

Monday, February 22, 2010

REQUEST NUMBER: 10-1981

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	HASL-300:ISOPU	1	RE15-10-8387	R	2/17/2010	
	HASL-300:ISOU	1	RE15-10-8386	R	2/17/2010	
		1	RE15-10-8387	R	2/17/2010	
	SW-846:6010B	1	RE15-10-8386	R	2/17/2010	
		1	RE15-10-8387	R	2/17/2010	
	SW-846:6020	1	RE15-10-8386	R	2/17/2010	
		1	RE15-10-8387	R	2/17/2010	
	SW-846:6850	1	RE15-10-8386	R	2/17/2010	
		1	RE15-10-8387	R	2/17/2010	
	SW-846:7471A	1	RE15-10-8386	R	2/17/2010	
		1	RE15-10-8387	R	2/17/2010	
	SW-846:8082	1	RE15-10-8386	R	2/17/2010	
		1	RE15-10-8387	R	2/17/2010	
	SW-846:8260B	1	RE15-10-8386	R	2/17/2010	
		1	RE15-10-8387	R	2/17/2010	
		1	RE15-10-8408	R	2/17/2010	
	SW-846:8270C	1	RE15-10-8386	R	2/17/2010	
		1	RE15-10-8387	R	2/17/2010	
	SW-846:8321A_MOD	1	RE15-10-8386	R	2/17/2010	
		1	RE15-10-8387	R	2/17/2010	
	SW-846:9012A	1	RE15-10-8386	R	2/17/2010	
		1	RE15-10-8387	R	2/17/2010	
	SW-846:9045C	1	RE15-10-8386	R	2/17/2010	
		1	RE15-10-8387	R	2/17/2010	

Monday, February 22, 2010

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-1981

LOS ALAMOS

REQUEST NUMBER: 10-1981

NATIONAL LABORATORY

ATTN: Valerie Davis

TURNAROUND/REPORT DUE: 3/24/2010

General Engineering Laboratories, Inc.,
Charleston, SC.

TURNAROUND REQ'D: 30

2040 Savage Rd

Charleston, SC 29407

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
RE15-10-8408	1	SEPTUM AMBER GLASS	8260B Trip Blank	Ice	R
RE15-10-8386	1	AMBER GLASS	8082+8270+NMED-EXP	Ice	R
RE15-10-8386	1	SEPTUM AMBER GLASS	8260B	Ice	R
RE15-10-8386	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8386	1	POLY	H3	Ice	R
RE15-10-8386	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE15-10-8387	1	AMBER GLASS	8082+8270+NMED-EXP	Ice	R
RE15-10-8387	1	SEPTUM AMBER GLASS	8260B	Ice	R
RE15-10-8387	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8387	1	POLY	H3	Ice	R
RE15-10-8387	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE15-10-8386	1	POLY	METALS+U-GEL	Ice	R
RE15-10-8387	1	POLY	METALS+U-GEL	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: 2508

EVENT NAME: 4th Qtr. FY09 - SWMU 15-009(h) - Threemile Canyon

SAMPLE ID: RE15-10-8386

WORK ORDER:

	<u>AS PLANNED</u>	<u>AS COLLECTED</u>	<u>AS PLANNED</u>	<u>AS COLLECTED</u>
DATE COLLECTED(MM/DD/YYYY):		02/17/2010	MEDIA:	QBT3
TIME COLLECTED (HH:MM)		1320	SUB-MEDIA:	TUFF 1
PRS ID:	15-009(h)	ok	SAMPLE TECH CODE:	HA
LOCATION ID:	15-610855	↓	FIELD QC TYPE:	NA
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA
TOP DEPTH:	0	6.0	SAMPLE USAGE:	INV
BOTTOM DEPTH:	0	7.5	SCREEN/PORT DESC:	NA
FIELD MATRIX:	R	S	EXCAVATED: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> NA	
COMPOSITE TYPE:	NA	COMPOSITE TIME INTERVAL:	NA	WATER FLOWING: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> NA
BOREHOLE: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> NA	BOREHOLE DECLINATION:	NA	BOREHOLE DIRECTION:	NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Normal	8082+8270+NME D-EXP	500 ML AMBER GLASS	Ice	Y	
1		8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1		H3	500 ML POLY	Ice	Y	
1		Perchlorate+CN+ N03+pH	500 ML POLY	Ice	Y	
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	
1		METALS+U-GEL	125 ML POLY	Ice	Y	

SAMPLE DESC: Brown fill and gray, tuff

FTB: RE15-10-8408

SAMPLE COMMENTS:

NA

LOCATION DESC: 9h-2, below inlet pipe

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha ≤ 5 dpm
Beta/Gamma ≤ 2240 dpm

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

COLLECTED BY (PRINT)

Th McFarland

REVIEWED BY (PRINT)

Larry A. Lopez

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) JOM MARIN	2/19/10	(Printed Name) [Signature]	2/18/10
(Signature) [Signature]	9:30	(Signature) [Signature]	935
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2508

EVENT NAME: 4th Qtr. FY09 - SWMU 15-009(h) - Threemile Canyon

SAMPLE ID: RE15-10-8387

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		02/17/2010		MEDIA: QBT3		ok	
TIME COLLECTED (HH:MM)		1349		SUB-MEDIA: TUFF 1		↓	
PRS ID:	15-009(h)	ok		SAMPLE TECH CODE: HA		ok	
LOCATION ID:	15-610855	↓		FIELD QC TYPE: NA		↓	
LOCATION TYPE:	GENERIC	↓		FIELD PREP: NA		↓	
TOP DEPTH:	0	8.4		SAMPLE USAGE: INV		↓	
BOTTOM DEPTH:	0	9.2		SCREEN/PORT DESC:		NA	
FIELD MATRIX:	R	R		EXCAVATED: YES/NO/NA			
COMPOSITE TYPE: NA		COMPOSITE TIME INTERVAL: NA		WATER FLOWING: YES/NO/NA			
BOREHOLE: YES/NO/NA		BOREHOLE DECLINATION: NA		BOREHOLE DIRECTION: NA			

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Normal	8082+8270+NME D-EXP	500 ML AMBER GLASS	Ice	Y	
1		8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1		H3	500 ML POLY	Ice	Y	
1		Perchlorate+CN+ N03+pH	500 ML POLY	Ice	Y	
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	
1		METALS+U-GEL	125 ML POLY	Ice	Y	

SAMPLE DESC: Dry tuff (Hard)

SAMPLE COMMENTS:

NA

LOCATION DESC: 9h-2 below inlet pipe; 1.4 ft deeper than pipe

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha \leq 16 dpm
 Beta/Gamma \leq 2190 dpm

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

COLLECTED BY (PRINT)

JLMcFarlane

REVIEWED BY (PRINT)

LARRY A. LOPEZ

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) JON MARIN	2/18/10	(Printed Name) Jeffery	2/18/10
(Signature) Jon R. Marin	9:30	(Signature)	930
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2508

EVENT NAME: 4th Qtr. FY09 - SWMU 15-009(h) - Threemile Canyon

SAMPLE ID: RE15-10-8408

WORK ORDER:

AS PLANNED		AS COLLECTED	AS PLANNED		AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		02/17/2010	MEDIA:		QBT3
TIME COLLECTED (HH:MM)		1254	SUB-MEDIA:		TUFF 1
PRS ID:	15-009(h)	ok	SAMPLE TECH CODE:		DC
LOCATION ID:	UNK	15-610855	FIELD QC TYPE:		FTB
LOCATION TYPE:	GENERIC	ok	FIELD PREP:		NA
TOP DEPTH:	0	↓	SAMPLE USAGE:		QC
BOTTOM DEPTH:	0	↓	SCREEN/PORT DESC:		NA
FIELD MATRIX:	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	Regular	8260B Trip Blank	40 ML SEPTUM AMBER GLASS	Ice	Y	

SAMPLE DESC: QC Sample of RE15-10-8386

SAMPLE COMMENTS:

FTB

LOCATION DESC:

NA

FIELD SCREENING/MEASUREMENT RESULTS:

NA

2/17/10
Alpha = ~~_____~~ dpm
Beta/Gamma = ~~_____~~ dpm

COLLECTED BY (PRINT)

TLMCFarland

REVIEWED BY (PRINT)

Lorey A. Lopez

RELINQUISHED BY (Printed Name) JON MARIN (Signature) Jon R. Marin	Date/Time 2/19/10 9:30	RECEIVED BY (Printed Name) [Signature] (Signature) [Signature]	Date/Time 2/18/10 9:35
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time



2609 North River Road, Port Allen, Louisiana 70767
1 (800) 401-4277 FAX (225) 361-2996

1 of 1

1 of 1

ARS Sample Delivery Group: ARS1-10-00300
Analysis Description: Gross Alpha/Beta In (Soil, Sludge, Waste, Sediment (SO))
Analysis Test Method: GPC-A-003
Request or PO Number: N/A
Date Received: 2/19/2010
Report Date: 02/19/10 18:26

ARS Sample ID	Client Sample ID	Isotope	Analysis Results	Analysis Error +/- 2 s	MDC	DLC	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery	Sample Matrix	Collection Date
ARS1-10-00300-001	RE15-10-8316	GROSS ALPHA	12.624	6.050	14.476	4.464	U	PC/g	2/19/2010	CR	N/A	SO	
ARS1-10-00300-002	RE15-10-8316	GROSS BETA	39.246	6.541	8.157	3.539		PC/g	2/19/2010	CR	N/A	SO	
ARS1-10-00300-002	RE15-10-8317	GROSS ALPHA	19.261	7.686	16.572	5.314		PC/g	2/19/2010	CR	N/A	SO	
ARS1-10-00300-002	RE15-10-8317	GROSS BETA	39.859	6.798	9.279	4.081		PC/g	2/19/2010	CR	N/A	SO	
ARS1-10-00300-003	RE15-10-8318	GROSS ALPHA	9.637	5.628	15.661	5.050	U	PC/g	2/19/2010	CR	N/A	SO	
ARS1-10-00300-003	RE15-10-8318	GROSS BETA	35.290	6.053	7.870	3.391		PC/g	2/19/2010	CR	N/A	SO	
ARS1-10-00300-004	RE15-10-8319	GROSS ALPHA	9.938	5.709	15.732	5.045	U	PC/g	2/19/2010	CR	N/A	SO	
ARS1-10-00300-004	RE15-10-8319	GROSS BETA	41.845	6.850	8.084	3.491		PC/g	2/19/2010	CR	N/A	SO	
ARS1-10-00300-005	RE15-10-8326	GROSS ALPHA	2.866	4.141	15.430	5.028	U	PC/g	2/19/2010	CR	N/A	SO	
ARS1-10-00300-005	RE15-10-8326	GROSS BETA	41.148	6.649	7.536	3.237		PC/g	2/19/2010	CR	N/A	SO	
ARS1-10-00300-006	RE15-10-8387	GROSS ALPHA	8.149	5.279	15.319	4.839	U	PC/g	2/19/2010	CR	N/A	SO	
ARS1-10-00300-006	RE15-10-8387	GROSS BETA	36.744	6.233	8.022	3.465		PC/g	2/19/2010	CR	N/A	SO	
ARS1-10-00300-007	RE15-10-8386	GROSS ALPHA	4.752	4.702	16.405	5.435	U	PC/g	2/19/2010	CR	N/A	SO	
ARS1-10-00300-007	RE15-10-8386	GROSS BETA	28.418	5.208	7.815	3.373		PC/g	2/19/2010	CR	N/A	SO	
ARS1-10-00300-008	WST15-10-1162	GROSS ALPHA	3.243	3.902	14.353	4.616	U	PC/g	2/19/2010	CR	N/A	SO	
ARS1-10-00300-008	WST15-10-1162	GROSS BETA	30.291	5.410	7.745	3.338		PC/g	2/19/2010	CR	N/A	SO	
NOTES:													

Project Manager Review

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

LEAP Certificate# 01949

NEAP Certificate # EB7558

DATA VALIDATION COVER SHEET

5114-1

Data Validation Cover Sheet

Records Use only



Section I.

REQUEST NUMBER: 10-1981 VALIDATION DATE: 04/29/10 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Joanne Compton 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 | <input type="checkbox"/> PESTICIDES/POLYCHLORINATED BIPHENYLS |
- ☒ OTHER (DESCRIBE): VOCs

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):


1. In the FTB, RE15-10-8408, associated with all samples, methylene chloride and acetone were detected. The associated sample results were NDs and, thus, were not qualified.
2. For the CCV associated with sample -8408, the %Ds for chloromethane, 4-methyl-2-pentanone, 2-hexanone, isopropylbenzene; 1,1,2,2-tetrachloroethane; 1,2,3-trichloropropane, n-propylbenzene and 2-chlorotoluene were > 20%. For the CCV associated with samples -8386 and -8387, the %Ds for dichlorodifluoromethane and 2-hexanone were > 20%. The associated sample results were NDs and, thus, were qualified UJ,V7c.
3. It should be noted that the 2-hexanone results exceeded the calibration range in the LCS. No sample data were qualified as a result.
4. The MS/MSD associated with this RN was not spiked with trichlorotrifluoroethane. Since the analysis of an MS or an MSD was not a client requirement, no sample data were qualified as a result.

Reviewed by: Mary Donovan

Level: I

Date: 04/30/10

DATA VALIDATION COVER SHEET	
5114-1 Data Validation Cover Sheet	Records Use only  Los Alamos NATIONAL LABORATORY EST. 1945
VALIDATOR'S SIGNATURE: <u><i>Jeanne Compton</i></u> DATE: <u>04/29/10</u>	
Form 5114-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

VOLATILE ORGANIC COMPOUND (VOC) ANALYTICAL DATA VALIDATION CHECKLIST	
5114-2 Volatile Organic Compound (VOC) 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, V9	J-, V9
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2. The holding time was >2 times the applicable holding time requirement.	R, V9a	J-, V9a
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3. The instrument performance sample did not pass method acceptance criteria.	R, V16	R, V16
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	4. Samples were analyzed outside specific method tune time criteria.	N/A	J, V16b
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	5. The required instrument performance sample information is missing. Contact the SMO or external laboratory for information.	R, V16c	R, V16c
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	6. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ or R, V7	J, V7
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7. 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, V7a	J, V7a
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8. The affected analytes were analyzed with an RRF of <0.05 in the initial calibration and/or CCV.	R, V7b	J, V7b
<input checked="" type="checkbox"/>	<input 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, V7c	J, V7c
<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, V7d	J, V7d
<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, V7f	R, V7f

VOLATILE ORGANIC COMPOUND (VOC) ANALYTICAL DATA VALIDATION CHECKLIST


5114-2

Volatile Organic Compound (VOC) 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 sample result is $\leq 5X$ (10X for common organic laboratory contaminants) the concentration of the related analyte in the method blank.	U, V4	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 $> 5X$ (10X for common laboratory contaminants).	N/A	J, V4a
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	14. The sample result is $\leq 5X$ the concentration of the related analyte in the trip blank, rinsate blank, and/or equipment blank.	U, V4d	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, V4e	R, V4e
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	16. The IS retention time has shifted by more than 30 seconds.	UJ, V0	J, V0
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	17. Analyte is positively confirmed but outside the IS retention time window; however, spectral matches must be provided.	N/A	J, V0a
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	18. Required IS retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V0b	R, V0b
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	19. The quantitating IS are 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, V1a	J, V1a
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	20. The IS area count for the quantitating IS is $< 50\%$ but $> 10\%$ for organics window relation to the previous continuing calibration. Follow the method-specific windows.	UJ, V1b	J, V1b

VOLATILE ORGANIC COMPOUND (VOC) ANALYTICAL DATA VALIDATION CHECKLIST	
5114-2 Volatile Organic Compound (VOC) 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"/>	21. The IS area count for the quantitating IS is >200% of the area count for the previous organic continuing calibration. Follow the method-specific windows.	UJ, V1c	J, V1c
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	22. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V1d	R, V1d
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	23. The surrogate is <10%R. Follow the external laboratory limits located within the associated data package.	R, V3	J-, V3
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	24. The surrogate is < the Lower Acceptance Limit (LAL) but ≥10%R. Follow the external laboratory limits located within the associated data package.	UJ, V3a	J-, V3a
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	25. The surrogate %R is > the Upper Acceptance Limit (UAL) Follow the external laboratory limits located within the associated data package.	N/A	J+, V3b
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	26. At least one surrogate is > the UAL and one surrogate is < the LAL. Follow the external laboratory limits located within the associated data package.	UJ, V3c	J, V3c
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	27. Required surrogate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V3d	R, V3d
<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, V12	J-, V12
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	29. The LCS percent recovery was < the LAL but > 10%. Follow the external laboratory limits located within the associated data package.	UV, V12a	J-, V12a
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	30. The LCS percent recover was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, V12b

VOLATILE ORGANIC COMPOUND (VOC) ANALYTICAL DATA VALIDATION CHECKLIST	
5114-2 Volatile Organic Compound (VOC) 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"/>	31. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V12c	R, V12c
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	32. The affected analyte is considered not detected because mass spectrum did not meet specifications.	N/A	U, V8
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	33. The mass spectrum column documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V8a	R, V8a
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	34. Duplicate, dilution, or reanalysis.	UJ, V88	J, V88
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	35. 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, V15	R, V15
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	36. 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"/>	37. 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, V19	J, R, V19

Volatile
Certificate of Analysis
Sample Summary

SDG Number: 10-1981	Date Collected: 02/17/2010 12:00	Matrix: R
Lab Sample ID: 247790002	Date Received: 02/23/2010 08:50	%Moisture: 5.4
	Client: LANL010	Project: LANL01004
Client ID: RE15-10-8386	Method: SW846 8260B	SOP Ref: GL-OA-E-038
Batch ID: 959504	Inst: VOA7.I	Dilution: 1
Run Date: 03/01/2010 23:59	Analyst: AXO1	Purge Vol: 5 mL
Prep Date: 03/01/2010 15:16	Allquot: 5 g	Final Volume: 5 mL
Data File: 7b130.d	Column: DB-624	Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.06	ug/kg	0.359	1.06 UJ,V7c
74-87-3	Chloromethane	U	1.06	ug/kg	0.317	1.06
75-01-4	Vinyl chloride	U	1.06	ug/kg	0.317	1.06
74-83-9	Bromomethane	U	1.06	ug/kg	0.317	1.06
75-00-3	Chloroethane	U	1.06	ug/kg	0.317	1.06
75-69-4	Trichlorofluoromethane	U	1.06	ug/kg	0.317	1.06
67-64-1	Acetone	U	5.29	ug/kg	1.75	5.29
75-35-4	1,1-Dichloroethylene	U	1.06	ug/kg	0.317	1.06
74-88-4	Iodomethane	U	5.29	ug/kg	1.69	5.29
75-09-2	Methylene chloride	U	5.29	ug/kg	2.11	5.29
75-15-0	Carbon disulfide	U	5.29	ug/kg	1.32	5.29
156-60-5	trans-1,2-Dichloroethylene	U	1.06	ug/kg	0.317	1.06
75-34-3	1,1-Dichloroethane	U	1.06	ug/kg	0.317	1.06
78-93-3	2-Butanone	U	5.29	ug/kg	1.59	5.29
156-59-2	cis-1,2-Dichloroethylene	U	1.06	ug/kg	0.317	1.06
594-20-7	2,2-Dichloropropane	U	1.06	ug/kg	0.317	1.06
67-66-3	Chloroform	U	1.06	ug/kg	0.317	1.06
74-97-5	Bromochloromethane	U	1.06	ug/kg	0.349	1.06
71-55-6	1,1,1-Trichloroethane	U	1.06	ug/kg	0.317	1.06
563-58-6	1,1-Dichloropropene	U	1.06	ug/kg	0.317	1.06
56-23-5	Carbon tetrachloride	U	1.06	ug/kg	0.317	1.06
107-06-2	1,2-Dichloroethane	U	1.06	ug/kg	0.317	1.06
71-43-2	Benzene	U	1.06	ug/kg	0.317	1.06
79-01-6	Trichloroethylene	U	1.06	ug/kg	0.349	1.06
78-87-5	1,2-Dichloropropane	U	1.06	ug/kg	0.317	1.06
75-27-4	Bromodichloromethane	U	1.06	ug/kg	0.317	1.06
74-95-3	Dibromomethane	U	1.06	ug/kg	0.317	1.06
108-10-1	4-Methyl-2-pentanone	U	5.29	ug/kg	1.32	5.29
10061-01-5	cis-1,3-Dichloropropylene	U	1.06	ug/kg	0.317	1.06
108-88-3	Toluene	U	1.06	ug/kg	0.317	1.06
10061-02-6	trans-1,3-Dichloropropylene	U	1.06	ug/kg	0.317	1.06
79-00-5	1,1,2-Trichloroethane	U	1.06	ug/kg	0.317	1.06
591-78-6	2-Hexanone	U	5.29	ug/kg	1.59	5.29 UJ,V7c
142-28-9	1,3-Dichloropropane	U	1.06	ug/kg	0.317	1.06
127-18-4	Tetrachloroethylene	U	1.06	ug/kg	0.317	1.06
124-48-1	Dibromochloromethane	U	1.06	ug/kg	0.317	1.06
106-93-4	1,2-Dibromoethane	U	1.06	ug/kg	0.317	1.06
108-90-7	Chlorobenzene	U	1.06	ug/kg	0.317	1.06

Volatile
Certificate of Analysis
Sample Summary

SDG Number: 10-1981	Date Collected: 02/17/2010 12:00	Matrix: R
Lab Sample ID: 247790002	Date Received: 02/23/2010 08:50	%Moisture: 5.4
	Client: LANL010	Project: LANL01004
Client ID: RE15-10-8386	Method: SW846 8260B	SOP Ref: GL-OA-E-038
Batch ID: 959504	Inst: VOA7.I	Dilution: 1
Run Date: 03/01/2010 23:59	Analyst: AX01	Purge Vol: 5 mL
Prep Date: 03/01/2010 15:16	Aliquot: 5 g	Final Volume: 5 mL
Data File: 7b130.d	Column: DB-624	Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.06	ug/kg	0.317	1.06
179601-23-1	m,p-Xylenes	U	2.11	ug/kg	0.317	2.11
95-47-6	o-Xylene	U	1.06	ug/kg	0.317	1.06
100-42-5	Styrene	U	1.06	ug/kg	0.317	1.06
75-25-2	Bromoform	U	1.06	ug/kg	0.317	1.06
79-34-5	1,1,2,2-Tetrachloroethane	U	1.06	ug/kg	0.317	1.06
96-18-4	1,2,3-Trichloropropane	U	1.06	ug/kg	0.317	1.06
108-86-1	Bromobenzene	U	1.06	ug/kg	0.317	1.06
103-65-1	n-Propylbenzene	U	1.06	ug/kg	0.317	1.06
95-49-8	2-Chlorotoluene	U	1.06	ug/kg	0.317	1.06
98-82-8	Isopropylbenzene	U	1.06	ug/kg	0.317	1.06
108-67-8	1,3,5-Trimethylbenzene	U	1.06	ug/kg	0.317	1.06
106-43-4	4-Chlorotoluene	U	1.06	ug/kg	0.317	1.06
98-06-6	tert-Butylbenzene	U	1.06	ug/kg	0.317	1.06
95-63-6	1,2,4-Trimethylbenzene	U	1.06	ug/kg	0.317	1.06
135-98-8	sec-Butylbenzene	U	1.06	ug/kg	0.317	1.06
99-87-6	4-Isopropyltoluene	U	1.06	ug/kg	0.317	1.06
541-73-1	1,3-Dichlorobenzene	U	1.06	ug/kg	0.317	1.06
106-46-7	1,4-Dichlorobenzene	U	1.06	ug/kg	0.317	1.06
104-51-8	n-Butylbenzene	U	1.06	ug/kg	0.317	1.06
96-12-8	1,2-Dibromo-3-chloropropane	U	1.06	ug/kg	0.317	1.06
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	U	5.29	ug/kg	1.69	5.29
	Trichlorotrifluoroethane					
630-20-6	1,1,1,2-Tetrachloroethane	U	1.06	ug/kg	0.317	1.06
95-50-1	1,2-Dichlorobenzene	U	1.06	ug/kg	0.317	1.06

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	No Tentatively Identified Compounds Found			ug/kg		

Volatile
Certificate of Analysis
Sample Summary

SDG Number: 10-1981	Date Collected: 02/17/2010 12:00	Matrix: R
Lab Sample ID: 247790003	Date Received: 02/23/2010 08:50	%Moisture: 5.7
	Client: LANL010	Project: LANL01004
Client ID: RE15-10-8387	Method: SW846 8260B	SOP Ref: GL-OA-E-038
Batch ID: 959504	Inst: VOA7.I	Dilution: 1
Run Date: 03/02/2010 00:34	Analyst: AXOI	Purge Vol: 5 mL
Prep Date: 03/01/2010 15:18	Aliquot: 5 g	Final Volume: 5 mL
Data File: 7b131.d	Column: DB-624	Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.06	ug/kg	0.361	1.06 UJ,V7c
74-87-3	Chloromethane	U	1.06	ug/kg	0.318	1.06
75-01-4	Vinyl chloride	U	1.06	ug/kg	0.318	1.06
74-83-9	Bromomethane	U	1.06	ug/kg	0.318	1.06
75-00-3	Chloroethane	U	1.06	ug/kg	0.318	1.06
75-69-4	Trichlorofluoromethane	U	1.06	ug/kg	0.318	1.06
67-64-1	Acetone	U	5.30	ug/kg	1.76	5.30
75-35-4	1,1-Dichloroethylene	U	1.06	ug/kg	0.318	1.06
74-88-4	Iodomethane	U	5.30	ug/kg	1.70	5.30
75-09-2	Methylene chloride	U	5.30	ug/kg	2.12	5.30
75-15-0	Carbon disulfide	U	5.30	ug/kg	1.33	5.30
156-60-5	trans-1,2-Dichloroethylene	U	1.06	ug/kg	0.318	1.06
75-34-3	1,1-Dichloroethane	U	1.06	ug/kg	0.318	1.06
78-93-3	2-Butanone	U	5.30	ug/kg	1.59	5.30
156-59-2	cis-1,2-Dichloroethylene	U	1.06	ug/kg	0.318	1.06
594-20-7	2,2-Dichloropropane	U	1.06	ug/kg	0.318	1.06
67-66-3	Chloroform	U	1.06	ug/kg	0.318	1.06
74-97-5	Bromochloromethane	U	1.06	ug/kg	0.350	1.06
71-55-6	1,1,1-Trichloroethane	U	1.06	ug/kg	0.318	1.06
563-58-6	1,1-Dichloropropene	U	1.06	ug/kg	0.318	1.06
56-23-5	Carbon tetrachloride	U	1.06	ug/kg	0.318	1.06
107-06-2	1,2-Dichloroethane	U	1.06	ug/kg	0.318	1.06
71-43-2	Benzene	U	1.06	ug/kg	0.318	1.06
79-01-6	Trichloroethylene	U	1.06	ug/kg	0.350	1.06
78-87-5	1,2-Dichloropropane	U	1.06	ug/kg	0.318	1.06
75-27-4	Bromodichloromethane	U	1.06	ug/kg	0.318	1.06
74-95-3	Dibromomethane	U	1.06	ug/kg	0.318	1.06
108-10-1	4-Methyl-2-pentanone	U	5.30	ug/kg	1.33	5.30
10061-01-5	cis-1,3-Dichloropropylene	U	1.06	ug/kg	0.318	1.06
108-88-3	Toluene	U	1.06	ug/kg	0.318	1.06
10061-02-6	trans-1,3-Dichloropropylene	U	1.06	ug/kg	0.318	1.06
79-00-5	1,1,2-Trichloroethane	U	1.06	ug/kg	0.318	1.06
591-78-6	2-Hexanone	U	5.30	ug/kg	1.59	5.30 UJ,V7c
142-28-9	1,3-Dichloropropane	U	1.06	ug/kg	0.318	1.06
127-18-4	Tetrachloroethylene	U	1.06	ug/kg	0.318	1.06
124-48-1	Dibromochloromethane	U	1.06	ug/kg	0.318	1.06
106-93-4	1,2-Dibromoethane	U	1.06	ug/kg	0.318	1.06
108-90-7	Chlorobenzene	U	1.06	ug/kg	0.318	1.06

Volatile
Certificate of Analysis
Sample Summary

SDG Number: 10-1981	Date Collected: 02/17/2010 12:00	Matrix: R
Lab Sample ID: 247790003	Date Received: 02/23/2010 08:50	%Moisture: 5.7
	Client: LANL010	Project: LANL01004
Client ID: RE15-10-8387	Method: SW846 8260B	SOP Ref: GL-OA-E-038
Batch ID: 959504	Inst: VOA7.I	Dilution: 1
Run Date: 03/02/2010 00:34	Analyst: AXO1	Purge Vol: 5 mL
Prep Date: 03/01/2010 15:18	Aliquot: 5 g	Final Volume: 5 mL
Data File: 7b131.d	Column: DB-624	Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.06	ug/kg	0.318	1.06
179601-23-1	m,p-Xylenes	U	2.12	ug/kg	0.318	2.12
95-47-6	o-Xylene	U	1.06	ug/kg	0.318	1.06
100-42-5	Styrene	U	1.06	ug/kg	0.318	1.06
75-25-2	Bromoforn	U	1.06	ug/kg	0.318	1.06
79-34-5	1,1,2,2-Tetrachloroethane	U	1.06	ug/kg	0.318	1.06
96-18-4	1,2,3-Trichloropropane	U	1.06	ug/kg	0.318	1.06
108-86-1	Bromobenzene	U	1.06	ug/kg	0.318	1.06
103-65-1	n-Propylbenzene	U	1.06	ug/kg	0.318	1.06
95-49-8	2-Chlorotoluene	U	1.06	ug/kg	0.318	1.06
98-82-8	Isopropylbenzene	U	1.06	ug/kg	0.318	1.06
108-67-8	1,3,5-Trimethylbenzene	U	1.06	ug/kg	0.318	1.06
106-43-4	4-Chlorotoluene	U	1.06	ug/kg	0.318	1.06
98-06-6	tert-Butylbenzene	U	1.06	ug/kg	0.318	1.06
95-63-6	1,2,4-Trimethylbenzene	U	1.06	ug/kg	0.318	1.06
135-98-8	sec-Butylbenzene	U	1.06	ug/kg	0.318	1.06
99-87-6	4-Isopropyltoluene	U	1.06	ug/kg	0.318	1.06
541-73-1	1,3-Dichlorobenzene	U	1.06	ug/kg	0.318	1.06
106-46-7	1,4-Dichlorobenzene	U	1.06	ug/kg	0.318	1.06
104-51-8	n-Butylbenzene	U	1.06	ug/kg	0.318	1.06
96-12-8	1,2-Dibromo-3-chloropropane	U	1.06	ug/kg	0.318	1.06
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	U	5.30	ug/kg	1.70	5.30
	Trichlorotrifluoroethane					
630-20-6	1,1,1,2-Tetrachloroethane	U	1.06	ug/kg	0.318	1.06
95-50-1	1,2-Dichlorobenzene	U	1.06	ug/kg	0.318	1.06

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	19.69	7.4	ug/kg		J

Volatile
Certificate of Analysis
Sample Summary

SDG Number: 10-1981
 Lab Sample ID: 247790001

Date Collected: 02/17/2010 12:00
 Date Received: 02/23/2010 08:50

Matrix: R

Client ID: RE15-10-8408
 Batch ID: 959504
 Run Date: 03/01/2010 17:07
 Prep Date: 03/01/2010 15:14
 Data File: 7b118.d

Client: LANL010
 Method: SW846 8260B
 Inst: VOA7.I
 Analyst: AXO1
 Aliquot: 5 g
 Column: DB-624

Project: LANL01004
 SOP Ref: GL-OA-E-038
 Dilution: 1
 Purge Vol: 5 mL
 Final Volume: 5 mL
 Level: LOW

CAS No.	Parmaame	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00 UJ,V7c
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.300	1.00
67-64-1	Acetone	J	4.60	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	J	2.01	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00 UJ,V7c
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00 UJ,V7c
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number: 10-1981	Date Collected: 02/17/2010 12:00	Matrix: R
Lab Sample ID: 247790001	Date Received: 02/23/2010 08:50	
Client ID: RE15-10-8408	Client: LANL010	Project: LANL01004
Batch ID: 959504	Method: SW846 8260B	SOP Ref: GL-OA-E-038
Run Date: 03/01/2010 17:07	Inst: VOA7.I	Dilution: 1
Prep Date: 03/01/2010 15:14	Analyst: AX01	Purge Vol: 5 mL
Data File: 7b118.d	Aliquot: 5 g	Final Volume: 5 mL
	Column: DB-624	Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00 UJ,V7c
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00 UJ,V7c
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00 UJ,V7c
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	U	5.00	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
No Tentatively Identified Compounds Found				ug/kg		

DATA VALIDATION COVER SHEET

5115-1

Data Validation Cover Sheet

Records Use only



Section I.

REQUEST NUMBER: 10-1981 VALIDATION DATE: 04/29/10 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Joanne Compton 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 | <input type="checkbox"/> 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; 2-methyl-4,6-dinitrophenol; benzyl alcohol and bis(2-chloroisopropyl)ether. For the CCV associated with sample RE15-10-8386, the %Ds for 2,4-dinitrophenol, pyrene, dibenzo(a,h)anthracene were >20%. For the CCV associated with sample -8387, the %D for hexachlorocyclopentadiene was >20%. The associated sample results were NDs and, thus, were qualified UJ,SV7c.
- The MS %R for benzyl alcohol and the MSD %R for 4-nitrophenol were < the laboratory LAL. It should be noted that the matrix QC were performed on a sample from another LANL RN and that the raw data were not included in the data package. Since the analysis of an MS or an MSD was not a client requirement, no sample data were qualified as a result.

Reviewed by: Mary Donovan


Level: I


Date: 04/30/10

VALIDATOR'S SIGNATURE:


A handwritten signature in cursive script that reads "Joanne Compton".

DATE: 04/29/10


DATA VALIDATION COVER SHEET	
5115-1 Data Validation Cover Sheet	Records Use only  Los Alamos NATIONAL LABORATORY EST. 1945
Form 5115-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

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"/>	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 (Check One)				Assign Qualifier Listed Below If Criterion = Yes	
				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 $\geq 10\%R$. 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 (Check One)				Assign Qualifier Listed Below If Criterion = Yes	
				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 type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" 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**

SDG Number: 10-1981
Lab Sample ID: 247790002

Date Collected: 02/17/2010 12:00
Date Received: 02/23/2010 08:50
Client: LANL010
Method: SW846 8270C
Inst: MSD8.I
Analyst: NAG1
Aliquot: 30.03 g
Column: J&W DB-5MS

Matrix: R
%Moisture: 5.4
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
62-75-9	N-Methyl-N-nitrosomethylamine	U	352	ug/kg	70.4	352
108-95-2	Phenol	U	352	ug/kg	70.4	352
95-57-8	2-Chlorophenol	U	352	ug/kg	70.4	352
106-46-7	1,4-Dichlorobenzene	U	352	ug/kg	70.4	352
621-64-7	N-Nitrosodipropylamine	U	352	ug/kg	70.4	352
59-50-7	4-Chloro-3-methylphenol	U	352	ug/kg	70.4	352
83-32-9	Acenaphthene	U	35.2	ug/kg	11.6	35.2
121-14-2	2,4-Dinitrotoluene	U	352	ug/kg	35.2	352
100-02-7	4-Nitrophenol	U	352	ug/kg	116	352
87-86-5	Pentachlorophenol	U	352	ug/kg	88.0	352
129-00-0	Pyrene	U	35.2	ug/kg	10.6	35.2 UJ,SV7c
110-86-1	Pyridine	U	352	ug/kg	70.4	352 UJ,SV7c
62-53-3	Aniline	U	352	ug/kg	106	352
111-44-4	bis(2-Chloroethyl) ether	U	352	ug/kg	70.4	352
541-73-1	1,3-Dichlorobenzene	U	352	ug/kg	70.4	352
100-51-6	Benzyl alcohol	U	352	ug/kg	106	352 UJ,SV7c
95-50-1	1,2-Dichlorobenzene	U	352	ug/kg	70.4	352
108-60-1	bis(2-Chloroisopropyl)ether	U	352	ug/kg	70.4	352 UJ,SV7c
95-48-7	o-Cresol	U	352	ug/kg	70.4	352
65794-96-9	m,p-Cresols	U	352	ug/kg	106	352
67-72-1	Hexachloroethane	U	352	ug/kg	70.4	352
98-95-3	Nitrobenzene	U	352	ug/kg	70.4	352
78-59-1	Isophorone	U	352	ug/kg	70.4	352
88-75-5	2-Nitrophenol	U	352	ug/kg	70.4	352
105-67-9	2,4-Dimethylphenol	U	352	ug/kg	123	352
111-91-1	bis(2-Chloroethoxy)methane	U	352	ug/kg	70.4	352
120-83-2	2,4-Dichlorophenol	U	352	ug/kg	70.4	352
65-85-0	Benzoic acid	U	704	ug/kg	176	704
91-20-3	Naphthalene	U	35.2	ug/kg	10.6	35.2
106-47-8	4-Chloroaniline	U	352	ug/kg	70.4	352
87-68-3	Hexachlorobutadiene	U	352	ug/kg	70.4	352
91-57-6	2-Methylnaphthalene	U	35.2	ug/kg	7.04	35.2
77-47-4	Hexachlorocyclopentadiene	U	352	ug/kg	70.4	352
88-06-2	2,4,6-Trichlorophenol	U	352	ug/kg	70.4	352
95-95-4	2,4,5-Trichlorophenol	U	352	ug/kg	70.4	352
91-58-7	2-Chloronaphthalene	U	35.2	ug/kg	11.6	35.2
88-74-4	2-Nitroaniline	U	352	ug/kg	70.4	352
99-09-2	<i>o</i> -Nitroaniline	U	352	ug/kg	70.4	352
	3-Nitroaniline					

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number: 10-1981	Date Collected: 02/17/2010 12:00	Matrix: R
Lab Sample ID: 247790002	Date Received: 02/23/2010 08:50	%Moisture: 5.4
	Client: LANL010	Project: LANL01004
Client ID: RE15-10-8386	Method: SW846 8270C	SOP Ref: GL-OA-E-009
Batch ID: 957838	Inst: MSD8.I	Dilution: 1
Run Date: 03/01/2010 19:29	Analyst: NAG1	Inj. Vol: .5 uL
Prep Date: 02/25/2010 21:57	Allquot: 30.03 g	Final Volume: 1 mL
Data File: s8c0116.d	Column: J&W DB-5MS	Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
131-11-3	<i>m</i> -Nitroaniline					
	Dimethylphthalate	U	352	ug/kg	70.4	352
606-20-2	2,6-Dinitrotoluene	U	352	ug/kg	35.2	352
208-96-8	Acenaphthylene	U	35.2	ug/kg	10.6	35.2
51-28-5	2,4-Dinitrophenol	U	704	ug/kg	134	704 UJ,SV7c
132-64-9	Dibenzofuran	U	352	ug/kg	70.4	352
84-66-2	Diethylphthalate	U	352	ug/kg	70.4	352
86-73-7	Fluorene	U	35.2	ug/kg	10.6	35.2
7005-72-3	4-Chlorophenylphenylether	U	352	ug/kg	70.4	352
534-52-1	2-Methyl-4,6-dinitrophenol	U	352	ug/kg	70.4	352 UJ,SV7c
100-01-6	4-Nitroaniline	U	352	ug/kg	106	352
	<i>p</i> -Nitroaniline					
122-39-4	Diphenylamine	U	352	ug/kg	70.4	352
122-66-7	Azobenzene	U	352	ug/kg	70.4	352
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	352	ug/kg	70.4	352
118-74-1	Hexachlorobenzene	U	352	ug/kg	70.4	352
85-01-8	Phenanthrene	U	35.2	ug/kg	10.6	35.2
120-12-7	Anthracene	U	35.2	ug/kg	7.04	35.2
84-74-2	Di-n-butylphthalate	U	352	ug/kg	70.4	352
206-44-0	Fluoranthene	U	35.2	ug/kg	10.6	35.2
85-68-7	Butylbenzylphthalate	U	352	ug/kg	70.4	352
56-55-3	Benzo(a)anthracene	U	35.2	ug/kg	10.6	35.2
91-94-1	3,3'-Dichlorobenzidine	U	352	ug/kg	106	352
218-01-9	Chrysene	U	35.2	ug/kg	10.6	35.2
117-81-7	bis(2-Ethylhexyl)phthalate	U	352	ug/kg	70.4	352
117-84-0	Di-n-octylphthalate	U	352	ug/kg	70.4	352
205-99-2	Benzo(b)fluoranthene	U	35.2	ug/kg	10.6	35.2
207-08-9	Benzo(k)fluoranthene	U	35.2	ug/kg	10.6	35.2
50-32-8	Benzo(a)pyrene	U	35.2	ug/kg	10.6	35.2
193-39-5	Indeno(1,2,3-cd)pyrene	U	35.2	ug/kg	10.6	35.2
53-70-3	Dibenzo(a,h)anthracene	U	35.2	ug/kg	10.6	35.2 UJ,SV7c
191-24-2	Benzo(ghi)perylene	U	35.2	ug/kg	10.6	35.2
120-82-1	1,2,4-Trichlorobenzene	U	352	ug/kg	70.4	352

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	2.93	148	ug/kg		JA

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

SDG Number: 10-1981
Lab Sample ID: 247790003

Date Collected: 02/17/2010 12:00
Date Received: 02/23/2010 08:50
Client: LANL010
Method: SW846 8270C
Inst: MSD8.I
Analyst: NAG1
Allquot: 30.19 g
Column: J&W DB-5MS

Matrix: R
%Moisture: 5.7
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	351	ug/kg	70.3	351
108-95-2	Phenol	U	351	ug/kg	70.3	351
95-57-8	2-Chlorophenol	U	351	ug/kg	70.3	351
106-46-7	1,4-Dichlorobenzene	U	351	ug/kg	70.3	351
621-64-7	N-Nitrosodipropylamine	U	351	ug/kg	70.3	351
59-50-7	4-Chloro-3-methylphenol	U	351	ug/kg	70.3	351
83-32-9	Acenaphthene	U	35.1	ug/kg	11.6	35.1
121-14-2	2,4-Dinitrotoluene	U	351	ug/kg	35.1	351
100-02-7	4-Nitrophenol	U	351	ug/kg	116	351
87-86-5	Pentachlorophenol	U	351	ug/kg	87.8	351
129-00-0	Pyrene	U	35.1	ug/kg	10.5	35.1
110-86-1	Pyridine	U	351	ug/kg	70.3	351 UJ,SV7c
62-53-3	Aniline	U	351	ug/kg	105	351
111-44-4	bis(2-Chloroethyl) ether	U	351	ug/kg	70.3	351
541-73-1	1,3-Dichlorobenzene	U	351	ug/kg	70.3	351
100-51-6	Benzyl alcohol	U	351	ug/kg	105	351 UJ,SV7c
95-50-1	1,2-Dichlorobenzene	U	351	ug/kg	70.3	351
108-60-1	bis(2-Chloroisopropyl)ether	U	351	ug/kg	70.3	351 UJ,SV7c
95-48-7	o-Cresol	U	351	ug/kg	70.3	351
65794-96-9	m,p-Cresols	U	351	ug/kg	105	351
67-72-1	Hexachloroethane	U	351	ug/kg	70.3	351
98-95-3	Nitrobenzene	U	351	ug/kg	70.3	351
78-59-1	Isophorone	U	351	ug/kg	70.3	351
88-75-5	2-Nitrophenol	U	351	ug/kg	70.3	351
105-67-9	2,4-Dimethylphenol	U	351	ug/kg	123	351
111-91-1	bis(2-Chloroethoxy)methane	U	351	ug/kg	70.3	351
120-83-2	2,4-Dichlorophenol	U	351	ug/kg	70.3	351
65-85-0	Benzoic acid	U	703	ug/kg	176	703
91-20-3	Naphthalene	U	35.1	ug/kg	10.5	35.1
106-47-8	4-Chloroaniline	U	351	ug/kg	70.3	351
87-68-3	Hexachlorobutadiene	U	351	ug/kg	70.3	351
91-57-6	2-Methylnaphthalene	U	35.1	ug/kg	7.03	35.1
77-47-4	Hexachlorocyclopentadiene	U	351	ug/kg	70.3	351 UJ,SV7c
88-06-2	2,4,6-Trichlorophenol	U	351	ug/kg	70.3	351
95-95-4	2,4,5-Trichlorophenol	U	351	ug/kg	70.3	351
91-58-7	2-Chloronaphthalene	U	35.1	ug/kg	11.6	35.1
88-74-4	2-Nitroaniline	U	351	ug/kg	70.3	351
	o-Nitroaniline					
99-09-2	3-Nitroaniline	U	351	ug/kg	70.3	351

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number: 10-1981
Lab Sample ID: 247790003

Date Collected: 02/17/2010 12:00
Date Received: 02/23/2010 08:50
Client: LANL010
Method: SW846 8270C
Inst: MSD8.I
Analyst: NAG1
Aliquot: 30.19 g
Column: J&W DB-5MS

Matrix: R
%Moisture: 5.7
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
131-11-3	<i>m</i> -Nitroaniline Dimethylphthalate	U	351	ug/kg	70.3	351
606-20-2	2,6-Dinitrotoluene	U	351	ug/kg	35.1	351
208-96-8	Acenaphthylene	U	35.1	ug/kg	10.5	35.1
51-28-5	2,4-Dinitrophenol	U	703	ug/kg	134	703
132-64-9	Dibenzofuran	U	351	ug/kg	70.3	351
84-66-2	Diethylphthalate	U	351	ug/kg	70.3	351
86-73-7	Fluorene	U	35.1	ug/kg	10.5	35.1
7005-72-3	4-Chlorophenylphenylether	U	351	ug/kg	70.3	351
534-52-1	2-Methyl-4,6-dinitrophenol	U	351	ug/kg	70.3	351 UJ,SV7c
100-01-6	4-Nitroaniline	U	351	ug/kg	105	351
122-39-4	<i>p</i> -Nitroaniline Diphenylamine	U	351	ug/kg	70.3	351
122-66-7	Azobenzene	U	351	ug/kg	70.3	351
101-55-3	1,2-Diphenylhydrazine 4-Bromophenylphenylether	U	351	ug/kg	70.3	351
118-74-1	Hexachlorobenzene	U	351	ug/kg	70.3	351
85-01-8	Phenanthrene	U	35.1	ug/kg	10.5	35.1
120-12-7	Anthracene	U	35.1	ug/kg	7.03	35.1
84-74-2	Di-n-butylphthalate	U	351	ug/kg	70.3	351
206-44-0	Fluoranthene	U	35.1	ug/kg	10.5	35.1
85-68-7	Butylbenzylphthalate	U	351	ug/kg	70.3	351
56-55-3	Benzo(a)anthracene	U	35.1	ug/kg	10.5	35.1
91-94-1	3,3'-Dichlorobenzidine	U	351	ug/kg	105	351
218-01-9	Chrysene	U	35.1	ug/kg	10.5	35.1
117-81-7	bis(2-Ethylhexyl)phthalate	U	351	ug/kg	70.3	351
117-84-0	Di-n-octylphthalate	U	351	ug/kg	70.3	351
205-99-2	Benzo(b)fluoranthene	U	35.1	ug/kg	10.5	35.1
207-08-9	Benzo(k)fluoranthene	U	35.1	ug/kg	10.5	35.1
50-32-8	Benzo(a)pyrene	U	35.1	ug/kg	10.5	35.1
193-39-5	Indeno(1,2,3-cd)pyrene	U	35.1	ug/kg	10.5	35.1
53-70-3	Dibenzo(a,h)anthracene	U	35.1	ug/kg	10.5	35.1
191-24-2	Benzo(ghi)perylene	U	35.1	ug/kg	10.5	35.1
120-82-1	1,2,4-Trichlorobenzene	U	351	ug/kg	70.3	351

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.03	173	ug/kg		JA

DATA VALIDATION COVER SHEET

5121-1

Data Validation Cover Sheet

Records Use only



Section I.

REQUEST NUMBER: 10-1981 VALIDATION DATE: 04/29/10 LAB CODE: GELCONTRACT LABORATORY NAME: GEL Laboratories LLCVALIDATOR: Joanne Compton ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

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

Section II. Completeness Check

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

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


1. The MS/MSD %R calculations were performed incorrectly. The parent sample result was < the MDL and, thus, a result of 0 ug/kg should have been used to calculate the %Rs. The laboratory subtracted the parent sample concentration. The %Rs were within the acceptance limit when calculated correctly. The MS/MSD were performed on a sample from another LANL RN and the raw data for the parent samples were not present in the data package. No sample results were qualified as a result.

Reviewed by: Mary Donovan Level: I Date: 04/30/10


VALIDATOR'S SIGNATURE: _____

A handwritten signature in cursive script that reads 'Joanne Compton'.


DATE: 04/29/10

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

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

LC/MS/MS PERCHLORATE ANALYTICAL DATA VALIDATION CHECKLIST	
5121-2	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 type="checkbox"/>	<input checked="" type="checkbox"/>	16. The affected analyte is considered not detected because ion abundance ratios did not meet specifications.	N/A	R, PERC8
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	17. The ion ratio documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	N/A	R, PERC8a
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	18. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ PERC9	J-, PERC9
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	19. The holding time was > 2 times the applicable holding time requirement.	R, PERC9a	J-, PERC9a
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	20. The LCS percent recovery was <10%. Follow the external laboratory limits.	R, PERC12	J-, PERC12
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	21. The LCS percent recovery was < the Lower Acceptance Limit but >10%. Follow the external laboratory limits.	UJ, PERC12a	J-, PERC12a
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	22. The LCS percent recovery was > the Upper Acceptance Limit. Follow the external laboratory limits.	N/A	J+, PERC12b
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	23. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PERC12c	R, PERC12c
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	24. The MS/MSD percent recovery was <10%	R, PERC12d	R, PERC12d
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	25. The MS/MSD percent recovery was >10% but <75%	UJ, PERC12e	J, PERC12e
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	26. The MS/MSD percent recovery was >125%.	N/A	J+, PERC12f

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

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

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: 957940
Extraction Type: Solid Prep
Sample Volume/Weight: 2.00 g
Concentrated Extract Volume: 20.0

Client Sample No.
RE15-10-8386
Date Received: 23-FEB-10
GEL Job No (SDG): 10-1981
GEL Sample ID: 247790002
Date Filtered: 06-MAR-10
Injection Volume (uL): 20
%Solids: 94.6

CAS No.	Analyte ^a	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.529	2.11	0.529	ug/kg	U	1	14-MAR-10 19:42	per0314031a
	Perchlorate Isotope Ratio						1	14-MAR-10 19:42	per0314031a
14797-73-0	Perchlorate-101	.529	2.11	0.529	ug/kg	U	1	14-MAR-10 19:42	per0314031a
	Perchlorate-O(18)			5.25	ug/kg		1	14-MAR-10 19:42	per0314031a

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

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

JCC
04/29/10

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: 957940

Extraction Type: Solid Prep

Client Sample No.

RE15-10-8387

Date Received: 23-FEB-10

GEL Job No (SDG): 10-1981

GEL Sample ID: 247790003

Date Filtered: 06-MAR-10

Injection Volume (uL): 20

%Solids: 94.3

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	.53	2.12	0.530	ug/kg	U	1	14-MAR-10 19:51	per0314032a
	Perchlorate Isotope Ratio						1	14-MAR-10 19:51	per0314032a
14797-73-0	Perchlorate-101	.53	2.12	0.530	ug/kg	U	1	14-MAR-10 19:51	per0314032a
	Perchlorate-O(18)			5.35	ug/kg		1	14-MAR-10 19:51	per0314032a

[^] 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

JCC
04/29/10

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

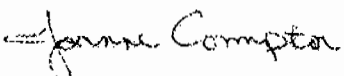
Section I.	
REQUEST NUMBER: <u>10-1981</u>	VALIDATION DATE: <u>04/30/10</u>
LAB CODE: <u>GEL</u>	
CONTRACT LABORATORY NAME: <u>GEL Laboratories LLC</u>	
VALIDATOR: <u>Joanne Compton</u>	
ORGANIZATION: <u>Analytical Quality Associates, Inc.</u>	
ANALYTICAL SUITE (CHECK ALL THAT APPLY):	
<input type="checkbox"/> TPH-GRO	<input type="checkbox"/> HIGH EXPLOSIVES
<input type="checkbox"/> TPH-DRO	<input type="checkbox"/> METALS
<input type="checkbox"/> GENERAL CHEMISTRY	<input type="checkbox"/> RADIOCHEMISTRY
<input type="checkbox"/> OTHER (DESCRIBE): _____	<input type="checkbox"/> DIOXIN FURANS <input type="checkbox"/> PCB CONGENERS <input checked="" type="checkbox"/> LCMSMS HIGH EXPLOSIVES <input type="checkbox"/> LCMSMS PERCHLORATES <input type="checkbox"/> ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS


Section II. Completeness Check																																																	
<table style="width: 100%;"> <tr> <th style="text-align: center;">YES</th> <th style="text-align: center;">NO</th> <th style="text-align: center;">N/A</th> <th style="text-align: center;">(CHECK ONE)</th> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td>1. CHAIN-OF-CUSTODY FORM(S)</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td>2. CASE NARRATIVE</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td>3. SAMPLE RESULT FORMS</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td>4. SAMPLE CHROMATOGRAMS</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>5. STANDARD CHROMATOGRAMS</td> </tr> </table>	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"/>	2. CASE NARRATIVE	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3. SAMPLE RESULT FORMS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4. SAMPLE CHROMATOGRAMS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	5. STANDARD CHROMATOGRAMS	<table style="width: 100%;"> <tr> <th style="text-align: center;">YES</th> <th style="text-align: center;">NO</th> <th style="text-align: center;">N/A</th> <th style="text-align: center;">(CHECK ONE)</th> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td>6. RAW/BSS DATA</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td>7. QUALITY CONTROL FORMS</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td>8. QUANTITATION REPORTS</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>9. TICS FORMS</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>10. TICS MASS SPECTRA</td> </tr> </table>	YES	NO	N/A	(CHECK ONE)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6. RAW/BSS DATA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7. QUALITY CONTROL FORMS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8. QUANTITATION REPORTS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	9. TICS FORMS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	10. TICS MASS SPECTRA
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"/>	2. CASE NARRATIVE																																														
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3. SAMPLE RESULT FORMS																																														
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4. SAMPLE CHROMATOGRAMS																																														
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YES	NO	N/A	(CHECK ONE)																																														
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6. RAW/BSS DATA																																														
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7. QUALITY CONTROL FORMS																																														
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8. QUANTITATION REPORTS																																														
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	9. TICS FORMS																																														
<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 were performed on a sample from another LANL RN and the raw data for the parent sample were not included in the data package. No sample data were qualified as a result.
2. It should also 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. No sample data were qualified as a result.

Reviewed by: Mary Donovan Level: I Date: 04/30/10


VALIDATOR'S SIGNATURE: <u></u>	DATE: <u>04/30/10</u>
Form 5122-1, Revision 0.0	
LOS ALAMOS Environmental Restoration Project	

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


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

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

Yes No N/A (Check One)			Assign Qualifier Listed Below If Criterion = Yes	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 type="checkbox"/>	<input checked="" 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: RE15-10-8386

Lab Code: GEL

GEL Job No (SDG) 10-1981

Matrix: SOIL

GEL Sample ID: 247790002

Sample Amount 2

Moisture: 5.4

Amount Units g

Date Received: 23-FEB-10

Extraction Type Sonication

Extraction Batch ID: 957199

Concentrated Extract Volume (mL) 10

Date Extracted: 01-MAR-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0314016a

Date Analyzed: 14-MAR-10 22:21

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
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1
High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE15-10-8386

Lab Code: GEL

GEL Job No (SDG) 10-1981

Matrix: SOIL

GEL Sample ID: 247790002

Sample Amount 2

Moisture: 5.4

Amount Units g

Date Received: 23-FEB-10

Extraction Type Sonication

Extraction Batch ID: 957199

Concentrated Extract Volume (mL) 10

Date Extracted: 01-MAR-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS03050041.wiff

Date Analyzed: 06-MAR-10 03:35

Units: ug/kg

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

*Concentration =

Instrument	X	<u>Concentrated Extract Volume</u>	X	Dilution
Value		<u>Sample Amount</u>		Factor

1
High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE15-10-8387

Lab Code: GEL

GEL Job No (SDG) 10-1981

Matrix: SOIL

GEL Sample ID: 247790003

Sample Amount 2

Moisture: 5.7

Amount Units g

Date Received: 23-FEB-10

Extraction Type Sonication

Extraction Batch ID: 957199

Concentrated Extract Volume (mL) 10

Date Extracted: 01-MAR-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0314017a

Date Analyzed: 14-MAR-10 22:50

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: RE15-10-8387

Lab Code: GEL

GEL Job No (SDG) 10-1981

Matrix: SOIL

GEL Sample ID: 247790003

Sample Amount 2

Moisture: .57

Amount Units g

Date Received: 23-FEB-10

Extraction Type Sonication

Extraction Batch ID: 957199

Concentrated Extract Volume (mL) 10

Date Extracted: 01-MAR-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS03050042.wiff

Date Analyzed: 06-MAR-10 03:51

Units: ug/kg

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

*Concentration =

Instrument	X	<u>Concentrated Extract Volume</u>	X	Dilution
Value		<u>Sample Amount</u>		Factor

DATA VALIDATION COVER SHEET

5116-1

Data Validation Cover Sheet

Records Use only



Section I.

REQUEST NUMBER: 10-1981 VALIDATION DATE: 04/30/10 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Joanne Compton ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

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

Section II. Completeness Check

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

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

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

Reviewed by: Mary Donovan Level: I Date: 04/30/10

VALIDATOR'S SIGNATURE:

A handwritten signature in cursive script that reads "Joanne Compton".

DATE: 04/30/10

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

5116-2

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

Records Use only



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, P9	J-, P9
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2. The holding time was >2 times the applicable holding time requirement.	R, P9	J-, P9a
<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, P9b	R, P9b
<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, P7	J, P7
<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, P7a	J, P7a
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	6. The Initial Calibration Verification (ICV) and/or Continuing Calibration Verification (CCV) were recovered outside the method-specific limits.	UJ, P7c	J, P7c
<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, P7d	J, P7d
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	8. The multicomponent standard was not analyzed within 72 hours of the initial analysis.	R, P7e	J, P7e
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, P7f	R, P7f
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	10. The breakdown criteria have been exceeded. This can cause low bias in reported results. If compound is detected, qualify J-. If compound is not present, but breakdown products are present, qualify R. If no compounds or breakdown products are present, qualify UJ (4,4' DDT and Endrin).	UJ, R, P13	J-, P13

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

5116-2

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

Records Use only



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"/>	11. The breakdown criteria have been exceeded. This can cause high bias in the reported results and potential false positive results for the breakdown products Endrin ketone, Endrin aldehyde, DDD, and DDE.	UJ, P13a	J+, P13a
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	12. The breakdown documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P13b	R, P13b
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	13. The sample result is $\leq 5X$ the concentration of the related analyte in the method blank.	U, P4	N/A
<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.	N/A	J, P4a
<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 instrument blank and continuing calibration blank.	UJ, P4b	N/A
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	16. The sample result is $\leq 5X$ the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	UJ, P4d	N/A
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	17. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P4e	R, P4e
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	18. The analyte RT shifted by more than 0.05 minutes from the mid-level standard of the initial calibration.	R, P0	J, P0
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	19. Required retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P0b	R, P0b
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	20. The surrogate is $<10\%R$. Follow the external laboratory limits located within the associated data package.	R, P3	J-, P3

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

5116-2

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

Records Use only



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"/>	21. The surrogate is < the Lower Acceptance Level (LAL) but $\geq 10\%R$. Follow the external laboratory limits located within the associated data package.	UJ, P3a	J-, P3a
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	22. The surrogate %R value is > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, P3b
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	23. At least one surrogate is > the Upper Acceptance Limit (UAL) and one surrogate is < the LAL. Follow the external laboratory limits located within the associated data package.	UJ, P3c	J, P3c
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	24. Required surrogate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P3d	R, P3d
<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, P12	J-, P12
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	26. The LCS percent recovery was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, P12a	J-, P12a
<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+, P12b
<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.	R, P12c	R, P12c
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	29. The analyte was not confirmed on a second dissimilar column.	N/A	R, P8
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	30. The second dissimilar column documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P8a	R, P8a
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	31. Duplicate, Dilution, or reanalysis.	UJ, P88	J, P88

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

5116-2

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

Records Use only



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"/>	32. 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, P15	R, P15
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	33. Qualification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB, NQ, NQ
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	34. The LANL project chemist identified quality deficiencies in the reported data that requires further qualification. This code can only be used and/or under advisement by the LANL project chemist.	UJ, R, P19	J, R, P19

PCB

Page 1 of 1

Certificate of Analysis
Sample SummarySDG Number: 10-1981
Lab Sample ID: 247790002Date Collected: 02/17/2010 12:00
Date Received: 02/23/2010 08:50
Client: LANL010
Method: SW846 8082
Inst: ECD1A.J
Analyst: YS1
Aliquot: 30.02 g
Column: 1 CLP1
2 CLP2Matrix: R
%Moisture: 5.4
Project: LANL01004
SOP Ref: GL-OA-E-040
Dilution: 1
Inj. Vol: 1 uL
Final Volume: 1 mL
Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.52	ug/kg	1.17	3.52	1
11104-28-2	Aroclor-1221	U	3.52	ug/kg	1.17	3.52	1
11141-16-5	Aroclor-1232	U	3.52	ug/kg	1.17	3.52	1
53469-21-9	Aroclor-1242	U	3.52	ug/kg	1.17	3.52	1
12672-29-6	Aroclor-1248	U	3.52	ug/kg	1.17	3.52	1
11097-69-1	Aroclor-1254	U	3.52	ug/kg	1.17	3.52	1
11096-82-5	Aroclor-1260	U	3.52	ug/kg	1.17	3.52	1

PCB
Certificate of Analysis
Sample Summary

SDG Number: 10-1981
 Lab Sample ID: 247790003

Date Collected: 02/17/2010 12:00
 Date Received: 02/23/2010 08:50
 Client: LANL010
 Method: SW846 8082
 Inst: ECD1A.J
 Analyst: YS1
 Aliquot: 30.02 g
 Column: 1 CLP1
 2 CLP2

Matrix: R
 %Moisture: 5.7
 Project: LANL01004
 SOP Ref: GL-OA-E-040
 Dilution: 1
 Inj. Vol: 1 uL
 Final Volume: 1 mL
 Level: LOW

Client ID: RE15-10-8387
 Batch ID: 958180
 Run Date: 03/01/2010 15:47
 Prep Date: 02/26/2010 20:38
 Data File: 054f5401.d
 054b5401.d

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.53	ug/kg	1.18	3.53	1
11104-28-2	Aroclor-1221	U	3.53	ug/kg	1.18	3.53	1
11141-16-5	Aroclor-1232	U	3.53	ug/kg	1.18	3.53	1
53469-21-9	Aroclor-1242	U	3.53	ug/kg	1.18	3.53	1
12672-29-6	Aroclor-1248	U	3.53	ug/kg	1.18	3.53	1
11097-69-1	Aroclor-1254	U	3.53	ug/kg	1.18	3.53	1
11096-82-5	Aroclor-1260	U	3.53	ug/kg	1.18	3.53	1

DATA VALIDATION COVER SHEET

5118-1

Data Validation Cover Sheet

Records Use only



Section I.

REQUEST NUMBER: 10-1981 VALIDATION DATE: 04/30/10 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Joanne Compton ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

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

Section II. Completeness Check

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


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


1. In the MB, Sb was detected. The associated sample results were NDs and, thus, were not qualified.
2. The LCS %R for Sb was < the laboratory LAL but $\geq 10\%$. The associated sample results were NDs and, thus, were qualified UJ,I12a.
3. The MS %Rs for Ca and Mg were > the laboratory UAL. The associated sample results were detects and, thus, were qualified J+,I6b. The MS %Rs were also < the laboratory LAL but $\geq 10\%$ for Ni. The associated sample results were detects and, thus, were qualified J-,I6a. The MS %Rs for Al and Fe were > the laboratory UAL. However, the associated parent sample results were detects > than 4X the spike amount and, thus, no sample results were qualified based on professional judgment.
4. The duplicate RPD was >35% and the parent and duplicate sample results were $\geq 5X$ the PQL for U. The associated sample results were detects and, thus, were qualified J,I10a.
5. It should be noted that the matrix QC for the Hg analysis were performed on a sample from another LANL RN and that the parent sample raw data were not included in the data package. No sample data were qualified as a result.

Reviewed by: Mary Donovan


Level: I

Date: 04/30/10


DATA VALIDATION COVER SHEET	
5118-1 Data Validation Cover Sheet	Records Use only  Los Alamos NATIONAL LABORATORY EST. 1945
VALIDATOR'S SIGNATURE: <u><i>Jane Compton</i></u> DATE: <u>04/30/10</u>	
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 (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 instrument performance sample did not pass method acceptance criteria.	R, I16	R, I16
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	4. The mass calibration is not within 0.1 amu or %RSD is >5% for any isotope (Be, Mg, Co, In, Pb).	UJ, I16a	J, I16a
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	5. Samples were analyzed outside specific method tune time criteria.	N/A	J, I16b
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	6. The required instrument performance sample information is missing. Contact the SMO or external laboratory for information.	R, I16c	R, I16c
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, I7	J, I7
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, I7a	J, I7a
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9. The initial Calibration Verification (ICV) and/or Continuing Calibration Verification (CCV) were recovered outside the method-specific limits.	UJ, I7c	J, I7c
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, I7d	J, I7d
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	11. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, I7f	R, I7f
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	12. Metals interference check sample percent recover value is <50%.	R, I2	J-, I2

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

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

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

Yes No N/A				Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	25. Required matrix spike information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. If the LCS information is present, do not Reject. Qualify data based on the LCS information.	R, I6c	R, I6c
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	26. The sample and the duplicate sample results were $\geq 5X$ the RL and the duplicate RPD was $>20\%$ for water samples and $>35\%$ for soil samples.	UJ, I10a	J, I10a
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	27. The duplicate sample was not prepared and/or analyzed with the samples for unspecified reasons. The duplicate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	UJ, I10d	J, I10d
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	28. The LCS percent recovery was $<10\%$. Follow the external laboratory limits located within the associated data package.	R, I12	R, I12
<input checked="" type="checkbox"/>	<input 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: 10-1981

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 247790002

BASIS: Dry Weight

DATE COLLECTED 17-FEB-10

CLIENT ID: RE15-10-8386

LEVEL: Low

DATE RECEIVED 23-FEB-10

MATRIX: SOIL

%SOLIDS: 94.6

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	4680000	ug/Kg		7050	20700	20700	1	P	HSC	03/19/10 15:41	031910-1	957496
7440-36-0	Antimony UJ,112a	1040	ug/Kg	U	342	1040	1040	1	P	HSC	03/19/10 15:41	031910-1	957496
7440-38-2	Arsenic	1.05	mg/kg		0.21	1.05	1.05	2	MS	PRB	04/20/10 14:13	100420-2	957498
7440-39-3	Barium	59600	ug/Kg		104	518	518	1	P	HSC	03/19/10 15:41	031910-1	957496
7440-41-7	Beryllium	0.481	mg/kg		0.021	0.105	0.105	2	MS	PRB	04/20/10 14:13	100420-2	957498
7440-43-9	Cadmium	518	ug/Kg	U	104	518	518	1	P	HSC	03/19/10 15:41	031910-1	957496
7440-70-2	Calcium J+,16b	1980000	ug/Kg	*N	8290	25900	25900	1	P	HSC	03/19/10 15:41	031910-1	957496
7440-47-3	Chromium	19100	ug/Kg		155	518	518	1	P	HSC	03/19/10 15:41	031910-1	957496
7440-48-4	Cobalt	1880	ug/Kg		155	518	518	1	P	HSC	03/19/10 15:41	031910-1	957496
7440-50-8	Copper	3740	ug/Kg		311	1040	1040	1	P	HSC	03/19/10 15:41	031910-1	957496
7439-89-6	Iron	10800000	ug/Kg		8290	25900	25900	1	P	HSC	03/19/10 15:41	031910-1	957496
7439-92-1	Lead	3930	ug/Kg		259	1040	1040	1	P	HSC	03/19/10 15:41	031910-1	957496
7439-95-4	Magnesium J+,16b	1150000	ug/Kg	N	8810	31100	31100	1	P	HSC	03/19/10 15:41	031910-1	957496
7439-96-5	Manganese	228000	ug/Kg		207	1040	1040	1	P	HSC	03/19/10 15:41	031910-1	957496
7439-97-6	Mercury	8.3	ug/kg	J	4.21	12.4	12.4	1	AV	JXL1	03/02/10 16:46	030210S1-5	958698
7440-02-0	Nickel J-,16a	7.4	mg/kg	*N	0.105	0.419	0.419	2	MS	PRB	04/20/10 14:13	100420-2	957498
7440-09-7	Potassium	869000	ug/Kg	N	6630	25900	25900	1	P	HSC	03/19/10 15:41	031910-1	957496
7782-49-2	Selenium	1.05	mg/kg	U	0.524	1.05	1.05	2	MS	PRB	04/20/10 14:13	100420-2	957498
7440-22-4	Silver	224	ug/Kg	J	104	518	518	1	P	HSC	03/19/10 15:41	031910-1	957496
7440-23-5	Sodium	342000	ug/Kg		7250	25900	25900	1	P	HSC	03/19/10 15:41	031910-1	957496
7440-28-0	Thallium	0.158	mg/kg	J	0.0629	0.21	0.21	2	MS	PRB	04/20/10 14:13	100420-2	957498
7440-61-1	Uranium J,110a	3.15	mg/kg	*	0.0138	0.0419	0.0419	2	MS	PRB	04/20/10 14:13	100420-2	957498
7440-62-2	Vanadium	11600	ug/Kg		104	518	518	1	P	HSC	03/19/10 15:41	031910-1	957496
7440-66-6	Zinc	31800	ug/Kg		342	1040	1040	1	P	HSC	03/19/10 15:41	031910-1	957496

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
957496	957495	SW846 3050B	0.51	g	50	mL	02/26/10	AXG2
957498	957497	SW846 3050B	0.504	g	50	mL	02/26/10	AXG2
958698	958693	SW846 7471A Prep	0.512	g	30	mL	03/01/10	TXB3

JCC
04/30/10

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 10-1981

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 247790003

BASIS: Dry Weight

DATE COLLECTED 17-FEB-10

CLIENT ID: RE15-10-8387

LEVEL: Low

DATE RECEIVED 23-FEB-10

MATRIX: SOIL


%SOLIDS: 94.3

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	3290000	ug/Kg		7000	20600	20600	1	P	HSC	03/19/10 16:30	031910-1	957496
7440-36-0	Antimony UJ,112a	1030	ug/Kg	U	340	1030	1030	1	P	HSC	03/19/10 16:30	031910-1	957496
7440-38-2	Arsenic	0.535	mg/kg	J	0.21	1.05	1.05	2	MS	PRB	04/20/10 14:37	100420-2	957498
7440-39-3	Barium	68800	ug/Kg		103	515	515	1	P	HSC	03/19/10 16:30	031910-1	957496
7440-41-7	Beryllium	0.306	mg/kg		0.021	0.105	0.105	2	MS	PRB	04/20/10 14:37	100420-2	957498
7440-43-9	Cadmium	515	ug/Kg	U	103	515	515	1	P	HSC	03/19/10 16:30	031910-1	957496
7440-70-2	Calcium J+,16b	1380000	ug/Kg	*N	8240	25700	25700	1	P	HSC	03/19/10 16:30	031910-1	957496
7440-47-3	Chromium	32000	ug/Kg		154	515	515	1	P	HSC	03/19/10 16:30	031910-1	957496
7440-48-4	Cobalt	1930	ug/Kg		154	515	515	1	P	HSC	03/19/10 16:30	031910-1	957496
7440-50-8	Copper	3630	ug/Kg		309	1030	1030	1	P	HSC	03/19/10 16:30	031910-1	957496
7439-89-6	Iron	10100000	ug/Kg		8240	25700	25700	1	P	HSC	03/19/10 16:30	031910-1	957496
7439-92-1	Lead	2490	ug/Kg		257	1030	1030	1	P	HSC	03/19/10 16:30	031910-1	957496
7439-95-4	Magnesium J+,16b	955000	ug/Kg	N	8750	30900	30900	1	P	HSC	03/19/10 16:30	031910-1	957496
7439-96-5	Manganese	318000	ug/Kg		206	1030	1030	1	P	HSC	03/19/10 16:30	031910-1	957496
7439-97-6	Mercury	8.74	ug/kg	J	4.18	12.3	12.3	1	AV	JXL1	03/02/10 16:48	030210S1-5	958698
7440-02-0	Nickel J-,16a	5.45	mg/kg	*N	0.105	0.419	0.419	2	MS	PRB	04/20/10 14:37	100420-2	957498
7440-09-7	Potassium	810000	ug/Kg	N	6590	25700	25700	1	P	HSC	03/19/10 16:30	031910-1	957496
7782-49-2	Selenium	1.05	mg/kg	U	0.524	1.05	1.05	2	MS	PRB	04/20/10 14:37	100420-2	957498
7440-22-4	Silver	273	ug/Kg	J	103	515	515	1	P	HSC	03/19/10 16:30	031910-1	957496
7440-23-5	Sodium	457000	ug/Kg		7210	25700	25700	1	P	HSC	03/19/10 16:30	031910-1	957496
7440-28-0	Thallium	0.210	mg/kg	U	0.0629	0.21	0.21	2	MS	PRB	04/20/10 14:37	100420-2	957498
7440-61-1	Uranium J,110a	1.67	mg/kg	*	0.0138	0.0419	0.0419	2	MS	PRB	04/20/10 14:37	100420-2	957498
7440-62-2	Vanadium	8990	ug/Kg		103	515	515	1	P	HSC	03/19/10 16:30	031910-1	957496
7440-66-6	Zinc	34400	ug/Kg		340	1030	1030	1	P	HSC	03/19/10 16:30	031910-1	957496

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
957496	957495	SW846 3050B	0.515	g	50	mL	02/26/10	AXG2
957498	957497	SW846 3050B	0.506	g	50	mL	02/26/10	AXG2
958698	958693	SW846 7471A Prep	0.518	g	30	mL	03/01/10	TXB3

JCC
04/30/10

DATA VALIDATION COVER SHEET	
5120-1 <p style="text-align: center;">Data Validation Cover Sheet</p>	Records Use only 

Section I.			
REQUEST NUMBER: <u>10-1981</u>	VALIDATION DATE: <u>04/30/10</u>	LAB CODE: <u>GEL</u>	
CONTRACT LABORATORY NAME: <u>GEL Laboratories LLC</u>			
VALIDATOR: <u>Joanne Compton</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"/> 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	<input type="checkbox"/> PESTICIDES/POLYCHLORINATED BIPHENYLS
<input type="checkbox"/> OTHER (DESCRIBE): _____			

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

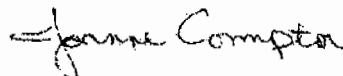
Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):


1. It should be noted that the matrix QC for all analyses except pH were performed on samples from other LANL RNs. No sample data were qualified as a result.

Reviewed by: Mary Donovan


Level: I

Date: 04/30/10


VALIDATOR'S SIGNATURE: <u></u>	DATE: <u>04/30/10</u>
Form 5120-1, Revision 0.0	
LOS ALAMOS Environmental Restoration Project	

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

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	Records Use only
General Chemistry 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"/>	14. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J, I4a
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	15. The sample result is ≤5X the concentration of the related analyte in the instrument blank and continuing calibration blank.	U, I4b	N/A
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	16. Continuing calibration blanks were not analyzed at the appropriate method frequency.	UJ, I4c	J, I4c
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	17. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	U, I4d	N/A
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	18. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, I4e	R, I4e
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	19. The associate matrix spike recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I6	R, I6
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	20. The associated matrix spike recovery was below the Lower Acceptance Limit (LAL) but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I6a	J-, I6a
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	21. The associated matrix spike recovery was above the Upper Acceptance Limit (UAL). Follow the external laboratory limits located within the associated data package.	UJ, I6b	J+, I6b
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	22. Required matrix spike information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. If LCS information is present, do not reject. Qualify data based on LCS information.	R, I6c	R, I6c
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	23. The sample and/or the duplicate sample results RPD is not within the acceptance limits. Follow the external laboratory limits located within the associated data package.	UJ, I10b	J, I10b

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

Yes No N/A (Check One)				Assign Qualifier Listed Below If Criterion = Yes	
				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: March 17, 2010

Client SDG: 10-1981

Client Sample ID: RE15-10-8386
Sample ID: 247790002
Matrix: R
Collect Date: 17-FEB-10 12:00
Receive Date: 23-FEB-10
Collector: Client
Moisture: 5.4%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Electrode Analysis											
<i>SW9045C pH "As Received"</i>											
pH at Temp 19.8C	H	8.89	0.010	0.100	SU	1	TXT1	02/24/10	1512	956998	1
Flow Injection Analysis											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	64.2	236	ug/kg	1	AXC2	03/02/10	1702	957569	2
Ion Chromatography											
<i>EPA 300.0 Nitrate in Soil "Dry Weight Corrected"</i>											
Nitrate-N		1.26	0.317	1.06	mg/kg	1	MAR1	03/10/10	1626	957881	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	03/10/10	1030	957878
SW846 9010B Prep	SW846 9010B Prep	AXS5	03/02/10	1528	957568

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

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: March 17, 2010

Client SDG: 10-1981

Client Sample ID: RE15-10-8387
Sample ID: 247790003
Matrix: R
Collect Date: 17-FEB-10 12:00
Receive Date: 23-FEB-10
Collector: Client
Moisture: 5.72%

Project: LANL01004
Client ID: LANL010


Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Electrode Analysis											
<i>SW9045C pH "As Received"</i>											
pH at Temp 19.6C	H	8.96	0.010	0.100	SU	1	TXT1	02/24/10	1516	956998	1
Flow Injection Analysis											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	63.3	233	ug/kg	1	AXC2	03/02/10	1703	957569	2
Ion Chromatography											
<i>EPA 300.0 Nitrate in Soil "Dry Weight Corrected"</i>											
Nitrate-N		1.08	0.318	1.06	mg/kg	1	MAR1	03/10/10	1655	957881	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	03/10/10	1030	957878
SW846 9010B Prep	SW846 9010B Prep	AXS5	03/02/10	1528	957568

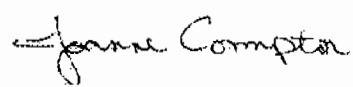
The following Analytical Methods were performed


Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

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


Section I.			
REQUEST NUMBER:	10-1981	VALIDATION DATE:	04/30/10
		LAB CODE:	GEL
CONTRACT LABORATORY NAME: <u>GEL Laboratories LLC</u>			
VALIDATOR: <u>Joanne Compton</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"/> 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	<input type="checkbox"/> PESTICIDES/POLYCHLORINATED BIPHENYLS
<input type="checkbox"/> OTHER (DESCRIBE): _____			

Section II. Completeness Check							
YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. CHAIN-OF-CUSTODY FORM(S)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6. RAW/BSS DATA
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2. CASE NARRATIVE	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7. QUALITY CONTROL FORMS
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3. SAMPLE RESULT FORMS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	8. QUANTITATION REPORTS
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	4. SAMPLE CHROMATOGRAMS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	9. TICS FORMS
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	5. STANDARD CHROMATOGRAMS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	10. TICS MASS SPECTRA
Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):							
1. The gamma spec sample results that were rejected by the laboratory due to interference and low abundance were qualified R,R5a. In the duplicate sample, several results were also rejected by the laboratory. No sample data were qualified as a result. 2. The alpha spec tracer %R was > the laboratory UAL but ≤125% for U-232 in sample RE15-10-8387. The isotopic U sample results were detects and, thus, were qualified J-,R3a. The Am-241 tracer %R was > the laboratory UAL but ≤125% in the LCS. Because this was a QC sample, no sample results were qualified. 3. An MS was not analyzed for tritium but an LCS was analyzed and met acceptance criteria. No sample data were qualified as a result. 4. It should be noted the matrix QC for the gamma spec and tritium analyses were performed on samples from other LANL RNs. No sample results were qualified as a result.							
Reviewed by: <u>Mary Donovan</u>				Level: <u>I</u>		Date: <u>04/30/10</u>	


VALIDATOR'S SIGNATURE: <u></u>	DATE: <u>04/30/10</u>
Form 5119-1, Revision 0.0	
LOS ALAMOS Environmental Restoration Project	

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	Records Use only	 Los Alamos <small>NATIONAL LABORATORY</small> <small>EST. 1942</small>
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"/>	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	Records Use only
<div style="display: flex; justify-content: space-between; align-items: center;"> <div>Rad Analytical Data Validation Checklist</div> <div>  </div> </div>	

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

GEL LABORATORIES LLC

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: March 11, 2010

Client Sample ID: RE15-10-8386
Sample ID: 247790002
Matrix: R
Collect Date: 17-FEB-10
Receive Date: 23-FEB-10
Collector: Client
Moisture: 5.4%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids												
<i>"As Received"</i>												
Rad Alpha Spec Analysis												
<i>AM241 "Dry Weight Corrected"</i>												
Americium-241	U	-4.23E-05	0.0209	+/-0.00173	0.050	pCi/g		JXH2	03/03/10	2039	957123	2
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.0111	0.026	+/-0.00511	0.050	pCi/g		JXH2	03/01/10	1821	957124	3
Plutonium-239/240	U	0.0108	0.0196	+/-0.00602	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		0.921	0.0659	+/-0.0799	0.100	pCi/g		JXH2	03/04/10	0905	957125	4
Uranium-235/236		0.0646	0.042	+/-0.0158	0.100	pCi/g						
Uranium-238		1.14	0.045	+/-0.0953	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	-0.0628	0.220	+/-0.0759	0.200	pCi/g		MXR1	03/05/10	1026	957136	5
Bismuth-211	UI	3.42	R,R5a	0.290	+/-0.292	pCi/g						
Bismuth-214		1.05		0.106	+/-0.0914	pCi/g						
Cadmium-109	UI	3.87	R,R5a	1.08	+/-0.381	pCi/g						
Cerium-139	U	-0.00318	0.0435	+/-0.013	0.050	pCi/g						
Cesium-134	U	0.0715	0.0906	+/-0.0245	0.100	pCi/g						
Cesium-137	U	-0.0248	0.060	+/-0.0195	0.100	pCi/g						
Cobalt-60	U	0.00764	0.0621	+/-0.0187	0.100	pCi/g						
Europium-152	U	-0.0965	0.132	+/-0.0455	0.200	pCi/g						
Lanthanum-140	U	-0.00744	0.121	+/-0.038		pCi/g						
Lead-212		1.39	0.0827	+/-0.0979	0.100	pCi/g						
Lead-214		1.24	0.105	+/-0.111	0.100	pCi/g						
Mercury-203	U	-0.0366	0.056	+/-0.0185	0.100	pCi/g						
Potassium-40		34.6	0.515	+/-1.79	1.00	pCi/g						
Radium-223	U	-0.116	0.930	+/-0.332		pCi/g						
Radium-224	UI	3.87	R,R5a	0.886	+/-0.623	pCi/g						
Radium-226		1.05	0.106	+/-0.0914		pCi/g						
Radium-228		1.61	0.192	+/-0.189	0.500	pCi/g						
Ruthenium-106	U	0.029	0.470	+/-0.142	0.800	pCi/g						
Sodium-22	U	-0.0198	0.0683	+/-0.0222	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: March 11, 2010

Client Sample ID: RE15-10-8386
Sample ID: 247790002

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	0.0348	0.0632	+/-0.0178		pCi/g					
Thallium-208		0.459	0.0537	+/-0.045	0.080	pCi/g					
Thorium-227	U	-0.107	0.400	+/-0.125		pCi/g					
Thorium-231	U	-0.116	0.930	+/-0.332		pCi/g					
Thorium-234		2.43	1.77	+/-0.905	2.00	pCi/g					
Tin-113	U	-0.029	0.0661	+/-0.0204	0.100	pCi/g					
Uranium-235	U	-0.042	0.294	+/-0.089	0.500	pCi/g					
Yttrium-88	U	0.0128	0.0488	+/-0.0134	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
<i>H3 "As Received"</i>											
Tritium		3.43E+05	726	+/-24200	250	pCi/L		KXK2	03/10/10 0905	960231	6

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE EML HASL-300, Am-05-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	DOE HASL 300, 4.5.2.3/Ga-01-R
6	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	88.9	(50%-105%)
Plutonium-236 Tracer	ISOPU "Dry Weight Corrected"	101	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	93.3	(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

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: March 11, 2010

Client Sample ID: RE15-10-8387
Sample ID: 247790003
Matrix: R
Collect Date: 17-FEB-10
Receive Date: 23-FEB-10
Collector: Client
Moisture: 5.72%

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	0.00155	0.0252	+/-0.00169	0.050	pCi/g		JXH2	03/03/10	2039	957123	2
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	-8.73E-05	0.0335	+/-0.00641	0.050	pCi/g		JXH2	03/01/10	1821	957124	3
Plutonium-239/240	U	-8.73E-05	0.0253	+/-0.00641	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		0.585	J-R3a	0.0567	+/-0.0539	0.100	pCi/g	JXH2	03/04/10	0906	957125	4
Uranium-235/236		0.0639	↓	0.0361	+/-0.0145	0.100	pCi/g					
Uranium-238		0.654	↓	0.0387	+/-0.0587	0.100	pCi/g					
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	-0.317		0.358	+/-0.112	0.200	pCi/g	MXR1	03/05/10	1026	957136	5
Bismuth-211	UI	3.04	R,R5a	0.362	+/-0.256		pCi/g					
Bismuth-214	UI	0.889	↓	0.285	+/-0.0947	0.200	pCi/g					
Cadmium-109	UI	2.32	↓	1.48	+/-0.511		pCi/g					
Cerium-139	U	0.0297		0.056	+/-0.0163	0.050	pCi/g					
Cesium-134	U	0.017		0.0993	+/-0.029	0.100	pCi/g					
Cesium-137	U	-0.00218		0.0726	+/-0.0225	0.100	pCi/g					
Cobalt-60	U	0.00954		0.0713	+/-0.0213	0.100	pCi/g					
Europium-152	U	-0.0221		0.176	+/-0.0648	0.200	pCi/g					
Lanthanum-140	U	-0.0155		0.152	+/-0.0473		pCi/g					
Lead-212		1.42		0.105	+/-0.0789	0.100	pCi/g					
Lead-214		1.10		0.143	+/-0.0977	0.100	pCi/g					
Mercury-203	U	-0.00133		0.0782	+/-0.023	0.100	pCi/g					
Potassium-40		33.6		0.658	+/-1.70	1.00	pCi/g					
Radium-223	U	-1.26		1.12	+/-0.384		pCi/g					
Radium-224	UI	4.25	R,R5a	1.13	+/-0.595		pCi/g					
Radium-226	UI	0.889	R,R5a	0.285	+/-0.0947		pCi/g					
Radium-228		1.66		0.296	+/-0.197	0.500	pCi/g					
Ruthenium-106	U	-0.44		0.594	+/-0.202	0.800	pCi/g					
Sodium-22	U	-0.0138		0.0914	+/-0.0289	0.080	pCi/g					

JCC
04/30/10

GEL LABORATORIES LLC

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

Certificate of Analysis

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

Report Date: March 11, 2010

Client Sample ID: RE15-10-8387
Sample ID: 247790003
Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Strontium-85	U	0.0382	0.0853	+/-0.0281		pCi/g						
Thallium-208		0.488	0.0718	+/-0.051	0.080	pCi/g						
Thorium-227	U	-0.0276	0.452	+/-0.141		pCi/g						
Thorium-231	U	-1.26	1.12	+/-0.384		pCi/g						
Thorium-234	U	0.574	3.11	+/-0.929	2.00	pCi/g						
Tin-113	U	-0.0299	0.0848	+/-0.0264	0.100	pCi/g						
Uranium-235	U	0.0206	0.387	+/-0.117	0.500	pCi/g						
Yttrium-88	U	0.0204	0.0717	+/-0.0197	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium		382	164	+/-61.5	250	pCi/L		KXK2	03/10/10	0917	960231	6

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE EML HASL-300, Am-05-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	DOE HASL 300, 4.5.2.3/Ga-01-R
6	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	75.8	(50%-105%)
Plutonium-236 Tracer	ISOPU "Dry Weight Corrected"	74.7	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	107 *	(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

Monday, February 22, 2010

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-1981

LOS ALAMOS

REQUEST NUMBER: 10-1981

NATIONAL LABORATORY

ATTN: Valerie Davis

TURNAROUND/REPORT DUE: 3/24/2010

General Engineering Laboratories, Inc.,
Charleston, SC.

TURNAROUND REQ'D: 30

2040 Savage Rd

Charleston, SC 29407

LAB REQUEST COMMENTS:

247790

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
RE15-10-8408	1	SEPTUM AMBER GLASS	8260B Trip Blank	Ice	R
RE15-10-8386	1	AMBER GLASS	8082+8270+NMED-EXP	Ice	R
RE15-10-8386	1	SEPTUM AMBER GLASS	8260B	Ice	R
RE15-10-8386	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8386	1	POLY	H3	Ice	R
RE15-10-8386	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE15-10-8387	1	AMBER GLASS	8082+8270+NMED-EXP	Ice	R
RE15-10-8387	1	SEPTUM AMBER GLASS	8260B	Ice	R
RE15-10-8387	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8387	1	POLY	H3	Ice	R
RE15-10-8387	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE15-10-8386	1	POLY	METALS+U-GEL	Ice	R
RE15-10-8387	1	POLY	METALS+U-GEL	Ice	R

Relinquished By:

Date

Time

Received By:

Date

Time

Dee L. G.
 Printed Name Signature

2/22/10 1400

Mercedes Simmons
 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, February 22, 2010
LOS ALAMOS
NATIONAL LABORATORY

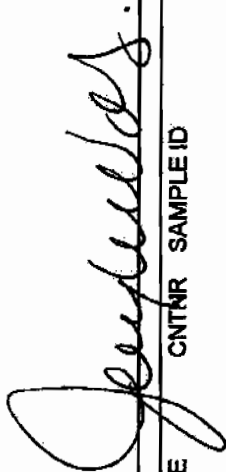
These Samples are on:
LANL Request Number: 10-1981
Per Agreement Number: 126310011
Project Cost Code: MR3A05529E00

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: 2/22/2010
TURNAROUND/REPORT DUE: 3/24/2010
TURNAROUND REQ'D: 30 Days

RAD SCREENING: Yes, Below Background
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature: 

PRIORITY	METHOD CODE	CNTR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA-300.0	1	RE15-10-8386	R	2/17/2010	
		1	RE15-10-8387	R	2/17/2010	
	EPA-901.1	1	RE15-10-8386	R	2/17/2010	
		1	RE15-10-8387	R	2/17/2010	
	EPA-906.0	1	RE15-10-8386	R	2/17/2010	
		1	RE15-10-8387	R	2/17/2010	
	HASL-300:AM-241	1	RE15-10-8386	R	2/17/2010	
		1	RE15-10-8387	R	2/17/2010	
	HASL-300:ISOPU	1	RE15-10-8386	R	2/17/2010	

Monday, February 22, 2010

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	HASL-300:ISOPU	1	RE15-10-8387	R	2/17/2010	
	HASL-300:ISOU	1	RE15-10-8386	R	2/17/2010	
		1	RE15-10-8387	R	2/17/2010	
	SW-846:6010B	1	RE15-10-8386	R	2/17/2010	
		1	RE15-10-8387	R	2/17/2010	
	SW-846:6020	1	RE15-10-8386	R	2/17/2010	
		1	RE15-10-8387	R	2/17/2010	
	SW-846:6850	1	RE15-10-8386	R	2/17/2010	
		1	RE15-10-8387	R	2/17/2010	
	SW-846:7471A	1	RE15-10-8386	R	2/17/2010	
		1	RE15-10-8387	R	2/17/2010	
	SW-846:8082	1	RE15-10-8386	R	2/17/2010	
		1	RE15-10-8387	R	2/17/2010	
	SW-846:8260B	1	RE15-10-8386	R	2/17/2010	
		1	RE15-10-8387	R	2/17/2010	
	SW-846:8270C	1	RE15-10-8408	R	2/17/2010	
		1	RE15-10-8386	R	2/17/2010	
	SW-846:8321A_MOD	1	RE15-10-8387	R	2/17/2010	
		1	RE15-10-8386	R	2/17/2010	
	SW-846:9012A	1	RE15-10-8386	R	2/17/2010	
		1	RE15-10-8387	R	2/17/2010	
	SW-846:9045C	1	RE15-10-8386	R	2/17/2010	
		1	RE15-10-8387	R	2/17/2010	

Final Page of REQUEST NUMBER 10-1981



March 01, 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 87545Re: LANL ER Project
Work Order: 247790
SDG: 10-1981

Dear Ms. Valdez:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on February 23, 2010, and analyzed for Explosives by LCMSMS, GC Semivolatile PCB, GC/MS Semivolatile, GC/MS Volatile, 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 ManagerPurchase Order: 72733-001-09
Chain of Custody: 10-1981
Enclosures

Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Work Order #: 247790
SDG: 10-1981

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Case Narrative

**Case Narrative for
Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Workorder #: 247790
SDG # : 10-1981**

March 01, 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 February 23, 2010 for analysis. The samples were prepared/analyzed within the required holding time. Shipping container temperatures were checked, documented, and within specifications. The samples were screened according to GEL Standard Operating Procedure. The 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 7,11,12C 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>
247790001	RE15-10-8408
247790002	RE15-10-8386
247790003	RE15-10-8387

Case Narrative

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

Data Package The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: Explosives by LCMSMS, GC Semivolatile PCB, GC/MS Semivolatile, GC/MS Volatile, 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 01 March 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, February 22, 2010

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-1981

LOS ALAMOS

REQUEST NUMBER: 10-1981

NATIONAL LABORATORY

ATTN: Valerie Davis

TURNAROUND/REPORT DUE: 3/24/2010

General Engineering Laboratories, Inc.,
Charleston, SC.

TURNAROUND REQ'D: 30

2040 Savage Rd

Charleston, SC 29407

LAB REQUEST COMMENTS:

247790

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
RE15-10-8408	1	SEPTUM AMBER GLASS	8260B Trip Blank	Ice	R
RE15-10-8386	1	AMBER GLASS	8082+8270+NMED-EXP	Ice	R
RE15-10-8386	1	SEPTUM AMBER GLASS	8260B	Ice	R
RE15-10-8386	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8386	1	POLY	H3	Ice	R
RE15-10-8386	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE15-10-8387	1	AMBER GLASS	8082+8270+NMED-EXP	Ice	R
RE15-10-8387	1	SEPTUM AMBER GLASS	8260B	Ice	R
RE15-10-8387	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8387	1	POLY	H3	Ice	R
RE15-10-8387	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE15-10-8386	1	POLY	METALS+U-GEL	Ice	R
RE15-10-8387	1	POLY	METALS+U-GEL	Ice	R

Relinquished By:

Date

Time

Received By:

Date

Time

Joey W. G. 2/22/10 1400
 Printed Name Signature

Mercedes Simmons Mercedes Simmons 2/23/10 0850
 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, February 22, 2010

**LOS ALAMOS
NATIONAL LABORATORY**

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

These Samples are on:

LANL Request Number: 10-1981

Per Agreement Number: 126310011

Project Cost Code: MR3A05529E00

REQUEST NUMBER: 10-1981

Please analyse the enclosed samples
according to the schedule indicated:

SHIP DATE: 2/22/2010

TURNAROUND/REPORT DUE: 3/24/2010

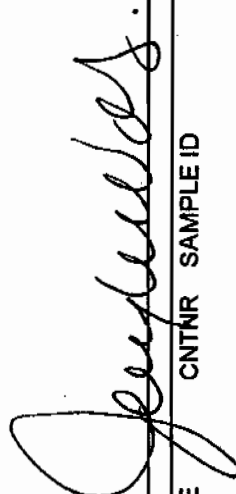
TURNAROUND REQ'D: 30 Days

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:300.0	1	RE15-10-8386	R	2/17/2010	
		1	RE15-10-8387	R	2/17/2010	
	EPA:901.1	1	RE15-10-8386	R	2/17/2010	
		1	RE15-10-8387	R	2/17/2010	
	EPA:906.0	1	RE15-10-8386	R	2/17/2010	
		1	RE15-10-8387	R	2/17/2010	
	HASL-300:AM-241	1	RE15-10-8386	R	2/17/2010	
		1	RE15-10-8387	R	2/17/2010	
	HASL-300:ISOPU	1	RE15-10-8386	R	2/17/2010	

Monday, February 22, 2010

REQUEST NUMBER: 10-1981

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	HASL-300:ISOPU	1	RE15-10-8387	R	2/17/2010	
	HASL-300:ISOU	1	RE15-10-8386	R	2/17/2010	
		1	RE15-10-8387	R	2/17/2010	
	SW-846:6010B	1	RE15-10-8386	R	2/17/2010	
		1	RE15-10-8387	R	2/17/2010	
	SW-846:6020	1	RE15-10-8386	R	2/17/2010	
		1	RE15-10-8387	R	2/17/2010	
	SW-846:6850	1	RE15-10-8386	R	2/17/2010	
		1	RE15-10-8387	R	2/17/2010	
	SW-846:7471A	1	RE15-10-8386	R	2/17/2010	
		1	RE15-10-8387	R	2/17/2010	
	SW-846:8082	1	RE15-10-8386	R	2/17/2010	
		1	RE15-10-8387	R	2/17/2010	
	SW-846:8260B	1	RE15-10-8386	R	2/17/2010	
		1	RE15-10-8387	R	2/17/2010	
		1	RE15-10-8408	R	2/17/2010	
	SW-846:8270C	1	RE15-10-8386	R	2/17/2010	
		1	RE15-10-8387	R	2/17/2010	
	SW-846:8321A_MOD	1	RE15-10-8386	R	2/17/2010	
		1	RE15-10-8387	R	2/17/2010	
	SW-846:9012A	1	RE15-10-8386	R	2/17/2010	
		1	RE15-10-8387	R	2/17/2010	
	SW-846:9045C	1	RE15-10-8386	R	2/17/2010	
		1	RE15-10-8387	R	2/17/2010	

Final Page of REQUEST NUMBER 10-1981



Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: LANL		SDG/ARCOC/Work Order: 10-1981	
Received By: Mercedes Simmons		Date Received: 2/23/10	
Suspected Hazard Information	Yes	No	*If Counts > x2 area background on samples not marked "radioactive", contact the Radiation Safety Group of further investigation.
COC/Samples marked as radioactive?		X	Maximum Counts Observed*: 60cpm
Classified Radioactive II by RSO?		X	
COC/Samples marked containing PCBs?		X	
Shipped as a DOT Hazardous?		X	Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?		X	

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other (describe)
2 Samples requiring cold preservation within 0 ≤ 6 deg. C?	X			Preservation Method: ice bags blue ice dry ice none other 0, 2-4C 7,11,12C
3 Chain of custody documents included with shipment?	X			
4 Sample containers intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other (describe)
5 Samples requiring chemical preservation at proper pH?		X	X	Sample ID's, containers affected and observed pH: If Preservation added, Lot#:
6 VOA vials free of headspace (defined as < 6mm bubble)?	X	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 Tracking Numbers:

7209 7850 1530 0C 7209 7850 1584 3C
 7209 7850 1595 2C 7209 7850 1621 4C
 7209 7850 1632 2C 7209 7850 1600 7C
 7209 7850 1529 2C 7209 7850 1507 11C
 7209 7850 1610 2C 7209 7850 1492 12C
 7209 7850 1518 3C
 7209 7850 1562 3C
 7209 7850 1573 3C

PM (or PMA) review: Initials

Date

2/24/10

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

SHIP DATE: 22FEB10
ACTWT: 52.0 LB MAN
CRD: 0014176/CAFE2450

LOS ALAMOS, NM 87545
UNITED STATES US

BILL SENDER

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 556-8171
REF: 68010AMR3A05529E00

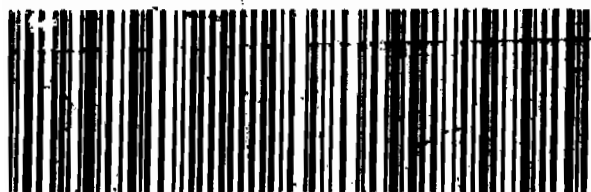
100 BLDG 1237 DPU 83



1 of 2
7209 7850 1610
MASTER NM
TUE - 23FEB A1
PRIORITY OVERNIGHT

X CHSA

29407
SC-US
CHS



JOYLENE VALDEZ
LOS ALAMOS NATL LAB
30 BLDG 1237 DPU 83

ACTWT: 52.0 LB MAN
CRD: 0014176/CAFE2450

LOS ALAMOS, NM 87545
UNITED STATES US

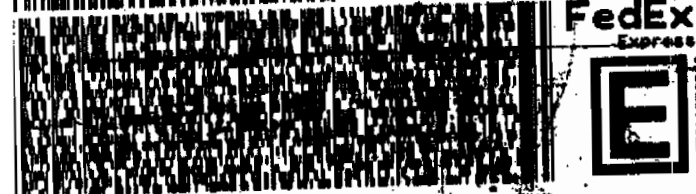
BILL SENDER

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 556-8171
REF: 68010AMR3A0223KY10

100 BLDG 1237 DPU 83



2 of 2
7209 7850 1562
MASTER NM
TUE - 23FEB A1
PRIORITY OVERNIGHT

X CHSA

29407
SC-US
CHS



ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TA00 BLDG 1237 DPU 83

SHIP DATE: 22FEB10
ACTWT: 52.0 LB MAN
CRD: 0014176/CAFE2450

LOS ALAMOS, NM 87545
UNITED STATES US

BILL SENDER

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 556-8171
REF: 68010AMR1A015AGWMD

100 BLDG 1237 DPU 83



2 of 2
7209 7850 1518
MASTER NM
TUE - 23FEB A1
PRIORITY OVERNIGHT

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29407
SC-US
CHS



JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TA00 BLDG 1237 DPU 83

ACTWT: 52.0 LB MAN
CRD: 0014176/CAFE2450

LOS ALAMOS, NM 87545
UNITED STATES US

BILL SENDER

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 556-8171
REF: 68010AMR3A0532VA00

100 BLDG 1237 DPU 83



2 of 2
7209 7850 1573
MASTER NM
TUE - 23FEB A1
PRIORITY OVERNIGHT

XX CHSA

29407
SC-US
CHS



ORIGIN ID: SAFA (505) 666-8968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TAGG BLDG 1237 DPU 03

SHIP DATE: 22FEB10
ACTWGT: 52.0 LB MAN
CAD: 0014176/CAFE2450

LOS ALAMOS, NM 87545
UNITED STATES US

BILL SENDER:

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 556-8171

REF: 6B010AMR2A05158YDO

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SC-US
CHS



ALAMOS NATL LAB
0 BLDG 1237 DPU 03

CAD: 0014176/CAFE2450

ALAMOS, NM 87545
UNITED STATES US

BILL SENDER

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 556-8171

F: 6B010AMR3A0224JFT0

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Express



TUE - 23FEB A1
PRIORITY OVERNIGHT

7209 7850 1600

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29407
SC-US
CHS



ORIGIN ID: SAFA (505) 666-8968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TAGG BLDG 1237 DPU 03

SHIP DATE: 22FEB10
ACTWGT: 46.0 LB MAN
CAD: 0014176/CAFE2450

LOS ALAMOS, NM 87545
UNITED STATES US

BILL SENDER

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 556-8171

REF: 6B010AMR3A05520E00

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2 of 2

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29407
SC-US
CHS



JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TAGG BLDG 1237 DPU 03

ACTWGT: 46.0 LB MAN
CAD: 0014176/CAFE2450

LOS ALAMOS, NM 87545
UNITED STATES US

BILL SENDER

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GENERAL ENGINEERING LAB
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CHARLESTON SC 29407

(843) 556-8171

REF: 6B010AMR1A015AGWMO

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SC-US
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TUE - 23FEB A1
PRIORITY OVERNIGHT

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 Volatile Analysis

**GC/MS Volatile Organics
Los Alamos National Laboratory (LANL)
SDG 10-1981**

Method/Analysis Information

Procedure: Volatile Organic Compounds (VOC) by Gas Chromatograph/Mass Spectrometer
Analytical Method: SW846 8260B
Prep Method: SW846 5030
Analytical Batch Number: 959504
Prep Batch Number: 959502

Sample Analysis

The following client and quality control samples were analyzed to complete this SDG using the methods referenced in the Analysis Information section:

Sample ID	Client ID
247790001	RE15-10-8408
247790002	RE15-10-8386
247790003	RE15-10-8387
1202057918	Method Blank (MB)
1202057921	Laboratory Control Sample (LCS)
1202057922	Laboratory Control Sample (LCS)
1202061835	Method Blank (MB)
1202061836	Laboratory Control Sample (LCS)
1202061837	Laboratory Control Sample (LCS)
1202057919	247791002(RE15-10-8317) Post Spike (PS)
1202057920	247791002(RE15-10-8317) Post Spike Duplicate (PSD)

NOTE: For volatile organic analyses the matrix spike designations may be indicated as "PS" or "PSD". The "PS" designation (post spike) indicates that the matrix was fortified prior to analysis but after applying any prep factors, such as a dilution. The laboratory considers the MS/MSD and PS/PSD designations interchangeable.

Samples 247790 002 and 003 in this SDG were analyzed on an "dry weight" basis. Samples 247790 001 in this SDG were analyzed on a "as received" basis.

Preparation/Analytical Method Verification

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-038 REV# 14.

Raw data reports are processed and reviewed by the analyst using the Target software package. False positives have been removed from the Target quantitation reports per standard operating procedures (SOP) section 19.1.2.

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.

The surrogate compounds were calibrated using a minimum five-point calibration curve. The surrogates were added by the auto sampler at a concentration of 50 ug/L. GEL Laboratories LLC will not have surrogate recoveries reported for Dibromofluoromethane. This is due to increased regulations for this analyte and an industry shortage.

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.

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 groups (SDG). A second source initial calibration verification (ICV) was included in the standard section directly behind the initial calibration.

Continuing Calibration Verification Requirements

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

Quality Control (QC) Information

Method Blank (MB) Statement

The MBs analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries

Surrogate recoveries in all client and quality control samples were within the acceptance limits.

Laboratory Control Sample (LCS) Recovery

The LCS spike recoveries met the acceptance limits.

QC Sample Designation

Sample 247791002 (RE15-10-8317) was designated for spike analysis.

Matrix Spike (PS) Recovery Statement

The spike recoveries were within the required acceptance limits.

Matrix Spike Duplicate (PSD) Recovery Statement

The spike duplicate recoveries were within the required acceptance limits.

Relative Percent Difference (RPD) Statement

The RPD(s) between the matrix spike pair met the acceptance limits.

Internal Standard (ISTD) Acceptance

The internal standard responses in all client and quality control samples met the required acceptance criteria.

Technical Information

Holding Time Specifications

GEL assigns holding times based on the associated methodology, which 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. All samples in this SDG met the specified holding time.

Sample Preservation and Integrity

All samples met the sample preservation and integrity requirements.

Sample Dilutions

The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis

Re-analyses were not required for samples in this SDG.

Miscellaneous Information**Electronic Package 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. An electronic signature page inserted after the case narrative of each electronic package will indicate the analyst, reviewer, and report specialist names associated with the generation of the data and package. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Data Exception (DER) Documentation

A Data Exception Document was not required for this SDG.

Manual Integrations

Data files associated with the initial calibration, continuing calibration check, and samples did not require manual integrations.

TIC Comment

Tentatively identified compounds (TIC) were required for this SDG.

Additional Comments

Additional comments were not required for this SDG.

Residual Chlorine

Residual Chlorine was not detected in any of the samples in this SDG.

System Configuration

The Volatile-GC/MS analysis was performed on the following instrument configuration:

Instrument ID	Instrument	System Configuration	Column ID	Column Description	P & T Trap
VOA7.I	Gas Chromatograph/Mass Spectrometer	HP6890N/HP5973N	DB-624	J&W, 60m x 0.25mm x 1.4um	Trap 10

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.

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: 10-1981 GEL Work Order: 247790

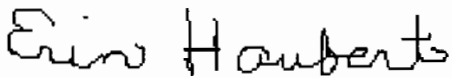
The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a surrogate compound
- E Organics--Concentration of the target analyte exceeds the instrument calibration range
- J Value is estimated
- U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

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

Signature: 

Name: Erin Haubert

Date: 20 MAR 2010

Title: Data Validator

Roadmap for LANL 10-1981 VOA

This roadmap was analyzed by ale01592 on 03-08-2010, 17:10.

This roadmap was reviewed by kel00587 on 03-08-2010, 17:46.

This roadmap was packaged by lys00434 on 03-19-2010, 12:28.

