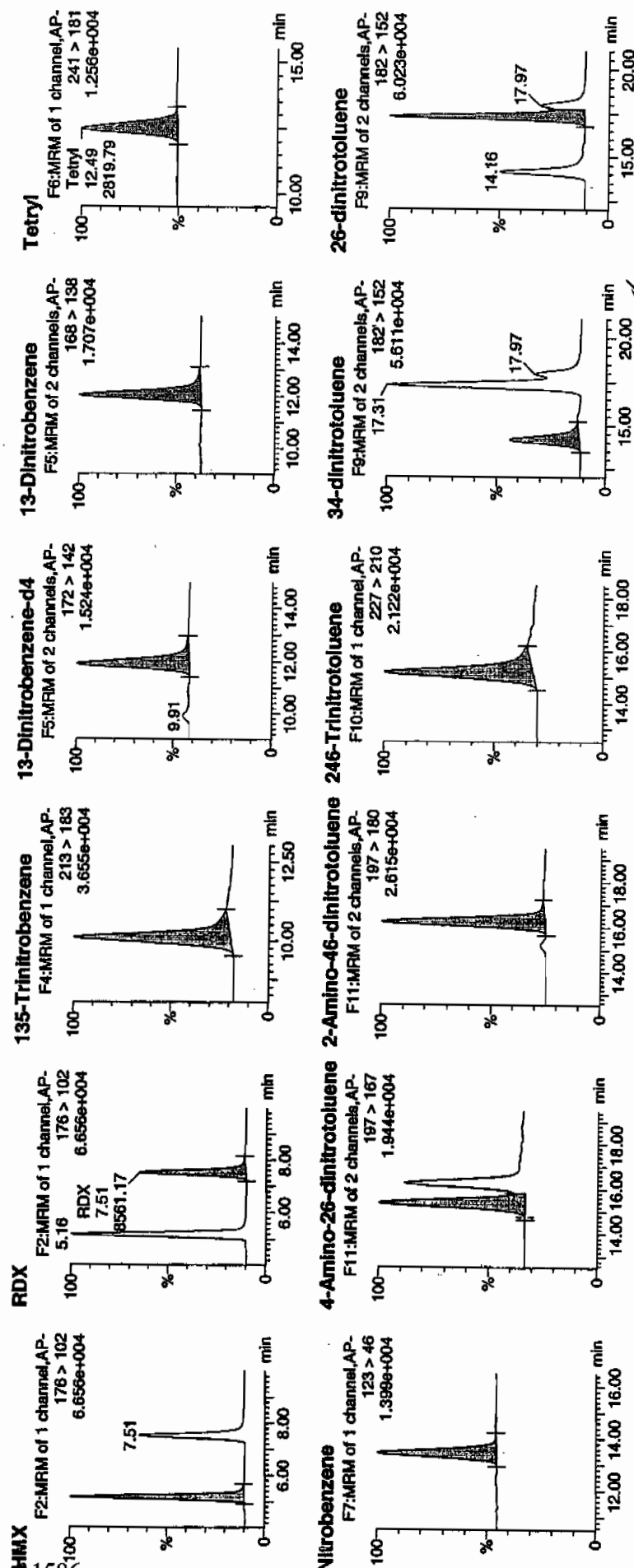
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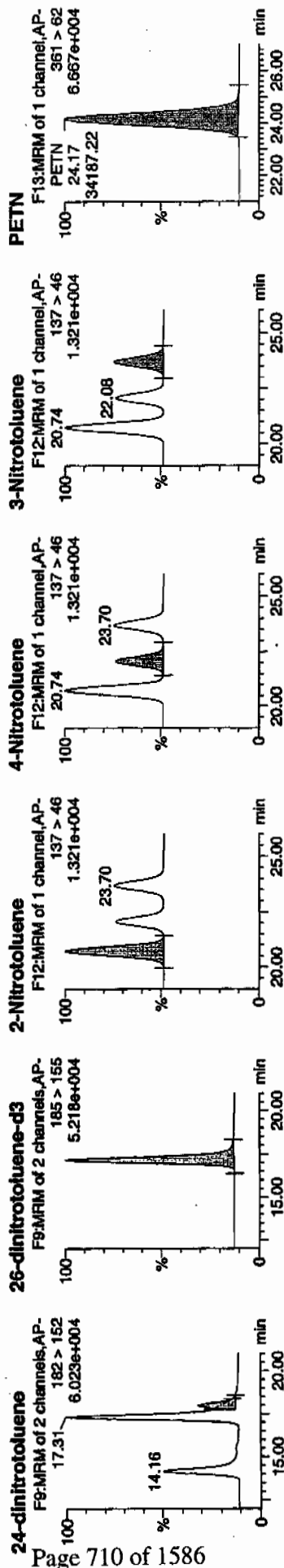


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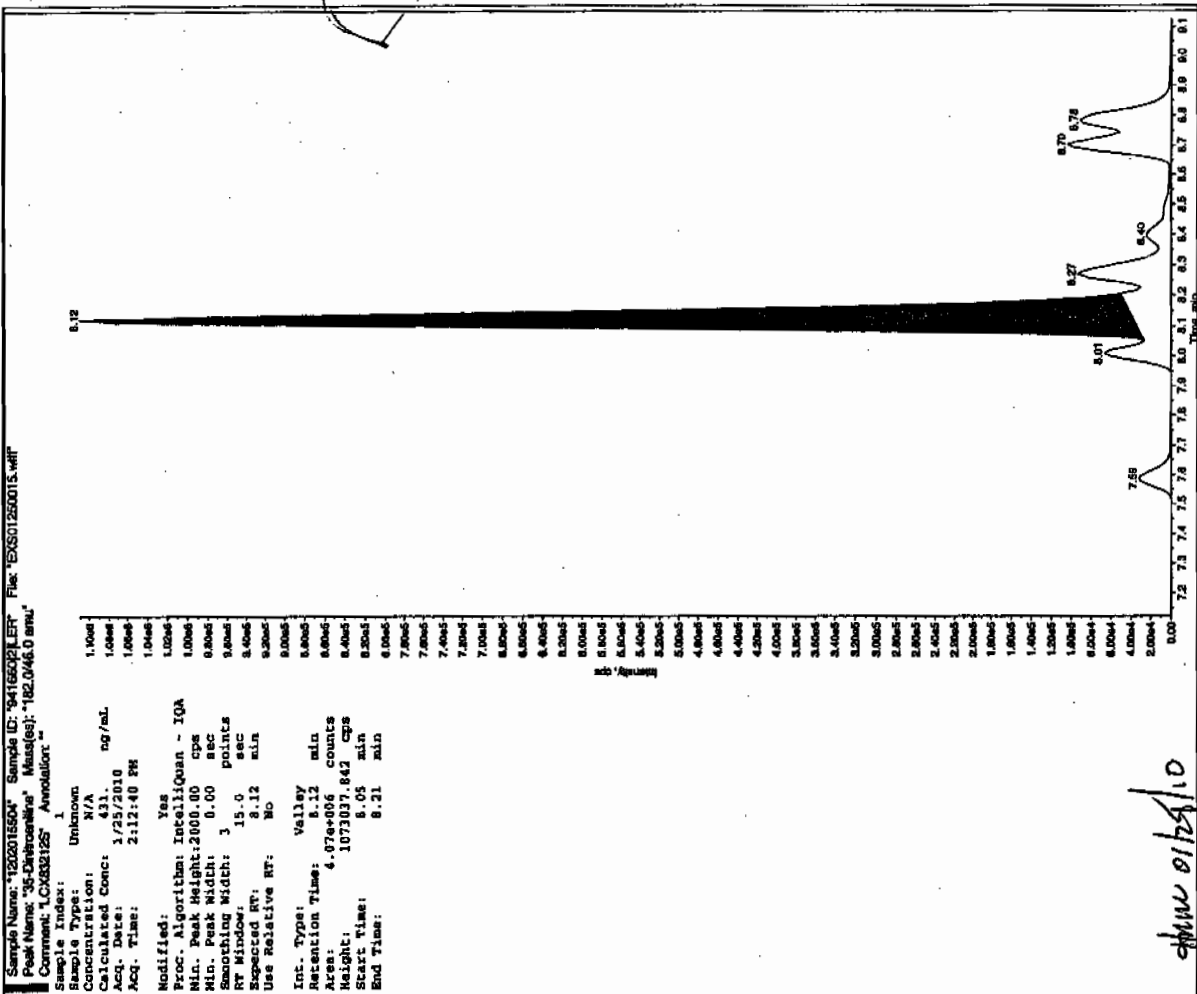
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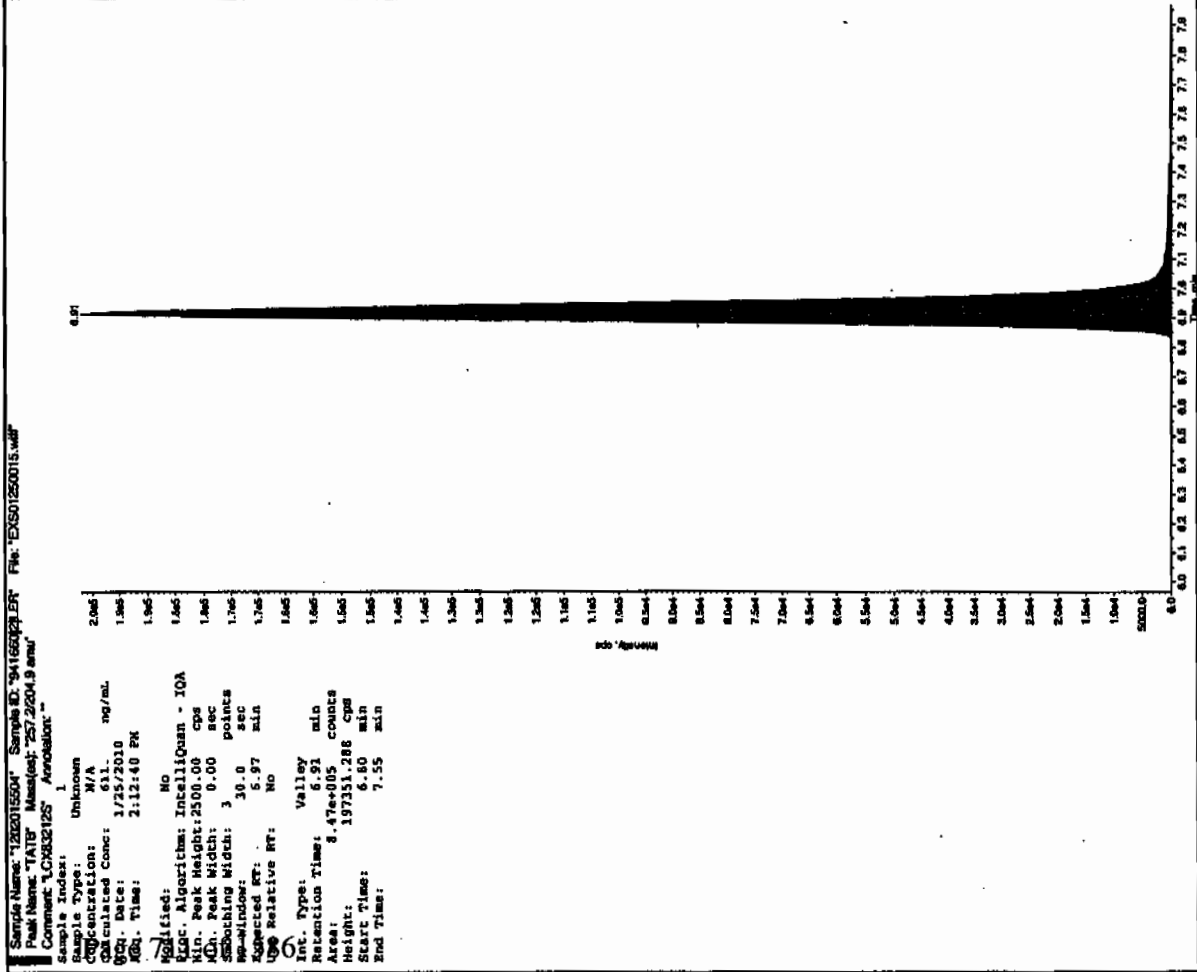


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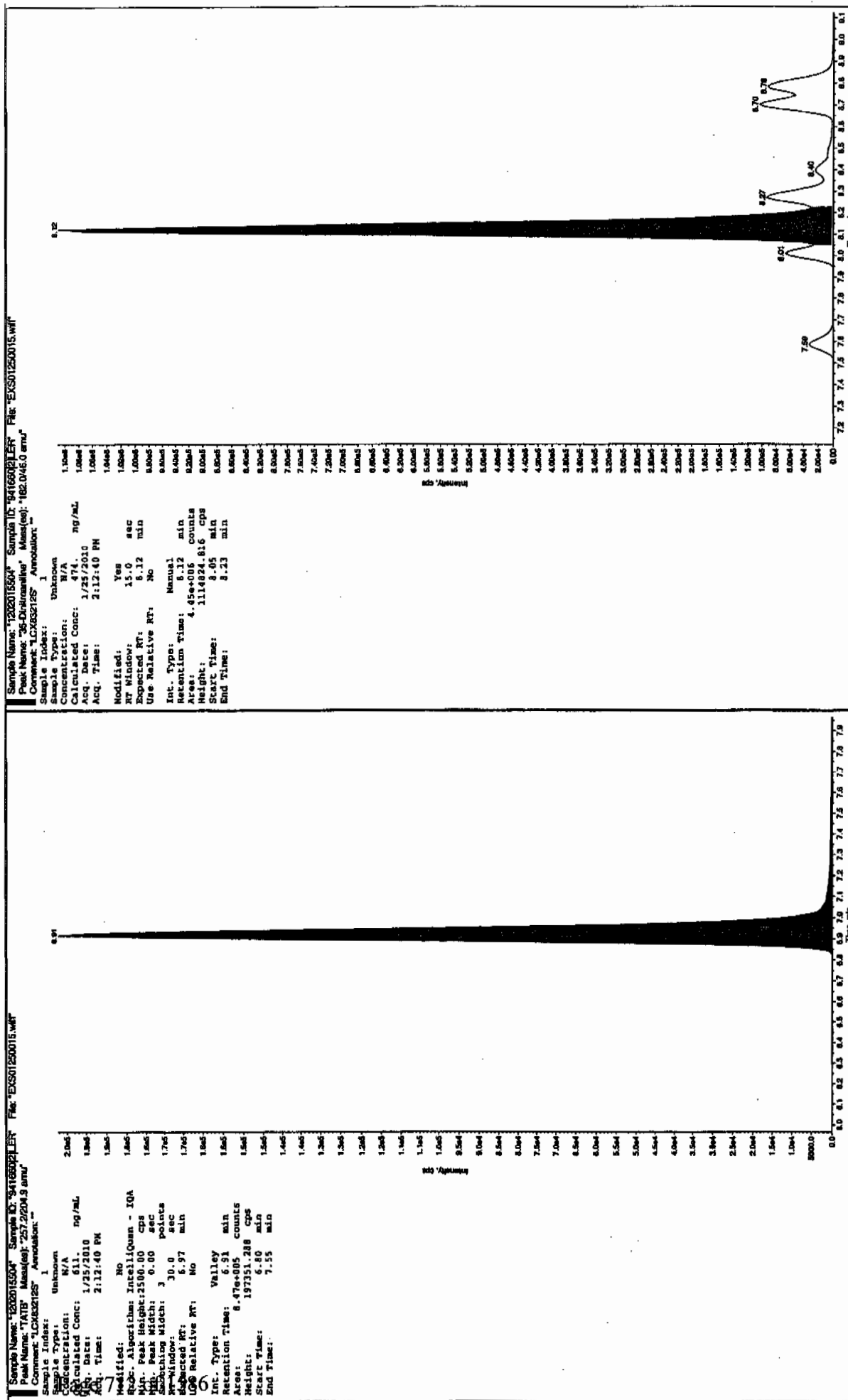
Before Jan 11/27/10

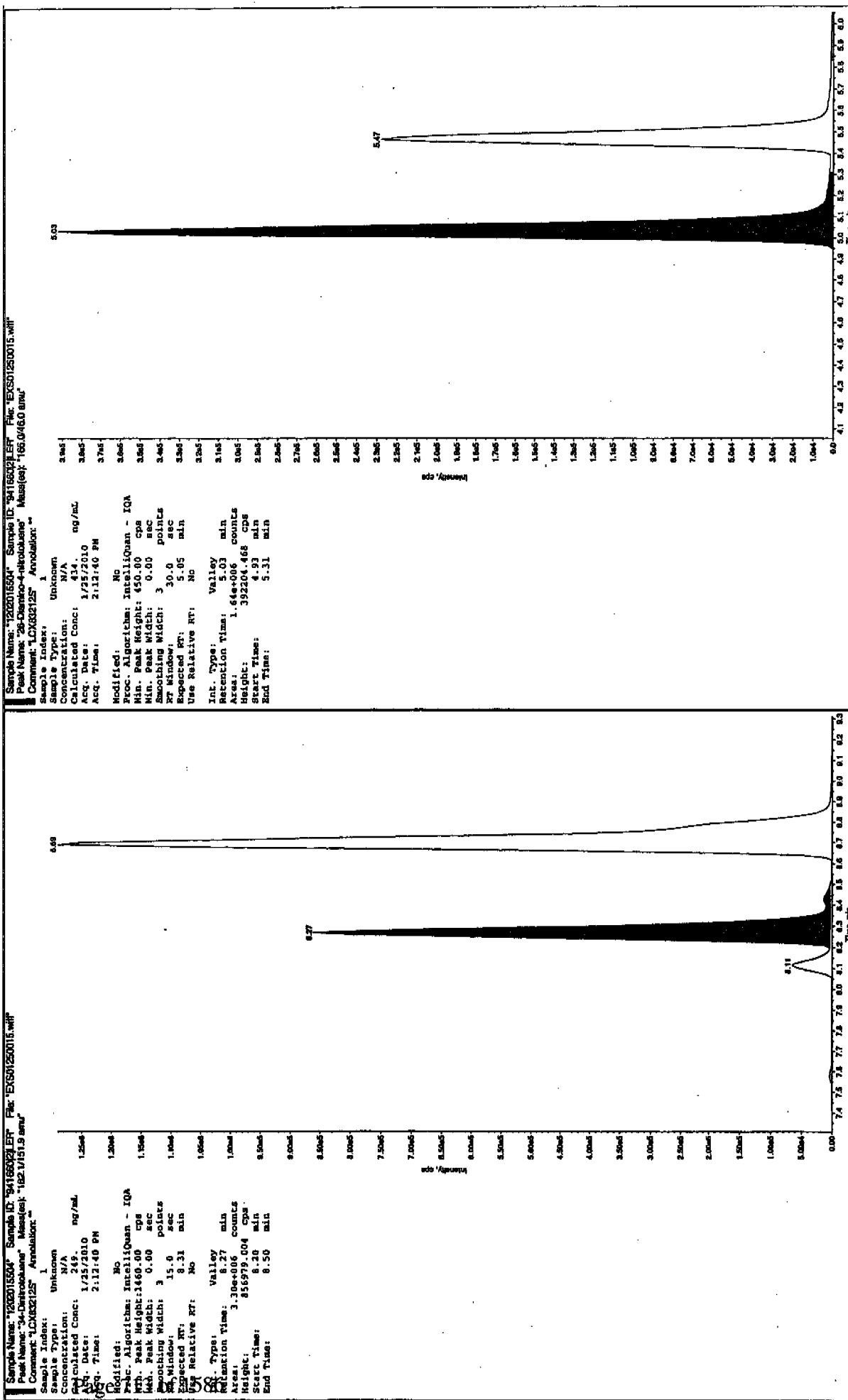


After 01/27/10



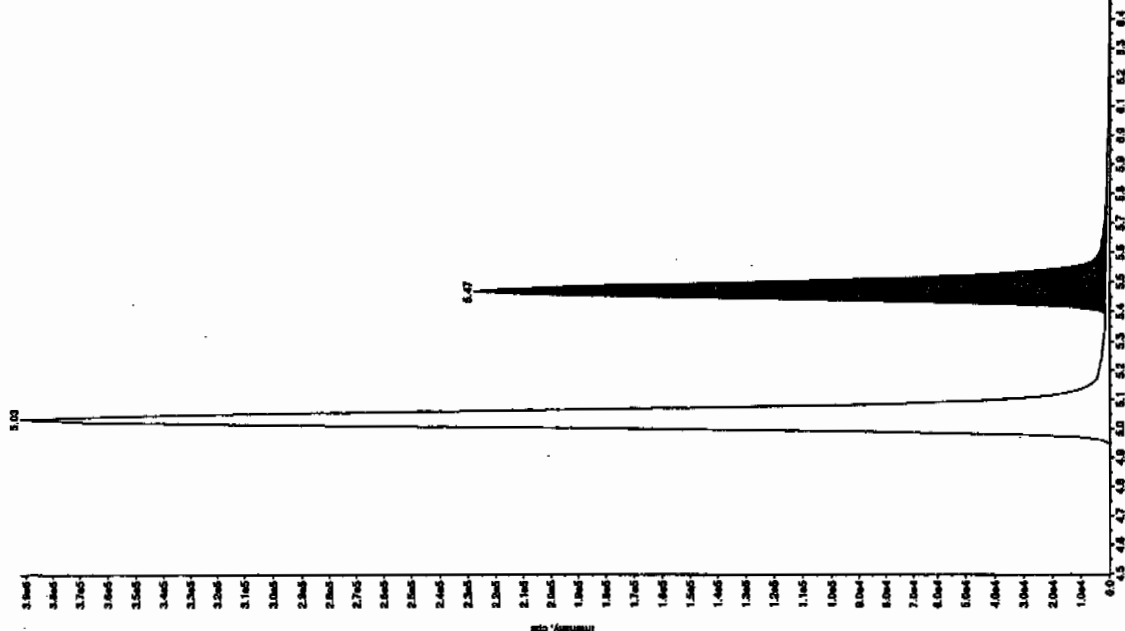
after Dec 1127110





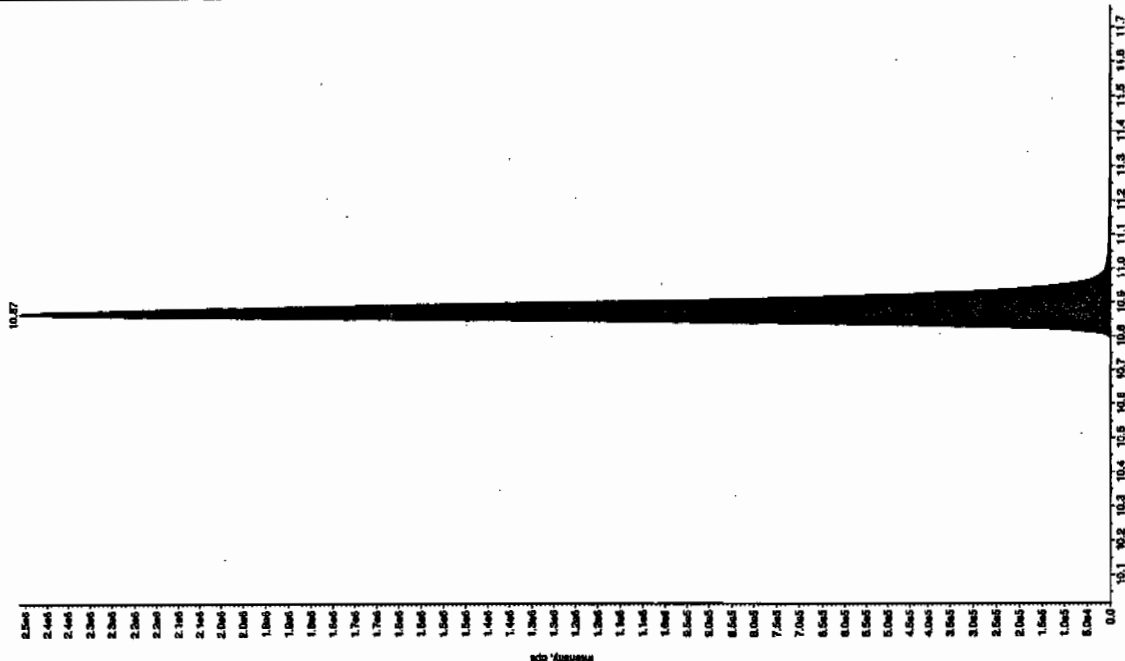
Sample Name: "1202015504" Sample ID: "941650121ER" File: "EX501250015.wif"
 Peak Name: "24-Dimino-6-nitrovalene" Mass(es): "166.046.0 amu"
 Comment: "LCX832125" Annotation: "

Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A ng/mL
 Calculated Conc: 1.725/2010
 Acq. Time: 2:11:40 PM
 Modified: No
 Proc. Algorithm: IntelliQuan - LOA
 Min. Peak Height: 350.00 cps
 Min. Peak Width: 0.00 sec
 Smoothing Width: 3 points
 RT Window: 30.0 sec
 Expected RT: 5.50 min
 Use Relative RT: No
 Int. Type: Valley
 Retention Time: 5.47 min
 Area: 9.58e+005 counts
 Height: 226567.368 cps
 Start Time: 5.35 min
 End Time: 5.57 min



Sample Name: "1202015504" Sample ID: "941650121ER" File: "EX501250015.wif"
 Peak Name: "tri(0-cresyl) phosphate" Mass(es): "360.191.0 amu"
 Comment: "LCX832125" Annotation: "

Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A ng/mL
 Calculated Conc: 1.725/2010
 Acq. Time: 2:11:40 PM
 Modified: No
 Proc. Algorithm: IntelliQuan - LOA
 Min. Peak Height: 1.00e4 cps
 Min. Peak Width: 0.00 sec
 Smoothing Width: 3 points
 RT Window: 30.0 sec
 Expected RT: 10.8 min
 Use Relative RT: No
 Int. Type: Valley
 Retention Time: 10.9 min
 Area: 9.35e+006 counts
 Height: 2665196.045 cps
 Start Time: 10.8 min
 End Time: 11.2 min



Quantify Sample Report

GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\011810expA4.qld, Time: Sat Jan 23 10:08:29 2010

Name: C:\MASSLYN\NEW_EXP.PRO\DATA\EXP0118219a

Date: 23-Jan-2010

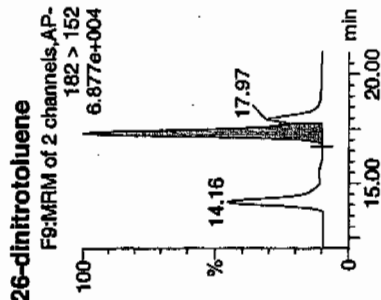
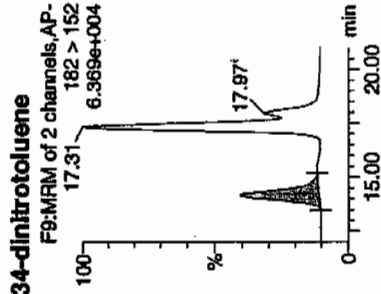
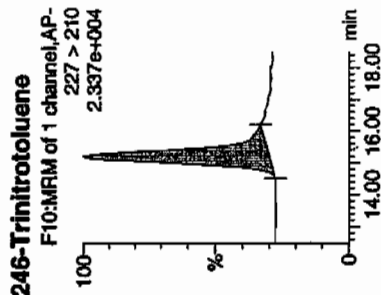
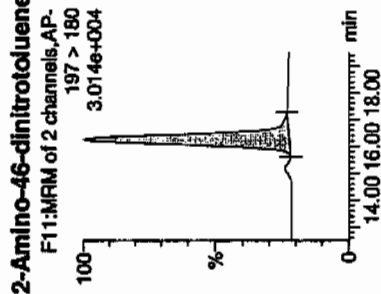
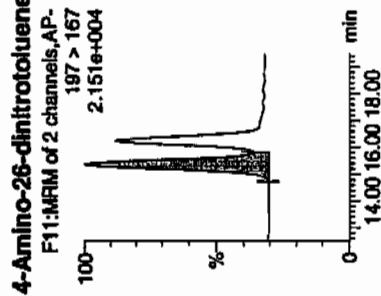
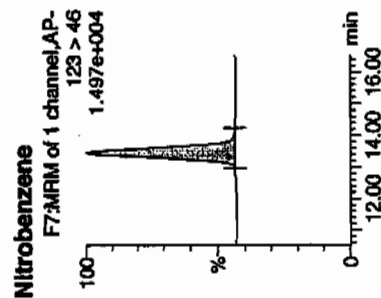
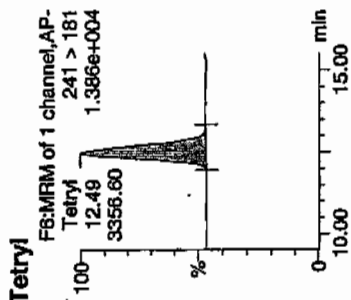
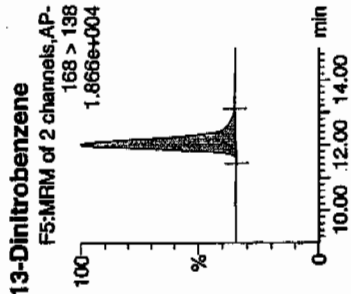
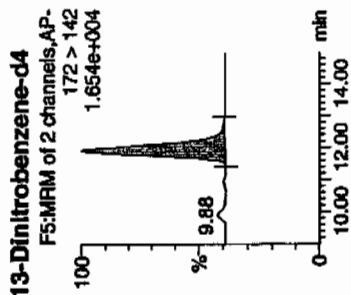
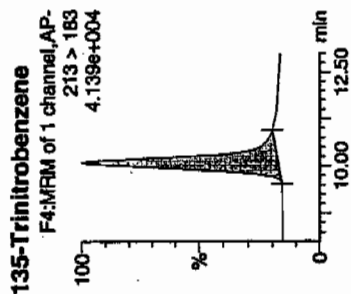
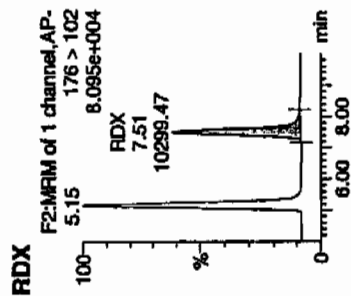
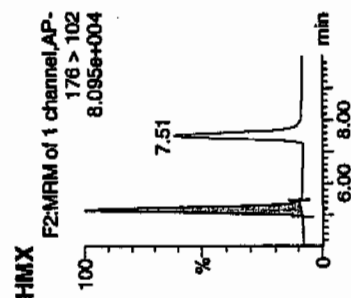
Time: 01:16:13

ID: 1202015505

Vial: 2:2,A

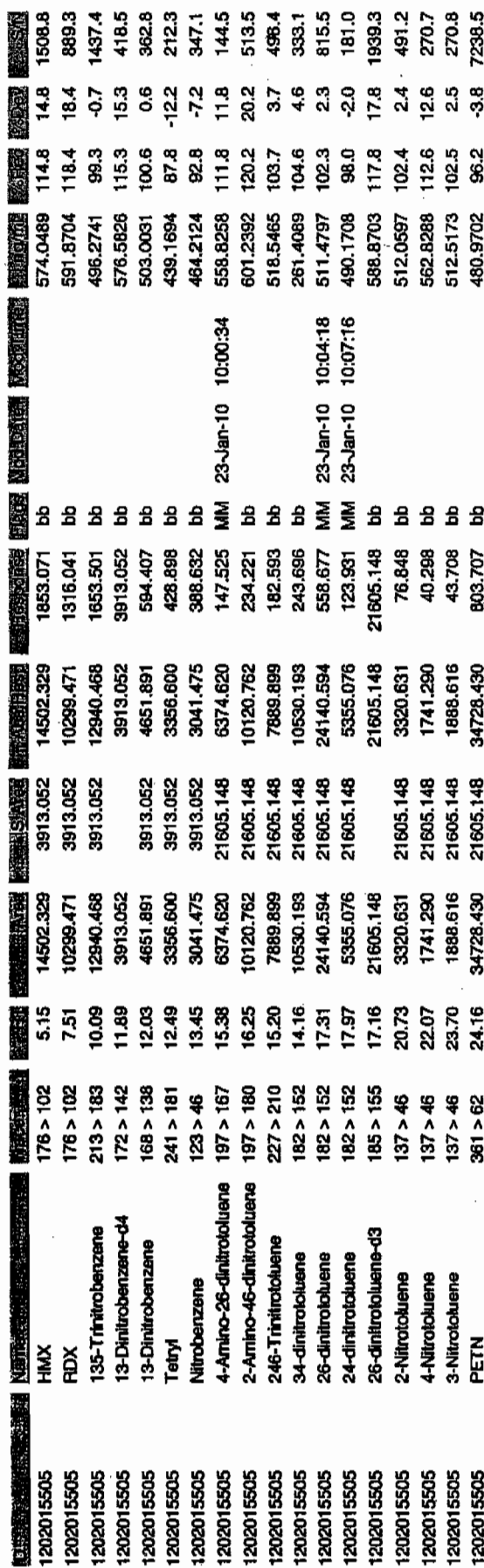
12/23/20

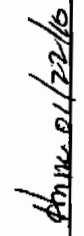
WAV 941660 8023 24460602225 2



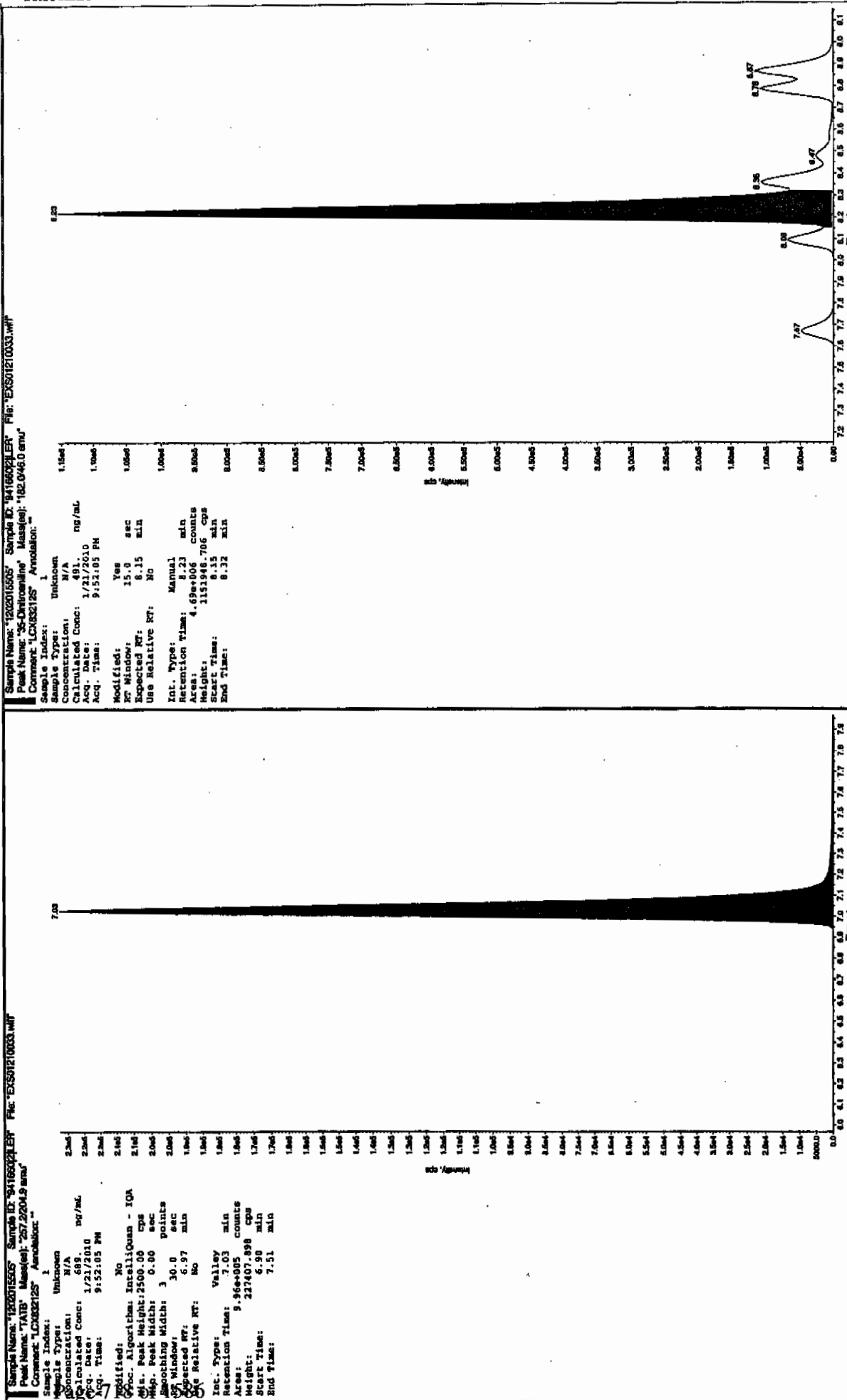
07/82/10 muth

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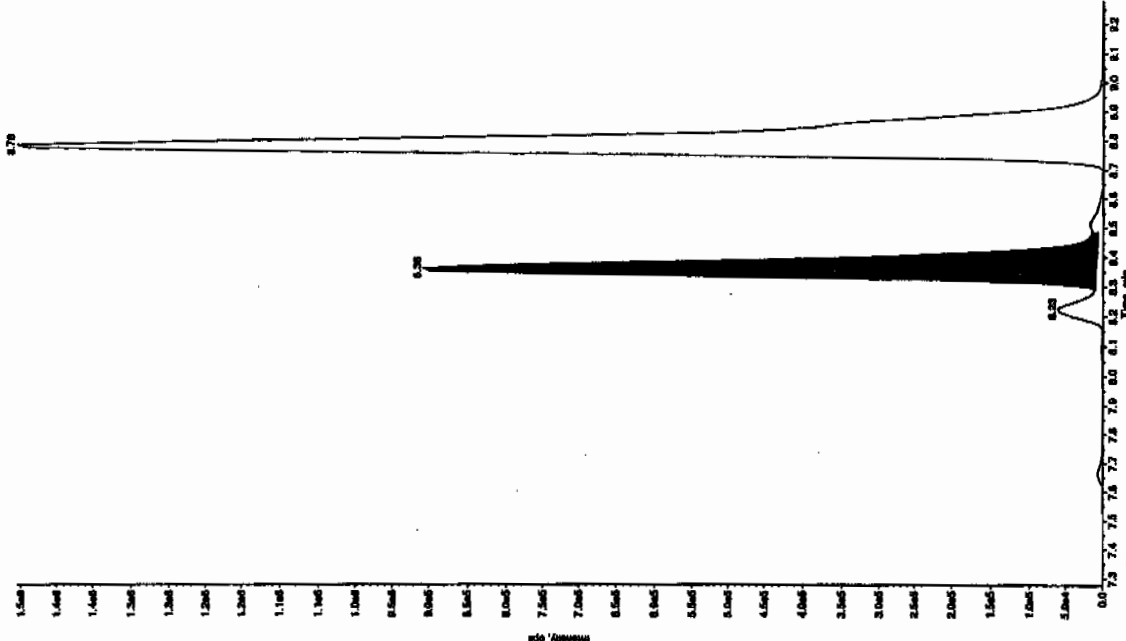


after scan 1122110



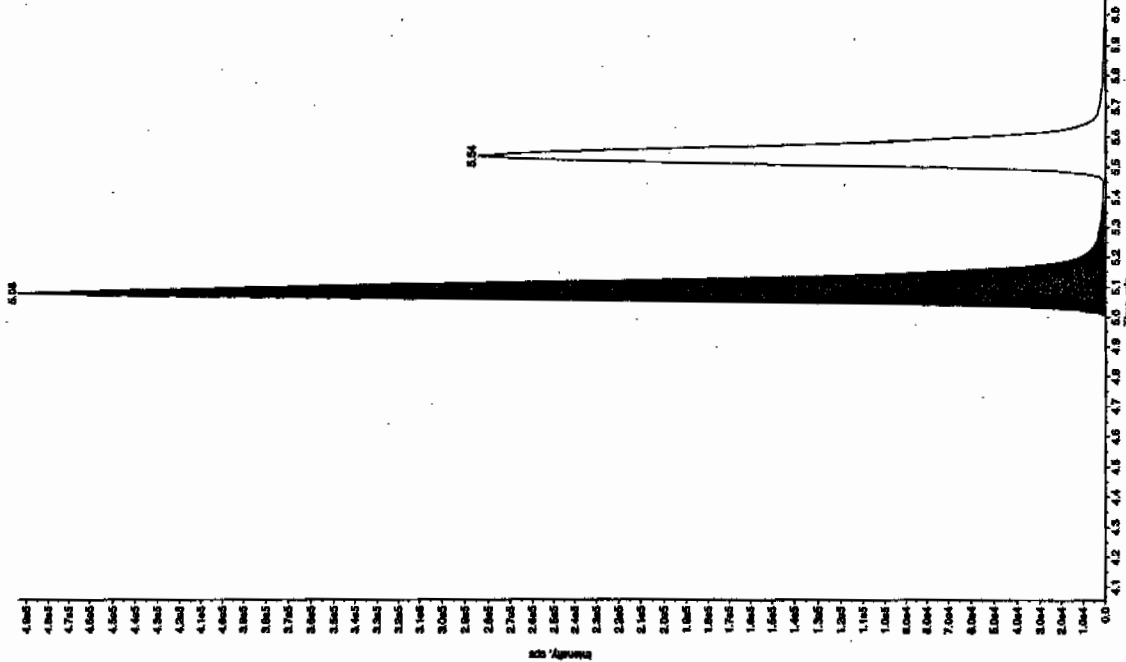
Sample Name: "1202015505" Sample ID: "94166021ER" File: "EX0501210003.wif"
 Peak Name: "34-Dibenzoketene" Mass(es): "182.1151.9 amu"
 Comment: "LCMS32125" Annotation: ""

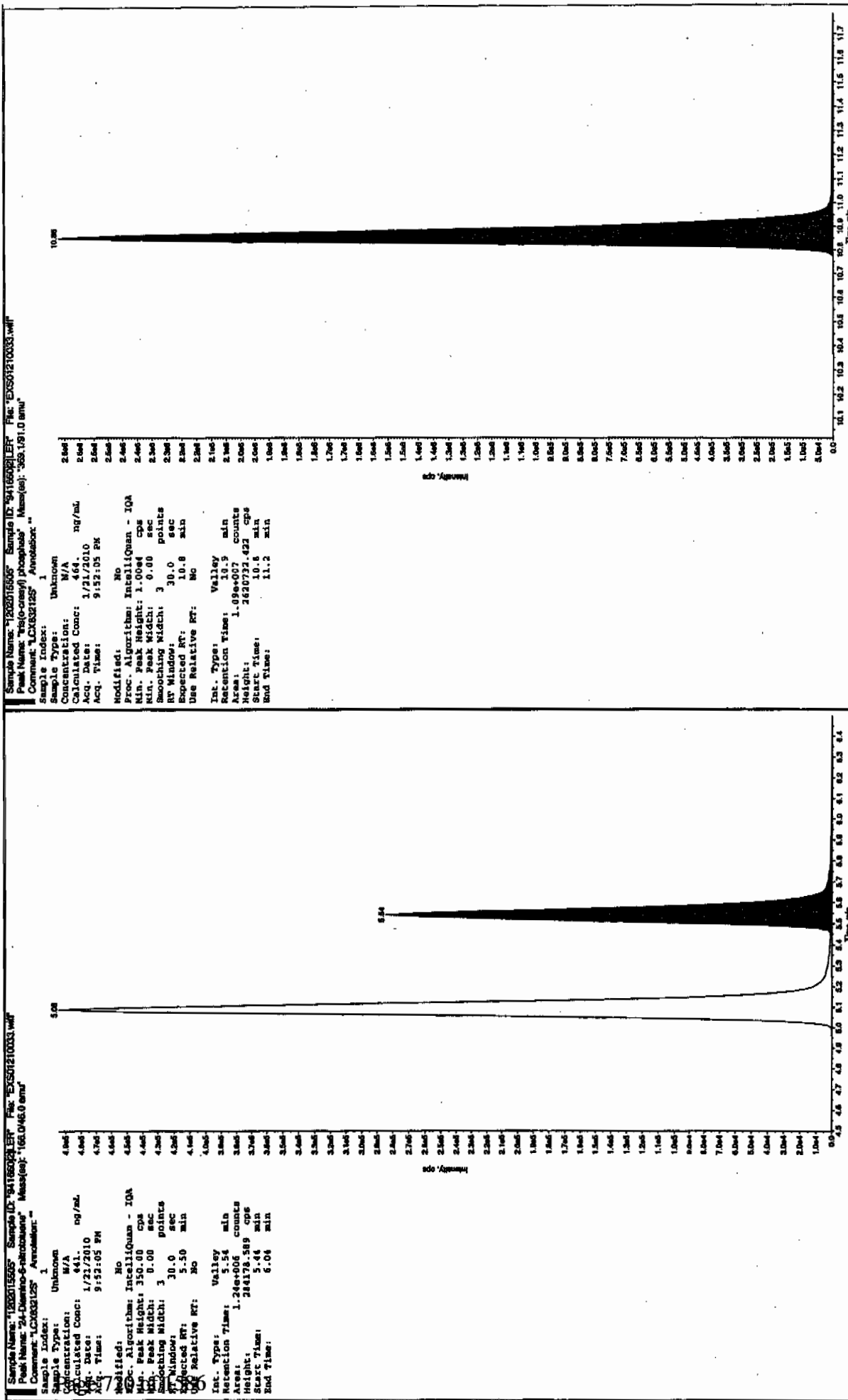
Sample Index: 3
 Sample Type: Unknown
 Concentration: N/A
 Calculated Conc: 1/21/2010
 Acq. Date: 1/21/2010
 Acq. Time: 9:52:05 PM
 Modified: No
 Proc. Algorithm: IntelliQuan - IQA
 Min. Peak Height: 1460.00 cps
 Min. Peak Width: 0.00 sec
 Smoothing Width: 3 points
 RT Window: 15.0 sec
 Expected RT: 8.28 min
 Use Relative RT: No
 Int. Type: Valley
 Retention Time: 8.26 min
 Area: 3.59e+006 counts
 Height: 897627.502 cps
 Start Time: 8.23 min
 End Time: 8.48 min



Sample Name: "1202015505" Sample ID: "94166021ER" File: "EX0501210003.wif"
 Peak Name: "28-Diamino-4-nitrobenzene" Mass(es): "166.046.0 amu"
 Comment: "LCMS32125" Annotation: ""

Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A
 Calculated Conc: 1/21/2010
 Acq. Date: 1/21/2010
 Acq. Time: 9:52:05 PM
 Modified: No
 Proc. Algorithm: IntelliQuan - IQA
 Min. Peak Height: 450.00 cps
 Min. Peak Width: 0.00 sec
 Smoothing Width: 3 points
 RT Window: 30.0 sec
 Expected RT: 5.05 min
 Use Relative RT: No
 Int. Type: Valley
 Retention Time: 5.08 min
 Area: 2.11e+006 counts
 Height: 493974.274 cps
 Start Time: 4.99 min
 End Time: 5.38 min





Metals Analysis

Case Narrative

**Metals Fractional Narrative
Los Alamos National Laboratory (LANL)
SDG 10-1213**

Sample Analysis

Sample ID	Client ID
244604001	RE12-10-7257
244604002	RE12-10-7256
1202015719	Method Blank (MB) ICP
1202015724	Laboratory Control Sample (LCS)
1202015721	244604001(RE12-10-7257L) Serial Dilution (SD)
1202015720	244604001(RE12-10-7257D) Sample Duplicate (DUP)
1202015722	244604001(RE12-10-7257S) Matrix Spike (MS)
1202015723	244604001(RE12-10-7257SD) Matrix Spike Duplicate (MSD)
1202015732	Method Blank (MB) ICP-MS
1202015737	Laboratory Control Sample (LCS)
1202015734	244604001(RE12-10-7257L) Serial Dilution (SD)
1202015733	244604001(RE12-10-7257D) Sample Duplicate (DUP)
1202015735	244604001(RE12-10-7257S) Matrix Spike (MS)
1202015736	244604001(RE12-10-7257SD) Matrix Spike Duplicate (MSD)
1202019739	Method Blank (MB) CVAA
1202019740	Laboratory Control Sample (LCS)
1202019743	244622001(RE46-10-10052L) Serial Dilution (SD)
1202019741	244622001(RE46-10-10052D) Sample Duplicate (DUP)
1202019742	244622001(RE46-10-10052S) Matrix Spike (MS)
1202019744	244622001(RE46-10-10052SD) Matrix Spike Duplicate (MSD)

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

Method/Analysis Information

Analytical Batch: 941749, 941754 and 943299
Prep Batch : 941746, 941751 and 943296
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 4300 Optima radial/axial-viewing inductively coupled plasma atomic emission spectrometer. The instrument is equipped with a Burgener nebulizer, cyclonic spray chamber, and yttrium or scandium internal standard. Operating conditions for the ICP are set at a power level of 1500 watts. The instrument has a peristaltic pump flow rate of 1.4L/min, argon gas flows of 15 L/min and 0.2 L/min for the torch and auxiliary gases, and a flow setting of 0.65L/min for the nebulizer.

The Metals analysis - ICPMS was performed on a Perkin Elmer ELAN 6100E inductively coupled plasma mass spectrometer (ICP-MS). The instrument is equipped with a cross-flow nebulizer, quadrupole mass spectrometer, and dual mode electron multiplier detector. Internal standards of scandium, germanium, indium, tantalum, and/or lutetium were utilized to cover the mass spectrum. Operating conditions are set at 1400W power and combined argon pressures of 360+/-7 kPa for the plasma and auxiliary gases, and 0.85 L/min carrier gas flow, and an initial lens voltage of 5.2.

The Metals analysis-Mercury was performed on a Perkin-Elmer Flow Injection Mercury System (FIMS-100) automated mercury analyzer. The instrument consists of a cold vapor atomic absorption spectrometer set to detect mercury at a wavelength of 253.7 nm. Sample introduction through the flow injection system is performed via a peristaltic pump at 9 mL/min and nitrogen carrier gas rate of 80 mL/min.

Calibration Information

Instrument Calibration

All initial calibration requirements have been met for this sample delivery group (SDG).

CRDL Requirements

All CRDL standard(s) met the referenced advisory control limits with the exception of potassium and iron, which recovered outside of the advisory limits of 70-130%.

ICSA/ICSAB Statement

All interference check samples (ICSA and ICSAB) associated with this SDG met the established acceptance criteria.

Continuing Calibration Blank (CCB) Requirements

All continuing calibration blanks (CCB) bracketing this batch met the established acceptance criteria.

Continuing Calibration Verification (CCV) Requirements

All continuing calibration verifications (CCV) bracketing this SDG met the acceptance criteria.

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

The 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: 244604001 and 244622001.

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 calcium, magnesium, potassium and nickel, 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 barium, calcium, magnesium, potassium, zinc and nickel, 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 iron, manganese and nickel, as indicated by the "*" qualifiers.

Duplicate Relative Percent Difference (RPD) Statement

The relative percent difference (RPD) obtained from the designated sample duplicate (DUP) is evaluated based on acceptance criteria of 20% when the sample is 5X the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the contract required detection limit (RL), a control of +/-RL is used to evaluate the DUP results. All applicable analytes met these requirements with the exception of aluminum, calcium, copper, lead, magnesium, potassium and vanadium, 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: 782700 and 784663. 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 Larson Date: 2/4/10

Sample Data Summary

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 10-1213

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 244604001

BASIS: Dry Weight

DATE COLLECTED 08-JAN-10

CLIENT ID: RE12-10-7257

LEVEL: Low

DATE RECEIVED 13-JAN-10

MATRIX: SOIL

%SOLIDS: 90

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	4600000	ug/Kg	*	7460	21900	21900	1	P	HSC	01/27/10 15:28	012710-1	941749
7440-36-0	Antimony	1100	ug/Kg	U	362	1100	1100	1	P	HSC	01/27/10 15:28	012710-1	941749
7440-38-2	Arsenic	2.68	mg/kg		0.222	1.11	1.11	2	MS	SKJ	01/21/10 19:06	100121-2	941754
7440-39-3	Barium	48400	ug/Kg	N	110	549	549	1	P	HSC	01/27/10 15:28	012710-1	941749
7440-41-7	Beryllium	0.822	mg/kg		0.0222	0.111	0.111	2	MS	SKJ	01/22/10 15:44	100122-3	941754
7440-43-9	Cadmium	549	ug/Kg	U	110	549	549	1	P	HSC	01/27/10 15:28	012710-1	941749
7440-70-2	Calcium	1030000	ug/Kg	*N	8780	27400	27400	1	P	HSC	01/27/10 15:28	012710-1	941749
7440-47-3	Chromium	13200	ug/Kg		165	549	549	1	P	HSC	01/27/10 15:28	012710-1	941749
7440-48-4	Cobalt	1810	ug/Kg		165	549	549	1	P	HSC	01/27/10 15:28	012710-1	941749
7440-50-8	Copper	4150	ug/Kg	*	329	1100	1100	1	P	HSC	01/27/10 15:28	012710-1	941749
7439-89-6	Iron	9360000	ug/Kg	*	8780	27400	27400	1	P	HSC	01/27/10 15:28	012710-1	941749
7439-92-1	Lead	7060	ug/Kg	*	274	1100	1100	1	P	HSC	01/27/10 15:28	012710-1	941749
7439-95-4	Magnesium	853000	ug/Kg	*N	9330	32900	32900	1	P	HSC	01/27/10 15:28	012710-1	941749
7439-96-5	Manganese	275000	ug/Kg	*	219	1100	1100	1	P	HSC	01/27/10 15:28	012710-1	941749
7439-97-6	Mercury	22.8	ug/kg		4.19	12.3	12.3	1	AV	JXL1	01/28/10 11:46	012810S1-4	943299
7440-02-0	Nickel	7.01	mg/kg	*N	0.111	0.443	0.443	2	MS	SKJ	01/21/10 19:06	100121-2	941754
7440-09-7	Potassium	634000	ug/Kg	*N	7020	27400	27400	1	P	HSC	01/27/10 15:28	012710-1	941749
7782-49-2	Selenium	1.11	mg/kg	U	0.554	1.11	1.11	2	MS	SKJ	01/21/10 19:06	100121-2	941754
7440-22-4	Silver	549	ug/Kg	U	110	549	549	1	P	HSC	01/27/10 15:28	012710-1	941749
7440-23-5	Sodium	91100	ug/Kg		7680	27400	27400	1	P	HSC	01/27/10 15:28	012710-1	941749
7440-28-0	Thallium	0.157	mg/kg	J	0.0665	0.222	0.222	2	MS	SKJ	01/21/10 19:06	100121-2	941754
7440-61-1	Uranium	0.661	mg/kg		0.0146	0.0443	0.0443	2	MS	SKJ	01/22/10 15:44	100122-3	941754
7440-62-2	Vanadium	9480	ug/Kg	*	110	549	549	1	P	HSC	01/27/10 15:28	012710-1	941749
7440-66-6	Zinc	25300	ug/Kg	N	362	1100	1100	1	P	HSC	01/27/10 15:28	012710-1	941749

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
941749	941746	SW846 3050B	0.506	g	50	mL	01/20/10	AXG2
941754	941751	SW846 3050B	0.501	g	50	mL	01/20/10	AXG2
943299	943296	SW846 7471A Prep	0.541	g	30	mL	01/27/10	TXB3

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 10-1213

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 244604002

BASIS: Dry Weight

DATE COLLECTED 08-JAN-10

CLIENT ID: RE12-10-7256

LEVEL: Low

DATE RECEIVED 13-JAN-10

MATRIX: SOIL

%SOLIDS: 76

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	7140000	ug/Kg	*	8580	25200	25200	1	P	HSC	01/27/10 15:46	012710-1	941749
7440-36-0	Antimony	696	ug/Kg	J	416	1260	1260	1	P	HSC	01/27/10 15:46	012710-1	941749
7440-38-2	Arsenic	2.5	mg/kg		0.251	1.25	1.25	2	MS	SKJ	01/21/10 19:49	100121-2	941754
7440-39-3	Barium	99300	ug/Kg	N	126	631	631	1	P	HSC	01/27/10 15:46	012710-1	941749
7440-41-7	Beryllium	0.847	mg/kg		0.0251	0.125	0.125	2	MS	SKJ	01/22/10 16:00	100122-3	941754
7440-43-9	Cadmium	132	ug/Kg	J	126	631	631	1	P	HSC	01/27/10 15:46	012710-1	941749
7440-70-2	Calcium	2690000	ug/Kg	*N	10100	31500	31500	1	P	HSC	01/27/10 15:46	012710-1	941749
7440-47-3	Chromium	33800	ug/Kg		189	631	631	1	P	HSC	01/27/10 15:46	012710-1	941749
7440-48-4	Cobalt	4350	ug/Kg		189	631	631	1	P	HSC	01/27/10 15:46	012710-1	941749
7440-50-8	Copper	7980	ug/Kg	*	378	1260	1260	1	P	HSC	01/27/10 15:46	012710-1	941749
7439-89-6	Iron	12200000	ug/Kg	*	10100	31500	31500	1	P	HSC	01/27/10 15:46	012710-1	941749
7439-92-1	Lead	14600	ug/Kg	*	315	1260	1260	1	P	HSC	01/27/10 15:46	012710-1	941749
7439-95-4	Magnesium	1560000	ug/Kg	*N	10700	37800	37800	1	P	HSC	01/27/10 15:46	012710-1	941749
7439-96-5	Manganese	314000	ug/Kg	*	252	1260	1260	1	P	HSC	01/27/10 15:46	012710-1	941749
7439-97-6	Mercury	18.9	ug/kg		4.7	13.8	13.8	1	AV	JXL1	01/28/10 11:47	012810S1-4	943299
7440-02-0	Nickel	8.69	mg/kg	*N	0.125	0.502	0.502	2	MS	SKJ	01/21/10 19:49	100121-2	941754
7440-09-7	Potassium	1490000	ug/Kg	*N	8070	31500	31500	1	P	HSC	01/27/10 15:46	012710-1	941749
7782-49-2	Selenium	1.25	mg/kg	U	0.627	1.25	1.25	2	MS	SKJ	01/21/10 19:49	100121-2	941754
7440-22-4	Silver	631	ug/Kg	U	126	631	631	1	P	HSC	01/27/10 15:46	012710-1	941749
7440-23-5	Sodium	54300	ug/Kg		8830	31500	31500	1	P	HSC	01/27/10 15:46	012710-1	941749
7440-28-0	Thallium	0.167	mg/kg	J	0.0752	0.251	0.251	2	MS	SKJ	01/21/10 19:49	100121-2	941754
7440-61-1	Uranium	7.12	mg/kg		0.0166	0.0502	0.0502	2	MS	SKJ	01/22/10 16:00	100122-3	941754
7440-62-2	Vanadium	20800	ug/Kg	*	126	631	631	1	P	HSC	01/27/10 15:46	012710-1	941749
7440-66-6	Zinc	60600	ug/Kg	N	416	1260	1260	1	P	HSC	01/27/10 15:46	012710-1	941749

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
941749	941746	SW846 3050B	0.522	g	50	mL	01/20/10	AXG2
941754	941751	SW846 3050B	0.525	g	50	mL	01/20/10	AXG2
943299	943296	SW846 7471A Prep	0.572	g	30	mL	01/27/10	TXB3

Quality Control Summary

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 10-1213

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS4,OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
ICV01										
	Arsenic	49.4	ug/L	50	ug/L	98.9	90.0 - 110.0	MS	21-JAN-10 16:37	100121-2
	Nickel	51.4	ug/L	50	ug/L	102.8	90.0 - 110.0	MS	21-JAN-10 16:37	100121-2
	Selenium	50.8	ug/L	50	ug/L	101.6	90.0 - 110.0	MS	21-JAN-10 16:37	100121-2
	Thallium	48.8	ug/L	50	ug/L	97.5	90.0 - 110.0	MS	21-JAN-10 16:37	100121-2
	Beryllium	48.6	ug/L	50	ug/L	97.1	90.0 - 110.0	MS	22-JAN-10 15:23	100122-3
	Uranium	52.3	ug/L	50	ug/L	104.5	90.0 - 110.0	MS	22-JAN-10 15:23	100122-3
	Aluminum	5050	ug/L	5000	ug/L	101.1	90.0 - 110.0	P	27-JAN-10 08:41	012710-1
	Antimony	517	ug/L	500	ug/L	103.4	90.0 - 110.0	P	27-JAN-10 08:41	012710-1
	Barium	509	ug/L	500	ug/L	101.7	90.0 - 110.0	P	27-JAN-10 08:41	012710-1
	Cadmium	502	ug/L	500	ug/L	100.3	90.0 - 110.0	P	27-JAN-10 08:41	012710-1
	Calcium	4890	ug/L	5000	ug/L	97.8	90.0 - 110.0	P	27-JAN-10 08:41	012710-1
	Chromium	490	ug/L	500	ug/L	98	90.0 - 110.0	P	27-JAN-10 08:41	012710-1
	Cobalt	509	ug/L	500	ug/L	101.8	90.0 - 110.0	P	27-JAN-10 08:41	012710-1
	Copper	509	ug/L	500	ug/L	101.8	90.0 - 110.0	P	27-JAN-10 08:41	012710-1
	Iron	5010	ug/L	5000	ug/L	100.3	90.0 - 110.0	P	27-JAN-10 08:41	012710-1
	Lead	505	ug/L	500	ug/L	100.9	90.0 - 110.0	P	27-JAN-10 08:41	012710-1
	Magnesium	5170	ug/L	5000	ug/L	103.3	90.0 - 110.0	P	27-JAN-10 08:41	012710-1
	Manganese	504	ug/L	500	ug/L	100.8	90.0 - 110.0	P	27-JAN-10 08:41	012710-1
	Potassium	2390	ug/L	2500	ug/L	95.4	90.0 - 110.0	P	27-JAN-10 08:41	012710-1
	Silver	264	ug/L	250	ug/L	105.6	90.0 - 110.0	P	27-JAN-10 08:41	012710-1
	Sodium	2420	ug/L	2500	ug/L	96.9	90.0 - 110.0	P	27-JAN-10 08:41	012710-1
	Vanadium	520	ug/L	500	ug/L	103.9	90.0 - 110.0	P	27-JAN-10 08:41	012710-1
	Zinc	513	ug/L	500	ug/L	102.5	90.0 - 110.0	P	27-JAN-10 08:41	012710-1
	Mercury	5.1	ug/L	5	ug/L	101.9	90.0 - 110.0	AV	28-JAN-10 09:05	012810S1-4
CCV01										
	Arsenic	48.9	ug/L	50	ug/L	97.8	90.0 - 110.0	MS	21-JAN-10 17:08	100121-2
	Nickel	50.7	ug/L	50	ug/L	101.3	90.0 - 110.0	MS	21-JAN-10 17:08	100121-2
	Selenium	51.2	ug/L	50	ug/L	102.4	90.0 - 110.0	MS	21-JAN-10 17:08	100121-2
	Thallium	48	ug/L	50	ug/L	96.1	90.0 - 110.0	MS	21-JAN-10 17:08	100121-2
	Beryllium	51.1	ug/L	50	ug/L	102.2	90.0 - 110.0	MS	22-JAN-10 15:34	100122-3

METALS

-2a-

Initial and Continuing Calibration Verification

SDG No: 10-1213

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS4,OPTIMA1

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Uranium	51.5	ug/L	50	ug/L	103	90.0 - 110.0	MS	22-JAN-10 15:34	100122-3
	Aluminum	5250	ug/L	5000	ug/L	105	90.0 - 110.0	P	27-JAN-10 09:04	012710-1
	Antimony	534	ug/L	500	ug/L	106.9	90.0 - 110.0	P	27-JAN-10 09:04	012710-1
	Barium	527	ug/L	500	ug/L	105.4	90.0 - 110.0	P	27-JAN-10 09:04	012710-1
	Cadmium	528	ug/L	500	ug/L	105.7	90.0 - 110.0	P	27-JAN-10 09:04	012710-1
	Calcium	5180	ug/L	5000	ug/L	103.6	90.0 - 110.0	P	27-JAN-10 09:04	012710-1
	Chromium	527	ug/L	500	ug/L	105.5	90.0 - 110.0	P	27-JAN-10 09:04	012710-1
	Cobalt	526	ug/L	500	ug/L	105.2	90.0 - 110.0	P	27-JAN-10 09:04	012710-1
	Copper	530	ug/L	500	ug/L	106.1	90.0 - 110.0	P	27-JAN-10 09:04	012710-1
	Iron	5270	ug/L	5000	ug/L	105.4	90.0 - 110.0	P	27-JAN-10 09:04	012710-1
	Lead	529	ug/L	500	ug/L	105.9	90.0 - 110.0	P	27-JAN-10 09:04	012710-1
	Magnesium	5320	ug/L	5000	ug/L	106.3	90.0 - 110.0	P	27-JAN-10 09:04	012710-1
	Manganese	517	ug/L	500	ug/L	103.4	90.0 - 110.0	P	27-JAN-10 09:04	012710-1
	Potassium	5240	ug/L	5000	ug/L	104.9	90.0 - 110.0	P	27-JAN-10 09:04	012710-1
	Silver	528	ug/L	500	ug/L	105.5	90.0 - 110.0	P	27-JAN-10 09:04	012710-1
	Sodium	10400	ug/L	10000	ug/L	103.8	90.0 - 110.0	P	27-JAN-10 09:04	012710-1
	Vanadium	532	ug/L	500	ug/L	106.4	90.0 - 110.0	P	27-JAN-10 09:04	012710-1
	Zinc	525	ug/L	500	ug/L	105.1	90.0 - 110.0	P	27-JAN-10 09:04	012710-1
	Mercury	5.06	ug/L	5	ug/L	101.2	80.0 - 120.0	AV	28-JAN-10 09:10	012810S1-4
CCV02	Arsenic	49.1	ug/L	50	ug/L	98.1	90.0 - 110.0	MS	21-JAN-10 17:27	100121-2
	Nickel	51	ug/L	50	ug/L	101.9	90.0 - 110.0	MS	21-JAN-10 17:27	100121-2
	Selenium	52.5	ug/L	50	ug/L	105.1	90.0 - 110.0	MS	21-JAN-10 17:27	100121-2
	Thallium	48.3	ug/L	50	ug/L	96.5	90.0 - 110.0	MS	21-JAN-10 17:27	100121-2
	Beryllium	52	ug/L	50	ug/L	104	90.0 - 110.0	MS	22-JAN-10 15:48	100122-3
	Uranium	51.8	ug/L	50	ug/L	103.6	90.0 - 110.0	MS	22-JAN-10 15:48	100122-3
	Aluminum	5270	ug/L	5000	ug/L	105.3	90.0 - 110.0	P	27-JAN-10 09:20	012710-1
	Antimony	541	ug/L	500	ug/L	108.2	90.0 - 110.0	P	27-JAN-10 09:20	012710-1
	Barium	528	ug/L	500	ug/L	105.5	90.0 - 110.0	P	27-JAN-10 09:20	012710-1
	Cadmium	528	ug/L	500	ug/L	105.5	90.0 - 110.0	P	27-JAN-10 09:20	012710-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 10-1213

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS4,OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Calcium	5310	ug/L	5000	ug/L	106.2	90.0 - 110.0	P	27-JAN-10 09:20	012710-1
	Chromium	527	ug/L	500	ug/L	105.5	90.0 - 110.0	P	27-JAN-10 09:20	012710-1
	Cobalt	529	ug/L	500	ug/L	105.8	90.0 - 110.0	P	27-JAN-10 09:20	012710-1
	Copper	529	ug/L	500	ug/L	105.7	90.0 - 110.0	P	27-JAN-10 09:20	012710-1
	Iron	5290	ug/L	5000	ug/L	105.9	90.0 - 110.0	P	27-JAN-10 09:20	012710-1
	Lead	535	ug/L	500	ug/L	106.9	90.0 - 110.0	P	27-JAN-10 09:20	012710-1
	Magnesium	5340	ug/L	5000	ug/L	106.8	90.0 - 110.0	P	27-JAN-10 09:20	012710-1
	Manganese	518	ug/L	500	ug/L	103.5	90.0 - 110.0	P	27-JAN-10 09:20	012710-1
	Potassium	5210	ug/L	5000	ug/L	104.3	90.0 - 110.0	P	27-JAN-10 09:20	012710-1
	Silver	530	ug/L	500	ug/L	106	90.0 - 110.0	P	27-JAN-10 09:20	012710-1
	Sodium	10400	ug/L	10000	ug/L	104.3	90.0 - 110.0	P	27-JAN-10 09:20	012710-1
	Vanadium	533	ug/L	500	ug/L	106.6	90.0 - 110.0	P	27-JAN-10 09:20	012710-1
	Zinc	525	ug/L	500	ug/L	105	90.0 - 110.0	P	27-JAN-10 09:20	012710-1
	Mercury	5.01	ug/L	5	ug/L	100.2	80.0 - 120.0	AV	28-JAN-10 09:30	012810S1-4
CCV03										
	Arsenic	47.4	ug/L	50	ug/L	94.7	90.0 - 110.0	MS	21-JAN-10 18:04	100121-2
	Nickel	49.4	ug/L	50	ug/L	98.9	90.0 - 110.0	MS	21-JAN-10 18:04	100121-2
	Selenium	52.6	ug/L	50	ug/L	105.2	90.0 - 110.0	MS	21-JAN-10 18:04	100121-2
	Thallium	48.3	ug/L	50	ug/L	96.5	90.0 - 110.0	MS	21-JAN-10 18:04	100121-2
	Beryllium	49.2	ug/L	50	ug/L	98.3	90.0 - 110.0	MS	22-JAN-10 16:02	100122-3
	Uranium	50.9	ug/L	50	ug/L	101.8	90.0 - 110.0	MS	22-JAN-10 16:02	100122-3
	Aluminum	5150	ug/L	5000	ug/L	102.9	90.0 - 110.0	P	27-JAN-10 10:02	012710-1
	Antimony	519	ug/L	500	ug/L	103.8	90.0 - 110.0	P	27-JAN-10 10:02	012710-1
	Barium	512	ug/L	500	ug/L	102.3	90.0 - 110.0	P	27-JAN-10 10:02	012710-1
	Cadmium	511	ug/L	500	ug/L	102.3	90.0 - 110.0	P	27-JAN-10 10:02	012710-1
	Calcium	5050	ug/L	5000	ug/L	101	90.0 - 110.0	P	27-JAN-10 10:02	012710-1
	Chromium	511	ug/L	500	ug/L	102.2	90.0 - 110.0	P	27-JAN-10 10:02	012710-1
	Cobalt	511	ug/L	500	ug/L	102.2	90.0 - 110.0	P	27-JAN-10 10:02	012710-1
	Copper	510	ug/L	500	ug/L	102.1	90.0 - 110.0	P	27-JAN-10 10:02	012710-1
	Iron	5180	ug/L	5000	ug/L	103.6	90.0 - 110.0	P	27-JAN-10 10:02	012710-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 10-1213

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS4,OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Lead	514	ug/L	500	ug/L	102.8	90.0 – 110.0	P	27-JAN-10 10:02	012710-1
	Magnesium	5230	ug/L	5000	ug/L	104.7	90.0 – 110.0	P	27-JAN-10 10:02	012710-1
	Manganese	502	ug/L	500	ug/L	100.4	90.0 – 110.0	P	27-JAN-10 10:02	012710-1
	Potassium	5050	ug/L	5000	ug/L	101	90.0 – 110.0	P	27-JAN-10 10:02	012710-1
	Silver	515	ug/L	500	ug/L	103	90.0 – 110.0	P	27-JAN-10 10:02	012710-1
	Sodium	10100	ug/L	10000	ug/L	101.3	90.0 – 110.0	P	27-JAN-10 10:02	012710-1
	Vanadium	517	ug/L	500	ug/L	103.4	90.0 – 110.0	P	27-JAN-10 10:02	012710-1
	Zinc	507	ug/L	500	ug/L	101.3	90.0 – 110.0	P	27-JAN-10 10:02	012710-1
	Mercury	5.11	ug/L	5	ug/L	102.2	80.0 – 120.0	AV	28-JAN-10 09:50	012810S1-4
CCV04										
	Arsenic	49	ug/L	50	ug/L	98	90.0 – 110.0	MS	21-JAN-10 18:41	100121-2
	Nickel	49.8	ug/L	50	ug/L	99.6	90.0 – 110.0	MS	21-JAN-10 18:41	100121-2
	Selenium	51.8	ug/L	50	ug/L	103.7	90.0 – 110.0	MS	21-JAN-10 18:41	100121-2
	Thallium	47.3	ug/L	50	ug/L	94.7	90.0 – 110.0	MS	21-JAN-10 18:41	100121-2
	Aluminum	5150	ug/L	5000	ug/L	103.1	90.0 – 110.0	P	27-JAN-10 10:43	012710-1
	Antimony	520	ug/L	500	ug/L	104.1	90.0 – 110.0	P	27-JAN-10 10:43	012710-1
	Barium	519	ug/L	500	ug/L	103.8	90.0 – 110.0	P	27-JAN-10 10:43	012710-1
	Cadmium	518	ug/L	500	ug/L	103.6	90.0 – 110.0	P	27-JAN-10 10:43	012710-1
	Calcium	5160	ug/L	5000	ug/L	103.2	90.0 – 110.0	P	27-JAN-10 10:43	012710-1
	Chromium	519	ug/L	500	ug/L	103.7	90.0 – 110.0	P	27-JAN-10 10:43	012710-1
	Cobalt	518	ug/L	500	ug/L	103.6	90.0 – 110.0	P	27-JAN-10 10:43	012710-1
	Copper	518	ug/L	500	ug/L	103.7	90.0 – 110.0	P	27-JAN-10 10:43	012710-1
	Iron	5240	ug/L	5000	ug/L	104.8	90.0 – 110.0	P	27-JAN-10 10:43	012710-1
	Lead	518	ug/L	500	ug/L	103.6	90.0 – 110.0	P	27-JAN-10 10:43	012710-1
	Magnesium	5250	ug/L	5000	ug/L	104.9	90.0 – 110.0	P	27-JAN-10 10:43	012710-1
	Manganese	509	ug/L	500	ug/L	101.8	90.0 – 110.0	P	27-JAN-10 10:43	012710-1
	Potassium	5070	ug/L	5000	ug/L	101.4	90.0 – 110.0	P	27-JAN-10 10:43	012710-1
	Silver	523	ug/L	500	ug/L	104.5	90.0 – 110.0	P	27-JAN-10 10:43	012710-1
	Sodium	10100	ug/L	10000	ug/L	101.1	90.0 – 110.0	P	27-JAN-10 10:43	012710-1
	Vanadium	524	ug/L	500	ug/L	104.8	90.0 – 110.0	P	27-JAN-10 10:43	012710-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 10-1213

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS4,OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Zinc	515	ug/L	500	ug/L	102.9	90.0 – 110.0	P	27-JAN-10 10:43	012710-1
	Mercury	5.17	ug/L	5	ug/L	103.5	80.0 – 120.0	AV	28-JAN-10 10:10	012810S1-4
CCV05										
	Arsenic	47.6	ug/L	50	ug/L	95.3	90.0 – 110.0	MS	21-JAN-10 19:18	100121-2
	Nickel	48.3	ug/L	50	ug/L	96.7	90.0 – 110.0	MS	21-JAN-10 19:18	100121-2
	Selenium	52.8	ug/L	50	ug/L	105.6	90.0 – 110.0	MS	21-JAN-10 19:18	100121-2
	Thallium	47	ug/L	50	ug/L	94	90.0 – 110.0	MS	21-JAN-10 19:18	100121-2
	Aluminum	5170	ug/L	5000	ug/L	103.3	90.0 – 110.0	P	27-JAN-10 11:20	012710-1
	Antimony	523	ug/L	500	ug/L	104.6	90.0 – 110.0	P	27-JAN-10 11:20	012710-1
	Barium	522	ug/L	500	ug/L	104.4	90.0 – 110.0	P	27-JAN-10 11:20	012710-1
	Cadmium	521	ug/L	500	ug/L	104.2	90.0 – 110.0	P	27-JAN-10 11:20	012710-1
	Calcium	5190	ug/L	5000	ug/L	103.8	90.0 – 110.0	P	27-JAN-10 11:20	012710-1
	Chromium	521	ug/L	500	ug/L	104.1	90.0 – 110.0	P	27-JAN-10 11:20	012710-1
	Cobalt	521	ug/L	500	ug/L	104.2	90.0 – 110.0	P	27-JAN-10 11:20	012710-1
	Copper	518	ug/L	500	ug/L	103.5	90.0 – 110.0	P	27-JAN-10 11:20	012710-1
	Iron	5250	ug/L	5000	ug/L	105.1	90.0 – 110.0	P	27-JAN-10 11:20	012710-1
	Lead	524	ug/L	500	ug/L	104.7	90.0 – 110.0	P	27-JAN-10 11:20	012710-1
	Magnesium	5270	ug/L	5000	ug/L	105.4	90.0 – 110.0	P	27-JAN-10 11:20	012710-1
	Manganese	512	ug/L	500	ug/L	102.5	90.0 – 110.0	P	27-JAN-10 11:20	012710-1
	Potassium	5110	ug/L	5000	ug/L	102.3	90.0 – 110.0	P	27-JAN-10 11:20	012710-1
	Silver	523	ug/L	500	ug/L	104.7	90.0 – 110.0	P	27-JAN-10 11:20	012710-1
	Sodium	10100	ug/L	10000	ug/L	101.4	90.0 – 110.0	P	27-JAN-10 11:20	012710-1
	Vanadium	526	ug/L	500	ug/L	105.3	90.0 – 110.0	P	27-JAN-10 11:20	012710-1
	Zinc	518	ug/L	500	ug/L	103.6	90.0 – 110.0	P	27-JAN-10 11:20	012710-1
	Mercury	5.17	ug/L	5	ug/L	103.5	80.0 – 120.0	AV	28-JAN-10 10:30	012810S1-4
CCV06										
	Arsenic	49.7	ug/L	50	ug/L	99.4	90.0 – 110.0	MS	21-JAN-10 19:55	100121-2
	Nickel	49.6	ug/L	50	ug/L	99.2	90.0 – 110.0	MS	21-JAN-10 19:55	100121-2
	Selenium	52.8	ug/L	50	ug/L	105.7	90.0 – 110.0	MS	21-JAN-10 19:55	100121-2
	Thallium	47.8	ug/L	50	ug/L	95.7	90.0 – 110.0	MS	21-JAN-10 19:55	100121-2

METALS

-2a-

Initial and Continuing Calibration Verification

SDG No: 10-1213

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS4,OPTIMA1

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Aluminum	5170	ug/L	5000	ug/L	103.4	90.0 – 110.0	P	27-JAN-10 11:52	012710-1
	Antimony	523	ug/L	500	ug/L	104.6	90.0 – 110.0	P	27-JAN-10 11:52	012710-1
	Barium	517	ug/L	500	ug/L	103.4	90.0 – 110.0	P	27-JAN-10 11:52	012710-1
	Cadmium	515	ug/L	500	ug/L	103.1	90.0 – 110.0	P	27-JAN-10 11:52	012710-1
	Calcium	5210	ug/L	5000	ug/L	104.1	90.0 – 110.0	P	27-JAN-10 11:52	012710-1
	Chromium	516	ug/L	500	ug/L	103.3	90.0 – 110.0	P	27-JAN-10 11:52	012710-1
	Cobalt	516	ug/L	500	ug/L	103.2	90.0 – 110.0	P	27-JAN-10 11:52	012710-1
	Copper	515	ug/L	500	ug/L	103	90.0 – 110.0	P	27-JAN-10 11:52	012710-1
	Iron	5270	ug/L	5000	ug/L	105.4	90.0 – 110.0	P	27-JAN-10 11:52	012710-1
	Lead	518	ug/L	500	ug/L	103.7	90.0 – 110.0	P	27-JAN-10 11:52	012710-1
	Magnesium	5260	ug/L	5000	ug/L	105.1	90.0 – 110.0	P	27-JAN-10 11:52	012710-1
	Manganese	508	ug/L	500	ug/L	101.6	90.0 – 110.0	P	27-JAN-10 11:52	012710-1
	Potassium	5130	ug/L	5000	ug/L	102.7	90.0 – 110.0	P	27-JAN-10 11:52	012710-1
	Silver	519	ug/L	500	ug/L	103.8	90.0 – 110.0	P	27-JAN-10 11:52	012710-1
	Sodium	10200	ug/L	10000	ug/L	101.6	90.0 – 110.0	P	27-JAN-10 11:52	012710-1
	Vanadium	522	ug/L	500	ug/L	104.3	90.0 – 110.0	P	27-JAN-10 11:52	012710-1
	Zinc	512	ug/L	500	ug/L	102.4	90.0 – 110.0	P	27-JAN-10 11:52	012710-1
	Mercury	5.08	ug/L	5	ug/L	101.6	80.0 – 120.0	AV	28-JAN-10 10:50	012810S1-4
CCV07										
	Aluminum	5180	ug/L	5000	ug/L	103.6	90.0 – 110.0	P	27-JAN-10 12:25	012710-1
	Antimony	523	ug/L	500	ug/L	104.7	90.0 – 110.0	P	27-JAN-10 12:25	012710-1
	Barium	518	ug/L	500	ug/L	103.6	90.0 – 110.0	P	27-JAN-10 12:25	012710-1
	Cadmium	515	ug/L	500	ug/L	103	90.0 – 110.0	P	27-JAN-10 12:25	012710-1
	Calcium	5170	ug/L	5000	ug/L	103.4	90.0 – 110.0	P	27-JAN-10 12:25	012710-1
	Chromium	518	ug/L	500	ug/L	103.5	90.0 – 110.0	P	27-JAN-10 12:25	012710-1
	Cobalt	517	ug/L	500	ug/L	103.5	90.0 – 110.0	P	27-JAN-10 12:25	012710-1
	Copper	517	ug/L	500	ug/L	103.3	90.0 – 110.0	P	27-JAN-10 12:25	012710-1
	Iron	5320	ug/L	5000	ug/L	106.4	90.0 – 110.0	P	27-JAN-10 12:25	012710-1
	Lead	522	ug/L	500	ug/L	104.4	90.0 – 110.0	P	27-JAN-10 12:25	012710-1
	Magnesium	5330	ug/L	5000	ug/L	106.6	90.0 – 110.0	P	27-JAN-10 12:25	012710-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 10-1213

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS4,OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Manganese	510	ug/L	500	ug/L	102	90.0 – 110.0	P	27-JAN-10 12:25	012710-1
	Potassium	5120	ug/L	5000	ug/L	102.3	90.0 – 110.0	P	27-JAN-10 12:25	012710-1
	Silver	520	ug/L	500	ug/L	104	90.0 – 110.0	P	27-JAN-10 12:25	012710-1
	Sodium	10100	ug/L	10000	ug/L	101.3	90.0 – 110.0	P	27-JAN-10 12:25	012710-1
	Vanadium	523	ug/L	500	ug/L	104.7	90.0 – 110.0	P	27-JAN-10 12:25	012710-1
	Zinc	513	ug/L	500	ug/L	102.6	90.0 – 110.0	P	27-JAN-10 12:25	012710-1
	Mercury	5.05	ug/L	5	ug/L	100.9	80.0 – 120.0	AV	28-JAN-10 11:10	012810S1-4
CCV08										
	Aluminum	5340	ug/L	5000	ug/L	106.9	90.0 – 110.0	P	27-JAN-10 12:58	012710-1
	Antimony	540	ug/L	500	ug/L	108.1	90.0 – 110.0	P	27-JAN-10 12:58	012710-1
	Barium	532	ug/L	500	ug/L	106.4	90.0 – 110.0	P	27-JAN-10 12:58	012710-1
	Cadmium	528	ug/L	500	ug/L	105.6	90.0 – 110.0	P	27-JAN-10 12:58	012710-1
	Calcium	5330	ug/L	5000	ug/L	106.6	90.0 – 110.0	P	27-JAN-10 12:58	012710-1
	Chromium	531	ug/L	500	ug/L	106.2	90.0 – 110.0	P	27-JAN-10 12:58	012710-1
	Cobalt	531	ug/L	500	ug/L	106.2	90.0 – 110.0	P	27-JAN-10 12:58	012710-1
	Copper	533	ug/L	500	ug/L	106.6	90.0 – 110.0	P	27-JAN-10 12:58	012710-1
	Iron	5400	ug/L	5000	ug/L	108.1	90.0 – 110.0	P	27-JAN-10 12:58	012710-1
	Lead	536	ug/L	500	ug/L	107.2	90.0 – 110.0	P	27-JAN-10 12:58	012710-1
	Magnesium	5400	ug/L	5000	ug/L	108.1	90.0 – 110.0	P	27-JAN-10 12:58	012710-1
	Manganese	525	ug/L	500	ug/L	104.9	90.0 – 110.0	P	27-JAN-10 12:58	012710-1
	Potassium	5240	ug/L	5000	ug/L	104.8	90.0 – 110.0	P	27-JAN-10 12:58	012710-1
	Silver	536	ug/L	500	ug/L	107.2	90.0 – 110.0	P	27-JAN-10 12:58	012710-1
	Sodium	10400	ug/L	10000	ug/L	104.2	90.0 – 110.0	P	27-JAN-10 12:58	012710-1
	Vanadium	538	ug/L	500	ug/L	107.6	90.0 – 110.0	P	27-JAN-10 12:58	012710-1
	Zinc	527	ug/L	500	ug/L	105.4	90.0 – 110.0	P	27-JAN-10 12:58	012710-1
	Mercury	4.99	ug/L	5	ug/L	99.9	80.0 – 120.0	AV	28-JAN-10 11:30	012810S1-4
CCV09										
	Aluminum	5230	ug/L	5000	ug/L	104.7	90.0 – 110.0	P	27-JAN-10 13:50	012710-1
	Antimony	529	ug/L	500	ug/L	105.9	90.0 – 110.0	P	27-JAN-10 13:50	012710-1
	Barium	525	ug/L	500	ug/L	104.9	90.0 – 110.0	P	27-JAN-10 13:50	012710-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 10-1213

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS4,OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Cadmium	522	ug/L	500	ug/L	104.5	90.0 - 110.0	P	27-JAN-10 13:50	012710-1
	Calcium	5290	ug/L	5000	ug/L	105.8	90.0 - 110.0	P	27-JAN-10 13:50	012710-1
	Chromium	525	ug/L	500	ug/L	105	90.0 - 110.0	P	27-JAN-10 13:50	012710-1
	Cobalt	525	ug/L	500	ug/L	105	90.0 - 110.0	P	27-JAN-10 13:50	012710-1
	Copper	524	ug/L	500	ug/L	104.8	90.0 - 110.0	P	27-JAN-10 13:50	012710-1
	Iron	5390	ug/L	5000	ug/L	107.7	90.0 - 110.0	P	27-JAN-10 13:50	012710-1
	Lead	530	ug/L	500	ug/L	106	90.0 - 110.0	P	27-JAN-10 13:50	012710-1
	Magnesium	5360	ug/L	5000	ug/L	107.1	90.0 - 110.0	P	27-JAN-10 13:50	012710-1
	Manganese	517	ug/L	500	ug/L	103.5	90.0 - 110.0	P	27-JAN-10 13:50	012710-1
	Potassium	5190	ug/L	5000	ug/L	103.8	90.0 - 110.0	P	27-JAN-10 13:50	012710-1
	Silver	527	ug/L	500	ug/L	105.3	90.0 - 110.0	P	27-JAN-10 13:50	012710-1
	Sodium	10300	ug/L	10000	ug/L	102.5	90.0 - 110.0	P	27-JAN-10 13:50	012710-1
	Vanadium	530	ug/L	500	ug/L	106.1	90.0 - 110.0	P	27-JAN-10 13:50	012710-1
	Zinc	520	ug/L	500	ug/L	104	90.0 - 110.0	P	27-JAN-10 13:50	012710-1
	Mercury	5.02	ug/L	5	ug/L	100.4	80.0 - 120.0	AV	28-JAN-10 11:51	012810S1-4
CCV10	Aluminum	5200	ug/L	5000	ug/L	103.9	90.0 - 110.0	P	27-JAN-10 14:23	012710-1
	Antimony	528	ug/L	500	ug/L	105.6	90.0 - 110.0	P	27-JAN-10 14:23	012710-1
	Barium	524	ug/L	500	ug/L	104.8	90.0 - 110.0	P	27-JAN-10 14:23	012710-1
	Cadmium	522	ug/L	500	ug/L	104.3	90.0 - 110.0	P	27-JAN-10 14:23	012710-1
	Calcium	5240	ug/L	5000	ug/L	104.8	90.0 - 110.0	P	27-JAN-10 14:23	012710-1
	Chromium	522	ug/L	500	ug/L	104.5	90.0 - 110.0	P	27-JAN-10 14:23	012710-1
	Cobalt	522	ug/L	500	ug/L	104.4	90.0 - 110.0	P	27-JAN-10 14:23	012710-1
	Copper	522	ug/L	500	ug/L	104.5	90.0 - 110.0	P	27-JAN-10 14:23	012710-1
	Iron	5380	ug/L	5000	ug/L	107.6	90.0 - 110.0	P	27-JAN-10 14:23	012710-1
	Lead	530	ug/L	500	ug/L	106	90.0 - 110.0	P	27-JAN-10 14:23	012710-1
	Magnesium	5320	ug/L	5000	ug/L	106.3	90.0 - 110.0	P	27-JAN-10 14:23	012710-1
	Manganese	516	ug/L	500	ug/L	103.3	90.0 - 110.0	P	27-JAN-10 14:23	012710-1
	Potassium	5120	ug/L	5000	ug/L	102.4	90.0 - 110.0	P	27-JAN-10 14:23	012710-1
	Silver	525	ug/L	500	ug/L	105.1	90.0 - 110.0	P	27-JAN-10 14:23	012710-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 10-1213

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS4,OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (% R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Sodium	10200	ug/L	10000	ug/L	101.7	90.0 - 110.0	P	27-JAN-10 14:23	012710-1
	Vanadium	529	ug/L	500	ug/L	105.8	90.0 - 110.0	P	27-JAN-10 14:23	012710-1
	Zinc	518	ug/L	500	ug/L	103.6	90.0 - 110.0	P	27-JAN-10 14:23	012710-1
	Mercury	5	ug/L	5	ug/L	100	80.0 - 120.0	AV	28-JAN-10 12:11	012810S1-4
CCV11										
	Aluminum	5310	ug/L	5000	ug/L	106.1	90.0 - 110.0	P	27-JAN-10 15:10	012710-1
	Antimony	531	ug/L	500	ug/L	106.2	90.0 - 110.0	P	27-JAN-10 15:10	012710-1
	Barium	524	ug/L	500	ug/L	104.9	90.0 - 110.0	P	27-JAN-10 15:10	012710-1
	Cadmium	521	ug/L	500	ug/L	104.1	90.0 - 110.0	P	27-JAN-10 15:10	012710-1
	Calcium	5200	ug/L	5000	ug/L	104	90.0 - 110.0	P	27-JAN-10 15:10	012710-1
	Chromium	525	ug/L	500	ug/L	105	90.0 - 110.0	P	27-JAN-10 15:10	012710-1
	Cobalt	523	ug/L	500	ug/L	104.6	90.0 - 110.0	P	27-JAN-10 15:10	012710-1
	Copper	525	ug/L	500	ug/L	105	90.0 - 110.0	P	27-JAN-10 15:10	012710-1
	Iron	5370	ug/L	5000	ug/L	107.5	90.0 - 110.0	P	27-JAN-10 15:10	012710-1
	Lead	527	ug/L	500	ug/L	105.5	90.0 - 110.0	P	27-JAN-10 15:10	012710-1
	Magnesium	5410	ug/L	5000	ug/L	108.1	90.0 - 110.0	P	27-JAN-10 15:10	012710-1
	Manganese	518	ug/L	500	ug/L	103.5	90.0 - 110.0	P	27-JAN-10 15:10	012710-1
	Potassium	5300	ug/L	5000	ug/L	106.1	90.0 - 110.0	P	27-JAN-10 15:10	012710-1
	Silver	528	ug/L	500	ug/L	105.6	90.0 - 110.0	P	27-JAN-10 15:10	012710-1
	Sodium	10700	ug/L	10000	ug/L	107.2	90.0 - 110.0	P	27-JAN-10 15:10	012710-1
	Vanadium	531	ug/L	500	ug/L	106.3	90.0 - 110.0	P	27-JAN-10 15:10	012710-1
	Zinc	519	ug/L	500	ug/L	103.8	90.0 - 110.0	P	27-JAN-10 15:10	012710-1
CCV12										
	Aluminum	5260	ug/L	5000	ug/L	105.2	90.0 - 110.0	P	27-JAN-10 15:53	012710-1
	Antimony	529	ug/L	500	ug/L	105.8	90.0 - 110.0	P	27-JAN-10 15:53	012710-1
	Barium	524	ug/L	500	ug/L	104.7	90.0 - 110.0	P	27-JAN-10 15:53	012710-1
	Cadmium	520	ug/L	500	ug/L	104	90.0 - 110.0	P	27-JAN-10 15:53	012710-1
	Calcium	5130	ug/L	5000	ug/L	102.6	90.0 - 110.0	P	27-JAN-10 15:53	012710-1
	Chromium	523	ug/L	500	ug/L	104.7	90.0 - 110.0	P	27-JAN-10 15:53	012710-1
	Cobalt	522	ug/L	500	ug/L	104.4	90.0 - 110.0	P	27-JAN-10 15:53	012710-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 10-1213

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS4,OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Copper	524	ug/L	500	ug/L	104.7	90.0 - 110.0	P	27-JAN-10 15:53	012710-1
	Iron	5360	ug/L	5000	ug/L	107.2	90.0 - 110.0	P	27-JAN-10 15:53	012710-1
	Lead	523	ug/L	500	ug/L	104.6	90.0 - 110.0	P	27-JAN-10 15:53	012710-1
	Magnesium	5360	ug/L	5000	ug/L	107.1	90.0 - 110.0	P	27-JAN-10 15:53	012710-1
	Manganese	516	ug/L	500	ug/L	103.3	90.0 - 110.0	P	27-JAN-10 15:53	012710-1
	Potassium	5240	ug/L	5000	ug/L	104.8	90.0 - 110.0	P	27-JAN-10 15:53	012710-1
	Silver	527	ug/L	500	ug/L	105.5	90.0 - 110.0	P	27-JAN-10 15:53	012710-1
	Sodium	10300	ug/L	10000	ug/L	103.5	90.0 - 110.0	P	27-JAN-10 15:53	012710-1
	Vanadium	529	ug/L	500	ug/L	105.9	90.0 - 110.0	P	27-JAN-10 15:53	012710-1
	Zinc	518	ug/L	500	ug/L	103.5	90.0 - 110.0	P	27-JAN-10 15:53	012710-1

METALS
-2b-
CRDL Standard for AA & ICP

SDG No: 10-1213

Contract: LANL01004

Lab Code: GEL

AA CRDL Standard Source: SPEX

ICP CRDL Standard Source Solutions Plus

Instrument ID: HG3,ICPMS4,OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Advisory Limits (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
CRDL01										
	Nickel	2.18	ug/L	2	ug/L	108.9	70.0 – 130.0	MS	21-JAN-10 16:50	100121-2
	Thallium	1.08	ug/L	1	ug/L	107.8	70.0 – 130.0	MS	21-JAN-10 16:50	100121-2
	Selenium	5.94	ug/L	5	ug/L	118.7	70.0 – 130.0	MS	21-JAN-10 16:50	100121-2
	Arsenic	6.24	ug/L	5	ug/L	124.9	70.0 – 130.0	MS	21-JAN-10 16:50	100121-2
	Beryllium	.633	ug/L	.5	ug/L	126.6	70.0 – 130.0	MS	22-JAN-10 15:28	100122-3
	Uranium	.222	ug/L	.2	ug/L	111	70.0 – 130.0	MS	22-JAN-10 15:28	100122-3
	Mercury	.159	ug/L	.2	ug/L	79.5	70.0 – 130.0	AV	28-JAN-10 09:08	012810S1-4
PQL01										
	Aluminum	212	ug/L	200	ug/L	106.1	70.0 – 130.0	P	27-JAN-10 08:48	012710-1
	Antimony	10.3	ug/L	10	ug/L	102.5	70.0 – 130.0	P	27-JAN-10 08:48	012710-1
	Calcium	205	ug/L	200	ug/L	102.7	70.0 – 130.0	P	27-JAN-10 08:48	012710-1
	Zinc	9.93	ug/L	10	ug/L	99.3	70.0 – 130.0	P	27-JAN-10 08:48	012710-1
	Vanadium	4.98	ug/L	5	ug/L	99.6	70.0 – 130.0	P	27-JAN-10 08:48	012710-1
	Copper	11.1	ug/L	10	ug/L	110.5	70.0 – 130.0	P	27-JAN-10 08:48	012710-1
	Cobalt	5.11	ug/L	5	ug/L	102.2	70.0 – 130.0	P	27-JAN-10 08:48	012710-1
	Chromium	5.31	ug/L	5	ug/L	106.1	70.0 – 130.0	P	27-JAN-10 08:48	012710-1
	Cadmium	5.1	ug/L	5	ug/L	101.9	70.0 – 130.0	P	27-JAN-10 08:48	012710-1
	Barium	4.97	ug/L	5	ug/L	99.4	70.0 – 130.0	P	27-JAN-10 08:48	012710-1
	Sodium	293	ug/L	300	ug/L	97.6	70.0 – 130.0	P	27-JAN-10 08:48	012710-1
	Lead	9.4	ug/L	10	ug/L	94	70.0 – 130.0	P	27-JAN-10 08:48	012710-1
	Manganese	10.5	ug/L	10	ug/L	105.4	70.0 – 130.0	P	27-JAN-10 08:48	012710-1
	Potassium	197	ug/L	150	ug/L	131.1	70.0 – 130.0	P	27-JAN-10 08:48	012710-1
	Silver	5.26	ug/L	5	ug/L	105.3	70.0 – 130.0	P	27-JAN-10 08:48	012710-1
	Magnesium	361	ug/L	300	ug/L	120.2	70.0 – 130.0	P	27-JAN-10 08:48	012710-1
	Iron	132	ug/L	100	ug/L	132.2	70.0 – 130.0	P	27-JAN-10 08:48	012710-1
PQL02										
	Aluminum	220	ug/L	200	ug/L	110.1	70.0 – 130.0	P	27-JAN-10 15:14	012710-1
	Iron	134	ug/L	100	ug/L	133.7	70.0 – 130.0	P	27-JAN-10 15:14	012710-1
	Lead	12.3	ug/L	10	ug/L	123.2	70.0 – 130.0	P	27-JAN-10 15:14	012710-1
	Magnesium	349	ug/L	300	ug/L	116.2	70.0 – 130.0	P	27-JAN-10 15:14	012710-1

METALS
-2b-
CRDL Standard for AA & ICP

SDG No: 10-1213

Contract: LANL01004

Lab Code: GEL

AA CRDL Standard Source:

ICP CRDL Standard Source

Instrument ID: HG3,ICPMS4,OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Advisory Limits (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Manganese	10.6	ug/L	10	ug/L	105.8	70.0 – 130.0	P	27-JAN-10 15:14	012710-1
	Potassium	156	ug/L	150	ug/L	104.1	70.0 – 130.0	P	27-JAN-10 15:14	012710-1
	Silver	4.85	ug/L	5	ug/L	97.1	70.0 – 130.0	P	27-JAN-10 15:14	012710-1
	Sodium	471	ug/L	300	ug/L	157.2	70.0 – 130.0	P	27-JAN-10 15:14	012710-1
	Antimony	14.3	ug/L	10	ug/L	143.4	70.0 – 130.0	P	27-JAN-10 15:14	012710-1
	Barium	4.91	ug/L	5	ug/L	98.1	70.0 – 130.0	P	27-JAN-10 15:14	012710-1
	Cadmium	5.45	ug/L	5	ug/L	109	70.0 – 130.0	P	27-JAN-10 15:14	012710-1
	Chromium	5.41	ug/L	5	ug/L	108.3	70.0 – 130.0	P	27-JAN-10 15:14	012710-1
	Cobalt	4.57	ug/L	5	ug/L	91.4	70.0 – 130.0	P	27-JAN-10 15:14	012710-1
	Copper	11.3	ug/L	10	ug/L	112.9	70.0 – 130.0	P	27-JAN-10 15:14	012710-1
	Vanadium	5.61	ug/L	5	ug/L	112.2	70.0 – 130.0	P	27-JAN-10 15:14	012710-1
	Zinc	9.81	ug/L	10	ug/L	98.1	70.0 – 130.0	P	27-JAN-10 15:14	012710-1
	Calcium	206	ug/L	200	ug/L	103	70.0 – 130.0	P	27-JAN-10 15:14	012710-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 10-1213

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
ICB01										
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	21-JAN-10 16:43	100121-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	21-JAN-10 16:43	100121-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	21-JAN-10 16:43	100121-2
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	21-JAN-10 16:43	100121-2
	Beryllium	0.106	+/-5	J	0.1	0.5	SOL	MS	22-JAN-10 15:25	100122-3
	Uranium	0.066	+/-2	U	0.066	0.2	SOL	MS	22-JAN-10 15:25	100122-3
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	27-JAN-10 08:44	012710-1
	Antimony	5.66	+/-10	J	3.3	10.0	SOL	P	27-JAN-10 08:44	012710-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	27-JAN-10 08:44	012710-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	27-JAN-10 08:44	012710-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	27-JAN-10 08:44	012710-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	27-JAN-10 08:44	012710-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	27-JAN-10 08:44	012710-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	27-JAN-10 08:44	012710-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	27-JAN-10 08:44	012710-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	27-JAN-10 08:44	012710-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	27-JAN-10 08:44	012710-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	27-JAN-10 08:44	012710-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	27-JAN-10 08:44	012710-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	27-JAN-10 08:44	012710-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	27-JAN-10 08:44	012710-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	27-JAN-10 08:44	012710-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	27-JAN-10 08:44	012710-1
	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	28-JAN-10 09:06	012810S1-4
CCB01										
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	21-JAN-10 17:14	100121-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	21-JAN-10 17:14	100121-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	21-JAN-10 17:14	100121-2
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	21-JAN-10 17:14	100121-2
	Beryllium	0.1	+/-5	U	0.1	0.5	SOL	MS	22-JAN-10 15:37	100122-3
	Uranium	0.066	+/-2	U	0.066	0.2	SOL	MS	22-JAN-10 15:37	100122-3

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 10-1213

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	27-JAN-10 09:08	012710-1
	Antimony	5.24	+/-10	J	3.3	10.0	SOL	P	27-JAN-10 09:08	012710-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	27-JAN-10 09:08	012710-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	27-JAN-10 09:08	012710-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	27-JAN-10 09:08	012710-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	27-JAN-10 09:08	012710-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	27-JAN-10 09:08	012710-1
	Copper	6.24	+/-10	J	3.0	10.0	SOL	P	27-JAN-10 09:08	012710-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	27-JAN-10 09:08	012710-1
	Lead	2.62	+/-10	J	2.5	10.0	SOL	P	27-JAN-10 09:08	012710-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	27-JAN-10 09:08	012710-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	27-JAN-10 09:08	012710-1
	Potassium	82.92	+/-250	J	64.0	250	SOL	P	27-JAN-10 09:08	012710-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	27-JAN-10 09:08	012710-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	27-JAN-10 09:08	012710-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	27-JAN-10 09:08	012710-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	27-JAN-10 09:08	012710-1
	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	28-JAN-10 09:11	012810S1-4
CCB02	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	21-JAN-10 17:33	100121-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	21-JAN-10 17:33	100121-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	21-JAN-10 17:33	100121-2
	Thallium	0.429	+/-1	J	0.3	1.0	SOL	MS	21-JAN-10 17:33	100121-2
	Beryllium	0.1	+/-5	U	0.1	0.5	SOL	MS	22-JAN-10 15:51	100122-3
	Uranium	0.066	+/-2	U	0.066	0.2	SOL	MS	22-JAN-10 15:51	100122-3
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	27-JAN-10 09:24	012710-1
	Antimony	4.76	+/-10	J	3.3	10.0	SOL	P	27-JAN-10 09:24	012710-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	27-JAN-10 09:24	012710-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	27-JAN-10 09:24	012710-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	27-JAN-10 09:24	012710-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	27-JAN-10 09:24	012710-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 10-1213

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	27-JAN-10 09:24	012710-1
	Copper	3.04	+/-10	J	3.0	10.0	SOL	P	27-JAN-10 09:24	012710-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	27-JAN-10 09:24	012710-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	27-JAN-10 09:24	012710-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	27-JAN-10 09:24	012710-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	27-JAN-10 09:24	012710-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	27-JAN-10 09:24	012710-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	27-JAN-10 09:24	012710-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	27-JAN-10 09:24	012710-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	27-JAN-10 09:24	012710-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	27-JAN-10 09:24	012710-1
	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	28-JAN-10 09:31	012810S1-4
CCB03	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	21-JAN-10 18:10	100121-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	21-JAN-10 18:10	100121-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	21-JAN-10 18:10	100121-2
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	21-JAN-10 18:10	100121-2
	Beryllium	0.1	+/-5	U	0.1	0.5	SOL	MS	22-JAN-10 16:04	100122-3
	Uranium	0.066	+/-2	U	0.066	0.2	SOL	MS	22-JAN-10 16:04	100122-3
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	27-JAN-10 10:06	012710-1
	Antimony	5.31	+/-10	J	3.3	10.0	SOL	P	27-JAN-10 10:06	012710-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	27-JAN-10 10:06	012710-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	27-JAN-10 10:06	012710-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	27-JAN-10 10:06	012710-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	27-JAN-10 10:06	012710-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	27-JAN-10 10:06	012710-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	27-JAN-10 10:06	012710-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	27-JAN-10 10:06	012710-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	27-JAN-10 10:06	012710-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	27-JAN-10 10:06	012710-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	27-JAN-10 10:06	012710-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 10-1213

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	27-JAN-10 10:06	012710-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	27-JAN-10 10:06	012710-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	27-JAN-10 10:06	012710-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	27-JAN-10 10:06	012710-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	27-JAN-10 10:06	012710-1
	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	28-JAN-10 09:52	012810S1-4
CCB04	Arsenic	-1.47	+/-5	J	1.0	5.0	SOL	MS	21-JAN-10 18:47	100121-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	21-JAN-10 18:47	100121-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	21-JAN-10 18:47	100121-2
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	21-JAN-10 18:47	100121-2
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	27-JAN-10 10:47	012710-1
	Antimony	4.25	+/-10	J	3.3	10.0	SOL	P	27-JAN-10 10:47	012710-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	27-JAN-10 10:47	012710-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	27-JAN-10 10:47	012710-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	27-JAN-10 10:47	012710-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	27-JAN-10 10:47	012710-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	27-JAN-10 10:47	012710-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	27-JAN-10 10:47	012710-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	27-JAN-10 10:47	012710-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	27-JAN-10 10:47	012710-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	27-JAN-10 10:47	012710-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	27-JAN-10 10:47	012710-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	27-JAN-10 10:47	012710-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	27-JAN-10 10:47	012710-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	27-JAN-10 10:47	012710-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	27-JAN-10 10:47	012710-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	27-JAN-10 10:47	012710-1
	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	28-JAN-10 10:12	012810S1-4
CCB05	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	21-JAN-10 19:24	100121-2

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 10-1213

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	21-JAN-10 19:24	100121-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	21-JAN-10 19:24	100121-2
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	21-JAN-10 19:24	100121-2
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	27-JAN-10 11:23	012710-1
	Antimony	4.17	+/-10	J	3.3	10.0	SOL	P	27-JAN-10 11:23	012710-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	27-JAN-10 11:23	012710-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	27-JAN-10 11:23	012710-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	27-JAN-10 11:23	012710-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	27-JAN-10 11:23	012710-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	27-JAN-10 11:23	012710-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	27-JAN-10 11:23	012710-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	27-JAN-10 11:23	012710-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	27-JAN-10 11:23	012710-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	27-JAN-10 11:23	012710-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	27-JAN-10 11:23	012710-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	27-JAN-10 11:23	012710-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	27-JAN-10 11:23	012710-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	27-JAN-10 11:23	012710-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	27-JAN-10 11:23	012710-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	27-JAN-10 11:23	012710-1
	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	28-JAN-10 10:32	012810S1-4
CCB06	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	21-JAN-10 20:02	100121-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	21-JAN-10 20:02	100121-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	21-JAN-10 20:02	100121-2
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	21-JAN-10 20:02	100121-2
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	27-JAN-10 11:56	012710-1
	Antimony	5.41	+/-10	J	3.3	10.0	SOL	P	27-JAN-10 11:56	012710-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	27-JAN-10 11:56	012710-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	27-JAN-10 11:56	012710-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	27-JAN-10 11:56	012710-1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 10-1213

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	27-JAN-10 11:56	012710-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	27-JAN-10 11:56	012710-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	27-JAN-10 11:56	012710-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	27-JAN-10 11:56	012710-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	27-JAN-10 11:56	012710-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	27-JAN-10 11:56	012710-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	27-JAN-10 11:56	012710-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	27-JAN-10 11:56	012710-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	27-JAN-10 11:56	012710-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	27-JAN-10 11:56	012710-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	27-JAN-10 11:56	012710-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	27-JAN-10 11:56	012710-1
	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	28-JAN-10 10:52	012810S1-4
CCB07	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	27-JAN-10 12:29	012710-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	27-JAN-10 12:29	012710-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	27-JAN-10 12:29	012710-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	27-JAN-10 12:29	012710-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	27-JAN-10 12:29	012710-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	27-JAN-10 12:29	012710-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	27-JAN-10 12:29	012710-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	27-JAN-10 12:29	012710-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	27-JAN-10 12:29	012710-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	27-JAN-10 12:29	012710-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	27-JAN-10 12:29	012710-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	27-JAN-10 12:29	012710-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	27-JAN-10 12:29	012710-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	27-JAN-10 12:29	012710-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	27-JAN-10 12:29	012710-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	27-JAN-10 12:29	012710-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	27-JAN-10 12:29	012710-1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 10-1213

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result ug/L</u>	<u>Acceptance</u>	<u>Conc Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run</u>
CCB08	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	28-JAN-10 11:12	012810S1-4
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	27-JAN-10 13:02	012710-1
	Antimony	4.49	+/-10	J	3.3	10.0	SOL	P	27-JAN-10 13:02	012710-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	27-JAN-10 13:02	012710-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	27-JAN-10 13:02	012710-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	27-JAN-10 13:02	012710-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	27-JAN-10 13:02	012710-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	27-JAN-10 13:02	012710-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	27-JAN-10 13:02	012710-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	27-JAN-10 13:02	012710-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	27-JAN-10 13:02	012710-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	27-JAN-10 13:02	012710-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	27-JAN-10 13:02	012710-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	27-JAN-10 13:02	012710-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	27-JAN-10 13:02	012710-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	27-JAN-10 13:02	012710-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	27-JAN-10 13:02	012710-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	27-JAN-10 13:02	012710-1
CCB09	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	28-JAN-10 11:32	012810S1-4
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	27-JAN-10 13:54	012710-1
	Antimony	8.75	+/-10	J	3.3	10.0	SOL	P	27-JAN-10 13:54	012710-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	27-JAN-10 13:54	012710-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	27-JAN-10 13:54	012710-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	27-JAN-10 13:54	012710-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	27-JAN-10 13:54	012710-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	27-JAN-10 13:54	012710-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	27-JAN-10 13:54	012710-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	27-JAN-10 13:54	012710-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	27-JAN-10 13:54	012710-1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 10-1213

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result ug/L</u>	<u>Acceptance</u>	<u>Conc Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run</u>
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	27-JAN-10 13:54	012710-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	27-JAN-10 13:54	012710-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	27-JAN-10 13:54	012710-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	27-JAN-10 13:54	012710-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	27-JAN-10 13:54	012710-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	27-JAN-10 13:54	012710-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	27-JAN-10 13:54	012710-1
	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	28-JAN-10 11:52	012810S1-4
CCB10	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	27-JAN-10 14:27	012710-1
	Antimony	3.46	+/-10	J	3.3	10.0	SOL	P	27-JAN-10 14:27	012710-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	27-JAN-10 14:27	012710-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	27-JAN-10 14:27	012710-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	27-JAN-10 14:27	012710-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	27-JAN-10 14:27	012710-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	27-JAN-10 14:27	012710-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	27-JAN-10 14:27	012710-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	27-JAN-10 14:27	012710-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	27-JAN-10 14:27	012710-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	27-JAN-10 14:27	012710-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	27-JAN-10 14:27	012710-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	27-JAN-10 14:27	012710-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	27-JAN-10 14:27	012710-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	27-JAN-10 14:27	012710-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	27-JAN-10 14:27	012710-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	27-JAN-10 14:27	012710-1
	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	28-JAN-10 12:13	012810S1-4
CCB11	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	27-JAN-10 15:17	012710-1
	Antimony	3.66	+/-10	J	3.3	10.0	SOL	P	27-JAN-10 15:17	012710-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	27-JAN-10 15:17	012710-1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 10-1213

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	27-JAN-10 15:17	012710-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	27-JAN-10 15:17	012710-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	27-JAN-10 15:17	012710-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	27-JAN-10 15:17	012710-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	27-JAN-10 15:17	012710-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	27-JAN-10 15:17	012710-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	27-JAN-10 15:17	012710-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	27-JAN-10 15:17	012710-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	27-JAN-10 15:17	012710-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	27-JAN-10 15:17	012710-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	27-JAN-10 15:17	012710-1
	Sodium	159.5	+/-250	J	70.0	250	SOL	P	27-JAN-10 15:17	012710-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	27-JAN-10 15:17	012710-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	27-JAN-10 15:17	012710-1
CCB12	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	27-JAN-10 15:57	012710-1
	Antimony	4.23	+/-10	J	3.3	10.0	SOL	P	27-JAN-10 15:57	012710-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	27-JAN-10 15:57	012710-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	27-JAN-10 15:57	012710-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	27-JAN-10 15:57	012710-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	27-JAN-10 15:57	012710-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	27-JAN-10 15:57	012710-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	27-JAN-10 15:57	012710-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	27-JAN-10 15:57	012710-1
	Lead	2.77	+/-10	J	2.5	10.0	SOL	P	27-JAN-10 15:57	012710-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	27-JAN-10 15:57	012710-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	27-JAN-10 15:57	012710-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	27-JAN-10 15:57	012710-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	27-JAN-10 15:57	012710-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	27-JAN-10 15:57	012710-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	27-JAN-10 15:57	012710-1

Metals

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Initial and Continuing Calibration Blank Summary

SDG No.: 10-1213

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	27-JAN-10 15:57	012710-1

METALS
-3b-
PREPARATION BLANK SUMMARY

SDG NO. 10-1213

Contract: LANL01004

Matrix: SOIL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Acceptance Window</u>	<u>Conc Qual</u>	<u>M</u>	<u>MDL</u>	<u>RDL</u>
1202015719	Aluminum	6530	ug/Kg	+/-19200	U	P	6530	19200
	Antimony	317	ug/Kg	+/-960	U	P	317	960
	Barium	96	ug/Kg	+/-480	U	P	96	480
	Cadmium	96	ug/Kg	+/-480	U	P	96	480
	Calcium	7680	ug/Kg	+/-24000	U	P	7680	24000
	Chromium	144	ug/Kg	+/-480	U	P	144	480
	Cobalt	144	ug/Kg	+/-480	U	P	144	480
	Copper	288	ug/Kg	+/-960	U	P	288	960
	Iron	8160	ug/Kg	+/-24000	J	P	7680	24000
	Lead	240	ug/Kg	+/-960	U	P	240	960
	Magnesium	8160	ug/Kg	+/-28800	U	P	8160	28800
	Manganese	192	ug/Kg	+/-960	U	P	192	960
	Potassium	6140	ug/Kg	+/-24000	U	P	6140	24000
	Silver	96	ug/Kg	+/-480	U	P	96	480
	Sodium	17600	ug/Kg	+/-24000	J	P	6720	24000
	Vanadium	96	ug/Kg	+/-480	U	P	96	480
	Zinc	317	ug/Kg	+/-960	U	P	317	960
1202015732	Arsenic	0.19	mg/kg	+/-0.952	U	MS	0.19	0.952
	Beryllium	0.0191	mg/kg	+/-0.0952	U	MS	0.0191	0.0952
	Nickel	0.0952	mg/kg	+/-0.381	U	MS	0.0952	0.381
	Selenium	0.476	mg/kg	+/-0.952	U	MS	0.476	0.952
	Thallium	0.0571	mg/kg	+/-0.19	U	MS	0.0571	0.19
	Uranium	0.0126	mg/kg	+/-0.0381	U	MS	0.0126	0.0381
1202019739	Mercury	3.73	ug/kg	+/-11	U	AV	3.73	11

METALS
-4-
Interference Check Sample

SDG No: 10-1213

Contract: LANL01004

Lab Code: GEL

ICS: O2Si

Instrument: OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
ICSA01									
	Aluminum	525000	ug/L	500000	ug/L	105	80.0 – 120.0	27-JAN-10 08:52	012710-1
	Antimony	13.8	ug/L					27-JAN-10 08:52	012710-1
	Barium	6.9	ug/L					27-JAN-10 08:52	012710-1
	Cadmium	2.2	ug/L					27-JAN-10 08:52	012710-1
	Calcium	502000	ug/L	500000	ug/L	100	80.0 – 120.0	27-JAN-10 08:52	012710-1
	Chromium	-0.752	ug/L					27-JAN-10 08:52	012710-1
	Cobalt	2.2	ug/L					27-JAN-10 08:52	012710-1
	Copper	4.3	ug/L					27-JAN-10 08:52	012710-1
	Iron	194000	ug/L	200000	ug/L	97.2	80.0 – 120.0	27-JAN-10 08:52	012710-1
	Lead	-9.52	ug/L					27-JAN-10 08:52	012710-1
	Magnesium	504000	ug/L	500000	ug/L	101	80.0 – 120.0	27-JAN-10 08:52	012710-1
	Manganese	-3.01	ug/L					27-JAN-10 08:52	012710-1
	Potassium	-62.8	ug/L					27-JAN-10 08:52	012710-1
	Silver	-6.45	ug/L					27-JAN-10 08:52	012710-1
	Sodium	2.65	ug/L					27-JAN-10 08:52	012710-1
	Vanadium	0.34	ug/L					27-JAN-10 08:52	012710-1
	Zinc	-0.849	ug/L					27-JAN-10 08:52	012710-1
ICSAB01									
	Aluminum	534000	ug/L	500000	ug/L	107	80.0 – 120.0	27-JAN-10 08:54	012710-1
	Antimony	546	ug/L	500	ug/L	109	80.0 – 120.0	27-JAN-10 08:54	012710-1
	Barium	526	ug/L	500	ug/L	105	80.0 – 120.0	27-JAN-10 08:54	012710-1
	Cadmium	487	ug/L	500	ug/L	97.4	80.0 – 120.0	27-JAN-10 08:54	012710-1
	Calcium	511000	ug/L	500000	ug/L	102	80.0 – 120.0	27-JAN-10 08:54	012710-1
	Chromium	509	ug/L	500	ug/L	102	80.0 – 120.0	27-JAN-10 08:54	012710-1
	Cobalt	464	ug/L	500	ug/L	92.8	80.0 – 120.0	27-JAN-10 08:54	012710-1
	Copper	572	ug/L	500	ug/L	114	80.0 – 120.0	27-JAN-10 08:54	012710-1
	Iron	199000	ug/L	200000	ug/L	99.3	80.0 – 120.0	27-JAN-10 08:54	012710-1
	Lead	501	ug/L	500	ug/L	100	80.0 – 120.0	27-JAN-10 08:54	012710-1
	Magnesium	515000	ug/L	500000	ug/L	103	80.0 – 120.0	27-JAN-10 08:54	012710-1

METALS
-4-
Interference Check Sample

SDG No: 10-1213

Contract: LANL01004

Lab Code: GEL

ICS:

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Manganese	494	ug/L	500	ug/L	98.8	80.0 - 120.0	27-JAN-10 08:54	012710-1
	Potassium	5310	ug/L	5000	ug/L	106	80.0 - 120.0	27-JAN-10 08:54	012710-1
	Silver	265	ug/L	250	ug/L	106	80.0 - 120.0	27-JAN-10 08:54	012710-1
	Sodium	5280	ug/L	5000	ug/L	106	80.0 - 120.0	27-JAN-10 08:54	012710-1
	Vanadium	537	ug/L	500	ug/L	107	80.0 - 120.0	27-JAN-10 08:54	012710-1
	Zinc	491	ug/L	500	ug/L	98.3	80.0 - 120.0	27-JAN-10 08:54	012710-1

METALS
-4-
Interference Check Sample

SDG No: 10-1213

Contract: LANL01004

Lab Code: GEL

ICS: O2Si

Instrument: ICPMS4

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
ICSA01									
	Arsenic	-0.594	ug/L					21-JAN-10 16:56	100121-2
	Nickel	3.79	ug/L					21-JAN-10 16:56	100121-2
	Selenium	-0.78	ug/L					21-JAN-10 16:56	100121-2
	Thallium	0.031	ug/L					21-JAN-10 16:56	100121-2
ICSAB01									
	Arsenic	22.2	ug/L	20	ug/L	111	80.0 - 120.0	21-JAN-10 17:02	100121-2
	Nickel	21.9	ug/L	22.7	ug/L	96.3	80.0 - 120.0	21-JAN-10 17:02	100121-2
	Selenium	22.3	ug/L	20	ug/L	111	80.0 - 120.0	21-JAN-10 17:02	100121-2
	Thallium	17.6	ug/L	20	ug/L	88.1	80.0 - 120.0	21-JAN-10 17:02	100121-2

METALS
-4-
Interference Check Sample

SDG No: 10-1213

Contract: LANL01004

Lab Code: GEL

ICS: O2Si

Instrument: ICPMS4

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
ICSA01	Beryllium	0.084	ug/L					22-JAN-10 15:30	100122-3
	Uranium	-0.002	ug/L					22-JAN-10 15:30	100122-3
ICSAB01	Beryllium	20.5	ug/L	20	ug/L	103	80.0 - 120.0	22-JAN-10 15:32	100122-3
	Uranium	20.5	ug/L	20	ug/L	102	80.0 - 120.0	22-JAN-10 15:32	100122-3

METALS

-5a-

Matrix Spike Summary

SDG NO. 10-1213 Client ID: RE12-10-7257S

Contract: LANL01004 Level: Low

Matrix: SOIL % Solids: 90

Sample ID: 244604001 Spike ID: 1202015722

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/Kg		14500000		4600000		544000	1830	N/A	P
Antimony	ug/Kg	75-125	49500		362	U	54400	91		P
Barium	ug/Kg	75-125	116000		48400		54400	125		P
Cadmium	ug/Kg	75-125	56600		110	U	54400	104		P
Calcium	ug/Kg	75-125	2070000		1030000		544000	190	N	P
Chromium	ug/Kg	75-125	73500		13200		54400	111		P
Cobalt	ug/Kg	75-125	58500		1810		54400	104		P
Copper	ug/Kg	75-125	66600		4150		54400	115		P
Iron	ug/Kg		13700000		9360000		544000	797	N/A	P
Lead	ug/Kg	75-125	67700		7060		54400	111		P
Magnesium	ug/Kg	75-125	2360000		853000		544000	276	N	P
Manganese	ug/Kg		321000		275000		54400	83.6	N/A	P
Potassium	ug/Kg	75-125	1960000		634000		544000	244	N	P
Silver	ug/Kg	75-125	58400		110	U	54400	107		P
Sodium	ug/Kg	75-125	660000		91100		544000	104		P
Vanadium	ug/Kg	75-125	72800		9480		54400	116		P
Zinc	ug/Kg	75-125	89200		25300		54400	118		P

METALS

-5a-

Matrix Spike Duplicate Summary

SDG NO. 10-1213 Client ID RE12-10-7257SD

Contract: LANL01004 Level: Low

Matrix: SOIL % Solids: 90

Sample ID: 244604001 Spike ID: 1202015723

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/Kg		15700000		4600000		543000	2040	N/A	P
Antimony	ug/Kg	75-125	52700		362	U	54300	96.9		P
Barium	ug/Kg	75-125	136000		48400		54300	161	N	P
Cadmium	ug/Kg	75-125	55400		110	U	54300	102		P
Calcium	ug/Kg	75-125	2360000		1030000		543000	245	N	P
Chromium	ug/Kg	75-125	77700		13200		54300	119		P
Cobalt	ug/Kg	75-125	58200		1810		54300	104		P
Copper	ug/Kg	75-125	66800		4150		54300	115		P
Iron	ug/Kg		17200000		9360000		543000	1430	N/A	P
Lead	ug/Kg	75-125	69700		7060		54300	115		P
Magnesium	ug/Kg	75-125	2610000		853000		543000	323	N	P
Manganese	ug/Kg		495000		275000		54300	403	N/A	P
Potassium	ug/Kg	75-125	2160000		634000		543000	281	N	P
Silver	ug/Kg	75-125	57300		110	U	54300	105		P
Sodium	ug/Kg	75-125	667000		91100		543000	106		P
Vanadium	ug/Kg	75-125	75700		9480		54300	122		P
Zinc	ug/Kg	75-125	99000		25300		54300	136	N	P

METALS

-5a-

Matrix Spike Summary

SDG NO. 10-1213

Client ID: RE12-10-7257S

Contract: LANL01004

Level: Low

Matrix: SOIL

% Solids: 90

Sample ID: 244604001

Spike ID: 1202015735

<u>Analyte</u>	<u>Units</u>	<u>Acceptance Limit</u>	<u>Spiked Result</u>	<u>C</u>	<u>Sample Result</u>	<u>C</u>	<u>Spike Added</u>	<u>% Recovery</u>	<u>Qual</u>	<u>M</u>
Arsenic	mg/kg	75-125	11.6		2.68		8.83	101		MS
Beryllium	mg/kg	75-125	5.9		0.822		5.52	92		MS
Nickel	mg/kg	75-125	15		7.01		5.52	146	N	MS
Selenium	mg/kg	75-125	2.21		0.554	U	2.21	82.8		MS
Thallium	mg/kg	75-125	9.14		0.157	J	11	81.4		MS
Uranium	mg/kg	75-125	6.01		0.661		5.52	96.8		MS

METALS

-5a-

Matrix Spike Duplicate Summary

SDG NO. 10-1213 Client ID: RE12-10-7257SD

Contract: LANL01004 Level: Low

Matrix: SOIL % Solids: 90

Sample ID: 244604001 Spike ID: 1202015736

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	mg/kg	75-125	10.5		2.68		8.73	89.9		MS
Beryllium	mg/kg	75-125	5.93		0.822		5.45	93.7		MS
Nickel	mg/kg	75-125	10.8		7.01		5.45	69.4	N	MS
Selenium	mg/kg	75-125	2.23		0.554	U	2.18	84.6		MS
Thallium	mg/kg	75-125	9.59		0.157	J	10.9	86.4		MS
Uranium	mg/kg	75-125	5.98		0.661		5.45	97.5		MS

METALS

-5a-

Matrix Spike Summary

SDG NO. 10-1213

Client ID RE46-10-10052S

Contract: LANL01004

Level: Low

Matrix: SOIL

% Solids: 96.6

Sample ID: 244622001

Spike ID: 1202019742

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/kg	75-125	135		10.2	J	117	107		AV

METALS

-5a-

Matrix Spike Duplicate Summary

SDG NO. 10-1213 Client ID: RE46-10-10052SD

Contract: LANL01004 Level: Low

Matrix: SOIL % Solids: 96.6

Sample ID: 244622001 Spike ID: 1202019744

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/kg	75-125	135		10.2	J	116	107		AV

Metals
-6-
Duplicate Sample Summary

SDG No.: 10-1213

Contract: LANL01004

Lab Code: GEL

Matrix: SOLID

Level: Low

Client ID: RE12-10-7257D

Sample ID: 244604001

Duplicate ID: 1202015720

Percent Solids for Dup: 90

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/Kg	+/-20%	4600000		6560000		35.1	*	P
Antimony	ug/Kg		362 U		348 U				P
Barium	ug/Kg	+/-20%	48400		54700		12.2		P
Cadmium	ug/Kg		110 U		106 U				P
Calcium	ug/Kg	+/-20%	1030000		1430000		32.3	*	P
Chromium	ug/Kg	+/-20%	13200		13400		1.36		P
Cobalt	ug/Kg	+/-528	1810		2060		12.7		P
Copper	ug/Kg	+/-1060	4150		5330		24.9	*	P
Iron	ug/Kg	+/-20%	9360000		10700000		13.5		P
Lead	ug/Kg	+/-20%	7060		8670		20.4	*	P
Magnesium	ug/Kg	+/-20%	853000		1180000		31.8	*	P
Manganese	ug/Kg	+/-20%	275000		256000		7.43		P
Potassium	ug/Kg	+/-20%	634000		885000		33.1	*	P
Silver	ug/Kg		110 U		106 U				P
Sodium	ug/Kg	+/-26400	91100		97500		6.81		P
Vanadium	ug/Kg	+/-20%	9480		12500		27.6	*	P
Zinc	ug/Kg	+/-20%	25300		27100		7.17		P

Metals
-6-
Duplicate Sample Summary

SDG No.: 10-1213

Contract: LANL01004

Lab Code: GEL

Matrix: SOLID

Level: Low

Client ID: RE12-10-7257SD

Sample ID: 1202015722

Duplicate ID: 1202015723

Percent Solids for Dup: 90

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/Kg	+/-20	14500000		15700000		7.59		P
Antimony	ug/Kg	+/-20	49500		52700		6.16		P
Barium	ug/Kg	+/-20	116000		136000		15.5		P
Cadmium	ug/Kg	+/-20	56600		55400		2.14		P
Calcium	ug/Kg	+/-20	2070000		2360000		13.3		P
Chromium	ug/Kg	+/-20	73500		77700		5.57		P
Cobalt	ug/Kg	+/-20	58500		58200		.578		P
Copper	ug/Kg	+/-20	66600		66800		.277		P
Iron	ug/Kg	+/-20	13700000		17200000		22.4	*	P
Lead	ug/Kg	+/-20	67700		69700		2.97		P
Magnesium	ug/Kg	+/-20	2360000		2610000		10.1		P
Manganese	ug/Kg	+/-20	321000		495000		42.6	*	P
Potassium	ug/Kg	+/-20	1960000		2160000		9.63		P
Silver	ug/Kg	+/-20	58400		57300		2.05		P
Sodium	ug/Kg	+/-20	660000		667000		1.1		P
Vanadium	ug/Kg	+/-20	72800		75700		3.79		P
Zinc	ug/Kg	+/-20	89200		99000		10.4		P

Metals

-6-

Duplicate Sample Summary

SDG No.: 10-1213

Contract: LANL01004

Lab Code: GEL

Matrix: SOLID

Level: Low

Client ID: RE12-10-7257D

Sample ID: 244604001

Duplicate ID: 1202015733

Percent Solids for Dup: 90

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	mg/kg	+/-1.1	2.68		2.17		21		MS
Beryllium	mg/kg	+/-20%	0.822		0.707		14.9		MS
Nickel	mg/kg	+/-20%	7.01		6.71		4.45		MS
Selenium	mg/kg		0.554 U		0.55 U				MS
Thallium	mg/kg	+/-22	0.157 J		0.114 J		31.8		MS
Uranium	mg/kg	+/-20%	0.661		0.636		4		MS

Metals

-6-

Duplicate Sample Summary

SDG No.: 10-1213

Contract: LANL01004

Lab Code: GEL

Matrix: SOLID

Level: Low

Client ID: RE12-10-7257SD

Sample ID: 1202015735

Duplicate ID: 1202015736

Percent Solids for Dup: 90

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	mg/kg	+/-20	11.6		10.5		9.74		MS
Beryllium	mg/kg	+/-20	5.9		5.93		.562		MS
Nickel	mg/kg	+/-20	15		10.8		32.9	*	MS
Selenium	mg/kg	+/-20	2.21		2.23		.814		MS
Thallium	mg/kg	+/-20	9.14		9.59		4.75		MS
Uranium	mg/kg	+/-20	6.01		5.98		.406		MS

Metals

-6-

Duplicate Sample Summary

SDG No.: 10-1213

Contract: LANL01004

Lab Code: GEL

Matrix: SOLID

Level: Low

Client ID: RE46-10-10052D

Sample ID: 244622001

Duplicate ID: 1202019741

Percent Solids for Dup: 96.6

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/kg	+/-12	10.2 J		10.5 J		2.83		AV

Metals

-6-

Duplicate Sample Summary

SDG No.: 10-1213

Contract: LANL01004

Lab Code: GEL

Matrix: SOLID

Level: Low

Client ID: RE46-10-10052SD

Sample ID: 1202019742

Duplicate ID: 1202019744

Percent Solids for Dup: 96.6

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/kg	+/-20	135		135		.16		AV

METALS

-7-

Laboratory Control Sample Summary

SDG NO. 10-1213

Contract: LANL01004

Aqueous LCS Source:

Solid LCS Source: ERA

<u>Sample ID</u>	<u>Analyte</u>	<u>Units</u>	<u>True Value</u>	<u>Result</u>	<u>C</u>	<u>% Recovery</u>	<u>Acceptance Limit</u>	<u>M</u>
1202015724								
	Manganese	ug/Kg	558000	576000		103	81-119	P
	Potassium	ug/Kg	4300000	4380000		102	74-127	P
	Silver	ug/Kg	30100	32400		108	66-134	P
	Sodium	ug/Kg	1020000	1070000		105	74-127	P
	Vanadium	ug/Kg	115000	129000		112	79-121	P
	Zinc	ug/Kg	594000	624000		105	80-121	P
	Aluminum	ug/Kg	10500000	9310000		88.7	56-144	P
	Antimony	ug/Kg	173000	182000		105	71-130	P
	Barium	ug/Kg	198000	199000		101	80-120	P
	Cadmium	ug/Kg	60700	62500		103	81-120	P
	Calcium	ug/Kg	9870000	10600000		107	83-117	P
	Chromium	ug/Kg	236000	249000		106	80-120	P
	Cobalt	ug/Kg	91200	96200		105	81-120	P
	Copper	ug/Kg	174000	194000		111	81-118	P
	Iron	ug/Kg	18000000	21000000		117	51-149	P
	Lead	ug/Kg	86000	94000		109	79-121	P
	Magnesium	ug/Kg	4000000	4100000		102	79-122	P

METALS

-7-

Laboratory Control Sample Summary

SDG NO. 10-1213

Contract: LANL01004

Aqueous LCS Source:

Solid LCS Source: ERA

<u>Sample ID</u>	<u>Analyte</u>	<u>Units</u>	<u>True Value</u>	<u>Result</u>	<u>C</u>	<u>% Recovery</u>	<u>Acceptance Limit</u>	<u>M</u>
1202015737								
	Arsenic	mg/kg	104	103		99.3	83-120	MS
	Beryllium	mg/kg	77.6	84.1		108	81.2-126.8	MS
	Nickel	mg/kg	134	139		104	83.3-121.4	MS
	Selenium	mg/kg	286	305		107	80.2-125.9	MS
	Thallium	mg/kg	121	117		96.7	78-123.2	MS
	Uranium	mg/kg	2.13	2.06		96.7	61.9-130.7	MS

METALS

-7-

Laboratory Control Sample Summary

SDG NO. 10-1213

Contract: LANL01004

Aqueous LCS Source:

Solid LCS Source: ERA

<u>Sample ID</u>	<u>Analyte</u>	<u>Units</u>	<u>True Value</u>	<u>Result</u>	<u>C</u>	<u>% Recovery</u>	<u>Acceptance Limit</u>	<u>M</u>
1202019740	Mercury	ug/kg	5150	5400		105	71.6-128.3	AV

METALS

-9-

Serial Dilution Sample Summary

SDG NO. 10-1213

Client ID RE12-10-7257L

Contract: LANL01004

Matrix: SOLID

Level: Low

Sample ID: 244604001

Serial Dilution ID: 1202015721

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Aluminum	41900		42300		.835		10	P
Antimony	3.3	U	17.6	J				P
Barium	441		441		0		10	P
Cadmium	1	U	5	U				P
Calcium	9430		9450		.212		10	P
Chromium	121		122		.826		10	P
Cobalt	16.5		16	J	3.33			P
Copper	37.8		36.9	J	2.38			P
Iron	85300		87000		1.99		10	P
Lead	64.4		72		11.8			P
Magnesium	7770		7900		1.67		10	P
Manganese	2510		2480		1.39		10	P
Potassium	5770		5850		1.39		10	P
Silver	1	U	5	U				P
Sodium	830		720	J	13.3			P
Vanadium	86.4		87.5		1.27		10	P
Zinc	230		216		6.3		10	P

METALS

-9-

Serial Dilution Sample Summary

SDG NO. 10-1213

Client ID: RE12-10-7257L

Contract: LANL01004

Matrix: SOLID

Level: Low

Sample ID: 244604001

Serial Dilution ID: 1202015734

<u>Analyte</u>	<u>Initial Value ug/L</u>	<u>C</u>	<u>Serial Value ug/L</u>	<u>C</u>	<u>% Difference</u>	<u>Qual</u>	<u>Acceptance Limit</u>	<u>M</u>
Arsenic	12.1		9.3	J	23.1			MS
Beryllium	3.71		3.41		8.22			MS
Nickel	31.6		34.3		8.39			MS
Selenium	2.5	U	12.5	U				MS
Thallium	.707	J	1.5	U	100			MS
Uranium	2.98		3.12		4.7			MS

METALS

-9-

Serial Dilution Sample Summary

SDG NO. 10-1213 Client ID RE46-10-10052L

Contract: LANL01004

Matrix: SOLID Level: Low

Sample ID: 244622001 Serial Dilution ID: 1202019743

<u>Analyte</u>	<u>Initial Value ug/L</u>	<u>C</u>	<u>Serial Value ug/L</u>	<u>C</u>	<u>% Difference</u>	<u>Qual</u>	<u>Acceptance Limit</u>	<u>M</u>
Mercury	.178	J	.34	U	100			AV

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 10-1213

Method Type: P

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Client ID</u>	<u>Sample Type</u>	<u>Matrix</u>	<u>Prep Date</u>	<u>Initial Sample Size</u>	<u>Final Sample Volume</u>	<u>Percent Solids</u>
Batch Number	941746						
1202015719	MB for batch 941746	MB	S	20-JAN-10	.521g	50mL	
1202015724	LCS for batch 941746	LCS	S	20-JAN-10	.515g	50mL	
1202015722	RE12-10-7257S	MS	S	20-JAN-10	.51g	50mL	
1202015723	RE12-10-7257SD	MSD	S	20-JAN-10	.511g	50mL	
1202015720	RE12-10-7257D	DUP	S	20-JAN-10	.526g	50mL	
244604001	RE12-10-7257	SAMPLE	S	20-JAN-10	.506g	50mL	
244604002	RE12-10-7256	SAMPLE	S	20-JAN-10	.522g	50mL	

SW846

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 10-1213

Method Type: MS

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Client ID</u>	<u>Sample Type</u>	<u>Matrix</u>	<u>Prep Date</u>	<u>Initial Sample Size</u>	<u>Final Sample Volume</u>	<u>Percent Solids</u>
Batch Number	941751						
1202015732	MB for batch 941751	MB	S	20-JAN-10	.525g	50mL	
1202015737	LCS for batch 941751	LCS	S	20-JAN-10	.505g	50mL	
1202015735	RE12-10-7257S	MS	S	20-JAN-10	.503g	50mL	
1202015736	RE12-10-7257SD	MSD	S	20-JAN-10	.509g	50mL	
1202015733	RE12-10-7257D	DUP	S	20-JAN-10	.505g	50mL	
244604001	RE12-10-7257	SAMPLE	S	20-JAN-10	.501g	50mL	
244604002	RE12-10-7256	SAMPLE	S	20-JAN-10	.525g	50mL	

SW846

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 10-1213

Method Type: AV

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Client ID</u>	<u>Sample Type</u>	<u>Matrix</u>	<u>Prep Date</u>	<u>Initial Sample Size</u>	<u>Final Sample Volume</u>	<u>Percent Solids</u>
Batch Number 943296							
1202019739	MB for batch 943296	MB	S	27-JAN-10	.547g	30mL	
1202019740	LCS for batch 943296	LCS	S	27-JAN-10	.203g	30mL	
1202019742	RE46-10-10052S	MS	S	27-JAN-10	.531g	30mL	
1202019744	RE46-10-10052SD	MSD	S	27-JAN-10	.536g	30mL	
1202019741	RE46-10-10052D	DUP	S	27-JAN-10	.516g	30mL	
244604001	RE12-10-7257	SAMPLE	S	27-JAN-10	.541g	30mL	
244604002	RE12-10-7256	SAMPLE	S	27-JAN-10	.572g	30mL	

SW846

Metals
-14-
Analysis Run Log

Contract: LANL01004

Lab Code: GEL

Inst Name: HG3

Start Date: 28-JAN-10

End Date: 28-JAN-10

Client Sdg: 10-1213

Method AV

Data File: 012810S1-4

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	08:55															X									
S0.2	1	08:56															X									
S0.5	1	08:58															X									
S2.0	1	09:00															X									
S5.0	1	09:01															X									
S10.0	1	09:03															X									
ICV01	1	09:05															X									
ICB01	1	09:06															X									
CRDL01	1	09:08															X									
CCV01	1	09:10															X									
CCB01	1	09:11															X									
ZZZZZZ	1	09:13																								
ZZZZZZ	10	09:15																								
ZZZZZZ	1	09:17																								
ZZZZZZ	1	09:18																								
ZZZZZZ	1	09:20																								
ZZZZZZ	1	09:21																								
ZZZZZZ	5	09:23																								
ZZZZZZ	1	09:25																								
ZZZZZZ	1	09:26																								
ZZZZZZ	1	09:28																								
CCV02	1	09:30															X									
CCB02	1	09:31															X									
ZZZZZZ	1	09:33																								
ZZZZZZ	1	09:35																								
ZZZZZZ	1	09:36																								
ZZZZZZ	1	09:38																								
ZZZZZZ	1	09:40																								
ZZZZZZ	1	09:42																								
ZZZZZZ	1	09:43																								
ZZZZZZ	1	09:45																								
ZZZZZZ	1	09:47																								
ZZZZZZ	1	09:48																								
CCV03	1	09:50															X									
CCB03	1	09:52															X									
ZZZZZZ	1	09:53																								
ZZZZZZ	1	09:55																								
ZZZZZZ	10	09:57																								
ZZZZZZ	1	09:58																								
ZZZZZZ	1	10:00																								

SW846

Metals
-14-
Analysis Run Log

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
ZZZZZZ	1	11:09																								
CCV07	1	11:10															X									
CCB07	1	11:12															X									
ZZZZZZ	1	11:14																								
ZZZZZZ	1	11:15																								
ZZZZZZ	1	11:17																								
ZZZZZZ	1	11:19																								
ZZZZZZ	1	11:20																								
ZZZZZZ	1	11:22																								
1202019739	1	11:24															X									
1202019740	10	11:25															X									
ZZZZZZ	1	11:27																								
ZZZZZZ	1	11:29																								
CCV08	1	11:30															X									
CCB08	1	11:32															X									
ZZZZZZ	1	11:34																								
ZZZZZZ	1	11:36																								
ZZZZZZ	1	11:37																								
ZZZZZZ	1	11:39																								
ZZZZZZ	1	11:41																								
ZZZZZZ	1	11:42																								
ZZZZZZ	1	11:44																								
244604001	1	11:46															X									
244604002	1	11:47															X									
ZZZZZZ	1	11:49																								
CCV09	1	11:51															X									
CCB09	1	11:52															X									
1202019741	1	11:54															X									
1202019742	1	11:56															X									
1202019744	1	11:57															X									
1202019743	5	11:59															X									
ZZZZZZ	1	12:01																								
ZZZZZZ	1	12:03																								
ZZZZZZ	1	12:04																								
ZZZZZZ	1	12:06																								
ZZZZZZ	1	12:08																								
ZZZZZZ	1	12:09																								
CCV10	1	12:11															X									
CCB10	1	12:13															X									

Metals
-14-
Analysis Run Log

Contract: LANL01004

Lab Code: GEL

Inst Name: ICPMS4

Start Date: 21-JAN-10

End Date: 21-JAN-10

Client Sdg: 10-1213

Method MS

Data File: 100121-2

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	16:19			X													X	X			X				
S10	1	16:25			X													X	X			X				
S100	1	16:31			X													X	X			X				
ICV01	1	16:37			X													X	X			X				
ICB01	1	16:43			X													X	X			X				
CRDL01	1	16:50			X													X	X			X				
ICSA01	1	16:56			X													X	X			X				
ICSAB01	1	17:02			X													X	X			X				
CCV01	1	17:08			X													X	X			X				
CCB01	1	17:14			X													X	X			X				
LR01	1	17:20			X													X	X			X				
CCV02	1	17:27			X													X	X			X				
CCB02	1	17:33			X													X	X			X				
ZZZZZZ	1	17:39																								
ZZZZZZ	1	17:45																								
ZZZZZZ	1	17:51																								
ZZZZZZ	1	17:58																								
CCV03	1	18:04			X													X	X			X				
CCB03	1	18:10			X													X	X			X				
ZZZZZZ	1	18:16																								
ZZZZZZ	1	18:22																								
ZZZZZZ	5	18:29																								
ZZZZZZ	1	18:35																								
CCV04	1	18:41			X													X	X			X				
CCB04	1	18:47			X													X	X			X				
1202015732	2	18:53			X													X	X			X				
1202015737	40	19:00			X													X	X			X				
244604001	2	19:06			X													X	X			X				
1202015733	2	19:12			X													X	X			X				
CCV05	1	19:18			X													X	X			X				
CCB05	1	19:24			X													X	X			X				
1202015735	2	19:31			X													X	X			X				
1202015736	2	19:37			X													X	X			X				
1202015734	10	19:43			X													X	X			X				
244604002	2	19:49			X													X	X			X				
CCV06	1	19:55			X													X	X			X				
CCB06	1	20:02			X													X	X			X				

Metals
-14-
Analysis Run Log

Contract: LANL01004

Lab Code: GEL

Inst Name: ICPMS4

Start Date: 22-JAN-10

End Date: 22-JAN-10

Client Sdg: 10-1213

Method MS

Data File: 100122-3

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	15:16					X																	X		
S10	1	15:18					X																	X		
S100	1	15:21					X																	X		
ICV01	1	15:23					X																	X		
ICB01	1	15:25					X																	X		
CRDL01	1	15:28					X																	X		
ICSA01	1	15:30					X																	X		
ICSAB01	1	15:32					X																	X		
CCV01	1	15:34					X																	X		
CCB01	1	15:37					X																	X		
1202015732	2	15:39					X																	X		
1202015737	40	15:41					X																	X		
244604001	2	15:44					X																	X		
1202015733	2	15:46					X																	X		
CCV02	1	15:48					X																	X		
CCB02	1	15:51					X																	X		
1202015735	2	15:53					X																	X		
1202015736	2	15:55					X																	X		
1202015734	10	15:58					X																	X		
244604002	2	16:00					X																	X		
CCV03	1	16:02					X																	X		
CCB03	1	16:04					X																	X		

Metals
-14-
Analysis Run Log

Contract: LANL01004

Lab Code: GEL

Inst Name: OPTIMA1

Start Date: 27-JAN-10

End Date: 27-JAN-10

Client Sdg: 10-1213

Method P

Data File: 012710-1

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
S0.0	1	08:25	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
S0.1	1	08:29		X		X		X		X	X			X		X			X		X				X	X
S0.5	1	08:31	X	X		X		X	X	X	X			X	X	X			X		X				X	X
SCAL	1	08:35	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
S10	1	08:38	X						X				X		X							X				
ICV01	1	08:41	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ICB01	1	08:44	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
PQL01	1	08:48	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ICSA01	1	08:52	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ICSAB01	1	08:54	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
LR01	1	08:57	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
LR02	1	09:00	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCV01	1	09:04	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB01	1	09:08	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
LR03	1	09:16	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCV02	1	09:20	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB02	1	09:24	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZ	1	09:30																								
ZZZZZ	1	09:34																								
ZZZZZ	1	09:37																								
ZZZZZ	1	09:40																								
ZZZZZ	1	09:44																								
ZZZZZ	1	09:48																								
ZZZZZ	5	09:51																								
ZZZZZ	1	09:55																								
ZZZZZ	1	09:59																								
CCV03	1	10:02	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB03	1	10:06	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZ	1	10:10																								
ZZZZZ	1	10:13																								
ZZZZZ	1	10:17																								
ZZZZZ	1	10:21																								
ZZZZZ	1	10:25																								
ZZZZZ	1	10:28																								
ZZZZZ	1	10:32																								
ZZZZZ	1	10:36																								
ZZZZZ	1	10:39																								
CCV04	1	10:43	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB04	1	10:47	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZ	1	10:50																								

Metals
-14-
Analysis Run Log

Samp No.	D/F	Run Time																		
ZZZZZZ	1	10:54																		
ZZZZZZ	1	10:58																		
ZZZZZZ	1	11:01																		
ZZZZZZ	1	11:05																		
ZZZZZZ	1	11:09																		
ZZZZZZ	1	11:12																		
ZZZZZZ	1	11:16																		
CCV05	1	11:20	X	X		X		X	X	X	X	X	X	X	X	X	X		X	X
CCB05	1	11:23	X	X		X		X	X	X	X	X	X	X	X	X	X		X	X
ZZZZZZ	1	11:27																		
ZZZZZZ	1	11:31																		
ZZZZZZ	1	11:34																		
ZZZZZZ	1	11:37																		
ZZZZZZ	1	11:41																		
ZZZZZZ	1	11:45																		
ZZZZZZ	5	11:48																		
CCV06	1	11:52	X	X		X		X	X	X	X	X	X	X	X	X	X		X	X
CCB06	1	11:56	X	X		X		X	X	X	X	X	X	X	X	X	X		X	X
ZZZZZZ	1	11:59																		
ZZZZZZ	1	12:03																		
ZZZZZZ	1	12:07																		
ZZZZZZ	1	12:10																		
ZZZZZZ	1	12:14																		
ZZZZZZ	1	12:18																		
ZZZZZZ	1	12:21																		
CCV07	1	12:25	X	X		X		X	X	X	X	X	X	X	X	X	X		X	X
CCB07	1	12:29	X	X		X		X	X	X	X	X	X	X	X	X	X		X	X
ZZZZZZ	1	12:32																		
ZZZZZZ	1	12:36																		
ZZZZZZ	1	12:40																		
ZZZZZZ	1	12:44																		
ZZZZZZ	1	12:47																		
ZZZZZZ	1	12:51																		
ZZZZZZ	1	12:55																		
CCV08	1	12:58	X	X		X		X	X	X	X	X	X	X	X	X	X		X	X
CCB08	1	13:02	X	X		X		X	X	X	X	X	X	X	X	X	X		X	X
ZZZZZZ	1	13:25																		
ZZZZZZ	1	13:29																		
ZZZZZZ	1	13:32																		
ZZZZZZ	1	13:35																		

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	13:39																								
ZZZZZZ	1	13:43																								
ZZZZZZ	5	13:46																								
CCV09	1	13:50	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB09	1	13:54	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	13:57																								
ZZZZZZ	1	14:01																								
ZZZZZZ	1	14:05																								
ZZZZZZ	1	14:08																								
ZZZZZZ	1	14:12																								
ZZZZZZ	1	14:16																								
ZZZZZZ	1	14:20																								
CCV10	1	14:23	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB10	1	14:27	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	14:32																								
ZZZZZZ	1	14:35																								
ZZZZZZ	1	14:39																								
ZZZZZZ	1	14:43																								
ZZZZZZ	1	14:47																								
ZZZZZZ	1	14:51																								
ZZZZZZ	1	14:55																								
ZZZZZZ	1	14:58																								
ZZZZZZ	1	15:02																								
ZZZZZZ	5	15:06																								
CCV11	1	15:10	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
PQL02	1	15:14	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB11	1	15:17	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
1202015719	1	15:21	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
1202015724	1	15:25	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
244604001	1	15:28	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
1202015720	1	15:31	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
1202015722	1	15:35	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
1202015723	1	15:39	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
1202015721	5	15:42	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
244604002	1	15:46	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	5	15:50																								
CCV12	1	15:53	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB12	1	15:57	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X

Standards

METALS
-10-
Instrument Detection Limits

SDG NO. 10-1213

Contract: LANL01004

Lab Code: GEL

MDL Effective Date: 01-JUL-09

ICP/MS	<u>Analyte</u>	<u>Wavelength</u>	<u>MDL</u>	<u>RDL</u>
		<u>(nm)</u>	<u>ug/L</u>	<u>ug/L</u>
SOLID	Aluminum		15.0	50
	Antimony		0.5	3
	Arsenic		1.0	5
	Barium		0.5	2
	Beryllium		0.1	.5
	Cadmium		0.1	1
	Calcium		33.0	100
	Chromium		1.0	3
	Cobalt		0.3	1
	Copper		0.33	1
	Iron		25.0	100
	Lead		0.5	2
	Magnesium		7.5	25
	Manganese		1.0	5
	Nickel		0.5	2
	Potassium		80.0	300
	Selenium		2.5	5
	Silver		0.2	1
	Sodium		80.0	250
	Thallium		0.3	1
	Uranium		0.066	.2
	Vanadium		2.0	10
	Zinc		2.0	10

METALS
-10-
Instrument Detection Limits

SDG NO. 10-1213

Contract: LANL01004

Lab Code: GEL

MDL Effective Date: 15-JUN-09

	<u>Analyte</u>	<u>Wavelength</u> <u>(nm)</u>	<u>MDL</u> <u>ug/L</u>	<u>RDL</u> <u>ug/L</u>
MERCURY				
SOLID	Mercury		0.068	.2

METALS
-10-
Instrument Detection Limits

SDG NO. 10-1213

Contract: LANL01004

Lab Code: GEL

MDL Effective Date: 01-JUL-09

ICP	Analyte	<u>Wavelength</u>	<u>MDL</u>	<u>RDL</u>
		<u>(nm)</u>	<u>ug/L</u>	<u>ug/L</u>
SOLID	Aluminum	396.153	68.0	200
	Antimony	206.836	3.3	10
	Arsenic	188.979	5.0	30
	Barium	233.527	1.0	5
	Beryllium	313.107	1.0	5
	Cadmium	226.502	1.0	5
	Calcium	317.933	80.0	250
	Chromium	267.716	1.5	5
	Cobalt	228.616	1.5	5
	Copper	324.752	3.0	10
	Iron	238.204	80.0	250
	Lead	220.353	2.5	10
	Magnesium	279.077	85.0	300
	Manganese	257.61	2.0	10
	Nickel	231.604	1.5	5
	Potassium	766.49	64.0	250
	Selenium	196.026	5.0	30
	Silver	328.068	1.0	5
	Sodium	589.592	70.0	250
	Thallium	190.801	5.0	20
	Uranium	409.014	10.0	50
	Vanadium	292.402	1.0	5
	Zinc	213.857	3.3	10

METALS
-11-
Interelement Correction Factors

Lab Code: GEL

GEL Job No:

10-1213

Contract: LANL01004

Instrument: OPTIMA1

Effective Dates:

01-NOV-09

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

		Aluminum	Antimony	Arsenic	Barium	Beryllium
Parmname	Wavelength					
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	-0.05500	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	-0.28800	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	-0.04600	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL

GEL Job No: 10-1213

Contract: LANL01004

Instrument: OPTIMA1

Effective Dates: 01-NOV-09

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

		Boron	Cadmium	Chromium	Cobalt	Copper
Parmname	Wavelength					
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	11.3250	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	-1.59900	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	-21.2250	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	1.68400
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	1.19100	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	105.59
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	3.36300	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	-2.30400	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	1.61100

METALS
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Interelement Correction Factors

Lab Code: GELGEL Job No: **10-1213**

Contract: LANL01004

Instrument: OPTIMA1

Effective Dates: **01-NOV-09**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

		Iron	Lead	Magnesium	Manganese	Molybdenum
Parmname	Wavelength					
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	20.5430
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	-16.3320
Arsenic	188.979	-0.05800	0.00000	0.00000	0.00000	1.97700
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.13300	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	-0.90500
Copper	324.752	-0.13900	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.03800	-2.87600	0.00000	0.00000	0.00000
Magnesium	279.077	1.07300	0.00000	0.00000	0.00000	-16.8110
Manganese	257.61	-0.13900	0.00000	0.04000	0.00000	0.00000
Molybdenum	202.031	-0.03800	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	-0.01300	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.81200	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	-0.88200	0.00000	0.28200	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	-0.06300	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	-0.03900	0.00000	0.00000	-4.11700	0.00000
Tin	189.927	-0.09200	0.00000	-0.19600	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.07900	0.00000	0.00000
Uranium	409.014	0.13900	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	-0.05300	0.00000	0.00000	0.00000	-7.71400
Zinc	213.857	0.14460	0.00000	0.02030	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GELGEL Job No: **10-1213**

Contract: LANL01004

Instrument: OPTIMA1

Effective Dates: **01-NOV-09**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

		Nickel	Phosphorous	Selenium	Silicon	Silver
Parmname	Wavelength					
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	-0.99900	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	4.41600	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GELGEL Job No: **10-1213**

Contract: LANL01004

Instrument: OPTIMA1

Effective Dates: **01-NOV-09**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

		Sulfur	Thallium	Tin	Titanium	Uranium
Parmname	Wavelength					
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.38100	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	2.08700	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	1.04000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	-14.8110	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	-8.68900	-1.22400
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	-1.03900
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL

GEL Job No: 10-1213

Contract: LANL01004

Instrument: OPTIMA1

Effective Dates: 01-NOV-09

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

		Vanadium	Zinc
Parmname	Wavelength		
Aluminum	396.153	0.00000	0.00000
Antimony	206.836	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000
Barium	233.527	-1.80500	0.00000
Beryllium	313.107	0.00000	0.00000
Boron	249.677	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000
Chromium	267.716	-0.63000	0.00000
Cobalt	228.616	0.00000	0.00000
Copper	324.752	0.00000	0.00000
Iron	238.204	0.00000	0.00000
Lead	220.353	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000
Manganese	257.61	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000
Nickel	231.604	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000
Selenium	196.026	0.00000	0.00000
Silicon	251.611	0.00000	0.00000
Silver	328.068	-6.59800	0.00000
Sulfur	181.975	0.00000	0.00000
Thallium	190.801	0.00000	0.00000
Tin	189.927	0.00000	0.00000
Titanium	334.94	0.00000	0.00000
Uranium	409.014	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000
Zinc	213.857	0.00000	0.00000

METALS
-12-
Linear Ranges

SDG NO. 10-1213

Contract: LANL01004

Lab Code: GEL

Instrument ID ICPMS4

<u>Analyte</u>	<u>Integration Time (msec)</u>	<u>LDR</u>	<u>Units</u>	<u>Effective Date</u>
Aluminum	1	50000	ug/L	01-NOV-09
Antimony	1000	250	ug/L	01-NOV-09
Arsenic	1000	1000	ug/L	01-NOV-09
Barium	1000	1000	ug/L	01-NOV-09
Beryllium	1000	1000	ug/L	01-NOV-09
Cadmium	1000	1000	ug/L	01-NOV-09
Calcium	500	50000	ug/L	01-NOV-09
Chromium	1000	1000	ug/L	01-NOV-09
Cobalt	1000	1000	ug/L	01-NOV-09
Copper	1000	1000	ug/L	01-NOV-09
Iron	500	50000	ug/L	01-NOV-09
Lead	1000	5000	ug/L	01-NOV-09
Magnesium	1	50000	ug/L	01-NOV-09
Manganese	1000	1000	ug/L	01-NOV-09
Nickel	1000	1000	ug/L	01-NOV-09
Potassium	1	50000	ug/L	01-NOV-09
Selenium	1000	500	ug/L	01-NOV-09
Silver	1000	250	ug/L	01-NOV-09
Sodium	1	50000	ug/L	01-NOV-09
Thallium	1000	500	ug/L	01-NOV-09
Uranium	1000	5000	ug/L	01-NOV-09
Vanadium	1000	100	ug/L	01-NOV-09
Zinc	1000	2500	ug/L	01-NOV-09

METALS
-12-
Linear Ranges

SDG NO. 10-1213

Contract: LANL01004

Lab Code: GEL

Instrument ID OPTIMA1

<u>Analyte</u>	<u>Integration Time (sec)</u>	<u>LDR</u>	<u>Units</u>	<u>Effective Date</u>
Aluminum	20	500000	ug/L	01-NOV-09
Antimony	20	10000	ug/L	01-NOV-09
Arsenic	20	10000	ug/L	01-NOV-09
Barium	20	15000	ug/L	01-NOV-09
Beryllium	20	3000	ug/L	01-NOV-09
Cadmium	20	10000	ug/L	01-NOV-09
Calcium	20	500000	ug/L	01-NOV-09
Chromium	20	25000	ug/L	01-NOV-09
Cobalt	20	10000	ug/L	01-NOV-09
Copper	20	20000	ug/L	01-NOV-09
Iron	20	500000	ug/L	01-NOV-09
Lead	20	25000	ug/L	01-NOV-09
Magnesium	20	500000	ug/L	01-NOV-09
Manganese	20	10000	ug/L	01-NOV-09
Nickel	20	10000	ug/L	01-NOV-09
Potassium	20	300000	ug/L	01-NOV-09
Selenium	20	10000	ug/L	01-NOV-09
Silver	20	1000	ug/L	01-NOV-09
Sodium	20	500000	ug/L	01-NOV-09
Thallium	20	10000	ug/L	01-NOV-09
Uranium	20	15000	ug/L	01-NOV-09
Vanadium	20	10000	ug/L	01-NOV-09
Zinc	20	15000	ug/L	01-NOV-09

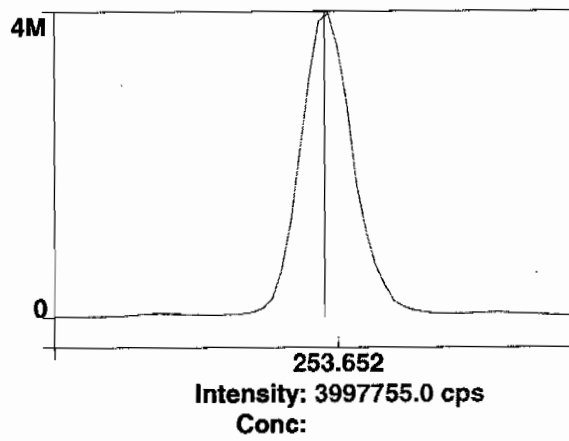
Raw Data

Method: Hg_ReAlign
Result: 020310

Sample ID: Hg_ReAlign

Hg 253.652

Rep: 1



1

=====
Analysis Begun

Start Time: 1/27/2010 08:25:13

Plasma On Time: 1/25/2010 05:31:26

Logged In Analyst: optima

Technique: ICP Continuous

Spectrometer Model: Optima 4300 DV, S/N 077N1030502 Autosampler Model: AS-93plus

Sample Information File: C:\pe\optimal\Sample Information\012710.sif

Batch ID:

Results Data Set: 012710

Results Library: c:\pe\optimal\Results\Results.mdb

=====
Sequence No.: 1

Autosampler Location: 8

Sample ID: S0

Date Collected: 1/27/2010 08:25:14

Analyst:

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Replicate Data: S0

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Analysis Time
1	Sc RADIAL	77232.1	77232.1	0.000 %	08:25:59
1	Al 396.153Radial†	-32.1	-31.9	[0.00] µg/L	08:25:59
1	Ca 317.933Radial†	251.4	250.0	[0.00] µg/L	08:26:19
1	Fe 238.204 Radial†	13.5	13.4	[0.00] µg/L	08:26:19
1	K 766.490 Radial†	412.4	410.2	[0.00] µg/L	08:25:59
1	Mg 279.077 IEC†	8.5	8.5	[0.00] µg/L	08:26:19
1	Na 589.592 Radial†	575.3	572.2	[0.00] µg/L	08:25:59
1	Sr 421.552†	552.9	550.0	[0.00] µg/L	08:25:59
1	Sc 361.383	1948536.9	1948536.9	0.0000 %	08:27:22
1	Y 371.029	1231872.8	1231872.8	0.0000 %	08:27:22
1	Ag 328.068†	-43.6	-43.5	[0.00] µg/L	08:27:27
1	As 188.979†	0.7	0.7	[0.00] µg/L	08:27:48
1	B 249.677†	122.7	122.3	[0.00] µg/L	08:27:48
1	Ba 233.527†	-13.2	-13.2	[0.00] µg/L	08:27:48
1	Be 313.107†	3810.4	3800.4	[0.00] µg/L	08:27:27
1	Cd 226.502†	-138.1	-137.7	[0.00] µg/L	08:27:48
1	Co 228.616†	-38.2	-38.1	[0.00] µg/L	08:27:48
1	Cr 267.716†	-76.3	-76.1	[0.00] µg/L	08:27:27
1	Cu 324.752†	3651.3	3641.7	[0.00] µg/L	08:27:27
1	Mn 257.610†	-188.8	-188.3	[0.00] µg/L	08:27:48
1	Mo 202.031†	14.3	14.3	[0.00] µg/L	08:27:48
1	Ni 231.604†	333.6	332.7	[0.00] µg/L	08:27:48
1	P 214.914†	206.9	206.3	[0.00] µg/L	08:27:48
1	Pb 220.353†	55.7	55.5	[0.00] µg/L	08:27:48
1	S 181.975 Axial†	24.1	24.0	[0.00] µg/L	08:27:48
1	Sb 206.836†	25.0	24.9	[0.00] µg/L	08:27:48
1	Se 196.026†	10.1	10.0	[0.00] µg/L	08:27:48
1	SiO2†	2259.5	2253.5	[0.00] µg/L	08:27:27
1	Si 251.611†	299.5	298.7	[0.00] µg/L	08:27:48
1	Sn 189.927†	19.5	19.4	[0.00] µg/L	08:27:48
1	Ti 334.940†	789.1	787.0	[0.00] µg/L	08:27:27
1	Tl 190.801†	-23.6	-23.5	[0.00] µg/L	08:27:48
1	U 409.014†	-136.1	-135.8	[0.00] µg/L	08:27:27
1	V 292.402†	-142.0	-141.6	[0.00] µg/L	08:27:27
1	Zn 213.857†	669.9	668.1	[0.00] µg/L	08:27:48
2	Sc RADIAL	76797.7	76797.7	0.000 %	08:26:25
2	Al 396.153Radial†	-27.5	-27.5	[0.00] µg/L	08:26:25
2	Ca 317.933Radial†	248.5	248.6	[0.00] µg/L	08:26:45
2	Fe 238.204 Radial†	16.8	16.8	[0.00] µg/L	08:26:45
2	K 766.490 Radial†	435.8	435.9	[0.00] µg/L	08:26:25
2	Mg 279.077 IEC†	7.1	7.1	[0.00] µg/L	08:26:45
2	Na 589.592 Radial†	528.0	528.1	[0.00] µg/L	08:26:25
2	Sr 421.552†	560.8	561.0	[0.00] µg/L	08:26:25
2	Sc 361.383	1941419.5	1941419.5	0.0000 %	08:27:54
2	Y 371.029	1227667.8	1227667.8	0.0000 %	08:27:54
2	Ag 328.068†	-56.2	-56.2	[0.00] µg/L	08:27:59
2	As 188.979†	0.0	0.0	[0.00] µg/L	08:28:20

2	B 249.677†	113.1	113.2	[0.00]	µg/L	08:28:20
2	Ba 233.527†	-17.8	-17.8	[0.00]	µg/L	08:28:20
2	Be 313.107†	3869.2	3873.1	[0.00]	µg/L	08:27:59
2	Cd 226.502†	-133.9	-134.0	[0.00]	µg/L	08:28:20
2	Co 228.616†	-53.9	-54.0	[0.00]	µg/L	08:28:20
2	Cr 267.716†	-104.0	-104.1	[0.00]	µg/L	08:27:59
2	Cu 324.752†	3694.4	3698.1	[0.00]	µg/L	08:27:59
2	Mn 257.610†	-185.6	-185.8	[0.00]	µg/L	08:28:20
2	Mo 202.031†	17.3	17.3	[0.00]	µg/L	08:28:20
2	Ni 231.604†	332.9	333.2	[0.00]	µg/L	08:28:20
2	P 214.914†	201.8	202.0	[0.00]	µg/L	08:28:20
2	Pb 220.353†	62.3	62.4	[0.00]	µg/L	08:28:20
2	S 181.975 Axial†	23.6	23.7	[0.00]	µg/L	08:28:20
2	Sb 206.836†	21.6	21.6	[0.00]	µg/L	08:28:20
2	Se 196.026†	15.5	15.5	[0.00]	µg/L	08:28:20
2	SiO2†	2290.6	2292.9	[0.00]	µg/L	08:27:59
2	Si 251.611†	310.5	310.8	[0.00]	µg/L	08:28:20
2	Sn 189.927†	27.2	27.2	[0.00]	µg/L	08:28:20
2	Ti 334.940†	796.3	797.1	[0.00]	µg/L	08:27:59
2	Tl 190.801†	-22.7	-22.7	[0.00]	µg/L	08:28:20
2	U 409.014†	-232.0	-232.2	[0.00]	µg/L	08:27:59
2	V 292.402†	-97.1	-97.2	[0.00]	µg/L	08:27:59
2	Zn 213.857†	667.1	667.8	[0.00]	µg/L	08:28:20
3	Sc RADIAL	76429.2	76429.2	0.000	%	08:26:51
3	Al 396.153Radial†	-24.3	-24.5	[0.00]	µg/L	08:26:51
3	Ca 317.933Radial†	255.1	256.4	[0.00]	µg/L	08:27:11
3	Fe 238.204 Radial†	17.3	17.4	[0.00]	µg/L	08:27:11
3	K 766.490 Radial†	387.9	389.9	[0.00]	µg/L	08:26:51
3	Mg 279.077 IEC†	9.3	9.3	[0.00]	µg/L	08:27:11
3	Na 589.592 Radial†	531.8	534.5	[0.00]	µg/L	08:26:51
3	Sr 421.552†	559.3	562.1	[0.00]	µg/L	08:26:51
3	Sc 361.383	1940224.9	1940224.9	0.0000	%	08:28:26
3	Y 371.029	1226856.6	1226856.6	0.0000	%	08:28:26
3	Ag 328.068†	-65.4	-65.5	[0.00]	µg/L	08:28:31
3	As 188.979†	0.9	0.9	[0.00]	µg/L	08:28:52
3	B 249.677†	109.9	110.0	[0.00]	µg/L	08:28:52
3	Ba 233.527†	-12.5	-12.6	[0.00]	µg/L	08:28:52
3	Be 313.107†	3838.5	3844.8	[0.00]	µg/L	08:28:31
3	Cd 226.502†	-134.5	-134.7	[0.00]	µg/L	08:28:52
3	Co 228.616†	-42.8	-42.9	[0.00]	µg/L	08:28:52
3	Cr 267.716†	-68.0	-68.2	[0.00]	µg/L	08:28:31
3	Cu 324.752†	3658.8	3664.8	[0.00]	µg/L	08:28:31
3	Mn 257.610†	-194.1	-194.4	[0.00]	µg/L	08:28:52
3	Mo 202.031†	20.0	20.0	[0.00]	µg/L	08:28:52
3	Ni 231.604†	339.8	340.3	[0.00]	µg/L	08:28:52
3	P 214.914†	198.8	199.1	[0.00]	µg/L	08:28:52
3	Pb 220.353†	49.8	49.9	[0.00]	µg/L	08:28:52
3	S 181.975 Axial†	28.8	28.9	[0.00]	µg/L	08:28:52
3	Sb 206.836†	20.6	20.6	[0.00]	µg/L	08:28:52
3	Se 196.026†	11.7	11.7	[0.00]	µg/L	08:28:52
3	SiO2†	2286.1	2289.9	[0.00]	µg/L	08:28:31
3	Si 251.611†	303.5	304.0	[0.00]	µg/L	08:28:52
3	Sn 189.927†	23.6	23.6	[0.00]	µg/L	08:28:52
3	Ti 334.940†	735.7	736.9	[0.00]	µg/L	08:28:31
3	Tl 190.801†	-23.0	-23.0	[0.00]	µg/L	08:28:52
3	U 409.014†	-330.4	-330.9	[0.00]	µg/L	08:28:31
3	V 292.402†	-127.4	-127.6	[0.00]	µg/L	08:28:31
3	Zn 213.857†	677.0	678.1	[0.00]	µg/L	08:28:52

Mean Data: S0

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc. Units	Calib
Sc 361.383	1943393.8	4493.97	0.23%	0.0000	%
Sc RADIAL	76819.7	401.92	0.52%	0.000	%
Y 371.029	1228799.0	2692.65	0.22%	0.0000	%
Ag 328.068†	-55.1	11.07	20.10%	[0.00]	µg/L
Al 396.153Radial†	-28.0	3.74	13.40%	[0.00]	µg/L
As 188.979†	0.6	0.45	80.85%	[0.00]	µg/L
B 249.677†	115.2	6.39	5.55%	[0.00]	µg/L
Ba 233.527†	-14.5	2.85	19.63%	[0.00]	µg/L

Be 313.107†	3839.4	36.65	0.95%	[0.00]	µg/L
Ca 317.933Radial†	251.7	4.15	1.65%	[0.00]	µg/L
Cd 226.502†	-135.5	1.97	1.46%	[0.00]	µg/L
Co 228.616†	-45.0	8.12	18.05%	[0.00]	µg/L
Cr 267.716†	-82.8	18.89	22.82%	[0.00]	µg/L
Cu 324.752†	3668.2	28.38	0.77%	[0.00]	µg/L
Fe 238.204 Radial†	15.9	2.13	13.42%	[0.00]	µg/L
K 766.490 Radial†	412.0	23.06	5.60%	[0.00]	µg/L
Mg 279.077 IEC†	8.3	1.11	13.39%	[0.00]	µg/L
Mn 257.610†	-189.5	4.42	2.33%	[0.00]	µg/L
Mo 202.031†	17.2	2.86	16.62%	[0.00]	µg/L
Na 589.592 Radial†	544.9	23.82	4.37%	[0.00]	µg/L
Ni 231.604†	335.4	4.26	1.27%	[0.00]	µg/L
P 214.914†	202.5	3.63	1.79%	[0.00]	µg/L
Pb 220.353†	55.9	6.26	11.19%	[0.00]	µg/L
S 181.975 Axial†	25.5	2.90	11.37%	[0.00]	µg/L
Sb 206.836†	22.4	2.26	10.08%	[0.00]	µg/L
Se 196.026†	12.4	2.78	22.39%	[0.00]	µg/L
SiO2†	2278.8	21.91	0.96%	[0.00]	µg/L
Si 251.611†	304.5	6.10	2.00%	[0.00]	µg/L
Sn 189.927†	23.4	3.90	16.65%	[0.00]	µg/L
Sr 421.552†	557.7	6.70	1.20%	[0.00]	µg/L
Ti 334.940†	773.7	32.23	4.17%	[0.00]	µg/L
Tl 190.801†	-23.1	0.41	1.76%	[0.00]	µg/L
U 409.014†	-233.0	97.55	41.87%	[0.00]	µg/L
V 292.402†	-122.1	22.68	18.57%	[0.00]	µg/L
Zn 213.857†	671.3	5.87	0.87%	[0.00]	µg/L

Sequence No.: 2
 Sample ID: S0.1
 Analyst:
 Initial Sample Wt:
 Dilution:

Autosampler Location: 2
 Date Collected: 1/27/2010 08:29:02
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:

Replicate Data: S0.1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Analysis Time
1	Sc RADIAL	78569.0	78569.0	102 %	08:29:36
1	K 766.490 Radial†	1868.6	1415.0	[1000] µg/L	08:29:36
1	Sr 421.552†	16590.2	15663.1	[100] µg/L	08:29:36
1	Sc 361.383	1938827.9	1938827.9	99.765 %	08:29:58
1	Y 371.029	1224834.0	1224834.0	99.677 %	08:29:58
1	Ag 328.068†	10845.5	10926.1	[100] µg/L	08:30:04
1	As 188.979†	45.7	45.3	[100] µg/L	08:30:24
1	B 249.677†	2162.8	2052.7	[100] µg/L	08:30:04
1	Ba 233.527†	3476.1	3498.8	[100] µg/L	08:30:04
1	Be 313.107†	147785.1	144293.7	[100] µg/L	08:29:58
1	Cd 226.502†	3334.4	3477.7	[100] µg/L	08:30:04
1	Co 228.616†	1808.3	1857.5	[100] µg/L	08:30:24
1	Cr 267.716†	4331.2	4424.2	[100] µg/L	08:30:04
1	Cu 324.752†	17403.4	13776.2	[100] µg/L	08:30:04
1	Mn 257.610†	27174.1	27427.5	[100] µg/L	08:30:04
1	Mo 202.031†	842.9	827.6	[100] µg/L	08:30:24
1	Ni 231.604†	1956.7	1625.8	[100] µg/L	08:30:24
1	P 214.914†	414.2	212.7	[500] µg/L	08:30:24
1	Pb 220.353†	415.9	360.9	[100] µg/L	08:30:24
1	S 181.975 Axial†	60.8	35.4	[200] µg/L	08:30:24
1	Sb 206.836†	124.0	101.9	[100] µg/L	08:30:24
1	Se 196.026†	75.8	63.5	[100] µg/L	08:30:24
1	SiO2†	7379.4	5118.0	[1069.5] µg/L	08:30:04
1	Si 251.611†	6303.9	6014.2	[500] µg/L	08:30:04
1	Sn 189.927†	201.2	178.2	[100] µg/L	08:30:24
1	Ti 334.940†	40467.4	39789.1	[100] µg/L	08:30:04
1	Tl 190.801†	37.7	60.8	[100] µg/L	08:30:24
1	U 409.014†	837.2	1072.2	[100] µg/L	08:30:04
1	V 292.402†	8069.1	8210.2	[100] µg/L	08:30:04
1	Zn 213.857†	4190.3	3528.8	[100] µg/L	08:30:04
2	Sc RADIAL	78405.0	78405.0	102 %	08:29:42
2	K 766.490 Radial†	1884.2	1434.1	[1000] µg/L	08:29:42
2	Sr 421.552†	16566.3	15673.7	[100] µg/L	08:29:42
2	Sc 361.383	1955896.1	1955896.1	100.64 %	08:30:30
2	Y 371.029	1237762.5	1237762.5	100.73 %	08:30:30
2	Ag 328.068†	10821.0	10806.9	[100] µg/L	08:30:36
2	As 188.979†	45.4	44.6	[100] µg/L	08:30:56
2	B 249.677†	2156.2	2027.2	[100] µg/L	08:30:36
2	Ba 233.527†	3472.6	3464.9	[100] µg/L	08:30:36
2	Be 313.107†	148254.9	143467.9	[100] µg/L	08:30:30
2	Cd 226.502†	3334.0	3448.2	[100] µg/L	08:30:36
2	Co 228.616†	1791.9	1825.5	[100] µg/L	08:30:56
2	Cr 267.716†	4363.2	4418.1	[100] µg/L	08:30:36
2	Cu 324.752†	17317.0	13538.1	[100] µg/L	08:30:36
2	Mn 257.610†	27125.2	27141.3	[100] µg/L	08:30:36
2	Mo 202.031†	836.7	814.1	[100] µg/L	08:30:56
2	Ni 231.604†	1979.1	1631.0	[100] µg/L	08:30:56
2	P 214.914†	425.5	220.3	[500] µg/L	08:30:56
2	Pb 220.353†	411.7	353.1	[100] µg/L	08:30:56
2	S 181.975 Axial†	59.2	33.3	[200] µg/L	08:30:56
2	Sb 206.836†	124.9	101.7	[100] µg/L	08:30:56
2	Se 196.026†	70.3	57.4	[100] µg/L	08:30:56
2	SiO2†	7371.7	5045.8	[1069.5] µg/L	08:30:36
2	Si 251.611†	6277.1	5932.4	[500] µg/L	08:30:36
2	Sn 189.927†	203.8	179.1	[100] µg/L	08:30:56
2	Ti 334.940†	40326.4	39294.9	[100] µg/L	08:30:36
2	Tl 190.801†	40.7	63.5	[100] µg/L	08:30:56
2	U 409.014†	808.1	1035.9	[100] µg/L	08:30:36
2	V 292.402†	8058.1	8128.7	[100] µg/L	08:30:36

2	Zn 213.857†	4190.0	3491.9	[100]	µg/L	08:30:36
3	Sc RADIAL	78492.0	78492.0	102	%	08:29:47
3	K 766.490 Radial†	1831.6	1380.6	[1000]	µg/L	08:29:47
3	Sr 421.552†	16597.8	15686.5	[100]	µg/L	08:29:47
3	Sc 361.383	1962005.4	1962005.4	100.96	%	08:31:03
3	Y 371.029	1239103.3	1239103.3	100.84	%	08:31:03
3	Ag 328.068†	11001.4	10952.1	[100]	µg/L	08:31:08
3	As 188.979†	46.3	45.4	[100]	µg/L	08:31:29
3	B 249.677†	2171.4	2035.6	[100]	µg/L	08:31:08
3	Ba 233.527†	3541.9	3522.9	[100]	µg/L	08:31:08
3	Be 313.107†	149152.3	143898.0	[100]	µg/L	08:31:03
3	Cd 226.502†	3401.8	3505.0	[100]	µg/L	08:31:08
3	Co 228.616†	1804.5	1832.4	[100]	µg/L	08:31:29
3	Cr 267.716†	4442.2	4482.8	[100]	µg/L	08:31:08
3	Cu 324.752†	17549.8	13715.1	[100]	µg/L	08:31:08
3	Mn 257.610†	27511.1	27439.6	[100]	µg/L	08:31:08
3	Mo 202.031†	838.9	813.8	[100]	µg/L	08:31:29
3	Ni 231.604†	1975.4	1621.3	[100]	µg/L	08:31:29
3	P 214.914†	409.6	203.3	[500]	µg/L	08:31:29
3	Pb 220.353†	420.0	360.1	[100]	µg/L	08:31:29
3	S 181.975 Axial†	56.5	30.4	[200]	µg/L	08:31:29
3	Sb 206.836†	117.8	94.3	[100]	µg/L	08:31:29
3	Se 196.026†	78.1	64.9	[100]	µg/L	08:31:29
3	SiO2†	7490.7	5140.8	[1069.5]	µg/L	08:31:08
3	Si 251.611†	6404.6	6039.4	[500]	µg/L	08:31:08
3	Sn 189.927†	202.3	176.9	[100]	µg/L	08:31:29
3	Ti 334.940†	40959.1	39796.9	[100]	µg/L	08:31:08
3	Tl 190.801†	34.9	57.6	[100]	µg/L	08:31:29
3	U 409.014†	795.0	1020.4	[100]	µg/L	08:31:08
3	V 292.402†	8153.4	8198.2	[100]	µg/L	08:31:08
3	Zn 213.857†	4244.2	3532.6	[100]	µg/L	08:31:08

Mean Data: S0.1

Analyte	Mean Corrected		RSD	Calib	
	Intensity	Std.Dev.		Conc.	Units
Sc 361.383	1952243.1	12012.81	0.62%	100.46	%
Sc RADIAL	78488.7	82.09	0.10%	102	%
Y 371.029	1233899.9	7879.88	0.64%	100.42	%
Ag 328.068†	10895.0	77.45	0.71%	[100]	µg/L
As 188.979†	45.1	0.43	0.95%	[100]	µg/L
B 249.677†	2038.5	13.00	0.64%	[100]	µg/L
Ba 233.527†	3495.5	29.10	0.83%	[100]	µg/L
Be 313.107†	143886.5	413.05	0.29%	[100]	µg/L
Cd 226.502†	3476.9	28.42	0.82%	[100]	µg/L
Co 228.616†	1838.5	16.88	0.92%	[100]	µg/L
Cr 267.716†	4441.7	35.72	0.80%	[100]	µg/L
Cu 324.752†	13676.5	123.67	0.90%	[100]	µg/L
K 766.490 Radial†	1409.9	27.13	1.92%	[1000]	µg/L
Mn 257.610†	27336.2	168.88	0.62%	[100]	µg/L
Mo 202.031†	818.5	7.91	0.97%	[100]	µg/L
Ni 231.604†	1626.1	4.88	0.30%	[100]	µg/L
P 214.914†	212.1	8.53	4.02%	[500]	µg/L
Pb 220.353†	358.1	4.30	1.20%	[100]	µg/L
S 181.975 Axial†	33.0	2.50	7.56%	[200]	µg/L
Sb 206.836†	99.3	4.34	4.37%	[100]	µg/L
Se 196.026†	62.0	3.99	6.44%	[100]	µg/L
SiO2†	5101.6	49.61	0.97%	[1069.5]	µg/L
Si 251.611†	5995.3	55.91	0.93%	[500]	µg/L
Sn 189.927†	178.1	1.10	0.62%	[100]	µg/L
Sr 421.552†	15674.4	11.69	0.07%	[100]	µg/L
Ti 334.940†	39627.0	287.58	0.73%	[100]	µg/L
Tl 190.801†	60.7	2.95	4.86%	[100]	µg/L
U 409.014†	1042.8	26.57	2.55%	[100]	µg/L
V 292.402†	8179.0	44.01	0.54%	[100]	µg/L
Zn 213.857†	3517.8	22.50	0.64%	[100]	µg/L

Sequence No.: 3
 Sample ID: S0.5
 Analyst:
 Initial Sample Wt:
 Dilution:

Autosampler Location: 3
 Date Collected: 1/27/2010 08:31:38
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:

Replicate Data: S0.5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib.	Analysis Time
1	Sc RADIAL	78938.0	78938.0	103	%	08:32:11
1	Al 396.153Radial†	7457.1	7285.0	[5000]	µg/L	08:32:11
1	Ca 317.933Radial†	6883.7	6447.3	[5000]	µg/L	08:32:31
1	K 766.490 Radial†	8134.2	7503.9	[5000]	µg/L	08:32:11
1	Mg 279.077 IEC†	495.8	474.2	[5000]	µg/L	08:32:31
1	Sr 421.552†	81896.5	79141.0	[500]	µg/L	08:32:11
1	Sc 361.383	1968655.2	1968655.2	101.30	%	08:33:34
1	Y 371.029	1242104.6	1242104.6	101.08	%	08:33:34
1	Ag 328.068†	55330.9	54676.0	[500]	µg/L	08:33:40
1	As 188.979†	227.8	224.3	[500]	µg/L	08:34:00
1	B 249.677†	10672.2	10420.1	[500]	µg/L	08:33:40
1	Ba 233.527†	17883.6	17668.7	[500]	µg/L	08:33:40
1	Be 313.107†	751946.4	738458.1	[500]	µg/L	08:33:34
1	Cd 226.502†	17559.9	17470.1	[500]	µg/L	08:33:40
1	Co 228.616†	9396.0	9320.5	[500]	µg/L	08:33:40
1	Cr 267.716†	22430.1	22225.1	[500]	µg/L	08:33:40
1	Cu 324.752†	72871.0	68267.7	[500]	µg/L	08:33:40
1	Mn 257.610†	138098.1	136515.6	[500]	µg/L	08:33:40
1	Mo 202.031†	4155.4	4084.9	[500]	µg/L	08:34:00
1	Ni 231.604†	8600.4	8154.6	[500]	µg/L	08:33:40
1	P 214.914†	1314.3	1094.9	[2500]	µg/L	08:34:00
1	Pb 220.353†	1870.4	1790.5	[500]	µg/L	08:34:00
1	S 181.975 Axial†	206.0	177.9	[1000]	µg/L	08:34:00
1	Sb 206.836†	489.2	460.5	[500]	µg/L	08:34:00
1	Se 196.026†	338.2	321.5	[500]	µg/L	08:34:00
1	SiO2†	28755.0	26107.2	[5347.5]	µg/L	08:33:40
1	Si 251.611†	31391.2	30683.9	[2500]	µg/L	08:33:40
1	Sn 189.927†	942.0	906.5	[500]	µg/L	08:34:00
1	Ti 334.940†	209697.9	206233.4	[500]	µg/L	08:33:34
1	Tl 190.801†	280.4	299.9	[500]	µg/L	08:34:00
1	U 409.014†	5155.7	5322.5	[500]	µg/L	08:33:40
1	V 292.402†	41855.5	41440.5	[500]	µg/L	08:33:40
1	Zn 213.857†	18535.8	17626.7	[500]	µg/L	08:33:40
2	Sc RADIAL	78548.1	78548.1	102	%	08:32:37
2	Al 396.153Radial†	7433.0	7297.4	[5000]	µg/L	08:32:37
2	Ca 317.933Radial†	6832.3	6430.3	[5000]	µg/L	08:32:57
2	K 766.490 Radial†	8107.9	7517.5	[5000]	µg/L	08:32:37
2	Mg 279.077 IEC†	487.5	468.5	[5000]	µg/L	08:32:57
2	Sr 421.552†	81515.8	79164.5	[500]	µg/L	08:32:37
2	Sc 361.383	1972139.4	1972139.4	101.48	%	08:34:07
2	Y 371.029	1242750.3	1242750.3	101.14	%	08:34:07
2	Ag 328.068†	55470.7	54717.2	[500]	µg/L	08:34:13
2	As 188.979†	229.3	225.4	[500]	µg/L	08:34:33
2	B 249.677†	10709.2	10437.9	[500]	µg/L	08:34:13
2	Ba 233.527†	17898.8	17652.4	[500]	µg/L	08:34:13
2	Be 313.107†	744397.6	729708.0	[500]	µg/L	08:34:07
2	Cd 226.502†	17652.9	17531.1	[500]	µg/L	08:34:13
2	Co 228.616†	9423.6	9331.3	[500]	µg/L	08:34:13
2	Cr 267.716†	22551.2	22305.3	[500]	µg/L	08:34:13
2	Cu 324.752†	73127.2	68393.1	[500]	µg/L	08:34:13
2	Mn 257.610†	138444.4	136616.0	[500]	µg/L	08:34:13
2	Mo 202.031†	4182.0	4103.8	[500]	µg/L	08:34:33
2	Ni 231.604†	8656.8	8195.2	[500]	µg/L	08:34:13
2	P 214.914†	1313.5	1091.8	[2500]	µg/L	08:34:33
2	Pb 220.353†	1879.7	1796.3	[500]	µg/L	08:34:33
2	S 181.975 Axial†	207.5	179.0	[1000]	µg/L	08:34:33
2	Sb 206.836†	515.1	485.2	[500]	µg/L	08:34:33
2	Se 196.026†	335.4	318.1	[500]	µg/L	08:34:33
2	SiO2†	28776.8	26078.6	[5347.5]	µg/L	08:34:13

2	Si 251.611†	31526.6	30762.5	[2500]	µg/L	08:34:13
2	Sn 189.927†	941.7	904.5	[500]	µg/L	08:34:33
2	Ti 334.940†	207775.3	203973.1	[500]	µg/L	08:34:07
2	Tl 190.801†	283.9	302.8	[500]	µg/L	08:34:33
2	U 409.014†	5241.3	5397.9	[500]	µg/L	08:34:13
2	V 292.402†	41944.0	41454.7	[500]	µg/L	08:34:13
2	Zn 213.857†	18588.0	17645.7	[500]	µg/L	08:34:13
3	Sc RADIAL	78235.1	78235.1	102	%	08:33:03
3	Al 396.153Radial†	7408.9	7302.8	[5000]	µg/L	08:33:03
3	Ca 317.933Radial†	6824.7	6449.6	[5000]	µg/L	08:33:23
3	K 766.490 Radial†	8092.9	7534.5	[5000]	µg/L	08:33:03
3	Mg 279.077 IEC†	490.0	472.9	[5000]	µg/L	08:33:23
3	Sr 421.552†	81351.5	79322.1	[500]	µg/L	08:33:03
3	Sc 361.383	1952151.4	1952151.4	100.45	%	08:34:40
3	Y 371.029	1232809.8	1232809.8	100.33	%	08:34:40
3	Ag 328.068†	54086.5	53899.0	[500]	µg/L	08:34:46
3	As 188.979†	204.3	202.8	[500]	µg/L	08:35:06
3	B 249.677†	10366.9	10205.1	[500]	µg/L	08:34:46
3	Ba 233.527†	17108.3	17046.1	[500]	µg/L	08:34:46
3	Be 313.107†	725489.3	718395.3	[500]	µg/L	08:34:40
3	Cd 226.502†	16783.2	16843.3	[500]	µg/L	08:34:46
3	Co 228.616†	8943.5	8948.4	[500]	µg/L	08:34:46
3	Cr 267.716†	21136.1	21124.1	[500]	µg/L	08:34:46
3	Cu 324.752†	69734.2	65753.2	[500]	µg/L	08:34:46
3	Mn 257.610†	131446.7	131046.5	[500]	µg/L	08:34:46
3	Mo 202.031†	3698.0	3664.2	[500]	µg/L	08:35:06
3	Ni 231.604†	8247.8	7875.4	[500]	µg/L	08:34:46
3	P 214.914†	1208.6	1000.7	[2500]	µg/L	08:35:06
3	Pb 220.353†	1726.8	1663.1	[500]	µg/L	08:35:06
3	S 181.975 Axial†	194.8	168.4	[1000]	µg/L	08:35:06
3	Sb 206.836†	464.9	440.4	[500]	µg/L	08:35:06
3	Se 196.026†	321.4	307.6	[500]	µg/L	08:35:06
3	SiO2†	27821.3	25417.7	[5347.5]	µg/L	08:34:46
3	Si 251.611†	30403.6	29962.7	[2500]	µg/L	08:34:46
3	Sn 189.927†	829.7	802.6	[500]	µg/L	08:35:06
3	Ti 334.940†	201953.4	200273.7	[500]	µg/L	08:34:40
3	Tl 190.801†	261.6	283.5	[500]	µg/L	08:35:06
3	U 409.014†	4937.6	5148.4	[500]	µg/L	08:34:46
3	V 292.402†	39802.1	39745.7	[500]	µg/L	08:34:46
3	Zn 213.857†	17753.1	17002.2	[500]	µg/L	08:34:46

Mean Data: S0.5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc.	Units
Sc 361.383	1964315.3	10677.38	0.54%	101.08	%
Sc RADIAL	78573.7	352.19	0.45%	102	%
Y 371.029	1239221.5	5562.12	0.45%	100.85	%
Ag 328.068†	54430.7	460.99	0.85%	[500]	µg/L
Al 396.153Radial†	7295.1	9.17	0.13%	[5000]	µg/L
As 188.979†	217.5	12.73	5.85%	[500]	µg/L
B 249.677†	10354.4	129.53	1.25%	[500]	µg/L
Ba 233.527†	17455.7	354.87	2.03%	[500]	µg/L
Be 313.107†	728853.8	10058.64	1.38%	[500]	µg/L
Ca 317.933Radial†	6442.4	10.53	0.16%	[5000]	µg/L
Cd 226.502†	17281.5	380.68	2.20%	[500]	µg/L
Co 228.616†	9200.0	218.01	2.37%	[500]	µg/L
Cr 267.716†	21884.8	660.05	3.02%	[500]	µg/L
Cu 324.752†	67471.3	1489.30	2.21%	[500]	µg/L
K 766.490 Radial†	7518.6	15.30	0.20%	[5000]	µg/L
Mg 279.077 IEC†	471.9	3.00	0.64%	[5000]	µg/L
Mn 257.610†	134726.0	3186.95	2.37%	[500]	µg/L
Mo 202.031†	3951.0	248.53	6.29%	[500]	µg/L
Ni 231.604†	8075.1	174.15	2.16%	[500]	µg/L
P 214.914†	1062.5	53.55	5.04%	[2500]	µg/L
Pb 220.353†	1750.0	75.27	4.30%	[500]	µg/L
S 181.975 Axial†	175.1	5.81	3.32%	[1000]	µg/L
Sb 206.836†	462.0	22.41	4.85%	[500]	µg/L
Se 196.026†	315.7	7.25	2.30%	[500]	µg/L
SiO2†	25867.8	390.09	1.51%	[5347.5]	µg/L
Si 251.611†	30469.7	440.83	1.45%	[2500]	µg/L

Sn 189.927†	871.2	59.44	6.82%	[500] µg/L
Sr 421.552†	79209.2	98.45	0.12%	[500] µg/L
Ti 334.940†	203493.4	3008.65	1.48%	[500] µg/L
Tl 190.801†	295.4	10.42	3.53%	[500] µg/L
U 409.014†	5289.6	127.98	2.42%	[500] µg/L
V 292.402†	40880.3	982.64	2.40%	[500] µg/L
Zn 213.857†	17424.9	366.19	2.10%	[500] µg/L

Sequence No.: 4
 Sample ID: SCAL
 Analyst:
 Initial Sample Wt:
 Dilution:

Autosampler Location: 4
 Date Collected: 1/27/2010 08:35:16
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:

Replicate Data: SCAL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib.	Analysis Time
1	Sc RADIAL	78758.1	78758.1	103 %		08:35:48
1	Al 396.153Radial†	14859.0	14521.2	[10000] µg/L		08:35:48
1	Ca 317.933Radial†	13454.0	12871.2	[10000] µg/L		08:35:48
1	Fe 238.204 Radial†	726.2	692.4	[10000] µg/L		08:36:09
1	K 766.490 Radial†	15902.8	15099.4	[10000] µg/L		08:35:48
1	Mg 279.077 IEC†	952.4	920.7	[10000] µg/L		08:36:09
1	Na 589.592 Radial†	36239.9	34803.1	[10000] µg/L		08:35:48
1	Sr 421.552†	161516.1	156983.2	[1000] µg/L		08:35:48
1	Sc 361.383	1968396.8	1968396.8	101.29 %		08:37:13
1	Y 371.029	1238215.3	1238215.3	100.77 %		08:37:13
1	Ag 328.068†	108989.9	107660.6	[1000] µg/L		08:37:18
1	As 188.979†	459.9	453.5	[1000] µg/L		08:37:39
1	B 249.677†	21117.7	20734.2	[1000] µg/L		08:37:18
1	Ba 233.527†	35225.4	34792.4	[1000] µg/L		08:37:18
1	Be 313.107†	1471640.7	1449108.2	[1000] µg/L		08:37:13
1	Cd 226.502†	34644.6	34340.0	[1000] µg/L		08:37:18
1	Co 228.616†	18595.2	18404.0	[1000] µg/L		08:37:18
1	Cr 267.716†	44517.9	44035.2	[1000] µg/L		08:37:18
1	Cu 324.752†	140490.9	135038.1	[1000] µg/L		08:37:18
1	Mn 257.610†	278000.7	274659.0	[1000] µg/L		08:37:13
1	Mo 202.031†	8244.8	8122.9	[1000] µg/L		08:37:18
1	Ni 231.604†	16671.0	16123.9	[1000] µg/L		08:37:18
1	P 214.914†	2395.1	2162.1	[5000] µg/L		08:37:39
1	Pb 220.353†	3644.4	3542.1	[1000] µg/L		08:37:39
1	S 181.975 Axial†	391.2	360.7	[2000] µg/L		08:37:39
1	Sb 206.836†	968.3	933.6	[1000] µg/L		08:37:39
1	Se 196.026†	676.2	655.2	[1000] µg/L		08:37:39
1	SiO2†	53959.8	50995.6	[10695] µg/L		08:37:18
1	Si 251.611†	61134.1	60053.1	[5000] µg/L		08:37:18
1	Sn 189.927†	1842.4	1795.6	[1000] µg/L		08:37:39
1	Ti 334.940†	411279.3	405281.5	[1000] µg/L		08:37:13
1	Tl 190.801†	572.3	588.1	[1000] µg/L		08:37:39
1	U 409.014†	10613.9	10712.0	[1000] µg/L		08:37:18
1	V 292.402†	82638.5	81711.0	[1000] µg/L		08:37:18
1	Zn 213.857†	35912.1	34784.6	[1000] µg/L		08:37:18
2	Sc RADIAL	78683.2	78683.2	102 %		08:36:14
2	Al 396.153Radial†	14798.9	14476.4	[10000] µg/L		08:36:14
2	Ca 317.933Radial†	13403.8	12834.7	[10000] µg/L		08:36:14
2	Fe 238.204 Radial†	732.3	699.1	[10000] µg/L		08:36:35
2	K 766.490 Radial†	15863.8	15076.0	[10000] µg/L		08:36:14
2	Mg 279.077 IEC†	960.9	929.9	[10000] µg/L		08:36:35
2	Na 589.592 Radial†	36221.7	34818.9	[10000] µg/L		08:36:14
2	Sr 421.552†	161122.0	156748.3	[1000] µg/L		08:36:14
2	Sc 361.383	1961486.2	1961486.2	100.93 %		08:37:46
2	Y 371.029	1234525.6	1234525.6	100.47 %		08:37:46
2	Ag 328.068†	108730.7	107782.9	[1000] µg/L		08:37:52
2	As 188.979†	455.1	450.3	[1000] µg/L		08:38:12
2	B 249.677†	21032.5	20723.3	[1000] µg/L		08:37:52
2	Ba 233.527†	35130.3	34820.8	[1000] µg/L		08:37:52
2	Be 313.107†	1463671.2	1446331.1	[1000] µg/L		08:37:46
2	Cd 226.502†	34565.6	34382.2	[1000] µg/L		08:37:52
2	Co 228.616†	18523.9	18398.1	[1000] µg/L		08:37:52
2	Cr 267.716†	44412.5	44085.7	[1000] µg/L		08:37:52
2	Cu 324.752†	140072.0	135111.8	[1000] µg/L		08:37:52
2	Mn 257.610†	276284.1	273925.1	[1000] µg/L		08:37:46
2	Mo 202.031†	8216.6	8123.6	[1000] µg/L		08:37:52
2	Ni 231.604†	16581.5	16093.1	[1000] µg/L		08:37:52
2	P 214.914†	2393.3	2168.7	[5000] µg/L		08:38:12
2	Pb 220.353†	3619.5	3530.2	[1000] µg/L		08:38:12

2	S 181.975 Axial†	386.1	357.0	[2000]	µg/L	08:38:12
2	Sb 206.836†	963.9	932.6	[1000]	µg/L	08:38:12
2	Se 196.026†	668.7	650.1	[1000]	µg/L	08:38:12
2	SiO2†	53848.9	51073.4	[10695]	µg/L	08:37:52
2	Si 251.611†	60903.2	60037.0	[5000]	µg/L	08:37:52
2	Sn 189.927†	1827.3	1787.0	[1000]	µg/L	08:38:12
2	Ti 334.940†	409230.6	404682.2	[1000]	µg/L	08:37:46
2	Tl 190.801†	569.3	587.1	[1000]	µg/L	08:38:12
2	U 409.014†	10631.3	10766.3	[1000]	µg/L	08:37:52
2	V 292.402†	82359.7	81722.1	[1000]	µg/L	08:37:52
2	Zn 213.857†	35797.7	34796.2	[1000]	µg/L	08:37:52
3	Sc RADIAL	78843.3	78843.3	103	%	08:36:40
3	Al 396.153Radial†	14950.8	14595.0	[10000]	µg/L	08:36:40
3	Ca 317.933Radial†	13511.2	12912.8	[10000]	µg/L	08:36:40
3	Fe 238.204 Radial†	730.0	695.4	[10000]	µg/L	08:37:01
3	K 766.490 Radial†	15885.1	15065.4	[10000]	µg/L	08:36:40
3	Mg 279.077 IEC†	961.6	928.6	[10000]	µg/L	08:37:01
3	Na 589.592 Radial†	36393.6	34914.6	[10000]	µg/L	08:36:40
3	Sr 421.552†	162387.5	157661.9	[1000]	µg/L	08:36:40
3	Sc 361.383	1962778.1	1962778.1	101.00	%	08:38:19
3	Y 371.029	1234258.6	1234258.6	100.44	%	08:38:19
3	Ag 328.068†	106148.3	105155.1	[1000]	µg/L	08:38:25
3	As 188.979†	398.9	394.4	[1000]	µg/L	08:38:45
3	B 249.677†	20414.6	20097.8	[1000]	µg/L	08:38:25
3	Ba 233.527†	33578.2	33261.1	[1000]	µg/L	08:38:25
3	Be 313.107†	1411372.9	1393594.8	[1000]	µg/L	08:38:19
3	Cd 226.502†	32912.3	32722.7	[1000]	µg/L	08:38:25
3	Co 228.616†	17461.1	17333.7	[1000]	µg/L	08:38:25
3	Cr 267.716†	41011.8	40689.6	[1000]	µg/L	08:38:25
3	Cu 324.752†	132250.2	127275.9	[1000]	µg/L	08:38:25
3	Mn 257.610†	266785.7	264340.5	[1000]	µg/L	08:38:19
3	Mo 202.031†	7770.6	7676.7	[1000]	µg/L	08:38:25
3	Ni 231.604†	15667.3	15177.2	[1000]	µg/L	08:38:25
3	P 214.914†	2129.6	1906.0	[5000]	µg/L	08:38:45
3	Pb 220.353†	3245.2	3157.2	[1000]	µg/L	08:38:45
3	S 181.975 Axial†	357.6	328.5	[2000]	µg/L	08:38:45
3	Sb 206.836†	856.7	825.8	[1000]	µg/L	08:38:45
3	Se 196.026†	613.6	595.1	[1000]	µg/L	08:38:45
3	SiO2†	51921.6	49130.1	[10695]	µg/L	08:38:25
3	Si 251.611†	58620.8	57737.4	[5000]	µg/L	08:38:25
3	Sn 189.927†	1572.1	1533.2	[1000]	µg/L	08:38:45
3	Ti 334.940†	393216.4	388559.3	[1000]	µg/L	08:38:19
3	Tl 190.801†	539.9	557.6	[1000]	µg/L	08:38:45
3	U 409.014†	9748.6	9885.3	[1000]	µg/L	08:38:25
3	V 292.402†	77420.4	76778.0	[1000]	µg/L	08:38:25
3	Zn 213.857†	33891.9	32885.9	[1000]	µg/L	08:38:25

Mean Data: SCAL

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc. Units
Sc 361.383	1964220.3	3674.09	0.19%	101.07 %
Sc RADIAL	78761.5	80.10	0.10%	103 %
Y 371.029	1235666.5	2211.36	0.18%	100.56 %
Ag 328.068†	106866.2	1483.12	1.39%	[1000] µg/L
Al 396.153Radial†	14530.8	59.89	0.41%	[10000] µg/L
As 188.979†	432.7	33.26	7.69%	[1000] µg/L
B 249.677†	20518.4	364.32	1.78%	[1000] µg/L
Ba 233.527†	34291.4	892.43	2.60%	[1000] µg/L
Be 313.107†	1429678.0	31279.80	2.19%	[1000] µg/L
Ca 317.933Radial†	12872.9	39.09	0.30%	[10000] µg/L
Cd 226.502†	33814.9	946.16	2.80%	[1000] µg/L
Co 228.616†	18045.3	616.23	3.41%	[1000] µg/L
Cr 267.716†	42936.8	1946.32	4.53%	[1000] µg/L
Cu 324.752†	132475.3	4502.93	3.40%	[1000] µg/L
Fe 238.204 Radial†	695.6	3.35	0.48%	[10000] µg/L
K 766.490 Radial†	15080.3	17.38	0.12%	[10000] µg/L
Mg 279.077 IEC†	926.4	4.98	0.54%	[10000] µg/L
Mn 257.610†	270974.9	5757.25	2.12%	[1000] µg/L
Mo 202.031†	7974.4	257.81	3.23%	[1000] µg/L
Na 589.592 Radial†	34845.5	60.35	0.17%	[10000] µg/L

Ni 231.604†	15798.0	537.91	3.40%	[1000]	µg/L
P 214.914†	2079.0	149.79	7.21%	[5000]	µg/L
Pb 220.353†	3409.8	218.85	6.42%	[1000]	µg/L
S 181.975 Axial†	348.8	17.63	5.06%	[2000]	µg/L
Sb 206.836†	897.4	61.98	6.91%	[1000]	µg/L
Se 196.026†	633.5	33.33	5.26%	[1000]	µg/L
SiO2†	50399.7	1100.20	2.18%	[10695]	µg/L
Si 251.611†	59275.8	1332.33	2.25%	[5000]	µg/L
Sn 189.927†	1705.3	149.11	8.74%	[1000]	µg/L
Sr 421.552†	157131.1	474.42	0.30%	[1000]	µg/L
Ti 334.940†	399507.7	9486.30	2.37%	[1000]	µg/L
Tl 190.801†	577.6	17.34	3.00%	[1000]	µg/L
U 409.014†	10454.5	493.68	4.72%	[1000]	µg/L
V 292.402†	80070.4	2851.29	3.56%	[1000]	µg/L
Zn 213.857†	34155.5	1099.60	3.22%	[1000]	µg/L

Sequence No.: 5
 Sample ID: S10
 Analyst:
 Initial Sample Wt:
 Dilution:

Autosampler Location: 5
 Date Collected: 1/27/2010 08:38:54
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:

Replicate Data: S10

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib.	Analysis Time
1	Sc RADIAL	77557.9	77557.9	101 %		08:39:27
1	Al 396.153Radial†	73198.7	72530.0	[50000] µg/L		08:39:27
1	Ca 317.933Radial†	64881.9	64012.6	[50000] µg/L		08:39:27
1	Fe 238.204 Radial†	1422.2	1392.8	[20000] µg/L		08:39:47
1	Mg 279.077 IEC†	4635.7	4583.2	[50000] µg/L		08:39:47
1	Na 589.592 Radial†	71371.3	70147.0	[20000] µg/L		08:39:27
1	Sc 361.383	1954736.5	1954736.5	100.58 %		08:40:51
1	Y 371.029	1222696.2	1222696.2	99.503 %		08:40:51
2	Sc RADIAL	77462.6	77462.6	101 %		08:39:53
2	Al 396.153Radial†	72227.6	71656.1	[50000] µg/L		08:39:53
2	Ca 317.933Radial†	63940.6	63158.3	[50000] µg/L		08:39:53
2	Fe 238.204 Radial†	1432.1	1404.3	[20000] µg/L		08:40:13
2	Mg 279.077 IEC†	4664.0	4617.0	[50000] µg/L		08:40:13
2	Na 589.592 Radial†	70586.8	69456.0	[20000] µg/L		08:39:53
2	Sc 361.383	1972775.4	1972775.4	101.51 %		08:40:59
2	Y 371.029	1234012.3	1234012.3	100.42 %		08:40:59
3	Sc RADIAL	78064.1	78064.1	102 %		08:40:19
3	Al 396.153Radial†	72705.7	71574.7	[50000] µg/L		08:40:19
3	Ca 317.933Radial†	64472.0	63192.6	[50000] µg/L		08:40:19
3	Fe 238.204 Radial†	1422.1	1383.5	[20000] µg/L		08:40:39
3	Mg 279.077 IEC†	4636.0	4553.8	[50000] µg/L		08:40:39
3	Na 589.592 Radial†	70980.6	69304.2	[20000] µg/L		08:40:19
3	Sc 361.383	1967490.2	1967490.2	101.24 %		08:41:06
3	Y 371.029	1230263.9	1230263.9	100.12 %		08:41:06

Mean Data: S10

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc. Units	Calib
Sc 361.383	1965000.7	9273.53	0.47%	101.11 %	
Sc RADIAL	77694.8	323.28	0.42%	101 %	
Y 371.029	1228990.8	5764.48	0.47%	100.02 %	
Al 396.153Radial†	71920.3	529.59	0.74%	[50000] µg/L	
Ca 317.933Radial†	63454.5	483.66	0.76%	[50000] µg/L	
Fe 238.204 Radial†	1393.6	10.42	0.75%	[20000] µg/L	
Mg 279.077 IEC†	4584.7	31.58	0.69%	[50000] µg/L	
Na 589.592 Radial†	69635.8	449.24	0.65%	[20000] µg/L	

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	3	Lin Thru 0	0.0	107.3	0.00000	0.999972	
Al 396.153Radial	3	Lin Thru 0	0.0	1.439	0.00000	0.999997	
As 188.979	3	Lin Thru 0	0.0	0.4333	0.00000	0.999992	
B 249.677	3	Lin Thru 0	0.0	20.56	0.00000	0.999993	
Ba 233.527	3	Lin Thru 0	0.0	34.42	0.00000	0.999973	
Be 313.107	3	Lin Thru 0	0.0	1435	0.00000	0.999970	
Ca 317.933Radial	3	Lin Thru 0	0.0	1.270	0.00000	0.999995	
Cd 226.502	3	Lin Thru 0	0.0	33.97	0.00000	0.999959	
Co 228.616	3	Lin Thru 0	0.0	18.12	0.00000	0.999969	
Cr 267.716	3	Lin Thru 0	0.0	43.11	0.00000	0.999967	
Cu 324.752	3	Lin Thru 0	0.0	133.0	0.00000	0.999969	
Fe 238.204 Radia	2	Lin Thru 0	0.0	0.0697	0.00000	1.000000	
K 766.490 Radial	3	Lin Thru 0	0.0	1.506	0.00000	0.999983	
Mg 279.077 IEC	3	Lin Thru 0	0.0	0.0918	0.00000	0.999994	
Mn 257.610	3	Lin Thru 0	0.0	270.7	0.00000	0.999997	
Mo 202.031	3	Lin Thru 0	0.0	7.962	0.00000	0.999990	
Na 589.592 Radia	2	Lin Thru 0	0.0	3.482	0.00000	1.000000	

Ni 231.604	3	Lin Thru 0	0.0	15.87	0.00000	0.999959
P 214.914	3	Lin Thru 0	0.0	0.4177	0.00000	0.999961
Pb 220.353	3	Lin Thru 0	0.0	3.429	0.00000	0.999937
S 181.975 Axial	3	Lin Thru 0	0.0	0.1744	0.00000	0.999987
Sb 206.836	3	Lin Thru 0	0.0	0.9034	0.00000	0.999891
Se 196.026	3	Lin Thru 0	0.0	0.6330	0.00000	0.999997
SiO2	3	Lin Thru 0	0.0	4.738	0.00000	0.999945
Si 251.611	3	Lin Thru 0	0.0	11.92	0.00000	0.999938
Sn 189.927	3	Lin Thru 0	0.0	1.713	0.00000	0.999956
Sr 421.552	3	Lin Thru 0	0.0	157.4	0.00000	0.999995
Ti 334.940	3	Lin Thru 0	0.0	401.0	0.00000	0.999972
Tl 190.801	3	Lin Thru 0	0.0	0.5805	0.00000	0.999951
U 409.014	3	Lin Thru 0	0.0	10.48	0.00000	0.999989
V 292.402	3	Lin Thru 0	0.0	80.42	0.00000	0.999964
Zn 213.857	3	Lin Thru 0	0.0	34.30	0.00000	0.999965

Sequence No.: 6
 Sample ID: ICV
 Analyst:
 Initial Sample Wt:
 Dilution:

Autosampler Location: 9
 Date Collected: 1/27/2010 08:41:15
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:

Replicate Data: ICV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	79051.4	79051.4	103 %		08:41:49
1	Al 396.153Radial†	7444.6	7262.4	5034.9 µg/L	5034.9 ppb	08:41:49
1	Ca 317.933Radial†	6641.4	6202.2	4883.8 µg/L	4883.8 ppb	08:42:09
1	Fe 238.204 Radial†	377.6	351.0	5050.3 µg/L	5050.3 ppb	08:42:09
1	K 766.490 Radial†	4093.6	3566.0	2367.2 µg/L	2367.2 ppb	08:41:49
1	Mg 279.077 IEC†	496.1	473.8	5168.0 µg/L	5168.0 ppb	08:42:09
1	Na 589.592 Radial†	9206.4	8401.6	2412.6 µg/L	2412.6 ppb	08:41:49
1	Sr 421.552†	84707.2	81758.1	519.48 µg/L	519.48 ppb	08:41:49
1	Sc 361.383	1963098.9	1963098.9	101.01 %		08:43:12
1	Y 371.029	1236485.8	1236485.8	100.63 %		08:43:12
1	Ag 328.068†	28098.4	27871.5	263.54 µg/L	263.54 ppb	08:43:18
1	As 188.979†	219.2	216.4	498.43 µg/L	498.43 ppb	08:43:39
1	B 249.677†	10890.0	10665.5	517.04 µg/L	517.04 ppb	08:43:18
1	Ba 233.527†	17704.8	17541.6	510.57 µg/L	510.57 ppb	08:43:18
1	Be 313.107†	386773.1	379051.4	263.90 µg/L	263.90 ppb	08:43:12
1	Cd 226.502†	17197.2	17160.0	505.08 µg/L	505.08 ppb	08:43:18
1	Co 228.616†	9363.5	9314.5	513.55 µg/L	513.55 ppb	08:43:18
1	Cr 267.716†	21561.6	21428.0	497.34 µg/L	497.34 ppb	08:43:18
1	Cu 324.752†	72462.3	68066.7	512.48 µg/L	512.48 ppb	08:43:18
1	Mn 257.610†	138725.5	137522.5	508.50 µg/L	508.50 ppb	08:43:18
1	Mo 202.031†	4469.3	4407.3	553.75 µg/L	553.75 ppb	08:43:39
1	Ni 231.604†	8487.3	8066.7	507.70 µg/L	507.70 ppb	08:43:18
1	P 214.914†	1319.3	1103.6	2594.0 µg/L	2594.0 ppb	08:43:39
1	Pb 220.353†	1861.8	1787.2	521.49 µg/L	521.49 ppb	08:43:39
1	S 181.975 Axial†	491.2	460.7	2641.0 µg/L	2641.0 ppb	08:43:39
1	Sb 206.836†	512.5	485.0	539.92 µg/L	539.92 ppb	08:43:39
1	Se 196.026†	1738.4	1708.5	2717.6 µg/L	2717.6 ppb	08:43:39
1	SiO2†	53334.3	50520.2	10663 µg/L	10663 ppb	08:43:18
1	Si 251.611†	60130.3	59222.2	4967.4 µg/L	4967.4 ppb	08:43:18
1	Sn 189.927†	1015.7	982.1	575.76 µg/L	575.76 ppb	08:43:39
1	Ti 334.940†	203934.3	201113.6	501.24 µg/L	501.24 ppb	08:43:12
1	Tl 190.801†	296.2	316.3	549.24 µg/L	549.24 ppb	08:43:39
1	U 409.014†	5079.0	5261.0	501.05 µg/L	501.05 ppb	08:43:18
1	V 292.402†	42002.9	41703.4	524.78 µg/L	524.78 ppb	08:43:18
1	Zn 213.857†	18676.7	17817.9	515.85 µg/L	515.85 ppb	08:43:18
2	Sc RADIAL	79195.8	79195.8	103 %		08:42:15
2	Al 396.153Radial†	7477.6	7281.2	5048.0 µg/L	5048.0 ppb	08:42:15
2	Ca 317.933Radial†	6639.0	6188.2	4872.7 µg/L	4872.7 ppb	08:42:35
2	Fe 238.204 Radial†	370.7	343.7	4945.8 µg/L	4945.8 ppb	08:42:35
2	K 766.490 Radial†	4078.1	3543.7	2352.5 µg/L	2352.5 ppb	08:42:15
2	Mg 279.077 IEC†	494.7	471.6	5143.5 µg/L	5143.5 ppb	08:42:35
2	Na 589.592 Radial†	9245.2	8422.9	2418.7 µg/L	2418.7 ppb	08:42:15
2	Sr 421.552†	85195.7	82081.8	521.54 µg/L	521.54 ppb	08:42:15
2	Sc 361.383	1956579.9	1956579.9	100.68 %		08:43:45
2	Y 371.029	1234224.7	1234224.7	100.44 %		08:43:45
2	Ag 328.068†	28487.9	28351.0	268.07 µg/L	268.07 ppb	08:43:51
2	As 188.979†	221.9	219.9	506.35 µg/L	506.35 ppb	08:44:11
2	B 249.677†	11020.1	10830.6	525.14 µg/L	525.14 ppb	08:43:51
2	Ba 233.527†	18021.5	17914.5	521.43 µg/L	521.43 ppb	08:43:51
2	Be 313.107†	390557.4	384085.9	267.40 µg/L	267.40 ppb	08:43:45
2	Cd 226.502†	17456.0	17473.8	514.34 µg/L	514.34 ppb	08:43:51
2	Co 228.616†	9521.2	9502.1	523.89 µg/L	523.89 ppb	08:43:51
2	Cr 267.716†	21872.5	21807.9	506.15 µg/L	506.15 ppb	08:43:51
2	Cu 324.752†	73520.6	69356.9	522.17 µg/L	522.17 ppb	08:43:51
2	Mn 257.610†	140818.6	140059.1	517.86 µg/L	517.86 ppb	08:43:51
2	Mo 202.031†	4447.6	4400.4	552.89 µg/L	552.89 ppb	08:44:11
2	Ni 231.604†	8622.7	8229.2	517.93 µg/L	517.93 ppb	08:43:51
2	P 214.914†	1310.4	1099.1	2582.2 µg/L	2582.2 ppb	08:44:11
2	Pb 220.353†	1868.1	1799.6	525.07 µg/L	525.07 ppb	08:44:11

2	S 181.975 Axial†	484.1	455.3	2610.1 µg/L	2610.1 ppb	08:44:11
2	Sb 206.836†	504.0	478.2	532.29 µg/L	532.29 ppb	08:44:11
2	Se 196.026†	1729.7	1705.6	2712.6 µg/L	2712.6 ppb	08:44:11
2	SiO2†	54087.7	51444.4	10859 µg/L	10859 ppb	08:43:51
2	Si 251.611†	61010.9	60295.2	5057.4 µg/L	5057.4 ppb	08:43:51
2	Sn 189.927†	1013.3	983.1	576.34 µg/L	576.34 ppb	08:44:11
2	Ti 334.940†	205645.6	203486.0	507.16 µg/L	507.16 ppb	08:43:45
2	Tl 190.801†	297.8	318.9	553.76 µg/L	553.76 ppb	08:44:11
2	U 409.014†	5088.0	5286.7	503.52 µg/L	503.52 ppb	08:43:51
2	V 292.402†	42655.2	42489.9	534.57 µg/L	534.57 ppb	08:43:51
2	Zn 213.857†	18999.1	18199.7	526.93 µg/L	526.93 ppb	08:43:51
3	Sc RADIAL	78786.2	78786.2	103 %		08:42:41
3	Al 396.153Radial†	7485.5	7326.6	5081.0 µg/L	5081.0 ppb	08:42:41
3	Ca 317.933Radial†	6653.3	6235.6	4910.0 µg/L	4910.0 ppb	08:43:01
3	Fe 238.204 Radial†	375.7	350.5	5042.0 µg/L	5042.0 ppb	08:43:01
3	K 766.490 Radial†	4187.3	3670.8	2436.8 µg/L	2436.8 ppb	08:42:41
3	Mg 279.077 IEC†	496.5	475.8	5188.2 µg/L	5188.2 ppb	08:43:01
3	Na 589.592 Radial†	9263.9	8487.7	2437.4 µg/L	2437.4 ppb	08:42:41
3	Sr 421.552†	85234.0	82548.8	524.51 µg/L	524.51 ppb	08:42:41
3	Sc 361.383	1945853.7	1945853.7	100.13 %		08:44:18
3	Y 371.029	1226795.5	1226795.5	99.837 %		08:44:18
3	Ag 328.068†	27503.9	27524.2	260.14 µg/L	260.14 ppb	08:44:24
3	As 188.979†	195.2	194.4	447.78 µg/L	447.78 ppb	08:44:44
3	B 249.677†	10576.6	10448.0	506.41 µg/L	506.41 ppb	08:44:24
3	Ba 233.527†	16984.7	16977.8	494.15 µg/L	494.15 ppb	08:44:24
3	Be 313.107†	374101.0	369788.6	257.45 µg/L	257.45 ppb	08:44:18
3	Cd 226.502†	16375.3	16490.1	485.34 µg/L	485.34 ppb	08:44:24
3	Co 228.616†	8856.5	8890.3	490.10 µg/L	490.10 ppb	08:44:24
3	Cr 267.716†	20047.2	20104.6	466.63 µg/L	466.63 ppb	08:44:24
3	Cu 324.752†	69086.7	65331.1	491.91 µg/L	491.91 ppb	08:44:24
3	Mn 257.610†	131380.4	131403.8	485.90 µg/L	485.90 ppb	08:44:24
3	Mo 202.031†	3861.6	3839.5	482.44 µg/L	482.44 ppb	08:44:44
3	Ni 231.604†	8106.3	7760.6	488.44 µg/L	488.44 ppb	08:44:24
3	P 214.914†	1192.3	988.3	2319.1 µg/L	2319.1 ppb	08:44:44
3	Pb 220.353†	1660.9	1602.9	467.59 µg/L	467.59 ppb	08:44:44
3	S 181.975 Axial†	443.1	417.0	2390.3 µg/L	2390.3 ppb	08:44:44
3	Sb 206.836†	453.8	430.9	479.20 µg/L	479.20 ppb	08:44:44
3	Se 196.026†	1574.0	1559.6	2482.3 µg/L	2482.3 ppb	08:44:44
3	SiO2†	51604.1	49260.1	10397 µg/L	10397 ppb	08:44:24
3	Si 251.611†	58129.1	57751.1	4844.0 µg/L	4844.0 ppb	08:44:24
3	Sn 189.927†	873.4	848.9	498.02 µg/L	498.02 ppb	08:44:44
3	Ti 334.940†	196455.0	195433.0	487.07 µg/L	487.07 ppb	08:44:18
3	Tl 190.801†	269.3	292.0	507.24 µg/L	507.24 ppb	08:44:44
3	U 409.014†	4691.2	4918.2	468.34 µg/L	468.34 ppb	08:44:24
3	V 292.402†	39656.9	39728.9	499.57 µg/L	499.57 ppb	08:44:24
3	Zn 213.857†	17789.3	17095.5	494.91 µg/L	494.91 ppb	08:44:24

Mean Data: ICV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1955177.5	100.61 %	0.448			0.45%
Sc RADIAL	79011.2	103 %	0.3			0.26%
Y 371.029	1232502.0	100.30 %	0.413			0.41%
Ag 328.068†	27915.6	263.92 µg/L	3.977	263.92 ppb	3.977	1.51%
QC value within limits for Ag 328.068 Recovery = 105.57%						
Al 396.153Radial†	7290.1	5054.6 µg/L	23.74	5054.6 ppb	23.74	0.47%
QC value within limits for Al 396.153Radial Recovery = 101.09%						
As 188.979†	210.3	484.19 µg/L	31.773	484.19 ppb	31.773	6.56%
QC value within limits for As 188.979 Recovery = 96.84%						
B 249.677†	10648.1	516.20 µg/L	9.391	516.20 ppb	9.391	1.82%
QC value within limits for B 249.677 Recovery = 103.24%						
Ba 233.527†	17478.0	508.72 µg/L	13.734	508.72 ppb	13.734	2.70%
QC value within limits for Ba 233.527 Recovery = 101.74%						
Be 313.107†	377642.0	262.92 µg/L	5.049	262.92 ppb	5.049	1.92%
QC value within limits for Be 313.107 Recovery = 105.17%						
Ca 317.933Radial†	6208.7	4888.8 µg/L	19.18	4888.8 ppb	19.18	0.39%
QC value within limits for Ca 317.933Radial Recovery = 97.78%						
Cd 226.502†	17041.3	501.58 µg/L	14.811	501.58 ppb	14.811	2.95%
QC value within limits for Cd 226.502 Recovery = 100.32%						
Co 228.616†	9235.6	509.18 µg/L	17.313	509.18 ppb	17.313	3.40%

QC value within limits for Co 228.616 Recovery = 101.84%							
Cr 267.716†	21113.5	490.04 µg/L	20.750	490.04 ppb	20.750	4.23%	
QC value within limits for Cr 267.716 Recovery = 98.01%							
Cu 324.752†	67584.9	508.86 µg/L	15.451	508.86 ppb	15.451	3.04%	
QC value within limits for Cu 324.752 Recovery = 101.77%							
Fe 238.204 Radial†	348.4	5012.7 µg/L	58.08	5012.7 ppb	58.08	1.16%	
QC value within limits for Fe 238.204 Radial Recovery = 100.25%							
K 766.490 Radial†	3593.5	2385.5 µg/L	45.03	2385.5 ppb	45.03	1.89%	
QC value within limits for K 766.490 Radial Recovery = 95.42%							
Mg 279.077 IEC†	473.7	5166.6 µg/L	22.38	5166.6 ppb	22.38	0.43%	
QC value within limits for Mg 279.077 IEC Recovery = 103.33%							
Mn 257.610†	136328.5	504.09 µg/L	16.433	504.09 ppb	16.433	3.26%	
QC value within limits for Mn 257.610 Recovery = 100.82%							
Mo 202.031†	4215.7	529.69 µg/L	40.922	529.69 ppb	40.922	7.73%	
QC value within limits for Mo 202.031 Recovery = 105.94%							
Na 589.592 Radial†	8437.4	2422.9 µg/L	12.88	2422.9 ppb	12.88	0.53%	
QC value within limits for Na 589.592 Radial Recovery = 96.92%							
Ni 231.604†	8018.8	504.69 µg/L	14.970	504.69 ppb	14.970	2.97%	
QC value within limits for Ni 231.604 Recovery = 100.94%							
P 214.914†	1063.7	2498.4 µg/L	155.42	2498.4 ppb	155.42	6.22%	
QC value within limits for P 214.914 Recovery = 99.94%							
Pb 220.353†	1729.9	504.72 µg/L	32.204	504.72 ppb	32.204	6.38%	
QC value within limits for Pb 220.353 Recovery = 100.94%							
S 181.975 Axial†	444.3	2547.1 µg/L	136.70	2547.1 ppb	136.70	5.37%	
QC value within limits for S 181.975 Axial Recovery = 101.89%							
Sb 206.836†	464.7	517.14 µg/L	33.070	517.14 ppb	33.070	6.39%	
QC value within limits for Sb 206.836 Recovery = 103.43%							
Se 196.026†	1657.9	2637.5 µg/L	134.43	2637.5 ppb	134.43	5.10%	
QC value within limits for Se 196.026 Recovery = 105.50%							
SiO2†	50408.2	10640 µg/L	231.4	10640 ppb	231.4	2.18%	
QC value within limits for SiO2 Recovery = 99.48%							
Si 251.611†	59089.5	4956.2 µg/L	107.13	4956.2 ppb	107.13	2.16%	
QC value within limits for Si 251.611 Recovery = 99.12%							
Sn 189.927†	938.0	550.04 µg/L	45.048	550.04 ppb	45.048	8.19%	
QC value greater than the upper limit for Sn 189.927 Recovery = 110.01%							
Sr 421.552†	82129.6	521.84 µg/L	2.526	521.84 ppb	2.526	0.48%	
QC value within limits for Sr 421.552 Recovery = 104.37%							
Ti 334.940†	200010.9	498.49 µg/L	10.322	498.49 ppb	10.322	2.07%	
QC value within limits for Ti 334.940 Recovery = 99.70%							
Tl 190.801†	309.1	536.75 µg/L	25.655	536.75 ppb	25.655	4.78%	
QC value within limits for Tl 190.801 Recovery = 107.35%							
U 409.014†	5155.3	490.97 µg/L	19.636	490.97 ppb	19.636	4.00%	
QC value within limits for U 409.014 Recovery = 98.19%							
V 292.402†	41307.4	519.64 µg/L	18.056	519.64 ppb	18.056	3.47%	
QC value within limits for V 292.402 Recovery = 103.93%							
Zn 213.857†	17704.4	512.56 µg/L	16.261	512.56 ppb	16.261	3.17%	
QC value within limits for Zn 213.857 Recovery = 102.51%							
QC Failed. Continue with analysis.							

Sequence No.: 7
 Sample ID: ICB
 Analyst:
 Initial Sample Wt:
 Dilution:

Autosampler Location: 10
 Date Collected: 1/27/2010 08:44:54
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:

Replicate Data: ICB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	76272.5	76272.5	99.3 %		08:45:27
1	Al 396.153Radial†	-13.1	14.8	10.297 µg/L	10.297 ppb	08:45:27
1	Ca 317.933Radial†	247.1	-2.8	-2.2023 µg/L	-2.2023 ppb	08:45:48
1	Fe 238.204 Radial†	17.7	2.0	28.631 µg/L	28.631 ppb	08:45:48
1	K 766.490 Radial†	412.5	3.5	2.2982 µg/L	2.2982 ppb	08:45:27
1	Mg 279.077 IEC†	9.1	0.9	9.3798 µg/L	9.3798 ppb	08:45:48
1	Na 589.592 Radial†	513.4	-27.9	-8.0070 µg/L	-8.0070 ppb	08:45:27
1	Sr 421.552†	549.3	-4.4	-0.0282 µg/L	-0.0282 ppb	08:45:27
1	Sc 361.383	1932739.5	1932739.5	99.452 %		08:46:49
1	Y 371.029	1222269.0	1222269.0	99.469 %		08:46:49
1	Ag 328.068†	15.1	70.3	0.6630 µg/L	0.6630 ppb	08:46:55
1	As 188.979†	-4.4	-5.0	-11.501 µg/L	-11.501 ppb	08:47:16
1	B 249.677†	149.7	35.3	1.7032 µg/L	1.7032 ppb	08:47:16
1	Ba 233.527†	-16.8	-2.3	-0.0663 µg/L	-0.0663 ppb	08:47:16
1	Be 313.107†	3913.2	95.4	0.0664 µg/L	0.0664 ppb	08:46:55
1	Cd 226.502†	-133.6	1.1	0.0293 µg/L	0.0293 ppb	08:47:16
1	Co 228.616†	-46.6	-1.9	-0.1045 µg/L	-0.1045 ppb	08:47:16
1	Cr 267.716†	-83.7	-1.3	-0.0307 µg/L	-0.0307 ppb	08:47:16
1	Cu 324.752†	3718.2	70.5	0.5342 µg/L	0.5342 ppb	08:46:55
1	Mn 257.610†	-208.7	-20.3	-0.0717 µg/L	-0.0717 ppb	08:47:16
1	Mo 202.031†	13.8	-3.3	-0.4165 µg/L	-0.4165 ppb	08:47:16
1	Ni 231.604†	340.7	7.1	0.4493 µg/L	0.4493 ppb	08:47:16
1	P 214.914†	202.8	1.5	3.4199 µg/L	3.4199 ppb	08:47:16
1	Pb 220.353†	53.2	-2.4	-0.7088 µg/L	-0.7088 ppb	08:47:16
1	S 181.975 Axial†	22.0	-3.3	-19.173 µg/L	-19.173 ppb	08:47:16
1	Sb 206.836†	26.0	3.8	4.1744 µg/L	4.1744 ppb	08:47:16
1	Se 196.026†	6.3	-6.1	-9.4570 µg/L	-9.4570 ppb	08:47:16
1	SiO2†	2238.0	-28.4	-5.9985 µg/L	-5.9985 ppb	08:46:55
1	Si 251.611†	276.6	-26.4	-2.2168 µg/L	-2.2168 ppb	08:47:16
1	Sn 189.927†	21.6	-1.7	-0.9635 µg/L	-0.9635 ppb	08:47:16
1	Ti 334.940†	831.0	61.9	0.1536 µg/L	0.1536 ppb	08:46:55
1	Tl 190.801†	-22.6	0.3	0.5619 µg/L	0.5619 ppb	08:47:16
1	U 409.014†	-266.3	-34.8	-3.3206 µg/L	-3.3206 ppb	08:46:55
1	V 292.402†	-45.3	76.6	0.9468 µg/L	0.9468 ppb	08:46:55
1	Zn 213.857†	653.0	-14.7	-0.4346 µg/L	-0.4346 ppb	08:47:16
2	Sc RADIAL	76116.0	76116.0	99.1 %		08:45:53
2	Al 396.153Radial†	-56.7	-29.3	-20.333 µg/L	-20.333 ppb	08:45:53
2	Ca 317.933Radial†	256.1	6.8	5.3936 µg/L	5.3936 ppb	08:46:13
2	Fe 238.204 Radial†	17.2	1.5	21.461 µg/L	21.461 ppb	08:46:13
2	K 766.490 Radial†	414.5	6.3	4.2139 µg/L	4.2139 ppb	08:45:53
2	Mg 279.077 IEC†	9.1	0.9	9.2493 µg/L	9.2493 ppb	08:46:13
2	Na 589.592 Radial†	502.7	-37.5	-10.780 µg/L	-10.780 ppb	08:45:53
2	Sr 421.552†	571.9	19.5	0.1240 µg/L	0.1240 ppb	08:45:53
2	Sc 361.383	1945577.1	1945577.1	100.11 %		08:47:22
2	Y 371.029	1230330.5	1230330.5	100.12 %		08:47:22
2	Ag 328.068†	-77.9	-22.8	-0.2031 µg/L	-0.2031 ppb	08:47:27
2	As 188.979†	-2.9	-3.4	-7.9485 µg/L	-7.9485 ppb	08:47:48
2	B 249.677†	149.1	33.7	1.6283 µg/L	1.6283 ppb	08:47:48
2	Ba 233.527†	-18.7	-4.1	-0.1174 µg/L	-0.1174 ppb	08:47:48
2	Be 313.107†	3940.2	96.3	0.0671 µg/L	0.0671 ppb	08:47:27
2	Cd 226.502†	-134.0	1.7	0.0466 µg/L	0.0466 ppb	08:47:48
2	Co 228.616†	-43.2	1.8	0.0991 µg/L	0.0991 ppb	08:47:48
2	Cr 267.716†	-78.8	4.1	0.0961 µg/L	0.0961 ppb	08:47:48
2	Cu 324.752†	3700.6	28.2	0.2151 µg/L	0.2151 ppb	08:47:27
2	Mn 257.610†	-198.9	-9.2	-0.0315 µg/L	-0.0315 ppb	08:47:48
2	Mo 202.031†	11.9	-5.3	-0.6609 µg/L	-0.6609 ppb	08:47:48
2	Ni 231.604†	341.6	5.8	0.3658 µg/L	0.3658 ppb	08:47:48
2	P 214.914†	212.1	9.3	22.261 µg/L	22.261 ppb	08:47:48
2	Pb 220.353†	50.9	-5.0	-1.4730 µg/L	-1.4730 ppb	08:47:48

2	S 181.975 Axial†	21.9	-3.6	-20.597 µg/L	-20.597 ppb	08:47:48
2	Sb 206.836†	31.3	8.9	9.8324 µg/L	9.8324 ppb	08:47:48
2	Se 196.026†	8.9	-3.6	-5.5505 µg/L	-5.5505 ppb	08:47:48
2	SiO2†	2241.4	-39.9	-8.4261 µg/L	-8.4261 ppb	08:47:27
2	Si 251.611†	290.3	-14.5	-1.2161 µg/L	-1.2161 ppb	08:47:48
2	Sn 189.927†	20.4	-3.0	-1.7600 µg/L	-1.7600 ppb	08:47:48
2	Ti 334.940†	850.9	76.3	0.1897 µg/L	0.1897 ppb	08:47:27
2	Tl 190.801†	-16.7	6.4	10.960 µg/L	10.960 ppb	08:47:48
2	U 409.014†	-272.0	-38.8	-3.7016 µg/L	-3.7016 ppb	08:47:27
2	V 292.402†	-28.8	93.3	1.1529 µg/L	1.1529 ppb	08:47:27
2	Zn 213.857†	656.7	-15.3	-0.4505 µg/L	-0.4505 ppb	08:47:48
3	Sc RADIAL	76125.8	76125.8	99.1 %		08:46:19
3	Al 396.153Radial†	-20.8	7.0	4.8595 µg/L	4.8595 ppb	08:46:19
3	Ca 317.933Radial†	246.8	-2.6	-2.0738 µg/L	-2.0738 ppb	08:46:39
3	Fe 238.204 Radial†	16.8	1.1	15.977 µg/L	15.977 ppb	08:46:39
3	K 766.490 Radial†	398.3	-10.0	-6.6694 µg/L	-6.6694 ppb	08:46:19
3	Mg 279.077 IEC†	9.2	1.0	10.679 µg/L	10.679 ppb	08:46:39
3	Na 589.592 Radial†	477.9	-62.7	-18.004 µg/L	-18.004 ppb	08:46:19
3	Sr 421.552†	577.3	24.9	0.1581 µg/L	0.1581 ppb	08:46:19
3	Sc 361.383	1954667.6	1954667.6	100.58 %		08:47:54
3	Y 371.029	1236383.9	1236383.9	100.62 %		08:47:54
3	Ag 328.068†	-7.2	48.0	0.4462 µg/L	0.4462 ppb	08:47:59
3	As 188.979†	-1.5	-2.0	-4.6372 µg/L	-4.6372 ppb	08:48:20
3	B 249.677†	136.6	20.7	0.9963 µg/L	0.9963 ppb	08:48:20
3	Ba 233.527†	-23.5	-8.9	-0.2585 µg/L	-0.2585 ppb	08:48:20
3	Be 313.107†	3924.8	62.7	0.0436 µg/L	0.0436 ppb	08:47:59
3	Cd 226.502†	-131.9	4.4	0.1263 µg/L	0.1263 ppb	08:48:20
3	Co 228.616†	-40.5	4.8	0.2627 µg/L	0.2627 ppb	08:48:20
3	Cr 267.716†	-86.8	-3.5	-0.0824 µg/L	-0.0824 ppb	08:48:20
3	Cu 324.752†	3699.9	10.4	0.0802 µg/L	0.0802 ppb	08:47:59
3	Mn 257.610†	-206.1	-15.4	-0.0552 µg/L	-0.0552 ppb	08:48:20
3	Mo 202.031†	20.2	2.9	0.3634 µg/L	0.3634 ppb	08:48:20
3	Ni 231.604†	333.6	-3.8	-0.2387 µg/L	-0.2387 ppb	08:48:20
3	P 214.914†	202.7	-0.9	-2.1992 µg/L	-2.1992 ppb	08:48:20
3	Pb 220.353†	58.2	2.0	0.5767 µg/L	0.5767 ppb	08:48:20
3	S 181.975 Axial†	23.0	-2.6	-15.141 µg/L	-15.141 ppb	08:48:20
3	Sb 206.836†	25.2	2.7	2.9740 µg/L	2.9740 ppb	08:48:20
3	Se 196.026†	8.9	-3.6	-5.6183 µg/L	-5.6183 ppb	08:48:20
3	SiO2†	2234.6	-57.1	-12.049 µg/L	-12.049 ppb	08:47:59
3	Si 251.611†	300.6	-5.7	-0.4770 µg/L	-0.4770 ppb	08:48:20
3	Sn 189.927†	23.6	0.0	0.0229 µg/L	0.0229 ppb	08:48:20
3	Ti 334.940†	862.6	83.9	0.2085 µg/L	0.2085 ppb	08:47:59
3	Tl 190.801†	-21.1	2.1	3.5533 µg/L	3.5533 ppb	08:48:20
3	U 409.014†	-241.6	-7.3	-0.6965 µg/L	-0.6965 ppb	08:47:59
3	V 292.402†	-144.6	-21.6	-0.2661 µg/L	-0.2661 ppb	08:47:59
3	Zn 213.857†	653.4	-21.6	-0.6314 µg/L	-0.6314 ppb	08:48:20

Mean Data: ICB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1944328.1	100.05 %	0.567			0.57%
Sc RADIAL	76171.4	99.2 %	0.11			0.12%
Y 371.029	1229661.2	100.07 %	0.576			0.58%
Ag 328.068†	31.8	0.3020 µg/L	0.45069	0.3020 ppb	0.45069	149.22%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	-2.5	-1.7253 µg/L	16.34232	-1.7253 ppb	16.34232	947.24%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	-3.5	-8.0290 µg/L	3.43269	-8.0290 ppb	3.43269	42.75%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	29.9	1.4426 µg/L	0.38827	1.4426 ppb	0.38827	26.91%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	-5.1	-0.1474 µg/L	0.09952	-0.1474 ppb	0.09952	67.51%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	84.8	0.0590 µg/L	0.01335	0.0590 ppb	0.01335	22.61%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	0.5	0.3725 µg/L	4.34886	0.3725 ppb	4.34886	>999.9%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	2.4	0.0674 µg/L	0.05172	0.0674 ppb	0.05172	76.73%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	1.6	0.0858 µg/L	0.18395	0.0858 ppb	0.18395	214.45%

QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	-0.3	-0.0057 µg/L	0.09184	-0.0057 ppb	0.09184	>999.9%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	36.4	0.2765 µg/L	0.23316	0.2765 ppb	0.23316	84.32%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	1.5	22.023 µg/L	6.3456	22.023 ppb	6.3456	28.81%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated						
K 766.490 Radial†	-0.1	-0.0524 µg/L	5.80999	-0.0524 ppb	5.80999	>999.9%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	0.9	9.7694 µg/L	0.79048	9.7694 ppb	0.79048	8.09%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated						
Mn 257.610†	-15.0	-0.0528 µg/L	0.02022	-0.0528 ppb	0.02022	38.28%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	-1.9	-0.2380 µg/L	0.53496	-0.2380 ppb	0.53496	224.76%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	-42.7	-12.264 µg/L	5.1608	-12.264 ppb	5.1608	42.08%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	3.0	0.1921 µg/L	0.37548	0.1921 ppb	0.37548	195.43%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	3.3	7.8274 µg/L	12.81216	7.8274 ppb	12.81216	163.68%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	-1.8	-0.5350 µg/L	1.03587	-0.5350 ppb	1.03587	193.61%
QC value within limits for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	-3.2	-18.304 µg/L	2.8301	-18.304 ppb	2.8301	15.46%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	5.1	5.6603 µg/L	3.66265	5.6603 ppb	3.66265	64.71%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	-4.4	-6.8753 µg/L	2.23608	-6.8753 ppb	2.23608	32.52%
QC value within limits for Se 196.026 Recovery = Not calculated						
SiO2†	-41.8	-8.8245 µg/L	3.04473	-8.8245 ppb	3.04473	34.50%
QC value within limits for SiO2 Recovery = Not calculated						
Si 251.611†	-15.5	-1.3033 µg/L	0.87315	-1.3033 ppb	0.87315	66.99%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	-1.5	-0.9002 µg/L	0.89313	-0.9002 ppb	0.89313	99.22%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	13.3	0.0846 µg/L	0.09916	0.0846 ppb	0.09916	117.19%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	74.1	0.1839 µg/L	0.02788	0.1839 ppb	0.02788	15.16%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	2.9	5.0249 µg/L	5.35276	5.0249 ppb	5.35276	106.52%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 409.014†	-26.9	-2.5729 µg/L	1.63615	-2.5729 ppb	1.63615	63.59%
QC value within limits for U 409.014 Recovery = Not calculated						
V 292.402†	49.4	0.6112 µg/L	0.76676	0.6112 ppb	0.76676	125.45%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	-17.2	-0.5055 µg/L	0.10937	-0.5055 ppb	0.10937	21.64%
QC value within limits for Zn 213.857 Recovery = Not calculated						

All analyte(s) passed QC.

Sequence No.: 8
 Sample ID: PQL
 Analyst:
 Initial Sample Wt:
 Dilution:

Autosampler Location: 101
 Date Collected: 1/27/2010 08:48:30
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:

Replicate Data: PQL

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	75969.0	75969.0	98.9 %		08:49:02
1	Al 396.153Radial†	284.1	315.2	218.83 µg/L	218.83 ppb	08:49:02
1	Ca 317.933Radial†	508.4	262.4	206.61 µg/L	206.61 ppb	08:49:23
1	Fe 238.204 Radial†	24.8	9.2	131.62 µg/L	131.62 ppb	08:49:23
1	K 766.490 Radial†	695.7	291.5	193.53 µg/L	193.53 ppb	08:49:02
1	Mg 279.077 IEC†	40.9	33.0	359.75 µg/L	359.75 ppb	08:49:23
1	Na 589.592 Radial†	1539.5	1011.8	290.57 µg/L	290.57 ppb	08:49:02
1	Sr 421.552†	1385.7	843.5	5.3594 µg/L	5.3594 ppb	08:49:02
1	Sc 361.383	1920691.4	1920691.4	98.832 %		08:50:25
1	Y 371.029	1215717.6	1215717.6	98.935 %		08:50:25
1	Ag 328.068†	523.2	584.5	5.4898 µg/L	5.4898 ppb	08:50:30
1	As 188.979†	14.8	14.4	33.192 µg/L	33.192 ppb	08:50:51
1	B 249.677†	1201.0	1100.0	53.454 µg/L	53.454 ppb	08:50:30
1	Ba 233.527†	169.0	185.5	5.3985 µg/L	5.3985 ppb	08:50:51
1	Be 313.107†	11380.8	7675.9	5.3458 µg/L	5.3458 ppb	08:50:30
1	Cd 226.502†	45.3	181.2	5.3266 µg/L	5.3266 ppb	08:50:51
1	Co 228.616†	53.2	98.9	5.4552 µg/L	5.4552 ppb	08:50:51
1	Cr 267.716†	144.2	228.7	5.3079 µg/L	5.3079 ppb	08:50:30
1	Cu 324.752†	5183.3	1576.4	11.871 µg/L	11.871 ppb	08:50:30
1	Mn 257.610†	2726.8	2948.5	10.896 µg/L	10.896 ppb	08:50:30
1	Mo 202.031†	94.6	78.5	9.8709 µg/L	9.8709 ppb	08:50:51
1	Ni 231.604†	426.4	96.0	6.0428 µg/L	6.0428 ppb	08:50:51
1	P 214.914†	273.6	74.3	176.85 µg/L	176.85 ppb	08:50:51
1	Pb 220.353†	88.5	33.6	9.7587 µg/L	9.7587 ppb	08:50:51
1	S 181.975 Axial†	40.3	15.3	87.637 µg/L	87.637 ppb	08:50:51
1	Sb 206.836†	30.7	8.6	9.6382 µg/L	9.6382 ppb	08:50:51
1	Se 196.026†	31.0	18.9	30.314 µg/L	30.314 ppb	08:50:51
1	SiO2†	3342.1	1102.9	232.79 µg/L	232.79 ppb	08:50:30
1	Si 251.611†	1546.9	1260.7	105.74 µg/L	105.74 ppb	08:50:51
1	Sn 189.927†	44.5	21.6	12.728 µg/L	12.728 ppb	08:50:51
1	Ti 334.940†	2926.6	2187.5	5.4304 µg/L	5.4304 ppb	08:50:30
1	Tl 190.801†	-12.4	10.5	18.254 µg/L	18.254 ppb	08:50:51
1	U 409.014†	359.3	596.6	56.898 µg/L	56.898 ppb	08:50:30
1	V 292.402†	277.4	402.8	5.1635 µg/L	5.1635 ppb	08:50:30
1	Zn 213.857†	1016.3	357.0	10.334 µg/L	10.334 ppb	08:50:51
2	Sc RADIAL	76669.6	76669.6	99.8 %		08:49:28
2	Al 396.153Radial†	270.5	299.0	207.53 µg/L	207.53 ppb	08:49:28
2	Ca 317.933Radial†	506.1	255.4	201.14 µg/L	201.14 ppb	08:49:48
2	Fe 238.204 Radial†	25.1	9.3	132.93 µg/L	132.93 ppb	08:49:48
2	K 766.490 Radial†	726.2	315.6	209.53 µg/L	209.53 ppb	08:49:28
2	Mg 279.077 IEC†	41.3	33.1	360.96 µg/L	360.96 ppb	08:49:48
2	Na 589.592 Radial†	1567.3	1025.4	294.47 µg/L	294.47 ppb	08:49:28
2	Sr 421.552†	1408.3	853.3	5.4220 µg/L	5.4220 ppb	08:49:28
2	Sc 361.383	1942858.2	1942858.2	99.972 %		08:50:57
2	Y 371.029	1228778.5	1228778.5	99.998 %		08:50:57
2	Ag 328.068†	515.6	570.9	5.3622 µg/L	5.3622 ppb	08:51:02
2	As 188.979†	13.0	12.5	28.728 µg/L	28.728 ppb	08:51:23
2	B 249.677†	1181.2	1066.3	51.817 µg/L	51.817 ppb	08:51:02
2	Ba 233.527†	159.2	173.8	5.0578 µg/L	5.0578 ppb	08:51:23
2	Be 313.107†	11317.2	7480.9	5.2101 µg/L	5.2101 ppb	08:51:02
2	Cd 226.502†	39.2	174.7	5.1334 µg/L	5.1334 ppb	08:51:23
2	Co 228.616†	50.5	95.5	5.2692 µg/L	5.2692 ppb	08:51:23
2	Cr 267.716†	154.5	237.4	5.5086 µg/L	5.5086 ppb	08:51:02
2	Cu 324.752†	5135.5	1468.7	11.062 µg/L	11.062 ppb	08:51:02
2	Mn 257.610†	2706.3	2896.5	10.704 µg/L	10.704 ppb	08:51:02
2	Mo 202.031†	102.2	85.1	10.689 µg/L	10.689 ppb	08:51:23
2	Ni 231.604†	418.9	83.6	5.2625 µg/L	5.2625 ppb	08:51:23
2	P 214.914†	261.2	58.8	139.68 µg/L	139.68 ppb	08:51:23
2	Pb 220.353†	85.6	29.7	8.6225 µg/L	8.6225 ppb	08:51:23

2	S 181.975 Axial†	40.3	14.8	84.873 µg/L	84.873 ppb	08:51:23
2	Sb 206.836†	30.6	8.2	9.1533 µg/L	9.1533 ppb	08:51:23
2	Se 196.026†	32.4	20.0	32.030 µg/L	32.030 ppb	08:51:23
2	SiO2†	3373.7	1095.9	231.32 µg/L	231.32 ppb	08:51:02
2	Si 251.611†	1536.0	1231.9	103.33 µg/L	103.33 ppb	08:51:23
2	Sn 189.927†	42.0	18.6	10.999 µg/L	10.999 ppb	08:51:23
2	Ti 334.940†	2871.7	2098.8	5.2091 µg/L	5.2091 ppb	08:51:02
2	Tl 190.801†	-6.3	16.7	28.951 µg/L	28.951 ppb	08:51:23
2	U 409.014†	344.6	577.7	55.095 µg/L	55.095 ppb	08:51:02
2	V 292.402†	274.1	396.4	5.0880 µg/L	5.0880 ppb	08:51:02
2	Zn 213.857†	1035.3	364.2	10.551 µg/L	10.551 ppb	08:51:23
3	Sc RADIAL	76397.8	76397.8	99.5 %		08:49:54
3	Al 396.153Radial†	273.3	302.8	210.20 µg/L	210.20 ppb	08:49:54
3	Ca 317.933Radial†	513.2	264.3	208.15 µg/L	208.15 ppb	08:50:14
3	Fe 238.204 Radial†	24.9	9.2	132.00 µg/L	132.00 ppb	08:50:14
3	K 766.490 Radial†	689.9	281.7	186.99 µg/L	186.99 ppb	08:49:54
3	Mg 279.077 IBC†	41.2	33.1	361.06 µg/L	361.06 ppb	08:50:14
3	Na 589.592 Radial†	1558.3	1022.0	293.47 µg/L	293.47 ppb	08:49:54
3	Sr 421.552†	1413.6	863.8	5.4882 µg/L	5.4882 ppb	08:49:54
3	Sc 361.383	1966248.1	1966248.1	101.18 %		08:51:29
3	Y 371.029	1243520.0	1243520.0	101.20 %		08:51:29
3	Ag 328.068†	476.5	526.0	4.9415 µg/L	4.9415 ppb	08:51:35
3	As 188.979†	10.5	9.8	22.626 µg/L	22.626 ppb	08:51:55
3	B 249.677†	1143.8	1015.3	49.332 µg/L	49.332 ppb	08:51:35
3	Ba 233.527†	140.1	153.0	4.4540 µg/L	4.4540 ppb	08:51:55
3	Be 313.107†	10897.5	6931.4	4.8274 µg/L	4.8274 ppb	08:51:35
3	Cd 226.502†	29.3	164.4	4.8298 µg/L	4.8298 ppb	08:51:55
3	Co 228.616†	39.0	83.5	4.6079 µg/L	4.6079 ppb	08:51:55
3	Cr 267.716†	138.7	219.9	5.1029 µg/L	5.1029 ppb	08:51:35
3	Cu 324.752†	5083.7	1356.4	10.217 µg/L	10.217 ppb	08:51:35
3	Mn 257.610†	2554.6	2714.4	10.031 µg/L	10.031 ppb	08:51:35
3	Mo 202.031†	85.9	67.7	8.5123 µg/L	8.5123 ppb	08:51:55
3	Ni 231.604†	425.1	84.8	5.3370 µg/L	5.3370 ppb	08:51:55
3	P 214.914†	270.6	64.9	154.48 µg/L	154.48 ppb	08:51:55
3	Pb 220.353†	90.8	33.8	9.8176 µg/L	9.8176 ppb	08:51:55
3	S 181.975 Axial†	39.8	13.8	79.056 µg/L	79.056 ppb	08:51:55
3	Sb 206.836†	33.5	10.7	11.943 µg/L	11.943 ppb	08:51:55
3	Se 196.026†	24.1	11.4	18.456 µg/L	18.456 ppb	08:51:55
3	SiO2†	3335.8	1018.3	214.93 µg/L	214.93 ppb	08:51:35
3	Si 251.611†	1393.7	1073.0	89.998 µg/L	89.998 ppb	08:51:55
3	Sn 189.927†	41.3	17.4	10.259 µg/L	10.259 ppb	08:51:55
3	Ti 334.940†	2746.0	1940.4	4.8141 µg/L	4.8141 ppb	08:51:35
3	Tl 190.801†	-11.5	11.7	20.227 µg/L	20.227 ppb	08:51:55
3	U 409.014†	278.4	508.2	48.463 µg/L	48.463 ppb	08:51:35
3	V 292.402†	247.2	366.5	4.6922 µg/L	4.6922 ppb	08:51:35
3	Zn 213.857†	990.1	307.3	8.8916 µg/L	8.8916 ppb	08:51:55

Mean Data: PQL

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1943265.9	99.993 %		1.1722			1.17%
Sc RADIAL	76345.5	99.4 %		0.46			0.46%
Y 371.029	1229338.7	100.04 %		1.132			1.13%
Ag 328.068†	560.5	5.2645 µg/L		0.28690	5.2645 ppb	0.28690	5.45%
QC value within limits for Ag 328.068 Recovery = 105.29%							
Al 396.153Radial†	305.7	212.19 µg/L		5.906	212.19 ppb	5.906	2.78%
QC value within limits for Al 396.153Radial Recovery = 106.09%							
As 188.979†	12.2	28.182 µg/L		5.3038	28.182 ppb	5.3038	18.82%
QC value within limits for As 188.979 Recovery = 93.94%							
B 249.677†	1060.5	51.534 µg/L		2.0751	51.534 ppb	2.0751	4.03%
QC value within limits for B 249.677 Recovery = 103.07%							
Ba 233.527†	170.8	4.9701 µg/L		0.47834	4.9701 ppb	0.47834	9.62%
QC value within limits for Ba 233.527 Recovery = 99.40%							
Be 313.107†	7362.7	5.1277 µg/L		0.26883	5.1277 ppb	0.26883	5.24%
QC value within limits for Be 313.107 Recovery = 102.55%							
Ca 317.933Radial†	260.7	205.30 µg/L		3.686	205.30 ppb	3.686	1.80%
QC value within limits for Ca 317.933Radial Recovery = 102.65%							
Cd 226.502†	173.5	5.0966 µg/L		0.25045	5.0966 ppb	0.25045	4.91%
QC value within limits for Cd 226.502 Recovery = 101.93%							
Co 228.616†	92.6	5.1108 µg/L		0.44533	5.1108 ppb	0.44533	8.71%

QC value within limits for Co 228.616 Recovery = 102.22%							
Cr 267.716†	228.7	5.3065 µg/L	0.20282	5.3065 ppb	0.20282	3.82%	
QC value within limits for Cr 267.716 Recovery = 106.13%							
Cu 324.752†	1467.2	11.050 µg/L	0.8271	11.050 ppb	0.8271	7.48%	
QC value within limits for Cu 324.752 Recovery = 110.50%							
Fe 238.204 Radial†	9.2	132.18 µg/L	0.674	132.18 ppb	0.674	0.51%	
QC value greater than the upper limit for Fe 238.204 Radial Recovery = 132.18%							
K 766.490 Radial†	296.3	196.68 µg/L	11.596	196.68 ppb	11.596	5.90%	
QC value greater than the upper limit for K 766.490 Radial Recovery = 131.12%							
Mg 279.077 IEC†	33.1	360.59 µg/L	0.729	360.59 ppb	0.729	0.20%	
QC value within limits for Mg 279.077 IEC Recovery = 120.20%							
Mn 257.610†	2853.1	10.543 µg/L	0.4543	10.543 ppb	0.4543	4.31%	
QC value within limits for Mn 257.610 Recovery = 105.43%							
Mo 202.031†	77.1	9.6907 µg/L	1.09946	9.6907 ppb	1.09946	11.35%	
QC value within limits for Mo 202.031 Recovery = 96.91%							
Na 589.592 Radial†	1019.7	292.83 µg/L	2.026	292.83 ppb	2.026	0.69%	
QC value within limits for Na 589.592 Radial Recovery = 97.61%							
Ni 231.604†	88.1	5.5474 µg/L	0.43065	5.5474 ppb	0.43065	7.76%	
QC value within limits for Ni 231.604 Recovery = 110.95%							
P 214.914†	66.0	157.01 µg/L	18.713	157.01 ppb	18.713	11.92%	
QC value within limits for P 214.914 Recovery = 104.67%							
Pb 220.353†	32.4	9.3996 µg/L	0.67368	9.3996 ppb	0.67368	7.17%	
QC value within limits for Pb 220.353 Recovery = 94.00%							
S 181.975 Axial†	14.6	83.855 µg/L	4.3804	83.855 ppb	4.3804	5.22%	
QC value within limits for S 181.975 Axial Recovery = 83.86%							
Sb 206.836†	9.2	10.245 µg/L	1.4907	10.245 ppb	1.4907	14.55%	
QC value within limits for Sb 206.836 Recovery = 102.45%							
Se 196.026†	16.8	26.933 µg/L	7.3916	26.933 ppb	7.3916	27.44%	
QC value within limits for Se 196.026 Recovery = 89.78%							
SiO2†	1072.4	226.34 µg/L	9.910	226.34 ppb	9.910	4.38%	
QC value within limits for SiO2 Recovery = 106.27%							
Si 251.611†	1188.5	99.690 µg/L	8.4802	99.690 ppb	8.4802	8.51%	
QC value within limits for Si 251.611 Recovery = 99.69%							
Sn 189.927†	19.2	11.329 µg/L	1.2674	11.329 ppb	1.2674	11.19%	
QC value within limits for Sn 189.927 Recovery = 113.29%							
Sr 421.552†	853.5	5.4232 µg/L	0.06441	5.4232 ppb	0.06441	1.19%	
QC value within limits for Sr 421.552 Recovery = 108.46%							
Ti 334.940†	2075.6	5.1512 µg/L	0.31221	5.1512 ppb	0.31221	6.06%	
QC value within limits for Ti 334.940 Recovery = 103.02%							
Tl 190.801†	13.0	22.477 µg/L	5.6921	22.477 ppb	5.6921	25.32%	
QC value within limits for Tl 190.801 Recovery = 112.39%							
U 409.014†	560.8	53.485 µg/L	4.4418	53.485 ppb	4.4418	8.30%	
QC value within limits for U 409.014 Recovery = 106.97%							
V 292.402†	388.6	4.9813 µg/L	0.25313	4.9813 ppb	0.25313	5.08%	
QC value within limits for V 292.402 Recovery = 99.63%							
Zn 213.857†	342.8	9.9256 µg/L	0.90197	9.9256 ppb	0.90197	9.09%	
QC value within limits for Zn 213.857 Recovery = 99.26%							
QC Failed. Continue with analysis.							

Sequence No.: 9

Sample ID: ICSA

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 103

Date Collected: 1/27/2010 08:52:05

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: ICSA

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	75848.6	75848.6	98.7 %		08:52:46
1	Al 396.153Radial†	743409.2	752954.5	523190 µg/L	523190 ppb	08:52:41
1	Ca 317.933Radial†	627835.4	635621.5	500500 µg/L	500500 ppb	08:52:41
1	Fe 238.204 Radial†	13383.6	13539.1	194370 µg/L	194370 ppb	08:52:46
1	K 766.490 Radial†	273.1	-135.4	-89.877 µg/L	-89.877 ppb	08:52:46
1	Mg 279.077 IEC†	45554.9	46129.8	502540 µg/L	502540 ppb	08:52:46
1	Na 589.592 Radial†	534.4	-3.7	-1.0722 µg/L	-1.0722 ppb	08:52:46
1	Sr 421.552†	1115.2	571.8	3.6330 µg/L	3.6330 ppb	08:52:46
1	Sc 361.383	1842815.0	1842815.0	94.825 %		08:53:19
1	Y 371.029	1151480.8	1151480.8	93.708 %		08:53:19
1	Ag 328.068†	-1958.6	-2010.5	-6.5603 µg/L	-6.5603 ppb	08:53:25
1	As 188.979†	-4.2	-5.0	-26.252 µg/L	-26.252 ppb	08:53:45
1	B 249.677†	2198.8	2203.6	5.7787 µg/L	5.7787 ppb	08:53:25
1	Ba 233.527†	216.2	242.5	7.0287 µg/L	7.0287 ppb	08:53:45
1	Be 313.107†	3026.4	-647.8	-0.4614 µg/L	-0.4614 ppb	08:53:25
1	Cd 226.502†	652.8	823.9	2.2875 µg/L	2.2875 ppb	08:53:45
1	Co 228.616†	6.9	52.3	2.8185 µg/L	2.8185 ppb	08:53:45
1	Cr 267.716†	-96.3	-18.8	-0.4422 µg/L	-0.4422 ppb	08:53:45
1	Cu 324.752†	649.1	-2983.7	4.5838 µg/L	4.5838 ppb	08:53:25
1	Mn 257.610†	-2413.4	-2355.6	-2.9607 µg/L	-2.9607 ppb	08:53:25
1	Mo 202.031†	-97.5	-120.0	-7.6844 µg/L	-7.6844 ppb	08:53:45
1	Ni 231.604†	299.6	-19.5	1.2960 µg/L	1.2960 ppb	08:53:45
1	P 214.914†	219.1	28.6	60.325 µg/L	60.325 ppb	08:53:45
1	Pb 220.353†	-50.2	-108.9	-10.372 µg/L	-10.372 ppb	08:53:45
1	S 181.975 Axial†	65.3	43.3	248.28 µg/L	248.28 ppb	08:53:45
1	Sb 206.836†	69.8	51.2	23.392 µg/L	23.392 ppb	08:53:45
1	Se 196.026†	-411.1	-446.0	-41.561 µg/L	-41.561 ppb	08:53:45
1	SiO2†	2012.3	-156.6	-33.054 µg/L	-33.054 ppb	08:53:45
1	Si 251.611†	367.8	83.4	6.9913 µg/L	6.9913 ppb	08:53:45
1	Sn 189.927†	-341.0	-383.0	1.4798 µg/L	1.4798 ppb	08:53:45
1	Ti 334.940†	10736.9	10549.2	-5.3996 µg/L	-5.3996 ppb	08:53:25
1	Tl 190.801†	13.0	36.8	-24.150 µg/L	-24.150 ppb	08:53:45
1	U 409.014†	-158.7	65.6	-51.285 µg/L	-51.285 ppb	08:53:25
1	V 292.402†	-870.0	-795.4	0.3009 µg/L	0.3009 ppb	08:53:25
1	Zn 213.857†	1829.7	1258.2	-1.0154 µg/L	-1.0154 ppb	08:53:45
2	Sc RADIAL	75933.8	75933.8	98.8 %		08:52:58
2	Al 396.153Radial†	745925.5	754655.4	524370 µg/L	524370 ppb	08:52:52
2	Ca 317.933Radial†	631047.6	638157.7	502500 µg/L	502500 ppb	08:52:52
2	Fe 238.204 Radial†	13362.2	13502.2	193840 µg/L	193840 ppb	08:52:58
2	K 766.490 Radial†	326.0	-82.2	-54.543 µg/L	-54.543 ppb	08:52:58
2	Mg 279.077 IEC†	45695.9	46220.7	503530 µg/L	503530 ppb	08:52:58
2	Na 589.592 Radial†	584.8	46.7	13.412 µg/L	13.412 ppb	08:52:58
2	Sr 421.552†	1086.5	541.5	3.4408 µg/L	3.4408 ppb	08:52:58
2	Sc 361.383	1836647.0	1836647.0	94.507 %		08:53:51
2	Y 371.029	1147565.3	1147565.3	93.389 %		08:53:51
2	Ag 328.068†	-1924.9	-1981.7	-6.3229 µg/L	-6.3229 ppb	08:53:57
2	As 188.979†	-9.0	-10.0	-38.024 µg/L	-38.024 ppb	08:54:17
2	B 249.677†	2209.5	2222.7	6.9865 µg/L	6.9865 ppb	08:53:57
2	Ba 233.527†	211.0	237.8	6.8922 µg/L	6.8922 ppb	08:54:17
2	Be 313.107†	3053.4	-608.6	-0.4341 µg/L	-0.4341 ppb	08:53:57
2	Cd 226.502†	660.3	834.2	2.6503 µg/L	2.6503 ppb	08:54:17
2	Co 228.616†	-12.4	31.9	1.6913 µg/L	1.6913 ppb	08:54:17
2	Cr 267.716†	-131.3	-56.1	-1.3080 µg/L	-1.3080 ppb	08:54:17
2	Cu 324.752†	587.9	-3046.1	4.0407 µg/L	4.0407 ppb	08:53:57
2	Mn 257.610†	-2432.7	-2384.6	-3.1778 µg/L	-3.1778 ppb	08:53:57
2	Mo 202.031†	-89.4	-111.8	-6.6753 µg/L	-6.6753 ppb	08:54:17
2	Ni 231.604†	297.8	-20.3	1.2393 µg/L	1.2393 ppb	08:54:17
2	P 214.914†	218.0	28.2	60.382 µg/L	60.382 ppb	08:54:17
2	Pb 220.353†	-46.1	-104.7	-9.0869 µg/L	-9.0869 ppb	08:54:17

2	S 181.975 Axial†	61.6	39.6	227.17 µg/L	227.17 ppb	08:54:17
2	Sb 206.836†	62.1	43.3	14.568 µg/L	14.568 ppb	08:54:17
2	Se 196.026†	-420.6	-457.4	-61.589 µg/L	-61.589 ppb	08:54:17
2	SiO2†	2008.5	-153.6	-32.412 µg/L	-32.412 ppb	08:54:17
2	Si 251.611†	386.0	104.0	8.7216 µg/L	8.7216 ppb	08:54:17
2	Sn 189.927†	-333.1	-375.9	6.2047 µg/L	6.2047 ppb	08:54:17
2	Ti 334.940†	10742.6	10593.3	-5.3360 µg/L	-5.3360 ppb	08:53:57
2	Tl 190.801†	10.4	34.1	-29.066 µg/L	-29.066 ppb	08:54:17
2	U 409.014†	-86.5	141.4	-44.102 µg/L	-44.102 ppb	08:53:57
2	V 292.402†	-836.4	-762.9	0.6905 µg/L	0.6905 ppb	08:53:57
2	Zn 213.857†	1844.0	1279.8	-0.4164 µg/L	-0.4164 ppb	08:54:17
3	Sc RADIAL	75735.6	75735.6	98.6 %		08:53:09
3	Al 396.153Radial†	746305.3	757016.3	526010 µg/L	526010 ppb	08:53:03
3	Ca 317.933Radial†	629993.4	638759.7	502970 µg/L	502970 ppb	08:53:03
3	Fe 238.204 Radial†	13382.8	13558.5	194650 µg/L	194650 ppb	08:53:09
3	K 766.490 Radial†	340.8	-66.3	-44.028 µg/L	-44.028 ppb	08:53:09
3	Mg 279.077 IEC†	45682.7	46328.3	504700 µg/L	504700 ppb	08:53:09
3	Na 589.592 Radial†	522.2	-15.3	-4.3923 µg/L	-4.3923 ppb	08:53:09
3	Sr 421.552†	1123.7	582.1	3.6984 µg/L	3.6984 ppb	08:53:09
3	Sc 361.383	1842417.1	1842417.1	94.804 %		08:54:24
3	Y 371.029	1152634.8	1152634.8	93.802 %		08:54:24
3	Ag 328.068†	-1949.8	-2001.6	-6.4621 µg/L	-6.4621 ppb	08:54:29
3	As 188.979†	-7.6	-8.6	-34.578 µg/L	-34.578 ppb	08:54:50
3	B 249.677†	2197.6	2202.9	5.5989 µg/L	5.5989 ppb	08:54:29
3	Ba 233.527†	207.9	233.8	6.7748 µg/L	6.7748 ppb	08:54:50
3	Be 313.107†	3071.7	-599.4	-0.4279 µg/L	-0.4279 ppb	08:54:29
3	Cd 226.502†	633.5	803.7	1.6613 µg/L	1.6613 ppb	08:54:50
3	Co 228.616†	-5.8	38.9	2.0803 µg/L	2.0803 ppb	08:54:50
3	Cr 267.716†	-98.9	-21.5	-0.5048 µg/L	-0.5048 ppb	08:54:50
3	Cu 324.752†	606.9	-3028.1	4.2888 µg/L	4.2888 ppb	08:54:29
3	Mn 257.610†	-2385.5	-2326.8	-2.9035 µg/L	-2.9035 ppb	08:54:29
3	Mo 202.031†	-85.8	-107.7	-6.1290 µg/L	-6.1290 ppb	08:54:50
3	Ni 231.604†	308.7	-9.8	1.9103 µg/L	1.9103 ppb	08:54:50
3	P 214.914†	211.0	20.1	40.695 µg/L	40.695 ppb	08:54:50
3	Pb 220.353†	-46.5	-105.0	-9.0913 µg/L	-9.0913 ppb	08:54:50
3	S 181.975 Axial†	65.1	43.1	247.23 µg/L	247.23 ppb	08:54:50
3	Sb 206.836†	52.7	33.2	3.3537 µg/L	3.3537 ppb	08:54:50
3	Se 196.026†	-407.0	-441.7	-33.988 µg/L	-33.988 ppb	08:54:50
3	SiO2†	2012.8	-155.7	-32.858 µg/L	-32.858 ppb	08:54:50
3	Si 251.611†	360.2	75.4	6.3241 µg/L	6.3241 ppb	08:54:50
3	Sn 189.927†	-342.3	-384.5	1.6001 µg/L	1.6001 ppb	08:54:50
3	Ti 334.940†	10960.7	10787.7	-4.9362 µg/L	-4.9362 ppb	08:54:29
3	Tl 190.801†	13.3	37.1	-24.079 µg/L	-24.079 ppb	08:54:50
3	U 409.014†	-104.8	122.4	-46.059 µg/L	-46.059 ppb	08:54:29
3	V 292.402†	-893.1	-820.0	0.0271 µg/L	0.0271 ppb	08:54:29
3	Zn 213.857†	1830.5	1259.6	-1.1148 µg/L	-1.1148 ppb	08:54:50

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1840626.4	94.712 %	0.1776			0.19%
Sc RADIAL	75839.4	98.7 %	0.13			0.13%
Y 371.029	1150560.3	93.633 %	0.2162			0.23%
Ag 328.068†	-1997.9	-6.4484 µg/L	0.11925	-6.4484 ppb	0.11925	1.85%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	754875.4	524530 µg/L	1417.3	524530 ppb	1417.3	0.27%
QC value within limits for Al 396.153Radial Recovery = 104.91%						
As 188.979†	-7.9	-32.951 µg/L	6.0520	-32.951 ppb	6.0520	18.37%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	2209.7	6.1214 µg/L	0.75460	6.1214 ppb	0.75460	12.33%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	238.1	6.8985 µg/L	0.12707	6.8985 ppb	0.12707	1.84%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	-618.6	-0.4411 µg/L	0.01782	-0.4411 ppb	0.01782	4.04%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	637513.0	501990 µg/L	1311.5	501990 ppb	1311.5	0.26%
QC value within limits for Ca 317.933Radial Recovery = 100.40%						
Cd 226.502†	820.6	2.1997 µg/L	0.50032	2.1997 ppb	0.50032	22.74%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	41.0	2.1967 µg/L	0.57250	2.1967 ppb	0.57250	26.06%

QC value within limits for Co 228.616 Recovery = Not calculated							
Cr 267.716†	-32.1	-0.7517 µg/L	0.48284	-0.7517 ppb	0.48284	64.24%	
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu 324.752†	-3019.3	4.3044 µg/L	0.27189	4.3044 ppb	0.27189	6.32%	
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe 238.204 Radial†	13533.3	194290 µg/L	410.6	194290 ppb	410.6	0.21%	
QC value within limits for Fe 238.204 Radial Recovery = 97.14%							
K 766.490 Radial†	-94.6	-62.816 µg/L	24.0181	-62.816 ppb	24.0181	38.24%	
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg 279.077 IEC†	46226.3	503590 µg/L	1083.2	503590 ppb	1083.2	0.22%	
QC value within limits for Mg 279.077 IEC Recovery = 100.72%							
Mn 257.610†	-2355.7	-3.0140 µg/L	0.14470	-3.0140 ppb	0.14470	4.80%	
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo 202.031†	-113.2	-6.8296 µg/L	0.78908	-6.8296 ppb	0.78908	11.55%	
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na 589.592 Radial†	9.2	2.6490 µg/L	9.46729	2.6490 ppb	9.46729	357.39%	
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni 231.604†	-16.5	1.4819 µg/L	0.37213	1.4819 ppb	0.37213	25.11%	
QC value within limits for Ni 231.604 Recovery = Not calculated							
P 214.914†	25.6	53.801 µg/L	11.3499	53.801 ppb	11.3499	21.10%	
QC value within limits for P 214.914 Recovery = Not calculated							
Pb 220.353†	-106.2	-9.5167 µg/L	0.74063	-9.5167 ppb	0.74063	7.78%	
QC value within limits for Pb 220.353 Recovery = Not calculated							
S 181.975 Axial†	42.0	240.89 µg/L	11.898	240.89 ppb	11.898	4.94%	
QC value greater than the upper limit for S 181.975 Axial Recovery = Not calculated							
Sb 206.836†	42.6	13.771 µg/L	10.0427	13.771 ppb	10.0427	72.93%	
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	-448.4	-45.712 µg/L	14.2612	-45.712 ppb	14.2612	31.20%	
QC value within limits for Se 196.026 Recovery = Not calculated							
SiO2†	-155.3	-32.775 µg/L	0.3289	-32.775 ppb	0.3289	1.00%	
QC value within limits for SiO2 Recovery = Not calculated							
Si 251.611†	87.6	7.3457 µg/L	1.23740	7.3457 ppb	1.23740	16.85%	
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn 189.927†	-381.1	3.0948 µg/L	2.69386	3.0948 ppb	2.69386	87.04%	
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr 421.552†	565.1	3.5907 µg/L	0.13390	3.5907 ppb	0.13390	3.73%	
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti 334.940†	10643.4	-5.2239 µg/L	0.25121	-5.2239 ppb	0.25121	4.81%	
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl 190.801†	36.0	-25.765 µg/L	2.8592	-25.765 ppb	2.8592	11.10%	
QC value within limits for Tl 190.801 Recovery = Not calculated							
U 409.014†	109.8	-47.149 µg/L	3.7135	-47.149 ppb	3.7135	7.88%	
QC value within limits for U 409.014 Recovery = Not calculated							
V 292.402†	-792.7	0.3395 µg/L	0.33339	0.3395 ppb	0.33339	98.21%	
QC value within limits for V 292.402 Recovery = Not calculated							
Zn 213.857†	1265.9	-0.8489 µg/L	0.37780	-0.8489 ppb	0.37780	44.51%	
QC value within limits for Zn 213.857 Recovery = Not calculated							
QC Failed. Continue with analysis.							

Sequence No.: 10
 Sample ID: ICSAB
 Analyst:
 Initial Sample Wt:
 Dilution:

Autosampler Location: 104
 Date Collected: 1/27/2010 08:54:59
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:

Replicate Data: ICSAB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	75550.8	75550.8	98.3 %		08:55:38
1	Al 396.153Radial†	748321.0	760917.0	528710 µg/L	528710 ppb	08:55:33
1	Ca 317.933Radial†	632068.2	642432.1	505860 µg/L	505860 ppb	08:55:33
1	Fe 238.204 Radial†	13568.8	13780.8	197850 µg/L	197850 ppb	08:55:38
1	K 766.490 Radial†	8266.6	7993.5	5306.4 µg/L	5306.4 ppb	08:55:38
1	Mg 279.077 IEC†	46355.5	47125.7	513400 µg/L	513400 ppb	08:55:38
1	Na 589.592 Radial†	18553.0	18319.7	5260.7 µg/L	5260.7 ppb	08:55:38
1	Sr 421.552†	81816.6	82633.0	525.04 µg/L	525.04 ppb	08:55:33
1	Sc 361.383	1827534.5	1827534.5	94.038 %		08:56:12
1	Y 371.029	1143714.8	1143714.8	93.076 %		08:56:12
1	Ag 328.068†	25067.8	26712.1	264.90 µg/L	264.90 ppb	08:56:17
1	As 188.979†	213.4	226.4	506.61 µg/L	506.61 ppb	08:56:38
1	B 249.677†	12550.6	13231.0	541.26 µg/L	541.26 ppb	08:56:17
1	Ba 233.527†	16981.7	18072.8	526.01 µg/L	526.01 ppb	08:56:17
1	Be 313.107†	342188.8	360043.0	250.64 µg/L	250.64 ppb	08:56:12
1	Cd 226.502†	16151.5	17310.9	487.68 µg/L	487.68 ppb	08:56:17
1	Co 228.616†	7872.8	8416.9	463.87 µg/L	463.87 ppb	08:56:38
1	Cr 267.716†	20535.7	21920.3	508.76 µg/L	508.76 ppb	08:56:17
1	Cu 324.752†	71349.1	72204.2	570.39 µg/L	570.39 ppb	08:56:17
1	Mn 257.610†	123924.4	131970.2	493.30 µg/L	493.30 ppb	08:56:17
1	Mo 202.031†	3764.6	3986.1	508.18 µg/L	508.18 ppb	08:56:38
1	Ni 231.604†	7186.7	7306.9	462.40 µg/L	462.40 ppb	08:56:38
1	P 214.914†	1261.8	1139.3	2666.7 µg/L	2666.7 ppb	08:56:38
1	Pb 220.353†	1586.8	1631.5	497.34 µg/L	497.34 ppb	08:56:38
1	S 181.975 Axial†	509.9	516.7	2961.9 µg/L	2961.9 ppb	08:56:38
1	Sb 206.836†	508.0	517.8	542.16 µg/L	542.16 ppb	08:56:38
1	Se 196.026†	1103.2	1160.7	2507.0 µg/L	2507.0 ppb	08:56:38
1	SiO2†	53181.3	54274.0	11456 µg/L	11456 ppb	08:56:17
1	Si 251.611†	60421.0	63947.0	5363.7 µg/L	5363.7 ppb	08:56:17
1	Sn 189.927†	541.6	552.6	551.16 µg/L	551.16 ppb	08:56:38
1	Ti 334.940†	204861.3	217075.2	508.90 µg/L	508.90 ppb	08:56:17
1	Tl 190.801†	286.7	328.0	482.00 µg/L	482.00 ppb	08:56:38
1	U 409.014†	4801.9	5339.3	451.16 µg/L	451.16 ppb	08:56:17
1	V 292.402†	39287.2	41900.0	537.07 µg/L	537.07 ppb	08:56:17
1	Zn 213.857†	17804.0	18261.4	490.95 µg/L	490.95 ppb	08:56:17
2	Sc RADIAL	74638.0	74638.0	97.2 %		08:55:49
2	Al 396.153Radial†	750422.4	772385.3	536680 µg/L	536680 ppb	08:55:44
2	Ca 317.933Radial†	633173.4	651429.5	512950 µg/L	512950 ppb	08:55:44
2	Fe 238.204 Radial†	13439.4	13816.3	198360 µg/L	198360 ppb	08:55:49
2	K 766.490 Radial†	8178.5	8005.5	5314.4 µg/L	5314.4 ppb	08:55:49
2	Mg 279.077 IEC†	45878.4	47211.1	514330 µg/L	514330 ppb	08:55:49
2	Na 589.592 Radial†	18414.1	18407.4	5285.9 µg/L	5285.9 ppb	08:55:49
2	Sr 421.552†	82019.1	83858.8	532.83 µg/L	532.83 ppb	08:55:44
2	Sc 361.383	1820670.0	1820670.0	93.685 %		08:56:44
2	Y 371.029	1139248.7	1139248.7	92.712 %		08:56:44
2	Ag 328.068†	25242.5	26999.0	267.64 µg/L	267.64 ppb	08:56:50
2	As 188.979†	213.7	227.6	509.04 µg/L	509.04 ppb	08:57:11
2	B 249.677†	12643.9	13381.0	548.30 µg/L	548.30 ppb	08:56:50
2	Ba 233.527†	17045.2	18208.7	529.97 µg/L	529.97 ppb	08:56:50
2	Be 313.107†	340227.7	359321.6	250.14 µg/L	250.14 ppb	08:56:44
2	Cd 226.502†	16247.3	17477.9	492.55 µg/L	492.55 ppb	08:56:50
2	Co 228.616†	7901.7	8479.3	467.31 µg/L	467.31 ppb	08:57:11
2	Cr 267.716†	20676.1	22152.6	514.15 µg/L	514.15 ppb	08:56:50
2	Cu 324.752†	72048.9	73237.2	578.23 µg/L	578.23 ppb	08:56:50
2	Mn 257.610†	124670.3	133263.3	498.11 µg/L	498.11 ppb	08:56:50
2	Mo 202.031†	3766.1	4002.8	510.30 µg/L	510.30 ppb	08:57:11
2	Ni 231.604†	7218.0	7369.1	466.32 µg/L	466.32 ppb	08:57:11
2	P 214.914†	1261.3	1143.9	2678.8 µg/L	2678.8 ppb	08:57:11
2	Pb 220.353†	1607.4	1659.8	506.01 µg/L	506.01 ppb	08:57:11

2	S 181.975 Axial†	514.3	523.4	3000.5 µg/L	3000.5 ppb	08:57:11
2	Sb 206.836†	519.4	532.0	557.44 µg/L	557.44 ppb	08:57:11
2	Se 196.026†	1101.5	1163.3	2514.4 µg/L	2514.4 ppb	08:57:11
2	SiO2†	53503.4	54831.1	11573 µg/L	11573 ppb	08:56:50
2	Si 251.611†	60806.6	64600.8	5418.5 µg/L	5418.5 ppb	08:56:50
2	Sn 189.927†	547.6	561.1	557.91 µg/L	557.91 ppb	08:57:11
2	Ti 334.940†	206113.6	219233.2	514.32 µg/L	514.32 ppb	08:56:50
2	Tl 190.801†	291.8	334.5	492.28 µg/L	492.28 ppb	08:57:11
2	U 409.014†	4798.3	5354.7	452.13 µg/L	452.13 ppb	08:56:50
2	V 292.402†	39508.2	42293.5	542.02 µg/L	542.02 ppb	08:56:50
2	Zn 213.857†	17912.7	18448.8	496.31 µg/L	496.31 ppb	08:56:50
3	Sc RADIAL	74598.0	74598.0	97.1 %		08:56:01
3	Al 396.153Radial†	750572.4	772953.5	537080 µg/L	537080 ppb	08:55:55
3	Ca 317.933Radial†	633253.0	651860.5	513290 µg/L	513290 ppb	08:55:55
3	Fe 238.204 Radial†	13515.5	13902.1	199590 µg/L	199590 ppb	08:56:01
3	K 766.490 Radial†	8161.2	7992.2	5305.5 µg/L	5305.5 ppb	08:56:01
3	Mg 279.077 IEC†	46106.3	47471.1	517160 µg/L	517160 ppb	08:56:01
3	Na 589.592 Radial†	18464.1	18469.0	5303.6 µg/L	5303.6 ppb	08:56:01
3	Sr 421.552†	82085.6	83972.5	533.55 µg/L	533.55 ppb	08:55:55
3	Sc 361.383	1845921.4	1845921.4	94.984 %		08:57:17
3	Y 371.029	1153635.5	1153635.5	93.883 %		08:57:17
3	Ag 328.068†	25156.0	26539.4	263.37 µg/L	263.37 ppb	08:57:23
3	As 188.979†	205.4	215.7	481.69 µg/L	481.69 ppb	08:57:44
3	B 249.677†	12533.9	13080.5	533.03 µg/L	533.03 ppb	08:57:23
3	Ba 233.527†	17021.1	17934.4	521.98 µg/L	521.98 ppb	08:57:23
3	Be 313.107†	342872.9	357138.6	248.62 µg/L	248.62 ppb	08:57:17
3	Cd 226.502†	16103.2	17089.0	480.95 µg/L	480.95 ppb	08:57:23
3	Co 228.616†	7892.6	8354.3	460.43 µg/L	460.43 ppb	08:57:44
3	Cr 267.716†	20566.9	21735.7	504.47 µg/L	504.47 ppb	08:57:23
3	Cu 324.752†	71701.5	71819.5	567.74 µg/L	567.74 ppb	08:57:23
3	Mn 257.610†	124320.6	131074.8	490.07 µg/L	490.07 ppb	08:57:23
3	Mo 202.031†	3773.5	3955.6	504.41 µg/L	504.41 ppb	08:57:44
3	Ni 231.604†	7217.5	7263.2	459.67 µg/L	459.67 ppb	08:57:44
3	P 214.914†	1263.9	1128.2	2641.3 µg/L	2641.3 ppb	08:57:44
3	Pb 220.353†	1608.1	1637.0	499.35 µg/L	499.35 ppb	08:57:44
3	S 181.975 Axial†	506.6	507.9	2911.2 µg/L	2911.2 ppb	08:57:44
3	Sb 206.836†	509.6	514.1	537.56 µg/L	537.56 ppb	08:57:44
3	Se 196.026†	1108.5	1154.6	2504.3 µg/L	2504.3 ppb	08:57:44
3	SiO2†	53388.5	53928.9	11383 µg/L	11383 ppb	08:57:23
3	Si 251.611†	60471.9	63360.6	5314.5 µg/L	5314.5 ppb	08:57:23
3	Sn 189.927†	544.1	549.4	551.84 µg/L	551.84 ppb	08:57:44
3	Ti 334.940†	205493.7	215570.9	504.97 µg/L	504.97 ppb	08:57:23
3	Tl 190.801†	289.8	328.2	481.19 µg/L	481.19 ppb	08:57:44
3	U 409.014†	4815.9	5303.2	447.02 µg/L	447.02 ppb	08:57:23
3	V 292.402†	39287.1	41483.7	531.94 µg/L	531.94 ppb	08:57:23
3	Zn 213.857†	17861.9	18133.8	486.95 µg/L	486.95 ppb	08:57:23

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1831375.3	94.236 %	0.6718			0.71%
Sc RADIAL	74929.0	97.5 %	0.70			0.72%
Y 371.029	1145533.0	93.224 %	0.5993			0.64%
Ag 328.068†	26750.2	265.30 µg/L	2.165	265.30 ppb	2.165	0.82%
QC value within limits for Ag 328.068 Recovery = 106.12%						
Al 396.153Radial†	768751.9	534160 µg/L	4718.9	534160 ppb	4718.9	0.88%
QC value within limits for Al 396.153Radial Recovery = 106.83%						
As 188.979†	223.2	499.11 µg/L	15.141	499.11 ppb	15.141	3.03%
QC value within limits for As 188.979 Recovery = 99.82%						
B 249.677†	13230.9	540.86 µg/L	7.646	540.86 ppb	7.646	1.41%
QC value within limits for B 249.677 Recovery = 108.17%						
Ba 233.527†	18071.9	525.99 µg/L	3.994	525.99 ppb	3.994	0.76%
QC value within limits for Ba 233.527 Recovery = 105.20%						
Be 313.107†	358834.4	249.80 µg/L	1.052	249.80 ppb	1.052	0.42%
QC value within limits for Be 313.107 Recovery = 99.92%						
Ca 317.933Radial†	648574.0	510700 µg/L	4191.8	510700 ppb	4191.8	0.82%
QC value within limits for Ca 317.933Radial Recovery = 102.14%						
Cd 226.502†	17292.6	487.06 µg/L	5.822	487.06 ppb	5.822	1.20%
QC value within limits for Cd 226.502 Recovery = 97.41%						
Co 228.616†	8416.9	463.87 µg/L	3.442	463.87 ppb	3.442	0.74%

QC value within limits for Co 228.616 Recovery = 92.77%							
Cr 267.716†	21936.2	509.13 µg/L	4.848	509.13 ppb	4.848	0.95%	
QC value within limits for Cr 267.716 Recovery = 101.83%							
Cu 324.752†	72420.3	572.12 µg/L	5.454	572.12 ppb	5.454	0.95%	
QC value within limits for Cu 324.752 Recovery = 114.42%							
Fe 238.204 Radial†	13833.1	198600 µg/L	895.5	198600 ppb	895.5	0.45%	
QC value within limits for Fe 238.204 Radial Recovery = 99.30%							
K 766.490 Radial†	7997.1	5308.8 µg/L	4.88	5308.8 ppb	4.88	0.09%	
QC value within limits for K 766.490 Radial Recovery = 106.18%							
Mg 279.077 IEC†	47269.3	514960 µg/L	1959.7	514960 ppb	1959.7	0.38%	
QC value within limits for Mg 279.077 IEC Recovery = 102.99%							
Mn 257.610†	132102.8	493.83 µg/L	4.043	493.83 ppb	4.043	0.82%	
QC value within limits for Mn 257.610 Recovery = 98.77%							
Mo 202.031†	3981.5	507.63 µg/L	2.981	507.63 ppb	2.981	0.59%	
QC value within limits for Mo 202.031 Recovery = 101.53%							
Na 589.592 Radial†	18398.7	5283.4 µg/L	21.55	5283.4 ppb	21.55	0.41%	
QC value within limits for Na 589.592 Radial Recovery = 105.67%							
Ni 231.604†	7313.1	462.80 µg/L	3.342	462.80 ppb	3.342	0.72%	
QC value within limits for Ni 231.604 Recovery = 92.56%							
P 214.914†	1137.1	2662.3 µg/L	19.10	2662.3 ppb	19.10	0.72%	
QC value within limits for P 214.914 Recovery = 106.49%							
Pb 220.353†	1642.8	500.90 µg/L	4.537	500.90 ppb	4.537	0.91%	
QC value within limits for Pb 220.353 Recovery = 100.18%							
S 181.975 Axial†	516.0	2957.9 µg/L	44.80	2957.9 ppb	44.80	1.51%	
QC value within limits for S 181.975 Axial Recovery = 118.31%							
Sb 206.836†	521.3	545.72 µg/L	10.406	545.72 ppb	10.406	1.91%	
QC value within limits for Sb 206.836 Recovery = 109.14%							
Se 196.026†	1159.5	2508.6 µg/L	5.21	2508.6 ppb	5.21	0.21%	
QC value within limits for Se 196.026 Recovery = 100.34%							
SiO2†	54344.7	11471 µg/L	96.1	11471 ppb	96.1	0.84%	
QC value within limits for SiO2 Recovery = 107.25%							
Si 251.611†	63969.5	5365.6 µg/L	52.04	5365.6 ppb	52.04	0.97%	
QC value within limits for Si 251.611 Recovery = 107.31%							
Sn 189.927†	554.4	553.64 µg/L	3.717	553.64 ppb	3.717	0.67%	
QC value within limits for Sn 189.927 Recovery = 110.73%							
Sr 421.552†	83488.1	530.48 µg/L	4.719	530.48 ppb	4.719	0.89%	
QC value within limits for Sr 421.552 Recovery = 106.10%							
Ti 334.940†	217293.1	509.40 µg/L	4.696	509.40 ppb	4.696	0.92%	
QC value within limits for Ti 334.940 Recovery = 101.88%							
Tl 190.801†	330.2	485.16 µg/L	6.187	485.16 ppb	6.187	1.28%	
QC value within limits for Tl 190.801 Recovery = 97.03%							
U 409.014†	5332.4	450.11 µg/L	2.714	450.11 ppb	2.714	0.60%	
QC value within limits for U 409.014 Recovery = 90.02%							
V 292.402†	41892.4	537.01 µg/L	5.039	537.01 ppb	5.039	0.94%	
QC value within limits for V 292.402 Recovery = 107.40%							
Zn 213.857†	18281.3	491.41 µg/L	4.695	491.41 ppb	4.695	0.96%	
QC value within limits for Zn 213.857 Recovery = 98.28%							

All analyte(s) passed QC.

Sequence No.: 11
 Sample ID: LR1
 Analyst:
 Initial Sample Wt:
 Dilution:

Autosampler Location: 105
 Date Collected: 1/27/2010 08:57:53
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:

Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	74075.3	74075.3	96.4 %		08:58:33
1	Al 396.153Radial†	739137.1	766548.6	532640 µg/L	532640 ppb	08:58:28
1	Ca 317.933Radial†	629490.7	652560.4	513840 µg/L	513840 ppb	08:58:28
1	Fe 238.204 Radial†	32125.2	33299.5	478060 µg/L	478060 ppb	08:58:33
1	K 766.490 Radial†	257.8	-144.7	-96.039 µg/L	-96.039 ppb	08:58:33
1	Mg 279.077 IEC†	44900.3	46555.5	506870 µg/L	506870 ppb	08:58:33
1	Na 589.592 Radial†	1700122.4	1762563.6	506140 µg/L	506140 ppb	08:58:28
1	Sr 421.552†	1311.6	802.5	5.0990 µg/L	5.0990 ppb	08:58:33
1	Sc 361.383	1801363.6	1801363.6	92.692 %		08:59:08
1	Y 371.029	1119534.0	1119534.0	91.108 %		08:59:08
1	Ag 328.068†	-3791.2	-4035.0	-7.7804 µg/L	-7.7804 ppb	08:59:14
1	As 188.979†	-18.9	-20.9	-47.226 µg/L	-47.226 ppb	08:59:34
1	B 249.677†	5123.0	5411.7	13.835 µg/L	13.835 ppb	08:59:14
1	Ba 233.527†	467.6	519.0	15.001 µg/L	15.001 ppb	08:59:34
1	Be 313.107†	-960.8	-4876.0	-3.4083 µg/L	-3.4083 ppb	08:59:14
1	Cd 226.502†	1740.8	2013.5	5.2460 µg/L	5.2460 ppb	08:59:14
1	Co 228.616†	111.8	165.6	9.0515 µg/L	9.0515 ppb	08:59:34
1	Cr 267.716†	192.2	290.2	6.7026 µg/L	6.7026 ppb	08:59:34
1	Cu 324.752†	-4334.0	-8343.9	3.7135 µg/L	3.7135 ppb	08:59:14
1	Mn 257.610†	-12804.7	-13624.8	-7.0466 µg/L	-7.0466 ppb	08:59:14
1	Mo 202.031†	-217.7	-252.0	-13.490 µg/L	-13.490 ppb	08:59:34
1	Ni 231.604†	260.5	-54.4	2.7770 µg/L	2.7770 ppb	08:59:34
1	P 214.914†	378.9	206.3	261.97 µg/L	261.97 ppb	08:59:34
1	Pb 220.353†	61.1	10.0	-1.3691 µg/L	-1.3691 ppb	08:59:34
1	S 181.975 Axial†	54.4	33.2	190.13 µg/L	190.13 ppb	08:59:34
1	Sb 206.836†	56.1	38.2	7.7505 µg/L	7.7505 ppb	08:59:34
1	Se 196.026†	-1148.7	-1251.6	-226.81 µg/L	-226.81 ppb	08:59:34
1	SiO2†	1530.9	-627.2	-132.38 µg/L	-132.38 ppb	08:59:34
1	Si 251.611†	-281.6	-608.3	-51.019 µg/L	-51.019 ppb	08:59:34
1	Sn 189.927†	-374.0	-426.9	5.7349 µg/L	5.7349 ppb	08:59:34
1	Ti 334.940†	11564.3	11702.5	-2.6766 µg/L	-2.6766 ppb	08:59:14
1	Tl 190.801†	12.1	36.1	-22.295 µg/L	-22.295 ppb	08:59:34
1	U 409.014†	143954.4	155537.6	14745 µg/L	14745 ppb	08:59:08
1	V 292.402†	-3342.3	-3483.7	-2.7891 µg/L	-2.7891 ppb	08:59:14
1	Zn 213.857†	3016.6	2583.1	23.945 µg/L	23.945 ppb	08:59:34
2	Sc RADIAL	74358.4	74358.4	96.8 %		08:58:45
2	Al 396.153Radial†	738176.4	762638.4	529920 µg/L	529920 ppb	08:58:40
2	Ca 317.933Radial†	628111.5	648650.7	510760 µg/L	510760 ppb	08:58:40
2	Fe 238.204 Radial†	32231.4	33282.4	477820 µg/L	477820 ppb	08:58:45
2	K 766.490 Radial†	324.1	-77.1	-51.207 µg/L	-51.207 ppb	08:58:45
2	Mg 279.077 IEC†	45012.7	46494.3	506210 µg/L	506210 ppb	08:58:45
2	Na 589.592 Radial†	1699359.1	1755063.8	503990 µg/L	503990 ppb	08:58:40
2	Sr 421.552†	1313.9	799.7	5.0815 µg/L	5.0815 ppb	08:58:45
2	Sc 361.383	1820153.5	1820153.5	93.658 %		08:59:41
2	Y 371.029	1131986.5	1131986.5	92.121 %		08:59:41
2	Ag 328.068†	-3739.5	-3937.7	-6.8872 µg/L	-6.8872 ppb	08:59:47
2	As 188.979†	-9.2	-10.3	-22.607 µg/L	-22.607 ppb	09:00:07
2	B 249.677†	5107.4	5338.0	10.378 µg/L	10.378 ppb	08:59:47
2	Ba 233.527†	463.9	509.8	14.733 µg/L	14.733 ppb	09:00:07
2	Be 313.107†	-872.6	-4771.1	-3.3352 µg/L	-3.3352 ppb	08:59:47
2	Cd 226.502†	1694.4	1944.6	3.2465 µg/L	3.2465 ppb	08:59:47
2	Co 228.616†	116.8	169.7	9.2762 µg/L	9.2762 ppb	09:00:07
2	Cr 267.716†	187.2	282.7	6.5293 µg/L	6.5293 ppb	09:00:07
2	Cu 324.752†	-4427.7	-8395.7	3.2902 µg/L	3.2902 ppb	08:59:47
2	Mn 257.610†	-12846.1	-13526.4	-6.6892 µg/L	-6.6892 ppb	08:59:47
2	Mo 202.031†	-230.3	-263.1	-14.884 µg/L	-14.884 ppb	09:00:07
2	Ni 231.604†	264.8	-52.7	2.8805 µg/L	2.8805 ppb	09:00:07
2	P 214.914†	391.2	215.2	282.88 µg/L	282.88 ppb	09:00:07
2	Pb 220.353†	64.3	12.7	-0.6803 µg/L	-0.6803 ppb	09:00:07

2	S 181.975 Axial†	65.6	44.5	255.26 µg/L	255.26 ppb	09:00:07
2	Sb 206.836†	48.6	29.5	-1.6856 µg/L	-1.6856 ppb	09:00:07
2	Se 196.026†	-1147.4	-1237.5	-205.94 µg/L	-205.94 ppb	09:00:07
2	SiO2†	1537.2	-637.5	-134.57 µg/L	-134.57 ppb	09:00:07
2	Si 251.611†	-258.9	-580.9	-48.724 µg/L	-48.724 ppb	09:00:07
2	Sn 189.927†	-374.3	-423.1	7.1705 µg/L	7.1705 ppb	09:00:07
2	Ti 334.940†	11690.1	11707.9	-2.6595 µg/L	-2.6595 ppb	08:59:47
2	Tl 190.801†	1.5	24.7	-41.414 µg/L	-41.414 ppb	09:00:07
2	U 409.014†	144885.8	154928.8	14687 µg/L	14687 ppb	08:59:41
2	V 292.402†	-3364.2	-3469.8	-2.7007 µg/L	-2.7007 ppb	08:59:47
2	Zn 213.857†	3028.2	2561.9	23.376 µg/L	23.376 ppb	09:00:07
3	Sc RADIAL	74134.8	74134.8	96.5 %		08:58:57
3	Al 396.153Radial†	736230.3	762921.9	530120 µg/L	530120 ppb	08:58:51
3	Ca 317.933Radial†	624586.7	646955.3	509430 µg/L	509430 ppb	08:58:51
3	Fe 238.204 Radial†	32217.1	33368.0	479050 µg/L	479050 ppb	08:58:57
3	K 766.490 Radial†	303.2	-97.8	-64.922 µg/L	-64.922 ppb	08:58:57
3	Mg 279.077 IEC†	44945.2	46564.7	506970 µg/L	506970 ppb	08:58:57
3	Na 589.592 Radial†	1695729.6	1756598.1	504430 µg/L	504430 ppb	08:58:51
3	Sr 421.552†	1288.6	777.6	4.9405 µg/L	4.9405 ppb	08:58:57
3	Sc 361.383	1816386.2	1816386.2	93.465 %		09:00:14
3	Y 371.029	1129814.7	1129814.7	91.945 %		09:00:14
3	Ag 328.068†	-3787.5	-3997.2	-7.3667 µg/L	-7.3667 ppb	09:00:20
3	As 188.979†	-13.6	-15.1	-33.575 µg/L	-33.575 ppb	09:00:40
3	B 249.677†	5143.4	5387.9	12.164 µg/L	12.164 ppb	09:00:20
3	Ba 233.527†	449.7	495.6	14.321 µg/L	14.321 ppb	09:00:40
3	Be 313.107†	-966.7	-4873.8	-3.4068 µg/L	-3.4068 ppb	09:00:20
3	Cd 226.502†	1714.7	1970.0	3.8572 µg/L	3.8572 ppb	09:00:20
3	Co 228.616†	128.7	182.7	9.9944 µg/L	9.9944 ppb	09:00:40
3	Cr 267.716†	225.1	323.6	7.4791 µg/L	7.4791 ppb	09:00:40
3	Cu 324.752†	-4461.8	-8442.0	3.1131 µg/L	3.1131 ppb	09:00:20
3	Mn 257.610†	-12874.0	-13584.7	-6.7719 µg/L	-6.7719 ppb	09:00:20
3	Mo 202.031†	-221.7	-254.4	-13.751 µg/L	-13.751 ppb	09:00:40
3	Ni 231.604†	271.2	-45.2	3.3666 µg/L	3.3666 ppb	09:00:40
3	P 214.914†	382.7	206.9	262.17 µg/L	262.17 ppb	09:00:40
3	Pb 220.353†	59.2	7.5	-2.2884 µg/L	-2.2884 ppb	09:00:40
3	S 181.975 Axial†	44.6	22.2	127.27 µg/L	127.27 ppb	09:00:40
3	Sb 206.836†	50.2	31.3	0.4562 µg/L	0.4562 ppb	09:00:40
3	Se 196.026†	-1149.3	-1242.0	-208.97 µg/L	-208.97 ppb	09:00:40
3	SiO2†	1539.9	-631.2	-133.22 µg/L	-133.22 ppb	09:00:40
3	Si 251.611†	-278.7	-602.7	-50.554 µg/L	-50.554 ppb	09:00:40
3	Sn 189.927†	-374.0	-423.6	6.8229 µg/L	6.8229 ppb	09:00:40
3	Ti 334.940†	11713.5	11758.9	-2.6145 µg/L	-2.6145 ppb	09:00:20
3	Tl 190.801†	2.7	26.0	-39.027 µg/L	-39.027 ppb	09:00:40
3	U 409.014†	145084.5	155462.2	14738 µg/L	14738 ppb	09:00:14
3	V 292.402†	-3377.4	-3491.4	-2.8406 µg/L	-2.8406 ppb	09:00:20
3	Zn 213.857†	3048.0	2589.8	24.088 µg/L	24.088 ppb	09:00:40

Mean Data: LR1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1812634.4	93.272 %	0.5115			0.55%
Sc RADIAL	74189.5	96.6 %	0.19			0.20%
Y 371.029	1127111.8	91.725 %	0.5413			0.59%
Ag 328.068†	-3990.0	-7.3447 µg/L	0.44699	-7.3447 ppb	0.44699	6.09%
Al 396.153Radial†	764036.3	530890 µg/L	1515.0	530890 ppb	1515.0	0.29%
QC value within limits for Al 396.153Radial Recovery = 106.18%						
As 188.979†	-15.5	-34.469 µg/L	12.3339	-34.469 ppb	12.3339	35.78%
B 249.677†	5379.2	12.126 µg/L	1.7285	12.126 ppb	1.7285	14.25%
Ba 233.527†	508.2	14.685 µg/L	0.3429	14.685 ppb	0.3429	2.33%
Be 313.107†	-4840.3	-3.3834 µg/L	0.04177	-3.3834 ppb	0.04177	1.23%
Ca 317.933Radial†	649388.8	511340 µg/L	2263.5	511340 ppb	2263.5	0.44%
QC value within limits for Ca 317.933Radial Recovery = 102.27%						
Cd 226.502†	1976.0	4.1165 µg/L	1.02465	4.1165 ppb	1.02465	24.89%
Co 228.616†	172.7	9.4407 µg/L	0.49250	9.4407 ppb	0.49250	5.22%
Cr 267.716†	298.8	6.9037 µg/L	0.50578	6.9037 ppb	0.50578	7.33%
Cu 324.752†	-8393.9	3.3723 µg/L	0.30850	3.3723 ppb	0.30850	9.15%
Fe 238.204 Radial†	33316.6	478310 µg/L	650.5	478310 ppb	650.5	0.14%
QC value within limits for Fe 238.204 Radial Recovery = 95.66%						
K 766.490 Radial†	-106.5	-70.722 µg/L	22.9719	-70.722 ppb	22.9719	32.48%
Mg 279.077 IEC†	46538.2	506690 µg/L	416.4	506690 ppb	416.4	0.08%

QC value within limits for Mg 279.077 IEC Recovery = 101.34%							
Mn 257.610†	-13578.6	-6.8359 µg/L	0.18708	-6.8359 ppb	0.18708	2.74%	
Mo 202.031†	-256.5	-14.042 µg/L	0.7409	-14.042 ppb	0.7409	5.28%	
Na 589.592 Radial†	1758075.2	504850 µg/L	1137.8	504850 ppb	1137.8	0.23%	
QC value within limits for Na 589.592 Radial Recovery = 100.97%							
Ni 231.604†	-50.8	3.0080 µg/L	0.31482	3.0080 ppb	0.31482	10.47%	
P 214.914†	209.5	269.01 µg/L	12.013	269.01 ppb	12.013	4.47%	
Pb 220.353†	10.1	-1.4460 µg/L	0.80676	-1.4460 ppb	0.80676	55.79%	
S 181.975 Axial†	33.3	190.89 µg/L	63.997	190.89 ppb	63.997	33.53%	
Sb 206.836†	33.0	2.1737 µg/L	4.94696	2.1737 ppb	4.94696	227.58%	
Se 196.026†	-1243.7	-213.91 µg/L	11.275	-213.91 ppb	11.275	5.27%	
SiO2†	-632.0	-133.39 µg/L	1.100	-133.39 ppb	1.100	0.82%	
Si 251.611†	-597.3	-50.099 µg/L	1.2130	-50.099 ppb	1.2130	2.42%	
Sn 189.927†	-424.5	6.5761 µg/L	0.74897	6.5761 ppb	0.74897	11.39%	
Sr 421.552†	793.3	5.0404 µg/L	0.08690	5.0404 ppb	0.08690	1.72%	
Ti 334.940†	11723.1	-2.6502 µg/L	0.03210	-2.6502 ppb	0.03210	1.21%	
Tl 190.801†	28.9	-34.246 µg/L	10.4179	-34.246 ppb	10.4179	30.42%	
U 409.014†	155309.6	14723 µg/L	31.6	14723 ppb	31.6	0.21%	
QC value within limits for U 409.014 Recovery = 98.16%							
V 292.402†	-3481.6	-2.7768 µg/L	0.07077	-2.7768 ppb	0.07077	2.55%	
Zn 213.857†	2578.3	23.803 µg/L	0.3766	23.803 ppb	0.3766	1.58%	
All analyte(s) passed QC.							