Sample

exclude	manual	datafile	smpid	clientid	injdate	injtime	sublist	dilution	batchid	comment
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<input type="checkbox"/>	N	/chem/VOA7.i/030110v7/7b130.d	247790002	RE15-10-8386	01-MAR-2010	23:59	10-1981.sub	1	959504	<input type="checkbox"/>
<input type="checkbox"/>	N	/chem/VOA7.i/030110v7/7b131.d	247790003	RE15-10-8387	02-MAR-2010	00:34	10-1981.sub	1	959504	<input type="checkbox"/>

QC Sample

exclude	manual	datafile	smpid	clientid	sampletype	injdate	injtime	sublist	dilution	batchid	comment
<input type="checkbox"/>	N	/chem/VOA7.i/030110v7/7b104LL.d	1202057921	LCS	lcs	01-MAR-2010	09:14	all.sub	1	959504	<input type="checkbox"/>
<input type="checkbox"/>	N	/chem/VOA7.i/030110v7/7b106LL.d	1202057922	SLCS	lcs	01-MAR-2010	10:22	all.sub	1	959504	<input type="checkbox"/>
<input type="checkbox"/>	N	/chem/VOA7.i/030110v7/7b108LL.d	1202057918	BLANK	mb	01-MAR-2010	11:29	all.sub	1	959504	<input type="checkbox"/>
<input type="checkbox"/>	N	/chem/VOA7.i/030110v7/7b125LL.d	1202061836	LCS	lcs	01-MAR-2010	21:05	all.sub	1	959504	<input type="checkbox"/>
<input type="checkbox"/>	N	/chem/VOA7.i/030110v7/7b127LL.d	1202061837	SLCS	lcs	01-MAR-2010	22:15	all.sub	1	959504	<input type="checkbox"/>
<input type="checkbox"/>	N	/chem/VOA7.i/030110v7/7b129LL.d	1202061835	BLANK	mb	01-MAR-2010	23:24	all.sub	1	959504	<input type="checkbox"/>
<input checked="" type="checkbox"/>	N	/chem/VOA7.i/030110v7/7b140.d	1202057919	RE15-10-8317MS	ms	02-MAR-2010	05:51	10-1982.sub	1	959504	<input type="checkbox"/>
<input checked="" type="checkbox"/>	N	/chem/VOA7.i/030110v7/7b141.d	1202057920	RE15-10-8317MSD	msd	02-MAR-2010	06:24	10-1982.sub	1	959504	<input type="checkbox"/>

Sample Data Summary

Volatile
Certificate of Analysis
Sample Summary

SDG Number: 10-1981	Date Collected: 02/17/2010 12:00	Matrix: R
Lab Sample ID: 247790002	Date Received: 02/23/2010 08:50	%Moisture: 5.4
	Client: LANL010	Project: LANL01004
Client ID: RE15-10-8386	Method: SW846 8260B	SOP Ref: GL-OA-E-038
Batch ID: 959504	Inst: VOA7.I	Dilution: 1
Run Date: 03/01/2010 23:59	Analyst: AXO1	Purge Vol: 5 mL
Prep Date: 03/01/2010 15:16	Aliquot: 5 g	Final Volume: 5 mL
Data File: 7b130.d	Column: DB-624	Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.06	ug/kg	0.359	1.06
74-87-3	Chloromethane	U	1.06	ug/kg	0.317	1.06
75-01-4	Vinyl chloride	U	1.06	ug/kg	0.317	1.06
74-83-9	Bromomethane	U	1.06	ug/kg	0.317	1.06
75-00-3	Chloroethane	U	1.06	ug/kg	0.317	1.06
75-69-4	Trichlorofluoromethane	U	1.06	ug/kg	0.317	1.06
67-64-1	Acetone	U	5.29	ug/kg	1.75	5.29
75-35-4	1,1-Dichloroethylene	U	1.06	ug/kg	0.317	1.06
74-88-4	Iodomethane	U	5.29	ug/kg	1.69	5.29
75-09-2	Methylene chloride	U	5.29	ug/kg	2.11	5.29
75-15-0	Carbon disulfide	U	5.29	ug/kg	1.32	5.29
156-60-5	trans-1,2-Dichloroethylene	U	1.06	ug/kg	0.317	1.06
75-34-3	1,1-Dichloroethane	U	1.06	ug/kg	0.317	1.06
78-93-3	2-Butanone	U	5.29	ug/kg	1.59	5.29
156-59-2	cis-1,2-Dichloroethylene	U	1.06	ug/kg	0.317	1.06
594-20-7	2,2-Dichloropropane	U	1.06	ug/kg	0.317	1.06
67-66-3	Chloroform	U	1.06	ug/kg	0.317	1.06
74-97-5	Bromochloromethane	U	1.06	ug/kg	0.349	1.06
71-55-6	1,1,1-Trichloroethane	U	1.06	ug/kg	0.317	1.06
563-58-6	1,1-Dichloropropene	U	1.06	ug/kg	0.317	1.06
56-23-5	Carbon tetrachloride	U	1.06	ug/kg	0.317	1.06
107-06-2	1,2-Dichloroethane	U	1.06	ug/kg	0.317	1.06
71-43-2	Benzene	U	1.06	ug/kg	0.317	1.06
79-01-6	Trichloroethylene	U	1.06	ug/kg	0.349	1.06
78-87-5	1,2-Dichloropropane	U	1.06	ug/kg	0.317	1.06
75-27-4	Bromodichloromethane	U	1.06	ug/kg	0.317	1.06
74-95-3	Dibromomethane	U	1.06	ug/kg	0.317	1.06
108-10-1	4-Methyl-2-pentanone	U	5.29	ug/kg	1.32	5.29
10061-01-5	cis-1,3-Dichloropropylene	U	1.06	ug/kg	0.317	1.06
108-88-3	Toluene	U	1.06	ug/kg	0.317	1.06
10061-02-6	trans-1,3-Dichloropropylene	U	1.06	ug/kg	0.317	1.06
79-00-5	1,1,2-Trichloroethane	U	1.06	ug/kg	0.317	1.06
591-78-6	2-Hexanone	U	5.29	ug/kg	1.59	5.29
142-28-9	1,3-Dichloropropane	U	1.06	ug/kg	0.317	1.06
127-18-4	Tetrachloroethylene	U	1.06	ug/kg	0.317	1.06
124-48-1	Dibromochloromethane	U	1.06	ug/kg	0.317	1.06
106-93-4	1,2-Dibromoethane	U	1.06	ug/kg	0.317	1.06
108-90-7	Chlorobenzene	U	1.06	ug/kg	0.317	1.06

Volatile
Certificate of Analysis
Sample Summary

SDG Number: 10-1981
 Lab Sample ID: 247790002

Date Collected: 02/17/2010 12:00
 Date Received: 02/23/2010 08:50
 Client: LANL010
 Method: SW846 8260B
 Inst: VOA7.I
 Analyst: AXO1
 Aliquot: 5 g
 Column: DB-624

Matrix: R
 %Moisture: 5.4
 Project: LANL01004
 SOP Ref: GL-OA-E-038
 Dilution: 1
 Purge Vol: 5 mL
 Final Volume: 5 mL
 Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.06	ug/kg	0.317	1.06
179601-23-1	m,p-Xylenes	U	2.11	ug/kg	0.317	2.11
95-47-6	o-Xylene	U	1.06	ug/kg	0.317	1.06
100-42-5	Styrene	U	1.06	ug/kg	0.317	1.06
75-25-2	Bromoform	U	1.06	ug/kg	0.317	1.06
79-34-5	1,1,2,2-Tetrachloroethane	U	1.06	ug/kg	0.317	1.06
96-18-4	1,2,3-Trichloropropane	U	1.06	ug/kg	0.317	1.06
108-86-1	Bromobenzene	U	1.06	ug/kg	0.317	1.06
103-65-1	n-Propylbenzene	U	1.06	ug/kg	0.317	1.06
95-49-8	2-Chlorotoluene	U	1.06	ug/kg	0.317	1.06
98-82-8	Isopropylbenzene	U	1.06	ug/kg	0.317	1.06
108-67-8	1,3,5-Trimethylbenzene	U	1.06	ug/kg	0.317	1.06
106-43-4	4-Chlorotoluene	U	1.06	ug/kg	0.317	1.06
98-06-6	tert-Butylbenzene	U	1.06	ug/kg	0.317	1.06
95-63-6	1,2,4-Trimethylbenzene	U	1.06	ug/kg	0.317	1.06
135-98-8	sec-Butylbenzene	U	1.06	ug/kg	0.317	1.06
99-87-6	4-Isopropyltoluene	U	1.06	ug/kg	0.317	1.06
541-73-1	1,3-Dichlorobenzene	U	1.06	ug/kg	0.317	1.06
106-46-7	1,4-Dichlorobenzene	U	1.06	ug/kg	0.317	1.06
104-51-8	n-Butylbenzene	U	1.06	ug/kg	0.317	1.06
96-12-8	1,2-Dibromo-3-chloropropane	U	1.06	ug/kg	0.317	1.06
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	U	5.29	ug/kg	1.69	5.29
	Trichlorotrifluoroethane					
630-20-6	1,1,1,2-Tetrachloroethane	U	1.06	ug/kg	0.317	1.06
95-50-1	1,2-Dichlorobenzene	U	1.06	ug/kg	0.317	1.06

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
No Tentatively Identified Compounds Found				ug/kg		

**Volatile
Certificate of Analysis
Sample Summary**

SDG Number: 10-1981	Date Collected: 02/17/2010 12:00	Matrix: R
Lab Sample ID: 247790003	Date Received: 02/23/2010 08:50	%Moisture: 5.7
Client ID: RE15-10-8387	Client: LANL010	Project: LANL01004
Batch ID: 959504	Method: SW846 8260B	SOP Ref: GL-OA-E-038
Run Date: 03/02/2010 00:34	Inst: VOA7.I	Dilution: 1
Prep Date: 03/01/2010 15:18	Analyst: AX01	Purge Vol: 5 mL
Data File: 7b131.d	Aliquot: 5 g	Final Volume: 5 mL
	Column: DB-624	Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.06	ug/kg	0.361	1.06
74-87-3	Chloromethane	U	1.06	ug/kg	0.318	1.06
75-01-4	Vinyl chloride	U	1.06	ug/kg	0.318	1.06
74-83-9	Bromomethane	U	1.06	ug/kg	0.318	1.06
75-00-3	Chloroethane	U	1.06	ug/kg	0.318	1.06
75-69-4	Trichlorofluoromethane	U	1.06	ug/kg	0.318	1.06
67-64-1	Acetone	U	5.30	ug/kg	1.76	5.30
75-35-4	1,1-Dichloroethylene	U	1.06	ug/kg	0.318	1.06
74-88-4	Iodomethane	U	5.30	ug/kg	1.70	5.30
75-09-2	Methylene chloride	U	5.30	ug/kg	2.12	5.30
75-15-0	Carbon disulfide	U	5.30	ug/kg	1.33	5.30
156-60-5	trans-1,2-Dichloroethylene	U	1.06	ug/kg	0.318	1.06
75-34-3	1,1-Dichloroethane	U	1.06	ug/kg	0.318	1.06
78-93-3	2-Butanone	U	5.30	ug/kg	1.59	5.30
156-59-2	cis-1,2-Dichloroethylene	U	1.06	ug/kg	0.318	1.06
594-20-7	2,2-Dichloropropane	U	1.06	ug/kg	0.318	1.06
67-66-3	Chloroform	U	1.06	ug/kg	0.318	1.06
74-97-5	Bromochloromethane	U	1.06	ug/kg	0.350	1.06
71-55-6	1,1,1-Trichloroethane	U	1.06	ug/kg	0.318	1.06
563-58-6	1,1-Dichloropropene	U	1.06	ug/kg	0.318	1.06
56-23-5	Carbon tetrachloride	U	1.06	ug/kg	0.318	1.06
107-06-2	1,2-Dichloroethane	U	1.06	ug/kg	0.318	1.06
71-43-2	Benzene	U	1.06	ug/kg	0.318	1.06
79-01-6	Trichloroethylene	U	1.06	ug/kg	0.350	1.06
78-87-5	1,2-Dichloropropane	U	1.06	ug/kg	0.318	1.06
75-27-4	Bromodichloromethane	U	1.06	ug/kg	0.318	1.06
74-95-3	Dibromomethane	U	1.06	ug/kg	0.318	1.06
108-10-1	4-Methyl-2-pentanone	U	5.30	ug/kg	1.33	5.30
10061-01-5	cis-1,3-Dichloropropylene	U	1.06	ug/kg	0.318	1.06
108-88-3	Toluene	U	1.06	ug/kg	0.318	1.06
10061-02-6	trans-1,3-Dichloropropylene	U	1.06	ug/kg	0.318	1.06
79-00-5	1,1,2-Trichloroethane	U	1.06	ug/kg	0.318	1.06
591-78-6	2-Hexanone	U	5.30	ug/kg	1.59	5.30
142-28-9	1,3-Dichloropropane	U	1.06	ug/kg	0.318	1.06
127-18-4	Tetrachloroethylene	U	1.06	ug/kg	0.318	1.06
124-48-1	Dibromochloromethane	U	1.06	ug/kg	0.318	1.06
106-93-4	1,2-Dibromoethane	U	1.06	ug/kg	0.318	1.06
108-90-7	Chlorobenzene	U	1.06	ug/kg	0.318	1.06

Volatile
Certificate of Analysis
Sample Summary

SDG Number: 10-1981	Date Collected: 02/17/2010 12:00	Matrix: R
Lab Sample ID: 247790003	Date Received: 02/23/2010 08:50	%Moisture: 5.7
Client ID: RE15-10-8387	Client: LANL010	Project: LANL01004
Batch ID: 959504	Method: SW846 8260B	SOP Ref: GL-OA-E-038
Run Date: 03/02/2010 00:34	Inst: VOA7.I	Dilution: 1
Prep Date: 03/01/2010 15:18	Analyst: AXO1	Purge Vol: 5 mL
Data File: 7b131.d	Aliquot: 5 g	Final Volume: 5 mL
	Column: DB-624	Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.06	ug/kg	0.318	1.06
179601-23-1	m,p-Xylenes	U	2.12	ug/kg	0.318	2.12
95-47-6	o-Xylene	U	1.06	ug/kg	0.318	1.06
100-42-5	Styrene	U	1.06	ug/kg	0.318	1.06
75-25-2	Bromoform	U	1.06	ug/kg	0.318	1.06
79-34-5	1,1,2,2-Tetrachloroethane	U	1.06	ug/kg	0.318	1.06
96-18-4	1,2,3-Trichloropropane	U	1.06	ug/kg	0.318	1.06
108-86-1	Bromobenzene	U	1.06	ug/kg	0.318	1.06
103-65-1	n-Propylbenzene	U	1.06	ug/kg	0.318	1.06
95-49-8	2-Chlorotoluene	U	1.06	ug/kg	0.318	1.06
98-82-8	Isopropylbenzene	U	1.06	ug/kg	0.318	1.06
108-67-8	1,3,5-Trimethylbenzene	U	1.06	ug/kg	0.318	1.06
106-43-4	4-Chlorotoluene	U	1.06	ug/kg	0.318	1.06
98-06-6	tert-Butylbenzene	U	1.06	ug/kg	0.318	1.06
95-63-6	1,2,4-Trimethylbenzene	U	1.06	ug/kg	0.318	1.06
135-98-8	sec-Butylbenzene	U	1.06	ug/kg	0.318	1.06
99-87-6	4-Isopropyltoluene	U	1.06	ug/kg	0.318	1.06
541-73-1	1,3-Dichlorobenzene	U	1.06	ug/kg	0.318	1.06
106-46-7	1,4-Dichlorobenzene	U	1.06	ug/kg	0.318	1.06
104-51-8	n-Butylbenzene	U	1.06	ug/kg	0.318	1.06
96-12-8	1,2-Dibromo-3-chloropropane	U	1.06	ug/kg	0.318	1.06
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	U	5.30	ug/kg	1.70	5.30
	Trichlorotrifluoroethane					
630-20-6	1,1,1,2-Tetrachloroethane	U	1.06	ug/kg	0.318	1.06
95-50-1	1,2-Dichlorobenzene	U	1.06	ug/kg	0.318	1.06

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	19.69	7.4	ug/kg		J

Volatile
Certificate of Analysis
Sample Summary

SDG Number: 10-1981	Date Collected: 02/17/2010 12:00	Matrix: R
Lab Sample ID: 247790001	Date Received: 02/23/2010 08:50	
	Client: LANL010	Project: LANL01004
Client ID: RE15-10-8408	Method: SW846 8260B	SOP Ref: GL-OA-E-038
Batch ID: 959504	Inst: VOA7.I	Dilution: 1
Run Date: 03/01/2010 17:07	Analyst: AXO1	Purge Vol: 5 mL
Prep Date: 03/01/2010 15:14	Aliquot: 5 g	Final Volume: 5 mL
Data File: 7b118.d	Column: DB-624	Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.300	1.00
67-64-1	Acetone	J	4.60	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	J	2.01	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number: 10-1981	Date Collected: 02/17/2010 12:00	Matrix: R
Lab Sample ID: 247790001	Date Received: 02/23/2010 08:50	
Client ID: RE15-10-8408	Client: LANL010	Project: LANL01004
Batch ID: 959504	Method: SW846 8260B	SOP Ref: GL-OA-E-038
Run Date: 03/01/2010 17:07	Inst: VOA7.I	Dilution: 1
Prep Date: 03/01/2010 15:14	Analyst: AX01	Purge Vol: 5 mL
Data File: 7b118.d	Aliquot: 5 g	Final Volume: 5 mL
	Column: DB-624	Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	U	5.00	ug/kg	1.60	5.00
	<i>Trichlorotrifluoroethane</i>					
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
No Tentatively Identified Compounds Found						
				ug/kg		

QC Summary

Volatile
Surrogate Recovery Report

Page 1 of 1

SDG Number: 10-1981**Matrix Type: SOLID****CAP Column (1) : DB-624**

Sample ID	Client ID	DCED4 %REC	TOL %REC	BFB %REC
1202057921	LCS for batch 959502	99	89	89
1202057922	LCS for batch 959502	97	94	89
1202057918	MB for batch 959502	105	96	95
247790001	RE15-10-8408	97	94	86
1202061836	LCS for batch 959502	100	93	92
1202061837	LCS for batch 959502	97	94	93
1202061835	MB for batch 959502	104	96	92
247790002	RE15-10-8386	106	97	90
247790003	RE15-10-8387	109	97	90

Surrogate**Acceptance Limits**

DCED4 = 1,2-Dichloroethane-d4

(66%-134%)

TOL = Toluene-d8

(71%-128%)

BFB = Bromofluorobenzene

(65%-130%)

* Recovery outside Acceptance Limits

Column to be used to flag recovery values

D Sample Diluted

Volatile

Page 1 of 6

Quality Control Summary
Spike Recovery Report

SDG Number: 10-1981

Sample Type: Post Spike

Client ID: RE15-10-8317PS

Matrix: R

Lab Sample ID: 1202057919

% Moisture: 6.3

Instrument: VOA7.I

Analysis Date: 03/02/2010 05:51

Dilution: 1

Analyst: AXO1

Prep Batch ID: 959502

Purge Vol: 5 mL

Batch ID: 959504

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
75-71-8	PS Dichlorodifluoromethane	50.0	0.00	U 29.8	60	39-148
74-87-3	PS Chloromethane	50.0	0.00	U 35.2	70	42-131
75-01-4	PS Vinyl chloride	50.0	0.00	U 41.0	82	50-127
74-83-9	PS Bromomethane	50.0	0.00	U 38.7	77	26-135
75-00-3	PS Chloroethane	50.0	0.00	U 38.2	76	54-128
75-69-4	PS Trichlorofluoromethane	50.0	0.00	U 35.0	70	55-138
67-64-1	PS Acetone	250	0.00	U 139	55	20-144
75-35-4	PS 1,1-Dichloroethylene	50.0	0.00	U 37.0	74	55-128
74-88-4	PS Iodomethane	250	0.00	U 197	79	47-132
75-09-2	PS Methylene chloride	50.0	0.00	U 37.5	75	56-123
75-15-0	PS Carbon disulfide	250	0.00	U 197	79	53-133
156-60-5	PS trans-1,2-Dichloroethylene	50.0	0.00	U 35.1	70	57-119
75-34-3	PS 1,1-Dichloroethane	50.0	0.00	U 38.4	77	62-125
78-93-3	PS 2-Butanone	250	0.00	U 167	67	30-150
156-59-2	PS cis-1,2-Dichloroethylene	50.0	0.00	U 36.7	73	60-124
594-20-7	PS 2,2-Dichloropropane	50.0	0.00	U 32.6	65	56-129
67-66-3	PS Chloroform	50.0	0.00	U 36.6	73	62-120
74-97-5	PS Bromochloromethane	50.0	0.00	U 40.5	81	51-135
71-55-6	PS 1,1,1-Trichloroethane	50.0	0.00	U 37.4	75	58-129
563-58-6	PS 1,1-Dichloropropene	50.0	0.00	U 37.0	74	59-126
56-23-5	PS Carbon tetrachloride	50.0	0.00	U 34.9	70	55-132
107-06-2	PS 1,2-Dichloroethane	50.0	0.00	U 35.8	72	54-121

Volatile
Quality Control Summary
Spike Recovery Report

SDG Number: 10-1981

Sample Type: Post Spike

Client ID: RE15-10-8317PS

Matrix: R

Lab Sample ID: 1202057919

%Moisture: 6.3

Instrument: VOA7.I

Analysis Date: 03/02/2010 05:51

Dilution: 1

Analyst: AXO1

Pren Batch II 959502

Purge Vol: 5 mL

Batch ID: 959504

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
71-43-2	PS Benzene	50.0	0.00 U	38.3	77	58-120
79-01-6	PS Trichloroethylene	50.0	0.00 U	39.8	80	54-130
78-87-5	PS 1,2-Dichloropropane	50.0	0.00 U	39.3	79	59-121
75-27-4	PS Bromodichloromethane	50.0	0.00 U	39.2	78	57-130
74-95-3	PS Dibromomethane	50.0	0.00 U	40.9	82	57-124
108-10-1	PS 4-Methyl-2-pentanone	250	0.00 U	187	75	40-137
10061-01-5	PS cis-1,3-Dichloropropylene	50.0	0.00 U	39.2	78	50-131
108-88-3	PS Toluene	50.0	0.00 U	34.7	69	54-119
10061-02-6	PS trans-1,3-Dichloropropylene	50.0	0.00 U	35.0	70	47-133
79-00-5	PS 1,1,2-Trichloroethane	50.0	0.00 U	36.1	72	60-130
591-78-6	PS 2-Hexanone	250	0.00 U	156	62	30-139
142-28-9	PS 1,3-Dichloropropane	50.0	0.00 U	37.9	76	59-125
127-18-4	PS Tetrachloroethylene	50.0	0.00 U	34.1	68	50-126
124-48-1	PS Dibromochloromethane	50.0	0.00 U	37.8	76	54-131
106-93-4	PS 1,2-Dibromoethane	50.0	0.00 U	38.7	77	55-127
108-90-7	PS Chlorobenzene	50.0	0.00 U	35.4	71	50-130
100-41-4	PS Ethylbenzene	50.0	0.00 U	33.7	67	50-121
179601-23-1	PS m,p-Xylenes	100	0.00 U	72.4	72	47-125
95-47-6	PS o-Xylene	50.0	0.00 U	37.4	75	51-127
100-42-5	PS Styrene	50.0	0.00 U	38.4	77	41-136
75-25-2	PS Bromoform	50.0	0.00 U	37.5	75	48-143
79-34-5	PS 1,1,2,2-Tetrachloroethane	50.0	0.00 U	34.7	69	52-129

Volatile

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Quality Control Summary
Spike Recovery Report

SDG Number: 10-1981

Sample Type: Post Spike

Client ID: RE15-10-8317PS

Matrix: R

Lab Sample ID: 1202057919

%Moisture: 6.3

Instrument: VOA7.I

Analysis Date: 03/02/2010 05:51

Dilution: 1

Analyst: AXO1

Pre Batch ID: 959502

Purge Vol: 5 mL

Batch ID: 959504

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
96-18-4	PS 1,2,3-Trichloropropane	50.0	0.00 U	35.6	71	56-139
108-86-1	PS Bromobenzene	50.0	0.00 U	34.8	70	54-125
103-65-1	PS n-Propylbenzene	50.0	0.00 U	31.0	62	46-127
95-49-8	PS 2-Chlorotoluene	50.0	0.00 U	32.9	66	47-130
98-82-8	PS Isopropylbenzene	50.0	0.00 U	31.3	63	42-126
108-67-8	PS 1,3,5-Trimethylbenzene	50.0	0.00 U	32.8	66	44-132
106-43-4	PS 4-Chlorotoluene	50.0	0.00 U	31.0	62	46-127
98-06-6	PS tert-Butylbenzene	50.0	0.00 U	33.8	68	48-136
95-63-6	PS 1,2,4-Trimethylbenzene	50.0	0.00 U	32.6	65	42-132
135-98-8	PS sec-Butylbenzene	50.0	0.00 U	32.9	66	47-130
99-87-6	PS 4-Isopropyltoluene	50.0	0.00 U	33.4	67	36-142
541-73-1	PS 1,3-Dichlorobenzene	50.0	0.00 U	33.5	67	41-130
106-46-7	PS 1,4-Dichlorobenzene	50.0	0.00 U	33.7	67	41-126
104-51-8	PS n-Butylbenzene	50.0	0.00 U	31.8	64	37-136
96-12-8	PS 1,2-Dibromo-3-chloropropane	50.0	0.00 U	41.0	82	42-143
630-20-6	PS 1,1,1,2-Tetrachloroethane	50.0	0.00 U	37.8	76	58-127
95-50-1	PS 1,2-Dichlorobenzene	50.0	0.00 U	35.1	70	42-128

Volatile

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Quality Control Summary
Spike Recovery Report

SDG Number: 10-1981

Sample Type: Post Spike Duplicate

Client ID: RE15-10-8317PSD

Matrix: R

Lab Sample ID: 1202057920

% Moisture: 6.3

Instrument: VOA7.I

Analysis Date: 03/02/2010 06:24

Dilution: 1

Analyst: AXO1

Pren Batch II 959502

Purge Vol: 5 mL

Batch ID: 959504

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD	Acceptance Limits
75-71-8	PSD Dichlorodifluoromethane	50.0	0.00	U 30.5	61	39-148	2	0-19
74-87-3	PSD Chloromethane	50.0	0.00	U 35.6	71	42-131	1	0-23
75-01-4	PSD Vinyl chloride	50.0	0.00	U 39.0	78	50-127	5	0-23
74-83-9	PSD Bromomethane	50.0	0.00	U 38.6	77	26-135	0	0-22
75-00-3	PSD Chloroethane	50.0	0.00	U 38.1	76	54-128	0	0-25
75-69-4	PSD Trichlorofluoromethane	50.0	0.00	U 35.7	71	55-138	2	0-21
67-64-1	PSD Acetone	250	0.00	U 161	64	20-144	15	0-22
75-35-4	PSD 1,1-Dichloroethylene	50.0	0.00	U 37.7	75	55-128	2	0-20
74-88-4	PSD Iodomethane	250	0.00	U 201	81	47-132	2	0-20
75-09-2	PSD Methylene chloride	50.0	0.00	U 40.3	81	56-123	7	0-20
75-15-0	PSD Carbon disulfide	250	0.00	U 197	79	53-133	0	0-22
156-60-5	PSD trans-1,2-Dichloroethylene	50.0	0.00	U 37.2	74	57-119	6	0-20
75-34-3	PSD 1,1-Dichloroethane	50.0	0.00	U 40.0	80	62-125	4	0-20
78-93-3	PSD 2-Butanone	250	0.00	U 184	74	30-150	10	0-21
156-59-2	PSD cis-1,2-Dichloroethylene	50.0	0.00	U 37.7	75	60-124	3	0-20
594-20-7	PSD 2,2-Dichloropropane	50.0	0.00	U 33.0	66	56-129	1	0-20
67-66-3	PSD Chloroform	50.0	0.00	U 37.7	75	62-120	3	0-25
74-97-5	PSD Bromochloromethane	50.0	0.00	U 42.4	85	51-135	5	0-20
71-55-6	PSD 1,1,1-Trichloroethane	50.0	0.00	U 37.3	75	58-129	0	0-20
563-58-6	PSD 1,1-Dichloropropene	50.0	0.00	U 37.5	75	59-126	1	0-20
56-23-5	PSD Carbon tetrachloride	50.0	0.00	U 36.3	73	55-132	4	0-20
107-06-2	PSD 1,2-Dichloroethane	50.0	0.00	U 39.4	79	54-121	10	0-20

Volatile
Quality Control Summary
Spike Recovery Report

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SDG Number: 10-1981

Sample Type: Post Spike Duplicate

Client ID: RE15-10-8317PSD

Matrix: R

Lab Sample ID: 1202057920

%Moisture: 6.3

Instrument: VOA7.I

Analysis Date: 03/02/2010 06:24

Dilution: 1

Analyst: AXO1

Pren Batch II 959502

Purge Vol: 5 mL

Batch ID: 959504

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
71-43-2	PSD Benzene	50.0	0.00 U	39.1	78	58-120	2	0-20
79-01-6	PSD Trichloroethylene	50.0	0.00 U	39.5	79	54-130	1	0-23
78-87-5	PSD 1,2-Dichloropropane	50.0	0.00 U	41.7	83	59-121	6	0-20
75-27-4	PSD Bromodichloromethane	50.0	0.00 U	40.4	81	57-130	3	0-20
74-95-3	PSD Dibromomethane	50.0	0.00 U	43.9	88	57-124	7	0-20
108-10-1	PSD 4-Methyl-2-pentanone	250	0.00 U	200	80	40-137	7	0-25
10061-01-5	PSD cis-1,3-Dichloropropylene	50.0	0.00 U	41.5	83	50-131	6	0-20
108-88-3	PSD Toluene	50.0	0.00 U	35.5	71	54-119	2	0-23
10061-02-6	PSD trans-1,3-Dichloropropylene	50.0	0.00 U	37.7	75	47-133	7	0-24
79-00-5	PSD 1,1,2-Trichloroethane	50.0	0.00 U	39.3	79	60-130	8	0-20
591-78-6	PSD 2-Hexanone	250	0.00 U	161	65	30-139	4	0-21
142-28-9	PSD 1,3-Dichloropropane	50.0	0.00 U	40.6	81	59-125	7	0-20
127-18-4	PSD Tetrachloroethylene	50.0	0.00 U	33.9	68	50-126	1	0-20
124-48-1	PSD Dibromochloromethane	50.0	0.00 U	39.7	79	54-131	5	0-23
106-93-4	PSD 1,2-Dibromoethane	50.0	0.00 U	40.6	81	55-127	5	0-23
108-90-7	PSD Chlorobenzene	50.0	0.00 U	36.9	74	50-130	4	0-24
100-41-4	PSD Ethylbenzene	50.0	0.00 U	34.2	68	50-121	1	0-24
179601-23-1	PSD m,p-Xylenes	100	0.00 U	73.6	74	47-125	2	0-25
95-47-6	PSD o-Xylene	50.0	0.00 U	38.0	76	51-127	2	0-24
100-42-5	PSD Styrene	50.0	0.00 U	39.3	79	41-136	2	0-24
75-25-2	PSD Bromoform	50.0	0.00 U	41.3	83	48-143	10	0-20
79-34-5	PSD 1,1,2,2-Tetrachloroethane	50.0	0.00 U	38.1	76	52-129	9	0-20

Volatile

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Quality Control Summary
Spike Recovery Report

SDG Number: 10-1981

Sample Type: Post Spike Duplicate

Client ID: RE15-10-8317PSD

Matrix: R

Lab Sample ID: 1202057920

% Moisture: 6.3

Instrument: VOA7.I

Analysis Date: 03/02/2010 06:24

Dilution: 1

Analyst: AXO1

Prep Batch II 959502

Purge Vol: 5 mL

Batch ID: 959504

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
96-18-4	PSD 1,2,3-Trichloropropane	50.0	0.00	U 38.9	78	56-139	9	0-34
108-86-1	PSD Bromobenzene	50.0	0.00	U 37.2	74	54-125	7	0-22
103-65-1	PSD n-Propylbenzene	50.0	0.00	U 31.8	64	46-127	3	0-25
95-49-8	PSD 2-Chlorotoluene	50.0	0.00	U 34.3	69	47-130	4	0-24
98-82-8	PSD Isopropylbenzene	50.0	0.00	U 32.5	65	42-126	4	0-22
108-67-8	PSD 1,3,5-Trimethylbenzene	50.0	0.00	U 34.6	69	44-132	6	0-25
106-43-4	PSD 4-Chlorotoluene	50.0	0.00	U 32.1	64	46-127	4	0-26
98-06-6	PSD tert-Butylbenzene	50.0	0.00	U 34.6	69	48-136	2	0-24
95-63-6	PSD 1,2,4-Trimethylbenzene	50.0	0.00	U 34.0	68	42-132	4	0-26
135-98-8	PSD sec-Butylbenzene	50.0	0.00	U 33.4	67	47-130	1	0-27
99-87-6	PSD 4-Isopropyltoluene	50.0	0.00	U 34.4	69	36-142	3	0-27
541-73-1	PSD 1,3-Dichlorobenzene	50.0	0.00	U 34.9	70	41-130	4	0-25
106-46-7	PSD 1,4-Dichlorobenzene	50.0	0.00	U 35.6	71	41-126	6	0-25
104-51-8	PSD n-Butylbenzene	50.0	0.00	U 32.6	65	37-136	2	0-29
96-12-8	PSD 1,2-Dibromo-3-chloropropane	50.0	0.00	U 42.8	86	42-143	4	0-21
630-20-6	PSD 1,1,1,2-Tetrachloroethane	50.0	0.00	U 38.7	77	58-127	2	0-20
95-50-1	PSD 1,2-Dichlorobenzene	50.0	0.00	U 36.9	74	42-128	5	0-24

Volatile
Quality Control Summary
Spike Recovery Report

SDG Number: 10-1981

Sample Type: Laboratory Control Sample

Client ID: LCS for batch 959502

Matrix: SOIL

Lab Sample ID: 1202057921

Instrument: VOA7.I

Analysis Date: 03/01/2010 09:14

Dilution: 1

Analyst: AXO1

Prep Batch ID: 959502

Purge Vol: 5 mL

Batch ID: 959504

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
75-71-8	LCS Dichlorodifluoromethane	50.0	0.0	44.0	88	52-151
74-87-3	LCS Chloromethane	50.0	0.0	39.5	79	56-130
75-01-4	LCS Vinyl chloride	50.0	0.0	42.7	85	66-130
74-83-9	LCS Bromomethane	50.0	0.0	48.5	97	70-126
75-00-3	LCS Chloroethane	50.0	0.0	49.4	99	67-129
75-69-4	LCS Trichlorofluoromethane	50.0	0.0	54.0	108	73-143
67-64-1	LCS Acetone	250	0.0	241	96	30-140
75-35-4	LCS 1,1-Dichloroethylene	50.0	0.0	49.4	99	71-129
74-88-4	LCS Iodomethane	250	0.0	246	98	72-125
75-09-2	LCS Methylene chloride	50.0	0.0	47.9	96	64-121
75-15-0	LCS Carbon disulfide	250	0.0	240	96	70-133
156-60-5	LCS trans-1,2-Dichloroethylene	50.0	0.0	45.1	90	73-120
75-34-3	LCS 1,1-Dichloroethane	50.0	0.0	48.6	97	73-120
78-93-3	LCS 2-Butanone	250	0.0	233	93	32-145
156-59-2	LCS cis-1,2-Dichloroethylene	50.0	0.0	43.9	88	74-124
594-20-7	LCS 2,2-Dichloropropane	50.0	0.0	50.3	101	73-134
67-66-3	LCS Chloroform	50.0	0.0	47.1	94	74-120
74-97-5	LCS Bromochloromethane	50.0	0.0	46.3	93	73-122
71-55-6	LCS 1,1,1-Trichloroethane	50.0	0.0	53.4	107	74-132
563-58-6	LCS 1,1-Dichloropropene	50.0	0.0	49.8	100	79-128
56-23-5	LCS Carbon tetrachloride	50.0	0.0	52.5	105	75-135
107-06-2	LCS 1,2-Dichloroethane	50.0	0.0	43.8	88	65-120

Volatile
Quality Control Summary
Spike Recovery Report

SDG Number: 10-1981

Sample Type: Laboratory Control Sample

Client ID: LCS for batch 959502

Matrix: SOIL

Lab Sample ID: 1202057921

Instrument: VOA7.I

Analysis Date: 03/01/2010 09:14

Dilution: 1

Analyst: AXO1

Pren Batch II 959502

Purge Vol: 5 mL

Batch ID: 959504

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
71-43-2	LCS Benzene	50.0	0.0	46.3	93	74-120
79-01-6	LCS Trichloroethylene	50.0	0.0	50.0	100	77-124
78-87-5	LCS 1,2-Dichloropropane	50.0	0.0	45.0	90	73-120
75-27-4	LCS Bromodichloromethane	50.0	0.0	49.6	99	75-128
74-95-3	LCS Dibromomethane	50.0	0.0	50.2	100	75-120
108-10-1	LCS 4-Methyl-2-pentanone	250	0.0	222	89	63-133
10061-01-5	LCS cis-1,3-Dichloropropylene	50.0	0.0	50.5	101	78-127
108-88-3	LCS Toluene	50.0	0.0	44.2	88	74-120
10061-02-6	LCS trans-1,3-Dichloropropylene	50.0	0.0	46.8	94	70-125
79-00-5	LCS 1,1,2-Trichloroethane	50.0	0.0	43.8	88	75-120
591-78-6	LCS 2-Hexanone	250	0.0	192	77	40-153
142-28-9	LCS 1,3-Dichloropropane	50.0	0.0	43.7	87	73-120
127-18-4	LCS Tetrachloroethylene	50.0	0.0	46.3	93	72-126
124-48-1	LCS Dibromochloromethane	50.0	0.0	48.5	97	74-126
106-93-4	LCS 1,2-Dibromoethane	50.0	0.0	47.8	96	79-120
108-90-7	LCS Chlorobenzene	50.0	0.0	43.7	87	76-120
100-41-4	LCS Ethylbenzene	50.0	0.0	41.0	82	74-120
179601-23-1	LCS m,p-Xylenes	100	0.0	89.7	90	76-120
95-47-6	LCS o-Xylene	50.0	0.0	45.8	92	76-122
100-42-5	LCS Styrene	50.0	0.0	45.6	91	75-125
75-25-2	LCS Bromoform	50.0	0.0	47.9	96	68-135
79-34-5	LCS 1,1,2,2-Tetrachloroethane	50.0	0.0	41.8	84	72-122

Volatile
Quality Control Summary
Spike Recovery Report

Page 3 of 3

SDG Number: 10-1981

Sample Type: Laboratory Control Sample

Client ID: LCS for batch 959502

Matrix: SOIL

Lab Sample ID: 1202057921

Instrument: VOA7.I

Analysis Date: 03/01/2010 09:14

Dilution: 1

Analyst: AXO1

Pre Batch ID: 959502

Purge Vol: 5 mL

Batch ID: 959504

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
96-18-4	LCS 1,2,3-Trichloropropane	50.0	0.0	45.1	90	72-129
108-86-1	LCS Bromobenzene	50.0	0.0	42.7	85	74-120
103-65-1	LCS n-Propylbenzene	50.0	0.0	38.7	77	70-120
95-49-8	LCS 2-Chlorotoluene	50.0	0.0	39.3	79	70-120
98-82-8	LCS Isopropylbenzene	50.0	0.0	40.4	81	60-121
108-67-8	LCS 1,3,5-Trimethylbenzene	50.0	0.0	41.9	84	71-121
106-43-4	LCS 4-Chlorotoluene	50.0	0.0	40.8	82	71-120
98-06-6	LCS tert-Butylbenzene	50.0	0.0	43.4	87	75-123
95-63-6	LCS 1,2,4-Trimethylbenzene	50.0	0.0	42.2	84	73-120
135-98-8	LCS sec-Butylbenzene	50.0	0.0	42.0	84	74-123
99-87-6	LCS 4-Isopropyltoluene	50.0	0.0	44.4	89	76-127
541-73-1	LCS 1,3-Dichlorobenzene	50.0	0.0	42.7	85	75-120
106-46-7	LCS 1,4-Dichlorobenzene	50.0	0.0	43.1	86	73-120
104-51-8	LCS n-Butylbenzene	50.0	0.0	42.4	85	73-128
96-12-8	LCS 1,2-Dibromo-3-chloropropane	50.0	0.0	49.0	98	69-136
630-20-6	LCS 1,1,1,2-Tetrachloroethane	50.0	0.0	47.4	95	75-124
95-50-1	LCS 1,2-Dichlorobenzene	50.0	0.0	43.2	86	75-120

Volatile

Page 1 of 1

Quality Control Summary
Spike Recovery Report

SDG Number: 10-1981

Sample Type: Laboratory Control Sample

Client ID: LCS for batch 959502

Matrix: SOIL

Lab Sample ID: 1202057922

Instrument: VOA7.I

Analysis Date: 03/01/2010 10:22

Dilution: 1

Analyst: AXO1

Pre Batch ID: 959502

Purge Vol: 5 mL

Batch ID: 959504

CAS No	Paramname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
76-13-1	LCS 1,1,2-Trichloro-1,2,2-Trifluor Trichlorotrifluoroethane	250	0.0	240	96	67-140

Volatile
Quality Control Summary
Spike Recovery Report

Page 1 of 3

SDG Number: 10-1981

Sample Type: Laboratory Control Sample

Client ID: LCS for batch 959502

Matrix: MISC SOLID

Lab Sample ID: 1202061836

Instrument: VOA7.1

Analysis Date: 03/01/2010 21:05

Dilution: 1

Analyst: AXO1

Prep Batch ID: 959502

Purge Vol: 5 mL

Batch ID: 959504

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
75-71-8	LCS Dichlorodifluoromethane	50.0	0.0	36.9	74	52-151
74-87-3	LCS Chloromethane	50.0	0.0	40.1	80	56-130
75-01-4	LCS Vinyl chloride	50.0	0.0	43.5	87	66-130
74-83-9	LCS Bromomethane	50.0	0.0	46.1	92	70-126
75-00-3	LCS Chloroethane	50.0	0.0	46.8	94	67-129
75-69-4	LCS Trichlorofluoromethane	50.0	0.0	46.3	93	73-143
67-64-1	LCS Acetone	250	0.0	219	88	30-140
75-35-4	LCS 1,1-Dichloroethylene	50.0	0.0	45.9	92	71-129
74-88-4	LCS Iodomethane	250	0.0	238	95	72-125
75-09-2	LCS Methylene chloride	50.0	0.0	47.5	95	64-121
75-15-0	LCS Carbon disulfide	250	0.0	235	94	70-133
156-60-5	LCS trans-1,2-Dichloroethylene	50.0	0.0	45.0	90	73-120
75-34-3	LCS 1,1-Dichloroethane	50.0	0.0	47.8	96	73-120
78-93-3	LCS 2-Butanone	250	0.0	219	87	32-145
156-59-2	LCS cis-1,2-Dichloroethylene	50.0	0.0	45.2	90	74-124
594-20-7	LCS 2,2-Dichloropropane	50.0	0.0	44.8	90	73-134
67-66-3	LCS Chloroform	50.0	0.0	45.5	91	74-120
74-97-5	LCS Bromochloromethane	50.0	0.0	46.7	93	73-122
71-55-6	LCS 1,1,1-Trichloroethane	50.0	0.0	49.4	99	74-132
563-58-6	LCS 1,1-Dichloropropene	50.0	0.0	47.3	95	79-128
56-23-5	LCS Carbon tetrachloride	50.0	0.0	46.3	93	75-135
107-06-2	LCS 1,2-Dichloroethane	50.0	0.0	44.2	88	65-120

Volatile
Quality Control Summary
Spike Recovery Report

Page 2 of 3

SDG Number: 10-1981

Sample Type: Laboratory Control Sample

Client ID: LCS for batch 959502

Matrix: MISC SOLID

Lab Sample ID: 1202061836

Instrument: VOA7.I

Analysis Date: 03/01/2010 21:05

Dilution: 1

Analyst: AXO1

Pre Batch II 959502

Purge Vol: 5 mL

Batch ID: 959504

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
71-43-2	LCS Benzene	50.0	0.0	46.0	92	74-120
79-01-6	LCS Trichloroethylene	50.0	0.0	48.4	97	77-124
78-87-5	LCS 1,2-Dichloropropane	50.0	0.0	47.1	94	73-120
75-27-4	LCS Bromodichloromethane	50.0	0.0	48.2	96	75-128
74-95-3	LCS Dibromomethane	50.0	0.0	48.7	97	75-120
108-10-1	LCS 4-Methyl-2-pentanone	250	0.0	212	85	63-133
10061-01-5	LCS cis-1,3-Dichloropropylene	50.0	0.0	49.4	99	78-127
108-88-3	LCS Toluene	50.0	0.0	43.6	87	74-120
10061-02-6	LCS trans-1,3-Dichloropropylene	50.0	0.0	45.4	91	70-125
79-00-5	LCS 1,1,2-Trichloroethane	50.0	0.0	42.8	86	75-120
591-78-6	LCS 2-Hexanone	250	0.0	185	74	40-153
142-28-9	LCS 1,3-Dichloropropane	50.0	0.0	44.1	88	73-120
127-18-4	LCS Tetrachloroethylene	50.0	0.0	44.1	88	72-126
124-48-1	LCS Dibromochloromethane	50.0	0.0	45.8	92	74-126
106-93-4	LCS 1,2-Dibromoethane	50.0	0.0	44.8	90	79-120
108-90-7	LCS Chlorobenzene	50.0	0.0	43.6	87	76-120
100-41-4	LCS Ethylbenzene	50.0	0.0	41.1	82	74-120
179601-23-1	LCS m,p-Xylenes	100	0.0	88.9	89	76-120
95-47-6	LCS o-Xylene	50.0	0.0	45.5	91	76-122
100-42-5	LCS Styrene	50.0	0.0	45.7	91	75-125
75-25-2	LCS Bromoform	50.0	0.0	45.9	92	68-135
79-34-5	LCS 1,1,2,2-Tetrachloroethane	50.0	0.0	40.9	82	72-122

Volatile
Quality Control Summary
Spike Recovery Report

SDG Number: 10-1981

Sample Type: Laboratory Control Sample

Client ID: LCS for batch 959502

Matrix: MISC SOLID

Lab Sample ID: 1202061836

Instrument: VOA7.I

Analysis Date: 03/01/2010 21:05

Dilution: 1

Analyst: AXO1

Pre Batch ID: 959502

Purge Vol: 5 mL

Batch ID: 959504

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
96-18-4	LCS 1,2,3-Trichloropropane	50.0	0.0	41.3	83	72-129
108-86-1	LCS Bromobenzene	50.0	0.0	43.3	87	74-120
103-65-1	LCS n-Propylbenzene	50.0	0.0	39.4	79	70-120
95-49-8	LCS 2-Chlorotoluene	50.0	0.0	40.6	81	70-120
98-82-8	LCS Isopropylbenzene	50.0	0.0	40.5	81	60-121
108-67-8	LCS 1,3,5-Trimethylbenzene	50.0	0.0	42.6	85	71-121
106-43-4	LCS 4-Chlorotoluene	50.0	0.0	40.7	81	71-120
98-06-6	LCS tert-Butylbenzene	50.0	0.0	42.8	86	75-123
95-63-6	LCS 1,2,4-Trimethylbenzene	50.0	0.0	41.7	83	73-120
135-98-8	LCS sec-Butylbenzene	50.0	0.0	41.9	84	74-123
99-87-6	LCS 4-Isopropyltoluene	50.0	0.0	43.1	86	76-127
541-73-1	LCS 1,3-Dichlorobenzene	50.0	0.0	41.7	83	75-120
106-46-7	LCS 1,4-Dichlorobenzene	50.0	0.0	42.9	86	73-120
104-51-8	LCS n-Butylbenzene	50.0	0.0	42.5	85	73-128
96-12-8	LCS 1,2-Dibromo-3-chloropropane	50.0	0.0	44.7	89	69-136
630-20-6	LCS 1,1,1,2-Tetrachloroethane	50.0	0.0	46.8	94	75-124
95-50-1	LCS 1,2-Dichlorobenzene	50.0	0.0	42.8	86	75-120

Volatile

Page 1 of 1

Quality Control Summary
Spike Recovery Report

SDG Number: 10-1981

Sample Type: Laboratory Control Sample

Client ID: LCS for batch 959502

Matrix: MISC SOLID

Lab Sample ID:1202061837

Instrument: VOA7.I

Analysis Date: 03/01/2010 22:15

Dilution: 1

Analyst: AXO1

Pren Batch II 959502

Purge Vol: 5 mL

Batch ID: 959504

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
76-13-1	LCS 1,1,2-Trichloro-1,2,2-Trifluor Trichlorotrifluoroethane	250	0.0	226	90	67-140

Method Blank Summary

Page 1 of 1

SDG Number:	10-1981	Client:	LANL010	Matrix:	SOIL
Client ID:	MB for batch 959502	Instrument ID:	VOA7.I	Data File:	7b108LL.d
Lab Sample ID:	1202057918	Prep Date:	03/01/2010 06:30	Analyzed:	03/01/10 11:29
Column:	DB-624	Heated Purge:	Yes		

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 959502	1202057921	7b104LL.d	03/01/10	0914
02 LCS for batch 959502	1202057922	7b106LL.d	03/01/10	1022
03 RE15-10-8408	247790001	7b118.d	03/01/10	1707

Method Blank Summary

Page 1 of 1

SDG Number:	10-1981	Client:	LANL010	Matrix:	MISC SOLID
Client ID:	MB for batch 959502	Instrument ID:	VOA7.I	Data File:	7b1291LL.d
Lab Sample ID:	1202061835	Prep Date:	03/01/2010 15:00	Analyzed:	03/01/10 23:24
Column:	DB-624	Heated Purge:	Yes		

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 959502	1202061836	7b125LL.d	03/01/10	2105
02 LCS for batch 959502	1202061837	7b127LL.d	03/01/10	2215
03 RE15-10-8386	247790002	7b130.d	03/01/10	2359
04 RE15-10-8387	247790003	7b131.d	03/02/10	0034

Instrument Performance Check

BFB

Lab Name GEL Laboratories LLC

Client SDG: 10-1981

Instrument ID: VOA7.1

Injection Date/Time: 17-FEB-10 15:29

Column Description: db624

Lab File ID /021710v7/7z309.d

m/e	Ion Abundance Criteria	% Relative Abundance
95	Base Peak, 100% Relative Abundance	100
50	15.0 - 40.0% of mass 95	30.8
75	30.0 - 60.0% of mass 95	54.2
96	5.0 - 9.0% of mass 95	7
173	Less than 2.0% of mass 174	0.6
174	50.0 - 100.0% of mass 95	63
175	5.0 - 9.0% of mass 174	7.2
176	95.0 - 101.0% of mass 174	97.2
177	5.0 - 9.0% of mass 176	6.9

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
VSTD001	W7VM100217-06	7z310.d	17-FEB-10 16:02
VSTD002	W7VM100217-07	7z311.d	17-FEB-10 16:35
VSTD005	W7VM100217-08	7z312.d	17-FEB-10 17:09
VSTD010	W7VM100217-09	7z313.d	17-FEB-10 17:44
VSTD020	W7VM100217-10	7z314.d	17-FEB-10 18:20
VSTD050	W7VM100217-11	7z315.d	17-FEB-10 18:55
VSTD100	W7VM100217-12	7z316.d	17-FEB-10 19:30
VSTD0005	W7VM100217-13	7z318.d	17-FEB-10 20:39
VSTD005S	W7VM100217-14	7z319.d	17-FEB-10 21:14
VSTD010S	W7VM100217-15	7z320.d	17-FEB-10 21:49
VSTD025S	W7VM100217-16	7z321.d	17-FEB-10 22:24
VSTD050S	W7VM100217-17	7z322.d	17-FEB-10 22:59
VSTD100S	W7VM100217-18	7z323.d	17-FEB-10 23:33
VSTD250S	W7VM100217-19	7z324.d	18-FEB-10 00:08
VSTD500S	W7VM100217-20	7z325.d	18-FEB-10 00:42
ICV	W7VM100217-22	7z328.d	18-FEB-10 02:27
SICV	W7VM100217-23	7z329.d	18-FEB-10 03:03

Instrument Performance Check

BFB

Lab Name GEL Laboratories LLC

Client SDG: 10-1981

Instrument ID: VOA7.I

Injection Date/Time: 01-MAR-10 08:39

Column Description: db624

Lab File ID /030110v7/7b103BFB.d

m/e	Ion Abundance Criteria	% Relative Abundance
95	Base Peak, 100% Relative Abundance	100
50	15.0 - 40.0% of mass 95	26.7
75	30.0 - 60.0% of mass 95	51.9
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.5
174	50.0 - 100.0% of mass 95	66.7
175	5.0 - 9.0% of mass 174	7.1
176	95.0 - 101.0% of mass 174	99.1
177	5.0 - 9.0% of mass 176	6.5

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
VSTD050	W7VM100301-02	7b103.d	01-MAR-10 08:39
LCS	1202057921	7b104LL.d	01-MAR-10 09:14
VSTD250S	W7VM100301-04	7b105.d	01-MAR-10 09:48
SLCS	1202057922	7b106LL.d	01-MAR-10 10:22
BLANK	1202057918	7b108LL.d	01-MAR-10 11:29
RE15-10-8408	247790001	7b118.d	01-MAR-10 17:07

Instrument Performance Check

BFB

Lab Name GEL Laboratories LLC

Client SDG: 10-1981

Instrument ID: VOA7.I

Injection Date/Time: 01-MAR-10 20:31

Column Description: db624

Lab File ID /030110v7/7b124BFB.d

m/e	Ion Abundance Criteria	% Relative Abundance
95	Base Peak, 100% Relative Abundance	100
50	15.0 - 40.0% of mass 95	28.7
75	30.0 - 60.0% of mass 95	52.3
96	5.0 - 9.0% of mass 95	7
173	Less than 2.0% of mass 174	0.5
174	50.0 - 100.0% of mass 95	67.8
175	5.0 - 9.0% of mass 174	7.2
176	95.0 - 101.0% of mass 174	97.2
177	5.0 - 9.0% of mass 176	6.8

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
VSTD050	W7VM100301-06	7b124.d	01-MAR-10 20:31
LCS	1202061836	7b125LL.d	01-MAR-10 21:05
VSTD250S	W7VM100301-08	7b126.d	01-MAR-10 21:40
SLCS	1202061837	7b127LL.d	01-MAR-10 22:15
BLANK	1202061835	7b129LL.d	01-MAR-10 23:24
RE15-10-8386	247790002	7b130.d	01-MAR-10 23:59
RE15-10-8387	247790003	7b131.d	02-MAR-10 00:34

Internal Standard Area and RT Summary

Lab Name : GEL Laboratories LLC

Client SDG: 10-1981

Instrument: VOA7.1

STD Analysis Time: 01-MAR-10 08:39

GC Column: DB-624

Data File: 7b103.d

	Fluorobenzene			Chlorobenzene-d5			1,4-Dichlorobenzene-d4		
	Area	#	RT	Area	#	RT	Area	#	RT
12 Hour STD	1126921		15.3	884081		18.7	466904		21.0
Upper Limit	2253842		15.8	1768162		19.2	933808		21.5
Lower Limit	563461		14.8	442041		18.2	233452		20.5
Sample ID									
BLK01LCS	1113504		15.3	886173		18.7	469206		21.0
BLK01SLCS	1218274		15.3	892447		18.7	460410		21.0
BLK01	1080737		15.3	801384		18.7	392298		21.0
RE15-10-8408	754488		15.3	574296		18.7	283698		21.0

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

Internal Standard Area and RT Summary

Lab Name : GEL Laboratories LLC

Client SDG: 10-1981

Instrument: VOA7.J

STD Analysis Time: 01-MAR-10 20:31

GC Column: DB-624

Data File: 7b124.d

	Fluorobenzene			Chlorobenzene-d5			1,4-Dichlorobenzene-d4		
	Area	#	RT	Area	#	RT	Area	#	RT
12 Hour STD	905494		15.3	718701		18.7	360704		21.0
Upper Limit	1810988		15.8	1437402		19.2	721408		21.5
Lower Limit	452747		14.8	359351		18.2	180352		20.5
Sample ID									
BLK02LCS	947726		15.3	755709		18.7	390603		21.0
BLK02SLCS	1068022		15.3	794732		18.7	383391		21.0
BLK02	915717		15.3	692712		18.7	337818		21.0
RE15-10-8386	816126		15.3	610847		18.7	298076		21.0
RE15-10-8387	835041		15.3	629628		18.7	313490		21.0

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

Volatile
Certificate of Analysis
Sample Summary

SDG Number: 10-1981	Date Collected: 02/17/2010 12:00	Matrix: R
Lab Sample ID: 247790002	Date Received: 02/23/2010 08:50	% Moisture: 5.4
	Client: LANL010	Project: LANL01004
Client ID: RE15-10-8386	Method: SW846 8260B	SOP Ref: GL-OA-E-038
Batch ID: 959504	Inst: VOA7.1	Dilution: 1
Run Date: 03/01/2010 23:59	Analyst: AX01	Purge Vol: 5 mL
Prep Date: 03/01/2010 15:16	Aliquot: 5 g	Final Volume: 5 mL
Data File: 7h130.d	Column: DB-624	Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.06	ug/kg	0.359	1.06
74-87-3	Chloromethane	U	1.06	ug/kg	0.317	1.06
75-01-4	Vinyl chloride	U	1.06	ug/kg	0.317	1.06
74-83-9	Bromomethane	U	1.06	ug/kg	0.317	1.06
75-00-3	Chloroethane	U	1.06	ug/kg	0.317	1.06
75-69-4	Trichlorofluoromethane	U	1.06	ug/kg	0.317	1.06
67-64-1	Acetone	U	5.29	ug/kg	1.75	5.29
75-35-4	1,1-Dichloroethylene	U	1.06	ug/kg	0.317	1.06
74-88-4	Iodomethane	U	5.29	ug/kg	1.69	5.29
75-09-2	Methylene chloride	U	5.29	ug/kg	2.11	5.29
75-15-0	Carbon disulfide	U	5.29	ug/kg	1.32	5.29
156-60-5	trans-1,2-Dichloroethylene	U	1.06	ug/kg	0.317	1.06
75-34-3	1,1-Dichloroethane	U	1.06	ug/kg	0.317	1.06
78-93-3	2-Butanone	U	5.29	ug/kg	1.59	5.29
156-59-2	cis-1,2-Dichloroethylene	U	1.06	ug/kg	0.317	1.06
594-20-7	2,2-Dichloropropane	U	1.06	ug/kg	0.317	1.06
67-66-3	Chloroform	U	1.06	ug/kg	0.317	1.06
74-97-5	Bromochloromethane	U	1.06	ug/kg	0.349	1.06
71-55-6	1,1,1-Trichloroethane	U	1.06	ug/kg	0.317	1.06
563-58-6	1,1-Dichloropropene	U	1.06	ug/kg	0.317	1.06
56-23-5	Carbon tetrachloride	U	1.06	ug/kg	0.317	1.06
107-06-2	1,2-Dichloroethane	U	1.06	ug/kg	0.317	1.06
71-43-2	Benzene	U	1.06	ug/kg	0.317	1.06
79-01-6	Trichloroethylene	U	1.06	ug/kg	0.349	1.06
78-87-5	1,2-Dichloropropane	U	1.06	ug/kg	0.317	1.06
75-27-4	Bromodichloromethane	U	1.06	ug/kg	0.317	1.06
74-95-3	Dibromomethane	U	1.06	ug/kg	0.317	1.06
108-10-1	4-Methyl-2-pentanone	U	5.29	ug/kg	1.32	5.29
10061-01-5	cis-1,3-Dichloropropylene	U	1.06	ug/kg	0.317	1.06
108-88-3	Toluene	U	1.06	ug/kg	0.317	1.06
10061-02-6	trans-1,3-Dichloropropylene	U	1.06	ug/kg	0.317	1.06
79-00-5	1,1,2-Trichloroethane	U	1.06	ug/kg	0.317	1.06
591-78-6	2-Hexanone	U	5.29	ug/kg	1.59	5.29
142-28-9	1,3-Dichloropropane	U	1.06	ug/kg	0.317	1.06
127-18-4	Tetrachloroethylene	U	1.06	ug/kg	0.317	1.06
124-48-1	Dibromochloromethane	U	1.06	ug/kg	0.317	1.06
106-93-4	1,2-Dibromoethane	U	1.06	ug/kg	0.317	1.06
108-90-7	Chlorobenzene	U	1.06	ug/kg	0.317	1.06

Volatile
Certificate of Analysis
Sample Summary

SDG Number: 10-1981	Date Collected: 02/17/2010 12:00	Matrix: R
Lab Sample ID: 247790002	Date Received: 02/23/2010 08:50	%Moisture: 5.4
	Client: LANL010	Project: LANL01004
Client ID: RE15-10-8386	Method: SW846 8260B	SOP Ref: GL-OA-E-038
Batch ID: 959504	Inst: VOA7.1	Dilution: 1
Run Date: 03/01/2010 23:59	Analyst: AXO1	Purge Vol: 5 mL
Prep Date: 03/01/2010 15:16	Aliquot: 5 g	Final Volume: 5 mL
Data File: 7b130.d	Column: DB-624	Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.06	ug/kg	0.317	1.06
179601-23-1	m,p-Xylenes	U	2.11	ug/kg	0.317	2.11
95-47-6	o-Xylene	U	1.06	ug/kg	0.317	1.06
100-42-5	Styrene	U	1.06	ug/kg	0.317	1.06
75-25-2	Bromoform	U	1.06	ug/kg	0.317	1.06
79-34-5	1,1,2,2-Tetrachloroethane	U	1.06	ug/kg	0.317	1.06
96-18-4	1,2,3-Trichloropropane	U	1.06	ug/kg	0.317	1.06
108-86-1	Bromobenzene	U	1.06	ug/kg	0.317	1.06
103-65-1	n-Propylbenzene	U	1.06	ug/kg	0.317	1.06
95-49-8	2-Chlorotoluene	U	1.06	ug/kg	0.317	1.06
98-82-8	Isopropylbenzene	U	1.06	ug/kg	0.317	1.06
108-67-8	1,3,5-Trimethylbenzene	U	1.06	ug/kg	0.317	1.06
106-43-4	4-Chlorotoluene	U	1.06	ug/kg	0.317	1.06
98-06-6	tert-Butylbenzene	U	1.06	ug/kg	0.317	1.06
95-63-6	1,2,4-Trimethylbenzene	U	1.06	ug/kg	0.317	1.06
135-98-8	sec-Butylbenzene	U	1.06	ug/kg	0.317	1.06
99-87-6	4-Isopropyltoluene	U	1.06	ug/kg	0.317	1.06
541-73-1	1,3-Dichlorobenzene	U	1.06	ug/kg	0.317	1.06
106-46-7	1,4-Dichlorobenzene	U	1.06	ug/kg	0.317	1.06
104-51-8	n-Butylbenzene	U	1.06	ug/kg	0.317	1.06
96-12-8	1,2-Dibromo-3-chloropropane	U	1.06	ug/kg	0.317	1.06
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	U	5.29	ug/kg	1.69	5.29
	Trichlorotrifluoroethane					
630-20-6	1,1,1,2-Tetrachloroethane	U	1.06	ug/kg	0.317	1.06
95-50-1	1,2-Dichlorobenzene	U	1.06	ug/kg	0.317	1.06

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
No Tentatively Identified Compounds Found				ug/kg		

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA7.i/030110v7/7b130.d

Lab Smp Id: 247790002

Client Smp ID: RE15-10-8386

Inj Date : 01-MAR-2010 23:59

Operator : AX01

Inst ID: VOA7.i

Smp Info : |247790002|959504|1|VOAF|1|

Misc Info : LANL 5g N/A

Comment :

Method : /chem/VOA7.i/030110v7/VOA7-8260B-021710PM.m

Meth Date : 04-Mar-2010 13:42 ale01592 Quant Type: ISTD

Cal Date : 18-FEB-2010 00:08 Cal File: 7z324.d

Als bottle: 30

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: 10-1981.sub

Target Version: 3.50

Processing Host: prdsvr07

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

Name	Value	Description
DF	1.00000	Dilution Factor
M	5.40210	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG						CONCENTRATIONS	
	MASS	RT	EXP RT	REL RT	RESPONSE		ON-COLUMN	FINAL
							(ug/l)	(ug/Kg)
* 51 Fluorobenzene	96	15.317	15.317	(1.000)	816126		50.0000	
* 75 Chlorobenzene-d5	117	18.667	18.667	(1.000)	610847		50.0000	
* 101 1,4-Dichlorobenzene-d4	152	20.991	20.991	(1.000)	298076		50.0000	
\$ 46 1,2-Dichloroethane-d4	65	14.880	14.880	(0.971)	374643		53.1322	56.2
\$ 64 Toluene-d8	98	17.134	17.134	(0.918)	968446		48.7117	51.5
\$ 86 Bromofluorobenzene	95	19.814	19.814	(0.944)	354477		45.2093	47.8

ION RATIO REPORT

VOA REPORT

Data file: 7b130.d

Report Date: 03/02/2010 06:21

Lab. ID: 247790002

SampleType: SAMPLE

Injection Date: 01-MAR-2010 23:59

Operator: AX01

Instrument: VOA7.i

Sample Info: |247790002|1|VOAF|1|

Miscellaneous Info: LANL 5g N/A

Comment:

Method used: /chem/VOA7.i/030110v7/VOA7-8260B-021710PM.m

Dilution Factor= 1.0

Integrator: HP RTE

Compound Sublist: 10-1981

Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
=====						
63	4-Methyl-2-pentanone			CAS#: 108-10-1		
58	11680	17.13	16.94	80-120	100	(T)
43	6784	17.13	16.94	218-278	58	(QT)
100	669061	17.13	16.94	0- 56	5728	(QT)

82	Bromoform			CAS#: 75-25-2		
173	1166	19.81	19.54	80-120	100	(T)
175	17029	19.81	19.54	18- 78	1459	(QT)

89	1,2,3-Trichloropropane			CAS#: 96-18-4		
110	872	19.69	19.97	80-120	100	(T)
75	5003	19.69	19.97	307-367	574	(QT)
77	2442	19.81	19.97	93-153	280	(QT)

Q qualifier indicates ion failed ratio requirement

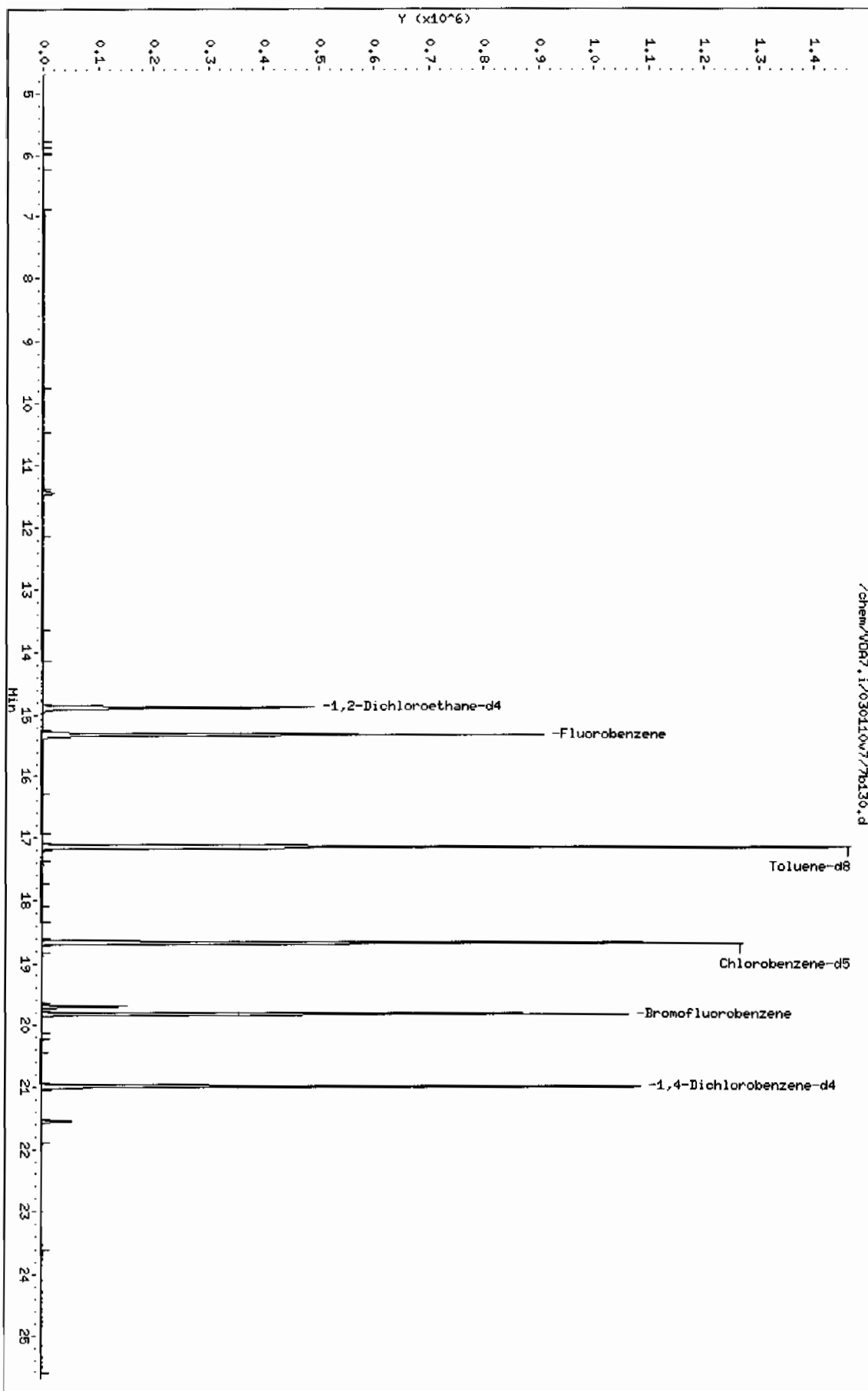
Data File: /chem/VOA7.i/030110v7/7b130.d
Report Date: 08-Mar-2010 17:14

Page 1

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026
Data file : /chem/VOA7.i/030110v7/7b130.d
Lab Smp Id: 247790002 Client Smp ID: RE15-10-8386
Inj Date : 01-MAR-2010 23:59
Operator : AX01 Inst ID: VOA7.i
Smp Info : |247790002|959504|1|VOAF|1|
Misc Info : LANL 5g N/A
Comment :
Method : /chem/VOA7.i/030110v7/VOA7-8260B-021710PM.m
Meth Date : 04-Mar-2010 13:42 ale01592 Quant Type: ISTD
Cal Date : 18-FEB-2010 00:08 Cal File: 7z324.d
Als bottle: 30
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 10-1981.sub
Target Version: 3.50
Processing Host: prdsvr07

- NO TENTATIVELY IDENTIFIED COMPOUNDS -



Data File: /chem/V0A7.i/030110v7/7b130.d
Date: 01-MAR-2010 23:59
Client ID: RE15-10-8386
Sample Info: 1247790002195950411V0A7.i1
Column Phase: DB-624

Instrument: V0A7.i
Operator: AXOL
Column diameter: 0.25

Volatile
Certificate of Analysis
Sample Summary

SDG Number: 10-1981
 Lab Sample ID: 247790003

Client ID: RE15-10-8387
 Batch ID: 959504
 Run Date: 03/02/2010 00:34
 Prep Date: 03/01/2010 15:18
 Data File: 7b131.d

Date Collected: 02/17/2010 12:00
 Date Received: 02/23/2010 08:50
 Client: LANL010
 Method: SW846 8260B
 Inst: VOA7.I
 Analyst: AX01
 Aliquot: 5 g
 Column: DB-624

Matrix: R
 % Moisture: 5.7
 Project: LANL01004
 SOP Ref: GL-OA-E-038
 Dilution: 1
 Purge Vol: 5 mL
 Final Volume: 5 mL
 Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.06	ug/kg	0.361	1.06
74-87-3	Chloromethane	U	1.06	ug/kg	0.318	1.06
75-01-4	Vinyl chloride	U	1.06	ug/kg	0.318	1.06
74-83-9	Bromomethane	U	1.06	ug/kg	0.318	1.06
75-00-3	Chloroethane	U	1.06	ug/kg	0.318	1.06
75-69-4	Trichlorofluoromethane	U	1.06	ug/kg	0.318	1.06
67-64-1	Acetone	U	5.30	ug/kg	1.76	5.30
75-35-4	1,1-Dichloroethylene	U	1.06	ug/kg	0.318	1.06
74-88-4	Iodomethane	U	5.30	ug/kg	1.70	5.30
75-09-2	Methylene chloride	U	5.30	ug/kg	2.12	5.30
75-15-0	Carbon disulfide	U	5.30	ug/kg	1.33	5.30
156-60-5	trans-1,2-Dichloroethylene	U	1.06	ug/kg	0.318	1.06
75-34-3	1,1-Dichloroethane	U	1.06	ug/kg	0.318	1.06
78-93-3	2-Butanone	U	5.30	ug/kg	1.59	5.30
156-59-2	cis-1,2-Dichloroethylene	U	1.06	ug/kg	0.318	1.06
594-20-7	2,2-Dichloropropane	U	1.06	ug/kg	0.318	1.06
67-66-3	Chloroform	U	1.06	ug/kg	0.318	1.06
74-97-5	Bromochloromethane	U	1.06	ug/kg	0.350	1.06
71-55-6	1,1,1-Trichloroethane	U	1.06	ug/kg	0.318	1.06
563-58-6	1,1-Dichloropropene	U	1.06	ug/kg	0.318	1.06
56-23-5	Carbon tetrachloride	U	1.06	ug/kg	0.318	1.06
107-06-2	1,2-Dichloroethane	U	1.06	ug/kg	0.318	1.06
71-43-2	Benzene	U	1.06	ug/kg	0.318	1.06
79-01-6	Trichloroethylene	U	1.06	ug/kg	0.350	1.06
78-87-5	1,2-Dichloropropane	U	1.06	ug/kg	0.318	1.06
75-27-4	Bromodichloromethane	U	1.06	ug/kg	0.318	1.06
74-95-3	Dibromomethane	U	1.06	ug/kg	0.318	1.06
108-10-1	4-Methyl-2-pentanone	U	5.30	ug/kg	1.33	5.30
10061-01-5	cis-1,3-Dichloropropylene	U	1.06	ug/kg	0.318	1.06
108-88-3	Toluene	U	1.06	ug/kg	0.318	1.06
10061-02-6	trans-1,3-Dichloropropylene	U	1.06	ug/kg	0.318	1.06
79-00-5	1,1,2-Trichloroethane	U	1.06	ug/kg	0.318	1.06
591-78-6	2-Hexanone	U	5.30	ug/kg	1.59	5.30
142-28-9	1,3-Dichloropropane	U	1.06	ug/kg	0.318	1.06
127-18-4	Tetrachloroethylene	U	1.06	ug/kg	0.318	1.06
124-48-1	Dibromochloromethane	U	1.06	ug/kg	0.318	1.06
106-93-4	1,2-Dibromoethane	U	1.06	ug/kg	0.318	1.06
108-90-7	Chlorobenzene	U	1.06	ug/kg	0.318	1.06

Volatile
Certificate of Analysis
Sample Summary

SDG Number: 10-1981
 Lab Sample ID: 247790003

Client ID: RE15-10-8387
 Batch ID: 959504
 Run Date: 03/02/2010 00:34
 Prep Date: 03/01/2010 15:18
 Data File: 7b131.d

Date Collected: 02/17/2010 12:00
 Date Received: 02/23/2010 08:50
 Client: LANL010
 Method: SW846 8260B
 Inst: VOA7.I
 Analyst: AXO1
 Aliquot: 5 g
 Column: DB-624

Matrix: R
 %Moisture: 5.7
 Project: LANL01004
 SOP Ref: GL-OA-E-038
 Dilution: 1
 Purge Vol: 5 mL
 Final Volume: 5 mL
 Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.06	ug/kg	0.318	1.06
179601-23-1	m,p-Xylenes	U	2.12	ug/kg	0.318	2.12
95-47-6	o-Xylene	U	1.06	ug/kg	0.318	1.06
100-42-5	Styrene	U	1.06	ug/kg	0.318	1.06
75-25-2	Bromoform	U	1.06	ug/kg	0.318	1.06
79-34-5	1,1,2,2-Tetrachloroethane	U	1.06	ug/kg	0.318	1.06
96-18-4	1,2,3-Trichloropropane	U	1.06	ug/kg	0.318	1.06
108-86-1	Bromobenzene	U	1.06	ug/kg	0.318	1.06
103-65-1	n-Propylbenzene	U	1.06	ug/kg	0.318	1.06
95-49-8	2-Chlorotoluene	U	1.06	ug/kg	0.318	1.06
98-82-8	Isopropylbenzene	U	1.06	ug/kg	0.318	1.06
108-67-8	1,3,5-Trimethylbenzene	U	1.06	ug/kg	0.318	1.06
106-43-4	4-Chlorotoluene	U	1.06	ug/kg	0.318	1.06
98-06-6	tert-Butylbenzene	U	1.06	ug/kg	0.318	1.06
95-63-6	1,2,4-Trimethylbenzene	U	1.06	ug/kg	0.318	1.06
135-98-8	sec-Butylbenzene	U	1.06	ug/kg	0.318	1.06
99-87-6	4-Isopropyltoluene	U	1.06	ug/kg	0.318	1.06
541-73-1	1,3-Dichlorobenzene	U	1.06	ug/kg	0.318	1.06
106-46-7	1,4-Dichlorobenzene	U	1.06	ug/kg	0.318	1.06
104-51-8	n-Butylbenzene	U	1.06	ug/kg	0.318	1.06
96-12-8	1,2-Dibromo-3-chloropropane	U	1.06	ug/kg	0.318	1.06
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	U	5.30	ug/kg	1.70	5.30
630-20-6	1,1,1,2-Tetrachloroethane	U	1.06	ug/kg	0.318	1.06
95-50-1	1,2-Dichlorobenzene	U	1.06	ug/kg	0.318	1.06

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	19.69	7.4	ug/kg		J

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA7.i/030110v7/7b131.d

Lab Smp Id: 247790003

Client Smp ID: RE15-10-8387

Inj Date : 02-MAR-2010 00:34

Operator : AX01

Inst ID: VOA7.i

Smp Info : |247790003|959504|1|VOAF|1|

Misc Info : LANL 5g N/A

Comment :

Method : /chem/VOA7.i/030110v7/VOA7-8260B-021710PM.m

Meth Date : 04-Mar-2010 13:42 ale01592

Quant Type: ISTD

Cal Date : 18-FEB-2010 00:08

Cal File: 7z324.d

Als bottle: 31

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: 10-1981.sub

Target Version: 3.50

Processing Host: prdsrv07

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

Name	Value	Description
DF	1.00000	Dilution Factor
M	5.72260	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG						CONCENTRATIONS	
	MASS	RT	EXP RT	REL RT	RESPONSE		ON-COLUMN	FINAL
							(ug/l)	(ug/Kg)
* 51 Fluorobenzene	96	15.317	15.317	(1.000)	835041		50.0000	
* 75 Chlorobenzene-d5	117	18.667	18.667	(1.000)	629628		50.0000	
* 101 1,4-Dichlorobenzene-d4	152	20.992	20.991	(1.000)	313490		50.0000	
\$ 46 1,2-Dichloroethane-d4	65	14.880	14.880	(0.971)	391643		54.2851	57.6
\$ 64 Toluene-d8	98	17.134	17.134	(0.918)	991746		48.3957	51.3
\$ 86 Bromofluorobenzene	95	19.814	19.814	(0.944)	372972		45.2293	48.0

ION RATIO REPORT

VOA REPORT

Data file: 7b131.d
 Report Date: 03/02/2010 06:21
 Lab. ID: 247790003
 Injection Date: 02-MAR-2010 00:34
 Operator: AX01
 Sample Info: |247790003|1|VOAF|1|
 Miscellaneous Info: LANL 5g N/A
 Comment:
 Method used: /chem/VOA7.i/030110v7/VOA7-8260B-021710PM.m
 Dilution Factor= 1.0
 Integrator: HP RTE
 Sample Matrix: SOIL

SampleType: SAMPLE
 Instrument: VOA7.i
 Compound Sublist: 10-1981

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
=====						
63	4-Methyl-2-pentanone			CAS#: 108-10-1		
58	11469	17.13	16.94	80-120	100	(T)
43	6979	17.13	16.94	218-278	61	(QT)
100	693401	17.13	16.94	0- 56	6046	(QT)

82	Bromoform			CAS#: 75-25-2		
173	1157	19.81	19.54	80-120	100	(T)
175	19299	19.81	19.54	18- 78	1667	(QT)

89	1,2,3-Trichloropropane			CAS#: 96-18-4		
110	1425	19.70	19.97	80-120	100	(T)
75	5522	19.69	19.97	307-367	388	(QT)
77	205	19.70	19.97	93-153	14	(QT)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA7.i/030110v7/7b131.d
 Lab Smp Id: 247790003 Client Smp ID: RE15-10-8387
 Inj Date : 02-MAR-2010 00:34
 Operator : AX01 Inst ID: VOA7.i
 Smp Info : |247790003|959504|1|VOAF|1|
 Misc Info : LANL 5g N/A
 Comment :
 Method : /chem/VOA7.i/030110v7/VOA7-8260B-021710PM.m
 Meth Date : 04-Mar-2010 13:42 ale01592 Quant Type: ISTD
 Cal Date : 18-FEB-2010 00:08 Cal File: 7z324.d
 Als bottle: 31
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: 10-1981.sub
 Target Version: 3.50
 Processing Host: prdsvr07

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

Name	Value	Description
DF	1.00000	Dilution Factor
M	5.72260	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 75 Chlorobenzene-d5	18.667	2332911	50.000

CONCENTRATIONS					QUANT		
RT	AREA	ON-COL (ug/l)	FINAL (ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
19.692	325501	6.97629184	7.4	0		0	75

Unknown Siloxane CAS #:

Data File: /chem/VD07.1/030110v7/7b131.d
Date: 02-MAR-2010 00:34
Client ID: RE15-10-8387
Sample Info: 124739003195950411V09F11

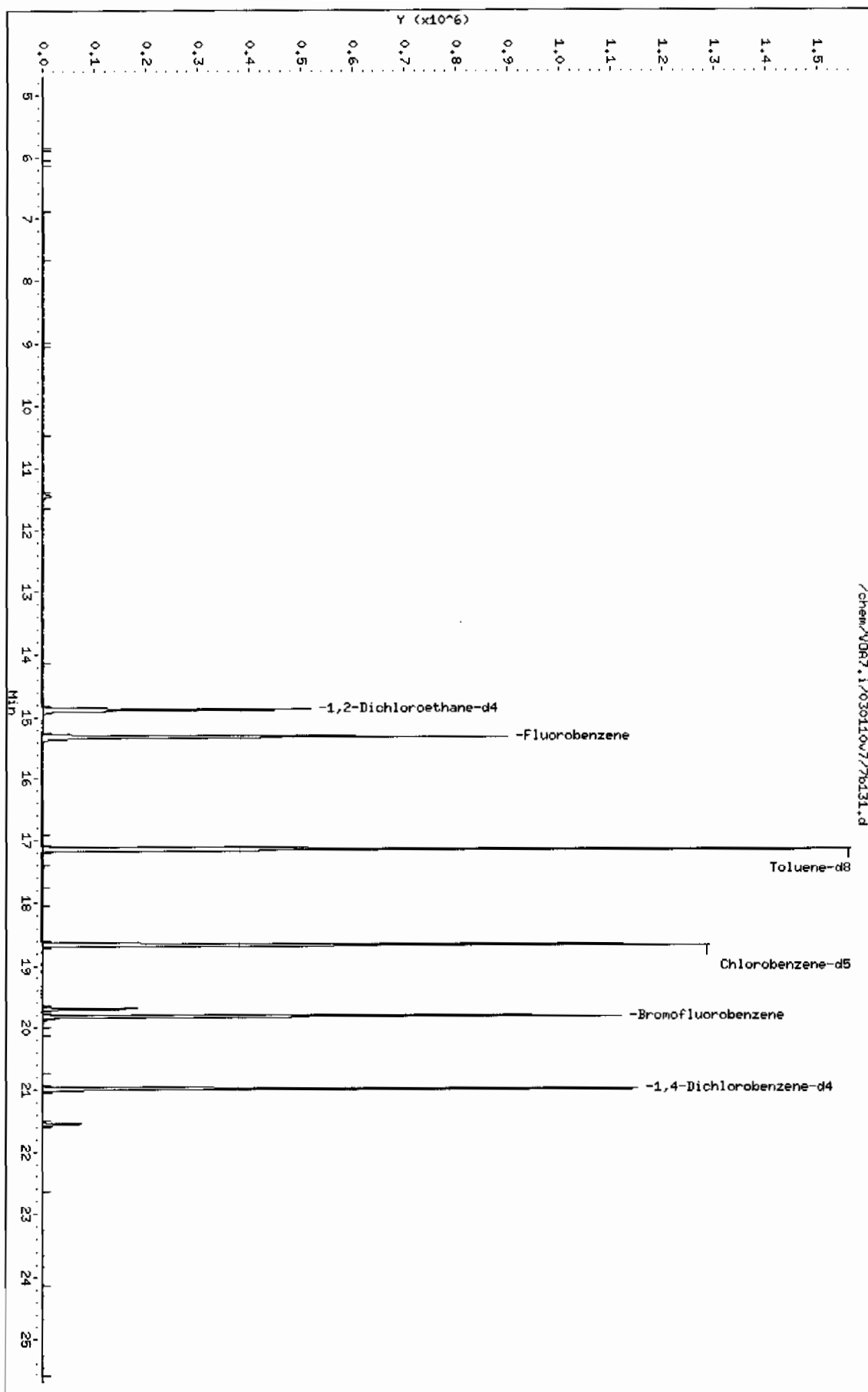
Column Phase: DB-624

Instrument: V007.i

Operator: RX01

Column diameter: 0.25

Page 1



Data File: /chem/VOA7.i/030110v7/7b131.d

Page 1

Date : 02-MAR-2010 00:34

Client ID: RE15-10-8387

Instrument: VOA7.i

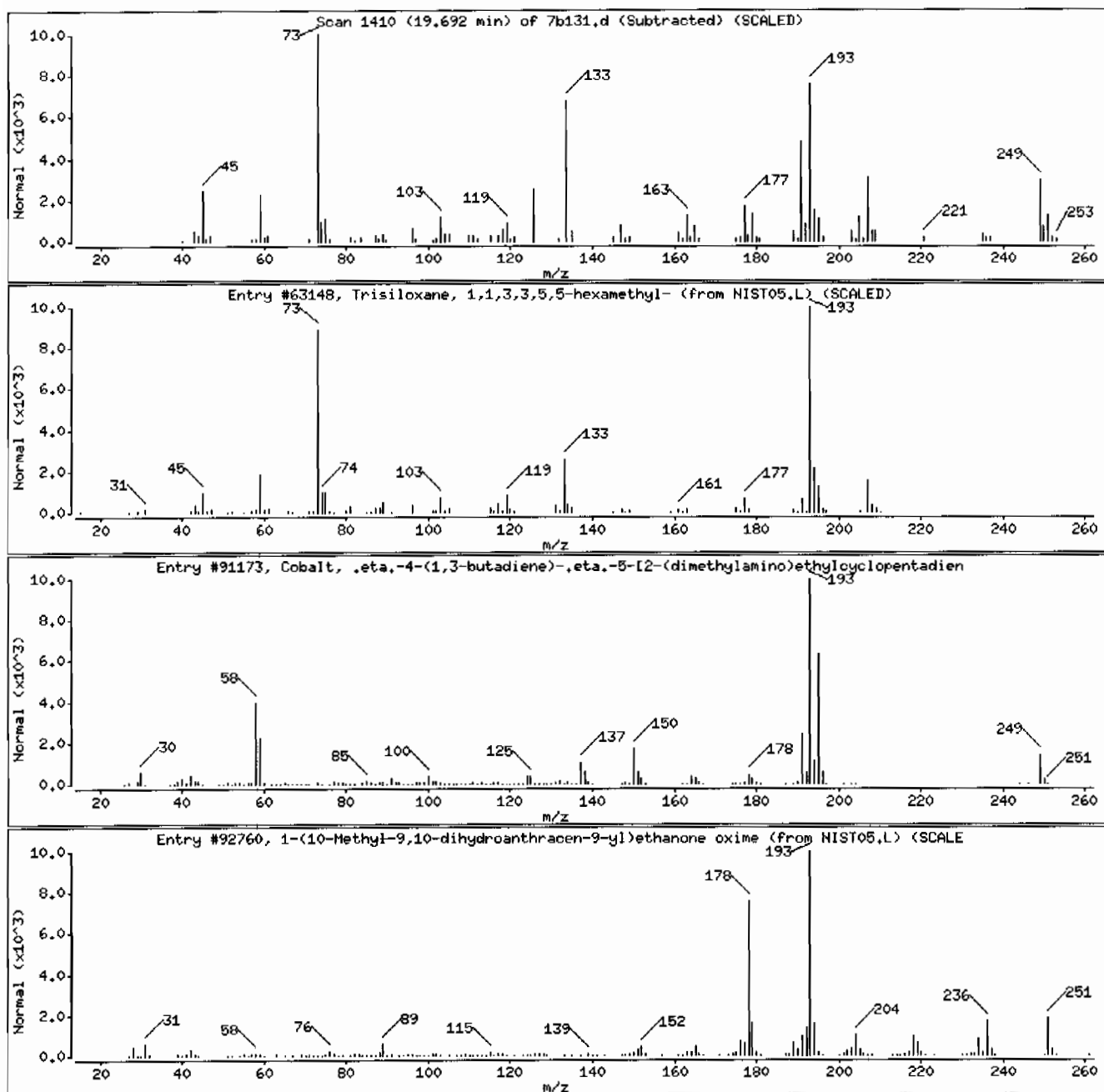
Sample Info: I247790003I959504I1I1VOAF11I

Operator: AX01

Column phase: DB-624

Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Siloxane						
Trisiloxane, 1,1,3,3,5,5-hexamethyl-	1189-93-1	NIST05.L	63148	38	C ₆ H ₂₀ O ₂ Si ₃	208
Cobalt, .eta.-4-(1,3-butadiene)-.eta.-5-	1000158-87-9	NIST05.L	91173	35	C ₁₃ H ₂₀ CoN	249
1-(10-Methyl-9,10-dihydroanthracen-9-yl)	1000210-33-6	NIST05.L	92760	30	C ₁₇ H ₁₇ NO	251



Volatile
Certificate of Analysis
Sample Summary

SDG Number: 10-1981	Date Collected: 02/17/2010 12:00	Matrix: R
Lab Sample ID: 247790001	Date Received: 02/23/2010 08:50	
	Client: LANL010	Project: LANL01004
Client ID: RE15-10-8408	Method: SW846 8260B	SOP Ref: GL-OA-E-038
Batch ID: 959504	Inst: VOA7.I	Dilution: 1
Run Date: 03/01/2010 17:07	Analyst: AXO1	Purge Vol: 5 mL
Prep Date: 03/01/2010 15:14	Aliquot: 5 g	Final Volume: 5 mL
Data File: 7b118.d	Column: DB-624	Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.300	1.00
67-64-1	Acetone	J	4.60	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	J	2.01	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number: 10-1981	Date Collected: 02/17/2010 12:00	Matrix: R
Lab Sample ID: 247790001	Date Received: 02/23/2010 08:50	
	Client: LANL010	Project: LANL01004
Client ID: RE15-10-8408	Method: SW846 8260B	SOP Ref: GL-OA-E-038
Batch ID: 959504	Inst: VOA7J	Dilution: 1
Run Date: 03/01/2010 17:07	Analyst: AXO1	Purge Vol: 5 mL
Prep Date: 03/01/2010 15:14	Aliquot: 5 g	Final Volume: 5 mL
Data File: 7b118.d	Column: DB-624	Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/L.O.D	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	U	5.00	ug/kg	1.60	5.00
	Trichlorotrifluoroethane					
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
No Tentatively Identified Compounds Found				ug/kg		

Data File: /chem/VOA7.i/030110v7/7b118.d
Report Date: 04-Mar-2010 14:41

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GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA7.i/030110v7/7b118.d

Lab Smp Id: 247790001

Client Smp ID: RE15-10-8408

Inj Date : 01-MAR-2010 17:07

Operator : AX01

Inst ID: VOA7.i

Smp Info : |247790001|959504|1|VOAF|1|

Misc Info : LANL 5g N/A

Comment :

Method : /chem/VOA7.i/030110v7/VOA7-8260B-021710.m

Meth Date : 04-Mar-2010 14:23 ale01592 Quant Type: ISTD

Cal Date : 18-FEB-2010 00:08

Cal File: 7z324.d

Als bottle: 18

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: 10-1981.sub

Target Version: 3.50

Processing Host: prdsvr07

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

Name	Value	Description
DF	1.00000	Dilution Factor
M	0.00000	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG						CONCENTRATIONS	
	MASS	RT	EXP RT	REL RT	RESPONSE		ON-COLUMN	FINAL
							(ug/l)	(ug/Kg)
* 51 Fluorobenzene	96	15.317	15.317	(1.000)	754488		50.0000	
* 75 Chlorobenzene-d5	117	18.667	18.667	(1.000)	574296		50.0000	
* 101 1,4-Dichlorobenzene-d4	152	20.991	20.992	(1.000)	283698		50.0000	
\$ 46 1,2-Dichloroethane-d4	65	14.880	14.880	(0.971)	315523		48.4035	48.4
\$ 64 Toluene-d8	98	17.134	17.134	(0.918)	878451		46.9972	47.0
\$ 86 Bromofluorobenzene	95	19.814	19.814	(0.944)	322620		43.2317	43.2
13 Acetone	43	10.464	10.413	(0.683)	23236		4.59778	4.6(a)
22 Methylene chloride	86	11.439	11.449	(0.747)	6187		2.00712	2.0(a)

QC Flag Legend

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

ION RATIO REPORT

VOA REPORT

Data file: 7b118.d

Report Date: 03/02/2010 05:43

Lab. ID: 247790001

SampleType: SAMPLE

Injection Date: 01-MAR-2010 17:07

Operator: AX01

Instrument: VOA7.i

Sample Info: |247790001|959504|1|VOAF|1|

Miscellaneous Info: LANL 5g N/A

Comment:

Method used: /chem/VOA7.i/030110v7/VOA7-8260B-021710.m

Dilution Factor= 1.0

Integrator: HP RTE

Compound Sublist: 10-1981

Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
=====						
13	Acetone		CAS#: 67-64-1			
43	23236	10.46	10.41	80-120	100	()
58	8988	10.45	10.41	0- 60	39	()

22	Methylene chloride		CAS#: 75-09-2			
86	6187	11.44	11.45	80-120	100	()
84	10073	11.45	11.44	124-184	163	()
49	17483	11.44	11.44	242-302	283	()

63	4-Methyl-2-pentanone		CAS#: 108-10-1			
58	10865	17.13	16.94	80-120	100	(T)
43	7491	17.13	16.93	213-273	69	(QT)
100	621195	17.13	16.94	0- 58	5717	(QT)

82	Bromoform		CAS#: 75-25-2			
173	1425	19.81	19.54	80-120	100	(T)
175	16933	19.81	19.54	20- 80	1188	(QT)

Q qualifier indicates ion failed ratio requirement

Data File: /chem/VOA7.i/030110v7/7b118.d
Report Date: 04-Mar-2010 14:41

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GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026
Data file : /chem/VOA7.i/030110v7/7b118.d
Lab Smp Id: 247790001 Client Smp ID: RE15-10-8408
Inj Date : 01-MAR-2010 17:07
Operator : AX01 Inst ID: VOA7.i
Smp Info : |247790001|959504|1|VOAF|1|
Misc Info : LANL 5g N/A
Comment :
Method : /chem/VOA7.i/030110v7/VOA7-8260B-021710.m
Meth Date : 04-Mar-2010 14:23 ale01592 Quant Type: ISTD
Cal Date : 18-FEB-2010 00:08 Cal File: 7z324.d
Als bottle: 18
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 10-1981.sub
Target Version: 3.50
Processing Host: prdsvr07

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

Data File: /chem/V007.i/030110v7/7b118.d
Date: 01-MAR-2010 17:07
Client ID: RE15-10-8408
Sample Info: 1247790001|95950411|V0AF|11

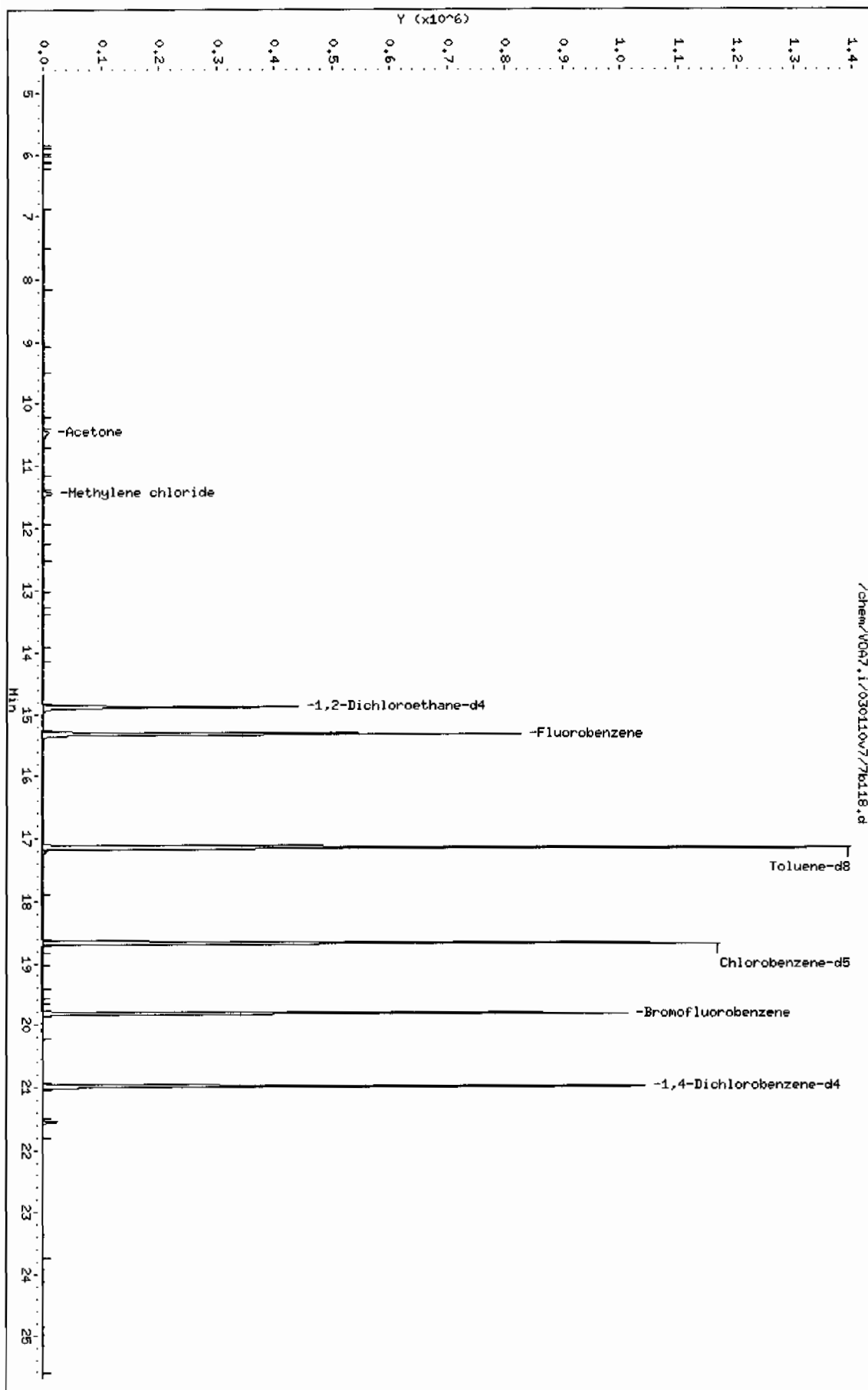
Column phase: DB-624

Instrument: V007.i

Operator: AX01

Column diameter: 0.25

Page 1



Date : 01-MAR-2010 17:07

Client ID: RE15-10-8408

Instrument: VOA7.i

Sample Info: 1247790001195950411|VOAF11|

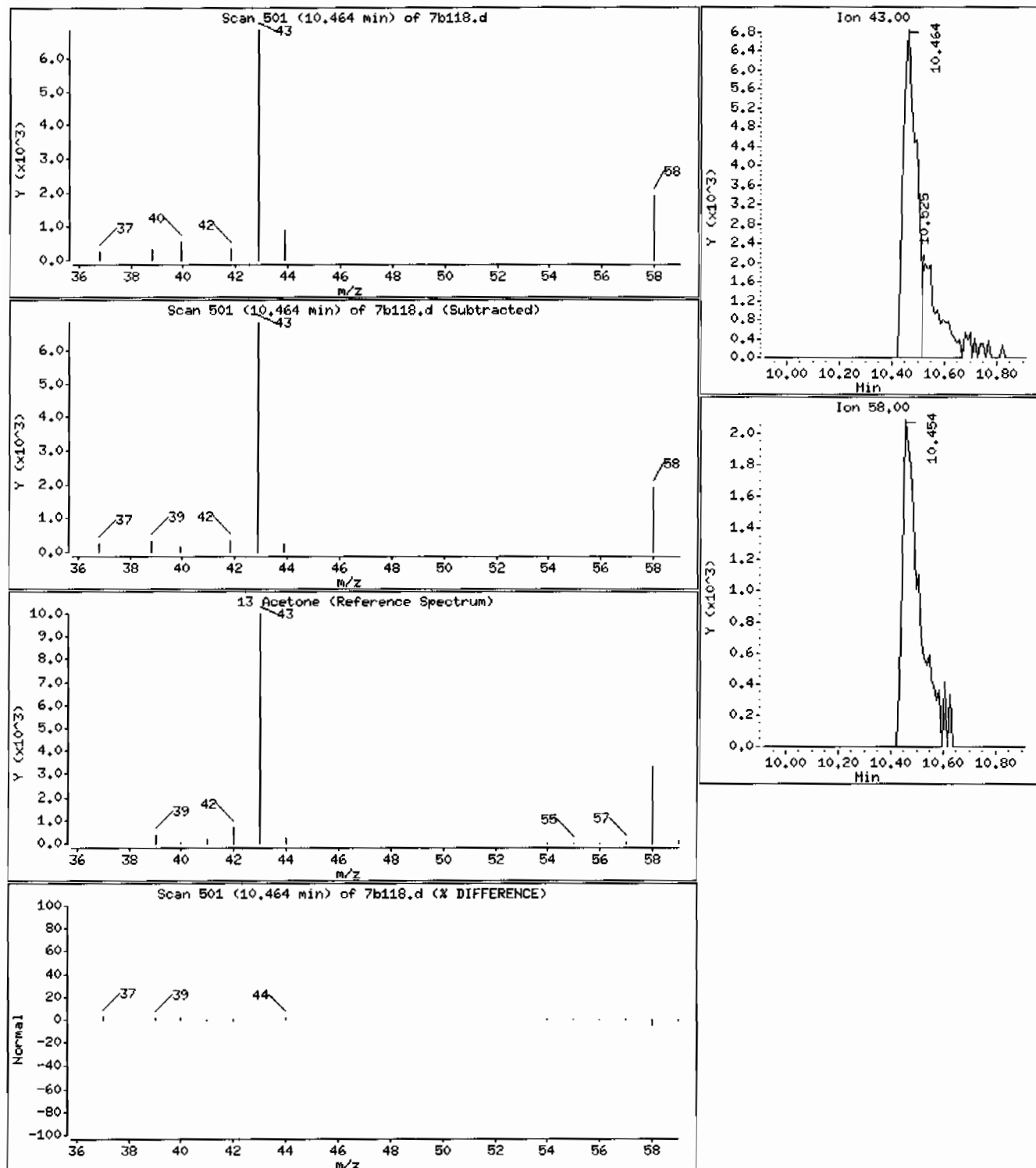
Operator: AX01

Column phase: DB-624

Column diameter: 0.25

13 Acetone

Concentration: 4,6 ug/Kg



Date : 01-MAR-2010 17:07

Client ID: RE15-10-8408

Instrument: V0A7.i

Sample Info: I247790001|959504|1|V0AF|1|

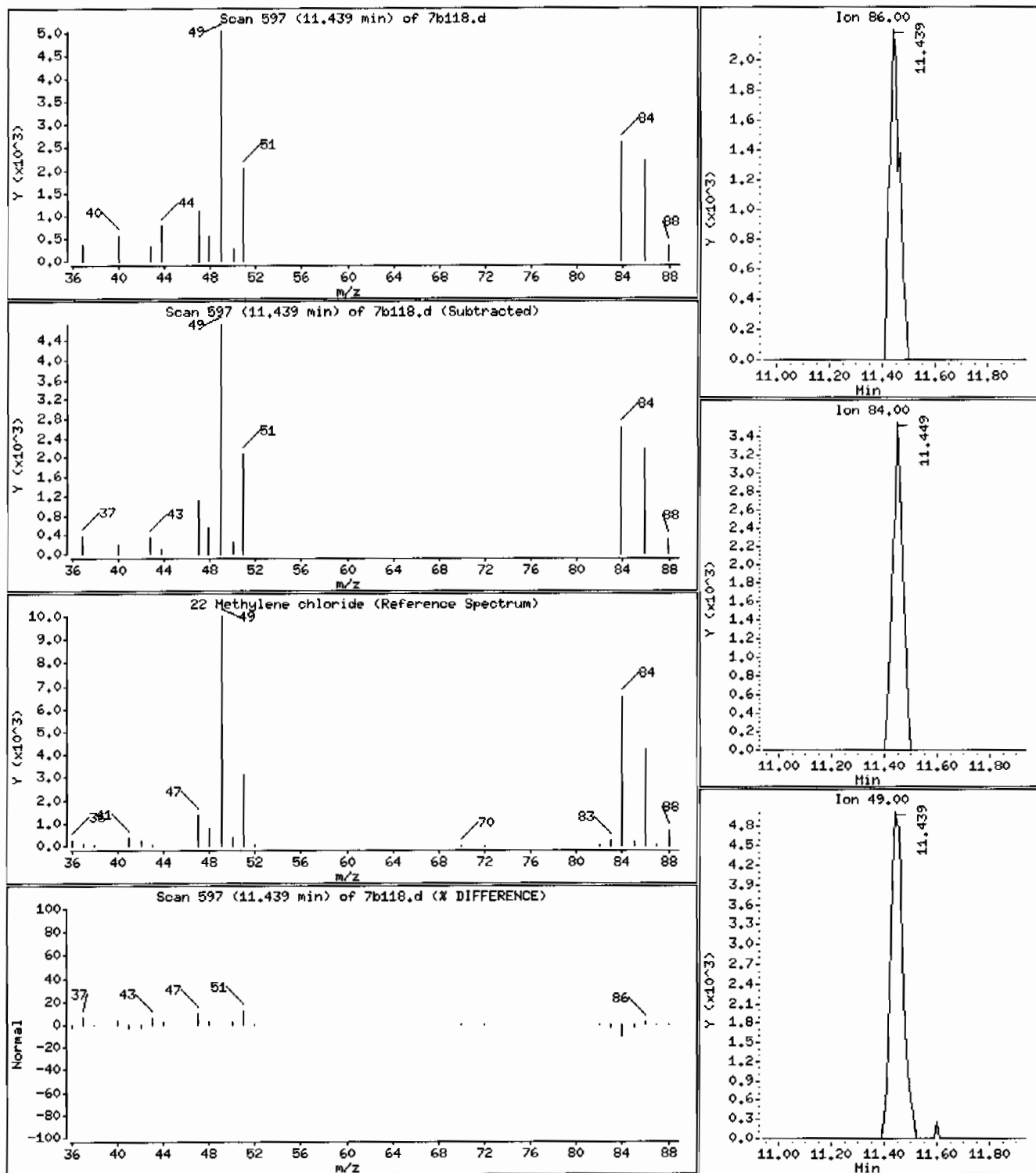
Operator: AX01

Column phase: DB-624

Column diameter: 0.25

22 Methylene chloride

Concentration: 2.0 ug/Kg



Standard Data

EPA 524.2/Low level SW846 8260B and Regular level 8260B and EPA 624
Calibration Standard Concentration Levels

	Level 1	Level 1a	Level 2	Level 3	Level 4 #	Level 5	Level 6	Level 7 !	Level 7a
Fluorobenzene (IS)									
1,2-Dichloroethane-d4(surr)		0.5	1	2	5	10	20	50	100
Dichlorodifluoromethane		0.5	1	2	5	10	20	50	100
Chloromethane		0.5	1	2	5	10	20	50	100
Vinyl chloride		0.5	1	2	5	10	20	50	100
Bromomethane		0.5	1	2	5	10	20	50	100
Chloroethane		0.5	1	2	5	10	20	50	100
Trichlorofluoromethane		0.5	1	2	5	10	20	50	100
1,1-Dichloroethene		0.5	1	2	5	10	20	50	100
Acetone	1	2.5	5	10	25	50	100	250	500
Iodomethane	1	2.5	5	10	25	50	100	250	500
Carbon disulfide	1	2.5	5	10	25	50	100	250	500
Methylene chloride		0.5	1	2	5	10	20	50	100
trans-1,2-Dichloroethene		0.5	1	2	5	10	20	50	100
1,1-Dichloroethane		0.5	1	2	5	10	20	50	100
Ethyl ether		0.5	1	2	5	10	20	50	100
Vinyl acetate	1	2.5	5	10	25	50	100	250	500
cis-1,2-Dichloroethene		0.5	1	2	5	10	20	50	100
1,2-Dichloroethene (total)		1	2	4	10	20	40	100	200
Cyclohexene		0.5	1	2	5	10	20	50	100
2-Chloroethylvinyl ether			5	10	25	50	100	250	500
2,2-Dichloropropane		0.5	1	2	5	10	20	50	100
2-Butanone	1	2.5	5	10	25	50	100	250	500
Bromochloromethane		0.5	1	2	5	10	20	50	100
Chloroform		0.5	1	2	5	10	20	50	100
1,1,1-Trichloroethane		0.5	1	2	5	10	20	50	100
1,1-Dichloropropene		0.5	1	2	5	10	20	50	100
Carbon tetrachloride		0.5	1	2	5	10	20	50	100
Benzene		0.5	1	2	5	10	20	50	100
1,2-Dichloroethane		0.5	1	2	5	10	20	50	100
Trichloroethene		0.5	1	2	5	10	20	50	100
1,2-Dichloropropane		0.5	1	2	5	10	20	50	100
Dibromomethane		0.5	1	2	5	10	20	50	100
Bromodichloromethane		0.5	1	2	5	10	20	50	100
cis-1,3-Dichloropropene		0.5	1	2	5	10	20	50	100
tert-Butylmethylether		0.5	1	2	5	10	20	50	100
Ethyl Ether			1	2	5	10	20	50	100
Acetonitrile			25	50	125	250	500	1250	2500
Methyl acetate			5	10	25	50	100	250	500
Cyclohexane			1	2	5	10	20	50	100
Methylcyclohexane			1	2	5	10	20	50	100
n-Butyl alcohol			50	100	250	500	1000	2500	5000
2-Nitropropane			5	10	25	50	100	250	500
Ethyl acetate			5	10	25	50	100	250	500
Acrolein			5	10	25	50	100	250	500
Trichlorotrifluoroethane			5	10	25	50	100	250	500
Allyl chloride			5	10	25	50	100	250	500
Acrylonitrile			5	10	25	50	100	250	500
1,4-Dioxane			50	100	250	500	1000	2500	5000
Isobutyl alcohol			50	100	250	500	1000	2500	5000
Methacrylonitrile			5	10	25	50	100	250	500
Propionitrile			5	10	25	50	100	250	500
Methyl methacrylate			5	10	25	50	100	250	500
Chlorotrifluoroethylene			5	10	25	50	100	250	500
2-Chloro-1,1,1-trifluoroethane			5	10	25	50	100	250	500

tert-Butyl alcohol			50	100	250	500	1000	2500	5000
Isopropyl ether			1	2	5	10	20	50	100
Ethyl tert-butyl ether			1	2	5	10	20	50	100
Isopropyl alcohol			50	100	250	500	1000	2500	5000
Methyl tert-amyl ether			1	2	5	10	20	50	100
1-Chlorohexane			1	2	5	10	20	50	100
2-Chloro-1,3-butadiene(chloroprene)			1	2	5	10	20	50	100
Chlorobenzene-d5 (IS)									
Toluene-d8 (surr)		0.5	1	2	5	10	20	50	100
4-Methyl-2-pentanone	1	2.5	5	10	25	50	100	250	500
Toluene		0.5	1	2	5	10	20	50	100
trans-1,3-Dichloropropene		0.5	1	2	5	10	20	50	100
1,1,2-Trichloroethane		0.5	1	2	5	10	20	50	100
Tetrachloroethene		0.5	1	2	5	10	20	50	100
1,3-Dichloropropane		0.5	1	2	5	10	20	50	100
2-Hexanone	1	2.5	5	10	25	50	20	250	500
Dibromochloromethane		0.5	1	2	5	10	20	50	100
1,2-Dibromoethane		0.5	1	2	5	10	20	50	100
Chlorobenzene		0.5	1	2	5	10	20	50	100
1,1,1,2-Tetrachloroethane		0.5	1	2	5	10	20	50	100
Ethylbenzene		0.5	1	2	5	10	20	50	100
m,p-Xylene		1	2	4	10	20	20	100	200
o-Xylene		0.5	1	2	5	10	20	50	100
Xylenes (total)		1.5	3	6	15	30	60	150	300
Stryene		0.5	1	2	5	10	20	50	100
Cyclohexanone			50	100	250	500	1000	2500	5000
Ethyl methacrylate			5	10	25	50	100	250	500
1,4-Dichlorobenzene-d4 (IS)									
Bromofluorobenzene (surr)		0.5	1	2	5	10	20	50	100
Bromoform		0.5	1	2	5	10	20	50	100
Isopropylbenzene		0.5	1	2	5	10	20	50	100
1,1,2,2-Tetrachloroethane		0.5	1	2	5	10	20	50	100
Bromobenzene		0.5	1	2	5	10	20	50	100
1,2,3-Trichloropropane		0.5	1	2	5	10	20	50	100
n-Propylbenzene		0.5	1	2	5	10	20	50	100
2-Chlorotoluene		0.5	1	2	5	10	20	50	100
1,3,5-Trimethylbenzene		0.5	1	2	5	10	20	50	100
4-Chlorotoluene		0.5	1	2	5	10	20	50	100
1,2,4-Trimethylbenzene		0.5	1	2	5	10	20	50	100
sec-Butylbenzene		0.5	1	2	5	10	20	50	100
1,3-Dichlorobenzene		0.5	1	2	5	10	20	50	100
tert-Butylbenzene		0.5	1	2	5	10	20	50	100
Isopropyltoluene		0.5	1	2	5	10	20	50	100
1,4-Dichlorobenzene		0.5	1	2	5	10	20	50	100
n-Butylbenzene		0.5	1	2	5	10	20	50	100
1,2-Dichlorobenzene		0.5	1	2	5	10	20	50	100
1,2-Dibromo-3-chloropropa		0.5	1	2	5	10	20	50	100
1,2,4-Trichlorobenzene		0.5	1	2	5	10	20	50	100
Hexachlorobutadiene		0.5	1	2	5	10	20	50	100
Naphthalene		0.5	1	2	5	10	20	50	100
1,2,3-Trichlorobenzene		0.5	1	2	5	10	20	50	100
cis-1,4-Dichloro-2-butene			5	10	25	50	100	250	500
trans-1,4-Dichloro-2-butene			5	10	25	50	100	250	500
Tetrahydrofuran			5	10	25	50	100	250	500
Pentachloroethane			5	10	25	50	100	250	500
Benzyl chloride			5	10	25	50	100	250	500
bis(2-Chloro-isopropyl)ether			5	10	25	50	100	250	500

Report Date: 02-Mar-2010 06:06

Calibration History

Method : /chem/VOA7.i/030110v7/VOA7-8260B-021710.m
Start Cal Date: 17-FEB-2010 16:02
End Cal Date : 18-FEB-2010 00:42

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 1.00000		
17-FEB-2010 21:14	ICALsubS	/chem/VOA7.i/021710v7/7z319.d
17-FEB-2010 16:02	ICALsubL+	/chem/VOA7.i/021710v7/7z310.d
Cal Level: 2 , Cal Amount: 2.00000		
17-FEB-2010 21:49	ICALsubS	/chem/VOA7.i/021710v7/7z320.d
17-FEB-2010 16:35	ICALsubL+	/chem/VOA7.i/021710v7/7z311.d
Cal Level: 3 , Cal Amount: 5.00000		
17-FEB-2010 22:24	ICALsubS	/chem/VOA7.i/021710v7/7z321.d
17-FEB-2010 17:09	ICALsubL+	/chem/VOA7.i/021710v7/7z312.d
Cal Level: 4 , Cal Amount: 10.00000		
17-FEB-2010 22:59	ICALsubS	/chem/VOA7.i/021710v7/7z322.d
17-FEB-2010 17:44	ICALsubL+	/chem/VOA7.i/021710v7/7z313.d
Cal Level: 5 , Cal Amount: 20.00000		
17-FEB-2010 23:33	ICALsubS	/chem/VOA7.i/021710v7/7z323.d
17-FEB-2010 18:20	ICALsubL+	/chem/VOA7.i/021710v7/7z314.d
Cal Level: 6 , Cal Amount: 50.00000		
18-FEB-2010 00:08	ICALsubS	/chem/VOA7.i/021710v7/7z324.d
17-FEB-2010 18:55	ICALsubL+	/chem/VOA7.i/021710v7/7z315.d
Cal Level: 7 , Cal Amount: 100.00000		
18-FEB-2010 00:42	ICALsubS	/chem/VOA7.i/021710v7/7z325.d
17-FEB-2010 19:30	ICALsubL+	/chem/VOA7.i/021710v7/7z316.d
Cal Level: 8 , Cal Amount: 200.00000		
17-FEB-2010 20:39	BENZENE+	/chem/VOA7.i/021710v7/7z318.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 6

Ccal Level: 6 , Ccal Amount: 50.0	
01-MAR-2010 08:39	CALsubL+ | /chem/VOA7.i/030110v7/7b103.d
Ccal Level: 6 , Ccal Amount: 50.0	
01-MAR-2010 09:48	CALsubS+SS | /chem/VOA7.i/030110v7/7b105.d
Ccal Level: 6 , Ccal Amount: 50.0	
01-MAR-2010 08:05	CALsubL+ | /chem/VOA7.i/030110v7/7b102.d

GEL Laboratories LLC
INITIAL CALIBRATION DATA

Start Cal Date : 17-FEB-2010 16:02
 End Cal Date : 18-FEB-2010 00:42
 Quant Method : ISTD
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/VOA7.i/030110v7/VOA7-8260B-021710.m
 Cal Date : 02-Mar-2010 06:02 ale01592

Calibration File Names:

Level 1: /chem/VOA7.i/021710v7/7z319.d
 Level 2: /chem/VOA7.i/021710v7/7z320.d
 Level 3: /chem/VOA7.i/021710v7/7z321.d
 Level 4: /chem/VOA7.i/021710v7/7z322.d
 Level 5: /chem/VOA7.i/021710v7/7z323.d
 Level 6: /chem/VOA7.i/021710v7/7z324.d
 Level 7: /chem/VOA7.i/021710v7/7z325.d
 Level 8: /chem/VOA7.i/021710v7/7z318.d

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	b	Coefficients m1	m2	IRSD or R ²
1,3-Dichloropropylene	0.42063 0.47574	0.42665 ++++	0.45952	0.44593	0.48874	0.44785	AVRG		0.45215		5.45519
2 Xylenes (total)	0.62830 0.62692	0.67143 ++++	0.66860	0.64173	0.68474	0.59685					
1,2-Dichloroethylene (total)	0.54927 0.46213	0.50779 ++++	0.51933	0.49776	0.47859	0.45089	AVRG		0.64551		4.80271
1,47 Chlorotrifluoroethylene	++++ ++++	0.10076 ++++	0.11210	0.09704	0.11905	0.10241	AVRG		0.49511		6.90087
1,1,1-trifluoroethane	++++ 0.38804	0.23271 ++++	0.22089	0.21365	0.20617	0.20476	AVRG		0.10627		8.51602
							AVRG		0.21104		7.23518

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 17-FEB-2010 16:02
 End Cal Date : 18-FEB-2010 00:42
 Quant Method : ISTD
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/VOA7.i/030110v7/VOA7-8260B-021710.m
 Cal Date : 02-Mar-2010 06:02 ale01592

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	b	Coefficients m1	m2	%RSD or R ²
4 Dichlorodifluoromethane	0.14689 0.14671 ++++	0.16337 ++++	0.17771	0.15010	0.15669	0.14834	AVRG		0.15569		7.36086
5 Chloromethane	0.52870 0.38772 ++++	0.50818 ++++	0.48152	0.45665	0.48246	0.42873	AVRG		0.46771		10.25591
6 Vinyl chloride	0.50952 0.32494 ++++	0.46079 ++++	0.43218	0.40625	0.41055	0.36375	AVRG		0.41543		14.62877
7 Bromomethane	0.25780 0.22760 ++++	0.23623 ++++	0.23278	0.22734	0.24344	0.23277	AVRG		0.23685		4.53392
8 Chloroethane	0.22734 0.20451 0.35996 0.28982	0.22323 ++++ 0.35068 ++++	0.21132 0.30112	0.20164 0.30563	0.21135 0.31443	0.20785 0.30426	AVRG AVRG		0.21246 0.31799		4.47108 8.38225
10 Ethyl Ether	0.28308 0.29597 0.04418	0.32062 ++++ 0.03949	0.28724 0.04544	0.29016 0.04756	0.29781 0.04531	0.29886 0.05365	AVRG AVRG		0.29582 0.04808		4.32385 14.70368
11 Acrolein	0.06092 0.10245	++++ 0.09727	0.09404	0.09075	0.07953	0.07034	AVRG		0.08737		13.51328
12 Trichlorotrifluoroethane	0.07720 ++++	++++					AVRG				

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INITIAL CALIBRATION DATA

Start Cal Date : 17-FEB-2010 16:02
 End Cal Date : 18-FEB-2010 00:42
 Quant Method : ISTD
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/VOA7.i/030110v7/VOA7-8260B-021710.m
 Cal Date : 02-Mar-2010 06:02 ale01592

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	b	Coefficients ml	m2	RSR or R2
13 Acetone	0.371221 0.308891	0.362791 ++++	0.323831	0.326141	0.341241	0.310271	AVRG		0.334911		7.33338
14 1,1-Dichloroethylene	0.23466 0.209981	0.22304 ++++	0.23525	0.212181	0.209551	0.19843	AVRG		0.217441		6.41898
15 Isopropyl Alcohol	0.033791 0.033851	0.028481 ++++	0.033621	0.033821	0.034381	0.029701	AVRG		0.03252		7.32915
16 Iodomethane	0.396081 0.380941	0.366451 ++++	0.405601	0.385661	0.357881	0.359751	AVRG		0.378911		4.844561
17 Acetonitrile	0.061931 0.050951	0.063811 ++++	0.057561	0.057971	0.057301	0.065941	AVRG		0.059351		8.41770
18 Methyl acetate	0.355151 0.278571	0.297491 ++++	0.328521	0.315061	0.298691	0.294471	AVRG		0.309711		8.253371
19 Carbon disulfide	0.892661 0.655991	0.790481 ++++	0.831001	0.787131	0.715681	0.681631	AVRG		0.764941		11.074381
20 Allyl chloride	0.539681 0.396211	0.505261 ++++	0.509581	0.486761	0.453621	0.429651	AVRG		0.474391		10.593051
21 tert-Butyl Alcohol	0.051671 0.047761	0.041391 ++++	0.047641	0.047671	0.050221	0.042651	AVRG		0.04700		7.963071

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Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	b	Coefficients ml	m2	%RSD or R^2
	Level 7	Level 8									
22 Methylene chloride	++++ 0.19549	0.23820 ++++	0.21441 ++++	0.20090 ++++	0.19068 ++++	0.18599 ++++	AVRG		0.20428		9.44493
23 Acrylonitrile	0.13731 0.13157	0.12635 ++++	0.14147 ++++	0.13774 ++++	0.13619 ++++	0.13170 ++++	AVRG		0.13462		3.74591
24 tert-Butyl methyl ether	0.80994 0.78981	0.81750 ++++	0.75450 ++++	0.77254 ++++	0.73118 ++++	0.73829 ++++	AVRG		0.77339		4.39216
25 trans-1,2-Dichloroethylene	0.50384 0.42206	0.46689 ++++	0.48692 ++++	0.46195 ++++	0.45327 ++++	0.42294 ++++	AVRG		0.45970		6.61934
26 Vinyl acetate	0.77450 0.60197	0.85406 ++++	0.75761 ++++	0.81966 ++++	0.81586 ++++	0.69432 ++++	AVRG		0.75971		11.40322
27 Isopropyl ether	++++ 1.18690	1.28662 ++++	1.29461 ++++	1.35198 ++++	1.29488 ++++	1.24203 ++++	AVRG		1.27617		4.38816
28 1,1-Dichloroethane	0.61604 0.58003	0.62372 ++++	0.63881 ++++	0.58962 ++++	0.58167 ++++	0.55743 ++++	AVRG		0.59819		4.80576
29 2-Chloro-1,3-butadiene	0.41421 0.37943	0.42657 ++++	0.42523 ++++	0.41666 ++++	0.39568 ++++	0.39845 ++++	AVRG		0.40803		4.26210
30 Ethyl tert-butyl ether	++++ 0.90285	0.84231 ++++	0.83069 ++++	0.85509 ++++	0.90158 ++++	0.89776 ++++	AVRG		0.87171		3.75724

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Compound	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Curve	b	Coefficients m1	n2	%RSD or R^2
	100	200									
	Level 7	Level 8									
31 2-Butanone	0.38771	0.40391	0.35922	0.36946	0.40769	0.34465	AVRG		0.37353		7.19573
	0.34266	++++									
32 Ethyl acetate	0.44278	0.41784	0.45125	0.42632	0.40256	0.35807	AVRG		0.40471		10.77753
	0.33414	++++									
33 cis-1,2-Dichloroethylene	0.59471	0.54869	0.55173	0.53357	0.50390	0.47885	AVRG		0.53052		7.33716
	0.50219	++++									
34 2,2-Dichloropropane	0.29938	0.24188	0.25597	0.23681	0.21790	0.23089	AVRG		0.24848		10.56617
	0.25653	++++									
35 Propionitrile	0.07002	0.05258	0.06457	0.05980	0.05683	0.05325	AVRG		0.05907		10.68190
	0.05642	++++									
36 Methacrylonitrile	0.25818	0.24456	0.27034	0.26013	0.24380	0.22478	AVRG		0.24530		8.04738
	0.21528	++++									
37 Bromochloromethane	0.40223	0.39817	0.41300	0.40043	0.38909	0.36555	AVRG		0.39220		4.15023
	0.37692	++++									
38 Chloroform	0.58519	0.49407	0.48340	0.48912	0.49932	0.45410	AVRG		0.49798		8.35869
	0.47062	++++									
39 Tetrahydrofuran	0.47764	0.44454	0.45944	0.42050	0.41053	0.36338	AVRG		0.41916		10.93258
	0.35812	++++									

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Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	b	Coefficients ml	m2	%RSD or R^2
	100	200									
	Level 7	Level 8									
41 1,1,1-Trichloroethane	C.33463	0.35201	0.35980	0.33703	0.33680	0.32438					
	C.34747	++++					AVRG		0.34173		3.50911
42 Isobutyl alcohol	0.01894	0.01694	0.00962	0.01852	0.01823	0.01675					
	0.01640	++++					AVRG		0.0791		6.84459
43 Cyclohexane	0.66684	0.57907	0.60139	0.53233	0.53775	0.48436					
	0.48668	++++					AVRG		0.55549		11.78390
44 1,1-Dichloropropene	0.37354	0.38678	0.36871	0.36553	0.35185	0.32521					
	0.33295	++++					AVRG		0.35780		6.23018
45 Carbon tetrachloride	0.30369	0.24799	0.29060	0.26048	0.26806	0.25705					
	0.27553	++++					AVRG		0.27191		7.21748
47 1,2-Dichloroethane	0.54033	0.47238	0.50508	0.49698	0.49337	0.45253					
	0.47861	++++					AVRG		0.49133		5.66795
48 Benzene	1.15482	1.06364	1.13097	1.06471	1.03320	0.97886					
	0.99723	1.32285					AVRG		1.09329		10.11080
49 Methyl tert-amyl ether	++++	0.62391	0.62516	0.64841	0.70561	0.68979					
	0.72584	++++					AVRG		0.66978		6.46624
50 Cyclohexene	0.56390	0.50610	0.54171	0.51654	0.51454	0.47290					
	0.48987	++++					AVRG		0.51508		5.92603

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Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	b	ml	m2	%RSD or R ²
	100	200									
	Level 7	Level 8									
52 n-Butyl alcohol	0.01179 0.01388	0.01241 0.01234	0.01216	0.01341	0.01403	0.01399	AVRG		0.01300		7.09548
53 Trichloroethylene	0.27430 0.25637	0.26438 ++++	0.27397	0.26519	0.27618	0.24387	AVRG		0.26489		4.39586
54 Methyl methacrylate	0.22336 0.20756	0.20671 ++++	0.22931	0.22055	0.21809	0.21228	AVRG		0.21684		3.87232
55 Methylcyclohexane	0.49966 0.42078	0.43861 ++++	0.44481	0.44006	0.43612	0.40383	AVRG		0.44055		6.73024
56 1,2-Dichloropropane	0.39245 0.33677	0.36897 ++++	0.38177	0.37142	0.36583	0.33120	AVRG		0.36406		6.6845
57 1,4-Dioxane	0.00348 0.00359	0.00250 ++++	0.00354	0.00334	0.00323	0.00313	AVRG		0.00326		11.42936
58 Dibromomethane	0.19196 0.19944	0.19723 ++++	0.19939	0.19727	0.19889	0.19046	AVRG		0.19638		1.8688
59 Bromodichloromethane	0.39732 0.39410	0.36909 ++++	0.39631	0.38593	0.41432	0.37605	AVRG		0.39044		3.84034
60 2-Nitropropane	0.13385 0.14680	0.11919 ++++	0.14652	0.14531	0.14750	0.14329	AVRG		0.14035		7.43854

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Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	b	Coefficients ml	m2	%RSD or R^2
	Level 7	Level 8									
61 2-Chloroethyvinyl ether	0.13828 0.14819	0.13131 ++++	0.13224	0.14312	0.14531	0.15383	AVRG	0.14176			5.85520
62 cis-1,3-Dichloropropylene	0.44683 0.48927	0.46424 ++++	0.48235	0.47289	0.50753	0.46544	AVRG	0.47551			4.13438
63 4-Methyl-2-pentanone	0.24889 0.23121	0.25775 ++++	0.24134	0.24113	0.27708	0.22508	AVRG	0.24607			7.06681
65 Toluene	0.99540 0.84445	0.91525 ++++	0.94675	0.88594	0.89959	0.81410	AVRG	0.90021			6.75427
66 Ethyl methacrylate	0.58277 0.50204	0.54247 ++++	0.62302	0.60387	0.58118	0.57129	AVRG	0.57238			6.98256
67 trans-1,3-Dichloropropylene	0.57975 0.62680	0.56956 ++++	0.63061	0.60000	0.66595	0.59758	AVRG	0.61004			5.45435
68 1,1,2-Trichloroethane	0.34428 0.30944	0.35523 ++++	0.35299	0.34101	0.36031	0.31095	AVRG	0.33917			6.14376
69 2-Hexanone	0.73685 0.50687	0.78422 ++++	0.70044	0.68470	0.76383	0.58953	AVRG	0.68092			14.65103
70 1,3-Dichloropropane	0.69293 0.63986	0.71194 ++++	0.70218	0.70482	0.75363	0.66338	AVRG	0.69553			5.22166

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Compound	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Curve	b	Coefficients	m2	%RSD or R^2
	100	200									
	Level 7	Level 8									
71 Tetrachloroethylene	0.28354	0.25342	0.26414	0.23364	0.24287	0.22289	AVRG		0.24878		8.14204
	0.24094	++++									
72 Dibromochloromethane	0.33269	0.34579	0.36231	0.35639	0.40520	0.36488	AVRG		0.36583		6.98702
	0.39353	++++									
73 1,2-Dibromoethane	0.36328	0.35222	0.36077	0.36799	0.40005	0.35812	AVRG		0.36785		4.25309
	0.37253	++++									
74 1-Chlorohexane	0.34706	0.30121	0.31913	0.33191	0.32325	0.30402	AVRG		0.31936		5.13508
	0.30890	++++									
76 Chlorobenzene	1.01098	0.95127	0.95000	0.91236	0.96965	0.82857	AVRG		0.92664		6.81260
	0.86362	++++									
77 1,1,1,2-Tetrachloroethane	0.30146	0.31109	0.30197	0.30384	0.34945	0.31502	AVRG		0.31932		6.94131
	0.35239	++++									
78 Ethylbenzene	1.85154	1.82479	1.76134	1.68668	1.76608	1.44831	AVRG		1.68200		10.24073
	1.43524	++++									
79 m,p-Xylenes	0.62114	0.67062	0.65895	0.62920	0.66820	0.57827	AVRG		0.63299		5.50638
	0.60453	++++									
80 o-Xylene	0.64264	0.67305	0.68788	0.66680	0.71782	0.63403	AVRG		0.67056		4.16006
	0.67170	++++									

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Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	b	Coefficients ml	m2	%RSD or R^2
	100	200									
	Level 7	Level 8									
81 Styrene	1.03480 1.04761	1.05435 ++++	1.09579	1.08161	1.17767	1.02490	AVRG		1.07382		4.85533
82 Bromoform	0.44800 0.51866	0.46729 ++++	0.45445	0.44703	0.54809	0.46991	AVRG		0.47906		8.5291
83 Isopropylbenzene	3.49497 2.64705	3.66615 ++++	3.43580	3.19632	3.44542	2.75679	AVRG		3.23464		12.06581
84 cis-1,4-Dichloro-2-butene	0.38069 0.39623	0.31673 ++++	0.41215	0.40845	0.41138	0.39737	AVRG		0.38900		8.67306
85 Cyclohexanone	0.03195 ++++	0.02350 ++++	0.02895	0.02863	0.02827	++++	AVRG		0.02826		10.75061
87 1,1,2,2-Tetrachloroethane	1.19265 0.98082	1.21572 ++++	1.15731	1.10829	1.25926	1.00651	AVRG		1.1351		9.3719
88 trans-1,4-Dichloro-2-butene	0.31891 0.36821	0.31312 ++++	0.36778	0.36391	0.36234	0.36318	AVRG		0.35137		6.86595
89 1,2,3-Trichloropropane	0.28647 0.23411	0.24666 ++++	0.22625	0.24828	0.25953	0.22210	AVRG		0.24620		8.97349
90 Bromobenzene	0.76034 0.73175	0.78745 ++++	0.77871	0.75408	0.80267	0.68660	AVRG		0.75737		5.14118

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Compound	1	2	5	10	20	50	Curve	b	Coefficients	m1	m2	%RSD or R^2
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6						
	100	200										
	Level 7	Level 8										
91 n-Propylbenzene	4.68347	4.56352	4.37500	4.07800	4.36558	3.44795	AVRG			4.11235		13.35638
	3.27290	++++										
92 1,3,5-Trimethylbenzene	2.81587	2.87105	2.68849	2.60394	2.92918	2.42595	AVRG			2.67285		8.07975
	2.37547	++++										
93 2-Chlorotoluene	3.05461	3.13194	2.82160	2.73305	3.05604	2.48242	AVRG			2.81550		10.07173
	2.42881	++++										
94 4-Chlorotoluene	2.83303	2.73655	2.57278	2.45072	2.69458	2.22008	AVRG			2.52732		10.03292
	2.18348	++++										
95 tert-Butylbenzene	2.54254	2.53348	2.52529	2.35277	2.63624	2.17076	AVRG			2.42130		7.65601
	2.18802	++++										
96 1,2,4-Trimethylbenzene	2.83048	2.81952	2.78705	2.63535	2.97059	2.45445	AVRG			2.70506		7.47088
	2.43799	++++										
97 Pentachloroethane	0.26106	0.28148	0.29783	0.29968	0.26523	0.29207	AVRG			0.28176		5.48711
	0.27493	++++										
98 sec-Butylbenzene	3.89578	3.94634	3.68073	3.52735	3.87381	3.06099	AVRG			3.56563		11.26370
	2.97444	++++										
99 4-isopropyltoluene	2.79121	2.68596	2.60196	2.47043	2.87417	2.31964	AVRG			2.57723		8.71312
	2.29722	++++										

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Compound	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Curve	b	ml	n2	%RSD or R^2
	100	200									
	Level 7	Level 8									
100 1,3-Dichlorobenzene	1.69373	1.54028	1.50003	1.42658	1.57954	1.28805	AVRG		1.47958		9.64386
	1.32887	++++									
102 1,4-Dichlorobenzene	1.53770	1.53666	1.49633	1.39235	1.50686	1.30262	AVRG		1.44472		6.77070
	1.34055	++++									
103 Benzyl chloride	1.17587	1.11939	1.30663	1.30678	1.28136	1.26359	AVRG		1.23904		5.72889
	1.21970	++++									
104 n-Butylbenzene	3.34819	3.21649	3.03466	2.89314	3.28392	2.61464	AVRG		2.98564		11.02434
	2.50844	++++									
105 1,2-Dichlorobenzene	1.50083	1.58906	1.51728	1.49969	1.60799	1.32336	AVRG		1.48620		7.15929
	1.36521	++++									
106 bis(2-Chloroisopropyl)ether	0.83007	0.63325	0.75441	0.70073	0.68867	0.64153	AVRG		0.69953		10.20844
	0.64789	++++									
107 1,2-Dibromo-3-chloropropane	584	2275	5481	11354	29844	73362	LNLR	0.02102	0.19109		0.99838
	176713	++++									
108 1,2,4-Trichlorobenzene	1.00820	0.98539	0.92239	0.88204	1.01161	0.84337	AVRG		0.93109		7.59068
	0.86464	++++									
109 Hexachlorobutadiene	0.50497	0.57866	0.51670	0.47693	0.53727	0.42764	AVRG		0.49991		10.16033
	0.45720	++++									

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 17-FEB-2010 16:02
 End Cal Date : 18-FEB-2010 00:42
 Quant Method : ISTD
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/VOA7.i/030110v7/VOA7-8260B-021710.m
 Cal Date : 02-Mar-2010 06:02 ale01592

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	b	Coefficients ml	m2	%RSD or R^2
110 Naphthalene	2.39039 2.29053	2.32801 ++++	2.24690	2.18867	2.66812	2.25278	AVRG		2.33792		6.80664
111 1,2,3-Trichlorobenzene	0.99358 0.80769	0.85784 ++++	0.84533	0.78975	0.93531	0.79611	AVRG		0.86076		8.92879
46 1,2-Dichloroethane-d4	0.42538 0.43397	0.44520 ++++	0.42789	0.43782	0.42368	0.42998	AVRG		0.43199		1.75777
64 Toluene-d8	1.62293 1.55870	1.66865 ++++	1.68737	1.64500	1.61861	1.59016	AVRG		1.62735		2.72640
86 Bromofluorobenzene	1.29606 1.27105	1.36624 ++++	1.35275	1.32744	1.29510	1.29800	AVRG		1.31523		2.62999

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 17-FEB-2010 16:02
End Cal Date : 18-FEB-2010 00:42
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/VOA7.i/030110v7/VOA7-8260B-021710.m
Cal Date : 02-Mar-2010 06:02 ale01592

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

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA7.i Injection Date: 18-FEB-2010 02:27
Lab File ID: 7z328.d Init. Cal. Date(s): 17-FEB-2010 18-FEB-2010
Analysis Type: WATER Init. Cal. Times: 16:02 00:42
Lab Sample ID: W7VM100217-22 Quant Type: ISTD
Method: /chem/VOA7.i/021710v7/VOA7-8260B-021710.m

COMPOUND	RRF / AMOUNT	RF50	CCAL	MIN	MAX	CURVE TYPE
			RRF50	RRF %D / %DRIFT	%D / %DRIFT	
M 2 Xylenes (total)	0.64551	0.62451	0.62451	0.050	-3.25377	30.00000 Averaged
M 3 1,2-Dichloroethylene (total)	0.49511	0.45815	0.45815	0.050	-7.46472	30.00000 Averaged
M 1 1,3-Dichloropropylene	0.45215	0.46016	0.46016	0.050	1.77148	30.00000 Averaged
4 Dichlorodifluoromethane	0.15569	0.13873	0.13873	0.050	-10.89039	30.00000 Averaged
5 Chloromethane	0.46771	0.40064	0.40064	0.100	-14.34049	30.00000 Averaged|spcc
6 Vinyl chloride	0.41543	0.34912	0.34912	0.050	-15.96116	20.00000 Averaged|ccc
7 Bromomethane	0.23685	0.22892	0.22892	0.050	-3.35016	30.00000 Averaged
8 Chloroethane	0.21246	0.20582	0.20582	0.010	-3.12447	30.00000 Averaged
9 Trichlorofluoromethane	0.31799	0.29248	0.29248	0.050	-8.02212	30.00000 Averaged
10 Ethyl Ether	0.29582	0.29735	0.29735	0.001	0.51656	30.00000 Averaged
13 Acetone	0.33491	0.29721	0.29721	0.050	-11.25680	40.00000 Averaged
17 Acetonitrile	0.05935	0.07072	0.07072	0.010	19.15195	30.00000 Averaged
14 1,1-Dichloroethylene	0.21744	0.19489	0.19489	0.050	-10.37135	20.00000 Averaged|ccc
18 Methyl acetate	0.30971	0.30162	0.30162	0.010	-2.61040	40.00000 Averaged
16 Iodomethane	0.37891	0.36309	0.36309	0.050	-4.17398	30.00000 Averaged
22 Methylene chloride	0.20428	0.19326	0.19326	0.050	-5.39206	30.00000 Averaged
19 Carbon disulfide	0.76494	0.70918	0.70918	0.050	-7.28904	30.00000 Averaged
24 tert-Butyl methyl ether	0.77339	0.77741	0.77741	0.050	0.51971	30.00000 Averaged
25 trans-1,2-Dichloroethylene	0.45970	0.42331	0.42331	0.050	-7.91447	30.00000 Averaged
26 Vinyl acetate	0.75971	0.65453	0.65453	0.010	-13.84562	40.00000 Averaged
28 1,1-Dichloroethane	0.59819	0.58345	0.58345	0.100	-2.46329	30.00000 Averaged|spcc
31 2-Butanone	0.37353	0.32999	0.32999	0.030	-11.65784	40.00000 Averaged
33 cis-1,2-Dichloroethylene	0.53052	0.49299	0.49299	0.050	-7.07501	30.00000 Averaged
34 2,2-Dichloropropane	0.24848	0.22525	0.22525	0.050	-9.35079	30.00000 Averaged
38 Chloroform	0.49798	0.47145	0.47145	0.010	-5.32731	20.00000 Averaged|ccc
37 Bromochloromethane	0.39220	0.37710	0.37710	0.010	-3.84914	30.00000 Averaged
41 1,1,1-Trichloroethane	0.34173	0.33281	0.33281	0.010	-2.61185	30.00000 Averaged
43 Cyclohexane	0.55549	0.48819	0.48819	0.010	-12.11548	30.00000 Averaged
44 1,1-Dichloropropene	0.35780	0.33377	0.33377	0.010	-6.71432	30.00000 Averaged
52 n-Butyl alcohol	0.01300	0.01560	0.01560	0.001	20.00901	40.00000 Averaged
45 Carbon tetrachloride	0.27191	0.26041	0.26041	0.010	-4.22921	30.00000 Averaged
\$ 46 1,2-Dichloroethane-d4	0.43199	0.41602	0.41602	0.010	-3.69539	30.00000 Averaged
47 1,2-Dichloroethane	0.49133	0.47654	0.47654	0.010	-3.00919	30.00000 Averaged
48 Benzene	1.09329	1.01770	1.01770	0.010	-6.91346	30.00000 Averaged
50 Cyclohexene	0.51508	0.47503	0.47503	0.010	-7.77517	30.00000 Averaged

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA7.i Injection Date: 18-FEB-2010 02:27
Lab File ID: 7z328.d Init. Cal. Date(s): 17-FEB-2010 18-FEB-2010
Analysis Type: WATER Init. Cal. Times: 16:02 00:42
Lab Sample ID: W7VM100217-22 Quant Type: ISTD
Method: /chem/VOA7.i/021710v7/VOA7-8260B-021710.m

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
53 Trichloroethylene	0.26489	0.25884	0.25884	0.010	-2.28485	30.00000	Averaged
56 1,2-Dichloropropane	0.36406	0.34276	0.34276	0.010	-5.85033	20.00000	Averaged|ccc
55 Methylcyclohexane	0.44055	0.40776	0.40776	0.010	-7.44328	30.00000	Averaged
59 Bromodichloromethane	0.39044	0.39204	0.39204	0.010	0.40888	30.00000	Averaged
58 Dibromomethane	0.19638	0.19614	0.19614	0.010	-0.12043	30.00000	Averaged
61 2-Chloroethylvinyl ether	0.14176	0.13312	0.13312	0.010	-6.08895	30.00000	Averaged
63 4-Methyl-2-pentanone	0.24607	0.23847	0.23847	0.010	-3.08660	40.00000	Averaged
62 cis-1,3-Dichloropropylene	0.47551	0.47478	0.47478	0.010	-0.15161	30.00000	Averaged
64 Toluene-d8	1.62735	1.59462	1.59462	0.010	-2.01081	30.00000	Averaged
65 Toluene	0.90021	0.86882	0.86882	0.010	-3.48730	20.00000	Averaged|ccc
67 trans-1,3-Dichloropropylene	0.61004	0.62998	0.62998	0.010	3.26982	30.00000	Averaged
68 1,1,2-Trichloroethane	0.33917	0.33086	0.33086	0.010	-2.45158	30.00000	Averaged
69 2-Hexanone	0.68092	0.56308	0.56308	0.010	-17.30573	40.00000	Averaged
70 1,3-Dichloropropane	0.69553	0.70217	0.70217	0.010	0.95395	30.00000	Averaged
71 Tetrachloroethylene	0.24878	0.23181	0.23181	0.010	-6.82091	30.00000	Averaged
72 Dibromochloromethane	0.36583	0.38883	0.38883	0.010	6.28730	30.00000	Averaged
73 1,2-Dibromoethane	0.36785	0.38653	0.38653	0.010	5.07802	30.00000	Averaged
76 Chlorobenzene	0.92664	0.90044	0.90044	0.300	-2.82685	30.00000	Averaged|spcc
77 1,1,1,2-Tetrachloroethane	0.31932	0.33458	0.33458	0.010	4.77841	30.00000	Averaged
78 Ethylbenzene	1.68200	1.51733	1.51733	0.010	-9.78969	20.00000	Averaged|ccc
79 m,p-Xylenes	0.63299	0.60842	0.60842	0.010	-3.88083	30.00000	Averaged
80 o-Xylene	0.67056	0.65668	0.65668	0.010	-2.06991	30.00000	Averaged
81 Styrene	1.07382	1.07422	1.07422	0.010	0.03737	30.00000	Averaged
82 Bromoform	0.47906	0.50547	0.50547	0.100	5.51185	30.00000	Averaged|spcc
83 Isopropylbenzene	3.23464	2.86304	2.86304	0.010	-11.48816	30.00000	Averaged
87 1,1,2,2-Tetrachloroethane	1.13151	1.04885	1.04885	0.300	-7.30521	30.00000	Averaged|spcc
86 Bromofluorobenzene	1.31523	1.28244	1.28244	0.010	-2.49352	30.00000	Averaged
89 1,2,3-Trichloropropane	0.24620	0.24376	0.24376	0.010	-0.99197	30.00000	Averaged
90 Bromobenzene	0.75737	0.73368	0.73368	0.010	-3.12821	30.00000	Averaged
91 n-Propylbenzene	4.11235	3.55350	3.55350	0.010	-13.58941	30.00000	Averaged
93 2-Chlorotoluene	2.81550	2.61345	2.61345	0.010	-7.17611	30.00000	Averaged
92 1,3,5-Trimethylbenzene	2.67285	2.53769	2.53769	0.010	-5.05667	30.00000	Averaged
94 4-Chlorotoluene	2.52732	2.34633	2.34633	0.010	-7.16112	30.00000	Averaged
95 tert-Butylbenzene	2.42130	2.26973	2.26973	0.010	-6.25993	30.00000	Averaged
96 1,2,4-Trimethylbenzene	2.70506	2.55659	2.55659	0.010	-5.48856	30.00000	Averaged
98 sec-Butylbenzene	3.56563	3.18076	3.18076	0.010	-10.79408	30.00000	Averaged

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA7.i Injection Date: 18-FEB-2010 02:27
 Lab File ID: 7z328.d Init. Cal. Date(s): 17-FEB-2010 18-FEB-2010
 Analysis Type: WATER Init. Cal. Times: 16:02 00:42
 Lab Sample ID: W7VM100217-22 Quant Type: ISTD
 Method: /chem/VOA7.i/021710v7/VOA7-8260B-021710.m

COMPOUND	RRF / AMOUNT	RF50	CCAL	MIN	MAX	CURVE TYPE
99 4-Isopropyltoluene	2.57723	2.40283	2.40283	0.010	-6.76672	Averaged
100 1,3-Dichlorobenzene	1.47958	1.37420	1.37420	0.010	-7.12232	Averaged
102 1,4-Dichlorobenzene	1.44472	1.35364	1.35364	0.010	-6.30431	Averaged
104 n-Butylbenzene	2.98564	2.67527	2.67527	0.010	-10.39534	Averaged
105 1,2-Dichlorobenzene	1.48620	1.41959	1.41959	0.010	-4.48214	Averaged
107 1,2-Dibromo-3-chloropropane	53.98003	50.00000	0.20228	0.010	7.96006	Linear
108 1,2,4-Trichlorobenzene	0.93109	0.87331	0.87331	0.010	-6.20563	Averaged
109 Hexachlorobutadiene	0.49991	0.45648	0.45648	0.010	-8.68867	Averaged
110 Naphthalene	2.33792	2.47041	2.47041	0.010	5.66713	Averaged
111 1,2,3-Trichlorobenzene	0.86076	0.87276	0.87276	0.010	1.39435	Averaged

Average %D / Drift Results.

 Calculated Average %D/Drift = 7.69699
 Maximum Average %D/Drift = 20.00000
 * Passed Average %D/Drift Test.

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA7.i/021710v7/7z328.d

Lab Smp Id: W7VM100217-22

Client Smp ID: ICV

Inj Date : 18-FEB-2010 02:27

Operator : AX01

Inst ID: VOA7.i

Smp Info : |W7VM100217-22|ICV|1|VOAF|1|

Misc Info : GEL 5mL N/A UVM100126-01E/IVM100214-01

Comment :

Method : /chem/VOA7.i/021710v7/VOA7-8260B-021710.m

Meth Date : 18-Feb-2010 06:55 ale01592 Quant Type: ISTD

Cal Date : 18-FEB-2010 00:08

Cal File: 7z324.d

Als bottle: 21

Continuing Calibration Sample

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: CALsubL+.sub

Target Version: 3.50

Concentration Formula: Amt * DF * (Uf/Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	sample purged

Cpnd Variable

Local Compound Variable

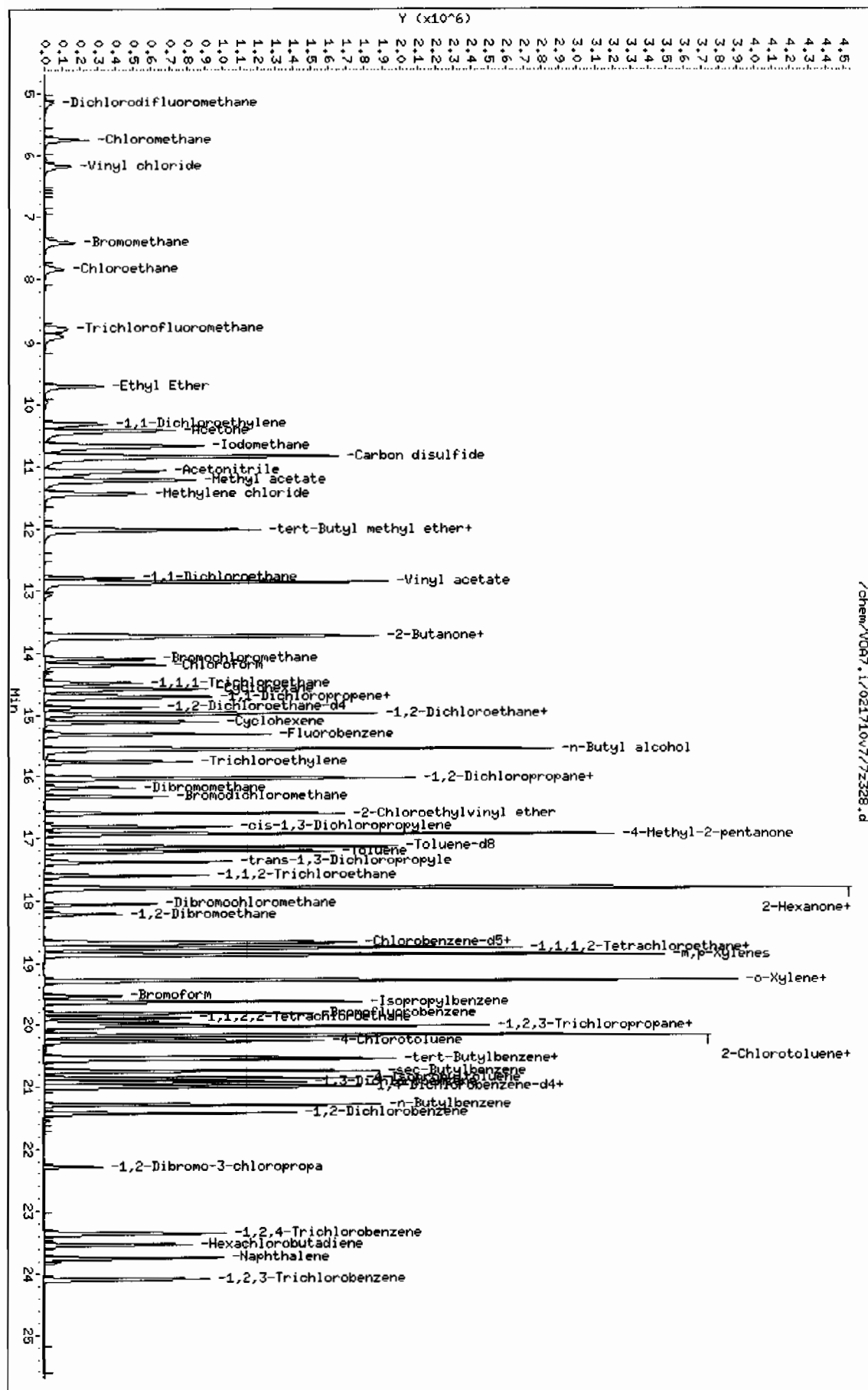
		QUANT SIG				AMOUNTS	
Compounds		MASS	RT	EXP RT	REL RT	RESPONSE	
M 2 Xylenes (total)	106					1553189	150.000
M 3 1,2-Dichloroethylene (total)	96					1074106	100.000
M 1 1,3-Dichloropropylene	75					1078824	100.000
4 Dichlorodifluoromethane	85	5.147	5.147	(0.336)		162626	50.0000
5 Chloromethane	50	5.757	5.757	(0.376)		469635	50.0000
6 Vinyl chloride	62	6.187	6.187	(0.404)		409216	50.0000
7 Bromomethane	94	7.418	7.418	(0.484)		268342	50.0000
8 Chloroethane	64	7.845	7.845	(0.512)		241269	50.0000
9 Trichlorofluoromethane	101	8.789	8.789	(0.574)		342848	50.0000
10 Ethyl Ether	59	9.703	9.692	(0.633)		348559	50.0000
13 Acetone	43	10.413	10.413	(0.680)		1741994	250.000
17 Acetonitrile	41	11.073	11.073	(0.723)		1657956	1000.00
14 1,1-Dichloroethylene	96	10.312	10.312	(0.673)		228453	50.0000
18 Methyl acetate	43	11.215	11.215	(0.732)		1767842	250.000
16 Iodomethane	142	10.667	10.667	(0.696)		2128132	250.000
22 Methylene chloride	86	11.439	11.439	(0.747)		226549	50.0000

Compounds	QUANT SIG					AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)
19 Carbon disulfide	76	10.840	10.840	(0.708)	4156596	250.000	232
24 tert-Butyl methyl ether	73	12.017	12.017	(0.785)	911300	50.0000	50.2
25 trans-1,2-Dichloroethylene	61	12.027	12.017	(0.785)	496217	50.0000	46.0
26 Vinyl acetate	43	12.860	12.860	(0.840)	3836252	250.000	215
28 1,1-Dichloroethane	63	12.799	12.789	(0.836)	683938	50.0000	48.8
31 2-Butanone	43	13.723	13.723	(0.896)	1934081	250.000	221
33 cis-1,2-Dichloroethylene	61	13.733	13.733	(0.897)	577889	50.0000	46.5
34 2,2-Dichloropropane	77	13.743	13.743	(0.897)	264039	50.0000	45.3
38 Chloroform	83	14.190	14.190	(0.926)	552641	50.0000	47.3
37 Bromochloromethane	49	14.088	14.088	(0.920)	442048	50.0000	48.1
41 1,1,1-Trichloroethane	97	14.484	14.484	(0.946)	390122	50.0000	48.7
43 Cyclohexane	56	14.586	14.586	(0.952)	572266	50.0000	43.9
44 1,1-Dichloropropene	75	14.697	14.697	(0.960)	391255	50.0000	46.6
52 n-Butyl alcohol	56	15.560	15.560	(1.016)	1829150	5000.00	6000
45 Carbon tetrachloride	117	14.718	14.718	(0.961)	305263	50.0000	47.9
\$ 46 1,2-Dichloroethane-d4	65	14.880	14.880	(0.971)	487674	50.0000	48.2
47 1,2-Dichloroethane	62	14.982	14.982	(0.978)	558613	50.0000	48.5
48 Benzene	78	14.982	14.982	(0.978)	1192975	50.0000	46.5
50 Cyclohexene	67	15.114	15.114	(0.987)	556844	50.0000	46.1
* 51 Fluorobenzene	96	15.317	15.317	(1.000)	1172223	50.0000	
53 Trichloroethylene	95	15.763	15.763	(1.029)	303421	50.0000	48.8
56 1,2-Dichloropropane	63	16.037	16.037	(1.047)	401792	50.0000	47.1
55 Methylcyclohexane	83	16.027	16.027	(1.046)	477986	50.0000	46.3
59 Bromodichloromethane	83	16.332	16.332	(1.066)	459560	50.0000	50.2
58 Dibromomethane	93	16.179	16.179	(1.056)	229919	50.0000	49.9
61 2-Chloroethylvinyl ether	63	16.606	16.606	(1.084)	780259	250.000	235
63 4-Methyl-2-pentanone	58	16.941	16.941	(0.908)	988490	250.000	242
62 cis-1,3-Dichloropropylene	75	16.819	16.819	(1.098)	556553	50.0000	49.9
\$ 64 Toluene-d8	98	17.134	17.134	(0.918)	1321978	50.0000	49.0
65 Toluene	92	17.215	17.215	(0.922)	720271	50.0000	48.2
67 trans-1,3-Dichloropropylene	75	17.388	17.388	(0.931)	522271	50.0000	51.6
68 1,1,2-Trichloroethane	83	17.611	17.611	(0.943)	274288	50.0000	48.8
69 2-Hexanone	43	17.804	17.794	(0.954)	2334037	250.000	207
70 1,3-Dichloropropane	76	17.794	17.794	(0.953)	582114	50.0000	50.5
71 Tetrachloroethylene	164	17.814	17.814	(0.954)	192175	50.0000	46.6
72 Dibromochloromethane	129	18.058	18.058	(0.967)	322348	50.0000	53.1
73 1,2-Dibromoethane	107	18.220	18.220	(0.976)	320442	50.0000	52.5
* 75 Chlorobenzene-d5	117	18.667	18.667	(1.000)	829022	50.0000	
76 Chlorobenzene	112	18.697	18.697	(1.002)	746485	50.0000	48.6
77 1,1,1,2-Tetrachloroethane	131	18.758	18.758	(1.005)	277371	50.0000	52.4
78 Ethylbenzene	91	18.768	18.758	(1.005)	1257903	50.0000	45.1
79 m,p-Xylenes	106	18.870	18.870	(1.011)	1008788	100.000	96.1
80 o-Xylene	106	19.286	19.286	(1.033)	544401	50.0000	49.0
81 Styrene	104	19.286	19.286	(1.033)	890551	50.0000	50.0
82 Bromoform	173	19.540	19.540	(0.931)	209984	50.0000	52.8
83 Isopropylbenzene	105	19.631	19.631	(0.935)	1189382	50.0000	44.2
87 1,1,1,2-Tetrachloroethane	83	19.885	19.885	(0.947)	435719	50.0000	46.3

Compounds	QUANT SIG					AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)
=====	=====	==	=====	=====	=====	=====	=====
\$ 86 Bromofluorobenzene	95	19.814	19.814	(0.944)	532758	50.0000	48.8
89 1,2,3-Trichloropropane	110	19.966	19.966	(0.951)	101263	50.0000	49.5
90 Bromobenzene	156	20.017	20.017	(0.954)	304789	50.0000	48.4
91 n-Propylbenzene	91	20.027	20.027	(0.954)	1476217	50.0000	43.2
93 2-Chlorotoluene	91	20.169	20.169	(0.961)	1085697	50.0000	46.4
92 1,3,5-Trimethylbenzene	105	20.169	20.169	(0.961)	1054223	50.0000	47.5
94 4-Chlorotoluene	91	20.271	20.271	(0.966)	974728	50.0000	46.4
95 tert-Butylbenzene	119	20.535	20.524	(0.978)	942904	50.0000	46.9
96 1,2,4-Trimethylbenzene	105	20.565	20.565	(0.980)	1062075	50.0000	47.2
98 sec-Butylbenzene	105	20.748	20.748	(0.988)	1321369	50.0000	44.6
99 4-Isopropyltoluene	119	20.859	20.859	(0.994)	998200	50.0000	46.6
100 1,3-Dichlorobenzene	146	20.931	20.930	(0.997)	570879	50.0000	46.4
* 101 1,4-Dichlorobenzene-d4	152	20.991	20.991	(1.000)	415426	50.0000	
102 1,4-Dichlorobenzene	146	21.012	21.012	(1.001)	562339	50.0000	46.8
104 n-Butylbenzene	91	21.296	21.296	(1.014)	1111378	50.0000	44.8
105 1,2-Dichlorobenzene	146	21.438	21.438	(1.021)	589734	50.0000	47.8
107 1,2-Dibromo-3-chloropropane	157	22.301	22.291	(1.062)	84034	50.0000	54.0
108 1,2,4-Trichlorobenzene	180	23.357	23.357	(1.113)	362796	50.0000	46.9
109 Hexachlorobutadiene	225	23.529	23.529	(1.121)	189632	50.0000	45.6
110 Naphthalene	128	23.743	23.743	(1.131)	1026272	50.0000	52.8
111 1,2,3-Trichlorobenzene	180	24.098	24.098	(1.148)	362567	50.0000	50.7

Data File: /chem/V067.i/021710v7/7z328.d
 Date: 18-FEB-2010 02:27
 Client ID: ICV
 Sample Info: 1127VH1002L7-221 ICV11.V06711.i
 Purge Volume: 5.0
 Column phase: DB-624

Instrument: V067.i
 Operator: AX01
 Column diameter: 0.25



GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA7.i Injection Date: 18-FEB-2010 03:03
Lab File ID: 7z329.d Init. Cal. Date(s): 17-FEB-2010 18-FEB-2010
Analysis Type: WATER Init. Cal. Times: 16:02 00:42
Lab Sample ID: W7VM100217-23 Quant Type: ISTD
Method: /chem/VOA7.i/021710v7/VOA7-8260B-021710.m

COMPOUND	RRF / AMOUNT	RF50	CCAL	MIN	MAX	CURVE TYPE
			RRF50	RRF %D / %DRIFT	%D / %DRIFT	
147 Chlorotrifluoroethylene	0.10627	0.08440	0.08440	0.010	-20.57911	30.00000 Averaged
148 2-Chloro-1,1,1-trifluoroeth	0.21104	0.19071	0.19071	0.010	-9.63206	30.00000 Averaged
11 Acrolein	0.04808	0.06342	0.06342	0.001	31.90544	30.00000 Averaged
12 Trichlorotrifluoroethane	0.08737	0.09264	0.09264	0.010	6.03207	30.00000 Averaged
15 Isopropyl Alcohol	0.03252	0.03340	0.03340	0.010	2.69600	40.00000 Averaged
20 Allyl chloride	0.47439	0.45060	0.45060	0.010	-5.01522	30.00000 Averaged
21 tert-Butyl Alcohol	0.04700	0.04729	0.04729	0.001	0.60763	40.00000 Averaged
23 Acrylonitrile	0.13462	0.13550	0.13550	0.010	0.65548	30.00000 Averaged
27 isopropyl ether	1.27617	1.16451	1.16451	0.010	-8.74982	30.00000 Averaged
29 2-Chloro-1,3-butadiene	0.40803	0.40855	0.40855	0.010	0.12766	30.00000 Averaged
30 Ethyl tert-butyl ether	0.87171	0.84896	0.84896	0.010	-2.60957	30.00000 Averaged
35 Propionitrile	0.05907	0.05400	0.05400	0.010	-8.58473	30.00000 Averaged
32 Ethyl acetate	0.40471	0.34558	0.34558	0.010	-14.60985	40.00000 Averaged
36 Methacrylonitrile	0.24530	0.22257	0.22257	0.010	-9.26511	30.00000 Averaged
39 Tetrahydrofuran	0.41916	0.38326	0.38326	0.010	-8.56559	30.00000 Averaged
42 isobutyl alcohol	0.01791	0.01700	0.01700	0.005	-5.09066	40.00000 Averaged
49 Methyl tert-amyl ether	0.66978	0.66370	0.66370	0.010	-0.90825	30.00000 Averaged
54 Methyl methacrylate	0.21684	0.20990	0.20990	0.010	-3.19904	30.00000 Averaged
66 Ethyl methacrylate	0.57238	0.56268	0.56268	0.010	-1.69472	30.00000 Averaged
74 1-Chlorohexane	0.31936	0.29112	0.29112	0.010	-8.83992	30.00000 Averaged
57 1,4-Dioxane	0.00326	0.00349	0.00349	0.001	7.06816	40.00000 Averaged
60 2-Nitropropane	0.14035	0.14903	0.14903	0.010	6.18586	30.00000 Averaged
84 cis-1,4-Dichloro-2-butene	0.38900	0.41782	0.41782	0.010	7.40931	30.00000 Averaged
85 Cyclohexanone	0.02826	0.03489	0.03489	0.010	23.43653	40.00000 Averaged
88 trans-1,4-Dichloro-2-butene	0.35107	0.38019	0.38019	0.010	8.29533	30.00000 Averaged
97 Pentachloroethane	0.28176	0.23364	0.23364	0.010	-17.07604	30.00000 Averaged
103 Benzyl chloride	1.23904	1.13837	1.13837	0.010	-8.12535	30.00000 Averaged
106 bis(2-Chloroisopropyl)ether	0.69951	0.66981	0.66981	0.010	-4.24580	30.00000 Averaged
46 1,2-Dichloroethane-d4	0.43199	0.41798	0.41798	0.010	-3.24324	30.00000 Averaged
64 Toluene-d8	1.62735	1.64351	1.64351	0.010	0.99350	30.00000 Averaged
86 Bromofluorobenzene	1.31523	1.27368	1.27368	0.010	-3.15966	30.00000 Averaged

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA7.i Injection Date: 18-FEB-2010 03:03
Lab File ID: 7z329.d Init. Cal. Date(s): 17-FEB-2010 18-FEB-2010
Analysis Type: WATER Init. Cal. Times: 16:02 00:42
Lab Sample ID: W7VM100217-23 Quant Type: ISTD
Method: /chem/VOA7.i/021710v7/VOA7-8260B-021710.m

Average %D / Drift Results.	
=====	
Calculated Average %D/Drift =	7.69699
Maximun Average %D/Drift =	20.00000
* Passed Average %D/Drift Test.	

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA7.i/021710v7/7z329.d

Lab Smp Id: W7VM100217-23

Client Smp ID: SICV

Inj Date : 18-FEB-2010 03:03

Operator : AX01

Inst ID: VOA7.i

Smp Info : |W7VM100217-23|SICV|1|VOAF|1|

Misc Info : GEL 5mL N/A UVM091216-08B/UVM100125-08C

Comment :

Method : /chem/VOA7.i/021710v7/VOA7-8260B-021710.m

Meth Date : 18-Feb-2010 06:55 ale01592

Quant Type: ISTD

Cal Date : 18-FEB-2010 00:08

Cal File: 7z324.d

Als bottle: 22

Continuing Calibration Sample

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: CALsubS+SS.sub

Target Version: 3.50

Concentration Formula: Amt * DF * (Uf/Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	sample purged

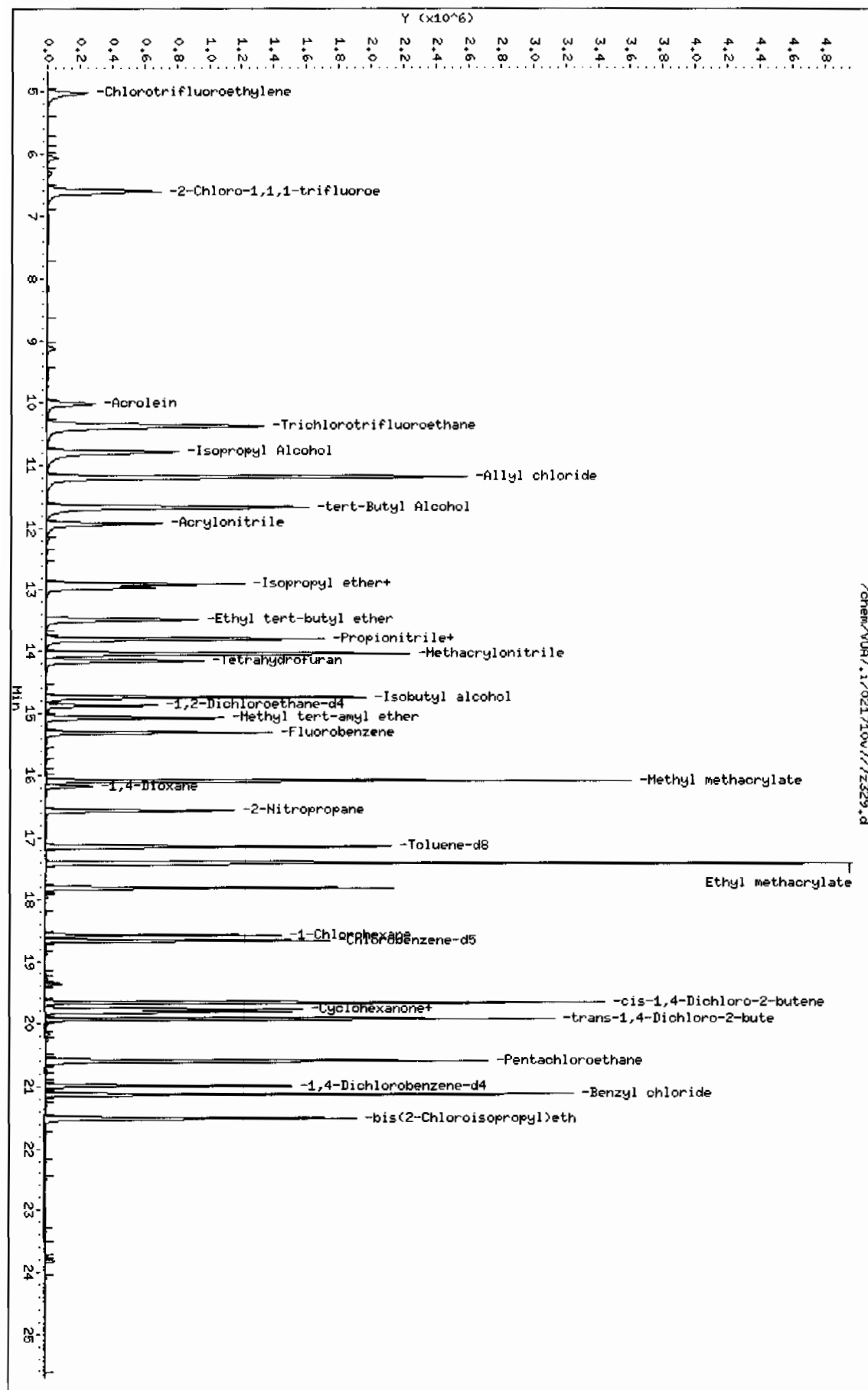
Cpnd Variable Local Compound Variable

Compounds	QUANT SIG				AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)
						ON-COL (ug/l)
147 Chlorotrifluoroethylene	116	5.029	5.029	(0.328)	321831	150.000
148 2-Chloro-1,1,1-trifluoroethane	118	6.604	6.604	(0.431)	727177	150.000
11 Acrolein	56	10.017	10.017	(0.654)	403023	250.000
12 Trichlorotrifluoroethane	85	10.373	10.373	(0.677)	588697	250.000
15 Isopropyl Alcohol	45	10.779	10.779	(0.704)	2122372	2500.00
20 Allyl chloride	41	11.185	11.185	(0.730)	2863564	250.000
21 tert-Butyl Alcohol	59	11.662	11.662	(0.761)	3005064	2500.00
23 Acrylonitrile	53	11.926	11.926	(0.779)	861102	250.000
27 Isopropyl ether	45	12.901	12.901	(0.842)	1480087	50.0000
29 2-Chloro-1,3-butadiene	53	12.961	12.961	(0.846)	519270	50.0000
30 Ethyl tert-butyl ether	59	13.489	13.489	(0.881)	1079030	50.0000
35 Propionitrile	54	13.804	13.804	(0.901)	343144	250.000
32 Ethyl acetate	43	13.804	13.804	(0.901)	2196159	250.000
36 Methacrylonitrile	41	14.038	14.038	(0.916)	1414418	250.000
39 Tetrahydrofuran	42	14.159	14.159	(0.675)	797978	250.000
42 Isobutyl alcohol	41	14.748	14.748	(0.963)	1080518	2500.00

Compounds	QUANT SIG					AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)
=====	----	--	-----	-----	-----	-----	-----
49 Methyl tert-amyl ether	73	15.073	15.073	(0.984)	843562	50.0000	49.5
54 Methyl methacrylate	69	16.078	16.078	(1.050)	1333906	250.000	242
66 Ethyl methacrylate	69	17.408	17.408	(0.933)	2383055	250.000	246
74 1-Chlorohexane	55	18.575	18.575	(1.213)	370019	50.0000	45.6
57 1,4-Dioxane	88	16.159	16.159	(1.055)	221750	2500.00	2680
60 2-Nitropropane	43	16.555	16.555	(1.081)	947088	250.000	265
84 cis-1,4-Dichloro-2-butene	53	19.662	19.662	(0.937)	869937	250.000	268
85 Cyclohexanone	55	19.773	19.773	(1.059)	738736	1250.00	1540
88 trans-1,4-Dichloro-2-butene	53	19.926	19.926	(0.949)	791580	250.000	271
97 Pentachloroethane	167	20.596	20.596	(0.981)	486462	250.000	207
103 Benzyl chloride	91	21.124	21.124	(1.006)	2370168	250.000	230
106 bis(2-Chloroisopropyl)ether	45	21.509	21.509	(1.025)	1394590	250.000	239
* 51 Fluorobenzene	96	15.317	15.317	(1.000)	1270997	50.0000	
* 75 Chlorobenzene-d5	117	18.667	18.667	(1.000)	847043	50.0000	
* 101 1,4-Dichlorobenzene-d4	152	20.992	20.991	(1.000)	416415	50.0000	
\$ 46 1,2-Dichloroethane-d4	65	14.880	14.880	(0.971)	531249	50.0000	48.4
\$ 64 Toluene-d8	98	17.134	17.134	(0.918)	1392127	50.0000	50.5
\$ 86 Bromofluorobenzene	95	19.814	19.814	(0.944)	530378	50.0000	48.4

Data File: /chem/VOA7.i/021710v7/7329.d
 Date: 18-FEB-2010 03:03
 Client ID: SICV
 Sample Info: 147VH100217-23|SICV11|VOA711
 Purge Volume: 5.0
 Column phase: DB-624

Instrument: VOA7.i
 Operator: AX01
 Column diameter: 0.25



GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA7.i Injection Date: 01-MAR-2010 08:39
Lab File ID: 7b103.d Init. Cal. Date(s): 17-FEB-2010 18-FEB-2010
Analysis Type: WATER Init. Cal. Times: 16:02 00:42
Lab Sample ID: W7VM100301-02 Quant Type: ISTD
Method: /chem/VOA7.i/030110v7/VOA7-8260B-021710.m

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
2 Xylenes (total)	0.64551	0.57746	0.57746	0.050	-10.54176	30.00000	Averaged
3 1,2-Dichloroethylene (total)	0.49511	0.43122	0.43122	0.050	-12.90277	30.00000	Averaged
1 1,3-Dichloropropylene	0.45215	0.44242	0.44242	0.050	-2.15152	30.00000	Averaged
4 Dichlorodifluoromethane	0.15569	0.13105	0.13105	0.050	-15.82468	30.00000	Averaged
5 Chloromethane	0.46771	0.36314	0.36314	0.100	-22.35752	30.00000	Averaged|spcc
6 Vinyl chloride	0.41543	0.34409	0.34409	0.050	-17.17256	20.00000	Averaged|ccc
7 Bromomethane	0.23665	0.21720	0.21720	0.050	-8.29917	30.00000	Averaged
8 Chloroethane	0.21246	0.19318	0.19318	0.010	-9.07323	30.00000	Averaged
9 Trichlorofluoromethane	0.31799	0.31810	0.31810	0.050	0.03430	30.00000	Averaged
10 Ethyl Ether	0.29582	0.27205	0.27205	0.001	-8.03394	30.00000	Averaged
13 Acetone	0.33491	0.27283	0.27283	0.050	-18.53678	40.00000	Averaged
17 Acetonitrile	0.05935	0.05988	0.05988	0.010	0.89716	30.00000	Averaged
14 1,1-Dichloroethylene	0.21744	0.20221	0.20221	0.050	-7.00336	20.00000	Averaged|ccc
18 Methyl acetate	0.30971	0.25316	0.25316	0.010	-18.25761	40.00000	Averaged
16 Iodomethane	0.37891	0.35690	0.35690	0.050	-5.80806	30.00000	Averaged
22 Methylene chloride	0.20428	0.18352	0.18352	0.050	-10.15984	30.00000	Averaged
19 Carbon disulfide	0.76494	0.70914	0.70914	0.050	-7.29387	30.00000	Averaged
24 tert-Butyl methyl ether	0.77339	0.73460	0.73460	0.050	-5.01544	30.00000	Averaged
25 trans-1,2-Dichloroethylene	0.45970	0.40522	0.40522	0.050	-11.85048	30.00000	Averaged
26 Vinyl acetate	0.75971	0.68429	0.68429	0.010	-9.92735	40.00000	Averaged
28 1,1-Dichloroethane	0.59819	0.56299	0.56299	0.100	-5.88444	30.00000	Averaged|spcc
31 2-Butanone	0.37353	0.29858	0.29858	0.030	-20.06470	40.00000	Averaged
33 cis-1,2-Dichloroethylene	0.53052	0.45723	0.45723	0.050	-13.81457	30.00000	Averaged
34 2,2-Dichloropropane	0.24848	0.23873	0.23873	0.050	-3.92290	30.00000	Averaged
38 Chloroform	0.49798	0.45094	0.45094	0.010	-9.44515	20.00000	Averaged|ccc
37 Bromochloromethane	0.39220	0.34781	0.34781	0.010	-11.31910	30.00000	Averaged
41 1,1,1-Trichloroethane	0.34173	0.33908	0.33908	0.010	-0.77682	30.00000	Averaged
43 Cyclohexane	0.55549	0.52021	0.52021	0.010	-6.35056	30.00000	Averaged
44 1,1-Dichloropropene	0.35780	0.34109	0.34109	0.010	-4.66909	30.00000	Averaged
52 n-Butyl alcohol	0.01300	0.01334	0.01334	0.001	2.62603	40.00000	Averaged
45 Carbon tetrachloride	0.27191	0.27108	0.27108	0.010	-0.30581	30.00000	Averaged
46 1,2-Dichloroethane-d4	0.43199	0.40063	0.40063	0.010	-7.25920	30.00000	Averaged
47 1,2-Dichloroethane	0.49133	0.41108	0.41108	0.010	-16.33347	30.00000	Averaged
48 Benzene	1.09329	0.96756	0.96756	0.010	-11.49973	30.00000	Averaged
50 Cyclohexene	0.51508	0.48529	0.48529	0.010	-5.78347	30.00000	Averaged

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA7.i Injection Date: 01-MAR-2010 08:39
Lab File ID: 7b103.d Init. Cal. Date(s): 17-FEB-2010 18-FEB-2010
Analysis Type: WATER Init. Cal. Times: 16:02 00:42
Lab Sample ID: W7VM100301-02 Quant Type: ISTD
Method: /chem/VOA7.i/030110v7/VOA7-8260B-021710.m

COMPOUND	RRF / AMOUNT	RF50	CCAL	MIN	MAX	CURVE TYPE
			RRF50	RRF	%D / %DRIFT	
53 Trichloroethylene	0.26489	0.25347	0.25347	0.010	-4.31118	Averaged
56 1,2-Dichloropropane	0.36406	0.31930	0.31930	0.010	-12.29426	Averaged|ccc
55 Methylcyclohexane	0.44055	0.43303	0.43303	0.010	-1.70647	Averaged
59 Bromodichloromethane	0.39044	0.37312	0.37312	0.010	-4.43787	Averaged
58 Dibromomethane	0.19638	0.18528	0.18528	0.010	-5.65252	Averaged
61 2-Chloroethylvinyl ether	0.14176	0.14188	0.14188	0.010	0.08604	Averaged
63 4-Methyl-2-pentanone	0.24607	0.19261	0.19261	0.010	-21.72579	Averaged
62 cis-1,3-Dichloropropylene	0.47551	0.45901	0.45901	0.010	-3.46860	Averaged
64 Toluene-d8	1.62735	1.44357	1.44357	0.010	-11.29286	Averaged
65 Toluene	0.90021	0.78299	0.78299	0.010	-13.02117	Averaged|ccc
67 trans-1,3-Dichloropropylene	0.61004	0.54280	0.54280	0.010	-11.02113	Averaged
68 1,1,2-Trichloroethane	0.33917	0.28071	0.28071	0.010	-17.23590	Averaged
69 2-Hexanone	0.68092	0.46776	0.46776	0.010	-31.30462	Averaged
70 1,3-Dichloropropane	0.69553	0.58627	0.58627	0.010	-15.70929	Averaged
71 Tetrachloroethylene	0.24878	0.22397	0.22397	0.010	-9.97276	Averaged
72 Dibromochloromethane	0.36583	0.33291	0.33291	0.010	-8.99971	Averaged
73 1,2-Dibromoethane	0.36785	0.32573	0.32573	0.010	-11.45038	Averaged
76 Chlorobenzene	0.92664	0.79635	0.79635	0.300	-14.05964	Averaged|spcc
77 1,1,1,2-Tetrachloroethane	0.31932	0.29563	0.29563	0.010	-7.41893	Averaged
78 Ethylbenzene	1.68200	1.36467	1.36467	0.010	-18.86602	Averaged|ccc
79 m,p-Xylenes	0.63299	0.56169	0.56169	0.010	-11.26401	Averaged
80 o-Xylene	0.67056	0.60901	0.60901	0.010	-9.17822	Averaged
81 Styrene	1.07382	0.96345	0.96345	0.010	-10.27814	Averaged
82 Bromoform	0.47906	0.41786	0.41786	0.100	-12.77552	Averaged|spcc
83 Isopropylbenzene	3.23464	2.56344	2.56344	0.010	-20.75041	Averaged
87 1,1,2,2-Tetrachloroethane	1.13151	0.86072	0.86072	0.300	-23.93132	Averaged|spcc
86 Bromofluorobenzene	1.31523	1.13158	1.13158	0.010	-13.96327	Averaged
89 1,2,3-Trichloropropane	0.24620	0.19270	0.19270	0.010	-21.72866	Averaged
90 Bromobenzene	0.75737	0.64708	0.64708	0.010	-14.56178	Averaged
91 n-Propylbenzene	4.11235	3.18205	3.18205	0.010	-22.62195	Averaged
93 2-Chlorotoluene	2.81550	2.18148	2.18148	0.010	-22.51868	Averaged
92 1,3,5-Trimethylbenzene	2.67285	2.18778	2.18778	0.010	-18.14794	Averaged
94 4-Chlorotoluene	2.52732	2.01127	2.01127	0.010	-20.41871	Averaged
95 tert-Butylbenzene	2.42130	2.05441	2.05441	0.010	-15.15261	Averaged
96 1,2,4-Trimethylbenzene	2.70506	2.25103	2.25103	0.010	-16.78467	Averaged
98 sec-Butylbenzene	3.56563	2.93297	2.93297	0.010	-17.74335	Averaged

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA7.i Injection Date: 01-MAR-2010 08:39
Lab File ID: 7b103.d Init. Cal. Date(s): 17-FEB-2010 18-FEB-2010
Analysis Type: WATER Init. Cal. Times: 16:02 00:42
Lab Sample ID: W7VM100301-02 Quant Type: ISTD
Method: /chem/VOA7.i/030110v7/VOA7-8260B-021710.m

COMPOUND	RRF / AMOUNT	RF50	CCAL	MIN	MAX		
			RRF50	RRF	%D / %DRIFT	%D / %DRIFT	CURVE TYPE
99 4-Isopropyltoluene	2.57723	2.24608	2.24608	0.010	-12.84916	30.00000	Averaged
100 1,3-Dichlorobenzene	1.47958	1.24668	1.24668	0.010	-15.74105	30.00000	Averaged
102 1,4-Dichlorobenzene	1.44472	1.22616	1.22616	0.010	-15.12829	30.00000	Averaged
104 n-Butylbenzene	2.98564	2.47957	2.47957	0.010	-16.95002	30.00000	Averaged
105 1,2-Dichlorobenzene	1.48620	1.26277	1.26277	0.010	-15.03368	30.00000	Averaged
107 1,2-Dibromo-3-chloropropane	42.90457	50.00000	0.15996	0.010	-14.19086	30.00000	Linear
108 1,2,4-Trichlorobenzene	0.93109	0.81587	0.81587	0.010	-12.37504	30.00000	Averaged
109 Hexachlorobutadiene	0.49991	0.42455	0.42455	0.010	-15.07589	30.00000	Averaged
110 Naphthalene	2.33792	1.93686	1.93686	0.010	-17.15421	30.00000	Averaged
111 1,2,3-Trichlorobenzene	0.86076	0.76204	0.76204	0.010	-11.46857	30.00000	Averaged

Average %D / Drift Results.
=====

Calculated Average %D/Drift =	11.88911
Maximum Average %D/Drift =	20.00000
* Passed Average %D/Drift Test.	

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Data File: /chem/VOA7.i/030110v7/7b103.d
Report Date: 12-Mar-2010 06:39

Page 1

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA7.i/030110v7/7b103.d

Lab Smp Id: W7VM100301-02

Client Smp ID: VSTD050

Inj Date : 01-MAR-2010 08:39

Operator : AX01

Inst ID: VOA7.i

Smp Info : |W7VM100301-02|BFB/CCV/LCS|1|VOAF|1|

Misc Info : GEL 5mL N/A UVM100220-01B/IVM100224-01

Comment :

Method : /chem/VOA7.i/030110v7/VOA7-8260B-021710.m

Meth Date : 12-Mar-2010 06:39 ale01592

Quant Type: ISTD

Cal Date : 18-FEB-2010 00:08

Cal File: 7z324.d

Als bottle: 3

Continuing Calibration Sample

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: CALsubL+.sub

Target Version: 3.50

Processing Host: prdsvr07

Concentration Formula: Amt * DF * (Uf/Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	sample purged

Cpnd Variable Local Compound Variable

		QUANT SIG			AMOUNTS		
Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)
=====	=====	==	=====	=====	=====	=====	=====
M 2 Xylenes (total)	106				1531569	150.000	134
M 3 1,2-Dichloroethylene (total)	96				971913	100.000	87.2
M 1 1,3-Dichloropropylene	75				997153	100.000	97.8
4 Dichlorodifluoromethane	85	5.148	5.148	(0.336)	147684	50.0000	42.1
5 Chloromethane	50	5.757	5.757	(0.376)	409230	50.0000	38.8
6 Vinyl chloride	62	6.188	6.188	(0.404)	387759	50.0000	41.4
7 Bromomethane	94	7.419	7.419	(0.484)	244762	50.0000	45.8
8 Chloroethane	64	7.855	7.855	(0.513)	217702	50.0000	45.5
9 Trichlorofluoromethane	101	8.799	8.799	(0.574)	358468	50.0000	50.0
10 Ethyl Ether	59	9.703	9.703	(0.633)	306584	50.0000	46.0
13 Acetone	43	10.413	10.413	(0.680)	1537292	250.000	204
17 Acetonitrile	41	11.073	11.073	(0.723)	1349690	1000.00	1010
14 1,1-Dichloroethylene	96	10.312	10.312	(0.673)	227877	50.0000	46.5
18 Methyl acetate	43	11.225	11.225	(0.733)	1426466	250.000	204
16 Iodomethane	142	10.667	10.667	(0.696)	2011000	250.000	235

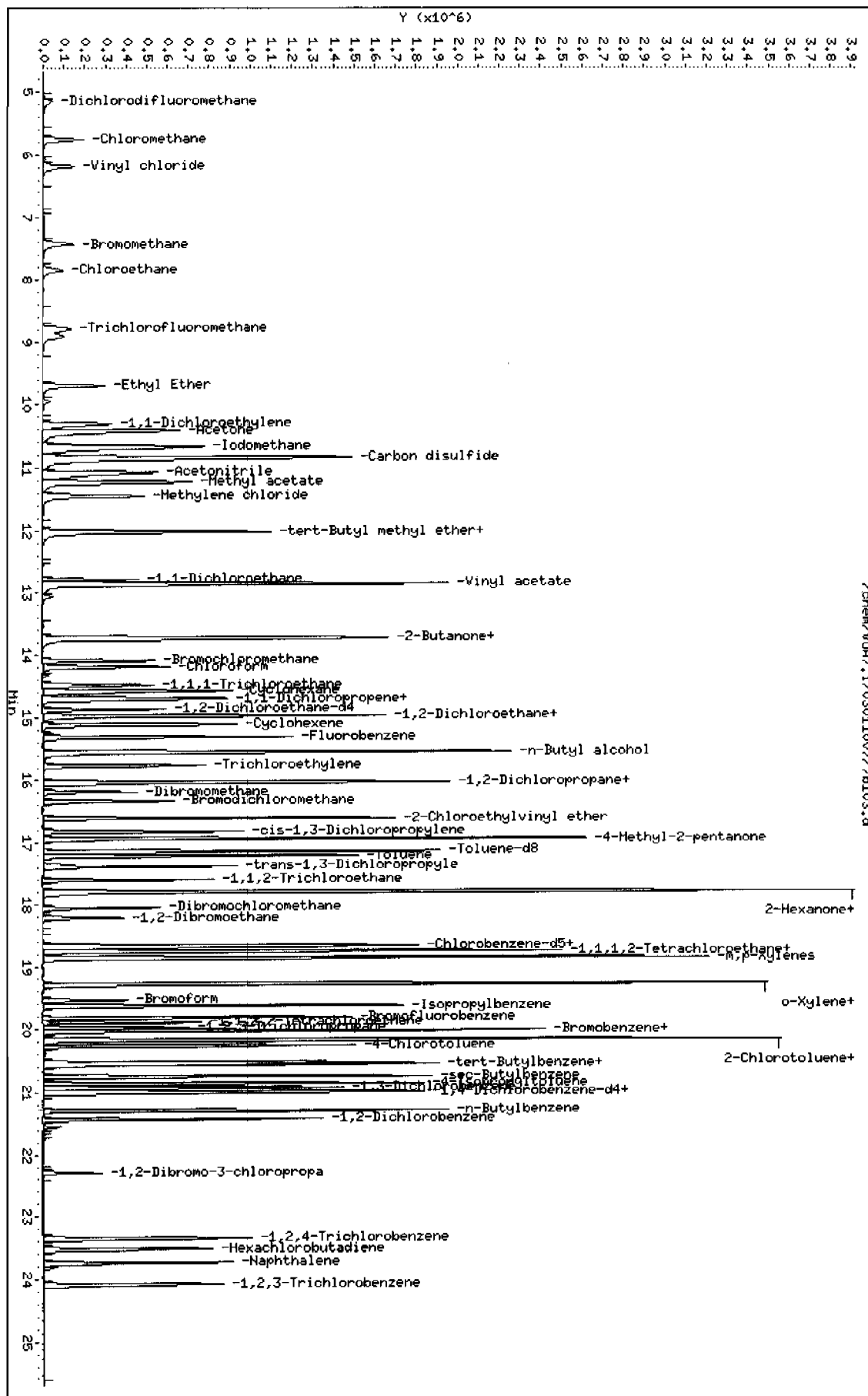
Compounds	QUANT SIG			REL RT	RESPONSE	AMOUNTS	
	MASS	RT	EXP RT			CAL-AMT (ug/l)	ON-COL (ug/l)
=====	=====	==	=====	=====	=====	=====	=====
22 Methylene chloride	86	11.449	11.449	(0.747)	206818	50.0000	44.9
19 Carbon disulfide	76	10.840	10.840	(0.708)	3995751	250.000	232
24 tert-Butyl methyl ether	73	12.017	12.017	(0.785)	827840	50.0000	47.5
25 trans-1,2-Dichloroethylene	61	12.027	12.027	(0.785)	456650	50.0000	44.1
26 Vinyl acetate	43	12.860	12.860	(0.840)	3855724	250.000	225
28 1,1-Dichloroethane	63	12.799	12.799	(0.836)	634444	50.0000	47.0
31 2-Butanone	43	13.723	13.723	(0.896)	1682397	250.000	200
33 cis-1,2-Dichloroethylene	61	13.733	13.733	(0.897)	515263	50.0000	43.1
34 2,2-Dichloropropane	77	13.743	13.743	(0.897)	269034	50.0000	48.0
38 Chloroform	83	14.190	14.190	(0.926)	508175	50.0000	45.3
37 Bromochloromethane	49	14.088	14.088	(0.920)	391949	50.0000	44.3
41 1,1,1-Trichloroethane	97	14.484	14.484	(0.946)	382112	50.0000	49.6
43 Cyclohexane	56	14.586	14.586	(0.952)	586238	50.0000	46.8
44 1,1-Dichloropropene	75	14.697	14.697	(0.960)	384381	50.0000	47.7
52 n-Butyl alcohol	56	15.560	15.560	(1.016)	1503752	5000.00	5130
45 Carbon tetrachloride	117	14.728	14.728	(0.962)	305488	50.0000	49.8
\$ 46 1,2-Dichloroethane-d4	65	14.880	14.880	(0.971)	451478	50.0000	46.4
47 1,2-Dichloroethane	62	14.982	14.982	(0.978)	463250	50.0000	41.8
48 Benzene	78	14.982	14.982	(0.978)	1090366	50.0000	44.2
50 Cyclohexene	67	15.124	15.124	(0.987)	546885	50.0000	47.1
* 51 Fluorobenzene	96	15.317	15.317	(1.000)	1126921	50.0000	
53 Trichloroethylene	95	15.763	15.763	(1.029)	285646	50.0000	47.8
56 1,2-Dichloropropane	63	16.037	16.037	(1.047)	359827	50.0000	43.8
55 Methylcyclohexane	83	16.027	16.027	(1.046)	487995	50.0000	49.1
59 Bromodichloromethane	83	16.332	16.332	(1.066)	420474	50.0000	47.8
58 Dibromomethane	93	16.180	16.180	(1.056)	208791	50.0000	47.2
61 2-Chloroethylvinyl ether	63	16.606	16.606	(1.084)	799427	250.000	250
63 4-Methyl-2-pentanone	58	16.941	16.941	(0.908)	851399	250.000	196
62 cis-1,3-Dichloropropylene	75	16.819	16.819	(1.098)	517270	50.0000	48.3
\$ 64 Toluene-d8	98	17.134	17.134	(0.918)	1276235	50.0000	44.4
65 Toluene	92	17.215	17.215	(0.922)	692231	50.0000	43.5
67 trans-1,3-Dichloropropylene	75	17.388	17.388	(0.931)	479883	50.0000	44.5
68 1,1,2-Trichloroethane	83	17.611	17.611	(0.943)	248173	50.0000	41.4
69 2-Hexanone	43	17.794	17.794	(0.953)	2067692	250.000	172
70 1,3-Dichloropropane	76	17.794	17.794	(0.953)	518311	50.0000	42.1
71 Tetrachloroethylene	164	17.814	17.814	(0.954)	198006	50.0000	45.0
72 Dibromochloromethane	129	18.058	18.058	(0.967)	294315	50.0000	45.5
73 1,2-Dibromoethane	107	18.220	18.220	(0.976)	287972	50.0000	44.3
* 75 Chlorobenzene-d5	117	18.667	18.667	(1.000)	884081	50.0000	
76 Chlorobenzene	112	18.697	18.697	(1.002)	704041	50.0000	43.0
77 1,1,1,2-Tetrachloroethane	131	18.758	18.758	(1.005)	261359	50.0000	46.3
78 Ethylbenzene	91	18.758	18.758	(1.005)	1206479	50.0000	40.6
79 m,p-Xylenes	106	18.870	18.870	(1.011)	993152	100.000	88.7
80 o-Xylene	106	19.286	19.286	(1.033)	538417	50.0000	45.4
81 Styrene	104	19.286	19.286	(1.033)	851767	50.0000	44.9
82 Bromoform	173	19.540	19.540	(0.931)	195100	50.0000	43.6
83 Isopropylbenzene	105	19.631	19.631	(0.935)	1196881	50.0000	39.6

Compounds	QUANT SIG						AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE		CAL-AMT (ug/l)	ON-COL (ug/l)
=====	=====	=====	=====	=====	=====	=====	=====	=====
87 1,1,2,2-Tetrachloroethane	83	19.885	19.885	(0.947)	401875	50.0000	38.0	
\$ 86 Bromofluorobenzene	95	19.814	19.814	(0.944)	528341	50.0000	43.0	
89 1,2,3-Trichloropropane	110	19.966	19.966	(0.951)	89974	50.0000	39.1	
90 Bromobenzene	156	20.017	20.017	(0.954)	302126	50.0000	42.7	
91 n-Propylbenzene	91	20.027	20.027	(0.954)	1485713	50.0000	38.7	
93 2-Chlorotoluene	91	20.169	20.169	(0.961)	1018544	50.0000	38.7	
92 1,3,5-Trimethylbenzene	105	20.169	20.169	(0.961)	1021484	50.0000	40.9	
94 4-Chlorotoluene	91	20.261	20.261	(0.965)	939071	50.0000	39.8	
95 tert-Butylbenzene	119	20.525	20.525	(0.978)	959212	50.0000	42.4	
96 1,2,4-Trimethylbenzene	105	20.565	20.565	(0.980)	1051013	50.0000	41.6	
98 sec-Butylbenzene	105	20.748	20.748	(0.988)	1369416	50.0000	41.1	
99 4-Isopropyltoluene	119	20.860	20.860	(0.994)	1048702	50.0000	43.6	
100 1,3-Dichlorobenzene	146	20.931	20.931	(0.997)	582080	50.0000	42.1	
* 101 1,4-Dichlorobenzene-d4	152	20.992	20.992	(1.000)	466904	50.0000		
102 1,4-Dichlorobenzene	146	21.012	21.012	(1.001)	572500	50.0000	42.4	
104 n-Butylbenzene	91	21.296	21.296	(1.014)	1157723	50.0000	41.5	
105 1,2-Dichlorobenzene	146	21.438	21.438	(1.021)	589593	50.0000	42.5	
107 1,2-Dibromo-3-chloropropane	157	22.291	22.291	(1.062)	74684	50.0000	42.9	
108 1,2,4-Trichlorobenzene	180	23.357	23.357	(1.113)	380932	50.0000	43.8	
109 Hexachlorobutadiene	225	23.529	23.529	(1.121)	198222	50.0000	42.5	
110 Naphthalene	128	23.743	23.743	(1.131)	904330	50.0000	41.4	
111 1,2,3-Trichlorobenzene	180	24.098	24.098	(1.148)	355800	50.0000	44.3	

Data File: /chem/V007.i/030110v7/7b103.d
 Date: 01-MAR-2010 08:39
 Client ID: VSTD050
 Sample Info: MWVH100301-02|BFB/CCW/LCS11|V007|1|
 Purge Volume: 5.0
 Column phase: DB-624

Instrument: V007.i
 Operator: RKD1
 Column diameter: 0.25

/chem/V007.i/030110v7/7b103.d



GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA7.i Injection Date: 01-MAR-2010 09:48
Lab File ID: 7b105.d Init. Cal. Date(s): 17-FEB-2010 18-FEB-2010
Analysis Type: WATER Init. Cal. Times: 16:02 00:42
Lab Sample ID: W7VM100301-04 Quant Type: ISTD
Method: /chem/VOA7.i/030110v7/VOA7-8260B-021710.m

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
147 Chlorotrifluoroethylene	0.10627	0.05499	0.05499	0.010	-48.25306	30.00000	Averaged|<-
148 2-Chloro-1,1,1-trifluoroeth	0.21104	0.19818	0.19818	0.010	-6.09049	30.00000	Averaged|
11 Acrolein	0.04808	0.06525	0.06525	0.001	35.71487	30.00000	Averaged|<-
12 Trichlorotrifluoroethane	0.08737	0.08960	0.08960	0.010	2.55996	30.00000	Averaged|
15 Isopropyl Alcohol	0.03252	0.03545	0.03545	0.010	9.02062	40.00000	Averaged|
20 Allyl chloride	0.47439	0.42680	0.42680	0.010	-10.03189	30.00000	Averaged|
21 tert-Butyl Alcohol	0.04700	0.05078	0.05078	0.001	8.04958	40.00000	Averaged|
23 Acrylonitrile	0.13462	0.14459	0.14459	0.010	7.40549	30.00000	Averaged|
27 Isopropyl ether	1.27617	1.18174	1.18174	0.010	-7.39985	30.00000	Averaged|
29 2-Chloro-1,3-butadiene	0.40803	0.44912	0.44912	0.010	10.06885	30.00000	Averaged|
30 Ethyl tert-butyl ether	0.87171	0.94846	0.94846	0.010	8.80446	30.00000	Averaged|
35 Propionitrile	0.05907	0.05820	0.05820	0.010	-1.47116	30.00000	Averaged|
32 Ethyl acetate	0.40471	0.34820	0.34820	0.010	-13.96300	40.00000	Averaged|
36 Methacrylonitrile	0.24530	0.22455	0.22455	0.010	-8.45633	30.00000	Averaged|
39 Tetrahydrofuran	0.41916	0.34019	0.34019	0.010	-18.84008	30.00000	Averaged|
42 Isobutyl alcohol	0.01791	0.01676	0.01676	0.005	-6.44162	40.00000	Averaged|
49 Methyl tert-amyl ether	0.66978	0.77964	0.77964	0.010	16.40133	30.00000	Averaged|
54 Methyl methacrylate	0.21684	0.22377	0.22377	0.010	3.19946	30.00000	Averaged|
66 Ethyl methacrylate	0.57238	0.53708	0.53708	0.010	-6.16684	30.00000	Averaged|
74 1-Chlorohexane	0.31936	0.31353	0.31353	0.010	-1.82335	30.00000	Averaged|
57 1,4-Dioxane	0.00326	0.00360	0.00360	0.001	10.36942	40.00000	Averaged|
60 2-Nitropropane	0.14035	0.14849	0.14849	0.010	5.80258	30.00000	Averaged|
84 cis-1,4-Dichloro-2-butene	0.38900	0.38412	0.38412	0.010	-1.25530	30.00000	Averaged|
85 Cyclohexanone	0.02826	0.05537	0.05537	0.010	95.93395	40.00000	Averaged|<-
88 trans-1,4-Dichloro-2-butene	0.35107	0.34692	0.34692	0.010	-1.18054	30.00000	Averaged|
97 Pentachloroethane	0.28176	0.39471	0.39471	0.010	40.08994	30.00000	Averaged|<-
103 Benzyl chloride	1.23904	1.44753	1.44753	0.010	16.82632	30.00000	Averaged|
106 bis(2-Chloroisopropyl)ether	0.69951	0.59287	0.59287	0.010	-15.24499	30.00000	Averaged|
\$ 46 1,2-Dichloroethane-d4	0.43199	0.43250	0.43250	0.010	0.11888	30.00000	Averaged|
\$ 64 Toluene-d8	1.62735	1.60384	1.60384	0.010	-1.44460	30.00000	Averaged|
\$ 86 Bromofluorobenzene	1.31523	1.21020	1.21020	0.010	-7.98553	30.00000	Averaged|

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA7.i Injection Date: 01-MAR-2010 09:48
Lab File ID: 7b105.d Init. Cal. Date(s): 17-FEB-2010 18-FEB-2010
Analysis Type: WATER Init. Cal. Times: 16:02 00:42
Lab Sample ID: W7VM100301-04 Quant Type: ISTD
Method: /chem/VOA7.i/030110v7/VOA7-8260B-021710.m

```
|Average %D / Drift Results. |
|=====|
|Calculated Average %D/Drift = 11.88911 |
|Maximum Average %D/Drift = 20.00000 |
|* Passed Average %D/Drift Test. |
|=====|
```


GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-F-038,-039,-026

Data file : /chem/VOA7.i/030110v7/7b105.d

Lab Smp Id: W7VM100301-04

Client Smp ID: VSTD250S

Inj Date : 01-MAR-2010 09:48

Operator : AX01

Inst ID: VOA7.i

Smp Info : |W7VM100301-04|SHORT/SLCS|1|VOAF|1|

Misc Info : GEL 5mL N/A UVM091216-08B/UVM100125-08D

Comment :

Method : /chem/VOA7.i/030110v7/VOA7-8260B-021710.m

Meth Date : 02-Mar-2010 06:02 ale01592 Quant Type: ISTD

Cal Date : 18-FEB-2010 00:08

Cal File: 7z324.d

Als bottle: 5

Continuing Calibration Sample

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: CALsubS+SS.sub

Target Version: 3.50

Concentration Formula: Amt * DF * (Uf/Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	sample purged

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG			AMOUNTS			
	MASS	RT	EXP RT REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)	
147 Chlorotrifluoroethylene	116	5.029	5.029 (0.328)	192024	150.000	77.6	
148 2-Chloro-1,1,1-trifluoroethane	118	6.604	6.604 (0.431)	692013	150.000	141	
11 Acrolein	56	10.017	10.017 (0.654)	379728	250.000	339	
12 Trichlorotrifluoroethane	85	10.373	10.373 (0.677)	521448	250.000	256	
15 Isopropyl Alcohol	45	10.779	10.779 (0.704)	2063268	2500.00	2720	
20 Allyl chloride	41	11.185	11.185 (0.730)	2483822	250.000	225	
21 tert-Butyl Alcohol	59	11.662	11.662 (0.761)	2955459	2500.00	2700	
23 Acrylonitrile	53	11.926	11.926 (0.779)	841439	250.000	268	
27 Isopropyl ether	45	12.900	12.900 (0.842)	1375448	50.0000	46.3	
29 2-Chloro-1,3-butadiene	53	12.961	12.961 (0.846)	522736	50.0000	55.0	
30 Ethyl tert-butyl ether	59	13.489	13.489 (0.881)	1103934	50.0000	54.4	
35 Propionitrile	54	13.804	13.804 (0.901)	338688	250.000	246	
32 Ethyl acetate	43	13.804	13.804 (0.901)	2026378	250.000	215	
36 Methacrylonitrile	41	14.037	14.037 (0.916)	1306805	250.000	229	
39 Tetrahydrofuran	42	14.159	14.159 (0.675)	763418	250.000	203	
42 Isobutyl alcohol	41	14.748	14.748 (0.963)	975404	2500.00	2340	

Compounds	QUANT SIG					AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)
49 Methyl tert-amyl ether	73	15.073	15.073	(0.984)	907437	50.0000	58.2
54 Methyl methacrylate	69	16.078	16.078	(1.050)	1302273	250.000	258
66 Ethyl methacrylate	69	17.408	17.408	(0.933)	2318502	250.000	234
74 1-Chlorohexane	55	18.575	18.575	(1.213)	364927	50.0000	49.1
57 1,4-Dioxane	88	16.159	16.159	(1.055)	209329	2500.00	2760
60 2-Nitropropane	43	16.555	16.555	(1.081)	864169	250.000	264
84 cis-1,4-Dichloro-2-butene	53	19.662	19.662	(0.937)	861984	250.000	247
85 Cyclohexanone	55	19.773	19.773	(1.059)	1195223	1250.00	2450
88 trans-1,4-Dichloro-2-butene	53	19.926	19.926	(0.949)	778515	250.000	247
97 Pentachloroethane	167	20.596	20.596	(0.981)	885758	250.000	350 (A)
103 Benzyl chloride	91	21.123	21.123	(1.006)	3248356	250.000	292
106 bis(2-Chloroisopropyl)ether	45	21.509	21.509	(1.025)	1330435	250.000	212
* 51 Fluorobenzene	96	15.317	15.317	(1.000)	1163921	50.0000	
* 75 Chlorobenzene-d5	117	18.667	18.667	(1.000)	863374	50.0000	
* 101 1,4-Dichlorobenzene-d4	152	20.991	20.992	(1.000)	448813	50.0000	
\$ 46 1,2-Dichloroethane-d4	65	14.880	14.880	(0.971)	503398	50.0000	50.0
\$ 64 Toluene-d8	98	17.134	17.134	(0.918)	1384713	50.0000	49.3
\$ 86 Bromofluorobenzene	95	19.814	19.814	(0.944)	543156	50.0000	46.0

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: /chem/V0A7.1/030110v7/7b105.d

Date : 01-MAR-2010 09:48

Client ID: VSTD2505

Sample Info: 1427H1400301-041SHORT/SLCS11V0A7111

Purge Volume: 5.0

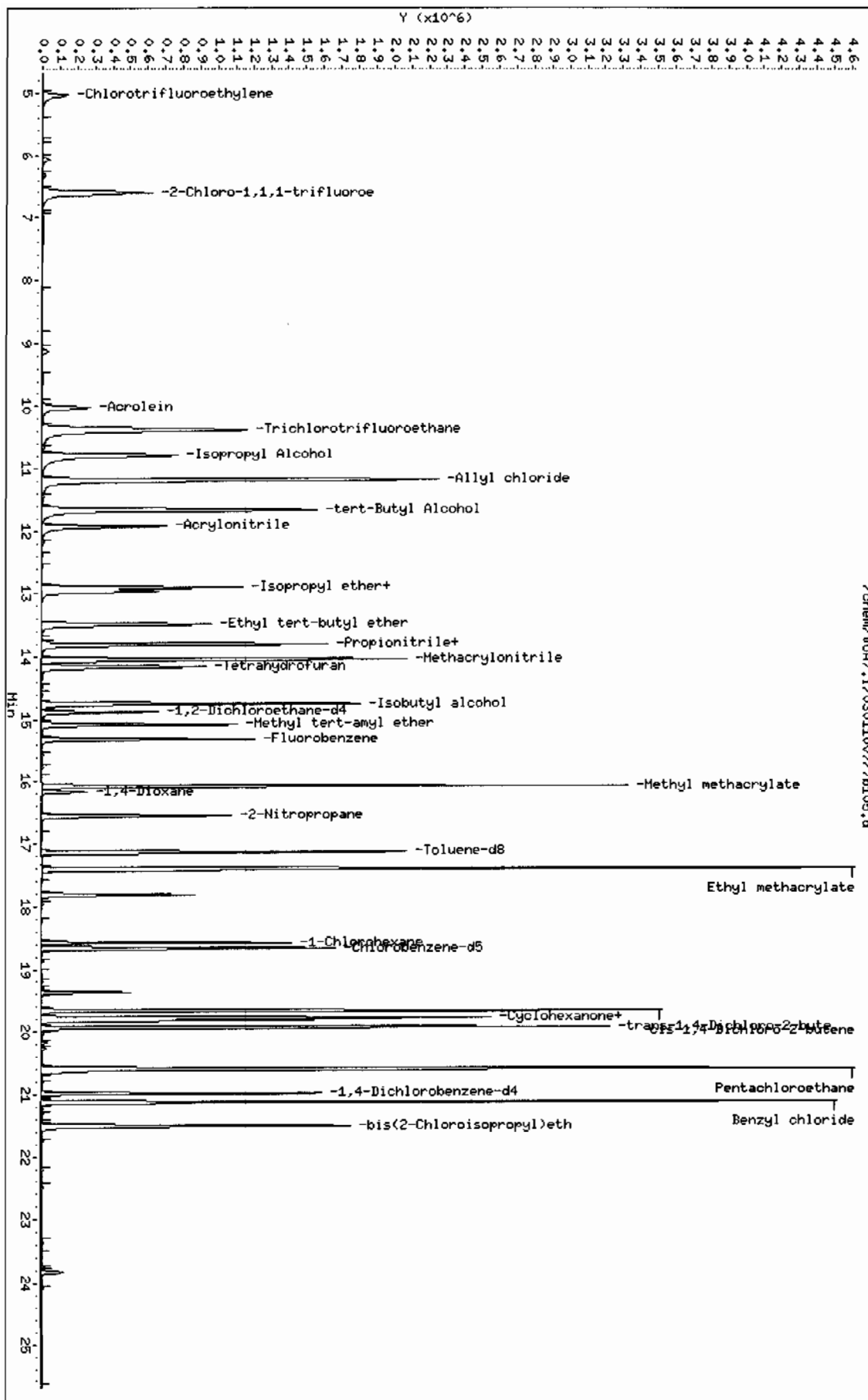
Column phase: DB-624

Instrument: V0A7.1

Operator: RND1

Column diameter: 0.25

Page 1



GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA7.i Injection Date: 01-MAR-2010 20:31
Lab File ID: 7b124.d Init. Cal. Date(s): 17-FEB-2010 18-FEB-2010
Analysis Type: WATER Init. Cal. Times: 16:02 00:42
Lab Sample ID: W7VM100301-06 Quant Type: ISTD
Method: /chem/VOA7.i/030110v7/VOA7-8260B-021710PM.m

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
M 2 Xylenes (total)	0.64551	0.60087	0.60087	0.050	-6.91492	30.00000	Averaged
M 3 1,2-Dichloroethylene (total)	0.49511	0.45831	0.45831	0.050	-7.43267	30.00000	Averaged
M 1 1,3-Dichloropropylene	0.45215	0.45687	0.45687	0.050	1.04337	30.00000	Averaged
4 Dichlorodifluoromethane	0.15569	0.11334	0.11334	0.050	-27.20176	30.00000	Averaged
5 Chloromethane	0.46771	0.37245	0.37245	0.100	-20.36771	30.00000	Averaged|spcc
6 Vinyl chloride	0.41543	0.37197	0.37197	0.050	-10.46165	20.00000	Averaged|ccc
7 Bromomethane	0.23685	0.21075	0.21075	0.050	-11.02129	30.00000	Averaged
8 Chloroethane	0.21246	0.19476	0.19476	0.010	-8.32943	30.00000	Averaged
9 Trichlorofluoromethane	0.31799	0.28792	0.28792	0.050	-9.45369	30.00000	Averaged
10 Ethyl Ether	0.29582	0.27640	0.27640	0.001	-6.56446	30.00000	Averaged
13 Acetone	0.33491	0.27918	0.27918	0.050	-16.64012	40.00000	Averaged
17 Acetonitrile	0.05935	0.06492	0.06492	0.010	9.38483	30.00000	Averaged
14 1,1-Dichloroethylene	0.21744	0.19611	0.19611	0.050	-9.81192	20.00000	Averaged|ccc
18 Methyl acetate	0.30971	0.27889	0.27889	0.010	-9.95001	40.00000	Averaged
16 Iodomethane	0.37891	0.36463	0.36463	0.050	-3.76945	30.00000	Averaged
22 Methylene chloride	0.20428	0.19363	0.19363	0.050	-5.21300	30.00000	Averaged
19 Carbon disulfide	0.76494	0.71455	0.71455	0.050	-6.58753	30.00000	Averaged
24 tert-Butyl methyl ether	0.77339	0.73339	0.73339	0.050	-5.17194	30.00000	Averaged
25 trans-1,2-Dichloroethylene	0.45970	0.41955	0.41955	0.050	-8.73302	30.00000	Averaged
26 Vinyl acetate	0.75971	0.68339	0.68339	0.010	-10.04613	40.00000	Averaged
28 1,1-Dichloroethane	0.59819	0.57596	0.57596	0.100	-3.71666	30.00000	Averaged|spcc
31 2-Butanone	0.37353	0.31969	0.31969	0.030	-14.41454	40.00000	Averaged
33 cis-1,2-Dichloroethylene	0.53052	0.49707	0.49707	0.050	-6.30592	30.00000	Averaged
34 2,2-Dichloropropane	0.24848	0.23312	0.23312	0.050	-6.18288	30.00000	Averaged
38 Chloroform	0.49798	0.46006	0.46006	0.010	-7.61320	20.00000	Averaged|ccc
37 Bromochloromethane	0.39220	0.37512	0.37512	0.010	-4.35483	30.00000	Averaged
41 1,1,1-Trichloroethane	0.34173	0.32274	0.32274	0.010	-5.55630	30.00000	Averaged
43 Cyclohexane	0.55549	0.51634	0.51634	0.010	-7.04758	30.00000	Averaged
44 1,1-Dichloropropene	0.35780	0.34134	0.34134	0.010	-4.59796	30.00000	Averaged
52 n-Butyl alcohol	0.01300	0.01398	0.01398	0.001	7.48595	40.00000	Averaged
45 Carbon tetrachloride	0.27191	0.25535	0.25535	0.010	-6.09021	30.00000	Averaged
\$ 46 1,2-Dichloroethane-d4	0.43199	0.41428	0.41428	0.010	-4.09883	30.00000	Averaged
47 1,2-Dichloroethane	0.49133	0.44783	0.44783	0.010	-8.85363	30.00000	Averaged
48 Benzene	1.09329	1.03038	1.03038	0.010	-5.75373	30.00000	Averaged
50 Cyclohexene	0.51508	0.49328	0.49328	0.010	-4.23232	30.00000	Averaged

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA7.i Injection Date: 01-MAR-2010 20:31
Lab File ID: 7b124.d Init. Cal. Date(s): 17-FEB-2010 18-FEB-2010
Analysis Type: WATER Init. Cal. Times: 16:02 00:42
Lab Sample ID: W7VM100301-06 Quant Type: ISTD
Method: /chem/VOA7.i/030110v7/VOA7-8260B-021710PM.m

COMPOUND	RRE / AMOUNT	RF50	CCAL RRE50	MIN RRE / SD / %DRIFT	MAX SD / %DRIFT	CURVE TYPE	
53 Trichloroethylene	0.26489	0.25785	0.25785	0.010	-2.65766	30.00000	Averaged
56 1,2-Dichloropropane	0.36406	0.35182	0.35182	0.010	-3.36250	20.00000	Averaged|ccc
55 Methylcyclohexane	0.44055	0.44000	0.44000	0.010	-0.12459	30.00000	Averaged
59 Bromodichloromethane	0.39044	0.37947	0.37947	0.010	-2.81055	30.00000	Averaged
58 Dibromomethane	0.19638	0.19138	0.19138	0.010	-2.54650	30.00000	Averaged
61 2-Chloroethylvinyl ether	0.14176	0.14896	0.14896	0.010	5.08142	30.00000	Averaged
63 4-Methyl-2-pentanone	0.24607	0.20469	0.20469	0.010	-16.81623	40.00000	Averaged
62 cis-1,3-Dichloropropylene	0.47551	0.47490	0.47490	0.010	-0.12682	30.00000	Averaged
64 Toluene-d8	1.62735	1.53235	1.53235	0.010	-5.83763	30.00000	Averaged
65 Toluene	0.90021	0.81261	0.81261	0.010	-9.73133	20.00000	Averaged|ccc
67 trans-1,3-Dichloropropylene	0.61004	0.55289	0.55289	0.010	-9.36752	30.00000	Averaged
68 1,1,2-Trichloroethane	0.33917	0.29504	0.29504	0.010	-13.01160	30.00000	Averaged
69 2-Hexanone	0.68092	0.49866	0.49866	0.010	-26.76689	40.00000	Averaged
70 1,3-Dichloropropane	0.69553	0.63074	0.63074	0.010	-9.31647	30.00000	Averaged
71 Tetrachloroethylene	0.24878	0.22012	0.22012	0.010	-11.51985	30.00000	Averaged
72 Dibromochloromethane	0.36583	0.33455	0.33455	0.010	-8.55097	30.00000	Averaged
73 1,2-Dibromoethane	0.36785	0.32929	0.32929	0.010	-10.48157	30.00000	Averaged
76 Chlorobenzene	0.92664	0.83650	0.83650	0.300	-9.72689	30.00000	Averaged|spcc
77 1,1,1,2-Tetrachloroethane	0.31932	0.30123	0.30123	0.010	-5.66379	30.00000	Averaged
78 Ethylbenzene	1.68200	1.42984	1.42984	0.010	-14.99151	20.00000	Averaged|ccc
79 m,p-Xylenes	0.63299	0.58445	0.58445	0.010	-7.66714	30.00000	Averaged
80 o-Xylene	0.67056	0.63371	0.63371	0.010	-5.49479	30.00000	Averaged
81 Styrene	1.07382	1.01171	1.01171	0.010	-5.78341	30.00000	Averaged
82 Bromoform	0.47906	0.44734	0.44734	0.100	-6.62121	30.00000	Averaged|spcc
83 Isopropylbenzene	3.23464	2.76495	2.76495	0.010	-14.52058	30.00000	Averaged
87 1,1,2,2-Tetrachloroethane	1.13151	0.94261	0.94261	0.300	-16.69389	30.00000	Averaged|spcc
86 Bromofluorobenzene	1.31523	1.22284	1.22284	0.010	-7.02471	30.00000	Averaged
89 1,2,3-Trichloropropane	0.24620	0.20556	0.20556	0.010	-16.50475	30.00000	Averaged
90 Bromobenzene	0.75737	0.69354	0.69354	0.010	-8.42740	30.00000	Averaged
91 n-Propylbenzene	4.11235	3.46937	3.46937	0.010	-15.63515	30.00000	Averaged
93 2-Chlorotoluene	2.81550	2.47578	2.47578	0.010	-12.06597	30.00000	Averaged
92 1,3,5-Trimethylbenzene	2.67285	2.44166	2.44166	0.010	-8.64968	30.00000	Averaged
94 4-Chlorotoluene	2.52732	2.21315	2.21315	0.010	-12.43100	30.00000	Averaged
95 tert-Butylbenzene	2.42130	2.17387	2.17387	0.010	-10.21883	30.00000	Averaged
96 1,2,4-Trimethylbenzene	2.70506	2.36901	2.36901	0.010	-12.42320	30.00000	Averaged
98 sec-Butylbenzene	3.56563	3.10599	3.10599	0.010	-12.89103	30.00000	Averaged

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA7.i Injection Date: 01-MAR-2010 20:31
 Lab File ID: 7b124.d Init. Cal. Date(s): 17-FEB-2010 18-FEB-2010
 Analysis Type: WATER Init. Cal. Times: 16:02 00:42
 Lab Sample ID: W7VM100301-06 Quant Type: ISTD
 Method: /chem/VOA7.i/030110v7/VOA7-8260B-021710PM.m

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
99 4-Isopropyltoluene	2.57723	2.35616	2.35616	0.010	-8.57758	30.00000	Averaged
100 1,3-Dichlorobenzene	1.47958	1.32143	1.32143	0.010	-10.68880	30.00000	Averaged
102 1,4-Dichlorobenzene	1.44472	1.30169	1.30169	0.010	-9.90060	30.00000	Averaged
104 n-Butylbenzene	2.98564	2.62691	2.62691	0.010	-12.01529	30.00000	Averaged
105 1,2-Dichlorobenzene	1.48620	1.34954	1.34954	0.010	-9.19549	30.00000	Averaged
107 1,2-Dibromo-3-chloropropane	44.30990	50.00000	0.16533	0.010	-11.38019	30.00000	Linear
108 1,2,4-Trichlorobenzene	0.93109	0.85454	0.85454	0.010	-8.22132	30.00000	Averaged
109 Hexachlorobutadiene	0.49991	0.43818	0.43818	0.010	-12.34756	30.00000	Averaged
110 Naphthalene	2.33792	2.10335	2.10335	0.010	-10.03297	30.00000	Averaged
111 1,2,3-Trichlorobenzene	0.86076	0.78088	0.78088	0.010	-9.28009	30.00000	Averaged

Average %D / Drift Results.

Calculated Average %D/Drift = 9.05665

Maximum Average %D/Drift = 20.00000

* Passed Average %D/Drift Test.

Data File: /chem/VOA7.i/030110v7/7b124.d
Report Date: 04-Mar-2010 13:42

Page 1

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VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA7.i/030110v7/7b124.d
Lab Smp Id: W7VM100301-06 Client Smp ID: VSTD050
Inj Date : 01-MAR-2010 20:31
Operator : AX01 Inst ID: VOA7.i
Smp Info : |W7VM100301-06|BFB/CCV/LCS|1|VOAF|1|
Misc Info : GEL 5mL N/A UVM100220-01B/IVM100224-01
Comment :
Method : /chem/VOA7.i/030110v7/VOA7-8260B-021710PM.m
Meth Date : 04-Mar-2010 13:42 ale01592 Quant Type: ISTD
Cal Date : 18-FEB-2010 00:08 Cal File: 7z324.d
Als bottle: 24 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CALsubL+.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (Uf/Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	sample purged

Cpnd Variable Local Compound Variable

						AMOUNTS		
Compounds		QUANT	SIG	RT	EXP RT REL RT	RESPONSE	CAL-AMT	ON-COL
		MASS					(ug/l)	(ug/l)
=====		----		==	-----	-----	-----	-----
M	2 Xylenes (total)	106				1295545	150.000	140
M	3 1,2-Dichloroethylene (total)	96				829990	100.000	92.5
M	1 1,3-Dichloropropylene	75				827385	100.000	101
	4 Dichlorodifluoromethane	85		5.147	5.147 (0.336)	102627	50.0000	36.4
	5 Chloromethane	50		5.757	5.757 (0.376)	337248	50.0000	39.8
	6 Vinyl chloride	62		6.187	6.187 (0.404)	336813	50.0000	44.8
	7 Bromomethane	94		7.429	7.429 (0.485)	190831	50.0000	44.5
	8 Chloroethane	64		7.855	7.855 (0.513)	176357	50.0000	45.8
	9 Trichlorofluoromethane	101		8.789	8.789 (0.574)	260714	50.0000	45.3
	10 Ethyl Ether	59		9.703	9.703 (0.633)	250280	50.0000	46.7
	13 Acetone	43		10.423	10.423 (0.681)	1263991	250.000	208
	17 Acetonitrile	41		11.073	11.073 (0.723)	1175721	1000.00	1090
	14 1,1-Dichloroethylene	96		10.312	10.312 (0.673)	177572	50.0000	45.1
	18 Methyl acetate	43		11.225	11.225 (0.733)	1262670	250.000	225
	16 Iodomethane	142		10.667	10.667 (0.696)	1650834	250.000	240

Compounds	QUANT SIG			RESPONSE	AMOUNTS	
	MASS	RT	EXP RT REL RT		CAL-AMT (ug/l)	ON-COL (ug/l)
22 Methylene chloride	86	11.449	11.449 (0.747)	175331	50.0000	47.4
19 Carbon disulfide	76	10.840	10.840 (0.708)	3235094	250.000	234
24 tert-Butyl methyl ether	73	12.017	12.017 (0.785)	664083	50.0000	47.4
25 trans-1,2-Dichloroethylene	61	12.027	12.027 (0.785)	379900	50.0000	45.6
26 Vinyl acetate	43	12.860	12.860 (0.840)	3094033	250.000	225
28 1,1-Dichloroethane	63	12.799	12.799 (0.836)	521525	50.0000	48.1
31 2-Butanone	43	13.723	13.723 (0.896)	1447378	250.000	214
33 cis-1,2-Dichloroethylene	61	13.733	13.733 (0.897)	450090	50.0000	46.8
34 2,2-Dichloropropane	77	13.743	13.743 (0.897)	211087	50.0000	46.9
38 Chloroform	83	14.190	14.190 (0.926)	416585	50.0000	46.2
37 Bromochloromethane	49	14.088	14.088 (0.920)	339668	50.0000	47.8
41 1,1,1-Trichloroethane	97	14.484	14.484 (0.946)	292242	50.0000	47.2
43 Cyclohexane	56	14.586	14.586 (0.952)	467543	50.0000	46.5
44 1,1-Dichloropropene	75	14.697	14.697 (0.960)	309085	50.0000	47.7
52 n-Butyl alcohol	56	15.560	15.560 (1.016)	1265501	5000.00	5370
45 Carbon tetrachloride	117	14.718	14.718 (0.961)	231221	50.0000	47.0
\$ 46 1,2-Dichloroethane-d4	65	14.880	14.880 (0.971)	375130	50.0000	48.0
47 1,2-Dichloroethane	62	14.982	14.982 (0.978)	405504	50.0000	45.6
48 Benzene	78	14.982	14.982 (0.978)	933005	50.0000	47.1
50 Cyclohexene	67	15.114	15.114 (0.987)	446663	50.0000	47.9
* 51 Fluorobenzene	96	15.317	15.317 (1.000)	905494	50.0000	
53 Trichloroethylene	95	15.763	15.763 (1.029)	233486	50.0000	48.7
56 1,2-Dichloropropane	63	16.037	16.037 (1.047)	318569	50.0000	48.3
55 Methylcyclohexane	83	16.027	16.027 (1.046)	398420	50.0000	49.9
59 Bromodichloromethane	83	16.332	16.332 (1.066)	343609	50.0000	48.6
58 Dibromomethane	93	16.179	16.179 (1.056)	173289	50.0000	48.7
61 2-Chloroethylvinyl ether	63	16.606	16.606 (1.084)	674409	250.000	263
63 4-Methyl-2-pentanone	58	16.941	16.941 (0.908)	735545	250.000	208
62 cis-1,3-Dichloropropylene	75	16.819	16.819 (1.098)	430021	50.0000	49.9
\$ 64 Toluene-d8	98	17.134	17.134 (0.918)	1101300	50.0000	47.1
65 Toluene	92	17.215	17.215 (0.922)	584024	50.0000	45.1
67 trans-1,3-Dichloropropylene	75	17.388	17.388 (0.931)	397364	50.0000	45.3
68 1,1,2-Trichloroethane	83	17.611	17.611 (0.943)	212046	50.0000	43.5
69 2-Hexanone	43	17.804	17.804 (0.954)	1791934	250.000	183
70 1,3-Dichloropropane	76	17.794	17.794 (0.953)	453310	50.0000	45.3
71 Tetrachloroethylene	164	17.814	17.814 (0.954)	158200	50.0000	44.2
72 Dibromochloromethane	129	18.058	18.058 (0.967)	240439	50.0000	45.7
73 1,2-Dibromoethane	107	18.220	18.220 (0.976)	236664	50.0000	44.8
* 75 Chlorobenzene-d5	117	18.667	18.667 (1.000)	718701	50.0000	
76 Chlorobenzene	112	18.697	18.697 (1.002)	601195	50.0000	45.1
77 1,1,1,2-Tetrachloroethane	131	18.758	18.758 (1.005)	216496	50.0000	47.2
78 Ethylbenzene	91	18.758	18.758 (1.005)	1027627	50.0000	42.5
79 m,p-Xylenes	106	18.870	18.870 (1.011)	840095	100.000	92.3
80 o-Xylene	106	19.286	19.286 (1.033)	455450	50.0000	47.2
81 Styrene	104	19.286	19.286 (1.033)	727120	50.0000	47.1
82 Bromoform	173	19.540	19.540 (0.931)	161358	50.0000	46.7
83 Isopropylbenzene	105	19.631	19.631 (0.935)	997330	50.0000	42.7

Compounds	QUANT SIG					AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)
87 1,1,2,2-Tetrachloroethane	83	19.885	19.885	(0.947)	340005	50.0000	41.6
\$ 86 Bromofluorobenzene	95	19.814	19.814	(0.944)	441084	50.0000	46.5
89 1,2,3-Trichloropropane	110	19.966	19.966	(0.951)	74148	50.0000	41.7
90 Bromobenzene	156	20.017	20.017	(0.954)	250164	50.0000	45.8
91 n-Propylbenzene	91	20.027	20.027	(0.954)	1251417	50.0000	42.2
93 2-Chlorotoluene	91	20.169	20.169	(0.961)	893024	50.0000	44.0
92 1,3,5-Trimethylbenzene	105	20.169	20.169	(0.961)	880715	50.0000	45.7
94 4-Chlorotoluene	91	20.260	20.260	(0.965)	798291	50.0000	43.8
95 tert-Butylbenzene	119	20.524	20.524	(0.978)	784124	50.0000	44.9
96 1,2,4-Trimethylbenzene	105	20.565	20.565	(0.980)	854510	50.0000	43.8
98 sec-Butylbenzene	105	20.748	20.748	(0.988)	1120342	50.0000	43.6
99 4-Isopropyltoluene	119	20.859	20.859	(0.994)	849878	50.0000	45.7
100 1,3-Dichlorobenzene	146	20.930	20.930	(0.997)	476646	50.0000	44.6
* 101 1,4-Dichlorobenzene-d4	152	20.991	20.991	(1.000)	360704	50.0000	
102 1,4-Dichlorobenzene	146	21.012	21.012	(1.001)	469524	50.0000	45.0
104 n-Butylbenzene	91	21.296	21.296	(1.014)	947536	50.0000	44.0
105 1,2-Dichlorobenzene	146	21.438	21.438	(1.021)	486784	50.0000	45.4
107 1,2-Dibromo-3-chloropropane	157	22.291	22.291	(1.062)	59634	50.0000	44.3
108 1,2,4-Trichlorobenzene	180	23.357	23.357	(1.113)	308237	50.0000	45.9
109 Hexachlorobutadiene	225	23.529	23.529	(1.121)	158055	50.0000	43.8
110 Naphthalene	128	23.743	23.743	(1.131)	758688	50.0000	45.0
111 1,2,3-Trichlorobenzene	180	24.088	24.088	(1.147)	281666	50.0000	45.4

Data File: /chem/0007.1/030110v7/7b124.d

Date : 01-MAR-2010 20:31

Client ID: VSTD050

Sample Info: 1M7VH100301-06|BFB/CCV/LCS|11V00F11

Purge Volume: 5.0

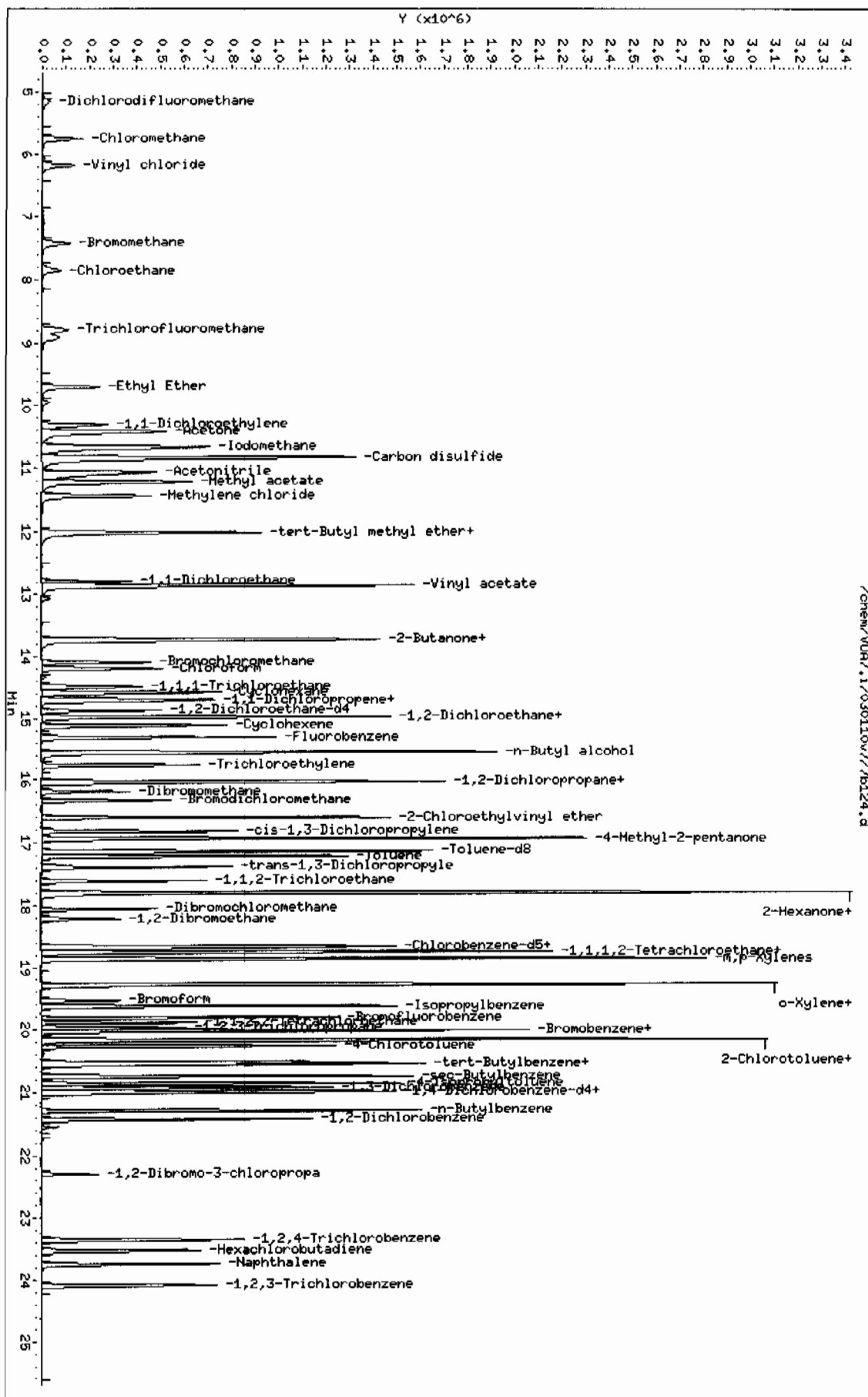
Column phase: DB-624

Instrument: V007.1

Operator: AX01

Column diameter: 0.25

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA7.i Injection Date: 01-MAR-2010 21:40
Lab File ID: 7b126.d Init. Cal. Date(s): 17-FEB-2010 18-FEB-2010
Analysis Type: WATER Init. Cal. Times: 16:02 00:42
Lab Sample ID: W7VM100301-08 Quant Type: ISTD
Method: /chem/VOA7.i/030110v7/VOA7-8260B-021710PM.m

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
11 Acrolein	0.04808	0.05544	0.05544	0.001	15.32122	30.00000	Averaged
12 Trichlorotrifluoroethane	0.08737	0.07979	0.07979	0.010	-8.66931	30.00000	Averaged
20 Allyl chloride	0.47439	0.41305	0.41305	0.010	-12.93095	30.00000	Averaged
23 Acrylonitrile	0.13462	0.13309	0.13309	0.010	-1.13418	30.00000	Averaged
29 2-Chloro-1,3-butadiene	0.40803	0.44697	0.44697	0.010	9.54356	30.00000	Averaged
35 Propionitrile	0.05907	0.05308	0.05308	0.010	-10.14373	30.00000	Averaged
32 Ethyl acetate	0.40471	0.32838	0.32838	0.010	-18.85991	40.00000	Averaged
36 Methacrylonitrile	0.24530	0.21198	0.21198	0.010	-13.58357	30.00000	Averaged
39 Tetrahydrofuran	0.41916	0.32940	0.32940	0.010	-21.41446	30.00000	Averaged
42 Isobutyl alcohol	0.01791	0.01531	0.01531	0.005	-14.53842	40.00000	Averaged
54 Methyl methacrylate	0.21684	0.20891	0.20891	0.010	-3.65584	30.00000	Averaged
66 Ethyl methacrylate	0.57238	0.50240	0.50240	0.010	-12.22641	30.00000	Averaged
57 1,4-Dioxane	0.00326	0.00326	0.00326	0.001	0.10912	40.00000	Averaged
60 2-Nitropropane	0.14035	0.13443	0.13443	0.010	-4.22030	30.00000	Averaged
84 cis-1,4-Dichloro-2-butene	0.38900	0.36726	0.36726	0.010	-5.58759	30.00000	Averaged
85 Cyclohexanone	0.02826	0.04953	0.04953	0.010	75.25104	40.00000	Averaged
88 trans-1,4-Dichloro-2-butene	0.35107	0.33228	0.33228	0.010	-5.35130	30.00000	Averaged
97 Pentachloroethane	0.28176	0.36269	0.36269	0.010	28.72591	30.00000	Averaged
103 Benzyl chloride	1.23904	1.30764	1.30764	0.010	5.53643	30.00000	Averaged
106 bis(2-Chloroisopropyl)ether	0.69951	0.55138	0.55138	0.010	-21.17614	30.00000	Averaged
46 1,2-Dichloroethane-d4	0.43199	0.40626	0.40626	0.010	-5.95505	30.00000	Averaged
64 Toluene-d8	1.62735	1.55510	1.55510	0.010	-4.43921	30.00000	Averaged
86 Bromofluorobenzene	1.31523	1.20147	1.20147	0.010	-8.64997	30.00000	Averaged

Average %D / Drift Results.