Sequence No.: 12
 Sample ID: LR2
 Analyst:
 Initial Sample Wt:
 Dilution:

Autosampler Location: 108
 Date Collected: 1/27/2010 09:00:49
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:

Replicate Data: LR2

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	77219.9	77219.9	101 %		09:01:32
1	Al 396.153Radial†	419.6	445.3	96.776 µg/L	96.776 ppb	09:01:32
1	Ca 317.933Radial†	367.4	113.9	89.668 µg/L	89.668 ppb	09:01:52
1	Fe 238.204 Radial†	-15.9	-31.7	-237.35 µg/L	-237.35 ppb	09:01:52
1	K 766.490 Radial†	474995.2	472121.5	313410 µg/L	313410 ppb	09:01:26
1	Mg 279.077 IEC†	-21.4	-29.6	-147.56 µg/L	-147.56 ppb	09:01:52
1	Na 589.592 Radial†	2011.8	1456.5	418.25 µg/L	418.25 ppb	09:01:32
1	Sr 421.552†	1634407.8	1625379.8	10328 µg/L	10328 ppb	09:01:26
1	Sc 361.383	1932740.7	1932740.7	99.452 %		09:03:24
1	Y 371.029	1211113.0	1211113.0	98.561 %		09:03:24
1	Ag 328.068†	-6924.7	-6907.8	5.5480 µg/L	5.5480 ppb	09:03:24
1	As 188.979†	4468.8	4492.8	10348 µg/L	10348 ppb	09:03:29
1	B 249.677†	105666.3	106133.6	5205.1 µg/L	5205.1 ppb	09:03:24
1	Ba 233.527†	518789.9	521663.9	15175 µg/L	15175 ppb	09:03:24
1	Be 313.107†	4336327.5	4356389.6	3031.3 µg/L	3031.3 ppb	09:03:13
1	Cd 226.502†	346507.1	348552.5	10271 µg/L	10271 ppb	09:03:24
1	Co 228.616†	184338.2	185399.2	10221 µg/L	10221 ppb	09:03:24
1	Cr 267.716†	1112692.1	1118908.0	25959 µg/L	25959 ppb	09:03:24
1	Cu 324.752†	2824056.2	2835953.9	21323 µg/L	21323 ppb	09:03:24
1	Mn 257.610†	2712988.7	2728132.0	10078 µg/L	10078 ppb	09:03:24
1	Mo 202.031†	81987.3	82422.0	10352 µg/L	10352 ppb	09:03:24
1	Ni 231.604†	164386.7	164957.3	10381 µg/L	10381 ppb	09:03:24
1	P 214.914†	7820.4	7661.0	16262 µg/L	16262 ppb	09:03:29
1	Pb 220.353†	91499.5	91947.9	26808 µg/L	26808 ppb	09:03:24
1	S 181.975 Axial†	9352.6	9378.6	53761 µg/L	53761 ppb	09:03:29
1	Sb 206.836†	9719.9	9751.1	10669 µg/L	10669 ppb	09:03:29
1	Se 196.026†	6716.8	6741.4	10649 µg/L	10649 ppb	09:03:29
1	SiO2†	491229.3	491658.2	103780 µg/L	103780 ppb	09:03:24
1	Si 251.611†	573236.5	576091.7	48321 µg/L	48321 ppb	09:03:24
1	Sn 189.927†	19764.2	19849.7	11586 µg/L	11586 ppb	09:03:29
1	Ti 334.940†	4080815.7	4102535.2	10232 µg/L	10232 ppb	09:03:13
1	Tl 190.801†	5917.8	5973.5	10387 µg/L	10387 ppb	09:03:29
1	U 409.014†	745.6	982.6	93.830 µg/L	93.830 ppb	09:03:24
1	V 292.402†	848005.0	852801.3	10744 µg/L	10744 ppb	09:03:24
1	Zn 213.857†	529589.9	531837.6	15425 µg/L	15425 ppb	09:03:24
2	Sc RADIAL	76398.3	76398.3	99.5 %		09:02:04
2	Al 396.153Radial†	383.5	413.6	75.539 µg/L	75.539 ppb	09:02:04
2	Ca 317.933Radial†	346.2	96.4	75.934 µg/L	75.934 ppb	09:02:24
2	Fe 238.204 Radial†	-16.4	-32.4	-248.97 µg/L	-248.97 ppb	09:02:24
2	K 766.490 Radial†	472333.0	474526.2	315010 µg/L	315010 ppb	09:01:58
2	Mg 279.077 IEC†	-21.2	-29.6	-149.21 µg/L	-149.21 ppb	09:02:24
2	Na 589.592 Radial†	1610.4	1074.4	308.52 µg/L	308.52 ppb	09:02:04
2	Sr 421.552†	1622831.1	1631224.0	10365 µg/L	10365 ppb	09:01:58
2	Sc 361.383	1932652.6	1932652.6	99.447 %		09:03:49
2	Y 371.029	1211672.3	1211672.3	98.606 %		09:03:49
2	Ag 328.068†	-6969.4	-6953.0	4.8123 µg/L	4.8123 ppb	09:03:49
2	As 188.979†	4439.6	4463.7	10280 µg/L	10280 ppb	09:03:54
2	B 249.677†	105498.2	105969.3	5196.9 µg/L	5196.9 ppb	09:03:49
2	Ba 233.527†	516150.9	519034.0	15099 µg/L	15099 ppb	09:03:49
2	Be 313.107†	4354175.9	4374535.7	3043.9 µg/L	3043.9 ppb	09:03:38
2	Cd 226.502†	344629.1	346679.9	10216 µg/L	10216 ppb	09:03:49
2	Co 228.616†	183217.0	184280.3	10159 µg/L	10159 ppb	09:03:49
2	Cr 267.716†	1105568.8	1111796.0	25794 µg/L	25794 ppb	09:03:49
2	Cu 324.752†	2816319.6	2828303.7	21266 µg/L	21266 ppb	09:03:49
2	Mn 257.610†	2698384.1	2713570.5	10025 µg/L	10025 ppb	09:03:49
2	Mo 202.031†	81663.2	82099.9	10312 µg/L	10312 ppb	09:03:49
2	Ni 231.604†	163487.2	164060.4	10325 µg/L	10325 ppb	09:03:49
2	P 214.914†	7772.3	7613.0	16151 µg/L	16151 ppb	09:03:54
2	Pb 220.353†	91105.9	91556.3	26694 µg/L	26694 ppb	09:03:49

2	S 181.975 Axial†	9354.5	9381.0	53775 µg/L	53775 ppb	09:03:54
2	Sb 206.836†	9672.2	9703.5	10617 µg/L	10617 ppb	09:03:54
2	Se 196.026†	6697.1	6721.9	10618 µg/L	10618 ppb	09:03:54
2	SiO2†	490288.7	490734.8	103580 µg/L	103580 ppb	09:03:49
2	Si 251.611†	571952.4	574826.6	48215 µg/L	48215 ppb	09:03:49
2	Sn 189.927†	19571.2	19656.6	11473 µg/L	11473 ppb	09:03:54
2	Ti 334.940†	4101225.6	4123245.4	10283 µg/L	10283 ppb	09:03:38
2	Tl 190.801†	5899.4	5955.3	10356 µg/L	10356 ppb	09:03:54
2	U 409.014†	736.2	973.2	92.933 µg/L	92.933 ppb	09:03:49
2	V 292.402†	844165.7	848979.5	10696 µg/L	10696 ppb	09:03:49
2	Zn 213.857†	527086.0	529344.1	15352 µg/L	15352 ppb	09:03:49
3	Sc RADIAL	76823.3	76823.3	100 %		09:02:36
3	Al 396.153Radial†	385.7	413.7	91.964 µg/L	91.964 ppb	09:02:36
3	Ca 317.933Radial†	343.4	91.7	72.187 µg/L	72.187 ppb	09:02:56
3	Fe 238.204 Radial†	-17.3	-33.2	-278.30 µg/L	-278.30 ppb	09:02:56
3	K 766.490 Radial†	473697.0	473262.4	314170 µg/L	314170 ppb	09:02:30
3	Mg 279.077 IEC†	-21.4	-29.7	-163.23 µg/L	-163.23 ppb	09:02:56
3	Na 589.592 Radial†	1436.2	891.2	255.91 µg/L	255.91 ppb	09:02:36
3	Sr 421.552†	1627729.2	1627093.9	10338 µg/L	10338 ppb	09:02:30
3	Sc 361.383	1940169.6	1940169.6	99.834 %		09:04:14
3	Y 371.029	1216195.3	1216195.3	98.974 %		09:04:14
3	Ag 328.068†	-6388.2	-6343.7	4.8969 µg/L	4.8969 ppb	09:04:14
3	As 188.979†	4100.8	4107.1	9459.0 µg/L	9459.0 ppb	09:04:19
3	B 249.677†	100480.1	100531.8	4928.4 µg/L	4928.4 ppb	09:04:14
3	Ba 233.527†	481468.6	482283.2	14029 µg/L	14029 ppb	09:04:14
3	Be 313.107†	4142672.2	4145717.2	2884.7 µg/L	2884.7 ppb	09:04:03
3	Cd 226.502†	321083.6	321752.6	9481.0 µg/L	9481.0 ppb	09:04:14
3	Co 228.616†	169271.1	169597.5	9348.8 µg/L	9348.8 ppb	09:04:14
3	Cr 267.716†	1003727.1	1005477.9	23328 µg/L	23328 ppb	09:04:14
3	Cu 324.752†	2606280.0	2606943.0	19601 µg/L	19601 ppb	09:04:14
3	Mn 257.610†	2495691.5	2500028.4	9235.7 µg/L	9235.7 ppb	09:04:14
3	Mo 202.031†	75653.2	75761.8	9515.8 µg/L	9515.8 ppb	09:04:14
3	Ni 231.604†	151028.3	150943.8	9499.2 µg/L	9499.2 ppb	09:04:14
3	P 214.914†	7078.4	6887.7	14573 µg/L	14573 ppb	09:04:19
3	Pb 220.353†	85783.7	85870.4	25036 µg/L	25036 ppb	09:04:14
3	S 181.975 Axial†	8675.5	8664.4	49667 µg/L	49667 ppb	09:04:19
3	Sb 206.836†	8858.1	8850.4	9687.8 µg/L	9687.8 ppb	09:04:19
3	Se 196.026†	6223.8	6221.7	9827.8 µg/L	9827.8 ppb	09:04:19
3	SiO2†	463164.4	461655.3	97443 µg/L	97443 ppb	09:04:14
3	Si 251.611†	540248.9	540842.2	45364 µg/L	45364 ppb	09:04:14
3	Sn 189.927†	17569.4	17575.1	10258 µg/L	10258 ppb	09:04:19
3	Ti 334.940†	3907150.0	3912869.3	9758.6 µg/L	9758.6 ppb	09:04:03
3	Tl 190.801†	5585.6	5618.0	9769.8 µg/L	9769.8 ppb	09:04:19
3	U 409.014†	640.2	874.2	83.485 µg/L	83.485 ppb	09:04:14
3	V 292.402†	779373.3	780790.6	9836.2 µg/L	9836.2 ppb	09:04:14
3	Zn 213.857†	489213.5	489355.2	14193 µg/L	14193 ppb	09:04:14

Mean Data: LR2

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1935187.6	99.578 %	0.2220			0.22%
Sc RADIAL	76813.8	100.0 %	0.53			0.53%
Y 371.029	1212993.5	98.714 %	0.2268			0.23%
Ag 328.068†	-6734.9	5.0857 µg/L	0.40256	5.0857 ppb	0.40256	7.92%
Al 396.153Radial†	424.2	88.093 µg/L	11.1350	88.093 ppb	11.1350	12.64%
As 188.979†	4354.5	10029 µg/L	494.8	10029 ppb	494.8	4.93%
QC value within limits for As 188.979 Recovery = 100.29%						
B 249.677†	104211.6	5110.1 µg/L	157.44	5110.1 ppb	157.44	3.08%
QC value within limits for B 249.677 Recovery = 102.20%						
Ba 233.527†	507660.4	14768 µg/L	640.6	14768 ppb	640.6	4.34%
QC value within limits for Ba 233.527 Recovery = 98.45%						
Be 313.107†	4292214.2	2986.6 µg/L	88.51	2986.6 ppb	88.51	2.96%
QC value within limits for Be 313.107 Recovery = 99.55%						
Ca 317.933Radial†	100.7	79.263 µg/L	9.2039	79.263 ppb	9.2039	11.61%
Cd 226.502†	338995.0	9989.1 µg/L	440.92	9989.1 ppb	440.92	4.41%
QC value within limits for Cd 226.502 Recovery = 99.89%						
Co 228.616†	179759.0	9909.4 µg/L	486.52	9909.4 ppb	486.52	4.91%
QC value within limits for Co 228.616 Recovery = 99.09%						
Cr 267.716†	1078727.3	25027 µg/L	1474.0	25027 ppb	1474.0	5.89%
QC value within limits for Cr 267.716 Recovery = 100.11%						

Cu 324.752†	2757066.9	20730 µg/L	978.0	20730 ppb	978.0	4.72%
QC value within limits for Cu 324.752 Recovery = 103.65%						
Fe 238.204 Radial†	-32.4	-254.88 µg/L	21.106	-254.88 ppb	21.106	8.28%
K 766.490 Radial†	473303.4	314200 µg/L	798.5	314200 ppb	798.5	0.25%
QC value within limits for K 766.490 Radial Recovery = 104.73%						
Mg 279.077 IEC†	-29.6	-153.33 µg/L	8.613	-153.33 ppb	8.613	5.62%
Mn 257.610†	2647243.6	9779.5 µg/L	471.76	9779.5 ppb	471.76	4.82%
QC value within limits for Mn 257.610 Recovery = 97.80%						
Mo 202.031†	80094.5	10060 µg/L	471.7	10060 ppb	471.7	4.69%
QC value within limits for Mo 202.031 Recovery = 100.60%						
Na 589.592 Radial†	1140.7	327.56 µg/L	82.827	327.56 ppb	82.827	25.29%
Ni 231.604†	159987.2	10068 µg/L	493.7	10068 ppb	493.7	4.90%
QC value within limits for Ni 231.604 Recovery = 100.68%						
P 214.914†	7387.2	15662 µg/L	945.0	15662 ppb	945.0	6.03%
QC value within limits for P 214.914 Recovery = 104.41%						
Pb 220.353†	89791.5	26179 µg/L	991.7	26179 ppb	991.7	3.79%
QC value within limits for Pb 220.353 Recovery = 104.72%						
S 181.975 Axial†	9141.3	52401 µg/L	2367.5	52401 ppb	2367.5	4.52%
QC value within limits for S 181.975 Axial Recovery = 104.80%						
Sb 206.836†	9435.0	10325 µg/L	552.0	10325 ppb	552.0	5.35%
QC value within limits for Sb 206.836 Recovery = 103.25%						
Se 196.026†	6561.7	10365 µg/L	465.4	10365 ppb	465.4	4.49%
QC value within limits for Se 196.026 Recovery = 103.65%						
SiO2†	481349.4	101600 µg/L	3601.3	101600 ppb	3601.3	3.54%
QC value within limits for SiO2 Recovery = 94.95%						
Si 251.611†	563920.2	47300 µg/L	1677.2	47300 ppb	1677.2	3.55%
QC value within limits for Si 251.611 Recovery = 94.60%						
Sn 189.927†	19027.2	11106 µg/L	736.1	11106 ppb	736.1	6.63%
QC value greater than the upper limit for Sn 189.927 Recovery = 111.06%						
Sr 421.552†	1627899.2	10344 µg/L	19.1	10344 ppb	19.1	0.18%
QC value within limits for Sr 421.552 Recovery = 103.44%						
Ti 334.940†	4046216.6	10091 µg/L	289.2	10091 ppb	289.2	2.87%
QC value within limits for Ti 334.940 Recovery = 100.91%						
Tl 190.801†	5848.9	10171 µg/L	347.7	10171 ppb	347.7	3.42%
QC value within limits for Tl 190.801 Recovery = 101.71%						
U 409.014†	943.4	90.082 µg/L	5.7313	90.082 ppb	5.7313	6.36%
V 292.402†	827523.8	10425 µg/L	510.9	10425 ppb	510.9	4.90%
QC value within limits for V 292.402 Recovery = 104.25%						
Zn 213.857†	516845.6	14990 µg/L	691.3	14990 ppb	691.3	4.61%
QC value within limits for Zn 213.857 Recovery = 99.93%						
QC Failed. Continue with analysis.						

Sequence No.: 13
 Sample ID: CCV
 Analyst:
 Initial Sample Wt:
 Dilution:

Autosampler Location: 7
 Date Collected: 1/27/2010 09:04:30
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	78693.9	78693.9	102 %		09:05:08
1	Al 396.153Radial†	7715.7	7559.9	5242.0 µg/L	5242.0 ppb	09:05:08
1	Ca 317.933Radial†	6994.7	6576.4	5178.4 µg/L	5178.4 ppb	09:05:28
1	Fe 238.204 Radial†	391.7	366.5	5272.7 µg/L	5272.7 ppb	09:05:28
1	K 766.490 Radial†	8529.6	7914.4	5253.9 µg/L	5253.9 ppb	09:05:08
1	Mg 279.077 IEC†	506.3	485.9	5299.1 µg/L	5299.1 ppb	09:05:28
1	Na 589.592 Radial†	37583.6	36143.5	10379 µg/L	10379 ppb	09:05:08
1	Sr 421.552†	83694.1	81143.1	515.58 µg/L	515.58 ppb	09:05:08
1	Sc 361.383	1956250.0	1956250.0	100.66 %		09:06:32
1	Y 371.029	1234151.7	1234151.7	100.44 %		09:06:32
1	Ag 328.068†	57118.7	56798.4	533.32 µg/L	533.32 ppb	09:06:37
1	As 188.979†	240.3	238.2	548.69 µg/L	548.69 ppb	09:06:58
1	B 249.677†	11208.7	11019.8	534.23 µg/L	534.23 ppb	09:06:37
1	Ba 233.527†	18536.7	18429.4	536.40 µg/L	536.40 ppb	09:06:37
1	Be 313.107†	762448.7	753598.6	524.84 µg/L	524.84 ppb	09:06:32
1	Cd 226.502†	18254.0	18269.5	537.74 µg/L	537.74 ppb	09:06:37
1	Co 228.616†	9754.4	9735.3	536.71 µg/L	536.71 ppb	09:06:37
1	Cr 267.716†	23332.8	23262.2	539.89 µg/L	539.89 ppb	09:06:37
1	Cu 324.752†	75951.0	71783.6	540.46 µg/L	540.46 ppb	09:06:37
1	Mn 257.610†	143269.3	142517.2	526.98 µg/L	526.98 ppb	09:06:37
1	Mo 202.031†	4304.9	4259.4	535.18 µg/L	535.18 ppb	09:06:58
1	Ni 231.604†	8936.5	8542.3	537.64 µg/L	537.64 ppb	09:06:37
1	P 214.914†	1336.6	1125.4	2642.7 µg/L	2642.7 ppb	09:06:58
1	Pb 220.353†	1950.8	1882.0	549.00 µg/L	549.00 ppb	09:06:58
1	S 181.975 Axial†	206.7	179.8	1030.7 µg/L	1030.7 ppb	09:06:58
1	Sb 206.836†	528.0	502.2	558.15 µg/L	558.15 ppb	09:06:58
1	Se 196.026†	349.1	334.3	547.47 µg/L	547.47 ppb	09:06:58
1	SiO2†	29873.8	27398.7	5783.1 µg/L	5783.1 ppb	09:06:37
1	Si 251.611†	32745.1	32225.4	2703.0 µg/L	2703.0 ppb	09:06:37
1	Sn 189.927†	976.8	947.0	555.37 µg/L	555.37 ppb	09:06:58
1	Ti 334.940†	212957.9	210784.7	525.36 µg/L	525.36 ppb	09:06:32
1	Tl 190.801†	286.2	307.4	534.02 µg/L	534.02 ppb	09:06:58
1	U 409.014†	5430.7	5627.9	536.02 µg/L	536.02 ppb	09:06:37
1	V 292.402†	43322.0	43159.4	542.89 µg/L	542.89 ppb	09:06:37
1	Zn 213.857†	19328.4	18530.1	536.42 µg/L	536.42 ppb	09:06:37
2	Sc RADIAL	78628.4	78628.4	102 %		09:05:34
2	Al 396.153Radial†	7730.9	7581.0	5256.7 µg/L	5256.7 ppb	09:05:34
2	Ca 317.933Radial†	7000.4	6587.7	5187.3 µg/L	5187.3 ppb	09:05:54
2	Fe 238.204 Radial†	390.1	365.2	5254.9 µg/L	5254.9 ppb	09:05:54
2	K 766.490 Radial†	8477.0	7870.0	5224.4 µg/L	5224.4 ppb	09:05:34
2	Mg 279.077 IEC†	507.6	487.7	5318.2 µg/L	5318.2 ppb	09:05:54
2	Na 589.592 Radial†	37631.9	36221.3	10401 µg/L	10401 ppb	09:05:34
2	Sr 421.552†	83781.9	81296.9	516.55 µg/L	516.55 ppb	09:05:34
2	Sc 361.383	1951423.4	1951423.4	100.41 %		09:07:05
2	Y 371.029	1230214.9	1230214.9	100.12 %		09:07:05
2	Ag 328.068†	56712.4	56534.1	530.84 µg/L	530.84 ppb	09:07:10
2	As 188.979†	243.2	241.6	556.56 µg/L	556.56 ppb	09:07:31
2	B 249.677†	11077.9	10917.1	529.24 µg/L	529.24 ppb	09:07:10
2	Ba 233.527†	18368.2	18307.1	532.84 µg/L	532.84 ppb	09:07:10
2	Be 313.107†	757466.2	750510.0	522.69 µg/L	522.69 ppb	09:07:05
2	Cd 226.502†	18085.8	18146.8	534.13 µg/L	534.13 ppb	09:07:10
2	Co 228.616†	9682.5	9687.6	534.08 µg/L	534.08 ppb	09:07:10
2	Cr 267.716†	23195.8	23183.1	538.06 µg/L	538.06 ppb	09:07:10
2	Cu 324.752†	75280.8	71302.8	536.84 µg/L	536.84 ppb	09:07:10
2	Mn 257.610†	141996.2	141601.4	523.59 µg/L	523.59 ppb	09:07:10
2	Mo 202.031†	4296.0	4261.2	535.41 µg/L	535.41 ppb	09:07:31
2	Ni 231.604†	8866.7	8494.8	534.65 µg/L	534.65 ppb	09:07:10
2	P 214.914†	1346.1	1138.0	2673.4 µg/L	2673.4 ppb	09:07:31
2	Pb 220.353†	1933.0	1869.1	545.25 µg/L	545.25 ppb	09:07:31

2	S 181.975 Axial†	210.6	184.2	1056.0 µg/L	1056.0 ppb	09:07:31
2	Sb 206.836†	518.0	493.5	548.51 µg/L	548.51 ppb	09:07:31
2	Se 196.026†	357.9	344.0	562.70 µg/L	562.70 ppb	09:07:31
2	SiO2†	29628.3	27227.6	5747.0 µg/L	5747.0 ppb	09:07:10
2	Si 251.611†	32387.4	31949.6	2679.8 µg/L	2679.8 ppb	09:07:10
2	Sn 189.927†	971.8	944.4	553.86 µg/L	553.86 ppb	09:07:31
2	Ti 334.940†	211657.4	210012.8	523.43 µg/L	523.43 ppb	09:07:05
2	Tl 190.801†	293.8	315.7	548.37 µg/L	548.37 ppb	09:07:31
2	U 409.014†	5307.2	5518.4	525.56 µg/L	525.56 ppb	09:07:10
2	V 292.402†	43008.7	42953.9	540.32 µg/L	540.32 ppb	09:07:10
2	Zn 213.857†	19115.6	18365.6	531.64 µg/L	531.64 ppb	09:07:10
3	Sc RADIAL	78334.2	78334.2	102 %		09:06:00
3	Al 396.153Radial†	7682.2	7561.6	5244.5 µg/L	5244.5 ppb	09:06:00
3	Ca 317.933Radial†	6952.7	6566.6	5170.7 µg/L	5170.7 ppb	09:06:20
3	Fe 238.204 Radial†	390.7	367.2	5283.2 µg/L	5283.2 ppb	09:06:20
3	K 766.490 Radial†	8491.9	7915.7	5254.7 µg/L	5254.7 ppb	09:06:00
3	Mg 279.077 IEC†	506.8	488.6	5327.8 µg/L	5327.8 ppb	09:06:20
3	Na 589.592 Radial†	37376.2	36108.6	10369 µg/L	10369 ppb	09:06:00
3	Sr 421.552†	83228.1	81061.3	515.06 µg/L	515.06 ppb	09:06:00
3	Sc 361.383	1954344.2	1954344.2	100.56 %		09:07:37
3	Y 371.029	1232547.2	1232547.2	100.31 %		09:07:37
3	Ag 328.068†	55522.7	55266.7	518.85 µg/L	518.85 ppb	09:07:43
3	As 188.979†	222.0	220.2	507.20 µg/L	507.20 ppb	09:08:04
3	B 249.677†	10778.7	10603.1	513.89 µg/L	513.89 ppb	09:07:43
3	Ba 233.527†	17676.3	17591.8	512.01 µg/L	512.01 ppb	09:07:43
3	Be 313.107†	742066.5	734069.2	511.24 µg/L	511.24 ppb	09:07:37
3	Cd 226.502†	17397.3	17435.3	513.16 µg/L	513.16 ppb	09:07:43
3	Co 228.616†	9218.3	9211.6	507.78 µg/L	507.78 ppb	09:07:43
3	Cr 267.716†	21764.3	21725.2	504.22 µg/L	504.22 ppb	09:07:43
3	Cu 324.752†	72344.7	68271.1	514.05 µg/L	514.05 ppb	09:07:43
3	Mn 257.610†	135691.0	135120.2	499.65 µg/L	499.65 ppb	09:07:43
3	Mo 202.031†	3798.1	3759.6	472.41 µg/L	472.41 ppb	09:08:04
3	Ni 231.604†	8509.9	8126.8	511.50 µg/L	511.50 ppb	09:07:43
3	P 214.914†	1230.0	1020.6	2393.7 µg/L	2393.7 ppb	09:08:04
3	Pb 220.353†	1759.6	1693.8	494.03 µg/L	494.03 ppb	09:08:04
3	S 181.975 Axial†	198.0	171.4	982.52 µg/L	982.52 ppb	09:08:04
3	Sb 206.836†	471.8	446.8	496.20 µg/L	496.20 ppb	09:08:04
3	Se 196.026†	327.5	313.3	514.22 µg/L	514.22 ppb	09:08:04
3	SiO2†	28770.9	26330.9	5557.7 µg/L	5557.7 ppb	09:07:43
3	Si 251.611†	31354.5	30874.3	2589.6 µg/L	2589.6 ppb	09:07:43
3	Sn 189.927†	851.6	823.4	483.25 µg/L	483.25 ppb	09:08:04
3	Ti 334.940†	206881.9	204949.1	510.80 µg/L	510.80 ppb	09:07:37
3	Tl 190.801†	273.7	295.2	512.95 µg/L	512.95 ppb	09:08:04
3	U 409.014†	4988.0	5193.1	494.52 µg/L	494.52 ppb	09:07:43
3	V 292.402†	40921.7	40814.5	513.12 µg/L	513.12 ppb	09:07:43
3	Zn 213.857†	18329.0	17555.0	508.14 µg/L	508.14 ppb	09:07:43

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1954005.9	100.55 %	0.125			0.12%
Sc RADIAL	78552.2	102 %	0.2			0.24%
Y 371.029	1232304.6	100.29 %	0.161			0.16%
Ag 328.068†	56199.8	527.67 µg/L	7.738	527.67 ppb	7.738	1.47%
QC value within limits for Ag 328.068 Recovery = 105.53%						
Al 396.153Radial†	7567.5	5247.7 µg/L	7.86	5247.7 ppb	7.86	0.15%
QC value within limits for Al 396.153Radial Recovery = 104.95%						
As 188.979†	233.3	537.49 µg/L	26.520	537.49 ppb	26.520	4.93%
QC value within limits for As 188.979 Recovery = 107.50%						
B 249.677†	10846.7	525.79 µg/L	10.597	525.79 ppb	10.597	2.02%
QC value within limits for B 249.677 Recovery = 105.16%						
Ba 233.527†	18109.4	527.09 µg/L	13.175	527.09 ppb	13.175	2.50%
QC value within limits for Ba 233.527 Recovery = 105.42%						
Be 313.107†	746059.2	519.59 µg/L	7.311	519.59 ppb	7.311	1.41%
QC value within limits for Be 313.107 Recovery = 103.92%						
Ca 317.933Radial†	6576.9	5178.8 µg/L	8.30	5178.8 ppb	8.30	0.16%
QC value within limits for Ca 317.933Radial Recovery = 103.58%						
Cd 226.502†	17950.5	528.34 µg/L	13.275	528.34 ppb	13.275	2.51%
QC value within limits for Cd 226.502 Recovery = 105.67%						
Co 228.616†	9544.9	526.19 µg/L	15.998	526.19 ppb	15.998	3.04%

Cr	267.716†	22723.5	527.39 µg/L	20.084	527.39 ppb	20.084	3.81%
Cu	324.752†	70452.5	530.45 µg/L	14.318	530.45 ppb	14.318	2.70%
Fe	238.204 Radial†	366.3	5270.3 µg/L	14.30	5270.3 ppb	14.30	0.27%
K	766.490 Radial†	7900.1	5244.3 µg/L	17.29	5244.3 ppb	17.29	0.33%
Mg	279.077 IEC†	487.4	5315.0 µg/L	14.63	5315.0 ppb	14.63	0.28%
Mn	257.610†	139746.3	516.74 µg/L	14.896	516.74 ppb	14.896	2.88%
Mo	202.031†	4093.4	514.33 µg/L	36.307	514.33 ppb	36.307	7.06%
Na	589.592 Radial†	36157.8	10383 µg/L	16.6	10383 ppb	16.6	0.16%
Ni	231.604†	8388.0	527.93 µg/L	14.311	527.93 ppb	14.311	2.71%
P	214.914†	1094.7	2569.9 µg/L	153.41	2569.9 ppb	153.41	5.97%
Pb	220.353†	1815.0	529.43 µg/L	30.711	529.43 ppb	30.711	5.80%
S	181.975 Axial†	178.5	1023.1 µg/L	37.34	1023.1 ppb	37.34	3.65%
Sb	206.836†	480.8	534.29 µg/L	33.337	534.29 ppb	33.337	6.24%
Se	196.026†	330.5	541.46 µg/L	24.795	541.46 ppb	24.795	4.58%
SiO2†		26985.7	5696.0 µg/L	121.05	5696.0 ppb	121.05	2.13%
Si	251.611†	31683.1	2657.5 µg/L	59.88	2657.5 ppb	59.88	2.25%
Sn	189.927†	904.9	530.83 µg/L	41.209	530.83 ppb	41.209	7.76%
Sr	421.552†	81167.1	515.73 µg/L	0.760	515.73 ppb	0.760	0.15%
Ti	334.940†	208582.2	519.86 µg/L	7.907	519.86 ppb	7.907	1.52%
Tl	190.801†	306.1	531.78 µg/L	17.814	531.78 ppb	17.814	3.35%
U	409.014†	5446.5	518.70 µg/L	21.585	518.70 ppb	21.585	4.16%
V	292.402†	42309.3	532.11 µg/L	16.495	532.11 ppb	16.495	3.10%
Zn	213.857†	18150.2	525.40 µg/L	15.134	525.40 ppb	15.134	2.88%

QC value within limits for Co 228.616 Recovery = 105.24%

QC value within limits for Cr 267.716 Recovery = 105.48%

QC value within limits for Cu 324.752 Recovery = 106.09%

QC value within limits for Fe 238.204 Radial Recovery = 105.41%

QC value within limits for K 766.490 Radial Recovery = 104.89%

QC value within limits for Mg 279.077 IEC Recovery = 106.30%

QC value within limits for Mn 257.610 Recovery = 103.35%

QC value within limits for Mo 202.031 Recovery = 102.87%

QC value within limits for Na 589.592 Radial Recovery = 103.83%

QC value within limits for Ni 231.604 Recovery = 105.59%

QC value within limits for P 214.914 Recovery = 102.80%

QC value within limits for Pb 220.353 Recovery = 105.89%

QC value within limits for S 181.975 Axial Recovery = 102.31%

QC value within limits for Sb 206.836 Recovery = 106.86%

QC value within limits for Se 196.026 Recovery = 108.29%

QC value within limits for SiO2 Recovery = 106.52%

QC value within limits for Si 251.611 Recovery = 106.30%

QC value within limits for Sn 189.927 Recovery = 106.17%

QC value within limits for Sr 421.552 Recovery = 103.15%

QC value within limits for Ti 334.940 Recovery = 103.97%

QC value within limits for Tl 190.801 Recovery = 106.36%

QC value within limits for U 409.014 Recovery = 103.74%

QC value within limits for V 292.402 Recovery = 106.42%

QC value within limits for Zn 213.857 Recovery = 105.08%

All analyte(s) passed QC.

Sequence No.: 14
 Sample ID: CCB
 Analyst:
 Initial Sample Wt:
 Dilution:

Autosampler Location: 8
 Date Collected: 1/27/2010 09:08:14
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	76637.5	76637.5	99.8 %		09:08:46
1	Al 396.153Radial†	40.0	68.1	47.288 µg/L	47.288 ppb	09:08:46
1	Ca 317.933Radial†	296.6	45.7	35.952 µg/L	35.952 ppb	09:09:07
1	Fe 238.204 Radial†	20.8	5.0	71.322 µg/L	71.322 ppb	09:09:07
1	K 766.490 Radial†	543.6	132.9	88.238 µg/L	88.238 ppb	09:08:46
1	Mg 279.077 IEC†	13.6	5.3	57.684 µg/L	57.684 ppb	09:09:07
1	Na 589.592 Radial†	797.0	253.9	72.924 µg/L	72.924 ppb	09:08:46
1	Sr 421.552†	584.1	27.8	0.1765 µg/L	0.1765 ppb	09:08:46
1	Sc 361.383	1951790.1	1951790.1	100.43 %		09:10:09
1	Y 371.029	1235152.2	1235152.2	100.52 %		09:10:09
1	Ag 328.068†	2.1	57.2	0.5382 µg/L	0.5382 ppb	09:10:14
1	As 188.979†	1.0	0.4	0.9179 µg/L	0.9179 ppb	09:10:35
1	B 249.677†	203.4	87.4	4.2139 µg/L	4.2139 ppb	09:10:35
1	Ba 233.527†	-1.1	13.4	0.3894 µg/L	0.3894 ppb	09:10:35
1	Be 313.107†	4022.6	165.9	0.1154 µg/L	0.1154 ppb	09:10:14
1	Cd 226.502†	-121.0	14.9	0.4322 µg/L	0.4322 ppb	09:10:35
1	Co 228.616†	-45.4	-0.2	-0.0123 µg/L	-0.0123 ppb	09:10:35
1	Cr 267.716†	-49.4	33.6	0.7799 µg/L	0.7799 ppb	09:10:14
1	Cu 324.752†	4520.1	832.4	6.2687 µg/L	6.2687 ppb	09:10:14
1	Mn 257.610†	-141.1	49.0	0.1881 µg/L	0.1881 ppb	09:10:35
1	Mo 202.031†	27.9	10.6	1.3290 µg/L	1.3290 ppb	09:10:35
1	Ni 231.604†	347.8	10.9	0.6862 µg/L	0.6862 ppb	09:10:35
1	P 214.914†	210.4	7.0	16.223 µg/L	16.223 ppb	09:10:35
1	Pb 220.353†	69.9	13.7	3.9800 µg/L	3.9800 ppb	09:10:35
1	S 181.975 Axial†	26.7	1.1	6.3957 µg/L	6.3957 ppb	09:10:35
1	Sb 206.836†	28.2	5.7	6.3439 µg/L	6.3439 ppb	09:10:35
1	Se 196.026†	7.9	-4.6	-6.9660 µg/L	-6.9660 ppb	09:10:35
1	SiO2†	2325.4	36.7	7.7402 µg/L	7.7402 ppb	09:10:14
1	Si 251.611†	356.6	50.6	4.2432 µg/L	4.2432 ppb	09:10:35
1	Sn 189.927†	31.3	7.8	4.5551 µg/L	4.5551 ppb	09:10:35
1	Ti 334.940†	1007.9	229.9	0.5693 µg/L	0.5693 ppb	09:10:14
1	Tl 190.801†	-21.7	1.5	2.5594 µg/L	2.5594 ppb	09:10:35
1	U 409.014†	-254.4	-20.4	-1.9556 µg/L	-1.9556 ppb	09:10:14
1	V 292.402†	-114.8	7.9	0.1114 µg/L	0.1114 ppb	09:10:14
1	Zn 213.857†	734.5	60.0	1.7298 µg/L	1.7298 ppb	09:10:35
2	Sc RADIAL	76515.4	76515.4	99.6 %		09:09:12
2	Al 396.153Radial†	37.5	65.6	45.585 µg/L	45.585 ppb	09:09:12
2	Ca 317.933Radial†	303.2	52.8	41.567 µg/L	41.567 ppb	09:09:33
2	Fe 238.204 Radial†	18.3	2.5	35.821 µg/L	35.821 ppb	09:09:33
2	K 766.490 Radial†	523.6	113.7	75.473 µg/L	75.473 ppb	09:09:12
2	Mg 279.077 IEC†	16.9	8.6	94.168 µg/L	94.168 ppb	09:09:33
2	Na 589.592 Radial†	769.7	227.8	65.422 µg/L	65.422 ppb	09:09:12
2	Sr 421.552†	610.6	55.4	0.3517 µg/L	0.3517 ppb	09:09:12
2	Sc 361.383	1950300.8	1950300.8	100.36 %		09:10:41
2	Y 371.029	1233736.8	1233736.8	100.40 %		09:10:41
2	Ag 328.068†	13.7	68.8	0.6471 µg/L	0.6471 ppb	09:10:46
2	As 188.979†	2.2	1.6	3.7077 µg/L	3.7077 ppb	09:11:07
2	B 249.677†	202.1	86.2	4.1762 µg/L	4.1762 ppb	09:11:07
2	Ba 233.527†	-0.8	13.7	0.3989 µg/L	0.3989 ppb	09:11:07
2	Be 313.107†	4013.9	160.2	0.1114 µg/L	0.1114 ppb	09:10:46
2	Cd 226.502†	-123.8	12.1	0.3519 µg/L	0.3519 ppb	09:11:07
2	Co 228.616†	-39.1	6.0	0.3338 µg/L	0.3338 ppb	09:11:07
2	Cr 267.716†	-81.3	1.8	0.0410 µg/L	0.0410 ppb	09:10:46
2	Cu 324.752†	4512.8	828.6	6.2349 µg/L	6.2349 ppb	09:10:46
2	Mn 257.610†	-135.3	54.7	0.2031 µg/L	0.2031 ppb	09:11:07
2	Mo 202.031†	27.4	10.1	1.2680 µg/L	1.2680 ppb	09:11:07
2	Ni 231.604†	349.8	13.1	0.8265 µg/L	0.8265 ppb	09:11:07
2	P 214.914†	209.3	6.1	13.870 µg/L	13.870 ppb	09:11:07
2	Pb 220.353†	62.7	6.5	1.8977 µg/L	1.8977 ppb	09:11:07

2	S 181.975 Axial†	23.1	-2.5	-14.555 µg/L	-14.555 ppb	09:11:07
2	Sb 206.836†	28.7	6.2	6.9314 µg/L	6.9314 ppb	09:11:07
2	Se 196.026†	8.2	-4.3	-6.6826 µg/L	-6.6826 ppb	09:11:07
2	SiO2†	2341.5	54.4	11.492 µg/L	11.492 ppb	09:10:46
2	Si 251.611†	373.7	67.8	5.6907 µg/L	5.6907 ppb	09:11:07
2	Sn 189.927†	27.7	4.2	2.4904 µg/L	2.4904 ppb	09:11:07
2	Ti 334.940†	993.1	215.9	0.5318 µg/L	0.5318 ppb	09:10:46
2	Tl 190.801†	-15.5	7.7	13.199 µg/L	13.199 ppb	09:11:07
2	U 409.014†	-306.1	-72.0	-6.8813 µg/L	-6.8813 ppb	09:10:46
2	V 292.402†	-76.1	46.3	0.5804 µg/L	0.5804 ppb	09:10:46
2	Zn 213.857†	740.7	66.8	1.9263 µg/L	1.9263 ppb	09:11:07
3	Sc RADIAL	76796.8	76796.8	100.0 %		09:09:38
3	Al 396.153Radial†	26.4	54.3	37.762 µg/L	37.762 ppb	09:09:38
3	Ca 317.933Radial†	308.6	57.1	44.937 µg/L	44.937 ppb	09:09:59
3	Fe 238.204 Radial†	19.7	3.8	55.046 µg/L	55.046 ppb	09:09:59
3	K 766.490 Radial†	539.9	128.1	85.040 µg/L	85.040 ppb	09:09:38
3	Mg 279.077 IEC†	14.4	6.1	66.442 µg/L	66.442 ppb	09:09:59
3	Na 589.592 Radial†	735.8	191.1	54.881 µg/L	54.881 ppb	09:09:38
3	Sr 421.552†	560.3	2.8	0.0178 µg/L	0.0178 ppb	09:09:38
3	Sc 361.383	1944171.2	1944171.2	100.04 %		09:11:13
3	Y 371.029	1230417.2	1230417.2	100.13 %		09:11:13
3	Ag 328.068†	-32.5	22.6	0.2158 µg/L	0.2158 ppb	09:11:18
3	As 188.979†	1.5	1.0	2.2759 µg/L	2.2759 ppb	09:11:39
3	B 249.677†	201.2	86.0	4.1542 µg/L	4.1542 ppb	09:11:39
3	Ba 233.527†	-4.7	9.8	0.2865 µg/L	0.2865 ppb	09:11:39
3	Be 313.107†	3952.3	111.3	0.0773 µg/L	0.0773 ppb	09:11:18
3	Cd 226.502†	-129.3	6.2	0.1773 µg/L	0.1773 ppb	09:11:39
3	Co 228.616†	-34.7	10.3	0.5699 µg/L	0.5699 ppb	09:11:39
3	Cr 267.716†	-56.3	26.5	0.6144 µg/L	0.6144 ppb	09:11:18
3	Cu 324.752†	4496.9	826.8	6.2246 µg/L	6.2246 ppb	09:11:18
3	Mn 257.610†	-135.3	54.3	0.2051 µg/L	0.2051 ppb	09:11:39
3	Mo 202.031†	16.8	-0.4	-0.0510 µg/L	-0.0510 ppb	09:11:39
3	Ni 231.604†	349.6	14.0	0.8851 µg/L	0.8851 ppb	09:11:39
3	P 214.914†	208.0	5.4	12.243 µg/L	12.243 ppb	09:11:39
3	Pb 220.353†	62.8	6.8	1.9727 µg/L	1.9727 ppb	09:11:39
3	S 181.975 Axial†	26.3	0.8	4.4048 µg/L	4.4048 ppb	09:11:39
3	Sb 206.836†	24.6	2.2	2.4546 µg/L	2.4546 ppb	09:11:39
3	Se 196.026†	7.8	-4.6	-7.0764 µg/L	-7.0764 ppb	09:11:39
3	SiO2†	2330.6	50.9	10.741 µg/L	10.741 ppb	09:11:18
3	Si 251.611†	359.9	55.2	4.6305 µg/L	4.6305 ppb	09:11:39
3	Sn 189.927†	26.2	2.8	1.6375 µg/L	1.6375 ppb	09:11:39
3	Ti 334.940†	968.8	194.7	0.4811 µg/L	0.4811 ppb	09:11:18
3	Tl 190.801†	-23.6	-0.6	-0.9631 µg/L	-0.9631 ppb	09:11:39
3	U 409.014†	-195.0	38.1	3.6229 µg/L	3.6229 ppb	09:11:18
3	V 292.402†	-104.5	17.7	0.2278 µg/L	0.2278 ppb	09:11:18
3	Zn 213.857†	726.1	54.5	1.5683 µg/L	1.5683 ppb	09:11:39

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1948754.0	100.28 %	0.208			0.21%
Sc RADIAL	76649.9	99.8 %	0.18			0.18%
Y 371.029	1233102.0	100.35 %	0.198			0.20%
Ag 328.068†	49.5	0.4671 µg/L	0.22427	0.4671 ppb	0.22427	48.02%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	62.7	43.545 µg/L	5.0804	43.545 ppb	5.0804	11.67%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	1.0	2.3005 µg/L	1.39510	2.3005 ppb	1.39510	60.64%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	86.5	4.1814 µg/L	0.03018	4.1814 ppb	0.03018	0.72%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	12.3	0.3583 µg/L	0.06229	0.3583 ppb	0.06229	17.39%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	145.8	0.1014 µg/L	0.02091	0.1014 ppb	0.02091	20.62%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	51.8	40.819 µg/L	4.5392	40.819 ppb	4.5392	11.12%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	11.1	0.3205 µg/L	0.13033	0.3205 ppb	0.13033	40.67%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	5.4	0.2971 µg/L	0.29283	0.2971 ppb	0.29283	98.56%

QC value within limits for Co 228.616 Recovery = Not calculated							
Cr 267.716†	20.6	0.4785 µg/L	0.38776	0.4785 ppb	0.38776	81.04%	
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu 324.752†	829.3	6.2427 µg/L	0.02305	6.2427 ppb	0.02305	0.37%	
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe 238.204 Radial†	3.8	54.063 µg/L	17.7709	54.063 ppb	17.7709	32.87%	
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K 766.490 Radial†	124.9	82.917 µg/L	6.6424	82.917 ppb	6.6424	8.01%	
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg 279.077 IEC†	6.7	72.765 µg/L	19.0462	72.765 ppb	19.0462	26.18%	
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn 257.610†	52.6	0.1988 µg/L	0.00927	0.1988 ppb	0.00927	4.66%	
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo 202.031†	6.7	0.8487 µg/L	0.77971	0.8487 ppb	0.77971	91.88%	
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na 589.592 Radial†	224.3	64.409 µg/L	9.0643	64.409 ppb	9.0643	14.07%	
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni 231.604†	12.7	0.7992 µg/L	0.10221	0.7992 ppb	0.10221	12.79%	
QC value within limits for Ni 231.604 Recovery = Not calculated							
P 214.914†	6.2	14.112 µg/L	2.0010	14.112 ppb	2.0010	14.18%	
QC value within limits for P 214.914 Recovery = Not calculated							
Pb 220.353†	9.0	2.6168 µg/L	1.18120	2.6168 ppb	1.18120	45.14%	
QC value within limits for Pb 220.353 Recovery = Not calculated							
S 181.975 Axial†	-0.2	-1.2513 µg/L	11.56387	-1.2513 ppb	11.56387	924.12%	
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb 206.836†	4.7	5.2433 µg/L	2.43288	5.2433 ppb	2.43288	46.40%	
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	-4.5	-6.9084 µg/L	0.20313	-6.9084 ppb	0.20313	2.94%	
QC value within limits for Se 196.026 Recovery = Not calculated							
SiO2†	47.3	9.9912 µg/L	1.98529	9.9912 ppb	1.98529	19.87%	
QC value within limits for SiO2 Recovery = Not calculated							
Si 251.611†	57.9	4.8548 µg/L	0.74938	4.8548 ppb	0.74938	15.44%	
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn 189.927†	4.9	2.8943 µg/L	1.50015	2.8943 ppb	1.50015	51.83%	
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr 421.552†	28.6	0.1820 µg/L	0.16704	0.1820 ppb	0.16704	91.78%	
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti 334.940†	213.5	0.5274 µg/L	0.04430	0.5274 ppb	0.04430	8.40%	
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl 190.801†	2.9	4.9318 µg/L	7.37311	4.9318 ppb	7.37311	149.50%	
QC value within limits for Tl 190.801 Recovery = Not calculated							
U 409.014†	-18.1	-1.7380 µg/L	5.25551	-1.7380 ppb	5.25551	302.39%	
QC value within limits for U 409.014 Recovery = Not calculated							
V 292.402†	24.0	0.3065 µg/L	0.24422	0.3065 ppb	0.24422	79.67%	
QC value within limits for V 292.402 Recovery = Not calculated							
Zn 213.857†	60.4	1.7414 µg/L	0.17927	1.7414 ppb	0.17927	10.29%	
QC value within limits for Zn 213.857 Recovery = Not calculated							

All analyte(s) passed QC.

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Analysis Begun

Start Time: 1/27/2010 09:16:48

Plasma On Time: 1/25/2010 05:31:26

Logged In Analyst: optima

Technique: ICP Continuous

Spectrometer Model: Optima 4300 DV, S/N 077N1030502 Autosampler Model: AS-93plus

Sample Information File: C:\pe\optimal\Sample Information\012710.sif

Batch ID:

Results Data Set: 012710

Results Library: c:\pe\optimal\Results\Results.mdb

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Method Loaded

Method Name: Gen Eng fast_new Si

Method Last Saved: 1/27/2010 07:53:54

IEC File: 011510.iec

MSF File:

Method Description:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Al 396.153Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
B 249.677	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Be 313.107	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ca 317.933Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	No
Cd 226.502	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cr 267.716	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Fe 238.204 Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	Yes
K 766.490 Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	No
Mg 279.077 IEC	Lin Thru 0	Peak Area	Radial	Sc RADIAL	Yes
Mn 257.610	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Na 589.592 Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	No
Ni 231.604	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
P 214.914	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
S 181.975 Axial	Lin Thru 0	Peak Area	Axial	Sc 361.383	No
Sb 206.836	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sc 361.383	Lin Thru 0	Peak Area	Axial	n/a	n/a
Sc RADIAL	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Se 196.026	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
SiO2	Lin Thru 0	Peak Area	Axial	Sc 361.383	No
Si 251.611	Lin Thru 0	Peak Area	Axial	Sc 361.383	No
Sn 189.927	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	Sc RADIAL	No
Ti 334.940	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
U 409.014	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y 371.029	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Zn 213.857	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes

Sequence No.: 1

Sample ID: LR2

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 113

Date Collected: 1/27/2010 09:16:50

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: LR2

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	76115.4	76115.4	99.1 %			09:17:25
1	Al 396.153Radial†	-22.0	5.8	4.0147 µg/L		4.0147 ppb	09:17:25
1	Ca 317.933Radial†	278.7	29.7	23.352 µg/L		23.352 ppb	09:17:45
1	Fe 238.204 Radial†	17.2	1.5	21.573 µg/L		21.573 ppb	09:17:45

1	K 766.490 Radial†	477.2	69.6	46.219 µg/L	46.219 ppb	09:17:25
1	Mg 279.077 IEC†	14.7	6.5	71.310 µg/L	71.310 ppb	09:17:45
1	Na 589.592 Radial†	519.2	-20.9	-6.0136 µg/L	-6.0136 ppb	09:17:25
1	Sr 421.552†	561.1	8.6	0.0549 µg/L	0.0549 ppb	09:17:25
1	Sc 361.383	1953413.1	1953413.1	100.52 %		09:18:47
1	Y 371.029	1235150.9	1235150.9	100.52 %		09:18:47
1	Ag 328.068†	-39.1	16.1	0.1510 µg/L	0.1510 ppb	09:18:52
1	As 188.979†	-1.8	-2.4	-5.4626 µg/L	-5.4626 ppb	09:19:13
1	B 249.677†	149.2	33.3	1.6073 µg/L	1.6073 ppb	09:19:13
1	Ba 233.527†	-20.9	-6.2	-0.1815 µg/L	-0.1815 ppb	09:19:13
1	Be 313.107†	3931.8	72.2	0.0502 µg/L	0.0502 ppb	09:18:52
1	Cd 226.502†	-124.8	11.3	0.3310 µg/L	0.3310 ppb	09:19:13
1	Co 228.616†	-48.4	-3.2	-0.1749 µg/L	-0.1749 ppb	09:19:13
1	Cr 267.716†	-74.7	8.5	0.1967 µg/L	0.1967 ppb	09:18:52
1	Cu 324.752†	4255.1	565.0	4.2514 µg/L	4.2514 ppb	09:18:52
1	Mn 257.610†	-203.5	-13.0	-0.0480 µg/L	-0.0480 ppb	09:19:13
1	Mo 202.031†	15.5	-1.8	-0.2240 µg/L	-0.2240 ppb	09:19:13
1	Ni 231.604†	339.5	2.3	0.1461 µg/L	0.1461 ppb	09:19:13
1	P 214.914†	172.0	-31.4	6.8946 µg/L	6.8946 ppb	09:19:13
1	Pb 220.353†	63.6	7.3	2.1386 µg/L	2.1386 ppb	09:19:13
1	S 181.975 Axial†	23.5	-2.1	-11.958 µg/L	-11.958 ppb	09:19:13
1	Sb 206.836†	8.3	-14.2	-15.711 µg/L	-15.711 ppb	09:19:13
1	Se 196.026†	16.6	4.1	6.5763 µg/L	6.5763 ppb	09:19:13
1	SiO2†	2441.1	149.8	31.626 µg/L	31.626 ppb	09:18:52
1	Si 251.611†	508.5	201.4	16.892 µg/L	16.892 ppb	09:19:13
1	Sn 189.927†	9608.7	9536.0	5566.1 µg/L	5566.1 ppb	09:18:52
1	Ti 334.940†	875.9	97.8	0.2386 µg/L	0.2386 ppb	09:18:52
1	Tl 190.801†	-23.5	-0.3	-0.5241 µg/L	-0.5241 ppb	09:19:13
1	U 409.014†	-308.8	-74.2	-7.0874 µg/L	-7.0874 ppb	09:18:52
1	V 292.402†	-133.2	-10.4	-0.1362 µg/L	-0.1362 ppb	09:18:52
1	Zn 213.857†	689.6	14.7	0.4166 µg/L	0.4166 ppb	09:19:13
2	Sc RADIAL	75953.1	75953.1	98.9 %		09:17:50
2	Al 396.153Radial†	15.8	43.9	30.534 µg/L	30.534 ppb	09:17:50
2	Ca 317.933Radial†	271.4	22.9	18.007 µg/L	18.007 ppb	09:18:11
2	Fe 238.204 Radial†	16.4	0.7	10.344 µg/L	10.344 ppb	09:18:11
2	K 766.490 Radial†	451.5	44.6	29.618 µg/L	29.618 ppb	09:17:50
2	Mg 279.077 IEC†	12.0	3.8	41.170 µg/L	41.170 ppb	09:18:11
2	Na 589.592 Radial†	518.8	-20.2	-5.7952 µg/L	-5.7952 ppb	09:17:50
2	Sr 421.552†	559.6	8.3	0.0529 µg/L	0.0529 ppb	09:17:50
2	Sc 361.383	1955574.6	1955574.6	100.63 %		09:19:19
2	Y 371.029	1236232.4	1236232.4	100.60 %		09:19:19
2	Ag 328.068†	-9.5	45.7	0.4254 µg/L	0.4254 ppb	09:19:24
2	As 188.979†	-3.0	-3.5	-8.0777 µg/L	-8.0777 ppb	09:19:45
2	B 249.677†	146.9	30.8	1.4923 µg/L	1.4923 ppb	09:19:45
2	Ba 233.527†	-12.6	2.0	0.0585 µg/L	0.0585 ppb	09:19:45
2	Be 313.107†	3877.2	13.6	0.0093 µg/L	0.0093 ppb	09:19:24
2	Cd 226.502†	-129.7	6.5	0.1911 µg/L	0.1911 ppb	09:19:45
2	Co 228.616†	-49.2	-3.9	-0.2140 µg/L	-0.2140 ppb	09:19:45
2	Cr 267.716†	-68.7	14.5	0.3366 µg/L	0.3366 ppb	09:19:24
2	Cu 324.752†	4236.3	541.7	4.0742 µg/L	4.0742 ppb	09:19:24
2	Mn 257.610†	-206.1	-15.4	-0.0570 µg/L	-0.0570 ppb	09:19:45
2	Mo 202.031†	15.1	-2.1	-0.2687 µg/L	-0.2687 ppb	09:19:45
2	Ni 231.604†	337.8	0.3	0.0175 µg/L	0.0175 ppb	09:19:45
2	P 214.914†	159.5	-44.0	-24.800 µg/L	-24.800 ppb	09:19:45
2	Pb 220.353†	61.9	5.6	1.6352 µg/L	1.6352 ppb	09:19:45
2	S 181.975 Axial†	23.2	-2.4	-13.854 µg/L	-13.854 ppb	09:19:45
2	Sb 206.836†	7.9	-14.5	-16.099 µg/L	-16.099 ppb	09:19:45
2	Se 196.026†	4.3	-8.1	-12.778 µg/L	-12.778 ppb	09:19:45
2	SiO2†	2461.6	167.5	35.346 µg/L	35.346 ppb	09:19:24
2	Si 251.611†	527.6	219.8	18.439 µg/L	18.439 ppb	09:19:45
2	Sn 189.927†	9449.2	9366.9	5467.4 µg/L	5467.4 ppb	09:19:24
2	Ti 334.940†	950.1	170.5	0.4223 µg/L	0.4223 ppb	09:19:24
2	Tl 190.801†	-21.9	1.3	2.1695 µg/L	2.1695 ppb	09:19:45
2	U 409.014†	-275.2	-40.5	-3.8642 µg/L	-3.8642 ppb	09:19:24
2	V 292.402†	-133.1	-10.2	-0.1310 µg/L	-0.1310 ppb	09:19:24
2	Zn 213.857†	691.7	16.1	0.4606 µg/L	0.4606 ppb	09:19:45
3	Sc RADIAL	76051.4	76051.4	99.0 %		09:18:16
3	Al 396.153Radial†	-10.7	17.2	11.931 µg/L	11.931 ppb	09:18:16
3	Ca 317.933Radial†	270.8	21.9	17.250 µg/L	17.250 ppb	09:18:37
3	Fe 238.204 Radial†	18.2	2.5	35.805 µg/L	35.805 ppb	09:18:37
3	K 766.490 Radial†	471.6	64.3	42.703 µg/L	42.703 ppb	09:18:16

3	Mg 279.077 IEC†	16.9	8.8	95.401 µg/L	95.401 ppb	09:18:37
3	Na 589.592 Radial†	521.6	-18.1	-5.1859 µg/L	-5.1859 ppb	09:18:16
3	Sr 421.552†	578.4	26.6	0.1688 µg/L	0.1688 ppb	09:18:16
3	Sc 361.383	1943892.0	1943892.0	100.03 %		09:19:51
3	Y 371.029	1228013.4	1228013.4	99.936 %		09:19:51
3	Ag 328.068†	25.2	80.3	0.7491 µg/L	0.7491 ppb	09:19:56
3	As 188.979†	-1.7	-2.3	-5.2873 µg/L	-5.2873 ppb	09:20:17
3	B 249.677†	158.6	43.4	2.0908 µg/L	2.0908 ppb	09:20:17
3	Ba 233.527†	-8.9	5.6	0.1616 µg/L	0.1616 ppb	09:20:17
3	Be 313.107†	3859.2	18.8	0.0130 µg/L	0.0130 ppb	09:19:56
3	Cd 226.502†	-120.1	15.4	0.4490 µg/L	0.4490 ppb	09:20:17
3	Co 228.616†	-38.9	6.2	0.3402 µg/L	0.3402 ppb	09:20:17
3	Cr 267.716†	-75.6	7.2	0.1662 µg/L	0.1662 ppb	09:19:56
3	Cu 324.752†	4163.5	494.2	3.7209 µg/L	3.7209 ppb	09:19:56
3	Mn 257.610†	-206.5	-17.0	-0.0618 µg/L	-0.0618 ppb	09:20:17
3	Mo 202.031†	23.4	6.2	0.7812 µg/L	0.7812 ppb	09:20:17
3	Ni 231.604†	339.1	3.6	0.2245 µg/L	0.2245 ppb	09:20:17
3	P 214.914†	170.4	-32.1	1.5362 µg/L	1.5362 ppb	09:20:17
3	Pb 220.353†	60.5	4.6	1.3164 µg/L	1.3164 ppb	09:20:17
3	S 181.975 Axial†	20.9	-4.6	-26.602 µg/L	-26.602 ppb	09:20:17
3	Sb 206.836†	8.0	-14.4	-15.885 µg/L	-15.885 ppb	09:20:17
3	Se 196.026†	-1.7	-14.1	-22.154 µg/L	-22.154 ppb	09:20:17
3	SiO2†	2435.7	156.3	32.991 µg/L	32.991 ppb	09:19:56
3	Si 251.611†	529.8	225.2	18.889 µg/L	18.889 ppb	09:20:17
3	Sn 189.927†	9144.0	9118.2	5322.2 µg/L	5322.2 ppb	09:19:56
3	Ti 334.940†	899.3	125.4	0.3055 µg/L	0.3055 ppb	09:19:56
3	Tl 190.801†	-21.5	1.5	2.6501 µg/L	2.6501 ppb	09:20:17
3	U 409.014†	-134.9	98.1	9.3544 µg/L	9.3544 ppb	09:19:56
3	V 292.402†	-139.5	-17.3	-0.1977 µg/L	-0.1977 ppb	09:19:56
3	Zn 213.857†	685.3	13.8	0.3878 µg/L	0.3878 ppb	09:20:17

Mean Data: LR2

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1950959.9	100.39 %	%	0.320			0.32%
Sc RADIAL	76040.0	99.0 %	%	0.11			0.11%
Y 371.029	1233132.2	100.35 %	%	0.363			0.36%
Ag 328.068†	47.4	0.4418 µg/L	µg/L	0.29938	0.4418 ppb	0.29938	67.76%
Al 396.153Radial†	22.3	15.493 µg/L	µg/L	13.6141	15.493 ppb	13.6141	87.87%
As 188.979†	-2.7	-6.2759 µg/L	µg/L	1.56290	-6.2759 ppb	1.56290	24.90%
B 249.677†	35.8	1.7302 µg/L	µg/L	0.31758	1.7302 ppb	0.31758	18.36%
Ba 233.527†	0.5	0.0128 µg/L	µg/L	0.17606	0.0128 ppb	0.17606	>999.9%
Be 313.107†	34.9	0.0242 µg/L	µg/L	0.02264	0.0242 ppb	0.02264	93.67%
Ca 317.933Radial†	24.8	19.536 µg/L	µg/L	3.3261	19.536 ppb	3.3261	17.03%
Cd 226.502†	11.1	0.3237 µg/L	µg/L	0.12915	0.3237 ppb	0.12915	39.89%
Co 228.616†	-0.3	-0.0162 µg/L	µg/L	0.30931	-0.0162 ppb	0.30931	>999.9%
Cr 267.716†	10.1	0.2332 µg/L	µg/L	0.09089	0.2332 ppb	0.09089	38.98%
Cu 324.752†	533.6	4.0155 µg/L	µg/L	0.27009	4.0155 ppb	0.27009	6.73%
Fe 238.204 Radial†	1.6	22.574 µg/L	µg/L	12.7603	22.574 ppb	12.7603	56.53%
K 766.490 Radial†	59.5	39.513 µg/L	µg/L	8.7484	39.513 ppb	8.7484	22.14%
Mg 279.077 IEC†	6.4	69.294 µg/L	µg/L	27.1715	69.294 ppb	27.1715	39.21%
Mn 257.610†	-15.1	-0.0556 µg/L	µg/L	0.00703	-0.0556 ppb	0.00703	12.64%
Mo 202.031†	0.8	0.0962 µg/L	µg/L	0.59368	0.0962 ppb	0.59368	617.40%
Na 589.592 Radial†	-19.7	-5.6649 µg/L	µg/L	0.42895	-5.6649 ppb	0.42895	7.57%
Ni 231.604†	2.0	0.1294 µg/L	µg/L	0.10453	0.1294 ppb	0.10453	80.81%
P 214.914†	-35.8	-5.4565 µg/L	µg/L	16.96507	-5.4565 ppb	16.96507	310.92%
Pb 220.353†	5.8	1.6967 µg/L	µg/L	0.41453	1.6967 ppb	0.41453	24.43%
S 181.975 Axial†	-3.0	-17.472 µg/L	µg/L	7.9639	-17.472 ppb	7.9639	45.58%
Sb 206.836†	-14.4	-15.898 µg/L	µg/L	0.1945	-15.898 ppb	0.1945	1.22%
Se 196.026†	-6.0	-9.4519 µg/L	µg/L	14.65104	-9.4519 ppb	14.65104	155.01%
SiO2†	157.9	33.321 µg/L	µg/L	1.8819	33.321 ppb	1.8819	5.65%
Si 251.611†	215.5	18.073 µg/L	µg/L	1.0479	18.073 ppb	1.0479	5.80%
Sn 189.927†	9340.4	5451.9 µg/L	µg/L	122.68	5451.9 ppb	122.68	2.25%
Sr 421.552†	14.5	0.0922 µg/L	µg/L	0.06636	0.0922 ppb	0.06636	71.97%
Ti 334.940†	131.2	0.3221 µg/L	µg/L	0.09295	0.3221 ppb	0.09295	28.85%
Tl 190.801†	0.8	1.4318 µg/L	µg/L	1.71085	1.4318 ppb	1.71085	119.49%
U 409.014†	-5.5	-0.5324 µg/L	µg/L	8.71258	-0.5324 ppb	8.71258	>999.9%
V 292.402†	-12.6	-0.1550 µg/L	µg/L	0.03710	-0.1550 ppb	0.03710	23.94%
Zn 213.857†	14.9	0.4217 µg/L	µg/L	0.03665	0.4217 ppb	0.03665	8.69%

Sequence No.: 2
 Sample ID: CCV
 Analyst:
 Initial Sample Wt:
 Dilution:

Autosampler Location: 7
 Date Collected: 1/27/2010 09:20:27
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	77658.0	77658.0	101 %		09:21:02
1	Al 396.153Radial†	7654.3	7599.6	5269.5 µg/L	5269.5 ppb	09:21:02
1	Ca 317.933Radial†	7074.2	6746.2	5312.1 µg/L	5312.1 ppb	09:21:02
1	Fe 238.204 Radial†	389.4	369.3	5313.0 µg/L	5313.0 ppb	09:21:22
1	K 766.490 Radial†	8401.4	7898.7	5243.5 µg/L	5243.5 ppb	09:21:02
1	Mg 279.077 IEC†	499.2	485.5	5295.0 µg/L	5295.0 ppb	09:21:22
1	Na 589.592 Radial†	37261.3	36314.1	10428 µg/L	10428 ppb	09:21:02
1	Sr 421.552†	83392.8	81934.9	520.61 µg/L	520.61 ppb	09:21:02
1	Sc 361.383	1928098.4	1928098.4	99.213 %		09:22:26
1	Y 371.029	1215523.9	1215523.9	98.920 %		09:22:26
1	Ag 328.068†	56397.2	56899.7	534.26 µg/L	534.26 ppb	09:22:31
1	As 188.979†	238.2	239.6	551.83 µg/L	551.83 ppb	09:22:52
1	B 249.677†	10844.3	10815.2	524.25 µg/L	524.25 ppb	09:22:31
1	Ba 233.527†	18196.6	18355.5	534.25 µg/L	534.25 ppb	09:22:31
1	Be 313.107†	763452.8	765669.8	533.25 µg/L	533.25 ppb	09:22:26
1	Cd 226.502†	17886.6	18164.0	534.63 µg/L	534.63 ppb	09:22:31
1	Co 228.616†	9622.5	9743.8	537.17 µg/L	537.17 ppb	09:22:31
1	Cr 267.716†	22981.7	23246.8	539.53 µg/L	539.53 ppb	09:22:31
1	Cu 324.752†	74406.5	71328.6	537.05 µg/L	537.05 ppb	09:22:31
1	Mn 257.610†	141029.1	142337.3	526.32 µg/L	526.32 ppb	09:22:31
1	Mo 202.031†	4297.3	4314.2	542.07 µg/L	542.07 ppb	09:22:52
1	Ni 231.604†	8805.9	8540.4	537.52 µg/L	537.52 ppb	09:22:31
1	P 214.914†	1340.7	1148.9	2699.4 µg/L	2699.4 ppb	09:22:52
1	Pb 220.353†	1938.8	1898.3	553.78 µg/L	553.78 ppb	09:22:52
1	S 181.975 Axial†	212.8	188.9	1083.0 µg/L	1083.0 ppb	09:22:52
1	Sb 206.836†	520.5	502.2	558.27 µg/L	558.27 ppb	09:22:52
1	Se 196.026†	348.9	339.2	555.42 µg/L	555.42 ppb	09:22:52
1	SiO2†	29320.2	27274.0	5756.8 µg/L	5756.8 ppb	09:22:31
1	Si 251.611†	32082.3	32032.3	2686.8 µg/L	2686.8 ppb	09:22:31
1	Sn 189.927†	976.1	960.5	563.28 µg/L	563.28 ppb	09:22:52
1	Ti 334.940†	212701.2	213614.9	532.42 µg/L	532.42 ppb	09:22:26
1	Tl 190.801†	295.3	320.7	556.98 µg/L	556.98 ppb	09:22:52
1	U 409.014†	5272.7	5547.5	528.33 µg/L	528.33 ppb	09:22:31
1	V 292.402†	42624.5	43084.7	542.00 µg/L	542.00 ppb	09:22:31
1	Zn 213.857†	18948.8	18427.8	533.44 µg/L	533.44 ppb	09:22:31
2	Sc RADIAL	77663.2	77663.2	101 %		09:21:28
2	Al 396.153Radial†	7642.5	7587.4	5261.1 µg/L	5261.1 ppb	09:21:28
2	Ca 317.933Radial†	7070.7	6742.3	5309.0 µg/L	5309.0 ppb	09:21:28
2	Fe 238.204 Radial†	388.3	368.2	5297.9 µg/L	5297.9 ppb	09:21:48
2	K 766.490 Radial†	8336.8	7834.3	5200.7 µg/L	5200.7 ppb	09:21:28
2	Mg 279.077 IEC†	504.1	490.3	5346.6 µg/L	5346.6 ppb	09:21:48
2	Na 589.592 Radial†	37269.4	36319.7	10430 µg/L	10430 ppb	09:21:28
2	Sr 421.552†	83523.3	82058.5	521.39 µg/L	521.39 ppb	09:21:28
2	Sc 361.383	1937804.8	1937804.8	99.712 %		09:22:58
2	Y 371.029	1221278.1	1221278.1	99.388 %		09:22:58
2	Ag 328.068†	56570.0	56788.3	533.22 µg/L	533.22 ppb	09:23:04
2	As 188.979†	235.9	236.0	543.56 µg/L	543.56 ppb	09:23:24
2	B 249.677†	10937.4	10853.7	526.13 µg/L	526.13 ppb	09:23:04
2	Ba 233.527†	18319.6	18386.9	535.17 µg/L	535.17 ppb	09:23:04
2	Be 313.107†	761338.1	759694.5	529.09 µg/L	529.09 ppb	09:22:58
2	Cd 226.502†	18007.6	18195.0	535.55 µg/L	535.55 ppb	09:23:04
2	Co 228.616†	9671.6	9744.6	537.21 µg/L	537.21 ppb	09:23:04
2	Cr 267.716†	23027.9	23177.2	537.92 µg/L	537.92 ppb	09:23:04
2	Cu 324.752†	74686.8	71234.0	536.33 µg/L	536.33 ppb	09:23:04
2	Mn 257.610†	141618.7	142216.7	525.87 µg/L	525.87 ppb	09:23:04
2	Mo 202.031†	4272.1	4267.2	536.17 µg/L	536.17 ppb	09:23:24
2	Ni 231.604†	8860.5	8550.6	538.17 µg/L	538.17 ppb	09:23:04
2	P 214.914†	1343.1	1144.5	2689.0 µg/L	2689.0 ppb	09:23:24
2	Pb 220.353†	1936.2	1885.8	550.13 µg/L	550.13 ppb	09:23:24

2	S 181.975 Axial†	207.2	182.2	1044.7 µg/L	1044.7 ppb	09:23:24
2	Sb 206.836†	521.2	500.3	556.07 µg/L	556.07 ppb	09:23:24
2	Se 196.026†	353.6	342.2	560.01 µg/L	560.01 ppb	09:23:24
2	SiO2†	29370.4	27176.3	5736.2 µg/L	5736.2 ppb	09:23:04
2	Si 251.611†	32241.0	32029.5	2686.5 µg/L	2686.5 ppb	09:23:04
2	Sn 189.927†	977.1	956.5	560.96 µg/L	560.96 ppb	09:23:24
2	Ti 334.940†	212129.6	211967.7	528.31 µg/L	528.31 ppb	09:22:58
2	Tl 190.801†	286.3	310.2	538.92 µg/L	538.92 ppb	09:23:24
2	U 409.014†	5267.9	5516.1	525.33 µg/L	525.33 ppb	09:23:04
2	V 292.402†	42878.9	43124.7	542.45 µg/L	542.45 ppb	09:23:04
2	Zn 213.857†	19038.6	18422.2	533.27 µg/L	533.27 ppb	09:23:04
3	Sc RADIAL	77480.4	77480.4	101 %		09:21:54
3	Al 396.153Radial†	7634.3	7597.1	5269.1 µg/L	5269.1 ppb	09:21:54
3	Ca 317.933Radial†	7049.3	6737.5	5305.3 µg/L	5305.3 ppb	09:21:54
3	Fe 238.204 Radial†	385.3	366.2	5268.0 µg/L	5268.0 ppb	09:22:14
3	K 766.490 Radial†	8316.2	7833.3	5200.0 µg/L	5200.0 ppb	09:21:54
3	Mg 279.077 IEC†	505.9	493.3	5378.2 µg/L	5378.2 ppb	09:22:14
3	Na 589.592 Radial†	37205.3	36343.1	10436 µg/L	10436 ppb	09:21:54
3	Sr 421.552†	83333.4	82065.1	521.43 µg/L	521.43 ppb	09:21:54
3	Sc 361.383	1926729.9	1926729.9	99.143 %		09:23:31
3	Y 371.029	1212565.3	1212565.3	98.679 %		09:23:31
3	Ag 328.068†	55069.2	55600.6	521.97 µg/L	521.97 ppb	09:23:37
3	As 188.979†	216.0	217.3	500.57 µg/L	500.57 ppb	09:23:57
3	B 249.677†	10564.3	10540.5	510.86 µg/L	510.86 ppb	09:23:37
3	Ba 233.527†	17467.5	17633.1	513.22 µg/L	513.22 ppb	09:23:37
3	Be 313.107†	746564.4	749181.9	521.77 µg/L	521.77 ppb	09:23:31
3	Cd 226.502†	17128.7	17412.3	512.49 µg/L	512.49 ppb	09:23:37
3	Co 228.616†	9167.6	9291.9	512.19 µg/L	512.19 ppb	09:23:37
3	Cr 267.716†	21487.9	21756.5	504.95 µg/L	504.95 ppb	09:23:37
3	Cu 324.752†	71144.3	68091.4	512.70 µg/L	512.70 ppb	09:23:37
3	Mn 257.610†	134069.3	135418.4	500.75 µg/L	500.75 ppb	09:23:37
3	Mo 202.031†	3775.5	3790.9	476.35 µg/L	476.35 ppb	09:23:57
3	Ni 231.604†	8430.5	8168.0	514.09 µg/L	514.09 ppb	09:23:37
3	P 214.914†	1217.2	1025.2	2405.0 µg/L	2405.0 ppb	09:23:57
3	Pb 220.353†	1755.2	1714.4	500.04 µg/L	500.04 ppb	09:23:57
3	S 181.975 Axial†	195.6	171.8	984.78 µg/L	984.78 ppb	09:23:57
3	Sb 206.836†	476.4	458.1	508.78 µg/L	508.78 ppb	09:23:57
3	Se 196.026†	325.9	316.3	518.99 µg/L	518.99 ppb	09:23:57
3	SiO2†	28347.8	26314.2	5554.2 µg/L	5554.2 ppb	09:23:37
3	Si 251.611†	30961.1	30924.4	2593.8 µg/L	2593.8 ppb	09:23:37
3	Sn 189.927†	852.9	836.9	491.17 µg/L	491.17 ppb	09:23:57
3	Ti 334.940†	207646.6	208668.9	520.08 µg/L	520.08 ppb	09:23:31
3	Tl 190.801†	268.9	294.3	511.45 µg/L	511.45 ppb	09:23:57
3	U 409.014†	5062.2	5339.0	508.44 µg/L	508.44 ppb	09:23:37
3	V 292.402†	40463.4	40935.5	514.67 µg/L	514.67 ppb	09:23:37
3	Zn 213.857†	18060.9	17545.8	507.87 µg/L	507.87 ppb	09:23:37

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1930877.7	99.356 %	0.3107			0.31%
Sc RADIAL	77600.5	101 %	0.1			0.13%
Y 371.029	1216455.8	98.996 %	0.3606			0.36%
Ag 328.068†	56429.5	529.82 µg/L	6.816	529.82 ppb	6.816	1.29%
QC value within limits for Ag 328.068 Recovery = 105.96%						
Al 396.153Radial†	7594.7	5266.6 µg/L	4.71	5266.6 ppb	4.71	0.09%
QC value within limits for Al 396.153Radial Recovery = 105.33%						
As 188.979†	231.0	531.98 µg/L	27.521	531.98 ppb	27.521	5.17%
QC value within limits for As 188.979 Recovery = 106.40%						
B 249.677†	10736.5	520.41 µg/L	8.329	520.41 ppb	8.329	1.60%
QC value within limits for B 249.677 Recovery = 104.08%						
Ba 233.527†	18125.2	527.54 µg/L	12.417	527.54 ppb	12.417	2.35%
QC value within limits for Ba 233.527 Recovery = 105.51%						
Be 313.107†	758182.1	528.03 µg/L	5.813	528.03 ppb	5.813	1.10%
QC value within limits for Be 313.107 Recovery = 105.61%						
Ca 317.933Radial†	6742.0	5308.8 µg/L	3.41	5308.8 ppb	3.41	0.06%
QC value within limits for Ca 317.933Radial Recovery = 106.18%						
Cd 226.502†	17923.8	527.55 µg/L	13.058	527.55 ppb	13.058	2.48%
QC value within limits for Cd 226.502 Recovery = 105.51%						
Co 228.616†	9593.4	528.86 µg/L	14.432	528.86 ppb	14.432	2.73%

QC value within limits for Co 228.616 Recovery = 105.77%							
Cr 267.716†	22726.8	527.47 µg/L	19.517	527.47 ppb	19.517	3.70%	
QC value within limits for Cr 267.716 Recovery = 105.49%							
Cu 324.752†	70218.0	528.69 µg/L	13.855	528.69 ppb	13.855	2.62%	
QC value within limits for Cu 324.752 Recovery = 105.74%							
Fe 238.204 Radial†	367.9	5292.9 µg/L	22.89	5292.9 ppb	22.89	0.43%	
QC value within limits for Fe 238.204 Radial Recovery = 105.86%							
K 766.490 Radial†	7855.4	5214.7 µg/L	24.90	5214.7 ppb	24.90	0.48%	
QC value within limits for K 766.490 Radial Recovery = 104.29%							
Mg 279.077 IEC†	489.7	5339.9 µg/L	41.97	5339.9 ppb	41.97	0.79%	
QC value within limits for Mg 279.077 IEC Recovery = 106.80%							
Mn 257.610†	139990.8	517.65 µg/L	14.635	517.65 ppb	14.635	2.83%	
QC value within limits for Mn 257.610 Recovery = 103.53%							
Mo 202.031†	4124.1	518.20 µg/L	36.361	518.20 ppb	36.361	7.02%	
QC value within limits for Mo 202.031 Recovery = 103.64%							
Na 589.592 Radial†	36325.7	10431 µg/L	4.4	10431 ppb	4.4	0.04%	
QC value within limits for Na 589.592 Radial Recovery = 104.31%							
Ni 231.604†	8419.7	529.93 µg/L	13.718	529.93 ppb	13.718	2.59%	
QC value within limits for Ni 231.604 Recovery = 105.99%							
P 214.914†	1106.2	2597.8 µg/L	167.07	2597.8 ppb	167.07	6.43%	
QC value within limits for P 214.914 Recovery = 103.91%							
Pb 220.353†	1832.8	534.65 µg/L	30.029	534.65 ppb	30.029	5.62%	
QC value within limits for Pb 220.353 Recovery = 106.93%							
S 181.975 Axial†	181.0	1037.5 µg/L	49.51	1037.5 ppb	49.51	4.77%	
QC value within limits for S 181.975 Axial Recovery = 103.75%							
Sb 206.836†	486.9	541.04 µg/L	27.961	541.04 ppb	27.961	5.17%	
QC value within limits for Sb 206.836 Recovery = 108.21%							
Se 196.026†	332.6	544.81 µg/L	22.478	544.81 ppb	22.478	4.13%	
QC value within limits for Se 196.026 Recovery = 108.96%							
SiO2†	26921.5	5682.4 µg/L	111.50	5682.4 ppb	111.50	1.96%	
QC value within limits for SiO2 Recovery = 106.26%							
Si 251.611†	31662.0	2655.7 µg/L	53.59	2655.7 ppb	53.59	2.02%	
QC value within limits for Si 251.611 Recovery = 106.23%							
Sn 189.927†	917.9	538.47 µg/L	40.983	538.47 ppb	40.983	7.61%	
QC value within limits for Sn 189.927 Recovery = 107.69%							
Sr 421.552†	82019.5	521.14 µg/L	0.466	521.14 ppb	0.466	0.09%	
QC value within limits for Sr 421.552 Recovery = 104.23%							
Ti 334.940†	211417.2	526.93 µg/L	6.284	526.93 ppb	6.284	1.19%	
QC value within limits for Ti 334.940 Recovery = 105.39%							
Tl 190.801†	308.4	535.78 µg/L	22.931	535.78 ppb	22.931	4.28%	
QC value within limits for Tl 190.801 Recovery = 107.16%							
U 409.014†	5467.5	520.70 µg/L	10.726	520.70 ppb	10.726	2.06%	
QC value within limits for U 409.014 Recovery = 104.14%							
V 292.402†	42381.6	533.04 µg/L	15.911	533.04 ppb	15.911	2.99%	
QC value within limits for V 292.402 Recovery = 106.61%							
Zn 213.857†	18131.9	524.86 µg/L	14.716	524.86 ppb	14.716	2.80%	
QC value within limits for Zn 213.857 Recovery = 104.97%							
All analyte(s) passed QC.							

Sequence No.: 3

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 1/27/2010 09:24:07

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	75637.8	75637.8	98.5 %			09:24:40
1	Al 396.153Radial†	7.5	35.5	24.723 µg/L		24.723 ppb	09:24:40
1	Ca 317.933Radial†	253.4	5.7	4.5028 µg/L		4.5028 ppb	09:25:00
1	Fe 238.204 Radial†	17.4	1.8	25.316 µg/L		25.316 ppb	09:25:00
1	K 766.490 Radial†	447.3	42.3	28.090 µg/L		28.090 ppb	09:24:40
1	Mg 279.077 IEC†	13.2	5.1	55.287 µg/L		55.287 ppb	09:25:00
1	Na 589.592 Radial†	598.9	63.3	18.182 µg/L		18.182 ppb	09:24:40
1	Sr 421.552†	598.6	50.2	0.3191 µg/L		0.3191 ppb	09:24:40
1	Sc 361.383	1940481.8	1940481.8	99.850 %			09:26:02
1	Y 371.029	1228957.2	1228957.2	100.01 %			09:26:02
1	Ag 328.068†	-39.6	15.4	0.1472 µg/L		0.1472 ppb	09:26:08
1	As 188.979†	0.3	-0.2	-0.5715 µg/L		-0.5715 ppb	09:26:28
1	B 249.677†	139.3	24.3	1.1694 µg/L		1.1694 ppb	09:26:08
1	Ba 233.527†	-9.7	4.8	0.1397 µg/L		0.1397 ppb	09:26:28
1	Be 313.107†	3905.4	71.9	0.0499 µg/L		0.0499 ppb	09:26:08
1	Cd 226.502†	-130.3	5.0	0.1447 µg/L		0.1447 ppb	09:26:28
1	Co 228.616†	-39.3	5.6	0.3092 µg/L		0.3092 ppb	09:26:28
1	Cr 267.716†	-76.9	5.8	0.1337 µg/L		0.1337 ppb	09:26:08
1	Cu 324.752†	4078.0	415.9	3.1304 µg/L		3.1304 ppb	09:26:08
1	Mn 257.610†	-194.3	-5.1	-0.0178 µg/L		-0.0178 ppb	09:26:28
1	Mo 202.031†	3.1	-14.1	-1.7652 µg/L		-1.7652 ppb	09:26:28
1	Ni 231.604†	343.3	8.4	0.5283 µg/L		0.5283 ppb	09:26:28
1	P 214.914†	209.0	6.8	16.022 µg/L		16.022 ppb	09:26:28
1	Pb 220.353†	59.7	3.8	1.1053 µg/L		1.1053 ppb	09:26:28
1	S 181.975 Axial†	20.6	-4.9	-28.219 µg/L		-28.219 ppb	09:26:28
1	Sb 206.836†	27.8	5.4	5.9530 µg/L		5.9530 ppb	09:26:28
1	Se 196.026†	8.0	-4.4	-6.8545 µg/L		-6.8545 ppb	09:26:28
1	SiO2†	2273.7	-1.7	-0.3611 µg/L		-0.3611 ppb	09:26:08
1	Si 251.611†	332.5	28.5	2.3879 µg/L		2.3879 ppb	09:26:28
1	Sn 189.927†	23.4	0.0	0.0352 µg/L		0.0352 ppb	09:26:28
1	Ti 334.940†	930.9	158.6	0.3912 µg/L		0.3912 ppb	09:26:08
1	Tl 190.801†	-22.4	0.7	1.1502 µg/L		1.1502 ppb	09:26:28
1	U 409.014†	-220.3	12.3	1.1736 µg/L		1.1736 ppb	09:26:08
1	V 292.402†	-98.1	23.9	0.2868 µg/L		0.2868 ppb	09:26:08
1	Zn 213.857†	691.4	21.2	0.6051 µg/L		0.6051 ppb	09:26:28
2	Sc RADIAL	75398.5	75398.5	98.2 %			09:25:06
2	Al 396.153Radial†	-2.5	25.4	17.670 µg/L		17.670 ppb	09:25:06
2	Ca 317.933Radial†	263.2	16.5	13.019 µg/L		13.019 ppb	09:25:26
2	Fe 238.204 Radial†	17.1	1.5	21.901 µg/L		21.901 ppb	09:25:26
2	K 766.490 Radial†	432.2	28.4	18.831 µg/L		18.831 ppb	09:25:06
2	Mg 279.077 IEC†	11.0	2.9	31.752 µg/L		31.752 ppb	09:25:26
2	Na 589.592 Radial†	542.7	8.0	2.2848 µg/L		2.2848 ppb	09:25:06
2	Sr 421.552†	543.1	-4.4	-0.0278 µg/L		-0.0278 ppb	09:25:06
2	Sc 361.383	1951012.5	1951012.5	100.39 %			09:26:35
2	Y 371.029	1235099.7	1235099.7	100.51 %			09:26:35
2	Ag 328.068†	-2.8	52.3	0.4879 µg/L		0.4879 ppb	09:26:40
2	As 188.979†	-2.6	-3.2	-7.2830 µg/L		-7.2830 ppb	09:27:01
2	B 249.677†	173.9	58.0	2.8094 µg/L		2.8094 ppb	09:26:40
2	Ba 233.527†	-5.9	8.7	0.2520 µg/L		0.2520 ppb	09:27:01
2	Be 313.107†	3970.8	115.8	0.0807 µg/L		0.0807 ppb	09:26:40
2	Cd 226.502†	-129.2	6.7	0.1962 µg/L		0.1962 ppb	09:27:01
2	Co 228.616†	-40.3	4.8	0.2665 µg/L		0.2665 ppb	09:27:01
2	Cr 267.716†	-69.5	13.5	0.3135 µg/L		0.3135 ppb	09:26:40
2	Cu 324.752†	4071.7	387.6	2.9172 µg/L		2.9172 ppb	09:26:40
2	Mn 257.610†	-178.8	11.4	0.0437 µg/L		0.0437 ppb	09:27:01
2	Mo 202.031†	19.3	2.0	0.2532 µg/L		0.2532 ppb	09:27:01
2	Ni 231.604†	346.6	9.8	0.6182 µg/L		0.6182 ppb	09:27:01
2	P 214.914†	209.2	5.9	13.785 µg/L		13.785 ppb	09:27:01
2	Pb 220.353†	45.0	-11.1	-3.2524 µg/L		-3.2524 ppb	09:27:01

2	S 181.975 Axial†	22.4	-3.2	-18.564 µg/L	-18.564 ppb	09:27:01
2	Sb 206.836†	25.9	3.4	3.7089 µg/L	3.7089 ppb	09:27:01
2	Se 196.026†	14.4	1.9	3.0609 µg/L	3.0609 ppb	09:27:01
2	SiO2†	2263.2	-24.4	-5.1500 µg/L	-5.1500 ppb	09:26:40
2	Si 251.611†	335.3	29.5	2.4734 µg/L	2.4734 ppb	09:27:01
2	Sn 189.927†	25.2	1.7	0.9914 µg/L	0.9914 ppb	09:27:01
2	Ti 334.940†	787.9	11.2	0.0257 µg/L	0.0257 ppb	09:26:40
2	Tl 190.801†	-20.4	2.8	4.8252 µg/L	4.8252 ppb	09:27:01
2	U 409.014†	-187.1	46.6	4.4407 µg/L	4.4407 ppb	09:26:40
2	V 292.402†	-131.0	-8.4	-0.0960 µg/L	-0.0960 ppb	09:26:40
2	Zn 213.857†	702.4	28.4	0.8167 µg/L	0.8167 ppb	09:27:01
3	Sc RADIAL	75525.1	75525.1	98.3 %		09:25:32
3	Al 396.153Radial†	-19.4	8.3	5.7463 µg/L	5.7463 ppb	09:25:32
3	Ca 317.933Radial†	255.6	8.3	6.5139 µg/L	6.5139 ppb	09:25:52
3	Fe 238.204 Radial†	15.8	0.1	2.1414 µg/L	2.1414 ppb	09:25:52
3	K 766.490 Radial†	493.8	90.2	59.904 µg/L	59.904 ppb	09:25:32
3	Mg 279.077 IEC†	11.4	3.3	35.792 µg/L	35.792 ppb	09:25:52
3	Na 589.592 Radial†	566.1	30.8	8.8572 µg/L	8.8572 ppb	09:25:32
3	Sr 421.552†	535.2	-13.3	-0.0844 µg/L	-0.0844 ppb	09:25:32
3	Sc 361.383	1946266.4	1946266.4	100.15 %		09:27:07
3	Y 371.029	1231901.9	1231901.9	100.25 %		09:27:07
3	Ag 328.068†	-15.5	39.7	0.3704 µg/L	0.3704 ppb	09:27:12
3	As 188.979†	1.9	1.3	3.0197 µg/L	3.0197 ppb	09:27:33
3	B 249.677†	167.5	52.0	2.5289 µg/L	2.5289 ppb	09:27:12
3	Ba 233.527†	-4.5	10.0	0.2914 µg/L	0.2914 ppb	09:27:33
3	Be 313.107†	4039.3	193.9	0.1350 µg/L	0.1350 ppb	09:27:12
3	Cd 226.502†	-125.7	10.0	0.2935 µg/L	0.2935 ppb	09:27:33
3	Co 228.616†	-44.3	0.7	0.0406 µg/L	0.0406 ppb	09:27:33
3	Cr 267.716†	-92.6	-9.7	-0.2248 µg/L	-0.2248 ppb	09:27:12
3	Cu 324.752†	4080.9	406.7	3.0580 µg/L	3.0580 ppb	09:27:12
3	Mn 257.610†	-196.0	-6.2	-0.0240 µg/L	-0.0240 ppb	09:27:33
3	Mo 202.031†	17.0	-0.2	-0.0311 µg/L	-0.0311 ppb	09:27:33
3	Ni 231.604†	346.6	10.7	0.6731 µg/L	0.6731 ppb	09:27:33
3	P 214.914†	204.6	1.8	4.0688 µg/L	4.0688 ppb	09:27:33
3	Pb 220.353†	74.3	18.2	5.3233 µg/L	5.3233 ppb	09:27:33
3	S 181.975 Axial†	23.6	-1.9	-11.103 µg/L	-11.103 ppb	09:27:33
3	Sb 206.836†	26.6	4.2	4.6242 µg/L	4.6242 ppb	09:27:33
3	Se 196.026†	3.8	-8.7	-13.694 µg/L	-13.694 ppb	09:27:33
3	SiO2†	2249.1	-32.9	-6.9535 µg/L	-6.9535 ppb	09:27:12
3	Si 251.611†	320.7	15.8	1.3216 µg/L	1.3216 ppb	09:27:33
3	Sn 189.927†	23.8	0.3	0.1958 µg/L	0.1958 ppb	09:27:33
3	Ti 334.940†	837.0	62.1	0.1522 µg/L	0.1522 ppb	09:27:12
3	Tl 190.801†	-21.0	2.1	3.5596 µg/L	3.5596 ppb	09:27:33
3	U 409.014†	-360.3	-126.8	-12.103 µg/L	-12.103 ppb	09:27:12
3	V 292.402†	-115.8	6.5	0.0680 µg/L	0.0680 ppb	09:27:12
3	Zn 213.857†	692.1	19.8	0.5667 µg/L	0.5667 ppb	09:27:33

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1945920.2	100.13 %	0.271			0.27%
Sc RADIAL	75520.5	98.3 %	0.16			0.16%
Y 371.029	1231986.3	100.26 %	0.250			0.25%
Ag 328.068†	35.8	0.3351 µg/L	0.17304	0.3351 ppb	0.17304	51.63%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	23.1	16.046 µg/L	9.5920	16.046 ppb	9.5920	59.78%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	-0.7	-1.6116 µg/L	5.22951	-1.6116 ppb	5.22951	324.50%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	44.8	2.1693 µg/L	0.87715	2.1693 ppb	0.87715	40.44%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	7.8	0.2277 µg/L	0.07871	0.2277 ppb	0.07871	34.57%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	127.2	0.0886 µg/L	0.04310	0.0886 ppb	0.04310	48.67%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	10.2	8.0118 µg/L	4.45118	8.0118 ppb	4.45118	55.56%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	7.2	0.2115 µg/L	0.07556	0.2115 ppb	0.07556	35.73%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	3.7	0.2055 µg/L	0.14432	0.2055 ppb	0.14432	70.24%

QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	3.2	0.0742 µg/L	0.27403	0.0742 ppb	0.27403	369.56%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	403.4	3.0352 µg/L	0.10842	3.0352 ppb	0.10842	3.57%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	1.1	16.453 µg/L	12.5113	16.453 ppb	12.5113	76.04%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated						
K 766.490 Radial†	53.6	35.608 µg/L	21.5442	35.608 ppb	21.5442	60.50%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	3.8	40.944 µg/L	12.5847	40.944 ppb	12.5847	30.74%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated						
Mn 257.610†	0.0	0.0006 µg/L	0.03742	0.0006 ppb	0.03742	>999.9%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	-4.1	-0.5143 µg/L	1.09253	-0.5143 ppb	1.09253	212.42%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	34.0	9.7747 µg/L	7.98833	9.7747 ppb	7.98833	81.72%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	9.6	0.6065 µg/L	0.07311	0.6065 ppb	0.07311	12.05%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	4.9	11.292 µg/L	6.3546	11.292 ppb	6.3546	56.28%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	3.6	1.0587 µg/L	4.28806	1.0587 ppb	4.28806	405.02%
QC value within limits for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	-3.4	-19.295 µg/L	8.5811	-19.295 ppb	8.5811	44.47%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	4.3	4.7621 µg/L	1.12836	4.7621 ppb	1.12836	23.69%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	-3.7	-5.8292 µg/L	8.42448	-5.8292 ppb	8.42448	144.52%
QC value within limits for Se 196.026 Recovery = Not calculated						
SiO2†	-19.7	-4.1549 µg/L	3.40702	-4.1549 ppb	3.40702	82.00%
QC value within limits for SiO2 Recovery = Not calculated						
Si 251.611†	24.6	2.0610 µg/L	0.64175	2.0610 ppb	0.64175	31.14%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	0.7	0.4075 µg/L	0.51203	0.4075 ppb	0.51203	125.66%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	10.9	0.0689 µg/L	0.21844	0.0689 ppb	0.21844	316.82%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	77.3	0.1897 µg/L	0.18564	0.1897 ppb	0.18564	97.86%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	1.8	3.1783 µg/L	1.86690	3.1783 ppb	1.86690	58.74%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 409.014†	-22.6	-2.1629 µg/L	8.76206	-2.1629 ppb	8.76206	405.10%
QC value within limits for U 409.014 Recovery = Not calculated						
V 292.402†	7.4	0.0863 µg/L	0.19206	0.0863 ppb	0.19206	222.59%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	23.1	0.6628 µg/L	0.13460	0.6628 ppb	0.13460	20.31%
QC value within limits for Zn 213.857 Recovery = Not calculated						

All analyte(s) passed QC.

Sequence No.: 10

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 1/27/2010 10:02:52

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	78930.7	78930.7	103 %		10:03:30
1	Al 396.153Radial†	7594.5	7419.3	5144.7 µg/L	5144.7 ppb	10:03:30
1	Ca 317.933Radial†	6809.4	6375.6	5020.3 µg/L	5020.3 ppb	10:03:51
1	Fe 238.204 Radial†	385.8	359.6	5173.3 µg/L	5173.3 ppb	10:03:51
1	K 766.490 Radial†	8224.2	7592.3	5040.0 µg/L	5040.0 ppb	10:03:30
1	Mg 279.077 IEC†	495.6	474.0	5169.3 µg/L	5169.3 ppb	10:03:51
1	Na 589.592 Radial†	36830.9	35300.9	10137 µg/L	10137 ppb	10:03:30
1	Sr 421.552†	82551.3	79785.8	506.95 µg/L	506.95 ppb	10:03:30
1	Sc 361.383	1987417.9	1987417.9	102.27 %		10:04:54
1	Y 371.029	1253652.6	1253652.6	102.02 %		10:04:54
1	Ag 328.068†	56082.4	54895.1	515.44 µg/L	515.44 ppb	10:05:00
1	As 188.979†	237.4	231.6	533.52 µg/L	533.52 ppb	10:05:21
1	B 249.677†	10746.0	10392.8	503.74 µg/L	503.74 ppb	10:05:00
1	Ba 233.527†	18059.5	17674.0	514.41 µg/L	514.41 ppb	10:05:00
1	Be 313.107†	761588.0	740878.4	515.98 µg/L	515.98 ppb	10:04:54
1	Cd 226.502†	17758.8	17500.9	515.10 µg/L	515.10 ppb	10:05:00
1	Co 228.616†	9505.0	9339.4	514.86 µg/L	514.86 ppb	10:05:00
1	Cr 267.716†	22724.6	22304.0	517.65 µg/L	517.65 ppb	10:05:00
1	Cu 324.752†	73622.3	68323.2	514.43 µg/L	514.43 ppb	10:05:00
1	Mn 257.610†	139804.2	136896.9	506.21 µg/L	506.21 ppb	10:05:00
1	Mo 202.031†	4213.5	4103.0	515.53 µg/L	515.53 ppb	10:05:21
1	Ni 231.604†	8695.4	8167.3	514.04 µg/L	514.04 ppb	10:05:00
1	P 214.914†	1322.1	1090.3	2561.3 µg/L	2561.3 ppb	10:05:21
1	Pb 220.353†	1901.7	1803.7	526.17 µg/L	526.17 ppb	10:05:21
1	S 181.975 Axial†	208.3	178.1	1021.1 µg/L	1021.1 ppb	10:05:21
1	Sb 206.836†	509.8	476.1	529.22 µg/L	529.22 ppb	10:05:21
1	Se 196.026†	343.3	323.3	529.67 µg/L	529.67 ppb	10:05:21
1	SiO2†	29247.9	26321.3	5555.7 µg/L	5555.7 ppb	10:05:00
1	Si 251.611†	32010.7	30997.1	2599.9 µg/L	2599.9 ppb	10:05:00
1	Sn 189.927†	953.7	909.1	533.23 µg/L	533.23 ppb	10:05:21
1	Ti 334.940†	212336.9	206859.7	515.58 µg/L	515.58 ppb	10:04:54
1	Tl 190.801†	284.0	300.8	522.67 µg/L	522.67 ppb	10:05:21
1	U 409.014†	5260.3	5376.8	512.07 µg/L	512.07 ppb	10:05:00
1	V 292.402†	42304.3	41489.3	521.89 µg/L	521.89 ppb	10:05:00
1	Zn 213.857†	18721.1	17635.1	510.48 µg/L	510.48 ppb	10:05:00
2	Sc RADIAL	78794.4	78794.4	103 %		10:03:56
2	Al 396.153Radial†	7561.7	7400.1	5131.2 µg/L	5131.2 ppb	10:03:56
2	Ca 317.933Radial†	6825.7	6403.0	5041.8 µg/L	5041.8 ppb	10:04:17
2	Fe 238.204 Radial†	385.9	360.3	5184.0 µg/L	5184.0 ppb	10:04:17
2	K 766.490 Radial†	8239.4	7620.9	5059.0 µg/L	5059.0 ppb	10:03:56
2	Mg 279.077 IEC†	504.5	483.6	5273.6 µg/L	5273.6 ppb	10:04:17
2	Na 589.592 Radial†	36692.3	35227.8	10116 µg/L	10116 ppb	10:03:56
2	Sr 421.552†	82261.8	79642.5	506.04 µg/L	506.04 ppb	10:03:56
2	Sc 361.383	1963776.6	1963776.6	101.05 %		10:05:27
2	Y 371.029	1237823.3	1237823.3	100.73 %		10:05:27
2	Ag 328.068†	56176.5	55648.5	522.51 µg/L	522.51 ppb	10:05:33
2	As 188.979†	229.3	226.4	521.41 µg/L	521.41 ppb	10:05:53
2	B 249.677†	10829.8	10602.2	513.94 µg/L	513.94 ppb	10:05:33
2	Ba 233.527†	18137.8	17964.1	522.86 µg/L	522.86 ppb	10:05:33
2	Be 313.107†	751862.6	740219.2	515.52 µg/L	515.52 ppb	10:05:27
2	Cd 226.502†	17744.9	17696.2	520.86 µg/L	520.86 ppb	10:05:33
2	Co 228.616†	9543.1	9489.1	523.12 µg/L	523.12 ppb	10:05:33
2	Cr 267.716†	22822.5	22668.4	526.11 µg/L	526.11 ppb	10:05:33
2	Cu 324.752†	73788.9	69354.8	522.19 µg/L	522.19 ppb	10:05:33
2	Mn 257.610†	140203.2	138937.5	513.75 µg/L	513.75 ppb	10:05:33
2	Mo 202.031†	4223.7	4162.6	523.03 µg/L	523.03 ppb	10:05:53
2	Ni 231.604†	8724.6	8298.6	522.30 µg/L	522.30 ppb	10:05:33
2	P 214.914†	1337.1	1120.7	2633.3 µg/L	2633.3 ppb	10:05:53
2	Pb 220.353†	1899.7	1824.1	532.11 µg/L	532.11 ppb	10:05:53

2	S 181.975 Axial†	207.6	179.9	1031.4 µg/L	1031.4 ppb	10:05:53
2	Sb 206.836†	518.2	490.5	545.15 µg/L	545.15 ppb	10:05:53
2	Se 196.026†	342.3	326.3	534.41 µg/L	534.41 ppb	10:05:53
2	SiO2†	29285.2	26702.5	5636.2 µg/L	5636.2 ppb	10:05:33
2	Si 251.611†	32072.6	31435.2	2636.7 µg/L	2636.7 ppb	10:05:33
2	Sn 189.927†	957.6	924.2	542.07 µg/L	542.07 ppb	10:05:53
2	Ti 334.940†	209980.2	207027.1	515.99 µg/L	515.99 ppb	10:05:27
2	Tl 190.801†	286.9	307.0	533.34 µg/L	533.34 ppb	10:05:53
2	U 409.014†	5272.9	5451.2	519.17 µg/L	519.17 ppb	10:05:33
2	V 292.402†	42466.8	42148.2	530.16 µg/L	530.16 ppb	10:05:33
2	Zn 213.857†	18784.9	17918.6	518.69 µg/L	518.69 ppb	10:05:33
3	Sc RADIAL	78235.3	78235.3	102 %		10:04:22
3	Al 396.153Radial†	7548.6	7439.9	5160.2 µg/L	5160.2 ppb	10:04:22
3	Ca 317.933Radial†	6840.1	6464.6	5090.4 µg/L	5090.4 ppb	10:04:43
3	Fe 238.204 Radial†	383.1	360.3	5182.7 µg/L	5182.7 ppb	10:04:43
3	K 766.490 Radial†	8176.5	7616.5	5056.1 µg/L	5056.1 ppb	10:04:22
3	Mg 279.077 IEC†	499.5	482.2	5257.3 µg/L	5257.3 ppb	10:04:43
3	Na 589.592 Radial†	36548.6	35342.3	10149 µg/L	10149 ppb	10:04:22
3	Sr 421.552†	81735.9	79699.3	506.40 µg/L	506.40 ppb	10:04:22
3	Sc 361.383	1972507.2	1972507.2	101.50 %		10:06:00
3	Y 371.029	1244522.4	1244522.4	101.28 %		10:06:00
3	Ag 328.068†	54764.3	54011.1	507.05 µg/L	507.05 ppb	10:06:06
3	As 188.979†	209.6	206.0	474.43 µg/L	474.43 ppb	10:06:26
3	B 249.677†	10500.3	10230.1	495.78 µg/L	495.78 ppb	10:06:06
3	Ba 233.527†	17325.3	17084.1	497.24 µg/L	497.24 ppb	10:06:06
3	Be 313.107†	740051.9	725289.6	505.13 µg/L	505.13 ppb	10:06:00
3	Cd 226.502†	17046.2	16930.1	498.28 µg/L	498.28 ppb	10:06:06
3	Co 228.616†	9069.7	8980.8	495.04 µg/L	495.04 ppb	10:06:06
3	Cr 267.716†	21321.3	21089.4	489.47 µg/L	489.47 ppb	10:06:06
3	Cu 324.752†	70407.2	65699.8	494.71 µg/L	494.71 ppb	10:06:06
3	Mn 257.610†	133221.9	131445.0	486.07 µg/L	486.07 ppb	10:06:06
3	Mo 202.031†	3737.6	3665.3	460.56 µg/L	460.56 ppb	10:06:26
3	Ni 231.604†	8310.3	7852.3	494.21 µg/L	494.21 ppb	10:06:06
3	P 214.914†	1214.5	994.1	2332.1 µg/L	2332.1 ppb	10:06:26
3	Pb 220.353†	1739.3	1657.7	483.51 µg/L	483.51 ppb	10:06:26
3	S 181.975 Axial†	199.8	171.3	982.02 µg/L	982.02 ppb	10:06:26
3	Sb 206.836†	463.6	434.4	482.49 µg/L	482.49 ppb	10:06:26
3	Se 196.026†	316.8	299.7	492.43 µg/L	492.43 ppb	10:06:26
3	SiO2†	28360.6	25663.2	5416.8 µg/L	5416.8 ppb	10:06:06
3	Si 251.611†	30927.1	30166.1	2530.2 µg/L	2530.2 ppb	10:06:06
3	Sn 189.927†	844.1	808.2	474.34 µg/L	474.34 ppb	10:06:26
3	Ti 334.940†	205918.4	202105.4	503.71 µg/L	503.71 ppb	10:06:00
3	Tl 190.801†	267.6	286.7	498.16 µg/L	498.16 ppb	10:06:26
3	U 409.014†	4957.5	5117.3	487.31 µg/L	487.31 ppb	10:06:06
3	V 292.402†	40147.9	39677.5	498.84 µg/L	498.84 ppb	10:06:06
3	Zn 213.857†	17893.0	16957.6	490.85 µg/L	490.85 ppb	10:06:06

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1974567.2	101.60 %	0.615			0.61%
Sc RADIAL	78653.4	102 %	0.5			0.47%
Y 371.029	1245332.8	101.35 %	0.647			0.64%
Ag 328.068†	54851.6	515.00 µg/L	7.742	515.00 ppb	7.742	1.50%
QC value within limits for Ag 328.068 Recovery = 103.00%						
Al 396.153Radial†	7419.8	5145.4 µg/L	14.48	5145.4 ppb	14.48	0.28%
QC value within limits for Al 396.153Radial Recovery = 102.91%						
As 188.979†	221.3	509.79 µg/L	31.214	509.79 ppb	31.214	6.12%
QC value within limits for As 188.979 Recovery = 101.96%						
B 249.677†	10408.4	504.48 µg/L	9.102	504.48 ppb	9.102	1.80%
QC value within limits for B 249.677 Recovery = 100.90%						
Ba 233.527†	17574.1	511.50 µg/L	13.057	511.50 ppb	13.057	2.55%
QC value within limits for Ba 233.527 Recovery = 102.30%						
Be 313.107†	735462.4	512.21 µg/L	6.140	512.21 ppb	6.140	1.20%
QC value within limits for Be 313.107 Recovery = 102.44%						
Ca 317.933Radial†	6414.4	5050.8 µg/L	35.92	5050.8 ppb	35.92	0.71%
QC value within limits for Ca 317.933Radial Recovery = 101.02%						
Cd 226.502†	17375.7	511.41 µg/L	11.734	511.41 ppb	11.734	2.29%
QC value within limits for Cd 226.502 Recovery = 102.28%						
Co 228.616†	9269.8	511.01 µg/L	14.433	511.01 ppb	14.433	2.82%

QC value within limits for Co 228.616 Recovery = 102.20%							
Cr 267.716†	22020.6	511.08 µg/L	19.186	511.08 ppb	19.186	3.75%	
QC value within limits for Cr 267.716 Recovery = 102.22%							
Cu 324.752†	67792.6	510.44 µg/L	14.168	510.44 ppb	14.168	2.78%	
QC value within limits for Cu 324.752 Recovery = 102.09%							
Fe 238.204 Radial†	360.1	5180.0 µg/L	5.84	5180.0 ppb	5.84	0.11%	
QC value within limits for Fe 238.204 Radial Recovery = 103.60%							
K 766.490 Radial†	7609.9	5051.7 µg/L	10.24	5051.7 ppb	10.24	0.20%	
QC value within limits for K 766.490 Radial Recovery = 101.03%							
Mg 279.077 IEC†	479.9	5233.4 µg/L	56.09	5233.4 ppb	56.09	1.07%	
QC value within limits for Mg 279.077 IEC Recovery = 104.67%							
Mn 257.610†	135759.8	502.01 µg/L	14.310	502.01 ppb	14.310	2.85%	
QC value within limits for Mn 257.610 Recovery = 100.40%							
Mo 202.031†	3977.0	499.71 µg/L	34.110	499.71 ppb	34.110	6.83%	
QC value within limits for Mo 202.031 Recovery = 99.94%							
Na 589.592 Radial†	35290.4	10134 µg/L	16.6	10134 ppb	16.6	0.16%	
QC value within limits for Na 589.592 Radial Recovery = 101.34%							
Ni 231.604†	8106.1	510.19 µg/L	14.436	510.19 ppb	14.436	2.83%	
QC value within limits for Ni 231.604 Recovery = 102.04%							
P 214.914†	1068.4	2508.9 µg/L	157.30	2508.9 ppb	157.30	6.27%	
QC value within limits for P 214.914 Recovery = 100.36%							
Pb 220.353†	1761.8	513.93 µg/L	26.510	513.93 ppb	26.510	5.16%	
QC value within limits for Pb 220.353 Recovery = 102.79%							
S 181.975 Axial†	176.5	1011.5 µg/L	26.06	1011.5 ppb	26.06	2.58%	
QC value within limits for S 181.975 Axial Recovery = 101.15%							
Sb 206.836†	467.0	518.95 µg/L	32.570	518.95 ppb	32.570	6.28%	
QC value within limits for Sb 206.836 Recovery = 103.79%							
Se 196.026†	316.4	518.84 µg/L	22.994	518.84 ppb	22.994	4.43%	
QC value within limits for Se 196.026 Recovery = 103.77%							
SiO2†	26229.0	5536.2 µg/L	110.97	5536.2 ppb	110.97	2.00%	
QC value within limits for SiO2 Recovery = 103.53%							
Si 251.611†	30866.2	2589.0 µg/L	54.07	2589.0 ppb	54.07	2.09%	
QC value within limits for Si 251.611 Recovery = 103.56%							
Sn 189.927†	880.5	516.55 µg/L	36.818	516.55 ppb	36.818	7.13%	
QC value within limits for Sn 189.927 Recovery = 103.31%							
Sr 421.552†	79709.2	506.47 µg/L	0.458	506.47 ppb	0.458	0.09%	
QC value within limits for Sr 421.552 Recovery = 101.29%							
Ti 334.940†	205330.7	511.76 µg/L	6.970	511.76 ppb	6.970	1.36%	
QC value within limits for Ti 334.940 Recovery = 102.35%							
Tl 190.801†	298.2	518.06 µg/L	18.041	518.06 ppb	18.041	3.48%	
QC value within limits for Tl 190.801 Recovery = 103.61%							
U 409.014†	5315.1	506.18 µg/L	16.728	506.18 ppb	16.728	3.30%	
QC value within limits for U 409.014 Recovery = 101.24%							
V 292.402†	41105.0	516.96 µg/L	16.231	516.96 ppb	16.231	3.14%	
QC value within limits for V 292.402 Recovery = 103.39%							
Zn 213.857†	17503.8	506.68 µg/L	14.309	506.68 ppb	14.309	2.82%	
QC value within limits for Zn 213.857 Recovery = 101.34%							
All analyte(s) passed QC.							

Sequence No.: 11

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 1/27/2010 10:06:35

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	76167.5	76167.5	99.2 %		10:07:08
1	Al 396.153Radial†	-30.6	-2.9	-2.0154 µg/L	-2.0154 ppb	10:07:08
1	Ca 317.933Radial†	255.2	5.7	4.5179 µg/L	4.5179 ppb	10:07:28
1	Fe 238.204 Radial†	19.3	3.6	51.197 µg/L	51.197 ppb	10:07:28
1	K 766.490 Radial†	441.1	32.9	21.862 µg/L	21.862 ppb	10:07:08
1	Mg 279.077 IEC†	10.2	1.9	20.973 µg/L	20.973 ppb	10:07:28
1	Na 589.592 Radial†	435.3	-105.9	-30.403 µg/L	-30.403 ppb	10:07:08
1	Sr 421.552†	581.9	29.2	0.1856 µg/L	0.1856 ppb	10:07:08
1	Sc 361.383	1969413.2	1969413.2	101.34 %		10:08:30
1	Y 371.029	1246832.7	1246832.7	101.47 %		10:08:30
1	Ag 328.068†	-60.7	-4.8	-0.0398 µg/L	-0.0398 ppb	10:08:36
1	As 188.979†	0.1	-0.5	-1.1488 µg/L	-1.1488 ppb	10:08:56
1	B 249.677†	152.7	35.5	1.7007 µg/L	1.7007 ppb	10:08:56
1	Ba 233.527†	-18.4	-3.7	-0.1057 µg/L	-0.1057 ppb	10:08:56
1	Be 313.107†	3908.7	17.6	0.0121 µg/L	0.0121 ppb	10:08:36
1	Cd 226.502†	-131.0	6.2	0.1760 µg/L	0.1760 ppb	10:08:56
1	Co 228.616†	-47.0	-1.4	-0.0771 µg/L	-0.0771 ppb	10:08:56
1	Cr 267.716†	-72.6	11.2	0.2590 µg/L	0.2590 ppb	10:08:36
1	Cu 324.752†	3791.8	73.5	0.5594 µg/L	0.5594 ppb	10:08:36
1	Mn 257.610†	-152.5	39.1	0.1502 µg/L	0.1502 ppb	10:08:56
1	Mo 202.031†	14.5	-2.9	-0.3622 µg/L	-0.3622 ppb	10:08:56
1	Ni 231.604†	346.8	6.8	0.4307 µg/L	0.4307 ppb	10:08:56
1	P 214.914†	201.6	-3.6	-8.6519 µg/L	-8.6519 ppb	10:08:56
1	Pb 220.353†	63.7	6.9	2.0184 µg/L	2.0184 ppb	10:08:56
1	S 181.975 Axial†	23.0	-2.9	-16.436 µg/L	-16.436 ppb	10:08:56
1	Sb 206.836†	30.3	7.5	8.2873 µg/L	8.2873 ppb	10:08:56
1	Se 196.026†	6.2	-6.3	-9.7576 µg/L	-9.7576 ppb	10:08:56
1	SiO2†	2278.2	-30.7	-6.4696 µg/L	-6.4696 ppb	10:08:36
1	Si 251.611†	359.6	50.4	4.2244 µg/L	4.2244 ppb	10:08:56
1	Sn 189.927†	23.5	-0.2	-0.1263 µg/L	-0.1263 ppb	10:08:56
1	Ti 334.940†	947.6	161.4	0.4009 µg/L	0.4009 ppb	10:08:36
1	Tl 190.801†	-25.5	-2.1	-3.5935 µg/L	-3.5935 ppb	10:08:56
1	U 409.014†	-236.7	-0.6	-0.0643 µg/L	-0.0643 ppb	10:08:36
1	V 292.402†	-98.9	24.5	0.3052 µg/L	0.3052 ppb	10:08:36
1	Zn 213.857†	681.4	1.1	0.0265 µg/L	0.0265 ppb	10:08:56
2	Sc RADIAL	76583.4	76583.4	99.7 %		10:07:34
2	Al 396.153Radial†	-34.7	-6.8	-4.7669 µg/L	-4.7669 ppb	10:07:34
2	Ca 317.933Radial†	249.3	-1.6	-1.2327 µg/L	-1.2327 ppb	10:07:54
2	Fe 238.204 Radial†	18.9	3.1	43.851 µg/L	43.851 ppb	10:07:54
2	K 766.490 Radial†	421.1	10.4	6.9301 µg/L	6.9301 ppb	10:07:34
2	Mg 279.077 IEC†	11.6	3.3	35.801 µg/L	35.801 ppb	10:07:54
2	Na 589.592 Radial†	447.8	-95.7	-27.486 µg/L	-27.486 ppb	10:07:34
2	Sr 421.552†	570.3	14.4	0.0915 µg/L	0.0915 ppb	10:07:34
2	Sc 361.383	1957148.2	1957148.2	100.71 %		10:09:03
2	Y 371.029	1239345.3	1239345.3	100.86 %		10:09:03
2	Ag 328.068†	-77.2	-21.5	-0.1969 µg/L	-0.1969 ppb	10:09:08
2	As 188.979†	-0.8	-1.3	-3.0219 µg/L	-3.0219 ppb	10:09:29
2	B 249.677†	142.4	26.2	1.2534 µg/L	1.2534 ppb	10:09:29
2	Ba 233.527†	-13.9	0.7	0.0213 µg/L	0.0213 ppb	10:09:29
2	Be 313.107†	3932.3	65.2	0.0453 µg/L	0.0453 ppb	10:09:08
2	Cd 226.502†	-136.4	0.0	-0.0043 µg/L	-0.0043 ppb	10:09:29
2	Co 228.616†	-41.4	3.9	0.2174 µg/L	0.2174 ppb	10:09:29
2	Cr 267.716†	-73.1	10.2	0.2376 µg/L	0.2376 ppb	10:09:08
2	Cu 324.752†	3720.6	26.2	0.2032 µg/L	0.2032 ppb	10:09:08
2	Mn 257.610†	-152.0	38.5	0.1467 µg/L	0.1467 ppb	10:09:29
2	Mo 202.031†	28.3	10.9	1.3718 µg/L	1.3718 ppb	10:09:29
2	Ni 231.604†	346.3	8.4	0.5302 µg/L	0.5302 ppb	10:09:29
2	P 214.914†	198.4	-5.4	-13.125 µg/L	-13.125 ppb	10:09:29
2	Pb 220.353†	68.3	11.9	3.4800 µg/L	3.4800 ppb	10:09:29

2	S 181.975 Axial†	25.5	-0.2	-1.0437 µg/L	-1.0437 ppb	10:09:29
2	Sb 206.836†	28.9	6.3	7.0434 µg/L	7.0434 ppb	10:09:29
2	Se 196.026†	5.4	-7.1	-11.022 µg/L	-11.022 ppb	10:09:29
2	SiO2†	2308.7	13.7	2.8956 µg/L	2.8956 ppb	10:09:08
2	Si 251.611†	377.1	69.9	5.8641 µg/L	5.8641 ppb	10:09:29
2	Sn 189.927†	19.7	-3.8	-2.2317 µg/L	-2.2317 ppb	10:09:29
2	Ti 334.940†	910.6	130.6	0.3228 µg/L	0.3228 ppb	10:09:08
2	Tl 190.801†	-20.3	3.0	5.1015 µg/L	5.1015 ppb	10:09:29
2	U 409.014†	-278.6	-43.7	-4.1719 µg/L	-4.1719 ppb	10:09:08
2	V 292.402†	-108.6	14.3	0.1864 µg/L	0.1864 ppb	10:09:08
2	Zn 213.857†	687.0	10.8	0.3085 µg/L	0.3085 ppb	10:09:29
3	Sc RADIAL	76172.6	76172.6	99.2 %		10:08:00
3	Al 396.153Radial†	-25.3	2.4	1.6852 µg/L	1.6852 ppb	10:08:00
3	Ca 317.933Radial†	256.8	7.3	5.7840 µg/L	5.7840 ppb	10:08:20
3	Fe 238.204 Radial†	16.9	1.1	16.320 µg/L	16.320 ppb	10:08:20
3	K 766.490 Radial†	419.8	11.4	7.5461 µg/L	7.5461 ppb	10:08:00
3	Mg 279.077 IEC†	9.5	1.3	13.955 µg/L	13.955 ppb	10:08:20
3	Na 589.592 Radial†	429.4	-111.9	-32.124 µg/L	-32.124 ppb	10:08:00
3	Sr 421.552†	571.0	18.2	0.1157 µg/L	0.1157 ppb	10:08:00
3	Sc 361.383	1961861.5	1961861.5	100.95 %		10:09:35
3	Y 371.029	1241859.8	1241859.8	101.06 %		10:09:35
3	Ag 328.068†	9.7	64.7	0.6052 µg/L	0.6052 ppb	10:09:40
3	As 188.979†	-2.3	-2.8	-6.4475 µg/L	-6.4475 ppb	10:10:01
3	B 249.677†	136.8	20.3	0.9823 µg/L	0.9823 ppb	10:10:01
3	Ba 233.527†	-18.4	-3.7	-0.1059 µg/L	-0.1059 ppb	10:10:01
3	Be 313.107†	3966.3	89.6	0.0623 µg/L	0.0623 ppb	10:09:40
3	Cd 226.502†	-137.2	-0.5	-0.0152 µg/L	-0.0152 ppb	10:10:01
3	Co 228.616†	-51.8	-6.3	-0.3468 µg/L	-0.3468 ppb	10:10:01
3	Cr 267.716†	-56.1	27.2	0.6315 µg/L	0.6315 ppb	10:09:40
3	Cu 324.752†	3807.8	103.7	0.7821 µg/L	0.7821 ppb	10:09:40
3	Mn 257.610†	-157.7	33.3	0.1245 µg/L	0.1245 ppb	10:10:01
3	Mo 202.031†	16.2	-1.2	-0.1452 µg/L	-0.1452 ppb	10:10:01
3	Ni 231.604†	342.0	3.3	0.2098 µg/L	0.2098 ppb	10:10:01
3	P 214.914†	205.6	1.1	2.6470 µg/L	2.6470 ppb	10:10:01
3	Pb 220.353†	52.3	-4.1	-1.2120 µg/L	-1.2120 ppb	10:10:01
3	S 181.975 Axial†	24.8	-0.9	-5.2354 µg/L	-5.2354 ppb	10:10:01
3	Sb 206.836†	23.2	0.6	0.6139 µg/L	0.6139 ppb	10:10:01
3	Se 196.026†	11.2	-1.4	-2.0875 µg/L	-2.0875 ppb	10:10:01
3	SiO2†	2305.9	5.4	1.1466 µg/L	1.1466 ppb	10:09:40
3	Si 251.611†	369.9	61.9	5.1959 µg/L	5.1959 ppb	10:10:01
3	Sn 189.927†	25.0	1.4	0.8063 µg/L	0.8063 ppb	10:10:01
3	Ti 334.940†	942.8	160.3	0.3987 µg/L	0.3987 ppb	10:09:40
3	Tl 190.801†	-20.2	3.0	5.2028 µg/L	5.2028 ppb	10:10:01
3	U 409.014†	-216.2	18.8	1.7917 µg/L	1.7917 ppb	10:09:40
3	V 292.402†	-108.9	14.3	0.1805 µg/L	0.1805 ppb	10:09:40
3	Zn 213.857†	667.4	-10.2	-0.3015 µg/L	-0.3015 ppb	10:10:01

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1962807.6	101.00 %	0.318			0.32%
Sc RADIAL	76307.8	99.3 %	0.31			0.31%
Y 371.029	1242679.2	101.13 %	0.310			0.31%
Ag 328.068†	12.8	0.1228 µg/L	0.42507	0.1228 ppb	0.42507	346.04%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	-2.4	-1.6990 µg/L	3.23767	-1.6990 ppb	3.23767	190.56%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	-1.5	-3.5394 µg/L	2.68700	-3.5394 ppb	2.68700	75.92%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	27.4	1.3121 µg/L	0.36278	1.3121 ppb	0.36278	27.65%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	-2.2	-0.0635 µg/L	0.07337	-0.0635 ppb	0.07337	115.63%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	57.5	0.0399 µg/L	0.02551	0.0399 ppb	0.02551	63.94%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	3.8	3.0230 µg/L	3.73955	3.0230 ppb	3.73955	123.70%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	1.9	0.0521 µg/L	0.10736	0.0521 ppb	0.10736	205.90%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-1.2	-0.0688 µg/L	0.28217	-0.0688 ppb	0.28217	410.03%

QC value within limits for Co 228.616 Recovery = Not calculated							
Cr 267.716†	16.2	0.3761 µg/L	0.22152	0.3761 ppb	0.22152	58.91%	
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu 324.752†	67.8	0.5149 µg/L	0.29200	0.5149 ppb	0.29200	56.71%	
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe 238.204 Radial†	2.6	37.123 µg/L	18.3861	37.123 ppb	18.3861	49.53%	
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K 766.490 Radial†	18.2	12.113 µg/L	8.4485	12.113 ppb	8.4485	69.75%	
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg 279.077 IEC†	2.2	23.577 µg/L	11.1531	23.577 ppb	11.1531	47.31%	
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn 257.610†	36.9	0.1405 µg/L	0.01393	0.1405 ppb	0.01393	9.92%	
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo 202.031†	2.3	0.2881 µg/L	0.94475	0.2881 ppb	0.94475	327.88%	
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na 589.592 Radial†	-104.5	-30.004 µg/L	2.3442	-30.004 ppb	2.3442	7.81%	
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni 231.604†	6.2	0.3902 µg/L	0.16401	0.3902 ppb	0.16401	42.03%	
QC value within limits for Ni 231.604 Recovery = Not calculated							
P 214.914†	-2.6	-6.3768 µg/L	8.12859	-6.3768 ppb	8.12859	127.47%	
QC value within limits for P 214.914 Recovery = Not calculated							
Pb 220.353†	4.9	1.4288 µg/L	2.40090	1.4288 ppb	2.40090	168.04%	
QC value within limits for Pb 220.353 Recovery = Not calculated							
S 181.975 Axial†	-1.3	-7.5718 µg/L	7.95784	-7.5718 ppb	7.95784	105.10%	
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb 206.836†	4.8	5.3149 µg/L	4.11838	5.3149 ppb	4.11838	77.49%	
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	-4.9	-7.6223 µg/L	4.83478	-7.6223 ppb	4.83478	63.43%	
QC value within limits for Se 196.026 Recovery = Not calculated							
SiO2†	-3.8	-0.8092 µg/L	4.97951	-0.8092 ppb	4.97951	615.39%	
QC value within limits for SiO2 Recovery = Not calculated							
Si 251.611†	60.7	5.0948 µg/L	0.82452	5.0948 ppb	0.82452	16.18%	
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn 189.927†	-0.9	-0.5172 µg/L	1.55628	-0.5172 ppb	1.55628	300.90%	
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr 421.552†	20.6	0.1309 µg/L	0.04887	0.1309 ppb	0.04887	37.33%	
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti 334.940†	150.7	0.3741 µg/L	0.04451	0.3741 ppb	0.04451	11.90%	
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl 190.801†	1.3	2.2369 µg/L	5.04958	2.2369 ppb	5.04958	225.74%	
QC value within limits for Tl 190.801 Recovery = Not calculated							
U 409.014†	-8.5	-0.8148 µg/L	3.05180	-0.8148 ppb	3.05180	374.53%	
QC value within limits for U 409.014 Recovery = Not calculated							
V 292.402†	17.7	0.2241 µg/L	0.07035	0.2241 ppb	0.07035	31.40%	
QC value within limits for V 292.402 Recovery = Not calculated							
Zn 213.857†	0.6	0.0112 µg/L	0.30527	0.0112 ppb	0.30527	>999.9%	
QC value within limits for Zn 213.857 Recovery = Not calculated							
All analyte(s) passed QC.							

Sequence No.: 21
 Sample ID: CCV
 Analyst:
 Initial Sample Wt:
 Dilution:

Autosampler Location: 7
 Date Collected: 1/27/2010 10:43:27
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	78513.9	78513.9	102 %		10:44:05
1	Al 396.153Radial†	7536.0	7401.3	5132.0 µg/L	5132.0 ppb	10:44:05
1	Ca 317.933Radial†	6914.5	6513.6	5129.0 µg/L	5129.0 ppb	10:44:05
1	Fe 238.204 Radial†	385.7	361.5	5201.7 µg/L	5201.7 ppb	10:44:26
1	K 766.490 Radial†	8205.9	7616.8	5056.3 µg/L	5056.3 ppb	10:44:05
1	Mg 279.077 IEC†	502.1	483.0	5267.1 µg/L	5267.1 ppb	10:44:26
1	Na 589.592 Radial†	36447.7	35116.3	10084 µg/L	10084 ppb	10:44:05
1	Sr 421.552†	81801.8	79479.0	505.00 µg/L	505.00 ppb	10:44:05
1	Sc 361.383	1954549.4	1954549.4	100.57 %		10:45:29
1	Y 371.029	1231977.8	1231977.8	100.26 %		10:45:29
1	Ag 328.068†	56498.5	56231.1	527.97 µg/L	527.97 ppb	10:45:35
1	As 188.979†	232.5	230.6	531.18 µg/L	531.18 ppb	10:45:55
1	B 249.677†	10800.5	10623.6	514.98 µg/L	514.98 ppb	10:45:35
1	Ba 233.527†	18218.8	18129.4	527.67 µg/L	527.67 ppb	10:45:35
1	Be 313.107†	749451.8	741334.9	516.30 µg/L	516.30 ppb	10:45:29
1	Cd 226.502†	17825.4	17859.1	525.66 µg/L	525.66 ppb	10:45:35
1	Co 228.616†	9551.4	9541.9	526.04 µg/L	526.04 ppb	10:45:35
1	Cr 267.716†	22927.7	22879.6	531.01 µg/L	531.01 ppb	10:45:35
1	Cu 324.752†	74120.3	70029.1	527.26 µg/L	527.26 ppb	10:45:35
1	Mn 257.610†	140845.7	140231.3	518.53 µg/L	518.53 ppb	10:45:35
1	Mo 202.031†	4210.8	4169.5	523.90 µg/L	523.90 ppb	10:45:55
1	Ni 231.604†	8763.2	8377.8	527.29 µg/L	527.29 ppb	10:45:35
1	P 214.914†	1325.3	1115.2	2619.7 µg/L	2619.7 ppb	10:45:55
1	Pb 220.353†	1896.8	1830.1	533.85 µg/L	533.85 ppb	10:45:55
1	S 181.975 Axial†	205.1	178.4	1022.7 µg/L	1022.7 ppb	10:45:55
1	Sb 206.836†	506.0	480.7	534.31 µg/L	534.31 ppb	10:45:55
1	Se 196.026†	343.9	329.5	539.54 µg/L	539.54 ppb	10:45:55
1	SiO2†	29407.3	26960.7	5690.7 µg/L	5690.7 ppb	10:45:35
1	Si 251.611†	32184.7	31696.5	2658.6 µg/L	2658.6 ppb	10:45:35
1	Sn 189.927†	953.8	925.0	542.53 µg/L	542.53 ppb	10:45:55
1	Ti 334.940†	209502.4	207533.0	517.25 µg/L	517.25 ppb	10:45:29
1	Tl 190.801†	290.2	311.6	541.24 µg/L	541.24 ppb	10:45:55
1	U 409.014†	5382.3	5584.5	531.89 µg/L	531.89 ppb	10:45:35
1	V 292.402†	42569.5	42448.6	533.93 µg/L	533.93 ppb	10:45:35
1	Zn 213.857†	18884.4	18105.3	524.10 µg/L	524.10 ppb	10:45:35
2	Sc RADIAL	78411.2	78411.2	102 %		10:44:31
2	Al 396.153Radial†	7565.3	7439.7	5158.8 µg/L	5158.8 ppb	10:44:31
2	Ca 317.933Radial†	6957.5	6564.7	5169.1 µg/L	5169.1 ppb	10:44:31
2	Fe 238.204 Radial†	390.8	367.0	5279.5 µg/L	5279.5 ppb	10:44:52
2	K 766.490 Radial†	8237.3	7658.1	5083.7 µg/L	5083.7 ppb	10:44:31
2	Mg 279.077 IEC†	502.6	484.1	5279.0 µg/L	5279.0 ppb	10:44:52
2	Na 589.592 Radial†	36535.2	35248.7	10122 µg/L	10122 ppb	10:44:31
2	Sr 421.552†	82142.4	79917.5	507.79 µg/L	507.79 ppb	10:44:31
2	Sc 361.383	1958001.1	1958001.1	100.75 %		10:46:02
2	Y 371.029	1233368.8	1233368.8	100.37 %		10:46:02
2	Ag 328.068†	56268.4	55903.7	524.91 µg/L	524.91 ppb	10:46:07
2	As 188.979†	234.4	232.1	534.69 µg/L	534.69 ppb	10:46:28
2	B 249.677†	10778.1	10582.5	512.93 µg/L	512.93 ppb	10:46:07
2	Ba 233.527†	18146.0	18025.1	524.63 µg/L	524.63 ppb	10:46:07
2	Be 313.107†	751383.0	741938.1	516.72 µg/L	516.72 ppb	10:46:02
2	Cd 226.502†	17820.5	17823.0	524.58 µg/L	524.58 ppb	10:46:07
2	Co 228.616†	9569.7	9543.3	526.11 µg/L	526.11 ppb	10:46:07
2	Cr 267.716†	22832.8	22745.2	527.89 µg/L	527.89 ppb	10:46:07
2	Cu 324.752†	73978.2	69758.1	525.23 µg/L	525.23 ppb	10:46:07
2	Mn 257.610†	140456.0	139597.6	516.20 µg/L	516.20 ppb	10:46:07
2	Mo 202.031†	4193.6	4145.1	520.84 µg/L	520.84 ppb	10:46:28
2	Ni 231.604†	8724.2	8323.7	523.88 µg/L	523.88 ppb	10:46:07
2	P 214.914†	1323.8	1111.4	2610.6 µg/L	2610.6 ppb	10:46:28
2	Pb 220.353†	1904.1	1834.0	534.98 µg/L	534.98 ppb	10:46:28

2	S 181.975 Axial†	210.5	183.4	1051.2 µg/L	1051.2 ppb	10:46:28
2	Sb 206.836†	507.8	481.6	535.27 µg/L	535.27 ppb	10:46:28
2	Se 196.026†	348.8	333.7	546.55 µg/L	546.55 ppb	10:46:28
2	SiO2†	29307.2	26809.8	5658.8 µg/L	5658.8 ppb	10:46:07
2	Si 251.611†	32151.4	31607.0	2651.1 µg/L	2651.1 ppb	10:46:07
2	Sn 189.927†	942.9	912.4	535.21 µg/L	535.21 ppb	10:46:28
2	Ti 334.940†	209831.5	207492.4	517.15 µg/L	517.15 ppb	10:46:02
2	Tl 190.801†	285.3	306.2	532.00 µg/L	532.00 ppb	10:46:28
2	U 409.014†	5250.4	5444.2	518.49 µg/L	518.49 ppb	10:46:07
2	V 292.402†	42463.4	42268.7	531.65 µg/L	531.65 ppb	10:46:07
2	Zn 213.857†	18798.0	17986.5	520.66 µg/L	520.66 ppb	10:46:07
3	Sc RADIAL	78677.8	78677.8	102 %		10:44:57
3	Al 396.153Radial†	7601.5	7450.0	5167.1 µg/L	5167.1 ppb	10:44:57
3	Ca 317.933Radial†	7000.3	6583.3	5183.8 µg/L	5183.8 ppb	10:44:57
3	Fe 238.204 Radial†	389.2	364.1	5238.1 µg/L	5238.1 ppb	10:45:18
3	K 766.490 Radial†	8250.9	7644.1	5074.4 µg/L	5074.4 ppb	10:44:57
3	Mg 279.077 IEC†	496.0	476.0	5189.4 µg/L	5189.4 ppb	10:45:18
3	Na 589.592 Radial†	36665.7	35254.9	10124 µg/L	10124 ppb	10:44:57
3	Sr 421.552†	82476.5	79970.9	508.13 µg/L	508.13 ppb	10:44:57
3	Sc 361.383	1957852.7	1957852.7	100.74 %		10:46:35
3	Y 371.029	1234064.2	1234064.2	100.43 %		10:46:35
3	Ag 328.068†	55199.0	54846.5	514.89 µg/L	514.89 ppb	10:46:40
3	As 188.979†	212.5	210.4	484.69 µg/L	484.69 ppb	10:47:01
3	B 249.677†	10512.0	10319.2	500.09 µg/L	500.09 ppb	10:46:40
3	Ba 233.527†	17466.9	17352.4	505.05 µg/L	505.05 ppb	10:46:40
3	Be 313.107†	733721.1	724463.0	504.55 µg/L	504.55 ppb	10:46:35
3	Cd 226.502†	17120.9	17129.9	504.16 µg/L	504.16 ppb	10:46:40
3	Co 228.616†	9119.4	9097.0	501.46 µg/L	501.46 ppb	10:46:40
3	Cr 267.716†	21478.3	21402.5	496.73 µg/L	496.73 ppb	10:46:40
3	Cu 324.752†	70907.4	66715.5	502.35 µg/L	502.35 ppb	10:46:40
3	Mn 257.610†	134079.5	133278.8	492.85 µg/L	492.85 ppb	10:46:40
3	Mo 202.031†	3726.5	3681.8	462.64 µg/L	462.64 ppb	10:47:01
3	Ni 231.604†	8385.7	7988.4	502.78 µg/L	502.78 ppb	10:46:40
3	P 214.914†	1214.3	1002.8	2352.2 µg/L	2352.2 ppb	10:47:01
3	Pb 220.353†	1729.9	1661.2	484.52 µg/L	484.52 ppb	10:47:01
3	S 181.975 Axial†	196.3	169.3	970.71 µg/L	970.71 ppb	10:47:01
3	Sb 206.836†	468.1	442.2	491.10 µg/L	491.10 ppb	10:47:01
3	Se 196.026†	318.6	303.8	499.19 µg/L	499.19 ppb	10:47:01
3	SiO2†	28433.0	25944.3	5476.1 µg/L	5476.1 ppb	10:46:40
3	Si 251.611†	31087.2	30553.1	2562.7 µg/L	2562.7 ppb	10:46:40
3	Sn 189.927†	837.0	807.4	473.89 µg/L	473.89 ppb	10:47:01
3	Ti 334.940†	204322.8	202040.2	503.56 µg/L	503.56 ppb	10:46:35
3	Tl 190.801†	267.8	288.9	501.96 µg/L	501.96 ppb	10:47:01
3	U 409.014†	4911.2	5107.9	486.40 µg/L	486.40 ppb	10:46:40
3	V 292.402†	40442.4	40265.8	506.19 µg/L	506.19 ppb	10:46:40
3	Zn 213.857†	18056.4	17251.7	499.37 µg/L	499.37 ppb	10:46:40

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1956801.1	100.69 %	0.100			0.10%
Sc RADIAL	78534.3	102 %	0.2			0.17%
Y 371.029	1233137.0	100.35 %	0.086			0.09%
Ag 328.068†	55660.4	522.59 µg/L	6.844	522.59 ppb	6.844	1.31%
QC value within limits for Ag 328.068 Recovery = 104.52%						
Al 396.153Radial†	7430.3	5152.7 µg/L	18.33	5152.7 ppb	18.33	0.36%
QC value within limits for Al 396.153Radial Recovery = 103.05%						
As 188.979†	224.4	516.85 µg/L	27.908	516.85 ppb	27.908	5.40%
QC value within limits for As 188.979 Recovery = 103.37%						
B 249.677†	10508.4	509.33 µg/L	8.068	509.33 ppb	8.068	1.58%
QC value within limits for B 249.677 Recovery = 101.87%						
Ba 233.527†	17835.6	519.12 µg/L	12.279	519.12 ppb	12.279	2.37%
QC value within limits for Ba 233.527 Recovery = 103.82%						
Be 313.107†	735912.0	512.52 µg/L	6.908	512.52 ppb	6.908	1.35%
QC value within limits for Be 313.107 Recovery = 102.50%						
Ca 317.933Radial†	6553.9	5160.6 µg/L	28.39	5160.6 ppb	28.39	0.55%
QC value within limits for Ca 317.933Radial Recovery = 103.21%						
Cd 226.502†	17604.0	518.14 µg/L	12.112	518.14 ppb	12.112	2.34%
QC value within limits for Cd 226.502 Recovery = 103.63%						
Co 228.616†	9394.1	517.87 µg/L	14.213	517.87 ppb	14.213	2.74%

QC value within limits for Co 228.616 Recovery = 103.57%							
Cr 267.716†	22342.4	518.55 µg/L	18.955	518.55 ppb	18.955	3.66%	
QC value within limits for Cr 267.716 Recovery = 103.71%							
Cu 324.752†	68834.3	518.28 µg/L	13.833	518.28 ppb	13.833	2.67%	
QC value within limits for Cu 324.752 Recovery = 103.66%							
Fe 238.204 Radial†	364.2	5239.8 µg/L	38.95	5239.8 ppb	38.95	0.74%	
QC value within limits for Fe 238.204 Radial Recovery = 104.80%							
K 766.490 Radial†	7639.7	5071.5 µg/L	13.94	5071.5 ppb	13.94	0.27%	
QC value within limits for K 766.490 Radial Recovery = 101.43%							
Mg 279.077 IEC†	481.0	5245.2 µg/L	48.62	5245.2 ppb	48.62	0.93%	
QC value within limits for Mg 279.077 IEC Recovery = 104.90%							
Mn 257.610†	137702.6	509.19 µg/L	14.199	509.19 ppb	14.199	2.79%	
QC value within limits for Mn 257.610 Recovery = 101.84%							
Mo 202.031†	3998.8	502.46 µg/L	34.518	502.46 ppb	34.518	6.87%	
QC value within limits for Mo 202.031 Recovery = 100.49%							
Na 589.592 Radial†	35206.6	10110 µg/L	22.5	10110 ppb	22.5	0.22%	
QC value within limits for Na 589.592 Radial Recovery = 101.10%							
Ni 231.604†	8230.0	517.99 µg/L	13.275	517.99 ppb	13.275	2.56%	
QC value within limits for Ni 231.604 Recovery = 103.60%							
P 214.914†	1076.5	2527.5 µg/L	151.90	2527.5 ppb	151.90	6.01%	
QC value within limits for P 214.914 Recovery = 101.10%							
Pb 220.353†	1775.1	517.78 µg/L	28.812	517.78 ppb	28.812	5.56%	
QC value within limits for Pb 220.353 Recovery = 103.56%							
S 181.975 Axial†	177.0	1014.9 µg/L	40.83	1014.9 ppb	40.83	4.02%	
QC value within limits for S 181.975 Axial Recovery = 101.49%							
Sb 206.836†	468.2	520.23 µg/L	25.228	520.23 ppb	25.228	4.85%	
QC value within limits for Sb 206.836 Recovery = 104.05%							
Se 196.026†	322.3	528.42 µg/L	25.561	528.42 ppb	25.561	4.84%	
QC value within limits for Se 196.026 Recovery = 105.68%							
SiO2†	26571.6	5608.5 µg/L	115.77	5608.5 ppb	115.77	2.06%	
QC value within limits for SiO2 Recovery = 104.88%							
Si 251.611†	31285.6	2624.1 µg/L	53.34	2624.1 ppb	53.34	2.03%	
QC value within limits for Si 251.611 Recovery = 104.97%							
Sn 189.927†	881.6	517.21 µg/L	37.692	517.21 ppb	37.692	7.29%	
QC value within limits for Sn 189.927 Recovery = 103.44%							
Sr 421.552†	79789.1	506.97 µg/L	1.715	506.97 ppb	1.715	0.34%	
QC value within limits for Sr 421.552 Recovery = 101.39%							
Ti 334.940†	205688.5	512.65 µg/L	7.876	512.65 ppb	7.876	1.54%	
QC value within limits for Ti 334.940 Recovery = 102.53%							
Tl 190.801†	302.2	525.07 µg/L	20.534	525.07 ppb	20.534	3.91%	
QC value within limits for Tl 190.801 Recovery = 105.01%							
U 409.014†	5378.9	512.26 µg/L	23.375	512.26 ppb	23.375	4.56%	
QC value within limits for U 409.014 Recovery = 102.45%							
V 292.402†	41661.1	523.93 µg/L	15.400	523.93 ppb	15.400	2.94%	
QC value within limits for V 292.402 Recovery = 104.79%							
Zn 213.857†	17781.2	514.71 µg/L	13.395	514.71 ppb	13.395	2.60%	
QC value within limits for Zn 213.857 Recovery = 102.94%							
All analyte(s) passed QC.							

Sequence No.: 22
 Sample ID: CCB
 Analyst:
 Initial Sample Wt:
 Dilution:

Autosampler Location: 8
 Date Collected: 1/27/2010 10:47:10
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	76008.7	76008.7	98.9 %		10:47:43
1	Al 396.153Radial†	-21.8	5.9	4.0787 µg/L	4.0787 ppb	10:47:43
1	Ca 317.933Radial†	251.6	2.6	2.0467 µg/L	2.0467 ppb	10:48:03
1	Fe 238.204 Radial†	18.6	2.9	42.032 µg/L	42.032 ppb	10:48:03
1	K 766.490 Radial†	390.7	-17.1	-11.359 µg/L	-11.359 ppb	10:47:43
1	Mg 279.077 IEC†	8.0	-0.2	-2.1102 µg/L	-2.1102 ppb	10:48:03
1	Na 589.592 Radial†	396.9	-143.8	-41.302 µg/L	-41.302 ppb	10:47:43
1	Sr 421.552†	561.3	9.6	0.0610 µg/L	0.0610 ppb	10:47:43
1	Sc 361.383	1955243.1	1955243.1	100.61 %		10:49:05
1	Y 371.029	1236657.7	1236657.7	100.64 %		10:49:05
1	Ag 328.068†	-40.2	15.1	0.1460 µg/L	0.1460 ppb	10:49:11
1	As 188.979†	-2.3	-2.9	-6.6202 µg/L	-6.6202 ppb	10:49:31
1	B 249.677†	124.4	8.5	0.3896 µg/L	0.3896 ppb	10:49:31
1	Ba 233.527†	-15.5	-0.9	-0.0246 µg/L	-0.0246 ppb	10:49:31
1	Be 313.107†	3959.5	96.0	0.0668 µg/L	0.0668 ppb	10:49:11
1	Cd 226.502†	-132.8	3.4	0.0962 µg/L	0.0962 ppb	10:49:31
1	Co 228.616†	-43.7	1.6	0.0876 µg/L	0.0876 ppb	10:49:31
1	Cr 267.716†	-107.7	-24.3	-0.5626 µg/L	-0.5626 ppb	10:49:11
1	Cu 324.752†	3653.7	-36.6	-0.2694 µg/L	-0.2694 ppb	10:49:11
1	Mn 257.610†	-164.5	26.0	0.1018 µg/L	0.1018 ppb	10:49:31
1	Mo 202.031†	19.3	2.0	0.2532 µg/L	0.2532 ppb	10:49:31
1	Ni 231.604†	342.5	5.0	0.3152 µg/L	0.3152 ppb	10:49:31
1	P 214.914†	212.8	9.1	21.731 µg/L	21.731 ppb	10:49:31
1	Pb 220.353†	51.1	-5.2	-1.5144 µg/L	-1.5144 ppb	10:49:31
1	S 181.975 Axial†	22.1	-3.6	-20.420 µg/L	-20.420 ppb	10:49:31
1	Sb 206.836†	26.0	3.4	3.7744 µg/L	3.7744 ppb	10:49:31
1	Se 196.026†	14.3	1.8	2.9467 µg/L	2.9467 ppb	10:49:31
1	SiO2†	2259.4	-33.1	-6.9784 µg/L	-6.9784 ppb	10:49:11
1	Si 251.611†	323.5	17.0	1.4283 µg/L	1.4283 ppb	10:49:31
1	Sn 189.927†	26.6	3.0	1.7574 µg/L	1.7574 ppb	10:49:31
1	Ti 334.940†	867.9	89.0	0.2222 µg/L	0.2222 ppb	10:49:11
1	Tl 190.801†	-24.7	-1.5	-2.4954 µg/L	-2.4954 ppb	10:49:31
1	U 409.014†	-136.5	97.3	9.2813 µg/L	9.2813 ppb	10:49:11
1	V 292.402†	-91.1	31.6	0.4058 µg/L	0.4058 ppb	10:49:11
1	Zn 213.857†	671.7	-3.7	-0.1110 µg/L	-0.1110 ppb	10:49:31
2	Sc RADIAL	76146.3	76146.3	99.1 %		10:48:09
2	Al 396.153Radial†	-21.7	6.1	4.1372 µg/L	4.1372 ppb	10:48:09
2	Ca 317.933Radial†	251.6	2.1	1.6909 µg/L	1.6909 ppb	10:48:29
2	Fe 238.204 Radial†	17.5	1.8	25.688 µg/L	25.688 ppb	10:48:29
2	K 766.490 Radial†	449.6	41.6	27.633 µg/L	27.633 ppb	10:48:09
2	Mg 279.077 IEC†	5.5	-2.8	-29.940 µg/L	-29.940 ppb	10:48:29
2	Na 589.592 Radial†	363.7	-178.0	-51.104 µg/L	-51.104 ppb	10:48:09
2	Sr 421.552†	597.8	45.4	0.2883 µg/L	0.2883 ppb	10:48:09
2	Sc 361.383	1943449.8	1943449.8	100.00 %		10:49:37
2	Y 371.029	1227540.6	1227540.6	99.898 %		10:49:37
2	Ag 328.068†	-42.7	12.4	0.1171 µg/L	0.1171 ppb	10:49:43
2	As 188.979†	1.0	0.5	1.1289 µg/L	1.1289 ppb	10:50:03
2	B 249.677†	132.2	17.0	0.8157 µg/L	0.8157 ppb	10:50:03
2	Ba 233.527†	-9.2	5.3	0.1539 µg/L	0.1539 ppb	10:50:03
2	Be 313.107†	3842.9	3.4	0.0023 µg/L	0.0023 ppb	10:49:43
2	Cd 226.502†	-127.2	8.3	0.2427 µg/L	0.2427 ppb	10:50:03
2	Co 228.616†	-44.8	0.2	0.0143 µg/L	0.0143 ppb	10:50:03
2	Cr 267.716†	-71.6	11.2	0.2588 µg/L	0.2588 ppb	10:49:43
2	Cu 324.752†	3603.3	-65.0	-0.4854 µg/L	-0.4854 ppb	10:49:43
2	Mn 257.610†	-168.1	21.4	0.0835 µg/L	0.0835 ppb	10:50:03
2	Mo 202.031†	53.1	35.9	4.5109 µg/L	4.5109 ppb	10:50:03
2	Ni 231.604†	349.1	13.7	0.8635 µg/L	0.8635 ppb	10:50:03
2	P 214.914†	209.8	7.4	17.679 µg/L	17.679 ppb	10:50:03
2	Pb 220.353†	57.5	1.6	0.4878 µg/L	0.4878 ppb	10:50:03

2	S 181.975 Axial†	22.0	-3.5	-20.136 µg/L	-20.136 ppb	10:50:03
2	Sb 206.836†	29.4	7.0	7.7725 µg/L	7.7725 ppb	10:50:03
2	Se 196.026†	9.0	-3.4	-5.3378 µg/L	-5.3378 ppb	10:50:03
2	SiO2†	2262.4	-16.4	-3.4659 µg/L	-3.4659 ppb	10:49:43
2	Si 251.611†	338.0	33.4	2.8052 µg/L	2.8052 ppb	10:50:03
2	Sn 189.927†	27.5	4.1	2.4020 µg/L	2.4020 ppb	10:50:03
2	Ti 334.940†	800.7	27.0	0.0698 µg/L	0.0698 ppb	10:49:43
2	Tl 190.801†	-22.4	0.7	1.1611 µg/L	1.1611 ppb	10:50:03
2	U 409.014†	-286.6	-53.6	-5.1200 µg/L	-5.1200 ppb	10:49:43
2	V 292.402†	-120.6	1.6	0.0510 µg/L	0.0510 ppb	10:49:43
2	Zn 213.857†	682.3	11.0	0.3178 µg/L	0.3178 ppb	10:50:03
3	Sc RADIAL	75638.4	75638.4	98.5 %		10:48:35
3	Al 396.153Radial†	4.0	32.0	22.223 µg/L	22.223 ppb	10:48:35
3	Ca 317.933Radial†	258.9	11.3	8.8892 µg/L	8.8892 ppb	10:48:55
3	Fe 238.204 Radial†	17.7	2.1	29.839 µg/L	29.839 ppb	10:48:55
3	K 766.490 Radial†	409.6	4.0	2.6742 µg/L	2.6742 ppb	10:48:35
3	Mg 279.077 IEC†	9.5	1.4	14.850 µg/L	14.850 ppb	10:48:55
3	Na 589.592 Radial†	375.1	-164.0	-47.098 µg/L	-47.098 ppb	10:48:35
3	Sr 421.552†	572.2	23.4	0.1487 µg/L	0.1487 ppb	10:48:35
3	Sc 361.383	1950011.6	1950011.6	100.34 %		10:50:09
3	Y 371.029	1233227.8	1233227.8	100.36 %		10:50:09
3	Ag 328.068†	-49.2	6.0	0.0572 µg/L	0.0572 ppb	10:50:15
3	As 188.979†	-3.5	-4.0	-9.2421 µg/L	-9.2421 ppb	10:50:35
3	B 249.677†	106.0	-9.5	-0.4785 µg/L	-0.4785 ppb	10:50:35
3	Ba 233.527†	-15.6	-1.0	-0.0307 µg/L	-0.0307 ppb	10:50:35
3	Be 313.107†	3891.1	38.5	0.0268 µg/L	0.0268 ppb	10:50:15
3	Cd 226.502†	-131.3	4.6	0.1318 µg/L	0.1318 ppb	10:50:35
3	Co 228.616†	-38.2	7.0	0.3848 µg/L	0.3848 ppb	10:50:35
3	Cr 267.716†	-79.4	3.7	0.0849 µg/L	0.0849 ppb	10:50:15
3	Cu 324.752†	3608.9	-71.5	-0.5335 µg/L	-0.5335 ppb	10:50:15
3	Mn 257.610†	-160.9	29.1	0.1110 µg/L	0.1110 ppb	10:50:35
3	Mo 202.031†	23.9	6.6	0.8360 µg/L	0.8360 ppb	10:50:35
3	Ni 231.604†	344.2	7.6	0.4768 µg/L	0.4768 ppb	10:50:35
3	P 214.914†	205.6	2.5	5.9294 µg/L	5.9294 ppb	10:50:35
3	Pb 220.353†	58.2	2.0	0.5951 µg/L	0.5951 ppb	10:50:35
3	S 181.975 Axial†	24.7	-0.9	-5.2178 µg/L	-5.2178 ppb	10:50:35
3	Sb 206.836†	23.6	1.1	1.2096 µg/L	1.2096 ppb	10:50:35
3	Se 196.026†	10.5	-1.9	-2.9260 µg/L	-2.9260 ppb	10:50:35
3	SiO2†	2248.7	-37.7	-7.9509 µg/L	-7.9509 ppb	10:50:15
3	Si 251.611†	352.3	46.6	3.9115 µg/L	3.9115 ppb	10:50:35
3	Sn 189.927†	22.7	-0.8	-0.4409 µg/L	-0.4409 ppb	10:50:35
3	Ti 334.940†	798.8	22.4	0.0549 µg/L	0.0549 ppb	10:50:15
3	Tl 190.801†	-21.3	1.8	3.1524 µg/L	3.1524 ppb	10:50:35
3	U 409.014†	-239.9	-6.1	-0.5894 µg/L	-0.5894 ppb	10:50:15
3	V 292.402†	-135.1	-12.5	-0.1480 µg/L	-0.1480 ppb	10:50:15
3	Zn 213.857†	673.4	-0.2	-0.0080 µg/L	-0.0080 ppb	10:50:35

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1949568.2	100.32 %	0.304			0.30%
Sc RADIAL	75931.1	98.8 %	0.34			0.35%
Y 371.029	1232475.4	100.30 %	0.375			0.37%
Ag 328.068†	11.2	0.1068 µg/L	0.04532	0.1068 ppb	0.04532	42.45%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	14.7	10.146 µg/L	10.4589	10.146 ppb	10.4589	103.08%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	-2.1	-4.9111 µg/L	5.39262	-4.9111 ppb	5.39262	109.80%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	5.3	0.2423 µg/L	0.65954	0.2423 ppb	0.65954	272.26%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	1.1	0.0329 µg/L	0.10483	0.0329 ppb	0.10483	319.09%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	46.0	0.0320 µg/L	0.03257	0.0320 ppb	0.03257	101.85%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	5.3	4.2089 µg/L	4.05714	4.2089 ppb	4.05714	96.39%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	5.4	0.1569 µg/L	0.07640	0.1569 ppb	0.07640	48.69%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	2.9	0.1622 µg/L	0.19624	0.1622 ppb	0.19624	120.96%

QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	-3.1	-0.0730 µg/L	0.43289	-0.0730 ppb	0.43289	593.11%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	-57.7	-0.4294 µg/L	0.14068	-0.4294 ppb	0.14068	32.76%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	2.3	32.519 µg/L	8.4954	32.519 ppb	8.4954	26.12%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated						
K 766.490 Radial†	9.5	6.3160 µg/L	19.74940	6.3160 ppb	19.74940	312.69%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	-0.5	-5.7335 µg/L	22.61400	-5.7335 ppb	22.61400	394.42%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated						
Mn 257.610†	25.5	0.0988 µg/L	0.01400	0.0988 ppb	0.01400	14.17%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	14.9	1.8667 µg/L	2.30843	1.8667 ppb	2.30843	123.66%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	-161.9	-46.501 µg/L	4.9282	-46.501 ppb	4.9282	10.60%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	8.8	0.5518 µg/L	0.28176	0.5518 ppb	0.28176	51.06%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	6.3	15.113 µg/L	8.2074	15.113 ppb	8.2074	54.31%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	-0.5	-0.1438 µg/L	1.18818	-0.1438 ppb	1.18818	826.02%
QC value within limits for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	-2.7	-15.258 µg/L	8.6963	-15.258 ppb	8.6963	56.99%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	3.8	4.2522 µg/L	3.30745	4.2522 ppb	3.30745	77.78%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	-1.2	-1.7724 µg/L	4.26103	-1.7724 ppb	4.26103	240.42%
QC value within limits for Se 196.026 Recovery = Not calculated						
SiO2†	-29.1	-6.1317 µg/L	2.35929	-6.1317 ppb	2.35929	38.48%
QC value within limits for SiO2 Recovery = Not calculated						
Si 251.611†	32.4	2.7150 µg/L	1.24407	2.7150 ppb	1.24407	45.82%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	2.1	1.2395 µg/L	1.49054	1.2395 ppb	1.49054	120.26%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	26.1	0.1660 µg/L	0.11463	0.1660 ppb	0.11463	69.06%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	46.2	0.1156 µg/L	0.09257	0.1156 ppb	0.09257	80.06%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	0.4	0.6060 µg/L	2.86452	0.6060 ppb	2.86452	472.68%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 409.014†	12.5	1.1906 µg/L	7.36379	1.1906 ppb	7.36379	618.48%
QC value within limits for U 409.014 Recovery = Not calculated						
V 292.402†	6.9	0.1029 µg/L	0.28052	0.1029 ppb	0.28052	272.56%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	2.4	0.0663 µg/L	0.22382	0.0663 ppb	0.22382	337.75%
QC value within limits for Zn 213.857 Recovery = Not calculated						

All analyte(s) passed QC.

Sequence No.: 31

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 1/27/2010 11:20:13

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	77806.3	77806.3	101 %		11:20:50
1	Al 396.153Radial†	7544.3	7476.6	5184.2 µg/L	5184.2 ppb	11:20:50
1	Ca 317.933Radial†	6907.7	6568.5	5172.2 µg/L	5172.2 ppb	11:20:50
1	Fe 238.204 Radial†	388.6	367.8	5291.8 µg/L	5291.8 ppb	11:21:10
1	K 766.490 Radial†	8244.7	7728.1	5130.2 µg/L	5130.2 ppb	11:20:50
1	Mg 279.077 IEC†	499.8	485.2	5290.9 µg/L	5290.9 ppb	11:21:10
1	Na 589.592 Radial†	36305.3	35300.1	10137 µg/L	10137 ppb	11:20:50
1	Sr 421.552†	81410.8	79820.8	507.17 µg/L	507.17 ppb	11:20:50
1	Sc 361.383	1939437.2	1939437.2	99.796 %		11:22:14
1	Y 371.029	1221612.2	1221612.2	99.415 %		11:22:14
1	Ag 328.068†	56270.6	56440.5	529.96 µg/L	529.96 ppb	11:22:19
1	As 188.979†	234.4	234.3	539.68 µg/L	539.68 ppb	11:22:40
1	B 249.677†	10787.9	10694.7	518.39 µg/L	518.39 ppb	11:22:19
1	Ba 233.527†	18264.0	18315.8	533.09 µg/L	533.09 ppb	11:22:19
1	Be 313.107†	747082.8	744767.4	518.69 µg/L	518.69 ppb	11:22:14
1	Cd 226.502†	17899.9	18071.9	531.92 µg/L	531.92 ppb	11:22:19
1	Co 228.616†	9599.1	9663.7	532.77 µg/L	532.77 ppb	11:22:19
1	Cr 267.716†	22894.5	23024.0	534.36 µg/L	534.36 ppb	11:22:19
1	Cu 324.752†	73668.5	70150.6	528.19 µg/L	528.19 ppb	11:22:19
1	Mn 257.610†	141181.3	141658.8	523.81 µg/L	523.81 ppb	11:22:19
1	Mo 202.031†	4237.5	4229.0	531.37 µg/L	531.37 ppb	11:22:40
1	Ni 231.604†	8809.2	8491.8	534.46 µg/L	534.46 ppb	11:22:19
1	P 214.914†	1341.8	1142.0	2683.8 µg/L	2683.8 ppb	11:22:40
1	Pb 220.353†	1904.6	1852.6	540.43 µg/L	540.43 ppb	11:22:40
1	S 181.975 Axial†	205.8	180.7	1035.7 µg/L	1035.7 ppb	11:22:40
1	Sb 206.836†	505.3	483.9	537.93 µg/L	537.93 ppb	11:22:40
1	Se 196.026†	343.1	331.4	542.89 µg/L	542.89 ppb	11:22:40
1	SiO2†	29325.7	27106.7	5721.5 µg/L	5721.5 ppb	11:22:19
1	Si 251.611†	32125.5	31886.5	2674.5 µg/L	2674.5 ppb	11:22:19
1	Sn 189.927†	961.7	940.3	551.47 µg/L	551.47 ppb	11:22:40
1	Ti 334.940†	208267.9	207919.1	518.21 µg/L	518.21 ppb	11:22:14
1	Tl 190.801†	287.0	310.7	539.64 µg/L	539.64 ppb	11:22:40
1	U 409.014†	5308.5	5552.3	528.80 µg/L	528.80 ppb	11:22:19
1	V 292.402†	42604.6	42813.6	538.54 µg/L	538.54 ppb	11:22:19
1	Zn 213.857†	18902.3	18269.6	528.86 µg/L	528.86 ppb	11:22:19
2	Sc RADIAL	77699.9	77699.9	101 %		11:21:16
2	Al 396.153Radial†	7499.3	7442.3	5160.5 µg/L	5160.5 ppb	11:21:16
2	Ca 317.933Radial†	6949.4	6619.0	5212.0 µg/L	5212.0 ppb	11:21:16
2	Fe 238.204 Radial†	385.2	365.0	5250.9 µg/L	5250.9 ppb	11:21:36
2	K 766.490 Radial†	8225.9	7720.7	5125.3 µg/L	5125.3 ppb	11:21:16
2	Mg 279.077 IEC†	497.4	483.5	5272.7 µg/L	5272.7 ppb	11:21:36
2	Na 589.592 Radial†	36326.3	35369.8	10157 µg/L	10157 ppb	11:21:16
2	Sr 421.552†	81673.5	80190.6	509.52 µg/L	509.52 ppb	11:21:16
2	Sc 361.383	1955286.0	1955286.0	100.61 %		11:22:46
2	Y 371.029	1231522.4	1231522.4	100.22 %		11:22:46
2	Ag 328.068†	56578.2	56289.1	528.53 µg/L	528.53 ppb	11:22:52
2	As 188.979†	238.8	236.8	545.43 µg/L	545.43 ppb	11:23:13
2	B 249.677†	10865.4	10684.1	517.89 µg/L	517.89 ppb	11:22:52
2	Ba 233.527†	18340.0	18243.0	530.97 µg/L	530.97 ppb	11:22:52
2	Be 313.107†	752555.6	744139.0	518.25 µg/L	518.25 ppb	11:22:46
2	Cd 226.502†	17976.0	18002.1	529.86 µg/L	529.86 ppb	11:22:52
2	Co 228.616†	9639.4	9625.8	530.67 µg/L	530.67 ppb	11:22:52
2	Cr 267.716†	23013.7	22956.5	532.80 µg/L	532.80 ppb	11:22:52
2	Cu 324.752†	74018.1	69899.7	526.29 µg/L	526.29 ppb	11:22:52
2	Mn 257.610†	141723.9	141051.4	521.56 µg/L	521.56 ppb	11:22:52
2	Mo 202.031†	4236.7	4193.8	526.94 µg/L	526.94 ppb	11:23:13
2	Ni 231.604†	8822.1	8433.0	530.76 µg/L	530.76 ppb	11:22:52
2	P 214.914†	1331.5	1120.9	2633.4 µg/L	2633.4 ppb	11:23:13
2	Pb 220.353†	1907.7	1840.2	536.81 µg/L	536.81 ppb	11:23:13

2	S 181.975 Axial†	207.7	181.0	1037.3 µg/L	1037.3 ppb	11:23:13
2	Sb 206.836†	517.0	491.4	546.19 µg/L	546.19 ppb	11:23:13
2	Se 196.026†	347.2	332.7	544.82 µg/L	544.82 ppb	11:23:13
2	SiO2†	29463.0	27005.0	5700.0 µg/L	5700.0 ppb	11:22:52
2	Si 251.611†	32234.5	31734.0	2661.7 µg/L	2661.7 ppb	11:22:52
2	Sn 189.927†	951.0	921.8	540.71 µg/L	540.71 ppb	11:23:13
2	Ti 334.940†	209745.0	207695.6	517.66 µg/L	517.66 ppb	11:22:46
2	Tl 190.801†	286.5	307.8	534.72 µg/L	534.72 ppb	11:23:13
2	U 409.014†	5315.2	5515.8	525.32 µg/L	525.32 ppb	11:22:52
2	V 292.402†	42766.2	42628.2	536.19 µg/L	536.19 ppb	11:22:52
2	Zn 213.857†	19005.0	18218.1	527.38 µg/L	527.38 ppb	11:22:52
3	Sc RADIAL	78076.8	78076.8	102 %		11:21:42
3	Al 396.153Radial†	7523.4	7430.2	5153.3 µg/L	5153.3 ppb	11:21:42
3	Ca 317.933Radial†	6951.1	6587.5	5187.2 µg/L	5187.2 ppb	11:21:42
3	Fe 238.204 Radial†	384.8	362.7	5218.3 µg/L	5218.3 ppb	11:22:02
3	K 766.490 Radial†	8208.5	7664.4	5087.9 µg/L	5087.9 ppb	11:21:42
3	Mg 279.077 IEC†	496.9	480.6	5240.4 µg/L	5240.4 ppb	11:22:02
3	Na 589.592 Radial†	36364.7	35234.3	10118 µg/L	10118 ppb	11:21:42
3	Sr 421.552†	81691.6	79818.6	507.16 µg/L	507.16 ppb	11:21:42
3	Sc 361.383	1955252.3	1955252.3	100.61 %		11:23:19
3	Y 371.029	1231691.3	1231691.3	100.24 %		11:23:19
3	Ag 328.068†	54769.1	54492.1	511.57 µg/L	511.57 ppb	11:23:25
3	As 188.979†	212.0	210.2	484.11 µg/L	484.11 ppb	11:23:46
3	B 249.677†	10417.4	10239.0	496.20 µg/L	496.20 ppb	11:23:25
3	Ba 233.527†	17348.3	17257.6	502.29 µg/L	502.29 ppb	11:23:25
3	Be 313.107†	737556.4	729243.7	507.88 µg/L	507.88 ppb	11:23:19
3	Cd 226.502†	16993.2	17025.6	501.09 µg/L	501.09 ppb	11:23:25
3	Co 228.616†	9078.3	9068.3	499.87 µg/L	499.87 ppb	11:23:25
3	Cr 267.716†	21370.3	21323.5	494.90 µg/L	494.90 ppb	11:23:25
3	Cu 324.752†	70292.7	66198.1	498.46 µg/L	498.46 ppb	11:23:25
3	Mn 257.610†	133527.7	132907.4	491.47 µg/L	491.47 ppb	11:23:25
3	Mo 202.031†	3757.5	3717.5	467.13 µg/L	467.13 ppb	11:23:46
3	Ni 231.604†	8340.7	7954.7	500.66 µg/L	500.66 ppb	11:23:25
3	P 214.914†	1221.6	1011.7	2373.8 µg/L	2373.8 ppb	11:23:46
3	Pb 220.353†	1759.3	1692.7	493.73 µg/L	493.73 ppb	11:23:46
3	S 181.975 Axial†	196.7	170.0	974.33 µg/L	974.33 ppb	11:23:46
3	Sb 206.836†	462.1	436.9	485.30 µg/L	485.30 ppb	11:23:46
3	Se 196.026†	329.9	315.5	517.56 µg/L	517.56 ppb	11:23:46
3	SiO2†	28211.5	25761.7	5437.6 µg/L	5437.6 ppb	11:23:25
3	Si 251.611†	30839.3	30347.8	2545.5 µg/L	2545.5 ppb	11:23:25
3	Sn 189.927†	839.1	810.6	475.75 µg/L	475.75 ppb	11:23:46
3	Ti 334.940†	204922.9	202906.4	505.71 µg/L	505.71 ppb	11:23:19
3	Tl 190.801†	269.7	291.1	505.77 µg/L	505.77 ppb	11:23:46
3	U 409.014†	4935.6	5138.6	489.33 µg/L	489.33 ppb	11:23:25
3	V 292.402†	40207.9	40086.2	503.99 µg/L	503.99 ppb	11:23:25
3	Zn 213.857†	17963.9	17183.7	497.40 µg/L	497.40 ppb	11:23:25

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1949991.9	100.34 %	0.470			0.47%
Sc RADIAL	77861.0	101 %	0.3			0.25%
Y 371.029	1228275.3	99.957 %	0.4697			0.47%
Ag 328.068†	55740.6	523.35 µg/L	10.230	523.35 ppb	10.230	1.95%
QC value within limits for Ag 328.068 Recovery = 104.67%						
Al 396.153Radial†	7449.7	5166.0 µg/L	16.20	5166.0 ppb	16.20	0.31%
QC value within limits for Al 396.153Radial Recovery = 103.32%						
As 188.979†	227.1	523.07 µg/L	33.865	523.07 ppb	33.865	6.47%
QC value within limits for As 188.979 Recovery = 104.61%						
B 249.677†	10539.3	510.83 µg/L	12.674	510.83 ppb	12.674	2.48%
QC value within limits for B 249.677 Recovery = 102.17%						
Ba 233.527†	17938.8	522.12 µg/L	17.206	522.12 ppb	17.206	3.30%
QC value within limits for Ba 233.527 Recovery = 104.42%						
Be 313.107†	739383.4	514.94 µg/L	6.119	514.94 ppb	6.119	1.19%
QC value within limits for Be 313.107 Recovery = 102.99%						
Ca 317.933Radial†	6591.7	5190.4 µg/L	20.10	5190.4 ppb	20.10	0.39%
QC value within limits for Ca 317.933Radial Recovery = 103.81%						
Cd 226.502†	17699.9	520.96 µg/L	17.236	520.96 ppb	17.236	3.31%
QC value within limits for Cd 226.502 Recovery = 104.19%						
Co 228.616†	9452.6	521.10 µg/L	18.418	521.10 ppb	18.418	3.53%

QC value within limits for Co 228.616 Recovery = 104.22%							
Cr 267.716†	22434.7	520.69 µg/L	22.346	520.69 ppb	22.346	4.29%	
QC value within limits for Cr 267.716 Recovery = 104.14%							
Cu 324.752†	68749.5	517.65 µg/L	16.644	517.65 ppb	16.644	3.22%	
QC value within limits for Cu 324.752 Recovery = 103.53%							
Fe 238.204 Radial†	365.2	5253.7 µg/L	36.80	5253.7 ppb	36.80	0.70%	
QC value within limits for Fe 238.204 Radial Recovery = 105.07%							
K 766.490 Radial†	7704.4	5114.5 µg/L	23.15	5114.5 ppb	23.15	0.45%	
QC value within limits for K 766.490 Radial Recovery = 102.29%							
Mg 279.077 IEC†	483.1	5268.0 µg/L	25.56	5268.0 ppb	25.56	0.49%	
QC value within limits for Mg 279.077 IEC Recovery = 105.36%							
Mn 257.610†	138539.2	512.28 µg/L	18.056	512.28 ppb	18.056	3.52%	
QC value within limits for Mn 257.610 Recovery = 102.46%							
Mo 202.031†	4046.8	508.48 µg/L	35.879	508.48 ppb	35.879	7.06%	
QC value within limits for Mo 202.031 Recovery = 101.70%							
Na 589.592 Radial†	35301.4	10137 µg/L	19.5	10137 ppb	19.5	0.19%	
QC value within limits for Na 589.592 Radial Recovery = 101.37%							
Ni 231.604†	8293.2	521.96 µg/L	18.539	521.96 ppb	18.539	3.55%	
QC value within limits for Ni 231.604 Recovery = 104.39%							
P 214.914†	1091.5	2563.7 µg/L	166.34	2563.7 ppb	166.34	6.49%	
QC value within limits for P 214.914 Recovery = 102.55%							
Pb 220.353†	1795.2	523.65 µg/L	25.982	523.65 ppb	25.982	4.96%	
QC value within limits for Pb 220.353 Recovery = 104.73%							
S 181.975 Axial†	177.2	1015.8 µg/L	35.90	1015.8 ppb	35.90	3.53%	
QC value within limits for S 181.975 Axial Recovery = 101.58%							
Sb 206.836†	470.7	523.14 µg/L	33.033	523.14 ppb	33.033	6.31%	
QC value within limits for Sb 206.836 Recovery = 104.63%							
Se 196.026†	326.5	535.09 µg/L	15.215	535.09 ppb	15.215	2.84%	
QC value within limits for Se 196.026 Recovery = 107.02%							
SiO2†	26624.5	5619.7 µg/L	158.08	5619.7 ppb	158.08	2.81%	
QC value within limits for SiO2 Recovery = 105.09%							
Si 251.611†	31322.8	2627.3 µg/L	71.11	2627.3 ppb	71.11	2.71%	
QC value within limits for Si 251.611 Recovery = 105.09%							
Sn 189.927†	890.9	522.64 µg/L	40.967	522.64 ppb	40.967	7.84%	
QC value within limits for Sn 189.927 Recovery = 104.53%							
Sr 421.552†	79943.4	507.95 µg/L	1.361	507.95 ppb	1.361	0.27%	
QC value within limits for Sr 421.552 Recovery = 101.59%							
Ti 334.940†	206173.7	513.86 µg/L	7.061	513.86 ppb	7.061	1.37%	
QC value within limits for Ti 334.940 Recovery = 102.77%							
Tl 190.801†	303.2	526.71 µg/L	18.302	526.71 ppb	18.302	3.47%	
QC value within limits for Tl 190.801 Recovery = 105.34%							
U 409.014†	5402.3	514.48 µg/L	21.855	514.48 ppb	21.855	4.25%	
QC value within limits for U 409.014 Recovery = 102.90%							
V 292.402†	41842.7	526.24 µg/L	19.303	526.24 ppb	19.303	3.67%	
QC value within limits for V 292.402 Recovery = 105.25%							
Zn 213.857†	17890.5	517.88 µg/L	17.749	517.88 ppb	17.749	3.43%	
QC value within limits for Zn 213.857 Recovery = 103.58%							

All analyte(s) passed QC.

Sequence No.: 32

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 1/27/2010 11:23:55

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	75986.5	75986.5	98.9 %		11:24:28
1	Al 396.153Radial†	-7.2	20.7	14.354 µg/L	14.354 ppb	11:24:28
1	Ca 317.933Radial†	242.5	-6.5	-5.0847 µg/L	-5.0847 ppb	11:24:48
1	Fe 238.204 Radial†	17.4	1.7	25.053 µg/L	25.053 ppb	11:24:48
1	K 766.490 Radial†	436.8	29.6	19.670 µg/L	19.670 ppb	11:24:28
1	Mg 279.077 IEC†	6.6	-1.7	-18.346 µg/L	-18.346 ppb	11:24:48
1	Na 589.592 Radial†	358.8	-182.2	-52.327 µg/L	-52.327 ppb	11:24:28
1	Sr 421.552†	583.7	32.4	0.2061 µg/L	0.2061 ppb	11:24:28
1	Sc 361.383	1932054.2	1932054.2	99.417 %		11:25:50
1	Y 371.029	1221823.4	1221823.4	99.432 %		11:25:50
1	Ag 328.068†	-77.5	-22.8	-0.2084 µg/L	-0.2084 ppb	11:25:55
1	As 188.979†	-0.9	-1.4	-3.2589 µg/L	-3.2589 ppb	11:26:16
1	B 249.677†	108.9	-5.7	-0.2900 µg/L	-0.2900 ppb	11:26:16
1	Ba 233.527†	-14.7	-0.3	-0.0067 µg/L	-0.0067 ppb	11:26:16
1	Be 313.107†	3920.6	104.2	0.0724 µg/L	0.0724 ppb	11:25:55
1	Cd 226.502†	-128.4	6.3	0.1837 µg/L	0.1837 ppb	11:26:16
1	Co 228.616†	-38.1	6.7	0.3688 µg/L	0.3688 ppb	11:26:16
1	Cr 267.716†	-100.9	-18.7	-0.4342 µg/L	-0.4342 ppb	11:25:55
1	Cu 324.752†	3719.5	73.1	0.5531 µg/L	0.5531 ppb	11:25:55
1	Mn 257.610†	-133.1	55.6	0.2093 µg/L	0.2093 ppb	11:26:16
1	Mo 202.031†	21.6	4.6	0.5730 µg/L	0.5730 ppb	11:26:16
1	Ni 231.604†	336.1	2.6	0.1665 µg/L	0.1665 ppb	11:26:16
1	P 214.914†	208.3	7.0	16.797 µg/L	16.797 ppb	11:26:16
1	Pb 220.353†	66.3	10.7	3.1410 µg/L	3.1410 ppb	11:26:16
1	S 181.975 Axial†	25.3	-0.1	-0.4468 µg/L	-0.4468 ppb	11:26:16
1	Sb 206.836†	28.9	6.7	7.4141 µg/L	7.4141 ppb	11:26:16
1	Se 196.026†	4.0	-8.4	-13.108 µg/L	-13.108 ppb	11:26:16
1	SiO2†	2295.1	29.8	6.2973 µg/L	6.2973 ppb	11:25:55
1	Si 251.611†	354.1	51.7	4.3351 µg/L	4.3351 ppb	11:26:16
1	Sn 189.927†	25.9	2.6	1.5154 µg/L	1.5154 ppb	11:26:16
1	Ti 334.940†	947.6	179.6	0.4492 µg/L	0.4492 ppb	11:25:55
1	Tl 190.801†	-21.3	1.7	2.8635 µg/L	2.8635 ppb	11:26:16
1	U 409.014†	-291.9	-60.6	-5.7877 µg/L	-5.7877 ppb	11:25:55
1	V 292.402†	-88.0	33.6	0.4168 µg/L	0.4168 ppb	11:25:55
1	Zn 213.857†	672.7	5.4	0.1547 µg/L	0.1547 ppb	11:26:16
2	Sc RADIAL	75428.9	75428.9	98.2 %		11:24:54
2	Al 396.153Radial†	-21.2	6.3	4.3990 µg/L	4.3990 ppb	11:24:54
2	Ca 317.933Radial†	243.0	-4.2	-3.2897 µg/L	-3.2897 ppb	11:25:14
2	Fe 238.204 Radial†	20.3	4.8	68.931 µg/L	68.931 ppb	11:25:14
2	K 766.490 Radial†	422.6	18.4	12.220 µg/L	12.220 ppb	11:24:54
2	Mg 279.077 IEC†	10.1	2.0	21.188 µg/L	21.188 ppb	11:25:14
2	Na 589.592 Radial†	366.6	-171.6	-49.278 µg/L	-49.278 ppb	11:24:54
2	Sr 421.552†	577.4	30.4	0.1931 µg/L	0.1931 ppb	11:24:54
2	Sc 361.383	1937259.1	1937259.1	99.684 %		11:26:22
2	Y 371.029	1224917.4	1224917.4	99.684 %		11:26:22
2	Ag 328.068†	-7.3	47.7	0.4463 µg/L	0.4463 ppb	11:26:28
2	As 188.979†	-1.4	-1.9	-4.4941 µg/L	-4.4941 ppb	11:26:48
2	B 249.677†	121.4	6.6	0.2866 µg/L	0.2866 ppb	11:26:48
2	Ba 233.527†	-17.8	-3.4	-0.0988 µg/L	-0.0988 ppb	11:26:48
2	Be 313.107†	3970.8	144.0	0.1002 µg/L	0.1002 ppb	11:26:28
2	Cd 226.502†	-126.2	8.9	0.2534 µg/L	0.2534 ppb	11:26:48
2	Co 228.616†	-45.7	-0.8	-0.0444 µg/L	-0.0444 ppb	11:26:48
2	Cr 267.716†	-60.7	21.9	0.5083 µg/L	0.5083 ppb	11:26:28
2	Cu 324.752†	3676.6	20.1	0.1606 µg/L	0.1606 ppb	11:26:28
2	Mn 257.610†	-140.5	48.6	0.1878 µg/L	0.1878 ppb	11:26:48
2	Mo 202.031†	19.6	2.5	0.3147 µg/L	0.3147 ppb	11:26:48
2	Ni 231.604†	340.6	6.3	0.3984 µg/L	0.3984 ppb	11:26:48
2	P 214.914†	210.2	8.3	19.919 µg/L	19.919 ppb	11:26:48
2	Pb 220.353†	63.5	7.7	2.2612 µg/L	2.2612 ppb	11:26:48

2	S	181.975 Axial†	21.6	-3.8	-22.011 µg/L	-22.011 ppb	11:26:48
2	Sb	206.836†	26.2	3.9	4.2698 µg/L	4.2698 ppb	11:26:48
2	Se	196.026†	6.0	-6.4	-9.8431 µg/L	-9.8431 ppb	11:26:48
2	SiO2†	2281.8	10.3		2.1648 µg/L	2.1648 ppb	11:26:28
2	Si	251.611†	349.0	45.6	3.8252 µg/L	3.8252 ppb	11:26:48
2	Sn	189.927†	25.7	2.4	1.4156 µg/L	1.4156 ppb	11:26:48
2	Ti	334.940†	844.5	73.5	0.1816 µg/L	0.1816 ppb	11:26:28
2	Tl	190.801†	-17.8	5.2	8.9349 µg/L	8.9349 ppb	11:26:48
2	U	409.014†	-295.4	-63.4	-6.0562 µg/L	-6.0562 ppb	11:26:28
2	V	292.402†	-157.3	-35.6	-0.4419 µg/L	-0.4419 ppb	11:26:28
2	Zn	213.857†	683.5	14.3	0.4110 µg/L	0.4110 ppb	11:26:48
3	Sc	RADIAL	75712.9	75712.9	98.6 %		11:25:19
3	Al	396.153Radial†	17.2	45.5	31.581 µg/L	31.581 ppb	11:25:19
3	Ca	317.933Radial†	251.2	3.2	2.4930 µg/L	2.4930 ppb	11:25:40
3	Fe	238.204 Radial†	19.6	4.0	57.137 µg/L	57.137 ppb	11:25:40
3	K	766.490 Radial†	413.2	7.2	4.8011 µg/L	4.8011 ppb	11:25:19
3	Mg	279.077 IEC†	7.2	-1.0	-11.013 µg/L	-11.013 ppb	11:25:40
3	Na	589.592 Radial†	362.1	-177.5	-50.984 µg/L	-50.984 ppb	11:25:19
3	Sr	421.552†	579.1	29.9	0.1897 µg/L	0.1897 ppb	11:25:19
3	Sc	361.383	1931643.4	1931643.4	99.395 %		11:26:54
3	Y	371.029	1220693.5	1220693.5	99.340 %		11:26:54
3	Ag	328.068†	-36.3	18.5	0.1764 µg/L	0.1764 ppb	11:27:00
3	As	188.979†	-2.4	-3.0	-6.8626 µg/L	-6.8626 ppb	11:27:20
3	B	249.677†	116.1	1.6	0.0456 µg/L	0.0456 ppb	11:27:20
3	Ba	233.527†	-14.5	-0.0	-0.0006 µg/L	-0.0006 ppb	11:27:20
3	Be	313.107†	3961.7	146.4	0.1019 µg/L	0.1019 ppb	11:27:00
3	Cd	226.502†	-128.8	5.9	0.1679 µg/L	0.1679 ppb	11:27:20
3	Co	228.616†	-48.5	-3.8	-0.2086 µg/L	-0.2086 ppb	11:27:20
3	Cr	267.716†	-89.1	-6.9	-0.1599 µg/L	-0.1599 ppb	11:27:00
3	Cu	324.752†	3651.3	5.3	0.0478 µg/L	0.0478 ppb	11:27:00
3	Mn	257.610†	-139.0	49.6	0.1915 µg/L	0.1915 ppb	11:27:20
3	Mo	202.031†	17.2	0.1	0.0122 µg/L	0.0122 ppb	11:27:20
3	Ni	231.604†	339.7	6.3	0.4009 µg/L	0.4009 ppb	11:27:20
3	P	214.914†	205.6	4.4	10.510 µg/L	10.510 ppb	11:27:20
3	Pb	220.353†	60.2	4.7	1.3569 µg/L	1.3569 ppb	11:27:20
3	S	181.975 Axial†	21.4	-4.0	-23.053 µg/L	-23.053 ppb	11:27:20
3	Sb	206.836†	23.0	0.8	0.8359 µg/L	0.8359 ppb	11:27:20
3	Se	196.026†	11.0	-1.3	-1.8582 µg/L	-1.8582 ppb	11:27:20
3	SiO2†	2272.6	7.6		1.6063 µg/L	1.6063 ppb	11:27:00
3	Si	251.611†	343.0	40.6	3.4020 µg/L	3.4020 ppb	11:27:20
3	Sn	189.927†	24.3	1.0	0.5781 µg/L	0.5781 ppb	11:27:20
3	Ti	334.940†	831.7	63.1	0.1582 µg/L	0.1582 ppb	11:27:00
3	Tl	190.801†	-24.2	-1.3	-2.2750 µg/L	-2.2750 ppb	11:27:20
3	U	409.014†	-226.0	5.6	0.5278 µg/L	0.5278 ppb	11:27:00
3	V	292.402†	-121.3	0.0	0.0039 µg/L	0.0039 ppb	11:27:00
3	Zn	213.857†	675.5	8.3	0.2382 µg/L	0.2382 ppb	11:27:20

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1933652.2	99.499 %	0.1611			0.16%
Sc RADIAL	75709.4	98.6 %	0.36			0.37%
Y 371.029	1222478.1	99.486 %	0.1780			0.18%
Ag 328.068†	14.5	0.1381 µg/L	0.32905	0.1381 ppb	0.32905	238.26%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	24.2	16.778 µg/L	13.7521	16.778 ppb	13.7521	81.97%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	-2.1	-4.8719 µg/L	1.83130	-4.8719 ppb	1.83130	37.59%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	0.8	0.0140 µg/L	0.28961	0.0140 ppb	0.28961	>999.9%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	-1.2	-0.0354 µg/L	0.05500	-0.0354 ppb	0.05500	155.57%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	131.5	0.0915 µg/L	0.01657	0.0915 ppb	0.01657	18.10%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	-2.5	-1.9605 µg/L	3.95985	-1.9605 ppb	3.95985	201.98%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	7.0	0.2017 µg/L	0.04547	0.2017 ppb	0.04547	22.55%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	0.7	0.0386 µg/L	0.29750	0.0386 ppb	0.29750	771.12%

Cr 267.716†	QC value within limits for Co 228.616	Recovery = Not calculated			
	-1.2	-0.0286 µg/L	0.48476	-0.0286 ppb	0.48476 >999.9%
Cu 324.752†	QC value within limits for Cr 267.716	Recovery = Not calculated			
	32.8	0.2538 µg/L	0.26522	0.2538 ppb	0.26522 104.49%
Fe 238.204 Radial†	QC value within limits for Cu 324.752	Recovery = Not calculated			
	3.5	50.374 µg/L	22.7075	50.374 ppb	22.7075 45.08%
K 766.490 Radial†	QC value within limits for Fe 238.204 Radial	Recovery = Not calculated			
	18.4	12.230 µg/L	7.4343	12.230 ppb	7.4343 60.79%
Mg 279.077 IEC†	QC value within limits for K 766.490 Radial	Recovery = Not calculated			
	-0.2	-2.7237 µg/L	21.03019	-2.7237 ppb	21.03019 772.13%
Mn 257.610†	QC value within limits for Mg 279.077 IEC	Recovery = Not calculated			
	51.3	0.1962 µg/L	0.01153	0.1962 ppb	0.01153 5.88%
Mo 202.031†	QC value within limits for Mn 257.610	Recovery = Not calculated			
	2.4	0.3000 µg/L	0.28072	0.3000 ppb	0.28072 93.59%
Na 589.592 Radial†	QC value within limits for Mo 202.031	Recovery = Not calculated			
	-177.1	-50.863 µg/L	1.5276	-50.863 ppb	1.5276 3.00%
Ni 231.604†	QC value within limits for Na 589.592 Radial	Recovery = Not calculated			
	5.1	0.3219 µg/L	0.13461	0.3219 ppb	0.13461 41.82%
P 214.914†	QC value within limits for Ni 231.604	Recovery = Not calculated			
	6.6	15.742 µg/L	4.7925	15.742 ppb	4.7925 30.44%
Pb 220.353†	QC value within limits for P 214.914	Recovery = Not calculated			
	7.7	2.2531 µg/L	0.89207	2.2531 ppb	0.89207 39.59%
S 181.975 Axial†	QC value within limits for Pb 220.353	Recovery = Not calculated			
	-2.6	-15.170 µg/L	12.7615	-15.170 ppb	12.7615 84.12%
Sb 206.836†	QC value within limits for S 181.975 Axial	Recovery = Not calculated			
	3.8	4.1733 µg/L	3.29017	4.1733 ppb	3.29017 78.84%
Se 196.026†	QC value within limits for Sb 206.836	Recovery = Not calculated			
	-5.4	-8.2697 µg/L	5.78756	-8.2697 ppb	5.78756 69.98%
SiO2†	QC value within limits for Se 196.026	Recovery = Not calculated			
	15.9	3.3561 µg/L	2.56244	3.3561 ppb	2.56244 76.35%
Si 251.611†	QC value within limits for SiO2	Recovery = Not calculated			
	45.9	3.8541 µg/L	0.46722	3.8541 ppb	0.46722 12.12%
Sn 189.927†	QC value within limits for Si 251.611	Recovery = Not calculated			
	2.0	1.1697 µg/L	0.51477	1.1697 ppb	0.51477 44.01%
Sr 421.552†	QC value within limits for Sn 189.927	Recovery = Not calculated			
	30.9	0.1963 µg/L	0.00868	0.1963 ppb	0.00868 4.42%
Ti 334.940†	QC value within limits for Sr 421.552	Recovery = Not calculated			
	105.4	0.2630 µg/L	0.16168	0.2630 ppb	0.16168 61.48%
Tl 190.801†	QC value within limits for Ti 334.940	Recovery = Not calculated			
	1.8	3.1744 µg/L	5.61143	3.1744 ppb	5.61143 176.77%
U 409.014†	QC value within limits for Tl 190.801	Recovery = Not calculated			
	-39.5	-3.7720 µg/L	3.72616	-3.7720 ppb	3.72616 98.78%
V 292.402†	QC value within limits for U 409.014	Recovery = Not calculated			
	-0.6	-0.0071 µg/L	0.42944	-0.0071 ppb	0.42944 >999.9%
Zn 213.857†	QC value within limits for V 292.402	Recovery = Not calculated			
	9.3	0.2680 µg/L	0.13075	0.2680 ppb	0.13075 48.80%
	QC value within limits for Zn 213.857	Recovery = Not calculated			

All analyte(s) passed QC.

Sequence No.: 40

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 1/27/2010 11:52:29

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	77967.3	77967.3	101 %		11:53:08
1	Al 396.153Radial†	7523.3	7440.5	5159.3 µg/L	5159.3 ppb	11:53:08
1	Ca 317.933Radial†	6965.4	6611.2	5205.8 µg/L	5205.8 ppb	11:53:08
1	Fe 238.204 Radial†	387.7	366.1	5266.8 µg/L	5266.8 ppb	11:53:28
1	K 766.490 Radial†	8294.2	7760.1	5151.4 µg/L	5151.4 ppb	11:53:08
1	Mg 279.077 IEC†	495.6	480.0	5234.9 µg/L	5234.9 ppb	11:53:28
1	Na 589.592 Radial†	36463.5	35381.8	10160 µg/L	10160 ppb	11:53:08
1	Sr 421.552†	82070.7	80305.0	510.25 µg/L	510.25 ppb	11:53:08
1	Sc 361.383	1966865.6	1966865.6	101.21 %		11:54:31
1	Y 371.029	1239244.0	1239244.0	100.85 %		11:54:31
1	Ag 328.068†	56109.7	55495.2	521.08 µg/L	521.08 ppb	11:54:37
1	As 188.979†	234.9	231.6	533.35 µg/L	533.35 ppb	11:54:57
1	B 249.677†	10748.5	10505.0	509.16 µg/L	509.16 ppb	11:54:37
1	Ba 233.527†	18142.5	17940.5	522.17 µg/L	522.17 ppb	11:54:37
1	Be 313.107†	755986.4	743125.3	517.55 µg/L	517.55 ppb	11:54:31
1	Cd 226.502†	17751.7	17675.3	520.24 µg/L	520.24 ppb	11:54:37
1	Co 228.616†	9574.5	9505.2	524.01 µg/L	524.01 ppb	11:54:37
1	Cr 267.716†	22854.0	22664.1	526.01 µg/L	526.01 ppb	11:54:37
1	Cu 324.752†	73628.8	69082.0	520.15 µg/L	520.15 ppb	11:54:37
1	Mn 257.610†	140490.6	139003.5	514.00 µg/L	514.00 ppb	11:54:37
1	Mo 202.031†	4213.5	4146.0	520.95 µg/L	520.95 ppb	11:54:57
1	Ni 231.604†	8756.3	8316.4	523.42 µg/L	523.42 ppb	11:54:37
1	P 214.914†	1325.8	1107.5	2601.8 µg/L	2601.8 ppb	11:54:57
1	Pb 220.353†	1900.1	1821.5	531.36 µg/L	531.36 ppb	11:54:57
1	S 181.975 Axial†	207.9	179.9	1031.0 µg/L	1031.0 ppb	11:54:57
1	Sb 206.836†	512.1	483.6	537.52 µg/L	537.52 ppb	11:54:57
1	Se 196.026†	345.6	329.1	539.15 µg/L	539.15 ppb	11:54:57
1	SiO2†	29192.3	26565.1	5607.2 µg/L	5607.2 ppb	11:54:37
1	Si 251.611†	32025.7	31339.0	2628.6 µg/L	2628.6 ppb	11:54:37
1	Sn 189.927†	958.3	923.5	541.66 µg/L	541.66 ppb	11:54:57
1	Ti 334.940†	211079.7	207787.1	517.89 µg/L	517.89 ppb	11:54:31
1	Tl 190.801†	283.6	303.3	526.99 µg/L	526.99 ppb	11:54:57
1	U 409.014†	5276.2	5446.2	518.67 µg/L	518.67 ppb	11:54:37
1	V 292.402†	42409.8	42025.9	528.63 µg/L	528.63 ppb	11:54:37
1	Zn 213.857†	18775.8	17880.4	517.58 µg/L	517.58 ppb	11:54:37
2	Sc RADIAL	78375.4	78375.4	102 %		11:53:34
2	Al 396.153Radial†	7589.9	7467.2	5177.8 µg/L	5177.8 ppb	11:53:34
2	Ca 317.933Radial†	7018.6	6627.6	5218.7 µg/L	5218.7 ppb	11:53:34
2	Fe 238.204 Radial†	386.2	362.7	5218.1 µg/L	5218.1 ppb	11:53:54
2	K 766.490 Radial†	8275.4	7699.1	5111.0 µg/L	5111.0 ppb	11:53:34
2	Mg 279.077 IEC†	498.4	480.2	5236.3 µg/L	5236.3 ppb	11:53:54
2	Na 589.592 Radial†	36661.5	35388.8	10162 µg/L	10162 ppb	11:53:34
2	Sr 421.552†	82482.2	80287.3	510.14 µg/L	510.14 ppb	11:53:34
2	Sc 361.383	1962513.3	1962513.3	100.98 %		11:55:04
2	Y 371.029	1237031.0	1237031.0	100.67 %		11:55:04
2	Ag 328.068†	56212.6	55720.0	523.19 µg/L	523.19 ppb	11:55:10
2	As 188.979†	233.0	230.2	530.25 µg/L	530.25 ppb	11:55:30
2	B 249.677†	10822.4	10601.7	513.90 µg/L	513.90 ppb	11:55:10
2	Ba 233.527†	18191.5	18028.8	524.74 µg/L	524.74 ppb	11:55:10
2	Be 313.107†	753509.5	742329.1	516.99 µg/L	516.99 ppb	11:55:04
2	Cd 226.502†	17822.3	17784.1	523.45 µg/L	523.45 ppb	11:55:10
2	Co 228.616†	9549.2	9501.2	523.79 µg/L	523.79 ppb	11:55:10
2	Cr 267.716†	22876.5	22736.4	527.69 µg/L	527.69 ppb	11:55:10
2	Cu 324.752†	73993.5	69604.5	524.07 µg/L	524.07 ppb	11:55:10
2	Mn 257.610†	140932.6	139749.1	516.75 µg/L	516.75 ppb	11:55:10
2	Mo 202.031†	4227.6	4169.2	523.86 µg/L	523.86 ppb	11:55:30
2	Ni 231.604†	8781.4	8360.5	526.20 µg/L	526.20 ppb	11:55:10
2	P 214.914†	1330.9	1115.5	2620.5 µg/L	2620.5 ppb	11:55:30
2	Pb 220.353†	1911.8	1837.3	535.96 µg/L	535.96 ppb	11:55:30

2	S 181.975 Axial†	210.6	183.0	1049.2 µg/L	1049.2 ppb	11:55:30
2	Sb 206.836†	514.5	487.1	541.43 µg/L	541.43 ppb	11:55:30
2	Se 196.026†	337.8	322.1	527.95 µg/L	527.95 ppb	11:55:30
2	SiO2†	29288.3	26724.2	5640.8 µg/L	5640.8 ppb	11:55:10
2	Si 251.611†	32052.0	31435.2	2636.7 µg/L	2636.7 ppb	11:55:10
2	Sn 189.927†	944.2	911.6	534.73 µg/L	534.73 ppb	11:55:30
2	Ti 334.940†	210643.7	207817.9	517.96 µg/L	517.96 ppb	11:55:04
2	Tl 190.801†	284.6	304.9	529.64 µg/L	529.64 ppb	11:55:30
2	U 409.014†	5329.8	5510.9	524.85 µg/L	524.85 ppb	11:55:10
2	V 292.402†	42529.4	42237.2	531.29 µg/L	531.29 ppb	11:55:10
2	Zn 213.857†	18867.4	18012.3	521.40 µg/L	521.40 ppb	11:55:10
3	Sc RADIAL	77385.1	77385.1	101 %		11:54:00
3	Al 396.153Radial†	7493.1	7466.3	5178.5 µg/L	5178.5 ppb	11:54:00
3	Ca 317.933Radial†	6894.2	6592.2	5190.8 µg/L	5190.8 ppb	11:54:00
3	Fe 238.204 Radial†	389.0	370.3	5326.6 µg/L	5326.6 ppb	11:54:20
3	K 766.490 Radial†	8209.7	7737.8	5136.6 µg/L	5136.6 ppb	11:54:00
3	Mg 279.077 IEC†	497.7	485.7	5295.7 µg/L	5295.7 ppb	11:54:20
3	Na 589.592 Radial†	36176.3	35367.1	10156 µg/L	10156 ppb	11:54:00
3	Sr 421.552†	81334.6	80182.7	509.47 µg/L	509.47 ppb	11:54:00
3	Sc 361.383	1964137.6	1964137.6	101.07 %		11:55:37
3	Y 371.029	1236096.3	1236096.3	100.59 %		11:55:37
3	Ag 328.068†	55074.4	54547.8	512.10 µg/L	512.10 ppb	11:55:43
3	As 188.979†	210.1	207.3	477.59 µg/L	477.59 ppb	11:56:03
3	B 249.677†	10574.2	10347.3	501.41 µg/L	501.41 ppb	11:55:43
3	Ba 233.527†	17484.5	17314.4	503.94 µg/L	503.94 ppb	11:55:43
3	Be 313.107†	733635.6	722048.0	502.87 µg/L	502.87 ppb	11:55:37
3	Cd 226.502†	17106.9	17061.7	502.15 µg/L	502.15 ppb	11:55:43
3	Co 228.616†	9136.4	9084.9	500.79 µg/L	500.79 ppb	11:55:43
3	Cr 267.716†	21503.7	21359.4	495.73 µg/L	495.73 ppb	11:55:43
3	Cu 324.752†	70935.8	66518.4	500.88 µg/L	500.88 ppb	11:55:43
3	Mn 257.610†	134533.1	133301.7	492.94 µg/L	492.94 ppb	11:55:43
3	Mo 202.031†	3744.8	3688.0	463.42 µg/L	463.42 ppb	11:56:03
3	Ni 231.604†	8392.8	7968.7	501.55 µg/L	501.55 ppb	11:55:43
3	P 214.914†	1220.9	1005.6	2358.8 µg/L	2358.8 ppb	11:56:03
3	Pb 220.353†	1746.4	1672.1	487.67 µg/L	487.67 ppb	11:56:03
3	S 181.975 Axial†	195.2	167.6	961.00 µg/L	961.00 ppb	11:56:03
3	Sb 206.836†	468.3	441.0	489.73 µg/L	489.73 ppb	11:56:03
3	Se 196.026†	314.4	298.6	491.26 µg/L	491.26 ppb	11:56:03
3	SiO2†	28407.5	25828.7	5451.7 µg/L	5451.7 ppb	11:55:43
3	Si 251.611†	31068.2	30435.6	2552.8 µg/L	2552.8 ppb	11:55:43
3	Sn 189.927†	835.2	802.9	471.32 µg/L	471.32 ppb	11:56:03
3	Ti 334.940†	204654.1	201719.0	502.75 µg/L	502.75 ppb	11:55:37
3	Tl 190.801†	268.3	288.5	501.32 µg/L	501.32 ppb	11:56:03
3	U 409.014†	5036.3	5216.1	496.71 µg/L	496.71 ppb	11:55:43
3	V 292.402†	40450.1	40145.0	504.71 µg/L	504.71 ppb	11:55:43
3	Zn 213.857†	18044.1	17182.2	497.34 µg/L	497.34 ppb	11:55:43

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1964505.5	101.09 %	0.113			0.11%
Sc RADIAL	77909.3	101 %	0.6			0.64%
Y 371.029	1237457.1	100.70 %	0.132			0.13%
Ag 328.068†	55254.3	518.79 µg/L	5.890	518.79 ppb	5.890	1.14%
QC value within limits for Ag 328.068 Recovery = 103.76%						
Al 396.153Radial†	7458.0	5171.9 µg/L	10.87	5171.9 ppb	10.87	0.21%
QC value within limits for Al 396.153Radial Recovery = 103.44%						
As 188.979†	223.0	513.73 µg/L	31.333	513.73 ppb	31.333	6.10%
QC value within limits for As 188.979 Recovery = 102.75%						
B 249.677†	10484.7	508.16 µg/L	6.303	508.16 ppb	6.303	1.24%
QC value within limits for B 249.677 Recovery = 101.63%						
Ba 233.527†	17761.2	516.95 µg/L	11.342	516.95 ppb	11.342	2.19%
QC value within limits for Ba 233.527 Recovery = 103.39%						
Be 313.107†	735834.2	512.47 µg/L	8.319	512.47 ppb	8.319	1.62%
QC value within limits for Be 313.107 Recovery = 102.49%						
Ca 317.933Radial†	6610.3	5205.1 µg/L	13.95	5205.1 ppb	13.95	0.27%
QC value within limits for Ca 317.933Radial Recovery = 104.10%						
Cd 226.502†	17507.0	515.28 µg/L	11.485	515.28 ppb	11.485	2.23%
QC value within limits for Cd 226.502 Recovery = 103.06%						
Co 228.616†	9363.8	516.19 µg/L	13.342	516.19 ppb	13.342	2.58%

QC value within limits for Co 228.616 Recovery = 103.24%							
Cr 267.716†	22253.3	516.48 µg/L	17.984	516.48 ppb	17.984	3.48%	
QC value within limits for Cr 267.716 Recovery = 103.30%							
Cu 324.752†	68401.6	515.03 µg/L	12.412	515.03 ppb	12.412	2.41%	
QC value within limits for Cu 324.752 Recovery = 103.01%							
Fe 238.204 Radial†	366.4	5270.5 µg/L	54.34	5270.5 ppb	54.34	1.03%	
QC value within limits for Fe 238.204 Radial Recovery = 105.41%							
K 766.490 Radial†	7732.3	5133.0 µg/L	20.48	5133.0 ppb	20.48	0.40%	
QC value within limits for K 766.490 Radial Recovery = 102.66%							
Mg 279.077 IEC†	482.0	5255.6 µg/L	34.70	5255.6 ppb	34.70	0.66%	
QC value within limits for Mg 279.077 IEC Recovery = 105.11%							
Mn 257.610†	137351.4	507.90 µg/L	13.024	507.90 ppb	13.024	2.56%	
QC value within limits for Mn 257.610 Recovery = 101.58%							
Mo 202.031†	4001.1	502.74 µg/L	34.084	502.74 ppb	34.084	6.78%	
QC value within limits for Mo 202.031 Recovery = 100.55%							
Na 589.592 Radial†	35379.2	10160 µg/L	3.2	10160 ppb	3.2	0.03%	
QC value within limits for Na 589.592 Radial Recovery = 101.60%							
Ni 231.604†	8215.2	517.06 µg/L	13.503	517.06 ppb	13.503	2.61%	
QC value within limits for Ni 231.604 Recovery = 103.41%							
P 214.914†	1076.2	2527.0 µg/L	146.00	2527.0 ppb	146.00	5.78%	
QC value within limits for P 214.914 Recovery = 101.08%							
Pb 220.353†	1777.0	518.33 µg/L	26.651	518.33 ppb	26.651	5.14%	
QC value within limits for Pb 220.353 Recovery = 103.67%							
S 181.975 Axial†	176.8	1013.7 µg/L	46.56	1013.7 ppb	46.56	4.59%	
QC value within limits for S 181.975 Axial Recovery = 101.37%							
Sb 206.836†	470.6	522.89 µg/L	28.787	522.89 ppb	28.787	5.51%	
QC value within limits for Sb 206.836 Recovery = 104.58%							
Se 196.026†	316.6	519.45 µg/L	25.052	519.45 ppb	25.052	4.82%	
QC value within limits for Se 196.026 Recovery = 103.89%							
SiO2†	26372.7	5566.6 µg/L	100.84	5566.6 ppb	100.84	1.81%	
QC value within limits for SiO2 Recovery = 104.10%							
Si 251.611†	31069.9	2606.0 µg/L	46.26	2606.0 ppb	46.26	1.78%	
QC value within limits for Si 251.611 Recovery = 104.24%							
Sn 189.927†	879.3	515.90 µg/L	38.765	515.90 ppb	38.765	7.51%	
QC value within limits for Sn 189.927 Recovery = 103.18%							
Sr 421.552†	80258.3	509.95 µg/L	0.420	509.95 ppb	0.420	0.08%	
QC value within limits for Sr 421.552 Recovery = 101.99%							
Ti 334.940†	205774.7	512.87 µg/L	8.763	512.87 ppb	8.763	1.71%	
QC value within limits for Ti 334.940 Recovery = 102.57%							
Tl 190.801†	298.9	519.31 µg/L	15.642	519.31 ppb	15.642	3.01%	
QC value within limits for Tl 190.801 Recovery = 103.86%							
U 409.014†	5391.1	513.41 µg/L	14.791	513.41 ppb	14.791	2.88%	
QC value within limits for U 409.014 Recovery = 102.68%							
V 292.402†	41469.4	521.54 µg/L	14.639	521.54 ppb	14.639	2.81%	
QC value within limits for V 292.402 Recovery = 104.31%							
Zn 213.857†	17691.6	512.11 µg/L	12.930	512.11 ppb	12.930	2.52%	
QC value within limits for Zn 213.857 Recovery = 102.42%							
All analyte(s) passed QC.							

Sequence No.: 41

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 1/27/2010 11:56:12

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	76080.7	76080.7	99.0 %		11:56:45
1	Al 396.153Radial†	-38.4	-10.9	-7.5614 µg/L	-7.5614 ppb	11:56:45
1	Ca 317.933Radial†	247.9	-1.3	-1.0343 µg/L	-1.0343 ppb	11:57:05
1	Fe 238.204 Radial†	18.1	2.4	34.068 µg/L	34.068 ppb	11:57:05
1	K 766.490 Radial†	370.9	-37.5	-24.900 µg/L	-24.900 ppb	11:56:45
1	Mg 279.077 IEC†	11.1	2.9	31.833 µg/L	31.833 ppb	11:57:05
1	Na 589.592 Radial†	339.6	-202.1	-58.025 µg/L	-58.025 ppb	11:56:45
1	Sr 421.552†	552.5	0.2	0.0012 µg/L	0.0012 ppb	11:56:45
1	Sc 361.383	1944233.2	1944233.2	100.04 %		11:58:07
1	Y 371.029	1229233.5	1229233.5	100.04 %		11:58:07
1	Ag 328.068†	-46.6	8.5	0.0858 µg/L	0.0858 ppb	11:58:13
1	As 188.979†	-2.2	-2.8	-6.4528 µg/L	-6.4528 ppb	11:58:33
1	B 249.677†	133.5	18.2	0.8687 µg/L	0.8687 ppb	11:58:33
1	Ba 233.527†	-15.8	-1.3	-0.0359 µg/L	-0.0359 ppb	11:58:33
1	Be 313.107†	3941.7	100.6	0.0700 µg/L	0.0700 ppb	11:58:13
1	Cd 226.502†	-127.0	8.5	0.2470 µg/L	0.2470 ppb	11:58:33
1	Co 228.616†	-44.2	0.8	0.0468 µg/L	0.0468 ppb	11:58:33
1	Cr 267.716†	-81.5	1.4	0.0319 µg/L	0.0319 ppb	11:58:13
1	Cu 324.752†	3686.1	16.3	0.1271 µg/L	0.1271 ppb	11:58:13
1	Mn 257.610†	-161.8	27.7	0.1057 µg/L	0.1057 ppb	11:58:33
1	Mo 202.031†	20.2	3.0	0.3720 µg/L	0.3720 ppb	11:58:33
1	Ni 231.604†	343.1	7.6	0.4779 µg/L	0.4779 ppb	11:58:33
1	P 214.914†	207.7	5.1	12.263 µg/L	12.263 ppb	11:58:33
1	Pb 220.353†	59.4	3.4	0.9890 µg/L	0.9890 ppb	11:58:33
1	S 181.975 Axial†	25.3	-0.2	-1.1294 µg/L	-1.1294 ppb	11:58:33
1	Sb 206.836†	20.9	-1.5	-1.6425 µg/L	-1.6425 ppb	11:58:33
1	Se 196.026†	0.7	-11.7	-18.404 µg/L	-18.404 ppb	11:58:33
1	SiO2†	2259.5	-20.2	-4.2726 µg/L	-4.2726 ppb	11:58:13
1	Si 251.611†	347.1	42.4	3.5580 µg/L	3.5580 ppb	11:58:33
1	Sn 189.927†	27.8	4.4	2.5517 µg/L	2.5517 ppb	11:58:33
1	Ti 334.940†	832.2	58.2	0.1427 µg/L	0.1427 ppb	11:58:13
1	Tl 190.801†	-25.7	-2.6	-4.4829 µg/L	-4.4829 ppb	11:58:33
1	U 409.014†	-177.5	55.6	5.2995 µg/L	5.2995 ppb	11:58:13
1	V 292.402†	-69.2	53.0	0.6692 µg/L	0.6692 ppb	11:58:13
1	Zn 213.857†	689.1	17.5	0.5033 µg/L	0.5033 ppb	11:58:33
2	Sc RADIAL	75624.6	75624.6	98.4 %		11:57:11
2	Al 396.153Radial†	-28.9	-1.5	-1.0125 µg/L	-1.0125 ppb	11:57:11
2	Ca 317.933Radial†	248.4	0.7	0.5418 µg/L	0.5418 ppb	11:57:31
2	Fe 238.204 Radial†	16.4	0.8	10.906 µg/L	10.906 ppb	11:57:31
2	K 766.490 Radial†	411.7	6.2	4.1481 µg/L	4.1481 ppb	11:57:11
2	Mg 279.077 IEC†	8.8	0.6	6.7423 µg/L	6.7423 ppb	11:57:31
2	Na 589.592 Radial†	320.9	-219.0	-62.879 µg/L	-62.879 ppb	11:57:11
2	Sr 421.552†	573.4	24.8	0.1577 µg/L	0.1577 ppb	11:57:11
2	Sc 361.383	1935956.5	1935956.5	99.617 %		11:58:39
2	Y 371.029	1224866.6	1224866.6	99.680 %		11:58:39
2	Ag 328.068†	-70.8	-15.9	-0.1499 µg/L	-0.1499 ppb	11:58:45
2	As 188.979†	-2.2	-2.8	-6.4400 µg/L	-6.4400 ppb	11:59:05
2	B 249.677†	126.0	11.3	0.5442 µg/L	0.5442 ppb	11:59:05
2	Ba 233.527†	-15.3	-0.8	-0.0247 µg/L	-0.0247 ppb	11:59:05
2	Be 313.107†	3920.9	96.6	0.0671 µg/L	0.0671 ppb	11:58:45
2	Cd 226.502†	-130.7	4.2	0.1237 µg/L	0.1237 ppb	11:59:05
2	Co 228.616†	-43.6	1.2	0.0652 µg/L	0.0652 ppb	11:59:05
2	Cr 267.716†	-94.2	-11.7	-0.2720 µg/L	-0.2720 ppb	11:58:45
2	Cu 324.752†	3712.9	59.0	0.4449 µg/L	0.4449 ppb	11:58:45
2	Mn 257.610†	-161.3	27.6	0.1032 µg/L	0.1032 ppb	11:59:05
2	Mo 202.031†	18.8	1.7	0.2088 µg/L	0.2088 ppb	11:59:05
2	Ni 231.604†	347.6	13.5	0.8511 µg/L	0.8511 ppb	11:59:05
2	P 214.914†	214.8	13.2	31.427 µg/L	31.427 ppb	11:59:05
2	Pb 220.353†	57.6	1.9	0.5557 µg/L	0.5557 ppb	11:59:05

2	S 181.975 Axial†	25.3	-0.1	-0.5581 µg/L	-0.5581 ppb	11:59:05
2	Sb 206.836†	32.4	10.1	11.214 µg/L	11.214 ppb	11:59:05
2	Se 196.026†	10.6	-1.8	-2.8201 µg/L	-2.8201 ppb	11:59:05
2	SiO2†	2296.7	26.8	5.6524 µg/L	5.6524 ppb	11:58:45
2	Si 251.611†	336.5	33.3	2.7960 µg/L	2.7960 ppb	11:59:05
2	Sn 189.927†	21.5	-1.8	-1.0616 µg/L	-1.0616 ppb	11:59:05
2	Ti 334.940†	920.0	149.9	0.3733 µg/L	0.3733 ppb	11:58:45
2	Tl 190.801†	-25.5	-2.6	-4.3981 µg/L	-4.3981 ppb	11:59:05
2	U 409.014†	-259.6	-27.7	-2.6409 µg/L	-2.6409 ppb	11:58:45
2	V 292.402†	-147.0	-25.4	-0.3175 µg/L	-0.3175 ppb	11:58:45
2	Zn 213.857†	674.3	5.6	0.1586 µg/L	0.1586 ppb	11:59:05
3	Sc RADIAL	76825.9	76825.9	100 %		11:57:37
3	Al 396.153Radial†	-21.5	6.5	4.4613 µg/L	4.4613 ppb	11:57:37
3	Ca 317.933Radial†	254.0	2.3	1.8074 µg/L	1.8074 ppb	11:57:57
3	Fe 238.204 Radial†	19.8	4.0	56.996 µg/L	56.996 ppb	11:57:57
3	K 766.490 Radial†	462.0	50.0	33.199 µg/L	33.199 ppb	11:57:37
3	Mg 279.077 IEC†	10.4	2.1	22.902 µg/L	22.902 ppb	11:57:57
3	Na 589.592 Radial†	371.3	-173.6	-49.853 µg/L	-49.853 ppb	11:57:37
3	Sr 421.552†	568.1	10.4	0.0658 µg/L	0.0658 ppb	11:57:37
3	Sc 361.383	1942016.4	1942016.4	99.929 %		11:59:11
3	Y 371.029	1227445.9	1227445.9	99.890 %		11:59:11
3	Ag 328.068†	-47.8	7.2	0.0733 µg/L	0.0733 ppb	11:59:17
3	As 188.979†	3.2	2.7	6.1471 µg/L	6.1471 ppb	11:59:37
3	B 249.677†	119.5	4.4	0.1853 µg/L	0.1853 ppb	11:59:37
3	Ba 233.527†	-13.8	0.7	0.0221 µg/L	0.0221 ppb	11:59:37
3	Be 313.107†	3988.2	151.6	0.1056 µg/L	0.1056 ppb	11:59:17
3	Cd 226.502†	-122.5	12.8	0.3715 µg/L	0.3715 ppb	11:59:37
3	Co 228.616†	-40.9	4.1	0.2266 µg/L	0.2266 ppb	11:59:37
3	Cr 267.716†	-68.4	14.3	0.3325 µg/L	0.3325 ppb	11:59:17
3	Cu 324.752†	3642.7	-22.9	-0.1646 µg/L	-0.1646 ppb	11:59:17
3	Mn 257.610†	-162.5	26.9	0.1059 µg/L	0.1059 ppb	11:59:37
3	Mo 202.031†	28.0	10.8	1.3582 µg/L	1.3582 ppb	11:59:37
3	Ni 231.604†	331.2	-4.0	-0.2520 µg/L	-0.2520 ppb	11:59:37
3	P 214.914†	211.6	9.2	22.070 µg/L	22.070 ppb	11:59:37
3	Pb 220.353†	56.4	0.5	0.1381 µg/L	0.1381 ppb	11:59:37
3	S 181.975 Axial†	25.3	-0.2	-1.1768 µg/L	-1.1768 ppb	11:59:37
3	Sb 206.836†	28.4	6.0	6.6472 µg/L	6.6472 ppb	11:59:37
3	Se 196.026†	9.4	-3.0	-4.5919 µg/L	-4.5919 ppb	11:59:37
3	SiO2†	2269.2	-8.0	-1.6913 µg/L	-1.6913 ppb	11:59:17
3	Si 251.611†	333.3	29.1	2.4369 µg/L	2.4369 ppb	11:59:37
3	Sn 189.927†	26.2	2.8	1.6261 µg/L	1.6261 ppb	11:59:37
3	Ti 334.940†	765.0	-8.1	-0.0220 µg/L	-0.0220 ppb	11:59:17
3	Tl 190.801†	-24.1	-1.0	-1.7329 µg/L	-1.7329 ppb	11:59:37
3	U 409.014†	-203.5	29.3	2.7902 µg/L	2.7902 ppb	11:59:17
3	V 292.402†	-93.9	28.1	0.3670 µg/L	0.3670 ppb	11:59:17
3	Zn 213.857†	684.3	13.5	0.3911 µg/L	0.3911 ppb	11:59:37

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1940735.3	99.863 %	0.2205			0.22%
Sc RADIAL	76177.1	99.2 %	0.79			0.80%
Y 371.029	1227182.0	99.868 %	0.1787			0.18%
Ag 328.068†	-0.1	0.0031 µg/L	0.13264	0.0031 ppb	0.13264	>999.9%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	-2.0	-1.3709 µg/L	6.01934	-1.3709 ppb	6.01934	439.09%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	-1.0	-2.2486 µg/L	7.27082	-2.2486 ppb	7.27082	323.35%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	11.3	0.5328 µg/L	0.34184	0.5328 ppb	0.34184	64.16%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	-0.5	-0.0128 µg/L	0.03082	-0.0128 ppb	0.03082	239.91%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	116.2	0.0809 µg/L	0.02142	0.0809 ppb	0.02142	26.47%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	0.6	0.4383 µg/L	1.42369	0.4383 ppb	1.42369	324.80%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	8.5	0.2474 µg/L	0.12392	0.2474 ppb	0.12392	50.09%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	2.0	0.1129 µg/L	0.09891	0.1129 ppb	0.09891	87.64%

QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	1.3	0.0308 µg/L	0.30226	0.0308 ppb	0.30226	981.02%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	17.4	0.1358 µg/L	0.30481	0.1358 ppb	0.30481	224.45%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	2.4	33.990 µg/L	23.0453	33.990 ppb	23.0453	67.80%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated						
K 766.490 Radial†	6.3	4.1490 µg/L	29.04954	4.1490 ppb	29.04954	700.15%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	1.9	20.492 µg/L	12.7178	20.492 ppb	12.7178	62.06%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated						
Mn 257.610†	27.4	0.1049 µg/L	0.00151	0.1049 ppb	0.00151	1.44%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	5.1	0.6464 µg/L	0.62189	0.6464 ppb	0.62189	96.22%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	-198.2	-56.919 µg/L	6.5829	-56.919 ppb	6.5829	11.57%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	5.7	0.3590 µg/L	0.56111	0.3590 ppb	0.56111	156.31%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	9.2	21.920 µg/L	9.5832	21.920 ppb	9.5832	43.72%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	1.9	0.5609 µg/L	0.42550	0.5609 ppb	0.42550	75.86%
QC value within limits for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	-0.2	-0.9548 µg/L	0.34433	-0.9548 ppb	0.34433	36.06%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	4.9	5.4061 µg/L	6.51737	5.4061 ppb	6.51737	120.55%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	-5.5	-8.6052 µg/L	8.53182	-8.6052 ppb	8.53182	99.15%
QC value within limits for Se 196.026 Recovery = Not calculated						
SiO2†	-0.5	-0.1038 µg/L	5.14939	-0.1038 ppb	5.14939	>999.9%
QC value within limits for SiO2 Recovery = Not calculated						
Si 251.611†	34.9	2.9303 µg/L	0.57248	2.9303 ppb	0.57248	19.54%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	1.8	1.0387 µg/L	1.87690	1.0387 ppb	1.87690	180.69%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	11.8	0.0749 µg/L	0.07863	0.0749 ppb	0.07863	105.01%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	66.7	0.1647 µg/L	0.19855	0.1647 ppb	0.19855	120.59%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	-2.1	-3.5380 µg/L	1.56379	-3.5380 ppb	1.56379	44.20%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 409.014†	19.1	1.8163 µg/L	4.05876	1.8163 ppb	4.05876	223.47%
QC value within limits for U 409.014 Recovery = Not calculated						
V 292.402†	18.6	0.2396 µg/L	0.50556	0.2396 ppb	0.50556	211.04%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	12.2	0.3510 µg/L	0.17581	0.3510 ppb	0.17581	50.09%
QC value within limits for Zn 213.857 Recovery = Not calculated						

All analyte(s) passed QC.

Sequence No.: 49
 Sample ID: CCV
 Analyst:
 Initial Sample Wt:
 Dilution:

Autosampler Location: 7
 Date Collected: 1/27/2010 12:25:39
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	78446.0	78446.0	102 %		12:26:16
1	Al 396.153Radial†	7580.4	7451.2	5166.7 µg/L	5166.7 ppb	12:26:16
1	Ca 317.933Radial†	6966.4	6570.3	5173.6 µg/L	5173.6 ppb	12:26:16
1	Fe 238.204 Radial†	394.4	370.4	5328.6 µg/L	5328.6 ppb	12:26:37
1	K 766.490 Radial†	8258.0	7674.8	5094.8 µg/L	5094.8 ppb	12:26:16
1	Mg 279.077 IEC†	505.1	486.3	5303.5 µg/L	5303.5 ppb	12:26:37
1	Na 589.592 Radial†	36506.3	35204.6	10109 µg/L	10109 ppb	12:26:16
1	Sr 421.552†	82220.9	79958.7	508.05 µg/L	508.05 ppb	12:26:16
1	Sc 361.383	1958216.0	1958216.0	100.76 %		12:27:40
1	Y 371.029	1233204.0	1233204.0	100.36 %		12:27:40
1	Ag 328.068†	56055.9	55686.7	522.88 µg/L	522.88 ppb	12:27:45
1	As 188.979†	236.8	234.5	540.13 µg/L	540.13 ppb	12:28:06
1	B 249.677†	10702.4	10506.2	509.19 µg/L	509.19 ppb	12:27:45
1	Ba 233.527†	18108.4	17985.9	523.49 µg/L	523.49 ppb	12:27:45
1	Be 313.107†	751785.0	742255.1	516.94 µg/L	516.94 ppb	12:27:40
1	Cd 226.502†	17637.5	17639.4	519.18 µg/L	519.18 ppb	12:27:45
1	Co 228.616†	9538.1	9510.9	524.33 µg/L	524.33 ppb	12:27:45
1	Cr 267.716†	22753.8	22664.4	526.02 µg/L	526.02 ppb	12:27:45
1	Cu 324.752†	73665.1	69439.4	522.84 µg/L	522.84 ppb	12:27:45
1	Mn 257.610†	140467.9	139594.2	516.19 µg/L	516.19 ppb	12:27:45
1	Mo 202.031†	4230.3	4181.1	525.35 µg/L	525.35 ppb	12:28:06
1	Ni 231.604†	8756.7	8355.0	525.85 µg/L	525.85 ppb	12:27:45
1	P 214.914†	1329.7	1117.2	2624.7 µg/L	2624.7 ppb	12:28:06
1	Pb 220.353†	1906.1	1835.7	535.50 µg/L	535.50 ppb	12:28:06
1	S 181.975 Axial†	209.6	182.5	1046.0 µg/L	1046.0 ppb	12:28:06
1	Sb 206.836†	505.3	479.1	532.55 µg/L	532.55 ppb	12:28:06
1	Se 196.026†	350.0	334.9	548.61 µg/L	548.61 ppb	12:28:06
1	SiO2†	29200.3	26700.5	5635.7 µg/L	5635.7 ppb	12:27:45
1	Si 251.611†	32060.3	31513.1	2643.2 µg/L	2643.2 ppb	12:27:45
1	Sn 189.927†	959.7	929.0	544.92 µg/L	544.92 ppb	12:28:06
1	Ti 334.940†	210590.7	208223.0	518.97 µg/L	518.97 ppb	12:27:40
1	Tl 190.801†	287.4	308.3	535.63 µg/L	535.63 ppb	12:28:06
1	U 409.014†	5354.7	5547.2	528.30 µg/L	528.30 ppb	12:27:45
1	V 292.402†	42339.9	42141.6	530.12 µg/L	530.12 ppb	12:27:45
1	Zn 213.857†	18733.7	17920.6	518.73 µg/L	518.73 ppb	12:27:45
2	Sc RADIAL	78500.6	78500.6	102 %		12:26:42
2	Al 396.153Radial†	7588.2	7453.6	5168.3 µg/L	5168.3 ppb	12:26:42
2	Ca 317.933Radial†	6991.5	6590.1	5189.2 µg/L	5189.2 ppb	12:26:42
2	Fe 238.204 Radial†	389.2	365.0	5251.7 µg/L	5251.7 ppb	12:27:03
2	K 766.490 Radial†	8318.3	7728.2	5130.3 µg/L	5130.3 ppb	12:26:42
2	Mg 279.077 IEC†	501.3	482.2	5258.6 µg/L	5258.6 ppb	12:27:03
2	Na 589.592 Radial†	36567.5	35239.6	10120 µg/L	10120 ppb	12:26:42
2	Sr 421.552†	82386.5	80064.7	508.72 µg/L	508.72 ppb	12:26:42
2	Sc 361.383	1955808.7	1955808.7	100.64 %		12:28:13
2	Y 371.029	1231481.4	1231481.4	100.22 %		12:28:13
2	Ag 328.068†	56404.0	56101.1	526.76 µg/L	526.76 ppb	12:28:18
2	As 188.979†	235.4	233.3	537.43 µg/L	537.43 ppb	12:28:39
2	B 249.677†	10765.2	10581.6	512.91 µg/L	512.91 ppb	12:28:18
2	Ba 233.527†	18213.3	18112.2	527.17 µg/L	527.17 ppb	12:28:18
2	Be 313.107†	750730.3	742125.5	516.85 µg/L	516.85 ppb	12:28:13
2	Cd 226.502†	17804.1	17826.5	524.69 µg/L	524.69 ppb	12:28:18
2	Co 228.616†	9580.5	9564.7	527.29 µg/L	527.29 ppb	12:28:18
2	Cr 267.716†	22918.3	22855.6	530.46 µg/L	530.46 ppb	12:28:18
2	Cu 324.752†	74099.4	69960.8	526.75 µg/L	526.75 ppb	12:28:18
2	Mn 257.610†	141459.4	140751.0	520.45 µg/L	520.45 ppb	12:28:18
2	Mo 202.031†	4231.6	4187.6	526.16 µg/L	526.16 ppb	12:28:39
2	Ni 231.604†	8794.9	8403.7	528.92 µg/L	528.92 ppb	12:28:18
2	P 214.914†	1339.6	1128.6	2651.7 µg/L	2651.7 ppb	12:28:39
2	Pb 220.353†	1915.3	1847.2	538.86 µg/L	538.86 ppb	12:28:39

2	S 181.975 Axial†	209.0	182.2	1044.4 µg/L	1044.4 ppb	12:28:39
2	Sb 206.836†	517.0	491.3	546.11 µg/L	546.11 ppb	12:28:39
2	Se 196.026†	344.5	329.9	540.42 µg/L	540.42 ppb	12:28:39
2	SiO2†	29455.7	26990.0	5696.9 µg/L	5696.9 ppb	12:28:18
2	Si 251.611†	32215.3	31706.3	2659.4 µg/L	2659.4 ppb	12:28:18
2	Sn 189.927†	953.4	923.9	541.92 µg/L	541.92 ppb	12:28:39
2	Ti 334.940†	210150.1	208042.5	518.52 µg/L	518.52 ppb	12:28:13
2	Tl 190.801†	285.9	307.2	533.63 µg/L	533.63 ppb	12:28:39
2	U 409.014†	5362.4	5561.4	529.67 µg/L	529.67 ppb	12:28:18
2	V 292.402†	42628.1	42479.7	534.33 µg/L	534.33 ppb	12:28:18
2	Zn 213.857†	18876.8	18085.7	523.53 µg/L	523.53 ppb	12:28:18
3	Sc RADIAL	76621.4	76621.4	99.7 %		12:27:08
3	Al 396.153Radial†	7446.8	7494.0	5197.6 µg/L	5197.6 ppb	12:27:08
3	Ca 317.933Radial†	6779.2	6545.1	5153.7 µg/L	5153.7 ppb	12:27:08
3	Fe 238.204 Radial†	389.0	374.1	5381.1 µg/L	5381.1 ppb	12:27:29
3	K 766.490 Radial†	8109.0	7718.0	5123.5 µg/L	5123.5 ppb	12:27:08
3	Mg 279.077 IEC†	505.2	498.2	5432.2 µg/L	5432.2 ppb	12:27:29
3	Na 589.592 Radial†	35876.1	35424.0	10172 µg/L	10172 ppb	12:27:08
3	Sr 421.552†	80614.5	80265.4	510.00 µg/L	510.00 ppb	12:27:08
3	Sc 361.383	1955585.7	1955585.7	100.63 %		12:28:46
3	Y 371.029	1231102.9	1231102.9	100.19 %		12:28:46
3	Ag 328.068†	54711.1	54425.1	510.96 µg/L	510.96 ppb	12:28:51
3	As 188.979†	208.0	206.2	474.85 µg/L	474.85 ppb	12:29:12
3	B 249.677†	10430.8	10250.6	496.68 µg/L	496.68 ppb	12:28:51
3	Ba 233.527†	17382.3	17288.4	503.18 µg/L	503.18 ppb	12:28:51
3	Be 313.107†	735123.0	726700.5	506.11 µg/L	506.11 ppb	12:28:46
3	Cd 226.502†	17000.3	17029.8	501.20 µg/L	501.20 ppb	12:28:51
3	Co 228.616†	9089.5	9077.9	500.40 µg/L	500.40 ppb	12:28:51
3	Cr 267.716†	21447.8	21396.9	496.60 µg/L	496.60 ppb	12:28:51
3	Cu 324.752†	70514.6	66406.8	500.05 µg/L	500.05 ppb	12:28:51
3	Mn 257.610†	134075.7	133429.3	493.42 µg/L	493.42 ppb	12:28:51
3	Mo 202.031†	3762.2	3721.5	467.63 µg/L	467.63 ppb	12:29:12
3	Ni 231.604†	8333.6	7946.2	500.13 µg/L	500.13 ppb	12:28:51
3	P 214.914†	1236.1	1025.9	2407.7 µg/L	2407.7 ppb	12:29:12
3	Pb 220.353†	1751.6	1684.8	491.39 µg/L	491.39 ppb	12:29:12
3	S 181.975 Axial†	193.0	166.3	953.40 µg/L	953.40 ppb	12:29:12
3	Sb 206.836†	468.0	442.7	491.72 µg/L	491.72 ppb	12:29:12
3	Se 196.026†	319.0	304.6	500.80 µg/L	500.80 ppb	12:29:12
3	SiO2†	28290.1	25834.9	5453.1 µg/L	5453.1 ppb	12:28:51
3	Si 251.611†	30984.0	30486.4	2557.1 µg/L	2557.1 ppb	12:28:51
3	Sn 189.927†	843.1	814.4	478.02 µg/L	478.02 ppb	12:29:12
3	Ti 334.940†	205262.9	203209.6	506.45 µg/L	506.45 ppb	12:28:46
3	Tl 190.801†	271.6	293.0	509.09 µg/L	509.09 ppb	12:29:12
3	U 409.014†	5016.8	5218.5	496.93 µg/L	496.93 ppb	12:28:51
3	V 292.402†	40326.0	40196.7	505.39 µg/L	505.39 ppb	12:28:51
3	Zn 213.857†	17917.6	17134.6	495.95 µg/L	495.95 ppb	12:28:51

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1956536.8	100.68 %	0.075			0.07%
Sc RADIAL	77856.0	101 %	1.4			1.37%
Y 371.029	1231929.4	100.25 %	0.091			0.09%
Ag 328.068†	55404.3	520.20 µg/L	8.234	520.20 ppb	8.234	1.58%
QC value within limits for Ag 328.068 Recovery = 104.04%						
Al 396.153Radial†	7466.3	5177.5 µg/L	17.39	5177.5 ppb	17.39	0.34%
QC value within limits for Al 396.153Radial Recovery = 103.55%						
As 188.979†	224.7	517.47 µg/L	36.934	517.47 ppb	36.934	7.14%
QC value within limits for As 188.979 Recovery = 103.49%						
B 249.677†	10446.1	506.26 µg/L	8.502	506.26 ppb	8.502	1.68%
QC value within limits for B 249.677 Recovery = 101.25%						
Ba 233.527†	17795.5	517.95 µg/L	12.917	517.95 ppb	12.917	2.49%
QC value within limits for Ba 233.527 Recovery = 103.59%						
Be 313.107†	737027.0	513.30 µg/L	6.228	513.30 ppb	6.228	1.21%
QC value within limits for Be 313.107 Recovery = 102.66%						
Ca 317.933Radial†	6568.5	5172.2 µg/L	17.78	5172.2 ppb	17.78	0.34%
QC value within limits for Ca 317.933Radial Recovery = 103.44%						
Cd 226.502†	17498.6	515.02 µg/L	12.286	515.02 ppb	12.286	2.39%
QC value within limits for Cd 226.502 Recovery = 103.00%						
Co 228.616†	9384.5	517.34 µg/L	14.747	517.34 ppb	14.747	2.85%

QC value within limits for Co 228.616 Recovery = 103.47%

Cr 267.716†	22305.6	517.69 µg/L	18.398	517.69 ppb	18.398	3.55%
QC value within limits for Cr 267.716 Recovery = 103.54%						
Cu 324.752†	68602.3	516.55 µg/L	14.422	516.55 ppb	14.422	2.79%
QC value within limits for Cu 324.752 Recovery = 103.31%						
Fe 238.204 Radial†	369.8	5320.5 µg/L	65.10	5320.5 ppb	65.10	1.22%
QC value within limits for Fe 238.204 Radial Recovery = 106.41%						
K 766.490 Radial†	7707.0	5116.2 µg/L	18.84	5116.2 ppb	18.84	0.37%
QC value within limits for K 766.490 Radial Recovery = 102.32%						
Mg 279.077 IEC†	488.9	5331.4 µg/L	90.09	5331.4 ppb	90.09	1.69%
QC value within limits for Mg 279.077 IEC Recovery = 106.63%						
Mn 257.610†	137924.8	510.02 µg/L	14.536	510.02 ppb	14.536	2.85%
QC value within limits for Mn 257.610 Recovery = 102.00%						
Mo 202.031†	4030.1	506.38 µg/L	33.562	506.38 ppb	33.562	6.63%
QC value within limits for Mo 202.031 Recovery = 101.28%						
Na 589.592 Radial†	35289.4	10134 µg/L	33.9	10134 ppb	33.9	0.33%
QC value within limits for Na 589.592 Radial Recovery = 101.34%						
Ni 231.604†	8235.0	518.30 µg/L	15.811	518.30 ppb	15.811	3.05%
QC value within limits for Ni 231.604 Recovery = 103.66%						
P 214.914†	1090.6	2561.4 µg/L	133.77	2561.4 ppb	133.77	5.22%
QC value within limits for P 214.914 Recovery = 102.45%						
Pb 220.353†	1789.2	521.92 µg/L	26.492	521.92 ppb	26.492	5.08%
QC value within limits for Pb 220.353 Recovery = 104.38%						
S 181.975 Axial†	177.0	1014.6 µg/L	53.01	1014.6 ppb	53.01	5.22%
QC value within limits for S 181.975 Axial Recovery = 101.46%						
Sb 206.836†	471.0	523.46 µg/L	28.313	523.46 ppb	28.313	5.41%
QC value within limits for Sb 206.836 Recovery = 104.69%						
Se 196.026†	323.1	529.94 µg/L	25.570	529.94 ppb	25.570	4.82%
QC value within limits for Se 196.026 Recovery = 105.99%						
SiO2†	26508.5	5595.2 µg/L	126.85	5595.2 ppb	126.85	2.27%
QC value within limits for SiO2 Recovery = 104.63%						
Si 251.611†	31235.3	2619.9 µg/L	55.00	2619.9 ppb	55.00	2.10%
QC value within limits for Si 251.611 Recovery = 104.80%						
Sn 189.927†	889.1	521.62 µg/L	37.785	521.62 ppb	37.785	7.24%
QC value within limits for Sn 189.927 Recovery = 104.32%						
Sr 421.552†	80096.3	508.92 µg/L	0.990	508.92 ppb	0.990	0.19%
QC value within limits for Sr 421.552 Recovery = 101.78%						
Ti 334.940†	206491.7	514.65 µg/L	7.100	514.65 ppb	7.100	1.38%
QC value within limits for Ti 334.940 Recovery = 102.93%						
Tl 190.801†	302.8	526.12 µg/L	14.777	526.12 ppb	14.777	2.81%
QC value within limits for Tl 190.801 Recovery = 105.22%						
U 409.014†	5442.3	518.30 µg/L	18.519	518.30 ppb	18.519	3.57%
QC value within limits for U 409.014 Recovery = 103.66%						
V 292.402†	41606.0	523.28 µg/L	15.636	523.28 ppb	15.636	2.99%
QC value within limits for V 292.402 Recovery = 104.66%						
Zn 213.857†	17713.6	512.73 µg/L	14.731	512.73 ppb	14.731	2.87%
QC value within limits for Zn 213.857 Recovery = 102.55%						

All analyte(s) passed QC.

Sequence No.: 50

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 1/27/2010 12:29:21

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	76131.1	76131.1	99.1 %		12:29:54
1	Al 396.153Radial†	-14.4	13.5	9.3521 µg/L	9.3521 ppb	12:29:54
1	Ca 317.933Radial†	255.9	6.6	5.1869 µg/L	5.1869 ppb	12:30:14
1	Fe 238.204 Radial†	15.9	0.2	2.8812 µg/L	2.8812 ppb	12:30:14
1	K 766.490 Radial†	409.9	1.6	1.0810 µg/L	1.0810 ppb	12:29:54
1	Mg 279.077 IEC†	10.7	2.5	27.212 µg/L	27.212 ppb	12:30:14
1	Na 589.592 Radial†	387.3	-154.1	-44.266 µg/L	-44.266 ppb	12:29:54
1	Sr 421.552†	579.8	27.4	0.1741 µg/L	0.1741 ppb	12:29:54
1	Sc 361.383	1949149.1	1949149.1	100.30 %		12:31:16
1	Y 371.029	1231337.7	1231337.7	100.21 %		12:31:16
1	Ag 328.068†	-34.5	20.7	0.1920 µg/L	0.1920 ppb	12:31:21
1	As 188.979†	-0.9	-1.4	-3.2912 µg/L	-3.2912 ppb	12:31:42
1	B 249.677†	118.9	3.4	0.1636 µg/L	0.1636 ppb	12:31:42
1	Ba 233.527†	-13.3	1.3	0.0372 µg/L	0.0372 ppb	12:31:42
1	Be 313.107†	3909.9	58.9	0.0409 µg/L	0.0409 ppb	12:31:21
1	Cd 226.502†	-124.7	11.1	0.3265 µg/L	0.3265 ppb	12:31:42
1	Co 228.616†	-46.7	-1.6	-0.0892 µg/L	-0.0892 ppb	12:31:42
1	Cr 267.716†	-74.9	8.1	0.1880 µg/L	0.1880 ppb	12:31:42
1	Cu 324.752†	3702.9	23.7	0.1787 µg/L	0.1787 ppb	12:31:21
1	Mn 257.610†	-145.8	44.1	0.1621 µg/L	0.1621 ppb	12:31:42
1	Mo 202.031†	16.2	-1.0	-0.1279 µg/L	-0.1279 ppb	12:31:42
1	Ni 231.604†	339.8	3.4	0.2121 µg/L	0.2121 ppb	12:31:42
1	P 214.914†	220.8	17.6	42.194 µg/L	42.194 ppb	12:31:42
1	Pb 220.353†	63.9	7.7	2.2556 µg/L	2.2556 ppb	12:31:42
1	S 181.975 Axial†	24.2	-1.4	-8.2102 µg/L	-8.2102 ppb	12:31:42
1	Sb 206.836†	22.6	0.1	0.1080 µg/L	0.1080 ppb	12:31:42
1	Se 196.026†	3.8	-8.7	-13.719 µg/L	-13.719 ppb	12:31:42
1	SiO2†	2282.3	-3.2	-0.6838 µg/L	-0.6838 ppb	12:31:21
1	Si 251.611†	334.7	29.2	2.4503 µg/L	2.4503 ppb	12:31:42
1	Sn 189.927†	26.2	2.7	1.5581 µg/L	1.5581 ppb	12:31:42
1	Ti 334.940†	902.9	126.6	0.3136 µg/L	0.3136 ppb	12:31:21
1	Tl 190.801†	-28.1	-4.9	-8.4405 µg/L	-8.4405 ppb	12:31:42
1	U 409.014†	-227.3	6.3	0.6031 µg/L	0.6031 ppb	12:31:21
1	V 292.402†	-132.3	-9.8	-0.1218 µg/L	-0.1218 ppb	12:31:21
1	Zn 213.857†	668.1	-5.2	-0.1549 µg/L	-0.1549 ppb	12:31:42
2	Sc RADIAL	76720.2	76720.2	99.9 %		12:30:20
2	Al 396.153Radial†	-19.0	8.9	6.2249 µg/L	6.2249 ppb	12:30:20
2	Ca 317.933Radial†	250.4	-0.9	-0.7386 µg/L	-0.7386 ppb	12:30:40
2	Fe 238.204 Radial†	18.4	2.5	35.985 µg/L	35.985 ppb	12:30:40
2	K 766.490 Radial†	448.0	36.6	24.290 µg/L	24.290 ppb	12:30:20
2	Mg 279.077 IEC†	11.2	2.9	31.655 µg/L	31.655 ppb	12:30:40
2	Na 589.592 Radial†	306.8	-237.7	-68.266 µg/L	-68.266 ppb	12:30:20
2	Sr 421.552†	567.9	10.9	0.0693 µg/L	0.0693 ppb	12:30:20
2	Sc 361.383	1938234.5	1938234.5	99.735 %		12:31:48
2	Y 371.029	1225115.0	1225115.0	99.700 %		12:31:48
2	Ag 328.068†	-20.1	35.0	0.3299 µg/L	0.3299 ppb	12:31:53
2	As 188.979†	2.4	1.8	4.1780 µg/L	4.1780 ppb	12:32:14
2	B 249.677†	109.9	-5.0	-0.2639 µg/L	-0.2639 ppb	12:32:14
2	Ba 233.527†	-9.3	5.2	0.1510 µg/L	0.1510 ppb	12:32:14
2	Be 313.107†	3917.2	88.2	0.0613 µg/L	0.0613 ppb	12:31:53
2	Cd 226.502†	-121.2	13.9	0.4054 µg/L	0.4054 ppb	12:32:14
2	Co 228.616†	-45.0	-0.1	-0.0069 µg/L	-0.0069 ppb	12:32:14
2	Cr 267.716†	-82.3	0.3	0.0062 µg/L	0.0062 ppb	12:32:14
2	Cu 324.752†	3671.9	13.4	0.1060 µg/L	0.1060 ppb	12:31:53
2	Mn 257.610†	-137.9	51.2	0.1928 µg/L	0.1928 ppb	12:32:14
2	Mo 202.031†	12.3	-4.8	-0.6059 µg/L	-0.6059 ppb	12:32:14
2	Ni 231.604†	337.3	2.7	0.1725 µg/L	0.1725 ppb	12:32:14
2	P 214.914†	217.0	15.1	36.133 µg/L	36.133 ppb	12:32:14
2	Pb 220.353†	58.2	2.5	0.7171 µg/L	0.7171 ppb	12:32:14

2	S 181.975 Axial†	20.9	-4.5	-26.029 µg/L	-26.029 ppb	12:32:14
2	Sb 206.836†	28.9	6.6	7.3227 µg/L	7.3227 ppb	12:32:14
2	Se 196.026†	9.1	-3.3	-5.1662 µg/L	-5.1662 ppb	12:32:14
2	SiO2†	2293.1	20.4	4.3133 µg/L	4.3133 ppb	12:31:53
2	Si 251.611†	345.3	41.7	3.4989 µg/L	3.4989 ppb	12:32:14
2	Sn 189.927†	19.7	-3.7	-2.1445 µg/L	-2.1445 ppb	12:32:14
2	Ti 334.940†	894.7	123.4	0.3052 µg/L	0.3052 ppb	12:31:53
2	Tl 190.801†	-27.7	-4.7	-8.0929 µg/L	-8.0929 ppb	12:32:14
2	U 409.014†	-286.1	-53.9	-5.1452 µg/L	-5.1452 ppb	12:31:53
2	V 292.402†	-101.0	20.8	0.2509 µg/L	0.2509 ppb	12:31:53
2	Zn 213.857†	663.6	-6.0	-0.1784 µg/L	-0.1784 ppb	12:32:14
3	Sc RADIAL	76482.7	76482.7	99.6 %		12:30:45
3	Al 396.153Radial†	-23.6	4.3	2.9869 µg/L	2.9869 ppb	12:30:45
3	Ca 317.933Radial†	251.7	1.1	0.8683 µg/L	0.8683 ppb	12:31:06
3	Fe 238.204 Radial†	18.7	2.9	41.557 µg/L	41.557 ppb	12:31:06
3	K 766.490 Radial†	470.5	60.6	40.202 µg/L	40.202 ppb	12:30:45
3	Mg 279.077 IEC†	11.3	3.0	32.804 µg/L	32.804 ppb	12:31:06
3	Na 589.592 Radial†	351.8	-191.5	-55.005 µg/L	-55.005 ppb	12:30:45
3	Sr 421.552†	574.8	19.7	0.1249 µg/L	0.1249 ppb	12:30:45
3	Sc 361.383	1941610.2	1941610.2	99.908 %		12:32:20
3	Y 371.029	1226605.1	1226605.1	99.821 %		12:32:20
3	Ag 328.068†	-107.6	-52.6	-0.4862 µg/L	-0.4862 ppb	12:32:25
3	As 188.979†	-3.3	-3.9	-8.8947 µg/L	-8.8947 ppb	12:32:46
3	B 249.677†	115.3	0.2	-0.0098 µg/L	-0.0098 ppb	12:32:46
3	Ba 233.527†	-25.7	-11.2	-0.3246 µg/L	-0.3246 ppb	12:32:46
3	Be 313.107†	3946.2	110.4	0.0768 µg/L	0.0768 ppb	12:32:25
3	Cd 226.502†	-130.2	5.1	0.1460 µg/L	0.1460 ppb	12:32:46
3	Co 228.616†	-42.1	2.9	0.1588 µg/L	0.1588 ppb	12:32:46
3	Cr 267.716†	-79.6	3.1	0.0732 µg/L	0.0732 ppb	12:32:46
3	Cu 324.752†	3650.1	-14.8	-0.1051 µg/L	-0.1051 ppb	12:32:25
3	Mn 257.610†	-140.7	48.6	0.1838 µg/L	0.1838 ppb	12:32:46
3	Mo 202.031†	16.6	-0.6	-0.0753 µg/L	-0.0753 ppb	12:32:46
3	Ni 231.604†	331.9	-3.3	-0.2053 µg/L	-0.2053 ppb	12:32:46
3	P 214.914†	217.1	14.8	35.386 µg/L	35.386 ppb	12:32:46
3	Pb 220.353†	49.5	-6.4	-1.8593 µg/L	-1.8593 ppb	12:32:46
3	S 181.975 Axial†	18.9	-6.6	-37.572 µg/L	-37.572 ppb	12:32:46
3	Sb 206.836†	23.9	1.5	1.7024 µg/L	1.7024 ppb	12:32:46
3	Se 196.026†	7.6	-4.9	-7.5433 µg/L	-7.5433 ppb	12:32:46
3	SiO2†	2297.7	21.0	4.4392 µg/L	4.4392 ppb	12:32:25
3	Si 251.611†	343.1	38.9	3.2599 µg/L	3.2599 ppb	12:32:46
3	Sn 189.927†	26.3	2.9	1.7173 µg/L	1.7173 ppb	12:32:46
3	Ti 334.940†	890.2	117.3	0.2901 µg/L	0.2901 ppb	12:32:25
3	Tl 190.801†	-20.1	2.9	5.0146 µg/L	5.0146 ppb	12:32:46
3	U 409.014†	-282.5	-49.8	-4.7537 µg/L	-4.7537 ppb	12:32:25
3	V 292.402†	-98.9	23.1	0.2845 µg/L	0.2845 ppb	12:32:25
3	Zn 213.857†	675.0	4.3	0.1231 µg/L	0.1231 ppb	12:32:46

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1942997.9	99.980 %	0.2875			0.29%
Sc RADIAL	76444.7	99.5 %	0.39			0.39%
Y 371.029	1227685.9	99.909 %	0.2644			0.26%
Ag 328.068†	1.0	0.0119 µg/L	0.43685	0.0119 ppb	0.43685	>999.9%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	8.9	6.1879 µg/L	3.18276	6.1879 ppb	3.18276	51.43%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	-1.2	-2.6693 µg/L	6.55853	-2.6693 ppb	6.55853	245.70%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	-0.5	-0.0367 µg/L	0.21505	-0.0367 ppb	0.21505	585.75%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	-1.6	-0.0455 µg/L	0.24831	-0.0455 ppb	0.24831	546.13%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	85.8	0.0597 µg/L	0.01800	0.0597 ppb	0.01800	30.15%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	2.3	1.7722 µg/L	3.06441	1.7722 ppb	3.06441	172.92%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	10.0	0.2926 µg/L	0.13301	0.2926 ppb	0.13301	45.45%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	0.4	0.0209 µg/L	0.12628	0.0209 ppb	0.12628	604.30%

QC value within limits for Co 228.616	Recovery = Not calculated		
Cr 267.716†	3.8	0.0891 µg/L	0.09195 103.19%
QC value within limits for Cr 267.716	Recovery = Not calculated		
Cu 324.752†	7.5	0.0598 µg/L	0.14744 246.40%
QC value within limits for Cu 324.752	Recovery = Not calculated		
Fe 238.204 Radial†	1.9	26.808 µg/L	20.9076 77.99%
QC value within limits for Fe 238.204 Radial	Recovery = Not calculated		
K 766.490 Radial†	32.9	21.858 µg/L	19.6737 90.01%
QC value within limits for K 766.490 Radial	Recovery = Not calculated		
Mg 279.077 IEC†	2.8	30.557 µg/L	2.9531 9.66%
QC value within limits for Mg 279.077 IEC	Recovery = Not calculated		
Mn 257.610†	48.0	0.1796 µg/L	0.01576 8.78%
QC value within limits for Mn 257.610	Recovery = Not calculated		
Mo 202.031†	-2.2	-0.2697 µg/L	0.29237 108.40%
QC value within limits for Mo 202.031	Recovery = Not calculated		
Na 589.592 Radial†	-194.5	-55.846 µg/L	12.0220 21.53%
QC value within limits for Na 589.592 Radial	Recovery = Not calculated		
Ni 231.604†	0.9	0.0598 µg/L	0.23039 385.54%
QC value within limits for Ni 231.604	Recovery = Not calculated		
P 214.914†	15.8	37.904 µg/L	3.7335 9.85%
QC value within limits for P 214.914	Recovery = Not calculated		
Pb 220.353†	1.3	0.3711 µg/L	2.07916 560.24%
QC value within limits for Pb 220.353	Recovery = Not calculated		
S 181.975 Axial†	-4.2	-23.937 µg/L	14.7924 61.80%
QC value within limits for S 181.975 Axial	Recovery = Not calculated		
Sb 206.836†	2.8	3.0444 µg/L	3.78995 124.49%
QC value within limits for Sb 206.836	Recovery = Not calculated		
Se 196.026†	-5.6	-8.8096 µg/L	4.41495 50.12%
QC value within limits for Se 196.026	Recovery = Not calculated		
SiO2†	12.7	2.6896 µg/L	2.92211 108.65%
QC value within limits for SiO2	Recovery = Not calculated		
Si 251.611†	36.6	3.0697 µg/L	0.54954 17.90%
QC value within limits for Si 251.611	Recovery = Not calculated		
Sn 189.927†	0.6	0.3770 µg/L	2.18511 579.67%
QC value within limits for Sn 189.927	Recovery = Not calculated		
Sr 421.552†	19.3	0.1228 µg/L	0.05242 42.70%
QC value within limits for Sr 421.552	Recovery = Not calculated		
Ti 334.940†	122.4	0.3030 µg/L	0.01193 3.94%
QC value within limits for Ti 334.940	Recovery = Not calculated		
Tl 190.801†	-2.2	-3.8396 µg/L	7.66992 199.76%
QC value within limits for Tl 190.801	Recovery = Not calculated		
U 409.014†	-32.4	-3.0986 µg/L	3.21172 103.65%
QC value within limits for U 409.014	Recovery = Not calculated		
V 292.402†	11.4	0.1378 µg/L	0.22552 163.61%
QC value within limits for V 292.402	Recovery = Not calculated		
Zn 213.857†	-2.3	-0.0701 µg/L	0.16773 239.44%
QC value within limits for Zn 213.857	Recovery = Not calculated		

All analyte(s) passed QC.

Sequence No.: 58
 Sample ID: CCV
 Analyst:
 Initial Sample Wt:
 Dilution:

Autosampler Location: 7
 Date Collected: 1/27/2010 12:58:48
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	77128.8	77128.8	100 %		12:59:27
1	Al 396.153Radial†	7700.6	7697.7	5337.6 µg/L	5337.6 ppb	12:59:27
1	Ca 317.933Radial†	7038.1	6758.3	5321.6 µg/L	5321.6 ppb	12:59:27
1	Fe 238.204 Radial†	399.8	382.3	5499.6 µg/L	5499.6 ppb	12:59:47
1	K 766.490 Radial†	8340.9	7895.5	5241.3 µg/L	5241.3 ppb	12:59:27
1	Mg 279.077 IEC†	510.2	499.9	5450.9 µg/L	5450.9 ppb	12:59:47
1	Na 589.592 Radial†	36935.8	36242.9	10408 µg/L	10408 ppb	12:59:27
1	Sr 421.552†	83434.1	82542.1	524.46 µg/L	524.46 ppb	12:59:27
1	Sc 361.383	1903443.4	1903443.4	97.944 %		13:00:51
1	Y 371.029	1198606.1	1198606.1	97.543 %		13:00:51
1	Ag 328.068†	56596.3	57839.2	543.09 µg/L	543.09 ppb	13:00:56
1	As 188.979†	238.0	242.5	558.56 µg/L	558.56 ppb	13:01:17
1	B 249.677†	10766.0	10876.7	527.16 µg/L	527.16 ppb	13:00:56
1	Ba 233.527†	18246.5	18644.0	542.65 µg/L	542.65 ppb	13:00:56
1	Be 313.107†	749877.2	761776.6	530.54 µg/L	530.54 ppb	13:00:51
1	Cd 226.502†	17777.8	18286.4	538.22 µg/L	538.22 ppb	13:00:56
1	Co 228.616†	9587.1	9833.3	542.10 µg/L	542.10 ppb	13:00:56
1	Cr 267.716†	22886.4	23449.5	544.24 µg/L	544.24 ppb	13:00:56
1	Cu 324.752†	74361.4	72253.9	544.03 µg/L	544.03 ppb	13:00:56
1	Mn 257.610†	141811.4	144977.3	536.09 µg/L	536.09 ppb	13:00:56
1	Mo 202.031†	4245.8	4317.8	542.53 µg/L	542.53 ppb	13:01:17
1	Ni 231.604†	8796.2	8645.4	544.13 µg/L	544.13 ppb	13:00:56
1	P 214.914†	1336.4	1162.0	2729.8 µg/L	2729.8 ppb	13:01:17
1	Pb 220.353†	1924.7	1909.2	556.93 µg/L	556.93 ppb	13:01:17
1	S 181.975 Axial†	212.1	191.1	1095.3 µg/L	1095.3 ppb	13:01:17
1	Sb 206.836†	516.3	504.8	561.06 µg/L	561.06 ppb	13:01:17
1	Se 196.026†	340.7	335.5	550.08 µg/L	550.08 ppb	13:01:17
1	SiO2†	29439.6	27778.8	5863.3 µg/L	5863.3 ppb	13:00:56
1	Si 251.611†	32239.8	32611.9	2735.4 µg/L	2735.4 ppb	13:00:56
1	Sn 189.927†	943.7	940.1	551.46 µg/L	551.46 ppb	13:01:17
1	Ti 334.940†	210760.5	214410.4	534.39 µg/L	534.39 ppb	13:00:51
1	Tl 190.801†	285.2	314.2	545.96 µg/L	545.96 ppb	13:01:17
1	U 409.014†	5419.9	5766.6	549.21 µg/L	549.21 ppb	13:00:56
1	V 292.402†	42762.6	43782.3	550.72 µg/L	550.72 ppb	13:00:56
1	Zn 213.857†	18840.0	18564.1	537.36 µg/L	537.36 ppb	13:00:56
2	Sc RADIAL	76827.5	76827.5	100 %		12:59:53
2	Al 396.153Radial†	7698.4	7725.5	5357.1 µg/L	5357.1 ppb	12:59:53
2	Ca 317.933Radial†	7023.4	6771.0	5331.6 µg/L	5331.6 ppb	12:59:53
2	Fe 238.204 Radial†	394.1	378.2	5441.3 µg/L	5441.3 ppb	13:00:13
2	K 766.490 Radial†	8335.0	7922.1	5259.0 µg/L	5259.0 ppb	12:59:53
2	Mg 279.077 IEC†	511.3	502.9	5484.3 µg/L	5484.3 ppb	13:00:13
2	Na 589.592 Radial†	36895.0	36346.4	10437 µg/L	10437 ppb	12:59:53
2	Sr 421.552†	83135.2	82569.1	524.64 µg/L	524.64 ppb	12:59:53
2	Sc 361.383	1925675.4	1925675.4	99.088 %		13:01:23
2	Y 371.029	1211202.7	1211202.7	98.568 %		13:01:23
2	Ag 328.068†	56498.6	57073.6	535.89 µg/L	535.89 ppb	13:01:29
2	As 188.979†	238.1	239.7	552.20 µg/L	552.20 ppb	13:01:50
2	B 249.677†	10740.1	10723.7	519.73 µg/L	519.73 ppb	13:01:29
2	Ba 233.527†	18151.2	18332.7	533.59 µg/L	533.59 ppb	13:01:29
2	Be 313.107†	752811.5	755898.8	526.44 µg/L	526.44 ppb	13:01:23
2	Cd 226.502†	17734.1	18032.8	530.75 µg/L	530.75 ppb	13:01:29
2	Co 228.616†	9575.7	9708.9	535.24 µg/L	535.24 ppb	13:01:29
2	Cr 267.716†	22878.7	23172.0	537.80 µg/L	537.80 ppb	13:01:29
2	Cu 324.752†	74301.0	71316.4	536.97 µg/L	536.97 ppb	13:01:29
2	Mn 257.610†	141371.4	142861.7	528.27 µg/L	528.27 ppb	13:01:29
2	Mo 202.031†	4231.6	4253.3	534.43 µg/L	534.43 ppb	13:01:50
2	Ni 231.604†	8770.3	8515.6	535.97 µg/L	535.97 ppb	13:01:29
2	P 214.914†	1328.0	1137.7	2672.5 µg/L	2672.5 ppb	13:01:50
2	Pb 220.353†	1913.6	1875.2	547.03 µg/L	547.03 ppb	13:01:50

2	S 181.975 Axial†	205.5	181.9	1042.7 µg/L	1042.7 ppb	13:01:50
2	Sb 206.836†	515.0	497.4	552.81 µg/L	552.81 ppb	13:01:50
2	Se 196.026†	342.3	333.1	546.05 µg/L	546.05 ppb	13:01:50
2	SiO2†	29311.0	27301.9	5762.7 µg/L	5762.7 ppb	13:01:29
2	Si 251.611†	32264.1	32256.5	2705.6 µg/L	2705.6 ppb	13:01:29
2	Sn 189.927†	952.9	938.2	550.37 µg/L	550.37 ppb	13:01:50
2	Ti 334.940†	211304.0	212474.6	529.56 µg/L	529.56 ppb	13:01:23
2	Tl 190.801†	284.6	310.3	539.11 µg/L	539.11 ppb	13:01:50
2	U 409.014†	5363.6	5645.9	537.70 µg/L	537.70 ppb	13:01:29
2	V 292.402†	42629.7	43144.1	542.70 µg/L	542.70 ppb	13:01:29
2	Zn 213.857†	18839.3	18341.4	530.91 µg/L	530.91 ppb	13:01:29
3	Sc RADIAL	77808.4	77808.4	101 %		13:00:19
3	Al 396.153Radial†	7766.3	7695.5	5337.4 µg/L	5337.4 ppb	13:00:19
3	Ca 317.933Radial†	7119.4	6777.3	5336.6 µg/L	5336.6 ppb	13:00:19
3	Fe 238.204 Radial†	387.2	366.4	5271.1 µg/L	5271.1 ppb	13:00:39
3	K 766.490 Radial†	8369.7	7851.4	5212.0 µg/L	5212.0 ppb	13:00:19
3	Mg 279.077 IEC†	498.3	483.6	5273.2 µg/L	5273.2 ppb	13:00:39
3	Na 589.592 Radial†	37250.0	36231.8	10404 µg/L	10404 ppb	13:00:19
3	Sr 421.552†	84200.3	82572.7	524.66 µg/L	524.66 ppb	13:00:19
3	Sc 361.383	1923230.2	1923230.2	98.962 %		13:01:56
3	Y 371.029	1210798.9	1210798.9	98.535 %		13:01:56
3	Ag 328.068†	55647.4	56285.9	528.40 µg/L	528.40 ppb	13:02:02
3	As 188.979†	213.2	214.8	494.87 µg/L	494.87 ppb	13:02:23
3	B 249.677†	10538.7	10534.0	510.55 µg/L	510.55 ppb	13:02:02
3	Ba 233.527†	17642.7	17842.2	519.30 µg/L	519.30 ppb	13:02:02
3	Be 313.107†	739780.3	743696.9	517.94 µg/L	517.94 ppb	13:01:56
3	Cd 226.502†	17199.5	17515.3	515.52 µg/L	515.52 ppb	13:02:02
3	Co 228.616†	9206.1	9347.6	515.27 µg/L	515.27 ppb	13:02:02
3	Cr 267.716†	21700.4	22010.7	510.85 µg/L	510.85 ppb	13:02:02
3	Cu 324.752†	71734.5	68818.4	518.17 µg/L	518.17 ppb	13:02:02
3	Mn 257.610†	136141.7	137758.6	509.40 µg/L	509.40 ppb	13:02:02
3	Mo 202.031†	3789.9	3812.5	479.05 µg/L	479.05 ppb	13:02:23
3	Ni 231.604†	8467.8	8221.1	517.43 µg/L	517.43 ppb	13:02:02
3	P 214.914†	1242.9	1053.4	2471.8 µg/L	2471.8 ppb	13:02:23
3	Pb 220.353†	1763.0	1725.5	503.27 µg/L	503.27 ppb	13:02:23
3	S 181.975 Axial†	199.6	176.2	1009.8 µg/L	1009.8 ppb	13:02:23
3	Sb 206.836†	473.8	456.4	506.87 µg/L	506.87 ppb	13:02:23
3	Se 196.026†	316.7	307.6	505.28 µg/L	505.28 ppb	13:02:23
3	SiO2†	28703.5	26725.7	5641.1 µg/L	5641.1 ppb	13:02:02
3	Si 251.611†	31386.2	31410.7	2634.6 µg/L	2634.6 ppb	13:02:02
3	Sn 189.927†	844.2	829.6	486.90 µg/L	486.90 ppb	13:02:23
3	Ti 334.940†	207244.5	208643.6	520.02 µg/L	520.02 ppb	13:01:56
3	Tl 190.801†	266.4	292.3	507.99 µg/L	507.99 ppb	13:02:23
3	U 409.014†	5048.7	5334.6	508.01 µg/L	508.01 ppb	13:02:02
3	V 292.402†	40908.1	41459.1	521.21 µg/L	521.21 ppb	13:02:02
3	Zn 213.857†	18170.0	17689.2	512.03 µg/L	512.03 ppb	13:02:02

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1917449.6	98.665 %	0.6273			0.64%
Sc RADIAL	77254.9	101 %	0.7			0.65%
Y 371.029	1206869.2	98.215 %	0.5826			0.59%
Ag 328.068†	57066.2	535.79 µg/L	7.343	535.79 ppb	7.343	1.37%
QC value within limits for Ag 328.068 Recovery = 107.16%						
Al 396.153Radial†	7706.3	5344.0 µg/L	11.33	5344.0 ppb	11.33	0.21%
QC value within limits for Al 396.153Radial Recovery = 106.88%						
As 188.979†	232.4	535.21 µg/L	35.083	535.21 ppb	35.083	6.55%
QC value within limits for As 188.979 Recovery = 107.04%						
B 249.677†	10711.5	519.14 µg/L	8.320	519.14 ppb	8.320	1.60%
QC value within limits for B 249.677 Recovery = 103.83%						
Ba 233.527†	18273.0	531.85 µg/L	11.770	531.85 ppb	11.770	2.21%
QC value within limits for Ba 233.527 Recovery = 106.37%						
Be 313.107†	753790.8	524.97 µg/L	6.423	524.97 ppb	6.423	1.22%
QC value within limits for Be 313.107 Recovery = 104.99%						
Ca 317.933Radial†	6768.9	5329.9 µg/L	7.64	5329.9 ppb	7.64	0.14%
QC value within limits for Ca 317.933Radial Recovery = 106.60%						
Cd 226.502†	17944.8	528.16 µg/L	11.568	528.16 ppb	11.568	2.19%
QC value within limits for Cd 226.502 Recovery = 105.63%						
Co 228.616†	9629.9	530.87 µg/L	13.941	530.87 ppb	13.941	2.63%

QC value within limits for Co 228.616 Recovery = 106.17%							
Cr 267.716†	22877.4	530.96 µg/L	17.714	530.96 ppb	17.714	3.34%	
QC value within limits for Cr 267.716 Recovery = 106.19%							
Cu 324.752†	70796.3	533.06 µg/L	13.369	533.06 ppb	13.369	2.51%	
QC value within limits for Cu 324.752 Recovery = 106.61%							
Fe 238.204 Radial†	375.6	5404.0 µg/L	118.74	5404.0 ppb	118.74	2.20%	
QC value within limits for Fe 238.204 Radial Recovery = 108.08%							
K 766.490 Radial†	7889.7	5237.5 µg/L	23.72	5237.5 ppb	23.72	0.45%	
QC value within limits for K 766.490 Radial Recovery = 104.75%							
Mg 279.077 IEC†	495.5	5402.8 µg/L	113.44	5402.8 ppb	113.44	2.10%	
QC value within limits for Mg 279.077 IEC Recovery = 108.06%							
Mn 257.610†	141865.9	524.59 µg/L	13.721	524.59 ppb	13.721	2.62%	
QC value within limits for Mn 257.610 Recovery = 104.92%							
Mo 202.031†	4127.8	518.67 µg/L	34.549	518.67 ppb	34.549	6.66%	
QC value within limits for Mo 202.031 Recovery = 103.73%							
Na 589.592 Radial†	36273.7	10416 µg/L	18.1	10416 ppb	18.1	0.17%	
QC value within limits for Na 589.592 Radial Recovery = 104.16%							
Ni 231.604†	8460.7	532.51 µg/L	13.682	532.51 ppb	13.682	2.57%	
QC value within limits for Ni 231.604 Recovery = 106.50%							
P 214.914†	1117.7	2624.7 µg/L	135.47	2624.7 ppb	135.47	5.16%	
QC value within limits for P 214.914 Recovery = 104.99%							
Pb 220.353†	1836.6	535.74 µg/L	28.555	535.74 ppb	28.555	5.33%	
QC value within limits for Pb 220.353 Recovery = 107.15%							
S 181.975 Axial†	183.0	1049.3 µg/L	43.12	1049.3 ppb	43.12	4.11%	
QC value within limits for S 181.975 Axial Recovery = 104.93%							
Sb 206.836†	486.2	540.25 µg/L	29.200	540.25 ppb	29.200	5.40%	
QC value within limits for Sb 206.836 Recovery = 108.05%							
Se 196.026†	325.4	533.81 µg/L	24.784	533.81 ppb	24.784	4.64%	
QC value within limits for Se 196.026 Recovery = 106.76%							
SiO2†	27268.8	5755.7 µg/L	111.30	5755.7 ppb	111.30	1.93%	
QC value within limits for SiO2 Recovery = 107.63%							
Si 251.611†	32093.0	2691.9 µg/L	51.76	2691.9 ppb	51.76	1.92%	
QC value within limits for Si 251.611 Recovery = 107.67%							
Sn 189.927†	902.6	529.58 µg/L	36.965	529.58 ppb	36.965	6.98%	
QC value within limits for Sn 189.927 Recovery = 105.92%							
Sr 421.552†	82561.3	524.59 µg/L	0.106	524.59 ppb	0.106	0.02%	
QC value within limits for Sr 421.552 Recovery = 104.92%							
Ti 334.940†	211842.9	527.99 µg/L	7.311	527.99 ppb	7.311	1.38%	
QC value within limits for Ti 334.940 Recovery = 105.60%							
Tl 190.801†	305.6	531.02 µg/L	20.240	531.02 ppb	20.240	3.81%	
QC value within limits for Tl 190.801 Recovery = 106.20%							
U 409.014†	5582.4	531.64 µg/L	21.255	531.64 ppb	21.255	4.00%	
QC value within limits for U 409.014 Recovery = 106.33%							
V 292.402†	42795.2	538.21 µg/L	15.257	538.21 ppb	15.257	2.83%	
QC value within limits for V 292.402 Recovery = 107.64%							
Zn 213.857†	18198.2	526.76 µg/L	13.162	526.76 ppb	13.162	2.50%	
QC value within limits for Zn 213.857 Recovery = 105.35%							
All analyte(s) passed QC.							

Sequence No.: 59

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 1/27/2010 13:02:33

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	75587.5	75587.5	98.4 %		13:03:05
1	Al 396.153Radial†	-8.0	19.8	13.746 µg/L	13.746 ppb	13:03:05
1	Ca 317.933Radial†	249.7	2.1	1.6478 µg/L	1.6478 ppb	13:03:26
1	Fe 238.204 Radial†	20.1	4.5	64.753 µg/L	64.753 ppb	13:03:26
1	K 766.490 Radial†	376.0	-29.8	-19.796 µg/L	-19.796 ppb	13:03:05
1	Mg 279.077 IEC†	9.0	0.9	9.1936 µg/L	9.1936 ppb	13:03:26
1	Na 589.592 Radial†	354.6	-184.6	-53.004 µg/L	-53.004 ppb	13:03:05
1	Sr 421.552†	566.1	17.6	0.1118 µg/L	0.1118 ppb	13:03:05
1	Sc 361.383	1917740.0	1917740.0	98.680 %		13:04:28
1	Y 371.029	1210743.2	1210743.2	98.531 %		13:04:28
1	Ag 328.068†	-88.3	-34.4	-0.3156 µg/L	-0.3156 ppb	13:04:33
1	As 188.979†	-1.1	-1.7	-3.9447 µg/L	-3.9447 ppb	13:04:54
1	B 249.677†	119.9	6.3	0.2704 µg/L	0.2704 ppb	13:04:54
1	Ba 233.527†	-15.8	-1.5	-0.0432 µg/L	-0.0432 ppb	13:04:54
1	Be 313.107†	3854.1	66.2	0.0460 µg/L	0.0460 ppb	13:04:33
1	Cd 226.502†	-130.2	3.5	0.0971 µg/L	0.0971 ppb	13:04:54
1	Co 228.616†	-44.9	-0.5	-0.0308 µg/L	-0.0308 ppb	13:04:54
1	Cr 267.716†	-91.1	-9.5	-0.2201 µg/L	-0.2201 ppb	13:04:33
1	Cu 324.752†	3677.5	58.5	0.4487 µg/L	0.4487 ppb	13:04:33
1	Mn 257.610†	-140.0	47.6	0.1843 µg/L	0.1843 ppb	13:04:54
1	Mo 202.031†	15.8	-1.2	-0.1501 µg/L	-0.1501 ppb	13:04:54
1	Ni 231.604†	343.0	12.1	0.7663 µg/L	0.7663 ppb	13:04:54
1	P 214.914†	220.6	21.1	50.356 µg/L	50.356 ppb	13:04:54
1	Pb 220.353†	57.2	2.0	0.5939 µg/L	0.5939 ppb	13:04:54
1	S 181.975 Axial†	23.1	-2.1	-11.886 µg/L	-11.886 ppb	13:04:54
1	Sb 206.836†	26.8	4.7	5.2136 µg/L	5.2136 ppb	13:04:54
1	Se 196.026†	1.0	-11.4	-17.754 µg/L	-17.754 ppb	13:04:54
1	SiO2†	2256.6	8.0	1.6951 µg/L	1.6951 ppb	13:04:33
1	Si 251.611†	324.0	23.8	1.9956 µg/L	1.9956 ppb	13:04:54
1	Sn 189.927†	22.6	-0.6	-0.3163 µg/L	-0.3163 ppb	13:04:54
1	Ti 334.940†	921.4	160.1	0.3986 µg/L	0.3986 ppb	13:04:33
1	Tl 190.801†	-24.2	-1.4	-2.4976 µg/L	-2.4976 ppb	13:04:54
1	U 409.014†	-295.5	-66.5	-6.3564 µg/L	-6.3564 ppb	13:04:33
1	V 292.402†	-110.8	9.8	0.1173 µg/L	0.1173 ppb	13:04:33
1	Zn 213.857†	675.6	13.4	0.3820 µg/L	0.3820 ppb	13:04:54
2	Sc RADIAL	75419.6	75419.6	98.2 %		13:03:31
2	Al 396.153Radial†	-20.9	6.7	4.6360 µg/L	4.6360 ppb	13:03:31
2	Ca 317.933Radial†	250.8	3.8	2.9628 µg/L	2.9628 ppb	13:03:52
2	Fe 238.204 Radial†	16.0	0.4	6.1121 µg/L	6.1121 ppb	13:03:52
2	K 766.490 Radial†	368.8	-36.4	-24.138 µg/L	-24.138 ppb	13:03:31
2	Mg 279.077 IEC†	12.8	4.7	51.515 µg/L	51.515 ppb	13:03:52
2	Na 589.592 Radial†	335.4	-203.3	-58.368 µg/L	-58.368 ppb	13:03:31
2	Sr 421.552†	560.6	13.3	0.0846 µg/L	0.0846 ppb	13:03:31
2	Sc 361.383	1913276.5	1913276.5	98.450 %		13:05:00
2	Y 371.029	1207487.2	1207487.2	98.266 %		13:05:00
2	Ag 328.068†	-73.8	-19.9	-0.1832 µg/L	-0.1832 ppb	13:05:05
2	As 188.979†	1.2	0.7	1.6352 µg/L	1.6352 ppb	13:05:26
2	B 249.677†	95.8	-17.9	-0.8751 µg/L	-0.8751 ppb	13:05:26
2	Ba 233.527†	-15.8	-1.5	-0.0435 µg/L	-0.0435 ppb	13:05:26
2	Be 313.107†	3900.6	122.5	0.0852 µg/L	0.0852 ppb	13:05:05
2	Cd 226.502†	-126.2	7.3	0.2143 µg/L	0.2143 ppb	13:05:26
2	Co 228.616†	-50.0	-5.8	-0.3223 µg/L	-0.3223 ppb	13:05:26
2	Cr 267.716†	-68.6	13.1	0.3048 µg/L	0.3048 ppb	13:05:05
2	Cu 324.752†	3644.8	33.9	0.2560 µg/L	0.2560 ppb	13:05:05
2	Mn 257.610†	-141.8	45.5	0.1668 µg/L	0.1668 ppb	13:05:26
2	Mo 202.031†	11.3	-5.7	-0.7213 µg/L	-0.7213 ppb	13:05:26
2	Ni 231.604†	335.3	5.1	0.3239 µg/L	0.3239 ppb	13:05:26
2	P 214.914†	214.8	15.7	37.573 µg/L	37.573 ppb	13:05:26
2	Pb 220.353†	61.8	6.8	1.9932 µg/L	1.9932 ppb	13:05:26

2	S 181.975 Axial†	23.6	-1.5	-8.5989 µg/L	-8.5989 ppb	13:05:26
2	Sb 206.836†	28.9	6.9	7.6313 µg/L	7.6313 ppb	13:05:26
2	Se 196.026†	12.4	0.1	0.2109 µg/L	0.2109 ppb	13:05:26
2	SiO2†	2263.2	20.1	4.2365 µg/L	4.2365 ppb	13:05:05
2	Si 251.611†	330.1	30.8	2.5850 µg/L	2.5850 ppb	13:05:26
2	Sn 189.927†	25.4	2.4	1.4047 µg/L	1.4047 ppb	13:05:26
2	Ti 334.940†	914.9	155.6	0.3841 µg/L	0.3841 ppb	13:05:05
2	Tl 190.801†	-17.8	5.0	8.6683 µg/L	8.6683 ppb	13:05:26
2	U 409.014†	-252.2	-23.2	-2.2193 µg/L	-2.2193 ppb	13:05:05
2	V 292.402†	-99.2	21.4	0.2588 µg/L	0.2588 ppb	13:05:05
2	Zn 213.857†	665.2	4.3	0.1213 µg/L	0.1213 ppb	13:05:26
3	Sc RADIAL	75285.9	75285.9	98.0 %		13:03:57
3	Al 396.153Radial†	-33.1	-5.8	-4.0530 µg/L	-4.0530 ppb	13:03:57
3	Ca 317.933Radial†	244.0	-2.7	-2.1035 µg/L	-2.1035 ppb	13:04:17
3	Fe 238.204 Radial†	19.9	4.4	62.941 µg/L	62.941 ppb	13:04:17
3	K 766.490 Radial†	367.1	-37.4	-24.841 µg/L	-24.841 ppb	13:03:57
3	Mg 279.077 IEC†	11.0	2.9	31.579 µg/L	31.579 ppb	13:04:17
3	Na 589.592 Radial†	331.8	-206.3	-59.252 µg/L	-59.252 ppb	13:03:57
3	Sr 421.552†	585.4	39.7	0.2520 µg/L	0.2520 ppb	13:03:57
3	Sc 361.383	1900462.8	1900462.8	97.791 %		13:05:32
3	Y 371.029	1197737.8	1197737.8	97.472 %		13:05:32
3	Ag 328.068†	-100.9	-48.1	-0.4404 µg/L	-0.4404 ppb	13:05:37
3	As 188.979†	-2.1	-2.7	-6.2829 µg/L	-6.2829 ppb	13:05:58
3	B 249.677†	109.1	-3.6	-0.2091 µg/L	-0.2091 ppb	13:05:58
3	Ba 233.527†	-13.7	0.5	0.0148 µg/L	0.0148 ppb	13:05:58
3	Be 313.107†	3918.9	168.0	0.1170 µg/L	0.1170 ppb	13:05:37
3	Cd 226.502†	-120.4	12.3	0.3553 µg/L	0.3553 ppb	13:05:58
3	Co 228.616†	-46.3	-2.4	-0.1318 µg/L	-0.1318 ppb	13:05:58
3	Cr 267.716†	-88.0	-7.2	-0.1664 µg/L	-0.1664 ppb	13:05:37
3	Cu 324.752†	3554.4	-33.5	-0.2435 µg/L	-0.2435 ppb	13:05:37
3	Mn 257.610†	-139.5	46.9	0.1802 µg/L	0.1802 ppb	13:05:58
3	Mo 202.031†	18.8	2.0	0.2515 µg/L	0.2515 ppb	13:05:58
3	Ni 231.604†	326.5	-1.5	-0.0964 µg/L	-0.0964 ppb	13:05:58
3	P 214.914†	222.7	25.2	60.404 µg/L	60.404 ppb	13:05:58
3	Pb 220.353†	68.9	14.5	4.2238 µg/L	4.2238 ppb	13:05:58
3	S 181.975 Axial†	20.2	-4.8	-27.595 µg/L	-27.595 ppb	13:05:58
3	Sb 206.836†	22.4	0.5	0.6142 µg/L	0.6142 ppb	13:05:58
3	Se 196.026†	10.7	-1.5	-2.1473 µg/L	-2.1473 ppb	13:05:58
3	SiO2†	2293.6	66.6	14.065 µg/L	14.065 ppb	13:05:37
3	Si 251.611†	338.6	41.8	3.5031 µg/L	3.5031 ppb	13:05:58
3	Sn 189.927†	29.9	7.2	4.1950 µg/L	4.1950 ppb	13:05:58
3	Ti 334.940†	878.2	124.4	0.3077 µg/L	0.3077 ppb	13:05:37
3	Tl 190.801†	-22.4	0.2	0.3245 µg/L	0.3245 ppb	13:05:58
3	U 409.014†	-191.5	37.2	3.5397 µg/L	3.5397 ppb	13:05:37
3	V 292.402†	-76.5	43.9	0.5549 µg/L	0.5549 ppb	13:05:37
3	Zn 213.857†	668.4	12.2	0.3522 µg/L	0.3522 ppb	13:05:58

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1910493.1	98.307 %	0.4615			0.47%
Sc RADIAL	75431.0	98.2 %	0.20			0.20%
Y 371.029	1205322.7	98.089 %	0.5507			0.56%
Ag 328.068†	-34.1	-0.3131 µg/L	0.12862	-0.3131 ppb	0.12862	41.08%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	6.9	4.7764 µg/L	8.90044	4.7764 ppb	8.90044	186.34%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	-1.2	-2.8641 µg/L	4.06810	-2.8641 ppb	4.06810	142.04%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	-5.1	-0.2713 µg/L	0.57527	-0.2713 ppb	0.57527	212.08%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	-0.8	-0.0240 µg/L	0.03358	-0.0240 ppb	0.03358	140.09%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	118.9	0.0827 µg/L	0.03556	0.0827 ppb	0.03556	42.99%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	1.1	0.8357 µg/L	2.62894	0.8357 ppb	2.62894	314.58%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	7.7	0.2222 µg/L	0.12927	0.2222 ppb	0.12927	58.17%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-2.9	-0.1616 µg/L	0.14799	-0.1616 ppb	0.14799	91.56%

Cr 267.716†	QC value within limits for Co 228.616	Recovery = Not calculated			
	-1.2	-0.0272 µg/L	0.28882	-0.0272 ppb	0.28882 >999.9%
Cu 324.752†	QC value within limits for Cr 267.716	Recovery = Not calculated			
	19.6	0.1537 µg/L	0.35724	0.1537 ppb	0.35724 232.37%
Fe 238.204 Radial†	QC value within limits for Cu 324.752	Recovery = Not calculated			
	3.1	44.602 µg/L	33.3456	44.602 ppb	33.3456 74.76%
K 766.490 Radial†	QC value within limits for Fe 238.204 Radial	Recovery = Not calculated			
	-34.5	-22.925 µg/L	2.7323	-22.925 ppb	2.7323 11.92%
Mg 279.077 IEC†	QC value within limits for K 766.490 Radial	Recovery = Not calculated			
	2.8	30.763 µg/L	21.1726	30.763 ppb	21.1726 68.83%
Mn 257.610†	QC value within limits for Mg 279.077 IEC	Recovery = Not calculated			
	46.7	0.1771 µg/L	0.00913	0.1771 ppb	0.00913 5.15%
Mo 202.031†	QC value within limits for Mn 257.610	Recovery = Not calculated			
	-1.7	-0.2066 µg/L	0.48887	-0.2066 ppb	0.48887 236.57%
Na 589.592 Radial†	QC value within limits for Mo 202.031	Recovery = Not calculated			
	-198.1	-56.875 µg/L	3.3812	-56.875 ppb	3.3812 5.95%
Ni 231.604†	QC value within limits for Na 589.592 Radial	Recovery = Not calculated			
	5.2	0.3313 µg/L	0.43137	0.3313 ppb	0.43137 130.21%
P 214.914†	QC value within limits for Ni 231.604	Recovery = Not calculated			
	20.7	49.444 µg/L	11.4430	49.444 ppb	11.4430 23.14%
Pb 220.353†	QC value within limits for P 214.914	Recovery = Not calculated			
	7.8	2.2703 µg/L	1.83074	2.2703 ppb	1.83074 80.64%
S 181.975 Axial†	QC value within limits for Pb 220.353	Recovery = Not calculated			
	-2.8	-16.027 µg/L	10.1524	-16.027 ppb	10.1524 63.35%
Sb 206.836†	QC value within limits for S 181.975 Axial	Recovery = Not calculated			
	4.1	4.4864 µg/L	3.56465	4.4864 ppb	3.56465 79.46%
Se 196.026†	QC value within limits for Sb 206.836	Recovery = Not calculated			
	-4.3	-6.5636 µg/L	9.76293	-6.5636 ppb	9.76293 148.74%
SiO2†	QC value within limits for Se 196.026	Recovery = Not calculated			
	31.6	6.6654 µg/L	6.53260	6.6654 ppb	6.53260 98.01%
Si 251.611†	QC value within limits for SiO2	Recovery = Not calculated			
	32.1	2.6946 µg/L	0.75967	2.6946 ppb	0.75967 28.19%
Sn 189.927†	QC value within limits for Si 251.611	Recovery = Not calculated			
	3.0	1.7612 µg/L	2.27668	1.7612 ppb	2.27668 129.27%
Sr 421.552†	QC value within limits for Sn 189.927	Recovery = Not calculated			
	23.5	0.1495 µg/L	0.08983	0.1495 ppb	0.08983 60.09%
Ti 334.940†	QC value within limits for Sr 421.552	Recovery = Not calculated			
	146.7	0.3635 µg/L	0.04884	0.3635 ppb	0.04884 13.44%
Tl 190.801†	QC value within limits for Ti 334.940	Recovery = Not calculated			
	1.3	2.1650 µg/L	5.80602	2.1650 ppb	5.80602 268.17%
U 409.014†	QC value within limits for Tl 190.801	Recovery = Not calculated			
	-17.5	-1.6787 µg/L	4.97013	-1.6787 ppb	4.97013 296.08%
V 292.402†	QC value within limits for U 409.014	Recovery = Not calculated			
	25.0	0.3104 µg/L	0.22329	0.3104 ppb	0.22329 71.95%
Zn 213.857†	QC value within limits for V 292.402	Recovery = Not calculated			
	10.0	0.2852 µg/L	0.14271	0.2852 ppb	0.14271 50.05%

All analyte(s) passed QC.

Sequence No.: 8
 Sample ID: CCV
 Analyst:
 Initial Sample Wt:
 Dilution:

Autosampler Location: 7
 Date Collected: 1/27/2010 13:50:29
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	77590.9	77590.9	101 %		13:51:08
1	Al 396.153Radial†	7594.4	7546.8	5233.0 µg/L	5233.0 ppb	13:51:08
1	Ca 317.933Radial†	7043.0	6721.3	5292.5 µg/L	5292.5 ppb	13:51:08
1	Fe 238.204 Radial†	395.4	375.6	5403.1 µg/L	5403.1 ppb	13:51:28
1	K 766.490 Radial†	8321.1	7826.4	5195.5 µg/L	5195.5 ppb	13:51:08
1	Mg 279.077 IEC†	507.4	494.0	5387.4 µg/L	5387.4 ppb	13:51:28
1	Na 589.592 Radial†	36539.7	35631.5	10232 µg/L	10232 ppb	13:51:08
1	Sr 421.552†	82781.7	81401.2	517.22 µg/L	517.22 ppb	13:51:08
1	Sc 361.383	1946327.6	1946327.6	100.15 %		13:52:31
1	Y 371.029	1226845.2	1226845.2	99.841 %		13:52:31
1	Ag 328.068†	56044.1	56014.7	525.96 µg/L	525.96 ppb	13:52:37
1	As 188.979†	234.6	233.7	538.37 µg/L	538.37 ppb	13:52:57
1	B 249.677†	10684.2	10552.9	511.43 µg/L	511.43 ppb	13:52:37
1	Ba 233.527†	18052.9	18040.2	525.08 µg/L	525.08 ppb	13:52:37
1	Be 313.107†	757030.0	752049.5	523.76 µg/L	523.76 ppb	13:52:31
1	Cd 226.502†	17641.3	17750.2	522.43 µg/L	522.43 ppb	13:52:37
1	Co 228.616†	9511.8	9542.5	526.06 µg/L	526.06 ppb	13:52:37
1	Cr 267.716†	22743.7	22792.2	528.98 µg/L	528.98 ppb	13:52:37
1	Cu 324.752†	73677.4	69898.2	526.30 µg/L	526.30 ppb	13:52:37
1	Mn 257.610†	140501.8	140479.5	519.47 µg/L	519.47 ppb	13:52:37
1	Mo 202.031†	4244.7	4221.1	530.38 µg/L	530.38 ppb	13:52:57
1	Ni 231.604†	8735.8	8387.2	527.89 µg/L	527.89 ppb	13:52:37
1	P 214.914†	1342.7	1138.2	2674.8 µg/L	2674.8 ppb	13:52:57
1	Pb 220.353†	1932.7	1873.9	546.63 µg/L	546.63 ppb	13:52:57
1	S 181.975 Axial†	212.9	187.0	1072.2 µg/L	1072.2 ppb	13:52:57
1	Sb 206.836†	515.6	492.4	547.40 µg/L	547.40 ppb	13:52:57
1	Se 196.026†	347.9	334.9	548.92 µg/L	548.92 ppb	13:52:57
1	SiO2†	29288.4	26965.4	5691.7 µg/L	5691.7 ppb	13:52:37
1	Si 251.611†	32010.0	31657.2	2655.3 µg/L	2655.3 ppb	13:52:37
1	Sn 189.927†	959.1	934.3	548.01 µg/L	548.01 ppb	13:52:57
1	Ti 334.940†	211736.0	210643.2	525.00 µg/L	525.00 ppb	13:52:31
1	Tl 190.801†	286.3	309.0	536.81 µg/L	536.81 ppb	13:52:57
1	U 409.014†	5372.2	5597.1	533.05 µg/L	533.05 ppb	13:52:37
1	V 292.402†	42364.2	42422.5	533.66 µg/L	533.66 ppb	13:52:37
1	Zn 213.857†	18695.9	17996.4	520.91 µg/L	520.91 ppb	13:52:37
2	Sc RADIAL	78063.3	78063.3	102 %		13:51:34
2	Al 396.153Radial†	7601.5	7508.4	5206.2 µg/L	5206.2 ppb	13:51:34
2	Ca 317.933Radial†	7037.5	6673.8	5255.1 µg/L	5255.1 ppb	13:51:34
2	Fe 238.204 Radial†	394.8	372.6	5361.3 µg/L	5361.3 ppb	13:51:54
2	K 766.490 Radial†	8358.5	7813.3	5186.8 µg/L	5186.8 ppb	13:51:34
2	Mg 279.077 IEC†	502.7	486.4	5304.6 µg/L	5304.6 ppb	13:51:54
2	Na 589.592 Radial†	36714.4	35584.6	10219 µg/L	10219 ppb	13:51:34
2	Sr 421.552†	83105.6	81224.0	516.09 µg/L	516.09 ppb	13:51:34
2	Sc 361.383	1938583.5	1938583.5	99.752 %		13:53:04
2	Y 371.029	1221226.8	1221226.8	99.384 %		13:53:04
2	Ag 328.068†	57021.3	57217.9	537.26 µg/L	537.26 ppb	13:53:10
2	As 188.979†	235.9	236.0	543.53 µg/L	543.53 ppb	13:53:30
2	B 249.677†	10931.1	10843.1	525.59 µg/L	525.59 ppb	13:53:10
2	Ba 233.527†	18469.3	18529.6	539.32 µg/L	539.32 ppb	13:53:10
2	Be 313.107†	758652.5	756695.5	527.00 µg/L	527.00 ppb	13:53:04
2	Cd 226.502†	18095.7	18276.0	537.93 µg/L	537.93 ppb	13:53:10
2	Co 228.616†	9727.3	9796.4	540.07 µg/L	540.07 ppb	13:53:10
2	Cr 267.716†	23248.9	23389.4	542.84 µg/L	542.84 ppb	13:53:10
2	Cu 324.752†	75076.3	71594.4	539.05 µg/L	539.05 ppb	13:53:10
2	Mn 257.610†	143477.9	144023.4	532.56 µg/L	532.56 ppb	13:53:10
2	Mo 202.031†	4247.9	4241.3	532.91 µg/L	532.91 ppb	13:53:30
2	Ni 231.604†	8896.8	8583.5	540.23 µg/L	540.23 ppb	13:53:10
2	P 214.914†	1345.1	1146.0	2692.0 µg/L	2692.0 ppb	13:53:30
2	Pb 220.353†	1919.9	1868.8	545.13 µg/L	545.13 ppb	13:53:30

2	S 181.975 Axial†	213.3	188.3	1079.4 µg/L	1079.4 ppb	13:53:30
2	Sb 206.836†	521.3	500.2	555.93 µg/L	555.93 ppb	13:53:30
2	Se 196.026†	344.3	332.7	545.31 µg/L	545.31 ppb	13:53:30
2	SiO2†	29831.3	27626.5	5831.2 µg/L	5831.2 ppb	13:53:10
2	Si 251.611†	32720.3	32497.0	2725.7 µg/L	2725.7 ppb	13:53:10
2	Sn 189.927†	957.0	935.9	548.96 µg/L	548.96 ppb	13:53:30
2	Ti 334.940†	211983.6	211736.0	527.73 µg/L	527.73 ppb	13:53:04
2	Tl 190.801†	289.5	313.3	544.29 µg/L	544.29 ppb	13:53:30
2	U 409.014†	5420.3	5666.7	539.70 µg/L	539.70 ppb	13:53:10
2	V 292.402†	43200.5	43429.8	546.25 µg/L	546.25 ppb	13:53:10
2	Zn 213.857†	19142.3	18518.5	536.07 µg/L	536.07 ppb	13:53:10
3	Sc RADIAL	77868.7	77868.7	101 %		13:52:00
3	Al 396.153Radial†	7660.5	7585.3	5260.9 µg/L	5260.9 ppb	13:52:00
3	Ca 317.933Radial†	7110.9	6763.4	5325.7 µg/L	5325.7 ppb	13:52:00
3	Fe 238.204 Radial†	396.1	374.8	5392.2 µg/L	5392.2 ppb	13:52:20
3	K 766.490 Radial†	8337.1	7812.8	5186.4 µg/L	5186.4 ppb	13:52:00
3	Mg 279.077 IEC†	508.5	493.3	5379.0 µg/L	5379.0 ppb	13:52:20
3	Na 589.592 Radial†	36926.5	35884.1	10305 µg/L	10305 ppb	13:52:00
3	Sr 421.552†	83734.0	82048.3	521.33 µg/L	521.33 ppb	13:52:00
3	Sc 361.383	1951953.3	1951953.3	100.44 %		13:53:37
3	Y 371.029	1229944.3	1229944.3	100.09 %		13:53:37
3	Ag 328.068†	55213.8	55026.7	516.61 µg/L	516.61 ppb	13:53:43
3	As 188.979†	214.7	213.3	491.22 µg/L	491.22 ppb	13:54:03
3	B 249.677†	10533.7	10372.3	502.60 µg/L	502.60 ppb	13:53:43
3	Ba 233.527†	17555.7	17493.2	509.15 µg/L	509.15 ppb	13:53:43
3	Be 313.107†	743708.4	736607.7	513.01 µg/L	513.01 ppb	13:53:37
3	Cd 226.502†	17160.4	17220.7	506.82 µg/L	506.82 ppb	13:53:43
3	Co 228.616†	9215.8	9220.4	508.25 µg/L	508.25 ppb	13:53:43
3	Cr 267.716†	21661.7	21649.5	502.47 µg/L	502.47 ppb	13:53:43
3	Cu 324.752†	71292.5	67311.7	506.86 µg/L	506.86 ppb	13:53:43
3	Mn 257.610†	135529.5	135124.6	499.68 µg/L	499.68 ppb	13:53:43
3	Mo 202.031†	3807.0	3773.1	474.11 µg/L	474.11 ppb	13:54:03
3	Ni 231.604†	8460.9	8088.4	509.08 µg/L	509.08 ppb	13:53:43
3	P 214.914†	1250.3	1042.4	2446.3 µg/L	2446.3 ppb	13:54:03
3	Pb 220.353†	1770.3	1706.6	497.76 µg/L	497.76 ppb	13:54:03
3	S 181.975 Axial†	194.7	168.4	965.20 µg/L	965.20 ppb	13:54:03
3	Sb 206.836†	460.6	436.2	484.55 µg/L	484.55 ppb	13:54:03
3	Se 196.026†	323.0	309.1	508.12 µg/L	508.12 ppb	13:54:03
3	SiO2†	28658.0	26253.6	5541.4 µg/L	5541.4 ppb	13:53:43
3	Si 251.611†	31301.6	30859.8	2588.4 µg/L	2588.4 ppb	13:53:43
3	Sn 189.927†	845.7	818.6	480.51 µg/L	480.51 ppb	13:54:03
3	Ti 334.940†	207313.7	205630.9	512.50 µg/L	512.50 ppb	13:53:37
3	Tl 190.801†	270.1	292.0	507.41 µg/L	507.41 ppb	13:54:03
3	U 409.014†	5087.9	5298.6	504.56 µg/L	504.56 ppb	13:53:43
3	V 292.402†	40737.4	40680.9	511.48 µg/L	511.48 ppb	13:53:43
3	Zn 213.857†	18148.3	17397.4	503.57 µg/L	503.57 ppb	13:53:43

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1945621.5	100.11 %	0.345			0.35%
Sc RADIAL	77841.0	101 %	0.3			0.30%
Y 371.029	1226005.4	99.773 %	0.3596			0.36%
Ag 328.068†	56086.4	526.61 µg/L	10.340	526.61 ppb	10.340	1.96%
QC value within limits for Ag 328.068 Recovery = 105.32%						
Al 396.153Radial†	7546.8	5233.4 µg/L	27.32	5233.4 ppb	27.32	0.52%
QC value within limits for Al 396.153Radial Recovery = 104.67%						
As 188.979†	227.7	524.38 µg/L	28.827	524.38 ppb	28.827	5.50%
QC value within limits for As 188.979 Recovery = 104.88%						
B 249.677†	10589.4	513.21 µg/L	11.595	513.21 ppb	11.595	2.26%
QC value within limits for B 249.677 Recovery = 102.64%						
Ba 233.527†	18021.0	524.51 µg/L	15.094	524.51 ppb	15.094	2.88%
QC value within limits for Ba 233.527 Recovery = 104.90%						
Be 313.107†	748450.9	521.26 µg/L	7.324	521.26 ppb	7.324	1.41%
QC value within limits for Be 313.107 Recovery = 104.25%						
Ca 317.933Radial†	6719.5	5291.1 µg/L	35.33	5291.1 ppb	35.33	0.67%
QC value within limits for Ca 317.933Radial Recovery = 105.82%						
Cd 226.502†	17749.0	522.39 µg/L	15.551	522.39 ppb	15.551	2.98%
QC value within limits for Cd 226.502 Recovery = 104.48%						
Co 228.616†	9519.8	524.79 µg/L	15.945	524.79 ppb	15.945	3.04%

Cr	267.716†	22610.4	524.76 µg/L	20.517	524.76 ppb	20.517	3.91%
QC value within limits for Co 228.616 Recovery = 104.96%							
Cu	324.752†	69601.4	524.07 µg/L	16.214	524.07 ppb	16.214	3.09%
QC value within limits for Cr 267.716 Recovery = 104.95%							
Fe	238.204 Radial†	374.4	5385.5 µg/L	21.68	5385.5 ppb	21.68	0.40%
QC value within limits for Cu 324.752 Recovery = 104.81%							
K	766.490 Radial†	7817.5	5189.6 µg/L	5.12	5189.6 ppb	5.12	0.10%
QC value within limits for Fe 238.204 Radial Recovery = 107.71%							
Mg	279.077 IEC†	491.3	5357.0 µg/L	45.57	5357.0 ppb	45.57	0.85%
QC value within limits for K 766.490 Radial Recovery = 103.79%							
Mn	257.610†	139875.9	517.24 µg/L	16.550	517.24 ppb	16.550	3.20%
QC value within limits for Mg 279.077 IEC Recovery = 107.14%							
Mo	202.031†	4078.5	512.47 µg/L	33.242	512.47 ppb	33.242	6.49%
QC value within limits for Mn 257.610 Recovery = 103.45%							
Na	589.592 Radial†	35700.1	10252 µg/L	46.3	10252 ppb	46.3	0.45%
QC value within limits for Mo 202.031 Recovery = 102.49%							
Ni	231.604†	8353.0	525.73 µg/L	15.688	525.73 ppb	15.688	2.98%
QC value within limits for Na 589.592 Radial Recovery = 102.52%							
P	214.914†	1108.8	2604.4 µg/L	137.13	2604.4 ppb	137.13	5.27%
QC value within limits for Ni 231.604 Recovery = 105.15%							
Pb	220.353†	1816.4	529.84 µg/L	27.793	529.84 ppb	27.793	5.25%
QC value within limits for P 214.914 Recovery = 104.17%							
S	181.975 Axial†	181.2	1038.9 µg/L	63.94	1038.9 ppb	63.94	6.15%
QC value within limits for Pb 220.353 Recovery = 105.97%							
Sb	206.836†	476.3	529.29 µg/L	38.984	529.29 ppb	38.984	7.37%
QC value within limits for S 181.975 Axial Recovery = 103.89%							
Se	196.026†	325.6	534.12 µg/L	22.584	534.12 ppb	22.584	4.23%
QC value within limits for Sb 206.836 Recovery = 105.86%							
SiO2†		26948.5	5688.1 µg/L	144.93	5688.1 ppb	144.93	2.55%
QC value within limits for Se 196.026 Recovery = 106.82%							
Si	251.611†	31671.4	2656.5 µg/L	68.67	2656.5 ppb	68.67	2.58%
QC value within limits for SiO2 Recovery = 106.37%							
Sn	189.927†	896.3	525.83 µg/L	39.251	525.83 ppb	39.251	7.46%
QC value within limits for Si 251.611 Recovery = 106.26%							
Sr	421.552†	81557.8	518.21 µg/L	2.757	518.21 ppb	2.757	0.53%
QC value within limits for Sn 189.927 Recovery = 105.17%							
Ti	334.940†	209336.7	521.74 µg/L	8.121	521.74 ppb	8.121	1.56%
QC value within limits for Sr 421.552 Recovery = 103.64%							
Tl	190.801†	304.8	529.50 µg/L	19.492	529.50 ppb	19.492	3.68%
QC value within limits for Ti 334.940 Recovery = 104.35%							
U	409.014†	5520.8	525.77 µg/L	18.666	525.77 ppb	18.666	3.55%
QC value within limits for Tl 190.801 Recovery = 105.90%							
V	292.402†	42177.7	530.46 µg/L	17.601	530.46 ppb	17.601	3.32%
QC value within limits for U 409.014 Recovery = 105.15%							
Zn	213.857†	17970.8	520.18 µg/L	16.263	520.18 ppb	16.263	3.13%
QC value within limits for V 292.402 Recovery = 106.09%							
QC value within limits for Zn 213.857 Recovery = 104.04%							

All analyte(s) passed QC.