Calculated Average %D/Drift = 9.05665

Maximum Average %D/Drift = 20.00000

* Passed Average %D/Drift Test.

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA7.i/030110v7/7b126.d

Lab Smp Id: W7VM100301-08

Client Smp ID: VSTD250S

Inj Date : 01-MAR-2010 21:40

Operator : AX01

Inst ID: VOA7.i

Smp Info : |W7VM100301-08|SHORT/SLCS|1|VOAF|1|

Misc Info : GEL 5mL N/A UVM091216-08B

Comment :

Method : /chem/VOA7.i/030110v7/VOA7-8260B-021710PM.m

Meth Date : 02-Mar-2010 06:16 ale01592 Quant Type: ISTD

Cal Date : 18-FEB-2010 00:08

Cal File: 7z324.d

Als bottle: 26

Continuing Calibration Sample

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: CALsubS+SS.sub

Target Version: 3.50

Concentration Formula: Amt * DF * (Uf/Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	sample purged

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG	AMOUNTS						
		MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT	ON-COL
							(ug/l)	(ug/l)
=====	=====	=====	=====	=====	=====	=====	=====	
11 Acrolein	56	10.027	10.027	(0.655)	293890	250.000	288	
12 Trichlorotrifluoroethane	85	10.373	10.373	(0.677)	422941	250.000	228	
20 Allyl chloride	41	11.185	11.185	(0.730)	2189400	250.000	218	
23 Acrylonitrile	53	11.926	11.926	(0.779)	705459	250.000	247	
29 2-Chloro-1,3-butadiene	53	12.961	12.961	(0.846)	473843	50.0000	54.8	
35 Propionitrile	54	13.804	13.804	(0.901)	281329	250.000	225	
32 Ethyl acetate	43	13.804	13.804	(0.901)	1740604	250.000	203	
36 Methacrylonitrile	41	14.037	14.037	(0.916)	1123591	250.000	216	
39 Tetrahydrofuran	42	14.159	14.159	(0.675)	639027	250.000	196	
42 Isobutyl alcohol	41	14.748	14.748	(0.963)	811526	2500.00	2140	
54 Methyl methacrylate	69	16.078	16.078	(1.050)	1107336	250.000	241	
66 Ethyl methacrylate	69	17.408	17.408	(0.933)	1989752	250.000	219	
57 1,4-Dioxane	88	16.159	16.159	(1.055)	172936	2500.00	2500	
60 2-Nitropropane	43	16.555	16.555	(1.081)	712534	250.000	239	
84 cis-1,4-Dichloro-2-butene	53	19.662	19.662	(0.937)	712476	250.000	236	
85 Cyclohexanone	55	19.773	19.773	(1.059)	980808	1250.00	2190	

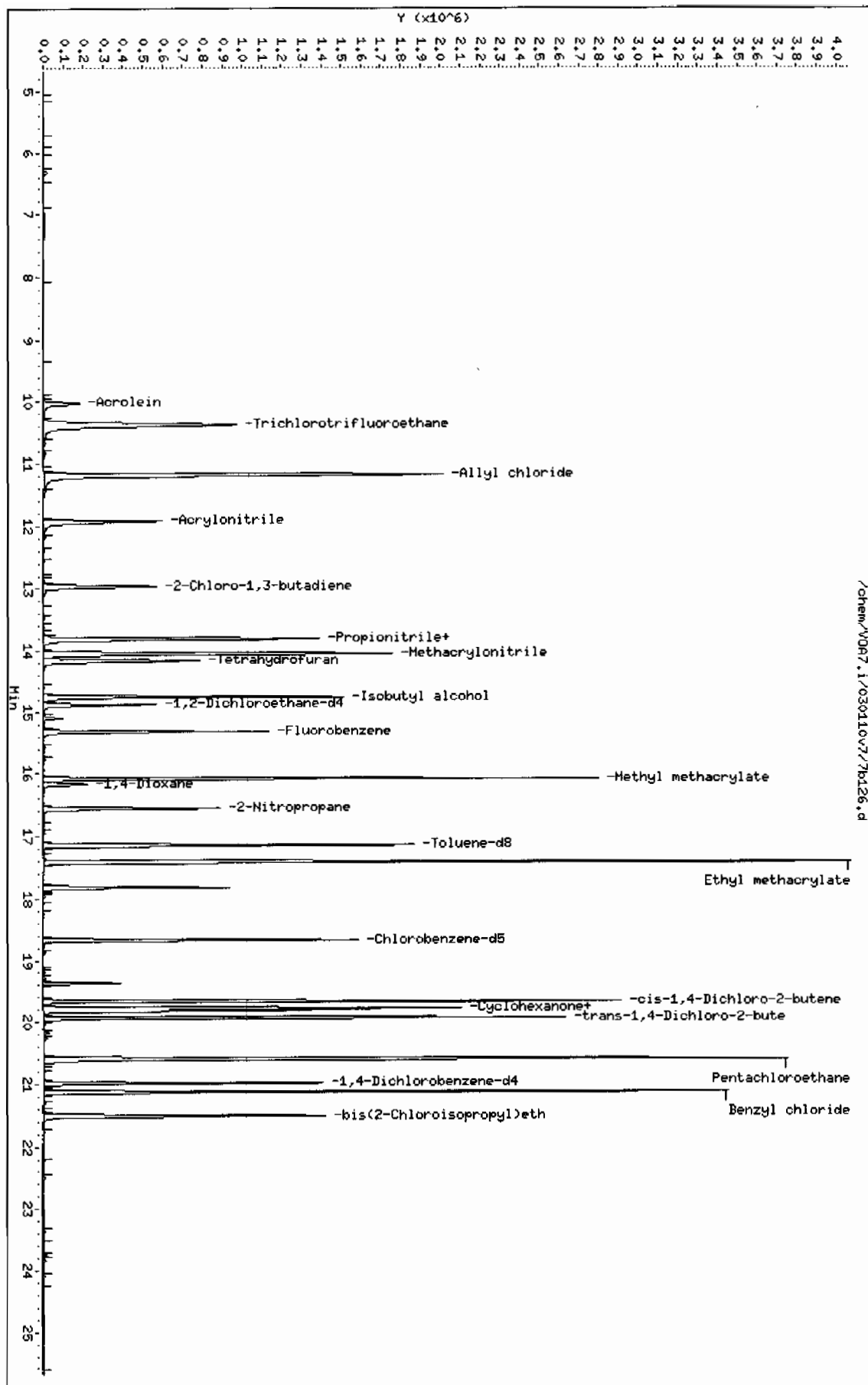
Compounds	QUANT SIG					AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)
=====	=====	=====	=====	=====	=====	=====	=====
88 trans-1,4-Dichloro-2-butene	53	19.925	19.925	(0.949)	644607	250.000	237
97 Pentachloroethane	167	20.596	20.596	(0.981)	703607	250.000	322 (A)
103 Benzyl chloride	91	21.123	21.123	(1.006)	2536770	250.000	264
106 bis(2-Chloroisopropyl)ether	45	21.509	21.509	(1.025)	1069650	250.000	197
* 51 Fluorobenzene	96	15.317	15.317	(1.000)	1060115	50.0000	
* 75 Chlorobenzene-d5	117	18.667	18.667	(1.000)	792106	50.0000	
* 101 1,4-Dichlorobenzene-d4	152	20.991	20.991	(1.000)	387991	50.0000	
\$ 46 1,2-Dichloroethane-d4	65	14.880	14.880	(0.971)	430686	50.0000	47.0
\$ 64 Toluene-d8	98	17.134	17.134	(0.918)	1231808	50.0000	47.8
\$ 86 Bromofluorobenzene	95	19.814	19.814	(0.944)	466158	50.0000	45.7

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: /chem/V007.i/030110v7/7b126.d
 Date: 01-MAR-2010 21:40
 Client ID: VSTD2505
 Sample Info: 147VH100301-08|SHORT/SLCS|1|V007.i
 Purge Volume: 5.0
 Column phase: DB-624

Instrument: V007.i
 Operator: AXD1
 Column diameter: 0.25



QC Data

Data File: /chem/V0A7.i/021710v7/7z309.d

Page 1

Date : 17-FEB-2010 15:29

Client ID: BFB01

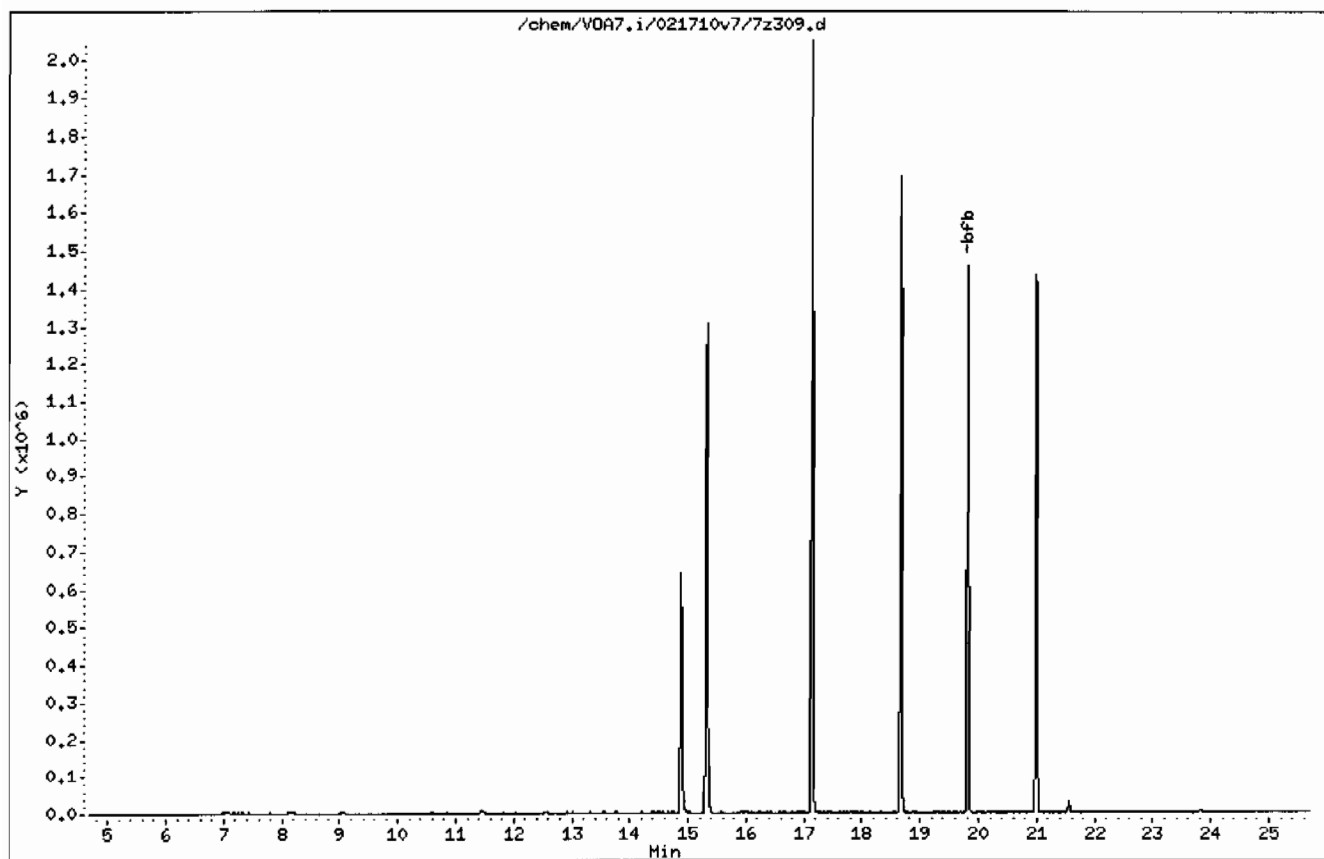
Instrument: V0A7.i

Sample Info: I120200-----IRINSEI1|V0AF11|

Operator: CDS1

Column phase: db624

Column diameter: 0.25



Date : 17-FEB-2010 15:29

Client ID: BFB01

Instrument: V0A7.i

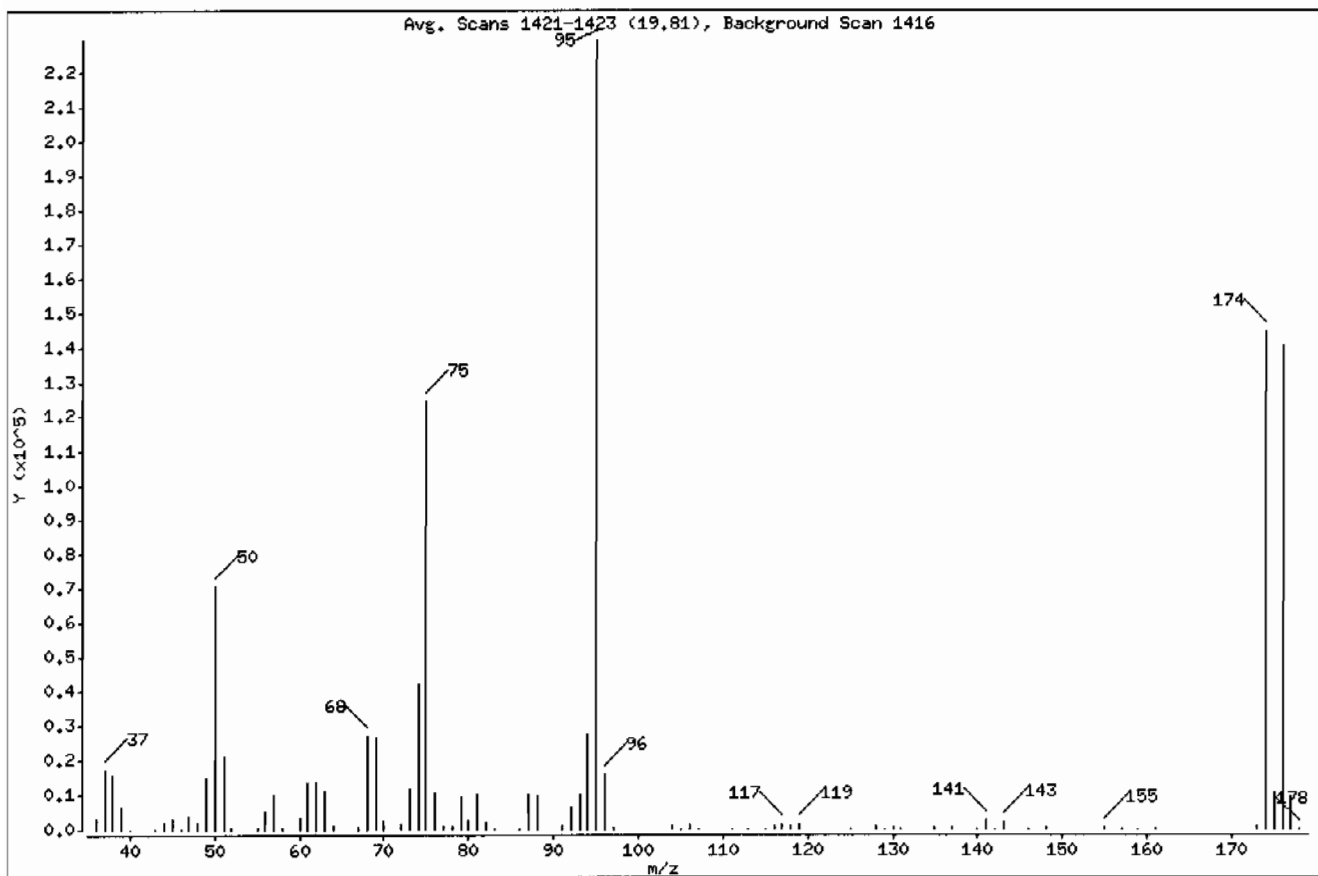
Sample Info: I120200-----IRINSEI1V0AF11I

Operator: CDS1

Column phase: db624

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	30.76
75	30.00 - 60.00% of mass 95	54.23
96	5.00 - 9.00% of mass 95	6.98
173	Less than 2.00% of mass 174	0.36 (0.57)
174	50.00 - 100.00% of mass 95	63.04
175	5.00 - 9.00% of mass 174	4.53 (7.18)
176	95.00 - 101.00% of mass 174	61.26 (97.17)
177	5.00 - 9.00% of mass 176	4.24 (6.92)

Date : 17-FEB-2010 15:29

Client ID: BFB01

Instrument: VOA7.i

Sample Info: I120200-----IRINSEI1VOAF11I

Operator: CDS1

Column phase: db624

Column diameter: 0.25

Data File: 7z309.d

Spectrum: Avg. Scans 1421-1423 (19.81), Background Scan 1416

Location of Maximum: 95.00

Number of points: 84

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	3286	63.00	11103	92.00	6546	135.00	493
37.00	17472	64.00	947	93.00	9939	137.00	490
38.00	16055	67.00	680	94.00	27256	140.00	87
39.00	6161	68.00	26752	95.00	229440	141.00	2431
40.00	202	69.00	26480	96.00	16004	142.00	224
43.00	96	70.00	2378	97.00	507	143.00	2362
44.00	2000	72.00	1351	104.00	1056	146.00	133
45.00	3186	73.00	11623	105.00	224	148.00	278
46.00	155	74.00	42264	106.00	1400	155.00	331
47.00	3534	75.00	124432	107.00	195	157.00	97
48.00	1953	76.00	10309	111.00	126	159.00	99
49.00	14857	77.00	1286	113.00	145	161.00	134
50.00	70568	78.00	973	115.00	130	173.00	824
51.00	20904	79.00	9389	116.00	905	174.00	144640
52.00	786	80.00	2629	117.00	1450	175.00	10392
55.00	762	81.00	10002	118.00	842	176.00	140544
56.00	5200	82.00	2048	119.00	1357	177.00	9727
57.00	9767	83.00	119	125.00	98	178.00	196
58.00	507	86.00	242	128.00	824		
60.00	2962	87.00	10165	129.00	258		
61.00	13385	88.00	9659	130.00	689		
62.00	13596	91.00	822	131.00	232		

Data File: /chem/VOA7.i/030110v7/7b103BFB.d

Page 1

Date : 01-MAR-2010 08:39

Client ID: BFB01

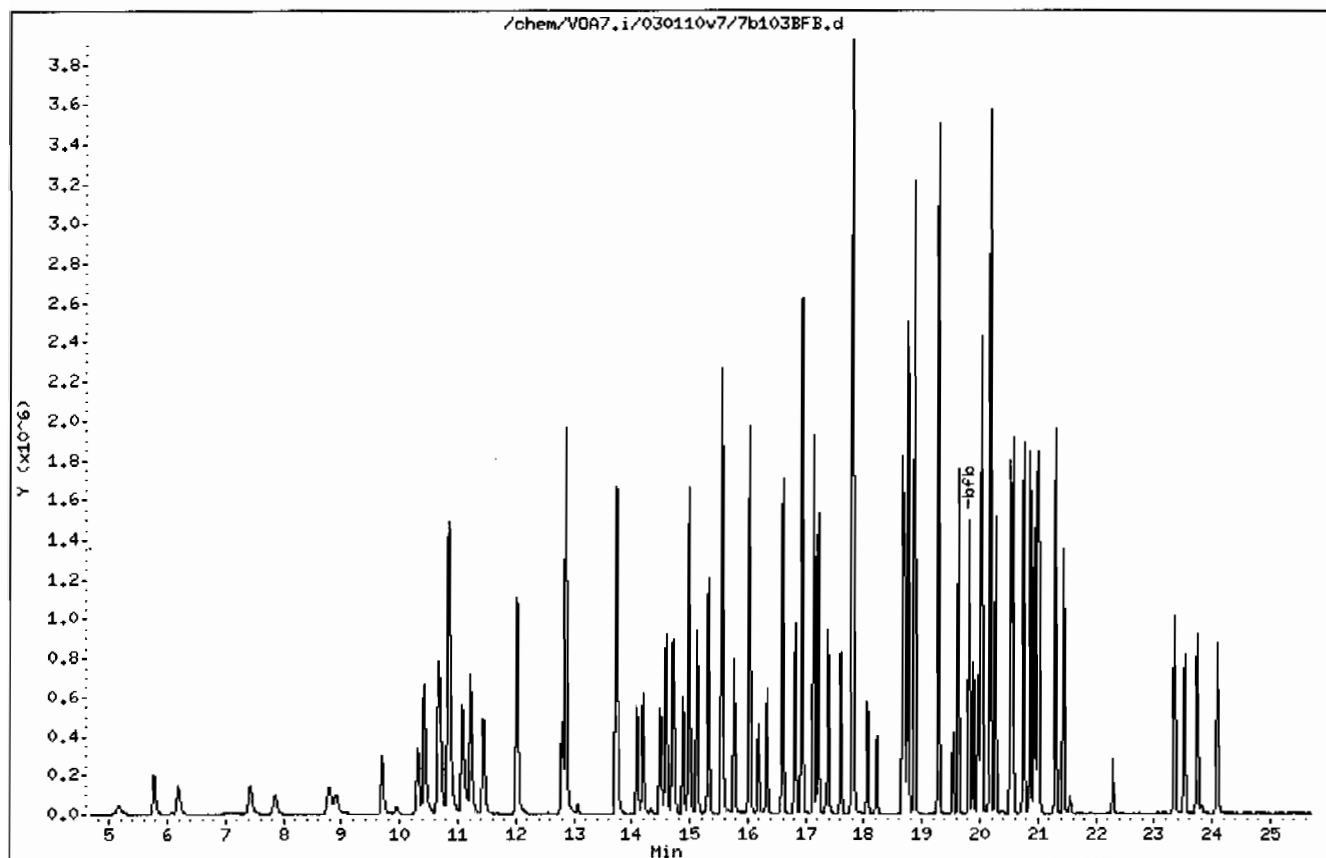
Instrument: VOA7.i

Sample Info: IW7VH100301-021BFB/CCV/LCSIV0AF111

Operator: AX01

Column phase: db624

Column diameter: 0.25



Date : 01-MAR-2010 08:39

Client ID: BFB01

Instrument: VOA7.i

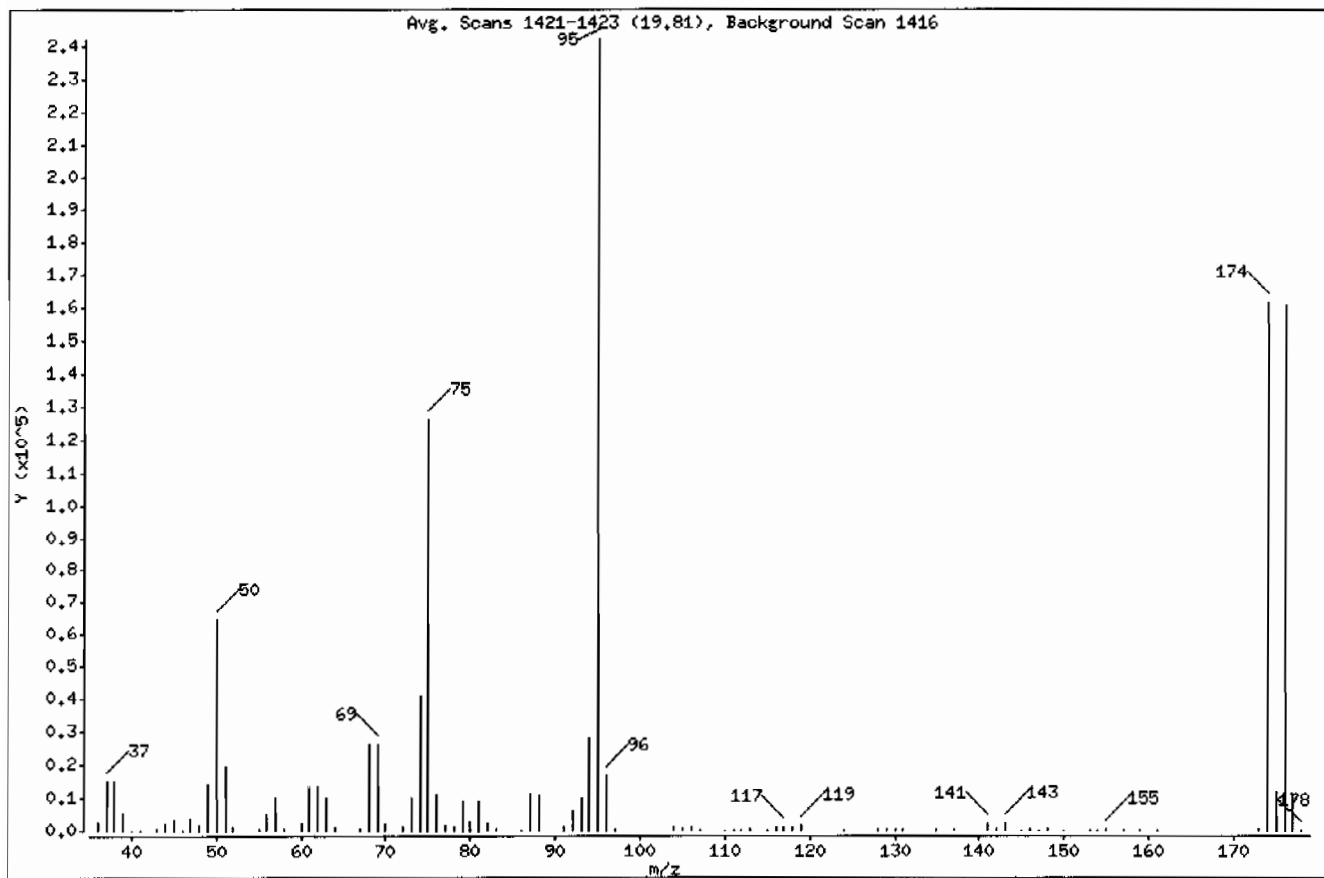
Sample Info: IW7VM100301-021BFB/CCV/LCS1VOAF111

Operator: AX01

Column phase: db624

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	26.75
75	30.00 - 60.00% of mass 95	51.87
96	5.00 - 9.00% of mass 95	6.84
173	Less than 2.00% of mass 174	0.34 (0.51)
174	50.00 - 100.00% of mass 95	66.72
175	5.00 - 9.00% of mass 174	4.75 (7.11)
176	95.00 - 101.00% of mass 174	66.11 (99.09)
177	5.00 - 9.00% of mass 176	4.31 (6.52)

Date : 01-MAR-2010 08:39

Client ID: BFB01

Instrument: VOA7.i

Sample Info: IW7VM100301-021BFB/CCV/LCSIVDAF111

Operator: AX01

Column phase: db624

Column diameter: 0.25

Data File: 7b103BFB.d

Spectrum: Avg, Scans 1421-1423 (19.81), Background Scan 1416

Location of Maximum: 95.00

Number of points: 91

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

| 36.00	2738	| 63.00	10064	| 93.00	10091	| 135.00	478
| 37.00	15297	| 64.00	894	| 94.00	27688	| 137.00	347
| 38.00	14894	| 67.00	693	| 95.00	242496	| 141.00	2196
| 39.00	5784	| 68.00	25984	| 96.00	16592	| 142.00	286
| 40.00	62	| 69.00	26000	| 97.00	550	| 143.00	2138

| 41.00	132	| 70.00	1978	| 104.00	1089	| 145.00	88
| 43.00	279	| 72.00	1179	| 105.00	483	| 146.00	385
| 44.00	2000	| 73.00	10085	| 106.00	1135	| 147.00	124
| 45.00	3335	| 74.00	40632	| 107.00	102	| 148.00	311
| 46.00	107	| 75.00	125776	| 110.00	204	| 150.00	123

| 47.00	3633	| 76.00	11033	| 111.00	94	| 153.00	101
| 48.00	1696	| 77.00	1598	| 112.00	125	| 154.00	83
| 49.00	13752	| 78.00	963	| 113.00	299	| 155.00	558
| 50.00	64856	| 79.00	8864	| 115.00	204	| 157.00	218
| 51.00	19536	| 80.00	2626	| 116.00	923	| 159.00	107

| 52.00	998	| 81.00	9058	| 117.00	1163	| 161.00	87
| 55.00	723	| 82.00	2203	| 118.00	854	| 173.00	829
| 56.00	5252	| 83.00	362	| 119.00	1560	| 174.00	161792
| 57.00	9844	| 86.00	265	| 124.00	116	| 175.00	11507
| 58.00	350	| 87.00	10955	| 128.00	805	| 176.00	160320

| 60.00	2451	| 88.00	10620	| 129.00	362	| 177.00	10448
| 61.00	12734	| 91.00	1064	| 130.00	765	| 178.00	253
| 62.00	13212	| 92.00	6175	| 131.00	361		

Data File: /chem/V0A7.i/030110v7/7b124BFB.d

Page 1

Date : 01-MAR-2010 20:31

Client ID: BFB01

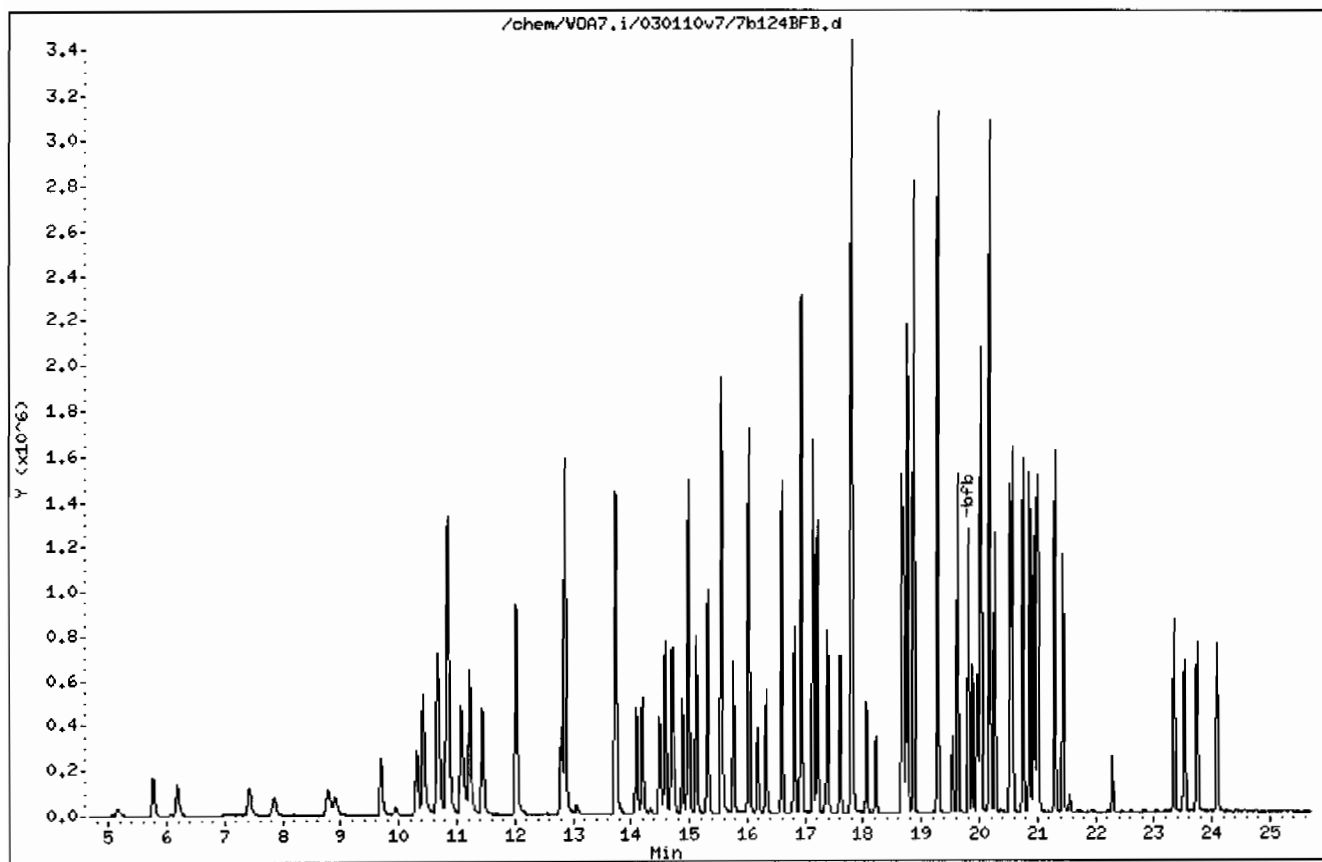
Instrument: V0A7.i

Sample Info: IW7VM100301-061BFB/CCV/LCS111V0AF111

Operator: AX01

Column phase: db624

Column diameter: 0.25



Date : 01-MAR-2010 20:31

Client ID: BFB01

Instrument: VOA7.i

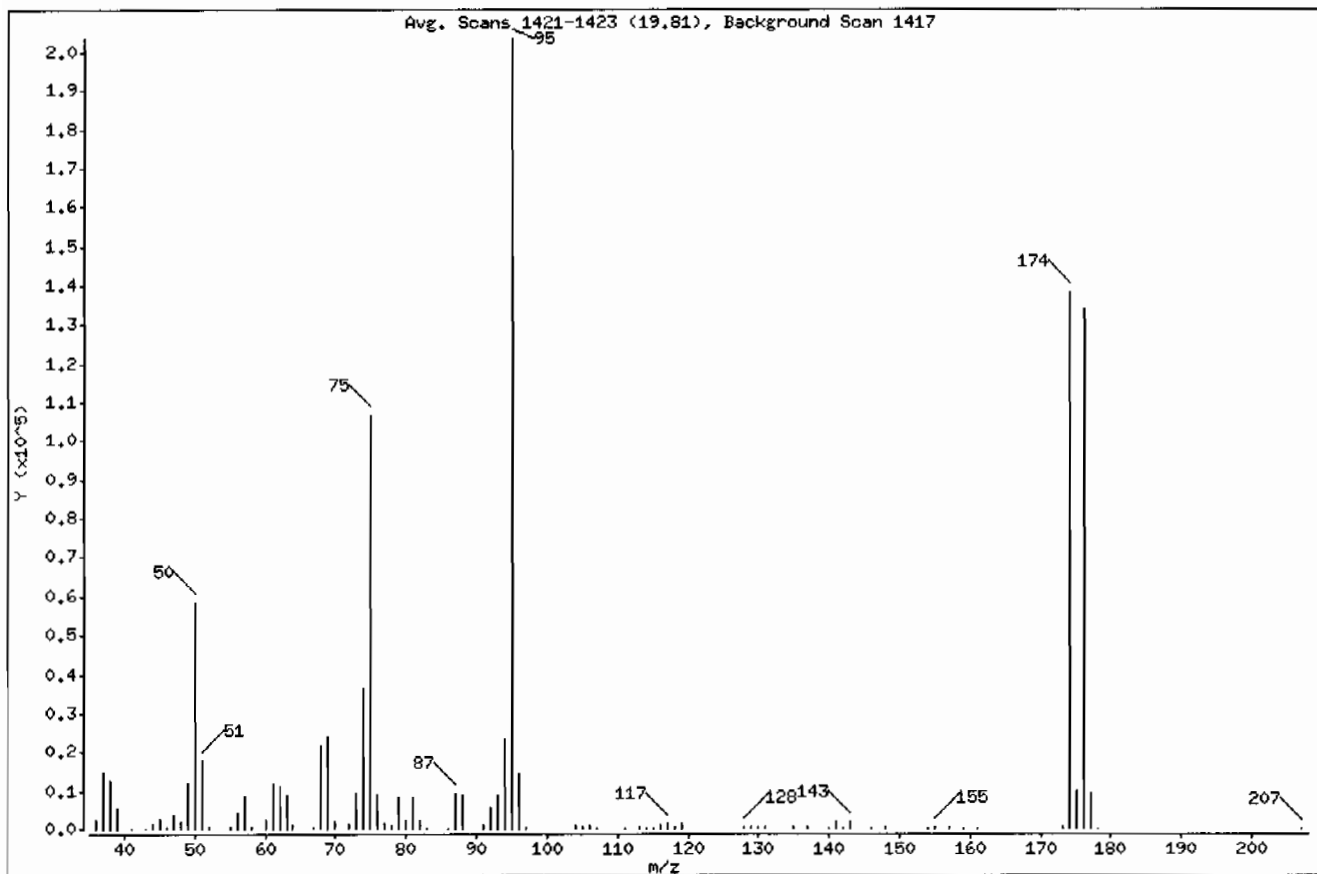
Sample Info: IW7VM100301-061BFB/CCV/LCSI11VOAF11

Operator: AX01

Column phase: db624

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	28.73
75	30.00 - 60.00% of mass 95	52.35
96	5.00 - 9.00% of mass 95	7.04
173	Less than 2.00% of mass 174	0.31 (0.46)
174	50.00 - 100.00% of mass 95	67.76
175	5.00 - 9.00% of mass 174	4.91 (7.25)
176	95.00 - 101.00% of mass 174	65.84 (97.17)
177	5.00 - 9.00% of mass 176	4.50 (6.83)

Date : 01-MAR-2010 20:31

Client ID: BFB01

Instrument: VOA7.i

Sample Info: MW7VM100301-061BFB/CCV/LCS111VOAF111

Operator: AX01

Column phase: db624

Column diameter: 0.25

Data File: 7b124BFB.d

Spectrum: Avg. Scans 1421-1423 (19.81), Background Scan 1417

Location of Maximum: 95.00

Number of points: 86

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2252	63.00	9041	92.00	5643	135.00	379
37.00	15077	64.00	795	93.00	8820	137.00	428
38.00	12770	67.00	608	94.00	23624	140.00	111
39.00	5432	68.00	21664	95.00	203648	141.00	1781
41.00	102	69.00	23880	96.00	14344	142.00	105
43.00	101	70.00	1783	97.00	422	143.00	1835
44.00	1590	72.00	1250	104.00	964	146.00	133
45.00	2766	73.00	9526	105.00	285	148.00	330
46.00	267	74.00	36376	106.00	1015	154.00	83
47.00	3816	75.00	106608	107.00	94	155.00	269
48.00	1675	76.00	8742	111.00	100	157.00	247
49.00	12200	77.00	1209	113.00	236	159.00	223
50.00	58504	78.00	922	114.00	109	161.00	135
51.00	17672	79.00	8585	115.00	196	173.00	637
52.00	688	80.00	2557	116.00	733	174.00	137984
55.00	591	81.00	8604	117.00	1269	175.00	10002
56.00	4429	82.00	2147	118.00	656	176.00	134080
57.00	8655	83.00	84	119.00	1260	177.00	9158
58.00	402	86.00	102	128.00	629	178.00	97
60.00	2390	87.00	9510	129.00	278	207.00	84
61.00	11498	88.00	8921	130.00	616		
62.00	11363	91.00	891	131.00	401		

**Volatile
Certificate of Analysis
Sample Summary**

SDG Number: 10-1981
Lab Sample ID: 1202057918

Matrix: SOIL

Client Sample: QC for batch 959502
Client ID: MB for batch 959502
Batch ID: 959504
Run Date: 03/01/2010 11:29
Prep Date: 03/01/2010 06:30
Data File: 7b108LL.d

Client: LANL010
Method: SW846 8260B
Inst: VOA7.I
Analyst: AXO1
Aliquot: 5 g
Column: DB-624

Project: QC
SOP Ref: GL-OA-E-038
Dilution: 1
Purge Vol: 5 mL
Final Volume: 5 mL
Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.300	1.00
67-64-1	Acetone	U	5.00	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number: 10-1981		Matrix: SOIL
Lab Sample ID: 1202057918		
Client Sample: QC for batch 959502	Client: LANL010	Project: QC
Client ID: MB for batch 959502	Method: SW846 8260B	SOP Ref: GL-QA-E-038
Batch ID: 959504	Inst: VOA7.1	Dilution: 1
Run Date: 03/01/2010 11:29	Analyst: AXO1	Purge Vol: 5 mL
Prep Date: 03/01/2010 06:30	Aliquot: 5 g	Final Volume: 5 mL
Data File: 7b108LL.d	Column: DB-624	Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQI/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	U	5.00	ug/kg	1.60	5.00
	<i>Trichlorotrifluoroethane</i>					
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
No Tentatively Identified Compounds Found				ug/kg		

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA7.i/030110v7/7b108LL.d
Lab Smp Id: 1202057918 Client Smp ID: BLANK
Inj Date : 01-MAR-2010 11:29
Operator : AX01 Inst ID: VOA7.i
Smp Info : |1202057918|959504|1|VOAF|1|
Misc Info : GEL 5g N/A
Comment :
Method : /chem/VOA7.i/030110v7/VOA7-8260B-021710.m
Meth Date : 04-Mar-2010 14:23 ale01592 Quant Type: ISTD
Cal Date : 18-FEB-2010 00:08 Cal File: 7z324.d
Als bottle: 8 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: prdsvr07

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

Name	Value	Description
DF	1.00000	Dilution Factor
M	0.00000	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG							CONCENTRATIONS	
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN	FINAL	(ug/l)	(ug/Kg)
\$ 46 1,2-Dichloroethane-d4	65	14.880	14.880	(0.971)	489019	52.3725	52.4		
* 51 Fluorobenzene	96	15.317	15.317	(1.000)	1080737	50.0000			
\$ 64 Toluene-d8	98	17.134	17.134	(0.918)	1247162	47.8159	47.8		
* 75 Chlorobenzene-d5	117	18.667	18.667	(1.000)	801384	50.0000			
\$ 86 Bromofluorobenzene	95	19.814	19.814	(0.944)	491830	47.6613	47.7		
* 101 1,4-Dichlorobenzene-d4	152	20.991	20.992	(1.000)	392298	50.0000			

Data File: /chem/VOA7.i/030110v7/7b108LL.d
Report Date: 04-Mar-2010 14:27

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GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA7.i/030110v7/7b108LL.d

Lab Smp Id: 1202057918

Client Smp ID: BLANK

Inj Date : 01-MAR-2010 11:29

Operator : AX01

Inst ID: VOA7.i

Smp Info : |1202057918|959504|1|VOAF|1|

Misc Info : GEL 5g N/A

Comment :

Method : /chem/VOA7.i/030110v7/VOA7-8260B-021710.m

Meth Date : 04-Mar-2010 14:23 ale01592

Quant Type: ISTD

Cal Date : 18-FEB-2010 00:08

Cal File: 7z324.d

Als bottle: 8

QC Sample: BLANK

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: all.sub

Target Version: 3.50

Processing Host: prdsvr07

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

Data File: /chem/V0A7.i/030110v7/7b108LL.d

Date : 01-MAR-2010 11:29

Client ID: BLANK

Sample Info: 11202057918195950411V0A7111

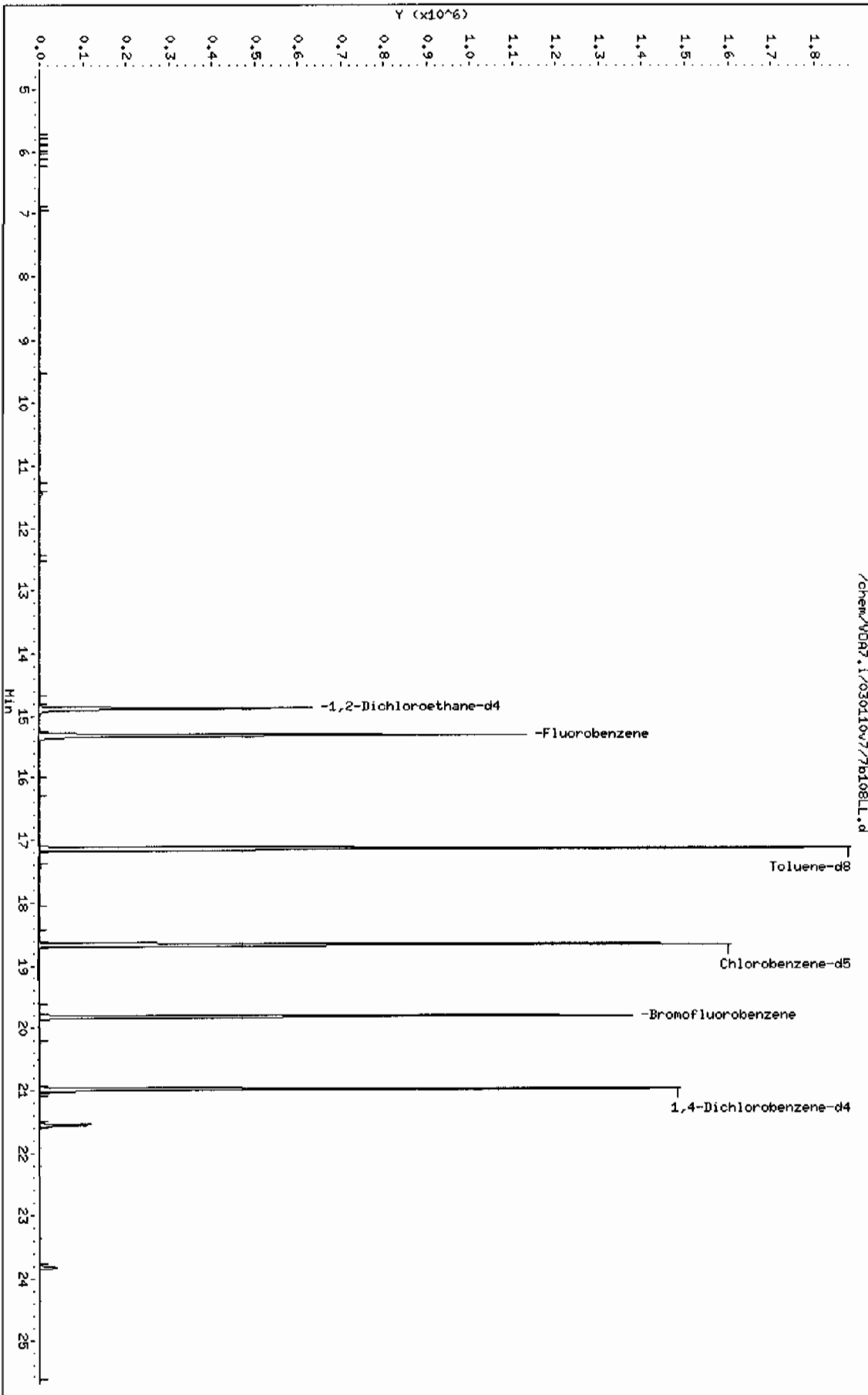
Column phase: DB-624

Instrument: V0A7.i

Operator: RX01

Column diameter: 0.25

Page 1



Volatile
Certificate of Analysis
Sample Summary

SDG Number: 10-1981		Matrix: MISC SOLID
Lab Sample ID: 1202061835		
Client Sample: QC for batch 959502	Client: LANL010	Project: QC
Client ID: MB for batch 959502	Method: SW846 8260B	SOP Ref: GL-OA-E-038
Batch ID: 959504	Inst: VOA7.1	Dilution: 1
Run Date: 03/01/2010 23:24	Analyst: AXO1	Purge Vol: 5 mL
Prep Date: 03/01/2010 15:00	Aliquot: 5 g	Final Volume: 5 mL
Data File: 7b129LL.d	Column: DB-624	Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.300	1.00
67-64-1	Acetone	U	5.00	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

**Volatile
Certificate of Analysis
Sample Summary**

SDG Number: 10-1981
Lab Sample ID: 1202061835
Client Sample: QC for batch 959502
Client ID: MB for batch 959502
Batch ID: 959504
Run Date: 03/01/2010 23:24
Prep Date: 03/01/2010 15:00
Data File: 7b129LL.d

Client: LANL010
Method: SW846 8260B
Inst: VOA7.1
Analyst: AX01
Aliquot: 5 g
Column: DB-624

Matrix: MISC SOLID
Project: QC
SOP Ref: GL-OA-E-038
Dilution: 1
Purge Vol: 5 mL
Final Volume: 5 mL
Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	U	5.00	ug/kg	1.60	5.00
	Trichlorotrifluoroethane					
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
No Tentatively Identified Compounds Found						

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA7.i/030110v7/7b129LL.d
 Lab Smp Id: 1202061835 Client Smp ID: BLANK
 Inj Date : 01-MAR-2010 23:24
 Operator : AX01 Inst ID: VOA7.i
 Smp Info : |1202061835|959504|1|VOAF|1|
 Misc Info : GEL 5g N/A
 Comment :
 Method : /chem/VOA7.i/030110v7/VOA7-8260B-021710PM.m
 Meth Date : 04-Mar-2010 13:42 ale01592 Quant Type: ISTD
 Cal Date : 18-FEB-2010 00:08 Cal File: 7z324.d
 Als bottle: 29 QC Sample: BLANK
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: all.sub
 Target Version: 3.50
 Processing Host: prdsvr07

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

Name	Value	Description
DF	1.00000	Dilution Factor
M	0.00000	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ug/l)	FINAL (ug/Kg)
\$ 46 1,2-Dichloroethane-d4	65	14.880	14.880	(0.971)	412036	52.0801	52.1	
* 51 Fluorobenzene	96	15.317	15.317	(1.000)	915717	50.0000		
\$ 64 Toluene-d8	98	17.134	17.134	(0.918)	1081617	47.9745	48.0	
* 75 Chlorobenzene-d5	117	18.667	18.667	(1.000)	692712	50.0000		
\$ 86 Bromofluorobenzene	95	19.814	19.814	(0.944)	408171	45.9332	45.9	
* 101 1,4-Dichlorobenzene-d4	152	20.992	20.991	(1.000)	337818	50.0000		

Data File: /chem/VOA7.i/030110v7/7b129LL.d
Report Date: 04-Mar-2010 14:32

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GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA7.i/030110v7/7b129LL.d
Lab Smp Id: 1202061835 Client Smp ID: BLANK
Inj Date : 01-MAR-2010 23:24
Operator : AX01 Inst ID: VOA7.i
Smp Info : |1202061835|959504|1|VOAF|1|
Misc Info : GEL 5g N/A
Comment :
Method : /chem/VOA7.i/030110v7/VOA7-8260B-021710PM.m
Meth Date : 04-Mar-2010 13:42 ale01592 Quant Type: ISTD
Cal Date : 18-FEB-2010 00:08 Cal File: 7z324.d
Als bottle: 29 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: prdsvr07

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

Data File: /chem/V067.i/030110v7/7b129LL.d
Date: 01-MAR-2010 23:24
Client ID: BLANK
Sample Info: 11202061835195950411V067111

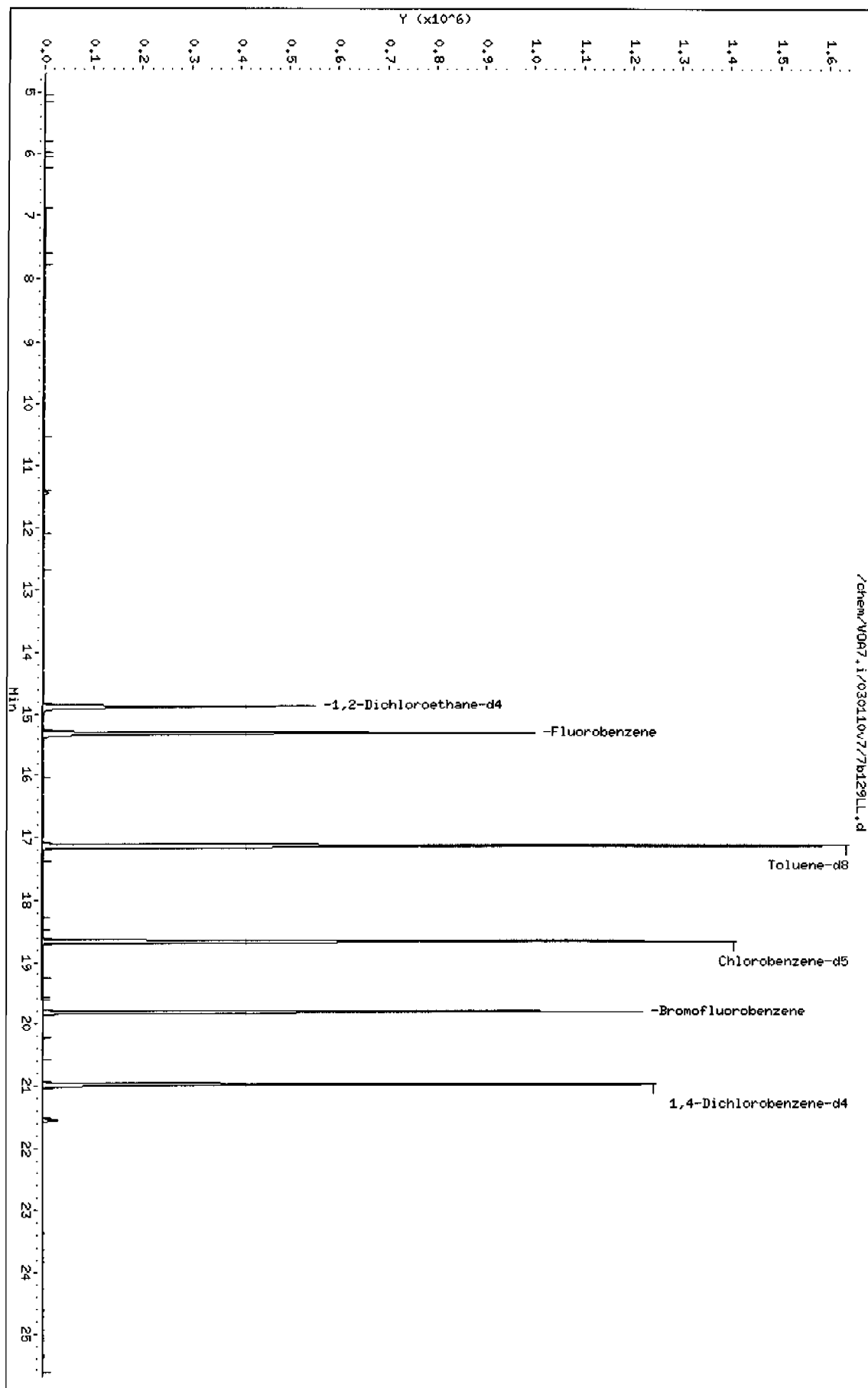
Column Phase: DB-624

Instrument: V067.i

Operator: RXD1

Column diameter: 0.25

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Volatile
Certificate of Analysis
Sample Summary

SDG Number: 10-1981
 Lab Sample ID: 1202057921
 Client Sample: QC for batch 959502
 Client ID: LCS for batch 959502
 Batch ID: 959504
 Run Date: 03/01/2010 09:14
 Prep Date: 03/01/2010 06:30
 Data File: 7b104LL.d

Client: LANL010
 Method: SW846 8260B
 Inst: VOA7.1
 Analyst: AX01
 Aliquot: 5 g
 Column: DB-624

Matrix: SOIL
 Project: QC
 SOP Ref: GL-OA-E-038
 Dilution: 1
 Purge Vol: 5 mL
 Final Volume: 5 mL
 Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane		44.0	ug/kg	0.340	1.00
74-87-3	Chloromethane		39.5	ug/kg	0.300	1.00
75-01-4	Vinyl chloride		42.7	ug/kg	0.300	1.00
74-83-9	Bromomethane		48.5	ug/kg	0.300	1.00
75-00-3	Chloroethane		49.4	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane		54.0	ug/kg	0.300	1.00
67-64-1	Acetone		241	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene		49.4	ug/kg	0.300	1.00
74-88-4	Iodomethane		246	ug/kg	1.60	5.00
75-09-2	Methylene chloride		47.9	ug/kg	2.00	5.00
75-15-0	Carbon disulfide		240	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene		45.1	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane		48.6	ug/kg	0.300	1.00
78-93-3	2-Butanone		233	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene		43.9	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane		50.3	ug/kg	0.300	1.00
67-66-3	Chloroform		47.1	ug/kg	0.300	1.00
74-97-5	Bromochloromethane		46.3	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane		53.4	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene		49.8	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride		52.5	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane		43.8	ug/kg	0.300	1.00
71-43-2	Benzene		46.3	ug/kg	0.300	1.00
79-01-6	Trichloroethylene		50.0	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane		45.0	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane		49.6	ug/kg	0.300	1.00
74-95-3	Dibromomethane		50.2	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone		222	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene		50.5	ug/kg	0.300	1.00
108-88-3	Toluene		44.2	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene		46.8	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane		43.8	ug/kg	0.300	1.00
591-78-6	2-Hexanone	E	192	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane		43.7	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene		46.3	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane		48.5	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane		47.8	ug/kg	0.300	1.00
108-90-7	Chlorobenzene		43.7	ug/kg	0.300	1.00

**Volatile
Certificate of Analysis
Sample Summary**

SDG Number: 10-1981
Lab Sample ID: 1202057921
Client Sample: QC for batch 959502
Client ID: LCS for batch 959502
Batch ID: 959504
Run Date: 03/01/2010 09:14
Prep Date: 03/01/2010 06:30
Data File: 7b104LL.d

Client: LANL010
Method: SW846 8260B
Inst: VOA7.1
Analyst: AXO1
Aliquot: 5 g
Column: DB-624

Matrix: SOIL
Project: QC
SOP Ref: GL-OA-E-038
Dilution: 1
Purge Vol: 5 mL
Final Volume: 5 mL
Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene		41.0	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes		89.7	ug/kg	0.300	2.00
95-47-6	o-Xylene		45.8	ug/kg	0.300	1.00
100-42-5	Styrene		45.6	ug/kg	0.300	1.00
75-25-2	Bromoform		47.9	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane		41.8	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane		45.1	ug/kg	0.300	1.00
108-86-1	Bromobenzene		42.7	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene		38.7	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene		39.3	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene		40.4	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene		41.9	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene		40.8	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene		43.4	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene		42.2	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene		42.0	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene		44.4	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene		42.7	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene		43.1	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene		42.4	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane		49.0	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	U	5.00	ug/kg	1.60	5.00
	<i>Trichlorotrifluoroethane</i>					
630-20-6	1,1,1,2-Tetrachloroethane		47.4	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene		43.2	ug/kg	0.300	1.00

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA7.i/030110v7/7b104LL.d

Lab Smp Id: 1202057921

Client Smp ID: LCS

Inj Date : 01-MAR-2010 09:14

Operator : AX01

Inst ID: VOA7.i

Smp Info : |1202057921|959504|1|VOAF|1|

Misc Info : GEL 5g N/A UVM100220-01B/IVM100224-01

Comment :

Method : /chem/VOA7.i/030110v7/VOA7-8260B-021710.m

Meth Date : 04-Mar-2010 14:23 ale01592

Quant Type: ISTD

Cal Date : 18-FEB-2010 00:08

Cal File: 7z324.d

Als bottle: 4

QC Sample: LCS

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: all.sub

Target Version: 3.50

Processing Host: prdsvr07

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

Name	Value	Description
DF	1.00000	Dilution Factor
M	0.00000	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable

Local Compound Variable

		QUANT SIG			CONCENTRATIONS		
Compounds		MASS	RT	EXP RT REL RT	RESPONSE	ON-COLUMN (ug/l)	FINAL (ug/Kg)
M	1 1,3-Dichloropropylene	75			1041141	103.396	103
M	2 Xylenes (total)	106			1550688	135.507	136
M	3 1,2-Dichloroethylene (total)	96			980892	89.0473	89.0
	4 Dichlorodifluoromethane	85	5.147	5.148 (0.336)	152497	43.9829	44.0
	5 Chloromethane	50	5.757	5.757 (0.376)	410937	39.4529	39.4
	6 Vinyl chloride	62	6.187	6.188 (0.404)	395349	42.7331	42.7
	7 Bromomethane	94	7.418	7.419 (0.484)	255770	48.4898	48.5
	8 Chloroethane	64	7.845	7.855 (0.512)	233788	49.4110	49.4
	9 Trichlorofluoromethane	101	8.789	8.799 (0.574)	382490	54.0120	54.0
	10 Ethyl Ether	59	9.692	9.703 (0.633)	326086	49.4973	49.5
	13 Acetone	43	10.413	10.413 (0.680)	1795469	240.727	241
	14 1,1-Dichloroethylene	96	10.312	10.312 (0.673)	239382	49.4345	49.4

Compounds	QUANT SIG					CONCENTRATIONS	
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/l)	FINAL (ug/Kg)
16 Iodomethane	142	10.667	10.667	(0.696)	2076660	246.098	246
17 Acetonitrile	41	11.073	11.073	(0.723)	1547314	1170.64	1170
18 Methyl acetate	43	11.215	11.225	(0.732)	1621485	235.093	235
19 Carbon disulfide	76	10.840	10.840	(0.708)	4087517	239.945	240
22 Methylene chloride	86	11.449	11.449	(0.747)	217965	47.9116	47.9
24 tert-Butyl methyl ether	73	12.017	12.017	(0.785)	868388	50.4188	50.4
25 trans-1,2-Dichloroethylene	61	12.027	12.027	(0.785)	461978	45.1263	45.1
26 Vinyl acetate	43	12.860	12.860	(0.840)	3983800	235.465	235
28 1,1-Dichloroethane	63	12.799	12.799	(0.836)	647166	48.5798	48.6
31 2-Butanone	43	13.723	13.723	(0.896)	1941149	233.352	233
33 cis-1,2-Dichloroethylene	61	13.733	13.733	(0.897)	518914	43.9210	43.9
34 2,2-Dichloropropane	77	13.743	13.743	(0.897)	278468	50.3222	50.3
37 Bromochloromethane	49	14.088	14.088	(0.920)	403987	46.2530	46.2
38 Chloroform	83	14.190	14.190	(0.926)	522580	47.1219	47.1
41 1,1,1-Trichloroethane	97	14.484	14.484	(0.946)	406667	53.4359	53.4
43 Cyclohexane	56	14.586	14.586	(0.952)	600251	48.5217	48.5
44 1,1-Dichloropropene	75	14.697	14.697	(0.960)	396789	49.7970	49.8
45 Carbon tetrachloride	117	14.728	14.728	(0.962)	317630	52.4528	52.4
\$ 46 1,2-Dichloroethane-d4	65	14.880	14.880	(0.972)	478513	49.7393	49.7
47 1,2-Dichloroethane	62	14.982	14.982	(0.978)	479120	43.7877	43.8
48 Benzene	78	14.982	14.982	(0.978)	1128272	46.3402	46.3
50 Cyclohexene	67	15.113	15.124	(0.987)	561363	48.9380	48.9
* 51 Fluorobenzene	96	15.317	15.317	(1.000)	1113504	50.0000	
52 n-Butyl alcohol	56	15.560	15.560	(1.016)	1823242	6296.47	6300
53 Trichloroethylene	95	15.763	15.763	(1.029)	294967	50.0009	50.0
55 Methylcyclohexane	83	16.027	16.027	(1.046)	515491	52.5415	52.5
56 1,2-Dichloropropane	63	16.037	16.037	(1.047)	365099	45.0315	45.0
58 Dibromomethane	93	16.179	16.180	(1.056)	219331	50.1522	50.2
59 Bromodichloromethane	83	16.332	16.332	(1.066)	431028	49.5706	49.6
61 2-Chloroethylvinyl ether	63	16.606	16.606	(1.084)	884253	280.100	280
62 cis-1,3-Dichloropropylene	75	16.819	16.819	(1.098)	535136	50.5344	50.5
63 4-Methyl-2-pentanone	58	16.941	16.941	(0.908)	970164	222.456	222
\$ 64 Toluene-d8	98	17.134	17.134	(0.918)	1287885	44.6528	44.6
65 Toluene	92	17.215	17.215	(0.922)	704807	44.1750	44.2
67 trans-1,3-Dichloropropylene	75	17.387	17.388	(0.931)	506005	46.8004	46.8
68 1,1,2-Trichloroethane	83	17.611	17.611	(0.943)	263274	43.7965	43.8
69 2-Hexanone	43	17.794	17.794	(0.953)	2321427	192.358	192(A)
70 1,3-Dichloropropane	76	17.794	17.794	(0.953)	538469	43.6811	43.7
71 Tetrachloroethylene	164	17.814	17.814	(0.954)	204305	46.3360	46.3
72 Dibromochloromethane	129	18.058	18.058	(0.967)	314174	48.4556	48.4
73 1,2-Dibromoethane	107	18.220	18.220	(0.976)	311761	47.8191	47.8
* 75 Chlorobenzene-d5	117	18.667	18.667	(1.000)	886173	50.0000	
76 Chlorobenzene	112	18.697	18.697	(1.002)	717730	43.7023	43.7
77 1,1,1,2-Tetrachloroethane	131	18.758	18.758	(1.005)	268177	47.3860	47.4
78 Ethylbenzene	91	18.758	18.758	(1.005)	1220862	40.9537	41.0
79 m,p-Xylenes	106	18.870	18.870	(1.011)	1006762	89.7397	89.7
80 o-Xylene	106	19.286	19.286	(1.033)	543926	45.7672	45.8

Compounds	QUANT SIG					CONCENTRATIONS	
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/l)	FINAL (ug/Kg)
81 Styrene	104	19.286	19.286	(1.033)	868260	45.6216	45.6
82 Bromoform	173	19.540	19.540	(0.931)	215354	47.9036	47.9
83 Isopropylbenzene	105	19.631	19.631	(0.935)	1225846	40.3846	40.4
\$ 86 Bromofluorobenzene	95	19.814	19.814	(0.944)	551134	44.6540	44.6
87 1,1,2,2-Tetrachloroethane	83	19.885	19.885	(0.947)	443920	41.8074	41.8
89 1,2,3-Trichloropropane	110	19.966	19.966	(0.951)	104203	45.1024	45.1
90 Bromobenzene	156	20.017	20.017	(0.954)	303740	42.7366	42.7
91 n-Propylbenzene	91	20.027	20.027	(0.954)	1491937	38.6605	38.7
92 1,3,5-Trimethylbenzene	105	20.169	20.169	(0.961)	1052198	41.9498	41.9
93 2-Chlorotoluene	91	20.169	20.169	(0.961)	1039646	39.3493	39.3
94 4-Chlorotoluene	91	20.271	20.261	(0.966)	968703	40.8448	40.8
95 tert-Butylbenzene	119	20.524	20.525	(0.978)	985430	43.3694	43.4
96 1,2,4-Trimethylbenzene	105	20.565	20.565	(0.980)	1072349	42.2440	42.2
98 sec-Butylbenzene	105	20.748	20.748	(0.988)	1406866	42.0458	42.0
99 4-Isopropyltoluene	119	20.859	20.860	(0.994)	1072695	44.3537	44.4
100 1,3-Dichlorobenzene	146	20.930	20.931	(0.997)	592648	42.6839	42.7
* 101 1,4-Dichlorobenzene-d4	152	20.991	20.992	(1.000)	469206	50.0000	
102 1,4-Dichlorobenzene	146	21.012	21.012	(1.001)	583843	43.0643	43.1
104 n-Butylbenzene	91	21.296	21.296	(1.014)	1188908	42.4343	42.4
105 1,2-Dichlorobenzene	146	21.438	21.438	(1.021)	603006	43.2365	43.2
107 1,2-Dibromo-3-chloropropane	157	22.291	22.291	(1.062)	85896	48.9517	49.0
108 1,2,4-Trichlorobenzene	180	23.357	23.357	(1.113)	401636	45.9671	46.0
109 Hexachlorobutadiene	225	23.529	23.529	(1.121)	208912	44.5324	44.5
110 Naphthalene	128	23.743	23.743	(1.131)	1018284	46.4137	46.4
111 1,2,3-Trichlorobenzene	180	24.088	24.098	(1.147)	376875	46.6577	46.6

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: /chem/V007.i/030110v7/7b104LL.d

Date: 01-MAR-2010 09:14

Client ID: LCS

Sample Info: 11202057921195950411V00AF11

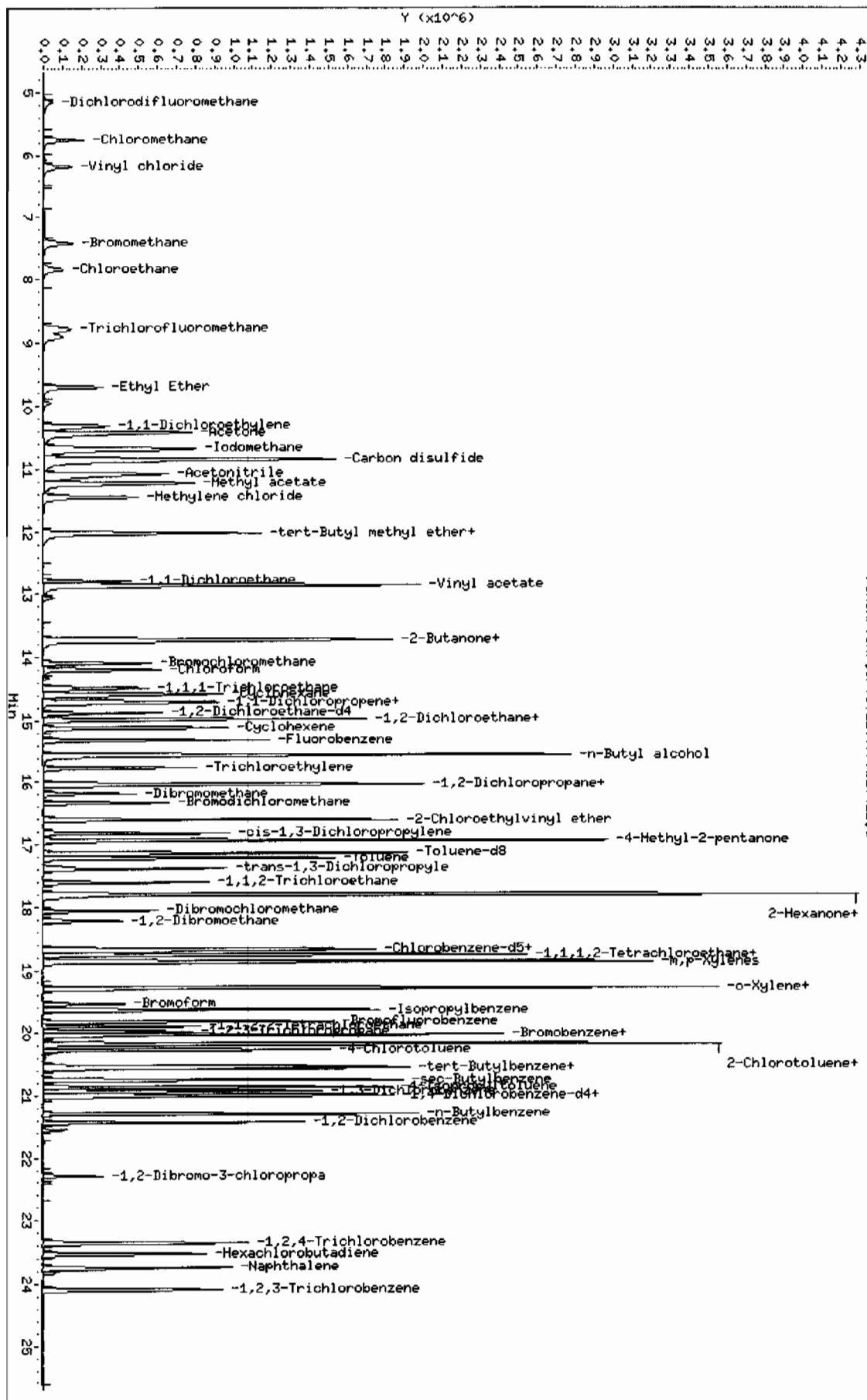
Column phase: DB-624

Instrument: V007.i

Operator: AX01

Column diameter: 0.25

/chem/V007.i/030110v7/7b104LL.d



Volatile
Certificate of Analysis
Sample Summary

SDG Number: 10-1981
 Lab Sample ID: 1202061836
 Client Sample: QC for batch 959502
 Client ID: LCS for batch 959502
 Batch ID: 959504
 Run Date: 03/01/2010 21:05
 Prep Date: 03/01/2010 15:00
 Data File: 7b125LL.d

Client: LANL010
 Method: SW846 8260B
 Inst: VOA7.I
 Analyst: AXO1
 Aliquot: 5 g
 Column: DB-624

Matrix: MISC SOLID
 Project: QC
 SOP Ref: GL-OA-E-038
 Dilution: 1
 Purge Vol: 5 mL
 Final Volume: 5 mL
 Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane		36.9	ug/kg	0.340	1.00
74-87-3	Chloromethane		40.1	ug/kg	0.300	1.00
75-01-4	Vinyl chloride		43.5	ug/kg	0.300	1.00
74-83-9	Bromomethane		46.1	ug/kg	0.300	1.00
75-00-3	Chloroethane		46.8	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane		46.3	ug/kg	0.300	1.00
67-64-1	Acetone		219	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene		45.9	ug/kg	0.300	1.00
74-88-4	Iodomethane		238	ug/kg	1.60	5.00
75-09-2	Methylene chloride		47.5	ug/kg	2.00	5.00
75-15-0	Carbon disulfide		235	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene		45.0	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane		47.8	ug/kg	0.300	1.00
78-93-3	2-Butanone		219	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene		45.2	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane		44.8	ug/kg	0.300	1.00
67-66-3	Chloroform		45.5	ug/kg	0.300	1.00
74-97-5	Bromochloromethane		46.7	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane		49.4	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene		47.3	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride		46.3	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane		44.2	ug/kg	0.300	1.00
71-43-2	Benzene		46.0	ug/kg	0.300	1.00
79-01-6	Trichloroethylene		48.4	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane		47.1	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane		48.2	ug/kg	0.300	1.00
74-95-3	Dibromomethane		48.7	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone		212	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene		49.4	ug/kg	0.300	1.00
108-88-3	Toluene		43.6	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene		45.4	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane		42.8	ug/kg	0.300	1.00
591-78-6	2-Hexanone	E	185	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane		44.1	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene		44.1	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane		45.8	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane		44.8	ug/kg	0.300	1.00
108-90-7	Chlorobenzene		43.6	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number: 10-1981
 Lab Sample ID: 1202061836

Client Sample: QC for batch 959502
 Client ID: LCS for batch 959502
 Batch ID: 959504
 Run Date: 03/01/2010 21:05
 Prep Date: 03/01/2010 15:00
 Data File: 7b1251L.d

Client: LANL010
 Method: SW846 8260B
 Inst: VOA7.J
 Analyst: AXO1
 Aliquot: 5 g
 Column: DB-624

Matrix: MISC SOLID
 Project: QC
 SOP Ref: GL-OA-E-038
 Dilution: 1
 Purge Vol: 5 mL
 Final Volume: 5 mL
 Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene		41.1	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes		88.9	ug/kg	0.300	2.00
95-47-6	o-Xylene		45.5	ug/kg	0.300	1.00
100-42-5	Styrene		45.7	ug/kg	0.300	1.00
75-25-2	Bromoform		45.9	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane		40.9	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane		41.3	ug/kg	0.300	1.00
108-86-1	Bromobenzene		43.3	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene		39.4	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene		40.6	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene		40.5	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene		42.6	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene		40.7	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene		42.8	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene		41.7	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene		41.9	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene		43.1	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene		41.7	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene		42.9	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene		42.5	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane		44.7	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	U	5.00	ug/kg	1.60	5.00
	<i>Trichlorotrifluoroethane</i>					
630-20-6	1,1,1,2-Tetrachloroethane		46.8	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene		42.8	ug/kg	0.300	1.00

Data File: /chem/VOA7.i/030110v7/7b125LL.d
Report Date: 04-Mar-2010 14:32

Page 1

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA7.i/030110v7/7b125LL.d

Lab Smp Id: 1202061836

Client Smp ID: LCS

Inj Date : 01-MAR-2010 21:05

Operator : AX01

Inst ID: VOA7.i

Smp Info : |1202061836|959504|1|VOAF|1|

Misc Info : GEL 5g N/A UVM100220-01B/IVM100224-01

Comment :

Method : /chem/VOA7.i/030110v7/VOA7-8260B-021710PM.m

Meth Date : 04-Mar-2010 13:42 ale01592

Quant Type: ISTD

Cal Date : 18-FEB-2010 00:08

Cal File: 7z324.d

Als bottle: 25

QC Sample: LCS

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: all.sub

Target Version: 3.50

Processing Host: prdsrv07

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

Name	Value	Description
DF	1.00000	Dilution Factor
M	0.00000	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable

Local Compound Variable

		QUANT SIG			CONCENTRATIONS	
Compounds		MASS	RT	EXP RT REL RT	ON-COLUMN (ug/l)	FINAL (ug/Kg)
M 1	1,3-Dichloropropylene	75			863379	100.741 101
M 2	Xylenes (total)	106			1311642	134.400 134
M 3	1,2-Dichloroethylene (total)	96			846639	90.1982 90.2
4	Dichlorodifluoromethane	85	5.147	5.147 (0.336)	108963	36.9242 36.9
5	Chloromethane	50	5.757	5.757 (0.376)	355378	40.0870 40.1
6	Vinyl chloride	62	6.188	6.187 (0.404)	342358	43.4784 43.5
7	Bromomethane	94	7.429	7.429 (0.485)	206765	46.0561 46.0
8	Chloroethane	64	7.845	7.855 (0.512)	188439	46.7930 46.8
9	Trichlorofluoromethane	101	8.799	8.789 (0.574)	279223	46.3266 46.3
10	Ethyl Ether	59	9.703	9.703 (0.633)	263478	46.9897 47.0
13	Acetone	43	10.413	10.423 (0.680)	1390862	219.099 219
14	1,1-Dichloroethylene	96	10.312	10.312 (0.673)	189191	45.9037 45.9

Compounds	QUANT SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
							(ug/l)	(ug/Kg)
16 Iodomethane		142	10.667	10.667	(0.696)	1709863	238.075	238
17 Acetonitrile		41	11.073	11.073	(0.723)	1262215	1121.99	1120
18 Methyl acetate		43	11.225	11.225	(0.733)	1368806	233.173	233
19 Carbon disulfide		76	10.840	10.840	(0.708)	3403672	234.752	235
22 Methylene chloride		86	11.449	11.449	(0.747)	184041	47.5311	47.5
24 tert-Butyl methyl ether		73	12.017	12.017	(0.785)	718682	49.0257	49.0
25 trans-1,2-Dichloroethylene		61	12.017	12.027	(0.785)	391850	44.9715	45.0
26 Vinyl acetate		43	12.860	12.860	(0.840)	3081878	214.019	214
28 1,1-Dichloroethane		63	12.799	12.799	(0.836)	542334	47.8317	47.8
31 2-Butanone		43	13.723	13.723	(0.896)	1548558	218.720	219
33 cis-1,2-Dichloroethylene		61	13.733	13.733	(0.897)	454789	45.2268	45.2
34 2,2-Dichloropropane		77	13.743	13.743	(0.897)	211093	44.8195	44.8
37 Bromochloromethane		49	14.088	14.088	(0.920)	347299	46.7181	46.7
38 Chloroform		83	14.190	14.190	(0.926)	429698	45.5242	45.5
41 1,1,1-Trichloroethane		97	14.484	14.484	(0.946)	320265	49.4439	49.4
43 Cyclohexane		56	14.586	14.586	(0.952)	483358	45.9072	45.9
44 1,1-Dichloropropene		75	14.697	14.697	(0.960)	320907	47.3186	47.3
45 Carbon tetrachloride		117	14.728	14.718	(0.962)	238772	46.3276	46.3
\$ 46 1,2-Dichloroethane-d4		65	14.880	14.880	(0.971)	408664	49.9093	49.9
47 1,2-Dichloroethane		62	14.982	14.982	(0.978)	411701	44.2078	44.2
48 Benzene		78	14.982	14.982	(0.978)	954034	46.0380	46.0
50 Cyclohexene		67	15.124	15.114	(0.987)	455118	46.6161	46.6
* 51 Fluorobenzene		96	15.317	15.317	(1.000)	947726	50.0000	
52 n-Butyl alcohol		56	15.560	15.560	(1.016)	1404390	5698.36	5700
53 Trichloroethylene		95	15.763	15.763	(1.029)	242907	48.3787	48.4
55 Methylcyclohexane		83	16.027	16.027	(1.046)	411173	49.2396	49.2
56 1,2-Dichloropropane		63	16.037	16.037	(1.047)	324855	47.0765	47.1
58 Dibromomethane		93	16.180	16.179	(1.056)	181095	48.6526	48.6
59 Bromodichloromethane		83	16.332	16.332	(1.066)	356961	48.2334	48.2
61 2-Chloroethylvinyl ether		63	16.606	16.606	(1.084)	687745	255.960	256
62 cis-1,3-Dichloropropylene		75	16.819	16.819	(1.098)	444803	49.3514	49.4
63 4-Methyl-2-pentanone		58	16.931	16.941	(0.907)	787177	211.658	212
\$ 64 Toluene-d8		98	17.134	17.134	(0.918)	1144020	46.5124	46.5
65 Toluene		92	17.215	17.215	(0.922)	592550	43.5507	43.6
67 trans-1,3-Dichloropropylene		75	17.388	17.388	(0.931)	418576	45.3976	45.4
68 1,1,2-Trichloroethane		83	17.611	17.611	(0.943)	219333	42.7857	42.8
69 2-Hexanone		43	17.794	17.804	(0.953)	1900401	184.656	185(A)
70 1,3-Dichloropropane		76	17.794	17.794	(0.953)	463860	44.1249	44.1
71 Tetrachloroethylene		164	17.814	17.814	(0.954)	165642	44.0528	44.0
72 Dibromochloromethane		129	18.058	18.058	(0.967)	253451	45.8387	45.8
73 1,2-Dibromoethane		107	18.220	18.220	(0.976)	248833	44.7561	44.8
* 75 Chlorobenzene-d5		117	18.667	18.667	(1.000)	755709	50.0000	
76 Chlorobenzene		112	18.697	18.697	(1.002)	610422	43.5850	43.6
77 1,1,1,2-Tetrachloroethane		131	18.758	18.758	(1.005)	225627	46.7502	46.8
78 Ethylbenzene		91	18.758	18.758	(1.005)	1044584	41.0898	41.1
79 m,p-Xylenes		106	18.870	18.870	(1.011)	850726	88.9224	88.9
80 o-Xylene		106	19.286	19.286	(1.033)	460916	45.4779	45.5

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN	FINAL
	MASS					(ug/l)	(ug/Kg)
=====	=====	==	=====	=====	=====	=====	=====
81 Styrene	104	19.286	19.286	(1.033)	741263	45.6728	45.7
82 Bromoform	173	19.540	19.540	(0.931)	171767	45.8968	45.9
83 Isopropylbenzene	105	19.631	19.631	(0.935)	1023385	40.4993	40.5
\$ 86 Bromofluorobenzene	95	19.814	19.814	(0.944)	474158	46.1482	46.1
87 1,1,2,2-Tetrachloroethane	83	19.885	19.885	(0.947)	361305	40.8744	40.9
89 1,2,3-Trichloropropane	110	19.966	19.966	(0.951)	79379	41.2718	41.3
90 Bromobenzene	156	20.017	20.017	(0.954)	256414	43.3379	43.3
91 n-Propylbenzene	91	20.027	20.027	(0.954)	1264329	39.3555	39.4
92 1,3,5-Trimethylbenzene	105	20.169	20.169	(0.961)	889223	42.5864	42.6
93 2-Chlorotoluene	91	20.169	20.169	(0.961)	892984	40.5997	40.6
94 4-Chlorotoluene	91	20.271	20.260	(0.966)	804122	40.7283	40.7
95 tert-Butylbenzene	119	20.524	20.524	(0.978)	809413	42.7914	42.8
96 1,2,4-Trimethylbenzene	105	20.565	20.565	(0.980)	882036	41.7392	41.7
98 sec-Butylbenzene	105	20.748	20.748	(0.988)	1166893	41.8918	41.9
99 4-Isopropyltoluene	119	20.860	20.859	(0.994)	866998	43.0625	43.1
100 1,3-Dichlorobenzene	146	20.931	20.930	(0.997)	482102	41.7094	41.7
* 101 1,4-Dichlorobenzene-d4	152	20.991	20.991	(1.000)	390603	50.0000	
102 1,4-Dichlorobenzene	146	21.012	21.012	(1.001)	484471	42.9257	42.9
104 n-Butylbenzene	91	21.296	21.296	(1.014)	990458	42.4652	42.5
105 1,2-Dichlorobenzene	146	21.438	21.438	(1.021)	497189	42.8231	42.8
107 1,2-Dibromo-3-chloropropane	157	22.291	22.291	(1.062)	65089	44.6528	44.6
108 1,2,4-Trichlorobenzene	180	23.357	23.357	(1.113)	315973	43.4403	43.4
109 Hexachlorobutadiene	225	23.529	23.529	(1.121)	164193	42.0432	42.0
110 Naphthalene	128	23.743	23.743	(1.131)	800719	43.8415	43.8
111 1,2,3-Trichlorobenzene	180	24.088	24.088	(1.147)	294894	43.8550	43.8

QC Flag Legend

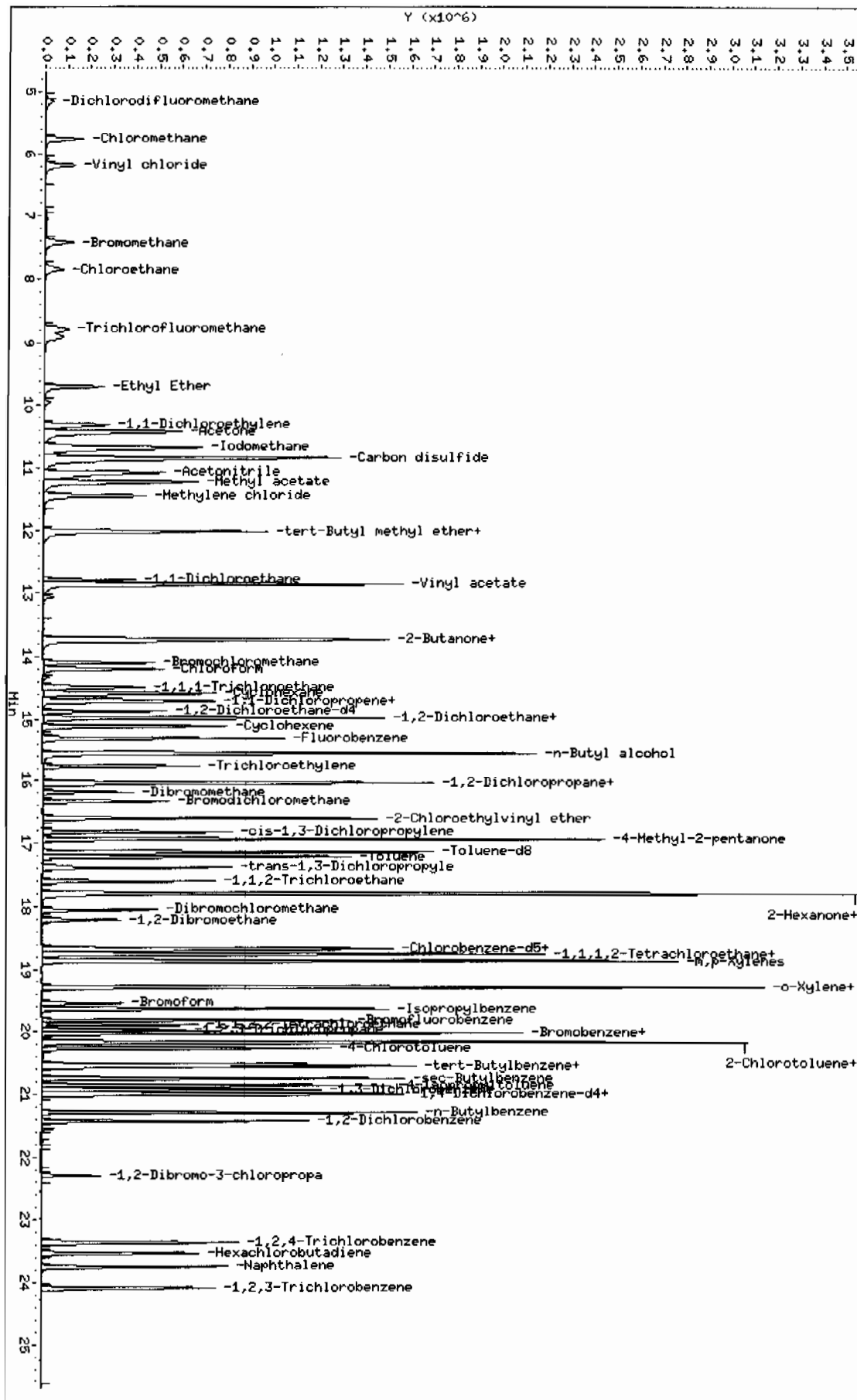
A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: /chem/V007.i/030110v7/7b12BL.d
 Date : 01-MAR-2010 21:05
 Client ID: LCS
 Sample Info: 11202061836195950411V007F11.i

Column Phase: DB-624

Instrument: V007.i
 Operator: AX01
 Column diameter: 0.25

/chem/V007.i/030110v7/7b12BL.d



Volatile
Certificate of Analysis
Sample Summary

SDG Number: 10-1981

Matrix: SOIL

Lab Sample ID: 1202057922

Client Sample: QC for batch 959502

Client: LANL010

Project: QC

Client ID: LCS for batch 959502

Method: SW846 8260B

SOP Ref: GL-OA-E-038

Batch ID: 959504

Inst: VOA7.I

Dilution: 1

Run Date: 03/01/2010 10:22

Analyst: AXO1

Purge Vol: 5 mL

Prep Date: 03/01/2010 06:30

Aliquot: 5 g

Final Volume: 5 mL

Data File: 7b106LL.d

Column: DB-624

Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.300	1.00
67-64-1	Acetone	U	5.00	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number: 10-1981
 Lab Sample ID: 1202057922
 Client Sample: QC for batch 959502
 Client ID: LCS for batch 959502
 Batch ID: 959504
 Run Date: 03/01/2010 10:22
 Prep Date: 03/01/2010 06:30
 Data File: 7b106LL.d

Client: LANL010
 Method: SW846 8260B
 Inst: VOA7.1
 Analyst: AXO1
 Aliquot: 5 g
 Column: DB-624

Matrix: SOIL
 Project: QC
 SOP Ref: GL-OA-E-038
 Dilution: 1
 Purge Vol: 5 mL
 Final Volume: 5 mL
 Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane		240	ug/kg	1.60	5.00
	Trichlorotrifluoroethane					
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

Data File: /chem/VOA7.i/030110v7/7b106LL.d
Report Date: 04-Mar-2010 14:26

Page 1

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA7.i/030110v7/7b106LL.d
Lab Smp Id: 1202057922 Client Smp ID: SLCS
Inj Date : 01-MAR-2010 10:22
Operator : AX01 Inst ID: VOA7.i
Smp Info : |1202057922|959504|1|VOAF|1|
Misc Info : GEL 5g N/A UVM091216-08B/UVM100125-08D
Comment :
Method : /chem/VOA7.i/030110v7/VOA7-8260B-021710.m
Meth Date : 04-Mar-2010 14:23 ale01592 Quant Type: ISTD
Cal Date : 18-FEB-2010 00:08 Cal File: 7z324.d
Als bottle: 6 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: prdsvr07

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

Name	Value	Description
DF	1.00000	Dilution Factor
M	0.00000	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG				CONCENTRATIONS		
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/l)	FINAL (ug/Kg)
147 Chlorotrifluoroethylene	116	5.029	5.029	(0.328)	191247	73.8571	73.8 (R)
148 2-Chloro-1,1,1-trifluoroethane	118	6.604	6.604	(0.431)	677389	131.736	132
11 Acrolein	56	10.017	10.017	(0.654)	353481	301.744	302
12 Trichlorotrifluoroethane	85	10.373	10.373	(0.677)	510243	239.697	240
15 Isopropyl Alcohol	45	10.779	10.779	(0.704)	1942386	2451.36	2450
20 Allyl chloride	41	11.185	11.185	(0.730)	2465497	213.300	213
21 tert-Butyl Alcohol	59	11.662	11.662	(0.761)	2816761	2459.61	2460
23 Acrylonitrile	53	11.926	11.926	(0.779)	809749	246.873	247
27 Isopropyl ether	45	12.901	12.900	(0.842)	1377479	44.2997	44.3
29 2-Chloro-1,3-butadiene	53	12.961	12.961	(0.846)	530189	53.3287	53.3
30 Ethyl tert-butyl ether	59	13.489	13.489	(0.881)	1094371	51.5249	51.5
32 Ethyl acetate	43	13.804	13.804	(0.901)	1957148	198.476	198

Compounds	QUANT SIG					CONCENTRATIONS	
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/l)	FINAL (ug/Kg)
=====	=====	==	=====	=====	=====	=====	=====
35 Propionitrile	54	13.804	13.804	(0.901)	325674	226.290	226
36 Methacrylonitrile	41	14.038	14.037	(0.916)	1264366	211.548	212
39 Tetrahydrofuran	42	14.159	14.159	(0.675)	729418	188.980	189
42 Isobutyl alcohol	41	14.748	14.748	(0.963)	936190	2144.77	2140
\$ 46 1,2-Dichloroethane-d4	65	14.880	14.880	(0.971)	510793	48.5286	48.5
49 Methyl tert-amyl ether	73	15.073	15.073	(0.984)	890896	54.5905	54.6
* 51 Fluorobenzene	96	15.317	15.317	(1.000)	1218274	50.0000	
54 Methyl methacrylate	69	16.078	16.078	(1.050)	1275463	241.414	241
57 1,4-Dioxane	88	16.159	16.159	(1.055)	202740	2553.15	2550
60 2-Nitropropane	43	16.555	16.555	(1.081)	831846	243.253	243
\$ 64 Toluene-d8	98	17.134	17.134	(0.918)	1372418	47.2491	47.2
66 Ethyl methacrylate	69	17.408	17.408	(0.933)	2279571	223.130	223
74 1-Chlorohexane	55	18.575	18.575	(1.213)	375176	48.2153	48.2
* 75 Chlorobenzene-d5	117	18.667	18.667	(1.000)	892447	50.0000	
84 cis-1,4-Dichloro-2-butene	53	19.662	19.662	(0.937)	833677	232.741	233
85 Cyclohexanone	55	19.773	19.773	(1.059)	1096831	2174.34	2170 (AR)
\$ 86 Bromofluorobenzene	95	19.814	19.814	(0.944)	537511	44.3823	44.4
88 trans-1,4-Dichloro-2-butene	53	19.926	19.926	(0.949)	755550	233.722	234
97 Pentachloroethane	167	20.596	20.596	(0.981)	822638	317.075	317 (A)
* 101 1,4-Dichlorobenzene-d4	152	20.992	20.992	(1.000)	460410	50.0000	
103 Benzyl chloride	91	21.123	21.123	(1.006)	3104775	272.125	272
106 bis(2-Chloroisopropyl)ether	45	21.509	21.509	(1.025)	1252727	194.486	194

QC Flag Legend

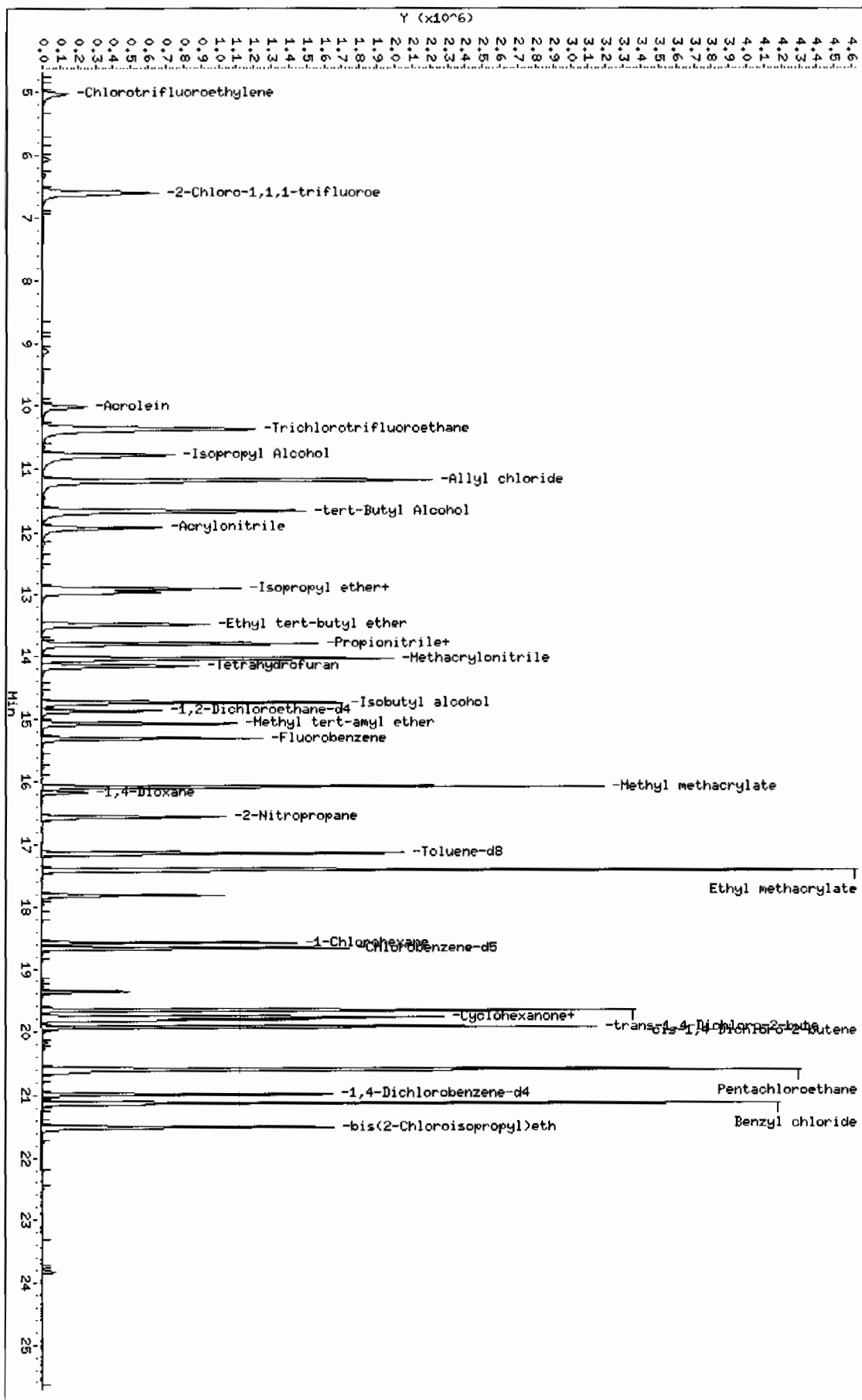
- A - Target compound detected but, quantitated amount exceeded maximum amount.
- R - Spike/Surrogate failed recovery limits.

Data File: /chem/V007.1/030110v7/7b106LL.d
 Date: 01-MAR-2010 10:22
 Client ID: SLCS
 Sample Info: 11202057922195950411V007.11

Column phase: DB-624

Instrument: V007.1
 Operator: AX01
 Column diameter: 0.25

/chem/V007.1/030110v7/7b106LL.d



Volatile
Certificate of Analysis
Sample Summary

SDG Number: 10-1981

Lab Sample ID: 1202061837

Client Sample: QC for batch 959502

Client ID: LCS for batch 959502

Batch ID: 959504

Run Date: 03/01/2010 22:15

Prep Date: 03/01/2010 15:00

Data File: 7b127LL.d

Client: LANL010

Method: SW846 8260B

Inst: VOA7.I

Analyst: AX01

Aliquot: 5 g

Column: DB-624

Matrix: MISC SOLID

Project: QC

SOP Ref: GL-OA-E-038

Dilution: 1

Purge Vol: 5 mL

Final Volume: 5 mL

Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.300	1.00
67-64-1	Acetone	U	5.00	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number: 10-1981
 Lab Sample ID: 1202061837
 Client Sample: QC for batch 959502
 Client ID: LCS for batch 959502
 Batch ID: 959504
 Run Date: 03/01/2010 22:15
 Prep Date: 03/01/2010 15:00
 Data File: 7b127LL.d

Client: LANL010
 Method: SW846 8260B
 Inst: VOA7.I
 Analyst: AXO1
 Aliquot: 5 g
 Column: DB-624

Matrix: MISC SOLID
 Project: QC
 SOP Ref: GL-OA-E-038
 Dilution: 1
 Purge Vol: 5 mL
 Final Volume: 5 mL
 Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane		226	ug/kg	1.60	5.00
	Trichlorotrifluoroethane					
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

Data File: /chem/VOA7.i/030110v7/7b127LL.d
Report Date: 04-Mar-2010 14:32

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GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA7.i/030110v7/7b127LL.d
Lab Smp Id: 1202061837 Client Smp ID: SLCS
Inj Date : 01-MAR-2010 22:15
Operator : AX01 Inst ID: VOA7.i
Smp Info : |1202061837|959504|1|VOAF|1|
Misc Info : GEL 5g N/A UVM091216-08B
Comment :
Method : /chem/VOA7.i/030110v7/VOA7-8260B-021710PM.m
Meth Date : 04-Mar-2010 13:42 ale01592 Quant Type: ISTD
Cal Date : 18-FEB-2010 00:08 Cal File: 7z324.d
Als bottle: 27 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: prdsvr07

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

Name	Value	Description
DF	1.00000	Dilution Factor
M	0.00000	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG				CONCENTRATIONS		
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/l)	FINAL (ug/Kg)
11 Acrolein	56	10.017	10.027	(0.654)	316229	307.921	308
12 Trichlorotrifluoroethane	85	10.373	10.373	(0.677)	422196	226.237	226
20 Allyl chloride	41	11.185	11.185	(0.730)	2162157	213.373	213
23 Acrylonitrile	53	11.926	11.926	(0.779)	749465	260.638	261
29 2-Chloro-1,3-butadiene	53	12.961	12.961	(0.846)	480047	55.0781	55.1
32 Ethyl acetate	43	13.804	13.804	(0.901)	1848681	213.851	214
35 Propionitrile	54	13.804	13.804	(0.901)	313547	248.513	248
36 Methacrylonitrile	41	14.038	14.037	(0.916)	1169271	223.160	223
39 Tetrahydrofuran	42	14.159	14.159	(0.675)	679801	211.507	212
42 Isobutyl alcohol	41	14.748	14.748	(0.963)	901584	2356.07	2360
\$ 46 1,2-Dichloroethane-d4	65	14.880	14.880	(0.971)	448808	48.6383	48.6
* 51 Fluorobenzene	96	15.317	15.317	(1.000)	1068022	50.0000	

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/l)	FINAL (ug/Kg)
54 Methyl methacrylate	69	16.078	16.078	(1.050)	1172401	253.125	253
57 1,4-Dioxane	88	16.159	16.159	(1.055)	183675	2638.46	2640
60 2-Nitropropane	43	16.555	16.555	(1.081)	756185	252.237	252
\$ 64 Toluene-d8	98	17.134	17.134	(0.918)	1220451	47.1834	47.2
66 Ethyl methacrylate	69	17.408	17.408	(0.933)	2042835	224.544	224
* 75 Chlorobenzene-d5	117	18.667	18.667	(1.000)	794732	50.0000	
84 cis-1,4-Dichloro-2-butene	53	19.662	19.662	(0.937)	729007	244.405	244
85 Cyclohexanone	55	19.773	19.773	(1.059)	1087469	2420.84	2420 (AR)
\$ 86 Bromofluorobenzene	95	19.814	19.814	(0.944)	467539	46.3600	46.4
88 trans-1,4-Dichloro-2-butene	53	19.926	19.925	(0.949)	663781	246.584	246
97 Pentachloroethane	167	20.596	20.596	(0.981)	577075	267.109	267 (A)
* 101 1,4-Dichlorobenzene-d4	152	20.992	20.991	(1.000)	383391	50.0000	
103 Benzyl chloride	91	21.124	21.123	(1.006)	2485685	261.630	262
106 bis(2-Chloroisopropyl)ether	45	21.509	21.509	(1.025)	1171538	218.420	218

QC Flag Legend

- A - Target compound detected but, quantitated amount exceeded maximum amount.
- R - Spike/Surrogate failed recovery limits.

Data File: /chem/V007.i/030110v7/7b127LL.d

Date: 01-MAR-2010 22:15

Client ID: SLCS

Sample Info: 11202061837195950411.V007F11

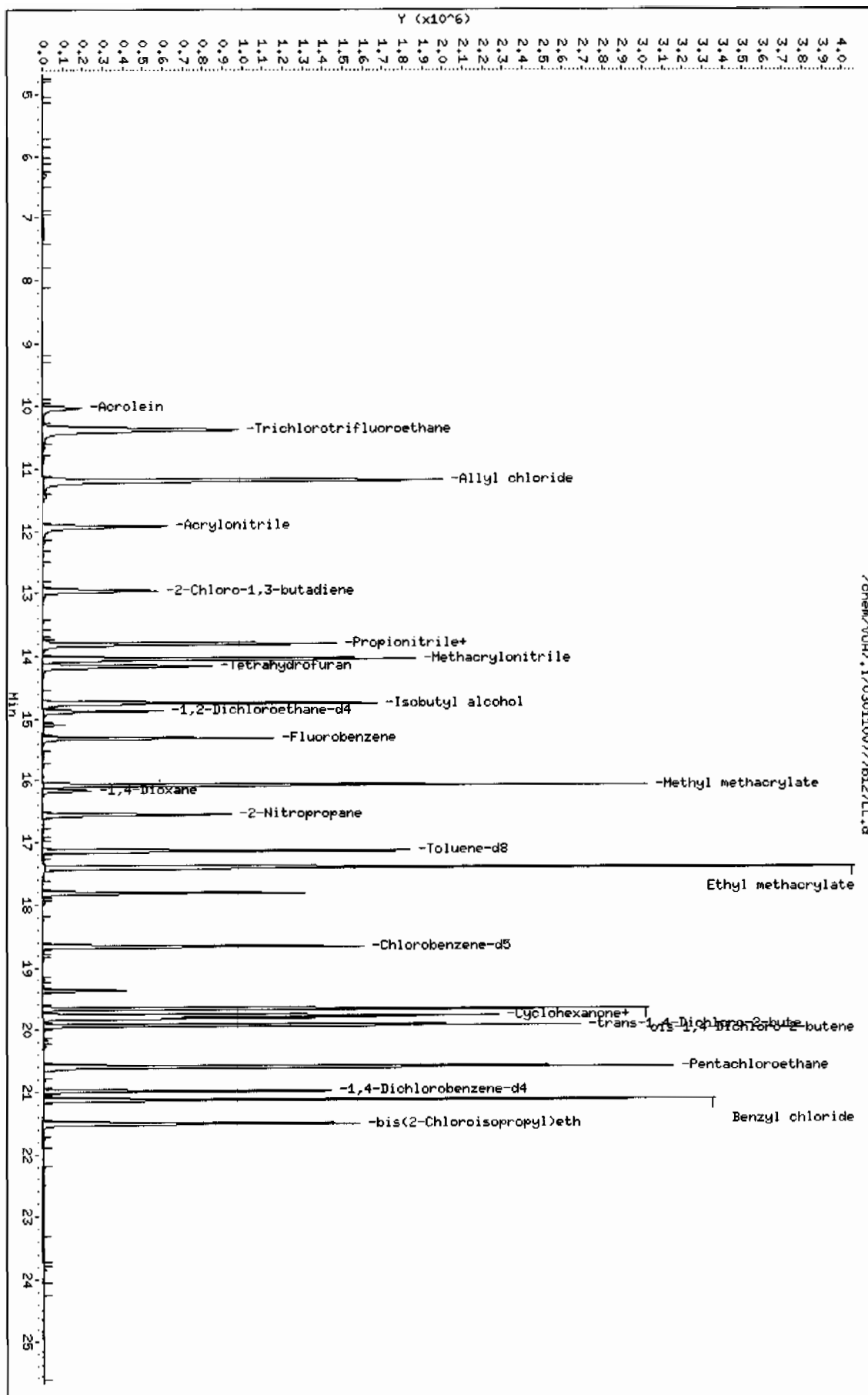
Column phase: DB-624

Instrument: V007.i

Operator: AX01

Column diameter: 0.25

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Miscellaneous Data

Prep Logbook

Volatile Organic Compounds (VOC) by Gas Chromatograph/Mass Spectrometer

Batch ID: 959502
Analyst: Alex Olson
Method: SW846 5030
Lab SOP: GL-OA-E-038 REV# 14
Instrument: Sartorius Balance B-001

Verified by: _____

Sample ID	Run Date	Matrix	Initial Weight (g)	Final Volume (mL)	Prep Factor (mL/g)	pH Check 1
1202057918 MB	01-MAR-2010 06:30:00	Soil	5	5	1	N/A
1202057921 LCS	01-MAR-2010 06:30:00	Soil	5	5	1	N/A
1202057922 LCS	01-MAR-2010 06:30:00	Soil	5	5	1	N/A
1202061835 MB	01-MAR-2010 15:00:00	Misc Solid	5	5	1	N/A
1202061836 LCS	01-MAR-2010 15:00:00	Misc Solid	5	5	1	N/A
1202061837 LCS	01-MAR-2010 15:00:00	Misc Solid	5	5	1	N/A
247784001	01-MAR-2010 15:10:00	Misc Solid	5	5	1	N/A
247790001	01-MAR-2010 15:14:00	Misc Solid	5	5	1	N/A
247790002	01-MAR-2010 15:16:00	Soil	5	5	1	N/A
247790003	01-MAR-2010 15:18:00	Soil	5	5	1	N/A
247791001	01-MAR-2010 15:20:00	Misc Solid	5	5	1	N/A
247791002	01-MAR-2010 15:22:00	Soil	5	5	1	N/A
1202057919 PS (247791002)	01-MAR-2010 15:24:00	Soil	5	5	1	N/A
1202057920 PSD (247791002)	01-MAR-2010 15:26:00	Soil	5	5	1	N/A
247791003	01-MAR-2010 15:28:00	Soil	5	5	1	N/A
247791004	01-MAR-2010 15:30:00	Soil	5	5	1	N/A
247791005	01-MAR-2010 15:32:00	Soil	5	5	1	N/A
247791006	01-MAR-2010 15:34:00	Soil	5	5	1	N/A
247855001	01-MAR-2010 15:36:00	Misc Solid	5	5	1	N/A
247855002	01-MAR-2010 15:38:00	Soil	5	5	1	N/A
247784002	02-MAR-2010 06:36:00	Soil	5	5	1	N/A

Reagent/Solvent Lot ID Description Amount Comments:

Date: 2/17/2010

Method 8260B/624

Operator: AXO1

REVIEWED BY: SAF
DATE: 2/18/10

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 1

Daily Instrument Readings:

Multiplier Voltage: 1941

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 2/17/2010

(See pg. 43 for ICAL Std. Sol. Ids)

NaHSO4 lot #

N/A

CI test lot #

N/A

Sequence Number: 021710V7

Purge Amount

5 Water Purge Vol:

N/A Soil Purge Vol:

N/A Mid level ext. MeOH Vol:

N/A ul

N/A Methanol Lot #

x Heated Purge

AO. 2/18/10

Analysis Date	Time	Data File	Lab Sample ID	Client	Batch #	Wt(g) or Vol(ml/ul)	Dil.	pH	AS Slot #	Matrix w or s	Analyst	CI test (N/N)	Acceptable (O/X)	Comments
2/17/2010	8:37	72301.D	120200	GEL	RINSE	5mL	1	N/A	1	w	AXO1	N/A	O	
2/17/2010	8:12	72302.D	W7VM100217-01	GEL	CCV	5mL	1	N/A	2	w	AXO1	N/A	X	UVM100106-07C/UVM100202-07C
2/17/2010	9:47	72303.D	W7VM100217-02	GEL	LCS	5mL	1	N/A	3	w	AXO1	N/A	X	UVM100126-01D/UVM100214-01
2/17/2010	10:22	72304.D	W7VM100217-03	GEL	LCS	5g	1	N/A	4	s	AXO1	N/A	X	UVM100126-01D/UVM100214-01
2/17/2010	11:21	72305.D	W7VM100217-04	GEL	LCS	5mL	1	N/A	5	w	AXO1	N/A	X	UVM100126-02C/UVM100214-01
2/17/2010	12:21	72306.D	120200	GEL	RINSE	5mL	1	N/A	1	w	AXO1	N/A	X	
2/17/2010	12:54	72307.D	W7VM100217-05	GEL	LCS	5mL	1	N/A	2	w	AXO1	N/A	X	UVM100126-01D/UVM100214-01
2/17/2010	14:55	72308.D	120200	GEL	RINSE	5mL	1	N/A	1	w	AXO1	N/A	X	
2/17/2010	15:28	72309.D	UVM100203-02	GEL	BFB01	5mL	1	N/A	2	w	AXO1	N/A	O	
2/17/2010	16:02	72310.D	W7VM100217-06	GEL	VSTD001	5mL	1	N/A	3	w	AXO1	N/A	O	UVM100106-02C/UVM100202-02C
2/17/2010	16:36	72311.D	W7VM100217-07	GEL	VSTD002	5mL	1	N/A	4	w	AXO1	N/A	O	UVM100106-03C/UVM100202-03C
2/17/2010	17:09	72312.D	W7VM100217-08	GEL	VSTD005	5mL	1	N/A	5	w	AXO1	N/A	O	UVM100106-04C/UVM100202-04C
2/17/2010	17:44	72313.D	W7VM100217-09	GEL	VSTD010	5mL	1	N/A	6	w	AXO1	N/A	O	UVM100106-05C/UVM100202-05C
2/17/2010	18:20	72314.D	W7VM100217-10	GEL	VSTD020	5mL	1	N/A	7	w	AXO1	N/A	O	UVM100106-06C/UVM100202-06C
2/17/2010	18:55	72315.D	W7VM100217-11	GEL	VSTD050	5mL	1	N/A	8	w	AXO1	N/A	O	UVM100106-07C/UVM100202-07C
2/17/2010	19:30	72316.D	W7VM100217-12	GEL	VSTD100	5mL	1	N/A	9	w	AXO1	N/A	O	UVM100106-08C/UVM100202-08C
2/17/2010	20:05	72317.D	120200	GEL	RINSE	5mL	1	N/A	10	w	AXO1	N/A	X	
2/17/2010	20:39	72318.D	W7VM100217-13	GEL	VSTD005	5mL	1	N/A	11	w	AXO1	N/A	O	UVM100106-01C/UVM100202-01C
2/17/2010	21:14	72319.D	W7VM100217-14	GEL	VSTD005S	5mL	1	N/A	12	w	AXO1	N/A	O	UVM100215-01/UVM100125-01D
2/17/2010	21:49	72320.D	W7VM100217-15	GEL	VSTD010S	5mL	1	N/A	13	w	AXO1	N/A	O	UVM100215-02/UVM100125-02D
2/17/2010	22:24	72321.D	W7VM100217-16	GEL	VSTD020S	5mL	1	N/A	14	w	AXO1	N/A	O	UVM100215-03/UVM100125-03D
2/17/2010	22:59	72322.D	W7VM100217-17	GEL	VSTD050S	5mL	1	N/A	15	w	AXO1	N/A	O	UVM100215-04/UVM100125-04D
2/17/2010	23:33	72323.D	W7VM100217-18	GEL	VSTD100S	5mL	1	N/A	16	w	AXO1	N/A	O	UVM100215-05/UVM100125-05D
2/18/2010	00:08	72324.D	W7VM100217-19	GEL	VSTD250S	5mL	1	N/A	17	w	AXO1	N/A	O	UVM100215-06/UVM100125-06D
2/18/2010	0:42	72325.D	W7VM100217-20	GEL	VSTD500S	5mL	1	N/A	18	w	AXO1	N/A	O	UVM100215-07/UVM100125-07D
2/18/2010	1:17	72326.D	120200	GEL	RINSE	5mL	1	N/A	19	w	AXO1	N/A	X	
2/18/2010	1:52	72327.D	W7VM100217-21	GEL	ICV	5mL	1	N/A	20	w	AXO1	N/A	X	UVM100126-02C/UVM100214-01
2/18/2010	2:27	72328.D	W7VM100217-22	GEL	ICV	5mL	1	N/A	21	w	AXO1	N/A	O	UVM100126-01E/UVM100214-01
2/18/2010	3:03	72329.D	W7VM100217-23	GEL	SICV	5mL	1	N/A	22	w	AXO1	N/A	O	UVM091216-08B/UVM100125-08C
2/18/2010	3:38	72330.D	120200	GEL	RINSE	5mL	1	N/A	23	w	AXO1	N/A	X	

Date: 3/1/2010

Method 8260B/624

Operator: AXO1

REVIEWED BY: AXO1
DATE: 3/1/10

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 1

Daily Instrument Readings:

Multiplier Voltage: 194.1

CALIBRATION & QC INFORMATION:

Initial Calibration Date: 2/17/2010

Daily Standard

Volume Added for Purge (ul)

Purge Amount

(See pg. 43 for ICAI Std. Sci. Ids)

Solution ID#

5 Water Purge Vol:

NaHSO4 lot #

IS UVM100203-01

5g Soil Purge Wt.