Sequence No.: 9

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 1/27/2010 13:54:13

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	75075.0	75075.0	97.7 %		13:54:45
1	Al 396.153Radial†	-26.9	0.5	0.3210 µg/L	0.3210 ppb	13:54:45
1	Ca 317.933Radial†	252.9	7.2	5.6377 µg/L	5.6377 ppb	13:55:06
1	Fe 238.204 Radial†	16.8	1.3	19.121 µg/L	19.121 ppb	13:55:06
1	K 766.490 Radial†	406.9	4.3	2.8656 µg/L	2.8656 ppb	13:54:45
1	Mg 279.077 IEC†	10.3	2.2	24.381 µg/L	24.381 ppb	13:55:06
1	Na 589.592 Radial†	338.7	-198.4	-56.969 µg/L	-56.969 ppb	13:54:45
1	Sr 421.552†	593.9	50.0	0.3180 µg/L	0.3180 ppb	13:54:45
1	Sc 361.383	1905976.9	1905976.9	98.075 %		13:56:08
1	Y 371.029	1202955.7	1202955.7	97.897 %		13:56:08
1	Ag 328.068†	-99.9	-46.8	-0.4325 µg/L	-0.4325 ppb	13:56:13
1	As 188.979†	-1.1	-1.7	-3.9678 µg/L	-3.9678 ppb	13:56:34
1	B 249.677†	120.7	7.8	0.3699 µg/L	0.3699 ppb	13:56:34
1	Ba 233.527†	-17.0	-2.9	-0.0824 µg/L	-0.0824 ppb	13:56:34
1	Be 313.107†	3888.9	125.9	0.0876 µg/L	0.0876 ppb	13:56:13
1	Cd 226.502†	-124.6	8.4	0.2461 µg/L	0.2461 ppb	13:56:34
1	Co 228.616†	-47.5	-3.4	-0.1872 µg/L	-0.1872 ppb	13:56:34
1	Cr 267.716†	-92.5	-11.5	-0.2659 µg/L	-0.2659 ppb	13:56:13
1	Cu 324.752†	3727.1	132.0	0.9954 µg/L	0.9954 ppb	13:56:13
1	Mn 257.610†	-160.5	25.8	0.0969 µg/L	0.0969 ppb	13:56:34
1	Mo 202.031†	19.1	2.2	0.2813 µg/L	0.2813 ppb	13:56:34
1	Ni 231.604†	340.6	11.9	0.7494 µg/L	0.7494 ppb	13:56:34
1	P 214.914†	222.6	24.5	58.506 µg/L	58.506 ppb	13:56:34
1	Pb 220.353†	56.8	2.0	0.5692 µg/L	0.5692 ppb	13:56:34
1	S 181.975 Axial†	19.2	-5.9	-33.946 µg/L	-33.946 ppb	13:56:34
1	Sb 206.836†	30.2	8.4	9.2660 µg/L	9.2660 ppb	13:56:34
1	Se 196.026†	5.8	-6.5	-10.185 µg/L	-10.185 ppb	13:56:34
1	SiO2†	2269.9	35.7	7.5373 µg/L	7.5373 ppb	13:56:13
1	Si 251.611†	344.1	46.4	3.8891 µg/L	3.8891 ppb	13:56:34
1	Sn 189.927†	26.9	4.0	2.3604 µg/L	2.3604 ppb	13:56:34
1	Ti 334.940†	836.3	79.1	0.1954 µg/L	0.1954 ppb	13:56:13
1	Tl 190.801†	-18.7	4.0	6.9531 µg/L	6.9531 ppb	13:56:34
1	U 409.014†	-210.4	18.4	1.7567 µg/L	1.7567 ppb	13:56:13
1	V 292.402†	-94.1	26.2	0.3300 µg/L	0.3300 ppb	13:56:13
1	Zn 213.857†	674.3	16.2	0.4655 µg/L	0.4655 ppb	13:56:34
2	Sc RADIAL	75408.4	75408.4	98.2 %		13:55:11
2	Al 396.153Radial†	-34.8	-7.5	-5.1947 µg/L	-5.1947 ppb	13:55:11
2	Ca 317.933Radial†	249.3	2.3	1.7886 µg/L	1.7886 ppb	13:55:32
2	Fe 238.204 Radial†	19.9	4.4	63.363 µg/L	63.363 ppb	13:55:32
2	K 766.490 Radial†	448.8	45.2	30.007 µg/L	30.007 ppb	13:55:11
2	Mg 279.077 IEC†	12.9	4.8	52.288 µg/L	52.288 ppb	13:55:32
2	Na 589.592 Radial†	306.3	-232.9	-66.883 µg/L	-66.883 ppb	13:55:11
2	Sr 421.552†	617.3	71.1	0.4520 µg/L	0.4520 ppb	13:55:11
2	Sc 361.383	1914628.2	1914628.2	98.520 %		13:56:40
2	Y 371.029	1209029.4	1209029.4	98.391 %		13:56:40
2	Ag 328.068†	-104.3	-50.8	-0.4663 µg/L	-0.4663 ppb	13:56:45
2	As 188.979†	-2.8	-3.4	-7.8577 µg/L	-7.8577 ppb	13:57:06
2	B 249.677†	123.8	10.4	0.4753 µg/L	0.4753 ppb	13:57:06
2	Ba 233.527†	-22.7	-8.6	-0.2480 µg/L	-0.2480 ppb	13:57:06
2	Be 313.107†	3902.7	121.9	0.0849 µg/L	0.0849 ppb	13:56:45
2	Cd 226.502†	-122.8	10.8	0.3114 µg/L	0.3114 ppb	13:57:06
2	Co 228.616†	-53.7	-9.5	-0.5219 µg/L	-0.5219 ppb	13:57:06
2	Cr 267.716†	-78.9	2.7	0.0636 µg/L	0.0636 ppb	13:56:45
2	Cu 324.752†	3702.1	89.5	0.6820 µg/L	0.6820 ppb	13:56:45
2	Mn 257.610†	-164.0	23.1	0.0915 µg/L	0.0915 ppb	13:57:06
2	Mo 202.031†	23.1	6.2	0.7840 µg/L	0.7840 ppb	13:57:06
2	Ni 231.604†	341.5	11.2	0.7093 µg/L	0.7093 ppb	13:57:06
2	P 214.914†	225.6	26.5	63.311 µg/L	63.311 ppb	13:57:06
2	Pb 220.353†	51.6	-3.5	-1.0379 µg/L	-1.0379 ppb	13:57:06

2	S 181.975 Axial†	19.6	-5.6	-32.313 µg/L	-32.313 ppb	13:57:06
2	Sb 206.836†	29.1	7.1	7.9066 µg/L	7.9066 ppb	13:57:06
2	Se 196.026†	8.5	-3.8	-5.8252 µg/L	-5.8252 ppb	13:57:06
2	SiO2†	2260.2	15.4	3.2574 µg/L	3.2574 ppb	13:56:45
2	Si 251.611†	340.0	40.6	3.4037 µg/L	3.4037 ppb	13:57:06
2	Sn 189.927†	24.2	1.1	0.6754 µg/L	0.6754 ppb	13:57:06
2	Ti 334.940†	836.2	75.1	0.1832 µg/L	0.1832 ppb	13:56:45
2	Tl 190.801†	-23.4	-0.7	-1.1817 µg/L	-1.1817 ppb	13:57:06
2	U 409.014†	-178.3	52.0	4.9493 µg/L	4.9493 ppb	13:56:45
2	V 292.402†	-84.3	36.6	0.4694 µg/L	0.4694 ppb	13:56:45
2	Zn 213.857†	677.9	16.8	0.4799 µg/L	0.4799 ppb	13:57:06
3	Sc RADIAL	76495.5	76495.5	99.6 %		13:55:37
3	Al 396.153Radial†	-42.7	-14.9	-10.384 µg/L	-10.384 ppb	13:55:37
3	Ca 317.933Radial†	256.1	5.6	4.3748 µg/L	4.3748 ppb	13:55:57
3	Fe 238.204 Radial†	17.4	1.6	23.157 µg/L	23.157 ppb	13:55:57
3	K 766.490 Radial†	407.0	-3.2	-2.1418 µg/L	-2.1418 ppb	13:55:37
3	Mg 279.077 IEC†	7.9	-0.4	-4.0245 µg/L	-4.0245 ppb	13:55:57
3	Na 589.592 Radial†	301.4	-242.2	-69.557 µg/L	-69.557 ppb	13:55:37
3	Sr 421.552†	596.2	41.1	0.2609 µg/L	0.2609 ppb	13:55:37
3	Sc 361.383	1888681.9	1888681.9	97.185 %		13:57:12
3	Y 371.029	1191443.4	1191443.4	96.960 %		13:57:12
3	Ag 328.068†	-125.6	-74.1	-0.6908 µg/L	-0.6908 ppb	13:57:17
3	As 188.979†	-0.4	-1.0	-2.3172 µg/L	-2.3172 ppb	13:57:38
3	B 249.677†	118.7	6.9	0.3229 µg/L	0.3229 ppb	13:57:38
3	Ba 233.527†	-15.3	-1.2	-0.0354 µg/L	-0.0354 ppb	13:57:38
3	Be 313.107†	3888.5	161.7	0.1126 µg/L	0.1126 ppb	13:57:17
3	Cd 226.502†	-131.4	0.2	0.0047 µg/L	0.0047 ppb	13:57:38
3	Co 228.616†	-54.7	-11.3	-0.6219 µg/L	-0.6219 ppb	13:57:38
3	Cr 267.716†	-84.3	-3.9	-0.0913 µg/L	-0.0913 ppb	13:57:17
3	Cu 324.752†	3615.4	51.9	0.3936 µg/L	0.3936 ppb	13:57:17
3	Mn 257.610†	-153.1	32.0	0.1213 µg/L	0.1213 ppb	13:57:38
3	Mo 202.031†	20.7	4.2	0.5225 µg/L	0.5225 ppb	13:57:38
3	Ni 231.604†	330.9	5.0	0.3173 µg/L	0.3173 ppb	13:57:38
3	P 214.914†	220.3	24.1	57.746 µg/L	57.746 ppb	13:57:38
3	Pb 220.353†	60.1	5.9	1.7248 µg/L	1.7248 ppb	13:57:38
3	S 181.975 Axial†	24.1	-0.7	-4.1374 µg/L	-4.1374 ppb	13:57:38
3	Sb 206.836†	29.7	8.2	9.0866 µg/L	9.0866 ppb	13:57:38
3	Se 196.026†	9.9	-2.2	-3.4504 µg/L	-3.4504 ppb	13:57:38
3	SiO2†	2259.3	46.0	9.7080 µg/L	9.7080 ppb	13:57:17
3	Si 251.611†	345.2	50.7	4.2515 µg/L	4.2515 ppb	13:57:38
3	Sn 189.927†	22.8	0.0	0.0277 µg/L	0.0277 ppb	13:57:38
3	Ti 334.940†	812.7	62.6	0.1565 µg/L	0.1565 ppb	13:57:17
3	Tl 190.801†	-18.8	3.8	6.5062 µg/L	6.5062 ppb	13:57:38
3	U 409.014†	-199.3	27.9	2.6615 µg/L	2.6615 ppb	13:57:17
3	V 292.402†	-136.0	-17.8	-0.2138 µg/L	-0.2138 ppb	13:57:17
3	Zn 213.857†	675.7	23.9	0.6953 µg/L	0.6953 ppb	13:57:38

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1903095.7	97.926 %	0.6798			0.69%
Sc RADIAL	75659.7	98.5 %	0.97			0.98%
Y 371.029	1201142.8	97.749 %	0.7269			0.74%
Ag 328.068†	-57.2	-0.5299 µg/L	0.14038	-0.5299 ppb	0.14038	26.49%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	-7.3	-5.0860 µg/L	5.35345	-5.0860 ppb	5.35345	105.26%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	-2.0	-4.7142 µg/L	2.84467	-4.7142 ppb	2.84467	60.34%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	8.4	0.3894 µg/L	0.07801	0.3894 ppb	0.07801	20.04%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	-4.2	-0.1219 µg/L	0.11167	-0.1219 ppb	0.11167	91.58%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	136.5	0.0950 µg/L	0.01528	0.0950 ppb	0.01528	16.08%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	5.0	3.9337 µg/L	1.96212	3.9337 ppb	1.96212	49.88%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	6.5	0.1874 µg/L	0.16160	0.1874 ppb	0.16160	86.23%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-8.0	-0.4437 µg/L	0.22767	-0.4437 ppb	0.22767	51.32%

QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	-4.2	-0.0979 µg/L	0.16482	-0.0979 ppb	0.16482	168.40%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	91.2	0.6903 µg/L	0.30100	0.6903 ppb	0.30100	43.60%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	2.5	35.214 µg/L	24.4614	35.214 ppb	24.4614	69.47%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated						
K 766.490 Radial†	15.4	10.244 µg/L	17.2980	10.244 ppb	17.2980	168.86%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	2.2	24.215 µg/L	28.1564	24.215 ppb	28.1564	116.28%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated						
Mn 257.610†	26.9	0.1032 µg/L	0.01586	0.1032 ppb	0.01586	15.37%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	4.2	0.5293 µg/L	0.25141	0.5293 ppb	0.25141	47.50%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	-224.5	-64.469 µg/L	6.6317	-64.469 ppb	6.6317	10.29%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	9.4	0.5920 µg/L	0.23876	0.5920 ppb	0.23876	40.33%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	25.0	59.854 µg/L	3.0176	59.854 ppb	3.0176	5.04%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	1.5	0.4187 µg/L	1.38750	0.4187 ppb	1.38750	331.40%
QC value within limits for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	-4.1	-23.466 µg/L	16.7586	-23.466 ppb	16.7586	71.42%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	7.9	8.7531 µg/L	0.73851	8.7531 ppb	0.73851	8.44%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	-4.2	-6.4867 µg/L	3.41550	-6.4867 ppb	3.41550	52.65%
QC value within limits for Se 196.026 Recovery = Not calculated						
SiO2†	32.4	6.8342 µg/L	3.28229	6.8342 ppb	3.28229	48.03%
QC value within limits for SiO2 Recovery = Not calculated						
Si 251.611†	45.9	3.8481 µg/L	0.42536	3.8481 ppb	0.42536	11.05%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	1.7	1.0212 µg/L	1.20416	1.0212 ppb	1.20416	117.92%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	54.1	0.3436 µg/L	0.09808	0.3436 ppb	0.09808	28.54%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	72.3	0.1784 µg/L	0.01991	0.1784 ppb	0.01991	11.16%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	2.4	4.0925 µg/L	4.57307	4.0925 ppb	4.57307	111.74%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 409.014†	32.8	3.1225 µg/L	1.64545	3.1225 ppb	1.64545	52.70%
QC value within limits for U 409.014 Recovery = Not calculated						
V 292.402†	15.0	0.1952 µg/L	0.36102	0.1952 ppb	0.36102	184.94%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	19.0	0.5469 µg/L	0.12867	0.5469 ppb	0.12867	23.53%
QC value within limits for Zn 213.857 Recovery = Not calculated						

All analyte(s) passed QC.

Sequence No.: 17

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 1/27/2010 14:23:43

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	78016.7	78016.7	102 %		14:24:19
1	Al 396.153Radial†	7627.6	7538.5	5227.2 µg/L	5227.2 ppb	14:24:19
1	Ca 317.933Radial†	7024.9	6665.5	5248.5 µg/L	5248.5 ppb	14:24:19
1	Fe 238.204 Radial†	396.9	374.9	5393.9 µg/L	5393.9 ppb	14:24:40
1	K 766.490 Radial†	8305.4	7766.0	5155.4 µg/L	5155.4 ppb	14:24:19
1	Mg 279.077 IEC†	503.8	487.7	5318.7 µg/L	5318.7 ppb	14:24:40
1	Na 589.592 Radial†	36689.8	35582.0	10218 µg/L	10218 ppb	14:24:19
1	Sr 421.552†	82897.5	81067.9	515.10 µg/L	515.10 ppb	14:24:19
1	Sc 361.383	1943370.6	1943370.6	99.999 %		14:25:43
1	Y 371.029	1222478.5	1222478.5	99.486 %		14:25:43
1	Ag 328.068†	57024.4	57080.1	535.97 µg/L	535.97 ppb	14:25:49
1	As 188.979†	239.6	239.1	550.68 µg/L	550.68 ppb	14:26:09
1	B 249.677†	10878.8	10763.7	521.70 µg/L	521.70 ppb	14:25:49
1	Ba 233.527†	18480.6	18495.3	538.32 µg/L	538.32 ppb	14:25:49
1	Be 313.107†	745306.0	741475.4	516.40 µg/L	516.40 ppb	14:25:43
1	Cd 226.502†	18073.1	18208.8	535.94 µg/L	535.94 ppb	14:25:49
1	Co 228.616†	9689.6	9734.7	536.69 µg/L	536.69 ppb	14:25:49
1	Cr 267.716†	23176.1	23259.2	539.82 µg/L	539.82 ppb	14:25:49
1	Cu 324.752†	74977.1	71309.8	536.92 µg/L	536.92 ppb	14:25:49
1	Mn 257.610†	143530.8	143722.0	531.45 µg/L	531.45 ppb	14:25:49
1	Mo 202.031†	4261.7	4244.6	533.33 µg/L	533.33 ppb	14:26:09
1	Ni 231.604†	8887.9	8552.6	538.29 µg/L	538.29 ppb	14:25:49
1	P 214.914†	1348.6	1146.2	2692.7 µg/L	2692.7 ppb	14:26:09
1	Pb 220.353†	1925.4	1869.5	545.35 µg/L	545.35 ppb	14:26:09
1	S 181.975 Axial†	213.6	188.1	1078.2 µg/L	1078.2 ppb	14:26:09
1	Sb 206.836†	517.7	495.4	550.56 µg/L	550.56 ppb	14:26:09
1	Se 196.026†	342.5	330.1	541.24 µg/L	541.24 ppb	14:26:09
1	SiO2†	29690.6	27412.2	5786.0 µg/L	5786.0 ppb	14:25:49
1	Si 251.611†	32583.1	32279.0	2707.5 µg/L	2707.5 ppb	14:25:49
1	Sn 189.927†	959.8	936.4	549.24 µg/L	549.24 ppb	14:26:09
1	Ti 334.940†	208624.7	207853.6	518.05 µg/L	518.05 ppb	14:25:43
1	Tl 190.801†	289.0	312.1	542.06 µg/L	542.06 ppb	14:26:09
1	U 409.014†	5376.9	5609.9	534.28 µg/L	534.28 ppb	14:25:49
1	V 292.402†	43199.1	43321.7	544.89 µg/L	544.89 ppb	14:25:49
1	Zn 213.857†	19051.5	18380.4	532.05 µg/L	532.05 ppb	14:25:49
2	Sc RADIAL	78659.3	78659.3	102 %		14:24:45
2	Al 396.153Radial†	7597.5	7447.8	5164.2 µg/L	5164.2 ppb	14:24:45
2	Ca 317.933Radial†	7065.9	6648.9	5235.5 µg/L	5235.5 ppb	14:24:45
2	Fe 238.204 Radial†	396.7	371.6	5345.5 µg/L	5345.5 ppb	14:25:06
2	K 766.490 Radial†	8278.0	7672.4	5093.2 µg/L	5093.2 ppb	14:24:45
2	Mg 279.077 IEC†	508.1	487.9	5320.8 µg/L	5320.8 ppb	14:25:06
2	Na 589.592 Radial†	36675.2	35272.5	10129 µg/L	10129 ppb	14:24:45
2	Sr 421.552†	82999.0	80500.2	511.49 µg/L	511.49 ppb	14:24:45
2	Sc 361.383	1951256.1	1951256.1	100.40 %		14:26:16
2	Y 371.029	1228395.5	1228395.5	99.967 %		14:26:16
2	Ag 328.068†	56117.2	55946.1	525.32 µg/L	525.32 ppb	14:26:22
2	As 188.979†	237.3	235.8	543.10 µg/L	543.10 ppb	14:26:42
2	B 249.677†	10679.1	10520.9	509.90 µg/L	509.90 ppb	14:26:22
2	Ba 233.527†	18171.3	18112.6	527.18 µg/L	527.18 ppb	14:26:22
2	Be 313.107†	757387.6	750496.3	522.68 µg/L	522.68 ppb	14:26:16
2	Cd 226.502†	17760.1	17824.0	524.61 µg/L	524.61 ppb	14:26:22
2	Co 228.616†	9539.3	9545.8	526.25 µg/L	526.25 ppb	14:26:22
2	Cr 267.716†	22788.2	22779.2	528.68 µg/L	528.68 ppb	14:26:22
2	Cu 324.752†	73859.9	69894.0	526.26 µg/L	526.26 ppb	14:26:22
2	Mn 257.610†	141043.7	140664.9	520.15 µg/L	520.15 ppb	14:26:22
2	Mo 202.031†	4263.7	4229.3	531.41 µg/L	531.41 ppb	14:26:42
2	Ni 231.604†	8770.3	8399.6	528.66 µg/L	528.66 ppb	14:26:22
2	P 214.914†	1345.8	1137.9	2674.1 µg/L	2674.1 ppb	14:26:42
2	Pb 220.353†	1933.4	1869.7	545.42 µg/L	545.42 ppb	14:26:42

2	S 181.975 Axial†	212.2	185.8	1065.2 µg/L	1065.2 ppb	14:26:42
2	Sb 206.836†	510.0	485.5	539.80 µg/L	539.80 ppb	14:26:42
2	Se 196.026†	346.2	332.4	544.65 µg/L	544.65 ppb	14:26:42
2	SiO2†	29260.8	26864.1	5670.3 µg/L	5670.3 ppb	14:26:22
2	Si 251.611†	32097.6	31663.7	2655.9 µg/L	2655.9 ppb	14:26:22
2	Sn 189.927†	972.1	944.8	554.12 µg/L	554.12 ppb	14:26:42
2	Ti 334.940†	211755.5	210128.6	523.72 µg/L	523.72 ppb	14:26:16
2	Tl 190.801†	284.3	306.2	532.05 µg/L	532.05 ppb	14:26:42
2	U 409.014†	5372.0	5583.3	531.75 µg/L	531.75 ppb	14:26:22
2	V 292.402†	42439.6	42390.7	533.27 µg/L	533.27 ppb	14:26:22
2	Zn 213.857†	18806.1	18059.0	522.74 µg/L	522.74 ppb	14:26:22
3	Sc RADIAL	78524.3	78524.3	102 %		14:25:11
3	Al 396.153Radial†	7633.3	7495.5	5198.5 µg/L	5198.5 ppb	14:25:11
3	Ca 317.933Radial†	7059.4	6654.5	5239.9 µg/L	5239.9 ppb	14:25:11
3	Fe 238.204 Radial†	400.4	375.8	5406.2 µg/L	5406.2 ppb	14:25:32
3	K 766.490 Radial†	8283.5	7691.7	5106.0 µg/L	5106.0 ppb	14:25:11
3	Mg 279.077 IEC†	506.3	487.0	5309.4 µg/L	5309.4 ppb	14:25:32
3	Na 589.592 Radial†	36753.9	35411.2	10169 µg/L	10169 ppb	14:25:11
3	Sr 421.552†	83293.9	80928.1	514.21 µg/L	514.21 ppb	14:25:11
3	Sc 361.383	1955344.3	1955344.3	100.61 %		14:26:49
3	Y 371.029	1230617.1	1230617.1	100.15 %		14:26:49
3	Ag 328.068†	55117.4	54835.6	514.81 µg/L	514.81 ppb	14:26:55
3	As 188.979†	214.4	212.5	489.57 µg/L	489.57 ppb	14:27:15
3	B 249.677†	10449.8	10270.8	497.65 µg/L	497.65 ppb	14:26:55
3	Ba 233.527†	17479.0	17386.7	506.04 µg/L	506.04 ppb	14:26:55
3	Be 313.107†	745696.1	737299.2	513.49 µg/L	513.49 ppb	14:26:49
3	Cd 226.502†	17103.8	17134.8	504.29 µg/L	504.29 ppb	14:26:55
3	Co 228.616†	9138.9	9128.0	503.16 µg/L	503.16 ppb	14:26:55
3	Cr 267.716†	21544.0	21495.1	498.88 µg/L	498.88 ppb	14:26:55
3	Cu 324.752†	71003.7	66901.6	503.77 µg/L	503.77 ppb	14:26:55
3	Mn 257.610†	135135.5	134499.1	497.38 µg/L	497.38 ppb	14:26:55
3	Mo 202.031†	3836.0	3795.3	476.91 µg/L	476.91 ppb	14:27:15
3	Ni 231.604†	8408.7	8021.9	504.89 µg/L	504.89 ppb	14:26:55
3	P 214.914†	1255.4	1045.3	2453.7 µg/L	2453.7 ppb	14:27:15
3	Pb 220.353†	1779.4	1712.6	499.53 µg/L	499.53 ppb	14:27:15
3	S 181.975 Axial†	198.9	172.2	986.99 µg/L	986.99 ppb	14:27:15
3	Sb 206.836†	470.1	444.9	494.23 µg/L	494.23 ppb	14:27:15
3	Se 196.026†	323.5	309.1	508.19 µg/L	508.19 ppb	14:27:15
3	SiO2†	28462.6	26009.9	5490.0 µg/L	5490.0 ppb	14:26:55
3	Si 251.611†	31134.1	30639.3	2569.9 µg/L	2569.9 ppb	14:26:55
3	Sn 189.927†	855.4	826.8	485.24 µg/L	485.24 ppb	14:27:15
3	Ti 334.940†	207988.0	205943.2	513.28 µg/L	513.28 ppb	14:26:49
3	Tl 190.801†	272.2	293.6	510.15 µg/L	510.15 ppb	14:27:15
3	U 409.014†	5065.5	5267.5	501.60 µg/L	501.60 ppb	14:26:55
3	V 292.402†	40554.4	40428.7	508.36 µg/L	508.36 ppb	14:26:55
3	Zn 213.857†	18038.3	17256.7	499.49 µg/L	499.49 ppb	14:26:55

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1949990.4	100.34 %	0.313			0.31%
Sc RADIAL	78400.1	102 %	0.4			0.43%
Y 371.029	1227163.7	99.867 %	0.3423			0.34%
Ag 328.068†	55954.0	525.36 µg/L	10.580	525.36 ppb	10.580	2.01%
QC value within limits for Ag 328.068 Recovery = 105.07%						
Al 396.153Radial†	7493.9	5196.6 µg/L	31.54	5196.6 ppb	31.54	0.61%
QC value within limits for Al 396.153Radial Recovery = 103.93%						
As 188.979†	229.1	527.78 µg/L	33.306	527.78 ppb	33.306	6.31%
QC value within limits for As 188.979 Recovery = 105.56%						
B 249.677†	10518.4	509.75 µg/L	12.027	509.75 ppb	12.027	2.36%
QC value within limits for B 249.677 Recovery = 101.95%						
Ba 233.527†	17998.2	523.85 µg/L	16.394	523.85 ppb	16.394	3.13%
QC value within limits for Ba 233.527 Recovery = 104.77%						
Be 313.107†	743090.3	517.52 µg/L	4.697	517.52 ppb	4.697	0.91%
QC value within limits for Be 313.107 Recovery = 103.50%						
Ca 317.933Radial†	6656.3	5241.3 µg/L	6.63	5241.3 ppb	6.63	0.13%
QC value within limits for Ca 317.933Radial Recovery = 104.83%						
Cd 226.502†	17722.5	521.61 µg/L	16.036	521.61 ppb	16.036	3.07%
QC value within limits for Cd 226.502 Recovery = 104.32%						
Co 228.616†	9469.5	522.03 µg/L	17.156	522.03 ppb	17.156	3.29%

QC value within limits for Co 228.616 Recovery = 104.41%

Cr 267.716† 22511.2 522.46 µg/L 21.167 522.46 ppb 21.167 4.05%

QC value within limits for Cr 267.716 Recovery = 104.49%

Cu 324.752† 69368.5 522.32 µg/L 16.920 522.32 ppb 16.920 3.24%

QC value within limits for Cu 324.752 Recovery = 104.46%

Fe 238.204 Radial† 374.1 5381.9 µg/L 32.07 5381.9 ppb 32.07 0.60%

QC value within limits for Fe 238.204 Radial Recovery = 107.64%

K 766.490 Radial† 7710.0 5118.2 µg/L 32.82 5118.2 ppb 32.82 0.64%

QC value within limits for K 766.490 Radial Recovery = 102.36%

Mg 279.077 IEC† 487.5 5316.3 µg/L 6.07 5316.3 ppb 6.07 0.11%

QC value within limits for Mg 279.077 IEC Recovery = 106.33%

Mn 257.610† 139628.7 516.32 µg/L 17.354 516.32 ppb 17.354 3.36%

QC value within limits for Mn 257.610 Recovery = 103.26%

Mo 202.031† 4089.8 513.88 µg/L 32.038 513.88 ppb 32.038 6.23%

QC value within limits for Mo 202.031 Recovery = 102.78%

Na 589.592 Radial† 35421.9 10172 µg/L 44.5 10172 ppb 44.5 0.44%

QC value within limits for Na 589.592 Radial Recovery = 101.72%

Ni 231.604† 8324.7 523.95 µg/L 17.191 523.95 ppb 17.191 3.28%

QC value within limits for Ni 231.604 Recovery = 104.79%

P 214.914† 1109.8 2606.9 µg/L 132.95 2606.9 ppb 132.95 5.10%

QC value within limits for P 214.914 Recovery = 104.27%

Pb 220.353† 1817.3 530.10 µg/L 26.474 530.10 ppb 26.474 4.99%

QC value within limits for Pb 220.353 Recovery = 106.02%

S 181.975 Axial† 182.0 1043.5 µg/L 49.34 1043.5 ppb 49.34 4.73%

QC value within limits for S 181.975 Axial Recovery = 104.35%

Sb 206.836† 475.3 528.20 µg/L 29.905 528.20 ppb 29.905 5.66%

QC value within limits for Sb 206.836 Recovery = 105.64%

Se 196.026† 323.9 531.36 µg/L 20.139 531.36 ppb 20.139 3.79%

QC value within limits for Se 196.026 Recovery = 106.27%

SiO2† 26762.0 5648.7 µg/L 149.17 5648.7 ppb 149.17 2.64%

QC value within limits for SiO2 Recovery = 105.63%

Si 251.611† 31527.4 2644.4 µg/L 69.48 2644.4 ppb 69.48 2.63%

QC value within limits for Si 251.611 Recovery = 105.78%

Sn 189.927† 902.6 529.54 µg/L 38.437 529.54 ppb 38.437 7.26%

QC value within limits for Sn 189.927 Recovery = 105.91%

Sr 421.552† 80832.1 513.60 µg/L 1.879 513.60 ppb 1.879 0.37%

QC value within limits for Sr 421.552 Recovery = 102.72%

Ti 334.940† 207975.1 518.35 µg/L 5.225 518.35 ppb 5.225 1.01%

QC value within limits for Ti 334.940 Recovery = 103.67%

Tl 190.801† 304.0 528.09 µg/L 16.317 528.09 ppb 16.317 3.09%

QC value within limits for Tl 190.801 Recovery = 105.62%

U 409.014† 5486.9 522.54 µg/L 18.183 522.54 ppb 18.183 3.48%

QC value within limits for U 409.014 Recovery = 104.51%

V 292.402† 42047.0 528.84 µg/L 18.667 528.84 ppb 18.667 3.53%

QC value within limits for V 292.402 Recovery = 105.77%

Zn 213.857† 17898.7 518.09 µg/L 16.770 518.09 ppb 16.770 3.24%

QC value within limits for Zn 213.857 Recovery = 103.62%

All analyte(s) passed QC.

Sequence No.: 18
 Sample ID: CCB
 Analyst:
 Initial Sample Wt:
 Dilution:

Autosampler Location: 8
 Date Collected: 1/27/2010 14:27:24
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	75706.3	75706.3	98.6 %		14:27:57
1	Al 396.153Radial†	-4.9	23.0	15.915 µg/L	15.915 ppb	14:27:57
1	Ca 317.933Radial†	256.4	8.5	6.6999 µg/L	6.6999 ppb	14:28:18
1	Fe 238.204 Radial†	16.9	1.3	18.281 µg/L	18.281 ppb	14:28:18
1	K 766.490 Radial†	448.9	43.5	28.884 µg/L	28.884 ppb	14:27:57
1	Mg 279.077 IEC†	12.4	4.3	46.380 µg/L	46.380 ppb	14:28:18
1	Na 589.592 Radial†	335.2	-204.8	-58.813 µg/L	-58.813 ppb	14:27:57
1	Sr 421.552†	590.7	41.7	0.2648 µg/L	0.2648 ppb	14:27:57
1	Sc 361.383	1956772.6	1956772.6	100.69 %		14:29:20
1	Y 371.029	1235760.5	1235760.5	100.57 %		14:29:20
1	Ag 328.068†	-140.8	-84.8	-0.7888 µg/L	-0.7888 ppb	14:29:25
1	As 188.979†	-3.7	-4.3	-9.8265 µg/L	-9.8265 ppb	14:29:46
1	B 249.677†	110.5	-5.4	-0.2733 µg/L	-0.2733 ppb	14:29:46
1	Ba 233.527†	-24.4	-9.7	-0.2819 µg/L	-0.2819 ppb	14:29:46
1	Be 313.107†	3926.5	60.2	0.0419 µg/L	0.0419 ppb	14:29:25
1	Cd 226.502†	-124.4	11.9	0.3492 µg/L	0.3492 ppb	14:29:46
1	Co 228.616†	-53.2	-7.8	-0.4306 µg/L	-0.4306 ppb	14:29:46
1	Cr 267.716†	-54.7	28.5	0.6601 µg/L	0.6601 ppb	14:29:25
1	Cu 324.752†	3765.4	71.5	0.5398 µg/L	0.5398 ppb	14:29:25
1	Mn 257.610†	-151.7	38.8	0.1439 µg/L	0.1439 ppb	14:29:46
1	Mo 202.031†	30.3	12.9	1.6220 µg/L	1.6220 ppb	14:29:46
1	Ni 231.604†	344.7	6.9	0.4347 µg/L	0.4347 ppb	14:29:46
1	P 214.914†	218.9	14.9	35.678 µg/L	35.678 ppb	14:29:46
1	Pb 220.353†	60.7	4.3	1.2561 µg/L	1.2561 ppb	14:29:46
1	S 181.975 Axial†	21.8	-3.9	-22.389 µg/L	-22.389 ppb	14:29:46
1	Sb 206.836†	25.9	3.4	3.7301 µg/L	3.7301 ppb	14:29:46
1	Se 196.026†	8.8	-3.7	-5.8169 µg/L	-5.8169 ppb	14:29:46
1	SiO2†	2313.4	18.8	3.9692 µg/L	3.9692 ppb	14:29:25
1	Si 251.611†	329.1	22.3	1.8717 µg/L	1.8717 ppb	14:29:46
1	Sn 189.927†	25.9	2.3	1.3591 µg/L	1.3591 ppb	14:29:46
1	Ti 334.940†	864.3	84.7	0.2077 µg/L	0.2077 ppb	14:29:25
1	Tl 190.801†	-22.9	0.3	0.6033 µg/L	0.6033 ppb	14:29:46
1	U 409.014†	-166.8	67.3	6.4185 µg/L	6.4185 ppb	14:29:25
1	V 292.402†	-121.9	1.0	0.0346 µg/L	0.0346 ppb	14:29:25
1	Zn 213.857†	669.6	-6.3	-0.1895 µg/L	-0.1895 ppb	14:29:46
2	Sc RADIAL	76310.5	76310.5	99.3 %		14:28:23
2	Al 396.153Radial†	-11.2	16.7	11.615 µg/L	11.615 ppb	14:28:23
2	Ca 317.933Radial†	256.4	6.4	5.0372 µg/L	5.0372 ppb	14:28:44
2	Fe 238.204 Radial†	16.4	0.6	9.0417 µg/L	9.0417 ppb	14:28:44
2	K 766.490 Radial†	436.1	27.0	17.950 µg/L	17.950 ppb	14:28:23
2	Mg 279.077 IEC†	8.3	0.0	0.3506 µg/L	0.3506 ppb	14:28:44
2	Na 589.592 Radial†	336.9	-205.8	-59.085 µg/L	-59.085 ppb	14:28:23
2	Sr 421.552†	606.2	52.6	0.3341 µg/L	0.3341 ppb	14:28:23
2	Sc 361.383	1939168.0	1939168.0	99.783 %		14:29:52
2	Y 371.029	1224619.5	1224619.5	99.660 %		14:29:52
2	Ag 328.068†	-54.8	0.2	0.0032 µg/L	0.0032 ppb	14:29:57
2	As 188.979†	-4.3	-4.8	-11.106 µg/L	-11.106 ppb	14:30:18
2	B 249.677†	124.2	9.3	0.4465 µg/L	0.4465 ppb	14:30:18
2	Ba 233.527†	-19.4	-5.0	-0.1437 µg/L	-0.1437 ppb	14:30:18
2	Be 313.107†	3880.0	49.1	0.0342 µg/L	0.0342 ppb	14:29:57
2	Cd 226.502†	-127.8	7.4	0.2171 µg/L	0.2171 ppb	14:30:18
2	Co 228.616†	-54.2	-9.3	-0.5144 µg/L	-0.5144 ppb	14:30:18
2	Cr 267.716†	-73.9	8.7	0.2017 µg/L	0.2017 ppb	14:29:57
2	Cu 324.752†	3710.8	50.6	0.3820 µg/L	0.3820 ppb	14:29:57
2	Mn 257.610†	-144.4	44.8	0.1667 µg/L	0.1667 ppb	14:30:18
2	Mo 202.031†	17.8	0.6	0.0766 µg/L	0.0766 ppb	14:30:18
2	Ni 231.604†	342.3	7.6	0.4796 µg/L	0.4796 ppb	14:30:18
2	P 214.914†	220.6	18.6	44.494 µg/L	44.494 ppb	14:30:18
2	Pb 220.353†	62.0	6.2	1.8192 µg/L	1.8192 ppb	14:30:18

2	S 181.975 Axial†	23.0	-2.5	-14.142 µg/L	-14.142 ppb	14:30:18
2	Sb 206.836†	22.8	0.4	0.4667 µg/L	0.4667 ppb	14:30:18
2	Se 196.026†	6.9	-5.5	-8.6125 µg/L	-8.6125 ppb	14:30:18
2	SiO2†	2269.7	-4.1	-0.8636 µg/L	-0.8636 ppb	14:29:57
2	Si 251.611†	340.0	36.2	3.0355 µg/L	3.0355 ppb	14:30:18
2	Sn 189.927†	28.9	5.5	3.2335 µg/L	3.2335 ppb	14:30:18
2	Ti 334.940†	810.6	38.7	0.0965 µg/L	0.0965 ppb	14:29:57
2	Tl 190.801†	-25.9	-2.9	-5.0017 µg/L	-5.0017 ppb	14:30:18
2	U 409.014†	-228.5	4.0	0.3755 µg/L	0.3755 ppb	14:29:57
2	V 292.402†	-113.2	8.7	0.1097 µg/L	0.1097 ppb	14:29:57
2	Zn 213.857†	671.2	1.3	0.0349 µg/L	0.0349 ppb	14:30:18
3	Sc RADIAL	76109.8	76109.8	99.1 %		14:28:49
3	Al 396.153Radial†	-0.1	27.8	19.317 µg/L	19.317 ppb	14:28:49
3	Ca 317.933Radial†	251.7	2.4	1.9078 µg/L	1.9078 ppb	14:29:09
3	Fe 238.204 Radial†	18.2	2.5	35.631 µg/L	35.631 ppb	14:29:09
3	K 766.490 Radial†	337.5	-71.4	-47.372 µg/L	-47.372 ppb	14:28:49
3	Mg 279.077 IEC†	9.7	1.5	15.865 µg/L	15.865 ppb	14:29:09
3	Na 589.592 Radial†	330.1	-211.7	-60.802 µg/L	-60.802 ppb	14:28:49
3	Sr 421.552†	612.2	60.2	0.3826 µg/L	0.3826 ppb	14:28:49
3	Sc 361.383	1931745.9	1931745.9	99.401 %		14:30:24
3	Y 371.029	1219493.6	1219493.6	99.243 %		14:30:24
3	Ag 328.068†	-71.1	-16.4	-0.1475 µg/L	-0.1475 ppb	14:30:30
3	As 188.979†	1.7	1.1	2.5955 µg/L	2.5955 ppb	14:30:50
3	B 249.677†	119.6	5.1	0.2316 µg/L	0.2316 ppb	14:30:50
3	Ba 233.527†	-28.1	-13.7	-0.3972 µg/L	-0.3972 ppb	14:30:50
3	Be 313.107†	3897.8	81.9	0.0570 µg/L	0.0570 ppb	14:30:30
3	Cd 226.502†	-130.0	4.7	0.1336 µg/L	0.1336 ppb	14:30:50
3	Co 228.616†	-37.4	7.4	0.4076 µg/L	0.4076 ppb	14:30:50
3	Cr 267.716†	-71.1	11.3	0.2626 µg/L	0.2626 ppb	14:30:30
3	Cu 324.752†	3659.1	13.0	0.1025 µg/L	0.1025 ppb	14:30:30
3	Mn 257.610†	-144.5	44.1	0.1671 µg/L	0.1671 ppb	14:30:50
3	Mo 202.031†	20.9	3.8	0.4792 µg/L	0.4792 ppb	14:30:50
3	Ni 231.604†	326.3	-7.1	-0.4490 µg/L	-0.4490 ppb	14:30:50
3	P 214.914†	218.2	17.0	40.744 µg/L	40.744 ppb	14:30:50
3	Pb 220.353†	62.9	7.3	2.1355 µg/L	2.1355 ppb	14:30:50
3	S 181.975 Axial†	26.2	0.8	4.6394 µg/L	4.6394 ppb	14:30:50
3	Sb 206.836†	27.8	5.6	6.1739 µg/L	6.1739 ppb	14:30:50
3	Se 196.026†	0.7	-11.7	-18.413 µg/L	-18.413 ppb	14:30:50
3	SiO2†	2282.5	17.5	3.6879 µg/L	3.6879 ppb	14:30:30
3	Si 251.611†	337.4	34.9	2.9273 µg/L	2.9273 ppb	14:30:50
3	Sn 189.927†	28.9	5.6	3.3034 µg/L	3.3034 ppb	14:30:50
3	Ti 334.940†	790.3	21.4	0.0521 µg/L	0.0521 ppb	14:30:30
3	Tl 190.801†	-22.7	0.2	0.4113 µg/L	0.4113 ppb	14:30:50
3	U 409.014†	-232.3	-0.7	-0.0720 µg/L	-0.0720 ppb	14:30:30
3	V 292.402†	-84.4	37.2	0.4685 µg/L	0.4685 ppb	14:30:30
3	Zn 213.857†	668.1	0.8	0.0222 µg/L	0.0222 ppb	14:30:50

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1942562.2	99.957 %	0.6614			0.66%
Sc RADIAL	76042.2	99.0 %	0.40			0.40%
Y 371.029	1226624.5	99.823 %	0.6768			0.68%
Ag 328.068†	-33.6	-0.3111 µg/L	0.42053	-0.3111 ppb	0.42053	135.20%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	22.5	15.616 µg/L	3.8602	15.616 ppb	3.8602	24.72%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	-2.6	-6.1122 µg/L	7.56824	-6.1122 ppb	7.56824	123.82%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	3.0	0.1349 µg/L	0.36951	0.1349 ppb	0.36951	273.87%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	-9.5	-0.2743 µg/L	0.12696	-0.2743 ppb	0.12696	46.29%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	63.7	0.0444 µg/L	0.01164	0.0444 ppb	0.01164	26.24%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	5.8	4.5483 µg/L	2.43319	4.5483 ppb	2.43319	53.50%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	8.0	0.2333 µg/L	0.10873	0.2333 ppb	0.10873	46.60%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-3.3	-0.1792 µg/L	0.50985	-0.1792 ppb	0.50985	284.56%

Cr 267.716†	QC value within limits for Co 228.616	Recovery = Not calculated			
	16.2	0.3748 µg/L	0.24894	0.3748 ppb	0.24894 66.42%
Cu 324.752†	QC value within limits for Cr 267.716	Recovery = Not calculated			
	45.0	0.3414 µg/L	0.22142	0.3414 ppb	0.22142 64.85%
Fe 238.204 Radial†	QC value within limits for Cu 324.752	Recovery = Not calculated			
	1.5	20.985 µg/L	13.4992	20.985 ppb	13.4992 64.33%
K 766.490 Radial†	QC value within limits for Fe 238.204 Radial	Recovery = Not calculated			
	-0.3	-0.1796 µg/L	41.23423	-0.1796 ppb	41.23423 >999.9%
Mg 279.077 IEC†	QC value within limits for K 766.490 Radial	Recovery = Not calculated			
	1.9	20.865 µg/L	23.4183	20.865 ppb	23.4183 112.24%
Mn 257.610†	QC value within limits for Mg 279.077 IEC	Recovery = Not calculated			
	42.6	0.1592 µg/L	0.01328	0.1592 ppb	0.01328 8.34%
Mo 202.031†	QC value within limits for Mn 257.610	Recovery = Not calculated			
	5.8	0.7259 µg/L	0.80172	0.7259 ppb	0.80172 110.44%
Na 589.592 Radial†	QC value within limits for Mo 202.031	Recovery = Not calculated			
	-207.4	-59.567 µg/L	1.0783	-59.567 ppb	1.0783 1.81%
Ni 231.604†	QC value within limits for Na 589.592 Radial	Recovery = Not calculated			
	2.5	0.1551 µg/L	0.52368	0.1551 ppb	0.52368 337.65%
P 214.914†	QC value within limits for Ni 231.604	Recovery = Not calculated			
	16.8	40.305 µg/L	4.4246	40.305 ppb	4.4246 10.98%
Pb 220.353†	QC value within limits for P 214.914	Recovery = Not calculated			
	6.0	1.7370 µg/L	0.44542	1.7370 ppb	0.44542 25.64%
S 181.975 Axial†	QC value within limits for Pb 220.353	Recovery = Not calculated			
	-1.9	-10.631 µg/L	13.8523	-10.631 ppb	13.8523 130.30%
Sb 206.836†	QC value within limits for S 181.975 Axial	Recovery = Not calculated			
	3.1	3.4569 µg/L	2.86336	3.4569 ppb	2.86336 82.83%
Se 196.026†	QC value within limits for Sb 206.836	Recovery = Not calculated			
	-7.0	-10.947 µg/L	6.6145	-10.947 ppb	6.6145 60.42%
SiO2†	QC value within limits for Se 196.026	Recovery = Not calculated			
	10.7	2.2645 µg/L	2.71270	2.2645 ppb	2.71270 119.79%
Si 251.611†	QC value within limits for SiO2	Recovery = Not calculated			
	31.1	2.6115 µg/L	0.64300	2.6115 ppb	0.64300 24.62%
Sn 189.927†	QC value within limits for Si 251.611	Recovery = Not calculated			
	4.5	2.6320 µg/L	1.10291	2.6320 ppb	1.10291 41.90%
Sr 421.552†	QC value within limits for Sn 189.927	Recovery = Not calculated			
	51.5	0.3272 µg/L	0.05920	0.3272 ppb	0.05920 18.09%
Ti 334.940†	QC value within limits for Sr 421.552	Recovery = Not calculated			
	48.3	0.1188 µg/L	0.08016	0.1188 ppb	0.08016 67.48%
Tl 190.801†	QC value within limits for Ti 334.940	Recovery = Not calculated			
	-0.8	-1.3290 µg/L	3.18210	-1.3290 ppb	3.18210 239.43%
U 409.014†	QC value within limits for Tl 190.801	Recovery = Not calculated			
	23.5	2.2407 µg/L	3.62500	2.2407 ppb	3.62500 161.78%
V 292.402†	QC value within limits for U 409.014	Recovery = Not calculated			
	15.6	0.2043 µg/L	0.23192	0.2043 ppb	0.23192 113.54%
Zn 213.857†	QC value within limits for V 292.402	Recovery = Not calculated			
	-1.4	-0.0441 µg/L	0.12606	-0.0441 ppb	0.12606 285.74%
	QC value within limits for Zn 213.857	Recovery = Not calculated			

All analyte(s) passed QC.

Sequence No.: 11

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 1/27/2010 15:10:34

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	77009.9	77009.9	100 %		15:11:13
1	Al 396.153Radial†	7593.0	7602.2	5271.5 µg/L	5271.5 ppb	15:11:13
1	Ca 317.933Radial†	6821.7	6553.2	5160.1 µg/L	5160.1 ppb	15:11:34
1	Fe 238.204 Radial†	387.4	370.6	5331.1 µg/L	5331.1 ppb	15:11:34
1	K 766.490 Radial†	8360.1	7927.5	5262.5 µg/L	5262.5 ppb	15:11:13
1	Mg 279.077 IEC†	506.4	496.8	5417.8 µg/L	5417.8 ppb	15:11:34
1	Na 589.592 Radial†	37719.9	37081.8	10649 µg/L	10649 ppb	15:11:13
1	Sr 421.552†	82338.2	81577.1	518.33 µg/L	518.33 ppb	15:11:13
1	Sc 361.383	1941000.0	1941000.0	99.877 %		15:12:37
1	Y 371.029	1221433.2	1221433.2	99.401 %		15:12:37
1	Ag 328.068†	56383.6	56508.3	530.59 µg/L	530.59 ppb	15:12:43
1	As 188.979†	237.6	237.4	546.72 µg/L	546.72 ppb	15:13:03
1	B 249.677†	10768.3	10666.4	516.99 µg/L	516.99 ppb	15:12:43
1	Ba 233.527†	18175.6	18212.5	530.09 µg/L	530.09 ppb	15:12:43
1	Be 313.107†	755472.9	752565.2	524.12 µg/L	524.12 ppb	15:12:37
1	Cd 226.502†	17724.7	17882.1	526.32 µg/L	526.32 ppb	15:12:43
1	Co 228.616†	9580.8	9637.6	531.31 µg/L	531.31 ppb	15:12:43
1	Cr 267.716†	22856.4	22967.4	533.05 µg/L	533.05 ppb	15:12:43
1	Cu 324.752†	74162.9	70586.2	531.47 µg/L	531.47 ppb	15:12:43
1	Mn 257.610†	141294.7	141658.5	523.81 µg/L	523.81 ppb	15:12:43
1	Mo 202.031†	4242.8	4230.8	531.60 µg/L	531.60 ppb	15:13:03
1	Ni 231.604†	8739.6	8415.0	529.63 µg/L	529.63 ppb	15:12:43
1	P 214.914†	1336.1	1135.2	2667.2 µg/L	2667.2 ppb	15:13:03
1	Pb 220.353†	1906.8	1853.2	540.62 µg/L	540.62 ppb	15:13:03
1	S 181.975 Axial†	210.4	185.2	1061.4 µg/L	1061.4 ppb	15:13:03
1	Sb 206.836†	517.9	496.1	551.44 µg/L	551.44 ppb	15:13:03
1	Se 196.026†	335.6	323.6	530.68 µg/L	530.68 ppb	15:13:03
1	SiO2†	29193.9	26951.2	5688.7 µg/L	5688.7 ppb	15:12:43
1	Si 251.611†	32017.3	31752.3	2663.3 µg/L	2663.3 ppb	15:12:43
1	Sn 189.927†	957.8	935.6	548.76 µg/L	548.76 ppb	15:13:03
1	Ti 334.940†	211460.3	210947.4	525.75 µg/L	525.75 ppb	15:12:37
1	Tl 190.801†	288.8	312.2	542.36 µg/L	542.36 ppb	15:13:03
1	U 409.014†	5319.4	5559.0	529.43 µg/L	529.43 ppb	15:12:43
1	V 292.402†	42686.8	42861.6	539.14 µg/L	539.14 ppb	15:12:43
1	Zn 213.857†	18830.3	18182.2	526.32 µg/L	526.32 ppb	15:12:43
2	Sc RADIAL	77258.2	77258.2	101 %		15:11:39
2	Al 396.153Radial†	7625.1	7609.8	5276.7 µg/L	5276.7 ppb	15:11:39
2	Ca 317.933Radial†	6864.1	6573.5	5176.1 µg/L	5176.1 ppb	15:12:00
2	Fe 238.204 Radial†	391.8	373.7	5376.4 µg/L	5376.4 ppb	15:12:00
2	K 766.490 Radial†	8413.5	7953.7	5280.0 µg/L	5280.0 ppb	15:11:39
2	Mg 279.077 IEC†	502.8	491.6	5361.5 µg/L	5361.5 ppb	15:12:00
2	Na 589.592 Radial†	37973.3	37212.8	10686 µg/L	10686 ppb	15:11:39
2	Sr 421.552†	83072.7	82043.5	521.30 µg/L	521.30 ppb	15:11:39
2	Sc 361.383	1927543.6	1927543.6	99.184 %		15:13:10
2	Y 371.029	1214406.3	1214406.3	98.829 %		15:13:10
2	Ag 328.068†	56661.7	57182.8	536.92 µg/L	536.92 ppb	15:13:16
2	As 188.979†	234.6	236.0	543.51 µg/L	543.51 ppb	15:13:36
2	B 249.677†	10809.2	10782.9	522.65 µg/L	522.65 ppb	15:13:16
2	Ba 233.527†	18263.4	18428.1	536.37 µg/L	536.37 ppb	15:13:16
2	Be 313.107†	761414.6	763836.3	531.97 µg/L	531.97 ppb	15:13:10
2	Cd 226.502†	17808.8	18090.7	532.46 µg/L	532.46 ppb	15:13:16
2	Co 228.616†	9576.1	9699.8	534.73 µg/L	534.73 ppb	15:13:16
2	Cr 267.716†	23071.7	23344.2	541.80 µg/L	541.80 ppb	15:13:16
2	Cu 324.752†	74525.0	71469.7	538.12 µg/L	538.12 ppb	15:13:16
2	Mn 257.610†	142244.3	143603.5	531.01 µg/L	531.01 ppb	15:13:16
2	Mo 202.031†	4249.4	4267.2	536.17 µg/L	536.17 ppb	15:13:36
2	Ni 231.604†	8800.8	8537.7	537.36 µg/L	537.36 ppb	15:13:16
2	P 214.914†	1336.8	1145.3	2690.6 µg/L	2690.6 ppb	15:13:36
2	Pb 220.353†	1916.5	1876.3	547.35 µg/L	547.35 ppb	15:13:36

2	S 181.975 Axial†	212.4	188.6	1081.3 µg/L	1081.3 ppb	15:13:36
2	Sb 206.836†	512.5	494.3	549.48 µg/L	549.48 ppb	15:13:36
2	Se 196.026†	340.3	330.7	542.11 µg/L	542.11 ppb	15:13:36
2	SiO2†	29379.5	27342.3	5771.2 µg/L	5771.2 ppb	15:13:16
2	Si 251.611†	32210.5	32170.8	2698.4 µg/L	2698.4 ppb	15:13:16
2	Sn 189.927†	954.9	939.4	550.96 µg/L	550.96 ppb	15:13:36
2	Ti 334.940†	213124.3	214103.2	533.63 µg/L	533.63 ppb	15:13:10
2	Tl 190.801†	287.8	313.3	544.33 µg/L	544.33 ppb	15:13:36
2	U 409.014†	5348.7	5625.7	535.79 µg/L	535.79 ppb	15:13:16
2	V 292.402†	42853.4	43327.9	545.00 µg/L	545.00 ppb	15:13:16
2	Zn 213.857†	18867.6	18351.4	531.21 µg/L	531.21 ppb	15:13:16
3	Sc RADIAL	76127.0	76127.0	99.1 %		15:12:05
3	Al 396.153Radial†	7648.6	7746.1	5372.7 µg/L	5372.7 ppb	15:12:05
3	Ca 317.933Radial†	6868.6	6679.5	5259.5 µg/L	5259.5 ppb	15:12:26
3	Fe 238.204 Radial†	388.7	376.4	5414.2 µg/L	5414.2 ppb	15:12:26
3	K 766.490 Radial†	8420.3	8084.9	5367.1 µg/L	5367.1 ppb	15:12:05
3	Mg 279.077 IEC†	502.8	499.1	5441.4 µg/L	5441.4 ppb	15:12:26
3	Na 589.592 Radial†	37919.6	37719.7	10832 µg/L	10832 ppb	15:12:05
3	Sr 421.552†	83204.1	83403.5	529.94 µg/L	529.94 ppb	15:12:05
3	Sc 361.383	1943316.0	1943316.0	99.996 %		15:13:43
3	Y 371.029	1223117.8	1223117.8	99.538 %		15:13:43
3	Ag 328.068†	54946.1	55003.4	516.38 µg/L	516.38 ppb	15:13:48
3	As 188.979†	217.3	216.8	499.36 µg/L	499.36 ppb	15:14:09
3	B 249.677†	10437.1	10322.3	500.16 µg/L	500.16 ppb	15:13:48
3	Ba 233.527†	17389.4	17404.6	506.57 µg/L	506.57 ppb	15:13:48
3	Be 313.107†	735336.8	731526.8	509.47 µg/L	509.47 ppb	15:13:43
3	Cd 226.502†	16966.9	17103.0	503.35 µg/L	503.35 ppb	15:13:48
3	Co 228.616†	9067.9	9113.3	502.35 µg/L	502.35 ppb	15:13:48
3	Cr 267.716†	21438.6	21522.2	499.51 µg/L	499.51 ppb	15:13:48
3	Cu 324.752†	70721.8	67056.4	504.94 µg/L	504.94 ppb	15:13:48
3	Mn 257.610†	134404.3	134599.2	497.74 µg/L	497.74 ppb	15:13:48
3	Mo 202.031†	3781.0	3764.0	472.97 µg/L	472.97 ppb	15:14:09
3	Ni 231.604†	8334.9	7999.8	503.51 µg/L	503.51 ppb	15:13:48
3	P 214.914†	1234.3	1031.9	2421.5 µg/L	2421.5 ppb	15:14:09
3	Pb 220.353†	1749.7	1693.9	494.06 µg/L	494.06 ppb	15:14:09
3	S 181.975 Axial†	197.5	172.0	986.15 µg/L	986.15 ppb	15:14:09
3	Sb 206.836†	465.7	443.3	492.40 µg/L	492.40 ppb	15:14:09
3	Se 196.026†	325.4	313.0	514.29 µg/L	514.29 ppb	15:14:09
3	SiO2†	28226.6	25948.9	5477.1 µg/L	5477.1 ppb	15:13:48
3	Si 251.611†	30884.3	30581.0	2565.0 µg/L	2565.0 ppb	15:13:48
3	Sn 189.927†	841.6	818.3	480.31 µg/L	480.31 ppb	15:14:09
3	Ti 334.940†	205222.6	204457.2	509.57 µg/L	509.57 ppb	15:13:43
3	Tl 190.801†	265.9	289.0	502.24 µg/L	502.24 ppb	15:14:09
3	U 409.014†	5007.6	5240.8	499.05 µg/L	499.05 ppb	15:13:48
3	V 292.402†	40410.1	40533.8	509.63 µg/L	509.63 ppb	15:13:48
3	Zn 213.857†	17904.5	17233.9	498.82 µg/L	498.82 ppb	15:13:48

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1937286.6	99.686 %	0.4382			0.44%
Sc RADIAL	76798.4	100.0 %	0.77			0.77%
Y 371.029	1219652.4	99.256 %	0.3760			0.38%
Ag 328.068†	56231.5	527.97 µg/L	10.520	527.97 ppb	10.520	1.99%
QC value within limits for Ag 328.068 Recovery = 105.59%						
Al 396.153Radial†	7652.7	5306.9 µg/L	57.00	5306.9 ppb	57.00	1.07%
QC value within limits for Al 396.153Radial Recovery = 106.14%						
As 188.979†	230.0	529.86 µg/L	26.466	529.86 ppb	26.466	4.99%
QC value within limits for As 188.979 Recovery = 105.97%						
B 249.677†	10590.5	513.27 µg/L	11.701	513.27 ppb	11.701	2.28%
QC value within limits for B 249.677 Recovery = 102.65%						
Ba 233.527†	18015.1	524.34 µg/L	15.709	524.34 ppb	15.709	3.00%
QC value within limits for Ba 233.527 Recovery = 104.87%						
Be 313.107†	749309.4	521.85 µg/L	11.421	521.85 ppb	11.421	2.19%
QC value within limits for Be 313.107 Recovery = 104.37%						
Ca 317.933Radial†	6602.0	5198.6 µg/L	53.39	5198.6 ppb	53.39	1.03%
QC value within limits for Ca 317.933Radial Recovery = 103.97%						
Cd 226.502†	17691.9	520.71 µg/L	15.344	520.71 ppb	15.344	2.95%
QC value within limits for Cd 226.502 Recovery = 104.14%						
Co 228.616†	9483.6	522.80 µg/L	17.790	522.80 ppb	17.790	3.40%

QC value within limits for Co 228.616 Recovery = 104.56%							
Cr 267.716†	22611.3	524.79 µg/L	22.320	524.79 ppb	22.320	4.25%	
QC value within limits for Cr 267.716 Recovery = 104.96%							
Cu 324.752†	69704.1	524.84 µg/L	17.553	524.84 ppb	17.553	3.34%	
QC value within limits for Cu 324.752 Recovery = 104.97%							
Fe 238.204 Radial†	373.5	5373.9 µg/L	41.63	5373.9 ppb	41.63	0.77%	
QC value within limits for Fe 238.204 Radial Recovery = 107.48%							
K 766.490 Radial†	7988.7	5303.2 µg/L	56.00	5303.2 ppb	56.00	1.06%	
QC value within limits for K 766.490 Radial Recovery = 106.06%							
Mg 279.077 IEC†	495.8	5406.9 µg/L	41.04	5406.9 ppb	41.04	0.76%	
QC value within limits for Mg 279.077 IEC Recovery = 108.14%							
Mn 257.610†	139953.7	517.52 µg/L	17.501	517.52 ppb	17.501	3.38%	
QC value within limits for Mn 257.610 Recovery = 103.50%							
Mo 202.031†	4087.3	513.58 µg/L	35.244	513.58 ppb	35.244	6.86%	
QC value within limits for Mo 202.031 Recovery = 102.72%							
Na 589.592 Radial†	37338.1	10722 µg/L	96.7	10722 ppb	96.7	0.90%	
QC value within limits for Na 589.592 Radial Recovery = 107.22%							
Ni 231.604†	8317.5	523.50 µg/L	17.738	523.50 ppb	17.738	3.39%	
QC value within limits for Ni 231.604 Recovery = 104.70%							
P 214.914†	1104.2	2593.1 µg/L	149.03	2593.1 ppb	149.03	5.75%	
QC value within limits for P 214.914 Recovery = 103.72%							
Pb 220.353†	1807.8	527.34 µg/L	29.022	527.34 ppb	29.022	5.50%	
QC value within limits for Pb 220.353 Recovery = 105.47%							
S 181.975 Axial†	181.9	1043.0 µg/L	50.21	1043.0 ppb	50.21	4.81%	
QC value within limits for S 181.975 Axial Recovery = 104.30%							
Sb 206.836†	477.9	531.11 µg/L	33.533	531.11 ppb	33.533	6.31%	
QC value within limits for Sb 206.836 Recovery = 106.22%							
Se 196.026†	322.4	529.03 µg/L	13.982	529.03 ppb	13.982	2.64%	
QC value within limits for Se 196.026 Recovery = 105.81%							
SiO2†	26747.5	5645.7 µg/L	151.69	5645.7 ppb	151.69	2.69%	
QC value within limits for SiO2 Recovery = 105.58%							
Si 251.611†	31501.4	2642.2 µg/L	69.12	2642.2 ppb	69.12	2.62%	
QC value within limits for Si 251.611 Recovery = 105.69%							
Sn 189.927†	897.7	526.68 µg/L	40.168	526.68 ppb	40.168	7.63%	
QC value within limits for Sn 189.927 Recovery = 105.34%							
Sr 421.552†	82341.4	523.19 µg/L	6.029	523.19 ppb	6.029	1.15%	
QC value within limits for Sr 421.552 Recovery = 104.64%							
Ti 334.940†	209835.9	522.98 µg/L	12.268	522.98 ppb	12.268	2.35%	
QC value within limits for Ti 334.940 Recovery = 104.60%							
Tl 190.801†	304.8	529.64 µg/L	23.751	529.64 ppb	23.751	4.48%	
QC value within limits for Tl 190.801 Recovery = 105.93%							
U 409.014†	5475.1	521.42 µg/L	19.636	521.42 ppb	19.636	3.77%	
QC value within limits for U 409.014 Recovery = 104.28%							
V 292.402†	42241.1	531.26 µg/L	18.954	531.26 ppb	18.954	3.57%	
QC value within limits for V 292.402 Recovery = 106.25%							
Zn 213.857†	17922.5	518.78 µg/L	17.457	518.78 ppb	17.457	3.37%	
QC value within limits for Zn 213.857 Recovery = 103.76%							

All analyte(s) passed QC.

Sequence No.: 12
 Sample ID: PQL
 Analyst:
 Initial Sample Wt:
 Dilution:

Autosampler Location: 101
 Date Collected: 1/27/2010 15:14:18
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:

Replicate Data: PQL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib. Units	Conc. Units	Sample Units	Analysis Time
1	Sc RADIAL	74517.5	74517.5	97.0	%			15:14:53
1	Al 396.153Radial†	294.2	331.2	229.90	µg/L	229.90	ppb	15:14:53
1	Ca 317.933Radial†	506.9	270.9	213.31	µg/L	213.31	ppb	15:15:13
1	Fe 238.204 Radial†	25.0	9.9	142.33	µg/L	142.33	ppb	15:15:13
1	K 766.490 Radial†	606.1	212.9	141.32	µg/L	141.32	ppb	15:14:53
1	Mg 279.077 IEC†	42.3	35.3	385.01	µg/L	385.01	ppb	15:15:13
1	Na 589.592 Radial†	2160.5	1682.4	483.11	µg/L	483.11	ppb	15:14:53
1	Sr 421.552†	1381.4	866.4	5.5047	µg/L	5.5047	ppb	15:14:53
1	Sc 361.383	1922915.8	1922915.8	98.946	%			15:16:15
1	Y 371.029	1215028.1	1215028.1	98.879	%			15:16:15
1	Ag 328.068†	461.7	521.7	4.9071	µg/L	4.9071	ppb	15:16:21
1	As 188.979†	14.0	13.6	31.342	µg/L	31.342	ppb	15:16:41
1	B 249.677†	1148.1	1045.1	50.777	µg/L	50.777	ppb	15:16:21
1	Ba 233.527†	160.1	176.3	5.1316	µg/L	5.1316	ppb	15:16:41
1	Be 313.107†	11140.2	7419.4	5.1673	µg/L	5.1673	ppb	15:16:21
1	Cd 226.502†	51.9	187.9	5.5222	µg/L	5.5222	ppb	15:16:41
1	Co 228.616†	37.7	83.1	4.5864	µg/L	4.5864	ppb	15:16:41
1	Cr 267.716†	144.5	228.9	5.3120	µg/L	5.3120	ppb	15:16:21
1	Cu 324.752†	5105.5	1491.7	11.236	µg/L	11.236	ppb	15:16:21
1	Mn 257.610†	2664.9	2882.7	10.653	µg/L	10.653	ppb	15:16:21
1	Mo 202.031†	107.0	91.0	11.434	µg/L	11.434	ppb	15:16:41
1	Ni 231.604†	423.9	93.0	5.8541	µg/L	5.8541	ppb	15:16:41
1	P 214.914†	286.7	87.3	207.89	µg/L	207.89	ppb	15:16:41
1	Pb 220.353†	91.8	36.9	10.716	µg/L	10.716	ppb	15:16:41
1	S 181.975 Axial†	41.6	16.5	94.496	µg/L	94.496	ppb	15:16:41
1	Sb 206.836†	36.4	14.4	16.053	µg/L	16.053	ppb	15:16:41
1	Se 196.026†	33.3	21.3	34.035	µg/L	34.035	ppb	15:16:41
1	SiO2†	3274.0	1030.1	217.43	µg/L	217.43	ppb	15:16:21
1	Si 251.611†	1528.2	1240.0	104.00	µg/L	104.00	ppb	15:16:41
1	Sn 189.927†	42.1	19.2	11.315	µg/L	11.315	ppb	15:16:41
1	Ti 334.940†	2750.1	2005.7	4.9752	µg/L	4.9752	ppb	15:16:21
1	Tl 190.801†	-7.6	15.4	26.655	µg/L	26.655	ppb	15:16:41
1	U 409.014†	289.2	525.3	50.093	µg/L	50.093	ppb	15:16:21
1	V 292.402†	306.3	431.7	5.5279	µg/L	5.5279	ppb	15:16:21
1	Zn 213.857†	1007.1	346.5	10.028	µg/L	10.028	ppb	15:16:41
2	Sc RADIAL	74412.8	74412.8	96.9	%			15:15:19
2	Al 396.153Radial†	276.0	312.9	217.15	µg/L	217.15	ppb	15:15:19
2	Ca 317.933Radial†	494.7	259.0	203.94	µg/L	203.94	ppb	15:15:39
2	Fe 238.204 Radial†	24.4	9.3	133.36	µg/L	133.36	ppb	15:15:39
2	K 766.490 Radial†	655.3	264.5	175.56	µg/L	175.56	ppb	15:15:19
2	Mg 279.077 IEC†	36.7	29.6	322.88	µg/L	322.88	ppb	15:15:39
2	Na 589.592 Radial†	2114.7	1638.2	470.42	µg/L	470.42	ppb	15:15:19
2	Sr 421.552†	1377.4	864.3	5.4916	µg/L	5.4916	ppb	15:15:19
2	Sc 361.383	1901779.2	1901779.2	97.859	%			15:16:47
2	Y 371.029	1201951.8	1201951.8	97.815	%			15:16:47
2	Ag 328.068†	483.2	548.8	5.1599	µg/L	5.1599	ppb	15:16:53
2	As 188.979†	12.2	11.9	27.377	µg/L	27.377	ppb	15:17:13
2	B 249.677†	1169.9	1080.3	52.497	µg/L	52.497	ppb	15:16:53
2	Ba 233.527†	154.6	172.5	5.0207	µg/L	5.0207	ppb	15:17:13
2	Be 313.107†	11129.2	7533.3	5.2464	µg/L	5.2464	ppb	15:16:53
2	Cd 226.502†	57.1	193.9	5.6968	µg/L	5.6968	ppb	15:17:13
2	Co 228.616†	38.2	84.1	4.6401	µg/L	4.6401	ppb	15:17:13
2	Cr 267.716†	170.5	257.1	5.9659	µg/L	5.9659	ppb	15:16:53
2	Cu 324.752†	5126.4	1570.4	11.826	µg/L	11.826	ppb	15:16:53
2	Mn 257.610†	2707.1	2955.9	10.924	µg/L	10.924	ppb	15:16:53
2	Mo 202.031†	106.6	91.8	11.529	µg/L	11.529	ppb	15:17:13
2	Ni 231.604†	412.2	85.8	5.4007	µg/L	5.4007	ppb	15:17:13
2	P 214.914†	280.9	84.6	201.38	µg/L	201.38	ppb	15:17:13
2	Pb 220.353†	96.7	42.8	12.448	µg/L	12.448	ppb	15:17:13

2	S 181.975 Axial†	40.9	16.3	93.153 µg/L	93.153 ppb	15:17:13
2	Sb 206.836†	34.1	12.4	13.834 µg/L	13.834 ppb	15:17:13
2	Se 196.026†	26.7	14.9	23.906 µg/L	23.906 ppb	15:17:13
2	SiO2†	3280.2	1073.2	226.52 µg/L	226.52 ppb	15:16:53
2	Si 251.611†	1521.2	1249.9	104.84 µg/L	104.84 ppb	15:17:13
2	Sn 189.927†	43.9	21.4	12.634 µg/L	12.634 ppb	15:17:13
2	Ti 334.940†	2903.6	2193.5	5.4483 µg/L	5.4483 ppb	15:16:53
2	Tl 190.801†	-3.7	19.3	33.346 µg/L	33.346 ppb	15:17:13
2	U 409.014†	415.6	657.7	62.728 µg/L	62.728 ppb	15:16:53
2	V 292.402†	306.6	435.5	5.5901 µg/L	5.5901 ppb	15:16:53
2	Zn 213.857†	1012.5	363.4	10.526 µg/L	10.526 ppb	15:17:13
3	Sc RADIAL	75373.2	75373.2	98.1 %		15:15:45
3	Al 396.153Radial†	274.2	307.4	213.39 µg/L	213.39 ppb	15:15:45
3	Ca 317.933Radial†	496.7	254.6	200.46 µg/L	200.46 ppb	15:16:05
3	Fe 238.204 Radial†	24.1	8.7	125.36 µg/L	125.36 ppb	15:16:05
3	K 766.490 Radial†	628.5	228.5	151.71 µg/L	151.71 ppb	15:15:45
3	Mg 279.077 IEC†	38.6	31.0	337.74 µg/L	337.74 ppb	15:16:05
3	Na 589.592 Radial†	2109.6	1605.2	460.95 µg/L	460.95 ppb	15:15:45
3	Sr 421.552†	1364.3	832.8	5.2913 µg/L	5.2913 ppb	15:15:45
3	Sc 361.383	1913647.9	1913647.9	98.469 %		15:17:19
3	Y 371.029	1209016.8	1209016.8	98.390 %		15:17:19
3	Ag 328.068†	415.4	476.9	4.4905 µg/L	4.4905 ppb	15:17:25
3	As 188.979†	11.1	10.7	24.660 µg/L	24.660 ppb	15:17:46
3	B 249.677†	1116.2	1018.4	49.486 µg/L	49.486 ppb	15:17:25
3	Ba 233.527†	140.0	156.7	4.5629 µg/L	4.5629 ppb	15:17:46
3	Be 313.107†	10844.3	7173.4	4.9960 µg/L	4.9960 ppb	15:17:25
3	Cd 226.502†	38.7	174.7	5.1342 µg/L	5.1342 ppb	15:17:46
3	Co 228.616†	35.6	81.1	4.4758 µg/L	4.4758 ppb	15:17:46
3	Cr 267.716†	128.9	213.7	4.9613 µg/L	4.9613 ppb	15:17:25
3	Cu 324.752†	5024.8	1434.7	10.804 µg/L	10.804 ppb	15:17:25
3	Mn 257.610†	2517.0	2745.6	10.146 µg/L	10.146 ppb	15:17:25
3	Mo 202.031†	94.5	78.8	9.9026 µg/L	9.9026 ppb	15:17:46
3	Ni 231.604†	413.9	84.9	5.3465 µg/L	5.3465 ppb	15:17:46
3	P 214.914†	280.9	82.8	197.21 µg/L	197.21 ppb	15:17:46
3	Pb 220.353†	101.7	47.4	13.780 µg/L	13.780 ppb	15:17:46
3	S 181.975 Axial†	40.7	15.8	90.391 µg/L	90.391 ppb	15:17:46
3	Sb 206.836†	33.6	11.8	13.117 µg/L	13.117 ppb	15:17:46
3	Se 196.026†	25.3	13.3	21.396 µg/L	21.396 ppb	15:17:46
3	SiO2†	3264.5	1036.5	218.77 µg/L	218.77 ppb	15:17:25
3	Si 251.611†	1414.0	1131.4	94.902 µg/L	94.902 ppb	15:17:46
3	Sn 189.927†	45.3	22.6	13.331 µg/L	13.331 ppb	15:17:46
3	Ti 334.940†	2651.9	1919.4	4.7636 µg/L	4.7636 ppb	15:17:25
3	Tl 190.801†	-10.3	12.6	21.765 µg/L	21.765 ppb	15:17:46
3	U 409.014†	308.1	545.8	52.058 µg/L	52.058 ppb	15:17:25
3	V 292.402†	320.6	447.8	5.7162 µg/L	5.7162 ppb	15:17:25
3	Zn 213.857†	963.3	306.9	8.8813 µg/L	8.8813 ppb	15:17:46

Mean Data: PQL

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1912781.0	98.425 %		0.5452			0.55%
Sc RADIAL	74767.8	97.3 %		0.69			0.70%
Y 371.029	1208665.6	98.362 %		0.5327			0.54%
Ag 328.068†	515.8	4.8525 µg/L		0.33802	4.8525 ppb	0.33802	6.97%
QC value within limits for Ag 328.068 Recovery = 97.05%							
Al 396.153Radial†	317.2	220.15 µg/L		8.654	220.15 ppb	8.654	3.93%
QC value within limits for Al 396.153Radial Recovery = 110.07%							
As 188.979†	12.1	27.793 µg/L		3.3602	27.793 ppb	3.3602	12.09%
QC value within limits for As 188.979 Recovery = 92.64%							
B 249.677†	1047.9	50.920 µg/L		1.5105	50.920 ppb	1.5105	2.97%
QC value within limits for B 249.677 Recovery = 101.84%							
Ba 233.527†	168.5	4.9051 µg/L		0.30149	4.9051 ppb	0.30149	6.15%
QC value within limits for Ba 233.527 Recovery = 98.10%							
Be 313.107†	7375.4	5.1366 µg/L		0.12803	5.1366 ppb	0.12803	2.49%
QC value within limits for Be 313.107 Recovery = 102.73%							
Ca 317.933Radial†	261.5	205.90 µg/L		6.647	205.90 ppb	6.647	3.23%
QC value within limits for Ca 317.933Radial Recovery = 102.95%							
Cd 226.502†	185.5	5.4511 µg/L		0.28796	5.4511 ppb	0.28796	5.28%
QC value within limits for Cd 226.502 Recovery = 109.02%							
Co 228.616†	82.8	4.5674 µg/L		0.08378	4.5674 ppb	0.08378	1.83%

QC value within limits for Co 228.616 Recovery = 91.35%							
Cr 267.716†	233.2	5.4131 µg/L	0.50990	5.4131 ppb	0.50990	9.42%	
QC value within limits for Cr 267.716 Recovery = 108.26%							
Cu 324.752†	1498.9	11.289 µg/L	0.5128	11.289 ppb	0.5128	4.54%	
QC value within limits for Cu 324.752 Recovery = 112.89%							
Fe 238.204 Radial†	9.3	133.68 µg/L	8.493	133.68 ppb	8.493	6.35%	
QC value greater than the upper limit for Fe 238.204 Radial Recovery = 133.68%							
K 766.490 Radial†	235.3	156.20 µg/L	17.558	156.20 ppb	17.558	11.24%	
QC value within limits for K 766.490 Radial Recovery = 104.13%							
Mg 279.077 IEC†	32.0	348.54 µg/L	32.445	348.54 ppb	32.445	9.31%	
QC value within limits for Mg 279.077 IEC Recovery = 116.18%							
Mn 257.610†	2861.4	10.575 µg/L	0.3951	10.575 ppb	0.3951	3.74%	
QC value within limits for Mn 257.610 Recovery = 105.75%							
Mo 202.031†	87.2	10.955 µg/L	0.9129	10.955 ppb	0.9129	8.33%	
QC value within limits for Mo 202.031 Recovery = 109.55%							
Na 589.592 Radial†	1641.9	471.49 µg/L	11.118	471.49 ppb	11.118	2.36%	
QC value greater than the upper limit for Na 589.592 Radial Recovery = 157.16%							
Ni 231.604†	87.9	5.5337 µg/L	0.27872	5.5337 ppb	0.27872	5.04%	
QC value within limits for Ni 231.604 Recovery = 110.67%							
P 214.914†	84.9	202.16 µg/L	5.384	202.16 ppb	5.384	2.66%	
QC value greater than the upper limit for P 214.914 Recovery = 134.77%							
Pb 220.353†	42.4	12.315 µg/L	1.5364	12.315 ppb	1.5364	12.48%	
QC value within limits for Pb 220.353 Recovery = 123.15%							
S 181.975 Axial†	16.2	92.680 µg/L	2.0931	92.680 ppb	2.0931	2.26%	
QC value within limits for S 181.975 Axial Recovery = 92.68%							
Sb 206.836†	12.9	14.335 µg/L	1.5302	14.335 ppb	1.5302	10.67%	
QC value greater than the upper limit for Sb 206.836 Recovery = 143.35%							
Se 196.026†	16.5	26.445 µg/L	6.6914	26.445 ppb	6.6914	25.30%	
QC value within limits for Se 196.026 Recovery = 88.15%							
SiO2†	1046.6	220.91 µg/L	4.904	220.91 ppb	4.904	2.22%	
QC value within limits for SiO2 Recovery = 103.71%							
Si 251.611†	1207.1	101.25 µg/L	5.513	101.25 ppb	5.513	5.44%	
QC value within limits for Si 251.611 Recovery = 101.25%							
Sn 189.927†	21.1	12.426 µg/L	1.0241	12.426 ppb	1.0241	8.24%	
QC value within limits for Sn 189.927 Recovery = 124.26%							
Sr 421.552†	854.5	5.4292 µg/L	0.11960	5.4292 ppb	0.11960	2.20%	
QC value within limits for Sr 421.552 Recovery = 108.58%							
Ti 334.940†	2039.6	5.0624 µg/L	0.35059	5.0624 ppb	0.35059	6.93%	
QC value within limits for Ti 334.940 Recovery = 101.25%							
Tl 190.801†	15.8	27.255 µg/L	5.8140	27.255 ppb	5.8140	21.33%	
QC value greater than the upper limit for Tl 190.801 Recovery = 136.28%							
U 409.014†	576.2	54.959 µg/L	6.7987	54.959 ppb	6.7987	12.37%	
QC value within limits for U 409.014 Recovery = 109.92%							
V 292.402†	438.3	5.6114 µg/L	0.09595	5.6114 ppb	0.09595	1.71%	
QC value within limits for V 292.402 Recovery = 112.23%							
Zn 213.857†	338.9	9.8119 µg/L	0.84358	9.8119 ppb	0.84358	8.60%	
QC value within limits for Zn 213.857 Recovery = 98.12%							
QC Failed. Continue with analysis.							

Sequence No.: 13
 Sample ID: CCB
 Analyst:
 Initial Sample Wt:
 Dilution:

Autosampler Location: 8
 Date Collected: 1/27/2010 15:17:55
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	75408.6	75408.6	98.2 %		15:18:29
1	Al 396.153Radial†	-31.3	-4.0	-2.7522 µg/L	-2.7522 ppb	15:18:29
1	Ca 317.933Radial†	250.6	3.7	2.8802 µg/L	2.8802 ppb	15:18:49
1	Fe 238.204 Radial†	17.0	1.5	21.122 µg/L	21.122 ppb	15:18:49
1	K 766.490 Radial†	427.7	23.7	15.742 µg/L	15.742 ppb	15:18:29
1	Mg 279.077 IEC†	7.2	-1.0	-11.126 µg/L	-11.126 ppb	15:18:49
1	Na 589.592 Radial†	1093.8	569.3	163.49 µg/L	163.49 ppb	15:18:29
1	Sr 421.552†	570.3	23.3	0.1481 µg/L	0.1481 ppb	15:18:29
1	Sc 361.383	1927030.5	1927030.5	99.158 %		15:19:52
1	Y 371.029	1216662.5	1216662.5	99.012 %		15:19:52
1	Ag 328.068†	-133.2	-79.2	-0.7359 µg/L	-0.7359 ppb	15:19:57
1	As 188.979†	-3.8	-4.4	-10.065 µg/L	-10.065 ppb	15:20:18
1	B 249.677†	113.7	-0.5	-0.0365 µg/L	-0.0365 ppb	15:20:18
1	Ba 233.527†	-19.9	-5.5	-0.1598 µg/L	-0.1598 ppb	15:20:18
1	Be 313.107†	3809.1	2.0	0.0015 µg/L	0.0015 ppb	15:19:57
1	Cd 226.502†	-124.7	9.7	0.2825 µg/L	0.2825 ppb	15:20:18
1	Co 228.616†	-45.2	-0.6	-0.0329 µg/L	-0.0329 ppb	15:20:18
1	Cr 267.716†	-69.6	12.6	0.2914 µg/L	0.2914 ppb	15:19:57
1	Cu 324.752†	3638.9	1.6	0.0151 µg/L	0.0151 ppb	15:19:57
1	Mn 257.610†	-174.5	13.5	0.0532 µg/L	0.0532 ppb	15:20:18
1	Mo 202.031†	18.3	1.2	0.1543 µg/L	0.1543 ppb	15:20:18
1	Ni 231.604†	341.9	9.4	0.5907 µg/L	0.5907 ppb	15:20:18
1	P 214.914†	224.4	23.8	57.019 µg/L	57.019 ppb	15:20:18
1	Pb 220.353†	53.3	-2.2	-0.6453 µg/L	-0.6453 ppb	15:20:18
1	S 181.975 Axial†	26.2	0.9	5.1157 µg/L	5.1157 ppb	15:20:18
1	Sb 206.836†	23.8	1.6	1.7555 µg/L	1.7555 ppb	15:20:18
1	Se 196.026†	8.9	-3.5	-5.4016 µg/L	-5.4016 ppb	15:20:18
1	SiO2†	2246.9	-12.8	-2.6963 µg/L	-2.6963 ppb	15:19:57
1	Si 251.611†	292.3	-9.7	-0.8160 µg/L	-0.8160 ppb	15:20:18
1	Sn 189.927†	23.5	0.3	0.1648 µg/L	0.1648 ppb	15:20:18
1	Ti 334.940†	716.9	-50.7	-0.1254 µg/L	-0.1254 ppb	15:19:57
1	Tl 190.801†	-26.9	-4.1	-6.9901 µg/L	-6.9901 ppb	15:20:18
1	U 409.014†	-241.1	-10.1	-0.9705 µg/L	-0.9705 ppb	15:19:57
1	V 292.402†	-104.4	16.9	0.2119 µg/L	0.2119 ppb	15:19:57
1	Zn 213.857†	660.0	-5.7	-0.1704 µg/L	-0.1704 ppb	15:20:18
2	Sc RADIAL	75599.4	75599.4	98.4 %		15:18:55
2	Al 396.153Radial†	-33.8	-6.4	-4.4488 µg/L	-4.4488 ppb	15:18:55
2	Ca 317.933Radial†	246.6	-1.1	-0.8743 µg/L	-0.8743 ppb	15:19:15
2	Fe 238.204 Radial†	15.5	-0.1	-1.4879 µg/L	-1.4879 ppb	15:19:15
2	K 766.490 Radial†	409.2	3.8	2.5211 µg/L	2.5211 ppb	15:18:55
2	Mg 279.077 IEC†	14.3	6.2	67.418 µg/L	67.418 ppb	15:19:15
2	Na 589.592 Radial†	1104.5	577.4	165.81 µg/L	165.81 ppb	15:18:55
2	Sr 421.552†	561.4	12.8	0.0813 µg/L	0.0813 ppb	15:18:55
2	Sc 361.383	1931162.5	1931162.5	99.371 %		15:20:24
2	Y 371.029	1219586.9	1219586.9	99.250 %		15:20:24
2	Ag 328.068†	-85.5	-31.0	-0.2835 µg/L	-0.2835 ppb	15:20:29
2	As 188.979†	-0.4	-0.9	-2.0949 µg/L	-2.0949 ppb	15:20:50
2	B 249.677†	120.7	6.2	0.3039 µg/L	0.3039 ppb	15:20:50
2	Ba 233.527†	-27.1	-12.8	-0.3700 µg/L	-0.3700 ppb	15:20:50
2	Be 313.107†	3829.9	14.7	0.0102 µg/L	0.0102 ppb	15:20:29
2	Cd 226.502†	-121.3	13.4	0.3939 µg/L	0.3939 ppb	15:20:50
2	Co 228.616†	-49.1	-4.4	-0.2417 µg/L	-0.2417 ppb	15:20:50
2	Cr 267.716†	-73.1	9.3	0.2152 µg/L	0.2152 ppb	15:20:29
2	Cu 324.752†	3622.1	-23.2	-0.1743 µg/L	-0.1743 ppb	15:20:29
2	Mn 257.610†	-178.4	9.9	0.0338 µg/L	0.0338 ppb	15:20:50
2	Mo 202.031†	10.5	-6.6	-0.8347 µg/L	-0.8347 ppb	15:20:50
2	Ni 231.604†	339.3	6.0	0.3798 µg/L	0.3798 ppb	15:20:50
2	P 214.914†	227.4	26.3	62.994 µg/L	62.994 ppb	15:20:50
2	Pb 220.353†	59.6	4.0	1.1703 µg/L	1.1703 ppb	15:20:50

2	S 181.975 Axial†	18.7	-6.7	-38.320 µg/L	-38.320 ppb	15:20:50
2	Sb 206.836†	23.7	1.5	1.6174 µg/L	1.6174 ppb	15:20:50
2	Se 196.026†	6.2	-6.2	-9.8274 µg/L	-9.8274 ppb	15:20:50
2	SiO2†	2224.4	-40.3	-8.5101 µg/L	-8.5101 ppb	15:20:29
2	Si 251.611†	306.4	3.9	0.3245 µg/L	0.3245 ppb	15:20:50
2	Sn 189.927†	21.4	-1.9	-1.0878 µg/L	-1.0878 ppb	15:20:50
2	Ti 334.940†	798.4	29.8	0.0691 µg/L	0.0691 ppb	15:20:29
2	Tl 190.801†	-23.0	-0.1	-0.1423 µg/L	-0.1423 ppb	15:20:50
2	U 409.014†	-193.3	38.4	3.6664 µg/L	3.6664 ppb	15:20:29
2	V 292.402†	-59.1	62.7	0.7775 µg/L	0.7775 ppb	15:20:29
2	Zn 213.857†	671.6	4.6	0.1279 µg/L	0.1279 ppb	15:20:50
3	Sc RADIAL	75302.4	75302.4	98.0 %		15:19:21
3	Al 396.153Radial†	-48.9	-22.0	-15.250 µg/L	-15.250 ppb	15:19:21
3	Ca 317.933Radial†	242.3	-4.5	-3.5535 µg/L	-3.5535 ppb	15:19:41
3	Fe 238.204 Radial†	17.4	1.9	26.576 µg/L	26.576 ppb	15:19:41
3	K 766.490 Radial†	435.2	32.0	21.257 µg/L	21.257 ppb	15:19:21
3	Mg 279.077 IEC†	8.8	0.7	7.6867 µg/L	7.6867 ppb	15:19:41
3	Na 589.592 Radial†	1043.4	519.5	149.19 µg/L	149.19 ppb	15:19:21
3	Sr 421.552†	553.7	7.2	0.0457 µg/L	0.0457 ppb	15:19:21
3	Sc 361.383	1912524.6	1912524.6	98.412 %		15:20:56
3	Y 371.029	1207845.4	1207845.4	98.295 %		15:20:56
3	Ag 328.068†	-113.0	-59.7	-0.5574 µg/L	-0.5574 ppb	15:21:02
3	As 188.979†	-1.0	-1.6	-3.6423 µg/L	-3.6423 ppb	15:21:22
3	B 249.677†	116.8	3.5	0.1566 µg/L	0.1566 ppb	15:21:22
3	Ba 233.527†	-20.8	-6.6	-0.1939 µg/L	-0.1939 ppb	15:21:22
3	Be 313.107†	3855.2	78.0	0.0544 µg/L	0.0544 ppb	15:21:02
3	Cd 226.502†	-126.9	6.5	0.1877 µg/L	0.1877 ppb	15:21:22
3	Co 228.616†	-45.7	-1.4	-0.0799 µg/L	-0.0799 ppb	15:21:22
3	Cr 267.716†	-77.8	3.8	0.0871 µg/L	0.0871 ppb	15:21:02
3	Cu 324.752†	3607.8	-2.1	-0.0124 µg/L	-0.0124 ppb	15:21:02
3	Mn 257.610†	-181.9	4.7	0.0204 µg/L	0.0204 ppb	15:21:22
3	Mo 202.031†	14.5	-2.4	-0.3051 µg/L	-0.3051 ppb	15:21:22
3	Ni 231.604†	328.0	-2.1	-0.1330 µg/L	-0.1330 ppb	15:21:22
3	P 214.914†	229.8	31.1	74.373 µg/L	74.373 ppb	15:21:22
3	Pb 220.353†	57.6	2.6	0.7555 µg/L	0.7555 ppb	15:21:22
3	S 181.975 Axial†	23.6	-1.6	-8.9972 µg/L	-8.9972 ppb	15:21:22
3	Sb 206.836†	28.8	6.9	7.6083 µg/L	7.6083 ppb	15:21:22
3	Se 196.026†	4.6	-7.7	-12.089 µg/L	-12.089 ppb	15:21:22
3	SiO2†	2244.5	2.0	0.4164 µg/L	0.4164 ppb	15:21:02
3	Si 251.611†	296.1	-3.6	-0.3022 µg/L	-0.3022 ppb	15:21:22
3	Sn 189.927†	27.2	4.3	2.4879 µg/L	2.4879 ppb	15:21:22
3	Ti 334.940†	765.6	4.3	0.0101 µg/L	0.0101 ppb	15:21:02
3	Tl 190.801†	-26.7	-4.1	-7.0432 µg/L	-7.0432 ppb	15:21:22
3	U 409.014†	-187.2	42.8	4.0807 µg/L	4.0807 ppb	15:21:02
3	V 292.402†	-150.0	-30.3	-0.3736 µg/L	-0.3736 ppb	15:21:02
3	Zn 213.857†	652.7	-8.1	-0.2359 µg/L	-0.2359 ppb	15:21:22

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1923572.5	98.980 %	0.5037			0.51%
Sc RADIAL	75436.8	98.2 %	0.20			0.20%
Y 371.029	1214698.2	98.852 %	0.4974			0.50%
Ag 328.068†	-56.6	-0.5256 µg/L	0.22786	-0.5256 ppb	0.22786	43.35%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	-10.8	-7.4836 µg/L	6.77897	-7.4836 ppb	6.77897	90.58%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	-2.3	-5.2675 µg/L	4.22639	-5.2675 ppb	4.22639	80.24%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	3.1	0.1413 µg/L	0.17069	0.1413 ppb	0.17069	120.77%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	-8.3	-0.2412 µg/L	0.11282	-0.2412 ppb	0.11282	46.77%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	31.6	0.0220 µg/L	0.02836	0.0220 ppb	0.02836	128.84%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	-0.7	-0.5159 µg/L	3.23176	-0.5159 ppb	3.23176	626.48%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	9.8	0.2880 µg/L	0.10323	0.2880 ppb	0.10323	35.84%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-2.1	-0.1182 µg/L	0.10954	-0.1182 ppb	0.10954	92.71%

QC value within limits for Co 228.616 Recovery = Not calculated							
Cr 267.716†	8.5	0.1979 µg/L	0.10320	0.1979 ppb	0.10320	52.15%	
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu 324.752†	-7.9	-0.0572 µg/L	0.10235	-0.0572 ppb	0.10235	178.91%	
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe 238.204 Radial†	1.1	15.403 µg/L	14.8803	15.403 ppb	14.8803	96.60%	
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K 766.490 Radial†	19.8	13.174 µg/L	9.6286	13.174 ppb	9.6286	73.09%	
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg 279.077 IEC†	2.0	21.326 µg/L	41.0102	21.326 ppb	41.0102	192.30%	
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn 257.610†	9.4	0.0358 µg/L	0.01650	0.0358 ppb	0.01650	46.06%	
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo 202.031†	-2.6	-0.3285 µg/L	0.49490	-0.3285 ppb	0.49490	150.65%	
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na 589.592 Radial†	555.4	159.50 µg/L	9.003	159.50 ppb	9.003	5.64%	
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni 231.604†	4.4	0.2792 µg/L	0.37221	0.2792 ppb	0.37221	133.31%	
QC value within limits for Ni 231.604 Recovery = Not calculated							
P 214.914†	27.1	64.795 µg/L	8.8158	64.795 ppb	8.8158	13.61%	
QC value within limits for P 214.914 Recovery = Not calculated							
Pb 220.353†	1.5	0.4269 µg/L	0.95136	0.4269 ppb	0.95136	222.88%	
QC value within limits for Pb 220.353 Recovery = Not calculated							
S 181.975 Axial†	-2.5	-14.067 µg/L	22.1570	-14.067 ppb	22.1570	157.51%	
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb 206.836†	3.3	3.6604 µg/L	3.41967	3.6604 ppb	3.41967	93.42%	
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	-5.8	-9.1060 µg/L	3.40148	-9.1060 ppb	3.40148	37.35%	
QC value within limits for Se 196.026 Recovery = Not calculated							
SiO2†	-17.0	-3.5967 µg/L	4.53086	-3.5967 ppb	4.53086	125.97%	
QC value within limits for SiO2 Recovery = Not calculated							
Si 251.611†	-3.2	-0.2646 µg/L	0.57118	-0.2646 ppb	0.57118	215.90%	
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn 189.927†	0.9	0.5216 µg/L	1.81440	0.5216 ppb	1.81440	347.85%	
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr 421.552†	14.4	0.0917 µg/L	0.05198	0.0917 ppb	0.05198	56.67%	
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti 334.940†	-5.5	-0.0154 µg/L	0.09973	-0.0154 ppb	0.09973	646.95%	
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl 190.801†	-2.7	-4.7252 µg/L	3.96899	-4.7252 ppb	3.96899	84.00%	
QC value within limits for Tl 190.801 Recovery = Not calculated							
U 409.014†	23.7	2.2589 µg/L	2.80439	2.2589 ppb	2.80439	124.15%	
QC value within limits for U 409.014 Recovery = Not calculated							
V 292.402†	16.4	0.2053 µg/L	0.57560	0.2053 ppb	0.57560	280.41%	
QC value within limits for V 292.402 Recovery = Not calculated							
Zn 213.857†	-3.1	-0.0928 µg/L	0.19394	-0.0928 ppb	0.19394	209.00%	
QC value within limits for Zn 213.857 Recovery = Not calculated							

All analyte(s) passed QC.

Sequence No.: 14

Sample ID: 1202015719|941749|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 315

Date Collected: 1/27/2010 15:21:31

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 1202015719|941749|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	73979.2	73979.2	96.3 %		15:22:08
1	Al 396.153Radial†	-33.1	-6.4	-4.4193 µg/L	-4.4193 ppb	15:22:08
1	Ca 317.933Radial†	260.9	19.3	15.191 µg/L	15.191 ppb	15:22:29
1	Fe 238.204 Radial†	22.1	7.1	102.02 µg/L	102.02 ppb	15:22:29
1	K 766.490 Radial†	415.1	19.0	12.611 µg/L	12.611 ppb	15:22:08
1	Mg 279.077 IEC†	10.4	2.5	27.578 µg/L	27.578 ppb	15:22:29
1	Na 589.592 Radial†	1168.8	668.7	192.03 µg/L	192.03 ppb	15:22:08
1	Sr 421.552†	571.2	35.5	0.2254 µg/L	0.2254 ppb	15:22:08
1	Sc 361.383	1914595.6	1914595.6	98.518 %		15:23:30
1	Y 371.029	1207286.5	1207286.5	98.249 %		15:23:30
1	Ag 328.068†	-58.0	-3.7	-0.0261 µg/L	-0.0261 ppb	15:23:35
1	As 188.979†	-1.0	-1.6	-3.5907 µg/L	-3.5907 ppb	15:23:56
1	B 249.677†	114.5	1.0	-0.0020 µg/L	-0.0020 ppb	15:23:56
1	Ba 233.527†	-26.3	-12.1	-0.3521 µg/L	-0.3521 ppb	15:23:56
1	Be 313.107†	3799.5	17.2	0.0119 µg/L	0.0119 ppb	15:23:35
1	Cd 226.502†	-130.5	3.0	0.0763 µg/L	0.0763 ppb	15:23:56
1	Co 228.616†	-49.3	-5.1	-0.2801 µg/L	-0.2801 ppb	15:23:56
1	Cr 267.716†	-53.7	28.3	0.6564 µg/L	0.6564 ppb	15:23:35
1	Cu 324.752†	3688.5	75.8	0.5842 µg/L	0.5842 ppb	15:23:35
1	Mn 257.610†	-26.7	162.4	0.6124 µg/L	0.6124 ppb	15:23:56
1	Mo 202.031†	14.1	-2.9	-0.3566 µg/L	-0.3566 ppb	15:23:56
1	Ni 231.604†	330.2	-0.3	-0.0159 µg/L	-0.0159 ppb	15:23:56
1	P 214.914†	221.4	22.3	53.209 µg/L	53.209 ppb	15:23:56
1	Pb 220.353†	65.6	10.6	3.0905 µg/L	3.0905 ppb	15:23:56
1	S 181.975 Axial†	20.9	-4.3	-24.933 µg/L	-24.933 ppb	15:23:56
1	Sb 206.836†	24.7	2.7	2.9426 µg/L	2.9426 ppb	15:23:56
1	Se 196.026†	13.3	1.1	2.1324 µg/L	2.1324 ppb	15:23:56
1	SiO2†	2305.3	61.2	12.909 µg/L	12.909 ppb	15:23:35
1	Si 251.611†	386.8	88.1	7.3867 µg/L	7.3867 ppb	15:23:56
1	Sn 189.927†	24.1	1.1	0.6331 µg/L	0.6331 ppb	15:23:56
1	Ti 334.940†	841.7	80.7	0.1992 µg/L	0.1992 ppb	15:23:35
1	Tl 190.801†	-16.1	6.7	11.622 µg/L	11.622 ppb	15:23:56
1	U 409.014†	-227.0	2.5	0.2267 µg/L	0.2267 ppb	15:23:35
1	V 292.402†	-92.5	28.2	0.3550 µg/L	0.3550 ppb	15:23:35
1	Zn 213.857†	699.0	38.2	1.1052 µg/L	1.1052 ppb	15:23:56
2	Sc RADIAL	73954.9	73954.9	96.3 %		15:22:34
2	Al 396.153Radial†	-32.1	-5.4	-3.7608 µg/L	-3.7608 ppb	15:22:34
2	Ca 317.933Radial†	264.9	23.5	18.498 µg/L	18.498 ppb	15:22:54
2	Fe 238.204 Radial†	22.0	7.0	100.04 µg/L	100.04 ppb	15:22:54
2	K 766.490 Radial†	438.3	43.3	28.729 µg/L	28.729 ppb	15:22:34
2	Mg 279.077 IEC†	9.6	1.7	18.413 µg/L	18.413 ppb	15:22:54
2	Na 589.592 Radial†	1157.2	657.1	188.71 µg/L	188.71 ppb	15:22:34
2	Sr 421.552†	556.9	20.7	0.1317 µg/L	0.1317 ppb	15:22:34
2	Sc 361.383	1900136.9	1900136.9	97.774 %		15:24:02
2	Y 371.029	1197360.2	1197360.2	97.441 %		15:24:02
2	Ag 328.068†	-112.1	-59.6	-0.5450 µg/L	-0.5450 ppb	15:24:07
2	As 188.979†	0.4	-0.2	-0.3976 µg/L	-0.3976 ppb	15:24:28
2	B 249.677†	127.5	15.2	0.6881 µg/L	0.6881 ppb	15:24:28
2	Ba 233.527†	-20.9	-6.8	-0.1971 µg/L	-0.1971 ppb	15:24:28
2	Be 313.107†	3843.6	91.7	0.0638 µg/L	0.0638 ppb	15:24:07
2	Cd 226.502†	-120.9	11.8	0.3352 µg/L	0.3352 ppb	15:24:28
2	Co 228.616†	-49.6	-5.8	-0.3181 µg/L	-0.3181 ppb	15:24:28
2	Cr 267.716†	-59.0	22.4	0.5201 µg/L	0.5201 ppb	15:24:07
2	Cu 324.752†	3626.6	41.0	0.3222 µg/L	0.3222 ppb	15:24:07
2	Mn 257.610†	-45.8	142.6	0.5395 µg/L	0.5395 ppb	15:24:28
2	Mo 202.031†	19.8	3.1	0.3889 µg/L	0.3889 ppb	15:24:28
2	Ni 231.604†	328.0	0.0	0.0018 µg/L	0.0018 ppb	15:24:28
2	P 214.914†	210.4	12.7	30.334 µg/L	30.334 ppb	15:24:28
2	Pb 220.353†	59.1	4.5	1.2984 µg/L	1.2984 ppb	15:24:28

2	S 181.975 Axial†	25.7	0.8	4.5985 µg/L	4.5985 ppb	15:24:28
2	Sb 206.836†	25.5	3.6	4.0368 µg/L	4.0368 ppb	15:24:28
2	Se 196.026†	11.1	-1.1	-1.2792 µg/L	-1.2792 ppb	15:24:28
2	SiO2†	2325.8	100.0	21.103 µg/L	21.103 ppb	15:24:07
2	Si 251.611†	394.0	98.4	8.2559 µg/L	8.2559 ppb	15:24:28
2	Sn 189.927†	27.0	4.2	2.4486 µg/L	2.4486 ppb	15:24:28
2	Ti 334.940†	800.5	45.1	0.1113 µg/L	0.1113 ppb	15:24:07
2	Tl 190.801†	-24.7	-2.2	-3.7722 µg/L	-3.7722 ppb	15:24:28
2	U 409.014†	-165.3	63.9	6.0871 µg/L	6.0871 ppb	15:24:07
2	V 292.402†	-72.6	47.9	0.6109 µg/L	0.6109 ppb	15:24:07
2	Zn 213.857†	726.3	71.5	2.0788 µg/L	2.0788 ppb	15:24:28
3	Sc RADIAL	75005.5	75005.5	97.6 %		15:23:00
3	Al 396.153Radial†	-26.4	1.0	0.6766 µg/L	0.6766 ppb	15:23:00
3	Ca 317.933Radial†	263.2	17.9	14.101 µg/L	14.101 ppb	15:23:20
3	Fe 238.204 Radial†	19.1	3.7	53.020 µg/L	53.020 ppb	15:23:20
3	K 766.490 Radial†	439.8	38.4	25.523 µg/L	25.523 ppb	15:23:00
3	Mg 279.077 IEC†	13.2	5.2	56.542 µg/L	56.542 ppb	15:23:20
3	Na 589.592 Radial†	1113.1	595.1	170.89 µg/L	170.89 ppb	15:23:00
3	Sr 421.552†	589.0	45.5	0.2892 µg/L	0.2892 ppb	15:23:00
3	Sc 361.383	1901251.0	1901251.0	97.831 %		15:24:34
3	Y 371.029	1199829.3	1199829.3	97.642 %		15:24:34
3	Ag 328.068†	-71.4	-17.9	-0.1614 µg/L	-0.1614 ppb	15:24:40
3	As 188.979†	-1.9	-2.5	-5.8359 µg/L	-5.8359 ppb	15:25:00
3	B 249.677†	134.9	22.7	1.0771 µg/L	1.0771 ppb	15:25:00
3	Ba 233.527†	-20.8	-6.7	-0.1945 µg/L	-0.1945 ppb	15:25:00
3	Be 313.107†	3770.4	14.6	0.0101 µg/L	0.0101 ppb	15:24:40
3	Cd 226.502†	-121.9	10.8	0.3126 µg/L	0.3126 ppb	15:25:00
3	Co 228.616†	-46.6	-2.7	-0.1472 µg/L	-0.1472 ppb	15:25:00
3	Cr 267.716†	-83.3	-2.4	-0.0551 µg/L	-0.0551 ppb	15:24:40
3	Cu 324.752†	3639.4	51.8	0.3972 µg/L	0.3972 ppb	15:24:40
3	Mn 257.610†	-33.4	155.3	0.5786 µg/L	0.5786 ppb	15:25:00
3	Mo 202.031†	13.2	-3.7	-0.4589 µg/L	-0.4589 ppb	15:25:00
3	Ni 231.604†	327.2	-1.0	-0.0625 µg/L	-0.0625 ppb	15:25:00
3	P 214.914†	224.1	26.6	63.517 µg/L	63.517 ppb	15:25:00
3	Pb 220.353†	58.4	3.7	1.0838 µg/L	1.0838 ppb	15:25:00
3	S 181.975 Axial†	21.0	-4.0	-22.940 µg/L	-22.940 ppb	15:25:00
3	Sb 206.836†	22.8	0.9	1.0335 µg/L	1.0335 ppb	15:25:00
3	Se 196.026†	4.9	-7.4	-11.524 µg/L	-11.524 ppb	15:25:00
3	SiO2†	2327.9	100.7	21.257 µg/L	21.257 ppb	15:24:40
3	Si 251.611†	388.0	92.1	7.7213 µg/L	7.7213 ppb	15:25:00
3	Sn 189.927†	26.9	4.0	2.3798 µg/L	2.3798 ppb	15:25:00
3	Ti 334.940†	794.3	38.3	0.0913 µg/L	0.0913 ppb	15:24:40
3	Tl 190.801†	-25.2	-2.7	-4.6700 µg/L	-4.6700 ppb	15:25:00
3	U 409.014†	-193.0	35.7	3.3971 µg/L	3.3971 ppb	15:24:40
3	V 292.402†	-91.8	28.3	0.3541 µg/L	0.3541 ppb	15:24:40
3	Zn 213.857†	711.5	56.0	1.6262 µg/L	1.6262 ppb	15:25:00

Mean Data: 1202015719|941749|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1905327.8	98.041 %	0.4140			0.42%
Sc RADIAL	74313.2	96.7 %	0.78			0.81%
Y 371.029	1201492.0	97.778 %	0.4206			0.43%
Ag 328.068†	-27.1	-0.2442 µg/L	0.26914	-0.2442 ppb	0.26914	110.23%
Al 396.153Radial†	-3.6	-2.5012 µg/L	2.77163	-2.5012 ppb	2.77163	110.81%
As 188.979†	-1.4	-3.2747 µg/L	2.73289	-3.2747 ppb	2.73289	83.45%
B 249.677†	13.0	0.5877 µg/L	0.54650	0.5877 ppb	0.54650	92.99%
Ba 233.527†	-8.6	-0.2479 µg/L	0.09023	-0.2479 ppb	0.09023	36.40%
Be 313.107†	41.2	0.0286 µg/L	0.03051	0.0286 ppb	0.03051	106.58%
Ca 317.933Radial†	20.2	15.930 µg/L	2.2900	15.930 ppb	2.2900	14.38%
Cd 226.502†	8.5	0.2414 µg/L	0.14343	0.2414 ppb	0.14343	59.42%
Co 228.616†	-4.5	-0.2485 µg/L	0.08973	-0.2485 ppb	0.08973	36.11%
Cr 267.716†	16.1	0.3738 µg/L	0.37765	0.3738 ppb	0.37765	101.03%
Cu 324.752†	56.2	0.4345 µg/L	0.13493	0.4345 ppb	0.13493	31.05%
Fe 238.204 Radial†	5.9	85.026 µg/L	27.7360	85.026 ppb	27.7360	32.62%
K 766.490 Radial†	33.6	22.288 µg/L	8.5324	22.288 ppb	8.5324	38.28%
Mg 279.077 IEC†	3.1	34.177 µg/L	19.9028	34.177 ppb	19.9028	58.23%
Mn 257.610†	153.5	0.5768 µg/L	0.03646	0.5768 ppb	0.03646	6.32%
Mo 202.031†	-1.2	-0.1422 µg/L	0.46277	-0.1422 ppb	0.46277	325.44%
Na 589.592 Radial†	640.3	183.88 µg/L	11.367	183.88 ppb	11.367	6.18%

Ni 231.604†	-0.4	-0.0255 µg/L	0.03322	-0.0255 ppb	0.03322	130.08%
P 214.914†	20.5	49.020 µg/L	16.9835	49.020 ppb	16.9835	34.65%
Pb 220.353†	6.3	1.8242 µg/L	1.10183	1.8242 ppb	1.10183	60.40%
S 181.975 Axial†	-2.5	-14.425 µg/L	16.5049	-14.425 ppb	16.5049	114.42%
Sb 206.836†	2.4	2.6710 µg/L	1.52000	2.6710 ppb	1.52000	56.91%
Se 196.026†	-2.5	-3.5570 µg/L	7.10767	-3.5570 ppb	7.10767	199.82%
SiO2†	87.3	18.423 µg/L	4.7760	18.423 ppb	4.7760	25.92%
Si 251.611†	92.8	7.7879 µg/L	0.43842	7.7879 ppb	0.43842	5.63%
Sn 189.927†	3.1	1.8205 µg/L	1.02888	1.8205 ppb	1.02888	56.52%
Sr 421.552†	33.9	0.2154 µg/L	0.07917	0.2154 ppb	0.07917	36.75%
Ti 334.940†	54.7	0.1339 µg/L	0.05742	0.1339 ppb	0.05742	42.87%
Tl 190.801†	0.6	1.0601 µg/L	9.15825	1.0601 ppb	9.15825	863.92%
U 409.014†	34.1	3.2369 µg/L	2.93346	3.2369 ppb	2.93346	90.62%
V 292.402†	34.8	0.4400 µg/L	0.14797	0.4400 ppb	0.14797	33.63%
Zn 213.857†	55.2	1.6034 µg/L	0.48721	1.6034 ppb	0.48721	30.39%

Sequence No.: 15

Sample ID: 1202015724|941749|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 316

Date Collected: 1/27/2010 15:25:09

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 1202015724|941749|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	76581.5	76581.5	99.7 %		15:25:48
1	Al 396.153Radial†	138096.2	138553.6	96262 µg/L	96262 ppb	15:25:43
1	Ca 317.933Radial†	139126.5	139307.4	109690 µg/L	109690 ppb	15:25:43
1	Fe 238.204 Radial†	15106.9	15138.0	217350 µg/L	217350 ppb	15:25:48
1	K 766.490 Radial†	68378.4	68179.1	45260 µg/L	45260 ppb	15:25:43
1	Mg 279.077 IEC†	3889.6	3893.4	42209 µg/L	42209 ppb	15:25:48
1	Na 589.592 Radial†	38741.9	38317.5	11003 µg/L	11003 ppb	15:25:43
1	Sr 421.552†	384297.5	384934.9	2445.8 µg/L	2445.8 ppb	15:25:43
1	Sc 361.383	1946390.6	1946390.6	100.15 %		15:26:23
1	Y 371.029	1251554.5	1251554.5	101.85 %		15:26:23
1	Ag 328.068†	33406.0	33409.7	333.75 µg/L	333.75 ppb	15:26:29
1	As 188.979†	511.1	509.7	1182.1 µg/L	1182.1 ppb	15:26:50
1	B 249.677†	34592.8	34424.4	1565.4 µg/L	1565.4 ppb	15:26:29
1	Ba 233.527†	70570.6	70476.5	2049.9 µg/L	2049.9 ppb	15:26:29
1	Be 313.107†	1212523.4	1206817.1	838.50 µg/L	838.50 ppb	15:26:23
1	Cd 226.502†	22528.0	22628.7	643.02 µg/L	643.02 ppb	15:26:29
1	Co 228.616†	18127.4	18144.4	989.35 µg/L	989.35 ppb	15:26:29
1	Cr 267.716†	110498.7	110411.3	2561.8 µg/L	2561.8 ppb	15:26:29
1	Cu 324.752†	264889.2	260813.1	1991.2 µg/L	1991.2 ppb	15:26:29
1	Mn 257.610†	1596804.5	1594535.5	5917.8 µg/L	5917.8 ppb	15:26:23
1	Mo 202.031†	4493.3	4469.2	569.59 µg/L	569.59 ppb	15:26:50
1	Ni 231.604†	23469.7	23098.1	1456.9 µg/L	1456.9 ppb	15:26:29
1	P 214.914†	4650.1	4440.5	10291 µg/L	10291 ppb	15:26:50
1	Pb 220.353†	3387.1	3326.0	965.35 µg/L	965.35 ppb	15:26:50
1	S 181.975 Axial†	758.2	731.5	4193.5 µg/L	4193.5 ppb	15:26:50
1	Sb 206.836†	1747.9	1722.8	1879.9 µg/L	1879.9 ppb	15:26:50
1	Se 196.026†	1592.5	1577.7	3334.2 µg/L	3334.2 ppb	15:26:50
1	SiO2†	132921.9	130438.4	27532 µg/L	27532 ppb	15:26:29
1	Si 251.611†	153376.3	152835.6	12819 µg/L	12819 ppb	15:26:29
1	Sn 189.927†	1851.2	1824.9	1117.3 µg/L	1117.3 ppb	15:26:50
1	Ti 334.940†	2425764.4	2421255.9	6037.0 µg/L	6037.0 ppb	15:26:23
1	Tl 190.801†	746.3	768.2	1369.4 µg/L	1369.4 ppb	15:26:50
1	U 409.014†	-943.6	-709.2	-104.58 µg/L	-104.58 ppb	15:26:29
1	V 292.402†	105168.8	105129.0	1328.9 µg/L	1328.9 ppb	15:26:29
1	Zn 213.857†	221702.2	220689.5	6411.5 µg/L	6411.5 ppb	15:26:29
2	Sc RADIAL	75939.4	75939.4	98.9 %		15:25:59
2	Al 396.153Radial†	137864.2	139490.3	96913 µg/L	96913 ppb	15:25:54
2	Ca 317.933Radial†	138455.9	139809.3	110090 µg/L	110090 ppb	15:25:54
2	Fe 238.204 Radial†	15070.3	15229.2	218660 µg/L	218660 ppb	15:25:59
2	K 766.490 Radial†	68205.7	68584.4	45529 µg/L	45529 ppb	15:25:54
2	Mg 279.077 IEC†	3891.6	3928.4	42588 µg/L	42588 ppb	15:25:59
2	Na 589.592 Radial†	38685.4	38589.0	11081 µg/L	11081 ppb	15:25:54
2	Sr 421.552†	382819.9	386699.9	2457.1 µg/L	2457.1 ppb	15:25:54
2	Sc 361.383	1944954.7	1944954.7	100.08 %		15:26:57
2	Y 371.029	1251708.2	1251708.2	101.86 %		15:26:57
2	Ag 328.068†	33397.0	33425.2	333.99 µg/L	333.99 ppb	15:27:03
2	As 188.979†	508.2	507.2	1176.4 µg/L	1176.4 ppb	15:27:23
2	B 249.677†	34702.6	34559.5	1571.3 µg/L	1571.3 ppb	15:27:03
2	Ba 233.527†	70645.9	70603.7	2053.6 µg/L	2053.6 ppb	15:27:03
2	Be 313.107†	1215684.9	1210869.8	841.32 µg/L	841.32 ppb	15:26:57
2	Cd 226.502†	22479.4	22596.8	641.94 µg/L	641.94 ppb	15:27:03
2	Co 228.616†	18084.7	18115.2	987.69 µg/L	987.69 ppb	15:27:03
2	Cr 267.716†	110772.1	110766.0	2570.0 µg/L	2570.0 ppb	15:27:03
2	Cu 324.752†	265530.3	261649.0	1997.7 µg/L	1997.7 ppb	15:27:03
2	Mn 257.610†	1600391.3	1599296.3	5935.6 µg/L	5935.6 ppb	15:26:57
2	Mo 202.031†	4492.6	4471.8	569.97 µg/L	569.97 ppb	15:27:23
2	Ni 231.604†	23601.3	23246.9	1466.3 µg/L	1466.3 ppb	15:27:03
2	P 214.914†	4640.5	4434.3	10275 µg/L	10275 ppb	15:27:23
2	Pb 220.353†	3394.0	3335.3	968.05 µg/L	968.05 ppb	15:27:23

2	S 181.975 Axial†	758.3	732.2	4197.2 µg/L	4197.2 ppb	15:27:23
2	Sb 206.836†	1746.4	1722.6	1879.6 µg/L	1879.6 ppb	15:27:23
2	Se 196.026†	1599.6	1585.9	3352.1 µg/L	3352.1 ppb	15:27:23
2	SiO2†	133362.9	130977.1	27646 µg/L	27646 ppb	15:27:03
2	Si 251.611†	153586.1	153158.3	12846 µg/L	12846 ppb	15:27:03
2	Sn 189.927†	1856.1	1831.2	1121.2 µg/L	1121.2 ppb	15:27:23
2	Ti 334.940†	2432143.1	2429417.5	6057.3 µg/L	6057.3 ppb	15:26:57
2	Tl 190.801†	738.2	760.7	1356.6 µg/L	1356.6 ppb	15:27:23
2	U 409.014†	-966.1	-732.4	-106.99 µg/L	-106.99 ppb	15:27:03
2	V 292.402†	105349.7	105387.3	1332.2 µg/L	1332.2 ppb	15:27:03
2	Zn 213.857†	222083.8	221234.3	6427.3 µg/L	6427.3 ppb	15:27:03
3	Sc RADIAL	77162.9	77162.9	100 %		15:26:11
3	Al 396.153Radial†	136671.8	136091.8	94552 µg/L	94552 ppb	15:26:05
3	Ca 317.933Radial†	137704.2	136840.0	107750 µg/L	107750 ppb	15:26:05
3	Fe 238.204 Radial†	14989.9	14907.3	214040 µg/L	214040 ppb	15:26:11
3	K 766.490 Radial†	67844.0	67130.2	44563 µg/L	44563 ppb	15:26:05
3	Mg 279.077 IEC†	3881.7	3856.1	41806 µg/L	41806 ppb	15:26:11
3	Na 589.592 Radial†	38516.3	37800.1	10855 µg/L	10855 ppb	15:26:05
3	Sr 421.552†	380249.5	378000.4	2401.8 µg/L	2401.8 ppb	15:26:05
3	Sc 361.383	1939190.1	1939190.1	99.784 %		15:27:30
3	Y 371.029	1247924.2	1247924.2	101.56 %		15:27:30
3	Ag 328.068†	33374.6	33502.0	334.45 µg/L	334.45 ppb	15:27:36
3	As 188.979†	507.1	507.6	1177.1 µg/L	1177.1 ppb	15:27:57
3	B 249.677†	34765.2	34725.4	1581.8 µg/L	1581.8 ppb	15:27:36
3	Ba 233.527†	70652.9	70820.6	2059.9 µg/L	2059.9 ppb	15:27:36
3	Be 313.107†	1212917.8	1211707.7	841.90 µg/L	841.90 ppb	15:27:30
3	Cd 226.502†	22497.7	22681.9	644.97 µg/L	644.97 ppb	15:27:36
3	Co 228.616†	18158.5	18242.9	994.73 µg/L	994.73 ppb	15:27:36
3	Cr 267.716†	110742.6	111065.5	2576.9 µg/L	2576.9 ppb	15:27:36
3	Cu 324.752†	265455.0	262362.2	2002.4 µg/L	2002.4 ppb	15:27:36
3	Mn 257.610†	1597601.5	1601254.2	5942.2 µg/L	5942.2 ppb	15:27:30
3	Mo 202.031†	4489.1	4481.6	571.03 µg/L	571.03 ppb	15:27:57
3	Ni 231.604†	23551.7	23267.4	1467.6 µg/L	1467.6 ppb	15:27:36
3	P 214.914†	4644.0	4451.5	10319 µg/L	10319 ppb	15:27:57
3	Pb 220.353†	3398.8	3350.3	972.46 µg/L	972.46 ppb	15:27:57
3	S 181.975 Axial†	756.3	732.4	4198.4 µg/L	4198.4 ppb	15:27:57
3	Sb 206.836†	1739.2	1720.5	1877.4 µg/L	1877.4 ppb	15:27:57
3	Se 196.026†	1582.8	1573.8	3315.2 µg/L	3315.2 ppb	15:27:57
3	SiO2†	133221.9	131231.9	27700 µg/L	27700 ppb	15:27:36
3	Si 251.611†	153414.6	153442.7	12870 µg/L	12870 ppb	15:27:36
3	Sn 189.927†	1859.5	1840.1	1125.3 µg/L	1125.3 ppb	15:27:57
3	Ti 334.940†	2426560.7	2431047.3	6061.4 µg/L	6061.4 ppb	15:27:30
3	Tl 190.801†	738.3	763.0	1361.2 µg/L	1361.2 ppb	15:27:57
3	U 409.014†	-1030.2	-799.4	-112.61 µg/L	-112.61 ppb	15:27:36
3	V 292.402†	105369.2	105719.7	1336.1 µg/L	1336.1 ppb	15:27:36
3	Zn 213.857†	222304.8	222115.4	6453.2 µg/L	6453.2 ppb	15:27:36

Mean Data: 1202015724|941749|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1943511.8	100.01 %	0.196			0.20%
Sc RADIAL	76561.3	99.7 %	0.80			0.80%
Y 371.029	1250395.6	101.76 %	0.174			0.17%
Ag 328.068†	33445.6	334.06 µg/L	0.355	334.06 ppb	0.355	0.11%
Al 396.153Radial†	138045.2	95909 µg/L	1219.7	95909 ppb	1219.7	1.27%
As 188.979†	508.2	1178.5 µg/L	3.10	1178.5 ppb	3.10	0.26%
B 249.677†	34569.7	1572.9 µg/L	8.30	1572.9 ppb	8.30	0.53%
Ba 233.527†	70633.6	2054.5 µg/L	5.06	2054.5 ppb	5.06	0.25%
Be 313.107†	1209798.2	840.58 µg/L	1.817	840.58 ppb	1.817	0.22%
Ca 317.933Radial†	138652.2	109180 µg/L	1251.5	109180 ppb	1251.5	1.15%
Cd 226.502†	22635.8	643.31 µg/L	1.535	643.31 ppb	1.535	0.24%
Co 228.616†	18167.5	990.59 µg/L	3.681	990.59 ppb	3.681	0.37%
Cr 267.716†	110747.6	2569.6 µg/L	7.60	2569.6 ppb	7.60	0.30%
Cu 324.752†	261608.1	1997.1 µg/L	5.62	1997.1 ppb	5.62	0.28%
Fe 238.204 Radial†	15091.5	216680 µg/L	2381.3	216680 ppb	2381.3	1.10%
K 766.490 Radial†	67964.5	45117 µg/L	498.2	45117 ppb	498.2	1.10%
Mg 279.077 IEC†	3892.6	42201 µg/L	391.1	42201 ppb	391.1	0.93%
Mn 257.610†	1598362.0	5931.9 µg/L	12.61	5931.9 ppb	12.61	0.21%
Mo 202.031†	4474.2	570.20 µg/L	0.747	570.20 ppb	0.747	0.13%
Na 589.592 Radial†	38235.5	10980 µg/L	115.1	10980 ppb	115.1	1.05%

Ni 231.604†	23204.1	1463.6 µg/L	5.81	1463.6 ppb	5.81	0.40%
P 214.914†	4442.1	10295 µg/L	22.2	10295 ppb	22.2	0.22%
Pb 220.353†	3337.2	968.62 µg/L	3.590	968.62 ppb	3.590	0.37%
S 181.975 Axial†	732.1	4196.3 µg/L	2.57	4196.3 ppb	2.57	0.06%
Sb 206.836†	1722.0	1879.0 µg/L	1.39	1879.0 ppb	1.39	0.07%
Se 196.026†	1579.1	3333.8 µg/L	18.46	3333.8 ppb	18.46	0.55%
SiO2†	130882.5	27626 µg/L	85.5	27626 ppb	85.5	0.31%
Si 251.611†	153145.6	12845 µg/L	25.5	12845 ppb	25.5	0.20%
Sn 189.927†	1832.0	1121.3 µg/L	4.02	1121.3 ppb	4.02	0.36%
Sr 421.552†	383211.7	2434.9 µg/L	29.22	2434.9 ppb	29.22	1.20%
Ti 334.940†	2427240.2	6051.9 µg/L	13.08	6051.9 ppb	13.08	0.22%
Tl 190.801†	764.0	1362.4 µg/L	6.51	1362.4 ppb	6.51	0.48%
U 409.014†	-747.0	-108.06 µg/L	4.120	-108.06 ppb	4.120	3.81%
V 292.402†	105412.0	1332.4 µg/L	3.61	1332.4 ppb	3.61	0.27%
Zn 213.857†	221346.4	6430.7 µg/L	21.05	6430.7 ppb	21.05	0.33%

Sequence No.: 16

Sample ID: 244604001|941749|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 317

Date Collected: 1/27/2010 15:28:07

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 244604001|941749|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	77323.8	77323.8	101 %		15:28:39
1	Al 396.153Radial†	60375.6	60010.0	41698 µg/L	41698 ppb	15:28:39
1	Ca 317.933Radial†	12140.2	11809.4	9299.0 µg/L	9299.0 ppb	15:29:00
1	Fe 238.204 Radial†	5916.6	5862.1	84159 µg/L	84159 ppb	15:29:00
1	K 766.490 Radial†	9063.8	8592.7	5704.1 µg/L	5704.1 ppb	15:28:39
1	Mg 279.077 IEC†	724.1	711.0	7659.0 µg/L	7659.0 ppb	15:29:00
1	Na 589.592 Radial†	3422.9	2855.7	820.04 µg/L	820.04 ppb	15:28:39
1	Sr 421.552†	14083.1	13433.6	85.356 µg/L	85.356 ppb	15:28:39
1	Sc 361.383	1955278.1	1955278.1	100.61 %		15:30:04
1	Y 371.029	1290252.4	1290252.4	105.00 %		15:30:04
1	Ag 328.068†	-825.8	-765.7	-1.2959 µg/L	-1.2959 ppb	15:30:10
1	As 188.979†	10.6	10.0	27.441 µg/L	27.441 ppb	15:30:30
1	B 249.677†	1254.0	1131.2	11.311 µg/L	11.311 ppb	15:30:10
1	Ba 233.527†	15301.7	15223.2	442.43 µg/L	442.43 ppb	15:30:10
1	Be 313.107†	12517.3	8601.8	5.4735 µg/L	5.4735 ppb	15:30:10
1	Cd 226.502†	208.4	342.6	0.6556 µg/L	0.6556 ppb	15:30:10
1	Co 228.616†	319.5	362.6	17.176 µg/L	17.176 ppb	15:30:30
1	Cr 267.716†	5158.0	5209.4	120.88 µg/L	120.88 ppb	15:30:10
1	Cu 324.752†	7159.5	3447.7	37.621 µg/L	37.621 ppb	15:30:10
1	Mn 257.610†	682912.4	678951.1	2519.1 µg/L	2519.1 ppb	15:30:04
1	Mo 202.031†	85.9	68.1	11.756 µg/L	11.756 ppb	15:30:30
1	Ni 231.604†	1607.9	1262.7	80.628 µg/L	80.628 ppb	15:30:30
1	P 214.914†	372.9	168.1	343.09 µg/L	343.09 ppb	15:30:30
1	Pb 220.353†	288.6	230.9	66.486 µg/L	66.486 ppb	15:30:30
1	S 181.975 Axial†	77.0	51.0	292.52 µg/L	292.52 ppb	15:30:30
1	Sb 206.836†	17.8	-4.7	-7.0885 µg/L	-7.0885 ppb	15:30:30
1	Se 196.026†	-183.2	-194.5	14.087 µg/L	14.087 ppb	15:30:30
1	SiO2†	157489.2	154253.2	32559 µg/L	32559 ppb	15:30:04
1	Si 251.611†	181081.5	179676.4	15071 µg/L	15071 ppb	15:30:04
1	Sn 189.927†	-23.4	-46.7	-15.989 µg/L	-15.989 ppb	15:30:30
1	Ti 334.940†	550842.1	546720.4	1363.0 µg/L	1363.0 ppb	15:30:04
1	Tl 190.801†	-32.5	-9.3	1.2992 µg/L	1.2992 ppb	15:30:30
1	U 409.014†	-1070.9	-831.4	-91.606 µg/L	-91.606 ppb	15:30:04
1	V 292.402†	6491.7	6574.3	86.473 µg/L	86.473 ppb	15:30:10
1	Zn 213.857†	8818.4	8093.5	231.12 µg/L	231.12 ppb	15:30:10
2	Sc RADIAL	76555.3	76555.3	99.7 %		15:29:05
2	Al 396.153Radial†	60203.7	60439.5	41996 µg/L	41996 ppb	15:29:05
2	Ca 317.933Radial†	12254.1	12044.7	9484.3 µg/L	9484.3 ppb	15:29:26
2	Fe 238.204 Radial†	5970.7	5975.4	85786 µg/L	85786 ppb	15:29:26
2	K 766.490 Radial†	9143.2	8762.7	5817.0 µg/L	5817.0 ppb	15:29:05
2	Mg 279.077 IEC†	734.0	728.2	7845.0 µg/L	7845.0 ppb	15:29:26
2	Na 589.592 Radial†	3434.6	2901.5	833.22 µg/L	833.22 ppb	15:29:05
2	Sr 421.552†	14036.0	13526.8	85.948 µg/L	85.948 ppb	15:29:05
2	Sc 361.383	1939610.0	1939610.0	99.805 %		15:30:38
2	Y 371.029	1279214.8	1279214.8	104.10 %		15:30:38
2	Ag 328.068†	-891.0	-837.7	-1.8603 µg/L	-1.8603 ppb	15:30:44
2	As 188.979†	10.2	9.7	26.768 µg/L	26.768 ppb	15:31:04
2	B 249.677†	1228.9	1116.1	9.7283 µg/L	9.7283 ppb	15:30:44
2	Ba 233.527†	15258.9	15303.2	444.75 µg/L	444.75 ppb	15:30:44
2	Be 313.107†	12429.1	8614.0	5.4812 µg/L	5.4812 ppb	15:30:44
2	Cd 226.502†	204.7	340.6	0.4121 µg/L	0.4121 ppb	15:30:44
2	Co 228.616†	306.5	352.1	16.593 µg/L	16.593 ppb	15:31:04
2	Cr 267.716†	5147.6	5240.5	121.60 µg/L	121.60 ppb	15:30:44
2	Cu 324.752†	7150.9	3496.7	38.215 µg/L	38.215 ppb	15:30:44
2	Mn 257.610†	677567.8	679079.1	2519.8 µg/L	2519.8 ppb	15:30:38
2	Mo 202.031†	94.2	77.1	12.949 µg/L	12.949 ppb	15:31:04
2	Ni 231.604†	1599.3	1267.0	80.918 µg/L	80.918 ppb	15:31:04
2	P 214.914†	379.1	177.3	363.79 µg/L	363.79 ppb	15:31:04
2	Pb 220.353†	280.6	225.2	64.782 µg/L	64.782 ppb	15:31:04

2	S 181.975 Axial†	75.6	50.2	287.67 µg/L	287.67 ppb	15:31:04
2	Sb 206.836†	30.4	8.0	7.0436 µg/L	7.0436 ppb	15:31:04
2	Se 196.026†	-192.8	-205.6	2.8169 µg/L	2.8169 ppb	15:31:04
2	SiO2†	156554.9	154581.5	32628 µg/L	32628 ppb	15:30:38
2	Si 251.611†	179724.3	179770.4	15079 µg/L	15079 ppb	15:30:38
2	Sn 189.927†	-17.9	-41.4	-12.643 µg/L	-12.643 ppb	15:31:04
2	Ti 334.940†	547188.0	547481.8	1364.9 µg/L	1364.9 ppb	15:30:38
2	Tl 190.801†	-32.1	-9.1	1.4902 µg/L	1.4902 ppb	15:31:04
2	U 409.014†	-963.4	-732.3	-82.386 µg/L	-82.386 ppb	15:30:38
2	V 292.402†	6490.3	6625.0	87.210 µg/L	87.210 ppb	15:30:44
2	Zn 213.857†	8793.4	8139.3	232.37 µg/L	232.37 ppb	15:30:44
3	Sc RADIAL	76035.8	76035.8	99.0 %		15:29:31
3	Al 396.153Radial†	59803.4	60447.9	42002 µg/L	42002 ppb	15:29:31
3	Ca 317.933Radial†	12188.1	12062.1	9498.0 µg/L	9498.0 ppb	15:29:51
3	Fe 238.204 Radial†	5949.2	5994.7	86062 µg/L	86062 ppb	15:29:51
3	K 766.490 Radial†	9050.9	8732.3	5796.8 µg/L	5796.8 ppb	15:29:31
3	Mg 279.077 IEC†	725.7	724.9	7808.2 µg/L	7808.2 ppb	15:29:51
3	Na 589.592 Radial†	3421.3	2911.6	836.11 µg/L	836.11 ppb	15:29:31
3	Sr 421.552†	13865.3	13450.6	85.464 µg/L	85.464 ppb	15:29:31
3	Sc 361.383	1939505.8	1939505.8	99.800 %		15:31:12
3	Y 371.029	1278718.7	1278718.7	104.06 %		15:31:12
3	Ag 328.068†	-779.0	-725.5	-0.8094 µg/L	-0.8094 ppb	15:31:18
3	As 188.979†	6.3	5.8	17.824 µg/L	17.824 ppb	15:31:38
3	B 249.677†	1226.0	1113.3	9.4435 µg/L	9.4435 ppb	15:31:18
3	Ba 233.527†	14979.5	15024.1	436.64 µg/L	436.64 ppb	15:31:18
3	Be 313.107†	12277.7	8462.9	5.3827 µg/L	5.3827 ppb	15:31:18
3	Cd 226.502†	196.3	332.1	0.1273 µg/L	0.1273 ppb	15:31:18
3	Co 228.616†	292.0	337.6	15.827 µg/L	15.827 ppb	15:31:38
3	Cr 267.716†	5045.1	5138.0	119.22 µg/L	119.22 ppb	15:31:18
3	Cu 324.752†	7050.0	3396.0	37.496 µg/L	37.496 ppb	15:31:18
3	Mn 257.610†	669989.8	671522.4	2491.9 µg/L	2491.9 ppb	15:31:12
3	Mo 202.031†	84.4	67.4	11.735 µg/L	11.735 ppb	15:31:38
3	Ni 231.604†	1529.1	1196.8	76.501 µg/L	76.501 ppb	15:31:38
3	P 214.914†	367.9	166.1	336.95 µg/L	336.95 ppb	15:31:38
3	Pb 220.353†	270.6	215.2	61.839 µg/L	61.839 ppb	15:31:38
3	S 181.975 Axial†	78.5	53.1	304.50 µg/L	304.50 ppb	15:31:38
3	Sb 206.836†	21.7	-0.7	-2.6007 µg/L	-2.6007 ppb	15:31:38
3	Se 196.026†	-180.4	-193.2	23.386 µg/L	23.386 ppb	15:31:38
3	SiO2†	155319.4	153352.0	32368 µg/L	32368 ppb	15:31:12
3	Si 251.611†	178406.1	178459.2	14969 µg/L	14969 ppb	15:31:12
3	Sn 189.927†	-9.8	-33.3	-7.8833 µg/L	-7.8833 ppb	15:31:38
3	Ti 334.940†	540082.7	540391.7	1347.3 µg/L	1347.3 ppb	15:31:12
3	Tl 190.801†	-31.2	-8.2	2.7144 µg/L	2.7144 ppb	15:31:38
3	U 409.014†	-927.3	-696.2	-78.982 µg/L	-78.982 ppb	15:31:12
3	V 292.402†	6344.9	6479.8	85.407 µg/L	85.407 ppb	15:31:18
3	Zn 213.857†	8612.0	7957.9	227.09 µg/L	227.09 ppb	15:31:18

Mean Data: 244604001|941749|1

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1944798.0	100.07 %		0.467			0.47%
Sc RADIAL	76638.3	99.8 %		0.84			0.85%
Y 371.029	1282728.7	104.39 %		0.531			0.51%
Ag 328.068†	-776.3	-1.3219 µg/L		0.52594	-1.3219 ppb	0.52594	39.79%
Al 396.153Radial†	60299.1	41899 µg/L		174.0	41899 ppb	174.0	0.42%
As 188.979†	8.5	24.011 µg/L		5.3688	24.011 ppb	5.3688	22.36%
B 249.677†	1120.2	10.161 µg/L		1.0060	10.161 ppb	1.0060	9.90%
Ba 233.527†	15183.5	441.27 µg/L		4.178	441.27 ppb	4.178	0.95%
Be 313.107†	8559.6	5.4458 µg/L		0.05476	5.4458 ppb	0.05476	1.01%
Ca 317.933Radial†	11972.1	9427.1 µg/L		111.15	9427.1 ppb	111.15	1.18%
Cd 226.502†	338.5	0.3983 µg/L		0.26443	0.3983 ppb	0.26443	66.39%
Co 228.616†	350.8	16.532 µg/L		0.6763	16.532 ppb	0.6763	4.09%
Cr 267.716†	5196.0	120.57 µg/L		1.219	120.57 ppb	1.219	1.01%
Cu 324.752†	3446.8	37.778 µg/L		0.3840	37.778 ppb	0.3840	1.02%
Fe 238.204 Radial†	5944.1	85336 µg/L		1028.3	85336 ppb	1028.3	1.20%
K 766.490 Radial†	8695.9	5772.7 µg/L		60.20	5772.7 ppb	60.20	1.04%
Mg 279.077 IEC†	721.4	7770.7 µg/L		98.51	7770.7 ppb	98.51	1.27%
Mn 257.610†	676517.5	2510.3 µg/L		15.90	2510.3 ppb	15.90	0.63%
Mo 202.031†	70.9	12.147 µg/L		0.6949	12.147 ppb	0.6949	5.72%
Na 589.592 Radial†	2889.6	829.79 µg/L		8.565	829.79 ppb	8.565	1.03%

Ni 231.604†	1242.2	79.349 µg/L	2.4710	79.349 ppb	2.4710	3.11%
P 214.914†	170.5	347.95 µg/L	14.065	347.95 ppb	14.065	4.04%
Pb 220.353†	223.7	64.369 µg/L	2.3511	64.369 ppb	2.3511	3.65%
S 181.975 Axial†	51.4	294.90 µg/L	8.666	294.90 ppb	8.666	2.94%
Sb 206.836†	0.9	-0.8819 µg/L	7.22117	-0.8819 ppb	7.22117	818.84%
Se 196.026†	-197.8	13.430 µg/L	10.3002	13.430 ppb	10.3002	76.70%
SiO2†	154062.2	32518 µg/L	134.4	32518 ppb	134.4	0.41%
Si 251.611†	179302.0	15039 µg/L	61.3	15039 ppb	61.3	0.41%
Sn 189.927†	-40.4	-12.172 µg/L	4.0734	-12.172 ppb	4.0734	33.47%
Sr 421.552†	13470.3	85.589 µg/L	0.3154	85.589 ppb	0.3154	0.37%
Ti 334.940†	544864.6	1358.4 µg/L	9.71	1358.4 ppb	9.71	0.71%
Tl 190.801†	-8.9	1.8346 µg/L	0.76789	1.8346 ppb	0.76789	41.86%
U 409.014†	-753.3	-84.325 µg/L	6.5317	-84.325 ppb	6.5317	7.75%
V 292.402†	6559.7	86.363 µg/L	0.9064	86.363 ppb	0.9064	1.05%
Zn 213.857†	8063.5	230.19 µg/L	2.758	230.19 ppb	2.758	1.20%

Sequence No.: 17

Sample ID: 1202015720|941749|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 318

Date Collected: 1/27/2010 15:31:47

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 1202015720|941749|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	77350.8	77350.8	101 %		15:32:20
1	Al 396.153Radial†	89991.2	89401.3	62120 µg/L	62120 ppb	15:32:20
1	Ca 317.933Radial†	17633.8	17261.1	13592 µg/L	13592 ppb	15:32:20
1	Fe 238.204 Radial†	7160.5	7095.4	101870 µg/L	101870 ppb	15:32:40
1	K 766.490 Radial†	13102.8	12600.8	8364.9 µg/L	8364.9 ppb	15:32:20
1	Mg 279.077 IEC†	1051.9	1036.4	11186 µg/L	11186 ppb	15:32:40
1	Na 589.592 Radial†	3772.9	3202.1	919.51 µg/L	919.51 ppb	15:32:20
1	Sr 421.552†	19652.2	18959.6	120.47 µg/L	120.47 ppb	15:32:20
1	Sc 361.383	1940340.8	1940340.8	99.843 %		15:33:45
1	Y 371.029	1284162.5	1284162.5	104.51 %		15:33:45
1	Ag 328.068†	-1012.6	-959.1	-1.7674 µg/L	-1.7674 ppb	15:33:51
1	As 188.979†	12.2	11.7	32.128 µg/L	32.128 ppb	15:34:11
1	B 249.677†	1525.0	1412.2	15.755 µg/L	15.755 ppb	15:33:51
1	Ba 233.527†	17999.7	18042.5	524.40 µg/L	524.40 ppb	15:33:51
1	Be 313.107†	15581.3	11766.4	7.5749 µg/L	7.5749 ppb	15:33:51
1	Cd 226.502†	271.5	407.4	0.5673 µg/L	0.5673 ppb	15:34:11
1	Co 228.616†	376.1	421.7	19.868 µg/L	19.868 ppb	15:34:11
1	Cr 267.716†	5471.4	5562.8	129.10 µg/L	129.10 ppb	15:33:51
1	Cu 324.752†	8563.7	4909.0	51.069 µg/L	51.069 ppb	15:33:51
1	Mn 257.610†	652927.6	654144.4	2429.7 µg/L	2429.7 ppb	15:33:45
1	Mo 202.031†	69.9	52.8	10.501 µg/L	10.501 ppb	15:34:11
1	Ni 231.604†	1699.0	1366.2	87.376 µg/L	87.376 ppb	15:34:11
1	P 214.914†	418.9	217.1	450.67 µg/L	450.67 ppb	15:34:11
1	Pb 220.353†	340.7	285.3	82.795 µg/L	82.795 ppb	15:34:11
1	S 181.975 Axial†	106.0	80.6	462.08 µg/L	462.08 ppb	15:34:11
1	Sb 206.836†	35.0	12.7	11.795 µg/L	11.795 ppb	15:34:11
1	Se 196.026†	-230.8	-243.6	3.9605 µg/L	3.9605 ppb	15:34:11
1	SiO2†	274611.7	272765.0	57573 µg/L	57573 ppb	15:33:45
1	Si 251.611†	316920.0	317114.2	26599 µg/L	26599 ppb	15:33:45
1	Sn 189.927†	-26.3	-49.8	-14.504 µg/L	-14.504 ppb	15:34:11
1	Ti 334.940†	655256.5	655513.9	1634.2 µg/L	1634.2 ppb	15:33:45
1	Tl 190.801†	-35.4	-12.4	-3.4192 µg/L	-3.4192 ppb	15:34:11
1	U 409.014†	-1079.5	-848.2	-95.929 µg/L	-95.929 ppb	15:33:45
1	V 292.402†	9069.1	9205.5	120.13 µg/L	120.13 ppb	15:33:51
1	Zn 213.857†	9770.1	9114.1	259.79 µg/L	259.79 ppb	15:33:51
2	Sc RADIAL	78337.8	78337.8	102 %		15:32:46
2	Al 396.153Radial†	90851.1	89118.4	61924 µg/L	61924 ppb	15:32:46
2	Ca 317.933Radial†	17839.3	17241.9	13577 µg/L	13577 ppb	15:32:46
2	Fe 238.204 Radial†	7165.1	7010.4	100640 µg/L	100640 ppb	15:33:06
2	K 766.490 Radial†	13333.7	12663.4	8406.4 µg/L	8406.4 ppb	15:32:46
2	Mg 279.077 IEC†	1049.6	1021.0	11020 µg/L	11020 ppb	15:33:06
2	Na 589.592 Radial†	3861.3	3241.5	930.85 µg/L	930.85 ppb	15:32:46
2	Sr 421.552†	19854.6	18912.1	120.17 µg/L	120.17 ppb	15:32:46
2	Sc 361.383	1960239.6	1960239.6	100.87 %		15:34:19
2	Y 371.029	1297396.8	1297396.8	105.58 %		15:34:19
2	Ag 328.068†	-1006.0	-942.3	-1.6990 µg/L	-1.6990 ppb	15:34:24
2	As 188.979†	7.1	6.5	20.061 µg/L	20.061 ppb	15:34:45
2	B 249.677†	1489.4	1361.4	13.919 µg/L	13.919 ppb	15:34:24
2	Ba 233.527†	17928.1	17788.5	517.02 µg/L	517.02 ppb	15:34:24
2	Be 313.107†	15497.8	11525.2	7.4081 µg/L	7.4081 ppb	15:34:24
2	Cd 226.502†	263.8	397.0	0.3995 µg/L	0.3995 ppb	15:34:45
2	Co 228.616†	382.6	424.3	20.021 µg/L	20.021 ppb	15:34:45
2	Cr 267.716†	5447.7	5483.6	127.26 µg/L	127.26 ppb	15:34:24
2	Cu 324.752†	8554.5	4812.8	50.176 µg/L	50.176 ppb	15:34:24
2	Mn 257.610†	658877.6	653404.9	2426.8 µg/L	2426.8 ppb	15:34:19
2	Mo 202.031†	68.7	51.0	10.226 µg/L	10.226 ppb	15:34:45
2	Ni 231.604†	1704.8	1354.8	86.638 µg/L	86.638 ppb	15:34:45
2	P 214.914†	424.3	218.2	454.23 µg/L	454.23 ppb	15:34:45
2	Pb 220.353†	353.3	294.3	85.448 µg/L	85.448 ppb	15:34:45

2	S 181.975 Axial†	105.6	79.2	454.15 µg/L	454.15 ppb	15:34:45
2	Sb 206.836†	20.6	-2.0	-4.4291 µg/L	-4.4291 ppb	15:34:45
2	Se 196.026†	-227.4	-237.9	8.3597 µg/L	8.3597 ppb	15:34:45
2	SiO2†	276783.0	272125.6	57438 µg/L	57438 ppb	15:34:19
2	Si 251.611†	319420.2	316370.7	26536 µg/L	26536 ppb	15:34:19
2	Sn 189.927†	-33.8	-56.9	-18.847 µg/L	-18.847 ppb	15:34:45
2	Ti 334.940†	660643.7	654192.7	1630.9 µg/L	1630.9 ppb	15:34:19
2	Tl 190.801†	-25.9	-2.6	13.449 µg/L	13.449 ppb	15:34:45
2	U 409.014†	-1033.0	-791.1	-90.313 µg/L	-90.313 ppb	15:34:19
2	V 292.402†	9025.9	9070.4	118.39 µg/L	118.39 ppb	15:34:24
2	Zn 213.857†	9795.3	9039.8	257.69 µg/L	257.69 ppb	15:34:24
3	Sc RADIAL	77295.1	77295.1	101 %		15:33:12
3	Al 396.153Radial†	90160.7	89634.1	62282 µg/L	62282 ppb	15:33:12
3	Ca 317.933Radial†	17589.5	17229.7	13567 µg/L	13567 ppb	15:33:12
3	Fe 238.204 Radial†	7167.4	7107.5	102040 µg/L	102040 ppb	15:33:32
3	K 766.490 Radial†	13107.8	12615.2	8374.4 µg/L	8374.4 ppb	15:33:12
3	Mg 279.077 IEC†	1051.8	1037.0	11193 µg/L	11193 ppb	15:33:32
3	Na 589.592 Radial†	3771.3	3203.2	919.84 µg/L	919.84 ppb	15:33:12
3	Sr 421.552†	19607.9	18929.6	120.28 µg/L	120.28 ppb	15:33:12
3	Sc 361.383	1940145.8	1940145.8	99.833 %		15:34:53
3	Y 371.029	1283302.8	1283302.8	104.44 %		15:34:53
3	Ag 328.068†	-1060.8	-1007.5	-2.2284 µg/L	-2.2284 ppb	15:34:58
3	As 188.979†	9.7	9.2	26.389 µg/L	26.389 ppb	15:35:19
3	B 249.677†	1442.7	1329.9	11.658 µg/L	11.658 ppb	15:34:58
3	Ba 233.527†	17602.2	17646.1	512.88 µg/L	512.88 ppb	15:34:58
3	Be 313.107†	15197.5	11383.5	7.3146 µg/L	7.3146 ppb	15:34:58
3	Cd 226.502†	237.6	373.5	-0.4539 µg/L	-0.4539 ppb	15:35:19
3	Co 228.616†	353.9	399.5	18.678 µg/L	18.678 ppb	15:35:19
3	Cr 267.716†	5284.9	5376.6	124.78 µg/L	124.78 ppb	15:34:58
3	Cu 324.752†	8429.3	4775.2	50.087 µg/L	50.087 ppb	15:34:58
3	Mn 257.610†	647983.2	649257.5	2411.6 µg/L	2411.6 ppb	15:34:53
3	Mo 202.031†	74.8	57.7	11.127 µg/L	11.127 ppb	15:35:19
3	Ni 231.604†	1629.0	1296.3	82.976 µg/L	82.976 ppb	15:35:19
3	P 214.914†	417.3	215.5	446.71 µg/L	446.71 ppb	15:35:19
3	Pb 220.353†	324.4	269.0	78.025 µg/L	78.025 ppb	15:35:19
3	S 181.975 Axial†	99.5	74.1	424.81 µg/L	424.81 ppb	15:35:19
3	Sb 206.836†	25.9	3.5	1.6824 µg/L	1.6824 ppb	15:35:19
3	Se 196.026†	-221.9	-234.7	18.653 µg/L	18.653 ppb	15:35:19
3	SiO2†	273524.5	271703.6	57349 µg/L	57349 ppb	15:34:53
3	Si 251.611†	315482.1	315705.7	26480 µg/L	26480 ppb	15:34:53
3	Sn 189.927†	-26.0	-49.4	-14.303 µg/L	-14.303 ppb	15:35:19
3	Ti 334.940†	648450.5	648762.4	1617.3 µg/L	1617.3 ppb	15:34:53
3	Tl 190.801†	-29.7	-6.7	6.2451 µg/L	6.2451 ppb	15:35:19
3	U 409.014†	-1011.6	-780.3	-89.473 µg/L	-89.473 ppb	15:34:53
3	V 292.402†	8815.9	8952.8	117.00 µg/L	117.00 ppb	15:34:58
3	Zn 213.857†	9561.9	8906.6	253.75 µg/L	253.75 ppb	15:34:58

Mean Data: 1202015720|941749|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1946908.7	100.18 %	0.594			0.59%
Sc RADIAL	77661.2	101 %	0.8			0.76%
Y 371.029	1288287.4	104.84 %	0.643			0.61%
Ag 328.068†	-969.6	-1.8983 µg/L	0.28796	-1.8983 ppb	0.28796	15.17%
Al 396.153Radial†	89384.6	62109 µg/L	179.4	62109 ppb	179.4	0.29%
As 188.979†	9.1	26.193 µg/L	6.0358	26.193 ppb	6.0358	23.04%
B 249.677†	1367.8	13.777 µg/L	2.0524	13.777 ppb	2.0524	14.90%
Ba 233.527†	17825.7	518.10 µg/L	5.836	518.10 ppb	5.836	1.13%
Be 313.107†	11558.3	7.4325 µg/L	0.13187	7.4325 ppb	0.13187	1.77%
Ca 317.933Radial†	17244.2	13578 µg/L	12.5	13578 ppb	12.5	0.09%
Cd 226.502†	392.6	0.1709 µg/L	0.54765	0.1709 ppb	0.54765	320.36%
Co 228.616†	415.2	19.522 µg/L	0.7350	19.522 ppb	0.7350	3.76%
Cr 267.716†	5474.3	127.05 µg/L	2.169	127.05 ppb	2.169	1.71%
Cu 324.752†	4832.3	50.444 µg/L	0.5430	50.444 ppb	0.5430	1.08%
Fe 238.204 Radial†	7071.1	101520 µg/L	759.8	101520 ppb	759.8	0.75%
K 766.490 Radial†	12626.4	8381.9 µg/L	21.75	8381.9 ppb	21.75	0.26%
Mg 279.077 IEC†	1031.5	11133 µg/L	98.1	11133 ppb	98.1	0.88%
Mn 257.610†	652268.9	2422.7 µg/L	9.68	2422.7 ppb	9.68	0.40%
Mo 202.031†	53.8	10.618 µg/L	0.4618	10.618 ppb	0.4618	4.35%
Na 589.592 Radial†	3215.6	923.40 µg/L	6.451	923.40 ppb	6.451	0.70%

Ni 231.604†	1339.1	85.664 µg/L	2.3565	85.664 ppb	2.3565	2.75%
P 214.914†	216.9	450.54 µg/L	3.760	450.54 ppb	3.760	0.83%
Pb 220.353†	282.9	82.089 µg/L	3.7614	82.089 ppb	3.7614	4.58%
S 181.975 Axial†	78.0	447.01 µg/L	19.631	447.01 ppb	19.631	4.39%
Sb 206.836†	4.7	3.0161 µg/L	8.19387	3.0161 ppb	8.19387	271.67%
Se 196.026†	-238.7	10.324 µg/L	7.5408	10.324 ppb	7.5408	73.04%
SiO2†	272198.1	57454 µg/L	112.8	57454 ppb	112.8	0.20%
Si 251.611†	316396.9	26538 µg/L	59.1	26538 ppb	59.1	0.22%
Sn 189.927†	-52.0	-15.885 µg/L	2.5670	-15.885 ppb	2.5670	16.16%
Sr 421.552†	18933.8	120.30 µg/L	0.152	120.30 ppb	0.152	0.13%
Ti 334.940†	652823.0	1627.5 µg/L	8.93	1627.5 ppb	8.93	0.55%
Tl 190.801†	-7.3	5.4251 µg/L	8.46409	5.4251 ppb	8.46409	156.02%
U 409.014†	-806.5	-91.905 µg/L	3.5100	-91.905 ppb	3.5100	3.82%
V 292.402†	9076.2	118.51 µg/L	1.569	118.51 ppb	1.569	1.32%
Zn 213.857†	9020.2	257.08 µg/L	3.066	257.08 ppb	3.066	1.19%

Sequence No.: 18
 Sample ID: 1202015722|941749|1
 Analyst: HSC
 Initial Sample Wt:
 Dilution:

Autosampler Location: 319
 Date Collected: 1/27/2010 15:35:28
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:

Replicate Data: 1202015722|941749|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	77581.5	77581.5	101 %		15:36:01
1	Al 396.153Radial†	193935.5	192059.1	133440 µg/L	133440 ppb	15:36:01
1	Ca 317.933Radial†	24763.5	24268.7	19110 µg/L	19110 ppb	15:36:21
1	Fe 238.204 Radial†	8902.4	8799.1	126340 µg/L	126340 ppb	15:36:21
1	K 766.490 Radial†	27799.4	27114.5	18000 µg/L	18000 ppb	15:36:01
1	Mg 279.077 IEC†	2037.8	2009.5	21773 µg/L	21773 ppb	15:36:21
1	Na 589.592 Radial†	21834.8	21075.4	6052.1 µg/L	6052.1 ppb	15:36:01
1	Sr 421.552†	103569.6	101994.9	648.07 µg/L	648.07 ppb	15:36:01
1	Sc 361.383	1954557.5	1954557.5	100.57 %		15:37:27
1	Y 371.029	1296545.1	1296545.1	105.51 %		15:37:27
1	Ag 328.068†	56525.9	56258.2	536.72 µg/L	536.72 ppb	15:37:32
1	As 188.979†	250.7	248.7	579.19 µg/L	579.19 ppb	15:37:53
1	B 249.677†	12280.2	12094.9	523.58 µg/L	523.58 ppb	15:37:32
1	Ba 233.527†	37053.2	36856.1	1072.0 µg/L	1072.0 ppb	15:37:32
1	Be 313.107†	795072.3	786691.7	547.07 µg/L	547.07 ppb	15:37:27
1	Cd 226.502†	18144.6	18176.5	521.41 µg/L	521.41 ppb	15:37:32
1	Co 228.616†	9908.0	9896.4	541.03 µg/L	541.03 ppb	15:37:32
1	Cr 267.716†	29286.2	29201.8	677.73 µg/L	677.73 ppb	15:37:32
1	Cu 324.752†	83479.7	79334.7	614.07 µg/L	614.07 ppb	15:37:32
1	Mn 257.610†	799830.9	795452.0	2954.5 µg/L	2954.5 ppb	15:37:27
1	Mo 202.031†	4065.1	4024.7	510.30 µg/L	510.30 ppb	15:37:53
1	Ni 231.604†	10337.7	9943.2	627.47 µg/L	627.47 ppb	15:37:32
1	P 214.914†	724.8	518.1	1121.1 µg/L	1121.1 ppb	15:37:53
1	Pb 220.353†	2198.6	2130.1	623.72 µg/L	623.72 ppb	15:37:53
1	S 181.975 Axial†	1064.4	1032.8	5920.2 µg/L	5920.2 ppb	15:37:53
1	Sb 206.836†	446.2	421.3	465.62 µg/L	465.62 ppb	15:37:53
1	Se 196.026†	58.3	45.5	551.43 µg/L	551.43 ppb	15:37:53
1	SiO2†	198381.7	194969.9	41153 µg/L	41153 ppb	15:37:27
1	Si 251.611†	229002.5	227390.0	19073 µg/L	19073 ppb	15:37:27
1	Sn 189.927†	920.8	892.1	540.76 µg/L	540.76 ppb	15:37:53
1	Ti 334.940†	1089453.9	1082457.6	2698.2 µg/L	2698.2 ppb	15:37:27
1	Tl 190.801†	270.3	291.8	530.07 µg/L	530.07 ppb	15:37:53
1	U 409.014†	4532.4	4739.5	433.56 µg/L	433.56 ppb	15:37:27
1	V 292.402†	53156.5	52975.1	671.36 µg/L	671.36 ppb	15:37:32
1	Zn 213.857†	29437.4	28597.9	822.76 µg/L	822.76 ppb	15:37:32
2	Sc RADIAL	78192.7	78192.7	102 %		15:36:27
2	Al 396.153Radial†	195945.1	192532.4	133770 µg/L	133770 ppb	15:36:27
2	Ca 317.933Radial†	24752.5	24066.2	18950 µg/L	18950 ppb	15:36:47
2	Fe 238.204 Radial†	8919.9	8747.4	125590 µg/L	125590 ppb	15:36:47
2	K 766.490 Radial†	28031.9	27127.6	18008 µg/L	18008 ppb	15:36:27
2	Mg 279.077 IEC†	2028.6	1984.7	21504 µg/L	21504 ppb	15:36:47
2	Na 589.592 Radial†	22087.1	21154.3	6074.7 µg/L	6074.7 ppb	15:36:27
2	Sr 421.552†	104582.1	102188.0	649.29 µg/L	649.29 ppb	15:36:27
2	Sc 361.383	1951825.5	1951825.5	100.43 %		15:38:01
2	Y 371.029	1295059.5	1295059.5	105.39 %		15:38:01
2	Ag 328.068†	56530.8	56341.7	537.46 µg/L	537.46 ppb	15:38:06
2	As 188.979†	249.6	248.0	577.65 µg/L	577.65 ppb	15:38:27
2	B 249.677†	12284.4	12116.2	525.01 µg/L	525.01 ppb	15:38:06
2	Ba 233.527†	37092.1	36946.4	1074.6 µg/L	1074.6 ppb	15:38:06
2	Be 313.107†	793755.9	786487.5	546.93 µg/L	546.93 ppb	15:38:01
2	Cd 226.502†	18133.9	18191.1	521.92 µg/L	521.92 ppb	15:38:06
2	Co 228.616†	9875.7	9878.0	540.02 µg/L	540.02 ppb	15:38:06
2	Cr 267.716†	29349.1	29305.1	680.13 µg/L	680.13 ppb	15:38:06
2	Cu 324.752†	83447.3	79418.6	614.59 µg/L	614.59 ppb	15:38:06
2	Mn 257.610†	798730.4	795469.4	2954.5 µg/L	2954.5 ppb	15:38:01
2	Mo 202.031†	4057.8	4023.1	510.08 µg/L	510.08 ppb	15:38:27
2	Ni 231.604†	10325.4	9945.3	627.60 µg/L	627.60 ppb	15:38:06
2	P 214.914†	712.0	506.4	1093.5 µg/L	1093.5 ppb	15:38:27
2	Pb 220.353†	2205.8	2140.4	626.74 µg/L	626.74 ppb	15:38:27

2	S 181.975 Axial†	1064.3	1034.2	5928.4 µg/L	5928.4 ppb	15:38:27
2	Sb 206.836†	440.0	415.7	459.49 µg/L	459.49 ppb	15:38:27
2	Se 196.026†	64.2	51.5	558.11 µg/L	558.11 ppb	15:38:27
2	SiO2†	198358.5	195222.8	41206 µg/L	41206 ppb	15:38:01
2	Si 251.611†	228753.4	227460.7	19079 µg/L	19079 ppb	15:38:01
2	Sn 189.927†	911.1	883.7	535.72 µg/L	535.72 ppb	15:38:27
2	Ti 334.940†	1088008.9	1082535.1	2698.4 µg/L	2698.4 ppb	15:38:01
2	Tl 190.801†	270.3	292.2	530.80 µg/L	530.80 ppb	15:38:27
2	U 409.014†	4596.2	4809.3	440.33 µg/L	440.33 ppb	15:38:01
2	V 292.402†	53283.0	53174.9	673.82 µg/L	673.82 ppb	15:38:06
2	Zn 213.857†	29376.0	28577.8	822.22 µg/L	822.22 ppb	15:38:06
3	Sc RADIAL	78129.5	78129.5	102 %		15:36:53
3	Al 396.153Radial†	195577.8	192326.9	133630 µg/L	133630 ppb	15:36:53
3	Ca 317.933Radial†	24779.9	24112.8	18987 µg/L	18987 ppb	15:37:13
3	Fe 238.204 Radial†	8913.6	8748.3	125610 µg/L	125610 ppb	15:37:13
3	K 766.490 Radial†	28019.1	27137.4	18015 µg/L	18015 ppb	15:36:53
3	Mg 279.077 IEC†	2042.5	1999.9	21670 µg/L	21670 ppb	15:37:13
3	Na 589.592 Radial†	21991.8	21078.2	6052.9 µg/L	6052.9 ppb	15:36:53
3	Sr 421.552†	104224.7	101919.7	647.59 µg/L	647.59 ppb	15:36:53
3	Sc 361.383	1943646.6	1943646.6	100.01 %		15:38:35
3	Y 371.029	1288346.5	1288346.5	104.85 %		15:38:35
3	Ag 328.068†	56164.6	56212.4	536.18 µg/L	536.18 ppb	15:38:41
3	As 188.979†	240.9	240.3	559.85 µg/L	559.85 ppb	15:39:01
3	B 249.677†	12147.2	12030.4	520.80 µg/L	520.80 ppb	15:38:41
3	Ba 233.527†	36532.8	36542.5	1062.8 µg/L	1062.8 ppb	15:38:41
3	Be 313.107†	784692.9	780751.5	542.94 µg/L	542.94 ppb	15:38:35
3	Cd 226.502†	17898.5	18031.6	517.22 µg/L	517.22 ppb	15:38:41
3	Co 228.616†	9676.4	9720.2	531.34 µg/L	531.34 ppb	15:38:41
3	Cr 267.716†	28632.5	28711.6	666.36 µg/L	666.36 ppb	15:38:41
3	Cu 324.752†	82106.2	78427.3	607.14 µg/L	607.14 ppb	15:38:41
3	Mn 257.610†	789984.3	790071.0	2934.5 µg/L	2934.5 ppb	15:38:35
3	Mo 202.031†	3890.3	3872.6	491.18 µg/L	491.18 ppb	15:39:01
3	Ni 231.604†	10174.0	9837.3	620.80 µg/L	620.80 ppb	15:38:41
3	P 214.914†	693.3	490.7	1056.4 µg/L	1056.4 ppb	15:39:01
3	Pb 220.353†	2151.8	2095.6	613.64 µg/L	613.64 ppb	15:39:01
3	S 181.975 Axial†	1045.3	1019.7	5845.1 µg/L	5845.1 ppb	15:39:01
3	Sb 206.836†	420.3	397.8	439.51 µg/L	439.51 ppb	15:39:01
3	Se 196.026†	66.8	54.4	562.60 µg/L	562.60 ppb	15:39:01
3	SiO2†	196197.6	193893.3	40926 µg/L	40926 ppb	15:38:35
3	Si 251.611†	226280.6	225946.6	18952 µg/L	18952 ppb	15:38:35
3	Sn 189.927†	867.9	844.3	512.77 µg/L	512.77 ppb	15:39:01
3	Ti 334.940†	1074466.7	1073553.3	2676.0 µg/L	2676.0 ppb	15:38:35
3	Tl 190.801†	269.5	292.6	531.15 µg/L	531.15 ppb	15:39:01
3	U 409.014†	4518.1	4750.5	434.71 µg/L	434.71 ppb	15:38:35
3	V 292.402†	52122.3	52237.6	661.98 µg/L	661.98 ppb	15:38:41
3	Zn 213.857†	28967.6	28292.5	813.93 µg/L	813.93 ppb	15:38:41

Mean Data: 1202015722|941749|1

Analyte	Mean Corrected	Conc. Units	Calib.	Std.Dev.	Conc. Units	Sample	Std.Dev.	RSD
Sc 361.383	1950009.9	100.34 %		0.292				0.29%
Sc RADIAL	77967.9	101 %		0.4				0.43%
Y 371.029	1293317.0	105.25 %		0.355				0.34%
Ag 328.068†	56270.8	536.79 µg/L		0.644	536.79 ppb		0.644	0.12%
Al 396.153Radial†	192306.1	133610 µg/L		164.9	133610 ppb		164.9	0.12%
As 188.979†	245.7	572.23 µg/L		10.750	572.23 ppb		10.750	1.88%
B 249.677†	12080.5	523.13 µg/L		2.137	523.13 ppb		2.137	0.41%
Ba 233.527†	36781.7	1069.8 µg/L		6.17	1069.8 ppb		6.17	0.58%
Be 313.107†	784643.6	545.65 µg/L		2.345	545.65 ppb		2.345	0.43%
Ca 317.933Radial†	24149.3	19016 µg/L		83.5	19016 ppb		83.5	0.44%
Cd 226.502†	18133.0	520.19 µg/L		2.579	520.19 ppb		2.579	0.50%
Co 228.616†	9831.5	537.46 µg/L		5.329	537.46 ppb		5.329	0.99%
Cr 267.716†	29072.8	674.74 µg/L		7.358	674.74 ppb		7.358	1.09%
Cu 324.752†	79060.2	611.93 µg/L		4.158	611.93 ppb		4.158	0.68%
Fe 238.204 Radial†	8765.0	125840 µg/L		424.8	125840 ppb		424.8	0.34%
K 766.490 Radial†	27126.5	18008 µg/L		7.6	18008 ppb		7.6	0.04%
Mg 279.077 IEC†	1998.0	21649 µg/L		136.0	21649 ppb		136.0	0.63%
Mn 257.610†	793664.2	2947.9 µg/L		11.52	2947.9 ppb		11.52	0.39%
Mo 202.031†	3973.4	503.85 µg/L		10.978	503.85 ppb		10.978	2.18%
Na 589.592 Radial†	21102.7	6059.9 µg/L		12.86	6059.9 ppb		12.86	0.21%

Ni 231.604†	9908.6	625.29 µg/L	3.890	625.29 ppb	3.890	0.62%
P 214.914†	505.1	1090.3 µg/L	32.46	1090.3 ppb	32.46	2.98%
Pb 220.353†	2122.0	621.37 µg/L	6.859	621.37 ppb	6.859	1.10%
S 181.975 Axial†	1028.9	5897.9 µg/L	45.94	5897.9 ppb	45.94	0.78%
Sb 206.836†	411.6	454.87 µg/L	13.653	454.87 ppb	13.653	3.00%
Se 196.026†	50.5	557.38 µg/L	5.624	557.38 ppb	5.624	1.01%
SiO2†	194695.3	41095 µg/L	149.0	41095 ppb	149.0	0.36%
Si 251.611†	226932.5	19034 µg/L	71.7	19034 ppb	71.7	0.38%
Sn 189.927†	873.4	529.75 µg/L	14.917	529.75 ppb	14.917	2.82%
Sr 421.552†	102034.2	648.32 µg/L	0.879	648.32 ppb	0.879	0.14%
Ti 334.940†	1079515.3	2690.9 µg/L	12.88	2690.9 ppb	12.88	0.48%
Tl 190.801†	292.2	530.68 µg/L	0.552	530.68 ppb	0.552	0.10%
U 409.014†	4766.4	436.20 µg/L	3.623	436.20 ppb	3.623	0.83%
V 292.402†	52795.9	669.05 µg/L	6.247	669.05 ppb	6.247	0.93%
Zn 213.857†	28489.4	819.63 µg/L	4.946	819.63 ppb	4.946	0.60%

Sequence No.: 19

Sample ID: 1202015723|941749|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 320

Date Collected: 1/27/2010 15:39:11

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 1202015723|941749|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	78519.0	78519.0	102 %		15:39:44
1	Al 396.153Radial†	211076.5	206536.3	143500 µg/L	143500 ppb	15:39:44
1	Ca 317.933Radial†	28381.3	27515.4	21666 µg/L	21666 ppb	15:40:04
1	Fe 238.204 Radial†	11206.8	10948.4	157190 µg/L	157190 ppb	15:40:04
1	K 766.490 Radial†	30763.9	29686.1	19707 µg/L	19707 ppb	15:39:44
1	Mg 279.077 IEC†	2269.7	2212.2	23950 µg/L	23950 ppb	15:40:04
1	Na 589.592 Radial†	22217.8	21192.0	6085.6 µg/L	6085.6 ppb	15:39:44
1	Sr 421.552†	105872.0	103023.0	654.60 µg/L	654.60 ppb	15:39:44
1	Sc 361.383	1955716.1	1955716.1	100.63 %		15:41:09
1	Y 371.029	1328085.4	1328085.4	108.08 %		15:41:09
1	Ag 328.068†	55350.0	55056.4	527.64 µg/L	527.64 ppb	15:41:15
1	As 188.979†	251.5	249.4	582.52 µg/L	582.52 ppb	15:41:35
1	B 249.677†	12544.1	12349.9	519.95 µg/L	519.95 ppb	15:41:15
1	Ba 233.527†	43523.4	43263.7	1258.2 µg/L	1258.2 ppb	15:41:15
1	Be 313.107†	773153.7	764442.9	531.33 µg/L	531.33 ppb	15:41:09
1	Cd 226.502†	17930.8	17953.3	511.38 µg/L	511.38 ppb	15:41:15
1	Co 228.616†	9885.1	9867.8	538.13 µg/L	538.13 ppb	15:41:15
1	Cr 267.716†	31204.2	31090.4	721.56 µg/L	721.56 ppb	15:41:15
1	Cu 324.752†	83675.0	79479.6	619.44 µg/L	619.44 ppb	15:41:15
1	Mn 257.610†	1238394.0	1230780.8	4566.7 µg/L	4566.7 ppb	15:41:09
1	Mo 202.031†	4089.8	4046.8	514.26 µg/L	514.26 ppb	15:41:35
1	Ni 231.604†	10732.6	10329.6	652.22 µg/L	652.22 ppb	15:41:15
1	P 214.914†	755.4	548.2	1170.3 µg/L	1170.3 ppb	15:41:35
1	Pb 220.353†	2279.9	2209.6	646.34 µg/L	646.34 ppb	15:41:35
1	S 181.975 Axial†	1066.7	1034.5	5930.1 µg/L	5930.1 ppb	15:41:35
1	Sb 206.836†	471.1	445.7	492.04 µg/L	492.04 ppb	15:41:35
1	Se 196.026†	-16.8	-29.1	551.33 µg/L	551.33 ppb	15:41:35
1	SiO2†	126995.2	123916.3	26155 µg/L	26155 ppb	15:41:15
1	Si 251.611†	146163.8	144938.4	12157 µg/L	12157 ppb	15:41:15
1	Sn 189.927†	879.6	850.7	520.42 µg/L	520.42 ppb	15:41:35
1	Ti 334.940†	1346941.5	1337681.2	3334.6 µg/L	3334.6 ppb	15:41:09
1	Tl 190.801†	258.1	279.5	519.26 µg/L	519.26 ppb	15:41:35
1	U 409.014†	3910.8	4119.1	369.91 µg/L	369.91 ppb	15:41:09
1	V 292.402†	55456.9	55229.7	701.09 µg/L	701.09 ppb	15:41:15
1	Zn 213.857†	32736.1	31858.5	916.11 µg/L	916.11 ppb	15:41:15
2	Sc RADIAL	78137.3	78137.3	102 %		15:40:10
2	Al 396.153Radial†	211928.7	208382.9	144780 µg/L	144780 ppb	15:40:10
2	Ca 317.933Radial†	28654.6	27919.7	21985 µg/L	21985 ppb	15:40:30
2	Fe 238.204 Radial†	11323.9	11117.1	159610 µg/L	159610 ppb	15:40:30
2	K 766.490 Radial†	30980.9	30046.5	19946 µg/L	19946 ppb	15:40:10
2	Mg 279.077 IEC†	2286.5	2239.6	24246 µg/L	24246 ppb	15:40:30
2	Na 589.592 Radial†	22383.4	21461.1	6162.8 µg/L	6162.8 ppb	15:40:10
2	Sr 421.552†	106282.4	103932.4	660.38 µg/L	660.38 ppb	15:40:10
2	Sc 361.383	1953040.8	1953040.8	100.50 %		15:41:43
2	Y 371.029	1325871.8	1325871.8	107.90 %		15:41:43
2	Ag 328.068†	55413.4	55194.8	529.10 µg/L	529.10 ppb	15:41:48
2	As 188.979†	253.9	252.1	588.81 µg/L	588.81 ppb	15:42:09
2	B 249.677†	12582.2	12404.8	521.36 µg/L	521.36 ppb	15:41:48
2	Ba 233.527†	43541.0	43340.5	1260.4 µg/L	1260.4 ppb	15:41:48
2	Be 313.107†	771566.7	763916.1	530.96 µg/L	530.96 ppb	15:41:43
2	Cd 226.502†	18003.3	18049.8	513.95 µg/L	513.95 ppb	15:41:48
2	Co 228.616†	9907.4	9903.5	540.11 µg/L	540.11 ppb	15:41:48
2	Cr 267.716†	31125.7	31054.8	720.73 µg/L	720.73 ppb	15:41:48
2	Cu 324.752†	83579.8	79498.7	619.92 µg/L	619.92 ppb	15:41:48
2	Mn 257.610†	1236235.6	1230318.7	4565.3 µg/L	4565.3 ppb	15:41:43
2	Mo 202.031†	4124.8	4087.2	519.43 µg/L	519.43 ppb	15:42:09
2	Ni 231.604†	10778.4	10389.8	656.04 µg/L	656.04 ppb	15:41:48
2	P 214.914†	751.1	544.9	1160.9 µg/L	1160.9 ppb	15:42:09
2	Pb 220.353†	2291.3	2224.0	650.54 µg/L	650.54 ppb	15:42:09

2	S 181.975 Axial†	1075.6	1044.8	5988.9 µg/L	5988.9 ppb	15:42:09
2	Sb 206.836†	471.6	446.9	493.46 µg/L	493.46 ppb	15:42:09
2	Se 196.026†	-25.4	-37.7	547.05 µg/L	547.05 ppb	15:42:09
2	SiO2†	126888.2	123982.7	26169 µg/L	26169 ppb	15:41:48
2	Si 251.611†	146021.4	144995.6	12162 µg/L	12162 ppb	15:41:48
2	Sn 189.927†	880.0	852.2	521.68 µg/L	521.68 ppb	15:42:09
2	Ti 334.940†	1343953.5	1336541.4	3331.7 µg/L	3331.7 ppb	15:41:43
2	Tl 190.801†	251.6	273.4	508.53 µg/L	508.53 ppb	15:42:09
2	U 409.014†	3930.7	4144.3	371.95 µg/L	371.95 ppb	15:41:43
2	V 292.402†	55512.2	55360.2	702.88 µg/L	702.88 ppb	15:41:48
2	Zn 213.857†	32807.3	31974.0	919.33 µg/L	919.33 ppb	15:41:48
3	Sc RADIAL	78755.1	78755.1	103 %		15:40:36
3	Al 396.153Radial†	213956.5	208726.6	145020 µg/L	145020 ppb	15:40:36
3	Ca 317.933Radial†	28431.2	27480.9	21639 µg/L	21639 ppb	15:40:56
3	Fe 238.204 Radial†	11210.6	10919.2	156770 µg/L	156770 ppb	15:40:56
3	K 766.490 Radial†	31233.4	30053.9	19951 µg/L	19951 ppb	15:40:36
3	Mg 279.077 IEC†	2263.8	2199.9	23816 µg/L	23816 ppb	15:40:56
3	Na 589.592 Radial†	22577.6	21477.9	6167.7 µg/L	6167.7 ppb	15:40:36
3	Sr 421.552†	107364.7	104168.6	661.88 µg/L	661.88 ppb	15:40:36
3	Sc 361.383	1948424.0	1948424.0	100.26 %		15:42:17
3	Y 371.029	1321992.7	1321992.7	107.58 %		15:42:17
3	Ag 328.068†	54766.8	54680.5	524.01 µg/L	524.01 ppb	15:42:22
3	As 188.979†	237.9	236.7	553.34 µg/L	553.34 ppb	15:42:43
3	B 249.677†	12341.6	12194.6	512.59 µg/L	512.59 ppb	15:42:22
3	Ba 233.527†	42654.2	42558.6	1237.7 µg/L	1237.7 ppb	15:42:22
3	Be 313.107†	762048.9	756242.1	525.63 µg/L	525.63 ppb	15:42:17
3	Cd 226.502†	17651.9	17741.8	505.19 µg/L	505.19 ppb	15:42:22
3	Co 228.616†	9662.6	9682.7	527.99 µg/L	527.99 ppb	15:42:22
3	Cr 267.716†	30245.6	30250.3	702.06 µg/L	702.06 ppb	15:42:22
3	Cu 324.752†	81460.4	77581.9	605.12 µg/L	605.12 ppb	15:42:22
3	Mn 257.610†	1221760.9	1218796.2	4522.4 µg/L	4522.4 ppb	15:42:17
3	Mo 202.031†	3923.5	3896.2	495.32 µg/L	495.32 ppb	15:42:43
3	Ni 231.604†	10516.0	10153.5	641.13 µg/L	641.13 ppb	15:42:22
3	P 214.914†	731.8	527.4	1122.7 µg/L	1122.7 ppb	15:42:43
3	Pb 220.353†	2205.6	2144.0	627.28 µg/L	627.28 ppb	15:42:43
3	S 181.975 Axial†	1041.0	1012.8	5805.5 µg/L	5805.5 ppb	15:42:43
3	Sb 206.836†	448.2	424.6	468.64 µg/L	468.64 ppb	15:42:43
3	Se 196.026†	-10.7	-23.1	559.36 µg/L	559.36 ppb	15:42:43
3	SiO2†	123954.7	121355.9	25615 µg/L	25615 ppb	15:42:22
3	Si 251.611†	142561.9	141889.4	11901 µg/L	11901 ppb	15:42:22
3	Sn 189.927†	849.1	823.5	504.50 µg/L	504.50 ppb	15:42:43
3	Ti 334.940†	1324481.9	1320288.9	3291.2 µg/L	3291.2 ppb	15:42:17
3	Tl 190.801†	262.2	284.5	527.42 µg/L	527.42 ppb	15:42:43
3	U 409.014†	3871.8	4094.8	367.65 µg/L	367.65 ppb	15:42:17
3	V 292.402†	53951.8	53934.6	684.77 µg/L	684.77 ppb	15:42:22
3	Zn 213.857†	32014.1	31260.2	898.77 µg/L	898.77 ppb	15:42:22

Mean Data: 1202015723|941749|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1952393.6	100.46 %	0.190			0.19%
Sc RADIAL	78470.5	102 %	0.4			0.40%
Y 371.029	1325316.7	107.85 %	0.251			0.23%
Ag 328.068†	54977.2	526.92 µg/L	2.622	526.92 ppb	2.622	0.50%
Al 396.153Radial†	207881.9	144440 µg/L	818.6	144440 ppb	818.6	0.57%
As 188.979†	246.1	574.89 µg/L	18.925	574.89 ppb	18.925	3.29%
B 249.677†	12316.4	517.97 µg/L	4.714	517.97 ppb	4.714	0.91%
Ba 233.527†	43054.3	1252.1 µg/L	12.54	1252.1 ppb	12.54	1.00%
Be 313.107†	761533.7	529.30 µg/L	3.189	529.30 ppb	3.189	0.60%
Ca 317.933Radial†	27638.7	21763 µg/L	192.1	21763 ppb	192.1	0.88%
Cd 226.502†	17915.0	510.17 µg/L	4.504	510.17 ppb	4.504	0.88%
Co 228.616†	9818.0	535.41 µg/L	6.503	535.41 ppb	6.503	1.21%
Cr 267.716†	30798.5	714.78 µg/L	11.025	714.78 ppb	11.025	1.54%
Cu 324.752†	78853.4	614.83 µg/L	8.414	614.83 ppb	8.414	1.37%
Fe 238.204 Radial†	10994.9	157860 µg/L	1533.8	157860 ppb	1533.8	0.97%
K 766.490 Radial†	29928.8	19868 µg/L	139.6	19868 ppb	139.6	0.70%
Mg 279.077 IEC†	2217.3	24004 µg/L	220.2	24004 ppb	220.2	0.92%
Mn 257.610†	1226631.9	4551.5 µg/L	25.20	4551.5 ppb	25.20	0.55%
Mo 202.031†	4010.1	509.67 µg/L	12.692	509.67 ppb	12.692	2.49%
Na 589.592 Radial†	21377.0	6138.7 µg/L	46.07	6138.7 ppb	46.07	0.75%

Ni 231.604†	10290.9	649.79 µg/L	7.745	649.79 ppb	7.745	1.19%
P 214.914†	540.2	1151.3 µg/L	25.24	1151.3 ppb	25.24	2.19%
Pb 220.353†	2192.5	641.39 µg/L	12.395	641.39 ppb	12.395	1.93%
S 181.975 Axial†	1030.7	5908.2 µg/L	93.65	5908.2 ppb	93.65	1.59%
Sb 206.836†	439.1	484.71 µg/L	13.937	484.71 ppb	13.937	2.88%
Se 196.026†	-30.0	552.58 µg/L	6.248	552.58 ppb	6.248	1.13%
SiO2†	123084.9	25980 µg/L	316.1	25980 ppb	316.1	1.22%
Si 251.611†	143941.1	12073 µg/L	149.1	12073 ppb	149.1	1.23%
Sn 189.927†	842.1	515.53 µg/L	9.578	515.53 ppb	9.578	1.86%
Sr 421.552†	103708.0	658.95 µg/L	3.843	658.95 ppb	3.843	0.58%
Ti 334.940†	1331503.8	3319.2 µg/L	24.25	3319.2 ppb	24.25	0.73%
Tl 190.801†	279.2	518.40 µg/L	9.473	518.40 ppb	9.473	1.83%
U 409.014†	4119.4	369.84 µg/L	2.154	369.84 ppb	2.154	0.58%
V 292.402†	54841.5	696.25 µg/L	9.979	696.25 ppb	9.979	1.43%
Zn 213.857†	31697.6	911.40 µg/L	11.060	911.40 ppb	11.060	1.21%

Sequence No.: 20

Sample ID: 1202015721|941749|5

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 321

Date Collected: 1/27/2010 15:42:52

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 1202015721|941749|5

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	76207.1	76207.1	99.2 %		15:43:25
1	Al 396.153Radial†	12019.9	12144.4	8438.5 µg/L	8438.5 ppb	15:43:25
1	Ca 317.933Radial†	2630.5	2400.0	1889.8 µg/L	1889.8 ppb	15:43:45
1	Fe 238.204 Radial†	1218.2	1212.2	17402 µg/L	17402 ppb	15:43:45
1	K 766.490 Radial†	2162.9	1768.3	1173.9 µg/L	1173.9 ppb	15:43:25
1	Mg 279.077 IEC†	151.8	144.7	1558.4 µg/L	1558.4 ppb	15:43:45
1	Na 589.592 Radial†	1032.1	495.5	142.29 µg/L	142.29 ppb	15:43:25
1	Sr 421.552†	3265.4	2733.9	17.371 µg/L	17.371 ppb	15:43:25
1	Sc 361.383	1927474.5	1927474.5	99.181 %		15:44:47
1	Y 371.029	1225193.9	1225193.9	99.707 %		15:44:47
1	Ag 328.068†	-274.4	-221.6	-0.8576 µg/L	-0.8576 ppb	15:44:53
1	As 188.979†	1.7	1.2	3.6551 µg/L	3.6551 ppb	15:45:13
1	B 249.677†	360.9	248.6	3.0550 µg/L	3.0550 ppb	15:44:53
1	Ba 233.527†	3032.4	3072.0	89.282 µg/L	89.282 ppb	15:44:53
1	Be 313.107†	5522.8	1729.0	1.1024 µg/L	1.1024 ppb	15:44:53
1	Cd 226.502†	-74.1	60.8	-0.1620 µg/L	-0.1620 ppb	15:44:53
1	Co 228.616†	21.5	66.7	3.1216 µg/L	3.1216 ppb	15:45:13
1	Cr 267.716†	978.4	1069.2	24.811 µg/L	24.811 ppb	15:44:53
1	Cu 324.752†	4329.6	697.2	7.6610 µg/L	7.6610 ppb	15:44:53
1	Mn 257.610†	134582.9	135883.9	504.24 µg/L	504.24 ppb	15:44:53
1	Mo 202.031†	28.9	12.0	2.1657 µg/L	2.1657 ppb	15:45:13
1	Ni 231.604†	575.9	245.2	15.671 µg/L	15.671 ppb	15:45:13
1	P 214.914†	248.2	47.7	101.91 µg/L	101.91 ppb	15:45:13
1	Pb 220.353†	108.0	53.0	15.277 µg/L	15.277 ppb	15:45:13
1	S 181.975 Axial†	31.4	6.1	35.134 µg/L	35.134 ppb	15:45:13
1	Sb 206.836†	26.0	3.9	3.8846 µg/L	3.8846 ppb	15:45:13
1	Se 196.026†	-29.3	-42.0	0.1157 µg/L	0.1157 ppb	15:45:13
1	SiO2†	32660.6	30651.5	6469.7 µg/L	6469.7 ppb	15:44:53
1	Si 251.611†	35924.3	35916.5	3012.6 µg/L	3012.6 ppb	15:44:53
1	Sn 189.927†	14.1	-9.2	-3.0583 µg/L	-3.0583 ppb	15:45:13
1	Ti 334.940†	107419.2	107532.7	268.09 µg/L	268.09 ppb	15:44:53
1	Tl 190.801†	-22.8	0.1	3.5535 µg/L	3.5535 ppb	15:45:13
1	U 409.014†	-532.3	-303.7	-31.518 µg/L	-31.518 ppb	15:44:53
1	V 292.402†	1229.1	1361.4	17.890 µg/L	17.890 ppb	15:44:53
1	Zn 213.857†	2231.3	1578.4	45.024 µg/L	45.024 ppb	15:45:13
2	Sc RADIAL	75258.5	75258.5	98.0 %		15:43:51
2	Al 396.153Radial†	11919.1	12194.3	8473.1 µg/L	8473.1 ppb	15:43:51
2	Ca 317.933Radial†	2620.6	2423.3	1908.1 µg/L	1908.1 ppb	15:44:11
2	Fe 238.204 Radial†	1206.4	1215.6	17451 µg/L	17451 ppb	15:44:11
2	K 766.490 Radial†	2110.5	1742.3	1156.6 µg/L	1156.6 ppb	15:43:51
2	Mg 279.077 IEC†	152.9	147.8	1591.9 µg/L	1591.9 ppb	15:44:11
2	Na 589.592 Radial†	1034.4	510.9	146.72 µg/L	146.72 ppb	15:43:51
2	Sr 421.552†	3237.4	2746.8	17.453 µg/L	17.453 ppb	15:43:51
2	Sc 361.383	1940050.2	1940050.2	99.828 %		15:45:19
2	Y 371.029	1234081.0	1234081.0	100.43 %		15:45:19
2	Ag 328.068†	-269.1	-214.4	-0.7871 µg/L	-0.7871 ppb	15:45:25
2	As 188.979†	1.0	0.4	1.9396 µg/L	1.9396 ppb	15:45:45
2	B 249.677†	351.5	236.9	2.4606 µg/L	2.4606 ppb	15:45:25
2	Ba 233.527†	3050.4	3070.2	89.230 µg/L	89.230 ppb	15:45:25
2	Be 313.107†	5508.1	1678.2	1.0679 µg/L	1.0679 ppb	15:45:25
2	Cd 226.502†	-61.2	74.2	0.2274 µg/L	0.2274 ppb	15:45:45
2	Co 228.616†	31.6	76.7	3.6780 µg/L	3.6780 ppb	15:45:45
2	Cr 267.716†	993.0	1077.5	25.002 µg/L	25.002 ppb	15:45:25
2	Cu 324.752†	4340.8	680.1	7.5394 µg/L	7.5394 ppb	15:45:25
2	Mn 257.610†	134242.8	134663.7	499.74 µg/L	499.74 ppb	15:45:25
2	Mo 202.031†	35.7	18.6	2.9949 µg/L	2.9949 ppb	15:45:45
2	Ni 231.604†	596.3	261.9	16.723 µg/L	16.723 ppb	15:45:45
2	P 214.914†	251.0	49.0	104.90 µg/L	104.90 ppb	15:45:45
2	Pb 220.353†	102.2	46.4	13.361 µg/L	13.361 ppb	15:45:45

2	S 181.975 Axial†	33.2	7.8	44.436 µg/L	44.436 ppb	15:45:45
2	Sb 206.836†	23.5	1.1	0.8418 µg/L	0.8418 ppb	15:45:45
2	Se 196.026†	-31.6	-44.1	-3.0062 µg/L	-3.0062 ppb	15:45:45
2	SiO2†	32585.2	30362.6	6408.7 µg/L	6408.7 ppb	15:45:25
2	Si 251.611†	35772.5	35529.7	2980.1 µg/L	2980.1 ppb	15:45:25
2	Sn 189.927†	14.7	-8.7	-2.7266 µg/L	-2.7266 ppb	15:45:45
2	Ti 334.940†	107180.8	106591.9	265.74 µg/L	265.74 ppb	15:45:25
2	Tl 190.801†	-17.9	5.2	12.250 µg/L	12.250 ppb	15:45:45
2	U 409.014†	-485.8	-253.6	-26.747 µg/L	-26.747 ppb	15:45:25
2	V 292.402†	1245.8	1370.1	18.012 µg/L	18.012 ppb	15:45:25
2	Zn 213.857†	2239.7	1572.2	44.834 µg/L	44.834 ppb	15:45:45
3	Sc RADIAL	76053.8	76053.8	99.0 %		15:44:17
3	Al 396.153Radial†	11981.3	12129.9	8428.4 µg/L	8428.4 ppb	15:44:17
3	Ca 317.933Radial†	2613.3	2388.0	1880.4 µg/L	1880.4 ppb	15:44:37
3	Fe 238.204 Radial†	1211.7	1208.0	17343 µg/L	17343 ppb	15:44:37
3	K 766.490 Radial†	2169.0	1778.8	1180.8 µg/L	1180.8 ppb	15:44:17
3	Mg 279.077 IEC†	154.7	148.0	1594.3 µg/L	1594.3 ppb	15:44:37
3	Na 589.592 Radial†	1033.8	499.2	143.36 µg/L	143.36 ppb	15:44:17
3	Sr 421.552†	3216.4	2691.1	17.099 µg/L	17.099 ppb	15:44:17
3	Sc 361.383	1945268.9	1945268.9	100.10 %		15:45:51
3	Y 371.029	1236202.9	1236202.9	100.60 %		15:45:51
3	Ag 328.068†	-220.3	-165.0	-0.3427 µg/L	-0.3427 ppb	15:45:57
3	As 188.979†	-1.4	-1.9	-3.5446 µg/L	-3.5446 ppb	15:46:17
3	B 249.677†	348.8	233.2	2.3344 µg/L	2.3344 ppb	15:45:57
3	Ba 233.527†	2947.6	2959.3	86.004 µg/L	86.004 ppb	15:45:57
3	Be 313.107†	5510.1	1665.4	1.0638 µg/L	1.0638 ppb	15:45:57
3	Cd 226.502†	-62.6	72.9	0.2009 µg/L	0.2009 ppb	15:46:17
3	Co 228.616†	14.5	59.5	2.7588 µg/L	2.7588 ppb	15:46:17
3	Cr 267.716†	924.6	1006.5	23.355 µg/L	23.355 ppb	15:45:57
3	Cu 324.752†	4273.1	600.8	6.9278 µg/L	6.9278 ppb	15:45:57
3	Mn 257.610†	129192.4	129257.4	479.75 µg/L	479.75 ppb	15:45:57
3	Mo 202.031†	30.9	13.7	2.3816 µg/L	2.3816 ppb	15:46:17
3	Ni 231.604†	555.2	219.3	14.038 µg/L	14.038 ppb	15:46:17
3	P 214.914†	241.3	38.6	80.236 µg/L	80.236 ppb	15:46:17
3	Pb 220.353†	106.3	50.3	14.483 µg/L	14.483 ppb	15:46:17
3	S 181.975 Axial†	32.4	6.8	39.091 µg/L	39.091 ppb	15:46:17
3	Sb 206.836†	28.0	5.6	5.7910 µg/L	5.7910 ppb	15:46:17
3	Se 196.026†	-25.3	-37.7	6.5865 µg/L	6.5865 ppb	15:46:17
3	SiO2†	31751.9	29442.6	6214.5 µg/L	6214.5 ppb	15:45:57
3	Si 251.611†	34813.2	34475.1	2891.7 µg/L	2891.7 ppb	15:45:57
3	Sn 189.927†	20.3	-3.2	0.4636 µg/L	0.4636 ppb	15:46:17
3	Ti 334.940†	102425.9	101553.5	253.17 µg/L	253.17 ppb	15:45:57
3	Tl 190.801†	-25.6	-2.5	-1.2280 µg/L	-1.2280 ppb	15:46:17
3	U 409.014†	-399.6	-166.2	-18.389 µg/L	-18.389 ppb	15:45:57
3	V 292.402†	1129.0	1250.0	16.514 µg/L	16.514 ppb	15:45:57
3	Zn 213.857†	2062.2	1388.9	39.507 µg/L	39.507 ppb	15:46:17

Mean Data: 1202015721|941749|5

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1937597.8	99.702 %		0.4707			0.47%
Sc RADIAL	75839.8	98.7 %		0.66			0.67%
Y 371.029	1231825.9	100.25 %		0.475			0.47%
Ag 328.068†	-200.3	-0.6625 µg/L		0.27920	-0.6625 ppb	0.27920	42.15%
Al 396.153Radial†	12156.2	8446.7 µg/L		23.44	8446.7 ppb	23.44	0.28%
As 188.979†	-0.1	0.6834 µg/L		3.76064	0.6834 ppb	3.76064	550.29%
B 249.677†	239.6	2.6166 µg/L		0.38483	2.6166 ppb	0.38483	14.71%
Ba 233.527†	3033.8	88.172 µg/L		1.8773	88.172 ppb	1.8773	2.13%
Be 313.107†	1690.8	1.0780 µg/L		0.02121	1.0780 ppb	0.02121	1.97%
Ca 317.933Radial†	2403.8	1892.8 µg/L		14.13	1892.8 ppb	14.13	0.75%
Cd 226.502†	69.3	0.0888 µg/L		0.21758	0.0888 ppb	0.21758	245.16%
Co 228.616†	67.6	3.1862 µg/L		0.46300	3.1862 ppb	0.46300	14.53%
Cr 267.716†	1051.1	24.389 µg/L		0.9008	24.389 ppb	0.9008	3.69%
Cu 324.752†	659.4	7.3760 µg/L		0.39295	7.3760 ppb	0.39295	5.33%
Fe 238.204 Radial†	1211.9	17399 µg/L		54.3	17399 ppb	54.3	0.31%
K 766.490 Radial†	1763.1	1170.4 µg/L		12.49	1170.4 ppb	12.49	1.07%
Mg 279.077 IEC†	146.8	1581.5 µg/L		20.08	1581.5 ppb	20.08	1.27%
Mn 257.610†	133268.3	494.58 µg/L		13.035	494.58 ppb	13.035	2.64%
Mo 202.031†	14.8	2.5141 µg/L		0.43019	2.5141 ppb	0.43019	17.11%
Na 589.592 Radial†	501.9	144.13 µg/L		2.310	144.13 ppb	2.310	1.60%

Ni 231.604†	242.1	15.477 µg/L	1.3528	15.477 ppb	1.3528	8.74%
P 214.914†	45.1	95.684 µg/L	13.4619	95.684 ppb	13.4619	14.07%
Pb 220.353†	49.9	14.374 µg/L	0.9628	14.374 ppb	0.9628	6.70%
S 181.975 Axial†	6.9	39.554 µg/L	4.6684	39.554 ppb	4.6684	11.80%
Sb 206.836†	3.5	3.5058 µg/L	2.49625	3.5058 ppb	2.49625	71.20%
Se 196.026†	-41.3	1.2320 µg/L	4.89278	1.2320 ppb	4.89278	397.14%
SiO2†	30152.2	6364.3 µg/L	133.26	6364.3 ppb	133.26	2.09%
Si 251.611†	35307.1	2961.4 µg/L	62.57	2961.4 ppb	62.57	2.11%
Sn 189.927†	-7.0	-1.7738 µg/L	1.94467	-1.7738 ppb	1.94467	109.63%
Sr 421.552†	2724.0	17.308 µg/L	0.1854	17.308 ppb	0.1854	1.07%
Ti 334.940†	105226.0	262.34 µg/L	8.020	262.34 ppb	8.020	3.06%
Tl 190.801†	0.9	4.8584 µg/L	6.83296	4.8584 ppb	6.83296	140.64%
U 409.014†	-241.2	-25.551 µg/L	6.6457	-25.551 ppb	6.6457	26.01%
V 292.402†	1327.2	17.472 µg/L	0.8322	17.472 ppb	0.8322	4.76%
Zn 213.857†	1513.2	43.122 µg/L	3.1319	43.122 ppb	3.1319	7.26%

Sequence No.: 21

Sample ID: 244604002|941749|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 322

Date Collected: 1/27/2010 15:46:26

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 244604002|941749|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	78507.8	78507.8	102 %		15:46:59
1	Al 396.153Radial†	82746.7	80995.3	56279 µg/L	56279 ppb	15:46:59
1	Ca 317.933Radial†	27931.5	27079.2	21323 µg/L	21323 ppb	15:46:59
1	Fe 238.204 Radial†	6869.4	6705.8	96272 µg/L	96272 ppb	15:47:19
1	K 766.490 Radial†	18452.4	17643.6	11712 µg/L	11712 ppb	15:46:59
1	Mg 279.077 IEC†	1172.8	1139.3	12314 µg/L	12314 ppb	15:47:19
1	Na 589.592 Radial†	2069.3	1479.9	424.96 µg/L	424.96 ppb	15:46:59
1	Sr 421.552†	28066.4	26905.2	170.95 µg/L	170.95 ppb	15:46:59
1	Sc 361.383	1939172.1	1939172.1	99.783 %		15:48:24
1	Y 371.029	1251832.9	1251832.9	101.87 %		15:48:24
1	Ag 328.068†	-1019.4	-966.5	-1.8756 µg/L	-1.8756 ppb	15:48:29
1	As 188.979†	7.8	7.3	21.193 µg/L	21.193 ppb	15:48:50
1	B 249.677†	1682.7	1571.1	26.636 µg/L	26.636 ppb	15:48:29
1	Ba 233.527†	27328.5	27402.5	796.42 µg/L	796.42 ppb	15:48:29
1	Be 313.107†	14580.3	10772.6	6.5475 µg/L	6.5475 ppb	15:48:29
1	Cd 226.502†	275.6	411.6	1.4130 µg/L	1.4130 ppb	15:48:50
1	Co 228.616†	692.2	738.8	35.539 µg/L	35.539 ppb	15:48:50
1	Cr 267.716†	11641.9	11750.1	272.64 µg/L	272.64 ppb	15:48:29
1	Cu 324.752†	10320.5	6674.7	63.568 µg/L	63.568 ppb	15:48:29
1	Mn 257.610†	673109.8	674764.7	2505.1 µg/L	2505.1 ppb	15:48:24
1	Mo 202.031†	128.2	111.3	17.637 µg/L	17.637 ppb	15:48:50
1	Ni 231.604†	3090.9	2762.2	175.24 µg/L	175.24 ppb	15:48:50
1	P 214.914†	662.9	461.9	1037.9 µg/L	1037.9 ppb	15:48:50
1	Pb 220.353†	459.0	404.1	117.23 µg/L	117.23 ppb	15:48:50
1	S 181.975 Axial†	215.4	190.3	1091.1 µg/L	1091.1 ppb	15:48:50
1	Sb 206.836†	35.0	12.7	9.8193 µg/L	9.8193 ppb	15:48:50
1	Se 196.026†	-212.4	-225.2	12.933 µg/L	12.933 ppb	15:48:50
1	SiO2†	284204.7	282544.7	59638 µg/L	59638 ppb	15:48:24
1	Si 251.611†	328046.4	328456.1	27550 µg/L	27550 ppb	15:48:24
1	Sn 189.927†	-59.5	-83.0	-32.528 µg/L	-32.528 ppb	15:48:50
1	Ti 334.940†	1006723.5	1008141.6	2513.6 µg/L	2513.6 ppb	15:48:24
1	Tl 190.801†	-32.6	-9.6	8.2722 µg/L	8.2722 ppb	15:48:50
1	U 409.014†	-269.1	-36.7	-18.186 µg/L	-18.186 ppb	15:48:24
1	V 292.402†	12879.8	13029.9	167.86 µg/L	167.86 ppb	15:48:29
1	Zn 213.857†	17494.5	16861.3	485.44 µg/L	485.44 ppb	15:48:29
2	Sc RADIAL	77598.2	77598.2	101 %		15:47:25
2	Al 396.153Radial†	82367.9	81569.5	56678 µg/L	56678 ppb	15:47:25
2	Ca 317.933Radial†	27590.8	27062.3	21309 µg/L	21309 ppb	15:47:25
2	Fe 238.204 Radial†	6876.2	6791.3	97500 µg/L	97500 ppb	15:47:45
2	K 766.490 Radial†	18319.6	17723.9	11766 µg/L	11766 ppb	15:47:25
2	Mg 279.077 IEC†	1170.1	1150.0	12429 µg/L	12429 ppb	15:47:45
2	Na 589.592 Radial†	2104.5	1538.5	441.80 µg/L	441.80 ppb	15:47:25
2	Sr 421.552†	27831.9	26995.0	171.52 µg/L	171.52 ppb	15:47:25
2	Sc 361.383	1945875.1	1945875.1	100.13 %		15:48:57
2	Y 371.029	1255771.9	1255771.9	102.20 %		15:48:57
2	Ag 328.068†	-1008.3	-951.9	-1.6744 µg/L	-1.6744 ppb	15:49:03
2	As 188.979†	8.8	8.2	23.499 µg/L	23.499 ppb	15:49:24
2	B 249.677†	1619.6	1502.3	22.644 µg/L	22.644 ppb	15:49:03
2	Ba 233.527†	27223.8	27203.6	790.64 µg/L	790.64 ppb	15:49:03
2	Be 313.107†	14591.2	10733.2	6.5227 µg/L	6.5227 ppb	15:49:03
2	Cd 226.502†	268.6	403.8	1.0398 µg/L	1.0398 ppb	15:49:24
2	Co 228.616†	687.0	731.1	35.133 µg/L	35.133 ppb	15:49:24
2	Cr 267.716†	11579.8	11647.9	270.27 µg/L	270.27 ppb	15:49:03
2	Cu 324.752†	10323.0	6641.7	63.490 µg/L	63.490 ppb	15:49:03
2	Mn 257.610†	673349.2	672680.0	2497.5 µg/L	2497.5 ppb	15:48:57
2	Mo 202.031†	116.9	99.5	16.205 µg/L	16.205 ppb	15:49:24
2	Ni 231.604†	3064.6	2725.3	172.93 µg/L	172.93 ppb	15:49:24
2	P 214.914†	649.5	446.2	999.41 µg/L	999.41 ppb	15:49:24
2	Pb 220.353†	460.1	403.6	117.06 µg/L	117.06 ppb	15:49:24

2	S 181.975 Axial†	215.8	190.1	1089.4 µg/L	1089.4 ppb	15:49:24
2	Sb 206.836†	29.6	7.2	3.7041 µg/L	3.7041 ppb	15:49:24
2	Se 196.026†	-216.0	-228.1	13.014 µg/L	13.014 ppb	15:49:24
2	SiO2†	284308.3	281666.9	59452 µg/L	59452 ppb	15:48:57
2	Si 251.611†	327971.2	327248.5	27449 µg/L	27449 ppb	15:48:57
2	Sn 189.927†	-56.1	-79.4	-30.307 µg/L	-30.307 ppb	15:49:24
2	Ti 334.940†	1007380.4	1005322.2	2506.6 µg/L	2506.6 ppb	15:48:57
2	Tl 190.801†	-34.0	-10.9	5.8549 µg/L	5.8549 ppb	15:49:24
2	U 409.014†	-202.1	31.1	-11.881 µg/L	-11.881 ppb	15:48:57
2	V 292.402†	12769.5	12875.3	165.99 µg/L	165.99 ppb	15:49:03
2	Zn 213.857†	17466.5	16772.9	482.81 µg/L	482.81 ppb	15:49:03
3	Sc RADIAL	77313.7	77313.7	101 %		15:47:51
3	Al 396.153Radial†	82393.0	81894.5	56904 µg/L	56904 ppb	15:47:51
3	Ca 317.933Radial†	27542.9	27115.2	21351 µg/L	21351 ppb	15:47:51
3	Fe 238.204 Radial†	6857.4	6797.7	97592 µg/L	97592 ppb	15:48:11
3	K 766.490 Radial†	18396.1	17866.6	11860 µg/L	11860 ppb	15:47:51
3	Mg 279.077 IEC†	1165.1	1149.3	12422 µg/L	12422 ppb	15:48:11
3	Na 589.592 Radial†	2040.0	1482.1	425.60 µg/L	425.60 ppb	15:47:51
3	Sr 421.552†	27819.7	27084.3	172.09 µg/L	172.09 ppb	15:47:51
3	Sc 361.383	1926205.8	1926205.8	99.116 %		15:49:31
3	Y 371.029	1242822.4	1242822.4	101.14 %		15:49:31
3	Ag 328.068†	-1016.1	-970.1	-1.8655 µg/L	-1.8655 ppb	15:49:37
3	As 188.979†	4.8	4.3	14.473 µg/L	14.473 ppb	15:49:58
3	B 249.677†	1625.4	1524.7	23.668 µg/L	23.668 ppb	15:49:37
3	Ba 233.527†	26388.4	26638.4	774.21 µg/L	774.21 ppb	15:49:37
3	Be 313.107†	14116.6	10403.2	6.3044 µg/L	6.3044 ppb	15:49:37
3	Cd 226.502†	254.8	392.6	0.6904 µg/L	0.6904 ppb	15:49:58
3	Co 228.616†	637.3	688.0	32.815 µg/L	32.815 ppb	15:49:58
3	Cr 267.716†	11070.5	11252.1	261.08 µg/L	261.08 ppb	15:49:37
3	Cu 324.752†	10112.4	6534.4	62.697 µg/L	62.697 ppb	15:49:37
3	Mn 257.610†	659230.6	665302.6	2470.3 µg/L	2470.3 ppb	15:49:31
3	Mo 202.031†	126.4	110.3	17.566 µg/L	17.566 ppb	15:49:58
3	Ni 231.604†	2879.6	2569.9	163.14 µg/L	163.14 ppb	15:49:58
3	P 214.914†	620.3	423.4	944.94 µg/L	944.94 ppb	15:49:58
3	Pb 220.353†	442.6	390.6	113.28 µg/L	113.28 ppb	15:49:58
3	S 181.975 Axial†	201.8	178.1	1021.0 µg/L	1021.0 ppb	15:49:58
3	Sb 206.836†	28.6	6.5	3.0310 µg/L	3.0310 ppb	15:49:58
3	Se 196.026†	-210.5	-224.8	18.673 µg/L	18.673 ppb	15:49:58
3	SiO2†	279426.3	279641.0	59025 µg/L	59025 ppb	15:49:31
3	Si 251.611†	322432.4	325005.0	27260 µg/L	27260 ppb	15:49:31
3	Sn 189.927†	-52.5	-76.4	-28.547 µg/L	-28.547 ppb	15:49:58
3	Ti 334.940†	985071.3	993087.7	2476.1 µg/L	2476.1 ppb	15:49:31
3	Tl 190.801†	-32.2	-9.4	8.0393 µg/L	8.0393 ppb	15:49:58
3	U 409.014†	-194.9	36.3	-11.400 µg/L	-11.400 ppb	15:49:31
3	V 292.402†	12310.3	12542.3	161.85 µg/L	161.85 ppb	15:49:37
3	Zn 213.857†	16939.1	16418.9	472.53 µg/L	472.53 ppb	15:49:37

Mean Data: 244604002|941749|1

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Conc. Units	Sample	Std.Dev.	RSD
Sc 361.383	1937084.3	99.675 %		0.5145				0.52%
Sc RADIAL	77806.6	101 %		0.8				0.80%
Y 371.029	1250142.4	101.74 %		0.540				0.53%
Ag 328.068†	-962.8	-1.8052 µg/L		0.11339	-1.8052 ppb		0.11339	6.28%
Al 396.153Radial†	81486.4	56621 µg/L		316.4	56621 ppb		316.4	0.56%
As 188.979†	6.6	19.722 µg/L		4.6894	19.722 ppb		4.6894	23.78%
B 249.677†	1532.7	24.316 µg/L		2.0738	24.316 ppb		2.0738	8.53%
Ba 233.527†	27081.5	787.09 µg/L		11.523	787.09 ppb		11.523	1.46%
Be 313.107†	10636.3	6.4582 µg/L		0.13376	6.4582 ppb		0.13376	2.07%
Ca 317.933Radial†	27085.6	21328 µg/L		21.3	21328 ppb		21.3	0.10%
Cd 226.502†	402.7	1.0477 µg/L		0.36135	1.0477 ppb		0.36135	34.49%
Co 228.616†	719.3	34.496 µg/L		1.4695	34.496 ppb		1.4695	4.26%
Cr 267.716†	11550.0	268.00 µg/L		6.102	268.00 ppb		6.102	2.28%
Cu 324.752†	6616.9	63.252 µg/L		0.4821	63.252 ppb		0.4821	0.76%
Fe 238.204 Radial†	6764.9	97121 µg/L		737.2	97121 ppb		737.2	0.76%
K 766.490 Radial†	17744.7	11780 µg/L		75.0	11780 ppb		75.0	0.64%
Mg 279.077 IEC†	1146.2	12388 µg/L		64.5	12388 ppb		64.5	0.52%
Mn 257.610†	670915.8	2490.9 µg/L		18.30	2490.9 ppb		18.30	0.73%
Mo 202.031†	107.0	17.136 µg/L		0.8070	17.136 ppb		0.8070	4.71%
Na 589.592 Radial†	1500.1	430.78 µg/L		9.542	430.78 ppb		9.542	2.22%

Ni 231.604†	2685.8	170.44 µg/L	6.423	170.44 ppb	6.423	3.77%
P 214.914†	443.8	994.08 µg/L	46.696	994.08 ppb	46.696	4.70%
Pb 220.353†	399.4	115.86 µg/L	2.232	115.86 ppb	2.232	1.93%
S 181.975 Axial†	186.2	1067.2 µg/L	39.99	1067.2 ppb	39.99	3.75%
Sb 206.836†	8.8	5.5182 µg/L	3.74008	5.5182 ppb	3.74008	67.78%
Se 196.026†	-226.1	14.873 µg/L	3.2906	14.873 ppb	3.2906	22.12%
SiO2†	281284.2	59372 µg/L	314.3	59372 ppb	314.3	0.53%
Si 251.611†	326903.2	27420 µg/L	146.9	27420 ppb	146.9	0.54%
Sn 189.927†	-79.6	-30.461 µg/L	1.9947	-30.461 ppb	1.9947	6.55%
Sr 421.552†	26994.8	171.52 µg/L	0.569	171.52 ppb	0.569	0.33%
Ti 334.940†	1002183.8	2498.8 µg/L	19.96	2498.8 ppb	19.96	0.80%
Tl 190.801†	-10.0	7.3888 µg/L	1.33349	7.3888 ppb	1.33349	18.05%
U 409.014†	10.3	-13.822 µg/L	3.7865	-13.822 ppb	3.7865	27.39%
V 292.402†	12815.9	165.23 µg/L	3.078	165.23 ppb	3.078	1.86%
Zn 213.857†	16684.4	480.26 µg/L	6.823	480.26 ppb	6.823	1.42%

Sequence No.: 23

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 1/27/2010 15:53:45

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	76756.5	76756.5	99.9	%		15:54:24
1	Al 396.153Radial†	7558.6	7592.8	5265.0	µg/L	5265.0 ppb	15:54:24
1	Ca 317.933Radial†	6807.3	6561.3	5166.5	µg/L	5166.5 ppb	15:54:45
1	Fe 238.204 Radial†	390.9	375.4	5400.3	µg/L	5400.3 ppb	15:54:45
1	K 766.490 Radial†	8353.4	7948.3	5276.4	µg/L	5276.4 ppb	15:54:24
1	Mg 279.077 IEC†	503.9	496.0	5408.4	µg/L	5408.4 ppb	15:54:45
1	Na 589.592 Radial†	36614.6	36099.8	10367	µg/L	10367 ppb	15:54:24
1	Sr 421.552†	82255.3	81765.3	519.53	µg/L	519.53 ppb	15:54:24
1	Sc 361.383	1936138.9	1936138.9	99.627	%		15:55:48
1	Y 371.029	1218231.6	1218231.6	99.140	%		15:55:48
1	Ag 328.068†	56110.6	56375.9	529.34	µg/L	529.34 ppb	15:55:54
1	As 188.979†	231.6	231.9	534.12	µg/L	534.12 ppb	15:56:14
1	B 249.677†	10668.9	10593.7	513.42	µg/L	513.42 ppb	15:55:54
1	Ba 233.527†	18052.3	18134.4	527.82	µg/L	527.82 ppb	15:55:54
1	Be 313.107†	750895.7	749870.0	522.24	µg/L	522.24 ppb	15:55:48
1	Cd 226.502†	17583.7	17785.0	523.46	µg/L	523.46 ppb	15:55:54
1	Co 228.616†	9480.0	9560.5	527.05	µg/L	527.05 ppb	15:55:54
1	Cr 267.716†	22728.4	22896.4	531.40	µg/L	531.40 ppb	15:55:54
1	Cu 324.752†	73684.2	70292.0	529.27	µg/L	529.27 ppb	15:55:54
1	Mn 257.610†	140455.7	141171.5	522.02	µg/L	522.02 ppb	15:55:54
1	Mo 202.031†	4219.2	4217.8	529.97	µg/L	529.97 ppb	15:56:14
1	Ni 231.604†	8712.4	8409.6	529.29	µg/L	529.29 ppb	15:55:54
1	P 214.914†	1338.0	1140.5	2679.9	µg/L	2679.9 ppb	15:56:14
1	Pb 220.353†	1897.6	1848.7	539.31	µg/L	539.31 ppb	15:56:14
1	S 181.975 Axial†	206.8	182.1	1043.7	µg/L	1043.7 ppb	15:56:14
1	Sb 206.836†	508.4	487.9	542.40	µg/L	542.40 ppb	15:56:14
1	Se 196.026†	342.7	331.6	543.60	µg/L	543.60 ppb	15:56:14
1	SiO2†	29085.1	26915.3	5681.1	µg/L	5681.1 ppb	15:55:54
1	Si 251.611†	31890.4	31705.4	2659.3	µg/L	2659.3 ppb	15:55:54
1	Sn 189.927†	953.9	934.1	547.89	µg/L	547.89 ppb	15:56:14
1	Ti 334.940†	210587.4	210602.8	524.89	µg/L	524.89 ppb	15:55:48
1	Tl 190.801†	285.9	310.0	538.57	µg/L	538.57 ppb	15:56:14
1	U 409.014†	5268.8	5521.5	525.84	µg/L	525.84 ppb	15:55:54
1	V 292.402†	42295.4	42576.0	535.57	µg/L	535.57 ppb	15:55:54
1	Zn 213.857†	18703.2	18101.9	523.98	µg/L	523.98 ppb	15:55:54
2	Sc RADIAL	77613.0	77613.0	101	%		15:54:50
2	Al 396.153Radial†	7592.2	7542.5	5230.1	µg/L	5230.1 ppb	15:54:50
2	Ca 317.933Radial†	6773.8	6452.9	5081.2	µg/L	5081.2 ppb	15:55:11
2	Fe 238.204 Radial†	388.5	368.7	5304.4	µg/L	5304.4 ppb	15:55:11
2	K 766.490 Radial†	8372.2	7874.6	5227.5	µg/L	5227.5 ppb	15:54:50
2	Mg 279.077 IEC†	499.2	485.8	5297.9	µg/L	5297.9 ppb	15:55:11
2	Na 589.592 Radial†	36910.1	35987.9	10334	µg/L	10334 ppb	15:54:50
2	Sr 421.552†	82900.4	81495.3	517.81	µg/L	517.81 ppb	15:54:50
2	Sc 361.383	1939701.1	1939701.1	99.810	%		15:56:21
2	Y 371.029	1220978.8	1220978.8	99.364	%		15:56:21
2	Ag 328.068†	56533.4	56696.1	532.34	µg/L	532.34 ppb	15:56:27
2	As 188.979†	230.8	230.7	531.47	µg/L	531.47 ppb	15:56:47
2	B 249.677†	10779.7	10685.0	517.91	µg/L	517.91 ppb	15:56:27
2	Ba 233.527†	18203.2	18252.4	531.25	µg/L	531.25 ppb	15:56:27
2	Be 313.107†	756057.5	753657.4	524.88	µg/L	524.88 ppb	15:56:21
2	Cd 226.502†	17802.0	17971.4	528.96	µg/L	528.96 ppb	15:56:27
2	Co 228.616†	9599.7	9663.0	532.70	µg/L	532.70 ppb	15:56:27
2	Cr 267.716†	22922.1	23048.6	534.93	µg/L	534.93 ppb	15:56:27
2	Cu 324.752†	74131.5	70604.4	531.60	µg/L	531.60 ppb	15:56:27
2	Mn 257.610†	141575.4	142034.4	525.20	µg/L	525.20 ppb	15:56:27
2	Mo 202.031†	4213.8	4204.6	528.30	µg/L	528.30 ppb	15:56:47
2	Ni 231.604†	8772.8	8454.1	532.09	µg/L	532.09 ppb	15:56:27
2	P 214.914†	1335.2	1135.3	2667.2	µg/L	2667.2 ppb	15:56:47
2	Pb 220.353†	1894.7	1842.4	537.45	µg/L	537.45 ppb	15:56:47

2	S 181.975 Axial†	204.8	179.7	1030.2 µg/L	1030.2 ppb	15:56:47
2	Sb 206.836†	512.1	490.7	545.42 µg/L	545.42 ppb	15:56:47
2	Se 196.026†	333.6	321.8	527.84 µg/L	527.84 ppb	15:56:47
2	SiO2†	29319.2	27096.2	5719.3 µg/L	5719.3 ppb	15:56:27
2	Si 251.611†	32155.7	31912.4	2676.7 µg/L	2676.7 ppb	15:56:27
2	Sn 189.927†	951.8	930.2	545.56 µg/L	545.56 ppb	15:56:47
2	Ti 334.940†	212100.9	211731.1	527.72 µg/L	527.72 ppb	15:56:21
2	Tl 190.801†	288.3	311.9	541.94 µg/L	541.94 ppb	15:56:47
2	U 409.014†	5326.4	5569.5	530.44 µg/L	530.44 ppb	15:56:27
2	V 292.402†	42649.2	42852.5	539.00 µg/L	539.00 ppb	15:56:27
2	Zn 213.857†	18841.6	18206.2	527.01 µg/L	527.01 ppb	15:56:27
3	Sc RADIAL	77394.4	77394.4	101 %		15:55:16
3	Al 396.153Radial†	7644.4	7615.6	5281.9 µg/L	5281.9 ppb	15:55:16
3	Ca 317.933Radial†	6841.3	6538.8	5148.8 µg/L	5148.8 ppb	15:55:37
3	Fe 238.204 Radial†	392.5	373.7	5375.7 µg/L	5375.7 ppb	15:55:37
3	K 766.490 Radial†	8330.7	7856.9	5215.7 µg/L	5215.7 ppb	15:55:16
3	Mg 279.077 IEC†	504.1	492.1	5365.3 µg/L	5365.3 ppb	15:55:37
3	Na 589.592 Radial†	36845.9	36027.3	10346 µg/L	10346 ppb	15:55:16
3	Sr 421.552†	82742.2	81570.0	518.29 µg/L	518.29 ppb	15:55:16
3	Sc 361.383	1936153.9	1936153.9	99.627 %		15:56:54
3	Y 371.029	1218038.4	1218038.4	99.124 %		15:56:54
3	Ag 328.068†	55208.1	55469.7	520.75 µg/L	520.75 ppb	15:56:59
3	As 188.979†	218.2	218.4	503.22 µg/L	503.22 ppb	15:57:20
3	B 249.677†	10479.8	10403.8	504.15 µg/L	504.15 ppb	15:56:59
3	Ba 233.527†	17493.1	17573.1	511.47 µg/L	511.47 ppb	15:56:59
3	Be 313.107†	735177.1	734086.7	511.25 µg/L	511.25 ppb	15:56:54
3	Cd 226.502†	17039.2	17238.3	507.35 µg/L	507.35 ppb	15:56:59
3	Co 228.616†	9090.3	9169.3	505.44 µg/L	505.44 ppb	15:56:59
3	Cr 267.716†	21526.2	21689.5	503.40 µg/L	503.40 ppb	15:56:59
3	Cu 324.752†	71149.8	67747.7	510.13 µg/L	510.13 ppb	15:56:59
3	Mn 257.610†	134969.6	135663.8	501.67 µg/L	501.67 ppb	15:56:59
3	Mo 202.031†	3776.2	3773.1	474.11 µg/L	474.11 ppb	15:57:20
3	Ni 231.604†	8388.8	8084.7	508.85 µg/L	508.85 ppb	15:56:59
3	P 214.914†	1227.9	1030.0	2416.5 µg/L	2416.5 ppb	15:57:20
3	Pb 220.353†	1738.0	1688.5	492.48 µg/L	492.48 ppb	15:57:20
3	S 181.975 Axial†	203.8	179.1	1026.6 µg/L	1026.6 ppb	15:57:20
3	Sb 206.836†	469.7	449.1	498.82 µg/L	498.82 ppb	15:57:20
3	Se 196.026†	311.6	300.3	494.12 µg/L	494.12 ppb	15:57:20
3	SiO2†	28373.2	26200.5	5530.2 µg/L	5530.2 ppb	15:56:59
3	Si 251.611†	31034.1	30845.7	2587.2 µg/L	2587.2 ppb	15:56:59
3	Sn 189.927†	843.8	823.5	483.35 µg/L	483.35 ppb	15:57:20
3	Ti 334.940†	205721.0	205716.6	512.71 µg/L	512.71 ppb	15:56:54
3	Tl 190.801†	269.0	293.1	509.25 µg/L	509.25 ppb	15:57:20
3	U 409.014†	5101.5	5353.6	509.82 µg/L	509.82 ppb	15:56:59
3	V 292.402†	40570.0	40843.9	513.52 µg/L	513.52 ppb	15:56:59
3	Zn 213.857†	17932.8	17328.5	501.56 µg/L	501.56 ppb	15:56:59

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1937331.3	99.688 %	0.1056			0.11%
Sc RADIAL	77254.7	101 %	0.6			0.58%
Y 371.029	1219082.9	99.209 %	0.1338			0.13%
Ag 328.068†	56180.6	527.48 µg/L	6.017	527.48 ppb	6.017	1.14%
QC value within limits for Ag 328.068 Recovery = 105.50%						
Al 396.153Radial†	7583.6	5259.0 µg/L	26.45	5259.0 ppb	26.45	0.50%
QC value within limits for Al 396.153Radial Recovery = 105.18%						
As 188.979†	227.0	522.93 µg/L	17.127	522.93 ppb	17.127	3.28%
QC value within limits for As 188.979 Recovery = 104.59%						
B 249.677†	10560.8	511.83 µg/L	7.020	511.83 ppb	7.020	1.37%
QC value within limits for B 249.677 Recovery = 102.37%						
Ba 233.527†	17986.6	523.51 µg/L	10.571	523.51 ppb	10.571	2.02%
QC value within limits for Ba 233.527 Recovery = 104.70%						
Be 313.107†	745871.4	519.46 µg/L	7.229	519.46 ppb	7.229	1.39%
QC value within limits for Be 313.107 Recovery = 103.89%						
Ca 317.933Radial†	6517.7	5132.1 µg/L	45.03	5132.1 ppb	45.03	0.88%
QC value within limits for Ca 317.933Radial Recovery = 102.64%						
Cd 226.502†	17664.9	519.92 µg/L	11.230	519.92 ppb	11.230	2.16%
QC value within limits for Cd 226.502 Recovery = 103.98%						
Co 228.616†	9464.3	521.73 µg/L	14.390	521.73 ppb	14.390	2.76%

QC value within limits for Co 228.616 Recovery = 104.35%							
Cr 267.716†	22544.8	523.24 µg/L	17.280	523.24 ppb	17.280	3.30%	
QC value within limits for Cr 267.716 Recovery = 104.65%							
Cu 324.752†	69548.0	523.67 µg/L	11.779	523.67 ppb	11.779	2.25%	
QC value within limits for Cu 324.752 Recovery = 104.73%							
Fe 238.204 Radial†	372.6	5360.1 µg/L	49.82	5360.1 ppb	49.82	0.93%	
QC value within limits for Fe 238.204 Radial Recovery = 107.20%							
K 766.490 Radial†	7893.3	5239.8 µg/L	32.18	5239.8 ppb	32.18	0.61%	
QC value within limits for K 766.490 Radial Recovery = 104.80%							
Mg 279.077 IEC†	491.3	5357.2 µg/L	55.70	5357.2 ppb	55.70	1.04%	
QC value within limits for Mg 279.077 IEC Recovery = 107.14%							
Mn 257.610†	139623.2	516.30 µg/L	12.765	516.30 ppb	12.765	2.47%	
QC value within limits for Mn 257.610 Recovery = 103.26%							
Mo 202.031†	4065.2	510.80 µg/L	31.778	510.80 ppb	31.778	6.22%	
QC value within limits for Mo 202.031 Recovery = 102.16%							
Na 589.592 Radial†	36038.3	10349 µg/L	16.3	10349 ppb	16.3	0.16%	
QC value within limits for Na 589.592 Radial Recovery = 103.49%							
Ni 231.604†	8316.2	523.41 µg/L	12.688	523.41 ppb	12.688	2.42%	
QC value within limits for Ni 231.604 Recovery = 104.68%							
P 214.914†	1101.9	2587.9 µg/L	148.55	2587.9 ppb	148.55	5.74%	
QC value within limits for P 214.914 Recovery = 103.51%							
Pb 220.353†	1793.2	523.08 µg/L	26.518	523.08 ppb	26.518	5.07%	
QC value within limits for Pb 220.353 Recovery = 104.62%							
S 181.975 Axial†	180.3	1033.5 µg/L	9.04	1033.5 ppb	9.04	0.88%	
QC value within limits for S 181.975 Axial Recovery = 103.35%							
Sb 206.836†	475.9	528.88 µg/L	26.079	528.88 ppb	26.079	4.93%	
QC value within limits for Sb 206.836 Recovery = 105.78%							
Se 196.026†	317.9	521.85 µg/L	25.280	521.85 ppb	25.280	4.84%	
QC value within limits for Se 196.026 Recovery = 104.37%							
SiO2†	26737.3	5643.5 µg/L	99.98	5643.5 ppb	99.98	1.77%	
QC value within limits for SiO2 Recovery = 105.54%							
Si 251.611†	31487.8	2641.1 µg/L	47.45	2641.1 ppb	47.45	1.80%	
QC value within limits for Si 251.611 Recovery = 105.64%							
Sn 189.927†	895.9	525.60 µg/L	36.608	525.60 ppb	36.608	6.96%	
QC value within limits for Sn 189.927 Recovery = 105.12%							
Sr 421.552†	81610.2	518.54 µg/L	0.886	518.54 ppb	0.886	0.17%	
QC value within limits for Sr 421.552 Recovery = 103.71%							
Ti 334.940†	209350.1	521.77 µg/L	7.974	521.77 ppb	7.974	1.53%	
QC value within limits for Ti 334.940 Recovery = 104.35%							
Tl 190.801†	305.0	529.92 µg/L	17.980	529.92 ppb	17.980	3.39%	
QC value within limits for Tl 190.801 Recovery = 105.98%							
U 409.014†	5481.5	522.04 µg/L	10.823	522.04 ppb	10.823	2.07%	
QC value within limits for U 409.014 Recovery = 104.41%							
V 292.402†	42090.8	529.36 µg/L	13.830	529.36 ppb	13.830	2.61%	
QC value within limits for V 292.402 Recovery = 105.87%							
Zn 213.857†	17878.9	517.52 µg/L	13.904	517.52 ppb	13.904	2.69%	
QC value within limits for Zn 213.857 Recovery = 103.50%							
All analyte(s) passed QC.							

Sequence No.: 24

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 1/27/2010 15:57:30

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	74856.5	74856.5	97.4 %		15:58:02
1	Al 396.153Radial†	-29.5	-2.3	-1.6269 µg/L	-1.6269 ppb	15:58:02
1	Ca 317.933Radial†	241.5	-3.8	-3.0311 µg/L	-3.0311 ppb	15:58:22
1	Fe 238.204 Radial†	17.1	1.7	24.563 µg/L	24.563 ppb	15:58:22
1	K 766.490 Radial†	426.1	25.3	16.772 µg/L	16.772 ppb	15:58:02
1	Mg 279.077 IEC†	12.2	4.2	45.510 µg/L	45.510 ppb	15:58:22
1	Na 589.592 Radial†	597.1	67.9	19.486 µg/L	19.486 ppb	15:58:02
1	Sr 421.552†	617.7	76.2	0.4839 µg/L	0.4839 ppb	15:58:02
1	Sc 361.383	1910640.1	1910640.1	98.315 %		15:59:24
1	Y 371.029	1207173.6	1207173.6	98.240 %		15:59:24
1	Ag 328.068†	-125.0	-72.0	-0.6699 µg/L	-0.6699 ppb	15:59:30
1	As 188.979†	-2.3	-2.9	-6.6813 µg/L	-6.6813 ppb	15:59:50
1	B 249.677†	129.2	16.2	0.7763 µg/L	0.7763 ppb	15:59:50
1	Ba 233.527†	-15.2	-0.9	-0.0268 µg/L	-0.0268 ppb	15:59:50
1	Be 313.107†	3950.3	178.6	0.1243 µg/L	0.1243 ppb	15:59:30
1	Cd 226.502†	-111.8	21.8	0.6388 µg/L	0.6388 ppb	15:59:50
1	Co 228.616†	-54.5	-10.4	-0.5774 µg/L	-0.5774 ppb	15:59:50
1	Cr 267.716†	-88.9	-7.6	-0.1770 µg/L	-0.1770 ppb	15:59:50
1	Cu 324.752†	3557.5	-49.7	-0.3703 µg/L	-0.3703 ppb	15:59:30
1	Mn 257.610†	-115.5	72.0	0.2674 µg/L	0.2674 ppb	15:59:50
1	Mo 202.031†	17.3	0.4	0.0502 µg/L	0.0502 ppb	15:59:50
1	Ni 231.604†	342.0	12.5	0.7855 µg/L	0.7855 ppb	15:59:50
1	P 214.914†	219.0	20.3	48.611 µg/L	48.611 ppb	15:59:50
1	Pb 220.353†	64.7	9.9	2.8805 µg/L	2.8805 ppb	15:59:50
1	S 181.975 Axial†	25.7	0.6	3.3311 µg/L	3.3311 ppb	15:59:50
1	Sb 206.836†	23.2	1.2	1.3215 µg/L	1.3215 ppb	15:59:50
1	Se 196.026†	1.0	-11.4	-17.901 µg/L	-17.901 ppb	15:59:50
1	SiO2†	2229.6	-11.0	-2.3166 µg/L	-2.3166 ppb	15:59:30
1	Si 251.611†	320.4	21.4	1.7930 µg/L	1.7930 ppb	15:59:50
1	Sn 189.927†	25.5	2.5	1.4931 µg/L	1.4931 ppb	15:59:50
1	Ti 334.940†	907.5	149.4	0.3689 µg/L	0.3689 ppb	15:59:30
1	Tl 190.801†	-15.9	7.0	11.978 µg/L	11.978 ppb	15:59:50
1	U 409.014†	-240.8	-12.0	-1.1462 µg/L	-1.1462 ppb	15:59:30
1	V 292.402†	-121.7	-1.6	-0.0201 µg/L	-0.0201 ppb	15:59:30
1	Zn 213.857†	677.9	18.2	0.5240 µg/L	0.5240 ppb	15:59:50
2	Sc RADIAL	75081.3	75081.3	97.7 %		15:58:28
2	Al 396.153Radial†	-33.1	-5.9	-4.1185 µg/L	-4.1185 ppb	15:58:28
2	Ca 317.933Radial†	254.0	8.2	6.4765 µg/L	6.4765 ppb	15:58:48
2	Fe 238.204 Radial†	17.5	2.0	29.075 µg/L	29.075 ppb	15:58:48
2	K 766.490 Radial†	376.5	-26.8	-17.766 µg/L	-17.766 ppb	15:58:28
2	Mg 279.077 IEC†	9.2	1.1	12.086 µg/L	12.086 ppb	15:58:48
2	Na 589.592 Radial†	546.7	14.4	4.1480 µg/L	4.1480 ppb	15:58:28
2	Sr 421.552†	586.7	42.6	0.2707 µg/L	0.2707 ppb	15:58:28
2	Sc 361.383	1924955.1	1924955.1	99.051 %		15:59:56
2	Y 371.029	1216395.7	1216395.7	98.991 %		15:59:56
2	Ag 328.068†	-99.5	-45.4	-0.4188 µg/L	-0.4188 ppb	16:00:02
2	As 188.979†	0.9	0.4	0.8560 µg/L	0.8560 ppb	16:00:22
2	B 249.677†	130.2	16.3	0.7761 µg/L	0.7761 ppb	16:00:22
2	Ba 233.527†	-16.2	-1.8	-0.0520 µg/L	-0.0520 ppb	16:00:22
2	Be 313.107†	3857.5	55.0	0.0383 µg/L	0.0383 ppb	16:00:02
2	Cd 226.502†	-119.3	15.1	0.4400 µg/L	0.4400 ppb	16:00:22
2	Co 228.616†	-54.7	-10.2	-0.5625 µg/L	-0.5625 ppb	16:00:22
2	Cr 267.716†	-73.8	8.2	0.1914 µg/L	0.1914 ppb	16:00:22
2	Cu 324.752†	3624.6	-8.9	-0.0626 µg/L	-0.0626 ppb	16:00:02
2	Mn 257.610†	-120.5	67.8	0.2538 µg/L	0.2538 ppb	16:00:22
2	Mo 202.031†	21.6	4.7	0.5861 µg/L	0.5861 ppb	16:00:22
2	Ni 231.604†	330.9	-1.3	-0.0825 µg/L	-0.0825 ppb	16:00:22
2	P 214.914†	228.3	28.0	67.123 µg/L	67.123 ppb	16:00:22
2	Pb 220.353†	68.3	13.0	3.8114 µg/L	3.8114 ppb	16:00:22

2	S 181.975 Axial†	23.6	-1.7	-9.7342 µg/L	-9.7342 ppb	16:00:22
2	Sb 206.836†	28.2	6.0	6.6902 µg/L	6.6902 ppb	16:00:22
2	Se 196.026†	12.7	0.4	0.7010 µg/L	0.7010 ppb	16:00:22
2	SiO2†	2230.2	-27.2	-5.7332 µg/L	-5.7332 ppb	16:00:02
2	Si 251.611†	324.7	23.4	1.9587 µg/L	1.9587 ppb	16:00:22
2	Sn 189.927†	22.8	-0.4	-0.2279 µg/L	-0.2279 ppb	16:00:22
2	Ti 334.940†	790.6	24.5	0.0602 µg/L	0.0602 ppb	16:00:02
2	Tl 190.801†	-20.4	2.5	4.3476 µg/L	4.3476 ppb	16:00:22
2	U 409.014†	-292.1	-61.9	-5.9127 µg/L	-5.9127 ppb	16:00:02
2	V 292.402†	-89.8	31.4	0.3913 µg/L	0.3913 ppb	16:00:02
2	Zn 213.857†	675.9	11.0	0.3204 µg/L	0.3204 ppb	16:00:22
3	Sc RADIAL	74357.9	74357.9	96.8 %		15:58:54
3	Al 396.153Radial†	-2.3	25.6	17.785 µg/L	17.785 ppb	15:58:54
3	Ca 317.933Radial†	253.4	10.2	8.0003 µg/L	8.0003 ppb	15:59:14
3	Fe 238.204 Radial†	18.0	2.7	39.125 µg/L	39.125 ppb	15:59:14
3	K 766.490 Radial†	460.9	64.1	42.561 µg/L	42.561 ppb	15:58:54
3	Mg 279.077 IEC†	8.0	0.0	-0.0003 µg/L	-0.0003 ppb	15:59:14
3	Na 589.592 Radial†	560.8	34.5	9.8953 µg/L	9.8953 ppb	15:58:54
3	Sr 421.552†	579.6	41.1	0.2613 µg/L	0.2613 ppb	15:58:54
3	Sc 361.383	1925562.7	1925562.7	99.082 %		16:00:28
3	Y 371.029	1216342.6	1216342.6	98.986 %		16:00:28
3	Ag 328.068†	-47.5	7.1	0.0696 µg/L	0.0696 ppb	16:00:34
3	As 188.979†	-1.7	-2.3	-5.3299 µg/L	-5.3299 ppb	16:00:54
3	B 249.677†	124.7	10.6	0.4967 µg/L	0.4967 ppb	16:00:54
3	Ba 233.527†	-16.9	-2.5	-0.0724 µg/L	-0.0724 ppb	16:00:54
3	Be 313.107†	3886.7	83.2	0.0578 µg/L	0.0578 ppb	16:00:34
3	Cd 226.502†	-126.5	7.8	0.2255 µg/L	0.2255 ppb	16:00:54
3	Co 228.616†	-57.2	-12.7	-0.7034 µg/L	-0.7034 ppb	16:00:54
3	Cr 267.716†	-64.7	17.5	0.4059 µg/L	0.4059 ppb	16:00:54
3	Cu 324.752†	3564.5	-70.7	-0.5260 µg/L	-0.5260 ppb	16:00:34
3	Mn 257.610†	-125.9	62.4	0.2358 µg/L	0.2358 ppb	16:00:54
3	Mo 202.031†	14.1	-2.9	-0.3658 µg/L	-0.3658 ppb	16:00:54
3	Ni 231.604†	331.6	-0.8	-0.0466 µg/L	-0.0466 ppb	16:00:54
3	P 214.914†	212.4	11.9	28.431 µg/L	28.431 ppb	16:00:54
3	Pb 220.353†	60.9	5.6	1.6305 µg/L	1.6305 ppb	16:00:54
3	S 181.975 Axial†	24.8	-0.5	-2.7257 µg/L	-2.7257 ppb	16:00:54
3	Sb 206.836†	26.4	4.2	4.6696 µg/L	4.6696 ppb	16:00:54
3	Se 196.026†	8.7	-3.7	-5.6371 µg/L	-5.6371 ppb	16:00:54
3	SiO2†	2212.1	-46.2	-9.7437 µg/L	-9.7437 ppb	16:00:34
3	Si 251.611†	324.5	23.0	1.9309 µg/L	1.9309 ppb	16:00:54
3	Sn 189.927†	18.3	-4.9	-2.8611 µg/L	-2.8611 ppb	16:00:54
3	Ti 334.940†	948.4	183.5	0.4577 µg/L	0.4577 ppb	16:00:34
3	Tl 190.801†	-19.5	3.4	5.9174 µg/L	5.9174 ppb	16:00:54
3	U 409.014†	-259.6	-29.0	-2.7779 µg/L	-2.7779 ppb	16:00:34
3	V 292.402†	-113.8	7.2	0.0874 µg/L	0.0874 ppb	16:00:34
3	Zn 213.857†	672.9	7.8	0.2271 µg/L	0.2271 ppb	16:00:54

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1920386.0	98.816 %	0.4346			0.44%
Sc RADIAL	74765.3	97.3 %	0.48			0.50%
Y 371.029	1213303.9	98.739 %	0.4321			0.44%
Ag 328.068†	-36.8	-0.3397 µg/L	0.37605	-0.3397 ppb	0.37605	110.70%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	5.8	4.0133 µg/L	11.99176	4.0133 ppb	11.99176	298.80%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	-1.6	-3.7184 µg/L	4.01876	-3.7184 ppb	4.01876	108.08%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	14.4	0.6830 µg/L	0.16137	0.6830 ppb	0.16137	23.63%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	-1.7	-0.0504 µg/L	0.02284	-0.0504 ppb	0.02284	45.29%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	105.6	0.0735 µg/L	0.04509	0.0735 ppb	0.04509	61.37%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	4.8	3.8152 µg/L	5.97784	3.8152 ppb	5.97784	156.68%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	14.9	0.4348 µg/L	0.20672	0.4348 ppb	0.20672	47.55%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-11.1	-0.6145 µg/L	0.07743	-0.6145 ppb	0.07743	12.60%

Cr	267.716†	6.0	0.1401 µg/L	0.29485	0.1401 ppb	0.29485	210.44%
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu	324.752†	-43.1	-0.3196 µg/L	0.23585	-0.3196 ppb	0.23585	73.79%
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe	238.204 Radial†	2.2	30.921 µg/L	7.4543	30.921 ppb	7.4543	24.11%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K	766.490 Radial†	20.9	13.856 µg/L	30.2691	13.856 ppb	30.2691	218.46%
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg	279.077 IEC†	1.8	19.199 µg/L	23.5744	19.199 ppb	23.5744	122.79%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn	257.610†	67.4	0.2524 µg/L	0.01586	0.2524 ppb	0.01586	6.29%
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo	202.031†	0.7	0.0902 µg/L	0.47722	0.0902 ppb	0.47722	529.29%
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na	589.592 Radial†	38.9	11.176 µg/L	7.7486	11.176 ppb	7.7486	69.33%
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni	231.604†	3.5	0.2188 µg/L	0.49109	0.2188 ppb	0.49109	224.41%
QC value within limits for Ni 231.604 Recovery = Not calculated							
P	214.914†	20.1	48.055 µg/L	19.3523	48.055 ppb	19.3523	40.27%
QC value within limits for P 214.914 Recovery = Not calculated							
Pb	220.353†	9.5	2.7742 µg/L	1.09436	2.7742 ppb	1.09436	39.45%
QC value within limits for Pb 220.353 Recovery = Not calculated							
S	181.975 Axial†	-0.5	-3.0429 µg/L	6.53845	-3.0429 ppb	6.53845	214.87%
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb	206.836†	3.8	4.2271 µg/L	2.71155	4.2271 ppb	2.71155	64.15%
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se	196.026†	-4.9	-7.6122 µg/L	9.45674	-7.6122 ppb	9.45674	124.23%
QC value within limits for Se 196.026 Recovery = Not calculated							
SiO2†		-28.1	-5.9312 µg/L	3.71749	-5.9312 ppb	3.71749	62.68%
QC value within limits for SiO2 Recovery = Not calculated							
Si	251.611†	22.6	1.8942 µg/L	0.08878	1.8942 ppb	0.08878	4.69%
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn	189.927†	-0.9	-0.5320 µg/L	2.19297	-0.5320 ppb	2.19297	412.24%
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr	421.552†	53.3	0.3386 µg/L	0.12592	0.3386 ppb	0.12592	37.19%
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti	334.940†	119.1	0.2956 µg/L	0.20866	0.2956 ppb	0.20866	70.59%
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl	190.801†	4.3	7.4144 µg/L	4.02959	7.4144 ppb	4.02959	54.35%
QC value within limits for Tl 190.801 Recovery = Not calculated							
U	409.014†	-34.3	-3.2789 µg/L	2.42240	-3.2789 ppb	2.42240	73.88%
QC value within limits for U 409.014 Recovery = Not calculated							
V	292.402†	12.4	0.1529 µg/L	0.21341	0.1529 ppb	0.21341	139.62%
QC value within limits for V 292.402 Recovery = Not calculated							
Zn	213.857†	12.4	0.3572 µg/L	0.15182	0.3572 ppb	0.15182	42.51%
QC value within limits for Zn 213.857 Recovery = Not calculated							

All analyte(s) passed QC.

Daily Performance Report

Sample ID: Sample

Sample Date/Time: Thursday, January 21, 2010 10:36:08

Sample Description:

Method File: c:\elandata\Method\daily2.mth

Dataset File: c:\elandata\Dataset\090811\Sample.363

Tuning File: c:\elandata\Tuning\default2.tun

Optimization File: c:\elandata\Optimize\default.dac

Dual Detector Mode: Pulse

Acq. Dead Time(ns): 35

Current Dead Time (ns): 35

Summary

Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
Be	9.0	343.6	343.604	14.571	4.2
Mg	24.0	9404.1	9404.095	121.725	1.3
Co	58.9	28388.0	28387.982	384.685	1.4
Rh	102.9	55192.6	55192.633	867.151	1.6
In	114.9	74748.9	74748.861	679.085	0.9
Pb	208.0	25837.1	25837.144	140.416	0.5
[> Ba	137.9	60754.3	60754.328	702.370	1.2
[Ba++	69.0	999.9	0.016	0.000	3.0
[> Ce	139.9	70737.5	70737.509	557.699	0.8
[CeO	155.9	1463.8	0.021	0.001	2.6
Bkgd	220.0	5.4	5.400	1.084	20.1

Current Optimization File Data

Current Value	Description
0.86	Nebulizer Gas Flow
9.00	Lens Voltage
1000.00	ICP RF Power
-1875.00	Analog Stage Voltage
1100.00	Pulse Stage Voltage
50.00	Discriminator Threshold
-2.00	AC Rod Offset

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	17	8.3	556.0
Co	59	17	9.5	22746.4
In	115	17	11.5	56372.0

ICPMS #4 TUNING REPORT

File Name: default2.tun
File Path: c:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas Peak W
He	3.0	3.0	597	2060	0.716
Be	9.0	9.0	2021	2045	0.762
Mg	24.0	24.0	5683	2075	0.701
Mg	25.0	25.0	5945	2080	0.745
Mg	26.0	26.0	6139	2085	0.692
Co	58.9	58.9	14162	2140	0.675
Rh	102.9	102.9	24869	2230	0.686
In	114.9	114.9	27771	2255	0.702
Ce	139.9	139.9	33843	2310	0.671
Pb	206.0	206.0	49928	2500	0.659
Pb	207.0	206.9	50089	2380	0.677
Pb	208.0	207.9	50424	2570	0.635
U	238.1	238.1	57690	2510	0.684

ICPMS#4 - Summary Report

Sample ID: Blank

Sample Date/Time: Thursday, January 21, 2010 16:19:07

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100121\Blank.046

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7		ug/L		6	
Be	9		ug/L		2	
B	11		ug/L		94	
Na	23		ug/L		19013	
Mg	24		ug/L		2000	
Al	27		ug/L		2667	
P	31		ug/L		1829	
K	39		ug/L		348540	
Ca	43		ug/L		318	
> Sc	45		ug/L		601547	
Ti	47		ug/L		138	
V	51		ug/L		-9795	
Cr	52		ug/L		4845	
Cr	53		ug/L		122985	
Mn	55		ug/L		713	
Fe	57		ug/L		3253	
Co	59		ug/L		71	
Ni	60		ug/L		91	
Cu	63		ug/L		94	
Cu	65		ug/L		101	
Zn	66		ug/L		218	
Zn	67		ug/L		5784	
Zn	68		ug/L		791	
> Ge	74		ug/L		138647	
As	75		ug/L		216	
Se	77		ug/L		5956	
Se	82		ug/L		-14	
Kr	83		ug/L		47	
Sr	88		ug/L		144	
Y	89		ug/L		13	
Zr	90		ug/L		145	
Mo	98		ug/L		30	
Ag	107		ug/L		45	
Cd	111		ug/L		14	
Cd	114		ug/L		18	
> In	115		ug/L		95794	
Sn	120		ug/L		86	
Sb	121		ug/L		128	
Sb	123		ug/L		115	
Ba	135		ug/L		10	
Ba	137		ug/L		15	
Ho	165		ug/L		4	
> Lu	175		ug/L		88751	
Tl	205		ug/L		101	
Pb	208		ug/L		260	
Bi	209		ug/L		22	
Th	232		ug/L		195	
U	238		ug/L		91	

Sample ID: Blank

Report Date/Time: Thursday, January 21, 2010 16:21:55

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	
Be	9Linear Thru Zero	
B	11Linear Thru Zero	
Na	23Linear Thru Zero	
Mg	24Linear Thru Zero	
Al	27Linear Thru Zero	
P	31Linear Thru Zero	
K	39Linear Thru Zero	
Ca	43Linear Thru Zero	
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	
V	51Linear Thru Zero	
Cr	52Linear Thru Zero	
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	
Fe	57Linear Thru Zero	
Co	59Linear Thru Zero	
Ni	60Linear Thru Zero	
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	
Zn	66Linear Thru Zero	
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	
Mo	98Linear Thru Zero	
Ag	107Linear Thru Zero	
Cd	111Linear Thru Zero	
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	
Sb	121Linear Thru Zero	
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	
Pb	208Linear Thru Zero	
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	
U	238Linear Thru Zero	

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45					
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74					
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115					
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175					
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

Sample ID: Blank

Report Date/Time: Thursday, January 21, 2010 16:21:55

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ICPMS#4 - Summary Report

Sample ID: Standard 1

Sample Date/Time: Thursday, January 21, 2010 16:25:18

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100121\Standard 1.047

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	10.000	ug/L	2.206	1059	0.002
Be	9	10.000	ug/L	10.959	344	0.001
B	11	20.000	ug/L	4.911	1041	0.002
Na	23	1000.000	ug/L	9.706	1426939	2.256
Mg	24	1000.000	ug/L	6.079	916540	1.467
Al	27	1000.000	ug/L	3.159	1273002	2.037
P	31	1000.000	ug/L	2.053	62562	0.097
K	39	1000.000	ug/L	5.313	2636595	3.649
Ca	43	1000.000	ug/L	2.356	4711	0.007
> Sc	45		ug/L		623710	623710.053
Ti	47	10.000	ug/L	1.150	2400	0.004
V	51	10.000	ug/L	14.378	12263	0.036
Cr	52	10.000	ug/L	1.496	28904	0.038
Cr	53		ug/L		183438	0.090
Mn	55	10.000	ug/L	2.026	33721	0.053
Fe	57	1000.000	ug/L	1.963	71889	0.110
Co	59	10.000	ug/L	1.395	27366	0.044
Ni	60	10.000	ug/L	1.759	5859	0.009
Cu	63		ug/L		12675	0.020
Cu	65	10.000	ug/L	1.167	6184	0.010
Zn	66	10.000	ug/L	1.579	3205	0.022
Zn	67		ug/L		8710	0.022
Zn	68		ug/L		3068	0.017
> Ge	74		ug/L		136338	136338.031
As	75	10.000	ug/L	6.294	3923	0.027
Se	77		ug/L		10408	0.033
Se	82	10.000	ug/L	2.347	318	0.002
Kr	83		ug/L		44	-0.000
Sr	88	10.000	ug/L	2.332	49270	0.519
Y	89		ug/L		24	0.000
Zr	90	10.000	ug/L	2.175	28063	0.295
Mo	98	10.000	ug/L	1.987	12766	0.135
Ag	107	10.000	ug/L	1.643	21555	0.227
Cd	111	10.000	ug/L	2.539	4856	0.051
Cd	114		ug/L		11789	0.124
> In	115		ug/L		94642	94641.709
Sn	120	10.000	ug/L	3.052	22704	0.239
Sb	121	10.000	ug/L	3.017	16414	0.172
Sb	123		ug/L		12566	0.132
Ba	135		ug/L		5239	0.059
Ba	137	10.000	ug/L	1.746	9079	0.101
Ho	165		ug/L		5	0.000
> Lu	175		ug/L		89319	89318.587
Tl	205	10.000	ug/L	0.330	20553	0.229
Pb	208	10.000	ug/L	0.504	48363	0.539
Bi	209		ug/L		20	-0.000
Th	232	10.000	ug/L	2.531	63351	0.707
U	238	10.000	ug/L	1.230	69157	0.773

Sample ID: Standard 1

Report Date/Time: Thursday, January 21, 2010 16:28:04

Page 1

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45					
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74					
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115					
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175					
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

Sample ID: Standard 1

Report Date/Time: Thursday, January 21, 2010 16:28:04

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ICPMS#4 - Summary Report

Sample ID: Standard 2

Sample Date/Time: Thursday, January 21, 2010 16:31:27

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100121\Standard 2.048

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	100.009	ug/L	7.977	10342	0.017
Be	9	100.063	ug/L	5.137	3553	0.006
B	11	200.062	ug/L	2.632	9580	0.016
Na	23	9998.840	ug/L	2.562	13553220	22.298
Mg	24	10005.340	ug/L	2.880	9412769	15.501
Al	27	10001.891	ug/L	5.761	12608493	20.762
P	31	9996.893	ug/L	1.402	574227	0.943
K	39	9998.241	ug/L	7.113	22122815	35.851
Ca	43	9998.068	ug/L	0.438	42151	0.069
> Sc	45		ug/L		607003	607002.516
Ti	47	99.985	ug/L	2.028	21775	0.036
V	51	99.933	ug/L	6.287	194432	0.337
Cr	52	99.836	ug/L	3.245	204244	0.328
Cr	53		ug/L		188812	0.107
Mn	55	99.976	ug/L	1.020	314189	0.516
Fe	57	9997.943	ug/L	1.735	656556	1.076
Co	59	99.952	ug/L	2.023	253527	0.418
Ni	60	99.965	ug/L	3.016	54255	0.089
Cu	63		ug/L		120197	0.198
Cu	65	99.958	ug/L	1.714	56858	0.094
Zn	66	99.955	ug/L	0.629	28373	0.210
Zn	67		ug/L		13071	0.056
Zn	68		ug/L		21330	0.153
> Ge	74		ug/L		134269	134269.137
As	75	99.887	ug/L	2.568	33024	0.244
Se	77		ug/L		10638	0.036
Se	82	99.959	ug/L	5.242	3129	0.023
Kr	83		ug/L		47	0.000
Sr	88	100.019	ug/L	1.194	477479	5.292
Y	89		ug/L		64	0.001
Zr	90	100.000	ug/L	1.252	266242	2.950
Mo	98	100.011	ug/L	1.400	122836	1.362
Ag	107	100.014	ug/L	1.703	208044	2.306
Cd	111	100.045	ug/L	0.715	48345	0.536
Cd	114		ug/L		114002	1.264
> In	115		ug/L		90199	90199.387
Sn	120	100.011	ug/L	0.940	218217	2.418
Sb	121	100.050	ug/L	1.066	163540	1.812
Sb	123		ug/L		124964	1.384
Ba	135		ug/L		50576	0.581
Ba	137	99.974	ug/L	4.408	86095	0.989
Ho	165		ug/L		7	0.000
> Lu	175		ug/L		87163	87163.166
Tl	205	100.008	ug/L	2.627	201090	2.307
Pb	208	99.980	ug/L	4.539	460084	5.281
Bi	209		ug/L		52	0.000
Th	232	100.030	ug/L	2.062	635260	7.289
U	238	100.008	ug/L	3.201	678899	7.792

Sample ID: Standard 2

Report Date/Time: Thursday, January 21, 2010 16:34:13

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	0.9999
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	0.9999
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45					
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74					
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115					
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175					
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

Sample ID: Standard 2

Report Date/Time: Thursday, January 21, 2010 16:34:13

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ICPMS#4 - Summary Report

Sample ID: QC Std 1

Sample Date/Time: Thursday, January 21, 2010 16:37:37

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100121\QC Std 1.049

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	50.166	ug/L	6.296	5263	0.009
Be	9	49.360	ug/L	1.132	1778	0.003
B	11	100.874	ug/L	2.895	4944	0.008
Na	23	5160.247	ug/L	5.010	7099079	11.508
Mg	24	5127.241	ug/L	6.067	4887952	7.944
Al	27	5254.339	ug/L	8.024	6713864	10.907
P	31	4944.271	ug/L	2.325	288813	0.466
K	39	4785.767	ug/L	2.660	10915093	17.160
Ca	43	4881.756	ug/L	0.889	21027	0.034
> Sc	45		ug/L		615216	615215.736
Ti	47	49.182	ug/L	0.732	10929	0.018
V	51	50.534	ug/L	6.859	94703	0.170
Cr	52	51.428	ug/L	3.155	109045	0.169
Cr	53		ug/L		169043	0.070
Mn	55	51.985	ug/L	0.228	165920	0.269
Fe	57	4982.647	ug/L	1.723	333277	0.536
Co	59	49.963	ug/L	2.511	128461	0.209
Ni	60	51.402	ug/L	2.736	28322	0.046
Cu	63		ug/L		61374	0.100
Cu	65	51.136	ug/L	1.936	29531	0.048
Zn	66	54.331	ug/L	2.464	15370	0.114
Zn	67		ug/L		10485	0.037
Zn	68		ug/L		11301	0.079
> Ge	74		ug/L		133001	133000.636
As	75	49.437	ug/L	1.385	16296	0.121
Se	77		ug/L		8931	0.024
Se	82	50.787	ug/L	1.695	1569	0.012
Kr	83		ug/L		41	-0.000
Sr	88	50.276	ug/L	1.281	246066	2.660
Y	89		ug/L		28	0.000
Zr	90	48.268	ug/L	2.615	131794	1.424
Mo	98	49.031	ug/L	1.044	61745	0.668
Ag	107	50.253	ug/L	3.169	107140	1.159
Cd	111	49.889	ug/L	1.263	24720	0.267
Cd	114		ug/L		58672	0.634
> In	115		ug/L		92456	92455.543
Sn	120	49.233	ug/L	2.460	110132	1.190
Sb	121	48.536	ug/L	3.015	81376	0.879
Sb	123		ug/L		62630	0.676
Ba	135		ug/L		26144	0.300
Ba	137	51.478	ug/L	2.441	44337	0.509
Ho	165		ug/L		14	0.000
> Lu	175		ug/L		87088	87088.198
Tl	205	48.748	ug/L	1.523	98030	1.125
Pb	208	51.659	ug/L	2.222	237850	2.729
Bi	209		ug/L		57	0.000
Th	232	50.889	ug/L	2.611	323124	3.708
U	238	52.515	ug/L	0.780	356450	4.092

Sample ID: QC Std 1

Report Date/Time: Thursday, January 21, 2010 16:40:23

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	0.9999
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	0.9999
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7	100.333				
Be	9	98.720				
B	11	100.874				
Na	23	103.205				
Mg	24	102.545				
Al	27	104.046				
P	31	98.885				
K	39	95.715				
Ca	43	97.635				
> Sc	45		102.3			
Ti	47	98.363				
V	51	101.069				
Cr	52	102.857				
Cr	53					
Mn	55	103.969				
Fe	57	99.653				
Co	59	99.926				
Ni	60	102.804				
Cu	63					
Cu	65	102.272				
Zn	66	108.662				
Zn	67					
Zn	68					
> Ge	74		95.9			
As	75	98.874				
Se	77					
Se	82	101.573				
Kr	83					
Sr	88	100.552				
Y	89					
Zr	90	96.536				
Mo	98	98.061				
Ag	107	100.506				
Cd	111	99.778				
Cd	114					
> In	115		96.5			
Sn	120	98.467				
Sb	121	97.072				
Sb	123					
Ba	135					
Ba	137	102.957				
Ho	165					
> Lu	175		98.1			
Tl	205	97.495				
Pb	208	103.318				
Bi	209					
Th	232	101.779				
U	238	105.030				

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 1

Report Date/Time: Thursday, January 21, 2010 16:40:23

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ICPMS#4 - Summary Report

Sample ID: QC Std 2

Sample Date/Time: Thursday, January 21, 2010 16:43:49

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100121\QC Std 2.050

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.005	ug/L	481.407	6	0.000
Be	9	0.026	ug/L	220.021	3	0.000
B	11	2.308	ug/L	37.667	207	0.000
Na	23	-3.010	ug/L	85.418	15342	-0.007
Mg	24	2.402	ug/L	134.404	4334	0.004
Al	27	0.736	ug/L	165.163	3667	0.002
P	31	-1.100	ug/L	134.640	1810	-0.000
K	39	4.440	ug/L	86.431	366989	0.016
Ca	43	-2.652	ug/L	175.679	315	-0.000
> Sc	45		ug/L		616492	616491.896
Ti	47	-0.000	ug/L	15418.158	142	-0.000
V	51	4.184	ug/L	89.009	-1336	0.014
Cr	52	-0.737	ug/L	9.267	3471	-0.002
Cr	53		ug/L		111900	-0.023
Mn	55	0.001	ug/L	1718.659	734	0.000
Fe	57	-5.037	ug/L	54.121	2999	-0.001
Co	59	0.022	ug/L	41.364	130	0.000
Ni	60	0.023	ug/L	126.281	106	0.000
Cu	63		ug/L		118	0.000
Cu	65	-0.007	ug/L	181.081	99	-0.000
Zn	66	0.012	ug/L	564.327	218	0.000
Zn	67		ug/L		5699	0.000
Zn	68		ug/L		713	-0.000
> Ge	74		ug/L		136315	136315.374
As	75	-0.794	ug/L	89.483	-52	-0.002
Se	77		ug/L		4652	-0.009
Se	82	0.182	ug/L	74.082	-8	0.000
Kr	83		ug/L		41	-0.000
Sr	88	0.020	ug/L	68.442	239	0.001
Y	89		ug/L		19	0.000
Zr	90	0.127	ug/L	24.222	489	0.004
Mo	98	0.050	ug/L	3.447	92	0.001
Ag	107	0.033	ug/L	20.079	115	0.001
Cd	111	0.031	ug/L	30.930	29	0.000
Cd	114		ug/L		55	0.000
> In	115		ug/L		93151	93151.113
Sn	120	0.109	ug/L	6.460	329	0.003
Sb	121	0.678	ug/L	13.124	1267	0.012
Sb	123		ug/L		967	0.009
Ba	135		ug/L		23	0.000
Ba	137	0.021	ug/L	49.491	34	0.000
Ho	165		ug/L		3	-0.000
> Lu	175		ug/L		89444	89444.116
Tl	205	0.168	ug/L	9.189	448	0.004
Pb	208	0.026	ug/L	58.792	382	0.001
Bi	209		ug/L		17	-0.000
Th	232	0.157	ug/L	14.734	1218	0.011
U	238	0.023	ug/L	42.629	253	0.002

Sample ID: QC Std 2

Report Date/Time: Thursday, January 21, 2010 16:46:37

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	0.9999
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	0.9999
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		102.5			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		98.3			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		97.2			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		100.8			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 2

Report Date/Time: Thursday, January 21, 2010 16:46:37

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ICPMS#4 - Summary Report

Sample ID: QC Std 3

Sample Date/Time: Thursday, January 21, 2010 16:50:01

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100121\QC Std 3.051

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	10.987	ug/L	8.141	1174	0.002
Be	9	0.545	ug/L	12.104	22	0.000
B	11	16.724	ug/L	6.155	913	0.001
Na	23	266.366	ug/L	16.892	391041	0.594
Mg	24	14.092	ug/L	45.881	15676	0.022
Al	27	26.758	ug/L	35.991	37386	0.056
P	31	70.750	ug/L	2.221	6069	0.007
K	39	290.675	ug/L	7.630	1013081	1.042
Ca	43	244.005	ug/L	3.262	1381	0.002
Sc	45		ug/L		624693	624692.835
Ti	47	8.935	ug/L	1.294	2134	0.003
V	51	13.321	ug/L	14.619	17888	0.045
Cr	52	11.236	ug/L	2.687	28123	0.037
Cr	53		ug/L		171265	0.070
Mn	55	5.767	ug/L	0.673	19350	0.030
Fe	57	105.939	ug/L	0.214	10502	0.011
Co	59	1.079	ug/L	3.251	2891	0.005
Ni	60	2.178	ug/L	4.084	1309	0.002
Cu	63		ug/L		1508	0.002
Cu	65	1.126	ug/L	4.049	762	0.001
Zn	66	11.193	ug/L	3.503	3395	0.023
Zn	67		ug/L		8776	0.023
Zn	68		ug/L		3229	0.018
Ge	74		ug/L		135474	135473.865
As	75	6.244	ug/L	23.753	2275	0.015
Se	77		ug/L		8856	0.022
Se	82	5.935	ug/L	1.114	174	0.001
Kr	83		ug/L		42	-0.000
Sr	88	11.031	ug/L	4.370	54793	0.584
Y	89		ug/L		17	0.000
Zr	90	2.162	ug/L	6.456	6113	0.064
Mo	98	0.533	ug/L	2.723	709	0.007
Ag	107	1.021	ug/L	4.131	2251	0.024
Cd	111	1.110	ug/L	8.548	570	0.006
Cd	114		ug/L		1272	0.013
In	115		ug/L		93694	93693.910
Sn	120	5.430	ug/L	3.429	12383	0.131
Sb	121	3.450	ug/L	4.950	5978	0.062
Sb	123		ug/L		4594	0.048
Ba	135		ug/L		1106	0.012
Ba	137	2.146	ug/L	5.723	1883	0.021
Ho	165		ug/L		4	-0.000
Lu	175		ug/L		88089	88088.701
Tl	205	1.078	ug/L	0.147	2291	0.025
Pb	208	2.171	ug/L	2.162	10358	0.115
Bi	209		ug/L		14	-0.000
Th	232	1.135	ug/L	2.981	7476	0.083
U	238	0.226	ug/L	3.453	1639	0.018

Sample ID: QC Std 3

Report Date/Time: Thursday, January 21, 2010 16:52:47

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	0.9999
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	0.9999
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7	109.867				
Be	9	108.953				
B	11	111.496				
Na	23	106.546				
Mg	24	93.944				
Al	27	89.195				
P	31	141.500				
K	39	96.892				
Ca	43	122.002				
> Sc	45		103.8			
Ti	47	89.349				
V	51	133.212				
Cr	52	112.361				
Cr	53					
Mn	55	115.344				
Fe	57	105.939				
Co	59	107.948				
Ni	60	108.902				
Cu	63					
Cu	65	112.575				
Zn	66	111.929				
Zn	67					
Zn	68					
> Ge	74		97.7			
As	75	124.887				
Se	77					
Se	82	118.697				
Kr	83					
Sr	88	110.307				
Y	89					
Zr	90	108.094				
Mo	98	106.570				
Ag	107	102.125				
Cd	111	110.988				
Cd	114					
> In	115		97.8			
Sn	120	108.605				
Sb	121	114.993				
Sb	123					
Ba	135					
Ba	137	107.308				
Ho	165					
> Lu	175		99.3			
Tl	205	107.782				
Pb	208	108.563				
Bi	209					
Th	232	113.473				
U	238	112.766				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 3	P	31CRDL is out of limits
QC Std 3	V	51CRDL is out of limits

QC Action

Sample ID: QC Std 3

Report Date/Time: Thursday, January 21, 2010 16:52:47

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QC Action Line: Continue

ICPMS#4 - Summary Report

Sample ID: QC Std 4

Sample Date/Time: Thursday, January 21, 2010 16:56:12

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100121\QC Std 4.052

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.071	ug/L	20.910	13	0.000
Be	9	0.100	ug/L	53.883	6	0.000
B	11	1.554	ug/L	36.454	172	0.000
Na	23	104638.312	ug/L	2.976	145151537	233.352
Mg	24	102272.846	ug/L	4.280	98480086	158.452
Al	27	96552.723	ug/L	8.023	124457491	200.428
P	31	100077.550	ug/L	5.715	5865760	9.440
K	39	96452.692	ug/L	11.991	214813705	345.853
Ca	43	95350.331	ug/L	5.011	408648	0.657
Sc	45		ug/L		622290	622289.708
Ti	47	1374.467	ug/L	5.413	304551	0.490
V	51	1.551	ug/L	128.917	-7001	0.005
Cr	52	3.502	ug/L	7.354	12166	0.012
Cr	53		ug/L		127300	0.001
Mn	55	5.517	ug/L	4.349	18446	0.028
Fe	57	98635.648	ug/L	3.862	6602228	10.617
Co	59	0.329	ug/L	5.090	926	0.001
Ni	60	3.789	ug/L	6.762	2194	0.003
Cu	63		ug/L		2365	0.004
Cu	65	2.911	ug/L	6.626	1795	0.003
Zn	66	5.040	ug/L	2.739	1514	0.011
Zn	67		ug/L		7398	0.018
Zn	68		ug/L		884	0.001
Ge	74		ug/L		124628	124627.541
As	75	-0.594	ug/L	50.239	13	-0.001
Se	77		ug/L		7052	0.014
Se	82	-0.780	ug/L	95.692	-36	-0.000
Kr	83		ug/L		100	0.000
Sr	88	1.152	ug/L	3.323	5401	0.061
Y	89		ug/L		162	0.002
Zr	90	0.563	ug/L	44.528	1563	0.017
Mo	98	2120.823	ug/L	0.938	2497162	28.874
Ag	107	0.079	ug/L	15.504	198	0.002
Cd	111	0.456	ug/L	54.573	225	0.002
Cd	114		ug/L		3845	0.044
In	115		ug/L		86491	86490.923
Sn	120	0.214	ug/L	3.052	525	0.005
Sb	121	0.351	ug/L	12.604	664	0.006
Sb	123		ug/L		547	0.005
Ba	135		ug/L		336	0.004
Ba	137	0.661	ug/L	7.737	572	0.007
Ho	165		ug/L		237	0.003
Lu	175		ug/L		85226	85225.650
Tl	205	0.031	ug/L	11.512	158	0.001
Pb	208	0.159	ug/L	4.016	965	0.008
Bi	209		ug/L		145	0.001
Th	232	0.139	ug/L	26.190	1051	0.010
U	238	-0.008	ug/L	11.232	36	-0.001

Sample ID: QC Std 4

Report Date/Time: Thursday, January 21, 2010 16:58:58

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	0.9999
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	0.9999
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23	104.638				
Mg	24	102.273				
Al	27	96.553				
P	31	100.078				
K	39	96.453				
Ca	43	95.350				
Sc	45		103.4			
Ti	47	68.723				
V	51					
Cr	52	94.658				
Cr	53					
Mn	55	95.123				
Fe	57	98.636				
Co	59	131.422				
Ni	60	140.318				
Cu	63					
Cu	65	100.395				
Zn	66	139.993				
Zn	67					
Zn	68					
Ge	74		89.9			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88	96.004				
Y	89					
Zr	90					
Mo	98	106.041				
Ag	107					
Cd	111	113.977				
Cd	114					
In	115		90.3			
Sn	120					
Sb	121	350.588				
Sb	123					
Ba	135					
Ba	137	98.699				
Ho	165					
Lu	175		96.0			
Tl	205					
Pb	208	79.394				
Bi	209					
Th	232					
U	238					

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 4	Ti	47ICSA is out of limits

QC Action

QC Action Line: Continue

Sample ID: QC Std 4

Report Date/Time: Thursday, January 21, 2010 16:58:58

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ICPMS#4 - Summary Report

Sample ID: QC Std 5

Sample Date/Time: Thursday, January 21, 2010 17:02:23

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100121\QC Std 5.053

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	20.407	ug/L	4.806	2111	0.003
Be	9	20.733	ug/L	3.617	736	0.001
B	11	21.751	ug/L	4.292	1123	0.002
Na	23	109458.967	ug/L	7.439	147740809	244.102
Mg	24	106601.738	ug/L	3.262	99984875	165.159
Al	27	105530.238	ug/L	7.065	132578122	219.064
P	31	105255.531	ug/L	1.593	6012873	9.928
K	39	98736.788	ug/L	4.631	214813705	354.044
Ca	43	98591.145	ug/L	1.022	411820	0.680
Sc	45		ug/L		605539	605538.887
Ti	47	1404.449	ug/L	0.730	303357	0.501
V	51	20.038	ug/L	7.648	31046	0.068
Cr	52	22.901	ug/L	2.255	50499	0.075
Cr	53		ug/L		119712	-0.007
Mn	55	25.061	ug/L	1.006	79096	0.129
Fe	57	102110.777	ug/L	1.120	6659360	10.991
Co	59	19.037	ug/L	0.946	48230	0.080
Ni	60	21.850	ug/L	1.424	11903	0.020
Cu	63		ug/L		23424	0.039
Cu	65	20.712	ug/L	2.529	11832	0.019
Zn	66	24.151	ug/L	3.487	6593	0.051
Zn	67		ug/L		7621	0.019
Zn	68		ug/L		4442	0.029
Ge	74		ug/L		126194	126193.903
As	75	22.234	ug/L	7.290	7059	0.054
Se	77		ug/L		7045	0.013
Se	82	22.269	ug/L	8.668	645	0.005
Kr	83		ug/L		92	0.000
Sr	88	21.923	ug/L	3.099	100624	1.160
Y	89		ug/L		188	0.002
Zr	90	21.437	ug/L	1.531	54945	0.632
Mo	98	2150.540	ug/L	0.813	2537939	29.279
Ag	107	18.913	ug/L	4.549	37812	0.436
Cd	111	19.702	ug/L	4.173	9157	0.106
Cd	114		ug/L		24328	0.281
In	115		ug/L		86680	86679.549
Sn	120	20.098	ug/L	1.730	42191	0.486
Sb	121	21.211	ug/L	3.859	33390	0.384
Sb	123		ug/L		25482	0.293
Ba	135		ug/L		9979	0.119
Ba	137	20.588	ug/L	1.697	17094	0.204
Ho	165		ug/L		248	0.003
Lu	175		ug/L		83905	83904.860
Tl	205	17.621	ug/L	1.210	34203	0.407
Pb	208	18.672	ug/L	1.798	82986	0.986
Bi	209		ug/L		194	0.002
Th	232	19.899	ug/L	0.856	121847	1.450
U	238	20.103	ug/L	0.752	131511	1.566

Sample ID: QC Std 5

Report Date/Time: Thursday, January 21, 2010 17:05:10

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	0.9999
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	0.9999
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7	102.036				
Be	9	103.663				
B	11	108.756				
Na	23	109.459				
Mg	24	106.602				
Al	27	105.530				
P	31	105.256				
K	39	98.737				
Ca	43	98.591				
> Sc	45		100.7			
Ti	47	70.222				
V	51	100.189				
Cr	52	96.627				
Cr	53					
Mn	55	97.136				
Fe	57	102.111				
Co	59	94.011				
Ni	60	96.255				
Cu	63					
Cu	65	90.443				
Zn	66	102.335				
Zn	67					
Zn	68					
> Ge	74		91.0			
As	75	111.172				
Se	77					
Se	82	111.346				
Kr	83					
Sr	88	103.411				
Y	89					
Zr	90	107.186				
Mo	98	107.527				
Ag	107	94.564				
Cd	111	96.579				
Cd	114					
> In	115		90.5			
Sn	120	100.488				
Sb	121	105.526				
Sb	123					
Ba	135					
Ba	137	99.605				
Ho	165					
> Lu	175		94.5			
Tl	205	88.107				
Pb	208	92.434				
Bi	209					
Th	232	99.495				
U	238	100.514				

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message
 QC Std 5 Ti 47IC5AB is out of limits

QC Action

QC Action Line: Continue

ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Thursday, January 21, 2010 17:08:35

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100121\QC Std 6.054

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	52.500	ug/L	6.329	5449	0.009
Be	9	52.128	ug/L	5.546	1858	0.003
B	11	103.750	ug/L	2.482	5029	0.008
Na	23	5664.262	ug/L	4.806	7708320	12.632
Mg	24	5303.065	ug/L	4.517	5002901	8.216
Al	27	5224.785	ug/L	5.664	6603529	10.846
P	31	5193.470	ug/L	1.947	300096	0.490
K	39	4851.322	ug/L	10.335	10935577	17.396
Ca	43	5006.464	ug/L	1.357	21335	0.035
> Sc	45		ug/L		608934	608934.195
Ti	47	50.399	ug/L	2.100	11080	0.018
V	51	49.306	ug/L	6.842	91247	0.166
Cr	52	50.728	ug/L	2.057	106525	0.167
Cr	53		ug/L		140332	0.026
Mn	55	51.481	ug/L	2.875	162600	0.266
Fe	57	4999.119	ug/L	1.960	330910	0.538
Co	59	49.678	ug/L	2.106	126417	0.208
Ni	60	50.652	ug/L	2.659	27622	0.045
Cu	63		ug/L		61254	0.100
Cu	65	51.083	ug/L	2.361	29195	0.048
Zn	66	53.238	ug/L	2.083	14984	0.112
Zn	67		ug/L		9833	0.033
Zn	68		ug/L		11038	0.078
> Ge	74		ug/L		132261	132261.119
As	75	48.873	ug/L	2.083	16023	0.120
Se	77		ug/L		7028	0.010
Se	82	51.204	ug/L	3.754	1573	0.012
Kr	83		ug/L		39	-0.000
Sr	88	50.110	ug/L	3.705	242761	2.651
Y	89		ug/L		23	0.000
Zr	90	49.067	ug/L	5.247	132585	1.448
Mo	98	49.562	ug/L	1.830	61813	0.675
Ag	107	49.480	ug/L	3.282	104443	1.141
Cd	111	49.069	ug/L	3.478	24065	0.263
Cd	114		ug/L		56875	0.621
> In	115		ug/L		91579	91578.535
Sn	120	48.686	ug/L	4.433	107795	1.177
Sb	121	47.990	ug/L	6.449	79606	0.869
Sb	123		ug/L		61101	0.667
Ba	135		ug/L		25655	0.303
Ba	137	51.823	ug/L	1.398	43370	0.512
Ho	165		ug/L		9	0.000
> Lu	175		ug/L		84616	84615.721
Tl	205	48.034	ug/L	2.090	93850	1.108
Pb	208	50.739	ug/L	1.420	226994	2.680
Bi	209		ug/L		56	0.000
Th	232	50.216	ug/L	1.052	309833	3.659
U	238	51.329	ug/L	1.986	338453	3.999

Sample ID: QC Std 6

Report Date/Time: Thursday, January 21, 2010 17:11:22

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	0.9999
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	0.9999
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7	104.999				
Be	9	104.255				
B	11	103.750				
Na	23	113.285				
Mg	24	106.061				
Al	27	103.461				
P	31	103.869				
K	39	97.026				
Ca	43	100.129				
> Sc	45		101.2			
Ti	47	100.798				
V	51	98.612				
Cr	52	101.456				
Cr	53					
Mn	55	102.962				
Fe	57	99.982				
Co	59	99.356				
Ni	60	101.305				
Cu	63					
Cu	65	102.165				
Zn	66	106.475				
Zn	67					
Zn	68					
> Ge	74		95.4			
As	75	97.746				
Se	77					
Se	82	102.408				
Kr	83					
Sr	88	100.220				
Y	89					
Zr	90	98.134				
Mo	98	99.125				
Ag	107	98.960				
Cd	111	98.139				
Cd	114					
> In	115		95.6			
Sn	120	97.372				
Sb	121	95.980				
Sb	123					
Ba	135					
Ba	137	103.645				
Ho	165					
> Lu	175		95.3			
Tl	205	96.069				
Pb	208	101.478				
Bi	209					
Th	232	100.432				
U	238	102.657				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 6	Na	23CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

Sample ID: QC Std 6

Report Date/Time: Thursday, January 21, 2010 17:11:22

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ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Thursday, January 21, 2010 17:14:48

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100121\QC Std 7.055

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.014	ug/L	217.806	7	0.000
Be	9	0.000	ug/L	10121.162	2	0.000
B	11	1.453	ug/L	32.573	161	0.000
Na	23	6.881	ug/L	39.148	28028	0.015
Mg	24	3.617	ug/L	95.604	5335	0.006
Al	27	1.902	ug/L	85.345	5001	0.004
P	31	1.323	ug/L	43.585	1890	0.000
K	39	-8.607	ug/L	109.641	327384	-0.031
Ca	43	15.006	ug/L	72.348	377	0.000
> Sc	45		ug/L		596896	596896.040
Ti	47	0.317	ug/L	13.730	205	0.000
V	51	2.215	ug/L	106.214	-5258	0.007
Cr	52	-1.140	ug/L	4.285	2569	-0.004
Cr	53		ug/L		89807	-0.054
Mn	55	-0.033	ug/L	60.051	607	-0.000
Fe	57	-5.651	ug/L	30.764	2865	-0.001
Co	59	0.008	ug/L	55.135	89	0.000
Ni	60	-0.001	ug/L	2575.167	89	-0.000
Cu	63		ug/L		102	0.000
Cu	65	-0.008	ug/L	129.435	96	-0.000
Zn	66	0.045	ug/L	144.291	228	0.000
Zn	67		ug/L		5109	-0.004
Zn	68		ug/L		578	-0.001
> Ge	74		ug/L		136478	136477.539
As	75	-0.427	ug/L	127.444	71	-0.001
Se	77		ug/L		3373	-0.018
Se	82	0.235	ug/L	65.040	-7	0.000
Kr	83		ug/L		39	-0.000
Sr	88	0.001	ug/L	380.862	144	0.000
Y	89		ug/L		10	-0.000
Zr	90	0.096	ug/L	30.896	398	0.003
Mo	98	0.202	ug/L	10.621	279	0.003
Ag	107	0.022	ug/L	30.200	89	0.001
Cd	111	-0.003	ug/L	378.638	12	-0.000
Cd	114		ug/L		32	0.000
> In	115		ug/L		91343	91342.632
Sn	120	0.089	ug/L	16.775	278	0.002
Sb	121	0.544	ug/L	19.356	1023	0.010
Sb	123		ug/L		825	0.008
Ba	135		ug/L		20	0.000
Ba	137	0.013	ug/L	12.436	26	0.000
Ho	165		ug/L		5	0.000
> Lu	175		ug/L		86913	86913.242
Tl	205	0.181	ug/L	18.253	462	0.004
Pb	208	0.006	ug/L	14.283	284	0.000
Bi	209		ug/L		16	-0.000
Th	232	0.095	ug/L	25.496	788	0.007
U	238	0.015	ug/L	23.172	189	0.001

Sample ID: QC Std 7

Report Date/Time: Thursday, January 21, 2010 17:17:36

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	0.9999
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	0.9999
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		99.2			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		98.4			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		95.4			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		97.9			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 7

Report Date/Time: Thursday, January 21, 2010 17:17:36

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ICPMS#4 - Summary Report

Sample ID: QC Std 10

Sample Date/Time: Thursday, January 21, 2010 17:20:59

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100121\QC Std 10.056

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	986.416	ug/L	4.730	97545	0.168
Be	9	1017.755	ug/L	1.824	34547	0.060
B	11	0.644	ug/L	50.030	120	0.000
Na	23	50949.951	ug/L	3.286	65950279	113.622
Mg	24	50589.865	ug/L	7.212	45478070	78.379
Al	27	49840.269	ug/L	7.221	60022053	103.460
P	31	24189.023	ug/L	2.853	1325686	2.282
K	39	49170.379	ug/L	4.389	102631133	176.312
Ca	43	47873.183	ug/L	2.411	191797	0.330
> Sc	45		ug/L		580372	580372.040
Ti	47	43.123	ug/L	2.849	9055	0.015
V	51	989.086	ug/L	2.813	1924415	3.333
Cr	52	917.879	ug/L	1.458	1757253	3.020
Cr	53		ug/L		329517	0.363
Mn	55	1006.444	ug/L	1.961	3017348	5.198
Fe	57	51679.946	ug/L	2.514	3231164	5.563
Co	59	996.950	ug/L	1.890	2416830	4.165
Ni	60	931.323	ug/L	1.050	482615	0.831
Cu	63		ug/L		1026161	1.768
Cu	65	904.430	ug/L	1.910	491093	0.846
Zn	66	2410.918	ug/L	1.774	630047	5.059
Zn	67		ug/L		105719	0.808
Zn	68		ug/L		446374	3.580
> Ge	74		ug/L		124510	124510.199
As	75	934.707	ug/L	1.850	285028	2.287
Se	77		ug/L		16557	0.090
Se	82	491.402	ug/L	1.356	14323	0.115
Kr	83		ug/L		59	0.000
Sr	88	1064.503	ug/L	1.627	4641965	56.321
Y	89		ug/L		165	0.002
Zr	90	509.244	ug/L	3.134	1238193	15.025
Mo	98	1007.727	ug/L	2.594	1130585	13.720
Ag	107	242.967	ug/L	0.561	461751	5.602
Cd	111	977.194	ug/L	3.441	431255	5.234
Cd	114		ug/L		1003911	12.184
> In	115		ug/L		82428	82427.976
Sn	120	983.643	ug/L	0.634	1960494	23.784
Sb	121	247.586	ug/L	2.253	369647	4.484
Sb	123		ug/L		289128	3.507
Ba	135		ug/L		463771	5.708
Ba	137	969.923	ug/L	0.615	779168	9.591
Ho	165		ug/L		77	0.001
> Lu	175		ug/L		81241	81240.829
Tl	205	464.332	ug/L	1.866	870321	10.712
Pb	208	4955.987	ug/L	1.353	21265558	261.768
Bi	209		ug/L		432	0.005
Th	232	2501.733	ug/L	1.708	14810682	182.297
U	238	5194.884	ug/L	1.491	32884935	404.779

Sample ID: QC Std 10

Report Date/Time: Thursday, January 21, 2010 17:23:45

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	0.9999
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	0.9999
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7	98.642				
Be	9	101.775				
B	11					
Na	23	101.900				
Mg	24	101.180				
Al	27	99.681				
P	31	96.756				
K	39	98.341				
Ca	43	95.746				
> Sc	45		96.5			
Ti	47					
V	51	98.909				
Cr	52	91.788				
Cr	53					
Mn	55	100.644				
Fe	57	103.360				
Co	59	99.695				
Ni	60	93.132				
Cu	63					
Cu	65	90.443				
Zn	66	96.437				
Zn	67					
Zn	68					
> Ge	74		89.8			
As	75	93.471				
Se	77					
Se	82	98.280				
Kr	83					
Sr	88	106.450				
Y	89					
Zr	90	101.849				
Mo	98	100.773				
Ag	107	97.187				
Cd	111	97.719				
Cd	114					
> In	115		86.0			
Sn	120	98.364				
Sb	121	99.034				
Sb	123					
Ba	135					
Ba	137	96.992				
Ho	165					
> Lu	175		91.5			
Tl	205	92.866				
Pb	208	99.120				
Bi	209					
Th	232	100.069				
U	238	103.898				

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 10

Report Date/Time: Thursday, January 21, 2010 17:23:45

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ICPMS#4 - Summary Report

Sample ID: QC Std 11

Sample Date/Time: Thursday, January 21, 2010 17:27:09

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100121\QC Std 11.057

Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li 7	50.773	ug/L	3.930	5188	0.009
Be 9	51.668	ug/L	2.172	1813	0.003
B 11	99.182	ug/L	2.739	4735	0.008
Na 23	5196.987	ug/L	2.404	6963428	11.590
Mg 24	5395.506	ug/L	3.474	5010739	8.359
Al 27	5348.881	ug/L	5.893	6655938	11.103
P 31	5039.787	ug/L	2.358	286657	0.475
K 39	4943.378	ug/L	5.296	10970692	17.726
Ca 43	4892.770	ug/L	1.028	20526	0.034
> Sc 45		ug/L		599211	599211.026
Ti 47	48.556	ug/L	1.395	10511	0.017
V 51	47.268	ug/L	8.029	85646	0.159
Cr 52	48.366	ug/L	1.383	100180	0.159
Cr 53		ug/L		136150	0.023
Mn 55	51.960	ug/L	1.626	161526	0.268
Fe 57	5031.187	ug/L	2.692	327750	0.542
Co 59	50.536	ug/L	2.796	126564	0.211
Ni 60	50.949	ug/L	2.446	27344	0.045
Cu 63		ug/L		59777	0.100
Cu 65	51.067	ug/L	1.610	28726	0.048
Zn 66	54.199	ug/L	5.258	14954	0.114
Zn 67		ug/L		9679	0.033
Zn 68		ug/L		11115	0.080
> Ge 74		ug/L		129784	129784.058
As 75	49.063	ug/L	4.669	15787	0.120
Se 77		ug/L		6683	0.009
Se 82	52.534	ug/L	2.796	1583	0.012
Kr 83		ug/L		46	0.000
Sr 88	49.141	ug/L	0.602	234880	2.600
Y 89		ug/L		23	0.000
Zr 90	49.753	ug/L	2.318	132670	1.468
Mo 98	49.355	ug/L	2.888	60690	0.672
Ag 107	49.756	ug/L	3.039	103599	1.147
Cd 111	47.737	ug/L	2.592	23097	0.256
Cd 114		ug/L		55389	0.613
> In 115		ug/L		90290	90290.180
Sn 120	51.473	ug/L	3.982	112432	1.245
Sb 121	51.211	ug/L	2.637	83846	0.927
Sb 123		ug/L		63467	0.702
Ba 135		ug/L		25199	0.296
Ba 137	51.503	ug/L	1.346	43350	0.509
Ho 165		ug/L		9	0.000
> Lu 175		ug/L		85101	85100.917
Tl 205	48.245	ug/L	2.351	94823	1.113
Pb 208	51.560	ug/L	1.554	231986	2.723
Bi 209		ug/L		52	0.000
Th 232	52.820	ug/L	1.103	327709	3.849
U 238	52.860	ug/L	0.845	350615	4.119

Sample ID: QC Std 11

Report Date/Time: Thursday, January 21, 2010 17:29:55

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	0.9999
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	0.9999
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Li	7	101.546				
|	Be	9	103.335				
|	B	11	99.182				
|	Na	23	103.940				
|	Mg	24	107.910				
|	Al	27	105.918				
|	P	31	100.796				
|	K	39	98.868				
|	Ca	43	97.855				
>	Sc	45		99.6			
|	Ti	47	97.113				
|	V	51	94.536				
|	Cr	52	96.733				
|	Cr	53					
|	Mn	55	103.920				
|	Fe	57	100.624				
|	Co	59	101.072				
|	Ni	60	101.897				
|	Cu	63					
|	Cu	65	102.134				
[	Zn	66	108.399				
|	Zn	67					
|	Zn	68					
>	Ge	74		93.6			
|	As	75	98.126				
|	Se	77					
|	Se	82	105.069				
[	Kr	83					
[	Sr	88	98.283				
|	Y	89					
|	Zr	90	99.507				
|	Mo	98	98.710				
|	Ag	107	99.511				
|	Cd	111	95.475				
|	Cd	114					
>	In	115		94.3			
|	Sn	120	102.947				
|	Sb	121	102.421				
[	Sb	123					
[	Ba	135					
|	Ba	137	103.006				
|	Ho	165					
>	Lu	175		95.9			
|	Tl	205	96.490				
|	Pb	208	103.119				
|	Bi	209					
|	Th	232	105.639				
[	U	238	105.720				

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 11

Report Date/Time: Thursday, January 21, 2010 17:29:55

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ICPMS#4 - Summary Report

Sample ID: QC Std 12

Sample Date/Time: Thursday, January 21, 2010 17:33:21

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100121\QC Std 12.058

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.056	ug/L	41.976	11	0.000
Be	9	0.039	ug/L	98.108	4	0.000
B	11	1.353	ug/L	17.760	157	0.000
Na	23	0.686	ug/L	330.415	20014	0.002
Mg	24	5.835	ug/L	71.256	7336	0.009
Al	27	3.222	ug/L	82.861	6668	0.007
P	31	-0.183	ug/L	1911.335	1819	-0.000
K	39	-9.782	ug/L	224.476	326717	-0.035
Ca	43	10.733	ug/L	43.794	363	0.000
Sc	45		ug/L		602799	602798.758
Ti	47	0.036	ug/L	119.489	146	0.000
V	51	1.883	ug/L	54.682	-5928	0.006
Cr	52	-1.265	ug/L	8.890	2340	-0.004
Cr	53		ug/L		89816	-0.055
Mn	55	0.033	ug/L	113.575	815	0.000
Fe	57	-5.931	ug/L	57.993	2871	-0.001
Co	59	0.074	ug/L	37.353	256	0.000
Ni	60	0.048	ug/L	114.746	116	0.000
Cu	63		ug/L		181	0.000
Cu	65	0.035	ug/L	55.935	120	0.000
Zn	66	0.225	ug/L	27.837	270	0.000
Zn	67		ug/L		5309	-0.002
Zn	68		ug/L		621	-0.001
Ge	74		ug/L		132262	132261.695
As	75	-0.680	ug/L	32.508	-15	-0.002
Se	77		ug/L		3258	-0.018
Se	82	0.369	ug/L	22.957	-2	0.000
Kr	83		ug/L		39	-0.000
Sr	88	0.058	ug/L	44.771	417	0.003
Y	89		ug/L		15	0.000
Zr	90	0.169	ug/L	19.856	587	0.005
Mo	98	0.188	ug/L	7.911	260	0.003
Ag	107	0.066	ug/L	16.796	181	0.002
Cd	111	0.071	ug/L	60.480	48	0.000
Cd	114		ug/L		108	0.001
In	115		ug/L		90473	90472.928
Sn	120	0.395	ug/L	11.440	945	0.010
Sb	121	0.999	ug/L	12.912	1756	0.018
Sb	123		ug/L		1383	0.014
Ba	135		ug/L		50	0.000
Ba	137	0.089	ug/L	18.197	90	0.001
Ho	165		ug/L		5	0.000
Lu	175		ug/L		85237	85237.154
Tl	205	0.429	ug/L	6.542	941	0.010
Pb	208	0.393	ug/L	23.364	2012	0.021
Bi	209		ug/L		16	-0.000
Th	232	0.336	ug/L	2.913	2273	0.024
U	238	0.267	ug/L	36.855	1850	0.021

Sample ID: QC Std 12

Report Date/Time: Thursday, January 21, 2010 17:36:09

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	0.9999
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	0.9999
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		100.2			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		95.4			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		94.4			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		96.0			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 12	U	238CCB is out of limits (+/- PQL)

QC Action

QC Action Line: Continue

ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Thursday, January 21, 2010 18:04:17

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100121\QC Std 6.063

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	47.867	ug/L	5.633	4950	0.008
Be	9	47.547	ug/L	2.568	1689	0.003
B	11	98.958	ug/L	3.486	4783	0.008
Na	23	5328.421	ug/L	4.246	7225211	11.883
Mg	24	4905.233	ug/L	8.015	4616254	7.600
Al	27	5051.117	ug/L	7.561	6363551	10.485
P	31	4976.247	ug/L	3.004	286540	0.469
K	39	4540.611	ug/L	5.732	10236191	16.281
Ca	43	4830.979	ug/L	0.977	20524	0.033
> Sc	45		ug/L		606708	606707.828
Ti	47	47.264	ug/L	1.332	10365	0.017
V	51	46.959	ug/L	2.020	86136	0.158
Cr	52	48.240	ug/L	4.049	101144	0.159
Cr	53		ug/L		137419	0.022
Mn	55	50.315	ug/L	0.918	158387	0.260
Fe	57	4872.754	ug/L	1.061	321541	0.525
Co	59	48.854	ug/L	0.867	123881	0.204
Ni	60	49.441	ug/L	2.085	26866	0.044
Cu	63		ug/L		59346	0.098
Cu	65	50.677	ug/L	1.785	28859	0.047
Zn	66	53.607	ug/L	0.498	14949	0.112
Zn	67		ug/L		9608	0.032
Zn	68		ug/L		10738	0.076
> Ge	74		ug/L		131051	131051.393
As	75	47.355	ug/L	2.813	15388	0.116
Se	77		ug/L		6985	0.010
Se	82	52.609	ug/L	1.968	1602	0.012
Kr	83		ug/L		39	-0.000
Sr	88	48.704	ug/L	1.669	235171	2.577
Y	89		ug/L		28	0.000
Zr	90	48.531	ug/L	0.975	130734	1.432
Mo	98	48.769	ug/L	1.336	60587	0.664
Ag	107	48.768	ug/L	1.618	102597	1.124
Cd	111	48.514	ug/L	0.581	23713	0.260
Cd	114		ug/L		56343	0.618
> In	115		ug/L		91209	91209.038
Sn	120	49.087	ug/L	1.672	108343	1.187
Sb	121	48.642	ug/L	3.299	80472	0.881
Sb	123		ug/L		62144	0.680
Ba	135		ug/L		25796	0.309
Ba	137	53.430	ug/L	1.176	44042	0.528
Ho	165		ug/L		9	0.000
> Lu	175		ug/L		83352	83352.071
Tl	205	48.268	ug/L	3.423	92881	1.114
Pb	208	51.961	ug/L	3.285	228876	2.745
Bi	209		ug/L		59	0.000
Th	232	51.275	ug/L	3.334	311601	3.736
U	238	52.368	ug/L	3.790	340088	4.080

Sample ID: QC Std 6

Report Date/Time: Thursday, January 21, 2010 18:07:04

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	0.9999
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	0.9999
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Li	7	95.735				
|	Be	9	95.093				
|	B	11	98.958				
|	Na	23	106.568				
|	Mg	24	98.105				
|	Al	27	100.022				
|	P	31	99.525				
|	K	39	90.812				
|	Ca	43	96.620				
>	Sc	45		100.9			
|	Ti	47	94.528				
|	V	51	93.917				
|	Cr	52	96.481				
|	Cr	53					
|	Mn	55	100.629				
|	Fe	57	97.455				
|	Co	59	97.708				
|	Ni	60	98.882				
|	Cu	63					
|	Cu	65	101.355				
[	Zn	66	107.215				
|	Zn	67					
|	Zn	68					
>	Ge	74		94.5			
|	As	75	94.709				
|	Se	77					
|	Se	82	105.218				
|	Kr	83					
[	Sr	88	97.408				
|	Y	89					
|	Zr	90	97.062				
|	Mo	98	97.539				
|	Ag	107	97.537				
|	Cd	111	97.028				
|	Cd	114					
>	In	115		95.2			
|	Sn	120	98.174				
|	Sb	121	97.285				
|	Sb	123					
[	Ba	135					
|	Ba	137	106.861				
|	Ho	165					
>	Lu	175		93.9			
|	Tl	205	96.536				
|	Pb	208	103.922				
|	Bi	209					
|	Th	232	102.549				
|	U	238	104.735				

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 6

Report Date/Time: Thursday, January 21, 2010 18:07:04

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ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Thursday, January 21, 2010 18:10:30

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100121\QC Std 7.064

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.049	ug/L	76.055	11	0.000
Be	9	0.028	ug/L	153.798	3	0.000
B	11	1.751	ug/L	36.379	176	0.000
Na	23	6.423	ug/L	58.761	27694	0.014
Mg	24	0.710	ug/L	230.744	2667	0.001
Al	27	1.592	ug/L	57.580	4667	0.003
P	31	-0.589	ug/L	238.809	1800	-0.000
K	39	-9.237	ug/L	157.220	329445	-0.033
Ca	43	-0.185	ug/L	3120.816	318	-0.000
> Sc	45		ug/L		603042	603041.915
Ti	47	0.025	ug/L	263.036	144	0.000
V	51	2.385	ug/L	22.177	-4973	0.008
Cr	52	-1.197	ug/L	8.278	2482	-0.004
Cr	53		ug/L		92008	-0.052
Mn	55	-0.026	ug/L	23.085	635	-0.000
Fe	57	-7.326	ug/L	8.329	2786	-0.001
Co	59	0.021	ug/L	44.101	123	0.000
Ni	60	-0.008	ug/L	124.266	87	-0.000
Cu	63		ug/L		109	0.000
Cu	65	-0.033	ug/L	28.056	82	-0.000
Zn	66	0.046	ug/L	62.176	220	0.000
Zn	67		ug/L		5347	-0.001
Zn	68		ug/L		656	-0.001
> Ge	74		ug/L		131884	131884.340
As	75	-0.721	ug/L	106.946	-29	-0.002
Se	77		ug/L		3372	-0.017
Se	82	0.758	ug/L	34.641	10	0.000
Kr	83		ug/L		31	-0.000
Sr	88	0.013	ug/L	51.949	202	0.001
Y	89		ug/L		12	-0.000
Zr	90	0.127	ug/L	15.996	481	0.004
Mo	98	0.059	ug/L	25.900	102	0.001
Ag	107	0.028	ug/L	23.949	101	0.001
Cd	111	0.026	ug/L	87.768	26	0.000
Cd	114		ug/L		44	0.000
> In	115		ug/L		91735	91735.381
Sn	120	0.156	ug/L	13.839	427	0.004
Sb	121	0.561	ug/L	14.964	1054	0.010
Sb	123		ug/L		841	0.008
Ba	135		ug/L		29	0.000
Ba	137	0.029	ug/L	31.831	40	0.000
Ho	165		ug/L		6	0.000
> Lu	175		ug/L		87550	87550.103
Tl	205	0.270	ug/L	12.589	646	0.006
Pb	208	0.041	ug/L	29.847	445	0.002
Bi	209		ug/L		22	0.000
Th	232	0.160	ug/L	19.521	1211	0.012
U	238	0.031	ug/L	31.524	300	0.002

Sample ID: QC Std 7

Report Date/Time: Thursday, January 21, 2010 18:13:18

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	0.9999
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	0.9999
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		100.2			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		95.1			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		95.8			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		98.6			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 7

Report Date/Time: Thursday, January 21, 2010 18:13:18

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ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Thursday, January 21, 2010 18:41:28

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100121\QC Std 6.069

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	51.685	ug/L	8.201	5465	0.009
Be	9	53.705	ug/L	6.470	1951	0.003
B	11	107.647	ug/L	3.758	5313	0.008
Na	23	5396.071	ug/L	9.701	7477475	12.034
Mg	24	5124.325	ug/L	8.061	4932364	7.939
Al	27	4908.150	ug/L	9.339	6316659	10.189
P	31	4991.030	ug/L	3.030	294015	0.471
K	39	4698.584	ug/L	4.994	10812672	16.848
Ca	43	4909.020	ug/L	0.903	21333	0.034
Sc	45		ug/L		620851	620850.737
Ti	47	49.715	ug/L	1.666	11144	0.018
V	51	48.754	ug/L	3.440	91944	0.164
Cr	52	49.240	ug/L	3.408	105524	0.162
Cr	53		ug/L		128684	0.003
Mn	55	51.163	ug/L	2.848	164783	0.264
Fe	57	4961.555	ug/L	2.531	334945	0.534
Co	59	48.720	ug/L	1.301	126425	0.204
Ni	60	49.787	ug/L	3.436	27673	0.044
Cu	63		ug/L		60438	0.097
Cu	65	48.740	ug/L	4.366	28388	0.046
Zn	66	52.327	ug/L	1.472	14701	0.110
Zn	67		ug/L		8924	0.026
Zn	68		ug/L		10972	0.077
Ge	74		ug/L		132001	132000.742
As	75	48.976	ug/L	7.004	16018	0.120
Se	77		ug/L		6221	0.004
Se	82	51.829	ug/L	0.924	1589	0.012
Kr	83		ug/L		42	-0.000
Sr	88	52.220	ug/L	2.678	248544	2.763
Y	89		ug/L		88	0.001
Zr	90	53.453	ug/L	7.095	141886	1.577
Mo	98	49.389	ug/L	2.277	60487	0.672
Ag	107	50.227	ug/L	3.602	104175	1.158
Cd	111	50.186	ug/L	2.433	24182	0.269
Cd	114		ug/L		56911	0.633
In	115		ug/L		89940	89940.180
Sn	120	49.794	ug/L	4.438	108341	1.204
Sb	121	50.818	ug/L	3.802	82883	0.920
Sb	123		ug/L		63993	0.710
Ba	135		ug/L		25333	0.298
Ba	137	51.087	ug/L	4.077	42872	0.505
Ho	165		ug/L		11	0.000
Lu	175		ug/L		84919	84918.737
Tl	205	47.335	ug/L	1.628	92791	1.092
Pb	208	49.271	ug/L	4.185	221023	2.602
Bi	209		ug/L		60	0.000
Th	232	49.597	ug/L	2.176	307022	3.614
U	238	50.249	ug/L	2.552	332369	3.915

Sample ID: QC Std 6

Report Date/Time: Thursday, January 21, 2010 18:44:16

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	0.9999
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	0.9999
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7	103.369				
Be	9	107.410				
B	11	107.647				
Na	23	107.921				
Mg	24	102.486				
Al	27	97.191				
P	31	99.821				
K	39	93.972				
Ca	43	98.180				
> Sc	45		103.2			
Ti	47	99.430				
V	51	97.508				
Cr	52	98.480				
Cr	53					
Mn	55	102.327				
Fe	57	99.231				
Co	59	97.440				
Ni	60	99.574				
Cu	63					
Cu	65	97.479				
Zn	66	104.653				
Zn	67					
Zn	68					
> Ge	74		95.2			
As	75	97.952				
Se	77					
Se	82	103.659				
Kr	83					
Sr	88	104.440				
Y	89					
Zr	90	106.906				
Mo	98	98.778				
Ag	107	100.455				
Cd	111	100.372				
Cd	114					
> In	115		93.9			
Sn	120	99.587				
Sb	121	101.635				
Sb	123					
Ba	135					
Ba	137	102.175				
Ho	165					
> Lu	175		95.7			
Tl	205	94.671				
Pb	208	98.542				
Bi	209					
Th	232	99.194				
U	238	100.499				