N/A

SS UVM100203-02

N/A Mid level ext. MeOH Vol:

N/A

LCS/MS W7VM100301-02/03

N/A ul

CI test lot #

BFB UVM100203-02

N/A Methanol Lot #

Sequence Number: 030110V7

SHORT W7VM100301-04/05

x Heated Purge

DHEC N/A

Analysis Date	Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol.(mL)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	CI test (Y/N)	Acceptable (O/X)	Comments
1 Mar 2010	07:30	7B101.D	120200----	GEL	RINSE	5mL	1	N/A	1	w	AXO1	N/A	X	
1 Mar 2010	08:05	7B102.D	W7VM100301-01	GEL	CCV	5mL	1	N/A	2	w	AXO1	N/A	X	UVM100106-07C/UVM100202-08D
1 Mar 2010	08:39	7B103.D	W7VM100301-02	GEL	BFB/CCV/LCS	5mL	1	N/A	3	w	AXO1	N/A	O	UVM100220-01B/UVM100224-01
1 Mar 2010	09:14	7B104.D	W7VM100301-03	GEL	LCS	5g	1	N/A	4	s	AXO1	N/A	O	UVM100220-01B/UVM100224-01
1 Mar 2010	09:48	7B105.D	W7VM100301-04	GEL	SHORT/SLCS	5mL	1	N/A	5	w	AXO1	N/A	O	UVM091216-08B/UVM100125-08D
1 Mar 2010	10:22	7B106.D	W7VM100301-05	GEL	SLCS	5g	1	N/A	6	s	AXO1	N/A	O	UVM091216-08B/UVM100125-08D
1 Mar 2010	10:55	7B107.D	120200----	GEL	BLANK	5mL	1	N/A	7	w	AXO1	N/A	O	
1 Mar 2010	11:29	7B108.D	120200----	GEL	BLANK	5g	1	N/A	8	s	AXO1	N/A	O	
1 Mar 2010	12:03	7B109.D	247775018	LANL	958036	5g	1	N/A	9	s	AXO1	N/A	O	
1 Mar 2010	12:37	7B110.D	1202055344	GEL	958378	0.5mL	10	N/A	10	w	AXO1	N/A	O	TB
1 Mar 2010	13:10	7B111.D	247555005	BY12	959378	0.5mL	10	N/A	11	w	AXO1	N/A	O	
1 Mar 2010	13:45	7B112.D	247555008	BY12	959378	0.5mL	10	N/A	12	w	AXO1	N/A	O	
1 Mar 2010	14:18	7B113.D	247555013	BY12	959378	0.5mL	10	N/A	13	w	AXO1	N/A	O	
1 Mar 2010	14:53	7B114.D	247555018	BY12	959378	0.5mL	10	N/A	14	w	AXO1	N/A	O	
1 Mar 2010	15:26	7B115.D	247555023	BY12	959378	0.5mL	10	N/A	15	w	AXO1	N/A	O	
1 Mar 2010	16:00	7B116.D	247784001	LANL	959504	5g	1	N/A	16	s	AXO1	N/A	O	
1 Mar 2010	16:34	7B117.D	247784002	LANL	959504	5g	1	N/A	17	s	AXO1	N/A	X	RR for IS failure see 7B143
1 Mar 2010	17:07	7B118.D	247790001	LANL	959504	5g	1	N/A	18	s	AXO1	N/A	O	
1 Mar 2010	17:42	7B119.D	1202054447	LANL	958036	5g	1	N/A	21	s	AXO1	N/A	O	MS 247775003
1 Mar 2010	18:16	7B120.D	1202054448	LANL	958036	5g	1	N/A	22	s	AXO1	N/A	O	MSD 247775003
1 Mar 2010	18:50	7B121.D	1202057597	BY12	959378	0.5mL	10	N/A	19	w	AXO1	N/A	O	MS 247555005
1 Mar 2010	19:24	7B122.D	1202057598	BY12	959378	0.5mL	10	N/A	20	w	AXO1	N/A	O	MSD 247555005

Date: 3/1/2010

Method 8250B/624

Operator: AXO1

REVIEWED BY: [Signature]

DATE: 3/2/10

Daily Instrument Readings:

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 1

Multipier Voltage: 1941

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 2/17/2010

(See pg. 43 for ICAL Std. Sol. Ids)

NaHSO4 lot #

N/A

Cl test lot #

N/A

Sequence Number: 030110V7PM

Daily Standard	Solution ID#	CCV	W7VM100301-06	Smpl	CCV	MS/	LCS	BFB
IS	W7VM100301-06	1	1	1	1	1	1	1
SS	UVM100203-01	1	1	1	1	1	1	1
LCS/MS	W7VM100301-06/07	1	1	1	1	1	1	1
BFB	UVM100203-02	1	1	1	1	1	1	1
SHORT	W7VM100301-08/09	1	1	1	1	1	1	1
DHEC	N/A	1	1	1	1	1	1	1

Purge Amount

5	Water Purge Vol:
5g	Soil Purge Wt.
N/A	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
x	Heated Purge

Analysis Date	Time	Data File	Lab Sample ID	Client	Batch #	Wt(g) or Vol(ml)	Dil.	Factor	pH	AS	Slot #	Matrix	Analyst	Cl test (Y/N)	Acceptable (O/X)	Comments
1 Mar 2010	19:57	78123.D	120200----		GEL	RINSE	5mL	1	N/A	23	23	w	AXO1	N/A	X	
1 Mar 2010	20:31	78124.D	W7VM100301-06		GEL	BFB/CCV/LCS	5mL	1	N/A	24	24	w	AXO1	N/A	O	UVM100220-01B/IVM100224-01
1 Mar 2010	21:05	78125.D	W7VM100301-07		GEL	LCS	5g	1	N/A	25	25	s	AXO1	N/A	O	UVM100220-01B/IVM100224-01
1 Mar 2010	21:40	78126.D	W7VM100301-08		GEL	SHORT/SLCS	5mL	1	N/A	26	26	w	AXO1	N/A	O	UVM091216-08B
1 Mar 2010	22:15	78127.D	W7VM100301-09		GEL	SLCS	5g	1	N/A	27	27	s	AXO1	N/A	O	UVM091216-08B
1 Mar 2010	22:49	78128.D	120200----		GEL	BLANK	5mL	1	N/A	28	28	w	AXO1	N/A	O	
1 Mar 2010	23:24	78129.D	120200----		GEL	BLANK	5g	1	N/A	29	29	s	AXO1	N/A	O	
1 Mar 2010	23:59	78130.D	247790002		LANL	959504	5g	1	N/A	30	30	s	AXO1	N/A	O	
2 Mar 2010	00:34	78131.D	247790003		LANL	959504	5g	1	N/A	31	31	s	AXO1	N/A	O	
2 Mar 2010	01:10	78132.D	247791001		LANL	959504	5g	1	N/A	32	32	s	AXO1	N/A	O	
2 Mar 2010	01:46	78133.D	247791002		LANL	959504	5g	1	N/A	33	33	s	AXO1	N/A	O	
2 Mar 2010	02:21	78134.D	247791003		LANL	959504	5g	1	N/A	34	34	s	AXO1	N/A	O	
2 Mar 2010	02:54	78135.D	247791004		LANL	959504	5g	1	N/A	35	35	s	AXO1	N/A	O	
2 Mar 2010	03:30	78136.D	247791005		LANL	959504	5g	1	N/A	36	36	s	AXO1	N/A	O	
2 Mar 2010	04:06	78137.D	247791006		LANL	959504	5g	1	N/A	37	37	s	AXO1	N/A	O	
2 Mar 2010	04:41	78138.D	247855001		LANL	959504	5g	1	N/A	38	38	s	AXO1	N/A	O	
2 Mar 2010	05:16	78139.D	247855002		LANL	959504	5g	1	N/A	39	39	s	AXO1	N/A	O	
2 Mar 2010	05:51	78140.D	1202057919		LANL	959504	5g	1	N/A	40	40	s	AXO1	N/A	O	MS 247791002
2 Mar 2010	06:24	78141.D	1202057920		LANL	959504	5g	1	N/A	41	41	s	AXO1	N/A	O	MSD 247791002
2 Mar 2010	06:58	78142.D	120200----		GEL	RINSE	5mL	1	N/A	42	42	w	AXO1	N/A	X	
2 Mar 2010	07:32	78143.D	247784002		LANL	959504	5g	1	N/A	43	43	s	AXO1	N/A	O	

Data File: /chem/VOA7.i/030110v7/7b133.d
Report Date: 08-Mar-2010 12:57

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GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA7.i/030110v7/7b133.d

Lab Smp Id: 247791002

Client Smp ID: RE15-10-8317

Inj Date : 02-MAR-2010 01:46

Operator : AX01

Inst ID: VOA7.i

Smp Info : |247791002|959504|1|VOAF|1|

Misc Info : LANL 5g N/A

Comment :

Method : /chem/VOA7.i/030110v7/VOA7-8260B-021710PM.m

Meth Date : 04-Mar-2010 13:42 ale01592

Quant Type: ISTD

Cal Date : 18-FEB-2010 00:08

Cal File: 7z324.d

Als bottle: 33

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: 10-1982.sub

Target Version: 3.50

Processing Host: prdsvr07

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

Name	Value	Description
DF	1.00000	Dilution Factor
M	6.34340	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG						CONCENTRATIONS	
	MASS	RT	EXP RT	REL RT	RESPONSE		ON-COLUMN	FINAL
							(ug/l)	(ug/Kg)
* 51 Fluorobenzene	96	15.317	15.317	(1.000)	790572	50.0000		
* 75 Chlorobenzene-d5	117	18.667	18.667	(1.000)	592192	50.0000		
* 101 1,4-Dichlorobenzene-d4	152	20.991	20.991	(1.000)	291382	50.0000		
\$ 46 1,2-Dichloroethane-d4	65	14.880	14.880	(0.971)	340131	49.7969		53.2
\$ 64 Toluene-d8	98	17.134	17.134	(0.918)	932683	48.3907		51.7
\$ 86 Bromofluorobenzene	95	19.814	19.814	(0.944)	336767	43.9374		46.9

ION RATIO REPORT

VOA REPORT

Data file: 7b133.d

Report Date: 03/02/2010 06:21

Lab. ID: 247791002

SampleType: SAMPLE

Injection Date: 02-MAR-2010 01:46

Operator: AX01

Instrument: VOA7.i

Sample Info: |247791002|1|VOAF|1|

Miscellaneous Info: LANL 5g N/A

Comment:

Method used: /chem/VOA7.i/030110v7/VOA7-8260B-021710PM.m

Dilution Factor= 1.0

Integrator: HP RTE

Compound Sublist: 10-1982

Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
=====						
63	4-Methyl-2-pentanone			CAS#: 108-10-1		
58	11526	17.13	16.94	80-120	100	(T)
43	6053	17.13	16.94	218-278	53	(QT)
100	647978	17.13	16.94	0- 56	5622	(QT)

82	Bromoform			CAS#: 75-25-2		
173	1120	19.81	19.54	80-120	100	(T)
175	17539	19.81	19.54	18- 78	1565	(QT)

Q qualifier indicates ion failed ratio requirement

Data File: /chem/VOA7.i/030110v7/7b133.d
Report Date: 08-Mar-2010 12:57

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GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026
Data file : /chem/VOA7.i/030110v7/7b133.d
Lab Smp Id: 247791002 Client Smp ID: RE15-10-8317
Inj Date : 02-MAR-2010 01:46
Operator : AX01 Inst ID: VOA7.i
Smp Info : |247791002|959504|1|VOAF|1|
Misc Info : LANL 5g N/A
Comment :
Method : /chem/VOA7.i/030110v7/VOA7-8260B-021710PM.m
Meth Date : 04-Mar-2010 13:42 ale01592 Quant Type: ISTD
Cal Date : 18-FEB-2010 00:08 Cal File: 7z324.d
Als bottle: 33
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 10-1982.sub
Target Version: 3.50
Processing Host: prdsvr07

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

Data File: /chem/V007.i/030110v7/7b133.d
Date: 02-MAR-2010 01:46
Client ID: RE15-10-8317
Sample Info: 1247791002|959504|11V00F11.1

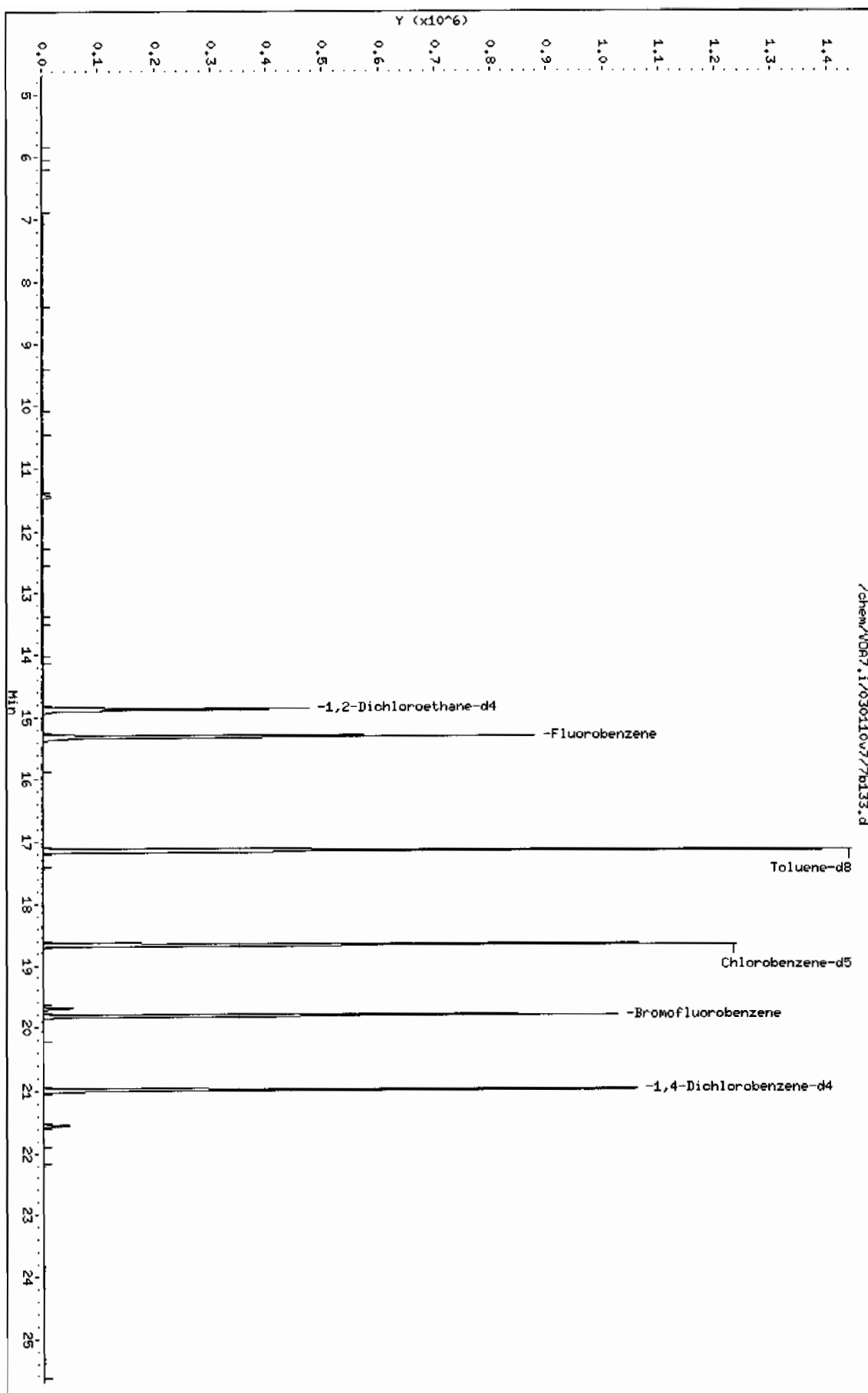
Column phase: DB-624

Instrument: V007.i

Operator: AK01

Column diameter: 0.25

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Data File: /chem/VOA7.i/030110v7/7b140.d
Report Date: 08-Mar-2010 12:57

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GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA7.i/030110v7/7b140.d

Lab Smp Id: 1202057919

Client Smp ID: RE15-10-8317MS

Inj Date : 02-MAR-2010 05:51

Operator : AX01

Inst ID: VOA7.i

Smp Info : |1202057919|959504|1|VOAF|1|

Misc Info : LANL 5g N/A MS 247791002

Comment :

Method : /chem/VOA7.i/030110v7/VOA7-8260B-021710PM.m

Meth Date : 04-Mar-2010 13:42 ale01592

Quant Type: ISTD

Cal Date : 18-FEB-2010 00:08

Cal File: 7z324.d

Als bottle: 40

QC Sample: MS

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: 10-1982.sub

Target Version: 3.50

Processing Host: prdsrv07

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

Name	Value	Description
DF	1.00000	Dilution Factor
M	6.34340	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG				CONCENTRATIONS		
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 51 Fluorobenzene	96	15.317	15.317	(1.000)	754205	50.0000	
* 75 Chlorobenzene-d5	117	18.667	18.667	(1.000)	614099	50.0000	
* 101 1,4-Dichlorobenzene-d4	152	20.992	20.991	(1.000)	330389	50.0000	
\$ 46 1,2-Dichloroethane-d4	65	14.880	14.880	(0.971)	306943	47.1049	50.3
\$ 64 Toluene-d8	98	17.134	17.134	(0.918)	904142	45.2364	48.3
\$ 86 Bromofluorobenzene	95	19.814	19.814	(0.944)	359575	41.3743	44.2
4 Dichlorodifluoromethane	85	5.148	5.147	(0.336)	69942	29.7827	31.8
5 Chloromethane	50	5.757	5.757	(0.376)	248607	35.2387	37.6
6 Vinyl chloride	62	6.188	6.187	(0.404)	256724	40.9688	43.7
7 Bromomethane	94	7.429	7.429	(0.485)	138299	38.7099	41.3
8 Chloroethane	64	7.855	7.855	(0.513)	122572	38.2468	40.8
9 Trichlorofluoromethane	101	8.789	8.789	(0.574)	167648	34.9519	37.3

Compounds	QUANT SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
							(ug/l)	(ug/Kg)
13 Acetone		43	10.423	10.423	(0.681)	700575	138.677	148
14 1,1-Dichloroethylene		96	10.312	10.312	(0.673)	121431	37.0229	39.5
102 1,4-Dichlorobenzene		146	21.012	21.012	(1.001)	321349	33.6617	35.9
16 Iodomethane		142	10.667	10.667	(0.696)	1127410	197.255	211
22 Methylene chloride		86	11.449	11.449	(0.747)	115535	37.4947	40.0
19 Carbon disulfide		76	10.840	10.840	(0.708)	2267461	196.514	210
25 trans-1,2-Dichloroethylene		61	12.027	12.027	(0.785)	243614	35.1328	37.5
28 1,1-Dichloroethane		63	12.799	12.799	(0.836)	346074	38.3540	41.0
31 2-Butanone		43	13.723	13.723	(0.896)	942092	167.204	178
33 cis-1,2-Dichloroethylene		61	13.733	13.733	(0.897)	293435	36.6683	39.2
100 1,3-Dichlorobenzene		146	20.931	20.930	(0.997)	327590	33.5070	35.8
34 2,2-Dichloropropane		77	13.743	13.743	(0.897)	122208	32.6052	34.8
38 Chloroform		83	14.190	14.190	(0.926)	274697	36.5701	39.0
105 1,2-Dichlorobenzene		146	21.438	21.438	(1.021)	344540	35.0838	37.5
37 Bromochloromethane		49	14.088	14.088	(0.920)	239631	40.5058	43.2
41 1,1,1-Trichloroethane		97	14.484	14.484	(0.946)	193030	37.4474	40.0
44 1,1-Dichloropropene		75	14.697	14.697	(0.960)	199628	36.9886	39.5
45 Carbon tetrachloride		117	14.718	14.718	(0.961)	142974	34.8583	37.2
47 1,2-Dichloroethane		62	14.982	14.982	(0.978)	265072	35.7663	38.2
48 Benzene		78	14.982	14.982	(0.978)	631983	38.3223	40.9
53 Trichloroethylene		95	15.773	15.763	(1.030)	158843	39.7535	42.4
56 1,2-Dichloropropane		63	16.037	16.037	(1.047)	215764	39.2905	42.0
59 Bromodichloromethane		83	16.332	16.332	(1.066)	230734	39.1771	41.8
58 Dibromomethane		93	16.180	16.179	(1.056)	121252	40.9337	43.7
63 4-Methyl-2-pentanone		58	16.941	16.941	(0.908)	565987	187.278	200
62 cis-1,3-Dichloropropylene		75	16.819	16.819	(1.098)	281103	39.1914	41.8
65 Toluene		92	17.215	17.215	(0.922)	383313	34.6689	37.0
67 trans-1,3-Dichloropropylene		75	17.388	17.388	(0.931)	262067	34.9774	37.3
68 1,1,2-Trichloroethane		83	17.611	17.611	(0.943)	150553	36.1410	38.6
69 2-Hexanone		43	17.794	17.804	(0.953)	1301678	155.646	166(A)
70 1,3-Dichloropropane		76	17.794	17.794	(0.953)	323945	37.9214	40.5
71 Tetrachloroethylene		164	17.814	17.814	(0.954)	104241	34.1160	36.4
72 Dibromochloromethane		129	18.058	18.058	(0.967)	170029	37.8423	40.4
73 1,2-Dibromoethane		107	18.220	18.220	(0.976)	175065	38.7489	41.4
76 Chlorobenzene		112	18.697	18.697	(1.002)	402369	35.3547	37.7
77 1,1,1,2-Tetrachloroethane		131	18.758	18.758	(1.005)	148052	37.7505	40.3
78 Ethylbenzene		91	18.758	18.758	(1.005)	696270	33.7042	36.0
79 m,p-Xylenes		106	18.870	18.870	(1.011)	562579	72.3638	77.3
80 o-Xylene		106	19.286	19.286	(1.033)	308337	37.4387	40.0
81 Styrene		104	19.286	19.286	(1.033)	506338	38.3921	41.0
82 Bromoform		173	19.540	19.540	(0.931)	118796	37.5280	40.1
87 1,1,2,2-Tetrachloroethane		83	19.885	19.885	(0.947)	259101	34.6542	37.0
89 1,2,3-Trichloropropane		110	19.966	19.966	(0.951)	57969	35.6331	38.0
90 Bromobenzene		156	20.017	20.017	(0.954)	174031	34.7746	37.1
91 n-Propylbenzene		91	20.027	20.027	(0.954)	841430	30.9651	33.1
93 2-Chlorotoluene		91	20.169	20.169	(0.961)	612047	32.8983	35.1
83 Isopropylbenzene		105	19.631	19.631	(0.935)	668994	31.2997	33.4

Compounds	QUANT SIG	CONCENTRATIONS					
		MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/l)
=====	=====	=====	=====	=====	=====	=====	FINAL (ug/Kg)
92 1,3,5-Trimethylbenzene	105		20.169	20.169	(0.961)	578467	32.7528
94 4-Chlorotoluene	91		20.271	20.260	(0.966)	517521	30.9894
95 tert-Butylbenzene	119		20.525	20.524	(0.978)	540947	33.8104
96 1,2,4-Trimethylbenzene	105		20.565	20.565	(0.980)	583428	32.6403
98 sec-Butylbenzene	105		20.748	20.748	(0.988)	774654	32.8788
99 4-Isopropyltoluene	119		20.860	20.859	(0.994)	569444	33.4382
104 n-Butylbenzene	91		21.296	21.296	(1.014)	628097	31.8371
107 1,2-Dibromo-3-chloropropane	157		22.301	22.291	(1.062)	50466	41.0184

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

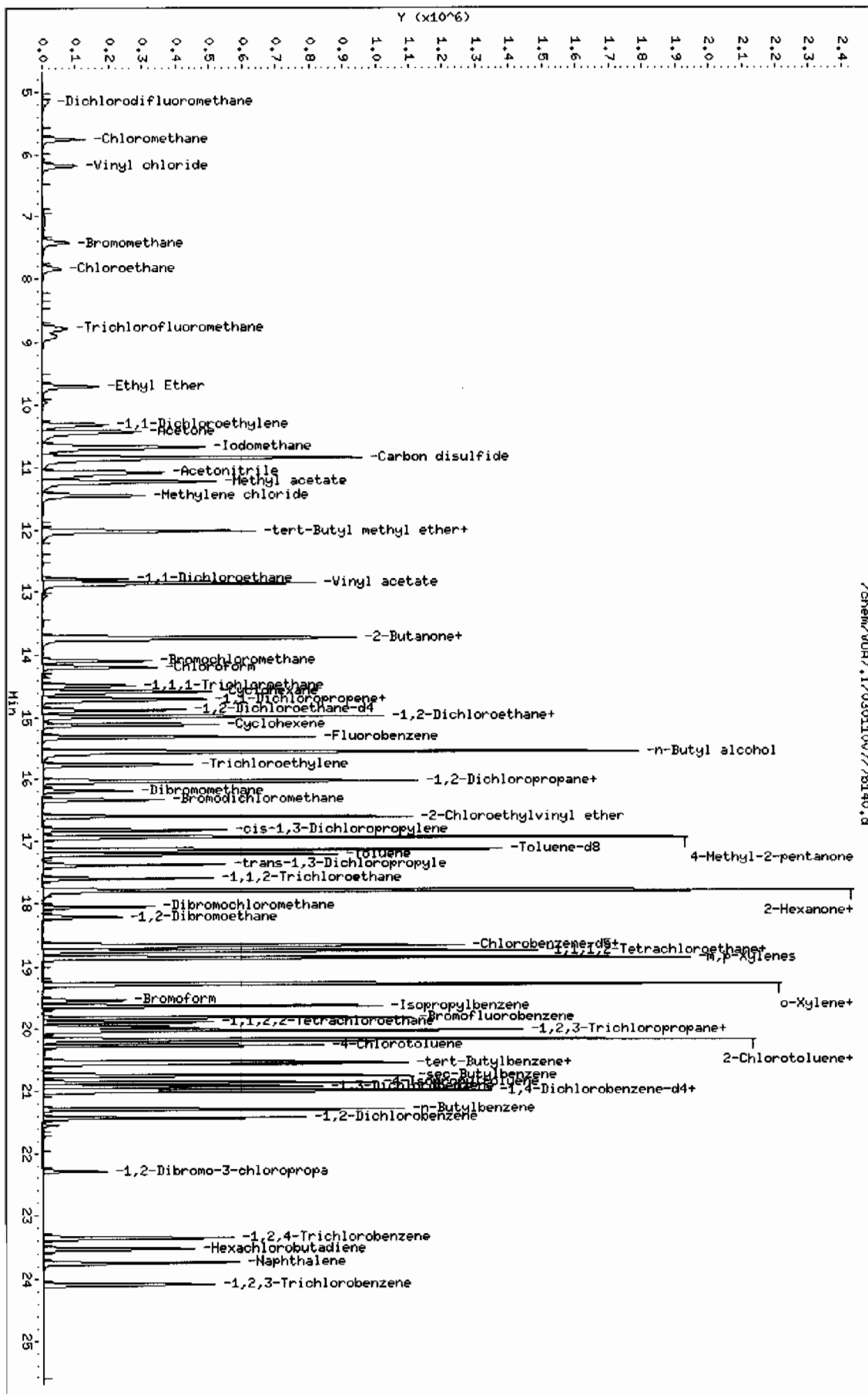
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 Date : 02-MAR-2010 05:51
 Client ID: RELS-10-8317MS
 Sample Info: 1120205794195950411V0A7111

Column phase: DB-624

Instrument: V0A7.1

Operator: RX01
 Column diameter: 0.25

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Data File: /chem/VOA7.i/030110v7/7b141.d
Report Date: 08-Mar-2010 12:57

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GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA7.i/030110v7/7b141.d

Lab Smp Id: 1202057920

Client Smp ID: RE15-10-8317MSD

Inj Date : 02-MAR-2010 06:24

Operator : AX01

Inst ID: VOA7.i

Smp Info : |1202057920|959504|1|VOAF|1|

Misc Info : LANL 5g N/A MSD 247791002

Comment :

Method : /chem/VOA7.i/030110v7/VOA7-8260B-021710PM.m

Meth Date : 04-Mar-2010 13:42 ale01592

Quant Type: ISTD

Cal Date : 18-FEB-2010 00:08

Cal File: 7z324.d

Als bottle: 41

QC Sample: MSD

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: 10-1982.sub

Target Version: 3.50

Processing Host: prdsvr07

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

Name	Value	Description
DF	1.00000	Dilution Factor
M	6.34340	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG				RESPONSE	CONCENTRATIONS	
	MASS	RT	EXP RT	REL RT		ON-COLUMN	FINAL
		min	min			(ug/l)	(ug/Kg)
* 51 Fluorobenzene	96	15.317	15.317	(1.000)	795569	50.0000	
* 75 Chlorobenzene-d5	117	18.667	18.667	(1.000)	637285	50.0000	
* 101 1,4-Dichlorobenzene-d4	152	20.992	20.991	(1.000)	334056	50.0000	
\$ 46 1,2-Dichloroethane-d4	65	14.880	14.880	(0.971)	333583	48.5315	51.8
\$ 64 Toluene-d8	98	17.134	17.134	(0.918)	950904	45.8451	49.0
\$ 86 Bromofluorobenzene	95	19.814	19.814	(0.944)	381277	43.3899	46.3
4 Dichlorodifluoromethane	85	5.148	5.147	(0.336)	75560	30.5020	32.6
5 Chloromethane	50	5.757	5.757	(0.376)	264814	35.5843	38.0
6 Vinyl chloride	62	6.188	6.187	(0.404)	257956	39.0251	41.7
7 Bromomethane	94	7.429	7.429	(0.485)	145489	38.6051	41.2
8 Chloroethane	64	7.855	7.855	(0.513)	128717	38.0760	40.6
9 Trichlorofluoromethane	101	8.799	8.789	(0.574)	180424	35.6598	38.1

Compounds	QUANT SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
							(ug/l)	(ug/Kg)
13 Acetone		43	10.424	10.423	(0.681)	857013	160.823	172
14 1,1-Dichloroethylene		96	10.312	10.312	(0.673)	130262	37.6504	40.2
102 1,4-Dichlorobenzene		146	21.012	21.012	(1.001)	343412	35.5780	38.0
16 Iodomethane		142	10.667	10.667	(0.696)	1213592	201.294	215
22 Methylene chloride		86	11.449	11.449	(0.747)	131107	40.3361	43.1
19 Carbon disulfide		76	10.840	10.840	(0.708)	2392930	196.605	210
25 trans-1,2-Dichloroethylene		61	12.028	12.027	(0.785)	272205	37.2150	39.7
28 1,1-Dichloroethane		63	12.799	12.799	(0.836)	380532	39.9802	42.7
31 2-Butanone		43	13.723	13.723	(0.896)	1093401	183.969	196
33 cis-1,2-Dichloroethylene		61	13.733	13.733	(0.897)	318400	37.7193	40.3
100 1,3-Dichlorobenzene		146	20.931	20.930	(0.997)	344735	34.8736	37.2
34 2,2-Dichloropropane		77	13.743	13.743	(0.897)	130595	33.0312	35.3
38 Chloroform		83	14.190	14.190	(0.926)	298666	37.6938	40.2
105 1,2-Dichlorobenzene		146	21.438	21.438	(1.021)	366460	36.9062	39.4
37 Bromochloromethane		49	14.088	14.088	(0.920)	264499	42.3848	45.2
41 1,1,1-Trichloroethane		97	14.484	14.484	(0.946)	203075	37.3478	39.9
44 1,1-Dichloropropene		75	14.697	14.697	(0.960)	213428	37.4894	40.0
45 Carbon tetrachloride		117	14.728	14.718	(0.962)	157202	36.3345	38.8
47 1,2-Dichloroethane		62	14.982	14.982	(0.978)	308276	39.4332	42.1
48 Benzene		78	14.982	14.982	(0.978)	680956	39.1451	41.8
53 Trichloroethylene		95	15.763	15.763	(1.029)	166398	39.4791	42.2
56 1,2-Dichloropropane		63	16.038	16.037	(1.047)	241798	41.7419	44.6
59 Bromodichloromethane		83	16.332	16.332	(1.066)	251098	40.4181	43.2
58 Dibromomethane		93	16.180	16.179	(1.056)	137284	43.9364	46.9
63 4-Methyl-2-pentanone		58	16.941	16.941	(0.908)	627724	200.149	214
62 cis-1,3-Dichloropropylene		75	16.819	16.819	(1.098)	313686	41.4603	44.3
65 Toluene		92	17.215	17.215	(0.922)	407728	35.5354	37.9
67 trans-1,3-Dichloropropylene		75	17.388	17.388	(0.931)	293005	37.6838	40.2
68 1,1,2-Trichloroethane		83	17.611	17.611	(0.943)	169920	39.3061	42.0
69 2-Hexanone		43	17.794	17.804	(0.953)	1400597	161.381	172 (A)
70 1,3-Dichloropropane		76	17.794	17.794	(0.953)	359559	40.5591	43.3
71 Tetrachloroethylene		164	17.814	17.814	(0.954)	107511	33.9060	36.2
72 Dibromochloromethane		129	18.058	18.058	(0.967)	184895	39.6537	42.3
73 1,2-Dibromoethane		107	18.220	18.220	(0.976)	190410	40.6120	43.4
76 Chlorobenzene		112	18.697	18.697	(1.002)	435659	36.8871	39.4
77 1,1,1,2-Tetrachloroethane		131	18.758	18.758	(1.005)	157329	38.6564	41.3
78 Ethylbenzene		91	18.758	18.758	(1.005)	732852	34.1844	36.5
79 m,p-Xylenes		106	18.870	18.870	(1.011)	593791	73.5997	78.6
80 o-Xylene		106	19.286	19.286	(1.033)	324986	38.0246	40.6
81 Styrene		104	19.286	19.286	(1.033)	538007	39.3092	42.0
82 Bromoform		173	19.540	19.540	(0.931)	132161	41.2917	44.1
87 1,1,2,2-Tetrachloroethane		83	19.885	19.885	(0.947)	287994	38.0958	40.7
89 1,2,3-Trichloropropane		110	19.966	19.966	(0.951)	64056	38.9425	41.6
90 Bromobenzene		156	20.017	20.017	(0.954)	188199	37.1929	39.7
91 n-Propylbenzene		91	20.027	20.027	(0.954)	872596	31.7596	33.9
93 2-Chlorotoluene		91	20.169	20.169	(0.961)	644932	34.2854	36.6
83 Isopropylbenzene		105	19.631	19.631	(0.935)	701398	32.4555	34.6

Compounds	QUANT SIG						CONCENTRATIONS	
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN	FINAL	
						(ug/l)	(ug/Kg)	
92 1,3,5-Trimethylbenzene	105	20.169	20.169	(0.961)	618504	34.6353	37.0	
94 4-Chlorotoluene	91	20.271	20.260	(0.966)	542049	32.1018	34.3	
95 tert-Butylbenzene	119	20.535	20.524	(0.978)	559924	34.6124	37.0	
96 1,2,4-Trimethylbenzene	105	20.565	20.565	(0.980)	614465	33.9994	36.3	
98 sec-Butylbenzene	105	20.748	20.748	(0.988)	794818	33.3643	35.6	
99 4-Isopropyltoluene	119	20.860	20.859	(0.994)	591780	34.3683	36.7	
104 n-Butylbenzene	91	21.296	21.296	(1.014)	650971	32.6343	34.8	
107 1,2-Dibromo-3-chloropropane	157	22.291	22.291	(1.062)	53246	42.7572	45.6	

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: /chem/VOA7.i/030110v7/7b141.d

Date: 02-MAR-2010 06:24

Client ID: RE15-10-8317MSD

Sample Info: 11202057920195950411/VOA711

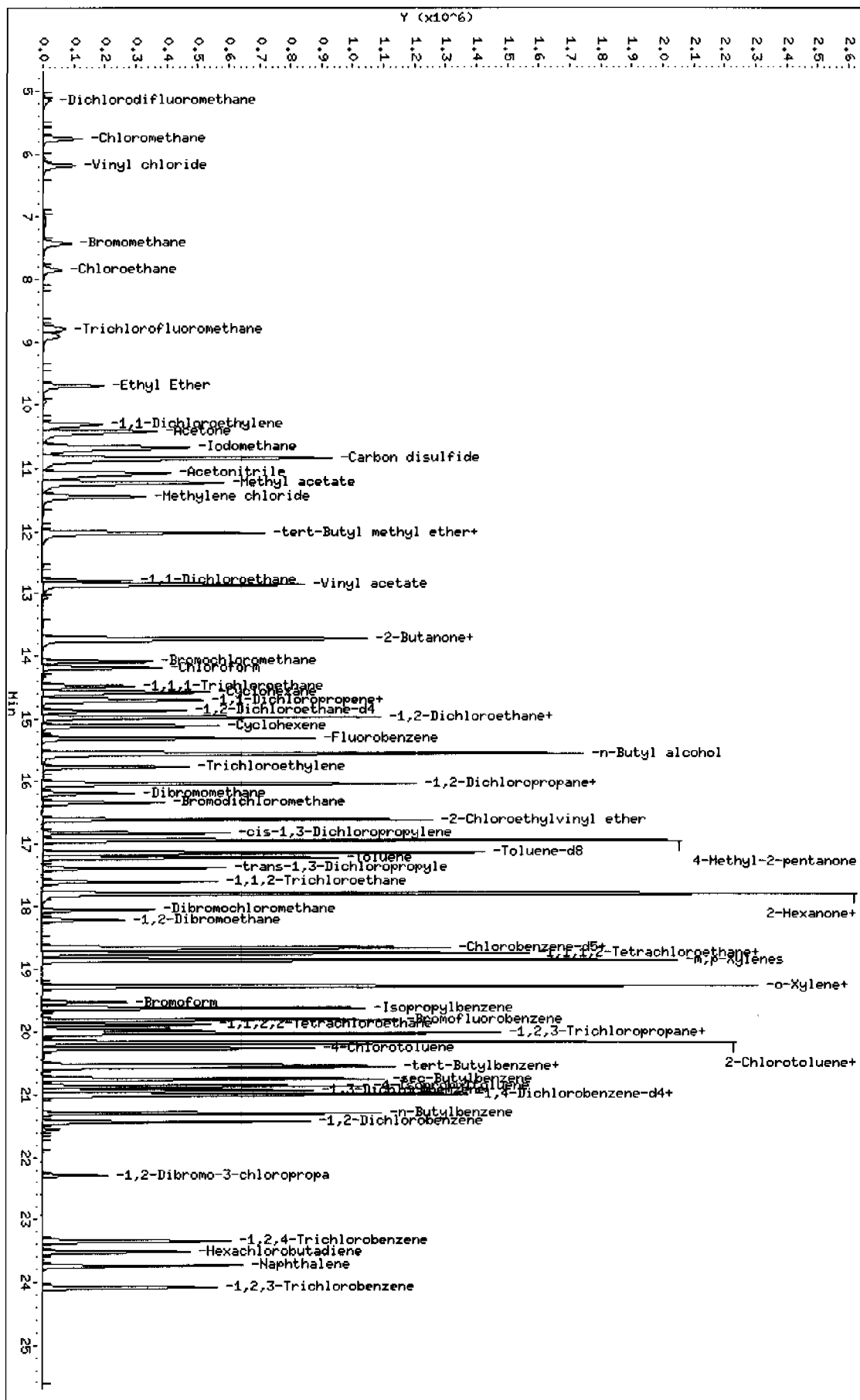
Column phase: DB-624

Instrument: VOA7.i

Operator: PX01

Column diameter: 0.25

/chem/VOA7.i/030110v7/7b141.d



GC/MS Semivolatile Analysis

**Semi-Volatile Case Narrative
Los Alamos National Laboratory (LANL)
SDG 10-1981**

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:	957838
Prep Batch Number:	957826

Sample Analysis

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

Sample ID	Client ID
247790002	RE15-10-8386
247790003	RE15-10-8387
1202053894	Method Blank (MB)
1202053895	Laboratory Control Sample (LCS)
1202053896	247791002(RE15-10-8317) Matrix Spike (MS)
1202053897	247791002(RE15-10-8317) 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 inversed in Target, so that the instrument response is treated as the independent variable (x) and the concentration ratio is treated as the dependent variable (y). The equation used in Target to calculate sample results is adjusted to account for the linear equation inversion and reciprocal slope. The adjusted calculation has been independently verified to produce valid results.

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

Sample 247791002 (RE15-10-8317) not associated with this SDG, was selected for analysis as the matrix spike and matrix spike duplicate. Please see the associated raw data files located in the Miscellaneous Section of the data report.

Matrix Spike (MS) Recovery Statement

The MS(1202053896) recovered Benzyl alcohol at 18%. The limits are 19%-112%. The MSD displayed a similar low but passing recovery for that analyte. Therefore, the biased low recoveries were attributed to sample matrix interference and the data have been reported.

Matrix Spike Duplicate (MSD) Recovery Statement

The MSD(1202053897) recovered 4-Nitrophenol at 13%. The limits are 15%-110%. The MS displayed a similar low but passing recovery for that analyte. Therefore, the biased low recoveries were attributed to sample matrix interference and the data have been reported.

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**

A DER was not required for the samples reported with this SDG.

Manual Integrations

Manual integrations were not required for the samples reported in this SDG.

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
MSD8.J	HP Mass Spectrometer	HP6890/HP5973	DB-5MS	25m x 0.2mm, 0.33um (5% Phenylmethylpolysiloxane)

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:  Date: 3-22-10

Roadmap for LANL 10-1981 SVOA

This roadmap was analyzed by nat00999 on 03-04-2010, 09:36.

This roadmap was reviewed by bar00895 on 03-04-2010, 11:22.

This roadmap was packaged by CHA01131 on 03-19-2010, 10:55.

Sample

exclude	manual	datafile	smplid	injdate	injtime	sublist	clientid	dilution	batchid	comment
<input type="checkbox"/>	N	/chem/MSD8.i/s030110.b/s8c0116.d	247790002	01-MAR-2010	19:29	10-1981.sub	RE15-10-8386	1	957838	
<input checked="" type="checkbox"/>	N	/chem/MSD8.i/s030110.b/s8c0117.d	247790003	01-MAR-2010	19:59	10-1981.sub	RE15-10-8387	1	957838	DUSE - failed IS rr - see s8c0219
<input type="checkbox"/>	N	/chem/MSD8.i/s030210.b/s8c0219.d	247790003	02-MAR-2010	18:07	10-1981.sub	RE15-10-8387	1	957838	USE - rr of s8c0117

QC Sample

exclude	manual	datafile	smplid	sampletype	injdate	injtime	sublist	clientid	dilution	batchid	comment
<input type="checkbox"/>	N	/chem/MSD8.i/s030110.b/s8c0105-1.d	1202053894	mb	01-MAR-2010	14:03	10-1981.sub	SBLK01	1	957838	
<input type="checkbox"/>	N	/chem/MSD8.i/s030110.b/s8c0106-1.d	1202053895	lcs	01-MAR-2010	14:31	10-1981.sub	SBLK01LCS	1	957838	

Sample Data Summary

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

SDG Number: 10-1981	Date Collected: 02/17/2010 12:00	Matrix: R
Lab Sample ID: 247790002	Date Received: 02/23/2010 08:50	%Moisture: 5.4
	Client: LANL010	Project: LANL01004
Client ID: RE15-10-8386	Method: SW846 8270C	SOP Ref: GL-OA-E-009
Batch ID: 957838	Inst: MSD8.I	Dilution: 1
Run Date: 03/01/2010 19:29	Analyst: NAG1	Inj. Vol: .5 uL
Prep Date: 02/25/2010 21:57	Aliquot: 30.03 g	Final Volume: 1 mL
Data File: s8c0116.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	U	352	ug/kg	70.4	352
108-95-2	Phenol	U	352	ug/kg	70.4	352
95-57-8	2-Chlorophenol	U	352	ug/kg	70.4	352
106-46-7	1,4-Dichlorobenzene	U	352	ug/kg	70.4	352
621-64-7	N-Nitrosodipropylamine	U	352	ug/kg	70.4	352
59-50-7	4-Chloro-3-methylphenol	U	352	ug/kg	70.4	352
83-32-9	Acenaphthene	U	35.2	ug/kg	11.6	35.2
121-14-2	2,4-Dinitrotoluene	U	352	ug/kg	35.2	352
100-02-7	4-Nitrophenol	U	352	ug/kg	116	352
87-86-5	Pentachlorophenol	U	352	ug/kg	88.0	352
129-00-0	Pyrene	U	35.2	ug/kg	10.6	35.2
110-86-1	Pyridine	U	352	ug/kg	70.4	352
62-53-3	Aniline	U	352	ug/kg	106	352
111-44-4	bis(2-Chloroethyl) ether	U	352	ug/kg	70.4	352
541-73-1	1,3-Dichlorobenzene	U	352	ug/kg	70.4	352
100-51-6	Benzyl alcohol	U	352	ug/kg	106	352
95-50-1	1,2-Dichlorobenzene	U	352	ug/kg	70.4	352
108-60-1	bis(2-Chloroisopropyl)ether	U	352	ug/kg	70.4	352
95-48-7	o-Cresol	U	352	ug/kg	70.4	352
65794-96-9	m,p-Cresols	U	352	ug/kg	106	352
67-72-1	Hexachloroethane	U	352	ug/kg	70.4	352
98-95-3	Nitrobenzene	U	352	ug/kg	70.4	352
78-59-1	Isophorone	U	352	ug/kg	70.4	352
88-75-5	2-Nitrophenol	U	352	ug/kg	70.4	352
105-67-9	2,4-Dimethylphenol	U	352	ug/kg	123	352
111-91-1	bis(2-Chloroethoxy)methane	U	352	ug/kg	70.4	352
120-83-2	2,4-Dichlorophenol	U	352	ug/kg	70.4	352
65-85-0	Benzoic acid	U	704	ug/kg	176	704
91-20-3	Naphthalene	U	35.2	ug/kg	10.6	35.2
106-47-8	4-Chloroaniline	U	352	ug/kg	70.4	352
87-68-3	Hexachlorobutadiene	U	352	ug/kg	70.4	352
91-57-6	2-Methylnaphthalene	U	35.2	ug/kg	7.04	35.2
77-47-4	Hexachlorocyclopentadiene	U	352	ug/kg	70.4	352
88-06-2	2,4,6-Trichlorophenol	U	352	ug/kg	70.4	352
95-95-4	2,4,5-Trichlorophenol	U	352	ug/kg	70.4	352
91-58-7	2-Chloronaphthalene	U	35.2	ug/kg	11.6	35.2
88-74-4	2-Nitroaniline	U	352	ug/kg	70.4	352
	<i>o</i> -Nitroaniline					
99-09-2	3-Nitroaniline	U	352	ug/kg	70.4	352

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

SDG Number: 10-1981	Date Collected: 02/17/2010 12:00	Matrix: R
Lab Sample ID: 247790002	Date Received: 02/23/2010 08:50	%Moisture: 5.4
Client ID: RE15-10-8386	Client: LANL010	Project: LANL01004
Batch ID: 957838	Method: SW846 8270C	SOP Ref: GL-OA-E-009
Run Date: 03/01/2010 19:29	Inst: MSD8.I	Dilution: 1
Prep Date: 02/25/2010 21:57	Analyst: NAG1	Inj. Vol: .5 uL
Data File: s8c0116.d	Aliquot: 30.03 g	Final Volume: 1 mL
	Column: J&W DB-5MS	Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
131-11-3	<i>m</i> -Nitroaniline					
	Dimethylphthalate	U	352	ug/kg	70.4	352
606-20-2	2,6-Dinitrotoluene	U	352	ug/kg	35.2	352
208-96-8	Acenaphthylene	U	35.2	ug/kg	10.6	35.2
51-28-5	2,4-Dinitrophenol	U	704	ug/kg	134	704
132-64-9	Dibenzofuran	U	352	ug/kg	70.4	352
84-66-2	Diethylphthalate	U	352	ug/kg	70.4	352
86-73-7	Fluorene	U	35.2	ug/kg	10.6	35.2
7005-72-3	4-Chlorophenylphenylether	U	352	ug/kg	70.4	352
534-52-1	2-Methyl-4,6-dinitrophenol	U	352	ug/kg	70.4	352
100-01-6	4-Nitroaniline	U	352	ug/kg	106	352
	<i>p</i> -Nitroaniline					
122-39-4	Diphenylamine	U	352	ug/kg	70.4	352
122-66-7	Azobenzene	U	352	ug/kg	70.4	352
	<i>1,2</i> -Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	352	ug/kg	70.4	352
118-74-1	Hexachlorobenzene	U	352	ug/kg	70.4	352
85-01-8	Phenanthrene	U	35.2	ug/kg	10.6	35.2
120-12-7	Anthracene	U	35.2	ug/kg	7.04	35.2
84-74-2	Di-n-butylphthalate	U	352	ug/kg	70.4	352
206-44-0	Fluoranthene	U	35.2	ug/kg	10.6	35.2
85-68-7	Butylbenzylphthalate	U	352	ug/kg	70.4	352
56-55-3	Benzo(a)anthracene	U	35.2	ug/kg	10.6	35.2
91-94-1	3,3'-Dichlorobenzidine	U	352	ug/kg	106	352
218-01-9	Chrysene	U	35.2	ug/kg	10.6	35.2
117-81-7	bis(2-Ethylhexyl)phthalate	U	352	ug/kg	70.4	352
117-84-0	Di-n-octylphthalate	U	352	ug/kg	70.4	352
205-99-2	Benzo(b)fluoranthene	U	35.2	ug/kg	10.6	35.2
207-08-9	Benzo(k)fluoranthene	U	35.2	ug/kg	10.6	35.2
50-32-8	Benzo(a)pyrene	U	35.2	ug/kg	10.6	35.2
193-39-5	Indeno(1,2,3-cd)pyrene	U	35.2	ug/kg	10.6	35.2
53-70-3	Dibenzo(a,h)anthracene	U	35.2	ug/kg	10.6	35.2
191-24-2	Benzo(ghi)perylene	U	35.2	ug/kg	10.6	35.2
120-82-1	1,2,4-Trichlorobenzene	U	352	ug/kg	70.4	352

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	2.93	148	ug/kg		JA

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

SDG Number: 10-1981	Date Collected: 02/17/2010 12:00	Matrix: R
Lab Sample ID: 247790003	Date Received: 02/23/2010 08:50	%Moisture: 5.7
	Client: LANL010	Project: LANL01004
Client ID: RE15-10-8387	Method: SW846 8270C	SOP Ref: GL-OA-E-009
Batch ID: 957838	Inst: MSD8.I	Dilution: 1
Run Date: 03/02/2010 18:07	Analyst: NAG1	Inj. Vol: .5 uL
Prep Date: 02/25/2010 21:57	Aliquot: 30.19 g	Final Volume: 1 mL
Data File: s8c0219.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	U	351	ug/kg	70.3	351
108-95-2	Phenol	U	351	ug/kg	70.3	351
95-57-8	2-Chlorophenol	U	351	ug/kg	70.3	351
106-46-7	1,4-Dichlorobenzene	U	351	ug/kg	70.3	351
621-64-7	N-Nitrosodipropylamine	U	351	ug/kg	70.3	351
59-50-7	4-Chloro-3-methylphenol	U	351	ug/kg	70.3	351
83-32-9	Acenaphthene	U	35.1	ug/kg	11.6	35.1
121-14-2	2,4-Dinitrotoluene	U	351	ug/kg	35.1	351
100-02-7	4-Nitrophenol	U	351	ug/kg	116	351
87-86-5	Pentachlorophenol	U	351	ug/kg	87.8	351
129-00-0	Pyrene	U	35.1	ug/kg	10.5	35.1
110-86-1	Pyridine	U	351	ug/kg	70.3	351
62-53-3	Aniline	U	351	ug/kg	105	351
111-44-4	bis(2-Chloroethyl) ether	U	351	ug/kg	70.3	351
541-73-1	1,3-Dichlorobenzene	U	351	ug/kg	70.3	351
100-51-6	Benzyl alcohol	U	351	ug/kg	105	351
95-50-1	1,2-Dichlorobenzene	U	351	ug/kg	70.3	351
108-60-1	bis(2-Chloroisopropyl)ether	U	351	ug/kg	70.3	351
95-48-7	o-Cresol	U	351	ug/kg	70.3	351
65794-96-9	m,p-Cresols	U	351	ug/kg	105	351
67-72-1	Hexachloroethane	U	351	ug/kg	70.3	351
98-95-3	Nitrobenzene	U	351	ug/kg	70.3	351
78-59-1	Isophorone	U	351	ug/kg	70.3	351
88-75-5	2-Nitrophenol	U	351	ug/kg	70.3	351
105-67-9	2,4-Dimethylphenol	U	351	ug/kg	123	351
111-91-1	bis(2-Chloroethoxy)methane	U	351	ug/kg	70.3	351
120-83-2	2,4-Dichlorophenol	U	351	ug/kg	70.3	351
65-85-0	Benzoic acid	U	703	ug/kg	176	703
91-20-3	Naphthalene	U	35.1	ug/kg	10.5	35.1
106-47-8	4-Chloroaniline	U	351	ug/kg	70.3	351
87-68-3	Hexachlorobutadiene	U	351	ug/kg	70.3	351
91-57-6	2-Methylnaphthalene	U	35.1	ug/kg	7.03	35.1
77-47-4	Hexachlorocyclopentadiene	U	351	ug/kg	70.3	351
88-06-2	2,4,6-Trichlorophenol	U	351	ug/kg	70.3	351
95-95-4	2,4,5-Trichlorophenol	U	351	ug/kg	70.3	351
91-58-7	2-Chloronaphthalene	U	35.1	ug/kg	11.6	35.1
88-74-4	2-Nitroaniline	U	351	ug/kg	70.3	351
99-09-2	<i>o</i> -Nitroaniline	U	351	ug/kg	70.3	351
	3-Nitroaniline					

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

SDG Number: 10-1981
Lab Sample ID: 247790003

Date Collected: 02/17/2010 12:00
Date Received: 02/23/2010 08:50
Client: LANL010
Method: SW846 8270C
Inst: MSD8.I
Analyst: NAG1
Aliquot: 30.19 g
Column: J&W DB-SMS

Matrix: R
%Moisture: 5.7
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	351	ug/kg	70.3	351
606-20-2	2,6-Dinitrotoluene	U	351	ug/kg	35.1	351
208-96-8	Acenaphthylene	U	35.1	ug/kg	10.5	35.1
51-28-5	2,4-Dinitrophenol	U	703	ug/kg	134	703
132-64-9	Dibenzofuran	U	351	ug/kg	70.3	351
84-66-2	Diethylphthalate	U	351	ug/kg	70.3	351
86-73-7	Fluorene	U	35.1	ug/kg	10.5	35.1
7005-72-3	4-Chlorophenylphenylether	U	351	ug/kg	70.3	351
534-52-1	2-Methyl-4,6-dinitrophenol	U	351	ug/kg	70.3	351
100-01-6	4-Nitroaniline	U	351	ug/kg	105	351
	<i>p</i> -Nitroaniline					
122-39-4	Diphenylamine	U	351	ug/kg	70.3	351
122-66-7	Azobenzene	U	351	ug/kg	70.3	351
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	351	ug/kg	70.3	351
118-74-1	Hexachlorobenzene	U	351	ug/kg	70.3	351
85-01-8	Phenanthrene	U	35.1	ug/kg	10.5	35.1
120-12-7	Anthracene	U	35.1	ug/kg	7.03	35.1
84-74-2	Di-n-butylphthalate	U	351	ug/kg	70.3	351
206-44-0	Fluoranthene	U	35.1	ug/kg	10.5	35.1
85-68-7	Butylbenzylphthalate	U	351	ug/kg	70.3	351
56-55-3	Benzo(a)anthracene	U	35.1	ug/kg	10.5	35.1
91-94-1	3,3'-Dichlorobenzidine	U	351	ug/kg	105	351
218-01-9	Chrysene	U	35.1	ug/kg	10.5	35.1
117-81-7	bis(2-Ethylhexyl)phthalate	U	351	ug/kg	70.3	351
117-84-0	Di-n-octylphthalate	U	351	ug/kg	70.3	351
205-99-2	Benzo(b)fluoranthene	U	35.1	ug/kg	10.5	35.1
207-08-9	Benzo(k)fluoranthene	U	35.1	ug/kg	10.5	35.1
50-32-8	Benzo(a)pyrene	U	35.1	ug/kg	10.5	35.1
193-39-5	Indeno(1,2,3-cd)pyrene	U	35.1	ug/kg	10.5	35.1
53-70-3	Dibenzo(a,h)anthracene	U	35.1	ug/kg	10.5	35.1
191-24-2	Benzo(ghi)perylene	U	35.1	ug/kg	10.5	35.1
120-82-1	1,2,4-Trichlorobenzene	U	351	ug/kg	70.3	351

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.03	173	ug/kg		JA

QC Summary

**Semi-Volatile
Surrogate Recovery Report**

Page 1 of 1

SDG Number: 10-1981

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
1202053894	MB for batch 957826	79	73	75	75	85	94
1202053895	LCS for batch 957826	64	60	60	60	79	74
247790002	RE15-10-8386	46	43	44	44	41	63
247790003	RE15-10-8387	46	41	45	44	38	60

Surrogate**Acceptance Limits**

2FP	= 2-Fluorophenol	(29%-99%)
PHL	= Phenol-d5	(33%-98%)
NBZ	= Nitrobenzene-d5	(31%-105%)
FBP	= 2-Fluorobiphenyl	(25%-109%)
TBP	= 2,4,6-Tribromophenol	(37%-106%)
TPH	= p-Terphenyl-d14	(13%-150%)

* 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: 10-1981

Sample Type: Laboratory Control Sample

Client ID: LCS for batch 957826

Matrix: SOIL

Lab Sample ID: 1202053895

Instrument: MSD8.I

Analysis Date: 03/01/2010 14:31

Dilution: 1

Analyst: NAG1

Pren Batch II 957826

Inj. Vol: .5 uL

Batch ID: 957838

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	844	51	22-114
108-95-2	LCS Phenol	1670	0.0	997	60	39-104
95-57-8	LCS 2-Chlorophenol	1670	0.0	1070	64	40-107
106-46-7	LCS 1,4-Dichlorobenzene	1670	0.0	995	60	33-108
621-64-7	LCS N-Nitrosodipropylamine	1670	0.0	967	58	34-113
59-50-7	LCS 4-Chloro-3-methylphenol	1670	0.0	1080	65	42-114
83-32-9	LCS Acenaphthene	1670	0.0	950	57	40-105
121-14-2	LCS 2,4-Dinitrotoluene	1670	0.0	1260	75	49-112
100-02-7	LCS 4-Nitrophenol	1670	0.0	1310	79	24-113
87-86-5	LCS Pentachlorophenol	1670	0.0	1400	84	27-116
129-00-0	LCS Pyrene	1670	0.0	950	57	42-113
110-86-1	LCS Pyridine	1670	0.0	860	52	8-125
62-53-3	LCS Aniline	1670	0.0	861	52	18-126
111-44-4	LCS bis(2-Chloroethyl) ether	1670	0.0	837	50	32-103
541-73-1	LCS 1,3-Dichlorobenzene	1670	0.0	983	59	32-108
100-51-6	LCS Benzyl alcohol	1670	0.0	775	47	27-108
95-50-1	LCS 1,2-Dichlorobenzene	1670	0.0	993	60	35-111
108-60-1	LCS bis(2-Chloroisopropyl)ether	1670	0.0	662	40	28-117
95-48-7	LCS o-Cresol	1670	0.0	966	58	39-111
65794-96-9	LCS m,p-Cresols	1670	0.0	1190	71	45-121
67-72-1	LCS Hexachloroethane	1670	0.0	934	56	30-109
98-95-3	LCS Nitrobenzene	1670	0.0	1000	60	33-116

Semi-Volatile
Quality Control Summary
Spike Recovery Report

Page 2 of 4

SDG Number: 10-1981

Sample Type: Laboratory Control Sample

Client ID: LCS for batch 957826

Matrix: SOIL

Lab Sample ID: 1202053895

Instrument: MSD8.I

Analysis Date: 03/01/2010 14:31

Dilution: 1

Analyst: NAG1

Pre Batch II 957826

Inj. Vol: .5 uL

Batch ID: 957838

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	980	59	35-113
88-75-5	LCS 2-Nitrophenol	1670	0.0	1180	71	31-117
105-67-9	LCS 2,4-Dimethylphenol	1670	0.0	983	59	32-112
111-91-1	LCS bis(2-Chloroethoxy)methane	1670	0.0	1040	62	34-110
120-83-2	LCS 2,4-Dichlorophenol	1670	0.0	1170	70	34-116
65-85-0	LCS Benzoic acid	3330	0.0	2520	76	22-138
91-20-3	LCS Naphthalene	1670	0.0	1060	63	35-103
106-47-8	LCS 4-Chloroaniline	1670	0.0	904	54	20-118
87-68-3	LCS Hexachlorobutadiene	1670	0.0	1020	61	31-117
91-57-6	LCS 2-Methylnaphthalene	1670	0.0	1110	67	38-115
77-47-4	LCS Hexachlorocyclopentadiene	1670	0.0	1050	63	22-140
88-06-2	LCS 2,4,6-Trichlorophenol	1670	0.0	1130	68	40-110
95-95-4	LCS 2,4,5-Trichlorophenol	1670	0.0	1160	70	43-113
91-58-7	LCS 2-Chloronaphthalene	1670	0.0	1040	63	37-111
88-74-4	LCS 2-Nitroaniline <i>o</i> -Nitroaniline	1670	0.0	1040	62	41-113
99-09-2	LCS 3-Nitroaniline <i>m</i> -Nitroaniline	1670	0.0	1130	68	34-125
131-11-3	LCS Dimethylphthalate	1670	0.0	1220	73	48-122
606-20-2	LCS 2,6-Dinitrotoluene	1670	0.0	1200	72	47-107
208-96-8	LCS Acenaphthylene	1670	0.0	1030	62	44-110
51-28-5	LCS 2,4-Dinitrophenol	1670	0.0	1570	94	18-127
132-64-9	LCS Dibenzofuran	1670	0.0	1120	67	49-115
84-66-2	LCS Diethylphthalate	1670	0.0	1200	72	51-126

Semi-Volatile
Quality Control Summary
Spike Recovery Report

SDG Number: 10-1981

Sample Type: Laboratory Control Sample

Client ID: LCS for batch 957826

Matrix: SOIL

Lab Sample ID: 1202053895

Instrument: MSD8.I

Analysis Date: 03/01/2010 14:31

Dilution: 1

Analyst: NAG1

Pren Batch ID: 957826

Inj. Vol: .5 uL

Batch ID: 957838

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	1050	63	43-109
7005-72-3	LCS 4-Chlorophenylphenylether	1670	0.0	1120	67	45-115
534-52-1	LCS 2-Methyl-4,6-dinitrophenol	1670	0.0	1460	88	32-117
100-01-6	LCS 4-Nitroaniline <i>p</i> -Nitroaniline	1670	0.0	1550	93	33-148
122-39-4	LCS Diphenylamine	1670	0.0	1340	80	46-114
122-66-7	LCS Azobenzene <i>1,2</i> -Diphenylhydrazine	1670	0.0	1070	64	38-123
101-55-3	LCS 4-Bromophenylphenylether	1670	0.0	1190	71	40-119
118-74-1	LCS Hexachlorobenzene	1670	0.0	1130	68	43-111
85-01-8	LCS Phenanthrene	1670	0.0	1150	69	46-107
120-12-7	LCS Anthracene	1670	0.0	1080	65	46-110
84-74-2	LCS Di-n-butylphthalate	1670	0.0	1370	82	52-132
206-44-0	LCS Fluoranthene	1670	0.0	1170	70	51-115
85-68-7	LCS Butylbenzylphthalate	1670	0.0	1290	77	47-137
56-55-3	LCS Benzo(a)anthracene	1670	0.0	1080	65	50-108
91-94-1	LCS 3,3'-Dichlorobenzidine	1670	0.0	997	60	36-103
218-01-9	LCS Chrysene	1670	0.0	1140	68	48-111
117-81-7	LCS bis(2-Ethylhexyl)phthalate	1670	0.0	1350	81	48-139
117-84-0	LCS Di-n-octylphthalate	1670	0.0	1260	76	42-141
205-99-2	LCS Benzo(b)fluoranthene	1670	0.0	1110	67	49-114
207-08-9	LCS Benzo(k)fluoranthene	1670	0.0	1110	67	50-116
50-32-8	LCS Benzo(a)pyrene	1670	0.0	1190	72	54-114
193-39-5	LCS Indeno(1,2,3-cd)pyrene	1670	0.0	1280	77	53-120

Semi-Volatile
Quality Control Summary
Spike Recovery Report

Page 4 of 4

SDG Number: 10-1981

Sample Type: Laboratory Control Sample

Client ID: LCS for batch 957826

Matrix: SOIL

Lab Sample ID: 1202053895

Instrument: MSD8.I

Analysis Date: 03/01/2010 14:31

Dilution: 1

Analyst: NAG1

Pren Batch II 957826

Inj. Vol: .5 uL

Batch ID: 957838

CAS No	Parmname	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	1520	91	53-121
191-24-2	LCS Benzo(ghi)perylene	1670	0.0	1390	83	50-121
120-82-1	LCS 1,2,4-Trichlorobenzene	1670	0.0	1040	62	32-114

Semi-Volatile
Quality Control Summary
Spike Recovery Report

Page 1 of 8

SDG Number: 10-1981

Sample Type: Matrix Spike

Client ID: RE15-10-8317MS

Matrix: R

Lab Sample ID: 1202053896

%Moisture: 6.3

Instrument: MSD8.I

Analysis Date: 03/02/2010 19:06

Dilution: 1

Analyst: NAG1

Pre Batch ID: 957826

Inj. Vol: .5 uL

Batch ID: 957838

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	1770	0.00	U 950	54	27-98
108-95-2	MS Phenol	1770	0.00	U 1060	60	33-94
95-57-8	MS 2-Chlorophenol	1770	0.00	U 1210	68	29-96
106-46-7	MS 1,4-Dichlorobenzene	1770	0.00	U 1130	64	27-96
621-64-7	MS N-Nitrosodipropylamine	1770	0.00	U 1140	64	29-102
59-50-7	MS 4-Chloro-3-methylphenol	1770	0.00	U 1120	64	29-110
83-32-9	MS Acenaphthene	1770	0.00	U 1050	59	17-109
121-14-2	MS 2,4-Dinitrotoluene	1770	0.00	U 1260	71	33-107
100-02-7	MS 4-Nitrophenol	1770	0.00	U 300	17	15-110
87-86-5	MS Pentachlorophenol	1770	0.00	U 591	33	23-110
129-00-0	MS Pyrene	1770	0.00	U 1110	63	24-118
110-86-1	MS Pyridine	1770	0.00	U 927	52	25-102
62-53-3	MS Aniline	1770	0.00	U 1010	57	18-109
111-44-4	MS bis(2-Chloroethyl) ether	1770	0.00	U 978	55	29-96
541-73-1	MS 1,3-Dichlorobenzene	1770	0.00	U 1140	64	26-97
100-51-6	MS Benzyl alcohol	1770	0.00	U 315	18 *	19-112
95-50-1	MS 1,2-Dichlorobenzene	1770	0.00	U 1140	65	30-97
108-60-1	MS bis(2-Chloroisopropyl)ether	1770	0.00	U 797	45	28-103
95-48-7	MS o-Cresol	1770	0.00	U 1110	63	32-107
65794-96-9	MS m,p-Cresols	1770	0.00	U 1380	78	33-115
67-72-1	MS Hexachloroethane	1770	0.00	U 1040	59	25-100
98-95-3	MS Nitrobenzene	1770	0.00	U 1120	63	27-106

Semi-Volatile
Quality Control Summary
Spike Recovery Report

Page 2 of 8

SDG Number: 10-1981

Sample Type: Matrix Spike

Client ID: RE15-10-8317MS

Matrix: R

Lab Sample ID: 1202053896

%Moisture: 6.3

Instrument: MSD8.I

Analysis Date: 03/02/2010 19:06

Dilution: 1

Analyst: NAG1

Prep Batch ID: 957826

Inj. Vol: .5 uL

Batch ID: 957838

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
78-59-1	MS Isophorone	1770	0.00 U	1130	64	29-104
88-75-5	MS 2-Nitrophenol	1770	0.00 U	1260	71	26-102
105-67-9	MS 2,4-Dimethylphenol	1770	0.00 U	764	43	22-104
111-91-1	MS bis(2-Chloroethoxy)methane	1770	0.00 U	1180	67	27-101
120-83-2	MS 2,4-Dichlorophenol	1770	0.00 U	1300	74	26-103
65-85-0	MS Benzoic acid	3540	0.00 U	2210	62	13-131
91-20-3	MS Naphthalene	1770	0.00 U	1190	67	23-103
106-47-8	MS 4-Chloroaniline	1770	0.00 U	1100	62	26-103
87-68-3	MS Hexachlorobutadiene	1770	0.00 U	1130	64	28-101
91-57-6	MS 2-Methylnaphthalene	1770	0.00 U	1250	71	27-106
77-47-4	MS Hexachlorocyclopentadiene	1770	0.00 U	774	44	24-117
88-06-2	MS 2,4,6-Trichlorophenol	1770	0.00 U	1050	60	26-105
95-95-4	MS 2,4,5-Trichlorophenol	1770	0.00 U	1180	67	30-110
91-58-7	MS 2-Chloronaphthalene	1770	0.00 U	1170	66	28-102
88-74-4	MS 2-Nitroaniline	1770	0.00 U	1130	64	33-106
99-09-2	MS 3-Nitroaniline	1770	0.00 U	1180	67	33-116
131-11-3	MS Dimethylphthalate	1770	0.00 U	1280	72	38-113
606-20-2	MS 2,6-Dinitrotoluene	1770	0.00 U	1250	71	29-107
208-96-8	MS Acenaphthylene	1770	0.00 U	1130	64	25-108
51-28-5	MS 2,4-Dinitrophenol	1770	0.00 U	768	43	14-102
132-64-9	MS Dibenzofuran	1770	0.00 U	1210	68	35-112
84-66-2	MS Diethylphthalate	1770	0.00 U	1260	71	36-122

Semi-Volatile
Quality Control Summary
Spike Recovery Report

Page 3 of 8

SDG Number: 10-1981

Sample Type: Matrix Spike

Client ID: RE15-10-8317MS

Matrix: R

Lab Sample ID: 1202053896

% Moisture: 6.3

Instrument: MSD8.I

Analysis Date: 03/02/2010 19:06

Dilution: 1

Analyst: NAG1

Pren Batch ID: 957826

Inj. Vol: .5 uL

Batch ID: 957838

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
86-73-7	MS Fluorene	1770	0.00 U	1120	64	33-105
7005-72-3	MS 4-Chlorophenylphenylether	1770	0.00 U	1200	68	30-110
534-52-1	MS 2-Methyl-4,6-dinitrophenol	1770	0.00 U	742	42	26-97
100-01-6	MS 4-Nitroaniline <i>p</i> -Nitroaniline	1770	0.00 U	1480	84	28-135
122-39-4	MS Diphenylamine	1770	0.00 U	1450	82	33-109
122-66-7	MS Azobenzene <i>1,2</i> -Diphenylhydrazine	1770	0.00 U	1190	67	31-113
101-55-3	MS 4-Bromophenylphenylether	1770	0.00 U	1280	73	31-109
118-74-1	MS Hexachlorobenzene	1770	0.00 U	1190	67	37-99
85-01-8	MS Phenanthrene	1770	0.00 U	1190	67	29-109
120-12-7	MS Anthracene	1770	0.00 U	1150	65	19-118
84-74-2	MS Di-n-butylphthalate	1770	0.00 U	1390	78	39-123
206-44-0	MS Fluoranthene	1770	0.00 U	1140	65	33-114
85-68-7	MS Butylbenzylphthalate	1770	0.00 U	1460	83	35-131
56-55-3	MS Benzo(a)anthracene	1770	0.00 U	1120	63	30-111
91-94-1	MS 3,3'-Dichlorobenzidine	1770	0.00 U	1200	68	30-124
218-01-9	MS Chrysene	1770	0.00 U	1200	68	32-108
117-81-7	MS bis(2-Ethylhexyl)phthalate	1770	0.00 U	1520	86	37-129
117-84-0	MS Di-n-octylphthalate	1770	0.00 U	1770	100	31-143
205-99-2	MS Benzo(b)fluoranthene	1770	0.00 U	1250	71	29-118
207-08-9	MS Benzo(k)fluoranthene	1770	0.00 U	1290	73	32-118
50-32-8	MS Benzo(a)pyrene	1770	0.00 U	1250	71	33-115
193-39-5	MS Indeno(1,2,3-cd)pyrene	1770	0.00 U	982	56	29-114

Semi-Volatile

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Quality Control Summary
Spike Recovery Report

SDG Number: 10-1981

Sample Type: Matrix Spike

Client ID: RE15-10-8317MS

Matrix: R

Lab Sample ID:1202053896

%Moisture: 6.3

Instrument: MSD8.I

Analysis Date: 03/02/2010 19:06

Dilution: 1

Analyst: NAG1

Prep Batch ID: 957826

Inj. Vol: .5 uL

Batch ID: 957838

CAS No	Parname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
53-70-3	MS Dibenzo(a,h)anthracene	1770	0.00 U	1310	74	27-119
191-24-2	MS Benzo(ghi)perylene	1770	0.00 U	1090	61	28-112
120-82-1	MS 1,2,4-Trichlorobenzene	1770	0.00 U	1170	66	28-99

Semi-Volatile

Page 5 of 8

Quality Control Summary Spike Recovery Report

SDG Number: 10-1981

Sample Type: Matrix Spike Duplicate

Client ID: RE15-10-8317MSD

Matrix: R

Lab Sample ID: 1202053897

%Moisture: 6.3

Instrument: MSD8.I

Analysis Date: 03/02/2010 19:35

Dilution: 1

Analyst: NAG1

Prep Batch ID: 957826

Inj. Vol: .5 uL

Batch ID: 957838

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	1780	0.00 U	1020	58	27-98	8	0-30
108-95-2	MSD Phenol	1780	0.00 U	1150	64	33-94	7	0-30
95-57-8	MSD 2-Chlorophenol	1780	0.00 U	1290	73	29-96	7	0-30
106-46-7	MSD 1,4-Dichlorobenzene	1780	0.00 U	1210	68	27-96	7	0-30
621-64-7	MSD N-Nitrosodipropylamine	1780	0.00 U	1220	69	29-102	7	0-30
59-50-7	MSD 4-Chloro-3-methylphenol	1780	0.00 U	1220	69	29-110	8	0-30
83-32-9	MSD Acenaphthene	1780	0.00 U	1100	62	17-109	5	0-30
121-14-2	MSD 2,4-Dinitrotoluene	1780	0.00 U	1380	78	33-107	9	0-30
100-02-7	MSD 4-Nitrophenol	1780	0.00 U	222	13 *	15-110	30	0-30
87-86-5	MSD Pentachlorophenol	1780	0.00 U	628	35	23-110	6	0-30
129-00-0	MSD Pyrene	1780	0.00 U	1100	62	24-118	1	0-30
110-86-1	MSD Pyridine	1780	0.00 U	966	54	25-102	4	0-30
62-53-3	MSD Aniline	1780	0.00 U	1020	57	18-109	1	0-30
111-44-4	MSD bis(2-Chloroethyl) ether	1780	0.00 U	1040	59	29-96	7	0-30
541-73-1	MSD 1,3-Dichlorobenzene	1780	0.00 U	1220	69	26-97	7	0-30
100-51-6	MSD Benzyl alcohol	1780	0.00 U	351	20	19-112	11	0-30
95-50-1	MSD 1,2-Dichlorobenzene	1780	0.00 U	1250	70	30-97	9	0-30
108-60-1	MSD bis(2-Chloroisopropyl)ether	1780	0.00 U	854	48	28-103	7	0-30
95-48-7	MSD o-Cresol	1780	0.00 U	1170	66	32-107	5	0-30
65794-96-9	MSD m,p-Cresols	1780	0.00 U	1440	81	33-115	5	0-30
67-72-1	MSD Hexachloroethane	1780	0.00 U	1130	63	25-100	8	0-30
98-95-3	MSD Nitrobenzene	1780	0.00 U	1230	69	27-106	9	0-30

Semi-Volatile
Quality Control Summary
Spike Recovery Report

Page 6 of 8

SDG Number: 10-1981

Sample Type: Matrix Spike Duplicate

Client ID: RE15-10-8317MSD

Matrix: R

Lab Sample ID: 1202053897

%Moisture: 6.3

Instrument: MSD8.I

Analysis Date: 03/02/2010 19:35

Dilution: 1

Analyst: NAG1

Prep Batch ID: 957826

Inj. Vol: .5 uL

Batch ID: 957838

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	1780	0.00 U	1210	68	29-104	8	0-30
88-75-5	MSD 2-Nitrophenol	1780	0.00 U	1420	80	26-102	12	0-30
105-67-9	MSD 2,4-Dimethylphenol	1780	0.00 U	626	35	22-104	20	0-30
111-91-1	MSD bis(2-Chloroethoxy)methane	1780	0.00 U	1290	72	27-101	9	0-30
120-83-2	MSD 2,4-Dichlorophenol	1780	0.00 U	1420	80	26-103	9	0-30
65-85-0	MSD Benzoic acid	3560	0.00 U	2430	68	13-131	10	0-30
91-20-3	MSD Naphthalene	1780	0.00 U	1280	72	23-103	8	0-30
106-47-8	MSD 4-Chloroaniline	1780	0.00 U	1170	66	26-103	6	0-30
87-68-3	MSD Hexachlorobutadiene	1780	0.00 U	1230	69	28-101	8	0-30
91-57-6	MSD 2-Methylnaphthalene	1780	0.00 U	1370	77	27-106	9	0-30
77-47-4	MSD Hexachlorocyclopentadiene	1780	0.00 U	903	51	24-117	15	0-30
88-06-2	MSD 2,4,6-Trichlorophenol	1780	0.00 U	1130	63	26-105	7	0-30
95-95-4	MSD 2,4,5-Trichlorophenol	1780	0.00 U	1250	70	30-110	6	0-30
91-58-7	MSD 2-Chloronaphthalene	1780	0.00 U	1230	69	28-102	6	0-30
88-74-4	MSD 2-Nitroaniline <i>o</i> -Nitroaniline	1780	0.00 U	1220	69	33-106	8	0-30
99-09-2	MSD 3-Nitroaniline <i>m</i> -Nitroaniline	1780	0.00 U	1300	73	33-116	10	0-30
131-11-3	MSD Dimethylphthalate	1780	0.00 U	1370	77	38-113	7	0-30
606-20-2	MSD 2,6-Dinitrotoluene	1780	0.00 U	1350	76	29-107	7	0-30
208-96-8	MSD Acenaphthylene	1780	0.00 U	1210	68	25-108	7	0-30
51-28-5	MSD 2,4-Dinitrophenol	1780	0.00 U	922	52	14-102	18	0-30
132-64-9	MSD Dibenzofuran	1780	0.00 U	1290	73	35-112	7	0-30
84-66-2	MSD Diethylphthalate	1780	0.00 U	1350	76	36-122	7	0-30

Semi-Volatile
Quality Control Summary
Spike Recovery Report

Page 7 of 8

SDG Number: 10-1981

Sample Type: Matrix Spike Duplicate

Client ID: RE15-10-8317MSD

Matrix: R

Lab Sample ID: 1202053897

%Moisture: 6.3

Instrument: MSD8.I

Analysis Date: 03/02/2010 19:35

Dilution: 1

Analyst: NAG1

Prep Batch ID: 957826

Inj. Vol: .5 uL

Batch ID: 957838

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	1780	0.00 U	1200	68	33-105	7	0-30
7005-72-3	MSD 4-Chlorophenylphenylether	1780	0.00 U	1270	72	30-110	6	0-30
534-52-1	MSD 2-Methyl-4,6-dinitrophenol	1780	0.00 U	924	52	26-97	22	0-30
100-01-6	MSD 4-Nitroaniline <i>p-Nitroaniline</i>	1780	0.00 U	1710	96	28-135	14	0-30
122-39-4	MSD Diphenylamine	1780	0.00 U	1510	85	33-109	4	0-30
122-66-7	MSD Azobenzene <i>1,2-Diphenylhydrazine</i>	1780	0.00 U	1250	70	31-113	5	0-30
101-55-3	MSD 4-Bromophenylphenylether	1780	0.00 U	1340	75	31-109	4	0-30
118-74-1	MSD Hexachlorobenzene	1780	0.00 U	1230	69	37-99	4	0-30
85-01-8	MSD Phenanthrene	1780	0.00 U	1250	71	29-109	5	0-30
120-12-7	MSD Anthracene	1780	0.00 U	1200	67	19-118	4	0-30
84-74-2	MSD Di-n-butylphthalate	1780	0.00 U	1430	80	39-123	3	0-30
206-44-0	MSD Fluoranthene	1780	0.00 U	1210	68	33-114	6	0-30
85-68-7	MSD Butylbenzylphthalate	1780	0.00 U	1460	82	35-131	0	0-30
56-55-3	MSD Benzo(a)anthracene	1780	0.00 U	1170	66	30-111	4	0-30
91-94-1	MSD 3,3'-Dichlorobenzidine	1780	0.00 U	1280	72	30-124	7	0-30
218-01-9	MSD Chrysene	1780	0.00 U	1200	68	32-108	0	0-30
117-81-7	MSD bis(2-Ethylhexyl)phthalate	1780	0.00 U	1510	85	37-129	0	0-30
117-84-0	MSD Di-n-octylphthalate	1780	0.00 U	1710	96	31-143	3	0-30
205-99-2	MSD Benzo(b)fluoranthene	1780	0.00 U	1310	73	29-118	4	0-30
207-08-9	MSD Benzo(k)fluoranthene	1780	0.00 U	1310	73	32-118	1	0-30
50-32-8	MSD Benzo(a)pyrene	1780	0.00 U	1310	74	33-115	5	0-30
193-39-5	MSD Indeno(1,2,3-cd)pyrene	1780	0.00 U	1120	63	29-114	13	0-30

Semi-Volatile

Page 8 of 8

Quality Control Summary
Spike Recovery Report

SDG Number: 10-1981

Sample Type: Matrix Spike Duplicate

Client ID: RE15-10-8317MSD

Matrix: R

Lab Sample ID: 1202053897

% Moisture: 6.3

Instrument: MSD8.1

Analysis Date: 03/02/2010 19:35

Dilution: 1

Analyst: NAG1

Pre Batch ID: 957826

Inj. Vol: .5 uL

Batch ID: 957838

CAS No	Parname	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	1780	0.00 U	1420	80	27-119	9	0-30
191-24-2	MSD Benzo(ghi)perylene	1780	0.00 U	1170	66	28-112	8	0-30
120-82-1	MSD 1,2,4-Trichlorobenzene	1780	0.00 U	1280	72	28-99	9	0-30

Method Blank Summary

Page 1 of 1

SDG Number:	10-1981	Client:	LANL010	Matrix:	SOIL
Client ID:	MB for batch 957826	Instrument ID:	MSD8.I	Data File:	s8c0105-1.d
Lab Sample ID:	1202053894	Prep Date:	02/25/2010 21:57	Analyzed:	03/01/10 14:03
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 957826	1202053895	s8c0106-1.d	03/01/10	1431
02 RE15-10-8386	247790002	s8c0116.d	03/01/10	1929
03 RE15-10-8387	247790003	s8c0219.d	03/02/10	1807

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC

Client SDG: 10-1981

Instrument ID: MSD8.I

Injection Date/Time: 01-MAR-10 12:11

Column Description: J & W DB-5MS

Lab File ID /chem/MSD8.i/s030110.b/s8c0101.d

m/e	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% Relative Abundance	100
51	30 - 60% of mass 198	32
68	Less than 2% of mass 69	0
69	Mass 69 Relative Abundance	36.3
70	Less than 2% of mass 69	0.5
127	40 - 60% of mass 198	48.7
197	0 - 1% of mass 198	0
199	5 - 9% of mass 198	6.7
275	10 - 30% of mass 198	27
365	Greater than 1% of mass 198	2.8
441	Present, but less than mass 443	83.1
442	Greater than 40% of mass 198	69.1
443	17 - 23% of mass 442	19.4

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	WBN100215-05.3	s8c0102.d	01-MAR-10 12:28
API2CVS	WBN100218-03.5	s8c0103.d	01-MAR-10 13:03
SBLK01	1202053894	s8c0105-1.d	01-MAR-10 14:03
SBLK01LCS	1202053895	s8c0106-1.d	01-MAR-10 14:31
RE15-10-8386	247790002	s8c0116.d	01-MAR-10 19:29

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC

Client SDG: 10-1981

Instrument ID: MSD8.I

Injection Date/Time: 02-MAR-10 09:18

Column Description: J & W DB-5MS

Lab File ID /chem/MSD8.i/s030210.b/s8c0201.d

m/e	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% Relative Abundance	100
51	30 - 60% of mass 198	30.9
68	Less than 2% of mass 69	0.3
69	Mass 69 Relative Abundance	35.6
70	Less than 2% of mass 69	0.5
127	40 - 60% of mass 198	48
197	0 - 1% of mass 198	0
199	5 - 9% of mass 198	6.8
275	10 - 30% of mass 198	27.8
365	Greater than 1% of mass 198	3
441	Present, but less than mass 443	85.9
442	Greater than 40% of mass 198	74.3
443	17 - 23% of mass 442	19.1

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	WBN100225-05.5	s8c0202.d	02-MAR-10 09:35
API2CVS	WBN100218-03.5	s8c0203.d	02-MAR-10 10:07
RE15-10-8387	247790003	s8c0219.d	02-MAR-10 18:07

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC

Client SDG: 10-1981

Instrument ID: MSD8.I

Injection Date/Time: 20-FEB-10 12:04

Column Description: J & W DB-5MS

Lab File ID /chem/MSD8.i/s022010.b/s8b2001.d

m/e	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% Relative Abundance	100
51	30 - 60% of mass 198	41.9
68	Less than 2% of mass 69	1.9
69	Mass 69 Relative Abundance	40.3
70	Less than 2% of mass 69	0.6
127	40 - 60% of mass 198	49.9
197	0 - 1% of mass 198	0
199	5 - 9% of mass 198	6.8
275	10 - 30% of mass 198	24.3
365	Greater than 1% of mass 198	2.6
441	Present, but less than mass 443	76.5
442	Greater than 40% of mass 198	61.7
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
MEGAICAL	WBN100215-08	s8b2003.d	20-FEB-10 12:55
MEGAICAL	WBN100215-07	s8b2004.d	20-FEB-10 13:30
MEGAICAL	WBN100215-06	s8b2005.d	20-FEB-10 14:05
MEGAICAL	WBN100215-05.1	s8b2006.d	20-FEB-10 14:40
MEGAICAL	WBN100215-04	s8b2007.d	20-FEB-10 15:14
MEGAICAL	WBN100215-03	s8b2008.d	20-FEB-10 15:50
MEGAICAL	WBN100215-02	s8b2009.d	20-FEB-10 16:25
MEGAICAL	WBN100215-01	s8b2010.d	20-FEB-10 16:59
MEGAICV	WBN100215-05.1	s8b2012.d	20-FEB-10 18:09

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC

Client SDG: 10-1981

Instrument ID: MSD8.J

Injection Date/Time: 21-FEB-10 08:35

Column Description: J & W DB-5MS

Lab File ID /chem/MSD8.i/s022010.b/s8b2013.d

m/e	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% Relative Abundance	100
51	30 - 60% of mass 198	40.5
68	Less than 2% of mass 69	1.8
69	Mass 69 Relative Abundance	38.9
70	Less than 2% of mass 69	0.6
127	40 - 60% of mass 198	48.8
197	0 - 1% of mass 198	0
199	5 - 9% of mass 198	6.8
275	10 - 30% of mass 198	25.3
365	Greater than 1% of mass 198	2.8
441	Present, but less than mass 443	76.6
442	Greater than 40% of mass 198	61.7
443	17 - 23% of mass 442	19.7

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
APICAL	WBN100218-01	s8b2015.d	21-FEB-10 09:21
APICAL	WBN100218-02	s8b2016.d	21-FEB-10 09:52
APICAL	WBN100218-03.1	s8b2017.d	21-FEB-10 10:23
APICAL	WBN100218-04	s8b2018.d	21-FEB-10 10:54
APICAL	WBN100218-05	s8b2019.d	21-FEB-10 11:26
APICAL	WBN100218-06	s8b2020.d	21-FEB-10 11:59
APICAL	WBN100218-07	s8b2021.d	21-FEB-10 12:30
APICV	WBN100218-08.1	s8b2035.d	21-FEB-10 19:53

Internal Standard Area and RT Summary

Lab Name : GEL Laboratories LLC

Client SDG: 10-1981

Instrument: MSD8.J

STD Analysis Time: 01-MAR-10 12:28

GC Column: J&W DB-5MS

Data File: s8c0102.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	382428		4.32	1513586		5.57	930718		7.43	1722494		9.02	1730470		11.9	1407560		13.9
Upper Limit	764856		4.82	3027172		6.07	1861436		7.93	3444988		9.52	3460940		12.4	2815120		14.4
Lower Limit	191214		3.82	756793		5.07	465359		6.93	861247		8.52	865235		11.4	703780		13.4
Sample ID																		
BLK01	407887		4.31	1530818		5.56	893865		7.42	1594962		9.01	1442616		11.9	1161684		13.9
BLK01LCS	412008		4.31	1550261		5.57	940870		7.42	1727881		9.02	1765079		11.9	1340583		13.9
RE15-10-8386	467136		4.31	1793362		5.56	1076623		7.42	1889708		9.01	1339491		11.9	778416		13.9

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

Internal Standard Area and RT Summary

Lab Name : GEL Laboratories LLC

Client SDG: 10-1981

Instrument: MSD8.1

STD Analysis Time: 02-MAR-10 09:35

GC Column: J&W DB-5MS

Data File: s8c0202.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	378003		4.4		1472940		5.66		879992		7.52		1554554		9.12		1456663		12.0		1135773		14.1	
Upper Limit	756006		4.9		2945880		6.16		1759984		8.02		3109108		9.62		2913326		12.5		2271546		14.6	
Lower Limit	189002		3.9		736470		5.16		439996		7.02		777277		8.62		728332		11.5		567887		13.6	
Sample ID																								
RE15-10-8387	454461		4.4		1739553		5.66		1049310		7.52		1879120		9.12		1534015		12.0		889047		14.1	

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: 10-1981
Lab Sample ID: 247790002

Date Collected: 02/17/2010 12:00
Date Received: 02/23/2010 08:50
Client: LANL010
Method: SW846 8270C
Inst: MSD8.I
Analyst: NAG1
Aliquot: 30.03 g
Column: J&W DB-5MS

Matrix: R
%Moisture: 5.4
Project: LANL01004
SOP Ref: GL-OA-E-009
Dilution: 1
Inj. Vol: .5 uL
Final Volume: 1 mL
Level: LOW

Client ID: RE15-10-8386
Batch ID: 957838
Run Date: 03/01/2010 19:29
Prep Date: 02/25/2010 21:57
Data File: s8c0116.d

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	352	ug/kg	70.4	352
108-95-2	Phenol	U	352	ug/kg	70.4	352
95-57-8	2-Chlorophenol	U	352	ug/kg	70.4	352
106-46-7	1,4-Dichlorobenzene	U	352	ug/kg	70.4	352
621-64-7	N-Nitrosodipropylamine	U	352	ug/kg	70.4	352
59-50-7	4-Chloro-3-methylphenol	U	352	ug/kg	70.4	352
83-32-9	Accnaphthene	U	35.2	ug/kg	11.6	35.2
121-14-2	2,4-Dinitrotoluene	U	352	ug/kg	35.2	352
100-02-7	4-Nitrophenol	U	352	ug/kg	116	352
87-86-5	Pentachlorophenol	U	352	ug/kg	88.0	352
129-00-0	Pyrene	U	35.2	ug/kg	10.6	35.2
110-86-1	Pyridine	U	352	ug/kg	70.4	352
62-53-3	Aniline	U	352	ug/kg	106	352
111-44-4	bis(2-Chloroethyl) ether	U	352	ug/kg	70.4	352
541-73-1	1,3-Dichlorobenzene	U	352	ug/kg	70.4	352
100-51-6	Benzyl alcohol	U	352	ug/kg	106	352
95-50-1	1,2-Dichlorobenzene	U	352	ug/kg	70.4	352
108-60-1	bis(2-Chloroisopropyl)ether	U	352	ug/kg	70.4	352
95-48-7	o-Cresol	U	352	ug/kg	70.4	352
65794-96-9	m,p-Cresols	U	352	ug/kg	106	352
67-72-1	Hexachloroethane	U	352	ug/kg	70.4	352
98-95-3	Nitrobenzene	U	352	ug/kg	70.4	352
78-59-1	Isophorone	U	352	ug/kg	70.4	352
88-75-5	2-Nitrophenol	U	352	ug/kg	70.4	352
105-67-9	2,4-Dimethylphenol	U	352	ug/kg	123	352
111-91-1	bis(2-Chloroethoxy)methane	U	352	ug/kg	70.4	352
120-83-2	2,4-Dichlorophenol	U	352	ug/kg	70.4	352
65-85-0	Benzoic acid	U	704	ug/kg	176	704
91-20-3	Naphthalene	U	35.2	ug/kg	10.6	35.2
106-47-8	4-Chloroaniline	U	352	ug/kg	70.4	352
87-68-3	Hexachlorobutadiene	U	352	ug/kg	70.4	352
91-57-6	2-Methylnaphthalene	U	35.2	ug/kg	7.04	35.2
77-47-4	Hexachlorocyclopentadiene	U	352	ug/kg	70.4	352
88-06-2	2,4,6-Trichlorophenol	U	352	ug/kg	70.4	352
95-95-4	2,4,5-Trichlorophenol	U	352	ug/kg	70.4	352
91-58-7	2-Chloronaphthalene	U	35.2	ug/kg	11.6	35.2
88-74-4	2-Nitroaniline	U	352	ug/kg	70.4	352
99-09-2	<i>o</i> -Nitroaniline	U	352	ug/kg	70.4	352
	<i>3</i> -Nitroaniline					

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

SDG Number: 10-1981
Lab Sample ID: 247790002

Date Collected: 02/17/2010 12:00
Date Received: 02/23/2010 08:50
Client: LANL010
Method: SW846 8270C
Inst: MSD8J
Analyst: NAG1
Aliquot: 30.03 g
Column: J&W DB-5MS

Matrix: R
%Moisture: 5.4
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
131-11-3	<i>m</i> -Nitroaniline					
	Dimethylphthalate	U	352	ug/kg	70.4	352
606-20-2	2,6-Dinitrotoluene	U	352	ug/kg	35.2	352
208-96-8	Acenaphthylene	U	35.2	ug/kg	10.6	35.2
51-28-5	2,4-Dinitrophenol	U	704	ug/kg	134	704
132-64-9	Dibenzofuran	U	352	ug/kg	70.4	352
84-66-2	Diethylphthalate	U	352	ug/kg	70.4	352
86-73-7	Fluorene	U	35.2	ug/kg	10.6	35.2
7005-72-3	4-Chlorophenylphenylether	U	352	ug/kg	70.4	352
534-52-1	2-Methyl-4,6-dinitrophenol	U	352	ug/kg	70.4	352
100-01-6	4-Nitroaniline	U	352	ug/kg	106	352
	<i>p</i> -Nitroaniline					
122-39-4	Diphenylamine	U	352	ug/kg	70.4	352
122-66-7	Azobenzene	U	352	ug/kg	70.4	352
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	352	ug/kg	70.4	352
118-74-1	Hexachlorobenzene	U	352	ug/kg	70.4	352
85-01-8	Phenanthrene	U	35.2	ug/kg	10.6	35.2
120-12-7	Anthracene	U	35.2	ug/kg	7.04	35.2
84-74-2	Di-n-butylphthalate	U	352	ug/kg	70.4	352
206-44-0	Fluoranthene	U	35.2	ug/kg	10.6	35.2
85-68-7	Butylbenzylphthalate	U	352	ug/kg	70.4	352
56-55-3	Benzo(a)anthracene	U	35.2	ug/kg	10.6	35.2
91-94-1	3,3'-Dichlorobenzidine	U	352	ug/kg	106	352
218-01-9	Chrysene	U	35.2	ug/kg	10.6	35.2
117-81-7	bis(2-Ethylhexyl)phthalate	U	352	ug/kg	70.4	352
117-84-0	Di-n-octylphthalate	U	352	ug/kg	70.4	352
205-99-2	Benzo(b)fluoranthene	U	35.2	ug/kg	10.6	35.2
207-08-9	Benzo(k)fluoranthene	U	35.2	ug/kg	10.6	35.2
50-32-8	Benzo(a)pyrene	U	35.2	ug/kg	10.6	35.2
193-39-5	Indeno(1,2,3-cd)pyrene	U	35.2	ug/kg	10.6	35.2
53-70-3	Dibenzo(a,h)anthracene	U	35.2	ug/kg	10.6	35.2
191-24-2	Benzo(ghi)perylene	U	35.2	ug/kg	10.6	35.2
120-82-1	1,2,4-Trichlorobenzene	U	352	ug/kg	70.4	352

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	2.93	148	ug/kg		JA

Data File: /chem/MSD8.i/s030110.b/s8c0116.d
 Report Date: 02-Mar-2010 07:31

Page 1

GEL Laboratories LLC

Data file : /chem/MSD8.i/s030110.b/s8c0116.d
 Lab Smp Id: 247790002 Client Smp ID: RE15-10-8386
 Inj Date : 01-MAR-2010 19:29
 Operator : nagl Inst ID: MSD8.i
 Smp Info : |247790002|957838|1|SVM|1|LANL
 Misc Info : |MSD8270_S|WBN100227-01
 Comment : Column: J & W DB-5MS, 25m x 0.20 mm x 0.33 micron film
 Method : /chem/MSD8.i/s030110.b/MSD8-8270AQA-022010.m
 Meth Date : 02-Mar-2010 07:06 nat00999 Quant Type: ISTD
 Cal Date : 21-FEB-2010 23:15 Cal File: s8b2042.d
 Als bottle: 16
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: 10-1981.sub
 Target Version: 3.50
 Processing Host: hpclp1

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	30.03000	weight of sample
M	5.40210	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG						CONCENTRATIONS	
		MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4		152	4.311	4.316	(1.000)	467136	40.0000	
* 29 Naphthalene-d8		136	5.563	5.573	(1.000)	1793362	40.0000	
* 46 Acenaphthene-d10		164	7.416	7.425	(1.000)	1076623	40.0000	
* 67 Phenanthrene-d10		188	9.011	9.016	(1.000)	1889708	40.0000	
* 91 Chrysene-d12		240	11.887	11.901	(1.000)	1339491	40.0000	
* 98 Perylene-d12		264	13.911	13.925	(1.000)	778416	40.0000	
\$ 3 2-Fluorophenol		112	3.173	3.168	(0.736)	509643	46.2117	1630
\$ 5 Phenol-d5		99	3.939	3.944	(0.914)	593361	43.1419	1520
\$ 20 Nitrobenzene-d5		82	4.835	4.844	(0.869)	283554	22.2424	783
\$ 39 2-Fluorobiphenyl		172	6.692	6.697	(0.902)	701279	22.1292	779
\$ 60 2,4,6-Tribromophenol		329	8.258	8.263	(1.114)	145303	40.8278	1440
\$ 81 p-terphenyl-d14		244	10.725	10.730	(0.902)	753646	31.2512	1100

ION RATIO REPORT

SV REPORT

Data file: s8c0116.d

Report Date: 03/02/2010 07:17

Lab. ID: 247790002

SampleType: SAMPLE

Injection Date: 01-MAR-2010 19:29

Operator: nagl

Instrument: MSD8.i

Sample Info: |247790002|957838|1|SVM|1|LANL

Miscellaneous Info: |MSD8270_S|WBN100227-01

Comment:

Method used: /chem/MSD8.i/s030110.b/MSD8-8270AQA-022010.m

Dilution Factor= 1.0

Integrator: HP RTE

Compound Sublist: 10-1981

Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
=====						
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	37361	4.83	4.69	80-120	100	(T)
42	16940	4.83	4.69	21- 81	45	(T)

44 2,6-Dinitrotoluene				CAS#: 606-20-2		
165	137939	7.42	7.20	80-120	100	(T)
63	1586	7.42	7.20	22- 82	1	(QT)

50 2,4-Dinitrotoluene				CAS#: 121-14-2		
165	137939	7.42	7.63	80-120	100	(T)
89	1699	7.42	7.63	37- 97	1	(QT)
63	1586	7.42	7.63	18- 78	1	(QT)

55 2-Methyl-4,6-dinitrophenol				CAS#: 534-52-1		
198	369	8.25	8.06	80-120	100	(T)
105	997	8.26	8.06	8- 68	270	(QT)
51	649	8.26	8.06	9- 69	176	(QT)

92 Chrysene				CAS#: 218-01-9		
228	2990	11.89	11.93	80-120	100	()
229	756	11.89	11.93	0- 49	25	()
226	178	11.89	11.93	0- 59	6	()

94 Di-n-octylphthalate				CAS#: 117-84-0		
149	599	12.76	12.76	80-120	100	()
43	301	12.73	12.76	0- 37	50	(Q)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

Data file : /chem/MSD8.i/s030110.b/s8c0116.d
Lab Smp Id: 247790002 Client Smp ID: RE15-10-8386
Inj Date : 01-MAR-2010 19:29
Operator : nag1 Inst ID: MSD8.i
Smp Info : |247790002|957838|1|SVM|1|LANL
Misc Info : |MSD8270 S|WBN100227-01
Comment : Column: J & W DB-5MS, 25m x 0.20 mm x 0.33 micron film
Method : /chem/MSD8.i/s030110.b/MSD8-8270AQA-022010.m
Meth Date : 02-Mar-2010 07:06 nat00999 Quant Type: ISTD
Cal Date : 21-FEB-2010 23:15 Cal File: s8b2042.d
Als bottle: 16
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 10-1981.sub
Target Version: 3.50
Processing Host: hpclp1

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	30.03000	weight of sample
M	5.40210	% moisture

Cpnd Variable

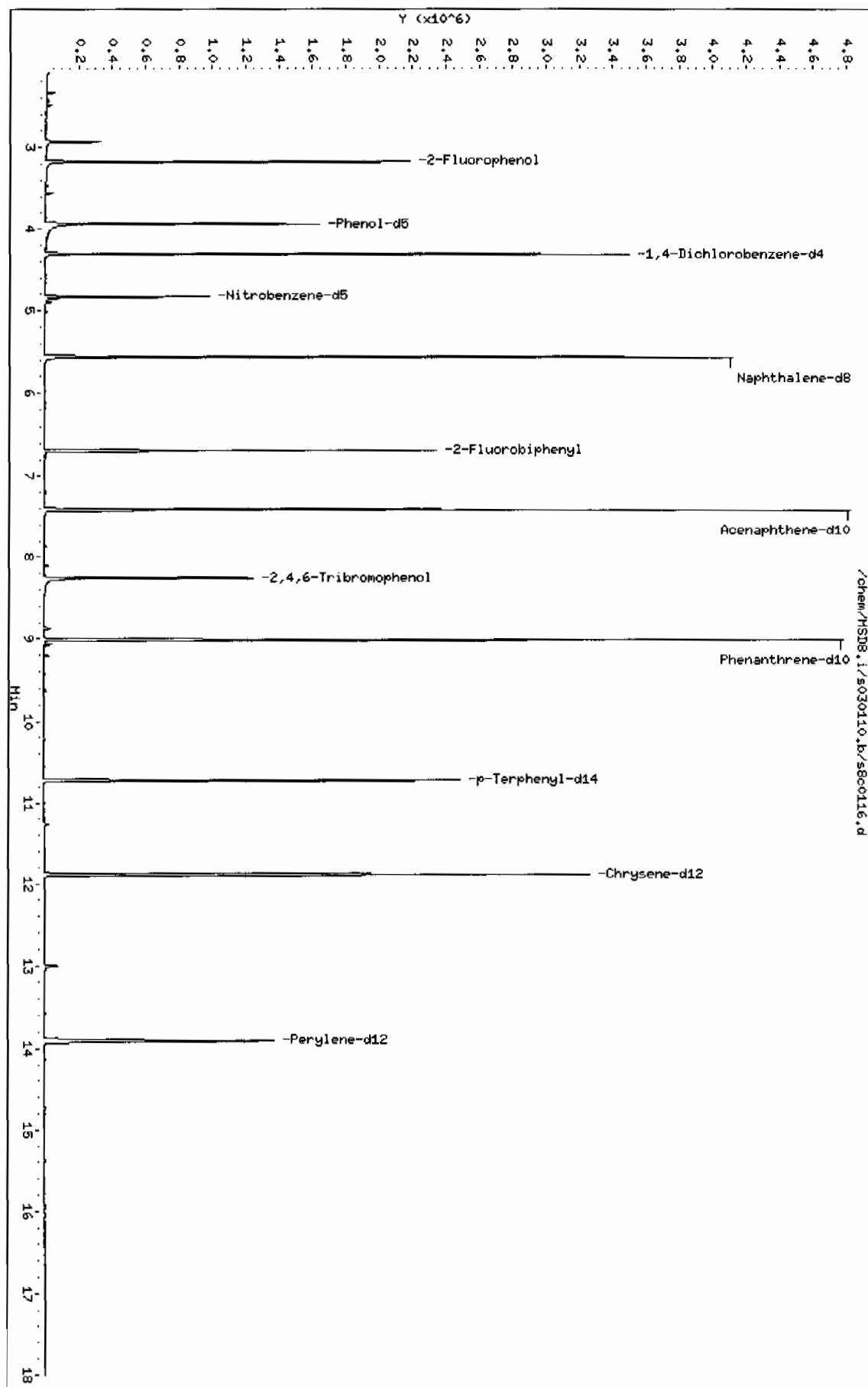
Local Compound Variable

ISTD	RT	AREA	AMOUNT
=====	=====	=====	=====
* 10 1,4-Dichlorobenzene-d4	4.311	2579214	40.000

CONCENTRATIONS				QUANT			
RT	AREA	ON-COL (ng/ul)	FINAL (ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
----	----	-----	-----	----	-----	-----	-----
Unknown Aldol Condensate					CAS #:		
2.935	270529	4.19552146	148	0		0	10

Data File: /chem/HSD8.i/s030110.k/s8c0116.d
Date: 01-MAR-2010 19:29
Client ID: RE15-10-8386
Sample Info: 1247900021957838115WH11LNL
Volume Injected (uL): 0.5
Column phase: J&W DB-SHS

Instrument: HSD8.i
Operator: nag1
Column diameter: 0.20



Date : 01-MAR-2010 19:29

Client ID: RE15-10-8386

Instrument: HSD8.i

Sample Info: I247790002195783811SVH11/LANL

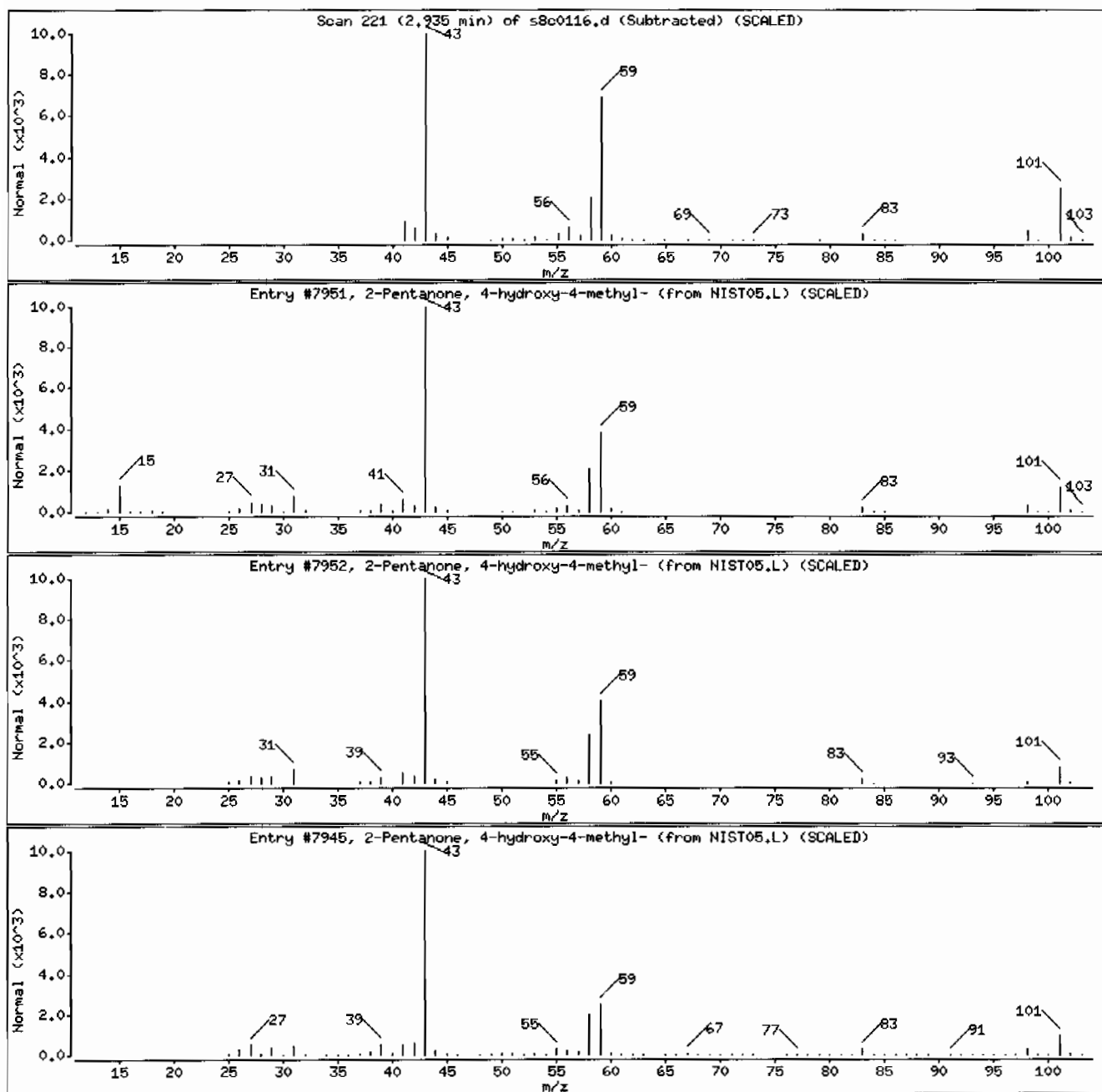
Volume Injected (uL): 0.5

Operator: nag1

Column phase: J&W DB-5HS

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	53	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	45	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7945	45	C6H12O2	116



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

SDG Number: 10-1981
Lab Sample ID: 247790003

Date Collected: 02/17/2010 12:00
Date Received: 02/23/2010 08:50
Client: LANL010
Method: SW846 8270C
Inst: MSD8.I
Analyst: NAG1
Aliquot: 30.19 g
Column: J&W DB-5MS

Matrix: R
%Moisture: 5.7
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	351	ug/kg	70.3	351
108-95-2	Phenol	U	351	ug/kg	70.3	351
95-57-8	2-Chlorophenol	U	351	ug/kg	70.3	351
106-46-7	1,4-Dichlorobenzene	U	351	ug/kg	70.3	351
621-64-7	N-Nitrosodipropylamine	U	351	ug/kg	70.3	351
59-50-7	4-Chloro-3-methylphenol	U	351	ug/kg	70.3	351
83-32-9	Acenaphthene	U	35.1	ug/kg	11.6	35.1
121-14-2	2,4-Dinitrotoluene	U	351	ug/kg	35.1	351
100-02-7	4-Nitrophenol	U	351	ug/kg	116	351
87-86-5	Pentachlorophenol	U	351	ug/kg	87.8	351
129-00-0	Pyrene	U	35.1	ug/kg	10.5	35.1
110-86-1	Pyridine	U	351	ug/kg	70.3	351
62-53-3	Aniline	U	351	ug/kg	105	351
111-44-4	bis(2-Chloroethyl) ether	U	351	ug/kg	70.3	351
541-73-1	1,3-Dichlorobenzene	U	351	ug/kg	70.3	351
100-51-6	Benzyl alcohol	U	351	ug/kg	105	351
95-50-1	1,2-Dichlorobenzene	U	351	ug/kg	70.3	351
108-60-1	bis(2-Chloroisopropyl)ether	U	351	ug/kg	70.3	351
95-48-7	o-Cresol	U	351	ug/kg	70.3	351
65794-96-9	m,p-Cresols	U	351	ug/kg	105	351
67-72-1	Hexachloroethane	U	351	ug/kg	70.3	351
98-95-3	Nitrobenzene	U	351	ug/kg	70.3	351
78-59-1	Isophorone	U	351	ug/kg	70.3	351
88-75-5	2-Nitrophenol	U	351	ug/kg	70.3	351
105-67-9	2,4-Dimethylphenol	U	351	ug/kg	123	351
111-91-1	bis(2-Chloroethoxy)methane	U	351	ug/kg	70.3	351
120-83-2	2,4-Dichlorophenol	U	351	ug/kg	70.3	351
65-85-0	Benzoic acid	U	703	ug/kg	176	703
91-20-3	Naphthalene	U	35.1	ug/kg	10.5	35.1
106-47-8	4-Chloroaniline	U	351	ug/kg	70.3	351
87-68-3	Hexachlorobutadiene	U	351	ug/kg	70.3	351
91-57-6	2-Methylnaphthalene	U	35.1	ug/kg	7.03	35.1
77-47-4	Hexachlorocyclopentadiene	U	351	ug/kg	70.3	351
88-06-2	2,4,6-Trichlorophenol	U	351	ug/kg	70.3	351
95-95-4	2,4,5-Trichlorophenol	U	351	ug/kg	70.3	351
91-58-7	2-Chloronaphthalene	U	35.1	ug/kg	11.6	35.1
88-74-4	2-Nitroaniline	U	351	ug/kg	70.3	351
99-09-2	<i>o</i> -Nitroaniline	U	351	ug/kg	70.3	351
	3-Nitroaniline					

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

SDG Number: 10-1981
Lab Sample ID: 247790003

Date Collected: 02/17/2010 12:00
Date Received: 02/23/2010 08:50
Client: LANL010
Method: SW846 8270C
Inst: MSD8.1
Analyst: NAG1
Aliquot: 30.19 g
Column: J&W DB-SMS

Matrix: R
%Moisture: 5.7
Project: LANL01004
SOP Ref: GL-OA-E-009
Dilution: 1
Inj. Vol: .5 uL
Final Volume: 1 mL
Level: LOW

Client ID: RE15-10-8387
Batch ID: 957838
Run Date: 03/02/2010 18:07
Prep Date: 02/25/2010 21:57
Data File: s8c0219.d

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
131-11-3	<i>m</i> -Nitroaniline					
	Dimethylphthalate	U	351	ug/kg	70.3	351
606-20-2	2,6-Dinitrotoluene	U	351	ug/kg	35.1	351
208-96-8	Acenaphthylene	U	35.1	ug/kg	10.5	35.1
51-28-5	2,4-Dinitrophenol	U	703	ug/kg	134	703
132-64-9	Dibenzofuran	U	351	ug/kg	70.3	351
84-66-2	Diethylphthalate	U	351	ug/kg	70.3	351
86-73-7	Fluorene	U	35.1	ug/kg	10.5	35.1
7005-72-3	4-Chlorophenylphenylether	U	351	ug/kg	70.3	351
534-52-1	2-Methyl-4,6-dinitrophenol	U	351	ug/kg	70.3	351
100-01-6	4-Nitroaniline	U	351	ug/kg	105	351
	<i>p</i> -Nitroaniline					
122-39-4	Diphenylamine	U	351	ug/kg	70.3	351
122-66-7	Azobenzene	U	351	ug/kg	70.3	351
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	351	ug/kg	70.3	351
118-74-1	Hexachlorobenzene	U	351	ug/kg	70.3	351
85-01-8	Phenanthrene	U	35.1	ug/kg	10.5	35.1
120-12-7	Anthracene	U	35.1	ug/kg	7.03	35.1
84-74-2	Di-n-butylphthalate	U	351	ug/kg	70.3	351
206-44-0	Fluoranthene	U	35.1	ug/kg	10.5	35.1
85-68-7	Butylbenzylphthalate	U	351	ug/kg	70.3	351
56-55-3	Benzo(a)anthracene	U	35.1	ug/kg	10.5	35.1
91-94-1	3,3'-Dichlorobenzidine	U	351	ug/kg	105	351
218-01-9	Chrysene	U	35.1	ug/kg	10.5	35.1
117-81-7	bis(2-Ethylhexyl)phthalate	U	351	ug/kg	70.3	351
117-84-0	Di-n-octylphthalate	U	351	ug/kg	70.3	351
205-99-2	Benzo(b)fluoranthene	U	35.1	ug/kg	10.5	35.1
207-08-9	Benzo(k)fluoranthene	U	35.1	ug/kg	10.5	35.1
50-32-8	Benzo(a)pyrene	U	35.1	ug/kg	10.5	35.1
193-39-5	Indeno(1,2,3-cd)pyrene	U	35.1	ug/kg	10.5	35.1
53-70-3	Dibenzo(a,h)anthracene	U	35.1	ug/kg	10.5	35.1
191-24-2	Benzo(ghi)perylene	U	35.1	ug/kg	10.5	35.1
120-82-1	1,2,4-Trichlorobenzene	U	351	ug/kg	70.3	351

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.03	173	ug/kg		JA

GEL Laboratories LLC

Data file : /chem/MSD8.i/s030210.b/s8c0219.d
Lab Smp Id: 247790003 Client Smp ID: RE15-10-8387
Inj Date : 02-MAR-2010 18:07
Operator : nagl Inst ID: MSD8.i
Smp Info : |247790003|957838|1|SVM|1|LANL
Misc Info : |MSD5C70D_S|WBN100227-01
Comment : Column: J & W DB-5MS, 25m x 0.20 mm x 0.33 micron film
Method : /chem/MSD8.i/s030210.b/MSD8-8270AQA-022010.m
Meth Date : 02-Mar-2010 20:07 nat00999 Quant Type: ISTD
Cal Date : 21-FEB-2010 23:15 Cal File: s8b2042.d
Als bottle: 19
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 10-1981.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	30.19000	weight of sample
M	5.72260	% 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	4.401	4.401	(1.000)	454461		40.0000	
* 29 Naphthalene-d8	136	5.658	5.663	(1.000)	1739553		40.0000	
* 46 Acenaphthene-d10	164	7.515	7.520	(1.000)	1049310		40.0000	
* 67 Phenanthrene-d10	188	9.115	9.115	(1.000)	1879120		40.0000	
* 91 Chrysene-d12	240	12.011	12.011	(1.000)	1534015		40.0000	
* 98 Perylene-d12	264	14.087	14.092	(1.000)	889047		40.0000	
\$ 3 2-Fluorophenol	112	3.263	3.253	(0.741)	496418		46.2679	1620
\$ 5 Phenol-d5	99	4.020	4.025	(0.913)	549359		41.0566	1440
\$ 20 Nitrobenzene-d5	82	4.925	4.934	(0.870)	277464		22.4379	788
\$ 39 2-Fluorobiphenyl	172	6.787	6.787	(0.903)	683273		22.1222	777
\$ 60 2,4,6-Tribromophenol	329	8.358	8.363	(1.112)	132886		38.3107	1350
\$ 81 p-Terphenyl-d14	244	10.830	10.830	(0.902)	823568		29.8201	1050

ION RATIO REPORT

SV REPORT

Data file: s8c0219.d

Report Date: 03/03/2010 06:57

Lab. ID: 247790003

SampleType: SAMPLE

Injection Date: 02-MAR-2010 18:07

Operator: nagl

Instrument: MSD8.i

Sample Info: |247790003|957838|1|SVM|1|LANL

Miscellaneous Info: |MSD5C70D_S|WBN100227-01

Comment:

Method used: /chem/MSD8.i/s030210.b/MSD8-8270AQA-022010.m

Dilution Factor= 1.0

Integrator: HP RTE

Compound Sublist: 10-1981

Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
=====						
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	36979	4.92	4.79	80-120	100	(T)
42	16678	4.92	4.79	21- 81	45	(T)

30 Naphthalene				CAS#: 91-20-3		
128	369	5.68	5.69	80-120	100	()
129	151	5.66	5.69	0- 41	41	()
127	0	0.00	5.69	0- 43	0	(T)

34 2-Methylnaphthalene				CAS#: 91-57-6		
142	299	6.40	6.41	80-120	100	()
141	183	6.40	6.41	56-116	61	()

44 2,6-Dinitrotoluene				CAS#: 606-20-2		
165	135466	7.52	7.29	80-120	100	(T)
63	1648	7.52	7.29	22- 82	1	(QT)

50 2,4-Dinitrotoluene				CAS#: 121-14-2		
165	135466	7.52	7.72	80-120	100	(T)
89	1651	7.52	7.72	36- 96	1	(QT)
63	1648	7.52	7.72	18- 78	1	(QT)

55 2-Methyl-4,6-dinitrophenol				CAS#: 534-52-1		
198	265	8.35	8.15	80-120	100	(T)
105	667	8.35	8.15	7- 67	252	(QT)
51	643	8.35	8.15	7- 67	243	(QT)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
=====						
92 Chrysene		CAS#: 218-01-9				
228	3577	12.01	12.04	80-120	100	()
229	856	12.01	12.04	0- 49	24	()
226	301	12.01	12.04	0- 58	8	()

94 Di-n-octylphthalate		CAS#: 117-84-0				
149	454	12.89	12.89	80-120	100	()
43	213	12.92	12.89	0- 37	47	(Q)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

Data file : /chem/MSD8.i/s030210.b/s8c0219.d
Lab Smp Id: 247790003 Client Smp ID: RE15-10-8387
Inj Date : 02-MAR-2010 18:07
Operator : nag1 Inst ID: MSD8.i
Smp Info : |247790003|957838|1|SVM|1|LANL
Misc Info : |MSD5C70D_S|WBN100227-01
Comment : Column: J & W DB-5MS, 25m x 0.20 mm x 0.33 micron film
Method : /chem/MSD8.i/s030210.b/MSD8-8270AQA-022010.m
Meth Date : 02-Mar-2010 20:07 nat00999 Quant Type: ISTD
Cal Date : 21-FEB-2010 23:15 Cal File: s8b2042.d
Als bottle: 19
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 10-1981.sub
Target Version: 3.50
Processing Host: hpclpl

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	30.19000	weight of sample
M	5.72260	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
=====	=====	=====	=====
* 10 1,4-Dichlorobenzene-d4	4.401	2497515	40.000

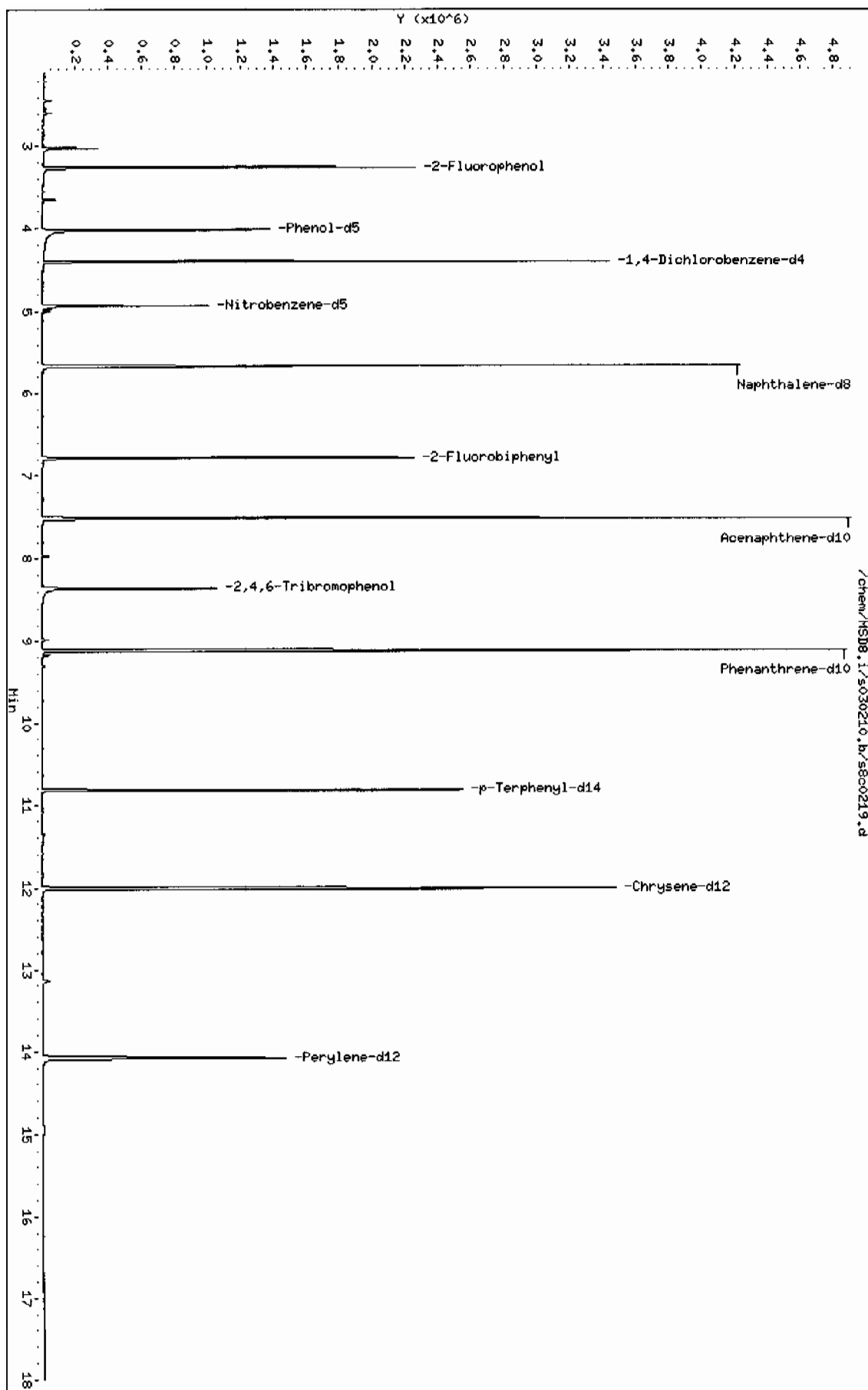
CONCENTRATIONS					QUANT		
RT	AREA	ON-COL (ng/ul)	FINAL (ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
=====	=====	=====	=====	=====	=====	=====	=====

Unknown Aldol Condensate				CAS #:			
3.030	308071	4.93403735	173	0		0	10

Data File: /chem/HSD8.i/s030210.b/s8c0219.d
Date: 02-MAR-2010 18:07
Client ID: REL5-10-8387
Sample Info: 1247790003196783811SVH11LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-SMS

Instrument: HSD8.i
Operator: nag1
Column diameter: 0.20

Page 1



Date : 02-MAR-2010 18:07

Client ID: RE15-10-8387

Instrument: HSD8.i

Sample Info: 1247790003195783811ISVM111LANL

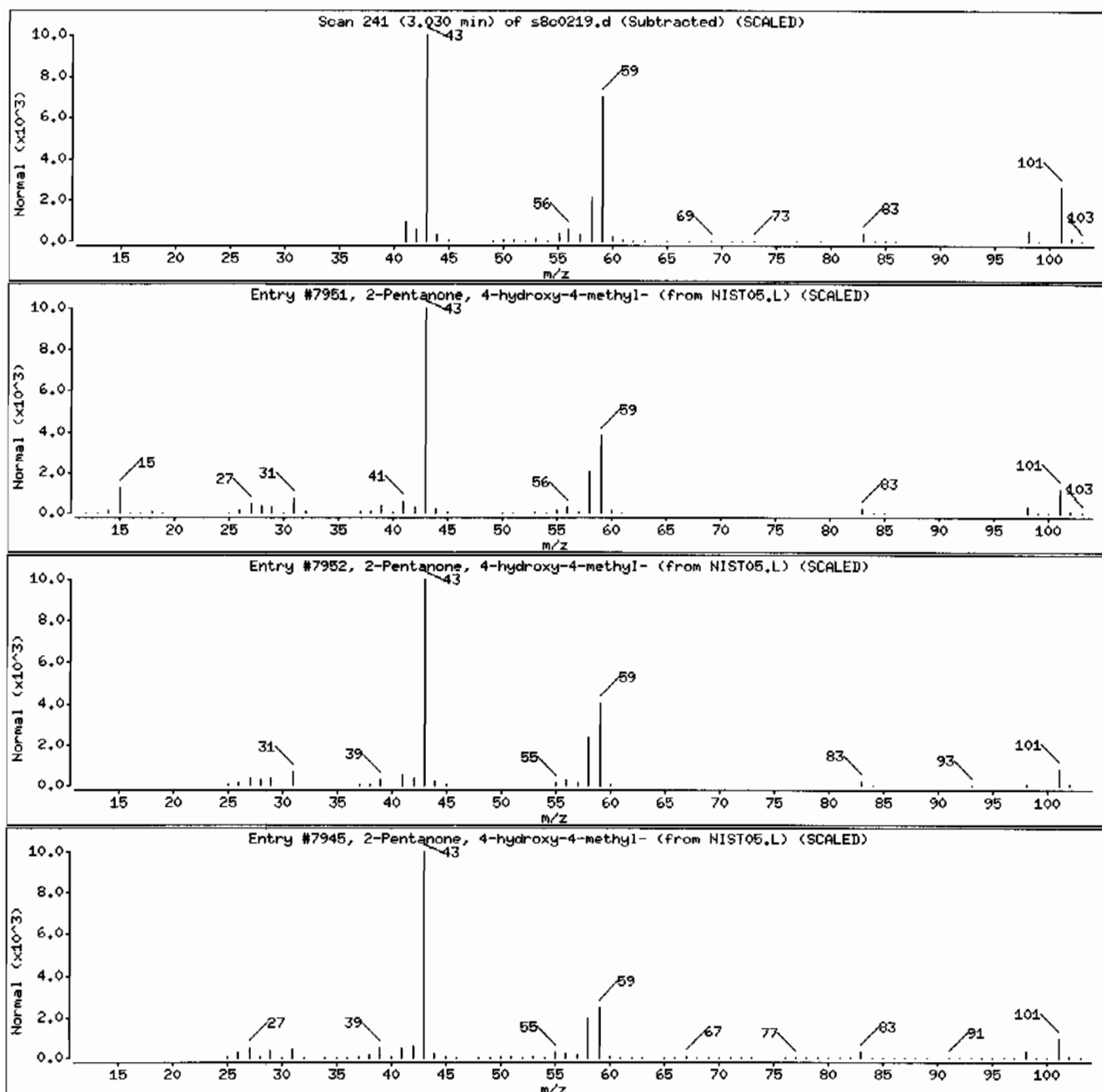
Volume Injected (uL): 0.5

Operator: nag1

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	53	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	45	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7945	42	C6H12O2	116



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
Safrole		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(j)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: 02-Mar-2010 07:30

Calibration History

Method : /chem/MSD8.i/s030110.b/MSD8-8270AQA-022010.m
Start Cal Date: 20-FEB-2010 12:55
End Cal Date : 22-FEB-2010 01:19

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 1.00000		
20-FEB-2010 12:55	MEGAIICARE	/chem/MSD8.i/s022010.b/s8b2003.d
Cal Level: 2 , Cal Amount: 10.00000		
21-FEB-2010 22:13	NEV	/chem/MSD8.i/s022010.b/s8b2040.d
21-FEB-2010 16:44	HEX	/chem/MSD8.i/s022010.b/s8b2029.d
21-FEB-2010 13:02	PEST	/chem/MSD8.i/s022010.b/s8b2022.d
21-FEB-2010 09:21	AP12	/chem/MSD8.i/s022010.b/s8b2015.d
20-FEB-2010 13:30	MEGAIICARE	/chem/MSD8.i/s022010.b/s8b2004.d
Cal Level: 3 , Cal Amount: 20.00000		
21-FEB-2010 22:45	NEV	/chem/MSD8.i/s022010.b/s8b2041.d
21-FEB-2010 17:16	HEX	/chem/MSD8.i/s022010.b/s8b2030.d
21-FEB-2010 13:33	PEST	/chem/MSD8.i/s022010.b/s8b2023.d
21-FEB-2010 09:52	AP12	/chem/MSD8.i/s022010.b/s8b2016.d
20-FEB-2010 14:05	MEGAIICARE	/chem/MSD8.i/s022010.b/s8b2005.d
Cal Level: 4 , Cal Amount: 40.00000		
21-FEB-2010 23:15	NEV	/chem/MSD8.i/s022010.b/s8b2042.d
21-FEB-2010 17:48	HEX	/chem/MSD8.i/s022010.b/s8b2031.d
21-FEB-2010 14:05	PEST	/chem/MSD8.i/s022010.b/s8b2024.d
21-FEB-2010 10:23	AP12	/chem/MSD8.i/s022010.b/s8b2017.d
20-FEB-2010 14:40	MEGAIICARE	/chem/MSD8.i/s022010.b/s8b2006.d
Cal Level: 5 , Cal Amount: 50.00000		
21-FEB-2010 23:46	NEV	/chem/MSD8.i/s022010.b/s8b2043.d
21-FEB-2010 18:19	HEX	/chem/MSD8.i/s022010.b/s8b2032.d
21-FEB-2010 14:37	PEST	/chem/MSD8.i/s022010.b/s8b2025.d
21-FEB-2010 10:54	AP12	/chem/MSD8.i/s022010.b/s8b2018.d
20-FEB-2010 15:14	MEGAIICARE	/chem/MSD8.i/s022010.b/s8b2007.d
Cal Level: 6 , Cal Amount: 80.00000		
22-FEB-2010 00:17	NEV	/chem/MSD8.i/s022010.b/s8b2044.d
21-FEB-2010 18:51	HEX	/chem/MSD8.i/s022010.b/s8b2033.d
21-FEB-2010 15:09	PEST	/chem/MSD8.i/s022010.b/s8b2026.d
21-FEB-2010 11:26	AP12	/chem/MSD8.i/s022010.b/s8b2019.d
20-FEB-2010 15:50	MEGAIICARE	/chem/MSD8.i/s022010.b/s8b2008.d
Cal Level: 7 , Cal Amount: 100.00000		

22-FEB-2010 00:48	NEV	/chem/MSD8.i/s022010.b/s8b2045.d
21-FEB-2010 19:22	HEX	/chem/MSD8.i/s022010.b/s8b2034.d
21-FEB-2010 15:40	PEST	/chem/MSD8.i/s022010.b/s8b2027.d
21-FEB-2010 11:59	AP12	/chem/MSD8.i/s022010.b/s8b2020.d
20-FEB-2010 16:25	MEGAIICARE	/chem/MSD8.i/s022010.b/s8b2009.d

Cal Level: 8 , Cal Amount: 120.00000

22-FEB-2010 01:19	NEV	/chem/MSD8.i/s022010.b/s8b2046.d
21-FEB-2010 16:12	PEST	/chem/MSD8.i/s022010.b/s8b2028.d
21-FEB-2010 12:30	AP12	/chem/MSD8.i/s022010.b/s8b2021.d
20-FEB-2010 16:59	MEGAIICARE	/chem/MSD8.i/s022010.b/s8b2010.d

Continuing Calibration

Ccal Level Mode: GLOBAL LEVEL 4

Ccal Level: 4 , Ccal Amount: 40.0

01-MAR-2010 12:28	MEGAIICARE	/chem/MSD8.i/s030110.b/s8c0102.d
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Ccal Level: 4 , Ccal Amount: 40.0

01-MAR-2010 13:03	AP12	/chem/MSD8.i/s030110.b/s8c0103.d
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GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 20-FEB-2010 12:55
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 Quant Method : ISTD
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/MSD8.i/s030110.b/MSD8-8270AQA-022010.m
 Cal Date : 02-Mar-2010 07:06 nat00999

Calibration File Names:

Level 1: /chem/MSD8.i/s022010.b/s8b2003.d
 Level 2: /chem/MSD8.i/s022010.b/s8b2040.d
 Level 3: /chem/MSD8.i/s022010.b/s8b2041.d
 Level 4: /chem/MSD8.i/s022010.b/s8b2042.d
 Level 5: /chem/MSD8.i/s022010.b/s8b2043.d
 Level 6: /chem/MSD8.i/s022010.b/s8b2044.d
 Level 7: /chem/MSD8.i/s022010.b/s8b2045.d
 Level 8: /chem/MSD8.i/s022010.b/s8b2046.d

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						
1 N-Methyl-N-nitrosomethylamine	++++ 0.57992	0.61951 0.58593	0.63665	0.62571	0.63931	0.60758	AVRG			0.60923		3.37337
2 Pyridine	++++ 0.87607	0.89446 0.87582	0.93458	0.90790	0.87786	0.88941	AVRG			0.89373		2.40541
4 Aniline	++++ 0.54402	0.55291 0.56183	0.56486	0.55215	0.55460	0.55759	AVRG			0.55542		1.23562
209 Benzaldehyde	++++ 0.82905	0.88461 0.77335	0.93065	0.82979	0.84335	0.81229	AVRG			0.84330		6.04219
6 Phenol	++++ 1.19022	1.21439 1.21801	1.26753	1.22620	1.19992	1.19696	AVRG			1.21617		2.13674

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Compound	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Curve	b	Coefficients m1	m2	%RSD or R^2
7 bis(2-Chloroethyl) ether	++++ 0.79428	0.86875 0.80161	0.87510 0.84552	0.82182	0.81301	AVRG	AVRG	0.83144	3.86597		
8 2-Chlorophenol	++++ 1.03335	1.03978 1.06466	1.08408	1.07215	1.04534	AVRG	AVRG	1.05301	1.05605	1.7387	
203 n-Decane	++++ 0.94466	1.27851 0.91988	1.24822	1.15740	1.07516	AVRG	AVRG	1.00264	1.08949	13.14312	
9 1,3-Dichlorobenzene	++++ 1.22581	1.28111 1.26112	1.28796	1.25869	1.21836	AVRG	AVRG	1.23373	1.25240	2.16688	
11 1,4-Dichlorobenzene	++++ 1.27786	1.29450 1.32204	1.32850	1.27510	1.26337	AVRG	AVRG	1.28372	1.29215	1.89951	
12 Benzyl alcohol	++++ 0.65441	0.63823 0.66840	0.66891	0.66923	0.65483	AVRG	AVRG	0.66997	0.66057	1.81681	
13 1,2-Dichlorobenzene	++++ 1.16994	1.23246 1.20670	1.24228	1.20302	1.17789	AVRG	AVRG	1.18128	1.20194	2.30652	
14 bis(2-Chloroisopropyl) ether	++++ 1.49862	1.75891 1.49146	1.77869	1.68785	1.62858	AVRG	AVRG	1.56724	1.63019	7.19167	
15 o-Cresol	++++ 0.83135	0.83685 0.85253	0.86246	0.86097	0.83301	AVRG	AVRG	0.83522	0.84463	1.60879	

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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									
	Level 7	Level 8									
16 Acetophenone	++++ 1.20314	1.22382 1.15394	1.29124	1.18127	1.20711	1.16108	AVRG		1.20309		3.85004
17 N-Nitrosodipropylamine	++++ 0.76559	0.77291 0.77632	0.78775	0.78533	0.78242	0.77484	AVRG		0.77788		0.99721
18 m,p-Cresols	++++ 1.06572	1.04493 1.08557	1.08669	1.06836	1.05918	1.07181	AVRG		1.06890		1.36774
19 Hexachloroethane	++++ 0.48126	0.48582 0.49008	0.49574	0.48975	0.48187	0.48407	AVRG		0.48694		1.06899
21 Nitrobenzene	++++ 0.29496	0.29364 0.29467	0.29812	0.29008	0.28855	0.29311	AVRG		0.29331		1.08619
22 Isophorone	++++ 0.54707	0.54198 0.54526	0.54074	0.53290	0.53134	0.54066	AVRG		0.53999		1.09041
23 2-Nitrophenol	++++ 0.13936	0.13002 0.13958	0.13039	0.13172	0.13404	0.13721	AVRS		0.13462		3.05487
24 2,4-Dimethylphenol	++++ 0.24421	0.23868 0.24544	0.23567	0.23285	0.23796	0.24044	AVRG		0.23932		1.86969
25 bis(2-Chloroethoxy)methane	++++ 0.30400	0.31326 0.30594	0.30893	0.29561	0.29347	0.29853	AVRG		0.30282		2.39356

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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 m2	m2	%RSD or R^2
26 2,4-Dichlorophenol	++++ 0.2235	0.20745 0.22510	0.21497 0.22510	0.21364 0.21364	0.21276 0.21276	0.21836 0.21836	AVRG	0.21654	0.21654		2.87770
27 Benzoic acid	++++ 779305	++++ 996763	83893	215984	333227	600127	LINR	0.37420	0.17210		0.99460
28 1,2,4-Trichlorobenzene	++++ 0.29534	0.30108 0.29975	0.29237 0.29975	0.28234	0.27990	0.28748	AVRG		0.29118		2.83696
30 Naphthalene	59622 4829589	408591 5952102	879341	1743176	2453204	3915424	LINR	0.05011	0.91806		0.99772
204 alpha-Terpineol	++++ 0.21504	0.23619 0.21341	0.23584	0.22166	0.22004	0.21591	AVRG		0.22259		4.31595
31 4-Chloroaniline	++++ 0.28493	0.27947 0.28604	0.29236 0.28604	0.29508	0.28109	0.28200	AVRG		0.28585		2.05307
189 Caprolactam	++++ 0.07008	0.05934 0.06871	0.06750	0.06559	0.06739	0.06727	AVRG		0.06655		5.20909
32 Hexachlorobutadiene	++++ 0.18360	0.18359 0.18593	0.18107	0.17811	0.17478	0.18060	AVRG		0.18110		2.07689
33 4-Chloro-3-methylphenol	++++ 0.24180	0.22447 0.24455	0.23171	0.23125	0.22996	0.23628	AVRG		0.23429		3.00125

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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
100	100	120									
Level 7 : Level 8 :											
34 2-Methylnaphthalene	38110 3185761	275963 3911554	600338 1651350	1198438 2574886	1651350 2574886	2574886	LINR	0.03268	0.6014		0.99853
35 1-Methylnaphthalene	38576 3139153	271665 3823750	594641 1616234	1175844 2506814	1616234 2506814	2506814	LINR	0.03094	0.58835		0.99835
36 Hexachlorocyclopentadiene	++++ 0.25115	0.21877 0.26766	0.25138 0.25138	0.24756 0.24756	0.25311 0.25311	0.24824	AVRG		0.24827		5.90114
208 1,1'-Biphenyl	++++ 1.25475	1.22247 1.22731	1.29127 1.29127	1.17987 1.17987	1.19898 1.19898	1.18070	AVRG		1.22219		3.32526
205 2,3-Dichloroaniline	++++ 0.55128	0.51270 0.57535	0.51480 0.51480	0.49871 0.49871	0.51091 0.51091	0.53248	AVRG		0.52803		5.10658
37 2,4,6-Trichlorophenol	++++ 0.33385	0.27914 0.34903	0.29504 0.32076	0.28876 0.31947	0.29978 0.31565	0.31571	AVRG		0.30819		8.34550
38 2,4,5-Trichlorophenol	++++ C.34169	0.29440 0.35990	0.32076 0.32076	0.31947 0.31947	0.31565 0.31565	0.33788	AVRG		C.32711		6.48907
40 2-Chloronaphthalene	36449 3039631	268251 3702903	582975 0.26998	1155795 0.26946	1582228 0.27364	2469755	AVRG	0.03655	1.02665		0.99760
42 o-Nitroaniline	++++ C.28197	0.25572 0.28884	0.26998 0.26998	0.26946 0.26946	0.27364 0.27364	0.27793	AVRG		0.27392		3.85593

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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
41 m-Nitroaniline	++++ 0.20505	0.18519 0.21482	0.21448	0.21492	0.21737	0.20957	AVRG		0.20877		5.36018
43 Dimethylphthalate	++++ 1.12375	1.12640 1.14118	1.14453	1.10613	1.09173	1.11237	AVRG		1.12089		1.68894
44 2,6-Dinitrotoluene	++++ 0.24733	0.25896 0.25426	0.26346	0.25342	0.24949	0.24696	AVRG		0.25341		2.42391
45 Acenaphthylene	2.18976 1.60612	1.59988 1.68189	1.58469	1.52835	1.53064	1.56415	AVRG		1.66068		13.20366
47 Acenaphthene	1.41358 1.02939	1.00028 1.07707	0.99778	0.98187	0.99926	1.00432	AVRG		1.06294		13.61052
48 2,4-Dinitrophenol	++++ 320377	++++ 412311	38021	93310	146622	245403	AVRG				
49 Dibenzofuran	++++ 1.41726	1.40644 1.49580	1.40820	1.32867	1.33815	1.36798	LINR	0.35935	0.12672		0.99075
50 2,4-Dinitrotoluene	++++ 0.33142	0.31049 0.34814	0.32653	0.32098	0.31786	0.31902	AVRG		1.39464		4.06888
51 Diethylphthalate	++++ 1.18165	1.16273 1.21522	1.19006	1.14803	1.15696	1.15712	AVRG		0.32492		3.75316
							AVRG		1.17311		2.02529

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Compound	1	10	20	40	50	80	Curve	b	Coefficients m1	m2	%RSD or R^2
52 4-Nitrophenol	++++ 0.14797	0.10359 0.15374	0.13187	0.13545	0.14163	0.14151	AVRG		0.13654		11.90490
53 Fluorene	1.69412 1.29401	1.18564 1.36155	1.18324	1.16123	1.18593	1.26226	AVRG		1.29100		13.69804
54 4-Chlorophenylphenylether	++++ 0.64896	0.59987 0.68125	0.60491	0.58503	0.59564	0.63651	AVRG		0.62173		5.60755
220 Hydroquinone	++++ ++++	++++ ++++	++++	++++	++++	++++	AVRG		0.000e+00		0.000e+00
55 2-Methyl-4,6-dinitrophenol	++++ 489102	26409 612903	78471	169233	248477	398816	LINR	0.16815	0.09594		0.99736
56 p-Nitroaniline	++++ 0.19726	0.13756 0.20537	0.16571	0.18963	0.20209	0.19373	AVRG		0.18448		13.23346
133 Diphenylamine	++++ 0.52558	0.48702 0.53844	0.48634	0.48646	0.49672	0.51765	AVRG		0.50546		4.26163
58 1,2-Diphenylhydrazine	++++ 0.59206	0.58322 0.60379	0.59673	0.58464	0.59299	0.60283	AVRG		0.59375		1.35599
59 Tributylphosphate	++++ 0.98996	0.85316 1.00565	0.98848	0.99919	0.98562	0.99554	AVRG		0.97394		5.51372

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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
61 4-Bromophenylphenylether	++++ 0.19629	0.18589 0.20338	0.18897	0.18392	0.18630	0.19322	AVRG		0.19114		3.62682
63 Hexachlorobenzene	++++ 0.20365	0.19642 0.21337	0.19554	0.19003	0.19110	0.20055	AVRG		0.19866		4.06498
207 Atrazine	++++ 0.03441	0.03758 0.03072	0.04062	0.03420	0.03665	0.03302	AVRG		0.0353		9.21662
65 Pentachlorophenol	++++ 0.09718	0.06388 0.10035	0.08247	0.08843	0.09083	0.09630	AVRG		0.08849		14.02887
206 n-Octadecane	++++ 0.37111	0.41912 0.36735	0.42264	0.40756	0.40012	0.39129	AVRG		0.39703		5.48958
68 Phenanthrene	65568 5370346	486199 6608324	1015060	2006630	2809008	4284140	ILNR	0.04915	0.98874		0.99753
69 Anthracene	1.26726 0.95537	0.89621 1.00675	0.90633	0.88074	0.91241	0.94159	AVRG		0.97083		13.00076
72 Di-n-butylphthalate	++++ 1.04405	0.94663 1.06383	0.99271	0.99656	1.01616	1.04338	AVRG		1.01476		3.93062
76 Fluoranthene	1.27400 1.01627	0.97604 1.03676	0.96078	0.93382	0.96162	0.98359	AVRG		1.01786		10.65772

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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
77 Benzidine	++++ 1879386	114948 2370017	240488	575469	576881	1632421	LINR	0.20503	0.37744		0.99275
79 Pyrene	1.59200 1.21785	1.13341 1.22742	1.18323	1.21037	1.19482	1.23234	AVRG		1.24889		11.38418
85 Butylbenzylphthalate	++++ 0.44474	0.37478 0.44980	0.43005	0.45705	0.44937	0.45125	AVRG		0.43672		6.54417
89 Benzo(a)anthracene	1.38070 1.04657	0.96707 1.07617	0.98220	0.98802	0.98013	1.02003	AVRG		1.05261		13.14311
90 3,3'-Dichlorobenzidine	++++ 0.27999	0.19682 0.27551	0.23362	0.24165	0.24177	0.26523	AVRG		0.24780		11.62921
92 Chrysene	56779 4593832	460630 5526812	913811	1690536	2342194	3398164	LINR	0.00950	0.92743		0.99892
93 bis(2-Ethylhexyl)phthalate	0.56666 0.64575	0.53374 0.66128	0.59392	0.62267	0.62324	0.64211	AVRG		0.61117		7.10990
94 Di-n-octylphthalate	++++ 4377445	368592 ++++	834860	1605441	2216889	3330642	LINR	0.13246	1.42322		0.99630
95 Benzo(b)fluoranthene	1.19103 1.17803	0.97573 1.29729	1.06659	1.08748	1.13194	1.14428	AVRG		1.13405		8.41332

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Compound	i	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													
			Level 7	Level 8													
96 Benzo(k)fluoranthene		1.26573	1.00893	1.07939	1.10364	1.13551	1.12361						AVRG	1.14008			7.11278
		1.19513	1.20870														
97 Benzo(a)pyrene		0.91365	0.85418	0.92377	0.94122	0.96804	0.99011						AVRG		0.95647		6.41651
		1.01342	1.04734														
99 Indeno(1,2,3-cd)pyrene		0.79917	0.81532	0.80541	0.77792	0.75613	0.85605						AVRG		0.79303		4.41296
		0.74498	0.78923														
100 Dibenzo(a,h)anthracene		0.61288	0.61866	0.60233	0.58469	0.57198	0.65233						AVRG				
		0.63604	0.62414												0.61288		4.28662
101 Benzo(ghi)perylene		0.75516	0.69322	0.66528	0.62680	0.59234	0.66873						AVRG		0.65613		8.07863
		0.64840	0.59909														
102 1,4-Dioxane		++++	0.35084	0.36273	0.32344	0.32306	0.29885						AVRG		0.32319		7.90081
		0.30758	0.29584														
103 Methyl methacrylate		++++	0.17778	0.18944	0.16410	0.16994	0.15571						AVRG		0.16817		7.11952
		0.16230	0.15788														
104 Ethyl methacrylate		++++	0.70693	0.75062	0.67894	0.68905	0.63812						AVRG		0.67963		6.10805
		0.66413	0.62961														
105 2-Picoline		++++	1.12830	1.19020	1.07957	1.10232	1.04185						AVRG		1.09294		4.88732
		1.07041	1.03794														

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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
106 N-Nitrosomethylethylamine	++++ 0.4409	0.44779 0.42146	0.46529	0.43489	0.44140	0.42410	AVRG		0.43986		3.39928
107 Methyl methanesulfonate	++++ 0.49978	0.52524 0.46508	0.54520	0.49099	0.48678	0.48343	AVRG		0.49950		5.43906
108 N-Nitrosodiethylamine	++++ 0.45963	0.46217 0.43541	0.49395	0.44813	0.46428	0.44274	AVRG		0.45804		4.7302
109 Ethyl Methanesulfonate	++++ 0.61342	0.62189 0.58197	0.65375	0.60074	0.60288	0.58949	AVRG		0.60902		3.91897
110 Pentachloroethane	++++ 0.32132	0.32386 0.30635	0.34717	0.31621	0.32412	0.30740	AVRG		0.32092		4.26755
111 N-Nitrosopyrrolidine	++++ 0.49612	0.47922 0.48073	0.51794	0.48306	0.49257	0.48446	AVRG		0.49059		2.76402
113 N-Nitrosomorpholine	++++ 0.65152	0.68559 0.61465	0.71997	0.66306	0.66815	0.64403	AVRG		0.66385		4.99866
114 o-Toluidine	++++ 1.62224	1.63357 1.57051	1.73837	1.58287	1.64173	1.56389	AVRG		1.62183		3.70471
115 N-Nitrosopiperidine	++++ 0.12371	0.12360 0.12009	0.13377	0.12334	0.12644	0.11963	AVRG		0.12437		3.81963

GEL Laboratories LLC
INITIAL CALIBRATION DATA

Start Cal Date : 20-FEB-2010 12:55
 End Cal Date : 22-FEB-2010 01:19
 Quant Method : ISTD
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/MSD8.i/s030110.b/MSD8-8270AQA-022010.m
 Cal Date : 02-Mar-2010 07:06 nat00999

Compound	i	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Curve	b	Coefficients m1	m2	%RSD or R^2
116 a,a-Dimethylphenethylamine	++++ 0.78780	0.64589 0.76698	0.73902	0.73378	0.77250	0.75528	AVRG			0.74304		6.29693
117 Triethylphosphorothioate	++++ 0.12726	0.12776 0.13005	0.13308	0.12715	0.12802	0.12765	AVRG			0.12828		0.97777
118 2,6-Dichlorophenol	++++ 0.20928	0.19213 0.20299	0.20693	0.19910	0.19955	0.20082	AVRG			0.20154		2.79228
119 Hexachloropropene	++++ 0.13255	0.11005 0.13069	0.12087	0.12529	0.11800	0.12775	AVRG			0.12360		6.37831
120 p-Phenylenediamine	++++ 0.18199	0.20097 0.16903	0.22012	0.20890	0.19933	0.19552	AVRG			0.19655		8.57847
121 N-Nitrosodi-n-butylamine	++++ 0.19691	0.22009 0.18916	0.23358	0.22059	0.22594	0.19498	AVRG			0.21161		8.26915
122 Safrrole	++++ 0.19409	0.19404 0.18904	0.20590	0.18988	0.19335	0.18710	AVRG			0.19334		3.19019
123 1,2,4,5-Tetrachlorobenzene	++++ 0.48299	0.48179 0.47441	0.50127	0.46416	0.46968	0.45641	AVRG			0.47582		3.07832
124 Isosafrole	++++ 0.32391	0.31959 0.31581	0.34105	0.31534	0.32095	0.31245	AVRG			0.32130		2.96333

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 Cal Date : 02-Mar-2010 07:06 nat00999

Compound	1	10	20	40	50	80	Curve	b	Coefficients m ²	m ²	%RSD or R ²
125 1,4-Naphthoquinone	++++ 0.23046	Level 2 120 Level 8 ++++	Level 3 0.32816	Level 4 0.34621	Level 5 0.30795	Level 6 0.25958	AVRG		0.29641		14.64421
126 m-Dinitrobenzene	++++ 0.16034	0.15594 ++++	0.16628	0.16332	0.16381	0.16032	AVRG		0.16162		2.24564
127 Pentachlorobenzene	++++ 0.44346	0.43767 0.43799	0.45121	0.42030	0.42682	0.42210	AVRG		0.43422		2.65150
128 1-Naphthylamine	++++ 0.87214	0.82239 0.85263	0.86814	0.82529	0.81386	0.84167	AVRG		0.84230		2.72431
129 2-Naphthylamine	++++ 0.94061	0.87494 0.91680	0.84477	0.88369	0.86051	0.89209	AVRG		0.88763		3.68720
130 2,3,4,6-Tetrachlorophenol	++++ 0.29224	0.25022 0.30421	0.26956	0.27043	0.27312	0.28194	AVRG		0.27739		6.29089
131 5-Nitro-o-toluidine	++++ 0.25619	0.21312 0.25185	0.24508	0.24089	0.23259	0.24890	AVRG		0.24122		6.04443
132 Thionazin	++++ 0.14438	0.13437 0.14610	0.14473	0.14728	0.14423	0.14621	AVRG		0.14390		3.02307
134 Sulfotep	++++ 0.08119	0.07479 0.08666	0.07643	0.07811	0.08209	0.08186	AVRG		0.08016		5.01325

GEL Laboratories LLC
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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									
135 Phorate	++++	0.29874	0.30476	0.30486	0.31798	0.30102	AVRG		0.30183		2.88237
	0.29242	0.29307									
136 1,3,5-Trinitrobenzene	++++	0.07415	0.09175	0.09919	0.09673	0.10189	AVRG		0.09499		10.32629
	0.10131	0.09994									
137 Phenacetin	++++	0.18206	0.20988	0.21406	0.21650	0.22859	AVRG		0.21690		8.45110
	0.23865	0.22853									
138 Diallyate	++++	0.20463	0.21020	0.19892	0.21153	0.19343	AVRG		0.20203		3.67352
	0.20258	0.19294									
139 Dimethoate	++++	0.14043	0.15915	0.16697	0.17200	0.17406	AVRG		0.16422		7.00813
	0.16740	0.16949									
140 4-Aminobiphenyl	++++	0.43217	0.48080	0.49774	0.49087	0.54937	AVRG		0.51727		11.12235
	0.58751	0.58243									
141 Pentachloronitrobenzene	++++	0.07756	0.08234	0.07796	0.08272	0.07781	AVRG		0.07936		3.09424
	0.08047	0.07668									
142 Pronamide	++++	0.24165	0.25727	0.24493	0.25850	0.24762	AVRG		0.25230		3.02507
	0.26196	0.25418									
143 Dinoseb	++++	36739	110780	253153	360839	582168	AVRG		0.25230		3.02507
	749359	959224					LINR	0.21574	0.15018		0.99408

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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	RSC or R^2
144 Disulfoton	++++ 0.22925	0.26489 0.23314	0.24948	0.24076	0.24841	0.23789	AVRG		0.24340		4.93796
145 Methyl parathion	++++ 0.16709	0.12612 0.17055	0.15136	0.15938	0.16288	0.16711	AVRG		0.15779		9.71146
146 4-Nitroquinoline-1-oxide	++++ ++++	0.02056 ++++	0.02289	0.01846	0.01666	0.01679	AVRG		0.01907		13.89367
147 Methapyrilene	++++ 0.28225	0.29694 0.26103	0.32659	0.28898	0.30536	0.28186	AVRG		0.29186		7.08529
148 Isodrin	++++ 0.10901	0.10688 0.10550	0.11119	0.10398	0.11043	0.10326	AVRG		0.10718		2.91403
149 Aramite	++++ 0.03486	0.03161 0.03195	0.03603	0.03415	0.03476	0.03379	AVRG		0.03388		4.71492
150 Kepone	++++ 0.07875	0.07589 0.07575	0.08420	0.07666	0.07796	0.07644	AVRG		0.07795		3.80313
151 p-(Dimethylamino)azobenzene	++++ 0.27510	0.22465 0.26877	0.25205	0.24804	0.27799	0.25995	AVRG		0.25808		7.17705
152 Chlorobenzilate	++++ 0.28069	0.22654 0.27880	0.24955	0.24660	0.29801	0.25875	AVRG		0.26271		9.30544

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Compound	1	10	20	40	50	80	Curve	b	Coefficients	m1	m2	%RSD or R^2
153 3,3'-Dimethylbenzidine	++++ 0.52259	0.37150 0.50844	0.43396	0.42299	0.44074	0.48724	AVRG			0.45535		11.72591
154 Famphur	++++ 0.36897	0.29682 0.38152	0.32006	0.33232	0.36789	0.37506	AVRG			0.34894		9.31134
155 2-Acetylaminofluorene	++++ 1402952	77941 1690573	174270	46888	454874	1169522	LINR	0.16495		0.26994		0.99689
157 7,12Dimethylbenz(a)anthracene	++++ 0.56747	0.44428 0.57419	0.50377	0.50095	0.52555	0.52043	AVRG			0.51909		8.50027
158 3-Methylcholanthrene	++++ 0.39268	0.31873 0.38502	0.35613	0.36783	0.37459	0.37965	AVRG			0.36780		6.70304
26 Phthalic anhydride	++++ 723533	35664 893615	121861	249075	381828	594958	AVRG					
173 Carbazole	0.89649 0.71352	0.61077 0.73688	0.58409	0.64323	0.66829	0.69364	AVRG	0.12971		0.14328		0.9997
174 Hexachlorophene	++++ 7386241	935628 ++++	3163522	4273678	5413416	6917749	AVRG			0.69337		13.94742
179 Dibenzo(a,e)pyrene	++++ 0.27252	0.28462 0.23457	0.26344	0.26698	0.22397	0.28475	AVRG	6.19705		0.07687		0.99449
							AVRG			0.26112		9.06299

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Compound	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Curve	b	Coefficients	m2	%RSD or R^2
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Curve	b	Coefficients	m2	%RSD or R^2
185 (2,3-Dibromopropyl)phosphate	++++	++++	++++	++++	++++	++++	AVRG		0.000e+00		0.000e+00
184 p-Benzoquinone	++++	13412	38094	103028	141046	214307	LNLR	0.07963	0.20135		0.99786
190 Parathion	+++	0.04141	0.04346	0.05375	0.05525	0.05615	AVRG		0.05291		10.91556
192 Methoxychlor	++++	0.47370	0.56446	0.59238	0.57838	0.60702	AVRG		0.57371		8.15235
210 m-Toluidine	++++	1.23929	1.38356	1.46111	1.48802	1.58621	AVRG		1.48620		9.61503
211 p-Toluidine	++++	1.6243	1.18370	1.16691	1.19548	1.08736	AVRG		1.14055		3.86703
212 Cis Diallyl	++++	0.20120	0.20767	0.19674	0.21346	0.19409	AVRG		0.20071		3.79541
213 Trans Diallyl	++++	0.19989	0.19195	0.23402	0.24886	0.22756	AVRG		0.23769		3.67352
214 1,4-Dinitrobenzene	++++	0.23833	0.22699	0.14712	0.16942	0.17667	AVRG		0.17136		7.34157

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 Cal Date : 02-Mar-2010 07:06 nat00999

Compound	1	10	20	40	50	80	Curve	b	Coefficients ml	m2	%RSD or R^2
215 2-Ethoxyethanol	++++ 0.55822	0.58676 0.54494	0.60203	0.59483	0.55565	0.57374	AVRG		0.57374		3.77318
216 Methylenebis(2-chloroaniline)	++++ 647915	36455 779120	87285	192808	305235	476431	LLNR	0.18581	0.13997		0.99822
229 2,2'-Dichlorobenzil	++++ 0.63091	0.53014 0.61172	0.54882	0.57218	0.56813	0.55363	AVRG		0.57365		6.23315
230 4-Chlorothioanisole	++++ 0.25390	0.23127 0.26275	0.22998	0.24707	0.25459	0.25234	AVRG		0.24741		4.99827
231 4-Chlorothiophenol	++++ 1130595	69510 1540522	156101	409410	538100	905821	LLNR	0.15090	0.21447		0.99884
232 bis(p-Chlorophenyl)sulfone	++++ 0.34792	0.32332 0.33496	0.32274	0.32522	0.32041	0.30818	AVRG		0.32611		3.81298
233 bis(p-Chlorophenyl)disulfide	++++ 0.12978	0.11382 0.12394	0.11054	0.12051	0.11929	0.11551	AVRG		0.11906		5.46007
234 Diphenyl disulfide	++++ 0.20205	0.19202 0.19917	0.19186	0.19737	0.19958	0.19288	AVRG		0.19642		2.10807
235 Diphenyl sulfide	++++ 0.81579	0.76604 0.83897	0.75916	0.77559	0.80138	0.79306	AVRG		0.79285		3.59622

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Compound	1	10	20	40	50	80	Coefficients	m2	%RSD or R^2
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	b		
	100	120							
	Level 7	Level 8							
236 Phenyl sulfone	++++	0.34800	0.34646	0.34913	0.35609	0.34394	AVRG	0.35221	2.05193
	0.35788	0.36394							
237 Hydroxymethyl phthalimide	++++	0.11562	0.12919	0.11505	0.10331	0.08699	AVRG	0.10525	14.88762
	0.09932	0.08725							
238 Phthalic acid	++++	20021	61221	192852	247836	445405	LINEAR	0.27721	0.11935
	592112	841517							
239 Thiophenol	++++	0.72136	0.86680	1.01677	1.07339	1.08115	AVRG	0.99193	14.55784
	1.06962	1.11441							
240 bis(Chloromethyl)ether	++++	0.73330	0.72927	0.75420	0.77531	0.76257	AVRG	0.74502	2.53135
	0.72897	0.73156							
241 Octachlorostyrene	++++	0.06930	0.06943	0.07008	0.07083	0.07166	AVRG	0.07215	4.62127
	0.07686	0.07691							
242 Trichlorophenols	++++	0.28677	0.30590	0.30411	0.30771	0.32680	AVRG	0.31765	7.28968
	0.33777	0.35446							
243 Tetrachlorophenols	++++	0.25022	0.26956	0.27043	0.27312	0.28194	AVRG	0.27739	6.29089
	0.29224	0.30421							
244 Benzo(b,k)fluoranthene	1.22838	0.99233	1.07299	1.09556	1.13372	1.13395	AVRG	1.13706	7.50876
	1.18658	1.25299							

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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 Level 7	120 Level 8									
M 225 TIO Sum Semivolatiles	++++ ++++	++++ ++++	++++ ++++	++++ ++++	++++ ++++	++++ ++++	AVRG AVRG		0.000e+00 0.000e+00		0.000e+00 0.000e+00
I\$ 3 2-Fluorophenol	++++ 0.93098	0.92659 0.94400	0.96919 0.94036	0.96659 0.94036	0.93281 0.94435		AVRG AVRG				1.80921
I\$ 5 Phenol-d5	++++ 1.15725	1.15492 1.19013	1.20808 1.17093	1.18961 1.17093	1.17303 1.17771		AVRG AVRG				1.63471
I\$ 187 2-Chlorophenol-d4	++++ ++++	++++ ++++	++++ ++++	++++ ++++	++++ ++++	++++ ++++	AVRG AVRG		0.000e+00 0.000e+00		0.000e+00 0.000e+00
I\$ 188 1,2-Dichlorobenzene-d4	++++ ++++	++++ ++++	++++ ++++	++++ ++++	++++ ++++	++++ ++++	AVRG AVRG		0.000e+00 0.000e+00		0.000e+00 0.000e+00
I\$ 20 Nitrobenzene-d5	0.28710 ++++	0.28463 1.17351	0.28610 1.17042	0.28272 1.12460	0.27867 1.11619	0.28386 1.18499	AVRG AVRG				1.06265
I\$ 39 2-Fluorobiphenyl	1.20400 ++++	1.26805 0.12711	1.17042 0.13347	1.12460 0.12836	1.11619 0.12619	1.18499 0.12779	AVRG AVRG		1.17740 0.13223		4.32813
I\$ 60 2,4,6-Tribromophenol	0.13893 ++++	0.14371 0.67083	0.12711 0.69230	0.13347 0.71233	0.12836 0.71339	0.12779 0.73658	AVRG AVRG				5.12665
I\$ 81 p-Terphenyl-d14	0.74530 ++++	0.77029 0.77029	0.69230 0.71233	0.71233 0.71339	0.71339 0.71339	0.73658 0.73658	AVRG AVRG		0.72015		4.65100

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

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD8.i Injection Date: 20-FEB-2010 18:09
Lab File ID: s8b2012.d Init. Cal. Date(s): 20-FEB-2010 22-FEB-2010
Analysis Type: Init. Cal. Times: 12:55 01:19
Lab Sample ID: WBN100215-05.1 Quant Type: ISTD
Method: /chem/MSD8.i/s022010.b/MSD8-8270AQA-022010.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
3 2-Fluorophenol	0.94435	0.91252	0.91252	0.000	-3.36963	60.00000	Averaged
5 Phenol-d5	1.17771	1.11967	1.11967	0.000	-4.92793	60.00000	Averaged
20 Nitrobenzene-d5	0.28435	0.28445	0.28445	0.000	0.03513	60.00000	Averaged
39 2-Fluorobiphenyl	1.17740	1.10971	1.10971	0.000	-5.74835	60.00000	Averaged
60 2,4,6-Tribromophenol	0.13223	0.12031	0.12031	0.000	-9.01194	60.00000	Averaged
81 p-Terphenyl-d14	0.72015	0.73651	0.73651	0.000	2.27163	60.00000	Averaged
1 N-Methyl-N-nitrosomethylami	0.60923	0.57218	0.57218	0.000	-6.08077	60.00000	Averaged
2 Pyridine	0.89373	0.67690	0.67690	0.000	-24.26051	60.00000	Averaged
4 Aniline	0.55542	0.50332	0.50332	0.000	-9.38073	60.00000	Averaged
6 Phenol	1.21617	1.17309	1.17309	0.001	-3.54259	20.00000	Averaged|ccc
7 bis(2-Chloroethyl) ether	0.83144	0.74294	0.74294	0.000	-10.64430	60.00000	Averaged
8 2-Chlorophenol	1.05605	1.02399	1.02399	0.000	-3.03618	60.00000	Averaged
203 n-Decane	1.08949	1.10768	1.10768	0.000	1.66910	60.00000	Averaged
9 1,3-Dichlorobenzene	1.25240	1.20785	1.20785	0.000	-3.55721	60.00000	Averaged
11 1,4-Dichlorobenzene	1.29215	1.21176	1.21176	0.001	-6.22171	20.00000	Averaged|ccc
13 1,2-Dichlorobenzene	1.20194	1.13600	1.13600	0.000	-5.48562	60.00000	Averaged
14 bis(2-Chloroisopropyl)ether	1.63019	1.56683	1.56683	0.000	-3.88699	60.00000	Averaged
12 Benzyl alcohol	0.66057	0.64188	0.64188	0.000	-2.82972	60.00000	Averaged
15 o-Cresol	0.84463	0.81254	0.81254	0.000	-3.79849	60.00000	Averaged
18 m,p-Cresols	1.06890	1.06346	1.06346	0.000	-0.50838	60.00000	Averaged
17 N-Nitrosodipropylamine	0.77788	0.74120	0.74120	0.050	-4.71529	60.00000	Averaged|spcc
19 Hexachloroethane	0.48694	0.45665	0.45665	0.000	-6.22059	60.00000	Averaged
21 Nitrobenzene	0.29331	0.27681	0.27681	0.000	-5.62390	60.00000	Averaged
22 Isophorone	0.53999	0.49377	0.49377	0.000	-8.55934	60.00000	Averaged
23 2-Nitrophenol	0.13462	0.13301	0.13301	0.001	-1.19474	20.00000	Averaged|ccc
24 2,4-Dimethylphenol	0.23932	0.22527	0.22527	0.000	-5.87154	60.00000	Averaged
25 bis(2-Chloroethoxy)methane	0.30282	0.26637	0.26637	0.000	-12.03559	60.00000	Averaged
26 2,4-Dichlorophenol	0.21654	0.20901	0.20901	0.001	-3.47894	20.00000	Averaged|ccc
27 Benzoic acid	41.94960	40.00000	0.11609	0.000	4.87400	60.00000	Linear
28 1,2,4-Trichlorobenzene	0.29118	0.26506	0.26506	0.000	-8.96931	60.00000	Averaged
30 Naphthalene	35.39177	40.00000	0.76629	0.000	-11.52057	60.00000	Linear
204 alpha-Terpeneol	0.22259	0.20059	0.20059	0.000	-9.88109	60.00000	Averaged
31 4-Chloroaniline	0.28585	0.27423	0.27423	0.000	-4.06642	60.00000	Averaged
32 Hexachlorobutadiene	0.18110	0.17017	0.17017	0.001	-6.03393	20.00000	Averaged|ccc
33 4-Chloro-3-methylphenol	0.23429	0.22644	0.22644	0.001	-3.34816	20.00000	Averaged|ccc
34 2-Methylnaphthalene	37.56535	40.00000	0.54491	0.000	-6.08662	60.00000	Linear

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD8.i Injection Date: 20-FEB-2010 18:09
Lab File ID: s8b2012.d Init. Cal. Date(s): 20-FEB-2010 22-FEB-2010
Analysis Type: Init. Cal. Times: 12:55 01:19
Lab Sample ID: WBN100215-05.1 Quant Type: ISTD
Method: /chem/MSD8.i/s022010.b/MSD8-8270AQA-022010.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
35 1-Methylnaphthalene	36.14060	40.00000	0.51338	0.000	-9.64851	60.00000	Linear
36 Hexachlorocyclopentadiene	0.24827	0.20951	0.20951	0.050	-15.61096	60.00000	Averaged|spcc
205 2,3-Dichloroaniline	0.52803	0.47281	0.47281	0.000	-10.45916	60.00000	Averaged
37 2,4,6-Trichlorophenol	0.30819	0.28652	0.28652	0.001	-7.02903	20.00000	Averaged|ccc
38 2,4,5-Trichlorophenol	0.32711	0.32121	0.32121	0.000	-1.80308	60.00000	Averaged
40 2-Chloronaphthalene	36.94398	40.00000	0.91069	0.000	-7.64006	60.00000	Linear
42 o-Nitroaniline	0.27392	0.25926	0.25926	0.000	-5.35118	60.00000	Averaged
41 m-Nitroaniline	0.20877	0.20131	0.20131	0.000	-3.57417	60.00000	Averaged
43 Dimethylphthalate	1.12088	1.03748	1.03748	0.000	-7.44016	60.00000	Averaged
44 2,6-Dinitrotoluene	0.25341	0.23417	0.23417	0.000	-7.59187	60.00000	Averaged
50 2,4-Dinitrotoluene	0.32492	0.29882	0.29882	0.000	-8.03184	60.00000	Averaged
45 Acenaphthylene	1.66068	1.47808	1.47808	0.000	-10.99555	60.00000	Averaged
47 Acenaphthene	1.06294	0.89925	0.89925	0.001	-15.39975	20.00000	Averaged|ccc
48 2,4-Dinitrophenol	42.02206	40.00000	0.08759	0.050	5.05516	60.00000	Linear|spcc
49 Dibenzofuran	1.39464	1.27908	1.27908	0.000	-8.28625	60.00000	Averaged
51 Diethylphthalate	1.17311	1.07200	1.07200	0.000	-8.61955	60.00000	Averaged
52 4-Nitrophenol	0.13654	0.14391	0.14391	0.050	5.40043	60.00000	Averaged|spcc
53 Fluorene	1.29100	1.07540	1.07540	0.000	-16.69989	60.00000	Averaged
54 4-Chlorophenylphenylether	0.62173	0.54162	0.54162	0.000	-12.88500	60.00000	Averaged
55 2-Methyl-4,6-dinitrophenol	48.66926	40.00000	0.10060	0.000	21.67316	60.00000	Linear
56 p-Nitroaniline	0.18448	0.18495	0.18495	0.000	0.25453	60.00000	Averaged
133 Diphenylamine	0.50546	0.46520	0.46520	0.001	-7.96469	20.00000	Averaged|ccc
58 1,2-Diphenylhydrazine	0.59375	0.56532	0.56532	0.000	-4.78833	60.00000	Averaged
61 4-Bromophenylphenylether	0.19114	0.16319	0.16319	0.000	-14.62019	60.00000	Averaged
63 Hexachlorobenzene	0.19866	0.17428	0.17428	0.000	-12.27477	60.00000	Averaged
65 Pentachlorophenol	0.08849	0.08776	0.08776	0.001	-0.83218	20.00000	Averaged|ccc
206 n-Octadecane	0.39703	0.39262	0.39262	0.000	-1.10928	60.00000	Averaged
68 Phenanthrene	35.36562	40.00000	0.82559	0.000	-11.58594	60.00000	Linear
69 Anthracene	0.97083	0.82497	0.82497	0.000	-15.02413	60.00000	Averaged
72 Di-n-butylphthalate	1.01476	0.94515	0.94515	0.000	-6.85986	60.00000	Averaged
76 Fluoranthene	1.01786	0.89285	0.89285	0.001	-12.28130	20.00000	Averaged|ccc
79 Pyrene	1.24889	1.05447	1.05447	0.000	-15.56774	60.00000	Averaged
85 Butylbenzylphthalate	0.43672	0.42071	0.42071	0.000	-3.66508	60.00000	Averaged
89 Benzo(a)anthracene	1.05261	0.90191	0.90191	0.000	-14.31645	60.00000	Averaged
92 Chrysene	36.32073	40.00000	0.83331	0.000	-9.19818	60.00000	Linear
93 bis(2-Ethylhexyl)phthalate	0.61117	0.58944	0.58944	0.000	-3.55520	60.00000	Averaged

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD8.i Injection Date: 20-FEB-2010 18:09
Lab File ID: s8b2012.d Init. Cal. Date(s): 20-FEB-2010 22-FEB-2010
Analysis Type: Init. Cal. Times: 12:55 01:19
Lab Sample ID: WBN100215-05.1 Quant Type: ISTD
Method: /chem/MSD8.i/s022010.b/MSD8-8270AQA-022010.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
94 Di-n-octylphthalate	39.76021	40.00000	1.22616	0.001	-0.59948	20.00000	Linear|ccc
95 Benzo(b)fluoranthene	1.13405	1.05298	1.05298	0.000	-7.14838	60.00000	Averaged
96 Benzo(k)fluoranthene	1.14008	1.04465	1.04465	0.000	-8.37069	60.00000	Averaged
97 Benzo(a)pyrene	0.95647	0.89169	0.89169	0.001	-6.77277	20.00000	Averaged|ccc
99 Indeno(1,2,3-cd)pyrene	0.79303	0.69287	0.69287	0.000	-12.62907	60.00000	Averaged
100 Dibenzo(a,h)anthracene	0.61288	0.52486	0.52486	0.000	-14.36175	60.00000	Averaged
101 Benzo(ghi)perylene	0.65613	0.54043	0.54043	0.000	-17.63270	60.00000	Averaged
126 m-Dinitrobenzene	0.16162	0.15617	0.15617	0.000	-3.37054	60.00000	Averaged
130 2,3,4,6-Tetrachlorophenol	0.27739	0.25140	0.25140	0.000	-9.36867	60.00000	Averaged
143 Dinoseb	39.33235	40.00000	0.11528	0.000	-1.66914	60.00000	Linear
173 Carbazole	0.69337	0.64707	0.64707	0.000	-6.67637	60.00000	Averaged
184 p-Benzoquinone	26.23116	40.00000	0.11601	0.000	-34.42209	60.00000	Linear
192 Methoxychlor	0.57371	0.53574	0.53574	0.000	-6.61792	60.00000	Averaged
211 p-Toluidine	1.14055	0.88750	0.88750	0.000	-22.18641	60.00000	Averaged
210 m-Toluidine	1.48620	1.44197	1.44197	0.000	-2.97629	60.00000	Averaged
26 Phthalic anhydride	53.94737	40.00000	0.17465	0.000	34.86844	60.00000	Linear
179 Dibenzo(a,e)pyrene	0.26112	0.15069	0.15069	0.000	-42.29332	60.00000	Averaged
214 1,4-Dinitrobenzene	0.17136	0.17062	0.17062	0.000	-0.43576	60.00000	Averaged
215 2-Ethoxyethanol	0.57374	0.58779	0.58779	0.000	2.44852	60.00000	Averaged
216 Methylenebis(2-chloroanilin	41.74874	40.00000	0.12008	0.000	4.37185	60.00000	Linear
IM 222 Trichlorophenols	0.31765	0.30387	0.30387	0.000	-4.33823	60.00000	Averaged
IM 223 Tetrachlorophenols	0.27739	0.25140	0.25140	0.000	-9.36867	60.00000	Averaged
IM 224 Benzo(b,k)fluoranthene	1.13706	1.04881	1.04881	0.000	-7.76116	60.00000	Averaged

Data File: /chem/MSD8.i/s022010.b/s8b2012.d
Report Date: 23-Feb-2010 13:25

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Data file : /chem/MSD8.i/s022010.b/s8b2012.d
Lab Smp Id: WBN100215-05.1 Client Smp ID: MEGAICV
Inj Date : 20-FEB-2010 18:09
Operator : nag1 Inst ID: MSD8.i
Smp Info : |WBN100215-05.1|40 PPM|1|SVM|1|MEGAICV
Misc Info : |MSD8270|WBN100217-01
Comment : Column: J & W DB-5MS, 25m x 0.20 mm x 0.33 micron film
Method : /chem/MSD8.i/s022010.b/MSD8-8270AQA-022010.m
Meth Date : 23-Feb-2010 13:25 nat00999 Quant Type: ISTD
Cal Date : 22-FEB-2010 01:19 Cal File: s8b2046.d
Als bottle: 11 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: MEGAICARE.sub
Target Version: 3.50
Processing Host: hpclp1

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	4.530	4.530	(1.000)	613599	40.0000	
* 29 Naphthalene-d8	136	5.797	5.797	(1.000)	2473544	40.0000	
* 46 Acenaphthene-d10	164	7.663	7.663	(1.000)	1402775	40.0000	
* 67 Phenanthrene-d10	188	9.263	9.263	(1.000)	2635307	40.0000	
* 91 Chrysene-d12	240	12.197	12.197	(1.000)	2302220	40.0000	
* 98 Perylene-d12	264	14.354	14.354	(1.000)	1521193	40.0000	
\$ 3 2-Fluorophenol	112	3.368	3.368	(0.743)	559924	40.0000	38.6
\$ 5 Phenol-d5	99	4.149	4.149	(0.916)	687028	40.0000	38.0
\$ 20 Nitrobenzene-d5	82	5.063	5.063	(0.873)	703589	40.0000	40.0
\$ 39 2-Fluorobiphenyl	172	6.925	6.925	(0.904)	1556680	40.0000	37.7
\$ 60 2,4,6-Tribromophenol	329	8.506	8.506	(1.110)	168767	40.0000	36.4
\$ 81 p-Terphenyl-d14	244	10.978	10.978	(0.900)	1695598	40.0000	40.9
1 N-Methyl-N-nitrosomethylamine	74	2.382	2.382	(0.526)	351092	40.0000	37.6
2 Pyridine	79	2.420	2.420	(0.534)	415348	40.0000	30.3
4 Aniline	66	4.220	4.220	(0.932)	308837	40.0000	36.2
6 Phenol	94	4.163	4.163	(0.919)	719807	40.0000	38.6(Q)
7 bis(2-Chloroethyl) ether	63	4.263	4.263	(0.941)	455867	40.0000	35.7
8 2-Chlorophenol	128	4.335	4.335	(0.957)	628318	40.0000	38.8
203 n-Decane	43	4.354	4.354	(0.961)	679671	40.0000	40.7
9 1,3-Dichlorobenzene	146	4.477	4.477	(0.988)	741134	40.0000	38.6
11 1,4-Dichlorobenzene	146	4.549	4.549	(1.004)	743535	40.0000	37.5
13 1,2-Dichlorobenzene	146	4.692	4.692	(1.036)	697051	40.0000	37.8
14 bis(2-Chloroisopropyl) ether	45	4.768	4.768	(1.053)	961403	40.0000	38.4
12 Benzyl alcohol	108	4.644	4.644	(1.025)	393855	40.0000	38.9(H)
15 o-Cresol	107	4.735	4.735	(1.045)	498576	40.0000	38.5
18 m,p-Cresols	107	4.887	4.887	(1.079)	652539	40.0000	39.8

Compounds	QUANT SIG			RESPONSE	AMOUNTS	
	MASS	RT	EXP RT REL RT		CAL-AMT (ng/ul)	ON-COL (ng/ul)
17 N-Nitrosodipropylamine	70	4.906	4.906 (1.083)	454801	40.0000	38.1
19 Hexachloroethane	117	5.025	5.025 (1.109)	280201	40.0000	37.5
21 Nitrobenzene	77	5.082	5.082 (0.877)	684707	40.0000	37.8
22 Isophorone	82	5.320	5.320 (0.918)	1221372	40.0000	36.6
23 2-Nitrophenol	139	5.397	5.397 (0.931)	329005	40.0000	39.5
24 2,4-Dimethylphenol	122	5.420	5.420 (0.935)	557217	40.0000	37.6
25 bis(2-Chloroethoxy)methane	93	5.525	5.525 (0.953)	658886	40.0000	35.2
26 2,4-Dichlorophenol	162	5.644	5.644 (0.974)	516992	40.0000	38.6
27 Benzoic acid	105	5.539	5.539 (0.956)	287142	40.0000	41.9
28 1,2,4-Trichlorobenzene	180	5.735	5.735 (0.989)	655648	40.0000	36.4
30 Naphthalene	128	5.820	5.820 (1.004)	1895442	40.0000	35.4
204 alpha-Terpineol	59	5.816	5.816 (1.003)	496172	40.0000	36.0
31 4-Chloroaniline	127	5.863	5.863 (1.012)	678318	40.0000	38.4
32 Hexachlorobutadiene	225	5.939	5.939 (1.025)	420920	40.0000	37.6
33 4-Chloro-3-methylphenol	107	6.354	6.354 (1.096)	560118	40.0000	38.7
34 2-Methylnaphthalene	142	6.539	6.539 (1.128)	1347856	40.0000	37.6
35 1-Methylnaphthalene	142	6.649	6.649 (1.147)	1269859	40.0000	36.1
36 Hexachlorocyclopentadiene	237	6.706	6.706 (0.875)	293896	40.0000	33.8
205 2,3-Dichloroaniline	161	6.835	6.835 (0.892)	663240	40.0000	35.8
37 2,4,6-Trichlorophenol	196	6.835	6.835 (0.892)	401928	40.0000	37.2
38 2,4,5-Trichlorophenol	196	6.873	6.873 (0.897)	450584	40.0000	39.3
40 2-Chloronaphthalene	162	7.063	7.063 (0.922)	1277487	40.0000	36.9
42 o-Nitroaniline	65	7.163	7.163 (0.935)	363688	40.0000	37.8
41 m-Nitroaniline	138	7.606	7.606 (0.993)	282391	40.0000	38.6
43 Dimethylphthalate	163	7.363	7.363 (0.961)	1455357	40.0000	37.0
44 2,6-Dinitrotoluene	165	7.425	7.425 (0.969)	328490	40.0000	37.0
50 2,4-Dinitrotoluene	165	7.854	7.854 (1.025)	419181	40.0000	36.8
45 Acenaphthylene	152	7.511	7.511 (0.980)	2073418	40.0000	35.6
47 Acenaphthene	154	7.697	7.697 (1.004)	1261448	40.0000	33.8
48 2,4-Dinitrophenol	184	7.711	7.711 (1.006)	122866	40.0000	42.0
49 Dibenzofuran	168	7.878	7.878 (1.028)	1794261	40.0000	36.7
51 Diethylphthalate	149	8.111	8.111 (1.058)	1503769	40.0000	36.6
52 4-Nitrophenol	139	7.768	7.768 (1.014)	201873	40.0000	42.2
53 Fluorene	166	8.249	8.249 (1.076)	1508548	40.0000	33.3
54 4-Chlorophenylphenylether	204	8.239	8.239 (1.075)	759775	40.0000	34.8
55 2-Methyl-4,6-dinitrophenol	198	8.297	8.297 (0.896)	265115	40.0000	48.7
56 p-Nitroaniline	138	8.263	8.263 (1.078)	259438	40.0000	40.1
133 Diphenylamine	169	8.368	8.368 (0.903)	1225948	40.0000	36.8
58 1,2-Diphenylhydrazine	77	8.416	8.416 (0.908)	1489780	40.0000	38.1
61 4-Bromophenylphenylether	248	8.768	8.768 (0.947)	430063	40.0000	34.2
63 Hexachlorobenzene	284	8.839	8.839 (0.954)	459277	40.0000	35.1
65 Pentachlorophenol	266	9.049	9.049 (0.977)	231262	40.0000	39.7
206 n-Octadecane	57	9.125	9.125 (0.985)	1034683	40.0000	39.6
68 Phenanthrene	178	9.292	9.292 (1.003)	2175678	40.0000	35.4
69 Anthracene	178	9.344	9.344 (1.009)	2174061	40.0000	34.0
72 Di-n-butylphthalate	149	9.873	9.873 (1.066)	2490757	40.0000	37.2
76 Fluoranthene	202	10.573	10.573 (1.141)	2352940	40.0000	35.1

Compounds	QUANT SIG			REL RT	RESPONSE	AMOUNTS	
	MASS	RT	EXP RT			CAL-AMT (ng/ul)	ON-COL (ng/ul)
79 Pyrene	202	10.820	10.820	(0.887)	2427617	40.0000	33.8
85 Butylbenzylphthalate	149	11.497	11.497	(0.943)	968576	40.0000	38.5
89 Benzo(a)anthracene	228	12.178	12.178	(0.998)	2076405	40.0000	34.3
92 Chrysene	228	12.230	12.230	(1.003)	1918472	40.0000	36.3
93 bis(2-Ethylhexyl)phthalate	149	12.182	12.182	(0.999)	1357026	40.0000	38.6
94 Di-n-octylphthalate	149	13.097	13.097	(0.912)	1865222	40.0000	39.8
95 Benzo(b)fluoranthene	252	13.720	13.720	(0.956)	1601785	40.0000	37.1 (H)
96 Benzo(k)fluoranthene	252	13.768	13.768	(0.959)	1589110	40.0000	36.6
97 Benzo(a)pyrene	252	14.254	14.254	(0.993)	1356428	40.0000	37.3
99 Indeno(1,2,3-cd)pyrene	276	16.220	16.220	(1.130)	1053996	40.0000	34.9
100 Dibenzo(a,h)anthracene	278	16.254	16.254	(1.132)	798414	40.0000	34.2
101 Benzo(ghi)perylene	276	16.701	16.701	(1.164)	822104	40.0000	32.9
126 m-Dinitrobenzene	168	7.392	7.392	(0.965)	219071	40.0000	38.6
130 2,3,4,6-Tetrachlorophenol	232	8.001	8.001	(1.044)	352660	40.0000	36.2
143 Dinoseb	211	9.239	9.239	(0.997)	303786	40.0000	39.3
173 Carbazole	167	9.511	9.511	(1.027)	1705240	40.0000	37.3
184 p-Benzoquinone	54	3.787	3.787	(0.836)	71181	40.0000	26.2
192 Methoxychlor	227	12.078	12.078	(0.990)	1233392	40.0000	37.4
211 p-Toluidine	106	4.949	4.949	(1.093)	544571	40.0000	31.1
210 m-Toluidine	106	4.982	4.982	(1.100)	884790	40.0000	38.8
26 Phthalic anhydride	104	6.597	6.597	(1.138)	432011	40.0000	53.9
179 Dibenzo(a,e)pyrene	302	19.925	19.925	(1.388)	229221	40.0000	23.1
214 1,4-Dinitrobenzene	75	7.311	7.311	(0.954)	239338	40.0000	39.8
215 2-Ethoxyethanol	59	2.177	2.177	(0.481)	360665	40.0000	41.0
216 Methylenebis(2-chloroaniline)	231	12.135	12.135	(0.995)	276453	40.0000	41.7 (Q)
M 222 Trichlorophenols	196				852512	80.0000	76.5
M 223 Tetrachlorophenols	232				352660	40.0000	36.2
M 224 Benzo(b,k)fluoranthene	252				3190895	80.0000	73.8

QC Flag Legend

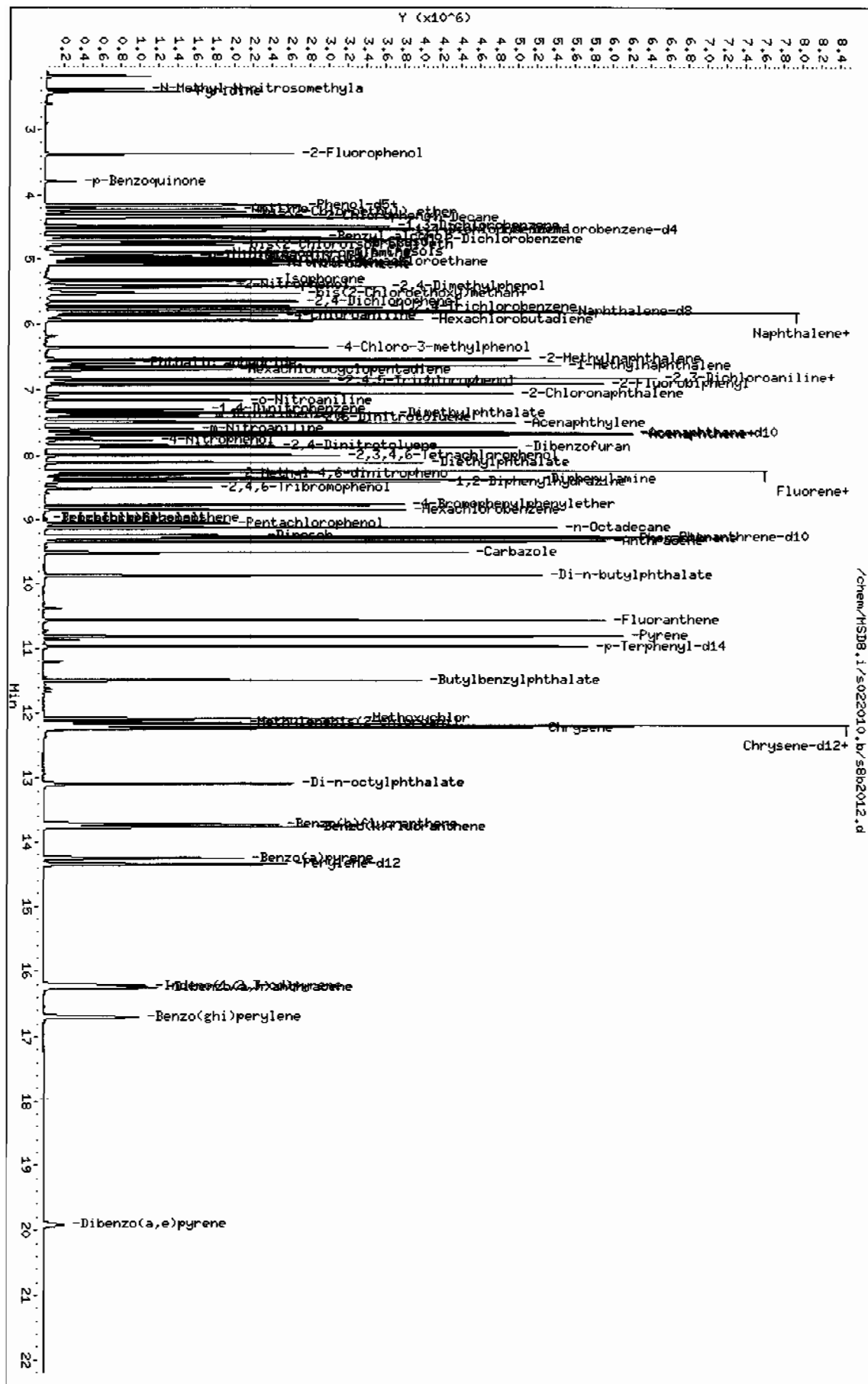
Q - Qualifier signal failed the ratio test.
H - Operator selected an alternate compound hit.

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Client ID: MEGAICV

Instrument: MSD8.i

Operator: nag1
Column diameter: 0.20



GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD8.i Injection Date: 21-FEB-2010 19:53
Lab File ID: s8b2035.d Init. Cal. Date(s): 20-FEB-2010 22-FEB-2010
Analysis Type: Init. Cal. Times: 12:55 01:19
Lab Sample ID: WBN100218-08.1 Quant Type: ISTD
Method: /chem/MSD8.i/s022010.b/MSD8-8270AQA-022010.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
209 Benzaldehyde	0.84330	0.69688	0.69688	0.000	-17.36320	60.00000	Averaged
16 Acetophenone	1.20309	1.14109	1.14109	0.000	-5.15283	60.00000	Averaged
189 Caprolactam	0.06655	0.06831	0.06831	0.000	2.63428	60.00000	Averaged
208 1,1'-Biphenyl	1.22219	1.19703	1.19703	0.000	-2.05853	60.00000	Averaged
207 Atrazine	0.03531	0.03806	0.03806	0.000	7.78782	60.00000	Averaged
77 Benzidine	41.98033	40.00000	0.31874	0.000	4.95082	60.00000	Linear
90 3,3'-Dichlorobenzidine	0.24780	0.27320	0.27320	0.000	10.24947	60.00000	Averaged
102 1,4-Dioxane	0.32319	0.37708	0.37708	0.000	16.67521	60.00000	Averaged
103 Methyl methacrylate	0.16817	0.19675	0.19675	0.000	16.99914	60.00000	Averaged
104 Ethyl methacrylate	0.67963	0.79943	0.79943	0.000	17.62812	60.00000	Averaged
105 2-Picoline	1.09294	1.07981	1.07981	0.000	-1.20157	60.00000	Averaged
106 N-Nitrosomethylethylamine	0.43986	0.46246	0.46246	0.000	5.13741	60.00000	Averaged
107 Methyl methanesulfonate	0.49950	0.54492	0.54492	0.000	9.09235	60.00000	Averaged
108 N-Nitrosodiethylamine	0.45804	0.47767	0.47767	0.000	4.28449	60.00000	Averaged
109 Ethyl Methanesulfonate	0.60902	0.73730	0.73730	0.000	21.06290	60.00000	Averaged
110 Pentachloroethane	0.32092	0.43327	0.43327	0.000	35.01075	60.00000	Averaged
111 N-Nitrosopyrrolidine	0.49059	0.49284	0.49284	0.000	0.45905	60.00000	Averaged
113 N-Nitrosomorpholine	0.66385	0.70342	0.70342	0.000	5.95974	60.00000	Averaged
114 o-Toluidine	1.62183	1.64404	1.64404	0.000	1.36960	60.00000	Averaged
115 N-Nitrosopiperidine	0.12437	0.12589	0.12589	0.000	1.22448	60.00000	Averaged
116 a,a-Dimethylphenethylamine	0.74304	0.77809	0.77809	0.000	4.71795	60.00000	Averaged
118 2,6-Dichlorophenol	0.20154	0.20467	0.20467	0.000	1.55320	60.00000	Averaged
119 Hexachloropropene	0.12360	0.18944	0.18944	0.000	53.26602	60.00000	Averaged
120 p-Phenylenediamine	0.19655	0.20159	0.20159	0.000	2.56438	60.00000	Averaged
121 N-Nitrosodi-n-butylamine	0.21161	0.22736	0.22736	0.000	7.44405	60.00000	Averaged
122 Safrole	0.19334	0.21416	0.21416	0.000	10.76780	60.00000	Averaged
123 1,2,4,5-Tetrachlorobenzene	0.47582	0.48716	0.48716	0.000	2.38273	60.00000	Averaged
124 Isosafrole	0.32130	0.41354	0.41354	0.000	28.70739	60.00000	Averaged
125 1,4-Naphthoquinone	0.29641	0.29356	0.29356	0.000	-0.96298	60.00000	Averaged
127 Pentachlorobenzene	0.43422	0.41984	0.41984	0.000	-3.31212	60.00000	Averaged
128 1-Naphthylamine	0.84230	0.87716	0.87716	0.000	4.13822	60.00000	Averaged
129 2-Naphthylamine	0.88763	0.93442	0.93442	0.000	5.27090	60.00000	Averaged
131 5-Nitro-o-toluidine	0.24122	0.24992	0.24992	0.000	3.60687	60.00000	Averaged
136 1,3,5-Trinitrobenzene	0.09499	0.13160	0.13160	0.000	38.54101	60.00000	Averaged
137 Phenacetin	0.21690	0.22945	0.22945	0.000	5.79020	60.00000	Averaged
138 Diallate	0.20203	0.19101	0.19101	0.000	-5.45490	60.00000	Averaged

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD8.i Injection Date: 21-FEB-2010 19:53
 Lab File ID: s8b2035.d Init. Cal. Date(s): 20-FEB-2010 22-FEB-2010
 Analysis Type: Init. Cal. Times: 12:55 01:19
 Lab Sample ID: WBN100218-08.1 Quant Type: ISTD
 Method: /chem/MSD8.i/s022010.b/MSD8-8270AQA-022010.m

COMPOUND	RRF / AMOUNT	RF40	CCAL	MIN	MAX	CURVE TYPE
			RRF40	RRF	%D / %DRIFT	
212 Cis Diallate	0.20071	0.25770	0.25770	0.000	28.39010	Averaged
213 Trans Diallate	0.23769	0.22472	0.22472	0.000	-5.45490	Averaged
140 4-Aminobiphenyl	0.51727	0.55152	0.55152	0.000	6.62074	Averaged
141 Pentachloronitrobenzene	0.07936	0.08310	0.08310	0.000	4.70392	Averaged
142 Pronamide	0.25230	0.26699	0.26699	0.000	5.82308	Averaged
146 4-Nitroquinoline-1-oxide	0.01907	0.01438	0.01438	0.000	-24.58503	Averaged
147 Methapyrilene	0.29186	0.32275	0.32275	0.000	10.58368	Averaged
148 Isodrin	0.10718	0.09605	0.09605	0.000	-10.38226	Averaged
149 Aramite	0.03388	0.03359	0.03359	0.000	-0.86154	Averaged
150 Kepone	0.07795	0.07692	0.07692	0.000	-1.31942	Averaged
151 p-(Dimethylamino)azobenzene	0.25808	0.27705	0.27705	0.000	7.35059	Averaged
152 Chlorobenzilate	0.26271	0.28217	0.28217	0.000	7.40895	Averaged
153 3,3'-Dimethylbenzidine	0.45535	0.49139	0.49139	0.000	7.91309	Averaged
155 2-Acetylaminofluorene	42.39036	40.00000	0.24154	0.000	5.97589	Linear
157 7,12Dimethylbenz(a)anthracene	0.51909	0.49026	0.49026	0.000	-5.55329	Averaged
158 3-Methylcholanthrene	0.36780	0.40291	0.40291	0.000	9.54489	Averaged

Data File: /chem/MSD8.i/s022010.b/s8b2035.d
Report Date: 23-Feb-2010 13:31

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Data file : /chem/MSD8.i/s022010.b/s8b2035.d
Lab Smp Id: WBN100218-08.1 Client Smp ID: APICV
Inj Date : 21-FEB-2010 19:53
Operator : nag1 Inst ID: MSD8.i
Smp Info : |WBN100218-08.1|40 PPM|1|SVM|1|APICV
Misc Info : |MSD8270|WBN100217-01
Comment : Column: J & W DB-5MS, 25m x 0.20 mm x 0.33 micron film
Method : /chem/MSD8.i/s022010.b/MSD8-8270AQA-022010.m
Meth Date : 23-Feb-2010 13:31 nat00999 Quant Type: ISTD
Cal Date : 22-FEB-2010 00:48 Cal File: s8b2045.d
Als bottle: 23 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AP12.sub
Target Version: 3.50
Processing Host: hpclp1

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	4.530	4.530	(1.000)		649861	40.0000	
* 29 Naphthalene-d8	136	5.796	5.796	(1.000)		2469894	40.0000	
* 46 Acenaphthene-d10	164	7.658	7.658	(1.000)		1465298	40.0000	
* 67 Phenanthrene-d10	188	9.263	9.263	(1.000)		2747481	40.0000	
* 91 Chrysene-d12	240	12.192	12.192	(1.000)		2214467	40.0000	
* 98 Perylene-d12	264	14.349	14.349	(1.000)		1648118	40.0000	
209 Benzaldehyde	77	4.125	4.125	(0.911)		452872	40.0000	33.0
16 Acetophenone	105	4.906	4.906	(1.083)		741552	40.0000	37.9
189 Caprolactam	113	6.225	6.225	(1.074)		168712	40.0000	41.0 (H)
208 1,1'-Biphenyl	154	7.034	7.034	(0.919)		1754011	40.0000	39.2
207 Atrazine	173	8.939	8.939	(0.965)		104582	40.0000	43.1
77 Benzidine	184	10.706	10.706	(0.878)		705844	40.0000	42.0
90 3,3'-Dichlorobenzidine	252	12.130	12.130	(0.995)		604986	40.0000	44.1
102 1,4-Dioxane	88	2.177	2.177	(0.481)		245052	40.0000	46.7
103 Methyl methacrylate	100	2.177	2.177	(0.481)		127862	40.0000	46.8
104 Ethyl methacrylate	69	2.692	2.692	(0.594)		519520	40.0000	47.0
105 2-Picoline	93	2.939	2.939	(0.649)		701726	40.0000	39.5
106 N-Nitrosomethylethylamine	88	3.011	3.011	(0.665)		300533	40.0000	42.0
107 Methyl methanesulfonate	80	3.239	3.239	(0.715)		354120	40.0000	43.6
108 N-Nitrosodiethylamine	102	3.568	3.568	(0.788)		310419	40.0000	41.7
109 Ethyl Methanesulfonate	79	3.806	3.806	(0.840)		479140	40.0000	48.4
110 Pentachloroethane	167	4.268	4.268	(0.942)		281568	40.0000	54.0
111 N-Nitrosopyrrolidine	100	4.887	4.887	(1.079)		320276	40.0000	40.2 (Q)
113 N-Nitrosomorpholine	56	4.925	4.925	(1.087)		457122	40.0000	42.4
114 o-Toluidine	106	4.944	4.944	(1.091)		1068400	40.0000	40.5
115 N-Nitrosopiperidine	114	5.230	5.230	(0.902)		310940	40.0000	40.5

Compounds	QUANT SIG					AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ng/ul)	ON-COL (ng/ul)
=====	----	==	-----	-----	-----	-----	-----
116 a,a-Dimethylphenethylamine	58	5.630	5.630	(0.971)	1921805	40.0000	41.9
118 2,6-Dichlorophenol	162	5.872	5.872	(1.013)	505519	40.0000	40.6
119 Hexachloropropene	213	5.906	5.906	(1.019)	467897	40.0000	61.3
120 p-Phenylenediamine	108	6.230	6.230	(1.075)	497912	40.0000	41.0
121 N-Nitrosodi-n-butylamine	84	6.211	6.211	(1.071)	561557	40.0000	43.0
122 Saffrole	162	6.439	6.439	(1.111)	528955	40.0000	44.3
123 1,2,4,5-Tetrachlorobenzene	216	6.715	6.715	(0.877)	713829	40.0000	41.0
124 Isosafrole	162	6.992	6.992	(0.913)	605957	40.0000	51.5
125 1,4-Naphthoquinone	158	7.244	7.244	(0.946)	430153	40.0000	39.6
127 Pentachlorobenzene	250	7.830	7.830	(1.022)	615188	40.0000	38.7
128 1-Naphthylamine	143	7.958	7.958	(1.039)	1285298	40.0000	41.6
129 2-Naphthylamine	143	8.044	8.044	(1.050)	1369199	40.0000	42.1
131 5-Nitro-o-toluidine	152	8.249	8.249	(1.077)	366207	40.0000	41.4
136 1,3,5-Trinitrobenzene	75	8.634	8.634	(0.932)	361581	40.0000	55.4
137 Phenacetin	108	8.701	8.701	(0.939)	630422	40.0000	42.3(Q)
138 Diallate	86	8.673	8.673	(0.936)	524804	40.0000	37.8
212 Cis Diallate	86	8.768	8.768	(0.947)	106203	6.00000	7.7
213 Trans Diallate	86	8.673	8.673	(0.936)	524804	34.0000	32.1
140 4-Aminobiphenyl	169	9.049	9.049	(0.977)	1515283	40.0000	42.6
141 Pentachloronitrobenzene	237	9.063	9.063	(0.978)	228304	40.0000	41.9(Q)
142 Pronamide	173	9.106	9.106	(0.983)	733556	40.0000	42.3
146 4-Nitroquinoline-1-oxide	101	10.111	10.111	(1.091)	39509	40.0000	30.2
147 Methapyrilene	58	10.192	10.192	(1.100)	886744	40.0000	44.2
148 Isodrin	193	10.411	10.411	(1.124)	263898	40.0000	35.8
149 Aramite	185	10.944	10.944	(1.181)	92281	40.0000	39.6
150 Kepone	272	11.563	11.563	(1.248)	211334	40.0000	39.5
151 p-(Dimethylamino)azobenzene	120	11.125	11.125	(0.912)	613518	40.0000	42.9
152 Chlorobenzilate	251	11.173	11.173	(0.916)	624855	40.0000	43.0
153 3,3'-Dimethylbenzidine	212	11.487	11.487	(0.942)	1088156	40.0000	43.2
155 2-Acetylaminofluorene	181	11.782	11.782	(0.966)	534890	40.0000	42.4
157 7,12Dimethylbenz(a)anthracene	256	13.706	13.706	(0.955)	808013	40.0000	37.8
158 3-Methylchoianthrene	268	14.849	14.849	(1.035)	664045	40.0000	43.8(Q)

QC Flag Legend

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

Data File: /chem/MSD8.i/s022010.b/sb02035.d

Date: 21-FEB-2010 19:53

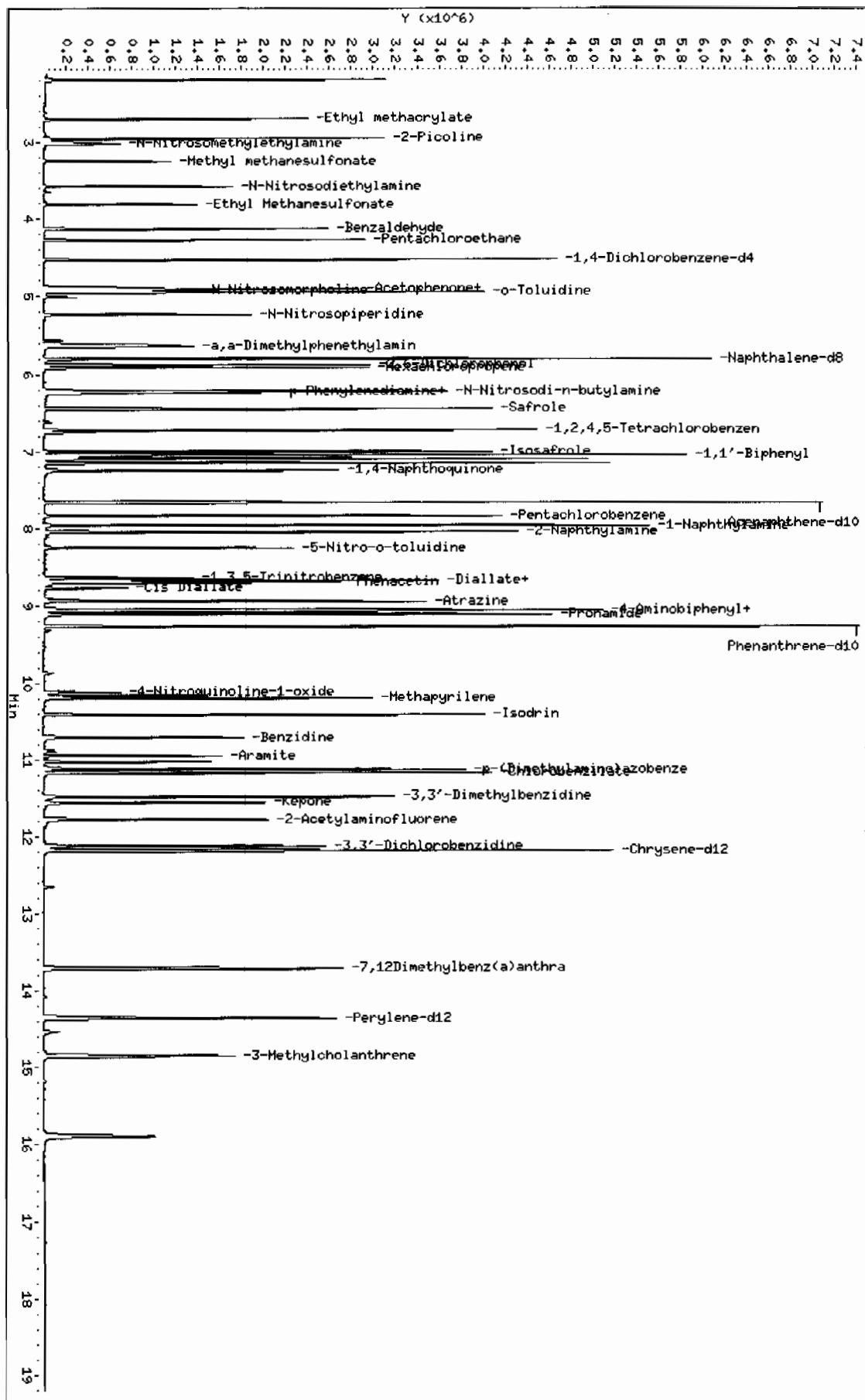
Client ID: APICV

Sample Info: IWMN00218-08.1140 PPH11SW11APICV

Column phase: J&W DB-5MS

Instrument: MSD8.i

Operator: nag1
Column diameter: 0.20



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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD8.i Injection Date: 01-MAR-2010 12:28
Lab File ID: s8c0102.d Init. Cal. Date(s): 20-FEB-2010 22-FEB-2010
Analysis Type: Init. Cal. Times: 12:55 01:19
Lab Sample ID: WBN100215-05.3 Quant Type: ISTD
Method: /chem/MSD8.i/s030110.b/MSD8-8270AQA-022010.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
3 2-Fluorophenol	0.94435	0.87945	0.87945	0.000	-6.87207	60.00000	Averaged
5 Phenol-d5	1.17771	1.09409	1.09409	0.000	-7.10026	60.00000	Averaged
20 Nitrobenzene-d5	0.28435	0.25249	0.25249	0.000	-11.20235	60.00000	Averaged
39 2-Fluorobiphenyl	1.17740	1.06897	1.06897	0.000	-9.20862	60.00000	Averaged
60 2,4,6-Tribromophenol	0.13223	0.13183	0.13183	0.000	-0.30034	60.00000	Averaged
81 p-Terphenyl-d14	0.72015	0.60412	0.60412	0.000	-16.11180	60.00000	Averaged
1 N-Methyl-N-nitrosomethylami	0.60923	0.51643	0.51643	0.000	-15.23300	60.00000	Averaged
2 Pyridine	0.89373	0.75499	0.75499	0.000	-15.52356	60.00000	Averaged
4 Aniline	0.55542	0.45641	0.45641	0.000	-17.82615	60.00000	Averaged
6 Phenol	1.21617	1.09605	1.09605	0.001	-9.87706	20.00000	Averaged|ccc
7 bis(2-Chloroethyl) ether	0.83144	0.66221	0.66221	0.000	-20.35411	60.00000	Averaged
8 2-Chlorophenol	1.05605	1.01503	1.01503	0.000	-3.88416	60.00000	Averaged
203 n-Decane	1.08949	0.71288	0.71288	0.000	-34.56742	60.00000	Averaged
9 1,3-Dichlorobenzene	1.25240	1.17501	1.17501	0.000	-6.17912	60.00000	Averaged
11 1,4-Dichlorobenzene	1.29215	1.22516	1.22516	0.001	-5.18441	20.00000	Averaged|ccc
13 1,2-Dichlorobenzene	1.20194	1.14419	1.14419	0.000	-4.80463	60.00000	Averaged
14 bis(2-Chloroisopropyl)ether	1.63019	0.98139	0.98139	0.000	-39.79927	60.00000	Averaged
12 Benzyl alcohol	0.66057	0.52226	0.52226	0.000	-20.93781	60.00000	Averaged
15 o-Cresol	0.84463	0.75531	0.75531	0.000	-10.57430	60.00000	Averaged
18 m,p-Cresols	1.06890	0.97862	0.97862	0.000	-8.44611	60.00000	Averaged
17 N-Nitrosodipropylamine	0.77788	0.66907	0.66907	0.050	-13.98791	60.00000	Averaged|spccc
19 Hexachloroethane	0.48694	0.45232	0.45232	0.000	-7.11006	60.00000	Averaged
21 Nitrobenzene	0.29331	0.25206	0.25206	0.000	-14.06389	60.00000	Averaged
22 Isophorone	0.53999	0.47560	0.47560	0.000	-11.92465	60.00000	Averaged
23 2-Nitrophenol	0.13462	0.14106	0.14106	0.001	4.78428	20.00000	Averaged|ccc
24 2,4-Dimethylphenol	0.23932	0.21562	0.21562	0.000	-9.90305	60.00000	Averaged
25 bis(2-Chloroethoxy)methane	0.30282	0.28559	0.28559	0.000	-5.69097	60.00000	Averaged
26 2,4-Dichlorophenol	0.21654	0.22066	0.22066	0.001	1.90236	20.00000	Averaged|ccc
27 Benzoic acid	44.99748	40.00000	0.12920	0.000	12.49369	60.00000	Linear
28 1,2,4-Trichlorobenzene	0.29118	0.27020	0.27020	0.000	-7.20643	60.00000	Averaged
30 Naphthalene	38.78189	40.00000	0.84409	0.000	-3.04526	60.00000	Linear
204 alpha-Terpineol	0.22259	0.18651	0.18651	0.000	-16.20920	60.00000	Averaged
31 4-Chloroaniline	0.28585	0.29184	0.29184	0.000	2.09322	60.00000	Averaged
32 Hexachlorobutadiene	0.18110	0.16741	0.16741	0.001	-7.55565	20.00000	Averaged|ccc
33 4-Chloro-3-methylphenol	0.23429	0.21946	0.21946	0.001	-6.32681	20.00000	Averaged|ccc
34 2-Methylnaphthalene	39.11640	40.00000	0.56822	0.000	-2.20901	60.00000	Linear

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD8.i Injection Date: 01-MAR-2010 12:28
Lab File ID: s8c0102.d Init. Cal. Date(s): 20-FEB-2010 22-FEB-2010
Analysis Type: Init. Cal. Times: 12:55 01:19
Lab Sample ID: WBN100215-05.3 Quant Type: ISTD
Method: /chem/MSD8.i/s030110.b/MSD8-8270AQA-022010.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
35 1-Methylnaphthalene	39.23404	40.00000	0.55888	0.000	-1.91490	60.00000	Linear
36 Hexachlorocyclopentadiene	0.24827	0.21829	0.21829	0.050	-12.07611	60.00000	Averaged|spcc
205 2,3-Dichloroaniline	0.52803	0.49529	0.49529	0.000	-6.20090	60.00000	Averaged
37 2,4,6-Trichlorophenol	0.30819	0.28793	0.28793	0.001	-6.57426	20.00000	Averaged|ccc
38 2,4,5-Trichlorophenol	0.32711	0.29301	0.29301	0.000	-10.42502	60.00000	Averaged
40 2-Chloronaphthalene	36.40389	40.00000	0.89682	0.000	-8.99027	60.00000	Linear
42 o-Nitroaniline	0.27392	0.22664	0.22664	0.000	-17.26126	60.00000	Averaged
41 m-Nitroaniline	0.20877	0.19760	0.19760	0.000	-5.34856	60.00000	Averaged
43 Dimethylphthalate	1.12088	1.04375	1.04375	0.000	-6.88086	60.00000	Averaged
44 2,6-Dinitrotoluene	0.25341	0.24398	0.24398	0.000	-3.71941	60.00000	Averaged
50 2,4-Dinitrotoluene	0.32492	0.31594	0.31594	0.000	-2.76336	60.00000	Averaged
45 Acenaphthylene	1.66068	1.45657	1.45657	0.000	-12.29118	60.00000	Averaged
47 Acenaphthene	1.06294	0.89839	0.89839	0.001	-15.48050	20.00000	Averaged|ccc
48 2,4-Dinitrophenol	50.73074	40.00000	0.11518	0.050	26.82684	60.00000	Linear|spcc
49 Dibenzofuran	1.39464	1.28500	1.28500	0.000	-7.86203	60.00000	Averaged
51 Diethylphthalate	1.17311	1.08979	1.08979	0.000	-7.10264	60.00000	Averaged
52 4-Nitrophenol	0.13654	0.16378	0.16378	0.050	19.95511	60.00000	Averaged|spcc
53 Fluorene	1.29100	1.15310	1.15310	0.000	-10.68149	60.00000	Averaged
54 4-Chlorophenylphenylether	0.62173	0.56096	0.56096	0.000	-9.77490	60.00000	Averaged
55 2-Methyl-4,6-dinitrophenol	45.69161	40.00000	0.09346	0.000	14.22902	60.00000	Linear
56 p-Nitroaniline	0.18448	0.18117	0.18117	0.000	-1.79026	60.00000	Averaged
133 Diphenylamine	0.50546	0.48026	0.48026	0.001	-4.98477	20.00000	Averaged|ccc
58 1,2-Diphenylhydrazine	0.59375	0.48972	0.48972	0.000	-17.52008	60.00000	Averaged
61 4-Bromophenylphenylether	0.19114	0.18231	0.18231	0.000	-4.62014	60.00000	Averaged
63 Hexachlorobenzene	0.19866	0.18256	0.18256	0.000	-8.10362	60.00000	Averaged
65 Pentachlorophenol	0.08849	0.09789	0.09789	0.001	10.62327	20.00000	Averaged|ccc
206 n-Octadecane	0.39703	0.30445	0.30445	0.000	-23.31843	60.00000	Averaged
68 Phenanthrene	36.27535	40.00000	0.84807	0.000	-9.31164	60.00000	Linear
69 Anthracene	0.97083	0.85587	0.85587	0.000	-11.84146	60.00000	Averaged
72 Di-n-butylphthalate	1.01476	1.00550	1.00550	0.000	-0.91266	60.00000	Averaged
76 Fluoranthene	1.01786	0.92083	0.92083	0.001	-9.53223	20.00000	Averaged|ccc
79 Pyrene	1.24889	0.97024	0.97024	0.000	-22.31233	60.00000	Averaged
85 Butylbenzylphthalate	0.43672	0.40492	0.40492	0.000	-7.28195	60.00000	Averaged
89 Benzo(a)anthracene	1.05261	0.87723	0.87723	0.000	-16.66113	60.00000	Averaged
92 Chrysene	35.56332	40.00000	0.81575	0.000	-11.09169	60.00000	Linear
93 bis(2-Ethylhexyl)phthalate	0.61117	0.59703	0.59703	0.000	-2.31309	60.00000	Averaged

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD8.i Injection Date: 01-MAR-2010 12:28
Lab File ID: s8c0102.d Init. Cal. Date(s): 20-FEB-2010 22-FEB-2010
Analysis Type: Init. Cal. Times: 12:55 01:19
Lab Sample ID: WBN100215-05.3 Quant Type: ISTD
Method: /chem/MSD8.i/s030110.b/MSD8-8270AQA-022010.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
94 Di-n-octylphthalate	35.62607	40.00000	1.07906	0.001	-10.93484	20.00000	Linear|ccc
95 Benzo(b)fluoranthene	1.13405	0.94463	0.94463	0.000	-16.70221	60.00000	Averaged
96 Benzo(k)fluoranthene	1.14008	0.97578	0.97578	0.000	-14.41124	60.00000	Averaged
97 Benzo(a)pyrene	0.95647	0.87557	0.87557	0.001	-8.45807	20.00000	Averaged|ccc
99 Indeno(1,2,3-cd)pyrene	0.79303	0.76539	0.76539	0.000	-3.48506	60.00000	Averaged
100 Dibenzo(a,h)anthracene	0.61288	0.74254	0.74254	0.000	21.15504	60.00000	Averaged
101 Benzo(ghi)perylene	0.65613	0.74291	0.74291	0.000	13.22616	60.00000	Averaged
126 m-Dinitrobenzene	0.16162	0.16234	0.16234	0.000	0.44678	60.00000	Averaged
130 2,3,4,6-Tetrachlorophenol	0.27739	0.23707	0.23707	0.000	-14.53388	60.00000	Averaged
143 Dinoseb	45.61506	40.00000	0.13886	0.000	14.03765	60.00000	Linear
173 Carbazole	0.69337	0.58901	0.58901	0.000	-15.05051	60.00000	Averaged
184 p-Benzoquinone	11.30417	40.00000	0.04087	0.000	-71.73956	60.00000	Linear|<-
192 Methoxychlor	0.57371	0.57662	0.57662	0.000	0.50764	60.00000	Averaged
211 p-Toluidine	1.14055	1.00830	1.00830	0.000	-11.59534	60.00000	Averaged
210 m-Toluidine	1.48620	1.27150	1.27150	0.000	-14.44636	60.00000	Averaged
26 Phthalic anhydride	30.12605	40.00000	0.08933	0.000	-24.68489	60.00000	Linear
179 Dibenzo(a,e)pyrene	0.26112	0.32622	0.32622	0.000	24.93098	60.00000	Averaged
214 1,4-Dinitrobenzene	0.17136	0.14709	0.14709	0.000	-14.16737	60.00000	Averaged
215 2-Ethoxyethanol	0.57374	0.44163	0.44163	0.000	-23.02571	60.00000	Averaged
216 Methylenebis(2-chloroanilin	32.75336	40.00000	0.08860	0.000	-18.11660	60.00000	Linear
IM 222 Trichlorophenols	0.31765	0.29047	0.29047	0.000	-8.55699	60.00000	Averaged
IM 223 Tetrachlorophenols	0.27739	0.23707	0.23707	0.000	-14.53388	60.00000	Averaged
IM 224 Benzo(b,k)fluoranthene	1.13706	0.96021	0.96021	0.000	-15.55369	60.00000	Averaged

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Data file : /chem/MSD8.i/s030110.b/s8c0102.d
 Lab Smp Id: WBN100215-05.3 Client Smp ID: MEGACVS
 Inj Date : 01-MAR-2010 12:28
 Operator : nag1 Inst ID: MSD8.i
 Smp Info : |WBN100215-05.3|40 PPM|1|SVMF|1|MEGACVS
 Misc Info : |MSD8270|WBN100227-01
 Comment : Column: J & W DB-5MS, 25m x 0.20 mm x 0.33 micron film
 Method : /chem/MSD8.i/s030110.b/MSD8-8270AQA-022010.m
 Meth Date : 02-Mar-2010 07:06 nat00999 Quant Type: ISTD
 Cal Date : 21-FEB-2010 23:15 Cal File: s8b2042.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