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Thursday, January 21, 2010 18:47:42

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100121\QC Std 7.070

Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li 7	0.097	ug/L	42.397	16	0.000
Be 9	0.096	ug/L	47.017	6	0.000
B 11	2.789	ug/L	20.775	235	0.000
Na 23	1.009	ug/L	97.981	21349	0.002
Mg 24	0.577	ug/L	199.082	2667	0.001
Al 27	0.658	ug/L	173.925	3667	0.001
P 31	-2.673	ug/L	17.873	1758	-0.000
K 39	-16.721	ug/L	38.491	327378	-0.060
Ca 43	-3.153	ug/L	207.767	319	-0.000
> Sc 45		ug/L		630429	630429.363
Ti 47	-0.078	ug/L	38.604	127	-0.000
V 51	4.008	ug/L	32.655	-1738	0.014
Cr 52	-1.409	ug/L	6.066	2156	-0.005
Cr 53		ug/L		84755	-0.070
Mn 55	0.070	ug/L	31.984	977	0.000
Fe 57	-5.678	ug/L	16.069	3024	-0.001
Co 59	0.017	ug/L	8.745	119	0.000
Ni 60	0.015	ug/L	133.262	103	0.000
Cu 63		ug/L		107	0.000
L Cu 65	-0.062	ug/L	8.336	69	-0.000
Zn 66	0.037	ug/L	77.780	225	0.000
Zn 67		ug/L		4763	-0.007
Zn 68		ug/L		579	-0.001
> Ge 74		ug/L		135955	135954.889
As 75	-1.474	ug/L	50.377	-279	-0.004
Se 77		ug/L		3033	-0.021
Se 82	0.297	ug/L	42.815	-5	0.000
L Kr 83		ug/L		39	-0.000
Sr 88	0.016	ug/L	52.695	224	0.001
Y 89		ug/L		22	0.000
Zr 90	0.109	ug/L	18.634	453	0.003
Mo 98	0.058	ug/L	9.158	106	0.001
Ag 107	0.018	ug/L	10.815	84	0.000
Cd 111	0.005	ug/L	401.289	16	0.000
Cd 114		ug/L		47	0.000
> In 115		ug/L		95579	95579.366
Sn 120	0.135	ug/L	5.023	397	0.003
Sb 121	0.674	ug/L	5.509	1295	0.012
L Sb 123		ug/L		1041	0.010
Ba 135		ug/L		27	0.000
Ba 137	0.020	ug/L	21.999	33	0.000
Ho 165		ug/L		8	0.000
> Lu 175		ug/L		87541	87540.623
Tl 205	0.248	ug/L	19.999	601	0.006
Pb 208	0.024	ug/L	6.828	366	0.001
Bi 209		ug/L		20	-0.000
Th 232	0.116	ug/L	10.665	934	0.008
L U 238	0.019	ug/L	24.826	219	0.001

Sample ID: QC Std 7

Report Date/Time: Thursday, January 21, 2010 18:50:30

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	0.9999
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	0.9999
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		104.8			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		98.1			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		99.8			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		98.6			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: 1202015732

Sample Date/Time: Thursday, January 21, 2010 18:53:54

Sample Type:

Sample Description: LANL 6020 MB

Number of Replicates: 3

Batch ID: 941754|2|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100121\1202015732.071

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.090	ug/L	33.461	16	0.000
Be	9	0.040	ug/L	72.071	4	0.000
B	11	1.290	ug/L	26.127	166	0.000
Na	23	3.616	ug/L	53.563	25690	0.008
Mg	24	0.192	ug/L	614.778	2334	0.000
Al	27	2.316	ug/L	62.959	6001	0.005
P	31	32.527	ug/L	13.708	3956	0.003
K	39	-5.285	ug/L	84.310	363230	-0.019
Ca	43	1.632	ug/L	196.420	350	0.000
> Sc	45		ug/L		648094	648093.587
Ti	47	0.086	ug/L	91.381	169	0.000
V	51	3.042	ug/L	73.033	-3890	0.010
Cr	52	-0.731	ug/L	2.339	3662	-0.002
Cr	53		ug/L		84150	-0.075
Mn	55	0.246	ug/L	19.055	1592	0.001
Fe	57	6.050	ug/L	64.900	3923	0.001
Co	59	0.003	ug/L	91.671	85	0.000
Ni	60	0.024	ug/L	83.191	112	0.000
Cu	63		ug/L		196	0.000
Cu	65	0.026	ug/L	76.295	124	0.000
Zn	66	0.690	ug/L	12.876	403	0.001
Zn	67		ug/L		4821	-0.005
Zn	68		ug/L		697	-0.000
> Ge	74		ug/L		133148	133147.546
As	75	-0.440	ug/L	141.898	65	-0.001
Se	77		ug/L		3221	-0.019
Se	82	0.393	ug/L	129.774	-2	0.000
Kr	83		ug/L		33	-0.000
Sr	88	0.018	ug/L	46.162	232	0.001
Y	89		ug/L		28	0.000
Zr	90	0.401	ug/L	23.714	1259	0.012
Mo	98	0.032	ug/L	5.725	70	0.000
Ag	107	0.004	ug/L	95.526	53	0.000
Cd	111	-0.000	ug/L	8176.200	14	-0.000
Cd	114		ug/L		18	0.000
> In	115		ug/L		94628	94627.687
Sn	120	0.547	ug/L	31.546	1338	0.013
Sb	121	0.367	ug/L	7.677	754	0.007
Sb	123		ug/L		596	0.005
Ba	135		ug/L		50	0.000
Ba	137	0.081	ug/L	24.659	85	0.001
Ho	165		ug/L		4	0.000
> Lu	175		ug/L		86963	86963.428
Tl	205	0.099	ug/L	18.850	298	0.002
Pb	208	0.033	ug/L	6.462	406	0.002
Bi	209		ug/L		25	0.000
Th	232	0.104	ug/L	23.043	852	0.008
U	238	-0.004	ug/L	38.677	62	-0.000

Sample ID: 1202015732

Report Date/Time: Thursday, January 21, 2010 18:56:41

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Calibration

Analyte	Mass Curve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	0.9999
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	0.9999
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		107.7			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		96.0			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		98.8			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		98.0			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: 1202015737

Sample Date/Time: Thursday, January 21, 2010 19:00:05

Sample Type:

Sample Description: LANL 6020 LCS

Number of Replicates: 3

Batch ID: 941754|40|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100121\1202015737.072

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	2.770	ug/L	6.137	304	0.000
Be	9	20.859	ug/L	1.785	774	0.001
B	11	40.878	ug/L	0.807	2117	0.003
Na	23	272.146	ug/L	3.745	403630	0.607
Mg	24	1046.762	ug/L	3.929	1026997	1.622
Al	27	3319.086	ug/L	2.245	4358219	6.890
P	31	214.417	ug/L	1.648	14707	0.020
K	39	1161.033	ug/L	4.067	2996529	4.163
Ca	43	2506.221	ug/L	1.229	11253	0.017
> Sc	45		ug/L		632076	632075.962
Ti	47	110.556	ug/L	2.081	25055	0.039
V	51	24.968	ug/L	17.335	42806	0.084
Cr	52	60.039	ug/L	2.796	129919	0.198
Cr	53		ug/L		125353	-0.006
Mn	55	144.037	ug/L	1.080	470944	0.744
Fe	57	4407.497	ug/L	4.183	303164	0.474
Co	59	24.230	ug/L	3.888	64023	0.101
Ni	60	35.021	ug/L	4.097	19849	0.031
Cu	63		ug/L		54450	0.086
Cu	65	43.800	ug/L	2.725	25999	0.041
Zn	66	159.567	ug/L	1.810	45562	0.335
Zn	67		ug/L		13361	0.057
Zn	68		ug/L		32800	0.236
> Ge	74		ug/L		135441	135440.710
As	75	26.078	ug/L	5.840	8854	0.064
Se	77		ug/L		6577	0.006
Se	82	77.020	ug/L	1.169	2430	0.018
Kr	83		ug/L		39	-0.000
Sr	88	59.243	ug/L	0.911	293989	3.134
Y	89		ug/L		14034	0.150
Zr	90	2.546	ug/L	1.023	7184	0.075
Mo	98	12.388	ug/L	1.841	15841	0.169
Ag	107	6.452	ug/L	2.244	13988	0.149
Cd	111	14.925	ug/L	2.159	7507	0.080
Cd	114		ug/L		18176	0.194
> In	115		ug/L		93755	93755.202
Sn	120	11.269	ug/L	0.602	25632	0.272
Sb	121	7.834	ug/L	1.736	13425	0.142
Sb	123		ug/L		10234	0.108
Ba	135		ug/L		25961	0.301
Ba	137	52.505	ug/L	1.345	44842	0.519
Ho	165		ug/L		633	0.007
> Lu	175		ug/L		86353	86352.751
Tl	205	29.531	ug/L	2.930	58916	0.681
Pb	208	23.408	ug/L	0.949	107009	1.236
Bi	209		ug/L		854	0.010
Th	232	2.157	ug/L	2.127	13761	0.157
U	238	0.445	ug/L	2.686	3082	0.035

Sample ID: 1202015737

Report Date/Time: Thursday, January 21, 2010 19:02:52

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	0.9999
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	0.9999
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		105.1			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		97.7			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		97.9			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		97.3			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

QC Out Of Limits

Measurement Type Analyte
Ti 47 Upper, S, EEETi

MassOut of Limits Message
47Sample is out of limits (over linear range)

QC Action

QC Action Line: No QC out of limits detected

Sample ID: 1202015737

Report Date/Time: Thursday, January 21, 2010 19:02:52

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ICPMS#4 - Summary Report

Sample ID: 244604001

Sample Date/Time: Thursday, January 21, 2010 19:06:17

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 941754|2|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100121\244604001.073

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	61.568	ug/L	4.177	7044	0.010
Be	9	3.808	ug/L	6.291	152	0.000
B	11	13.405	ug/L	5.743	807	0.001
Na	23	627.432	ug/L	4.529	960247	1.399
Mg	24	7480.482	ug/L	6.080	7777356	11.590
Al	27	53334.957	ug/L	2.255	74321424	110.715
P	31	1127.451	ug/L	2.124	73418	0.106
K	39	5974.010	ug/L	2.118	14771954	21.421
Ca	43	7805.424	ug/L	0.735	36473	0.054
> Sc	45		ug/L		671361	671361.478
Ti	47	590.090	ug/L	1.500	141375	0.210
V	51	67.278	ug/L	2.511	141221	0.227
Cr	52	31.391	ug/L	0.998	74742	0.103
Cr	53		ug/L		85991	-0.076
Mn	55	1591.589	ug/L	0.699	5520080	8.221
Fe	57	41476.481	ug/L	1.545	3001488	4.465
Co	59	10.892	ug/L	2.105	30618	0.045
Ni	60	31.626	ug/L	4.291	19049	0.028
Cu	63		ug/L		27626	0.041
Cu	65	20.591	ug/L	1.579	13044	0.019
Zn	66	124.567	ug/L	1.076	34671	0.261
Zn	67		ug/L		10439	0.037
Zn	68		ug/L		25959	0.191
> Ge	74		ug/L		131853	131852.716
As	75	12.101	ug/L	5.283	4111	0.030
Se	77		ug/L		3432	-0.017
Se	82	1.717	ug/L	38.028	39	0.000
Kr	83		ug/L		100	0.000
Sr	88	56.296	ug/L	1.927	281094	2.978
Y	89		ug/L		524833	5.564
Zr	90	100.795	ug/L	1.154	280658	2.974
Mo	98	4.679	ug/L	1.560	6039	0.064
Ag	107	0.581	ug/L	5.813	1306	0.013
Cd	111	2.083	ug/L	13.731	1067	0.011
Cd	114		ug/L		244	0.002
> In	115		ug/L		94333	94333.146
Sn	120	1.176	ug/L	3.923	2768	0.028
Sb	121	0.298	ug/L	3.157	636	0.005
Sb	123		ug/L		536	0.004
Ba	135		ug/L		167462	1.801
Ba	137	310.931	ug/L	2.543	285983	3.074
Ho	165		ug/L		22813	0.245
> Lu	175		ug/L		93026	93026.214
Tl	205	0.707	ug/L	4.391	1622	0.016
Pb	208	39.645	ug/L	2.079	195028	2.094
Bi	209		ug/L		2532	0.027
Th	232	28.545	ug/L	2.254	193740	2.080
U	238	2.784	ug/L	2.813	20280	0.217

Sample ID: 244604001

Report Date/Time: Thursday, January 21, 2010 19:09:05

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	0.9999
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	0.9999
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		111.6			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		95.1			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		98.5			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		104.8			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Upper, S, EEEAI	Al 27	27	Sample is out of limits (over linear range)
Upper, S, EEETi	Ti 47	47	Sample is out of limits (over linear range)
Upper, S, EEIMn	Mn 55	55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#4 - Summary Report

Sample ID: 1202015733

Sample Date/Time: Thursday, January 21, 2010 19:12:30

Sample Type:

Sample Description: LANL 6020 DUP

Number of Replicates: 3

Batch ID: 941754|2|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100121\1202015733.074

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	54.536	ug/L	5.844	6228	0.009
Be	9	4.045	ug/L	19.622	161	0.000
B	11	15.952	ug/L	4.089	939	0.001
Na	23	649.703	ug/L	9.522	991408	1.449
Mg	24	7925.708	ug/L	4.856	8226703	12.279
Al	27	50910.817	ug/L	2.380	70790715	105.683
P	31	267.758	ug/L	2.046	18955	0.025
K	39	5898.814	ug/L	3.268	14555408	21.152
Ca	43	18865.640	ug/L	0.789	87462	0.130
> Sc	45		ug/L		669869	669869.082
Ti	47	506.238	ug/L	1.178	121060	0.180
V	51	55.218	ug/L	6.578	113717	0.186
Cr	52	30.277	ug/L	0.479	72128	0.100
Cr	53		ug/L		86462	-0.075
Mn	55	957.862	ug/L	2.668	3314670	4.948
Fe	57	35955.232	ug/L	1.043	2596070	3.870
Co	59	8.576	ug/L	3.213	24076	0.036
Ni	60	30.491	ug/L	2.104	18336	0.027
Cu	63		ug/L		26616	0.040
Cu	65	20.309	ug/L	1.287	12839	0.019
Zn	66	104.463	ug/L	1.281	29291	0.219
Zn	67		ug/L		9438	0.029
Zn	68		ug/L		22301	0.162
> Ge	74		ug/L		132678	132677.668
As	75	9.884	ug/L	7.013	3414	0.024
Se	77		ug/L		3611	-0.016
Se	82	1.353	ug/L	35.489	28	0.000
Kr	83		ug/L		106	0.000
Sr	88	153.466	ug/L	3.709	745973	8.120
Y	89		ug/L		537244	5.849
Zr	90	99.024	ug/L	1.844	268565	2.922
Mo	98	3.672	ug/L	2.568	4622	0.050
Ag	107	0.567	ug/L	3.032	1244	0.013
Cd	111	2.225	ug/L	13.862	1111	0.012
Cd	114		ug/L		287	0.003
> In	115		ug/L		91900	91899.962
Sn	120	1.112	ug/L	0.990	2552	0.027
Sb	121	0.249	ug/L	10.295	536	0.005
Sb	123		ug/L		440	0.004
Ba	135		ug/L		168623	1.834
Ba	137	315.274	ug/L	2.447	286593	3.117
Ho	165		ug/L		20502	0.223
> Lu	175		ug/L		91939	91938.824
Tl	205	0.517	ug/L	3.147	1201	0.012
Pb	208	27.347	ug/L	1.642	133059	1.444
Bi	209		ug/L		2149	0.023
Th	232	25.045	ug/L	0.406	167987	1.825
U	238	2.830	ug/L	1.863	20368	0.220

Sample ID: 1202015733

Report Date/Time: Thursday, January 21, 2010 19:15:17

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	0.9999
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	0.9999
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		111.4			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		95.7			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		95.9			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		103.6			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

QC Out Of Limits

Measurement Type Analyte

Al 27 Upper, S, EEEAI

Ti 47 Upper, S, EEETi

MassOut of Limits Message

27Sample is out of limits (over linear range)

47Sample is out of limits (over linear range)

QC Action

Sample ID: 1202015733

Report Date/Time: Thursday, January 21, 2010 19:15:17

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QC Action Line: Continue

ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Thursday, January 21, 2010 19:18:42

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100121\QC Std 6.075

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	57.079	ug/L	9.947	6230	0.010
Be	9	55.233	ug/L	6.409	2072	0.003
B	11	111.914	ug/L	4.661	5702	0.009
Na	23	5316.706	ug/L	4.776	7617885	11.857
Mg	24	5003.458	ug/L	8.024	4966326	7.752
Al	27	5245.937	ug/L	4.408	6981425	10.890
P	31	5122.444	ug/L	3.924	311599	0.483
K	39	4755.045	ug/L	4.287	11298438	17.050
Ca	43	4934.547	ug/L	0.632	22155	0.034
Sc	45		ug/L		641347	641346.641
Ti	47	48.247	ug/L	4.227	11172	0.017
V	51	46.317	ug/L	0.570	89642	0.156
Cr	52	48.786	ug/L	3.783	108042	0.161
Cr	53		ug/L		126992	-0.006
Mn	55	50.741	ug/L	1.153	168836	0.262
Fe	57	4945.721	ug/L	2.820	344811	0.532
Co	59	48.240	ug/L	2.747	129289	0.202
Ni	60	48.337	ug/L	2.799	27760	0.043
Cu	63		ug/L		60412	0.094
Cu	65	47.867	ug/L	1.808	28817	0.045
Zn	66	52.879	ug/L	5.075	15042	0.111
Zn	67		ug/L		8767	0.024
Zn	68		ug/L		10917	0.076
Ge	74		ug/L		133785	133785.181
As	75	47.636	ug/L	4.151	15814	0.117
Se	77		ug/L		6903	0.009
Se	82	52.806	ug/L	2.537	1641	0.012
Kr	83		ug/L		38	-0.000
Sr	88	51.065	ug/L	0.922	248099	2.702
Y	89		ug/L		60	0.001
Zr	90	49.805	ug/L	2.989	134989	1.469
Mo	98	48.722	ug/L	2.801	60906	0.663
Ag	107	48.597	ug/L	1.620	102863	1.120
Cd	111	49.711	ug/L	2.763	24448	0.266
Cd	114		ug/L		56965	0.621
In	115		ug/L		91779	91778.612
Sn	120	48.914	ug/L	1.619	108624	1.183
Sb	121	48.732	ug/L	3.520	81111	0.883
Sb	123		ug/L		62511	0.680
Ba	135		ug/L		24662	0.288
Ba	137	50.507	ug/L	1.681	42719	0.499
Ho	165		ug/L		10	0.000
Lu	175		ug/L		85523	85523.168
Tl	205	47.000	ug/L	1.685	92846	1.084
Pb	208	48.415	ug/L	2.152	218886	2.557
Bi	209		ug/L		57	0.000
Th	232	49.286	ug/L	1.865	307287	3.591
U	238	50.723	ug/L	2.403	338161	3.952

Sample ID: QC Std 6

Report Date/Time: Thursday, January 21, 2010 19:21:30

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	0.9999
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	0.9999
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7	114.158				
Be	9	110.466				
B	11	111.914				
Na	23	106.334				
Mg	24	100.069				
Al	27	103.880				
P	31	102.449				
K	39	95.101				
Ca	43	98.691				
> Sc	45		106.6			
Ti	47	96.495				
V	51	92.635				
Cr	52	97.571				
Cr	53					
Mn	55	101.482				
Fe	57	98.914				
Co	59	96.480				
Ni	60	96.674				
Cu	63					
Cu	65	95.733				
Zn	66	105.759				
Zn	67					
Zn	68					
> Ge	74		96.5			
As	75	95.273				
Se	77					
Se	82	105.612				
Kr	83					
Sr	88	102.129				
Y	89					
Zr	90	99.610				
Mo	98	97.444				
Ag	107	97.194				
Cd	111	99.421				
Cd	114					
> In	115		95.8			
Sn	120	97.829				
Sb	121	97.465				
Sb	123					
Ba	135					
Ba	137	101.013				
Ho	165					
> Lu	175		96.4			
Tl	205	94.000				
Pb	208	96.830				
Bi	209					
Th	232	98.573				
U	238	101.447				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 6	Li	7CCV is out of limits (+/- 10%)
QC Std 6	Be	9CCV is out of limits (+/- 10%)
QC Std 6	B	11CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Thursday, January 21, 2010 19:24:55

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100121\QC Std 7.076

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.034	ug/L	26.352	10	0.000
Be	9	0.041	ug/L	61.941	4	0.000
B	11	1.900	ug/L	23.113	194	0.000
Na	23	1.544	ug/L	340.834	22352	0.003
Mg	24	0.881	ug/L	108.039	3000	0.001
Al	27	1.907	ug/L	63.567	5334	0.004
P	31	-2.143	ug/L	51.090	1808	-0.000
K	39	-9.505	ug/L	80.133	347170	-0.034
Ca	43	-3.377	ug/L	207.423	322	-0.000
Sc	45		ug/L		637054	637053.641
Ti	47	-0.029	ug/L	241.185	140	-0.000
V	51	2.031	ug/L	86.595	-5973	0.007
Cr	52	-1.004	ug/L	3.747	3027	-0.003
Cr	53		ug/L		84084	-0.072
Mn	55	0.009	ug/L	118.881	783	0.000
Fe	57	-5.268	ug/L	18.951	3084	-0.001
Co	59	0.016	ug/L	48.878	118	0.000
Ni	60	0.003	ug/L	711.579	98	0.000
Cu	63		ug/L		108	0.000
Cu	65	-0.069	ug/L	19.525	65	-0.000
Zn	66	-0.034	ug/L	38.994	205	-0.000
Zn	67		ug/L		4676	-0.007
Zn	68		ug/L		545	-0.002
Ge	74		ug/L		136553	136553.335
As	75	-0.741	ug/L	58.783	-33	-0.002
Se	77		ug/L		3308	-0.019
Se	82	0.185	ug/L	125.414	-8	0.000
Kr	83		ug/L		37	-0.000
Sr	88	0.011	ug/L	44.949	194	0.001
Y	89		ug/L		29	0.000
Zr	90	0.121	ug/L	17.538	470	0.004
Mo	98	0.042	ug/L	12.665	81	0.001
Ag	107	0.028	ug/L	24.195	104	0.001
Cd	111	0.016	ug/L	80.700	22	0.000
Cd	114		ug/L		52	0.000
In	115		ug/L		92642	92642.476
Sn	120	0.111	ug/L	10.034	331	0.003
Sb	121	0.473	ug/L	14.693	917	0.009
Sb	123		ug/L		706	0.006
Ba	135		ug/L		29	0.000
Ba	137	0.033	ug/L	18.943	43	0.000
Ho	165		ug/L		6	0.000
Lu	175		ug/L		86455	86455.365
Tl	205	0.198	ug/L	15.995	493	0.005
Pb	208	0.020	ug/L	25.901	343	0.001
Bi	209		ug/L		19	-0.000
Th	232	0.107	ug/L	7.569	864	0.008
U	238	0.021	ug/L	26.454	231	0.002

Sample ID: QC Std 7

Report Date/Time: Thursday, January 21, 2010 19:27:44

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	0.9999
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	0.9999
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		105.9			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		98.5			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		96.7			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		97.4			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 7

Report Date/Time: Thursday, January 21, 2010 19:27:44

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ICPMS#4 - Summary Report

Sample ID: 1202015735

Sample Date/Time: Thursday, January 21, 2010 19:31:09

Sample Type:

Sample Description: LANL 6020 MS

Number of Replicates: 3

Batch ID: 941754|2|sk|

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100121\1202015735.077

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	119.158	ug/L	9.777	13944	0.020
Be	9	30.217	ug/L	3.949	1217	0.002
B	11	70.263	ug/L	2.070	3878	0.005
Na	23	1955.265	ug/L	9.324	3015264	4.360
Mg	24	13278.396	ug/L	0.705	14141360	20.572
Al	27	101490.610	ug/L	2.265	144759068	210.678
P	31	1206.682	ug/L	2.566	80290	0.114
K	39	12081.363	ug/L	11.353	30152578	43.321
Ca	43	9950.428	ug/L	1.748	47490	0.069
> Sc	45		ug/L		687249	687249.261
Ti	47	868.614	ug/L	1.615	212962	0.310
V	51	116.428	ug/L	2.503	258343	0.392
Cr	52	87.658	ug/L	2.699	203746	0.288
Cr	53		ug/L		98628	-0.061
Mn	55	1266.266	ug/L	0.241	4495642	6.540
Fe	57	61833.092	ug/L	0.728	4577893	6.656
Co	59	37.622	ug/L	1.561	108082	0.157
Ni	60	68.146	ug/L	2.637	41904	0.061
Cu	63		ug/L		69860	0.102
Cu	65	50.856	ug/L	1.767	32806	0.048
Zn	66	192.338	ug/L	2.974	52361	0.404
Zn	67		ug/L		13530	0.063
Zn	68		ug/L		38759	0.294
> Ge	74		ug/L		129269	129269.340
As	75	52.569	ug/L	1.635	16829	0.129
Se	77		ug/L		3592	-0.015
Se	82	10.000	ug/L	9.534	289	0.002
Kr	83		ug/L		138	0.001
Sr	88	117.224	ug/L	3.103	566668	6.202
Y	89		ug/L		567725	6.215
Zr	90	178.992	ug/L	1.361	482660	5.281
Mo	98	23.896	ug/L	2.245	29750	0.325
Ag	107	22.951	ug/L	3.736	48382	0.529
Cd	111	7.802	ug/L	3.152	3833	0.042
Cd	114		ug/L		5510	0.060
> In	115		ug/L		91394	91393.886
Sn	120	7.847	ug/L	2.434	17417	0.190
Sb	121	10.989	ug/L	3.336	18300	0.199
Sb	123		ug/L		14025	0.152
Ba	135		ug/L		232647	2.487
Ba	137	425.467	ug/L	3.088	393479	4.207
Ho	165		ug/L		23767	0.254
> Lu	175		ug/L		93567	93566.815
Tl	205	41.404	ug/L	0.584	89477	0.955
Pb	208	129.323	ug/L	3.197	639176	6.831
Bi	209		ug/L		3958	0.042
Th	232	60.808	ug/L	0.834	414786	4.431
U	238	26.290	ug/L	3.115	191727	2.048

Sample ID: 1202015735

Report Date/Time: Thursday, January 21, 2010 19:33:57

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	0.9999
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	0.9999
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		114.2			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		93.2			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		95.4			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		105.4			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Upper, S, EEEAI	Al 27	27	Sample is out of limits (over linear range)
Upper, S, EEE Ti	Ti 47	47	Sample is out of limits (over linear range)
Upper, S, EEE V	V 51	51	Sample is out of limits (over linear range)
Upper, S, EEIMn	Mn 55	55	Sample is out of limits (over linear range)
Upper, S, EEEFe	Fe 57	57	Sample is out of limits (over linear range)

Sample ID: 1202015735

Report Date/Time: Thursday, January 21, 2010 19:33:57

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QC Action

QC Action Line: Continue

ICPMS#4 - Summary Report

Sample ID: 1202015736

Sample Date/Time: Thursday, January 21, 2010 19:37:21

Sample Type:

Sample Description: LANL 6020 MSD

Number of Replicates: 3

Batch ID: 941754|2|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100121\1202015736.078

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	90.488	ug/L	7.980	10444	0.015
Be	9	29.176	ug/L	8.252	1158	0.002
B	11	70.656	ug/L	6.677	3843	0.006
Na	23	1751.963	ug/L	5.902	2670187	3.907
Mg	24	9383.610	ug/L	3.892	9851666	14.538
Al	27	76397.634	ug/L	0.828	107510088	158.589
P	31	1171.022	ug/L	1.868	76930	0.110
K	39	8180.861	ug/L	2.762	20273395	29.334
Ca	43	6881.255	ug/L	1.775	32511	0.047
Sc	45		ug/L		677825	677825.299
Ti	47	701.750	ug/L	1.237	169751	0.250
V	51	87.868	ug/L	0.730	189642	0.296
Cr	52	58.744	ug/L	2.370	136448	0.193
Cr	53		ug/L		90440	-0.071
Mn	55	791.413	ug/L	0.791	2771879	4.088
Fe	57	41203.334	ug/L	0.633	3010059	4.435
Co	59	32.155	ug/L	2.074	91111	0.134
Ni	60	49.487	ug/L	2.467	30040	0.044
Cu	63		ug/L		56737	0.084
Cu	65	42.795	ug/L	1.667	27245	0.040
Zn	66	136.522	ug/L	0.969	37347	0.286
Zn	67		ug/L		10583	0.040
Zn	68		ug/L		28075	0.211
Ge	74		ug/L		129653	129652.983
As	75	48.257	ug/L	4.167	15511	0.118
Se	77		ug/L		3426	-0.017
Se	82	10.202	ug/L	6.436	296	0.002
Kr	83		ug/L		99	0.000
Sr	88	86.092	ug/L	0.975	412271	4.555
Y	89		ug/L		418645	4.627
Zr	90	135.186	ug/L	2.162	361003	3.988
Mo	98	25.970	ug/L	1.089	32019	0.354
Ag	107	23.882	ug/L	2.585	49856	0.551
Cd	111	6.882	ug/L	5.442	3348	0.037
Cd	114		ug/L		5625	0.062
In	115		ug/L		90486	90485.977
Sn	120	12.187	ug/L	0.936	26745	0.295
Sb	121	22.557	ug/L	2.631	37080	0.408
Sb	123		ug/L		28558	0.314
Ba	135		ug/L		160420	1.736
Ba	137	302.456	ug/L	3.574	276392	2.991
Ho	165		ug/L		18296	0.198
Lu	175		ug/L		92463	92462.634
Tl	205	43.938	ug/L	0.608	93830	1.014
Pb	208	116.454	ug/L	3.098	568736	6.151
Bi	209		ug/L		2535	0.027
Th	232	49.975	ug/L	1.942	336835	3.642
U	238	26.188	ug/L	0.651	188791	2.041

Sample ID: 1202015736

Report Date/Time: Thursday, January 21, 2010 19:40:08

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	0.9999
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	0.9999
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		112.7			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		93.5			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		94.5			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		104.2			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

QC Out Of Limits

Measurement Type Analyte

Al 27 Upper, S, EEEAl

Ti 47 Upper, S, EEE Ti

Mass Out of Limits Message

27 Sample is out of limits (over linear range)

47 Sample is out of limits (over linear range)

QC Action

Sample ID: 1202015736

Report Date/Time: Thursday, January 21, 2010 19:40:08

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QC Action Line: Continue

ICPMS#4 - Summary Report

Sample ID: 1202015734

Sample Date/Time: Thursday, January 21, 2010 19:43:32

Sample Type:

Sample Description: LANL 6020 SDILT

Number of Replicates: 3

Batch ID: 941754|10|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100121\1202015734.079

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	14.614	ug/L	5.712	1566	0.002
Be	9	0.852	ug/L	7.195	34	0.000
B	11	5.322	ug/L	19.478	358	0.000
Na	23	152.028	ug/L	4.339	232549	0.339
Mg	24	1576.518	ug/L	3.768	1533922	2.443
Al	27	12249.218	ug/L	6.584	15937841	25.427
P	31	268.802	ug/L	4.341	17799	0.025
K	39	1346.524	ug/L	5.093	3391580	4.828
Ca	43	1705.775	ug/L	3.816	7701	0.012
Sc	45		ug/L		627117	627117.224
Ti	47	126.921	ug/L	1.406	28517	0.045
V	51	13.523	ug/L	4.994	18345	0.046
Cr	52	6.483	ug/L	6.841	18414	0.021
Cr	53		ug/L		102529	-0.041
Mn	55	330.186	ug/L	2.665	1069827	1.705
Fe	57	8549.542	ug/L	2.633	580337	0.920
Co	59	2.347	ug/L	4.715	6219	0.010
Ni	60	6.850	ug/L	5.467	3927	0.006
Cu	63		ug/L		5735	0.009
Cu	65	4.720	ug/L	4.831	2873	0.004
Zn	66	28.239	ug/L	1.955	7860	0.059
Zn	67		ug/L		6833	0.011
Zn	68		ug/L		5988	0.041
Ge	74		ug/L		129224	129223.816
As	75	1.856	ug/L	82.043	791	0.005
Se	77		ug/L		4547	-0.008
Se	82	1.126	ug/L	10.635	21	0.000
Kr	83		ug/L		41	-0.000
Sr	88	11.557	ug/L	0.449	55284	0.611
Y	89		ug/L		105482	1.170
Zr	90	21.153	ug/L	4.391	56405	0.624
Mo	98	1.013	ug/L	4.209	1271	0.014
Ag	107	0.113	ug/L	10.114	278	0.003
Cd	111	0.375	ug/L	34.868	194	0.002
Cd	114		ug/L		63	0.001
In	115		ug/L		90185	90185.252
Sn	120	0.321	ug/L	4.257	780	0.008
Sb	121	0.233	ug/L	15.246	501	0.004
Sb	123		ug/L		418	0.003
Ba	135		ug/L		32706	0.381
Ba	137	66.849	ug/L	4.140	56735	0.661
Ho	165		ug/L		4647	0.054
Lu	175		ug/L		85854	85854.132
Tl	205	0.294	ug/L	9.986	680	0.007
Pb	208	8.715	ug/L	3.251	39756	0.460
Bi	209		ug/L		520	0.006
Th	232	6.206	ug/L	1.713	39005	0.452
U	238	0.599	ug/L	0.751	4096	0.047

Sample ID: 1202015734

Report Date/Time: Thursday, January 21, 2010 19:46:19

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Calibration

Analyte	Mass Curve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	0.9999
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	0.9999
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		104.3			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		93.2			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		94.1			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		96.7			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

QC Out Of Limits

Measurement Type Analyte
Ti 47 Upper, S, EEETI

MassOut of Limits Message
47Sample is out of limits (over linear range)

QC Action

QC Action Line: No QC out of limits detected

Sample ID: 1202015734

Report Date/Time: Thursday, January 21, 2010 19:46:19

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ICPMS#4 - Summary Report

Sample ID: 244604002
 Sample Date/Time: Thursday, January 21, 2010 19:49:44
 Sample Type:
 Sample Description: LANL 6020
 Number of Replicates: 3
 Batch ID: 941754|2|skj
 Method File: c:\elandata\Method\6020.mth
 Dataset File: C:\elandata\Dataset\100121\244604002.080

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	55.049	ug/L	5.915	6100	0.009
Be	9	3.934	ug/L	7.030	152	0.000
B	11	18.045	ug/L	3.775	1018	0.001
Na	23	357.938	ug/L	11.261	539393	0.798
Mg	24	8409.390	ug/L	3.418	8474889	13.029
Al	27	53887.640	ug/L	3.800	72732605	111.862
P	31	561.528	ug/L	3.832	36410	0.053
K	39	8201.602	ug/L	4.943	19512557	29.409
Ca	43	10645.462	ug/L	1.340	48068	0.073
> Sc	45		ug/L		650522	650521.906
Ti	47	685.156	ug/L	1.713	159050	0.244
V	51	63.664	ug/L	4.920	128842	0.215
Cr	52	47.581	ug/L	4.037	107018	0.157
Cr	53		ug/L		89431	-0.067
Mn	55	1106.611	ug/L	0.303	3719043	5.716
Fe	57	37399.896	ug/L	0.123	2622329	4.026
Co	59	16.018	ug/L	1.674	43595	0.067
Ni	60	34.640	ug/L	3.316	20204	0.031
Cu	63		ug/L		34109	0.052
Cu	65	26.651	ug/L	0.815	16328	0.025
Zn	66	223.733	ug/L	4.020	61006	0.469
Zn	67		ug/L		14099	0.067
Zn	68		ug/L		43890	0.333
> Ge	74		ug/L		129514	129514.399
As	75	9.962	ug/L	5.538	3359	0.024
Se	77		ug/L		3314	-0.017
Se	82	1.377	ug/L	27.119	28	0.000
Kr	83		ug/L		75	0.000
Sr	88	93.707	ug/L	1.340	447019	4.958
Y	89		ug/L		271595	3.014
Zr	90	76.961	ug/L	2.356	204719	2.271
Mo	98	2.668	ug/L	2.318	3302	0.036
Ag	107	0.464	ug/L	3.699	1005	0.011
Cd	111	1.686	ug/L	6.902	827	0.009
Cd	114		ug/L		547	0.006
> In	115		ug/L		90123	90123.452
Sn	120	0.707	ug/L	1.160	1622	0.017
Sb	121	0.287	ug/L	9.166	589	0.005
Sb	123		ug/L		502	0.004
Ba	135		ug/L		207081	2.347
Ba	137	401.117	ug/L	2.522	349967	3.966
Ho	165		ug/L		11345	0.129
> Lu	175		ug/L		88273	88273.234
Tl	205	0.665	ug/L	1.842	1454	0.015
Pb	208	51.707	ug/L	2.735	241219	2.731
Bi	209		ug/L		3909	0.044
Th	232	25.278	ug/L	0.397	162783	1.842
U	238	28.260	ug/L	1.212	194441	2.202

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	0.9999
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	0.9999
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		108.1			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		93.4			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		94.1			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		99.5			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
Al 27 Upper, S, EEFAI		27Sample is out of limits (over linear range)
Ti 47 Upper, S, EETi		47Sample is out of limits (over linear range)
Mn 55 Upper, S, EEIMn		55Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Thursday, January 21, 2010 19:55:56

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100121\QC Std 6.081

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	58.535	ug/L	4.997	6225	0.010
Be	9	55.595	ug/L	2.024	2029	0.003
B	11	115.315	ug/L	2.682	5710	0.009
Na	23	5566.887	ug/L	6.278	7763056	12.415
Mg	24	5531.576	ug/L	7.509	5339911	8.570
Al	27	5198.082	ug/L	7.650	6722139	10.790
P	31	5336.741	ug/L	3.305	315557	0.503
K	39	5111.545	ug/L	10.407	11769572	18.329
Ca	43	5115.311	ug/L	4.168	22306	0.035
Sc	45		ug/L		623454	623454.290
Ti	47	48.103	ug/L	2.480	10831	0.017
V	51	46.867	ug/L	6.154	88198	0.158
Cr	52	49.867	ug/L	3.727	107249	0.164
Cr	53		ug/L		126426	-0.002
Mn	55	51.679	ug/L	3.910	167088	0.267
Fe	57	5023.102	ug/L	3.581	340289	0.541
Co	59	49.401	ug/L	2.182	128685	0.206
Ni	60	49.597	ug/L	2.007	27691	0.044
Cu	63		ug/L		59485	0.095
Cu	65	48.685	ug/L	3.265	28484	0.046
Zn	66	54.196	ug/L	1.161	15157	0.114
Zn	67		ug/L		8585	0.024
Zn	68		ug/L		10896	0.077
Ge	74		ug/L		131474	131474.455
As	75	49.720	ug/L	9.063	16177	0.122
Se	77		ug/L		6591	0.007
Se	82	52.834	ug/L	4.760	1613	0.012
Kr	83		ug/L		34	-0.000
Sr	88	51.324	ug/L	1.825	245335	2.715
Y	89		ug/L		57	0.000
Zr	90	49.097	ug/L	2.285	130931	1.449
Mo	98	49.479	ug/L	1.351	60870	0.674
Ag	107	49.168	ug/L	1.361	102402	1.134
Cd	111	48.192	ug/L	1.075	23323	0.258
Cd	114		ug/L		56015	0.620
In	115		ug/L		90313	90312.540
Sn	120	48.594	ug/L	1.227	106208	1.175
Sb	121	48.586	ug/L	1.966	79585	0.880
Sb	123		ug/L		60741	0.671
Ba	135		ug/L		24690	0.297
Ba	137	52.058	ug/L	1.209	42797	0.515
Ho	165		ug/L		12	0.000
Lu	175		ug/L		83116	83116.279
Tl	205	47.828	ug/L	2.532	91800	1.103
Pb	208	50.496	ug/L	1.694	221904	2.667
Bi	209		ug/L		54	0.000
Th	232	49.874	ug/L	2.477	302197	3.634
U	238	50.561	ug/L	1.825	327530	3.940

Sample ID: QC Std 6

Report Date/Time: Thursday, January 21, 2010 19:58:43

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	0.9999
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	0.9999
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7	117.069				
Be	9	111.190				
B	11	115.315				
Na	23	111.338				
Mg	24	110.632				
Al	27	102.932				
P	31	106.735				
K	39	102.231				
Ca	43	102.306				
> Sc	45		103.6			
Ti	47	96.206				
V	51	93.734				
Cr	52	99.735				
Cr	53					
Mn	55	103.357				
Fe	57	100.462				
Co	59	98.801				
Ni	60	99.193				
Cu	63					
Cu	65	97.371				
Zn	66	108.392				
Zn	67					
Zn	68					
> Ge	74		94.8			
As	75	99.440				
Se	77					
Se	82	105.668				
Kr	83					
Sr	88	102.648				
Y	89					
Zr	90	98.193				
Mo	98	98.958				
Ag	107	98.336				
Cd	111	96.385				
Cd	114					
> In	115		94.3			
Sn	120	97.188				
Sb	121	97.172				
Sb	123					
Ba	135					
Ba	137	104.117				
Ho	165					
> Lu	175		93.7			
Tl	205	95.655				
Pb	208	100.992				
Bi	209					
Th	232	99.748				
U	238	101.122				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	Li	7	7CCV is out of limits (+/- 10%)
QC Std 6	Be	9	9CCV is out of limits (+/- 10%)
QC Std 6	B	11	11CCV is out of limits (+/- 10%)
QC Std 6	Na	23	23CCV is out of limits (+/- 10%)
QC Std 6	Mg	24	24CCV is out of limits (+/- 10%)

Sample ID: QC Std 6

Report Date/Time: Thursday, January 21, 2010 19:58:43

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QC Action

QC Action Line: Continue

ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Thursday, January 21, 2010 20:02:09

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100121\QC Std 7.082

Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Li	7	0.039 ug/L	109.146	10	0.000
|	Be	9	0.067 ug/L	81.020	5	0.000
|	B	11	1.840 ug/L	12.271	193	0.000
|	Na	23	1.129 ug/L	695.939	22020	0.003
|	Mg	24	0.524 ug/L	109.197	2667	0.001
|	Al	27	2.597 ug/L	15.118	6335	0.005
|	P	31	-1.756 ug/L	75.082	1853	-0.000
|	K	39	-4.865 ug/L	131.569	362207	-0.017
|	Ca	43	-4.387 ug/L	152.756	321	-0.000
>	Sc	45	ug/L		644448	644447.867
|	Ti	47	0.025 ug/L	9.452	154	0.000
|	V	51	3.176 ug/L	35.713	-3584	0.011
|	Cr	52	-1.055 ug/L	6.717	2953	-0.003
|	Cr	53	ug/L		83658	-0.075
|	Mn	55	0.021 ug/L	28.634	835	0.000
|	Fe	57	-2.725 ug/L	90.454	3296	-0.000
|	Co	59	0.018 ug/L	45.149	123	0.000
|	Ni	60	-0.002 ug/L	392.104	96	-0.000
|	Cu	63	ug/L		108	0.000
|	Cu	65	-0.062 ug/L	9.560	71	-0.000
[	Zn	66	0.019 ug/L	115.050	216	0.000
|	Zn	67	ug/L		4502	-0.008
|	Zn	68	ug/L		519	-0.002
>	Ge	74	ug/L		133937	133936.951
|	As	75	-0.605 ug/L	235.157	9	-0.001
|	Se	77	ug/L		3174	-0.019
|	Se	82	0.391 ug/L	62.171	-2	0.000
|	Kr	83	ug/L		35	-0.000
[	Sr	88	0.013 ug/L	83.607	203	0.001
|	Y	89	ug/L		26	0.000
|	Zr	90	0.123 ug/L	22.408	482	0.004
|	Mo	98	0.046 ug/L	3.588	87	0.001
|	Ag	107	0.026 ug/L	34.361	101	0.001
|	Cd	111	0.020 ug/L	44.296	24	0.000
|	Cd	114	ug/L		43	0.000
>	In	115	ug/L		93557	93556.993
|	Sn	120	0.084 ug/L	6.643	274	0.002
|	Sb	121	0.418 ug/L	10.986	833	0.008
|	Sb	123	ug/L		678	0.006
[	Ba	135	ug/L		30	0.000
|	Ba	137	0.032 ug/L	42.969	42	0.000
|	Ho	165	ug/L		6	0.000
>	Lu	175	ug/L		85342	85341.680
|	Tl	205	0.229 ug/L	21.757	549	0.005
|	Pb	208	0.025 ug/L	39.424	364	0.001
|	Bi	209	ug/L		28	0.000
|	Th	232	0.110 ug/L	26.683	869	0.008
	U	238	0.023 ug/L	27.847	241	0.002

Sample ID: QC Std 7

Report Date/Time: Thursday, January 21, 2010 20:04:57

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	0.9999
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	0.9999
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		107.1			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		96.6			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		97.7			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		96.2			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 7

Report Date/Time: Thursday, January 21, 2010 20:04:57

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Daily Performance Report

Sample ID: Sample

Sample Date/Time: Friday, January 22, 2010 10:26:15

Sample Description:

Method File: c:\elandata\Method\daily2.mth

Dataset File: c:\elandata\Dataset\090811\Sample.364

Tuning File: c:\elandata\Tuning\default2.tun

Optimization File: c:\elandata\Optimize\default.dac

Dual Detector Mode: Pulse

Acq. Dead Time(ns): 35

Current Dead Time (ns): 35

Summary

Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
Be	9.0	374.0	374.005	17.249	4.6
Mg	24.0	8994.0	8994.032	212.169	2.4
Co	58.9	22562.4	22562.404	192.322	0.9
Rh	102.9	45804.9	45804.923	518.285	1.1
In	114.9	62914.2	62914.239	472.042	0.8
Pb	208.0	25424.8	25424.808	369.305	1.5
[> Ba	137.9	52884.2	52884.173	534.771	1.0
[Ba++	69.0	751.4	0.014	0.000	1.8
[> Ce	139.9	62291.9	62291.927	660.601	1.1
[CeO	155.9	1431.9	0.023	0.000	1.6
Bkgd	220.0	4.2	4.200	0.758	18.1

Current Optimization File Data

Current Value	Description
0.86	Nebulizer Gas Flow
9.00	Lens Voltage
1000.00	ICP RF Power
-1875.00	Analog Stage Voltage
1100.00	Pulse Stage Voltage
50.00	Discriminator Threshold
-2.00	AC Rod Offset

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	17	8.5	527.0
Co	59	17	9.8	18505.3
In	115	17	11.3	47109.5

ICPMS #4 TUNING REPORT

File Name: default2.tun
File Path: c:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas Peak W
He	3.0	3.0	601	2060	0.699
Be	9.0	9.1	2049	2045	0.718
Mg	24.0	24.0	5655	2075	0.629
Mg	25.0	25.1	5977	2080	0.710
Mg	26.0	25.9	6113	2085	0.676
Co	58.9	58.8	14158	2140	0.675
Rh	102.9	102.9	24867	2230	0.677
In	114.9	114.9	27769	2255	0.696
Ce	139.9	139.9	33853	2310	0.660
Pb	206.0	206.0	49930	2500	0.629
Pb	207.0	207.0	50113	2380	0.658
Pb	208.0	208.0	50436	2570	0.640
U	238.1	238.1	57690	2510	0.677

ICPMS#4 - Summary Report

Sample ID: Blank

Sample Date/Time: Friday, January 22, 2010 15:16:34

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be and u.mth

Dataset File: c:\elandata\dataset\100122\Blank.051

Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	ug/L		2	
[>	Sc	45	ug/L		228079	
[>	Lu	175	ug/L		79533	
[	U	238	ug/L		52	

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	
Sc	45Linear Thru Zero	
Lu	175Linear Thru Zero	
U	238Simple Linear	

QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Be	9				
[>	Sc	45				
[>	Lu	175				
[U	238				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: Standard 1

Sample Date/Time: Friday, January 22, 2010 15:18:52

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be and u.mth

Dataset File: c:\elandata\dataset\100122\Standard 1.052

Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be 9	10.000	ug/L	3.999	382	0.002
[>	Sc 45		ug/L		229684	229684.261
[>	Lu 175		ug/L		79586	79585.906
[	U 238	10.000	ug/L	3.003	59380	0.746

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Be 9					
[>	Sc 45					
[>	Lu 175					
[	U 238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: Standard 2

Sample Date/Time: Friday, January 22, 2010 15:21:08

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be and u.mth

Dataset File: c:\elandata\dataset\100122\Standard 2.053

Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[Be 9	100.061	ug/L	2.267	4095	0.018
[> Sc 45		ug/L		232606	232606.136
[> Lu 175		ug/L		79459	79458.839
[U 238	99.980	ug/L	1.730	581052	7.312

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[Be 9					
[> Sc 45					
[> Lu 175					
[U 238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: QC Std 1

Sample Date/Time: Friday, January 22, 2010 15:23:24

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be and u.mth

Dataset File: c:\elandata\dataset\100122\QC Std 1.054

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[Be	9	48.572	ug/L	3.113	1984	0.009
[> Sc	45		ug/L		232110	232110.491
[> Lu	175		ug/L		79948	79948.266
[U	238	52.264	ug/L	0.527	305636	3.822

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[Be	9	97.144				
[> Sc	45		101.8			
[> Lu	175		100.5			
[U	238	104.527				

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: QC Std 2

Sample Date/Time: Friday, January 22, 2010 15:25:42

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be and u.mth

Dataset File: c:\elandata\dataset\100122\QC Std 2.055

Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be 9	0.106	ug/L	28.797	7	0.000
[>	Sc 45		ug/L		230727	230726.833
[>	Lu 175		ug/L		80145	80145.035
[	U 238	0.010	ug/L	4.707	111	0.001

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Be 9					
[>	Sc 45		101.2			
[>	Lu 175		100.8			
[	U 238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: QC Std 3

Sample Date/Time: Friday, January 22, 2010 15:28:01

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be and u.mth

Dataset File: c:\elandata\dataset\100122\QC Std 3.056

Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[Be 9	0.633	ug/L	11.541	28	0.000
> Sc 45		ug/L		232908	232907.820
> Lu 175		ug/L		79741	79741.419
[U 238	0.222	ug/L	0.730	1348	0.016

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[Be 9	126.697				
> Sc 45		102.1			
> Lu 175		100.3			
[U 238	111.154				

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: QC Std 4

Sample Date/Time: Friday, January 22, 2010 15:30:18

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be and u.mth

Dataset File: c:\elandata\dataset\100122\QC Std 4.057

Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be 9	0.084	ug/L	45.276	6	0.000
[>	Sc 45		ug/L		226102	226101.895
[>	Lu 175		ug/L		76368	76368.357
[	U 238	-0.002	ug/L	45.406	36	-0.000

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Be 9					
[>	Sc 45		99.1			
[>	Lu 175		96.0			
[	U 238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: QC Std 5

Sample Date/Time: Friday, January 22, 2010 15:32:35

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be and u.mth

Dataset File: c:\elandata\dataset\100122\QC Std 5.058

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	20.524	ug/L	5.053	825	0.004
Sc	45		ug/L		228049	228048.828
Lu	175		ug/L		76486	76485.987
U	238	20.449	ug/L	0.843	114450	1.496

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Be	9	102.620				
Sc	45		100.0			
Lu	175		96.2			
U	238	102.245				

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 5

Report Date/Time: Friday, January 22, 2010 15:32:53

Page 1

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ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Friday, January 22, 2010 15:34:53

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be and u.mth

Dataset File: c:\elandata\dataset\100122\QC Std 6.059

Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	51.079 ug/L	0.768	2125	0.009
[>	Sc	45	ug/L		236337	236337.462
[>	Lu	175	ug/L		77771	77771.269
[	U	238	51.507 ug/L	0.938	293047	3.767

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Be	9	102.157			
[>	Sc	45		103.6		
[>	Lu	175		97.8		
[	U	238	103.014			

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Friday, January 22, 2010 15:37:13

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be and u.mth

Dataset File: c:\elandata\dataset\100122\QC Std 7.060

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	0.015	ug/L	424.320	3	0.000
Sc	45		ug/L		232906	232906.307
Lu	175		ug/L		77441	77441.151
U	238	0.009	ug/L	26.063	102	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Be	9					
Sc	45		102.1			
Lu	175		97.4			
U	238					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: 1202015732

Sample Date/Time: Friday, January 22, 2010 15:39:32

Sample Type:

Sample Description: LANL 6020 MB

Number of Replicates: 3

Batch ID: 941754|2|skj

Method File: c:\elandata\Method\be and u.mth

Dataset File: c:\elandata\dataset\100122\1202015732.061

Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be 9	0.039	ug/L	4.564	4	0.000
[>	Sc 45		ug/L		233679	233679.099
[>	Lu 175		ug/L		76517	76517.477
[	U 238	-0.001	ug/L	67.285	43	-0.000

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Be 9					
[>	Sc 45		102.5			
[>	Lu 175		96.2			
[	U 238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: 1202015737

Sample Date/Time: Friday, January 22, 2010 15:41:50

Sample Type:

Sample Description: LANL 6020 LCS

Number of Replicates: 3

Batch ID: 941754|40|skj

Method File: c:\elandata\Method\be and u.mth

Dataset File: c:\elandata\dataset\100122\1202015737.062

Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be 9	21.225	ug/L	11.195	793	0.004
[>	Sc 45		ug/L		213646	213645.980
[>	Lu 175		ug/L		71611	71611.488
[	U 238	0.520	ug/L	13.781	2743	0.038

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Be 9					
[>	Sc 45		93.7			
[>	Lu 175		90.0			
[	U 238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: 244604001

Sample Date/Time: Friday, January 22, 2010 15:44:08

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 941754|2|skj

Method File: c:\elandata\Method\be and u.mth

Dataset File: c:\elandata\dataset\100122\244604001.063

Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be 9	3.707	ug/L	8.776	166	0.001
[>	Sc 45		ug/L		251174	251174.094
[>	Lu 175		ug/L		81903	81903.275
[	U 238	2.984	ug/L	0.395	17926	0.218

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Be 9					
[>	Sc 45		110.1			
[>	Lu 175		103.0			
[	U 238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: 1202015733

Sample Date/Time: Friday, January 22, 2010 15:46:27

Sample Type:

Sample Description: LANL 6020 DUP

Number of Replicates: 3

Batch ID: 941754|2|skj

Method File: c:\elandata\Method\be and u.mth

Dataset File: c:\elandata\dataset\100122\1202015733.064

Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[Be 9	3.217	ug/L	6.745	145	0.001
> Sc 45		ug/L		251818	251817.532
> Lu 175		ug/L		83763	83763.403
[U 238	2.890	ug/L	0.974	17757	0.211

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[Be 9					
> Sc 45		110.4			
> Lu 175		105.3			
[U 238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Friday, January 22, 2010 15:48:46

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be and u.mth

Dataset File: c:\elandata\dataset\100122\QC Std 6.065

Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be 9	52.018	ug/L	3.070	2143	0.009
Sc 45		ug/L		234042	234041.590
Lu 175		ug/L		77729	77729.002
U 238	51.799	ug/L	1.802	294513	3.789

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Be 9	104.035				
Sc 45		102.6			
Lu 175		97.7			
U 238	103.598				

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Friday, January 22, 2010 15:51:05

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be and u.mth

Dataset File: c:\elandata\dataset\100122\QC Std 7.066

Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[Be 9	0.008	ug/L	673.782	3	0.000
[> Sc 45		ug/L		229500	229499.540
[> Lu 175		ug/L		77930	77930.115
[U 238	0.010	ug/L	27.589	108	0.001

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[Be 9					
[> Sc 45		100.6			
[> Lu 175		98.0			
[U 238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: 1202015735

Sample Date/Time: Friday, January 22, 2010 15:53:25

Sample Type:

Sample Description: LANL 6020 MS

Number of Replicates: 3

Batch ID: 941754|2|skj

Method File: c:\elandata\Method\be and u.mth

Dataset File: c:\elandata\dataset\100122\1202015735.067

Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	26.713 ug/L	0.783	1256	0.005
[>	Sc	45	ug/L		266952	266952.490
[>	Lu	175	ug/L		82587	82586.555
[	U	238	27.205 ug/L	3.004	164330	1.990

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Be	9				
[>	Sc	45		117.0		
[>	Lu	175		103.8		
[	U	238				

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: 1202015736

Sample Date/Time: Friday, January 22, 2010 15:55:44

Sample Type:

Sample Description: LANL 6020 MSD

Number of Replicates: 3

Batch ID: 941754|2|skj

Method File: c:\elandata\Method\be and u.mth

Dataset File: c:\elandata\dataset\100122\1202015736.068

Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[Be 9	27.184	ug/L	4.546	1241	0.005
[> Sc 45		ug/L		259117	259117.303
[> Lu 175		ug/L		81985	81985.463
[U 238	27.418	ug/L	0.706	164449	2.005

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[Be 9					
[> Sc 45		113.6			
[> Lu 175		103.1			
[U 238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: 1202015734

Sample Date/Time: Friday, January 22, 2010 15:58:01

Sample Type:

Sample Description: LANL 6020 SDILT

Number of Replicates: 3

Batch ID: 941754|10|sk|

Method File: c:\elandata\Method\be and u.mth

Dataset File: c:\elandata\dataset\100122\1202015734.069

Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be 9	0.681	ug/L	14.245	31	0.000
>	Sc 45		ug/L		241469	241469.220
>	Lu 175		ug/L		78213	78212.667
[	U 238	0.624	ua/L	1.012	3618	0.046

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Be	9				
>	Sc	45		105.9		
>	Lu	175		98.3		
[	U	238				

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: 244604002

Sample Date/Time: Friday, January 22, 2010 16:00:19

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 941754|2|skj

Method File: c:\elandata\Method\be and u.mth

Dataset File: c:\elandata\dataset\100122\244604002.070

Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be 9	3.376	ug/L	10.184	154	0.001
Sc 45		ug/L		255342	255342.027
Lu 175		ug/L		81092	81091.745
U 238	28.380	ug/L	2.017	168343	2.076

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Be 9					
Sc 45		112.0			
Lu 175		102.0			
U 238					

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Friday, January 22, 2010 16:02:37

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be and u.mth

Dataset File: c:\elandata\dataset\100122\QC Std 6.071

Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be 9	49.158	ug/L	3.377	2073	0.009
[>	Sc 45		ug/L		239541	239540.609
[>	Lu 175		ug/L		78214	78214.400
[	U 238	50.881	ug/L	0.858	291107	3.721

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Be 9	98.316				
[>	Sc 45		105.0			
[>	Lu 175		98.3			
[	U 238	101.762				

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Friday, January 22, 2010 16:04:56

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be and u.mth

Dataset File: c:\elandata\dataset\100122\QC Std 7.072

Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[Be 9	0.047	ug/L	59.426	4	0.000
[> Sc 45		ug/L		233529	233528.943
[> Lu 175		ug/L		78645	78645.422
[U 238	0.009	ug/L	32.089	103	0.001

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[Be 9					
[> Sc 45		102.4			
[> Lu 175		98.9			
[U 238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

=====
Analysis BegunLogged In Analyst: Administrator
Spectrometer Model: FIMS-100, S/N B050-9550Technique: AA FIMS-MHS
Autosampler Model: S10Sample Information File: C:\data-AA\Administrator\Sample Information\012810S1.SIF
Batch ID:
Results Data Set: 012810S1
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: 1/28/2010 08:53:52

Analyst:

Data Type: Original

Replicate Data: Calib Blank

Repl #	Sample Conc ug/L	Std Conc ug/L	Blk Corr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.00]	0.0002	-0.0001	0.0002	08:54:44	Yes
2		[0.00]	0.0001	-0.0003	0.0001	08:55:13	Yes
Mean:		[0.00]	0.0001				
SD:		0.00	0.0000				
%RSD:		0.00	29.97				

Auto-zero performed.

Sequence No.: 2

Autosampler Location: 2

Sample ID: S0.2

Date Collected: 1/28/2010 08:55:32

Analyst:

Data Type: Original

Replicate Data: S0.2

Repl #	Sample Conc ug/L	Std Conc ug/L	Blk Corr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.2]	0.0020	0.0081	0.0022	08:56:23	Yes
2		[0.2]	0.0021	0.0093	0.0023	08:56:53	Yes
Mean:		[0.2]	0.0021				
SD:		0.0	0.0001				
%RSD:		0.0	2.74				

Standard number 1 applied. [0.2]

Correlation Coef.: 1.000000 Slope: 0.01038 Intercept: 0.00000

Sequence No.: 3

Autosampler Location: 3

Sample ID: S0.5

Date Collected: 1/28/2010 08:57:12

Analyst:

Data Type: Original

Replicate Data: S0.5

Repl #	Sample Conc ug/L	Std Conc ug/L	Blk Corr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.5]	0.0054	0.0215	0.0055	08:58:03	Yes
2		[0.5]	0.0054	0.0220	0.0055	08:58:33	Yes
Mean:		[0.5]	0.0054				
SD:		0.0	0.0000				
%RSD:		0.0	0.01				

Standard number 2 applied. [0.5]

Correlation Coef.: 0.999902 Slope: 0.01072 Intercept: -0.00003

Sequence No.: 4

Autosampler Location: 4

Sample ID: S2.0

Date Collected: 1/28/2010 08:58:52

Analyst:

Data Type: Original

Replicate Data: S2.0

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[2.0]	0.0219	0.0915	0.0221	08:59:44	Yes
2		[2.0]	0.0218	0.0916	0.0219	09:00:14	Yes
Mean:		[2.0]	0.0218				
SD:		0.0	0.0001				
%RSD:		0.0	0.40				

Standard number 3 applied. [2.0]
Correlation Coef.: 0.999983 Slope: 0.01095 Intercept: -0.00007

Sequence No.: 5

Sample ID: S5.0

Analyst:

Autosampler Location: 5

Date Collected: 1/28/2010 09:00:33

Data Type: Original

Replicate Data: S5.0

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[5.0]	0.0547	0.2297	0.0548	09:01:25	Yes
2		[5.0]	0.0544	0.2281	0.0545	09:01:55	Yes
Mean:		[5.0]	0.0545				
SD:		0.0	0.0002				
%RSD:		0.0	0.43				

Standard number 4 applied. [5.0]
Correlation Coef.: 0.999997 Slope: 0.01092 Intercept: -0.00006

Sequence No.: 6

Sample ID: S10.0

Analyst:

Autosampler Location: 6

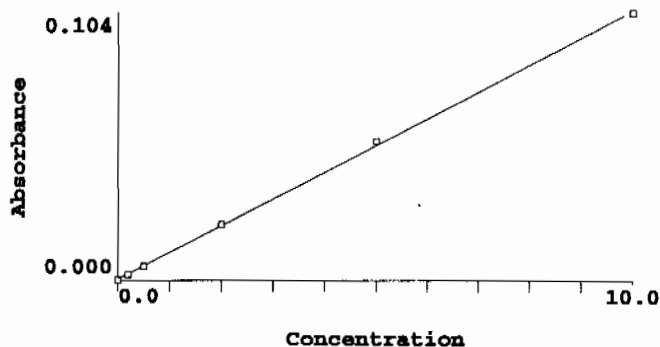
Date Collected: 1/28/2010 09:02:15

Data Type: Original

Replicate Data: S10.0

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[10.0]	0.1045	0.4437	0.1046	09:03:05	Yes
2		[10.0]	0.1043	0.4410	0.1045	09:03:35	Yes
Mean:		[10.0]	0.1044				
SD:		0.0	0.0001				
%RSD:		0.0	0.12				

Standard number 5 applied. [10.0]
Correlation Coef.: 0.999747 Slope: 0.01049 Intercept: 0.00043



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	-0.041	0.00	30.0
S0.2	0.0021	0.2	0.157	0.00	2.7
S0.5	0.0054	0.5	0.469	0.00	0.0
S2.0	0.0218	2.0	2.042	0.00	0.4

S5.0 0.0545 5.0 5.159 0.00 0.4
S10.0 0.1044 10.0 9.914 0.00 0.1
Correlation Coef.: 0.999747 Slope: 0.01049 Intercept: 0.00043

Sequence No.: 7

Sample ID: ICV

Analyst:

Autosampler Location: 9

Date Collected: 1/28/2010 09:03:54

Data Type: Original

Replicate Data: ICV

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	5.094	5.094	0.0539	0.2278	0.0540	09:04:46	Yes
2	5.099	5.099	0.0539	0.2267	0.0540	09:05:15	Yes
Mean:	5.097	5.097	0.0539				
SD:	0.003	0.003	0.0000				
%RSD:	0.058	0.058	0.06				

QC value within limits for Hg 253.7 Recovery = 101.93%
All analyte(s) passed QC.

Sequence No.: 8

Sample ID: ICB

Analyst:

Autosampler Location: 10

Date Collected: 1/28/2010 09:05:35

Data Type: Original

Replicate Data: ICB

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.052	-0.052	-0.0001	-0.0016	0.0000	09:06:27	Yes
2	-0.048	-0.048	-0.0001	-0.0008	0.0001	09:06:56	Yes
Mean:	-0.050	-0.050	-0.0001				
SD:	0.003	0.003	0.0000				
%RSD:	6.738	6.738	39.21				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 9

Sample ID: CRDL

Analyst:

Autosampler Location: 11

Date Collected: 1/28/2010 09:07:16

Data Type: Original

Replicate Data: CRDL

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.164	0.164	0.0022	0.0088	0.0023	09:08:08	Yes
2	0.155	0.155	0.0021	0.0078	0.0022	09:08:38	Yes
Mean:	0.159	0.159	0.0021				
SD:	0.007	0.007	0.0001				
%RSD:	4.126	4.126	3.27				

QC value within limits for Hg 253.7 Recovery = 79.64%
All analyte(s) passed QC.

Sequence No.: 10

Sample ID: CCV

Analyst:

Autosampler Location: 7

Date Collected: 1/28/2010 09:08:58

Data Type: Original

Replicate Data: CCV

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	5.072	5.072	0.0536	0.2278	0.0538	09:09:48	Yes
2	5.052	5.052	0.0534	0.2256	0.0536	09:10:18	Yes
Mean:	5.062	5.062	0.0535				
SD:	0.014	0.014	0.0002				
%RSD:	0.286	0.286	0.28				

QC value within limits for Hg 253.7 Recovery = 101.24%
All analyte(s) passed QC.

Sequence No.: 11
Sample ID: CCB
Analyst:

Autosampler Location: 8
Date Collected: 1/28/2010 09:10:37
Data Type: Original

Replicate Data: CCB

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.050	-0.050	-0.0001	-0.0011	0.0001	09:11:27	Yes
2	-0.049	-0.049	-0.0001	-0.0007	0.0001	09:11:57	Yes
Mean:	-0.050	-0.050	-0.0001				
SD:	0.000	0.000	0.0000				
%RSD:	0.809	0.809	4.85				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 12
Sample ID: 1202019704|943287|1
Analyst: JXL

Autosampler Location: 12
Date Collected: 1/28/2010 09:12:17
Data Type: Original

Replicate Data: 1202019704|943287|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.048	-0.048	-0.0001	-0.0009	0.0001	09:13:08	Yes
2	-0.051	-0.051	-0.0001	-0.0010	0.0001	09:13:38	Yes
Mean:	-0.049	-0.049	-0.0001				
SD:	0.002	0.002	0.0000				
%RSD:	3.339	3.339	20.56				

Sequence No.: 13
Sample ID: 1202019705|943287|10
Analyst: JXL

Autosampler Location: 13
Date Collected: 1/28/2010 09:13:58
Data Type: Original

Replicate Data: 1202019705|943287|10

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	3.720	3.720	0.0394	0.1674	0.0396	09:14:50	Yes
2	3.699	3.699	0.0392	0.1659	0.0394	09:15:19	Yes
Mean:	3.710	3.710	0.0393				
SD:	0.015	0.015	0.0002				
%RSD:	0.410	0.410	0.41				

Sequence No.: 14
Sample ID: 244227001|943287|1
Analyst: JXL

Autosampler Location: 14
Date Collected: 1/28/2010 09:15:40
Data Type: Original

Replicate Data: 244227001|943287|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.027	0.027	0.0007	0.0017	0.0009	09:16:30	Yes
2	0.028	0.028	0.0007	0.0022	0.0009	09:17:00	Yes
Mean:	0.028	0.028	0.0007				
SD:	0.001	0.001	0.0000				
%RSD:	4.386	4.386	1.75				

Sequence No.: 15
Sample ID: 1202019706|943287|1
Analyst: JXL

Autosampler Location: 15
Date Collected: 1/28/2010 09:17:19
Data Type: Original

Replicate Data: 1202019706|943287|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
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Replicate Data: 244227003|943287|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.137	0.137	0.0019	0.0087	0.0020	09:26:27	Yes
2	0.136	0.136	0.0019	0.0083	0.0020	09:26:57	Yes
Mean:	0.137	0.137	0.0019				
SD:	0.001	0.001	0.0000				
%RSD:	0.806	0.806	0.62				

Sequence No.: 21

Autosampler Location: 21

Sample ID: 244227004|943287|1

Date Collected: 1/28/2010 09:27:16

Analyst: JXL

Data Type: Original

Replicate Data: 244227004|943287|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.219	0.219	0.0027	0.0119	0.0029	09:28:07	Yes
2	0.213	0.213	0.0027	0.0110	0.0028	09:28:37	Yes
Mean:	0.216	0.216	0.0027				
SD:	0.004	0.004	0.0000				
%RSD:	1.899	1.899	1.59				

Sequence No.: 22

Autosampler Location: 7

Sample ID: CCV

Date Collected: 1/28/2010 09:28:56

Analyst:

Data Type: Original

Replicate Data: CCV

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	5.005	5.005	0.0529	0.2242	0.0531	09:29:46	Yes
2	5.020	5.020	0.0531	0.2247	0.0532	09:30:16	Yes
Mean:	5.012	5.012	0.0530				
SD:	0.011	0.011	0.0001				
%RSD:	0.221	0.221	0.22				

QC value within limits for Hg 253.7 Recovery = 100.25%
All analyte(s) passed QC.

Sequence No.: 23

Autosampler Location: 8

Sample ID: CCB

Date Collected: 1/28/2010 09:30:35

Analyst:

Data Type: Original

Replicate Data: CCB

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.049	-0.049	-0.0001	-0.0006	0.0001	09:31:26	Yes
2	-0.043	-0.043	-0.0000	0.0003	0.0001	09:31:56	Yes
Mean:	-0.046	-0.046	-0.0000				
SD:	0.004	0.004	0.0000				
%RSD:	8.634	8.634	90.40				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 24

Autosampler Location: 22

Sample ID: 244227005|943287|1

Date Collected: 1/28/2010 09:32:15

Analyst: JXL

Data Type: Original

Replicate Data: 244227005|943287|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.268	0.268	0.0032	0.0141	0.0034	09:33:06	Yes
2	0.265	0.265	0.0032	0.0139	0.0034	09:33:36	Yes

Repl	SampleConc	StndConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.165	0.165	0.0022	0.0111	0.0023	09:41:33	Yes
2	0.166	0.166	0.0022	0.0112	0.0023	09:42:03	Yes
Mean:	0.165	0.165	0.0022				
SD:	0.000	0.000	0.0000				
%RSD:	0.181	0.181	0.14				

Sequence No.: 30

Sample ID: 244227011|943287|1

Analyst: JXL

Autosampler Location: 28

Date Collected: 1/28/2010 09:42:22

Data Type: Original

Replicate Data: 244227011|943287|1

Repl	SampleConc	StndConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.011	0.011	0.0006	0.0024	0.0007	09:43:13	Yes
2	0.012	0.012	0.0006	0.0026	0.0007	09:43:43	Yes
Mean:	0.011	0.011	0.0006				
SD:	0.000	0.000	0.0000				
%RSD:	2.628	2.628	0.57				

Sequence No.: 31

Sample ID: 244227012|943287|1

Analyst: JXL

Autosampler Location: 29

Date Collected: 1/28/2010 09:44:02

Data Type: Original

Replicate Data: 244227012|943287|1

Repl	SampleConc	StndConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.140	0.140	0.0019	0.0083	0.0021	09:44:53	Yes
2	0.132	0.132	0.0018	0.0079	0.0020	09:45:23	Yes
Mean:	0.136	0.136	0.0019				
SD:	0.005	0.005	0.0001				
%RSD:	3.982	3.982	3.05				

Sequence No.: 32

Sample ID: 244227013|943287|1

Analyst: JXL

Autosampler Location: 30

Date Collected: 1/28/2010 09:45:42

Data Type: Original

Replicate Data: 244227013|943287|1

Repl	SampleConc	StndConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.361	0.361	0.0042	0.0181	0.0044	09:46:32	Yes
2	0.362	0.362	0.0042	0.0184	0.0044	09:47:02	Yes
Mean:	0.361	0.361	0.0042				
SD:	0.001	0.001	0.0000				
%RSD:	0.169	0.169	0.15				

Sequence No.: 33

Sample ID: 244227014|943287|1

Analyst: JXL

Autosampler Location: 31

Date Collected: 1/28/2010 09:47:21

Data Type: Original

Replicate Data: 244227014|943287|1

Repl	SampleConc	StndConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.181	0.181	0.0023	0.0102	0.0025	09:48:12	Yes
2	0.180	0.180	0.0023	0.0101	0.0025	09:48:42	Yes
Mean:	0.181	0.181	0.0023				
SD:	0.001	0.001	0.0000				
%RSD:	0.497	0.497	0.40				

Sequence No.: 34

Sample ID: CCV

Autosampler Location: 7

Date Collected: 1/28/2010 09:49:01

Analyst:

Data Type: Original

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.102	5.102	0.0539	0.2295	0.0541	09:49:52	Yes
2	5.115	5.115	0.0541	0.2304	0.0542	09:50:22	Yes
Mean:	5.109	5.109	0.0540				
SD:	0.009	0.009	0.0001				
%RSD:	0.184	0.184	0.18				

QC value within limits for Hg 253.7 Recovery = 102.17%
All analyte(s) passed QC.

Sequence No.: 35

Autosampler Location: 8

Sample ID: CCB

Date Collected: 1/28/2010 09:50:41

Analyst:

Data Type: Original

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.038	-0.038	0.0000	0.0015	0.0002	09:51:31	Yes
2	-0.030	-0.030	0.0001	0.0023	0.0003	09:52:01	Yes
Mean:	-0.034	-0.034	0.0001				
SD:	0.006	0.006	0.0001				
%RSD:	16.35	16.35	78.42				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 36

Autosampler Location: 32

Sample ID: 244227015|943287|1

Date Collected: 1/28/2010 09:52:21

Analyst: JXL

Data Type: Original

Replicate Data: 244227015|943287|1

Repl #	SampleConc ug/L	StndConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.096	0.096	0.0014	0.0077	0.0016	09:53:11	Yes
2	0.096	0.096	0.0014	0.0080	0.0016	09:53:41	Yes
Mean:	0.096	0.096	0.0014				
SD:	0.000	0.000	0.0000				
%RSD:	0.188	0.188	0.13				

Sequence No.: 37

Autosampler Location: 33

Sample ID: 1202019684|943278|1

Date Collected: 1/28/2010 09:54:01

Analyst: JXL

Data Type: Original

Replicate Data: 1202019684|943278|1

Repl #	SampleConc ug/L	StndConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.021	-0.021	0.0002	0.0033	0.0004	09:54:51	Yes
2	-0.020	-0.020	0.0002	0.0032	0.0004	09:55:21	Yes
Mean:	-0.021	-0.021	0.0002				
SD:	0.000	0.000	0.0000				
%RSD:	2.351	2.351	2.37				

Sequence No.: 38

Autosampler Location: 34

Sample ID: 1202019685|943278|10

Date Collected: 1/28/2010 09:55:41

Analyst: JXL

Data Type: Original

Replicate Data: 1202019685|943278|10

Repl #	SampleConc ug/L	StndConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	3.800	3.800	0.0403	0.1714	0.0404	09:56:32	Yes

Replicate Data: 244228005|943278|1

Repl	SampleConc	StndConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.124	0.124	0.0017	0.0081	0.0019	10:04:57	Yes
2	0.126	0.126	0.0018	0.0084	0.0019	10:05:27	Yes
Mean:	0.125	0.125	0.0017				
SD:	0.001	0.001	0.0000				
%RSD:	0.819	0.819	0.62				

Sequence No.: 44

Autosampler Location: 40

Sample ID: 244228006|943278|1

Date Collected: 1/28/2010 10:05:46

Analyst: JXL

Data Type: Original

Replicate Data: 244228006|943278|1

Repl	SampleConc	StndConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.153	0.153	0.0020	0.0094	0.0022	10:06:37	Yes
2	0.153	0.153	0.0020	0.0095	0.0022	10:07:07	Yes
Mean:	0.153	0.153	0.0020				
SD:	0.000	0.000	0.0000				
%RSD:	0.115	0.115	0.09				

Sequence No.: 45

Autosampler Location: 41

Sample ID: 244888001|943278|1

Date Collected: 1/28/2010 10:07:26

Analyst: JXL

Data Type: Original

Replicate Data: 244888001|943278|1

Repl	SampleConc	StndConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.151	0.151	0.0020	0.0092	0.0022	10:08:17	Yes
2	0.156	0.156	0.0021	0.0101	0.0022	10:08:47	Yes
Mean:	0.154	0.154	0.0020				
SD:	0.003	0.003	0.0000				
%RSD:	2.238	2.238	1.76				

Sequence No.: 46

Autosampler Location: 7

Sample ID: CCV

Date Collected: 1/28/2010 10:09:07

Analyst:

Data Type: Original

Replicate Data: CCV

Repl	SampleConc	StndConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	5.176	5.176	0.0547	0.2332	0.0549	10:09:57	Yes
2	5.172	5.172	0.0547	0.2332	0.0548	10:10:27	Yes
Mean:	5.174	5.174	0.0547				
SD:	0.003	0.003	0.0000				
%RSD:	0.049	0.049	0.05				

QC value within limits for Hg 253.7 Recovery = 103.47%
All analyte(s) passed QC.

Sequence No.: 47

Autosampler Location: 8

Sample ID: CCB

Date Collected: 1/28/2010 10:10:46

Analyst:

Data Type: Original

Replicate Data: CCB

Repl	SampleConc	StndConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.045	-0.045	-0.0000	0.0005	0.0001	10:11:36	Yes
2	-0.040	-0.040	0.0000	0.0012	0.0002	10:12:06	Yes
Mean:	-0.042	-0.042	-0.0000				
SD:	0.003	0.003	0.0000				
%RSD:	7.815	7.815	354.02				

QC value within limits for Hg 253.7 Recovery = Not calculated

Replicate Data: 244920001|943278|1

Repl #	SampleConc ug/L	StndConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	11.68	11.68	0.1229	0.5238	0.1230	10:28:23	Yes
Sample concentration is greater than that of the highest standard.							
2	11.65	11.65	0.1226	0.5219	0.1227	10:28:53	Yes
Sample concentration is greater than that of the highest standard.							
Mean:	11.66	11.66	0.1227				
SD:	0.022	0.022	0.0002				
%RSD:	0.191	0.191	0.19				
Sample concentration is greater than that of the highest standard.							

=====

Sequence No.: 58

Sample ID: CCV

Analyst:

Autosampler Location: 7

Date Collected: 1/28/2010 10:29:13

Data Type: Original

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.167	5.167	0.0546	0.2323	0.0548	10:30:04	Yes
2	5.181	5.181	0.0548	0.2326	0.0549	10:30:34	Yes
Mean:	5.174	5.174	0.0547				
SD:	0.010	0.010	0.0001				
%RSD:	0.195	0.195	0.19				
QC value within limits for Hg 253.7 Recovery = 103.48%							
All analyte(s) passed QC.							

=====

Sequence No.: 59

Sample ID: CCB

Analyst:

Autosampler Location: 8

Date Collected: 1/28/2010 10:30:52

Data Type: Original

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.038	-0.038	0.0000	0.0005	0.0002	10:31:43	Yes
2	-0.033	-0.033	0.0001	0.0013	0.0002	10:32:13	Yes
Mean:	-0.035	-0.035	0.0001				
SD:	0.003	0.003	0.0000				
%RSD:	8.424	8.424	50.14				
QC value within limits for Hg 253.7 Recovery = Not calculated							
All analyte(s) passed QC.							

=====

Sequence No.: 60

Sample ID: 1202019686|943278|1

Analyst: JXL

Autosampler Location: 52

Date Collected: 1/28/2010 10:32:32

Data Type: Original

Replicate Data: 1202019686|943278|1

Repl #	SampleConc ug/L	StndConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	12.34	12.34	0.1299	0.5561	0.1300	10:33:23	Yes
Sample concentration is greater than that of the highest standard.							
2	12.27	12.27	0.1291	0.5508	0.1292	10:33:53	Yes
Sample concentration is greater than that of the highest standard.							
Mean:	12.31	12.31	0.1295				
SD:	0.054	0.054	0.0006				
%RSD:	0.443	0.443	0.44				
Sample concentration is greater than that of the highest standard.							

=====

Sequence No.: 61

Sample ID: 1202019687|943278|1

Analyst: JXL

Autosampler Location: 53

Date Collected: 1/28/2010 10:34:12

Data Type: Original

Mean: 0.180 0.180 0.0023
SD: 0.002 0.002 0.0000
%RSD: 1.223 1.223 0.99

Sequence No.: 66
Sample ID: 1202019727|943294|1
Analyst: JXL

Autosampler Location: 58
Date Collected: 1/28/2010 10:42:34
Data Type: Original

Replicate Data: 1202019727|943294|1

Repl	SampleConc	StndConc	BlnkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.034	-0.034	0.0001	0.0013	0.0002	10:43:25	Yes
2	-0.042	-0.042	-0.0000	0.0006	0.0001	10:43:55	Yes
Mean:	-0.038	-0.038	0.0000				
SD:	0.006	0.006	0.0001				
%RSD:	14.59	14.59	163.60				

Sequence No.: 67
Sample ID: 1202019728|943294|10
Analyst: JXL

Autosampler Location: 59
Date Collected: 1/28/2010 10:44:15
Data Type: Original

Replicate Data: 1202019728|943294|10

Repl	SampleConc	StndConc	BlnkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	3.852	3.852	0.0408	0.1757	0.0410	10:45:06	Yes
2	3.853	3.853	0.0408	0.1758	0.0410	10:45:36	Yes
Mean:	3.852	3.852	0.0408				
SD:	0.001	0.001	0.0000				
%RSD:	0.021	0.021	0.02				

Sequence No.: 68
Sample ID: 244242001|943294|1
Analyst: JXL

Autosampler Location: 60
Date Collected: 1/28/2010 10:45:56
Data Type: Original

Replicate Data: 244242001|943294|1

Repl	SampleConc	StndConc	BlnkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.305	0.305	0.0036	0.0160	0.0038	10:46:47	Yes
2	0.299	0.299	0.0036	0.0157	0.0037	10:47:17	Yes
Mean:	0.302	0.302	0.0036				
SD:	0.004	0.004	0.0000				
%RSD:	1.352	1.352	1.19				

Sequence No.: 69
Sample ID: 1202019729|943294|1
Analyst: JXL

Autosampler Location: 61
Date Collected: 1/28/2010 10:47:37
Data Type: Original

Replicate Data: 1202019729|943294|1

Repl	SampleConc	StndConc	BlnkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.292	0.292	0.0035	0.0154	0.0036	10:48:29	Yes
2	0.302	0.302	0.0036	0.0167	0.0038	10:48:59	Yes
Mean:	0.297	0.297	0.0036				
SD:	0.007	0.007	0.0001				
%RSD:	2.334	2.334	2.05				

Sequence No.: 70
Sample ID: CCV
Analyst:

Autosampler Location: 7
Date Collected: 1/28/2010 10:49:19
Data Type: Original

Replicate Data: CCV

Repl #	SampleConc ug/L	StdndConc ug/L	BlndCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.089	5.089	0.0538	0.2313	0.0539	10:50:10	Yes
2	5.073	5.073	0.0536	0.2297	0.0538	10:50:40	Yes
Mean:	5.081	5.081	0.0537				
SD:	0.012	0.012	0.0001				
%RSD:	0.229	0.229	0.23				

QC value within limits for Hg 253.7 Recovery = 101.62%
All analyte(s) passed QC.

Sequence No.: 71

Sample ID: CCB

Analyst:

Autosampler Location: 8

Date Collected: 1/28/2010 10:50:59

Data Type: Original

Replicate Data: CCB

Repl #	SampleConc ug/L	StdndConc ug/L	BlndCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.038	-0.038	0.0000	0.0006	0.0002	10:51:50	Yes
2	-0.035	-0.035	0.0001	0.0011	0.0002	10:52:20	Yes
Mean:	-0.036	-0.036	0.0001				
SD:	0.003	0.003	0.0000				
%RSD:	6.972	6.972	51.65				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 72

Sample ID: 1202019730|943294|1

Analyst: JXL

Autosampler Location: 62

Date Collected: 1/28/2010 10:52:39

Data Type: Original

Replicate Data: 1202019730|943294|1

Repl #	SampleConc ug/L	StdndConc ug/L	BlndCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.356	2.356	0.0251	0.1071	0.0253	10:53:30	Yes
2	2.347	2.347	0.0250	0.1079	0.0252	10:54:00	Yes
Mean:	2.351	2.351	0.0251				
SD:	0.007	0.007	0.0001				
%RSD:	0.281	0.281	0.28				

Sequence No.: 73

Sample ID: 1202019732|943294|1

Analyst: JXL

Autosampler Location: 63

Date Collected: 1/28/2010 10:54:19

Data Type: Original

Replicate Data: 1202019732|943294|1

Repl #	SampleConc ug/L	StdndConc ug/L	BlndCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.405	2.405	0.0257	0.1099	0.0258	10:55:10	Yes
2	2.395	2.395	0.0255	0.1099	0.0257	10:55:40	Yes
Mean:	2.400	2.400	0.0256				
SD:	0.007	0.007	0.0001				
%RSD:	0.312	0.312	0.31				

Sequence No.: 74

Sample ID: 1202019731|943294|5

Analyst: JXL

Autosampler Location: 64

Date Collected: 1/28/2010 10:56:00

Data Type: Original

Replicate Data: 1202019731|943294|5

Repl #	SampleConc ug/L	StdndConc ug/L	BlndCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.028	0.028	0.0007	0.0034	0.0009	10:56:51	Yes
2	0.027	0.027	0.0007	0.0035	0.0009	10:57:21	Yes
Mean:	0.028	0.028	0.0007				
SD:	0.001	0.001	0.0000				
%RSD:	3.832	3.832	1.54				

2	0.374	0.374	0.0044	0.0197	0.0045	11:05:45	Yes
Mean:	0.373	0.373	0.0043				
SD:	0.002	0.002	0.0000				
%RSD:	0.659	0.659	0.59				

Sequence No.: 80

Autosampler Location: 70

Sample ID: 244242007|943294|1

Date Collected: 1/28/2010 11:06:05

Analyst: JXL

Data Type: Original

Replicate Data: 244242007|943294|1

Repl	SampleConc	StndConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	2.400	2.400	0.0256	0.1107	0.0258	11:06:56	Yes
2	2.400	2.400	0.0256	0.1106	0.0257	11:07:26	Yes
Mean:	2.400	2.400	0.0256				
SD:	0.000	0.000	0.0000				
%RSD:	0.013	0.013	0.01				

Sequence No.: 81

Autosampler Location: 71

Sample ID: 244242008|943294|1

Date Collected: 1/28/2010 11:07:46

Analyst: JXL

Data Type: Original

Replicate Data: 244242008|943294|1

Repl	SampleConc	StndConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.604	0.604	0.0068	0.0297	0.0069	11:08:37	Yes
2	0.608	0.608	0.0068	0.0304	0.0070	11:09:07	Yes
Mean:	0.606	0.606	0.0068				
SD:	0.003	0.003	0.0000				
%RSD:	0.450	0.450	0.42				

Sequence No.: 82

Autosampler Location: 7

Sample ID: CCV

Date Collected: 1/28/2010 11:09:27

Analyst:

Data Type: Original

Replicate Data: CCV

Repl	SampleConc	StndConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	5.053	5.053	0.0534	0.2302	0.0536	11:10:17	Yes
2	5.037	5.037	0.0533	0.2308	0.0534	11:10:47	Yes
Mean:	5.045	5.045	0.0533				
SD:	0.011	0.011	0.0001				
%RSD:	0.217	0.217	0.21				

QC value within limits for Hg 253.7 Recovery = 100.90%
All analyte(s) passed QC.

Sequence No.: 83

Autosampler Location: 8

Sample ID: CCB

Date Collected: 1/28/2010 11:11:06

Analyst:

Data Type: Original

Replicate Data: CCB

Repl	SampleConc	StndConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.034	-0.034	0.0001	0.0004	0.0002	11:11:57	Yes
2	-0.038	-0.038	0.0000	0.0004	0.0002	11:12:26	Yes
Mean:	-0.036	-0.036	0.0001				
SD:	0.003	0.003	0.0000				
%RSD:	9.437	9.437	61.94				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 84

Autosampler Location: 72

%RSD: 2.427 2.427 1.95

Sequence No.: 89

Sample ID: 244242014|943294|1

Analyst: JXL

Autosampler Location: 77

Date Collected: 1/28/2010 11:21:12

Data Type: Original

Replicate Data: 244242014|943294|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.050	0.050	0.0010	0.0045	0.0011	11:22:03	Yes
2	0.051	0.051	0.0010	0.0049	0.0011	11:22:33	Yes
Mean:	0.051	0.051	0.0010				
SD:	0.000	0.000	0.0000				
%RSD:	0.280	0.280	0.15				

Sequence No.: 90

Sample ID: 1202019739|943299|1

Analyst: JXL

Autosampler Location: 78

Date Collected: 1/28/2010 11:22:53

Data Type: Original

Replicate Data: 1202019739|943299|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.037	-0.037	0.0000	0.0009	0.0002	11:23:45	Yes
2	-0.038	-0.038	0.0000	0.0010	0.0002	11:24:15	Yes
Mean:	-0.038	-0.038	0.0000				
SD:	0.000	0.000	0.0000				
%RSD:	0.223	0.223	2.18				

Sequence No.: 91

Sample ID: 1202019740|943299|10

Analyst: JXL

Autosampler Location: 79

Date Collected: 1/28/2010 11:24:35

Data Type: Original

Replicate Data: 1202019740|943299|10

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	3.663	3.663	0.0388	0.1678	0.0390	11:25:26	Yes
2	3.652	3.652	0.0387	0.1678	0.0389	11:25:56	Yes
Mean:	3.657	3.657	0.0388				
SD:	0.007	0.007	0.0001				
%RSD:	0.202	0.202	0.20				

Sequence No.: 92

Sample ID: 244515001|943299|1

Analyst: JXL

Autosampler Location: 80

Date Collected: 1/28/2010 11:26:16

Data Type: Original

Replicate Data: 244515001|943299|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.493	0.493	0.0056	0.0243	0.0057	11:27:07	Yes
2	0.496	0.496	0.0056	0.0252	0.0058	11:27:37	Yes
Mean:	0.494	0.494	0.0056				
SD:	0.002	0.002	0.0000				
%RSD:	0.399	0.399	0.37				

Sequence No.: 93

Sample ID: 244515002|943299|1

Analyst: JXL

Autosampler Location: 81

Date Collected: 1/28/2010 11:27:57

Data Type: Original

Replicate Data: 244515002|943299|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored

1	0.736	0.736	0.0082	0.0361	0.0083	11:28:48	Yes
2	0.740	0.740	0.0082	0.0355	0.0083	11:29:18	Yes
Mean:	0.738	0.738	0.0082				
SD:	0.003	0.003	0.0000				
%RSD:	0.343	0.343	0.32				

Sequence No.: 94

Autosampler Location: 7

Sample ID: CCV

Date Collected: 1/28/2010 11:29:38

Analyst:

Data Type: Original

Replicate Data: CCV

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	4.943	4.943	0.0523	0.2273	0.0524	11:30:29	Yes
2	5.042	5.042	0.0533	0.2297	0.0535	11:30:59	Yes
Mean:	4.993	4.993	0.0528				
SD:	0.070	0.070	0.0007				
%RSD:	1.403	1.403	1.39				

QC value within limits for Hg 253.7 Recovery = 99.86%
All analyte(s) passed QC.

Sequence No.: 95

Autosampler Location: 8

Sample ID: CCB

Date Collected: 1/28/2010 11:31:18

Analyst:

Data Type: Original

Replicate Data: CCB

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.038	-0.038	0.0000	0.0005	0.0002	11:32:08	Yes
2	-0.035	-0.035	0.0001	0.0009	0.0002	11:32:38	Yes
Mean:	-0.036	-0.036	0.0001				
SD:	0.002	0.002	0.0000				
%RSD:	5.882	5.882	42.30				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 96

Autosampler Location: 82

Sample ID: 244515003|943299|1

Date Collected: 1/28/2010 11:32:57

Analyst: JXL

Data Type: Original

Replicate Data: 244515003|943299|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.101	0.101	0.0015	0.0064	0.0016	11:33:49	Yes
2	0.112	0.112	0.0016	0.0074	0.0018	11:34:18	Yes
Mean:	0.106	0.106	0.0015				
SD:	0.008	0.008	0.0001				
%RSD:	7.655	7.655	5.51				

Sequence No.: 97

Autosampler Location: 83

Sample ID: 244515004|943299|1

Date Collected: 1/28/2010 11:34:38

Analyst: JXL

Data Type: Original

Replicate Data: 244515004|943299|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.194	0.194	0.0025	0.0113	0.0026	11:35:30	Yes
2	0.192	0.192	0.0025	0.0110	0.0026	11:36:00	Yes
Mean:	0.193	0.193	0.0025				
SD:	0.001	0.001	0.0000				
%RSD:	0.566	0.566	0.47				

SD: 0.003 0.003 0.0000
%RSD: 3.765 3.765 2.37

Sequence No.: 103

Sample ID: 244604001|943299|1

Analyst: JXL

Autosampler Location: 89

Date Collected: 1/28/2010 11:44:48

Data Type: Original

Replicate Data: 244604001|943299|1

Repl	SampleConc	StndConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.370	0.370	0.0043	0.0192	0.0045	11:45:40	Yes
2	0.370	0.370	0.0043	0.0193	0.0045	11:46:10	Yes
Mean:	0.370	0.370	0.0043				
SD:	0.000	0.000	0.0000				
%RSD:	0.006	0.006	0.01				

Sequence No.: 104

Sample ID: 244604002|943299|1

Analyst: JXL

Autosampler Location: 90

Date Collected: 1/28/2010 11:46:30

Data Type: Original

Replicate Data: 244604002|943299|1

Repl	SampleConc	StndConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.274	0.274	0.0033	0.0153	0.0035	11:47:22	Yes
2	0.275	0.275	0.0033	0.0148	0.0035	11:47:51	Yes
Mean:	0.274	0.274	0.0033				
SD:	0.000	0.000	0.0000				
%RSD:	0.151	0.151	0.13				

Sequence No.: 105

Sample ID: 244622001|943299|1

Analyst: JXL

Autosampler Location: 91

Date Collected: 1/28/2010 11:48:12

Data Type: Original

Replicate Data: 244622001|943299|1

Repl	SampleConc	StndConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.181	0.181	0.0023	0.0104	0.0025	11:49:03	Yes
2	0.175	0.175	0.0023	0.0096	0.0024	11:49:33	Yes
Mean:	0.178	0.178	0.0023				
SD:	0.004	0.004	0.0000				
%RSD:	2.197	2.197	1.78				

Sequence No.: 106

Sample ID: CCV

Analyst:

Autosampler Location: 7

Date Collected: 1/28/2010 11:49:53

Data Type: Original

Replicate Data: CCV

Repl	SampleConc	StndConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	5.038	5.038	0.0533	0.2265	0.0534	11:50:43	Yes
2	5.002	5.002	0.0529	0.2270	0.0530	11:51:13	Yes
Mean:	5.020	5.020	0.0531				
SD:	0.025	0.025	0.0003				
%RSD:	0.504	0.504	0.50				

QC value within limits for Hg 253.7 Recovery = 100.40%
All analyte(s) passed QC.

Sequence No.: 107

Sample ID: CCB

Analyst:

Autosampler Location: 8

Date Collected: 1/28/2010 11:51:32

Data Type: Original

Replicate Data: CCB

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.041	-0.041	0.0000	0.0004	0.0001	11:52:22	Yes
2	-0.041	-0.041	0.0000	0.0005	0.0002	11:52:52	Yes
Mean:	-0.041	-0.041	0.0000				
SD:	0.000	0.000	0.0000				
%RSD:	0.117	0.117	46.35				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 108

Sample ID: 1202019741|943299|1

Analyst: JXL

Autosampler Location: 92

Date Collected: 1/28/2010 11:53:11

Data Type: Original

Replicate Data: 1202019741|943299|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.174	0.174	0.0023	0.0101	0.0024	11:54:03	Yes
2	0.174	0.174	0.0023	0.0102	0.0024	11:54:33	Yes
Mean:	0.174	0.174	0.0023				
SD:	0.000	0.000	0.0000				
%RSD:	0.065	0.065	0.05				

Sequence No.: 109

Sample ID: 1202019742|943299|1

Analyst: JXL

Autosampler Location: 93

Date Collected: 1/28/2010 11:54:53

Data Type: Original

Replicate Data: 1202019742|943299|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	2.307	2.307	0.0246	0.1058	0.0248	11:55:45	Yes
2	2.306	2.306	0.0246	0.1055	0.0248	11:56:15	Yes
Mean:	2.307	2.307	0.0246				
SD:	0.001	0.001	0.0000				
%RSD:	0.052	0.052	0.05				

Sequence No.: 110

Sample ID: 1202019744|943299|1

Analyst: JXL

Autosampler Location: 94

Date Collected: 1/28/2010 11:56:35

Data Type: Original

Replicate Data: 1202019744|943299|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	2.339	2.339	0.0250	0.1076	0.0251	11:57:26	Yes
2	2.311	2.311	0.0247	0.1061	0.0248	11:57:56	Yes
Mean:	2.325	2.325	0.0248				
SD:	0.020	0.020	0.0002				
%RSD:	0.841	0.841	0.83				

Sequence No.: 111

Sample ID: 1202019743|943299|5

Analyst: JXL

Autosampler Location: 95

Date Collected: 1/28/2010 11:58:17

Data Type: Original

Replicate Data: 1202019743|943299|5

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.002	0.002	0.0005	0.0027	0.0006	11:59:08	Yes
2	0.005	0.005	0.0005	0.0027	0.0006	11:59:38	Yes
Mean:	0.004	0.004	0.0005				
SD:	0.002	0.002	0.0000				
%RSD:	50.66	50.66	3.97				

Mean: 0.233 0.233 0.0029
SD: 0.003 0.003 0.0000
%RSD: 1.396 1.396 1.19

Sequence No.: 117
Sample ID: 244622007|943299|1
Analyst: JXL

Autosampler Location: 101
Date Collected: 1/28/2010 12:08:29
Data Type: Original

Replicate Data: 244622007|943299|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.135	0.135	0.0019	0.0083	0.0020	12:09:21	Yes
2	0.140	0.140	0.0019	0.0087	0.0020	12:09:51	Yes
Mean:	0.138	0.138	0.0019				
SD:	0.003	0.003	0.0000				
%RSD:	2.318	2.318	1.78				

Sequence No.: 118
Sample ID: CCV
Analyst:

Autosampler Location: 7
Date Collected: 1/28/2010 12:10:12
Data Type: Original

Replicate Data: CCV

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	4.996	4.996	0.0528	0.2269	0.0530	12:11:02	Yes
2	5.006	5.006	0.0529	0.2271	0.0531	12:11:32	Yes
Mean:	5.001	5.001	0.0529				
SD:	0.006	0.006	0.0001				
%RSD:	0.129	0.129	0.13				

QC value within limits for Hg 253.7 Recovery = 100.02%
All analyte(s) passed QC.

Sequence No.: 119
Sample ID: CCB
Analyst:

Autosampler Location: 8
Date Collected: 1/28/2010 12:11:50
Data Type: Original

Replicate Data: CCB

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.040	-0.040	0.0000	0.0005	0.0002	12:12:41	Yes
2	-0.041	-0.041	-0.0000	0.0007	0.0001	12:13:11	Yes
Mean:	-0.041	-0.041	0.0000				
SD:	0.001	0.001	0.0000				
%RSD:	2.394	2.394	158.66				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 120
Sample ID: 244622008|943299|1
Analyst: JXL

Autosampler Location: 102
Date Collected: 1/28/2010 12:13:30
Data Type: Original

Replicate Data: 244622008|943299|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.244	0.244	0.0030	0.0135	0.0031	12:14:22	Yes
2	0.236	0.236	0.0029	0.0128	0.0031	12:14:52	Yes
Mean:	0.240	0.240	0.0030				
SD:	0.006	0.006	0.0001				
%RSD:	2.548	2.548	2.17				

Sequence No.: 121
Sample ID: 1202019751|943305|1

Autosampler Location: 103
Date Collected: 1/28/2010 12:15:12

Miscellaneous

Prep LogBook

Analyst: AXG2
 Batch: 941746
 Lab SOP: GL-MA-E-009 REV# 19

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1202015724	U062540-1	.515	g
MS	1202015722	U091216-01	.25	mL
MS	1202015722	U091216-06	.25	mL
MSD	1202015723	U091216-01	.25	mL
MSD	1202015723	U091216-06	.25	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1202015719		SW846 3050B	20-JAN-2010 07:30	0.521 g	50 mL	95.96929	SOIL
LCS	1202015724		SW846 3050B	20-JAN-2010 07:30	0.515 g	50 mL	97.08738	SOIL
SAMPLE	244604001		SW846 3050B	20-JAN-2010 07:30	0.506 g	50 mL	98.81423	SOIL
DUP	1202015720	244604001	SW846 3050B	20-JAN-2010 07:30	0.526 g	50 mL	95.05703	SOIL
SDIL.T	1202015721	244604001	SW846 3050B	20-JAN-2010 07:30	0.506 g	50 mL	98.81423	SOIL
MS	1202015722	244604001	SW846 3050B	20-JAN-2010 07:30	0.511 g	50 mL	98.03922	SOIL
MSD	1202015723	244604001	SW846 3050B	20-JAN-2010 07:30	0.511 g	50 mL	97.84736	SOIL
SAMPLE	244604002		SW846 3050B	20-JAN-2010 07:30	0.522 g	50 mL	95.78544	SOIL

Reagent/Solvent Lot ID Amount Description
 1252838 10 mL HYDROCHLORIC ACID
 1252836 1.25 mL Nitric Acid CONC.

Comments: Sample 244604001 consist of brown powder-like soil with rocky material.

Prep LogBook

Analyst: AXG2
 Batch: 941751
 Lab SOP: GL-MA-E-009 REV# 19

Verified by: _____

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1202015737	U1062540-MS	.505	g
MS	1202015735	U1091015-A	.5	mL
MS	1202015735	U1091015-B	.5	mL
MSD	1202015736	U1091015-A	.5	mL
MSD	1202015736	U1091015-B	.5	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1202015732		SW846 3050B	20-JAN-2010 07:30	0.525 g	50 mL	95.2381	SOIL
LCS	1202015737		SW846 3050B	20-JAN-2010 07:30	0.505 g	50 mL	99.0099	SOIL
SAMPLE	244604001		SW846 3050B	20-JAN-2010 07:30	0.501 g	50 mL	99.8004	SOIL
DUP	1202015733	244604001	SW846 3050B	20-JAN-2010 07:30	0.505 g	50 mL	99.0099	SOIL
SDILT	1202015734	244604001	SW846 3050B	20-JAN-2010 07:30	0.501 g	50 mL	99.8004	SOIL
MS	1202015735	244604001	SW846 3050B	20-JAN-2010 07:30	0.503 g	50 mL	99.40358	SOIL
MSD	1202015736	244604001	SW846 3050B	20-JAN-2010 07:30	0.509 g	50 mL	98.23183	SOIL
SAMPLE	244604002		SW846 3050B	20-JAN-2010 07:30	0.525 g	50 mL	95.2381	SOIL

Reagent/Solvent Lot ID
 1203655-02
 1252836

Amount
 1.5 mL
 5 mL

Description
 Hydrogen Peroxide 30%
 Nitric Acid CONC.

Comments: Sample 244604001 consist of brown, powder-like soil with rocky material.

Prep LogBook

Analyst: TXB3
Batch: 943296
Lab SOP: GL-MA-E-010 REV# 23

Verified by: _____

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Type	Sample Id	Lot Id	Spike Amount	Spike Units
MB	1202019739		SW846 7471A Prep	27-JAN-2010 12:00	LCS	1202019740	UH031809A	.203	g
LCS	1202019740		SW846 7471A Prep	27-JAN-2010 12:00	MS	1202019742	WHG100127-14	.3	mL
SAMPLE	244515001		SW846 7471A Prep	27-JAN-2010 12:00	MSD	1202019744	WHG100127-14	.3	mL
SAMPLE	244515002		SW846 7471A Prep	27-JAN-2010 12:00					
SAMPLE	244515003		SW846 7471A Prep	27-JAN-2010 12:00					
SAMPLE	244515004		SW846 7471A Prep	27-JAN-2010 12:00					
SAMPLE	244515005		SW846 7471A Prep	27-JAN-2010 12:00					
SAMPLE	244515006		SW846 7471A Prep	27-JAN-2010 12:00					
SAMPLE	244515007		SW846 7471A Prep	27-JAN-2010 12:00					
SAMPLE	244515008		SW846 7471A Prep	27-JAN-2010 12:00					
SAMPLE	244597001		SW846 7471A Prep	27-JAN-2010 12:00					
SAMPLE	244604001		SW846 7471A Prep	27-JAN-2010 12:00					
SAMPLE	244604002		SW846 7471A Prep	27-JAN-2010 12:00					
SAMPLE	244622001		SW846 7471A Prep	27-JAN-2010 12:00					
DUP	1202019741	244622001	SW846 7471A Prep	27-JAN-2010 12:00					
MS	1202019742	244622001	SW846 7471A Prep	27-JAN-2010 12:00					
MSD	1202019744	244622001	SW846 7471A Prep	27-JAN-2010 12:00					
SDIL-T	1202019743	244622001	SW846 7471A Prep	27-JAN-2010 12:00					
SAMPLE	244622002		SW846 7471A Prep	27-JAN-2010 12:00					
SAMPLE	244622003		SW846 7471A Prep	27-JAN-2010 12:00					
SAMPLE	244622004		SW846 7471A Prep	27-JAN-2010 12:00					
SAMPLE	244622005		SW846 7471A Prep	27-JAN-2010 12:00					
SAMPLE	244622006		SW846 7471A Prep	27-JAN-2010 12:00					
SAMPLE	244622007		SW846 7471A Prep	27-JAN-2010 12:00					
SAMPLE	244622008		SW846 7471A Prep	27-JAN-2010 12:00					

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 244622001 is a dry light brown rocky soil.
Digestion Start Date: 27-JAN-10 12:00
Digestion End Date: 27-JAN-10 12:30

Prep Data Logbook Version 1.1

GEL Laboratories LLC

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Prep LogBook

WHG100127-07	30 uL	Mercury Working Standard 1st Source CAL S 0.2/CRA
WHG100127-08	75 uL	Mercury Working Standard 1st Source CAL S 0.5
WHG100127-11	1.5 mL	Mercury Working 1st Source CAL S 10.0
WHG100127-09	300 uL	Mercury Working 1st Source CAL S 2.0
WHG100127-10	750 uL	Mercury Working 1st Source CAL S 5.0/CCV
WHG100127-12	750 uL	Mercury Working 2nd Source S 5.0/ICV

DATA EXCEPTION REPORT

Mo. Day Yr. 22-JAN-10	Division: Industrial	Quality Criteria: Specifications	Type: Process
Instrument Type: ICP/MS	Test / Method: SW846 3050B/6020	Matrix Type: Solid	Client Code: LANL
Batch ID: 941754	Sample Numbers: See Below		
<p>Potentially affected work order(s)(SDG): 244604(10-1213)</p> <p>Application Issues:</p> <p>Failed Recovery for MS/PS</p> <p>Failed RPD for MS/MSD, or PS/PSD</p> <p>Failed Recovery for MSD/PSD</p>			
Specification and Requirements		DER Disposition:	
<p>Exception Description:</p> <p>1. Failed Recovery for MS/PS:</p> <p>QC 1202015735MS</p> <p>2. Failed RPD for MS/MSD, or PS/PSD:</p> <p>QC 1202015736MSD</p> <p>3. Failed Recovery for MSD/PSD:</p> <p>QC 1202015736MSD</p>		<p>The matrix spike and matrix spike duplicate recovery failed outside of the control limits for Ni 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.</p> <p>The matrix spike and matrix spike duplicate % RPD failed outside of the control limits for Ni 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.</p>	

Originator's Name:

Samantha Jacobs 22-JAN-10

Data Validator/Group Leader:

Elizabeth Janssen 25-JAN-10

DATA EXCEPTION REPORT

Mo.Day Yr. 28-JAN-10	Division: Industrial	Quality Criteria: Specifications	Type: Process
Instrument Type: ICP	Test / Method: SW846 3050B/6010B	Matrix Type: Solid	Client Code: LANL
Batch ID: 941749	Sample Numbers: See Below		

Potentially affected work order(s)(SDG): 244604(10-1213)

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:
<p>1. Failed Recovery for MS/PS: QC 1202015722MS</p> <p>2. Failed RPD for DUP: QC 1202015720DUP</p> <p>3. Failed RPD for MS/MSD, or PS/PSD: QC 1202015723MSD</p> <p>4. Failed Recovery for MSD/PSD: QC 1202015723MSD</p>	<p>1. The matrix spike recovery failed outside of the control limits for 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.</p> <p>2. The sample and sample duplicate % RPD failed outside the control limits for aluminum,calcium,copper,lead,magnesium,potassium and vanadium 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.</p> <p>3. The matrix spike and matrix spike duplicate % RPD failed outside of the control limits for iron and manganese 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.</p> <p>4. The matrix spike duplicate recovery failed outside of the control limits for barium,calcium,magnesium,potassium and zinc 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.</p>

Originator's Name:

Helen Camello 29-JAN-10

Data Validator/Group Leader:

Louise Smith 29-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

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Strontium	227 mg/kg	Thallium	121 mg/kg
Thorium	9.84 mg/kg	Tin	104 mg/kg
Titanium	462 mg/kg	Uranium	2.13 mg/kg
Uranium-235	.0153 mg/kg	Uranium-238	2.11 mg/kg
Vanadium	92.4 mg/kg	Zinc	594 mg/kg
Zirconium	10.6 mg/kg		

Serial ID: UI090422-40 **Opened:** 04-MAY-09 **Amount :** 500 mL
Name: TRACE ICP ICSA SOLN A **Received:** 22-APR-09 **Catalog Number :** 160005-01-03
Type: Source Material **Expires:** 04-MAY-10 **Lot Number :** 1013357
Employee: Helen Camello **Solvent :** 5%HNO3
Supplier: o2si
Description: TRACE ICP ICSA SOLN A mg/L +/- 0.5% IN 5% HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	5000 mg/L	Calcium	5000 mg/L
Iron	2000 mg/L	Magnesium	5000 mg/L

Serial ID: UI090610-03 **Opened:** 10-JUN-09 **Catalog Number :** 060074-06-01
Name: ICPMS Tungsten - 10mg/L **Received:** 10-JUN-09 **Lot Number :** 1016338
Type: Source Material **Expires:** 10-JUN-10 **Solvent :** 2% HNO3
Employee: Paul Boyd
Supplier: O2SI
Description: ICPMS Tungsten standard SPIKE - 10mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Tungsten	10 mg/L		

Serial ID: UI090701-09 **Opened:** 01-JUL-09 **Amount :** 250 mL
Name: ICP-MS CRDL Master #1 **Received:** 01-JUL-09 **Catalog Number :** 160044-09-02
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016477
Employee: Paul Boyd **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: O2SI
Description: ICPMS CRDL Master Soln #1
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	15 mg/L	Arsenic	5 mg/L
Barium	2 mg/L	Beryllium	.5 mg/L
Boron	15 mg/L	Cadmium	1 mg/L
Calcium	100 mg/L	Chromium	3 mg/L
Cobalt	1 mg/L	Copper	1 mg/L

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Iron	25 mg/L	Lead	2 mg/L
Lithium	10 mg/L	Magnesium	15 mg/L
Manganese	5 mg/L	Nickel	2 mg/L
Phosphorous	50 mg/L	Potassium	300 mg/L
Selenium	5 mg/L	Sodium	250 mg/L
Strontium	10 mg/L	Thallium	1 mg/L
Thorium	1 mg/L	Uranium	.2 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID: UI090701-10 **Opened:** 01-JUL-09 **Amount :** 250 mL
Name: ICP-MS CRDL Master #2 **Received:** 01-JUL-09 **Catalog Number :** 160044-08-02
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016476
Employee: Paul Boyd **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: 02SI
Description: ICPMS CRDL Soln #2
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Molybdenum	.5 mg/L
Silver	1 mg/L	Tin	2 mg/L
Titanium	10 mg/L	Tungsten	5 mg/L
Zirconium	2 mg/L		

Serial ID: UI090701-40 **Opened:** 01-JUL-09 **Amount :** 500 mL
Name: TRACE ICP Stock PQL St **Received:** 30-JUN-09 **Catalog Number :** 160543-01-03
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016475
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3+TrHF
Supplier: 02si
Description: TRACE ICP Stock PQL Standard
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	100 mg/L	Antimony	5 mg/L
Arsenic	15 mg/L	Barium	2.5 mg/L
Beryllium	2.5 mg/L	Boron	25 mg/L
Cadmium	2.5 mg/L	Calcium	100 mg/L
Chromium	2.5 mg/L	Cobalt	2.5 mg/L
Copper	5 mg/L	Iron	50 mg/L
Lead	5 mg/L	Magnesium	150 mg/L
Manganese	5 mg/L	Molybdenum	5 mg/L
Nickel	2.5 mg/L	Phosphorous	75 mg/L
Potassium	75 mg/L	Selenium	15 mg/L
Silicon	50 mg/L	Silver	2.5 mg/L
Sodium	150 mg/L	Strontium	2.5 mg/L
Sulfur	50 mg/L	Thallium	10 mg/L

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Tin	5 mg/L	Titanium	2.5 mg/L
Uranium	25 mg/L	Vanadium	2.5 mg/L
Zinc	5 mg/L		

Serial ID: UI090828-42 **Opened:** 16-SEP-09 **Amount :** 500 mL
Name: TRACE ICP Na-1000SOUR **Received:** 27-AUG-09 **Catalog Number :** 060011-02-03
Type: Source Material **Expires:** 16-SEP-10 **Lot Number :** 1017098
Employee: Helen Camello **Solvent :** 1%HNO3
Supplier: 02SI
Description: Sodium 1000 +/- 3 ug/mL in 1% HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration
Sodium	1000 ug/mL		

Serial ID: UI090925-40 **Opened:** 23-OCT-09 **Amount :** 500 mL
Name: SECOND SOURCE STD -1 **Received:** 25-SEP-09 **Catalog Number :** SGELMX38-500N
Type: Source Material **Expires:** 30-SEP-10 **Lot Number :** 4909129
Employee: Helen Camello **Solvent :** 5%HNO3
Supplier: SPECTRO PURE
Description: SECOND SOURCE STD #1A 5%HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Arsenic	100 mg/L
Barium	100 mg/L	Boron	100 mg/L
Cadmium	100 mg/L	Calcium	1000 mg/L
Chromium	100 mg/L	Cobalt	100 mg/L
Copper	100 mg/L	Iron	1000 mg/L
Lead	100 mg/L	Phosphorous	500 mg/L
Potassium	500 mg/L	Selenium	500 mg/L
Sodium	500 mg/L	Strontium	100 mg/L

Serial ID: UI090925-41 **Opened:** 23-OCT-09 **Amount :** 500 mL
Name: SECOND SOURCE STD -1 **Received:** 25-SEP-09 **Catalog Number :** SGELMX39-500B
Type: Source Material **Expires:** 30-SEP-10 **Lot Number :** 4909130
Employee: Helen Camello **Solvent :** 5%HNO3,TR.HF
Supplier: SPECTRO PURE
Description: SECOND SOURCE STD #1B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 mg/L	Beryllium	50 mg/L
Magnesium	1000 mg/L	Manganese	100 mg/L

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Molybdenum	100 mg/L	Nickel	100 mg/L
Silver	50 mg/L	Sulfur	500 mg/L
Thallium	100 mg/L	Tin	100 mg/L
Titanium	100 mg/L	Uranium	100 mg/L
Vanadium	100 mg/L	Zinc	100 mg/L

Serial ID: UI091015-42 **Opened:** 28-OCT-09 **Amount:** 500 mL
Name: SI 1000mg/L **Received:** 15-OCT-09 **Catalog Number:** 060014-02-03
Type: Source Material **Expires:** 28-OCT-10 **Lot Number:** 1017581
Employee: Helen Camello **Solvent:** 0.3%H2O(NH4)2SiF6
Supplier: o2si
Description: Silicon 1000mg/L +/- 0.3% in H2O(NH4)2SiF6
Comments: None

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID: UI091015-A **Opened:** 15-OCT-09 **Catalog Number:** 160067-03
Name: ICP-MS DOE SOIL SPIKE **Received:** 15-OCT-09 **Lot Number:** 1017142
Type: Source Material **Expires:** 15-OCT-10
Employee: Francena Armstrong
Supplier: 02si
Description: ICP-MS Spike for soil products.
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	200 mg/L	Arsenic	8 mg/L
Barium	5 mg/L	Beryllium	5 mg/L
Boron	10 mg/L	Cadmium	1 mg/L
Calcium	200 mg/L	Chromium	5 mg/L
Cobalt	5 mg/L	Copper	5 mg/L
Iron	200 mg/L	Lead	20 mg/L
Lithium	5 mg/L	Magnesium	200 mg/L
Manganese	5 mg/L	Nickel	5 mg/L
Phosphorus, Total as P	200 mg/L	Potassium	200 mg/L
Selenium	2 mg/L	Sodium	200 mg/L
Strontium	5 mg/L	Thallium	10 mg/L
Thorium	5 mg/L	Uranium	5 mg/L
Uranium-235	.036 mg/L	Uranium-238	4.964 mg/L
Vanadium	5 mg/L	Zinc	5 mg/L

Standard Logbook

Serial ID: UI091015-B **Opened:** 15-OCT-09 **Catalog Number :** 160067-03
Name: ICP-MS DOE SOIL SPIKE **Received:** 15-OCT-09 **Lot Number :** 1017142
Type: Source Material **Expires:** 15-OCT-10
Employee: Francena Armstrong
Supplier: 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

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Tin	200 mg/L	Titanium	200 mg/L

Serial ID: UI091102-42 **Opened:** 17-NOV-09 **Amount :** 200 mL
Name: SILICON **Received:** 02-NOV-09 **Catalog Number :** HP100050-4F
Type: Source Material **Expires:** 17-NOV-10 **Lot Number :** 0921924
Employee: Helen Camello **Solvent :** H2O/tr HF
Supplier: ENVIRONMENTAL EXPRESS
Description: SILICON 1000mg/L H2O/tr HF
Comments: None

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID: UI091212-11 **Opened:** 12-DEC-09 **Amount :** 1000 mL
Name: ICP-MS ICSA Master A **Received:** 12-DEC-09 **Catalog Number :** 160013-01-01L
Type: Source Material **Expires:** 12-DEC-10 **Lot Number :** 1015303
Employee: Paul Boyd **Solvent :** 2% HNO3
Supplier: O2SI
Description: ICP-MS ICSA Master A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Carbon	2000 mg/L	Chloride	10000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Molybdenum	20 mg/L	Phosphorous	1000 mg/L
Potassium	1000 mg/L	Sodium	1000 mg/L
Sulfur	1000 mg/L	Titanium	20 mg/L

Serial ID: UI091212-60 **Opened:** 12-DEC-09 **Amount :** .5 mL
Name: ICPMS High Range Standard **Received:** 12-DEC-09 **Catalog Number :** 160212-02-01
Type: Source Material **Expires:** 12-DEC-10 **Lot Number :** 1018064
Employee: Paul Boyd **Solvent :** 2%HNO3 + Tr HF
Supplier: O2SI
Description: Linear Range Standard A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	5000 mg/L	Arsenic	100 mg/L
Barium	250 mg/L	Beryllium	100 mg/L
Cadmium	100 mg/L	Calcium	5000 mg/L
Chromium	100 mg/L	Cobalt	100 mg/L
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 Standard **Received:** 12-DEC-09 **Catalog Number :** 160212-02-01
Type: Source Material **Expires:** 12-DEC-10 **Lot Number :** 1018064
Employee: Paul Boyd **Solvent :** 2%HNO3 + Tr HF
Supplier: O2SI
Description: Linear Range Standard B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	25 mg/L	Molybdenum	100 mg/L
Silver	25 mg/L	Tin	100 mg/L
Tungsten	100 mg/L	Zirconium	50 mg/L

Serial ID: UI091216-01 **Opened:** 16-DEC-09 **Lot Number :** 1018095
Name: METALSPIKE-1 **Received:** 16-DEC-09
Type: Source Material **Expires:** 16-DEC-10
Employee: Francena Armstrong
Supplier: OS2I
Description: Metals Spike Mix I
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 ug/mL	Arsenic	100 ug/mL
Barium	100 ug/mL	Beryllium	100 ug/mL
Boron	100 ug/mL	Cadmium	100 ug/mL
Calcium	1000 ug/mL	Cobalt	100 ug/mL
Iron	1000 ug/mL	Lead	100 ug/mL
Magnesium	1000 ug/mL	Phosphorous	100 ug/mL
Potassium	1000 ug/mL	Silver	100 ug/mL
Sodium	1000 ug/mL	Strontium	100 ug/mL

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

Standard Logbook

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: Q2SI
Description: ICPMS ICV/CCV SOLN A - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	2020 mg/L	Calcium	2000 mg/L
Iron	2000 mg/L	Magnesium	2000 mg/L
Phosphorous	2000 mg/L	Potassium	2000 mg/L
Sodium	2000 mg/L		

Serial ID: UI091217-07 **Opened:** 17-DEC-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master B **Received:** 17-DEC-09 **Catalog Number :** 160054-02
Type: Source Material **Expires:** 17-DEC-10 **Lot Number :** 1018210
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: Q2SI
Description: ICPMS ICV/CCV Soln B - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	20 mg/L	Barium	20 mg/L
Beryllium	20 mg/L	Boron	40 mg/L
Cadmium	20 mg/L	Chromium	20 mg/L
Cobalt	20 mg/L	Copper	20 mg/L
Lead	20 mg/L	Lithium	20 mg/L
Manganese	20 mg/L	Nickel	20 mg/L
Selenium	20 mg/L	Strontium	20 mg/L
Thallium	20 mg/L	Thorium	20 mg/L
Uranium	20 mg/L	Vanadium	20 mg/L
Zinc	20 mg/L		

Standard Logbook

Serial ID: UI091217-08 **Opened:** 17-DEC-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master C **Received:** 17-DEC-09 **Catalog Number :** 160054-03
Type: Source Material **Expires:** 17-DEC-10 **Lot Number :** 1018211
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV Soln C - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	20 mg/L
Silver	20 mg/L	Tin	20 mg/L
Titanium	20 mg/L	Tungsten	20 mg/L
Zirconium	20 mg/L		

Serial ID: UI091217-12 **Opened:** 17-DEC-09 **Amount :** 250 mL
Name: ICP-MS ICSAB Master B **Received:** 17-DEC-09 **Catalog Number :** 160033-02
Type: Source Material **Expires:** 17-DEC-10 **Lot Number :** 1018212
Employee: Paul Boyd **Solvent :** +/- 0.5% in 2% HNO3
Supplier: 02SI
Description: ICPMS ICSAB Master B
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	2 mg/L	Barium	2 mg/L
Beryllium	2 mg/L	Boron	2 mg/L
Cadmium	2 mg/L	Chromium	2 mg/L
Cobalt	2 mg/L	Copper	2 mg/L
Lead	2 mg/L	Lithium	2 mg/L
Manganese	2 mg/L	Nickel	2 mg/L
Selenium	2 mg/L	Strontium	2 mg/L
Thallium	2 mg/L	Thorium	2 mg/L
Uranium	2 mg/L	Vanadium	2 mg/L
Zinc	2 mg/L		

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		

Standard Logbook

Serial ID: UI100114-40 **Opened:** 14-JAN-10 **Amount :** 500 mL
Name: ICP HIGH RANGE STD-A **Received:** 14-JAN-10 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 14-JAN-11 **Lot Number :** 1018160
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STD SOLUTION A
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10000 ug/L	Arsenic	10000 ug/L
Barium	15000 ug/L	Beryllium	3000 ug/L
Boron	5000 ug/L	Cadmium	10000 ug/L
Chromium	25000 ug/L	Cobalt	10000 ug/L
Copper	20000 ug/L	Lead	25000 ug/L
Manganese	10000 ug/L	Molybdenum	10000 ug/L
Nickel	10000 ug/L	Phosphorous	15000 ug/L
Potassium	300000 ug/L	Selenium	10000 ug/L
Silica	107000 ug/L	Silicon	50000 ug/L
Silver	1000 ug/L	Strontium	10000 ug/L
Sulfur	50000 ug/L	Thallium	10000 ug/L
Tin	10000 ug/L	Titanium	10000 ug/L
Vanadium	10000 ug/L	Zinc	15000 ug/L

Serial ID: UI100114-41 **Opened:** 14-JAN-10 **Amount :** 500 mL
Name: ICP HIGH RANGE STD B **Received:** 14-JAN-10 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 14-JAN-11 **Lot Number :** 1018160
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STD SOLUTION B
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Calcium	500000 ug/L
Iron	500000 ug/L	Magnesium	500000 ug/L
Sodium	500000 ug/L	Uranium	15000 ug/L

Serial ID: UI100114-48 **Opened:** 22-JAN-10 **Amount :** 1000 mL
Name: Trace ICP ICSEA **Received:** 18-JAN-10 **Catalog Number :** 160005-02
Type: Source Material **Expires:** 22-JAN-11 **Lot Number :** 1018466
Employee: Helen Camello **Solvent :** 3% HCl + 1% HNO3
Supplier: o2si
Description: Trace ICP Interferent Check Standard A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 UG/L	Calcium	500000 UG/L

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Iron	200000 UG/L	Magnesium	500000 UG/L

Serial ID: UI100114-49.5 **Opened:** 27-JAN-10 **Amount :** 100 ml
Name: Trace ICP ICSAB **Received:** 18-JAN-10 **Catalog Number :** 160066-04
Type: Source Material **Expires:** 28-JAN-10 **Lot Number :** 1018458
Employee: Helen Camello **Solvent :** 3% HCl + 1% HNO3
Supplier: o2si
Description: Trace ICP Interferent Check Standard AB
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Antimony	500 ug/L
Arsenic	500 ug/L	Barium	500 ug/L
Beryllium	250 ug/L	Boron	500 ug/L
Cadmium	500 ug/L	Calcium	500000 ug/L
Chromium	500 ug/L	Cobalt	500 ug/L
Copper	500 ug/L	Iron	200000 ug/L
Lead	500 ug/L	Magnesium	500000 ug/L
Manganese	500 ug/L	Molybdenum	500 ug/L
Nickel	500 ug/L	Phosphorous	2500 ug/L
Potassium	5000 ug/L	Selenium	2500 ug/L
Silica	10696.5 ug/L	Silicon	5000 ug/L
Silver	250 ug/L	Sodium	5000 ug/L
Strontium	500 ug/L	Sulfur	2500 ug/L
Thallium	500 ug/L	Tin	500 ug/L
Titanium	500 ug/L	Uranium	500 ug/L
Vanadium	500 ug/L	Zinc	500 ug/L

Serial ID: 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

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Thorium	10 mg/L	Uranium	10 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID: UMS090303-02 **Opened:** 03-MAR-09 **Catalog Number :** ZGEL-102-250
Name: ICPMSCalSPIKEA **Received:** 03-MAR-09 **Lot Number :** 14-83JB
Type: Source Material **Expires:** 28-FEB-10
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Phosphorous	1000 mg/L	Potassium	1000 mg/L
Sodium	1000 mg/L		

Serial ID: UMS090303-03 **Opened:** 03-MAR-09 **Amount :** 250 ml
Name: ICPMSCalSPIKEC **Received:** 03-MAR-09 **Catalog Number :** ZGEL-101-250
Type: Source Material **Expires:** 28-FEB-10 **Lot Number :** 15-199JB
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution C
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10 mg/L	Molybdenum	10 mg/L
Tin	10 mg/L	Titanium	10 mg/L
Zirconium	10 mg/L		

Serial ID: IHG100127-01 **Opened:** 27-JAN-10 **Instrument Id :** Mercury
Name: MHGINTER1 **Received:** 27-JAN-10 **Pipet Id :** Minou1
Type: Intermediate **Expires:** 28-JAN-10 **Solvent :** 1mL HNO3 + TypeI H2O
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Intermediate 1st Source 200 ug/L
Comments: Prepare fresh daily

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG1167639-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Standard Logbook

Serial ID: IHG100127-02 **Opened:** 27-JAN-10 **Pipet Id :** Minou1
Name: MHGINTER2 **Received:** 27-JAN-10 **Solvent :** 2% HNO3-1257474
Type: Intermediate **Expires:** 28-JAN-10
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Intermediate 2nd Source 200 ug/L
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG1167641-02	Mercury	999.7 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WHG100127-07 **Opened:** 27-JAN-10 **Pipet Id :** Hg1289245
Name: MHGWORKCALSO.2CRA **Received:** 27-JAN-10 **Solvent :** 2% HNO3-1257474
Type: Working **Expires:** 03-FEB-10
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working Standard 1st Source CAL S 0.2/CRA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG100127-01	Mercury	200 ug/L	30 uL	30 mL	.2 ug/L

Serial ID: WHG100127-08 **Opened:** 27-JAN-10 **Pipet Id :** Hg1289245
Name: MHGWORKCALSO.5 **Received:** 27-JAN-10 **Solvent :** 2% HNO3-1257474
Type: Working **Expires:** 03-FEB-10
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working Standard 1st Source CAL S 0.5
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG100127-01	Mercury	200 ug/L	75 uL	30 mL	.5 ug/L

Serial ID: WHG100127-09 **Opened:** 27-JAN-10 **Pipet Id :** Hg1289245
Name: MHGWORKCALSO.2.0 **Received:** 27-JAN-10 **Solvent :** 2% HNO3-1257474
Type: Working **Expires:** 03-FEB-10
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL S 2.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG100127-01	Mercury	200 ug/L	300 uL	30 mL	2 ug/L

Standard Logbook

Serial ID: WHG100127-10 **Opened:** 27-JAN-10 **Pipet Id :** Hg1289245
Name: MHGWORKCALS5.0CCV **Received:** 27-JAN-10 **Solvent :** 2% HNO3-1257474
Type: Working **Expires:** 03-FEB-10
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL S 5.0/CCV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG100127-01	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Serial ID: WHG100127-11 **Opened:** 27-JAN-10 **Pipet Id :** Hg1289245
Name: MHGWORKCALS10.0 **Received:** 27-JAN-10 **Solvent :** 2% HNO3-1257474
Type: Working **Expires:** 03-FEB-10
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working 1st Source CAL S 10.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG100127-01	Mercury	200 ug/L	1.5 mL	30 mL	10 ug/L

Serial ID: WHG100127-12 **Opened:** 27-JAN-10 **Pipet Id :** Hg1289245
Name: MHGWORKS5.0ICV **Received:** 27-JAN-10 **Solvent :** 2% HNO3-1257474
Type: Working **Expires:** 03-FEB-10
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 2nd Source S 5.0/ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG100127-02	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Serial ID: WHG100127-14 **Opened:** 27-JAN-10 **Pipet Id :** Hg1289245
Name: MHGSOILMSSPIKE **Received:** 27-JAN-10 **Solvent :** 2% HNO3-1257474
Type: Working **Expires:** 03-FEB-10
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury soil working intermediate standard for MS
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG1167639-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Standard Logbook

Serial ID: WI100127-42 **Opened:** 27-JAN-10 **Balance Id :** 216
Name: TRACE ICP 0.1 PPM STD. **Received:** 02-NOV-09 **Pipet Id :** 1099667
Type: Working **Expires:** 28-JAN-10 **Solvent :** 3%HCL and 1%HNO3 -1259494
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.
WI100127-44	Aluminum	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100127-44	Antimony	1000 ug/L	10 mL	100 mL	100 ug/L
WI100127-44	Arsenic	1000 ug/L	10 mL	100 mL	100 ug/L
WI100127-44	Barium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100127-44	Beryllium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100127-44	Boron	1000 ug/L	10 mL	100 mL	100 ug/L
WI100127-44	Cadmium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100127-44	Calcium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100127-44	Chromium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100127-44	Cobalt	1000 ug/L	10 mL	100 mL	100 ug/L
WI100127-44	Copper	1000 ug/L	10 mL	100 mL	100 ug/L
WI100127-44	Iron	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100127-44	Lead	1000 ug/L	10 mL	100 mL	100 ug/L
WI100127-44	Magnesium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100127-44	Manganese	1000 ug/L	10 mL	100 mL	100 ug/L
WI100127-44	Molybdenum	1000 ug/L	10 mL	100 mL	100 ug/L
WI100127-44	Nickel	1000 ug/L	10 mL	100 mL	100 ug/L
WI100127-44	Phosphorous	5000 ug/L	10 mL	100 mL	500 ug/L
WI100127-44	Potassium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100127-44	Selenium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100127-44	Silica	10698 ug/L	10 mL	100 mL	1069 ug/L
WI100127-44	Silicon	5000 ug/L	10 mL	100 mL	500 ug/L
WI100127-44	Silver	1000 ug/L	10 mL	100 mL	100 ug/L
WI100127-44	Sodium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100127-44	Strontium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100127-44	Sulfur	2000 ug/L	10 mL	100 mL	200 ug/L
WI100127-44	Thallium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100127-44	Tin	1000 ug/L	10 mL	100 mL	100 ug/L
WI100127-44	Titanium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100127-44	Uranium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100127-44	Vanadium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100127-44	Zinc	1000 ug/L	10 mL	100 mL	100 ug/L

Standard Logbook

Serial ID: WI100127-43 **Opened:** 27-JAN-10 **Balance Id :** 216
Name: TRACE ICP 0.5/CCV STD. **Received:** 02-NOV-09 **Pipet Id :** 1099667
Type: Working **Expires:** 28-JAN-10 **Solvent :** 3%HCL and 1%HNO3 -1259494
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP 0.5/CCV CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090828-42	Sodium	1000 ug/mL	5 mL	1000 mL	5000 UG/L
UI091015-42	Silica	2139 mg/L	2.5 mL	1000 mL	5348.25 UG/L
UI091015-42	Silicon	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI091102-40	Aluminum	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Arsenic	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Barium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Beryllium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Boron	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Cadmium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Calcium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Chromium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Cobalt	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Copper	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Iron	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Lead	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Magnesium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Manganese	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Nickel	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Phosphorous	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI091102-40	Potassium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Selenium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Sodium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Strontium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Thallium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Uranium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Vanadium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Zinc	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Antimony	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Molybdenum	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Silver	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Sulfur	400 mg/L	2.5 mL	1000 mL	1000 UG/L
UI091102-41	Tin	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Titanium	200 mg/L	2.5 mL	1000 mL	500 UG/L

Standard Logbook

Serial ID: W1100127-44 **Opened:** 27-JAN-10 **Balance Id :** 216
Name: TRACE ICP SCAL 1.0 **Received:** 02-NOV-09 **Pipet Id :** 1099667
Type: Working **Expires:** 28-JAN-10 **Solvent :** 3%HCL and 1 %HNO3-1259494
Employee: Helen Camello
Supplier: o2si
Description: Trace ICP Calibration Standard 1.0ppm
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091015-42	Silica	2139 mg/L	2.5 mL	500 mL	10698 ug/L
UI091015-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI091102-40	Aluminum	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Arsenic	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Barium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Beryllium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Boron	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Cadmium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Calcium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Chromium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Cobalt	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Copper	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Iron	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Lead	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Magnesium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Manganese	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Nickel	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Phosphorous	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI091102-40	Potassium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Selenium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Sodium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Strontium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Thallium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Uranium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Vanadium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Zinc	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-41	Antimony	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-41	Molybdenum	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-41	Silver	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-41	Sulfur	400 mg/L	2.5 mL	500 mL	2000 ug/L
UI091102-41	Tin	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-41	Titanium	200 mg/L	2.5 mL	500 mL	1000 ug/L

Standard Logbook

Serial ID: WI100127-45 **Opened:** 27-JAN-10 **Balance Id :** 216
Name: TRACE ICP S-10 STD **Received:** 22-APR-09 **Pipet Id :** 1099667
Type: Working **Expires:** 28-JAN-10 **Solvent :** 3%HCL and 1%HNO3 -1259494
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP S-10 CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	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: WI100127-46 **Opened:** 27-JAN-10 **Balance Id :** 216
Name: ICP TRACE ICV **Received:** 25-SEP-09 **Pipet Id :** 1099667
Type: Working **Expires:** 28-JAN-10 **Solvent :** 3%HCL AND 1%HNO3-1259494
Employee: Helen Camello
Supplier: GEL
Description: Initial Calibration Verification ICP Trace Metals
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090925-40	Aluminum	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090925-40	Arsenic	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Barium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Boron	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Cadmium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Calcium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090925-40	Chromium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Cobalt	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Copper	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Iron	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090925-40	Lead	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Phosphorous	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-40	Potassium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-40	Selenium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-40	Sodium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-40	Strontium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Antimony	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Beryllium	50 mg/L	2.5 mL	500 mL	250 ug/L
UI090925-41	Magnesium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090925-41	Manganese	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Molybdenum	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Nickel	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Silver	50 mg/L	2.5 mL	500 mL	250 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
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: WI100127-47 **Opened:** 27-JAN-10 **Balance Id :** 216
Name: PQL Working Standard **Received:** 30-JUN-09 **Pipet Id :** 1099667
Type: Working **Expires:** 28-JAN-10 **Solvent :** 3%HCL &1%HNO3-1259494
Employee: Helen Camello
Supplier: 02si
Description: PQL Working Standard
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-40	Aluminum	100 mg/L	2 mL	1000 mL	200 ug/L
UI090701-40	Antimony	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Arsenic	15 mg/L	2 mL	1000 mL	15 ug/L
UI090701-40	Barium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Beryllium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Boron	25 mg/L	2 mL	1000 mL	50 ug/L
UI090701-40	Cadmium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Calcium	100 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Chromium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Cobalt	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Copper	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Iron	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Lead	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Magnesium	150 mg/L	2 mL	1000 mL	300 ug/L
UI090701-40	Manganese	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Molybdenum	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Nickel	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Phosphorous	75 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Potassium	75 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Selenium	15 mg/L	2 mL	1000 mL	15 ug/L
UI090701-40	Silicon	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Silver	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Sodium	150 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Strontium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Sulfur	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Thallium	10 mg/L	2 mL	1000 mL	20 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
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: WMS100121-04 **Opened:** 21-JAN-10 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 21-JAN-10 **Balance Id :** 4025216
Type: Working **Expires:** 22-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
UMS090303-01	Boron	20 mg/L	.5 mL	50 mL	200 ug/l
UMS090303-01	Cadmium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Chromium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Cobalt	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Copper	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Lead	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Lithium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Manganese	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Nickel	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Selenium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Silver	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Strontium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Thallium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Thorium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Uranium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Vanadium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Zinc	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-02	Aluminum	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Calcium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Iron	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Magnesium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Phosphorous	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Potassium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Sodium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-03	Antimony	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Molybdenum	10 mg/L	.5 mL	50 mL	100 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UMS090303-03	Tin	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Titanium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Zirconium	10 mg/L	.5 mL	50 mL	100 ug/l

Serial ID: WMS100121-04A **Opened:** 21-JAN-10 **Balance Id :** 4025216
Name: ICPMS Cal Standard 10 **Received:** 21-JAN-10 **Pipet Id :** 3541598
Type: Working **Expires:** 22-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.
WMS100121-04	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100121-04	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS100121-04	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS100121-04	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100121-04	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100121-04	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS100121-04	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100121-04	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100121-04	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100121-04	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS100121-04	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS100121-04	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100121-04	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS100121-04	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100121-04	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100121-04	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS100121-04	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS100121-04	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS100121-04	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100121-04	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100121-04	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100121-04	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS100121-04	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100121-04	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100121-04	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100121-04	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100121-04	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS100121-04	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100121-04	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS100121-04	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100121-04	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100121-04	Zinc	100 ug/l	5 mL	50 mL	10 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS100121-04	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

Serial ID: <u>WMS100121-05</u>	Opened: <u>21-JAN-10</u>	Balance Id : <u>40245216</u>
Name: <u>ICPMS ICV</u>	Received: <u>21-JAN-10</u>	Pipet Id : <u>3541598</u>
Type: <u>Working</u>	Expires: <u>22-JAN-10</u>	Solvent : <u>2%HNO3/1%HCl - 1256053</u>
Employee: <u>Paul Boyd</u>		
Supplier: <u>GEL</u>		
Description: <u>ICPMS ICV</u>		
Comments: <u>None</u>		

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-06	Aluminum	2020 mg/L	.125 mL	50 mL	5050 ug/L
UI091217-06	Calcium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Iron	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Magnesium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Phosphorous	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Potassium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Sodium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-07	Arsenic	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L
UI091217-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L

Standard Logbook

Serial ID: WMS100121-06 **Opened:** 21-JAN-10 **Balance Id :** 40245216
Name: ICPMS CRDL **Received:** 21-JAN-10 **Pipet Id :** 3820544
Type: Working **Expires:** 22-JAN-10 **Solvent :** 2%HNO3/1%HCl - 1256053
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS CRDL
Comments: None

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
UI090701-09	Aluminum	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Calcium	100 mg/L	.05 mL	50 mL	100 ug/L
UI090701-09	Chromium	3 mg/L	.05 mL	50 mL	3 ug/L
UI090701-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Iron	25 mg/L	.05 mL	50 mL	25 ug/L
UI090701-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI090701-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L
UI090701-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI090701-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI090701-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

Standard Logbook

Serial ID: WMS100121-07 **Opened:** 21-JAN-10 **Balance Id :** 40245216
Name: ICPMS ICSA **Received:** 21-JAN-10 **Lot Number :** 1010773
Type: Working **Expires:** 22-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

Serial ID: WMS100121-08 **Opened:** 21-JAN-10 **Balance Id :** 40245216
Name: ICPMS ICSAB **Received:** 21-JAN-10 **Pipet Id :** 1758088
Type: Working **Expires:** 22-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

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI091217-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI091217-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI091217-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI091217-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI091217-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI091217-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L

Serial ID: WMS100121-70 **Opened:** 21-JAN-10 **Balance Id :** 40245216
Name: ICPMS LINEAR RANGE ST **Received:** 21-JAN-10 **Pipet Id :** 1758088
Type: Working **Expires:** 22-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

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
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: WMS100122-04 **Opened:** 22-JAN-10 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 22-JAN-10 **Balance Id :** 4025216
Type: Working **Expires:** 23-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
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

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
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: WMS100122-04A **Opened:** 22-JAN-10 **Balance Id :** 4025216
Name: ICPMS Cal Standard 10 **Received:** 22-JAN-10 **Pipet Id :** 3541598
Type: Working **Expires:** 23-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.
WMS100122-04	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100122-04	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS100122-04	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS100122-04	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100122-04	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100122-04	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS100122-04	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100122-04	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100122-04	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100122-04	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS100122-04	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS100122-04	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100122-04	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS100122-04	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100122-04	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100122-04	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS100122-04	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS100122-04	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS100122-04	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100122-04	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100122-04	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100122-04	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS100122-04	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS100122-04	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100122-04	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100122-04	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100122-04	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS100122-04	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100122-04	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS100122-04	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100122-04	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100122-04	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS100122-04	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

Serial ID: WMS100122-05 **Opened:** 22-JAN-10 **Balance Id :** 40245216
Name: ICPMS ICV **Received:** 22-JAN-10 **Pipet Id :** 3541598
Type: Working **Expires:** 23-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
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

Standard Logbook

Parent Material	Analyte	Parent Conc.	Alliquot	Final Vol.	Final Conc.
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: WMS100122-06 **Opened:** 22-JAN-10 **Balance Id :** 40245216
Name: ICPMS CRDL **Received:** 22-JAN-10 **Pipet Id :** 3820544
Type: Working **Expires:** 23-JAN-10 **Solvent :** 2%HNO3/1%HCl - 1256053
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS CRDL
Comments: None

Parent Material	Analyte	Parent Conc.	Alliquot	Final Vol.	Final Conc.
UI090701-09	Aluminum	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Calcium	100 mg/L	.05 mL	50 mL	100 ug/L
UI090701-09	Chromium	3 mg/L	.05 mL	50 mL	3 ug/L
UI090701-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Iron	25 mg/L	.05 mL	50 mL	25 ug/L
UI090701-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI090701-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L
UI090701-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI090701-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI090701-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
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: WMS100122-07 **Opened:** 22-JAN-10 **Balance Id :** 40245216
Name: ICPMS ICSA **Received:** 22-JAN-10 **Lot Number :** 1010773
Type: Working **Expires:** 23-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.	Allquot	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: WMS100122-08 **Opened:** 22-JAN-10 **Balance Id :** 40245216
Name: ICPMS ICSAB **Received:** 22-JAN-10 **Pipet Id :** 1758088
Type: Working **Expires:** 23-JAN-10 **Solvent :** 2%HNO3/1%HCl - 1256053
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICSAB
Comments: None

Parent Material	Analyte	Parent Conc.	Allquot	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

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
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: 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

Standard Logbook

Serial ID: 1228372-A Opened: 12-NOV-09 Lot Number : 49215936
Name: B-NH2OH.HCl-MER Received: 12-NOV-09
Type: Reagent/Solvent Expires: 12-NOV-10
Employee: Tara Griffin
Supplier: Fisher Scientific
Description: Hydroxylamine Hydrochloride
Comments: None

Serial ID: 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

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

Standard Logbook

Serial ID: 1252838 **Opened:** 08-JAN-10 **Lot Number :** H41032
Name: I-HCL **Received:** 08-JAN-10 **Preservative_Id :** 5 none
Type: Reagent/Solvent **Expires:** 08-JAN-11
Employee: Francena Armstrong
Supplier: J.T. BAKER
Description: HYDROCHLORIC ACID
Comments: None

Serial ID: 1255532-C **Opened:** 15-JAN-10 **Balance Id :** BAL-002
Name: B-NaCl.NH2OH.HCl-MER **Received:** 15-JAN-10
Type: Reagent/Solvent **Expires:** 15-JUL-10
Employee: Tara Griffin
Supplier: GEL
Description: Hg reducing agent
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1228372-A	B-NH2OH.HCl-MER	N/A	120 g	1000 mL	N/A

Serial ID: 1255535-C **Opened:** 15-JAN-10 **Balance Id :** BAL-002
Name: B-KMnO4-MER **Received:** 15-JAN-10
Type: Reagent/Solvent **Expires:** 15-JUL-10
Employee: Tara Griffin
Supplier: GEL
Description: 5% KMnO4 solution
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1156689-A	B-KMnO4(VWR)-MER	Crystals	50 g	1000 mL	3%

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

Standard Logbook

Serial ID: 1257474-1 Opened: 20-JAN-10 Instrument Id : MERCURY
Name: B-HNO3-MER Received: 20-JAN-10 Lot Number : H20053
Type: Reagent/Solvent Expires: 20-JAN-11
Employee: Tara Griffin
Supplier: Mallinckrodt Chemicals
Description: NITRIC ACID
Comments: None

Serial ID: 1259494 Opened: 25-JAN-10 Amount : 20 L
Name: B-ICP-RINSE SOLN Received: 28-DEC-10 Lot Number : H04040+G34050
Type: Reagent/Solvent Expires: 31-JAN-10 Solvent : 3%HCL+1%HNO3
Employee: Helen Camello
Supplier: GEL
Description: 3%HCL+1%HNO3 RINSE SOLN.
Comments: None

General Chemistry Analysis

Case Narrative

**General Chemistry Narrative
Los Alamos National Laboratory (LANL)
SDG 10-1213**

Method/Analysis Information

Product: Cyanide, Total

Analytical Batch: 941967 **Method:** SW846 9012A

Prep Batch : 941966 **Method:** SW846 9010B Prep

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 9012A:

Sample ID	Client ID
244604001	RE12-10-7257
244604002	RE12-10-7256
1202016404	Method Blank (MB)
1202016405	244601005(RE12-10-7239) Sample Duplicate (DUP)
1202016406	244601006(RE12-10-7238) Sample Duplicate (DUP)
1202016407	244601005(RE12-10-7239) Matrix Spike (MS)
1202016408	244601006(RE12-10-7238) Matrix Spike (MS)
1202016409	244601005(RE12-10-7239) Matrix Spike Duplicate (MSD)
1202016410	244601006(RE12-10-7238) Matrix Spike Duplicate (MSD)
1202016411	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: 244601005 (RE12-10-7239) and 244601006 (RE12-10-7238).

Matrix Spike (MS)/Post Spike (PS) Recovery Statement

The MS/PS recoveries for this sample set were within the required acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement

The MSD recoveries for this sample set were within the required acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement

The RPDs between the spike and spike duplicate met the acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement

The values for the sample and duplicate are less than the Practical Quantitation Limit (PQL); therefore, the RPD is not applicable. 1202016405 (RE12-10-7239) and 1202016406 (RE12-10-7238).

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: 1202016411 (LCS).

Sample Re-analysis

The following samples were re-analyzed due to CCV failure: 1202016404 (MB), 1202016411 (LCS), 244604001 (RE12-10-7257) and 244604002 (RE12-10-7256).

Miscellaneous Information

Data Exception (DER) Documentation

A DER was not required for this SDG.

Additional Comments

Additional comments were not required for this SDG.

Electronic Packaging Comment

This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Certification Statement

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

Review Validation:

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

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

Reviewer:  Date: 04Feb10

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: 10-1213 GEL Work Order: 244604

The Qualifiers in this report are defined as follows:


- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

Reviewed by

A handwritten signature in black ink, appearing to read "Tom Lewis, Jr.", is written over a horizontal line.

GEL LABORATORIES LLC

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

Certificate of Analysis

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

Report Date: February 1, 2010

Client SDG: 10-1213

Client Sample ID: RE12-10-7257
Sample ID: 244604001
Matrix: R
Collect Date: 08-JAN-10 12:00
Receive Date: 13-JAN-10
Collector: Client
Moisture: 9.96%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Flow Injection Analysis											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	75.5	278	ug/kg	1	AXC2	01/21/10	1214	941967	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/20/10	1551	941966

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

GEL LABORATORIES LLC

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

Certificate of Analysis

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

Report Date: February 1, 2010

Client SDG: 10-1213

Client Sample ID: RE12-10-7256
Sample ID: 244604002
Matrix: R
Collect Date: 08-JAN-10 12:00
Receive Date: 13-JAN-10
Collector: Client
Moisture: 24.1%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Flow Injection Analysis											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	89.5	329	ug/kg	1	AXC2	01/21/10	1215	941967	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/20/10	1551	941966

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

Quality Control Summary

GEL LABORATORIES LLC

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

QC Summary

Report Date: February 1, 2010

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

Contact:

Workorder: 244604

Paramname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Flow Injection Analysis											
Batch	941967										
QC1202016405	244601005	DUP									
Cyanide, Total		U	ND	U	ND	ug/kg	N/A		AXC2	01/21/10	11:36
QC1202016406	244601006	DUP									
Cyanide, Total		J	186	U	ND	ug/kg	200 ^			01/21/10	11:39
QC1202016411	LCS										
Cyanide, Total		67900			78000	ug/kg	110	(46%-145%)		01/21/10	11:30
QC1202016404	MB										
Cyanide, Total				U	250	ug/kg				01/21/10	11:29
QC1202016407	244601005	MS									
Cyanide, Total		5510	U	ND	5730	ug/kg	104	(50%-130%)		01/21/10	11:36
QC1202016408	244601006	MS									
Cyanide, Total		6000	J	186	5700	ug/kg	91.9	(50%-130%)		01/21/10	11:40
QC1202016409	244601005	MSD									
Cyanide, Total		5510	U	ND	6010	ug/kg	4.69	109	(0%-30%)	01/21/10	11:37
QC1202016410	244601006	MSD									
Cyanide, Total		6000	J	186	5830	ug/kg	2.29	94.1	(0%-30%)	01/21/10	11:41

Notes:

RER is calculated at the 95% confidence level (2-sigma).

The Qualifiers in this report are defined as follows:

** Analyte is a surrogate compound

< Result is less than value reported

> Result is greater than value reported

A The TIC is a suspected aldol-condensation product

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

BD Results are either below the MDC or tracer recovery is low

C Analyte has been confirmed by GC/MS analysis

D Results are reported from a diluted aliquot of the sample

E General Chemistry--Concentration of the target analyte exceeds the instrument calibration range

E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria

E Organics--Concentration of the target analyte exceeds the instrument calibration range

F Estimated Value

H Analytical holding time was exceeded

J Value is estimated

M M if above MDC and less than LLD

M Matrix Related Failure

N Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based

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Workorder: 244604

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[illegible]

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.

^a The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

Instrument QC Data Summary

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 01-FEB-2010 14:47

GEL Laboratories LLC

Contract: LANL01004

SDG #: 10-1213

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	21-JAN-2010 10:34:52	OM_1-21-2010_10-24-21	158	150	105	(90%-110%)	Yes
CCV	21-JAN-2010 11:19:02	OM_1-21-2010_11-18-16	101	100	101	(90%-110%)	Yes
CCV	21-JAN-2010 11:31:25	OM_1-21-2010_11-18-16	96.4	100	96	(90%-110%)	Yes
CCV	21-JAN-2010 11:43:57	OM_1-21-2010_11-18-16	96.2	100	96	(90%-110%)	Yes
CCV	21-JAN-2010 12:06:14	OM_1-21-2010_12-04-42	99.6	100	100	(90%-110%)	Yes
CCV	21-JAN-2010 12:18:43	OM_1-21-2010_12-04-42	99.7	100	100	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	21-JAN-2010 10:36:42	OM_1-21-2010_10-24-21	-2.4	5	Yes
CCB	21-JAN-2010 11:20:52	OM_1-21-2010_11-18-16	0.746	5	Yes
CCB	21-JAN-2010 11:33:16	OM_1-21-2010_11-18-16	0.324	5	Yes
CCB	21-JAN-2010 11:45:47	OM_1-21-2010_11-18-16	0.353	5	Yes
CCB	21-JAN-2010 12:08:05	OM_1-21-2010_12-04-42	0.791	5	Yes
CCB	21-JAN-2010 12:20:34	OM_1-21-2010_12-04-42	0.209	5	Yes

Cyanide, Total

Prep LogBook

Analyst: AXSS
 Batch: 941966
 Lab SOP: GL-GC-E-067 REV# 13

Verified by: _____

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1202016411	URF1200957-01	.25	g
MS	1202016407	URF1184831-02	.025	mL
MS	1202016408	URF1184831-02	.025	mL
MSD	1202016409	URF1184831-02	.025	mL
MSD	1202016410	URF1184831-02	.025	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Ph	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1202016404		SW846 9010B Prep	20-JAN-2010 15:51	>12	0.5 g	25 mL	50	SOIL
LCS	1202016411		SW846 9010B Prep	20-JAN-2010 15:51	>12	0.25 g	25 mL	100	SOIL
SAMPLE	244601005		SW846 9010B Prep	20-JAN-2010 15:51	>12	0.5 g	25 mL	50	SOIL
DUP	1202016405	244601005	SW846 9010B Prep	20-JAN-2010 15:51	>12	0.5 g	25 mL	50	SOIL
MS	1202016407	244601005	SW846 9010B Prep	20-JAN-2010 15:51	>12	0.5 g	25 mL	50	SOIL
MSD	1202016409	244601005	SW846 9010B Prep	20-JAN-2010 15:51	>12	0.5 g	25 mL	50	SOIL
SAMPLE	244601006		SW846 9010B Prep	20-JAN-2010 15:51	>12	0.5 g	25 mL	50	SOIL
DUP	1202016406	244601006	SW846 9010B Prep	20-JAN-2010 15:51	>12	0.5 g	25 mL	50	SOIL
MS	1202016408	244601006	SW846 9010B Prep	20-JAN-2010 15:51	>12	0.5 g	25 mL	50	SOIL
MSD	1202016410	244601006	SW846 9010B Prep	20-JAN-2010 15:51	>12	0.5 g	25 mL	50	SOIL
SAMPLE	244601007		SW846 9010B Prep	20-JAN-2010 15:51	>12	0.5 g	25 mL	50	SOIL
SAMPLE	244601008		SW846 9010B Prep	20-JAN-2010 15:51	>12	0.5 g	25 mL	50	SOIL
SAMPLE	244601009		SW846 9010B Prep	20-JAN-2010 15:51	>12	0.5 g	25 mL	50	SOIL
SAMPLE	244601010		SW846 9010B Prep	20-JAN-2010 15:51	>12	0.5 g	25 mL	50	SOIL
SAMPLE	244601011		SW846 9010B Prep	20-JAN-2010 15:51	>12	0.5 g	25 mL	50	SOIL
SAMPLE	244601012		SW846 9010B Prep	20-JAN-2010 15:51	>12	0.5 g	25 mL	50	SOIL
SAMPLE	244601013		SW846 9010B Prep	20-JAN-2010 15:51	>12	0.5 g	25 mL	50	SOIL
SAMPLE	244604001		SW846 9010B Prep	20-JAN-2010 15:51	>12	0.5 g	25 mL	50	SOIL
SAMPLE	244604002		SW846 9010B Prep	20-JAN-2010 15:51	>12	0.5 g	25 mL	50	SOIL
SAMPLE	244628001		SW846 9010B Prep	20-JAN-2010 15:51	>12	0.5 g	25 mL	50	SOIL
SAMPLE	244628002		SW846 9010B Prep	20-JAN-2010 15:51	>12	0.5 g	25 mL	50	SOIL
SAMPLE	244628003		SW846 9010B Prep	20-JAN-2010 15:51	>12	0.5 g	25 mL	50	SOIL
SAMPLE	244628004		SW846 9010B Prep	20-JAN-2010 15:51	>12	0.5 g	25 mL	50	SOIL
SAMPLE	244628005		SW846 9010B Prep	20-JAN-2010 15:51	>12	0.5 g	25 mL	50	SOIL
SAMPLE	244628006		SW846 9010B Prep	20-JAN-2010 15:51	>12	0.5 g	25 mL	50	SOIL
SAMPLE	244628007		SW846 9010B Prep	20-JAN-2010 15:51	>12	0.5 g	25 mL	50	SOIL
SAMPLE	244628008		SW846 9010B Prep	20-JAN-2010 15:51	>12	0.5 g	25 mL	50	SOIL
SAMPLE	244628009		SW846 9010B Prep	20-JAN-2010 15:51	>12	0.5 g	25 mL	50	SOIL

Prep Data Logbook Version 1:1

GEL Laboratories LLC

Page#

Prep LogBook

Reagent/Solvent Lot ID	Amount	Description	Comments
091211-C	25 mL	0.25N Sodium Hydroxide Solution	
WCN100119-07	.0375 mL	150 ppb CN Distilled ICV Standard	
1176724-C	1.25 mL	0.8N H3NO3S	
1238146-C	2.5 mL	50% H2SO4 CN Prep	
1176778-C	1 mL	51% MgCl2 Soln	
1238142-C	1.25 mL	Bismuth Nitrate Solution	

This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
200 ppb		1	axc2	1/21/2010 10:27:43	OM_1-21-2010_10-24-21
150 ppb		1	axc2	1/21/2010 10:28:35	OM_1-21-2010_10-24-21
100 ppb		1	axc2	1/21/2010 10:29:27	OM_1-21-2010_10-24-21
50 ppb		1	axc2	1/21/2010 10:30:20	OM_1-21-2010_10-24-21
10 ppb		1	axc2	1/21/2010 10:31:13	OM_1-21-2010_10-24-21
CRDL 5.0 ppb		1	axc2	1/21/2010 10:32:07	OM_1-21-2010_10-24-21
ICAL-00		1	axc2	1/21/2010 10:33:01	OM_1-21-2010_10-24-21
ICV		1	axc2	1/21/2010 10:34:52	OM_1-21-2010_10-24-21
ICB		1	axc2	1/21/2010 10:36:42	OM_1-21-2010_10-24-21
CRDL		1	axc2	1/21/2010 10:38:32	OM_1-21-2010_10-24-21
1202016428	941971	1	axc2	1/21/2010 10:40:22	OM_1-21-2010_10-24-21
1202016432	941971	25	axc2	1/21/2010 10:41:15	OM_1-21-2010_10-24-21
244612001	941971	1	axc2	1/21/2010 10:42:08	OM_1-21-2010_10-24-21
1202017516	941971	1	axc2	1/21/2010 10:43:01	OM_1-21-2010_10-24-21
1202017517	941971	1	axc2	1/21/2010 10:43:54	OM_1-21-2010_10-24-21
1202017518	941971	1	axc2	1/21/2010 10:44:47	OM_1-21-2010_10-24-21
244619001	941971	1	axc2	1/21/2010 10:45:40	OM_1-21-2010_10-24-21
244619003	941971	1	axc2	1/21/2010 10:46:33	OM_1-21-2010_10-24-21
244622001	941971	1	axc2	1/21/2010 10:47:25	OM_1-21-2010_10-24-21
244622002	941971	1	axc2	1/21/2010 10:48:17	OM_1-21-2010_10-24-21
CCV		1	axc2	1/21/2010 10:49:09	OM_1-21-2010_10-24-21
CCB		1	axc2	1/21/2010 10:51:00	OM_1-21-2010_10-24-21
244628010	941971	1	axc2	1/21/2010 10:52:48	OM_1-21-2010_10-24-21
1202016429	941971	1	axc2	1/21/2010 10:53:40	OM_1-21-2010_10-24-21
1202016430	941971	1	axc2	1/21/2010 10:54:33	OM_1-21-2010_10-24-21
1202016431	941971	1	axc2	1/21/2010 10:55:24	OM_1-21-2010_10-24-21
244628011	941971	1	axc2	1/21/2010 10:56:15	OM_1-21-2010_10-24-21
244628012	941971	1	axc2	1/21/2010 10:57:09	OM_1-21-2010_10-24-21
244628013	941971	1	axc2	1/21/2010 10:58:03	OM_1-21-2010_10-24-21
244628014	941971	1	axc2	1/21/2010 10:58:56	OM_1-21-2010_10-24-21
244628015	941971	1	axc2	1/21/2010 10:59:49	OM_1-21-2010_10-24-21
244628016	941971	1	axc2	1/21/2010 11:00:43	OM_1-21-2010_10-24-21
CCV		1	axc2	1/21/2010 11:01:36	OM_1-21-2010_10-24-21
CCB		1	axc2	1/21/2010 11:03:26	OM_1-21-2010_10-24-21
244721001*	941971	1	axc2	1/21/2010 11:05:15	OM_1-21-2010_10-24-21
244721002*	941971	1	axc2	1/21/2010 11:06:08	OM_1-21-2010_10-24-21
244721003*	941971	1	axc2	1/21/2010 11:07:01	OM_1-21-2010_10-24-21
244721004*	941971	1	axc2	1/21/2010 11:07:53	OM_1-21-2010_10-24-21
244721005*	941971	1	axc2	1/21/2010 11:08:46	OM_1-21-2010_10-24-21
244721006*	941971	1	axc2	1/21/2010 11:09:38	OM_1-21-2010_10-24-21
244721007*	941971	1	axc2	1/21/2010 11:10:30	OM_1-21-2010_10-24-21
244721008*	941971	1	axc2	1/21/2010 11:11:22	OM_1-21-2010_10-24-21
1202016404*	941967	1	axc2	1/21/2010 11:12:15	OM_1-21-2010_10-24-21
1202016411*	941967	25	axc2	1/21/2010 11:13:07	OM_1-21-2010_10-24-21
CCV		1	axc2	1/21/2010 11:13:59	OM_1-21-2010_10-24-21

Author: axc2

Date : 1/22/2010

Original Run Filename: OM_1-21-2010_10-24-21.OMN created 1/21/2010 10:24:21
 Original Run Author's Signature: [axc2]
 Current Run Filename: OM_1-21-2010_10-24-21.OMN last modified 1/21/2010 11:15:04
 Current Run Author's Signature: [axc2]
 Description: GL-GC-E-102 EPA 420.4, 9066
 LCS nominal 50 ug/L.

Sample	Rep.	Cup No.	Channel 1		Detection Time	ADF	MDF	Description
			TCYANIDE					
			Conc. (ug/L)	Area (Vs)				
WCN10012101	1	S1	200	6.67	1/21/2010@10:27:43			200 ppb
WCN100121-02	1	S2	150	5.08	1/21/2010@10:28:35			150 ppb
WCN100121-03	1	S3	100	3.41	1/21/2010@10:29:27			100 ppb
WCN100121-04	1	S4	50.0	1.78	1/21/2010@10:30:20			50 ppb
WCN100121-05	1	S5	10.0	0.469	1/21/2010@10:31:13			10 ppb
WCN100121-06	1	S6	5.00	0.298	1/21/2010@10:32:07			CRDL 5.0 ppb
WCN100121-08	1	S7	0.00	-0.00455	1/21/2010@10:33:01			0.0 ppb
DQM Test: Minimum Correlation Coefficient								
Result:			0.99980 > 0.99500					
Message			Pass					
Action			Continue					
WCN100121-07	1	S8	158	5.30	1/21/2010@10:34:52			ICV
Known Conc:			150					
DQM Test: > + Percent Relative Difference								
Result:			5.0 < 10.0					
Message			ICV Passed					
Action			Continue					
DQM Test: < - Percent Relative Difference								
Result:			5.0 < 10.0					
Message			ICV Passed					
Action			Continue					
Calibration:			Table/Fig. 1					
WCN100121-08	1	S7	-2.40	0.0191	1/21/2010@10:36:42			ICB/CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			-2.40 < 5.01					
Message			ICB/CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			-2.40 > -5.01					
Message			ICB/CCB Passed					
Action			Continue					
WCN100121-06	1	S6	5.87	0.292	1/21/2010@10:38:32			CRDL
Known Conc:			5.00					
DQM Test: > + Concentration Limit								
Result:			5.87 < 7.50					
Message			CRDL Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			5.87 > 2.50					
Message			Pass					
Action			None					
1202016428|941971|MB	1	1	-2.00	0.0322	1/21/2010@10:40:22			
1202016432|LCS	1	2	31.6	1.14	1/21/2010@10:41:15		25.00	
244612001	1	3	-1.49	0.0492	1/21/2010@10:42:08			
1202017516|DUP	1	4	-1.96	0.0337	1/21/2010@10:43:01			
1202017517|MS	1	5	109	3.69	1/21/2010@10:43:54			
1202017518|MSD	1	6	107	3.63	1/21/2010@10:44:47			
244619001	1	7	0.140	0.103	1/21/2010@10:45:40			
244619003	1	8	0.0720	0.101	1/21/2010@10:46:33			
244622001	1	9	-1.77	0.0398	1/21/2010@10:47:25			
244622002	1	10	-1.91	0.0351	1/21/2010@10:48:17			
WCN100121-03	1	S3	104	3.53	1/21/2010@10:49:09			CCV
Known Conc:			100					
DQM Test: > + Percent Relative Difference								
Result:			3.9 < 10.0					
Message			CCV Passed					

			Action	Continue					
			DQM Test: < - Percent Relative Difference						
			Result:	3.9 < 10.0					
			Message	CCV Passed					
			Action	Continue					
WCN100121-08	1	S7		-0.243	0.0903	1/21/2010@10:51:00			CCB
			Known Conc:	0.00					
			DQM Test: > + Concentration Limit						
			Result:	-0.243 < 5.00					
			Message	CCB Passed					
			Action	Continue					
			DQM Test: < - Concentration Limit						
			Result:	-0.243 > -5.00					
			Message	CCB Passed					
			Action	Continue					
244628010	1	11		1.90	0.161	1/21/2010@10:52:48			
1202016429	DUP	1	12	3.43	0.212	1/21/2010@10:53:40			
1202016430	MS	1	13	91.4	3.12	1/21/2010@10:54:33			
1202016431	MSD	1	14	99.1	3.37	1/21/2010@10:55:24			
244628011		1	15	1.13	0.136	1/21/2010@10:56:15			
244628012		1	16	0.879	0.127	1/21/2010@10:57:09			
244628013		1	17	-0.820	0.0712	1/21/2010@10:58:03			
244628014		1	18	-3.16	-0.00624	1/21/2010@10:58:56			
244628015		1	19	2.03	0.165	1/21/2010@10:59:49			
244628016		1	20	-2.23	0.0247	1/21/2010@11:00:43			
WCN100121-03	1	S3		107	3.65	1/21/2010@11:01:36			CCV
			Known Conc:	100					
			DQM Test: > + Percent Relative Difference						
			Result:	7.4 < 10.0					
			Message	CCV Passed					
			Action	Continue					
			DQM Test: < - Percent Relative Difference						
			Result:	7.4 < 10.0					
			Message	CCV Passed					
			Action	Continue					
WCN100121-08	1	S7		1.15	0.137	1/21/2010@11:03:26			CCB
			Known Conc:	0.00					
			DQM Test: > + Concentration Limit						
			Result:	1.15 < 5.00					
			Message	CCB Passed					
			Action	Continue					
			DQM Test: < - Concentration Limit						
			Result:	1.15 > -5.00					
			Message	CCB Passed					
			Action	Continue					
244721001	1	21		0.0472	0.0999	1/21/2010@11:05:15			
244721002	1	22		-1.32	0.0546	1/21/2010@11:06:08			
244721003	1	23		-0.588	0.0789	1/21/2010@11:07:01			
244721004	1	24		4.11	0.234	1/21/2010@11:07:53			
244721005	1	25		-1.73	0.0410	1/21/2010@11:08:46			
244721006	1	26		3.04	0.199	1/21/2010@11:09:38			
244721007	1	27		0.176	0.104	1/21/2010@11:10:30			
244721008	1	28		-0.868	0.0697	1/21/2010@11:11:22			
1202016404	941967	1	29	-2.13	0.0279	1/21/2010@11:12:15			
1202016411	LCS	1	30	30.0	1.09	1/21/2010@11:13:07		25.00	
WCN100121-03	1	S3		111	3.78	1/21/2010@11:13:59			CCV
			Known Conc:	100					
			DQM Test: > + Percent Relative Difference						
			Result:	11.5 > 10.0					
			Message	CCV Failed					
			Action	Stop Run					
			DQM Test: < - Percent Relative Difference						
			Result:	11.5 > 10.0					
			Message	CCV Passed					
			Action	Continue					

Analyte Properties Table for OM_1-21-2010_10-24-21.OMN

Property	Channel 1
	TCYANIDE
Concentration Units	ug/L
Calibration Fit Type	First Order
Clear Calibration	True
Force Through Zero	False
Calibration Weighting	None
Auto Dilution Trigger	True
% of High Standard	100
Quik Chem Method	10-204-00-1-A
Chemistry	Direct/Bipolar
Calibration by Height	False
Inject to Peak Start	22
Peak Base Width	39

Channel 1: Current View

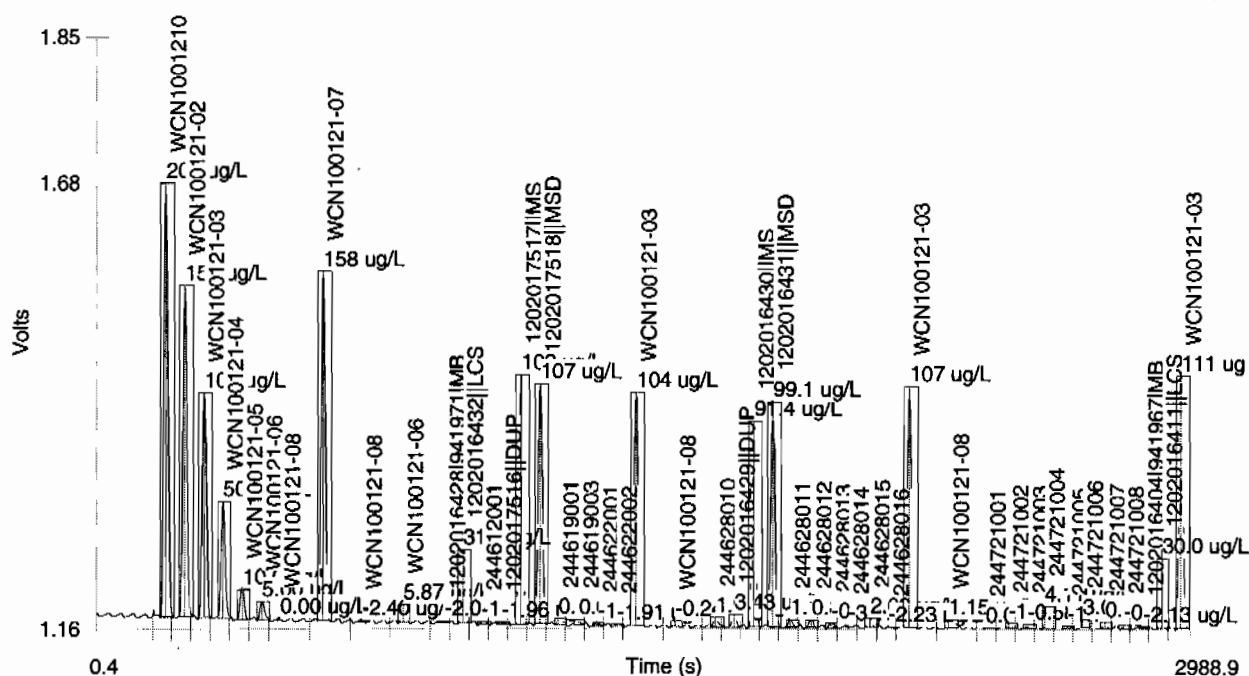
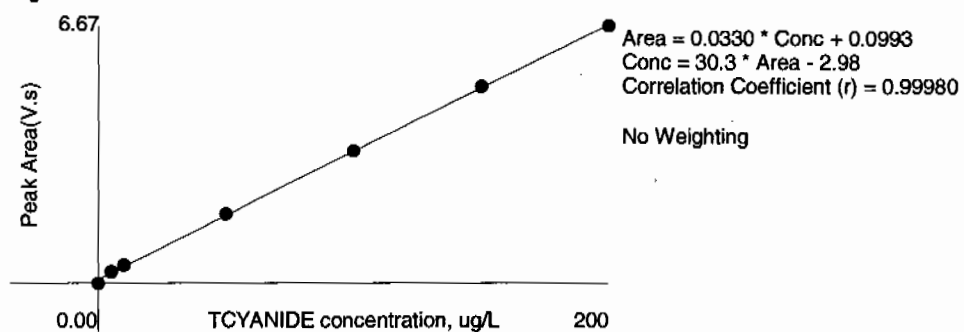


Table 1: TCYANIDE

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	6.67	0.502	0.6	1/21/2010	10:28:46
2	150	1	5.08	0.383	-0.6	1/21/2010	10:29:38
3	100	1	3.41	0.258	-0.3	1/21/2010	10:30:30
4	50.0	1	1.78	0.135	-1.6	1/21/2010	10:31:23
5	10.0	1	0.469	0.0346	-9.1	1/21/2010	10:32:16
6	5.00	1	0.298	0.0213	-12.7	1/21/2010	10:33:10
7	0.00	1	-0.00455	-0.00192		1/21/2010	10:34:04

Figure 1: TCYANIDE



This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
CCV		1	axc2	1/21/2010 11:19:02	OM_1-21-2010_11-18-16
CCB		1	axc2	1/21/2010 11:20:52	OM_1-21-2010_11-18-16
244721001	941971	1	axc2	1/21/2010 11:22:42	OM_1-21-2010_11-18-16
244721002	941971	1	axc2	1/21/2010 11:23:35	OM_1-21-2010_11-18-16
244721003	941971	1	axc2	1/21/2010 11:24:27	OM_1-21-2010_11-18-16
244721004	941971	1	axc2	1/21/2010 11:25:20	OM_1-21-2010_11-18-16
244721005	941971	1	axc2	1/21/2010 11:26:13	OM_1-21-2010_11-18-16
244721006	941971	1	axc2	1/21/2010 11:27:05	OM_1-21-2010_11-18-16
244721007	941971	1	axc2	1/21/2010 11:27:57	OM_1-21-2010_11-18-16
244721008	941971	1	axc2	1/21/2010 11:28:49	OM_1-21-2010_11-18-16
1202016404	941967	1	axc2	1/21/2010 11:29:41	OM_1-21-2010_11-18-16
1202016411	941967	25	axc2	1/21/2010 11:30:33	OM_1-21-2010_11-18-16
CCV		1	axc2	1/21/2010 11:31:25	OM_1-21-2010_11-18-16
CCB		1	axc2	1/21/2010 11:33:16	OM_1-21-2010_11-18-16
244601005	941967	1	axc2	1/21/2010 11:35:06	OM_1-21-2010_11-18-16
1202016405	941967	1	axc2	1/21/2010 11:36:00	OM_1-21-2010_11-18-16
1202016407	941967	1	axc2	1/21/2010 11:36:53	OM_1-21-2010_11-18-16
1202016409	941967	1	axc2	1/21/2010 11:37:47	OM_1-21-2010_11-18-16
244601006	941967	1	axc2	1/21/2010 11:38:40	OM_1-21-2010_11-18-16
1202016406	941967	1	axc2	1/21/2010 11:39:33	OM_1-21-2010_11-18-16
1202016408	941967	1	axc2	1/21/2010 11:40:26	OM_1-21-2010_11-18-16
1202016410	941967	1	axc2	1/21/2010 11:41:19	OM_1-21-2010_11-18-16
244601007	941967	1	axc2	1/21/2010 11:42:12	OM_1-21-2010_11-18-16
244601008	941967	1	axc2	1/21/2010 11:43:05	OM_1-21-2010_11-18-16
CCV		1	axc2	1/21/2010 11:43:57	OM_1-21-2010_11-18-16
CCB		1	axc2	1/21/2010 11:45:47	OM_1-21-2010_11-18-16
244601009*	941967	1	axc2	1/21/2010 11:47:36	OM_1-21-2010_11-18-16
244601010*	941967	1	axc2	1/21/2010 11:48:28	OM_1-21-2010_11-18-16
244601011*	941967	1	axc2	1/21/2010 11:49:21	OM_1-21-2010_11-18-16
244601012*	941967	1	axc2	1/21/2010 11:50:12	OM_1-21-2010_11-18-16
244601013*	941967	1	axc2	1/21/2010 11:51:04	OM_1-21-2010_11-18-16
244604001*	941967	1	axc2	1/21/2010 11:51:58	OM_1-21-2010_11-18-16
244604002*	941967	1	axc2	1/21/2010 11:52:52	OM_1-21-2010_11-18-16
244628001*	941967	1	axc2	1/21/2010 11:53:46	OM_1-21-2010_11-18-16
244628002*	941967	1	axc2	1/21/2010 11:54:40	OM_1-21-2010_11-18-16
244628003*	941967	1	axc2	1/21/2010 11:55:34	OM_1-21-2010_11-18-16
CCV		1	axc2	1/21/2010 11:56:26	OM_1-21-2010_11-18-16
CCB		1	axc2	1/21/2010 11:58:16	OM_1-21-2010_11-18-16

Original Run Filename: OM_1-21-2010_11-18-16.OMN created 1/21/2010 11:18:16
 Original Run Author's Signature: [axc2]
 Current Run Filename: OM_1-21-2010_11-18-16.OMN last modified 1/21/2010 11:59:21
 Current Run Author's Signature: [axc2]
 Description: GL-GC-E-102 EPA 420.4, 9066
 LCS nominal 50 ug/L

Sample	Rep.	Cup No.	Channel 1 TCYANIDE		Detection Time	ADF	MDF	Description
			Conc. (ug/L)	Area (Vs)				
WCN100121-03	1	S3	101	3.44	1/21/2010@11:19:02			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					
Calibration:			Table/Fig. 1					
WCN100121-08	1	S7	0.746	0.123	1/21/2010@11:20:52			CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			0.746 < 5.00					
Message			CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			0.746 > -5.00					
Message			CCB Passed					
Action			Continue					
244721001|941971|	1	21	-1.14	0.0605	1/21/2010@11:22:42			
244721002	1	22	-0.453	0.0834	1/21/2010@11:23:35			
244721003	1	23	-0.586	0.0790	1/21/2010@11:24:27			
244721004	1	24	0.967	0.130	1/21/2010@11:25:20			
244721005	1	25	-1.70	0.0421	1/21/2010@11:26:13			
244721006	1	26	-0.610	0.0782	1/21/2010@11:27:05			
244721007	1	27	0.360	0.110	1/21/2010@11:27:57			
244721008	1	28	-1.15	0.0604	1/21/2010@11:28:49			
1202016404|941967|MB	1	29	-1.95	0.0339	1/21/2010@11:29:41			
1202016411|LCS	1	30	31.2	1.13	1/21/2010@11:30:33		25.00	
WCN100121-03	1	S3	96.4	3.28	1/21/2010@11:31:25			CCV
Known Conc:			100					
DQM Test: > + Percent Relative Difference								
Result:			-3.6 < 10.0					
Message			CCV Passed					
Action			Continue					
DQM Test: < - Percent Relative Difference								
Result:			-3.6 < 10.0					
Message			CCV Passed					
Action			Continue					
WCN100121-08	1	S7	0.324	0.109	1/21/2010@11:33:16			CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			0.324 < 5.00					
Message			CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			0.324 > -5.00					
Message			CCB Passed					
Action			Continue					
244601005	1	31	-0.951	0.0669	1/21/2010@11:35:06			
1202016405|DUP	1	32	-1.97	0.0333	1/21/2010@11:36:00			
1202016407|MS	1	33	104	3.55	1/21/2010@11:36:53			
1202016409|MSD	1	34	109	3.69	1/21/2010@11:37:47			
244601006	1	35	3.10	0.201	1/21/2010@11:38:40			
1202016406|DUP	1	36	-0.467	0.0829	1/21/2010@11:39:33			

1202016408	MS	1	37	95.0	3.24	1/21/2010@11:40:26			
1202016410	MSD	1	38	97.2	3.31	1/21/2010@11:41:19			
244601007		1	39	1.24	0.139	1/21/2010@11:42:12			
244601008		1	40	0.510	0.115	1/21/2010@11:43:05			
WCN100121-03		1	S3	96.2	3.28	1/21/2010@11:43:57			CCV
Known Conc:				100					
DQM Test: > + Percent Relative Difference									
Result:				-3.8 < 10.0					
Message				CCV Passed					
Action				Continue					
DQM Test: < - Percent Relative Difference									
Result:				-3.8 < 10.0					
Message				CCV Passed					
Action				Continue					
WCN100121-08		1	S7	0.353	0.110	1/21/2010@11:45:47			CCB
Known Conc:				0.00					
DQM Test: > + Concentration Limit									
Result:				0.353 < 5.00					
Message				CCB Passed					
Action				Continue					
DQM Test: < - Concentration Limit									
Result:				0.353 > -5.00					
Message				CCB Passed					
Action				Continue					
244601009		1	41	0.390	0.111	1/21/2010@11:47:36			
244601010		1	42	-1.29	0.0557	1/21/2010@11:48:28			
244601011		1	43	-0.652	0.0768	1/21/2010@11:49:21			
244601012		1	44	-0.725	0.0744	1/21/2010@11:50:12			
244601013		1	45	-1.42	0.0515	1/21/2010@11:51:04			
244604001		1	46	4.05	0.232	1/21/2010@11:51:58			
244604002		1	47	0.277	0.107	1/21/2010@11:52:52			
244628001		1	48	-0.683	0.0758	1/21/2010@11:53:46			
244628002		1	49	-1.11	0.0618	1/21/2010@11:54:40			
244628003		1	50	-1.86	0.0367	1/21/2010@11:55:34			
WCN100121-03		1	S3	95.8	3.26	1/21/2010@11:56:26			CCV
Known Conc:				100					
DQM Test: > + Percent Relative Difference									
Result:				-4.2 < 10.0					
Message				CCV Passed					
Action				Continue					
DQM Test: < - Percent Relative Difference									
Result:				-4.2 < 10.0					
Message				CCV Passed					
Action				Continue					
WCN100121-08		1	S7	7.89	0.359	1/21/2010@11:58:16			CCB
Known Conc:				0.00					
DQM Test: > + Concentration Limit									
Result:				7.89 > 5.00					
Message				CCB Failed					
Action				Stop Run					
DQM Test: < - Concentration Limit									
Result:				7.89 > -5.00					
Message				CCB Passed					
Action				Continue					

Analyte Properties Table for OM_1-21-2010_11-18-16.OMN

Property	Channel 1
	TCYANIDE
Concentration Units	ug/L
Calibration Fit Type	First Order
Clear Calibration	True
Force Through Zero	False
Calibration Weighting	None
Auto Dilution Trigger	True
% of High Standard	100
Quik Chem Method	10-204-00-1-A
Chemistry	Direct/Bipolar

Calibration by Height	False
Inject to Peak Start	22
Peak Base Width	39

Channel 1: Current View

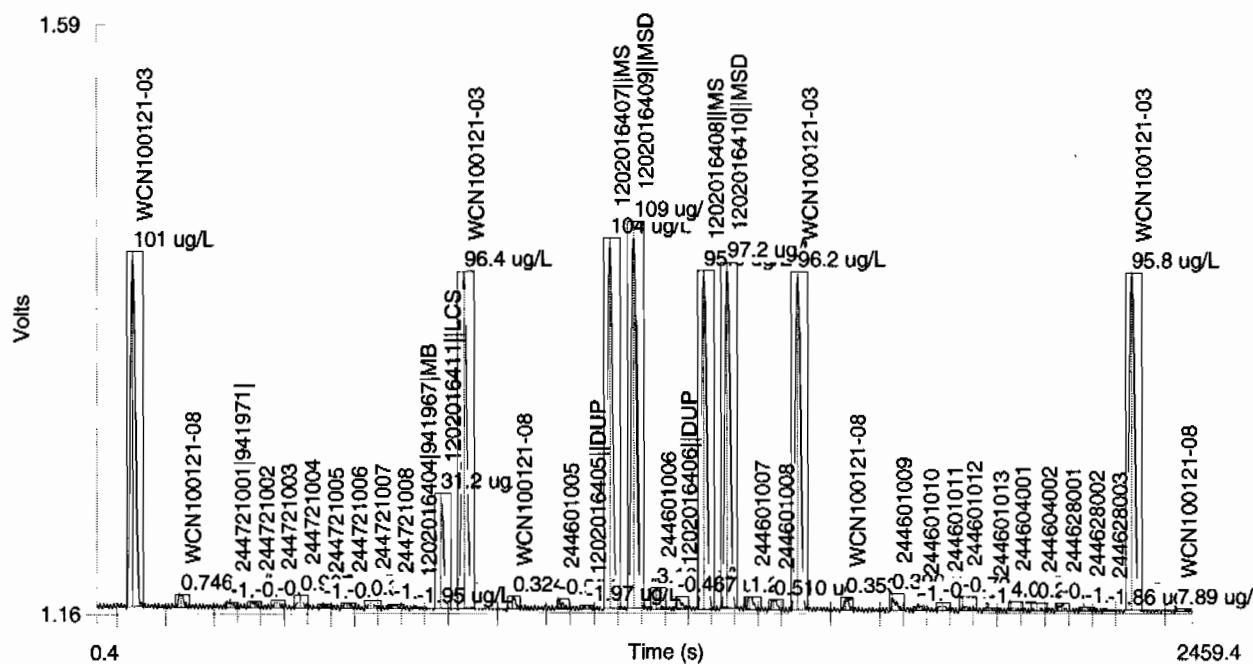
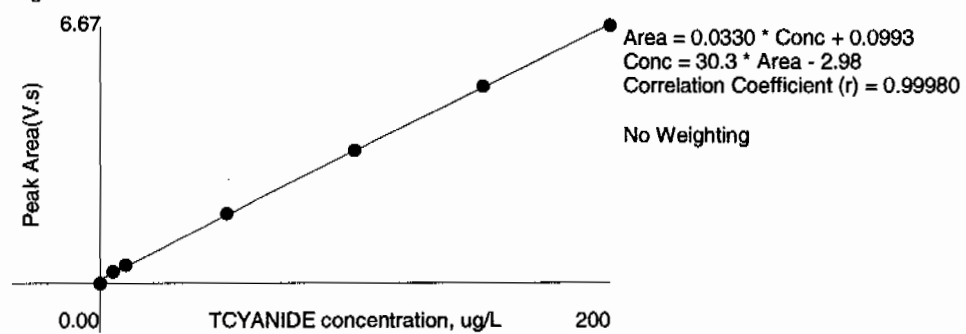


Table 1: TCYANIDE

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	6.67	0.502	0.6	1/21/2010	10:28:46
2	150	1	5.08	0.383	-0.6	1/21/2010	10:29:38
3	100	1	3.41	0.258	-0.3	1/21/2010	10:30:30
4	50.0	1	1.78	0.135	-1.6	1/21/2010	10:31:23
5	10.0	1	0.469	0.0346	-9.1	1/21/2010	10:32:16
6	5.00	1	0.298	0.0213	-12.7	1/21/2010	10:33:10
7	0.00	1	-0.00455	-0.00192		1/21/2010	10:34:04

Figure 1: TCYANIDE



This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
CCV		1	axc2	1/21/2010 12:06:14	OM_1-21-2010_12-04-42
CCB		1	axc2	1/21/2010 12:08:05	OM_1-21-2010_12-04-42
244601009	941967	1	axc2	1/21/2010 12:09:53	OM_1-21-2010_12-04-42
244601010	941967	1	axc2	1/21/2010 12:10:46	OM_1-21-2010_12-04-42
244601011	941967	1	axc2	1/21/2010 12:11:38	OM_1-21-2010_12-04-42
244601012	941967	1	axc2	1/21/2010 12:12:30	OM_1-21-2010_12-04-42
244601013	941967	1	axc2	1/21/2010 12:13:22	OM_1-21-2010_12-04-42
244604001	941967	1	axc2	1/21/2010 12:14:16	OM_1-21-2010_12-04-42
244604002	941967	1	axc2	1/21/2010 12:15:10	OM_1-21-2010_12-04-42
244628001	941967	1	axc2	1/21/2010 12:16:04	OM_1-21-2010_12-04-42
244628002	941967	1	axc2	1/21/2010 12:16:57	OM_1-21-2010_12-04-42
244628003	941967	1	axc2	1/21/2010 12:17:51	OM_1-21-2010_12-04-42
CCV		1	axc2	1/21/2010 12:18:43	OM_1-21-2010_12-04-42
CCB		1	axc2	1/21/2010 12:20:34	OM_1-21-2010_12-04-42
244628004	941967	1	axc2	1/21/2010 12:22:23	OM_1-21-2010_12-04-42
244628005	941967	1	axc2	1/21/2010 12:23:16	OM_1-21-2010_12-04-42
244628006	941967	1	axc2	1/21/2010 12:24:09	OM_1-21-2010_12-04-42
244628007	941967	1	axc2	1/21/2010 12:25:02	OM_1-21-2010_12-04-42
244628008	941967	1	axc2	1/21/2010 12:25:55	OM_1-21-2010_12-04-42
244628009	941967	1	axc2	1/21/2010 12:26:48	OM_1-21-2010_12-04-42
1202015109	941490	1	axc2	1/21/2010 12:27:40	OM_1-21-2010_12-04-42
1202015116	941490	1	axc2	1/21/2010 12:28:32	OM_1-21-2010_12-04-42
244510001	941490	1	axc2	1/21/2010 12:29:25	OM_1-21-2010_12-04-42
1202015110	941490	1	axc2	1/21/2010 12:30:17	OM_1-21-2010_12-04-42
CCV		1	axc2	1/21/2010 12:31:09	OM_1-21-2010_12-04-42
CCB		1	axc2	1/21/2010 12:32:59	OM_1-21-2010_12-04-42
1202015112	941490	1	axc2	1/21/2010 12:34:50	OM_1-21-2010_12-04-42
1202015114	941490	1	axc2	1/21/2010 12:35:44	OM_1-21-2010_12-04-42
244510003	941490	1	axc2	1/21/2010 12:36:38	OM_1-21-2010_12-04-42
244510005	941490	1	axc2	1/21/2010 12:37:32	OM_1-21-2010_12-04-42
244521001	941490	1	axc2	1/21/2010 12:38:26	OM_1-21-2010_12-04-42
244521003	941490	1	axc2	1/21/2010 12:39:19	OM_1-21-2010_12-04-42
244602001	941490	1	axc2	1/21/2010 12:40:12	OM_1-21-2010_12-04-42
1202016398	941490	1	axc2	1/21/2010 12:41:06	OM_1-21-2010_12-04-42
1202016400	941490	1	axc2	1/21/2010 12:41:58	OM_1-21-2010_12-04-42
1202016402	941490	1	axc2	1/21/2010 12:42:51	OM_1-21-2010_12-04-42
CCV		1	axc2	1/21/2010 12:43:43	OM_1-21-2010_12-04-42
CCB		1	axc2	1/21/2010 12:45:34	OM_1-21-2010_12-04-42
244614001	941490	1	axc2	1/21/2010 12:47:23	OM_1-21-2010_12-04-42
244618001	941490	1	axc2	1/21/2010 12:48:16	OM_1-21-2010_12-04-42
244625001	941490	1	axc2	1/21/2010 12:49:08	OM_1-21-2010_12-04-42
244625002	941490	1	axc2	1/21/2010 12:50:01	OM_1-21-2010_12-04-42
244640001	941490	1	axc2	1/21/2010 12:50:53	OM_1-21-2010_12-04-42
1202015111	941490	1	axc2	1/21/2010 12:51:47	OM_1-21-2010_12-04-42
1202015113	941490	1	axc2	1/21/2010 12:52:42	OM_1-21-2010_12-04-42
1202015115	941490	1	axc2	1/21/2010 12:53:36	OM_1-21-2010_12-04-42
244640002	941490	1	axc2	1/21/2010 12:54:30	OM_1-21-2010_12-04-42
244640003	941490	1	axc2	1/21/2010 12:55:24	OM_1-21-2010_12-04-42
CCV		1	axc2	1/21/2010 12:56:17	OM_1-21-2010_12-04-42
CCB		1	axc2	1/21/2010 12:58:07	OM_1-21-2010_12-04-42
244695002	941490	1	axc2	1/21/2010 12:59:56	OM_1-21-2010_12-04-42
1202016399	941490	1	axc2	1/21/2010 13:00:50	OM_1-21-2010_12-04-42
1202016401	941490	1	axc2	1/21/2010 13:01:43	OM_1-21-2010_12-04-42
1202016403	941490	1	axc2	1/21/2010 13:02:36	OM_1-21-2010_12-04-42
244695004	941490	1	axc2	1/21/2010 13:03:29	OM_1-21-2010_12-04-42
244726001	941490	1	axc2	1/21/2010 13:04:22	OM_1-21-2010_12-04-42
244758001	941490	1	axc2	1/21/2010 13:05:15	OM_1-21-2010_12-04-42
244758002	941490	1	axc2	1/21/2010 13:06:08	OM_1-21-2010_12-04-42

1202017566	942468	1	axc2	1/21/2010	13:07:01	OM_1-21-2010_12-04-42
1202017576	942468	1	axc2	1/21/2010	13:07:52	OM_1-21-2010_12-04-42
CCV		1	axc2	1/21/2010	13:08:45	OM_1-21-2010_12-04-42
CCB		1	axc2	1/21/2010	13:10:35	OM_1-21-2010_12-04-42
244855001*	942468	1	axc2	1/21/2010	13:12:26	OM_1-21-2010_12-04-42
1202017567*	942468	1	axc2	1/21/2010	13:13:20	OM_1-21-2010_12-04-42
1202017570*	942468	1	axc2	1/21/2010	13:14:14	OM_1-21-2010_12-04-42
1202017573*	942468	1	axc2	1/21/2010	13:15:09	OM_1-21-2010_12-04-42
244855003*	942468	1	axc2	1/21/2010	13:16:03	OM_1-21-2010_12-04-42
244874001*	942468	1	axc2	1/21/2010	13:16:57	OM_1-21-2010_12-04-42
244879003*	942468	1	axc2	1/21/2010	13:17:51	OM_1-21-2010_12-04-42
1202017568*	942468	1	axc2	1/21/2010	13:18:45	OM_1-21-2010_12-04-42
1202017571*	942468	1	axc2	1/21/2010	13:19:38	OM_1-21-2010_12-04-42
1202017574*	942468	1	axc2	1/21/2010	13:20:31	OM_1-21-2010_12-04-42
CCV		1	axc2	1/21/2010	13:21:24	OM_1-21-2010_12-04-42

Original Run Filename: OM_1-21-2010_12-04-42.OMN created 1/21/2010 12:04:42
 Original Run Author's Signature: [axc2]
 Current Run Filename: OM_1-21-2010_12-04-42.OMN last modified 1/21/2010 13:22:29
 Current Run Author's Signature: [axc2]
 Description: GL-GC-E-102 EPA 420.4, 9066
 LCS nominal 50 ug/L

Sample	Rep.	Cup No.	Channel 1 TCYANIDE		Detection Time	ADF	MDF	Description
			Conc. (ug/L)	Area (Vs)				
WCN100121-03	1	S3	99.6	3.39	1/21/2010@12:06:14			CCV
Known Conc:			100					
DQM Test: > + Percent Relative Difference								
Result:			-0.4 < 10.0					
Message			CCV Passed					
Action			Continue					
DQM Test: < - Percent Relative Difference								
Result:			-0.4 < 10.0					
Message			CCV Passed					
Action			Continue					
WCN100121-08	1	S7	0.791	0.124	1/21/2010@12:08:05			CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			0.791 < 5.00					
Message			CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			0.791 > -5.00					
Message			CCB Passed					
Action			Continue					
Calibration:			Table/Fig. 1					
244601009[941967]	1	41	-0.501	0.0818	1/21/2010@12:09:53			
244601010	1	42	-1.30	0.0554	1/21/2010@12:10:46			
244601011	1	43	-0.319	0.0878	1/21/2010@12:11:38			
244601012	1	44	-1.43	0.0511	1/21/2010@12:12:30			
244601013	1	45	-1.15	0.0602	1/21/2010@12:13:22			
244604001	1	46	-1.61	0.0450	1/21/2010@12:14:16			
244604002	1	47	-0.0842	0.0956	1/21/2010@12:15:10			
244628001	1	48	-0.762	0.0731	1/21/2010@12:16:04			
244628002	1	49	-1.20	0.0586	1/21/2010@12:16:57			
244628003	1	50	-1.34	0.0542	1/21/2010@12:17:51			
WCN100121-03	1	S3	99.7	3.39	1/21/2010@12:18:43			CCV
Known Conc:			100					
DQM Test: > + Percent Relative Difference								
Result:			-0.3 < 10.0					
Message			CCV Passed					
Action			Continue					
DQM Test: < - Percent Relative Difference								
Result:			-0.3 < 10.0					
Message			CCV Passed					
Action			Continue					
WCN100121-08	1	S7	0.209	0.105	1/21/2010@12:20:34			CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			0.209 < 5.00					
Message			CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			0.209 > -5.00					
Message			CCB Passed					
Action			Continue					
244628004	1	51	-0.821	0.0712	1/21/2010@12:22:23			
244628005	1	52	-1.38	0.0527	1/21/2010@12:23:16			
244628006	1	53	0.607	0.118	1/21/2010@12:24:09			
244628007	1	54	-1.69	0.0424	1/21/2010@12:25:02			
244628008	1	55	-2.98	0.00	1/21/2010@12:25:55			
244628009	1	56	0.0868	0.101	1/21/2010@12:26:48			

1202015109|941490|MB	1	57	-0.219	0.0911	1/21/2010@12:27:40			
1202015116|LCS	1	58	53.4	1.86	1/21/2010@12:28:32			
244510001	1	59	-0.767	0.0730	1/21/2010@12:29:25			
1202015110|DUP	1	60	-2.98	-2.84e-4	1/21/2010@12:30:17			
WCN100121-03	1	S3	96.1	3.27	1/21/2010@12:31:09			CCV
Known Conc:			100					
DQM Test: > + Percent Relative Difference								
Result:			-3.9 < 10.0					
Message			CCV Passed					
Action			Continue					
DQM Test: < - Percent Relative Difference								
Result:			-3.9 < 10.0					
Message			CCV Passed					
Action			Continue					
WCN100121-08	1	S7	1.10	0.135	1/21/2010@12:32:59			CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			1.10 < 5.00					
Message			CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			1.10 > -5.00					
Message			CCB Passed					
Action			Continue					
1202015112|MS	1	61	108	3.68	1/21/2010@12:34:50			
1202015114|MSD	1	62	111	3.77	1/21/2010@12:35:44			
244510003	1	63	0.439	0.113	1/21/2010@12:36:38			
244510005	1	64	3.23	0.205	1/21/2010@12:37:32			
244521001	1	65	-1.99	0.0325	1/21/2010@12:38:26			
244521003	1	66	1.19	0.138	1/21/2010@12:39:19			
244602001	1	67	-2.16	0.0268	1/21/2010@12:40:12			
1202016398|DUP	1	68	-2.98	-1.33e-4	1/21/2010@12:41:06			
1202016400|MS	1	69	111	3.78	1/21/2010@12:41:58			
1202016402|MSD	1	70	117	3.97	1/21/2010@12:42:51			
WCN100121-03	1	S3	101	3.45	1/21/2010@12:43:43			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					
WCN100121-08	1	S7	1.18	0.137	1/21/2010@12:45:34			CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			1.18 < 5.00					
Message			CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			1.18 > -5.00					
Message			CCB Passed					
Action			Continue					
244614001	1	71	-2.30	0.0223	1/21/2010@12:47:23			
244618001	1	72	-2.25	0.0239	1/21/2010@12:48:16			
244625001	1	73	-3.13	-0.00504	1/21/2010@12:49:08			
244625002	1	74	-2.49	0.0159	1/21/2010@12:50:01			
244640001	1	75	-2.02	0.0316	1/21/2010@12:50:53			
1202015111|DUP	1	76	-2.17	0.0266	1/21/2010@12:51:47			
1202015113|MS	1	77	104	3.54	1/21/2010@12:52:42			
1202015115|MSD	1	78	114	3.85	1/21/2010@12:53:36			
244640002	1	79	0.712	0.122	1/21/2010@12:54:30			
244640003	1	80	-1.59	0.0457	1/21/2010@12:55:24			
WCN100121-03	1	S3	97.7	3.33	1/21/2010@12:56:17			CCV
Known Conc:			100					
DQM Test: > + Percent Relative Difference								
Result:			-2.3 < 10.0					

Message			CCV Passed				
Action			Continue				
DQM Test: < - Percent Relative Difference							
Result:			-2.3 < 10.0				
Message			CCV Passed				
Action			Continue				
WCN100121-08	1	S7	0.823	0.126	1/21/2010@12:58:07		CCB
Known Conc:			0.00				
DQM Test: > + Concentration Limit							
Result:			0.823 < 5.00				
Message			CCB Passed				
Action			Continue				
DQM Test: < - Concentration Limit							
Result:			0.823 > -5.00				
Message			CCB Passed				
Action			Continue				
244695002	1	81	-2.59	0.0126	1/21/2010@12:59:56		
1202016399|DUP	1	82	0.985	0.131	1/21/2010@13:00:50		
1202016401|MS	1	83	114	3.86	1/21/2010@13:01:43		
1202016403|MSD	1	84	119	4.02	1/21/2010@13:02:36		
244695004	1	85	-1.10	0.0618	1/21/2010@13:03:29		
244726001	1	86	26.8	0.985	1/21/2010@13:04:22		
244758001	1	87	-1.02	0.0645	1/21/2010@13:05:15		
244758002	1	88	-1.24	0.0575	1/21/2010@13:06:08		
1202017566|942468|MB	1	89	-1.04	0.0641	1/21/2010@13:07:01		
1202017576|LCS	1	90	49.7	1.74	1/21/2010@13:07:52		
WCN100121-03	1	S3	99.0	3.37	1/21/2010@13:08:45		CCV
Known Conc:			100				
DQM Test: > + Percent Relative Difference							
Result:			-1.0 < 10.0				
Message			CCV Passed				
Action			Continue				
DQM Test: < - Percent Relative Difference							
Result:			-1.0 < 10.0				
Message			CCV Passed				
Action			Continue				
WCN100121-08	1	S7	1.01	0.132	1/21/2010@13:10:35		CCB
Known Conc:			0.00				
DQM Test: > + Concentration Limit							
Result:			1.01 < 5.00				
Message			CCB Passed				
Action			Continue				
DQM Test: < - Concentration Limit							
Result:			1.01 > -5.00				
Message			CCB Passed				
Action			Continue				
244855001	1	91	-1.52	0.0483	1/21/2010@13:12:26		
1202017567|DUP	1	92	-1.16	0.0601	1/21/2010@13:13:20		
1202017570|MS	1	93	105	3.57	1/21/2010@13:14:14		
1202017573|MSD	1	94	113	3.82	1/21/2010@13:15:09		
244855003	1	95	2.70	0.188	1/21/2010@13:16:03		
244874001	1	96	6.26	0.305	1/21/2010@13:16:57		
244879003	1	97	0.509	0.115	1/21/2010@13:17:51		
1202017568|DUP	1	98	-0.0503	0.0967	1/21/2010@13:18:45		
1202017571|MS	1	99	113	3.83	1/21/2010@13:19:38		
1202017574|MSD	1	100	138	4.65	1/21/2010@13:20:31		
WCN100121-03	1	S3	-321	-10.5	1/21/2010@13:21:24		CCV
Known Conc:			100				
DQM Test: > + Percent Relative Difference							
Result:			-420.7 < 10.0				
Message			CCV Passed				
Action			Continue				
DQM Test: < - Percent Relative Difference							
Result:			-420.7 < 10.0				
Message			CCV Failed				
Action			Stop Run				

Analyte Properties Table for OM_1-21-2010_12-04-42.OMN

Property	Channel 1
	TCYANIDE
Concentration Units	ug/L
Calibration Fit Type	First Order
Clear Calibration	True
Force Through Zero	False
Calibration Weighting	None
Auto Dilution Trigger	True
% of High Standard	100
Quik Chem Method	10-204-00-1-A
Chemistry	Direct/Bipolar
Calibration by Height	False
Inject to Peak Start	22
Peak Base Width	39

Channel 1: Current View

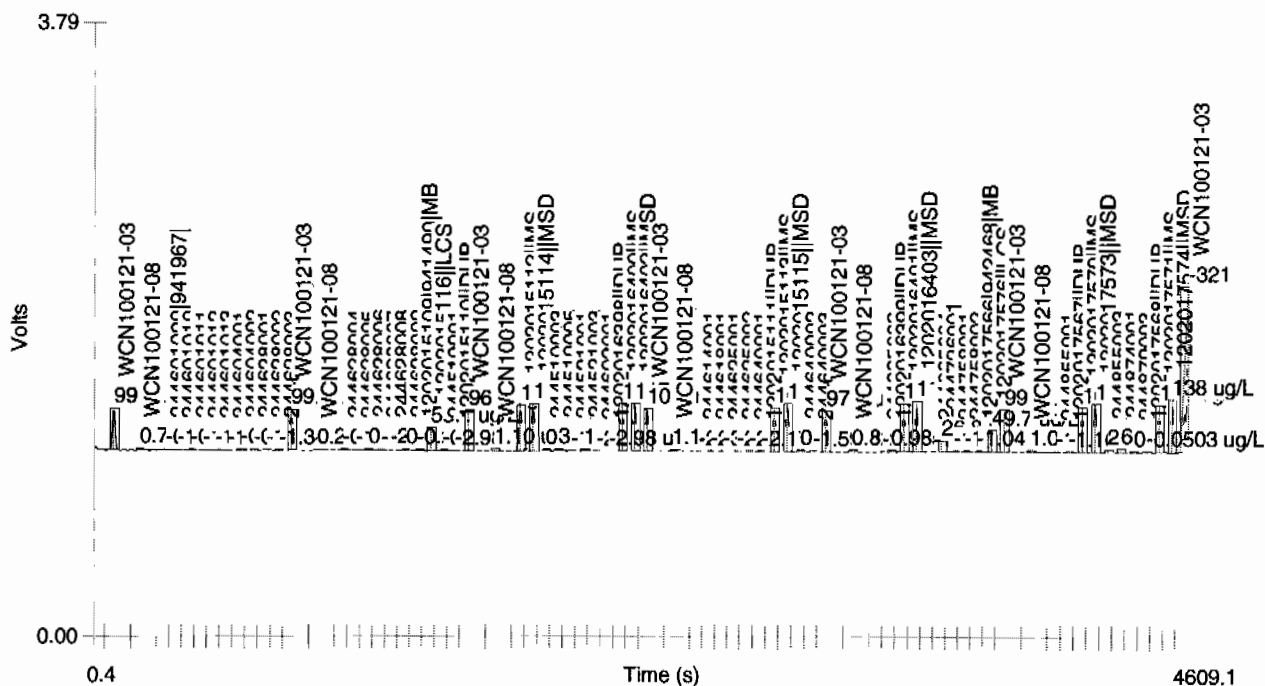
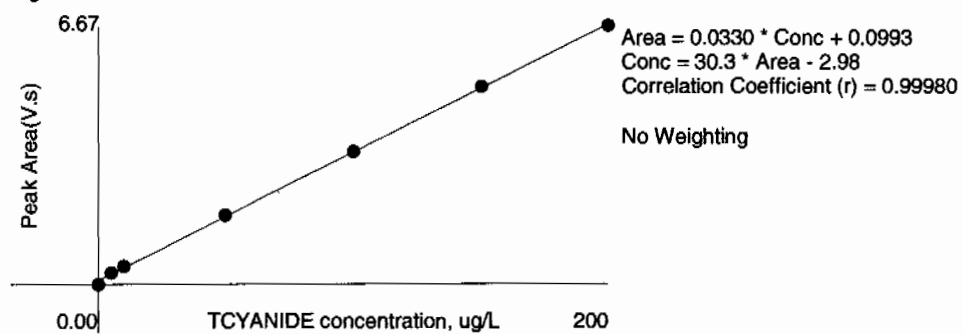


Table 1: TCYANIDE

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	6.67	0.502	0.6	1/21/2010	10:28:46
2	150	1	5.08	0.383	-0.6	1/21/2010	10:29:38
3	100	1	3.41	0.258	-0.3	1/21/2010	10:30:30
4	50.0	1	1.78	0.135	-1.6	1/21/2010	10:31:23
5	10.0	1	0.469	0.0346	-9.1	1/21/2010	10:32:16
6	5.00	1	0.298	0.0213	-12.7	1/21/2010	10:33:10
7	0.00	1	-0.00455	-0.00192		1/21/2010	10:34:04

Figure 1: TCYANIDE



RADIOLOGICAL ANALYSIS

**Radiochemistry Case Narrative
Los Alamos National Laboratory (LANL)
SDG 10-1213
Work Order 244604**

Method/Analysis Information

Procedure: Dry Weight-Percent Moisture

Analytical Method: Dry Soil Prep

Analytical Batch Number: 941623

Sample ID	Client ID
244604001	RE12-10-7257
244604002	RE12-10-7256
1202015415	244604001(RE12-10-7257) 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: 244604001 (RE12-10-7257). The QC was from LANL work order 244604.

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:	941688
Prep Batch Number:	941623

Sample ID	Client ID
244604001	RE12-10-7257
244604002	RE12-10-7256
1202015548	Method Blank (MB)
1202015549	244604002(RE12-10-7256) Sample Duplicate (DUP)
1202015550	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 1202015548 (MB) was changed to 1.0 per client request.

Designated QC

The following sample was used for QC: 244604002 (RE12-10-7256). The QC was from LANL work order 244604.

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:	941690
Prep Batch Number:	941623

Sample ID	Client ID
244604001	RE12-10-7257
244604002	RE12-10-7256
1202015551	Method Blank (MB)
1202015552	244604002(RE12-10-7256) Sample Duplicate (DUP)
1202015553	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 1202015551 (MB) was changed to 1.0 per client request.

Designated QC

The following sample was used for QC: 244604002 (RE12-10-7256). The QC was from LANL work order 244604.

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: 941691
Prep Batch Number: 941623

Sample ID	Client ID
244604001	RE12-10-7257
244604002	RE12-10-7256
1202015554	Method Blank (MB)
1202015555	244604002(RE12-10-7256) Sample Duplicate (DUP)
1202015556	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 1202015554 (MB) was changed to 1.0 per client request.

Designated QC

The following sample was used for QC: 244604002 (RE12-10-7256). The QC was from LANL work order 244604.

QC Information

All of the QC samples met the required acceptance limits.

CSU

The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time

All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis

Sample 1202015554 (MB) was recounted due to high carrier/tracer yield.

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. Sample, 1202015554 (MB), did not meet the client tracer yield requirements, however it is less than 110 percent and does meet the GEL standard tracer yield requirements.

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:	941636
Prep Batch Number:	941623

Sample ID	Client ID
244604001	RE12-10-7257
244604002	RE12-10-7256
1202015438	Method Blank (MB)
1202015439	244606003(RE16-10-1547) Sample Duplicate (DUP)
1202015440	Laboratory Control Sample (LCS)

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

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-013 REV# 18.

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met. The initial Calibrations were performed in January 2009, February 2009, October 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: 244606003 (RE16-10-1547). The QC was from LANL work order 244606.

QC Information

All of the QC samples met the required acceptance limits.

CSU

The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time

All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis

None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:**Data Exception (DER) Documentation**

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

Additional Comments

Additional comments were not required for this sample set.

Blank Decision Level

The blank 1202015438 (MB) result is greater than the decision level for Ra-224 but less than the MDC.

Qualifier information

Qualifier	Reason	Analyte	Sample	Client Sample
UI	Data rejected due to interference.	Bismuth-211	244604001	RE12-10-7257
			244604002	RE12-10-7256
			1202015439	RE16-10-1547(244606003DUP)
		Cadmium-109	244604001	RE12-10-7257
			244604002	RE12-10-7256
			1202015439	RE16-10-1547(244606003DUP)
		Radium-224	244604001	RE12-10-7257
			244604002	RE12-10-7256
			1202015439	RE16-10-1547(244606003DUP)
UI	Data rejected due to low abundance.	Cesium-134	244604001	RE12-10-7257
			1202015439	RE16-10-1547(244606003DUP)
		Strontium-85	244604001	RE12-10-7257
			1202015438	MB for batch 941636

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: _____

AB 1/27/10

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: 10-1213 GEL Work Order: 244604

The Qualifiers in this report are defined as follows:

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

Reviewed by



GEL LABORATORIES LLC

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

Certificate of Analysis

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

Report Date: January 27, 2010

Client Sample ID: RE12-10-7257
Sample ID: 244604001
Matrix: R
Collect Date: 08-JAN-10
Receive Date: 13-JAN-10
Collector: Client
Moisture: 9.96%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids												
<i>"As Received"</i>												
Rad Alpha Spec Analysis												
<i>AM241 "Dry Weight Corrected"</i>												
Americium-241	U	0.00805	0.024	+/-0.00845	0.050	pCi/g		KXM4	01/23/10	1208	941688	2
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.00105	0.0173	+/-0.00105	0.050	pCi/g		KXM4	01/21/10	1659	941690	3
Plutonium-239/240	U	0.00314	0.0198	+/-0.00182	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		0.728	0.142	+/-0.0786	0.100	pCi/g		KXM4	01/23/10	1116	941691	4
Uranium-235/236	U	0.0622	0.0881	+/-0.0224	0.100	pCi/g						
Uranium-238		0.796	0.0823	+/-0.0839	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.0293	0.288	+/-0.0909	0.200	pCi/g		MXR1	01/25/10	0838	941636	5
Bismuth-211	UI	4.49	0.347	+/-0.331		pCi/g						
Bismuth-214		1.18	0.124	+/-0.108	0.200	pCi/g						
Cadmium-109	UI	3.31	1.30	+/-0.437		pCi/g						
Cerium-139	U	-0.023	0.0528	+/-0.0152	0.050	pCi/g						
Cesium-134	UI	0.135	0.103	+/-0.0418	0.100	pCi/g						
Cesium-137	U	0.0252	0.0718	+/-0.0201	0.100	pCi/g						
Cobalt-60	U	0.00909	0.069	+/-0.020	0.100	pCi/g						
Europium-152	U	0.0234	0.173	+/-0.0611	0.200	pCi/g						
Lanthanum-140	U	0.0615	0.172	+/-0.0506		pCi/g						
Lead-212		1.80	0.101	+/-0.109	0.100	pCi/g						
Lead-214		1.56	0.121	+/-0.122	0.100	pCi/g						
Mercury-203	U	0.0514	0.0825	+/-0.0256	0.100	pCi/g						
Potassium-40		31.9	0.491	+/-1.69	1.00	pCi/g						
Radium-223	U	0.0331	1.11	+/-0.369		pCi/g						
Radium-224	UI	4.86	1.15	+/-0.729		pCi/g						
Radium-226		1.18	0.124	+/-0.108		pCi/g						
Radium-228		1.82	0.246	+/-0.195	0.500	pCi/g						
Ruthenium-106	U	0.170	0.614	+/-0.173	0.800	pCi/g						

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 27, 2010

Client Sample ID:
Sample ID:

RE12-10-7257
244604001

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time Batch	Mtd.
Rad Gamma Spec Analysis											
<i>GAMMA SPEC "Dry Weight Corrected"</i>											
Sodium-22	U	-0.00622	0.0784	+/-0.0236	0.080	pCi/g					
Strontium-85	UI	0.112	0.0797	+/-0.0231		pCi/g					
Thallium-208		0.602	0.0582	+/-0.0509	0.080	pCi/g					
Thorium-227	U	-0.359	0.675	+/-0.205		pCi/g					
Thorium-231	U	0.0331	1.11	+/-0.369		pCi/g					
Thorium-234	U	1.47	2.41	+/-0.974	2.00	pCi/g					
Tin-113	U	-0.0248	0.0824	+/-0.0252	0.100	pCi/g					
Uranium-235	U	0.0417	0.392	+/-0.109	0.500	pCi/g					
Yttrium-88	U	0.0144	0.0623	+/-0.0177	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"	78.6	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	94.5	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	80.3	(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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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 27, 2010

Client Sample ID: RE12-10-7257
Sample ID: 244604001
Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time Batch	Mtd.
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E Organics--Concentration of the target analyte exceeds the instrument calibration range
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC).
Quantitation is based on nearest internal standard response factor
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d 5-day BOD--The 2:1 depletion requirement was not met for this sample
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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

Report Date: January 27, 2010

Client Sample ID: RE12-10-7256
Sample ID: 244604002
Matrix: R
Collect Date: 08-JAN-10
Receive Date: 13-JAN-10
Collector: Client
Moisture: 24.1%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids												
<i>"As Received"</i>												
Rad Alpha Spec Analysis												
<i>AM241 "Dry Weight Corrected"</i>												
Americium-241	U	0.00194	0.0213	+/-0.00236	0.050	pCi/g		KXM4	01/23/10	1208	941688	2
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.000989	0.0163	+/-0.00099	0.050	pCi/g		KXM4	01/21/10	1659	941690	3
Plutonium-239/240		0.0297	0.0187	+/-0.00561	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		1.33	0.122	+/-0.119	0.100	pCi/g		KXM4	01/23/10	1117	941691	4
Uranium-235/236	U	0.0389	0.0756	+/-0.014	0.100	pCi/g						
Uranium-238		1.98	0.0706	+/-0.166	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.107	0.325	+/-0.0976	0.200	pCi/g		MXR1	01/25/10	0838	941636	5
Bismuth-211	UI	4.21	0.346	+/-0.346		pCi/g						
Bismuth-214		1.12	0.114	+/-0.0921	0.200	pCi/g						
Cadmium-109	UI	3.34	1.52	+/-0.527		pCi/g						
Cerium-139	U	-0.0219	0.0521	+/-0.0161	0.050	pCi/g						
Cesium-134	U	0.0525	0.0919	+/-0.0257	0.100	pCi/g						
Cesium-137		0.293	0.0751	+/-0.040	0.100	pCi/g						
Cobalt-60	U	0.00914	0.0646	+/-0.019	0.100	pCi/g						
Europium-152	U	0.0265	0.183	+/-0.053	0.200	pCi/g						
Lanthanum-140	U	-0.0785	0.135	+/-0.0469		pCi/g						
Lead-212		1.56	0.0999	+/-0.114	0.100	pCi/g						
Lead-214		1.46	0.121	+/-0.126	0.100	pCi/g						
Mercury-203	U	0.0368	0.0767	+/-0.024	0.100	pCi/g						
Potassium-40		27.7	0.593	+/-1.60	1.00	pCi/g						
Radium-223	U	0.722	1.23	+/-0.389		pCi/g						
Radium-224	UI	4.35	1.14	+/-0.718		pCi/g						
Radium-226		1.12	0.114	+/-0.0921		pCi/g						
Radium-228		1.67	0.226	+/-0.204	0.500	pCi/g						
Ruthenium-106	U	0.100	0.582	+/-0.168	0.800	pCi/g						
Sodium-22	U	-0.0128	0.0788	+/-0.0245	0.080	pCi/g						

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

Report Date: January 27, 2010

Client Sample ID:
Sample ID:

RE12-10-7256
244604002

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time Batch	Mtd.
Rad Gamma Spec Analysis											
<i>GAMMA SPEC "Dry Weight Corrected"</i>											
Strontium-85	U	0.0458	0.071	+/-0.0227		pCi/g					
Thallium-208		0.509	0.0608	+/-0.0532	0.080	pCi/g					
Thorium-227	U	0.376	0.705	+/-0.197		pCi/g					
Thorium-231	U	0.722	1.23	+/-0.389		pCi/g					
Thorium-234	U	1.68	2.43	+/-1.13	2.00	pCi/g					
Tin-113	U	-0.0142	0.0809	+/-0.0246	0.100	pCi/g					
Uranium-235	U	-0.00454	0.381	+/-0.113	0.500	pCi/g					
Yttrium-88	U	-0.005	0.0487	+/-0.0154	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"	90.8	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	95.0	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	92.7	(50%-105%)

Notes:

TPU is calculated at the 67% confidence level (1-sigma).

The Qualifiers in this report are defined as follows :

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- 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 27, 2010

Client Sample ID: RE12-10-7256
Sample ID: 244604002

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
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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 27, 2010

Page 1 of 6

Client : Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico
Contact: Ms. Joylene Valdez
Workorder: 244604

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date	Time
Rad Alpha Spec											
Batch	941688										
QC1202015549	244604002	DUP									
Americium-241		U	0.00194	U	0.0133	pCi/g	0.892	(0-1) KXM4		01/23/10	12:08
		TPU:	+/-0.00236		+/-0.00401						
		Yield:	90.8		88.6						
QC1202015550	LCS										
Americium-241		33.2			31.3	pCi/g		94.3 (75%-125%)			
		TPU:			+/-2.19						
		Yield:			92.5						
QC1202015548	MB										
Americium-241				U	-0.00228	pCi/g					
		TPU:			+/-0.00314						
		Yield:			88.4						
Batch	941690										
QC1202015552	244604002	DUP									
Plutonium-238		U	0.000989	U	0.00	pCi/g	0.238	(0-1) KXM4		01/21/10	17:00
		TPU:	+/-0.00099		+/-0.00109						
		Yield:	95.0		85.7						
Plutonium-239/240			0.0297		0.0413	pCi/g	0.457	(0-1)			
		TPU:	+/-0.00561		+/-0.00718						
		Yield:	95.0		85.7						
QC1202015553	LCS										
Plutonium-238					6.63	pCi/g		(75%-125%)		01/21/10	17:00
		TPU:			+/-0.503						
		Yield:			78.7						
Plutonium-239/240		41.8			37.5	pCi/g		89.8 (75%-125%)			
		TPU:			+/-2.35						
		Yield:			78.7						
QC1202015551	MB										
Plutonium-238				U	-0.00126	pCi/g				01/21/10	17:00
		TPU:			+/-0.00178						
		Yield:			96.2						
Plutonium-239/240				U	0.00126	pCi/g					
		TPU:			+/-0.00126						
		Yield:			96.2						
Batch	941691										
QC1202015555	244604002	DUP									
Uranium-233/234			1.33		1.50	pCi/g	0.347	(0-1) KXM4		01/22/10	14:32
		TPU:	+/-0.119		+/-0.126						
		Yield:	92.7		86.2						
Uranium-235/236		U	0.0389		0.107	pCi/g	0.933	(0-1)			
		TPU:	+/-0.014		+/-0.0225						
		Yield:	92.7		86.2						
Uranium-238			1.98		2.32	pCi/g	0.486	(0-1)			
		TPU:	+/-0.166		+/-0.184						

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QC Summary

Workorder: 244604

Page 2 of 6

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date	Time
Rad Alpha Spec											
Batch	941691										
QC1202015556	LCS	Yield:	92.7	86.2							
Uranium-233/234				5.97	pCi/g			(75%-125%)			
		TPU:		+/-0.525							
		Yield:		104							
Uranium-235/236			U	0.234	pCi/g			(75%-125%)			
		TPU:		+/-0.0666							
		Yield:		104							
Uranium-238	5.75			5.36	pCi/g		93.2	(75%-125%)			
		TPU:		+/-0.478							
		Yield:		104							
QC1202015554	MB										
Uranium-233/234			U	-0.000352	pCi/g					01/25/10	17:13
		TPU:		+/-0.00241							
		Yield:		108							
Uranium-235/236			U	0.00	pCi/g						
		TPU:		+/-0.00211							
		Yield:		108							
Uranium-238			U	-0.0017	pCi/g						
		TPU:		+/-0.00295							
		Yield:		108							
Rad Gamma Spec											
Batch	941636										
QC1202015439	244606003	DUP									
Americium-241		U	0.140	U	-0.00295	pCi/g	0.613	(0-1)	MXR1	01/25/10	11:12
		TPU:	+/-0.088		+/-0.0282						
Bismuth-211		UI	2.64	UI	2.80	pCi/g	0.190	(0-1)			
		TPU:	+/-0.209		+/-0.214						
Bismuth-214			0.799		0.870	pCi/g	0.234	(0-1)			
		TPU:	+/-0.0688		+/-0.0832						
Cadmium-109		U	1.29	UI	2.33	pCi/g	0.612	(0-1)			
		TPU:	+/-0.489		+/-0.361						
Cerium-139		U	-0.00659	U	-0.00892	pCi/g	0.0414	(0-1)			
		TPU:	+/-0.0142		+/-0.0139						
Cesium-134		U	0.0378	UI	0.125	pCi/g	0.883	(0-1)			
		TPU:	+/-0.0218		+/-0.0276						
Cesium-137			0.109		0.177	pCi/g	0.520	(0-1)			
		TPU:	+/-0.0268		+/-0.038						
Cobalt-60		U	0.0327	U	-0.0245	pCi/g	0.695	(0-1)			
		TPU:	+/-0.0197		+/-0.0214						
Europium-152		U	-0.132	U	0.0236	pCi/g	0.739	(0-1)			
		TPU:	+/-0.0569		+/-0.0482						
Lanthanum-140		U	-0.0718	U	-0.0636	pCi/g	0.0404	(0-1)			
		TPU:	+/-0.0516		+/-0.0509						
Lead-212			1.03		1.06	pCi/g	0.155	(0-1)			
		TPU:	+/-0.0587		+/-0.0668						
Lead-214			0.918		0.974	pCi/g	0.181	(0-1)			
		TPU:	+/-0.0766		+/-0.0787						
Mercury-203		U	0.0652	U	0.0534	pCi/g	0.144	(0-1)			
		TPU:	+/-0.0212		+/-0.0197						

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QC Summary

Workorder: 244604

Page 3 of 6

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	941636										
Potassium-40		26.6		27.5	pCi/g	0.195		(0-1)			
	TPU:	+/-1.18		+/-1.18							
Radium-223	U	-0.63	U	-1.02	pCi/g	0.292		(0-1)			
	TPU:	+/-0.316		+/-0.345							
Radium-224	UI	3.44	UI	3.39	pCi/g	0.0238		(0-1)			
	TPU:	+/-0.607		+/-0.569							
Radium-226		0.799		0.870	pCi/g	0.234		(0-1)			
	TPU:	+/-0.0688		+/-0.0832							
Radium-228		0.916		1.37	pCi/g	0.705		(0-1)			
	TPU:	+/-0.157		+/-0.163							
Ruthenium-106	U	-0.103	U	0.049	pCi/g	0.242		(0-1)			
	TPU:	+/-0.143		+/-0.172							
Sodium-22	U	0.0407	U	-0.0342	pCi/g	0.840		(0-1)			
	TPU:	+/-0.0213		+/-0.0233							
Strontium-85	U	0.0298	U	0.0396	pCi/g	0.113		(0-1)			
	TPU:	+/-0.0208		+/-0.0224							
Thallium-208		0.377		0.277	pCi/g	0.642		(0-1)			
	TPU:	+/-0.0375		+/-0.0403							
Thorium-227	U	-0.0785	U	-0.226	pCi/g	0.203		(0-1)			
	TPU:	+/-0.190		+/-0.174							
Thorium-231	U	-0.63	U	-1.02	pCi/g	0.292		(0-1)			
	TPU:	+/-0.316		+/-0.345							
Thorium-234	U	1.14	U	0.897	pCi/g	0.0867		(0-1)			
	TPU:	+/-0.877		+/-0.499							
Tin-113	U	0.0209	U	-0.00152	pCi/g	0.246		(0-1)			
	TPU:	+/-0.0223		+/-0.0233							
Uranium-235	U	0.0167	U	0.0302	pCi/g	0.0289		(0-1)			
	TPU:	+/-0.103		+/-0.133							
Yttrium-88	U	-0.000336	U	0.00272	pCi/g	0.057		(0-1)			
	TPU:	+/-0.0119		+/-0.0149							
QC1202015440	LCS										
Americium-241	15.9			13.4	pCi/g		84.4	(75%-125%)		01/25/10	11:12
	TPU:			+/-0.633							
Bismuth-211				1.88	pCi/g						
	TPU:			+/-0.341							
Bismuth-214				0.772	pCi/g						
	TPU:			+/-0.129							
Cadmium-109				31.2	pCi/g						
	TPU:			+/-1.96							
Cerium-139			U	0.00892	pCi/g						
	TPU:			+/-0.0187							
Cesium-134			U	0.0247	pCi/g						
	TPU:			+/-0.0367							
Cesium-137	5.57			5.78	pCi/g		104	(75%-125%)			
	TPU:			+/-0.287							
Cobalt-60	6.45			6.29	pCi/g		97.6	(75%-125%)			
	TPU:			+/-0.307							
Europium-152			U	0.0249	pCi/g						
	TPU:			+/-0.0811							
Lanthanum-140			U	-0.0175	pCi/g						
	TPU:			+/-0.0312							

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QC Summary

Workorder: 244604

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Parmname	NOM	Sample Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec									
Batch 941636									
Lead-212			0.792	pCi/g					
	TPU:		+/-0.103						
Lead-214			0.654	pCi/g					
	TPU:		+/-0.120						
Mercury-203		U	-0.00303	pCi/g					
	TPU:		+/-0.0296						
Potassium-40		U	0.597	pCi/g					
	TPU:		+/-0.277						
Radium-223		U	0.0231	pCi/g					
	TPU:		+/-0.587						
Radium-224			2.18	pCi/g					
	TPU:		+/-0.606						
Radium-226			0.772	pCi/g					
	TPU:		+/-0.129						
Radium-228			0.958	pCi/g					
	TPU:		+/-0.249						
Ruthenium-106		U	0.195	pCi/g					
	TPU:		+/-0.253						
Sodium-22		U	-0.0187	pCi/g					
	TPU:		+/-0.0252						
Strontium-85		U	0.0336	pCi/g					
	TPU:		+/-0.0317						
Thallium-208			0.263	pCi/g					
	TPU:		+/-0.058						
Thorium-227		U	-0.297	pCi/g					
	TPU:		+/-0.313						
Thorium-231		U	0.0231	pCi/g					
	TPU:		+/-0.587						
Thorium-234		U	2.12	pCi/g					
	TPU:		+/-0.905						
Tin-113		U	-0.0786	pCi/g					
	TPU:		+/-0.0351						
Uranium-235		U	0.285	pCi/g					
	TPU:		+/-0.138						
Yttrium-88		U	0.0346	pCi/g					
	TPU:		+/-0.0204						
QC1202015438 MB									
Americium-241		U	-0.0155	pCi/g					01/25/1010:47
	TPU:		+/-0.0283						
Bismuth-211		U	-0.0747	pCi/g					
	TPU:		+/-0.0573						
Bismuth-214		U	0.00319	pCi/g					
	TPU:		+/-0.0215						
Cadmium-109		U	0.179	pCi/g					
	TPU:		+/-0.148						
Cerium-139		U	-0.000429	pCi/g					
	TPU:		+/-0.00649						
Cesium-134		U	-0.0138	pCi/g					
	TPU:		+/-0.00987						
Cesium-137		U	0.00236	pCi/g					
	TPU:		+/-0.00839						

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QC Summary

Workorder: 244604

Page 5 of 6

Parmname	NOM	Sample Qual	QC	Units	RER	REC%	Range	Anlst	Date	Time
Rad Gamma Spec										
Batch	941636									
Cobalt-60		U	0.0086	pCi/g						
	TPU:		+/-0.00795							
Europium-152		U	-0.0014	pCi/g						
	TPU:		+/-0.0245							
Lanthanum-140		U	0.00437	pCi/g						
	TPU:		+/-0.0122							
Lead-212		U	0.00256	pCi/g						
	TPU:		+/-0.0207							
Lead-214		U	-0.0139	pCi/g						
	TPU:		+/-0.0196							
Mercury-203		U	-0.00279	pCi/g						
	TPU:		+/-0.0087							
Potassium-40		U	0.0517	pCi/g						
	TPU:		+/-0.120							
Radium-223		U	0.0287	pCi/g						
	TPU:		+/-0.160							
Radium-224		U	0.290	pCi/g						
	TPU:		+/-0.181							
Radium-226		U	0.00319	pCi/g						
	TPU:		+/-0.0215							
Radium-228		U	0.0536	pCi/g						
	TPU:		+/-0.0585							
Ruthenium-106		U	0.00396	pCi/g						
	TPU:		+/-0.0766							
Sodium-22		U	-0.00301	pCi/g						
	TPU:		+/-0.00993							
Strontium-85		UI	0.0798	pCi/g						
	TPU:		+/-0.0109							
Thallium-208		U	0.0154	pCi/g						
	TPU:		+/-0.0161							
Thorium-227		U	0.0824	pCi/g						
	TPU:		+/-0.0997							
Thorium-231		U	0.0287	pCi/g						
	TPU:		+/-0.160							
Thorium-234		U	0.229	pCi/g						
	TPU:		+/-0.333							
Tin-113		U	0.00728	pCi/g						
	TPU:		+/-0.0105							
Uranium-235		U	-0.0466	pCi/g						
	TPU:		+/-0.0531							
Yttrium-88		U	-0.00121	pCi/g						
	TPU:		+/-0.00878							

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

GEL LABORATORIES LLC

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QC Summary

Workorder: 244604

Page 6 of 6

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 acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

For PS, PSD, and 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# 941688 Product: Am Date: 1/25/10

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to 100 mg for GAB.			N/A
Samples have been blank corrected (if required)	✓		
If activity less 10" MDA/ MDC, error is 150% or less of sample activity. If greater 10" MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits.	✓		
Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5" MDA/ MDC, then RPD is 100% or less. If greater 5" MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%.	✓		
Or meets the client's required RER acceptance criteria.			
Tracer yield is 15-125% . Carrier yield 25-125%.	✓		
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
Allquot 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: JPLM-1- 1/25/10

Secondary Review Performed By: Denise Green 1/26/10

1/24 (2/3)

Am/Cm Que Sheet

14-JAN-10

Batch #: 941688 Analyst: KXM4 First Client Due Date: 03-FEB-10 Internal Due Date: 24-JAN-10 Comments:

Tracer(s): Am241/Cm244 Tracer Code: 445-26-7-55 Expiration Date: 5-11-10 Vol: 0.1ml

LCS Isotope(s): Am241/Cm244 LCS Code(s): SM 02448 / NA Expiration Date: 4-30-10 / NA Vol(s): 0.1g / NA

Spike Isotope(s): Am241/Cm244 Spike Code(s): NA / NA Expiration Date: NA / NA Vol(s): NA / NA

Prep Date: 1-19-10 Initials: KM Pipet ID: 29405B Balance ID: 5040272 Witness: AKB 19/10

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry Aliquot (g/l/n)	Am/Cm Det #
244604001-1	RE12-10-7257	SAMPLE		.05 pCi/g	SOIL	LANL010	08-JAN-10	1	1	1.251	25
244604002-1	RE12-10-7256	SAMPLE		.05 pCi/g	SOIL	LANL010	08-JAN-10	2	2	1.257	26
244606002-1	RE16-10-1525	SAMPLE		.05 pCi/g	SOIL	LANL010	07-JAN-10	3	3	1.253	27
244606003-1	RE16-10-1547	SAMPLE		.05 pCi/g	SOIL	LANL010	07-JAN-10	4	4	1.256	28
244606004-1	RE16-10-1527	SAMPLE		.05 pCi/g	SOIL	LANL010	07-JAN-10	5	5	1.255	31
244606005-1	RE16-10-1515	SAMPLE		.05 pCi/g	SOIL	LANL010	07-JAN-10	6	6	1.255	32 33
244606006-1	RE16-10-1523	SAMPLE		.05 pCi/g	SOIL	LANL010	07-JAN-10	7	7	1.252	35
244606007-1	RE16-10-1519	SAMPLE		.05 pCi/g	SOIL	LANL010	07-JAN-10	8	8	1.258	38
244606008-1	RE16-10-1517	SAMPLE		.05 pCi/g	SOIL	LANL010	07-JAN-10	9	9	1.253	46
244606009-1	RE16-10-1521	SAMPLE		.05 pCi/g	SOIL	LANL010	07-JAN-10	10	10	1.258	48
244619001-1	RE16-10-2926	SAMPLE		.05 pCi/g	SOIL	LANL010	07-JAN-10	11	11	1.252	65
244619002-1	RE16-10-2932	SAMPLE		.05 pCi/g	SOIL	LANL010	07-JAN-10	12	12	1.259	66
244619003-1	RE16-10-2930	SAMPLE		.05 pCi/g	SOIL	LANL010	07-JAN-10	13	13	1.251	67
244619004-1	RE16-10-2924	SAMPLE		.05 pCi/g	SOIL	LANL010	07-JAN-10	14	14	1.258	68
244619005-1	RE16-10-2928	SAMPLE		.05 pCi/g	SOIL	LANL010	07-JAN-10	15	15	1.250	69
1202015548-1	MB for batch 941688	MB		.05 pCi/g	SOIL	QC ACCOUNT		16	16	1.254 1.043	43
1202015549-1	RE12-10-7256(244604002DUP)	DUP		.05 pCi/g	SOIL	QC ACCOUNT	08-JAN-10	17	17	1.256	44
1202015550-1	LCS for batch 941688	LCS		.05 pCi/g	SOIL	QC ACCOUNT		18	18	0.105	45

Choose SOP Used: GL-RAD-A-011
GL-RAD-A-036

Solid Sample Dissolution by LEACH or DIGESTION
Circle One

Data Reviewed By: Jacelyn - 1/25/10

Blank Correction Report

Batch ID 941688

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1202015549	DUP	Americium-241	1.26 g	0.0133	0.00401	0.0198	-.00180952	pCi/g	NO
1202015550	LCS	Americium-241	0.105 g	31.3	2.19	0.234	-.02171429	pCi/g	NO
1202015548	MB	Americium-241	1.00 g	-0.00228	0.00314	0.0253	-.00228	pCi/g	NO
244604001	RE12-10-7257	Americium-241	1.25 g	0.00805	0.00845	0.024	-.001824	pCi/g	NO
244604002	RE12-10-7256	Americium-241	1.26 g	0.00194	0.00236	0.0213	-.00180952	pCi/g	NO
244606002	RE16-10-1525	Americium-241	1.25 g	0.00752	0.00414	0.0198	-.001824	pCi/g	NO
244606003	RE16-10-1547	Americium-241	1.26 g	0.00681	0.00423	0.0293	-.00180952	pCi/g	NO
244606004	RE16-10-1527	Americium-241	1.26 g	0.014	0.00485	0.0206	-.00180952	pCi/g	NO
244606005	RE16-10-1515	Americium-241	1.26 g	0.00576	0.00371	0.0215	-.00180952	pCi/g	NO
244606006	RE16-10-1523	Americium-241	1.25 g	0.00285	0.00247	0.0199	-.001824	pCi/g	NO
244606007	RE16-10-1519	Americium-241	1.26 g	-0.00569	0.006	0.0219	-.00180952	pCi/g	NO
244606008	RE16-10-1517	Americium-241	1.25 g	0.00454	0.00373	0.018	-.001824	pCi/g	NO
244606009	RE16-10-1521	Americium-241	1.26 g	-0.000624	0.00601	0.0202	-.00180952	pCi/g	NO
244619001	RE16-10-2926	Americium-241	1.25 g	-0.00435	0.00545	0.0215	-.001824	pCi/g	NO
244619002	RE16-10-2932	Americium-241	1.26 g	-0.000524	0.00399	0.0219	-.00180952	pCi/g	NO
244619003	RE16-10-2930	Americium-241	1.25 g	-0.00571	0.00317	0.022	-.001824	pCi/g	NO
244619004	RE16-10-2924	Americium-241	1.26 g	0.00235	0.00267	0.0236	-.00180952	pCi/g	NO
244619005	RE16-10-2928	Americium-241	1.25 g	0.00581	0.00328	0.0216	-.001824	pCi/g	NO

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 941688 SAMPLE DATE : 8-JAN-2010 00:00:00.			SAMPLE ID : S0244604001_AM SAMPLE QTY: 1.251 G		
DETECTOR NUMBER :45-149AA5 AVERAGE %EFFICIENCY :32.4684 % YIELD : 78.634			COUNT DATE:23-JAN-2010 12:08:53 ELAPSED LIVE TIME(SEC): 59999.99 ANALYST :KXM4		
MS/MSD ID : 0244-B ISOTOPE : AM-241 PCI/G : 3.316E+01	LCS/LCSD ID : 0244-B ISOTOPE : AM-241 PCI/G : 3.316E+01	TRACER ID : 445-96-2-SS ISOTOPE : AM243 NOMINAL : 2.91658 dpm RESULTS : 2.29343 dpm	LIB FILE : ENV_ALPHA_AM.N BKG FILE : B025.CNF;1104 BKG DATE : 17-JAN-2010 EFF FILE : W025.CNF;326 CAL DATE : 4-JAN-2010		

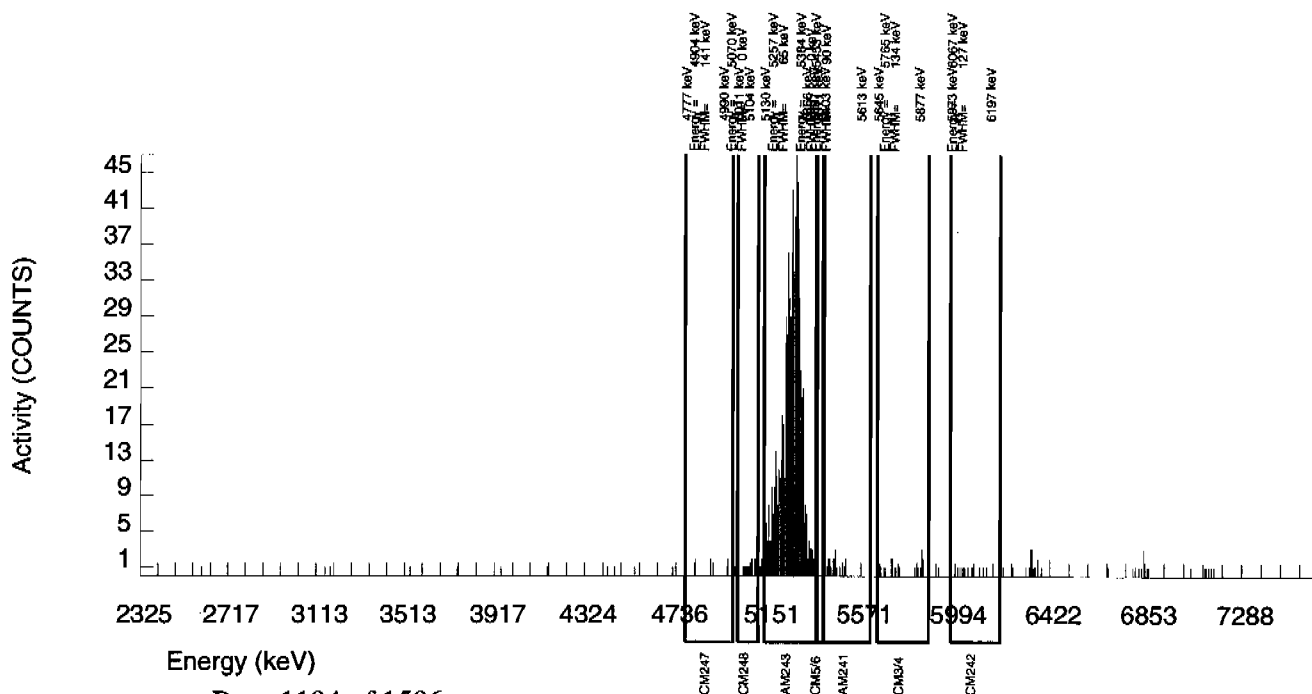
NUCLIDE ACTIVITY SUMMARY

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
CM-3/4	5795.020	19.000	-9.000	28.000	5.2338	100.0000	-1.27E-02	9.69E-03	1.72E-02	3.82E-02	9.68E-03
CM-5/6	5386.000	6.000	4.000	2.000	19.8463	86.09000	6.55E-03	4.65E-03	7.56E-02	1.56E-01	4.63E-03
AM-241	5479.150	22.000	5.707	15.000	3.0704	99.94000	8.05E-03	8.45E-03	1.01E-02	2.40E-02	8.43E-03
CM-242	6102.000	11.000	5.000	6.000	4.3186	100.0000	7.54E-03	6.24E-03	1.42E-02	3.22E-02	6.22E-03
AM243	5270.000	746.000	743.000	3.000	1.7321	99.78000	1.05E+00	7.53E-02	5.70E-03	1.52E-02	3.87E-02
CM-247	4946.000	9.000	9.000	0.000	15.3366	79.30000	1.60E-02	5.43E-03	6.35E-02	1.32E-01	5.34E-03
CM-248	5078.600	21.000	21.000	0.000	22.1555	91.00000	3.25E-02	7.38E-03	7.99E-02	1.64E-01	7.10E-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



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 941688 SAMPLE DATE : 8-JAN-2010 00:00:00.		SAMPLE ID : S0244604002_AM SAMPLE QTY: 1.257 G	
DETECTOR NUMBER :78204 AVERAGE %EFFICIENCY :31.5763 % YIELD : 90.759		COUNT DATE:23-JAN-2010 12:08:53 ELAPSED LIVE TIME(SEC): 59999.99 ANALYST :KXM4	
MS/MSD ID : 0244-B ISOTOPE : AM-241 PCI/G : 3.316E+01	LCS/LCSD ID : 0244-B ISOTOPE : AM-241 PCI/G : 3.316E+01	TRACER ID : 445-96-2-SS ISOTOPE : AM243 NOMINAL : 2.91658 dpm RESULTS : 2.64705 dpm	LIB FILE : ENV_ALPHA_AM.N BKG FILE : B026.CNF;1105 BKG DATE : 17-JAN-2010 EFF FILE : W026.CNF;300 CAL DATE : 4-JAN-2010

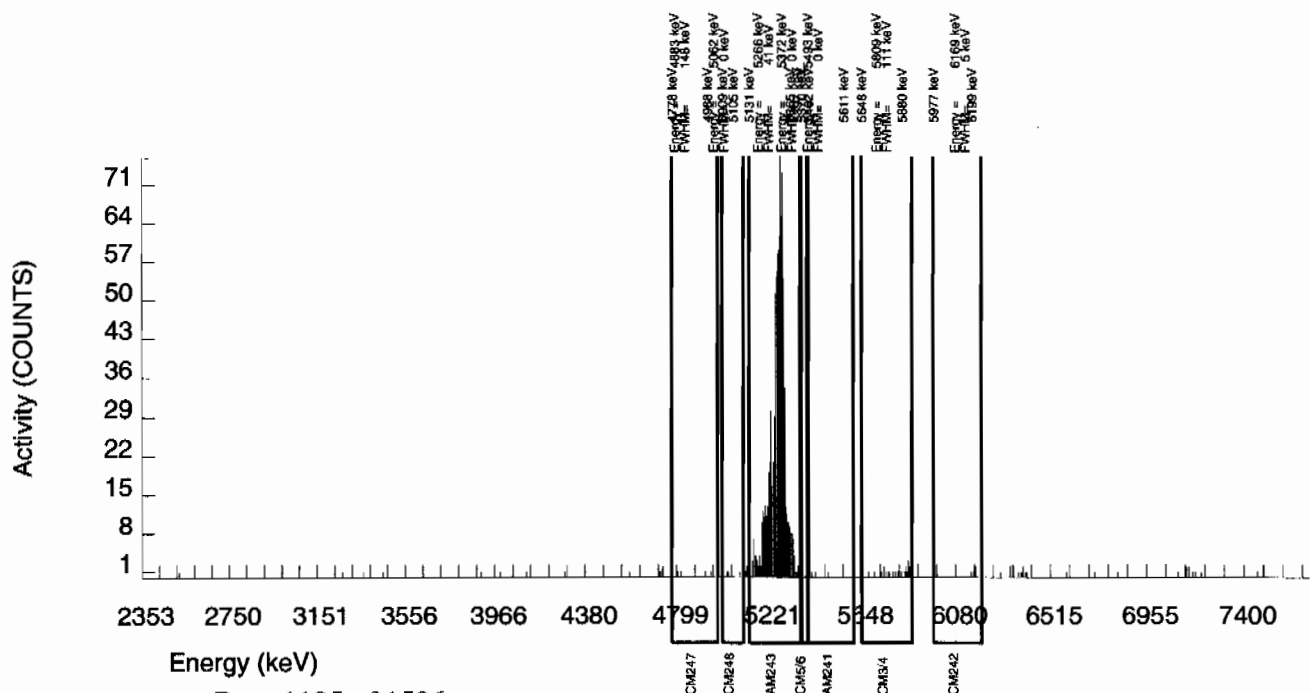
NUCLIDE ACTIVITY SUMMARY

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
CM-3/4	5795.020	23.000	12.000	11.000	5.2338	100.0000	1.50E-02	7.36E-03	1.52E-02	3.38E-02	7.30E-03
CM-5/6	5386.000	3.000	3.000	0.000	19.8463	86.09000	4.36E-03	2.53E-03	6.71E-02	1.38E-01	2.52E-03
AM-241	5479.150	4.000	1.549	1.000	3.0704	99.94000	1.94E-03	2.36E-03	8.94E-03	2.13E-02	2.36E-03
CM-242	6102.000	4.000	4.000	0.000	4.3186	100.0000	5.35E-03	2.70E-03	1.26E-02	2.85E-02	2.68E-03
AM243	5270.000	838.000	834.000	4.000	2.0000	99.78000	1.05E+00	7.43E-02	5.83E-03	1.51E-02	3.64E-02
CM-247	4946.000	4.000	2.000	2.000	15.3366	79.30000	3.15E-03	3.87E-03	5.63E-02	1.17E-01	3.86E-03
CM-248	5078.600	9.000	9.000	0.000	22.1555	91.00000	1.24E-02	4.19E-03	7.08E-02	1.45E-01	4.12E-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



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 941688 SAMPLE DATE : 19-JAN-2010 00:00:00				SAMPLE ID : S1202015548_AM SAMPLE QTY: 1.000 G			
DETECTOR NUMBER :76543 AVERAGE %EFFICIENCY :34.3031 % YIELD : 88.352				COUNT DATE:23-JAN-2010 12:08:57 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :KXM4			
MS/MSD ID : 0244-B ISOTOPE : AM-241 PCI/G : 3.316E+01		LCS/LCSD ID : 0244-B ISOTOPE : AM-241 PCI/G : 3.316E+01		TRACER ID : 445-96-2-SS ISOTOPE : AM243 NOMINAL : 2.91658 dpm RESULTS : 2.57687 dpm		LIB FILE : ENV_ALPHA_AM.N BKG FILE : B043.CNF;1098 BKG DATE : 17-JAN-2010 EFF FILE : W043.CNF;284 CAL DATE : 4-JAN-2010	

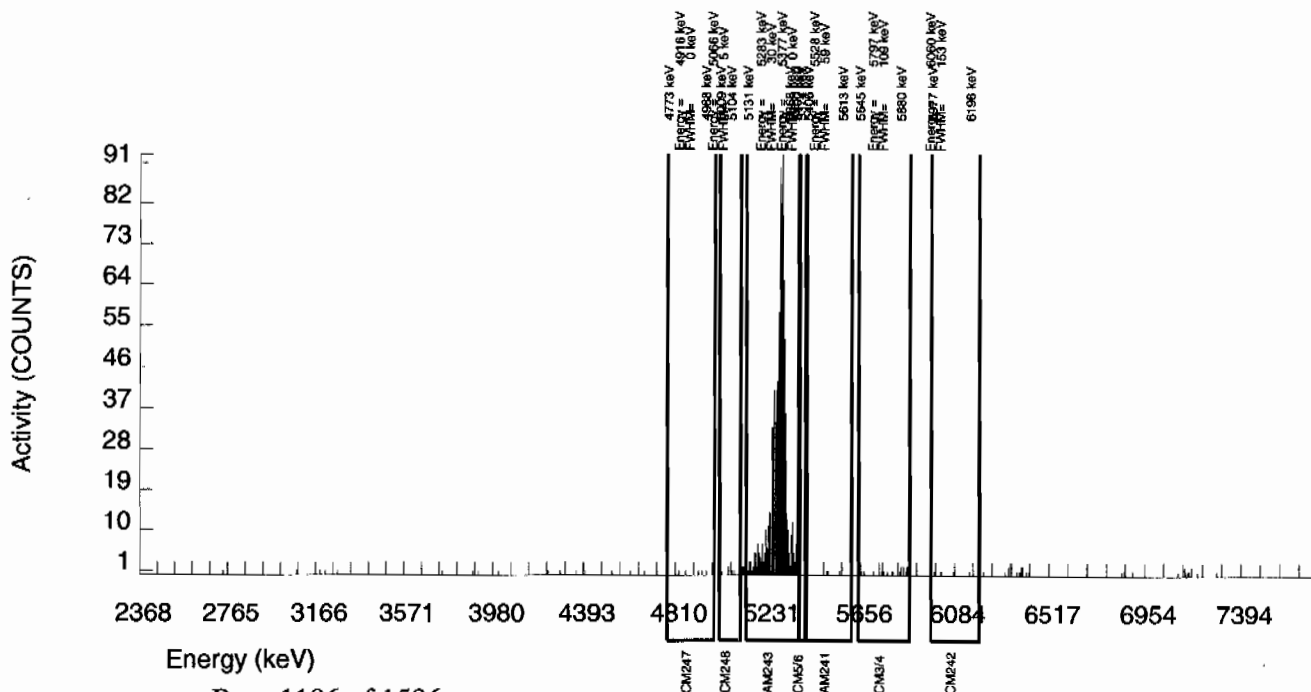
NUCLIDE ACTIVITY SUMMARY

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
CM-3/4	5795.020	19.000	6.000	13.000	5.2338	100.0000	8.92E-03	8.43E-03	1.81E-02	4.02E-02	8.41E-03
CM-5/6	5386.000	9.000	9.000	0.000	19.8463	86.09000	1.55E-02	5.26E-03	7.97E-02	1.64E-01	5.18E-03
AM-241	5479.150	3.000	-1.535	3.000	3.0704	99.94000	-2.28E-03	3.14E-03	1.06E-02	2.53E-02	3.14E-03
CM-242	6102.000	5.000	5.000	0.000	4.3186	100.0000	7.59E-03	3.42E-03	1.49E-02	3.39E-02	3.39E-03
AM243	5270.000	882.000	882.000	0.000	0.0000	99.78000	1.31E+00	9.01E-02	0.00E+00	4.04E-03	4.42E-02
CM-247	4946.000	6.000	5.000	1.000	15.3366	79.30000	9.37E-03	4.99E-03	6.69E-02	1.39E-01	4.96E-03
CM-248	5078.600	7.000	7.000	0.000	22.1555	91.00000	1.14E-02	4.37E-03	8.42E-02	1.73E-01	4.32E-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



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 941688 SAMPLE DATE : 8-JAN-2010 00:00:00.				SAMPLE ID : S1202015549_AM SAMPLE QTY: 1.256 G			
DETECTOR NUMBER :79459 AVERAGE %EFFICIENCY :34.8103 % YIELD : 88.645				COUNT DATE:23-JAN-2010 12:08:57 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :KXM4			
MS/MSD ID : 0244-B ISOTOPE : AM-241 PCI/G : 3.316E+01		LCS/LCSD ID : 0244-B ISOTOPE : AM-241 PCI/G : 3.316E+01		TRACER ID : 445-96-2-SS ISOTOPE : AM243 NOMINAL : 2.91658 dpm RESULTS : 2.58539 dpm		LIB FILE : ENV_ALPHA_AM.N BKG FILE : B044.CNF;1108 BKG DATE : 17-JAN-2010 EFF FILE : W044.CNF;305 CAL DATE : 4-JAN-2010	

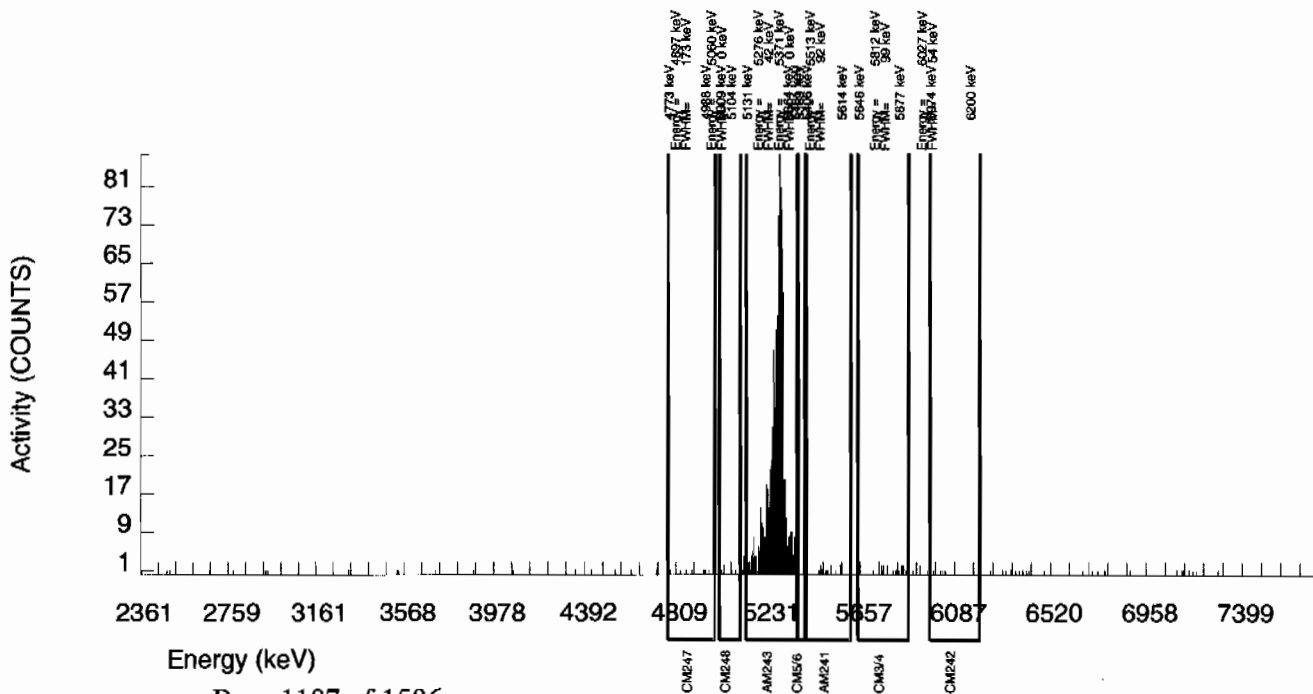
NUCLIDE ACTIVITY SUMMARY

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
CM-3/4	5795.020	21.000	-4.000	25.000	5.2338	100.0000	-4.66E-03	7.90E-03	1.42E-02	3.15E-02	7.90E-03
CM-5/6	5386.000	4.000	4.000	0.000	19.8463	86.09000	5.40E-03	2.72E-03	6.23E-02	1.28E-01	2.70E-03
AM-241	5479.150	13.000	11.437	0.000	3.0704	99.94000	1.33E-02	4.01E-03	8.31E-03	1.98E-02	3.93E-03
CM-242	6102.000	4.000	1.000	3.000	4.3186	100.0000	1.24E-03	3.29E-03	1.17E-02	2.65E-02	3.29E-03
AM243	5270.000	898.000	898.000	0.000	0.0000	99.78000	1.05E+00	7.14E-02	0.00E+00	3.16E-03	3.49E-02
CM-247	4946.000	8.000	7.000	1.000	15.3366	79.30000	1.03E-02	4.44E-03	5.23E-02	1.09E-01	4.40E-03
CM-248	5078.600	14.000	14.000	0.000	22.1555	91.00000	1.79E-02	4.90E-03	6.58E-02	1.35E-01	4.78E-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



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 941688
SAMPLE DATE : 19-JAN-2010 00:00:00

SAMPLE ID : S1202015550_AM
SAMPLE QTY: 0.105 G

DETECTOR NUMBER :78783
AVERAGE %EFFICIENCY :33.6899
% YIELD : 92.511

COUNT DATE:23-JAN-2010 12:08:57
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :KXM4

MS/MSD
ID : 0244-B
ISOTOPE : AM-241
PCI/G : 3.316E+01

LCS/LCSD
ID : 0244-B
ISOTOPE : AM-241
PCI/G : 3.316E+01

TRACER
ID : 445-96-2-SS
ISOTOPE : AM243
NOMINAL : 2.91658 dpm
RESULTS : 2.69814 dpm

LIB FILE : ENV_ALPHA_AM.N
BKG FILE : B045.CNF;1097
BKG DATE : 17-JAN-2010
EFF FILE : W045.CNF;296
CAL DATE : 4-JAN-2010

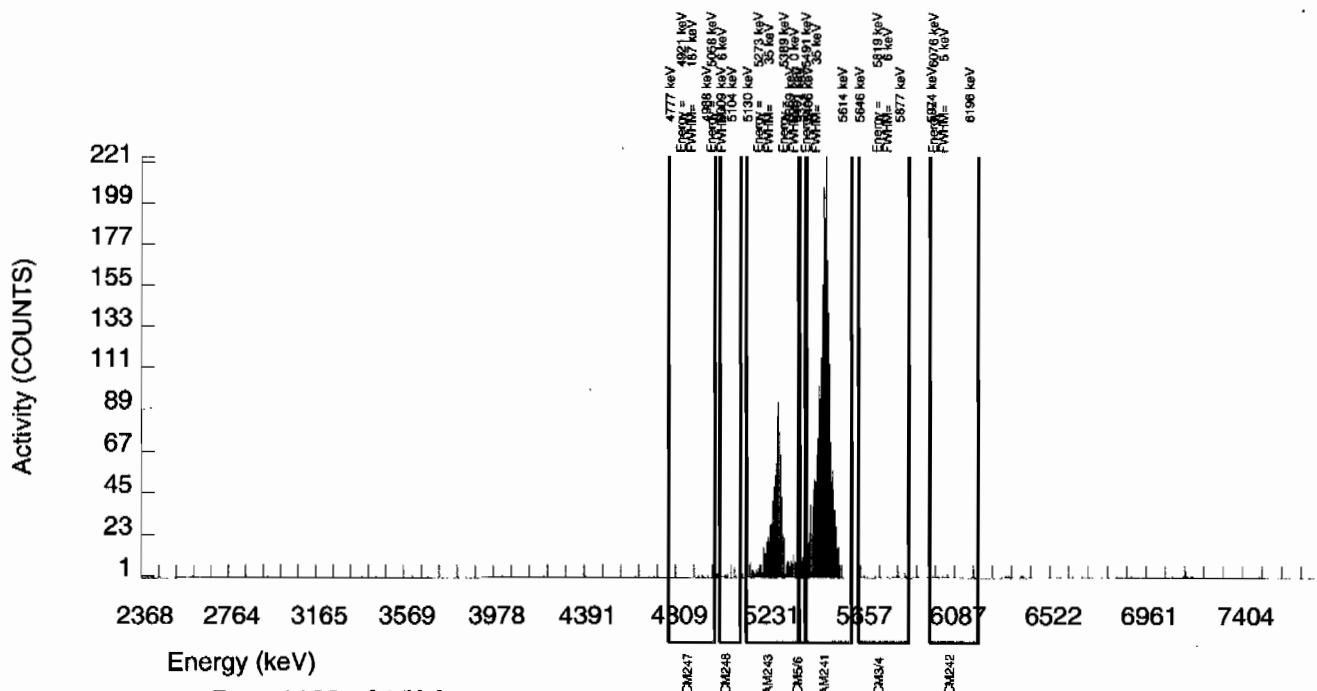
NUCLIDE ACTIVITY SUMMARY

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
CM-3/4	5795.020	10.000	-14.000	24.000	5.2338	100.0000	-1.93E-01	8.03E-02	1.68E-01	3.72E-01	8.03E-02
CM-5/6	5386.000	48.000	48.000	0.000	19.8463	86.09000	7.67E-01	1.22E-01	7.38E-01	1.52E+00	1.11E-01
AM-241	5479.150	2274.000	2271.422	1.000	3.0704	99.94000	3.13E+01	2.19E+00	9.84E-02	2.34E-01	6.57E-01
CM-242	6102.000	7.000	6.000	1.000	4.3186	100.0000	8.43E-02	4.01E-02	1.38E-01	3.14E-01	3.97E-02
AM243	5270.000	908.000	907.000	1.000	1.0000	99.78000	1.25E+01	9.35E-01	3.21E-02	1.02E-01	4.16E-01
CM-247	4946.000	6.000	3.000	3.000	15.3366	79.30000	5.21E-02	5.22E-02	6.19E-01	1.29E+00	5.21E-02
CM-248	5078.600	13.000	13.000	0.000	22.1555	91.00000	1.97E-01	5.61E-02	7.80E-01	1.60E+00	5.45E-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#

9411090

Product:

PU

Date:

1/22/10

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to 100 mg for GAB.			N/A
Samples have been blank corrected (if required)	✓		
If activity less 10 ⁶ MDA/ MDC, error is 150% or less of sample activity. If greater 10 ⁶ MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits.	✓		
Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5 ⁶ MDA/ MDC, then RPD is 100% or less. If greater 5 ⁶ MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%.	✓		
Or meets the client's required RER acceptance criteria.			
Tracer yield is 15-125% . Carrier yield 25-125%.	✓		
Or meets the client's contract acceptance criteria.			
Method blank is less than the RDL/ LLD.	✓		
(If rad samples, < 5% of lowest activity)			
Sample was run within hold time.	✓		
Sample was correctly preserved if required.			N/A
Smears Taken for Radioactive batches.			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 cuts initialed and dated.	✓		
No transcription errors are apparent.			
Aux data is correct.			N/A
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly 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 Brown 1/22/10

Secondary Review Performed By:

Jen Am signing for JM 1/28/10

2/3

CAUL

Plutonium Que Sheet

14-JAN-10

Batch #: 941690 Analyst: KXM4 First Client Due Date: 03-FEB-10 Internal Due Date: 24-JAN-10
 Tracer Isotope(s): Pu-239 Pu-238 Tracer Code: 1374-A Expiration Date: 12-8-10 Vol: 0.11
 LCS Isotope(s): Pu-239 Pu-238 LCS Code: 50A 0244-B Expiration Date: 4-30-10 Vol: 0.15
 Spike Isotope(s): Pu-239 Pu-238 Spike Code: NA Expiration Date: NA Vol: NA
 Prep Date: 1-19-10 Initials: VNA Pipet ID: 7971058 Balance ID: 50410272

Witness: NAKB 1/19/10

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry	Aliquot (g/1/1)	Pu Det #
244604001-1	RE12-10-7257	SAMPLE	.05 pCi/g		SOIL	LANL010	08-JAN-10	1	1	1.751		209
244604002-1	RE12-10-7256	SAMPLE	.05 pCi/g		SOIL	LANL010	08-JAN-10	2	2	1.757		210
244606002-1	RE16-10-1525	SAMPLE	.05 pCi/g		SOIL	LANL010	07-JAN-10	3	3	1.753		211
244606003-1	RE16-10-1547	SAMPLE	.05 pCi/g		SOIL	LANL010	07-JAN-10	4	4	1.756		212
244606004-1	RE16-10-1527	SAMPLE	.05 pCi/g		SOIL	LANL010	07-JAN-10	5	5	1.755		213
244606005-1	RE16-10-1515	SAMPLE	.05 pCi/g		SOIL	LANL010	07-JAN-10	6	6	1.755		214
244606006-1	RE16-10-1523	SAMPLE	.05 pCi/g		SOIL	LANL010	07-JAN-10	7	7	1.752		215
244606007-1	RE16-10-1519	SAMPLE	.05 pCi/g		SOIL	LANL010	07-JAN-10	8	8	1.758		216
244606008-1	RE16-10-1517	SAMPLE	.05 pCi/g		SOIL	LANL010	07-JAN-10	9	9	1.753		217
244606009-1	RE16-10-1521	SAMPLE	.05 pCi/g		SOIL	LANL010	07-JAN-10	10	10	1.758		218
244619001-1	RE16-10-2926	SAMPLE	.05 pCi/g		SOIL	LANL010	07-JAN-10	11	11	1.752		219
244619002-1	RE16-10-2932	SAMPLE	.05 pCi/g		SOIL	LANL010	07-JAN-10	12	12	1.759		220
244619003-1	RE16-10-2930	SAMPLE	.05 pCi/g		SOIL	LANL010	07-JAN-10	13	13	1.751		221
244619004-1	RE16-10-2924	SAMPLE	.05 pCi/g		SOIL	LANL010	07-JAN-10	14	14	1.758		222
244619005-1	RE16-10-2928	SAMPLE	.05 pCi/g		SOIL	LANL010	07-JAN-10	15	15	1.750		223
1202015551-1	MB for batch 941690	MB	.05 pCi/g		SOIL	QC ACCOUNT	08-JAN-10	16	16	0.1259		224
1202015552-1	RE12-10-7256(244604002DUP)	DUP	.05 pCi/g		SOIL	QC ACCOUNT	08-JAN-10	17	17	1.756		225
1202015553-1	LCS for batch 941690	LCS	.05 pCi/g		SOIL	QC ACCOUNT	08-JAN-10	18	18	0.105		226

Solid Sample Dissolution by: LEACH or DIGESTION
 Circle One

Choose SOP Used: GL-RAD-A-01, GL-RAD-A-036, GL-RAD-A-045, GL-RAD-A-043

GEL Laboratories LLC, Radiochemistry Division

Data Reviewed By: NAKB 1/20/10

Page: 1 of 1

Blank Correction Report

Batch ID 941690

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1202015552	DUP	Plutonium-238	1.26 g	0.00	0.00109	0.018	-.001	pCi/g	NO
		Plutonium-239/240	1.26 g	0.0413	0.00718	0.0206	.001	pCi/g	NO
1202015553	LCS	Plutonium-238	0.105 g	6.63	0.503	0.244	-.012	pCi/g	NO
		Plutonium-239/240	0.105 g	37.5	2.35	0.280	.012	pCi/g	NO
1202015551	MB	Plutonium-238	1.00 g	-0.00126	0.00178	0.0207	-.00126	pCi/g	NO
		Plutonium-239/240	1.00 g	0.00126	0.00126	0.0237	.00126	pCi/g	YES
244604001	RE12-10-7257	Plutonium-238	1.25 g	0.00105	0.00105	0.0173	-.001008	pCi/g	NO
		Plutonium-239/240	1.25 g	0.00314	0.00182	0.0198	.001008	pCi/g	YES
244604002	RE12-10-7256	Plutonium-238	1.26 g	0.000989	0.00099	0.0163	-.001	pCi/g	NO
		Plutonium-239/240	1.26 g	0.0297	0.00561	0.0187	.001	pCi/g	NO
244606002	RE16-10-1525	Plutonium-238	1.25 g	-0.0039	0.00308	0.0161	-.001008	pCi/g	NO
		Plutonium-239/240	1.25 g	0.036	0.00756	0.0184	.001008	pCi/g	NO
244606003	RE16-10-1547	Plutonium-238	1.26 g	0.00	0.00114	0.0189	-.001	pCi/g	NO
		Plutonium-239/240	1.26 g	0.0137	0.00401	0.0216	.001	pCi/g	NO
244606004	RE16-10-1527	Plutonium-238	1.26 g	0.00	0.0011	0.0181	-.001	pCi/g	NO
		Plutonium-239/240	1.26 g	0.0263	0.00552	0.0207	.001	pCi/g	NO
244606005	RE16-10-1515	Plutonium-238	1.26 g	-0.00221	0.00191	0.0183	-.001	pCi/g	NO
		Plutonium-239/240	1.26 g	0.00994	0.00335	0.0209	.001	pCi/g	NO
244606006	RE16-10-1523	Plutonium-238	1.25 g	0.00111	0.00111	0.0183	-.001008	pCi/g	NO
		Plutonium-239/240	1.25 g	0.0144	0.00405	0.0209	.001008	pCi/g	NO
244606007	RE16-10-1519	Plutonium-238	1.26 g	0.00	0.00202	0.0167	-.001	pCi/g	NO
		Plutonium-239/240	1.26 g	-0.00101	0.00175	0.0191	.001	pCi/g	YES
244606008	RE16-10-1517	Plutonium-238	1.25 g	0.00101	0.00101	0.0166	-.001008	pCi/g	NO
		Plutonium-239/240	1.25 g	0.0202	0.00461	0.019	.001008	pCi/g	NO
244606009	RE16-10-1521	Plutonium-238	1.26 g	0.0022	0.00156	0.0181	-.001	pCi/g	NO
		Plutonium-239/240	1.26 g	0.00549	0.00331	0.0208	.001	pCi/g	NO
244619001	RE16-10-2926	Plutonium-238	1.25 g	0.00104	0.00104	0.0171	-.001008	pCi/g	NO
		Plutonium-239/240	1.25 g	0.00	0.00147	0.0196	.001008	pCi/g	YES
244619002	RE16-10-2932	Plutonium-238	1.26 g	0.00	0.00157	0.0184	-.001	pCi/g	NO
		Plutonium-239/240	1.26 g	0.00445	0.00273	0.021	.001	pCi/g	YES
244619003	RE16-10-2930	Plutonium-238	1.25 g	-0.00106	0.0015	0.0175	-.001008	pCi/g	NO
		Plutonium-239/240	1.25 g	0.00425	0.00213	0.0201	.001008	pCi/g	YES
244619004	RE16-10-2924	Plutonium-238	1.26 g	0.0029	0.00168	0.016	-.001	pCi/g	NO
		Plutonium-239/240	1.26 g	0.000966	0.000967	0.0183	.001	pCi/g	YES
244619005	RE16-10-2928	Plutonium-238	1.25 g	0.00218	0.00154	0.018	-.001008	pCi/g	NO
		Plutonium-239/240	1.25 g	0.00327	0.00189	0.0206	.001008	pCi/g	YES

SDW
11/22/10

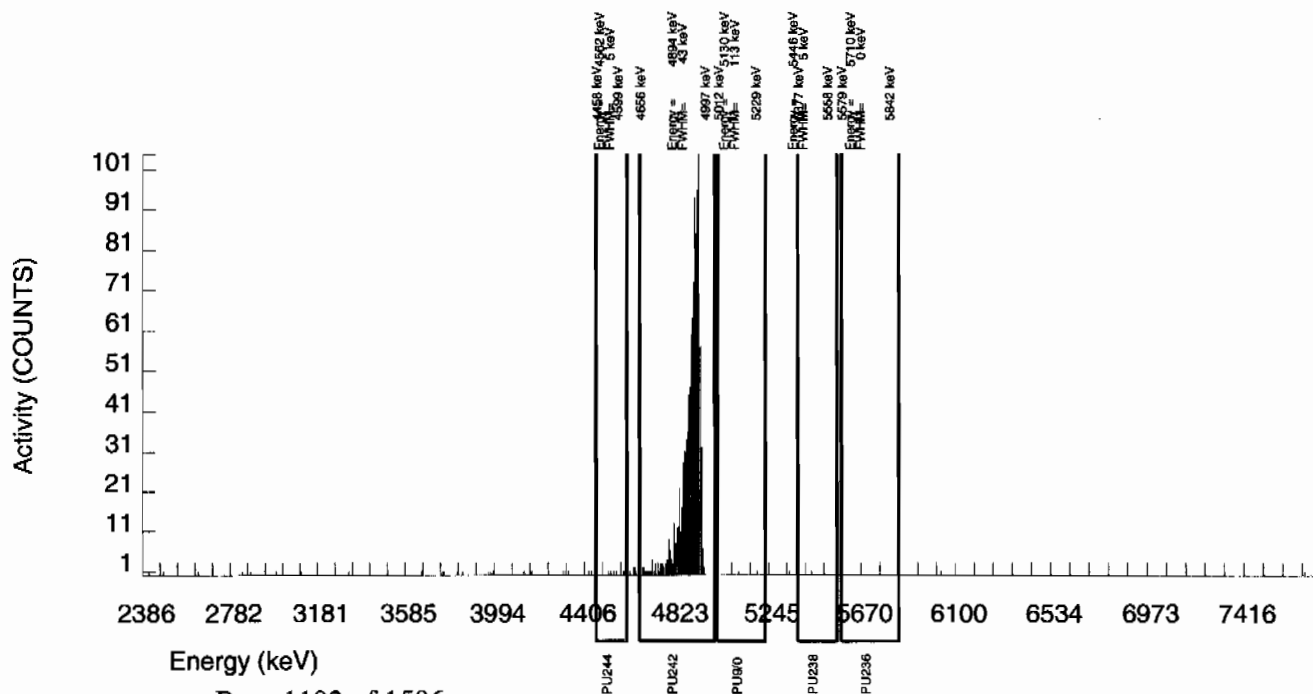
GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 941690 SAMPLE DATE : 8-JAN-2010 00:00:00.		SAMPLE ID : S0244604001_PU SAMPLE QTY: 1.251 G	
DETECTOR NUMBER :79188 AVERAGE %EFFICIENCY :36.4789 % YIELD : 94.496		COUNT DATE:21-JAN-2010 16:59:31 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :KXM4	
MS/MSD ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 4.178E+01	LCS/LCSD ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 4.178E+01	TRACER ID : 1374-A ISOTOPE : PU242 NOMINAL : 3.38543 dpm RESULTS : 3.19910 dpm	LIB FILE : ENV_ALPHA_PU.N BKG FILE : B209.CNF;71 BKG DATE : 17-JAN-2010 EFF FILE : W209.CNF;27 CAL DATE : 28-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
PU-9/0	5155.000	3.000	3.000	0.000	3.4797	99.90000	3.14E-03	1.82E-03	8.46E-03	1.98E-02	1.81E-03
PU-236	5749.000	0.000	0.000	0.000	2.1286	100.0000	0.00E+00	1.06E-03	5.17E-03	1.32E-02	1.05E-03
PU-238	5499.000	1.000	1.000	0.000	2.9680	99.90000	1.05E-03	1.05E-03	7.22E-03	1.73E-02	1.05E-03
PU242	4890.000	1169.000	1167.000	2.000	1.4142	100.0000	1.22E+00	6.99E-02	3.44E-03	9.70E-03	3.57E-02
PU-244	4589.000	8.000	7.000	1.000	5.2050	99.90000	7.32E-03	3.16E-03	1.27E-02	2.82E-02	3.14E-03

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)



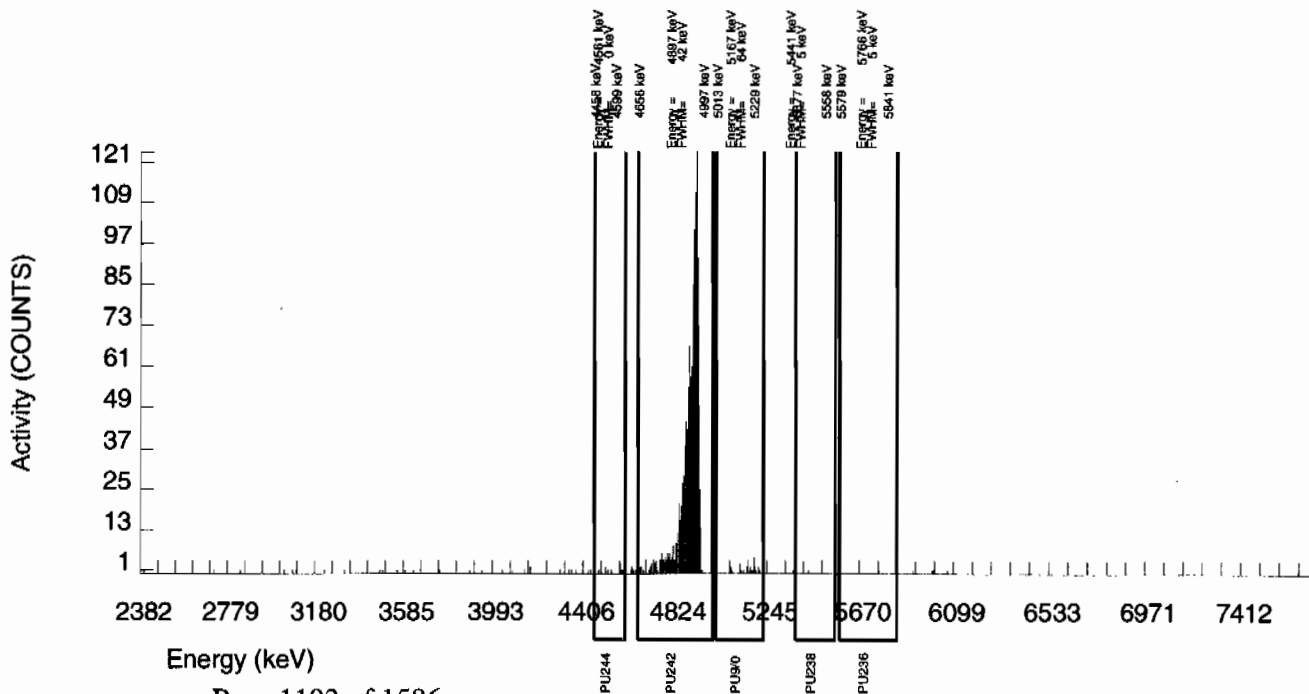
GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 941690 SAMPLE DATE : 8-JAN-2010 00:00:00.		SAMPLE ID : S0244604002_PU SAMPLE QTY: 1.257 G	
DETECTOR NUMBER :79189 AVERAGE %EFFICIENCY :38.1693 % YIELD : 95.032		COUNT DATE:21-JAN-2010 16:59:33 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :KXM4	
MS/MSD ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 4.178E+01	LCS/LCSD ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 4.178E+01	TRACER ID : 1374-A ISOTOPE : PU242 NOMINAL : 3.38543 dpm RESULTS : 3.21724 dpm	LIB FILE : ENV_ALPHA_PU.N BKG FILE : B210.CNF;70 BKG DATE : 17-JAN-2010 EFF FILE : W210.CNF;25 CAL DATE : 28-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
PU-9/0	5155.000	30.000	30.000	0.000	3.4797	99.90000	2.97E-02	5.61E-03	8.01E-03	1.87E-02	5.42E-03
PU-236	5749.000	1.000	0.000	1.000	2.1286	100.0000	0.00E+00	1.41E-03	4.89E-03	1.25E-02	1.41E-03
PU-238	5499.000	1.000	1.000	0.000	2.9680	99.90000	9.89E-04	9.90E-04	6.83E-03	1.63E-02	9.89E-04
PU242	4890.000	1229.000	1228.000	1.000	1.0000	100.0000	1.21E+00	6.86E-02	2.30E-03	7.27E-03	3.46E-02
PU-244	4589.000	13.000	13.000	0.000	5.2050	99.90000	1.29E-02	3.62E-03	1.20E-02	2.66E-02	3.57E-03

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 941690
SAMPLE DATE : 19-JAN-2010 00:00:00

SAMPLE ID : S1202015551_PU
SAMPLE QTY: 1.000 G

DETECTOR NUMBER :79419
AVERAGE %EFFICIENCY :37.3342
% YIELD : 96.208

COUNT DATE:21-JAN-2010 17:00:07
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :KXM4

MS/MSD
ID : 0244-B
ISOTOPE : PU-9/0
PCI/G : 4.178E+01

LCS/LCSD
ID : 0244-B
ISOTOPE : PU-9/0
PCI/G : 4.178E+01

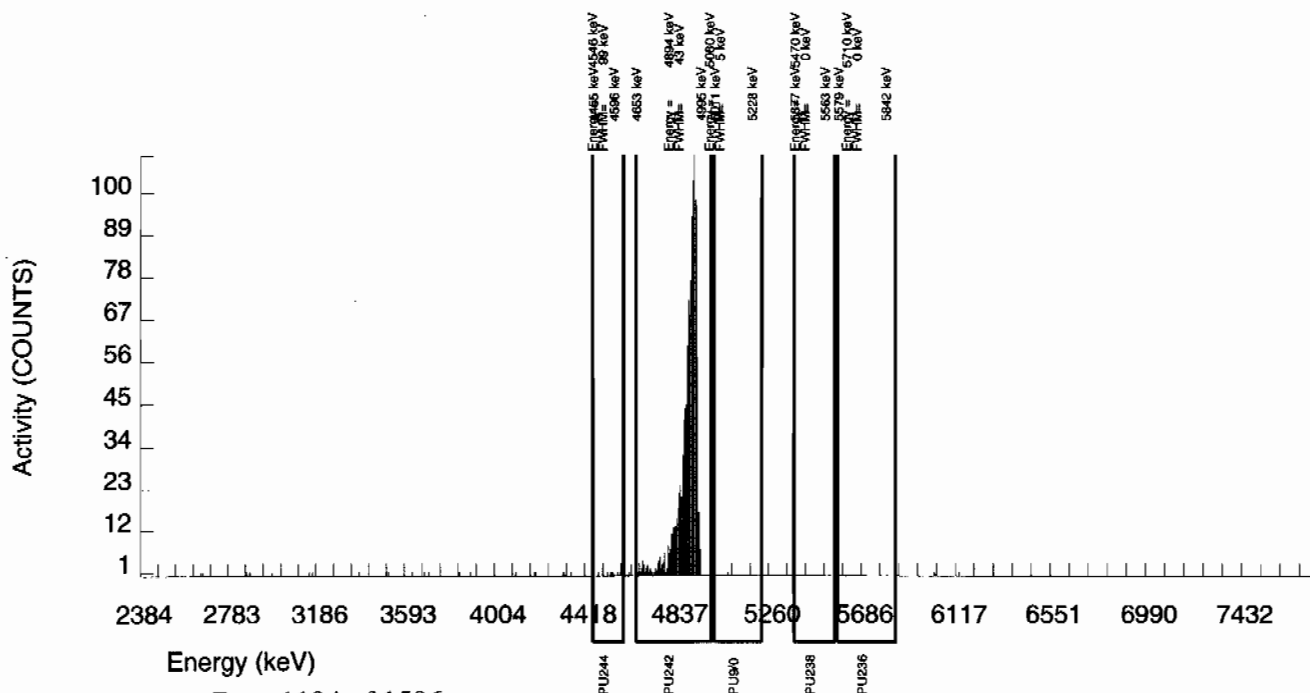
TRACER
ID : 1374-A
ISOTOPE : PU242
NOMINAL : 3.38543 dpm
RESULTS : 3.25706 dpm

LIB FILE : ENV_ALPHA_PU.N
BKG FILE : B226.CNF;70
BKG DATE : 17-JAN-2010
EFF FILE : W226.CNF;24
CAL DATE : 28-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
PU-9/0	5155.000	1.000	1.000	0.000	3.4797	99.90000	1.26E-03	1.26E-03	1.02E-02	2.37E-02	1.26E-03
PU-236	5749.000	0.000	0.000	0.000	2.1286	100.0000	0.00E+00	1.26E-03	6.21E-03	1.58E-02	1.26E-03
PU-238	5499.000	0.000	-1.000	1.000	2.9680	99.90000	-1.26E-03	1.78E-03	8.67E-03	2.07E-02	1.78E-03
PU242	4890.000	1216.000	1216.000	0.000	0.0000	100.0000	1.52E+00	8.64E-02	0.00E+00	3.40E-03	4.37E-02
PU-244	4589.000	7.000	7.000	0.000	5.2050	99.90000	8.79E-03	3.35E-03	1.52E-02	3.38E-02	3.32E-03

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)



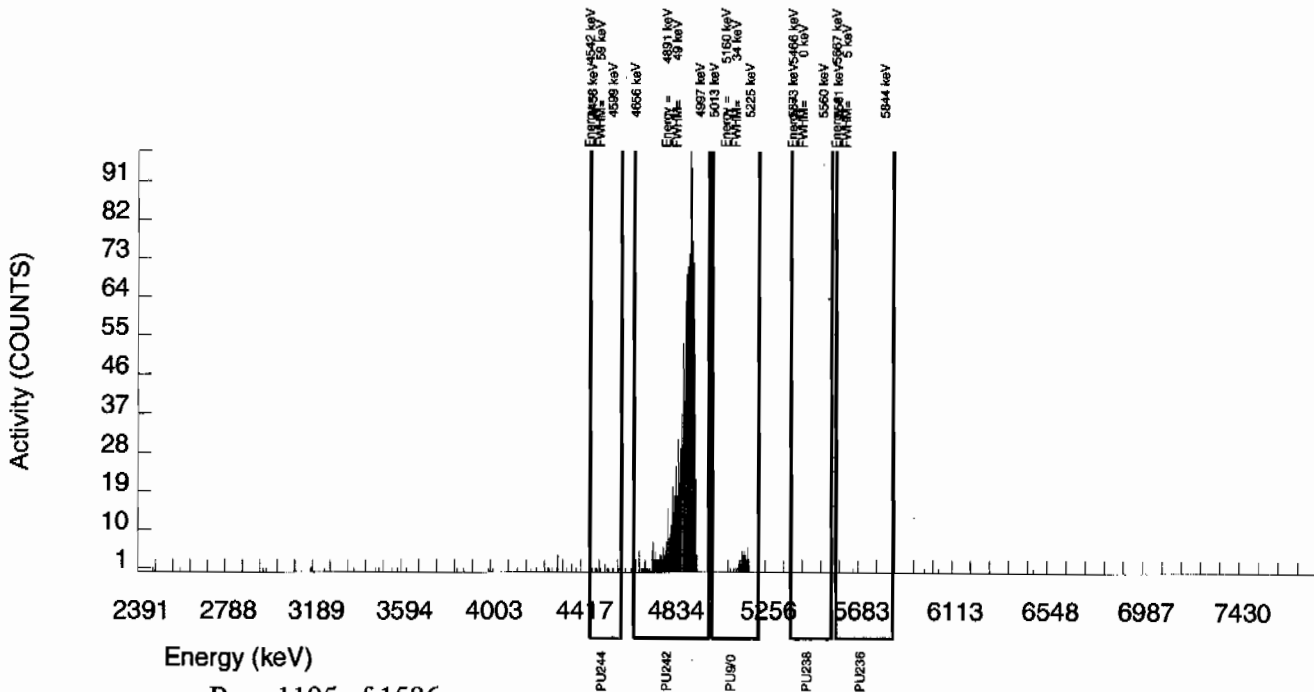
GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 941690 SAMPLE DATE : 8-JAN-2010 00:00:00.		SAMPLE ID : S1202015552_PU SAMPLE QTY: 1.256 G	
DETECTOR NUMBER :79420 AVERAGE %EFFICIENCY :38.4824 % YIELD : 85.739		COUNT DATE:21-JAN-2010 17:00:09 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :KXM4	
MS/MSD ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 4.178E+01	LCS/LCSD ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 4.178E+01	TRACER ID : 1374-A ISOTOPE : PU242 NOMINAL : 3.38543 dpm RESULTS : 2.90262 dpm	LIB FILE : ENV_ALPHA_PU.N BKG FILE : B227.CNF;70 BKG DATE : 17-JAN-2010 EFF FILE : W227.CNF;24 CAL DATE : 28-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
PU-9/0	5155.000	39.000	38.000	1.000	3.4797	99.90000	4.13E-02	7.18E-03	8.81E-03	2.06E-02	6.88E-03
PU-236	5749.000	1.000	-1.000	2.000	2.1286	100.0000	-1.10E-03	1.90E-03	5.38E-03	1.37E-02	1.90E-03
PU-238	5499.000	0.000	0.000	0.000	2.9680	99.90000	0.00E+00	1.09E-03	7.51E-03	1.80E-02	1.09E-03
PU242	4890.000	1118.000	1117.000	1.000	1.0000	100.0000	1.21E+00	7.03E-02	2.53E-03	8.00E-03	3.64E-02
PU-244	4589.000	13.000	13.000	0.000	5.2050	99.90000	1.41E-02	3.99E-03	1.32E-02	2.93E-02	3.92E-03

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 941690
SAMPLE DATE : 19-JAN-2010 00:00:00

SAMPLE ID : S1202015553_PU
SAMPLE QTY: 0.105 G

DETECTOR NUMBER :79421
AVERAGE %EFFICIENCY :36.8770
% YIELD : 78.738

COUNT DATE:21-JAN-2010 17:00:12
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :KXM4

MS/MSD
ID : 0244-B
ISOTOPE : PU-9/0
PCI/G : 4.178E+01

LCS/LCSD
ID : 0244-B
ISOTOPE : PU-9/0
PCI/G : 4.178E+01

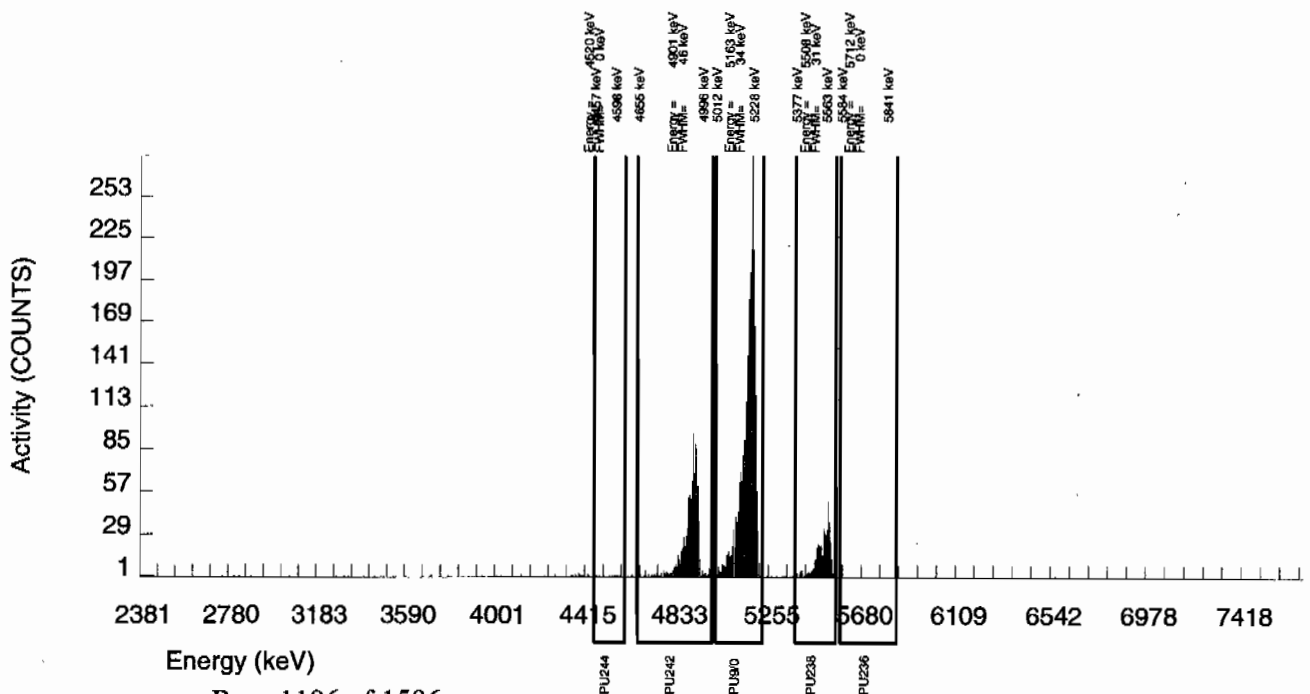
TRACER
ID : 1374-A
ISOTOPE : PU242
NOMINAL : 3.38543 dpm
RESULTS : 2.66562 dpm

LIB FILE : ENV_ALPHA_PU.N
BKG FILE : B228.CNF;70
BKG DATE : 17-JAN-2010
EFF FILE : W228.CNF;24
CAL DATE : 28-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
PU-9/0	5155.000	2536.000	2536.000	0.000	3.4797	99.90000	3.75E+01	2.35E+00	1.20E-01	2.80E-01	7.45E-01
PU-236	5749.000	0.000	0.000	0.000	2.1286	100.0000	0.00E+00	1.48E-02	7.32E-02	1.86E-01	1.48E-02
PU-238	5499.000	449.000	448.000	1.000	2.9680	99.90000	6.63E+00	5.03E-01	1.02E-01	2.44E-01	3.14E-01
PU242	4890.000	984.000	983.000	1.000	1.0000	100.0000	1.45E+01	9.79E-01	3.44E-02	1.09E-01	4.64E-01
PU-244	4589.000	16.000	16.000	0.000	5.2050	99.90000	2.37E-01	6.08E-02	1.79E-01	3.98E-01	5.92E-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#

941691

Product:

J

Date:

1/26/10

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to 100 mg for GAB.			N/A
Samples have been blank corrected (if required)	✓		
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits.	✓		
Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%.	✓		
Or meets the client's required RER acceptance criteria.			
Tracer yield is 15-125% . Carrier yield 25-125%.	✓		Case narrative
Or meets the client's contract acceptance criteria.			
Method blank is less than the RDL/ LLD.	✓		
(If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.			N/A
Smears Taken for Radioactive batches.			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 stated.	✓		
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:

Jae L. M. 1- 1/26/10

Secondary Review Performed By:

Jae L. M. 1/26/10

1/24 2/3

LANL

Uranium Que Sheet

14-JAN-10

Batch #: 941691 Analyst: KXM4 First Client Due Date: 03-FEB-10 Internal Due Date: 24-JAN-10
 Tracer Isotope: U-238 Tracer Code: 1283-H Expiration Date: 12-9-10 Vol: 0.61
 LCS Isotope: U-238 LCS Code: 0244-A Expiration Date: 10-31-10 Vol: 0.13
 Spike Isotope: U-238 Spike Code: NA Expiration Date: NA Vol: 1.1A
 Prep Date: 1-19-10 Initials: YH Pipet ID: 297058 Balance ID: 50410272

Witness: AKS 1/19/10

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry Aliquot (g/l/f)	U Det #
244604001-1	RE12-10-7257	SAMPLE		.1 pCi/g	SOIL	LANL010	08-JAN-10	1	1	0.504	149
244604002-1	RE12-10-7256	SAMPLE		.1 pCi/g	SOIL	LANL010	08-JAN-10	2	2	0.507	151
244606002-1	RE16-10-1525	SAMPLE		.1 pCi/g	SOIL	LANL010	07-JAN-10	3	3	0.515	153
244606003-1	RE16-10-1547	SAMPLE		.1 pCi/g	SOIL	LANL010	07-JAN-10	4	4	0.513	155
244606004-1	RE16-10-1527	SAMPLE		.1 pCi/g	SOIL	LANL010	07-JAN-10	5	5	0.504	157
244606005-1	RE16-10-1515	SAMPLE		.1 pCi/g	SOIL	LANL010	07-JAN-10	6	6	0.518	159
244606006-1	RE16-10-1523	SAMPLE		.1 pCi/g	SOIL	LANL010	07-JAN-10	7	7	0.518	150
244606007-1	RE16-10-1519	SAMPLE		.1 pCi/g	SOIL	LANL010	07-JAN-10	8	8	0.510	152
244606008-1	RE16-10-1517	SAMPLE		.1 pCi/g	SOIL	LANL010	07-JAN-10	9	9	0.509	154
244606009-1	RE16-10-1521	SAMPLE		.1 pCi/g	SOIL	LANL010	07-JAN-10	10	10	0.508	156
244619001-1	RE16-10-2926	SAMPLE		.1 pCi/g	SOIL	LANL010	07-JAN-10	11	11	0.509	158
244619002-1	RE16-10-2932	SAMPLE		.1 pCi/g	SOIL	LANL010	07-JAN-10	12	12	0.508	160
244619003-1	RE16-10-2924	SAMPLE		.1 pCi/g	SOIL	LANL010	07-JAN-10	13	13	0.510	162
244619004-1	RE16-10-2924	SAMPLE		.1 pCi/g	SOIL	LANL010	07-JAN-10	14	14	0.506	163
244619005-1	RE16-10-2928	SAMPLE		.1 pCi/g	SOIL	LANL010	07-JAN-10	15	15	0.519	172
1202015554-1	MB for batch 941691	MB		.1 pCi/g	SOIL	QC ACCOUNT		16	16	0.519	160
1202015555-1	RE12-10-7256(244604002DUP)	DUP		.1 pCi/g	SOIL	QC ACCOUNT		17	17	0.512	8
1202015556-1	LCS for batch 941691	LCS		.1 pCi/g	SOIL	QC ACCOUNT		18	18	0.109	10

Choose SOP used: GL-RAD-A-011

Solid Sample Dissolution by: LEACH or DIGESTION

Circle One

Data Reviewed By: JRM 1/26/10

Blank Correction Report

Batch ID 941691

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1202015555	DUP	Uranium-233/234	0.512 g	1.50	0.126	0.099	-0.0006875	pCi/g	NO
		Uranium-235/236	0.512 g	0.107	0.0225	0.0615	0	pCi/g	NO
		Uranium-238	0.512 g	2.32	0.184	0.0574	-0.00332031	pCi/g	NO
1202015556	LGS	Uranium-233/234	0.109 g	5.97	0.525	0.391	-0.00322936	pCi/g	NO
		Uranium-235/236	0.109 g	0.234	0.0666	0.243	0	pCi/g	NO
		Uranium-238	0.109 g	5.36	0.478	0.227	-0.01559633	pCi/g	NO
1202015554	MB	Uranium-233/234	1.00 g	-0.000352	0.00241	0.0527	-0.000352	pCi/g	NO
		Uranium-235/236	1.00 g	0.00	0.00211	0.0327	0	pCi/g	NO
		Uranium-238	1.00 g	-0.0017	0.00295	0.0306	-0.0017	pCi/g	NO
244604001	RE12-10-7257	Uranium-233/234	0.504 g	0.728	0.0786	0.142	-0.00069841	pCi/g	NO
		Uranium-235/236	0.504 g	0.0622	0.0224	0.0881	0	pCi/g	NO
		Uranium-238	0.504 g	0.796	0.0839	0.0823	-0.00337302	pCi/g	NO
244604002	RE12-10-7256	Uranium-233/234	0.507 g	1.33	0.119	0.122	-0.00069428	pCi/g	NO
		Uranium-235/236	0.507 g	0.0389	0.014	0.0756	0	pCi/g	NO
		Uranium-238	0.507 g	1.98	0.166	0.0706	-0.00335306	pCi/g	NO
244606002	RE16-10-1525	Uranium-233/234	0.515 g	1.02	0.0966	0.123	-0.00068350	pCi/g	NO
		Uranium-235/236	0.515 g	0.0539	0.0167	0.0762	0	pCi/g	NO
		Uranium-238	0.515 g	1.26	0.115	0.0712	-0.00330097	pCi/g	NO
244606003	RE16-10-1547	Uranium-233/234	0.513 g	0.770	0.0738	0.102	-0.00068616	pCi/g	NO
		Uranium-235/236	0.513 g	0.0327	0.0118	0.0636	0	pCi/g	NO
		Uranium-238	0.513 g	0.787	0.0751	0.0594	-0.00331384	pCi/g	NO
244606004	RE16-10-1527	Uranium-233/234	0.504 g	0.862	0.0844	0.121	-0.00069841	pCi/g	NO
		Uranium-235/236	0.504 g	0.0194	0.00978	0.0754	0	pCi/g	NO
		Uranium-238	0.504 g	0.858	0.0843	0.0704	-0.00337302	pCi/g	NO
244606005	RE16-10-1515	Uranium-233/234	0.518 g	0.680	0.0685	0.107	-0.00067954	pCi/g	NO
		Uranium-235/236	0.518 g	0.0555	0.017	0.0665	0	pCi/g	NO
		Uranium-238	0.518 g	0.816	0.0784	0.0621	-0.00328185	pCi/g	NO
244606006	RE16-10-1523	Uranium-233/234	0.518 g	0.713	0.0709	0.108	-0.00067954	pCi/g	NO
		Uranium-235/236	0.518 g	0.0387	0.0132	0.067	0	pCi/g	NO
		Uranium-238	0.518 g	0.748	0.0733	0.0626	-0.00328185	pCi/g	NO
244606007	RE16-10-1519	Uranium-233/234	0.510 g	0.899	0.0872	0.121	-0.00069020	pCi/g	NO
		Uranium-235/236	0.510 g	0.0677	0.0187	0.0752	0	pCi/g	NO
		Uranium-238	0.510 g	0.805	0.0804	0.0703	-0.00333333	pCi/g	NO
244606008	RE16-10-1517	Uranium-233/234	0.509 g	0.772	0.077	0.117	-0.00069155	pCi/g	NO
		Uranium-235/236	0.509 g	0.0281	0.0116	0.0729	0	pCi/g	NO
		Uranium-238	0.509 g	0.909	0.0873	0.0681	-0.00333988	pCi/g	NO
244606009	RE16-10-1521	Uranium-233/234	0.508 g	0.736	0.0732	0.112	-0.00069291	pCi/g	NO
		Uranium-235/236	0.508 g	0.0446	0.0145	0.0695	0	pCi/g	NO
		Uranium-238	0.508 g	0.693	0.0701	0.0649	-0.00334646	pCi/g	NO
244619001	RE16-10-2926	Uranium-233/234	0.509 g	0.338	0.0425	0.109	-0.00069155	pCi/g	NO
		Uranium-235/236	0.509 g	0.00872	0.00619	0.0678	0	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
244619001	RE16-10-2926	Uranium-238	0.509 g	0.367	0.0446	0.0634	-.00333988	pCi/g	NO
244619002	RE16-10-2932	Uranium-233/234	0.508 g	0.467	0.0553	0.127	-.00069291	pCi/g	NO
		Uranium-235/236	0.508 g	0.0253	0.0115	0.0788	0	pCi/g	NO
		Uranium-238	0.508 g	0.655	0.0698	0.0736	-.00334646	pCi/g	NO
244619004	RE16-10-2924	Uranium-233/234	0.506 g	0.407	0.0421	0.0759	-.00069565	pCi/g	NO
		Uranium-235/236	0.506 g	0.0454	0.0121	0.0471	0	pCi/g	NO
		Uranium-238	0.506 g	0.568	0.0539	0.044	-.00335968	pCi/g	NO
244619005	RE16-10-2928	Uranium-233/234	0.519 g	0.558	0.0521	0.070	-.00067823	pCi/g	NO
		Uranium-235/236	0.519 g	0.0251	0.00855	0.0434	0	pCi/g	NO
		Uranium-238	0.519 g	0.528	0.050	0.0406	-.00327553	pCi/g	NO

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 941691 SAMPLE DATE : 8-JAN-2010 00:00:00.		SAMPLE ID : S0244604001_UU SAMPLE QTY: 0.504 G	
DETECTOR NUMBER :33449 AVERAGE %EFFICIENCY :24.3144 % YIELD : 80.308		COUNT DATE:23-JAN-2010 11:16:57 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :KXM4	
MS/MSD ID : 0244-A ISOTOPE : U-238 PCI/G : 5.750E+00	LCS/LCSD ID : 0244-A ISOTOPE : U-238 PCI/G : 5.750E+00	TRACER ID : 1283-H ISOTOPE : U232 NOMINAL : 4.50865 dpm RESULTS : 3.62082 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B149.CNF;393 BKG DATE : 17-JAN-2010 EFF FILE : W149.CNF;112 CAL DATE : 18-JAN-2010

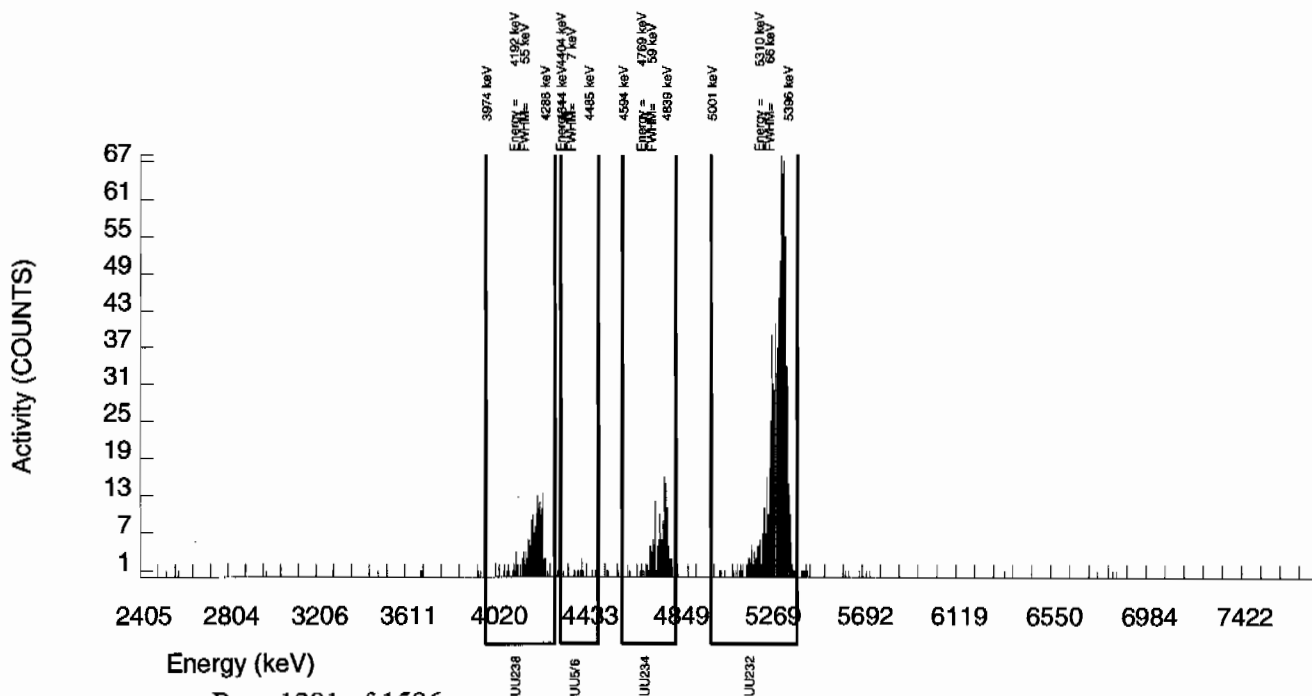
NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	162.000	159.110	2.000	6.0782	100.0000	7.28E-01	7.86E-02	6.47E-02	1.42E-01	5.85E-02
U232	5302.100	883.000	880.000	3.000	1.7321	100.0000	4.03E+00	3.21E-01	1.84E-02	4.93E-02	1.36E-01
U-235	4391.000	13.000	11.000	2.000	2.7628	80.90000	6.22E-02	2.24E-02	3.64E-02	8.81E-02	2.19E-02
U-238	4184.730	176.000	174.000	2.000	3.2810	100.0000	7.96E-01	8.39E-02	3.49E-02	8.23E-02	6.11E-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



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 941691
SAMPLE DATE : 8-JAN-2010 00:00:00.