						AMOUNTS	
		QUANT SIG				CAL-AMT	ON-COL
Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ng/ul)	(ng/ul)
=====	=====	==	=====	=====	=====	=====	=====
* 10 1,4-Dichlorobenzene-d4	152	4.316	4.316	(1.000)	382428	40.0000	
* 29 Naphthalene-d8	136	5.573	5.573	(1.000)	1513586	40.0000	
* 46 Acenaphthene-d10	164	7.425	7.425	(1.000)	930718	40.0000	
* 67 Phenanthrene-d10	188	9.016	9.016	(1.000)	1722494	40.0000	
* 91 Chrysene-d12	240	11.901	11.901	(1.000)	1730470	40.0000	
* 98 Perylene-d12	264	13.925	13.925	(1.000)	1407560	40.0000	
\$ 3 2-Fluorophenol	112	3.168	3.168	(0.734)	336326	40.0000	37.2
\$ 5 Phenol-d5	99	3.944	3.944	(0.914)	418409	40.0000	37.2
\$ 20 Nitrobenzene-d5	82	4.844	4.844	(0.869)	382169	40.0000	35.5
\$ 39 2-Fluorobiphenyl	172	6.697	6.697	(0.902)	994913	40.0000	36.3
\$ 60 2,4,6-Tribromophenol	329	8.263	8.263	(1.113)	122695	40.0000	39.9
\$ 81 p-Terphenyl-d14	244	10.730	10.730	(0.902)	1045408	40.0000	33.6
1 N-Methyl-N-nitrosomethylamine	74	2.206	2.206	(0.511)	197496	40.0000	33.9
2 Pyridine	79	2.235	2.235	(0.518)	288729	40.0000	33.8
4 Aniline	66	4.006	4.006	(0.928)	174545	40.0000	32.9
6 Phenol	94	3.958	3.958	(0.917)	419161	40.0000	36.0
7 bis(2-Chloroethyl) ether	63	4.054	4.054	(0.939)	253247	40.0000	31.8
8 2-Chlorophenol	128	4.116	4.116	(0.954)	388177	40.0000	38.4
203 n-Decane	43	4.144	4.144	(0.960)	272627	40.0000	26.2
9 1,3-Dichlorobenzene	146	4.263	4.263	(0.988)	449357	40.0000	37.5
11 1,4-Dichlorobenzene	146	4.330	4.330	(1.003)	468537	40.0000	37.9
13 1,2-Dichlorobenzene	146	4.473	4.473	(1.036)	437570	40.0000	38.1
14 bis(2-Chloroisopropyl)ether	45	4.558	4.558	(1.056)	375310	40.0000	24.1
12 Benzyl alcohol	108	4.430	4.430	(1.026)	199727	40.0000	31.6
15 o-Cresol	107	4.520	4.520	(1.047)	288853	40.0000	35.8
18 m,p-Cresols	107	4.677	4.677	(1.084)	374250	40.0000	36.6

Compounds	QUANT SIG					AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ng/ul)	ON-COL (ng/ul)
=====	=====	==	=====	=====	=====	=====	=====
17 N-Nitrosodipropylamine	70	4.692	4.692	(1.087)	255872	40.0000	34.4
19 Hexachloroethane	117	4.801	4.801	(1.113)	172980	40.0000	37.2
21 Nitrobenzene	77	4.863	4.863	(0.873)	381510	40.0000	34.4
22 Isophorone	82	5.101	5.101	(0.915)	719864	40.0000	35.2
23 2-Nitrophenol	139	5.177	5.177	(0.929)	213504	40.0000	41.9
24 2,4-Dimethylphenol	122	5.206	5.206	(0.934)	326363	40.0000	36.0
25 bis(2-Chloroethoxy)methane	93	5.306	5.306	(0.952)	432259	40.0000	37.7
26 2,4-Dichlorophenol	162	5.420	5.420	(0.973)	333990	40.0000	40.8
27 Benzoic acid	105	5.320	5.320	(0.955)	195553	40.0000	45.0
28 1,2,4-Trichlorobenzene	180	5.506	5.506	(0.988)	408967	40.0000	37.1
30 Naphthalene	128	5.592	5.592	(1.003)	1277609	40.0000	38.8
204 alpha-Terpineol	59	5.596	5.596	(1.004)	282293	40.0000	33.5
31 4-Chloroaniline	127	5.639	5.639	(1.012)	441720	40.0000	40.8
32 Hexachlorobutadiene	225	5.716	5.716	(1.026)	253394	40.0000	37.0
33 4-Chloro-3-methylphenol	107	6.135	6.135	(1.101)	332179	40.0000	37.5
34 2-Methylnaphthalene	142	6.311	6.311	(1.132)	860048	40.0000	39.1
35 1-Methylnaphthalene	142	6.416	6.416	(1.151)	845908	40.0000	39.2
36 Hexachlorocyclopentadiene	237	6.473	6.473	(0.872)	203163	40.0000	35.2
205 2,3-Dichloroaniline	161	6.606	6.606	(0.890)	460976	40.0000	37.5
37 2,4,6-Trichlorophenol	196	6.606	6.606	(0.890)	267977	40.0000	37.4
38 2,4,5-Trichlorophenol	196	6.639	6.639	(0.894)	272706	40.0000	35.8
40 2-Chloronaphthalene	162	6.825	6.825	(0.919)	834690	40.0000	36.4
42 o-Nitroaniline	65	6.930	6.930	(0.933)	210937	40.0000	33.1
41 m-Nitroaniline	138	7.373	7.373	(0.993)	183914	40.0000	37.9
43 Dimethylphthalate	163	7.135	7.135	(0.961)	971440	40.0000	37.2
44 2,6-Dinitrotoluene	165	7.197	7.197	(0.969)	227081	40.0000	38.5
50 2,4-Dinitrotoluene	165	7.625	7.625	(1.027)	294052	40.0000	38.9
45 Acenaphthylene	152	7.273	7.273	(0.979)	1355653	40.0000	35.1
47 Acenaphthene	154	7.458	7.458	(1.004)	836151	40.0000	33.8
48 2,4-Dinitrophenol	184	7.482	7.482	(1.008)	107197	40.0000	50.7
49 Dibenzofuran	168	7.639	7.639	(1.029)	1195969	40.0000	36.8
51 Diethylphthalate	149	7.887	7.887	(1.062)	1014288	40.0000	37.2
52 4-Nitrophenol	139	7.544	7.544	(1.016)	152435	40.0000	48.0
53 Fluorene	166	8.011	8.011	(1.079)	1073211	40.0000	35.7
54 4-Chlorophenylphenylether	204	8.006	8.006	(1.078)	522095	40.0000	36.1
55 2-Methyl-4,6-dinitrophenol	198	8.063	8.063	(0.894)	160983	40.0000	45.7
56 p-Nitroaniline	138	8.025	8.025	(1.081)	168622	40.0000	39.3
133 Diphenylamine	169	8.135	8.135	(0.902)	827251	40.0000	38.0
58 1,2-Diphenylhydrazine	77	8.177	8.177	(0.907)	843542	40.0000	33.0
61 4-Bromophenylphenylether	248	8.535	8.535	(0.947)	314022	40.0000	38.2
63 Hexachlorobenzene	284	8.601	8.601	(0.954)	314467	40.0000	36.8
65 Pentachlorophenol	266	8.806	8.806	(0.977)	168619	40.0000	44.2
206 n-Octadecane	57	8.901	8.901	(0.987)	524408	40.0000	30.7
68 Phenanthrene	178	9.044	9.044	(1.003)	1460804	40.0000	36.3
69 Anthracene	178	9.097	9.097	(1.009)	1474236	40.0000	35.3
72 Di-n-butylphthalate	149	9.644	9.644	(1.070)	1731965	40.0000	39.6
76 Fluoranthene	202	10.320	10.320	(1.145)	1586131	40.0000	36.2

Compounds	QUANT SIG					AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ng/ul)	ON-COL (ng/ul)
=====	=====	=====	=====	=====	=====	=====	=====
79 Pyrene	202	10.568	10.568	(0.888)	1678963	40.0000	31.1
85 Butylbenzylphthalate	149	11.258	11.258	(0.946)	700699	40.0000	37.1
89 Benzo(a)anthracene	228	11.882	11.882	(0.998)	1518027	40.0000	33.3
92 Chrysene	228	11.930	11.930	(1.002)	1411636	40.0000	35.6
93 bis(2-Ethylhexyl)phthalate	149	11.906	11.906	(1.000)	1033149	40.0000	39.1
94 Di-n-octylphthalate	149	12.763	12.763	(0.917)	1518846	40.0000	35.6
95 Benzo(b)fluoranthene	252	13.330	13.330	(0.957)	1329630	40.0000	33.3
96 Benzo(k)fluoranthene	252	13.378	13.378	(0.961)	1373469	40.0000	34.2
97 Benzo(a)pyrene	252	13.835	13.835	(0.994)	1232414	40.0000	36.6
99 Indeno(1,2,3-cd)pyrene	276	15.706	15.706	(1.128)	1077331	40.0000	38.6
100 Dibenzo(a,h)anthracene	278	15.744	15.744	(1.131)	1045164	40.0000	48.5
101 Benzo(ghi)perylene	276	16.173	16.173	(1.161)	1045686	40.0000	45.3
126 m-Dinitrobenzene	168	7.163	7.163	(0.965)	151092	40.0000	40.2
130 2,3,4,6-Tetrachlorophenol	232	7.768	7.768	(1.046)	220649	40.0000	34.2
143 Dinoseb	211	9.006	9.006	(0.999)	239193	40.0000	45.6
173 Carbazole	167	9.268	9.268	(1.028)	1014568	40.0000	34.0
184 p-Benzoquinone	54	3.582	3.582	(0.830)	15629	40.0000	11.3
192 Methoxychlor	227	11.801	11.801	(0.992)	997824	40.0000	40.2
211 p-Toluidine	106	4.730	4.730	(1.096)	385602	40.0000	35.4
210 m-Toluidine	106	4.768	4.768	(1.105)	486257	40.0000	34.2
26 Phthalic anhydride	104	6.368	6.368	(1.143)	135202	40.0000	30.1
179 Dibenzo(a,e)pyrene	302	19.120	19.120	(1.373)	459178	40.0000	50.0
214 1,4-Dinitrobenzene	75	7.082	7.082	(0.954)	136896	40.0000	34.3
215 2-Ethoxyethanol	59	2.001	2.001	(0.464)	168892	40.0000	30.8
216 Methylenebis(2-chloroaniline)	231	11.854	11.854	(0.996)	153327	40.0000	32.8
M 222 Trichlorophenols	196				540683	80.0000	73.2
M 223 Tetrachlorophenols	232				220649	40.0000	34.2
M 224 Benzo(b,k)fluoranthene	252				2703099	80.0000	67.6

Data File: /chem/MSDB.i/s030110.b/s030102.d

Date: 01-MAR-2010 12:28

Client ID: MECOCVS

Sample Info: IWBNI00215-05.3140 PPH11SVH11.MEGACVS

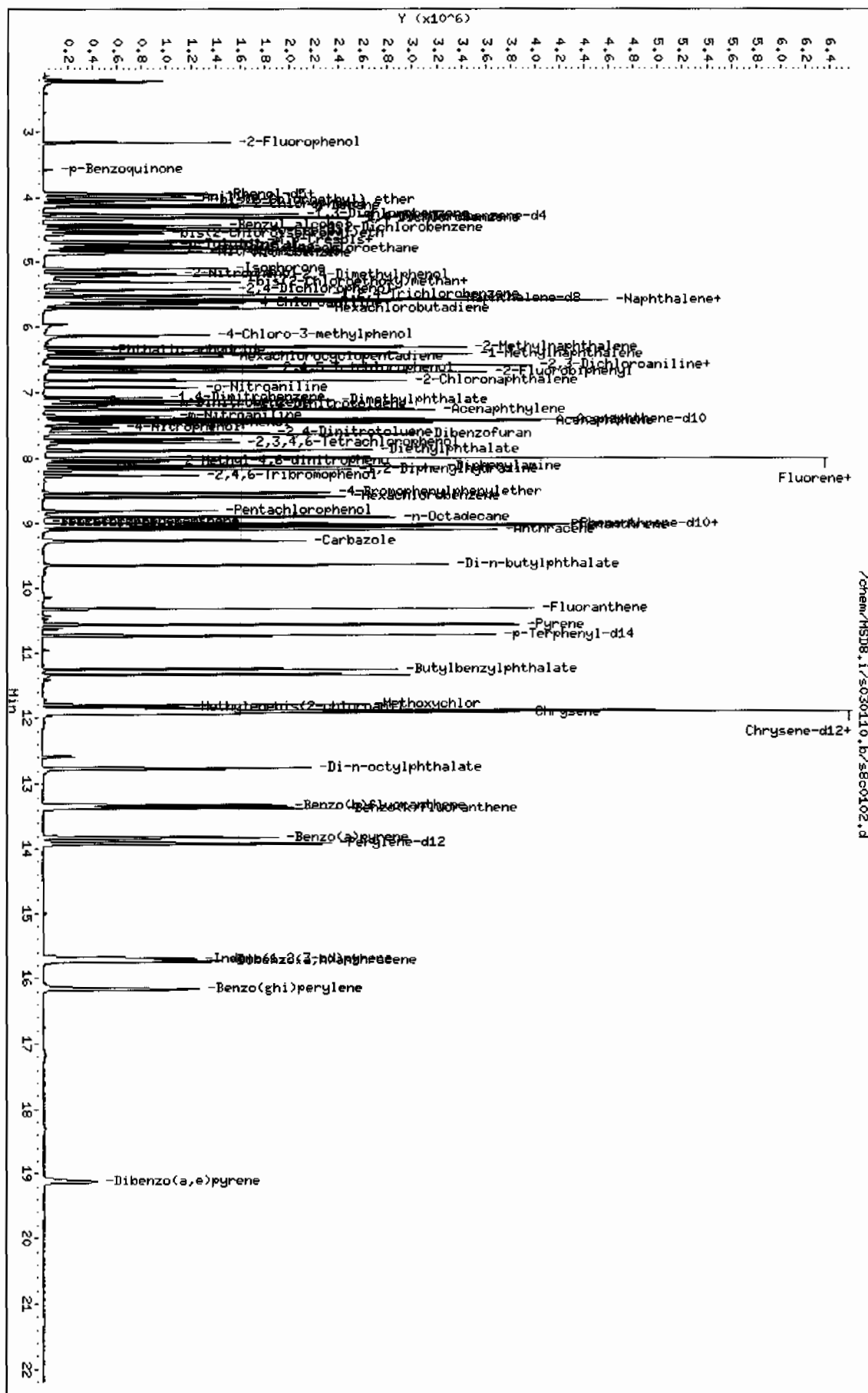
Column phase: J&W DB-5MS

Instrument: MSD8.i

Operator: nag1

Column diameter: 0.20

Page 1



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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD8.i Injection Date: 01-MAR-2010 13:03
Lab File ID: s8c0103.d Init. Cal. Date(s): 20-FEB-2010 22-FEB-2010
Analysis Type: Init. Cal. Times: 12:55 01:19
Lab Sample ID: WBN100218-03.5 Quant Type: ISTD
Method: /chem/MSD8.i/s030110.b/MSD8-8270AQA-022010.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
209 Benzaldehyde	0.84330	0.68424	0.68424	0.000	-18.86109	60.00000	Averaged
16 Acetophenone	1.20309	1.02416	1.02416	0.000	-14.87237	60.00000	Averaged
189 Caprolactam	0.06655	0.06606	0.06606	0.000	-0.74401	60.00000	Averaged
208 1,1'-Biphenyl	1.22219	1.10301	1.10301	0.000	-9.75159	60.00000	Averaged
207 Atrazine	0.03531	0.03717	0.03717	0.000	5.25421	60.00000	Averaged
77 Benzidine	31.27890	40.00000	0.21776	0.000	-21.80276	60.00000	Linear
90 3,3'-Dichlorobenzidine	0.24780	0.22657	0.22657	0.000	-8.56526	60.00000	Averaged
102 1,4-Dioxane	0.32319	0.28345	0.28345	0.000	-12.29598	60.00000	Averaged
103 Methyl methacrylate	0.16817	0.15888	0.15888	0.000	-5.52207	60.00000	Averaged
104 Ethyl methacrylate	0.67963	0.54686	0.54686	0.000	-19.53495	60.00000	Averaged
105 2-Picoline	1.09294	0.96603	0.96603	0.000	-11.61149	60.00000	Averaged
106 N-Nitrosomethylethylamine	0.43986	0.35783	0.35783	0.000	-18.64992	60.00000	Averaged
107 Methyl methanesulfonate	0.49950	0.41413	0.41413	0.000	-17.09021	60.00000	Averaged
108 N-Nitrosodiethylamine	0.45804	0.39062	0.39062	0.000	-14.72106	60.00000	Averaged
109 Ethyl Methanesulfonate	0.60902	0.50140	0.50140	0.000	-17.67017	60.00000	Averaged
110 Pentachloroethane	0.32092	0.29879	0.29879	0.000	-6.89610	60.00000	Averaged
111 N-Nitrosopyrrolidine	0.49059	0.42239	0.42239	0.000	-13.90178	60.00000	Averaged
113 N-Nitrosomorpholine	0.66385	0.49267	0.49267	0.000	-25.78585	60.00000	Averaged
114 o-Toluidine	1.62183	1.41951	1.41951	0.000	-12.47510	60.00000	Averaged
115 N-Nitrosopiperidine	0.12437	0.11536	0.11536	0.000	-7.24780	60.00000	Averaged
116 a,a-Dimethylphenethylamine	0.74304	0.52752	0.52752	0.000	-29.00488	60.00000	Averaged
118 2,6-Dichlorophenol	0.20154	0.20346	0.20346	0.000	0.95074	60.00000	Averaged
119 Hexachloropropene	0.12360	0.10972	0.10972	0.000	-11.23054	60.00000	Averaged
120 p-Phenylenediamine	0.19655	0.20029	0.20029	0.000	1.90390	60.00000	Averaged
121 N-Nitrosodi-n-butylamine	0.21161	0.19819	0.19819	0.000	-6.34242	60.00000	Averaged
122 Saffrole	0.19334	0.18495	0.18495	0.000	-4.34271	60.00000	Averaged
123 1,2,4,5-Tetrachlorobenzene	0.47582	0.41722	0.41722	0.000	-12.31638	60.00000	Averaged
124 Isosafrole	0.32130	0.28835	0.28835	0.000	-10.25445	60.00000	Averaged
125 1,4-Naphthoquinone	0.29641	0.29182	0.29182	0.000	-1.54918	60.00000	Averaged
127 Pentachlorobenzene	0.43422	0.37449	0.37449	0.000	-13.75559	60.00000	Averaged
128 1-Naphthylamine	0.84230	0.77770	0.77770	0.000	-7.66992	60.00000	Averaged
129 2-Naphthylamine	0.88763	0.81738	0.81738	0.000	-7.91430	60.00000	Averaged
131 5-Nitro-o-toluidine	0.24122	0.22580	0.22580	0.000	-6.39280	60.00000	Averaged
136 1,3,5-Trinitrobenzene	0.09499	0.09945	0.09945	0.000	4.69524	60.00000	Averaged
137 Phenacetin	0.21690	0.19905	0.19905	0.000	-8.22626	60.00000	Averaged
138 Diallate	0.20203	0.17527	0.17527	0.000	-13.24876	60.00000	Averaged

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD8.i Injection Date: 01-MAR-2010 13:03
Lab File ID: s8c0103.d Init. Cal. Date(s): 20-FEB-2010 22-FEB-2010
Analysis Type: Init. Cal. Times: 12:55 01:19
Lab Sample ID: WBN100218-03.5 Quant Type: ISTD
Method: /chem/MSD8.i/s030110.b/MSD8-8270AQA-022010.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
212 Cis Diallate	0.20071	0.17435	0.17435	0.000	-13.13674	60.00000	Averaged
213 Trans Diallate	0.23769	0.20620	0.20620	0.000	-13.24876	60.00000	Averaged
140 4-Aminobiphenyl	0.51727	0.47900	0.47900	0.000	-7.39883	60.00000	Averaged
141 Pentachloronitrobenzene	0.07936	0.06924	0.06924	0.000	-12.75826	60.00000	Averaged
142 Pronamide	0.25230	0.25129	0.25129	0.000	-0.40090	60.00000	Averaged
146 4-Nitroquinoline-1-oxide	0.01907	0.01858	0.01858	0.000	-2.55943	60.00000	Averaged
147 Methapyrilene	0.29186	0.24208	0.24208	0.000	-17.05484	60.00000	Averaged
148 Isodrin	0.10718	0.09950	0.09950	0.000	-7.16539	60.00000	Averaged
149 Aramite	0.03388	0.03439	0.03439	0.000	1.51159	60.00000	Averaged
150 Kepone	0.07795	0.07695	0.07695	0.000	-1.27960	60.00000	Averaged
151 p-(Dimethylamino)azobenzene	0.25808	0.23816	0.23816	0.000	-7.72021	60.00000	Averaged
152 Chlorobenzilate	0.26271	0.25652	0.25652	0.000	-2.35539	60.00000	Averaged
153 3,3'-Dimethylbenzidine	0.45535	0.40331	0.40331	0.000	-11.42822	60.00000	Averaged
155 2-Acetylaminofluorene	40.67251	40.00000	0.22995	0.000	1.68127	60.00000	Linear
157 7,12Dimethylbenz(a)anthracene	0.51909	0.46479	0.46479	0.000	-10.46050	60.00000	Averaged
158 3-Methylcholanthrene	0.36780	0.35613	0.35613	0.000	-3.17543	60.00000	Averaged

Data File: /chem/MSD8.i/s030110.b/s8c0103.d
Report Date: 02-Mar-2010 07:05

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GEL Laboratories LLC

Data file : /chem/MSD8.i/s030110.b/s8c0103.d
Lab Smp Id: WBN100218-03.5 Client Smp ID: AP12CVS
Inj Date : 01-MAR-2010 13:03
Operator : nag1 Inst ID: MSD8.i
Smp Info : |WBN100218-03.5|40 PPM|1|SVMF|1|AP12CVS
Misc Info : |MSD8270|WBN100227-01
Comment : Column: J & W DB-5MS, 25m x 0.20 mm x 0.33 micron film
Method : /chem/MSD8.i/s030110.b/MSD8-8270AQA-022010.m
Meth Date : 02-Mar-2010 07:05 nat00999 Quant Type: ISTD
Cal Date : 21-FEB-2010 23:15 Cal File: s8b2042.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AP12.sub
Target Version: 3.50
Processing Host: hpc1p1

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	4.311	4.311	(1.000)	410864	40.0000	
* 29 Naphthalene-d8	136	5.568	5.568	(1.000)	1532615	40.0000	
* 46 Acenaphthene-d10	164	7.420	7.420	(1.000)	940630	40.0000	
* 67 Phenanthrene-d10	188	9.015	9.015	(1.000)	1677188	40.0000	
* 91 Chrysene-d12	240	11.892	11.892	(1.000)	1504027	40.0000	
* 98 Perylene-d12	264	13.916	13.916	(1.000)	1161513	40.0000	
209 Benzaldehyde	77	3.915	3.915	(0.908)	281131	40.0000	32.4
16 Acetophenone	105	4.687	4.687	(1.087)	420790	40.0000	34.0
189 Caprolactam	113	5.996	5.996	(1.077)	101243	40.0000	39.7
208 1,1'-Biphenyl	154	6.801	6.801	(0.917)	1037524	40.0000	36.1
207 Atrazine	173	8.711	8.711	(0.966)	62341	40.0000	42.1
77 Benzidine	184	10.458	10.458	(0.879)	327521	40.0000	31.3
90 3,3'-Dichlorobenzidine	252	11.844	11.844	(0.996)	340774	40.0000	36.6
102 1,4-Dioxane	88	2.001	2.001	(0.464)	116460	40.0000	35.1
103 Methyl methacrylate	100	2.006	2.006	(0.465)	65278	40.0000	37.8
104 Ethyl methacrylate	69	2.506	2.506	(0.581)	224686	40.0000	32.2
105 2-Picoline	93	2.744	2.744	(0.637)	396909	40.0000	35.4
106 N-Nitrosomethylethylamine	88	2.815	2.815	(0.653)	147018	40.0000	32.5
107 Methyl methanesulfonate	80	3.044	3.044	(0.706)	170153	40.0000	33.2
108 N-Nitrosodiethylamine	102	3.363	3.363	(0.780)	160490	40.0000	34.1
109 Ethyl Methanesulfonate	79	3.601	3.601	(0.835)	206009	40.0000	32.9
110 Pentachloroethane	167	4.053	4.053	(0.940)	122761	40.0000	37.2
111 N-Nitrosopyrrolidine	100	4.673	4.673	(1.084)	173543	40.0000	34.4 (Q)
113 N-Nitrosomorpholine	56	4.706	4.706	(1.092)	202421	40.0000	29.7
114 o-Toluidine	106	4.725	4.725	(1.096)	583224	40.0000	35.0
115 N-Nitrosopiperidine	114	5.006	5.006	(0.899)	176795	40.0000	37.1

Compounds	QUANT SIG					AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ng/ul)	ON-COL (ng/ul)
116 a,a-Dimethylphenethylamine	58	5.406	5.406	(0.971)	808484	40.0000	28.4
118 2,6-Dichlorophenol	162	5.649	5.649	(1.015)	311823	40.0000	40.4
119 Hexachloropropene	213	5.677	5.677	(1.020)	168160	40.0000	35.5
120 p-Phenylenediamine	108	6.006	6.006	(1.079)	306974	40.0000	40.8
121 N-Nitrosodi-n-butylamine	84	5.987	5.987	(1.075)	303745	40.0000	37.5
122 Safrole	162	6.211	6.211	(1.115)	283451	40.0000	38.3
123 1,2,4,5-Tetrachlorobenzene	216	6.487	6.487	(0.874)	392445	40.0000	35.1
124 Isosafrole	162	6.763	6.763	(0.911)	271234	40.0000	35.9
125 1,4-Naphthoquinone	158	7.011	7.011	(0.945)	274497	40.0000	39.4
127 Pentachlorobenzene	250	7.592	7.592	(1.023)	352257	40.0000	34.5
128 1-Naphthylamine	143	7.720	7.720	(1.040)	731526	40.0000	36.9
129 2-Naphthylamine	143	7.801	7.801	(1.051)	768853	40.0000	36.8
131 5-Nitro-o-toluidine	152	8.011	8.011	(1.080)	212393	40.0000	37.4
136 1,3,5-Trinitrobenzene	75	8.406	8.406	(0.932)	166802	40.0000	41.9
137 Phenacetin	108	8.468	8.468	(0.939)	333850	40.0000	36.7(Q)
138 Diallate	86	8.439	8.439	(0.936)	293955	40.0000	34.7
212 Cis Diallate	86	8.534	8.534	(0.947)	43862	6.00000	5.2
213 Trans Diallate	86	8.439	8.439	(0.936)	293955	34.0000	29.5
140 4-Aminobiphenyl	169	8.811	8.811	(0.977)	803370	40.0000	37.0
141 Pentachloronitrobenzene	237	8.820	8.820	(0.978)	116124	40.0000	34.9(Q)
142 Pronamide	173	8.873	8.873	(0.984)	421459	40.0000	39.8
146 4-Nitroquinoline-1-oxide	101	9.863	9.863	(1.094)	31162	40.0000	39.0
147 Methapyrilene	58	9.949	9.949	(1.104)	406018	40.0000	33.2
148 Isodrin	193	10.158	10.158	(1.127)	166878	40.0000	37.1
149 Aramite	185	10.706	10.706	(1.188)	57681	40.0000	40.6
150 Kepone	272	11.296	11.296	(1.253)	129060	40.0000	39.5
151 p-(Dimethylamino)azobenzene	120	10.882	10.882	(0.915)	358192	40.0000	36.9
152 Chlorobenzilate	251	10.930	10.930	(0.919)	385810	40.0000	39.0
153 3,3'-Dimethylbenzidine	212	11.239	11.239	(0.945)	606595	40.0000	35.4
155 2-Acetylaminofluorene	181	11.511	11.511	(0.968)	345852	40.0000	40.7
157 7,12Dimethylbenz(a)anthracene	256	13.316	13.316	(0.957)	539861	40.0000	35.8
158 3-Methylcholanthrene	268	14.392	14.392	(1.034)	413644	40.0000	38.7(Q)

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: /chem/HSD8.i/s030110.b/s0c0103.d

Date: 01-MAR-2010 13:03

Client ID: AP12CVS

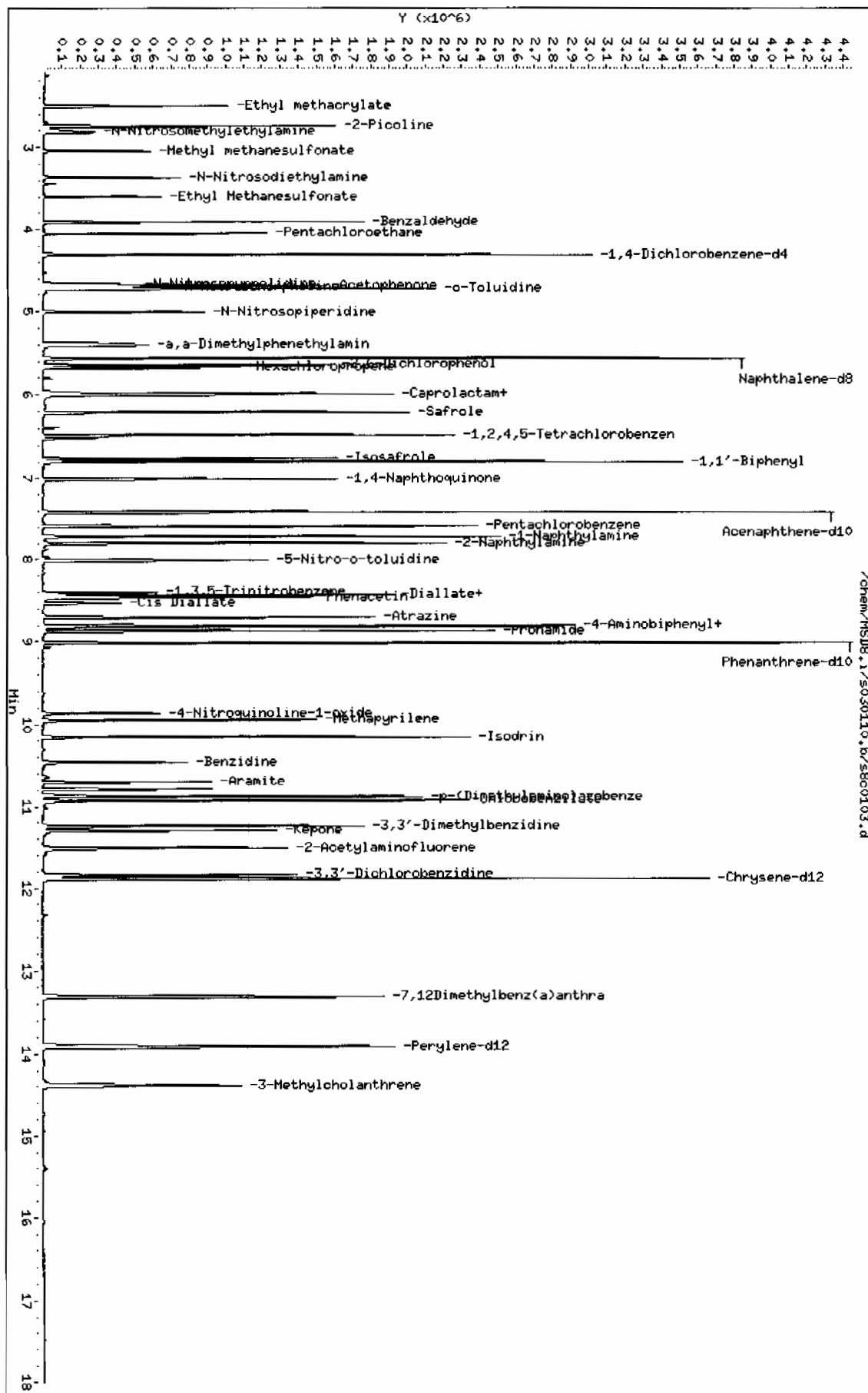
Sample Info: IBBN100218-03.SI 40 PPM 11.5VHF 11.1AP12CVS

Column phase: J&W DB-5MS

Instrument: HSD8.i

Operator: nag1

Column diameter: 0.20



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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD8.i Injection Date: 02-MAR-2010 09:35
Lab File ID: s8c0202.d Init. Cal. Date(s): 20-FEB-2010 22-FEB-2010
Analysis Type: Init. Cal. Times: 12:55 01:19
Lab Sample ID: WBN100225-05.5 Quant Type: ISTD
Method: /chem/MSD8.i/s030210.b/MSD8-8270AQA-022010.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
3 2-Fluorophenol	0.94435	0.91264	0.91264	0.000	-3.35756	60.00000	Averaged
5 Phenol-d5	1.17771	1.15545	1.15545	0.000	-1.88989	60.00000	Averaged
20 Nitrobenzene-d5	0.28435	0.26603	0.26603	0.000	-6.44002	60.00000	Averaged
39 2-Fluorobiphenyl	1.17740	1.13667	1.13667	0.000	-3.45871	60.00000	Averaged
60 2,4,6-Tribromophenol	0.13223	0.12345	0.12345	0.000	-6.63417	60.00000	Averaged
81 p-Terphenyl-d14	0.72015	0.64995	0.64995	0.000	-9.74774	60.00000	Averaged
1 N-Methyl-N-nitrosomethylami	0.60923	0.53197	0.53197	0.000	-12.68093	60.00000	Averaged
2 Pyridine	0.89373	0.78078	0.78078	0.000	-12.63815	60.00000	Averaged
4 Aniline	0.55542	0.47406	0.47406	0.000	-14.64941	60.00000	Averaged
6 Phenol	1.21617	1.13712	1.13712	0.001	-6.50063	20.00000	Averaged|ccc
7 bis(2-Chloroethyl) ether	0.83144	0.67757	0.67757	0.000	-18.50666	60.00000	Averaged
8 2-Chlorophenol	1.05605	1.04815	1.04815	0.000	-0.74843	60.00000	Averaged
203 n-Decane	1.08949	0.75177	0.75177	0.000	-30.99861	60.00000	Averaged
9 1,3-Dichlorobenzene	1.25240	1.24263	1.24263	0.000	-0.77970	60.00000	Averaged
11 1,4-Dichlorobenzene	1.29215	1.27464	1.27464	0.001	-1.35581	20.00000	Averaged|ccc
13 1,2-Dichlorobenzene	1.20194	1.19291	1.19291	0.000	-0.75080	60.00000	Averaged
14 bis(2-Chloroisopropyl)ether	1.63019	1.02754	1.02754	0.000	-36.96818	60.00000	Averaged
12 Benzyl alcohol	0.66057	0.50129	0.50129	0.000	-24.11165	60.00000	Averaged
15 o-Cresol	0.84463	0.77917	0.77917	0.000	-7.75029	60.00000	Averaged
18 m,p-Cresols	1.06890	0.98287	0.98287	0.000	-8.04854	60.00000	Averaged
17 N-Nitrosodipropylamine	0.77788	0.69279	0.69279	0.050	-10.93846	60.00000	Averaged|spcc
19 Hexachloroethane	0.48694	0.46293	0.46293	0.000	-4.93121	60.00000	Averaged
21 Nitrobenzene	0.29331	0.26246	0.26246	0.000	-10.51730	60.00000	Averaged
22 Isophorone	0.53999	0.49522	0.49522	0.000	-8.29099	60.00000	Averaged
23 2-Nitrophenol	0.13462	0.14126	0.14126	0.001	4.93127	20.00000	Averaged|ccc
24 2,4-Dimethylphenol	0.23932	0.22327	0.22327	0.000	-6.70846	60.00000	Averaged
25 bis(2-Chloroethoxy)methane	0.30282	0.29866	0.29866	0.000	-1.37450	60.00000	Averaged
26 2,4-Dichlorophenol	0.21654	0.22191	0.22191	0.001	2.47894	20.00000	Averaged|ccc
27 Benzoic acid	33.12304	40.00000	0.07811	0.000	-17.19240	60.00000	Linear
28 1,2,4-Trichlorobenzene	0.29118	0.28600	0.28600	0.000	-1.77863	60.00000	Averaged
30 Naphthalene	40.44133	40.00000	0.88218	0.000	1.10333	60.00000	Linear
204 alpha-Terpeneol	0.22259	0.19272	0.19272	0.000	-13.41598	60.00000	Averaged
31 4-Chloroaniline	0.28585	0.30345	0.30345	0.000	6.15693	60.00000	Averaged
32 Hexachlorobutadiene	0.18110	0.17185	0.17185	0.001	-5.10810	20.00000	Averaged|ccc
33 4-Chloro-3-methylphenol	0.23429	0.19752	0.19752	0.001	-15.69204	20.00000	Averaged|ccc
34 2-Methylnaphthalene	40.22842	40.00000	0.58493	0.000	0.57104	60.00000	Linear

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD8.i Injection Date: 02-MAR-2010 09:35
Lab File ID: s8c0202.d Init. Cal. Date(s): 20-FEB-2010 22-FEB-2010
Analysis Type: Init. Cal. Times: 12:55 01:19
Lab Sample ID: WBN100225-05.5 Quant Type: ISTD
Method: /chem/MSD8.i/s030210.b/MSD8-8270AQA-022010.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
35 1-Methylnaphthalene	39.87766	40.00000	0.56834	0.000	-0.30584	60.00000	Linear
36 Hexachlorocyclopentadiene	0.24827	0.15148	0.15148	0.050	-38.98705	60.00000	Averaged|spcc
205 2,3-Dichloroaniline	0.52803	0.52387	0.52387	0.000	-0.78902	60.00000	Averaged
37 2,4,6-Trichlorophenol	0.30819	0.29910	0.29910	0.001	-2.94880	20.00000	Averaged|ccc
38 2,4,5-Trichlorophenol	0.32711	0.29381	0.29381	0.000	-10.17801	60.00000	Averaged
40 2-Chloronaphthalene	38.65946	40.00000	0.95472	0.000	-3.35135	60.00000	Linear
42 o-Nitroaniline	0.27392	0.23730	0.23730	0.000	-13.36972	60.00000	Averaged
41 m-Nitroaniline	0.20877	0.21048	0.21048	0.000	0.82056	60.00000	Averaged
43 Dimethylphthalate	1.12088	1.10575	1.10575	0.000	-1.35021	60.00000	Averaged
44 2,6-Dinitrotoluene	0.25341	0.25411	0.25411	0.000	0.27674	60.00000	Averaged
50 2,4-Dinitrotoluene	0.32492	0.32284	0.32284	0.000	-0.64029	60.00000	Averaged
45 Acenaphthylene	1.66068	1.52380	1.52380	0.000	-8.24271	60.00000	Averaged
47 Acenaphthene	1.06294	0.95339	0.95339	0.001	-10.30615	20.00000	Averaged|ccc
48 2,4-Dinitrophenol	33.38384	40.00000	0.06022	0.050	-16.54041	60.00000	Linear|spcc
49 Dibenzofuran	1.39464	1.34616	1.34616	0.000	-3.47648	60.00000	Averaged
51 Diethylphthalate	1.17311	1.15175	1.15175	0.000	-1.82093	60.00000	Averaged
52 4-Nitrophenol	0.13654	0.14268	0.14268	0.050	4.49787	60.00000	Averaged|spcc
53 Fluorene	1.29100	1.19956	1.19956	0.000	-7.08310	60.00000	Averaged
54 4-Chlorophenylphenylether	0.62173	0.58543	0.58543	0.000	-5.83934	60.00000	Averaged
55 2-Methyl-4,6-dinitrophenol	30.25490	40.00000	0.05643	0.000	-24.36275	60.00000	Linear
56 p-Nitroaniline	0.18448	0.18638	0.18638	0.000	1.03178	60.00000	Averaged
133 Diphenylamine	0.50546	0.52318	0.52318	0.001	3.50524	20.00000	Averaged|ccc
58 1,2-Diphenylhydrazine	0.59375	0.53451	0.53451	0.000	-9.97609	60.00000	Averaged
61 4-Bromophenylphenylether	0.19114	0.19708	0.19708	0.000	3.10689	60.00000	Averaged
63 Hexachlorobenzene	0.19866	0.19425	0.19425	0.000	-2.22216	60.00000	Averaged
65 Pentachlorophenol	0.08849	0.07173	0.07173	0.001	-18.94016	20.00000	Averaged|ccc
206 n-Octadecane	0.39703	0.33943	0.33943	0.000	-14.50673	60.00000	Averaged
68 Phenanthrene	38.47965	40.00000	0.90256	0.000	-3.80088	60.00000	Linear
69 Anthracene	0.97083	0.90183	0.90183	0.000	-7.10785	60.00000	Averaged
72 Di-n-butylphthalate	1.01476	1.05449	1.05449	0.000	3.91551	60.00000	Averaged
76 Fluoranthene	1.01786	0.92844	0.92844	0.001	-8.78523	20.00000	Averaged|ccc
79 Pyrene	1.24889	1.04410	1.04410	0.000	-16.39762	60.00000	Averaged
85 Butylbenzylphthalate	0.43672	0.43294	0.43294	0.000	-0.86519	60.00000	Averaged
89 Benzo(a)anthracene	1.05261	0.93422	0.93422	0.000	-11.24739	60.00000	Averaged
92 Chrysene	37.58835	40.00000	0.86270	0.000	-6.02912	60.00000	Linear
93 bis(2-Ethylhexyl)phthalate	0.61117	0.62582	0.62582	0.000	2.39615	60.00000	Averaged

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD8.i Injection Date: 02-MAR-2010 09:35
Lab File ID: s8c0202.d Init. Cal. Date(s): 20-FEB-2010 22-FEB-2010
Analysis Type: Init. Cal. Times: 12:55 01:19
Lab Sample ID: WBN100225-05.5 Quant Type: ISTD
Method: /chem/MSD8.i/s030210.b/MSD8-8270AQA-022010.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
94 Di-n-octylphthalate	37.75897	40.00000	1.15495	0.001	-5.60257	20.00000	Linear
95 Benzo(b)fluoranthene	1.13405	1.02815	1.02815	0.000	-9.33769	60.00000	Averaged
96 Benzo(k)fluoranthene	1.14008	1.04061	1.04061	0.000	-8.72486	60.00000	Averaged
97 Benzo(a)pyrene	0.95647	0.93064	0.93064	0.001	-2.69996	20.00000	Averaged
99 Indeno(1,2,3-cd)pyrene	0.79303	0.90743	0.90743	0.000	14.42614	60.00000	Averaged
100 Dibenzo(a,h)anthracene	0.61288	0.73092	0.73092	0.000	19.25955	60.00000	Averaged
101 Benzo(ghi)perylene	0.65613	0.73362	0.73362	0.000	11.81131	60.00000	Averaged
126 m-Dinitrobenzene	0.16162	0.16674	0.16674	0.000	3.16916	60.00000	Averaged
130 2,3,4,6-Tetrachlorophenol	0.27739	0.22425	0.22425	0.000	-19.15664	60.00000	Averaged
143 Dinoseb	31.14299	40.00000	0.08453	0.000	-22.14251	60.00000	Linear
173 Carbazole	0.69337	0.63446	0.63446	0.000	-8.49544	60.00000	Averaged
184 p-Benzoquinone	22.05484	40.00000	0.09498	0.000	-44.86291	60.00000	Linear
192 Methoxychlor	0.57371	0.57415	0.57415	0.000	0.07647	60.00000	Averaged
211 p-Toluidine	1.14055	1.10349	1.10349	0.000	-3.24899	60.00000	Averaged
210 m-Toluidine	1.48620	1.23780	1.23780	0.000	-16.71369	60.00000	Averaged
26 Phthalic anhydride	21.75926	40.00000	0.05936	0.000	-45.60186	60.00000	Linear
179 Dibenzo(a,e)pyrene	0.26112	0.30510	0.30510	0.000	16.84167	60.00000	Averaged
214 1,4-Dinitrobenzene	0.17136	0.14572	0.14572	0.000	-14.96638	60.00000	Averaged
215 2-Ethoxyethanol	0.57374	0.43962	0.43962	0.000	-23.37558	60.00000	Averaged
216 Methylenebis(2-chloroanilin	33.60863	40.00000	0.09160	0.000	-15.97842	60.00000	Linear
M 222 Trichlorophenols	0.31765	0.29646	0.29646	0.000	-6.67106	60.00000	Averaged
M 223 Tetrachlorophenols	0.27739	0.22425	0.22425	0.000	-19.15664	60.00000	Averaged
M 224 Benzo(b,k)fluoranthene	1.13706	1.03438	1.03438	0.000	-9.03046	60.00000	Averaged

Data File: /chem/MSD8.i/s030210.b/s8c0202.d
Report Date: 02-Mar-2010 20:07

Page 1

GEL Laboratories LLC

Data file : /chem/MSD8.i/s030210.b/s8c0202.d
Lab Smp Id: WBN100225-05.5 Client Smp ID: MEGACVS
Inj Date : 02-MAR-2010 09:35
Operator : nag1 Inst ID: MSD8.i
Smp Info : |WBN100225-05.5|40 PPM|1|SVMF|1|MEGACVS
Misc Info : |MSD8270|WBN100227-01
Comment : Column: J & W DB-5MS, 25m x 0.20 mm x 0.33 micron film
Method : /chem/MSD8.i/s030210.b/MSD8-8270AQA-022010.m
Meth Date : 02-Mar-2010 20:07 nat00999 Quant Type: ISTD
Cal Date : 21-FEB-2010 23:15 Cal File: s8b2042.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 (ng/ul)	ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	4.401	4.401	(1.000)	378003	40.0000	
* 29 Naphthalene-d8	136	5.663	5.663	(1.000)	1472940	40.0000	
* 46 Acenaphthene-d10	164	7.520	7.520	(1.000)	879992	40.0000	
* 67 Phenanthrene-d10	188	9.115	9.115	(1.000)	1554554	40.0000	
* 91 Chrysene-d12	240	12.011	12.011	(1.000)	1456663	40.0000	
* 98 Perylene-d12	264	14.092	14.092	(1.000)	1135773	40.0000	
\$ 3 2-Fluorophenol	112	3.253	3.253	(0.739)	344980	40.0000	38.6
\$ 5 Phenol-d5	99	4.025	4.025	(0.915)	436763	40.0000	39.2
\$ 20 Nitrobenzene-d5	82	4.934	4.934	(0.871)	391852	40.0000	37.4
\$ 39 2-Fluorobiphenyl	172	6.787	6.787	(0.902)	1000263	40.0000	38.6
\$ 60 2,4,6-Tribromophenol	329	8.363	8.363	(1.112)	108638	40.0000	37.3
\$ 81 p-Terphenyl-d14	244	10.830	10.830	(0.902)	946756	40.0000	36.1
1 N-Methyl-N-nitrosomethylamine	74	2.296	2.296	(0.522)	201088	40.0000	34.9
2 Pyridine	79	2.330	2.330	(0.529)	295136	40.0000	34.9
4 Aniline	66	4.096	4.096	(0.931)	179195	40.0000	34.1
6 Phenol	94	4.039	4.039	(0.918)	429833	40.0000	37.4
7 bis(2-Chloroethyl) ether	63	4.139	4.139	(0.940)	256123	40.0000	32.6
8 2-Chlorophenol	128	4.206	4.206	(0.956)	396203	40.0000	39.7
203 n-Decane	43	4.230	4.230	(0.961)	284170	40.0000	27.6
9 1,3-Dichlorobenzene	146	4.353	4.353	(0.989)	469719	40.0000	39.7
11 1,4-Dichlorobenzene	146	4.420	4.420	(1.004)	481816	40.0000	39.4
13 1,2-Dichlorobenzene	146	4.563	4.563	(1.037)	450925	40.0000	39.7
14 bis(2-Chloroisopropyl) ether	45	4.644	4.644	(1.055)	388413	40.0000	25.2
12 Benzyl alcohol	108	4.515	4.515	(1.026)	189491	40.0000	30.4
15 o-Cresol	107	4.606	4.606	(1.047)	294527	40.0000	36.9
18 m,p-Cresols	107	4.763	4.763	(1.082)	371526	40.0000	36.8

Compounds	QUANT SIG					AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ng/ul)	ON-COL (ng/ul)
17 N-Nitrosodipropylamine	70	4.787	4.787	(1.088)	261878	40.0000	35.6
19 Hexachloroethane	117	4.892	4.892	(1.111)	174989	40.0000	38.0
21 Nitrobenzene	77	4.953	4.953	(0.875)	386587	40.0000	35.8
22 Isophorone	82	5.192	5.192	(0.917)	729434	40.0000	36.7
23 2-Nitrophenol	139	5.268	5.268	(0.930)	208062	40.0000	42.0
24 2,4-Dimethylphenol	122	5.292	5.292	(0.934)	328860	40.0000	37.3
25 bis(2-Chloroethoxy)methane	93	5.396	5.396	(0.953)	439904	40.0000	39.4
26 2,4-Dichlorophenol	162	5.511	5.511	(0.973)	326860	40.0000	41.0
27 Benzoic acid	105	5.387	5.387	(0.951)	115051	40.0000	33.1
28 1,2,4-Trichlorobenzene	180	5.601	5.601	(0.989)	421264	40.0000	39.3
30 Naphthalene	128	5.687	5.687	(1.004)	1299399	40.0000	40.4
204 alpha-Terpineol	59	5.687	5.687	(1.004)	283870	40.0000	34.6
31 4-Chloroaniline	127	5.730	5.730	(1.012)	446968	40.0000	42.5
32 Hexachlorobutadiene	225	5.806	5.806	(1.025)	253118	40.0000	38.0
33 4-Chloro-3-methylphenol	107	6.220	6.220	(1.098)	290940	40.0000	33.7
34 2-Methylnaphthalene	142	6.406	6.406	(1.131)	861568	40.0000	40.2
35 1-Methylnaphthalene	142	6.511	6.511	(1.150)	837136	40.0000	39.9
36 Hexachlorocyclopentadiene	237	6.568	6.568	(0.873)	133297	40.0000	24.4
205 2,3-Dichloroaniline	161	6.696	6.696	(0.890)	460999	40.0000	39.7
37 2,4,6-Trichlorophenol	196	6.696	6.696	(0.890)	263204	40.0000	38.8
38 2,4,5-Trichlorophenol	196	6.730	6.730	(0.895)	258554	40.0000	35.9
40 2-Chloronaphthalene	162	6.920	6.920	(0.920)	840142	40.0000	38.6
42 o-Nitroaniline	65	7.025	7.025	(0.934)	208821	40.0000	34.6
41 m-Nitroaniline	138	7.468	7.468	(0.993)	185224	40.0000	40.3
43 Dimethylphthalate	163	7.225	7.225	(0.961)	973047	40.0000	39.4
44 2,6-Dinitrotoluene	165	7.287	7.287	(0.969)	223616	40.0000	40.1
50 2,4-Dinitrotoluene	165	7.720	7.720	(1.027)	284096	40.0000	39.7
45 Acenaphthylene	152	7.368	7.368	(0.980)	1340931	40.0000	36.7
47 Acenaphthene	154	7.553	7.553	(1.004)	838979	40.0000	35.9
48 2,4-Dinitrophenol	184	7.573	7.573	(1.007)	52995	40.0000	33.4
49 Dibenzofuran	168	7.734	7.734	(1.028)	1184609	40.0000	38.6
51 Diethylphthalate	149	7.977	7.977	(1.061)	1013532	40.0000	39.3
52 4-Nitrophenol	139	7.630	7.630	(1.015)	125555	40.0000	41.8
53 Fluorene	166	8.106	8.106	(1.078)	1055599	40.0000	37.2
54 4-Chlorophenylphenylether	204	8.101	8.101	(1.077)	515172	40.0000	37.7
55 2-Methyl-4,6-dinitrophenol	198	8.153	8.153	(0.894)	87730	40.0000	30.2
56 p-Nitroaniline	138	8.120	8.120	(1.080)	164013	40.0000	40.4
133 Diphenylamine	169	8.230	8.230	(0.903)	813307	40.0000	41.4
58 1,2-Diphenylhydrazine	77	8.273	8.273	(0.908)	830930	40.0000	36.0
61 4-Bromophenylphenylether	248	8.630	8.630	(0.947)	306365	40.0000	41.2
63 Hexachlorobenzene	284	8.696	8.696	(0.954)	301971	40.0000	39.1
65 Pentachlorophenol	266	8.901	8.901	(0.976)	111510	40.0000	32.4
206 n-Octadecane	57	8.987	8.987	(0.986)	527665	40.0000	34.2
68 Phenanthrene	178	9.139	9.139	(1.003)	1403081	40.0000	38.5
69 Anthracene	178	9.196	9.196	(1.009)	1401941	40.0000	37.2
72 Di-n-butylphthalate	149	9.734	9.734	(1.068)	1639266	40.0000	41.6
76 Fluoranthene	202	10.420	10.420	(1.143)	1443306	40.0000	36.5

Compounds	QUANT SIG			REL RT	RESPONSE	AMOUNTS	
	MASS	RT	EXP RT			CAL-AMT (ng/ul)	ON-COL (ng/ul)
79 Pyrene	202	10.668	10.668	(0.888)	1520907	40.0000	33.4
85 Butylbenzylphthalate	149	11.349	11.349	(0.945)	630650	40.0000	39.6
89 Benzo(a)anthracene	228	11.996	11.996	(0.999)	1360843	40.0000	35.5
92 Chrysene	228	12.044	12.044	(1.003)	1256670	40.0000	37.6
93 bis(2-Ethylhexyl)phthalate	149	12.011	12.011	(1.000)	911602	40.0000	41.0
94 Di-n-octylphthalate	149	12.892	12.892	(0.915)	1311764	40.0000	37.8
95 Benzo(h)fluoranthene	252	13.482	13.482	(0.957)	1167747	40.0000	36.3
96 Benzo(k)fluoranthene	252	13.530	13.530	(0.960)	1181896	40.0000	36.5
97 Benzo(a)pyrene	252	13.996	13.996	(0.993)	1056998	40.0000	38.9
99 Indeno(1,2,3-cd)pyrene	276	15.901	15.901	(1.128)	1030634	40.0000	45.8
100 Dibenzo(a,h)anthracene	278	15.944	15.944	(1.131)	830158	40.0000	47.7
101 Benzo(ghi)perylene	276	16.377	16.377	(1.162)	833230	40.0000	44.7
126 m-Dinitrobenzene	168	7.258	7.258	(0.965)	146729	40.0000	41.3
130 2,3,4,6-Tetrachlorophenol	232	7.863	7.863	(1.046)	197339	40.0000	32.3
143 Dinoseb	211	9.096	9.096	(0.998)	131403	40.0000	31.1
173 Carbazole	167	9.363	9.363	(1.027)	986305	40.0000	36.6
184 p-Benzoquinone	54	3.668	3.668	(0.833)	35904	40.0000	22.0
192 Methoxychlor	227	11.906	11.906	(0.991)	836338	40.0000	40.0
211 p-Toluidine	106	4.820	4.820	(1.095)	417124	40.0000	38.7
210 m-Toluidine	106	4.853	4.853	(1.103)	467893	40.0000	33.3
26 Phthalic anhydride	104	6.463	6.463	(1.141)	87428	40.0000	21.8
179 Dibenzo(a,e)pyrene	302	19.425	19.425	(1.378)	346524	40.0000	46.7
214 1,4-Dinitrobenzene	75	7.173	7.173	(0.954)	128230	40.0000	34.0
215 2-Ethoxyethanol	59	2.096	2.096	(0.476)	166179	40.0000	30.6
216 Methylenebis(2-chloroaniline)	231	11.963	11.963	(0.996)	133426	40.0000	33.6
M 222 Trichlorophenols	196				521758	80.0000	74.7
M 223 Tetrachlorophenols	232				197339	40.0000	32.3
M 224 Benzo(b,k)fluoranthene	252				2349643	80.0000	72.8

Data File: /chem/HSD8.i/s030210.b/s80202.d

Date: 02-MAR-2010 09:35

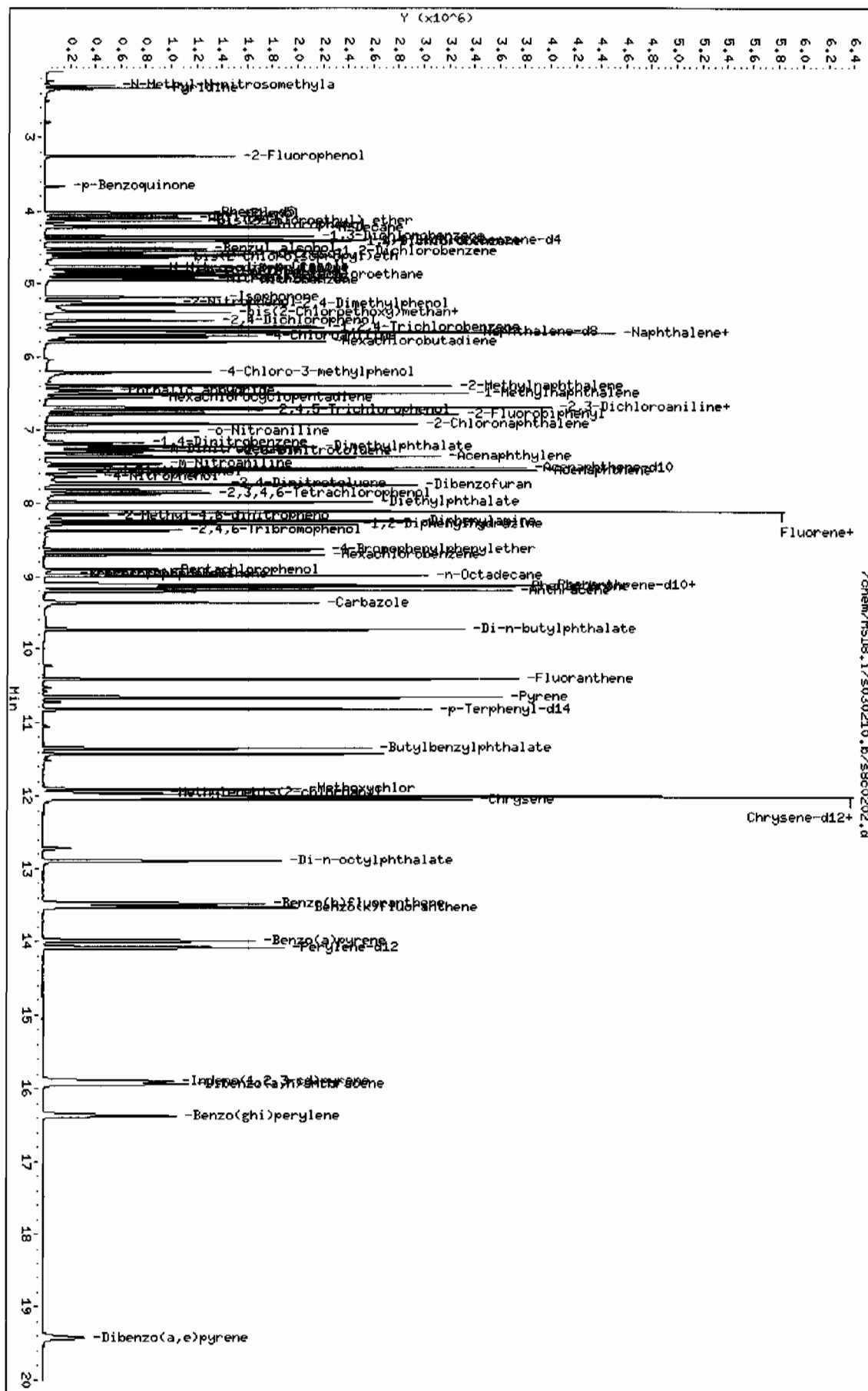
Client ID: MEGACVS

Sample Info: IABN100225-05.5140 PPH11|SWH11|MEGACVS

Column phase: J&W DB-5MS

Instrument: HSD8.i

Operator: nag1
Column diameter: 0.20



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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD8.i Injection Date: 02-MAR-2010 10:07
Lab File ID: s8c0203.d Init. Cal. Date(s): 20-FEB-2010 22-FEB-2010
Analysis Type: Init. Cal. Times: 12:55 01:19
Lab Sample ID: WBN100218-03.5 Quant Type: ISTD
Method: /chem/MSD8.i/s030210.b/MSD8-8270AQA-022010.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
209 Benzaldehyde	0.84330	0.69269	0.69269	0.000	-17.85920	60.00000	Averaged
16 Acetophenone	1.20309	1.06184	1.06184	0.000	-11.74047	60.00000	Averaged
189 Caprolactam	0.06655	0.06815	0.06815	0.000	2.39951	60.00000	Averaged
208 1,1'-Biphenyl	1.22219	1.17289	1.17289	0.000	-4.03438	60.00000	Averaged
207 Atrazine	0.03531	0.03738	0.03738	0.000	5.83621	60.00000	Averaged
77 Benzidine	41.60484	40.00000	0.31520	0.000	4.01209	60.00000	Linear
90 3,3'-Dichlorobenzidine	0.24780	0.25717	0.25717	0.000	3.77987	60.00000	Averaged
102 1,4-Dioxane	0.32319	0.28743	0.28743	0.000	-11.06503	60.00000	Averaged
103 Methyl methacrylate	0.16817	0.16212	0.16212	0.000	-3.59272	60.00000	Averaged
104 Ethyl methacrylate	0.67963	0.55454	0.55454	0.000	-18.40574	60.00000	Averaged
105 2-Picoline	1.09294	0.99613	0.99613	0.000	-8.85796	60.00000	Averaged
106 N-Nitrosomethylethylamine	0.43986	0.37311	0.37311	0.000	-15.17415	60.00000	Averaged
107 Methyl methanesulfonate	0.49950	0.40052	0.40052	0.000	-19.81486	60.00000	Averaged
108 N-Nitrosodiethylamine	0.45804	0.40772	0.40772	0.000	-10.98743	60.00000	Averaged
109 Ethyl Methanesulfonate	0.60902	0.50402	0.50402	0.000	-17.24019	60.00000	Averaged
110 Pentachloroethane	0.32092	0.29981	0.29981	0.000	-6.57681	60.00000	Averaged
111 N-Nitrosopyrrolidine	0.49059	0.44453	0.44453	0.000	-9.38845	60.00000	Averaged
113 N-Nitrosomorpholine	0.66385	0.51021	0.51021	0.000	-23.14450	60.00000	Averaged
114 o-Toluidine	1.62183	1.46823	1.46823	0.000	-9.47059	60.00000	Averaged
115 N-Nitrosopiperidine	0.12437	0.11867	0.11867	0.000	-4.58529	60.00000	Averaged
116 a,a-Dimethylphenethylamine	0.74304	0.55304	0.55304	0.000	-25.57082	60.00000	Averaged
118 2,6-Dichlorophenol	0.20154	0.20289	0.20289	0.000	0.66754	60.00000	Averaged
119 Hexachloropropene	0.12360	0.10783	0.10783	0.000	-12.75796	60.00000	Averaged
120 p-Phenylenediamine	0.19655	0.22150	0.22150	0.000	12.69281	60.00000	Averaged
121 N-Nitrosodi-n-butylamine	0.21161	0.20235	0.20235	0.000	-4.37366	60.00000	Averaged
122 Safrole	0.19334	0.18940	0.18940	0.000	-2.03877	60.00000	Averaged
123 1,2,4,5-Tetrachlorobenzene	0.47582	0.44000	0.44000	0.000	-7.52799	60.00000	Averaged
124 Isosafrole	0.32130	0.30931	0.30931	0.000	-3.73243	60.00000	Averaged
125 1,4-Naphthoquinone	0.29641	0.30523	0.30523	0.000	2.97429	60.00000	Averaged
127 Pentachlorobenzene	0.43422	0.39046	0.39046	0.000	-10.07789	60.00000	Averaged
128 1-Naphthylamine	0.84230	0.84558	0.84558	0.000	0.38923	60.00000	Averaged
129 2-Naphthylamine	0.88763	0.90599	0.90599	0.000	2.06837	60.00000	Averaged
131 5-Nitro-o-toluidine	0.24122	0.25391	0.25391	0.000	5.26269	60.00000	Averaged
136 1,3,5-Trinitrobenzene	0.09499	0.08952	0.08952	0.000	-5.75728	60.00000	Averaged
137 Phenacetin	0.21690	0.21469	0.21469	0.000	-1.01697	60.00000	Averaged
138 Diallate	0.20203	0.18255	0.18255	0.000	-9.64550	60.00000	Averaged

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD8.i Injection Date: 02-MAR-2010 10:07
Lab File ID: s8c0203.d Init. Cal. Date(s): 20-FEB-2010 22-FEB-2010
Analysis Type: Init. Cal. Times: 12:55 01:19
Lab Sample ID: WBN100218-03.5 Quant Type: ISTD
Method: /chem/MSD8.i/s030210.b/MSD8-8270AQA-022010.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
212 Cis Diallate	0.20071	0.17135	0.17135	0.000	-14.62982	60.00000	Averaged
213 Trans Diallate	0.23769	0.21476	0.21476	0.000	-9.64550	60.00000	Averaged
140 4-Aminobiphenyl	0.51727	0.57522	0.57522	0.000	11.20241	60.00000	Averaged
141 Pentachloronitrobenzene	0.07936	0.06802	0.06802	0.000	-14.29032	60.00000	Averaged
142 Pronamido	0.25230	0.25217	0.25217	0.000	-0.05161	60.00000	Averaged
146 4-Nitroquinoline-1-oxide	0.01907	0.01818	0.01818	0.000	-4.64519	60.00000	Averaged
147 Methapyrilene	0.29186	0.23526	0.23526	0.000	-19.39092	60.00000	Averaged
148 Isodrin	0.10718	0.09771	0.09771	0.000	-8.83288	60.00000	Averaged
149 Aramite	0.03388	0.03482	0.03482	0.000	2.78100	60.00000	Averaged
150 Kepone	0.07795	0.07080	0.07080	0.000	-9.16460	60.00000	Averaged
151 p-(Dimethylamino)azobenzene	0.25808	0.23864	0.23864	0.000	-7.53210	60.00000	Averaged
152 Chlorobenzilate	0.26271	0.23976	0.23976	0.000	-8.73277	60.00000	Averaged
153 3,3'-Dimethylbenzidine	0.45535	0.47187	0.47187	0.000	3.62686	60.00000	Averaged
155 2-Acetylaminofluorene	44.61089	40.00000	0.25653	0.000	11.52723	60.00000	Linear
157 7,12Dimethylbenz(a)anthrace	0.51909	0.49236	0.49236	0.000	-5.15040	60.00000	Averaged
158 3-Methylcholanthrene	0.36780	0.37381	0.37381	0.000	1.63185	60.00000	Averaged

Data File: /chem/MSD8.i/s030210.b/s8c0203.d
 Report Date: 02-Mar-2010 13:24

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Data file : /chem/MSD8.i/s030210.b/s8c0203.d
 Lab Smp Id: WBN100218-03.5 Client Smp ID: AP12CVS
 Inj Date : 02-MAR-2010 10:07
 Operator : nag1 Inst ID: MSD8.i
 Smp Info : |WBN100218-03.5|40 PPM|1|SVMF|1|AP12CVS
 Misc Info : |MSD8270|WBN100227-01
 Comment : Column: J & W DB-5MS, 25m x 0.20 mm x 0.33 micron film
 Method : /chem/MSD8.i/s030210.b/MSD8-8270AQA-022010.m
 Meth Date : 02-Mar-2010 13:24 nat00999 Quant Type: ISTD
 Cal Date : 21-FEB-2010 23:15 Cal File: s8b2042.d
 Als bottle: 3 Continuing Calibration Sample
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: AP12.sub
 Target Version: 3.50
 Processing Host: hpc1p1

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	4.401	4.401	(1.000)	435863	40.0000
* 29 Naphthalene-d8	136	5.658	5.658	(1.000)	1629584	40.0000
* 46 Acenaphthene-d10	164	7.516	7.516	(1.000)	967111	40.0000
* 67 Phenanthrene-d10	188	9.116	9.116	(1.000)	1775308	40.0000
* 91 Chrysene-d12	240	12.011	12.011	(1.000)	1695624	40.0000
* 98 Perylene-d12	264	14.087	14.087	(1.000)	1307663	40.0000
209 Benzaldehyde	77	4.001	4.001	(0.909)	301919	40.0000 32.8
16 Acetophenone	105	4.777	4.777	(1.085)	462816	40.0000 35.3
189 Caprolactam	113	6.087	6.087	(1.076)	111058	40.0000 41.0
208 1,1'-Biphenyl	154	6.897	6.897	(0.918)	1134310	40.0000 38.4
207 Atrazine	173	8.801	8.801	(0.966)	66353	40.0000 42.3
77 Benzidine	184	10.558	10.558	(0.879)	534459	40.0000 41.6
90 3,3'-Dichlorobenzidine	252	11.959	11.959	(0.996)	436056	40.0000 41.5
102 1,4-Dioxane	88	2.101	2.101	(0.477)	125280	40.0000 35.6
103 Methyl methacrylate	100	2.101	2.101	(0.477)	70664	40.0000 38.6
104 Ethyl methacrylate	69	2.596	2.596	(0.590)	241702	40.0000 32.6
105 2-Picoline	93	2.835	2.835	(0.644)	434176	40.0000 36.4
106 N-Nitrosomethylethylamine	88	2.906	2.906	(0.660)	162627	40.0000 33.9
107 Methyl methanesulfonate	80	3.130	3.130	(0.711)	174574	40.0000 32.1
108 N-Nitrosodiethylamine	102	3.454	3.454	(0.785)	177709	40.0000 35.6
109 Ethyl Methanesulfonate	79	3.687	3.687	(0.838)	219685	40.0000 33.1
110 Pentachloroethane	167	4.144	4.144	(0.942)	130677	40.0000 37.4
111 N-Nitrosopyrrolidine	100	4.758	4.758	(1.081)	193753	40.0000 36.2 (Q)
113 N-Nitrosomorpholine	56	4.796	4.796	(1.090)	222380	40.0000 30.7
114 o-Toluidine	106	4.816	4.816	(1.094)	639949	40.0000 36.2
115 N-Nitrosopiperidine	114	5.096	5.096	(0.901)	193377	40.0000 38.2

Compounds	QUANT SIG					AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ng/ul)	ON-COL (ng/ul)
=====	=====	==	=====	=====	=====	=====	=====
116 a,a-Dimethylphenethylamine	58	5.468	5.468	(0.966)	901218	40.0000	29.8
118 2,6-Dichlorophenol	162	5.739	5.739	(1.014)	330622	40.0000	40.3
119 Hexachloropropene	213	5.768	5.768	(1.019)	175723	40.0000	34.9
120 p-Phenylenediamine	108	6.097	6.097	(1.077)	360953	40.0000	45.1
121 N-Nitrosodi-n-butylamine	84	6.077	6.077	(1.074)	329752	40.0000	38.2
122 Safrole	162	6.306	6.306	(1.114)	308644	40.0000	39.2
123 1,2,4,5-Tetrachlorobenzene	216	6.577	6.577	(0.875)	425528	40.0000	37.0
124 Isosafrole	162	6.854	6.854	(0.912)	299136	40.0000	38.5
125 1,4-Naphthoquinone	158	7.106	7.106	(0.946)	295192	40.0000	41.2
127 Pentachlorobenzene	250	7.687	7.687	(1.023)	377618	40.0000	36.0
128 1-Naphthylamine	143	7.816	7.816	(1.040)	817770	40.0000	40.2
129 2-Naphthylamine	143	7.901	7.901	(1.051)	876193	40.0000	40.8
131 5-Nitro-o-toluidine	152	8.111	8.111	(1.079)	245563	40.0000	42.1
136 1,3,5-Trinitrobenzene	75	8.501	8.501	(0.933)	158933	40.0000	37.7
137 Phenacetin	108	8.563	8.563	(0.939)	381141	40.0000	39.6 (Q)
138 Diallate	86	8.535	8.535	(0.936)	324076	40.0000	36.1
212 Cis Diallate	86	8.630	8.630	(0.947)	45630	6.00000	5.1
213 Trans Diallate	86	8.535	8.535	(0.936)	324076	34.0000	30.7
140 4-Aminobiphenyl	169	8.906	8.906	(0.977)	1021187	40.0000	44.5
141 Pentachloronitrobenzene	237	8.916	8.916	(0.978)	120759	40.0000	34.3 (Q)
142 Pronamide	173	8.968	8.968	(0.984)	447680	40.0000	40.0
146 4-Nitroquinoline-1-oxide	101	9.963	9.963	(1.093)	32279	40.0000	38.1
147 Methapyrilene	58	10.044	10.044	(1.102)	417667	40.0000	32.2
148 Isodrin	193	10.254	10.254	(1.125)	173468	40.0000	36.5
149 Aramite	185	10.801	10.801	(1.185)	61819	40.0000	41.1
150 Kepone	272	11.401	11.401	(1.251)	125699	40.0000	36.3
151 p-(Dimethylamino)azobenzene	120	10.978	10.978	(0.914)	404645	40.0000	37.0
152 Chlorobenzilate	251	11.025	11.025	(0.918)	406550	40.0000	36.5
153 3,3'-Dimethylbenzidine	212	11.339	11.339	(0.944)	800110	40.0000	41.4
155 2-Acetylaminofluorene	181	11.616	11.616	(0.967)	434976	40.0000	44.6
157 7,12Dimethylbenz(a)anthracene	256	13.468	13.468	(0.956)	643835	40.0000	37.9
158 3-Methylcholanthrene	268	14.568	14.568	(1.034)	488813	40.0000	40.6 (Q)

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: /chem/MSD8.i/s030210.b/s8c0203.d

Date : 02-MAR-2010 10:07

Client ID: AP12CVS

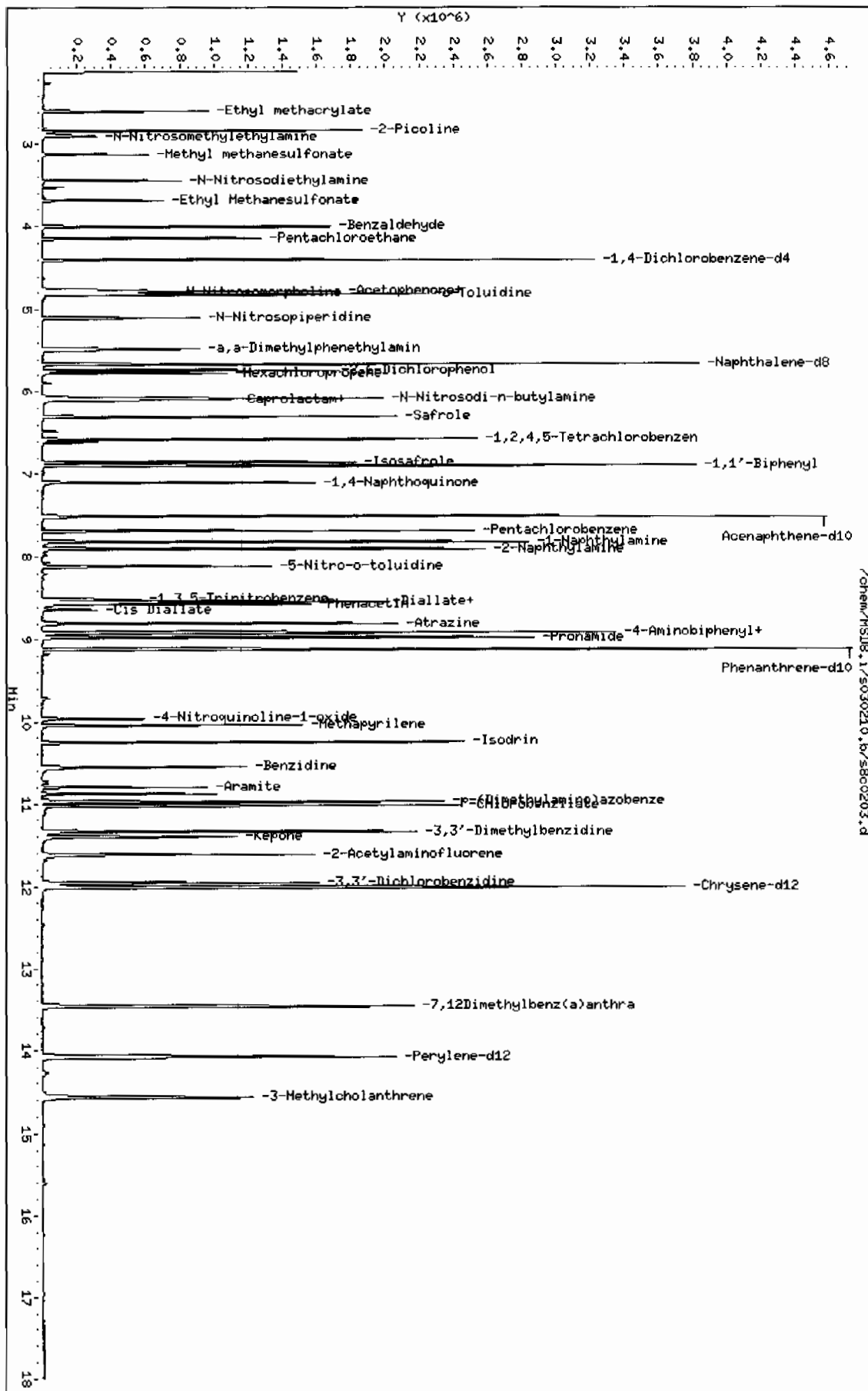
Sample Info: IABN100218-03.5140 PPH11SWH11AP12CVS

Column Phase: JMW DB-SMS

Instrument: MSD8.i

Operator: nag1

Column diameter: 0.20



QC Data

Data File: /chem/MSD8.i/s022010.b/s8b2001.d

Page 1

Date : 20-FEB-2010 12:04

Client ID: DFTPP

Instrument: MSD8.i

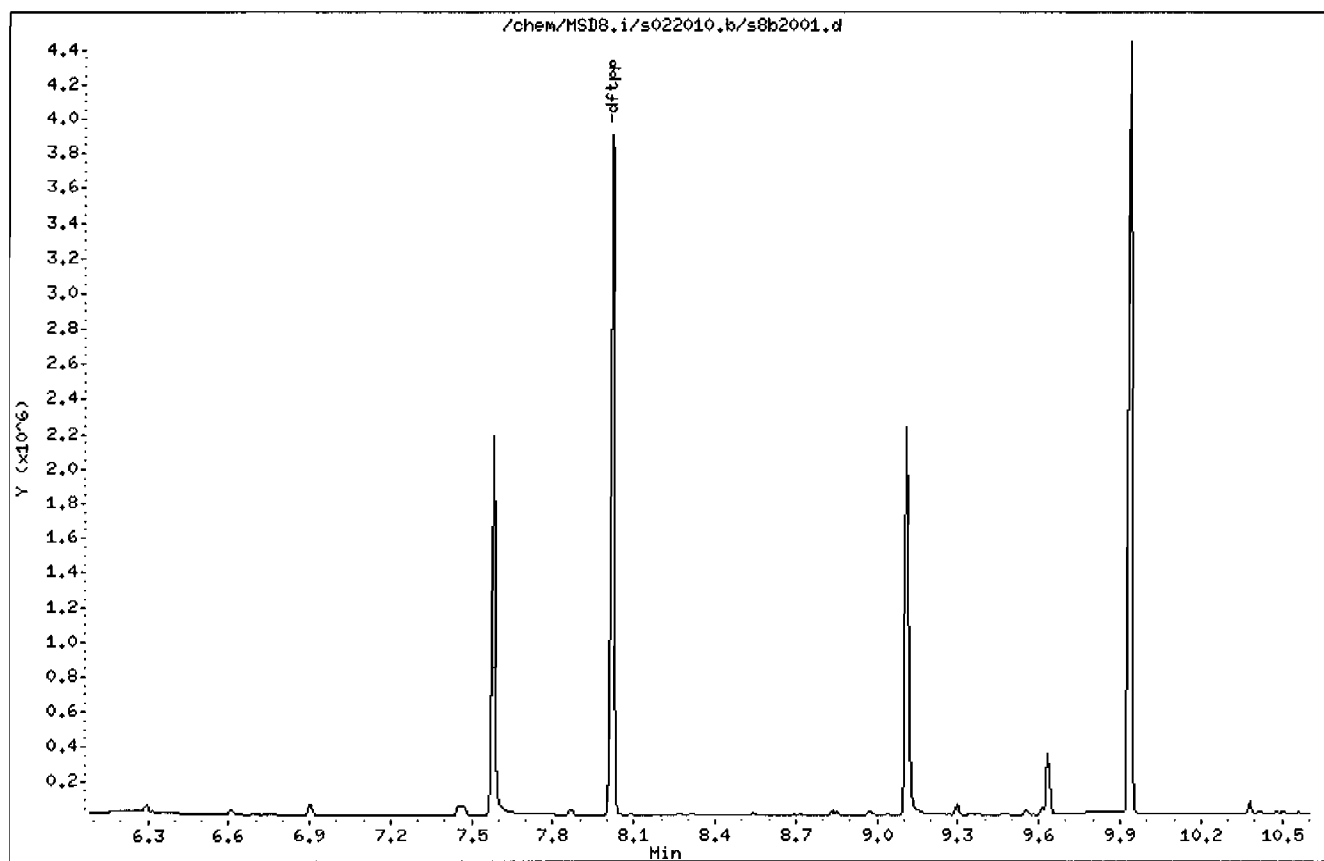
Sample Info: IWBH100207-01150 PPM111SVMF111DFTPP

Volume Injected (uL): 1.0

Operator: nag1

Column phase: J & W DB-5MS

Column diameter: 0.20



Date : 20-FEB-2010 12:04

Client ID: DFTPP

Instrument: MSD8.i

Sample Info: IWBNI00207-01150 PPH11SVHF11IDFTPP

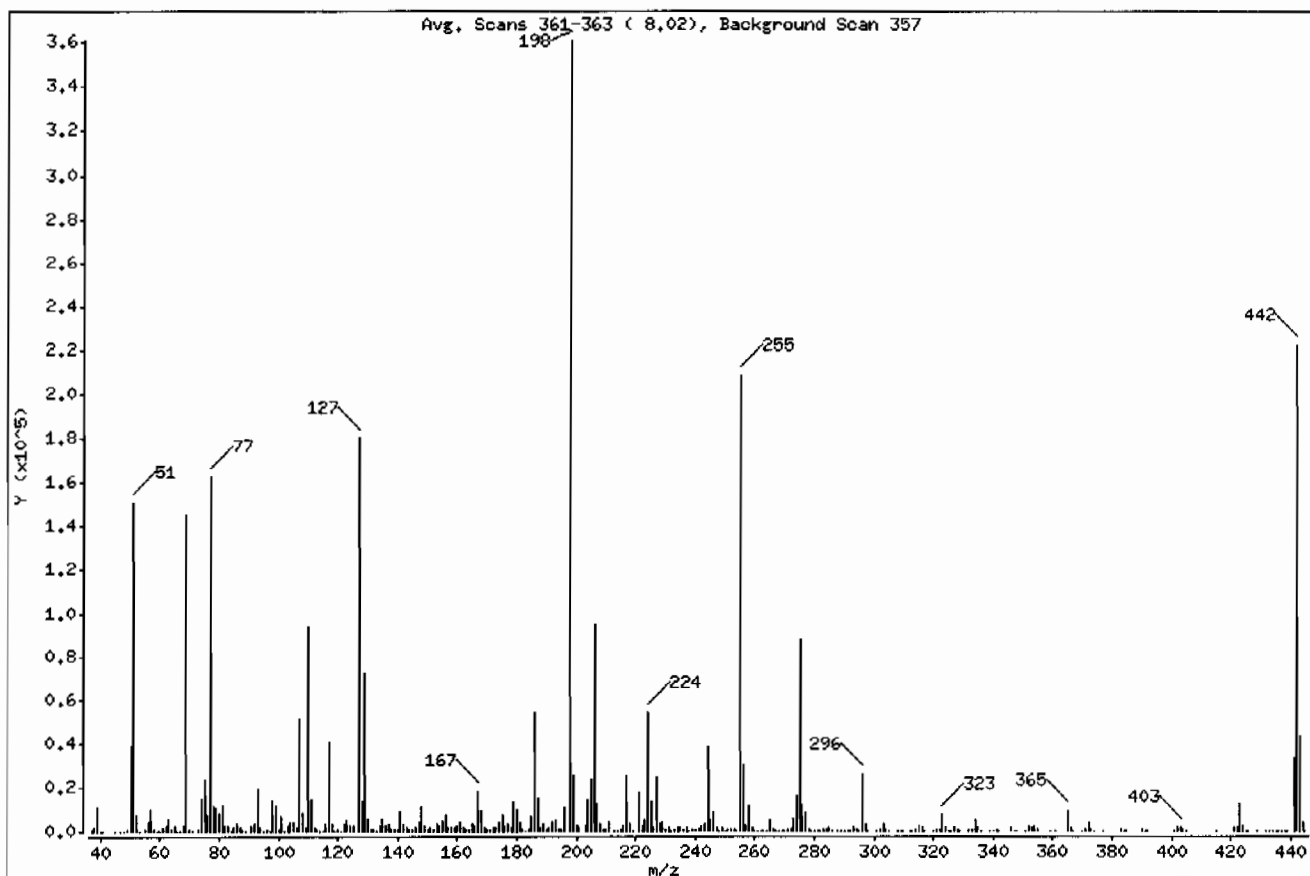
Volume Injected (uL): 1.0

Operator: nag1

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	41.91
68	Less than 2.00% of mass 69	0.76 (1.89)
69	Mass 69 relative abundance	40.27
70	Less than 2.00% of mass 69	0.22 (0.56)
127	40.00 - 60.00% of mass 198	49.86
197	Less than 1.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.79
275	10.00 - 30.00% of mass 198	24.30
365	Greater than 1.00% of mass 198	2.63
441	Present, but less than mass 443	9.09
442	Greater than 40.00% of mass 198	61.67
443	17.00 - 23.00% of mass 442	11.88 (19.27)

Date : 20-FEB-2010 12:04

Client ID: DFTTP

Instrument: HSD8,i

Sample Info: IWBNI00207-01150 PPM11|SVHF11|DFTTP

Volume Injected (uL): 1.0

Operator: nag1

Column phase: J & W DB-5MS

Column diameter: 0.20

Data File: s8b2001.d

Spectrum: Avg. Scans 361-363 (8.02), Background Scan 357

Location of Maximum: 198.00

Number of points: 333

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	636	129.00	72112	216.00	2111	304.00	793
38.00	1805	130.00	6198	217.00	25088	305.00	96
39.00	10515	131.00	1179	218.00	3223	308.00	368
40.00	135	132.00	719	219.00	274	309.00	231
41.00	281	133.00	246	221.00	17016	310.00	352
45.00	296	134.00	2094	222.00	2240	312.00	71
47.00	79	135.00	5474	223.00	5388	313.00	267
48.00	100	136.00	2273	224.00	53856	314.00	1186
49.00	1097	137.00	2986	225.00	13496	315.00	2886
50.00	38736	138.00	704	226.00	1520	316.00	1494
51.00	151296	139.00	433	227.00	24000	317.00	272
52.00	7819	140.00	888	228.00	3311	320.00	103
53.00	348	141.00	9408	229.00	4563	321.00	882
55.00	755	142.00	3186	230.00	691	322.00	424
56.00	4473	143.00	1904	231.00	1920	323.00	7824
57.00	10066	144.00	664	232.00	303	324.00	1477
58.00	547	145.00	475	233.00	448	325.00	190
59.00	111	146.00	1633	234.00	1560	326.00	188
60.00	164	147.00	4413	235.00	1679	327.00	1444
61.00	1759	148.00	10596	236.00	1024	328.00	743
62.00	2153	149.00	2303	237.00	1900	329.00	97
63.00	6125	150.00	612	238.00	252	332.00	590
64.00	883	151.00	1360	239.00	942	333.00	759
65.00	2765	152.00	728	240.00	677	334.00	5028
66.00	317	153.00	2923	241.00	1231	335.00	1370
67.00	157	154.00	2190	242.00	2711	336.00	167
68.00	2746	155.00	5079	243.00	3008	339.00	122
69.00	145408	156.00	7633	244.00	38520	340.00	144
70.00	809	157.00	1609	245.00	5292	341.00	1027
71.00	66	158.00	1859	246.00	8553	342.00	229
73.00	1006	159.00	1245	247.00	1526	346.00	1715
74.00	14753	160.00	2882	248.00	404	347.00	313
75.00	23536	161.00	4229	249.00	1334	348.00	34
76.00	7856	162.00	1249	250.00	237	351.00	95
77.00	162688	163.00	420	251.00	454	352.00	2254

Date : 20-FEB-2010 12:04

Client ID: DFTPP

Instrument: MSD8.i

Sample Info: INBN100207-01150 PPH11SVMF11IDFTPP

Volume Injected (uL): 1.0

Operator: nag1

Column phase: J & W DB-5MS

Column diameter: 0.20

Data File: s8b2001.d

Spectrum: Avg. Scans 361-363 (8.02), Background Scan 357

Location of Maximum: 198.00

Number of points: 333

m/z	Y	m/z	Y	m/z	Y	m/z	Y
78.00	11164	164.00	482	252.00	526	353.00	1685
79.00	11063	165.00	3411	253.00	1014	354.00	2374
80.00	8318	166.00	2886	254.00	246	355.00	442
81.00	11755	167.00	18128	255.00	208576	359.00	131
82.00	2698	168.00	8989	256.00	29864	361.00	41
83.00	2563	169.00	1693	257.00	2335	365.00	9500
84.00	292	170.00	689	258.00	11889	366.00	1267
85.00	2016	171.00	811	259.00	1946	367.00	41
86.00	3161	172.00	1827	260.00	327	370.00	143
87.00	1709	173.00	1985	261.00	323	371.00	544
88.00	611	174.00	3761	262.00	91	372.00	4073
89.00	242	175.00	7387	263.00	105	373.00	967
91.00	2732	176.00	2369	264.00	245	374.00	36
92.00	2924	177.00	3691	265.00	4904	377.00	41
93.00	18696	178.00	1264	266.00	660	383.00	924
94.00	1352	179.00	13514	267.00	81	384.00	271
95.00	383	180.00	9564	268.00	48	385.00	83
96.00	815	181.00	4172	269.00	46	390.00	495
97.00	300	182.00	737	270.00	217	391.00	390
98.00	14288	183.00	389	271.00	458	392.00	149
99.00	11396	184.00	1158	272.00	683	401.00	249
100.00	988	185.00	6644	273.00	6165	402.00	1263
101.00	6504	186.00	53976	274.00	16175	403.00	1933
102.00	385	187.00	15120	275.00	87720	404.00	757
103.00	2407	188.00	1626	276.00	11586	405.00	99
104.00	4126	189.00	3449	277.00	8344	415.00	104
105.00	3848	190.00	678	278.00	1175	421.00	1862
106.00	1319	191.00	1548	279.00	270	422.00	1706
107.00	51688	192.00	4531	280.00	40	423.00	12077
108.00	8074	193.00	4921	281.00	26	424.00	2784
109.00	1707	194.00	960	282.00	153	425.00	353
110.00	94192	195.00	585	283.00	954	426.00	35
111.00	14368	196.00	10955	284.00	633	429.00	49
112.00	1773	198.00	361024	285.00	1386	432.00	53
113.00	552	199.00	24520	286.00	247	433.00	99

Date : 20-FEB-2010 12:04

Client ID: DFTPP

Instrument: MSD8.i

Sample Info: IMBN100207-01150 PPH11ISVMF11IDFTPP

Volume Injected (uL): 1.0

Operator: nag1

Column phase: J & W DB-5MS

Column diameter: 0.20

Data File: s8b2001.d

Spectrum: Avg. Scans 361-363 (8.02), Background Scan 357

Location of Maximum: 198.00

Number of points: 333

m/z	Y	m/z	Y	m/z	Y	m/z	Y
114.00	137	200.00	2077	288.00	81	434.00	73
115.00	242	201.00	1683	289.00	256	435.00	109
116.00	2914	203.00	2421	290.00	281	436.00	130
117.00	40800	204.00	13892	291.00	185	437.00	215
118.00	3050	205.00	22864	292.00	403	438.00	351
119.00	350	206.00	94712	293.00	1882	439.00	245
120.00	773	207.00	12092	294.00	526	441.00	32832
121.00	290	208.00	3333	295.00	44	442.00	222592
122.00	3559	209.00	1153	296.00	25992	443.00	42896
123.00	5240	210.00	891	297.00	3524	444.00	3896
124.00	2349	211.00	3877	298.00	302	445.00	219
125.00	2177	213.00	294	301.00	317		
127.00	179968	214.00	128	302.00	514		
128.00	13270	215.00	1136	303.00	3030		

Data File: /chem/MSD8.i/s022010.b/s8b2013.d

Page 1

Date : 21-FEB-2010 08:35

Client ID: DFTPP

Instrument: MSD8.i

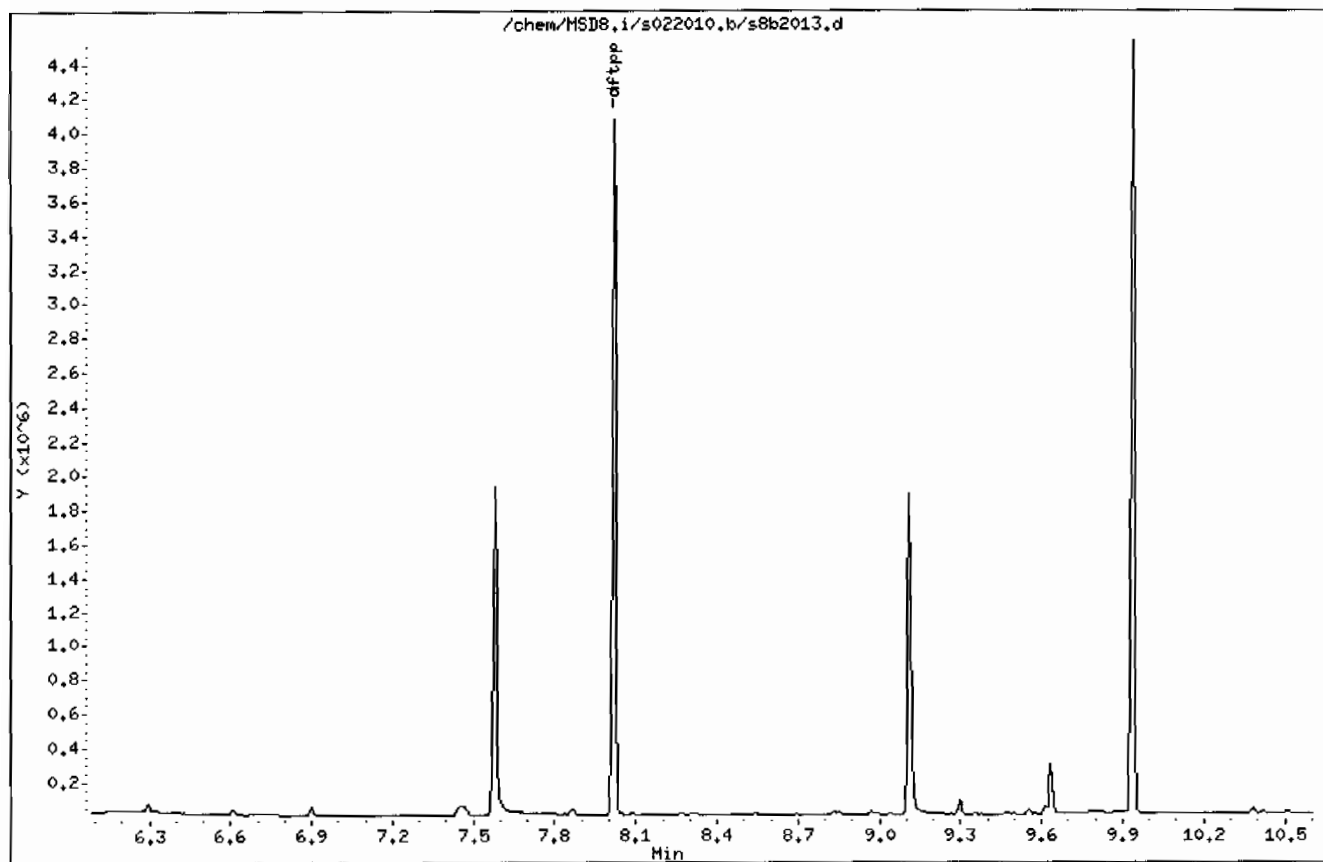
Sample Info: IWBNI00207-01150 PPMI11SVHF111DFTPP

Volume Injected (uL): 1.0

Operator: nag1

Column phase: J & W DB-5MS

Column diameter: 0.20



Date : 21-FEB-2010 08:35

Client ID: DFTPP

Instrument: MSD8.i

Sample Info: INBN100207-01150 PPH11SVHF111DFTPP

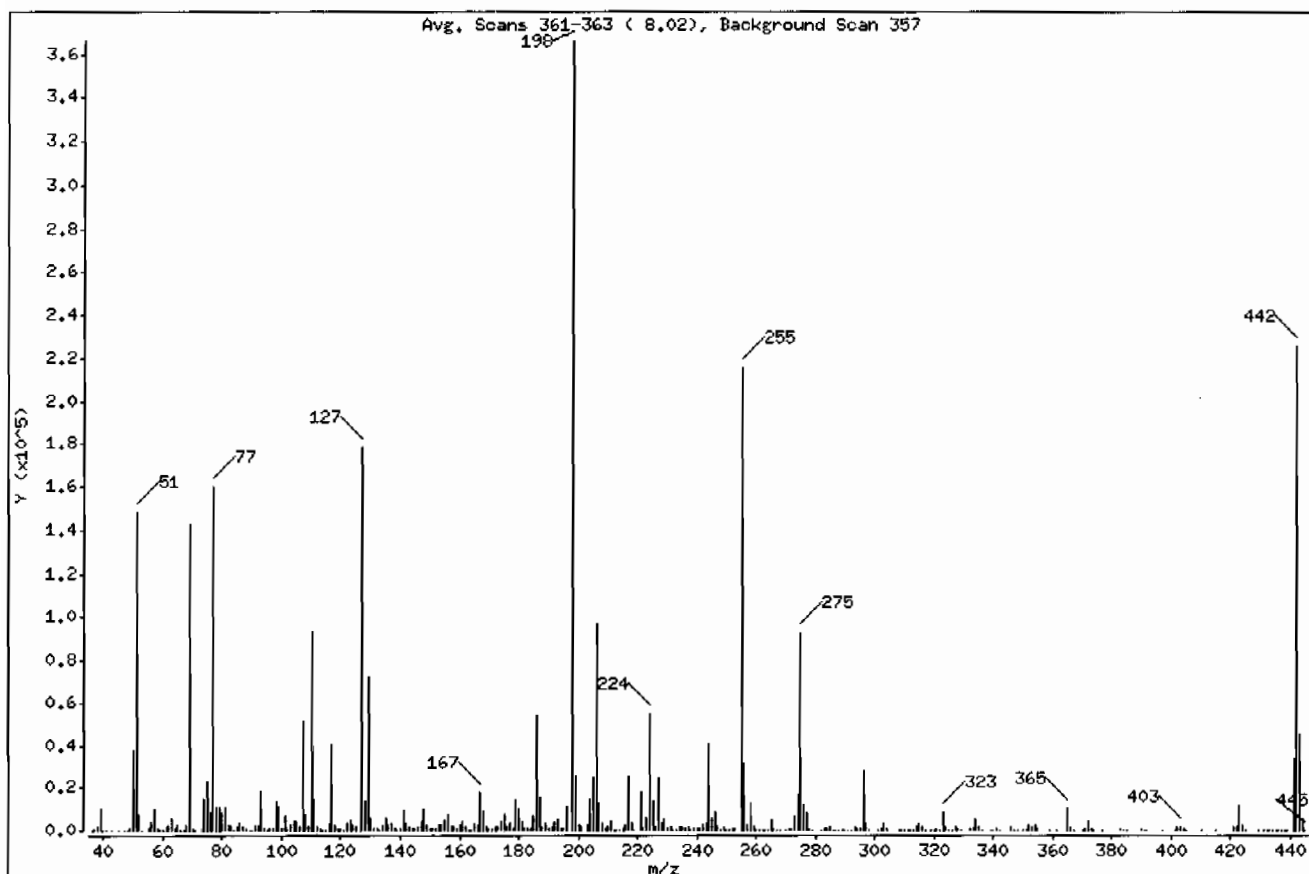
Volume Injected (uL): 1.0

Operator: nag1

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	40.53
68	Less than 2.00% of mass 69	0.71 (1.84)
69	Mass 69 relative abundance	38.91
70	Less than 2.00% of mass 69	0.22 (0.56)
127	40.00 - 60.00% of mass 198	48.75
197	Less than 1.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.82
275	10.00 - 30.00% of mass 198	25.27
365	Greater than 1.00% of Mass 198	2.78
441	Present, but less than mass 443	9.31
442	Greater than 40.00% of mass 198	61.67
443	17.00 - 23.00% of mass 442	12.15 (19.71)

Date : 21-FEB-2010 08:35

Client ID: DFTPP

Instrument: MSD8.i

Sample Info: IWBNI00207-01150 PPH11SVMF11DFTPP

Volume Injected (uL): 1.0

Operator: nag1

Column phase: J & W DB-5MS

Column diameter: 0.20

Data File: s8b2013.d

Spectrum: Avg. Scans 361-363 (8.02), Background Scan 357

Location of Maximum: 198.00

Number of points: 338

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	56	127.00	178624	214.00	46	309.00	256
37.00	622	128.00	13701	215.00	1055	310.00	391
38.00	1670	129.00	72120	216.00	2351	311.00	40
39.00	10227	130.00	6084	217.00	25672	312.00	66
40.00	276	131.00	1249	218.00	3337	313.00	215
41.00	148	132.00	676	219.00	394	314.00	1282
43.00	81	133.00	345	221.00	17360	315.00	2979
45.00	175	134.00	2137	222.00	784	316.00	1571
47.00	75	135.00	5764	223.00	5854	317.00	345
48.00	135	136.00	2291	224.00	54384	319.00	39
49.00	1152	137.00	3163	225.00	13504	320.00	89
50.00	38328	138.00	613	226.00	1516	321.00	844
51.00	148480	139.00	305	227.00	24384	322.00	237
52.00	7983	140.00	874	228.00	3450	323.00	8074
53.00	379	141.00	9200	229.00	5126	324.00	1548
55.00	654	142.00	3293	230.00	654	325.00	173
56.00	4225	143.00	2051	231.00	1887	326.00	144
57.00	9800	144.00	620	232.00	354	327.00	1551
58.00	460	145.00	527	233.00	399	328.00	753
59.00	146	146.00	1802	234.00	1541	329.00	186
60.00	207	147.00	4607	235.00	1773	332.00	625
61.00	1930	148.00	10337	236.00	1054	333.00	892
62.00	2234	149.00	2168	237.00	1872	334.00	4922
63.00	5775	150.00	592	238.00	323	335.00	1472
64.00	828	151.00	1245	239.00	1019	336.00	124
65.00	2791	152.00	804	240.00	727	339.00	168
66.00	273	153.00	2889	241.00	1258	340.00	43
67.00	294	154.00	2254	242.00	2657	341.00	971
68.00	2618	155.00	4976	243.00	3024	342.00	281
69.00	142528	156.00	7917	244.00	40320	346.00	1742
70.00	801	157.00	1591	245.00	5613	347.00	411
71.00	110	158.00	1797	246.00	8746	348.00	42
73.00	982	159.00	1200	247.00	1601	350.00	100
74.00	14686	160.00	2833	248.00	402	351.00	114
75.00	23056	161.00	3964	249.00	1347	352.00	2446

Date : 21-FEB-2010 08:35

Client ID: DFTTP

Instrument: MSDB.i

Sample Info: IWBNI00207-01150 PPHI1ISVHF11/DFTTP

Volume Injected (uL): 1.0

Operator: nag1

Column phase: J & W DB-5MS

Column diameter: 0.20

Data File: s8b2013.d

Spectrum: Avg. Scans 361-363 (8.02), Background Scan 357

Location of Maximum: 198.00

Number of points: 338

m/z	Y	m/z	Y	m/z	Y	m/z	Y
76.00	8112	162.00	1292	250.00	297	353.00	1664
77.00	159808	163.00	370	251.00	407	354.00	2324
78.00	10752	164.00	418	252.00	537	355.00	613
79.00	10806	165.00	3457	253.00	973	359.00	188
80.00	8432	166.00	2678	255.00	216000	361.00	35
81.00	11175	167.00	17744	256.00	30888	365.00	10172
82.00	2848	168.00	9666	257.00	2348	366.00	1571
83.00	2358	169.00	1555	258.00	12794	367.00	123
84.00	380	170.00	598	259.00	1933	370.00	198
85.00	1937	171.00	742	260.00	364	371.00	652
86.00	3300	172.00	1586	261.00	405	372.00	4000
87.00	1567	173.00	2096	262.00	34	373.00	950
88.00	607	174.00	3829	263.00	99	374.00	88
89.00	261	175.00	7675	264.00	325	377.00	56
90.00	99	176.00	2028	265.00	5206	383.00	1037
91.00	2533	177.00	3616	266.00	733	384.00	350
92.00	2877	178.00	1241	267.00	130	385.00	59
93.00	18624	179.00	14050	268.00	1	390.00	434
94.00	1132	180.00	10302	270.00	314	391.00	386
95.00	384	181.00	4359	271.00	454	392.00	247
96.00	852	182.00	801	272.00	611	397.00	36
97.00	507	183.00	425	273.00	6575	401.00	218
98.00	13725	184.00	1104	274.00	16896	402.00	1420
99.00	11316	185.00	7010	275.00	92592	403.00	2003
100.00	984	186.00	53560	276.00	12112	404.00	730
101.00	6416	187.00	15376	277.00	8831	405.00	147
102.00	398	188.00	1621	278.00	1259	410.00	36
103.00	2271	189.00	3344	279.00	291	415.00	89
104.00	4172	190.00	507	282.00	228	421.00	1948
105.00	3955	191.00	1461	283.00	887	422.00	1783
106.00	1360	192.00	4556	284.00	657	423.00	12054
107.00	51416	193.00	5226	285.00	1565	424.00	2758
108.00	7732	194.00	1074	286.00	264	425.00	311
109.00	1415	195.00	648	287.00	35	429.00	89
110.00	93200	196.00	11299	288.00	114	431.00	91

Date : 21-FEB-2010 08:35

Client ID: DFTPP

Instrument: MSD8.i

Sample Info: IWBNI00207-01/50 PPMI1SVHF11IDFTPP

Volume Injected (uL): 1.0

Operator: nag1

Column phase: J & W DB-5MS

Column diameter: 0.20

Data File: s8b2013.d

Spectrum: Avg. Scans 361-363 (8.02), Background Scan 357

Location of Maximum: 198.00

Number of points: 338

m/z	Y	m/z	Y	m/z	Y	m/z	Y
111.00	14005	198.00	366464	289.00	359	432.00	75
112.00	1777	199.00	25008	290.00	221	433.00	42
113.00	565	200.00	2149	291.00	192	434.00	133
114.00	156	201.00	1762	292.00	407	435.00	174
115.00	309	203.00	2677	293.00	1828	436.00	69
116.00	2977	204.00	14145	294.00	475	437.00	142
117.00	40696	205.00	24104	295.00	609	438.00	145
118.00	2826	206.00	97072	296.00	27600	439.00	257
119.00	441	207.00	12482	297.00	3606	441.00	34104
120.00	684	208.00	3467	298.00	227	442.00	225984
121.00	249	209.00	1206	301.00	394	443.00	44536
122.00	3382	210.00	1778	302.00	459	444.00	4167
123.00	5335	211.00	3877	303.00	3092	445.00	202
124.00	2445	212.00	196	304.00	889		
125.00	2106	213.00	321	308.00	309		

Data File: /chem/MSDS.i/s030110.b/s8c0101.d

Page 1

Date : 01-MAR-2010 12:11

Client ID: DFTPP

Instrument: MSD8.i

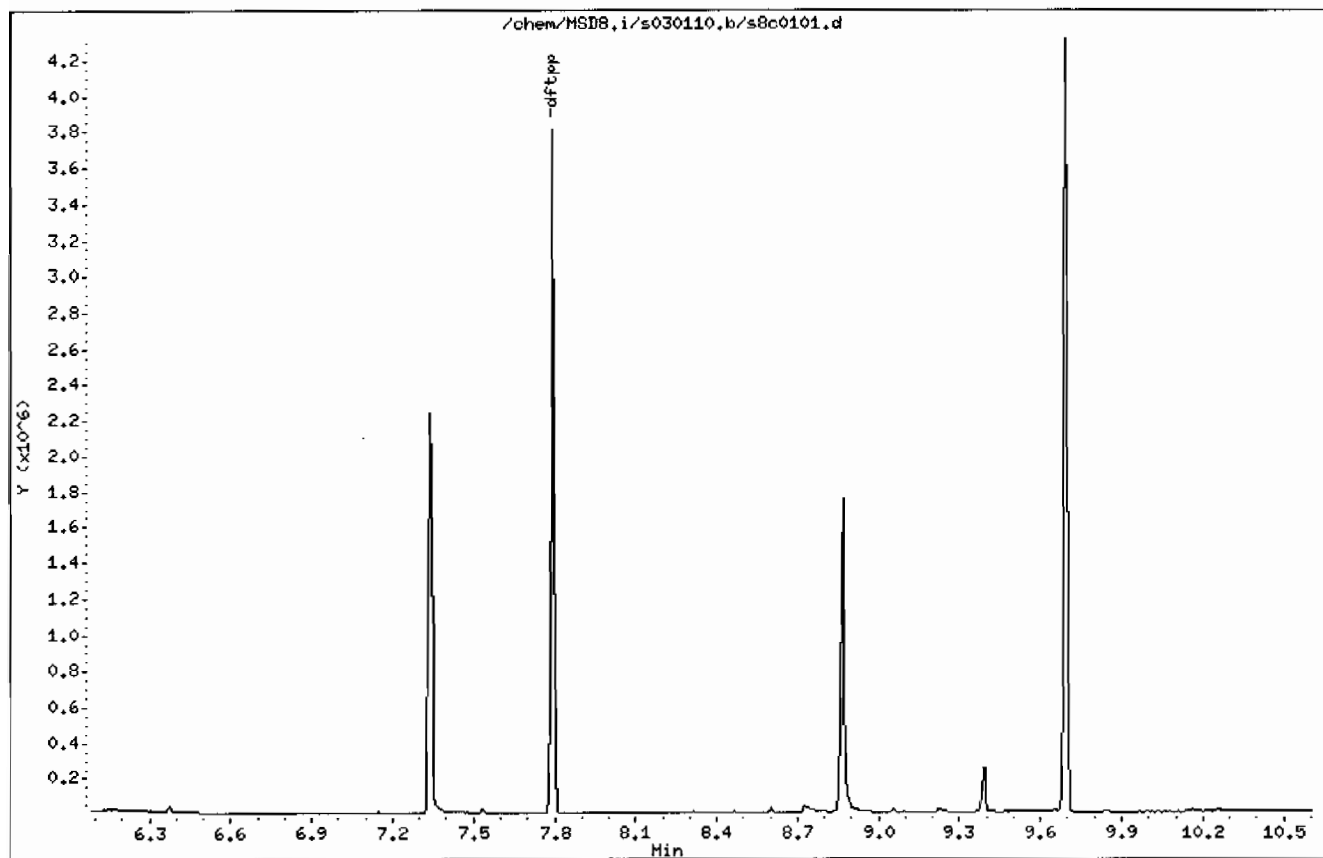
Sample Info: IWBNI00207-01150 PPHI11SVMF111DFTPP

Volume Injected (uL): 1.0

Operator: nag1

Column phase: J & W DB-5MS

Column diameter: 0.20



Date : 01-MAR-2010 12:11

Client ID: DFTPP

Instrument: MSD8.i

Sample Info: IWBNI00207-01150 PPHI11SVMF11IDFTPP

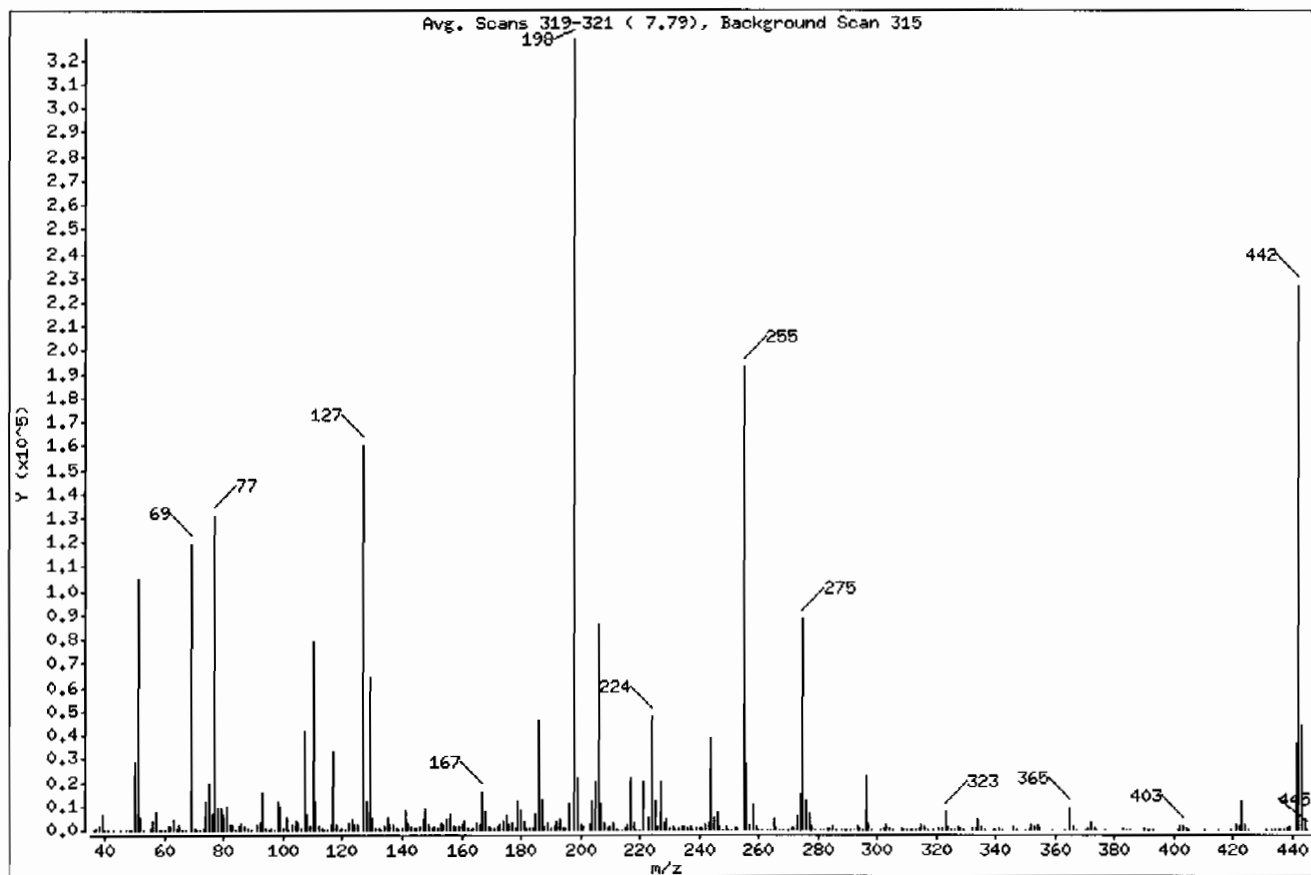
Volume Injected (uL): 1.0

Operator: nag1

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	32.01
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Mass 69 relative abundance	36.25
70	Less than 2.00% of mass 69	0.20 (0.54)
127	40.00 - 60.00% of mass 198	48.74
197	Less than 1.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.70
275	10.00 - 30.00% of mass 198	26.96
365	Greater than 1.00% of mass 198	2.83
441	Present, but less than mass 443	11.11
442	Greater than 40.00% of mass 198	69.06
443	17.00 - 23.00% of mass 442	13.38 (19.37)

Date : 01-MAR-2010 12:11

Client ID: DFTPP

Instrument: MSD8.i

Sample Info: IWBH100207-01150 PPH11SVHF11IDFTPP

Volume Injected (uL): 1.0

Operator: nag1

Column phase: J & W DB-5MS

Column diameter: 0.20

Data File: s8c0101.d
 Spectrum: Avg. Scans 319-321 (7.79), Background Scan 315
 Location of Maximum: 198.00
 Number of points: 334