SAMPLE ID : S0244604002_UU
SAMPLE QTY: 0.507 G

DETECTOR NUMBER :75556
AVERAGE %EFFICIENCY :24.3876
% YIELD : 92.714

COUNT DATE:23-JAN-2010 11:17:05
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :KXM4

MS/MSD
ID : 0244-A
ISOTOPE : U-238
PCI/G : 5.750E+00

LCS/LCSD
ID : 0244-A
ISOTOPE : U-238
PCI/G : 5.750E+00

TRACER
ID : 1283-H
ISOTOPE : U232
NOMINAL : 4.50865 dpm
RESULTS : 4.18016 dpm

LIB FILE : ENV_ALPHA_UU.N
BKG FILE : B151.CNF;389
BKG DATE : 17-JAN-2010
EFF FILE : W151.CNF;118
CAL DATE : 18-JAN-2010

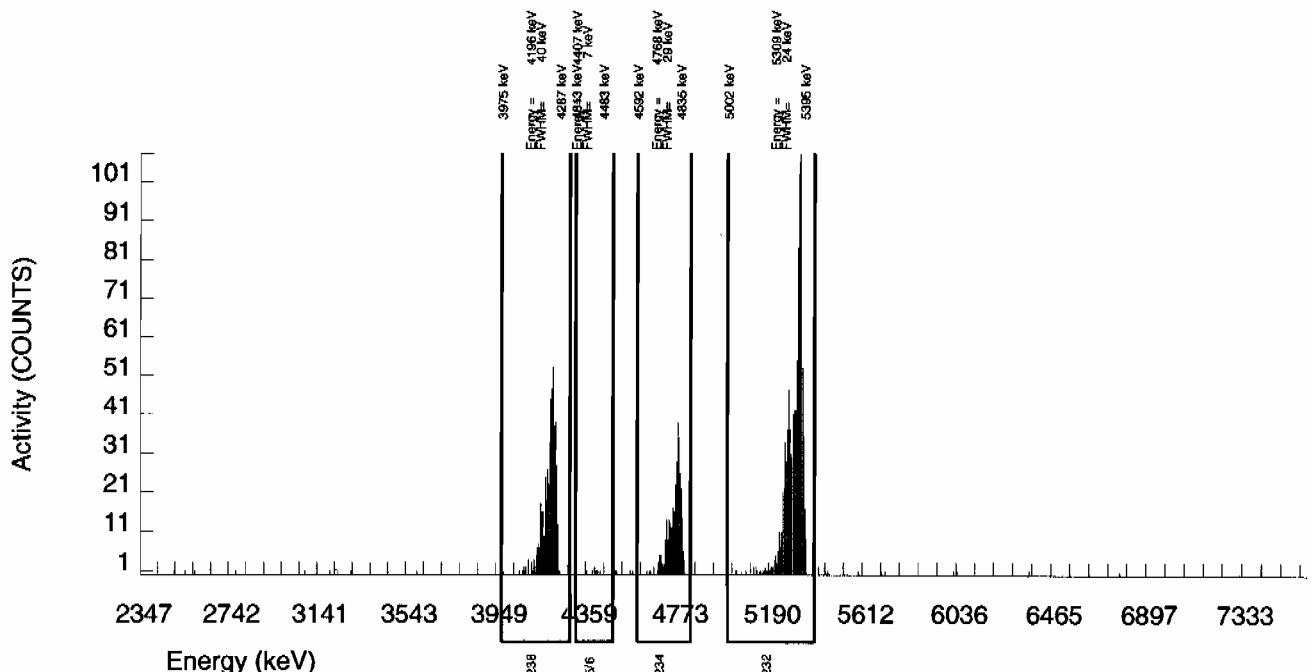
NUCLIDE ACTIVITY SUMMARY

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	342.000	338.969	2.000	6.0782	100.0000	1.33E+00	1.19E-01	5.56E-02	1.22E-01	7.28E-02
U232	5302.100	1024.000	1019.000	5.000	2.2361	100.0000	4.01E+00	3.12E-01	2.04E-02	5.15E-02	1.26E-01
U-235	4391.000	8.000	8.000	0.000	2.7628	80.90000	3.89E-02	1.40E-02	3.12E-02	7.56E-02	1.37E-02
U-238	4184.730	505.000	505.000	0.000	3.2810	100.0000	1.98E+00	1.66E-01	3.00E-02	7.06E-02	8.83E-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



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 941691 SAMPLE DATE : 19-JAN-2010 00:00:00		SAMPLE ID : S1202015554_UU SAMPLE QTY: 1.000 G	
DETECTOR NUMBER :79994 AVERAGE %EFFICIENCY :24.5767 % YIELD : 107.717		COUNT DATE:25-JAN-2010 17:13:18 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :KXM4	
MS/MSD ID : 0244-A ISOTOPE : U-238 PCI/G : 5.750E+00	LCS/LCSD ID : 0244-A ISOTOPE : U-238 PCI/G : 5.750E+00	TRACER ID : 1283-H ISOTOPE : U232 NOMINAL : 4.50729 dpm RESULTS : 4.85513 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B160.CNF;369 BKG DATE : 24-JAN-2010 EFF FILE : W160.CNF;116 CAL DATE : 18-JAN-2010

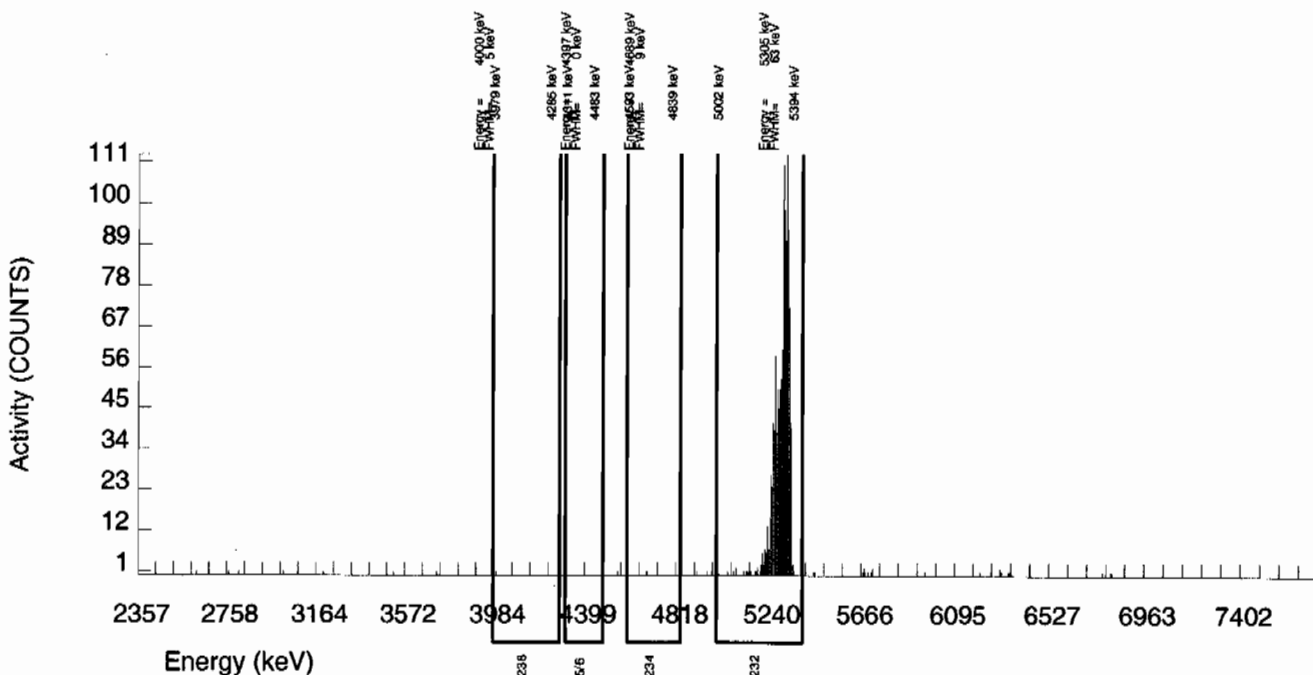
NUCLIDE ACTIVITY SUMMARY

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	2.000	-0.207	1.000	6.0782	100.0000	-3.52E-04	2.41E-03	2.41E-02	5.27E-02	2.41E-03
U232	5302.100	1194.000	1193.000	1.000	1.0000	100.0000	2.03E+00	1.54E-01	3.96E-03	1.25E-02	5.88E-02
U-235	4391.000	0.000	0.000	0.000	2.7628	80.90000	0.00E+00	2.11E-03	1.35E-02	3.27E-02	2.10E-03
U-238	4184.730	1.000	-1.000	2.000	3.2810	100.0000	-1.70E-03	2.95E-03	1.30E-02	3.06E-02	2.95E-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



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 941691 SAMPLE DATE : 8-JAN-2010 00:00:00.		SAMPLE ID : S1202015555_UU SAMPLE QTY: 0.512 G	
DETECTOR NUMBER :78788 AVERAGE %EFFICIENCY :31.9627 % YIELD : 86.151		COUNT DATE:22-JAN-2010 14:32:52 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :KXM4	
MS/MSD ID : 0244-A ISOTOPE : U-238 PCI/G : 5.750E+00	LCS/LCSD ID : 0244-A ISOTOPE : U-238 PCI/G : 5.750E+00	TRACER ID : 1283-H ISOTOPE : U232 NOMINAL : 4.50865 dpm RESULTS : 3.88425 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B008.CNF;1105 BKG DATE : 17-JAN-2010 EFF FILE : W008.CNF;341 CAL DATE : 4-JAN-2010

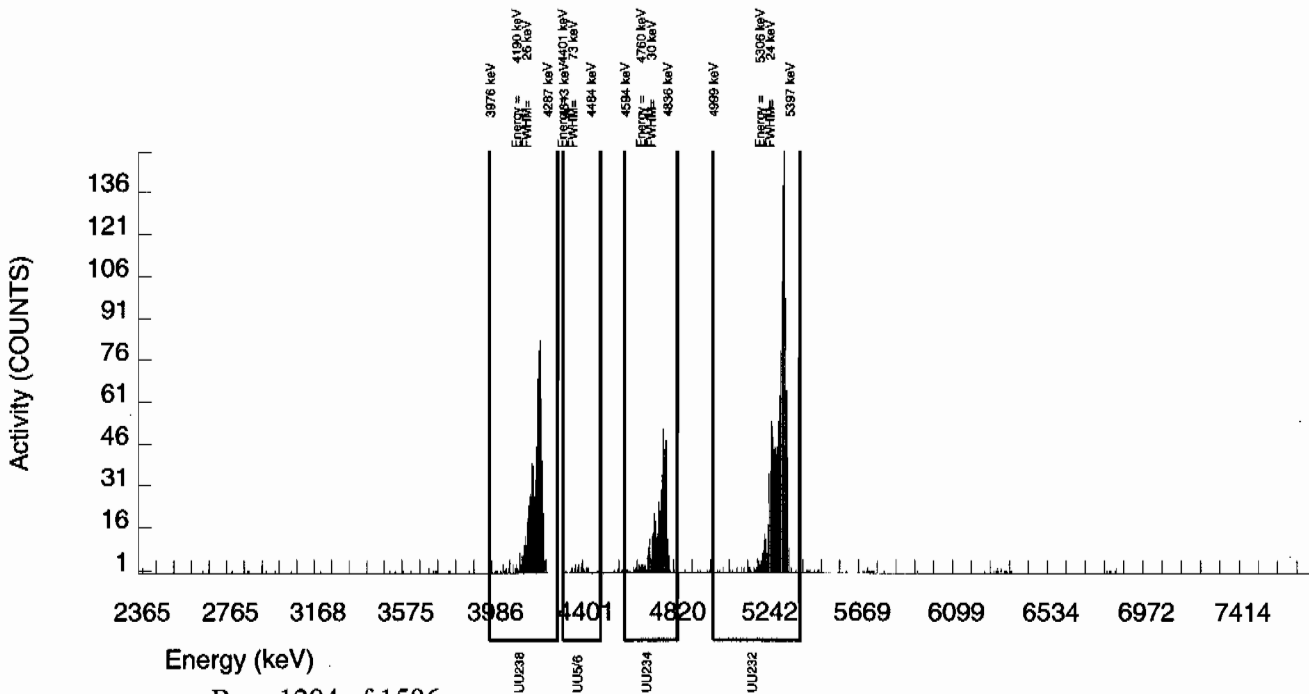
NUCLIDE ACTIVITY SUMMARY

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
U-3/4	4763.020	472.000	470.745	0.000	6.0782	100.0000	1.50E+00	1.26E-01	4.52E-02	9.90E-02	6.93E-02
U232	5302.100	1245.000	1241.000	4.000	2.0000	100.0000	3.97E+00	2.99E-01	1.49E-02	3.84E-02	1.13E-01
U-235	4391.000	28.000	27.000	1.000	2.7628	80.90000	1.07E-01	2.25E-02	2.54E-02	6.15E-02	2.13E-02
U-238	4184.730	729.000	727.000	2.000	3.2810	100.0000	2.32E+00	1.84E-01	2.44E-02	5.74E-02	8.64E-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



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 941691 SAMPLE DATE : 19-JAN-2010 00:00:00		SAMPLE ID : S1202015556_UU SAMPLE QTY: 0.109 G	
DETECTOR NUMBER :72529 AVERAGE %EFFICIENCY :31.4316 % YIELD : 104.267		COUNT DATE:22-JAN-2010 14:32:52 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :KXM4	
MS/MSD ID : 0244-A ISOTOPE : U-238 PCI/G : 5.750E+00	LCS/LCSD ID : 0244-A ISOTOPE : U-238 PCI/G : 5.750E+00	TRACER ID : 1283-H ISOTOPE : U232 NOMINAL : 4.50729 dpm RESULTS : 4.69961 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B010.CNF;1114 BKG DATE : 17-JAN-2010 EFF FILE : W010.CNF;333 CAL DATE : 4-JAN-2010

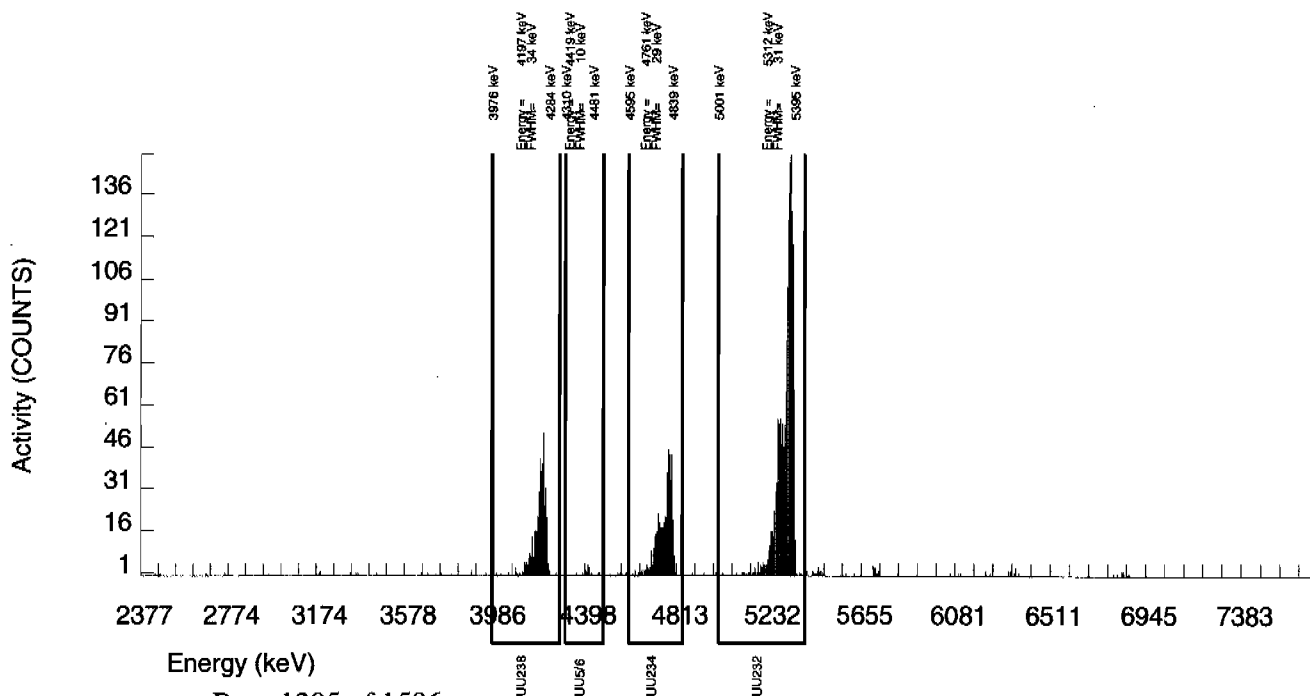
NUCLIDE ACTIVITY SUMMARY

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
U-3/4	4763.020	478.000	473.506	3.000	6.0782	100.0000	5.97E+00	5.25E-01	1.78E-01	3.91E-01	2.76E-01
U232	5302.100	1481.000	1477.000	4.000	2.0000	100.0000	1.86E+01	1.47E+00	5.87E-02	1.52E-01	4.86E-01
U-235	4391.000	16.000	15.000	1.000	2.7628	80.90000	2.34E-01	6.66E-02	1.00E-01	2.43E-01	6.43E-02
U-238	4184.730	426.000	425.000	1.000	3.2810	100.0000	5.36E+00	4.78E-01	9.62E-02	2.27E-01	2.61E-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#

941636

Product:

XS/LANL

Date:

1/26/10

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to 100 mg for GAB.			NA
Samples have been blank corrected (if required)			NA
If activity less 10% MDA/ MDC, error is 150% or less of sample activity; If greater 10% MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits.			
Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met			
If duplicate activities are less 5% MDA/ MDC, then RPD is 100% or less. If greater 5% MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%.	✓		
Or meets the client's required RER acceptance criteria.			
Tracer yield is 15-125% . Carrier yield 25-125%.			NA
Or meets the client's contract acceptance criteria.			
Method blank is less than the RDL/ LLD.	✓		
(If rad samples, < 5% of lowest activity)			
Sample was run within hold time.	✓		
Sample was correctly preserved if required.	✓		
Smears Taken for Radioactive batches.			NA
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.			NA
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
OC data entered into OC database and/ batch is in REVW	✓		
Hit notification complete (if necessary)			NA
Batch entered into Case Narrative.	✓		
Batch Data Exception Reports (DER) completed, if applicable.			NA
Batch Data Exception Reports (DER) second reviewed and disposition verified to be completed.			NA
Aliquot Correction completed if required.			NA
Review sample historical results if available (if REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

RADchecklistrev10, revised 1/13/2010

Primary Review Performed By:

L. L. Perry 1/26/10

Secondary Review Performed By:

J. E. Anderson 1/27/10

Gamma Spec Que Sheet 1.g. - 1/25/10

01/18/2010

Batch #: 941636 Analyst: MXR1 First Client Due Date: 02/03/2010 Internal Due Date: 01/24/2010

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: 2.5e7
 Initials: MS Prep Date: 1/18/10 Library: SOLID Witness: n/a
 Wet/Dry: Wet

Sample ID	Client Description / Container ID	Hazard Code	Type	Client	Matrix	Collect Date	Geometry	Detector	Sealing Date/Time (if Applicable)
244604001-1	RE12-10-7257	LANL010	SAMPLE	LANL010	SOIL	08-JAN-10 12:00:00	CAV	1	1/15/10
244604002-1	RE12-10-7256	LANL010	SAMPLE	LANL010	SOIL	08-JAN-10 12:00:00	RF	2	
244606002-1	RE16-10-1525	LANL010	SAMPLE	LANL010	SOIL	07-JAN-10 12:00:00	RF	4	
244606003-1	RE16-10-1547	LANL010	SAMPLE	LANL010	SOIL	07-JAN-10 12:00:00	RF	6	
244606004-1	RE16-10-1527	LANL010	SAMPLE	LANL010	SOIL	07-JAN-10 12:00:00	RF	7	
244606005-1	RE16-10-1515	LANL010	SAMPLE	LANL010	SOIL	07-JAN-10 12:00:00	RF	22	
244606006-1	RE16-10-1523	LANL010	SAMPLE	LANL010	SOIL	07-JAN-10 12:00:00	RF	13	
244606007-1	RE16-10-1519	LANL010	SAMPLE	LANL010	SOIL	07-JAN-10 12:00:00	RF	16	
244606008-1	RE16-10-1517	LANL010	SAMPLE	LANL010	SOIL	07-JAN-10 12:00:00	RF	25	1/18/10
244606009-1	RE16-10-1521	LANL010	SAMPLE	LANL010	SOIL	07-JAN-10 12:00:00	RF	15	1/15/10
244619001-1	RE16-10-2926	LANL010	SAMPLE	LANL010	SOIL	07-JAN-10 12:00:00	RF	23	
244619002-1	RE16-10-2932	LANL010	SAMPLE	LANL010	SOIL	07-JAN-10 12:00:00	RF	1	
244619003-1	RE16-10-2930	LANL010	SAMPLE	LANL010	SOIL	07-JAN-10 12:00:00	RF	2	
244619004-1	RE16-10-2924	LANL010	SAMPLE	LANL010	SOIL	07-JAN-10 12:00:00	RF	4	
244619005-1	RE16-10-2928	LANL010	SAMPLE	LANL010	SOIL	07-JAN-10 12:00:00	RF	7	
1202015438-1	MB	QC ACCOUNT	MB	QC ACCOUNT	QC ACCOUNT	1/18/10	RF	22	1/18/10
1202015439-1	DUP RE16-10-1547(244606003)	QC ACCOUNT	DUP	QC ACCOUNT	QC ACCOUNT	1/18/10	RF	13	1/15/10
1202015440-1	LCS	QC ACCOUNT	LCS	QC ACCOUNT	QC ACCOUNT	1/18/10	RF	15	1/18/10

Data Reviewed By: [Signature] 1/26/10
[Signature] 1/27/10
 Page 1 of 1

Failed RDL Report

Batch Id	Samp Id	Sample Type	Run Date	YIELD	Parmname	Result	MDA	RDL
941636	244604001	SAMPLE	25-JAN-10		Americium-241	0.02927	0.2882	0.200
					Cerium-139	-0.02303	0.05276	0.050
					Thorium-234	1.47	2.405	2.00
941636	244604002	SAMPLE	25-JAN-10		Americium-241	0.1068	0.3254	0.200
					Cerium-139	-0.02189	0.05207	0.050
					Thorium-234	1.683	2.429	2.00
941636	244606002	SAMPLE	25-JAN-10		Americium-241	0.1034	0.3973	0.200
					Cerium-139	0.01378	0.05051	0.050
					Thorium-234	1.839	3.22	2.00
941636	244606003	SAMPLE	25-JAN-10		Americium-241	0.1396	0.2965	0.200
					Thorium-234	1.135	2.376	2.00
941636	244606004	SAMPLE	25-JAN-10					
941636	244606005	SAMPLE	25-JAN-10					
941636	244606006	SAMPLE	25-JAN-10		Cesium-134	0.04044	0.1045	0.100
					Sodium-22	0.0039	0.09175	0.080
941636	244606007	SAMPLE	25-JAN-10					
941636	244606008	SAMPLE	25-JAN-10					
941636	244606009	SAMPLE	25-JAN-10		Americium-241	-0.07076	0.4554	0.200
					Cerium-139	-0.01474	0.05225	0.050
					Thorium-234	-0.06727	3.522	2.00
941636	244619001	SAMPLE	25-JAN-10		Americium-241	-0.2248	0.333	0.200
					Cerium-139	-0.0197	0.05001	0.050
					Cesium-134	0.05458	0.1039	0.100
					Sodium-22	0.00699	0.09475	0.080
					Thorium-234	0.9368	2.854	2.00
941636	244619002	SAMPLE	25-JAN-10		Americium-241	-0.011	0.2765	0.200
					Cerium-139	-0.03632	0.05122	0.050
					Sodium-22	0.02185	0.08859	0.080
					Thorium-234	0.7123	2.191	2.00
941636	244619003	SAMPLE	25-JAN-10		Americium-241	0.09253	0.2966	0.200
					Cerium-139	-0.01228	0.05064	0.050
					Thorium-234	0.2243	2.225	2.00
941636	244619004	SAMPLE	25-JAN-10		Americium-241	0.00253	0.3653	0.200
					Sodium-22	0.02281	0.08105	0.080
					Thorium-234	-0.5184	2.766	2.00
941636	244619005	SAMPLE	25-JAN-10		Sodium-22	-0.00173	0.08148	0.080
941636	1202015438	MB	25-JAN-10					
941636	1202015439	DUP	25-JAN-10					
941636	1202015440	LCS	25-JAN-10		Cerium-139	0.00892	0.06678	0.050
					Cesium-134	0.02465	0.1301	0.100
					Europium-152	0.02493	0.2576	0.200
					Potassium-40	0.5965	1.073	1.00
					Ruthenium-106	0.1951	0.8753	0.800

Failed RDL Report

Batch Id	Samp Id	Sample Type	Run Date	YIELD	Parmname	Result	MDA	RDL
941636	1202015440	LCS	25-JAN-10		Thorium-234	2.117	3.043	2.00
					Tin-113	-0.07859	0.1145	0.100
					Uranium-235	0.2846	0.5074	0.500

GEL QUALS

Batch ID: 941636

Report run on: January 26, 2010 5:30 PM

Samp Id	Parname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
244604001-1 25-JAN-2010 08:38	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.492			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.311			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1353		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.859			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1123			
244604002-1 25-JAN-2010 08:38	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.205			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.339			
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.348			
244605002-1 25-JAN-2010 08:39	Bismuth-211	UI	UI	UI	Data rejected due to interference.		2.714			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.288			
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.905			
244606003-1 25-JAN-2010 08:39	Bismuth-211	UI	UI	UI	Data rejected due to interference.		2.84			
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.442			
244606004-1 25-JAN-2010 08:41	Bismuth-211	UI	UI	UI	Data rejected due to interference.		2.845			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.438			
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.939			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.08143			
244606005-1 25-JAN-2010 08:41	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.092			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.741			

GEL QUALS

Batch ID: 941636

Report run on: January 26, 2010 5:30 PM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
244606005-1 25-JAN-2010 08:41	Radium-224	UI	UI	UI	Data rejected due to interference.		3.248			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1366			
244606006-1 25-JAN-2010 09:08	Bismuth-211	UI	UI	UI	Data rejected due to interference.		2.397			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.131			
	Radium-224	UI	UI	UI	Data rejected due to low abundance.		3.696			
244606007-1 25-JAN-2010 09:09	Bismuth-211	UI	UI	UI	Data rejected due to interference.		2.632			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.683			
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.562			
244606008-1 25-JAN-2010 09:13	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.002			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.37			
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.256			
244606009-1 25-JAN-2010 09:14	Bismuth-211	UI	UI	UI	Data rejected due to interference.		2.841			
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.093			
244619001-1 25-JAN-2010 09:14	Bismuth-211	UI	UI	UI	Data rejected due to interference.		2.669			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		1.977			
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.044			
244619002-1 25-JAN-2010 10:43	Bismuth-211	UI	UI	UI	Data rejected due to interference.		2.586			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.049			
	Radium-224	UI	UI	UI	Data rejected due to interference.		2.865			

GEL QUALS

Batch ID: 941636

Report run on: January 26, 2010 5:30 PM

Samp Id Parmname CoFa Edd Qual Comments Auto Result MDA Uncert SQL

244619002-1
25-JAN-2010 10:43

244619003-1
25-JAN-2010 10:43

Biernuth-211 UI UI UI Data rejected due to interference. 3.28

Cadmium-109 UI UI UI Data rejected due to interference. 2.745

Radium-224 UI UI UI Data rejected due to interference. 2.266

244619004-1
25-JAN-2010 10:44

Biernuth-211 UI UI UI Data rejected due to interference. 3.217

Cadmium-109 UI UI UI Data rejected due to interference. 3.34

Mercury-203 UI UI UI Data rejected due to high counting uncertainty. .0771 .1

Radium-224 UI UI UI Data rejected due to interference. 2.103

244619005-1
25-JAN-2010 10:47

Biernuth-211 UI UI UI Data rejected due to interference. 2.646

Cadmium-109 UI UI UI Data rejected due to interference. 3.233

Radium-224 UI UI UI Data rejected due to interference. 2.024

1202015438-1 MB
25-JAN-2010 10:47

Strontium-85 UI UI UI Data rejected due to low abundance. .07976

1202015439-1 DUP
25-JAN-2010 11:12

Biernuth-211 UI UI UI Data rejected due to interference. 2.801

Cadmium-109 UI UI UI Data rejected due to interference. 2.329

Cesium-134 UI UI UI Data rejected due to low abundance. .1249 .1

Radium-224 UI UI UI Data rejected due to interference. 3.386

Gamma Review Report based on Result > MDA for Batch:941636

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue		
244604001	08-JAN-10 12:00	25-JAN-10 08:38	16.9	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	1.817	0.1951	pCi/g	0.2461	N	911.5	3 1.625	IDENTIFIED	9.045	<input type="checkbox"/>	
Americium-243	INT	0.4168	0.04631	pCi/g	0.09974	N	74.81	1 1.305	IDENTIFIED	10.3	<input type="checkbox"/>	
Annihilation Rad.		0.2009	0.0363	pCi/g	0.04849	N	511	1 2.069	IDENTIFIED	17.57	<input type="checkbox"/>	
Bismuth-211	INT	4.492	0.3307	pCi/g	0.3474	Y	352.2	4 1.415	IDENTIFIED	5.793	<input checked="" type="checkbox"/>	UI
Bismuth-212	NR	1.589	0.3257	pCi/g	0.5225	N	727.8	1 1.503	IDENTIFIED	19.89	<input type="checkbox"/>	
Bismuth-214	✓	1.176	0.1075	pCi/g	0.1236	0.200	609.6	4 1.34	IDENTIFIED	7.693	<input type="checkbox"/>	
Cadmium-109	INT	3.311	0.4369	pCi/g	1.299	Y	87.26	3 1.248	IDENTIFIED	12.33	<input checked="" type="checkbox"/>	UI
Cerium-143		971.5	223.4	pCi/g	0	N	0	10 0	SHORT_HLIF	0	<input type="checkbox"/>	
Cesium-134	LA	0.1353	0.04184	pCi/g	0.1025	0.100	0	10 0	FAIL_ABUND	0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Gross Gamma		10.41	1.84	pCi/g	4.245	N	0				<input type="checkbox"/>	
Iodine-123		5.92E+07	2.71E+07	pCi/g	0	N	0	10 0	SHORT_HLIF	0	<input type="checkbox"/>	
Iodine-133	HE	733.6	12750	pCi/g	0	N	0	10 0	SHORT_HLIF	0	<input type="checkbox"/>	
Krypton-85	HE	21.5	4.425	pCi/g	15.26	N	0	10 0	NOT_IDENTI	0	<input type="checkbox"/>	
Lead-212	✓	1.802	0.1091	pCi/g	0.1008	0.100	239	4 1.2	IDENTIFIED	3.32	<input type="checkbox"/>	
Lead-214	✓	1.563	0.122	pCi/g	0.1211	0.100	352.2	4 1.415	IDENTIFIED	5.793	<input type="checkbox"/>	
Lutetium-177	HE	3.661	0.9846	pCi/g	2.685	N	0	10 0	FAIL_ABUND	0	<input type="checkbox"/>	
Neptunium-237	INT	0.9533	0.1597	pCi/g	0.4061	N	87.26	3 1.248	IDENTIFIED	12.33	<input type="checkbox"/>	
Polonium-212	NR	1.802	0.1091	pCi/g	0.1008	N	239	4 1.2	IDENTIFIED	3.32	<input type="checkbox"/>	
Polonium-214	NR	1.563	0.122	pCi/g	0.1211	N	352.2	4 1.415	IDENTIFIED	5.793	<input type="checkbox"/>	
Polonium-216	NR	1.802	0.1091	pCi/g	0.1008	N	239	4 1.2	IDENTIFIED	3.32	<input type="checkbox"/>	
Polonium-218	NR	1.563	0.122	pCi/g	0.1211	N	352.2	4 1.415	IDENTIFIED	5.793	<input type="checkbox"/>	
Potassium-40	✓	31.87	1.692	pCi/g	0.4906	1.00	1461	1 2.015	IDENTIFIED	2.904	<input type="checkbox"/>	
Radium-224	INT	4.859	0.7287	pCi/g	1.147	Y	242	1 1.708	IDENTIFIED	14.29	<input checked="" type="checkbox"/>	UI
Radium-226	✓	1.176	0.1075	pCi/g	0.1236	Y	609.6	4 1.34	IDENTIFIED	7.693	<input type="checkbox"/>	
Radium-228	✓	1.817	0.1951	pCi/g	0.2461	0.500	911.5	3 1.625	IDENTIFIED	9.045	<input type="checkbox"/>	
Strontium-85	LA	0.1123	0.02311	pCi/g	0.07968	Y	0	10 0	NOT_IDENTI	0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Thallium-200	HE	62.15	781	pCi/g	0	N	0	10 0	SHORT_HLIF	0	<input type="checkbox"/>	
Thallium-208	✓	0.6019	0.05088	pCi/g	0.05818	0.080	583.5	1 1.245	IDENTIFIED	7.129	<input type="checkbox"/>	
Thorium-228	NR	1.832	0.1109	pCi/g	0.1025	N	239	4 1.2	IDENTIFIED	3.32	<input type="checkbox"/>	
Thorium-230	NR	1.176	0.1074	pCi/g	0.1236	N	609.6	4 1.34	IDENTIFIED	7.693	<input type="checkbox"/>	
Thorium-232	NR	1.817	0.1951	pCi/g	0.2461	N	911.5	3 1.625	IDENTIFIED	9.045	<input type="checkbox"/>	
Tin-126	INT	0.3246	0.04283	pCi/g	0.128	N	87.26	3 1.248	IDENTIFIED	12.33	<input type="checkbox"/>	
Titanium-44	LA	0.4522	0.03556	pCi/g	0.09069	N	0	10 0	FAIL_ABUND	0	<input type="checkbox"/>	
Total Uranium		4.3936	2.90E-06	ug/g	3.5805	N	0				<input type="checkbox"/>	
Uranium-234	NR	1.176	0.1074	pCi/g	0.1236	N	609.6	4 1.34	IDENTIFIED	7.693	<input type="checkbox"/>	
Zirconium-97		1.46E+07	5.53E+06	pCi/g	0	N	0	10 0	SHORT_HLIF	0	<input type="checkbox"/>	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue	
244604002	08-JAN-10 12:00	25-JAN-10 08:38	16.9	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	1.665	0.2042	pCi/g	0.2261	N	910.7	3 1.95	IDENTIFIED	10.56	<input type="checkbox"/>
Americium-243	INT	0.3281	0.04491	pCi/g	0.09529	N	74.57	1 1.084	IDENTIFIED	12.97	<input type="checkbox"/>
Annihilation Rad.		0.1472	0.03799	pCi/g	0.05219	N	510.7	1 2.151	IDENTIFIED	25.33	<input type="checkbox"/>
Barium-137m	NR	0.2769	0.03785	pCi/g	0.07105	N	661.3	2 1.636	IDENTIFIED	12.97	<input type="checkbox"/>
Bismuth-211	INT	4.205	0.3455	pCi/g	0.3458	Y	351.5	4 1.144	IDENTIFIED	5.858	<input checked="" type="checkbox"/> UI
Bismuth-212	HE	0.724	0.2188	pCi/g	0.6562	N	0	9 0	FAIL_ABUND	0	<input type="checkbox"/>
Bismuth-214	✓	1.12	0.09211	pCi/g	0.1143	0.200	609	4 1.368	IDENTIFIED	6.299	<input type="checkbox"/>
Cadmium-109	INT	3.339	0.5274	pCi/g	1.521	Y	86.96	3 1.315	IDENTIFIED	14.99	<input checked="" type="checkbox"/> UI
Cerium-143		1883	327.8	pCi/g	0	N	0	9 0	SHORT_HLIF	0	<input type="checkbox"/>
Cesium-135	HE	0.4738	0.1237	pCi/g	0.3001	N	269.5	1 0.9667	IDENTIFIED	25.25	<input type="checkbox"/>

Cesium-137	✓	0.2927	0.04002	pCi/g	0.07511	0.100	661.3	2	1.636	IDENTIFIED	12.97	☐
Gross Gamma		9.158	1.478	pCi/g	3.16	N		0				☐
Iodine-133	HE	948.7	13000	pCi/g	0	N	0	9	0	SHORT_HLIF	0	☐
Lead-212	✓	1.563	0.1141	pCi/g	0.09986	0.100	238.4	4	1.039	IDENTIFIED	3.71	☐
Lead-214	✓	1.463	0.1261	pCi/g	0.1205	0.100	351.5	4	1.144	IDENTIFIED	5.858	☐
Latetium-177	HE	4.125	0.9295	pCi/g	2.727	N	0	9	0	FAIL_ABUND	0	☐
Neptunium-237	INT	0.9613	0.1813	pCi/g	0.4367	N	86.96	3	1.315	IDENTIFIED	14.99	☐
Niobium-97		7.01E+05	3.14E+05	pCi/g	0	N	0	9	0	SHORT_HLIF	0	☐
Polonium-212	NR	1.563	0.1141	pCi/g	0.09986	N	238.4	4	1.039	IDENTIFIED	3.71	☐
Polonium-214	NR	1.463	0.1261	pCi/g	0.1205	N	351.5	4	1.144	IDENTIFIED	5.858	☐
Polonium-216	NR	1.563	0.1141	pCi/g	0.09986	N	238.4	4	1.039	IDENTIFIED	3.71	☐
Polonium-218	NR	1.463	0.1261	pCi/g	0.1205	N	351.5	4	1.144	IDENTIFIED	5.858	☐
Potassium-40	NR	27.66	1.603	pCi/g	0.5929	1.00	1460	1	2.245	IDENTIFIED	3.317	☐
Radium-224	INT	4.348	0.7175	pCi/g	1.137	Y	241.3	1	1.722	IDENTIFIED	15.41	☐
Radium-226	✓	1.12	0.09211	pCi/g	0.1143	Y	609	4	1.368	IDENTIFIED	6.299	☐
Radium-228	✓	1.665	0.2042	pCi/g	0.2261	0.500	910.7	3	1.95	IDENTIFIED	10.56	☐
Technetium-99m		1.70E+18	0	pCi/g	0	N	0	9	0	SHORT_HLIF	0	☐
Thallium-200	HE	450	726	pCi/g	0	N	0	9	0	SHORT_HLIF	0	☐
Thallium-208	✓	0.5085	0.05316	pCi/g	0.06078	0.080	582.7	1	1.377	IDENTIFIED	9.174	☐
Thorium-228	NR	1.589	0.1161	pCi/g	0.1016	N	238.4	4	1.039	IDENTIFIED	3.71	☐
Thorium-230	NR	1.12	0.09211	pCi/g	0.1143	N	609	4	1.368	IDENTIFIED	6.299	☐
Thorium-232	NR	1.665	0.2042	pCi/g	0.2261	N	910.7	3	1.95	IDENTIFIED	10.56	☐
Tin-126	NR	0.3274	0.0517	pCi/g	0.15	N	86.96	3	1.315	IDENTIFIED	14.99	☐
Titanium-44	HE	0.09254	0.02065	pCi/g	0.07057	N	0	9	0	NOT_IDENTI	0	☐
Total Uranium		5.0049	3.36E-06	ug/g	3.6161	N		0				☐
Uranium-234	NR	1.12	0.09211	pCi/g	0.1143	N	609	4	1.368	IDENTIFIED	6.299	☐
Zirconium-97		1.27E+07	6.31E+06	pCi/g	0	N	0	9	0	SHORT_HLIF	0	☐

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Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue		
244606002	07-JAN-10 12:00	25-JAN-10 08:39	17.9	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	1.393	0.1408	pCi/g	0.1972	N	911.1	3	1.611	IDENTIFIED	8.509	
Americium-243	INT	0.3061	0.04393	pCi/g	0.1021	N	74.79	1	1.032	IDENTIFIED	13.16	
Annihilation Rad.		0.1317	0.03295	pCi/g	0.04722	N	511	1	1.803	IDENTIFIED	24.86	
Barium-137m	NR	0.7754	0.05014	pCi/g	0.06058	N	661.7	2	1.35	IDENTIFIED	5.988	
Bismuth-211	INT	2.714	0.2369	pCi/g	0.3542	Y	352	4	1.176	IDENTIFIED	8.051	UI
Bismuth-212	HE	0.8056	0.2376	pCi/g	0.6563	N	0	9	0	FAIL_ABUND	0	
Bismuth-214	✓	0.91	0.08118	pCi/g	0.1113	0.200	609.5	4	1.589	IDENTIFIED	8.129	
Cadmium-109	INT	2.288	0.5361	pCi/g	1.589	Y	87.17	3	1.066	IDENTIFIED	22.66	UI
Cerium-143		1962	390.7	pCi/g	0	N	0	9	0	SHORT_HLIF	0	
Cesium-137	✓	0.8197	0.05304	pCi/g	0.06404	0.100	661.7	2	1.35	IDENTIFIED	5.988	
Gross Gamma		8.736	1.192	pCi/g	2.723	N	0					
Iodine-123	HE	8.07E+07	9.27E+07	pCi/g	0	N	0	9	0	SHORT_HLIF	0	
Lead-212	✓	1.472	0.08161	pCi/g	0.08574	0.100	238.6	4	1.099	IDENTIFIED	3.822	
Lead-214	✓	0.9441	0.08602	pCi/g	0.1223	0.100	352	4	1.176	IDENTIFIED	8.051	
Neptunium-237	HE	0.6577	0.1684	pCi/g	0.4588	N	87.17	3	1.066	IDENTIFIED	22.66	
Polonium-212	NR	1.472	0.08161	pCi/g	0.08574	N	238.6	4	1.099	IDENTIFIED	3.822	
Polonium-214	NR	0.9441	0.08602	pCi/g	0.1223	N	352	4	1.176	IDENTIFIED	8.051	
Polonium-216	NR	1.472	0.08161	pCi/g	0.08574	N	238.6	4	1.099	IDENTIFIED	3.822	
Polonium-218	NR	0.9441	0.08602	pCi/g	0.1223	N	352	4	1.176	IDENTIFIED	8.051	
Potassium-40	✓	28.68	1.369	pCi/g	0.5152	1.00	1461	1	2.066	IDENTIFIED	3.19	
Promethium-149	HE	58.91	109	pCi/g	0	N	0	9	0	SHORT_HLIF	0	
Radium-224	INT	3.905	0.6493	pCi/g	0.9759	Y	241.6	1	1.865	IDENTIFIED	16.29	UI
Radium-226	✓	0.91	0.08118	pCi/g	0.1113	Y	609.5	4	1.589	IDENTIFIED	8.129	
Radium-228		1.393	0.1408	pCi/g	0.1972	0.500	911.1	3	1.611	IDENTIFIED	8.509	
Sodium-24	HE	1.22E+07	8.11E+06	pCi/g	0	N	0	9	0	SHORT_HLIF	0	
Technetium-99m		8.75E+18	0	pCi/g	0	N	0	9	0	SHORT_HLIF	0	

Thallium-200	HE	507.7	1372	pCi/g	0	N	0	9	0	SHORT_HLIF	0	<input type="checkbox"/>
Thallium-208	✓	0.4709	0.03852	pCi/g	0.05717	0.080	583.2	1	1.29	IDENTIFIED	7.551	<input type="checkbox"/>
Thorium-228	NR	1.499	0.08307	pCi/g	0.08727	N	238.6	4	1.099	IDENTIFIED	3.822	<input type="checkbox"/>
Thorium-230	NR	0.91	0.08118	pCi/g	0.1113	N	609.5	4	1.589	IDENTIFIED	8.129	<input type="checkbox"/>
Thorium-232	NR	1.393	0.1408	pCi/g	0.1972	N	911.1	3	1.611	IDENTIFIED	8.509	<input type="checkbox"/>
Tin-126	HE	0.224	0.05248	pCi/g	0.159	N	87.17	3	1.066	IDENTIFIED	22.66	<input type="checkbox"/>
Titanium-44	LA	0.3344	0.03366	pCi/g	0.08412	N	0	9	0	FAIL_ABUND	0	<input type="checkbox"/>
Total Uranium		5.4067	2.75E-06	ug/g	4.7926	N						<input type="checkbox"/>
Uranium-234	NR	0.91	0.08118	pCi/g	0.1113	N	609.5	4	1.589	IDENTIFIED	8.129	<input type="checkbox"/>
Zirconium-97		3.95E+07	1.46E+07	pCi/g	0	N	0	9	0	SHORT_HLIF	0	<input type="checkbox"/>

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Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
244606003	07-JAN-10 12:00	25-JAN-10 08:39	17.9	SAMPLE	LOAD	1	LANL	LANL01004KEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228	NR	0.9161	0.1571	pCi/g	0.1972	N	911.2	3	1.641	IDENTIFIED	16.37 <input type="checkbox"/>
Americium-243	INT	0.2952	0.0385	pCi/g	0.08691	N	74.47	1	1.32	IDENTIFIED	12.24 <input type="checkbox"/>
Annihilation Rad.	HE	0.07648	0.03178	pCi/g	0.04643	N	510.9	1	1.784	IDENTIFIED	41.47 <input type="checkbox"/>
Barium-137m	HE	0.1033	0.0253	pCi/g	0.06245	N	661.7	2	1.126	IDENTIFIED	24.37 <input type="checkbox"/>
Bismuth-211	INT	2.64	0.2093	pCi/g	0.3501	Y	351.7	4	1.337	IDENTIFIED	7.243 <input type="checkbox"/>
Bismuth-212	LA	1.197	0.2244	pCi/g	0.6128	N	0	12	0	FAIL_ABUND	0 <input type="checkbox"/>
Bismuth-214	✓	0.799	0.06882	pCi/g	0.1101	0.200	609	4	1.457	IDENTIFIED	7.783 <input type="checkbox"/>
Cerium-143		3405	502.7	pCi/g	0	N	0	12	0	SHORT_HLIF	0 <input type="checkbox"/>
Cesium-137	✓	0.1092	0.02675	pCi/g	0.06602	0.100	661.7	2	1.126	IDENTIFIED	24.37 <input type="checkbox"/>
Gross Gamma		6.812	1.171	pCi/g	2.613	N					<input type="checkbox"/>
Iodine-133	HE	44330	24380	pCi/g	0	N	0	12	0	SHORT_HLIF	0 <input type="checkbox"/>
Iodine-135		2.00E+17	0	pCi/g	0	N	0	12	0	SHORT_HLIF	0 <input type="checkbox"/>
Lead-212	✓	1.025	0.05871	pCi/g	0.09098	0.100	238.4	4	1.134	IDENTIFIED	4.387 <input type="checkbox"/>
Lead-214	✓	0.9182	0.07664	pCi/g	0.1103	0.100	351.7	4	1.337	IDENTIFIED	7.243 <input type="checkbox"/>
Lutetium-177	HE	2.781	0.8205	pCi/g	2.496	N	0	12	0	FAIL_ABUND	0 <input type="checkbox"/>
Niobium-95m	HE	0.3469	0.07665	pCi/g	0.2544	N	0	12	0	NOT_IDENTI	0 <input type="checkbox"/>
Niobium-97	HE	1.15E+06	8.28E+05	pCi/g	0	N	0	12	0	SHORT_HLIF	0 <input type="checkbox"/>
Polonium-212	NR	1.025	0.05871	pCi/g	0.09098	N	238.4	4	1.134	IDENTIFIED	4.387 <input type="checkbox"/>
Polonium-214	NR	0.9182	0.07664	pCi/g	0.1103	N	351.7	4	1.337	IDENTIFIED	7.243 <input type="checkbox"/>
Polonium-216	NR	1.025	0.05871	pCi/g	0.09098	N	238.4	4	1.134	IDENTIFIED	4.387 <input type="checkbox"/>
Polonium-218	NR	0.9182	0.07664	pCi/g	0.1103	N	351.7	4	1.337	IDENTIFIED	7.243 <input type="checkbox"/>
Potassium-40	✓	26.56	1.184	pCi/g	0.4609	1.00	1461	1	2.098	IDENTIFIED	2.985 <input type="checkbox"/>
Promethium-149	HE	163.9	100.9	pCi/g	0	N	0	12	0	SHORT_HLIF	0 <input type="checkbox"/>
Radium-224	INT	3.442	0.6065	pCi/g	1.035	Y	241.3	1	1.952	IDENTIFIED	17.37 <input type="checkbox"/>
Radium-226	✓	0.799	0.06882	pCi/g	0.1101	Y	609	4	1.457	IDENTIFIED	7.783 <input type="checkbox"/>
Radium-228	✓	0.9161	0.1571	pCi/g	0.1972	0.500	911.2	3	1.641	IDENTIFIED	16.37 <input type="checkbox"/>
Sodium-24	HE	5.56E+05	6.46E+06	pCi/g	0	N	0	12	0	SHORT_HLIF	0 <input type="checkbox"/>
Technetium-99m		2.52E+19	0	pCi/g	0	N	0	12	0	SHORT_HLIF	0 <input type="checkbox"/>
Thallium-208	✓	0.3772	0.03752	pCi/g	0.05699	0.080	583.2	1	1.502	IDENTIFIED	9.431 <input type="checkbox"/>
Thorium-228	NR	1.043	0.05976	pCi/g	0.09261	N	238.4	4	1.134	IDENTIFIED	4.387 <input type="checkbox"/>
Thorium-230	NR	0.799	0.06882	pCi/g	0.1101	N	609	4	1.457	IDENTIFIED	7.783 <input type="checkbox"/>
Thorium-232	NR	0.9161	0.1571	pCi/g	0.1972	N	911.2	3	1.641	IDENTIFIED	16.37 <input type="checkbox"/>
Titanium-44	LA	0.2112	0.02173	pCi/g	0.07525	N	0	12	0	NOT_IDENTI	0 <input type="checkbox"/>
Uranium-234	NR	0.799	0.06882	pCi/g	0.1101	N	609	4	1.457	IDENTIFIED	7.783 <input type="checkbox"/>
Zirconium-97		3.87E+07	1.55E+07	pCi/g	0	N	0	12	0	SHORT_HLIF	0 <input type="checkbox"/>

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Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
244606004	07-JAN-10 12:00	25-JAN-10 08:41	17.9	SAMPLE	LOAD	1	LANL	LANL01004KEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228	NR	1.414	0.1606	pCi/g	0.1822	N	911.5	3	1.873	IDENTIFIED	9.756 <input type="checkbox"/>
Americium-243	INT	0.2613	0.02964	pCi/g	0.06671	N	74.76	1	1.217	IDENTIFIED	10.61 <input type="checkbox"/>

Annihilation Rad.		0.1151	0.03273	pCi/g	0.0441	N	511	1	2.291	IDENTIFIED	28.1	<input type="checkbox"/>
Barium-137m	NR	0.5844	0.04965	pCi/g	0.05176	N	661.9	2	1.549	IDENTIFIED	7.251	<input type="checkbox"/>
Bismuth-211	WT	2.845	0.2379	pCi/g	0.3083	Y	351.9	4	1.291	IDENTIFIED	7.059	<input checked="" type="checkbox"/>
Bismuth-212	HE	0.9023	0.2321	pCi/g	0.6015	N	0	12	0	FAIL_ABUND	0	<input type="checkbox"/>
Bismuth-214	✓	0.8328	0.08702	pCi/g	0.1059	0.200	609.6	4	1.534	IDENTIFIED	9.08	<input type="checkbox"/>
Cadmium-109	WT	2.436	0.3942	pCi/g	1.028	Y	87.26	3	1.165	IDENTIFIED	15.49	<input checked="" type="checkbox"/>
Cerium-143		1604	327.6	pCi/g	0	N	0	12	0	SHORT_HLIF	0	<input type="checkbox"/>
Cesium-137	✓	0.6178	0.05251	pCi/g	0.05471	0.100	661.9	2	1.549	IDENTIFIED	7.251	<input type="checkbox"/>
Europium-155	HE	0.1772	0.0444	pCi/g	0.1623	N	0	12	0	FAIL_ABUND	0	<input type="checkbox"/>
Gross Gamma		8.352	1.43	pCi/g	3.048	N	0					<input type="checkbox"/>
Iodine-133	HE	25050	24910	pCi/g	0	N	0	12	0	SHORT_HLIF	0	<input type="checkbox"/>
Krypton-85	HE	15.43	3.86	pCi/g	13.38	N	0	12	0	NOT_IDENTI	0	<input type="checkbox"/>
Lead-212	✓	1.356	0.08157	pCi/g	0.08012	0.100	238.7	4	1.132	IDENTIFIED	3.649	<input type="checkbox"/>
Lead-214	✓	0.9896	0.0867	pCi/g	0.1075	0.100	351.9	4	1.291	IDENTIFIED	7.059	<input type="checkbox"/>
Lutetium-177	HE	2.477	0.9029	pCi/g	2.412	N	0	12	0	FAIL_ABUND	0	<input type="checkbox"/>
Neptunium-237	WT	0.7003	0.1344	pCi/g	0.3396	N	87.26	3	1.165	IDENTIFIED	15.49	<input type="checkbox"/>
Polonium-212	NR	1.356	0.08157	pCi/g	0.08012	N	238.7	4	1.132	IDENTIFIED	3.649	<input type="checkbox"/>
Polonium-214	NR	0.9896	0.0867	pCi/g	0.1075	N	351.9	4	1.291	IDENTIFIED	7.059	<input type="checkbox"/>
Polonium-216	NR	1.356	0.08157	pCi/g	0.08012	N	238.7	4	1.132	IDENTIFIED	3.649	<input type="checkbox"/>
Polonium-218	NR	0.9896	0.0867	pCi/g	0.1075	N	351.9	4	1.291	IDENTIFIED	7.059	<input type="checkbox"/>
Potassium-40	✓	28.9	1.504	pCi/g	0.5229	1.00	1461	1	2.016	IDENTIFIED	2.937	<input type="checkbox"/>
Promethium-149	HE	80.33	101.2	pCi/g	0	N	0	12	0	SHORT_HLIF	0	<input type="checkbox"/>
Radium-224	WT	3.939	0.6389	pCi/g	0.9119	Y	241.7	1	1.828	IDENTIFIED	15.66	<input checked="" type="checkbox"/>
Radium-226	✓	0.8328	0.08702	pCi/g	0.1059	Y	609.6	4	1.534	IDENTIFIED	9.08	<input type="checkbox"/>
Radium-228	✓	1.414	0.1606	pCi/g	0.1822	0.500	911.5	3	1.873	IDENTIFIED	9.756	<input type="checkbox"/>
Sodium-24	HE	7.91E+06	7.37E+06	pCi/g	0	N	0	12	0	SHORT_HLIF	0	<input type="checkbox"/>
Strontium-85	LA	0.08143	0.02037	pCi/g	0.07063	Y	0	12	0	NOT_IDENTI	0	<input checked="" type="checkbox"/> UI Data rejected due to low abundance.
Thallium-200	HE	185.8	1200	pCi/g	0	N	0	12	0	SHORT_HLIF	0	<input type="checkbox"/>
Thallium-208	✓	0.4583	0.04124	pCi/g	0.05808	0.080	583.2	1	1.61	IDENTIFIED	7.622	<input type="checkbox"/>
Thorium-228	NR	1.38	0.08304	pCi/g	0.08156	N	238.7	4	1.132	IDENTIFIED	3.649	<input type="checkbox"/>
Thorium-230	NR	0.8327	0.08702	pCi/g	0.1059	N	609.6	4	1.534	IDENTIFIED	9.08	<input type="checkbox"/>
Thorium-232	NR	1.414	0.1606	pCi/g	0.1822	N	911.5	3	1.873	IDENTIFIED	9.756	<input type="checkbox"/>
Tin-126	WT	0.2385	0.03859	pCi/g	0.1009	N	87.26	3	1.165	IDENTIFIED	15.49	<input type="checkbox"/>
Titanium-44	LA	0.2768	0.02142	pCi/g	0.06257	N	0	12	0	FAIL_ABUND	0	<input type="checkbox"/>
Total Uranium		2.2419	1.59E-06	ug/g	2.0699	N	0					<input type="checkbox"/>
Uranium-234	NR	0.8327	0.08702	pCi/g	0.1059	N	609.6	4	1.534	IDENTIFIED	9.08	<input type="checkbox"/>
Zirconium-97	HE	2.00E+07	1.44E+07	pCi/g	0	N	0	12	0	SHORT_HLIF	0	<input type="checkbox"/>

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue	
244606005	07-JAN-10 12:00	25-JAN-10 08:41	17.9	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	1.253	0.1239	pCi/g	0.1818	N	911.2	3	2.128	IDENTIFIED 7.341	<input type="checkbox"/>
Americium-243	WT	0.2015	0.02376	pCi/g	0.06932	N	74.9	1	0.8494	IDENTIFIED 11.06	<input type="checkbox"/>
Annihilation Rad.	HE	0.08393	0.02815	pCi/g	0.03894	N	511.1	1	2.027	IDENTIFIED 33.16	<input type="checkbox"/>
Barium-137m	NR	0.1464	0.02515	pCi/g	0.04893	N	661.7	2	1.68	IDENTIFIED 16.35	<input type="checkbox"/>
Bismuth-211	WT	3.092	0.2499	pCi/g	0.2615	Y	351.9	4	1.602	IDENTIFIED 5.612	<input checked="" type="checkbox"/>
Bismuth-212	LA	1.046	0.1999	pCi/g	0.5018	N	0	11	0	FAIL_ABUND	<input type="checkbox"/>
Bismuth-214	✓	0.8362	0.07319	pCi/g	0.08697	0.200	609.3	4	1.847	IDENTIFIED 6.543	<input type="checkbox"/>
Cadmium-109	WT	2.741	0.388	pCi/g	1.008	Y	87.28	3	1.212	IDENTIFIED 13.35	<input checked="" type="checkbox"/>
Cadmium-115	HE	8.993	9.045	pCi/g	0	N	0	11	0	SHORT_HLIF	<input type="checkbox"/>
Cerium-143		2848	450.7	pCi/g	0	N	0	11	0	SHORT_HLIF	<input type="checkbox"/>
Cesium-137	✓	0.1548	0.02658	pCi/g	0.05172	0.100	661.7	2	1.68	IDENTIFIED 16.35	<input type="checkbox"/>
Gross Gamma		7.434	1.193	pCi/g	1.632	N	0				<input type="checkbox"/>
Iodine-123	HE	4.46E+07	7.63E+07	pCi/g	0	N	0	11	0	SHORT_HLIF	<input type="checkbox"/>
Iodine-126	HE	0.3216	0.09198	pCi/g	0.2992	N	0	11	0	NOT_IDENTI	<input type="checkbox"/>
Krypton-85	LA	25.88	3.533	pCi/g	11.86	N	0	11	0	NOT_IDENTI	<input type="checkbox"/>
Lead-212	✓	1.207	0.08946	pCi/g	0.0748	0.100	238.7	4	1.225	IDENTIFIED 3.353	<input type="checkbox"/>

Lead-214	✓	1.075	0.09133	pCi/g	0.09112	0.100	351.9	4	1.602	IDENTIFIED	5.612	☑
Lutetium-177	HE	3.67	1.161	pCi/g	2.203	N	0	11	0	FAIL_ABUND	0	☑
Neptunium-237	INT	0.7878	0.138	pCi/g	0.3111	N	87.28	3	1.212	IDENTIFIED	13.35	☑
Niobium-97	HE	1.10E+06	6.65E+05	pCi/g	0	N	0	11	0	SHORT_HLIF	0	☑
Polonium-212	NR	1.207	0.08946	pCi/g	0.0748	N	238.7	4	1.225	IDENTIFIED	3.353	☑
Polonium-214	NR	1.075	0.09133	pCi/g	0.09112	N	351.9	4	1.602	IDENTIFIED	5.612	☑
Polonium-216	NR	1.207	0.08946	pCi/g	0.0748	N	238.7	4	1.225	IDENTIFIED	3.353	☑
Polonium-218	NR	1.075	0.09133	pCi/g	0.09112	N	351.9	4	1.602	IDENTIFIED	5.612	☑
Potassium-40	✓	29.52	1.492	pCi/g	0.4128	1.00	1461	1	2.573	IDENTIFIED	2.138	☑
Radium-224	INT	3.248	0.491	pCi/g	0.8501	Y	241.6	1	1.677	IDENTIFIED	13.75	☑ ✓ VI
Radium-226	✓	0.8362	0.07319	pCi/g	0.08697	Y	609.3	4	1.847	IDENTIFIED	6.543	☑
Radium-228	✓	1.253	0.1239	pCi/g	0.1818	0.500	911.2	3	2.128	IDENTIFIED	7.341	☑
Strontium-85	LA	0.1366	0.01865	pCi/g	0.06257	Y	0	11	0	NOT_IDENTI	0	☑ UI Data rejected due to low abundance.
Thallium-208	✓	0.3501	0.03375	pCi/g	0.04118	0.080	583.2	1	1.609	IDENTIFIED	7.974	☑
Thorium-228	NR	1.229	0.09107	pCi/g	0.07614	N	238.7	4	1.225	IDENTIFIED	3.353	☑
Thorium-230	NR	0.8362	0.07319	pCi/g	0.08697	N	609.3	4	1.847	IDENTIFIED	6.543	☑
Thorium-232	NR	1.253	0.1239	pCi/g	0.1818	N	911.2	3	2.128	IDENTIFIED	7.341	☑
Tin-126	INT	0.2683	0.03798	pCi/g	0.09908	N	87.28	3	1.212	IDENTIFIED	13.35	☑
Titanium-44	LA	0.2389	0.02034	pCi/g	0.05775	N	0	11	0	FAIL_ABUND	0	☑
Total Uranium		2.9286	2.35E-06	ug/g	2.2858	N						☑
Uranium-234	NR	0.8362	0.07319	pCi/g	0.08697	N	609.3	4	1.847	IDENTIFIED	6.543	☑
Zirconium-97		6.03E+07	1.31E+07	pCi/g	0	N	0	11	0	SHORT_HLIF	0	☑

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Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue		
244606006	07-JAN-10 12:00	25-JAN-10 09:08	17.9	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	1.225	0.1649	pCi/g	0.2677	N	910.7	3	1.928	IDENTIFIED 12.42		
Americium-243	INT	0.2054	0.02885	pCi/g	0.05668	N	74.66	1	1.34	IDENTIFIED 13.37		
Barium-137m	NR	0.261	0.04312	pCi/g	0.07016	N	661.3	2	1.534	IDENTIFIED 16.01		
Bismuth-210	NR	1.631	0.3581	pCi/g	0.7175	N	46.17	3	1.108	IDENTIFIED 21.56		
Bismuth-211	INT	2.397	0.2077	pCi/g	0.3612	Y	351.6	4	1.505	IDENTIFIED 7.862	✓ VI	
Bismuth-212	HE	0.9496	0.2757	pCi/g	0.6855	N	0	10	0	FAIL_ABUND	0	
Bismuth-214	✓	0.7978	0.09234	pCi/g	0.1323	0.200	609	4	1.64	IDENTIFIED 10.59		
Cadmium-109	INT	2.131	0.3772	pCi/g	0.9589	Y	86.97	3	1.183	IDENTIFIED 17.25	✓ VI	
Cadmium-115	HE	10.31	13.73	pCi/g	0	N	0	10	0	SHORT_HLIF	0	
Cerium-143		2521	455	pCi/g	0	N	0	10	0	SHORT_HLIF	0	
Cesium-137	✓	0.2759	0.04559	pCi/g	0.07416	0.100	661.3	2	1.534	IDENTIFIED 16.01		
Gross Gamma		7.458	1.804	pCi/g	2.637	N						
Iodine-123	HE	1.05E+08	9.45E+07	pCi/g	0	N	0	10	0	SHORT_HLIF	0	
Iodine-135		3.66E+18	0	pCi/g	0	N	0	10	0	SHORT_HLIF	0	
Lead-210	NR	1.631	0.3581	pCi/g	0.7175	N	46.17	3	1.108	IDENTIFIED 21.56		
Lead-212	✓	0.9863	0.08707	pCi/g	0.09748	0.100	238.4	4	1.236	IDENTIFIED 7.57		
Lead-214	✓	0.8339	0.07545	pCi/g	0.126	0.100	351.6	4	1.505	IDENTIFIED 7.862		
Neptunium-237	INT	0.6126	0.1255	pCi/g	0.2745	N	86.97	3	1.183	IDENTIFIED 17.25		
Niobium-97		2.60E+06	1.05E+06	pCi/g	0	N	0	10	0	SHORT_HLIF	0	
Polonium-210	NR	1.631	0.3566	pCi/g	0.7175	N	46.17	3	1.108	IDENTIFIED 21.56		
Polonium-212	NR	0.9863	0.08707	pCi/g	0.09748	N	238.4	4	1.236	IDENTIFIED 7.57		
Polonium-214	NR	0.8339	0.07545	pCi/g	0.126	N	351.6	4	1.505	IDENTIFIED 7.862		
Polonium-216	NR	0.9863	0.08707	pCi/g	0.09748	N	238.4	4	1.236	IDENTIFIED 7.57		
Polonium-218	NR	0.8339	0.07545	pCi/g	0.126	N	351.6	4	1.505	IDENTIFIED 7.862		
Potassium-40	✓	29.02	1.272	pCi/g	0.6532	1.00	1460	1	2.26	IDENTIFIED 3.14		
Radium-224	LA	3.696	0.4499	pCi/g	1.567	Y	0	10	0	NOT_IDENTI	0	UI Data rejected due to low abundance.
Radium-226	✓	0.7978	0.09234	pCi/g	0.1323	Y	609	4	1.64	IDENTIFIED 10.59		
Radium-228	✓	1.225	0.1649	pCi/g	0.2677	0.500	910.7	3	1.928	IDENTIFIED 12.42		
Thallium-200	HE	123.8	1495	pCi/g	0	N	0	10	0	SHORT_HLIF	0	
Thallium-208	✓	0.4298	0.04265	pCi/g	0.06825	0.080	582.7	1	1.401	IDENTIFIED 9.019		
Thorium-228	NR	1.004	0.08864	pCi/g	0.09924	N	238.4	4	1.236	IDENTIFIED 7.57		
Thorium-230	NR	0.7978	0.09234	pCi/g	0.1323	N	609	4	1.64	IDENTIFIED 10.59		

Thorium-232	NR	1.225	0.1649	pCi/g	0.2677	N	910.7	3	1.928	IDENTIFIED	12.42	<input type="checkbox"/>
Tin-126	INT	0.2086	0.03693	pCi/g	0.09374	N	86.97	3	1.183	IDENTIFIED	17.25	<input type="checkbox"/>
Titanium-44	LA	0.2564	0.02126	pCi/g	0.04936	N	0	10	0	FAIL_ABUND	0	<input type="checkbox"/>
Total Uranium		2.1136	1.60E-06	ug/g	1.4464	N			0			<input type="checkbox"/>
Uranium-234	NR	0.7978	0.09234	pCi/g	0.1323	N	609	4	1.64	IDENTIFIED	10.59	<input type="checkbox"/>
Zirconium-97	HE	2.96E+07	1.80E+07	pCi/g	0	N	0	10	0	SHORT_HLIF	0	<input type="checkbox"/>

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Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
244606007	07-JAN-10 12:00	25-JAN-10 09:09	17.9	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	1.173	0.1423	pCi/g	0.1718	N	911.3	3	1.357	IDENTIFIED	10.58 <input type="checkbox"/>
Americium-243	WT	0.2486	0.02919	pCi/g	0.06734	N	74.87	1	1.023	IDENTIFIED	10.98 <input type="checkbox"/>
Annihilation Rad.	HE	0.06624	0.02995	pCi/g	0.03618	N	511.3	1	2.122	IDENTIFIED	44.97 <input type="checkbox"/>
Bismuth-211	WT	2.832	0.2313	pCi/g	0.2451	Y	351.9	4	1.13	IDENTIFIED	6.078 <input checked="" type="checkbox"/>
Bismuth-212	LA	1.096	0.2128	pCi/g	0.5746	N	0	8	0	FAIL_ABUND	0 <input type="checkbox"/>
Bismuth-214	✓	0.7598	0.07382	pCi/g	0.09711	0.200	609.3	4	1.258	IDENTIFIED	8.153 <input type="checkbox"/>
Cadmium-109	WT	2.663	0.4142	pCi/g	0.9234	Y	87.28	3	1.157	IDENTIFIED	14.8 <input checked="" type="checkbox"/>
Cadmium-115	HE	2.955	10.1	pCi/g	0	N	0	8	0	SHORT_HLIF	0 <input type="checkbox"/>
Cerium-143		1446	299.4	pCi/g	0	N	0	8	0	SHORT_HLIF	0 <input type="checkbox"/>
Gross Gamma		7.47	1.193	pCi/g	2.366	N			0		<input type="checkbox"/>
Iodine-133	HE	4762	22340	pCi/g	0	N	0	8	0	SHORT_HLIF	0 <input type="checkbox"/>
Iodine-135		2.32E+18	0	pCi/g	0	N	0	8	0	SHORT_HLIF	0 <input type="checkbox"/>
Lead-212	✓	1.179	0.08197	pCi/g	0.07149	0.100	238.6	4	0.9596	IDENTIFIED	3.642 <input type="checkbox"/>
Lead-214	✓	0.985	0.08446	pCi/g	0.08545	0.100	351.9	4	1.13	IDENTIFIED	6.078 <input type="checkbox"/>
Lutetium-177	LA	3.686	0.7043	pCi/g	2.272	N	0	8	0	FAIL_ABUND	0 <input type="checkbox"/>
Neptunium-237	INT	0.7654	0.1429	pCi/g	0.2697	N	87.28	3	1.157	IDENTIFIED	14.8 <input type="checkbox"/>
Polonium-212	NR	1.179	0.08197	pCi/g	0.07149	N	238.6	4	0.9596	IDENTIFIED	3.642 <input type="checkbox"/>
Polonium-214	NR	0.985	0.08446	pCi/g	0.08545	N	351.9	4	1.13	IDENTIFIED	6.078 <input type="checkbox"/>
Polonium-216	NR	1.179	0.08197	pCi/g	0.07149	N	238.6	4	0.9596	IDENTIFIED	3.642 <input type="checkbox"/>
Polonium-218	NR	0.985	0.08446	pCi/g	0.08545	N	351.9	4	1.13	IDENTIFIED	6.078 <input type="checkbox"/>
Potassium-40	✓	27.84	1.443	pCi/g	0.4257	1.00	1461	1	1.852	IDENTIFIED	2.749 <input type="checkbox"/>
Radium-224	INT	3.562	0.5313	pCi/g	0.8136	Y	241.4	1	1.736	IDENTIFIED	13.86 <input checked="" type="checkbox"/>
Radium-226	✓	0.7598	0.07382	pCi/g	0.09711	Y	609.3	4	1.258	IDENTIFIED	8.153 <input type="checkbox"/>
Radium-228	✓	1.173	0.1423	pCi/g	0.1718	0.500	911.3	3	1.357	IDENTIFIED	10.58 <input type="checkbox"/>
Thallium-200	HE	266.5	1061	pCi/g	0	N	0	8	0	SHORT_HLIF	0 <input type="checkbox"/>
Thallium-208	✓	0.3754	0.03809	pCi/g	0.04463	0.000	583.1	1	1.339	IDENTIFIED	8.852 <input type="checkbox"/>
Thorium-228	NR	1.201	0.08345	pCi/g	0.07278	N	238.6	4	0.9596	IDENTIFIED	3.642 <input type="checkbox"/>
Thorium-230	NR	0.7597	0.07382	pCi/g	0.09711	N	609.3	4	1.258	IDENTIFIED	8.153 <input type="checkbox"/>
Thorium-232	NR	1.173	0.1423	pCi/g	0.1718	N	911.3	3	1.357	IDENTIFIED	10.58 <input type="checkbox"/>
Tin-126	INT	0.2606	0.04054	pCi/g	0.0908	N	87.28	3	1.157	IDENTIFIED	14.8 <input type="checkbox"/>
Titanium-44	LA	0.2775	0.02262	pCi/g	0.0578	N	0	8	0	FAIL_ABUND	0 <input type="checkbox"/>
Total Uranium		4.816	2.11E-06	ug/g	2.4591	N			0		<input type="checkbox"/>
Uranium-234	NR	0.7597	0.07382	pCi/g	0.09711	N	609.3	4	1.258	IDENTIFIED	8.153 <input type="checkbox"/>

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Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
244606008	07-JAN-10 12:00	25-JAN-10 09:13	17.9	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	1.065	0.1577	pCi/g	0.2349	N	911.3	3	1.748	IDENTIFIED	13.57 <input type="checkbox"/>
Americium-243	INT	0.2517	0.02131	pCi/g	0.04219	N	74.79	1	0.9062	IDENTIFIED	6.776 <input type="checkbox"/>
Annihilation Rad.	HE	0.1026	0.03495	pCi/g	0.04974	N	511	1	2.019	IDENTIFIED	33.66 <input type="checkbox"/>
Barium-137m	NR	0.5485	0.04851	pCi/g	0.05885	N	661.5	2	1.287	IDENTIFIED	6.895 <input type="checkbox"/>
Bismuth-210	NR	2.171	0.3521	pCi/g	0.5947	N	46.49	3	0.9571	IDENTIFIED	15.38 <input type="checkbox"/>
Bismuth-211	INT	3.002	0.2532	pCi/g	0.2989	Y	351.8	4	1.252	IDENTIFIED	6.591 <input checked="" type="checkbox"/>
Bismuth-212	HE	0.7418	0.2742	pCi/g	0.641	N	0	11	0	FAIL_ABUND	0 <input type="checkbox"/>
Bismuth-214	✓	1.023	0.09855	pCi/g	0.104	0.200	609.2	4	1.511	IDENTIFIED	7.515 <input type="checkbox"/>
Cadmium-109	INT	2.37	0.326	pCi/g	0.7391	Y	87.11	3	1.019	IDENTIFIED	12.67 <input checked="" type="checkbox"/>

Cadmium-115	HE	3.361	11.92	pCi/g 0	N	0	11	0	SHORT_HLIF 0	<input type="checkbox"/>
Cerium-143		1336	316.2	pCi/g 0	N	0	11	0	SHORT_HLIF 0	<input type="checkbox"/>
Cesium-137	✓	0.5798	0.0513	pCi/g 0.06221	0.100	661.5	2	1.287	IDENTIFIED 6.895	<input type="checkbox"/>
Gross Gamma		8.416	1.246	pCi/g 3.236	N		0			<input type="checkbox"/>
Iodine-123	HE	8.62E+07	7.27E+07	pCi/g 0	N	0	11	0	SHORT_HLIF 0	<input type="checkbox"/>
Iodine-135		2.31E+18	0	pCi/g 0	N	0	11	0	SHORT_HLIF 0	<input type="checkbox"/>
Lead-210	NR	2.171	0.3521	pCi/g 0.5947	N	46.49	3	0.9571	IDENTIFIED 15.38	<input type="checkbox"/>
Lead-212	✓	1.289	0.08729	pCi/g 0.07533	0.100	238.6	4	0.9828	IDENTIFIED 3.667	<input type="checkbox"/>
Lead-214	✓	1.044	0.09219	pCi/g 0.1033	0.100	351.8	4	1.252	IDENTIFIED 6.591	<input type="checkbox"/>
Lutetium-177	HE	3.094	0.8975	pCi/g 2.312	N	0	11	0	FAIL_ABUND 0	<input type="checkbox"/>
Neptunium-237	NR	0.6812	0.1171	pCi/g 0.1951	N	87.11	3	1.019	IDENTIFIED 12.67	<input type="checkbox"/>
Niobium-97	HE	1.19E+06	7.51E+05	pCi/g 0	N	0	11	0	SHORT_HLIF 0	<input type="checkbox"/>
Polonium-210	NR	2.171	0.3495	pCi/g 0.5947	N	46.49	3	0.9571	IDENTIFIED 15.38	<input type="checkbox"/>
Polonium-212	NR	1.289	0.08729	pCi/g 0.07533	N	238.6	4	0.9828	IDENTIFIED 3.667	<input type="checkbox"/>
Polonium-214	NR	1.044	0.09219	pCi/g 0.1033	N	351.8	4	1.252	IDENTIFIED 6.591	<input type="checkbox"/>
Polonium-216	NR	1.289	0.08729	pCi/g 0.07533	N	238.6	4	0.9828	IDENTIFIED 3.667	<input type="checkbox"/>
Polonium-218	NR	1.044	0.09219	pCi/g 0.1033	N	351.8	4	1.252	IDENTIFIED 6.591	<input type="checkbox"/>
Potassium-40	✓	28.3	1.502	pCi/g 0.5734	1.00	1461	1	2.058	IDENTIFIED 3.165	<input type="checkbox"/>
Radium-224	NR	4.256	0.6636	pCi/g 0.8583	Y	241.7	1	1.95	IDENTIFIED 14.68	<input checked="" type="checkbox"/>
Radium-226	✓	1.023	0.09855	pCi/g 0.104	Y	609.2	4	1.511	IDENTIFIED 7.515	<input type="checkbox"/>
Radium-228	✓	1.065	0.1577	pCi/g 0.2349	0.500	911.3	3	1.748	IDENTIFIED 13.57	<input type="checkbox"/>
Sodium-24	HE	7.31E+06	8.37E+06	pCi/g 0	N	0	11	0	SHORT_HLIF 0	<input type="checkbox"/>
Thallium-200	HE	896.2	1235	pCi/g 0	N	0	11	0	SHORT_HLIF 0	<input type="checkbox"/>
Thallium-208	✓	0.3828	0.04319	pCi/g 0.05513	0.080	583.1	1	1.542	IDENTIFIED 9.772	<input type="checkbox"/>
Thorium-228	NR	1.312	0.08885	pCi/g 0.07668	N	238.6	4	0.9828	IDENTIFIED 3.667	<input type="checkbox"/>
Thorium-230	NR	1.023	0.09855	pCi/g 0.104	N	609.2	4	1.511	IDENTIFIED 7.515	<input type="checkbox"/>
Thorium-232	NR	1.065	0.1577	pCi/g 0.2349	N	911.3	3	1.748	IDENTIFIED 13.57	<input type="checkbox"/>
Thorium-234	✓	1.319	0.3443	pCi/g 0.7028	2.00	63.2	2	0.7528	IDENTIFIED 24.38	<input type="checkbox"/>
Tin-126	NR	0.232	0.03191	pCi/g 0.0722	N	87.11	3	1.019	IDENTIFIED 12.67	<input type="checkbox"/>
Titanium-44	LA	0.3158	0.0209	pCi/g 0.04059	N	0	11	0	FAIL_ABUND 0	<input type="checkbox"/>
Total Uranium		3.9988	1.03E-06	ug/g 1.0482	N		0			<input type="checkbox"/>
Uranium-234	NR	1.023	0.09855	pCi/g 0.104	N	609.2	4	1.511	IDENTIFIED 7.515	<input type="checkbox"/>
Uranium-238	HE	1.319	0.3443	pCi/g 0.7028	N	63.2	2	0.7528	IDENTIFIED 24.38	<input type="checkbox"/>
Zirconium-97		4.87E+07	1.51E+07	pCi/g 0	N	0	11	0	SHORT_HLIF 0	<input type="checkbox"/>

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quas	Zero?	queue		
244606009	07-JAN-10 12:00	25-JAN-10 09:14	17.9	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	1.013	0.126	pCi/g	0.192	N	910.6	3	1.666	IDENTIFIED	11.12	<input type="checkbox"/>
Americium-243	NR	0.2359	0.05037	pCi/g	0.1123	N	74.03	1	1.581	IDENTIFIED	20.61	<input type="checkbox"/>
Annihilation Rad.	HE	0.09971	0.03031	pCi/g	0.05041	N	510.2	1	1.407	IDENTIFIED	30.26	<input type="checkbox"/>
Bismuth-211	NR	2.841	0.2218	pCi/g	0.3336	Y	351.3	4	1.599	IDENTIFIED	7.014	<input checked="" type="checkbox"/> ✓
Bismuth-214	✓	0.7686	0.07705	pCi/g	0.1143	0.200	608.7	4	1.632	IDENTIFIED	9.311	<input type="checkbox"/>
Cerium-143		3077	647.1	pCi/g	0	N	0	9	0	SHORT_HLIF	0	<input type="checkbox"/>
Cesium-135	HE	0.5162	0.1307	pCi/g	0.28	N	269	1	3.214	IDENTIFIED	24.95	<input type="checkbox"/>
Gross Gamma		6.676	1.125	pCi/g	2.077	N		0				<input type="checkbox"/>
Iodine-133	HE	10020	25940	pCi/g	0	N	0	9	0	SHORT_HLIF	0	<input type="checkbox"/>
Lead-212	✓	1.139	0.07169	pCi/g	0.09661	0.100	238	4	1.308	IDENTIFIED	4.741	<input type="checkbox"/>
Lead-214	✓	0.9882	0.08136	pCi/g	0.1223	0.100	351.3	4	1.599	IDENTIFIED	7.014	<input type="checkbox"/>
Neptunium-237	HE	0.6831	0.1555	pCi/g	0.511	N	0	9	0	NOT_IDENTI	0	<input type="checkbox"/>
Niobium-95m	LA	1.28	0.108	pCi/g	0.3693	N	0	9	0	NOT_IDENTI	0	<input type="checkbox"/>
Polonium-212	NR	1.139	0.07169	pCi/g	0.09661	N	238	4	1.308	IDENTIFIED	4.741	<input type="checkbox"/>
Polonium-214	NR	0.9882	0.08136	pCi/g	0.1223	N	351.3	4	1.599	IDENTIFIED	7.014	<input type="checkbox"/>
Polonium-216	NR	1.139	0.07169	pCi/g	0.09661	N	238	4	1.308	IDENTIFIED	4.741	<input type="checkbox"/>
Polonium-218	NR	0.9882	0.08136	pCi/g	0.1223	N	351.3	4	1.599	IDENTIFIED	7.014	<input type="checkbox"/>
Potassium-40	✓	26.75	1.332	pCi/g	0.5348	1.00	1460	1	2.058	IDENTIFIED	3.19	<input type="checkbox"/>
Promethium-149	HE	201.8	116.6	pCi/g	0	N	0	9	0	SHORT_HLIF	0	<input type="checkbox"/>

Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228	NR	1.549	0.1772	pCi/g 0.2381	N	911.5 3	2.237	IDENTIFIED	9.868	☐	
Americium-243	WT	0.3619	0.04522	pCi/g 0.0911	N	74.66 1	1.578	IDENTIFIED	11.78	☐	
Annihilation Rad.		0.1491	0.0395	pCi/g 0.05656	N	511.6 1	2.276	IDENTIFIED	26.15	☐	
Bismuth-211	INT	2.586	0.2452	pCi/g 0.3238	Y	352.3 4	1.454	IDENTIFIED	8.321	☐	✓
Bismuth-212	NR	1.212	0.2375	pCi/g 0.7355	N	0 6 0		FAIL_ABUND 0		☐	
Bismuth-214	✓	0.8731	0.09179	pCi/g 0.1316	0.200	609.8 4	1.489	IDENTIFIED	9.285	☐	
Cadmium-109	INT	2.049	0.5866	pCi/g 1.565	Y	87.53 3	1.141	IDENTIFIED	28.24	☐	✓
Cerium-143		1286	371.9	pCi/g 0	N	0 6 0		SHORT_HLIF 0		☐	
Gross Gamma		8.728	1.606	pCi/g 2.726	N	0				☐	
Lead-212	✓	1.452	0.09486	pCi/g 0.1024	0.100	239 4	1.294	IDENTIFIED	4.126	☐	
Lead-214	✓	0.8996	0.08845	pCi/g 0.122	0.100	352.3 4	1.454	IDENTIFIED	8.321	☐	
Lutetium-177	HE	4.348	1.119	pCi/g 2.893	N	0 6 0		FAIL_ABUND 0		☐	
Neptunium-237	HE	0.5889	0.1792	pCi/g 0.443	N	87.53 3	1.141	IDENTIFIED	28.24	☐	
Polonium-212	NR	1.452	0.09486	pCi/g 0.1024	N	239 4	1.294	IDENTIFIED	4.126	☐	
Polonium-214	NR	0.8996	0.08845	pCi/g 0.122	N	352.3 4	1.454	IDENTIFIED	8.321	☐	
Polonium-216	NR	1.452	0.09486	pCi/g 0.1024	N	239 4	1.294	IDENTIFIED	4.126	☐	
Polonium-218	NR	0.8996	0.08845	pCi/g 0.122	N	352.3 4	1.454	IDENTIFIED	8.321	☐	
Potassium-40	✓	36.73	1.947	pCi/g 0.5159	1.00	1461 1	2.049	IDENTIFIED	2.89	☐	
Radium-224	✓	2.865	0.556	pCi/g 1.166	Y	242 1	1.533	IDENTIFIED	18.86	☐	✓
Radium-226	✓	0.8731	0.09179	pCi/g 0.1316	Y	609.8 4	1.489	IDENTIFIED	9.285	☐	
Radium-228	✓	1.549	0.1772	pCi/g 0.2381	0.500	911.5 3	2.237	IDENTIFIED	9.868	☐	
Technetium-99m		2.48E+19 0		pCi/g 0	N	0 6 0		SHORT_HLIF 0		☐	
Thallium-208	✓	0.4859	0.04865	pCi/g 0.06248	0.080	583.4 1	1.411	IDENTIFIED	8.925	☐	
Thorium-228	NR	1.479	0.09657	pCi/g 0.1043	N	239 4	1.294	IDENTIFIED	4.126	☐	
Thorium-230	NR	0.8731	0.09179	pCi/g 0.1316	N	609.8 4	1.489	IDENTIFIED	9.285	☐	
Thorium-232	NR	1.549	0.1772	pCi/g 0.2381	N	911.5 3	2.237	IDENTIFIED	9.868	☐	
Tin-126	HE	0.2006	0.05742	pCi/g 0.1548	N	87.53 3	1.141	IDENTIFIED	28.24	☐	
Titanium-44	LA	0.3137	0.02825	pCi/g 0.08359	N	0 6 0		FAIL_ABUND 0		☐	
Uranium-234	NR	0.8731	0.09179	pCi/g 0.1316	N	609.8 4	1.489	IDENTIFIED	9.285	☐	
Zirconium-97	HE	3.29E+07	1.79E+07	pCi/g 0	N	0 6 0		SHORT_HLIF 0		☐	

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Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue	
244619003	07-JAN-10 12:00	25-JAN-10 10:43	17.9	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	1.848	0.1976	pCi/g 0.2123	N	910.8 3	1.855	IDENTIFIED	8.688	☐	
Americium-243	INT	0.3404	0.04167	pCi/g 0.08691	N	74.52 1	1.084	IDENTIFIED	11.44	☐	
Annihilation Rad.	HE	0.08151	0.03448	pCi/g 0.05335	N	510.5 1	2.257	IDENTIFIED	42.01	☐	
Bismuth-211	WT	3.28	0.3093	pCi/g 0.3233	Y	351.5 4	1.216	IDENTIFIED	7.464	☐	✓
Bismuth-212	NR	1.038	0.248	pCi/g 0.4934	N	726.2 1	1.483	IDENTIFIED	23.32	☐	
Bismuth-214	✓	0.8947	0.08815	pCi/g 0.1186	0.200	608.9 4	1.253	IDENTIFIED	8.314	☐	
Cadmium-109	INT	2.745	0.4132	pCi/g 1.203	Y	87.1 3	1.161	IDENTIFIED	14.21	☐	✓
Cadmium-115	HE	13.53	12.69	pCi/g 0	N	0 9 0		SHORT_HLIF 0		☐	
Cerium-143		2938	505.4	pCi/g 0	N	0 9 0		SHORT_HLIF 0		☐	
Cesium-135	NR	0.5654	0.1495	pCi/g 0.2483	N	269.5 1	1.14	IDENTIFIED	25.61	☐	
Gross Gamma	HE	7.878	4.154	pCi/g 2.737	N	0				☐	
Iodine-133	HE	25900	29370	pCi/g 0	N	0 9 0		SHORT_HLIF 0		☐	
Iodine-135		2.66E+18 0		pCi/g 0	N	0 9 0		SHORT_HLIF 0		☐	
Lead-212	✓	1.424	0.1107	pCi/g 0.1231	0.100	238.3 4	1.127	IDENTIFIED	4.57	☐	
Lead-214	✓	1.141	0.1116	pCi/g 0.1127	0.100	351.5 4	1.216	IDENTIFIED	7.464	☐	
Lutetium-177	HE	3.985	0.9526	pCi/g 2.815	N	0 9 0		FAIL_ABUND 0		☐	
Neptunium-237	INT	0.7889	0.144	pCi/g 0.4061	N	87.1 3	1.161	IDENTIFIED	14.21	☐	
Polonium-212	NR	1.424	0.1107	pCi/g 0.1231	N	238.3 4	1.127	IDENTIFIED	4.57	☐	
Polonium-214	NR	1.141	0.1116	pCi/g 0.1127	N	351.5 4	1.216	IDENTIFIED	7.464	☐	
Polonium-216	NR	1.424	0.1107	pCi/g 0.1231	N	238.3 4	1.127	IDENTIFIED	4.57	☐	
Polonium-218	NR	1.141	0.1116	pCi/g 0.1127	N	351.5 4	1.216	IDENTIFIED	7.464	☐	
Potassium-40	✓	24.93	1.467	pCi/g 0.5918	1.00	1460 1	2.15	IDENTIFIED	3.471	☐	

Promethium-149	HE	66.27	114	pCi/g	0	N	0	9	0	SHORT_HLIF	0	<input checked="" type="checkbox"/>
Radium-224	INT	2.266	0.4749	pCi/g	1.401	Y	241.3	1	1.504	IDENTIFIED	20.11	<input checked="" type="checkbox"/> VI
Radium-226	✓	0.8947	0.08815	pCi/g	0.1186	Y	608.9	4	1.253	IDENTIFIED	8.314	<input checked="" type="checkbox"/>
Radium-228	✓	1.848	0.1976	pCi/g	0.2123	0.500	910.8	3	1.855	IDENTIFIED	8.688	<input checked="" type="checkbox"/>
Thallium-200	HE	1482	1491	pCi/g	0	N	0	9	0	SHORT_HLIF	0	<input checked="" type="checkbox"/>
Thallium-208	✓	0.499	0.04781	pCi/g	0.06089	0.080	582.9	1	1.461	IDENTIFIED	8.167	<input checked="" type="checkbox"/>
Thorium-228	NR	1.45	0.1127	pCi/g	0.1253	N	238.3	4	1.127	IDENTIFIED	4.57	<input checked="" type="checkbox"/>
Thorium-230	NR	0.8947	0.08815	pCi/g	0.1186	N	608.9	4	1.253	IDENTIFIED	8.314	<input checked="" type="checkbox"/>
Thorium-232	NR	1.848	0.1976	pCi/g	0.2123	N	910.8	3	1.855	IDENTIFIED	8.688	<input checked="" type="checkbox"/>
Tin-126	INT	0.2687	0.04044	pCi/g	0.1184	N	87.1	3	1.161	IDENTIFIED	14.21	<input checked="" type="checkbox"/>
Titanium-44	LA	0.3202	0.02905	pCi/g	0.06481	N	0	9	0	FAIL_ABUND	0	<input checked="" type="checkbox"/>
Uranium-234	NR	0.8947	0.08815	pCi/g	0.1186	N	608.9	4	1.253	IDENTIFIED	8.314	<input checked="" type="checkbox"/>
Zirconium-97		3.83E+07	1.87E+07	pCi/g	0	N	0	9	0	SHORT_HLIF	0	<input checked="" type="checkbox"/>

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
244619004	07-JAN-10 12:00	25-JAN-10 10:44	17.9	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	1.406	0.1713	pCi/g	0.2341	N	911.3	3	1.434	IDENTIFIED	10.9	<input checked="" type="checkbox"/>
Americium-243	INT	0.3074	0.04873	pCi/g	0.09774	N	74.79	1	1.11	IDENTIFIED	14.78	<input checked="" type="checkbox"/>
Annihilation Rad.	HE	0.06273	0.03674	pCi/g	0.04873	N	510.6	1	1.768	IDENTIFIED	58.51	<input checked="" type="checkbox"/>
Bismuth-211	WT	3.217	0.2539	pCi/g	0.306	Y	351.9	4	1.312	IDENTIFIED	7.135	<input checked="" type="checkbox"/> VI
Bismuth-212	HE	0.8524	0.229	pCi/g	0.6644	N	0	9	0	FAIL_ABUND	0	<input checked="" type="checkbox"/>
Bismuth-214	✓	0.8976	0.08188	pCi/g	0.121	0.200	609.3	4	1.378	IDENTIFIED	8.35	<input checked="" type="checkbox"/>
Cadmium-109	INT	3.34	0.472	pCi/g	1.283	Y	87.11	3	1.21	IDENTIFIED	12.8	<input checked="" type="checkbox"/> VI
Cadmium-115	HE	5.716	13.43	pCi/g	0	N	0	9	0	SHORT_HLIF	0	<input checked="" type="checkbox"/>
Cerium-143		1609	364.1	pCi/g	0	N	0	9	0	SHORT_HLIF	0	<input checked="" type="checkbox"/>
Gross Gamma		8.678	1.583	pCi/g	2.292	N	0					<input checked="" type="checkbox"/>
Iodine-123	HE	2.21E+07	1.02E+08	pCi/g	0	N	0	9	0	SHORT_HLIF	0	<input checked="" type="checkbox"/>
Lead-212	✓	1.284	0.08964	pCi/g	0.1079	0.100	238.5	4	1.056	IDENTIFIED	5.714	<input checked="" type="checkbox"/>
Lead-214	✓	1.119	0.09303	pCi/g	0.1067	0.100	351.9	4	1.312	IDENTIFIED	7.135	<input checked="" type="checkbox"/>
Mercury-203	NR	0.0771	0.04005	pCi/g	0.06512	0.100	277.8	1	1.514	IDENTIFIED	51.83	<input checked="" type="checkbox"/> VI
Neptunium-237	WT	0.96	0.168	pCi/g	0.4076	N	87.11	3	1.21	IDENTIFIED	12.8	<input checked="" type="checkbox"/>
Polonium-212	NR	1.284	0.08964	pCi/g	0.1079	N	238.5	4	1.056	IDENTIFIED	5.714	<input checked="" type="checkbox"/>
Polonium-214	NR	1.119	0.09303	pCi/g	0.1067	N	351.9	4	1.312	IDENTIFIED	7.135	<input checked="" type="checkbox"/>
Polonium-216	NR	1.284	0.08964	pCi/g	0.1079	N	238.5	4	1.056	IDENTIFIED	5.714	<input checked="" type="checkbox"/>
Polonium-218	NR	1.119	0.09303	pCi/g	0.1067	N	351.9	4	1.312	IDENTIFIED	7.135	<input checked="" type="checkbox"/>
Potassium-40	✓	37.1	1.676	pCi/g	0.4992	1.00	1461	1	2.004	IDENTIFIED	2.793	<input checked="" type="checkbox"/>
Promethium-149	HE	142	107.2	pCi/g	0	N	0	9	0	SHORT_HLIF	0	<input checked="" type="checkbox"/>
Radium-224	INT	2.103	0.5097	pCi/g	1.515	Y	241.7	1	2.2	IDENTIFIED	24	<input checked="" type="checkbox"/> VI
Radium-226	✓	0.8976	0.08188	pCi/g	0.121	Y	609.3	4	1.378	IDENTIFIED	8.35	<input checked="" type="checkbox"/>
Radium-228	✓	1.406	0.1713	pCi/g	0.2341	0.500	911.3	3	1.434	IDENTIFIED	10.9	<input checked="" type="checkbox"/>
Sodium-24	HE	1.51E+07	7.89E+06	pCi/g	0	N	0	9	0	SHORT_HLIF	0	<input checked="" type="checkbox"/>
Tellurium-125m	HE	17.87	4.757	pCi/g	17.01	N	0	9	0	NOT_IDENTI	0	<input checked="" type="checkbox"/>
Thallium-208	✓	0.4533	0.04189	pCi/g	0.05885	0.080	583.1	1	1.337	IDENTIFIED	8.689	<input checked="" type="checkbox"/>
Thorium-228	NR	1.307	0.09126	pCi/g	0.1099	N	238.5	4	1.056	IDENTIFIED	5.714	<input checked="" type="checkbox"/>
Thorium-230	NR	0.8975	0.08188	pCi/g	0.121	N	609.3	4	1.378	IDENTIFIED	8.35	<input checked="" type="checkbox"/>
Thorium-232	NR	1.406	0.1713	pCi/g	0.2341	N	911.3	3	1.434	IDENTIFIED	10.9	<input checked="" type="checkbox"/>
Tin-126	INT	0.3269	0.04619	pCi/g	0.1265	N	87.11	3	1.21	IDENTIFIED	12.8	<input checked="" type="checkbox"/>
Titanium-44	LA	0.29	0.02988	pCi/g	0.08253	N	0	9	0	FAIL_ABUND	0	<input checked="" type="checkbox"/>
Uranium-234	NR	0.8975	0.08188	pCi/g	0.121	N	609.3	4	1.378	IDENTIFIED	8.35	<input checked="" type="checkbox"/>
Zirconium-97	HE	2.72E+07	1.61E+07	pCi/g	0	N	0	9	0	SHORT_HLIF	0	<input checked="" type="checkbox"/>

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
244619005	07-JAN-10 12:00	25-JAN-10 10:47	17.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Cerium-143		2721	437.2	pCi/g	0	N	0	10	0	SHORT_HLIF	0	
Cesium-134	LA	0.1249	0.02755	pCi/g	0.1057	0.100	0	10	0	NOT_IDENTI	0	UI Data rejected due to low abundance.
Cesium-137	✓	0.1765	0.03795	pCi/g	0.07651	0.100	661.5	2	1.504	IDENTIFIED	21.11	
Gross Gamma		7.045	1.606	pCi/g	2.424	N		0				
Iodine-123		1.94E+08	9.17E+07	pCi/g	0	N	0	10	0	SHORT_HLIF	0	
Iodine-133	HE	7616	28480	pCi/g	0	N	0	10	0	SHORT_HLIF	0	
Lead-210	NR	1.925	0.4316	pCi/g	0.7176	N	46.14	3	1.145	IDENTIFIED	22.05	
Lead-212	✓	1.064	0.06679	pCi/g	0.08448	0.100	238.4	4	1.342	IDENTIFIED	4.334	
Lead-214	✓	0.9743	0.07866	pCi/g	0.1195	0.100	351.7	4	1.369	IDENTIFIED	6.718	
Neptunium-237	INT	0.6694	0.1246	pCi/g	0.2707	N	87.11	3	1.125	IDENTIFIED	14.97	
Niobium-97		2.12E+06	1.00E+06	pCi/g	0	N	0	10	0	SHORT_HLIF	0	
Polonium-210	NR	1.925	0.4299	pCi/g	0.7176	N	46.14	3	1.145	IDENTIFIED	22.05	
Polonium-212	NR	1.064	0.06679	pCi/g	0.08448	N	238.4	4	1.342	IDENTIFIED	4.334	
Polonium-214	NR	0.9743	0.07866	pCi/g	0.1195	N	351.7	4	1.369	IDENTIFIED	6.718	
Polonium-216	NR	1.064	0.06679	pCi/g	0.08448	N	238.4	4	1.342	IDENTIFIED	4.334	
Polonium-218	NR	0.9743	0.07866	pCi/g	0.1195	N	351.7	4	1.369	IDENTIFIED	6.718	
Potassium-40	✓	27.48	1.177	pCi/g	0.6755	1.00	1460	1	2.545	IDENTIFIED	3.001	
Promethium-149	HE	168.2	103.4	pCi/g	0	N	0	10	0	SHORT_HLIF	0	
Radium-224	INT	3.386	0.5689	pCi/g	0.9616	Y	241.3	1	1.831	IDENTIFIED	16.33	✓
Radium-226	✓	0.8702	0.08324	pCi/g	0.128	Y	608.9	4	1.795	IDENTIFIED	8.345	
Radium-228	✓	1.367	0.1629	pCi/g	0.2407	0.500	910.7	3	2.051	IDENTIFIED	10.73	
Technetium-99m		1.24E+19	0	pCi/g	0	N	0	10	0	SHORT_HLIF	0	
Thallium-208	✓	0.2772	0.04032	pCi/g	0.06286	0.880	583	1	1.409	IDENTIFIED	13.95	
Thorium-228	NR	1.083	0.068	pCi/g	0.08601	N	238.4	4	1.342	IDENTIFIED	4.334	
Thorium-230	NR	0.8702	0.08323	pCi/g	0.128	N	608.9	4	1.795	IDENTIFIED	8.345	
Thorium-232	NR	1.367	0.1629	pCi/g	0.2407	N	910.7	3	2.051	IDENTIFIED	10.73	
Tin-126	INT	0.228	0.0353	pCi/g	0.08438	N	87.11	3	1.125	IDENTIFIED	14.97	
Titanium-44	LA	0.2493	0.02003	pCi/g	0.0472	N	0	10	0	FAIL_ABUND	0	
Total Uranium		2.6812	1.49E-06	ug/g	1.365	N		0				
Uranium-234	NR	0.8702	0.08323	pCi/g	0.128	N	608.9	4	1.795	IDENTIFIED	8.345	
Zirconium-97		7.45E+07	1.75E+07	pCi/g	0	N	0	10	0	SHORT_HLIF	0	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue	
1202015440		25-JAN-10 11:12	0	LCS	LOAD	1		GEL	N	RGSP	
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228	0.9582	0.2492	pCi/g	0.4521	N	911.1	3	1.59	IDENTIFIED	25.32	
Americium-241	13.43	0.6331	pCi/g	0.4889	0.200	59.56	1	0.9966	IDENTIFIED	2.612	
Americium-243	0.5309	0.08498	pCi/g	0.1264	N	76.1	1	3.006	IDENTIFIED	15.41	
Barium-137m	5.467	0.2708	pCi/g	0.1031	N	661.6	2	1.475	IDENTIFIED	2.201	
Bismuth-211	1.881	0.3411	pCi/g	0.5432	Y	352	4	1.24	IDENTIFIED	17.3	
Bismuth-214	0.7722	0.1286	pCi/g	0.1776	0.200	609.3	4	1.463	IDENTIFIED	15.79	
Cadmium-109	31.21	1.961	pCi/g	1.938	Y	87.94	3	0.9752	IDENTIFIED	4.033	
Cesium-137	5.779	0.2867	pCi/g	0.109	0.100	661.6	2	1.475	IDENTIFIED	2.201	
Cobalt-57	0.2419	0.02929	pCi/g	0.05445	N	122.1	1	1.14	IDENTIFIED	11.37	
Cobalt-60	6.293	0.3069	pCi/g	0.06525	0.100	1332	1	1.956	IDENTIFIED	2.45	
Gross Gamma	26.72	2.739	pCi/g	3.874	N		0				
Iodine-123	310.8	228.7	pCi/g	0	N	0	5	0	SHORT_HLIF	0	
Lead-212	0.7917	0.1025	pCi/g	0.171	0.100	238.5	4	1.048	IDENTIFIED	11.51	
Lead-214	0.6542	0.1199	pCi/g	0.1893	0.100	352	4	1.24	IDENTIFIED	17.3	
Neptunium-237	9.113	1.101	pCi/g	0.5747	N	87.94	3	0.9752	IDENTIFIED	4.033	
Niobium-97	92.35	51.33	pCi/g	0	N	0	5	0	SHORT_HLIF	0	
Polonium-212	0.7917	0.1025	pCi/g	0.171	N	238.5	4	1.048	IDENTIFIED	11.51	
Polonium-214	0.6542	0.1199	pCi/g	0.1893	N	352	4	1.24	IDENTIFIED	17.3	
Polonium-216	0.7917	0.1025	pCi/g	0.171	N	238.5	4	1.048	IDENTIFIED	11.51	
Polonium-218	0.6542	0.1199	pCi/g	0.1893	N	352	4	1.24	IDENTIFIED	17.3	
Radium-224	2.184	0.6055	pCi/g	2.008	Y	0	5	0	NOT_IDENTI	0	
Radium-226	0.7722	0.1286	pCi/g	0.1776	Y	609.3	4	1.463	IDENTIFIED	15.79	
Radium-228	0.9582	0.2492	pCi/g	0.4521	0.500	911.1	3	1.59	IDENTIFIED	25.32	

Thallium-208		0.2629	0.05797	pCi/g	0.1064	0.080	583.3	1	1.393	IDENTIFIED	21.49	<input checked="" type="checkbox"/>
Thorium-228		0.7976	0.1032	pCi/g	0.1723	N	238.5	4	1.048	IDENTIFIED	11.51	<input checked="" type="checkbox"/>
Thorium-230		0.7722	0.1286	pCi/g	0.1776	N	609.3	4	1.463	IDENTIFIED	15.79	<input checked="" type="checkbox"/>
Thorium-232		0.9582	0.2492	pCi/g	0.4521	N	911.1	3	1.59	IDENTIFIED	25.32	<input checked="" type="checkbox"/>
Tin-126		3.103	0.1949	pCi/g	0.1935	N	87.94	3	0.0752	IDENTIFIED	4.033	<input checked="" type="checkbox"/>
Titanium-44	HE	0.1105	0.02553	pCi/g	0.09238	N	0	5	0	NOT_IDENTI	0	<input checked="" type="checkbox"/>
Total Uranium		6.4304	2.69E-06	ug/g	4.5298	N		0				<input checked="" type="checkbox"/>
Uranium-234		0.7722	0.1286	pCi/g	0.1776	N	609.3	4	1.463	IDENTIFIED	15.79	<input checked="" type="checkbox"/>
Zirconium-97	HE	1500	866.4	pCi/g	0	N	0	5	0	SHORT_HLIF	0	<input checked="" type="checkbox"/>

*** = Number of isotopes identified with a keyline at this energy.

SEE
1/27/10

Technetium-99m	1.24E+19 0	pCi/g 0	N	0	10 0	SHORT_HLIF 0	☐
Thallium-208	0.2772 0.04032	pCi/g 0.06286	0.080	583	1 1.409	IDENTIFIED 13.95	☐
Thorium-228	1.083 0.068	pCi/g 0.08601	N	238.4	4 1.342	IDENTIFIED 4.334	☐
Thorium-230	0.8702 0.08323	pCi/g 0.128	N	608.9	4 1.795	IDENTIFIED 8.345	☐
Thorium-232	1.367 0.1629	pCi/g 0.2407	N	910.7	3 2.051	IDENTIFIED 10.73	☐
Tin-126	0.228 0.0353	pCi/g 0.08438	N	87.11	3 1.125	IDENTIFIED 14.97	☐
Titanium-44	0.2493 0.02003	pCi/g 0.0472	N	0	10 0	FAIL_ABUND 0	☐
Total Uranium	2.6812 1.49E-06	ug/g 1.365	N	0			☐
Uranium-234	0.8702 0.08323	pCi/g 0.128	N	608.9	4 1.795	IDENTIFIED 8.345	☐
Zirconium-97	7.45E+07 1.75E+07	pCi/g 0	N	0	10 0	SHORT_HLIF 0	☐

*** Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1202015440		25-JAN-10 11:12	0	LCS	LOAD	1		GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228	0.9583	0.2492	pCi/g	0.4521	N	911.1 3	1.59	IDENTIFIED	25.32	☐	
Americium-241 ✓	13.43	0.6332	pCi/g	0.4889	0.200	59.56 1	0.9966	IDENTIFIED	2.612	☐	
Americium-243	0.531	0.08479	pCi/g	0.1265	N	76.1 1	3.006	IDENTIFIED	15.41	☐	
Barium-137m	5.467	0.2708	pCi/g	0.1031	N	661.6 2	1.475	IDENTIFIED	2.201	☐	
Bismuth-211	1.881	0.3411	pCi/g	0.5432	Y	352 4	1.24	IDENTIFIED	17.3	☐	
Bismuth-214	0.7723	0.1286	pCi/g	0.1776	0.200	609.3 4	1.463	IDENTIFIED	15.79	☐	
Cadmium-109	31.22	1.961	pCi/g	1.938	Y	87.94 3	0.9752	IDENTIFIED	4.033	☐	
Cesium-137 ✓	5.78	0.2867	pCi/g	0.109	0.100	661.6 2	1.475	IDENTIFIED	2.201	☐	
Cobalt-57	0.2419	0.02929	pCi/g	0.05445	N	122.1 1	1.14	IDENTIFIED	11.37	☐	
Cobalt-60 ✓	6.294	0.307	pCi/g	0.06525	0.100	1332 1	1.956	IDENTIFIED	2.45	☐	
Gross Gamma	26.72	2.739	pCi/g	3.874	N	0				☐	
Iodine-123 HE	310.8	228.7	pCi/g	0	N	0 5 0	SHORT_HLIF 0			☐	
Lead-212	0.7918	0.1025	pCi/g	0.171	0.100	238.5 4	1.048	IDENTIFIED	11.51	☐	
Lead-214	0.6542	0.1199	pCi/g	0.1894	0.100	352 4	1.24	IDENTIFIED	17.3	☐	
Neptunium-237	9.114	1.101	pCi/g	0.5748	N	87.94 3	0.9752	IDENTIFIED	4.033	☐	
Niobium-97 HE	92.36	51.33	pCi/g	0	N	0 5 0	SHORT_HLIF 0			☐	
Polonium-212	0.7918	0.1025	pCi/g	0.171	N	238.5 4	1.048	IDENTIFIED	11.51	☐	
Polonium-214	0.6542	0.1199	pCi/g	0.1894	N	352 4	1.24	IDENTIFIED	17.3	☐	
Polonium-216	0.7918	0.1025	pCi/g	0.171	N	238.5 4	1.048	IDENTIFIED	11.51	☐	
Polonium-218	0.6542	0.1199	pCi/g	0.1894	N	352 4	1.24	IDENTIFIED	17.3	☐	
Radium-224	2.184	0.6056	pCi/g	2.008	Y	0 5 0	NOT_IDENTI 0			☐	
Radium-226	0.7723	0.1286	pCi/g	0.1776	Y	609.3 4	1.463	IDENTIFIED	15.79	☐	
Radium-228	0.9583	0.2492	pCi/g	0.4521	0.500	911.1 3	1.59	IDENTIFIED	25.32	☐	
Thallium-208	0.2629	0.05797	pCi/g	0.1064	0.080	583.3 1	1.393	IDENTIFIED	21.49	☐	
Thorium-228	0.7977	0.1032	pCi/g	0.1723	N	238.5 4	1.048	IDENTIFIED	11.51	☐	
Thorium-230	0.7723	0.1286	pCi/g	0.1776	N	609.3 4	1.463	IDENTIFIED	15.79	☐	
Thorium-232	0.9583	0.2492	pCi/g	0.4521	N	911.1 3	1.59	IDENTIFIED	25.32	☐	
Tin-126	3.104	0.195	pCi/g	0.1935	N	87.94 3	0.9752	IDENTIFIED	4.033	☐	
Titanium-44 HE	0.1105	0.02554	pCi/g	0.09239	N	0 5 0	NOT_IDENTI 0			☐	
Total Uranium	6.4308	2.69E-06	ug/g	4.5301	N	0				☐	
Uranium-234	0.7723	0.1286	pCi/g	0.1776	N	609.3 4	1.463	IDENTIFIED	15.79	☐	
Zirconium-97 HE	1500	866.4	pCi/g	0	N	0 5 0	SHORT_HLIF 0			☐	

*** = Number of isotopes identified with a keyline at this energy.

Result Greater Than DL

Batch Id	Sample Id	Sample Type	Run Date	Parname	Result	Uncertainty	Units	DL	RDL
941636	244619004	SAMPLE	25-JAN-10	Thallium-201	15.15	6.359	pCi/g	11.14	N
				Thallium-208	0.4533	0.04189	pCi/g	0.02944	0.080
				Uranium-235	0.1775	0.08978	pCi/g	0.1721	0.500
				Zirconium-97	2.72E+07	1.61E+07	pCi/g	0	N
941636	244619005	SAMPLE	25-JAN-10	Americium-241	0.1522	0.05612	pCi/g	0.09233	0.200
				Bismuth-211	2.646	0.2292	pCi/g	0.1613	Y
				Bismuth-214	0.9565	0.09208	pCi/g	0.05965	0.200
				Cadmium-109	3.233	0.3714	pCi/g	0.5404	Y
				Cerium-143	1847	391.3	pCi/g	0	N
				Cesium-134	0.04815	0.03171	pCi/g	0.04331	0.100
				Gross Gamma	8.718	1.583	pCi/g	1.407	N
				Krypton-85	11.2	3.813	pCi/g	6.425	N
				Lanthanum-140	0.1042	0.04955	pCi/g	0.09308	Y
				Lead-212	1.361	0.08508	pCi/g	0.04479	0.100
				Lead-214	0.9203	0.08327	pCi/g	0.05622	0.100
				Potassium-40	36.63	1.873	pCi/g	0.2614	1.00
				Promethium-148	240.1	109.6	pCi/g	0	N
				Radium-224	2.024	0.53	pCi/g	0.5098	Y
				Radium-226	0.9565	0.09208	pCi/g	0.05965	Y
				Radium-228	1.176	0.1855	pCi/g	0.1018	0.500
				Strontium-85	0.05917	0.02014	pCi/g	0.03394	Y
				Technetium-99m	5.46E+16	0	pCi/g	0	N
				Thallium-200	225.7	1335	pCi/g	0	N
				Thallium-208	0.4418	0.0402	pCi/g	0.03214	0.080
				Thorium-234	1.448	0.6376	pCi/g	0.7894	2.00
				Zirconium-97	2.41E+07	1.57E+07	pCi/g	0	N
941636	1202015438	MB	25-JAN-10	Iodine-123	17.14	79.89	pCi/g	0	N
				Krypton-85	16.86	2.307	pCi/g	4.41	N
				Radium-224	0.29	0.1805	pCi/g	0.2883	Y
				Sodium-24	35.05	36.32	pCi/g	0	N
				Strontium-85	0.07976	0.01091	pCi/g	0.02086	X
				Zirconium-97	1361	254.2	pCi/g	0	N
941636	1202015439	DUP	25-JAN-10	Bismuth-211	2.801	0.214	pCi/g	0.1715	Y
				Bismuth-214	0.8702	0.08324	pCi/g	0.06405	0.200
				Cadmium-109	2.329	0.3607	pCi/g	0.4319	Y
				Cerium-143	2721	437.2	pCi/g	0	N
				Cesium-134	0.1249	0.02755	pCi/g	0.05289	0.100

MRP
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MRP
12/2/10

Blank Results Greater Than CSU

Batch ID	Blank ID & Run Seq.	Run Date	Parmname	Result Units	1 Sigma			RDL	MDA	Report Parm?
					1 Sigma TPU	1 Sigma TPU x1.65	1 Sigma TPU x2			
941636	1202015438-1	25-JAN-10 10:47	Actinium-228	0.0536 pCi/g	0.0585	0.0965	0.117		0.1192	N
941636	1202015438-1	25-JAN-10 10:47	Antimony-126	0.0205 pCi/g	0.022	0.0362	0.0439		0.07676	N
941636	1202015438-1	25-JAN-10 10:47	Arsenic-73	0.173 pCi/g	0.141	0.232	0.282		0.5405	N
941636	1202015438-1	25-JAN-10 10:47	Cadmium-109	0.179 pCi/g	0.148	0.244	0.296		0.492	Y
941636	1202015438-1	25-JAN-10 10:47	Cesium-135	0.0626 pCi/g	0.0401	0.0661	0.0802		0.1422	N
941636	1202015438-1	25-JAN-10 10:47	Cobalt-60	0.0086 pCi/g	0.0079 5	0.0131	0.0159	0.100	0.02849	Y
941636	1202015438-1	25-JAN-10 10:47	Curium-247	0.00871 pCi/g	0.0085 8	0.0142	0.0172		0.03061	N
941636	1202015438-1	25-JAN-10 10:47	Europium-155	0.0247 pCi/g	0.0251	0.0413	0.0501		0.08972	N
941636	1202015438-1	25-JAN-10 10:47	Iridium-192	0.00698 pCi/g	0.0079 5	0.0131	0.0159		0.02879	N
941636	1202015438-1	25-JAN-10 10:47	Iron-59	0.038 pCi/g	0.0183	0.0303	0.0367		0.06709	N
941636	1202015438-1	25-JAN-10 10:47	Krypton-85	16.9 pCi/g	2.31	3.81	4.61		8.815	N
941636	1202015438-1	25-JAN-10 10:47	Niobium-95	0.00791 pCi/g	0.0091 3	0.0151	0.0183		0.03159	N
941636	1202015438-1	25-JAN-10 10:47	Niobium-95m	0.0387 pCi/g	0.0296	0.0488	0.0592		0.09386	N
941636	1202015438-1	25-JAN-10 10:47	Promethium-149	2.04 pCi/g	2.11	3.49	4.23		7.346	N
941636	1202015438-1	25-JAN-10 10:47	Radium-224	0.290 pCi/g	0.181	0.298	0.361		0.5763	Y
941636	1202015438-1	25-JAN-10 10:47	Radium-228	0.0536 pCi/g	0.0585	0.0965	0.117	0.500	0.1192	Y
941636	1202015438-1	25-JAN-10 10:47	Radon-219	0.174 pCi/g	0.0939	0.155	0.188		0.3423	N
941636	1202015438-1	25-JAN-10 10:47	Radon-220	6.00 pCi/g	5.89	9.73	11.8		21.27	N
941636	1202015438-1	25-JAN-10 10:47	Rhodium-101	0.0139 pCi/g	0.0096 1	0.0159	0.0192		0.03221	N
941636	1202015438-1	25-JAN-10 10:47	Rubidium-84	0.0181 pCi/g	0.0133	0.0219	0.0265		0.04809	N
941636	1202015438-1	25-JAN-10 10:47	Ruthenium-103	0.00742 pCi/g	0.0083 9	0.0138	0.0168		0.02918	N
941636	1202015438-1	25-JAN-10 10:47	Sodium-24	35.1 pCi/g	36.3	59.9	72.6		0	N
941636	1202015438-1	25-JAN-10 10:47	Strontium-85	0.0798 pCi/g	0.0109	0.018	0.0218		0.0417	Y
941636	1202015438-1	25-JAN-10 10:47	Terbium-160	0.048 pCi/g	0.0284	0.0469	0.0568		0.1045	N
941636	1202015438-1	25-JAN-10 10:47	Thallium-202	0.00978 pCi/g	0.0105	0.0173	0.021		0.03702	N
941636	1202015438-1	25-JAN-10 10:47	Thallium-208	0.0154 pCi/g	0.0161	0.0265	0.0322	0.080	0.03387	Y
941636	1202015438-1	25-JAN-10 10:47	Thorium-232	0.0536 pCi/g	0.0585	0.0965	0.117		0.1192	N
941636	1202015438-1	25-JAN-10 10:47	Zirconium-95	0.0144 pCi/g	0.015	0.0248	0.03		0.05236	N
941636	1202015438-1	25-JAN-10 10:47	Zirconium-97	1360 pCi/g	254	419	508		0	N

VAX/VMS Nuclide Identification Report Generated 26-JAN-2010 15:28:29.31

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*****
*                               GEL Laboratories LLC                      *
*                               2040 Savage Road                          *
*                               Charleston, SC 29414                     *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G244604001.CNF;1
Sample date       : 8-JAN-2010 12:00:00. Acquisition date : 25-JAN-2010 08:38:21
Sample ID        : G244604001      Sample quantity   : 1.48820E+02 GRAM
Detector name    : GAM01           Detector geometry: CAN
Elapsed live time: 0 02:00:00.00   Elapsed real time: 0 02:00:01.36 0.0%
Energy tolerance : 1.50000 keV     Analyst Initials : MXR1
Abundance limit  : 75.00000        Sensitivity     : 5.00000
Batch ID        : 941636           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	63.08*	61	487	1.40	126.89	123	8	8.46E-03	65.7	
2	2	74.81	453	550	1.30	150.33	143	17	6.29E-02	10.3	3.42E+00
3	2	77.20*	767	509	1.30	155.11	143	17	1.07E-01	6.6	
4	0	85.15*	40	538	1.00	171.01	165	8	5.58E-03	102.7	
5	4	87.26	247	326	1.25	175.23	172	20	3.43E-02	12.3	4.55E-01
6	4	89.96	181	620	1.62	180.63	172	20	2.51E-02	28.0	
7	4	92.75*	238	537	1.58	186.19	172	20	3.31E-02	20.3	
8	0	128.75	132	407	1.31	258.16	254	9	1.83E-02	28.8	
9	0	186.07*	206	463	1.15	372.73	367	11	2.86E-02	22.2	
10	0	209.48	133	342	1.13	419.53	415	9	1.85E-02	26.5	
11	3	239.01*	1384	236	1.20	478.55	471	20	1.92E-01	3.3	4.38E-01
12	3	241.96	328	303	1.71	484.45	471	20	4.55E-02	14.3	
13	0	276.85	73	278	3.20	554.18	549	12	1.01E-02	47.0	
14	0	295.57*	411	237	1.30	591.61	585	12	5.71E-02	9.1	
15	0	300.40	117	164	0.90	601.27	597	9	1.63E-02	21.7	
16	0	328.21	46	177	0.79	656.85	653	9	6.35E-03	54.4	
17	0	338.82	291	219	1.18	678.07	672	13	4.04E-02	12.0	
18	0	352.19*	743	209	1.42	704.78	697	16	1.03E-01	5.8	
19	0	463.36	92	117	1.00	927.00	921	11	1.28E-02	25.1	
20	0	511.02*	191	144	2.07	1022.24	1015	17	2.65E-02	17.6	
21	0	583.47*	431	114	1.24	1167.06	1160	13	5.98E-02	7.1	
22	0	609.55*	446	147	1.34	1219.19	1212	15	6.19E-02	7.7	
23	0	727.81	132	101	1.50	1455.56	1448	17	1.83E-02	19.9	
24	0	769.05	17	151	0.94	1537.99	1532	14	2.33E-03	157.3	
25	0	795.76	66	79	1.73	1591.37	1587	15	9.21E-03	30.6	
26	0	861.16*	49	57	1.33	1722.08	1717	10	6.80E-03	33.5	
27	0	911.51*	288	79	1.62	1822.71	1815	15	4.00E-02	9.0	
28	1	965.04	68	48	1.92	1929.69	1922	34	9.44E-03	22.9	1.41E+00
29	1	969.33*	176	39	1.63	1938.27	1922	34	2.45E-02	10.5	
30	0	1120.55*	137	60	1.53	2240.49	2234	14	1.90E-02	14.9	
31	0	1408.73	24	21	0.68	2816.44	2807	14	3.31E-03	45.7	
32	0	1461.31*	1274	15	2.02	2921.51	2914	15	1.77E-01	2.9	
33	0	1588.17	37	13	0.96	3175.03	3166	17	5.19E-03	27.3	
34	0	1621.57	7	9	1.45	3241.77	3239	9	9.98E-04	77.7	
35	0	1730.43	29	10	1.75	3459.32	3452	14	3.98E-03	30.4	
36	0	1765.08*	58	21	1.21	3528.57	3522	14	8.00E-03	22.3	

Flag: "*" = Peak area was modified by background subtraction

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G244604001.CNF;1
 Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
 Sample title : MXR1
 Sample date : 8-JAN-2010 12:00:00 Acquisition date : 25-JAN-2010 08:38:21
 Sample ID : G244604001 Sample quantity : 148.82 GRAM
 Sample type : SOLID Sample geometry :
 Detector name : GAMMA1 Detector geometry: CAN
 Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.36 0.0%
 Peak Width (FWHM): 3.00 Confidence level : 5.00 %
 Energy tolerance : 1.50 keV Half life ratio : 8.00
 Errors propagated: Yes Systematic Error : 0.00 %
 Efficiency type : Empirical Efficiencies at : Peak Energy
 Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.187E+01	3.384E+00	4.874E-01	4.333E-02	65.375
CD-109	+	88.03	*	3.311E+00	8.737E-01	1.207E+00	1.142E-01	2.743
SN-126	+	64.28		5.820E-01	7.692E-01	9.256E-01	1.362E-01	0.629
	+	86.94		1.350E+00	6.518E-01	5.314E-01	2.206E-01	2.539
	+	87.57	*	3.246E-01	8.565E-02	1.190E-01	1.121E-02	2.729
TL-208	+	277.35		6.967E-01	6.607E-01	6.435E-01	8.178E-02	1.083
	+	510.84		9.300E-01	3.449E-01	2.173E-01	2.582E-02	4.280
	+	583.14	*	6.019E-01	1.018E-01	5.651E-02	5.132E-03	10.652
	+	860.37		6.514E-01	4.414E-01	4.577E-01	4.386E-02	1.423
BI-211		72.87		7.811E+00	3.418E+00	5.813E+00	4.767E-01	1.344
	+	351.07	*	4.492E+00	6.613E-01	3.333E-01	3.032E-02	13.477
BI-212	+	727.18	*	1.589E+00	6.513E-01	5.102E-01	5.056E-02	3.114
		785.46		2.914E+00	1.927E+00	3.512E+00	3.069E-01	0.830
	+	1620.62		7.550E-01	1.175E+00	1.697E+00	1.461E-01	0.445
PB-212	+	74.81		2.571E+00	6.197E-01	5.679E-01	7.108E-02	4.527
	+	77.11		2.450E+00	3.853E-01	3.205E-01	2.719E-02	7.647
	+	87.30		1.501E+00	4.236E-01	5.519E-01	7.571E-02	2.720
	+	238.63	*	1.802E+00	2.182E-01	9.584E-02	9.704E-03	18.799
	+	300.09		2.377E+00	1.064E+00	1.098E+00	1.187E-01	2.165
PO-212	+	74.81		2.571E+00	6.197E-01	5.679E-01	7.108E-02	4.527
	+	77.11		2.450E+00	3.853E-01	3.205E-01	2.719E-02	7.647
	+	87.30		1.501E+00	4.236E-01	5.519E-01	7.571E-02	2.720
	+	115.19		-3.309E-01	3.849E+00	6.097E+00	5.297E-01	-0.054
	+	238.63	*	1.802E+00	2.182E-01	9.584E-02	9.704E-03	18.799
	+	300.09		2.377E+00	1.064E+00	1.098E+00	1.187E-01	2.165
BI-214	+	609.31	*	1.176E+00	2.149E-01	1.202E-01	1.185E-02	9.786
	+	1120.29		1.918E+00	6.073E-01	4.942E-01	5.288E-02	3.880
	+	1764.49		1.114E+00	5.046E-01	3.384E-01	2.838E-02	3.291
PB-214	+	74.81		4.430E+00	1.038E+00	9.786E-01	1.090E-01	4.527
	+	77.11		4.201E+00	7.340E-01	5.494E-01	6.265E-02	7.647
	+	87.30		2.572E+00	7.070E-01	9.455E-01	1.149E-01	2.720
	+	241.98		2.562E+00	7.819E-01	5.773E-01	6.167E-02	4.438
	+	295.21		1.459E+00	3.095E-01	2.226E-01	2.458E-02	6.555
	+	351.92	*	1.563E+00	2.441E-01	1.162E-01	1.218E-02	13.448

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-214	+	74.81		4.430E+00	1.038E+00	9.786E-01	1.090E-01	4.527
	+	77.11		4.201E+00	7.340E-01	5.494E-01	6.265E-02	7.647
	+	87.30		2.572E+00	7.070E-01	9.455E-01	1.149E-01	2.720
	+	241.98		2.562E+00	7.819E-01	5.773E-01	6.167E-02	4.438
	+	295.21		1.459E+00	3.095E-01	2.226E-01	2.458E-02	6.555
PO-216	+	351.92	*	1.563E+00	2.441E-01	1.162E-01	1.218E-02	13.448
	+	74.81		2.571E+00	6.197E-01	5.679E-01	7.108E-02	4.527
	+	77.11		2.450E+00	3.853E-01	3.205E-01	2.719E-02	7.647
	+	87.30		1.501E+00	4.236E-01	5.519E-01	7.571E-02	2.720
	+	238.63	*	1.802E+00	2.182E-01	9.584E-02	9.704E-03	18.799
PO-218	+	300.09		2.377E+00	1.064E+00	1.098E+00	1.187E-01	2.165
	+	74.81		4.430E+00	1.038E+00	9.786E-01	1.090E-01	4.527
	+	77.11		4.201E+00	7.340E-01	5.494E-01	6.265E-02	7.647
	+	87.30		2.572E+00	7.070E-01	9.455E-01	1.149E-01	2.720
	+	241.98		2.562E+00	7.819E-01	5.773E-01	6.167E-02	4.438
RA-224	+	295.21		1.459E+00	3.095E-01	2.226E-01	2.458E-02	6.555
	+	351.92	*	1.563E+00	2.441E-01	1.162E-01	1.218E-02	13.448
	+	240.98	*	4.859E+00	1.457E+00	1.091E+00	9.914E-02	4.454
	+	609.31	*	1.176E+00	2.149E-01	1.202E-01	1.185E-02	9.786
	+	1120.29		1.918E+00	6.073E-01	4.942E-01	5.288E-02	3.880
AC-228	+	1764.49		1.114E+00	5.046E-01	3.384E-01	2.838E-02	3.291
	+	338.32		1.936E+00	9.247E-01	3.793E-01	1.566E-01	5.105
	+	911.07	*	1.817E+00	3.903E-01	2.416E-01	2.797E-02	7.521
	+	969.11		1.965E+00	6.176E-01	4.069E-01	9.548E-02	4.828
	+	338.32		1.936E+00	9.247E-01	3.793E-01	1.566E-01	5.105
RA-228	+	911.07	*	1.817E+00	3.903E-01	2.416E-01	2.797E-02	7.521
	+	969.11		1.965E+00	6.176E-01	4.069E-01	9.548E-02	4.828
	+	74.81		2.615E+00	5.817E-01	5.775E-01	4.851E-02	4.527
	+	77.11		2.492E+00	3.918E-01	3.259E-01	2.765E-02	7.647
	+	87.30		1.527E+00	4.029E-01	5.613E-01	5.271E-02	2.720
TH-228	+	238.63	*	1.832E+00	2.219E-01	9.746E-02	9.868E-03	18.799
	+	300.09		2.417E+00	1.778E+00	1.116E+00	6.625E-01	2.165
	+	609.31	*	1.176E+00	2.149E-01	1.202E-01	1.185E-02	9.786
	+	1120.29		1.918E+00	6.072E-01	4.942E-01	5.288E-02	3.880
	+	1764.49		1.114E+00	5.046E-01	3.384E-01	2.838E-02	3.291
TH-232	+	338.32		1.936E+00	4.946E-01	3.793E-01	3.339E-02	5.105
	+	911.07	*	1.817E+00	3.903E-01	2.416E-01	2.797E-02	7.521
	+	969.11		1.965E+00	6.176E-01	4.069E-01	9.548E-02	4.828
	+	63.29	*	1.470E+00	1.948E+00	2.219E+00	3.901E-01	0.662
	+	92.38		2.021E+00	9.019E-01	7.762E-01	1.423E-01	2.603
U-234	+	609.31	*	1.176E+00	2.149E-01	1.202E-01	1.185E-02	9.786
	+	1120.29		1.918E+00	6.072E-01	4.942E-01	5.288E-02	3.880
	+	1764.49		1.114E+00	5.046E-01	3.384E-01	2.838E-02	3.291
	+	86.50	*	9.533E-01	3.193E-01	3.774E-01	8.543E-02	2.526
	+	95.87		1.869E-01	1.084E+00	1.555E+00	3.850E-01	0.120
U-238	+	63.29	*	1.470E+00	1.948E+00	2.219E+00	3.901E-01	0.662
	+	92.38		2.021E+00	8.428E-01	7.762E-01	7.088E-02	2.603
	+	74.67	*	4.168E-01	9.261E-02	9.238E-02	7.682E-03	4.512
	+	86.72		3.575E+01	9.432E+00	1.411E+01	1.317E+00	2.533

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		117.66		-2.435E+00	4.108E+00	6.352E+00	5.538E-01	-0.383
		142.18		-5.686E+00	1.764E+01	2.955E+01	2.528E+00	-0.192
ANH-511	+	511.00	*	2.009E-01	7.260E-02	4.694E-02	3.979E-03	4.279

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-9.110E-02	3.436E-01	5.397E-01	4.909E-02	-0.169
NA-22		1274.54	*	-6.217E-03	4.711E-02	7.764E-02	6.519E-03	-0.080
NA-24		1368.53	*	-4.652E+00	4.711E-02	Half-Life too short		
AL-26		1129.67		-1.158E+00	1.945E+00	2.941E+00	2.456E-01	-0.394
		1808.65	*	-1.991E-02	2.399E-02	2.890E-02	2.394E-03	-0.689
TI-44		67.85		-1.641E-02	5.747E-02	8.178E-02	6.485E-03	-0.201
	+	78.38	*	4.522E-01	7.111E-02	8.409E-02	7.217E-03	5.378
SC-46		889.25	*	-3.748E-03	4.195E-02	6.797E-02	6.145E-03	-0.055
	+	1120.51		3.330E-01	1.031E-01	1.549E-01	1.302E-02	2.150
V-48		944.10		-3.847E-01	1.039E+00	1.629E+00	1.467E-01	-0.236
		983.50	*	-7.938E-02	8.413E-02	1.229E-01	1.097E-02	-0.646
		1312.09		-2.681E-04	8.825E-02	1.470E-01	1.246E-02	-0.002
CR-51		320.08	*	8.752E-02	4.019E-01	6.664E-01	6.268E-02	0.131
MN-52		744.21		-4.611E-02	3.371E-01	5.514E-01	4.730E-02	-0.084
		848.13		6.125E+00	8.052E+00	1.415E+01	1.265E+00	0.433
		935.52		1.904E-01	3.522E-01	6.006E-01	5.417E-02	0.317
		1246.25		6.788E-01	1.002E+01	1.685E+01	1.401E+00	0.040
		1333.61		5.635E+00	6.645E+00	1.205E+01	1.027E+00	0.468
		1434.06	*	2.045E-01	2.902E-01	5.259E-01	4.540E-02	0.389
MN-54		834.83	*	8.579E-03	4.025E-02	6.723E-02	5.984E-03	0.128
CO-56		846.75	*	2.143E-02	3.959E-02	6.816E-02	6.090E-03	0.314
		977.42		1.303E+00	3.823E+00	5.608E+00	5.015E-01	0.232
		1037.82		-2.659E-01	3.547E-01	5.285E-01	4.872E-02	-0.503
		1175.09		-1.220E+00	2.459E+00	3.949E+00	3.199E-01	-0.309
		1238.25		1.317E-01	1.067E-01	1.924E-01	1.645E-02	0.685
		1360.21		7.827E-01	1.090E+00	1.957E+00	1.675E-01	0.400
		1771.40		7.849E-02	2.203E-01	3.455E-01	2.892E-02	0.227
CO-57		122.06	*	5.206E-03	2.801E-02	4.477E-02	3.941E-03	0.116
		136.48		-1.610E-02	2.122E-01	3.592E-01	3.318E-02	-0.045
CO-58		810.76	*	-2.576E-02	4.156E-02	6.433E-02	5.691E-03	-0.400
FE-59		142.65		-1.457E-01	2.798E+00	4.733E+00	4.048E-01	-0.031
		192.34		1.994E-01	1.038E+00	1.751E+00	2.365E-01	0.114
		1099.22	*	-1.999E-02	1.056E-01	1.669E-01	1.539E-02	-0.120
		1291.56		-3.834E-02	1.459E-01	2.308E-01	2.220E-02	-0.166
CO-60		1173.22		-8.879E-03	4.881E-02	8.068E-02	6.530E-03	-0.110
		1332.49	*	9.087E-03	4.005E-02	6.840E-02	5.830E-03	0.133
ZN-65		1115.52	*	4.942E-02	1.116E-01	1.640E-01	1.384E-02	0.301
GE-68		1077.35	*	7.700E-01	1.488E+00	2.512E+00	2.163E-01	0.307
AS-73		53.44	*	1.030E-01	9.454E-01	1.547E+00	1.252E-01	0.067
AS-74		595.88	*	-2.877E-02	1.084E-01	1.783E-01	1.502E-02	-0.161
		634.78		2.837E-01	4.073E-01	7.126E-01	5.920E-02	0.398

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SE-75	66.05			4.978E-01	5.979E+00	8.664E+00	8.496E-01	0.057
	96.73			-8.207E-01	9.344E-01	1.258E+00	1.738E-01	-0.652
	121.11			7.438E-02	1.493E-01	2.414E-01	2.738E-02	0.308
	136.00			-1.473E-02	4.059E-02	6.802E-02	5.887E-03	-0.217
	198.60			8.443E-01	1.925E+00	3.271E+00	3.182E-01	0.258
	264.65	*		-4.158E-02	4.813E-02	7.509E-02	6.898E-03	-0.554
	279.53			1.078E-01	1.336E-01	2.032E-01	1.920E-02	0.531
	303.91			-1.723E+00	2.412E+00	3.264E+00	3.856E-01	-0.528
	400.65			7.405E-02	2.782E-01	4.580E-01	4.908E-02	0.162
BR-77	87.88		+	1.186E+03	3.130E+02	5.881E+02	5.558E+01	2.018
	200.40			-7.148E+01	2.860E+02	4.738E+02	4.179E+01	-0.151
	239.00		+	4.810E+02	5.411E+01	6.673E+01	6.058E+00	7.209
	249.79			-2.368E-01	1.175E+02	1.947E+02	1.775E+01	-0.001
	281.68			-9.572E+01	1.846E+02	2.571E+02	2.350E+01	-0.372
	297.23			7.096E+02	1.624E+02	2.279E+02	2.073E+01	3.114
	303.76			-2.220E+02	3.386E+02	4.614E+02	4.183E+01	-0.481
	439.47			1.821E+02	2.616E+02	4.404E+02	3.651E+01	0.414
	484.57			1.026E+02	4.429E+02	7.209E+02	6.079E+01	0.142
	520.65	*		1.351E+01	1.836E+01	3.093E+01	2.624E+00	0.437
	574.64			-4.680E+01	3.479E+02	5.782E+02	4.894E+01	-0.081
	578.91			7.026E+01	1.589E+02	2.425E+02	2.051E+01	0.290
	585.48			3.323E+03	5.521E+02	9.665E+02	8.164E+01	3.438
	755.35			-9.731E+01	3.004E+02	4.829E+02	4.165E+01	-0.201
	817.79			-1.570E+02	2.340E+02	3.599E+02	3.185E+01	-0.436
SR-82	698.33			-2.128E+01	3.828E+01	6.080E+01	5.092E+00	-0.350
	776.49	*		-1.430E-01	4.649E-01	6.721E-01	5.851E-02	-0.213
	1395.20			7.401E+00	1.037E+01	1.892E+01	1.628E+00	0.391
RB-83	520.41	*		4.297E-02	7.313E-02	1.220E-01	1.035E-02	0.352
	529.64			1.329E-03	1.119E-01	1.887E-01	1.602E-02	0.007
	552.65			-9.845E-03	2.055E-01	3.445E-01	2.924E-02	-0.029
RB-84	881.50	*		3.103E-02	8.164E-02	1.379E-01	1.244E-02	0.225
KR-85	513.99	*		2.150E+01	8.850E+00	1.477E+01	1.253E+00	1.455
SR-85	513.99	*		1.123E-01	4.622E-02	7.715E-02	6.541E-03	1.455
RB-86	1076.63	*		5.670E-01	9.726E-01	1.653E+00	1.424E-01	0.343
Y-88	898.02			-4.583E-03	4.710E-02	7.626E-02	6.938E-03	-0.060
	1836.01	*		1.436E-02	3.546E-02	6.226E-02	5.121E-03	0.231
ZR-88	392.90	*		-3.802E-04	3.426E-02	5.550E-02	4.469E-03	-0.007
Y-91	1204.90	*		8.507E+00	2.144E+01	3.702E+01	3.033E+00	0.230
NB-94	702.63	*		1.888E-02	3.615E-02	6.218E-02	5.220E-03	0.304
	871.10			-6.232E-03	3.470E-02	5.578E-02	5.019E-03	-0.112
NB-95	765.79	*		-1.028E-02	5.372E-02	7.521E-02	6.517E-03	-0.137
NB-95M	235.69	*		7.277E-02	1.459E-01	2.190E-01	2.246E-02	0.332
ZR-95	724.18			1.125E-01	1.115E-01	1.769E-01	1.636E-02	0.636
	756.15	*		-3.565E-02	7.909E-02	1.257E-01	1.195E-02	-0.284
NB-97	657.90	*		-7.240E-01	7.909E-02	Half-Life	too short	
	1024.50			1.911E+01	7.909E-02	Half-Life	too short	
ZR-97	254.15			-5.162E+00	7.909E-02	Half-Life	too short	
	355.39			2.844E+01	7.909E-02	Half-Life	too short	
	507.63	*		1.458E+01	7.909E-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
MO-99	602.52			7.752E+00	7.909E-02	Half-Life	too short	
	1021.30			4.340E+01	7.909E-02	Half-Life	too short	
	1147.95			-1.370E+01	7.909E-02	Half-Life	too short	
	1362.66			-3.374E+01	7.909E-02	Half-Life	too short	
	1750.46			1.181E+01	7.909E-02	Half-Life	too short	
	140.51			-2.224E+01	4.113E+01	6.765E+01	1.872E+01	-0.329
	181.06			2.869E+01	3.054E+01	4.677E+01	8.560E+00	0.613
	366.43			3.290E+01	1.405E+02	2.318E+02	1.960E+01	0.142
TC-99M	739.58	*		6.716E+00	1.954E+01	3.316E+01	5.023E+00	0.203
	778.00			1.047E+01	5.588E+01	9.356E+01	8.152E+00	0.112
	140.51	*		-2.574E+12	5.588E+01	Half-Life	too short	
RH-101	127.23			2.449E-02	3.839E-02	5.580E-02	4.854E-03	0.439
	198.01	*		2.915E-02	3.493E-02	6.012E-02	5.291E-03	0.485
	325.23			-1.709E-01	2.533E-01	3.423E-01	3.054E-02	-0.499
RH-102	418.52			-8.826E-02	3.249E-01	5.156E-01	4.226E-02	-0.171
	475.06	*		-9.991E-03	3.126E-02	4.823E-02	4.056E-03	-0.207
	631.29			-1.404E-03	5.779E-02	9.630E-02	8.012E-03	-0.015
	697.49			-5.518E-02	7.995E-02	1.253E-01	1.049E-02	-0.440
	766.84			5.692E-02	1.433E-01	2.130E-01	1.846E-02	0.267
RU-103	1046.59			-5.233E-02	1.165E-01	1.787E-01	1.561E-02	-0.293
	1112.84			1.008E-01	2.717E-01	4.136E-01	3.492E-02	0.244
	497.08	*		-3.588E-02	4.665E-02	6.978E-02	9.813E-03	-0.514
RH-106	610.33	+		1.309E+01	2.960E+00	3.228E+00	5.347E-01	4.056
	511.85	+		1.007E+00	3.638E-01	4.617E-01	3.913E-02	2.180
RU-106	621.84	*		1.695E-01	3.464E-01	5.973E-01	7.876E-02	0.284
	1050.47			1.453E+00	2.363E+00	4.058E+00	3.539E-01	0.358
	511.85	+		1.007E+00	3.638E-01	4.617E-01	3.913E-02	2.180
AG-108M	621.84	*		1.695E-01	3.459E-01	5.973E-01	4.989E-02	0.284
	1050.47			1.453E+00	2.363E+00	4.058E+00	3.539E-01	0.358
	433.93	*		-2.235E-02	3.582E-02	5.516E-02	4.756E-03	-0.405
AG-110M	614.37			-5.113E-03	4.564E-02	6.560E-02	5.723E-03	-0.078
	722.95			4.347E-02	4.508E-02	7.189E-02	6.348E-03	0.605
	657.75	*		-4.043E-02	3.750E-02	5.702E-02	4.834E-03	-0.709
	677.61			-2.730E-01	3.317E-01	5.144E-01	4.386E-02	-0.531
	706.67			-9.728E-02	2.407E-01	3.874E-01	3.354E-02	-0.251
IN-111	763.93			-9.321E-02	2.101E-01	2.854E-01	2.540E-02	-0.327
	884.67			-4.309E-02	5.363E-02	8.057E-02	7.489E-03	-0.535
	937.48			-5.503E-02	1.188E-01	1.846E-01	1.720E-02	-0.298
	1384.27			-7.927E-02	1.772E-01	2.777E-01	2.453E-02	-0.285
	171.28			5.070E-02	1.560E+00	2.630E+00	2.251E-01	0.019
IN-113M	245.39	*		3.091E-01	1.892E+00	2.788E+00	2.538E-01	0.111
	391.69	*		-2.477E-02	5.047E-02	7.930E-02	6.605E-03	-0.312
SN-113	391.69	*		-2.477E-02	5.047E-02	7.930E-02	6.605E-03	-0.312
IN-114M	190.27	*		-5.027E-02	2.228E-01	3.252E-01	2.840E-02	-0.155
CD-115	260.90			6.870E+01	2.384E+02	3.996E+02	3.654E+01	0.172
SN-117M	492.35			1.673E+01	6.720E+01	1.096E+02	9.258E+00	0.153
	527.90	*		4.658E+00	1.955E+01	3.348E+01	2.841E+00	0.139
	156.02			-8.967E-01	2.566E+00	4.280E+00	3.645E-01	-0.209
	158.56	*		6.418E-02	6.211E-02	1.082E-01	9.216E-03	0.593

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SB-122	563.90	*		1.203E+00	3.410E+00	5.860E+00	4.968E-01	0.205
	692.80			-2.853E+01	6.971E+01	1.119E+02	9.343E+00	-0.255
I-123	159.00	*		5.915E+01	6.971E+01	Half-Life	too short	
	528.96			1.372E+03	6.971E+01	Half-Life	too short	
TE-123M	159.00	*		3.243E-02	2.967E-02	5.178E-02	4.436E-03	0.626
I-124	602.71	*		-5.469E-03	1.124E+00	1.636E+00	1.376E-01	-0.003
	722.78			6.138E+00	6.292E+00	1.005E+01	8.526E-01	0.611
	1325.50			2.721E-01	4.988E+01	8.309E+01	7.070E+00	0.003
	1376.25			3.053E+01	4.618E+01	8.184E+01	7.023E+00	0.373
	1509.49			1.619E+01	2.274E+01	4.089E+01	3.540E+00	0.396
	1691.02			-6.114E-01	5.467E+00	8.760E+00	7.463E-01	-0.070
SB-124	602.71			-2.429E-04	4.993E-02	7.267E-02	6.112E-03	-0.003
	645.85			-6.751E-02	5.410E-01	8.934E-01	7.863E-02	-0.076
	709.31			4.460E-01	3.286E+00	5.499E+00	4.633E-01	0.081
	713.82			8.112E-01	1.854E+00	3.167E+00	3.773E-01	0.256
	722.78			3.952E-01	4.051E-01	6.468E-01	5.611E-02	0.611
+	968.20			2.063E+01	4.696E+00	8.481E+00	7.601E-01	2.433
	1045.16			-2.410E+00	2.606E+00	3.762E+00	3.288E-01	-0.640
	1325.50			1.871E-02	3.430E+00	5.714E+00	4.862E-01	0.003
	1368.21			-1.503E+00	1.982E+00	2.987E+00	4.017E-01	-0.503
	1436.60			3.291E+00	3.902E+00	7.166E+00	6.188E-01	0.459
	1691.02	*		-9.284E-03	8.302E-02	1.330E-01	1.179E-02	-0.070
SB-125	427.89	*		-1.010E-01	1.058E-01	1.541E-01	1.297E-02	-0.655
+	463.38			8.764E-01	4.468E-01	5.935E-01	5.383E-02	1.477
	600.56			1.655E-01	1.995E-01	3.503E-01	3.175E-02	0.472
	635.90			2.370E-01	2.886E-01	5.088E-01	4.591E-02	0.466
TE-125M	109.28	*		2.339E+00	1.040E+01	1.670E+01	1.732E+00	0.140
I-126	388.63			2.511E-01	2.476E-01	4.246E-01	3.439E-02	0.591
	666.33	*		-7.349E-02	2.102E-01	3.406E-01	2.798E-02	-0.216
	753.82			4.210E-01	1.689E+00	2.846E+00	2.453E-01	0.148
SB-126	223.80			-1.004E+00	4.822E+00	7.962E+00	7.163E-01	-0.126
	278.60			3.072E+00	3.356E+00	5.127E+00	4.688E-01	0.599
+	296.50			1.601E+01	3.246E+00	4.289E+00	3.903E-01	3.734
	414.70			2.713E-02	9.121E-02	1.502E-01	1.228E-02	0.181
	415.30			8.855E-01	7.676E+00	1.250E+01	1.022E+00	0.071
	555.20			-3.351E+00	4.543E+00	7.224E+00	6.130E-01	-0.464
	573.80			-5.307E-02	1.161E+00	1.943E+00	1.645E-01	-0.027
	593.00			5.468E-01	1.080E+00	1.872E+00	1.578E-01	0.292
	656.30			-2.332E-01	3.836E+00	6.361E+00	5.226E-01	-0.037
	666.33			-3.083E-02	8.819E-02	1.429E-01	1.174E-02	-0.216
	675.00			1.382E+00	2.269E+00	3.944E+00	3.257E-01	0.351
	695.00			-2.709E-03	8.715E-02	1.443E-01	1.206E-02	-0.019
	697.00			-2.786E-01	3.108E-01	4.781E-01	4.001E-02	-0.583
	720.50	*		-5.294E-02	1.888E-01	2.623E-01	2.223E-02	-0.202
	856.80			5.434E-01	5.833E-01	9.259E-01	8.298E-02	0.587
	989.30			5.254E-01	1.503E+00	2.521E+00	2.247E-01	0.208
	1034.80			-6.808E-01	1.135E+01	1.826E+01	1.603E+00	-0.037
	1213.00			1.936E+00	5.827E+00	1.001E+01	8.222E-01	0.193
SB-127	61.10			1.861E+01	9.253E+01	1.353E+02	1.485E+01	0.138

---- Non-Identified Nuclides ----

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	252.40			2.873E+00	6.336E+00	1.052E+01	4.450E+00	0.273
	290.80			-2.280E+01	3.504E+01	4.807E+01	5.800E+00	-0.474
	411.60			6.246E+00	1.898E+01	3.126E+01	4.961E+00	0.200
	444.90			-4.473E+00	1.382E+01	2.169E+01	2.779E+00	-0.206
	473.00			-3.449E-01	2.430E+00	3.803E+00	5.017E-01	-0.091
	543.00			1.745E+01	2.324E+01	4.086E+01	6.022E+00	0.427
	603.60			-9.043E+00	2.008E+01	2.794E+01	3.590E+00	-0.324
	685.20	*		-1.504E+00	2.046E+00	3.195E+00	3.734E-01	-0.471
	698.50			-1.251E+01	2.241E+01	3.549E+01	5.703E+00	-0.353
	722.20			2.926E+01	4.593E+01	7.069E+01	8.196E+00	0.414
	783.80			6.880E-02	5.629E+00	9.284E+00	1.205E+00	0.007
XE-127	57.60			3.056E+00	6.839E+00	1.131E+01	8.682E-01	0.270
	145.22			-1.180E-01	7.493E-01	1.255E+00	1.072E-01	-0.094
	172.10			-3.379E-02	1.257E-01	2.095E-01	1.794E-02	-0.161
	202.84	*		-4.106E-02	5.068E-02	8.184E-02	7.236E-03	-0.502
	374.96			8.334E-02	2.166E-01	3.603E-01	3.000E-02	0.231
I-131	80.18			5.159E+00	7.441E+00	8.807E+00	7.744E-01	0.586
	284.30			-8.614E-01	1.889E+00	3.039E+00	2.909E-01	-0.283
	364.48	*		-1.113E-01	1.515E-01	2.294E-01	2.058E-02	-0.485
	636.97			1.617E+00	1.906E+00	3.366E+00	2.966E-01	0.480
	722.89			8.426E+00	8.815E+00	1.405E+01	1.202E+00	0.600
TE-132	49.72			9.106E+00	3.297E+01	5.438E+01	6.106E+00	0.167
	111.76			-2.404E+00	4.895E+01	7.646E+01	8.692E+00	-0.031
	116.30			2.115E+00	4.276E+01	6.809E+01	7.758E+00	0.031
	228.16	*		3.210E-01	1.088E+00	1.830E+00	2.977E-01	0.175
BA-133	53.15			-3.110E+00	4.126E+00	6.497E+00	5.279E-01	-0.479
	79.62			6.774E-01	1.880E+00	2.172E+00	3.314E-01	0.312
	81.00			-2.092E-03	1.405E-01	1.580E-01	2.524E-02	-0.013
+	276.40			6.887E-01	6.552E-01	6.905E-01	1.020E-01	0.997
	302.84			-4.071E-02	1.699E-01	2.402E-01	3.264E-02	-0.169
	356.01	*		1.222E-02	4.984E-02	7.257E-02	9.571E-03	0.168
	383.85			-3.611E-01	3.246E-01	4.835E-01	5.951E-02	-0.747
I-133	510.53	+		8.238E+00	3.246E-01	Half-Life	too short	
	529.87	*		7.336E-04	3.246E-01	Half-Life	too short	
	706.58			-7.960E-01	3.246E-01	Half-Life	too short	
	856.28			2.045E+00	3.246E-01	Half-Life	too short	
	875.33			1.639E-01	3.246E-01	Half-Life	too short	
	1236.41			1.485E+00	3.246E-01	Half-Life	too short	
	1298.22			-2.681E-01	3.246E-01	Half-Life	too short	
CS-134	475.35			-8.677E-01	2.052E+00	3.139E+00	2.640E-01	-0.276
	563.23			-8.989E-02	4.006E-01	6.633E-01	5.679E-02	-0.136
	569.32			-1.211E-01	2.113E-01	3.407E-01	2.927E-02	-0.355
	604.70			-2.076E-02	4.140E-02	5.728E-02	4.827E-03	-0.362
+	795.84	*		1.353E-01	8.368E-02	1.003E-01	8.865E-03	1.349
	801.93			8.551E-03	4.693E-01	6.705E-01	5.930E-02	0.013
	1038.57			-2.626E+00	4.414E+00	6.706E+00	5.878E-01	-0.392
	1167.94			1.195E+00	2.856E+00	4.951E+00	4.023E-01	0.241
	1365.15			2.626E-01	1.278E+00	2.177E+00	1.952E-01	0.121
CS-135	268.24	*		-7.911E-02	1.848E-01	2.905E-01	3.029E-02	-0.272

---- Non-Identified Nuclides ----

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I-135	288.45			7.563E+10	1.848E-01	Half-Life	too short	
	417.63			-1.297E+12	1.848E-01	Half-Life	too short	
	546.56			1.953E+11	1.848E-01	Half-Life	too short	
	836.80			6.523E+10	1.848E-01	Half-Life	too short	
	1038.76			-4.050E+11	1.848E-01	Half-Life	too short	
	1124.00			4.152E+12	1.848E-01	Half-Life	too short	
	1131.51			4.027E+10	1.848E-01	Half-Life	too short	
	1260.41	*		-1.023E+11	1.848E-01	Half-Life	too short	
	1457.56			2.055E+13	1.848E-01	Half-Life	too short	
	1678.03			-1.497E+12	1.848E-01	Half-Life	too short	
	1706.46			-1.201E+12	1.848E-01	Half-Life	too short	
	1791.20			3.163E+11	1.848E-01	Half-Life	too short	
CS-136	66.91			-2.901E-02	1.048E+00	1.511E+00	2.272E-01	-0.019
	86.29	+		4.644E+00	1.303E+00	2.284E+00	3.040E-01	2.033
	153.22			1.942E-01	7.414E-01	1.250E+00	1.193E-01	0.155
	163.89			4.769E-01	1.217E+00	2.041E+00	1.952E-01	0.234
	176.55			-3.086E-01	4.188E-01	6.832E-01	6.222E-02	-0.452
	273.65			-1.098E+00	6.634E-01	8.491E-01	8.226E-02	-1.293
	340.57			7.404E-01	1.946E-01	3.262E-01	2.945E-02	2.270
	818.51			-1.673E-02	8.260E-02	1.331E-01	1.179E-02	-0.126
	1048.07	*		-4.391E-02	1.224E-01	1.900E-01	1.728E-02	-0.231
	1235.34			-2.260E-01	7.495E-01	1.226E+00	1.423E-01	-0.184
	661.65	*		2.387E-02	3.810E-02	6.618E-02	5.421E-03	0.361
BA-137M	661.65	*		2.523E-02	4.028E-02	6.996E-02	5.743E-03	0.361
CS-137	661.65	*		2.523E-02	4.028E-02	6.996E-02	5.743E-03	0.361
CE-139	165.85	*		-2.303E-02	3.044E-02	4.975E-02	4.237E-03	-0.463
BA-140	162.64			-7.163E-02	8.657E-01	1.429E+00	1.289E-01	-0.050
	304.84			-6.962E-01	1.636E+00	2.261E+00	6.368E-01	-0.308
LA-140	423.70			4.650E-01	2.297E+00	3.750E+00	1.212E+00	0.124
	537.32	*		-2.093E-02	3.025E-01	5.071E-01	1.679E-01	-0.041
	328.77	+		4.121E-01	4.500E-01	6.162E-01	5.770E-02	0.669
	432.53			-1.045E+00	2.460E+00	3.847E+00	3.346E-01	-0.272
	487.03			1.034E-01	1.694E-01	2.827E-01	2.539E-02	0.366
	751.79			-9.696E-01	1.999E+00	3.166E+00	3.018E-01	-0.306
	815.85			-3.531E-01	3.712E-01	5.522E-01	5.418E-02	-0.640
	867.82			1.275E-01	1.596E+00	2.501E+00	2.358E-01	0.051
	919.63			1.272E+00	3.234E+00	5.342E+00	5.870E-01	0.238
	925.24			-4.538E-01	1.326E+00	2.087E+00	1.993E-01	-0.217
	1596.49	*		6.147E-02	1.012E-01	1.712E-01	1.477E-02	0.359
CE-141	145.44	*		1.066E-03	6.871E-02	1.158E-01	1.007E-02	0.009
CE-143	57.37			6.928E-04	6.871E-02	Half-Life	too short	
	231.56			-4.870E-03	6.871E-02	Half-Life	too short	
	293.26	*		9.715E-04	6.871E-02	Half-Life	too short	
	350.59			6.030E-02	6.871E-02	Half-Life	too short	
	490.36			-1.890E-03	6.871E-02	Half-Life	too short	
	664.57			-6.403E-04	6.871E-02	Half-Life	too short	
	721.93			2.326E-03	6.871E-02	Half-Life	too short	
CE-144	80.11			2.102E+00	2.962E+00	3.510E+00	3.060E-01	0.599
	133.54	*		1.917E-01	2.509E-01	3.645E-01	5.674E-02	0.526
PM-144	476.78			3.991E-02	6.882E-02	1.151E-01	1.064E-02	0.347

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		618.01		-2.670E-02	3.488E-02	5.320E-02	4.581E-03	-0.502
		696.49	*	-1.492E-02	3.596E-02	5.773E-02	4.832E-03	-0.258
		778.57		1.147E+00	2.355E+00	4.040E+00	3.521E-01	0.284
PR-144		696.49	*	-1.012E+00	2.439E+00	3.916E+00	3.276E-01	-0.258
		1489.15		-6.386E-01	9.703E+00	1.582E+01	1.369E+00	-0.040
PM-146		453.90	*	3.767E-03	4.704E-02	7.609E-02	7.993E-03	0.050
		633.02		-4.353E-01	1.461E+00	2.369E+00	8.838E-01	-0.184
		735.90		-9.685E-02	1.829E-01	2.565E-01	7.330E-02	-0.378
		747.13		-3.906E-03	9.960E-02	1.641E-01	2.301E-02	-0.024
ND-147	+	91.11		8.832E-01	5.028E-01	6.133E-01	6.063E-02	1.440
		319.41		5.301E-01	3.910E+00	6.455E+00	5.791E-01	0.082
		439.89		5.229E+00	7.203E+00	1.214E+01	1.007E+00	0.431
		531.02	*	-1.061E-01	6.681E-01	1.114E+00	1.657E-01	-0.095
PM-149		285.90	*	8.088E+01	1.722E+02	2.894E+02	4.585E+01	0.279
EU-152		121.78		7.632E-03	8.067E-02	1.285E-01	1.294E-02	0.059
		244.69		3.916E-01	3.908E-01	6.023E-01	5.482E-02	0.650
		344.27	*	2.337E-02	1.222E-01	1.654E-01	1.530E-02	0.141
		443.98		-5.665E-01	9.867E-01	1.518E+00	1.262E-01	-0.373
		778.89		4.488E-02	2.754E-01	4.603E-01	4.011E-02	0.098
		867.32		1.910E-02	8.970E-01	1.345E+00	1.209E-01	0.014
	+	964.01		8.711E-01	4.072E-01	6.608E-01	5.928E-02	1.318
		1085.78		-1.309E-01	4.901E-01	7.707E-01	6.607E-02	-0.170
		1112.02		-1.462E-01	3.779E-01	5.676E-01	4.794E-02	-0.258
	+	1407.95		2.984E-01	2.741E-01	3.640E-01	3.135E-02	0.820
GD-153		69.67		4.618E-01	2.020E+00	2.941E+00	2.359E-01	0.157
		83.37		1.942E+00	1.774E+01	2.529E+01	2.277E+00	0.077
		97.43	*	-7.259E-02	9.613E-02	1.296E-01	1.151E-02	-0.560
		103.18		-2.048E-01	1.156E-01	1.687E-01	1.472E-02	-1.214
EU-154		123.07		-9.231E-03	5.685E-02	8.951E-02	1.028E-02	-0.103
		247.94		1.065E-01	4.098E-01	6.389E-01	7.571E-02	0.167
		591.81		2.453E-01	6.700E-01	1.149E+00	1.326E-01	0.213
		723.30		1.079E-01	2.008E-01	3.058E-01	2.877E-02	0.353
		756.87		-2.016E-01	8.377E-01	1.356E+00	1.625E-01	-0.149
		873.19		-1.078E-01	3.103E-01	4.901E-01	6.134E-02	-0.220
		996.32		-1.350E-01	4.027E-01	6.305E-01	1.129E-01	-0.214
		1004.76		-2.244E-01	2.509E-01	3.700E-01	4.377E-02	-0.606
		1274.45	*	5.912E-03	1.288E-01	2.160E-01	2.405E-02	0.027
EU-155		48.70		-1.598E+00	2.992E+00	4.773E+00	4.085E-01	-0.335
		60.01		-1.541E+00	5.895E+00	8.419E+00	6.365E-01	-0.183
	+	86.54		3.912E-01	1.033E-01	1.910E-01	1.794E-02	2.048
		105.31	*	5.010E-02	1.137E-01	1.844E-01	1.622E-02	0.272
TB-160	+	86.79		1.062E+00	2.802E-01	5.203E-01	4.859E-02	2.041
		197.04		3.579E-01	6.110E-01	1.044E+00	9.176E-02	0.343
		215.65		2.900E-01	8.069E-01	1.365E+00	1.220E-01	0.212
		298.57		2.211E-01	1.734E-01	2.085E-01	1.896E-02	1.060
		879.36	*	1.948E-01	1.606E-01	2.882E-01	2.598E-02	0.676
		962.29		5.555E-01	6.636E-01	1.023E+00	9.182E-02	0.543
	+	966.15		6.081E-01	2.843E-01	5.255E-01	4.712E-02	1.157
		1177.93		-7.966E-02	4.002E-01	6.604E-01	5.355E-02	-0.121

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
HO-166M	1271.85			1.051E-01	7.710E-01	1.304E+00	1.093E-01	0.081
	80.57			1.003E-02	3.893E-01	4.392E-01	3.847E-02	0.023
	184.41			1.002E-01	4.220E-02	6.786E-02	5.889E-03	1.477
	280.46			1.418E-02	1.006E-01	1.470E-01	1.344E-02	0.096
	410.95			2.204E-01	2.833E-01	4.781E-01	3.899E-02	0.461
	711.68	*		4.090E-02	7.001E-02	1.207E-01	1.018E-02	0.339
TM-171	752.31			-1.334E-01	2.898E-01	4.599E-01	3.960E-02	-0.290
	810.29			-1.711E-02	5.983E-02	9.572E-02	8.447E-03	-0.179
	51.35			-1.500E+01	3.547E+01	5.676E+01	4.723E+00	-0.264
	52.39			-7.656E+00	1.785E+01	2.854E+01	2.343E+00	-0.268
	59.40			1.417E+00	3.165E+01	4.597E+01	3.465E+00	0.031
	66.72	*		2.340E+00	3.467E+01	5.019E+01	3.953E+00	0.047
LU-176	88.36		+	7.700E-01	2.032E-01	3.818E-01	3.601E-02	2.017
	201.83			-2.113E-02	3.016E-02	4.898E-02	4.326E-03	-0.431
	306.84	*		1.113E-02	2.645E-02	4.436E-02	4.015E-03	0.251
LU-177	401.10			-8.459E-01	7.370E+00	1.185E+01	9.599E-01	-0.071
	112.95			-1.975E+00	2.220E+00	3.337E+00	2.894E-01	-0.592
LU-177M	208.36	*	+	3.661E+00	1.969E+00	2.546E+00	2.262E-01	1.438
	52.97			-1.635E+00	1.878E+00	2.940E+00	2.394E-01	-0.556
	54.07			1.828E-01	9.629E-01	1.580E+00	1.268E-01	0.116
	61.30			8.533E-01	1.773E+00	2.626E+00	2.003E-01	0.325
	121.62			1.400E-01	4.123E-01	6.631E-01	5.825E-02	0.211
	147.16			1.258E-01	6.807E-01	1.160E+00	9.894E-02	0.109
	171.86			-1.179E-01	4.944E-01	8.247E-01	7.063E-02	-0.143
	218.09			-2.648E-02	9.242E-01	1.539E+00	1.379E-01	-0.017
	268.79			4.356E-01	9.449E-01	1.546E+00	1.414E-01	0.282
	319.02			3.229E-02	2.731E-01	4.505E-01	4.042E-02	0.072
	367.43			4.177E-01	1.004E+00	1.630E+00	1.376E-01	0.256
	413.65	*		-6.096E-02	2.074E-01	3.292E-01	2.690E-02	-0.185
HF-181	56.28			-2.920E-01	1.093E+00	1.758E+00	1.371E-01	-0.166
	57.53			2.576E-01	5.733E-01	9.479E-01	7.285E-02	0.272
	65.20			3.500E-01	1.192E+00	1.745E+00	1.362E-01	0.201
	133.02			1.535E-02	8.288E-02	1.175E-01	1.013E-02	0.131
	136.25			-4.053E-02	4.759E-01	8.056E-01	6.922E-02	-0.050
	345.85			4.245E-02	2.448E-01	3.309E-01	2.886E-02	0.128
W-181	482.03	*		1.078E-03	4.957E-02	7.958E-02	6.705E-03	0.014
	56.28			-1.119E-01	4.199E-01	6.754E-01	5.267E-02	-0.166
	57.53			9.908E-02	2.205E-01	3.645E-01	2.801E-02	0.272
TA-182	65.20	*		1.335E-01	4.549E-01	6.657E-01	5.197E-02	0.201
	67.75			-2.986E-02	1.296E-01	1.978E-01	1.567E-02	-0.151
	100.10			2.100E-01	1.917E-01	3.180E-01	2.796E-02	0.660
	152.43			-1.219E-01	3.435E-01	5.732E-01	4.884E-02	-0.213
	222.10			2.582E-01	3.790E-01	6.473E-01	5.817E-02	0.399
	1001.68			1.461E+00	2.326E+00	3.967E+00	3.523E-01	0.368
RE-183	1121.28		+	9.162E-01	2.837E-01	4.238E-01	3.559E-02	2.162
	1189.05			-1.551E-01	3.408E-01	5.495E-01	4.475E-02	-0.282
	1221.42	*		3.084E-02	2.178E-01	3.687E-01	3.039E-02	0.084
	1230.97			-2.540E-01	5.440E-01	8.767E-01	7.250E-02	-0.290
	57.98			-3.675E-02	2.337E-01	3.591E-01	2.746E-02	-0.102

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RE-184		59.32		6.637E-03	1.324E-01	1.923E-01	1.450E-02	0.035
		67.20		-5.282E-02	2.530E-01	3.615E-01	2.856E-02	-0.146
		162.32	*	-1.262E-02	1.170E-01	1.930E-01	1.643E-02	-0.065
	+	208.81		2.797E+00	1.504E+00	1.986E+00	1.765E-01	1.408
		291.72		-5.462E-01	1.107E+00	1.538E+00	1.402E-01	-0.355
		57.98		-1.341E-01	8.526E-01	1.310E+00	1.002E-01	-0.102
		59.32		2.419E-02	4.824E-01	7.009E-01	5.287E-02	0.035
		67.20		-1.926E-01	9.227E-01	1.318E+00	1.041E-01	-0.146
		161.27		-3.727E-01	3.716E-01	6.019E-01	5.124E-02	-0.619
		216.55		1.432E-01	2.805E-01	4.769E-01	4.267E-02	0.300
		252.85	*	8.895E-02	2.462E-01	4.145E-01	3.784E-02	0.215
		318.01		-1.217E-01	4.859E-01	7.852E-01	7.051E-02	-0.155
		792.07		-2.799E-01	1.123E+00	1.550E+00	1.358E-01	-0.181
		903.28		2.028E-01	1.228E+00	1.921E+00	1.739E-01	0.106
OS-185		920.93		1.096E-01	4.680E-01	7.809E-01	7.057E-02	0.140
		59.72		4.553E-02	3.483E-01	5.081E-01	3.832E-02	0.090
		61.14		5.025E-02	1.951E-01	2.860E-01	2.179E-02	0.176
		69.30		-8.596E-02	3.705E-01	5.282E-01	4.227E-02	-0.163
		592.07		1.627E+00	2.748E+00	4.783E+00	4.034E-01	0.340
		646.12	*	1.435E-03	4.574E-02	7.644E-02	6.315E-03	0.019
		717.42		-7.672E-01	9.663E-01	1.494E+00	1.265E-01	-0.513
		874.81		-1.530E-01	6.449E-01	1.032E+00	9.292E-02	-0.148
		880.27		8.588E-01	8.776E-01	1.552E+00	1.400E-01	0.553
		155.03	*	6.471E-02	1.804E-01	3.049E-01	2.597E-02	0.212
RE-188		477.96		-3.654E+00	3.404E+00	4.985E+00	4.196E-01	-0.733
		633.10		-9.904E-01	3.013E+00	4.904E+00	4.077E-01	-0.202
		63.58		6.014E+01	7.912E+01	1.003E+02	7.758E+00	0.600
W-188	+	227.08		8.360E+00	1.401E+01	2.384E+01	2.150E+00	0.351
		290.67	*	-5.452E+00	9.027E+00	1.245E+01	1.135E+00	-0.438
IR-192	+	295.96		1.131E+00	2.296E-01	3.075E-01	2.817E-02	3.678
		308.46		9.726E-02	1.056E-01	1.811E-01	1.645E-02	0.537
		316.51	*	9.225E-03	3.709E-02	6.163E-02	5.552E-03	0.150
		468.07		3.378E-02	7.652E-02	1.122E-01	1.012E-02	0.301
		604.41		-2.831E-01	5.688E-01	7.865E-01	1.013E-01	-0.360
AU-195		612.46		2.970E+00	1.029E+00	1.765E+00	1.711E-01	1.683
		65.12		7.591E-02	2.106E-01	3.091E-01	2.412E-02	0.246
		66.83		-6.692E-03	1.157E-01	1.665E-01	1.312E-02	-0.040
	+	75.70		1.358E+00	3.017E-01	4.946E-01	4.147E-02	2.746
		98.88	*	3.660E-02	2.462E-01	3.902E-01	3.445E-02	0.094
TL-200	+	129.76		7.272E+00	4.242E+00	5.285E+00	4.578E-01	1.376
		367.94	*	6.215E-05	4.242E+00	Half-Life	too short	
		579.30		7.015E-03	4.242E+00	Half-Life	too short	
		828.27		1.041E-02	4.242E+00	Half-Life	too short	
TL-201		1205.75		3.870E-03	4.242E+00	Half-Life	too short	
		68.90		-3.721E-01	8.690E+00	1.250E+01	9.979E-01	-0.030
		70.82		2.575E+00	4.781E+00	7.048E+00	5.697E-01	0.365
		80.30		1.541E+00	1.074E+01	1.223E+01	1.068E+00	0.126
		135.34		-3.865E+00	4.126E+01	6.492E+01	5.583E+00	-0.060
		167.43	*	-3.468E+00	1.042E+01	1.734E+01	1.478E+00	-0.200

---- 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		-2.484E-02	5.801E-01	8.346E-01	6.661E-02	-0.030
		70.82		1.714E-01	3.183E-01	4.692E-01	3.792E-02	0.365
		80.30		1.026E-01	7.154E-01	8.143E-01	7.114E-02	0.126
		439.56	*	5.949E-02	8.414E-02	1.418E-01	1.175E-02	0.420
HG-203		70.83		6.987E-01	1.285E+00	1.891E+00	2.510E-01	0.369
		72.87		1.594E+00	7.158E-01	1.186E+00	1.535E-01	1.344
		82.60		3.759E-01	1.317E+00	1.891E+00	2.637E-01	0.199
		279.20	*	5.140E-02	5.127E-02	7.873E-02	7.381E-03	0.653
BI-207		72.80		3.903E-01	1.968E-01	3.333E-01	2.733E-02	1.171
	+	74.97		7.483E-01	1.663E-01	2.460E-01	2.051E-02	3.041
	+	84.90		1.233E-01	2.534E-01	3.315E-01	3.033E-02	0.372
		569.67		-1.070E-02	3.241E-02	5.319E-02	4.506E-03	-0.201
		1063.62	*	-4.513E-02	5.722E-02	8.550E-02	7.412E-03	-0.528
		1770.23		2.565E-01	4.519E-01	7.457E-01	6.244E-02	0.344
TL-207		81.07		3.634E-02	3.062E-01	3.478E-01	3.061E-02	0.104
	+	83.78		8.126E-02	1.671E-01	2.136E-01	1.931E-02	0.380
		94.90		4.951E-01	2.663E-01	4.083E-01	3.671E-02	1.213
		122.32		9.357E-02	1.944E+00	3.088E+00	2.906E-01	0.030
		144.24		3.929E-01	7.060E-01	1.210E+00	1.158E-01	0.325
		154.21		1.727E-01	4.085E-01	6.920E-01	6.495E-02	0.250
		269.46		2.972E-01	2.226E-01	3.749E-01	3.494E-02	0.793
		323.87	*	3.310E-02	7.373E-01	1.062E+00	1.896E-01	0.031
	+	338.28		8.086E+00	2.184E+00	2.623E+00	3.264E-01	3.082
		445.03		-2.840E-01	2.334E+00	3.723E+00	4.420E-01	-0.076
PO-209		260.50		5.642E+00	1.027E+01	1.741E+01	1.592E+00	0.324
		262.80		-1.979E+01	2.923E+01	4.616E+01	4.222E+00	-0.429
		896.60	*	2.032E+00	8.874E+00	1.428E+01	1.293E+00	0.142
BI-210		46.50	*	4.507E+00	4.588E+00	7.648E+00	7.219E-01	0.589
PB-210		46.50	*	4.507E+00	4.588E+00	7.648E+00	7.219E-01	0.589
PO-210		46.50	*	4.507E+00	4.584E+00	7.648E+00	6.556E-01	0.589
PB-211		404.84	*	-5.173E-01	1.064E+00	1.587E+00	9.934E-01	-0.326
		427.08		-1.080E+00	2.419E+00	3.522E+00	2.187E+00	-0.307
		831.96		-8.133E-01	1.444E+00	2.106E+00	1.320E+00	-0.386
PO-215		81.07		3.634E-02	3.062E-01	3.478E-01	3.061E-02	0.104
	+	83.78		8.126E-02	1.671E-01	2.136E-01	1.931E-02	0.380
		94.90		4.951E-01	2.663E-01	4.083E-01	3.671E-02	1.213
		122.32		9.357E-02	1.944E+00	3.088E+00	2.906E-01	0.030
		144.24		3.929E-01	7.060E-01	1.210E+00	1.158E-01	0.325
		154.21		1.727E-01	4.085E-01	6.920E-01	6.495E-02	0.250
		269.46		2.972E-01	2.226E-01	3.749E-01	3.494E-02	0.793
		323.87	*	3.310E-02	7.373E-01	1.062E+00	1.896E-01	0.031
	+	338.28		8.086E+00	2.184E+00	2.623E+00	3.264E-01	3.082
		445.03		-2.840E-01	2.334E+00	3.723E+00	4.420E-01	-0.076
RN-219		271.23		5.200E-01	3.126E-01	4.901E-01	5.273E-02	1.061
		401.81	*	-2.834E-01	4.563E-01	7.066E-01	1.041E-01	-0.401
RN-220		549.76	*	1.110E+01	2.769E+01	4.779E+01	4.056E+00	0.232
RA-223		81.07		3.634E-02	3.062E-01	3.478E-01	3.061E-02	0.104
	+	83.78		8.126E-02	1.671E-01	2.136E-01	1.931E-02	0.380
		94.90		4.951E-01	2.663E-01	4.083E-01	3.671E-02	1.213

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AC-227		122.32		9.357E-02	1.944E+00	3.088E+00	2.906E-01	0.030
		144.24		3.929E-01	7.060E-01	1.210E+00	1.158E-01	0.325
		154.21		1.727E-01	4.085E-01	6.920E-01	6.495E-02	0.250
		269.46		2.972E-01	2.226E-01	3.749E-01	3.494E-02	0.793
		323.87	*	3.310E-02	7.373E-01	1.062E+00	1.896E-01	0.031
	+	338.28		8.086E+00	2.184E+00	2.623E+00	3.264E-01	3.082
		445.03		-2.840E-01	2.334E+00	3.723E+00	4.420E-01	-0.076
		79.80		1.913E+00	2.326E+00	2.741E+00	5.902E-01	0.698
		236.00		1.265E-01	2.702E-01	4.045E-01	5.081E-02	0.313
		256.20	*	-3.591E-01	4.092E-01	6.429E-01	1.006E-01	-0.559
		286.10		1.246E+00	1.653E+00	2.810E+00	3.806E-01	0.443
	+	299.80		4.405E+00	2.067E+00	2.809E+00	4.978E-01	1.568
TH-227		304.40		-1.767E+00	2.200E+00	2.932E+00	5.467E-01	-0.603
		334.20		-2.921E-02	2.856E+00	3.801E+00	7.417E-01	-0.008
		79.80		1.913E+00	2.327E+00	2.741E+00	5.977E-01	0.698
	+	94.00		7.809E+00	3.612E+00	3.871E+00	8.497E-01	2.017
		236.00		1.265E-01	2.701E-01	4.045E-01	4.622E-02	0.313
		256.20	*	-3.591E-01	4.107E-01	6.429E-01	1.177E-01	-0.559
		286.10		1.246E+00	2.066E+00	2.810E+00	2.822E+00	0.443
	+	299.80		4.405E+00	2.067E+00	2.809E+00	4.978E-01	1.568
		304.40		-1.767E+00	2.200E+00	2.932E+00	5.467E-01	-0.603
		334.20		-2.921E-02	2.856E+00	3.801E+00	7.417E-01	-0.008
	+	85.43		1.216E-01	2.501E-01	3.427E-01	3.153E-02	0.355
	+	88.47		4.432E-01	1.169E-01	2.197E-01	2.070E-02	2.017
PA-231		100.00		1.881E-01	1.978E-01	3.267E-01	2.873E-02	0.576
		193.63	*	-1.131E-01	5.433E-01	9.032E-01	7.913E-02	-0.125
	+	210.97		2.153E+00	1.158E+00	1.509E+00	1.344E-01	1.427
		283.67	*	-6.510E-01	1.731E+00	2.695E+00	4.172E-01	-0.242
	+	301.29		1.762E+00	7.971E-01	1.112E+00	1.398E-01	1.584
	TH-231	81.07		3.634E-02	3.062E-01	3.478E-01	3.061E-02	0.104
	+	83.78		8.126E-02	1.671E-01	2.136E-01	1.931E-02	0.380
		94.90		4.951E-01	2.663E-01	4.083E-01	3.671E-02	1.213
		122.32		9.357E-02	1.944E+00	3.088E+00	2.906E-01	0.030
		144.24		3.929E-01	7.060E-01	1.210E+00	1.158E-01	0.325
		154.21		1.727E-01	4.085E-01	6.920E-01	6.495E-02	0.250
		269.46		2.972E-01	2.226E-01	3.749E-01	3.494E-02	0.793
U-231		323.87	*	3.310E-02	7.373E-01	1.062E+00	1.896E-01	0.031
	+	338.28		8.086E+00	2.184E+00	2.623E+00	3.264E-01	3.082
		445.03		-2.840E-01	2.334E+00	3.723E+00	4.420E-01	-0.076
	+	84.21		4.665E+00	9.593E+00	1.230E+01	1.117E+00	0.379
	+	92.29		1.028E+01	4.288E+00	5.665E+00	5.176E-01	1.815
		95.87	*	2.823E-01	1.636E+00	2.350E+00	2.102E-01	0.120
		108.00		-2.436E+00	3.000E+00	4.611E+00	3.997E-01	-0.528
	PA-233	75.28		2.183E+01	5.588E+00	7.376E+00	1.121E+00	2.960
	+	86.59		6.355E+00	2.327E+00	3.105E+00	8.399E-01	2.047
	+	300.12		1.228E+00	5.651E-01	7.895E-01	1.196E-01	1.556
		311.98	*	-5.553E-02	7.018E-02	1.099E-01	1.017E-02	-0.505
		340.50		3.422E+00	1.154E+00	1.462E+00	3.492E-01	2.341
		398.62		-3.737E-01	2.355E+00	3.774E+00	9.988E-01	-0.099

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PA-234	+	415.76		-7.283E-01	1.874E+00	2.943E+00	6.293E-01	-0.247
		63.00		1.714E+00	2.266E+00	2.936E+00	4.408E-01	0.584
		94.67		4.519E-01	2.015E-01	3.055E-01	3.871E-02	1.479
		98.44		1.048E-02	1.042E-01	1.569E-01	8.760E-02	0.067
		99.86		4.715E-01	5.006E-01	8.266E-01	7.274E-02	0.570
		111.00		1.707E-01	2.018E-01	3.302E-01	4.002E-02	0.517
		131.20		7.408E-02	1.278E-01	1.850E-01	1.599E-02	0.400
		152.70		-6.354E-02	3.322E-01	5.509E-01	9.363E-02	-0.115
	+	186.00		5.030E+00	2.729E+00	2.782E+00	8.689E-01	1.808
		226.40		1.309E-01	4.387E-01	7.385E-01	9.942E-02	0.177
		227.20		3.011E-01	4.661E-01	7.947E-01	7.166E-02	0.379
		248.90		-1.207E-01	8.978E-01	1.428E+00	3.229E-01	-0.084
		293.70		3.746E+00	1.107E+00	1.580E+00	2.772E-01	2.371
		369.80		2.225E-01	9.329E-01	1.496E+00	3.246E-01	0.149
		568.70		-2.202E-01	1.062E+00	1.758E+00	1.490E-01	-0.125
		569.50		-1.020E-01	2.871E-01	4.702E-01	3.984E-02	-0.217
		574.00		-4.526E-01	1.531E+00	2.516E+00	2.130E-01	-0.180
		699.00		-1.947E-01	7.620E-01	1.239E+00	2.350E-01	-0.157
		706.10		-2.341E-01	1.170E+00	1.904E+00	8.484E-01	-0.123
		733.00		3.052E-02	4.279E-01	6.195E-01	1.373E-01	0.049
		742.81		5.782E-01	1.544E+00	2.544E+00	1.710E+00	0.227
	+	796.30		2.625E+00	1.757E+00	1.971E+00	5.343E-01	1.331
		805.60		1.062E+00	1.071E+00	1.796E+00	5.514E-01	0.591
		819.60		1.207E+00	1.287E+00	2.161E+00	8.228E-01	0.559
		826.30		-4.758E-01	8.885E-01	1.344E+00	6.019E-01	-0.354
		831.60		1.539E-02	6.781E-01	1.115E+00	3.337E-01	0.014
		876.40		-4.111E-02	9.333E-01	1.520E+00	1.563E+00	-0.027
		880.51		2.041E-01	3.186E-01	5.490E-01	4.953E-02	0.372
		883.24		3.220E-02	3.132E-01	5.158E-01	3.470E-01	0.062
		899.00		3.846E-01	9.732E-01	1.620E+00	7.096E-01	0.237
		925.00		-4.856E-01	1.248E+00	1.954E+00	1.765E-01	-0.248
		926.50		-4.527E-02	1.832E-01	2.906E-01	7.388E-02	-0.156
		946.00	*	-5.414E-02	3.323E-01	5.324E-01	1.008E-01	-0.102
		949.00		1.386E-01	5.180E-01	8.627E-01	7.763E-02	0.161
		980.50		4.222E-01	8.889E-01	1.330E+00	1.188E-01	0.318
		1394.10		-2.543E-01	1.042E+00	1.639E+00	1.067E+00	-0.155
	PA-234M	766.42		3.968E+00	1.467E+01	2.138E+01	1.085E+01	0.186
		1001.03	*	5.835E-01	5.320E+00	8.688E+00	8.856E-01	0.067
	U-235	+	89.95	3.151E+00	2.019E+00	2.020E+00	6.273E-01	1.560
	+	93.35		2.430E+00	1.203E+00	1.288E+00	3.628E-01	1.886
		105.00		6.813E-01	1.121E+00	1.803E+00	5.385E-01	0.378
		143.76	*	4.171E-02	2.174E-01	3.684E-01	6.436E-02	0.113
		163.35		2.508E-01	4.881E-01	8.190E-01	1.559E-01	0.306
	+	185.71		1.863E-01	8.419E-02	1.032E-01	8.970E-03	1.805
		205.31		2.122E-01	6.170E-01	9.069E-01	1.740E-01	0.234
NP-236		94.67		3.449E-01	1.499E-01	2.319E-01	2.088E-02	1.487
		98.44		7.885E-03	7.862E-02	1.186E-01	1.049E-02	0.066
		111.00		1.292E-01	1.522E-01	2.497E-01	2.164E-02	0.517
		160.31	*	-4.850E-02	8.354E-02	1.379E-01	1.174E-02	-0.352

---- 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		1.230E-01	1.688E-01	2.730E-01	2.405E-02	0.451
		117.00	*	1.097E-02	2.025E-01	3.224E-01	2.808E-02	0.034
	+	209.75		2.169E+00	1.167E+00	1.554E+00	1.382E-01	1.396
		228.18		7.184E-02	2.454E-01	4.131E-01	3.727E-02	0.174
	+	277.60		3.360E-01	3.173E-01	3.364E-01	3.077E-02	0.999
AM-241		334.30		-6.083E-02	1.616E+00	2.146E+00	1.898E-01	-0.028
		59.54	*	2.927E-02	1.818E-01	2.657E-01	2.189E-02	0.110
CM-243		99.55		1.266E-01	1.737E-01	2.809E-01	2.475E-02	0.451
		103.76	*	-7.536E-02	1.020E-01	1.574E-01	1.371E-02	-0.479
		117.00		1.129E-02	2.084E-01	3.317E-01	2.889E-02	0.034
	+	209.75		2.138E+00	1.150E+00	1.532E+00	1.363E-01	1.396
		228.18		7.260E-02	2.480E-01	4.174E-01	3.767E-02	0.174
AM-246	+	277.60		3.388E-01	3.199E-01	3.392E-01	3.102E-02	0.999
		798.80		-3.570E-02	1.590E-01	2.199E-01	1.932E-02	-0.162
		1036.00		-1.280E-03	3.436E-01	5.557E-01	4.875E-02	-0.002
		1062.04		-1.394E-01	2.450E-01	3.713E-01	3.221E-02	-0.375
		1078.86	*	3.967E-02	1.693E-01	2.791E-01	2.401E-02	0.142
CM-247	+	278.00		1.393E+00	1.316E+00	1.394E+00	1.275E-01	1.000
		287.40		6.050E-01	1.319E+00	2.220E+00	2.027E-01	0.273
		402.60	*	-1.701E-02	4.035E-02	6.354E-02	5.153E-03	-0.268
CF-249		252.85		3.314E-01	9.173E-01	1.544E+00	1.410E-01	0.215
		333.44		1.773E-02	2.759E-01	2.870E-01	2.540E-02	0.062
		387.95	*	4.514E-02	4.360E-02	7.489E-02	6.075E-03	0.603
CF-251		176.60	*	-9.387E-02	1.318E-01	2.154E-01	1.854E-02	-0.436
		227.00		1.376E-01	4.178E-01	7.043E-01	6.350E-02	0.195
		285.00		-6.552E-01	1.897E+00	3.070E+00	2.804E-01	-0.213

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]G244604001          *
* Acquisition date   : 25-JAN-2010 08:38:21 Detector SN#      :                *
* Detector ID        : GAM01                               Sensitivity      : 5.000    *
* Geometry           : CAN                               Energy tolerance: 1.500    *
* Elapsed live time  : 0 02:00:00.00                      Abundance limit : 75.000    *
* Elapsed real time  : 0 02:00:01.36                      Half life ratio  : 8.000    *
*****
*
*                               SAMPLE DATA                                *
*
* Sample date        : 8-JAN-2010 12:00:00 Nuclide Library   : SOLID            *
* Sample ID          : G244604001                      Analyst initials: MXR1        *
* Batch Number       : 941636                          Sample Quantity : 1.4882E+02 GRAM *
* Recovery           : 1.00000                        Carrier Weight  : 0.00000    *
*****
*
*                               QC DATA                                *
*
* Standard Weight    : 0.00000                                *
* CALIB. DATE/TIME   : 12-JAN-2010 15:15:52 MS Isotope      :                *
* MSD DPM             : 0.000                               MSD Isotope      :                *
* LCS DPM             : 0.000                               LCS Isotope      :                *
* LCSD DPM            : 0.000                               LCSD Isotope     :                *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.187E+01	3.316E+00	4.906E-01	0.000E+00
CD-109	3.311E+00	8.562E-01	1.299E+00	0.000E+00
SN-126	3.246E-01	8.394E-02	1.280E-01	0.000E+00
TL-208	6.019E-01	9.972E-02	5.818E-02	0.000E+00
BI-211	4.492E+00	6.481E-01	3.474E-01	0.000E+00
BI-212	1.589E+00	6.383E-01	5.225E-01	0.000E+00
PB-212	1.802E+00	2.138E-01	1.008E-01	0.000E+00
PO-212	1.802E+00	2.138E-01	1.008E-01	0.000E+00
BI-214	1.176E+00	2.106E-01	1.236E-01	0.000E+00
PB-214	1.563E+00	2.392E-01	1.211E-01	0.000E+00
PO-214	1.563E+00	2.392E-01	1.211E-01	0.000E+00
PO-216	1.802E+00	2.138E-01	1.008E-01	0.000E+00
PO-218	1.563E+00	2.392E-01	1.211E-01	0.000E+00
RA-224	4.859E+00	1.428E+00	1.147E+00	0.000E+00
RA-226	1.176E+00	2.106E-01	1.236E-01	0.000E+00
AC-228	1.817E+00	3.825E-01	2.461E-01	0.000E+00
RA-228	1.817E+00	3.825E-01	2.461E-01	0.000E+00
TH-228	1.832E+00	2.174E-01	1.025E-01	0.000E+00
TH-230	1.176E+00	2.106E-01	1.236E-01	0.000E+00
TH-232	1.817E+00	3.825E-01	2.461E-01	0.000E+00
TH-234	1.470E+00	1.909E+00	2.405E+00	0.000E+00
U-234	1.176E+00	2.106E-01	1.236E-01	0.000E+00
NP-237	9.533E-01	3.129E-01	4.061E-01	0.000E+00
U-238	1.470E+00	1.909E+00	2.405E+00	0.000E+00
AM-243	4.168E-01	9.076E-02	9.974E-02	0.000E+00
ANH-511	2.009E-01	7.115E-02	4.849E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error) Ided	MDA (pCi/GRAM)	
BE-7	-9.110E-02	3.368E-01	5.583E-01	0.000E+00 NOT IDENT.

NA-22	-6.217E-03	4.617E-02	7.841E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	5.666E+06	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-1.991E-02	2.351E-02	2.893E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	6.969E-02	9.069E-02	0.000E+00	FAIL ABUN
SC-46	-3.748E-03	4.111E-02	6.927E-02	0.000E+00	FAIL ABUN
V-48	-7.938E-02	8.245E-02	1.249E-01	0.000E+00	NOT IDENT.
CR-51	8.752E-02	3.938E-01	6.960E-01	0.000E+00	NOT IDENT.
MN-52	2.045E-01	2.844E-01	5.295E-01	0.000E+00	NOT IDENT.
MN-54	8.579E-03	3.945E-02	6.861E-02	0.000E+00	NOT IDENT.
CO-56	2.143E-02	3.880E-02	6.955E-02	0.000E+00	NOT IDENT.
CO-57	5.206E-03	2.745E-02	4.781E-02	0.000E+00	NOT IDENT.
CO-58	-2.576E-02	4.073E-02	6.570E-02	0.000E+00	NOT IDENT.
FE-59	-1.999E-02	1.035E-01	1.692E-01	0.000E+00	NOT IDENT.
CO-60	9.087E-03	3.925E-02	6.901E-02	0.000E+00	NOT IDENT.
ZN-65	4.942E-02	1.093E-01	1.662E-01	0.000E+00	NOT IDENT.
GE-68	7.700E-01	1.458E+00	2.548E+00	0.000E+00	NOT IDENT.
AS-73	1.030E-01	9.265E-01	1.682E+00	0.000E+00	NOT IDENT.
AS-74	-2.877E-02	1.062E-01	1.834E-01	0.000E+00	NOT IDENT.
SE-75	-4.158E-02	4.717E-02	7.878E-02	0.000E+00	NOT IDENT.
BR-77	1.351E+01	1.799E+01	3.194E+01	0.000E+00	FAIL ABUN
SR-82	-1.430E-01	4.556E-01	6.872E-01	0.000E+00	NOT IDENT.
RB-83	4.297E-02	7.167E-02	1.260E-01	0.000E+00	NOT IDENT.
RB-84	3.103E-02	8.001E-02	1.406E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	8.673E+00	1.526E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	4.529E-02	7.968E-02	0.000E+00	NOT IDENT.
RB-86	5.670E-01	9.531E-01	1.677E+00	0.000E+00	NOT IDENT.
Y-88	1.436E-02	3.475E-02	6.230E-02	0.000E+00	NOT IDENT.
ZR-88	-3.802E-04	3.357E-02	5.769E-02	0.000E+00	NOT IDENT.
Y-91	8.507E+00	2.101E+01	3.744E+01	0.000E+00	NOT IDENT.
NB-94	1.888E-02	3.543E-02	6.374E-02	0.000E+00	NOT IDENT.
NB-95	-1.028E-02	5.264E-02	7.692E-02	0.000E+00	NOT IDENT.
NB-95M	7.277E-02	1.430E-01	2.304E-01	0.000E+00	NOT IDENT.
ZR-95	-3.565E-02	7.751E-02	1.286E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	5.756E+05	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.083E+07	0.000E+00	0.000E+00	SHORT HLIF
MO-99	6.716E+00	1.915E+01	3.394E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	4.683E+18	0.000E+00	0.000E+00	SHORT HLIF
RH-101	2.915E-02	3.423E-02	6.350E-02	0.000E+00	NOT IDENT.
RH-102	-9.991E-03	3.064E-02	4.990E-02	0.000E+00	NOT IDENT.
RU-103	-3.588E-02	4.572E-02	7.212E-02	0.000E+00	FAIL ABUN
RH-106	1.695E-01	3.394E-01	6.140E-01	0.000E+00	FAIL ABUN
RU-106	1.695E-01	3.390E-01	6.140E-01	0.000E+00	FAIL ABUN
AG-108M	-2.235E-02	3.510E-02	5.720E-02	0.000E+00	NOT IDENT.
AG-110M	-4.043E-02	3.675E-02	5.853E-02	0.000E+00	NOT IDENT.
IN-111	3.091E-01	1.855E+00	2.930E+00	0.000E+00	NOT IDENT.
IN-113M	-2.477E-02	4.946E-02	8.243E-02	0.000E+00	NOT IDENT.
SN-113	-2.477E-02	4.946E-02	8.243E-02	0.000E+00	NOT IDENT.
IN-114M	-5.027E-02	2.184E-01	3.438E-01	0.000E+00	NOT IDENT.
CD-115	4.658E+00	1.916E+01	3.455E+01	0.000E+00	NOT IDENT.
SN-117M	6.418E-02	6.087E-02	1.149E-01	0.000E+00	NOT IDENT.
SB-122	1.203E+00	3.342E+00	6.039E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	5.302E+07	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	3.243E-02	2.907E-02	5.497E-02	0.000E+00	NOT IDENT.
I-124	-5.469E-03	1.102E+00	1.683E+00	0.000E+00	NOT IDENT.
SB-124	-9.284E-03	8.136E-02	1.334E-01	0.000E+00	FAIL ABUN
SB-125	-1.010E-01	1.037E-01	1.599E-01	0.000E+00	FAIL ABUN
TE-125M	2.339E+00	1.019E+01	1.788E+01	0.000E+00	NOT IDENT.
I-126	-7.349E-02	2.060E-01	3.495E-01	0.000E+00	NOT IDENT.
SB-126	-5.294E-02	1.850E-01	2.687E-01	0.000E+00	FAIL ABUN
SB-127	-1.504E+00	2.005E+00	3.277E+00	0.000E+00	NOT IDENT.
XE-127	-4.106E-02	4.967E-02	8.639E-02	0.000E+00	NOT IDENT.
I-131	-1.113E-01	1.485E-01	2.388E-01	0.000E+00	NOT IDENT.
TE-132	3.210E-01	1.066E+00	1.927E+00	0.000E+00	NOT IDENT.
BA-133	1.222E-02	4.884E-02	7.561E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	2.498E+04	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	8.201E-02	1.025E-01	0.000E+00	FAIL ABUN
CS-135	-7.911E-02	1.811E-01	3.047E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	4.637E+17	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-4.391E-02	1.199E-01	1.928E-01	0.000E+00	FAIL ABUN
BA-137M	2.387E-02	3.734E-02	6.794E-02	0.000E+00	NOT IDENT.
CS-137	2.523E-02	3.947E-02	7.182E-02	0.000E+00	NOT IDENT.
CE-139	-2.303E-02	2.983E-02	5.276E-02	0.000E+00	NOT IDENT.
BA-140	-2.093E-02	2.964E-01	5.231E-01	0.000E+00	NOT IDENT.
LA-140	6.147E-02	9.920E-02	1.720E-01	0.000E+00	FAIL ABUN
CE-141	1.066E-03	6.733E-02	1.231E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	4.378E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	1.917E-01	2.459E-01	3.884E-01	0.000E+00	NOT IDENT.
PM-144	-1.492E-02	3.524E-02	5.919E-02	0.000E+00	NOT IDENT.

PR-144	-1.012E+00	2.390E+00	4.014E+00	0.000E+00	NOT IDENT.
PM-146	3.767E-03	4.610E-02	7.882E-02	0.000E+00	NOT IDENT.
ND-147	-1.061E-01	6.548E-01	1.150E+00	0.000E+00	FAIL ABUN
PM-149	8.088E+01	1.688E+02	3.031E+02	0.000E+00	NOT IDENT.
EU-152	2.337E-02	1.197E-01	1.725E-01	0.000E+00	FAIL ABUN
GD-153	-7.259E-02	9.421E-02	1.391E-01	0.000E+00	NOT IDENT.
EU-154	5.912E-03	1.262E-01	2.182E-01	0.000E+00	NOT IDENT.
EU-155	5.010E-02	1.114E-01	1.976E-01	0.000E+00	FAIL ABUN
TB-160	1.948E-01	1.574E-01	2.937E-01	0.000E+00	FAIL ABUN
HO-166M	4.090E-02	6.861E-02	1.236E-01	0.000E+00	NOT IDENT.
TM-171	2.340E+00	3.398E+01	5.432E+01	0.000E+00	NOT IDENT.
LU-176	1.113E-02	2.592E-02	4.638E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.930E+00	2.685E+00	0.000E+00	FAIL ABUN
LU-177M	-6.096E-02	2.032E-01	3.418E-01	0.000E+00	NOT IDENT.
HF-181	1.078E-03	4.858E-02	8.231E-02	0.000E+00	NOT IDENT.
W-181	1.335E-01	4.458E-01	7.209E-01	0.000E+00	NOT IDENT.
TA-182	3.084E-02	2.134E-01	3.728E-01	0.000E+00	FAIL ABUN
RE-183	-1.262E-02	1.147E-01	2.047E-01	0.000E+00	FAIL ABUN
RE-184	8.895E-02	2.413E-01	4.354E-01	0.000E+00	NOT IDENT.
OS-185	1.435E-03	4.483E-02	7.851E-02	0.000E+00	NOT IDENT.
RE-188	6.471E-02	1.768E-01	3.239E-01	0.000E+00	NOT IDENT.
W-188	-5.452E+00	8.846E+00	1.303E+01	0.000E+00	FAIL ABUN
IR-192	9.225E-03	3.635E-02	6.438E-02	0.000E+00	FAIL ABUN
AU-195	3.660E-02	2.413E-01	4.187E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.531E+03	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-3.468E+00	1.021E+01	1.838E+01	0.000E+00	NOT IDENT.
TL-202	5.949E-02	8.246E-02	1.469E-01	0.000E+00	NOT IDENT.
HG-203	5.140E-02	5.024E-02	8.249E-02	0.000E+00	NOT IDENT.
BI-207	-4.513E-02	5.608E-02	8.675E-02	0.000E+00	FAIL ABUN
TL-207	3.310E-02	7.225E-01	1.109E+00	0.000E+00	FAIL ABUN
PO-209	2.032E+00	8.697E+00	1.454E+01	0.000E+00	NOT IDENT.
BI-210	4.507E+00	4.496E+00	8.343E+00	0.000E+00	NOT IDENT.
PB-210	4.507E+00	4.496E+00	8.343E+00	0.000E+00	NOT IDENT.
PO-210	4.507E+00	4.492E+00	8.343E+00	0.000E+00	NOT IDENT.
PB-211	-5.173E-01	1.043E+00	1.648E+00	0.000E+00	NOT IDENT.
PO-215	3.310E-02	7.225E-01	1.109E+00	0.000E+00	FAIL ABUN
RN-219	-2.834E-01	4.472E-01	7.341E-01	0.000E+00	NOT IDENT.
RN-220	1.110E+01	2.713E+01	4.927E+01	0.000E+00	NOT IDENT.
RA-223	3.310E-02	7.225E-01	1.109E+00	0.000E+00	FAIL ABUN
AC-227	-3.591E-01	4.010E-01	6.750E-01	0.000E+00	FAIL ABUN
TH-227	-3.591E-01	4.024E-01	6.750E-01	0.000E+00	FAIL ABUN
TH-229	-1.131E-01	5.325E-01	9.544E-01	0.000E+00	FAIL ABUN
PA-231	-6.510E-01	1.696E+00	2.823E+00	0.000E+00	FAIL ABUN
TH-231	3.310E-02	7.225E-01	1.109E+00	0.000E+00	FAIL ABUN
U-231	2.823E-01	1.603E+00	2.523E+00	0.000E+00	FAIL ABUN
PA-233	-5.553E-02	6.877E-02	1.148E-01	0.000E+00	FAIL ABUN
PA-234	-5.414E-02	3.257E-01	5.417E-01	0.000E+00	FAIL ABUN
PA-234M	5.835E-01	5.214E+00	8.827E+00	0.000E+00	NOT IDENT.
U-235	4.171E-02	2.131E-01	3.920E-01	0.000E+00	FAIL ABUN
NP-236	-4.850E-02	8.187E-02	1.464E-01	0.000E+00	NOT IDENT.
NP-239	1.097E-02	1.984E-01	3.446E-01	0.000E+00	FAIL ABUN
AM-241	2.927E-02	1.782E-01	2.882E-01	0.000E+00	NOT IDENT.
CM-243	-7.536E-02	9.997E-02	1.687E-01	0.000E+00	FAIL ABUN
AM-246	3.967E-02	1.659E-01	2.830E-01	0.000E+00	NOT IDENT.
CM-247	-1.701E-02	3.955E-02	6.600E-02	0.000E+00	FAIL ABUN
CF-249	4.514E-02	4.273E-02	7.787E-02	0.000E+00	NOT IDENT.
CF-251	-9.387E-02	1.292E-01	2.281E-01	0.000E+00	NOT IDENT.

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*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                           *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G244604001.CNF;1
Sample date        : 8-JAN-2010 12:00:00. Acquisition date : 25-JAN-2010 08:38:21
Sample ID          : G244604001          Sample quantity  : 1.48820E+02 GRAM
Detector name      : GAM01              Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00      Elapsed real time: 0 02:00:01.36  0.0%
Energy tolerance   : 1.50000 keV        Analyst Initials  : MXR1
Abundance limit    : 75.00000          Sensitivity       : 5.00000
Batch ID           : 941636             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	1274	10.67*	9.454E-01	3.187E+01	3.187E+01	10.62
CD-109	88.03	247	3.72*	5.191E+00	3.229E+00	3.311E+00	26.38
SN-126	64.28	61	9.60	2.749E+00	5.820E-01	5.820E-01	132.16
	86.94	247	8.90	5.191E+00	1.350E+00	1.350E+00	48.29
	87.57	247	37.00*	5.191E+00	3.246E-01	3.246E-01	26.38
TL-208	277.35	73	6.80	3.890E+00	6.967E-01	6.967E-01	94.83
	510.84	191	21.60	2.393E+00	9.300E-01	9.300E-01	37.09
	583.14	431	84.20*	2.143E+00	6.019E-01	6.019E-01	16.91
	860.37	49	12.46	1.521E+00	6.514E-01	6.514E-01	67.77
BI-211	72.87	-----	1.27	3.944E+00	-----	Line Not Found	-----
	351.07	743	12.94*	3.226E+00	4.492E+00	4.492E+00	14.72
BI-212	727.18	132	11.80*	1.770E+00	1.589E+00	1.589E+00	40.99
	785.46	-----	1.97	1.653E+00	-----	Line Not Found	-----
	1620.62	7	2.75	8.732E-01	7.550E-01	7.550E-01	155.64
PB-212	74.81	453	10.70	4.150E+00	2.571E+00	2.571E+00	24.11
	77.11	767	18.00	4.389E+00	2.450E+00	2.450E+00	15.72
	87.30	247	8.00	5.191E+00	1.501E+00	1.501E+00	28.22
	238.63	1384	44.60*	4.345E+00	1.802E+00	1.802E+00	12.11
	300.09	117	3.41	3.653E+00	2.377E+00	2.377E+00	44.78
PO-212	74.81	453	10.70	4.150E+00	2.571E+00	2.571E+00	24.11
	77.11	767	18.00	4.389E+00	2.450E+00	2.450E+00	15.72
	87.30	247	8.00	5.191E+00	1.501E+00	1.501E+00	28.22
	115.19	-----	0.60	6.043E+00	-----	Line Not Found	-----
	238.63	1384	44.60*	4.345E+00	1.802E+00	1.802E+00	12.11
	300.09	117	3.41	3.653E+00	2.377E+00	2.377E+00	44.78
BI-214	609.31	446	46.30*	2.065E+00	1.176E+00	1.176E+00	18.28
	1120.29	137	15.10	1.193E+00	1.918E+00	1.918E+00	31.67
	1764.49	58	15.80	8.255E-01	1.114E+00	1.114E+00	45.31
PB-214	74.81	453	6.21	4.150E+00	4.430E+00	4.430E+00	23.42
	77.11	767	10.50	4.389E+00	4.201E+00	4.201E+00	17.47
	87.30	247	4.67	5.191E+00	2.572E+00	2.572E+00	27.49
	241.98	328	7.49	4.306E+00	2.562E+00	2.562E+00	30.52

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PO-214	295.21	411	19.20	3.699E+00	1.459E+00	1.459E+00	21.21
	351.92	743	37.20*	3.226E+00	1.563E+00	1.563E+00	15.62
	74.81	453	6.21	4.150E+00	4.430E+00	4.430E+00	23.42
	77.11	767	10.50	4.389E+00	4.201E+00	4.201E+00	17.47
	87.30	247	4.67	5.191E+00	2.572E+00	2.572E+00	27.49
	241.98	328	7.49	4.306E+00	2.562E+00	2.562E+00	30.52
PO-216	295.21	411	19.20	3.699E+00	1.459E+00	1.459E+00	21.21
	351.92	743	37.20*	3.226E+00	1.563E+00	1.563E+00	15.62
	74.81	453	10.70	4.150E+00	2.571E+00	2.571E+00	24.11
	77.11	767	18.00	4.389E+00	2.450E+00	2.450E+00	15.72
	87.30	247	8.00	5.191E+00	1.501E+00	1.501E+00	28.22
	238.63	1384	44.60*	4.345E+00	1.802E+00	1.802E+00	12.11
PO-218	300.09	117	3.41	3.653E+00	2.377E+00	2.377E+00	44.78
	74.81	453	6.21	4.150E+00	4.430E+00	4.430E+00	23.42
	77.11	767	10.50	4.389E+00	4.201E+00	4.201E+00	17.47
	87.30	247	4.67	5.191E+00	2.572E+00	2.572E+00	27.49
	241.98	328	7.49	4.306E+00	2.562E+00	2.562E+00	30.52
	295.21	411	19.20	3.699E+00	1.459E+00	1.459E+00	21.21
RA-224	351.92	743	37.20*	3.226E+00	1.563E+00	1.563E+00	15.62
	240.98	328	3.95*	4.306E+00	4.859E+00	4.859E+00	30.00
RA-226	609.31	446	46.30*	2.065E+00	1.176E+00	1.176E+00	18.28
	1120.29	137	15.10	1.193E+00	1.918E+00	1.918E+00	31.67
AC-228	1764.49	58	15.80	8.255E-01	1.114E+00	1.114E+00	45.31
	338.32	291	11.40	3.326E+00	1.936E+00	1.936E+00	47.76
	911.07	288	27.70*	1.444E+00	1.817E+00	1.817E+00	21.48
	969.11	176	16.60	1.364E+00	1.965E+00	1.965E+00	31.44
RA-228	338.32	291	11.40	3.326E+00	1.936E+00	1.936E+00	47.76
	911.07	288	27.70*	1.444E+00	1.817E+00	1.817E+00	21.48
	969.11	176	16.60	1.364E+00	1.965E+00	1.965E+00	31.44
TH-228	74.81	453	10.70	4.150E+00	2.571E+00	2.615E+00	22.25
	77.11	767	18.00	4.389E+00	2.450E+00	2.492E+00	15.72
	87.30	247	8.00	5.191E+00	1.501E+00	1.527E+00	26.38
	238.63	1384	44.60*	4.345E+00	1.802E+00	1.832E+00	12.11
TH-230	300.09	117	3.41	3.653E+00	2.377E+00	2.417E+00	73.56
	609.31	446	46.30*	2.065E+00	1.176E+00	1.176E+00	18.28
	1120.29	137	15.10	1.193E+00	1.918E+00	1.918E+00	31.67
	1764.49	58	15.80	8.255E-01	1.114E+00	1.114E+00	45.31
TH-232	338.32	291	11.40	3.326E+00	1.936E+00	1.936E+00	25.54
	911.07	288	27.70*	1.444E+00	1.817E+00	1.817E+00	21.48
	969.11	176	16.60	1.364E+00	1.965E+00	1.965E+00	31.44
TH-234	63.29	61	3.80*	2.749E+00	1.470E+00	1.470E+00	132.52
	92.38	238	5.41	5.498E+00	2.021E+00	2.021E+00	44.63
U-234	609.31	446	46.30*	2.065E+00	1.176E+00	1.176E+00	18.28
	1120.29	137	15.10	1.193E+00	1.918E+00	1.918E+00	31.67
	1764.49	58	15.80	8.255E-01	1.114E+00	1.114E+00	45.31
NP-237	86.50	247	12.60*	5.191E+00	9.533E-01	9.533E-01	33.50
	95.87	-----	2.60	5.636E+00	-----	Line Not Found	-----
U-238	63.29	61	3.80*	2.749E+00	1.470E+00	1.470E+00	132.52
	92.38	238	5.41	5.498E+00	2.021E+00	2.021E+00	41.70

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
AM-243	74.67	453	66.00*	4.150E+00	4.168E-01	4.168E-01	22.22
	86.72	247	0.34	5.191E+00	3.575E+01	3.575E+01	26.38
	117.66	-----	0.55	6.054E+00	-----	Line Not Found	-----
	142.18	-----	0.13	5.887E+00	-----	Line Not Found	-----
ANH-511	511.00	191	100.00*	2.393E+00	2.009E-01	2.009E-01	36.14

Flag: "*" = Keyline

Total number of lines in spectrum 36
Number of unidentified lines 3
Number of lines tentatively identified by NID 33 91.67%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.187E+01	3.187E+01	0.338E+01	10.62	
CD-109	464.00D	1.03	3.229E+00	3.311E+00	0.874E+00	26.38	
SN-126	1.00E+05Y	1.00	3.246E-01	3.246E-01	0.857E-01	26.38	
TL-208	1.41E+10Y	1.00	6.019E-01	6.019E-01	1.018E-01	16.91	
BI-211	7.04E+08Y	1.00	4.492E+00	4.492E+00	0.661E+00	14.72	
BI-212	1.41E+10Y	1.00	1.589E+00	1.589E+00	0.651E+00	40.99	
PB-212	1.41E+10Y	1.00	1.802E+00	1.802E+00	0.218E+00	12.11	
PO-212	1.41E+10Y	1.00	1.802E+00	1.802E+00	0.218E+00	12.11	
BI-214	1600.00Y	1.00	1.176E+00	1.176E+00	0.215E+00	18.28	
PB-214	1600.00Y	1.00	1.563E+00	1.563E+00	0.244E+00	15.62	
PO-214	1600.00Y	1.00	1.563E+00	1.563E+00	0.244E+00	15.62	
PO-216	1.41E+10Y	1.00	1.802E+00	1.802E+00	0.218E+00	12.11	
PO-218	1600.00Y	1.00	1.563E+00	1.563E+00	0.244E+00	15.62	
RA-224	1.41E+10Y	1.00	4.859E+00	4.859E+00	1.457E+00	30.00	
RA-226	1600.00Y	1.00	1.176E+00	1.176E+00	0.215E+00	18.28	
AC-228	1.41E+10Y	1.00	1.817E+00	1.817E+00	0.390E+00	21.48	
RA-228	1.41E+10Y	1.00	1.817E+00	1.817E+00	0.390E+00	21.48	
TH-228	1.91Y	1.02	1.802E+00	1.832E+00	0.222E+00	12.11	
TH-230	4.47E+09Y	1.00	1.176E+00	1.176E+00	0.215E+00	18.28	
TH-232	1.41E+10Y	1.00	1.817E+00	1.817E+00	0.390E+00	21.48	
TH-234	4.47E+09Y	1.00	1.470E+00	1.470E+00	1.948E+00	132.52	
U-234	4.47E+09Y	1.00	1.176E+00	1.176E+00	0.215E+00	18.28	
NP-237	2.14E+06Y	1.00	9.533E-01	9.533E-01	3.193E-01	33.50	
U-238	4.47E+09Y	1.00	1.470E+00	1.470E+00	1.948E+00	132.52	
AM-243	7380.00Y	1.00	4.168E-01	4.168E-01	0.926E-01	22.22	
ANH-511	1.00E+09Y	1.00	2.009E-01	2.009E-01	0.726E-01	36.14	
Total Activity :			7.352E+01	7.364E+01			

Grand Total Activity : 7.352E+01 7.364E+01

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	85.15	40	538	1.00	171.01	165	8	5.58E-03	****	5.05E+00	T
4	89.96	181	620	1.62	180.63	172	20	2.51E-02	56.0	5.35E+00	T
0	128.75	132	407	1.31	258.16	254	9	1.83E-02	57.7	6.03E+00	T
0	186.07	206	463	1.15	372.73	367	11	2.86E-02	44.3	5.16E+00	T
0	209.48	133	342	1.13	419.53	415	9	1.85E-02	53.0	4.77E+00	T
0	328.21	46	177	0.79	656.85	653	9	6.35E-03	****	3.41E+00	T
0	463.36	92	117	1.00	927.00	921	11	1.28E-02	50.2	2.59E+00	T
0	769.05	17	151	0.94	1537.99	1532	14	2.33E-03	****	1.69E+00	
0	795.76	66	79	1.73	1591.37	1587	15	9.21E-03	61.2	1.63E+00	T
1	965.04	68	48	1.92	1929.69	1922	34	9.44E-03	45.9	1.37E+00	T
0	1408.73	24	21	0.68	2816.44	2807	14	3.31E-03	91.5	9.74E-01	T
0	1588.17	37	13	0.96	3175.03	3166	17	5.19E-03	54.6	8.86E-01	
0	1730.43	29	10	1.75	3459.32	3452	14	3.98E-03	60.7	8.36E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 26-JAN-2010 15:28:36.20

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*****
*                                     GEL Laboratories LLC
*                                     2040 Savage Road
*                                     Charleston, SC 29414
*****
*
*                               DETECTOR DATA
*
* Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G244604001.CNF;1
* Acquisition date   : 25-JAN-2010 08:38:21  Detector SN#      :
* Detector ID        : GAM01                  Sensitivity       : 5.00000
* Geometry           : CAN                    Energy tolerance: 1.50000
* Elapsed live time  : 0 02:00:00.00          Abundance limit  : 75.00000
* Elapsed real time  : 0 02:00:01.36          Half life ratio  : 8.00000
*****
*
*                               SAMPLE DATA
*
* Sample date        : 8-JAN-2010 12:00:00.  Nuclide Library : SOLID
* Sample ID          : G244604001            Analyst initials: MXR1
* Batch Number       : 941636                Sample Quantity : 1.48820E+02 GRAM
*****
*
*                               QC DATA
*
* CALIB. DATE/TIME   : 12-JAN-2010 15:15:52.7MS Isotope      :
* MSD ID             :                      MSD Isotope      :
* LCS ID             : 1032-A                LCS Isotope      :
*****

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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.187E+01	3.384E+00	4.874E-01	4.333E-02	65.375
CD-109	3.311E+00	8.737E-01	1.207E+00	1.142E-01	2.743
SN-126	3.246E-01	8.565E-02	1.190E-01	1.121E-02	2.729
TL-208	6.019E-01	1.018E-01	5.651E-02	5.132E-03	10.652
BI-211	4.492E+00	6.613E-01	3.333E-01	3.032E-02	13.477
BI-212	1.589E+00	6.513E-01	5.102E-01	5.056E-02	3.114
PB-212	1.802E+00	2.182E-01	9.584E-02	9.704E-03	18.799
PO-212	1.802E+00	2.182E-01	9.584E-02	9.704E-03	18.799
BI-214	1.176E+00	2.149E-01	1.202E-01	1.185E-02	9.786
PB-214	1.563E+00	2.441E-01	1.162E-01	1.218E-02	13.448
PO-214	1.563E+00	2.441E-01	1.162E-01	1.218E-02	13.448
PO-216	1.802E+00	2.182E-01	9.584E-02	9.704E-03	18.799
PO-218	1.563E+00	2.441E-01	1.162E-01	1.218E-02	13.448
RA-224	4.859E+00	1.457E+00	1.091E+00	9.914E-02	4.454
RA-226	1.176E+00	2.149E-01	1.202E-01	1.185E-02	9.786
AC-228	1.817E+00	3.903E-01	2.416E-01	2.797E-02	7.521
RA-228	1.817E+00	3.903E-01	2.416E-01	2.797E-02	7.521
TH-228	1.832E+00	2.219E-01	9.746E-02	9.868E-03	18.799

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-230	1.176E+00	2.149E-01	1.202E-01	1.185E-02	9.786
TH-232	1.817E+00	3.903E-01	2.416E-01	2.797E-02	7.521
TH-234	1.470E+00	1.948E+00	2.219E+00	3.901E-01	0.662
U-234	1.176E+00	2.149E-01	1.202E-01	1.185E-02	9.786
NP-237	9.533E-01	3.193E-01	3.774E-01	8.543E-02	2.526
U-238	1.470E+00	1.948E+00	2.219E+00	3.901E-01	0.662
AM-243	4.168E-01	9.261E-02	9.238E-02	7.682E-03	4.512
ANH-511	2.009E-01	7.260E-02	4.694E-02	3.979E-03	4.279

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-9.110E-02		3.436E-01	5.397E-01	4.909E-02	-0.169
NA-22	-6.217E-03		4.711E-02	7.764E-02	6.519E-03	-0.080
NA-24	-4.652E+00		2.891E+00	Half-Life too short		
AL-26	-1.991E-02		2.399E-02	2.890E-02	2.394E-03	-0.689
TI-44	4.522E-01	+	7.111E-02	8.409E-02	7.217E-03	5.378
SC-46	-3.748E-03		4.195E-02	6.797E-02	6.145E-03	-0.055
V-48	-7.938E-02		8.413E-02	1.229E-01	1.097E-02	-0.646
CR-51	8.752E-02		4.019E-01	6.664E-01	6.268E-02	0.131
MN-52	2.045E-01		2.902E-01	5.259E-01	4.540E-02	0.389
MN-54	8.579E-03		4.025E-02	6.723E-02	5.984E-03	0.128
CO-56	2.143E-02		3.959E-02	6.816E-02	6.090E-03	0.314
CO-57	5.206E-03		2.801E-02	4.477E-02	3.941E-03	0.116
CO-58	-2.576E-02		4.156E-02	6.433E-02	5.691E-03	-0.400
FE-59	-1.999E-02		1.056E-01	1.669E-01	1.539E-02	-0.120
CO-60	9.087E-03		4.005E-02	6.840E-02	5.830E-03	0.133
ZN-65	4.942E-02		1.116E-01	1.640E-01	1.384E-02	0.301
GE-68	7.700E-01		1.488E+00	2.512E+00	2.163E-01	0.307
AS-73	1.030E-01		9.454E-01	1.547E+00	1.252E-01	0.067
AS-74	-2.877E-02		1.084E-01	1.783E-01	1.502E-02	-0.161
SE-75	-4.158E-02		4.813E-02	7.509E-02	6.898E-03	-0.554
BR-77	1.351E+01		1.836E+01	3.093E+01	2.624E+00	0.437
SR-82	-1.430E-01		4.649E-01	6.721E-01	5.851E-02	-0.213
RB-83	4.297E-02		7.313E-02	1.220E-01	1.035E-02	0.352
RB-84	3.103E-02		8.164E-02	1.379E-01	1.244E-02	0.225
KR-85	2.150E+01		8.850E+00	1.477E+01	1.253E+00	1.455
SR-85	1.123E-01		4.622E-02	7.715E-02	6.541E-03	1.455
RB-86	5.670E-01		9.726E-01	1.653E+00	1.424E-01	0.343
Y-88	1.436E-02		3.546E-02	6.226E-02	5.121E-03	0.231
ZR-88	-3.802E-04		3.426E-02	5.550E-02	4.469E-03	-0.007
Y-91	8.507E+00		2.144E+01	3.702E+01	3.033E+00	0.230
NB-94	1.888E-02		3.615E-02	6.218E-02	5.220E-03	0.304
NB-95	-1.028E-02		5.372E-02	7.521E-02	6.517E-03	-0.137
NB-95M	7.277E-02		1.459E-01	2.190E-01	2.246E-02	0.332
ZR-95	-3.565E-02		7.909E-02	1.257E-01	1.195E-02	-0.284
NB-97	-7.240E-01		2.937E-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
ZR-97	1.458E+01		5.525E+00	Half-Life too short		
MO-99	6.716E+00		1.954E+01	3.316E+01	5.023E+00	0.203
TC-99M	-2.574E+12		2.390E+12	Half-Life too short		
RH-101	2.915E-02		3.493E-02	6.012E-02	5.291E-03	0.485
RH-102	-9.991E-03		3.126E-02	4.823E-02	4.056E-03	-0.207
RU-103	-3.588E-02		4.665E-02	6.978E-02	9.813E-03	-0.514
RH-106	1.695E-01		3.464E-01	5.973E-01	7.876E-02	0.284
RU-106	1.695E-01		3.459E-01	5.973E-01	4.989E-02	0.284
AG-108M	-2.235E-02		3.582E-02	5.516E-02	4.756E-03	-0.405
AG-110M	-4.043E-02		3.750E-02	5.702E-02	4.834E-03	-0.709
IN-111	3.091E-01		1.892E+00	2.788E+00	2.538E-01	0.111
IN-113M	-2.477E-02		5.047E-02	7.930E-02	6.605E-03	-0.312
SN-113	-2.477E-02		5.047E-02	7.930E-02	6.605E-03	-0.312
IN-114M	-5.027E-02		2.228E-01	3.252E-01	2.840E-02	-0.155
CD-115	4.658E+00		1.955E+01	3.348E+01	2.841E+00	0.139
SN-117M	6.418E-02		6.211E-02	1.082E-01	9.216E-03	0.593
SB-122	1.203E+00		3.410E+00	5.860E+00	4.968E-01	0.205
I-123	5.915E+01		2.705E+01	Half-Life too short		
TE-123M	3.243E-02		2.967E-02	5.178E-02	4.436E-03	0.626
I-124	-5.469E-03		1.124E+00	1.636E+00	1.376E-01	-0.003
SB-124	-9.284E-03		8.302E-02	1.330E-01	1.179E-02	-0.070
SB-125	-1.010E-01		1.058E-01	1.541E-01	1.297E-02	-0.655
TE-125M	2.339E+00		1.040E+01	1.670E+01	1.732E+00	0.140
I-126	-7.349E-02		2.102E-01	3.406E-01	2.798E-02	-0.216
SB-126	-5.294E-02		1.888E-01	2.623E-01	2.223E-02	-0.202
SB-127	-1.504E+00		2.046E+00	3.195E+00	3.734E-01	-0.471
XE-127	-4.106E-02		5.068E-02	8.184E-02	7.236E-03	-0.502
I-131	-1.113E-01		1.515E-01	2.294E-01	2.058E-02	-0.485
TE-132	3.210E-01		1.088E+00	1.830E+00	2.977E-01	0.175
BA-133	1.222E-02		4.984E-02	7.257E-02	9.571E-03	0.168
I-133	7.336E-04		1.275E-02	Half-Life too short		
CS-134	1.353E-01	+	8.368E-02	1.003E-01	8.865E-03	1.349
CS-135	-7.911E-02		1.848E-01	2.905E-01	3.029E-02	-0.272
I-135	-1.023E+11		2.366E+11	Half-Life too short		
CS-136	-4.391E-02		1.224E-01	1.900E-01	1.728E-02	-0.231
BA-137M	2.387E-02		3.810E-02	6.618E-02	5.421E-03	0.361
CS-137	2.523E-02		4.028E-02	6.996E-02	5.743E-03	0.361
CE-139	-2.303E-02		3.044E-02	4.975E-02	4.237E-03	-0.463
BA-140	-2.093E-02		3.025E-01	5.071E-01	1.679E-01	-0.041
LA-140	6.147E-02		1.012E-01	1.712E-01	1.477E-02	0.359
CE-141	1.066E-03		6.871E-02	1.158E-01	1.007E-02	0.009
CE-143	9.715E-04		2.234E-04	Half-Life too short		
CE-144	1.917E-01		2.509E-01	3.645E-01	5.674E-02	0.526
PM-144	-1.492E-02		3.596E-02	5.773E-02	4.832E-03	-0.258
PR-144	-1.012E+00		2.439E+00	3.916E+00	3.276E-01	-0.258
PM-146	3.767E-03		4.704E-02	7.609E-02	7.993E-03	0.050
ND-147	-1.061E-01		6.681E-01	1.114E+00	1.657E-01	-0.095
PM-149	8.088E+01		1.722E+02	2.894E+02	4.585E+01	0.279

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-152	2.337E-02		1.222E-01	1.654E-01	1.530E-02	0.141
GD-153	-7.259E-02		9.613E-02	1.296E-01	1.151E-02	-0.560
EU-154	5.912E-03		1.288E-01	2.160E-01	2.405E-02	0.027
EU-155	5.010E-02		1.137E-01	1.844E-01	1.622E-02	0.272
TB-160	1.948E-01		1.606E-01	2.882E-01	2.598E-02	0.676
HO-166M	4.090E-02		7.001E-02	1.207E-01	1.018E-02	0.339
TM-171	2.340E+00		3.467E+01	5.019E+01	3.953E+00	0.047
LU-176	1.113E-02		2.645E-02	4.436E-02	4.015E-03	0.251
LU-177	3.661E+00	+	1.969E+00	2.546E+00	2.262E-01	1.438
LU-177M	-6.096E-02		2.074E-01	3.292E-01	2.690E-02	-0.185
HF-181	1.078E-03		4.957E-02	7.958E-02	6.705E-03	0.014
W-181	1.335E-01		4.549E-01	6.657E-01	5.197E-02	0.201
TA-182	3.084E-02		2.178E-01	3.687E-01	3.039E-02	0.084
RE-183	-1.262E-02		1.170E-01	1.930E-01	1.643E-02	-0.065
RE-184	8.895E-02		2.462E-01	4.145E-01	3.784E-02	0.215
OS-185	1.435E-03		4.574E-02	7.644E-02	6.315E-03	0.019
RE-188	6.471E-02		1.804E-01	3.049E-01	2.597E-02	0.212
W-188	-5.452E+00		9.027E+00	1.245E+01	1.135E+00	-0.438
IR-192	9.225E-03		3.709E-02	6.163E-02	5.552E-03	0.150
AU-195	3.660E-02		2.462E-01	3.902E-01	3.445E-02	0.094
TL-200	6.215E-05		7.810E-04	Half-Life too short		
TL-201	-3.468E+00		1.042E+01	1.734E+01	1.478E+00	-0.200
TL-202	5.949E-02		8.414E-02	1.418E-01	1.175E-02	0.420
HG-203	5.140E-02		5.127E-02	7.873E-02	7.381E-03	0.653
BI-207	-4.513E-02		5.722E-02	8.550E-02	7.412E-03	-0.528
TL-207	3.310E-02		7.373E-01	1.062E+00	1.896E-01	0.031
PO-209	2.032E+00		8.874E+00	1.428E+01	1.293E+00	0.142
BI-210	4.507E+00		4.588E+00	7.648E+00	7.219E-01	0.589
PB-210	4.507E+00		4.588E+00	7.648E+00	7.219E-01	0.589
PO-210	4.507E+00		4.584E+00	7.648E+00	6.556E-01	0.589
PB-211	-5.173E-01		1.064E+00	1.587E+00	9.934E-01	-0.326
PO-215	3.310E-02		7.373E-01	1.062E+00	1.896E-01	0.031
RN-219	-2.834E-01		4.563E-01	7.066E-01	1.041E-01	-0.401
RN-220	1.110E+01		2.769E+01	4.779E+01	4.056E+00	0.232
RA-223	3.310E-02		7.373E-01	1.062E+00	1.896E-01	0.031
AC-227	-3.591E-01		4.092E-01	6.429E-01	1.006E-01	-0.559
TH-227	-3.591E-01		4.107E-01	6.429E-01	1.177E-01	-0.559
TH-229	-1.131E-01		5.433E-01	9.032E-01	7.913E-02	-0.125
PA-231	-6.510E-01		1.731E+00	2.695E+00	4.172E-01	-0.242
TH-231	3.310E-02		7.373E-01	1.062E+00	1.896E-01	0.031
U-231	2.823E-01		1.636E+00	2.350E+00	2.102E-01	0.120
PA-233	-5.553E-02		7.018E-02	1.099E-01	1.017E-02	-0.505
PA-234	-5.414E-02		3.323E-01	5.324E-01	1.008E-01	-0.102
PA-234M	5.835E-01		5.320E+00	8.688E+00	8.856E-01	0.067
U-235	4.171E-02		2.174E-01	3.684E-01	6.436E-02	0.113
NP-236	-4.850E-02		8.354E-02	1.379E-01	1.174E-02	-0.352
NP-239	1.097E-02		2.025E-01	3.224E-01	2.808E-02	0.034
AM-241	2.927E-02		1.818E-01	2.657E-01	2.189E-02	0.110

----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-7.536E-02		1.020E-01	1.574E-01	1.371E-02	-0.479
AM-246	3.967E-02		1.693E-01	2.791E-01	2.401E-02	0.142
CM-247	-1.701E-02		4.035E-02	6.354E-02	5.153E-03	-0.268
CF-249	4.514E-02		4.360E-02	7.489E-02	6.075E-03	0.603
CF-251	-9.387E-02		1.318E-01	2.154E-01	1.854E-02	-0.436

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]G244604001          *
* Acquisition date   : 25-JAN-2010 08:38:21 Detector SN#                  *
* Detector ID        : GAM01 Sensitivity      : 5.000                      *
* Geometry           : CAN Energy tolerance: 1.500                        *
* Elapsed live time  : 0 02:00:00.00 Abundance limit : 75.000             *
* Elapsed real time  : 0 02:00:01.36 Half life ratio : 8.000              *
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 8-JAN-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID          : G244604001 Analyst initials: MXR1                 *
* Batch Number       : 941636 Sample Quantity : 1.4882E+02 GRAM          *
* Recovery           : 1.00000 Carrier Weight : 0.00000                  *
*****
*                                     QC DATA                                *
*
* CALIB. DATE/TIME  : 12-JAN-2010 15:15:52 MS Isotope                    :
* MSD DPM            : 0.000 MSD Isotope                                  :
* LCS DPM            : 0.000 LCS Isotope                                  :
* LCSD DPM           : 0.000 LCSD Isotope                                 :
*****

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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.187E+01	3.316E+00	2.455E-01	1.692E+00
CD-109	3.311E+00	8.562E-01	6.497E-01	4.369E-01
SN-126	3.246E-01	8.394E-02	6.403E-02	4.283E-02
TL-208	6.019E-01	9.972E-02	2.911E-02	5.088E-02
BI-211	4.492E+00	6.481E-01	1.738E-01	3.307E-01
BI-212	1.589E+00	6.383E-01	2.614E-01	3.257E-01
PB-212	1.802E+00	2.138E-01	5.043E-02	1.091E-01
PO-212	1.802E+00	2.138E-01	5.043E-02	1.091E-01
BI-214	1.176E+00	2.106E-01	6.183E-02	1.075E-01
PB-214	1.563E+00	2.392E-01	6.058E-02	1.220E-01
PO-214	1.563E+00	2.392E-01	6.058E-02	1.220E-01
PO-216	1.802E+00	2.138E-01	5.043E-02	1.091E-01
PO-218	1.563E+00	2.392E-01	6.058E-02	1.220E-01
RA-224	4.859E+00	1.428E+00	5.739E-01	7.287E-01
RA-226	1.176E+00	2.106E-01	6.183E-02	1.075E-01
AC-228	1.817E+00	3.825E-01	1.231E-01	1.951E-01
RA-228	1.817E+00	3.825E-01	1.231E-01	1.951E-01
TH-228	1.832E+00	2.174E-01	5.128E-02	1.109E-01
TH-230	1.176E+00	2.106E-01	6.183E-02	1.074E-01
TH-232	1.817E+00	3.825E-01	1.231E-01	1.951E-01
TH-234	1.470E+00	1.909E+00	1.203E+00	9.742E-01
U-234	1.176E+00	2.106E-01	6.183E-02	1.074E-01
NP-237	9.533E-01	3.129E-01	2.032E-01	1.597E-01
U-238	1.470E+00	1.909E+00	1.203E+00	9.742E-01
AM-243	4.168E-01	9.076E-02	4.990E-02	4.631E-02
ANH-511	2.009E-01	7.115E-02	2.426E-02	3.630E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	-9.110E-02	3.368E-01	2.793E-01	1.718E-01 NOT IDENT.

NA-22	-6.217E-03	4.617E-02	3.923E-02	2.355E-02	NOT IDENT.
NA-24	-4.652E+06	5.666E+06	0.000E+00	2.891E+06	SHORT HLIF
AL-26	-1.991E-02	2.351E-02	1.447E-02	1.199E-02	NOT IDENT.
TI-44	4.522E-01	6.969E-02	4.537E-02	3.556E-02	FAIL ABUN
SC-46	-3.748E-03	4.111E-02	3.466E-02	2.097E-02	FAIL ABUN
V-48	-7.938E-02	8.245E-02	6.249E-02	4.207E-02	NOT IDENT.
CR-51	8.752E-02	3.938E-01	3.482E-01	2.009E-01	NOT IDENT.
MN-52	2.045E-01	2.844E-01	2.649E-01	1.451E-01	NOT IDENT.
MN-54	8.579E-03	3.945E-02	3.433E-02	2.013E-02	NOT IDENT.
CO-56	2.143E-02	3.880E-02	3.479E-02	1.979E-02	NOT IDENT.
CO-57	5.206E-03	2.745E-02	2.392E-02	1.401E-02	NOT IDENT.
CO-58	-2.576E-02	4.073E-02	3.287E-02	2.078E-02	NOT IDENT.
FE-59	-1.999E-02	1.035E-01	8.467E-02	5.280E-02	NOT IDENT.
CO-60	9.087E-03	3.925E-02	3.452E-02	2.002E-02	NOT IDENT.
ZN-65	4.942E-02	1.093E-01	8.315E-02	5.579E-02	NOT IDENT.
GE-68	7.700E-01	1.458E+00	1.275E+00	7.441E-01	NOT IDENT.
AS-73	1.030E-01	9.265E-01	8.414E-01	4.727E-01	NOT IDENT.
AS-74	-2.877E-02	1.062E-01	9.178E-02	5.419E-02	NOT IDENT.
SE-75	-4.158E-02	4.717E-02	3.941E-02	2.407E-02	NOT IDENT.
BR-77	1.351E+01	1.799E+01	1.598E+01	9.179E+00	FAIL ABUN
SR-82	-1.430E-01	4.556E-01	3.438E-01	2.324E-01	NOT IDENT.
RB-83	4.297E-02	7.167E-02	6.304E-02	3.657E-02	NOT IDENT.
RB-84	3.103E-02	8.001E-02	7.033E-02	4.082E-02	NOT IDENT.
KR-85	2.150E+01	8.673E+00	7.633E+00	4.425E+00	NOT IDENT.
SR-85	1.123E-01	4.529E-02	3.986E-02	2.311E-02	NOT IDENT.
RB-86	5.670E-01	9.531E-01	8.388E-01	4.863E-01	NOT IDENT.
Y-88	1.436E-02	3.475E-02	3.117E-02	1.773E-02	NOT IDENT.
ZR-88	-3.802E-04	3.357E-02	2.886E-02	1.713E-02	NOT IDENT.
Y-91	8.507E+00	2.101E+01	1.873E+01	1.072E+01	NOT IDENT.
NB-94	1.888E-02	3.543E-02	3.189E-02	1.808E-02	NOT IDENT.
NB-95	-1.028E-02	5.264E-02	3.848E-02	2.686E-02	NOT IDENT.
NB-95M	7.277E-02	1.430E-01	1.153E-01	7.297E-02	NOT IDENT.
ZR-95	-3.565E-02	7.751E-02	6.436E-02	3.955E-02	NOT IDENT.
NB-97	-7.240E+05	5.756E+05	0.000E+00	2.937E+05	SHORT HLIF
ZR-97	1.458E+07	1.083E+07	0.000E+00	5.525E+06	SHORT HLIF
MO-99	6.716E+00	1.915E+01	1.698E+01	9.772E+00	NOT IDENT.
TC-99M	-2.574E+18	4.683E+18	0.000E+00	0.000E+00	SHORT HLIF
RH-101	2.915E-02	3.423E-02	3.177E-02	1.747E-02	NOT IDENT.
RH-102	-9.991E-03	3.064E-02	2.497E-02	1.563E-02	NOT IDENT.
RU-103	-3.588E-02	4.572E-02	3.608E-02	2.332E-02	FAIL ABUN
RH-106	1.695E-01	3.394E-01	3.072E-01	1.732E-01	FAIL ABUN
RU-106	1.695E-01	3.390E-01	3.072E-01	1.730E-01	FAIL ABUN
AG-108M	-2.235E-02	3.510E-02	2.861E-02	1.791E-02	NOT IDENT.
AG-110M	-4.043E-02	3.675E-02	2.928E-02	1.875E-02	NOT IDENT.
IN-111	3.091E-01	1.855E+00	1.466E+00	9.462E-01	NOT IDENT.
IN-113M	-2.477E-02	4.946E-02	4.124E-02	2.524E-02	NOT IDENT.
SN-113	-2.477E-02	4.946E-02	4.124E-02	2.524E-02	NOT IDENT.
IN-114M	-5.027E-02	2.184E-01	1.720E-01	1.114E-01	NOT IDENT.
CD-115	4.658E+00	1.916E+01	1.729E+01	9.776E+00	NOT IDENT.
SN-117M	6.418E-02	6.087E-02	5.749E-02	3.106E-02	NOT IDENT.
SB-122	1.203E+00	3.342E+00	3.021E+00	1.705E+00	NOT IDENT.
I-123	5.915E+07	5.302E+07	0.000E+00	2.705E+07	SHORT HLIF
TE-123M	3.243E-02	2.907E-02	2.750E-02	1.483E-02	NOT IDENT.
I-124	-5.469E-03	1.102E+00	8.422E-01	5.620E-01	NOT IDENT.
SB-124	-9.284E-03	8.136E-02	6.673E-02	4.151E-02	FAIL ABUN
SB-125	-1.010E-01	1.037E-01	8.000E-02	5.290E-02	FAIL ABUN
TE-125M	2.339E+00	1.019E+01	8.943E+00	5.198E+00	NOT IDENT.
I-126	-7.349E-02	2.060E-01	1.749E-01	1.051E-01	NOT IDENT.
SB-126	-5.294E-02	1.850E-01	1.344E-01	9.439E-02	FAIL ABUN
SB-127	-1.504E+00	2.005E+00	1.640E+00	1.023E+00	NOT IDENT.
XE-127	-4.106E-02	4.967E-02	4.322E-02	2.534E-02	NOT IDENT.
I-131	-1.113E-01	1.485E-01	1.195E-01	7.576E-02	NOT IDENT.
TE-132	3.210E-01	1.066E+00	9.639E-01	5.440E-01	NOT IDENT.
BA-133	1.222E-02	4.884E-02	3.783E-02	2.492E-02	FAIL ABUN
I-133	7.336E+02	2.498E+04	0.000E+00	1.275E+04	SHORT HLIF
CS-134	1.353E-01	8.201E-02	5.128E-02	4.184E-02	FAIL ABUN
CS-135	-7.911E-02	1.811E-01	1.524E-01	9.242E-02	NOT IDENT.
I-135	-1.023E+17	4.637E+17	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-4.391E-02	1.199E-01	9.647E-02	6.118E-02	FAIL ABUN
BA-137M	2.387E-02	3.734E-02	3.399E-02	1.905E-02	NOT IDENT.
CS-137	2.523E-02	3.947E-02	3.593E-02	2.014E-02	NOT IDENT.
CE-139	-2.303E-02	2.983E-02	2.640E-02	1.522E-02	NOT IDENT.
BA-140	-2.093E-02	2.964E-01	2.617E-01	1.512E-01	NOT IDENT.
LA-140	6.147E-02	9.920E-02	8.603E-02	5.061E-02	FAIL ABUN
CE-141	1.066E-03	6.733E-02	6.161E-02	3.435E-02	NOT IDENT.
CE-143	9.715E+02	4.378E+02	0.000E+00	2.234E+02	SHORT HLIF
CE-144	1.917E-01	2.459E-01	1.943E-01	1.254E-01	NOT IDENT.
PM-144	-1.492E-02	3.524E-02	2.961E-02	1.798E-02	NOT IDENT.

PR-144	-1.012E+00	2.390E+00	2.008E+00	1.219E+00	NOT IDENT.
PM-146	3.767E-03	4.610E-02	3.943E-02	2.352E-02	NOT IDENT.
ND-147	-1.061E-01	6.548E-01	5.752E-01	3.341E-01	FAIL ABUN
PM-149	8.088E+01	1.688E+02	1.516E+02	8.611E+01	NOT IDENT.
EU-152	2.337E-02	1.197E-01	8.629E-02	6.108E-02	FAIL ABUN
GD-153	-7.259E-02	9.421E-02	6.961E-02	4.807E-02	NOT IDENT.
EU-154	5.912E-03	1.262E-01	1.091E-01	6.440E-02	NOT IDENT.
EU-155	5.010E-02	1.114E-01	9.886E-02	5.685E-02	FAIL ABUN
TB-160	1.948E-01	1.574E-01	1.469E-01	8.030E-02	FAIL ABUN
HO-166M	4.090E-02	6.861E-02	6.186E-02	3.501E-02	NOT IDENT.
TM-171	2.340E+00	3.398E+01	2.718E+01	1.734E+01	NOT IDENT.
LU-176	1.113E-02	2.592E-02	2.321E-02	1.323E-02	FAIL ABUN
LU-177	3.661E+00	1.930E+00	1.344E+00	9.846E-01	FAIL ABUN
LU-177M	-6.096E-02	2.032E-01	1.710E-01	1.037E-01	NOT IDENT.
HF-181	1.078E-03	4.858E-02	4.118E-02	2.478E-02	NOT IDENT.
W-181	1.335E-01	4.458E-01	3.606E-01	2.274E-01	NOT IDENT.
TA-182	3.084E-02	2.134E-01	1.865E-01	1.089E-01	FAIL ABUN
RE-183	-1.262E-02	1.147E-01	1.024E-01	5.850E-02	FAIL ABUN
RE-184	8.895E-02	2.413E-01	2.178E-01	1.231E-01	NOT IDENT.
OS-185	1.435E-03	4.483E-02	3.928E-02	2.287E-02	NOT IDENT.
RE-188	6.471E-02	1.768E-01	1.620E-01	9.019E-02	NOT IDENT.
W-188	-5.452E+00	8.846E+00	6.519E+00	4.513E+00	FAIL ABUN
IR-192	9.225E-03	3.635E-02	3.221E-02	1.855E-02	FAIL ABUN
AU-195	3.660E-02	2.413E-01	2.095E-01	1.231E-01	FAIL ABUN
TL-200	6.215E+01	1.531E+03	0.000E+00	7.810E+02	SHORT HLIF
TL-201	-3.468E+00	1.021E+01	9.195E+00	5.211E+00	NOT IDENT.
TL-202	5.949E-02	8.246E-02	7.352E-02	4.207E-02	NOT IDENT.
HG-203	5.140E-02	5.024E-02	4.127E-02	2.564E-02	NOT IDENT.
BI-207	-4.513E-02	5.608E-02	4.340E-02	2.861E-02	FAIL ABUN
TL-207	3.310E-02	7.225E-01	5.547E-01	3.686E-01	FAIL ABUN
PO-209	2.032E+00	8.697E+00	7.277E+00	4.437E+00	NOT IDENT.
BI-210	4.507E+00	4.496E+00	4.174E+00	2.294E+00	NOT IDENT.
PB-210	4.507E+00	4.496E+00	4.174E+00	2.294E+00	NOT IDENT.
PO-210	4.507E+00	4.492E+00	4.174E+00	2.292E+00	NOT IDENT.
PB-211	-5.173E-01	1.043E+00	8.247E-01	5.321E-01	NOT IDENT.
PO-215	3.310E-02	7.225E-01	5.547E-01	3.686E-01	FAIL ABUN
RN-219	-2.834E-01	4.472E-01	3.673E-01	2.282E-01	NOT IDENT.
RN-220	1.110E+01	2.713E+01	2.465E+01	1.384E+01	NOT IDENT.
RA-223	3.310E-02	7.225E-01	5.547E-01	3.686E-01	FAIL ABUN
AC-227	-3.591E-01	4.010E-01	3.377E-01	2.046E-01	FAIL ABUN
TH-227	-3.591E-01	4.024E-01	3.377E-01	2.053E-01	FAIL ABUN
TH-229	-1.131E-01	5.325E-01	4.775E-01	2.717E-01	FAIL ABUN
PA-231	-6.510E-01	1.696E+00	1.412E+00	8.654E-01	FAIL ABUN
TH-231	3.310E-02	7.225E-01	5.547E-01	3.686E-01	FAIL ABUN
U-231	2.823E-01	1.603E+00	1.262E+00	8.181E-01	FAIL ABUN
PA-233	-5.553E-02	6.877E-02	5.745E-02	3.509E-02	FAIL ABUN
PA-234	-5.414E-02	3.257E-01	2.710E-01	1.662E-01	FAIL ABUN
PA-234M	5.835E-01	5.214E+00	4.416E+00	2.660E+00	NOT IDENT.
U-235	4.171E-02	2.131E-01	1.961E-01	1.087E-01	FAIL ABUN
NP-236	-4.850E-02	8.187E-02	7.323E-02	4.177E-02	NOT IDENT.
NP-239	1.097E-02	1.984E-01	1.724E-01	1.012E-01	FAIL ABUN
AM-241	2.927E-02	1.782E-01	1.442E-01	9.092E-02	NOT IDENT.
CM-243	-7.536E-02	9.997E-02	8.440E-02	5.101E-02	FAIL ABUN
AM-246	3.967E-02	1.659E-01	1.416E-01	8.467E-02	NOT IDENT.
CM-247	-1.701E-02	3.955E-02	3.302E-02	2.018E-02	FAIL ABUN
CF-249	4.514E-02	4.273E-02	3.896E-02	2.180E-02	NOT IDENT.
CF-251	-9.387E-02	1.292E-01	1.141E-01	6.592E-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	290.7104
46.50	290.7104
46.50	290.7104
48.70	333.1865
49.72	292.6634
51.35	311.2047
52.39	306.6682
52.97	331.9124
53.15	332.0288
53.44	298.9958
54.07	301.4409
56.28	340.2963
56.28	340.2980
57.37	0.0000
57.53	319.1258
57.53	319.1270
57.60	319.1673
57.98	345.5728
57.98	345.5728
59.32	341.7048
59.32	341.7048
59.40	341.7545
59.54	333.9657
59.72	334.0757
60.01	359.4785
61.10	364.9276
61.14	364.9536
61.30	365.0588
63.00	398.3962
63.29	398.5999
63.29	398.5999
63.58	464.9183
64.28	484.5527
65.12	442.3027
65.20	442.3642
65.20	442.3642
66.05	452.5730
66.72	453.0909
66.83	461.1560
66.91	461.2177
67.20	482.2019
67.20	482.2019
67.75	479.4548
67.85	482.7341
68.90	473.9789
68.90	473.9789
69.30	490.3186
69.67	466.5720
70.82	451.3940
70.82	451.3940
70.83	451.4004
72.80	460.9097
72.87	460.9620
72.87	460.9620
74.67	462.2931
74.81	462.3978
74.81	462.3978
74.81	462.3978
74.81	462.3978
74.81	462.3978
74.81	462.3978
74.81	462.3978
74.97	462.5135
75.28	462.7426
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77.11	464.0736

77.11	464.0736
77.11	464.0736
77.11	464.0736
77.11	464.0736
77.11	464.0736
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80.18	397.7994
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80.30	440.2682
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81.07	427.7229
81.07	427.7229
81.07	427.7229
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83.78	491.7480
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85.43	433.7917
86.29	434.3355
86.50	434.4684
86.54	434.4926
86.59	434.5248
86.72	434.6074
86.79	434.6497
86.94	434.7444
87.30	382.2481
87.30	382.2481
87.30	382.2481
87.30	382.2481
87.30	382.2481
87.30	382.2481
87.57	382.3968
87.88	382.5667
88.03	382.6499
88.36	382.8304
88.47	382.8906
89.95	383.6995
91.11	384.3279
92.29	384.9615
92.38	385.0111
92.38	385.0111
93.35	385.5297
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94.67	364.5868
94.67	364.5884
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94.90	353.0465
94.90	353.0465
94.90	353.0465
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98.44	368.1297
98.88	368.3463
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99.55	342.9797
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100.10	337.6410
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103.76	369.5929
105.00	330.8023
105.31	342.1902
108.00	403.2265
109.28	375.5922

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111.00	350.3235
111.76	384.6959
112.95	404.5795
115.19	362.3823
116.30	346.8938
117.00	338.0480
117.00	338.0480
117.66	362.3182
121.11	329.3709
121.62	334.1613
121.78	348.0066
122.06	348.1199
122.32	357.4203
122.32	357.4203
122.32	357.4203
122.32	357.4203
123.07	356.5817
127.23	334.5967
129.76	372.0640
131.20	337.8364
133.02	348.9868
133.54	324.7451
135.34	353.3767
136.00	363.2580
136.25	346.7221
136.48	346.8082
140.51	363.2687
140.51	0.0000
142.18	360.3869
142.65	356.1600
143.76	346.8674
144.24	336.4446
144.24	336.4446
144.24	336.4446
144.24	336.4446
145.22	360.6575
145.44	360.7385
147.16	360.4971
152.43	347.3051
152.70	338.4926
153.22	328.8658
154.21	324.7346
154.21	324.7346
154.21	324.7346
154.21	324.7346
155.03	326.7869
156.02	359.2826
158.56	308.2200
159.00	0.0000
159.00	303.8720
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161.27	362.9410
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162.64	323.8440
163.35	295.2606
163.89	302.6184
165.85	334.7724
167.43	314.4909
171.28	302.9372
171.86	311.2677
172.10	311.3383
176.55	334.4977
176.60	334.5117
181.06	284.0731
184.41	318.7082
185.71	300.5126
186.00	300.5899
190.27	326.2637
192.34	316.1293
193.63	326.6607
197.04	310.9111
198.01	296.3075
198.60	307.6079
200.40	314.5928
201.83	324.2879
202.84	321.7661
205.31	282.6164

208.36	323.8022
208.81	323.9236
209.75	283.6500
209.75	283.6500
210.97	298.9567
215.65	278.0345
216.55	265.0325
218.09	289.9111
222.10	269.0451
223.80	289.3232
226.40	277.5528
227.00	275.7801
227.08	262.4834
227.20	262.5087
228.16	273.1725
228.18	273.1768
228.18	273.1768
231.56	0.0000
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236.00	277.3043
236.00	277.3043
238.63	251.3718
238.63	251.3718
238.63	251.3718
238.63	251.3718
239.00	251.4418
240.98	251.8136
241.98	252.0015
241.98	252.0015
241.98	252.0015
244.69	218.9681
245.39	222.1664
247.94	217.6882
248.90	227.5990
249.79	226.3644
252.40	205.4704
252.85	209.4148
252.85	209.4148
254.15	0.0000
256.20	240.0463
256.20	240.0463
260.50	205.6877
260.90	208.6709
262.80	225.5472
264.65	222.9067
268.24	259.7272
268.79	243.1600
269.46	224.6357
269.46	224.6357
269.46	224.6357
269.46	224.6357
271.23	219.9976
273.65	306.9346
276.40	209.9319
277.35	210.0684
277.60	210.1041
277.60	210.1041
278.00	210.1594
278.60	205.3118
279.20	195.9146
279.53	195.9569
280.46	194.4998
281.68	218.3978
283.67	212.8016
284.30	212.0408
285.00	208.1735
285.90	192.4281
286.10	181.5424
286.10	181.5424
287.40	186.6603
288.45	0.0000
290.67	206.9622
290.80	206.9812
291.72	194.3601
293.26	0.0000
293.70	180.2565
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295.21	182.0298

295.21	182.0298
295.96	182.1161
296.50	151.8168
297.23	151.8887
298.57	152.0209
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299.80	152.1392
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300.09	136.1515
300.09	136.1515
300.09	136.1515
300.12	136.1536
301.29	139.4613
302.84	184.5278
303.76	175.0014
303.91	175.0200
304.40	183.1041
304.40	183.1041
304.84	175.1212
306.84	168.9100
308.46	161.0303
311.98	194.6698
316.51	160.8293
318.01	175.1514
319.02	160.0637
319.41	162.1289
320.08	154.0851
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323.87	144.6880
323.87	144.6880
323.87	144.6880
325.23	164.3321
328.77	171.2043
333.44	159.4206
334.20	157.4496
334.20	157.4496
334.30	157.4590
338.28	150.6562
338.28	150.6562
338.28	150.6562
338.28	150.6562
338.32	150.6584
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338.32	150.6584
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340.57	142.8533
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345.85	137.9421
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351.07	141.4548
351.92	141.5237
351.92	141.5237
351.92	141.5237
355.39	0.0000
356.01	130.8785
364.48	156.0585
366.43	135.3995
367.43	128.1801
367.94	0.0000
369.80	129.3925
374.96	128.7131
383.85	153.5232
387.95	123.2985
388.63	126.5076
391.69	155.2230
391.69	155.2230
392.90	140.5312
398.62	148.3740
400.65	129.4351
401.10	142.2012
401.81	150.7450
402.60	144.4357
404.84	145.6670
410.95	141.8604
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413.65	158.0788
414.70	128.2416
415.30	133.6250

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427.08	124.7439
427.89	135.5534
432.53	125.0837
433.93	129.4849
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439.56	109.2867
439.89	110.3859
443.98	111.6913
444.90	108.4869
445.03	104.1533
445.03	104.1533
445.03	104.1533
445.03	104.1533
453.90	111.1376
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468.07	87.7527
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475.06	100.1450
475.35	102.3587
476.78	85.9064
477.59	102.4652
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484.57	116.0582
487.03	100.6962
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497.08	115.6051
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511.00	91.7151
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511.85	91.7489
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513.99	80.6353
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529.87	0.0000
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546.56	0.0000
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552.65	90.1731
555.20	101.2089
563.23	112.5228
563.90	93.3365
568.70	102.6867
569.32	109.1337
569.50	102.7223
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574.00	94.6388
574.64	88.2305
578.91	78.2556
579.30	0.0000
583.14	75.6198
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591.81	89.7629
592.07	85.1449
593.00	83.3225
595.88	105.6615
600.56	96.5707
602.52	0.0000
602.71	108.4237
602.71	108.4237
603.60	116.2079
604.41	111.5947
604.70	111.6094
609.31	95.9690

609.31	95.9690
609.31	95.9690
609.31	95.9690
610.33	96.0068
612.46	88.6218
614.37	91.7986
618.01	98.6800
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621.84	83.3234
631.29	83.6222
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634.78	75.2637
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661.65	78.8662
664.57	0.0000
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666.33	90.4216
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677.61	91.7438
685.20	93.9087
692.80	82.6301
695.00	77.8874
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696.49	86.5854
697.00	94.2987
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698.33	94.3441
698.50	95.3117
699.00	89.5511
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717.42	87.2161
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722.78	55.0148
722.78	55.0148
722.89	55.0162
722.95	55.0176
723.30	67.9714
724.18	66.3731
727.18	82.6447
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735.90	84.9792
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742.81	72.3289
744.21	85.0756
747.13	76.3490
751.79	78.4277
752.31	77.4609
753.82	67.6894
755.35	80.4825
756.15	82.4660
756.87	78.5586
763.93	90.2232
765.79	86.9963
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766.84	93.5922
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798.80	63.0380
801.93	63.1014
805.60	47.6576
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817.79	69.0876
818.51	59.0893
819.60	42.0769
826.30	67.2617
828.27	0.0000
831.60	69.3832
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836.80	0.0000
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848.13	42.4460
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860.37	54.7752
867.32	47.9186
867.82	48.2886
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873.19	59.0564
874.81	63.1595
875.33	0.0000
876.40	64.2089
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881.50	60.2215
883.24	59.2319
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889.25	57.2893
896.60	62.5384
898.02	65.6406
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903.28	68.0518
911.07	67.9465
911.07	67.9465
911.07	67.9465
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925.00	58.9134
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926.50	55.8365
935.52	58.0521
937.48	62.2324
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946.00	61.3407
949.00	63.4737
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968.20	61.7167
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969.11	61.7325
969.11	61.7325
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983.50	66.1761
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996.32	61.1336
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1001.68	49.6105
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1021.30	0.0000
1024.50	0.0000
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1037.82	65.0001
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1038.76	0.0000
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1046.59	51.2648
1048.07	52.3520

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1050.47	41.6946
1062.04	57.8997
1063.62	55.7781
1076.63	53.8110
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1078.86	61.3780
1085.78	71.1917
1099.22	60.6074
1112.02	68.7606
1112.84	54.2969
1115.52	54.3311
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1120.29	57.6582
1120.29	57.6582
1120.51	57.6634
1121.28	57.6737
1124.00	0.0000
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1147.95	0.0000
1167.94	64.1923
1173.22	65.1902
1175.09	67.9749
1177.93	66.1816
1189.05	70.9624
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1205.75	0.0000
1213.00	69.5038
1221.42	68.7065
1230.97	83.7451
1235.34	93.1437
1236.41	0.0000
1238.25	73.6318
1246.25	63.4927
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1271.85	46.9523
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1274.54	50.7393
1291.56	49.9873
1298.22	0.0000
1312.09	36.9465
1325.50	38.0029
1325.50	38.0029
1332.49	31.3994
1333.61	28.5522
1360.21	26.7992
1362.66	0.0000
1365.15	27.7846
1368.21	38.3480
1368.53	0.0000
1376.25	34.5718
1384.27	36.5527
1394.10	21.2051
1395.20	16.3892
1407.95	23.1982
1434.06	18.4635
1436.60	18.4727
1457.56	0.0000
1460.81	17.5847
1489.15	13.7539
1509.49	21.6983
1596.49	16.0423
1620.62	12.0854
1678.03	0.0000
1691.02	16.3190
1691.02	16.3190
1706.46	0.0000
1750.46	0.0000
1764.49	14.1669
1764.49	14.1669
1764.49	14.1669
1764.49	14.1669
1770.23	7.0904
1771.40	7.0918
1791.20	0.0000
1808.65	10.4077

1836.01

10.4549

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G244604001

Total Uranium Activity	4.3936E+00	ug/g
Total Uranium Counting Unc.	5.6816E+00	ug/g
Total Uranium Tpu	2.8988E-06	ug/g
Total Uranium Mda	3.5805E+00	ug/g

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*****
*
*               GEL Laboratories LLC
*               2040 SAVAGE ROAD
*               CHARLESTON ,SC 29417
*               GROSS GAMMA REPORT
*
*****
*
*  BATCH ID      : 941636          SAMPLE ID   : G244604001
*  ANALYST       : MXR1            DETECTOR    : GAM01
*  SAMPLE DATE   : 8-JAN-2010 12:00:00.00  COUNT TIME : 0 02:00:00.00
*  ANALYSIS DATE : 25-JAN-2010 08:38:21.60  SAMPLE ALQT: 148.820 GRAM
*
*****

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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 1.041E+01
GROSS GAMMA ERROR (pCi/GRAM ) : 1.840E+00
GROSS GAMMA MDA (pCi/GRAM ) : 4.245E+00
GROSS GAMMA DLC (pCi/GRAM ) : 2.061E+00

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VAX/VMS Nuclide Identification Report Generated 26-JAN-2010 15:29:27.27

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*****
*                               GEL Laboratories LLC                      *
*                               2040 Savage Road                        *
*                               Charleston, SC 29414                   *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G244604002.CNF;1
Sample date        : 8-JAN-2010 12:00:00. Acquisition date : 25-JAN-2010 08:38:58
Sample ID          : G244604002      Sample quantity   : 1.32070E+02 GRAM
Detector name      : GAM02            Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00    Elapsed real time: 0 02:00:02.80  0.0%
Energy tolerance   : 1.50000 keV      Analyst Initials  : MXR1
Abundance limit    : 75.00000          Sensitivity       : 5.00000
Batch ID           : 941636            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	63.04*	57	412	0.85	125.27	122	8	7.95E-03	66.4	
2	2	74.57*	309	445	1.08	148.34	142	15	4.28E-02	13.0	1.06E+00
3	2	76.84	555	346	0.93	152.90	142	15	7.71E-02	7.0	
4	4	86.96	223	355	1.31	173.14	170	12	3.09E-02	15.0	3.05E+00
5	4	89.69	92	373	1.04	178.61	170	12	1.28E-02	34.6	
6	0	92.51*	233	528	1.30	184.24	181	9	3.24E-02	20.3	
7	0	185.74*	244	484	1.11	370.80	366	12	3.38E-02	20.1	
8	0	209.10	136	248	1.82	417.55	413	8	1.89E-02	21.8	
9	4	238.38*	1093	202	1.04	476.13	471	17	1.52E-01	3.7	7.93E-01
10	4	241.27	267	267	1.72	481.92	471	17	3.71E-02	15.4	
11	0	269.49	109	182	0.97	538.39	533	10	1.51E-02	25.2	
12	0	277.24	117	240	1.21	553.90	548	13	1.63E-02	28.8	
13	0	294.91*	320	237	1.11	589.26	584	11	4.44E-02	11.0	
14	0	300.04	63	200	1.41	599.52	595	10	8.70E-03	44.3	
15	0	327.34	36	162	1.01	654.16	651	8	5.03E-03	62.8	
16	0	338.01*	193	167	1.23	675.49	670	9	2.68E-02	14.2	
17	0	351.54*	642	173	1.14	702.58	697	13	8.91E-02	5.9	
18	0	462.75	83	102	0.81	925.12	919	12	1.15E-02	26.8	
19	0	510.70*	131	137	2.15	1021.07	1014	17	1.83E-02	25.3	
20	0	582.75*	345	134	1.38	1165.26	1158	15	4.80E-02	9.2	
21	0	608.96*	404	58	1.37	1217.71	1213	10	5.61E-02	6.3	
22	0	661.27	181	100	1.64	1322.40	1317	11	2.52E-02	13.0	
23	0	727.18	57	67	0.98	1454.31	1449	10	7.98E-03	29.8	
24	0	859.53	42	59	0.97	1719.17	1712	13	5.87E-03	40.3	
25	0	910.69*	255	76	1.95	1821.57	1813	20	3.54E-02	10.6	
26	0	964.05	37	38	1.39	1928.36	1923	10	5.17E-03	34.9	
27	0	968.52	162	42	1.42	1937.31	1932	12	2.25E-02	11.2	
28	0	1119.79*	82	39	1.41	2240.06	2235	11	1.14E-02	18.8	
29	0	1239.61	57	88	0.68	2479.88	2469	22	7.91E-03	45.1	
30	0	1460.11*	1068	24	2.24	2921.22	2912	21	1.48E-01	3.3	
31	0	1728.20	24	6	1.94	3457.85	3451	12	3.33E-03	28.9	
32	0	1763.88*	61	19	2.29	3529.27	3520	15	8.53E-03	21.0	

Flag: "*" = Peak area was modified by background subtraction

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Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G244604002.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 8-JAN-2010 12:00:00   Acquisition date : 25-JAN-2010 08:38:58
Sample ID        : G244604002             Sample quantity  : 132.07 GRAM
Sample type      : SOLID                   Sample geometry   :
Detector name    : GAMMA2                 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00          Elapsed real time: 0 02:00:02.80    0.0%
Peak Width (FWHM): 3.00                   Confidence level  : 5.00 %
Energy tolerance : 1.50 keV               Half life ratio   : 8.00
Errors propagated: Yes                     Systematic Error  : 0.00 %
Efficiency type  : Empirical               Efficiencies at   : Peak Energy
Abundance limit  : 75.00                  WTM error limit   : 3.00

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Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	2.766E+01	3.207E+00	5.921E-01	5.629E-02	46.719
CD-109	+	88.03	*	3.339E+00	1.055E+00	1.449E+00	1.455E-01	2.305
SN-126	+	64.28		6.662E-01	8.905E-01	8.457E-01	1.254E-01	0.788
	+	86.94		1.361E+00	6.984E-01	5.986E-01	2.493E-01	2.274
	+	87.57	*	3.274E-01	1.034E-01	1.428E-01	1.428E-02	2.292
CS-135	+	268.24	*	4.738E-01	2.474E-01	2.911E-01	3.852E-02	1.627
BA-137M	+	661.65	*	2.769E-01	7.570E-02	6.999E-02	6.030E-03	3.957
CS-137	+	661.65	*	2.927E-01	8.004E-02	7.398E-02	6.386E-03	3.957
TL-208	+	277.35		1.226E+00	7.308E-01	5.824E-01	8.852E-02	2.105
	+	510.84		6.813E-01	3.563E-01	2.369E-01	3.068E-02	2.876
	+	583.14	*	5.085E-01	1.063E-01	5.974E-02	5.984E-03	8.513
	+	860.37		5.836E-01	4.749E-01	5.486E-01	5.783E-02	1.064
BI-211		72.87		6.653E+00	3.310E+00	5.777E+00	4.972E-01	1.152
	+	351.07	*	4.205E+00	6.911E-01	3.369E-01	3.887E-02	12.480
PB-212	+	74.81		2.024E+00	5.855E-01	5.563E-01	7.124E-02	3.638
	+	77.11		2.035E+00	3.364E-01	3.120E-01	2.790E-02	6.523
	+	87.30		1.514E+00	5.016E-01	6.629E-01	9.357E-02	2.284
	+	238.63	*	1.563E+00	2.282E-01	9.668E-02	1.217E-02	16.164
	+	300.09		1.387E+00	1.242E+00	1.273E+00	1.720E-01	1.089
PO-212	+	74.81		2.024E+00	5.855E-01	5.563E-01	7.124E-02	3.638
	+	77.11		2.035E+00	3.364E-01	3.120E-01	2.790E-02	6.523
	+	87.30		1.514E+00	5.016E-01	6.629E-01	9.357E-02	2.284
	+	115.19		-1.011E-01	3.836E+00	6.330E+00	5.322E-01	-0.016
	+	238.63	*	1.563E+00	2.282E-01	9.668E-02	1.217E-02	16.164
	+	300.09		1.387E+00	1.242E+00	1.273E+00	1.720E-01	1.089
BI-214	+	609.31	*	1.120E+00	1.842E-01	1.124E-01	1.188E-02	9.968
	+	1120.29		1.195E+00	4.687E-01	4.702E-01	5.119E-02	2.541
	+	1764.49		1.227E+00	5.264E-01	2.958E-01	2.507E-02	4.150
PB-214	+	74.81		3.487E+00	9.890E-01	9.585E-01	1.099E-01	3.638
	+	77.11		3.489E+00	6.350E-01	5.349E-01	6.284E-02	6.523
	+	87.30		2.594E+00	8.433E-01	1.136E+00	1.431E-01	2.284
	+	241.98		2.293E+00	7.677E-01	5.826E-01	7.622E-02	3.935
	+	295.21		1.242E+00	3.229E-01	2.376E-01	3.265E-02	5.226
	+	351.92	*	1.463E+00	2.522E-01	1.175E-01	1.485E-02	12.454

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-214	+	74.81		3.487E+00	9.890E-01	9.585E-01	1.099E-01	3.638
	+	77.11		3.489E+00	6.350E-01	5.349E-01	6.284E-02	6.523
	+	87.30		2.594E+00	8.433E-01	1.136E+00	1.431E-01	2.284
	+	241.98		2.293E+00	7.677E-01	5.826E-01	7.622E-02	3.935
	+	295.21		1.242E+00	3.229E-01	2.376E-01	3.265E-02	5.226
	+	351.92	*	1.463E+00	2.522E-01	1.175E-01	1.485E-02	12.454
PO-216	+	74.81		2.024E+00	5.855E-01	5.563E-01	7.124E-02	3.638
	+	77.11		2.035E+00	3.364E-01	3.120E-01	2.790E-02	6.523
	+	87.30		1.514E+00	5.016E-01	6.629E-01	9.357E-02	2.284
	+	238.63	*	1.563E+00	2.282E-01	9.668E-02	1.217E-02	16.164
	+	300.09		1.387E+00	1.242E+00	1.273E+00	1.720E-01	1.089
PO-218	+	74.81		3.487E+00	9.890E-01	9.585E-01	1.099E-01	3.638
	+	77.11		3.489E+00	6.350E-01	5.349E-01	6.284E-02	6.523
	+	87.30		2.594E+00	8.433E-01	1.136E+00	1.431E-01	2.284
	+	241.98		2.293E+00	7.677E-01	5.826E-01	7.622E-02	3.935
	+	295.21		1.242E+00	3.229E-01	2.376E-01	3.265E-02	5.226
	+	351.92	*	1.463E+00	2.522E-01	1.175E-01	1.485E-02	12.454
RA-224	+	240.98	*	4.348E+00	1.435E+00	1.101E+00	1.299E-01	3.949
RA-226	+	609.31	*	1.120E+00	1.842E-01	1.124E-01	1.188E-02	9.968
	+	1120.29		1.195E+00	4.687E-01	4.702E-01	5.119E-02	2.541
	+	1764.49		1.227E+00	5.264E-01	2.958E-01	2.507E-02	4.150
AC-228	+	338.32		1.396E+00	7.076E-01	3.973E-01	1.667E-01	3.513
	+	911.07	*	1.665E+00	4.085E-01	2.240E-01	2.793E-02	7.434
	+	969.11		1.869E+00	6.117E-01	3.957E-01	9.428E-02	4.724
RA-228	+	338.32		1.396E+00	7.076E-01	3.973E-01	1.667E-01	3.513
	+	911.07	*	1.665E+00	4.085E-01	2.240E-01	2.793E-02	7.434
	+	969.11		1.869E+00	6.117E-01	3.957E-01	9.428E-02	4.724
TH-228	+	74.81		2.058E+00	5.639E-01	5.657E-01	4.993E-02	3.638
	+	77.11		2.070E+00	3.421E-01	3.173E-01	2.838E-02	6.523
	+	87.30		1.540E+00	4.863E-01	6.741E-01	6.716E-02	2.284
	+	238.63	*	1.589E+00	2.321E-01	9.832E-02	1.237E-02	16.164
	+	300.09		1.410E+00	1.507E+00	1.294E+00	7.753E-01	1.089
TH-230	+	609.31	*	1.120E+00	1.842E-01	1.124E-01	1.188E-02	9.968
	+	1120.29		1.195E+00	4.687E-01	4.702E-01	5.119E-02	2.541
	+	1764.49		1.227E+00	5.264E-01	2.958E-01	2.507E-02	4.150
TH-232	+	338.32		1.396E+00	4.285E-01	3.973E-01	4.568E-02	3.513
	+	911.07	*	1.665E+00	4.085E-01	2.240E-01	2.793E-02	7.434
	+	969.11		1.869E+00	6.117E-01	3.957E-01	9.428E-02	4.724
TH-234	+	63.29	*	1.683E+00	2.256E+00	2.301E+00	4.063E-01	0.731
	+	92.38		2.195E+00	9.799E-01	7.871E-01	1.458E-01	2.788
U-234	+	609.31	*	1.120E+00	1.842E-01	1.124E-01	1.188E-02	9.968
	+	1120.29		1.195E+00	4.687E-01	4.702E-01	5.119E-02	2.541
	+	1764.49		1.227E+00	5.264E-01	2.958E-01	2.507E-02	4.150
NP-237	+	86.50	*	9.613E-01	3.627E-01	4.158E-01	9.512E-02	2.312
	+	95.87		-1.210E+00	1.085E+00	1.463E+00	3.635E-01	-0.827
U-238	+	63.29	*	1.683E+00	2.256E+00	2.301E+00	4.063E-01	0.731
	+	92.38		2.195E+00	9.157E-01	7.871E-01	7.494E-02	2.788
AM-243	+	74.67	*	3.281E-01	8.983E-02	9.052E-02	7.916E-03	3.624
	+	86.72		3.605E+01	1.139E+01	1.590E+01	1.574E+00	2.267

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		117.66		-1.098E+00	3.872E+00	6.309E+00	5.286E-01	-0.174
		142.18		-2.137E+01	1.933E+01	2.965E+01	2.682E+00	-0.721
ANH-511	+	511.00	*	1.472E-01	7.597E-02	5.118E-02	5.074E-03	2.875

---- 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	*	-4.546E-02	3.710E-01	5.932E-01	6.291E-02	-0.077
NA-22		1274.54	*	-1.279E-02	4.904E-02	7.847E-02	6.957E-03	-0.163
NA-24		1368.53	*	-5.343E-01	4.904E-02	Half-Life too short		
AL-26		1129.67		-1.689E-02	1.790E+00	2.868E+00	2.450E-01	-0.006
		1808.65	*	2.997E-02	2.805E-02	5.624E-02	4.655E-03	0.533
TI-44		67.85		-4.584E-02	4.829E-02	7.484E-02	6.174E-03	-0.612
		78.38	*	9.254E-02	4.130E-02	6.709E-02	6.074E-03	1.379
SC-46		889.25	*	-7.681E-03	4.255E-02	6.774E-02	6.887E-03	-0.113
+		1120.51		2.075E-01	8.023E-02	1.345E-01	1.162E-02	1.543
V-48		944.10		-4.034E-01	1.002E+00	1.543E+00	1.544E-01	-0.261
		983.50	*	7.723E-02	8.361E-02	1.464E-01	1.432E-02	0.527
		1312.09		4.917E-02	9.664E-02	1.672E-01	1.531E-02	0.294
CR-51		320.08	*	-2.385E-01	3.962E-01	6.332E-01	7.725E-02	-0.377
MN-52		744.21		2.089E-01	3.031E-01	5.282E-01	4.866E-02	0.395
		848.13		-7.258E+00	8.730E+00	1.295E+01	1.283E+00	-0.561
		935.52		7.139E-02	3.402E-01	5.607E-01	5.636E-02	0.127
		1246.25		-1.205E+01	1.190E+01	1.433E+01	1.237E+00	-0.841
		1333.61		2.264E-01	5.905E+00	9.725E+00	9.062E-01	0.023
		1434.06	*	-4.616E-02	3.233E-01	5.150E-01	4.791E-02	-0.090
MN-54		834.83	*	6.571E-03	4.473E-02	7.380E-02	7.520E-03	0.089
CO-56		846.75	*	-1.039E-04	4.046E-02	6.590E-02	6.255E-03	-0.002
		977.42		-2.340E+00	3.256E+00	4.809E+00	4.722E-01	-0.487
		1037.82		1.662E-01	3.212E-01	5.638E-01	5.534E-02	0.295
		1175.09		-2.755E-01	2.270E+00	3.715E+00	2.997E-01	-0.074
+		1238.25		2.369E-01	2.146E-01	1.868E-01	1.648E-02	1.268
		1360.21		-7.609E-01	1.127E+00	1.671E+00	1.559E-01	-0.455
		1771.40		-3.945E-01	2.570E-01	2.814E-01	2.376E-02	-1.402
CO-57		122.06	*	1.467E-02	2.527E-02	4.260E-02	3.561E-03	0.344
		136.48		-1.609E-01	2.168E-01	3.423E-01	3.232E-02	-0.470
CO-58		810.76	*	-1.871E-02	4.294E-02	6.727E-02	6.515E-03	-0.278
FE-59		142.65		-3.277E+00	3.088E+00	4.749E+00	4.306E-01	-0.690
		192.34		1.052E+00	1.041E+00	1.729E+00	2.582E-01	0.608
		1099.22	*	-4.163E-02	9.836E-02	1.570E-01	1.497E-02	-0.265
		1291.56		3.934E-02	1.321E-01	2.242E-01	2.268E-02	0.175
CO-60		1173.22		3.163E-03	4.610E-02	7.690E-02	6.192E-03	0.041
		1332.49	*	9.139E-03	3.809E-02	6.440E-02	6.000E-03	0.142
		1115.52	*	-7.007E-03	1.051E-01	1.492E-01	1.298E-02	-0.047
GE-68		1077.35	*	3.904E-01	1.402E+00	2.397E+00	2.171E-01	0.163
AS-73		53.44	*	2.832E-01	1.081E+00	1.871E+00	1.549E-01	0.151
AS-74		595.88	*	-8.269E-04	9.696E-02	1.625E-01	1.517E-02	-0.005
		634.78		-1.756E-02	3.783E-01	6.287E-01	5.620E-02	-0.028

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SE-75		66.05		1.367E-01	5.287E+00	8.092E+00	8.114E-01	0.017
		96.73		-8.954E-01	8.831E-01	1.218E+00	1.700E-01	-0.735
		121.11		-3.878E-02	1.393E-01	2.265E-01	2.496E-02	-0.171
		136.00		-1.529E-02	4.029E-02	6.478E-02	5.733E-03	-0.236
		198.60		1.042E+00	1.974E+00	3.202E+00	3.749E-01	0.325
		264.65	*	4.983E-02	5.249E-02	8.253E-02	1.009E-02	0.604
		279.53		2.251E-02	1.259E-01	1.886E-01	2.381E-02	0.119
		303.91		-2.196E+00	2.561E+00	3.483E+00	4.979E-01	-0.631
		400.65		3.197E-02	2.882E-01	4.748E-01	5.812E-02	0.067
BR-77	+	87.88		1.196E+03	3.779E+02	5.585E+02	5.602E+01	2.142
		200.40		-1.287E+02	2.905E+02	4.529E+02	4.977E+01	-0.284
	+	239.00		4.173E+02	5.800E+01	6.641E+01	7.813E+00	6.283
		249.79		7.058E+01	1.092E+02	1.899E+02	2.271E+01	0.372
		281.68		1.400E+01	1.676E+02	2.494E+02	3.087E+01	0.056
		297.23		1.243E+02	1.443E+02	1.696E+02	2.072E+01	0.733
		303.76		-3.108E+02	3.583E+02	4.879E+02	5.915E+01	-0.637
		439.47		1.187E+02	2.766E+02	4.617E+02	4.651E+01	0.257
		484.57		-2.819E+01	4.257E+02	6.829E+02	6.834E+01	-0.041
		520.65	*	-6.641E+00	1.877E+01	2.917E+01	2.878E+00	-0.228
		574.64		3.801E+02	3.996E+02	6.800E+02	6.474E+01	0.559
		578.91		-2.575E+01	1.902E+02	2.749E+02	2.607E+01	-0.094
		585.48		7.711E+02	3.784E+02	6.366E+02	6.002E+01	1.211
		755.35		3.567E+02	2.997E+02	5.360E+02	4.979E+01	0.666
		817.79		8.743E+01	2.335E+02	3.948E+02	3.834E+01	0.221
SR-82		698.33		1.974E+01	4.038E+01	6.916E+01	6.145E+00	0.285
		776.49	*	-4.430E-01	4.023E-01	5.846E-01	5.516E-02	-0.758
		1395.20		-4.260E+00	1.222E+01	1.892E+01	1.763E+00	-0.225
RB-83		520.41	*	-5.528E-02	7.807E-02	1.175E-01	1.160E-02	-0.470
		529.64		-5.167E-02	1.170E-01	1.801E-01	1.768E-02	-0.287
		552.65		-1.760E-03	2.161E-01	3.643E-01	3.527E-02	-0.005
RB-84		881.50	*	6.891E-02	7.781E-02	1.366E-01	1.382E-02	0.505
KR-85		513.99	*	8.776E+00	8.691E+00	1.334E+01	1.320E+00	0.658
SR-85		513.99	*	4.583E-02	4.538E-02	6.965E-02	6.895E-03	0.658
RB-86		1076.63	*	-4.594E-01	9.463E-01	1.508E+00	1.367E-01	-0.305
Y-88		898.02		-3.475E-02	4.541E-02	6.752E-02	6.924E-03	-0.515
		1836.01	*	-5.002E-03	3.075E-02	4.887E-02	3.986E-03	-0.102
ZR-88		392.90	*	1.305E-02	3.504E-02	5.870E-02	5.874E-03	0.222
Y-91		1204.90	*	-5.401E+00	2.204E+01	3.567E+01	2.962E+00	-0.151
NB-94		702.63	*	6.372E-03	3.564E-02	5.981E-02	5.333E-03	0.107
		871.10		1.474E-02	3.745E-02	6.310E-02	6.344E-03	0.234
NB-95		765.79	*	2.913E-02	5.089E-02	8.677E-02	8.123E-03	0.336
NB-95M		235.69	*	9.982E-02	1.505E-01	2.333E-01	2.952E-02	0.428
ZR-95		724.18		3.469E-02	1.197E-01	1.767E-01	1.728E-02	0.196
		756.15	*	9.082E-02	7.916E-02	1.414E-01	1.430E-02	0.642
NB-97		657.90	*	7.011E-01	7.916E-02	Half-Life	too short	
		1024.50		-1.644E+01	7.916E-02	Half-Life	too short	
ZR-97		254.15		1.095E+01	7.916E-02	Half-Life	too short	
		355.39		2.868E+00	7.916E-02	Half-Life	too short	
		507.63	*	1.269E+01	7.916E-02	Half-Life	too short	

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	602.52			-1.372E+01	7.916E-02	Half-Life too short		
	1021.30			-1.309E+01	7.916E-02	Half-Life too short		
	1147.95			-8.406E+00	7.916E-02	Half-Life too short		
	1362.66			7.908E+00	7.916E-02	Half-Life too short		
	1750.46			-1.780E+01	7.916E-02	Half-Life too short		
MO-99	140.51			1.463E+01	4.224E+01	6.967E+01	1.937E+01	0.210
	181.06			1.012E+01	3.099E+01	4.519E+01	8.715E+00	0.224
	366.43			-2.397E+01	1.375E+02	2.239E+02	2.415E+01	-0.107
	739.58	*		-9.453E-01	1.742E+01	2.855E+01	4.428E+00	-0.033
	778.00			1.597E+01	5.039E+01	8.521E+01	8.050E+00	0.187
TC-99M	140.51	*		1.695E+12	5.039E+01	Half-Life too short		
RH-101	127.23			-2.842E-03	3.336E-02	5.459E-02	4.633E-03	-0.052
	198.01	*		1.050E-02	3.658E-02	5.877E-02	6.428E-03	0.179
	325.23			-3.948E-02	2.749E-01	3.971E-01	4.673E-02	-0.099
RH-102	418.52			-2.972E-01	3.227E-01	4.907E-01	4.936E-02	-0.606
	475.06	*		2.518E-02	3.273E-02	5.562E-02	5.580E-03	0.453
	631.29			3.617E-02	5.452E-02	9.570E-02	8.593E-03	0.378
	697.49			4.017E-04	8.659E-02	1.434E-01	1.274E-02	0.003
	766.84			7.165E-02	1.293E-01	2.200E-01	2.061E-02	0.326
	1046.59			3.211E-02	1.215E-01	2.083E-01	1.942E-02	0.154
	1112.84			5.075E-02	2.700E-01	4.122E-01	3.594E-02	0.123
RU-103	497.08	*		4.123E-02	4.404E-02	7.544E-02	1.133E-02	0.546
+	610.33			1.247E+01	2.639E+00	3.027E+00	5.144E-01	4.120
RH-106	511.85	+		7.375E-01	3.807E-01	4.607E-01	4.565E-02	1.601
	621.84	*		9.995E-02	3.354E-01	5.728E-01	7.825E-02	0.174
	1050.47			2.080E+00	2.510E+00	4.495E+00	4.176E-01	0.463
RU-106	511.85	+		7.375E-01	3.807E-01	4.607E-01	4.565E-02	1.601
	621.84	*		9.995E-02	3.353E-01	5.728E-01	5.202E-02	0.174
	1050.47			2.080E+00	2.510E+00	4.495E+00	4.176E-01	0.463
AG-108M	433.93	*		-2.227E-02	3.703E-02	5.756E-02	5.967E-03	-0.387
	614.37			2.889E-02	4.158E-02	6.515E-02	6.175E-03	0.444
	722.95			-1.871E-02	5.117E-02	7.005E-02	6.573E-03	-0.267
AG-110M	657.75	*		3.903E-02	4.014E-02	6.423E-02	5.730E-03	0.608
	677.61			4.523E-02	3.243E-01	5.444E-01	4.885E-02	0.083
	706.67			-7.605E-02	2.158E-01	3.463E-01	3.177E-02	-0.220
	763.93			-1.337E-01	1.872E-01	2.892E-01	2.769E-02	-0.462
	884.67			-3.210E-02	5.313E-02	8.062E-02	8.364E-03	-0.398
	937.48			-1.007E-01	1.196E-01	1.748E-01	1.803E-02	-0.576
	1384.27			6.394E-02	1.707E-01	2.924E-01	2.792E-02	0.219
IN-111	171.28			-7.204E-01	1.604E+00	2.529E+00	2.622E-01	-0.285
	245.39	*		-9.782E-02	1.804E+00	2.687E+00	3.192E-01	-0.036
IN-113M	391.69	*		-1.419E-02	4.911E-02	7.894E-02	8.077E-03	-0.180
SN-113	391.69	*		-1.419E-02	4.911E-02	7.894E-02	8.077E-03	-0.180
IN-114M	190.27	*		-8.511E-02	2.243E-01	3.117E-01	3.357E-02	-0.273
CD-115	260.90			-1.431E+02	2.337E+02	3.809E+02	4.622E+01	-0.376
	492.35			-7.682E+01	6.766E+01	9.790E+01	9.774E+00	-0.785
	527.90	*		-1.177E+01	2.046E+01	3.111E+01	3.058E+00	-0.378
SN-117M	156.02			-2.237E+00	2.623E+00	4.078E+00	3.962E-01	-0.549
	158.56	*		3.356E-03	6.191E-02	1.006E-01	9.911E-03	0.033

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SB-122	563.90	*		-7.649E-01	3.283E+00	5.433E+00	5.217E-01	-0.141
	692.80			1.728E+01	7.663E+01	1.291E+02	1.142E+01	0.134
I-123	159.00	*		-2.580E+01	7.663E+01	Half-Life	too short	
	528.96			-1.369E+03	7.663E+01	Half-Life	too short	
TE-123M	159.00	*		-1.414E-02	3.002E-02	4.754E-02	4.717E-03	-0.297
I-124	602.71	*		-2.533E-01	1.004E+00	1.494E+00	1.386E-01	-0.170
	722.78			-2.586E+00	7.138E+00	9.776E+00	8.858E-01	-0.264
	1325.50			7.494E+00	5.159E+01	8.597E+01	7.963E+00	0.087
	1376.25			4.802E+01	4.698E+01	8.511E+01	7.937E+00	0.564
	1509.49			3.971E+01	2.513E+01	4.828E+01	4.451E+00	0.822
	1691.02			5.275E-01	5.396E+00	9.137E+00	8.004E-01	0.058
SB-124	602.71			-1.125E-02	4.458E-02	6.636E-02	6.155E-03	-0.170
	645.85			5.197E-01	5.711E-01	1.011E+00	9.421E-02	0.514
	709.31			1.210E+00	2.813E+00	4.819E+00	4.320E-01	0.251
	713.82			-6.306E-01	1.660E+00	2.647E+00	3.259E-01	-0.238
	722.78			-1.665E-01	4.596E-01	6.294E-01	5.814E-02	-0.264
+	968.20			1.963E+01	4.811E+00	7.905E+00	7.806E-01	2.484
	1045.16			-8.007E-01	2.610E+00	4.236E+00	3.955E-01	-0.189
	1325.50			5.153E-01	3.547E+00	5.911E+00	5.475E-01	0.087
	1368.21			-7.181E-01	2.011E+00	3.127E+00	4.358E-01	-0.230
	1436.60			-1.325E+00	4.060E+00	6.271E+00	5.832E-01	-0.211
	1691.02	*		8.010E-03	8.193E-02	1.387E-01	1.262E-02	0.058
SB-125	427.89	*		-6.395E-02	1.006E-01	1.560E-01	1.594E-02	-0.410
+	463.38			8.384E-01	4.588E-01	5.757E-01	6.125E-02	1.456
	600.56			-1.991E-02	1.852E-01	3.079E-01	3.044E-02	-0.065
	635.90			-1.894E-01	2.795E-01	4.392E-01	4.217E-02	-0.431
TE-125M	109.28	*		-8.455E+00	9.821E+00	1.564E+01	1.604E+00	-0.541
I-126	388.63			-5.665E-02	2.418E-01	3.903E-01	3.944E-02	-0.145
	666.33	*		9.771E-02	2.538E-01	3.809E-01	3.295E-02	0.257
	753.82			6.150E-01	1.781E+00	3.001E+00	2.785E-01	0.205
SB-126	223.80			9.937E-01	4.883E+00	7.818E+00	8.972E-01	0.127
+	278.60			8.934E+00	5.267E+00	5.198E+00	6.441E-01	1.719
	296.50			9.602E+00	2.952E+00	3.921E+00	4.792E-01	2.449
	414.70			7.314E-02	9.152E-02	1.566E-01	1.575E-02	0.467
	415.30			6.150E+00	7.571E+00	1.297E+01	1.304E+00	0.474
	555.20			2.818E+00	4.623E+00	8.110E+00	7.838E-01	0.347
	573.80			8.518E-01	1.259E+00	2.208E+00	2.103E-01	0.386
	593.00			-9.219E-01	1.035E+00	1.607E+00	1.505E-01	-0.574
	656.30			-1.186E+00	4.366E+00	6.107E+00	5.303E-01	-0.194
	666.33			4.100E-02	1.065E-01	1.598E-01	1.382E-02	0.257
	675.00			-4.220E-01	2.390E+00	3.880E+00	3.381E-01	-0.109
	695.00			-3.453E-02	9.808E-02	1.582E-01	1.401E-02	-0.218
	697.00			-7.816E-02	3.372E-01	5.488E-01	4.871E-02	-0.142
	720.50	*		1.333E-01	1.790E-01	2.892E-01	2.615E-02	0.461
	856.80			2.708E-01	6.490E-01	9.613E-01	9.579E-02	0.282
	989.30			-9.145E-01	1.562E+00	2.348E+00	2.288E-01	-0.389
	1034.80			-6.098E+00	1.034E+01	1.631E+01	1.536E+00	-0.374
	1213.00			1.297E+00	5.853E+00	9.849E+00	8.242E-01	0.132
SB-127	61.10			2.590E-01	9.358E+01	1.437E+02	1.583E+01	0.002

---- Non-Identified Nuclides ----

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XE-127		252.40		-4.800E+00	6.346E+00	9.730E+00	4.184E+00	-0.493
		290.80		-3.369E+01	3.717E+01	5.081E+01	7.424E+00	-0.663
		411.60		-1.507E+01	1.870E+01	2.862E+01	4.842E+00	-0.527
		444.90		1.152E+01	1.497E+01	2.545E+01	3.567E+00	0.453
		473.00		7.669E-01	2.547E+00	4.202E+00	6.004E-01	0.183
		543.00		1.219E+01	2.452E+01	4.067E+01	6.301E+00	0.300
		603.60		4.305E+00	1.794E+01	2.681E+01	3.599E+00	0.161
		685.20	*	4.235E-01	2.004E+00	3.378E+00	4.064E-01	0.125
		698.50		1.399E+01	2.335E+01	4.015E+01	6.562E+00	0.348
		722.20		8.231E+00	4.941E+01	7.209E+01	8.666E+00	0.114
		783.80		4.301E+00	5.435E+00	9.440E+00	1.274E+00	0.456
		57.60		-1.375E+00	7.534E+00	1.277E+01	9.827E-01	-0.108
		145.22		-1.830E-01	7.510E-01	1.211E+00	1.112E-01	-0.151
		172.10		-7.916E-02	1.281E-01	1.999E-01	2.076E-02	-0.396
I-131		202.84	*	-3.299E-02	5.117E-02	7.870E-02	8.690E-03	-0.419
		374.96		1.989E-01	2.221E-01	3.839E-01	4.045E-02	0.518
		80.18		4.763E+00	5.507E+00	8.652E+00	8.030E-01	0.550
		284.30		-6.326E-01	1.945E+00	3.093E+00	3.923E-01	-0.204
TE-132		364.48	*	-9.021E-02	1.391E-01	2.186E-01	2.455E-02	-0.413
		636.97		1.504E-01	1.858E+00	3.120E+00	2.931E-01	0.048
		722.89		-3.705E+00	1.001E+01	1.370E+01	1.250E+00	-0.270
		49.72		3.710E+01	4.278E+01	6.911E+01	7.916E+00	0.537
BA-133		111.76		-1.046E+01	4.650E+01	7.506E+01	8.421E+00	-0.139
		116.30		6.669E+00	4.121E+01	6.847E+01	7.642E+00	0.097
		228.16	*	3.099E-02	1.106E+00	1.752E+00	3.119E-01	0.018
		53.15		6.487E-01	4.658E+00	8.023E+00	6.676E-01	0.081
I-133		79.62		4.060E-01	1.343E+00	2.060E+00	3.201E-01	0.197
		81.00		-6.485E-02	1.063E-01	1.552E-01	2.522E-02	-0.418
	+	276.40		1.212E+00	7.281E-01	7.157E-01	1.213E-01	1.693
		302.84		-5.200E-02	1.678E-01	2.403E-01	3.796E-02	-0.216
I-133		356.01	*	-1.230E-02	5.022E-02	7.110E-02	1.061E-02	-0.173
		383.85		3.066E-04	3.233E-01	5.307E-01	7.312E-02	0.001
	+	510.53		6.037E+00	3.233E-01	Half-Life	too short	
		529.87	*	9.487E-04	3.233E-01	Half-Life	too short	
CS-134		706.58		-5.771E-01	3.233E-01	Half-Life	too short	
		856.28		6.436E-01	3.233E-01	Half-Life	too short	
		875.33		-8.988E-02	3.233E-01	Half-Life	too short	
		1236.41		2.541E+00	3.233E-01	Half-Life	too short	
I-135		1298.22		-7.583E-01	3.233E-01	Half-Life	too short	
		475.35		1.234E+00	2.120E+00	3.564E+00	3.575E-01	0.346
		563.23		-9.990E-02	3.710E-01	6.125E-01	5.929E-02	-0.163
		569.32		-1.709E-01	2.105E-01	3.278E-01	3.168E-02	-0.521
I-135		604.70		-9.097E-03	3.918E-02	5.568E-02	5.164E-03	-0.163
		795.84	*	5.248E-02	5.144E-02	9.079E-02	8.737E-03	0.578
		801.93		-3.377E-01	4.459E-01	6.733E-01	6.498E-02	-0.502
		1038.57		2.404E+00	3.948E+00	6.983E+00	6.556E-01	0.344
I-135		1167.94		2.714E+00	2.591E+00	4.692E+00	3.808E-01	0.578
		1365.15		9.204E-01	1.262E+00	2.262E+00	2.191E-01	0.407
		288.45		7.663E+11	1.262E+00	Half-Life	too short	

---- Non-Identified Nuclides ----

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		417.63		-5.766E+11	1.262E+00	Half-Life too short		
		546.56		-8.223E+11	1.262E+00	Half-Life too short		
		836.80		2.040E+12	1.262E+00	Half-Life too short		
		1038.76		9.492E+11	1.262E+00	Half-Life too short		
		1124.00		-5.131E+11	1.262E+00	Half-Life too short		
		1131.51		1.822E+11	1.262E+00	Half-Life too short		
		1260.41	*	-2.907E+09	1.262E+00	Half-Life too short		
		1457.56		7.592E+13	1.262E+00	Half-Life too short		
		1678.03		3.681E+11	1.262E+00	Half-Life too short		
		1706.46		2.298E+11	1.262E+00	Half-Life too short		
		1791.20		9.828E+11	1.262E+00	Half-Life too short		
CS-136		66.91		-6.566E-01	9.565E-01	1.402E+00	2.131E-01	-0.468
	+	86.29		4.683E+00	1.545E+00	2.263E+00	3.101E-01	2.070
		153.22		3.878E-01	7.761E-01	1.286E+00	1.350E-01	0.302
		163.89		1.063E+00	1.238E+00	2.070E+00	2.286E-01	0.514
		176.55		7.484E-02	4.230E-01	6.867E-01	7.479E-02	0.109
		273.65		4.642E-01	6.455E-01	7.661E-01	9.753E-02	0.606
		340.57		3.278E-02	1.650E-01	2.437E-01	2.836E-02	0.135
		818.51		5.415E-02	8.570E-02	1.480E-01	1.440E-02	0.366
		1048.07	*	1.511E-01	1.265E-01	2.327E-01	2.247E-02	0.649
		1235.34		2.912E-01	9.044E-01	1.326E+00	1.564E-01	0.220
CE-139		165.85	*	-2.189E-02	3.209E-02	5.011E-02	5.140E-03	-0.437
BA-140		162.64		6.670E-01	9.033E-01	1.458E+00	1.533E-01	0.457
		304.84		1.323E-02	1.673E+00	2.458E+00	7.199E-01	0.005
		423.70		2.400E+00	2.365E+00	3.899E+00	1.280E+00	0.616
		537.32	*	-4.097E-01	3.387E-01	4.368E-01	1.461E-01	-0.938
LA-140	+	328.77		3.553E-01	4.486E-01	6.364E-01	7.674E-02	0.558
		432.53		-4.200E-01	2.509E+00	4.032E+00	4.207E-01	-0.104
		487.03		1.064E-01	1.625E-01	2.745E-01	2.872E-02	0.388
		751.79		-3.546E-01	2.019E+00	3.271E+00	3.313E-01	-0.108
		815.85		6.380E-03	3.866E-01	6.328E-01	6.703E-02	0.010
		867.82		-1.857E-01	1.698E+00	2.732E+00	2.849E-01	-0.068
		919.63		1.828E+00	3.951E+00	5.856E+00	6.970E-01	0.312
		925.24		-5.061E-01	1.383E+00	2.150E+00	2.272E-01	-0.235
		1596.49	*	-7.854E-02	9.386E-02	1.349E-01	1.220E-02	-0.582
CE-141		145.44	*	-2.468E-02	6.814E-02	1.092E-01	1.021E-02	-0.226
CE-143		57.37		-9.850E-04	6.814E-02	Half-Life too short		
		231.56		-5.625E-04	6.814E-02	Half-Life too short		
		293.26	*	1.883E-03	6.814E-02	Half-Life too short		
	+	350.59		8.027E-02	6.814E-02	Half-Life too short		
		490.36		-3.915E-03	6.814E-02	Half-Life too short		
		664.57		-6.330E-05	6.814E-02	Half-Life too short		
		721.93		5.971E-04	6.814E-02	Half-Life too short		
CE-144		80.11		1.862E+00	2.190E+00	3.439E+00	3.167E-01	0.541
		133.54	*	7.369E-02	2.126E-01	3.528E-01	5.507E-02	0.209
PM-144		476.78		-5.153E-02	7.710E-02	1.179E-01	1.265E-02	-0.437
		618.01		-2.084E-02	3.204E-02	5.064E-02	4.733E-03	-0.411
		696.49	*	-1.046E-02	3.977E-02	6.457E-02	5.731E-03	-0.162
		778.57		9.222E-01	2.217E+00	3.781E+00	3.574E-01	0.244

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PR-144		696.49	*	-7.098E-01	2.697E+00	4.380E+00	3.885E-01	-0.162
		1489.15		-2.857E+00	1.209E+01	1.878E+01	1.737E+00	-0.152
PM-146		453.90	*	1.431E-02	4.852E-02	8.023E-02	9.562E-03	0.178
		633.02		-2.180E-01	1.420E+00	2.336E+00	8.750E-01	-0.093
		735.90		2.403E-02	1.400E-01	2.344E-01	6.742E-02	0.103
		747.13		9.972E-03	9.558E-02	1.588E-01	2.290E-02	0.063
ND-147	+	91.11		1.233E+00	5.161E-01	6.271E-01	6.458E-02	1.965
		319.41		-3.629E+00	3.881E+00	6.056E+00	7.193E-01	-0.599
		439.89		2.746E+00	7.497E+00	1.247E+01	1.256E+00	0.220
		531.02	*	2.490E-01	6.941E-01	1.141E+00	1.788E-01	0.218
PM-149		285.90	*	1.087E+02	1.718E+02	2.953E+02	5.280E+01	0.368
EU-152		121.78		4.510E-02	7.317E-02	1.235E-01	1.197E-02	0.365
		244.69		-2.050E-02	3.618E-01	5.390E-01	6.396E-02	-0.038
		344.27	*	2.649E-02	1.061E-01	1.779E-01	2.092E-02	0.149
		443.98		-1.398E-01	1.072E+00	1.724E+00	1.737E-01	-0.081
		778.89		1.148E-01	2.536E-01	4.340E-01	4.102E-02	0.265
		867.32		-1.229E-01	9.272E-01	1.488E+00	1.493E-01	-0.083
	+	964.01		4.944E-01	3.484E-01	5.665E-01	5.607E-02	0.873
		1085.78		-3.912E-01	4.371E-01	6.638E-01	5.962E-02	-0.589
		1112.02		9.150E-02	3.561E-01	5.808E-01	5.068E-02	0.158
		1407.95		1.020E-01	2.288E-01	3.916E-01	3.649E-02	0.261
GD-153		69.67		1.722E+00	1.804E+00	2.868E+00	2.403E-01	0.600
		83.37		4.969E+00	1.655E+01	2.509E+01	2.392E+00	0.198
		97.43	*	-2.197E-02	8.858E-02	1.287E-01	1.170E-02	-0.171
		103.18		-1.476E-02	1.075E-01	1.777E-01	1.556E-02	-0.083
EU-154		123.07		1.619E-02	5.212E-02	8.686E-02	9.710E-03	0.186
		247.94		-2.768E-03	3.646E-01	6.166E-01	8.710E-02	-0.004
		591.81		6.001E-02	6.137E-01	1.037E+00	1.270E-01	0.058
		723.30		-1.063E-01	2.190E-01	2.955E-01	2.935E-02	-0.360
		756.87		4.385E-01	8.145E-01	1.398E+00	1.745E-01	0.314
		873.19		1.102E-01	3.230E-01	5.416E-01	7.205E-02	0.203
		996.32		-7.027E-01	4.790E-01	6.297E-01	1.153E-01	-1.116
		1004.76		-2.298E-01	2.341E-01	3.547E-01	4.403E-02	-0.648
		1274.45	*	-3.947E-02	1.365E-01	2.177E-01	2.502E-02	-0.181
EU-155		48.70		-1.662E+00	4.018E+00	6.097E+00	5.398E-01	-0.273
		60.01		3.947E+00	6.133E+00	9.717E+00	7.332E-01	0.406
	+	86.54		3.945E-01	1.247E-01	1.917E-01	1.908E-02	2.058
		105.31	*	9.385E-02	1.109E-01	1.895E-01	1.662E-02	0.495
TB-160	+	86.79		1.071E+00	3.383E-01	5.240E-01	5.190E-02	2.044
		197.04		3.092E-01	6.190E-01	1.004E+00	1.096E-01	0.308
		215.65		2.204E-01	8.305E-01	1.337E+00	1.512E-01	0.165
	+	298.57		2.052E-01	1.833E-01	2.174E-01	2.651E-02	0.944
		879.36	*	5.100E-02	1.537E-01	2.575E-01	2.603E-02	0.198
		962.29		6.622E-01	6.589E-01	1.028E+00	1.019E-01	0.644
		966.15		1.468E+00	3.517E-01	5.790E-01	5.724E-02	2.535
		1177.93		-2.572E-01	3.839E-01	5.932E-01	4.800E-02	-0.434
		1271.85		4.691E-01	8.390E-01	1.452E+00	1.283E-01	0.323
HO-166M		80.57		1.117E-01	2.834E-01	4.363E-01	4.037E-02	0.256
	+	184.41		1.818E-01	7.561E-02	8.435E-02	8.979E-03	2.155

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TM-171		280.46		1.569E-02	9.502E-02	1.423E-01	1.763E-02	0.110
		410.95		-1.339E-01	2.715E-01	4.285E-01	4.307E-02	-0.312
		711.68	*	-1.295E-02	6.073E-02	9.851E-02	8.847E-03	-0.132
		752.31		-5.926E-02	2.955E-01	4.777E-01	4.428E-02	-0.124
		810.29		-2.993E-02	6.493E-02	1.016E-01	9.813E-03	-0.295
		51.35		-3.237E+01	4.238E+01	7.035E+01	6.039E+00	-0.460
		52.39		8.851E+00	2.087E+01	3.635E+01	3.066E+00	0.243
		59.40		1.503E+01	3.392E+01	5.327E+01	3.987E+00	0.282
		66.72	*	-1.893E+01	3.148E+01	4.656E+01	3.803E+00	-0.407
		88.36		3.096E-01	2.167E-01	3.555E-01	3.553E-02	0.871
LU-176	+	201.83		-1.421E-02	3.024E-02	4.704E-02	5.184E-03	-0.302
		306.84	*	5.499E-03	2.676E-02	4.511E-02	5.450E-03	0.122
LU-177		401.10		3.161E+00	7.518E+00	1.261E+01	1.265E+00	0.251
		112.95		1.502E+00	2.147E+00	3.584E+00	3.028E-01	0.419
LU-177M	+	208.36	*	4.125E+00	1.859E+00	2.634E+00	2.939E-01	1.566
		52.97		3.345E-01	2.135E+00	3.680E+00	3.072E-01	0.091
		54.07		2.497E-01	1.090E+00	1.882E+00	1.540E-01	0.133
		61.30		6.309E-02	1.776E+00	2.730E+00	2.103E-01	0.023
		121.62		2.649E-01	3.772E-01	6.389E-01	5.335E-02	0.415
		147.16		-1.954E-02	6.748E-01	1.098E+00	1.018E-01	-0.018
		171.86		-2.758E-01	4.999E-01	7.830E-01	8.126E-02	-0.352
		218.09		-1.843E-01	9.413E-01	1.478E+00	1.680E-01	-0.125
	+	268.79		2.399E+00	1.247E+00	1.581E+00	1.938E-01	1.517
		319.02		-2.765E-01	2.712E-01	4.200E-01	4.991E-02	-0.658
		367.43		-7.764E-02	9.553E-01	1.565E+00	1.683E-01	-0.050
		413.65	*	-2.314E-03	1.967E-01	3.208E-01	3.225E-02	-0.007
HF-181		56.28		1.394E-01	1.169E+00	2.007E+00	1.579E-01	0.069
		57.53		-1.211E-01	6.316E-01	1.071E+00	8.245E-02	-0.113
		65.20		4.492E-01	1.056E+00	1.649E+00	1.329E-01	0.272
		133.02		3.675E-02	7.017E-02	1.173E-01	1.019E-02	0.313
		136.25		-3.610E-01	4.863E-01	7.680E-01	6.760E-02	-0.470
W-181		345.85		-7.149E-03	2.392E-01	3.466E-01	3.925E-02	-0.021
		482.03	*	7.167E-03	4.922E-02	8.023E-02	8.035E-03	0.089
		56.28		5.350E-02	4.492E-01	7.713E-01	6.067E-02	0.069
		57.53		-4.664E-02	2.429E-01	4.117E-01	3.171E-02	-0.113
		65.20	*	1.714E-01	4.027E-01	6.291E-01	5.069E-02	0.272
TA-182		67.75		-9.663E-02	1.161E-01	1.810E-01	1.492E-02	-0.534
		100.10		1.585E-02	1.815E-01	3.031E-01	2.702E-02	0.052
		152.43		5.824E-01	3.619E-01	6.210E-01	5.919E-02	0.938
		222.10		2.468E-01	3.925E-01	6.406E-01	7.330E-02	0.385
		1001.68		2.187E+00	2.582E+00	4.417E+00	4.267E-01	0.495
RE-183	+	1121.28		5.708E-01	2.207E-01	3.763E-01	3.248E-02	1.517
		1189.05		-5.449E-02	3.518E-01	5.742E-01	4.696E-02	-0.095
		1221.42	*	-6.912E-02	2.301E-01	3.702E-01	3.123E-02	-0.187
		1230.97		-2.021E-01	6.581E-01	8.982E-01	7.644E-02	-0.225
		57.98		3.703E-02	2.389E-01	4.102E-01	3.137E-02	0.090
		59.32		6.381E-02	1.420E-01	2.230E-01	1.671E-02	0.286
		67.20		-1.176E-01	2.246E-01	3.335E-01	2.736E-02	-0.353
		162.32	*	4.885E-02	1.220E-01	1.945E-01	1.956E-02	0.251

---- Non-Identified Nuclides ----

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RE-184	+	208.81		3.151E+00	1.420E+00	1.993E+00	2.226E-01	1.581
		291.72		-6.641E-01	1.147E+00	1.616E+00	1.984E-01	-0.411
		57.98		1.351E-01	8.715E-01	1.496E+00	1.144E-01	0.090
		59.32		2.326E-01	5.174E-01	8.128E-01	6.090E-02	0.286
		67.20		-4.289E-01	8.189E-01	1.216E+00	9.978E-02	-0.353
		161.27		-4.940E-02	3.875E-01	6.032E-01	6.031E-02	-0.082
		216.55		-4.958E-02	2.944E-01	4.634E-01	5.250E-02	-0.107
		252.85	*	-1.767E-01	2.357E-01	3.814E-01	4.579E-02	-0.463
		318.01		-4.352E-01	4.641E-01	7.233E-01	8.607E-02	-0.602
		792.07		4.329E-01	1.108E+00	1.873E+00	1.787E-01	0.231
OS-185		903.28		6.443E-01	1.216E+00	1.824E+00	1.860E-01	0.353
		920.93		1.180E-01	5.376E-01	8.644E-01	8.749E-02	0.136
		59.72		2.071E-01	3.739E-01	5.900E-01	4.428E-02	0.351
		61.14		1.837E-03	1.969E-01	3.024E-01	2.324E-02	0.006
		69.30		7.215E-02	3.307E-01	5.094E-01	4.254E-02	0.142
		592.07		-7.378E-01	2.551E+00	4.181E+00	3.918E-01	-0.176
		646.12	*	5.148E-02	4.778E-02	8.551E-02	7.531E-03	0.602
		717.42		-3.844E-01	9.326E-01	1.484E+00	1.339E-01	-0.259
		874.81		8.878E-02	6.482E-01	1.067E+00	1.075E-01	0.083
		880.27		4.791E-01	8.732E-01	1.489E+00	1.506E-01	0.322
RE-188		155.03	*	-1.883E-02	1.837E-01	2.969E-01	2.870E-02	-0.063
		477.96		-6.820E-01	3.575E+00	5.688E+00	5.703E-01	-0.120
		633.10		-3.884E-01	2.919E+00	4.819E+00	4.317E-01	-0.081
W-188	+	63.58		6.883E+01	9.160E+01	1.108E+02	8.782E+00	0.621
IR-192		227.08		3.254E+00	1.398E+01	2.240E+01	2.585E+00	0.145
	*	290.67		-8.715E+00	9.543E+00	1.307E+01	1.607E+00	-0.667
	+	295.96		9.624E-01	2.431E-01	3.079E-01	3.778E-02	3.126
AU-195		308.46		-2.483E-02	1.060E-01	1.745E-01	2.109E-02	-0.142
		316.51	*	1.506E-02	3.535E-02	6.025E-02	7.193E-03	0.250
		468.07		3.523E-03	7.868E-02	1.117E-01	1.182E-02	0.032
		604.41		-2.292E-01	5.505E-01	7.661E-01	1.030E-01	-0.299
		612.46		9.300E-01	7.803E-01	1.271E+00	1.321E-01	0.731
		65.12		7.860E-02	1.861E-01	2.907E-01	2.340E-02	0.270
		66.83		-6.190E-02	1.044E-01	1.546E-01	1.264E-02	-0.401
TL-200	+	75.70		1.069E+00	2.926E-01	4.787E-01	4.225E-02	2.233
		98.88	*	2.620E-01	2.332E-01	3.957E-01	3.557E-02	0.662
		129.76		2.961E+00	3.075E+00	5.217E+00	4.469E-01	0.567
		367.94	*	4.500E-04	3.075E+00	Half-Life	too short	
TL-201		579.30		6.806E-03	3.075E+00	Half-Life	too short	
		828.27		7.369E-03	3.075E+00	Half-Life	too short	
		1205.75		-3.562E-03	3.075E+00	Half-Life	too short	
		68.90		-2.205E-01	7.870E+00	1.199E+01	9.976E-01	-0.018
TL-202		70.82		3.454E+00	4.473E+00	7.044E+00	5.958E-01	0.490
		80.30		3.928E+00	7.804E+00	1.207E+01	1.114E+00	0.325
		135.34		-1.156E+01	3.826E+01	6.177E+01	5.415E+00	-0.187
		167.43	*	-3.747E+00	1.126E+01	1.754E+01	1.804E+00	-0.214
		68.90		-1.472E-02	5.253E-01	8.000E-01	6.659E-02	-0.018
		70.82		2.299E-01	2.978E-01	4.689E-01	3.966E-02	0.490
		80.30		2.615E-01	5.197E-01	8.040E-01	7.419E-02	0.325

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
HG-203	439.56	*		4.466E-02	8.855E-02	1.485E-01	1.496E-02	0.301
	70.83			9.288E-01	1.204E+00	1.889E+00	2.551E-01	0.492
	72.87			1.358E+00	6.891E-01	1.179E+00	1.556E-01	1.152
	82.60			-7.416E-01	1.190E+00	1.830E+00	2.614E-01	-0.405
BI-207	279.20	*		3.680E-02	4.790E-02	7.443E-02	9.358E-03	0.494
	72.80			3.274E-01	1.904E-01	3.308E-01	2.846E-02	0.990
	74.97	+		5.890E-01	1.613E-01	2.366E-01	2.074E-02	2.490
	84.90			3.139E-01	2.075E-01	3.280E-01	3.179E-02	0.957
	569.67			-3.217E-02	3.305E-02	5.076E-02	4.852E-03	-0.634
	1063.62	*		3.951E-02	6.010E-02	1.058E-01	9.716E-03	0.373
TL-207	1770.23			-2.240E+00	7.840E-01	6.994E-01	5.910E-02	-3.203
	81.07			-1.443E-01	2.197E-01	3.429E-01	3.189E-02	-0.421
	83.78			6.242E-02	1.388E-01	2.117E-01	2.027E-02	0.295
	94.90			1.444E-01	2.472E-01	3.717E-01	3.452E-02	0.388
	122.32			1.099E+00	1.741E+00	2.940E+00	2.647E-01	0.374
	144.24			6.099E-01	7.285E-01	1.213E+00	1.226E-01	0.503
	154.21			-7.422E-02	4.207E-01	6.779E-01	7.049E-02	-0.109
	269.46	+		5.574E-01	2.898E-01	3.633E-01	4.502E-02	1.534
	323.87	*		7.215E-01	7.775E-01	1.201E+00	2.336E-01	0.601
	338.28	+		5.828E+00	1.861E+00	2.607E+00	3.774E-01	2.235
PO-209	445.03			1.894E+00	2.541E+00	4.317E+00	5.683E-01	0.439
	260.50			-5.369E+00	9.981E+00	1.634E+01	1.982E+00	-0.329
	262.80			-1.436E+00	2.908E+01	4.730E+01	5.755E+00	-0.030
	896.60	*		-4.408E+00	7.754E+00	1.178E+01	1.203E+00	-0.374
BI-210	46.50	*		-4.028E+00	6.583E+00	9.714E+00	9.307E-01	-0.415
PB-210	46.50	*		-4.028E+00	6.583E+00	9.714E+00	9.307E-01	-0.415
PO-210	46.50	*		-4.028E+00	6.582E+00	9.714E+00	8.479E-01	-0.415
PB-211	404.84	*		-1.877E-01	1.030E+00	1.652E+00	1.039E+00	-0.114
BI-212	427.08			-1.547E+00	2.476E+00	3.536E+00	2.205E+00	-0.437
	831.96			-1.516E-01	1.365E+00	2.199E+00	1.382E+00	-0.069
	727.18	+		7.240E-01	4.375E-01	6.474E-01	6.744E-02	1.118
	785.46			2.381E+00	1.930E+00	3.458E+00	3.284E-01	0.689
	1620.62			1.571E+00	1.379E+00	2.654E+00	2.383E-01	0.592
PO-215	81.07			-1.443E-01	2.197E-01	3.429E-01	3.189E-02	-0.421
	83.78			6.242E-02	1.388E-01	2.117E-01	2.027E-02	0.295
	94.90			1.444E-01	2.472E-01	3.717E-01	3.452E-02	0.388
	122.32			1.099E+00	1.741E+00	2.940E+00	2.647E-01	0.374
	144.24			6.099E-01	7.285E-01	1.213E+00	1.226E-01	0.503
	154.21			-7.422E-02	4.207E-01	6.779E-01	7.049E-02	-0.109
	269.46	+		5.574E-01	2.898E-01	3.633E-01	4.502E-02	1.534
	323.87	*		7.215E-01	7.775E-01	1.201E+00	2.336E-01	0.601
	338.28	+		5.828E+00	1.861E+00	2.607E+00	3.774E-01	2.235
	445.03			1.894E+00	2.541E+00	4.317E+00	5.683E-01	0.439
RN-219	271.23			6.725E-01	3.162E-01	4.268E-01	5.775E-02	1.576
	401.81	*		2.438E-01	4.603E-01	7.754E-01	1.231E-01	0.314
RN-220	549.76	*		1.029E+01	2.978E+01	4.880E+01	4.733E+00	0.211
RA-223	81.07			-1.443E-01	2.197E-01	3.429E-01	3.189E-02	-0.421
	83.78			6.242E-02	1.388E-01	2.117E-01	2.027E-02	0.295
	94.90			1.444E-01	2.472E-01	3.717E-01	3.452E-02	0.388

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AC-227		122.32		1.099E+00	1.741E+00	2.940E+00	2.647E-01	0.374
		144.24		6.099E-01	7.285E-01	1.213E+00	1.226E-01	0.503
		154.21		-7.422E-02	4.207E-01	6.779E-01	7.049E-02	-0.109
	+	269.46		5.574E-01	2.898E-01	3.633E-01	4.502E-02	1.534
		323.87	*	7.215E-01	7.775E-01	1.201E+00	2.336E-01	0.601
	+	338.28		5.828E+00	1.861E+00	2.607E+00	3.774E-01	2.235
		445.03		1.894E+00	2.541E+00	4.317E+00	5.683E-01	0.439
		79.80		1.214E+00	1.706E+00	2.639E+00	5.735E-01	0.460
		236.00		6.783E-01	3.083E-01	4.888E-01	7.130E-02	1.388
		256.20	*	3.763E-01	3.919E-01	6.828E-01	1.196E-01	0.551
		286.10		1.200E+00	1.676E+00	2.890E+00	4.591E-01	0.415
	+	299.80		2.570E+00	2.329E+00	2.791E+00	5.439E-01	0.921
TH-227		304.40		-5.327E-02	2.191E+00	3.213E+00	6.524E-01	-0.017
		334.20		3.286E-01	2.808E+00	4.127E+00	8.625E-01	0.080
		79.80		1.214E+00	1.706E+00	2.639E+00	5.807E-01	0.460
	+	94.00		8.481E+00	3.924E+00	3.701E+00	8.173E-01	2.292
		236.00		6.783E-01	3.063E-01	4.888E-01	6.658E-02	1.388
		256.20	*	3.763E-01	3.935E-01	6.828E-01	1.361E-01	0.551
		286.10		1.200E+00	2.058E+00	2.890E+00	2.912E+00	0.415
	+	299.80		2.570E+00	2.329E+00	2.791E+00	5.439E-01	0.921
		304.40		-5.327E-02	2.191E+00	3.213E+00	6.524E-01	-0.017
		334.20		3.286E-01	2.808E+00	4.127E+00	8.625E-01	0.080
		85.43		3.601E-01	2.049E-01	3.282E-01	3.200E-02	1.097
	+	88.47		1.782E-01	1.247E-01	2.028E-01	2.024E-02	0.879
TH-229		100.00		1.264E-01	1.832E-01	3.127E-01	2.790E-02	0.404
		193.63	*	1.133E-01	5.465E-01	8.831E-01	9.576E-02	0.128
		210.97		4.445E-01	9.125E-01	1.330E+00	1.491E-01	0.334
		283.67	*	-3.047E-01	1.733E+00	2.666E+00	4.687E-01	-0.114
PA-231	+	301.29		1.028E+00	9.229E-01	1.082E+00	1.618E-01	0.950
TH-231		81.07		-1.443E-01	2.197E-01	3.429E-01	3.189E-02	-0.421
		83.78		6.242E-02	1.388E-01	2.117E-01	2.027E-02	0.295
		94.90		1.444E-01	2.472E-01	3.717E-01	3.452E-02	0.388
		122.32		1.099E+00	1.741E+00	2.940E+00	2.647E-01	0.374
U-231		144.24		6.099E-01	7.285E-01	1.213E+00	1.226E-01	0.503
		154.21		-7.422E-02	4.207E-01	6.779E-01	7.049E-02	-0.109
	+	269.46		5.574E-01	2.898E-01	3.633E-01	4.502E-02	1.534
		323.87	*	7.215E-01	7.775E-01	1.201E+00	2.336E-01	0.601
	+	338.28		5.828E+00	1.861E+00	2.607E+00	3.774E-01	2.235
		445.03		1.894E+00	2.541E+00	4.317E+00	5.683E-01	0.439
		84.21		5.550E+00	7.808E+00	1.203E+01	1.157E+00	0.461
	+	92.29		1.117E+01	4.659E+00	6.281E+00	5.986E-01	1.778
		95.87	*	-1.828E+00	1.584E+00	2.211E+00	2.035E-01	-0.827
		108.00		-7.630E-01	2.785E+00	4.563E+00	3.910E-01	-0.167
	+	75.28		1.719E+01	5.187E+00	7.108E+00	1.098E+00	2.418
	+	86.59		6.408E+00	2.597E+00	3.119E+00	8.501E-01	2.054
	+	300.12		7.164E-01	6.461E-01	7.795E-01	1.339E-01	0.919
PA-233		311.98	*	-3.297E-02	6.906E-02	1.118E-01	1.361E-02	-0.295
		340.50		3.161E-01	7.279E-01	1.088E+00	2.721E-01	0.290
		398.62		1.555E-01	2.319E+00	3.811E+00	1.033E+00	0.041

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PA-234	+	415.76		1.107E+00	1.853E+00	3.115E+00	6.904E-01	0.355
		63.00		1.962E+00	2.623E+00	3.249E+00	4.906E-01	0.604
		94.67		2.513E-01	1.785E-01	2.753E-01	3.549E-02	0.913
		98.44		8.094E-02	1.051E-01	1.602E-01	8.947E-02	0.505
		99.86		3.528E-01	4.656E-01	7.963E-01	7.111E-02	0.443
		111.00		-1.220E-01	1.982E-01	3.140E-01	3.767E-02	-0.389
		131.20		-6.035E-02	1.148E-01	1.841E-01	1.586E-02	-0.328
		152.70		3.406E-01	3.546E-01	5.910E-01	1.036E-01	0.576
	+	186.00		6.544E+00	3.356E+00	3.178E+00	1.012E+00	2.059
		226.40		1.966E-01	4.312E-01	6.979E-01	1.065E-01	0.282
		227.20		1.210E-01	4.648E-01	7.457E-01	8.607E-02	0.162
		248.90		1.311E-01	8.211E-01	1.399E+00	3.341E-01	0.094
	+	293.70		5.960E+00	1.750E+00	1.871E+00	3.625E-01	3.185
		369.80		-3.588E-01	9.162E-01	1.464E+00	3.320E-01	-0.245
		568.70		-4.753E-01	1.043E+00	1.673E+00	1.600E-01	-0.284
		569.50		-2.400E-01	2.904E-01	4.517E-01	4.318E-02	-0.531
		574.00		1.232E+00	1.650E+00	2.904E+00	2.766E-01	0.424
		699.00		2.701E-01	8.121E-01	1.374E+00	2.639E-01	0.197
		706.10		-2.538E-01	1.081E+00	1.744E+00	7.786E-01	-0.146
		733.00		-8.348E-02	3.948E-01	5.751E-01	1.288E-01	-0.145
		742.81		8.215E-01	1.476E+00	2.375E+00	1.598E+00	0.346
		796.30		7.594E-01	1.028E+00	1.750E+00	4.789E-01	0.434
		805.60		5.570E-01	1.132E+00	1.908E+00	5.905E-01	0.292
		819.60		2.784E-01	1.276E+00	2.121E+00	8.121E-01	0.131
		826.30		-6.621E-01	8.801E-01	1.239E+00	5.571E-01	-0.535
		831.60		-3.219E-01	7.221E-01	1.122E+00	3.388E-01	-0.287
		876.40		-8.550E-01	1.289E+00	1.392E+00	1.433E+00	-0.614
		880.51		2.392E-01	3.070E-01	5.337E-01	5.398E-02	0.448
		883.24		4.721E-02	2.990E-01	4.904E-01	3.307E-01	0.096
		899.00		-4.055E-01	9.042E-01	1.368E+00	6.027E-01	-0.296
		925.00		-5.079E-01	1.305E+00	2.023E+00	2.044E-01	-0.251
		926.50		-1.094E-01	1.966E-01	2.963E-01	7.649E-02	-0.369
		946.00	*	-5.980E-02	3.078E-01	4.854E-01	9.435E-02	-0.123
		949.00		2.523E-01	4.578E-01	7.801E-01	7.787E-02	0.323
		980.50		-5.269E-01	8.211E-01	1.227E+00	1.203E-01	-0.429
		1394.10		6.285E-01	1.248E+00	2.071E+00	1.350E+00	0.303
PA-234M		766.42		1.252E+01	1.473E+01	2.324E+01	1.182E+01	0.539
		1001.03	*	4.329E+00	5.793E+00	9.833E+00	1.070E+00	0.440
U-235	+	89.95		1.789E+00	1.359E+00	1.857E+00	5.795E-01	0.963
	+	93.35		2.638E+00	1.307E+00	1.384E+00	3.913E-01	1.907
		105.00		6.510E-01	1.110E+00	1.857E+00	5.544E-01	0.351
		143.76	*	-4.536E-03	2.265E-01	3.655E-01	6.490E-02	-0.012
		163.35		5.226E-01	5.227E-01	8.396E-01	1.662E-01	0.622
	+	185.71		2.424E-01	1.008E-01	1.181E-01	1.260E-02	2.053
		205.31		2.498E-01	6.177E-01	8.958E-01	1.820E-01	0.279
NP-236		94.67		1.917E-01	1.343E-01	2.090E-01	1.945E-02	0.917
		98.44		6.117E-02	7.194E-02	1.211E-01	1.092E-02	0.505
		111.00		-9.231E-02	1.497E-01	2.375E-01	2.016E-02	-0.389
		160.31	*	-7.303E-02	8.318E-02	1.287E-01	1.280E-02	-0.567

---- 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		1.637E-01	1.593E-01	2.695E-01	2.411E-02	0.607
		117.00	*	3.316E-02	1.948E-01	3.237E-01	2.714E-02	0.102
	+	209.75		2.444E+00	1.101E+00	1.523E+00	1.703E-01	1.605
		228.18		5.602E-03	2.495E-01	3.952E-01	4.570E-02	0.014
	+	277.60		5.912E-01	3.485E-01	3.579E-01	4.431E-02	1.652
AM-241		334.30		2.345E-01	1.593E+00	2.348E+00	2.720E-01	0.100
		59.54	*	1.068E-01	1.952E-01	3.080E-01	2.523E-02	0.347
	CM-243	99.55		1.685E-01	1.639E-01	2.773E-01	2.481E-02	0.607
		103.76	*	1.227E-02	9.910E-02	1.654E-01	1.444E-02	0.074
		117.00		3.412E-02	2.004E-01	3.330E-01	2.793E-02	0.102
AM-246	+	209.75		2.409E+00	1.086E+00	1.501E+00	1.679E-01	1.605
		228.18		5.661E-03	2.521E-01	3.994E-01	4.618E-02	0.014
	+	277.60		5.961E-01	3.514E-01	3.609E-01	4.468E-02	1.652
		798.80		-2.413E-01	1.572E-01	2.185E-01	2.095E-02	-1.104
		1036.00		7.329E-02	3.110E-01	5.324E-01	5.009E-02	0.138
CM-247		1062.04		1.251E-01	2.661E-01	4.619E-01	4.246E-02	0.271
		1078.86	*	1.059E-01	1.616E-01	2.846E-01	2.574E-02	0.372
	+	278.00		2.452E+00	1.445E+00	1.480E+00	1.833E-01	1.656
		287.40		8.505E-01	1.346E+00	2.319E+00	2.859E-01	0.367
		402.60	*	2.353E-02	4.131E-02	6.988E-02	7.010E-03	0.337
CF-249		252.85		-6.584E-01	8.781E-01	1.421E+00	1.706E-01	-0.463
		333.44		-1.813E-02	2.259E-01	3.046E-01	3.534E-02	-0.060
		387.95	*	2.199E-02	4.223E-02	7.151E-02	7.242E-03	0.308
CF-251		176.60	*	2.531E-02	1.332E-01	2.163E-01	2.266E-02	0.117
		227.00		8.796E-02	4.118E-01	6.592E-01	7.607E-02	0.133
		285.00		-6.066E-01	1.875E+00	3.089E+00	3.814E-01	-0.196

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]G244604002      *
* Acquisition date   : 25-JAN-2010 08:38:58 Detector SN#                   *
* Detector ID        : GAM02 Sensitivity : 5.000                          *
* Geometry           : CAN Energy tolerance: 1.500                        *
* Elapsed live time   : 0 02:00:00.00 Abundance limit : 75.000            *
* Elapsed real time   : 0 02:00:02.80 Half life ratio : 8.000             *
*****
*                                     SAMPLE DATA                            *
*                                     *                                       *
* Sample date        : 8-JAN-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID          : G244604002 Analyst initials: MXR1                 *
* Batch Number       : 941636 Sample Quantity : 1.3207E+02 GRAM          *
* Recovery           : 1.00000 Carrier Weight : 0.00000                  *
*****
*                                     QC DATA                                *
*                                     *                                       *
* Standard Weight    : 0.00000                                             *
* CALIB. DATE/TIME   : 29-OCT-2009 10:28:07 MS Isotope :                  *
* MSD DPM             : 0.000 MSD Isotope :                               *
* LCS DPM             : 0.000 LCS Isotope :                               *
* LCSD DPM            : 0.000 LCSD Isotope :                              *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	2.766E+01	3.143E+00	5.929E-01	0.000E+00
CD-109	3.339E+00	1.034E+00	1.521E+00	0.000E+00
SN-126	3.274E-01	1.013E-01	1.500E-01	0.000E+00
CS-135	4.738E-01	2.424E-01	3.001E-01	0.000E+00
BA-137M	2.769E-01	7.419E-02	7.105E-02	0.000E+00
CS-137	2.927E-01	7.844E-02	7.511E-02	0.000E+00
TL-208	5.085E-01	1.042E-01	6.078E-02	0.000E+00
BI-211	4.205E+00	6.772E-01	3.458E-01	0.000E+00
PB-212	1.563E+00	2.237E-01	9.986E-02	0.000E+00
PO-212	1.563E+00	2.237E-01	9.986E-02	0.000E+00
BI-214	1.120E+00	1.805E-01	1.143E-01	0.000E+00
PB-214	1.463E+00	2.472E-01	1.205E-01	0.000E+00
PO-214	1.463E+00	2.472E-01	1.205E-01	0.000E+00
PO-216	1.563E+00	2.237E-01	9.986E-02	0.000E+00
PO-218	1.463E+00	2.472E-01	1.205E-01	0.000E+00
RA-224	4.348E+00	1.406E+00	1.137E+00	0.000E+00
RA-226	1.120E+00	1.805E-01	1.143E-01	0.000E+00
AC-228	1.665E+00	4.003E-01	2.261E-01	0.000E+00
RA-228	1.665E+00	4.003E-01	2.261E-01	0.000E+00
TH-228	1.589E+00	2.275E-01	1.016E-01	0.000E+00
TH-230	1.120E+00	1.805E-01	1.143E-01	0.000E+00
TH-232	1.665E+00	4.003E-01	2.261E-01	0.000E+00
TH-234	1.683E+00	2.210E+00	2.429E+00	0.000E+00
U-234	1.120E+00	1.805E-01	1.143E-01	0.000E+00
NP-237	9.613E-01	3.554E-01	4.367E-01	0.000E+00
U-238	1.683E+00	2.210E+00	2.429E+00	0.000E+00
AM-243	3.281E-01	8.803E-02	9.529E-02	0.000E+00
ANH-511	1.472E-01	7.446E-02	5.219E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error) Ided	MDA (pCi/GRAM)
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BE-7	-4.546E-02	3.635E-01	6.056E-01	0.000E+00	NOT IDENT.
NA-22	-1.279E-02	4.806E-02	7.876E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	5.341E+06	0.000E+00	0.000E+00	SHORT HLIF
AL-26	2.997E-02	2.749E-02	5.610E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	4.047E-02	7.057E-02	0.000E+00	NOT IDENT.
SC-46	-7.681E-03	4.170E-02	6.842E-02	0.000E+00	FAIL ABUN
V-48	7.723E-02	8.194E-02	1.476E-01	0.000E+00	NOT IDENT.
CR-51	-2.385E-01	3.883E-01	6.508E-01	0.000E+00	NOT IDENT.
MN-52	-4.616E-02	3.168E-01	5.159E-01	0.000E+00	NOT IDENT.
MN-54	6.571E-03	4.383E-02	7.463E-02	0.000E+00	NOT IDENT.
CO-56	-1.039E-04	3.965E-02	6.662E-02	0.000E+00	FAIL ABUN
CO-57	1.467E-02	2.477E-02	4.449E-02	0.000E+00	NOT IDENT.
CO-58	-1.871E-02	4.208E-02	6.806E-02	0.000E+00	NOT IDENT.
FE-59	-4.163E-02	9.639E-02	1.580E-01	0.000E+00	NOT IDENT.
CO-60	9.139E-03	3.733E-02	6.459E-02	0.000E+00	NOT IDENT.
ZN-65	-7.007E-03	1.030E-01	1.501E-01	0.000E+00	NOT IDENT.
GE-68	3.904E-01	1.374E+00	2.413E+00	0.000E+00	NOT IDENT.
AS-73	2.832E-01	1.060E+00	1.980E+00	0.000E+00	NOT IDENT.
AS-74	-8.269E-04	9.502E-02	1.653E-01	0.000E+00	NOT IDENT.
SE-75	4.983E-02	5.144E-02	8.510E-02	0.000E+00	NOT IDENT.
BR-77	-6.641E+00	1.839E+01	2.973E+01	0.000E+00	FAIL ABUN
SR-82	-4.430E-01	3.942E-01	5.919E-01	0.000E+00	NOT IDENT.
RB-83	-5.528E-02	7.651E-02	1.198E-01	0.000E+00	NOT IDENT.
RB-84	6.891E-02	7.625E-02	1.380E-01	0.000E+00	NOT IDENT.
KR-85	8.776E+00	8.517E+00	1.360E+01	0.000E+00	NOT IDENT.
SR-85	4.583E-02	4.448E-02	7.102E-02	0.000E+00	NOT IDENT.
RB-86	-4.594E-01	9.273E-01	1.518E+00	0.000E+00	NOT IDENT.
Y-88	-5.002E-03	3.014E-02	4.873E-02	0.000E+00	NOT IDENT.
ZR-88	1.305E-02	3.433E-02	6.013E-02	0.000E+00	NOT IDENT.
Y-91	-5.401E+00	2.160E+01	3.584E+01	0.000E+00	NOT IDENT.
NB-94	6.372E-03	3.493E-02	6.066E-02	0.000E+00	NOT IDENT.
NB-95	2.913E-02	4.987E-02	8.787E-02	0.000E+00	NOT IDENT.
NB-95M	9.982E-02	1.475E-01	2.410E-01	0.000E+00	NOT IDENT.
ZR-95	9.082E-02	7.758E-02	1.432E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	6.151E+05	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.237E+07	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-9.453E-01	1.707E+01	2.893E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	4.805E+18	0.000E+00	0.000E+00	SHORT HLIF
RH-101	1.050E-02	3.585E-02	6.089E-02	0.000E+00	NOT IDENT.
RH-102	2.518E-02	3.207E-02	5.679E-02	0.000E+00	NOT IDENT.
RU-103	4.123E-02	4.316E-02	7.697E-02	0.000E+00	FAIL ABUN
RH-106	9.995E-02	3.287E-01	5.822E-01	0.000E+00	FAIL ABUN
RU-106	9.995E-02	3.286E-01	5.822E-01	0.000E+00	FAIL ABUN
AG-108M	-2.227E-02	3.629E-02	5.886E-02	0.000E+00	NOT IDENT.
AG-110M	3.903E-02	3.933E-02	6.522E-02	0.000E+00	NOT IDENT.
IN-111	-9.782E-02	1.768E+00	2.774E+00	0.000E+00	NOT IDENT.
IN-113M	-1.419E-02	4.813E-02	8.086E-02	0.000E+00	NOT IDENT.
SN-113	-1.419E-02	4.813E-02	8.086E-02	0.000E+00	NOT IDENT.
IN-114M	-8.511E-02	2.199E-01	3.232E-01	0.000E+00	NOT IDENT.
CD-115	-1.177E+01	2.005E+01	3.170E+01	0.000E+00	NOT IDENT.
SN-117M	3.356E-03	6.067E-02	1.046E-01	0.000E+00	NOT IDENT.
SB-122	-7.649E-01	3.217E+00	5.531E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	5.368E+07	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-1.414E-02	2.942E-02	4.944E-02	0.000E+00	NOT IDENT.
I-124	-2.533E-01	9.837E-01	1.519E+00	0.000E+00	NOT IDENT.
SB-124	8.010E-03	8.029E-02	1.386E-01	0.000E+00	FAIL ABUN
SB-125	-6.395E-02	9.863E-02	1.596E-01	0.000E+00	FAIL ABUN
TE-125M	-8.455E+00	9.625E+00	1.636E+01	0.000E+00	NOT IDENT.
I-126	9.771E-02	2.487E-01	3.867E-01	0.000E+00	NOT IDENT.
SB-126	1.333E-01	1.754E-01	2.931E-01	0.000E+00	FAIL ABUN
SB-127	4.235E-01	1.964E+00	3.427E+00	0.000E+00	NOT IDENT.
XE-127	-3.299E-02	5.015E-02	8.151E-02	0.000E+00	NOT IDENT.
I-131	-9.021E-02	1.363E-01	2.242E-01	0.000E+00	NOT IDENT.
TE-132	3.099E-02	1.083E+00	1.811E+00	0.000E+00	NOT IDENT.
BA-133	-1.230E-02	4.922E-02	7.295E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	2.547E+04	0.000E+00	0.000E+00	SHORT HLIF
CS-134	5.248E-02	5.041E-02	9.188E-02	0.000E+00	NOT IDENT.
I-135	0.000E+00	4.635E+17	0.000E+00	0.000E+00	SHORT HLIF
CS-136	1.511E-01	1.240E-01	2.344E-01	0.000E+00	FAIL ABUN
CE-139	-2.189E-02	3.145E-02	5.207E-02	0.000E+00	NOT IDENT.
BA-140	-4.097E-01	3.319E-01	4.450E-01	0.000E+00	NOT IDENT.
LA-140	-7.854E-02	9.198E-02	1.349E-01	0.000E+00	FAIL ABUN
CE-141	-2.468E-02	6.677E-02	1.138E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	6.424E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	7.369E-02	2.083E-01	3.679E-01	0.000E+00	NOT IDENT.
PM-144	-1.046E-02	3.897E-02	6.550E-02	0.000E+00	NOT IDENT.
PR-144	-7.098E-01	2.643E+00	4.442E+00	0.000E+00	NOT IDENT.

PM-146	1.431E-02	4.755E-02	8.198E-02	0.000E+00	NOT IDENT.
ND-147	2.490E-01	6.802E-01	1.163E+00	0.000E+00	FAIL ABUN
PM-149	1.087E+02	1.684E+02	3.041E+02	0.000E+00	NOT IDENT.
EU-152	2.649E-02	1.039E-01	1.827E-01	0.000E+00	FAIL ABUN
GD-153	-2.197E-02	8.681E-02	1.349E-01	0.000E+00	NOT IDENT.
EU-154	-3.947E-02	1.338E-01	2.185E-01	0.000E+00	NOT IDENT.
EU-155	9.385E-02	1.086E-01	1.984E-01	0.000E+00	FAIL ABUN
TB-160	5.100E-02	1.506E-01	2.602E-01	0.000E+00	FAIL ABUN
HO-166M	-1.295E-02	5.952E-02	9.989E-02	0.000E+00	FAIL ABUN
TM-171	-1.893E+01	3.085E+01	4.909E+01	0.000E+00	NOT IDENT.
LU-176	5.499E-03	2.622E-02	4.640E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.822E+00	2.727E+00	0.000E+00	FAIL ABUN
LU-177M	-2.314E-03	1.928E-01	3.283E-01	0.000E+00	FAIL ABUN
HF-181	7.167E-03	4.824E-02	8.190E-02	0.000E+00	NOT IDENT.
W-181	1.714E-01	3.947E-01	6.637E-01	0.000E+00	NOT IDENT.
TA-182	-6.912E-02	2.255E-01	3.718E-01	0.000E+00	FAIL ABUN
RE-183	4.885E-02	1.196E-01	2.022E-01	0.000E+00	FAIL ABUN
RE-184	-1.767E-01	2.310E-01	3.936E-01	0.000E+00	NOT IDENT.
OS-185	5.148E-02	4.682E-02	8.685E-02	0.000E+00	NOT IDENT.
RE-188	-1.883E-02	1.801E-01	3.089E-01	0.000E+00	NOT IDENT.
W-188	-8.715E+00	9.353E+00	1.346E+01	0.000E+00	FAIL ABUN
IR-192	1.506E-02	3.465E-02	6.194E-02	0.000E+00	FAIL ABUN
AU-195	2.620E-01	2.285E-01	4.146E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.423E+03	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-3.747E+00	1.103E+01	1.822E+01	0.000E+00	NOT IDENT.
TL-202	4.466E-02	8.678E-02	1.518E-01	0.000E+00	NOT IDENT.
HG-203	3.680E-02	4.694E-02	7.668E-02	0.000E+00	NOT IDENT.
BI-207	3.951E-02	5.889E-02	1.066E-01	0.000E+00	FAIL ABUN
TL-207	7.215E-01	7.620E-01	1.234E+00	0.000E+00	FAIL ABUN
PO-209	-4.408E+00	7.599E+00	1.190E+01	0.000E+00	NOT IDENT.
BI-210	-4.028E+00	6.452E+00	1.030E+01	0.000E+00	NOT IDENT.
PB-210	-4.028E+00	6.452E+00	1.030E+01	0.000E+00	NOT IDENT.
PO-210	-4.028E+00	6.450E+00	1.030E+01	0.000E+00	NOT IDENT.
PB-211	-1.877E-01	1.009E+00	1.691E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	4.288E-01	6.562E-01	0.000E+00	FAIL ABUN
PO-215	7.215E-01	7.620E-01	1.234E+00	0.000E+00	FAIL ABUN
RN-219	2.438E-01	4.511E-01	7.940E-01	0.000E+00	NOT IDENT.
RN-220	1.029E+01	2.918E+01	4.970E+01	0.000E+00	NOT IDENT.
RA-223	7.215E-01	7.620E-01	1.234E+00	0.000E+00	FAIL ABUN
AC-227	3.763E-01	3.840E-01	7.045E-01	0.000E+00	FAIL ABUN
TH-227	3.763E-01	3.856E-01	7.045E-01	0.000E+00	FAIL ABUN
TH-229	1.133E-01	5.355E-01	9.153E-01	0.000E+00	FAIL ABUN
PA-231	-3.047E-01	1.698E+00	2.746E+00	0.000E+00	FAIL ABUN
TH-231	7.215E-01	7.620E-01	1.234E+00	0.000E+00	FAIL ABUN
U-231	-1.828E+00	1.552E+00	2.318E+00	0.000E+00	FAIL ABUN
PA-233	-3.297E-02	6.768E-02	1.149E-01	0.000E+00	FAIL ABUN
PA-234	-5.980E-02	3.016E-01	4.898E-01	0.000E+00	FAIL ABUN
PA-234M	4.329E+00	5.677E+00	9.911E+00	0.000E+00	NOT IDENT.
U-235	-4.536E-03	2.219E-01	3.807E-01	0.000E+00	FAIL ABUN
NP-236	-7.303E-02	8.152E-02	1.338E-01	0.000E+00	NOT IDENT.
NP-239	3.316E-02	1.909E-01	3.383E-01	0.000E+00	FAIL ABUN
AM-241	1.068E-01	1.913E-01	3.254E-01	0.000E+00	NOT IDENT.
CM-243	1.227E-02	9.712E-02	1.732E-01	0.000E+00	FAIL ABUN
AM-246	1.059E-01	1.584E-01	2.865E-01	0.000E+00	NOT IDENT.
CM-247	2.353E-02	4.049E-02	7.155E-02	0.000E+00	FAIL ABUN
CF-249	2.199E-02	4.138E-02	7.326E-02	0.000E+00	NOT IDENT.
CF-251	2.531E-02	1.305E-01	2.245E-01	0.000E+00	NOT IDENT.

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*                               GEL Laboratories LLC                      *
*                               2040 Savage Road                        *
*                               Charleston, SC 29414                    *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G244604002.CNF;1
Sample date        : 8-JAN-2010 12:00:00. Acquisition date : 25-JAN-2010 08:38:58
Sample ID          : G244604002          Sample quantity  : 1.32070E+02 GRAM
Detector name      : GAM02              Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00      Elapsed real time: 0 02:00:02.80  0.0%
Energy tolerance   : 1.50000 keV        Analyst Initials : MXR1
Abundance limit    : 75.00000           Sensitivity      : 5.00000
Batch ID          : 941636              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	1068	10.67*	1.028E+00	2.766E+01	2.766E+01	11.59
CD-109	88.03	223	3.72*	5.227E+00	3.256E+00	3.339E+00	31.59
SN-126	64.28	57	9.60	2.543E+00	6.662E-01	6.662E-01	133.67
	86.94	223	8.90	5.227E+00	1.361E+00	1.361E+00	51.32
	87.57	223	37.00*	5.227E+00	3.274E-01	3.274E-01	31.59
CS-135	268.24	109	16.00*	4.076E+00	4.738E-01	4.738E-01	52.21
BA-137M	661.65	181	89.98*	2.071E+00	2.766E-01	2.769E-01	27.34
CS-137	661.65	181	85.12*	2.071E+00	2.924E-01	2.927E-01	27.34
TL-208	277.35	117	6.80	3.992E+00	1.226E+00	1.226E+00	59.61
	510.84	131	21.60	2.539E+00	6.813E-01	6.813E-01	52.29
	583.14	345	84.20*	2.292E+00	5.085E-01	5.085E-01	20.91
	860.37	42	12.46	1.653E+00	5.836E-01	5.836E-01	81.36
BI-211	72.87	-----	1.27	3.848E+00	-----	Line Not Found	-----
	351.07	642	12.94*	3.352E+00	4.205E+00	4.205E+00	16.43
PB-212	74.81	309	10.70	4.049E+00	2.024E+00	2.024E+00	28.93
	77.11	555	18.00	4.306E+00	2.035E+00	2.035E+00	16.53
	87.30	223	8.00	5.227E+00	1.514E+00	1.514E+00	33.13
	238.63	1093	44.60*	4.457E+00	1.563E+00	1.563E+00	14.61
	300.09	63	3.41	3.767E+00	1.387E+00	1.387E+00	89.56
PO-212	74.81	309	10.70	4.049E+00	2.024E+00	2.024E+00	28.93
	77.11	555	18.00	4.306E+00	2.035E+00	2.035E+00	16.53
	87.30	223	8.00	5.227E+00	1.514E+00	1.514E+00	33.13
	115.19	-----	0.60	6.220E+00	-----	Line Not Found	-----
	238.63	1093	44.60*	4.457E+00	1.563E+00	1.563E+00	14.61
	300.09	63	3.41	3.767E+00	1.387E+00	1.387E+00	89.56
BI-214	609.31	404	46.30*	2.214E+00	1.120E+00	1.120E+00	16.45
	1120.29	82	15.10	1.298E+00	1.195E+00	1.195E+00	39.23
	1764.49	61	15.80	9.005E-01	1.227E+00	1.227E+00	42.88
PB-214	74.81	309	6.21	4.049E+00	3.487E+00	3.487E+00	28.36
	77.11	555	10.50	4.306E+00	3.489E+00	3.489E+00	18.20
	87.30	223	4.67	5.227E+00	2.594E+00	2.594E+00	32.52
	241.98	267	7.49	4.419E+00	2.293E+00	2.293E+00	33.48

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PO-214	295.21	320	19.20	3.815E+00	1.242E+00	1.242E+00	26.00
	351.92	642	37.20*	3.352E+00	1.463E+00	1.463E+00	17.24
	74.81	309	6.21	4.049E+00	3.487E+00	3.487E+00	28.36
	77.11	555	10.50	4.306E+00	3.489E+00	3.489E+00	18.20
	87.30	223	4.67	5.227E+00	2.594E+00	2.594E+00	32.52
PO-216	241.98	267	7.49	4.419E+00	2.293E+00	2.293E+00	33.48
	295.21	320	19.20	3.815E+00	1.242E+00	1.242E+00	26.00
	351.92	642	37.20*	3.352E+00	1.463E+00	1.463E+00	17.24
	74.81	309	10.70	4.049E+00	2.024E+00	2.024E+00	28.93
	77.11	555	18.00	4.306E+00	2.035E+00	2.035E+00	16.53
PO-218	87.30	223	8.00	5.227E+00	1.514E+00	1.514E+00	33.13
	238.63	1093	44.60*	4.457E+00	1.563E+00	1.563E+00	14.61
	300.09	63	3.41	3.767E+00	1.387E+00	1.387E+00	89.56
	74.81	309	6.21	4.049E+00	3.487E+00	3.487E+00	28.36
	77.11	555	10.50	4.306E+00	3.489E+00	3.489E+00	18.20
RA-224	87.30	223	4.67	5.227E+00	2.594E+00	2.594E+00	32.52
	241.98	267	7.49	4.419E+00	2.293E+00	2.293E+00	33.48
	295.21	320	19.20	3.815E+00	1.242E+00	1.242E+00	26.00
	351.92	642	37.20*	3.352E+00	1.463E+00	1.463E+00	17.24
	240.98	267	3.95*	4.419E+00	4.348E+00	4.348E+00	33.01
AC-228	609.31	404	46.30*	2.214E+00	1.120E+00	1.120E+00	16.45
	1120.29	82	15.10	1.298E+00	1.195E+00	1.195E+00	39.23
	1764.49	61	15.80	9.005E-01	1.227E+00	1.227E+00	42.88
	338.32	193	11.40	3.450E+00	1.396E+00	1.396E+00	50.70
	911.07	255	27.70*	1.569E+00	1.665E+00	1.665E+00	24.53
RA-228	969.11	162	16.60	1.484E+00	1.869E+00	1.869E+00	32.72
	338.32	193	11.40	3.450E+00	1.396E+00	1.396E+00	50.70
	911.07	255	27.70*	1.569E+00	1.665E+00	1.665E+00	24.53
	969.11	162	16.60	1.484E+00	1.869E+00	1.869E+00	32.72
	74.81	309	10.70	4.049E+00	2.024E+00	2.058E+00	27.40
TH-228	77.11	555	18.00	4.306E+00	2.035E+00	2.070E+00	16.53
	87.30	223	8.00	5.227E+00	1.514E+00	1.540E+00	31.59
	238.63	1093	44.60*	4.457E+00	1.563E+00	1.589E+00	14.61
	300.09	63	3.41	3.767E+00	1.387E+00	1.410E+00	106.89
	609.31	404	46.30*	2.214E+00	1.120E+00	1.120E+00	16.45
TH-230	1120.29	82	15.10	1.298E+00	1.195E+00	1.195E+00	39.23
	1764.49	61	15.80	9.005E-01	1.227E+00	1.227E+00	42.88
	338.32	193	11.40	3.450E+00	1.396E+00	1.396E+00	30.70
	911.07	255	27.70*	1.569E+00	1.665E+00	1.665E+00	24.53
	969.11	162	16.60	1.484E+00	1.869E+00	1.869E+00	32.72
TH-234	63.29	57	3.80*	2.543E+00	1.683E+00	1.683E+00	134.02
	92.38	233	5.41	5.585E+00	2.195E+00	2.195E+00	44.65
	609.31	404	46.30*	2.214E+00	1.120E+00	1.120E+00	16.45
	1120.29	82	15.10	1.298E+00	1.195E+00	1.195E+00	39.23
	1764.49	61	15.80	9.005E-01	1.227E+00	1.227E+00	42.88
NP-237	86.50	223	12.60*	5.227E+00	9.613E-01	9.613E-01	37.73
	95.87	-----	2.60	5.755E+00	-----	Line Not Found	-----
	63.29	57	3.80*	2.543E+00	1.683E+00	1.683E+00	134.02
	92.38	233	5.41	5.585E+00	2.195E+00	2.195E+00	41.72

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
AM-243	74.67	309	66.00*	4.049E+00	3.281E-01	3.281E-01	27.38
	86.72	223	0.34	5.227E+00	3.605E+01	3.605E+01	31.59
	117.66	-----	0.55	6.232E+00	-----	Line Not Found	-----
	142.18	-----	0.13	6.053E+00	-----	Line Not Found	-----
ANH-511	511.00	131	100.00*	2.539E+00	1.472E-01	1.472E-01	51.63

Flag: "*" = Keyline

Total number of lines in spectrum 32
Number of unidentified lines 1
Number of lines tentatively identified by NID 31 96.88%

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	2.766E+01	2.766E+01	0.321E+01	11.59	
CD-109	464.00D	1.03	3.256E+00	3.339E+00	1.055E+00	31.59	
SN-126	1.00E+05Y	1.00	3.274E-01	3.274E-01	1.034E-01	31.59	
CS-135	2.30E+06Y	1.00	4.738E-01	4.738E-01	2.474E-01	52.21	
BA-137M	30.17Y	1.00	2.766E-01	2.769E-01	0.757E-01	27.34	
CS-137	30.17Y	1.00	2.924E-01	2.927E-01	0.800E-01	27.34	
TL-208	1.41E+10Y	1.00	5.085E-01	5.085E-01	1.063E-01	20.91	
BI-211	7.04E+08Y	1.00	4.205E+00	4.205E+00	0.691E+00	16.43	
PB-212	1.41E+10Y	1.00	1.563E+00	1.563E+00	0.228E+00	14.61	
PO-212	1.41E+10Y	1.00	1.563E+00	1.563E+00	0.228E+00	14.61	
BI-214	1600.00Y	1.00	1.120E+00	1.120E+00	0.184E+00	16.45	
PB-214	1600.00Y	1.00	1.463E+00	1.463E+00	0.252E+00	17.24	
PO-214	1600.00Y	1.00	1.463E+00	1.463E+00	0.252E+00	17.24	
PO-216	1.41E+10Y	1.00	1.563E+00	1.563E+00	0.228E+00	14.61	
PO-218	1600.00Y	1.00	1.463E+00	1.463E+00	0.252E+00	17.24	
RA-224	1.41E+10Y	1.00	4.348E+00	4.348E+00	1.435E+00	33.01	
RA-226	1600.00Y	1.00	1.120E+00	1.120E+00	0.184E+00	16.45	
AC-228	1.41E+10Y	1.00	1.665E+00	1.665E+00	0.408E+00	24.53	
RA-228	1.41E+10Y	1.00	1.665E+00	1.665E+00	0.408E+00	24.53	
TH-228	1.91Y	1.02	1.563E+00	1.589E+00	0.232E+00	14.61	
TH-230	4.47E+09Y	1.00	1.120E+00	1.120E+00	0.184E+00	16.45	
TH-232	1.41E+10Y	1.00	1.665E+00	1.665E+00	0.408E+00	24.53	
TH-234	4.47E+09Y	1.00	1.683E+00	1.683E+00	2.256E+00	134.02	
U-234	4.47E+09Y	1.00	1.120E+00	1.120E+00	0.184E+00	16.45	
NP-237	2.14E+06Y	1.00	9.613E-01	9.613E-01	3.627E-01	37.73	
U-238	4.47E+09Y	1.00	1.683E+00	1.683E+00	2.256E+00	134.02	
AM-243	7380.00Y	1.00	3.281E-01	3.281E-01	0.898E-01	27.38	
ANH-511	1.00E+09Y	1.00	1.472E-01	1.472E-01	0.760E-01	51.63	

Total Activity : 6.627E+01 6.638E+01

Grand Total Activity : 6.627E+01 6.638E+01

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G244604002

Page : 5
Acquisition date : 25-JAN-2010 08:38:58

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
4	89.69	92	373	1.04	178.61	170	12	1.28E-02	69.3	5.42E+00	T
0	185.74	244	484	1.11	370.80	366	12	3.38E-02	40.2	5.29E+00	T
0	209.10	136	248	1.82	417.55	413	8	1.89E-02	43.7	4.89E+00	T
0	327.34	36	162	1.01	654.16	651	8	5.03E-03	****	3.53E+00	T
0	462.75	83	102	0.81	925.12	919	12	1.15E-02	53.7	2.74E+00	T
0	727.18	57	67	0.98	1454.31	1449	10	7.98E-03	59.5	1.91E+00	T
0	964.05	37	38	1.39	1928.36	1923	10	5.17E-03	69.8	1.49E+00	T
0	1239.61	57	88	0.68	2479.88	2469	22	7.91E-03	90.2	1.18E+00	T
0	1728.20	24	6	1.94	3457.85	3451	12	3.33E-03	57.7	9.11E-01	

Flags: "T" = Tentatively associated

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                    *
*****
*                                     DETECTOR DATA                          *
*
* Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G244604002.CNF;1
* Acquisition date   : 25-JAN-2010 08:38:58   Detector SN#      :
* Detector ID        : GAM02                   Sensitivity       : 5.00000
* Geometry           : CAN                     Energy tolerance  : 1.50000
* Elapsed live time  : 0 02:00:00.00           Abundance limit      : 75.00000
* Elapsed real time  : 0 02:00:02.80           Half life ratio      : 8.00000
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 8-JAN-2010 12:00:00.   Nuclide Library   : SOLID
* Sample ID          : G244604002             Analyst initials: MXR1
* Batch Number       : 941636                 Sample Quantity   : 1.32070E+02 GRAM
*****
*                                     QC DATA                               *
*
* CALIB. DATE/TIME   : 29-OCT-2009 10:28:07.3MS Isotope         :
* MSD ID             :                          MSD Isotope      :
* LCS ID             : 1032-A                   LCS Isotope       :
*****

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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	2.766E+01	3.207E+00	5.921E-01	5.629E-02	46.719
CD-109	3.339E+00	1.055E+00	1.449E+00	1.455E-01	2.305
SN-126	3.274E-01	1.034E-01	1.428E-01	1.428E-02	2.292
CS-135	4.738E-01	2.474E-01	2.911E-01	3.852E-02	1.627
BA-137M	2.769E-01	7.570E-02	6.999E-02	6.030E-03	3.957
CS-137	2.927E-01	8.004E-02	7.398E-02	6.386E-03	3.957
TL-208	5.085E-01	1.063E-01	5.974E-02	5.984E-03	8.513
BI-211	4.205E+00	6.911E-01	3.369E-01	3.887E-02	12.480
PB-212	1.563E+00	2.282E-01	9.668E-02	1.217E-02	16.164
PO-212	1.563E+00	2.282E-01	9.668E-02	1.217E-02	16.164
BI-214	1.120E+00	1.842E-01	1.124E-01	1.188E-02	9.968
PB-214	1.463E+00	2.522E-01	1.175E-01	1.485E-02	12.454
PO-214	1.463E+00	2.522E-01	1.175E-01	1.485E-02	12.454
PO-216	1.563E+00	2.282E-01	9.668E-02	1.217E-02	16.164
PO-218	1.463E+00	2.522E-01	1.175E-01	1.485E-02	12.454
RA-224	4.348E+00	1.435E+00	1.101E+00	1.299E-01	3.949
RA-226	1.120E+00	1.842E-01	1.124E-01	1.188E-02	9.968
AC-228	1.665E+00	4.085E-01	2.240E-01	2.793E-02	7.434

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-228	1.665E+00	4.085E-01	2.240E-01	2.793E-02	7.434
TH-228	1.589E+00	2.321E-01	9.832E-02	1.237E-02	16.164
TH-230	1.120E+00	1.842E-01	1.124E-01	1.188E-02	9.968
TH-232	1.665E+00	4.085E-01	2.240E-01	2.793E-02	7.434
TH-234	1.683E+00	2.256E+00	2.301E+00	4.063E-01	0.731
U-234	1.120E+00	1.842E-01	1.124E-01	1.188E-02	9.968
NP-237	9.613E-01	3.627E-01	4.158E-01	9.512E-02	2.312
U-238	1.683E+00	2.256E+00	2.301E+00	4.063E-01	0.731
AM-243	3.281E-01	8.983E-02	9.052E-02	7.916E-03	3.624
ANH-511	1.472E-01	7.597E-02	5.118E-02	5.074E-03	2.875

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-4.546E-02		3.710E-01	5.932E-01	6.291E-02	-0.077
NA-22	-1.279E-02		4.904E-02	7.847E-02	6.957E-03	-0.163
NA-24	-5.343E-01		2.725E+00	Half-Life too short		
AL-26	2.997E-02		2.805E-02	5.624E-02	4.655E-03	0.533
TI-44	9.254E-02		4.130E-02	6.709E-02	6.074E-03	1.379
SC-46	-7.681E-03		4.255E-02	6.774E-02	6.887E-03	-0.113
V-48	7.723E-02		8.361E-02	1.464E-01	1.432E-02	0.527
CR-51	-2.385E-01		3.962E-01	6.332E-01	7.725E-02	-0.377
MN-52	-4.616E-02		3.233E-01	5.150E-01	4.791E-02	-0.090
MN-54	6.571E-03		4.473E-02	7.380E-02	7.250E-03	0.089
CO-56	-1.039E-04		4.046E-02	6.590E-02	6.525E-03	-0.002
CO-57	1.467E-02		2.527E-02	4.260E-02	3.561E-03	0.344
CO-58	-1.871E-02		4.294E-02	6.727E-02	6.515E-03	-0.278
FE-59	-4.163E-02		9.836E-02	1.570E-01	1.497E-02	-0.265
CO-60	9.139E-03		3.809E-02	6.440E-02	6.000E-03	0.142
ZN-65	-7.007E-03		1.051E-01	1.492E-01	1.298E-02	-0.047
GE-68	3.904E-01		1.402E+00	2.397E+00	2.171E-01	0.163
AS-73	2.832E-01		1.081E+00	1.871E+00	1.549E-01	0.151
AS-74	-8.269E-04		9.696E-02	1.625E-01	1.517E-02	-0.005
SE-75	4.983E-02		5.249E-02	8.253E-02	1.009E-02	0.604
BR-77	-6.641E+00		1.877E+01	2.917E+01	2.878E+00	-0.228
SR-82	-4.430E-01		4.023E-01	5.846E-01	5.516E-02	-0.758
RB-83	-5.528E-02		7.807E-02	1.175E-01	1.160E-02	-0.470
RB-84	6.891E-02		7.781E-02	1.366E-01	1.382E-02	0.505
KR-85	8.776E+00		8.691E+00	1.334E+01	1.320E+00	0.658
SR-85	4.583E-02		4.538E-02	6.965E-02	6.895E-03	0.658
RB-86	-4.594E-01		9.463E-01	1.508E+00	1.367E-01	-0.305
Y-88	-5.002E-03		3.075E-02	4.887E-02	3.986E-03	-0.102
ZR-88	1.305E-02		3.504E-02	5.870E-02	5.874E-03	0.222
Y-91	-5.401E+00		2.204E+01	3.567E+01	2.962E+00	-0.151
NB-94	6.372E-03		3.564E-02	5.981E-02	5.333E-03	0.107
NB-95	2.913E-02		5.089E-02	8.677E-02	8.123E-03	0.336
NB-95M	9.982E-02		1.505E-01	2.333E-01	2.952E-02	0.428

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-95	9.082E-02		7.916E-02	1.414E-01	1.430E-02	0.642
NB-97	7.011E-01		3.138E-01	Half-Life	too short	
ZR-97	1.269E+01		6.311E+00	Half-Life	too short	
MO-99	-9.453E-01		1.742E+01	2.855E+01	4.428E+00	-0.033
TC-99M	1.695E+12		2.451E+12	Half-Life	too short	
RH-101	1.050E-02		3.658E-02	5.877E-02	6.428E-03	0.179
RH-102	2.518E-02		3.273E-02	5.562E-02	5.580E-03	0.453
RU-103	4.123E-02		4.404E-02	7.544E-02	1.133E-02	0.546
RH-106	9.995E-02		3.354E-01	5.728E-01	7.825E-02	0.174
RU-106	9.995E-02		3.353E-01	5.728E-01	5.202E-02	0.174
AG-108M	-2.227E-02		3.703E-02	5.756E-02	5.967E-03	-0.387
AG-110M	3.903E-02		4.014E-02	6.423E-02	5.730E-03	0.608
IN-111	-9.782E-02		1.804E+00	2.687E+00	3.192E-01	-0.036
IN-113M	-1.419E-02		4.911E-02	7.894E-02	8.077E-03	-0.180
SN-113	-1.419E-02		4.911E-02	7.894E-02	8.077E-03	-0.180
IN-114M	-8.511E-02		2.243E-01	3.117E-01	3.357E-02	-0.273
CD-115	-1.177E+01		2.046E+01	3.111E+01	3.058E+00	-0.378
SN-117M	3.356E-03		6.191E-02	1.006E-01	9.911E-03	0.033
SB-122	-7.649E-01		3.283E+00	5.433E+00	5.217E-01	-0.141
I-123	-2.580E+01		2.739E+01	Half-Life	too short	
TE-123M	-1.414E-02		3.002E-02	4.754E-02	4.717E-03	-0.297
I-124	-2.533E-01		1.004E+00	1.494E+00	1.386E-01	-0.170
SB-124	8.010E-03		8.193E-02	1.387E-01	1.262E-02	0.058
SB-125	-6.395E-02		1.006E-01	1.560E-01	1.594E-02	-0.410
TE-125M	-8.455E+00		9.821E+00	1.564E+01	1.604E+00	-0.541
I-126	9.771E-02		2.538E-01	3.809E-01	3.295E-02	0.257
SB-126	1.333E-01		1.790E-01	2.892E-01	2.615E-02	0.461
SB-127	4.235E-01		2.004E+00	3.378E+00	4.064E-01	0.125
XE-127	-3.299E-02		5.117E-02	7.870E-02	8.690E-03	-0.419
I-131	-9.021E-02		1.391E-01	2.186E-01	2.455E-02	-0.413
TE-132	3.099E-02		1.106E+00	1.752E+00	3.119E-01	0.018
BA-133	-1.230E-02		5.022E-02	7.110E-02	1.061E-02	-0.173
I-133	9.487E-04		1.300E-02	Half-Life	too short	
CS-134	5.248E-02		5.144E-02	9.079E-02	8.737E-03	0.578
I-135	-2.907E+09		2.365E+11	Half-Life	too short	
CS-136	1.511E-01		1.265E-01	2.327E-01	2.247E-02	0.649
CE-139	-2.189E-02		3.209E-02	5.011E-02	5.140E-03	-0.437
BA-140	-4.097E-01		3.387E-01	4.368E-01	1.461E-01	-0.938
LA-140	-7.854E-02		9.386E-02	1.349E-01	1.220E-02	-0.582
CE-141	-2.468E-02		6.814E-02	1.092E-01	1.021E-02	-0.226
CE-143	1.883E-03		3.278E-04	Half-Life	too short	
CE-144	7.369E-02		2.126E-01	3.528E-01	5.507E-02	0.209
PM-144	-1.046E-02		3.977E-02	6.457E-02	5.731E-03	-0.162
PR-144	-7.098E-01		2.697E+00	4.380E+00	3.885E-01	-0.162
PM-146	1.431E-02		4.852E-02	8.023E-02	9.562E-03	0.178
ND-147	2.490E-01		6.941E-01	1.141E+00	1.788E-01	0.218
PM-149	1.087E+02		1.718E+02	2.953E+02	5.280E+01	0.368
EU-152	2.649E-02		1.061E-01	1.779E-01	2.092E-02	0.149

----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GD-153	-2.197E-02		8.858E-02	1.287E-01	1.170E-02	-0.171
EU-154	-3.947E-02		1.365E-01	2.177E-01	2.502E-02	-0.181
EU-155	9.385E-02		1.109E-01	1.895E-01	1.662E-02	0.495
TB-160	5.100E-02		1.537E-01	2.575E-01	2.603E-02	0.198
HO-166M	-1.295E-02		6.073E-02	9.851E-02	8.847E-03	-0.132
TM-171	-1.893E+01		3.148E+01	4.656E+01	3.803E+00	-0.407
LU-176	5.499E-03		2.676E-02	4.511E-02	5.450E-03	0.122
LU-177	4.125E+00	+	1.859E+00	2.634E+00	2.939E-01	1.566
LU-177M	-2.314E-03		1.967E-01	3.208E-01	3.225E-02	-0.007
HF-181	7.167E-03		4.922E-02	8.023E-02	8.035E-03	0.089
W-181	1.714E-01		4.027E-01	6.291E-01	5.069E-02	0.272
TA-182	-6.912E-02		2.301E-01	3.702E-01	3.123E-02	-0.187
RE-183	4.885E-02		1.220E-01	1.945E-01	1.956E-02	0.251
RE-184	-1.767E-01		2.357E-01	3.814E-01	4.579E-02	-0.463
OS-185	5.148E-02		4.778E-02	8.551E-02	7.531E-03	0.602
RE-188	-1.883E-02		1.837E-01	2.969E-01	2.870E-02	-0.063
W-188	-8.715E+00		9.543E+00	1.307E+01	1.607E+00	-0.667
IR-192	1.506E-02		3.535E-02	6.025E-02	7.193E-03	0.250
AU-195	2.620E-01		2.332E-01	3.957E-01	3.557E-02	0.662
TL-200	4.500E-04		7.260E-04	Half-Life too short		
TL-201	-3.747E+00		1.126E+01	1.754E+01	1.804E+00	-0.214
TL-202	4.466E-02		8.855E-02	1.485E-01	1.496E-02	0.301
HG-203	3.680E-02		4.790E-02	7.443E-02	9.358E-03	0.494
BI-207	3.951E-02		6.010E-02	1.058E-01	9.716E-03	0.373
TL-207	7.215E-01		7.775E-01	1.201E+00	2.336E-01	0.601
PO-209	-4.408E+00		7.754E+00	1.178E+01	1.203E+00	-0.374
BI-210	-4.028E+00		6.583E+00	9.714E+00	9.307E-01	-0.415
PB-210	-4.028E+00		6.583E+00	9.714E+00	9.307E-01	-0.415
PO-210	-4.028E+00		6.582E+00	9.714E+00	8.479E-01	-0.415
PB-211	-1.877E-01		1.030E+00	1.652E+00	1.039E+00	-0.114
BI-212	7.240E-01	+	4.375E-01	6.474E-01	6.744E-02	1.118
PO-215	7.215E-01		7.775E-01	1.201E+00	2.336E-01	0.601
RN-219	2.438E-01		4.603E-01	7.754E-01	1.231E-01	0.314
RN-220	1.029E+01		2.978E+01	4.880E+01	4.733E+00	0.211
RA-223	7.215E-01		7.775E-01	1.201E+00	2.336E-01	0.601
AC-227	3.763E-01		3.919E-01	6.828E-01	1.196E-01	0.551
TH-227	3.763E-01		3.935E-01	6.828E-01	1.361E-01	0.551
TH-229	1.133E-01		5.465E-01	8.831E-01	9.576E-02	0.128
PA-231	-3.047E-01		1.733E+00	2.666E+00	4.687E-01	-0.114
TH-231	7.215E-01		7.775E-01	1.201E+00	2.336E-01	0.601
U-231	-1.828E+00		1.584E+00	2.211E+00	2.035E-01	-0.827
PA-233	-3.297E-02		6.906E-02	1.118E-01	1.361E-02	-0.295
PA-234	-5.980E-02		3.078E-01	4.854E-01	9.435E-02	-0.123
PA-234M	4.329E+00		5.793E+00	9.833E+00	1.070E+00	0.440
U-235	-4.536E-03		2.265E-01	3.655E-01	6.490E-02	-0.012
NP-236	-7.303E-02		8.318E-02	1.287E-01	1.280E-02	-0.567
NP-239	3.316E-02		1.948E-01	3.237E-01	2.714E-02	0.102
AM-241	1.068E-01		1.952E-01	3.080E-01	2.523E-02	0.347

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	1.227E-02		9.910E-02	1.654E-01	1.444E-02	0.074
AM-246	1.059E-01		1.616E-01	2.846E-01	2.574E-02	0.372
CM-247	2.353E-02		4.131E-02	6.988E-02	7.010E-03	0.337
CF-249	2.199E-02		4.223E-02	7.151E-02	7.242E-03	0.308
CF-251	2.531E-02		1.332E-01	2.163E-01	2.266E-02	0.117

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]G244604002
* Acquisition date   : 25-JAN-2010 08:38:58 Detector SN#      :
* Detector ID        : GAM02                               Sensitivity      : 5.000
* Geometry           : CAN                                   Energy tolerance: 1.500
* Elapsed live time   : 0 02:00:00.00                      Abundance limit : 75.000
* Elapsed real time   : 0 02:00:02.80                      Half life ratio  : 8.000
*****
*                               SAMPLE DATA                               *
*
* Sample date        : 8-JAN-2010 12:00:00 Nuclide Library : SOLID
* Sample ID          : G244604002                      Analyst initials: MXR1
* Batch Number       : 941636                          Sample Quantity : 1.3207E+02 GRAM
* Recovery           : 1.00000                          Carrier Weight  : 0.00000
*****
*                               QC DATA                               *
*
* CALIB. DATE/TIME   : 29-OCT-2009 10:28:07 MS Isotope      :
* MSD DPM             : 0.000                          MSD Isotope      :
* LCS DPM             : 0.000                          LCS Isotope      :
* LCSD DPM            : 0.000                          LCSD Isotope     :
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	2.766E+01	3.143E+00	2.966E-01	1.603E+00
CD-109	3.339E+00	1.034E+00	7.610E-01	5.274E-01
SN-126	3.274E-01	1.013E-01	7.503E-02	5.170E-02
CS-135	4.738E-01	2.424E-01	1.502E-01	1.237E-01
BA-137M	2.769E-01	7.419E-02	3.555E-02	3.785E-02
CS-137	2.927E-01	7.844E-02	3.758E-02	4.002E-02
TL-208	5.085E-01	1.042E-01	3.041E-02	5.316E-02
BI-211	4.205E+00	6.772E-01	1.730E-01	3.455E-01
PB-212	1.563E+00	2.237E-01	4.996E-02	1.141E-01
PO-212	1.563E+00	2.237E-01	4.996E-02	1.141E-01
BI-214	1.120E+00	1.805E-01	5.716E-02	9.211E-02
PB-214	1.463E+00	2.472E-01	6.030E-02	1.261E-01
PO-214	1.463E+00	2.472E-01	6.030E-02	1.261E-01
PO-216	1.563E+00	2.237E-01	4.996E-02	1.141E-01
PO-218	1.463E+00	2.472E-01	6.030E-02	1.261E-01
RA-224	4.348E+00	1.406E+00	5.688E-01	7.175E-01
RA-226	1.120E+00	1.805E-01	5.716E-02	9.211E-02
AC-228	1.665E+00	4.003E-01	1.131E-01	2.042E-01
RA-228	1.665E+00	4.003E-01	1.131E-01	2.042E-01
TH-228	1.589E+00	2.275E-01	5.081E-02	1.161E-01
TH-230	1.120E+00	1.805E-01	5.716E-02	9.211E-02
TH-232	1.665E+00	4.003E-01	1.131E-01	2.042E-01
TH-234	1.683E+00	2.210E+00	1.215E+00	1.128E+00
U-234	1.120E+00	1.805E-01	5.716E-02	9.211E-02
NP-237	9.613E-01	3.554E-01	2.185E-01	1.813E-01
U-238	1.683E+00	2.210E+00	1.215E+00	1.128E+00
AM-243	3.281E-01	8.803E-02	4.767E-02	4.491E-02
ANH-511	1.472E-01	7.446E-02	2.611E-02	3.799E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
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BE-7	-4.546E-02	3.635E-01	3.030E-01	1.855E-01	NOT IDENT.
NA-22	-1.279E-02	4.806E-02	3.940E-02	2.452E-02	NOT IDENT.
NA-24	-5.343E+05	5.341E+06	0.000E+00	2.725E+06	SHORT HLIF
AL-26	2.997E-02	2.749E-02	2.806E-02	1.402E-02	NOT IDENT.
TI-44	9.254E-02	4.047E-02	3.530E-02	2.065E-02	NOT IDENT.
SC-46	-7.681E-03	4.170E-02	3.423E-02	2.128E-02	FAIL ABUN
V-48	7.723E-02	8.194E-02	7.387E-02	4.180E-02	NOT IDENT.
CR-51	-2.385E-01	3.883E-01	3.256E-01	1.981E-01	NOT IDENT.
MN-52	-4.616E-02	3.168E-01	2.581E-01	1.616E-01	NOT IDENT.
MN-54	6.571E-03	4.383E-02	3.733E-02	2.236E-02	NOT IDENT.
CO-56	-1.039E-04	3.965E-02	3.333E-02	2.023E-02	FAIL ABUN
CO-57	1.467E-02	2.477E-02	2.226E-02	1.264E-02	NOT IDENT.
CO-58	-1.871E-02	4.208E-02	3.405E-02	2.147E-02	NOT IDENT.
FE-59	-4.163E-02	9.639E-02	7.906E-02	4.918E-02	NOT IDENT.
CO-60	9.139E-03	3.733E-02	3.231E-02	1.904E-02	NOT IDENT.
ZN-65	-7.007E-03	1.030E-01	7.511E-02	5.255E-02	NOT IDENT.
GE-68	3.904E-01	1.374E+00	1.207E+00	7.008E-01	NOT IDENT.
AS-73	2.832E-01	1.060E+00	9.905E-01	5.407E-01	NOT IDENT.
AS-74	-8.269E-04	9.502E-02	8.268E-02	4.848E-02	NOT IDENT.
SE-75	4.983E-02	5.144E-02	4.257E-02	2.624E-02	NOT IDENT.
BR-77	-6.641E+00	1.839E+01	1.488E+01	9.384E+00	FAIL ABUN
SR-82	-4.430E-01	3.942E-01	2.961E-01	2.011E-01	NOT IDENT.
RB-83	-5.528E-02	7.651E-02	5.992E-02	3.903E-02	NOT IDENT.
RB-84	6.891E-02	7.625E-02	6.904E-02	3.890E-02	NOT IDENT.
KR-85	8.776E+00	8.517E+00	6.804E+00	4.345E+00	NOT IDENT.
SR-85	4.583E-02	4.448E-02	3.553E-02	2.269E-02	NOT IDENT.
RB-86	-4.594E-01	9.273E-01	7.595E-01	4.731E-01	NOT IDENT.
Y-88	-5.002E-03	3.014E-02	2.438E-02	1.538E-02	NOT IDENT.
ZR-88	1.305E-02	3.433E-02	3.008E-02	1.752E-02	NOT IDENT.
Y-91	-5.401E+00	2.160E+01	1.793E+01	1.102E+01	NOT IDENT.
NB-94	6.372E-03	3.493E-02	3.035E-02	1.782E-02	NOT IDENT.
NB-95	2.913E-02	4.987E-02	4.396E-02	2.544E-02	NOT IDENT.
NB-95M	9.982E-02	1.475E-01	1.206E-01	7.526E-02	NOT IDENT.
ZR-95	9.082E-02	7.758E-02	7.167E-02	3.958E-02	NOT IDENT.
NB-97	7.011E+05	6.151E+05	0.000E+00	3.138E+05	SHORT HLIF
ZR-97	1.269E+07	1.237E+07	0.000E+00	6.311E+06	SHORT HLIF
MO-99	-9.453E-01	1.707E+01	1.448E+01	8.708E+00	NOT IDENT.
TC-99M	1.695E+18	4.805E+18	0.000E+00	0.000E+00	SHORT HLIF
RH-101	1.050E-02	3.585E-02	3.046E-02	1.829E-02	NOT IDENT.
RH-102	2.518E-02	3.207E-02	2.841E-02	1.636E-02	NOT IDENT.
RU-103	4.123E-02	4.316E-02	3.851E-02	2.202E-02	FAIL ABUN
RH-106	9.995E-02	3.287E-01	2.913E-01	1.677E-01	FAIL ABUN
RU-106	9.995E-02	3.286E-01	2.913E-01	1.676E-01	FAIL ABUN
AG-108M	-2.227E-02	3.629E-02	2.945E-02	1.851E-02	NOT IDENT.
AG-110M	3.903E-02	3.933E-02	3.263E-02	2.007E-02	NOT IDENT.
IN-111	-9.782E-02	1.768E+00	1.388E+00	9.020E-01	NOT IDENT.
IN-113M	-1.419E-02	4.813E-02	4.045E-02	2.455E-02	NOT IDENT.
SN-113	-1.419E-02	4.813E-02	4.045E-02	2.455E-02	NOT IDENT.
IN-114M	-8.511E-02	2.199E-01	1.617E-01	1.122E-01	NOT IDENT.
CD-115	-1.177E+01	2.005E+01	1.586E+01	1.023E+01	NOT IDENT.
SN-117M	3.356E-03	6.067E-02	5.234E-02	3.095E-02	NOT IDENT.
SB-122	-7.649E-01	3.217E+00	2.767E+00	1.642E+00	NOT IDENT.
I-123	-2.580E+07	5.368E+07	0.000E+00	2.739E+07	SHORT HLIF
TE-123M	-1.414E-02	2.942E-02	2.473E-02	1.501E-02	NOT IDENT.
I-124	-2.533E-01	9.837E-01	7.601E-01	5.019E-01	NOT IDENT.
SB-124	8.010E-03	8.029E-02	6.933E-02	4.097E-02	FAIL ABUN
SB-125	-6.395E-02	9.863E-02	7.985E-02	5.032E-02	FAIL ABUN
TE-125M	-8.455E+00	9.625E+00	8.186E+00	4.911E+00	NOT IDENT.
I-126	9.771E-02	2.487E-01	1.935E-01	1.269E-01	NOT IDENT.
SB-126	1.333E-01	1.754E-01	1.467E-01	8.950E-02	FAIL ABUN
SB-127	4.235E-01	1.964E+00	1.715E+00	1.002E+00	NOT IDENT.
XE-127	-3.299E-02	5.015E-02	4.078E-02	2.558E-02	NOT IDENT.
I-131	-9.021E-02	1.363E-01	1.122E-01	6.956E-02	NOT IDENT.
TE-132	3.099E-02	1.083E+00	9.060E-01	5.528E-01	NOT IDENT.
BA-133	-1.230E-02	4.922E-02	3.650E-02	2.511E-02	FAIL ABUN
I-133	9.487E+02	2.547E+04	0.000E+00	1.300E+04	SHORT HLIF
CS-134	5.248E-02	5.041E-02	4.597E-02	2.572E-02	NOT IDENT.
I-135	-2.907E+15	4.635E+17	0.000E+00	0.000E+00	SHORT HLIF
CS-136	1.511E-01	1.240E-01	1.173E-01	6.327E-02	FAIL ABUN
CE-139	-2.189E-02	3.145E-02	2.605E-02	1.605E-02	NOT IDENT.
BA-140	-4.097E-01	3.319E-01	2.226E-01	1.694E-01	NOT IDENT.
LA-140	-7.854E-02	9.198E-02	6.748E-02	4.693E-02	FAIL ABUN
CE-141	-2.468E-02	6.677E-02	5.692E-02	3.407E-02	NOT IDENT.
CE-143	1.883E+03	6.424E+02	0.000E+00	3.278E+02	SHORT HLIF
CE-144	7.369E-02	2.083E-01	1.841E-01	1.063E-01	NOT IDENT.
PM-144	-1.046E-02	3.897E-02	3.277E-02	1.988E-02	NOT IDENT.
PR-144	-7.098E-01	2.643E+00	2.223E+00	1.349E+00	NOT IDENT.

PM-146	1.431E-02	4.755E-02	4.101E-02	2.426E-02	NOT IDENT.
ND-147	2.490E-01	6.802E-01	5.818E-01	3.471E-01	FAIL ABUN
PM-149	1.087E+02	1.684E+02	1.521E+02	8.592E+01	NOT IDENT.
EU-152	2.649E-02	1.039E-01	9.138E-02	5.303E-02	FAIL ABUN
GD-153	-2.197E-02	8.681E-02	6.751E-02	4.429E-02	NOT IDENT.
EU-154	-3.947E-02	1.338E-01	1.093E-01	6.825E-02	NOT IDENT.
EU-155	9.385E-02	1.086E-01	9.927E-02	5.543E-02	FAIL ABUN
TB-160	5.100E-02	1.506E-01	1.302E-01	7.686E-02	FAIL ABUN
HO-166M	-1.295E-02	5.952E-02	4.997E-02	3.037E-02	FAIL ABUN
TM-171	-1.893E+01	3.085E+01	2.456E+01	1.574E+01	NOT IDENT.
LU-176	5.499E-03	2.622E-02	2.321E-02	1.338E-02	FAIL ABUN
LU-177	4.125E+00	1.822E+00	1.364E+00	9.295E-01	FAIL ABUN
LU-177M	-2.314E-03	1.928E-01	1.643E-01	9.835E-02	FAIL ABUN
HF-181	7.167E-03	4.824E-02	4.097E-02	2.461E-02	NOT IDENT.
W-181	1.714E-01	3.947E-01	3.320E-01	2.014E-01	NOT IDENT.
TA-182	-6.912E-02	2.255E-01	1.860E-01	1.150E-01	FAIL ABUN
RE-183	4.885E-02	1.196E-01	1.012E-01	6.101E-02	FAIL ABUN
RE-184	-1.767E-01	2.310E-01	1.969E-01	1.178E-01	NOT IDENT.
OS-185	5.148E-02	4.682E-02	4.345E-02	2.389E-02	NOT IDENT.
RE-188	-1.883E-02	1.801E-01	1.545E-01	9.187E-02	NOT IDENT.
W-188	-8.715E+00	9.353E+00	6.734E+00	4.772E+00	FAIL ABUN
IR-192	1.506E-02	3.465E-02	3.099E-02	1.768E-02	FAIL ABUN
AU-195	2.620E-01	2.285E-01	2.074E-01	1.166E-01	FAIL ABUN
TL-200	4.500E+02	1.423E+03	0.000E+00	7.260E+02	SHORT HLIF
TL-201	-3.747E+00	1.103E+01	9.115E+00	5.628E+00	NOT IDENT.
TL-202	4.466E-02	8.678E-02	7.595E-02	4.428E-02	NOT IDENT.
HG-203	3.680E-02	4.694E-02	3.836E-02	2.395E-02	NOT IDENT.
BI-207	3.951E-02	5.889E-02	5.332E-02	3.005E-02	FAIL ABUN
TL-207	7.215E-01	7.620E-01	6.175E-01	3.888E-01	FAIL ABUN
PO-209	-4.408E+00	7.599E+00	5.953E+00	3.877E+00	NOT IDENT.
BI-210	-4.028E+00	6.452E+00	5.154E+00	3.292E+00	NOT IDENT.
PB-210	-4.028E+00	6.452E+00	5.154E+00	3.292E+00	NOT IDENT.
PO-210	-4.028E+00	6.450E+00	5.154E+00	3.291E+00	NOT IDENT.
PB-211	-1.877E-01	1.009E+00	8.462E-01	5.148E-01	NOT IDENT.
BI-212	7.240E-01	4.288E-01	3.283E-01	2.188E-01	FAIL ABUN
PO-215	7.215E-01	7.620E-01	6.175E-01	3.888E-01	FAIL ABUN
RN-219	2.438E-01	4.511E-01	3.972E-01	2.302E-01	NOT IDENT.
RN-220	1.029E+01	2.918E+01	2.486E+01	1.489E+01	NOT IDENT.
RA-223	7.215E-01	7.620E-01	6.175E-01	3.888E-01	FAIL ABUN
AC-227	3.763E-01	3.840E-01	3.524E-01	1.959E-01	FAIL ABUN
TH-227	3.763E-01	3.856E-01	3.524E-01	1.968E-01	FAIL ABUN
TH-229	1.133E-01	5.355E-01	4.579E-01	2.732E-01	FAIL ABUN
PA-231	-3.047E-01	1.698E+00	1.374E+00	8.665E-01	FAIL ABUN
TH-231	7.215E-01	7.620E-01	6.175E-01	3.888E-01	FAIL ABUN
U-231	-1.828E+00	1.552E+00	1.160E+00	7.920E-01	FAIL ABUN
PA-233	-3.297E-02	6.768E-02	5.751E-02	3.453E-02	FAIL ABUN
PA-234	-5.980E-02	3.016E-01	2.450E-01	1.539E-01	FAIL ABUN
PA-234M	4.329E+00	5.677E+00	4.958E+00	2.896E+00	NOT IDENT.
U-235	-4.536E-03	2.219E-01	1.904E-01	1.132E-01	FAIL ABUN
NP-236	-7.303E-02	8.152E-02	6.695E-02	4.159E-02	NOT IDENT.
NP-239	3.316E-02	1.909E-01	1.692E-01	9.739E-02	FAIL ABUN
AM-241	1.068E-01	1.913E-01	1.628E-01	9.761E-02	NOT IDENT.
CM-243	1.227E-02	9.712E-02	8.665E-02	4.955E-02	FAIL ABUN
AM-246	1.059E-01	1.584E-01	1.433E-01	8.082E-02	NOT IDENT.
CM-247	2.353E-02	4.049E-02	3.580E-02	2.066E-02	FAIL ABUN
CF-249	2.199E-02	4.138E-02	3.665E-02	2.111E-02	NOT IDENT.
CF-251	2.531E-02	1.305E-01	1.123E-01	6.658E-02	NOT IDENT.

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*                                     *
*               GEL Laboratories LLC   *
*               2040 SAVAGE ROAD       *
*               CHARLESTON ,SC 29417  *
*               GAMMA SPECTROSCOPY BACKGROUND REPORT *
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ENERGY	MDA COUNTS
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46.50	281.2853
46.50	281.2853
46.50	281.2853
48.70	262.3632
49.72	209.6405
51.35	269.3741
52.39	235.0601
52.97	243.9264
53.15	244.0717
53.44	239.2516
54.07	242.2796
56.28	250.8148
56.28	250.8171
57.37	0.0000
57.53	278.2718
57.53	278.2734
57.60	278.3331
57.98	266.6968
57.98	266.6968
59.32	272.9570
59.32	272.9570
59.40	273.0241
59.54	267.9877
59.72	268.1353
60.01	263.2115
61.10	279.6174
61.14	279.6512
61.30	279.7855
63.00	290.7523
63.29	291.0007
63.29	291.0007
63.58	291.2486
64.28	278.3417
65.12	265.9202
65.20	265.9818
65.20	265.9818
66.05	279.7656
66.72	310.5638
66.83	310.6629
66.91	317.3164
67.20	310.9888
67.20	310.9888
67.75	319.9161
67.85	325.2874
68.90	315.1187
68.90	315.1187
69.30	308.8398
69.67	283.9477
70.82	316.7856
70.82	316.7856
70.83	316.7946
72.80	335.4315
72.87	335.4927
72.87	335.4927
74.67	337.0953
74.81	337.2177
74.81	337.2177
74.81	337.2177
74.81	337.2177
74.81	337.2177
74.81	337.2177
74.81	337.2177
74.97	337.3593
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75.70	338.0018
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77.11	339.2354

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77.11	339.2354
77.11	339.2354
77.11	339.2354
77.11	339.2354
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79.62	314.6166
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80.18	297.3267
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80.30	317.8810
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81.07	370.7047
81.07	370.7047
81.07	370.7047
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83.78	342.6258
83.78	342.6258
83.78	342.6258
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84.90	310.4376
85.43	331.5546
86.29	423.5959
86.50	423.8083
86.54	443.2397
86.59	443.2910
86.72	443.4277
86.79	443.4985
86.94	443.6572
87.30	444.0356
87.30	444.0356
87.30	444.0356
87.30	444.0356
87.30	444.0356
87.30	444.0356
87.57	444.3164
87.88	444.6387
88.03	444.7949
88.36	445.1367
88.47	445.2515
89.95	262.4831
91.11	263.1816
92.29	322.8427
92.38	322.9076
92.38	322.9076
93.35	322.2060
94.00	259.2680
94.67	252.5955
94.67	252.5982
94.90	275.3182
94.90	275.3182
94.90	275.3182
94.90	275.3182
95.87	338.1652
95.87	338.1652
96.73	323.2116
97.43	293.8883
98.44	277.9318
98.44	277.9318
98.88	263.0041
99.55	257.6780
99.55	257.6780
99.86	269.2666
100.00	269.3472
100.10	295.1108
103.18	299.9058
103.76	295.4737
105.00	291.4230
105.31	280.0606
108.00	303.8585
109.28	325.9871

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111.00	319.3165
111.76	317.8470
112.95	303.9324
115.19	322.9256
116.30	287.2207
117.00	278.7408
117.00	278.7408
117.66	285.0077
121.11	274.9515
121.62	241.4316
121.78	244.4848
122.06	244.6111
122.32	243.7339
122.32	243.7339
122.32	243.7339
122.32	243.7339
123.07	259.0148
127.23	303.1382
129.76	296.4404
131.20	335.6069
133.02	274.8154
133.54	274.0485
135.34	276.9362
136.00	278.2709
136.25	294.7048
136.48	294.8209
140.51	279.3711
140.51	0.0000
142.18	302.8077
142.65	309.2255
143.76	265.3894
144.24	236.6594
144.24	236.6594
144.24	236.6594
144.24	236.6594
145.22	298.1104
145.44	298.2188
147.16	277.2450
152.43	242.9317
152.70	272.3673
153.22	282.0253
154.21	289.8107
154.21	289.8107
154.21	289.8107
154.21	289.8107
155.03	281.7702
156.02	297.9987
158.56	255.8203
159.00	0.0000
159.00	272.9177
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161.27	257.9354
162.32	249.8381
162.64	241.4484
163.35	232.1217
163.89	244.0323
165.85	282.1489
167.43	260.3084
171.28	253.1514
171.86	247.9734
172.10	252.3717
176.55	240.9517
176.60	240.9675
181.06	242.4715
184.41	273.2176
185.71	246.2191
186.00	246.3170
190.27	257.1350
192.34	216.2547
193.63	239.9502
197.04	223.1689
198.01	239.0912
198.60	222.5005
200.40	247.6718
201.83	241.3873
202.84	243.9462
205.31	228.3584

208.36	235.4557
208.81	235.5890
209.75	207.5132
209.75	207.5132
210.97	229.9713
215.65	221.5832
216.55	232.1147
218.09	227.9642
222.10	215.2448
223.80	213.3699
226.40	195.5111
227.00	201.4371
227.08	201.4565
227.20	201.4831
228.16	215.6188
228.18	215.6245
228.18	215.6245
231.56	0.0000
235.69	239.9386
236.00	241.4278
236.00	241.4278
238.63	211.1719
238.63	211.1719
238.63	211.1719
238.63	211.1719
239.00	211.2579
240.98	211.7267
241.98	211.9611
241.98	211.9611
241.98	211.9611
244.69	179.9983
245.39	178.7194
247.94	176.9064
248.90	169.9724
249.79	154.9926
252.40	187.5872
252.85	184.1037
252.85	184.1037
254.15	0.0000
256.20	154.2688
256.20	154.2688
260.50	186.5040
260.90	188.3857
262.80	180.6305
264.65	156.3653
268.24	207.8074
268.79	168.1192
269.46	168.2349
269.46	168.2349
269.46	168.2349
269.46	168.2349
271.23	91.1011
273.65	113.2435
276.40	142.8604
277.35	142.9960
277.60	143.0317
277.60	143.0317
278.00	143.0889
278.60	143.1746
279.20	149.8723
279.53	160.2108
280.46	150.0590
281.68	148.7679
283.67	167.2607
284.30	179.3206
285.00	175.4839
285.90	159.9226
286.10	159.9543
286.10	159.9543
287.40	162.9348
288.45	0.0000
290.67	205.0560
290.80	205.0830
291.72	182.9505
293.26	0.0000
293.70	175.8477
295.21	173.1164
295.21	173.1164

295.21	173.1164
295.96	164.2803
296.50	164.3635
297.23	164.4763
298.57	164.6858
299.80	152.8855
299.80	152.8855
300.09	152.9278
300.09	152.9278
300.09	152.9278
300.09	152.9278
300.12	152.9303
301.29	144.0938
302.84	157.8307
303.76	173.0110
303.91	173.0334
304.40	150.5322
304.40	150.5322
304.84	155.1111
306.84	152.7599
308.46	160.5423
311.98	159.1637
316.51	122.7189
318.01	148.6042
319.02	153.5047
319.41	154.5125
320.08	142.1975
323.87	122.5703
323.87	122.5703
323.87	122.5703
323.87	122.5703
325.23	161.0658
328.77	155.4133
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334.20	151.5076
334.20	151.5076
334.30	151.5220
338.28	139.6296
338.28	139.6296
338.28	139.6296
338.28	139.6296
338.32	139.6340
338.32	139.6340
338.32	139.6340
340.50	144.5564
340.57	150.7834
344.27	138.3924
345.85	135.8440
350.59	0.0000
351.07	122.5185
351.92	122.6044
351.92	122.6044
351.92	122.6044
355.39	0.0000
356.01	122.8214
364.48	123.8689
366.43	119.1010
367.43	117.2096
367.94	0.0000
369.80	127.3828
374.96	108.9185
383.85	119.7390
387.95	108.0057
388.63	124.2209
391.69	126.5354
391.69	126.5354
392.90	122.5989
398.62	123.1288
400.65	124.3363
401.10	121.3188
401.81	117.3040
402.60	117.3724
404.84	125.7458
410.95	133.5021
411.60	137.6763
413.65	121.4174
414.70	105.0350
415.30	103.0197

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432.53	111.5960
433.93	122.1452
439.47	112.1381
439.56	110.0492
439.89	111.1224
443.98	110.3865
444.90	95.7280
445.03	95.7363
445.03	95.7363
445.03	95.7363
445.03	95.7363
453.90	101.6089
463.38	100.5521
468.07	87.1881
473.00	95.4038
475.06	90.1652
475.35	91.2554
476.78	113.9076
477.59	104.2910
477.96	107.5424
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484.57	99.3616
487.03	81.1283
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492.35	104.1958
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507.63	0.0000
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511.85	96.6810
511.85	96.6810
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513.99	88.0060
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529.87	0.0000
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543.00	74.9947
546.56	0.0000
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552.65	89.1483
555.20	76.6536
563.23	87.8755
563.90	85.1921
568.70	82.6954
569.32	90.9058
569.50	90.9155
569.67	94.5623
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574.00	83.8534
574.64	78.6400
578.91	109.6729
579.30	0.0000
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591.81	70.8735
592.07	76.4082
593.00	85.6572
595.88	73.7988
600.56	86.9316
602.52	0.0000
602.71	88.6198
602.71	88.6198
603.60	77.1932
604.41	94.2179
604.70	88.0536
609.31	75.8806

609.31	75.8806
609.31	75.8806
609.31	75.8806
610.33	80.5708
612.46	60.4963
614.37	60.5566
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621.84	72.9536
631.29	59.2148
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634.78	66.8537
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645.85	70.0742
646.12	66.2949
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661.65	97.0376
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666.33	81.3186
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685.20	71.4508
692.80	82.3707
695.00	94.0990
696.49	94.1653
696.49	94.1653
697.00	92.2469
697.49	87.4116
698.33	81.6170
698.50	78.7080
699.00	84.5595
702.63	74.9678
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713.82	66.5540
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722.78	80.2630
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722.95	80.2690
723.30	85.1982
724.18	78.6758
727.18	64.9977
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735.90	50.4260
739.58	55.4613
742.81	52.5678
744.21	53.5926
747.13	62.6078
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752.31	70.7209
753.82	64.7889
755.35	51.8654
756.15	55.8756
756.87	58.8876
763.93	91.1111
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766.84	75.1868
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778.57	48.3668
778.89	47.3660
783.80	61.6061
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792.07	68.9197

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798.80	89.4459
801.93	66.1553
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867.82	60.6437
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880.51	47.2874
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884.67	58.9422
889.25	54.8285
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898.02	62.4210
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911.07	54.2273
911.07	54.2273
911.07	54.2273
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925.00	58.7880
925.24	58.7933
926.50	60.9605
935.52	52.5817
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949.00	42.0593
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968.20	21.7202
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969.11	54.3176
969.11	54.3176
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983.50	41.4948
989.30	59.0876
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1001.68	52.7520
1004.76	67.8454
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1036.00	46.3379
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1048.07	39.0845

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1050.47	44.7031
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1076.63	62.0039
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1085.78	63.1342
1099.22	54.8918
1112.02	52.4598
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1120.29	48.5948
1120.29	48.5948
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1175.09	49.4332
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1333.61	25.3703
1360.21	36.7983
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1368.53	0.0000
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1384.27	24.6904
1394.10	19.5976
1395.20	28.8887
1407.95	34.1615
1434.06	27.0981
1436.60	26.0732
1457.56	0.0000
1460.81	24.1361
1489.15	20.0808
1509.49	16.9954
1596.49	24.1719
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1678.03	0.0000
1691.02	14.2503
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1750.46	0.0000
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1764.49	10.1367
1764.49	10.1367
1764.49	10.1367
1770.23	58.9618
1771.40	23.2040
1791.20	0.0000
1808.65	4.8725

1836.01

9.8009

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G244604002

Total Uranium Activity	5.0049E+00	ug/g
Total Uranium Counting Unc.	6.5768E+00	ug/g
Total Uranium Tpu	3.3555E-06	ug/g
Total Uranium Mda	3.6161E+00	ug/g

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*****
*
*               GEL Laboratories LLC               *
*               2040 SAVAGE ROAD                   *
*               CHARLESTON ,SC 29417                *
*               GROSS GAMMA REPORT                  *
*
*****
*
*  BATCH ID      : 941636                          SAMPLE ID   : G244604002
*  ANALYST       : MXR1                             DETECTOR    : GAM02
*  SAMPLE DATE   : 8-JAN-2010 12:00:00.00          COUNT TIME   : 0 02:00:00.00
*  ANALYSIS DATE : 25-JAN-2010 08:38:58.11          SAMPLE ALQT  : 132.070 GRAM
*
*****

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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 9.158E+00
GROSS GAMMA ERROR (pCi/GRAM )   : 1.478E+00
GROSS GAMMA MDA (pCi/GRAM )     : 3.160E+00
GROSS GAMMA DLC (pCi/GRAM )     : 1.526E+00

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VAX/VMS Nuclide Identification Report Generated 26-JAN-2010 15:31:20.90

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*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                           *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G244606003.CNF;1
Sample date       : 7-JAN-2010 12:00:00. Acquisition date : 25-JAN-2010 08:39:59
Sample ID        : G244606003          Sample quantity  : 1.59070E+02 GRAM
Detector name    : GAM06              Detector geometry: CAN
Elapsed live time: 0 02:00:00.00      Elapsed real time: 0 02:00:01.23  0.0%
Energy tolerance : 1.50000 keV        Analyst Initials  : MXR1
Abundance limit  : 75.00000           Sensitivity      : 5.00000
Batch ID        : 941636              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	63.54*	51	431	0.68	127.09	122	9	7.07E-03	76.7	
2	2	74.47	337	449	1.32	148.94	142	18	4.68E-02	12.2	1.14E+00
3	2	76.86*	438	387	1.10	153.73	142	18	6.08E-02	9.2	
4	0	86.90	102	453	0.84	173.80	170	8	1.41E-02	37.5	
5	0	93.56*	134	677	1.35	187.13	180	14	1.86E-02	44.3	
6	0	185.53*	178	323	1.72	371.05	366	11	2.48E-02	21.5	
7	0	209.45	98	218	1.28	418.90	415	9	1.36E-02	29.4	
8	3	238.40*	846	165	1.13	476.79	472	24	1.17E-01	4.4	1.08E+00
9	3	241.33	249	244	1.95	482.66	472	24	3.46E-02	17.4	
10	0	270.04	109	195	1.42	540.07	535	12	1.51E-02	27.4	
11	0	294.95	285	196	1.14	589.90	585	11	3.96E-02	11.2	
12	0	338.07*	201	185	1.17	676.14	670	13	2.79E-02	16.0	
13	0	351.66*	469	173	1.34	703.33	698	11	6.52E-02	7.2	
14	0	463.28	75	136	1.44	926.56	920	15	1.04E-02	35.6	
15	0	510.86*	78	143	1.78	1021.72	1014	17	1.08E-02	41.5	
16	0	583.19*	290	97	1.50	1166.38	1161	13	4.03E-02	9.4	
17	0	609.02*	326	69	1.46	1218.03	1212	12	4.53E-02	7.8	
18	0	661.73	76	88	1.13	1323.45	1316	11	1.06E-02	24.4	
19	0	726.73	107	55	1.77	1453.47	1445	16	1.49E-02	18.4	
20	0	911.17*	157	92	1.64	1822.34	1814	17	2.18E-02	16.4	
21	0	969.17*	90	98	1.64	1938.34	1930	15	1.24E-02	26.9	
22	0	1119.96	88	42	1.83	2239.93	2233	12	1.22E-02	18.2	
23	0	1460.60*	1156	5	2.10	2921.20	2912	18	1.61E-01	3.0	
24	0	1538.03	12	3	1.46	3076.07	3068	11	1.63E-03	40.6	
25	0	1729.19	29	0	2.42	3458.38	3452	13	4.03E-03	18.6	
26	0	1764.54	68	0	1.74	3529.09	3522	14	9.44E-03	12.1	

Flag: "*" = Peak area was modified by background subtraction

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Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G244606003.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 7-JAN-2010 12:00:00 Acquisition date : 25-JAN-2010 08:39:59
Sample ID        : G244606003 Sample quantity  : 159.07 GRAM
Sample type       : SOLID Sample geometry   :
Detector name     : GAMMA6 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.23 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type   : Empirical Efficiencies at : Peak Energy
Abundance limit  : 75.00 WTM error limit : 3.00

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Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	2.656E+01	2.367E+00	4.565E-01	3.020E-02	58.188
CD-109	+	88.03	*	1.290E+00	9.770E-01	1.433E+00	1.415E-01	0.900
SN-126	+	64.28		4.491E-01	6.925E-01	7.791E-01	1.199E-01	0.576
	+	86.94		5.252E-01	4.508E-01	5.472E-01	2.277E-01	0.960
	+	87.57	*	1.263E-01	9.563E-02	1.342E-01	1.320E-02	0.941
BA-137M	+	661.65	*	1.033E-01	5.061E-02	6.044E-02	2.985E-03	1.709
CS-137	+	661.65	*	1.092E-01	5.350E-02	6.389E-02	3.174E-03	1.709
TL-208		277.35		1.813E-01	3.935E-01	6.205E-01	6.609E-02	0.292
	+	510.84		3.541E-01	2.958E-01	2.065E-01	2.072E-02	1.715
	+	583.14	*	3.772E-01	7.504E-02	5.496E-02	3.473E-03	6.864
		860.37		4.196E-01	2.871E-01	5.301E-01	4.053E-02	0.792
BI-211		72.87		1.361E+01	3.283E+00	5.711E+00	5.128E-01	2.383
	+	351.07	*	2.640E+00	4.186E-01	3.329E-01	2.149E-02	7.930
PB-212	+	74.81		1.821E+00	5.046E-01	4.875E-01	6.338E-02	3.735
	+	77.11		1.327E+00	2.723E-01	2.749E-01	2.510E-02	4.825
	+	87.30		5.842E-01	4.461E-01	6.544E-01	9.170E-02	0.893
	+	238.63	*	1.025E+00	1.174E-01	8.559E-02	6.309E-03	11.972
		300.09		1.358E+00	8.225E-01	1.326E+00	1.110E-01	1.024
PO-212	+	74.81		1.821E+00	5.046E-01	4.875E-01	6.338E-02	3.735
	+	77.11		1.327E+00	2.723E-01	2.749E-01	2.510E-02	4.825
	+	87.30		5.842E-01	4.461E-01	6.544E-01	9.170E-02	0.893
		115.19		-1.799E-01	3.276E+00	5.386E+00	3.554E-01	-0.033
	+	238.63	*	1.025E+00	1.174E-01	8.559E-02	6.309E-03	11.972
		300.09		1.358E+00	8.225E-01	1.326E+00	1.110E-01	1.024
BI-214	+	609.31	*	7.990E-01	1.376E-01	1.063E-01	7.846E-03	7.515
	+	1120.29		1.136E+00	4.257E-01	3.933E-01	3.592E-02	2.889
	+	1764.49		1.209E+00	3.015E-01	2.818E-01	1.650E-02	4.289
PB-214	+	74.81		3.138E+00	8.508E-01	8.400E-01	9.816E-02	3.735
	+	77.11		2.274E+00	4.979E-01	4.713E-01	5.605E-02	4.825
	+	87.30		1.001E+00	7.616E-01	1.121E+00	1.399E-01	0.893
	+	241.98		1.815E+00	6.477E-01	5.155E-01	4.183E-02	3.521
	+	295.21		9.417E-01	2.268E-01	2.195E-01	1.898E-02	4.290
	+	351.92	*	9.182E-01	1.533E-01	1.049E-01	8.705E-03	8.753
PO-214	+	74.81		3.138E+00	8.508E-01	8.400E-01	9.816E-02	3.735

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-216	+	77.11		2.274E+00	4.979E-01	4.713E-01	5.605E-02	4.825
	+	87.30		1.001E+00	7.616E-01	1.121E+00	1.399E-01	0.893
	+	241.98		1.815E+00	6.477E-01	5.155E-01	4.183E-02	3.521
	+	295.21		9.417E-01	2.268E-01	2.195E-01	1.898E-02	4.290
	+	351.92	*	9.182E-01	1.533E-01	1.049E-01	8.705E-03	8.753
	+	74.81		1.821E+00	5.046E-01	4.875E-01	6.338E-02	3.735
	+	77.11		1.327E+00	2.723E-01	2.749E-01	2.510E-02	4.825
	+	87.30		5.842E-01	4.461E-01	6.544E-01	9.170E-02	0.893
	+	238.63	*	1.025E+00	1.174E-01	8.559E-02	6.309E-03	11.972
	+	300.09		1.358E+00	8.225E-01	1.326E+00	1.110E-01	1.024
PO-218	+	74.81		3.138E+00	8.508E-01	8.400E-01	9.816E-02	3.735
	+	77.11		2.274E+00	4.979E-01	4.713E-01	5.605E-02	4.825
	+	87.30		1.001E+00	7.616E-01	1.121E+00	1.399E-01	0.893
	+	241.98		1.815E+00	6.477E-01	5.155E-01	4.183E-02	3.521
	+	295.21		9.417E-01	2.268E-01	2.195E-01	1.898E-02	4.290
RA-224	+	351.92	*	9.182E-01	1.533E-01	1.049E-01	8.705E-03	8.753
	+	240.98	*	3.442E+00	1.213E+00	9.742E-01	5.709E-02	3.533
RA-226	+	609.31	*	7.990E-01	1.376E-01	1.063E-01	7.846E-03	7.515
	+	1120.29		1.136E+00	4.257E-01	3.933E-01	3.592E-02	2.889
AC-228	+	1764.49		1.209E+00	3.015E-01	2.818E-01	1.650E-02	4.289
	+	338.32		1.245E+00	6.450E-01	3.515E-01	1.433E-01	3.542
	+	911.07	*	9.161E-01	3.142E-01	1.926E-01	1.968E-02	4.756
	+	969.11		9.211E-01	5.375E-01	4.413E-01	1.006E-01	2.087
RA-228	+	338.32		1.245E+00	6.450E-01	3.515E-01	1.433E-01	3.542
	+	911.07	*	9.161E-01	3.142E-01	1.926E-01	1.968E-02	4.756
	+	969.11		9.211E-01	5.375E-01	4.413E-01	1.006E-01	2.087
TH-228	+	74.81		1.854E+00	4.840E-01	4.963E-01	4.519E-02	3.735
	+	77.11		1.350E+00	2.772E-01	2.799E-01	2.555E-02	4.825
	+	87.30		5.947E-01	4.502E-01	6.661E-01	6.539E-02	0.893
	+	238.63	*	1.043E+00	1.195E-01	8.713E-02	6.423E-03	11.972
TH-230	+	300.09		1.382E+00	1.163E+00	1.350E+00	7.956E-01	1.024
	+	609.31	*	7.990E-01	1.376E-01	1.063E-01	7.846E-03	7.515
	+	1120.29		1.136E+00	4.257E-01	3.933E-01	3.592E-02	2.889
	+	1764.49		1.209E+00	3.015E-01	2.818E-01	1.650E-02	4.289
TH-232	+	338.32		1.245E+00	4.045E-01	3.515E-01	2.068E-02	3.542
	+	911.07	*	9.161E-01	3.142E-01	1.926E-01	1.968E-02	4.756
	+	969.11		9.211E-01	5.375E-01	4.413E-01	1.006E-01	2.087
TH-234	+	63.29	*	1.135E+00	1.753E+00	2.159E+00	3.926E-01	0.525
	+	92.38		1.061E+00	9.607E-01	7.670E-01	1.405E-01	1.384
U-234	+	609.31	*	7.990E-01	1.376E-01	1.063E-01	7.846E-03	7.515
	+	1120.29		1.136E+00	4.257E-01	3.933E-01	3.592E-02	2.889
	+	1764.49		1.209E+00	3.015E-01	2.818E-01	1.650E-02	4.289
NP-237	+	86.50	*	3.709E-01	2.911E-01	3.805E-01	8.684E-02	0.975
	+	95.87		-3.909E-01	9.446E-01	1.337E+00	3.291E-01	-0.292
U-238	+	63.29	*	1.135E+00	1.753E+00	2.159E+00	3.926E-01	0.525
	+	92.38		1.061E+00	9.457E-01	7.670E-01	6.973E-02	1.384
AM-243	+	74.67	*	2.952E-01	7.701E-02	7.931E-02	7.163E-03	3.722
	+	86.72		1.391E+01	1.053E+01	1.461E+01	1.427E+00	0.952
		117.66		-4.868E-01	3.493E+00	5.718E+00	3.666E-01	-0.085

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ANH-511	+	142.18	*	4.155E+00	1.711E+01	2.788E+01	1.592E+00	0.149
		511.00	*	7.648E-02	6.357E-02	4.461E-02	2.494E-03	1.714

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	9.748E-02	3.309E-01	5.555E-01	3.669E-02	0.175
NA-22		1274.54	*	4.071E-02	4.262E-02	7.616E-02	4.703E-03	0.535
NA-24		1368.53	*	5.560E-01	4.262E-02	Half-Life too short		
AL-26		1129.67		-2.095E-01	1.663E+00	2.698E+00	1.680E-01	-0.078
		1808.65	*	-2.451E-02	2.812E-02	3.757E-02	2.158E-03	-0.652
TI-44		67.85		-2.096E-02	5.816E-02	7.056E-02	6.296E-03	-0.297
		78.38	*	2.112E-01	4.346E-02	6.876E-02	6.320E-03	3.071
SC-46		889.25	*	-1.302E-02	3.455E-02	5.531E-02	3.964E-03	-0.235
	+	1120.51		1.990E-01	7.337E-02	1.168E-01	7.348E-03	1.703
V-48		944.10		-3.703E-01	9.760E-01	1.562E+00	1.115E-01	-0.237
		983.50	*	-8.511E-03	8.054E-02	1.321E-01	9.250E-03	-0.064
		1312.09		-4.305E-02	8.516E-02	1.296E-01	8.087E-03	-0.332
CR-51		320.08	*	8.649E-02	3.632E-01	6.169E-01	4.064E-02	0.140
MN-52		744.21		-1.952E-01	3.379E-01	5.143E-01	2.933E-02	-0.380
		848.13		-6.666E+00	9.349E+00	1.463E+01	9.858E-01	-0.456
		935.52		3.694E-01	3.436E-01	6.220E-01	4.456E-02	0.594
		1246.25		4.591E+00	1.011E+01	1.720E+01	1.049E+00	0.267
		1333.61		2.825E+00	6.967E+00	1.187E+01	7.459E-01	0.238
		1434.06	*	2.723E-02	2.847E-01	4.675E-01	2.942E-02	0.058
MN-54		834.83	*	-3.041E-02	3.742E-02	5.840E-02	3.854E-03	-0.521
CO-56		846.75	*	-2.793E-02	3.945E-02	6.178E-02	4.153E-03	-0.452
		977.42		-3.166E-01	3.341E+00	5.233E+00	3.676E-01	-0.061
		1037.82		-2.754E-02	3.228E-01	5.287E-01	3.881E-02	-0.052
		1175.09		8.925E-01	2.374E+00	4.016E+00	2.378E-01	0.222
		1238.25		1.389E-01	9.593E-02	1.732E-01	1.113E-02	0.802
		1360.21		1.540E-01	8.116E-01	1.357E+00	8.539E-02	0.113
		1771.40		-7.558E-01	3.159E-01	3.124E-01	1.824E-02	-2.419
CO-57		122.06	*	-4.413E-03	2.312E-02	3.772E-02	2.304E-03	-0.117
		136.48		-1.913E-01	2.003E-01	3.150E-01	2.116E-02	-0.607
CO-58		810.76	*	6.569E-03	3.957E-02	6.716E-02	4.288E-03	0.098
FE-59		142.65		-6.258E-01	2.777E+00	4.444E+00	2.535E-01	-0.141
		192.34		-2.240E-01	9.618E-01	1.485E+00	1.738E-01	-0.151
		1099.22	*	-5.348E-02	9.632E-02	1.499E-01	1.100E-02	-0.357
		1291.56		-6.570E-02	1.237E-01	1.886E-01	1.459E-02	-0.348
CO-60		1173.22		2.162E-02	4.646E-02	7.919E-02	4.685E-03	0.273
		1332.49	*	3.270E-02	3.949E-02	7.023E-02	4.412E-03	0.466
ZN-65		1115.52	*	-2.546E-02	1.052E-01	1.436E-01	9.095E-03	-0.177
GE-68		1077.35	*	2.341E-02	1.291E+00	2.131E+00	1.396E-01	0.011
AS-73		53.44	*	9.998E-01	9.149E-01	1.590E+00	1.454E-01	0.629
AS-74		595.88	*	6.476E-03	1.093E-01	1.787E-01	9.502E-03	0.036
		634.78		1.938E-01	3.904E-01	6.588E-01	3.367E-02	0.294
SE-75		66.05		1.817E+00	5.150E+00	7.638E+00	8.175E-01	0.238

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	96.73			-3.170E-01	7.827E-01	1.112E+00	1.504E-01	-0.285
	121.11			-1.923E-02	1.270E-01	2.076E-01	1.965E-02	-0.093
	136.00			-3.526E-02	3.821E-02	6.022E-02	3.549E-03	-0.586
	198.60			1.395E+00	1.793E+00	2.923E+00	2.040E-01	0.477
	264.65	*		4.922E-03	4.997E-02	7.014E-02	4.207E-03	0.070
	279.53			1.526E-01	1.107E-01	1.969E-01	1.265E-02	0.775
	303.91			-2.381E+00	2.079E+00	3.275E+00	3.158E-01	-0.727
	400.65			-1.141E-02	2.448E-01	4.054E-01	3.631E-02	-0.028
BR-77	+	87.88		6.182E+02	4.680E+02	6.830E+02	6.741E+01	0.905
		200.40		-1.668E+02	3.510E+02	5.550E+02	3.126E+01	-0.301
	+	239.00		3.663E+02	3.863E+01	6.974E+01	4.081E+00	5.253
		249.79		-2.657E+01	1.667E+02	2.302E+02	1.357E+01	-0.115
		281.68		-4.194E+01	2.011E+02	3.358E+02	2.004E+01	-0.125
		297.23		2.725E+02	1.458E+02	2.348E+02	1.403E+01	1.160
		303.76		-4.385E+02	3.870E+02	6.124E+02	3.655E+01	-0.716
		439.47		2.122E+01	3.047E+02	5.061E+02	2.848E+01	0.042
		484.57		-3.817E+02	4.606E+02	7.083E+02	3.984E+01	-0.539
		520.65	*	2.473E+00	2.196E+01	3.630E+01	2.023E+00	0.068
		574.64		-2.753E+02	4.307E+02	6.649E+02	3.596E+01	-0.414
		578.91		1.700E+02	2.006E+02	3.092E+02	1.667E+01	0.550
		585.48		2.293E+03	4.941E+02	9.276E+02	4.976E+01	2.471
		755.35		7.219E+01	3.584E+02	5.863E+02	3.407E+01	0.123
		817.79		1.268E+02	2.530E+02	4.431E+02	2.848E+01	0.286
SR-82		698.33		-2.573E+01	3.682E+01	5.589E+01	2.946E+00	-0.460
		776.49	*	-1.484E-01	3.810E-01	6.186E-01	3.721E-02	-0.240
		1395.20		5.846E+00	1.019E+01	1.794E+01	1.130E+00	0.326
RB-83		520.41	*	6.303E-03	6.656E-02	1.099E-01	6.125E-03	0.057
		529.64		5.977E-02	9.824E-02	1.685E-01	9.352E-03	0.355
		552.65		-5.345E-02	1.878E-01	2.999E-01	1.645E-02	-0.178
RB-84		881.50	*	-1.643E-02	6.498E-02	1.056E-01	7.480E-03	-0.156
KR-85		513.99	*	5.652E+00	7.891E+00	1.195E+01	6.675E-01	0.473
SR-85		513.99	*	2.983E-02	4.164E-02	6.307E-02	3.523E-03	0.473
RB-86		1076.63	*	8.159E-02	9.142E-01	1.518E+00	9.955E-02	0.054
Y-88		898.02		1.430E-02	3.975E-02	6.832E-02	4.995E-03	0.209
		1836.01	*	-3.363E-04	2.385E-02	3.926E-02	2.231E-03	-0.009
ZR-88		392.90	*	-6.735E-03	3.069E-02	5.034E-02	2.793E-03	-0.134
Y-91		1204.90	*	-1.449E-01	2.117E+01	3.461E+01	2.076E+00	-0.004
NB-94		702.63	*	-1.732E-02	3.321E-02	5.118E-02	2.719E-03	-0.338
		871.10		-1.514E-02	3.189E-02	5.079E-02	3.543E-03	-0.298
NB-95		765.79	*	1.881E-02	4.262E-02	7.066E-02	4.177E-03	0.266
NB-95M		235.69	*	3.469E-01	1.533E-01	2.392E-01	1.808E-02	1.450
ZR-95		724.18		9.872E-02	1.139E-01	1.723E-01	1.140E-02	0.573
		756.15	*	1.606E-03	7.170E-02	1.154E-01	8.133E-03	0.014
NB-97		657.90	*	1.148E+00	7.170E-02	Half-Life too short		
		1024.50		2.681E+00	7.170E-02	Half-Life too short		
ZR-97		254.15		-3.332E+01	7.170E-02	Half-Life too short		
		355.39		1.906E+01	7.170E-02	Half-Life too short		
		507.63	*	3.871E+01	7.170E-02	Half-Life too short		
		602.52		-5.059E+01	7.170E-02	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	1021.30			3.579E+01	7.170E-02	Half-Life	too short	
	1147.95			1.868E+01	7.170E-02	Half-Life	too short	
	1362.66			-1.526E+01	7.170E-02	Half-Life	too short	
	1750.46			-1.119E+01	7.170E-02	Half-Life	too short	
MO-99	140.51			1.762E+01	5.014E+01	8.284E+01	2.231E+01	0.213
	181.06			-4.806E+00	3.616E+01	5.088E+01	8.671E+00	-0.094
	366.43			5.553E+01	1.562E+02	2.659E+02	1.525E+01	0.209
	739.58	*		7.962E+00	2.225E+01	3.692E+01	5.065E+00	0.216
	778.00			-7.625E+01	6.302E+01	9.430E+01	5.688E+00	-0.809
TC-99M	140.51	*		2.520E+13	6.302E+01	Half-Life	too short	
RH-101	127.23			-5.060E-04	3.003E-02	4.929E-02	2.943E-03	-0.010
	198.01	*		1.221E-02	3.257E-02	5.224E-02	2.935E-03	0.234
	325.23			-6.266E-02	2.087E-01	3.442E-01	2.040E-02	-0.182
RH-102	418.52			1.577E-01	2.767E-01	4.745E-01	2.658E-02	0.332
	475.06	*		2.267E-02	2.808E-02	4.874E-02	2.745E-03	0.465
	631.29			-1.606E-02	5.360E-02	8.479E-02	4.351E-03	-0.189
	697.49			-5.074E-02	7.795E-02	1.189E-01	6.260E-03	-0.427
	766.84			4.957E-04	1.075E-01	1.719E-01	1.018E-02	0.003
	1046.59			1.082E-02	1.181E-01	1.965E-01	1.321E-02	0.055
	1112.84			-1.469E-01	2.595E-01	3.365E-01	2.133E-02	-0.437
RU-103	497.08	*		-9.841E-03	3.827E-02	6.161E-02	7.737E-03	-0.160
	610.33	+		9.055E+00	1.971E+00	2.583E+00	3.931E-01	3.506
RH-106	511.85	+		3.840E-01	3.192E-01	3.898E-01	2.179E-02	0.985
	621.84	*		-1.033E-01	2.862E-01	4.492E-01	5.141E-02	-0.230
	1050.47			-3.719E-01	2.308E+00	3.748E+00	2.512E-01	-0.099
RU-106	511.85	+		3.840E-01	3.192E-01	3.898E-01	2.179E-02	0.985
	621.84	*		-1.033E-01	2.860E-01	4.492E-01	2.329E-02	-0.230
	1050.47			-3.719E-01	2.308E+00	3.748E+00	2.512E-01	-0.099
AG-108M	433.93	*		9.768E-03	3.244E-02	5.467E-02	3.353E-03	0.179
	614.37			3.613E-02	3.736E-02	5.860E-02	3.380E-03	0.617
	722.95			1.612E-02	4.582E-02	6.599E-02	3.970E-03	0.244
AG-110M	657.75	*		2.137E-02	3.971E-02	5.894E-02	3.182E-03	0.363
	677.61			1.358E-01	3.212E-01	5.366E-01	2.943E-02	0.253
	706.67			-9.268E-02	2.160E-01	3.358E-01	1.922E-02	-0.276
	763.93			-5.787E-02	1.665E-01	2.592E-01	1.618E-02	-0.223
	884.67			2.407E-02	4.316E-02	7.578E-02	5.647E-03	0.318
	937.48			-1.033E-01	1.113E-01	1.686E-01	1.270E-02	-0.613
	1384.27			-2.039E-02	1.441E-01	2.286E-01	1.514E-02	-0.089
IN-111	171.28			-2.007E+00	1.860E+00	2.874E+00	1.562E-01	-0.698
	245.39	*		-1.342E+00	2.019E+00	3.122E+00	1.835E-01	-0.430
IN-113M	391.69	*		2.090E-02	4.469E-02	7.625E-02	4.538E-03	0.274
SN-113	391.69	*		2.090E-02	4.469E-02	7.625E-02	4.538E-03	0.274
IN-114M	190.27	*		9.775E-02	2.003E-01	2.921E-01	1.626E-02	0.335
CD-115	260.90			-9.517E-05	2.003E-01	Half-Life	too short	
	492.35			9.206E-06	2.003E-01	Half-Life	too short	
	527.90	*		-1.851E-07	2.003E-01	Half-Life	too short	
SN-117M	156.02			-2.183E+00	2.413E+00	3.780E+00	2.088E-01	-0.577
	158.56	*		-4.334E-02	5.853E-02	9.229E-02	5.070E-03	-0.470
SB-122	563.90	*		7.163E+00	4.016E+00	7.370E+00	4.016E-01	0.972

---- Non-Identified Nuclides ----

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I-123	692.80			4.581E+01	9.116E+01	1.529E+02	7.984E+00	0.300
	159.00	*		-6.268E+01	9.116E+01	Half-Life	too short	
	528.96			7.109E+03	9.116E+01	Half-Life	too short	
TE-123M	159.00	*		-9.723E-03	2.675E-02	4.291E-02	2.390E-03	-0.227
I-124	602.71	*		-2.850E-01	1.225E+00	1.680E+00	8.877E-02	-0.170
	722.78			2.564E+00	7.536E+00	1.084E+01	5.962E-01	0.236
	1325.50			-9.290E+00	5.336E+01	8.484E+01	5.318E+00	-0.109
SB-124	1376.25			4.193E+01	4.216E+01	7.721E+01	4.861E+00	0.543
	1509.49			2.372E+01	2.105E+01	3.992E+01	2.498E+00	0.594
	1691.02			3.098E-01	4.631E+00	7.807E+00	4.695E-01	0.040
	602.71			-1.084E-02	4.664E-02	6.392E-02	3.380E-03	-0.170
	645.85			-2.206E-01	4.689E-01	7.264E-01	4.274E-02	-0.304
	709.31			2.620E+00	2.816E+00	4.884E+00	2.625E-01	0.536
	713.82			-4.668E-01	1.672E+00	2.627E+00	2.626E-01	-0.178
	722.78			1.414E-01	4.158E-01	5.981E-01	3.461E-02	0.236
	968.20	+		9.787E+00	5.301E+00	6.669E+00	4.707E-01	1.468
	1045.16			1.210E+00	2.622E+00	4.503E+00	3.029E-01	0.269
	1325.50			-5.473E-01	3.144E+00	4.999E+00	3.133E-01	-0.109
	1368.21			-1.805E-01	1.508E+00	2.399E+00	2.908E-01	-0.075
SB-125	1436.60			3.854E-01	3.351E+00	5.519E+00	3.473E-01	0.070
	1691.02	*		4.031E-03	6.026E-02	1.016E-01	6.596E-03	0.040
	427.89	*		-9.066E-02	8.650E-02	1.326E-01	7.783E-03	-0.683
	463.38	+		6.659E-01	4.767E-01	5.193E-01	3.438E-02	1.282
	600.56			2.738E-02	1.793E-01	2.951E-01	1.852E-02	0.093
TE-125M	635.90			1.604E-01	2.684E-01	4.562E-01	2.832E-02	0.352
	109.28	*		-7.552E+00	9.107E+00	1.433E+01	1.304E+00	-0.527
	388.63			8.151E-02	2.327E-01	3.946E-01	2.199E-02	0.207
I-126	666.33	*		-1.294E-03	2.286E-01	3.189E-01	1.588E-02	-0.004
	753.82			2.054E-01	1.654E+00	2.688E+00	1.557E-01	0.076
	223.80			-2.100E+00	4.594E+00	7.228E+00	4.175E-01	-0.290
SB-126	278.60			4.888E+00	2.826E+00	5.091E+00	3.037E-01	0.960
	296.50			6.278E+00	2.201E+00	3.641E+00	2.175E-01	1.724
	414.70			3.537E-02	8.345E-02	1.419E-01	7.942E-03	0.249
	415.30			2.153E+00	6.964E+00	1.176E+01	6.584E-01	0.183
	555.20			-2.827E+00	4.188E+00	6.446E+00	3.532E-01	-0.439
	573.80			-5.734E-01	1.097E+00	1.710E+00	9.255E-02	-0.335
	593.00			2.957E-01	1.114E+00	1.849E+00	9.858E-02	0.160
	656.30			2.541E+00	4.382E+00	6.537E+00	3.252E-01	0.389
	666.33			-5.442E-04	9.615E-02	1.341E-01	6.679E-03	-0.004
	675.00			-1.277E+00	2.475E+00	3.835E+00	1.940E-01	-0.333
	695.00			-1.400E-03	9.368E-02	1.510E-01	7.915E-03	-0.009
	697.00			-1.340E-01	3.151E-01	4.904E-01	2.579E-02	-0.273
	720.50	*		-5.868E-02	1.868E-01	2.487E-01	1.362E-02	-0.236
	856.80			-5.817E-01	5.659E-01	8.628E-01	5.890E-02	-0.674
	989.30			-4.666E-01	1.301E+00	2.071E+00	1.445E-01	-0.225
SB-127	1034.80			1.452E+00	1.053E+01	1.761E+01	1.194E+00	0.082
	1213.00			-2.165E+00	5.799E+00	9.175E+00	5.522E-01	-0.236
	61.10			7.310E+01	1.062E+02	1.612E+02	1.994E+01	0.453
	252.40			3.124E+00	7.092E+00	1.143E+01	4.777E+00	0.273

---- Non-Identified Nuclides ----

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	290.80			-2.084E+01	3.682E+01	5.170E+01	5.318E+00	-0.403
	411.60			1.373E+01	1.906E+01	3.279E+01	4.909E+00	0.419
	444.90			2.655E+00	1.504E+01	2.515E+01	2.914E+00	0.106
	473.00			-2.036E+00	2.635E+00	4.082E+00	4.877E-01	-0.499
	543.00			1.622E+01	2.527E+01	4.324E+01	5.852E+00	0.375
	603.60			-5.545E+00	2.118E+01	2.888E+01	3.291E+00	-0.192
	685.20	*		2.370E-01	2.339E+00	3.809E+00	3.840E-01	0.062
	698.50			-1.212E+01	2.456E+01	3.786E+01	5.661E+00	-0.320
	722.20			-8.338E+00	5.529E+01	7.487E+01	7.497E+00	-0.111
	783.80			7.687E+00	5.436E+00	1.001E+01	1.170E+00	0.768
XE-127	57.60			-4.403E+00	7.134E+00	1.079E+01	9.934E-01	-0.408
	145.22			4.884E-01	6.850E-01	1.151E+00	6.520E-02	0.424
	172.10			-3.771E-02	1.168E-01	1.871E-01	1.018E-02	-0.202
	202.84	*		-2.343E-02	4.628E-02	7.298E-02	4.123E-03	-0.321
	374.96			-8.408E-02	1.945E-01	3.153E-01	1.790E-02	-0.267
I-131	80.18			-4.981E+00	5.902E+00	8.263E+00	7.737E-01	-0.603
	284.30			-3.639E-01	1.847E+00	3.083E+00	2.044E-01	-0.118
	364.48	*		-5.915E-03	1.318E-01	2.193E-01	1.416E-02	-0.027
	636.97			1.759E+00	1.896E+00	3.304E+00	1.952E-01	0.532
	722.89			3.398E+00	9.772E+00	1.407E+01	7.907E-01	0.242
TE-132	49.72			-4.415E+01	4.037E+01	6.471E+01	7.545E+00	-0.682
	111.76			4.892E+00	4.906E+01	8.120E+01	8.439E+00	0.060
	116.30			-1.555E+01	4.583E+01	7.443E+01	7.559E+00	-0.209
	228.16	*		1.795E-01	1.220E+00	1.975E+00	2.952E-01	0.091
BA-133	53.15			4.416E+00	3.933E+00	6.837E+00	6.241E-01	0.646
	79.62			1.117E-02	1.290E+00	1.890E+00	2.948E-01	0.006
	81.00			-1.477E-01	1.115E-01	1.373E-01	2.235E-02	-1.076
	276.40			-2.814E-02	4.375E-01	6.052E-01	7.890E-02	-0.046
	302.84			-9.197E-02	1.408E-01	2.285E-01	2.683E-02	-0.403
	356.01	*		3.551E-02	4.263E-02	6.609E-02	7.640E-03	0.537
	383.85			4.663E-02	2.762E-01	4.643E-01	5.001E-02	0.100
I-133	510.53	+		6.985E+00	2.762E-01	Half-Life	too short	
	529.87	*		4.433E-02	2.762E-01	Half-Life	too short	
	706.58			-1.683E+00	2.762E-01	Half-Life	too short	
	856.28			-6.748E+00	2.762E-01	Half-Life	too short	
	875.33			2.577E-01	2.762E-01	Half-Life	too short	
	1236.41			6.717E+00	2.762E-01	Half-Life	too short	
	1298.22			1.641E+00	2.762E-01	Half-Life	too short	
CS-134	475.35			2.385E+00	1.823E+00	3.259E+00	1.835E-01	0.732
	563.23			3.683E-01	3.530E-01	6.190E-01	3.455E-02	0.595
	569.32			-1.698E-01	1.872E-01	2.814E-01	1.579E-02	-0.604
	604.70			9.410E-03	3.684E-02	5.321E-02	2.826E-03	0.177
	795.84	*		3.779E-02	4.350E-02	7.775E-02	4.893E-03	0.486
	801.93			-1.982E-01	3.687E-01	5.933E-01	3.758E-02	-0.334
	1038.57			-4.729E-01	3.924E+00	6.404E+00	4.330E-01	-0.074
	1167.94			-2.835E-01	2.544E+00	4.126E+00	2.458E-01	-0.069
	1365.15			-6.669E-01	1.071E+00	1.570E+00	1.071E-01	-0.425
CS-135	268.24	*		1.596E-01	1.777E-01	2.628E-01	2.042E-02	0.607
I-135	288.45			-2.421E+13	1.777E-01	Half-Life	too short	

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	417.63			5.569E+12	1.777E-01	Half-Life too short		
	546.56			4.780E+12	1.777E-01	Half-Life too short		
	836.80			2.341E+12	1.777E-01	Half-Life too short		
	1038.76			-6.345E+12	1.777E-01	Half-Life too short		
	1124.00			-3.813E+10	1.777E-01	Half-Life too short		
	1131.51			-1.733E+12	1.777E-01	Half-Life too short		
	1260.41	*		2.000E+11	1.777E-01	Half-Life too short		
	1457.56			7.009E+14	1.777E-01	Half-Life too short		
	1678.03			-1.160E+13	1.777E-01	Half-Life too short		
	1706.46			5.759E+12	1.777E-01	Half-Life too short		
	1791.20			-1.480E+11	1.777E-01	Half-Life too short		
CS-136	66.91			8.779E-02	1.022E+00	1.400E+00	2.186E-01	0.063
+	86.29			1.905E+00	1.453E+00	2.059E+00	2.805E-01	0.925
	153.22			3.036E-01	7.019E-01	1.166E+00	8.201E-02	0.261
	163.89			2.106E-02	1.177E+00	1.880E+00	1.309E-01	0.011
	176.55			9.743E-02	4.061E-01	6.664E-01	4.152E-02	0.146
	273.65			-8.393E-01	6.119E-01	7.591E-01	5.130E-02	-1.106
	340.57			2.782E-01	1.530E-01	2.438E-01	1.521E-02	1.141
	818.51			3.416E-02	7.505E-02	1.308E-01	8.436E-03	0.261
	1048.07	*		7.487E-03	1.278E-01	2.121E-01	1.523E-02	0.035
	1235.34			3.395E-01	7.379E-01	1.246E+00	1.264E-01	0.272
CE-139	165.85	*		-6.590E-03	2.842E-02	4.580E-02	2.476E-03	-0.144
BA-140	162.64			3.298E-01	8.317E-01	1.349E+00	8.378E-02	0.244
	304.84			-1.485E+00	1.470E+00	2.248E+00	6.142E-01	-0.661
	423.70			1.080E+00	2.074E+00	3.504E+00	1.113E+00	0.308
	537.32	*		1.598E-01	2.659E-01	4.484E-01	1.456E-01	0.356
LA-140	328.77			4.096E-01	3.239E-01	5.746E-01	3.793E-02	0.713
	432.53			1.144E+00	2.317E+00	3.953E+00	2.468E-01	0.289
	487.03			-1.062E-01	1.427E-01	2.208E-01	1.415E-02	-0.481
	751.79			-5.958E-01	1.956E+00	3.054E+00	2.162E-01	-0.195
	815.85			-1.850E-01	3.426E-01	5.448E-01	4.190E-02	-0.340
	867.82			-2.711E-01	1.439E+00	2.357E+00	1.768E-01	-0.115
	919.63			-2.649E+00	3.294E+00	4.568E+00	4.358E-01	-0.580
	925.24			2.755E-01	1.230E+00	2.087E+00	1.635E-01	0.132
	1596.49	*		-7.183E-02	1.032E-01	1.553E-01	9.580E-03	-0.463
CE-141	145.44	*		3.025E-02	6.227E-02	1.037E-01	6.121E-03	0.292
CE-143	57.37			-4.622E-03	6.227E-02	Half-Life too short		
	231.56			6.567E-03	6.227E-02	Half-Life too short		
	293.26	*		3.405E-03	6.227E-02	Half-Life too short		
+	350.59			8.345E-02	6.227E-02	Half-Life too short		
	490.36			8.500E-03	6.227E-02	Half-Life too short		
	664.57			8.229E-03	6.227E-02	Half-Life too short		
	721.93			-2.004E-03	6.227E-02	Half-Life too short		
CE-144	80.11			-1.772E+00	2.161E+00	3.030E+00	2.814E-01	-0.585
	133.54	*		-2.849E-02	1.967E-01	3.206E-01	4.560E-02	-0.089
PM-144	476.78			3.852E-02	6.607E-02	1.130E-01	7.688E-03	0.341
	618.01			1.461E-03	2.815E-02	4.595E-02	2.570E-03	0.032
	696.49	*		-3.062E-03	3.445E-02	5.519E-02	2.904E-03	-0.055
	778.57			-1.579E+00	2.132E+00	3.349E+00	2.023E-01	-0.472

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PR-144	696.49	*		-2.078E-01	2.338E+00	3.745E+00	1.968E-01	-0.055
	1489.15			-1.184E+01	1.006E+01	1.209E+01	7.585E-01	-0.979
PM-146	453.90	*		-9.150E-03	4.089E-02	6.644E-02	5.654E-03	-0.138
	633.02			-3.150E-01	1.363E+00	2.162E+00	7.938E-01	-0.146
	735.90			-1.587E-01	1.532E-01	2.117E-01	5.894E-02	-0.750
	747.13			7.230E-02	8.754E-02	1.506E-01	1.878E-02	0.480
ND-147	91.11			2.047E-01	4.936E-01	5.566E-01	5.547E-02	0.368
	319.41			-6.361E-01	3.631E+00	6.031E+00	3.586E-01	-0.105
	439.89			-9.099E-01	6.683E+00	1.095E+01	6.165E-01	-0.083
	531.02	*		4.262E-01	5.981E-01	1.030E+00	1.383E-01	0.414
PM-149	285.90	*		1.639E-04	5.981E-01	Half-Life too short		
EU-152	121.78			-1.118E-02	6.672E-02	1.090E-01	8.557E-03	-0.103
	244.69			-8.379E-02	3.214E-01	5.085E-01	2.988E-02	-0.165
	344.27	*		-1.317E-01	1.138E-01	1.387E-01	9.138E-03	-0.950
	443.98			-1.668E-01	8.922E-01	1.455E+00	8.193E-02	-0.115
	778.89			-1.814E-01	2.449E-01	3.847E-01	2.323E-02	-0.472
	867.32			-4.093E-01	7.538E-01	1.192E+00	8.265E-02	-0.344
	964.01			2.894E-01	3.319E-01	5.192E-01	3.672E-02	0.557
	1085.78			-1.265E-01	3.954E-01	6.306E-01	4.102E-02	-0.201
	1112.02			-1.179E-01	3.478E-01	4.889E-01	3.102E-02	-0.241
	1407.95			2.682E-01	1.667E-01	3.263E-01	2.055E-02	0.822
GD-153	69.67			-1.904E+00	1.781E+00	2.474E+00	2.208E-01	-0.770
	83.37			3.330E+00	1.597E+01	2.200E+01	2.091E+00	0.151
	97.43	*		-2.780E-02	8.050E-02	1.148E-01	9.598E-03	-0.242
	103.18			-4.743E-02	9.825E-02	1.593E-01	1.224E-02	-0.298
EU-154	123.07			-1.655E-02	4.673E-02	7.565E-02	7.244E-03	-0.219
	247.94			-2.359E-01	4.041E-01	5.389E-01	5.171E-02	-0.438
	591.81			-1.180E-01	6.405E-01	9.990E-01	9.497E-02	-0.118
	723.30			9.413E-02	1.936E-01	2.830E-01	1.936E-02	0.333
	756.87			-1.450E-01	7.689E-01	1.214E+00	1.232E-01	-0.119
	873.19			1.610E-01	2.790E-01	4.885E-01	5.452E-02	0.330
	996.32			3.847E-02	3.672E-01	6.133E-01	1.044E-01	0.063
	1004.76			-1.656E-01	2.205E-01	3.409E-01	3.560E-02	-0.486
	1274.45	*		1.069E-01	1.184E-01	2.103E-01	2.013E-02	0.508
EU-155	48.70			-1.645E+00	2.806E+00	4.619E+00	3.868E-01	-0.356
	60.01			5.771E+00	5.531E+00	8.542E+00	7.825E-01	0.676
	86.54			1.523E-01	1.153E-01	1.631E-01	1.604E-02	0.933
	105.31	*		-3.011E-03	9.887E-02	1.631E-01	1.237E-02	-0.018
TB-160	86.79	+		4.172E-01	3.159E-01	4.433E-01	4.333E-02	0.941
	197.04			3.404E-02	5.648E-01	8.935E-01	5.013E-02	0.038
	215.65			1.134E+00	7.656E-01	1.275E+00	7.305E-02	0.889
	298.57			9.735E-02	1.224E-01	1.888E-01	1.128E-02	0.516
	879.36	*		-7.139E-02	1.311E-01	2.070E-01	1.462E-02	-0.345
	962.29			4.409E-01	6.052E-01	9.364E-01	6.629E-02	0.471
	966.15			6.293E-01	2.842E-01	4.809E-01	3.398E-02	1.309
	1177.93			-1.508E-01	4.097E-01	6.501E-01	3.854E-02	-0.232
	1271.85			-3.960E-01	7.204E-01	1.103E+00	6.788E-02	-0.359
HO-166M	80.57			-3.870E-01	2.813E-01	3.813E-01	3.552E-02	-1.015
	184.41	+		1.129E-01	4.885E-02	6.132E-02	3.387E-03	1.842

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TM-171		280.46		2.883E-03	8.325E-02	1.406E-01	8.390E-03	0.021
		410.95		2.654E-01	2.277E-01	4.034E-01	2.255E-02	0.658
		711.68	*	2.498E-04	6.181E-02	9.968E-02	5.378E-03	0.003
		752.31		3.087E-02	2.641E-01	4.289E-01	2.479E-02	0.072
		810.29		1.284E-02	5.705E-02	9.731E-02	6.180E-03	0.132
		51.35		3.447E+00	3.429E+01	5.788E+01	5.190E+00	0.060
		52.39		1.149E+01	1.764E+01	3.027E+01	2.748E+00	0.380
		59.40		2.317E+01	3.038E+01	4.641E+01	4.265E+00	0.499
		66.72	*	4.342E+00	2.991E+01	4.395E+01	3.926E+00	0.099
		88.36		2.996E-01	2.268E-01	3.305E-01	3.241E-02	0.907
LU-176	+	201.83		-5.129E-03	2.704E-02	4.333E-02	2.445E-03	-0.118
		306.84	*	-2.769E-03	2.263E-02	3.777E-02	2.253E-03	-0.073
		401.10		2.464E-02	6.342E+00	1.053E+01	5.866E-01	0.002
LU-177		112.95		1.071E+00	1.969E+00	3.313E+00	2.245E-01	0.323
	+	208.36	*	2.781E+00	1.641E+00	2.340E+00	1.330E-01	1.189
LU-177M		52.97		2.241E+00	1.810E+00	3.156E+00	2.877E-01	0.710
		54.07		4.907E-01	9.367E-01	1.601E+00	1.468E-01	0.307
		61.30		1.388E+00	1.702E+00	2.600E+00	2.364E-01	0.534
		121.62		-4.483E-02	3.466E-01	5.671E-01	3.473E-02	-0.079
		147.16		-8.642E-01	6.290E-01	9.675E-01	5.456E-02	-0.893
		171.86		-1.739E-01	4.509E-01	7.203E-01	3.919E-02	-0.241
		218.09		-4.778E-01	8.626E-01	1.353E+00	7.774E-02	-0.353
	+	268.79		2.049E+00	1.131E+00	1.352E+00	8.043E-02	1.515
		319.02		-2.439E-02	2.367E-01	3.948E-01	2.346E-02	-0.062
		367.43		-6.116E-01	8.797E-01	1.405E+00	8.047E-02	-0.435
HF-181		413.65	*	-1.767E-01	1.755E-01	2.723E-01	1.523E-02	-0.649
		56.28		-1.337E+00	1.052E+00	1.673E+00	1.540E-01	-0.799
		57.53		-4.387E-01	5.984E-01	8.998E-01	8.283E-02	-0.488
		65.20		8.724E-01	1.049E+00	1.588E+00	1.422E-01	0.549
		133.02		-3.690E-02	6.621E-02	1.062E-01	6.220E-03	-0.348
		136.25		-5.120E-01	4.578E-01	7.149E-01	4.148E-02	-0.716
		345.85		-5.297E-02	2.249E-01	3.018E-01	1.765E-02	-0.176
		482.03	*	9.306E-03	4.205E-02	7.029E-02	3.955E-03	0.132
		56.28		-5.082E-01	4.000E-01	6.359E-01	5.854E-02	-0.799
		57.53		-1.671E-01	2.277E-01	3.424E-01	3.151E-02	-0.488
W-181		65.20	*	3.293E-01	3.960E-01	5.994E-01	5.369E-02	0.549
		67.75		-4.107E-02	1.415E-01	1.725E-01	1.539E-02	-0.238
		100.10		2.095E-01	1.769E-01	2.849E-01	2.287E-02	0.735
TA-182		152.43		1.544E-01	3.178E-01	5.290E-01	2.947E-02	0.292
		222.10		2.269E-01	3.410E-01	5.658E-01	3.263E-02	0.401
		1001.68		-1.903E-01	2.161E+00	3.558E+00	2.465E-01	-0.053
	+	1121.28		5.462E-01	2.014E-01	3.145E-01	1.976E-02	1.737
		1189.05		4.461E-03	3.560E-01	5.833E-01	3.475E-02	0.008
		1221.42	*	-8.550E-02	2.030E-01	3.192E-01	1.927E-02	-0.268
		1230.97		-2.153E-01	5.431E-01	8.590E-01	5.207E-02	-0.251
		57.98		-2.842E-02	2.399E-01	3.525E-01	3.243E-02	-0.081
		59.32		9.676E-02	1.281E-01	1.957E-01	1.799E-02	0.494
		67.20		1.021E-01	2.271E-01	3.193E-01	2.851E-02	0.320
RE-183		162.32	*	2.697E-02	1.055E-01	1.737E-01	9.463E-03	0.155

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RE-184	+	208.81		1.935E+00	1.142E+00	1.634E+00	9.294E-02	1.184
		291.72		1.017E-01	1.013E+00	1.496E+00	8.937E-02	0.068
		57.98		-1.031E-01	8.699E-01	1.278E+00	1.176E-01	-0.081
		59.32		3.506E-01	4.642E-01	7.091E-01	6.517E-02	0.494
		67.20		3.702E-01	8.234E-01	1.158E+00	1.034E-01	0.320
		161.27		1.622E-01	3.332E-01	5.539E-01	3.024E-02	0.293
		216.55		3.652E-02	2.644E-01	4.288E-01	2.459E-02	0.085
		252.85	*	1.280E-01	2.298E-01	3.786E-01	2.236E-02	0.338
		318.01		-9.707E-03	4.136E-01	6.929E-01	4.120E-02	-0.014
		792.07		1.057E+00	9.314E-01	1.695E+00	1.046E-01	0.624
OS-185		903.28		-4.108E-02	1.134E+00	1.618E+00	1.173E-01	-0.025
		920.93		-1.362E-02	4.170E-01	6.761E-01	4.871E-02	-0.020
		59.72		3.476E-01	3.368E-01	5.200E-01	4.772E-02	0.668
		61.14		1.275E-01	1.883E-01	2.862E-01	2.604E-02	0.445
		69.30		-3.067E-01	3.211E-01	4.490E-01	4.007E-02	-0.683
		592.07		-1.208E-01	2.561E+00	4.155E+00	2.217E-01	-0.029
		646.12	*	-2.114E-02	3.986E-02	6.142E-02	3.097E-03	-0.344
		717.42		4.035E-01	8.913E-01	1.457E+00	7.939E-02	0.277
		874.81		3.837E-01	5.549E-01	9.817E-01	6.886E-02	0.391
		880.27		-4.425E-01	7.223E-01	1.131E+00	8.000E-02	-0.391
RE-188		155.03	*	6.374E-02	1.607E-01	2.666E-01	1.476E-02	0.239
		477.96		7.838E-01	3.164E+00	5.295E+00	2.981E-01	0.148
		633.10		-5.648E-01	2.826E+00	4.510E+00	2.309E-01	-0.125
W-188	+	63.58		4.687E+01	7.203E+01	8.902E+01	8.013E+00	0.526
		227.08		-1.601E+00	1.284E+01	2.054E+01	1.190E+00	-0.078
IR-192		290.67	*	-4.574E+00	7.985E+00	1.122E+01	6.702E-01	-0.408
	+	295.96		7.367E-01	1.715E-01	2.530E-01	1.534E-02	2.912
		308.46		-1.251E-02	9.104E-02	1.518E-01	9.150E-03	-0.082
		316.51	*	3.293E-03	3.257E-02	5.494E-02	3.284E-03	0.060
		468.07		4.331E-02	6.671E-02	1.019E-01	6.664E-03	0.425
		604.41		8.676E-02	5.070E-01	7.258E-01	8.051E-02	0.120
AU-195		612.46		8.089E-01	7.723E-01	1.204E+00	8.609E-02	0.672
		65.12		1.551E-01	1.827E-01	2.768E-01	2.480E-02	0.560
		66.83		1.977E-02	9.974E-02	1.469E-01	1.312E-02	0.135
	+	75.70		1.183E+00	2.428E-01	4.296E-01	3.896E-02	2.754
		98.88	*	1.857E-01	2.333E-01	3.528E-01	2.884E-02	0.526
TL-200		129.76		4.473E+00	2.720E+00	4.718E+00	2.793E-01	0.948
		367.94	*	-1.016E-03	2.720E+00	Half-Life	too short	
		579.30		2.382E-02	2.720E+00	Half-Life	too short	
		828.27		3.995E-03	2.720E+00	Half-Life	too short	
TL-201		1205.75		8.226E-03	2.720E+00	Half-Life	too short	
		68.90		-9.596E+00	1.027E+01	1.332E+01	1.188E+00	-0.721
		70.82		1.522E+00	5.168E+00	7.697E+00	6.879E-01	0.198
		80.30		-8.034E+00	9.477E+00	1.326E+01	1.233E+00	-0.606
TL-202		135.34		-3.406E+00	4.455E+01	7.280E+01	4.235E+00	-0.047
		167.43	*	4.353E+00	1.202E+01	1.987E+01	1.075E+00	0.219
		68.90		-5.398E-01	5.779E-01	7.490E-01	6.683E-02	-0.721
		70.82		8.538E-02	2.899E-01	4.317E-01	3.859E-02	0.198
		80.30		-4.508E-01	5.318E-01	7.443E-01	6.921E-02	-0.606

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
HG-203	439.56	*		3.506E-03	7.728E-02	1.282E-01	7.210E-03	0.027
	70.83			3.373E-01	1.121E+00	1.669E+00	2.305E-01	0.202
	72.87			2.820E+00	7.363E-01	1.183E+00	1.590E-01	2.383
	82.60			4.732E-02	1.580E+00	1.678E+00	2.396E-01	0.028
BI-207	279.20	*		6.521E-02	4.237E-02	7.578E-02	4.786E-03	0.860
	72.80			7.432E-01	1.886E-01	3.290E-01	2.953E-02	2.259
	74.97		+	5.300E-01	1.383E-01	2.227E-01	2.013E-02	2.380
	84.90			3.948E-01	1.900E-01	2.983E-01	2.869E-02	1.324
	569.67			-2.376E-02	2.914E-02	4.418E-02	2.398E-03	-0.538
	1063.62	*		2.735E-02	5.200E-02	8.984E-02	5.957E-03	0.304
TL-207	1770.23			3.446E-01	2.970E-01	6.075E-01	3.549E-02	0.567
	81.07			-3.205E-01	2.420E-01	3.033E-01	2.835E-02	-1.057
	83.78			5.382E-02	1.248E-01	1.859E-01	1.773E-02	0.289
	94.90		+	5.127E-01	4.568E-01	3.450E-01	3.004E-02	1.486
	122.32			-3.600E-01	1.588E+00	2.586E+00	1.798E-01	-0.139
	144.24			1.911E-01	6.634E-01	1.082E+00	7.724E-02	0.177
	154.21			1.923E-01	3.693E-01	6.152E-01	4.187E-02	0.313
	269.46		+	4.740E-01	2.617E-01	3.148E-01	1.954E-02	1.506
	323.87	*		-6.297E-01	6.323E-01	9.888E-01	1.638E-01	-0.637
	338.28		+	5.199E+00	1.750E+00	2.199E+00	2.326E-01	2.364
PO-209	445.03			3.969E-01	2.140E+00	3.579E+00	3.642E-01	0.111
	260.50			-1.885E+00	9.545E+00	1.510E+01	8.955E-01	-0.125
	262.80			7.496E+00	2.578E+01	4.187E+01	2.485E+00	0.179
	896.60	*		2.100E+00	6.857E+00	1.174E+01	8.506E-01	0.179
BI-210	46.50	*		1.734E+00	4.184E+00	7.070E+00	5.821E-01	0.245
PB-210	46.50	*		1.734E+00	4.184E+00	7.070E+00	5.821E-01	0.245
PO-210	46.50	*		1.734E+00	4.183E+00	7.070E+00	5.107E-01	0.245
PB-211	404.84	*		-6.722E-01	9.866E-01	1.414E+00	8.809E-01	-0.476
BI-212	427.08			-1.312E+00	2.082E+00	3.028E+00	1.871E+00	-0.433
	831.96			7.468E-01	1.236E+00	2.017E+00	1.259E+00	0.370
	727.18	*	+	1.197E+00	4.487E-01	5.947E-01	4.472E-02	2.013
	785.46			1.063E+00	1.591E+00	2.811E+00	1.716E-01	0.378
	1620.62			7.369E-01	1.117E+00	2.051E+00	1.258E-01	0.359
PO-215	81.07			-3.205E-01	2.420E-01	3.033E-01	2.835E-02	-1.057
	83.78			5.382E-02	1.248E-01	1.859E-01	1.773E-02	0.289
	94.90		+	5.127E-01	4.568E-01	3.450E-01	3.004E-02	1.486
	122.32			-3.600E-01	1.588E+00	2.586E+00	1.798E-01	-0.139
	144.24			1.911E-01	6.634E-01	1.082E+00	7.724E-02	0.177
	154.21			1.923E-01	3.693E-01	6.152E-01	4.187E-02	0.313
	269.46		+	4.740E-01	2.617E-01	3.148E-01	1.954E-02	1.506
	323.87	*		-6.297E-01	6.323E-01	9.888E-01	1.638E-01	-0.637
	338.28		+	5.199E+00	1.750E+00	2.199E+00	2.326E-01	2.364
	445.03			3.969E-01	2.140E+00	3.579E+00	3.642E-01	0.111
RN-219	271.23		+	6.081E-01	3.374E-01	4.082E-01	3.353E-02	1.490
	401.81	*		2.036E-01	3.807E-01	6.515E-01	8.801E-02	0.312
RN-220	549.76	*		1.024E+01	2.484E+01	4.189E+01	2.303E+00	0.244
RA-223	81.07			-3.205E-01	2.420E-01	3.033E-01	2.835E-02	-1.057
	83.78			5.382E-02	1.248E-01	1.859E-01	1.773E-02	0.289
	94.90		+	5.127E-01	4.568E-01	3.450E-01	3.004E-02	1.486

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AC-227		122.32		-3.600E-01	1.588E+00	2.586E+00	1.798E-01	-0.139
		144.24		1.911E-01	6.634E-01	1.082E+00	7.724E-02	0.177
		154.21		1.923E-01	3.693E-01	6.152E-01	4.187E-02	0.313
	+	269.46		4.740E-01	2.617E-01	3.148E-01	1.954E-02	1.506
		323.87	*	-6.297E-01	6.323E-01	9.888E-01	1.638E-01	-0.637
	+	338.28		5.199E+00	1.750E+00	2.199E+00	2.326E-01	2.364
		445.03		3.969E-01	2.140E+00	3.579E+00	3.642E-01	0.111
		79.80		-2.351E-01	1.628E+00	2.365E+00	5.149E-01	-0.099
		236.00		1.163E+00	3.241E-01	5.017E-01	5.255E-02	2.319
		256.20	*	-7.848E-02	3.792E-01	6.000E-01	8.405E-02	-0.131
		286.10		8.508E-01	1.430E+00	2.473E+00	2.880E-01	0.344
		299.80		2.261E+00	1.560E+00	2.440E+00	3.989E-01	0.926
TH-227		304.40		-2.531E+00	1.868E+00	2.837E+00	4.923E-01	-0.892
		334.20		-2.575E-02	2.462E+00	3.583E+00	6.581E-01	-0.007
		79.80		-2.351E-01	1.628E+00	2.365E+00	5.214E-01	-0.099
	+	94.00		4.101E+00	3.745E+00	3.260E+00	7.129E-01	1.258
		236.00		1.163E+00	3.183E-01	5.017E-01	4.557E-02	2.319
		256.20	*	-7.848E-02	3.793E-01	6.000E-01	1.016E-01	-0.131
		286.10		8.508E-01	1.662E+00	2.473E+00	2.477E+00	0.344
		299.80		2.261E+00	1.560E+00	2.440E+00	3.989E-01	0.926
		304.40		-2.531E+00	1.868E+00	2.837E+00	4.923E-01	-0.892
		334.20		-2.575E-02	2.462E+00	3.583E+00	6.581E-01	-0.007
	+	85.43		2.833E-01	2.144E-01	3.107E-01	3.002E-02	0.912
		88.47		-1.768E-02	1.802E-01	1.889E-01	1.849E-02	-0.094
TH-229		100.00		2.181E-01	1.808E-01	2.914E-01	2.343E-02	0.748
		193.63	*	-5.927E-01	4.986E-01	7.623E-01	4.259E-02	-0.778
		210.97		4.742E-02	8.281E-01	1.171E+00	6.676E-02	0.040
	PA-231	283.67	*	-7.673E-01	1.505E+00	2.470E+00	3.422E-01	-0.311
		301.29		9.549E-01	5.912E-01	9.799E-01	1.034E-01	0.974
	TH-231	81.07		-3.205E-01	2.420E-01	3.033E-01	2.835E-02	-1.057
		83.78		5.382E-02	1.248E-01	1.859E-01	1.773E-02	0.289
	+	94.90		5.127E-01	4.568E-01	3.450E-01	3.004E-02	1.486
		122.32		-3.600E-01	1.588E+00	2.586E+00	1.798E-01	-0.139
		144.24		1.911E-01	6.634E-01	1.082E+00	7.724E-02	0.177
		154.21		1.923E-01	3.693E-01	6.152E-01	4.187E-02	0.313
	+	269.46		4.740E-01	2.617E-01	3.148E-01	1.954E-02	1.506
U-231		323.87	*	-6.297E-01	6.323E-01	9.888E-01	1.638E-01	-0.637
	+	338.28		5.199E+00	1.750E+00	2.199E+00	2.326E-01	2.364
		445.03		3.969E-01	2.140E+00	3.579E+00	3.642E-01	0.111
		84.21		4.913E+00	8.334E+00	1.250E+01	1.196E+00	0.393
	+	92.29		6.370E+00	5.676E+00	5.388E+00	4.906E-01	1.182
		95.87	*	-6.967E-01	1.676E+00	2.382E+00	2.041E-01	-0.292
		108.00		-2.153E+00	3.061E+00	4.851E+00	3.496E-01	-0.444
	PA-233	75.28		1.546E+01	4.486E+00	6.796E+00	1.060E+00	2.276
	+	86.59		2.473E+00	1.975E+00	2.644E+00	7.193E-01	0.935
		300.12		7.005E-01	4.314E-01	6.848E-01	9.254E-02	1.023
		311.98	*	6.939E-03	5.769E-02	9.748E-02	6.149E-03	0.071
		340.50		1.333E+00	7.150E-01	1.050E+00	2.414E-01	1.269
		398.62		1.235E-01	1.917E+00	3.196E+00	8.247E-01	0.039

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PA-234	+	415.76		-1.478E-02	1.593E+00	2.639E+00	5.419E-01	-0.006
	+	63.00		1.323E+00	2.040E+00	2.604E+00	4.095E-01	0.508
	+	94.67		3.657E-01	3.275E-01	2.576E-01	3.216E-02	1.420
		98.44		4.014E-02	9.548E-02	1.381E-01	7.696E-02	0.291
		99.86		5.663E-01	4.585E-01	7.397E-01	5.959E-02	0.766
		111.00		-4.657E-02	1.699E-01	2.770E-01	3.035E-02	-0.168
		131.20		3.546E-02	1.014E-01	1.685E-01	9.930E-03	0.210
		152.70		1.610E-01	3.011E-01	5.005E-01	7.871E-02	0.322
	+	186.00		4.065E+00	2.140E+00	2.265E+00	6.910E-01	1.795
		226.40		-2.848E-01	3.969E-01	6.140E-01	7.095E-02	-0.464
		227.20		-6.802E-02	4.215E-01	6.727E-01	3.898E-02	-0.101
		248.90		-7.788E-01	9.385E-01	1.208E+00	2.598E-01	-0.645
	+	293.70		4.520E+00	1.251E+00	1.566E+00	2.528E-01	2.886
		369.80		9.840E-02	8.081E-01	1.356E+00	2.821E-01	0.073
		568.70		-9.394E-01	9.514E-01	1.420E+00	7.712E-02	-0.662
		569.50		-2.175E-01	2.581E-01	3.902E-01	2.118E-02	-0.557
		574.00		-7.219E-01	1.350E+00	2.102E+00	1.138E-01	-0.343
		699.00		-3.605E-01	7.013E-01	1.077E+00	1.920E-01	-0.335
		706.10		-7.630E-01	1.119E+00	1.618E+00	7.133E-01	-0.471
		733.00		1.577E-01	3.693E-01	5.415E-01	1.148E-01	0.291
		742.81		-1.065E+00	1.518E+00	1.993E+00	1.333E+00	-0.534
		796.30		2.156E-01	8.616E-01	1.470E+00	3.877E-01	0.147
		805.60		-6.882E-01	9.849E-01	1.516E+00	4.560E-01	-0.454
		819.60		-3.039E-01	1.065E+00	1.723E+00	6.479E-01	-0.176
		826.30		-5.148E-01	7.595E-01	1.129E+00	5.011E-01	-0.456
		831.60		2.540E-01	5.854E-01	1.007E+00	2.951E-01	0.252
		876.40		4.571E-01	8.941E-01	1.339E+00	1.375E+00	0.341
		880.51		-1.748E-01	2.589E-01	4.029E-01	2.850E-02	-0.434
		883.24		-6.639E-02	2.555E-01	4.084E-01	2.738E-01	-0.163
		899.00		3.440E-01	8.269E-01	1.404E+00	6.103E-01	0.245
		925.00		1.940E-01	1.086E+00	1.836E+00	1.320E-01	0.106
		926.50		9.193E-02	1.678E-01	2.903E-01	7.207E-02	0.317
		946.00	*	7.386E-02	2.885E-01	4.898E-01	8.879E-02	0.151
		949.00		2.186E-01	4.324E-01	7.497E-01	5.340E-02	0.292
		980.50		4.708E-01	7.284E-01	1.275E+00	8.943E-02	0.369
		1394.10		-3.427E-01	1.123E+00	1.700E+00	1.102E+00	-0.202
		766.42		3.884E+00	1.121E+01	1.817E+01	9.148E+00	0.214
		1001.03	*	-5.453E-02	4.890E+00	8.101E+00	6.924E-01	-0.007
U-235		89.95		-1.876E+00	1.845E+00	1.698E+00	5.283E-01	-1.105
	+	93.35		1.276E+00	1.187E+00	1.059E+00	2.979E-01	1.204
		105.00		-1.358E-01	9.639E-01	1.582E+00	4.674E-01	-0.086
		143.76	*	1.665E-02	2.052E-01	3.322E-01	5.403E-02	0.050
NP-236		163.35		-6.488E-02	4.530E-01	7.182E-01	1.283E-01	-0.090
	+	185.71		1.506E-01	6.514E-02	8.414E-02	4.656E-03	1.789
		205.31		-6.651E-02	5.410E-01	7.569E-01	1.358E-01	-0.088
	+	94.67		2.774E-01	2.472E-01	1.956E-01	1.709E-02	1.418
		98.44		3.028E-02	7.021E-02	1.044E-01	8.591E-03	0.290
		111.00		-3.522E-02	1.285E-01	2.096E-01	1.455E-02	-0.168
		160.31	*	1.032E-02	7.282E-02	1.194E-01	6.533E-03	0.086

----- 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		2.165E-01	1.590E-01	2.464E-01	1.994E-02	0.879
		117.00	*	-8.230E-02	1.779E-01	2.875E-01	1.857E-02	-0.286
	+	209.75		1.486E+00	8.765E-01	1.238E+00	7.047E-02	1.200
		228.18		3.412E-02	2.225E-01	3.605E-01	2.091E-02	0.095
		277.60		1.473E-01	1.815E-01	3.015E-01	1.798E-02	0.489
AM-241		334.30		-7.750E-03	1.396E+00	2.032E+00	1.198E-01	-0.004
		59.54	*	1.396E-01	1.759E-01	2.690E-01	2.630E-02	0.519
CM-243		99.55		2.229E-01	1.636E-01	2.536E-01	2.052E-02	0.879
		103.76	*	-2.253E-02	8.960E-02	1.466E-01	1.117E-02	-0.154
		117.00		-8.469E-02	1.831E-01	2.958E-01	1.911E-02	-0.286
	+	209.75		1.465E+00	8.642E-01	1.220E+00	6.948E-02	1.200
		228.18		3.448E-02	2.249E-01	3.643E-01	2.113E-02	0.095
AM-246		277.60		1.486E-01	1.831E-01	3.040E-01	1.813E-02	0.489
		798.80		-2.037E-01	1.317E-01	1.898E-01	1.184E-02	-1.073
		1036.00		1.995E-02	3.083E-01	5.121E-01	3.468E-02	0.039
		1062.04		-1.036E-01	2.323E-01	3.667E-01	2.434E-02	-0.282
		1078.86	*	4.489E-03	1.504E-01	2.484E-01	1.626E-02	0.018
CM-247		278.00		9.632E-01	7.299E-01	1.271E+00	7.584E-02	0.758
		287.40		-4.554E-01	1.166E+00	1.925E+00	1.150E-01	-0.237
CF-249		402.60	*	4.863E-03	3.415E-02	5.720E-02	3.187E-03	0.085
		252.85		4.749E-01	8.526E-01	1.405E+00	8.298E-02	0.338
		333.44		-5.687E-02	1.883E-01	2.681E-01	1.582E-02	-0.212
CF-251		387.95	*	2.089E-02	3.927E-02	6.726E-02	3.751E-03	0.311
		176.60	*	2.833E-02	1.212E-01	1.988E-01	1.088E-02	0.142
		227.00		-6.057E-02	3.752E-01	5.989E-01	3.470E-02	-0.101
		285.00		3.489E-01	1.697E+00	2.887E+00	1.724E-01	0.121

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]G244606003      *
* Acquisition date   : 25-JAN-2010 08:39:59 Detector SN#      :              *
* Detector ID        : GAM06                      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 02:00:01.23           Half life ratio : 8.000      *
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 7-JAN-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID          : G244606003           Analyst initials: MXR1          *
* Batch Number       : 941636              Sample Quantity : 1.5907E+02 GRAM  *
* Recovery           : 1.00000             Carrier Weight  : 0.00000        *
*****
*                                     QC DATA                               *
*
* Standard Weight    : 0.00000
* CALIB. DATE/TIME   : 4-FEB-2009 13:05:54 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	2.656E+01	2.320E+00	4.609E-01	0.000E+00
CD-109	1.290E+00	9.574E-01	1.564E+00	0.000E+00
SN-126	1.263E-01	9.372E-02	1.464E-01	0.000E+00
BA-137M	1.033E-01	4.959E-02	6.245E-02	0.000E+00
CS-137	1.092E-01	5.243E-02	6.602E-02	0.000E+00
TL-208	3.772E-01	7.354E-02	5.699E-02	0.000E+00
BI-211	2.640E+00	4.102E-01	3.501E-01	0.000E+00
PB-212	1.025E+00	1.151E-01	9.098E-02	0.000E+00
PO-212	1.025E+00	1.151E-01	9.098E-02	0.000E+00
BI-214	7.990E-01	1.349E-01	1.101E-01	0.000E+00
PB-214	9.182E-01	1.502E-01	1.103E-01	0.000E+00
PO-214	9.182E-01	1.502E-01	1.103E-01	0.000E+00
PO-216	1.025E+00	1.151E-01	9.098E-02	0.000E+00
PO-218	9.182E-01	1.502E-01	1.103E-01	0.000E+00
RA-224	3.442E+00	1.189E+00	1.035E+00	0.000E+00
RA-226	7.990E-01	1.349E-01	1.101E-01	0.000E+00
AC-228	9.161E-01	3.079E-01	1.972E-01	0.000E+00
RA-228	9.161E-01	3.079E-01	1.972E-01	0.000E+00
TH-228	1.043E+00	1.171E-01	9.261E-02	0.000E+00
TH-230	7.990E-01	1.349E-01	1.101E-01	0.000E+00
TH-232	9.161E-01	3.079E-01	1.972E-01	0.000E+00
TH-234	1.135E+00	1.718E+00	2.376E+00	0.000E+00
U-234	7.990E-01	1.349E-01	1.101E-01	0.000E+00
NP-237	3.709E-01	2.852E-01	4.154E-01	0.000E+00
U-238	1.135E+00	1.718E+00	2.376E+00	0.000E+00
AM-243	2.952E-01	7.547E-02	8.691E-02	0.000E+00
ANH-511	7.648E-02	6.230E-02	4.643E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error) Ided	MDA (pCi/GRAM)
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BE-7	9.748E-02	3.243E-01	5.793E-01	0.000E+00	NOT IDENT.
NA-22	4.071E-02	4.177E-02	7.721E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.266E+07	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-2.451E-02	2.756E-02	3.769E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	4.259E-02	7.525E-02	0.000E+00	NOT IDENT.
SC-46	-1.302E-02	3.385E-02	5.667E-02	0.000E+00	FAIL ABUN
V-48	-8.511E-03	7.892E-02	1.349E-01	0.000E+00	NOT IDENT.
CR-51	8.649E-02	3.559E-01	6.505E-01	0.000E+00	NOT IDENT.
MN-52	2.723E-02	2.790E-01	4.723E-01	0.000E+00	NOT IDENT.
MN-54	-3.041E-02	3.667E-02	5.994E-02	0.000E+00	NOT IDENT.
CO-56	-2.793E-02	3.866E-02	6.339E-02	0.000E+00	NOT IDENT.
CO-57	-4.413E-03	2.266E-02	4.082E-02	0.000E+00	NOT IDENT.
CO-58	6.569E-03	3.878E-02	6.899E-02	0.000E+00	NOT IDENT.
FE-59	-5.348E-02	9.440E-02	1.527E-01	0.000E+00	NOT IDENT.
CO-60	3.270E-02	3.870E-02	7.111E-02	0.000E+00	NOT IDENT.
ZN-65	-2.546E-02	1.031E-01	1.461E-01	0.000E+00	NOT IDENT.
GE-68	2.341E-02	1.266E+00	2.171E+00	0.000E+00	NOT IDENT.
AS-73	9.998E-01	8.966E-01	1.757E+00	0.000E+00	NOT IDENT.
AS-74	6.476E-03	1.071E-01	1.852E-01	0.000E+00	NOT IDENT.
SE-75	4.922E-03	4.897E-02	7.434E-02	0.000E+00	NOT IDENT.
BR-77	2.473E+00	2.152E+01	3.777E+01	0.000E+00	FAIL ABUN
SR-82	-1.484E-01	3.734E-01	6.363E-01	0.000E+00	NOT IDENT.
RB-83	6.303E-03	6.523E-02	1.144E-01	0.000E+00	NOT IDENT.
RB-84	-1.643E-02	6.368E-02	1.082E-01	0.000E+00	NOT IDENT.
KR-85	5.652E+00	7.733E+00	1.244E+01	0.000E+00	NOT IDENT.
SR-85	2.983E-02	4.081E-02	6.564E-02	0.000E+00	NOT IDENT.
RB-86	8.159E-02	8.959E-01	1.547E+00	0.000E+00	NOT IDENT.
Y-88	-3.363E-04	2.337E-02	3.937E-02	0.000E+00	NOT IDENT.
ZR-88	-6.735E-03	3.008E-02	5.278E-02	0.000E+00	NOT IDENT.
Y-91	-1.449E-01	2.075E+01	3.514E+01	0.000E+00	NOT IDENT.
NB-94	-1.732E-02	3.255E-02	5.280E-02	0.000E+00	NOT IDENT.
NB-95	1.881E-02	4.177E-02	7.270E-02	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	1.502E-01	2.544E-01	0.000E+00	NOT IDENT.
ZR-95	1.606E-03	7.026E-02	1.188E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.622E+06	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	3.033E+07	0.000E+00	0.000E+00	SHORT HLIF
MO-99	7.962E+00	2.180E+01	3.802E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	7.045E+19	0.000E+00	0.000E+00	SHORT HLIF
RH-101	1.221E-02	3.192E-02	5.581E-02	0.000E+00	NOT IDENT.
RH-102	2.267E-02	2.752E-02	5.084E-02	0.000E+00	NOT IDENT.
RU-103	-9.841E-03	3.751E-02	6.418E-02	0.000E+00	FAIL ABUN
RH-106	-1.033E-01	2.804E-01	4.649E-01	0.000E+00	FAIL ABUN
RU-106	-1.033E-01	2.802E-01	4.649E-01	0.000E+00	FAIL ABUN
AG-108M	9.768E-03	3.179E-02	5.716E-02	0.000E+00	NOT IDENT.
AG-110M	2.137E-02	3.892E-02	6.091E-02	0.000E+00	NOT IDENT.
IN-111	-1.342E+00	1.978E+00	3.316E+00	0.000E+00	NOT IDENT.
IN-113M	2.090E-02	4.379E-02	7.996E-02	0.000E+00	NOT IDENT.
SN-113	2.090E-02	4.379E-02	7.996E-02	0.000E+00	NOT IDENT.
IN-114M	9.775E-02	1.963E-01	3.124E-01	0.000E+00	NOT IDENT.
CD-115	0.000E+00	2.346E+01	0.000E+00	0.000E+00	SHORT HLIF
SN-117M	-4.334E-02	5.736E-02	9.917E-02	0.000E+00	NOT IDENT.
SB-122	7.163E+00	3.936E+00	7.650E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.690E+08	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-9.723E-03	2.621E-02	4.611E-02	0.000E+00	NOT IDENT.
I-124	-2.850E-01	1.201E+00	1.740E+00	0.000E+00	NOT IDENT.
SB-124	4.031E-03	5.905E-02	1.021E-01	0.000E+00	FAIL ABUN
SB-125	-9.066E-02	8.477E-02	1.388E-01	0.000E+00	FAIL ABUN
TE-125M	-7.552E+00	8.925E+00	1.555E+01	0.000E+00	NOT IDENT.
I-126	-1.294E-03	2.241E-01	3.295E-01	0.000E+00	NOT IDENT.
SB-126	-5.868E-02	1.831E-01	2.563E-01	0.000E+00	NOT IDENT.
SB-127	2.370E-01	2.292E+00	3.932E+00	0.000E+00	NOT IDENT.
XE-127	-2.343E-02	4.535E-02	7.792E-02	0.000E+00	NOT IDENT.
I-131	-5.915E-03	1.292E-01	2.304E-01	0.000E+00	NOT IDENT.
TE-132	1.795E-01	1.195E+00	2.102E+00	0.000E+00	NOT IDENT.
BA-133	3.551E-02	4.178E-02	6.949E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	4.778E+04	0.000E+00	0.000E+00	SHORT HLIF
CS-134	3.779E-02	4.263E-02	7.992E-02	0.000E+00	NOT IDENT.
CS-135	1.596E-01	1.741E-01	2.784E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	5.626E+18	0.000E+00	0.000E+00	SHORT HLIF
CS-136	7.487E-03	1.253E-01	2.162E-01	0.000E+00	FAIL ABUN
CE-139	-6.590E-03	2.785E-02	4.916E-02	0.000E+00	NOT IDENT.
BA-140	1.598E-01	2.606E-01	4.661E-01	0.000E+00	NOT IDENT.
LA-140	-7.183E-02	1.011E-01	1.564E-01	0.000E+00	NOT IDENT.
CE-141	3.025E-02	6.102E-02	1.117E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	9.853E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-2.849E-02	1.927E-01	3.461E-01	0.000E+00	NOT IDENT.
PM-144	-3.062E-03	3.376E-02	5.694E-02	0.000E+00	NOT IDENT.
PR-144	-2.078E-01	2.291E+00	3.864E+00	0.000E+00	NOT IDENT.

PM-146	-9.150E-03	4.007E-02	6.938E-02	0.000E+00	NOT IDENT.
ND-147	4.262E-01	5.861E-01	1.071E+00	0.000E+00	NOT IDENT.
PM-149	0.000E+00	1.978E+02	0.000E+00	0.000E+00	SHORT HLIF
EU-152	-1.317E-01	1.115E-01	1.460E-01	0.000E+00	NOT IDENT.
GD-153	-2.780E-02	7.889E-02	1.250E-01	0.000E+00	NOT IDENT.
EU-154	1.069E-01	1.161E-01	2.132E-01	0.000E+00	NOT IDENT.
EU-155	-3.011E-03	9.689E-02	1.772E-01	0.000E+00	FAIL ABUN
TB-160	-7.139E-02	1.285E-01	2.121E-01	0.000E+00	FAIL ABUN
HO-166M	2.498E-04	6.058E-02	1.028E-01	0.000E+00	FAIL ABUN
TM-171	4.342E+00	2.932E+01	4.830E+01	0.000E+00	NOT IDENT.
LU-176	-2.769E-03	2.218E-02	3.987E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.608E+00	2.496E+00	0.000E+00	FAIL ABUN
LU-177M	-1.767E-01	1.720E-01	2.851E-01	0.000E+00	FAIL ABUN
HF-181	9.306E-03	4.120E-02	7.329E-02	0.000E+00	NOT IDENT.
W-181	3.293E-01	3.881E-01	6.591E-01	0.000E+00	NOT IDENT.
TA-182	-8.550E-02	1.989E-01	3.240E-01	0.000E+00	FAIL ABUN
RE-183	2.697E-02	1.034E-01	1.866E-01	0.000E+00	FAIL ABUN
RE-184	1.280E-01	2.252E-01	4.018E-01	0.000E+00	NOT IDENT.
OS-185	-2.114E-02	3.907E-02	6.351E-02	0.000E+00	NOT IDENT.
RE-188	6.374E-02	1.575E-01	2.866E-01	0.000E+00	NOT IDENT.
W-188	-4.574E+00	7.825E+00	1.186E+01	0.000E+00	FAIL ABUN
IR-192	3.293E-03	3.191E-02	5.795E-02	0.000E+00	FAIL ABUN
AU-195	1.857E-01	2.286E-01	3.838E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.470E+03	0.000E+00	0.000E+00	SHORT HLIF
TL-201	4.353E+00	1.178E+01	2.132E+01	0.000E+00	NOT IDENT.
TL-202	3.506E-03	7.573E-02	1.340E-01	0.000E+00	NOT IDENT.
HG-203	6.521E-02	4.152E-02	8.021E-02	0.000E+00	NOT IDENT.
BI-207	2.735E-02	5.096E-02	9.156E-02	0.000E+00	FAIL ABUN
TL-207	-6.297E-01	6.196E-01	1.042E+00	0.000E+00	FAIL ABUN
PO-209	2.100E+00	6.720E+00	1.203E+01	0.000E+00	NOT IDENT.
BI-210	1.734E+00	4.100E+00	7.839E+00	0.000E+00	NOT IDENT.
PB-210	1.734E+00	4.100E+00	7.839E+00	0.000E+00	NOT IDENT.
PO-210	1.734E+00	4.100E+00	7.839E+00	0.000E+00	NOT IDENT.
PB-211	-6.722E-01	9.668E-01	1.481E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	4.397E-01	6.128E-01	0.000E+00	FAIL ABUN
PO-215	-6.297E-01	6.196E-01	1.042E+00	0.000E+00	FAIL ABUN
RN-219	2.036E-01	3.731E-01	6.827E-01	0.000E+00	FAIL ABUN
RN-220	1.024E+01	2.435E+01	4.352E+01	0.000E+00	NOT IDENT.
RA-223	-6.297E-01	6.196E-01	1.042E+00	0.000E+00	FAIL ABUN
AC-227	-7.848E-02	3.716E-01	6.365E-01	0.000E+00	NOT IDENT.
TH-227	-7.848E-02	3.717E-01	6.365E-01	0.000E+00	FAIL ABUN
TH-229	-5.927E-01	4.886E-01	8.149E-01	0.000E+00	FAIL ABUN
PA-231	-7.673E-01	1.475E+00	2.613E+00	0.000E+00	NOT IDENT.
TH-231	-6.297E-01	6.196E-01	1.042E+00	0.000E+00	FAIL ABUN
U-231	-6.967E-01	1.642E+00	2.594E+00	0.000E+00	FAIL ABUN
PA-233	6.939E-03	5.654E-02	1.029E-01	0.000E+00	FAIL ABUN
PA-234	7.386E-02	2.828E-01	5.009E-01	0.000E+00	FAIL ABUN
PA-234M	-5.453E-02	4.792E+00	8.271E+00	0.000E+00	NOT IDENT.
U-235	1.665E-02	2.011E-01	3.579E-01	0.000E+00	FAIL ABUN
NP-236	1.032E-02	7.136E-02	1.283E-01	0.000E+00	FAIL ABUN
NP-239	-8.230E-02	1.743E-01	3.114E-01	0.000E+00	FAIL ABUN
AM-241	1.396E-01	1.724E-01	2.965E-01	0.000E+00	NOT IDENT.
CM-243	-2.253E-02	8.780E-02	1.593E-01	0.000E+00	FAIL ABUN
AM-246	4.489E-03	1.474E-01	2.531E-01	0.000E+00	NOT IDENT.
CM-247	4.863E-03	3.347E-02	5.994E-02	0.000E+00	NOT IDENT.
CF-249	2.089E-02	3.848E-02	7.055E-02	0.000E+00	NOT IDENT.
CF-251	2.833E-02	1.187E-01	2.130E-01	0.000E+00	NOT IDENT.

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*                               GEL Laboratories LLC                      *
*                               2040 Savage Road                        *
*                               Charleston, SC 29414                    *
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Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G244606003.CNF;1
Sample date        : 7-JAN-2010 12:00:00. Acquisition date : 25-JAN-2010 08:39:59
Sample ID          : G244606003      Sample quantity      : 1.59070E+02 GRAM
Detector name      : GAM06            Detector geometry   : CAN
Elapsed live time  : 0 02:00:00.00    Elapsed real time  : 0 02:00:01.23  0.0%
Energy tolerance   : 1.50000 keV      Analyst Initials   : MXR1
Abundance limit    : 75.00000          Sensitivity         : 5.00000
Batch ID           : 941636            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	1156	10.67*	9.624E-01	2.656E+01	2.656E+01	8.91
CD-109	88.03	102	3.72*	5.138E+00	1.256E+00	1.290E+00	75.71
SN-126	64.28	51	9.60	2.785E+00	4.491E-01	4.491E-01	154.20
	86.94	102	8.90	5.138E+00	5.252E-01	5.252E-01	85.83
	87.57	102	37.00*	5.138E+00	1.263E-01	1.263E-01	75.71
BA-137M	661.65	76	89.98*	1.939E+00	1.032E-01	1.033E-01	49.00
CS-137	661.65	76	85.12*	1.939E+00	1.091E-01	1.092E-01	49.00
TL-208	277.35	-----	6.80	3.899E+00	-----	Line Not Found	-----
	510.84	78	21.60	2.406E+00	3.541E-01	3.541E-01	83.54
	583.14	290	84.20*	2.157E+00	3.772E-01	3.772E-01	19.89
	860.37	-----	12.46	1.539E+00	-----	Line Not Found	-----
BI-211	72.87	-----	1.27	3.913E+00	-----	Line Not Found	-----
	351.07	469	12.94*	3.243E+00	2.640E+00	2.640E+00	15.86
PB-212	74.81	337	10.70	4.084E+00	1.821E+00	1.821E+00	27.71
	77.11	438	18.00	4.325E+00	1.327E+00	1.327E+00	20.52
	87.30	102	8.00	5.138E+00	5.842E-01	5.842E-01	76.36
	238.63	846	44.60*	4.367E+00	1.025E+00	1.025E+00	11.46
	300.09	-----	3.41	3.669E+00	-----	Line Not Found	-----
PO-212	74.81	337	10.70	4.084E+00	1.821E+00	1.821E+00	27.71
	77.11	438	18.00	4.325E+00	1.327E+00	1.327E+00	20.52
	87.30	102	8.00	5.138E+00	5.842E-01	5.842E-01	76.36
	115.19	-----	0.60	6.030E+00	-----	Line Not Found	-----
	238.63	846	44.60*	4.367E+00	1.025E+00	1.025E+00	11.46
	300.09	-----	3.41	3.669E+00	-----	Line Not Found	-----
BI-214	609.31	326	46.30*	2.080E+00	7.990E-01	7.990E-01	17.23
	1120.29	88	15.10	1.211E+00	1.136E+00	1.136E+00	37.47
	1764.49	68	15.80	8.404E-01	1.209E+00	1.209E+00	24.95
PB-214	74.81	337	6.21	4.084E+00	3.138E+00	3.138E+00	27.12
	77.11	438	10.50	4.325E+00	2.274E+00	2.274E+00	21.89
	87.30	102	4.67	5.138E+00	1.001E+00	1.001E+00	76.10
	241.98	249	7.49	4.328E+00	1.815E+00	1.815E+00	35.68
	295.21	285	19.20	3.719E+00	9.417E-01	9.417E-01	24.08

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PO-214	351.92	469	37.20*	3.243E+00	9.182E-01	9.182E-01	16.69
	74.81	337	6.21	4.084E+00	3.138E+00	3.138E+00	27.12
	77.11	438	10.50	4.325E+00	2.274E+00	2.274E+00	21.89
	87.30	102	4.67	5.138E+00	1.001E+00	1.001E+00	76.10
	241.98	249	7.49	4.328E+00	1.815E+00	1.815E+00	35.68
PO-216	295.21	285	19.20	3.719E+00	9.417E-01	9.417E-01	24.08
	351.92	469	37.20*	3.243E+00	9.182E-01	9.182E-01	16.69
	74.81	337	10.70	4.084E+00	1.821E+00	1.821E+00	27.71
	77.11	438	18.00	4.325E+00	1.327E+00	1.327E+00	20.52
	87.30	102	8.00	5.138E+00	5.842E-01	5.842E-01	76.36
PO-218	238.63	846	44.60*	4.367E+00	1.025E+00	1.025E+00	11.46
	300.09	-----	3.41	3.669E+00	-----	Line Not Found	-----
	74.81	337	6.21	4.084E+00	3.138E+00	3.138E+00	27.12
	77.11	438	10.50	4.325E+00	2.274E+00	2.274E+00	21.89
	87.30	102	4.67	5.138E+00	1.001E+00	1.001E+00	76.10
RA-224	241.98	249	7.49	4.328E+00	1.815E+00	1.815E+00	35.68
	295.21	285	19.20	3.719E+00	9.417E-01	9.417E-01	24.08
	351.92	469	37.20*	3.243E+00	9.182E-01	9.182E-01	16.69
	240.98	249	3.95*	4.328E+00	3.442E+00	3.442E+00	35.24
	609.31	326	46.30*	2.080E+00	7.990E-01	7.990E-01	17.23
AC-228	1120.29	88	15.10	1.211E+00	1.136E+00	1.136E+00	37.47
	1764.49	68	15.80	8.404E-01	1.209E+00	1.209E+00	24.95
	338.32	201	11.40	3.344E+00	1.245E+00	1.245E+00	51.80
	911.07	157	27.70*	1.461E+00	9.161E-01	9.161E-01	34.30
	969.11	90	16.60	1.382E+00	9.211E-01	9.211E-01	58.35
RA-228	338.32	201	11.40	3.344E+00	1.245E+00	1.245E+00	51.80
	911.07	157	27.70*	1.461E+00	9.161E-01	9.161E-01	34.30
	969.11	90	16.60	1.382E+00	9.211E-01	9.211E-01	58.35
	74.81	337	10.70	4.084E+00	1.821E+00	1.854E+00	26.11
	77.11	438	18.00	4.325E+00	1.327E+00	1.350E+00	20.53
TH-228	87.30	102	8.00	5.138E+00	5.842E-01	5.947E-01	75.71
	238.63	846	44.60*	4.367E+00	1.025E+00	1.043E+00	11.46
	300.09	-----	3.41	3.669E+00	-----	Line Not Found	-----
	609.31	326	46.30*	2.080E+00	7.990E-01	7.990E-01	17.23
	1120.29	88	15.10	1.211E+00	1.136E+00	1.136E+00	37.47
TH-230	1764.49	68	15.80	8.404E-01	1.209E+00	1.209E+00	24.95
	338.32	201	11.40	3.344E+00	1.245E+00	1.245E+00	32.49
	911.07	157	27.70*	1.461E+00	9.161E-01	9.161E-01	34.30
	969.11	90	16.60	1.382E+00	9.211E-01	9.211E-01	58.35
	63.29	51	3.80*	2.785E+00	1.135E+00	1.135E+00	154.50
U-234	92.38	134	5.41	5.510E+00	1.061E+00	1.061E+00	90.51
	609.31	326	46.30*	2.080E+00	7.990E-01	7.990E-01	17.23
	1120.29	88	15.10	1.211E+00	1.136E+00	1.136E+00	37.47
	1764.49	68	15.80	8.404E-01	1.209E+00	1.209E+00	24.95
	86.50	102	12.60*	5.138E+00	3.709E-01	3.709E-01	78.47
NP-237	95.87	-----	2.60	5.611E+00	-----	Line Not Found	-----
	63.29	51	3.80*	2.785E+00	1.135E+00	1.135E+00	154.50
	92.38	134	5.41	5.510E+00	1.061E+00	1.061E+00	89.11
	74.67	337	66.00*	4.084E+00	2.952E-01	2.952E-01	26.08

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	86.72	102	0.34	5.138E+00	1.391E+01	1.391E+01	75.71
	117.66	-----	0.55	6.042E+00	-----	Line Not Found	-----
	142.18	-----	0.13	5.887E+00	-----	Line Not Found	-----
ANH-511	511.00	78	100.00*	2.406E+00	7.648E-02	7.648E-02	83.12

Flag: "*" = Keyline

Total number of lines in spectrum 26
Number of unidentified lines 2
Number of lines tentatively identified by NID 24 92.31%

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	2.656E+01	2.656E+01	0.237E+01	8.91	
CD-109	464.00D	1.03	1.256E+00	1.290E+00	0.977E+00	75.71	
SN-126	1.00E+05Y	1.00	1.263E-01	1.263E-01	0.956E-01	75.71	
BA-137M	30.17Y	1.00	1.032E-01	1.033E-01	0.506E-01	49.00	
CS-137	30.17Y	1.00	1.091E-01	1.092E-01	0.535E-01	49.00	
TL-208	1.41E+10Y	1.00	3.772E-01	3.772E-01	0.750E-01	19.89	
BI-211	7.04E+08Y	1.00	2.640E+00	2.640E+00	0.419E+00	15.86	
PB-212	1.41E+10Y	1.00	1.025E+00	1.025E+00	0.117E+00	11.46	
PO-212	1.41E+10Y	1.00	1.025E+00	1.025E+00	0.117E+00	11.46	
BI-214	1600.00Y	1.00	7.990E-01	7.990E-01	1.376E-01	17.23	
PB-214	1600.00Y	1.00	9.182E-01	9.182E-01	1.533E-01	16.69	
PO-214	1600.00Y	1.00	9.182E-01	9.182E-01	1.533E-01	16.69	
PO-216	1.41E+10Y	1.00	1.025E+00	1.025E+00	0.117E+00	11.46	
PO-218	1600.00Y	1.00	9.182E-01	9.182E-01	1.533E-01	16.69	
RA-224	1.41E+10Y	1.00	3.442E+00	3.442E+00	1.213E+00	35.24	
RA-226	1600.00Y	1.00	7.990E-01	7.990E-01	1.376E-01	17.23	
AC-228	1.41E+10Y	1.00	9.161E-01	9.161E-01	3.142E-01	34.30	
RA-228	1.41E+10Y	1.00	9.161E-01	9.161E-01	3.142E-01	34.30	
TH-228	1.91Y	1.02	1.025E+00	1.043E+00	0.120E+00	11.46	
TH-230	4.47E+09Y	1.00	7.990E-01	7.990E-01	1.376E-01	17.23	
TH-232	1.41E+10Y	1.00	9.161E-01	9.161E-01	3.142E-01	34.30	
TH-234	4.47E+09Y	1.00	1.135E+00	1.135E+00	1.753E+00	154.50	
U-234	4.47E+09Y	1.00	7.990E-01	7.990E-01	1.376E-01	17.23	
NP-237	2.14E+06Y	1.00	3.709E-01	3.709E-01	2.911E-01	78.47	
U-238	4.47E+09Y	1.00	1.135E+00	1.135E+00	1.753E+00	154.50	
AM-243	7380.00Y	1.00	2.952E-01	2.952E-01	0.770E-01	26.08	
ANH-511	1.00E+09Y	1.00	7.648E-02	7.648E-02	6.357E-02	83.12	

Total Activity : 5.043E+01 5.048E+01

Grand Total Activity : 5.043E+01 5.048E+01

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G244606003

Page : 5
Acquisition date : 25-JAN-2010 08:39:59

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	185.53	178	323	1.72	371.05	366	11	2.48E-02	42.9	5.18E+00	T
0	209.45	98	218	1.28	418.90	415	9	1.36E-02	58.7	4.79E+00	T
0	270.04	109	195	1.42	540.07	535	12	1.51E-02	54.9	3.98E+00	T
0	463.28	75	136	1.44	926.56	920	15	1.04E-02	71.3	2.60E+00	T
0	726.73	107	55	1.77	1453.47	1445	16	1.49E-02	36.7	1.79E+00	T
0	1538.03	12	3	1.46	3076.07	3068	11	1.63E-03	81.2	9.24E-01	
0	1729.19	29	0	2.42	3458.38	3452	13	4.03E-03	37.1	8.51E-01	

Flags: "T" = Tentatively associated


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*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                           *
*****
*                               DETECTOR DATA                               *
*
* Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G244606003.CNF;1
* Acquisition date   : 25-JAN-2010 08:39:59   Detector SN#      :
* Detector ID        : GAM06                  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 02:00:01.23          Half life ratio  : 8.00000
*****
*                               SAMPLE DATA                               *
*
* Sample date        : 7-JAN-2010 12:00:00.   Nuclide Library  : SOLID
* Sample ID          : G244606003             Analyst initials: MXR1
* Batch Number       : 941636                 Sample Quantity  : 1.59070E+02 GRAM
*****
*                               QC DATA                                   *
*
* CALIB. DATE/TIME   : 4-FEB-2009 13:05:54.47MS 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	2.656E+01	2.367E+00	4.565E-01	3.020E-02	58.188
CD-109	1.290E+00	9.770E-01	1.433E+00	1.415E-01	0.900
SN-126	1.263E-01	9.563E-02	1.342E-01	1.320E-02	0.941
BA-137M	1.033E-01	5.061E-02	6.044E-02	2.985E-03	1.709
CS-137	1.092E-01	5.350E-02	6.389E-02	3.174E-03	1.709
TL-208	3.772E-01	7.504E-02	5.496E-02	3.473E-03	6.864
BI-211	2.640E+00	4.186E-01	3.329E-01	2.149E-02	7.930
PB-212	1.025E+00	1.174E-01	8.559E-02	6.309E-03	11.972
PO-212	1.025E+00	1.174E-01	8.559E-02	6.309E-03	11.972
BI-214	7.990E-01	1.376E-01	1.063E-01	7.846E-03	7.515
PB-214	9.182E-01	1.533E-01	1.049E-01	8.705E-03	8.753
PO-214	9.182E-01	1.533E-01	1.049E-01	8.705E-03	8.753
PO-216	1.025E+00	1.174E-01	8.559E-02	6.309E-03	11.972
PO-218	9.182E-01	1.533E-01	1.049E-01	8.705E-03	8.753
RA-224	3.442E+00	1.213E+00	9.742E-01	5.709E-02	3.533
RA-226	7.990E-01	1.376E-01	1.063E-01	7.846E-03	7.515
AC-228	9.161E-01	3.142E-01	1.926E-01	1.968E-02	4.756
RA-228	9.161E-01	3.142E-01	1.926E-01	1.968E-02	4.756

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-228	1.043E+00	1.195E-01	8.713E-02	6.423E-03	11.972
TH-230	7.990E-01	1.376E-01	1.063E-01	7.846E-03	7.515
TH-232	9.161E-01	3.142E-01	1.926E-01	1.968E-02	4.756
TH-234	1.135E+00	1.753E+00	2.159E+00	3.926E-01	0.525
U-234	7.990E-01	1.376E-01	1.063E-01	7.846E-03	7.515
NP-237	3.709E-01	2.911E-01	3.805E-01	8.684E-02	0.975
U-238	1.135E+00	1.753E+00	2.159E+00	3.926E-01	0.525
AM-243	2.952E-01	7.701E-02	7.931E-02	7.163E-03	3.722
ANH-511	7.648E-02	6.357E-02	4.461E-02	2.494E-03	1.714

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	9.748E-02		3.309E-01	5.555E-01	3.669E-02	0.175
NA-22	4.071E-02		4.262E-02	7.616E-02	4.703E-03	0.535
NA-24	5.560E-01		6.461E+00	Half-Life too short		
AL-26	-2.451E-02		2.812E-02	3.757E-02	2.158E-03	-0.652
TI-44	2.112E-01		4.346E-02	6.876E-02	6.320E-03	3.071
SC-46	-1.302E-02		3.455E-02	5.531E-02	3.964E-03	-0.235
V-48	-8.511E-03		8.054E-02	1.321E-01	9.250E-03	-0.064
CR-51	8.649E-02		3.632E-01	6.169E-01	4.064E-02	0.140
MN-52	2.723E-02		2.847E-01	4.675E-01	2.942E-02	0.058
MN-54	-3.041E-02		3.742E-02	5.840E-02	3.854E-03	-0.521
CO-56	-2.793E-02		3.945E-02	6.178E-02	4.153E-03	-0.452
CO-57	-4.413E-03		2.312E-02	3.772E-02	2.304E-03	-0.117
CO-58	6.569E-03		3.957E-02	6.716E-02	4.288E-03	0.098
FE-59	-5.348E-02		9.632E-02	1.499E-01	1.100E-02	-0.357
CO-60	3.270E-02		3.949E-02	7.023E-02	4.412E-03	0.466
ZN-65	-2.546E-02		1.052E-01	1.436E-01	9.095E-03	-0.177
GE-68	2.341E-02		1.291E+00	2.131E+00	1.396E-01	0.011
AS-73	9.998E-01		9.149E-01	1.590E+00	1.454E-01	0.629
AS-74	6.476E-03		1.093E-01	1.787E-01	9.502E-03	0.036
SE-75	4.922E-03		4.997E-02	7.014E-02	4.207E-03	0.070
BR-77	2.473E+00		2.196E+01	3.630E+01	2.023E+00	0.068
SR-82	-1.484E-01		3.810E-01	6.186E-01	3.721E-02	-0.240
RB-83	6.303E-03		6.656E-02	1.099E-01	6.125E-03	0.057
RB-84	-1.643E-02		6.498E-02	1.056E-01	7.480E-03	-0.156
KR-85	5.652E+00		7.891E+00	1.195E+01	6.675E-01	0.473
SR-85	2.983E-02		4.164E-02	6.307E-02	3.523E-03	0.473
RB-86	8.159E-02		9.142E-01	1.518E+00	9.955E-02	0.054
Y-88	-3.363E-04		2.385E-02	3.926E-02	2.231E-03	-0.009
ZR-88	-6.735E-03		3.069E-02	5.034E-02	2.793E-03	-0.134
Y-91	-1.449E-01		2.117E+01	3.461E+01	2.076E+00	-0.004
NB-94	-1.732E-02		3.321E-02	5.118E-02	2.719E-03	-0.338
NB-95	1.881E-02		4.262E-02	7.066E-02	4.177E-03	0.266
NB-95M	3.469E-01		1.533E-01	2.392E-01	1.808E-02	1.450
ZR-95	1.606E-03		7.170E-02	1.154E-01	8.133E-03	0.014

----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-97	1.148E+00		8.278E-01	Half-Life too short		
ZR-97	3.871E+01		1.547E+01	Half-Life too short		
MO-99	7.962E+00		2.225E+01	3.692E+01	5.065E+00	0.216
TC-99M	2.520E+13		3.595E+13	Half-Life too short		
RH-101	1.221E-02		3.257E-02	5.224E-02	2.935E-03	0.234
RH-102	2.267E-02		2.808E-02	4.874E-02	2.745E-03	0.465
RU-103	-9.841E-03		3.827E-02	6.161E-02	7.737E-03	-0.160
RH-106	-1.033E-01		2.862E-01	4.492E-01	5.141E-02	-0.230
RU-106	-1.033E-01		2.860E-01	4.492E-01	2.329E-02	-0.230
AG-108M	9.768E-03		3.244E-02	5.467E-02	3.353E-03	0.179
AG-110M	2.137E-02		3.971E-02	5.894E-02	3.182E-03	0.363
IN-111	-1.342E+00		2.019E+00	3.122E+00	1.835E-01	-0.430
IN-113M	2.090E-02		4.469E-02	7.625E-02	4.538E-03	0.274
SN-113	2.090E-02		4.469E-02	7.625E-02	4.538E-03	0.274
IN-114M	9.775E-02		2.003E-01	2.921E-01	1.626E-02	0.335
CD-115	-1.851E-07		1.197E-05	Half-Life too short		
SN-117M	-4.334E-02		5.853E-02	9.229E-02	5.070E-03	-0.470
SB-122	7.163E+00		4.016E+00	7.370E+00	4.016E-01	0.972
I-123	-6.268E+01		8.621E+01	Half-Life too short		
TE-123M	-9.723E-03		2.675E-02	4.291E-02	2.390E-03	-0.227
I-124	-2.850E-01		1.225E+00	1.680E+00	8.877E-02	-0.170
SB-124	4.031E-03		6.026E-02	1.016E-01	6.596E-03	0.040
SB-125	-9.066E-02		8.650E-02	1.326E-01	7.783E-03	-0.683
TE-125M	-7.552E+00		9.107E+00	1.433E+01	1.304E+00	-0.527
I-126	-1.294E-03		2.286E-01	3.189E-01	1.588E-02	-0.004
SB-126	-5.868E-02		1.868E-01	2.487E-01	1.362E-02	-0.236
SB-127	2.370E-01		2.339E+00	3.809E+00	3.840E-01	0.062
XE-127	-2.343E-02		4.628E-02	7.298E-02	4.123E-03	-0.321
I-131	-5.915E-03		1.318E-01	2.193E-01	1.416E-02	-0.027
TE-132	1.795E-01		1.220E+00	1.975E+00	2.952E-01	0.091
BA-133	3.551E-02		4.263E-02	6.609E-02	7.640E-03	0.537
I-133	4.433E-02		2.438E-02	Half-Life too short		
CS-134	3.779E-02		4.350E-02	7.775E-02	4.893E-03	0.486
CS-135	1.596E-01		1.777E-01	2.628E-01	2.042E-02	0.607
I-135	2.000E+11		2.870E+12	Half-Life too short		
CS-136	7.487E-03		1.278E-01	2.121E-01	1.523E-02	0.035
CE-139	-6.590E-03		2.842E-02	4.580E-02	2.476E-03	-0.144
BA-140	1.598E-01		2.659E-01	4.484E-01	1.456E-01	0.356
LA-140	-7.183E-02		1.032E-01	1.553E-01	9.580E-03	-0.463
CE-141	3.025E-02		6.227E-02	1.037E-01	6.121E-03	0.292
CE-143	3.405E-03		5.027E-04	Half-Life too short		
CE-144	-2.849E-02		1.967E-01	3.206E-01	4.560E-02	-0.089
PM-144	-3.062E-03		3.445E-02	5.519E-02	2.904E-03	-0.055
PR-144	-2.078E-01		2.338E+00	3.745E+00	1.968E-01	-0.055
PM-146	-9.150E-03		4.089E-02	6.644E-02	5.654E-03	-0.138
ND-147	4.262E-01		5.981E-01	1.030E+00	1.383E-01	0.414
PM-149	1.639E-04		1.009E-04	Half-Life too short		
EU-152	-1.317E-01		1.138E-01	1.387E-01	9.138E-03	-0.950

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GD-153	-2.780E-02		8.050E-02	1.148E-01	9.598E-03	-0.242
EU-154	1.069E-01		1.184E-01	2.103E-01	2.013E-02	0.508
EU-155	-3.011E-03		9.887E-02	1.631E-01	1.237E-02	-0.018
TB-160	-7.139E-02		1.311E-01	2.070E-01	1.462E-02	-0.345
HO-166M	2.498E-04		6.181E-02	9.968E-02	5.378E-03	0.003
TM-171	4.342E+00		2.991E+01	4.395E+01	3.926E+00	0.099
LU-176	-2.769E-03		2.263E-02	3.777E-02	2.253E-03	-0.073
LU-177	2.781E+00	+	1.641E+00	2.340E+00	1.330E-01	1.189
LU-177M	-1.767E-01		1.755E-01	2.723E-01	1.523E-02	-0.649
HF-181	9.306E-03		4.205E-02	7.029E-02	3.955E-03	0.132
W-181	3.293E-01		3.960E-01	5.994E-01	5.369E-02	0.549
TA-182	-8.550E-02		2.030E-01	3.192E-01	1.927E-02	-0.268
RE-183	2.697E-02		1.055E-01	1.737E-01	9.463E-03	0.155
RE-184	1.280E-01		2.298E-01	3.786E-01	2.236E-02	0.338
OS-185	-2.114E-02		3.986E-02	6.142E-02	3.097E-03	-0.344
RE-188	6.374E-02		1.607E-01	2.666E-01	1.476E-02	0.239
W-188	-4.574E+00		7.985E+00	1.122E+01	6.702E-01	-0.408
IR-192	3.293E-03		3.257E-02	5.494E-02	3.284E-03	0.060
AU-195	1.857E-01		2.333E-01	3.528E-01	2.884E-02	0.526
TL-200	-1.016E-03		1.260E-03	Half-Life too short		
TL-201	4.353E+00		1.202E+01	1.987E+01	1.075E+00	0.219
TL-202	3.506E-03		7.728E-02	1.282E-01	7.210E-03	0.027
HG-203	6.521E-02		4.237E-02	7.578E-02	4.786E-03	0.860
BI-207	2.735E-02		5.200E-02	8.984E-02	5.957E-03	0.304
TL-207	-6.297E-01		6.323E-01	9.888E-01	1.638E-01	-0.637
PO-209	2.100E+00		6.857E+00	1.174E+01	8.506E-01	0.179
BI-210	1.734E+00		4.184E+00	7.070E+00	5.821E-01	0.245
PB-210	1.734E+00		4.184E+00	7.070E+00	5.821E-01	0.245
PO-210	1.734E+00		4.183E+00	7.070E+00	5.107E-01	0.245
PB-211	-6.722E-01		9.866E-01	1.414E+00	8.809E-01	-0.476
BI-212	1.197E+00	+	4.487E-01	5.947E-01	4.472E-02	2.013
PO-215	-6.297E-01		6.323E-01	9.888E-01	1.638E-01	-0.637
RN-219	2.036E-01		3.807E-01	6.515E-01	8.801E-02	0.312
RN-220	1.024E+01		2.484E+01	4.189E+01	2.303E+00	0.244
RA-223	-6.297E-01		6.323E-01	9.888E-01	1.638E-01	-0.637
AC-227	-7.848E-02		3.792E-01	6.000E-01	8.405E-02	-0.131
TH-227	-7.848E-02		3.793E-01	6.000E-01	1.016E-01	-0.131
TH-229	-5.927E-01		4.986E-01	7.623E-01	4.259E-02	-0.778
PA-231	-7.673E-01		1.505E+00	2.470E+00	3.422E-01	-0.311
TH-231	-6.297E-01		6.323E-01	9.888E-01	1.638E-01	-0.637
U-231	-6.967E-01		1.676E+00	2.382E+00	2.041E-01	-0.292
PA-233	6.939E-03		5.769E-02	9.748E-02	6.149E-03	0.071
PA-234	7.386E-02		2.885E-01	4.898E-01	8.879E-02	0.151
PA-234M	-5.453E-02		4.890E+00	8.101E+00	6.924E-01	-0.007
U-235	1.665E-02		2.052E-01	3.322E-01	5.403E-02	0.050
NP-236	1.032E-02		7.282E-02	1.194E-01	6.533E-03	0.086
NP-239	-8.230E-02		1.779E-01	2.875E-01	1.857E-02	-0.286
AM-241	1.396E-01		1.759E-01	2.690E-01	2.630E-02	0.519

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-2.253E-02		8.960E-02	1.466E-01	1.117E-02	-0.154
AM-246	4.489E-03		1.504E-01	2.484E-01	1.626E-02	0.018
CM-247	4.863E-03		3.415E-02	5.720E-02	3.187E-03	0.085
CF-249	2.089E-02		3.927E-02	6.726E-02	3.751E-03	0.311
CF-251	2.833E-02		1.212E-01	1.988E-01	1.088E-02	0.142

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]G244606003             *
* Acquisition date   : 25-JAN-2010 08:39:59 Detector SN#      :               *
* Detector ID        : GAM06                               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 02:00:01.23 Half life ratio : 8.000   *
*****
*
*                               SAMPLE DATA                                  *
*
* Sample date        : 7-JAN-2010 12:00:00 Nuclide Library : SOLID             *
* Sample ID          : G244606003 Analyst initials: MXR1          *
* Batch Number       : 941636 Sample Quantity : 1.5907E+02 GRAM *
* Recovery           : 1.00000 Carrier Weight : 0.00000          *
*****
*
*                               QC DATA                                    *
*
* CALIB. DATE/TIME  : 4-FEB-2009 13:05:54 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	2.656E+01	2.320E+00	2.306E-01	1.184E+00
CD-109	1.290E+00	9.574E-01	7.824E-01	4.885E-01
SN-126	1.263E-01	9.372E-02	7.326E-02	4.782E-02
BA-137M	1.033E-01	4.959E-02	3.125E-02	2.530E-02
CS-137	1.092E-01	5.243E-02	3.303E-02	2.675E-02
TL-208	3.772E-01	7.354E-02	2.851E-02	3.752E-02
BI-211	2.640E+00	4.102E-01	1.752E-01	2.093E-01
PB-212	1.025E+00	1.151E-01	4.552E-02	5.871E-02
PO-212	1.025E+00	1.151E-01	4.552E-02	5.871E-02
BI-214	7.990E-01	1.349E-01	5.510E-02	6.882E-02
PB-214	9.182E-01	1.502E-01	5.520E-02	7.664E-02
PO-214	9.182E-01	1.502E-01	5.520E-02	7.664E-02
PO-216	1.025E+00	1.151E-01	4.552E-02	5.871E-02
PO-218	9.182E-01	1.502E-01	5.520E-02	7.664E-02
RA-224	3.442E+00	1.189E+00	5.179E-01	6.065E-01
RA-226	7.990E-01	1.349E-01	5.510E-02	6.882E-02
AC-228	9.161E-01	3.079E-01	9.866E-02	1.571E-01
RA-228	9.161E-01	3.079E-01	9.866E-02	1.571E-01
TH-228	1.043E+00	1.171E-01	4.633E-02	5.976E-02
TH-230	7.990E-01	1.349E-01	5.509E-02	6.882E-02
TH-232	9.161E-01	3.079E-01	9.866E-02	1.571E-01
TH-234	1.135E+00	1.718E+00	1.189E+00	8.765E-01
U-234	7.990E-01	1.349E-01	5.509E-02	6.882E-02
NP-237	3.709E-01	2.852E-01	2.078E-01	1.455E-01
U-238	1.135E+00	1.718E+00	1.189E+00	8.765E-01
AM-243	2.952E-01	7.547E-02	4.348E-02	3.850E-02
ANH-511	7.648E-02	6.230E-02	2.323E-02	3.178E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
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BE-7	9.748E-02	3.243E-01	2.898E-01	1.654E-01	NOT IDENT.
NA-22	4.071E-02	4.177E-02	3.863E-02	2.131E-02	NOT IDENT.
NA-24	5.560E+05	1.266E+07	0.000E+00	6.461E+06	SHORT HLIF
AL-26	-2.451E-02	2.756E-02	1.886E-02	1.406E-02	NOT IDENT.
TI-44	2.112E-01	4.259E-02	3.765E-02	2.173E-02	NOT IDENT.
SC-46	-1.302E-02	3.385E-02	2.835E-02	1.727E-02	FAIL ABUN
V-48	-8.511E-03	7.892E-02	6.751E-02	4.027E-02	NOT IDENT.
CR-51	8.649E-02	3.559E-01	3.255E-01	1.816E-01	NOT IDENT.
MN-52	2.723E-02	2.790E-01	2.363E-01	1.423E-01	NOT IDENT.
MN-54	-3.041E-02	3.667E-02	2.999E-02	1.871E-02	NOT IDENT.
CO-56	-2.793E-02	3.866E-02	3.171E-02	1.972E-02	NOT IDENT.
CO-57	-4.413E-03	2.266E-02	2.042E-02	1.156E-02	NOT IDENT.
CO-58	6.569E-03	3.878E-02	3.452E-02	1.978E-02	NOT IDENT.
FE-59	-5.348E-02	9.440E-02	7.638E-02	4.816E-02	NOT IDENT.
CO-60	3.270E-02	3.870E-02	3.557E-02	1.974E-02	NOT IDENT.
ZN-65	-2.546E-02	1.031E-01	7.311E-02	5.259E-02	NOT IDENT.
GE-68	2.341E-02	1.266E+00	1.086E+00	6.457E-01	NOT IDENT.
AS-73	9.998E-01	8.966E-01	8.789E-01	4.574E-01	NOT IDENT.
AS-74	6.476E-03	1.071E-01	9.265E-02	5.465E-02	NOT IDENT.
SE-75	4.922E-03	4.897E-02	3.719E-02	2.498E-02	NOT IDENT.
BR-77	2.473E+00	2.152E+01	1.890E+01	1.098E+01	FAIL ABUN
SR-82	-1.484E-01	3.734E-01	3.183E-01	1.905E-01	NOT IDENT.
RB-83	6.303E-03	6.523E-02	5.721E-02	3.328E-02	NOT IDENT.
RB-84	-1.643E-02	6.368E-02	5.413E-02	3.249E-02	NOT IDENT.
KR-85	5.652E+00	7.733E+00	6.223E+00	3.946E+00	NOT IDENT.
SR-85	2.983E-02	4.081E-02	3.284E-02	2.082E-02	NOT IDENT.
RB-86	8.159E-02	8.959E-01	7.737E-01	4.571E-01	NOT IDENT.
Y-88	-3.363E-04	2.337E-02	1.969E-02	1.192E-02	NOT IDENT.
ZR-88	-6.735E-03	3.008E-02	2.641E-02	1.535E-02	NOT IDENT.
Y-91	-1.449E-01	2.075E+01	1.758E+01	1.059E+01	NOT IDENT.
NB-94	-1.732E-02	3.255E-02	2.641E-02	1.661E-02	NOT IDENT.
NB-95	1.881E-02	4.177E-02	3.637E-02	2.131E-02	NOT IDENT.
NB-95M	3.469E-01	1.502E-01	1.273E-01	7.665E-02	NOT IDENT.
ZR-95	1.606E-03	7.026E-02	5.943E-02	3.585E-02	NOT IDENT.
NB-97	1.148E+06	1.622E+06	0.000E+00	8.278E+05	SHORT HLIF
ZR-97	3.871E+07	3.033E+07	0.000E+00	1.547E+07	SHORT HLIF
MO-99	7.962E+00	2.180E+01	1.902E+01	1.112E+01	NOT IDENT.
TC-99M	2.520E+19	7.045E+19	0.000E+00	0.000E+00	SHORT HLIF
RH-101	1.221E-02	3.192E-02	2.792E-02	1.629E-02	NOT IDENT.
RH-102	2.267E-02	2.752E-02	2.543E-02	1.404E-02	NOT IDENT.
RU-103	-9.841E-03	3.751E-02	3.211E-02	1.914E-02	FAIL ABUN
RH-106	-1.033E-01	2.804E-01	2.326E-01	1.431E-01	FAIL ABUN
RU-106	-1.033E-01	2.802E-01	2.326E-01	1.430E-01	FAIL ABUN
AG-108M	9.768E-03	3.179E-02	2.860E-02	1.622E-02	NOT IDENT.
AG-110M	2.137E-02	3.892E-02	3.048E-02	1.986E-02	NOT IDENT.
IN-111	-1.342E+00	1.978E+00	1.659E+00	1.009E+00	NOT IDENT.
IN-113M	2.090E-02	4.379E-02	4.000E-02	2.234E-02	NOT IDENT.
SN-113	2.090E-02	4.379E-02	4.000E-02	2.234E-02	NOT IDENT.
IN-114M	9.775E-02	1.963E-01	1.563E-01	1.002E-01	NOT IDENT.
CD-115	-1.851E-01	2.346E+01	0.000E+00	1.197E+01	SHORT HLIF
SN-117M	-4.334E-02	5.736E-02	4.962E-02	2.926E-02	NOT IDENT.
SB-122	7.163E+00	3.936E+00	3.827E+00	2.008E+00	NOT IDENT.
I-123	-6.268E+07	1.690E+08	0.000E+00	8.621E+07	SHORT HLIF
TE-123M	-9.723E-03	2.621E-02	2.307E-02	1.337E-02	NOT IDENT.
I-124	-2.850E-01	1.201E+00	8.706E-01	6.127E-01	NOT IDENT.
SB-124	4.031E-03	5.905E-02	5.109E-02	3.013E-02	FAIL ABUN
SB-125	-9.066E-02	8.477E-02	6.942E-02	4.325E-02	FAIL ABUN
TE-125M	-7.552E+00	8.925E+00	7.778E+00	4.554E+00	NOT IDENT.
I-126	-1.294E-03	2.241E-01	1.648E-01	1.143E-01	NOT IDENT.
SB-126	-5.868E-02	1.831E-01	1.282E-01	9.341E-02	NOT IDENT.
SB-127	2.370E-01	2.292E+00	1.967E+00	1.169E+00	NOT IDENT.
XE-127	-2.343E-02	4.535E-02	3.898E-02	2.314E-02	NOT IDENT.
I-131	-5.915E-03	1.292E-01	1.153E-01	6.592E-02	NOT IDENT.
TE-132	1.795E-01	1.195E+00	1.051E+00	6.098E-01	NOT IDENT.
BA-133	3.551E-02	4.178E-02	3.477E-02	2.131E-02	NOT IDENT.
I-133	4.433E+04	4.778E+04	0.000E+00	2.438E+04	SHORT HLIF
CS-134	3.779E-02	4.263E-02	3.998E-02	2.175E-02	NOT IDENT.
CS-135	1.596E-01	1.741E-01	1.393E-01	8.884E-02	NOT IDENT.
I-135	2.000E+17	5.626E+18	0.000E+00	0.000E+00	SHORT HLIF
CS-136	7.487E-03	1.253E-01	1.082E-01	6.392E-02	FAIL ABUN
CE-139	-6.590E-03	2.785E-02	2.459E-02	1.421E-02	NOT IDENT.
BA-140	1.598E-01	2.606E-01	2.332E-01	1.330E-01	NOT IDENT.
LA-140	-7.183E-02	1.011E-01	7.822E-02	5.159E-02	NOT IDENT.
CE-141	3.025E-02	6.102E-02	5.591E-02	3.113E-02	NOT IDENT.
CE-143	3.405E+03	9.853E+02	0.000E+00	5.027E+02	SHORT HLIF
CE-144	-2.849E-02	1.927E-01	1.732E-01	9.834E-02	NOT IDENT.
PM-144	-3.062E-03	3.376E-02	2.849E-02	1.722E-02	NOT IDENT.
PR-144	-2.078E-01	2.291E+00	1.933E+00	1.169E+00	NOT IDENT.

PM-146	-9.150E-03	4.007E-02	3.471E-02	2.044E-02	NOT IDENT.
ND-147	4.262E-01	5.861E-01	5.361E-01	2.990E-01	NOT IDENT.
PM-149	1.639E+02	1.978E+02	0.000E+00	1.009E+02	SHORT HLIF
EU-152	-1.317E-01	1.115E-01	7.302E-02	5.689E-02	NOT IDENT.
GD-153	-2.780E-02	7.889E-02	6.252E-02	4.025E-02	NOT IDENT.
EU-154	1.069E-01	1.161E-01	1.067E-01	5.921E-02	NOT IDENT.
EU-155	-3.011E-03	9.689E-02	8.865E-02	4.944E-02	FAIL ABUN
TB-160	-7.139E-02	1.285E-01	1.061E-01	6.556E-02	FAIL ABUN
HO-166M	2.498E-04	6.058E-02	5.142E-02	3.091E-02	FAIL ABUN
TM-171	4.342E+00	2.932E+01	2.416E+01	1.496E+01	NOT IDENT.
LU-176	-2.769E-03	2.218E-02	1.995E-02	1.131E-02	FAIL ABUN
LU-177	2.781E+00	1.608E+00	1.249E+00	8.205E-01	FAIL ABUN
LU-177M	-1.767E-01	1.720E-01	1.426E-01	8.774E-02	FAIL ABUN
HF-181	9.306E-03	4.120E-02	3.666E-02	2.102E-02	NOT IDENT.
W-181	3.293E-01	3.881E-01	3.297E-01	1.980E-01	NOT IDENT.
TA-182	-8.550E-02	1.989E-01	1.621E-01	1.015E-01	FAIL ABUN
RE-183	2.697E-02	1.034E-01	9.334E-02	5.275E-02	FAIL ABUN
RE-184	1.280E-01	2.252E-01	2.010E-01	1.149E-01	NOT IDENT.
OS-185	-2.114E-02	3.907E-02	3.177E-02	1.993E-02	NOT IDENT.
RE-188	6.374E-02	1.575E-01	1.434E-01	8.036E-02	NOT IDENT.
W-188	-4.574E+00	7.825E+00	5.934E+00	3.992E+00	FAIL ABUN
IR-192	3.293E-03	3.191E-02	2.899E-02	1.628E-02	FAIL ABUN
AU-195	1.857E-01	2.286E-01	1.920E-01	1.167E-01	FAIL ABUN
TL-200	-1.016E+03	2.470E+03	0.000E+00	1.260E+03	SHORT HLIF
TL-201	4.353E+00	1.178E+01	1.067E+01	6.011E+00	NOT IDENT.
TL-202	3.506E-03	7.573E-02	6.702E-02	3.864E-02	NOT IDENT.
HG-203	6.521E-02	4.152E-02	4.013E-02	2.118E-02	NOT IDENT.
BI-207	2.735E-02	5.096E-02	4.581E-02	2.600E-02	FAIL ABUN
TL-207	-6.297E-01	6.196E-01	5.215E-01	3.161E-01	FAIL ABUN
PO-209	2.100E+00	6.720E+00	6.016E+00	3.429E+00	NOT IDENT.
BI-210	1.734E+00	4.100E+00	3.922E+00	2.092E+00	NOT IDENT.
PB-210	1.734E+00	4.100E+00	3.922E+00	2.092E+00	NOT IDENT.
PO-210	1.734E+00	4.100E+00	3.922E+00	2.092E+00	NOT IDENT.
PB-211	-6.722E-01	9.668E-01	7.409E-01	4.933E-01	NOT IDENT.
BI-212	1.197E+00	4.397E-01	3.066E-01	2.244E-01	FAIL ABUN
PO-215	-6.297E-01	6.196E-01	5.215E-01	3.161E-01	FAIL ABUN
RN-219	2.036E-01	3.731E-01	3.415E-01	1.904E-01	FAIL ABUN
RN-220	1.024E+01	2.435E+01	2.177E+01	1.242E+01	NOT IDENT.
RA-223	-6.297E-01	6.196E-01	5.215E-01	3.161E-01	FAIL ABUN
AC-227	-7.848E-02	3.716E-01	3.184E-01	1.896E-01	NOT IDENT.
TH-227	-7.848E-02	3.717E-01	3.184E-01	1.896E-01	FAIL ABUN
TH-229	-5.927E-01	4.886E-01	4.077E-01	2.493E-01	FAIL ABUN
PA-231	-7.673E-01	1.475E+00	1.308E+00	7.527E-01	NOT IDENT.
TH-231	-6.297E-01	6.196E-01	5.215E-01	3.161E-01	FAIL ABUN
U-231	-6.967E-01	1.642E+00	1.298E+00	8.379E-01	FAIL ABUN
PA-233	6.939E-03	5.654E-02	5.146E-02	2.884E-02	FAIL ABUN
PA-234	7.386E-02	2.828E-01	2.506E-01	1.443E-01	FAIL ABUN
PA-234M	-5.453E-02	4.792E+00	4.138E+00	2.445E+00	NOT IDENT.
U-235	1.665E-02	2.011E-01	1.790E-01	1.026E-01	FAIL ABUN
NP-236	1.032E-02	7.136E-02	6.418E-02	3.641E-02	FAIL ABUN
NP-239	-8.230E-02	1.743E-01	1.558E-01	8.895E-02	FAIL ABUN
AM-241	1.396E-01	1.724E-01	1.483E-01	8.797E-02	NOT IDENT.
CM-243	-2.253E-02	8.780E-02	7.970E-02	4.480E-02	FAIL ABUN
AM-246	4.489E-03	1.474E-01	1.266E-01	7.522E-02	NOT IDENT.
CM-247	4.863E-03	3.347E-02	2.999E-02	1.707E-02	NOT IDENT.
CF-249	2.089E-02	3.848E-02	3.529E-02	1.963E-02	NOT IDENT.
CF-251	2.833E-02	1.187E-01	1.066E-01	6.059E-02	NOT IDENT.


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*                                     *
*               GEL Laboratories LLC                                     *
*               2040 SAVAGE ROAD                                         *
*               CHARLESTON , SC 29417                                    *
*               GAMMA SPECTROSCOPY BACKGROUND REPORT                    *
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ENERGY	MDA COUNTS
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46.50	316.2002
46.50	316.2002
46.50	316.2002
48.70	351.9225
49.72	375.2738
51.35	333.5109
52.39	326.8028
52.97	306.1081
53.15	308.0294
53.44	299.9495
54.07	328.6456
56.28	387.7297
56.28	387.7313
57.37	0.0000
57.53	376.8568
57.53	376.8576
57.60	371.9883
57.98	364.1079
57.98	364.1079
59.32	347.1586
59.32	347.1586
59.40	347.2023
59.54	347.2791
59.72	334.0742
60.01	334.2266
61.10	376.2755
61.14	379.2617
61.30	379.3563
63.00	423.4365
63.29	423.6231
63.29	423.6231
63.58	426.7846
64.28	385.5549
65.12	357.7222
65.20	357.7646
65.20	357.7646
66.05	367.1742
66.72	377.9944
66.83	378.0577
66.91	386.6957
67.20	371.9089
67.20	371.9089
67.75	413.9800
67.85	414.0408
68.90	445.8996
68.90	445.8996
69.30	440.9085
69.67	451.6488
70.82	396.7799
70.82	396.7799
70.83	396.7863
72.80	382.4433
72.87	382.4804
72.87	382.4804
74.67	383.4376
74.81	383.5119
74.81	383.5119
74.81	383.5119
74.81	383.5119
74.81	383.5119
74.81	383.5119
74.81	383.5119
74.97	383.5956
75.28	383.7597
75.70	383.9796
77.11	384.7169
77.11	384.7169

77.11	384.7169
77.11	384.7169
77.11	384.7169
77.11	384.7169
77.11	384.7169
78.38	343.2306
79.62	401.6042
79.80	401.6992
79.80	401.6992
80.11	435.3540
80.18	435.3942
80.30	435.4622
80.30	435.4622
80.57	467.6035
81.00	470.5347
81.07	470.5780
81.07	470.5780
81.07	470.5780
81.07	470.5780
82.60	400.8861
83.37	405.1052
83.78	396.1432
83.78	396.1432
83.78	396.1432
83.78	396.1432
84.21	385.6505
84.90	353.8245
85.43	384.7176
86.29	446.5138
86.50	498.8167
86.54	498.8405
86.59	498.8722
86.72	525.8224
86.79	525.8663
86.94	520.5918
87.30	606.8641
87.30	606.8641
87.30	606.8641
87.30	606.8641
87.30	606.8641
87.30	606.8641
87.30	606.8641
87.57	549.4359
87.88	607.3053
88.03	607.4186
88.36	607.6669
88.47	607.7513
89.95	608.8651
91.11	501.6791
92.29	425.1070
92.38	425.1540
92.38	425.1540
93.35	425.6525
94.00	425.9848
94.67	426.3230
94.67	426.3255
94.90	334.9516
94.90	334.9516
94.90	334.9516
94.90	334.9516
95.87	339.9954
95.87	339.9954
96.73	332.5712
97.43	331.2888
98.44	308.3212
98.44	308.3224
98.88	305.3636
99.55	282.2137
99.55	282.2137
99.86	293.7524
100.00	293.7996
100.10	293.8352
103.18	345.4281
103.76	336.8416
105.00	325.5448
105.31	326.6384
108.00	338.4360
109.28	339.8963

111.00	332.6368
111.00	332.6368
111.76	326.9822
112.95	306.6285
115.19	320.2498
116.30	327.5729
117.00	331.7869
117.00	331.7869
117.66	311.1409
121.11	304.2717
121.62	297.4441
121.78	297.4919
122.06	297.5771
122.32	298.6544
122.32	298.6544
122.32	298.6544
122.32	298.6544
123.07	299.8821
127.23	333.2582
129.76	296.8591
131.20	335.5711
133.02	354.3340
133.54	334.3132
135.34	320.7269
136.00	352.3118
136.25	355.4346
136.48	348.4223
140.51	328.3968
140.51	0.0000
142.18	323.8155
142.65	344.3308
143.76	330.4072
144.24	322.3913
144.24	322.3913
144.24	322.3913
144.24	322.3913
145.22	305.3212
145.44	308.4468
147.16	363.1470
152.43	292.9213
152.70	289.9067
153.22	291.0686
154.21	293.3801
154.21	293.3801
154.21	293.3801
154.21	293.3801
155.03	282.2615
156.02	319.6237
158.56	306.8976
159.00	0.0000
159.00	296.6760
160.31	277.3483
161.27	276.5415
162.32	287.1546
162.64	277.9003
163.35	294.6691
163.89	285.4621
165.85	297.3726
167.43	267.5724
171.28	307.0724
171.86	277.9614
172.10	278.0162
176.55	281.1227
176.60	281.1330
181.06	282.9811
184.41	283.7297
185.71	295.8530
186.00	295.9213
190.27	256.1839
192.34	271.8828
193.63	316.8001
197.04	262.1952
198.01	258.1202
198.60	244.3608
200.40	288.5003
201.83	269.5515
202.84	271.8943
205.31	253.9432

208.36	245.9104
208.81	259.7524
209.75	261.4337
209.75	261.4337
210.97	272.2163
215.65	219.7870
216.55	259.4641
218.09	280.3093
222.10	231.1731
223.80	257.5245
226.40	264.5169
227.00	249.3803
227.08	248.3052
227.20	248.3261
228.16	244.1284
228.18	244.1318
228.18	244.1318
231.56	0.0000
235.69	257.6430
236.00	285.7454
236.00	285.7454
238.63	230.4902
238.63	230.4902
238.63	230.4902
238.63	230.4902
239.00	230.5463
240.98	230.8491
241.98	231.0013
241.98	231.0013
241.98	231.0013
244.69	231.4114
245.39	231.5172
247.94	215.5567
248.90	222.7625
249.79	210.5074
252.40	193.8055
252.85	190.5382
252.85	190.5382
254.15	0.0000
256.20	212.0363
256.20	212.0363
260.50	205.9316
260.90	0.0000
262.80	182.8184
264.65	189.2783
268.24	191.4872
268.79	186.1818
269.46	195.2127
269.46	195.2127
269.46	195.2127
269.46	195.2127
271.23	181.0825
273.65	249.5790
276.40	223.0153
277.35	204.3759
277.60	193.4790
277.60	193.4790
278.00	181.0246
278.60	181.8888
279.20	188.2607
279.53	192.8011
280.46	210.0356
281.68	221.0144
283.67	210.4366
284.30	200.5778
285.00	189.8126
285.90	0.0000
286.10	166.4198
286.10	166.4198
287.40	191.8921
288.45	0.0000
290.67	188.9343
290.80	188.9471
291.72	179.9744
293.26	0.0000
293.70	149.8998
295.21	203.6754
295.21	203.6754

295.21	203.6754
295.96	231.9653
296.50	250.2359
297.23	219.9957
298.57	174.6127
299.80	161.0617
299.80	161.0617
300.09	156.5285
300.09	156.5285
300.09	156.5285
300.09	156.5285
300.12	156.5306
301.29	157.7216
302.84	206.3933
303.76	210.1558
303.91	210.1726
304.40	212.9737
304.40	212.9737
304.84	199.3109
306.84	158.3482
308.46	160.3241
311.98	145.0333
316.51	149.0768
318.01	148.2804
319.02	147.4395
319.41	153.9225
320.08	143.8373
323.87	182.0158
323.87	182.0158
323.87	182.0158
323.87	182.0158
325.23	170.1281
328.77	147.2943
333.44	176.4504
334.20	161.0379
334.20	161.0379
334.30	161.0464
338.28	148.9707
338.28	148.9707
338.28	148.9707
338.28	148.9707
338.32	148.9727
338.32	148.9727
338.32	148.9727
340.50	118.0728
340.57	118.0759
344.27	169.9852
345.85	143.9501
350.59	0.0000
351.07	162.4598
351.92	132.8367
351.92	132.8367
351.92	132.8367
355.39	0.0000
356.01	104.9247
364.48	120.7859
366.43	119.9601
367.43	146.4799
367.94	0.0000
369.80	129.6215
374.96	133.7452
383.85	118.1300
387.95	129.8176
388.63	132.7236
391.69	130.0483
391.69	130.0483
392.90	137.7773
398.62	116.0844
400.65	124.8378
401.10	125.8252
401.81	110.4938
402.60	117.2627
404.84	141.4390
410.95	103.2435
411.60	113.8919
413.65	147.8116
414.70	114.0532
415.30	116.0186

415.76	122.8127
417.63	0.0000
418.52	111.3473
423.70	101.9033
427.08	119.5541
427.89	125.4317
432.53	107.1788
433.93	115.0442
439.47	109.4625
439.56	109.4666
439.89	114.3706
443.98	105.7614
444.90	101.8850
445.03	101.8913
445.03	101.8913
445.03	101.8913
445.03	101.8913
453.90	106.2163
463.38	95.7851
468.07	75.8562
473.00	112.0372
475.06	90.3013
475.35	81.3804
476.78	96.3239
477.59	104.3040
477.96	106.3064
482.03	93.5479
484.57	98.6266
487.03	94.7379
490.36	0.0000
492.35	0.0000
497.08	87.1147
507.63	0.0000
510.53	0.0000
510.84	95.6488
511.00	95.6546
511.85	95.6877
511.85	95.6877
513.99	102.4882
513.99	102.4882
520.41	86.9133
520.65	86.9217
527.90	0.0000
528.96	0.0000
529.64	73.0266
529.87	0.0000
531.02	67.9913
537.32	65.1031
543.00	73.3992
546.56	0.0000
549.76	79.7196
552.65	83.8979
555.20	83.9779
563.23	78.0651
563.90	64.7288
568.70	91.6031
569.32	89.5658
569.50	88.5426
569.67	88.5468
573.80	83.5253
574.00	83.5313
574.64	88.7085
578.91	70.5939
579.30	0.0000
583.14	82.7734
585.48	60.4069
591.81	92.2570
592.07	88.2290
593.00	90.3347
595.88	103.9380
600.56	94.7413
602.52	0.0000
602.71	102.4530
602.71	102.4530
603.60	95.5383
604.41	86.8774
604.70	86.8856
609.31	87.0260

609.31	87.0260
609.31	87.0260
609.31	87.0260
610.33	74.8686
612.46	73.1821
614.37	55.7956
618.01	65.9916
621.84	71.3220
621.84	71.3220
631.29	82.0771
633.02	81.0718
633.10	81.0737
634.78	72.6926
635.90	71.6656
636.97	64.3121
645.85	70.8489
646.12	72.9705
656.30	70.7422
657.75	72.5458
657.90	0.0000
661.65	92.1278
661.65	92.1278
664.57	0.0000
666.33	74.5254
666.33	74.5254
675.00	96.0886
677.61	78.0045
685.20	83.5510
692.80	80.5334
695.00	88.1120
696.49	82.7788
696.49	82.7788
697.00	89.2432
697.49	93.5590
698.33	92.5067
698.50	87.1343
699.00	86.0723
702.63	87.2470
706.10	93.8117
706.58	0.0000
706.67	90.5933
709.31	64.7637
711.68	79.9348
713.82	77.8254
717.42	62.5230
720.50	74.0155
721.93	0.0000
722.20	74.0547
722.78	65.0347
722.78	65.0347
722.89	65.0376
722.95	65.0391
723.30	65.0464
724.18	72.2933
727.18	71.6364
733.00	48.9298
735.90	81.6229
739.58	61.0121
742.81	77.4309
744.21	78.5549
747.13	54.6008
751.79	72.1730
752.31	64.5284
753.82	65.6528
755.35	64.5874
756.15	67.8882
756.87	72.2842
763.93	82.3132
765.79	66.9853
766.42	69.1939
766.84	76.8923
776.49	69.7672
778.00	78.0637
778.57	72.5645
778.89	72.5710
783.80	47.8370
785.46	56.1438
792.07	54.4074

795.84	58.1589
796.30	68.3226
798.80	85.0034
801.93	60.1110
805.60	74.9850
810.29	62.1078
810.76	64.8973
815.85	62.2059
817.79	43.6609
818.51	46.4569
819.60	52.0477
826.30	59.5951
828.27	0.0000
831.60	56.8859
831.96	56.8921
834.83	84.9404
836.80	0.0000
846.75	72.1092
848.13	72.1374
856.28	0.0000
856.80	86.3941
860.37	51.6990
867.32	58.3886
867.82	52.7450
871.10	59.3906
873.19	48.1051
874.81	46.2396
875.33	0.0000
876.40	45.3145
879.36	57.6330
880.27	57.6479
880.51	59.5419
881.50	50.1037
883.24	50.1264
884.67	40.6843
889.25	49.2599
896.60	49.3562
898.02	51.2732
899.00	54.1356
903.28	60.3095
911.07	50.4962
911.07	50.4962
911.07	50.4962
919.63	61.1120
920.93	47.9337
925.00	48.7661
925.24	49.7254
926.50	47.8292
935.52	46.0225
937.48	70.9859
944.10	59.5756
946.00	51.9137
949.00	50.9911
962.29	61.2283
964.01	64.5652
966.15	77.8519
968.20	85.0728
969.11	85.0925
969.11	85.0925
969.11	85.0925
977.42	65.1137
980.50	49.4540
983.50	59.1955
989.30	47.6183
996.32	57.4347
1001.03	62.3737
1001.68	61.4081
1004.76	67.3070
1021.30	0.0000
1024.50	0.0000
1034.80	56.0050
1036.00	57.9845
1037.82	58.0109
1038.57	58.0205
1038.76	0.0000
1045.16	54.1720
1046.59	58.1309
1048.07	58.1501

1050.47	57.1976
1050.47	57.1976
1062.04	62.2976
1063.62	49.4609
1076.63	59.5313
1077.35	58.5487
1078.86	61.5459
1085.78	57.6672
1099.22	63.8281
1112.02	60.0122
1112.84	63.4544
1115.52	65.2065
1120.29	42.9461
1120.29	42.9461
1120.29	42.9461
1120.29	42.9461
1120.51	42.9478
1121.28	46.3912
1124.00	0.0000
1129.67	57.2366
1131.51	0.0000
1147.95	0.0000
1167.94	62.7821
1173.22	58.8001
1175.09	59.8378
1177.93	78.1405
1189.05	79.3457
1204.90	75.5296
1205.75	0.0000
1213.00	77.7039
1221.42	72.7218
1230.97	91.3394
1235.34	81.1505
1236.41	0.0000
1238.25	62.6978
1246.25	52.5066
1260.41	0.0000
1271.85	51.7476
1274.45	36.2419
1274.54	36.2433
1291.56	45.7188
1298.22	0.0000
1312.09	39.6467
1325.50	36.6136
1325.50	36.6136
1332.49	29.3319
1333.61	31.4331
1360.21	18.9580
1362.66	0.0000
1365.15	24.2466
1368.21	22.1519
1368.53	0.0000
1376.25	20.0731
1384.27	25.3945
1394.10	27.5615
1395.20	18.0251
1407.95	13.8167
1434.06	19.2246
1436.60	19.2334
1457.56	0.0000
1460.81	18.2465
1489.15	22.6560
1509.49	11.9104
1596.49	31.0952
1620.62	13.2461
1678.03	0.0000
1691.02	9.5728
1691.02	9.5728
1706.46	0.0000
1750.46	0.0000
1764.49	11.6237
1764.49	11.6237
1764.49	11.6237
1764.49	11.6237
1770.23	1.6967
1771.40	45.5755
1791.20	0.0000
1808.65	16.5814

1836.01

6.8564

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G244606003

Total Uranium Activity	3.3831E+00	ug/g
Total Uranium Counting Unc.	5.1116E+00	ug/g
Total Uranium Tpu	2.6080E-06	ug/g
Total Uranium Mda	3.5376E+00	ug/g

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*****
*
*               GEL Laboratories LLC               *
*               2040 SAVAGE ROAD                   *
*               CHARLESTON ,SC 29417                *
*               GROSS GAMMA REPORT                  *
*
*****
*
*  BATCH ID      : 941636                          SAMPLE ID   : G244606003
*  ANALYST       : MXR1                             DETECTOR    : GAM06
*  SAMPLE DATE   : 7-JAN-2010 12:00:00.00          COUNT TIME   : 0 02:00:00.00
*  ANALYSIS DATE : 25-JAN-2010 08:39:59.25          SAMPLE ALQT  : 159.070 GRAM
*
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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 6.812E+00
GROSS GAMMA ERROR   (pCi/GRAM ) : 1.171E+00
GROSS GAMMA MDA      (pCi/GRAM ) : 2.613E+00
GROSS GAMMA DLC      (pCi/GRAM ) : 1.267E+00

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VAX/VMS Nuclide Identification Report Generated 26-JAN-2010 15:42:46.95

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*****
*                               GEL Laboratories LLC                      *
*                               2040 Savage Road                        *
*                               Charleston, SC 29414                    *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202015438.CNF;1
Sample date        : 18-JAN-2010 00:00:00 Acquisition date : 25-JAN-2010 10:47:49
Sample ID          : G1202015438 Sample quantity   : 1.59070E+02 GRAM
Detector name      : GAM22 Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00 Elapsed real time: 0 02:00:01.02 0.0%
Energy tolerance   : 1.50000 keV Analyst Initials : MXR1
Abundance limit    : 75.00000 Sensitivity        : 5.00000
Batch ID           : 941636 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	63.07*	16	136	1.52	126.40	124	8	2.20E-03	145.2	
2	0	92.74*	27	244	1.12	185.67	181	12	3.78E-03	133.0	
3	0	185.86*	27	249	1.23	371.74	367	12	3.80E-03	128.9	
4	0	238.54*	3	155	1.35	477.01	471	10	4.50E-04	810.0	
5	0	511.25*	25	93	2.32	1022.01	1014	20	3.48E-03	126.0	
6	0	584.48	22	104	1.14	1168.37	1162	14	2.99E-03	104.5	
7	0	911.95*	18	45	2.35	1823.02	1814	22	2.43E-03	109.0	
8	0	1191.04	37	11	0.78	2381.09	2370	22	5.14E-03	28.2	
9	0	1765.57*	4	15	3.40	3530.33	3518	17	5.92E-04	264.2	

Flag: "*" = Peak area was modified by background subtraction

```

Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202015438.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 18-JAN-2010 00:00:00 Acquisition date : 25-JAN-2010 10:47:49
Sample ID         : G1202015438 Sample quantity : 159.07 GRAM
Sample type       : SOLID Sample geometry :
Detector name     : GAMMA22 Detector geometry: CAN
Elapsed live time : 0 02:00:00.00 Elapsed real time: 0 02:00:01.02 0.0%
Peak Width (FWHM) : 3.00 Confidence level : 5.00 %
Energy tolerance  : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type   : Empirical Efficiencies at : Peak Energy
Abundance limit   : 75.00 WTM error limit : 3.00

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Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TL-208		277.35		7.196E-02	1.743E-01	2.865E-01	4.724E-02	0.251
	+	510.84		6.378E-02	1.609E-01	1.006E-01	1.310E-02	0.634
	+	583.14	*	1.537E-02	3.216E-02	3.266E-02	3.541E-03	0.471
		860.37		-4.217E-03	1.529E-01	2.424E-01	2.824E-02	-0.017
TH-234	+	63.29	*	2.288E-01	6.654E-01	7.277E-01	1.267E-01	0.314
	+	92.38		1.510E-01	4.026E-01	2.987E-01	5.474E-02	0.506
U-238	+	63.29	*	2.288E-01	6.654E-01	7.277E-01	1.267E-01	0.314
	+	92.38		1.510E-01	4.019E-01	2.987E-01	2.722E-02	0.506
ANH-511	+	511.00	*	1.378E-02	3.474E-02	2.172E-02	2.177E-03	0.634

---- 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	*	-1.331E-01	1.461E-01	2.167E-01	2.261E-02	-0.614
NA-22		1274.54	*	-3.008E-03	1.986E-02	3.231E-02	2.784E-03	-0.093
NA-24		1368.53	*	3.505E-05	1.986E-02	Half-Life too short		
AL-26		1129.67		3.841E-01	5.918E-01	1.044E+00	9.089E-02	0.368
		1808.65	*	-6.960E-03	1.498E-02	2.239E-02	1.831E-03	-0.311
K-40		1460.81	*	5.168E-02	2.399E-01	4.328E-01	3.965E-02	0.119
TI-44		67.85		6.067E-03	1.825E-02	2.766E-02	2.111E-03	0.219
		78.38	*	1.658E-03	1.293E-02	1.986E-02	1.684E-03	0.083
SC-46		889.25	*	-5.946E-04	1.677E-02	2.772E-02	3.103E-03	-0.021
		1120.51		6.513E-03	2.272E-02	3.833E-02	3.389E-03	0.170
V-48		944.10		-1.430E-01	2.736E-01	4.232E-01	4.590E-02	-0.338
		983.50	*	-1.631E-04	2.063E-02	3.385E-02	3.550E-03	-0.005
		1312.09		6.047E-04	2.039E-02	3.380E-02	2.978E-03	0.018
CR-51		320.08	*	-1.150E-01	1.508E-01	2.385E-01	3.089E-02	-0.482
MN-52		744.21		-3.022E-02	4.255E-02	6.377E-02	6.929E-03	-0.474
		848.13		-8.032E-01	1.193E+00	1.848E+00	2.057E-01	-0.435
		935.52		3.940E-02	3.893E-02	7.113E-02	7.766E-03	0.554
		1246.25		1.434E-02	1.122E+00	1.863E+00	1.575E-01	0.008
		1333.61		3.899E-01	7.695E-01	1.359E+00	1.212E-01	0.287
		1434.06	*	1.871E-03	4.375E-02	7.199E-02	6.433E-03	0.026

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
MN-54	834.83	*		-1.675E-02	1.654E-02	2.472E-02	2.746E-03	-0.678
CO-56	846.75	*		-8.062E-03	1.683E-02	2.668E-02	2.970E-03	-0.302
	977.42			-9.678E-02	1.119E+00	1.819E+00	1.919E-01	-0.053
	1037.82			-3.044E-02	1.276E-01	2.026E-01	2.089E-02	-0.150
	1175.09			-3.114E-01	6.837E-01	1.067E+00	8.594E-02	-0.292
	1238.25			-1.149E-02	3.419E-02	5.151E-02	4.463E-03	-0.223
	1360.21			-4.137E-01	4.143E-01	5.742E-01	5.129E-02	-0.721
	1771.40			1.043E-02	8.678E-02	1.265E-01	1.051E-02	0.082
CO-57	122.06	*		1.204E-03	1.163E-02	1.857E-02	1.531E-03	0.065
	136.48			-2.132E-02	9.143E-02	1.526E-01	1.416E-02	-0.140
CO-58	810.76	*		3.024E-03	1.548E-02	2.639E-02	2.922E-03	0.115
FE-59	142.65			-1.008E+00	1.210E+00	1.829E+00	1.619E-01	-0.551
	192.34			-2.067E-02	4.399E-01	6.698E-01	9.946E-02	-0.031
	1099.22	*		3.797E-02	3.668E-02	6.589E-02	6.457E-03	0.576
	1291.56			-1.032E-02	4.261E-02	6.807E-02	6.709E-03	-0.152
CO-60	1173.22			-7.040E-03	1.399E-02	2.160E-02	1.737E-03	-0.326
	1332.49	*		8.597E-03	1.590E-02	2.814E-02	2.509E-03	0.306
ZN-65	1115.52	*		-5.789E-02	4.008E-02	5.347E-02	4.770E-03	-1.083
GE-68	1077.35	*		2.164E-01	5.451E-01	9.151E-01	8.627E-02	0.236
AS-73	53.44	*		1.731E-01	2.817E-01	4.891E-01	3.696E-02	0.354
AS-74	595.88	*		-1.171E-02	3.578E-02	5.783E-02	5.994E-03	-0.203
	634.78			6.777E-02	1.200E-01	2.074E-01	2.174E-02	0.327
SE-75	66.05			-2.112E+00	2.003E+00	2.565E+00	2.447E-01	-0.823
	96.73			-4.587E-02	3.274E-01	4.643E-01	6.391E-02	-0.099
	121.11			-4.466E-03	6.175E-02	9.749E-02	1.066E-02	-0.046
	136.00			-8.132E-03	1.685E-02	2.775E-02	2.408E-03	-0.293
	198.60			8.537E-01	1.003E+00	1.579E+00	1.846E-01	0.541
	264.65	*		-7.401E-03	2.181E-02	3.424E-02	4.608E-03	-0.216
	279.53			-6.963E-03	4.996E-02	7.911E-02	1.123E-02	-0.088
	303.91			-2.608E-01	8.927E-01	1.470E+00	2.239E-01	-0.177
	400.65			1.237E-02	1.148E-01	1.899E-01	2.223E-02	0.065
BR-77	87.88			3.876E+00	6.908E+00	1.048E+01	9.938E-01	0.370
	200.40			-9.313E+00	9.342E+00	1.447E+01	1.591E+00	-0.644
+	239.00			4.385E-02	7.103E-01	8.718E-01	1.085E-01	0.050
	249.79			-6.508E-01	3.531E+00	5.632E+00	7.242E-01	-0.116
	281.68			-4.272E-01	4.610E+00	7.319E+00	1.020E+00	-0.058
	297.23			-1.345E+00	2.637E+00	4.293E+00	5.773E-01	-0.313
	303.76			-2.394E+00	8.501E+00	1.401E+01	1.853E+00	-0.171
	439.47			3.036E+00	7.223E+00	1.215E+01	1.169E+00	0.250
	484.57			-1.868E+00	1.263E+01	2.013E+01	1.990E+00	-0.093
	520.65	*		1.707E-01	5.898E-01	8.825E-01	8.882E-02	0.193
	574.64			-2.445E+00	1.092E+01	1.783E+01	1.835E+00	-0.137
	578.91			1.333E+00	5.474E+00	8.032E+00	8.278E-01	0.166
+	585.48			7.330E+00	1.533E+01	1.594E+01	1.646E+00	0.460
	755.35			1.827E+00	8.168E+00	1.353E+01	1.475E+00	0.135
	817.79			-3.970E+00	6.591E+00	9.730E+00	1.077E+00	-0.408
SR-82	698.33			-5.611E+00	1.396E+01	2.202E+01	2.356E+00	-0.255
	776.49	*		-6.725E-02	1.331E-01	2.026E-01	2.222E-02	-0.332
	1395.20			9.090E-01	3.731E+00	6.346E+00	5.674E-01	0.143

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RB-83	520.41	*		1.177E-02	3.444E-02	5.182E-02	5.215E-03	0.227
	529.64			4.159E-03	4.473E-02	7.549E-02	7.630E-03	0.055
	552.65			-6.574E-02	8.277E-02	1.280E-01	1.306E-02	-0.514
RB-84	881.50	*		1.809E-02	2.653E-02	4.692E-02	5.248E-03	0.386
KR-85	513.99	*		1.686E+01	4.615E+00	8.470E+00	8.499E-01	1.991
SR-85	513.99	*		7.976E-02	2.183E-02	4.006E-02	4.020E-03	1.991
RB-86	1076.63	*		5.358E-02	2.658E-01	4.370E-01	4.123E-02	0.123
Y-88	898.02			-1.105E-02	2.022E-02	2.877E-02	3.233E-03	-0.384
	1836.01	*		-1.212E-03	1.755E-02	2.849E-02	2.303E-03	-0.043
ZR-88	392.90	*		3.538E-03	1.423E-02	2.380E-02	2.216E-03	0.149
Y-91	1204.90	*		-5.335E-01	5.638E+00	9.266E+00	7.619E-01	-0.058
NB-94	702.63	*		6.826E-03	1.684E-02	2.839E-02	3.042E-03	0.240
	871.10			-1.051E-02	1.470E-02	2.242E-02	2.505E-03	-0.469
NB-95	765.79	*		7.910E-03	1.826E-02	3.070E-02	3.357E-03	0.258
NB-95M	235.69	*		3.871E-02	5.916E-02	8.827E-02	1.167E-02	0.439
ZR-95	724.18			-3.313E-02	3.760E-02	5.542E-02	6.318E-03	-0.598
	756.15	*		1.444E-02	3.001E-02	5.087E-02	5.905E-03	0.284
NB-97	657.90	*		-2.247E-06	3.001E-02	Half-Life	too short	
	1024.50			1.845E-03	3.001E-02	Half-Life	too short	
ZR-97	254.15			2.107E-04	3.001E-02	Half-Life	too short	
	355.39			-7.662E-04	3.001E-02	Half-Life	too short	
	507.63	*		1.361E-03	3.001E-02	Half-Life	too short	
	602.52			-5.508E-04	3.001E-02	Half-Life	too short	
	1021.30			-1.067E-03	3.001E-02	Half-Life	too short	
	1147.95			-2.539E-04	3.001E-02	Half-Life	too short	
	1362.66			1.388E-04	3.001E-02	Half-Life	too short	
	1750.46			-1.218E-03	3.001E-02	Half-Life	too short	
MO-99	140.51			-1.922E+00	1.949E+00	2.894E+00	8.027E-01	-0.664
	181.06			7.681E-01	1.267E+00	1.921E+00	3.676E-01	0.400
	366.43			-2.004E+00	6.053E+00	9.775E+00	1.037E+00	-0.205
	739.58	*		1.123E-01	7.909E-01	1.302E+00	2.155E-01	0.086
	778.00			-1.385E+00	2.016E+00	2.977E+00	3.266E-01	-0.465
TC-99M	140.51	*		-1.213E+01	2.016E+00	Half-Life	too short	
RH-101	127.23			7.732E-03	1.543E-02	2.510E-02	2.098E-03	0.308
	198.01	*		1.391E-02	1.922E-02	3.015E-02	3.289E-03	0.461
	325.23			9.358E-02	1.048E-01	1.838E-01	2.285E-02	0.509
RH-102	418.52			4.384E-02	1.397E-01	2.337E-01	2.218E-02	0.188
	475.06	*		4.493E-03	1.443E-02	2.391E-02	2.351E-03	0.188
	631.29			2.890E-03	2.542E-02	4.233E-02	4.432E-03	0.068
	697.49			-1.349E-02	3.898E-02	6.179E-02	6.609E-03	-0.218
	766.84			2.030E-02	5.005E-02	8.393E-02	9.180E-03	0.242
	1046.59			-1.571E-02	4.892E-02	7.673E-02	7.525E-03	-0.205
	1112.84			-1.210E-01	1.008E-01	1.390E-01	1.244E-02	-0.870
RU-103	497.08	*		7.416E-03	1.678E-02	2.801E-02	4.204E-03	0.265
	610.33			-1.687E-01	4.081E-01	6.493E-01	1.148E-01	-0.260
RH-106	511.85	+		6.782E-02	1.710E-01	2.292E-01	2.298E-02	0.296
	621.84	*		3.958E-03	1.533E-01	2.536E-01	3.703E-02	0.016
	1050.47			-5.195E-01	9.235E-01	1.395E+00	1.361E-01	-0.372
RU-106	511.85	+		6.782E-02	1.710E-01	2.292E-01	2.298E-02	0.296

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AG-108M	621.84	*		3.958E-03	1.533E-01	2.536E-01	2.649E-02	0.016
	1050.47			-5.195E-01	9.235E-01	1.395E+00	1.361E-01	-0.372
	433.93	*		-2.859E-04	1.632E-02	2.656E-02	2.629E-03	-0.011
	614.37			-3.694E-02	2.138E-02	3.011E-02	3.224E-03	-1.227
CD-109	722.95			-1.113E-02	1.835E-02	2.798E-02	3.096E-03	-0.398
	88.03	*		1.786E-01	2.962E-01	4.509E-01	4.279E-02	0.396
	657.75	*		-2.132E-03	1.625E-02	2.638E-02	2.835E-03	-0.081
	677.61			5.674E-02	1.286E-01	2.196E-01	2.375E-02	0.258
AG-110M	706.67			4.410E-03	9.670E-02	1.584E-01	1.731E-02	0.028
	763.93			9.617E-03	7.531E-02	1.234E-01	1.373E-02	0.078
	884.67			1.263E-03	2.226E-02	3.714E-02	4.236E-03	0.034
	937.48			2.740E-02	4.376E-02	7.714E-02	8.601E-03	0.355
IN-111	1384.27			-5.928E-03	7.587E-02	1.232E-01	1.130E-02	-0.048
	171.28			6.166E-02	7.311E-02	1.267E-01	1.264E-02	0.487
	245.39	*		-4.211E-02	8.252E-02	1.289E-01	1.636E-02	-0.327
	391.69	*		7.279E-03	2.107E-02	3.548E-02	3.388E-03	0.205
IN-113M	391.69	*		7.279E-03	2.107E-02	3.548E-02	3.388E-03	0.205
SN-113	190.27	*		-4.097E-03	9.145E-02	1.321E-01	1.404E-02	-0.031
IN-114M	260.90			-5.188E+00	6.740E+00	9.779E+00	1.299E+00	-0.531
CD-115	492.35			-1.714E+00	1.676E+00	2.443E+00	2.425E-01	-0.701
	527.90	*		-2.237E-01	4.611E-01	7.413E-01	7.486E-02	-0.302
	156.02			-2.277E-01	6.864E-01	1.128E+00	1.058E-01	-0.202
	158.56	*		6.561E-03	1.696E-02	2.894E-02	2.745E-03	0.227
SB-122	563.90	*		4.127E-02	1.236E-01	2.117E-01	2.170E-02	0.195
	692.80			-1.813E-01	2.970E+00	4.829E+00	5.156E-01	-0.038
I-123	159.00	*		1.714E-05	2.970E+00	Half-Life too short		
	528.96			-9.800E-05	2.970E+00	Half-Life too short		
TE-123M	159.00	*		1.341E-03	1.250E-02	2.102E-02	2.007E-03	0.064
I-124	602.71	*		-2.847E-02	1.075E-01	1.748E-01	1.816E-02	-0.163
	722.78			-2.749E-01	5.419E-01	8.366E-01	9.028E-02	-0.329
	1325.50			2.194E+00	3.994E+00	7.070E+00	6.278E-01	0.310
	1376.25			1.785E+00	3.907E+00	6.782E+00	6.062E-01	0.263
SB-124	1509.49			2.058E+00	2.132E+00	3.919E+00	3.483E-01	0.525
	1691.02			-1.133E-01	5.075E-01	8.064E-01	6.895E-02	-0.141
	602.71			-5.402E-03	2.039E-02	3.317E-02	3.446E-03	-0.163
	645.85			-8.046E-02	2.287E-01	3.647E-01	3.989E-02	-0.221
SB-124	709.31			-1.159E+00	1.353E+00	1.863E+00	2.001E-01	-0.622
	713.82			-2.902E-01	7.157E-01	1.120E+00	1.529E-01	-0.259
	722.78			-7.560E-02	1.490E-01	2.301E-01	2.517E-02	-0.329
	968.20			-2.016E-01	1.122E+00	1.820E+00	1.935E-01	-0.111
SB-125	1045.16			3.258E-01	9.207E-01	1.567E+00	1.539E-01	0.208
	1325.50			6.445E-01	1.173E+00	2.077E+00	1.844E-01	0.310
	1368.21			8.223E-01	7.484E-01	1.391E+00	1.903E-01	0.591
	1436.60			-3.954E-01	1.589E+00	2.498E+00	2.232E-01	-0.158
SB-125	1691.02	*		-7.352E-03	3.292E-02	5.231E-02	4.653E-03	-0.141
	427.89	*		1.365E-02	4.611E-02	7.688E-02	7.460E-03	0.178
	463.38			1.960E-01	1.378E-01	2.443E-01	2.534E-02	0.802
	600.56			-3.753E-03	9.870E-02	1.631E-01	1.780E-02	-0.023
	635.90			3.805E-02	1.238E-01	2.095E-01	2.318E-02	0.182

---- Non-Identified Nuclides ----

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TE-125M		109.28	*	-3.235E+00	4.368E+00	6.311E+00	6.381E-01	-0.513
I-126		388.63		3.775E-03	6.594E-02	1.090E-01	1.032E-02	0.035
		666.33	*	-1.210E-02	5.258E-02	8.436E-02	8.913E-03	-0.143
		753.82		1.452E-01	4.398E-01	7.363E-01	8.024E-02	0.197
SB-126		223.80		-2.876E-01	1.302E+00	2.093E+00	2.483E-01	-0.137
		278.60		2.895E-01	7.623E-01	1.250E+00	1.748E-01	0.232
		296.50		-1.795E-01	4.578E-01	7.041E-01	9.485E-02	-0.255
		414.70		-1.909E-02	2.389E-02	3.656E-02	3.461E-03	-0.522
		415.30		-1.132E+00	1.979E+00	3.091E+00	2.927E-01	-0.366
		555.20		6.700E-01	1.050E+00	1.850E+00	1.889E-01	0.362
		573.80		-1.811E-01	3.330E-01	5.293E-01	5.445E-02	-0.342
		593.00		-3.792E-02	3.158E-01	4.942E-01	5.118E-02	-0.077
		656.30		5.992E-01	1.051E+00	1.806E+00	1.903E-01	0.332
		666.33		-4.969E-03	2.159E-02	3.464E-02	3.660E-03	-0.143
		675.00		-5.496E-01	5.791E-01	8.529E-01	9.044E-02	-0.644
		695.00		-2.050E-03	2.454E-02	3.982E-02	4.255E-03	-0.051
		697.00		-3.538E-02	8.845E-02	1.395E-01	1.492E-02	-0.254
		720.50	*	2.049E-02	4.390E-02	7.446E-02	8.030E-03	0.275
		856.80		2.492E-02	1.453E-01	2.456E-01	2.738E-02	0.101
		989.30		9.141E-02	3.607E-01	6.087E-01	6.349E-02	0.150
		1034.80		-1.272E-01	2.525E+00	4.103E+00	4.080E-01	-0.031
		1213.00		-7.338E-04	1.055E+00	1.755E+00	1.451E-01	0.000
SN-126	+	64.28		9.056E-02	2.632E-01	3.287E-01	4.774E-02	0.276
		86.94		-2.828E-02	1.117E-01	1.772E-01	7.358E-02	-0.160
		87.57	*	7.755E-03	2.773E-02	4.376E-02	4.132E-03	0.177
SB-127		61.10		4.445E+00	4.931E+00	7.923E+00	6.330E-01	0.561
		252.40		-7.316E-02	5.616E-01	8.973E-01	3.830E-01	-0.082
		290.80		-9.002E-01	2.506E+00	4.128E+00	5.819E-01	-0.218
		411.60		2.107E-01	1.411E+00	2.337E+00	3.500E-01	0.090
		444.90		-3.001E-01	1.132E+00	1.799E+00	2.114E-01	-0.167
		473.00		1.683E-01	2.060E-01	3.535E-01	4.325E-02	0.476
		543.00		1.123E-01	1.927E+00	3.236E+00	4.556E-01	0.035
		603.60		-3.679E-01	1.702E+00	2.779E+00	3.427E-01	-0.132
		685.20	*	-7.058E-02	1.527E-01	2.380E-01	2.720E-02	-0.297
		698.50		-6.981E-01	1.942E+00	3.072E+00	4.880E-01	-0.227
		722.20		1.349E-01	3.290E+00	5.377E+00	6.100E-01	0.025
		783.80		3.969E-01	3.739E-01	6.671E-01	8.507E-02	0.595
XE-127		57.60		-4.356E-01	1.813E+00	2.971E+00	2.134E-01	-0.147
		145.22		-1.677E-02	3.010E-01	4.754E-01	4.252E-02	-0.035
		172.10		4.627E-02	4.961E-02	8.621E-02	8.628E-03	0.537
		202.84	*	7.137E-03	1.975E-02	3.307E-02	3.666E-03	0.216
		374.96		-7.360E-02	8.232E-02	1.263E-01	1.286E-02	-0.583
I-131		80.18		-1.977E-01	8.082E-01	1.298E+00	1.125E-01	-0.152
		284.30		7.989E-02	3.866E-01	6.262E-01	8.836E-02	0.128
		364.48	*	-1.600E-03	2.907E-02	4.792E-02	5.295E-03	-0.033
		636.97		-1.150E-01	3.551E-01	5.667E-01	6.150E-02	-0.203
		722.89		-9.141E-01	1.600E+00	2.451E+00	2.648E-01	-0.373
TE-132		49.72		2.641E-01	1.226E+00	2.091E+00	1.808E-01	0.126
		111.76		-8.490E-01	2.721E+00	4.257E+00	3.808E-01	-0.199

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BA-133	116.30			1.437E-02	2.489E+00	3.962E+00	3.523E-01	0.004
	228.16	*		2.697E-02	6.658E-02	1.107E-01	1.867E-02	0.244
	53.15			4.489E-01	1.274E+00	2.180E+00	1.654E-01	0.206
	79.62			-1.493E-01	4.495E-01	7.178E-01	1.092E-01	-0.208
	81.00			-9.345E-03	3.300E-02	5.278E-02	8.413E-03	-0.177
	276.40			6.496E-02	1.728E-01	2.834E-01	5.128E-02	0.229
	302.84			-5.319E-03	6.418E-02	1.073E-01	1.789E-02	-0.050
I-133	356.01	*		-2.061E-03	2.211E-02	3.645E-02	5.446E-03	-0.057
	383.85			5.831E-02	1.425E-01	2.414E-01	3.230E-02	0.242
	510.53	+		3.044E-04	1.425E-01	Half-Life	too short	
	529.87	*		9.681E-07	1.425E-01	Half-Life	too short	
	706.58			1.930E-05	1.425E-01	Half-Life	too short	
	856.28			-1.419E-04	1.425E-01	Half-Life	too short	
	875.33			-7.446E-05	1.425E-01	Half-Life	too short	
CS-134	1236.41			-3.795E-04	1.425E-01	Half-Life	too short	
	1298.22			-1.644E-05	1.425E-01	Half-Life	too short	
	475.35			3.226E-01	9.315E-01	1.548E+00	1.522E-01	0.208
	563.23			2.310E-03	1.544E-01	2.576E-01	2.658E-02	0.009
	569.32			-2.813E-02	8.977E-02	1.455E-01	1.508E-02	-0.193
	604.70			-7.661E-03	1.975E-02	3.186E-02	3.317E-03	-0.240
	795.84	*		-1.382E-02	1.973E-02	2.920E-02	3.232E-03	-0.473
CS-135	801.93			9.827E-02	1.988E-01	3.219E-01	3.565E-02	0.305
	1038.57			-6.190E-01	1.731E+00	2.710E+00	2.683E-01	-0.228
	1167.94			4.830E-02	7.455E-01	1.256E+00	1.021E-01	0.038
	1365.15			2.807E-01	5.481E-01	9.635E-01	8.973E-02	0.291
	268.24	*		6.263E-02	8.017E-02	1.342E-01	1.941E-02	0.467
	288.45			8.734E+00	8.017E-02	Half-Life	too short	
	417.63			-1.942E+00	8.017E-02	Half-Life	too short	
I-135	546.56			3.504E+00	8.017E-02	Half-Life	too short	
	836.80			5.952E-01	8.017E-02	Half-Life	too short	
	1038.76			-1.083E+01	8.017E-02	Half-Life	too short	
	1124.00			-3.677E+01	8.017E-02	Half-Life	too short	
	1131.51			-9.046E+00	8.017E-02	Half-Life	too short	
	1260.41	*		-6.013E+00	8.017E-02	Half-Life	too short	
	1457.56			7.544E+00	8.017E-02	Half-Life	too short	
CS-136	1678.03			-3.910E+00	8.017E-02	Half-Life	too short	
	1706.46			-3.556E+01	8.017E-02	Half-Life	too short	
	1791.20			8.237E+00	8.017E-02	Half-Life	too short	
	66.91			-8.558E-02	2.235E-01	3.050E-01	4.536E-02	-0.281
	86.29			-5.289E-02	2.325E-01	3.718E-01	4.948E-02	-0.142
	153.22			1.609E-02	1.964E-01	3.308E-01	3.376E-02	0.049
	163.89			-2.163E-01	3.663E-01	5.624E-01	5.986E-02	-0.385
BA-137M	176.55			-3.382E-02	1.112E-01	1.812E-01	1.916E-02	-0.187
	273.65			-1.237E-01	1.444E-01	2.157E-01	3.051E-02	-0.573
	340.57			1.679E-02	3.998E-02	6.819E-02	8.166E-03	0.246
	818.51			-9.744E-03	2.294E-02	3.462E-02	3.834E-03	-0.281
	1048.07	*		-2.804E-02	3.021E-02	4.318E-02	4.364E-03	-0.649
	1235.34			-4.458E-03	1.309E-01	2.164E-01	2.528E-02	-0.021
	661.65	*		2.232E-03	1.588E-02	2.641E-02	2.785E-03	0.085

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CS-137	661.65	*		2.359E-03	1.679E-02	2.791E-02	2.947E-03	0.085
CE-139	165.85	*		-4.286E-04	1.298E-02	2.161E-02	2.119E-03	-0.020
BA-140	162.64			-9.147E-02	2.584E-01	4.037E-01	4.082E-02	-0.227
	304.84			-1.834E-01	3.873E-01	6.239E-01	1.856E-01	-0.294
	423.70			-4.347E-01	6.446E-01	9.726E-01	3.177E-01	-0.447
	537.32	*		-3.880E-02	8.203E-02	1.254E-01	4.209E-02	-0.309
LA-140	328.77			1.333E-02	9.337E-02	1.572E-01	1.986E-02	0.085
	432.53			-2.032E-01	7.209E-01	1.151E+00	1.146E-01	-0.177
	487.03			2.790E-02	4.623E-02	7.803E-02	8.088E-03	0.358
	751.79			3.619E-01	5.099E-01	8.823E-01	1.027E-01	0.410
	815.85			3.451E-02	9.281E-02	1.607E-01	1.905E-02	0.215
	867.82			9.114E-02	3.987E-01	6.782E-01	7.814E-02	0.134
	919.63			-1.692E-01	9.216E-01	1.261E+00	1.600E-01	-0.134
	925.24			1.816E-01	3.046E-01	5.361E-01	6.128E-02	0.339
	1596.49	*		4.374E-03	2.446E-02	4.188E-02	3.671E-03	0.104
CE-141	145.44	*		9.921E-03	2.420E-02	4.155E-02	3.782E-03	0.239
CE-143	57.37			-3.338E+00	7.895E+00	1.278E+01	1.090E+00	-0.261
	231.56			-2.418E+01	2.858E+01	4.053E+01	1.325E+01	-0.597
	293.26	*		3.196E-01	1.258E+00	2.147E+00	5.116E-01	0.149
	350.59			-7.031E+00	1.897E+01	2.926E+01	9.323E+00	-0.240
	490.36			9.338E+00	2.996E+01	4.931E+01	1.574E+01	0.189
	664.57			-4.299E+00	1.199E+01	1.886E+01	6.197E+00	-0.228
	721.93			3.081E-01	1.289E+01	2.103E+01	6.277E+00	0.015
CE-144	80.11			-1.669E-01	7.076E-01	1.137E+00	9.831E-02	-0.147
	133.54	*		-1.644E-02	8.709E-02	1.459E-01	2.265E-02	-0.113
PM-144	476.78			-1.805E-02	3.221E-02	4.943E-02	5.218E-03	-0.365
	618.01			9.117E-03	1.590E-02	2.739E-02	2.911E-03	0.333
	696.49	*		-6.152E-03	1.689E-02	2.672E-02	2.857E-03	-0.230
	778.57			-6.770E-01	9.070E-01	1.325E+00	1.454E-01	-0.511
PR-144	696.49	*		-4.152E-01	1.140E+00	1.803E+00	1.928E-01	-0.230
	1489.15			-7.853E-01	5.812E+00	9.272E+00	8.258E-01	-0.085
PM-146	453.90	*		-5.181E-03	2.016E-02	3.198E-02	3.717E-03	-0.162
	633.02			2.032E-01	6.220E-01	1.048E+00	3.967E-01	0.194
	735.90			3.728E-03	6.955E-02	1.136E-01	3.334E-02	0.033
	747.13			-4.089E-03	4.038E-02	6.483E-02	1.007E-02	-0.063
ND-147	91.11			2.075E-01	7.705E-02	1.277E-01	1.261E-02	1.625
	319.41			3.464E-02	1.004E+00	1.684E+00	2.131E-01	0.021
	439.89			5.972E-01	1.664E+00	2.788E+00	2.684E-01	0.214
	531.02	*		-2.360E-02	1.544E-01	2.553E-01	4.048E-02	-0.092
PM-149	285.90	*		2.042E+00	4.228E+00	6.945E+00	1.313E+00	0.294
EU-152	121.78			-2.225E-03	3.473E-02	5.484E-02	5.264E-03	-0.041
	244.69			-1.911E-02	1.643E-01	2.639E-01	3.341E-02	-0.072
	344.27	*		-1.404E-03	4.907E-02	8.147E-02	9.792E-03	-0.017
	443.98			-3.212E-02	4.405E-01	7.120E-01	6.873E-02	-0.045
	778.89			-1.041E-01	1.079E-01	1.526E-01	1.674E-02	-0.682
	867.32			-1.082E-01	3.783E-01	6.106E-01	6.818E-02	-0.177
	964.01			-1.554E-01	1.513E-01	2.029E-01	2.165E-02	-0.766
	1085.78			-6.834E-03	1.687E-01	2.731E-01	2.544E-02	-0.025
	1112.02			-5.769E-02	1.300E-01	1.991E-01	1.784E-02	-0.290

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GD-153	1407.95			5.221E-02	8.563E-02	1.514E-01	1.354E-02	0.345
	69.67			-7.549E-02	5.677E-01	9.274E-01	7.199E-02	-0.081
	83.37			-2.523E+00	5.154E+00	7.453E+00	6.690E-01	-0.339
	97.43	*		-6.846E-03	3.580E-02	5.053E-02	4.443E-03	-0.135
EU-154	103.18			-3.807E-02	4.725E-02	7.184E-02	6.139E-03	-0.530
	123.07			-6.407E-03	2.538E-02	3.956E-02	4.388E-03	-0.162
	247.94			-6.440E-02	1.813E-01	2.858E-01	4.247E-02	-0.225
	591.81			-2.922E-01	3.735E-01	4.813E-01	6.258E-02	-0.607
	723.30			-6.613E-02	7.709E-02	1.140E-01	1.314E-02	-0.580
	756.87			-4.147E-02	3.546E-01	5.679E-01	7.788E-02	-0.073
	873.19			-7.811E-02	1.285E-01	1.984E-01	2.810E-02	-0.394
	996.32			-1.717E-03	1.729E-01	2.833E-01	5.290E-02	-0.006
EU-155	1004.76			-6.901E-02	9.702E-02	1.457E-01	1.881E-02	-0.474
	1274.45	*		-7.863E-03	5.575E-02	9.082E-02	1.026E-02	-0.087
	48.70			-1.849E-01	8.150E-01	1.348E+00	1.098E-01	-0.137
	60.01			-5.030E-01	1.784E+00	2.587E+00	1.837E-01	-0.194
	86.54			-4.700E-03	3.213E-02	5.167E-02	4.859E-03	-0.091
	105.31	*		2.471E-02	5.013E-02	8.261E-02	7.091E-03	0.299
TB-160	86.79			-1.801E-02	8.011E-02	1.281E-01	1.198E-02	-0.141
	197.04			2.803E-02	3.026E-01	4.604E-01	5.007E-02	0.061
	215.65			1.587E-01	3.234E-01	5.434E-01	6.281E-02	0.292
	298.57			1.540E-02	4.774E-02	8.179E-02	1.096E-02	0.188
	879.36	*		4.801E-02	5.681E-02	1.019E-01	1.140E-02	0.471
	962.29			-1.957E-01	2.592E-01	3.604E-01	3.851E-02	-0.543
	966.15			6.780E-02	8.334E-02	1.468E-01	1.564E-02	0.462
	1177.93			3.037E-02	1.088E-01	1.856E-01	1.497E-02	0.164
HO-166M	1271.85			2.605E-01	2.891E-01	5.246E-01	4.509E-02	0.497
	80.57			-1.001E-02	9.227E-02	1.495E-01	1.299E-02	-0.067
	184.41	+		1.179E-02	3.041E-02	3.292E-02	3.432E-03	0.358
	280.46			-2.479E-02	4.205E-02	6.419E-02	8.965E-03	-0.386
	410.95			9.939E-04	1.101E-01	1.805E-01	1.704E-02	0.006
	711.68	*		-2.717E-02	3.144E-02	4.274E-02	4.595E-03	-0.636
TM-171	752.31			4.427E-02	1.254E-01	2.103E-01	2.291E-02	0.211
	810.29			-1.631E-02	2.575E-02	4.022E-02	4.447E-03	-0.405
	51.35			-1.575E+01	1.057E+01	1.568E+01	1.223E+00	-1.005
	52.39			-4.010E+00	5.492E+00	8.717E+00	6.690E-01	-0.460
LU-176	59.40			-2.383E+00	9.706E+00	1.414E+01	9.993E-01	-0.169
	66.72	*		-5.908E+00	1.200E+01	1.623E+01	1.226E+00	-0.364
	88.36			3.546E-02	7.112E-02	1.073E-01	1.014E-02	0.331
	201.83			-1.188E-02	1.485E-02	2.325E-02	2.569E-03	-0.511
LU-177	306.84	*		3.814E-03	1.107E-02	1.899E-02	2.491E-03	0.201
	401.10			1.271E+00	3.099E+00	5.241E+00	4.911E-01	0.243
	112.95			1.067E-01	3.362E-01	5.465E-01	4.543E-02	0.195
LU-177M	208.36	*		6.054E-02	2.187E-01	3.642E-01	4.111E-02	0.166
	52.97			1.758E-01	5.442E-01	9.303E-01	7.078E-02	0.189
	54.07			3.447E-01	3.015E-01	5.381E-01	4.030E-02	0.641
	61.30			5.239E-01	4.953E-01	8.048E-01	5.790E-02	0.651
	121.62			-7.993E-03	1.726E-01	2.729E-01	2.248E-02	-0.029
	147.16			-8.227E-02	2.918E-01	4.835E-01	4.360E-02	-0.170

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
HF-181	171.86			2.119E-01	2.240E-01	3.895E-01	3.895E-02	0.544
	218.09			-2.743E-01	4.006E-01	6.249E-01	7.280E-02	-0.439
	268.79			5.350E-01	3.850E-01	6.613E-01	8.990E-02	0.809
	319.02			1.669E-02	1.247E-01	2.104E-01	2.666E-02	0.079
	367.43			-1.781E-01	4.374E-01	7.022E-01	7.413E-02	-0.254
	413.65	*		-3.904E-02	7.993E-02	1.257E-01	1.189E-02	-0.311
	56.28			9.880E-03	3.001E-01	5.016E-01	3.654E-02	0.020
	57.53			-7.450E-02	1.588E-01	2.562E-01	1.842E-02	-0.291
	65.20			-1.632E-01	3.575E-01	4.860E-01	3.623E-02	-0.336
	133.02			-4.661E-03	2.507E-02	4.203E-02	3.583E-03	-0.111
W-181	136.25			-8.214E-02	1.816E-01	2.995E-01	2.584E-02	-0.274
	345.85			3.458E-03	8.644E-02	1.441E-01	1.666E-02	0.024
	482.03	*		6.355E-04	1.795E-02	2.906E-02	2.869E-03	0.022
	56.28			4.169E-03	1.274E-01	2.130E-01	1.552E-02	0.020
TA-182	57.53			-3.162E-02	6.751E-02	1.089E-01	7.828E-03	-0.290
	65.20	*		-6.882E-02	1.507E-01	2.049E-01	1.527E-02	-0.336
	67.75			1.453E-02	4.164E-02	6.319E-02	4.819E-03	0.230
	100.10			3.147E-02	7.067E-02	1.169E-01	1.013E-02	0.269
RE-183	152.43			6.433E-02	1.434E-01	2.461E-01	2.271E-02	0.261
	222.10			-1.292E-03	1.631E-01	2.659E-01	3.138E-02	-0.005
	1001.68			-8.247E-02	9.436E-01	1.517E+00	1.563E-01	-0.054
	1121.28			-9.697E-03	6.305E-02	1.020E-01	9.010E-03	-0.095
	1189.05			7.875E-02	1.016E-01	1.848E-01	1.503E-02	0.426
	1221.42	*		-3.001E-03	6.314E-02	1.043E-01	8.674E-03	-0.029
	1230.97			-1.546E-01	1.556E-01	2.239E-01	1.874E-02	-0.691
	57.98			-2.626E-02	6.306E-02	1.020E-01	7.298E-03	-0.258
	59.32			-8.584E-03	3.733E-02	5.446E-02	3.852E-03	-0.158
	67.20			3.441E-02	7.551E-02	1.101E-01	8.355E-03	0.313
RE-184	162.32	*		-2.697E-03	5.244E-02	8.324E-02	8.030E-03	-0.032
	208.81			3.225E-01	3.910E-01	6.699E-01	7.573E-02	0.481
	291.72			-2.167E-01	4.051E-01	6.589E-01	8.978E-02	-0.329
	57.98			-1.012E-01	2.429E-01	3.929E-01	2.811E-02	-0.258
OS-185	59.32			-3.304E-02	1.437E-01	2.096E-01	1.483E-02	-0.158
	67.20			1.325E-01	2.908E-01	4.240E-01	3.218E-02	0.313
	161.27			7.628E-02	1.621E-01	2.772E-01	2.661E-02	0.275
	216.55			-1.976E-02	1.208E-01	1.953E-01	2.264E-02	-0.101
	252.85	*		-8.256E-03	1.156E-01	1.857E-01	2.410E-02	-0.044
	318.01			1.554E-01	2.123E-01	3.699E-01	4.702E-02	0.420
	792.07			-2.142E-01	4.165E-01	6.329E-01	6.968E-02	-0.338
	903.28			-2.811E-01	5.084E-01	6.550E-01	7.313E-02	-0.429
	920.93			7.314E-02	2.019E-01	3.029E-01	3.342E-02	0.241
	59.72			-2.463E-02	1.010E-01	1.471E-01	1.041E-02	-0.167
	61.14			4.876E-02	5.275E-02	8.493E-02	6.101E-03	0.574
	69.30			2.156E-02	9.685E-02	1.617E-01	1.251E-02	0.133
	592.07			-1.032E+00	1.373E+00	1.870E+00	1.936E-01	-0.552
	646.12	*		2.761E-03	1.946E-02	3.241E-02	3.406E-03	0.085
	717.42			4.817E-01	4.060E-01	7.255E-01	7.815E-02	0.664
	874.81			-1.556E-01	2.376E-01	3.649E-01	4.078E-02	-0.426
	880.27			1.756E-01	3.322E-01	5.796E-01	6.482E-02	0.303

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RE-188	155.03	*		4.454E-03	7.087E-02	1.192E-01	1.112E-02	0.037
	477.96			-1.310E+00	1.422E+00	2.107E+00	2.075E-01	-0.622
	633.10			2.698E-01	1.169E+00	1.966E+00	2.060E-01	0.137
W-188	63.58	+		8.518E+00	2.474E+01	3.396E+01	2.495E+00	0.251
	227.08			1.144E+00	5.913E+00	9.731E+00	1.167E+00	0.118
	290.67	*		-1.481E+00	3.177E+00	5.192E+00	7.092E-01	-0.285
IR-192	295.96			-3.252E-02	5.072E-02	7.674E-02	1.038E-02	-0.424
	308.46			-6.545E-03	4.016E-02	6.663E-02	8.723E-03	-0.098
	316.51	*		6.980E-03	1.590E-02	2.730E-02	3.489E-03	0.256
	468.07			-2.541E-02	3.133E-02	4.718E-02	4.881E-03	-0.539
	604.41			-1.152E-01	2.504E-01	4.016E-01	5.724E-02	-0.287
	612.46			-2.905E-01	3.502E-01	5.418E-01	6.231E-02	-0.536
AU-195	65.12			-3.172E-02	7.124E-02	9.702E-02	7.227E-03	-0.327
	66.83			-1.669E-02	3.894E-02	5.299E-02	4.008E-03	-0.315
	75.70			1.490E-02	6.635E-02	1.034E-01	8.516E-03	0.144
	98.88	*		3.316E-02	9.690E-02	1.521E-01	1.326E-02	0.218
	129.76			-3.173E-01	1.230E+00	2.060E+00	1.736E-01	-0.154
TL-200	367.94	*		3.915E-01	1.711E+00	2.874E+00	3.026E-01	0.136
	579.30			8.927E+00	1.544E+01	2.341E+01	2.413E+00	0.381
	828.27			4.953E+00	1.690E+01	2.898E+01	3.216E+00	0.171
	1205.75			-7.266E-01	6.218E+00	1.019E+01	8.383E-01	-0.071
TL-201	68.90			-2.399E-03	2.930E-01	4.827E-01	3.720E-02	-0.005
	70.82			-1.444E-01	1.650E-01	2.561E-01	2.009E-02	-0.564
	80.30			-4.733E-02	2.968E-01	4.794E-01	4.153E-02	-0.099
	135.34			-1.023E+00	1.948E+00	3.200E+00	2.751E-01	-0.320
	167.43	*		-1.738E-01	5.736E-01	9.397E-01	9.262E-02	-0.185
TL-202	68.90			-8.007E-04	9.780E-02	1.611E-01	1.242E-02	-0.005
	70.82			-4.807E-02	5.491E-02	8.522E-02	6.687E-03	-0.564
	80.30			-1.576E-02	9.880E-02	1.596E-01	1.383E-02	-0.099
	439.56	*		9.779E-03	2.098E-02	3.541E-02	3.409E-03	0.276
HG-203	70.83			-2.870E-01	3.293E-01	5.088E-01	6.681E-02	-0.564
	72.87			2.397E-02	1.858E-01	3.074E-01	3.938E-02	0.078
	82.60			3.809E-03	3.601E-01	5.435E-01	7.564E-02	0.007
	279.20	*		-2.790E-03	1.740E-02	2.750E-02	3.893E-03	-0.101
BI-207	72.80			5.569E-03	6.095E-02	1.007E-01	8.052E-03	0.055
	74.97			9.729E-03	3.557E-02	5.923E-02	4.843E-03	0.164
	84.90			-7.552E-02	6.799E-02	9.323E-02	8.522E-03	-0.810
	569.67			-3.079E-03	1.411E-02	2.305E-02	2.368E-03	-0.134
	1063.62	*		7.619E-03	2.173E-02	3.689E-02	3.541E-03	0.207
	1770.23			1.238E-01	2.242E-01	3.633E-01	3.020E-02	0.341
TL-207	81.07			-2.291E-02	7.273E-02	1.162E-01	1.015E-02	-0.197
	83.78			-4.448E-02	4.568E-02	6.363E-02	5.739E-03	-0.699
	94.90			6.242E-02	9.859E-02	1.492E-01	1.334E-02	0.418
	122.32			1.089E-01	8.219E-01	1.314E+00	1.169E-01	0.083
	144.24			1.509E-02	3.408E-01	5.412E-01	5.358E-02	0.028
	154.21			-7.540E-02	1.778E-01	2.909E-01	2.939E-02	-0.259
	269.46			1.228E-01	9.281E-02	1.590E-01	2.184E-02	0.772
	323.87	*		2.873E-02	3.196E-01	5.372E-01	1.068E-01	0.053
	338.28			-6.491E-02	5.326E-01	8.430E-01	1.247E-01	-0.077

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PO-209	445.03			-3.002E-01	1.047E+00	1.660E+00	2.133E-01	-0.181
	260.50			-1.541E+00	4.961E+00	7.815E+00	1.037E+00	-0.197
	262.80			-9.397E+00	1.465E+01	2.140E+01	2.859E+00	-0.439
	896.60	*		-1.646E-01	3.416E+00	5.634E+00	6.312E-01	-0.029
BI-210	46.50	*		-6.378E-01	1.355E+00	2.037E+00	1.892E-01	-0.313
PB-210	46.50	*		-6.378E-01	1.355E+00	2.037E+00	1.892E-01	-0.313
PO-210	46.50	*		-6.378E-01	1.355E+00	2.037E+00	1.713E-01	-0.313
BI-211	72.87			1.351E-01	1.047E+00	1.732E+00	1.387E-01	0.078
PB-211	351.07	*		-7.474E-02	1.145E-01	1.743E-01	2.033E-02	-0.429
	404.84	*		-1.325E-01	4.402E-01	6.922E-01	4.346E-01	-0.191
	427.08			1.201E-02	1.023E+00	1.671E+00	1.041E+00	0.007
	831.96			-8.859E-02	5.315E-01	8.679E-01	5.473E-01	-0.102
BI-212	727.18	*		-8.255E-02	1.280E-01	1.892E-01	2.260E-02	-0.436
	785.46			8.486E-01	7.419E-01	1.332E+00	1.464E-01	0.637
	1620.62			-2.418E-01	6.592E-01	1.038E+00	9.052E-02	-0.233
	74.81			3.127E-02	1.225E-01	2.038E-01	2.529E-02	0.153
PB-212	77.11			-4.793E-02	7.566E-02	1.114E-01	9.315E-03	-0.430
	87.30			1.474E-02	1.272E-01	1.984E-01	2.724E-02	0.074
	238.63	*		2.555E-03	4.139E-02	5.055E-02	6.679E-03	0.051
	300.09			6.336E-02	3.482E-01	5.919E-01	8.632E-02	0.107
PO-212	74.81			3.127E-02	1.225E-01	2.038E-01	2.529E-02	0.153
	77.11			-4.793E-02	7.566E-02	1.114E-01	9.315E-03	-0.430
	87.30			1.474E-02	1.272E-01	1.984E-01	2.724E-02	0.074
	115.19			-9.078E-01	1.683E+00	2.587E+00	2.143E-01	-0.351
+ BI-214	238.63	*		2.555E-03	4.139E-02	5.055E-02	6.679E-03	0.051
	300.09			6.336E-02	3.482E-01	5.919E-01	8.632E-02	0.107
	609.31	*		3.188E-03	4.295E-02	7.066E-02	8.215E-03	0.045
	1120.29			4.057E-02	1.414E-01	2.386E-01	2.636E-02	0.170
+ PB-214	1764.49	*		3.713E-02	1.962E-01	2.843E-01	2.369E-02	0.131
	74.81			5.388E-02	2.111E-01	3.512E-01	3.871E-02	0.153
	77.11			-8.216E-02	1.299E-01	1.910E-01	2.160E-02	-0.430
	87.30			2.524E-02	2.179E-01	3.399E-01	4.135E-02	0.074
PO-214	241.98			7.016E-02	1.839E-01	2.685E-01	3.692E-02	0.261
	295.21			2.134E-02	6.944E-02	1.113E-01	1.658E-02	0.192
	351.92	*		-1.394E-02	3.910E-02	6.066E-02	7.732E-03	-0.230
	74.81			5.388E-02	2.111E-01	3.512E-01	3.871E-02	0.153
PO-215	77.11			-8.216E-02	1.299E-01	1.910E-01	2.160E-02	-0.430
	87.30			2.524E-02	2.179E-01	3.399E-01	4.135E-02	0.074
	241.98			7.016E-02	1.839E-01	2.685E-01	3.692E-02	0.261
	295.21			2.134E-02	6.944E-02	1.113E-01	1.658E-02	0.192
PO-215	351.92	*		-1.394E-02	3.910E-02	6.066E-02	7.732E-03	-0.230
	81.07			-2.291E-02	7.273E-02	1.162E-01	1.015E-02	-0.197
	83.78			-4.448E-02	4.568E-02	6.363E-02	5.739E-03	-0.699
	94.90			6.242E-02	9.859E-02	1.492E-01	1.334E-02	0.418
PO-215	122.32			1.089E-01	8.219E-01	1.314E+00	1.169E-01	0.083
	144.24			1.509E-02	3.408E-01	5.412E-01	5.358E-02	0.028
	154.21			-7.540E-02	1.778E-01	2.909E-01	2.939E-02	-0.259
	269.46			1.228E-01	9.281E-02	1.590E-01	2.184E-02	0.772
PO-215	323.87	*		2.873E-02	3.196E-01	5.372E-01	1.068E-01	0.053

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PO-216	338.28			-6.491E-02	5.326E-01	8.430E-01	1.247E-01	-0.077
	445.03			-3.002E-01	1.047E+00	1.660E+00	2.133E-01	-0.181
	74.81			3.127E-02	1.225E-01	2.038E-01	2.529E-02	0.153
	77.11			-4.793E-02	7.566E-02	1.114E-01	9.315E-03	-0.430
	87.30			1.474E-02	1.272E-01	1.984E-01	2.724E-02	0.074
PO-218	238.63	*		2.555E-03	4.139E-02	5.055E-02	6.679E-03	0.051
	300.09			6.336E-02	3.482E-01	5.919E-01	8.632E-02	0.107
	74.81			5.388E-02	2.111E-01	3.512E-01	3.871E-02	0.153
	77.11			-8.216E-02	1.299E-01	1.910E-01	2.160E-02	-0.430
	87.30			2.524E-02	2.179E-01	3.399E-01	4.135E-02	0.074
RN-219	241.98			7.016E-02	1.839E-01	2.685E-01	3.692E-02	0.261
	295.21			2.134E-02	6.944E-02	1.113E-01	1.658E-02	0.192
	351.92	*		-1.394E-02	3.910E-02	6.066E-02	7.732E-03	-0.230
	271.23			-6.936E-02	1.198E-01	1.840E-01	2.725E-02	-0.377
	401.81	*		1.741E-01	1.877E-01	3.267E-01	5.054E-02	0.533
RN-220	549.76	*		5.997E+00	1.179E+01	2.048E+01	2.087E+00	0.293
RA-223	81.07			-2.291E-02	7.273E-02	1.162E-01	1.015E-02	-0.197
	83.78			-4.448E-02	4.568E-02	6.363E-02	5.739E-03	-0.699
	94.90			6.242E-02	9.859E-02	1.492E-01	1.334E-02	0.418
	122.32			1.089E-01	8.219E-01	1.314E+00	1.169E-01	0.083
	144.24			1.509E-02	3.408E-01	5.412E-01	5.358E-02	0.028
RA-224	154.21			-7.540E-02	1.778E-01	2.909E-01	2.939E-02	-0.259
	269.46			1.228E-01	9.281E-02	1.590E-01	2.184E-02	0.772
	323.87	*		2.873E-02	3.196E-01	5.372E-01	1.068E-01	0.053
	338.28			-6.491E-02	5.326E-01	8.430E-01	1.247E-01	-0.077
	445.03			-3.002E-01	1.047E+00	1.660E+00	2.133E-01	-0.181
RA-226	240.98	*		2.900E-01	3.611E-01	5.423E-01	6.788E-02	0.535
AC-227	609.31	*		3.188E-03	4.295E-02	7.066E-02	8.215E-03	0.045
	1120.29			4.057E-02	1.414E-01	2.386E-01	2.636E-02	0.170
	1764.49	+		3.713E-02	1.962E-01	2.843E-01	2.369E-02	0.131
	79.80			-4.337E-02	5.592E-01	9.084E-01	1.953E-01	-0.048
	236.00			7.471E-02	1.221E-01	1.813E-01	2.734E-02	0.412
TH-227	256.20	*		8.236E-02	1.992E-01	3.284E-01	5.993E-02	0.251
	286.10			4.930E-01	7.737E-01	1.282E+00	2.185E-01	0.384
	299.80			2.006E-01	6.439E-01	1.101E+00	2.230E-01	0.182
	304.40			-4.576E-01	8.560E-01	1.379E+00	2.892E-01	-0.332
	334.20			-1.375E+00	1.196E+00	1.792E+00	3.792E-01	-0.767
AC-228	79.80			-4.337E-02	5.592E-01	9.084E-01	1.978E-01	-0.048
	94.00	+		5.835E-01	1.557E+00	1.557E+00	3.415E-01	0.375
	236.00			7.471E-02	1.221E-01	1.813E-01	2.566E-02	0.412
	256.20	*		8.236E-02	1.994E-01	3.284E-01	6.760E-02	0.251
	286.10			4.930E-01	9.161E-01	1.282E+00	1.294E+00	0.384
RA-228	299.80			2.006E-01	6.439E-01	1.101E+00	2.230E-01	0.182
	304.40			-4.576E-01	8.560E-01	1.379E+00	2.892E-01	-0.332
	334.20			-1.375E+00	1.196E+00	1.792E+00	3.792E-01	-0.767
	338.32			-1.585E-02	1.277E-01	2.018E-01	8.490E-02	-0.079
	911.07	+	*	5.356E-02	1.170E-01	1.164E-01	1.542E-02	0.460
RA-228	969.11			-1.435E-02	1.188E-01	1.938E-01	4.680E-02	-0.074
	338.32			-1.585E-02	1.277E-01	2.018E-01	8.490E-02	-0.079

---- Non-Identified Nuclides ----

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TH-228	+	911.07	*	5.356E-02	1.170E-01	1.164E-01	1.542E-02	0.460
		969.11		-1.435E-02	1.188E-01	1.938E-01	4.680E-02	-0.074
		74.81		3.150E-02	1.234E-01	2.054E-01	1.692E-02	0.153
		77.11		-4.829E-02	7.623E-02	1.122E-01	9.385E-03	-0.430
		87.30		1.485E-02	1.281E-01	1.999E-01	1.881E-02	0.074
TH-229	+	238.63	*	2.574E-03	4.169E-02	5.093E-02	6.729E-03	0.051
		300.09		6.384E-02	3.528E-01	5.963E-01	3.587E-01	0.107
		85.43		-6.906E-02	6.581E-02	9.038E-02	8.314E-03	-0.764
		88.47		2.141E-02	4.097E-02	6.189E-02	5.847E-03	0.346
		100.00		1.387E-02	7.839E-02	1.275E-01	1.105E-02	0.109
TH-230		193.63	*	-1.968E-01	2.547E-01	4.006E-01	4.307E-02	-0.491
		210.97		1.228E-01	3.325E-01	5.563E-01	6.333E-02	0.221
		609.31	*	3.188E-03	4.295E-02	7.065E-02	8.215E-03	0.045
		1120.29		4.057E-02	1.414E-01	2.386E-01	2.636E-02	0.170
	+	1764.49		3.713E-02	1.962E-01	2.843E-01	2.369E-02	0.131
PA-231		283.67	*	-5.971E-02	7.690E-01	1.222E+00	2.281E-01	-0.049
TH-231		301.29		2.932E-02	2.557E-01	4.328E-01	6.882E-02	0.068
		81.07		-2.291E-02	7.273E-02	1.162E-01	1.015E-02	-0.197
		83.78		-4.448E-02	4.568E-02	6.363E-02	5.739E-03	-0.699
		94.90		6.242E-02	9.859E-02	1.492E-01	1.334E-02	0.418
		122.32		1.089E-01	8.219E-01	1.314E+00	1.169E-01	0.083
U-231		144.24		1.509E-02	3.408E-01	5.412E-01	5.358E-02	0.028
		154.21		-7.540E-02	1.778E-01	2.909E-01	2.939E-02	-0.259
		269.46		1.228E-01	9.281E-02	1.590E-01	2.184E-02	0.772
		323.87	*	2.873E-02	3.196E-01	5.372E-01	1.068E-01	0.053
		338.28		-6.491E-02	5.326E-01	8.430E-01	1.247E-01	-0.077
TH-232		445.03		-3.002E-01	1.047E+00	1.660E+00	2.133E-01	-0.181
		84.21		-4.737E-01	5.536E-01	7.799E-01	7.070E-02	-0.607
	+	92.29		1.626E-01	4.327E-01	4.916E-01	4.483E-02	0.331
		95.87	*	-9.718E-02	1.369E-01	1.841E-01	1.635E-02	-0.528
		108.00		-9.336E-02	2.767E-01	4.335E-01	3.644E-02	-0.215
PA-233		338.32		-1.585E-02	1.275E-01	2.018E-01	2.400E-02	-0.079
	+	911.07	*	5.356E-02	1.170E-01	1.164E-01	1.542E-02	0.460
		969.11		-1.435E-02	1.188E-01	1.938E-01	4.680E-02	-0.074
		75.28		2.913E-01	1.037E+00	1.726E+00	2.609E-01	0.169
		86.59		-2.654E-01	5.415E-01	8.430E-01	2.281E-01	-0.315
PA-234		300.12		3.238E-02	1.799E-01	3.058E-01	5.514E-02	0.106
		311.98	*	-2.817E-03	2.973E-02	4.952E-02	6.488E-03	-0.057
		340.50		1.379E-01	2.931E-01	4.985E-01	1.254E-01	0.277
		398.62		-6.330E-01	9.971E-01	1.533E+00	4.120E-01	-0.413
		415.76		-4.333E-01	8.109E-01	1.263E+00	2.767E-01	-0.343
	+	63.00		2.667E-01	7.752E-01	1.072E+00	1.588E-01	0.249
		94.67		7.618E-02	7.261E-02	1.124E-01	1.421E-02	0.678
		98.44		-4.953E-04	4.319E-02	6.188E-02	3.453E-02	-0.008
		99.86		4.819E-02	1.992E-01	3.254E-01	2.823E-02	0.148
		111.00		-4.807E-02	9.342E-02	1.366E-01	1.624E-02	-0.352
		131.20		1.313E-02	4.587E-02	7.889E-02	6.681E-03	0.166
		152.70		6.510E-02	1.450E-01	2.483E-01	4.312E-02	0.262
	+	186.00		4.244E-01	1.102E+00	1.208E+00	3.839E-01	0.351

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	226.40			-7.277E-02	2.022E-01	3.216E-01	5.015E-02	-0.226
	227.20			7.461E-02	2.161E-01	3.586E-01	4.301E-02	0.208
	248.90			-2.463E-01	4.175E-01	6.415E-01	1.561E-01	-0.384
	293.70			5.803E-02	3.012E-01	5.129E-01	1.037E-01	0.113
	369.80			3.268E-01	4.158E-01	7.141E-01	1.611E-01	0.458
	568.70			-2.367E-01	4.472E-01	7.096E-01	7.286E-02	-0.334
	569.50			-3.097E-02	1.249E-01	2.036E-01	2.091E-02	-0.152
	574.00			-1.939E-01	7.230E-01	1.177E+00	1.210E-01	-0.165
	699.00			-1.078E-01	3.609E-01	5.736E-01	1.153E-01	-0.188
	706.10			1.295E-01	4.982E-01	8.260E-01	3.721E-01	0.157
	733.00			-5.701E-02	1.766E-01	2.773E-01	6.419E-02	-0.206
	742.81			-1.803E-01	6.457E-01	1.000E+00	6.756E-01	-0.180
	796.30			-1.361E-01	3.875E-01	5.975E-01	1.668E-01	-0.228
	805.60			-4.430E-02	4.466E-01	7.403E-01	2.326E-01	-0.060
	819.60			-2.221E-01	5.898E-01	8.891E-01	3.437E-01	-0.250
	826.30			8.267E-02	3.736E-01	6.340E-01	2.871E-01	0.130
	831.60			4.639E-02	2.729E-01	4.624E-01	1.417E-01	0.100
	876.40			-7.595E-02	3.718E-01	5.902E-01	6.082E-01	-0.129
	880.51			6.980E-02	1.274E-01	2.226E-01	2.490E-02	0.314
	883.24			3.200E-03	1.312E-01	2.183E-01	1.476E-01	0.015
	899.00			-2.066E-01	4.436E-01	6.265E-01	2.775E-01	-0.330
	925.00			2.285E-01	4.889E-01	8.364E-01	9.202E-02	0.273
	926.50			2.166E-02	7.088E-02	1.209E-01	3.165E-02	0.179
	946.00	*		2.992E-02	1.244E-01	2.105E-01	4.184E-02	0.142
	949.00			4.427E-02	1.954E-01	3.298E-01	3.564E-02	0.134
	980.50			4.592E-02	2.985E-01	4.994E-01	5.252E-02	0.092
	1394.10			6.748E-02	5.038E-01	8.403E-01	5.473E-01	0.080
PA-234M	766.42			1.464E+00	5.365E+00	8.815E+00	4.512E+00	0.166
	1001.03	*		1.151E-01	2.272E+00	3.705E+00	4.246E-01	0.031
U-234	609.31	*		3.188E-03	4.295E-02	7.065E-02	8.215E-03	0.045
	1120.29			4.057E-02	1.414E-01	2.386E-01	2.636E-02	0.170
+	1764.49			3.713E-02	1.962E-01	2.843E-01	2.369E-02	0.131
U-235	89.95			7.242E-02	4.373E-01	6.396E-01	1.986E-01	0.113
+	93.35			1.815E-01	4.856E-01	5.354E-01	1.508E-01	0.339
	105.00			3.135E-01	4.932E-01	8.064E-01	2.404E-01	0.389
	143.76	*		-4.663E-02	1.062E-01	1.642E-01	2.897E-02	-0.284
	163.35			-1.049E-01	2.417E-01	3.738E-01	7.321E-02	-0.281
+	185.71			1.572E-02	4.055E-02	4.500E-02	4.712E-03	0.349
	205.31			-3.536E-01	2.806E-01	3.851E-01	7.842E-02	-0.918
NP-236	94.67			5.849E-02	5.487E-02	8.541E-02	7.647E-03	0.685
	98.44			-3.969E-04	3.264E-02	4.677E-02	4.089E-03	-0.008
	111.00			-3.636E-02	7.060E-02	1.033E-01	8.621E-03	-0.352
	160.31	*		-1.466E-02	3.830E-02	6.271E-02	5.995E-03	-0.234
NP-237	86.50	*		-1.250E-02	7.857E-02	1.262E-01	2.857E-02	-0.099
	95.87			-3.040E-01	4.340E-01	5.760E-01	1.424E-01	-0.528
NP-239	99.55			2.952E-02	6.625E-02	1.095E-01	9.517E-03	0.270
	117.00	*		2.872E-02	8.872E-02	1.439E-01	1.190E-02	0.200
	209.75			2.910E-01	3.412E-01	5.846E-01	6.629E-02	0.498
	228.18			4.570E-02	1.112E-01	1.851E-01	2.227E-02	0.247

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	277.60			-1.177E-03	8.568E-02	1.370E-01	1.910E-02	-0.009
	334.30			-7.678E-01	6.623E-01	1.013E+00	1.222E-01	-0.758
AM-241	59.54		*	-1.546E-02	5.668E-02	8.232E-02	6.435E-03	-0.188
AM-243	74.67		*	4.758E-03	1.990E-02	3.308E-02	2.696E-03	0.144
	86.72			-1.517E+00	3.017E+00	4.731E+00	4.420E-01	-0.321
	117.66			-1.814E-01	1.750E+00	2.762E+00	2.282E-01	-0.066
	142.18			-5.421E+00	8.139E+00	1.323E+01	1.169E+00	-0.410
CM-243	99.55			3.037E-02	6.814E-02	1.126E-01	9.789E-03	0.270
	103.76		*	-6.668E-03	4.377E-02	6.955E-02	5.930E-03	-0.096
	117.00			2.953E-02	9.123E-02	1.480E-01	1.223E-02	0.200
	209.75			2.868E-01	3.362E-01	5.760E-01	6.531E-02	0.498
	228.18			4.616E-02	1.123E-01	1.869E-01	2.249E-02	0.247
AM-246	277.60			-1.186E-03	8.634E-02	1.381E-01	1.924E-02	-0.009
	798.80			-7.726E-03	6.423E-02	1.022E-01	1.127E-02	-0.076
	1036.00			2.197E-02	1.272E-01	2.121E-01	2.106E-02	0.104
	1062.04			7.447E-02	9.585E-02	1.700E-01	1.635E-02	0.438
CM-247	1078.86		*	1.110E-02	6.433E-02	1.054E-01	9.915E-03	0.105
	278.00			2.037E-01	3.517E-01	5.838E-01	8.147E-02	0.349
	287.40			2.466E-01	6.265E-01	1.025E+00	1.411E-01	0.240
	402.60		*	8.714E-03	1.717E-02	2.921E-02	2.740E-03	0.298
CF-249	252.85			-3.197E-02	4.478E-01	7.191E-01	9.331E-02	-0.044
	333.44			-4.360E-02	8.436E-02	1.359E-01	1.644E-02	-0.321
	387.95		*	-1.275E-03	1.936E-02	3.171E-02	3.014E-03	-0.040
CF-251	176.60		*	-1.866E-02	5.734E-02	9.332E-02	9.480E-03	-0.200
	227.00			2.457E-02	1.908E-01	3.129E-01	3.751E-02	0.079
	285.00			6.786E-01	8.762E-01	1.466E+00	2.028E-01	0.463

VAX/VMS Nuclide Identification Report Generated

 * GEL Laboratories LLC *
 * 2040 Savage Road *
 * Charleston, SC 29414 *

DETECTOR DATA

* Configuration : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202015438 *
 * Acquisition date : 25-JAN-2010 10:47:49 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 02:00:01.02 Half life ratio : 8.000 *

SAMPLE DATA

* Sample date : 18-JAN-2010 00:00:00 Nuclide Library : SOLID *
 * Sample ID : G1202015438 Analyst initials: MXR1 *
 * Batch Number : 941636 Sample Quantity : 1.5907E+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 : *

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
TL-208	1.537E-02	3.152E-02	3.387E-02	0.000E+00
TH-234	2.288E-01	6.521E-01	8.007E-01	0.000E+00
U-238	2.288E-01	6.521E-01	8.007E-01	0.000E+00
ANH-511	1.378E-02	3.405E-02	2.261E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error) Ided	MDA (pCi/GRAM)	
BE-7	-1.331E-01	1.432E-01	2.260E-01	0.000E+00 NOT IDENT.
NA-22	-3.008E-03	1.946E-02	3.275E-02	0.000E+00 NOT IDENT.
NA-24	0.000E+00	7.119E+01	0.000E+00	0.000E+00 SHORT HLIF
AL-26	-6.960E-03	1.468E-02	2.246E-02	0.000E+00 NOT IDENT.
K-40	5.168E-02	2.351E-01	4.370E-01	0.000E+00 NOT IDENT.
TI-44	1.658E-03	1.267E-02	2.174E-02	0.000E+00 NOT IDENT.
SC-46	-5.946E-04	1.644E-02	2.840E-02	0.000E+00 NOT IDENT.
V-48	-1.631E-04	2.021E-02	3.458E-02	0.000E+00 NOT IDENT.
CR-51	-1.150E-01	1.477E-01	2.515E-01	0.000E+00 NOT IDENT.
MN-52	1.871E-03	4.287E-02	7.272E-02	0.000E+00 NOT IDENT.
MN-54	-1.675E-02	1.621E-02	2.537E-02	0.000E+00 NOT IDENT.
CO-56	-8.062E-03	1.649E-02	2.738E-02	0.000E+00 NOT IDENT.
CO-57	1.204E-03	1.140E-02	2.009E-02	0.000E+00 NOT IDENT.
CO-58	3.024E-03	1.517E-02	2.711E-02	0.000E+00 NOT IDENT.
FE-59	3.797E-02	3.595E-02	6.709E-02	0.000E+00 NOT IDENT.
CO-60	8.597E-03	1.558E-02	2.849E-02	0.000E+00 NOT IDENT.
ZN-65	-5.789E-02	3.928E-02	5.442E-02	0.000E+00 NOT IDENT.
GE-68	2.164E-01	5.342E-01	9.323E-01	0.000E+00 NOT IDENT.
AS-73	1.731E-01	2.760E-01	5.405E-01	0.000E+00 NOT IDENT.
AS-74	-1.171E-02	3.507E-02	5.994E-02	0.000E+00 NOT IDENT.
SE-75	-7.401E-03	2.138E-02	3.629E-02	0.000E+00 NOT IDENT.
BR-77	1.707E-01	5.780E-01	9.181E-01	0.000E+00 FAIL ABUN
SR-82	-6.725E-02	1.304E-01	2.084E-01	0.000E+00 NOT IDENT.

RB-83	1.177E-02	3.376E-02	5.391E-02	0.000E+00	NOT IDENT.
RB-84	1.809E-02	2.600E-02	4.809E-02	0.000E+00	NOT IDENT.
KR-85	0.000E+00	4.522E+00	8.815E+00	0.000E+00	NOT IDENT.
SR-85	0.000E+00	2.139E-02	4.170E-02	0.000E+00	NOT IDENT.
RB-86	5.358E-02	2.605E-01	4.452E-01	0.000E+00	NOT IDENT.
Y-88	-1.212E-03	1.720E-02	2.856E-02	0.000E+00	NOT IDENT.
ZR-88	3.538E-03	1.394E-02	2.496E-02	0.000E+00	NOT IDENT.
Y-91	-5.335E-01	5.526E+00	9.409E+00	0.000E+00	NOT IDENT.
NB-94	6.826E-03	1.651E-02	2.929E-02	0.000E+00	NOT IDENT.
NB-95	7.910E-03	1.790E-02	3.159E-02	0.000E+00	NOT IDENT.
NB-95M	3.871E-02	5.797E-02	9.386E-02	0.000E+00	NOT IDENT.
ZR-95	1.444E-02	2.941E-02	5.236E-02	0.000E+00	NOT IDENT.
NB-97	0.000E+00	2.401E+01	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	4.982E+02	0.000E+00	0.000E+00	SHORT HLIF
MO-99	1.123E-01	7.750E-01	1.341E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.175E+07	0.000E+00	0.000E+00	SHORT HLIF
RH-101	1.391E-02	1.883E-02	3.221E-02	0.000E+00	NOT IDENT.
RH-102	4.493E-03	1.414E-02	2.494E-02	0.000E+00	NOT IDENT.
RU-103	7.416E-03	1.645E-02	2.918E-02	0.000E+00	NOT IDENT.
RH-106	3.958E-03	1.502E-01	2.625E-01	0.000E+00	FAIL ABUN
RU-106	3.958E-03	1.502E-01	2.625E-01	0.000E+00	FAIL ABUN
AG-108M	-2.859E-04	1.599E-02	2.777E-02	0.000E+00	NOT IDENT.
CD-109	1.786E-01	2.903E-01	4.920E-01	0.000E+00	NOT IDENT.
AG-110M	-2.132E-03	1.592E-02	2.726E-02	0.000E+00	NOT IDENT.
IN-111	-4.211E-02	8.087E-02	1.369E-01	0.000E+00	NOT IDENT.
IN-113M	7.279E-03	2.065E-02	3.721E-02	0.000E+00	NOT IDENT.
SN-113	7.279E-03	2.065E-02	3.721E-02	0.000E+00	NOT IDENT.
IN-114M	-4.097E-03	8.962E-02	1.412E-01	0.000E+00	NOT IDENT.
CD-115	-2.237E-01	4.519E-01	7.709E-01	0.000E+00	NOT IDENT.
SN-117M	6.561E-03	1.662E-02	3.110E-02	0.000E+00	NOT IDENT.
SB-122	4.127E-02	1.211E-01	2.197E-01	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.566E+02	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	1.341E-03	1.225E-02	2.259E-02	0.000E+00	NOT IDENT.
I-124	-2.847E-02	1.053E-01	1.811E-01	0.000E+00	NOT IDENT.
SB-124	-7.352E-03	3.227E-02	5.258E-02	0.000E+00	NOT IDENT.
SB-125	1.365E-02	4.519E-02	8.042E-02	0.000E+00	NOT IDENT.
TE-125M	-3.235E+00	4.280E+00	6.848E+00	0.000E+00	NOT IDENT.
I-126	-1.210E-02	5.153E-02	8.715E-02	0.000E+00	NOT IDENT.
SB-126	2.049E-02	4.302E-02	7.676E-02	0.000E+00	NOT IDENT.
SN-126	7.755E-03	2.717E-02	4.776E-02	0.000E+00	FAIL ABUN
SB-127	-7.058E-02	1.496E-01	2.456E-01	0.000E+00	NOT IDENT.
XE-127	7.137E-03	1.936E-02	3.530E-02	0.000E+00	NOT IDENT.
I-131	-1.600E-03	2.849E-02	5.035E-02	0.000E+00	NOT IDENT.
TE-132	2.697E-02	6.525E-02	1.178E-01	0.000E+00	NOT IDENT.
BA-133	-2.061E-03	2.167E-02	3.832E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	5.714E+00	0.000E+00	0.000E+00	SHORT HLIF
CS-134	-1.382E-02	1.934E-02	3.001E-02	0.000E+00	NOT IDENT.
CS-135	6.263E-02	7.857E-02	1.422E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	8.968E+06	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-2.804E-02	2.960E-02	4.402E-02	0.000E+00	NOT IDENT.
BA-137M	2.232E-03	1.556E-02	2.729E-02	0.000E+00	NOT IDENT.
CS-137	2.359E-03	1.645E-02	2.884E-02	0.000E+00	NOT IDENT.
CE-139	-4.286E-04	1.272E-02	2.319E-02	0.000E+00	NOT IDENT.
BA-140	-3.880E-02	8.039E-02	1.303E-01	0.000E+00	NOT IDENT.
LA-140	4.374E-03	2.397E-02	4.217E-02	0.000E+00	NOT IDENT.
CE-141	9.921E-03	2.371E-02	4.475E-02	0.000E+00	NOT IDENT.
CE-143	3.196E-01	1.233E+00	2.269E+00	0.000E+00	NOT IDENT.
CE-144	-1.644E-02	8.535E-02	1.575E-01	0.000E+00	NOT IDENT.
PM-144	-6.152E-03	1.656E-02	2.756E-02	0.000E+00	NOT IDENT.
PR-144	-4.152E-01	1.117E+00	1.860E+00	0.000E+00	NOT IDENT.
PM-146	-5.181E-03	1.975E-02	3.340E-02	0.000E+00	NOT IDENT.
ND-147	-2.360E-02	1.513E-01	2.654E-01	0.000E+00	NOT IDENT.
PM-149	2.042E+00	4.143E+00	7.346E+00	0.000E+00	NOT IDENT.
EU-152	-1.404E-03	4.809E-02	8.573E-02	0.000E+00	NOT IDENT.
GD-153	-6.846E-03	3.508E-02	5.499E-02	0.000E+00	NOT IDENT.
EU-154	-7.863E-03	5.464E-02	9.207E-02	0.000E+00	NOT IDENT.
EU-155	2.471E-02	4.912E-02	8.972E-02	0.000E+00	NOT IDENT.
TB-160	4.801E-02	5.567E-02	1.045E-01	0.000E+00	NOT IDENT.
HO-166M	-2.717E-02	3.082E-02	4.408E-02	0.000E+00	FAIL ABUN
TM-171	-5.908E+00	1.176E+01	1.783E+01	0.000E+00	NOT IDENT.
LU-176	3.814E-03	1.085E-02	2.004E-02	0.000E+00	NOT IDENT.
LU-177	6.054E-02	2.144E-01	3.886E-01	0.000E+00	NOT IDENT.
LU-177M	-3.904E-02	7.833E-02	1.316E-01	0.000E+00	NOT IDENT.
HF-181	6.355E-04	1.759E-02	3.030E-02	0.000E+00	NOT IDENT.
W-181	-6.882E-02	1.477E-01	2.253E-01	0.000E+00	NOT IDENT.
TA-182	-3.001E-03	6.188E-02	1.059E-01	0.000E+00	NOT IDENT.
RE-183	-2.697E-03	5.139E-02	8.940E-02	0.000E+00	NOT IDENT.
RE-184	-8.256E-03	1.133E-01	1.971E-01	0.000E+00	NOT IDENT.

OS-185	2.761E-03	1.907E-02	3.351E-02	0.000E+00	NOT IDENT.
RE-188	4.454E-03	6.945E-02	1.281E-01	0.000E+00	NOT IDENT.
W-188	-1.481E+00	3.113E+00	5.490E+00	0.000E+00	FAIL ABUN
IR-192	6.980E-03	1.558E-02	2.879E-02	0.000E+00	NOT IDENT.
AU-195	3.316E-02	9.496E-02	1.654E-01	0.000E+00	NOT IDENT.
TL-200	3.915E-01	1.677E+00	3.019E+00	0.000E+00	NOT IDENT.
TL-201	-1.738E-01	5.621E-01	1.008E+00	0.000E+00	NOT IDENT.
TL-202	9.779E-03	2.056E-02	3.702E-02	0.000E+00	NOT IDENT.
HG-203	-2.790E-03	1.705E-02	2.911E-02	0.000E+00	NOT IDENT.
BI-207	7.619E-03	2.129E-02	3.759E-02	0.000E+00	NOT IDENT.
TL-207	2.873E-02	3.132E-01	5.663E-01	0.000E+00	NOT IDENT.
PO-209	-1.646E-01	3.348E+00	5.771E+00	0.000E+00	NOT IDENT.
BI-210	-6.378E-01	1.328E+00	2.259E+00	0.000E+00	NOT IDENT.
PB-210	-6.378E-01	1.328E+00	2.259E+00	0.000E+00	NOT IDENT.
PO-210	-6.378E-01	1.327E+00	2.259E+00	0.000E+00	NOT IDENT.
BI-211	-7.474E-02	1.122E-01	1.833E-01	0.000E+00	NOT IDENT.
PB-211	-1.325E-01	4.314E-01	7.252E-01	0.000E+00	NOT IDENT.
BI-212	-8.255E-02	1.254E-01	1.950E-01	0.000E+00	NOT IDENT.
PB-212	2.555E-03	4.056E-02	5.373E-02	0.000E+00	FAIL ABUN
PO-212	2.555E-03	4.056E-02	5.373E-02	0.000E+00	FAIL ABUN
BI-214	3.188E-03	4.209E-02	7.318E-02	0.000E+00	FAIL ABUN
PB-214	-1.394E-02	3.832E-02	6.380E-02	0.000E+00	NOT IDENT.
PO-214	-1.394E-02	3.832E-02	6.380E-02	0.000E+00	NOT IDENT.
PO-215	2.873E-02	3.132E-01	5.663E-01	0.000E+00	NOT IDENT.
PO-216	2.555E-03	4.056E-02	5.373E-02	0.000E+00	FAIL ABUN
PO-218	-1.394E-02	3.832E-02	6.380E-02	0.000E+00	NOT IDENT.
RN-219	1.741E-01	1.840E-01	3.423E-01	0.000E+00	NOT IDENT.
RN-220	5.997E+00	1.155E+01	2.127E+01	0.000E+00	NOT IDENT.
RA-223	2.873E-02	3.132E-01	5.663E-01	0.000E+00	NOT IDENT.
RA-224	2.900E-01	3.538E-01	5.763E-01	0.000E+00	NOT IDENT.
RA-226	3.188E-03	4.209E-02	7.318E-02	0.000E+00	FAIL ABUN
AC-227	8.236E-02	1.952E-01	3.484E-01	0.000E+00	NOT IDENT.
TH-227	8.236E-02	1.954E-01	3.484E-01	0.000E+00	FAIL ABUN
AC-228	5.356E-02	1.147E-01	1.192E-01	0.000E+00	FAIL ABUN
RA-228	5.356E-02	1.147E-01	1.192E-01	0.000E+00	FAIL ABUN
TH-228	2.574E-03	4.086E-02	5.414E-02	0.000E+00	FAIL ABUN
TH-229	-1.968E-01	2.496E-01	4.283E-01	0.000E+00	NOT IDENT.
TH-230	3.188E-03	4.209E-02	7.318E-02	0.000E+00	FAIL ABUN
PA-231	-5.971E-02	7.536E-01	1.292E+00	0.000E+00	NOT IDENT.
TH-231	2.873E-02	3.132E-01	5.663E-01	0.000E+00	NOT IDENT.
U-231	-9.718E-02	1.342E-01	2.005E-01	0.000E+00	FAIL ABUN
TH-232	5.356E-02	1.147E-01	1.192E-01	0.000E+00	FAIL ABUN
PA-233	-2.817E-03	2.913E-02	5.226E-02	0.000E+00	NOT IDENT.
PA-234	2.992E-02	1.219E-01	2.153E-01	0.000E+00	FAIL ABUN
PA-234M	1.151E-01	2.227E+00	3.783E+00	0.000E+00	NOT IDENT.
U-234	3.188E-03	4.209E-02	7.318E-02	0.000E+00	FAIL ABUN
U-235	-4.663E-02	1.041E-01	1.769E-01	0.000E+00	FAIL ABUN
NP-236	-1.466E-02	3.754E-02	6.737E-02	0.000E+00	NOT IDENT.
NP-237	-1.250E-02	7.700E-02	1.377E-01	0.000E+00	NOT IDENT.
NP-239	2.872E-02	8.695E-02	1.559E-01	0.000E+00	NOT IDENT.
AM-241	-1.546E-02	5.555E-02	9.073E-02	0.000E+00	NOT IDENT.
AM-243	4.758E-03	1.950E-02	3.625E-02	0.000E+00	NOT IDENT.
CM-243	-6.668E-03	4.290E-02	7.557E-02	0.000E+00	NOT IDENT.
AM-246	1.110E-02	6.304E-02	1.074E-01	0.000E+00	NOT IDENT.
CM-247	8.714E-03	1.682E-02	3.061E-02	0.000E+00	NOT IDENT.
CF-249	-1.275E-03	1.897E-02	3.326E-02	0.000E+00	NOT IDENT.
CF-251	-1.866E-02	5.619E-02	1.000E-01	0.000E+00	NOT IDENT.

```

*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                           *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202015438.CNF;1
Sample date        : 18-JAN-2010 00:00:00 Acquisition date : 25-JAN-2010 10:47:49
Sample ID          : G1202015438           Sample quantity  : 1.59070E+02 GRAM
Detector name      : GAM22                 Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00         Elapsed real time: 0 02:00:01.02  0.0%
Energy tolerance   : 1.50000 keV           Analyst Initials : MXR1
Abundance limit    : 75.00000              Sensitivity       : 5.00000
Batch ID           : 941636                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
TL-208	277.35	-----	6.80	6.182E+00	-----	Line Not Found	-----
	510.84	25	21.60	4.296E+00	6.378E-02	6.378E-02	252.32
	583.14	22	84.20*	3.924E+00	1.537E-02	1.537E-02	209.21
	860.37	-----	12.46	2.924E+00	-----	Line Not Found	-----
TH-234	63.29	16	3.80*	4.295E+00	2.288E-01	2.288E-01	290.83
	92.38	27	5.41	7.862E+00	1.510E-01	1.510E-01	266.59
U-238	63.29	16	3.80*	4.295E+00	2.288E-01	2.288E-01	290.83
	92.38	27	5.41	7.862E+00	1.510E-01	1.510E-01	266.12
ANH-511	511.00	25	100.00*	4.296E+00	1.378E-02	1.378E-02	252.18

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : G1202015438

Page : 2
Acquisition date : 25-JAN-2010 10:47:49

Total number of lines in spectrum 9
Number of unidentified lines 1
Number of lines tentatively identified by NID 8 88.89%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
TL-208	1.41E+10Y	1.00	1.537E-02	1.537E-02	3.216E-02	209.21	
TH-234	4.47E+09Y	1.00	2.288E-01	2.288E-01	6.654E-01	290.83	
U-238	4.47E+09Y	1.00	2.288E-01	2.288E-01	6.654E-01	290.83	
ANH-511	1.00E+09Y	1.00	1.378E-02	1.378E-02	3.474E-02	252.18	

Total Activity : 4.867E-01 4.867E-01

Grand Total Activity : 4.867E-01 4.867E-01

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G1202015438

Page : 3
Acquisition date : 25-JAN-2010 10:47:49

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	185.86	27	249	1.23	371.74	367	12	3.80E-03	****	7.61E+00	T
0	238.54	3	155	1.35	477.01	471	10	4.50E-04	****	6.71E+00	T
0	911.95	18	45	2.35	1823.02	1814	22	2.43E-03	****	2.79E+00	T
0	1191.04	37	11	0.78	2381.09	2370	22	5.14E-03	56.3	2.23E+00	
0	1765.57	4	15	3.40	3530.33	3518	17	5.92E-04	****	1.72E+00	T

Flags: "T" = Tentatively associated

```

*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
*                                     DETECTOR DATA                          *
*
* Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202015438.CNF;1
* Acquisition date   : 25-JAN-2010 10:47:49  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 02:00:01.02           Half life ratio  : 8.00000
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 18-JAN-2010 00:00:00  Nuclide Library : SOLID
* Sample ID          : G1202015438           Analyst initials: MXR1
* Batch Number       : 941636                Sample Quantity : 1.59070E+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
TL-208	1.537E-02	3.216E-02	3.266E-02	3.541E-03	0.471
TH-234	2.288E-01	6.654E-01	7.277E-01	1.267E-01	0.314
U-238	2.288E-01	6.654E-01	7.277E-01	1.267E-01	0.314
ANH-511	1.378E-02	3.474E-02	2.172E-02	2.177E-03	0.634

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-1.331E-01		1.461E-01	2.167E-01	2.261E-02	-0.614
NA-22	-3.008E-03		1.986E-02	3.231E-02	2.784E-03	-0.093
NA-24	3.505E-05		3.632E-05	Half-Life too short		
AL-26	-6.960E-03		1.498E-02	2.239E-02	1.831E-03	-0.311
K-40	5.168E-02		2.399E-01	4.328E-01	3.965E-02	0.119
TI-44	1.658E-03		1.293E-02	1.986E-02	1.684E-03	0.083
SC-46	-5.946E-04		1.677E-02	2.772E-02	3.103E-03	-0.021
V-48	-1.631E-04		2.063E-02	3.385E-02	3.550E-03	-0.005

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CR-51	-1.150E-01		1.508E-01	2.385E-01	3.089E-02	-0.482
MN-52	1.871E-03		4.375E-02	7.199E-02	6.433E-03	0.026
MN-54	-1.675E-02		1.654E-02	2.472E-02	2.746E-03	-0.678
CO-56	-8.062E-03		1.683E-02	2.668E-02	2.970E-03	-0.302
CO-57	1.204E-03		1.163E-02	1.857E-02	1.531E-03	0.065
CO-58	3.024E-03		1.548E-02	2.639E-02	2.922E-03	0.115
FE-59	3.797E-02		3.668E-02	6.589E-02	6.457E-03	0.576
CO-60	8.597E-03		1.590E-02	2.814E-02	2.509E-03	0.306
ZN-65	-5.789E-02		4.008E-02	5.347E-02	4.770E-03	-1.083
GE-68	2.164E-01		5.451E-01	9.151E-01	8.627E-02	0.236
AS-73	1.731E-01		2.817E-01	4.891E-01	3.696E-02	0.354
AS-74	-1.171E-02		3.578E-02	5.783E-02	5.994E-03	-0.203
SE-75	-7.401E-03		2.181E-02	3.424E-02	4.608E-03	-0.216
BR-77	1.707E-01		5.898E-01	8.825E-01	8.882E-02	0.193
SR-82	-6.725E-02		1.331E-01	2.026E-01	2.222E-02	-0.332
RB-83	1.177E-02		3.444E-02	5.182E-02	5.215E-03	0.227
RB-84	1.809E-02		2.653E-02	4.692E-02	5.248E-03	0.386
KR-85	1.686E+01		4.615E+00	8.470E+00	8.499E-01	1.991
SR-85	7.976E-02		2.183E-02	4.006E-02	4.020E-03	1.991
RB-86	5.358E-02		2.658E-01	4.370E-01	4.123E-02	0.123
Y-88	-1.212E-03		1.755E-02	2.849E-02	2.303E-03	-0.043
ZR-88	3.538E-03		1.423E-02	2.380E-02	2.216E-03	0.149
Y-91	-5.335E-01		5.638E+00	9.266E+00	7.619E-01	-0.058
NB-94	6.826E-03		1.684E-02	2.839E-02	3.042E-03	0.240
NB-95	7.910E-03		1.826E-02	3.070E-02	3.357E-03	0.258
NB-95M	3.871E-02		5.916E-02	8.827E-02	1.167E-02	0.439
ZR-95	1.444E-02		3.001E-02	5.087E-02	5.905E-03	0.284
NB-97	-2.247E-06		1.225E-05	Half-Life too short		
ZR-97	1.361E-03		2.542E-04	Half-Life too short		
MO-99	1.123E-01		7.909E-01	1.302E+00	2.155E-01	0.086
TC-99M	-1.213E+01		5.997E+00	Half-Life too short		
RH-101	1.391E-02		1.922E-02	3.015E-02	3.289E-03	0.461
RH-102	4.493E-03		1.443E-02	2.391E-02	2.351E-03	0.188
RU-103	7.416E-03		1.678E-02	2.801E-02	4.204E-03	0.265
RH-106	3.958E-03		1.533E-01	2.536E-01	3.703E-02	0.016
RU-106	3.958E-03		1.533E-01	2.536E-01	2.649E-02	0.016
AG-108M	-2.859E-04		1.632E-02	2.656E-02	2.629E-03	-0.011
CD-109	1.786E-01		2.962E-01	4.509E-01	4.279E-02	0.396
AG-110M	-2.132E-03		1.625E-02	2.638E-02	2.835E-03	-0.081
IN-111	-4.211E-02		8.252E-02	1.289E-01	1.636E-02	-0.327
IN-113M	7.279E-03		2.107E-02	3.548E-02	3.388E-03	0.205
SN-113	7.279E-03		2.107E-02	3.548E-02	3.388E-03	0.205
IN-114M	-4.097E-03		9.145E-02	1.321E-01	1.404E-02	-0.031
CD-115	-2.237E-01		4.611E-01	7.413E-01	7.486E-02	-0.302
SN-117M	6.561E-03		1.696E-02	2.894E-02	2.745E-03	0.227
SB-122	4.127E-02		1.236E-01	2.117E-01	2.170E-02	0.195
I-123	1.714E-05		7.989E-05	Half-Life too short		
TE-123M	1.341E-03		1.250E-02	2.102E-02	2.007E-03	0.064

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
I-124	-2.847E-02		1.075E-01	1.748E-01	1.816E-02	-0.163
SB-124	-7.352E-03		3.292E-02	5.231E-02	4.653E-03	-0.141
SB-125	1.365E-02		4.611E-02	7.688E-02	7.460E-03	0.178
TE-125M	-3.235E+00		4.368E+00	6.311E+00	6.381E-01	-0.513
I-126	-1.210E-02		5.258E-02	8.436E-02	8.913E-03	-0.143
SB-126	2.049E-02		4.390E-02	7.446E-02	8.030E-03	0.275
SN-126	7.755E-03		2.773E-02	4.376E-02	4.132E-03	0.177
SB-127	-7.058E-02		1.527E-01	2.380E-01	2.720E-02	-0.297
XE-127	7.137E-03		1.975E-02	3.307E-02	3.666E-03	0.216
I-131	-1.600E-03		2.907E-02	4.792E-02	5.295E-03	-0.033
TE-132	2.697E-02		6.658E-02	1.107E-01	1.867E-02	0.244
BA-133	-2.061E-03		2.211E-02	3.645E-02	5.446E-03	-0.057
I-133	9.681E-07		2.915E-06	Half-Life	too short	
CS-134	-1.382E-02		1.973E-02	2.920E-02	3.232E-03	-0.473
CS-135	6.263E-02		8.017E-02	1.342E-01	1.941E-02	0.467
I-135	-6.013E+00		4.576E+00	Half-Life	too short	
CS-136	-2.804E-02		3.021E-02	4.318E-02	4.364E-03	-0.649
BA-137M	2.232E-03		1.588E-02	2.641E-02	2.785E-03	0.085
CS-137	2.359E-03		1.679E-02	2.791E-02	2.947E-03	0.085
CE-139	-4.286E-04		1.298E-02	2.161E-02	2.119E-03	-0.020
BA-140	-3.880E-02		8.203E-02	1.254E-01	4.209E-02	-0.309
LA-140	4.374E-03		2.446E-02	4.188E-02	3.671E-03	0.104
CE-141	9.921E-03		2.420E-02	4.155E-02	3.782E-03	0.239
CE-143	3.196E-01		1.258E+00	2.147E+00	5.116E-01	0.149
CE-144	-1.644E-02		8.709E-02	1.459E-01	2.265E-02	-0.113
PM-144	-6.152E-03		1.689E-02	2.672E-02	2.857E-03	-0.230
PR-144	-4.152E-01		1.140E+00	1.803E+00	1.928E-01	-0.230
PM-146	-5.181E-03		2.016E-02	3.198E-02	3.717E-03	-0.162
ND-147	-2.360E-02		1.544E-01	2.553E-01	4.048E-02	-0.092
PM-149	2.042E+00		4.228E+00	6.945E+00	1.313E+00	0.294
EU-152	-1.404E-03		4.907E-02	8.147E-02	9.792E-03	-0.017
GD-153	-6.846E-03		3.580E-02	5.053E-02	4.443E-03	-0.135
EU-154	-7.863E-03		5.575E-02	9.082E-02	1.026E-02	-0.087
EU-155	2.471E-02		5.013E-02	8.261E-02	7.091E-03	0.299
TB-160	4.801E-02		5.681E-02	1.019E-01	1.140E-02	0.471
HO-166M	-2.717E-02		3.144E-02	4.274E-02	4.595E-03	-0.636
TM-171	-5.908E+00		1.200E+01	1.623E+01	1.226E+00	-0.364
LU-176	3.814E-03		1.107E-02	1.899E-02	2.491E-03	0.201
LU-177	6.054E-02		2.187E-01	3.642E-01	4.111E-02	0.166
LU-177M	-3.904E-02		7.993E-02	1.257E-01	1.189E-02	-0.311
HF-181	6.355E-04		1.795E-02	2.906E-02	2.869E-03	0.022
W-181	-6.882E-02		1.507E-01	2.049E-01	1.527E-02	-0.336
TA-182	-3.001E-03		6.314E-02	1.043E-01	8.674E-03	-0.029
RE-183	-2.697E-03		5.244E-02	8.324E-02	8.030E-03	-0.032
RE-184	-8.256E-03		1.156E-01	1.857E-01	2.410E-02	-0.044
OS-185	2.761E-03		1.946E-02	3.241E-02	3.406E-03	0.085
RE-188	4.454E-03		7.087E-02	1.192E-01	1.112E-02	0.037
W-188	-1.481E+00		3.177E+00	5.192E+00	7.092E-01	-0.285

----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
IR-192	6.980E-03		1.590E-02	2.730E-02	3.489E-03	0.256
AU-195	3.316E-02		9.690E-02	1.521E-01	1.326E-02	0.218
TL-200	3.915E-01		1.711E+00	2.874E+00	3.026E-01	0.136
TL-201	-1.738E-01		5.736E-01	9.397E-01	9.262E-02	-0.185
TL-202	9.779E-03		2.098E-02	3.541E-02	3.409E-03	0.276
HG-203	-2.790E-03		1.740E-02	2.750E-02	3.893E-03	-0.101
BI-207	7.619E-03		2.173E-02	3.689E-02	3.541E-03	0.207
TL-207	2.873E-02		3.196E-01	5.372E-01	1.068E-01	0.053
PO-209	-1.646E-01		3.416E+00	5.634E+00	6.312E-01	-0.029
BI-210	-6.378E-01		1.355E+00	2.037E+00	1.892E-01	-0.313
PB-210	-6.378E-01		1.355E+00	2.037E+00	1.892E-01	-0.313
PO-210	-6.378E-01		1.355E+00	2.037E+00	1.713E-01	-0.313
BI-211	-7.474E-02		1.145E-01	1.743E-01	2.033E-02	-0.429
PB-211	-1.325E-01		4.402E-01	6.922E-01	4.346E-01	-0.191
BI-212	-8.255E-02		1.280E-01	1.892E-01	2.260E-02	-0.436
PB-212	2.555E-03	+	4.139E-02	5.055E-02	6.679E-03	0.051
PO-212	2.555E-03	+	4.139E-02	5.055E-02	6.679E-03	0.051
BI-214	3.188E-03		4.295E-02	7.066E-02	8.215E-03	0.045
PB-214	-1.394E-02		3.910E-02	6.066E-02	7.732E-03	-0.230
PO-214	-1.394E-02		3.910E-02	6.066E-02	7.732E-03	-0.230
PO-215	2.873E-02		3.196E-01	5.372E-01	1.068E-01	0.053
PO-216	2.555E-03	+	4.139E-02	5.055E-02	6.679E-03	0.051
PO-218	-1.394E-02		3.910E-02	6.066E-02	7.732E-03	-0.230
RN-219	1.741E-01		1.877E-01	3.267E-01	5.054E-02	0.533
RN-220	5.997E+00		1.179E+01	2.048E+01	2.087E+00	0.293
RA-223	2.873E-02		3.196E-01	5.372E-01	1.068E-01	0.053
RA-224	2.900E-01		3.611E-01	5.423E-01	6.788E-02	0.535
RA-226	3.188E-03		4.295E-02	7.066E-02	8.215E-03	0.045
AC-227	8.236E-02		1.992E-01	3.284E-01	5.993E-02	0.251
TH-227	8.236E-02		1.994E-01	3.284E-01	6.760E-02	0.251
AC-228	5.356E-02	+	1.170E-01	1.164E-01	1.542E-02	0.460
RA-228	5.356E-02	+	1.170E-01	1.164E-01	1.542E-02	0.460
TH-228	2.574E-03	+	4.169E-02	5.093E-02	6.729E-03	0.051
TH-229	-1.968E-01		2.547E-01	4.006E-01	4.307E-02	-0.491
TH-230	3.188E-03		4.295E-02	7.065E-02	8.215E-03	0.045
PA-231	-5.971E-02		7.690E-01	1.222E+00	2.281E-01	-0.049
TH-231	2.873E-02		3.196E-01	5.372E-01	1.068E-01	0.053
U-231	-9.718E-02		1.369E-01	1.841E-01	1.635E-02	-0.528
TH-232	5.356E-02	+	1.170E-01	1.164E-01	1.542E-02	0.460
PA-233	-2.817E-03		2.973E-02	4.952E-02	6.488E-03	-0.057
PA-234	2.992E-02		1.244E-01	2.105E-01	4.184E-02	0.142
PA-234M	1.151E-01		2.272E+00	3.705E+00	4.246E-01	0.031
U-234	3.188E-03		4.295E-02	7.065E-02	8.215E-03	0.045
U-235	-4.663E-02		1.062E-01	1.642E-01	2.897E-02	-0.284
NP-236	-1.466E-02		3.830E-02	6.271E-02	5.995E-03	-0.234
NP-237	-1.250E-02		7.857E-02	1.262E-01	2.857E-02	-0.099
NP-239	2.872E-02		8.872E-02	1.439E-01	1.190E-02	0.200
AM-241	-1.546E-02		5.668E-02	8.232E-02	6.435E-03	-0.188

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AM-243	4.758E-03		1.990E-02	3.308E-02	2.696E-03	0.144
CM-243	-6.668E-03		4.377E-02	6.955E-02	5.930E-03	-0.096
AM-246	1.110E-02		6.433E-02	1.054E-01	9.915E-03	0.105
CM-247	8.714E-03		1.717E-02	2.921E-02	2.740E-03	0.298
CF-249	-1.275E-03		1.936E-02	3.171E-02	3.014E-03	-0.040
CF-251	-1.866E-02		5.734E-02	9.332E-02	9.480E-03	-0.200

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]G1202015438          *
* Acquisition date   : 25-JAN-2010 10:47:49 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 02:00:01.02                               Half life ratio  : 8.000      *
*****
*                                     SAMPLE DATA                            *
*                                     *                                       *
* Sample date        : 18-JAN-2010 00:00:00 Nuclide Library : SOLID          *
* Sample ID          : G1202015438                               Analyst initials: MXR1        *
* Batch Number       : 941636                                   Sample Quantity : 1.5907E+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
TL-208	1.537E-02	3.152E-02	1.694E-02	1.608E-02
TH-234	2.288E-01	6.521E-01	4.006E-01	3.327E-01
U-238	2.288E-01	6.521E-01	4.006E-01	3.327E-01
ANH-511	1.378E-02	3.405E-02	1.131E-02	1.737E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	-1.331E-01	1.432E-01	1.130E-01	7.305E-02	NOT IDENT.
NA-22	-3.008E-03	1.946E-02	1.639E-02	9.929E-03	NOT IDENT.
NA-24	3.505E+01	7.119E+01	0.000E+00	3.632E+01	SHORT HLIF
AL-26	-6.960E-03	1.468E-02	1.124E-02	7.489E-03	NOT IDENT.
K-40	5.168E-02	2.351E-01	2.186E-01	1.200E-01	NOT IDENT.
TI-44	1.658E-03	1.267E-02	1.088E-02	6.466E-03	NOT IDENT.
SC-46	-5.946E-04	1.644E-02	1.421E-02	8.387E-03	NOT IDENT.
V-48	-1.631E-04	2.021E-02	1.730E-02	1.031E-02	NOT IDENT.
CR-51	-1.150E-01	1.477E-01	1.258E-01	7.538E-02	NOT IDENT.
MN-52	1.871E-03	4.287E-02	3.638E-02	2.187E-02	NOT IDENT.
MN-54	-1.675E-02	1.621E-02	1.269E-02	8.268E-03	NOT IDENT.
CO-56	-8.062E-03	1.649E-02	1.370E-02	8.415E-03	NOT IDENT.
CO-57	1.204E-03	1.140E-02	1.005E-02	5.817E-03	NOT IDENT.
CO-58	3.024E-03	1.517E-02	1.356E-02	7.738E-03	NOT IDENT.
FE-59	3.797E-02	3.595E-02	3.356E-02	1.834E-02	NOT IDENT.
CO-60	8.597E-03	1.558E-02	1.425E-02	7.948E-03	NOT IDENT.
ZN-65	-5.789E-02	3.928E-02	2.723E-02	2.004E-02	NOT IDENT.
GE-68	2.164E-01	5.342E-01	4.664E-01	2.726E-01	NOT IDENT.
AS-73	1.731E-01	2.760E-01	2.704E-01	1.408E-01	NOT IDENT.
AS-74	-1.171E-02	3.507E-02	2.999E-02	1.789E-02	NOT IDENT.
SE-75	-7.401E-03	2.138E-02	1.816E-02	1.091E-02	NOT IDENT.
BR-77	1.707E-01	5.780E-01	4.593E-01	2.949E-01	FAIL ABUN
SR-82	-6.725E-02	1.304E-01	1.043E-01	6.653E-02	NOT IDENT.

RB-83	1.177E-02	3.376E-02	2.697E-02	1.722E-02	NOT IDENT.
RB-84	1.809E-02	2.600E-02	2.406E-02	1.327E-02	NOT IDENT.
KR-85	1.686E+01	4.522E+00	4.410E+00	2.307E+00	NOT IDENT.
SR-85	7.976E-02	2.139E-02	2.086E-02	1.091E-02	NOT IDENT.
RB-86	5.358E-02	2.605E-01	2.227E-01	1.329E-01	NOT IDENT.
Y-88	-1.212E-03	1.720E-02	1.429E-02	8.777E-03	NOT IDENT.
ZR-88	3.538E-03	1.394E-02	1.249E-02	7.114E-03	NOT IDENT.
Y-91	-5.335E-01	5.526E+00	4.707E+00	2.819E+00	NOT IDENT.
NB-94	6.826E-03	1.651E-02	1.465E-02	8.421E-03	NOT IDENT.
NB-95	7.910E-03	1.790E-02	1.581E-02	9.132E-03	NOT IDENT.
NB-95M	3.871E-02	5.797E-02	4.696E-02	2.958E-02	NOT IDENT.
ZR-95	1.444E-02	2.941E-02	2.620E-02	1.501E-02	NOT IDENT.
NB-97	-2.247E+00	2.401E+01	0.000E+00	1.225E+01	SHORT HLIF
ZR-97	1.361E+03	4.982E+02	0.000E+00	2.542E+02	SHORT HLIF
MO-99	1.123E-01	7.750E-01	6.709E-01	3.954E-01	NOT IDENT.
TC-99M	-1.213E+07	1.175E+07	0.000E+00	5.997E+06	SHORT HLIF
RH-101	1.391E-02	1.883E-02	1.612E-02	9.610E-03	NOT IDENT.
RH-102	4.493E-03	1.414E-02	1.248E-02	7.216E-03	NOT IDENT.
RU-103	7.416E-03	1.645E-02	1.460E-02	8.392E-03	NOT IDENT.
RH-106	3.958E-03	1.502E-01	1.313E-01	7.663E-02	FAIL ABUN
RU-106	3.958E-03	1.502E-01	1.313E-01	7.663E-02	FAIL ABUN
AG-108M	-2.859E-04	1.599E-02	1.389E-02	8.158E-03	NOT IDENT.
CD-109	1.786E-01	2.903E-01	2.462E-01	1.481E-01	NOT IDENT.
AG-110M	-2.132E-03	1.592E-02	1.364E-02	8.123E-03	NOT IDENT.
IN-111	-4.211E-02	8.087E-02	6.851E-02	4.126E-02	NOT IDENT.
IN-113M	7.279E-03	2.065E-02	1.861E-02	1.054E-02	NOT IDENT.
SN-113	7.279E-03	2.065E-02	1.861E-02	1.054E-02	NOT IDENT.
IN-114M	-4.097E-03	8.962E-02	7.066E-02	4.573E-02	NOT IDENT.
CD-115	-2.237E-01	4.519E-01	3.857E-01	2.305E-01	NOT IDENT.
SN-117M	6.561E-03	1.662E-02	1.556E-02	8.480E-03	NOT IDENT.
SB-122	4.127E-02	1.211E-01	1.099E-01	6.179E-02	NOT IDENT.
I-123	1.714E+01	1.566E+02	0.000E+00	7.989E+01	SHORT HLIF
TE-123M	1.341E-03	1.225E-02	1.130E-02	6.248E-03	NOT IDENT.
I-124	-2.847E-02	1.053E-01	9.061E-02	5.374E-02	NOT IDENT.
SB-124	-7.352E-03	3.227E-02	2.631E-02	1.646E-02	NOT IDENT.
SB-125	1.365E-02	4.519E-02	4.024E-02	2.306E-02	NOT IDENT.
TE-125M	-3.235E+00	4.280E+00	3.426E+00	2.184E+00	NOT IDENT.
I-126	-1.210E-02	5.153E-02	4.360E-02	2.629E-02	NOT IDENT.
SB-126	2.049E-02	4.302E-02	3.840E-02	2.195E-02	NOT IDENT.
SN-126	7.755E-03	2.717E-02	2.389E-02	1.386E-02	FAIL ABUN
SB-127	-7.058E-02	1.496E-01	1.229E-01	7.633E-02	NOT IDENT.
XE-127	7.137E-03	1.936E-02	1.766E-02	9.877E-03	NOT IDENT.
I-131	-1.600E-03	2.849E-02	2.519E-02	1.453E-02	NOT IDENT.
TE-132	2.697E-02	6.525E-02	5.894E-02	3.329E-02	NOT IDENT.
BA-133	-2.061E-03	2.167E-02	1.917E-02	1.106E-02	NOT IDENT.
I-133	9.681E-01	5.714E+00	0.000E+00	2.915E+00	SHORT HLIF
CS-134	-1.382E-02	1.934E-02	1.501E-02	9.865E-03	NOT IDENT.
CS-135	6.263E-02	7.857E-02	7.115E-02	4.008E-02	NOT IDENT.
I-135	-6.013E+06	8.968E+06	0.000E+00	4.576E+06	SHORT HLIF
CS-136	-2.804E-02	2.960E-02	2.202E-02	1.510E-02	NOT IDENT.
BA-137M	2.232E-03	1.556E-02	1.365E-02	7.940E-03	NOT IDENT.
CS-137	2.359E-03	1.645E-02	1.443E-02	8.393E-03	NOT IDENT.
CE-139	-4.286E-04	1.272E-02	1.160E-02	6.490E-03	NOT IDENT.
BA-140	-3.880E-02	8.039E-02	6.520E-02	4.102E-02	NOT IDENT.
LA-140	4.374E-03	2.397E-02	2.110E-02	1.223E-02	NOT IDENT.
CE-141	9.921E-03	2.371E-02	2.239E-02	1.210E-02	NOT IDENT.
CE-143	3.196E-01	1.233E+00	1.135E+00	6.288E-01	NOT IDENT.
CE-144	-1.644E-02	8.535E-02	7.880E-02	4.355E-02	NOT IDENT.
PM-144	-6.152E-03	1.656E-02	1.379E-02	8.446E-03	NOT IDENT.
PR-144	-4.152E-01	1.117E+00	9.307E-01	5.701E-01	NOT IDENT.
PM-146	-5.181E-03	1.975E-02	1.671E-02	1.008E-02	NOT IDENT.
ND-147	-2.360E-02	1.513E-01	1.328E-01	7.722E-02	NOT IDENT.
PM-149	2.042E+00	4.143E+00	3.675E+00	2.114E+00	NOT IDENT.
EU-152	-1.404E-03	4.809E-02	4.289E-02	2.454E-02	NOT IDENT.
GD-153	-6.846E-03	3.508E-02	2.751E-02	1.790E-02	NOT IDENT.
EU-154	-7.863E-03	5.464E-02	4.606E-02	2.788E-02	NOT IDENT.
EU-155	2.471E-02	4.912E-02	4.489E-02	2.506E-02	NOT IDENT.
TB-160	4.801E-02	5.567E-02	5.227E-02	2.840E-02	NOT IDENT.
HO-166M	-2.717E-02	3.082E-02	2.205E-02	1.572E-02	FAIL ABUN
TM-171	-5.908E+00	1.176E+01	8.923E+00	6.001E+00	NOT IDENT.
LU-176	3.814E-03	1.085E-02	1.003E-02	5.534E-03	NOT IDENT.
LU-177	6.054E-02	2.144E-01	1.944E-01	1.094E-01	NOT IDENT.
LU-177M	-3.904E-02	7.833E-02	6.584E-02	3.997E-02	NOT IDENT.
HF-181	6.355E-04	1.759E-02	1.516E-02	8.974E-03	NOT IDENT.
W-181	-6.882E-02	1.477E-01	1.127E-01	7.536E-02	NOT IDENT.
TA-182	-3.001E-03	6.188E-02	5.297E-02	3.157E-02	NOT IDENT.
RE-183	-2.697E-03	5.139E-02	4.472E-02	2.622E-02	NOT IDENT.
RE-184	-8.256E-03	1.133E-01	9.861E-02	5.782E-02	NOT IDENT.

OS-185	2.761E-03	1.907E-02	1.677E-02	9.730E-03	NOT IDENT.
RE-188	4.454E-03	6.945E-02	6.411E-02	3.544E-02	NOT IDENT.
W-188	-1.481E+00	3.113E+00	2.747E+00	1.588E+00	FAIL ABUN
IR-192	6.980E-03	1.558E-02	1.441E-02	7.949E-03	NOT IDENT.
AU-195	3.316E-02	9.496E-02	8.277E-02	4.845E-02	NOT IDENT.
TL-200	3.915E-01	1.677E+00	1.510E+00	8.556E-01	NOT IDENT.
TL-201	-1.738E-01	5.621E-01	5.045E-01	2.868E-01	NOT IDENT.
TL-202	9.779E-03	2.056E-02	1.852E-02	1.049E-02	NOT IDENT.
HG-203	-2.790E-03	1.705E-02	1.456E-02	8.698E-03	NOT IDENT.
BI-207	7.619E-03	2.129E-02	1.881E-02	1.086E-02	NOT IDENT.
TL-207	2.873E-02	3.132E-01	2.833E-01	1.598E-01	NOT IDENT.
PO-209	-1.646E-01	3.348E+00	2.887E+00	1.708E+00	NOT IDENT.
BI-210	-6.378E-01	1.328E+00	1.130E+00	6.774E-01	NOT IDENT.
PB-210	-6.378E-01	1.328E+00	1.130E+00	6.774E-01	NOT IDENT.
PO-210	-6.378E-01	1.327E+00	1.130E+00	6.773E-01	NOT IDENT.
BI-211	-7.474E-02	1.122E-01	9.171E-02	5.726E-02	NOT IDENT.
PB-211	-1.325E-01	4.314E-01	3.628E-01	2.201E-01	NOT IDENT.
BI-212	-8.255E-02	1.254E-01	9.756E-02	6.398E-02	NOT IDENT.
PB-212	2.555E-03	4.056E-02	2.688E-02	2.069E-02	FAIL ABUN
PO-212	2.555E-03	4.056E-02	2.688E-02	2.069E-02	FAIL ABUN
BI-214	3.188E-03	4.209E-02	3.661E-02	2.148E-02	FAIL ABUN
PB-214	-1.394E-02	3.832E-02	3.192E-02	1.955E-02	NOT IDENT.
PO-214	-1.394E-02	3.832E-02	3.192E-02	1.955E-02	NOT IDENT.
PO-215	2.873E-02	3.132E-01	2.833E-01	1.598E-01	NOT IDENT.
PO-216	2.555E-03	4.056E-02	2.688E-02	2.069E-02	FAIL ABUN
PO-218	-1.394E-02	3.832E-02	3.192E-02	1.955E-02	NOT IDENT.
RN-219	1.741E-01	1.840E-01	1.713E-01	9.387E-02	NOT IDENT.
RN-220	5.997E+00	1.155E+01	1.064E+01	5.894E+00	NOT IDENT.
RA-223	2.873E-02	3.132E-01	2.833E-01	1.598E-01	NOT IDENT.
RA-224	2.900E-01	3.538E-01	2.883E-01	1.805E-01	NOT IDENT.
RA-226	3.188E-03	4.209E-02	3.661E-02	2.148E-02	FAIL ABUN
AC-227	8.236E-02	1.952E-01	1.743E-01	9.961E-02	NOT IDENT.
TH-227	8.236E-02	1.954E-01	1.743E-01	9.968E-02	FAIL ABUN
AC-228	5.356E-02	1.147E-01	5.962E-02	5.851E-02	FAIL ABUN
RA-228	5.356E-02	1.147E-01	5.962E-02	5.851E-02	FAIL ABUN
TH-228	2.574E-03	4.086E-02	2.708E-02	2.085E-02	FAIL ABUN
TH-229	-1.968E-01	2.496E-01	2.143E-01	1.274E-01	NOT IDENT.
TH-230	3.188E-03	4.209E-02	3.661E-02	2.148E-02	FAIL ABUN
PA-231	-5.971E-02	7.536E-01	6.466E-01	3.845E-01	NOT IDENT.
TH-231	2.873E-02	3.132E-01	2.833E-01	1.598E-01	NOT IDENT.
U-231	-9.718E-02	1.342E-01	1.003E-01	6.847E-02	FAIL ABUN
TH-232	5.356E-02	1.147E-01	5.962E-02	5.851E-02	FAIL ABUN
PA-233	-2.817E-03	2.913E-02	2.615E-02	1.486E-02	NOT IDENT.
PA-234	2.992E-02	1.219E-01	1.077E-01	6.219E-02	FAIL ABUN
PA-234M	1.151E-01	2.227E+00	1.892E+00	1.136E+00	NOT IDENT.
U-234	3.188E-03	4.209E-02	3.661E-02	2.148E-02	FAIL ABUN
U-235	-4.663E-02	1.041E-01	8.850E-02	5.312E-02	FAIL ABUN
NP-236	-1.466E-02	3.754E-02	3.371E-02	1.915E-02	NOT IDENT.
NP-237	-1.250E-02	7.700E-02	6.891E-02	3.929E-02	NOT IDENT.
NP-239	2.872E-02	8.695E-02	7.800E-02	4.436E-02	NOT IDENT.
AM-241	-1.546E-02	5.555E-02	4.539E-02	2.834E-02	NOT IDENT.
AM-243	4.758E-03	1.950E-02	1.813E-02	9.948E-03	NOT IDENT.
CM-243	-6.668E-03	4.290E-02	3.781E-02	2.189E-02	NOT IDENT.
AM-246	1.110E-02	6.304E-02	5.371E-02	3.216E-02	NOT IDENT.
CM-247	8.714E-03	1.682E-02	1.531E-02	8.583E-03	NOT IDENT.
CF-249	-1.275E-03	1.897E-02	1.664E-02	9.678E-03	NOT IDENT.
CF-251	-1.866E-02	5.619E-02	5.003E-02	2.867E-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	96.6395
46.50	96.6395
46.50	96.6395
48.70	92.1641
49.72	79.7597
51.35	115.4372
52.39	108.5440
52.97	92.0768
53.15	96.8026
53.44	96.9234
54.07	90.6439
56.28	109.4090
56.28	109.4102
57.37	115.5863
57.53	115.6617
57.53	115.6626
57.60	108.1083
57.98	109.2251
57.98	109.2251
59.32	104.5627
59.32	104.5627
59.40	104.5958
59.54	104.6540
59.72	103.2943
60.01	103.4129
61.10	82.2195
61.14	82.2322
61.30	82.2834
63.00	103.1663
63.29	119.2815
63.29	119.2815
63.58	119.4126
64.28	135.7891
65.12	137.6808
65.20	136.2567
65.20	136.2567
66.05	148.4432
66.72	135.5475
66.83	135.6023
66.91	135.6423
67.20	107.7428
67.20	107.7428
67.75	128.6614
67.85	128.7082
68.90	134.6387
68.90	134.6387
69.30	126.8991
69.67	136.9935
70.82	150.5046
70.82	150.5046
70.83	150.5100
72.80	135.4813
72.87	135.5143
72.87	135.5143
74.67	141.3928
74.81	141.4590
74.81	141.4590
74.81	141.4590
74.81	141.4590
74.81	141.4590
74.81	141.4590
74.81	141.4590
74.97	141.5352
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75.70	135.7993
77.11	152.7229
77.11	152.7229

77.11	152.7229
77.11	152.7229
77.11	152.7229
77.11	152.7229
77.11	152.7229
78.38	121.6626
79.62	137.5462
79.80	128.3817
79.80	128.3817
80.11	130.5650
80.18	130.5941
80.30	128.5865
80.30	128.5865
80.57	128.6964
81.00	128.8719
81.07	128.9005
81.07	128.9005
81.07	128.9005
81.07	128.9005
82.60	105.6881
83.37	108.0170
83.78	121.6739
83.78	121.6739
83.78	121.6739
83.78	121.6739
84.21	120.7938
84.90	122.0922
85.43	117.0631
86.29	120.5111
86.50	120.5872
86.54	120.6018
86.59	132.1575
86.72	132.2094
86.79	122.7908
86.94	122.8468
87.30	113.5190
87.30	113.5190
87.30	113.5190
87.30	113.5190
87.30	113.5190
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87.30	113.5190
87.57	113.6102
87.88	108.9770
88.03	109.0254
88.36	115.4582
88.47	115.4961
89.95	139.8337
91.11	129.1451
92.29	133.3167
92.38	133.3510
92.38	133.3510
93.35	133.7191
94.00	133.9652
94.67	124.0159
94.67	124.0176
94.90	124.0975
94.90	124.0975
94.90	124.0975
94.90	124.0975
95.87	147.0578
95.87	147.0578
96.73	129.5905
97.43	137.9545
98.44	136.7076
98.44	136.7083
98.88	131.6575
99.55	129.5026
99.55	129.5026
99.86	133.9669
100.00	134.0176
100.10	124.2462
103.18	169.2177
103.76	152.9680
105.00	143.5258
105.31	151.3754
108.00	173.5600
109.28	168.5402

111.00	155.8136
111.00	155.8136
111.76	165.0916
112.95	145.3008
115.19	166.4786
116.30	147.6194
117.00	143.3163
117.00	143.3163
117.66	145.8197
121.11	150.4493
121.62	149.4774
121.78	149.5323
122.06	143.8739
122.32	143.9597
122.32	143.9597
122.32	143.9597
122.32	143.9597
123.07	164.9743
127.23	156.0508
129.76	167.7603
131.20	146.2619
133.02	150.3777
133.54	149.6608
135.34	159.1269
136.00	163.8006
136.25	163.8876
136.48	157.7298
140.51	185.1221
140.51	0.0000
142.18	183.9552
142.65	173.2998
143.76	166.4538
144.24	153.0325
144.24	153.0325
144.24	153.0325
144.24	153.0325
145.22	155.1501
145.44	155.2192
147.16	173.0587
152.43	144.4864
152.70	144.5619
153.22	152.0804
154.21	161.6045
154.21	161.6045
154.21	161.6045
154.21	161.6045
155.03	150.7593
156.02	157.5307
158.56	146.1837
159.00	0.0000
159.00	152.8266
160.31	176.5545
161.27	153.4735
162.32	152.8324
162.64	163.2431
163.35	156.8798
163.89	160.7952
165.85	149.1014
167.43	163.7225
171.28	141.9781
171.86	142.1225
172.10	142.1827
176.55	148.0948
176.60	148.1077
181.06	136.4440
184.41	149.6848
185.71	176.7661
186.00	176.8517
190.27	170.0209
192.34	161.9017
193.63	184.9898
197.04	165.1059
198.01	154.3993
198.60	148.5589
200.40	212.9675
201.83	197.4073
202.84	155.5617
205.31	175.2917

208.36	137.6436
208.81	119.5070
209.75	124.7464
209.75	124.7464
210.97	128.0216
215.65	129.9320
216.55	142.3957
218.09	159.1425
222.10	150.7697
223.80	154.2406
226.40	160.0027
227.00	148.6994
227.08	148.7158
227.20	146.6606
228.16	139.5666
228.18	139.5707
228.18	139.5707
231.56	165.0434
235.69	131.3403
236.00	139.8193
236.00	139.8193
238.63	165.6753
238.63	165.6753
238.63	165.6753
238.63	165.6753
239.00	158.9922
240.98	137.3678
241.98	134.1553
241.98	134.1553
241.98	134.1553
244.69	145.9283
245.39	153.5262
247.94	139.0643
248.90	143.5221
249.79	132.9647
252.40	138.7937
252.85	137.7969
252.85	137.7969
254.15	0.0000
256.20	134.0636
256.20	134.0636
260.50	140.2277
260.90	146.8240
262.80	136.2705
264.65	139.8613
268.24	125.1137
268.79	108.7254
269.46	108.8145
269.46	108.8145
269.46	108.8145
269.46	108.8145
271.23	143.1952
273.65	136.9854
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277.35	107.6331
277.60	118.7635
277.60	118.7635
278.00	106.6055
278.60	111.1267
279.20	118.9905
279.53	119.0362
280.46	130.3039
281.68	113.7617
283.67	120.7337
284.30	115.2290
285.00	105.2466
285.90	114.3235
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286.10	108.7446
287.40	115.6440
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290.80	125.3392
291.72	129.0823
293.26	119.3607
293.70	119.4204
295.21	102.4063
295.21	102.4063

295.21	102.4063
295.96	126.9827
296.50	118.8915
297.23	134.4303
298.57	114.6197
299.80	110.2220
299.80	110.2220
300.09	112.9926
300.09	112.9926
300.09	112.9926
300.09	112.9926
300.12	112.9956
301.29	111.3176
302.84	106.9396
303.76	107.0481
303.91	107.0653
304.40	114.4485
304.40	114.4485
304.84	113.5874
306.84	92.7222
308.46	100.2435
311.98	104.3181
316.51	108.5364
318.01	100.3482
319.02	115.3372
319.41	113.5246
320.08	124.7777
323.87	113.1229
323.87	113.1229
323.87	113.1229
323.87	113.1229
325.23	97.3667
328.77	116.5179
333.44	130.2965
334.20	146.4610
334.20	146.4610
334.30	145.5311
338.28	113.8579
338.28	113.8579
338.28	113.8579
338.28	113.8579
338.32	113.8638
338.32	113.8638
338.32	113.8638
340.50	112.2109
340.57	112.2181
344.27	116.4510
345.85	117.5902
350.59	114.2978
351.07	121.0781
351.92	110.5991
351.92	110.5991
351.92	110.5991
355.39	0.0000
356.01	116.8318
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366.43	104.3459
367.43	107.3722
367.94	96.6809
369.80	83.1531
374.96	106.1622
383.85	85.2263
387.95	96.4826
388.63	95.5465
391.69	93.8118
391.69	93.8118
392.90	93.9128
398.62	96.3961
400.65	86.5081
401.10	80.5049
401.81	69.4784
402.60	79.6027
404.84	90.8624
410.95	82.2073
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413.65	92.5685
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415.30	97.7918

415.76	97.8305
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427.08	90.5309
427.89	88.5321
432.53	104.3708
433.93	88.9720
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439.56	71.7113
439.89	71.7307
443.98	75.0955
444.90	77.2384
445.03	77.2465
445.03	77.2465
445.03	77.2465
445.03	77.2465
453.90	77.7903
463.38	70.9536
468.07	98.8432
473.00	68.2766
475.06	77.9991
475.35	75.8795
476.78	84.5200
477.59	94.2058
477.96	93.1618
482.03	74.1118
484.57	88.2421
487.03	75.4653
490.36	74.5700
492.35	91.9965
497.08	65.1628
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510.53	0.0000
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511.00	72.3986
511.85	72.4417
511.85	72.4417
513.99	72.5517
513.99	72.5517
520.41	66.2534
520.65	66.2651
527.90	75.8490
528.96	0.0000
529.64	65.7521
529.87	0.0000
531.02	66.7427
537.32	68.8917
543.00	68.2222
546.56	0.0000
549.76	59.1432
552.65	71.4850
555.20	45.2246
563.23	61.5643
563.90	56.8542
568.70	72.2396
569.32	73.2183
569.50	72.2767
569.67	72.2844
573.80	84.8734
574.00	79.1617
574.64	80.1497
578.91	85.2889
579.30	78.7467
583.14	97.0294
585.48	59.2923
591.81	90.9460
592.07	89.7191
593.00	77.6094
595.88	91.8670
600.56	103.7716
602.52	0.0000
602.71	116.5332
602.71	116.5332
603.60	121.4549
604.41	129.2929
604.70	128.3423
609.31	85.8032

609.31	85.8032
609.31	85.8032
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610.33	94.6378
612.46	110.3906
614.37	121.2754
618.01	69.5931
621.84	69.7534
621.84	69.7534
631.29	61.2533
633.02	53.4045
633.10	55.3848
634.78	52.4695
635.90	56.4666
636.97	59.4763
645.85	73.7335
646.12	63.7799
656.30	60.1440
657.75	67.2167
657.90	0.0000
661.65	57.3108
661.65	57.3108
664.57	61.4344
666.33	59.4789
666.33	59.4789
675.00	64.8333
677.61	45.6519
685.20	59.0880
692.80	69.5633
695.00	69.6463
696.49	76.8784
696.49	76.8784
697.00	79.9757
697.49	81.0219
698.33	81.0589
698.50	81.0669
699.00	79.0350
702.63	68.9056
706.10	61.8213
706.58	0.0000
706.67	63.9022
709.31	73.2809
711.68	67.1727
713.82	66.2148
717.42	47.6827
720.50	55.0283
721.93	56.1083
722.20	55.0768
722.78	62.3706
722.78	62.3706
722.89	62.3743
722.95	62.3755
723.30	65.5071
724.18	65.5366
727.18	54.1783
733.00	61.6576
735.90	55.4714
739.58	54.5274
742.81	57.7695
744.21	60.9630
747.13	50.5273
751.79	44.3165
752.31	49.6057
753.82	48.5868
755.35	51.7953
756.15	48.6438
756.87	55.0088
763.93	59.4510
765.79	58.4431
766.42	61.6498
766.84	59.5365
776.49	51.2759
778.00	47.0374
778.57	45.9814
778.89	49.1969
783.80	33.2346
785.46	34.3346
792.07	53.8198

795.84	53.9174
796.30	50.6939
798.80	53.9947
801.93	41.0979
805.60	52.0039
810.29	53.0508
810.76	42.8226
815.85	41.9921
817.79	48.5686
818.51	46.7163
819.60	48.6094
826.30	46.8872
828.27	46.9299
831.60	47.0023
831.96	50.7710
834.83	64.9606
836.80	0.0000
846.75	54.9040
848.13	55.8856
856.28	0.0000
856.80	54.2039
860.37	55.2428
867.32	50.6385
867.82	41.0931
871.10	47.8524
873.19	46.9390
874.81	46.9723
875.33	0.0000
876.40	44.1277
879.36	34.5799
880.27	40.3594
880.51	40.3638
881.50	37.4970
883.24	46.1853
884.67	46.2146
889.25	46.3075
896.60	47.4235
898.02	47.4525
899.00	48.4410
903.28	50.9573
911.07	33.1112
911.07	33.1112
911.07	33.1112
919.63	41.0515
920.93	30.8057
925.00	31.6496
925.24	30.3718
926.50	32.3486
935.52	26.5673
937.48	30.5281
944.10	43.4491
946.00	34.5892
949.00	39.5794
962.29	58.6985
964.01	61.7254
966.15	46.8328
968.20	45.8741
969.11	44.8941
969.11	44.8941
969.11	44.8941
977.42	35.0342
980.50	33.0731
983.50	34.1162
989.30	37.2123
996.32	47.4016
1001.03	35.3644
1001.68	35.3735
1004.76	50.5947
1021.30	0.0000
1024.50	0.0000
1034.80	38.9012
1036.00	34.8218
1037.82	40.9947
1038.57	44.0828
1038.76	0.0000
1045.16	30.8318
1046.59	40.1031
1048.07	43.2129

1050.47	38.1021
1050.47	38.1021
1062.04	28.9590
1063.62	32.0812
1076.63	33.2757
1077.35	31.2043
1078.86	34.3443
1085.78	36.5173
1099.22	32.5029
1112.02	40.0251
1112.84	54.7875
1115.52	61.1678
1120.29	32.7483
1120.29	32.7483
1120.29	32.7483
1120.29	32.7483
1120.51	32.7515
1121.28	35.9305
1124.00	0.0000
1129.67	21.1984
1131.51	0.0000
1147.95	0.0000
1167.94	20.6767
1173.22	26.3628
1175.09	28.2642
1177.93	22.1303
1189.05	22.7183
1204.90	27.5973
1205.75	28.5571
1213.00	30.5342
1221.42	29.6623
1230.97	39.3534
1235.34	32.6812
1236.41	0.0000
1238.25	35.5987
1246.25	36.6548
1260.41	0.0000
1271.85	28.2035
1274.45	40.8798
1274.54	40.8810
1291.56	28.3787
1298.22	0.0000
1312.09	19.6967
1325.50	20.7667
1325.50	20.7667
1332.49	19.8199
1333.61	18.8353
1360.21	31.9775
1362.66	0.0000
1365.15	21.0160
1368.21	18.0302
1368.53	0.0000
1376.25	26.1055
1384.27	29.1867
1394.10	20.1868
1395.20	19.1832
1407.95	22.2947
1434.06	24.5039
1436.60	24.5222
1457.56	0.0000
1460.81	19.5462
1489.15	23.8472
1509.49	17.7242
1596.49	17.0698
1620.62	26.7179
1678.03	0.0000
1691.02	16.5089
1691.02	16.5089
1706.46	0.0000
1750.46	0.0000
1764.49	3.5581
1764.49	3.5581
1764.49	3.5581
1764.49	3.5581
1770.23	8.9072
1771.40	7.1277
1791.20	0.0000
1808.65	16.9756

1836.01

18.0869

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1202015438

Total Uranium Activity	6.5907E-01	ug/g
Total Uranium Counting Unc.	1.9405E+00	ug/g
Total Uranium Tpu	9.9007E-07	ug/g
Total Uranium Mda	1.1925E+00	ug/g

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*****
*
*               GEL Laboratories LLC               *
*               2040 SAVAGE ROAD                   *
*               CHARLESTON ,SC 29417               *
*               GROSS GAMMA REPORT                 *
*
*****
*
*  BATCH ID      : 941636          SAMPLE ID   : G1202015438
*  ANALYST       : MXR1            DETECTOR    : GAM22
*  SAMPLE DATE   : 18-JAN-2010 00:00:00.00  COUNT TIME : 0 02:00:00.00
*  ANALYSIS DATE: 25-JAN-2010 10:47:49.25  SAMPLE ALQT: 159.070 GRAM
*
*****

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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 1.131E-01
GROSS GAMMA ERROR   (pCi/GRAM ) : 1.805E-01
GROSS GAMMA MDA     (pCi/GRAM ) : 2.888E-01
GROSS GAMMA DLC     (pCi/GRAM ) : 1.364E-01

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VAX/VMS Nuclide Identification Report Generated 26-JAN-2010 15:43:43.44

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*****
*                               GEL Laboratories LLC                      *
*                               2040 Savage Road                          *
*                               Charleston, SC 29414                     *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202015439.CNF;1
Sample date        : 7-JAN-2010 12:00:00. Acquisition date : 25-JAN-2010 11:12:23
Sample ID          : G1202015439      Sample quantity   : 1.59070E+02 GRAM
Detector name      : GAM13            Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00    Elapsed real time: 0 02:00:01.66  0.0%
Energy tolerance   : 1.50000 keV      Analyst Initials  : MXR1
Abundance limit    : 75.00000          Sensitivity       : 5.00000
Batch ID           : 941636            Detector SN#      :
Matrix Spike ID    :                   LCS ID           : 1032-A
*****

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Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.14*	241	638	1.15	92.03	86	11	3.34E-02	22.1	
2	0	63.18*	107	813	1.21	126.12	122	10	1.48E-02	54.9	
3	4	74.71*	468	629	1.16	149.19	144	14	6.50E-02	10.3	2.95E-01
4	4	76.93*	757	567	1.17	153.64	144	14	1.05E-01	6.8	
5	0	84.08*	73	520	1.49	167.94	164	7	1.02E-02	54.6	
6	5	87.11	259	495	1.13	174.01	171	20	3.60E-02	15.0	2.47E+00
7	5	89.86	173	526	1.40	179.49	171	20	2.40E-02	24.3	
8	5	92.53*	189	459	1.31	184.84	171	20	2.63E-02	25.5	
9	0	104.89	82	378	1.28	209.58	206	8	1.14E-02	42.7	
10	0	143.83*	8	417	1.67	287.46	284	8	1.18E-03	438.5	
11	0	185.73*	76	487	1.22	371.28	367	11	1.06E-02	62.5	
12	0	209.28*	82	270	0.79	418.40	414	8	1.14E-02	37.4	
13	4	238.41*	948	207	1.34	476.67	469	24	1.32E-01	4.3	1.45E+00
14	4	241.33	265	255	1.83	482.51	469	24	3.68E-02	16.3	
15	0	294.76*	343	308	1.24	589.41	582	14	4.77E-02	12.2	
16	0	338.12*	190	200	1.43	676.14	671	10	2.64E-02	16.1	
17	0	351.69*	537	189	1.37	703.29	698	11	7.46E-02	6.7	
18	0	510.56*	93	175	1.97	1021.14	1015	13	1.29E-02	36.3	
19	0	583.04*	223	175	1.41	1166.14	1160	12	3.10E-02	13.9	
20	0	608.91*	371	126	1.80	1217.90	1212	13	5.15E-02	8.3	
21	0	661.48	128	128	1.50	1323.06	1315	15	1.78E-02	21.1	
22	0	727.23	115	107	1.82	1454.61	1446	16	1.59E-02	22.3	
23	0	910.72*	245	74	2.05	1821.74	1814	18	3.41E-02	10.7	
24	0	968.54*	95	72	1.61	1937.41	1933	10	1.32E-02	20.4	
25	0	1119.35	111	89	1.77	2239.17	2231	17	1.54E-02	21.8	
26	0	1460.01*	1294	35	2.55	2920.80	2910	19	1.80E-01	3.0	
27	0	1710.19	9	9	0.88	3421.42	3412	12	1.29E-03	72.1	
28	0	1763.61	79	10	2.53	3528.32	3521	14	1.09E-02	14.3	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 26-JAN-2010 15:43:46

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Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202015439.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 7-JAN-2010 12:00:00   Acquisition date : 25-JAN-2010 11:12:23
Sample ID        : G1202015439           Sample quantity  : 159.07 GRAM
Sample type      : SOLID                  Sample geometry   :
Detector name    : GAMMA13               Detector geometry: CAN
Elapsed live time: 0 02:00:00.00          Elapsed real time: 0 02:00:01.66   0.0%
Peak Width (FWHM): 3.00                  Confidence level  : 5.00 %
Energy tolerance : 1.50 keV              Half life ratio   : 8.00
Errors propagated: Yes                   Systematic Error  : 0.00 %
Efficiency type  : Empirical              Efficiencies at   : Peak Energy
Abundance limit  : 75.00                 WTM error limit   : 3.00

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Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	2.748E+01	2.355E+00	6.691E-01	4.090E-02	41.080
CD-109	+	88.03	*	2.329E+00	7.214E-01	7.911E-01	6.242E-02	2.945
SN-126	+	64.28		3.549E-01	3.934E-01	3.299E-01	5.137E-02	1.076
	+	86.94		9.478E-01	4.828E-01	3.208E-01	1.323E-01	2.954
	+	87.57	*	2.280E-01	7.060E-02	7.732E-02	6.116E-03	2.949
BA-137M	+	661.65	*	1.670E-01	7.179E-02	7.004E-02	5.713E-03	2.384
CS-137	+	661.65	*	1.765E-01	7.590E-02	7.404E-02	6.052E-03	2.384
EU-155		48.70		-1.328E-02	3.805E-01	5.884E-01	4.441E-02	-0.023
		60.01		-1.742E+00	1.893E+00	2.776E+00	2.657E-01	-0.628
	+	86.54		2.749E-01	8.519E-02	1.018E-01	8.206E-03	2.700
	+	105.31	*	1.341E-01	1.152E-01	1.358E-01	1.394E-02	0.988
TL-208		277.35		4.444E-01	3.535E-01	6.107E-01	7.153E-02	0.728
	+	510.84		3.990E-01	2.927E-01	2.382E-01	2.589E-02	1.675
	+	583.14	*	2.772E-01	8.064E-02	6.062E-02	5.018E-03	4.573
		860.37		2.349E-01	3.610E-01	5.852E-01	4.934E-02	0.401
BI-210	+	46.50	*	1.925E+00	8.632E-01	6.472E-01	5.275E-02	2.974
PB-210	+	46.50	*	1.925E+00	8.632E-01	6.472E-01	5.275E-02	2.974
PO-210	+	46.50	*	1.925E+00	8.598E-01	6.472E-01	4.614E-02	2.974
BI-211		72.87		2.454E+00	1.831E+00	2.885E+00	2.523E-01	0.851
	+	351.07	*	2.801E+00	4.280E-01	3.260E-01	2.376E-02	8.592
PB-212	+	74.81		1.403E+00	3.401E-01	3.048E-01	3.877E-02	4.604
	+	77.11		1.351E+00	2.171E-01	1.822E-01	1.548E-02	7.414
	+	87.30		1.054E+00	3.431E-01	3.573E-01	4.559E-02	2.951
	+	238.63	*	1.064E+00	1.336E-01	7.948E-02	7.220E-03	13.385
		300.09		5.952E-01	7.822E-01	1.184E+00	1.126E-01	0.503
PO-212	+	74.81		1.403E+00	3.401E-01	3.048E-01	3.877E-02	4.604
	+	77.11		1.351E+00	2.171E-01	1.822E-01	1.548E-02	7.414
	+	87.30		1.054E+00	3.431E-01	3.573E-01	4.559E-02	2.951
		115.19		7.398E-01	3.025E+00	4.996E+00	5.794E-01	0.148
	+	238.63	*	1.064E+00	1.336E-01	7.948E-02	7.220E-03	13.385
		300.09		5.952E-01	7.822E-01	1.184E+00	1.126E-01	0.503
BI-214	+	609.31	*	8.702E-01	1.665E-01	1.236E-01	1.156E-02	7.040
	+	1120.29		1.341E+00	5.963E-01	5.607E-01	5.016E-02	2.392
	+	1764.49		1.306E+00	3.799E-01	3.177E-01	1.804E-02	4.110

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PB-214	+	74.81		2.418E+00	5.696E-01	5.252E-01	5.973E-02	4.604
	+	77.11		2.316E+00	4.119E-01	3.124E-01	3.565E-02	7.414
	+	87.30		1.806E+00	5.764E-01	6.121E-01	6.767E-02	2.951
	+	241.98		1.786E+00	6.084E-01	4.789E-01	4.636E-02	3.728
	+	295.21		1.047E+00	2.758E-01	1.990E-01	1.949E-02	5.262
PO-214	+	351.92	*	9.743E-01	1.573E-01	1.137E-01	1.018E-02	8.572
	+	74.81		2.418E+00	5.696E-01	5.252E-01	5.973E-02	4.604
	+	77.11		2.316E+00	4.119E-01	3.124E-01	3.565E-02	7.414
	+	87.30		1.806E+00	5.764E-01	6.121E-01	6.767E-02	2.951
	+	241.98		1.786E+00	6.084E-01	4.789E-01	4.636E-02	3.728
PO-216	+	295.21		1.047E+00	2.758E-01	1.990E-01	1.949E-02	5.262
	+	351.92	*	9.743E-01	1.573E-01	1.137E-01	1.018E-02	8.572
	+	74.81		1.403E+00	3.401E-01	3.048E-01	3.877E-02	4.604
	+	77.11		1.351E+00	2.171E-01	1.822E-01	1.548E-02	7.414
	+	87.30		1.054E+00	3.431E-01	3.573E-01	4.559E-02	2.951
PO-218	+	238.63	*	1.064E+00	1.336E-01	7.948E-02	7.220E-03	13.385
	+	300.09		5.952E-01	7.822E-01	1.184E+00	1.126E-01	0.503
	+	74.81		2.418E+00	5.696E-01	5.252E-01	5.973E-02	4.604
	+	77.11		2.316E+00	4.119E-01	3.124E-01	3.565E-02	7.414
	+	87.30		1.806E+00	5.764E-01	6.121E-01	6.767E-02	2.951
RA-224	+	241.98		1.786E+00	6.084E-01	4.789E-01	4.636E-02	3.728
	+	295.21		1.047E+00	2.758E-01	1.990E-01	1.949E-02	5.262
	+	351.92	*	9.743E-01	1.573E-01	1.137E-01	1.018E-02	8.572
	+	240.98	*	3.386E+00	1.138E+00	9.049E-01	7.143E-02	3.742
	+	609.31	*	8.702E-01	1.665E-01	1.236E-01	1.156E-02	7.040
AC-228	+	1120.29		1.341E+00	5.963E-01	5.607E-01	5.016E-02	2.392
	+	1764.49		1.306E+00	3.799E-01	3.177E-01	1.804E-02	4.110
	+	338.32		1.089E+00	5.678E-01	3.475E-01	1.423E-01	3.134
	+	911.07	*	1.367E+00	3.259E-01	2.351E-01	2.442E-02	5.812
	+	969.11		9.291E-01	4.338E-01	5.321E-01	1.215E-01	1.746
TH-228	+	338.32		1.089E+00	5.678E-01	3.475E-01	1.423E-01	3.134
	+	911.07	*	1.367E+00	3.259E-01	2.351E-01	2.442E-02	5.812
	+	969.11		9.291E-01	4.338E-01	5.321E-01	1.215E-01	1.746
	+	74.81		1.429E+00	3.199E-01	3.103E-01	2.700E-02	4.604
	+	77.11		1.375E+00	2.210E-01	1.855E-01	1.576E-02	7.414
TH-230	+	87.30		1.073E+00	3.324E-01	3.638E-01	2.883E-02	2.951
	+	238.63	*	1.083E+00	1.360E-01	8.091E-02	7.350E-03	13.385
	+	300.09		6.060E-01	8.713E-01	1.205E+00	7.125E-01	0.503
	+	609.31	*	8.702E-01	1.665E-01	1.236E-01	1.156E-02	7.040
	+	1120.29		1.341E+00	5.963E-01	5.607E-01	5.016E-02	2.392
TH-232	+	1764.49		1.306E+00	3.799E-01	3.177E-01	1.804E-02	4.110
	+	338.32		1.089E+00	5.595E-01	3.475E-01	2.420E-02	3.134
	+	911.07	*	1.367E+00	3.259E-01	2.351E-01	2.442E-02	5.812
	+	969.11		9.291E-01	4.338E-01	5.321E-01	1.215E-01	1.746
	+	63.29	*	8.965E-01	9.975E-01	8.322E-01	1.527E-01	1.077
U-234	+	92.38		1.150E+00	6.228E-01	5.366E-01	9.659E-02	2.143
	+	609.31	*	8.702E-01	1.665E-01	1.236E-01	1.156E-02	7.040
	+	1120.29		1.341E+00	5.963E-01	5.607E-01	5.016E-02	2.392
	+	1764.49		1.306E+00	3.799E-01	3.177E-01	1.804E-02	4.110

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
U-235	+	89.95		2.094E+00	1.205E+00	1.067E+00	3.279E-01	1.962
	+	93.35		1.383E+00	8.051E-01	6.471E-01	1.813E-01	2.137
	+	105.00		1.313E+00	1.189E+00	1.328E+00	4.025E-01	0.989
	+	143.76	*	3.024E-02	2.653E-01	3.007E-01	5.552E-02	0.101
		163.35		4.279E-02	4.330E-01	6.873E-01	1.297E-01	0.062
	+	185.71		6.003E-02	7.514E-02	6.176E-02	4.875E-03	0.972
		205.31		1.904E-01	5.118E-01	7.530E-01	1.414E-01	0.253
NP-237	+	86.50	*	6.694E-01	2.491E-01	2.479E-01	5.484E-02	2.700
		95.87		-6.563E-01	7.778E-01	1.063E+00	2.630E-01	-0.617
U-238	+	63.29	*	8.965E-01	9.975E-01	8.322E-01	1.527E-01	1.077
	+	92.38		1.150E+00	5.953E-01	5.366E-01	4.530E-02	2.143
AM-243	+	74.67	*	2.275E-01	5.087E-02	4.940E-02	4.267E-03	4.606
	+	86.72		2.510E+01	7.775E+00	9.303E+00	7.402E-01	2.698
		117.66		-6.720E-01	3.255E+00	5.275E+00	6.313E-01	-0.127
		142.18		-1.339E+01	1.925E+01	2.662E+01	2.820E+00	-0.503
ANH-511	+	511.00	*	8.619E-02	6.282E-02	5.148E-02	3.593E-03	1.674

---- 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	*	1.558E-01	3.421E-01	5.864E-01	4.409E-02	0.266
NA-22		1274.54	*	-3.421E-02	4.659E-02	7.242E-02	4.088E-03	-0.472
NA-24		1368.53	*	-1.304E+01	4.659E-02	Half-Life too short		
AL-26		1129.67		-2.017E+00	2.122E+00	3.083E+00	1.827E-01	-0.654
		1808.65	*	1.961E-02	3.366E-02	6.065E-02	3.422E-03	0.323
TI-44		67.85		-3.907E-03	2.361E-02	3.561E-02	3.224E-03	-0.110
	+	78.38	*	2.493E-01	4.006E-02	4.313E-02	3.632E-03	5.781
SC-46		889.25	*	-2.385E-02	4.374E-02	6.859E-02	5.194E-03	-0.348
	+	1120.51		2.351E-01	1.033E-01	1.298E-01	7.806E-03	1.811
V-48		944.10		-3.438E-01	1.122E+00	1.801E+00	1.315E-01	-0.191
		983.50	*	-7.165E-03	9.390E-02	1.531E-01	1.083E-02	-0.047
		1312.09		4.285E-02	9.873E-02	1.700E-01	9.638E-03	0.252
CR-51		320.08	*	-2.054E-01	3.908E-01	6.204E-01	4.829E-02	-0.331
MN-52		744.21		-1.268E-01	3.787E-01	5.925E-01	4.810E-02	-0.214
		848.13		4.234E-01	1.031E+01	1.719E+01	1.339E+00	0.025
		935.52		3.726E-01	4.068E-01	7.140E-01	5.245E-02	0.522
		1246.25		9.394E+00	1.158E+01	2.037E+01	1.140E+00	0.461
		1333.61		-6.815E-01	7.977E+00	1.310E+01	7.451E-01	-0.052
		1434.06	*	2.879E-03	3.123E-01	5.140E-01	2.954E-02	0.006
MN-54		834.83	*	-1.441E-02	3.910E-02	6.331E-02	4.968E-03	-0.228
CO-56		846.75	*	4.067E-03	4.237E-02	7.097E-02	5.532E-03	0.057
		977.42		-1.103E+00	3.371E+00	5.383E+00	3.828E-01	-0.205
		1037.82		2.343E-01	3.718E-01	6.359E-01	4.632E-02	0.369
		1175.09		4.741E-01	2.758E+00	4.503E+00	2.476E-01	0.105
		1238.25		1.779E-01	1.050E-01	1.919E-01	1.145E-02	0.927
		1360.21		6.925E-02	1.000E+00	1.666E+00	9.507E-02	0.042
		1771.40		-9.275E-01	3.511E-01	3.728E-01	2.115E-02	-2.488
CO-57		122.06	*	-2.259E-03	2.256E-02	3.663E-02	4.634E-03	-0.062

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-58		136.48		-1.253E-01	1.867E-01	2.927E-01	3.426E-02	-0.428
FE-59	+	810.76	*	-3.148E-02	4.657E-02	7.400E-02	5.894E-03	-0.425
		142.65		4.078E-01	3.576E+00	4.429E+00	4.670E-01	0.092
		192.34		-5.221E-01	8.507E-01	1.355E+00	1.759E-01	-0.385
		1099.22	*	6.406E-02	1.167E-01	1.969E-01	1.407E-02	0.325
		1291.56		1.225E-01	1.410E-01	2.506E-01	1.830E-02	0.489
CO-60		1173.22		5.565E-02	5.269E-02	9.160E-02	5.034E-03	0.608
		1332.49	*	-2.446E-02	4.280E-02	6.681E-02	3.800E-03	-0.366
ZN-65		1115.52	*	4.893E-02	1.181E-01	1.713E-01	1.040E-02	0.286
GE-68		1077.35	*	1.220E+00	1.513E+00	2.607E+00	1.666E-01	0.468
AS-73		53.44	*	1.123E-01	2.058E-01	3.441E-01	2.907E-02	0.326
AS-74		595.88	*	5.020E-02	1.092E-01	1.845E-01	1.417E-02	0.272
		634.78		4.348E-02	4.435E-01	7.283E-01	5.803E-02	0.060
SE-75		66.05		-6.418E-01	2.318E+00	3.485E+00	3.796E-01	-0.184
		96.73		-4.667E-01	6.406E-01	9.098E-01	1.263E-01	-0.513
		121.11		5.024E-02	1.224E-01	2.026E-01	2.921E-02	0.248
		136.00		-5.181E-03	3.498E-02	5.626E-02	6.356E-03	-0.092
		198.60		-3.130E-01	1.648E+00	2.665E+00	2.381E-01	-0.117
		264.65	*	1.325E-02	4.051E-02	6.822E-02	5.344E-03	0.194
		279.53		7.630E-02	1.029E-01	1.756E-01	1.413E-02	0.435
		303.91		-8.490E-01	2.006E+00	3.218E+00	3.419E-01	-0.264
		400.65		-6.979E-02	2.712E-01	4.282E-01	3.935E-02	-0.163
BR-77	+	87.88		1.151E+03	3.563E+02	5.284E+02	4.171E+01	2.178
		200.40		3.432E+02	3.187E+02	5.598E+02	4.435E+01	0.613
	+	239.00		3.922E+02	4.600E+01	6.755E+01	5.336E+00	5.807
		249.79		-6.763E+00	1.419E+02	2.280E+02	1.793E+01	-0.030
		281.68		-1.788E+02	1.955E+02	3.077E+02	2.359E+01	-0.581
		297.23		2.016E+02	1.407E+02	2.190E+02	1.647E+01	0.920
		303.76		-3.586E+02	3.944E+02	6.159E+02	4.588E+01	-0.582
		439.47		2.305E+01	3.297E+02	5.570E+02	3.519E+01	0.041
		484.57		-5.983E+01	5.358E+02	8.887E+02	5.991E+01	-0.067
		520.65	*	-1.002E+01	2.484E+01	4.015E+01	2.836E+00	-0.249
		574.64		-5.186E+01	4.976E+02	8.132E+02	6.110E+01	-0.064
		578.91		-9.151E+00	2.374E+02	3.369E+02	2.543E+01	-0.027
		585.48		1.307E+03	5.377E+02	8.893E+02	6.758E+01	1.470
		755.35		2.698E+02	4.278E+02	7.185E+02	5.818E+01	0.376
		817.79		1.931E+02	3.449E+02	5.971E+02	4.727E+01	0.323
SR-82		698.33		-3.348E+01	4.239E+01	6.462E+01	5.276E+00	-0.518
		776.49	*	-6.925E-02	4.690E-01	7.784E-01	6.265E-02	-0.089
		1395.20		-3.749E+00	1.364E+01	2.183E+01	1.251E+00	-0.172
RB-83		520.41	*	-4.206E-02	7.326E-02	1.170E-01	8.265E-03	-0.359
		529.64		-4.051E-02	1.086E-01	1.755E-01	1.253E-02	-0.231
		552.65		7.017E-02	2.097E-01	3.537E-01	2.594E-02	0.198
RB-84		881.50	*	2.673E-02	8.411E-02	1.426E-01	1.086E-02	0.187
KR-85		513.99	*	7.496E+00	8.480E+00	1.306E+01	9.151E-01	0.574
SR-85		513.99	*	3.961E-02	4.480E-02	6.902E-02	4.835E-03	0.574
RB-86		1076.63	*	1.039E+00	1.055E+00	1.839E+00	1.177E-01	0.565
Y-88		898.02		-3.961E-02	4.849E-02	7.398E-02	5.600E-03	-0.535
		1836.01	*	2.724E-03	2.981E-02	5.032E-02	2.834E-03	0.054

----- Non-Identified Nuclides -----

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ZR-88		392.90	*	-8.039E-03	3.143E-02	4.969E-02	2.910E-03	-0.162
Y-91		1204.90	*	1.651E+01	2.218E+01	3.886E+01	2.154E+00	0.425
NB-94		702.63	*	9.873E-03	3.645E-02	6.003E-02	4.900E-03	0.164
		871.10		-3.589E-03	3.764E-02	6.199E-02	4.756E-03	-0.058
NB-95		765.79	*	7.730E-03	4.956E-02	8.392E-02	6.777E-03	0.092
NB-95M		235.69	*	1.147E-01	1.251E-01	1.932E-01	1.787E-02	0.594
ZR-95		724.18		3.181E-02	1.303E-01	1.852E-01	1.654E-02	0.172
		756.15	*	7.697E-02	8.378E-02	1.431E-01	1.291E-02	0.538
NB-97		657.90	*	2.115E+00	8.378E-02	Half-Life	too short	
		1024.50		-1.184E+02	8.378E-02	Half-Life	too short	
ZR-97		254.15		9.457E+00	8.378E-02	Half-Life	too short	
		355.39		2.103E+00	8.378E-02	Half-Life	too short	
		507.63	*	7.450E+01	8.378E-02	Half-Life	too short	
		602.52		-4.057E+01	8.378E-02	Half-Life	too short	
		1021.30		1.430E+02	8.378E-02	Half-Life	too short	
		1147.95		-7.010E+01	8.378E-02	Half-Life	too short	
		1362.66		5.721E+01	8.378E-02	Half-Life	too short	
		1750.46		1.001E+01	8.378E-02	Half-Life	too short	
MO-99		140.51		6.667E+00	5.422E+01	7.853E+01	2.233E+01	0.085
		181.06		-2.558E+01	3.745E+01	4.961E+01	8.905E+00	-0.516
		366.43		4.190E+00	1.703E+02	2.756E+02	1.773E+01	0.015
		739.58	*	1.138E+01	2.661E+01	4.411E+01	6.576E+00	0.258
		778.00		-4.417E+01	7.814E+01	1.258E+02	1.012E+01	-0.351
TC-99M		140.51	*	1.244E+13	7.814E+01	Half-Life	too short	
RH-101		127.23		-1.455E-02	2.786E-02	4.426E-02	5.375E-03	-0.329
		198.01	*	-9.732E-03	2.957E-02	4.752E-02	3.762E-03	-0.205
		325.23		-4.073E-01	2.255E-01	3.302E-01	2.367E-02	-1.234
RH-102		418.52		-2.770E-02	2.923E-01	4.642E-01	2.838E-02	-0.060
		475.06	*	5.625E-03	3.010E-02	5.087E-02	3.385E-03	0.111
		631.29		3.715E-02	6.148E-02	1.043E-01	8.282E-03	0.356
		697.49		-3.064E-02	8.742E-02	1.379E-01	1.126E-02	-0.222
		766.84		2.356E-02	1.239E-01	2.101E-01	1.696E-02	0.112
		1046.59		8.127E-02	1.376E-01	2.342E-01	1.554E-02	0.347
		1112.84		-2.747E-02	2.858E-01	3.914E-01	2.381E-02	-0.070
RU-103		497.08	*	8.140E-03	4.243E-02	7.151E-02	9.412E-03	0.114
	+	610.33		9.880E+00	2.303E+00	2.630E+00	4.279E-01	3.757
RH-106	+	511.85		4.328E-01	3.155E-01	4.193E-01	2.929E-02	1.032
		621.84	*	4.900E-02	3.433E-01	5.665E-01	7.301E-02	0.087
		1050.47		-1.551E+00	2.733E+00	4.248E+00	2.807E-01	-0.365
RU-106	+	511.85		4.328E-01	3.155E-01	4.193E-01	2.929E-02	1.032
		621.84	*	4.900E-02	3.432E-01	5.665E-01	4.461E-02	0.087
		1050.47		-1.551E+00	2.733E+00	4.248E+00	2.806E-01	-0.365
AG-108M		433.93	*	-1.727E-02	3.128E-02	5.097E-02	3.429E-03	-0.339
		614.37		1.357E-02	4.832E-02	7.014E-02	5.746E-03	0.194
		722.95		-2.113E-02	5.553E-02	7.410E-02	6.301E-03	-0.285
AG-110M		657.75	*	4.866E-02	4.289E-02	6.678E-02	5.610E-03	0.729
		677.61		2.079E-01	3.348E-01	5.666E-01	4.771E-02	0.367
		706.67		6.973E-02	2.305E-01	3.804E-01	3.199E-02	0.183
		763.93		-1.795E-02	1.861E-01	3.105E-01	2.589E-02	-0.058

---- Non-Identified Nuclides ----

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		884.67		-5.915E-03	5.575E-02	9.159E-02	7.247E-03	-0.065
		937.48		-1.136E-01	1.307E-01	2.005E-01	1.544E-02	-0.566
		1384.27		4.271E-02	1.852E-01	3.124E-01	1.900E-02	0.137
IN-111		171.28		-7.974E-01	1.790E+00	2.788E+00	2.189E-01	-0.286
		245.39	*	-9.630E-01	2.040E+00	2.898E+00	2.283E-01	-0.332
IN-113M		391.69	*	-1.517E-03	4.658E-02	7.472E-02	4.656E-03	-0.020
SN-113		391.69	*	-1.517E-03	4.658E-02	7.472E-02	4.656E-03	-0.020
IN-114M		190.27	*	-1.091E-01	1.892E-01	2.550E-01	2.015E-02	-0.428
CD-115		260.90		-3.859E-05	1.892E-01	Half-Life	too short	
		492.35		-5.962E-05	1.892E-01	Half-Life	too short	
		527.90	*	-1.540E-05	1.892E-01	Half-Life	too short	
SN-117M		156.02		-2.023E+00	2.361E+00	3.632E+00	3.281E-01	-0.557
		158.56	*	4.585E-02	5.500E-02	9.115E-02	7.960E-03	0.503
SB-122		563.90	*	-3.008E+00	4.736E+00	7.488E+00	5.561E-01	-0.402
		692.80		1.024E+02	1.031E+02	1.774E+02	1.448E+01	0.577
I-123		159.00	*	1.938E+02	1.031E+02	Half-Life	too short	
		528.96		-8.328E+03	1.031E+02	Half-Life	too short	
TE-123M		159.00	*	2.630E-02	2.490E-02	4.161E-02	3.633E-03	0.632
I-124		602.71	*	-2.827E-01	1.301E+00	1.806E+00	1.397E-01	-0.156
		722.78		-6.254E+00	9.591E+00	1.243E+01	1.013E+00	-0.503
		1325.50		4.506E+01	5.926E+01	1.051E+02	5.970E+00	0.429
		1376.25		6.164E+01	5.078E+01	9.349E+01	5.346E+00	0.659
		1509.49		6.520E+00	2.877E+01	4.824E+01	2.781E+00	0.135
		1691.02		-2.696E+00	6.209E+00	9.257E+00	5.301E-01	-0.291
SB-124		602.71		-1.058E-02	4.871E-02	6.764E-02	5.231E-03	-0.156
		645.85		2.129E-01	5.652E-01	9.444E-01	8.121E-02	0.225
		709.31		1.458E+00	2.985E+00	4.994E+00	4.075E-01	0.292
		713.82		-2.004E+00	1.849E+00	2.703E+00	3.165E-01	-0.741
		722.78		-3.394E-01	5.206E-01	6.747E-01	5.630E-02	-0.503
	+	968.20		9.883E+00	4.087E+00	6.729E+00	4.822E-01	1.469
		1045.16		2.435E+00	3.049E+00	5.264E+00	3.500E-01	0.463
		1325.50		2.612E+00	3.435E+00	6.091E+00	3.461E-01	0.429
		1368.21		-7.034E-01	1.924E+00	3.046E+00	3.603E-01	-0.231
		1436.60		-2.068E+00	3.913E+00	5.993E+00	3.445E-01	-0.345
		1691.02	*	-3.451E-02	7.949E-02	1.185E-01	7.380E-03	-0.291
SB-125		427.89	*	4.860E-02	9.171E-02	1.590E-01	1.023E-02	0.306
		463.38		3.420E-01	2.857E-01	5.070E-01	3.758E-02	0.675
		600.56		-4.899E-02	1.893E-01	3.050E-01	2.568E-02	-0.161
		635.90		-2.418E-01	3.028E-01	4.646E-01	4.053E-02	-0.521
TE-125M		109.28	*	-1.779E+00	8.625E+00	1.253E+01	1.523E+00	-0.142
I-126		388.63		1.534E-01	2.467E-01	4.106E-01	2.431E-02	0.374
		666.33	*	-1.238E-01	2.856E-01	3.835E-01	3.129E-02	-0.323
		753.82		-5.600E-01	1.948E+00	3.057E+00	2.477E-01	-0.183
SB-126		223.80		-2.480E+00	3.992E+00	6.513E+00	5.163E-01	-0.381
		278.60		3.485E+00	2.720E+00	4.731E+00	3.639E-01	0.737
		296.50		7.161E+00	2.154E+00	3.503E+00	2.637E-01	2.045
		414.70		-1.911E-02	8.907E-02	1.405E-01	8.534E-03	-0.136
		415.30		5.086E-01	7.292E+00	1.171E+01	7.123E-01	0.043
		555.20		-1.177E+00	4.866E+00	7.903E+00	5.813E-01	-0.149

---- Non-Identified Nuclides ----

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SB-127		573.80	1.783E-01	1.263E+00	2.097E+00	1.574E-01	0.085
		593.00	-3.392E-01	1.190E+00	1.915E+00	1.467E-01	-0.177
		656.30	-5.883E-01	4.955E+00	6.874E+00	5.581E-01	-0.086
		666.33	-5.206E-02	1.201E-01	1.613E-01	1.316E-02	-0.323
		675.00	7.586E-01	2.553E+00	4.228E+00	3.452E-01	0.179
		695.00	-3.574E-02	1.073E-01	1.697E-01	1.385E-02	-0.211
		697.00	-6.388E-02	3.590E-01	5.734E-01	4.682E-02	-0.111
		720.50	* 1.563E-01	2.115E-01	3.163E-01	2.577E-02	0.494
		856.80	-1.248E-01	6.181E-01	1.012E+00	7.839E-02	-0.123
		989.30	-2.673E-01	1.678E+00	2.715E+00	1.910E-01	-0.098
		1034.80	-6.621E-01	1.247E+01	2.027E+01	1.363E+00	-0.033
		1213.00	-6.937E-01	6.163E+00	1.022E+01	5.674E-01	-0.068
		61.10	1.088E+01	3.807E+01	5.880E+01	7.464E+00	0.185
		252.40	8.015E-01	6.526E+00	1.091E+01	4.596E+00	0.073
		290.80	2.415E+00	3.492E+01	5.071E+01	5.748E+00	0.048
		411.60	1.050E+01	2.004E+01	3.303E+01	5.011E+00	0.318
		444.90	-2.573E+00	1.657E+01	2.659E+01	3.191E+00	-0.097
		473.00	-1.493E+00	2.929E+00	4.647E+00	5.802E-01	-0.321
		543.00	-1.947E+01	2.915E+01	4.588E+01	6.588E+00	-0.424
		603.60	-1.150E+00	2.326E+01	3.282E+01	4.186E+00	-0.035
		685.20	* 6.857E-02	2.482E+00	4.029E+00	4.812E-01	0.017
		698.50	-2.136E+01	2.913E+01	4.435E+01	7.196E+00	-0.482
		722.20	7.038E+00	6.413E+01	9.010E+01	1.056E+01	0.078
		783.80	3.361E+00	6.636E+00	1.146E+01	1.471E+00	0.293
		57.60	1.733E+00	1.978E+00	3.445E+00	3.184E-01	0.503
	+	145.22	1.055E-01	9.254E-01	1.106E+00	1.136E-01	0.095
		172.10	-1.855E-02	1.121E-01	1.771E-01	1.390E-02	-0.105
		202.84	* -4.518E-02	4.235E-02	6.829E-02	5.412E-03	-0.662
I-131		374.96	-8.694E-02	2.093E-01	3.291E-01	2.055E-02	-0.264
		80.18	2.128E+00	4.756E+00	5.895E+00	4.952E-01	0.361
		284.30	-1.305E+00	1.788E+00	2.838E+00	2.319E-01	-0.460
		364.48	* 1.020E-01	1.460E-01	2.454E-01	1.745E-02	0.416
TE-132		636.97	-1.500E+00	2.118E+00	3.267E+00	2.785E-01	-0.459
		722.89	-4.469E+00	1.196E+01	1.597E+01	1.314E+00	-0.280
		49.72	-5.908E+00	6.332E+00	9.323E+00	1.027E+00	-0.634
		111.76	3.264E+00	4.639E+01	7.569E+01	1.028E+01	0.043
BA-133		116.30	-3.416E+01	4.345E+01	6.843E+01	9.673E+00	-0.499
		228.16	* 3.036E-01	1.118E+00	1.894E+00	3.014E-01	0.160
		53.15	5.078E-01	8.520E-01	1.427E+00	1.197E-01	0.356
		79.62	-4.443E-01	1.077E+00	1.259E+00	1.898E-01	-0.353
I-133		81.00	-2.857E-02	8.371E-02	9.828E-02	1.542E-02	-0.291
		276.40	2.966E-01	3.411E-01	5.823E-01	8.107E-02	0.509
		302.84	-1.298E-01	1.373E-01	2.129E-01	2.676E-02	-0.610
		356.01	* -1.845E-02	5.044E-02	6.951E-02	8.345E-03	-0.265
		383.85	-4.559E-02	3.102E-01	4.950E-01	5.445E-02	-0.092
	+	510.53	8.567E+00	3.102E-01	Half-Life too short		
		529.87	* 7.616E-03	3.102E-01	Half-Life too short		
		706.58	1.363E+00	3.102E-01	Half-Life too short		
		856.28	-4.607E+00	3.102E-01	Half-Life too short		

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CS-134		875.33		4.265E-01	3.102E-01	Half-Life	too short	
		1236.41		2.028E+01	3.102E-01	Half-Life	too short	
		1298.22		-1.310E+00	3.102E-01	Half-Life	too short	
		475.35		3.401E-01	1.954E+00	3.300E+00	2.197E-01	0.103
		563.23		2.659E-01	3.818E-01	6.559E-01	4.930E-02	0.405
		569.32		1.541E-01	2.087E-01	3.592E-01	2.732E-02	0.429
		604.70		3.324E-02	4.149E-02	6.288E-02	4.887E-03	0.529
		795.84	*	1.249E-01	5.510E-02	1.029E-01	8.290E-03	1.215
		801.93		-4.534E-01	4.744E-01	7.339E-01	5.889E-02	-0.618
		1038.57		-3.936E-01	4.641E+00	7.523E+00	5.038E-01	-0.052
CS-135		1167.94		1.537E-01	2.879E+00	4.664E+00	2.589E-01	0.033
		1365.15		7.814E-01	1.278E+00	2.248E+00	1.413E-01	0.348
		268.24	*	6.631E-02	1.477E-01	2.493E-01	2.303E-02	0.266
		288.45		-8.263E+12	1.477E-01	Half-Life	too short	
		417.63		-1.891E+13	1.477E-01	Half-Life	too short	
		546.56		4.244E+12	1.477E-01	Half-Life	too short	
		836.80		1.951E+13	1.477E-01	Half-Life	too short	
		1038.76		-7.820E+12	1.477E-01	Half-Life	too short	
		1124.00		9.383E+13	1.477E-01	Half-Life	too short	
		1131.51		-4.556E+11	1.477E-01	Half-Life	too short	
I-135		1260.41	*	-4.426E+12	1.477E-01	Half-Life	too short	
		1457.56		1.390E+15	1.477E-01	Half-Life	too short	
		1678.03		-4.306E+12	1.477E-01	Half-Life	too short	
		1706.46		2.921E+13	1.477E-01	Half-Life	too short	
		1791.20		7.133E+12	1.477E-01	Half-Life	too short	
		66.91		-2.682E-01	4.472E-01	6.602E-01	1.038E-01	-0.406
	+	86.29		3.457E+00	1.120E+00	1.553E+00	1.931E-01	2.226
		153.22		1.002E+00	6.854E-01	1.155E+00	1.191E-01	0.867
		163.89		9.332E-01	1.138E+00	1.858E+00	1.707E-01	0.502
		176.55		2.284E-01	3.860E-01	6.293E-01	5.295E-02	0.363
CS-136		273.65		-9.074E-01	5.169E-01	7.626E-01	6.376E-02	-1.190
		340.57		1.708E-01	1.568E-01	2.399E-01	1.736E-02	0.712
		818.51		8.221E-02	9.906E-02	1.742E-01	1.380E-02	0.472
		1048.07	*	7.297E-02	1.472E-01	2.490E-01	1.768E-02	0.293
		1235.34		1.186E+00	7.929E-01	1.426E+00	1.407E-01	0.831
		165.85	*	-8.918E-03	2.783E-02	4.378E-02	3.433E-03	-0.204
		162.64		-6.285E-01	8.124E-01	1.237E+00	1.084E-01	-0.508
		304.84		8.788E-01	1.390E+00	2.319E+00	6.421E-01	0.379
		423.70		-1.716E+00	2.360E+00	3.484E+00	1.110E+00	-0.493
		537.32	*	1.149E-01	3.193E-01	5.368E-01	1.761E-01	0.214
CE-139		328.77		7.406E-01	3.337E-01	5.957E-01	4.583E-02	1.243
		432.53		-1.346E+00	2.288E+00	3.721E+00	2.536E-01	-0.362
		487.03		-3.755E-02	1.622E-01	2.668E-01	1.983E-02	-0.141
		751.79		-5.468E-01	2.219E+00	3.493E+00	3.171E-01	-0.157
		815.85		-1.144E-01	4.396E-01	7.202E-01	6.477E-02	-0.159
		867.82		-3.387E-01	1.774E+00	2.901E+00	2.378E-01	-0.117
		919.63		2.713E+00	3.814E+00	6.051E+00	5.872E-01	0.448
		925.24		2.919E-01	1.443E+00	2.418E+00	1.940E-01	0.121
		1596.49	*	-6.355E-02	1.018E-01	1.504E-01	8.669E-03	-0.422
BA-140								
LA-140								

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CE-141		145.44	*	4.641E-02	6.698E-02	9.954E-02	1.033E-02	0.466
CE-143		57.37		1.327E-03	6.698E-02	Half-Life too short		
		231.56		3.238E-03	6.698E-02	Half-Life too short		
		293.26	*	2.721E-03	6.698E-02	Half-Life too short		
	+	350.59		9.340E-02	6.698E-02	Half-Life too short		
		490.36		-7.402E-04	6.698E-02	Half-Life too short		
		664.57		6.396E-03	6.698E-02	Half-Life too short		
		721.93		1.687E-03	6.698E-02	Half-Life too short		
CE-144		80.11		7.292E-01	1.721E+00	2.130E+00	1.773E-01	0.342
		133.54	*	3.976E-02	1.792E-01	2.929E-01	5.076E-02	0.136
PM-144		476.78		-8.081E-03	6.884E-02	1.143E-01	8.784E-03	-0.071
		618.01		3.843E-03	3.619E-02	5.958E-02	4.831E-03	0.065
		696.49	*	4.904E-03	3.959E-02	6.457E-02	5.275E-03	0.076
		778.57		-2.334E+00	2.545E+00	3.981E+00	3.204E-01	-0.586
PR-144		696.49	*	3.328E-01	2.687E+00	4.382E+00	3.578E-01	0.076
		1489.15		-2.263E+00	1.161E+01	1.849E+01	1.065E+00	-0.122
PM-146		453.90	*	-1.694E-02	4.182E-02	6.846E-02	6.213E-03	-0.247
		633.02		9.487E-01	1.592E+00	2.637E+00	9.814E-01	0.360
		735.90		-1.263E-02	1.680E-01	2.687E-01	7.647E-02	-0.047
		747.13		-1.672E-02	1.000E-01	1.585E-01	2.177E-02	-0.106
ND-147	+	91.11		6.294E-01	3.113E-01	4.832E-01	4.358E-02	1.303
		319.41		-2.480E+00	3.852E+00	6.073E+00	4.406E-01	-0.408
		439.89		-6.712E-01	7.066E+00	1.183E+01	7.482E-01	-0.057
		531.02	*	4.526E-02	6.517E-01	1.085E+00	1.536E-01	0.042
PM-149		285.90	*	1.682E-04	6.517E-01	Half-Life too short		
EU-152		121.78		3.096E-02	6.481E-02	1.075E-01	1.454E-02	0.288
		244.69		-1.913E-01	3.180E-01	4.480E-01	3.531E-02	-0.427
		344.27	*	2.359E-02	9.647E-02	1.536E-01	1.151E-02	0.154
		443.98		-1.388E-01	9.404E-01	1.568E+00	9.974E-02	-0.088
		778.89		-3.770E-01	2.975E-01	4.521E-01	3.636E-02	-0.834
		867.32		3.172E-02	9.066E-01	1.509E+00	1.160E-01	0.021
		964.01		7.448E-01	3.937E-01	6.460E-01	4.645E-02	1.153
		1085.78		5.585E-01	4.296E-01	7.710E-01	4.873E-02	0.724
		1112.02		-1.156E-01	4.270E-01	5.728E-01	3.488E-02	-0.202
		1407.95		7.691E-03	2.044E-01	3.379E-01	1.938E-02	0.023
GD-153		69.67		1.461E-01	9.019E-01	1.376E+00	1.230E-01	0.106
	+	83.37		1.140E+01	1.248E+01	1.655E+01	1.347E+00	0.689
		97.43	*	5.256E-03	6.581E-02	9.620E-02	8.755E-03	0.055
		103.18		9.598E-03	8.882E-02	1.318E-01	1.301E-02	0.073
EU-154		123.07		-1.326E-02	4.535E-02	7.298E-02	1.064E-02	-0.182
		247.94		1.042E-01	3.553E-01	5.310E-01	5.800E-02	0.196
		591.81		-1.127E-01	6.639E-01	1.077E+00	1.182E-01	-0.105
		723.30		-8.047E-02	2.328E-01	3.118E-01	2.838E-02	-0.258
		756.87		5.830E-01	8.831E-01	1.483E+00	1.720E-01	0.393
		873.19		-3.901E-01	3.485E-01	5.240E-01	6.073E-02	-0.744
		996.32		-2.011E-01	4.261E-01	6.698E-01	1.141E-01	-0.300
		1004.76		-1.804E-01	2.456E-01	3.770E-01	3.941E-02	-0.479
		1274.45	*	-9.852E-02	1.299E-01	2.010E-01	1.857E-02	-0.490
TB-160	+	86.79		7.537E-01	2.334E-01	3.434E-01	2.731E-02	2.195

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
HO-166M		197.04		-1.687E-01	5.147E-01	8.271E-01	6.548E-02	-0.204
		215.65		1.608E-02	6.820E-01	1.149E+00	9.117E-02	0.014
		298.57		9.472E-02	1.175E-01	1.785E-01	1.340E-02	0.531
		879.36	*	6.851E-02	1.661E-01	2.833E-01	2.161E-02	0.242
		962.29		1.881E+00	6.962E-01	1.215E+00	8.749E-02	1.548
		966.15		9.272E-01	3.260E-01	5.509E-01	3.954E-02	1.683
		1177.93		-3.268E-01	4.534E-01	6.894E-01	3.794E-02	-0.474
		1271.85		-4.249E-01	7.507E-01	1.184E+00	6.663E-02	-0.359
	+	80.57		3.273E-02	2.252E-01	2.736E-01	2.270E-02	0.120
		184.41		4.502E-02	5.636E-02	6.509E-02	5.135E-03	0.692
		280.46		-2.379E-02	8.026E-02	1.306E-01	1.003E-02	-0.182
		410.95		1.092E-01	2.496E-01	4.099E-01	2.475E-02	0.266
		711.68	*	-4.676E-02	6.279E-02	9.501E-02	7.750E-03	-0.492
		752.31		-1.312E-01	3.092E-01	4.797E-01	3.887E-02	-0.274
TM-171		810.29		-3.306E-02	6.744E-02	1.087E-01	8.633E-03	-0.304
		51.35		-6.980E+00	6.188E+00	9.733E+00	7.835E-01	-0.717
		52.39		3.298E+00	3.524E+00	5.956E+00	4.912E-01	0.554
		59.40		6.005E-01	9.721E+00	1.492E+01	1.431E+00	0.040
LU-176	+	66.72	*	-9.063E+00	1.388E+01	2.051E+01	1.872E+00	-0.442
		88.36		5.407E-01	1.675E-01	2.416E-01	1.916E-02	2.238
		201.83		-2.119E-02	2.466E-02	4.019E-02	3.184E-03	-0.527
		306.84	*	-1.122E-02	2.422E-02	3.876E-02	2.874E-03	-0.290
LU-177		401.10		-8.103E-01	6.930E+00	1.104E+01	6.555E-01	-0.073
		112.95		3.892E-01	1.888E+00	3.093E+00	3.485E-01	0.126
LU-177M	+	208.36	*	2.194E+00	1.649E+00	2.288E+00	1.814E-01	0.959
		52.97		4.081E-01	3.819E-01	6.470E-01	5.408E-02	0.631
HF-181		54.07		4.085E-02	2.197E-01	3.636E-01	3.115E-02	0.112
		61.30		1.108E+00	6.032E-01	9.734E-01	9.231E-02	1.138
		121.62		1.750E-01	3.368E-01	5.593E-01	7.032E-02	0.313
		147.16		-8.869E-02	6.508E-01	9.261E-01	9.306E-02	-0.096
		171.86		-2.531E-01	4.378E-01	6.772E-01	5.317E-02	-0.374
		218.09		-1.339E-01	7.695E-01	1.285E+00	1.019E-01	-0.104
		268.79		4.628E-01	7.617E-01	1.294E+00	1.005E-01	0.358
		319.02		-2.472E-01	2.597E-01	4.021E-01	2.918E-02	-0.615
		367.43		-2.611E-01	8.955E-01	1.421E+00	9.110E-02	-0.184
		413.65	*	-1.600E-01	1.824E-01	2.750E-01	1.668E-02	-0.582
		56.28		-6.624E-02	2.771E-01	4.686E-01	4.212E-02	-0.141
		57.53		1.766E-01	1.636E-01	2.861E-01	2.641E-02	0.617
		65.20		2.106E-01	4.518E-01	6.998E-01	6.455E-02	0.301
		133.02		1.102E-03	5.966E-02	9.680E-02	1.119E-02	0.011
W-181		136.25		-1.202E-01	4.186E-01	6.690E-01	7.509E-02	-0.180
		345.85		-3.064E-02	2.221E-01	3.120E-01	2.132E-02	-0.098
		482.03	*	9.687E-03	4.517E-02	7.640E-02	5.133E-03	0.127
		56.28		-2.500E-02	1.052E-01	1.780E-01	1.600E-02	-0.140
TA-182		57.53		6.704E-02	6.216E-02	1.087E-01	1.003E-02	0.617
		65.20	*	7.942E-02	1.703E-01	2.639E-01	2.434E-02	0.301
		67.75		-9.975E-03	5.713E-02	8.614E-02	7.804E-03	-0.116
		100.10		6.526E-02	1.430E-01	2.295E-01	2.171E-02	0.284
		152.43		2.583E-01	3.082E-01	5.109E-01	4.829E-02	0.506

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RE-183		222.10		2.457E-02	3.020E-01	5.092E-01	4.037E-02	0.048
		1001.68		2.761E+00	2.599E+00	4.312E+00	3.000E-01	0.640
		1121.28		3.239E-01	2.282E-01	3.543E-01	2.128E-02	0.914
		1189.05		1.881E-01	3.598E-01	6.230E-01	3.439E-02	0.302
		1221.42	*	3.162E-02	2.314E-01	3.897E-01	2.169E-02	0.081
		1230.97		-7.968E-01	5.830E-01	8.832E-01	4.926E-02	-0.902
		57.98		5.145E-02	6.394E-02	1.111E-01	1.035E-02	0.463
		59.32		5.181E-03	4.094E-02	6.300E-02	6.031E-03	0.082
		67.20		-2.642E-02	1.016E-01	1.527E-01	1.389E-02	-0.173
		162.32	*	-8.308E-02	1.051E-01	1.600E-01	1.324E-02	-0.519
RE-184	+	208.81		1.512E+00	1.136E+00	1.568E+00	1.244E-01	0.964
		291.72		2.478E-01	9.521E-01	1.401E+00	1.062E-01	0.177
		57.98		1.865E-01	2.318E-01	4.029E-01	3.752E-02	0.463
		59.32		1.876E-02	1.483E-01	2.282E-01	2.184E-02	0.082
		67.20		-9.572E-02	3.680E-01	5.532E-01	5.031E-02	-0.173
		161.27		-1.930E-01	3.191E-01	4.956E-01	4.165E-02	-0.389
		216.55		1.851E-03	2.367E-01	3.985E-01	3.160E-02	0.005
		252.85	*	1.139E-01	2.089E-01	3.561E-01	2.796E-02	0.320
		318.01		-2.992E-01	4.500E-01	7.094E-01	5.158E-02	-0.422
		792.07		-2.823E-01	1.168E+00	1.923E+00	1.540E-01	-0.147
OS-185		903.28		1.064E+00	1.315E+00	2.025E+00	1.519E-01	0.525
		920.93		3.947E-02	5.221E-01	8.274E-01	6.138E-02	0.048
		59.72		-1.004E-01	1.135E-01	1.669E-01	1.601E-02	-0.602
		61.14		2.982E-02	6.666E-02	1.036E-01	9.834E-03	0.288
		69.30		1.689E-02	1.514E-01	2.450E-01	2.196E-02	0.069
		592.07		-5.172E-01	2.763E+00	4.478E+00	3.426E-01	-0.116
		646.12	*	-2.627E-03	4.870E-02	7.901E-02	6.359E-03	-0.033
		717.42		4.654E-01	1.015E+00	1.692E+00	1.379E-01	0.275
		874.81		-2.372E-01	6.859E-01	1.108E+00	8.477E-02	-0.214
		880.27		2.170E-01	9.179E-01	1.547E+00	1.179E-01	0.140
RE-188		155.03	*	-2.246E-02	1.576E-01	2.512E-01	2.299E-02	-0.089
		477.96		1.778E+00	3.247E+00	5.594E+00	3.738E-01	0.318
		633.10		1.851E+00	3.221E+00	5.452E+00	4.338E-01	0.340
W-188	+	63.58		3.707E+01	4.083E+01	4.784E+01	4.463E+00	0.775
		227.08		-4.015E-01	1.130E+01	1.892E+01	1.499E+00	-0.021
IR-192		290.67	*	-3.951E+00	7.738E+00	1.076E+01	8.163E-01	-0.367
	+	295.96		8.199E-01	2.100E-01	2.468E-01	1.877E-02	3.322
		308.46		2.567E-02	9.394E-02	1.561E-01	1.163E-02	0.164
		316.51	*	2.204E-02	3.458E-02	5.836E-02	4.269E-03	0.378
		468.07		-3.741E-02	7.001E-02	1.136E-01	8.382E-03	-0.329
AU-195		604.41		3.013E-01	5.661E-01	8.396E-01	1.046E-01	0.359
		612.46		6.283E-01	9.268E-01	1.386E+00	1.275E-01	0.453
		65.12		5.226E-02	7.880E-02	1.229E-01	1.134E-02	0.425
		66.83		-2.894E-02	4.646E-02	6.874E-02	6.268E-03	-0.421
	+	75.70		7.443E-01	1.664E-01	2.702E-01	2.317E-02	2.755
		98.88	*	4.294E-02	1.801E-01	2.917E-01	2.711E-02	0.147
TL-200		129.76		2.809E+00	2.508E+00	4.217E+00	5.014E-01	0.666
		367.94	*	-1.672E-03	2.508E+00	Half-Life too short		
		579.30		7.550E-03	2.508E+00	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV) Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		828.27	3.478E-03	2.508E+00	Half-Life too short		
		1205.75	6.969E-03	2.508E+00	Half-Life too short		
TL-201		68.90	2.623E-01	4.317E+00	7.296E+00	6.557E-01	0.036
		70.82	9.139E-02	2.876E+00	4.360E+00	3.867E-01	0.021
		80.30	6.372E+00	7.608E+00	9.657E+00	8.028E-01	0.660
		135.34	-2.525E+00	4.252E+01	6.869E+01	7.775E+00	-0.037
		167.43 *	3.061E+00	1.164E+01	1.879E+01	1.473E+00	0.163
TL-202		68.90	1.449E-02	2.385E-01	4.030E-01	3.622E-02	0.036
		70.82	5.035E-03	1.584E-01	2.402E-01	2.130E-02	0.021
		80.30	3.511E-01	4.192E-01	5.322E-01	4.424E-02	0.660
		439.56 *	-7.808E-03	8.243E-02	1.380E-01	8.721E-03	-0.057
HG-203		70.83	1.955E-02	6.096E-01	9.242E-01	1.272E-01	0.021
		72.87	5.093E-01	3.833E-01	5.988E-01	7.954E-02	0.851
	+	82.60	8.771E-01	9.647E-01	1.226E+00	1.652E-01	0.715
		279.20 *	5.342E-02	3.947E-02	6.889E-02	5.485E-03	0.775
BI-207		72.80	1.241E-01	1.060E-01	1.664E-01	1.456E-02	0.746
	+	74.97	4.085E-01	9.133E-02	1.324E-01	1.141E-02	3.085
	+	84.90	1.463E-01	1.601E-01	2.074E-01	1.671E-02	0.705
		569.67	2.324E-02	3.242E-02	5.572E-02	4.164E-03	0.417
		1063.62 *	1.187E-02	6.574E-02	1.084E-01	7.052E-03	0.109
		1770.23	-3.325E-01	5.485E-01	6.551E-01	3.717E-02	-0.508
TL-207		81.07	-6.734E-02	1.846E-01	2.165E-01	1.791E-02	-0.311
	+	83.78	9.644E-02	1.056E-01	1.423E-01	1.155E-02	0.678
		94.90	2.399E-01	1.773E-01	2.746E-01	2.408E-02	0.873
		122.32	-3.170E-01	1.532E+00	2.476E+00	3.235E-01	-0.128
	+	144.24	9.801E-02	8.595E-01	1.072E+00	1.204E-01	0.091
		154.21	1.833E-01	3.528E-01	5.779E-01	5.810E-02	0.317
		269.46	1.953E-01	1.772E-01	3.064E-01	2.438E-02	0.637
		323.87 *	-1.015E+00	6.889E-01	1.002E+00	1.709E-01	-1.012
	+	338.28	4.548E+00	1.554E+00	2.136E+00	2.396E-01	2.129
		445.03	-7.126E-01	2.312E+00	3.675E+00	3.896E-01	-0.194
PO-209		260.50	2.975E+00	8.651E+00	1.459E+01	1.140E+00	0.204
		262.80	-2.956E+00	2.444E+01	4.034E+01	3.146E+00	-0.073
		896.60 *	-4.356E+00	8.123E+00	1.266E+01	9.531E-01	-0.344
PB-211		404.84 *	7.744E-01	1.081E+00	1.623E+00	1.012E+00	0.477
		427.08	1.352E+00	2.260E+00	3.488E+00	2.157E+00	0.387
		831.96	-5.637E-01	1.310E+00	2.030E+00	1.270E+00	-0.278
BI-212	+	727.18 *	1.235E+00	5.634E-01	6.679E-01	6.412E-02	1.848
		785.46	3.398E+00	1.907E+00	3.525E+00	2.828E-01	0.964
		1620.62	1.320E+00	1.362E+00	2.486E+00	1.431E-01	0.531
PO-215		81.07	-6.734E-02	1.846E-01	2.165E-01	1.791E-02	-0.311
	+	83.78	9.644E-02	1.056E-01	1.423E-01	1.155E-02	0.678
		94.90	2.399E-01	1.773E-01	2.746E-01	2.408E-02	0.873
		122.32	-3.170E-01	1.532E+00	2.476E+00	3.235E-01	-0.128
	+	144.24	9.801E-02	8.595E-01	1.072E+00	1.204E-01	0.091
		154.21	1.833E-01	3.528E-01	5.779E-01	5.810E-02	0.317
		269.46	1.953E-01	1.772E-01	3.064E-01	2.438E-02	0.637
		323.87 *	-1.015E+00	6.889E-01	1.002E+00	1.709E-01	-1.012
	+	338.28	4.548E+00	1.554E+00	2.136E+00	2.396E-01	2.129

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RN-219		445.03		-7.126E-01	2.312E+00	3.675E+00	3.896E-01	-0.194
		271.23		3.339E-01	2.311E-01	3.960E-01	3.799E-02	0.843
		401.81	*	1.825E-01	4.333E-01	7.108E-01	9.716E-02	0.257
RN-220		549.76	*	-2.257E+00	2.729E+01	4.485E+01	3.279E+00	-0.050
RA-223		81.07		-6.734E-02	1.846E-01	2.165E-01	1.791E-02	-0.311
	+	83.78		9.644E-02	1.056E-01	1.423E-01	1.155E-02	0.678
		94.90		2.399E-01	1.773E-01	2.746E-01	2.408E-02	0.873
		122.32		-3.170E-01	1.532E+00	2.476E+00	3.235E-01	-0.128
	+	144.24		9.801E-02	8.595E-01	1.072E+00	1.204E-01	0.091
		154.21		1.833E-01	3.528E-01	5.779E-01	5.810E-02	0.317
		269.46		1.953E-01	1.772E-01	3.064E-01	2.438E-02	0.637
		323.87	*	-1.015E+00	6.889E-01	1.002E+00	1.709E-01	-1.012
	+	338.28		4.548E+00	1.554E+00	2.136E+00	2.396E-01	2.129
AC-227		445.03		-7.126E-01	2.312E+00	3.675E+00	3.896E-01	-0.194
		79.80		-5.227E-01	1.372E+00	1.606E+00	3.435E-01	-0.326
		236.00		5.371E-01	2.440E-01	3.881E-01	4.562E-02	1.384
		256.20	*	-2.261E-01	3.470E-01	5.566E-01	8.305E-02	-0.406
		286.10		1.111E+00	1.413E+00	2.408E+00	3.029E-01	0.461
		299.80		6.354E-01	1.487E+00	2.200E+00	3.731E-01	0.289
		304.40		6.302E-01	1.724E+00	2.876E+00	5.152E-01	0.219
		334.20		-6.872E-01	2.441E+00	3.398E+00	6.374E-01	-0.202
TH-227		79.80		-5.227E-01	1.372E+00	1.606E+00	3.479E-01	-0.326
	+	94.00		4.444E+00	2.466E+00	2.866E+00	6.245E-01	1.551
		236.00		5.371E-01	2.424E-01	3.881E-01	4.088E-02	1.384
		256.20	*	-2.261E-01	3.477E-01	5.566E-01	9.852E-02	-0.406
		286.10		1.111E+00	1.794E+00	2.408E+00	2.415E+00	0.461
		299.80		6.354E-01	1.487E+00	2.200E+00	3.731E-01	0.289
		304.40		6.302E-01	1.724E+00	2.876E+00	5.152E-01	0.219
		334.20		-6.872E-01	2.441E+00	3.398E+00	6.374E-01	-0.202
TH-229	+	85.43		1.444E-01	1.580E-01	2.129E-01	1.709E-02	0.678
	+	88.47		3.113E-01	9.639E-02	1.378E-01	1.095E-02	2.260
		100.00		6.538E-02	1.458E-01	2.339E-01	2.209E-02	0.280
		193.63	*	1.067E-01	4.205E-01	7.202E-01	5.697E-02	0.148
		210.97		1.842E-01	7.360E-01	1.110E+00	8.803E-02	0.166
PA-231		283.67	*	-1.296E+00	1.426E+00	2.223E+00	3.259E-01	-0.583
		301.29		2.609E-01	5.570E-01	8.699E-01	9.977E-02	0.300
TH-231		81.07		-6.734E-02	1.846E-01	2.165E-01	1.791E-02	-0.311
	+	83.78		9.644E-02	1.056E-01	1.423E-01	1.155E-02	0.678
		94.90		2.399E-01	1.773E-01	2.746E-01	2.408E-02	0.873
		122.32		-3.170E-01	1.532E+00	2.476E+00	3.235E-01	-0.128
	+	144.24		9.801E-02	8.595E-01	1.072E+00	1.204E-01	0.091
		154.21		1.833E-01	3.528E-01	5.779E-01	5.810E-02	0.317
		269.46		1.953E-01	1.772E-01	3.064E-01	2.438E-02	0.637
		323.87	*	-1.015E+00	6.889E-01	1.002E+00	1.709E-01	-1.012
	+	338.28		4.548E+00	1.554E+00	2.136E+00	2.396E-01	2.129
U-231		445.03		-7.126E-01	2.312E+00	3.675E+00	3.896E-01	-0.194
	+	84.21		6.647E+00	7.275E+00	9.873E+00	7.992E-01	0.673
	+	92.29		7.024E+00	3.636E+00	5.495E+00	4.632E-01	1.278
		95.87	*	-1.190E+00	1.384E+00	1.929E+00	1.716E-01	-0.617

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PA-233		108.00		-2.703E-01	2.876E+00	4.207E+00	4.438E-01	-0.064
	+	75.28		1.192E+01	3.064E+00	4.090E+00	6.273E-01	2.914
	+	86.59		4.463E+00	1.787E+00	2.030E+00	5.404E-01	2.198
		300.12		3.059E-01	4.054E-01	6.114E-01	8.712E-02	0.500
		311.98	*	-1.052E-02	6.183E-02	1.003E-01	7.663E-03	-0.105
PA-234		340.50		8.415E-01	6.866E-01	1.021E+00	2.377E-01	0.824
		398.62		-5.812E-01	2.162E+00	3.405E+00	8.813E-01	-0.171
		415.76		6.000E-01	1.640E+00	2.677E+00	5.534E-01	0.224
	+	63.00		1.045E+00	1.159E+00	1.340E+00	2.134E-01	0.780
		94.67		2.678E-01	1.329E-01	2.067E-01	2.581E-02	1.296
		98.44		1.111E-02	7.256E-02	1.168E-01	6.527E-02	0.095
		99.86		-9.188E-02	3.724E-01	5.915E-01	5.575E-02	-0.155
		111.00		-6.767E-02	1.554E-01	2.484E-01	3.446E-02	-0.272
		131.20		-3.787E-02	9.415E-02	1.502E-01	1.764E-02	-0.252
		152.70		2.390E-01	2.932E-01	4.822E-01	8.421E-02	0.496
	+	186.00		1.621E+00	2.086E+00	2.444E+00	7.581E-01	0.663
		226.40		8.313E-02	3.397E-01	5.758E-01	7.347E-02	0.144
		227.20		-6.479E-02	3.736E-01	6.219E-01	4.928E-02	-0.104
		248.90		-2.569E-02	8.378E-01	1.226E+00	2.713E-01	-0.021
	+	293.70		5.025E+00	1.491E+00	1.507E+00	2.531E-01	3.334
		369.80		-7.815E-01	8.462E-01	1.262E+00	2.648E-01	-0.619
		568.70		-1.615E-01	1.088E+00	1.775E+00	1.325E-01	-0.091
		569.50		2.093E-01	2.878E-01	4.950E-01	3.699E-02	0.423
		574.00		1.152E-01	1.539E+00	2.546E+00	1.912E-01	0.045
		699.00		-1.392E-01	8.017E-01	1.280E+00	2.416E-01	-0.109
		706.10		2.746E-01	1.138E+00	1.859E+00	8.275E-01	0.148
		733.00		-1.836E-01	4.816E-01	6.370E-01	1.402E-01	-0.288
		742.81		-2.292E-01	1.564E+00	2.473E+00	1.661E+00	-0.093
		796.30		2.052E+00	1.195E+00	1.974E+00	5.301E-01	1.039
		805.60		-1.746E-02	1.148E+00	1.916E+00	5.837E-01	-0.009
		819.60		4.275E-01	1.391E+00	2.354E+00	8.915E-01	0.182
		826.30		-6.870E-01	9.388E-01	1.392E+00	6.209E-01	-0.494
		831.60		-2.395E-01	6.461E-01	1.039E+00	3.080E-01	-0.230
		876.40		9.990E-01	1.398E+00	1.693E+00	1.739E+00	0.590
		880.51		9.445E-02	3.263E-01	5.519E-01	4.206E-02	0.171
		883.24		-5.537E-02	3.281E-01	5.332E-01	3.578E-01	-0.104
		899.00		-6.189E-01	9.849E-01	1.488E+00	6.476E-01	-0.416
		925.00		2.308E-01	1.291E+00	2.159E+00	1.597E-01	0.107
		926.50		4.754E-03	1.908E-01	3.154E-01	7.849E-02	0.015
		946.00	*	1.088E-01	3.354E-01	5.651E-01	1.028E-01	0.192
		949.00		2.488E-01	5.014E-01	8.558E-01	6.226E-02	0.291
		980.50		-1.268E-01	8.311E-01	1.347E+00	9.552E-02	-0.094
		1394.10		-9.657E-01	1.494E+00	2.066E+00	1.338E+00	-0.467
PA-234M		766.42		2.127E+00	1.302E+01	2.198E+01	1.113E+01	0.097
NP-236		1001.03	*	5.816E+00	5.861E+00	9.676E+00	8.294E-01	0.601
		94.67		2.053E-01	9.928E-02	1.570E-01	1.372E-02	1.307
		98.44		8.397E-03	5.466E-02	8.829E-02	8.153E-03	0.095
		111.00		-5.118E-02	1.174E-01	1.879E-01	2.063E-02	-0.272
		160.31	*	-4.065E-02	7.172E-02	1.117E-01	9.520E-03	-0.364

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NF-239		99.55		4.505E-02	1.228E-01	1.994E-01	1.871E-02	0.226
		117.00	*	-1.233E-01	1.639E-01	2.588E-01	3.072E-02	-0.476
	+	209.75		1.159E+00	8.713E-01	1.200E+00	9.517E-02	0.966
		228.18		3.146E-02	2.000E-01	3.376E-01	2.674E-02	0.093
		277.60		1.641E-01	1.701E-01	2.925E-01	2.253E-02	0.561
		334.30		-3.539E-01	1.383E+00	1.932E+00	1.358E-01	-0.183
AM-241		59.54	*	-2.946E-03	5.648E-02	8.627E-02	8.774E-03	-0.034
CM-243		99.55		4.636E-02	1.263E-01	2.053E-01	1.926E-02	0.226
	+	103.76	*	1.200E-01	1.031E-01	1.251E-01	1.246E-02	0.959
		117.00		-1.269E-01	1.686E-01	2.664E-01	3.161E-02	-0.476
	+	209.75		1.143E+00	8.591E-01	1.183E+00	9.383E-02	0.966
		228.18		3.179E-02	2.021E-01	3.411E-01	2.703E-02	0.093
		277.60		1.655E-01	1.715E-01	2.950E-01	2.271E-02	0.561
AM-246		798.80		-1.780E-01	1.705E-01	2.653E-01	2.118E-02	-0.671
		1036.00		9.467E-02	3.615E-01	6.017E-01	4.042E-02	0.157
		1062.04		-2.078E-01	2.906E-01	4.471E-01	2.914E-02	-0.465
		1078.86	*	1.024E-01	1.700E-01	2.889E-01	1.843E-02	0.355
		278.00		6.849E-01	7.022E-01	1.208E+00	9.299E-02	0.567
CM-247		287.40		1.436E+00	1.194E+00	1.950E+00	1.486E-01	0.736
		402.60	*	2.177E-02	3.925E-02	6.491E-02	3.865E-03	0.335
		252.85		4.225E-01	7.746E-01	1.321E+00	1.037E-01	0.320
CF-249		333.44		-1.334E-01	1.885E-01	2.541E-01	1.790E-02	-0.525
		387.95	*	-1.602E-02	4.219E-02	6.636E-02	3.941E-03	-0.241
CF-251		176.60	*	1.650E-02	1.168E-01	1.867E-01	1.469E-02	0.088
		227.00		-9.204E-03	3.296E-01	5.523E-01	4.376E-02	-0.017
		285.00		6.808E-01	1.632E+00	2.746E+00	2.098E-01	0.248

VAX/VMS Nuclide Identification Report Generated

```
*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                          *
*****
*                               DETECTOR DATA                               *
*
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202015439
* Acquisition date   : 25-JAN-2010 11:12:23 Detector SN#      :
* Detector ID        : GAM13                               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 02:00:01.66                     Half life ratio  : 8.000
*****
*                               SAMPLE DATA                               *
*
* Sample date        : 7-JAN-2010 12:00:00 Nuclide Library : SOLID
* Sample ID          : G1202015439                     Analyst initials: MXR1
* Batch Number       : 941636                           Sample Quantity : 1.5907E+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     :
*****
```

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	2.748E+01	2.308E+00	6.755E-01	0.000E+00
CD-109	2.329E+00	7.069E-01	8.632E-01	0.000E+00
SN-126	2.280E-01	6.919E-02	8.438E-02	0.000E+00
BA-137M	1.670E-01	7.036E-02	7.237E-02	0.000E+00
CS-137	1.765E-01	7.438E-02	7.651E-02	0.000E+00
EU-155	1.341E-01	1.129E-01	1.475E-01	0.000E+00
TL-208	2.772E-01	7.903E-02	6.286E-02	0.000E+00
BI-210	1.925E+00	8.459E-01	7.176E-01	0.000E+00
PB-210	1.925E+00	8.459E-01	7.176E-01	0.000E+00
PO-210	1.925E+00	8.426E-01	7.176E-01	0.000E+00
BI-211	2.801E+00	4.194E-01	3.429E-01	0.000E+00
PB-212	1.064E+00	1.309E-01	8.448E-02	0.000E+00
PO-212	1.064E+00	1.309E-01	8.448E-02	0.000E+00
BI-214	8.702E-01	1.631E-01	1.280E-01	0.000E+00
PB-214	9.743E-01	1.542E-01	1.195E-01	0.000E+00
PO-214	9.743E-01	1.542E-01	1.195E-01	0.000E+00
PO-216	1.064E+00	1.309E-01	8.448E-02	0.000E+00
PO-218	9.743E-01	1.542E-01	1.195E-01	0.000E+00
RA-224	3.386E+00	1.115E+00	9.616E-01	0.000E+00
RA-226	8.702E-01	1.631E-01	1.280E-01	0.000E+00
AC-228	1.367E+00	3.194E-01	2.407E-01	0.000E+00
RA-228	1.367E+00	3.194E-01	2.407E-01	0.000E+00
TH-228	1.083E+00	1.333E-01	8.601E-02	0.000E+00
TH-230	8.702E-01	1.631E-01	1.280E-01	0.000E+00
TH-232	1.367E+00	3.194E-01	2.407E-01	0.000E+00
TH-234	8.965E-01	9.776E-01	9.157E-01	0.000E+00
U-234	8.702E-01	1.631E-01	1.280E-01	0.000E+00
U-235	3.024E-02	2.600E-01	3.240E-01	0.000E+00
NP-237	6.694E-01	2.441E-01	2.707E-01	0.000E+00
U-238	8.965E-01	9.776E-01	9.157E-01	0.000E+00
AM-243	2.275E-01	4.985E-02	5.413E-02	0.000E+00
ANH-511	8.619E-02	6.156E-02	5.358E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM	K.L. Act error) Ided	MDA (pCi/GRAM)	
BE-7	1.558E-01	3.352E-01	6.116E-01	0.000E+00	NOT IDENT.
NA-22	-3.421E-02	4.566E-02	7.342E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.858E+07	0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.961E-02	3.299E-02	6.085E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	3.926E-02	4.720E-02	0.000E+00	FAIL ABUN
SC-46	-2.385E-02	4.286E-02	7.027E-02	0.000E+00	FAIL ABUN
V-48	-7.165E-03	9.202E-02	1.564E-01	0.000E+00	NOT IDENT.
CR-51	-2.054E-01	3.830E-01	6.542E-01	0.000E+00	NOT IDENT.
MN-52	2.879E-03	3.061E-01	5.193E-01	0.000E+00	NOT IDENT.
MN-54	-1.441E-02	3.831E-02	6.498E-02	0.000E+00	NOT IDENT.
CO-56	4.067E-03	4.152E-02	7.282E-02	0.000E+00	NOT IDENT.
CO-57	-2.259E-03	2.211E-02	3.964E-02	0.000E+00	NOT IDENT.
CO-58	-3.148E-02	4.564E-02	7.602E-02	0.000E+00	NOT IDENT.
FE-59	6.406E-02	1.143E-01	2.005E-01	0.000E+00	FAIL ABUN
CO-60	-2.446E-02	4.195E-02	6.764E-02	0.000E+00	NOT IDENT.
ZN-65	4.893E-02	1.158E-01	1.744E-01	0.000E+00	NOT IDENT.
GE-68	1.220E+00	1.483E+00	2.656E+00	0.000E+00	NOT IDENT.
AS-73	1.123E-01	2.017E-01	3.802E-01	0.000E+00	NOT IDENT.
AS-74	5.020E-02	1.071E-01	1.912E-01	0.000E+00	NOT IDENT.
SE-75	1.325E-02	3.970E-02	7.231E-02	0.000E+00	NOT IDENT.
BR-77	-1.002E+01	2.434E+01	4.177E+01	0.000E+00	FAIL ABUN
SR-82	-6.925E-02	4.596E-01	8.006E-01	0.000E+00	NOT IDENT.
RB-83	-4.206E-02	7.179E-02	1.218E-01	0.000E+00	NOT IDENT.
RB-84	2.673E-02	8.243E-02	1.461E-01	0.000E+00	NOT IDENT.
KR-85	7.496E+00	8.310E+00	1.360E+01	0.000E+00	NOT IDENT.
SR-85	3.961E-02	4.390E-02	7.183E-02	0.000E+00	NOT IDENT.
RB-86	1.039E+00	1.034E+00	1.874E+00	0.000E+00	NOT IDENT.
Y-88	2.724E-03	2.922E-02	5.046E-02	0.000E+00	NOT IDENT.
ZR-88	-8.039E-03	3.080E-02	5.210E-02	0.000E+00	NOT IDENT.
Y-91	1.651E+01	2.174E+01	3.946E+01	0.000E+00	NOT IDENT.
NB-94	9.873E-03	3.572E-02	6.192E-02	0.000E+00	NOT IDENT.
NB-95	7.730E-03	4.856E-02	8.635E-02	0.000E+00	NOT IDENT.
NB-95M	1.147E-01	1.226E-01	2.054E-01	0.000E+00	NOT IDENT.
ZR-95	7.697E-02	8.211E-02	1.473E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.964E+06	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	3.431E+07	0.000E+00	0.000E+00	SHORT HLIF
MO-99	1.138E+01	2.608E+01	4.543E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	9.917E+19	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-9.732E-03	2.898E-02	5.076E-02	0.000E+00	NOT IDENT.
RH-102	5.625E-03	2.949E-02	5.306E-02	0.000E+00	NOT IDENT.
RU-103	8.140E-03	4.158E-02	7.449E-02	0.000E+00	FAIL ABUN
RH-106	4.900E-02	3.364E-01	5.863E-01	0.000E+00	FAIL ABUN
RU-106	4.900E-02	3.364E-01	5.863E-01	0.000E+00	FAIL ABUN
AG-108M	-1.727E-02	3.065E-02	5.329E-02	0.000E+00	NOT IDENT.
AG-110M	4.866E-02	4.203E-02	6.901E-02	0.000E+00	NOT IDENT.
IN-111	-9.630E-01	1.999E+00	3.078E+00	0.000E+00	NOT IDENT.
IN-113M	-1.517E-03	4.565E-02	7.835E-02	0.000E+00	NOT IDENT.
SN-113	-1.517E-03	4.565E-02	7.835E-02	0.000E+00	NOT IDENT.
IN-114M	-1.091E-01	1.855E-01	2.727E-01	0.000E+00	NOT IDENT.
CD-115	0.000E+00	2.625E+01	0.000E+00	0.000E+00	SHORT HLIF
SN-117M	4.585E-02	5.390E-02	9.795E-02	0.000E+00	NOT IDENT.
SB-122	-3.008E+00	4.641E+00	7.772E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.798E+08	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	2.630E-02	2.440E-02	4.471E-02	0.000E+00	NOT IDENT.
I-124	-2.827E-01	1.275E+00	1.872E+00	0.000E+00	NOT IDENT.
SB-124	-3.451E-02	7.790E-02	1.191E-01	0.000E+00	FAIL ABUN
SB-125	4.860E-02	8.988E-02	1.663E-01	0.000E+00	NOT IDENT.
TE-125M	-1.779E+00	8.452E+00	1.359E+01	0.000E+00	NOT IDENT.
I-126	-1.238E-01	2.799E-01	3.961E-01	0.000E+00	NOT IDENT.
SB-126	1.563E-01	2.073E-01	3.260E-01	0.000E+00	NOT IDENT.
SB-127	6.857E-02	2.433E+00	4.159E+00	0.000E+00	NOT IDENT.
XE-127	-4.518E-02	4.150E-02	7.290E-02	0.000E+00	FAIL ABUN
I-131	1.020E-01	1.431E-01	2.578E-01	0.000E+00	NOT IDENT.
TE-132	3.036E-01	1.095E+00	2.015E+00	0.000E+00	NOT IDENT.
BA-133	-1.845E-02	4.943E-02	7.309E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	5.582E+04	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	5.400E-02	1.057E-01	0.000E+00	NOT IDENT.
CS-135	6.631E-02	1.447E-01	2.642E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	8.136E+18	0.000E+00	0.000E+00	SHORT HLIF
CS-136	7.297E-02	1.442E-01	2.539E-01	0.000E+00	FAIL ABUN
CE-139	-8.918E-03	2.728E-02	4.699E-02	0.000E+00	NOT IDENT.
BA-140	1.149E-01	3.129E-01	5.579E-01	0.000E+00	NOT IDENT.
LA-140	-6.355E-02	9.976E-02	1.515E-01	0.000E+00	NOT IDENT.

CE-141	4.641E-02	6.564E-02	1.072E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	8.568E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	3.976E-02	1.756E-01	3.161E-01	0.000E+00	NOT IDENT.
PM-144	4.904E-03	3.880E-02	6.662E-02	0.000E+00	NOT IDENT.
PR-144	3.328E-01	2.633E+00	4.521E+00	0.000E+00	NOT IDENT.
PM-146	-1.694E-02	4.099E-02	7.149E-02	0.000E+00	NOT IDENT.
ND-147	4.526E-02	6.386E-01	1.128E+00	0.000E+00	FAIL ABUN
PM-149	0.000E+00	2.026E+02	0.000E+00	0.000E+00	SHORT HLIF
EU-152	2.359E-02	9.454E-02	1.616E-01	0.000E+00	NOT IDENT.
GD-153	5.256E-03	6.449E-02	1.047E-01	0.000E+00	FAIL ABUN
EU-154	-9.852E-02	1.273E-01	2.038E-01	0.000E+00	NOT IDENT.
TB-160	6.851E-02	1.628E-01	2.903E-01	0.000E+00	FAIL ABUN
HO-166M	-4.676E-02	6.154E-02	9.797E-02	0.000E+00	FAIL ABUN
TM-171	-9.063E+00	1.361E+01	2.254E+01	0.000E+00	NOT IDENT.
LU-176	-1.122E-02	2.374E-02	4.092E-02	0.000E+00	FAIL ABUN
LU-177	2.194E+00	1.616E+00	2.441E+00	0.000E+00	FAIL ABUN
LU-177M	-1.600E-01	1.788E-01	2.879E-01	0.000E+00	NOT IDENT.
HF-181	9.687E-03	4.426E-02	7.965E-02	0.000E+00	NOT IDENT.
W-181	7.942E-02	1.669E-01	2.901E-01	0.000E+00	NOT IDENT.
TA-182	3.162E-02	2.268E-01	3.956E-01	0.000E+00	NOT IDENT.
RE-183	-8.308E-02	1.030E-01	1.718E-01	0.000E+00	FAIL ABUN
RE-184	1.139E-01	2.047E-01	3.779E-01	0.000E+00	NOT IDENT.
OS-185	-2.627E-03	4.772E-02	8.169E-02	0.000E+00	NOT IDENT.
RE-188	-2.246E-02	1.544E-01	2.701E-01	0.000E+00	NOT IDENT.
W-188	-3.951E+00	7.584E+00	1.137E+01	0.000E+00	FAIL ABUN
IR-192	2.204E-02	3.389E-02	6.156E-02	0.000E+00	FAIL ABUN
AU-195	4.294E-02	1.765E-01	3.173E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.680E+03	0.000E+00	0.000E+00	SHORT HLIF
TL-201	3.061E+00	1.141E+01	2.017E+01	0.000E+00	NOT IDENT.
TL-202	-7.808E-03	8.079E-02	1.443E-01	0.000E+00	NOT IDENT.
HG-203	5.342E-02	3.868E-02	7.292E-02	0.000E+00	FAIL ABUN
BI-207	1.187E-02	6.442E-02	1.105E-01	0.000E+00	FAIL ABUN
TL-207	-1.015E+00	6.752E-01	1.057E+00	0.000E+00	FAIL ABUN
PO-209	-4.356E+00	7.961E+00	1.297E+01	0.000E+00	NOT IDENT.
PB-211	7.744E-01	1.060E+00	1.701E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	5.521E-01	6.883E-01	0.000E+00	FAIL ABUN
PO-215	-1.015E+00	6.752E-01	1.057E+00	0.000E+00	FAIL ABUN
RN-219	1.825E-01	4.246E-01	7.448E-01	0.000E+00	NOT IDENT.
RN-220	-2.257E+00	2.675E+01	4.659E+01	0.000E+00	NOT IDENT.
RA-223	-1.015E+00	6.752E-01	1.057E+00	0.000E+00	FAIL ABUN
AC-227	-2.261E-01	3.400E-01	5.905E-01	0.000E+00	NOT IDENT.
TH-227	-2.261E-01	3.407E-01	5.905E-01	0.000E+00	FAIL ABUN
TH-229	1.067E-01	4.121E-01	7.698E-01	0.000E+00	FAIL ABUN
PA-231	-1.296E+00	1.397E+00	2.352E+00	0.000E+00	NOT IDENT.
TH-231	-1.015E+00	6.752E-01	1.057E+00	0.000E+00	FAIL ABUN
U-231	-1.190E+00	1.356E+00	2.100E+00	0.000E+00	FAIL ABUN
PA-233	-1.052E-02	6.059E-02	1.059E-01	0.000E+00	FAIL ABUN
PA-234	1.088E-01	3.287E-01	5.779E-01	0.000E+00	FAIL ABUN
PA-234M	5.816E+00	5.744E+00	9.880E+00	0.000E+00	NOT IDENT.
NP-236	-4.065E-02	7.028E-02	1.200E-01	0.000E+00	NOT IDENT.
NP-239	-1.233E-01	1.606E-01	2.804E-01	0.000E+00	FAIL ABUN
AM-241	-2.946E-03	5.535E-02	9.508E-02	0.000E+00	NOT IDENT.
CM-243	1.200E-01	1.010E-01	1.359E-01	0.000E+00	FAIL ABUN
AM-246	1.024E-01	1.666E-01	2.943E-01	0.000E+00	NOT IDENT.
CM-247	2.177E-02	3.847E-02	6.801E-02	0.000E+00	NOT IDENT.
CF-249	-1.602E-02	4.135E-02	6.960E-02	0.000E+00	NOT IDENT.
CF-251	1.650E-02	1.144E-01	2.001E-01	0.000E+00	NOT IDENT.

```

*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                           *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202015439.CNF;1
Sample date        : 7-JAN-2010 12:00:00. Acquisition date : 25-JAN-2010 11:12:23
Sample ID          : G1202015439          Sample quantity  : 1.59070E+02 GRAM
Detector name      : GAM13                Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00        Elapsed real time: 0 02:00:01.66  0.0%
Energy tolerance   : 1.50000 keV          Analyst Initials : MXR1
Abundance limit    : 75.00000             Sensitivity        : 5.00000
Batch ID           : 941636               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	1294	10.67*	1.041E+00	2.748E+01	2.748E+01	8.57
CD-109	88.03	259	3.72*	7.248E+00	2.267E+00	2.329E+00	30.97
SN-126	64.28	107	9.60	7.391E+00	3.549E-01	3.549E-01	110.84
	86.94	259	8.90	7.248E+00	9.478E-01	9.478E-01	50.94
	87.57	259	37.00*	7.248E+00	2.280E-01	2.280E-01	30.97
BA-137M	661.65	128	89.98*	2.018E+00	1.668E-01	1.670E-01	42.99
CS-137	661.65	128	85.12*	2.018E+00	1.763E-01	1.765E-01	43.00
EU-155	48.70	-----	4.60	7.317E+00	-----	Line Not Found	-----
	60.01	-----	1.11	7.386E+00	-----	Line Not Found	-----
	86.54	259	30.90	7.248E+00	2.730E-01	2.749E-01	30.99
	105.31	82	20.70*	6.997E+00	1.332E-01	1.341E-01	85.91
TL-208	277.35	-----	6.80	4.225E+00	-----	Line Not Found	-----
	510.84	93	21.60	2.538E+00	3.990E-01	3.990E-01	73.36
	583.14	223	84.20*	2.257E+00	2.772E-01	2.772E-01	29.09
	860.37	-----	12.46	1.606E+00	-----	Line Not Found	-----
BI-210	46.50	241	4.05*	7.294E+00	1.922E+00	1.925E+00	44.85
PB-210	46.50	241	4.05*	7.294E+00	1.922E+00	1.925E+00	44.85
PO-210	46.50	241	4.05*	7.294E+00	1.922E+00	1.925E+00	44.67
BI-211	72.87	-----	1.27	7.369E+00	-----	Line Not Found	-----
	351.07	537	12.94*	3.498E+00	2.801E+00	2.801E+00	15.28
PB-212	74.81	468	10.70	7.359E+00	1.403E+00	1.403E+00	24.23
	77.11	757	18.00	7.344E+00	1.351E+00	1.351E+00	16.07
	87.30	259	8.00	7.248E+00	1.054E+00	1.054E+00	32.54
	238.63	948	44.60*	4.716E+00	1.064E+00	1.064E+00	12.56
	300.09	-----	3.41	3.976E+00	-----	Line Not Found	-----
PO-212	74.81	468	10.70	7.359E+00	1.403E+00	1.403E+00	24.23
	77.11	757	18.00	7.344E+00	1.351E+00	1.351E+00	16.07
	87.30	259	8.00	7.248E+00	1.054E+00	1.054E+00	32.54
	115.19	-----	0.60	6.822E+00	-----	Line Not Found	-----
	238.63	948	44.60*	4.716E+00	1.064E+00	1.064E+00	12.56
	300.09	-----	3.41	3.976E+00	-----	Line Not Found	-----
BI-214	609.31	371	46.30*	2.172E+00	8.702E-01	8.702E-01	19.13

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PB-214	1120.29	111	15.10	1.288E+00	1.341E+00	1.341E+00	44.46
	1764.49	79	15.80	8.991E-01	1.306E+00	1.306E+00	29.09
	74.81	468	6.21	7.359E+00	2.418E+00	2.418E+00	23.55
	77.11	757	10.50	7.344E+00	2.316E+00	2.316E+00	17.78
	87.30	259	4.67	7.248E+00	1.806E+00	1.806E+00	31.91
PO-214	241.98	265	7.49	4.676E+00	1.786E+00	1.786E+00	34.07
	295.21	343	19.20	4.032E+00	1.047E+00	1.047E+00	26.35
	351.92	537	37.20*	3.498E+00	9.743E-01	9.743E-01	16.15
	74.81	468	6.21	7.359E+00	2.418E+00	2.418E+00	23.55
	77.11	757	10.50	7.344E+00	2.316E+00	2.316E+00	17.78
PO-216	87.30	259	4.67	7.248E+00	1.806E+00	1.806E+00	31.91
	241.98	265	7.49	4.676E+00	1.786E+00	1.786E+00	34.07
	295.21	343	19.20	4.032E+00	1.047E+00	1.047E+00	26.35
	351.92	537	37.20*	3.498E+00	9.743E-01	9.743E-01	16.15
	74.81	468	10.70	7.359E+00	1.403E+00	1.403E+00	24.23
PO-218	77.11	757	18.00	7.344E+00	1.351E+00	1.351E+00	16.07
	87.30	259	8.00	7.248E+00	1.054E+00	1.054E+00	32.54
	238.63	948	44.60*	4.716E+00	1.064E+00	1.064E+00	12.56
	300.09	-----	3.41	3.976E+00	-----	Line Not Found	-----
	74.81	468	6.21	7.359E+00	2.418E+00	2.418E+00	23.55
RA-224	77.11	757	10.50	7.344E+00	2.316E+00	2.316E+00	17.78
	87.30	259	4.67	7.248E+00	1.806E+00	1.806E+00	31.91
	241.98	265	7.49	4.676E+00	1.786E+00	1.786E+00	34.07
	295.21	343	19.20	4.032E+00	1.047E+00	1.047E+00	26.35
	351.92	537	37.20*	3.498E+00	9.743E-01	9.743E-01	16.15
RA-226	240.98	265	3.95*	4.676E+00	3.386E+00	3.386E+00	33.61
AC-228	609.31	371	46.30*	2.172E+00	8.702E-01	8.702E-01	19.13
	1120.29	111	15.10	1.288E+00	1.341E+00	1.341E+00	44.46
	1764.49	79	15.80	8.991E-01	1.306E+00	1.306E+00	29.09
	338.32	190	11.40	3.614E+00	1.089E+00	1.089E+00	52.14
	911.07	245	27.70*	1.530E+00	1.367E+00	1.367E+00	23.84
RA-228	969.11	95	16.60	1.452E+00	9.291E-01	9.291E-01	46.69
	338.32	190	11.40	3.614E+00	1.089E+00	1.089E+00	52.14
	911.07	245	27.70*	1.530E+00	1.367E+00	1.367E+00	23.84
	969.11	95	16.60	1.452E+00	9.291E-01	9.291E-01	46.69
	74.81	468	10.70	7.359E+00	1.403E+00	1.429E+00	22.39
TH-228	77.11	757	18.00	7.344E+00	1.351E+00	1.375E+00	16.07
	87.30	259	8.00	7.248E+00	1.054E+00	1.073E+00	30.97
	238.63	948	44.60*	4.716E+00	1.064E+00	1.083E+00	12.56
	300.09	-----	3.41	3.976E+00	-----	Line Not Found	-----
	609.31	371	46.30*	2.172E+00	8.702E-01	8.702E-01	19.13
TH-230	1120.29	111	15.10	1.288E+00	1.341E+00	1.341E+00	44.46
	1764.49	79	15.80	8.991E-01	1.306E+00	1.306E+00	29.09
	338.32	190	11.40	3.614E+00	1.089E+00	1.089E+00	33.01
	911.07	245	27.70*	1.530E+00	1.367E+00	1.367E+00	23.84
	969.11	95	16.60	1.452E+00	9.291E-01	9.291E-01	46.69
TH-234	63.29	107	3.80*	7.391E+00	8.965E-01	8.965E-01	111.26
	92.38	189	5.41	7.181E+00	1.150E+00	1.150E+00	54.15
	609.31	371	46.30*	2.172E+00	8.702E-01	8.702E-01	19.13

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
U-235	1120.29	111	15.10	1.288E+00	1.341E+00	1.341E+00	44.46
	1764.49	79	15.80	8.991E-01	1.306E+00	1.306E+00	29.09
	89.95	173	2.70	7.215E+00	2.094E+00	2.094E+00	57.54
	93.35	189	4.50	7.181E+00	1.383E+00	1.383E+00	58.23
	105.00	82	2.10	6.997E+00	1.313E+00	1.313E+00	90.53
	143.76	8	10.50*	6.291E+00	3.024E-02	3.024E-02	877.11
	163.35	-----	4.70	5.928E+00	-----	Line Not Found	-----
NP-237	185.71	76	54.00	5.530E+00	6.003E-02	6.003E-02	125.17
	205.31	-----	4.70	5.207E+00	-----	Line Not Found	-----
	86.50	259	12.60*	7.248E+00	6.694E-01	6.694E-01	37.21
	95.87	-----	2.60	7.135E+00	-----	Line Not Found	-----
U-238	63.29	107	3.80*	7.391E+00	8.965E-01	8.965E-01	111.26
	92.38	189	5.41	7.181E+00	1.150E+00	1.150E+00	51.76
AM-243	74.67	468	66.00*	7.359E+00	2.275E-01	2.275E-01	22.36
	86.72	259	0.34	7.248E+00	2.510E+01	2.510E+01	30.97
	117.66	-----	0.55	6.778E+00	-----	Line Not Found	-----
ANH-511	142.18	-----	0.13	6.323E+00	-----	Line Not Found	-----
	511.00	93	100.00*	2.538E+00	8.619E-02	8.619E-02	72.89

Flag: "*" = Keyline

Total number of lines in spectrum 28
Number of unidentified lines 1
Number of lines tentatively identified by NID 27 96.43%

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	2.748E+01	2.748E+01	0.235E+01	8.57	
CD-109	464.00D	1.03	2.267E+00	2.329E+00	0.721E+00	30.97	
SN-126	1.00E+05Y	1.00	2.280E-01	2.280E-01	0.706E-01	30.97	
BA-137M	30.17Y	1.00	1.668E-01	1.670E-01	0.718E-01	42.99	
CS-137	30.17Y	1.00	1.763E-01	1.765E-01	0.759E-01	43.00	
EU-155	4.96Y	1.01	1.332E-01	1.341E-01	1.152E-01	85.91	
TL-208	1.41E+10Y	1.00	2.772E-01	2.772E-01	0.806E-01	29.09	
BI-210	22.26Y	1.00	1.922E+00	1.925E+00	0.863E+00	44.85	
PB-210	22.26Y	1.00	1.922E+00	1.925E+00	0.863E+00	44.85	
PO-210	22.26Y	1.00	1.922E+00	1.925E+00	0.860E+00	44.67	
BI-211	7.04E+08Y	1.00	2.801E+00	2.801E+00	0.428E+00	15.28	
PB-212	1.41E+10Y	1.00	1.064E+00	1.064E+00	0.134E+00	12.56	
PO-212	1.41E+10Y	1.00	1.064E+00	1.064E+00	0.134E+00	12.56	
BI-214	1600.00Y	1.00	8.702E-01	8.702E-01	1.665E-01	19.13	
PB-214	1600.00Y	1.00	9.743E-01	9.743E-01	1.573E-01	16.15	
PO-214	1600.00Y	1.00	9.743E-01	9.743E-01	1.573E-01	16.15	
PO-216	1.41E+10Y	1.00	1.064E+00	1.064E+00	0.134E+00	12.56	
PO-218	1600.00Y	1.00	9.743E-01	9.743E-01	1.573E-01	16.15	
RA-224	1.41E+10Y	1.00	3.386E+00	3.386E+00	1.138E+00	33.61	
RA-226	1600.00Y	1.00	8.702E-01	8.702E-01	1.665E-01	19.13	
AC-228	1.41E+10Y	1.00	1.367E+00	1.367E+00	0.326E+00	23.84	
RA-228	1.41E+10Y	1.00	1.367E+00	1.367E+00	0.326E+00	23.84	
TH-228	1.91Y	1.02	1.064E+00	1.083E+00	0.136E+00	12.56	
TH-230	4.47E+09Y	1.00	8.702E-01	8.702E-01	1.665E-01	19.13	
TH-232	1.41E+10Y	1.00	1.367E+00	1.367E+00	0.326E+00	23.84	
TH-234	4.47E+09Y	1.00	8.965E-01	8.965E-01	9.975E-01	111.26	
U-234	4.47E+09Y	1.00	8.702E-01	8.702E-01	1.665E-01	19.13	
U-235	7.04E+08Y	1.00	3.024E-02	3.024E-02	26.53E-02	877.11	
NP-237	2.14E+06Y	1.00	6.694E-01	6.694E-01	2.491E-01	37.21	
U-238	4.47E+09Y	1.00	8.965E-01	8.965E-01	9.975E-01	111.26	
AM-243	7380.00Y	1.00	2.275E-01	2.275E-01	0.509E-01	22.36	
ANH-511	1.00E+09Y	1.00	8.619E-02	8.619E-02	6.282E-02	72.89	
Total Activity :			6.025E+01	6.034E+01			

Grand Total Activity : 6.025E+01 6.034E+01

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G1202015439

Page : 5
Acquisition date : 25-JAN-2010 11:12:23

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	84.08	73	520	1.49	167.94	164	7	1.02E-02	****	7.28E+00	T
0	209.28	82	270	0.79	418.40	414	8	1.14E-02	74.7	5.14E+00	T
0	727.23	115	107	1.82	1454.61	1446	16	1.59E-02	44.6	1.86E+00	T
0	1710.19	9	9	0.88	3421.42	3412	12	1.29E-03	****	9.21E-01	

Flags: "T" = Tentatively associated

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
*                                     DETECTOR DATA                          *
*
* Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202015439.CNF;1
* Acquisition date   : 25-JAN-2010 11:12:23   Detector SN#      :
* Detector ID        : GAM13                   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 02:00:01.66           Half life ratio  : 8.00000
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 7-JAN-2010 12:00:00.   Nuclide Library : SOLID
* Sample ID          : G1202015439             Analyst initials: MXR1
* Batch Number       : 941636                  Sample Quantity : 1.59070E+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
K-40	2.748E+01	2.355E+00	6.691E-01	4.090E-02	41.080
CD-109	2.329E+00	7.214E-01	7.911E-01	6.242E-02	2.945
SN-126	2.280E-01	7.060E-02	7.732E-02	6.116E-03	2.949
BA-137M	1.670E-01	7.179E-02	7.004E-02	5.713E-03	2.384
CS-137	1.765E-01	7.590E-02	7.404E-02	6.052E-03	2.384
EU-155	1.341E-01	1.152E-01	1.358E-01	1.394E-02	0.988
TL-208	2.772E-01	8.064E-02	6.062E-02	5.018E-03	4.573
BI-210	1.925E+00	8.632E-01	6.472E-01	5.275E-02	2.974
PB-210	1.925E+00	8.632E-01	6.472E-01	5.275E-02	2.974
PO-210	1.925E+00	8.598E-01	6.472E-01	4.614E-02	2.974
BI-211	2.801E+00	4.280E-01	3.260E-01	2.376E-02	8.592
PB-212	1.064E+00	1.336E-01	7.948E-02	7.220E-03	13.385
PO-212	1.064E+00	1.336E-01	7.948E-02	7.220E-03	13.385
BI-214	8.702E-01	1.665E-01	1.236E-01	1.156E-02	7.040
PB-214	9.743E-01	1.573E-01	1.137E-01	1.018E-02	8.572
PO-214	9.743E-01	1.573E-01	1.137E-01	1.018E-02	8.572
PO-216	1.064E+00	1.336E-01	7.948E-02	7.220E-03	13.385
PO-218	9.743E-01	1.573E-01	1.137E-01	1.018E-02	8.572

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-224	3.386E+00	1.138E+00	9.049E-01	7.143E-02	3.742
RA-226	8.702E-01	1.665E-01	1.236E-01	1.156E-02	7.040
AC-228	1.367E+00	3.259E-01	2.351E-01	2.442E-02	5.812
RA-228	1.367E+00	3.259E-01	2.351E-01	2.442E-02	5.812
TH-228	1.083E+00	1.360E-01	8.091E-02	7.350E-03	13.385
TH-230	8.702E-01	1.665E-01	1.236E-01	1.156E-02	7.040
TH-232	1.367E+00	3.259E-01	2.351E-01	2.442E-02	5.812
TH-234	8.965E-01	9.975E-01	8.322E-01	1.527E-01	1.077
U-234	8.702E-01	1.665E-01	1.236E-01	1.156E-02	7.040
U-235	3.024E-02	2.653E-01	3.007E-01	5.552E-02	0.101
NP-237	6.694E-01	2.491E-01	2.479E-01	5.484E-02	2.700
U-238	8.965E-01	9.975E-01	8.322E-01	1.527E-01	1.077
AM-243	2.275E-01	5.087E-02	4.940E-02	4.267E-03	4.606
ANH-511	8.619E-02	6.282E-02	5.148E-02	3.593E-03	1.674

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	1.558E-01		3.421E-01	5.864E-01	4.409E-02	0.266
NA-22	-3.421E-02		4.659E-02	7.242E-02	4.088E-03	-0.472
NA-24	-1.304E+01		9.479E+00	Half-Life	too short	
AL-26	1.961E-02		3.366E-02	6.065E-02	3.422E-03	0.323
TI-44	2.493E-01	+	4.006E-02	4.313E-02	3.632E-03	5.781
SC-46	-2.385E-02		4.374E-02	6.859E-02	5.194E-03	-0.348
V-48	-7.165E-03		9.390E-02	1.531E-01	1.083E-02	-0.047
CR-51	-2.054E-01		3.908E-01	6.204E-01	4.829E-02	-0.331
MN-52	2.879E-03		3.123E-01	5.140E-01	2.954E-02	0.006
MN-54	-1.441E-02		3.910E-02	6.331E-02	4.968E-03	-0.228
CO-56	4.067E-03		4.237E-02	7.097E-02	5.532E-03	0.057
CO-57	-2.259E-03		2.256E-02	3.663E-02	4.634E-03	-0.062
CO-58	-3.148E-02		4.657E-02	7.400E-02	5.894E-03	-0.425
FE-59	6.406E-02		1.167E-01	1.969E-01	1.407E-02	0.325
CO-60	-2.446E-02		4.280E-02	6.681E-02	3.800E-03	-0.366
ZN-65	4.893E-02		1.181E-01	1.713E-01	1.040E-02	0.286
GE-68	1.220E+00		1.513E+00	2.607E+00	1.666E-01	0.468
AS-73	1.123E-01		2.058E-01	3.441E-01	2.907E-02	0.326
AS-74	5.020E-02		1.092E-01	1.845E-01	1.417E-02	0.272
SE-75	1.325E-02		4.051E-02	6.822E-02	5.344E-03	0.194
BR-77	-1.002E+01		2.484E+01	4.015E+01	2.836E+00	-0.249
SR-82	-6.925E-02		4.690E-01	7.784E-01	6.265E-02	-0.089
RB-83	-4.206E-02		7.326E-02	1.170E-01	8.265E-03	-0.359
RB-84	2.673E-02		8.411E-02	1.426E-01	1.086E-02	0.187
KR-85	7.496E+00		8.480E+00	1.306E+01	9.151E-01	0.574
SR-85	3.961E-02		4.480E-02	6.902E-02	4.835E-03	0.574
RB-86	1.039E+00		1.055E+00	1.839E+00	1.177E-01	0.565
Y-88	2.724E-03		2.981E-02	5.032E-02	2.834E-03	0.054
ZR-88	-8.039E-03		3.143E-02	4.969E-02	2.910E-03	-0.162

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
Y-91	1.651E+01		2.218E+01	3.886E+01	2.154E+00	0.425
NB-94	9.873E-03		3.645E-02	6.003E-02	4.900E-03	0.164
NB-95	7.730E-03		4.956E-02	8.392E-02	6.777E-03	0.092
NB-95M	1.147E-01		1.251E-01	1.932E-01	1.787E-02	0.594
ZR-95	7.697E-02		8.378E-02	1.431E-01	1.291E-02	0.538
NB-97	2.115E+00		1.002E+00	Half-Life too short		
ZR-97	7.450E+01		1.751E+01	Half-Life too short		
MO-99	1.138E+01		2.661E+01	4.411E+01	6.576E+00	0.258
TC-99M	1.244E+13		5.060E+13	Half-Life too short		
RH-101	-9.732E-03		2.957E-02	4.752E-02	3.762E-03	-0.205
RH-102	5.625E-03		3.010E-02	5.087E-02	3.385E-03	0.111
RU-103	8.140E-03		4.243E-02	7.151E-02	9.412E-03	0.114
RH-106	4.900E-02		3.433E-01	5.665E-01	7.301E-02	0.087
RU-106	4.900E-02		3.432E-01	5.665E-01	4.461E-02	0.087
AG-108M	-1.727E-02		3.128E-02	5.097E-02	3.429E-03	-0.339
AG-110M	4.866E-02		4.289E-02	6.678E-02	5.610E-03	0.729
IN-111	-9.630E-01		2.040E+00	2.898E+00	2.283E-01	-0.332
IN-113M	-1.517E-03		4.658E-02	7.472E-02	4.656E-03	-0.020
SN-113	-1.517E-03		4.658E-02	7.472E-02	4.656E-03	-0.020
IN-114M	-1.091E-01		1.892E-01	2.550E-01	2.015E-02	-0.428
CD-115	-1.540E-05		1.339E-05	Half-Life too short		
SN-117M	4.585E-02		5.500E-02	9.115E-02	7.960E-03	0.503
SB-122	-3.008E+00		4.736E+00	7.488E+00	5.561E-01	-0.402
I-123	1.938E+02		9.172E+01	Half-Life too short		
TE-123M	2.630E-02		2.490E-02	4.161E-02	3.633E-03	0.632
I-124	-2.827E-01		1.301E+00	1.806E+00	1.397E-01	-0.156
SB-124	-3.451E-02		7.949E-02	1.185E-01	7.380E-03	-0.291
SB-125	4.860E-02		9.171E-02	1.590E-01	1.023E-02	0.306
TE-125M	-1.779E+00		8.625E+00	1.253E+01	1.523E+00	-0.142
I-126	-1.238E-01		2.856E-01	3.835E-01	3.129E-02	-0.323
SB-126	1.563E-01		2.115E-01	3.163E-01	2.577E-02	0.494
SB-127	6.857E-02		2.482E+00	4.029E+00	4.812E-01	0.017
XE-127	-4.518E-02		4.235E-02	6.829E-02	5.412E-03	-0.662
I-131	1.020E-01		1.460E-01	2.454E-01	1.745E-02	0.416
TE-132	3.036E-01		1.118E+00	1.894E+00	3.014E-01	0.160
BA-133	-1.845E-02		5.044E-02	6.951E-02	8.345E-03	-0.265
I-133	7.616E-03		2.848E-02	Half-Life too short		
CS-134	1.249E-01		5.510E-02	1.029E-01	8.290E-03	1.215
CS-135	6.631E-02		1.477E-01	2.493E-01	2.303E-02	0.266
I-135	-4.426E+12		4.151E+12	Half-Life too short		
CS-136	7.297E-02		1.472E-01	2.490E-01	1.768E-02	0.293
CE-139	-8.918E-03		2.783E-02	4.378E-02	3.433E-03	-0.204
BA-140	1.149E-01		3.193E-01	5.368E-01	1.761E-01	0.214
LA-140	-6.355E-02		1.018E-01	1.504E-01	8.669E-03	-0.422
CE-141	4.641E-02		6.698E-02	9.954E-02	1.033E-02	0.466
CE-143	2.721E-03		4.372E-04	Half-Life too short		
CE-144	3.976E-02		1.792E-01	2.929E-01	5.076E-02	0.136
PM-144	4.904E-03		3.959E-02	6.457E-02	5.275E-03	0.076

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PR-144	3.328E-01		2.687E+00	4.382E+00	3.578E-01	0.076
PM-146	-1.694E-02		4.182E-02	6.846E-02	6.213E-03	-0.247
ND-147	4.526E-02		6.517E-01	1.085E+00	1.536E-01	0.042
PM-149	1.682E-04		1.034E-04	Half-Life too short		
EU-152	2.359E-02		9.647E-02	1.536E-01	1.151E-02	0.154
GD-153	5.256E-03		6.581E-02	9.620E-02	8.755E-03	0.055
EU-154	-9.852E-02		1.299E-01	2.010E-01	1.857E-02	-0.490
TB-160	6.851E-02		1.661E-01	2.833E-01	2.161E-02	0.242
HO-166M	-4.676E-02		6.279E-02	9.501E-02	7.750E-03	-0.492
TM-171	-9.063E+00		1.388E+01	2.051E+01	1.872E+00	-0.442
LU-176	-1.122E-02		2.422E-02	3.876E-02	2.874E-03	-0.290
LU-177	2.194E+00	+	1.649E+00	2.288E+00	1.814E-01	0.959
LU-177M	-1.600E-01		1.824E-01	2.750E-01	1.668E-02	-0.582
HF-181	9.687E-03		4.517E-02	7.640E-02	5.133E-03	0.127
W-181	7.942E-02		1.703E-01	2.639E-01	2.434E-02	0.301
TA-182	3.162E-02		2.314E-01	3.897E-01	2.169E-02	0.081
RE-183	-8.308E-02		1.051E-01	1.600E-01	1.324E-02	-0.519
RE-184	1.139E-01		2.089E-01	3.561E-01	2.796E-02	0.320
OS-185	-2.627E-03		4.870E-02	7.901E-02	6.359E-03	-0.033
RE-188	-2.246E-02		1.576E-01	2.512E-01	2.299E-02	-0.089
W-188	-3.951E+00		7.738E+00	1.076E+01	8.163E-01	-0.367
IR-192	2.204E-02		3.458E-02	5.836E-02	4.269E-03	0.378
AU-195	4.294E-02		1.801E-01	2.917E-01	2.711E-02	0.147
TL-200	-1.672E-03		1.368E-03	Half-Life too short		
TL-201	3.061E+00		1.164E+01	1.879E+01	1.473E+00	0.163
TL-202	-7.808E-03		8.243E-02	1.380E-01	8.721E-03	-0.057
HG-203	5.342E-02		3.947E-02	6.889E-02	5.485E-03	0.775
BI-207	1.187E-02		6.574E-02	1.084E-01	7.052E-03	0.109
TL-207	-1.015E+00		6.889E-01	1.002E+00	1.709E-01	-1.012
PO-209	-4.356E+00		8.123E+00	1.266E+01	9.531E-01	-0.344
PB-211	7.744E-01		1.081E+00	1.623E+00	1.012E+00	0.477
BI-212	1.235E+00	+	5.634E-01	6.679E-01	6.412E-02	1.848
PO-215	-1.015E+00		6.889E-01	1.002E+00	1.709E-01	-1.012
RN-219	1.825E-01		4.333E-01	7.108E-01	9.716E-02	0.257
RN-220	-2.257E+00		2.729E+01	4.485E+01	3.279E+00	-0.050
RA-223	-1.015E+00		6.889E-01	1.002E+00	1.709E-01	-1.012
AC-227	-2.261E-01		3.470E-01	5.566E-01	8.305E-02	-0.406
TH-227	-2.261E-01		3.477E-01	5.566E-01	9.852E-02	-0.406
TH-229	1.067E-01		4.205E-01	7.202E-01	5.697E-02	0.148
PA-231	-1.296E+00		1.426E+00	2.223E+00	3.259E-01	-0.583
TH-231	-1.015E+00		6.889E-01	1.002E+00	1.709E-01	-1.012
U-231	-1.190E+00		1.384E+00	1.929E+00	1.716E-01	-0.617
PA-233	-1.052E-02		6.183E-02	1.003E-01	7.663E-03	-0.105
PA-234	1.088E-01		3.354E-01	5.651E-01	1.028E-01	0.192
PA-234M	5.816E+00		5.861E+00	9.676E+00	8.294E-01	0.601
NP-236	-4.065E-02		7.172E-02	1.117E-01	9.520E-03	-0.364
NP-239	-1.233E-01		1.639E-01	2.588E-01	3.072E-02	-0.476
AM-241	-2.946E-03		5.648E-02	8.627E-02	8.774E-03	-0.034

----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	1.200E-01	+	1.031E-01	1.251E-01	1.246E-02	0.959
AM-246	1.024E-01		1.700E-01	2.889E-01	1.843E-02	0.355
CM-247	2.177E-02		3.925E-02	6.491E-02	3.865E-03	0.335
CF-249	-1.602E-02		4.219E-02	6.636E-02	3.941E-03	-0.241
CF-251	1.650E-02		1.168E-01	1.867E-01	1.469E-02	0.088

VAX/VMS Nuclide Identification Report Generated

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                    *
*****
*
*                                     DETECTOR DATA                          *
*
* Configuration      : SYSSYSROOT:[ALPHA.ARCHIVE.GAMMA]G1202015439          *
* Acquisition date   : 25-JAN-2010 11:12:23 Detector SN#      :             *
* Detector ID        : GAM13                                           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 02:00:01.66                               Half life ratio  : 8.000          *
*****
*
*                                     SAMPLE DATA                            *
*
* Sample date        : 7-JAN-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID          : G1202015439                               Analyst initials: MXR1          *
* Batch Number       : 941636                                     Sample Quantity : 1.5907E+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
K-40	2.748E+01	2.308E+00	3.380E-01	1.177E+00
CD-109	2.329E+00	7.069E-01	4.319E-01	3.607E-01
SN-126	2.280E-01	6.919E-02	4.221E-02	3.530E-02
BA-137M	1.670E-01	7.036E-02	3.621E-02	3.590E-02
CS-137	1.765E-01	7.438E-02	3.828E-02	3.795E-02
EU-155	1.341E-01	1.129E-01	7.379E-02	5.761E-02
TL-208	2.772E-01	7.903E-02	3.145E-02	4.032E-02
BI-210	1.925E+00	8.459E-01	3.590E-01	4.316E-01
PB-210	1.925E+00	8.459E-01	3.590E-01	4.316E-01
PO-210	1.925E+00	8.426E-01	3.590E-01	4.299E-01
BI-211	2.801E+00	4.194E-01	1.715E-01	2.140E-01
PB-212	1.064E+00	1.309E-01	4.227E-02	6.679E-02
PO-212	1.064E+00	1.309E-01	4.227E-02	6.679E-02
BI-214	8.702E-01	1.631E-01	6.405E-02	8.324E-02
PB-214	9.743E-01	1.542E-01	5.981E-02	7.866E-02
PO-214	9.743E-01	1.542E-01	5.981E-02	7.866E-02
PO-216	1.064E+00	1.309E-01	4.227E-02	6.679E-02
PO-218	9.743E-01	1.542E-01	5.981E-02	7.866E-02
RA-224	3.386E+00	1.115E+00	4.811E-01	5.689E-01
RA-226	8.702E-01	1.631E-01	6.405E-02	8.324E-02
AC-228	1.367E+00	3.194E-01	1.204E-01	1.629E-01
RA-228	1.367E+00	3.194E-01	1.204E-01	1.629E-01
TH-228	1.083E+00	1.333E-01	4.303E-02	6.800E-02
TH-230	8.702E-01	1.631E-01	6.405E-02	8.323E-02
TH-232	1.367E+00	3.194E-01	1.204E-01	1.629E-01
TH-234	8.965E-01	9.776E-01	4.581E-01	4.988E-01
U-234	8.702E-01	1.631E-01	6.405E-02	8.323E-02
U-235	3.024E-02	2.600E-01	1.621E-01	1.326E-01
NP-237	6.694E-01	2.441E-01	1.354E-01	1.246E-01
U-238	8.965E-01	9.776E-01	4.581E-01	4.988E-01
AM-243	2.275E-01	4.985E-02	2.708E-02	2.544E-02
ANH-511	8.619E-02	6.156E-02	2.681E-02	3.141E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	1.558E-01	3.352E-01	3.060E-01	1.710E-01 NOT IDENT.
NA-22	-3.421E-02	4.566E-02	3.673E-02	2.330E-02 NOT IDENT.
NA-24	-1.304E+07	1.858E+07	0.000E+00	9.479E+06 SHORT HLIF
AL-26	1.961E-02	3.299E-02	3.044E-02	1.683E-02 NOT IDENT.
TI-44	2.493E-01	3.926E-02	2.361E-02	2.003E-02 FAIL ABUN
SC-46	-2.385E-02	4.286E-02	3.516E-02	2.187E-02 FAIL ABUN
V-48	-7.165E-03	9.202E-02	7.825E-02	4.695E-02 NOT IDENT.
CR-51	-2.054E-01	3.830E-01	3.273E-01	1.954E-01 NOT IDENT.
MN-52	2.879E-03	3.061E-01	2.598E-01	1.562E-01 NOT IDENT.
MN-54	-1.441E-02	3.831E-02	3.251E-02	1.955E-02 NOT IDENT.
CO-56	4.067E-03	4.152E-02	3.643E-02	2.118E-02 NOT IDENT.
CO-57	-2.259E-03	2.211E-02	1.983E-02	1.128E-02 NOT IDENT.
CO-58	-3.148E-02	4.564E-02	3.803E-02	2.329E-02 NOT IDENT.
FE-59	6.406E-02	1.143E-01	1.003E-01	5.833E-02 FAIL ABUN
CO-60	-2.446E-02	4.195E-02	3.384E-02	2.140E-02 NOT IDENT.
ZN-65	4.893E-02	1.158E-01	8.725E-02	5.906E-02 NOT IDENT.
GE-68	1.220E+00	1.483E+00	1.329E+00	7.566E-01 NOT IDENT.
AS-73	1.123E-01	2.017E-01	1.902E-01	1.029E-01 NOT IDENT.
AS-74	5.020E-02	1.071E-01	9.565E-02	5.462E-02 NOT IDENT.
SE-75	1.325E-02	3.970E-02	3.618E-02	2.026E-02 NOT IDENT.
BR-77	-1.002E+01	2.434E+01	2.090E+01	1.242E+01 FAIL ABUN
SR-82	-6.925E-02	4.596E-01	4.006E-01	2.345E-01 NOT IDENT.
RB-83	-4.206E-02	7.179E-02	6.092E-02	3.663E-02 NOT IDENT.
RB-84	2.673E-02	8.243E-02	7.311E-02	4.206E-02 NOT IDENT.
KR-85	7.496E+00	8.310E+00	6.802E+00	4.240E+00 NOT IDENT.
SR-85	3.961E-02	4.390E-02	3.593E-02	2.240E-02 NOT IDENT.
RB-86	1.039E+00	1.034E+00	9.375E-01	5.274E-01 NOT IDENT.
Y-88	2.724E-03	2.922E-02	2.525E-02	1.491E-02 NOT IDENT.
ZR-88	-8.039E-03	3.080E-02	2.607E-02	1.571E-02 NOT IDENT.
Y-91	1.651E+01	2.174E+01	1.974E+01	1.109E+01 NOT IDENT.
NB-94	9.873E-03	3.572E-02	3.098E-02	1.822E-02 NOT IDENT.
NB-95	7.730E-03	4.856E-02	4.320E-02	2.478E-02 NOT IDENT.
NB-95M	1.147E-01	1.226E-01	1.028E-01	6.255E-02 NOT IDENT.
ZR-95	7.697E-02	8.211E-02	7.369E-02	4.189E-02 NOT IDENT.
NB-97	2.115E+06	1.964E+06	0.000E+00	1.002E+06 SHORT HLIF
ZR-97	7.450E+07	3.431E+07	0.000E+00	1.751E+07 SHORT HLIF
MO-99	1.138E+01	2.608E+01	2.273E+01	1.331E+01 NOT IDENT.
TC-99M	1.244E+19	9.917E+19	0.000E+00	0.000E+00 SHORT HLIF
RH-101	-9.732E-03	2.898E-02	2.540E-02	1.478E-02 NOT IDENT.
RH-102	5.625E-03	2.949E-02	2.654E-02	1.505E-02 NOT IDENT.
RU-103	8.140E-03	4.158E-02	3.727E-02	2.121E-02 FAIL ABUN
RH-106	4.900E-02	3.364E-01	2.933E-01	1.716E-01 FAIL ABUN
RU-106	4.900E-02	3.364E-01	2.933E-01	1.716E-01 FAIL ABUN
AG-108M	-1.727E-02	3.065E-02	2.666E-02	1.564E-02 NOT IDENT.
AG-110M	4.866E-02	4.203E-02	3.453E-02	2.144E-02 NOT IDENT.
IN-111	-9.630E-01	1.999E+00	1.540E+00	1.020E+00 NOT IDENT.
IN-113M	-1.517E-03	4.565E-02	3.920E-02	2.329E-02 NOT IDENT.
SN-113	-1.517E-03	4.565E-02	3.920E-02	2.329E-02 NOT IDENT.
IN-114M	-1.091E-01	1.855E-01	1.364E-01	9.462E-02 NOT IDENT.
CD-115	-1.540E+01	2.625E+01	0.000E+00	1.339E+01 SHORT HLIF
SN-117M	4.585E-02	5.390E-02	4.900E-02	2.750E-02 NOT IDENT.
SB-122	-3.008E+00	4.641E+00	3.889E+00	2.368E+00 NOT IDENT.
I-123	1.938E+08	1.798E+08	0.000E+00	9.172E+07 SHORT HLIF
TE-123M	2.630E-02	2.440E-02	2.237E-02	1.245E-02 NOT IDENT.
I-124	-2.827E-01	1.275E+00	9.364E-01	6.505E-01 NOT IDENT.
SB-124	-3.451E-02	7.790E-02	5.959E-02	3.974E-02 FAIL ABUN
SB-125	4.860E-02	8.988E-02	8.319E-02	4.586E-02 NOT IDENT.
TE-125M	-1.779E+00	8.452E+00	6.800E+00	4.312E+00 NOT IDENT.
I-126	-1.238E-01	2.799E-01	1.982E-01	1.428E-01 NOT IDENT.
SB-126	1.563E-01	2.073E-01	1.631E-01	1.058E-01 NOT IDENT.
SB-127	6.857E-02	2.433E+00	2.081E+00	1.241E+00 NOT IDENT.
XE-127	-4.518E-02	4.150E-02	3.647E-02	2.118E-02 FAIL ABUN
I-131	1.020E-01	1.431E-01	1.290E-01	7.300E-02 NOT IDENT.
TE-132	3.036E-01	1.095E+00	1.008E+00	5.588E-01 NOT IDENT.
BA-133	-1.845E-02	4.943E-02	3.656E-02	2.522E-02 NOT IDENT.
I-133	7.616E+03	5.582E+04	0.000E+00	2.848E+04 SHORT HLIF
CS-134	1.249E-01	5.400E-02	5.289E-02	2.755E-02 NOT IDENT.
CS-135	6.631E-02	1.447E-01	1.322E-01	7.383E-02 NOT IDENT.
I-135	-4.426E+18	8.136E+18	0.000E+00	0.000E+00 SHORT HLIF
CS-136	7.297E-02	1.442E-01	1.270E-01	7.359E-02 FAIL ABUN
CE-139	-8.918E-03	2.728E-02	2.351E-02	1.392E-02 NOT IDENT.
BA-140	1.149E-01	3.129E-01	2.791E-01	1.597E-01 NOT IDENT.
LA-140	-6.355E-02	9.976E-02	7.578E-02	5.090E-02 NOT IDENT.

CE-141	4.641E-02	6.564E-02	5.364E-02	3.349E-02	NOT IDENT.
CE-143	2.721E+03	8.568E+02	0.000E+00	4.372E+02	SHORT HLIF
CE-144	3.976E-02	1.756E-01	1.582E-01	8.958E-02	NOT IDENT.
PM-144	4.904E-03	3.880E-02	3.333E-02	1.980E-02	NOT IDENT.
PR-144	3.328E-01	2.633E+00	2.262E+00	1.343E+00	NOT IDENT.
PM-146	-1.694E-02	4.099E-02	3.577E-02	2.091E-02	NOT IDENT.
ND-147	4.526E-02	6.386E-01	5.643E-01	3.258E-01	FAIL ABUN
PM-149	1.682E+02	2.026E+02	0.000E+00	1.034E+02	SHORT HLIF
EU-152	2.359E-02	9.454E-02	8.085E-02	4.823E-02	NOT IDENT.
GD-153	5.256E-03	6.449E-02	5.238E-02	3.290E-02	FAIL ABUN
EU-154	-9.852E-02	1.273E-01	1.020E-01	6.494E-02	NOT IDENT.
TB-160	6.851E-02	1.628E-01	1.452E-01	8.304E-02	FAIL ABUN
HO-166M	-4.676E-02	6.154E-02	4.901E-02	3.140E-02	FAIL ABUN
TM-171	-9.063E+00	1.361E+01	1.128E+01	6.941E+00	NOT IDENT.
LU-176	-1.122E-02	2.374E-02	2.047E-02	1.211E-02	FAIL ABUN
LU-177	2.194E+00	1.616E+00	1.221E+00	8.245E-01	FAIL ABUN
LU-177M	-1.600E-01	1.788E-01	1.441E-01	9.122E-02	NOT IDENT.
HF-181	9.687E-03	4.426E-02	3.985E-02	2.258E-02	NOT IDENT.
W-181	7.942E-02	1.669E-01	1.452E-01	8.517E-02	NOT IDENT.
TA-182	3.162E-02	2.268E-01	1.979E-01	1.157E-01	NOT IDENT.
RE-183	-8.308E-02	1.030E-01	8.595E-02	5.254E-02	FAIL ABUN
RE-184	1.139E-01	2.047E-01	1.891E-01	1.044E-01	NOT IDENT.
OS-185	-2.627E-03	4.772E-02	4.087E-02	2.435E-02	NOT IDENT.
RE-188	-2.246E-02	1.544E-01	1.351E-01	7.879E-02	NOT IDENT.
W-188	-3.951E+00	7.584E+00	5.691E+00	3.869E+00	FAIL ABUN
IR-192	2.204E-02	3.389E-02	3.080E-02	1.729E-02	FAIL ABUN
AU-195	4.294E-02	1.765E-01	1.588E-01	9.006E-02	FAIL ABUN
TL-200	-1.672E+03	2.680E+03	0.000E+00	1.368E+03	SHORT HLIF
TL-201	3.061E+00	1.141E+01	1.009E+01	5.820E+00	NOT IDENT.
TL-202	-7.808E-03	8.079E-02	7.218E-02	4.122E-02	NOT IDENT.
HG-203	5.342E-02	3.868E-02	3.648E-02	1.974E-02	FAIL ABUN
BI-207	1.187E-02	6.442E-02	5.529E-02	3.287E-02	FAIL ABUN
TL-207	-1.015E+00	6.752E-01	5.287E-01	3.445E-01	FAIL ABUN
PO-209	-4.356E+00	7.961E+00	6.487E+00	4.062E+00	NOT IDENT.
PB-211	7.744E-01	1.060E+00	8.508E-01	5.407E-01	NOT IDENT.
BI-212	1.235E+00	5.521E-01	3.444E-01	2.817E-01	FAIL ABUN
PO-215	-1.015E+00	6.752E-01	5.287E-01	3.445E-01	FAIL ABUN
RN-219	1.825E-01	4.246E-01	3.726E-01	2.166E-01	NOT IDENT.
RN-220	-2.257E+00	2.675E+01	2.331E+01	1.365E+01	NOT IDENT.
RA-223	-1.015E+00	6.752E-01	5.287E-01	3.445E-01	FAIL ABUN
AC-227	-2.261E-01	3.400E-01	2.954E-01	1.735E-01	NOT IDENT.
TH-227	-2.261E-01	3.407E-01	2.954E-01	1.738E-01	FAIL ABUN
TH-229	1.067E-01	4.121E-01	3.852E-01	2.102E-01	FAIL ABUN
PA-231	-1.296E+00	1.397E+00	1.177E+00	7.130E-01	NOT IDENT.
TH-231	-1.015E+00	6.752E-01	5.287E-01	3.445E-01	FAIL ABUN
U-231	-1.190E+00	1.356E+00	1.051E+00	6.918E-01	FAIL ABUN
PA-233	-1.052E-02	6.059E-02	5.298E-02	3.091E-02	FAIL ABUN
PA-234	1.088E-01	3.287E-01	2.891E-01	1.677E-01	FAIL ABUN
PA-234M	5.816E+00	5.744E+00	4.943E+00	2.930E+00	NOT IDENT.
NP-236	-4.065E-02	7.028E-02	6.004E-02	3.586E-02	NOT IDENT.
NP-239	-1.233E-01	1.606E-01	1.403E-01	8.193E-02	FAIL ABUN
AM-241	-2.946E-03	5.535E-02	4.757E-02	2.824E-02	NOT IDENT.
CM-243	1.200E-01	1.010E-01	6.801E-02	5.155E-02	FAIL ABUN
AM-246	1.024E-01	1.666E-01	1.473E-01	8.498E-02	NOT IDENT.
CM-247	2.177E-02	3.847E-02	3.403E-02	1.963E-02	NOT IDENT.
CF-249	-1.602E-02	4.135E-02	3.482E-02	2.110E-02	NOT IDENT.
CF-251	1.650E-02	1.144E-01	1.001E-01	5.839E-02	NOT IDENT.

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*                               GEL Laboratories LLC                               *
*                               2040 SAVAGE ROAD                               *
*                               CHARLESTON ,SC 29417                           *
*                               GAMMA SPECTROSCOPY BACKGROUND REPORT             *
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ENERGY	MDA COUNTS
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46.50	302.8573
46.50	302.8573
46.50	302.8573
48.70	323.2303
49.72	364.8552
51.35	387.5404
52.39	344.2145
52.97	339.9027
53.15	363.9528
53.44	364.3654
54.07	383.1794
56.28	419.9819
56.28	419.9868
57.37	0.0000
57.53	400.3327
57.53	400.3362
57.60	413.4094
57.98	411.3910
57.98	411.3910
59.32	437.3425
59.32	437.3425
59.40	437.4690
59.54	437.6901
59.72	483.7337
60.01	484.2390
61.10	463.7892
61.14	463.8552
61.30	408.8969
63.00	453.2225
63.29	453.6774
63.29	453.6774
63.58	454.1323
64.28	455.2244
65.12	458.3027
65.20	458.4268
65.20	458.4268
66.05	483.7972
66.72	503.6292
66.83	503.8185
66.91	503.9505
67.20	491.0195
67.20	491.0195
67.75	495.9423
67.85	496.1084
68.90	492.8678
68.90	492.8678
69.30	492.7856
69.67	499.0602
70.82	507.6872
70.82	507.6872
70.83	507.7043
72.80	508.1368
72.87	508.2475
72.87	508.2475
74.67	478.1124
74.81	478.3168
74.81	478.3168
74.81	478.3168
74.81	478.3168
74.81	478.3168
74.81	478.3168
74.81	478.3168
74.97	478.5531
75.28	479.0045
75.70	479.6178
77.11	481.6621
77.11	481.6621

77.11	481.6621
77.11	481.6621
77.11	481.6621
77.11	481.6621
77.11	481.6621
78.38	484.8755
79.62	451.7886
79.80	452.0259
79.80	452.0259
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80.18	399.4535
80.30	371.6475
80.30	371.6475
80.57	425.0740
81.00	453.6030
81.07	453.6957
81.07	453.6957
81.07	453.6957
81.07	453.6957
82.60	469.7563
83.37	486.2828
83.78	486.8513
83.78	486.8513
83.78	486.8513
83.78	486.8513
84.21	423.8617
84.90	424.6811
85.43	425.3082
86.29	426.3222
86.50	426.5694
86.54	426.6151
86.59	426.6747
86.72	426.8257
86.79	355.7549
86.94	355.9036
87.30	356.2546
87.30	356.2546
87.30	356.2546
87.30	356.2546
87.30	356.2546
87.30	356.2546
87.57	356.5178
87.88	356.8192
88.03	356.9641
88.36	357.2845
88.47	357.3914
89.95	358.8162
91.11	359.9262
92.29	361.0478
92.38	361.1336
92.38	361.1336
93.35	362.0491
94.00	319.1403
94.67	303.7047
94.67	303.7095
94.90	303.8881
94.90	303.8881
94.90	303.8881
94.90	303.8881
95.87	358.5761
95.87	358.5761
96.73	372.5118
97.43	311.7046
98.44	332.5466
98.44	332.5466
98.88	328.0174
99.55	310.9102
99.55	310.9102
99.86	335.6873
100.00	325.1996
100.10	325.2821
103.18	310.2200
103.76	331.4631
105.00	316.0510
105.31	316.2839
108.00	324.2999
109.28	337.3125

111.00	350.7435
111.00	350.7435
111.76	338.2255
112.95	339.1388
115.19	336.7746
116.30	360.0417
117.00	355.4890
117.00	355.4890
117.66	336.5670
121.11	326.7208
121.62	320.8864
121.78	320.9956
122.06	338.7438
122.32	333.7640
122.32	333.7640
122.32	333.7640
122.32	333.7640
123.07	336.3646
127.23	348.6939
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131.20	353.6299
133.02	315.8382
133.54	308.7618
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136.00	317.7027
136.25	317.8578
136.48	336.0811
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140.51	0.0000
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142.65	359.9965
143.76	327.8582
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144.24	314.1192
144.24	314.1192
144.24	314.1192
145.22	293.6058
145.44	309.9553
147.16	314.1993
152.43	293.6675
152.70	292.7130
153.22	271.0382
154.21	294.5999
154.21	294.5999
154.21	294.5999
154.21	294.5999
155.03	311.5435
156.02	329.7322
158.56	256.9880
159.00	0.0000
159.00	247.2069
160.31	311.0978
161.27	302.7101
162.32	317.7490
162.64	314.5764
163.35	288.1504
163.89	267.1756
165.85	312.9242
167.43	263.1476
171.28	280.6726
171.86	288.8698
172.10	274.2489
176.55	264.8138
176.60	286.5241
181.06	315.5728
184.41	312.0227
185.71	282.5420
186.00	282.6686
190.27	276.3505
192.34	275.7073
193.63	253.1360
197.04	280.9164
198.01	283.0835
198.60	283.3276
200.40	243.2348
201.83	297.1120
202.84	297.5427
205.31	256.0408

208.36	298.8070
208.81	278.5109
209.75	263.4043
209.75	263.4043
210.97	272.5042
215.65	271.1832
216.55	265.1597
218.09	272.9965
222.10	241.5361
223.80	246.6668
226.40	226.3533
227.00	240.3445
227.08	240.3704
227.20	246.8539
228.16	244.3980
228.18	249.0154
228.18	249.0154
231.56	0.0000
235.69	248.8325
236.00	248.9303
236.00	248.9303
238.63	231.8132
238.63	231.8132
238.63	231.8132
238.63	231.8132
239.00	231.9210
240.98	232.4991
241.98	232.7895
241.98	232.7895
241.98	232.7895
244.69	227.5470
245.39	215.6765
247.94	199.7112
248.90	221.1512
249.79	220.9567
252.40	212.9634
252.85	198.8109
252.85	198.8109
254.15	0.0000
256.20	232.0812
256.20	232.0812
260.50	202.5485
260.90	0.0000
262.80	216.5680
264.65	201.6013
268.24	228.5890
268.79	230.6751
269.46	220.1799
269.46	220.1799
269.46	220.1799
269.46	220.1799
271.23	200.2163
273.65	286.5307
276.40	202.3632
277.35	201.5994
277.60	210.4662
277.60	210.4662
278.00	207.6232
278.60	198.9422
279.20	187.3074
279.53	202.0897
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281.68	235.0213
283.67	217.7998
284.30	217.9482
285.00	193.4429
285.90	0.0000
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286.10	178.8513
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290.67	200.1942
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291.72	178.1527
293.26	0.0000
293.70	196.2635
295.21	196.5792
295.21	196.5792

295.21	196.5792
295.96	242.8734
296.50	236.6157
297.23	228.8000
298.57	182.6588
299.80	195.7272
299.80	195.7272
300.09	179.7387
300.09	179.7387
300.09	179.7387
300.09	179.7387
300.12	179.7441
301.29	188.8032
302.84	223.3076
303.76	223.5210
303.91	205.4288
304.40	179.3390
304.40	179.3390
304.84	173.3726
306.84	209.0847
308.46	182.1149
311.98	191.9070
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318.01	207.3768
319.02	212.7004
319.41	198.4610
320.08	199.6149
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323.87	238.3862
323.87	238.3862
323.87	238.3862
325.23	246.9360
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334.20	181.0076
334.20	181.0076
334.30	181.0262
338.28	170.0432
338.28	170.0432
338.28	170.0432
338.28	170.0432
338.32	170.0506
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338.32	170.0506
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340.57	168.7435
344.27	164.0612
345.85	172.9399
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351.92	181.5112
351.92	181.5112
351.92	181.5112
355.39	0.0000
356.01	161.0083
364.48	145.1641
366.43	153.9712
367.43	157.3180
367.94	0.0000
369.80	167.2996
374.96	165.9044
383.85	167.1850
387.95	179.7537
388.63	154.7860
391.69	161.7440
391.69	161.7440
392.90	155.3450
398.62	163.7827
400.65	167.3586
401.10	163.0166
401.81	157.6020
402.60	158.8074
404.84	148.0510
410.95	148.7892
411.60	134.4245
413.65	165.8039
414.70	148.1253
415.30	138.1680

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417.63	0.0000
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427.89	136.8501
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433.93	140.2076
439.47	141.7159
439.56	147.1764
439.89	147.2139
443.98	136.7340
444.90	133.1805
445.03	135.9298
445.03	135.9298
445.03	135.9298
445.03	135.9298
453.90	132.2455
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468.07	150.3345
473.00	136.9009
475.06	132.4403
475.35	130.6006
476.78	133.5371
477.59	126.1390
477.96	124.3027
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484.57	130.5212
487.03	128.8656
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492.35	0.0000
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507.63	0.0000
510.53	0.0000
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511.00	141.5241
511.85	146.7092
511.85	146.7092
513.99	134.1442
513.99	134.1442
520.41	129.9078
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528.96	0.0000
529.64	117.1449
529.87	0.0000
531.02	101.7469
537.32	113.8408
543.00	127.9265
546.56	0.0000
549.76	116.7106
552.65	107.0973
555.20	117.1116
563.23	109.7887
563.90	141.4953
568.70	130.0085
569.32	108.2150
569.50	108.2283
569.67	108.2389
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574.00	110.5176
574.64	114.5452
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579.30	0.0000
583.14	110.1316
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592.07	115.7524
593.00	121.8596
595.88	107.9457
600.56	123.4178
602.52	0.0000
602.71	123.2350
602.71	123.2350
603.60	119.9223
604.41	114.9077
604.70	114.9271
609.31	128.1164

609.31	128.1164
609.31	128.1164
609.31	128.1164
610.33	120.3932
612.46	125.6338
614.37	117.2742
618.01	119.5622
621.84	104.4628
621.84	104.4628
631.29	103.9935
633.02	103.0640
633.10	103.0688
634.78	109.3565
635.90	121.8143
636.97	111.5569
645.85	98.6135
646.12	110.0475
656.30	107.8794
657.75	85.3273
657.90	0.0000
661.65	134.0219
661.65	134.0219
664.57	0.0000
666.33	131.2103
666.33	131.2103
675.00	98.0746
677.61	89.7605
685.20	99.6639
692.80	98.9964
695.00	128.9465
696.49	115.1824
696.49	115.1824
697.00	119.4812
697.49	121.6455
698.33	131.3061
698.50	129.1799
699.00	116.4006
702.63	101.6403
706.10	99.6776
706.58	0.0000
706.67	100.7769
709.31	85.8828
711.68	98.8865
713.82	111.9041
717.42	93.7841
720.50	88.1705
721.93	0.0000
722.20	106.2557
722.78	131.5075
722.78	131.5075
722.89	120.7041
722.95	120.7096
723.30	120.7287
724.18	118.9805
727.18	101.8257
733.00	101.3975
735.90	99.0047
739.58	89.3732
742.81	101.5235
744.21	99.4091
747.13	92.9854
751.79	97.5828
752.31	103.0902
753.82	103.1659
755.35	87.8652
756.15	86.8016
756.87	90.1279
763.93	116.7190
765.79	119.5819
766.42	124.2197
766.84	124.2444
776.49	108.1712
778.00	109.1726
778.57	111.0522
778.89	119.3995
783.80	94.6268
785.46	71.4888
792.07	119.2057

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796.30	86.7788
798.80	137.3250
801.93	115.0698
805.60	102.1431
810.29	104.2409
810.76	108.9600
815.85	102.6199
817.79	83.8648
818.51	82.9494
819.60	85.8179
826.30	94.5902
828.27	0.0000
831.60	86.2789
831.96	90.0869
834.83	93.0494
836.80	0.0000
846.75	78.2664
848.13	81.1799
856.28	0.0000
856.80	96.8245
860.37	83.5308
867.32	81.8544
867.82	84.7630
871.10	82.9521
873.19	105.2301
874.81	92.7441
875.33	0.0000
876.40	72.5052
879.36	84.2122
880.27	86.1807
880.51	86.1898
881.50	81.3801
883.24	88.2266
884.67	84.3998
889.25	78.7308
896.60	76.0481
898.02	88.7746
899.00	94.6654
903.28	77.0956
911.07	82.3884
911.07	82.3884
911.07	82.3884
919.63	63.4830
920.93	75.6297
925.00	74.9656
925.24	73.9868
926.50	75.9974
935.52	73.3029
937.48	102.1094
944.10	82.5002
946.00	75.5980
949.00	75.6892
962.29	61.7833
964.01	85.8677
966.15	104.8459
968.20	140.4785
969.11	136.5146
969.11	136.5146
969.11	136.5146
977.42	81.5685
980.50	81.6641
983.50	85.7972
989.30	80.9294
996.32	91.2891
1001.03	67.0635
1001.68	64.0318
1004.76	93.6153
1021.30	0.0000
1024.50	0.0000
1034.80	87.4626
1036.00	84.4124
1037.82	74.1680
1038.57	87.5836
1038.76	0.0000
1045.16	76.4329
1046.59	79.5723
1048.07	77.5482

1050.47	92.1036
1050.47	92.1036
1062.04	108.0752
1063.62	93.5779
1076.63	74.1663
1077.35	77.3182
1078.86	78.4058
1085.78	54.4946
1099.22	85.2847
1112.02	88.8364
1112.84	77.9795
1115.52	81.6818
1120.29	98.6346
1120.29	98.6346
1120.29	98.6346
1120.29	98.6346
1120.51	120.0071
1121.28	114.5830
1124.00	0.0000
1129.67	107.9441
1131.51	0.0000
1147.95	0.0000
1167.94	86.2142
1173.22	76.6480
1175.09	92.8972
1177.93	109.2030
1189.05	89.2902
1204.90	87.8791
1205.75	0.0000
1213.00	99.3528
1221.42	103.3782
1230.97	139.5139
1235.34	93.4513
1236.41	0.0000
1238.25	89.7583
1246.25	76.7200
1260.41	0.0000
1271.85	66.8262
1274.45	73.5679
1274.54	73.5706
1291.56	53.7832
1298.22	0.0000
1312.09	52.1807
1325.50	42.6864
1325.50	42.6864
1332.49	57.3579
1333.61	54.4590
1360.21	36.2606
1362.66	0.0000
1365.15	34.3494
1368.21	45.1834
1368.53	0.0000
1376.25	34.4580
1384.27	46.3787
1394.10	53.4331
1395.20	49.4908
1407.95	45.6952
1434.06	28.0156
1436.60	37.0465
1457.56	0.0000
1460.81	45.8586
1489.15	27.4200
1509.49	38.7992
1596.49	32.3634
1620.62	21.0045
1678.03	0.0000
1691.02	21.3644
1691.02	21.3644
1706.46	0.0000
1750.46	0.0000
1764.49	16.9032
1764.49	16.9032
1764.49	16.9032
1764.49	16.9032
1770.23	22.0024
1771.40	62.8519
1791.20	0.0000
1808.65	16.3250

1836.01

11.5935

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1202015439

Total Uranium Activity	2.6812E+00	ug/g
Total Uranium Counting Unc.	2.9108E+00	ug/g
Total Uranium Tpu	1.4851E-06	ug/g
Total Uranium Mda	1.3650E+00	ug/g

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*****
*
*               GEL Laboratories LLC
*               2040 SAVAGE ROAD
*               CHARLESTON ,SC 29417
*               GROSS GAMMA REPORT
*
*****
*
*  BATCH ID      : 941636                SAMPLE ID   : G1202015439
*  ANALYST       : MXR1                  DETECTOR    : GAM13
*  SAMPLE DATE   : 7-JAN-2010 12:00:00.00  COUNT TIME   : 0 02:00:00.00
*  ANALYSIS DATE : 25-JAN-2010 11:12:23.53  SAMPLE ALQT  : 159.070 GRAM
*
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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 7.045E+00
GROSS GAMMA ERROR (pCi/GRAM )   : 1.606E+00
GROSS GAMMA MDA (pCi/GRAM )     : 2.424E+00
GROSS GAMMA DLC (pCi/GRAM )     : 1.179E+00

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VAX/VMS Nuclide Identification Report Generated 27-JAN-2010 10:20:46.21

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202015440.CNF;1
Sample date        : 18-JAN-2010 00:00:00 Acquisition date : 25-JAN-2010 11:12:57
Sample ID          : G1202015440      Sample quantity   : 1.55440E+02 GRAM
Detector name      : GAM16             Detector geometry: CAN
Elapsed live time  : 0 01:00:00.00     Elapsed real time: 0 01:00:02.03 0.1%
Energy tolerance   : 1.50000 keV       Analyst Initials : MXR1
Abundance limit    : 75.00000          Sensitivity      : 5.00000
Batch ID           : 941636            Detector SN#     :
Matrix Spike ID    :                   LCS ID           : 1032-A
*****

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Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	59.56	2943	840	1.00	119.31	114	10	8.17E-01	2.6	
2	0	76.10*	381	719	3.01	152.39	146	13	1.06E-01	15.4	
3	0	87.94	1499	620	0.98	176.08	170	10	4.16E-01	4.0	
4	0	93.07*	91	361	1.52	186.33	182	9	2.52E-02	40.5	
5	0	122.10	301	266	1.14	244.39	240	9	8.37E-02	11.4	
6	0	185.45*	72	326	0.91	371.10	367	10	1.99E-02	49.3	
7	0	238.47*	382	440	1.05	477.13	473	10	1.06E-01	11.5	
8	0	295.24*	144	222	1.25	590.68	586	10	4.00E-02	21.2	
9	0	338.70*	95	272	0.91	677.59	672	12	2.63E-02	36.5	
10	0	351.97*	198	240	1.24	704.12	699	12	5.51E-02	17.3	
11	0	510.19*	44	152	1.51	1020.53	1015	11	1.21E-02	61.1	
12	0	583.30*	122	148	1.39	1166.75	1161	11	3.40E-02	21.5	
13	0	609.27*	191	139	1.46	1218.67	1211	16	5.29E-02	15.8	
14	0	661.59	2449	114	1.48	1323.29	1319	12	6.80E-01	2.2	
15	0	728.11	43	124	1.08	1456.32	1449	13	1.18E-02	56.0	
16	0	911.06*	100	135	1.59	1822.12	1816	12	2.79E-02	25.3	
17	0	969.77*	133	86	1.32	1939.52	1934	14	3.69E-02	17.3	
18	0	1173.14	1958	75	1.68	2346.11	2339	16	5.44E-01	2.5	
19	0	1332.37	1693	5	1.96	2664.45	2655	19	4.70E-01	2.4	
20	0	1764.36*	30	3	1.59	3528.00	3522	12	8.20E-03	23.8	

Flag: "*" = Peak area was modified by background subtraction

```

Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202015440.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 18-JAN-2010 00:00:00 Acquisition date : 25-JAN-2010 11:12:57
Sample ID         : G1202015440 Sample quantity : 155.44 GRAM
Sample type       : SOLID Sample geometry :
Detector name     : GAMMA16 Detector geometry: CAN
Elapsed live time : 0 01:00:00.00 Elapsed real time: 0 01:00:02.03 0.1%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

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Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57	+	122.06	*	2.419E-01	5.858E-02	5.056E-02	4.202E-03	4.784
		136.48		-2.047E-02	2.718E-01	4.512E-01	4.102E-02	-0.045
CO-60	+	1173.22		6.517E+00	6.144E-01	9.538E-02	7.668E-03	68.335
	+	1332.49	*	6.294E+00	6.139E-01	6.453E-02	5.444E-03	97.525
CD-109	+	88.03	*	3.122E+01	3.922E+00	1.785E+00	1.720E-01	17.491
SN-126		64.28		-8.087E-01	6.682E-01	9.741E-01	1.419E-01	-0.830
	+	86.94		1.290E+01	5.465E+00	7.457E-01	3.099E-01	17.302
	+	87.57	*	3.104E+00	3.899E-01	1.782E-01	1.709E-02	17.413
BA-137M	+	661.65	*	5.467E+00	5.416E-01	1.000E-01	8.877E-03	54.659
CS-137	+	661.65	*	5.780E+00	5.734E-01	1.057E-01	9.401E-03	54.659
TL-208		277.35		2.889E-01	6.098E-01	9.975E-01	1.483E-01	0.290
	+	510.84		3.281E-01	4.031E-01	4.207E-01	5.319E-02	0.780
	+	583.14	*	2.629E-01	1.159E-01	1.028E-01	1.019E-02	2.556
		860.37		1.423E-01	5.564E-01	9.460E-01	9.471E-02	0.150
BI-211		72.87		-5.088E-01	4.111E+00	6.317E+00	5.135E-01	-0.081
	+	351.07	*	1.881E+00	6.822E-01	5.181E-01	5.665E-02	3.630
PB-212	+	74.81		3.275E+00	1.090E+00	7.134E-01	8.912E-02	4.591
	+	77.11		1.947E+00	6.218E-01	4.047E-01	3.438E-02	4.811
	+	87.30		1.435E+01	2.305E+00	8.266E-01	1.143E-01	17.366
	+	238.63	*	7.918E-01	2.049E-01	1.615E-01	1.912E-02	4.903
		300.09		1.387E+00	1.396E+00	2.104E+00	2.757E-01	0.659
PO-212	+	74.81		3.275E+00	1.090E+00	7.134E-01	8.912E-02	4.591
	+	77.11		1.947E+00	6.218E-01	4.047E-01	3.438E-02	4.811
	+	87.30		1.435E+01	2.305E+00	8.266E-01	1.143E-01	17.366
		115.19		7.035E-01	4.534E+00	7.668E+00	6.398E-01	0.092
	+	238.63	*	7.918E-01	2.049E-01	1.615E-01	1.912E-02	4.903
		300.09		1.387E+00	1.396E+00	2.104E+00	2.757E-01	0.659
BI-214	+	609.31	*	7.723E-01	2.572E-01	1.719E-01	1.818E-02	4.492
		1120.29		3.237E-01	5.375E-01	9.246E-01	9.926E-02	0.350
	+	1764.49		8.548E-01	4.129E-01	4.434E-01	3.670E-02	1.928
PB-214	+	74.81		5.643E+00	1.850E+00	1.229E+00	1.367E-01	4.591
	+	77.11		3.338E+00	1.096E+00	6.938E-01	7.917E-02	4.811
	+	87.30		2.459E+01	3.624E+00	1.416E+00	1.738E-01	17.366
		241.98		4.879E-01	6.277E-01	9.419E-01	1.167E-01	0.518

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-214	+	295.21		8.069E-01	3.585E-01	3.320E-01	4.432E-02	2.430
	+	351.92	*	6.542E-01	2.398E-01	1.806E-01	2.184E-02	3.622
	+	74.81		5.643E+00	1.850E+00	1.229E+00	1.367E-01	4.591
	+	77.11		3.338E+00	1.096E+00	6.938E-01	7.917E-02	4.811
	+	87.30		2.459E+01	3.624E+00	1.416E+00	1.738E-01	17.366
PO-216	+	241.98		4.879E-01	6.277E-01	9.419E-01	1.167E-01	0.518
	+	295.21		8.069E-01	3.585E-01	3.320E-01	4.432E-02	2.430
	+	351.92	*	6.542E-01	2.398E-01	1.806E-01	2.184E-02	3.622
	+	74.81		3.275E+00	1.090E+00	7.134E-01	8.912E-02	4.591
	+	77.11		1.947E+00	6.218E-01	4.047E-01	3.438E-02	4.811
PO-218	+	87.30		1.435E+01	2.305E+00	8.266E-01	1.143E-01	17.366
	+	238.63	*	7.918E-01	2.049E-01	1.615E-01	1.912E-02	4.903
	+	300.09		1.387E+00	1.396E+00	2.104E+00	2.757E-01	0.659
	+	74.81		5.643E+00	1.850E+00	1.229E+00	1.367E-01	4.591
	+	77.11		3.338E+00	1.096E+00	6.938E-01	7.917E-02	4.811
RA-226	+	87.30		2.459E+01	3.624E+00	1.416E+00	1.738E-01	17.366
	+	241.98		4.879E-01	6.277E-01	9.419E-01	1.167E-01	0.518
	+	295.21		8.069E-01	3.585E-01	3.320E-01	4.432E-02	2.430
	+	351.92	*	6.542E-01	2.398E-01	1.806E-01	2.184E-02	3.622
	+	609.31	*	7.723E-01	2.572E-01	1.719E-01	1.818E-02	4.492
AC-228	+	1120.29		3.237E-01	5.375E-01	9.246E-01	9.926E-02	0.350
	+	1764.49		8.548E-01	4.129E-01	4.434E-01	3.670E-02	1.928
	+	338.32		9.881E-01	8.315E-01	5.712E-01	2.388E-01	1.730
	+	911.07	*	9.583E-01	4.984E-01	4.424E-01	5.255E-02	2.166
	+	969.11		2.241E+00	9.400E-01	8.991E-01	2.120E-01	2.493
RA-228	+	338.32		9.881E-01	8.315E-01	5.712E-01	2.388E-01	1.730
	+	911.07	*	9.583E-01	4.984E-01	4.424E-01	5.255E-02	2.166
	+	969.11		2.241E+00	9.400E-01	8.991E-01	2.120E-01	2.493
	+	74.81		3.300E+00	1.054E+00	7.187E-01	6.013E-02	4.591
	+	77.11		1.961E+00	6.264E-01	4.077E-01	3.463E-02	4.811
TH-228	+	87.30		1.446E+01	1.817E+00	8.327E-01	7.958E-02	17.366
	+	238.63	*	7.977E-01	2.065E-01	1.627E-01	1.926E-02	4.903
	+	300.09		1.398E+00	1.626E+00	2.120E+00	1.268E+00	0.659
	+	609.31	*	7.723E-01	2.572E-01	1.719E-01	1.818E-02	4.492
	+	1120.29		3.237E-01	5.375E-01	9.246E-01	9.926E-02	0.350
TH-230	+	1764.49		8.548E-01	4.129E-01	4.434E-01	3.670E-02	1.928
	+	338.32		9.881E-01	7.296E-01	5.712E-01	6.234E-02	1.730
	+	911.07	*	9.583E-01	4.984E-01	4.424E-01	5.255E-02	2.166
	+	969.11		2.241E+00	9.400E-01	8.991E-01	2.120E-01	2.493
	+	609.31	*	7.723E-01	2.572E-01	1.719E-01	1.818E-02	4.492
U-234	+	1120.29		3.237E-01	5.375E-01	9.246E-01	9.926E-02	0.350
	+	1764.49		8.548E-01	4.129E-01	4.434E-01	3.670E-02	1.928
	+	86.50	*	9.114E+00	2.202E+00	5.292E-01	1.201E-01	17.223
	+	95.87		-8.649E-01	1.204E+00	1.723E+00	4.266E-01	-0.502
	+	59.54	*	1.343E+01	1.266E+00	4.461E-01	3.500E-02	30.110
AM-241	+	74.67	*	5.310E-01	1.696E-01	1.160E-01	9.604E-03	4.577
	+	86.72		3.418E+02	4.294E+01	1.980E+01	1.878E+00	17.263
	+	117.66		-2.209E+00	5.351E+00	7.848E+00	6.530E-01	-0.281
	+	142.18		-2.517E+01	2.303E+01	3.617E+01	3.084E+00	-0.696

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ANH-511	+	511.00	*	7.087E-02	8.688E-02	9.089E-02	8.644E-03	0.780

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-2.193E-01	5.252E-01	8.472E-01	8.570E-02	-0.259
NA-22		1274.54	*	-1.873E-02	5.032E-02	7.684E-02	6.394E-03	-0.244
NA-24		1368.53	*	-8.547E-05	5.032E-02	Half-Life too short		
AL-26		1129.67		1.869E+00	3.032E+00	5.217E+00	4.373E-01	0.358
		1808.65	*	-2.296E-02	4.454E-02	6.490E-02	5.307E-03	-0.354
K-40		1460.81	*	5.965E-01	5.543E-01	1.064E+00	9.349E-02	0.561
TI-44		67.85		5.527E-03	6.431E-02	1.004E-01	7.779E-03	0.055
		78.38	*	1.105E-01	5.107E-02	8.485E-02	7.307E-03	1.302
SC-46		889.25	*	-4.856E-02	7.634E-02	1.217E-01	1.150E-02	-0.399
		1120.51		4.794E-02	8.651E-02	1.484E-01	1.254E-02	0.323
V-48		944.10		4.490E-01	1.501E+00	2.541E+00	2.374E-01	0.177
		983.50	*	-2.245E-02	1.088E-01	1.778E-01	1.636E-02	-0.126
		1312.09		3.878E-02	6.252E-02	1.115E-01	9.364E-03	0.348
CR-51		320.08	*	-9.806E-02	5.097E-01	7.966E-01	9.313E-02	-0.123
MN-52		744.21		1.529E-02	1.559E-01	2.519E-01	2.313E-02	0.061
		848.13		-3.424E+00	5.223E+00	8.347E+00	7.856E-01	-0.410
		935.52		6.393E-02	2.272E-01	3.844E-01	3.601E-02	0.166
		1246.25		-6.270E-01	3.354E+00	5.313E+00	4.379E-01	-0.118
	+	1333.61		3.133E+02	3.056E+01	3.469E+01	2.927E+00	9.031
		1434.06	*	1.136E-01	1.007E-01	1.967E-01	1.678E-02	0.578
MN-54		834.83	*	2.917E-02	6.640E-02	1.147E-01	1.077E-02	0.254
CO-56		846.75	*	-8.474E-02	7.378E-02	1.131E-01	1.065E-02	-0.749
		977.42		8.479E-01	6.621E+00	1.009E+01	9.312E-01	0.084
		1037.82		-7.936E-02	6.083E-01	9.940E-01	9.344E-02	-0.080
		1175.09		2.460E+02	2.352E+01	2.907E+01	2.339E+00	8.461
		1238.25		1.308E-02	8.756E-02	1.451E-01	1.231E-02	0.090
		1360.21		-5.564E-01	8.626E-01	1.158E+00	9.811E-02	-0.480
		1771.40		-1.221E-01	2.661E-01	3.884E-01	3.209E-02	-0.314
CO-58		810.76	*	-2.261E-02	6.358E-02	1.041E-01	9.749E-03	-0.217
FE-59		142.65		-2.106E+00	3.139E+00	5.048E+00	4.310E-01	-0.417
		192.34		-1.041E+00	1.195E+00	1.852E+00	2.622E-01	-0.562
		1099.22	*	-8.867E-02	1.630E-01	2.560E-01	2.379E-02	-0.346
		1291.56		-3.330E-02	1.158E-01	1.779E-01	1.698E-02	-0.187
ZN-65		1115.52	*	-1.240E-02	1.755E-01	2.863E-01	2.432E-02	-0.043
GE-68		1077.35	*	9.410E-02	2.485E+00	4.100E+00	3.581E-01	0.023
AS-73		53.44	*	-1.088E+00	1.669E+00	2.551E+00	1.946E-01	-0.426
AS-74		595.88	*	5.508E-03	1.162E-01	1.901E-01	1.765E-02	0.029
		634.78		-1.516E-01	4.887E-01	7.744E-01	7.020E-02	-0.196
SE-75		66.05		5.784E-01	6.078E+00	9.514E+00	9.153E-01	0.061
		96.73		-1.782E-01	9.352E-01	1.407E+00	1.946E-01	-0.127
	+	121.11		1.269E+00	3.205E-01	3.953E-01	4.341E-02	3.210
		136.00		-2.150E-03	4.943E-02	8.218E-02	6.975E-03	-0.026
		198.60		3.116E-01	2.505E+00	4.110E+00	4.406E-01	0.076

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BR-77	+	264.65	*	3.748E-02	6.587E-02	1.088E-01	1.270E-02	0.344
		279.53		-1.190E-02	1.679E-01	2.671E-01	3.270E-02	-0.045
		303.91		9.516E-01	3.171E+00	5.127E+00	7.125E-01	0.186
		400.65		-1.089E-01	4.067E-01	6.713E-01	7.815E-02	-0.162
		87.88		7.284E+02	9.152E+01	9.613E+01	9.252E+00	7.578
		200.40		-5.787E+00	2.567E+01	4.141E+01	4.114E+00	-0.140
		239.00		1.358E+01	3.461E+00	4.385E+00	4.809E-01	3.096
		249.79		8.385E-01	1.092E+01	1.765E+01	1.986E+00	0.048
		281.68		8.749E-01	1.528E+01	2.448E+01	2.933E+00	0.036
		297.23		-3.493E+00	1.086E+01	1.498E+01	1.762E+00	-0.233
		303.76		-1.574E+01	3.157E+01	4.854E+01	5.657E+00	-0.324
		439.47		7.165E+00	2.971E+01	5.012E+01	4.730E+00	0.143
		484.57		1.211E+01	4.083E+01	6.888E+01	6.552E+00	0.176
		520.65	*	-1.307E+00	1.867E+00	2.914E+00	2.769E-01	-0.448
		574.64		-1.417E+01	3.703E+01	5.877E+01	5.507E+00	-0.241
SR-82		578.91		-3.628E-01	1.781E+01	2.544E+01	2.380E+00	-0.014
		585.48		5.676E+01	3.488E+01	5.669E+01	5.288E+00	1.001
		755.35		-4.202E+00	3.223E+01	5.100E+01	4.699E+00	-0.082
		817.79		-3.348E-01	2.697E+01	4.531E+01	4.242E+00	-0.007
		698.33		7.751E+00	4.864E+01	7.927E+01	7.153E+00	0.098
RB-83		776.49	*	-2.224E-01	5.845E-01	9.034E-01	8.376E-02	-0.246
		1395.20		-1.154E+01	1.145E+01	1.469E+01	1.250E+00	-0.786
		520.41	*	-7.424E-02	1.088E-01	1.701E-01	1.616E-02	-0.437
RB-84		529.64		-1.083E-01	1.619E-01	2.525E-01	2.396E-02	-0.429
		552.65		-1.352E-01	3.157E-01	5.011E-01	4.730E-02	-0.270
KR-85		881.50	*	7.308E-02	1.221E-01	2.120E-01	2.003E-02	0.345
SR-85		513.99	*	7.110E+00	1.339E+01	2.024E+01	1.925E+00	0.351
RB-86		513.99	*	3.363E-02	6.334E-02	9.575E-02	9.105E-03	0.351
Y-88		1076.63	*	8.773E-02	1.182E+00	1.955E+00	1.709E-01	0.045
ZR-88		898.02		-1.299E-02	8.190E-02	1.352E-01	1.284E-02	-0.096
		1836.01	*	3.459E-02	4.088E-02	7.965E-02	6.466E-03	0.434
Y-91		392.90	*	-4.197E-02	4.531E-02	7.151E-02	6.615E-03	-0.587
NB-94		1204.90	*	1.428E+01	2.083E+01	3.665E+01	2.980E+00	0.390
NB-95		702.63	*	2.565E-02	5.847E-02	9.722E-02	8.789E-03	0.264
		871.10		3.801E-02	6.736E-02	1.170E-01	1.104E-02	0.325
NB-95M		765.79	*	-4.422E-02	7.271E-02	1.105E-01	1.022E-02	-0.400
ZR-95		235.69	*	1.580E-01	1.805E-01	2.741E-01	3.260E-02	0.576
NB-97		724.18		6.155E-02	1.522E-01	2.235E-01	2.196E-02	0.275
		756.15	*	-1.438E-01	1.226E-01	1.752E-01	1.759E-02	-0.821
ZR-97		657.90	*	9.236E-05	1.226E-01	Half-Life too short		
		1024.50		8.341E-03	1.226E-01	Half-Life too short		
ZR-97		254.15		9.878E-04	1.226E-01	Half-Life too short		
		355.39		7.343E-04	1.226E-01	Half-Life too short		
		507.63	*	1.500E-03	1.226E-01	Half-Life too short		
		602.52		-3.044E-04	1.226E-01	Half-Life too short		
		1021.30		2.558E-03	1.226E-01	Half-Life too short		
		1147.95		1.298E-03	1.226E-01	Half-Life too short		
		1362.66		4.653E-03	1.226E-01	Half-Life too short		
		1750.46		5.064E-03	1.226E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
MO-99	140.51			-4.119E+00	5.010E+00	7.823E+00	2.163E+00	-0.527
	181.06			-1.098E+00	3.646E+00	5.229E+00	9.770E-01	-0.210
	366.43			-1.055E+01	1.939E+01	3.163E+01	3.199E+00	-0.334
	739.58	*		5.643E-01	2.821E+00	4.599E+00	7.129E-01	0.123
	778.00			4.603E+00	9.378E+00	1.554E+01	1.441E+00	0.296
TC-99M	140.51	*		-2.582E+01	9.378E+00	Half-Life too short		
RH-101	127.23			-3.619E-02	3.920E-02	6.237E-02	5.193E-03	-0.580
	198.01	*		1.178E-02	4.824E-02	7.960E-02	7.859E-03	0.148
	325.23			1.761E-01	3.867E-01	6.268E-01	7.038E-02	0.281
RH-102	418.52			-1.229E-01	5.240E-01	8.649E-01	8.101E-02	-0.142
	475.06	*		1.623E-02	5.247E-02	8.854E-02	8.416E-03	0.183
	631.29			4.072E-02	9.791E-02	1.643E-01	1.493E-02	0.248
	697.49			6.076E-02	1.335E-01	2.223E-01	2.005E-02	0.273
	766.84			1.437E-01	1.978E-01	3.324E-01	3.073E-02	0.432
	1046.59			-9.575E-02	2.364E-01	3.776E-01	3.365E-02	-0.254
	1112.84			3.389E-01	4.404E-01	7.625E-01	6.483E-02	0.444
RU-103	497.08	*		-3.959E-02	6.190E-02	9.747E-02	1.435E-02	-0.406
	610.33			7.285E+00	2.613E+00	2.784E+00	4.732E-01	2.617
RH-106	511.85			-3.351E-02	3.385E-01	5.461E-01	5.193E-02	-0.061
	621.84	*		1.951E-01	5.067E-01	8.477E-01	1.162E-01	0.230
	1050.47			4.884E+00	4.475E+00	7.947E+00	7.064E-01	0.615
RU-106	511.85			-3.351E-02	3.385E-01	5.461E-01	5.193E-02	-0.061
	621.84	*		1.951E-01	5.063E-01	8.477E-01	7.752E-02	0.230
	1050.47			4.884E+00	4.475E+00	7.947E+00	7.064E-01	0.615
AG-108M	433.93	*		6.342E-03	6.379E-02	1.069E-01	1.041E-02	0.059
	614.37			4.922E-02	6.454E-02	9.962E-02	9.470E-03	0.494
	722.95			-1.929E-02	7.645E-02	1.038E-01	9.786E-03	-0.186
AG-110M	657.75	*		7.990E-02	6.471E-02	1.030E-01	9.431E-03	0.775
	677.61			2.606E-01	5.070E-01	8.516E-01	7.815E-02	0.306
	706.67			-3.561E-01	3.584E-01	5.267E-01	4.888E-02	-0.676
	763.93			-2.236E-01	2.950E-01	4.413E-01	4.177E-02	-0.507
	884.67			-4.666E-02	1.010E-01	1.633E-01	1.584E-02	-0.286
	937.48			6.831E-02	2.419E-01	4.095E-01	3.952E-02	0.167
	1384.27			-1.349E-02	1.724E-01	2.730E-01	2.387E-02	-0.049
IN-111	171.28			2.273E-01	2.082E-01	3.593E-01	3.303E-02	0.633
	245.39	*		-3.115E-02	2.556E-01	4.091E-01	4.556E-02	-0.076
IN-113M	391.69	*		-7.859E-02	7.018E-02	1.095E-01	1.040E-02	-0.718
SN-113	391.69	*		-7.859E-02	7.018E-02	1.095E-01	1.040E-02	-0.718
IN-114M	190.27	*		7.076E-02	2.481E-01	3.696E-01	3.574E-02	0.191
CD-115	260.90			-2.679E+00	1.844E+01	2.934E+01	3.386E+00	-0.091
	492.35			2.507E+00	5.505E+00	9.372E+00	8.918E-01	0.267
	527.90	*		-4.897E-02	1.680E+00	2.759E+00	2.619E-01	-0.018
SN-117M	156.02			-1.021E+00	2.028E+00	3.269E+00	2.883E-01	-0.312
	158.56	*		2.436E-02	4.857E-02	8.217E-02	7.298E-03	0.296
SB-122	563.90	*		3.444E-01	4.540E-01	7.834E-01	7.370E-02	0.440
	692.80			1.203E+00	1.057E+01	1.719E+01	1.547E+00	0.070
I-123	159.00	*		3.108E-04	1.057E+01	Half-Life too short		
	528.96			3.132E-03	1.057E+01	Half-Life too short		
TE-123M	159.00	*		2.440E-02	3.591E-02	6.118E-02	5.472E-03	0.399

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
I-124	602.71	*	-3.426E-02	3.563E-01	5.039E-01	4.660E-02	-0.068	
	722.78		-4.926E-01	2.243E+00	3.058E+00	2.786E-01	-0.161	
	1325.50		-8.134E+00	1.363E+01	1.603E+01	1.350E+00	-0.507	
	1376.25		2.007E+01	1.132E+01	2.255E+01	1.914E+00	0.890	
	1509.49		-2.555E+00	4.565E+00	6.718E+00	5.745E-01	-0.380	
SB-124	1691.02		-8.667E-03	1.334E+00	2.205E+00	1.854E-01	-0.004	
	602.71		-6.503E-03	6.763E-02	9.565E-02	8.848E-03	-0.068	
	645.85		2.282E-01	7.176E-01	1.194E+00	1.133E-01	0.191	
	709.31		-1.061E+00	4.445E+00	7.009E+00	6.353E-01	-0.151	
	713.82		-2.382E-01	2.549E+00	4.064E+00	5.028E-01	-0.059	
	722.78		-1.356E-01	6.173E-01	8.414E-01	7.815E-02	-0.161	
	968.20		2.448E+00	6.404E+00	9.522E+00	8.820E-01	0.257	
	1045.16		-2.930E+00	4.658E+00	7.300E+00	6.511E-01	-0.401	
	1325.50		-2.391E+00	4.006E+00	4.712E+00	3.968E-01	-0.507	
	1368.21		-1.023E+00	1.734E+00	2.423E+00	3.243E-01	-0.422	
SB-125	1436.60		-2.835E-01	3.819E+00	6.326E+00	5.399E-01	-0.045	
	1691.02	*	-5.625E-04	8.656E-02	1.431E-01	1.253E-02	-0.004	
	427.89	*	6.166E-02	1.621E-01	2.762E-01	2.639E-02	0.223	
	463.38		6.812E-02	5.132E-01	8.582E-01	8.674E-02	0.079	
	600.56		-1.096E-02	3.079E-01	5.005E-01	4.932E-02	-0.022	
TE-125M	635.90		2.194E-01	4.710E-01	7.903E-01	7.684E-02	0.278	
	109.28	*	2.387E+00	1.003E+01	1.708E+01	1.736E+00	0.140	
I-126	388.63		6.303E-02	2.322E-01	3.956E-01	3.702E-02	0.159	
	666.33	*	-1.365E-01	2.245E-01	2.937E-01	2.612E-02	-0.465	
SB-126	753.82		1.832E+00	1.702E+00	2.952E+00	2.719E-01	0.621	
	223.80		1.855E+00	3.950E+00	6.547E+00	6.915E-01	0.283	
	278.60		1.322E+00	2.576E+00	4.227E+00	5.070E-01	0.313	
	296.50	+	5.232E+00	2.301E+00	2.739E+00	3.224E-01	1.911	
	414.70		1.959E-02	8.406E-02	1.424E-01	1.332E-02	0.138	
	415.30		1.424E+00	7.135E+00	1.207E+01	1.129E+00	0.118	
	555.20		1.393E+00	4.249E+00	7.129E+00	6.725E-01	0.195	
	573.80		5.843E-01	1.076E+00	1.829E+00	1.714E-01	0.320	
	593.00		-4.222E-03	9.928E-01	1.619E+00	1.505E-01	-0.003	
	656.30		-1.473E-01	4.514E+00	6.362E+00	5.672E-01	-0.023	
	666.33		-5.605E-02	9.218E-02	1.206E-01	1.072E-02	-0.465	
	675.00		-2.522E-01	2.133E+00	3.410E+00	3.045E-01	-0.074	
	695.00		-5.626E-02	9.074E-02	1.388E-01	1.251E-02	-0.405	
	697.00		1.287E-01	3.070E-01	5.100E-01	4.599E-02	0.252	
	720.50	*	5.518E-02	1.549E-01	2.481E-01	2.259E-02	0.222	
SB-127	856.80		-5.251E-01	5.898E-01	9.228E-01	8.695E-02	-0.569	
	989.30		2.608E-01	1.708E+00	2.861E+00	2.627E-01	0.091	
	1034.80		-2.238E+00	1.192E+01	1.940E+01	1.741E+00	-0.115	
	1213.00		1.939E+00	3.480E+00	6.057E+00	4.939E-01	0.320	
	61.10		2.875E+02	3.936E+01	6.054E+01	4.868E+00	4.748	
	252.40		2.949E-01	1.705E+00	2.762E+00	1.166E+00	0.107	
	290.80		5.616E+00	8.926E+00	1.327E+01	1.641E+00	0.423	
	411.60		-4.869E+00	5.171E+00	8.098E+00	1.207E+00	-0.601	
	444.90		-1.530E+00	4.623E+00	7.551E+00	8.744E-01	-0.203	
	473.00		6.389E-01	7.834E-01	1.353E+00	1.621E-01	0.472	

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
XE-127		543.00		-2.398E+00	6.623E+00	1.056E+01	1.434E+00	-0.227
		603.60		-1.481E+00	5.590E+00	7.766E+00	8.841E-01	-0.191
		685.20	*	3.306E-01	6.151E-01	1.031E+00	1.020E-01	0.320
		698.50		5.771E-01	6.814E+00	1.104E+01	1.635E+00	0.052
		722.20		-7.576E+00	1.446E+01	1.896E+01	1.851E+00	-0.400
		783.80		1.534E+00	1.609E+00	2.753E+00	3.117E-01	0.557
		57.60		2.011E+01	1.345E+01	2.031E+01	1.468E+00	0.990
		145.22		2.283E-01	7.946E-01	1.336E+00	1.147E-01	0.171
		172.10		9.338E-02	1.399E-01	2.374E-01	2.187E-02	0.393
		202.84	*	1.320E-02	5.842E-02	9.627E-02	9.628E-03	0.137
I-131		374.96		-1.540E-01	2.893E-01	4.725E-01	4.648E-02	-0.326
		80.18		-1.327E+00	3.259E+00	4.910E+00	4.320E-01	-0.270
		284.30		-2.011E-01	1.251E+00	1.977E+00	2.421E-01	-0.102
		364.48	*	-1.013E-01	9.359E-02	1.468E-01	1.547E-02	-0.690
TE-132		636.97		-4.218E-01	1.414E+00	2.239E+00	2.121E-01	-0.188
		722.89		-1.664E+00	6.648E+00	9.024E+00	8.234E-01	-0.184
		49.72		7.724E+00	7.439E+00	1.213E+01	1.057E+00	0.637
		111.76		-2.557E+00	7.273E+00	1.203E+01	1.083E+00	-0.212
BA-133		116.30		-2.706E+00	6.830E+00	1.125E+01	1.006E+00	-0.241
		228.16	*	1.538E-01	2.082E-01	3.472E-01	5.531E-02	0.443
		53.15		-6.686E+00	7.703E+00	1.166E+01	8.935E-01	-0.573
		79.62		-6.738E-01	1.781E+00	2.685E+00	4.105E-01	-0.251
I-133		81.00		-7.394E-02	1.387E-01	2.070E-01	3.315E-02	-0.357
		276.40		1.176E-01	6.078E-01	9.814E-01	1.633E-01	0.120
		302.84		-2.971E-01	2.486E-01	3.599E-01	5.557E-02	-0.825
		356.01	*	4.006E-02	7.463E-02	1.156E-01	1.671E-02	0.346
		383.85		-1.166E-01	4.945E-01	8.203E-01	1.086E-01	-0.142
	+	510.53		1.562E-03	4.945E-01	Half-Life	too short	
		529.87	*	-1.380E-05	4.945E-01	Half-Life	too short	
		706.58		-1.619E-03	4.945E-01	Half-Life	too short	
		856.28		-1.704E-03	4.945E-01	Half-Life	too short	
		875.33		-7.050E-04	4.945E-01	Half-Life	too short	
CS-134		1236.41		1.500E-03	4.945E-01	Half-Life	too short	
		1298.22		4.069E-04	4.945E-01	Half-Life	too short	
		475.35		4.742E-01	3.436E+00	5.741E+00	5.457E-01	0.083
		563.23		5.154E-01	5.732E-01	9.966E-01	9.452E-02	0.517
		569.32		-2.465E-02	3.137E-01	5.102E-01	4.846E-02	-0.048
		604.70		5.456E-03	6.142E-02	8.834E-02	8.179E-03	0.062
		795.84	*	2.465E-02	7.348E-02	1.269E-01	1.189E-02	0.194
		801.93		7.185E-01	6.559E-01	1.193E+00	1.119E-01	0.602
CS-135		1038.57		-1.137E-01	7.902E+00	1.302E+01	1.166E+00	-0.009
		1167.94		1.179E+00	4.239E+00	6.231E+00	5.037E-01	0.189
		1365.15		-1.222E-01	1.279E+00	2.019E+00	1.791E-01	-0.061
		268.24	*	-8.456E-04	2.492E-01	3.990E-01	5.089E-02	-0.002
I-135		288.45		-1.237E+02	2.492E-01	Half-Life	too short	
		417.63		-1.995E+00	2.492E-01	Half-Life	too short	
		546.56		2.090E+00	2.492E-01	Half-Life	too short	
		836.80		-8.503E+01	2.492E-01	Half-Life	too short	
		1038.76		-4.409E+01	2.492E-01	Half-Life	too short	

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	1124.00			-3.065E+02	2.492E-01	Half-Life	too short	
	1131.51			5.032E+01	2.492E-01	Half-Life	too short	
	1260.41	*		-1.277E+01	2.492E-01	Half-Life	too short	
	1457.56			-8.904E+00	2.492E-01	Half-Life	too short	
	1678.03			-1.426E+01	2.492E-01	Half-Life	too short	
	1706.46			2.534E+00	2.492E-01	Half-Life	too short	
	1791.20			-5.309E+01	2.492E-01	Half-Life	too short	
CS-136	66.91			1.023E+00	7.061E-01	1.151E+00	1.718E-01	0.889
	86.29			4.448E+00	1.272E+00	2.060E+00	2.762E-01	2.159
	153.22			5.950E-01	5.818E-01	1.004E+00	9.793E-02	0.592
	163.89			-5.374E-01	9.539E-01	1.525E+00	1.526E-01	-0.352
	176.55			1.103E-01	3.410E-01	5.689E-01	5.564E-02	0.194
	273.65			2.277E-02	4.812E-01	7.717E-01	9.480E-02	0.030
	340.57			2.108E-01	1.377E-01	2.259E-01	2.497E-02	0.933
	818.51			1.118E-02	9.360E-02	1.587E-01	1.486E-02	0.070
	1048.07	*		-5.358E-02	1.490E-01	2.388E-01	2.210E-02	-0.224
	1235.34			-7.697E-02	4.232E-01	6.716E-01	7.759E-02	-0.115
CE-139	165.85	*		8.915E-03	3.746E-02	6.248E-02	5.667E-03	0.143
BA-140	162.64			1.371E-01	6.444E-01	1.079E+00	1.021E-01	0.127
	304.84			6.457E-01	1.331E+00	2.157E+00	6.277E-01	0.299
	423.70			-6.525E-02	2.263E+00	3.775E+00	1.232E+00	-0.017
	537.32	*		7.171E-02	2.693E-01	4.496E-01	1.500E-01	0.160
LA-140	328.77			-3.594E-02	3.412E-01	5.357E-01	6.174E-02	-0.067
	432.53			-5.925E-01	2.621E+00	4.320E+00	4.234E-01	-0.137
	487.03			-8.880E-03	1.507E-01	2.483E-01	2.483E-02	-0.036
	751.79			5.912E-01	2.014E+00	3.301E+00	3.324E-01	0.179
	815.85			1.554E-01	3.944E-01	6.810E-01	7.002E-02	0.228
	867.82			-1.435E+00	1.843E+00	2.908E+00	2.865E-01	-0.494
	919.63			1.158E+00	4.183E+00	7.086E+00	8.005E-01	0.163
	925.24			1.420E+00	1.666E+00	2.915E+00	2.884E-01	0.487
	1596.49	*		-1.754E-02	6.242E-02	9.768E-02	8.320E-03	-0.180
CE-141	145.44	*		8.436E-03	7.027E-02	1.173E-01	1.026E-02	0.072
CE-143	57.37			3.510E+01	5.580E+01	8.205E+01	7.032E+00	0.428
	231.56			-8.194E+01	8.384E+01	1.215E+02	3.911E+01	-0.675
	293.26	*		2.313E+00	5.157E+00	7.509E+00	1.718E+00	0.308
	350.59			3.120E+02	1.462E+02	1.292E+02	4.083E+01	2.414
	490.36			-6.521E+01	1.020E+02	1.577E+02	5.015E+01	-0.414
	664.57			3.392E+02	1.289E+02	1.301E+02	4.209E+01	2.607
	721.93			-3.535E+01	5.721E+01	7.290E+01	2.135E+01	-0.485
CE-144	80.11			-1.177E+00	2.852E+00	4.296E+00	3.772E-01	-0.274
	133.54	*		-5.834E-02	2.660E-01	4.388E-01	6.776E-02	-0.133
PM-144	476.78			-1.119E-01	1.212E-01	1.885E-01	1.930E-02	-0.594
	618.01			-2.952E-02	5.015E-02	7.740E-02	7.268E-03	-0.381
	696.49	*		3.867E-02	5.864E-02	9.908E-02	8.935E-03	0.390
	778.57			3.331E+00	4.207E+00	7.123E+00	6.609E-01	0.468
PR-144	696.49	*		2.610E+00	3.958E+00	6.687E+00	6.030E-01	0.390
	1489.15			9.595E+00	1.605E+01	2.929E+01	2.505E+00	0.328
PM-146	453.90	*		1.281E-02	8.137E-02	1.365E-01	1.558E-02	0.094
	633.02			1.735E+00	2.546E+00	4.202E+00	1.575E+00	0.413

---- Non-Identified Nuclides ----

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ND-147		735.90		-4.276E-02	2.482E-01	3.914E-01	1.126E-01	-0.109
		747.13		-3.968E-02	1.515E-01	2.366E-01	3.406E-02	-0.168
		91.11		1.993E-01	2.581E-01	3.346E-01	3.344E-02	0.596
		319.41		8.229E-01	3.281E+00	5.277E+00	5.991E-01	0.156
		439.89		1.614E+00	6.899E+00	1.164E+01	1.098E+00	0.139
PM-149		531.02	*	-4.068E-01	5.676E-01	8.775E-01	1.357E-01	-0.464
EU-152	+	285.90	*	3.838E+00	1.306E+01	2.118E+01	3.722E+00	0.181
		121.78		7.152E-01	1.767E-01	2.348E-01	2.267E-02	3.046
		244.69		-8.269E-01	5.531E-01	8.096E-01	9.001E-02	-1.021
		344.27	*	2.493E-02	1.622E-01	2.456E-01	2.744E-02	0.102
		443.98		-9.760E-01	1.787E+00	2.881E+00	2.722E-01	-0.339
		778.89		4.477E-01	4.970E-01	8.471E-01	7.859E-02	0.529
		867.32		-7.366E-01	1.661E+00	2.692E+00	2.540E-01	-0.274
		964.01		6.891E-01	6.763E-01	1.058E+00	9.814E-02	0.651
		1085.78		-1.263E-01	7.494E-01	1.214E+00	1.054E-01	-0.104
		1112.02		1.937E-01	6.325E-01	1.061E+00	9.029E-02	0.183
		1407.95		3.073E-03	1.710E-01	2.760E-01	2.350E-02	0.011
		69.67		-9.007E-01	2.024E+00	3.416E+00	2.691E-01	-0.264
		83.37		1.523E+01	1.998E+01	3.173E+01	2.892E+00	0.480
		97.43	*	1.636E-02	9.966E-02	1.533E-01	1.362E-02	0.107
EU-154	+	103.18		1.181E-01	1.272E-01	2.229E-01	1.920E-02	0.530
		123.07		5.018E-01	1.271E-01	1.517E-01	1.688E-02	3.307
		247.94		2.389E-02	5.732E-01	9.249E-01	1.251E-01	0.026
		591.81		-1.644E-01	9.714E-01	1.562E+00	1.903E-01	-0.105
		723.30		-6.782E-02	3.200E-01	4.366E-01	4.356E-02	-0.155
EU-155		756.87		-1.151E+00	1.413E+00	2.091E+00	2.596E-01	-0.551
		873.19		5.346E-01	5.856E-01	1.035E+00	1.328E-01	0.517
		996.32		-5.673E-01	7.452E-01	1.151E+00	2.075E-01	-0.493
		1004.76		-2.363E-01	4.252E-01	6.722E-01	8.074E-02	-0.352
		1274.45	*	-7.443E-02	1.444E-01	2.152E-01	2.384E-02	-0.346
		48.70		-7.841E+00	4.870E+00	7.089E+00	5.824E-01	-1.106
		60.01		4.357E+02	3.841E+01	3.744E+01	2.674E+00	11.636
		86.54		3.727E+00	4.705E-01	3.460E-01	3.303E-02	10.771
		105.31	*	1.269E-01	1.318E-01	2.311E-01	1.999E-02	0.549
		86.79		9.277E+00	1.165E+00	1.017E+00	9.657E-02	9.122
TB-160	+	197.04		-2.210E-01	7.729E-01	1.244E+00	1.225E-01	-0.178
		215.65		-2.844E-01	1.031E+00	1.650E+00	1.707E-01	-0.172
		298.57		1.090E-01	1.821E-01	2.689E-01	3.157E-02	0.405
		879.36	*	1.934E-01	2.619E-01	4.586E-01	4.332E-02	0.422
		962.29		6.566E-01	1.064E+00	1.787E+00	1.658E-01	0.368
HO-166M		966.15		2.104E-01	4.448E-01	6.669E-01	6.182E-02	0.316
		1177.93		-1.695E-01	5.726E-01	7.716E-01	6.215E-02	-0.220
		1271.85		1.980E-01	7.498E-01	1.264E+00	1.050E-01	0.157
		80.57		2.907E-02	3.674E-01	5.674E-01	5.007E-02	0.051
		184.41		7.808E-02	7.738E-02	8.092E-02	7.703E-03	0.965
		280.46		-9.188E-02	1.394E-01	2.134E-01	2.560E-02	-0.431
		410.95		-3.064E-01	4.150E-01	6.642E-01	6.201E-02	-0.461
		711.68	*	1.016E-01	1.032E-01	1.784E-01	1.618E-02	0.569
		752.31		2.169E-01	4.843E-01	8.034E-01	7.396E-02	0.270

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TM-171		810.29		-1.658E-02	1.036E-01	1.722E-01	1.609E-02	-0.096
		51.35		3.763E+01	6.258E+01	1.004E+02	7.910E+00	0.375
		52.39		-3.157E+01	3.312E+01	4.994E+01	3.871E+00	-0.632
+ 59.40		59.40		2.281E+03	2.011E+02	2.077E+02	1.475E+01	10.978
		66.72	*	4.610E+01	3.733E+01	6.140E+01	4.704E+00	0.751
		88.36		7.361E+00	9.248E-01	9.489E-01	9.110E-02	7.758
LU-176		201.83		2.453E-02	4.104E-02	6.877E-02	6.859E-03	0.357
		306.84	*	-1.218E-02	3.893E-02	6.048E-02	7.015E-03	-0.201
		401.10		-8.982E-02	1.124E+01	1.885E+01	1.751E+00	-0.005
LU-177		112.95		3.747E-01	9.197E-01	1.574E+00	1.318E-01	0.238
		208.36	*	2.952E-01	7.457E-01	1.235E+00	1.253E-01	0.239
		52.97		-3.320E+00	3.371E+00	5.077E+00	3.900E-01	-0.654
LU-177M		54.07		-5.545E-02	1.808E+00	2.829E+00	2.138E-01	-0.020
		61.30		1.034E+01	2.757E+00	4.483E+00	3.252E-01	2.307
		121.62		3.553E+00	8.602E-01	1.161E+00	9.637E-02	3.060
+ 147.16		147.16		-3.921E-01	8.247E-01	1.336E+00	1.153E-01	-0.293
		171.86		5.429E-01	6.380E-01	1.090E+00	1.004E-01	0.498
		218.09		2.939E-01	1.215E+00	1.996E+00	2.077E-01	0.147
268.79		268.79		1.377E-01	1.259E+00	2.029E+00	2.383E-01	0.068
		319.02		-1.734E-01	4.073E-01	6.260E-01	7.112E-02	-0.277
		367.43		5.439E-02	1.428E+00	2.414E+00	2.434E-01	0.023
HF-181		413.65	*	8.674E-02	2.860E-01	4.865E-01	4.547E-02	0.178
		56.28		2.304E+00	2.030E+00	3.045E+00	2.235E-01	0.757
		57.53		1.314E+00	1.143E+00	1.710E+00	1.237E-01	0.769
65.20		65.20		-2.510E+00	1.168E+00	1.595E+00	1.205E-01	-1.574
		133.02		3.906E-02	7.345E-02	1.254E-01	1.052E-02	0.311
		136.25		-3.417E-02	5.359E-01	8.901E-01	7.504E-02	-0.038
345.85		345.85		6.742E-02	2.661E-01	4.425E-01	4.743E-02	0.152
		482.03	*	-3.705E-03	6.447E-02	1.064E-01	1.012E-02	-0.035
		56.28		9.795E-01	8.622E-01	1.293E+00	9.492E-02	0.757
W-181		57.53		5.534E-01	4.857E-01	7.261E-01	5.253E-02	0.762
		65.20	*	-1.058E+00	4.926E-01	6.726E-01	5.080E-02	-1.574
		67.75		2.355E-02	1.471E-01	2.305E-01	1.783E-02	0.102
TA-182		100.10		-1.157E-01	2.020E-01	3.319E-01	2.903E-02	-0.349
		152.43		-1.194E-01	4.390E-01	7.178E-01	6.271E-02	-0.166
		222.10		-2.638E-01	4.997E-01	7.865E-01	8.271E-02	-0.335
1001.68		1001.68		3.971E+00	3.799E+00	6.750E+00	6.162E-01	0.588
		1121.28		1.337E-01	2.431E-01	4.170E-01	3.521E-02	0.321
		1189.05		-2.521E-03	3.793E-01	6.183E-01	5.000E-02	-0.004
1221.42		1221.42	*	-1.664E-01	1.606E-01	2.085E-01	1.705E-02	-0.798
		1230.97		3.219E-01	4.944E-01	8.699E-01	7.136E-02	0.370
		57.98		3.083E+00	4.925E-01	8.233E-01	5.928E-02	3.745
RE-183		59.32		8.728E+00	7.694E-01	7.974E-01	5.667E-02	10.945
		67.20		3.746E-01	2.476E-01	4.111E-01	3.164E-02	0.911
		162.32	*	6.481E-02	1.322E-01	2.242E-01	2.012E-02	0.289
208.81		208.81		1.236E+00	1.375E+00	2.320E+00	2.358E-01	0.533
		291.72		7.774E-01	1.471E+00	2.170E+00	2.570E-01	0.358
		57.98		1.188E+01	1.897E+00	3.172E+00	2.284E-01	3.745
RE-184		59.32		3.360E+01	2.962E+00	3.070E+00	2.181E-01	10.945

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
OS-185	+	67.20		1.443E+00	9.536E-01	1.583E+00	1.218E-01	0.911
		161.27		-1.666E-01	4.565E-01	7.425E-01	6.645E-02	-0.224
		216.55		-1.750E-02	3.870E-01	6.268E-01	6.499E-02	-0.028
		252.85	*	-1.232E-02	3.527E-01	5.661E-01	6.415E-02	-0.022
		318.01		-4.219E-01	7.157E-01	1.087E+00	1.237E-01	-0.388
		792.07		3.562E-01	1.494E+00	2.563E+00	2.386E-01	0.139
		903.28		1.806E-01	1.956E+00	3.194E+00	3.018E-01	0.057
		920.93		-1.653E-01	9.895E-01	1.631E+00	1.534E-01	-0.101
		59.72		2.427E+01	2.140E+00	2.155E+00	1.534E-01	11.260
		61.14		2.681E+00	3.831E-01	6.177E-01	4.473E-02	4.340
		69.30		-1.103E-01	3.508E-01	5.952E-01	4.673E-02	-0.185
		592.07		-1.009E-01	3.793E+00	6.174E+00	5.742E-01	-0.016
		646.12	*	1.824E-02	6.379E-02	1.058E-01	9.514E-03	0.172
		717.42		-4.264E-01	1.387E+00	2.167E+00	1.970E-01	-0.197
		874.81		-5.262E-01	1.063E+00	1.711E+00	1.616E-01	-0.308
RE-188	*	880.27		1.718E+00	1.470E+00	2.637E+00	2.491E-01	0.652
		155.03		3.591E-02	2.124E-01	3.542E-01	3.116E-02	0.101
		477.96		-7.441E-01	5.061E+00	8.308E+00	7.899E-01	-0.090
W-188		633.10		3.289E+00	4.633E+00	7.895E+00	7.165E-01	0.417
		63.58		1.726E+01	6.802E+01	1.008E+02	7.489E+00	0.171
IR-192	+	227.08		2.327E+00	1.825E+01	2.974E+01	3.167E+00	0.078
		290.67	*	6.940E+00	1.138E+01	1.689E+01	2.004E+00	0.411
		295.96		5.726E-01	2.519E-01	3.163E-01	3.741E-02	1.811
		308.46		-1.463E-01	1.449E-01	2.130E-01	2.471E-02	-0.687
		316.51	*	-2.542E-02	5.305E-02	8.129E-02	9.290E-03	-0.313
AU-195		468.07		8.026E-02	1.133E-01	1.951E-01	1.963E-02	0.411
		604.41		8.772E-02	7.796E-01	1.124E+00	1.510E-01	0.078
		612.46		3.840E-01	1.133E+00	1.671E+00	1.739E-01	0.230
		65.12		-5.209E-01	2.311E-01	3.129E-01	2.361E-02	-1.665
		66.83		1.612E-01	1.213E-01	2.002E-01	1.535E-02	0.806
		75.70	+	1.669E+00	5.331E-01	4.527E-01	3.788E-02	3.687
TL-200	*	98.88		2.710E-01	2.585E-01	4.559E-01	4.015E-02	0.594
		129.76		3.026E+00	3.548E+00	6.137E+00	5.124E-01	0.493
		367.94	*	2.693E+00	5.568E+00	9.628E+00	9.691E-01	0.280
		579.30		1.887E+01	4.932E+01	7.325E+01	6.851E+00	0.258
TL-201		828.27		-2.202E+01	7.293E+01	1.195E+02	1.121E+01	-0.184
		1205.75		-1.252E+01	2.296E+01	3.482E+01	2.832E+00	-0.360
		68.90		3.613E-01	1.038E+00	1.804E+00	1.411E-01	0.200
TL-202	*	70.82		2.725E-01	6.400E-01	1.010E+00	8.049E-02	0.270
		80.30		-4.777E-01	1.200E+00	1.808E+00	1.591E-01	-0.264
		135.34		7.610E-02	5.796E+00	9.665E+00	8.135E-01	0.008
		167.43		3.356E-01	1.594E+00	2.654E+00	2.416E-01	0.126
HG-203	*	68.90		1.206E-01	3.467E-01	6.024E-01	4.712E-02	0.200
		70.82		9.075E-02	2.131E-01	3.364E-01	2.680E-02	0.270
		80.30		-1.591E-01	3.997E-01	6.024E-01	5.299E-02	-0.264
		439.56		6.193E-03	8.759E-02	1.465E-01	1.383E-02	0.042
		70.83		5.459E-01	1.274E+00	2.009E+00	2.653E-01	0.272
		72.87		-9.028E-02	7.296E-01	1.121E+00	1.445E-01	-0.081
		82.60		7.046E-01	1.378E+00	2.164E+00	3.031E-01	0.326

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity Key (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BI-207		279.20	* -3.027E-03	5.912E-02	9.418E-02	1.148E-02	-0.032
		72.80	-2.904E-02	2.400E-01	3.689E-01	2.996E-02	-0.079
	+	74.97	9.527E-01	3.043E-01	2.489E-01	2.067E-02	3.827
		84.90	1.922E-01	2.714E-01	4.289E-01	3.981E-02	0.448
		569.67	7.838E-03	4.789E-02	7.932E-02	7.446E-03	0.099
TL-207		1063.62	* 9.525E-03	1.061E-01	1.759E-01	1.551E-02	0.054
		1770.23	-1.384E+00	7.936E-01	8.246E-01	6.815E-02	-1.679
		81.07	-1.720E-01	3.054E-01	4.563E-01	4.049E-02	-0.377
		83.78	7.226E-02	1.783E-01	2.788E-01	2.553E-02	0.259
		94.90	6.487E-02	2.832E-01	4.378E-01	3.958E-02	0.148
	+	122.32	1.705E+01	4.168E+00	5.586E+00	5.002E-01	3.053
		144.24	6.860E-01	8.840E-01	1.518E+00	1.456E-01	0.452
		154.21	2.380E-01	5.334E-01	9.003E-01	8.663E-02	0.264
		269.46	1.091E-01	2.967E-01	4.842E-01	5.760E-02	0.225
		323.87	* 2.312E-02	1.173E+00	1.857E+00	3.553E-01	0.012
PO-209	+	338.28	4.126E+00	3.068E+00	3.209E+00	4.497E-01	1.286
		445.03	-1.321E+00	4.291E+00	7.017E+00	8.908E-01	-0.188
		260.50	-8.610E-02	1.473E+01	2.363E+01	2.725E+00	-0.004
		262.80	-2.560E+01	4.268E+01	6.591E+01	7.640E+00	-0.388
		896.60	* -4.080E+00	1.572E+01	2.579E+01	2.439E+00	-0.158
BI-210		46.50	* -9.657E-01	6.584E+00	1.034E+01	9.642E-01	-0.093
PB-210		46.50	* -9.657E-01	6.584E+00	1.034E+01	9.642E-01	-0.093
PO-210		46.50	* -9.657E-01	6.584E+00	1.034E+01	8.734E-01	-0.093
PB-211		404.84	* -4.014E-01	1.572E+00	2.562E+00	1.608E+00	-0.157
BI-212		427.08	5.777E-01	3.647E+00	6.114E+00	3.806E+00	0.094
		831.96	3.607E-01	2.315E+00	3.910E+00	2.454E+00	0.092
	+	727.18	* 7.840E-01	8.826E-01	9.673E-01	1.011E-01	0.810
		785.46	1.512E-01	2.971E+00	5.030E+00	4.674E-01	0.030
		1620.62	-2.198E-01	1.567E+00	2.533E+00	2.152E-01	-0.087
PO-215		81.07	-1.720E-01	3.054E-01	4.563E-01	4.049E-02	-0.377
		83.78	7.226E-02	1.783E-01	2.788E-01	2.553E-02	0.259
		94.90	6.487E-02	2.832E-01	4.378E-01	3.958E-02	0.148
	+	122.32	1.705E+01	4.168E+00	5.586E+00	5.002E-01	3.053
		144.24	6.860E-01	8.840E-01	1.518E+00	1.456E-01	0.452
		154.21	2.380E-01	5.334E-01	9.003E-01	8.663E-02	0.264
		269.46	1.091E-01	2.967E-01	4.842E-01	5.760E-02	0.225
		323.87	* 2.312E-02	1.173E+00	1.857E+00	3.553E-01	0.012
	+	338.28	4.126E+00	3.068E+00	3.209E+00	4.497E-01	1.286
		445.03	-1.321E+00	4.291E+00	7.017E+00	8.908E-01	-0.188
RN-219		271.23	1.345E-01	3.826E-01	6.237E-01	8.167E-02	0.216
		401.81	* -5.074E-01	7.095E-01	1.135E+00	1.750E-01	-0.447
RN-220		549.76	* -1.672E+01	4.491E+01	7.164E+01	6.769E+00	-0.233
RA-223		81.07	-1.720E-01	3.054E-01	4.563E-01	4.049E-02	-0.377
		83.78	7.226E-02	1.783E-01	2.788E-01	2.553E-02	0.259
		94.90	6.487E-02	2.832E-01	4.378E-01	3.958E-02	0.148
	+	122.32	1.705E+01	4.168E+00	5.586E+00	5.002E-01	3.053
		144.24	6.860E-01	8.840E-01	1.518E+00	1.456E-01	0.452
		154.21	2.380E-01	5.334E-01	9.003E-01	8.663E-02	0.264
		269.46	1.091E-01	2.967E-01	4.842E-01	5.760E-02	0.225

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-224 AC-227	+	323.87	*	2.312E-02	1.173E+00	1.857E+00	3.553E-01	0.012
		338.28		4.126E+00	3.068E+00	3.209E+00	4.497E-01	1.286
		445.03		-1.321E+00	4.291E+00	7.017E+00	8.908E-01	-0.188
		240.98	*	2.184E+00	1.211E+00	1.897E+00	2.090E-01	1.152
	+	79.80		-9.639E-01	2.263E+00	3.394E+00	7.317E-01	-0.284
		236.00		4.133E-01	3.631E-01	5.571E-01	7.763E-02	0.742
		256.20	*	-2.970E-01	6.262E-01	9.766E-01	1.668E-01	-0.304
		286.10		9.515E-01	2.411E+00	3.931E+00	6.117E-01	0.242
TH-227	+	299.80		2.470E+00	2.626E+00	3.913E+00	7.517E-01	0.631
		304.40		2.283E-01	2.957E+00	4.719E+00	9.451E-01	0.048
		334.20		-1.813E+00	4.128E+00	5.969E+00	1.229E+00	-0.304
		79.80		-9.639E-01	2.263E+00	3.394E+00	7.410E-01	-0.284
	+	94.00		4.732E+00	3.975E+00	4.060E+00	8.922E-01	1.166
		236.00		4.133E-01	3.625E-01	5.571E-01	7.198E-02	0.742
		256.20	*	-2.970E-01	6.269E-01	9.766E-01	1.910E-01	-0.304
		286.10		9.515E-01	2.590E+00	3.931E+00	3.959E+00	0.242
TH-229	+	299.80		2.470E+00	2.626E+00	3.913E+00	7.517E-01	0.631
		304.40		2.283E-01	2.957E+00	4.719E+00	9.451E-01	0.048
		334.20		-1.813E+00	4.128E+00	5.969E+00	1.229E+00	-0.304
		85.43		2.734E-01	2.660E-01	4.252E-01	3.972E-02	0.643
	+	88.47		4.237E+00	5.324E-01	5.436E-01	5.212E-02	7.795
		100.00		-1.128E-01	2.202E-01	3.630E-01	3.177E-02	-0.311
		193.63	*	6.066E-02	7.279E-01	1.195E+00	1.166E-01	0.051
		210.97		1.023E-01	1.149E+00	1.877E+00	1.918E-01	0.054
PA-231	+	283.67	*	-1.363E-01	2.456E+00	3.906E+00	6.756E-01	-0.035
		301.29		1.058E+00	9.344E-01	1.561E+00	2.274E-01	0.678
TH-231	+	81.07		-1.720E-01	3.054E-01	4.563E-01	4.049E-02	-0.377
		83.78		7.226E-02	1.783E-01	2.788E-01	2.553E-02	0.259
		94.90		6.487E-02	2.832E-01	4.378E-01	3.958E-02	0.148
		122.32		1.705E+01	4.168E+00	5.586E+00	5.002E-01	3.053
U-231	+	144.24		6.860E-01	8.840E-01	1.518E+00	1.456E-01	0.452
		154.21		2.380E-01	5.334E-01	9.003E-01	8.663E-02	0.264
		269.46		1.091E-01	2.967E-01	4.842E-01	5.760E-02	0.225
		323.87	*	2.312E-02	1.173E+00	1.857E+00	3.553E-01	0.012
	+	338.28		4.126E+00	3.068E+00	3.209E+00	4.497E-01	1.286
		445.03		-1.321E+00	4.291E+00	7.017E+00	8.908E-01	-0.188
		84.21		1.324E+00	2.185E+00	3.442E+00	3.169E-01	0.385
		92.29		1.318E+00	1.075E+00	1.237E+00	1.142E-01	1.066
PA-233	+	95.87	*	-2.764E-01	3.794E-01	5.505E-01	4.942E-02	-0.502
		108.00		-3.640E-01	6.912E-01	1.134E+00	9.607E-02	-0.321
		75.28		2.781E+01	9.559E+00	7.260E+00	1.103E+00	3.831
		86.59		6.076E+01	1.722E+01	5.862E+00	1.589E+00	10.365
PA-234	+	300.12		7.079E-01	7.246E-01	1.086E+00	1.830E-01	0.652
		311.98	*	-4.867E-02	1.060E-01	1.629E-01	1.904E-02	-0.299
		340.50		1.561E+00	1.060E+00	1.646E+00	4.071E-01	0.948
		398.62		1.548E+00	3.550E+00	6.055E+00	1.626E+00	0.256
	+	415.76		1.807E-01	2.905E+00	4.875E+00	1.066E+00	0.037
		63.00		2.498E+00	2.122E+00	3.281E+00	4.873E-01	0.761
		94.67		2.289E-01	2.004E-01	3.232E-01	4.108E-02	0.708

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	98.44			1.319E-01	1.289E-01	1.892E-01	1.056E-01	0.697
	99.86			-2.034E-01	5.577E-01	9.266E-01	8.114E-02	-0.220
	111.00			-7.372E-03	2.275E-01	3.822E-01	4.562E-02	-0.019
	131.20			-1.496E-01	1.403E-01	2.218E-01	1.855E-02	-0.675
	152.70			1.383E-01	4.337E-01	7.279E-01	1.245E-01	0.190
+	186.00			2.811E+00	2.910E+00	3.136E+00	9.875E-01	0.896
	226.40			-1.748E-01	6.311E-01	1.007E+00	1.469E-01	-0.174
	227.20			6.978E-02	6.650E-01	1.082E+00	1.153E-01	0.064
	248.90			3.102E-01	1.284E+00	2.091E+00	4.923E-01	0.148
	293.70			2.053E+00	1.324E+00	1.990E+00	3.801E-01	1.031
	369.80			1.546E-01	1.458E+00	2.471E+00	5.527E-01	0.063
	568.70			2.897E-01	1.605E+00	2.660E+00	2.499E-01	0.109
	569.50			-5.181E-02	4.359E-01	7.067E-01	6.635E-02	-0.073
	574.00			1.360E+00	2.378E+00	4.050E+00	3.796E-01	0.336
	699.00			1.576E-01	1.274E+00	2.070E+00	3.988E-01	0.076
	706.10			-1.529E+00	1.943E+00	2.725E+00	1.217E+00	-0.561
	733.00			7.545E-02	7.416E-01	1.050E+00	2.352E-01	0.072
	742.81			1.908E+00	2.666E+00	4.002E+00	2.693E+00	0.477
	796.30			2.526E-02	1.452E+00	2.450E+00	6.684E-01	0.010
	805.60			-1.061E+00	1.767E+00	2.790E+00	8.608E-01	-0.380
	819.60			-3.299E-01	2.302E+00	3.824E+00	1.461E+00	-0.086
	826.30			-1.095E-01	1.576E+00	2.634E+00	1.182E+00	-0.042
	831.60			5.165E-01	1.193E+00	2.045E+00	6.149E-01	0.253
	876.40			-1.324E+00	2.160E+00	2.646E+00	2.722E+00	-0.501
	880.51			7.327E-01	5.606E-01	1.013E+00	9.567E-02	0.723
	883.24			-2.579E-01	6.254E-01	9.750E-01	6.565E-01	-0.265
	899.00			3.127E-01	1.686E+00	2.841E+00	1.247E+00	0.110
	925.00			1.258E+00	2.652E+00	4.544E+00	4.270E-01	0.277
	926.50			-7.725E-02	3.900E-01	6.403E-01	1.636E-01	-0.121
	946.00		*	5.515E-01	6.940E-01	1.197E+00	2.287E-01	0.461
	949.00			-4.779E-01	1.007E+00	1.620E+00	1.511E-01	-0.295
	980.50			1.314E+00	1.597E+00	2.785E+00	2.566E-01	0.472
PA-234M	1394.10			-4.190E-02	1.444E+00	2.310E+00	1.503E+00	-0.018
	766.42			1.157E+01	2.132E+01	3.415E+01	1.736E+01	0.339
TH-234	1001.03		*	5.932E+00	9.239E+00	1.600E+01	1.666E+00	0.371
	63.29		*	2.117E+00	1.809E+00	2.780E+00	4.849E-01	0.762
+	92.38			1.225E+00	1.018E+00	1.150E+00	2.114E-01	1.065
U-235	89.95			5.563E-01	1.885E+00	2.346E+00	7.294E-01	0.237
+	93.35			1.472E+00	1.264E+00	1.382E+00	3.896E-01	1.065
	105.00			1.483E+00	1.390E+00	2.331E+00	6.953E-01	0.636
	143.76		*	2.846E-01	2.761E-01	4.730E-01	8.267E-02	0.602
	163.35			-9.139E-02	6.265E-01	1.024E+00	1.972E-01	-0.089
+	185.71			1.041E-01	1.032E-01	1.160E-01	1.108E-02	0.897
	205.31			-3.212E-02	7.459E-01	1.212E+00	2.398E-01	-0.026
NP-236	94.67			1.746E-01	1.513E-01	2.453E-01	2.222E-02	0.712
	98.44			9.971E-02	8.050E-02	1.430E-01	1.263E-02	0.697
	111.00			-5.576E-03	1.721E-01	2.891E-01	2.430E-02	-0.019
	160.31		*	-1.622E-02	1.064E-01	1.744E-01	1.556E-02	-0.093
U-238	63.29		*	2.117E+00	1.809E+00	2.780E+00	4.849E-01	0.762

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NP-239	+	92.38		1.225E+00	9.991E-01	1.150E+00	1.061E-01	1.065
		99.55		2.004E-02	1.864E-01	3.167E-01	2.778E-02	0.063
		117.00	*	-1.054E-01	2.538E-01	3.976E-01	3.311E-02	-0.265
		209.75		1.422E+00	1.153E+00	1.968E+00	2.004E-01	0.723
		228.18		2.562E-01	3.468E-01	5.805E-01	6.199E-02	0.441
CM-243		277.60		1.273E-01	2.925E-01	4.781E-01	5.722E-02	0.266
		334.30		-1.108E+00	2.329E+00	3.367E+00	3.709E-01	-0.329
		99.55		2.061E-02	1.917E-01	3.257E-01	2.858E-02	0.063
		103.76	*	1.044E-01	1.207E-01	2.109E-01	1.813E-02	0.495
		117.00		-1.083E-01	2.609E-01	4.089E-01	3.404E-02	-0.265
AM-246		209.75		1.401E+00	1.136E+00	1.939E+00	1.975E-01	0.723
		228.18		2.588E-01	3.502E-01	5.863E-01	6.261E-02	0.441
		277.60		1.282E-01	2.947E-01	4.817E-01	5.766E-02	0.266
		798.80		-2.901E-01	2.362E-01	3.576E-01	3.334E-02	-0.811
		1036.00		-8.376E-02	6.140E-01	1.003E+00	8.992E-02	-0.084
CM-247		1062.04		-5.077E-01	4.853E-01	7.323E-01	6.462E-02	-0.693
		1078.86	*	5.907E-02	2.776E-01	4.642E-01	4.050E-02	0.127
		278.00		3.413E-01	1.219E+00	1.976E+00	2.368E-01	0.173
		287.40		-5.763E-01	1.937E+00	3.030E+00	3.608E-01	-0.190
		402.60	*	-2.650E-02	6.146E-02	1.004E-01	9.336E-03	-0.264
CF-249		252.85		-4.770E-02	1.366E+00	2.192E+00	2.484E-01	-0.022
		333.44		-1.140E-01	3.094E-01	4.516E-01	4.984E-02	-0.252
CF-251		387.95	*	6.147E-02	6.849E-02	1.201E-01	1.127E-02	0.512
		176.60	*	6.084E-02	1.764E-01	2.945E-01	2.745E-02	0.207
		227.00		7.797E-02	5.915E-01	9.639E-01	1.026E-01	0.081
		285.00		9.711E-01	2.737E+00	4.457E+00	5.321E-01	0.218

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]G1202015440      *
* Acquisition date   : 25-JAN-2010 11:12:57 Detector SN#      :              *
* Detector ID        : GAM16                      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 01:00:02.03              Half life ratio : 8.000      *
*****
*
*                                     SAMPLE DATA                            *
*
* Sample date        : 18-JAN-2010 00:00:00 Nuclide Library : SOLID           *
* Sample ID          : G1202015440              Analyst initials: MXR1         *
* Batch Number       : 941636                    Sample Quantity : 1.5544E+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)	
CO-57	2.419E-01	5.741E-02	5.445E-02	0.000E+00
CO-60	6.294E+00	6.017E-01	6.525E-02	0.000E+00
CD-109	3.122E+01	3.843E+00	1.938E+00	0.000E+00
SN-126	3.104E+00	3.821E-01	1.935E-01	0.000E+00
BA-137M	5.467E+00	5.308E-01	1.031E-01	0.000E+00
CS-137	5.780E+00	5.619E-01	1.090E-01	0.000E+00
TL-208	2.629E-01	1.136E-01	1.064E-01	0.000E+00
BI-211	1.881E+00	6.686E-01	5.432E-01	0.000E+00
PB-212	7.918E-01	2.008E-01	1.710E-01	0.000E+00
PO-212	7.918E-01	2.008E-01	1.710E-01	0.000E+00
BI-214	7.723E-01	2.520E-01	1.776E-01	0.000E+00
PB-214	6.542E-01	2.350E-01	1.894E-01	0.000E+00
PO-214	6.542E-01	2.350E-01	1.894E-01	0.000E+00
PO-216	7.918E-01	2.008E-01	1.710E-01	0.000E+00
PO-218	6.542E-01	2.350E-01	1.894E-01	0.000E+00
RA-226	7.723E-01	2.520E-01	1.776E-01	0.000E+00
AC-228	9.583E-01	4.885E-01	4.521E-01	0.000E+00
RA-228	9.583E-01	4.885E-01	4.521E-01	0.000E+00
TH-228	7.977E-01	2.023E-01	1.723E-01	0.000E+00
TH-230	7.723E-01	2.520E-01	1.776E-01	0.000E+00
TH-232	9.583E-01	4.885E-01	4.521E-01	0.000E+00
U-234	7.723E-01	2.520E-01	1.776E-01	0.000E+00
NP-237	9.114E+00	2.158E+00	5.748E-01	0.000E+00
AM-241	1.343E+01	1.241E+00	4.889E-01	0.000E+00
AM-243	5.310E-01	1.662E-01	1.265E-01	0.000E+00
ANH-511	7.087E-02	8.514E-02	9.435E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error) Ided	MDA (pCi/GRAM)	
BE-7	-2.193E-01	5.147E-01	8.810E-01	0.000E+00 NOT IDENT.

NA-22	-1.873E-02	4.932E-02	7.780E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.598E+02	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-2.296E-02	4.365E-02	6.506E-02	0.000E+00	NOT IDENT.
K-40	5.965E-01	5.432E-01	1.073E+00	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.005E-02	9.239E-02	0.000E+00	NOT IDENT.
SC-46	-4.856E-02	7.481E-02	1.244E-01	0.000E+00	NOT IDENT.
V-48	-2.245E-02	1.067E-01	1.813E-01	0.000E+00	NOT IDENT.
CR-51	-9.806E-02	4.995E-01	8.372E-01	0.000E+00	NOT IDENT.
MN-52	1.136E-01	9.866E-02	1.985E-01	0.000E+00	FAIL ABUN
MN-54	2.917E-02	6.507E-02	1.175E-01	0.000E+00	NOT IDENT.
CO-56	-8.474E-02	7.230E-02	1.158E-01	0.000E+00	NOT IDENT.
CO-58	-2.261E-02	6.231E-02	1.067E-01	0.000E+00	NOT IDENT.
FE-59	-8.867E-02	1.598E-01	2.602E-01	0.000E+00	NOT IDENT.
ZN-65	-1.240E-02	1.720E-01	2.910E-01	0.000E+00	NOT IDENT.
GE-68	9.410E-02	2.436E+00	4.170E+00	0.000E+00	NOT IDENT.
AS-73	-1.088E+00	1.636E+00	2.803E+00	0.000E+00	NOT IDENT.
AS-74	5.508E-03	1.139E-01	1.965E-01	0.000E+00	NOT IDENT.
SE-75	3.748E-02	6.455E-02	1.149E-01	0.000E+00	FAIL ABUN
BR-77	-1.307E+00	1.830E+00	3.023E+00	0.000E+00	FAIL ABUN
SR-82	-2.224E-01	5.728E-01	9.273E-01	0.000E+00	NOT IDENT.
RB-83	-7.424E-02	1.066E-01	1.764E-01	0.000E+00	NOT IDENT.
RB-84	7.308E-02	1.197E-01	2.169E-01	0.000E+00	NOT IDENT.
KR-85	7.110E+00	1.312E+01	2.101E+01	0.000E+00	NOT IDENT.
SR-85	3.363E-02	6.207E-02	9.938E-02	0.000E+00	NOT IDENT.
RB-86	8.773E-02	1.158E+00	1.989E+00	0.000E+00	NOT IDENT.
Y-88	3.459E-02	4.006E-02	7.981E-02	0.000E+00	NOT IDENT.
ZR-88	-4.197E-02	4.441E-02	7.475E-02	0.000E+00	NOT IDENT.
Y-91	1.428E+01	2.041E+01	3.716E+01	0.000E+00	NOT IDENT.
NB-94	2.565E-02	5.730E-02	1.001E-01	0.000E+00	NOT IDENT.
NB-95	-4.422E-02	7.125E-02	1.135E-01	0.000E+00	NOT IDENT.
NB-95M	1.580E-01	1.769E-01	2.904E-01	0.000E+00	NOT IDENT.
ZR-95	-1.438E-01	1.201E-01	1.800E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.006E+02	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.698E+03	0.000E+00	0.000E+00	SHORT HLIF
MO-99	5.643E-01	2.764E+00	4.727E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	3.024E+07	0.000E+00	0.000E+00	SHORT HLIF
RH-101	1.178E-02	4.727E-02	8.469E-02	0.000E+00	NOT IDENT.
RH-102	1.623E-02	5.142E-02	9.209E-02	0.000E+00	NOT IDENT.
RU-103	-3.959E-02	6.066E-02	1.013E-01	0.000E+00	FAIL ABUN
RH-106	1.951E-01	4.965E-01	8.753E-01	0.000E+00	NOT IDENT.
RU-106	1.951E-01	4.961E-01	8.753E-01	0.000E+00	NOT IDENT.
AG-108M	6.342E-03	6.251E-02	1.115E-01	0.000E+00	NOT IDENT.
AG-110M	7.990E-02	6.342E-02	1.062E-01	0.000E+00	NOT IDENT.
IN-111	-3.115E-02	2.505E-01	4.329E-01	0.000E+00	NOT IDENT.
IN-113M	-7.859E-02	6.878E-02	1.145E-01	0.000E+00	NOT IDENT.
SN-113	-7.859E-02	6.878E-02	1.145E-01	0.000E+00	NOT IDENT.
IN-114M	7.076E-02	2.431E-01	3.936E-01	0.000E+00	NOT IDENT.
CD-115	-4.897E-02	1.647E+00	2.861E+00	0.000E+00	NOT IDENT.
SN-117M	2.436E-02	4.760E-02	8.792E-02	0.000E+00	NOT IDENT.
SB-122	3.444E-01	4.449E-01	8.111E-01	0.000E+00	NOT IDENT.
I-123	0.000E+00	4.482E+02	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	2.440E-02	3.519E-02	6.546E-02	0.000E+00	NOT IDENT.
I-124	-3.426E-02	3.492E-01	5.207E-01	0.000E+00	NOT IDENT.
SB-124	-5.625E-04	8.483E-02	1.437E-01	0.000E+00	NOT IDENT.
SB-125	6.166E-02	1.589E-01	2.881E-01	0.000E+00	NOT IDENT.
TE-125M	2.387E+00	9.833E+00	1.845E+01	0.000E+00	NOT IDENT.
I-126	-1.365E-01	2.200E-01	3.027E-01	0.000E+00	NOT IDENT.
SB-126	5.518E-02	1.518E-01	2.552E-01	0.000E+00	FAIL ABUN
SB-127	3.306E-01	6.028E-01	1.062E+00	0.000E+00	NOT IDENT.
XE-127	1.320E-02	5.725E-02	1.024E-01	0.000E+00	NOT IDENT.
I-131	-1.013E-01	9.172E-02	1.537E-01	0.000E+00	NOT IDENT.
TE-132	1.538E-01	2.040E-01	3.681E-01	0.000E+00	NOT IDENT.
BA-133	4.006E-02	7.313E-02	1.212E-01	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.076E+01	0.000E+00	0.000E+00	SHORT HLIF
CS-134	2.465E-02	7.201E-02	1.301E-01	0.000E+00	NOT IDENT.
CS-135	-8.456E-04	2.442E-01	4.213E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.304E+07	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-5.358E-02	1.460E-01	2.431E-01	0.000E+00	NOT IDENT.
CE-139	8.915E-03	3.671E-02	6.678E-02	0.000E+00	NOT IDENT.
BA-140	7.171E-02	2.639E-01	4.661E-01	0.000E+00	NOT IDENT.
LA-140	-1.754E-02	6.117E-02	9.827E-02	0.000E+00	NOT IDENT.
CE-141	8.436E-03	6.887E-02	1.258E-01	0.000E+00	NOT IDENT.
CE-143	2.313E+00	5.054E+00	7.910E+00	0.000E+00	FAIL ABUN
CE-144	-5.834E-02	2.606E-01	4.716E-01	0.000E+00	NOT IDENT.
PM-144	3.867E-02	5.747E-02	1.020E-01	0.000E+00	NOT IDENT.
PR-144	2.610E+00	3.878E+00	6.884E+00	0.000E+00	NOT IDENT.
PM-146	1.281E-02	7.974E-02	1.421E-01	0.000E+00	NOT IDENT.
ND-147	-4.068E-01	5.562E-01	9.099E-01	0.000E+00	NOT IDENT.

PM-149	3.838E+00	1.280E+01	2.232E+01	0.000E+00	NOT IDENT.
EU-152	2.493E-02	1.590E-01	2.576E-01	0.000E+00	FAIL ABUN
GD-153	1.636E-02	9.767E-02	1.660E-01	0.000E+00	NOT IDENT.
EU-154	-7.443E-02	1.415E-01	2.178E-01	0.000E+00	FAIL ABUN
EU-155	1.269E-01	1.292E-01	2.498E-01	0.000E+00	FAIL ABUN
TB-160	1.934E-01	2.566E-01	4.691E-01	0.000E+00	FAIL ABUN
HO-166M	1.016E-01	1.011E-01	1.835E-01	0.000E+00	FAIL ABUN
TM-171	4.610E+01	3.658E+01	6.711E+01	0.000E+00	FAIL ABUN
LU-176	-1.218E-02	3.815E-02	6.363E-02	0.000E+00	FAIL ABUN
LU-177	2.952E-01	7.308E-01	1.312E+00	0.000E+00	NOT IDENT.
LU-177M	8.674E-02	2.802E-01	5.079E-01	0.000E+00	FAIL ABUN
HF-181	-3.705E-03	6.318E-02	1.106E-01	0.000E+00	NOT IDENT.
W-181	-1.058E+00	4.827E-01	7.356E-01	0.000E+00	NOT IDENT.
TA-182	-1.664E-01	1.574E-01	2.114E-01	0.000E+00	NOT IDENT.
RE-183	6.481E-02	1.296E-01	2.397E-01	0.000E+00	FAIL ABUN
RE-184	-1.232E-02	3.457E-01	5.985E-01	0.000E+00	FAIL ABUN
OS-185	1.824E-02	6.252E-02	1.092E-01	0.000E+00	FAIL ABUN
RE-188	3.591E-02	2.081E-01	3.792E-01	0.000E+00	NOT IDENT.
W-188	6.940E+00	1.115E+01	1.780E+01	0.000E+00	NOT IDENT.
IR-192	-2.542E-02	5.199E-02	8.546E-02	0.000E+00	FAIL ABUN
AU-195	2.710E-01	2.533E-01	4.936E-01	0.000E+00	FAIL ABUN
TL-200	2.693E+00	5.457E+00	1.008E+01	0.000E+00	NOT IDENT.
TL-201	3.356E-01	1.562E+00	2.836E+00	0.000E+00	NOT IDENT.
TL-202	6.193E-03	8.584E-02	1.527E-01	0.000E+00	NOT IDENT.
HG-203	-3.027E-03	5.794E-02	9.933E-02	0.000E+00	NOT IDENT.
BI-207	9.525E-03	1.040E-01	1.790E-01	0.000E+00	FAIL ABUN
TL-207	2.312E-02	1.150E+00	1.951E+00	0.000E+00	FAIL ABUN
PO-209	-4.080E+00	1.541E+01	2.636E+01	0.000E+00	NOT IDENT.
BI-210	-9.657E-01	6.452E+00	1.140E+01	0.000E+00	NOT IDENT.
PB-210	-9.657E-01	6.452E+00	1.140E+01	0.000E+00	NOT IDENT.
PO-210	-9.657E-01	6.452E+00	1.140E+01	0.000E+00	NOT IDENT.
PB-211	-4.014E-01	1.540E+00	2.676E+00	0.000E+00	NOT IDENT.
BI-212	7.840E-01	8.649E-01	9.946E-01	0.000E+00	FAIL ABUN
PO-215	2.312E-02	1.150E+00	1.951E+00	0.000E+00	FAIL ABUN
RN-219	-5.074E-01	6.953E-01	1.186E+00	0.000E+00	NOT IDENT.
RN-220	-1.672E+01	4.401E+01	7.423E+01	0.000E+00	NOT IDENT.
RA-223	2.312E-02	1.150E+00	1.951E+00	0.000E+00	FAIL ABUN
RA-224	0.000E+00	1.187E+00	2.008E+00	0.000E+00	NOT IDENT.
AC-227	-2.970E-01	6.137E-01	1.032E+00	0.000E+00	NOT IDENT.
TH-227	-2.970E-01	6.143E-01	1.032E+00	0.000E+00	FAIL ABUN
TH-229	6.066E-02	7.134E-01	1.272E+00	0.000E+00	FAIL ABUN
PA-231	-1.363E-01	2.407E+00	4.118E+00	0.000E+00	NOT IDENT.
TH-231	2.312E-02	1.150E+00	1.951E+00	0.000E+00	FAIL ABUN
U-231	-2.764E-01	3.718E-01	5.964E-01	0.000E+00	FAIL ABUN
PA-233	-4.867E-02	1.039E-01	1.713E-01	0.000E+00	FAIL ABUN
PA-234	5.515E-01	6.801E-01	1.222E+00	0.000E+00	FAIL ABUN
PA-234M	5.932E+00	9.054E+00	1.631E+01	0.000E+00	NOT IDENT.
TH-234	2.117E+00	1.773E+00	3.043E+00	0.000E+00	FAIL ABUN
U-235	2.846E-01	2.705E-01	5.074E-01	0.000E+00	FAIL ABUN
NP-236	-1.622E-02	1.042E-01	1.865E-01	0.000E+00	NOT IDENT.
U-238	2.117E+00	1.773E+00	3.043E+00	0.000E+00	FAIL ABUN
NP-239	-1.054E-01	2.487E-01	4.287E-01	0.000E+00	NOT IDENT.
CM-243	1.044E-01	1.183E-01	2.280E-01	0.000E+00	NOT IDENT.
AM-246	5.907E-02	2.720E-01	4.721E-01	0.000E+00	NOT IDENT.
CM-247	-2.650E-02	6.023E-02	1.049E-01	0.000E+00	NOT IDENT.
CF-249	6.147E-02	6.712E-02	1.256E-01	0.000E+00	NOT IDENT.
CF-251	6.084E-02	1.728E-01	3.142E-01	0.000E+00	NOT IDENT.

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*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                           *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202015440.CNF;1
Sample date        : 18-JAN-2010 00:00:00 Acquisition date : 25-JAN-2010 11:12:57
Sample ID          : G1202015440          Sample quantity  : 1.55440E+02 GRAM
Detector name      : GAM16                Detector geometry: CAN
Elapsed live time  : 0 01:00:00.00        Elapsed real time: 0 01:00:02.03 0.1%
Energy tolerance  : 1.50000 keV           Analyst Initials : MXR1
Abundance limit   : 75.00000              Sensitivity       : 5.00000
Batch ID          : 941636                Detector SN#      :
Matrix Spike ID   :                      LCS ID          : 1032-A
*****

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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
CO-57	122.06	301	85.51*	7.172E+00	2.373E-01	2.419E-01	24.22
	136.48	-----	10.60	7.049E+00	-----	Line Not Found	-----
CO-60	1173.22	1958	100.00	1.455E+00	6.500E+00	6.517E+00	9.43
	1332.49	1693	100.00*	1.303E+00	6.277E+00	6.294E+00	9.75
CD-109	88.03	1499	3.72*	6.306E+00	3.087E+01	3.122E+01	12.56
SN-126	64.28	-----	9.60	3.681E+00	-----	Line Not Found	-----
	86.94	1499	8.90	6.306E+00	1.290E+01	1.290E+01	42.36
	87.57	1499	37.00*	6.306E+00	3.104E+00	3.104E+00	12.56
BA-137M	661.65	2449	89.98*	2.405E+00	5.465E+00	5.467E+00	9.91
CS-137	661.65	2449	85.12*	2.405E+00	5.777E+00	5.780E+00	9.92
TL-208	277.35	-----	6.80	4.695E+00	-----	Line Not Found	-----
	510.84	44	21.60	2.967E+00	3.281E-01	3.281E-01	122.87
	583.14	122	84.20*	2.667E+00	2.629E-01	2.629E-01	44.10
	860.37	-----	12.46	1.920E+00	-----	Line Not Found	-----
BI-211	72.87	-----	1.27	4.872E+00	-----	Line Not Found	-----
	351.07	198	12.94*	3.939E+00	1.881E+00	1.881E+00	36.27
PB-212	74.81	381	10.70	5.252E+00	3.275E+00	3.275E+00	33.28
	77.11	381	18.00	5.252E+00	1.947E+00	1.947E+00	31.94
	87.30	1499	8.00	6.306E+00	1.435E+01	1.435E+01	16.06
	238.63	382	44.60*	5.227E+00	7.918E-01	7.918E-01	25.88
	300.09	-----	3.41	4.433E+00	-----	Line Not Found	-----
PO-212	74.81	381	10.70	5.252E+00	3.275E+00	3.275E+00	33.28
	77.11	381	18.00	5.252E+00	1.947E+00	1.947E+00	31.94
	87.30	1499	8.00	6.306E+00	1.435E+01	1.435E+01	16.06
	115.19	-----	0.60	7.166E+00	-----	Line Not Found	-----
	238.63	382	44.60*	5.227E+00	7.918E-01	7.918E-01	25.88
	300.09	-----	3.41	4.433E+00	-----	Line Not Found	-----
BI-214	609.31	191	46.30*	2.575E+00	7.723E-01	7.723E-01	33.30
	1120.29	-----	15.10	1.516E+00	-----	Line Not Found	-----
	1764.49	30	15.80	1.056E+00	8.548E-01	8.548E-01	48.30
PB-214	74.81	381	6.21	5.252E+00	5.643E+00	5.643E+00	32.78
	77.11	381	10.50	5.252E+00	3.338E+00	3.338E+00	32.83

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	87.30	1499	4.67	6.306E+00	2.459E+01	2.459E+01	14.74
	241.98	-----	7.49	5.174E+00	-----	Line Not Found	-----
	295.21	144	19.20	4.486E+00	8.069E-01	8.069E-01	44.42
	351.92	198	37.20*	3.939E+00	6.542E-01	6.542E-01	36.65
PO-214	74.81	381	6.21	5.252E+00	5.643E+00	5.643E+00	32.78
	77.11	381	10.50	5.252E+00	3.338E+00	3.338E+00	32.83
	87.30	1499	4.67	6.306E+00	2.459E+01	2.459E+01	14.74
	241.98	-----	7.49	5.174E+00	-----	Line Not Found	-----
	295.21	144	19.20	4.486E+00	8.069E-01	8.069E-01	44.42
	351.92	198	37.20*	3.939E+00	6.542E-01	6.542E-01	36.65
PO-216	74.81	381	10.70	5.252E+00	3.275E+00	3.275E+00	33.28
	77.11	381	18.00	5.252E+00	1.947E+00	1.947E+00	31.94
	87.30	1499	8.00	6.306E+00	1.435E+01	1.435E+01	16.06
	238.63	382	44.60*	5.227E+00	7.918E-01	7.918E-01	25.88
	300.09	-----	3.41	4.433E+00	-----	Line Not Found	-----
PO-218	74.81	381	6.21	5.252E+00	5.643E+00	5.643E+00	32.78
	77.11	381	10.50	5.252E+00	3.338E+00	3.338E+00	32.83
	87.30	1499	4.67	6.306E+00	2.459E+01	2.459E+01	14.74
	241.98	-----	7.49	5.174E+00	-----	Line Not Found	-----
	295.21	144	19.20	4.486E+00	8.069E-01	8.069E-01	44.42
	351.92	198	37.20*	3.939E+00	6.542E-01	6.542E-01	36.65
RA-226	609.31	191	46.30*	2.575E+00	7.723E-01	7.723E-01	33.30
	1120.29	-----	15.10	1.516E+00	-----	Line Not Found	-----
	1764.49	30	15.80	1.056E+00	8.548E-01	8.548E-01	48.30
AC-228	338.32	95	11.40	4.054E+00	9.881E-01	9.881E-01	84.15
	911.07	100	27.70*	1.825E+00	9.583E-01	9.583E-01	52.01
	969.11	133	16.60	1.726E+00	2.241E+00	2.241E+00	41.94
RA-228	338.32	95	11.40	4.054E+00	9.881E-01	9.881E-01	84.15
	911.07	100	27.70*	1.825E+00	9.583E-01	9.583E-01	52.01
	969.11	133	16.60	1.726E+00	2.241E+00	2.241E+00	41.94
TH-228	74.81	381	10.70	5.252E+00	3.275E+00	3.300E+00	31.96
	77.11	381	18.00	5.252E+00	1.947E+00	1.961E+00	31.94
	87.30	1499	8.00	6.306E+00	1.435E+01	1.446E+01	12.56
	238.63	382	44.60*	5.227E+00	7.918E-01	7.977E-01	25.88
	300.09	-----	3.41	4.433E+00	-----	Line Not Found	-----
TH-230	609.31	191	46.30*	2.575E+00	7.723E-01	7.723E-01	33.30
	1120.29	-----	15.10	1.516E+00	-----	Line Not Found	-----
	1764.49	30	15.80	1.056E+00	8.548E-01	8.548E-01	48.30
TH-232	338.32	95	11.40	4.054E+00	9.881E-01	9.881E-01	73.84
	911.07	100	27.70*	1.825E+00	9.583E-01	9.583E-01	52.01
	969.11	133	16.60	1.726E+00	2.241E+00	2.241E+00	41.94
U-234	609.31	191	46.30*	2.575E+00	7.723E-01	7.723E-01	33.30
	1120.29	-----	15.10	1.516E+00	-----	Line Not Found	-----
	1764.49	30	15.80	1.056E+00	8.548E-01	8.548E-01	48.30
NP-237	86.50	1499	12.60*	6.306E+00	9.114E+00	9.114E+00	24.16
	95.87	-----	2.60	6.742E+00	-----	Line Not Found	-----
AM-241	59.54	2943	35.90*	2.947E+00	1.343E+01	1.343E+01	9.43
AM-243	74.67	381	66.00*	5.252E+00	5.310E-01	5.310E-01	31.94
	86.72	1499	0.34	6.306E+00	3.418E+02	3.418E+02	12.56

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	117.66	-----	0.55	7.175E+00	-----	Line Not Found	-----
	142.18	-----	0.13	6.968E+00	-----	Line Not Found	-----
ANH-511	511.00	44	100.00*	2.967E+00	7.087E-02	7.087E-02	122.59

Flag: "*" = Keyline

Total number of lines in spectrum 20
Number of unidentified lines 0
Number of lines tentatively identified by NID 20 100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CO-57	270.90D	1.02	2.373E-01	2.419E-01	0.586E-01	24.22	
CO-60	5.27Y	1.00	6.277E+00	6.294E+00	0.614E+00	9.75	
CD-109	464.00D	1.01	3.087E+01	3.122E+01	0.392E+01	12.56	
SN-126	1.00E+05Y	1.00	3.104E+00	3.104E+00	0.390E+00	12.56	
BA-137M	30.17Y	1.00	5.465E+00	5.467E+00	0.542E+00	9.91	
CS-137	30.17Y	1.00	5.777E+00	5.780E+00	0.573E+00	9.92	
TL-208	1.41E+10Y	1.00	2.629E-01	2.629E-01	1.159E-01	44.10	
BI-211	7.04E+08Y	1.00	1.881E+00	1.881E+00	0.682E+00	36.27	
PB-212	1.41E+10Y	1.00	7.918E-01	7.918E-01	2.049E-01	25.88	
PO-212	1.41E+10Y	1.00	7.918E-01	7.918E-01	2.049E-01	25.88	
BI-214	1600.00Y	1.00	7.723E-01	7.723E-01	2.572E-01	33.30	
PB-214	1600.00Y	1.00	6.542E-01	6.542E-01	2.398E-01	36.65	
PO-214	1600.00Y	1.00	6.542E-01	6.542E-01	2.398E-01	36.65	
PO-216	1.41E+10Y	1.00	7.918E-01	7.918E-01	2.049E-01	25.88	
PO-218	1600.00Y	1.00	6.542E-01	6.542E-01	2.398E-01	36.65	
RA-226	1600.00Y	1.00	7.723E-01	7.723E-01	2.572E-01	33.30	
AC-228	1.41E+10Y	1.00	9.583E-01	9.583E-01	4.984E-01	52.01	
RA-228	1.41E+10Y	1.00	9.583E-01	9.583E-01	4.984E-01	52.01	
TH-228	1.91Y	1.01	7.918E-01	7.977E-01	2.065E-01	25.88	
TH-230	4.47E+09Y	1.00	7.723E-01	7.723E-01	2.572E-01	33.30	
TH-232	1.41E+10Y	1.00	9.583E-01	9.583E-01	4.984E-01	52.01	
U-234	4.47E+09Y	1.00	7.723E-01	7.723E-01	2.572E-01	33.30	
NP-237	2.14E+06Y	1.00	9.114E+00	9.114E+00	2.202E+00	24.16	
AM-241	432.20Y	1.00	1.343E+01	1.343E+01	0.127E+01	9.43	
AM-243	7380.00Y	1.00	5.310E-01	5.310E-01	1.696E-01	31.94	
ANH-511	1.00E+09Y	1.00	7.087E-02	7.087E-02	8.688E-02	122.59	

Total Activity : 8.811E+01 8.849E+01

Grand Total Activity : 8.811E+01 8.849E+01

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G1202015440

Page : 5
Acquisition date : 25-JAN-2010 11:12:57

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	93.07	91	361	1.52	186.33	182	9	2.52E-02	81.1	6.61E+00	T
0	185.45	72	326	0.91	371.10	367	10	1.99E-02	98.6	6.15E+00	T
0	728.11	43	124	1.08	1456.32	1449	13	1.18E-02	****	2.22E+00	T

Flags: "T" = Tentatively associated

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*****
*                                     GEL Laboratories LLC
*                                     2040 Savage Road
*                                     Charleston, SC 29414
*****
*
*                               DETECTOR DATA
*
* Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202015440.CNF;1
* Acquisition date   : 25-JAN-2010 11:12:57 Detector SN#      :
* Detector ID        : GAM16 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 01:00:02.03 Half life ratio : 8.00000
*****
*
*                               SAMPLE DATA
*
* Sample date        : 18-JAN-2010 00:00:00 Nuclide Library : SOLID
* Sample ID          : G1202015440 Analyst initials: MXR1
* Batch Number       : 941636 Sample Quantity : 1.55440E+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
CO-57	2.419E-01	5.858E-02	5.056E-02	4.202E-03	4.784
CO-60	6.294E+00	6.139E-01	6.453E-02	5.444E-03	97.525
CD-109	3.122E+01	3.922E+00	1.785E+00	1.720E-01	17.491
SN-126	3.104E+00	3.899E-01	1.782E-01	1.709E-02	17.413
BA-137M	5.467E+00	5.416E-01	1.000E-01	8.877E-03	54.659
CS-137	5.780E+00	5.734E-01	1.057E-01	9.401E-03	54.659
TL-208	2.629E-01	1.159E-01	1.028E-01	1.019E-02	2.556
BI-211	1.881E+00	6.822E-01	5.181E-01	5.665E-02	3.630
PB-212	7.918E-01	2.049E-01	1.615E-01	1.912E-02	4.903
PO-212	7.918E-01	2.049E-01	1.615E-01	1.912E-02	4.903
BI-214	7.723E-01	2.572E-01	1.719E-01	1.818E-02	4.492
PB-214	6.542E-01	2.398E-01	1.806E-01	2.184E-02	3.622
PO-214	6.542E-01	2.398E-01	1.806E-01	2.184E-02	3.622
PO-216	7.918E-01	2.049E-01	1.615E-01	1.912E-02	4.903
PO-218	6.542E-01	2.398E-01	1.806E-01	2.184E-02	3.622
RA-226	7.723E-01	2.572E-01	1.719E-01	1.818E-02	4.492
AC-228	9.583E-01	4.984E-01	4.424E-01	5.255E-02	2.166
RA-228	9.583E-01	4.984E-01	4.424E-01	5.255E-02	2.166

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-228	7.977E-01	2.065E-01	1.627E-01	1.926E-02	4.903
TH-230	7.723E-01	2.572E-01	1.719E-01	1.818E-02	4.492
TH-232	9.583E-01	4.984E-01	4.424E-01	5.255E-02	2.166
U-234	7.723E-01	2.572E-01	1.719E-01	1.818E-02	4.492
NP-237	9.114E+00	2.202E+00	5.292E-01	1.201E-01	17.223
AM-241	1.343E+01	1.266E+00	4.461E-01	3.500E-02	30.110
AM-243	5.310E-01	1.696E-01	1.160E-01	9.604E-03	4.577
ANH-511	7.087E-02	8.688E-02	9.089E-02	8.644E-03	0.780

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-2.193E-01		5.252E-01	8.472E-01	8.570E-02	-0.259
NA-22	-1.873E-02		5.032E-02	7.684E-02	6.394E-03	-0.244
NA-24	-8.547E-05		8.152E-05	Half-Life too short		
AL-26	-2.296E-02		4.454E-02	6.490E-02	5.307E-03	-0.354
K-40	5.965E-01		5.543E-01	1.064E+00	9.349E-02	0.561
TI-44	1.105E-01		5.107E-02	8.485E-02	7.307E-03	1.302
SC-46	-4.856E-02		7.634E-02	1.217E-01	1.150E-02	-0.399
V-48	-2.245E-02		1.088E-01	1.778E-01	1.636E-02	-0.126
CR-51	-9.806E-02		5.097E-01	7.966E-01	9.313E-02	-0.123
MN-52	1.136E-01		1.007E-01	1.967E-01	1.678E-02	0.578
MN-54	2.917E-02		6.640E-02	1.147E-01	1.077E-02	0.254
CO-56	-8.474E-02		7.378E-02	1.131E-01	1.065E-02	-0.749
CO-58	-2.261E-02		6.358E-02	1.041E-01	9.749E-03	-0.217
FE-59	-8.867E-02		1.630E-01	2.560E-01	2.379E-02	-0.346
ZN-65	-1.240E-02		1.755E-01	2.863E-01	2.432E-02	-0.043
GE-68	9.410E-02		2.485E+00	4.100E+00	3.581E-01	0.023
AS-73	-1.088E+00		1.669E+00	2.551E+00	1.946E-01	-0.426
AS-74	5.508E-03		1.162E-01	1.901E-01	1.765E-02	0.029
SE-75	3.748E-02		6.587E-02	1.088E-01	1.270E-02	0.344
BR-77	-1.307E+00		1.867E+00	2.914E+00	2.769E-01	-0.448
SR-82	-2.224E-01		5.845E-01	9.034E-01	8.376E-02	-0.246
RB-83	-7.424E-02		1.088E-01	1.701E-01	1.616E-02	-0.437
RB-84	7.308E-02		1.221E-01	2.120E-01	2.003E-02	0.345
KR-85	7.110E+00		1.339E+01	2.024E+01	1.925E+00	0.351
SR-85	3.363E-02		6.334E-02	9.575E-02	9.105E-03	0.351
RB-86	8.773E-02		1.182E+00	1.955E+00	1.709E-01	0.045
Y-88	3.459E-02		4.088E-02	7.965E-02	6.466E-03	0.434
ZR-88	-4.197E-02		4.531E-02	7.151E-02	6.615E-03	-0.587
Y-91	1.428E+01		2.083E+01	3.665E+01	2.980E+00	0.390
NB-94	2.565E-02		5.847E-02	9.722E-02	8.789E-03	0.264
NB-95	-4.422E-02		7.271E-02	1.105E-01	1.022E-02	-0.400
NB-95M	1.580E-01		1.805E-01	2.741E-01	3.260E-02	0.576
ZR-95	-1.438E-01		1.226E-01	1.752E-01	1.759E-02	-0.821
NB-97	9.236E-05		5.133E-05	Half-Life too short		
ZR-97	1.500E-03		8.664E-04	Half-Life too short		

----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
MO-99	5.643E-01		2.821E+00	4.599E+00	7.129E-01	0.123
TC-99M	-2.582E+01		1.543E+01	Half-Life too short		
RH-101	1.178E-02		4.824E-02	7.960E-02	7.859E-03	0.148
RH-102	1.623E-02		5.247E-02	8.854E-02	8.416E-03	0.183
RU-103	-3.959E-02		6.190E-02	9.747E-02	1.435E-02	-0.406
RH-106	1.951E-01		5.067E-01	8.477E-01	1.162E-01	0.230
RU-106	1.951E-01		5.063E-01	8.477E-01	7.752E-02	0.230
AG-108M	6.342E-03		6.379E-02	1.069E-01	1.041E-02	0.059
AG-110M	7.990E-02		6.471E-02	1.030E-01	9.431E-03	0.775
IN-111	-3.115E-02		2.556E-01	4.091E-01	4.556E-02	-0.076
IN-113M	-7.859E-02		7.018E-02	1.095E-01	1.040E-02	-0.718
SN-113	-7.859E-02		7.018E-02	1.095E-01	1.040E-02	-0.718
IN-114M	7.076E-02		2.481E-01	3.696E-01	3.574E-02	0.191
CD-115	-4.897E-02		1.680E+00	2.759E+00	2.619E-01	-0.018
SN-117M	2.436E-02		4.857E-02	8.217E-02	7.298E-03	0.296
SB-122	3.444E-01		4.540E-01	7.834E-01	7.370E-02	0.440
I-123	3.108E-04		2.287E-04	Half-Life too short		
TE-123M	2.440E-02		3.591E-02	6.118E-02	5.472E-03	0.399
I-124	-3.426E-02		3.563E-01	5.039E-01	4.660E-02	-0.068
SB-124	-5.625E-04		8.656E-02	1.431E-01	1.253E-02	-0.004
SB-125	6.166E-02		1.621E-01	2.762E-01	2.639E-02	0.223
TE-125M	2.387E+00		1.003E+01	1.708E+01	1.736E+00	0.140
I-126	-1.365E-01		2.245E-01	2.937E-01	2.612E-02	-0.465
SB-126	5.518E-02		1.549E-01	2.481E-01	2.259E-02	0.222
SB-127	3.306E-01		6.151E-01	1.031E+00	1.020E-01	0.320
XE-127	1.320E-02		5.842E-02	9.627E-02	9.628E-03	0.137
I-131	-1.013E-01		9.359E-02	1.468E-01	1.547E-02	-0.690
TE-132	1.538E-01		2.082E-01	3.472E-01	5.531E-02	0.443
BA-133	4.006E-02		7.463E-02	1.156E-01	1.671E-02	0.346
I-133	-1.380E-05		1.059E-05	Half-Life too short		
CS-134	2.465E-02		7.348E-02	1.269E-01	1.189E-02	0.194
CS-135	-8.456E-04		2.492E-01	3.990E-01	5.089E-02	-0.002
I-135	-1.277E+01		1.175E+01	Half-Life too short		
CS-136	-5.358E-02		1.490E-01	2.388E-01	2.210E-02	-0.224
CE-139	8.915E-03		3.746E-02	6.248E-02	5.667E-03	0.143
BA-140	7.171E-02		2.693E-01	4.496E-01	1.500E-01	0.160
LA-140	-1.754E-02		6.242E-02	9.768E-02	8.320E-03	-0.180
CE-141	8.436E-03		7.027E-02	1.173E-01	1.026E-02	0.072
CE-143	2.313E+00		5.157E+00	7.509E+00	1.718E+00	0.308
CE-144	-5.834E-02		2.660E-01	4.388E-01	6.776E-02	-0.133
PM-144	3.867E-02		5.864E-02	9.908E-02	8.935E-03	0.390
PR-144	2.610E+00		3.958E+00	6.687E+00	6.030E-01	0.390
PM-146	1.281E-02		8.137E-02	1.365E-01	1.558E-02	0.094
ND-147	-4.068E-01		5.676E-01	8.775E-01	1.357E-01	-0.464
PM-149	3.838E+00		1.306E+01	2.118E+01	3.722E+00	0.181
EU-152	2.493E-02		1.622E-01	2.456E-01	2.744E-02	0.102
GD-153	1.636E-02		9.966E-02	1.533E-01	1.362E-02	0.107
EU-154	-7.443E-02		1.444E-01	2.152E-01	2.384E-02	-0.346

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-155	1.269E-01		1.318E-01	2.311E-01	1.999E-02	0.549
TB-160	1.934E-01		2.619E-01	4.586E-01	4.332E-02	0.422
HO-166M	1.016E-01		1.032E-01	1.784E-01	1.618E-02	0.569
TM-171	4.610E+01		3.733E+01	6.140E+01	4.704E+00	0.751
LU-176	-1.218E-02		3.893E-02	6.048E-02	7.015E-03	-0.201
LU-177	2.952E-01		7.457E-01	1.235E+00	1.253E-01	0.239
LU-177M	8.674E-02		2.860E-01	4.865E-01	4.547E-02	0.178
HF-181	-3.705E-03		6.447E-02	1.064E-01	1.012E-02	-0.035
W-181	-1.058E+00		4.926E-01	6.726E-01	5.080E-02	-1.574
TA-182	-1.664E-01		1.606E-01	2.085E-01	1.705E-02	-0.798
RE-183	6.481E-02		1.322E-01	2.242E-01	2.012E-02	0.289
RE-184	-1.232E-02		3.527E-01	5.661E-01	6.415E-02	-0.022
OS-185	1.824E-02		6.379E-02	1.058E-01	9.514E-03	0.172
RE-188	3.591E-02		2.124E-01	3.542E-01	3.116E-02	0.101
W-188	6.940E+00		1.138E+01	1.689E+01	2.004E+00	0.411
IR-192	-2.542E-02		5.305E-02	8.129E-02	9.290E-03	-0.313
AU-195	2.710E-01		2.585E-01	4.559E-01	4.015E-02	0.594
TL-200	2.693E+00		5.568E+00	9.628E+00	9.691E-01	0.280
TL-201	3.356E-01		1.594E+00	2.654E+00	2.416E-01	0.126
TL-202	6.193E-03		8.759E-02	1.465E-01	1.383E-02	0.042
HG-203	-3.027E-03		5.912E-02	9.418E-02	1.148E-02	-0.032
BI-207	9.525E-03		1.061E-01	1.759E-01	1.551E-02	0.054
TL-207	2.312E-02		1.173E+00	1.857E+00	3.553E-01	0.012
PO-209	-4.080E+00		1.572E+01	2.579E+01	2.439E+00	-0.158
BI-210	-9.657E-01		6.584E+00	1.034E+01	9.642E-01	-0.093
PB-210	-9.657E-01		6.584E+00	1.034E+01	9.642E-01	-0.093
PO-210	-9.657E-01		6.584E+00	1.034E+01	8.734E-01	-0.093
PB-211	-4.014E-01		1.572E+00	2.562E+00	1.608E+00	-0.157
BI-212	7.840E-01	+	8.826E-01	9.673E-01	1.011E-01	0.810
PO-215	2.312E-02		1.173E+00	1.857E+00	3.553E-01	0.012
RN-219	-5.074E-01		7.095E-01	1.135E+00	1.750E-01	-0.447
RN-220	-1.672E+01		4.491E+01	7.164E+01	6.769E+00	-0.233
RA-223	2.312E-02		1.173E+00	1.857E+00	3.553E-01	0.012
RA-224	2.184E+00		1.211E+00	1.897E+00	2.090E-01	1.152
AC-227	-2.970E-01		6.262E-01	9.766E-01	1.668E-01	-0.304
TH-227	-2.970E-01		6.269E-01	9.766E-01	1.910E-01	-0.304
TH-229	6.066E-02		7.279E-01	1.195E+00	1.166E-01	0.051
PA-231	-1.363E-01		2.456E+00	3.906E+00	6.756E-01	-0.035
TH-231	2.312E-02		1.173E+00	1.857E+00	3.553E-01	0.012
U-231	-2.764E-01		3.794E-01	5.505E-01	4.942E-02	-0.502
PA-233	-4.867E-02		1.060E-01	1.629E-01	1.904E-02	-0.299
PA-234	5.515E-01		6.940E-01	1.197E+00	2.287E-01	0.461
PA-234M	5.932E+00		9.239E+00	1.600E+01	1.666E+00	0.371
TH-234	2.117E+00		1.809E+00	2.780E+00	4.849E-01	0.762
U-235	2.846E-01		2.761E-01	4.730E-01	8.267E-02	0.602
NP-236	-1.622E-02		1.064E-01	1.744E-01	1.556E-02	-0.093
U-238	2.117E+00		1.809E+00	2.780E+00	4.849E-01	0.762
NP-239	-1.054E-01		2.538E-01	3.976E-01	3.311E-02	-0.265

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	1.044E-01		1.207E-01	2.109E-01	1.813E-02	0.495
AM-246	5.907E-02		2.776E-01	4.642E-01	4.050E-02	0.127
CM-247	-2.650E-02		6.146E-02	1.004E-01	9.336E-03	-0.264
CF-249	6.147E-02		6.849E-02	1.201E-01	1.127E-02	0.512
CF-251	6.084E-02		1.764E-01	2.945E-01	2.745E-02	0.207

VAX/VMS Nuclide Identification Report Generated

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
*                                     DETECTOR DATA                          *
*
* Configuration      : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1202015440          *
* Acquisition date   : 25-JAN-2010 11:12:57 Detector SN# :                  *
* Detector ID        : GAM16 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 01:00:02.03 Half life ratio : 8.000             *
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 18-JAN-2010 00:00:00 Nuclide Library : SOLID          *
* Sample ID          : G1202015440 Analyst initials: MXR1                *
* Batch Number       : 941636 Sample Quantity : 1.5544E+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
CO-57	2.419E-01	5.741E-02	2.724E-02	2.929E-02
CO-60	6.294E+00	6.017E-01	3.265E-02	3.070E-01
CD-109	3.122E+01	3.843E+00	9.694E-01	1.961E+00
SN-126	3.104E+00	3.821E-01	9.683E-02	1.950E-01
BA-137M	5.467E+00	5.308E-01	5.159E-02	2.708E-01
CS-137	5.780E+00	5.619E-01	5.453E-02	2.867E-01
TL-208	2.629E-01	1.136E-01	5.322E-02	5.797E-02
BI-211	1.881E+00	6.686E-01	2.718E-01	3.411E-01
PB-212	7.918E-01	2.008E-01	8.555E-02	1.025E-01
PO-212	7.918E-01	2.008E-01	8.555E-02	1.025E-01
BI-214	7.723E-01	2.520E-01	8.887E-02	1.286E-01
PB-214	6.542E-01	2.350E-01	9.473E-02	1.199E-01
PO-214	6.542E-01	2.350E-01	9.473E-02	1.199E-01
PO-216	7.918E-01	2.008E-01	8.555E-02	1.025E-01
PO-218	6.542E-01	2.350E-01	9.473E-02	1.199E-01
RA-226	7.723E-01	2.520E-01	8.887E-02	1.286E-01
AC-228	9.583E-01	4.885E-01	2.262E-01	2.492E-01
RA-228	9.583E-01	4.885E-01	2.262E-01	2.492E-01
TH-228	7.977E-01	2.023E-01	8.619E-02	1.032E-01
TH-230	7.723E-01	2.520E-01	8.887E-02	1.286E-01
TH-232	9.583E-01	4.885E-01	2.262E-01	2.492E-01
U-234	7.723E-01	2.520E-01	8.887E-02	1.286E-01
NP-237	9.114E+00	2.158E+00	2.876E-01	1.101E+00
AM-241	1.343E+01	1.241E+00	2.446E-01	6.332E-01
AM-243	5.310E-01	1.662E-01	6.326E-02	8.479E-02
ANH-511	7.087E-02	8.514E-02	4.720E-02	4.344E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	-2.193E-01	5.147E-01	4.408E-01	2.626E-01 NOT IDENT.

NA-22	-1.873E-02	4.932E-02	3.892E-02	2.516E-02	NOT IDENT.
NA-24	-8.547E+01	1.598E+02	0.000E+00	8.152E+01	SHORT HLIF
AL-26	-2.296E-02	4.365E-02	3.255E-02	2.227E-02	NOT IDENT.
K-40	5.965E-01	5.432E-01	5.367E-01	2.772E-01	NOT IDENT.
TI-44	1.105E-01	5.005E-02	4.622E-02	2.554E-02	NOT IDENT.
SC-46	-4.856E-02	7.481E-02	6.225E-02	3.817E-02	NOT IDENT.
V-48	-2.245E-02	1.067E-01	9.069E-02	5.442E-02	NOT IDENT.
CR-51	-9.806E-02	4.995E-01	4.188E-01	2.549E-01	NOT IDENT.
MN-52	1.136E-01	9.866E-02	9.928E-02	5.034E-02	FAIL ABUN
MN-54	2.917E-02	6.507E-02	5.879E-02	3.320E-02	NOT IDENT.
CO-56	-8.474E-02	7.230E-02	5.796E-02	3.689E-02	NOT IDENT.
CO-58	-2.261E-02	6.231E-02	5.337E-02	3.179E-02	NOT IDENT.
FE-59	-8.867E-02	1.598E-01	1.302E-01	8.152E-02	NOT IDENT.
ZN-65	-1.240E-02	1.720E-01	1.456E-01	8.774E-02	NOT IDENT.
GE-68	9.410E-02	2.436E+00	2.086E+00	1.243E+00	NOT IDENT.
AS-73	-1.088E+00	1.636E+00	1.402E+00	8.347E-01	NOT IDENT.
AS-74	5.508E-03	1.139E-01	9.832E-02	5.810E-02	NOT IDENT.
SE-75	3.748E-02	6.455E-02	5.750E-02	3.293E-02	FAIL ABUN
BR-77	-1.307E+00	1.830E+00	1.513E+00	9.336E-01	FAIL ABUN
SR-82	-2.224E-01	5.728E-01	4.639E-01	2.922E-01	NOT IDENT.
RB-83	-7.424E-02	1.066E-01	8.827E-02	5.440E-02	NOT IDENT.
RB-84	7.308E-02	1.197E-01	1.085E-01	6.107E-02	NOT IDENT.
KR-85	7.110E+00	1.312E+01	1.051E+01	6.695E+00	NOT IDENT.
SR-85	3.363E-02	6.207E-02	4.972E-02	3.167E-02	NOT IDENT.
RB-86	8.773E-02	1.158E+00	9.950E-01	5.909E-01	NOT IDENT.
Y-88	3.459E-02	4.006E-02	3.993E-02	2.044E-02	NOT IDENT.
ZR-88	-4.197E-02	4.441E-02	3.740E-02	2.266E-02	NOT IDENT.
Y-91	1.428E+01	2.041E+01	1.859E+01	1.042E+01	NOT IDENT.
NB-94	2.565E-02	5.730E-02	5.006E-02	2.924E-02	NOT IDENT.
NB-95	-4.422E-02	7.125E-02	5.677E-02	3.635E-02	NOT IDENT.
NB-95M	1.580E-01	1.769E-01	1.453E-01	9.023E-02	NOT IDENT.
ZR-95	-1.438E-01	1.201E-01	9.003E-02	6.128E-02	NOT IDENT.
NB-97	9.236E+01	1.006E+02	0.000E+00	5.133E+01	SHORT HLIF
ZR-97	1.500E+03	1.698E+03	0.000E+00	8.664E+02	SHORT HLIF
MO-99	5.643E-01	2.764E+00	2.365E+00	1.410E+00	NOT IDENT.
TC-99M	-2.582E+07	3.024E+07	0.000E+00	1.543E+07	SHORT HLIF
RH-101	1.178E-02	4.727E-02	4.237E-02	2.412E-02	NOT IDENT.
RH-102	1.623E-02	5.142E-02	4.607E-02	2.624E-02	NOT IDENT.
RU-103	-3.959E-02	6.066E-02	5.066E-02	3.095E-02	FAIL ABUN
RH-106	1.951E-01	4.965E-01	4.379E-01	2.533E-01	NOT IDENT.
RU-106	1.951E-01	4.961E-01	4.379E-01	2.531E-01	NOT IDENT.
AG-108M	6.342E-03	6.251E-02	5.578E-02	3.189E-02	NOT IDENT.
AG-110M	7.990E-02	6.342E-02	5.315E-02	3.236E-02	NOT IDENT.
IN-111	-3.115E-02	2.505E-01	2.166E-01	1.278E-01	NOT IDENT.
IN-113M	-7.859E-02	6.878E-02	5.728E-02	3.509E-02	NOT IDENT.
SN-113	-7.859E-02	6.878E-02	5.728E-02	3.509E-02	NOT IDENT.
IN-114M	7.076E-02	2.431E-01	1.969E-01	1.240E-01	NOT IDENT.
CD-115	-4.897E-02	1.647E+00	1.432E+00	8.402E-01	NOT IDENT.
SN-117M	2.436E-02	4.760E-02	4.399E-02	2.429E-02	NOT IDENT.
SB-122	3.444E-01	4.449E-01	4.058E-01	2.270E-01	NOT IDENT.
I-123	3.108E+02	4.482E+02	0.000E+00	2.287E+02	SHORT HLIF
TE-123M	2.440E-02	3.519E-02	3.275E-02	1.795E-02	NOT IDENT.
I-124	-3.426E-02	3.492E-01	2.605E-01	1.781E-01	NOT IDENT.
SB-124	-5.625E-04	8.483E-02	7.192E-02	4.328E-02	NOT IDENT.
SB-125	6.166E-02	1.589E-01	1.441E-01	8.105E-02	NOT IDENT.
TE-125M	2.387E+00	9.833E+00	9.229E+00	5.017E+00	NOT IDENT.
I-126	-1.365E-01	2.200E-01	1.514E-01	1.123E-01	NOT IDENT.
SB-126	5.518E-02	1.518E-01	1.277E-01	7.744E-02	FAIL ABUN
SB-127	3.306E-01	6.028E-01	5.315E-01	3.076E-01	NOT IDENT.
XE-127	1.320E-02	5.725E-02	5.121E-02	2.921E-02	NOT IDENT.
I-131	-1.013E-01	9.172E-02	7.692E-02	4.679E-02	NOT IDENT.
TE-132	1.538E-01	2.040E-01	1.842E-01	1.041E-01	NOT IDENT.
BA-133	4.006E-02	7.313E-02	6.063E-02	3.731E-02	NOT IDENT.
I-133	-1.380E+01	2.076E+01	0.000E+00	1.059E+01	SHORT HLIF
CS-134	2.465E-02	7.201E-02	6.510E-02	3.674E-02	NOT IDENT.
CS-135	-8.456E-04	2.442E-01	2.108E-01	1.246E-01	NOT IDENT.
I-135	-1.277E+07	2.304E+07	0.000E+00	1.175E+07	SHORT HLIF
CS-136	-5.358E-02	1.460E-01	1.216E-01	7.448E-02	NOT IDENT.
CE-139	8.915E-03	3.671E-02	3.341E-02	1.873E-02	NOT IDENT.
BA-140	7.171E-02	2.639E-01	2.332E-01	1.347E-01	NOT IDENT.
LA-140	-1.754E-02	6.117E-02	4.916E-02	3.121E-02	NOT IDENT.
CE-141	8.436E-03	6.887E-02	6.294E-02	3.514E-02	NOT IDENT.
CE-143	2.313E+00	5.054E+00	3.957E+00	2.578E+00	FAIL ABUN
CE-144	-5.834E-02	2.606E-01	2.359E-01	1.330E-01	NOT IDENT.
PM-144	3.867E-02	5.747E-02	5.103E-02	2.932E-02	NOT IDENT.
PR-144	2.610E+00	3.878E+00	3.444E+00	1.979E+00	NOT IDENT.
PM-146	1.281E-02	7.974E-02	7.109E-02	4.068E-02	NOT IDENT.
ND-147	-4.068E-01	5.562E-01	4.552E-01	2.838E-01	NOT IDENT.

PM-149	3.838E+00	1.280E+01	1.117E+01	6.530E+00	NOT IDENT.
EU-152	2.493E-02	1.590E-01	1.289E-01	8.112E-02	FAIL ABUN
GD-153	1.636E-02	9.767E-02	8.307E-02	4.983E-02	NOT IDENT.
EU-154	-7.443E-02	1.415E-01	1.090E-01	7.218E-02	FAIL ABUN
EU-155	1.269E-01	1.292E-01	1.250E-01	6.590E-02	FAIL ABUN
TB-160	1.934E-01	2.566E-01	2.347E-01	1.309E-01	FAIL ABUN
HO-166M	1.016E-01	1.011E-01	9.181E-02	5.158E-02	FAIL ABUN
TM-171	4.610E+01	3.658E+01	3.357E+01	1.867E+01	FAIL ABUN
LU-176	-1.218E-02	3.815E-02	3.183E-02	1.946E-02	FAIL ABUN
LU-177	2.952E-01	7.308E-01	6.564E-01	3.728E-01	NOT IDENT.
LU-177M	8.674E-02	2.802E-01	2.541E-01	1.430E-01	FAIL ABUN
HF-181	-3.705E-03	6.318E-02	5.532E-02	3.224E-02	NOT IDENT.
W-181	-1.058E+00	4.827E-01	3.680E-01	2.463E-01	NOT IDENT.
TA-182	-1.664E-01	1.574E-01	1.057E-01	8.030E-02	NOT IDENT.
RE-183	6.481E-02	1.296E-01	1.199E-01	6.611E-02	FAIL ABUN
RE-184	-1.232E-02	3.457E-01	2.995E-01	1.764E-01	FAIL ABUN
OS-185	1.824E-02	6.252E-02	5.462E-02	3.190E-02	FAIL ABUN
RE-188	3.591E-02	2.081E-01	1.897E-01	1.062E-01	NOT IDENT.
W-188	6.940E+00	1.115E+01	8.905E+00	5.688E+00	NOT IDENT.
IR-192	-2.542E-02	5.199E-02	4.275E-02	2.653E-02	FAIL ABUN
AU-195	2.710E-01	2.533E-01	2.470E-01	1.292E-01	FAIL ABUN
TL-200	2.693E+00	5.457E+00	5.044E+00	2.784E+00	NOT IDENT.
TL-201	3.356E-01	1.562E+00	1.419E+00	7.970E-01	NOT IDENT.
TL-202	6.193E-03	8.584E-02	7.639E-02	4.380E-02	NOT IDENT.
HG-203	-3.027E-03	5.794E-02	4.970E-02	2.956E-02	NOT IDENT.
BI-207	9.525E-03	1.040E-01	8.957E-02	5.306E-02	FAIL ABUN
TL-207	2.312E-02	1.150E+00	9.763E-01	5.866E-01	FAIL ABUN
PO-209	-4.080E+00	1.541E+01	1.319E+01	7.862E+00	NOT IDENT.
BI-210	-9.657E-01	6.452E+00	5.703E+00	3.292E+00	NOT IDENT.
PB-210	-9.657E-01	6.452E+00	5.703E+00	3.292E+00	NOT IDENT.
PO-210	-9.657E-01	6.452E+00	5.703E+00	3.292E+00	NOT IDENT.
PB-211	-4.014E-01	1.540E+00	1.339E+00	7.859E-01	NOT IDENT.
BI-212	7.840E-01	8.649E-01	4.976E-01	4.413E-01	FAIL ABUN
PO-215	2.312E-02	1.150E+00	9.763E-01	5.866E-01	FAIL ABUN
RN-219	-5.074E-01	6.953E-01	5.931E-01	3.547E-01	NOT IDENT.
RN-220	-1.672E+01	4.401E+01	3.714E+01	2.245E+01	NOT IDENT.
RA-223	2.312E-02	1.150E+00	9.763E-01	5.866E-01	FAIL ABUN
RA-224	2.184E+00	1.187E+00	1.005E+00	6.056E-01	NOT IDENT.
AC-227	-2.970E-01	6.137E-01	5.165E-01	3.131E-01	NOT IDENT.
TH-227	-2.970E-01	6.143E-01	5.165E-01	3.134E-01	FAIL ABUN
TH-229	6.066E-02	7.134E-01	6.363E-01	3.640E-01	FAIL ABUN
PA-231	-1.363E-01	2.407E+00	2.060E+00	1.228E+00	NOT IDENT.
TH-231	2.312E-02	1.150E+00	9.763E-01	5.866E-01	FAIL ABUN
U-231	-2.764E-01	3.718E-01	2.984E-01	1.897E-01	FAIL ABUN
PA-233	-4.867E-02	1.039E-01	8.570E-02	5.300E-02	FAIL ABUN
PA-234	5.515E-01	6.801E-01	6.115E-01	3.470E-01	FAIL ABUN
PA-234M	5.932E+00	9.054E+00	8.160E+00	4.619E+00	NOT IDENT.
TH-234	2.117E+00	1.773E+00	1.522E+00	9.046E-01	FAIL ABUN
U-235	2.846E-01	2.705E-01	2.538E-01	1.380E-01	FAIL ABUN
NP-236	-1.622E-02	1.042E-01	9.332E-02	5.318E-02	NOT IDENT.
U-238	2.117E+00	1.773E+00	1.522E+00	9.046E-01	FAIL ABUN
NP-239	-1.054E-01	2.487E-01	2.145E-01	1.269E-01	NOT IDENT.
CM-243	1.044E-01	1.183E-01	1.141E-01	6.034E-02	NOT IDENT.
AM-246	5.907E-02	2.720E-01	2.362E-01	1.388E-01	NOT IDENT.
CM-247	-2.650E-02	6.023E-02	5.248E-02	3.073E-02	NOT IDENT.
CF-249	6.147E-02	6.712E-02	6.282E-02	3.424E-02	NOT IDENT.
CF-251	6.084E-02	1.728E-01	1.572E-01	8.818E-02	NOT IDENT.

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*                               GEL Laboratories LLC                               *
*                               2040 SAVAGE ROAD                               *
*                               CHARLESTON , SC 29417                          *
*                               GAMMA SPECTROSCOPY BACKGROUND REPORT            *
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ENERGY	MDA COUNTS
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46.50	360.8712
46.50	360.8712
46.50	360.8712
48.70	452.1197
49.72	368.0470
51.35	425.9231
52.39	501.4257
52.97	521.4552
53.15	521.7282
53.44	517.3647
54.07	524.3163
56.28	538.8954
56.28	538.8988
57.37	610.1207
57.53	608.7711
57.53	608.7739
57.60	608.8887
57.98	438.9056
57.98	438.9056
59.32	440.5072
59.32	440.5072
59.40	440.6022
59.54	440.7689
59.72	440.9816
60.01	441.3252
61.10	305.6974
61.14	305.7292
61.30	305.8581
63.00	197.1475
63.29	197.2958
63.29	197.2958
63.58	235.2869
64.28	274.4449
65.12	330.7835
65.20	330.8492
65.20	330.8492
66.05	253.3269
66.72	231.3619
66.83	231.4258
66.91	227.7392
67.20	229.1479
67.20	229.1479
67.75	285.5774
67.85	285.6490
68.90	286.8031
68.90	286.8031
69.30	307.9467
69.67	311.5656
70.82	285.2065
70.82	285.2065
70.83	285.2134
72.80	309.2744
72.87	309.3248
72.87	309.3248
74.67	300.9073
74.81	301.0033
74.81	301.0033
74.81	301.0033
74.81	301.0033
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74.81	301.0033
74.81	301.0033
74.97	301.1156
75.28	301.3311
75.70	301.6208
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77.11	302.5913

77.11	302.5913
77.11	302.5913
77.11	302.5913
77.11	302.5913
77.11	302.5913
78.38	281.2959
79.62	312.8465
79.80	312.9713
79.80	312.9713
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80.18	311.9500
80.30	312.0316
80.30	312.0316
80.57	294.2292
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81.07	334.4263
81.07	334.4263
81.07	334.4263
81.07	334.4263
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83.78	315.6929
83.78	315.6929
83.78	315.6929
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84.90	319.0406
85.43	309.0121
86.29	339.2298
86.50	339.3790
86.54	339.4069
86.59	339.4427
86.72	339.5342
86.79	339.5820
86.94	339.6914
87.30	339.9461
87.30	339.9461
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87.30	339.9461
87.57	340.1371
87.88	340.3560
88.03	340.4615
88.36	308.2970
88.47	308.3672
89.95	309.3035
91.11	239.0930
92.29	224.3871
92.38	224.4274
92.38	224.4274
93.35	224.8616
94.00	175.7355
94.67	178.6120
94.67	178.6140
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94.90	203.8439
94.90	203.8439
94.90	203.8439
95.87	212.1887
95.87	212.1887
96.73	200.5907
97.43	195.5406
98.44	167.0426
98.44	167.0435
98.88	176.9662
99.55	199.4527
99.55	199.4527
99.86	208.4800
100.00	211.2083
100.10	211.2505
103.18	190.0590
103.76	193.8538
105.00	189.7989
105.31	185.4071
108.00	206.2110
109.28	186.7420

111.00	206.4069
111.00	206.4069
111.76	221.2508
112.95	202.5515
115.19	210.6660
116.30	216.5734
117.00	216.0977
117.00	216.0977
117.66	211.0964
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121.62	183.3339
121.78	183.3822
122.06	183.4678
122.32	183.5464
122.32	183.5464
122.32	183.5464
122.32	183.5464
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135.34	213.8843
136.00	215.9974
136.25	219.8695
136.48	219.9474
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140.51	0.0000
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142.65	223.9096
143.76	183.0630
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144.24	188.9460
144.24	188.9460
144.24	188.9460
145.22	217.0730
145.44	217.1420
147.16	223.4638
152.43	232.9175
152.70	210.6757
153.22	190.4273
154.21	210.1487
154.21	210.1487
154.21	210.1487
154.21	210.1487
155.03	212.3384
156.02	219.4588
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159.00	187.0616
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161.27	207.2910
162.32	182.0059
162.64	187.9884
163.35	199.9913
163.89	209.9947
165.85	188.7986
167.43	187.2120
171.28	176.2096
171.86	184.3131
172.10	184.3696
176.55	201.4601
176.60	201.4744
181.06	199.5831
184.41	192.8216
185.71	196.6760
186.00	196.7471
190.27	191.1411
192.34	224.8295
193.63	210.8449
197.04	232.2464
198.01	217.0786
198.60	215.1677
200.40	226.9668
201.83	197.3748
202.84	207.9499
205.31	216.8366

208.36	237.3655
208.81	224.9868
209.75	207.4982
209.75	207.4982
210.97	235.9730
215.65	213.0567
216.55	212.2167
218.09	195.7367
222.10	216.6676
223.80	192.7085
226.40	224.0330
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227.08	208.2560
227.20	208.2819
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228.18	191.4771
228.18	191.4771
231.56	216.7076
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236.00	173.7350
236.00	173.7350
238.63	280.6605
238.63	280.6605
238.63	280.6605
238.63	280.6605
239.00	280.7640
240.98	206.9551
241.98	224.9672
241.98	224.9672
241.98	224.9672
244.69	257.4944
245.39	201.3770
247.94	188.8611
248.90	178.1755
249.79	175.0701
252.40	174.4287
252.85	179.9585
252.85	179.9585
254.15	0.0000
256.20	204.6159
256.20	204.6159
260.50	167.0077
260.90	170.3669
262.80	189.3953
264.65	159.9419
268.24	187.0443
268.79	199.3213
269.46	182.8253
269.46	182.8253
269.46	182.8253
269.46	182.8253
271.23	183.1241
273.65	191.3199
276.40	192.9180
277.35	181.9225
277.60	180.8492
277.60	180.8492
278.00	185.3822
278.60	173.1924
279.20	185.5815
279.53	182.2840
280.46	194.7482
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283.67	167.2491
284.30	171.8355
285.00	150.5892
285.90	154.0860
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286.10	150.7364
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290.80	135.5493
291.72	144.1379
293.26	186.7831
293.70	174.9630
295.21	162.1522
295.21	162.1522

295.21	162.1522
295.96	165.0966
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297.23	209.5782
298.57	155.2315
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299.80	160.5183
300.09	157.1423
300.09	157.1423
300.09	157.1423
300.09	157.1423
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304.40	152.0062
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308.46	166.2904
311.98	162.1793
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318.01	159.5204
319.02	153.8678
319.41	138.8721
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323.87	180.0292
323.87	180.0292
323.87	180.0292
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334.20	174.2599
334.30	174.2751
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338.28	138.3404
338.28	138.3404
338.28	138.3404
338.32	138.3452
338.32	138.3452
338.32	138.3452
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340.57	118.6377
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350.59	133.7894
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351.92	138.9113
351.92	138.9113
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367.43	140.5276
367.94	129.7661
369.80	153.4062
374.96	160.3225
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387.95	136.2180
388.63	148.1721
391.69	157.6570
391.69	157.6570
392.90	140.3605
398.62	136.3133
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401.10	143.9268
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402.60	147.7686
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411.60	157.9639
413.65	133.9893
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427.89	136.1964
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433.93	166.9044
439.47	161.8233
439.56	166.5630
439.89	158.0787
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444.90	158.5832
445.03	158.5985
445.03	158.5985
445.03	158.5985
445.03	158.5985
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468.07	129.0887
473.00	124.6440
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475.35	130.6268
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484.57	105.0765
487.03	108.1528
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492.35	97.7402
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511.85	136.0074
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513.99	114.0047
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520.65	111.2549
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529.87	0.0000
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546.56	0.0000
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555.20	87.0524
563.23	78.2736
563.90	77.2826
568.70	88.6913
569.32	91.7798
569.50	91.7880
569.67	83.6366
573.80	79.7281
574.00	79.7353
574.64	100.2131
578.91	103.3040
579.30	91.8449
583.14	105.7881
585.48	85.5537
591.81	82.5293
592.07	82.5391
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595.88	97.1699
600.56	106.7248
602.52	0.0000
602.71	99.5771
602.71	99.5771
603.60	104.6021
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604.70	94.6929
609.31	83.2520

609.31	83.2520
609.31	83.2520
609.31	83.2520
610.33	83.2935
612.46	80.0461
614.37	65.0984
618.01	87.7888
621.84	75.3882
621.84	75.3882
631.29	88.3553
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633.10	85.2740
634.78	106.4156
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636.97	97.0341
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646.12	69.9135
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661.65	92.8278
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666.33	88.9637
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692.80	88.7366
695.00	105.0725
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696.49	81.2943
697.00	87.8176
697.49	86.7529
698.33	93.2935
698.50	96.5561
699.00	95.4927
702.63	85.8638
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721.93	91.1904
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722.78	78.9434
722.89	78.9478
722.95	78.9500
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727.18	76.8958
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739.58	70.6758
742.81	66.3501
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756.15	105.6400
756.87	96.7732
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765.79	110.5260
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766.84	91.5869
776.49	96.4324
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778.57	76.3132
778.89	76.3236
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792.07	68.6041

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826.30	93.3190
828.27	100.7161
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867.82	106.8776
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874.81	92.2445
875.33	0.0000
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880.51	72.8298
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883.24	107.4840
884.67	106.6050
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896.60	107.0670
898.02	102.4243
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903.28	89.9613
911.07	99.1271
911.07	99.1271
911.07	99.1271
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920.93	116.5287
925.00	105.3091
925.24	96.7780
926.50	112.9599
935.52	120.9322
937.48	109.5813
944.10	116.5195
946.00	103.2144
949.00	121.4996
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964.01	102.5703
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969.11	131.6484
969.11	131.6484
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983.50	100.6662
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1001.68	70.1139
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1021.30	0.0000
1024.50	0.0000
1034.80	90.5580
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1037.82	92.6139
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1038.76	0.0000
1045.16	96.7846
1046.59	94.8516
1048.07	93.9053

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1078.86	75.8516
1085.78	75.0146
1099.22	92.3953
1112.02	83.6809
1112.84	75.6372
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1120.29	70.7520
1120.29	70.7520
1120.29	70.7520
1120.29	70.7520
1120.51	71.7662
1121.28	71.7835
1124.00	0.0000
1129.67	61.8280
1131.51	0.0000
1147.95	0.0000
1167.94	46.1250
1173.22	37.9828
1175.09	32.5264
1177.93	51.3989
1189.05	38.1563
1204.90	29.0049
1205.75	40.4092
1213.00	26.9953
1221.42	23.9366
1230.97	25.0430
1235.34	33.4313
1236.41	0.0000
1238.25	29.2756
1246.25	32.4849
1260.41	0.0000
1271.85	21.1035
1274.45	28.5108
1274.54	26.3989
1291.56	20.1550
1298.22	0.0000
1312.09	13.8652
1325.50	23.1901
1325.50	23.1901
1332.49	13.9388
1333.61	13.9433
1360.21	12.9586
1362.66	0.0000
1365.15	12.9750
1368.21	16.2312
1368.53	0.0000
1376.25	10.8428
1384.27	14.1242
1394.10	16.3374
1395.20	23.9680
1407.95	9.8363
1434.06	6.5997
1436.60	13.7579
1457.56	0.0000
1460.81	15.6836
1489.15	13.9319
1509.49	13.9984
1596.49	12.3748
1620.62	13.3979
1678.03	0.0000
1691.02	9.7160
1691.02	9.7160
1706.46	0.0000
1750.46	0.0000
1764.49	10.8518
1764.49	10.8518
1764.49	10.8518
1764.49	10.8518
1770.23	27.6548
1771.40	10.8671
1791.20	0.0000
1808.65	13.9351

1836.01

5.0039

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1202015440

Total Uranium Activity	6.4308E+00	ug/g
Total Uranium Counting Unc.	5.2761E+00	ug/g
Total Uranium Tpu	2.6919E-06	ug/g
Total Uranium Mda	4.5301E+00	ug/g

```

*****
*
*                               GEL Laboratories LLC                               *
*                               2040 SAVAGE ROAD                               *
*                               CHARLESTON ,SC 29417                           *
*                               GROSS GAMMA REPORT                             *
*
*****
*
*  BATCH ID      : 941636                SAMPLE ID   : G1202015440                *
*  ANALYST       : MXR1                  DETECTOR    : GAM16                    *
*  SAMPLE DATE   : 18-JAN-2010 00:00:00.00  COUNT TIME : 0 01:00:00.00          *
*  ANALYSIS DATE: 25-JAN-2010 11:12:57.77  SAMPLE ALQT: 155.440 GRAM          *
*
*****

```

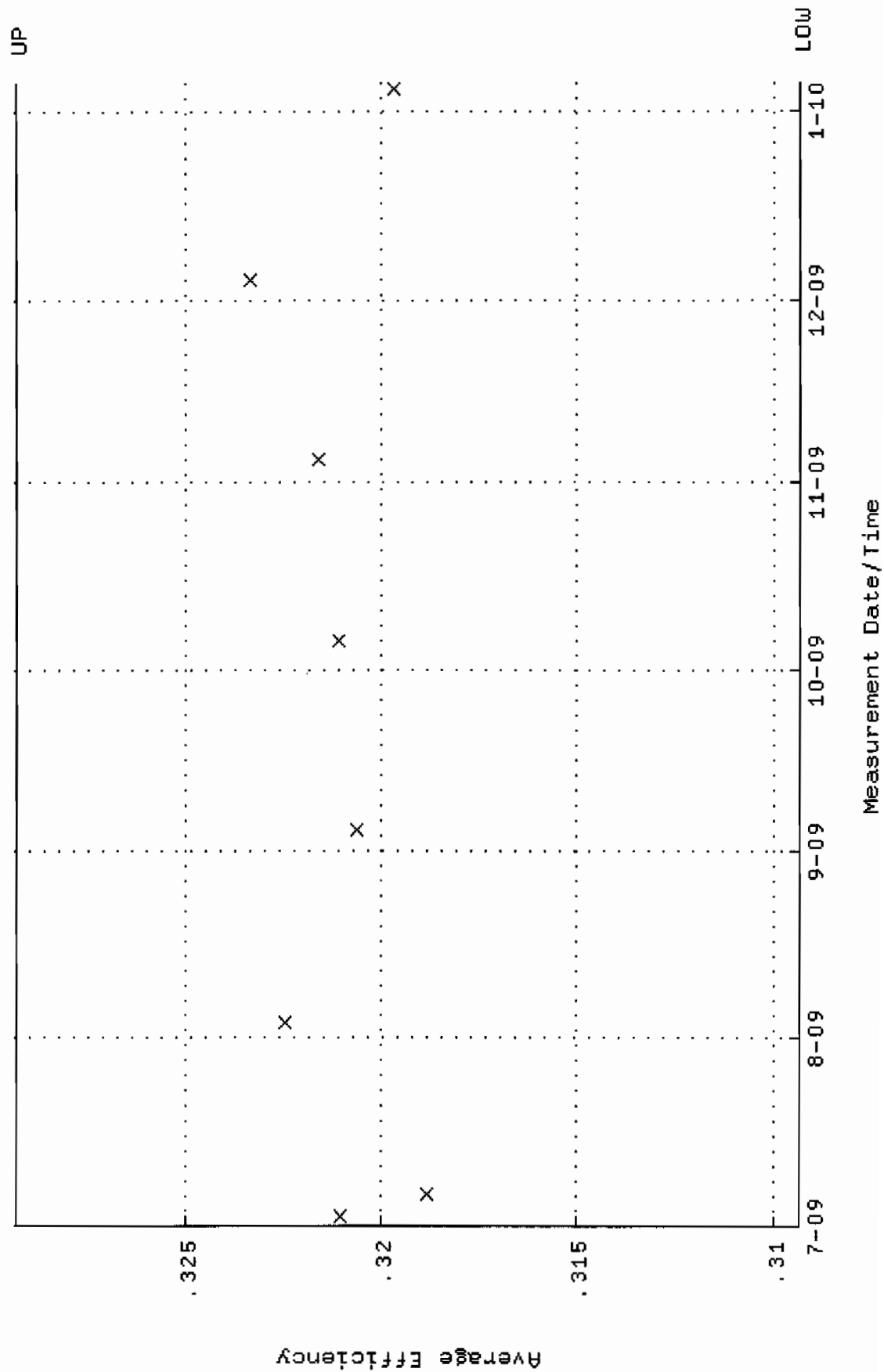
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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 2.672E+01
GROSS GAMMA ERROR (pCi/GRAM )   : 2.739E+00
GROSS GAMMA MDA (pCi/GRAM )     : 3.874E+00
GROSS GAMMA DLC (pCi/GRAM )     : 1.889E+00

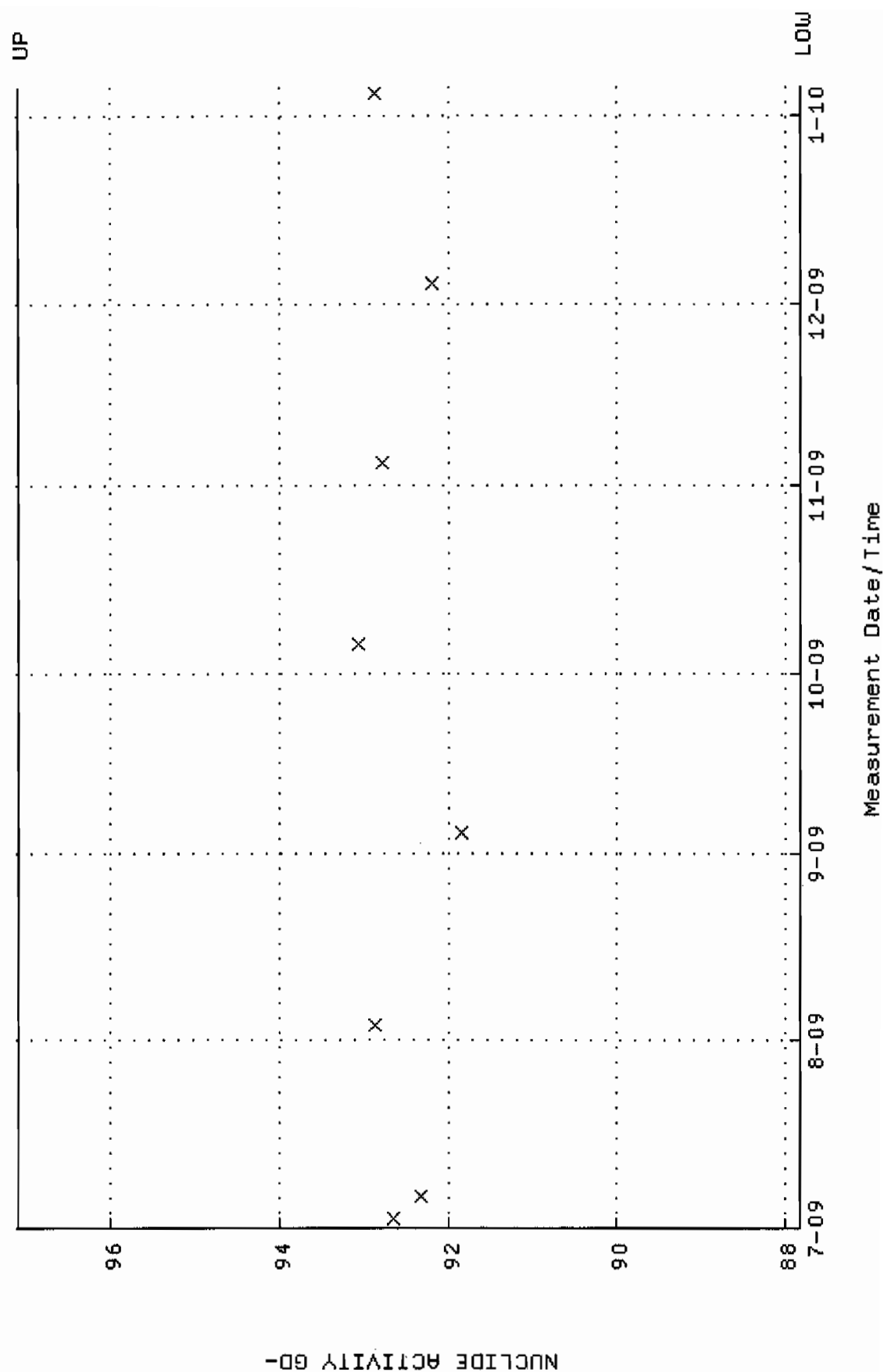
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BACKGROUND AND EFFICIENCY DATA

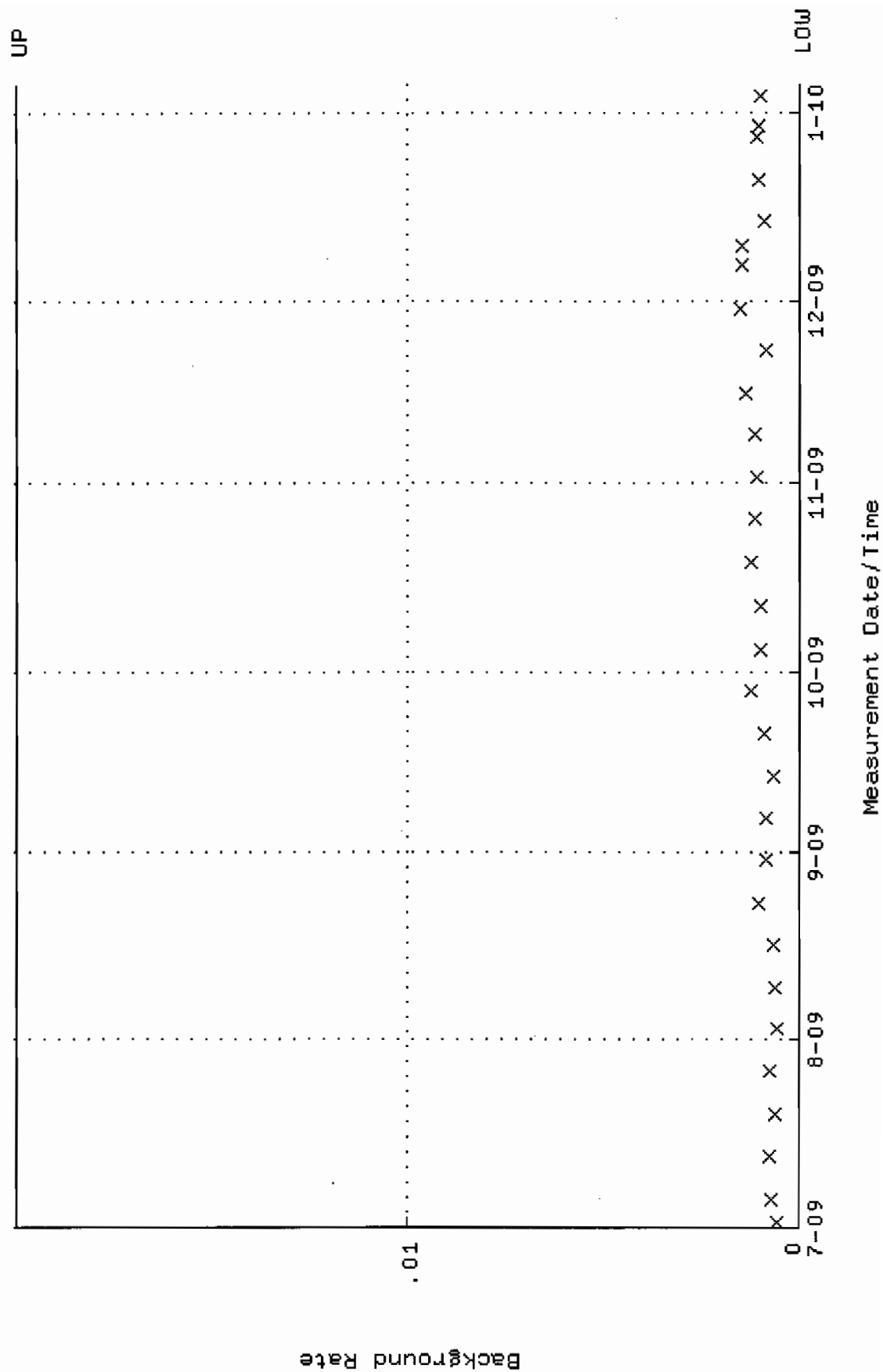
QA filename : DKA100:[ENV_ALPHA.QA.w]W008.QAF;4
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 2-JUL-2009 15:04:11 through 5-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.309318 through 0.329318



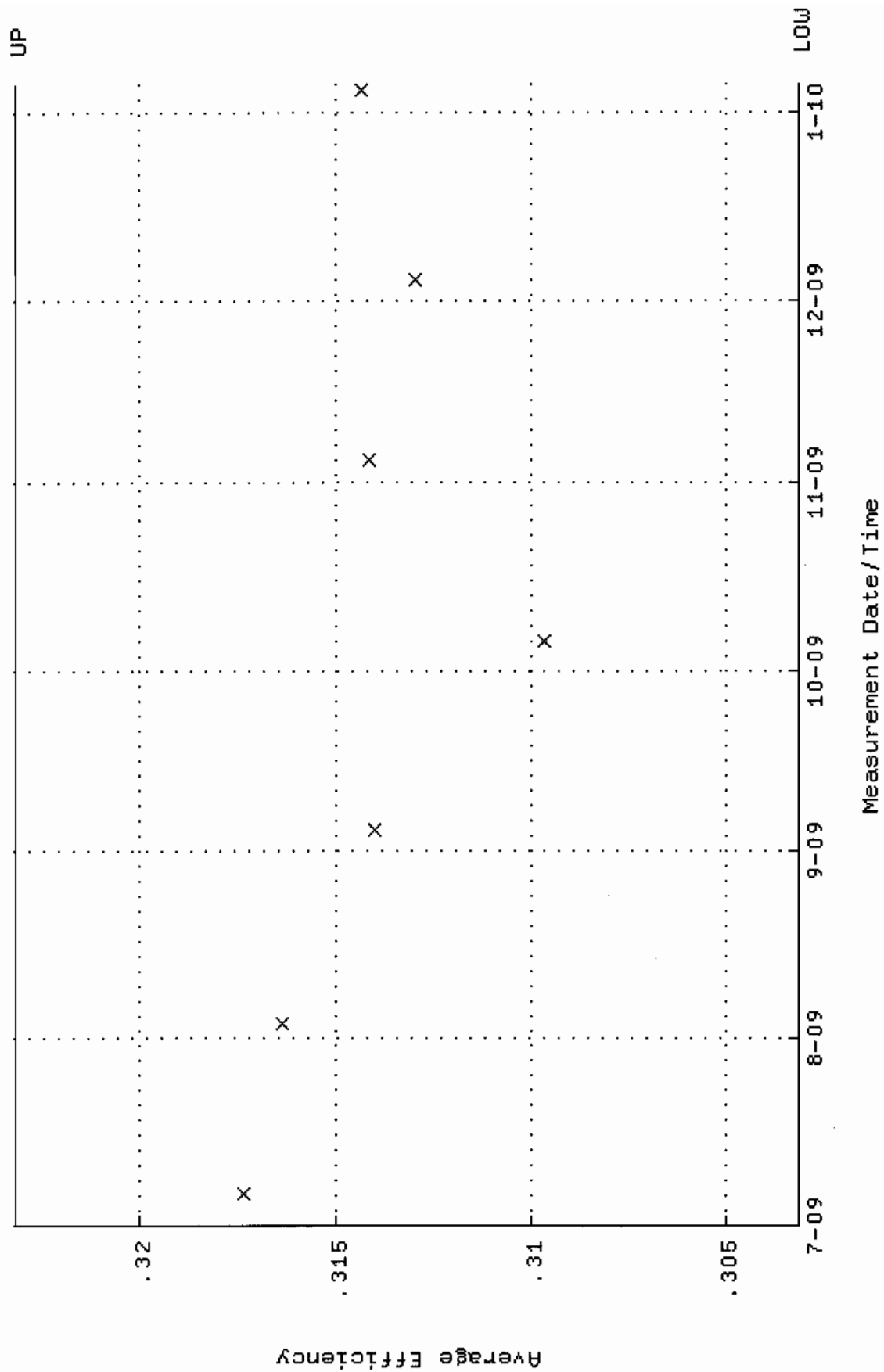
QA filename : DKA100:[ENV_ALPHA.QA.W]W008.QAF;4
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 2-JUL-2009 15:04:11 through 5-JAN-2010 12:00:00
 Lower/Upper Lmts: 87.8346 through 97.0804



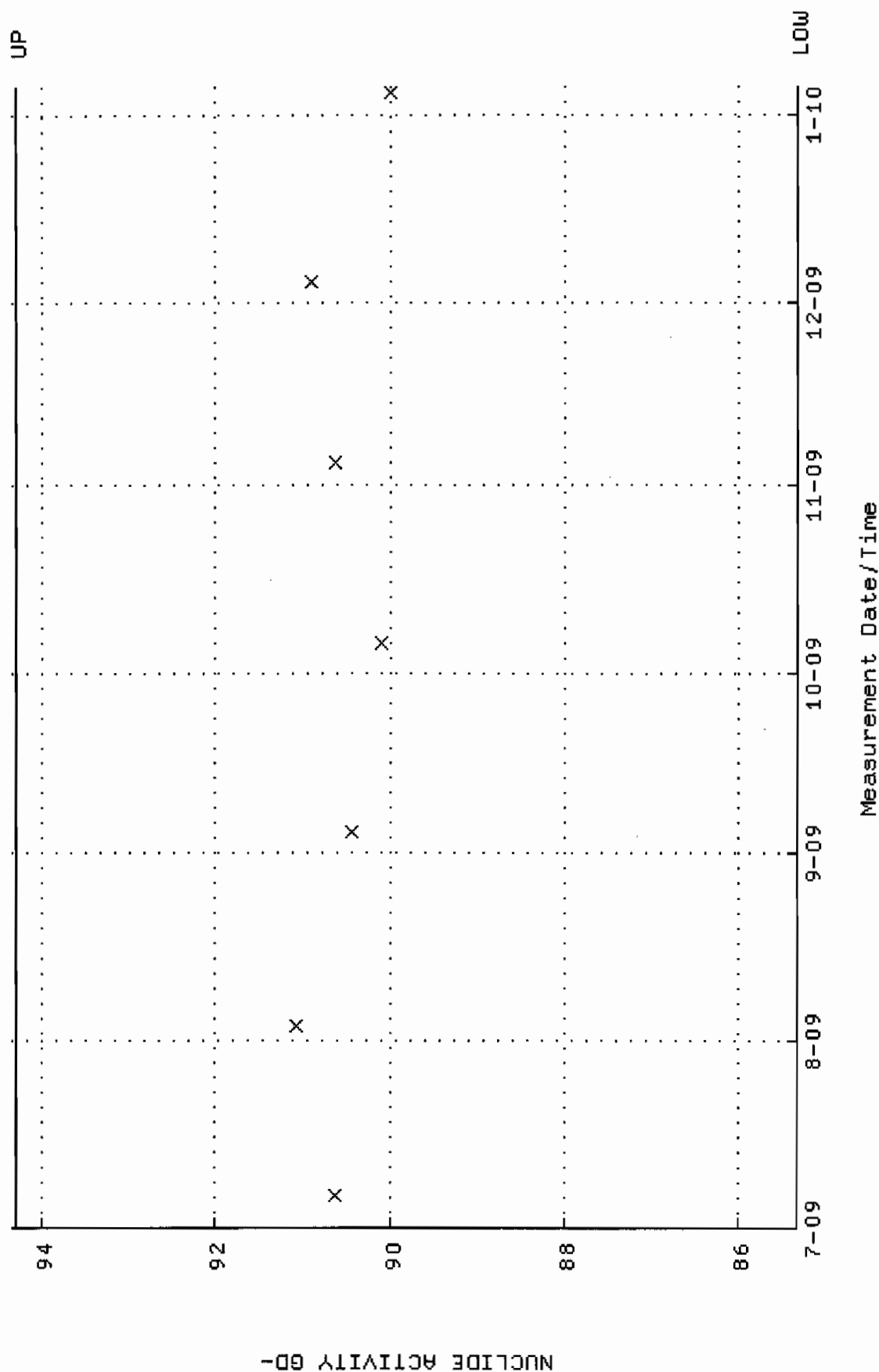
QA filename : DKA100:[ENV_ALPHA.QA.B]B008.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 1-JUL-2009 21:39:55 through 5-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



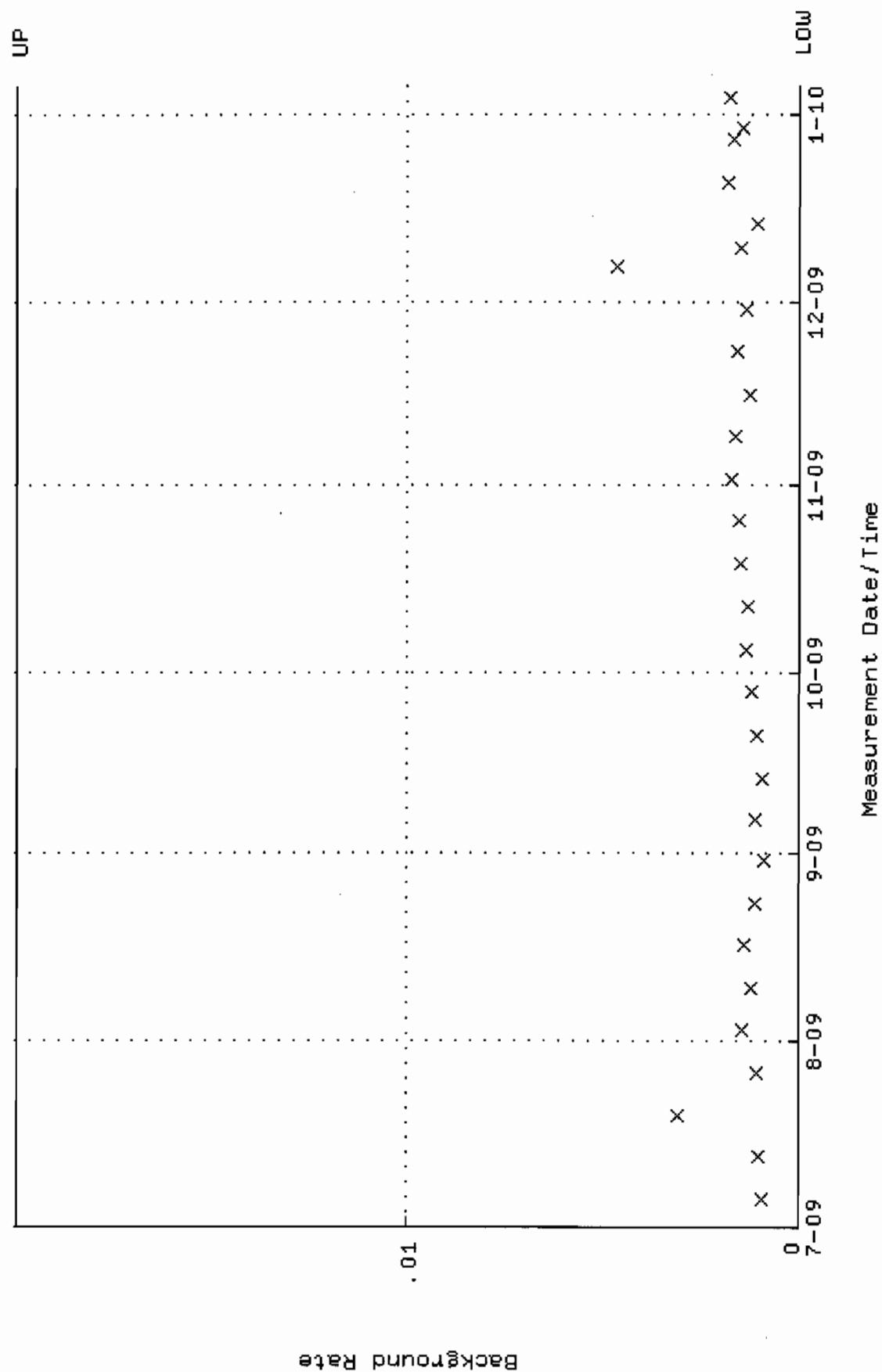
QA filename : DKA100:[ENV_ALPHA.QA.W]W010.QAF;5
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 6-JUL-2009 09:46:11 through 5-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.303169 through 0.323169



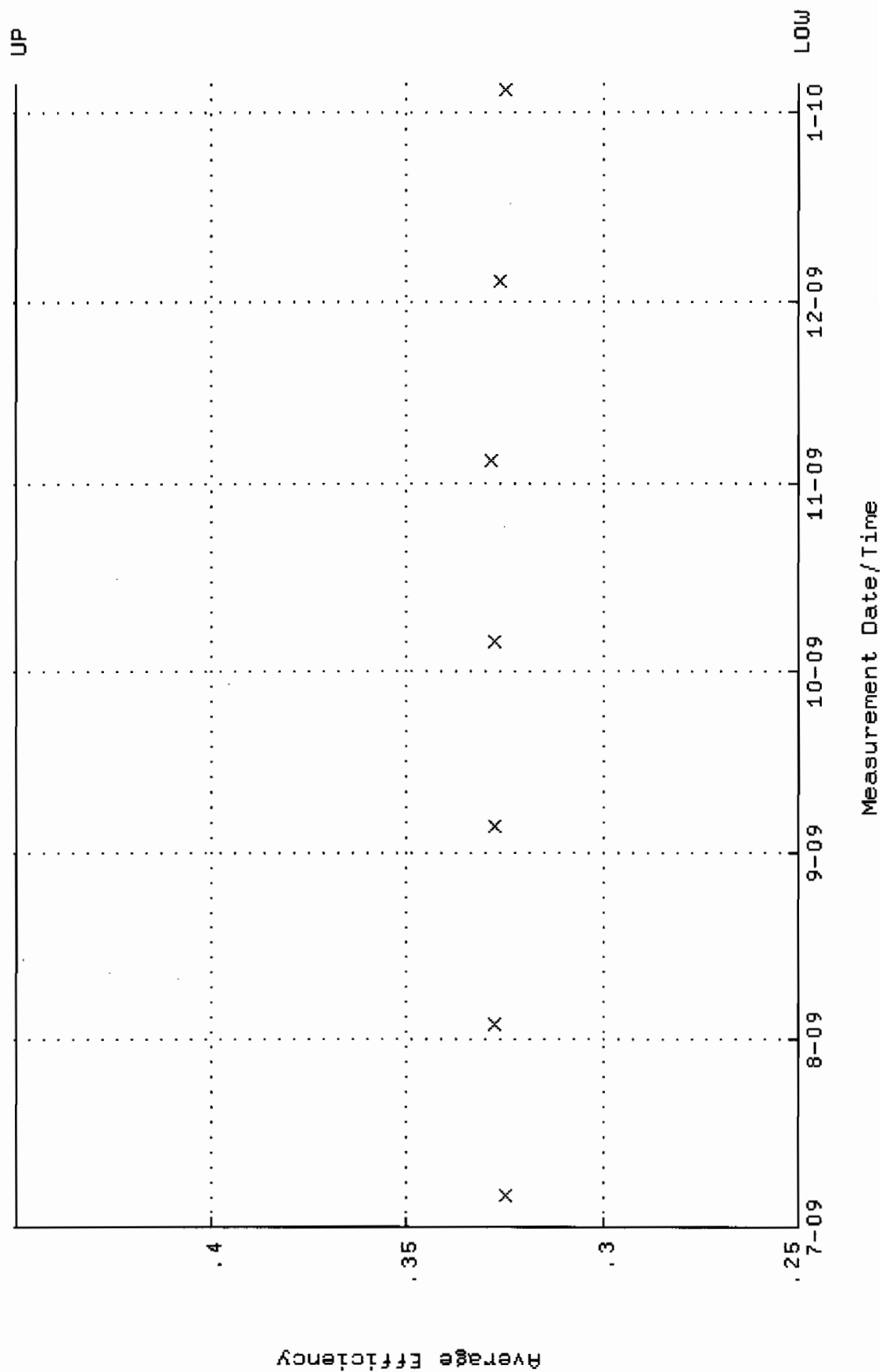
QA filename : DKA100:[ENV_ALPHA.QA.W]W010.QAF;5
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 6-JUL-2009 09:46:11 through 5-JAN-2010 12:00:00
 Lower/Upper Lmts: 85.3273 through 94.3091



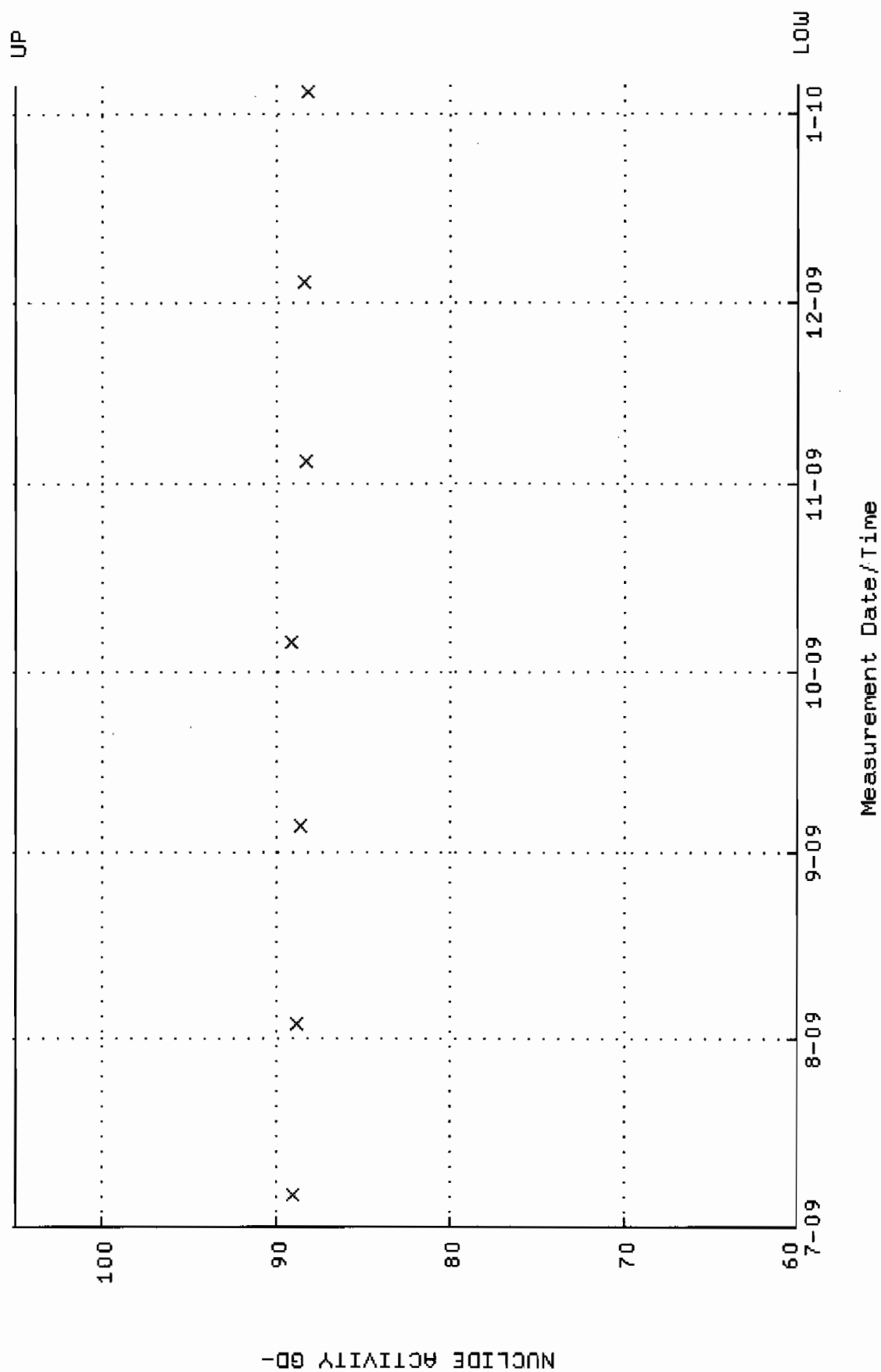
QA filename : DKA100:[ENV_ALPHA.QA.B]B010.QAF;2
 Parameter Name : BACKRATE (Background Rate)
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 Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



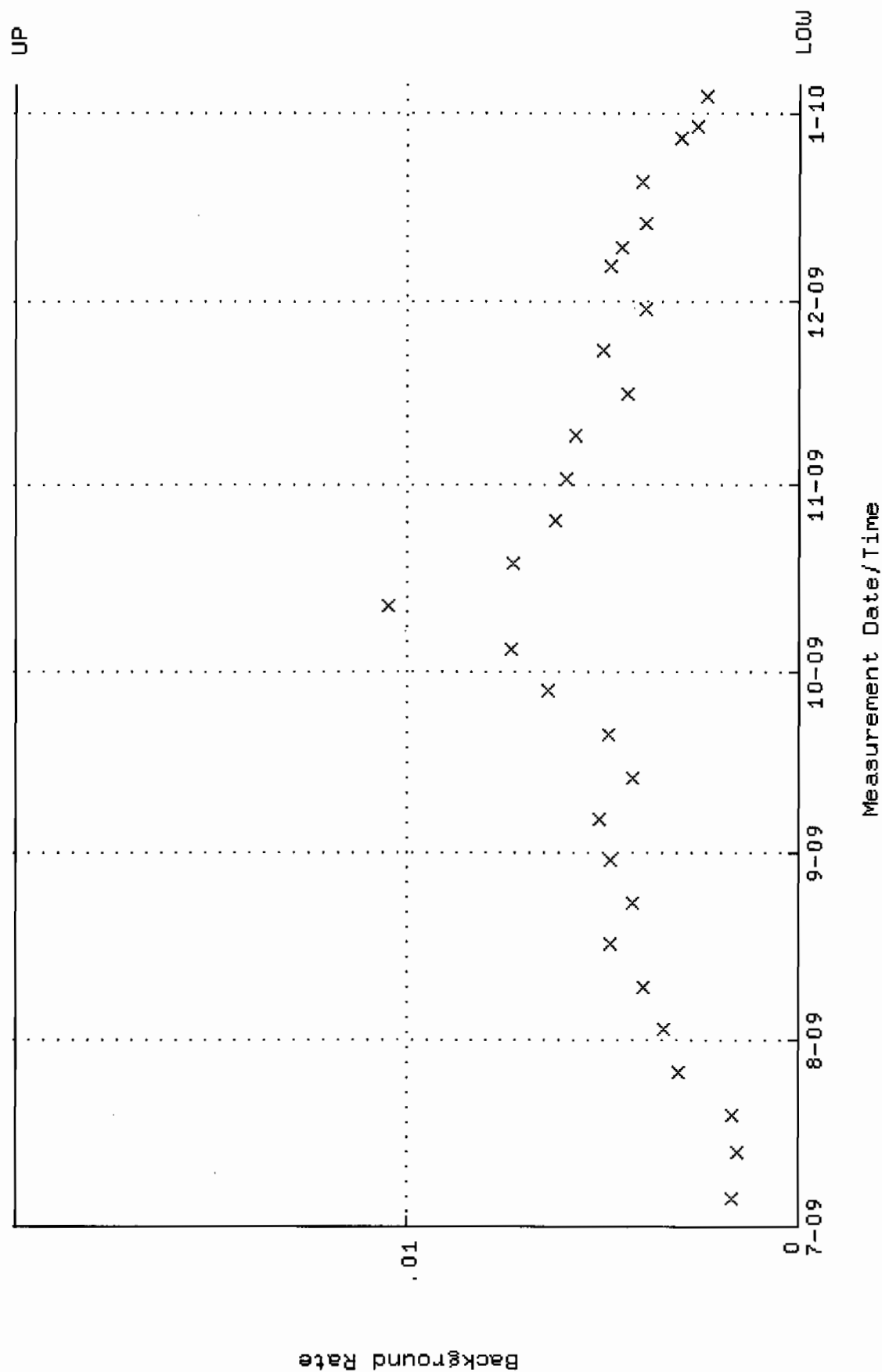
QA filename : DKA100:[ENV_ALPHA.QA.W]W025.QAF;4
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 6-JUL-2009 09:46:14 through 5-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.250000 through 0.450000



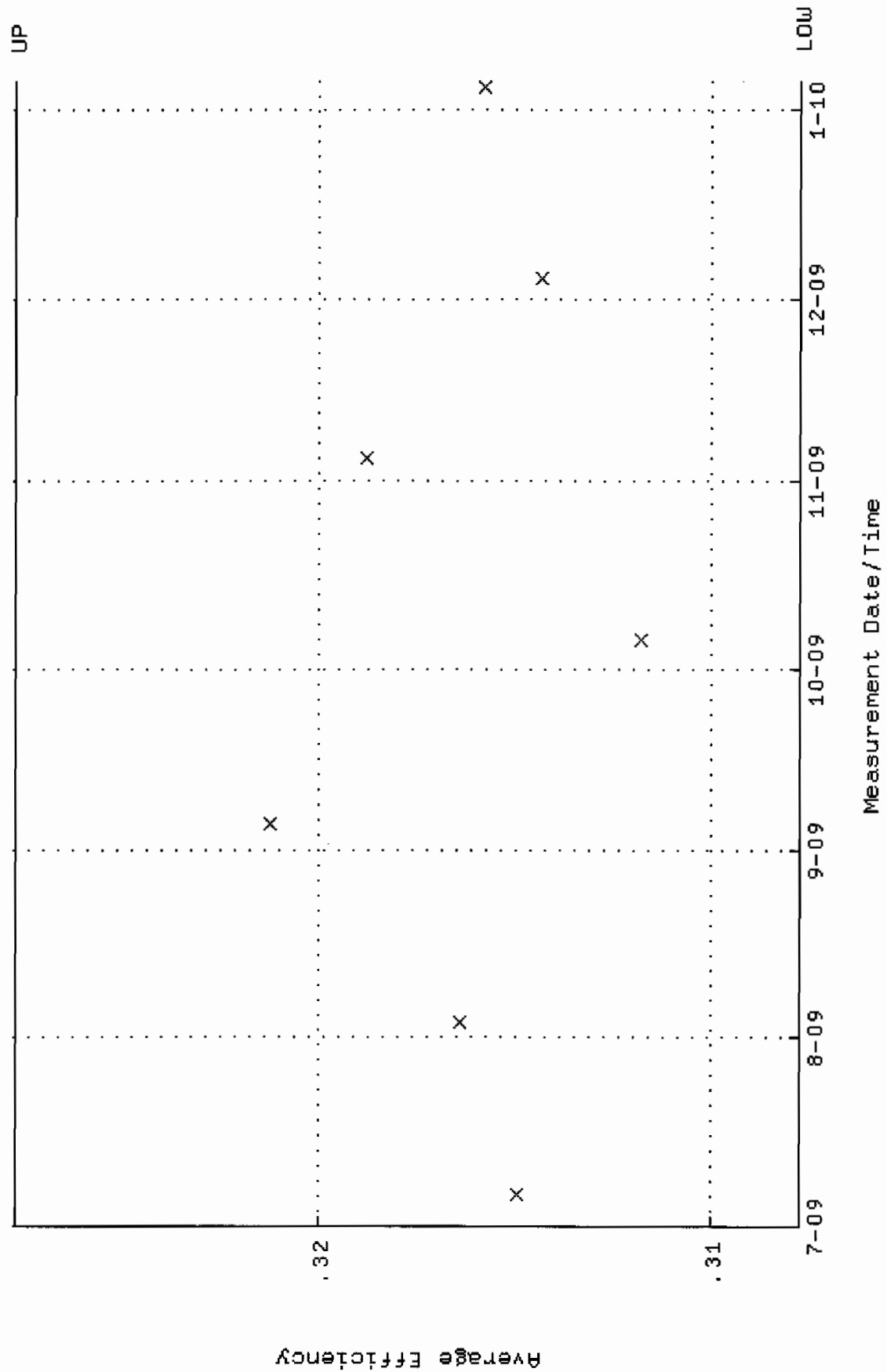
QA filename : DKA100:[ENV_ALPHA.QA.w]W025.QAF;4
Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 6-JUL-2009 09:46:14 through 5-JAN-2010 12:00:00
Lower/Upper Lmts: 60.0000 through 105.000



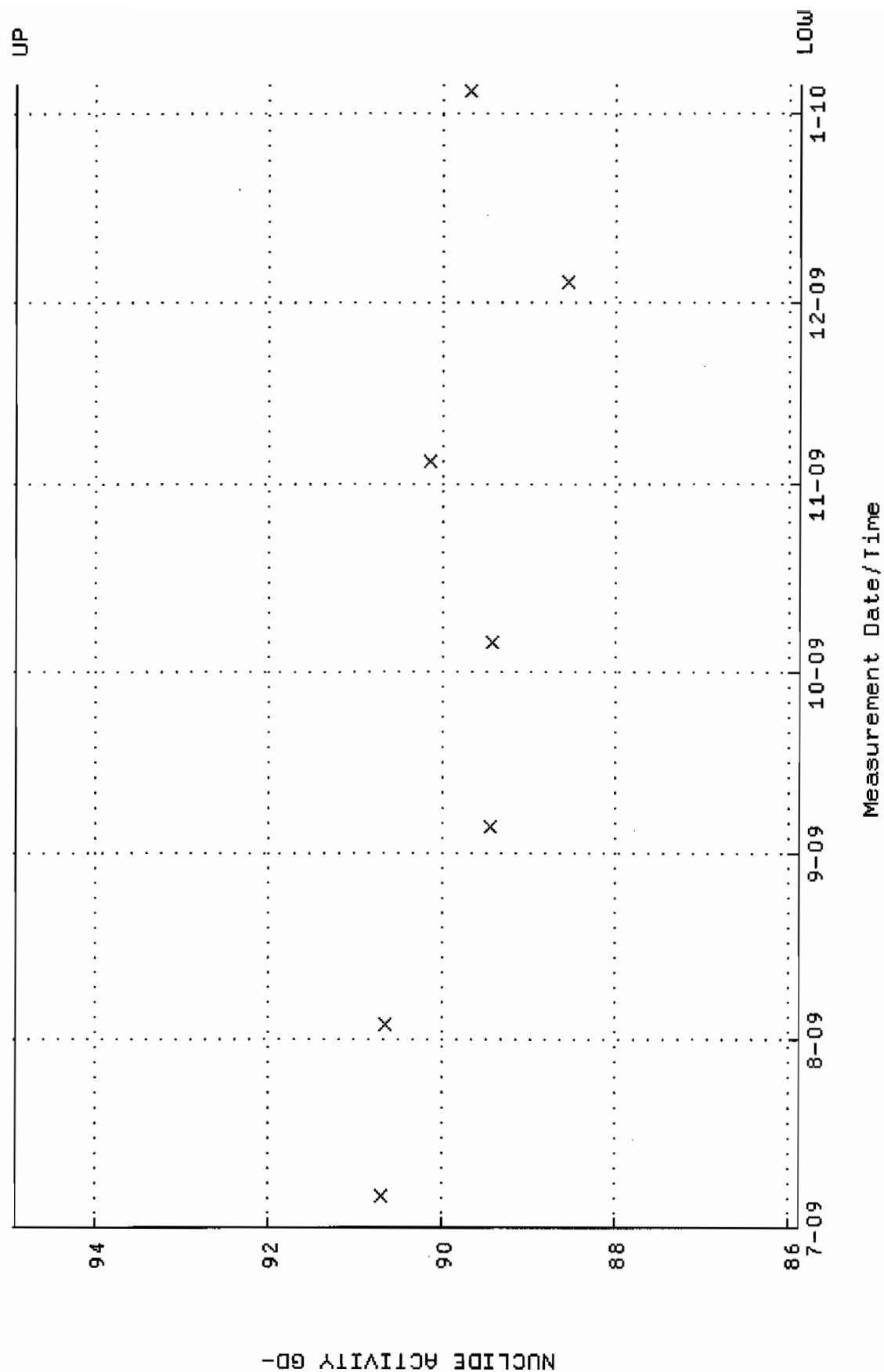
QA filename : DKA100:[ENV_ALPHA.QA.B]B025.QAF;2
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 5-JUL-2009 15:11:58 through 5-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



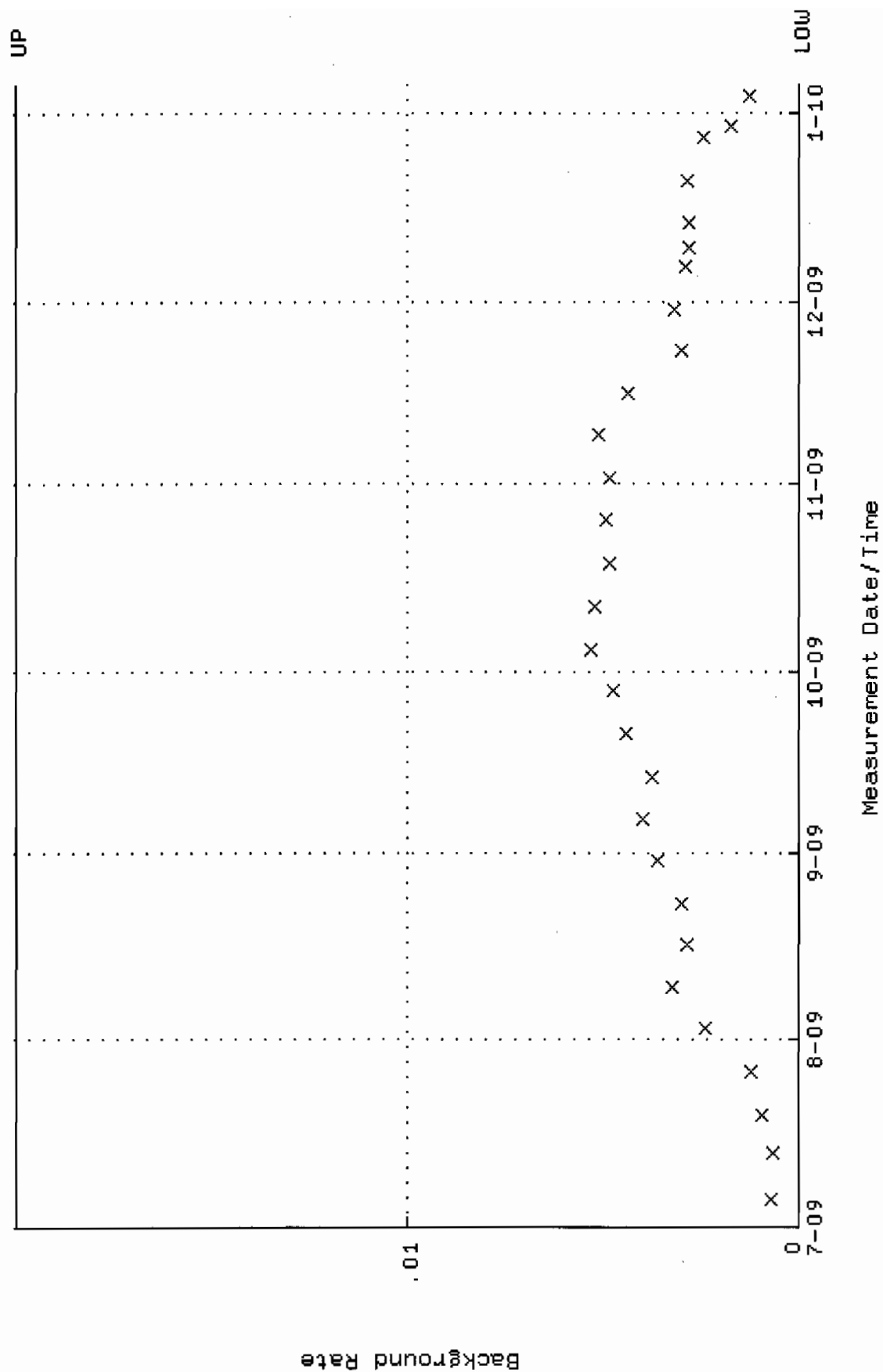
QA filename : DKA100:[ENV_ALPHA.QA.W]w026.QAF;3
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 6-JUL-2009 09:46:14 through 5-JAN-2010 12:00:00
Lower/Upper Lmts: 0.307728 through 0.327728



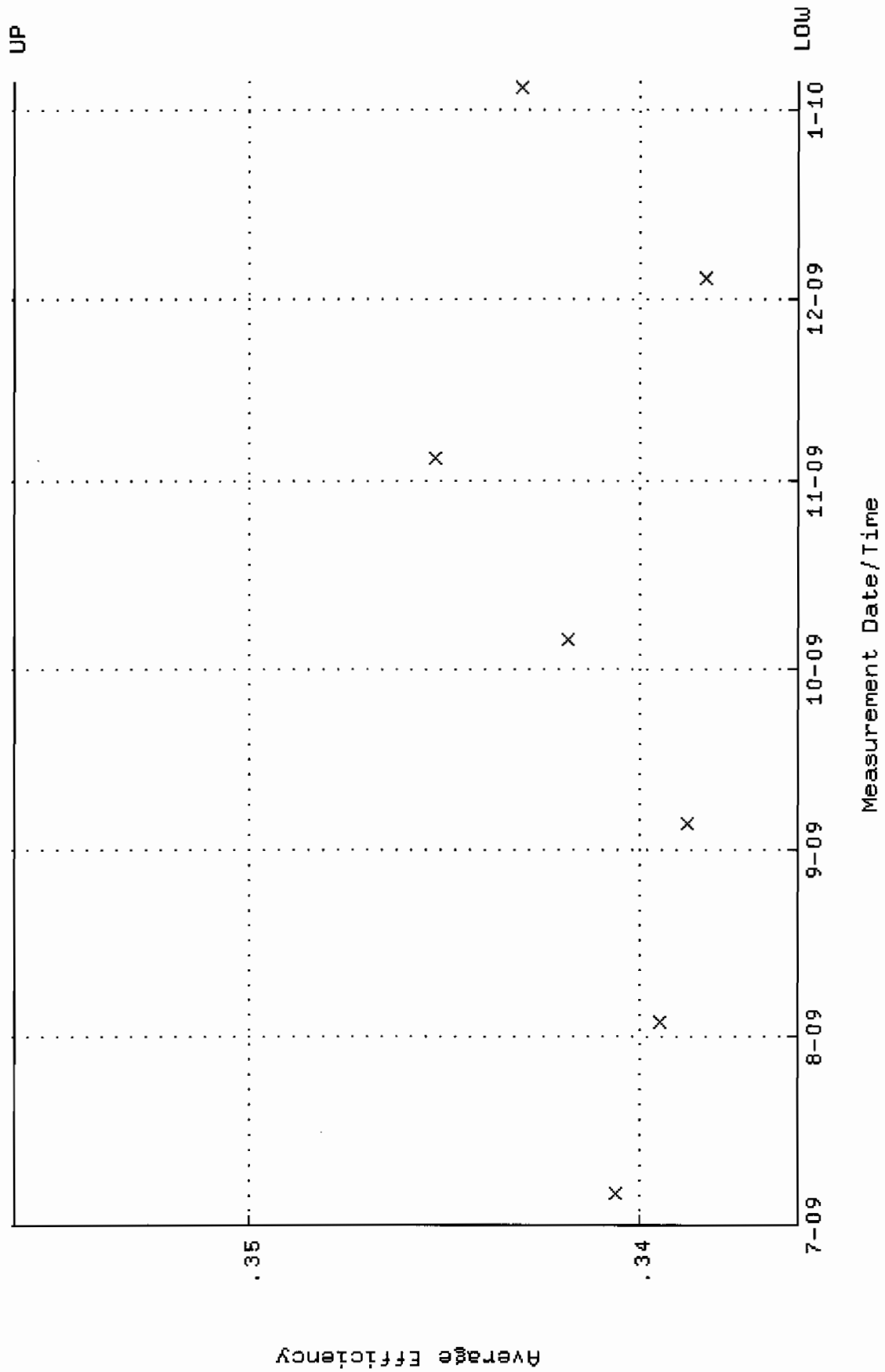
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 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 6-JUL-2009 09:46:14 through 5-JAN-2010 12:00:00
 Lower/Upper Lmts: 85.8763 through 94.9159



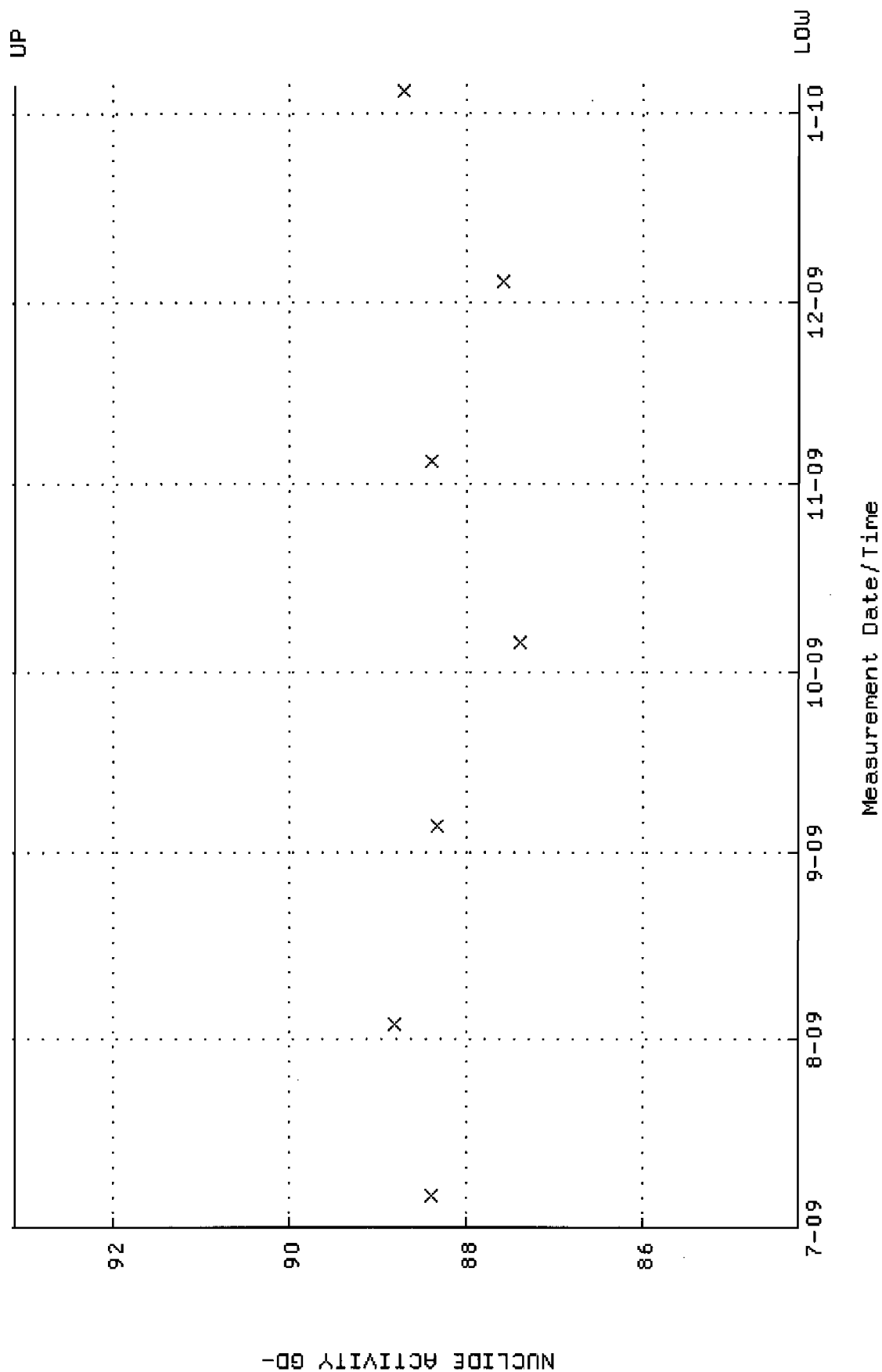
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 Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



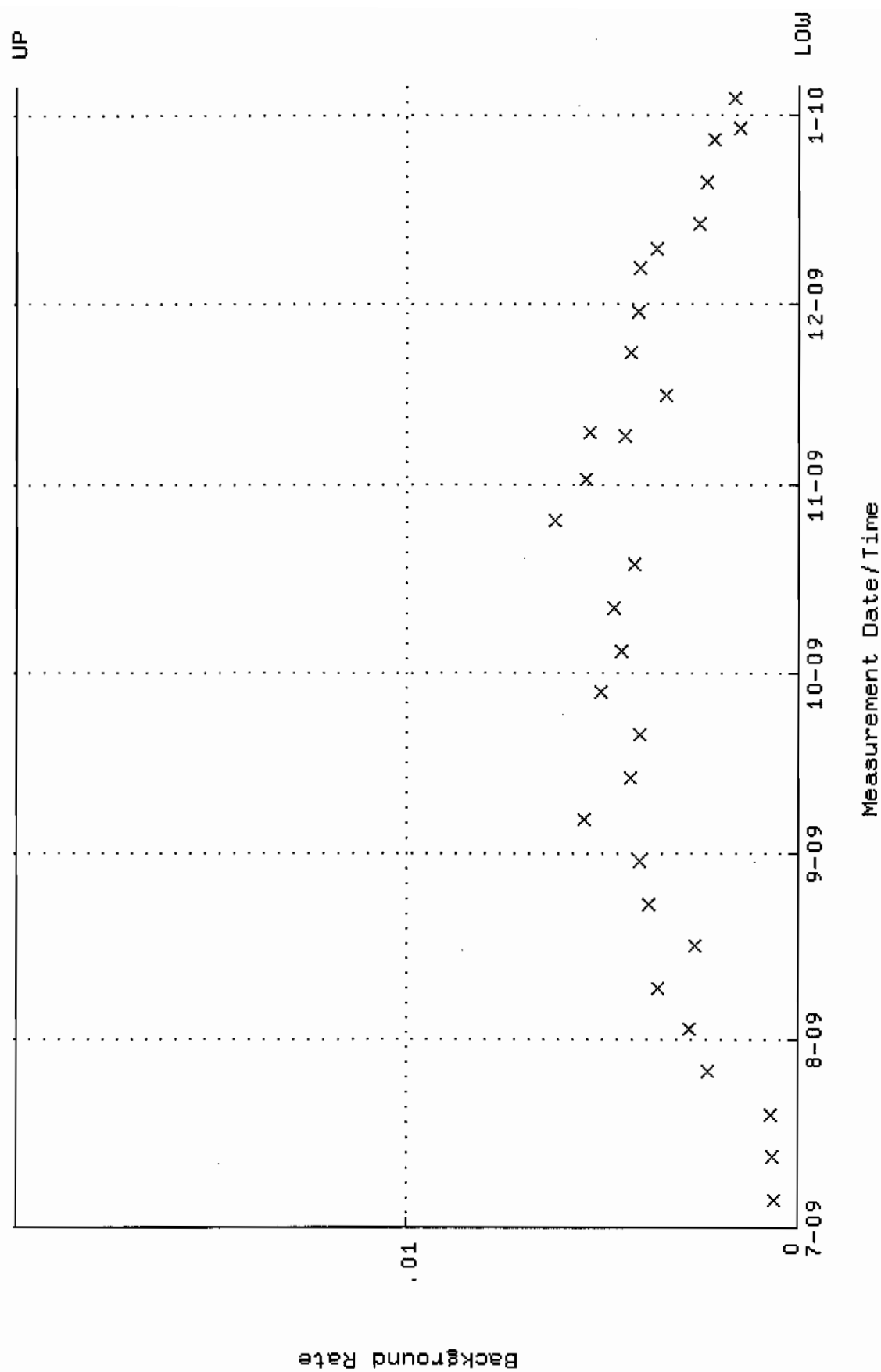
QA filename : DKA100:[ENV_ALPHA.QA.W]W043.QAF;102
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 6-JUL-2009 09:46:17 through 5-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.335973 through 0.355973



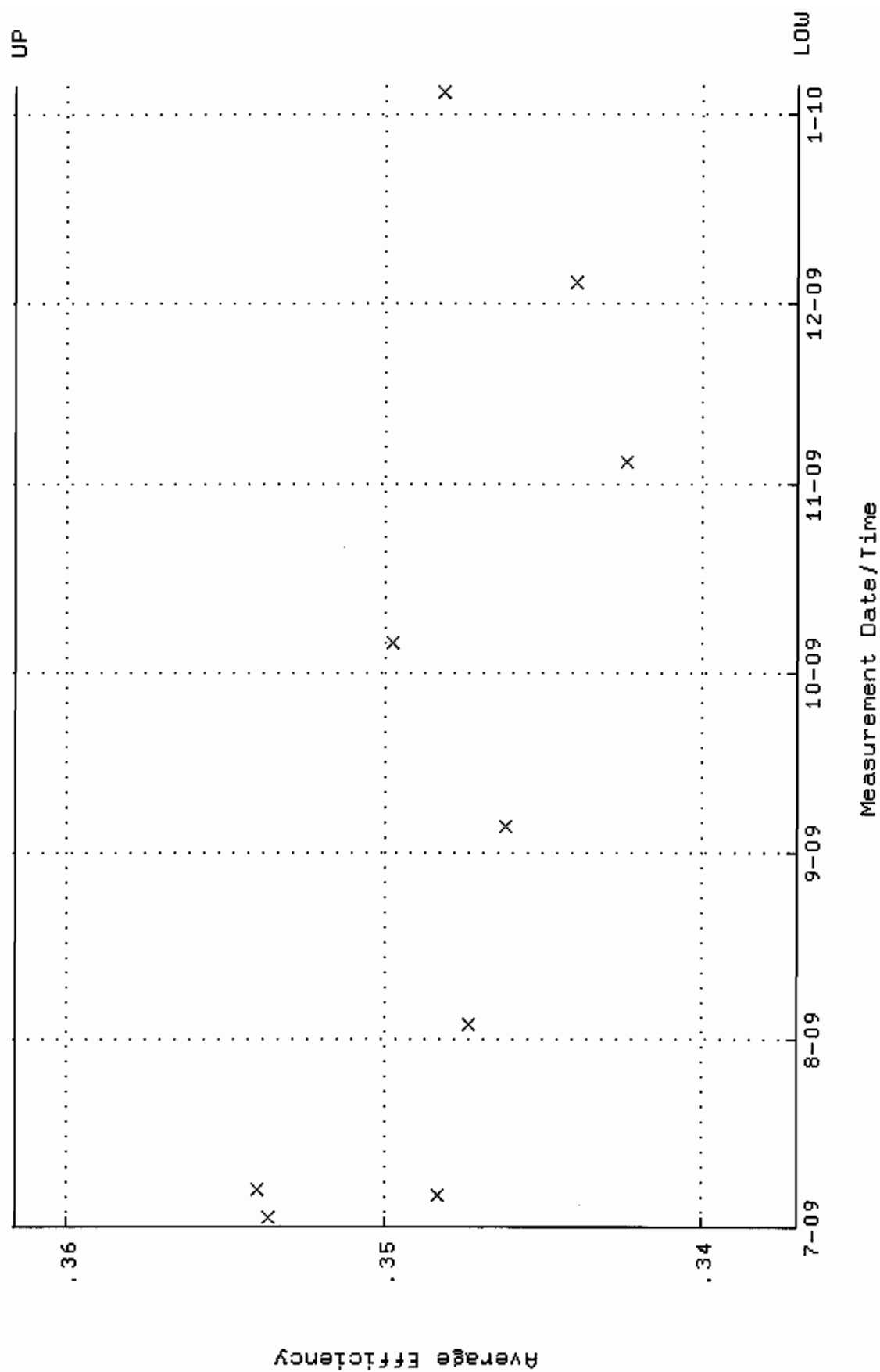
QA filename : DKA100:[ENV-ALPHA.QA.W]W043.QAF;102
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 6-JUL-2009 09:46:17 through 5-JAN-2010 12:00:00
 Lower/Upper Lmts: 84.2440 through 93.1118



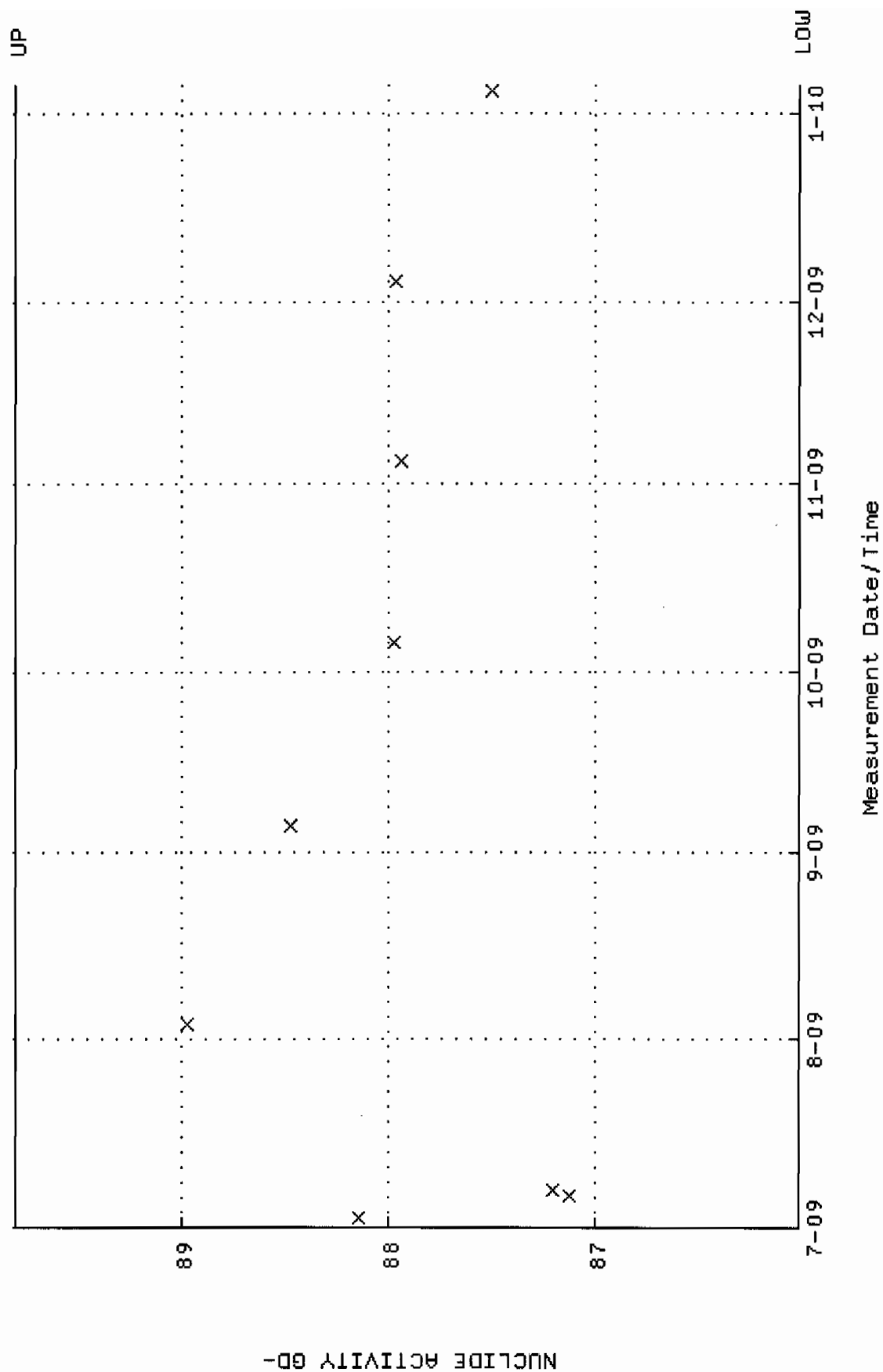
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 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 5-JUL-2009 15:12:00 through 5-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



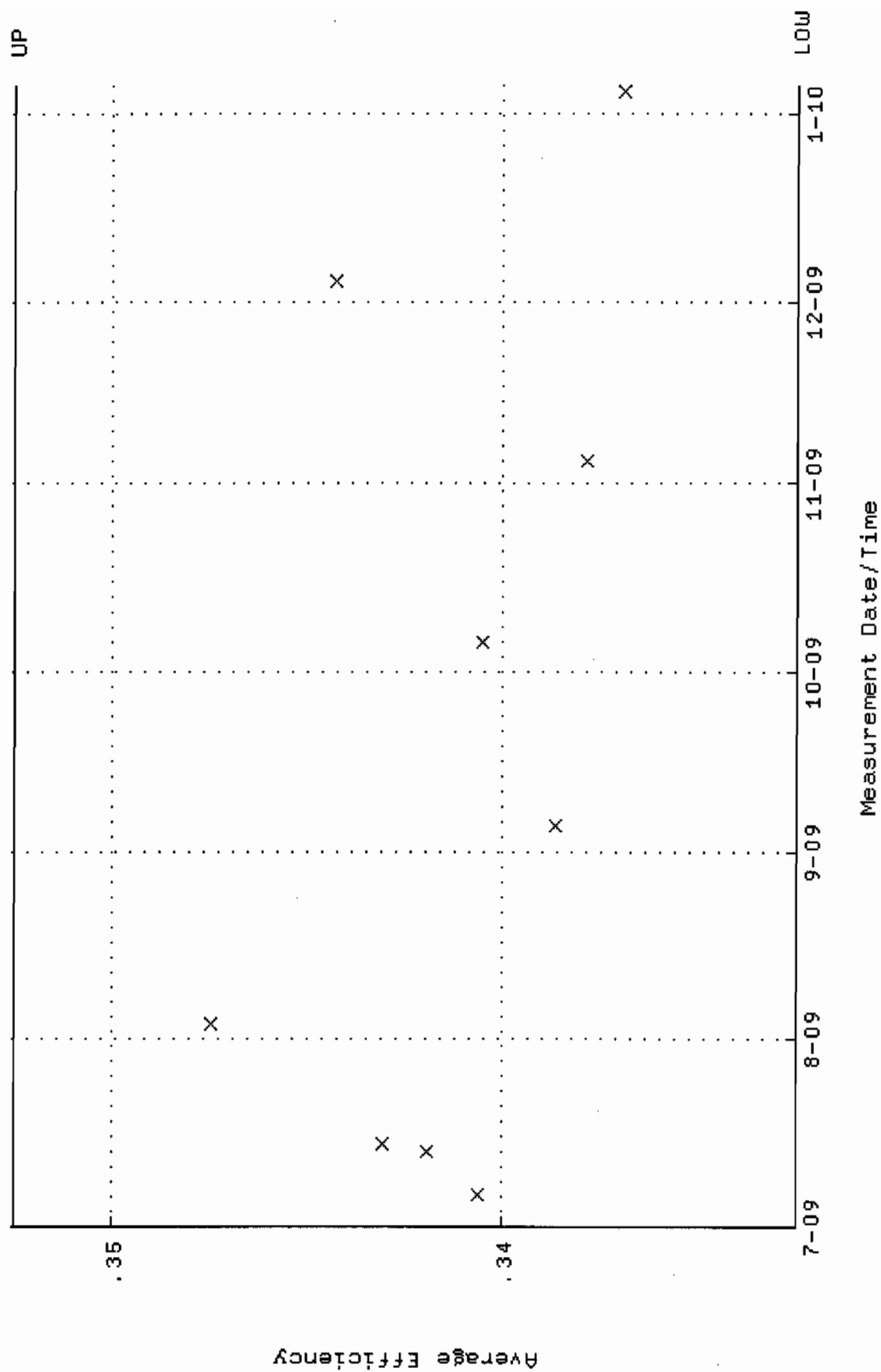
QA filename : DKA100:[ENV_ALPHA.QA.W]w044.QAF;5
 Parameter Name : AVREFF (Average Efficiency)
 Start/End Dates : 2-JUL-2009 15:04:12 through 5-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.336958 through 0.361648



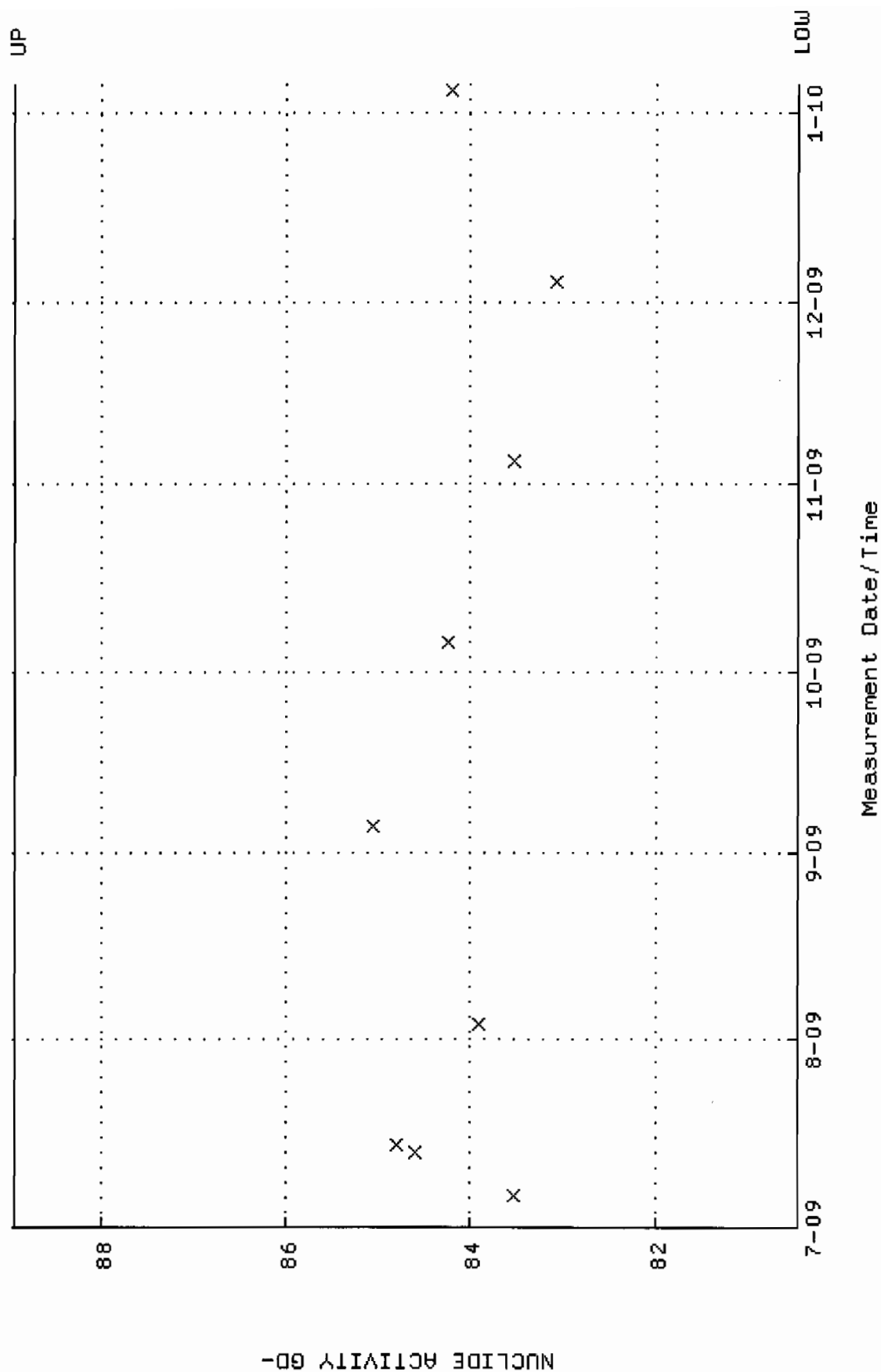
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 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 2-JUL-2009 15:04:12 through 5-JAN-2010 12:00:00
 Lower/Upper Lmts: 86.0137 through 89.8023



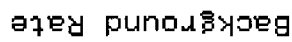
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 Parameter Name : AVRGEFF (Average Efficiency)
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 Lower/Upper Lmts: 0.332472 through 0.352472



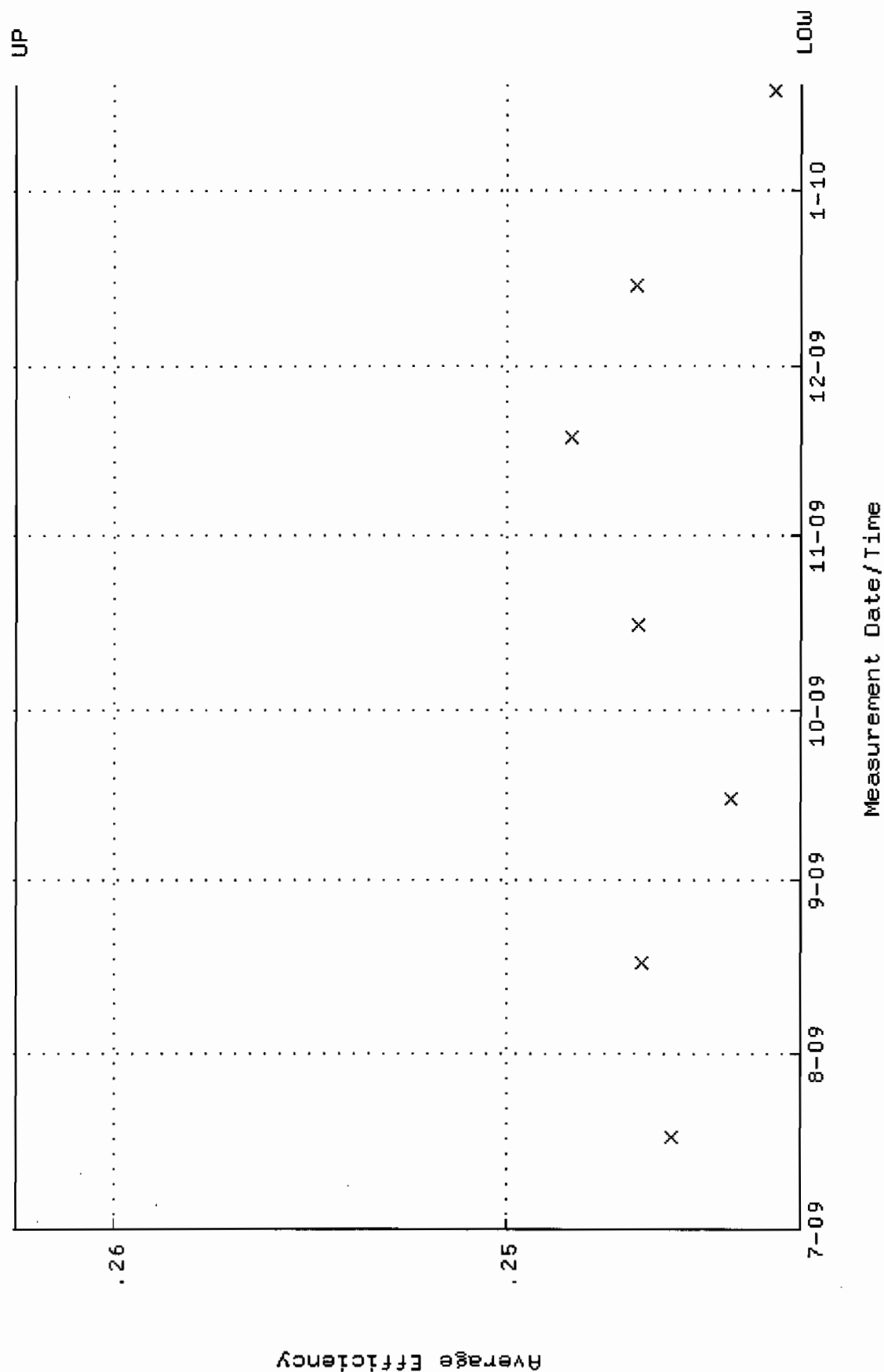
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 Parameter Name : NLACTIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 6-JUL-2009 09:46:17 through 5-JAN-2010 12:00:00
 Lower/Upper Lmts: 80.4622 through 88.9320



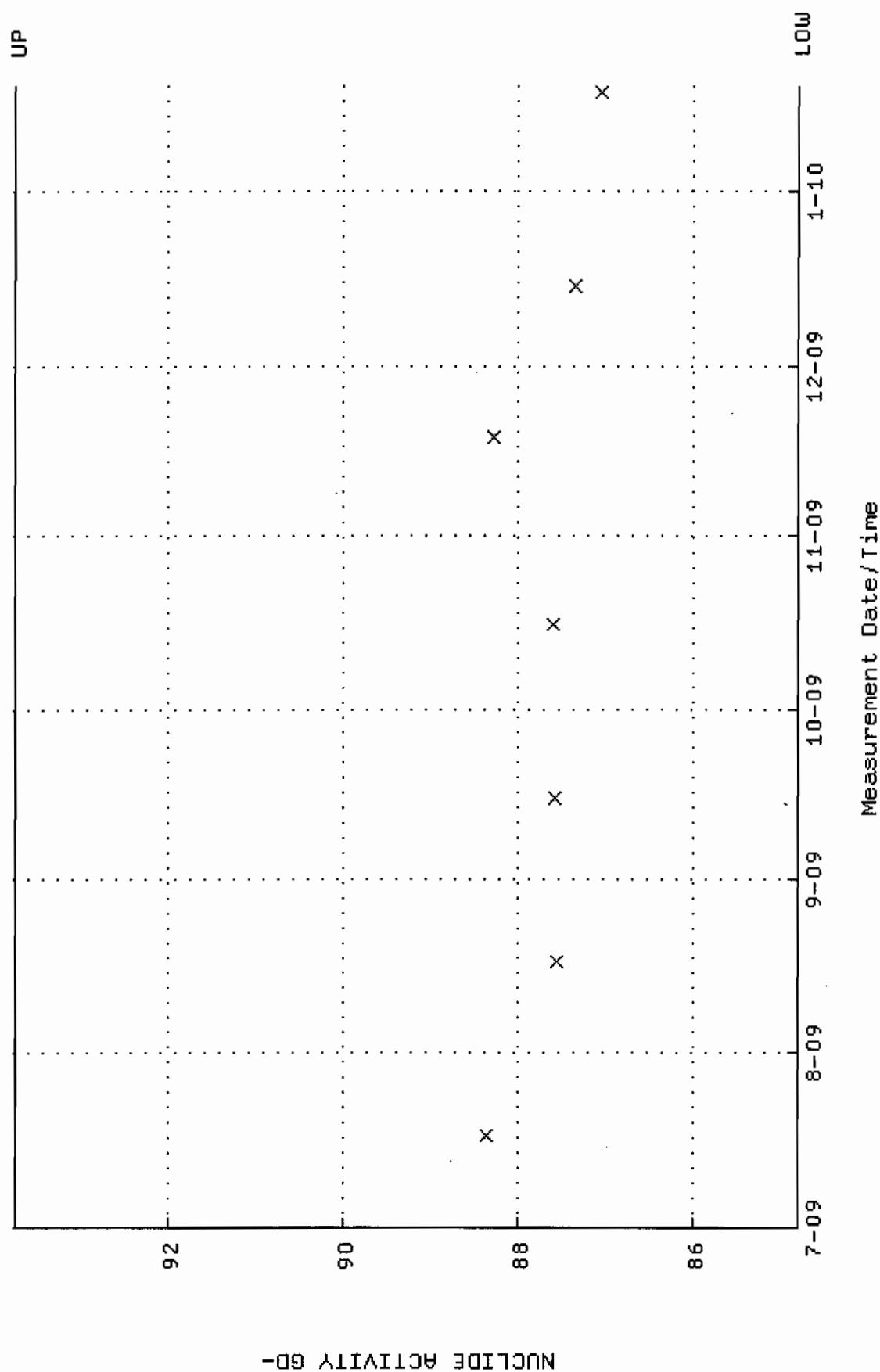
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



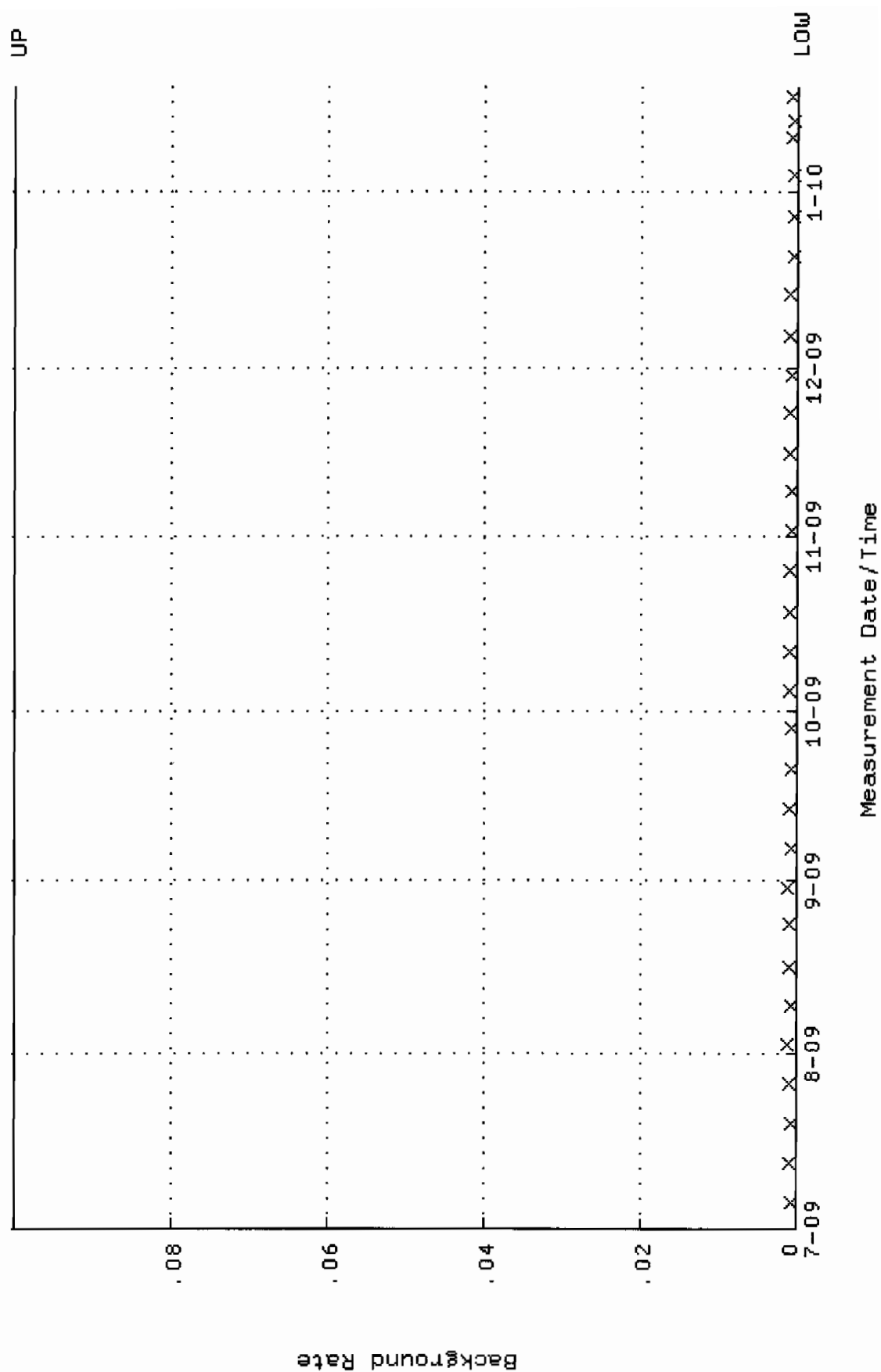
QA filename : DKA100:[ENV_ALPHA.QA.W]W149.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 17-JUL-2009 09:13:39 through 19-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.242495 through 0.262495



QA filename : DKA100:[ENV_ALPHA.QA.W]W149.QAF;1
 Parameter Name : NLACTIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 17-JUL-2009 09:13:39 through 19-JAN-2010 12:00:00
 Lower/Upper Lmts: 84.8126 through 93.7402



QA filename : DKA100:[ENV_ALPHA.QA.B]B149.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 5-JUL-2009 14:57:43 through 19-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000

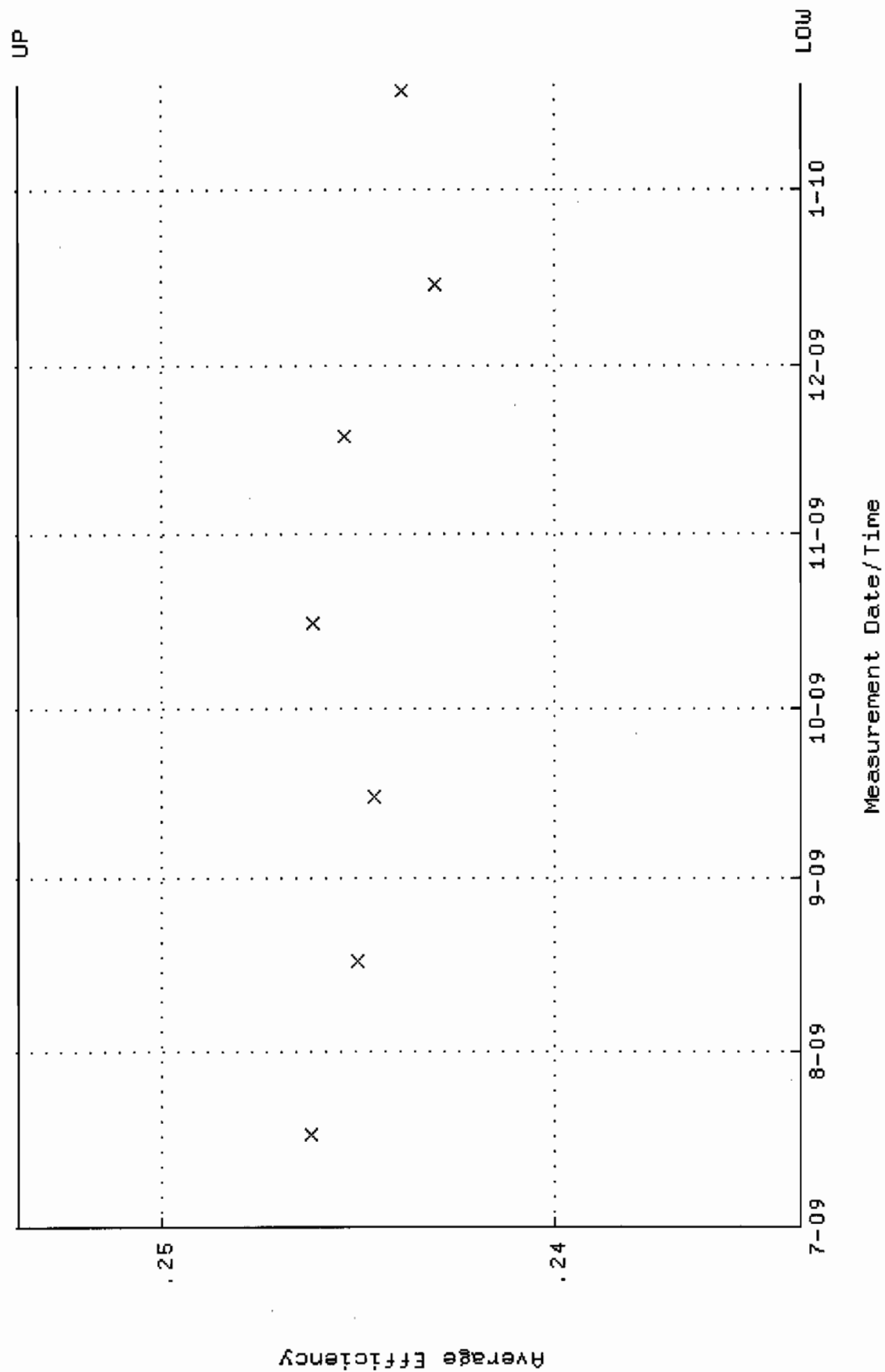


QA filename : DKA100:[ENV_ALPHA.QA.W]W151.QAF;1

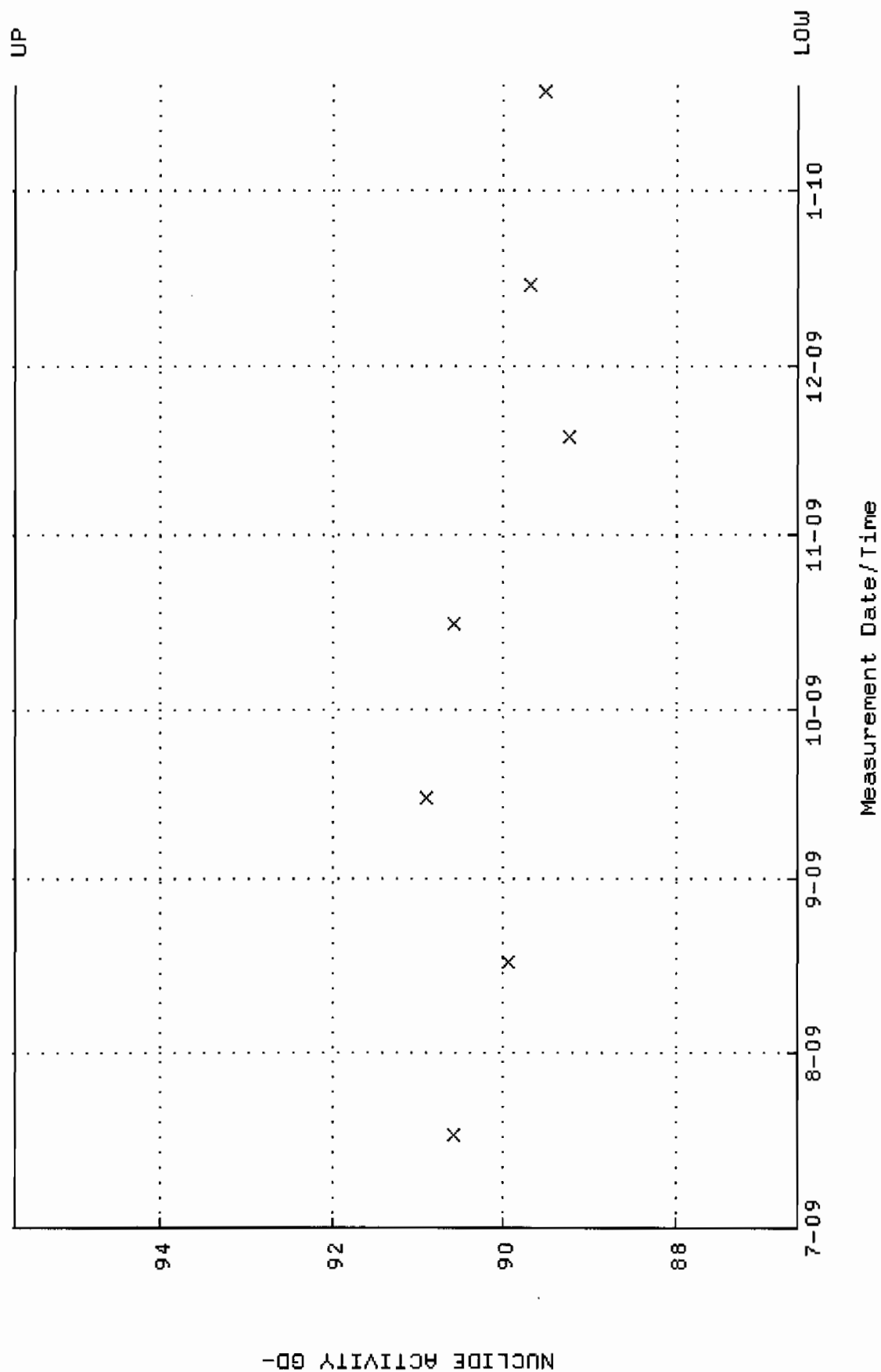
Parameter Name : AVRGEFF (Average Efficiency)

Start/End Dates : 17-JUL-2009 09:13:48 through 19-JAN-2010 12:00:00

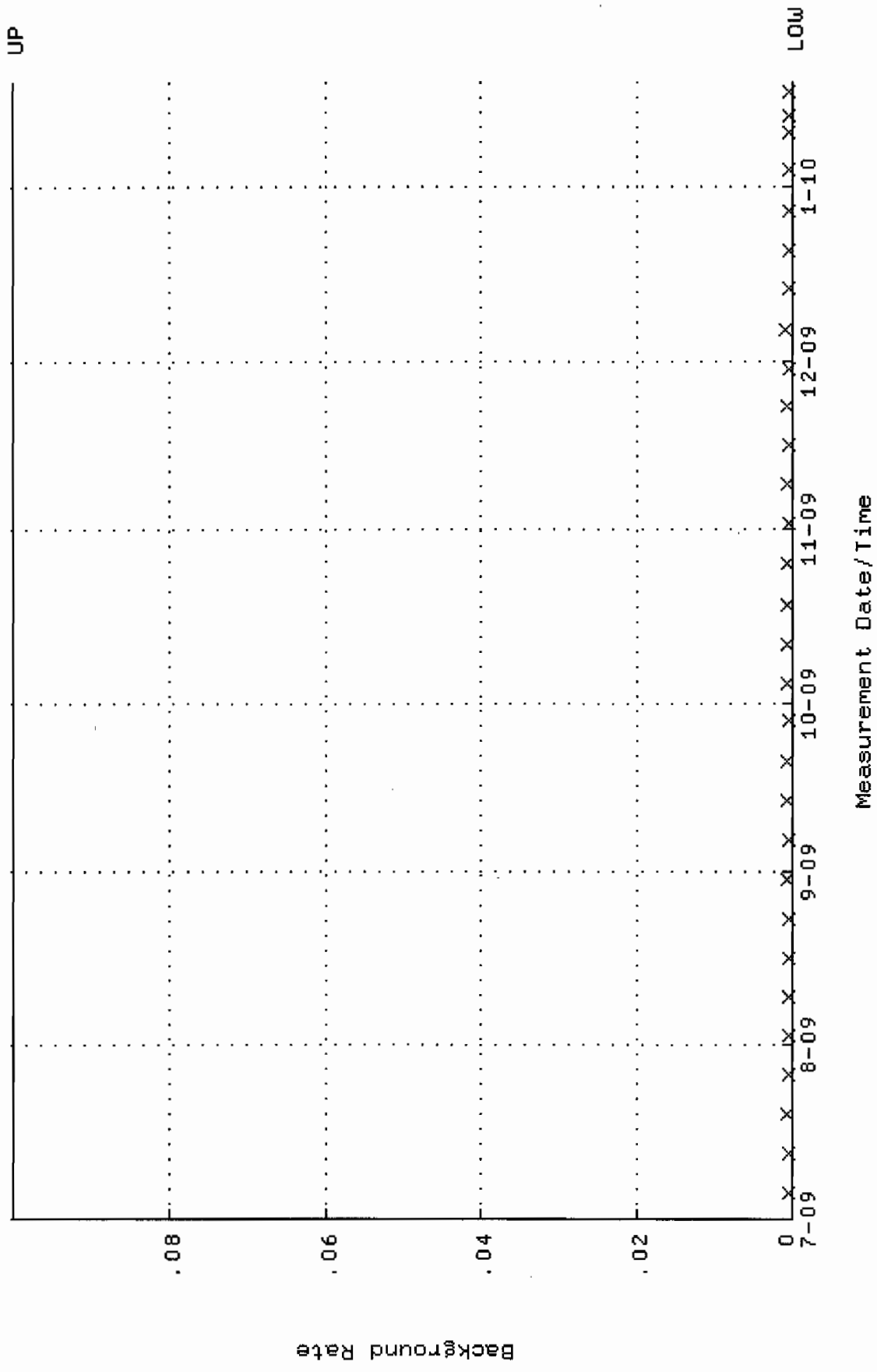
Lower/Upper Lmts: 0.233693 through 0.253693



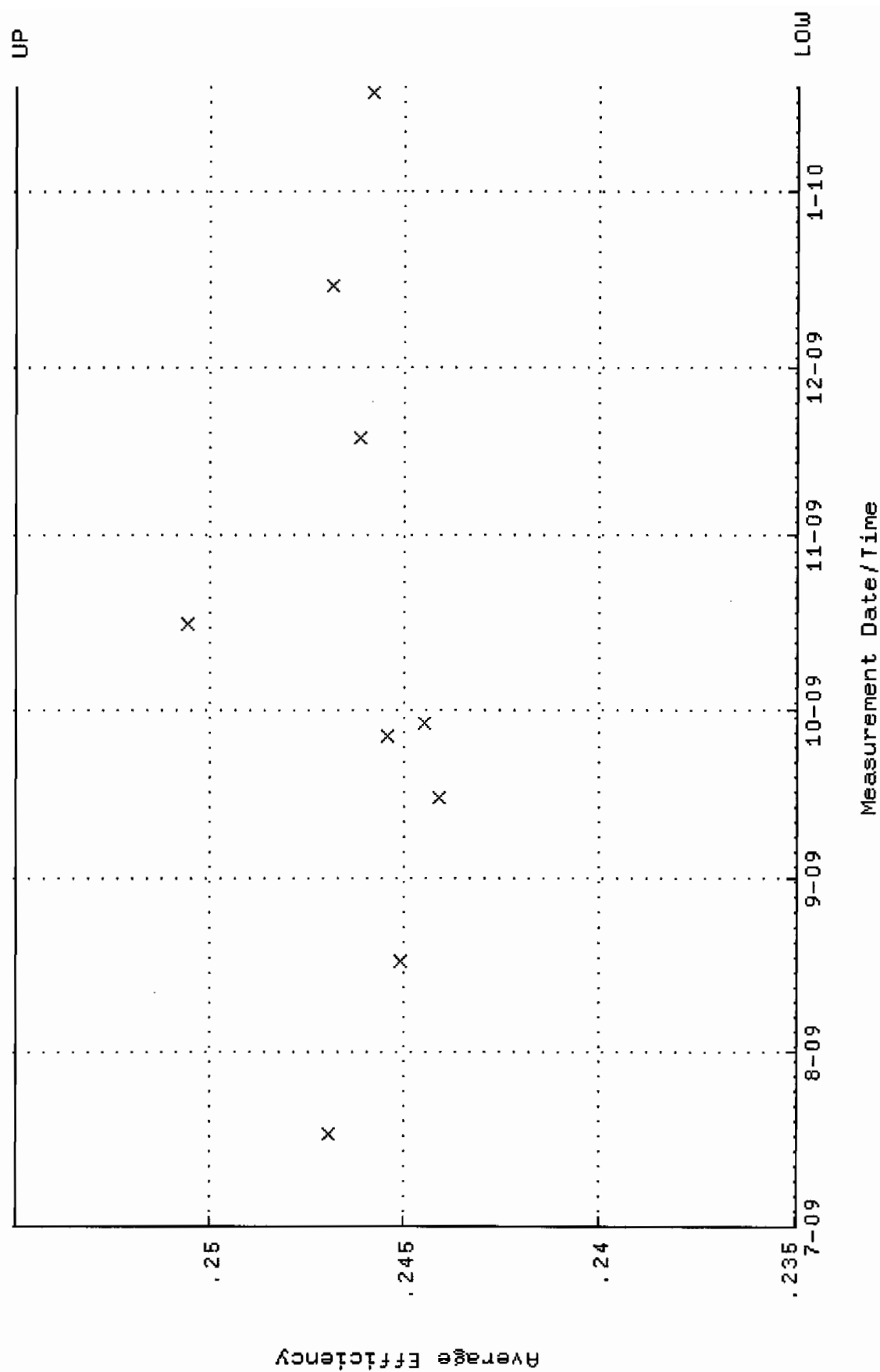
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 Parameter Name : NLACTIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 17-JUL-2009 09:13:48 through 19-JAN-2010 12:00:00
 Lower/Upper Lmts: 86.5749 through 95.6881



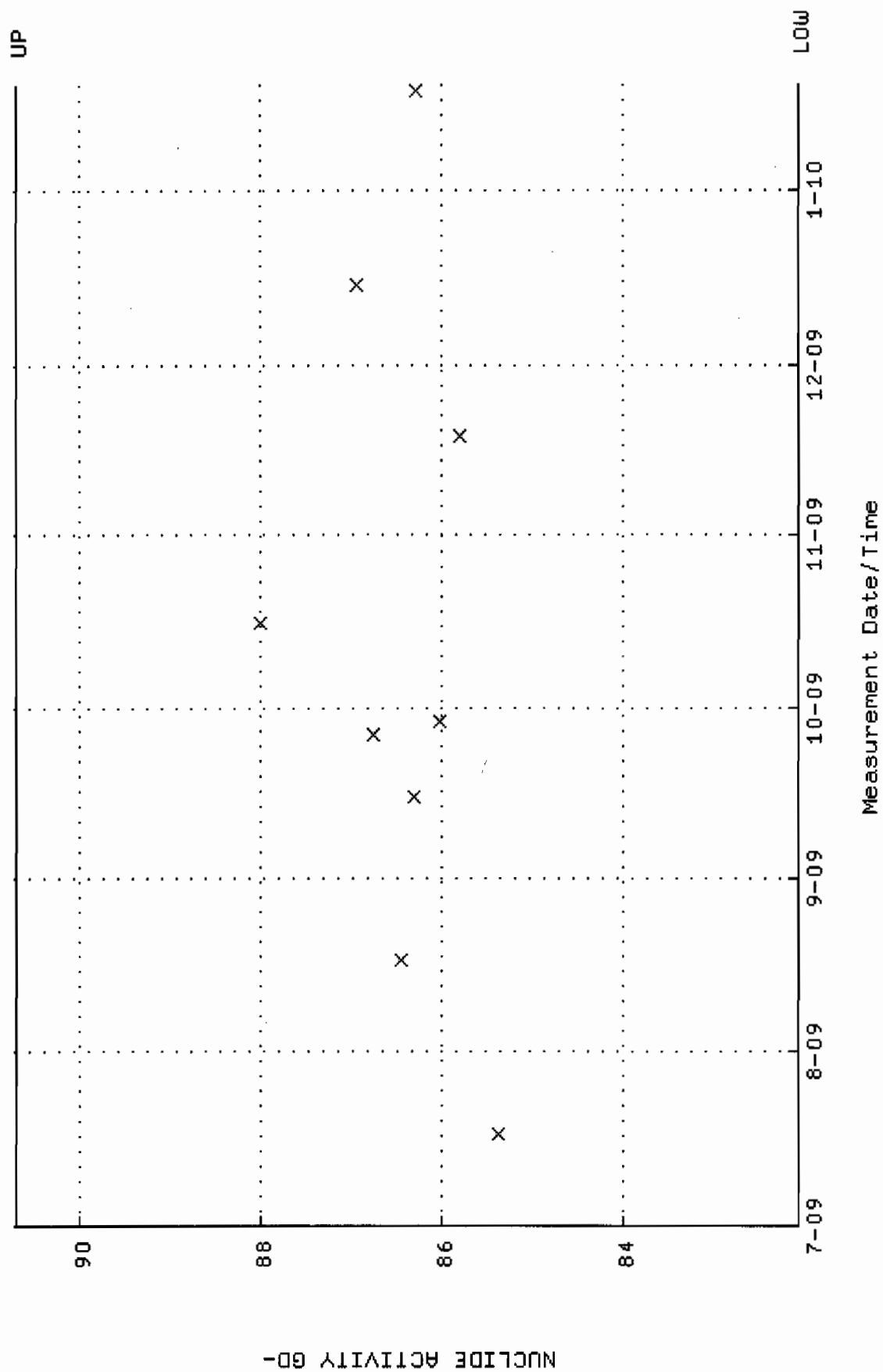
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 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 5-JUL-2009 14:57:53 through 19-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



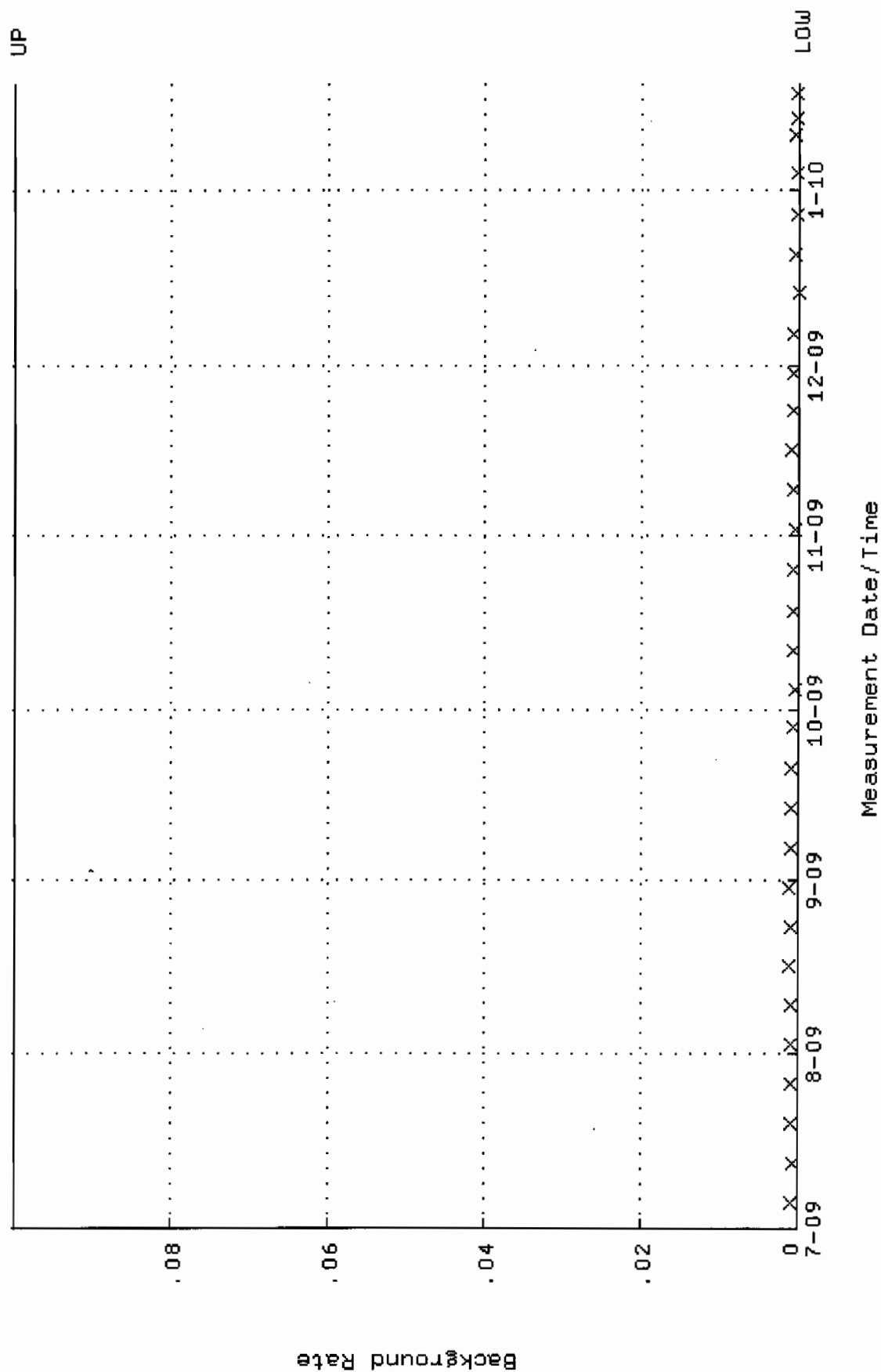
QA filename : DKA100:[ENV_ALPHA.QA.W]W160.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
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 Lower/Upper Lmts: 0.234941 through 0.254941



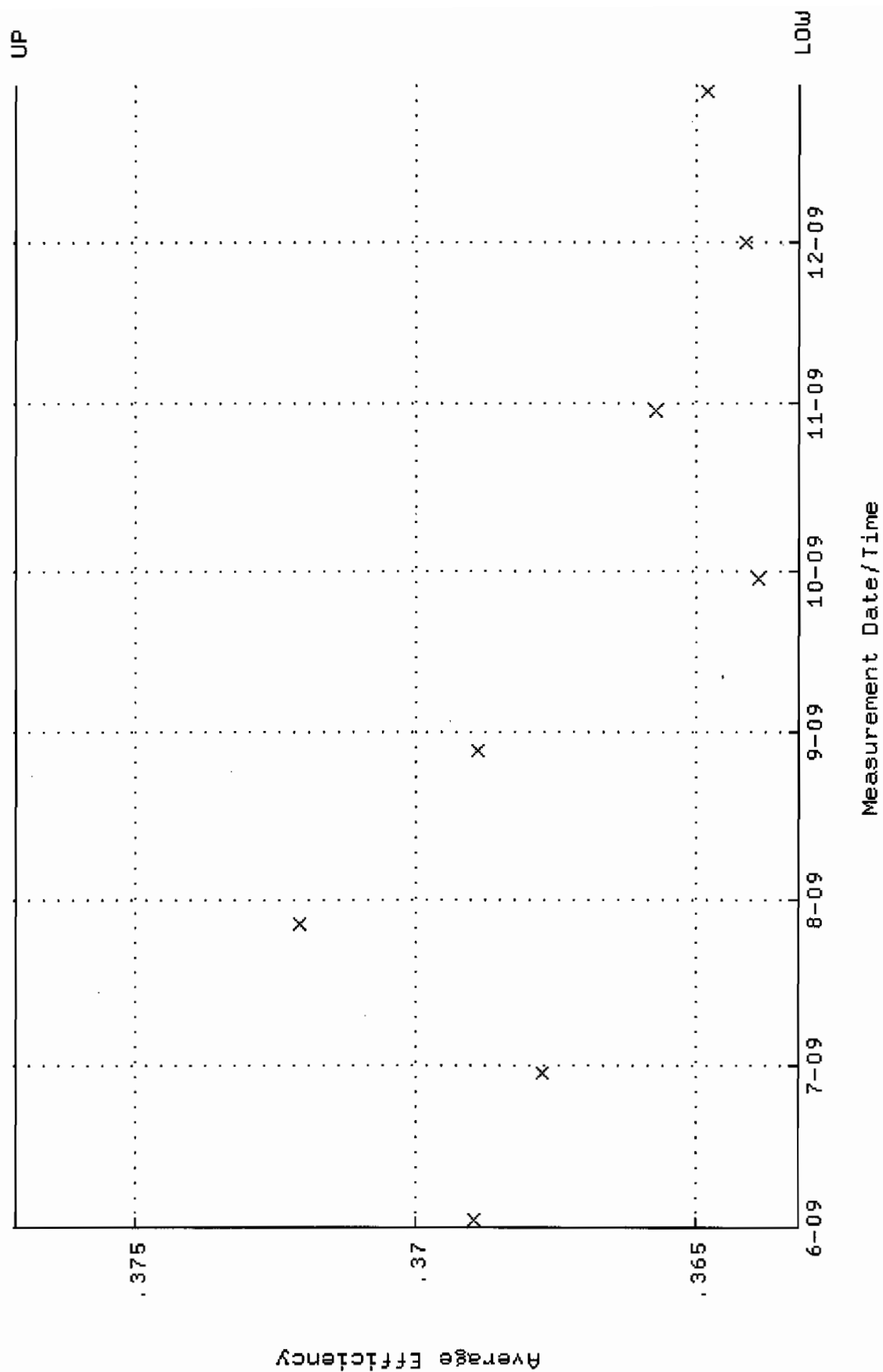
QA filename : DKA100:[ENV_ALPHA.QA.W]w160.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 17-JUL-2009 09:14:34 through 19-JAN-2010 12:00:00
 Lower/Upper Lmts: 82.0594 through 90.6972



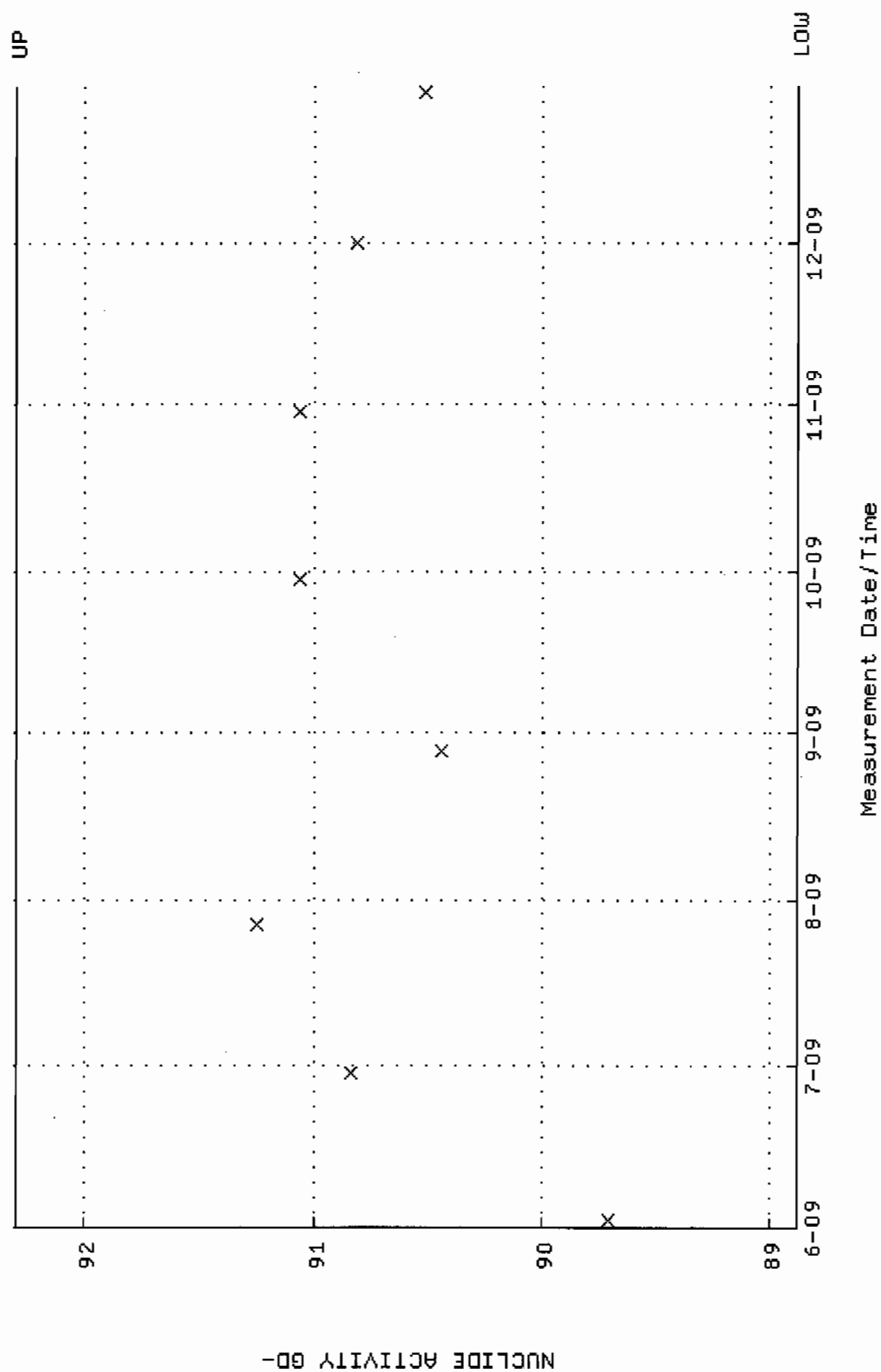
QA filename : DKA100:[ENV_ALPHA.QA.B]B160.QAF;1
 Parameter Name : BACKRATE (Background Rate)
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 Lower/Upper Lmts: 0.000000E+00 through 0.100000



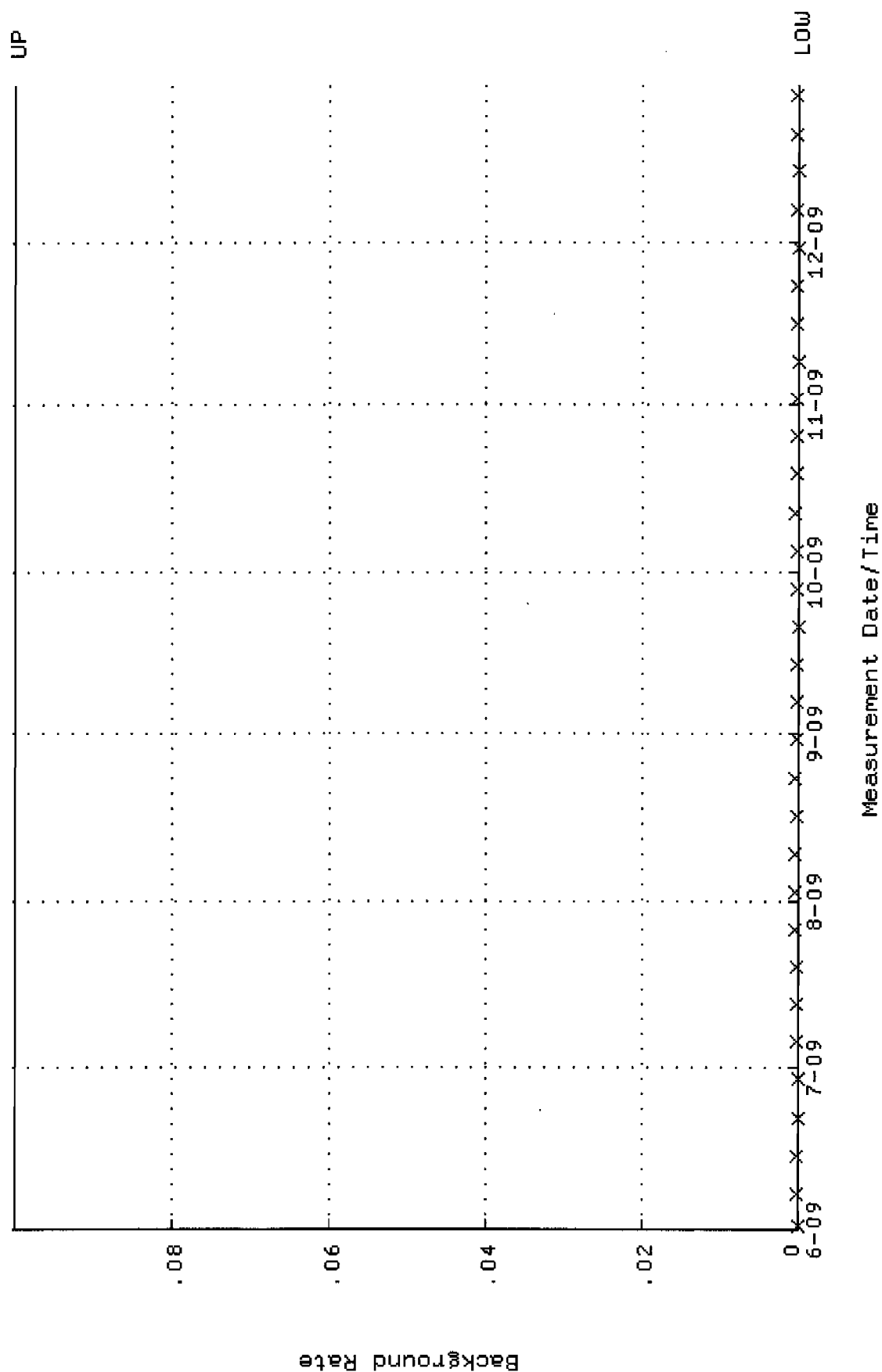
QA filename : DKA100:[ENV_ALPHA.QA.W]W209.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 2-JUN-2009 11:17:06 through 29-DEC-2009 12:00:00
 Lower/Upper Lmts: 0.363151 through 0.377133



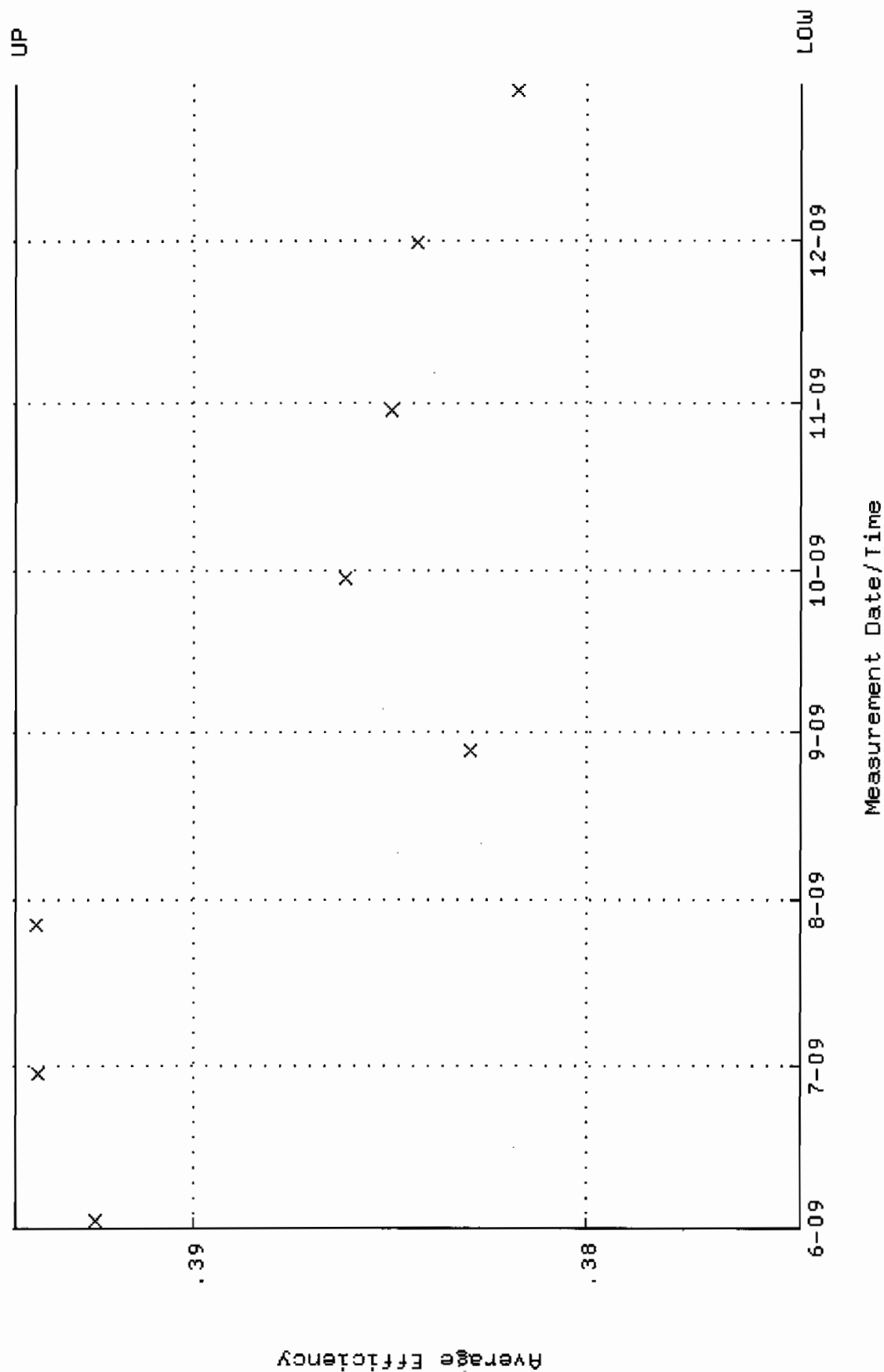
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 Parameter Name : NLACTIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 2-JUN-2009 11:17:06 through 29-DEC-2009 12:00:00
 Lower/Upper Lmts: 88.8827 through 92.2979



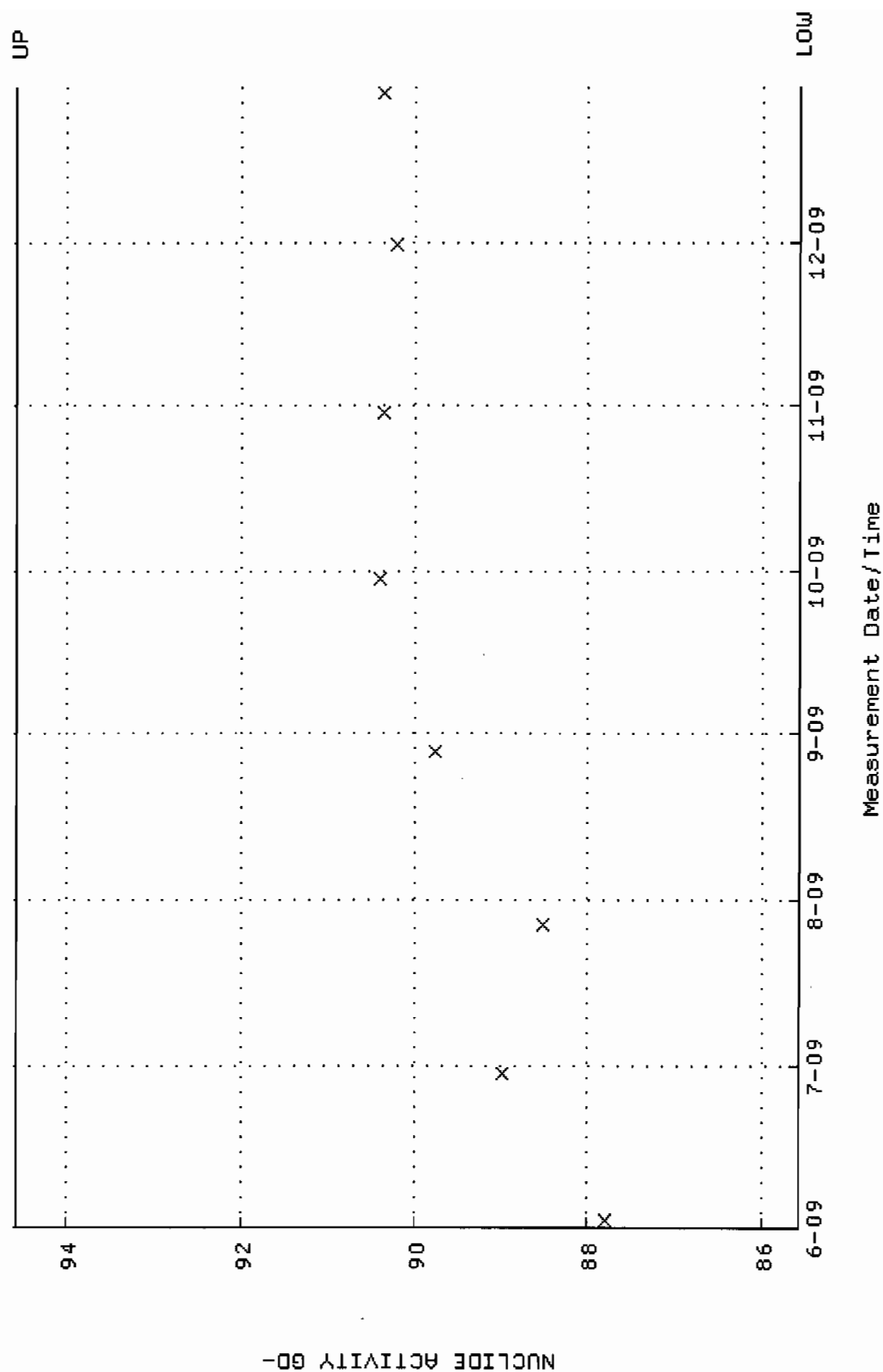
QA filename : DKA100:[ENV_ALPHA.QA.B]B209.QAF;1
 Parameter Name : BACKRATE (Background Rate)
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 Lower/Upper Lmts: 0.000000E+00 through 0.100000



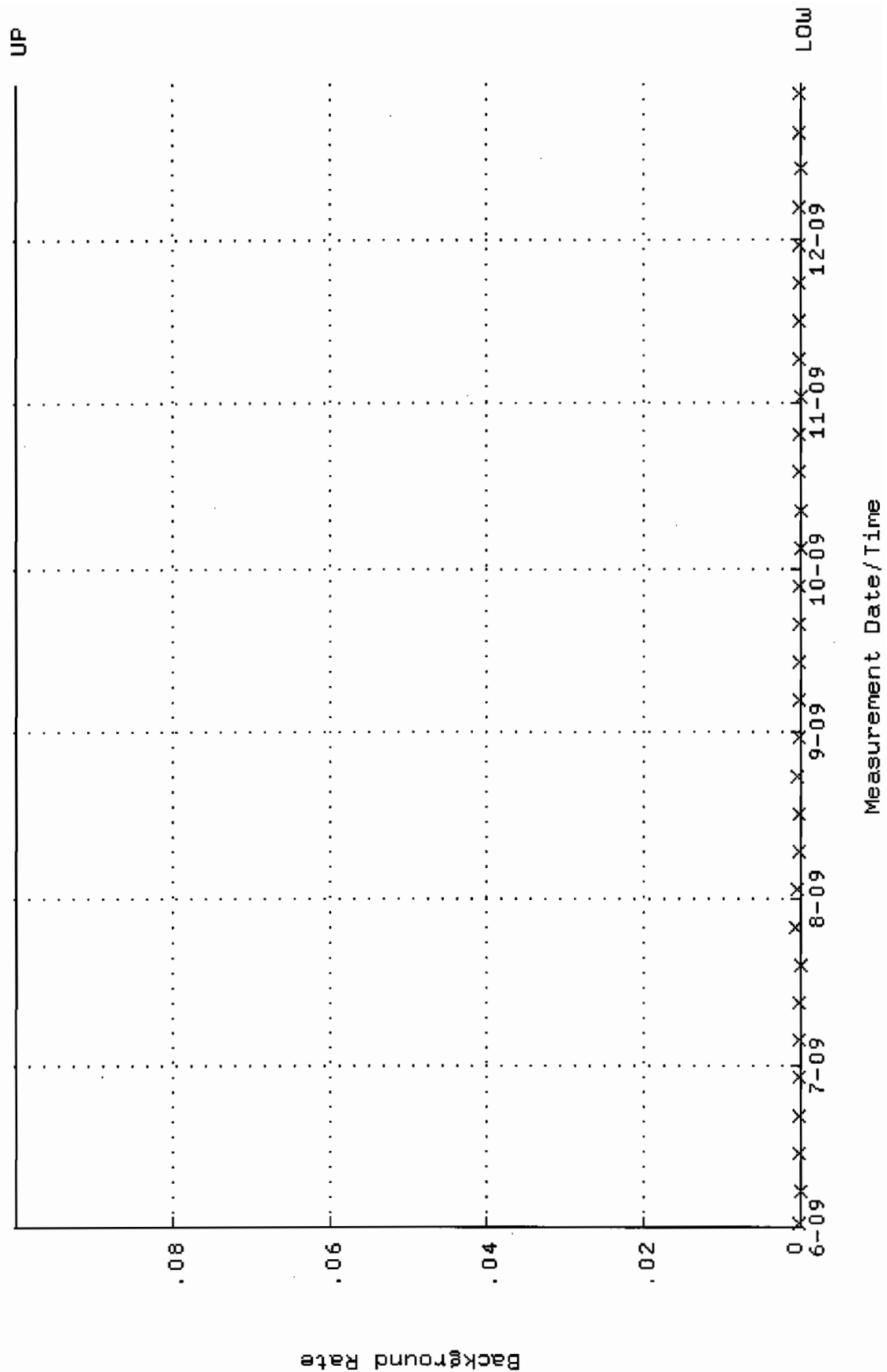
QA filename : DKA100:[ENV_ALPHA.QA.W]w210.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 2-JUN-2009 11:17:12 through 29-DEC-2009 12:00:00
 Lower/Upper Lmts: 0.374526 through 0.394526



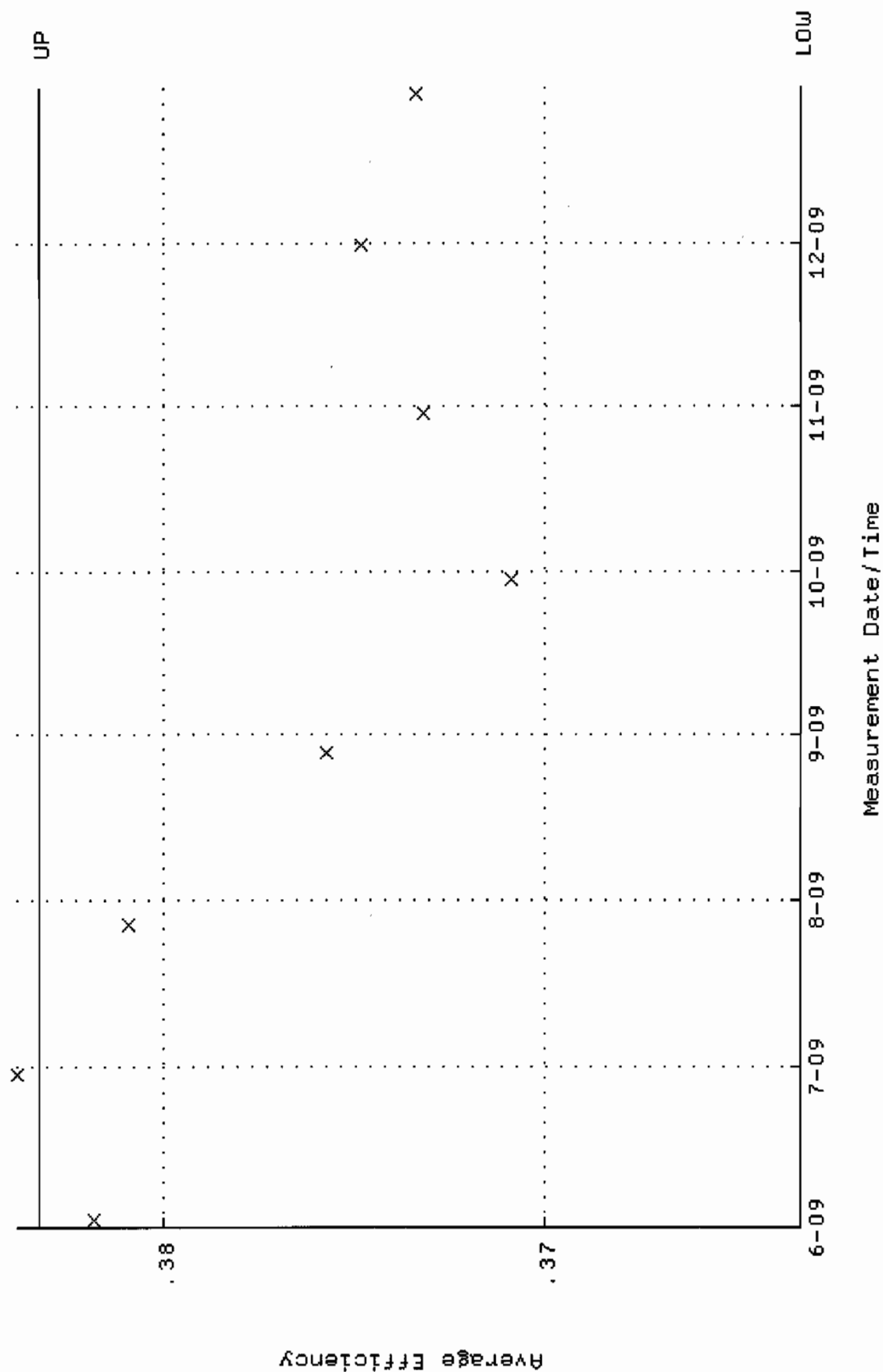
QA filename : DKA100:[ENV_ALPHA.QA.W]W210.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
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 Lower/Upper Lmts: 85.5688 through 94.5760



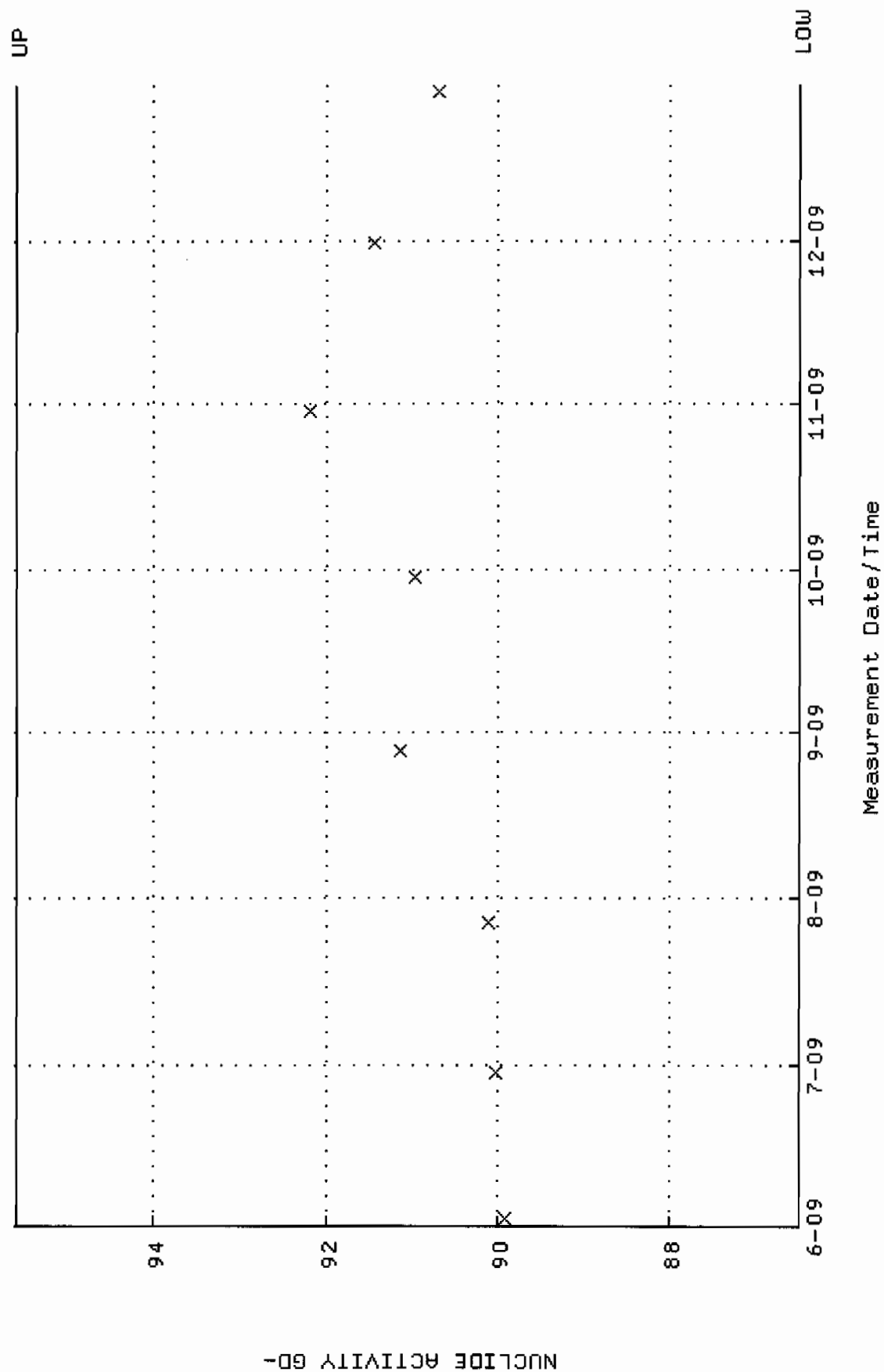
QA filename : DKA100:[ENV_ALPHA.QA.B]B210.QAF;1
 Parameter Name : BACKRATE (Background Rate)
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 Lower/Upper Lmts: 0.000000E+00 through 0.100000



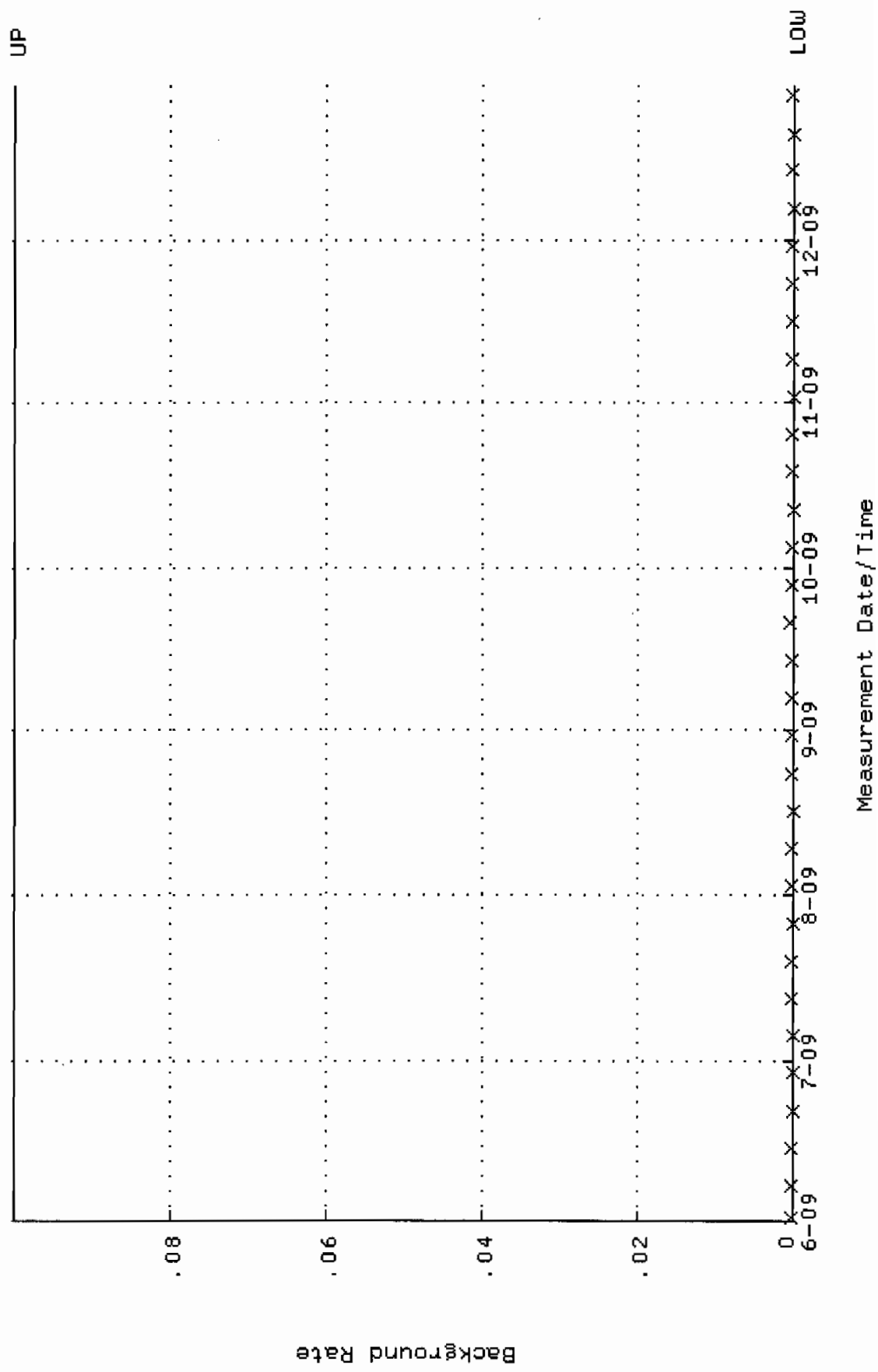
QA filename : DKA100:[ENV_ALPHA.QA.W]W226.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 2-JUN-2009 11:18:36 through 29-DEC-2009 12:00:00
 Lower/Upper Lmts: 0.363285 through 0.383285



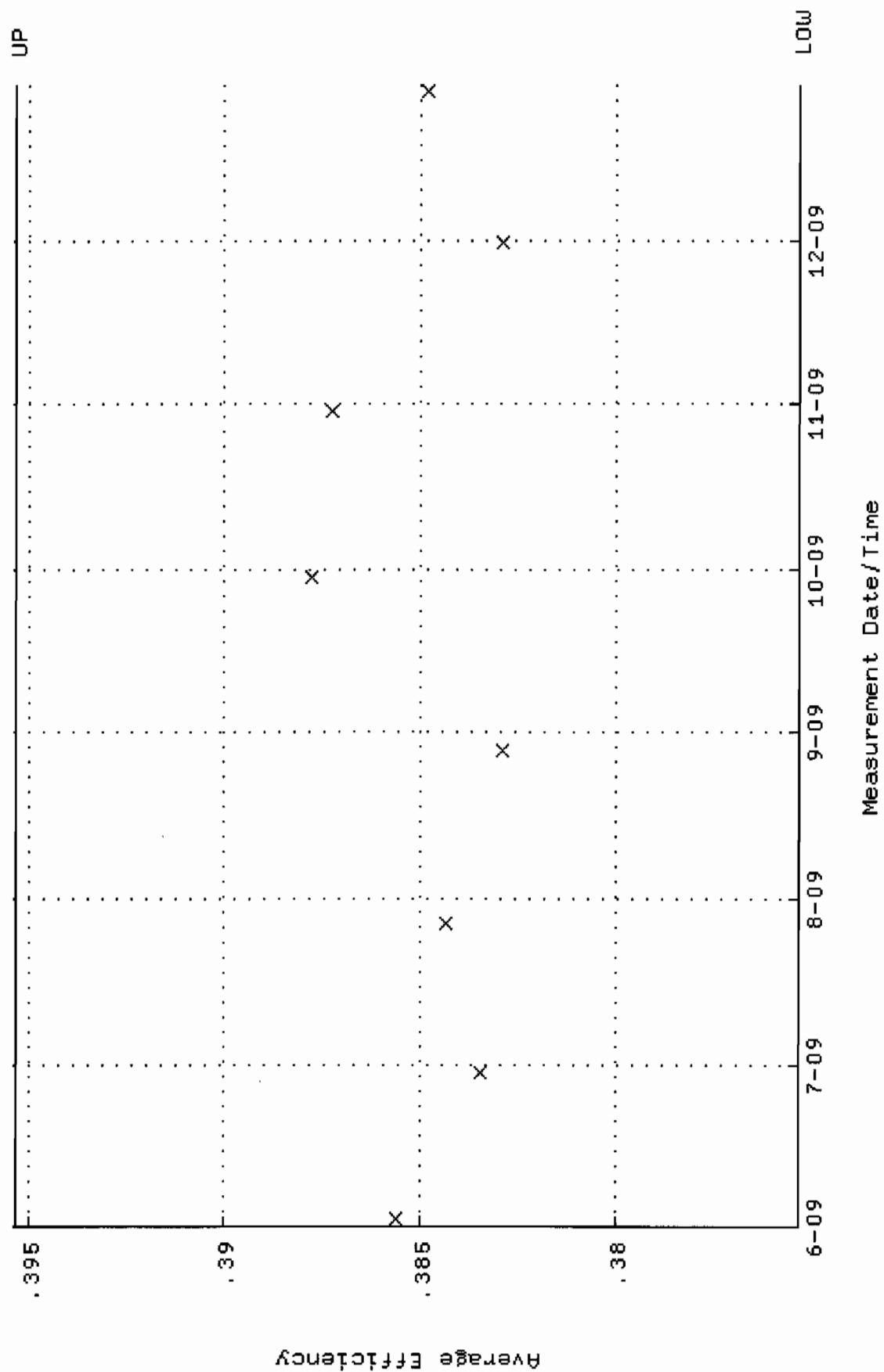
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 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 2-JUN-2009 11:18:36 through 29-DEC-2009 12:00:00
 Lower/Upper Lmts: 86.4888 through 95.5928



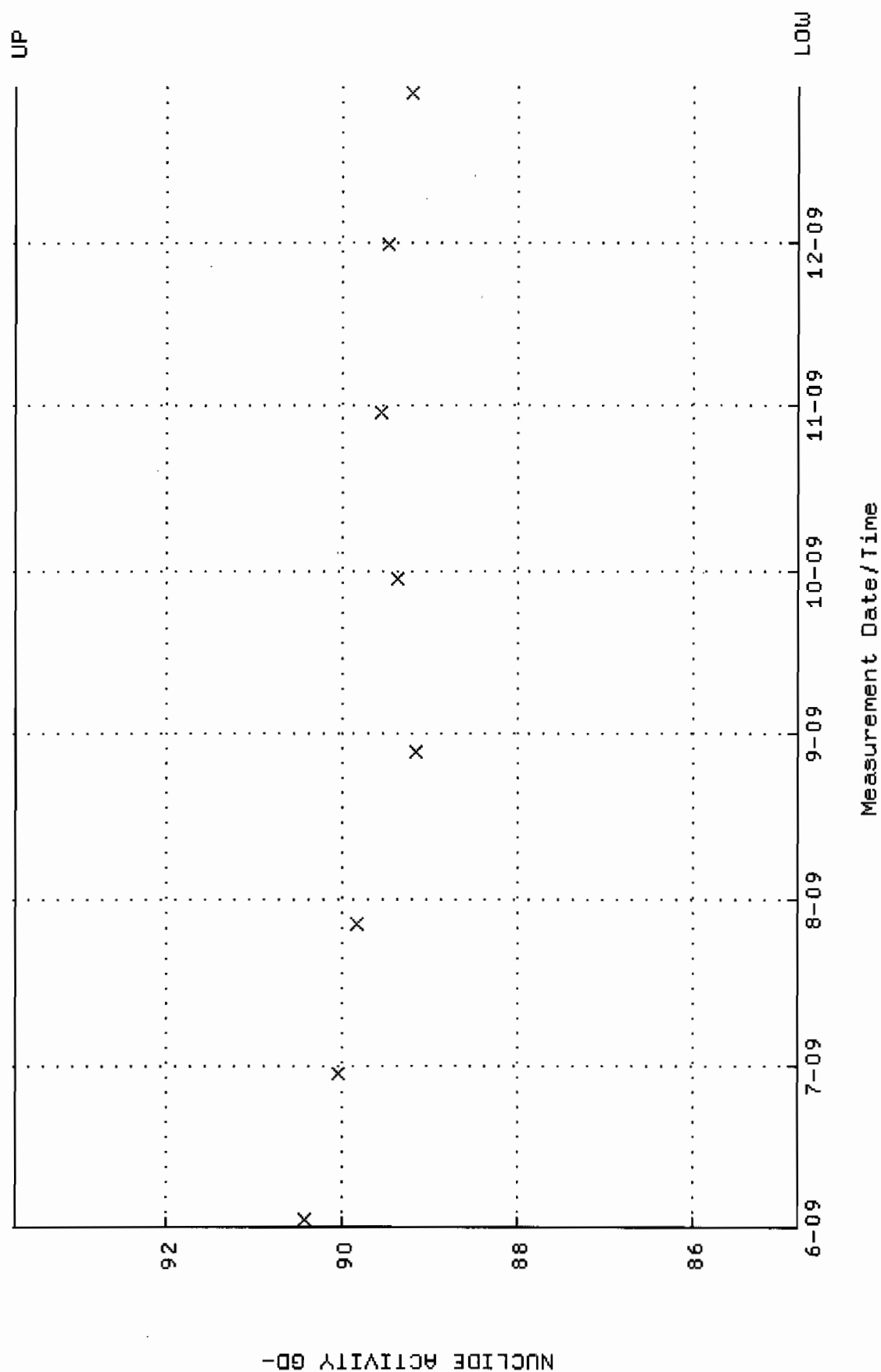
QA filename : DKA100:[ENV_ALPHA.QA.B]B226.QAF;1
 Parameter Name : BACKRATE (Background Rate)
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 Lower/Upper Lmts: 0.000000E+00 through 0.100000



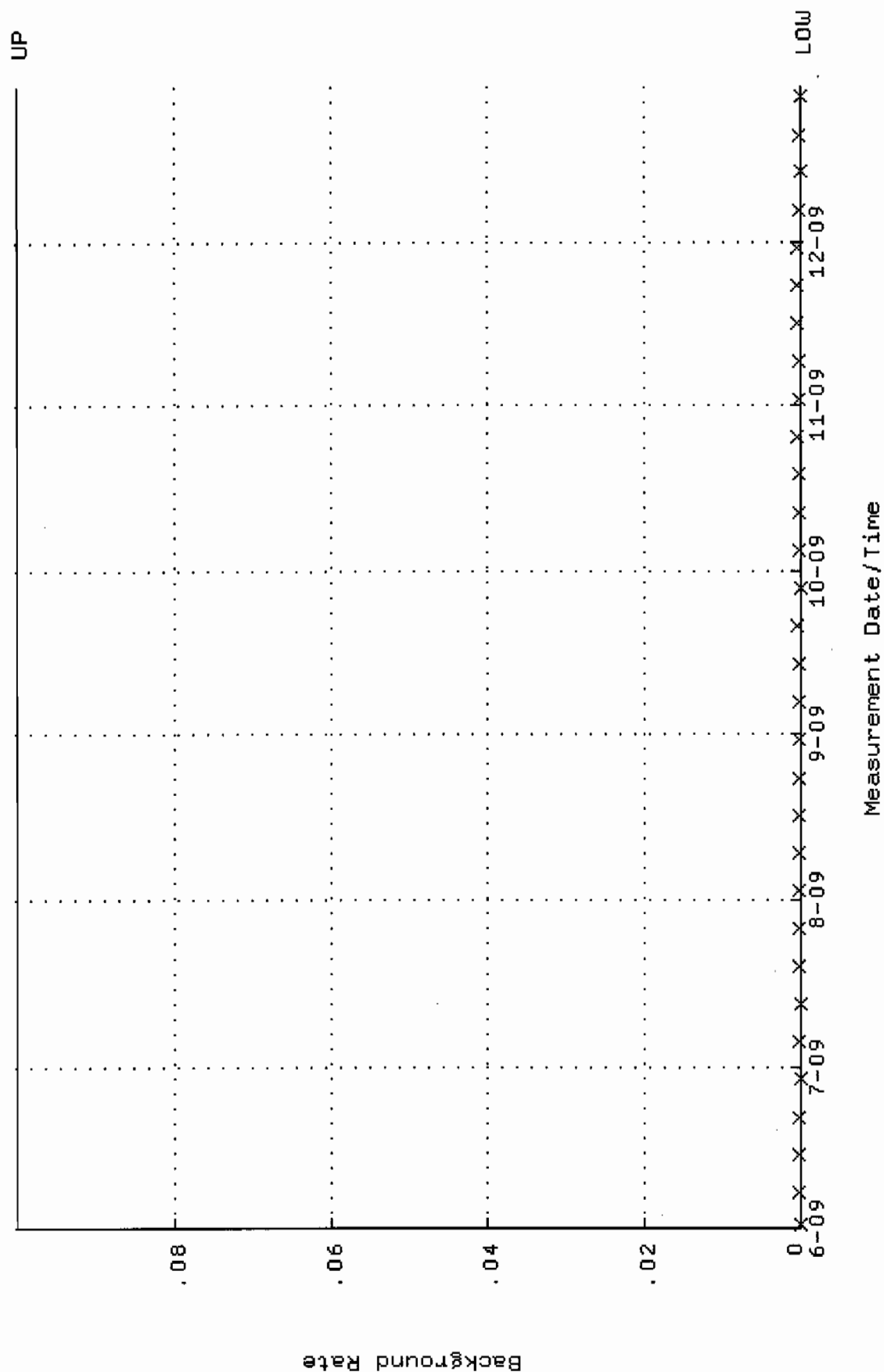
QA filename : DKA100:[ENV_ALPHA.QA.W]W227.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 2-JUN-2009 11:18:41 through 29-DEC-2009 12:00:00
 Lower/Upper Lmts: 0.375328 through 0.395328



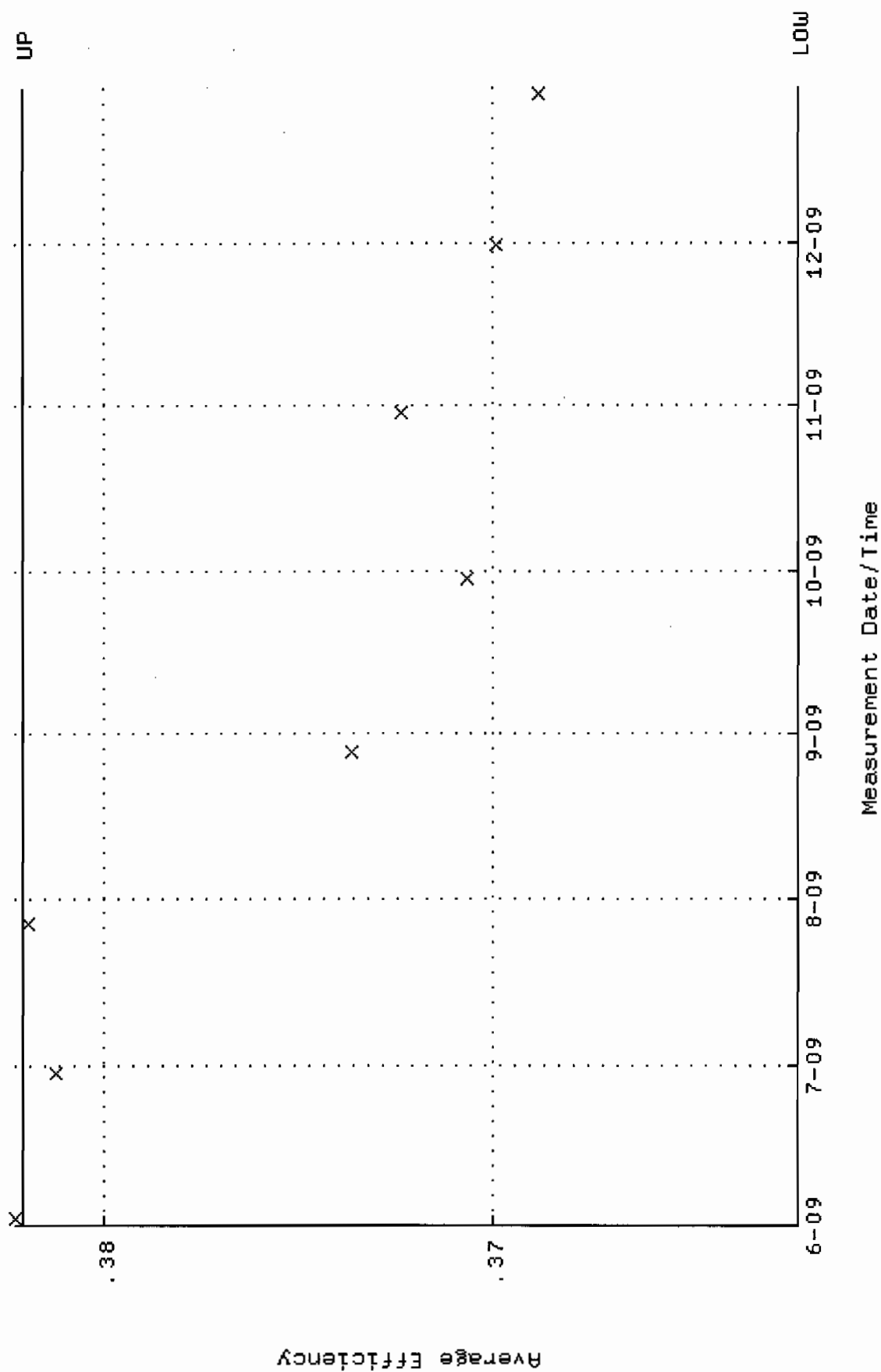
QA filename : DKA100:[ENV_ALPHA.QA.W]W227.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 2-JUN-2009 11:18:41 through 29-DEC-2009 12:00:00
 Lower/Upper Lmts: 84.8011 through 93.7275



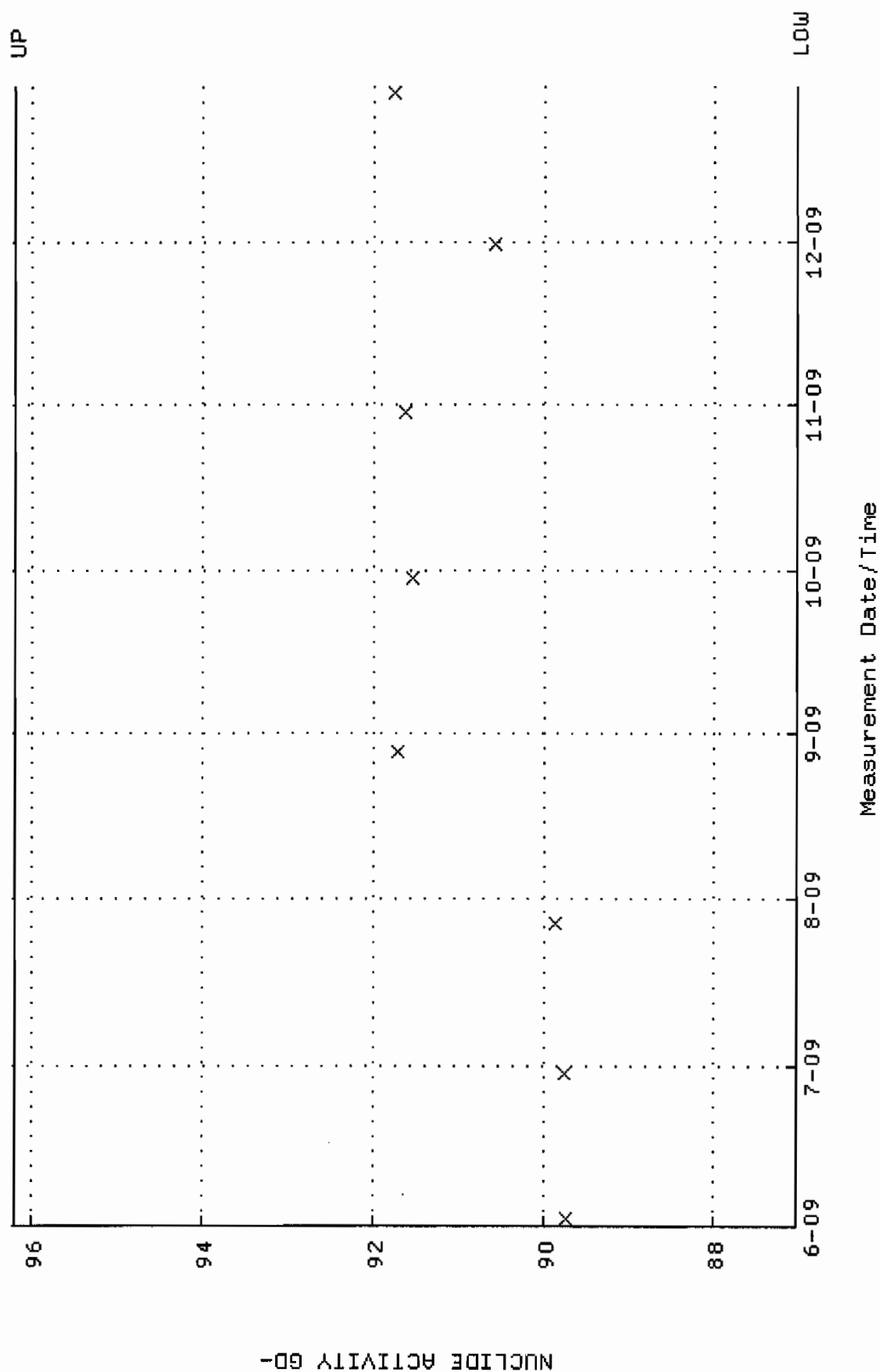
QA filename : DKA100:[ENV_ALPHA.QA.B]B227.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 1-JUN-2009 17:44:52 through 29-DEC-2009 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



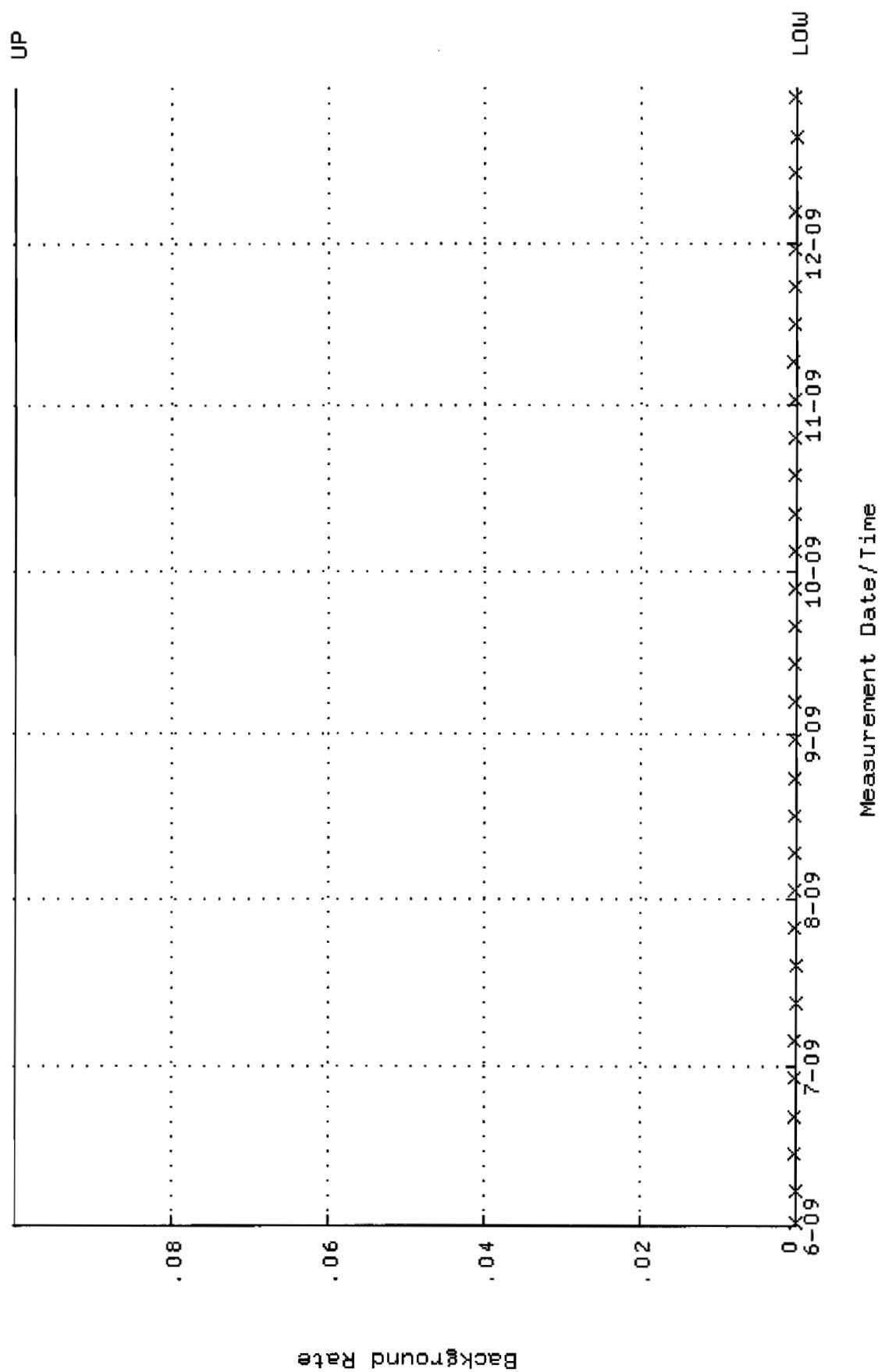
QA filename : DKA100:[ENV_ALPHA.QA.W]W228.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 2-JUN-2009 11:18:47 through 29-DEC-2009 12:00:00
 Lower/Upper Lmts: 0.362134 through 0.382134



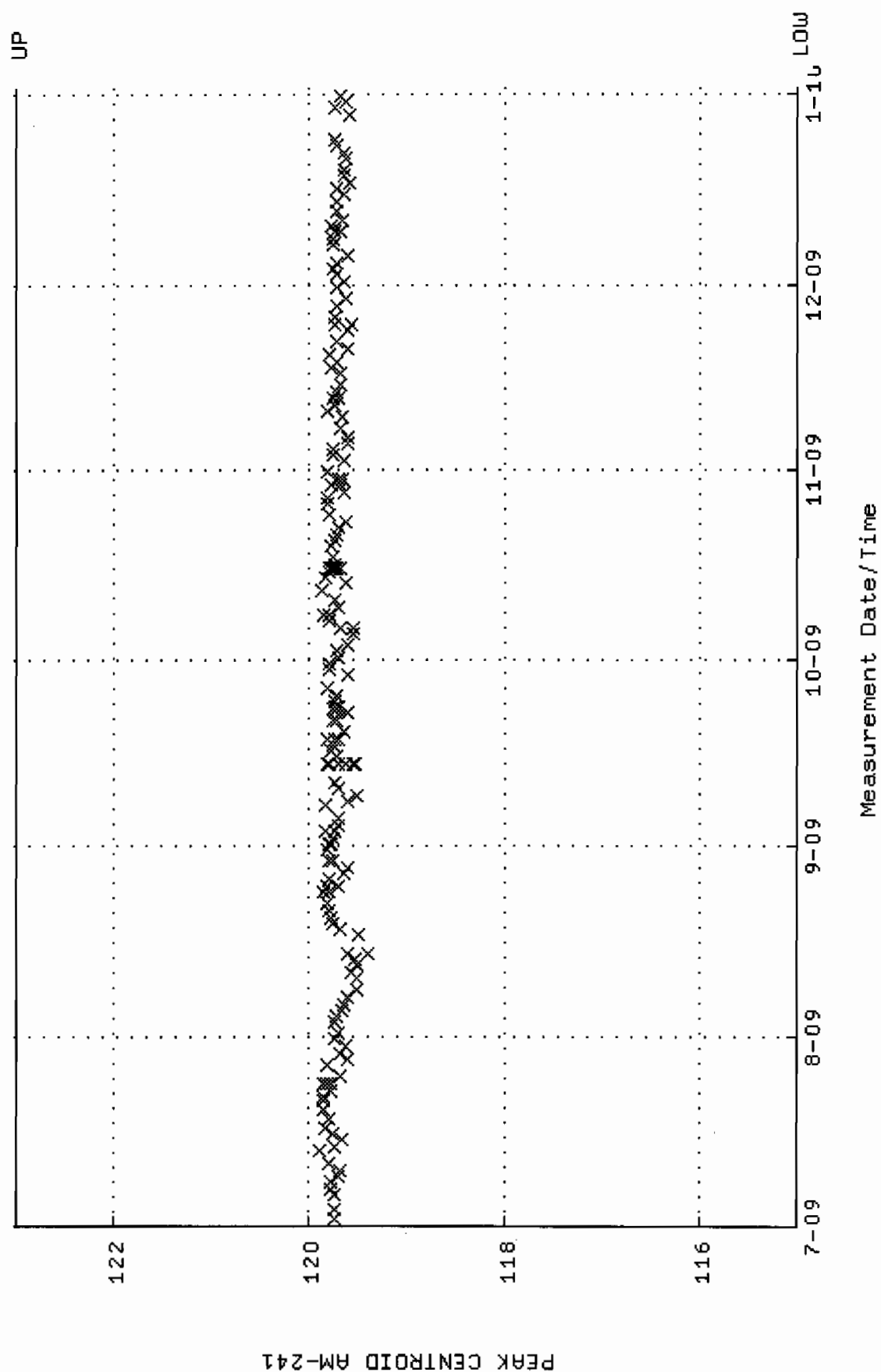
QA filename : DKA100:[ENV_ALPHA.QA.W]W228.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 2-JUN-2009 11:18:47 through 29-DEC-2009 12:00:00
 Lower/Upper Lmts: 87.0370 through 96.1988



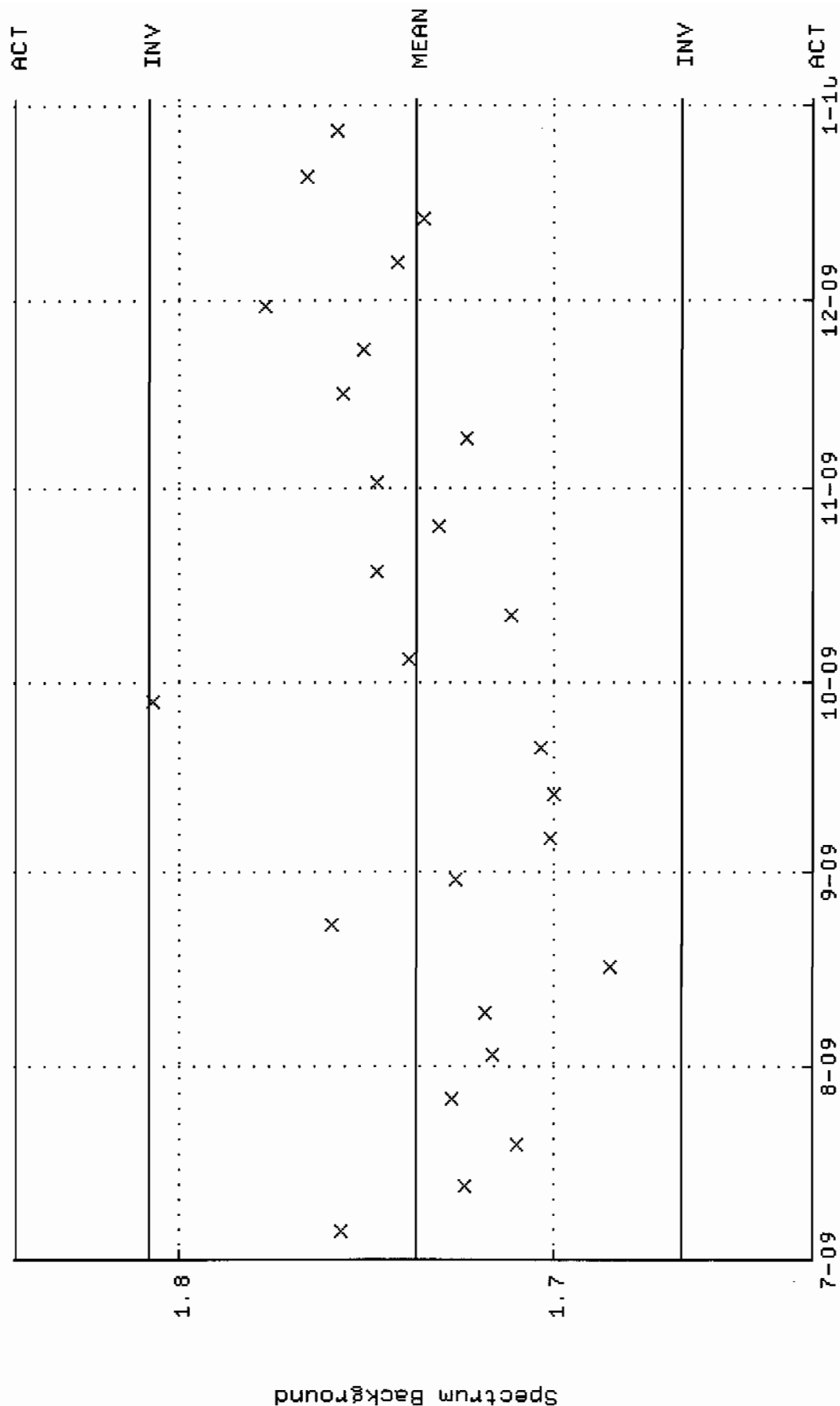
QA filename : DKA100:[ENV_ALPHA.QA.B]B228.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 1-JUN-2009 17:44:57 through 29-DEC-2009 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



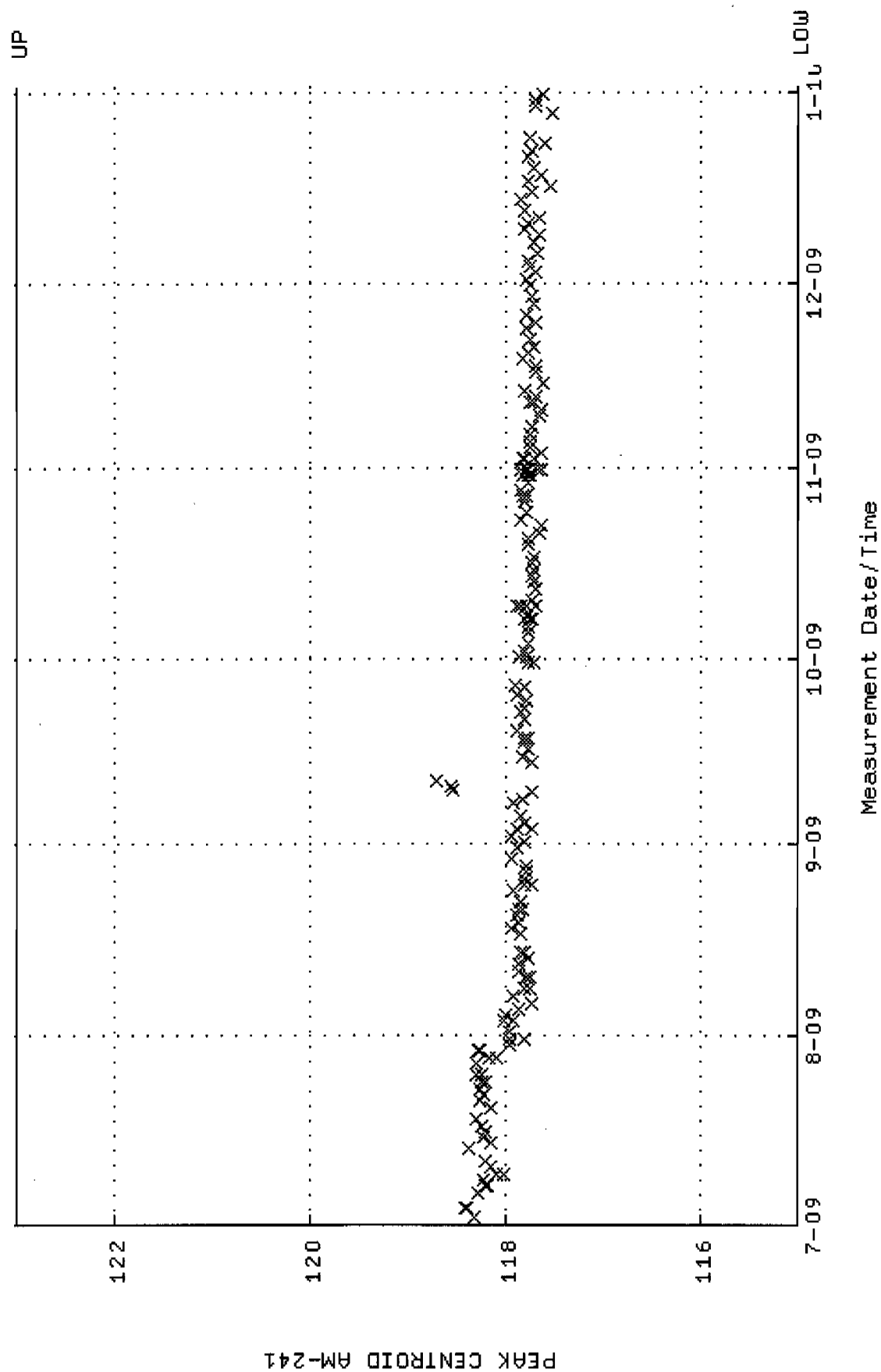
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM01_500MLMB.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-JUL-2009 04:58:53 through 1-JAN-2010 12:00:00
Lower/Upper Lmts: 115.000 through 123.000



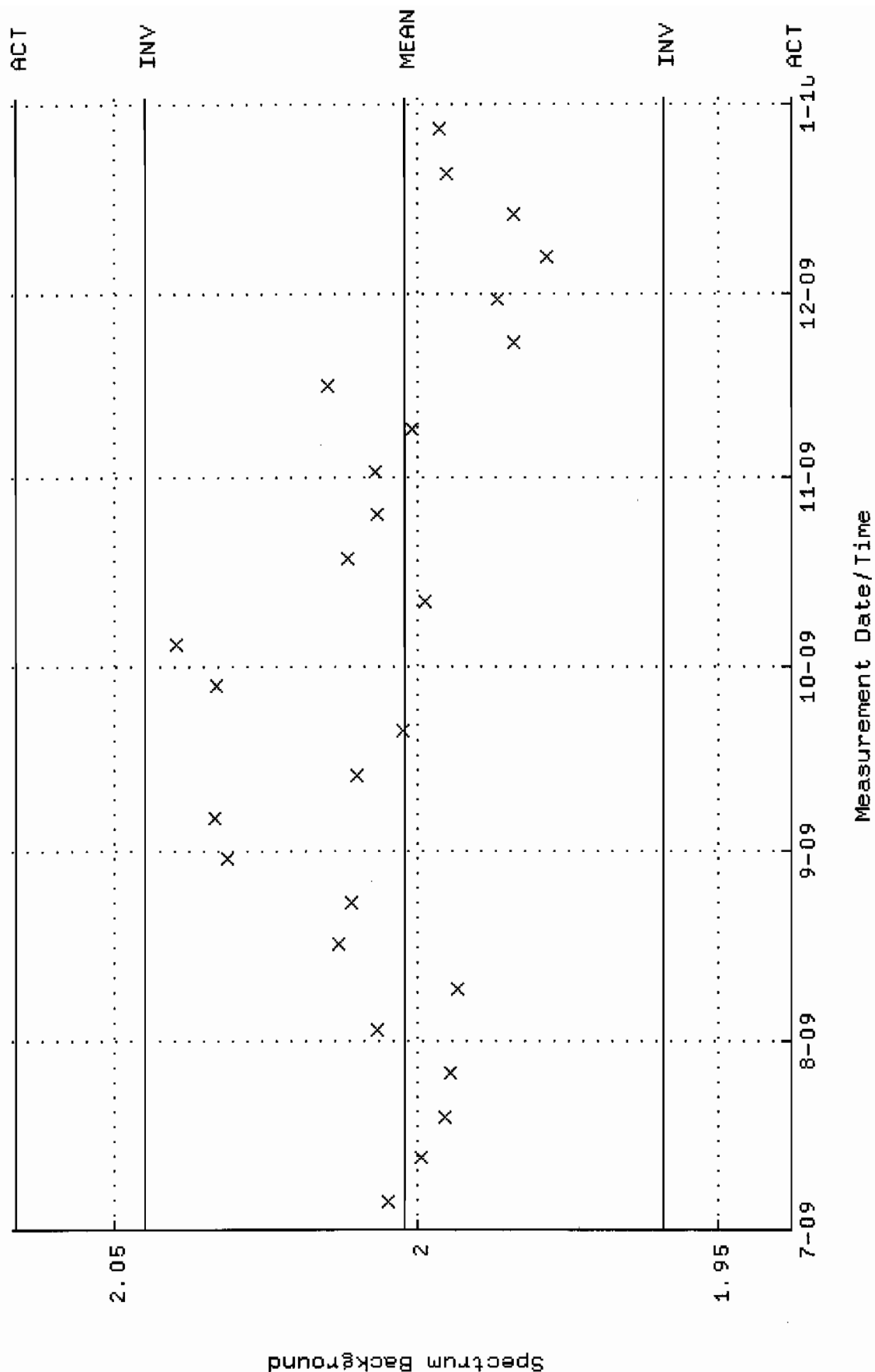
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC-GAM01.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 5-JUL-2009 13:49:24 through 1-JAN-2010 12:00:00
 Mean +- Std Dev : 1.73723 +- 3.552524E-02 (2.04 %)



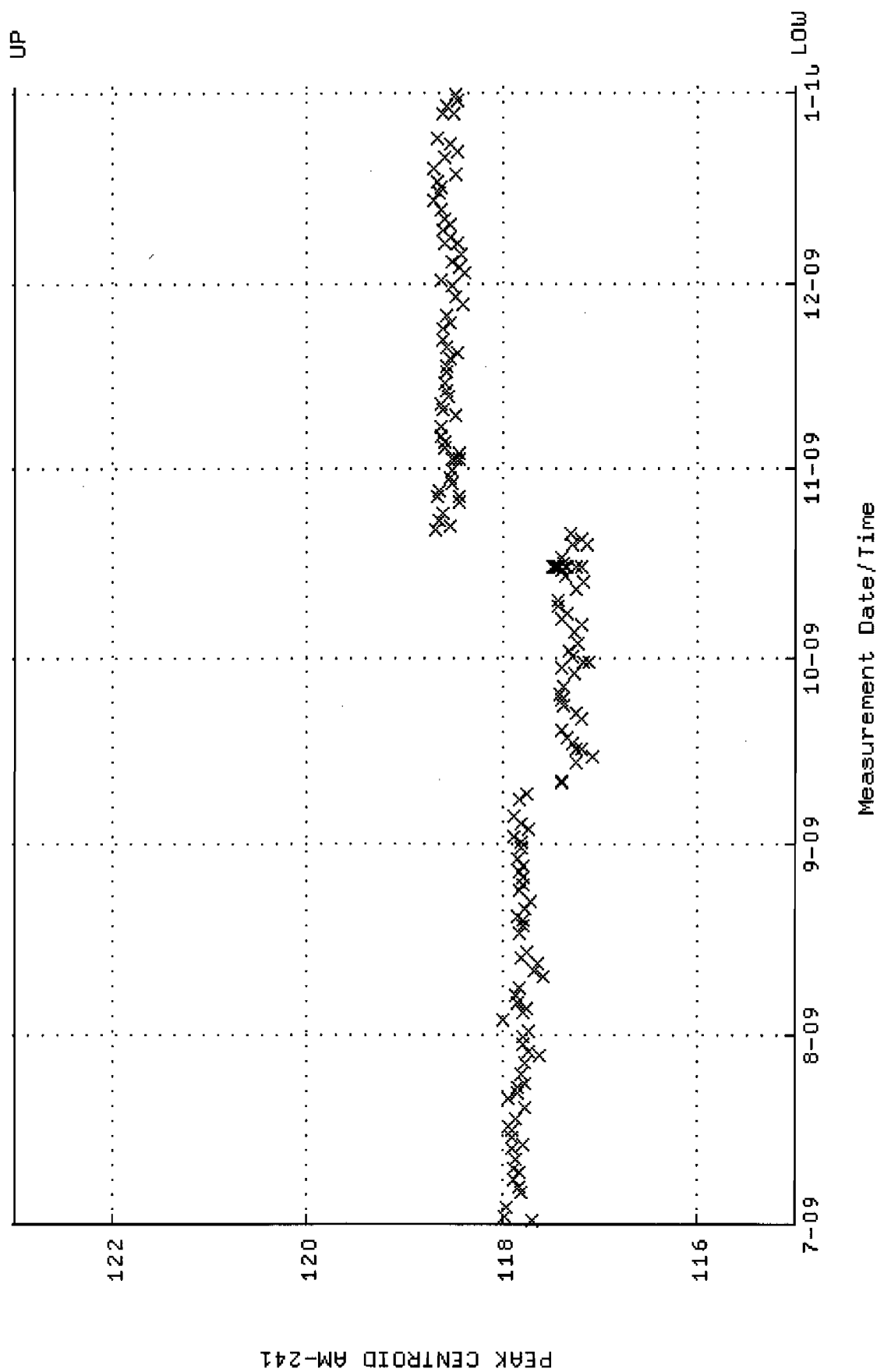
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM02_CAN.QAF;1
 Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
 Start/End Dates : 2-JUL-2009 04:58:43 through 1-JAN-2010 12:00:00
 Lower/Upper Lmts: 115.000 through 123.000



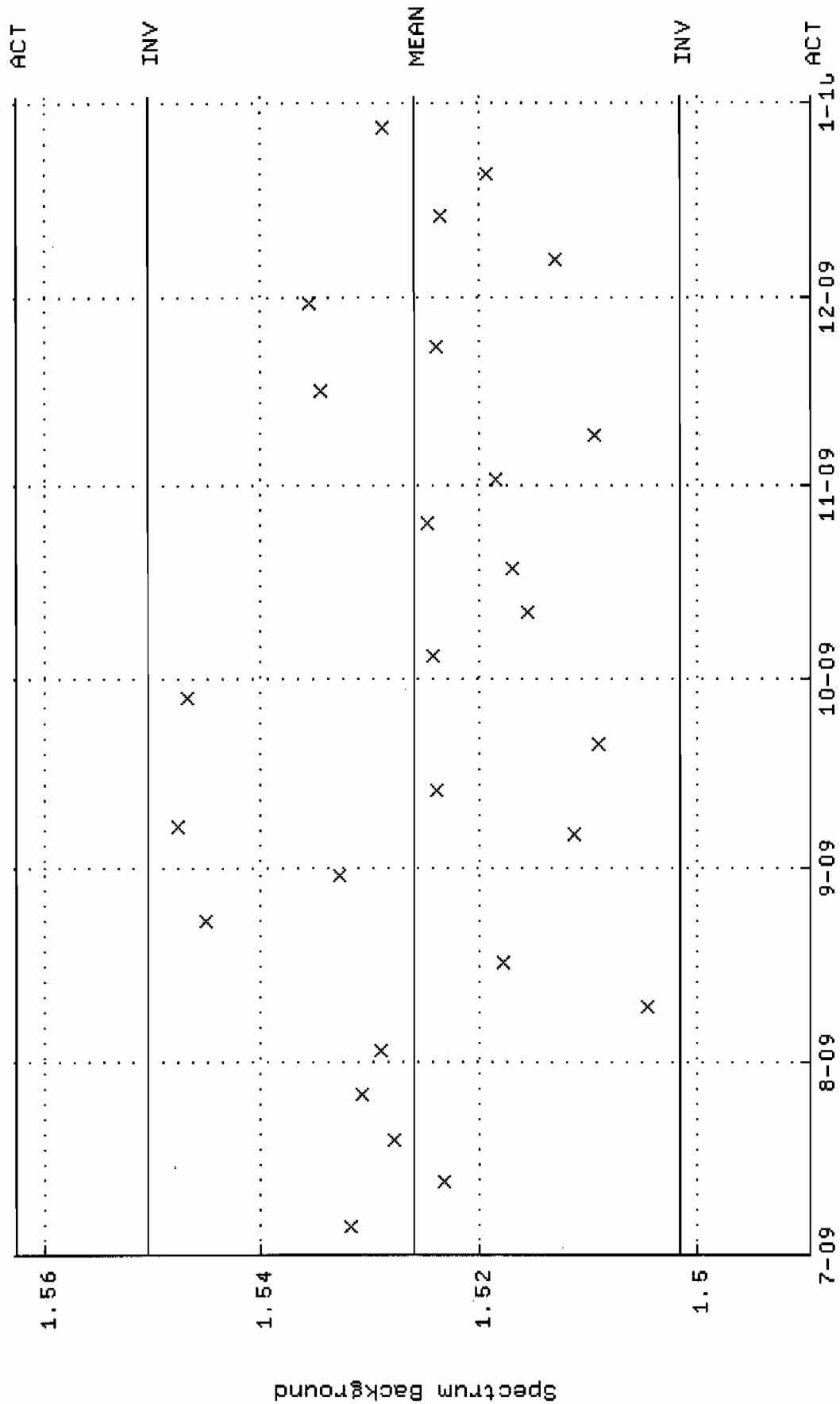
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM02.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 5-JUL-2009 13:49:39 through 1-JAN-2010 12:00:00
 Mean +- Std Dev : 2.00226 +- 2.139827E-02 (1.07 %)



QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC-GAM06_500MLMB.QAF;1
 Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
 Start/End Dates : 1-JUL-2009 14:30:59 through 1-JAN-2010 12:00:00
 Lower/Upper Lmts: 115.000 through 123.000

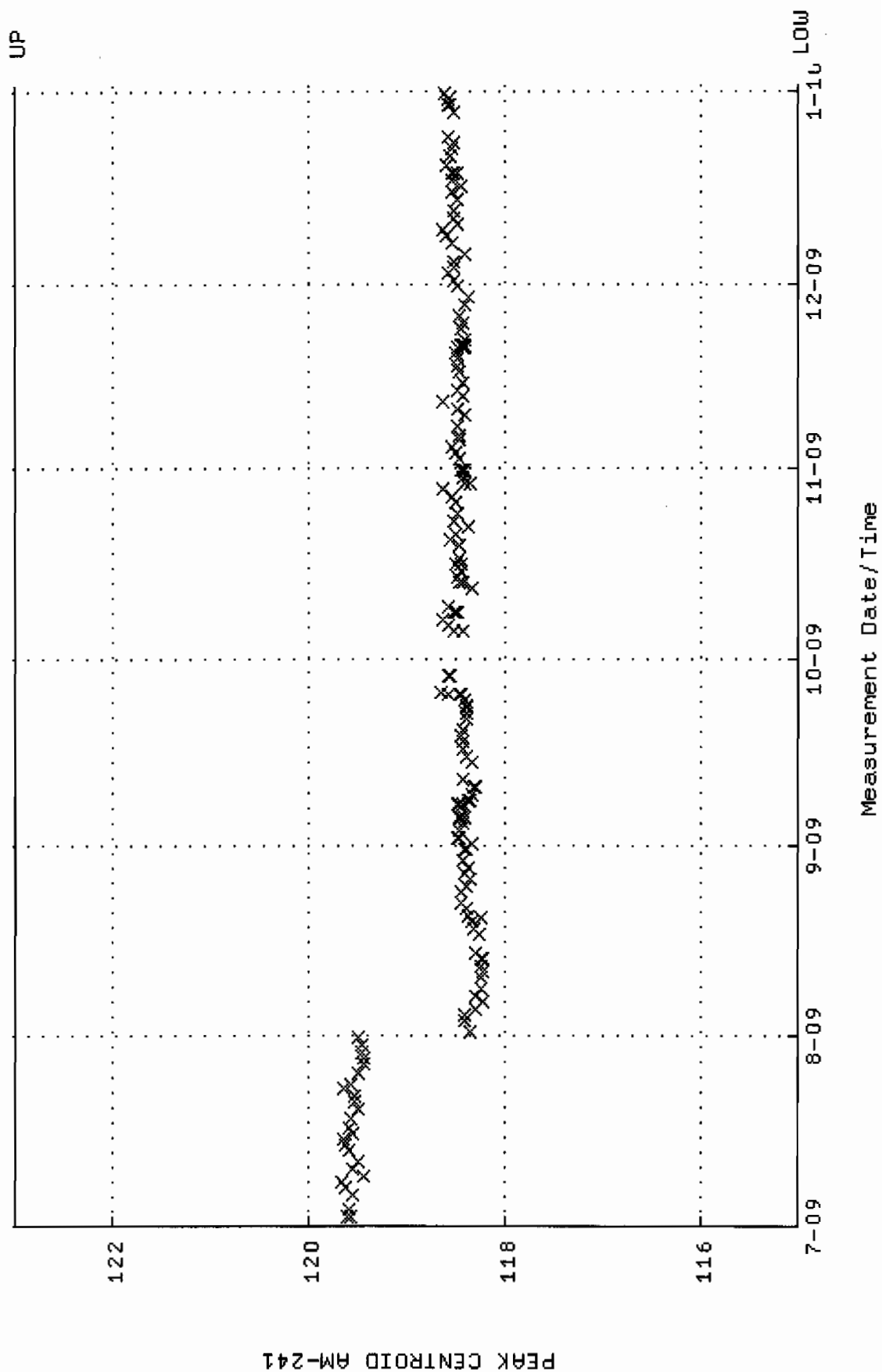


QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM06.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 5-JUL-2009 13:50:15 through 1-JAN-2010 12:00:00
 Mean +- Std Dev : 1.52603 +- 1.215987E-02 (0.80 %)

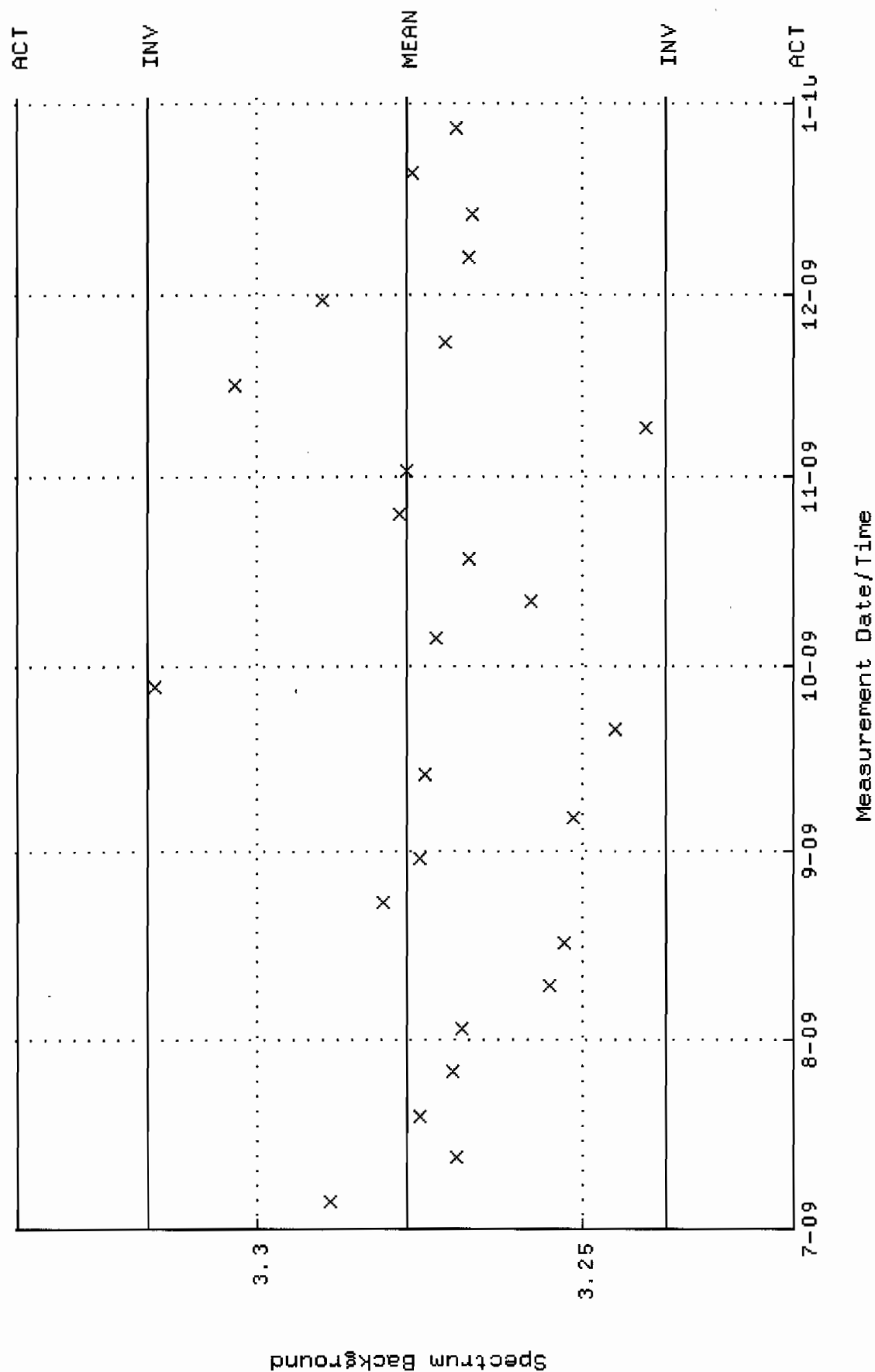


Measurement Date/Time

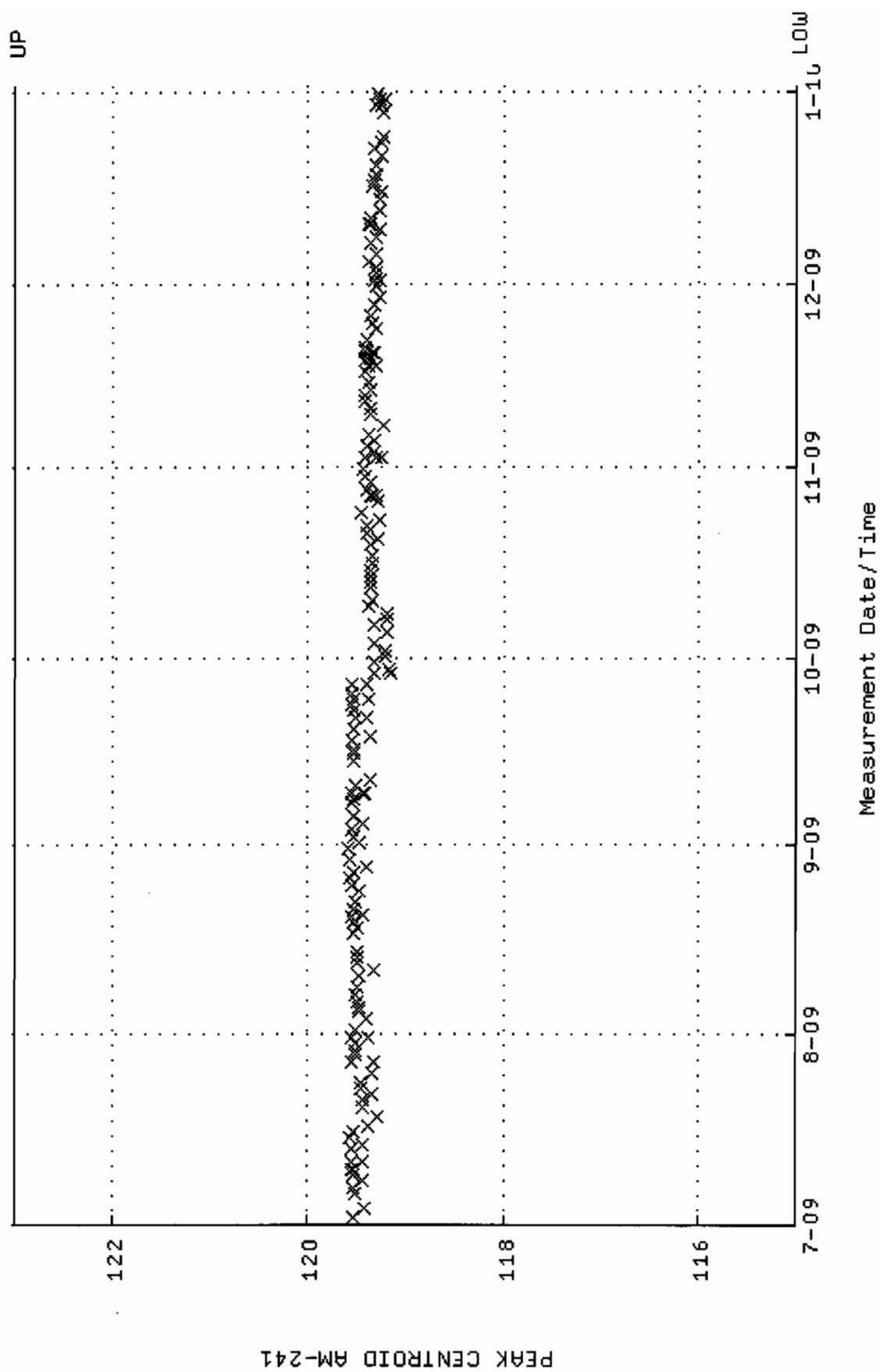
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM13_CAN.QAF;1
 Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
 Start/End Dates : 2-JUL-2009 10:47:30 through 1-JAN-2010 12:00:00
 Lower/Upper Lmts: 115.000 through 123.000



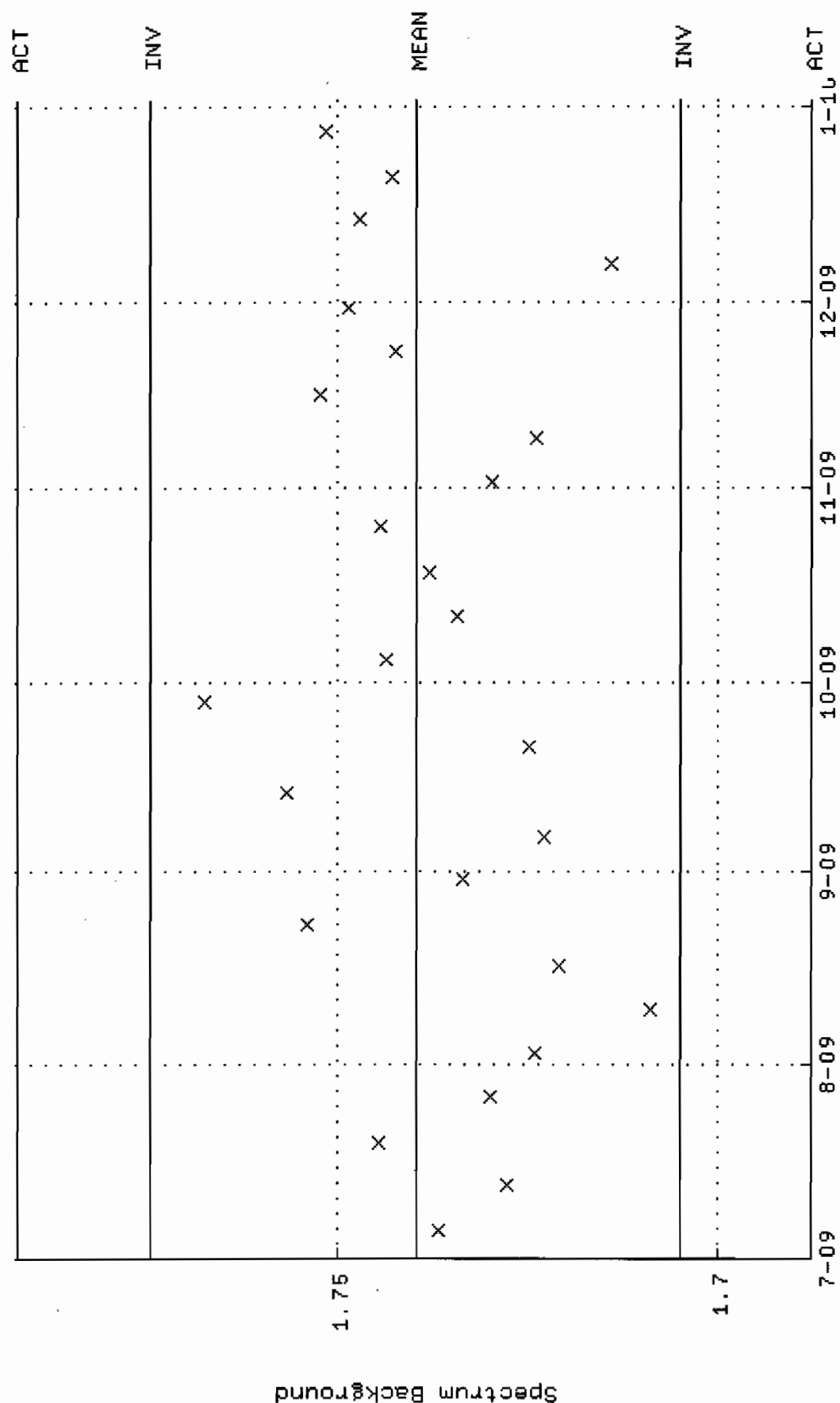
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM13.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 5-JUL-2009 13:52:16 through 1-JAN-2010 12:00:00
 Mean +- Std Dev : 3.27712 +- 1.999120E-02 (0.61 %)



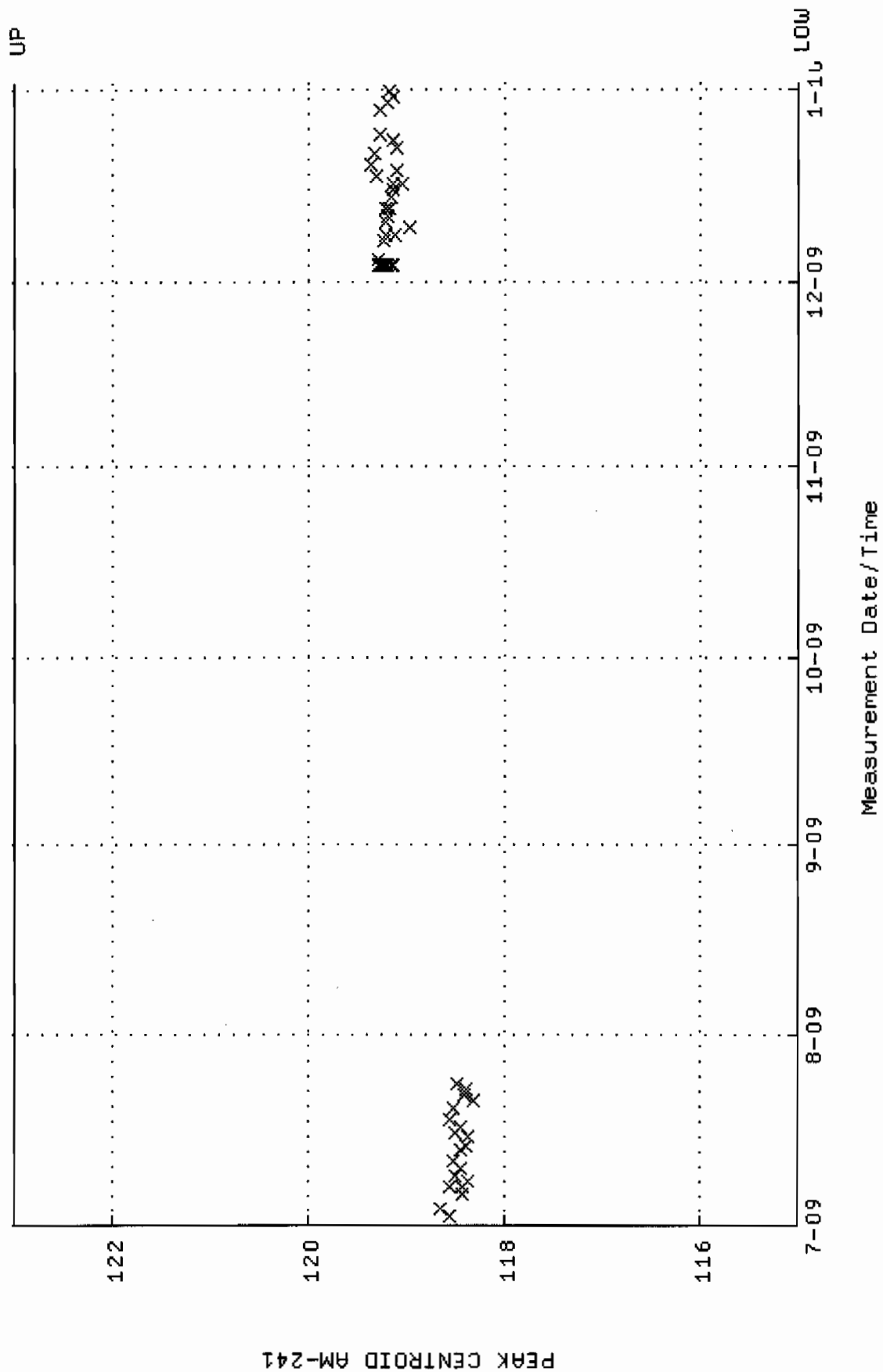
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC-GAM16-CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-JUL-2009 05:29:19 through 1-JAN-2010 12:00:00
Lower/Upper Lmts: 115.000 through 123.000



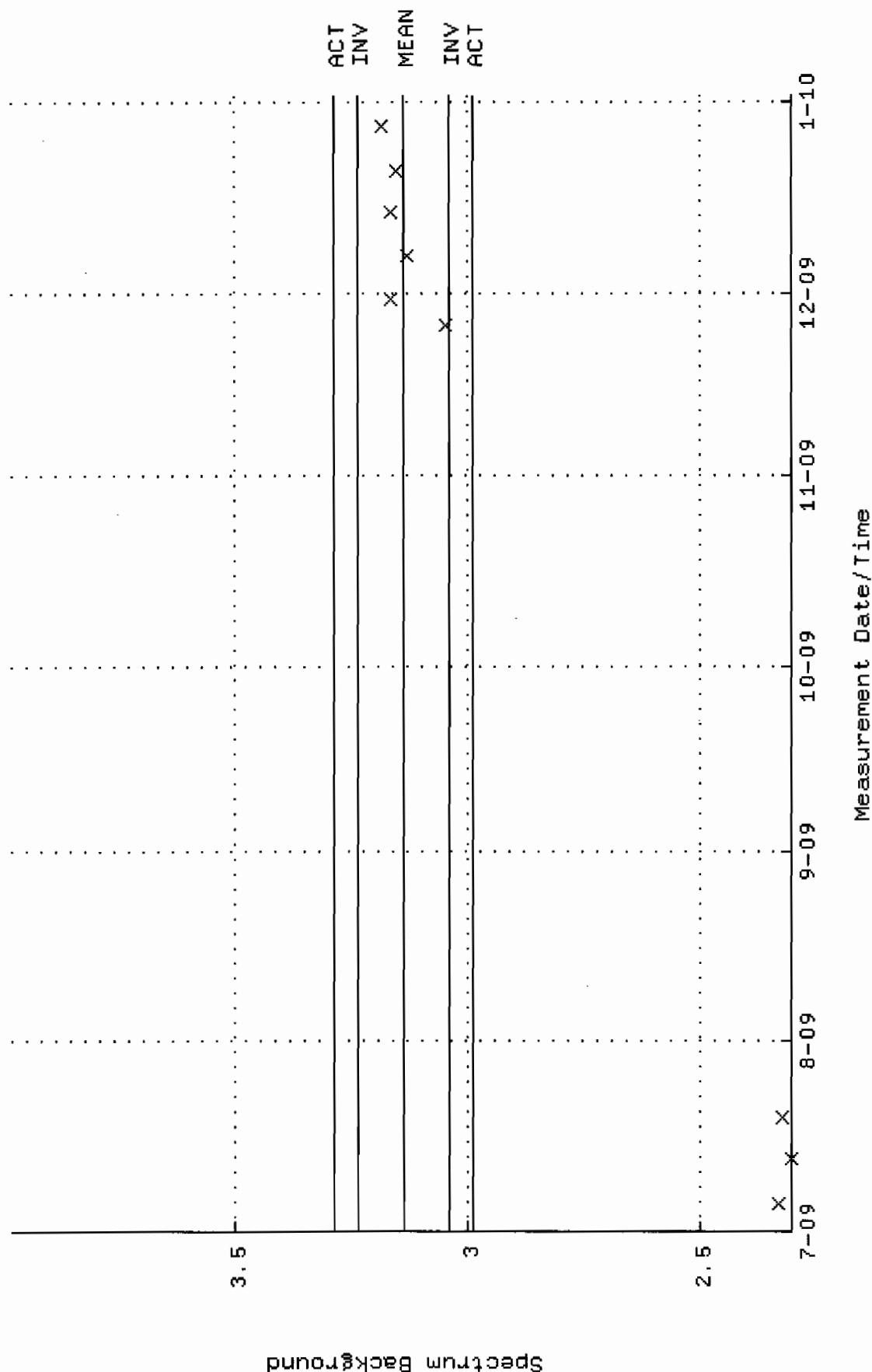
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM16.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 5-JUL-2009 13:52:58 through 1-JAN-2010 12:00:00
 Mean +- Std Dev : 1.73980 +- 1.729897E-02 (0.99 %)



QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_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

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. Analytix maintains traceability to the National Institute of Standards and Technology through a Measurements Assurance Program as described in USNRC Regulatory Guide 4.15, Rev. 1, February, 1979.

Calibration date: October 1, 2006 12:00 EST

ISOTOPE	GAMMA-RAY ENERGY	HALF-LIFE		GAMMA-RAYS PER SECOND	TOTAL UNCERTAINTY %
Am-241	59.5	432	y	3339	3.0
Cd-109	88	462.6	d	4815	3.3
Co-57	122	271.79	d	2409	3.0
Ce-139	166	137.6	d	3408	2.8
Hg-203	279	46.61	d	7522	2.7
Sn-113	392	115.1	d	4728	2.6
Cs-137	662	30.07	y	2973	3.0
Y-88	898	106.6	d	11600	2.6
Co-60	1173	5.2714	y	5780	2.7
Co-60	1332	5.2714	y	5783	2.6
Y-88	1836	106.6	d	12260	2.6

5.31725 grams 4M HCl solution.

P O NUMBER 2734RD, Item 1

SOURCE PREPARED BY:

M. Dimitrova
M. Dimitrova, Radiochemist

Q A APPROVED:

W.M. [Signature] 11-28-06

This standard will expire one year after the calibration date.

Rec'd 11/28/06
RC-S-045-073-0

1380 Seaboard Industrial Blvd.
 Atlanta, Georgia 30318

Tel 404-352-8677

Fax 404-352-2837

www.analytisticsinc.com

ANALYSIS OF UNCERTAINTY FOR MIXED GAMMA STANDARDS BATCH 127

CALIBRATION DATE: October 1, 2006 12:00 EST

Isotope	Energy (keV)	Calibration Method ¹	Statistics ²	Calibration ²	Peak Fitting ²	Geometry ²	Impurities ²	Weighting	Combined Standard Uncertainty	Relative Expanded Uncertainty (k=2)
Cd-109	88	HPGe	0.16	1.1	0.88	0.8	0	0.2	1.64	3.3
Co-57	122	HPGe	0.23	1.1	0.71	0.7	0	0.2	1.52	3.0
Ce-139	166	HPGe	0.17	1.0	0.58	0.7	0	0.2	1.38	2.8
Hg-203	279	HPGe	0.11	1.1	0.34	0.7	0	0.2	1.37	2.7
Sn-113	392	HPGe	0.21	1.0	0.35	0.7	0	0.2	1.30	2.6
Cs-137	662	HPGe	0.36	1.1	0.60	0.7	0	0.2	1.49	3.0
Y-88	898	HPGe	0.19	1.0	0.33	0.7	0	0.2	1.29	2.6
Co-60	1173	HPGe	0.31	.97	0.45	0.7	0	0.2	1.33	2.7
Co-60	1332	HPGe	0.33	.93	0.48	0.7	0	0.2	1.32	2.6
Y-88	1836	HPGe	0.24	1.0	0.35	0.7	0	0.2	1.31	2.6

Optional Additional Isotopes

Pb-210	46.5	4π LS	0.33	1.1	0	0.9	0.30	0.2	1.50	3.0
Am-241	59.5	4π LS	0.33	1.1	0	0.9	0.30	0.2	1.50	3.0
Sr-85	514	IC	0.30	1.1	0	0.7	0.17	0.2	1.36	2.7
Cs-134	605	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Cs-134	796	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Mn-54	835	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Zn-65	1116	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7

Calibration Methods:

4π LS (4 pi Liquid Scintillation Counting)

HPGe (High Purity Germanium Gamma Ray Spectrometer)

IC (Gamma Ray Ionization Chamber)

²As Percent (%) from counting data

No interfering gamma emitting impurities were detected during calibration. Depending on the resolution and energy dispersion (keV/channel) of the measuring system, the following spectral conflicts may occur: (1) between the 88 keV gamma-ray and the X-rays emitted in the decay of Hg-203, (2) between the 1333 keV gamma-ray and the 1325 keV single escape peak from the 1836 keV gamma-ray.

Standard Traceability Log Rad

Source Material Info		A Solution Material Info	
Parent Code:	1032	Isotope:	Mixed Gamma
Prepared By:	Daniel Roy	Prepared By:	Daniel Roy
Carrier Conc:	4 M HCL	Prep Date:	11/30/2006
Reference Date:	10/01/2006	Verification Date:	12/02/2009
Ampoule Mass (g):	5.31725 g	Expiration Date:	12/02/2010
Uncertainty:	+/- 2.81 %	Primary Code:	1032-A
LogBook No:	RC-S-045-073	Dilution(mL):	100 mL
		Mass of Parent(g):	5.2579 g
		Density(g/mL):	1.0611
		Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

$(\text{Mass of parent(g)}) * (\text{Parm Activity (dpm)}) * (\text{conversion dpm to dpm}) / (\text{Ampoule Mass(g)} * (\text{Dilution Vol})) = \text{Parent Activity (dpm/mL)}$
$(\text{Mass of parent(g)}) * (\text{Parm Activity (dpm)}) * (\text{conversion dpm to dpm}) / \text{Density} / (\text{Ampoule Mass (g)} * (\text{Dilution Vol})) = \text{Parent Activity (dpm/g)}$
$(5.2579 \text{ g}) * (218817 \text{ dpm}) * (1 \text{ dpm/dpm}) / (5.31725 \text{ g} * 100 \text{ mL}) = 2163.7461 \text{ dpm/mL}$
$(5.2579 \text{ g}) * (218817 \text{ dpm}) * (1 \text{ dpm/dpm}) / (1.0611 \text{ g/mL}) / (5.31725 \text{ g} * 100 \text{ mL}) = 2039.2400 \text{ dpm/g}$

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
-----------	----------	--------------	---------------	------	-------------	-------------------	-----------------

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Mixed Gamma Standard 1032-A

M. Stamps
12/2/2009

Am-241

Isotope	Result	pCi/L - Ver- Jar-1
Mixed Gamma N1	2534	pCi/L
Mixed Gamma N2	2510	pCi/L
Mixed Gamma N3	2413	pCi/L

Mean Value (Counting) = 2485.67
Stdev = 64.065
Rule 3 (Pass/Fail) Pass

Certificate Value = 2485.68018
Lower Limit = 2357.536524
Upper Limit = 2613.796809
Rule 1 (Pass/Fail) Pass
Two sigma = 128.1301422
10 % of Mean = 248.56866667
Rule 2 (Pass/Fail) Pass

Verification Rules

- Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
- Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
- Rule 3 = The determined mean value shall be within 5% of the certificate value.

M. Stamps
12/2/09
independent
12/2/09

Verification for Mixed Gamma Standard 1032-A

M. Stamps
12/2/2009

Cs-137

Isotope	Result	
Mixed Gamma N1	854.2	pCi/L - Ver-Tab-1
Mixed Gamma N2	907.6	pCi/L - Ver-Tab-3
Mixed Gamma N3	898.9	pCi/L - Ver-Tab-2

Mean Value (Counting) =
Stdev =

886.90
28.651

95.01

Pass

Rule 3 (Pass/Fail)

Certificate Value =

Lower Limit =

Upper Limit =

Rule 1 (Pass/Fail)

Two sigma =

10 % of Mean =

Rule 2 (Pass/Fail)

933.44144

829.597644

944.202356

Pass

57.30235597

88.69000000

Pass

pCi/L

pCi/L

pCi/L

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements

Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.

Rule 3 = The determined mean value shall be within 5% of the certificate value.

Handwritten: 12/2/09
12/2/09
12/2/09

Verification for Mixed Gamma Standard 1032-A

M. Stamps
12/2/2009

Co-60 (1332.5)

Isotope	Result	
Mixed Gamma N1	1572	pCi/L - VER-JAN-5
Mixed Gamma N2	1495	pCi/L - VER-JAN-2
Mixed Gamma N3	1501	pCi/L - VER-JAN-3

Mean Value (Counting) = 1522.67
Stdev = 42.829
98.50 Pass
Rule 3 (Pass/Fail)

Certificate Value = 1545.8378
Lower Limit = 1437.008431
Upper Limit = 1608.324902
Rule 1 (Pass/Fail)
Two sigma = Pass
10 % of Mean = 85.65823564
Rule 2 (Pass/Fail)
152.26666667
Pass

M. Stamps issued 12/2/09
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 *lett c held 12/1/04*

angela d. johnson 12/13/04

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
Tn-230	471 ± 11	24.5 ± 0.6	58.5 ± 2.1	44.0 ± 1.6
Ra-226	489 ± 17	25.4 ± 0.9	60.3 ± 2.3	42.9 ± 1.2
Pb-210	1558 ± 25	22.1 ± 1.2	56.0 ± 2.1	38.9 ± 2.0

0244-B Characterization

Sample #	Plutonium-239 Result (pCi/g)	Plutonium-238 Result (pCi/g)	Americium-241 Result (pCi/g)
0244-B 1	39.9	7.88	38.4
0244-B 2	44.1	7.97	40.6
0244-B 3	45.8	6.56	31.8
0244-B 4	43.6	7.69	31.5
0244-B 5	43	7.9	40.2
0244-B 6	43.5	7.84	29.4
0244-B 7	41.3	7.67	36
0244-B 8	44.3	6.95	33.2
0244-B 9	42.7	7.2	29.2
0244-B 10	44.9	7.69	30
0244-B 11	41.4	7.22	30.2
0244-B 12	41.3	7.74	36
0244-B 13	39.2	6.65	33.8
0244-B 14	39.6	7.78	31.1
0244-B 15	45.3	8.41	37.3
0244-B 16	38.1	6.74	33.6
0244-B 17	48.5	8.51	30.5
0244-B 18	36.5	7.23	38.6
0244-B 19	35.3	6.98	30.9
0244-B 20	37.4	8.55	31.3
Mean Value	41.79	7.56	33.68
1 sigma	3.418	0.596	3.724
2 sigma	6.835	1.193	7.448
75% Limit	30.75	6.02	24.38
125% Limit	51.25	10.04	40.63
Expected Result	41.0 +/- 3.0	8.03 +/- 0.37	32.5 +/- 1.1
Achieved Results	41.79 +/- 3.418	7.56 +/- .596	33.68 +/- 3.724

REFERENCE DATA 4/14/2000

Amanda L. Lehn 4/30/04
 Lott & Sheld 5/1/04

PREPARATION AND CHARACTERIZATION OF THE PERFORMANCE EVALUATION SOIL SAMPLE PEM-1

INTRODUCTION

Rust Geotech (Rust) was contracted by Los Alamos National Laboratory (LANL) to prepare and characterize a soil performance evaluation sample designated PEM-1. This report describes sample preparation, homogeneity assessment, and determination of the concentrations of 28 elements and radioactive isotopes in the sample.

SAMPLE PREPARATION

Rust received nine five-gallon buckets of soil from LANL. The soils were dried overnight in ovens at 103 °C. The large pieces of leaves and sticks were removed and the soils were ground with ceramic-plate grinders to a particle size that passed through a 325 mesh screen. The samples were blended at the proportions specified by LANL for 48 hours in a 3-cubic-foot cross-flow blender. The sample identifications and the amounts used are listed in Table 1.

Table 1. Sample Identifications and Amounts Used to Prepare PEM-1

LANL Sample ID	Amount Used (kg)
AAA 1592	1.7
AAA 2505-1	10.9
AAA 2505-2	12.8
AAA 2750-1	8.4
AAA 2750-2	8.4
AAA 3205	12.6
AAA 8581	4.2
AAB 3417	12.8
AAB 3475	12.6

The blended sample was transferred to three five-gallon plastic containers. While the sample was being transferred, 10 samples were taken at pre-determined time intervals to be used for homogeneity assessment and sample characterization. These samples are believed to be representative of the bulk material.

Attention Nancy Slater At GEL
Not For Log In
9911627-01-001
Page 1 of 1
AR/COC- 602945

Internal Lab
Batch No. SARWR No. N/A
Press F1 for Instructions for each field.

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.:

Contract No.: AJ-2480A
Case No.: 10204 13
SMO Authorization: [Signature]
Bill to: Sandia National Laboratories
Supplier Services, Dept.
P.O. Box 5800 MS 0154

Location		Tech Area VI		Reference LOV (available at SMO)		LAB USE	
Building	N/A	Room	N/A	Sample Type	Parameter & Method Requested	Lab Sample ID	
Sample No. - Fraction		ER Sample ID or Sample Location Detail		Preservative			
050484 - 001	PEM-1			4C	See Special Instructions Below		
050485 - 001	TRM-2			4C			
050488 - 001	HRM-2	NBHD		4C			
-							
-							
-							
-							
-							
-							

RMMA ☐ Yes ☒ No Ref. No.
Sample Disposal ☐ Return to Client ☒ Disposal by lab
Turnaround Time ☒ Normal ☐ Rush Required Report Date
Sample Team
Name Douglas E. Perry
Signature [Signature]
1. Relinquished by [Signature] Date 11-16-99 Time 0900
1. Received by [Signature] Date [] Time []
2. Relinquished by [] Date [] Time []
2. Received by [] Date [] Time []
3. Relinquished by [] Date [] Time []
3. Received by [] Date [] Time []

Special Instructions/QC Requirements
EDD ☐ Yes ☒ No
Raw data package ☐ Yes ☒ No
These samples are for general analytical and materials being sent to GEL for back to back history
Please list as separate report.

4. Relinquished by [] Date [] Time []
4. Received by [] Date [] Time []
5. Relinquished by [] Date [] Time []
5. Received by [] Date [] Time []
6. Relinquished by [] Date [] Time []
6. Received by [] Date [] Time []

THE LEAK TEST(S) INDICATED BY THE CHECKED BOX(ES) WAS(WERE) APPLIED TO
DETERMINE THE INTEGRITY OF THE SOURCE DESCRIBED ON THE FRONT SIDE

☒ 1. STANDARD WIPE TEST

The source is wiped over its entire surface with a moistened filter paper disk. After drying, the disk is checked for activity using a windowless proportional counter or end-window G.M. tube. Activity levels exceeding 0.001 μCi beta-gamma or 0.0001 μCi alpha are cause for rejection of the source.

☐ 2. SOAK TEST

The source is immersed in distilled water and maintained at $50 \pm 10^\circ \text{C}$ for a minimum of four hours. After removal of the source, the liquid is a) checked for activity using a liquid scintillation counter, or b) evaporated in a planchet and the residue is checked for activity using a windowless proportional counter or end-window G.M. tube. Activity levels exceeding 0.001 μCi beta-gamma or 0.0001 μCi alpha are cause for rejection of the source.

☐ 3. SOAK TEST -- BERYLLIUM WINDOW

The source is immersed in distilled water and maintained at $50 \pm 10^\circ \text{C}$ for 20 minutes. The entire surface of the source is then wiped with a moistened cotton swab or filter paper disk. After drying, the swab or disk is checked for activity using a windowless proportional counter or end-window G.M. tube. Activity levels exceeding 0.001 μCi beta-gamma or 0.0001 μCi alpha are cause for rejection of the source.

☐ 4. GAS SOURCE TEST (Radioactive Gas)

The source is placed in a vacuum desiccator and maintained at a pressure of less than 1 mm Hg for not less than 12 hours. The activity is checked by introducing air into the desiccator and monitoring the air with an end-window G.M. tube. Activity levels exceeding 1000 cpm are cause for rejection of the source.

☒ 5. OTHER LEAK TEST

The ampoule is kept in an inverted position on a filter paper disk for a minimum of 16 hours. The filter paper disk is then checked for activity using a windowless proportional counter or end-window G.M. tube. Activity levels exceeding 0.001 μCi beta-gamma or 0.0001 μCi alpha are cause for rejection of the source.

☐ 6. LEAK TEST NOT APPLICABLE

The active area of this source is uncovered or is protected by a very thin coating. Although the deposit is adherent, it is not designed or certified to pass a standard leak test. The inactive portions of the source have been checked using the standard wipe test. Levels of removable activity did not exceed 0.001 μCi beta-gamma or 0.0001 μCi alpha at the time of shipment.

Standard Traceability Log Rad

Source Material Info	
Parent Code:	445-96-2
Prepared By:	Genie Bost
Carrier Conc:	2M HNO3
Reference Date:	01/01/1994
Ampoule Mass (g):	5.3739 g
Uncertainty:	+/- 3 %
LogBook No:	RC S 005 032

A Solution Material Info	
Isotope:	Americium-243
Prepared By:	Angela Johnson
Prep Date:	01/05/1994
Verification Date:	05/11/2009
Expiration Date:	05/11/2010
Primary Code:	445-96-2-A
Dilution(mL):	100 mL
Mass of Parent(g):	5.3419 g
Density(g/mL):	1.0785
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

$(\text{Mass of parent(g)}) * (\text{Parm Activity (uCi/g)}) * (\text{conversion dpm to uCi}) / (\text{Dilution Vol}) = \text{Parent Activity (dpm/mL)}$
$(\text{Mass of parent(g)}) * (\text{Parm Activity (uCi/g)}) * (\text{conversion dpm to uCi}) / \text{Density (g/mL)} / (\text{Dilution Vol}) = \text{Parent Activity (dpm/g)}$
$(5.3419 \text{ g}) * (18.84 \text{ uCi/g}) * (2220000 \text{ dpm/uCi}) / (100 \text{ mL}) = 2234238.9912 \text{ dpm/mL}$
$(5.3419 \text{ g}) * (18.84 \text{ uCi/g}) * (2220000 \text{ dpm/uCi}) / (1.0785 \text{ g/mL}) / (100 \text{ mL}) = 2071617.0528 \text{ dpm/g}$

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
01/05/1994	Genie Bost	.0058	100	445-96-2-B	120.1 dpm/ml	01/05/1995	01/05/1996
09/10/2004	Amanda Fehr	.0325	1000	445-96-2-BB	67.328 dpm/mL	09/10/2005	09/10/2006
01/05/1994	Genie Bost	.0025	100	445-96-2-C	51.77 dpm/ml	01/05/1995	01/05/1996
05/27/2005	Brenda Burke	.000246	100	445-96-2-CC	5.10613 dpm/mL	05/31/2005	05/31/2006
03/25/1994	Genie Bost	.0064	100	445-96-2-D	132.53 dpm/ml	01/05/1995	01/05/1996
08/16/2005	Brenda Burke	.001224	500	445-96-2-DD	5.07144 dpm/mL	08/18/2007	08/18/2008
08/04/1994	Genie Bost	.0094	100	445-96-2-E	194.65 dpm/ml	01/05/1995	01/05/1996
10/13/2005	Brenda Burke	.0017	500	445-96-2-EE	7.0435 dpm/mL	11/15/2005	11/15/2006
08/04/1994	Genie Bost	.0046	100	445-96-2-F	95.25 dpm/ml	01/05/1995	01/05/1996
10/14/2005	Mary Aders	.0141	500	445-96-2-FF	58.4196 dpm/mL	10/14/2005	10/14/2006
09/01/1994	Genie Bost	.0031	100	445-96-2-G	64.19 dpm/ml	01/05/1995	01/05/1996
05/10/2006	Mary Aders	2.0753	1000	445-96-2-GG	4299.227 dpm/mL	09/30/2008	09/30/2009
10/17/1994	Genie Bost	.0969	100	445-96-2-H	2006.52 dpm/ml	01/05/1995	01/05/1996
06/07/2006	Mary Aders	.0365	1000	445-96-2-HH	75.614 dpm/mL	06/19/2006	06/19/2007
02/06/1995	Genie Bost	.0043	100	445-96-2-I	89.04 dpm/ml	01/05/1995	01/05/1996
05/11/2006	Brenda Burke	.000009739	100	445-96-2-II	.201761 dpm/mL	07/26/2006	07/26/2007
07/20/1995	Theresa Austin	.0041	100	445-96-2-J	84.9 dpm/ml	01/05/1995	01/05/1996
05/01/2007	Daniel Roy	.0352	1000	445-96-2-JJ	72.9209 dpm/ml	04/30/2008	04/30/2009
08/10/1995	Garret Ray	.0952	100	445-96-2-K	1971.32 dpm/ml	01/05/1995	01/05/1996
06/12/2007	Julie Strock	.01038	250	445-96-2-KK	22.1496 dpm/mL	05/28/2008	05/28/2009

09/11/1995	Theresa Austin	1.0525	100	445-96-2-L	21794.23 dpm/ml	01/05/1995	01/05/1996
09/11/1995	Theresa Austin	.5107	100	445-96-2-L-1	111.3 dpm/ml	01/05/1995	01/05/1996
04/28/1998	Richard Kinney	.1264	100	445-96-2-M	2617.4 dpm/ml	04/28/1998	04/28/1999
11/01/2007	Eric Williamson	.001274	500	445-96-2-MM	5.27945 dpm/mL	04/06/2008	04/06/2010
10/12/1998	Gregory Smith	.1348	100	445-96-2-N	2791.32 dpm/mL	01/05/1995	01/05/1996
01/25/1999	Gregory Smith	1.9382	100	445-96-2-N-1	50.16 dpm/ml	01/05/1995	01/05/1996
04/19/2008	Daniel Roy	.0424	1000	445-96-2-NN	87.8366 dpm/ml	04/16/2009	04/16/2010
04/21/1999	Greg Smith	.1645	100	445-96-2-O	3406.32 dpm/mL	04/21/1999	04/21/2000
07/27/1999	Gregory Smith	1.567	100	445-96-2-O-2	50.56 dpm/ml	05/13/1999	05/13/2000
10/12/1999	Richard Kinney	1.5589	100	445-96-2-O-3	50.31 dpm/mL	05/13/1999	05/13/2000
04/21/1999	Greg Smith	1.5309	100	445-96-2-O-1	49.4 dpm/mL	04/21/1999	04/21/2000
11/10/1999	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-241 certified values.

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements

Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.

Rule 3 = The determined mean value shall be within 5% of the certificate value.

M. Aders 5/15/09
Taheri 07/09

1374



National Institute of Standards & Technology Certificate

Standard Reference Material 4334H Plutonium-242 Radioactivity Standard

This Standard Reference Material (SRM) consists of radioactive plutonium-242 nitrate and nitric acid dissolved in 5 mL of distilled water. The solution is contained in a flame-sealed NIST borosilicate-glass ampoule. The SRM is intended for the calibration of alpha-particle counting instruments and for the monitoring of radiochemical procedures.

Radiological Hazard: The SRM ampoule contains plutonium-242 with a total activity of approximately 150 Bq. Plutonium-242 decays by alpha-particle emission. None of the alpha particles escape from the SRM ampoule. During the decay process, X-rays and gamma rays with energies from 10 keV to 160 keV are also emitted. Most of these photons escape from the SRM ampoule but their intensities are so small that they do not represent a radiation hazard. Approximate unshielded dose rates at several distances (as of the reference time) are given in note [a]*. The SRM should be used only by persons qualified to handle radioactive material.

Chemical Hazard: The SRM ampoule contains nitric acid (HNO_3) with a concentration of 3 moles per liter of water. The solution is corrosive and represents a health hazard if it comes in contact with eyes or skin. If the ampoule is to be opened to transfer the solution, the recommended procedure is given on page 2. The ampoule should be opened only by persons qualified to handle both radioactive material and strong acid solution.

Storage and Handling: The SRM should be stored and used at a temperature between 5 °C and 65 °C. The solution in an unopened ampoule should remain stable and homogeneous until at least January 2015. The ampoule (or any subsequent container) should always be clearly marked as containing radioactive material. If the ampoule is transported it should be packed, marked, labeled, and shipped in accordance with the applicable national, international, and carrier regulations. The solution in the ampoule is a dangerous good (hazardous material) both because of the radioactivity and because of the strong acid.

Preparation: This Standard Reference Material was prepared in the Physics Laboratory, Ionizing Radiation Division, Radioactivity Group, M.P. Unterwieser, Acting Group Leader. The overall technical direction and physical measurements leading to certification were provided by L.L. Lucas of the Radioactivity Group. The support aspects involved in the preparation, certification, and issuance of this SRM were coordinated through the Standard Reference Materials Program.

RECEIVED
2/10/05

Lisa R. Karam, Acting Chief
Ionizing Radiation Division

Gaithersburg, Maryland 20899
January 2005

Robert L. Watters, Jr., Chief
Measurement Services Division

Recommended Procedure for Opening the SRM Ampoule

- 1) If the SRM solution is to be diluted, it is recommended that the diluting solution have a composition comparable to that of the SRM solution.
- 2) Wear eye protection, gloves, and protective clothing and work over a tray with absorbent paper in it. Work in a fume hood. In addition to the radioactive material, the solution contains strong acid and is corrosive.
- 3) Shake the ampoule to wet all of the inside surface of the ampoule. Return the ampoule to the upright position.
- 4) Check that all of the liquid has drained out of the neck of the ampoule. If necessary, gently tap the neck to speed the process.
- 5) Holding the ampoule upright, score the narrowest part of the neck with a scribe or diamond pencil.
- 6) Lightly wet the scored line. This reduces the crack propagation velocity and makes for a cleaner break.
- 7) Hold the ampoule upright with a paper towel, a wiper, or a support jig. Position the scored line away from you. Using a paper towel or wiper to avoid contamination, snap off the top of the ampoule by pressing the narrowest part of the neck away from you while pulling the tip of the ampoule towards you.
- 8) Transfer the solution from the ampoule using a pycnometer or a pipet with dispenser handle. NEVER PIPETTE BY MOUTH.
- 9) Seal any unused SRM solution in a flame-sealed glass ampoule, if possible, to minimize the evaporation loss.

See also reference [4]*.

PROPERTIES OF SRM 4334H

Certified values

Radionuclide	Plutonium-242
Reference time	1200 EST, 07 June 1994 [b]*
Massic activity of the solution [c]	26.31 Bq·g ⁻¹
Relative expanded uncertainty (k=2)	0.72% [d] [e]
Solution density	(1.105 ± 0.002) g·mL ⁻¹ at 20 °C [f]

Uncertified values

Physical Properties:			
Source description	Liquid in flame-sealed NIST borosilicate-glass ampoule		
Ampoule specifications	Body outside diameter	(16.5 ± 0.5) mm	
	Wall thickness	(0.60 ± 0.04) mm	
	Barium content	Less than 2.5%	
	Lead-oxide content	Less than 0.02%	
	Other heavy elements	Trace quantities	
Solution mass	Approximately 5.5 g		
Chemical Properties:			
Solution composition	Chemical Formula	Concentration (mol·L ⁻¹)	Mass Fraction (g·g ⁻¹)
	H ₂ O	50	0.81
	HNO ₃	3.2	0.19
	²⁴² Pu ⁺⁶	8 × 10 ⁻⁷	2 × 10 ⁻⁷
Radiological Properties:			
Alpha-particle-emitting impurities	None detected [g] [h]. See table on page 5.		
Beta-particle-emitting impurities	Plutonium-241: (0.092 ± 0.018) Bq·g ⁻¹ [f] [h]		
Photon-emitting impurities	None detected [i]		
Half lives used	Plutonium-242: (373 500 ± 1100) a [j] [5] Plutonium-241: (14.35 ± 0.10) a [j] [5] Americium-241: (432.2 ± 0.7) a [j] [5]		
Calibration method and measuring instrument(s)	Three 4π α liquid-scintillation counters, a calibrated germanium detector system, and a silicon surface-barrier detector		

EVALUATION OF THE UNCERTAINTY OF THE MASSIC ACTIVITY [d] [e]*

Input Quantity x_i , the source of uncertainty (and individual uncertainty components where appropriate)	Method Used To Evaluate $u(x_i)$, the standard uncertainty of x_i (A) denotes evaluation by statistical methods (B) denotes evaluation by other methods	Relative Uncertainty Of Input Quantity, $u(x_i)/x_i$, (%) [k]	Relative Sensitivity Factor, $|\partial y/\partial x_i| \cdot$ (x_i/y) [m]	Relative Uncertainty Of Output Quantity, $u(y)/y$, (%) [n]
Massic alpha-particle emission rate, corrected for background and decay	Standard deviation of the mean for 80 sets of $4\pi\alpha$ liquid- scintillation measurements (A)	0.05	1.0	0.05
Half life of Pu-242	Standard uncertainty of the half life (A)	0.32 [p]	0.00001 [q]	0.000003
Decay-scheme data	Standard uncertainty of the probability of decay by alpha- particle emission (A)	0.001	1.0	0.001
Extrapolation of alpha- particle-count-rate- versus-energy to zero energy	Estimated (B)	0.25	1.0	0.25
Gravimetric measurements	Estimated (B)	0.10	1.0	0.10
Live time [r]	Estimated (B)	0.10	1.0	0.10
Alpha-particle detection efficiency of scintillators	Estimated (B)	0.15	1.0	0.15
Alpha-particle-emitting impurities	Limit of detection (B) [s]	100.	0.001	0.10
Photon-emitting impurities	Limit of detection (B) [s]	100.	0.001	0.10
Relative Combined Standard Uncertainty of the Output Quantity, $u_c(y)/y$, (%)				0.36
Coverage Factor, k				<u>x 2</u>
Relative Expanded Uncertainty of the Output Quantity, $U(y)/y$, (%)				0.72

RELATIVE ACTIVITIES OF RADIONUCLIDIC IMPURITIES AT THE REFERENCE TIME [b]

Radionuclide	Half Life (years) [j] [5]	Relative Activity As Determined By	
		LLNL	NIST
Plutonium-242	373 500 ± 1100	1.000 000	1.000 000
Plutonium-241	14.35 ± 0.10	--	0.0035 ± 0.0004 [t]
Plutonium-240	6 564 ± 11	²³⁹ Pu + ²⁴⁰ Pu <0.000 001 [u]	²³⁹ Pu + ²⁴⁰ Pu 0.000 020 ± 0.000 021 [v]
Plutonium-239	24 110 ± 30		
Plutonium-238	87.7 ± 0.1	²³⁸ Pu + ²⁴¹ Am <0.000 016 [u]	0.000 009 ± 0.000 016 [v]
Americium-241	432.2 ± 0.7		0.000 000 assumed [t]

NOTES

- [a] The Sievert is the SI unit for dose equivalent. See reference [1]. One μSv is equal to 0.1 mrem.
Distance from Ampoule (cm): 1 30 100
Approximate Dose Rate ($\mu\text{Sv/h}$): <0.1 - -
- [b] The plutonium-242 master solution was chemically purified at 1200 EST, 07 June 1994.
- [c] **Massic activity** is the preferred name for the quantity activity divided by the total mass of the sample. See reference [1].
- [d] The reported value, y , of massic activity (activity per unit mass) at the reference time was not measured directly but was derived from measurements and calculations of other quantities. This can be expressed as $y = f(x_1, x_2, x_3, \dots, x_n)$, where f is a mathematical function derived from the assumed model of the measurement process. The value, x_i , used for each input quantity i has a **standard uncertainty**, $u(x_i)$, that generates a corresponding uncertainty in y , $u_i(y) = |\partial y / \partial x_i| \cdot u(x_i)$, called a **component of combined standard uncertainty** of y . The **combined standard uncertainty** of y , $u_c(y)$, is the positive square root of the sum of the squares of the components of combined standard uncertainty. The combined standard uncertainty is multiplied by a **coverage factor** of $k=2$ to obtain U , the **expanded uncertainty** of y .

Since it can be assumed that the possible estimated values of the massic activity are approximately normally distributed with approximate standard deviation $u_c(y)$, the unknown value of the massic activity is believed to lie in the interval $y \pm U$ with a level of confidence of approximately 95 percent.

For further information on the expression of uncertainties, see references [2] and [3].

- [e] The value of each component of combined standard uncertainty, and hence the value of the expanded uncertainty itself, is a best estimate based upon all available information, but is only approximately known. That is to say, the "uncertainty of the uncertainty" is large and not well known. This is true for uncertainties evaluated by statistical methods (e.g., the relative standard deviation of the standard deviation of the mean for the massic response is approximately 50%) and for uncertainties evaluated by other methods (which could easily be over estimated or under estimated by substantial amounts). The unknown value of the expanded uncertainty is believed to lie in the interval $U/2$ to $2U$ (i.e., within a factor of 2 of the estimated value).
- [f] The stated uncertainty is two times the standard uncertainty.
- [g] Estimated limits of detection for alpha-particle-emitting impurities, expressed as massic alpha-particle emission rates (numbers of alpha particles per second per gram), are:
 $0.003 \text{ s}^{-1}\text{g}^{-1}$ for energies less than 3.1 MeV,
 $0.03 \text{ s}^{-1}\text{g}^{-1}$ for energies between 3.1 and 4.4 MeV, and
 $0.003 \text{ s}^{-1}\text{g}^{-1}$ for energies greater than 5.0 MeV.
- [h] The plutonium-242 master solution was chemically purified at 1200 EST, 07 June 1994. Americium-241, the daughter of plutonium-241, was removed but has been growing in since that time.
- [i] Estimated limits of detection for photon-emitting impurities, expressed as massic photon emission rates (numbers of photons per second per gram), are:
 $5 \times 10^{-5} \text{ s}^{-1}\text{g}^{-1}$ for energies between 19 and 39 keV,
 $7 \times 10^{-5} \text{ s}^{-1}\text{g}^{-1}$ for energies between 49 and 92 keV,
 $2 \times 10^{-5} \text{ s}^{-1}\text{g}^{-1}$ for energies between 106 and 507 keV,
 $1 \times 10^{-5} \text{ s}^{-1}\text{g}^{-1}$ for energies between 515 and 1456 keV, and
 $5 \times 10^{-6} \text{ s}^{-1}\text{g}^{-1}$ for energies between 1465 and 2750 keV,
provided that the photons are separated in energy by 4 keV or more from photons emitted in the decay of plutonium-242, plutonium-241, or americium-241.
- [j] The stated uncertainty is the standard uncertainty.
- [k] Relative standard uncertainty of the input quantity x_i .
- [m] The relative change in the output quantity y divided by the relative change in the input quantity x_i . If $|\partial y / \partial x_i| \cdot (x_i / y) = 1.0$, then a 1% change in x_i results in a 1% change in y . If $|\partial y / \partial x_i| \cdot (x_i / y) = 0.05$, then a 1% change in x_i results in a 0.05% change in y .
- [n] Relative component of combined standard uncertainty of output quantity y , rounded to two significant figures or less. The relative component of combined standard uncertainty of y is given by $u_i(y)/y \equiv |\partial y / \partial x_i| \cdot u(x_i)/y = |\partial y / \partial x_i| \cdot (x_i / y) \cdot u(x_i)/x_i$. The numerical values of $u(x_i)/x_i$, $|\partial y / \partial x_i| \cdot (x_i / y)$, and $u_i(y)/y$, all dimensionless quantities, are listed in columns 3, 4, and 5, respectively. Thus, the value in column 5 is equal to the value in column 4 multiplied by the value in column 3. The input quantities are independent, or very nearly so. Hence the covariances are zero or negligible.

- [p] The relative standard uncertainty of λt is determined by the relative standard uncertainty of λ (i.e., of the half life). The relative standard uncertainty of t is negligible.
- [q] $|\partial y / \partial x_i| \cdot (x_i / y) = |\lambda \cdot t|$
- [r] The live time is determined by counting the pulses from a gated crystal-controlled oscillator.
- [s] The standard uncertainty for each undetected impurity that might reasonably be expected to be present is estimated to be equal to the estimated limit of detection for that impurity, i.e. $u(x_i) / x_i = 100\%$. $|\partial y / \partial x_i| \cdot (x_i / y) = \{(\text{response per Bq of impurity}) / (\text{response per Bq of Pu-242})\} \cdot \{(\text{Bq of impurity}) / (\text{Bq of Pu-242})\}$. Thus $u_i(y) / y$ 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		A Solution Material Info	
Parent Code:	1374	Isotope:	Plutonium-242
Prepared By:	Mary Aders	Prepared By:	Ashley Drochter
Carrier Conc:	0.5M HNO3	Prep Date:	12/02/2009
Reference Date:	06/07/1994	Verification Date:	12/08/2009
Ampoule Mass (g):	5.5 g	Expiration Date:	12/08/2010
Uncertainty:	+/- .72 %	Primary Code:	1374-A
LogBook No:	RC-S-051-093	Dilution(mL):	250 mL
		Mass of Parent(g):	5.3616 g
		Density(g/mL):	1.0136
		Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

$(\text{Mass of parent(g)}) * (\text{Parm Activity (Bq/g)}) * (\text{conversion dpm to Bq}) / (\text{Dilution Vol}) = \text{Parent Activity (dpm/mL)}$
$(\text{Mass of parent(g)}) * (\text{Parm Activity (Bq/g)}) * (\text{conversion dpm to Bq}) / \text{Density (g/mL)} / (\text{Dilution Vol}) = \text{Parent Activity (dpm/g)}$
$(5.3616 \text{ g}) * (26.31 \text{ Bq/g}) * (60 \text{ dpm/Bq}) / (250 \text{ mL}) = 33.8553 \text{ dpm/mL}$
$(5.3616 \text{ g}) * (26.31 \text{ Bq/g}) * (60 \text{ dpm/Bq}) / (1.0136 \text{ g/mL}) / (250 \text{ mL}) = 33.4010 \text{ dpm/g}$

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
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GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Pu-242 Standard 1374-A

A.Drochter 12/8/2009	Isotope 1374-A 1374-A 1374-A	Value 1.610 1.580 1.530	Uncertainty 0.2480 0.2510 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.

Not called
12/8/09
12/9/09
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

78747-278

1283

U-232 5 mL Liquid in Flame Sealed Vial

Customer: GEL Laboratories, LLC
P.O. No.: 7319 RD, Item 1

This standard radionuclide source was prepared gravimetrically from a calibrated master solution. The master solution was calibrated using a germanium gamma spectrometer system.

Radionuclide purity and calibration were checked using a germanium gamma spectrometer system. The nuclear decay rate and assay date for this source are given below.

ANALYTICS maintains traceability to the National Institute of Standards and Technology through Measurements Assurance Programs as described in USNRC Reg. Guide 4.15, Revision 1.

Isotope:	U-232
Activity (Bq):	3.754 E3
Half-Life:	68.9 years
Calibration Date:	December 9, 2008 12:00 EST
Relative Expanded Uncertainty (k=2):	5.0%

Comments:

Impurities: U-233 <0.3%, Am-241 <0.15%
5.20453 grams 1M HNO₃ solution.

Source Prepared By: W. Mao
W. Mao, Radiochemist

QA Approved: D. M. Montgomery
D. M. Montgomery, QA Manager

Date: 12-11-08

Standard Traceability Log Rad

Source Material Info		A Solution Material Info	
Parent Code:	1283	Isotope:	Uranium-232
Prepared By:	Daniel Roy	Prepared By:	Daniel Roy
Carrier Conc:	1M HNO3	Prep Date:	12/16/2008
Reference Date:	12/09/2008	Verification Date:	12/30/2008
Ampoule Mass (g):	5.20453 g	Expiration Date:	12/30/2009
Uncertainty:	+/- 5 %	Primary Code:	1283-A
LogBook No:	RC-S-051-002	Dilution(mL):	100 mL
		Mass of Parent(g):	5.0245 g
		Density(g/mL):	1.0285
		Balance ID:	

Calculations Converting parent activity to dpm/mL|dpm/g

$(\text{Mass of parent(g)} * (\text{Parm Activity (Bq)}) * (\text{conversion dpm to Bq}) / (\text{Ampoule Mass(g)} * (\text{Dilution Vol})) = \text{Parent Activity (dpm/mL)}$

$(\text{Mass of parent(g)} * (\text{Parm Activity (Bq)}) * (\text{conversion dpm to Bq}) / \text{Density} / (\text{Ampoule Mass (g)} * (\text{Dilution Vol})) = \text{Parent Activity (dpm/g)}$

$(5.0245 \text{ g}) * (3754 \text{ Bq}) * (60 \text{ dpm/Bq}) / (5.20453 \text{ g} * 100 \text{ mL}) = 2174.4872 \text{ dpm/mL}$

$(5.0245 \text{ g}) * (3754 \text{ Bq}) * (60 \text{ dpm/Bq}) / (1.0285 \text{ g/mL}) / (5.20453 \text{ g} * 100 \text{ mL}) = 2114.1700 \text{ dpm/g}$

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
12/16/2008	Daniel Roy	25.1813	1000	1283-B	53.2375 dpm/mL	12/16/2008	12/16/2009
12/30/2008	Tina Schoneman	2.05	250	1283-C	17.336 dpm/mL	12/30/2008	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

Verification for Uranium-232 Standard 1283-H

Analyst: A. Drochter
Date: 12/10/09

Serial #	Value	Uncertainty
1283-H N1	2.020	pCi/L 0.238
1283-H N2	2.000	pCi/L 0.234
1283-H N3	2.060	pCi/L 0.242

Mean Value (Counting) =	2.027	pCi/L	99.66904	Pass
Stdev =	0.030550505	pCi/L		Rule 3 (Pass/Fail)

Target =	2.033	pCi/L
Lower Limit =	1.965565657	pCi/L
Upper Limit =	2.087767676	pCi/L
Rule 1 Pass/Fail	Pass	
Two sigma =	0.061101009	
10 % of Mean =	0.202666667	
Rule 2 (Pass/Fail)	Pass	

- Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
- Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
- Rule 3 = The determined mean value shall be within 10% of the certificate value.

The analyst prepared three standard verification sources for standard 1283-H using 0.1 mL for each source. Each standard was combined with 0.1 mL of U-238 standard 1163-G and was diluted to 10 mL with DI water. 50 micrograms of neodymium carrier and 1ml of Titanium Chloride were added. The solution was allowed to sit for 30 seconds. One mL of 49% HF was then added to precipitate neodymium (and uranium) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for U-238 were calculated by comparison to U-232 certified values.

A. Drochter
12/14/09

RUNLOGS

Instrument Run Log

Instrument Type: GAMMA SPECTROMETER

Batch ID: 941636

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
244604001	SAMPLE	MXR1	GAM01	25-JAN-10 08:38	DONE	CAN	30-JAN-09 00:00
244604002	SAMPLE	MXR1	GAM02	25-JAN-10 08:38	DONE	CAN	29-OCT-09 00:00
244606002	SAMPLE	MXR1	GAM04	25-JAN-10 08:39	DONE	CAN	05-MAY-09 00:00
244606003	SAMPLE	MXR1	GAM06	25-JAN-10 08:39	DONE	CAN	04-FEB-09 00:00
244606004	SAMPLE	MXR1	GAM07	25-JAN-10 08:41	DONE	CAN	20-JUL-09 00:00
244606005	SAMPLE	MXR1	GAM22	25-JAN-10 08:41	DONE	CAN	02-DEC-09 00:00
244606006	SAMPLE	MXR1	GAM13	25-JAN-10 09:08	DONE	CAN	02-FEB-09 00:00
244606007	SAMPLE	MXR1	GAM16	25-JAN-10 09:09	DONE	CAN	16-NOV-09 00:00
244606008	SAMPLE	MXR1	GAM25	25-JAN-10 09:13	DONE	CAN	07-OCT-09 00:00
244606009	SAMPLE	MXR1	GAM15	25-JAN-10 09:14	DONE	CAN	16-FEB-09 00:00
244619001	SAMPLE	MXR1	GAM23	25-JAN-10 09:14	DONE	CAN	02-JUN-09 00:00
244619002	SAMPLE	MXR1	GAM01	25-JAN-10 10:43	DONE	CAN	30-JAN-09 00:00
244619003	SAMPLE	MXR1	GAM02	25-JAN-10 10:43	DONE	CAN	29-OCT-09 00:00
244619004	SAMPLE	MXR1	GAM04	25-JAN-10 10:44	DONE	CAN	05-MAY-09 00:00
244619005	SAMPLE	MXR1	GAM07	25-JAN-10 10:47	DONE	CAN	20-JUL-09 00:00
1202015438	MB	MXR1	GAM22	25-JAN-10 10:47	DONE	CAN	02-DEC-09 00:00
1202015439	DUP	MXR1	GAM13	25-JAN-10 11:12	DONE	CAN	02-FEB-09 00:00
1202015440	LCS	MXR1	GAM16	25-JAN-10 11:12	DONE	CAN	16-NOV-09 00:00

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER

Batch ID: 941688

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
244604001	SAMPLE	KXM4	1025	23-JAN-10 12:08	DONE		
244604002	SAMPLE	KXM4	1026	23-JAN-10 12:08	DONE		
244606002	SAMPLE	KXM4	1027	23-JAN-10 12:08	DONE		
244606003	SAMPLE	KXM4	1028	23-JAN-10 12:08	DONE		
244606004	SAMPLE	KXM4	1031	23-JAN-10 12:08	DONE		
244606005	SAMPLE	KXM4	1033	23-JAN-10 12:08	DONE		
244606006	SAMPLE	KXM4	1036	23-JAN-10 12:08	DONE		
244606007	SAMPLE	KXM4	1038	23-JAN-10 12:08	DONE		
1202015548	MB	KXM4	1043	23-JAN-10 12:08	DONE		
1202015549	DUP	KXM4	1044	23-JAN-10 12:08	DONE		
1202015550	LCS	KXM4	1045	23-JAN-10 12:08	DONE		
244606008	SAMPLE	KXM4	1046	23-JAN-10 12:08	DONE		
244606009	SAMPLE	KXM4	1048	23-JAN-10 12:08	DONE		
244619001	SAMPLE	KXM4	1065	23-JAN-10 12:08	DONE		
244619002	SAMPLE	KXM4	1066	23-JAN-10 12:08	DONE		
244619003	SAMPLE	KXM4	1067	23-JAN-10 12:08	DONE		
244619004	SAMPLE	KXM4	1068	23-JAN-10 12:08	DONE		
244619005	SAMPLE	KXM4	1069	23-JAN-10 12:08	DONE		

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER

Batch ID: 941690

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
244604001	SAMPLE	KXM4	1209	21-JAN-10 16:59	DONE		
244604002	SAMPLE	KXM4	1210	21-JAN-10 16:59	DONE		
244606002	SAMPLE	KXM4	1211	21-JAN-10 16:59	DONE		
244606003	SAMPLE	KXM4	1212	21-JAN-10 16:59	DONE		
244606004	SAMPLE	KXM4	1213	21-JAN-10 16:59	DONE		
244606005	SAMPLE	KXM4	1214	21-JAN-10 16:59	DONE		
244606006	SAMPLE	KXM4	1215	21-JAN-10 16:59	DONE		
244606007	SAMPLE	KXM4	1216	21-JAN-10 16:59	DONE		
244606008	SAMPLE	KXM4	1217	21-JAN-10 16:59	DONE		
244606009	SAMPLE	KXM4	1218	21-JAN-10 16:59	DONE		
244619001	SAMPLE	KXM4	1219	21-JAN-10 16:59	DONE		
244619002	SAMPLE	KXM4	1220	21-JAN-10 16:59	DONE		
244619003	SAMPLE	KXM4	1223	21-JAN-10 16:59	DONE		
244619004	SAMPLE	KXM4	1224	21-JAN-10 17:00	DONE		
244619005	SAMPLE	KXM4	1225	21-JAN-10 17:00	DONE		
1202015551	MB	KXM4	1226	21-JAN-10 17:00	DONE		
1202015552	DUP	KXM4	1227	21-JAN-10 17:00	DONE		
1202015553	LCS	KXM4	1228	21-JAN-10 17:00	DONE		

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER

Batch ID: 941691

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
1202015555	DUP	KXM4	1008	22-JAN-10 14:32	DONE		
1202015556	LCS	KXM4	1010	22-JAN-10 14:32	DONE		
1202015554	MB	KXM4	1011	22-JAN-10 14:32	DUSE		
244619003	SAMPLE	KXM4	1162	23-JAN-10 11:08	DUSE		
244619004	SAMPLE	KXM4	1163	23-JAN-10 11:08	DONE		
244619005	SAMPLE	KXM4	1172	23-JAN-10 11:09	DONE		
244604001	SAMPLE	KXM4	1149	23-JAN-10 11:16	DONE		
244606006	SAMPLE	KXM4	1150	23-JAN-10 11:17	DONE		
244604002	SAMPLE	KXM4	1151	23-JAN-10 11:17	DONE		
244606007	SAMPLE	KXM4	1152	23-JAN-10 11:17	DONE		
244606002	SAMPLE	KXM4	1153	23-JAN-10 11:17	DONE		
244606008	SAMPLE	KXM4	1154	23-JAN-10 11:17	DONE		
244606003	SAMPLE	KXM4	1155	23-JAN-10 11:17	DONE		
244606009	SAMPLE	KXM4	1156	23-JAN-10 11:17	DONE		
244606004	SAMPLE	KXM4	1157	23-JAN-10 11:17	DONE		
244619001	SAMPLE	KXM4	1158	23-JAN-10 11:17	DUSE		
244606005	SAMPLE	KXM4	1159	23-JAN-10 11:17	DONE		
244619002	SAMPLE	KXM4	1160	23-JAN-10 11:17	DONE		
244619001	SAMPLE	KXM4	1158	25-JAN-10 17:13	DONE		
244619003	SAMPLE	KXM4	1159	25-JAN-10 17:13	DUSE		
1202015554	MB	KXM4	1160	25-JAN-10 17:13	DONE		