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	79	127.00	160256	213.00	238	305.00	121
37.00	442	128.00	12054	214.00	167	308.00	420
38.00	1284	129.00	64040	215.00	944	309.00	205
39.00	7032	130.00	5295	216.00	2035	310.00	321
40.00	227	131.00	1013	217.00	22024	311.00	37
41.00	112	132.00	591	218.00	3038	312.00	47
43.00	153	133.00	308	219.00	299	313.00	223
45.00	258	134.00	1767	220.00	291	314.00	1040
47.00	37	135.00	4940	221.00	20112	315.00	2527
48.00	82	136.00	2100	223.00	5431	316.00	1311
49.00	204	137.00	2536	224.00	48000	317.00	279
50.00	28480	138.00	560	225.00	12404	319.00	42
51.00	105272	139.00	358	226.00	1395	321.00	806
52.00	5610	140.00	730	227.00	20256	322.00	420
53.00	240	141.00	8103	228.00	2862	323.00	7507
55.00	680	142.00	2792	229.00	4271	324.00	1264
56.00	3481	143.00	1768	230.00	622	325.00	128
57.00	7754	144.00	514	231.00	1722	326.00	151
58.00	322	145.00	420	232.00	333	327.00	1265
59.00	109	146.00	1586	233.00	457	328.00	651
60.00	110	147.00	4203	234.00	1233	329.00	136
61.00	1453	148.00	8725	235.00	1381	332.00	559
62.00	1807	149.00	1908	236.00	899	333.00	794
63.00	4780	150.00	545	237.00	1716	334.00	4571
64.00	643	151.00	1409	238.00	248	335.00	1310
65.00	2362	152.00	858	239.00	850	336.00	147
66.00	181	153.00	2677	240.00	546	339.00	115
67.00	136	154.00	2050	241.00	1096	340.00	110
69.00	119224	155.00	4554	242.00	2637	341.00	865
70.00	645	156.00	6582	243.00	3042	342.00	273
71.00	126	157.00	1553	244.00	38440	346.00	1468
72.00	41	158.00	1487	245.00	5239	347.00	271
73.00	1030	159.00	1151	246.00	7199	350.00	37
74.00	12316	160.00	2496	247.00	1637	351.00	141
75.00	19344	161.00	3669	248.00	371	352.00	2225

Date : 01-MAR-2010 12:11

Client ID: DFTPP

Instrument: MSD8.i

Sample Info: IWBNI00207-01150 PPH11SVMF111DFTPP

Volume Injected (uL): 1.0

Operator: nag1

Column phase: J & W DB-5MS

Column diameter: 0.20

Data File: s8c0101.d

Spectrum: Avg. Scans 319-321 (7.79), Background Scan 315

Location of Maximum: 198.00

Number of points: 334

m/z	Y	m/z	Y	m/z	Y	m/z	Y
76.00	7006	162.00	1070	249.00	1284	353.00	1578
77.00	130448	163.00	311	250.00	323	354.00	2128
78.00	8958	164.00	519	251.00	356	355.00	426
79.00	9321	165.00	3062	252.00	438	359.00	182
80.00	6716	166.00	2584	253.00	1071	363.00	51
81.00	9524	167.00	16001	255.00	192768	365.00	9304
82.00	2371	168.00	7232	256.00	28184	366.00	1434
83.00	2124	169.00	1298	257.00	2137	367.00	102
84.00	289	170.00	603	258.00	10803	370.00	216
85.00	1884	171.00	771	259.00	1634	371.00	576
86.00	2751	172.00	1454	260.00	370	372.00	3399
87.00	1302	173.00	1912	261.00	345	373.00	875
88.00	473	174.00	3500	263.00	133	374.00	91
89.00	289	175.00	6243	264.00	288	377.00	78
91.00	2185	176.00	2136	265.00	4274	383.00	925
92.00	2734	177.00	2826	266.00	642	384.00	243
93.00	15801	178.00	1097	267.00	147	385.00	71
94.00	1070	179.00	12169	268.00	12	390.00	457
95.00	303	180.00	8469	270.00	298	391.00	274
96.00	790	181.00	3838	271.00	398	392.00	209
97.00	298	182.00	588	272.00	574	393.00	34
98.00	12418	183.00	421	273.00	6037	401.00	245
99.00	9617	184.00	990	274.00	15458	402.00	1294
100.00	840	185.00	6452	275.00	88656	403.00	1870
101.00	5626	186.00	46448	276.00	11990	404.00	707
102.00	342	187.00	13165	277.00	6973	405.00	98
103.00	2109	188.00	1441	278.00	1222	410.00	36
104.00	3624	189.00	3003	279.00	242	415.00	49
105.00	3202	190.00	505	281.00	21	419.00	37
106.00	970	191.00	1364	282.00	200	421.00	1938
107.00	41752	192.00	3959	283.00	929	422.00	1744
108.00	6730	193.00	4220	284.00	578	423.00	11763
109.00	1238	194.00	862	285.00	1253	424.00	2559
110.00	79232	195.00	786	286.00	228	425.00	253
111.00	12120	196.00	11124	288.00	77	431.00	84

Date : 01-MAR-2010 12:11

Client ID: DFTPP

Instrument: MSD8.i

Sample Info: IWBNI00207-01150 PPH11SVHF111DFTPP

Volume Injected (uL): 1.0

Operator: nag1

Column phase: J & W DB-5MS

Column diameter: 0.20

Data File: s8c0101.d

Spectrum: Avg. Scans 319-321 (7.79), Background Scan 315

Location of Maximum: 198.00

Number of points: 334

m/z	Y	m/z	Y	m/z	Y	m/z	Y
112.00	1463	198.00	328832	289.00	276	433.00	41
113.00	497	199.00	22040	290.00	262	434.00	97
114.00	101	200.00	1936	291.00	177	435.00	189
115.00	283	201.00	1840	292.00	340	436.00	239
116.00	2612	203.00	2430	293.00	1691	437.00	159
117.00	33336	204.00	12371	294.00	378	438.00	490
118.00	2564	205.00	20640	295.00	229	439.00	1175
119.00	366	206.00	86384	296.00	22360	441.00	36552
120.00	563	207.00	11288	297.00	3067	442.00	227072
121.00	285	208.00	3011	298.00	261	443.00	43984
122.00	3162	209.00	881	301.00	340	444.00	4178
123.00	4728	210.00	1499	302.00	417	445.00	253
124.00	2017	211.00	3220	303.00	2645		
125.00	1899	212.00	302	304.00	755		

Data File: /chem/MSD8.i/s030210.b/s8c0201.d

Page 1

Date : 02-MAR-2010 09:18

Client ID: DFTPP

Instrument: MSD8.i

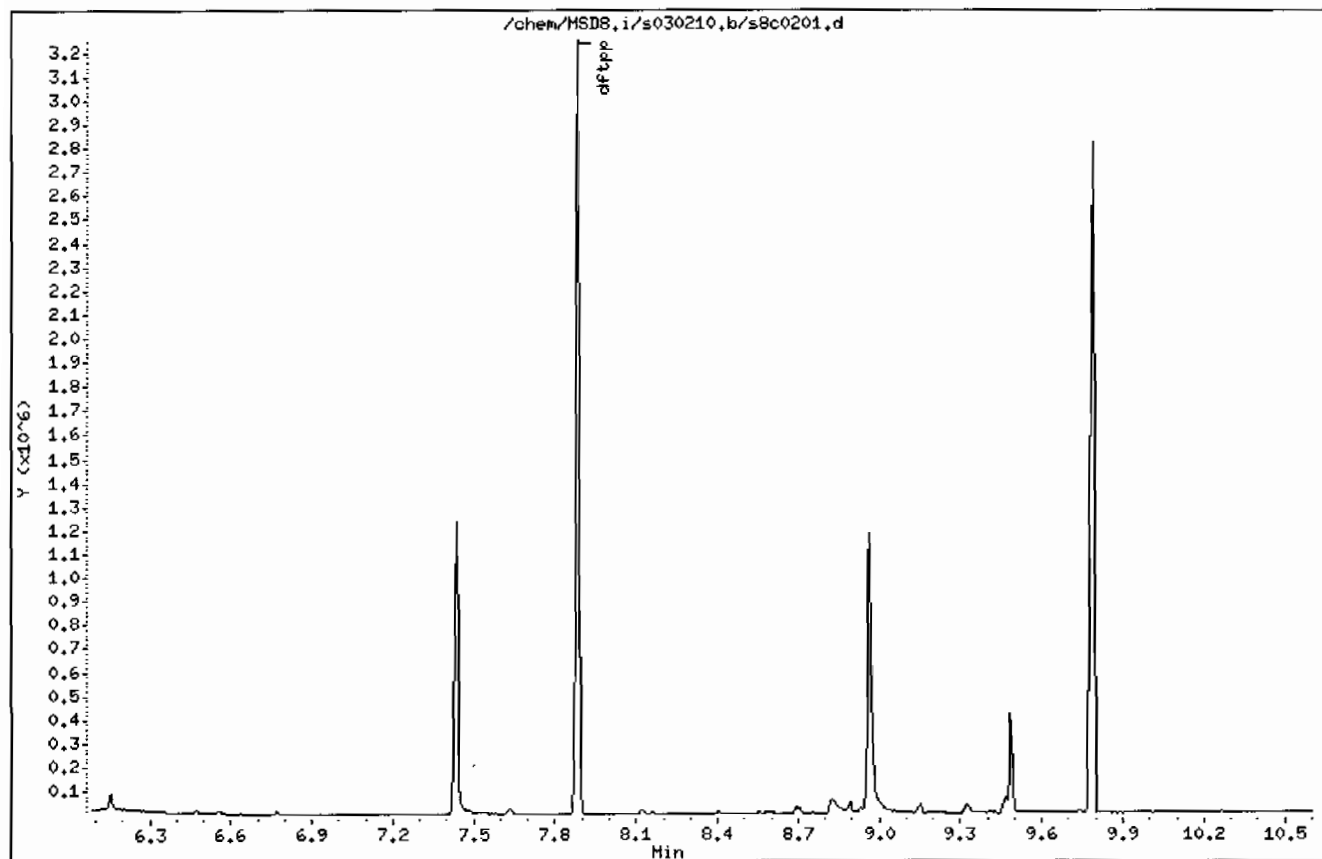
Sample Info: INBN100207-01150 PPH11|SVHF11|DFTPP

Volume Injected (uL): 1.0

Operator: nag1

Column phase: J & W DB-5MS

Column diameter: 0.20



Date : 02-MAR-2010 09:18

Client ID: DFTPP

Instrument: MSD8.i

Sample Info: IWBNI00207-01150 PPH11SVMF111DFTPP

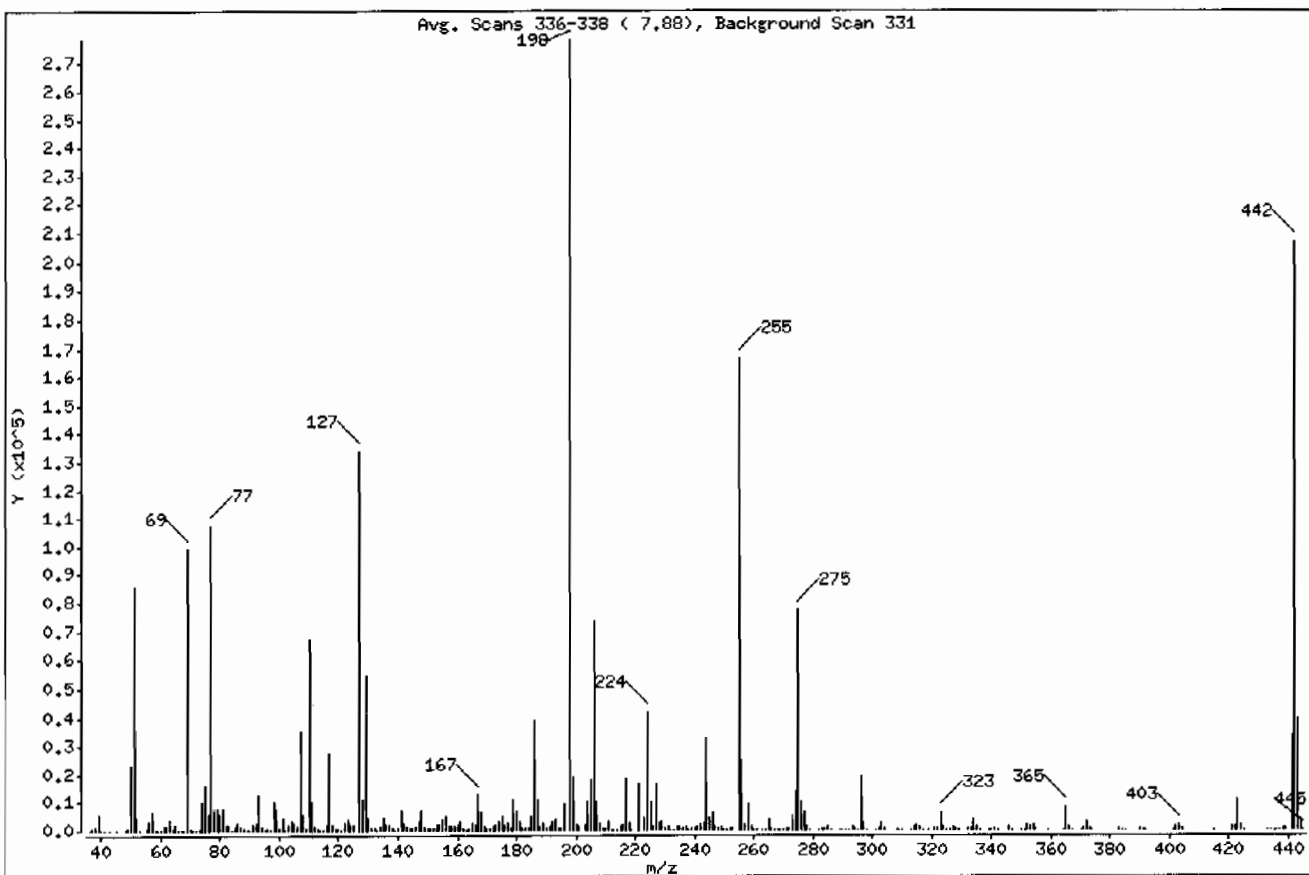
Volume Injected (uL): 1.0

Operator: nag1

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	30.88
68	Less than 2.00% of mass 69	0.09 (0.26)
69	Mass 69 relative abundance	35.62
70	Less than 2.00% of mass 69	0.18 (0.52)
127	40.00 - 60.00% of mass 198	47.98
197	Less than 1.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.84
275	10.00 - 30.00% of mass 198	27.85
365	Greater than 1.00% of mass 198	2.99
441	Present, but less than mass 443	12.22
442	Greater than 40.00% of mass 198	74.32
443	17.00 - 23.00% of mass 442	14.22 (19.14)

Date : 02-MAR-2010 09:18

Client ID: DFTPP

Instrument: MSD8.i

Sample Info: IWBNI00207-01150 PPH11ISVMF11DFTPP

Volume Injected (uL): 1.0

Operator: nag1

Column phase: J & W DB-SMS

Column diameter: 0.20

Data File: s8c0201.d

Spectrum: Avg. Scans 336-338 (7.88), Background Scan 331

Location of Maximum: 198.00

Number of points: 324

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	79	123.00	3986	208.00	2547	298.00	129
37.00	364	124.00	1622	209.00	741	301.00	279
38.00	1114	125.00	1667	210.00	652	302.00	471
39.00	5849	127.00	133632	211.00	2926	303.00	2468
40.00	145	128.00	10624	212.00	313	304.00	616
41.00	107	129.00	54424	213.00	208	308.00	259
43.00	175	130.00	4408	214.00	96	309.00	185
45.00	168	131.00	908	215.00	980	310.00	260
48.00	53	132.00	527	216.00	1697	313.00	185
49.00	523	133.00	236	217.00	18712	314.00	1067
50.00	23312	134.00	1459	218.00	2440	315.00	2156
51.00	86024	135.00	4304	219.00	276	316.00	1170
52.00	4516	136.00	1698	221.00	16800	317.00	197
53.00	241	137.00	2114	223.00	4424	319.00	36
55.00	513	138.00	506	224.00	41928	321.00	674
56.00	3047	139.00	279	225.00	10452	322.00	396
57.00	6599	140.00	714	226.00	1107	323.00	6397
58.00	243	141.00	6980	227.00	16752	324.00	1168
59.00	39	142.00	2286	228.00	2501	325.00	138
60.00	103	143.00	1540	229.00	3499	326.00	176
61.00	1376	144.00	415	230.00	540	327.00	1276
62.00	1456	145.00	402	231.00	1580	328.00	614
63.00	4032	146.00	1164	232.00	229	329.00	113
64.00	543	147.00	3458	233.00	312	332.00	558
65.00	2046	148.00	7355	234.00	1141	333.00	590
66.00	153	149.00	1554	235.00	1164	334.00	4156
67.00	165	150.00	500	236.00	822	335.00	1165
68.00	261	151.00	764	237.00	1492	336.00	96
69.00	99232	152.00	690	238.00	205	339.00	36
70.00	512	153.00	2101	239.00	658	340.00	96
71.00	61	154.00	1689	240.00	657	341.00	724
72.00	33	155.00	3724	241.00	963	342.00	231
73.00	735	156.00	5434	242.00	2222	346.00	1353
74.00	10242	157.00	1239	243.00	2625	347.00	240
75.00	15727	158.00	1290	244.00	32648	350.00	35

Date : 02-MAR-2010 09:18

Client ID: DFTPP

Instrument: MSD8.i

Sample Info: IWBNI00207-01150 PPH11|SVHF11|DFTPP

Volume Injected (uL): 1.0

Operator: nag1

Column phase: J & W DB-5MS

Column diameter: 0.20

Data File: s8c0201.d

Spectrum: Avg. Scans 336-338 (7.88), Background Scan 331

Location of Maximum: 198.00

Number of points: 324

m/z	Y	m/z	Y	m/z	Y	m/z	Y
76.00	5549	159.00	965	245.00	4390	351.00	155
77.00	107344	160.00	2018	246.00	6494	352.00	1850
78.00	7156	161.00	3385	247.00	1255	353.00	1394
79.00	7669	162.00	918	248.00	332	354.00	1950
80.00	5592	163.00	315	249.00	1099	355.00	377
81.00	7693	164.00	423	250.00	179	359.00	105
82.00	1908	165.00	2714	251.00	308	364.00	33
83.00	1947	166.00	2117	252.00	351	365.00	8341
84.00	244	167.00	13049	253.00	805	366.00	1194
85.00	1512	168.00	6088	255.00	166784	367.00	43
86.00	2269	169.00	1144	256.00	24704	370.00	165
87.00	1005	170.00	496	257.00	1925	371.00	565
88.00	395	171.00	699	258.00	9432	372.00	3074
89.00	215	172.00	1246	259.00	1561	373.00	852
90.00	90	173.00	1631	260.00	282	374.00	57
91.00	1994	174.00	2887	261.00	225	383.00	886
92.00	2268	175.00	5373	263.00	60	384.00	198
93.00	13081	176.00	1770	264.00	234	385.00	34
94.00	969	177.00	2442	265.00	3524	390.00	400
95.00	312	178.00	936	266.00	495	391.00	293
96.00	577	179.00	10754	267.00	81	392.00	212
97.00	225	180.00	6847	268.00	52	401.00	151
98.00	10042	181.00	3341	269.00	70	402.00	1068
99.00	7825	182.00	533	270.00	199	403.00	1752
100.00	720	183.00	362	271.00	366	404.00	638
101.00	4256	184.00	839	272.00	532	415.00	63
102.00	257	185.00	5340	273.00	5318	421.00	1450
103.00	1741	186.00	39208	274.00	13807	422.00	1574
104.00	3035	187.00	10900	275.00	77576	423.00	11021
105.00	2807	188.00	1151	276.00	10392	424.00	2154
106.00	1026	189.00	2397	277.00	6356	425.00	223
107.00	35368	190.00	439	278.00	1047	433.00	46
108.00	5689	191.00	1217	279.00	243	434.00	87
109.00	927	192.00	3209	282.00	202	435.00	137
110.00	67200	193.00	3749	283.00	729	436.00	125

Date : 02-MAR-2010 09:18

Client ID: DFTPP

Instrument: MSDB.i

Sample Info: IWBNI00207-01150 PPHI1ISVMFI1|DFTPP

Volume Injected (uL): 1.0

Operator: nag1

Column phase: J & W DB-5MS

Column diameter: 0.20

Data File: s8c0201.d

Spectrum: Avg. Scans 336-338 (7.88), Background Scan 331

Location of Maximum: 198.00

Number of points: 324

m/z	Y	m/z	Y	m/z	Y	m/z	Y
111.00	10037	194.00	827	284.00	537	437.00	253
112.00	1212	195.00	537	285.00	1139	438.00	527
113.00	373	196.00	9552	286.00	193	439.00	453
114.00	40	198.00	278592	289.00	287	441.00	34056
115.00	248	199.00	19056	290.00	248	442.00	207040
116.00	2209	200.00	1631	291.00	106	443.00	39632
117.00	27632	201.00	1536	292.00	306	444.00	3693
118.00	2108	203.00	1979	293.00	1356	445.00	194
119.00	328	204.00	10366	294.00	355		
120.00	477	205.00	17952	295.00	128		
121.00	193	206.00	73824	296.00	18936		
122.00	2634	207.00	10196	297.00	2737		

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

SDG Number: 10-1981		Matrix: SOIL
Lab Sample ID: 1202053894		
Client Sample: QC for batch 957826	Client: LANL010	Project: QC
Client ID: MB for batch 957826	Method: SW846 8270C	SOP Ref: GL-OA-E-009
Batch ID: 957838	Inst: MSD8.1	Dilution: 1
Run Date: 03/01/2010 14:03	Analyst: NAG1	Inj. Vol: .5 uL
Prep Date: 02/25/2010 21:57	Aliquot: 30 g	Final Volume: 1 mL
Data File: s8c0105-1.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	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
99-09-2	<i>o</i> -Nitroaniline	U	333	ug/kg	66.7	333
	3-Nitroaniline					

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

SDG Number: 10-1981		Matrix: SOIL
Lab Sample ID: 1202053894		
Client Sample: QC for batch 957826	Client: LANL010	Project: QC
Client ID: MB for batch 957826	Method: SW846 8270C	SOP Ref: GL-OA-E-009
Batch ID: 957838	Inst: MSD8.1	Dilution: 1
Run Date: 03/01/2010 14:03	Analyst: NAG1	Inj. Vol: .5 uL
Prep Date: 02/25/2010 21:57	Aliquot: 30 g	Final Volume: 1 mL
Data File: s8c0105-1.d	Column: J&W DB-5MS	Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
131-11-3	<i>m</i> -Nitroaniline					
	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 Aldol Condensate	2.94	359	ug/kg		JA

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Data file : /chem/MSD8.i/s030110.b/s8c0105-1.d
 Lab Smp Id: 1202053894 Client Smp ID: SBLK01
 Inj Date : 01-MAR-2010 14:03
 Operator : nag1 Inst ID: MSD8.i
 Smp Info : |1202053894|957838|1|SVM|1|SBLK01
 Misc Info : |MSD8270_S|WBN100227-01
 Comment : Column: J & W DB-5MS, 25m x 0.20 mm x 0.33 micron film
 Method : /chem/MSD8.i/s030110.b/MSD8-8270AQA-022010.m
 Meth Date : 02-Mar-2010 07:06 nat00999 Quant Type: ISTD
 Cal Date : 21-FEB-2010 23:15 Cal File: s8b2042.d
 Als bottle: 5 QC Sample: BLANK
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: 10-1981.sub
 Target Version: 3.50
 Processing Host: hpclpl

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				RESPONSE	CONCENTRATIONS	
	MASS	RT	EXP RT	REL RT		ON-COLUMN	FINAL
=====	----	--	-----	-----	-----	(ng/ul)	(ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.311	4.316	(1.000)	407887	40.0000	
* 29 Naphthalene-d8	136	5.563	5.573	(1.000)	1530818	40.0000	
* 46 Acenaphthene-d10	164	7.415	7.425	(1.000)	893865	40.0000	
* 67 Phenanthrene-d10	188	9.011	9.016	(1.000)	1594962	40.0000	
* 91 Chrysene-d12	240	11.887	11.901	(1.000)	1442616	40.0000	
* 98 Perylene-d12	264	13.911	13.925	(1.000)	1161684	40.0000	
\$ 3 2-Fluorophenol	112	3.177	3.168	(0.737)	763829	79.3205	2640
\$ 5 Phenol-d5	99	3.939	3.944	(0.914)	878660	73.1651	2440
\$ 20 Nitrobenzene-d5	82	4.834	4.844	(0.869)	410083	37.6844	1260
\$ 39 2-Fluorobiphenyl	172	6.692	6.697	(0.902)	992101	37.7070	1260
\$ 60 2,4,6-Tribromophenol	329	8.258	8.263	(1.114)	251421	85.0892	2840
\$ 81 p-Terphenyl-d14	244	10.725	10.730	(0.902)	1223029	47.0896	1570

Data File: /chem/MSD8.i/s030110.b/s8c0105-1.d
Report Date: 02-Mar-2010 07:12

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Data file : /chem/MSD8.i/s030110.b/s8c0105-1.d
Lab Smp Id: 1202053894 Client Smp ID: SBLK01
Inj Date : 01-MAR-2010 14:03
Operator : nagl Inst ID: MSD8.i
Smp Info : |1202053894|957838|1|SVM|1|SBLK01
Misc Info : |MSD8270_S|WBN100227-01
Comment : Column: J & W DB-5MS, 25m x 0.20 mm x 0.33 micron film
Method : /chem/MSD8.i/s030110.b/MSD8-8270AQA-022010.m
Meth Date : 02-Mar-2010 07:06 nat00999 Quant Type: ISTD
Cal Date : 21-FEB-2010 23:15 Cal File: s8b2042.d
Als bottle: 5 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 10-1981.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

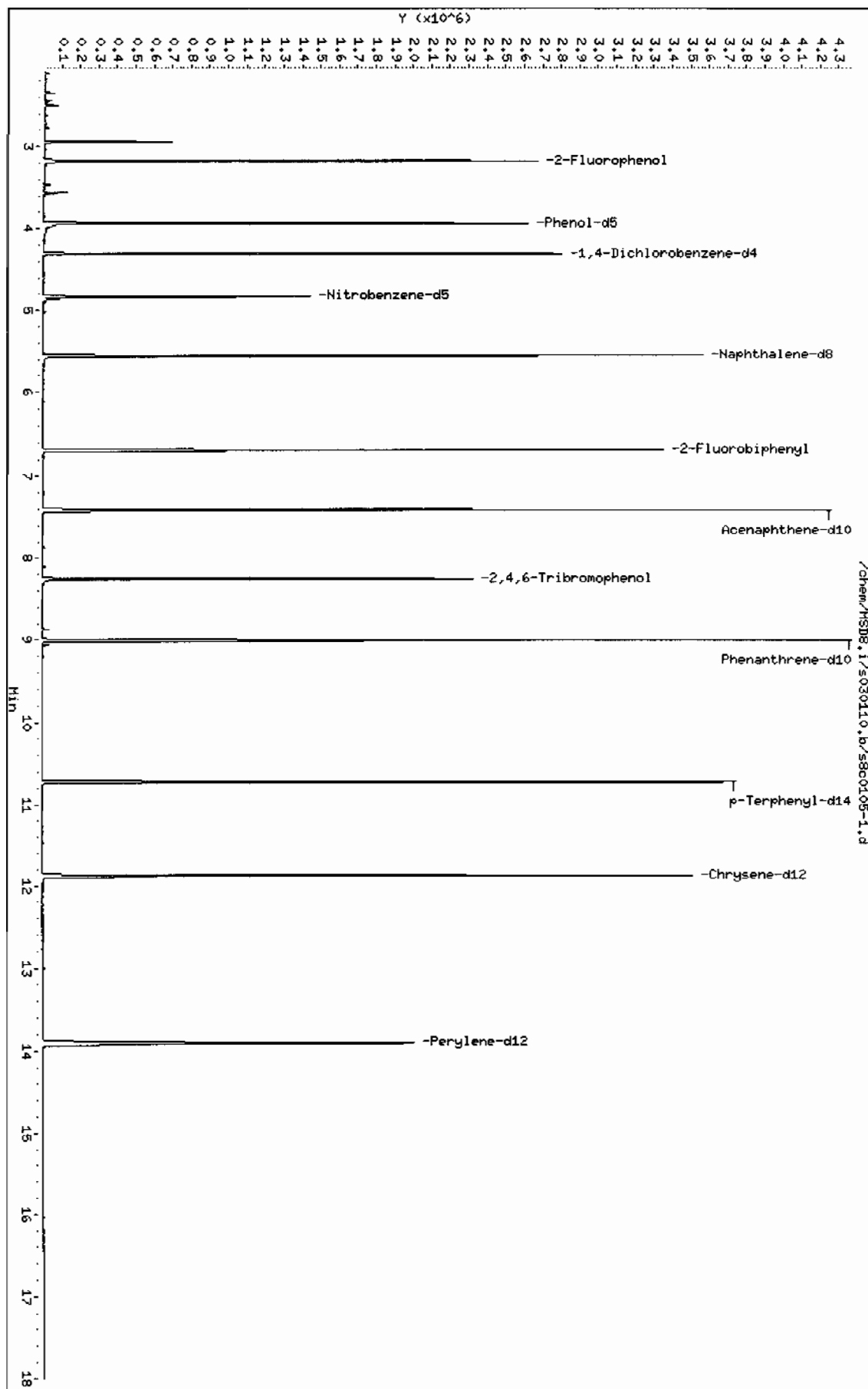
Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
=====	====	=====	=====
* 10 1,4-Dichlorobenzene-d4	4.311	2251896	40.000

CONCENTRATIONS				QUANT		
RT	AREA	ON-COL (ng/ul)	FINAL (ug/Kg)	QUAL	LIBRARY	LIB ENTRY
====	====	=====	=====	====	=====	=====
Unknown Aldol Condensate				CAS #:		
2.944	606632	10.7754923	359	0		0 10

Data File: /chem/MSD8.i/s030110.b/s8c0105-1.d
Date: 01-MAR-2010 14:03
Client ID: SBLK01
Sample Info: 11202053894/96783811/SWH11/SBLK01
Volume Injected (uL): 0.5
Column phase: 364 DB-5MS

Instrument: MSD8.i
Operator: nag1
Column diameter: 0.20



Date : 01-MAR-2010 14:03

Client ID: SBLK01

Instrument: MSD8.i

Sample Info: I12020538941957838111SVH11|SBLK01

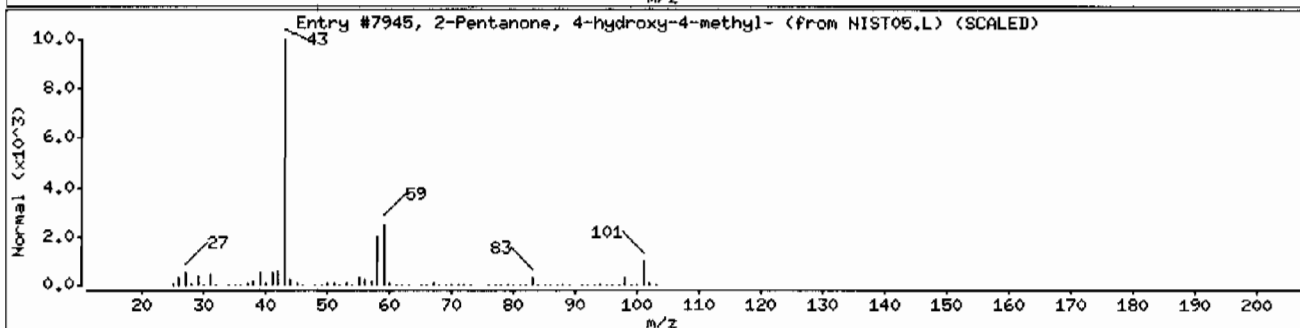
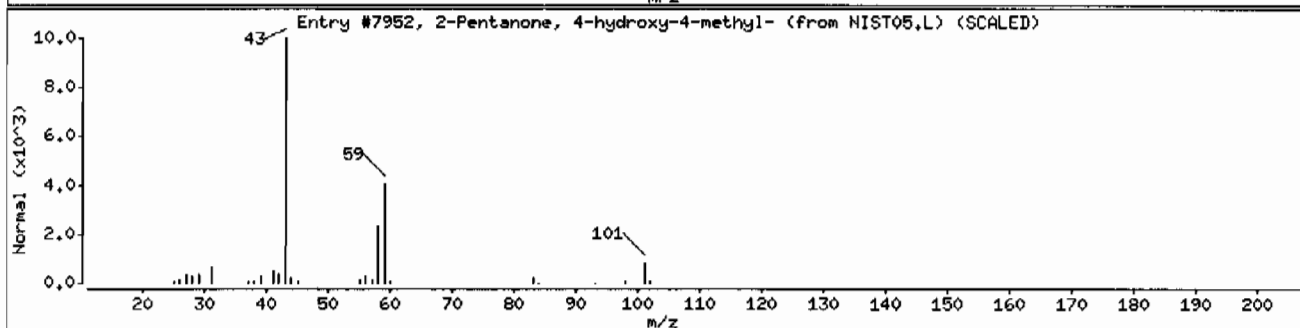
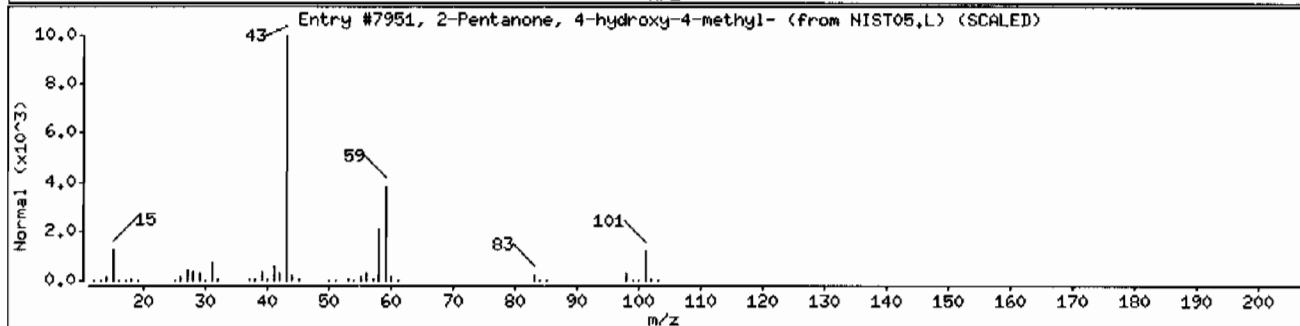
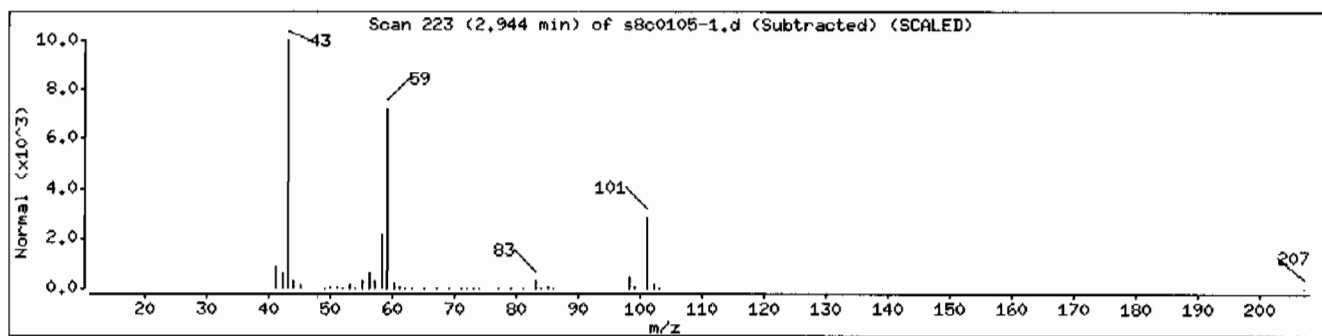
Volume Injected (uL): 0.5

Operator: nag1

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	53	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05,L	7952	45	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05,L	7945	40	C6H12O2	116



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

SDG Number: 10-1981		Matrix: SOIL
Lab Sample ID: 1202053895		
Client Sample: QC for batch 957826	Client: LANL010	Project: QC
Client ID: LCS for batch 957826	Method: SW846 8270C	SOP Ref: GL-OA-E-009
Batch ID: 957838	Inst: MSD8.I	Dilution: 1
Run Date: 03/01/2010 14:31	Analyst: NAG1	Inj. Vol: .5 uL
Prep Date: 02/25/2010 21:57	Aliquot: 30 g	Final Volume: 1 mL
Data File: s8c0106-1.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		844	ug/kg	66.7	333
108-95-2	Phenol		997	ug/kg	66.7	333
95-57-8	2-Chlorophenol		1070	ug/kg	66.7	333
106-46-7	1,4-Dichlorobenzene		995	ug/kg	66.7	333
621-64-7	N-Nitrosodipropylamine		967	ug/kg	66.7	333
59-50-7	4-Chloro-3-methylphenol		1080	ug/kg	66.7	333
83-32-9	Acenaphthene		950	ug/kg	11.0	33.3
121-14-2	2,4-Dinitrotoluene		1260	ug/kg	33.3	333
100-02-7	4-Nitrophenol		1310	ug/kg	110	333
87-86-5	Pentachlorophenol		1400	ug/kg	83.3	333
129-00-0	Pyrene		950	ug/kg	10.0	33.3
110-86-1	Pyridine		860	ug/kg	66.7	333
62-53-3	Aniline		861	ug/kg	100	333
111-44-4	bis(2-Chloroethyl) ether		837	ug/kg	66.7	333
541-73-1	1,3-Dichlorobenzene		983	ug/kg	66.7	333
100-51-6	Benzyl alcohol		775	ug/kg	100	333
95-50-1	1,2-Dichlorobenzene		993	ug/kg	66.7	333
108-60-1	bis(2-Chloroisopropyl)ether		662	ug/kg	66.7	333
95-48-7	o-Cresol		966	ug/kg	66.7	333
65794-96-9	m,p-Cresols		1190	ug/kg	100	333
67-72-1	Hexachloroethane		934	ug/kg	66.7	333
98-95-3	Nitrobenzene		1000	ug/kg	66.7	333
78-59-1	Isophorone		980	ug/kg	66.7	333
88-75-5	2-Nitrophenol		1180	ug/kg	66.7	333
105-67-9	2,4-Dimethylphenol		983	ug/kg	117	333
111-91-1	bis(2-Chloroethoxy)methane		1040	ug/kg	66.7	333
120-83-2	2,4-Dichlorophenol		1170	ug/kg	66.7	333
65-85-0	Benzoic acid		2520	ug/kg	167	667
91-20-3	Naphthalene		1060	ug/kg	10.0	33.3
106-47-8	4-Chloroaniline		904	ug/kg	66.7	333
87-68-3	Hexachlorobutadiene		1020	ug/kg	66.7	333
91-57-6	2-Methylnaphthalene		1110	ug/kg	6.67	33.3
77-47-4	Hexachlorocyclopentadiene		1050	ug/kg	66.7	333
88-06-2	2,4,6-Trichlorophenol		1130	ug/kg	66.7	333
95-95-4	2,4,5-Trichlorophenol		1160	ug/kg	66.7	333
91-58-7	2-Chloronaphthalene		1040	ug/kg	11.0	33.3
88-74-4	2-Nitroaniline		1040	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**

SDG Number: 10-1981		Matrix: SOIL	
Lab Sample ID: 1202053895			
Client Sample: QC for batch 957826	Client: LANL010	Project: QC	
Client ID: LCS for batch 957826	Method: SW846 8270C	SOP Ref: GL-OA-E-009	
Batch ID: 957838	Inst: MSD8.I	Dilution: 1	
Run Date: 03/01/2010 14:31	Analyst: NAG1	Inj. Vol: .5 uL	
Prep Date: 02/25/2010 21:57	Aliquot: 30 g	Final Volume: 1 mL	
Data File: s8c0106-1.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		1220	ug/kg	66.7	333
606-20-2	2,6-Dinitrotoluene		1200	ug/kg	33.3	333
208-96-8	Acenaphthylene		1030	ug/kg	10.0	33.3
51-28-5	2,4-Dinitrophenol		1570	ug/kg	127	667
132-64-9	Dibenzofuran		1120	ug/kg	66.7	333
84-66-2	Diethylphthalate		1200	ug/kg	66.7	333
86-73-7	Fluorene		1050	ug/kg	10.0	33.3
7005-72-3	4-Chlorophenylphenylether		1120	ug/kg	66.7	333
534-52-1	2-Methyl-4,6-dinitrophenol		1460	ug/kg	66.7	333
100-01-6	4-Nitroaniline		1550	ug/kg	100	333
	<i>p</i> -Nitroaniline					
122-39-4	Diphenylamine		1340	ug/kg	66.7	333
122-66-7	Azobenzene		1070	ug/kg	66.7	333
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether		1190	ug/kg	66.7	333
118-74-1	Hexachlorobenzene		1130	ug/kg	66.7	333
85-01-8	Phenanthrene		1150	ug/kg	10.0	33.3
120-12-7	Anthracene		1080	ug/kg	6.67	33.3
84-74-2	Di-n-butylphthalate		1370	ug/kg	66.7	333
206-44-0	Fluoranthene		1170	ug/kg	10.0	33.3
85-68-7	Butylbenzylphthalate		1290	ug/kg	66.7	333
56-55-3	Benzo(a)anthracene		1080	ug/kg	10.0	33.3
91-94-1	3,3'-Dichlorobenzidine		997	ug/kg	100	333
218-01-9	Chrysene		1140	ug/kg	10.0	33.3
117-81-7	bis(2-Ethylhexyl)phthalate		1350	ug/kg	66.7	333
117-84-0	Di-n-octylphthalate		1260	ug/kg	66.7	333
205-99-2	Benzo(b)fluoranthene		1110	ug/kg	10.0	33.3
207-08-9	Benzo(k)fluoranthene		1110	ug/kg	10.0	33.3
50-32-8	Benzo(a)pyrene		1190	ug/kg	10.0	33.3
193-39-5	Indeno(1,2,3-cd)pyrene		1280	ug/kg	10.0	33.3
53-70-3	Dibenzo(a,h)anthracene		1520	ug/kg	10.0	33.3
191-24-2	Benzo(ghi)perylene		1390	ug/kg	10.0	33.3
120-82-1	1,2,4-Trichlorobenzene		1040	ug/kg	66.7	333

Data File: /chem/MSD8.i/s030110.b/s8c0106-1.d
Report Date: 02-Mar-2010 07:13

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Data file : /chem/MSD8.i/s030110.b/s8c0106-1.d
Lab Smp Id: 1202053895 Client Smp ID: SBLK01LCS
Inj Date : 01-MAR-2010 14:31
Operator : nagl Inst ID: MSD8.i
Smp Info : |1202053895|957838|1|SVM|1|SBLK01LCS
Misc Info : |MSD8270_S|WBN100227-01
Comment : Column: J & W DB-5MS, 25m x 0.20 mm x 0.33 micron film
Method : /chem/MSD8.i/s030110.b/MSD8-8270AQA-022010.m
Meth Date : 02-Mar-2010 07:06 nat00999 Quant Type: ISTD
Cal Date : 21-FEB-2010 23:15 Cal File: s8b2042.d
Als bottle: 6 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 10-1981.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 (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.311	4.316	(1.000)	412008	40.0000	
* 29 Naphthalene-d8	136	5.568	5.573	(1.000)	1550261	40.0000	
* 46 Acenaphthene-d10	164	7.420	7.425	(1.000)	940870	40.0000	
* 67 Phenanthrene-d10	188	9.016	9.016	(1.000)	1727881	40.0000	
* 91 Chrysene-d12	240	11.897	11.901	(1.000)	1765079	40.0000	
* 98 Perylene-d12	264	13.920	13.925	(1.000)	1340583	40.0000	
\$ 3 2-Fluorophenol	112	3.177	3.168	(0.737)	623299	64.0796	2140
\$ 5 Phenol-d5	99	3.944	3.944	(0.915)	724150	59.6961	1990
\$ 20 Nitrobenzene-d5	82	4.839	4.844	(0.869)	329960	29.9412	998
\$ 39 2-Fluorobiphenyl	172	6.692	6.697	(0.902)	824608	29.7753	992
\$ 60 2,4,6-Tribromophenol	329	8.263	8.263	(1.114)	246954	79.4020	2650
\$ 81 p-Terphenyl-d14	244	10.725	10.730	(0.902)	1167947	36.7534	1220

Compounds	QUANT SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
							(ng/ul)	(ug/Kg)
6 Phenol		94	3.958	3.958	(0.918)	374857	29.9243	997
8 2-Chlorophenol		128	4.115	4.116	(0.955)	347580	31.9539	1060
11 1,4-Dichlorobenzene		146	4.325	4.330	(1.003)	397175	29.8416	995
17 N-Nitrosodipropylamine		70	4.687	4.692	(1.087)	232483	29.0156	967 (0)
28 1,2,4-Trichlorobenzene		180	5.501	5.506	(0.988)	351710	31.1657	1040
33 4-Chloro-3-methylphenol		107	6.139	6.135	(1.103)	293166	32.2864	1080
47 Acenaphthene		154	7.454	7.458	(1.004)	712396	28.4933	950
50 2,4-Dinitrotoluene		165	7.620	7.625	(1.027)	288480	37.7459	1260
52 4-Nitrophenol		139	7.544	7.544	(1.017)	126507	39.3910	1310
65 Pentachlorophenol		266	8.806	8.806	(0.977)	161022	42.1240	1400
79 Pyrene		202	10.563	10.568	(0.888)	1570674	28.5008	950
2 Pyridine		79	2.263	2.235	(0.525)	237597	25.8101	860
4 Aniline		66	4.001	4.006	(0.928)	147836	25.8411	861
7 bis(2-Chloroethyl) ether		63	4.049	4.054	(0.939)	215109	25.1178	837
9 1,3-Dichlorobenzene		146	4.258	4.263	(0.988)	380241	29.4762	982
12 Benzyl alcohol		108	4.425	4.430	(1.026)	158290	23.2643	775
13 1,2-Dichlorobenzene		146	4.468	4.473	(1.036)	368788	29.7885	993
14 bis(2-Chloroisopropyl) ether		45	4.554	4.558	(1.056)	333470	19.8597	662
15 o-Cresol		107	4.525	4.520	(1.050)	252178	28.9866	966
18 m,p-Cresols		107	4.668	4.677	(1.083)	392755	35.6731	1190
19 Hexachloroethane		117	4.796	4.801	(1.113)	140544	28.0214	934
21 Nitrobenzene		77	4.858	4.863	(0.873)	340979	29.9957	1000
22 Isophorone		82	5.092	5.101	(0.914)	615330	29.4018	980
23 2-Nitrophenol		139	5.173	5.177	(0.929)	185079	35.4739	1180
24 2,4-Dimethylphenol		122	5.201	5.206	(0.934)	273586	29.4961	983
25 bis(2-Chloroethoxy)methane		93	5.301	5.306	(0.952)	364892	31.0911	1040
26 2,4-Dichlorophenol		162	5.420	5.420	(0.973)	294209	35.0565	1170
27 Benzoic acid		105	5.349	5.320	(0.961)	404076	75.5505	2520
30 Naphthalene		128	5.587	5.592	(1.003)	1055283	31.6633	1060
31 4-Chloroaniline		127	5.635	5.639	(1.012)	300380	27.1133	904
32 Hexachlorobutadiene		225	5.711	5.716	(1.026)	215105	30.6476	1020
34 2-Methylnaphthalene		142	6.306	6.311	(1.133)	746790	33.3607	1110
36 Hexachlorocyclopentadiene		237	6.468	6.473	(0.872)	183127	31.3591	1040
37 2,4,6-Trichlorophenol		196	6.601	6.606	(0.890)	245078	33.8082	1130
38 2,4,5-Trichlorophenol		196	6.644	6.639	(0.895)	268822	34.9386	1160
40 2-Chloronaphthalene		162	6.825	6.825	(0.920)	719511	31.2573	1040
42 o-Nitroaniline		65	6.930	6.930	(0.934)	201108	31.2129	1040
41 m-Nitroaniline		138	7.368	7.373	(0.993)	166239	33.8527	1130
43 Dimethylphthalate		163	7.125	7.135	(0.960)	962372	36.5018	1220
44 2,6-Dinitrotoluene		165	7.192	7.197	(0.969)	214082	35.9159	1200
45 Acenaphthylene		152	7.268	7.273	(0.979)	1211045	31.0030	1030
48 2,4-Dinitrophenol		184	7.477	7.482	(1.008)	97364	47.0395	1570
49 Dibenzofuran		168	7.635	7.639	(1.029)	1098385	33.4828	1120
51 Diethylphthalate		149	7.882	7.887	(1.062)	997494	36.1494	1200
53 Fluorene		166	8.006	8.011	(1.079)	957474	31.5306	1050
54 4-Chlorophenylphenylether		204	8.001	8.006	(1.078)	490779	33.5593	1120
55 2-Methyl-4,6-dinitrophenol		198	8.058	8.063	(0.894)	153660	43.8031	1460

Compounds	QUANT SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
							(ng/ul)	(ug/Kg)
56 p-Nitroaniline		138	8.025	8.025	(1.081)	202324	46.6269	1550
133 Diphenylamine		169	8.130	8.135	(0.902)	875232	40.0851	1340
58 1,2-Diphenylhydrazine		77	8.173	8.177	(0.906)	825967	32.2039	1070
61 4-Bromophenylphenylether		248	8.530	8.535	(0.946)	295096	35.7408	1190
63 Hexachlorobenzene		284	8.597	8.601	(0.954)	290236	33.8204	1130
68 Phenanthrene		178	9.039	9.044	(1.003)	1387847	34.4602	1150
69 Anthracene		178	9.097	9.097	(1.009)	1362962	32.5001	1080
72 Di-n-butylphthalate		149	9.639	9.644	(1.069)	1795818	40.9680	1360
76 Fluoranthene		202	10.316	10.320	(1.144)	1543139	35.0965	1170
85 Butylbenzylphthalate		149	11.254	11.258	(0.946)	743365	38.5740	1280
89 Benzo(a)anthracene		228	11.877	11.882	(0.998)	1499661	32.2865	1080
90 3,3'-Dichlorobenzidine		252	11.844	11.844	(0.996)	327095	29.9137	997
92 Chrysene		228	11.925	11.930	(1.002)	1378592	34.0660	1140
93 bis(2-Ethylhexyl)phthalate		149	11.901	11.906	(1.000)	1088737	40.3698	1340
94 Di-n-octylphthalate		149	12.758	12.763	(0.917)	1556334	37.9272	1260
95 Benzo(b)fluoranthene		252	13.325	13.330	(0.957)	1270511	33.4283	1110
96 Benzo(k)fluoranthene		252	13.373	13.378	(0.961)	1271031	33.2650	1110
97 Benzo(a)pyrene		252	13.830	13.835	(0.993)	1147816	35.8071	1190
99 Indeno(1,2,3-cd)pyrene		276	15.697	15.706	(1.128)	1017106	38.2688	1280
100 Dibenzo(a,h)anthracene		278	15.735	15.744	(1.130)	937364	45.6350	1520
101 Benzo(ghi)perylene		276	16.163	16.173	(1.161)	917491	41.7235	1390
1 N-Methyl-N-nitrosomethylamine		74	2.230	2.206	(0.517)	158811	25.3077	844

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Miscellaneous Data

Prep Logbook

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

Batch ID: 957826 Verified by: _____
 Analyst: Alberto Velasco Lab SOP: GL-OA-E-010 REV# 18
 Method: SW846 3550B Instrument: Semi-Volatiles Manual

Sample ID	Run Date	Aliquot (g)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1202053894 MIB	25-FEB-2010 21:57:00	30	1	0.03333
1202053895 LCS	25-FEB-2010 21:57:00	30	1	0.03333
247784002	25-FEB-2010 21:57:00	30.01	1	0.03332
247790002	25-FEB-2010 21:57:00	30.03	1	0.0333
247790003	25-FEB-2010 21:57:00	30.19	1	0.03312
247791002	25-FEB-2010 21:57:00	30.05	1	0.03328
1202053896 MS (247791002)	25-FEB-2010 21:57:00	30.19	1	0.03312
1202053897 MSD (247791002)	25-FEB-2010 21:57:00	30.03	1	0.0333
247791003	25-FEB-2010 21:57:00	30.07	1	0.03326
247791004	25-FEB-2010 21:57:00	30.06	1	0.03327
247791005	25-FEB-2010 21:57:00	30.03	1	0.0333
247791006	25-FEB-2010 21:57:00	30.04	1	0.03329
247855002	25-FEB-2010 21:57:00	30.05	1	0.03328

Type	Sample Id	Description	Serial Number	Spike Amt	Units	Comments:
LCS	1202053895	BNA LCS w/o Benzidine 50ppm	UE100217-14	1	mL	Verified By: AJS
LCS	1202053895	BENZIDINE LCS	UE100217-22	1	mL	Final Solvent: CH2Cl2
MS	1202053896	BNA LCS w/o Benzidine 50ppm	UE100217-14	1	mL	
MS	1202053896	BENZIDINE LCS	UE100217-22	1	mL	
MSD	1202053897	BNA LCS w/o Benzidine 50ppm	UE100217-14	1	mL	
MSD	1202053897	BENZIDINE LCS	UE100217-22	1	mL	
SURR	All	BNA for all Surrogate	UE100222-10	1	mL	
REGNT	All	Acetone	1273823-B1	150	mL	
REGNT	All	Methylene Chloride	1274843-D	150	mL	
SOURC	All	SODIUM SULFATE	1274910	30	g	

GEL ORGANIC RUN LOG

INSTRUMENT ID: MSD8

DATE: 03/01/2010

METHOD: See raw data

OPERATOR: NAG

REVIEWED BY:

DATE:

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 1 on pg. 1 SOLVENT LOT 1266705-D
Multiplier Voltage: 1094mv
Extr. Injection Volume: 0.5, 1.0 ul
DFTPP Solution ID: WBN100207-01
Internal Std ID: WBN100227-01
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. 23

Sequence Number: /chem/MSD8.i/s030110.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
s8c0101-D.d	WBN100207-01	nag1	01-MAR-2010 12:11	150 PPM	s030110	1.0	DFTPP	
s8c0101.d	WBN100207-01	nag1	01-MAR-2010 12:11	150 PPM	s030110	1.0	DFTPP	
s8c0102-D.d	WBN100215-05.3	nag1	01-MAR-2010 12:28	140 PPM	s030110	1.0	MEGACVS	382428
s8c0102.d	WBN100215-05.3	nag1	01-MAR-2010 12:28	140 PPM	s030110	1.0	MEGACVS	
s8c0103-D.d	WBN100218-03.5	nag1	01-MAR-2010 13:03	140 PPM	s030110	1.0	AP12CVS	
s8c0103.d	WBN100218-03.5	nag1	01-MAR-2010 13:03	140 PPM	s030110	1.0	AP12CVS	
s8c0104.d	WBN100205-23.3	nag1	01-MAR-2010 13:33	140 PPM	s030110	1.0	PESTCVS	
s8c0105-1.d	1202053894	nag1	01-MAR-2010 14:03	1957838	110-1981	1.0	SBLK01	
s8c0105-2.d	1202053894	nag1	01-MAR-2010 14:03	1957838	110-1982	1.0	SBLK01	
s8c0105-3.d	1202053894	nag1	01-MAR-2010 14:03	1957838	110-1978	1.0	SBLK01	
s8c0105.d	1202053894	nag1	01-MAR-2010 14:03	1957838	110-1979	1.0	SBLK01	
s8c0106-1.d	1202053895	nag1	01-MAR-2010 14:31	1957838	110-1981	1.0	SBLK01LCS	
s8c0106-2.d	1202053895	nag1	01-MAR-2010 14:31	1957838	110-1982	1.0	SBLK01LCS	
s8c0106-3.d	1202053895	nag1	01-MAR-2010 14:31	1957838	110-1978	1.0	SBLK01LCS	
s8c0106.d	1202053895	nag1	01-MAR-2010 14:31	1957838	110-1979	1.0	SBLK01LCS	
s8c0107.d	1247116010	nag1	01-MAR-2010 15:00	1956004	110-1839	1.0	LANL	10SE-failed IS/surr-tr-s8c0417 confirmed-RX-see MSD7
s8c0108.d	1247116011	nag1	01-MAR-2010 15:29	1956004	110-1839	1.0	LANL	
s8c0109.d	1247116012	nag1	01-MAR-2010 15:59	1956004	110-1839	1.0	LANL	10USE - failed IS - rr - see s8c0225
s8c0110.d	1247116013	nag1	01-MAR-2010 16:29	1956004	110-1839	1.0	LANL	10USE - failed IS - rr - see s8c0217

s8c0111.d	| 247116014	| nag1	| 01-MAR-2010 16:59	| 956004	| 10-1839	|	1.0|LANL	| DUSE - failed IS - rr - see s8c0218	|
s8c0112.d	| 247116015	| nag1	| 01-MAR-2010 17:29	| 956004	| 10-1839	|	1.0|LANL	| DUSE - failed IS - rr - see s8c0223	|
s8c0113.d	| 247116016	| nag1	| 01-MAR-2010 18:00	| 956004	| 10-1839	|	1.0|LANL	|	|
s8c0114.d	| 247116017	| nag1	| 01-MAR-2010 18:29	| 956004	| 10-1839	|	1.0|LANL	| DUSE - failed IS - rr - see s8c0224	|
s8c0115.d	| 247784002	| nag1	| 01-MAR-2010 18:59	| 957838	| 10-1979	|	1.0|LANL	|	|
s8c0116.d	| 247790002	| nag1	| 01-MAR-2010 19:29	| 957838	| 10-1981	|	1.0|LANL	|	|
s8c0117.d	| 247790003	| nag1	| 01-MAR-2010 19:59	| 957838	| 10-1981	|	1.0|LANL	| DUSE - failed IS - rr - see s8c0219	|
s8c0118.d	| 247791002	| nag1	| 01-MAR-2010 20:28	| 957838	| 10-1982	|	1.0|LANL	| DUSE - failed IS - rr - see s8c0220	|
s8c0119.d	| 1202053896	| nag1	| 01-MAR-2010 20:58	| 957838	| 10-1982	|	1.0|MS	| DUSE - failed spike - rr - see s8c0221	|
s8c0120.d	| 1202053897	| nag1	| 01-MAR-2010 21:28	| 957838	| 10-1982	|	1.0|MSD	| DUSE - failed spike - rr - see s8c0222	|
s8c0121.d	| 247791003	| nag1	| 01-MAR-2010 21:58	| 957838	| 10-1982	|	1.0|LANL	| DUSE - failed IS/surr - rr - see s8c0320	|
s8c0122.d	| 247838002	| nag1	| 01-MAR-2010 22:28	| 957051	| 1247838	|	1.0|GEIC	| DUSE - failed IS/surr - rr - see s8c0214	|
s8c0123.d	| 1202052075	| nag1	| 01-MAR-2010 22:58	| 957051	| 1247838	|	1.0|MS	| DUSE - failed spike - rr - see s8c0215	|
s8c0124.d	| 1202052076	| nag1	| 01-MAR-2010 23:27	| 957051	| 1247838	|	1.0|MSD	| DUSE - failed spike - rr - see s8c0216	|
s8c0125.d	| 1247409001	| nag1	| 01-MAR-2010 23:56	| 956332	| EUC-751.6	|	10.0|CARE	| DUSE - failed IS/surr - rr of s8E2821 - rr - see MSD6	|

Instrument Batch: /chem/MSD8.i/s030110.b

Page: 1

GEL ORGANIC RUN LOG

INSTRUMENT ID: MSD8

DATE: 03/02/2010 METHOD: See raw data OPERATOR: NAG REVIEWED BY: DATE:
 HARDWARE CONFIGURATION & METHOD SUMMARY: No. 1 on pg. 1 SOLVENT LOT 1266705-D
 Multiplier Voltage: 1094mv Extr. Injection Volume: 0.5, 1.0 ul
 DFTPP Solution ID: WBN100207-01 Internal Std ID: WBN100227-01
 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. 23

Sequence Number: /chem/MSD8.i/s030210.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
s8c0201.d	WBN100207-01	nag1	02-MAR-2010 09:18	150 PPM	s030210	1.0	DFTPP	
s8c0201.d	WBN100207-01	nag1	02-MAR-2010 09:18	150 PPM	s030210	1.0	DFTPP	
s8c0202.d	WBN100225-05.5	nag1	02-MAR-2010 09:35	140 PPM	s030210	1.0	MEGACVS	1378003
s8c0202.d	WBN100225-05.5	nag1	02-MAR-2010 09:35	140 PPM	s030210	1.0	MEGACVS	
s8c0203.d	WBN100218-03.5	nag1	02-MAR-2010 10:07	140 PPM	s030210	1.0	API2CVS	
s8c0203.d	WBN100218-03.5	nag1	02-MAR-2010 10:07	140 PPM	s030210	1.0	API2CVS	
s8c0204.d	WBN100205-23.3	nag1	02-MAR-2010 10:36	140 PPM	s030210	1.0	PESTCVS	
s8c0205.d	1202051515	nag1	02-MAR-2010 11:06	1958321	EU1-7509	1.0	TBLK01	
s8c0206.d	1202052746	nag1	02-MAR-2010 11:36	1958321	EU1-7515	1.0	TBLK01	
s8c0207.d	1202055171	nag1	02-MAR-2010 12:05	1958321	EU1-7509	1.0	SBLK01	
s8c0208.d	1202055172	nag1	02-MAR-2010 12:35	1958321	EU1-7509	1.0	SBLK01LCS	
s8c0209.d	1247294001	nag1	02-MAR-2010 13:05	1958321	EU1-7509	1.0	CARE	
s8c0210.d	1202055173	nag1	02-MAR-2010 13:34	1958321	EU1-7509	1.0	MS	
s8c0211.d	1202055174	nag1	02-MAR-2010 14:05	1958321	EU1-7509	1.0	MSD	
s8c0212.d	1247407001	nag1	02-MAR-2010 14:35	1958321	EU1-7514	1.0	CARE	
s8c0213.d	1247408001	nag1	02-MAR-2010 15:04	1958321	EU1-7515	1.0	CARE	
s8c0214.d	1247838002	nag1	02-MAR-2010 15:35	1957051	1247838	1.0	GEIC	USE - rr of s8c0122
s8c0215.d	1202052075	nag1	02-MAR-2010 16:08	1957051	1247838	1.0	MS	USE - rr of s8c0123
s8c0216.d	1202052076	nag1	02-MAR-2010 16:38	1957051	1247838	1.0	MSD	USE - rr of s8c0124

s8c0217.d	1247116013	1nag1	02-MAR-2010 17:07	956004	10-1839	1	1.0|LANL	USE - rr of s8c0110
s8c0218.d	1247116014	1nag1	02-MAR-2010 17:37	956004	10-1839	1	1.0|LANL	USE - rr of s8c0111
s8c0219.d	1247790003	1nag1	02-MAR-2010 18:07	957838	10-1981	1	1.0|LANL	USE - rr of s8c0117
s8c0220.d	1247791002	1nag1	02-MAR-2010 18:36	957838	10-1982	1	1.0|LANL	USE - rr of s8c0118
s8c0221.d	1202053896	1nag1	02-MAR-2010 19:06	957838	10-1982	1	1.0|MS	USE - rr of s8c0119
s8c0222.d	1202053897	1nag1	02-MAR-2010 19:35	957838	10-1982	1	1.0|MSD	USE - rr of s8c0120
s8c0223.d	1247116015	1nag1	02-MAR-2010 20:05	956004	10-1839	1	1.0|LANL	USE - rr of s8c0112
s8c0224.d	1247116017	1nag1	02-MAR-2010 20:34	956004	10-1839	1	1.0|LANL	USE - rr of s8c0114
s8c0225.d	1247116012	1nag1	02-MAR-2010 21:04	956004	10-1839	1	1.0 LANL	USE - rr of s8c0109

Instrument Batch: /chem/MSD8.i/s030210.b

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GEL ORGANIC RUN LOG

INSTRUMENT ID: MSD8

DATE: 02/20/2010 METHOD: See raw data OPERATOR: NAG REVIEWED BY: DATE:
HARDWARE CONFIGURATION & METHOD SUMMARY: No. 1 on pg. 1 SOLVENT LOT 1239699-D
Multiplier Voltage: 1094mv Extr. Injection Volume: 0.5, 1.0 ul
DFTPP Solution ID: WBN100207-01 Internal Std ID: WBN100217-01
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. 23

Sequence Number: /chem/MSD8.i/s022010.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
ls8b2001.d	WBN100207-01	lnag1	20-FEB-2010 12:04	150 PPM	ls022010	1.0	DFTPP	
ls8b2001.d	WBN100207-01	lnag1	20-FEB-2010 12:04	150 PPM	ls022010	1.0	DFTPP	
ls8b2002.d	inst blk	lnag1	20-FEB-2010 12:21	-----	ls022010	1.0	INST BLK	
ls8b2003.d	WBN100215-08	lnag1	20-FEB-2010 12:55	11 PPM	ls022010	1.0	MEGICAL	Naphthalene/1-Methylnaphthalene failed SC
ls8b2004.d	Linear.d\WBN100215-07	lnag1	20-FEB-2010 13:30	110 PPM	ls022010	1.0	MEGICAL	
ls8b2004.d	WBN100215-07	lnag1	20-FEB-2010 13:30	110 PPM	ls022010	1.0	MEGICAL	
ls8b2005.d	Linear.d\WBN100215-06	lnag1	20-FEB-2010 14:05	120 PPM	ls022010	1.0	MEGICAL	
ls8b2005.d	WBN100215-06	lnag1	20-FEB-2010 14:05	120 PPM	ls022010	1.0	MEGICAL	
ls8b2006.d	WBN100215-05.1	lnag1	20-FEB-2010 14:40	140 PPM	ls022010	1.0	MEGICAL	
ls8b2007.d	WBN100215-04	lnag1	20-FEB-2010 15:14	150 PPM	ls022010	1.0	MEGICAL	
ls8b2008.d	WBN100215-03	lnag1	20-FEB-2010 15:50	180 PPM	ls022010	1.0	MEGICAL	
ls8b2009.d	WBN100215-02	lnag1	20-FEB-2010 16:25	1100 PPM	ls022010	1.0	MEGICAL	
ls8b2010.d	WBN100215-01	lnag1	20-FEB-2010 16:59	1120 PPM	ls022010	1.0	MEGICAL	
ls8b2011.d	inst blk	lnag1	20-FEB-2010 17:34	-----	ls022010	1.0	INST BLK	
ls8b2012.d	D.d\WBN100215-C5.1	lnag1	20-FEB-2010 18:09	40 PPM	ls022010	1.0	MEGICAL	18270D
ls8b2012.d	WBN100215-C5.1	lnag1	20-FEB-2010 18:09	40 PPM	ls022010	1.0	MEGICAL	
ls8b2013.d	D.d\WBN100207-01	lnag1	21-FEB-2010 08:35	150 PPM	ls022010	1.0	DFTPP	
ls8b2013.d	WBN100207-01	lnag1	21-FEB-2010 08:35	150 PPM	ls022010	1.0	DFTPP	
ls8b2014.d	inst blk	lnag1	21-FEB-2010 08:51	-----	ls022010	1.0	INST BLK	

Data File: /chem/MSD8.i/s030210.b/s8c0221.d
Report Date: 03-Mar-2010 07:00

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GEL Laboratories LLC

Data file : /chem/MSD8.i/s030210.b/s8c0221.d
Lab Smp Id: 1202053896 Client Smp ID: RE15-10-8317MS
Inj Date : 02-MAR-2010 19:06
Operator : naql Inst ID: MSD8.i
Smp Info : |1202053896|957838|1|SVM|1|MS
Misc Info : |MSD5C70D_S|WBN100227-01
Comment : Column: J & W DB-5MS, 25m x 0.20 mm x 0.33 micron film
Method : /chem/MSD8.i/s030210.b/MSD8-8270AQA-022010.m
Meth Date : 02-Mar-2010 20:07 nat00999 Quant Type: ISTD
Cal Date : 21-FEB-2010 23:15 Cal File: s8b2042.d
Als bottle: 21 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 10-1982.sub
Target Version: 3.50
Processing Host: hpclpl

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	30.19000	weight of sample
M	6.34340	% 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	4.401	4.401	(1.000)	442998	40.0000	
* 29 Naphthalene-d8	136	5.663	5.663	(1.000)	1693938	40.0000	
* 46 Acenaphthene-d10	164	7.515	7.520	(1.000)	1018772	40.0000	
* 67 Phenanthrene-d10	188	9.116	9.115	(1.000)	1808746	40.0000	
* 91 Chrysene-d12	240	12.016	12.011	(1.000)	1527235	40.0000	
* 98 Perylene-d12	264	14.087	14.092	(1.000)	839090	40.0000	
\$ 3 2-Fluorophenol	112	3.268	3.253	(0.742)	712752	68.1500	2410
\$ 5 Phenol-d5	99	4.034	4.025	(0.917)	863152	66.1772	2340
\$ 20 Nitrobenzene-d5	82	4.930	4.934	(0.870)	383970	31.8869	1130
\$ 39 2-Fluorobiphenyl	172	6.787	6.787	(0.903)	951998	31.7466	1120
\$ 60 2,4,6-Tribromophenol	329	8.363	8.363	(1.113)	194708	57.8165	2040
\$ 81 p-Terphenyl-d14	244	10.830	10.830	(0.901)	1116766	40.6158	1440

Compounds	QUANT SIG			REL RT	RESPONSE	CONCENTRATIONS	
	MASS	RT	EXP RT			ON-COLUMN (ng/ul)	FINAL (ug/Kg)
6 Phenol	94	4.044	4.039	(0.919)	405077	30.0746	1060
8 2-Chlorophenol	128	4.206	4.206	(0.956)	399681	34.1733	1210
11 1,4-Dichlorobenzene	146	4.420	4.420	(1.004)	455490	31.8290	1120
17 N-Nitrosodipropylamine	70	4.777	4.787	(1.085)	276601	32.1069	1140(Q)
28 1,2,4-Trichlorobenzene	180	5.596	5.601	(0.988)	407493	33.0460	1170
33 4-Chloro-3-methylphenol	107	6.239	6.220	(1.102)	315329	31.7817	1120
47 Acenaphthene	154	7.554	7.553	(1.005)	802066	29.6267	1050
50 2,4-Dinitrotoluene	165	7.715	7.720	(1.027)	294940	35.6402	1260
52 4-Nitrophenol	139	7.692	7.630	(1.023)	29464	8.47280	300(a)
65 Pentachlorophenol	266	8.911	8.901	(0.978)	66909	16.7211	591
79 Pyrene	202	10.668	10.668	(0.888)	1496666	31.3873	1110
2 Pyridine	79	2.358	2.330	(0.536)	259438	26.2112	927
4 Aniline	66	4.092	4.096	(0.930)	176272	28.6561	1010
7 bis(2-Chloroethyl) ether	63	4.139	4.139	(0.940)	254624	27.6520	978
9 1,3-Dichlorobenzene	146	4.354	4.353	(0.989)	445385	32.1108	1140
12 Benzyl alcohol	108	4.535	4.515	(1.030)	65138	8.90378	315(aRM)
13 1,2-Dichlorobenzene	146	4.563	4.563	(1.037)	430171	32.3160	1140
14 bis(2-Chloroisopropyl) ether	45	4.644	4.644	(1.055)	406705	22.5268	797
15 o-Cresol	107	4.611	4.606	(1.048)	294126	31.4432	1110
18 m,p-Cresols	107	4.758	4.763	(1.081)	460448	38.8959	1380
19 Hexachloroethane	117	4.892	4.892	(1.111)	158039	29.3052	1040
21 Nitrobenzene	77	4.954	4.953	(0.875)	392843	31.6270	1120
22 Isophorone	82	5.187	5.192	(0.916)	727542	31.8150	1120
23 2-Nitrophenol	139	5.263	5.268	(0.929)	203600	35.7139	1260
24 2,4-Dimethylphenol	122	5.292	5.292	(0.934)	219000	21.6084	764
25 bis(2-Chloroethoxy) methane	93	5.392	5.396	(0.952)	427114	33.3060	1180
26 2,4-Dichlorophenol	162	5.515	5.511	(0.974)	337400	36.7930	1300
27 Benzoic acid	105	5.420	5.387	(0.957)	345466	62.3701	2200(Q)
30 Naphthalene	128	5.682	5.687	(1.003)	1226362	33.5481	1190
31 4-Chloroaniline	127	5.730	5.730	(1.012)	376527	31.1040	1100
32 Hexachlorobutadiene	225	5.801	5.806	(1.024)	245407	31.9993	1130
34 2-Methylnaphthalene	142	6.401	6.406	(1.130)	865232	35.2945	1250
36 Hexachlorocyclopentadiene	237	6.563	6.568	(0.873)	138369	21.8828	774
37 2,4,6-Trichlorophenol	196	6.701	6.696	(0.892)	233626	29.7640	1050
38 2,4,5-Trichlorophenol	196	6.744	6.730	(0.897)	277512	33.3100	1180
40 2-Chloronaphthalene	162	6.920	6.920	(0.921)	823284	32.9476	1160
42 o-Nitroaniline	65	7.025	7.025	(0.935)	222260	31.8580	1130
41 m-Nitroaniline	138	7.468	7.468	(0.994)	177791	33.4367	1180
43 Dimethylphthalate	163	7.220	7.225	(0.961)	1032510	36.1675	1280
44 2,6-Dinitrotoluene	165	7.287	7.287	(0.970)	228674	35.4304	1250
45 Acenaphthylene	152	7.363	7.368	(0.980)	1353486	32.0000	1130
48 2,4-Dinitrophenol	184	7.577	7.573	(1.008)	23681	21.7116	768
49 Dibenzofuran	168	7.735	7.734	(1.029)	1213579	34.1655	1210
51 Diethylphthalate	149	7.977	7.977	(1.061)	1064718	35.6351	1260
53 Fluorene	166	8.106	8.106	(1.079)	1044522	31.7669	1120
54 4-Chlorophenylphenylether	204	8.101	8.101	(1.078)	535251	33.8015	1200
55 2-Methyl-4,6-dinitrophenol	198	8.154	8.153	(0.894)	61891	20.9922	742

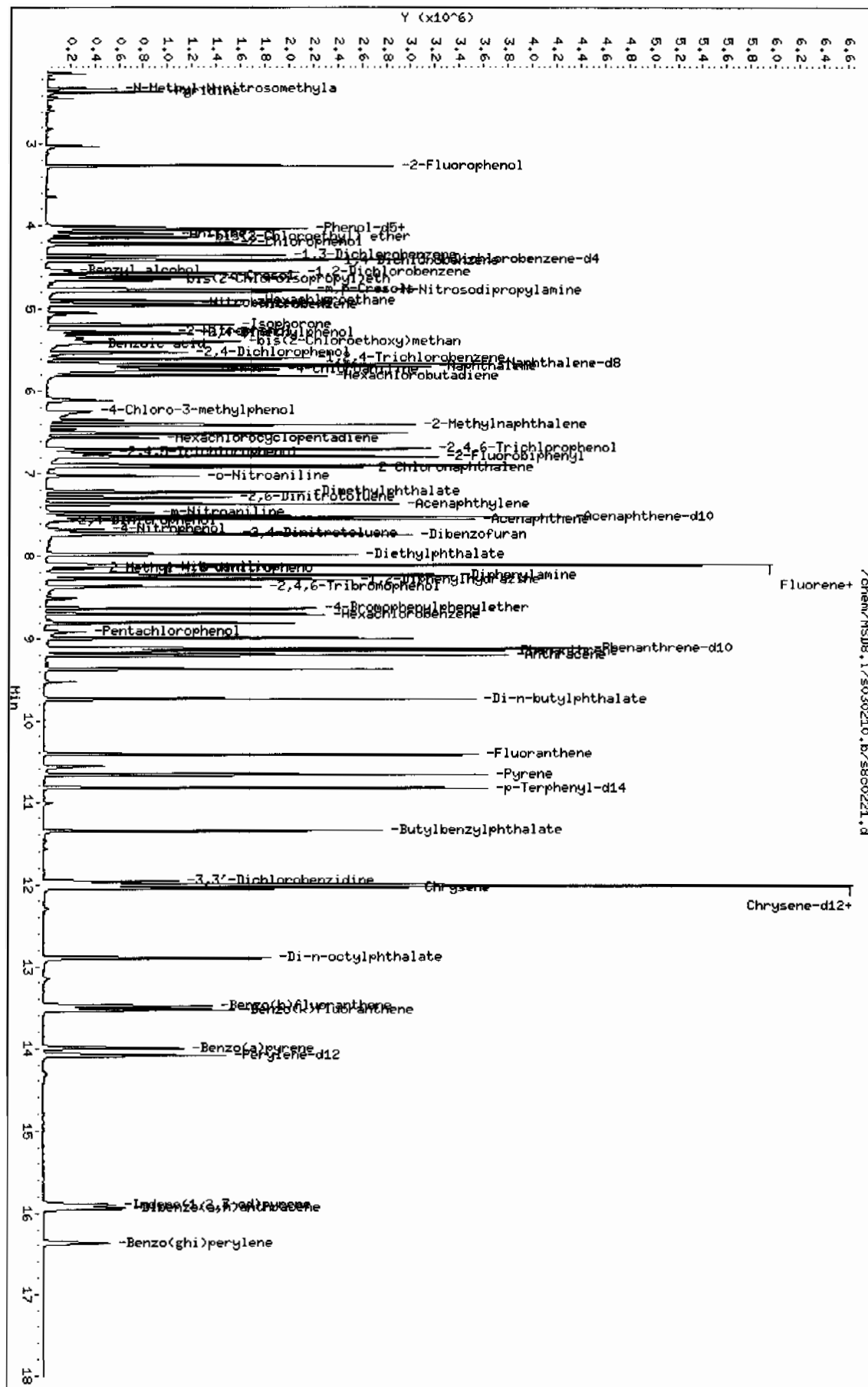
Compounds	QUANT SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
							(ng/ul)	(ug/Kg)
56 p-Nitroaniline		138	8.125	8.120	(1.081)	196720	41.8687	1480
133 Diphenylamine		169	8.230	8.230	(0.903)	937324	41.0096	1450
58 1,2-Diphenylhydrazine		77	8.273	8.273	(0.908)	904238	33.6794	1190
61 4-Bromophenylphenylether		248	8.630	8.630	(0.947)	313482	36.2701	1280
63 Hexachlorobenzene		284	8.696	8.696	(0.954)	302313	33.6527	1190
68 Phenanthrene		178	9.144	9.139	(1.003)	1420277	33.7328	1190
69 Anthracene		178	9.196	9.196	(1.009)	1428816	32.5472	1150
72 Di-n-butylphthalate		149	9.735	9.734	(1.068)	1798731	39.1999	1390
76 Fluoranthene		202	10.420	10.420	(1.143)	1487283	32.3138	1140
85 Butylbenzylphthalate		149	11.354	11.349	(0.945)	689002	41.3211	1460
89 Benzo(a)anthracene		228	11.996	11.996	(0.998)	1275477	31.7365	1120
90 3,3'-Dichlorobenzidine		252	11.958	11.959	(0.995)	320785	33.9054	1200
92 Chrysene		228	12.044	12.044	(1.002)	1184705	33.8367	1200
93 bis(2-Ethylhexyl)phthalate		149	12.016	12.011	(1.000)	1001580	42.9217	1520
94 Di-n-octylphthalate		149	12.892	12.892	(0.915)	1334471	49.9968	1770
95 Benzo(b)fluoranthene		252	13.482	13.482	(0.957)	843298	35.4488	1250
96 Benzo(k)fluoranthene		252	13.525	13.530	(0.960)	871541	36.4422	1290
97 Benzo(a)pyrene		252	13.997	13.996	(0.994)	710639	35.4186	1250
99 Indeno(1,2,3-cd)pyrene		276	15.901	15.901	(1.129)	462004	27.7722	982
100 Dibenzo(a,h)anthracene		278	15.939	15.944	(1.131)	474448	36.9032	1300
101 Benzo(ghi)perylene		276	16.368	16.377	(1.162)	422758	30.7154	1090
1 N-Methyl-N-nitrosomethylamine		74	2.320	2.296	(0.527)	181156	26.8491	950

QC Flag Legend

- a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
- Q - Qualifier signal failed the ratio test.
- R - Spike/Surrogate failed recovery limits.
- M - Compound response manually integrated.

Data File: /chem/MSD8.i/s030210.b/s800221.d
 Date : 02-MAR-2010 19:06
 Client ID: RELS-10-8317MS
 Sample Info: 1120205396195783811SVH11HS
 Volume Injected (uL): 0.5
 Column phase: J&W DB-SMS

Instrument: MSD8.i
 Operator: nag1
 Column diameter: 0.20



Data File: /chem/MSD8.i/s030210.b/s8c0222.d
Report Date: 03-Mar-2010 07:00

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Data file : /chem/MSD8.i/s030210.b/s8c0222.d
Lab Smp Id: 1202053897 Client Smp ID: RE15-10-8317MSD
Inj Date : 02-MAR-2010 19:35
Operator : nag1 Inst ID: MSD8.i
Smp Info : |1202053897|957838|1|SVM|1|MSD
Misc Info : |MSD5C70D_S|WBN100227-01
Comment : Column: J & W DB-5MS, 25m x 0.20 mm x 0.33 micron film
Method : /chem/MSD8.i/s030210.b/MSD8-8270AQA-022010.m
Meth Date : 02-Mar-2010 20:07 nat00999 Quant Type: ISTD
Cal Date : 21-FEB-2010 23:15 Cal File: s8b2042.d
Als bottle: 22 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 10-1982.sub
Target Version: 3.50
Processing Host: hpclpl

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	30.03000	weight of sample
M	6.34340	% 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	4.401	4.401	(1.000)	458356	40.0000	
* 29 Naphthalene-d8		136	5.663	5.663	(1.000)	1729539	40.0000	
* 46 Acenaphthene-d10		164	7.516	7.520	(1.000)	1058027	40.0000	
* 67 Phenanthrene-d10		188	9.116	9.115	(1.000)	1917293	40.0000	
* 91 Chrysene-d12		240	12.016	12.011	(1.000)	1754507	40.0000	
* 98 Perylene-d12		264	14.092	14.092	(1.000)	997950	40.0000	
\$ 3 2-Fluorophenol		112	3.268	3.253	(0.742)	788321	72.8500	2590
\$ 5 Phenol-d5		99	4.035	4.025	(0.917)	955077	70.7715	2520
\$ 20 Nitrobenzene-d5		82	4.930	4.934	(0.870)	425978	34.6473	1230
\$ 39 2-Fluorobiphenyl		172	6.787	6.787	(0.903)	1059061	34.0065	1210
\$ 60 2,4,6-Tribromophcnol		329	8.368	8.363	(1.113)	231480	66.1853	2350
\$ 81 p-Terphenyl-d14		244	10.830	10.830	(0.901)	1271921	40.2665	1430

Compounds	QUANT SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
							(ng/ul)	(ug/Kg)
6 Phenol		94	4.044	4.039	(0.919)	449341	32.2431	1150
8 2-Chlorophenol		128	4.206	4.206	(0.956)	439262	36.2991	1290
11 1,4-Dichlorobenzene		146	4.420	4.420	(1.004)	505056	34.1100	1210
17 N-Nitrosodipropylamine		70	4.777	4.787	(1.085)	305455	34.2682	1220 (Q)
28 1,2,4-Trichlorobenzene		180	5.596	5.601	(0.988)	451729	35.8793	1280
33 4-Chloro-3-methylphenol		107	6.244	6.220	(1.103)	348115	34.3639	1220
47 Acenaphthene		154	7.554	7.553	(1.005)	869372	30.9214	1100
50 2,4-Dinitrotoluene		165	7.716	7.720	(1.027)	334124	38.8772	1380
52 4-Nitrophenol		139	7.687	7.630	(1.023)	22596	6.25672	222 (aR)
65 Pentachlorophenol		266	8.911	8.901	(0.978)	74946	17.6692	628
79 Pyrene		202	10.668	10.668	(0.888)	1694959	30.9413	1100
2 Pyridine		79	2.363	2.330	(0.537)	278181	27.1631	966
4 Aniline		66	4.096	4.096	(0.931)	182402	28.6591	1020
7 bis(2-Chloroethyl) ether		63	4.139	4.139	(0.940)	279910	29.3795	1040
9 1,3-Dichlorobenzene		146	4.354	4.353	(0.989)	493857	34.4125	1220
12 Benzyl alcohol		108	4.539	4.515	(1.031)	74791	9.88071	351 (aQ)
13 1,2-Dichlorobenzene		146	4.563	4.563	(1.037)	483660	35.1168	1250
14 bis(2-Chloroisopropyl) ether		45	4.644	4.644	(1.055)	448813	24.0261	854
15 o-Cresol		107	4.615	4.606	(1.049)	318117	32.8684	1170
18 m,p-Cresols		107	4.763	4.763	(1.082)	496084	40.5020	1440
19 Hexachloroethane		117	4.892	4.892	(1.111)	176700	31.6677	1120
21 Nitrobenzene		77	4.954	4.953	(0.875)	438014	34.5378	1230
22 Isophorone		82	5.187	5.192	(0.916)	797387	34.1515	1210
23 2-Nitrophenol		139	5.263	5.268	(0.929)	233016	40.0325	1420
24 2,4-Dimethylphenol		122	5.292	5.292	(0.934)	182191	17.6065	626
25 bis(2-Chloroethoxy)methane		93	5.392	5.396	(0.952)	474447	36.2355	1290
26 2,4-Dichlorophenol		162	5.520	5.511	(0.975)	374513	39.9995	1420
27 Benzoic acid		105	5.430	5.387	(0.959)	396421	68.2420	2430 (Q)
30 Naphthalene		128	5.682	5.687	(1.003)	1348889	35.9855	1280
31 4-Chloroaniline		127	5.730	5.730	(1.012)	407463	32.9666	1170
32 Hexachlorobutadiene		225	5.801	5.806	(1.024)	270215	34.5088	1230
34 2-Methylnaphthalene		142	6.401	6.406	(1.130)	964158	38.4009	1360
36 Hexachlorocyclopentadiene		237	6.563	6.568	(0.873)	166707	25.3862	903
37 2,4,6-Trichlorophenol		196	6.701	6.696	(0.892)	258256	31.6811	1130
38 2,4,5-Trichlorophenol		196	6.749	6.730	(0.898)	304754	35.2227	1250
40 2-Chloronaphthalene		162	6.920	6.920	(0.921)	903252	34.7242	1230
42 o-Nitroaniline		65	7.025	7.025	(0.935)	248848	34.3456	1220
41 m-Nitroaniline		138	7.468	7.468	(0.994)	202406	36.6536	1300
43 Dimethylphthalate		163	7.220	7.225	(0.961)	1144494	38.6027	1370
44 2,6-Dinitrotoluene		165	7.287	7.287	(0.970)	253898	37.8790	1350
45 Acenaphthylene		152	7.368	7.368	(0.980)	1496645	34.0718	1210
48 2,4-Dinitrophenol		184	7.577	7.573	(1.008)	38769	25.9408	922
49 Dibenzofuran		168	7.735	7.734	(1.029)	1342774	36.4001	1290
51 Diethylphthalate		149	7.977	7.977	(1.061)	1176014	37.8997	1350
53 Fluorene		166	8.106	8.106	(1.079)	1155121	33.8271	1200
54 4-Chlorophenylphenylether		204	8.101	8.101	(1.078)	589609	35.8528	1270
55 2-Methyl-4,6-dinitrophenol		198	8.154	8.153	(0.894)	88543	25.9802	924

Compounds	QUANT SIG					CONCENTRATIONS	
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ng/ul)	FINAL (ug/Kg)
=====	=====	----	-----	-----	-----	-----	-----
56 p-Nitroaniline	138	8.125	8.120	(1.081)	234247	48.0060	1710
133 Diphenylamine	169	8.230	8.230	(0.903)	1028356	42.4452	1510
58 1,2-Diphenylhydrazine	77	8.273	8.273	(0.908)	1000598	35.1585	1250
61 4-Bromophenylphenylether	248	8.630	8.630	(0.947)	345588	37.7211	1340
63 Hexachlorobenzene	284	8.696	8.696	(0.954)	330629	34.7211	1230
68 Phenanthrene	178	9.144	9.139	(1.003)	1577739	35.2568	1250
69 Anthracene	178	9.196	9.196	(1.009)	1568372	33.7036	1200
72 Di-n-butylphthalate	149	9.735	9.734	(1.068)	1953854	40.1699	1430
76 Fluoranthene	202	10.425	10.420	(1.144)	1666205	34.1517	1210
85 Butylbenzylphthalate	149	11.354	11.349	(0.945)	784875	40.9734	1460
89 Benzo(a)anthracene	228	12.001	11.996	(0.999)	1521700	32.9584	1170
90 3,3'-Dichlorobenzidine	252	11.963	11.959	(0.996)	391730	36.0406	1280
92 Chrysene	228	12.049	12.044	(1.003)	1359714	33.8049	1200
93 bis(2-Ethylhexyl)phthalate	149	12.016	12.011	(1.000)	1140698	42.5513	1510
94 Di-n-octylphthalate	149	12.892	12.892	(0.915)	1518639	48.0682	1710
95 Benzo(b)fluoranthene	252	13.487	13.482	(0.957)	1038930	36.7204	1300
96 Benzo(k)fluoranthene	252	13.530	13.530	(0.960)	1045097	36.7428	1310
97 Benzo(a)pyrene	252	14.001	13.996	(0.994)	882422	36.9792	1310
99 Indeno(1,2,3-cd)pyrene	276	15.906	15.901	(1.129)	622478	31.4621	1120
100 Dibenzo(a,h)anthracene	278	15.944	15.944	(1.131)	611624	40.0000	1420
101 Benzo(ghi)perylene	276	16.373	16.377	(1.162)	539142	32.9357	1170
1 N-Methyl-N-nitrosomethylamine	74	2.325	2.296	(0.528)	201030	28.7963	1020

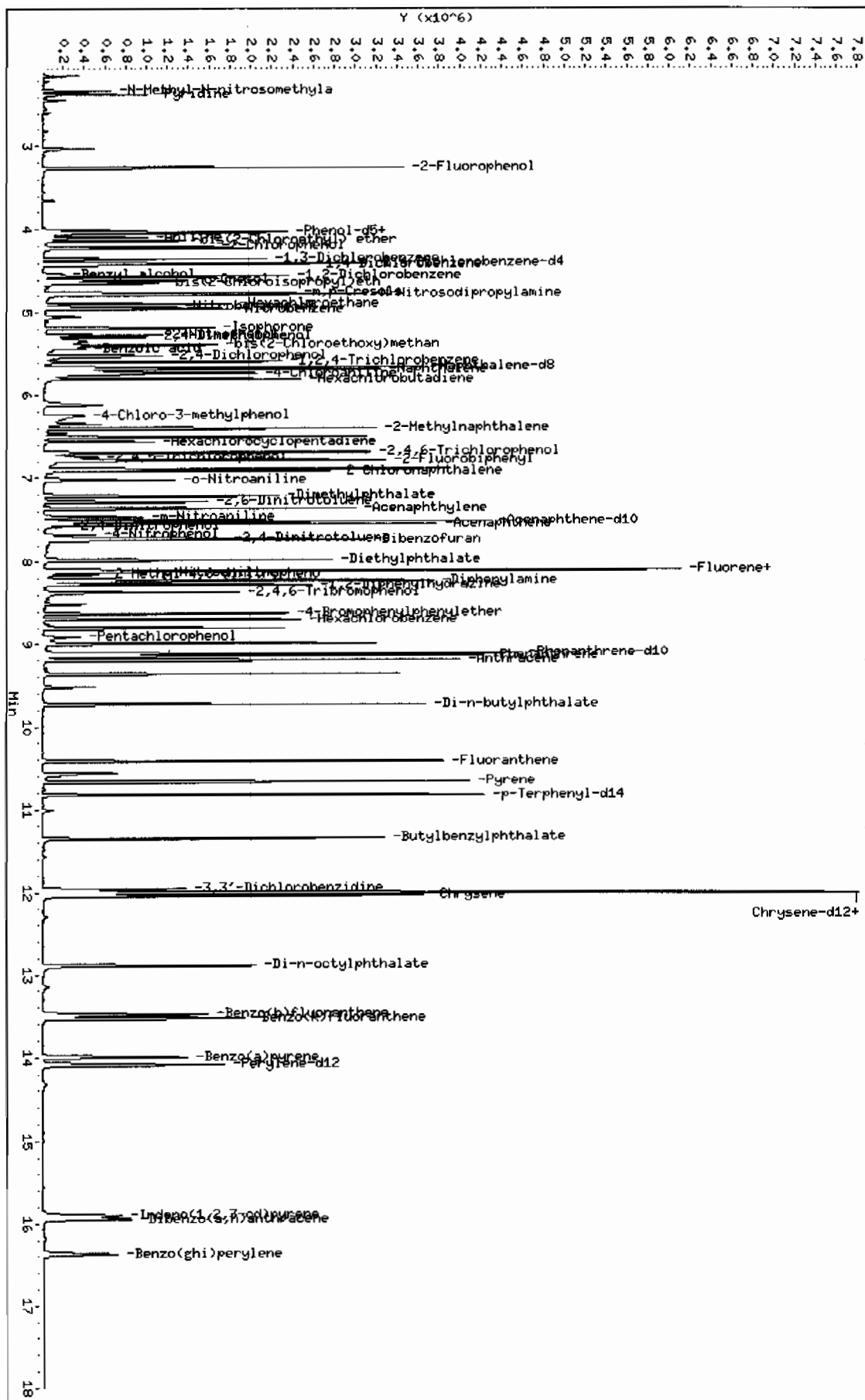
QC Flag Legend

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

Data File: /chem/MSD8.i/s030210.b/s0c0222.d
 Date : 02-MAR-2010 19:35
 Client ID: RE35-10-8317MSD
 Sample Info: 11202063897196783811|SVH111MSD
 Volume Injected (uL): 0.5
 Column phase: 3uM DB-5HS

Instrument: MSD8.i
 Operator: nagt
 Column diameter: 0.20

/chem/MSD8.i/s030210.b/s0c0222.d



LC/MS/MS PERCHLORATE ANALYSIS

**Perchlorate by LC/MSMS
Los Alamos National Laboratory (LANL)
SDG 10-1981**

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: 957943

Prep Batch Number: 957940

Sample Analysis

Sample ID	Client ID
247790002	RE15-10-8386
247790003	RE15-10-8387
1202054226	Interference Check Sample (ICS)
1202054222	Method Blank (MB)
1202054223	Laboratory Control Sample (LCS)
1202054224	247539002(CAPU-10-12549) Matrix Spike (MS)
1202054225	247539002(CAPU-10-12549) 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.

10-1981-PERLCMS

Page 1 of 4

CCV Requirements

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

CCB Requirements

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

CCV Requirements

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

Low Level Standard (CRI) Requirements

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

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

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

Interference Check Sample (ICS)

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

Laboratory Control Sample (LCS) Recovery

The LCS spike recoveries met the acceptance limits.

QC Sample Designation

Client sample 247539002 (CAPU-10-12549) from SDG 10-1960 was chosen for matrix spike and matrix spike duplicate analysis. Please see the raw data in the Miscellaneous Section.

Matrix Spike (MS) Recovery Statement

The MS recoveries were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement

The MSD recoveries were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement

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

Retention Time Standard Area Acceptance

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

Retention Time

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

Technical Information

Holding Time Specifications

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

Preparation/Analytical Method Verification

All procedures were performed as stated in the SOP.

Sample Dilutions

The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis

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

Miscellaneous Information

Data Exception (DER) Documentation

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

Manual Integrations

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

Method Comments

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

Additional Comments

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

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

Perchlorate Isotope Ratio

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

System Configuration

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

Chromatographic Columns

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

Dionex: IonPac AG-16 2 x 50 mm.

Certification Statement

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

Review Validation:

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

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

Reviewer:

Heberth Mauer Date: 03/17/10

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: 257940

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-8386

Date Received: 23-FEB-10

GEL Job No (SDG): 10-1981

GEL Sample ID: 247790002

Date Filtered: 06-MAR-10

Injection Volume (uL): 20

%Solids: 94.6

CAS No.	Analyte ^a	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.529	2.11	0.529	ug/kg	U	1	14-MAR-10 19:42	per0314031a
	Perchlorate Isotope Ratio						1	14-MAR-10 19:42	per0314031a
14797-73-0	Perchlorate-101	.529	2.11	0.529	ug/kg	U	1	14-MAR-10 19:42	per0314031a
	Perchlorate-O(18)			5.25	ug/kg		1	14-MAR-10 19:42	per0314031a

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

*Concentration =

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

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 957940

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-8387

Date Received: 23-FEB-10

GEL Job No (SDG): 10-1981

GEL Sample ID: 247790003

Date Filtered: 06-MAR-10

Injection Volume (uL): 20

%Solids: 94.3

CAS No.	Analyte [^]	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.53	2.12	0.530	ug/kg	U	1	14-MAR-10 19:51	per0314032a
	Perchlorate Isotope Ratio						1	14-MAR-10 19:51	per0314032a
14797-73-0	Perchlorate-101	.53	2.12	0.530	ug/kg	U	1	14-MAR-10 19:51	per0314032a
	Perchlorate-O(18)			5.35	ug/kg		1	14-MAR-10 19:51	per0314032a

[^] 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

QUALITY CONTROL SUMMARY

Perchlorate Laboratory Control Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 10-1981

Extract Batch Code: 957940

Date Filtered: 06-MAR-10

Matrix: SOIL

Sample ID: 1202054223

Analyte^	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	2.00	2.02	ug/kg	101		70 - 130
Perchlorate Isotope Ratio		3.11				-
Perchlorate-101	2.00	2.01	ug/kg	100		70 - 130
Perchlorate-O(18)		4.69	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): 10-1981

Extract Batch Code: 957940

Date Filtered: 06-MAR-10

Matrix: SOIL

Sample ID: 1202054226

Analyte [^]	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	2.00	2.26	ug/kg	113		70 - 130
Perchlorate Isotope Ratio		3.11				
Perchlorate-101	2.00	2.24	ug/kg	112		70 - 130
Perchlorate-O(18)		5.18	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: Charters W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per031410a.qld

Last Altered: Monday, March 15, 2010 8:56:56 AM Eastern Standard Time
Printed: Monday, March 15, 2010 9:13:21 AM Eastern Standard Time

File Name: per0314014a

Date: 14-Mar-2010

Time: 17:25:53

ID: 1202054226

Vial: 1:3,C

W
03-15-10

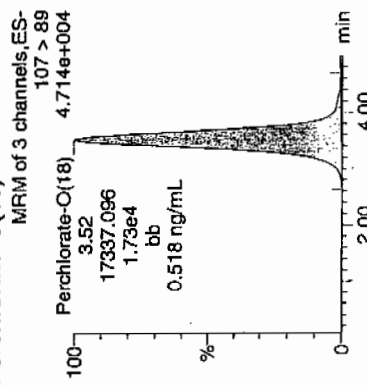
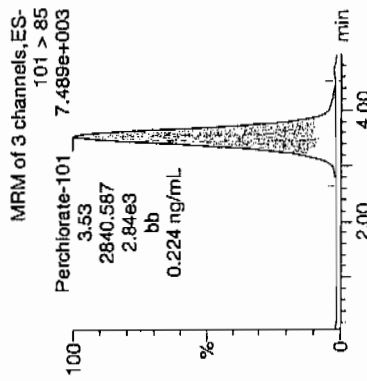
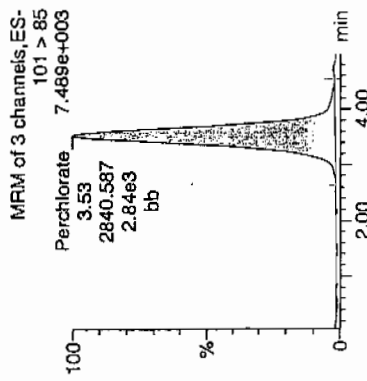
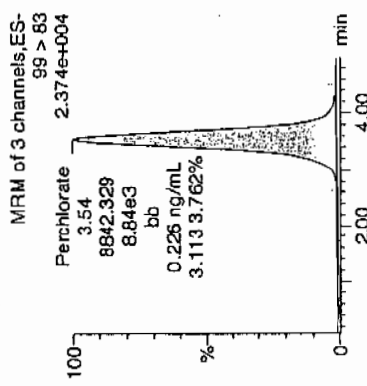
1202054226 | 3000 | 7.5 | 1.1

Perchlorate

Perchlorate

Perchlorate-101

Perchlorate-O(18)



ID	Name	Trace	RT	Area	Response	Flags	Mod Date	Mod Time	End/m	%Rec	%Dev	S/N	Q1 Ratio
1202054226	Perchlorate	99 > 83	3.54	8842.329	8842.329	bb			0.2258	112.92	12.92	539.433	3.11
1202054226	Perchlorate-101	101 > 85	3.53	2840.587	2840.587	bb			0.2240	112.02	12.02	408.061	
1202054226	Perchlorate-O(18)	107 > 89	3.52	17337.096	17337.096	bb			0.5181	103.62	3.62	699.798	

$$\frac{8842.329}{2840.587} = 3.1126$$

W
3/16/10

Perchlorate Spike/Spike Duplicate Summary

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No (SDG): 10-1981

Extract Batch Code: 957940

Date Extracted: 06-MAR-10

GEL MS/PS ID: 1202054224

Client ID: CAPU-10-12549

GEL MSD/PSD ID: 1202054225

QC Type: MS

Compound [^]	Spike Added	Sample Conc	Units	MS Conc	MS Rec	#	MSD Conc	MSD Rec	#	RPD	#	RPD Limit	Recovery Limit
Perchlorate	2.18	0.0844	ug/kg	2.27	100		2.37	105		4.61		30	75 - 125
Perchlorate Isotope Ratio	0	0.00		3.18			3.19			0			-
Perchlorate-101	2.18	0.0595	ug/kg	2.21	98.6		2.3	103		4.26		30	75 - 125
Perchlorate-O(18)	0	5.01	ug/kg	5.24			5.3			1.16			-

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

Comments:

Form 4

Perchlorate Initial Calibration Blank

GEL Job No.(SDG): 10-1981

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	14-MAR-10	per0314001a	IPB001
Perchlorate-101	0.00	0	NA	14-MAR-10	per0314001a	IPB001
Perchlorate	0.00	0	NA	14-MAR-10	per0314002a	IPB001
Perchlorate-101	0.00	0	NA	14-MAR-10	per0314002a	IPB001

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

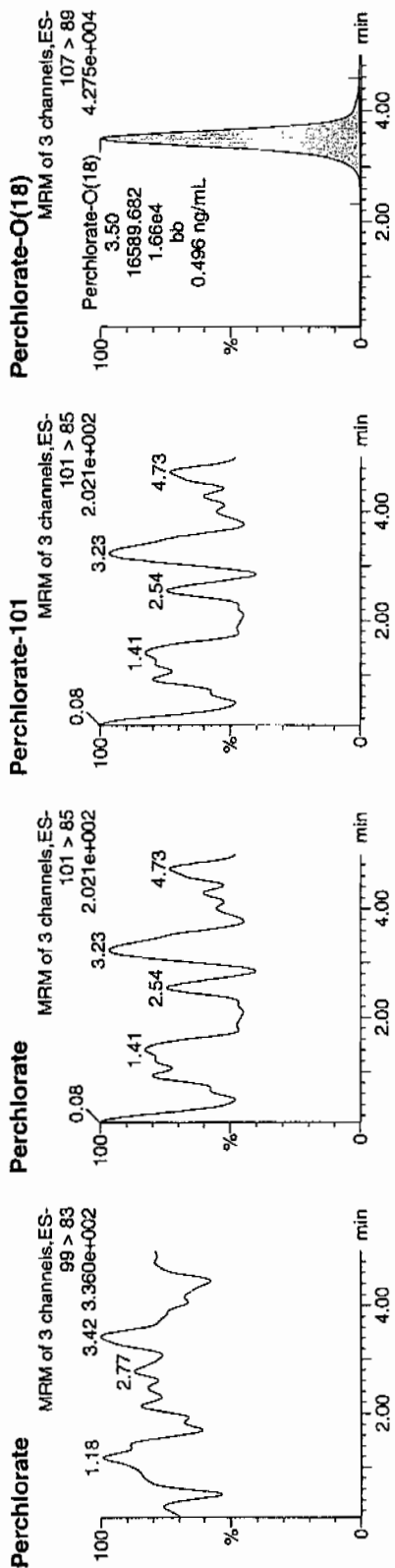
Dataset: C:\MassLynx\Perchlorate.PRO\per031410a.qld

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Printed: Monday, March 15, 2010 9:13:21 AM Eastern Standard Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per031410a.mdb 15 Mar 2010 08:54:46
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per031410a.cdb 15 Mar 2010 08:56:54

Of Name: per0314001a
Date: 14-Mar-2010
Time: 15:41:14
ID: IPB001
Vial: 1:1,A

03-15-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB001	Perchlorate	99 > 83											
IPB001	Perchlorate-101	101 > 85											
IPB001	Perchlorate-O(18)	107 > 89	3.50	16589.682	16589.682	bb			0.4858	98.15	-0.85	1780.0...	0.00

1.41
3.50

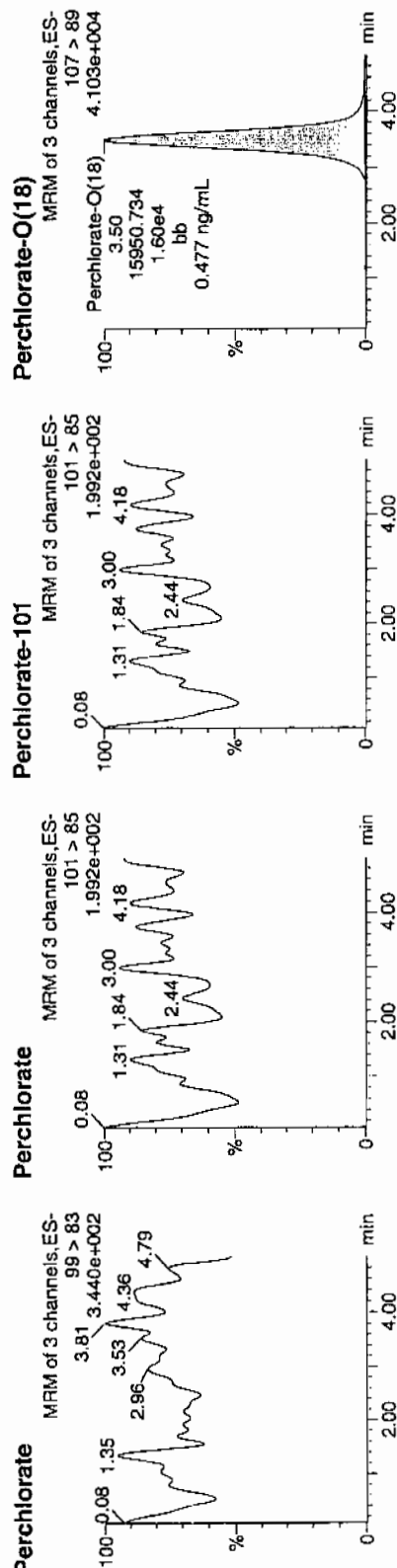
Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per031410a.qld

Last Altered: Monday, March 15, 2010 8:56:56 AM Eastern Standard Time
Printed: Monday, March 15, 2010 9:13:21 AM Eastern Standard Time

Sample Name: per0314002a
Date: 14-Mar-2010
Time: 15:49:17
ID: IPB001
Vial: 1:1,A

03-15-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.	Date	Mod.	Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB001	Perchlorate	99 > 83													
IPB001	Perchlorate-101	101 > 85													
IPB001	Perchlorate-O(18)	107 > 89	3.50	15950.734	15950.734	bb					0.4767	95.34	-4.66	1555.8...	0.00

Auth
3/16/10

Perchlorate Continuing Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-1981

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	14-MAR-10	per0314008a	IPB002
Perchlorate-101	0.00	0	NA	14-MAR-10	per0314008a	IPB002
Perchlorate	0.00	0	NA	14-MAR-10	per0314010a	IPB003
Perchlorate-101	0.00	0	NA	14-MAR-10	per0314010a	IPB003
Perchlorate	0.00	0	NA	14-MAR-10	per0314023a	IPB004
Perchlorate-101	0.00	0	NA	14-MAR-10	per0314023a	IPB004
Perchlorate	0.00	0	NA	14-MAR-10	per0314036a	IPB005
Perchlorate-101	0.00	0	NA	14-MAR-10	per0314036a	IPB005

Quantify Sample Report MassLynx 4.0 SP4

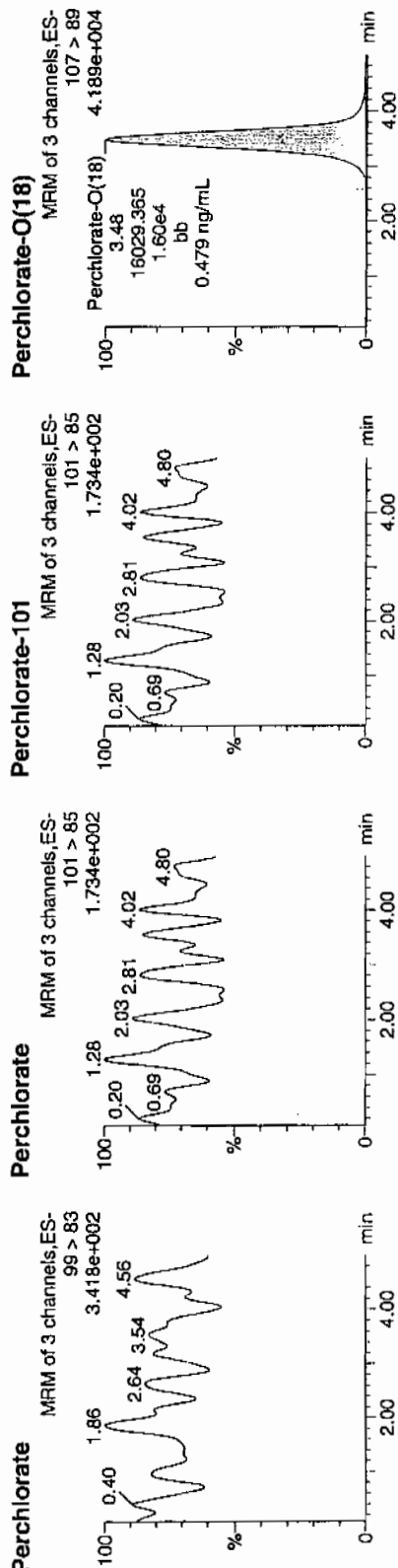
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per031410a.qld

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 Printed: Monday, March 15, 2010 9:13:21 AM Eastern Standard Time

Page Name: per0314008a
 of 154 Date: 14-Mar-2010
 Time: 16:37:25
 ID: IPB002
 Vial: 1:1,A

3/15/10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB002	Perchlorate	99 > 83											
IPB002	Perchlorate-101	101 > 85											
IPB002	Perchlorate-O(18)	107 > 89	3.48	16029.365	16029.365	bb			0.4790	95.81	-4.19	1104.5...	

3/16/10

Quantify Sample Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per031410a.qld

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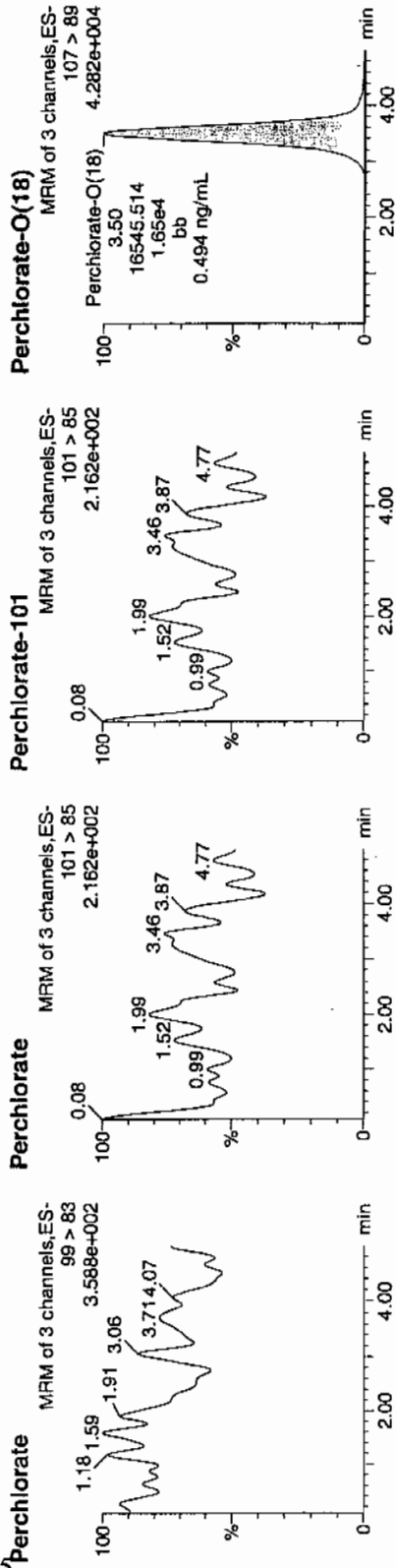
Date: 14-Mar-2010

Time: 16:53:41

ID: IPB003

Vial: 1:1,A

03-15-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB003	Perchlorate	99 > 83											0.00
IPB003	Perchlorate-101	101 > 85											
IPB003	Perchlorate-O(18)	107 > 89	3.50	16545.514	16545.514	bb			0.4945	98.89	-1.11	1258.9...	

107
3/16/10

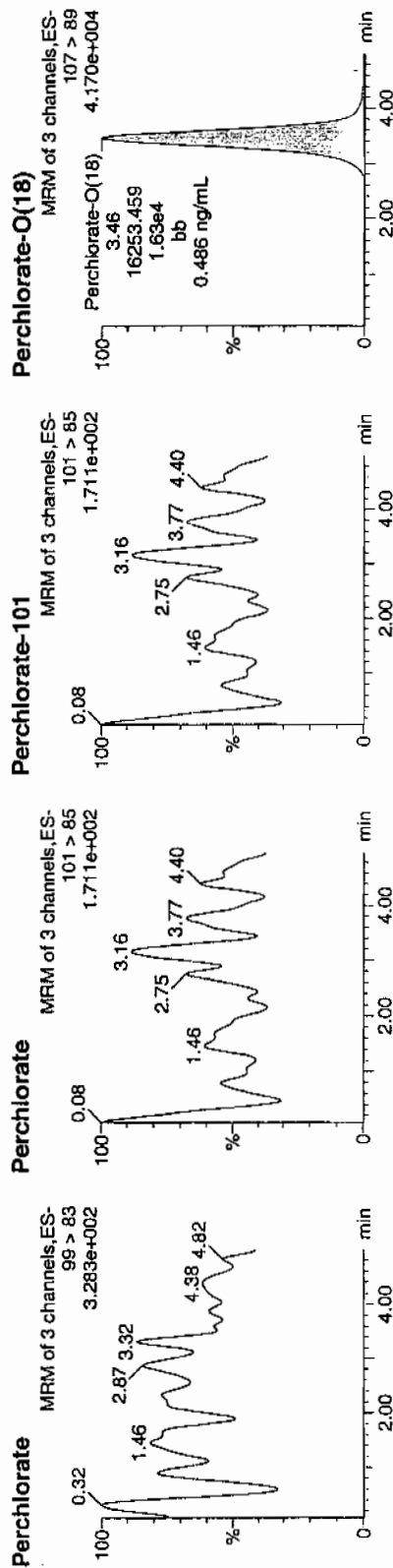
Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per031410a.qld

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Printed: Monday, March 15, 2010 9:13:21 AM Eastern Standard Time

Name: per0314023a
Date: 14-Mar-2010
Time: 18:38:13
ID: IPB004
Vial: 1:1,A

03-15-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB004	Perchlorate	99 > 83											
IPB004	Perchlorate-101	101 > 85											
IPB004	Perchlorate-O(18)	107 > 89	3.46	16253.459	16253.459	bb			0.4857	97.14	-2.86	1623.8...	

3/16/10

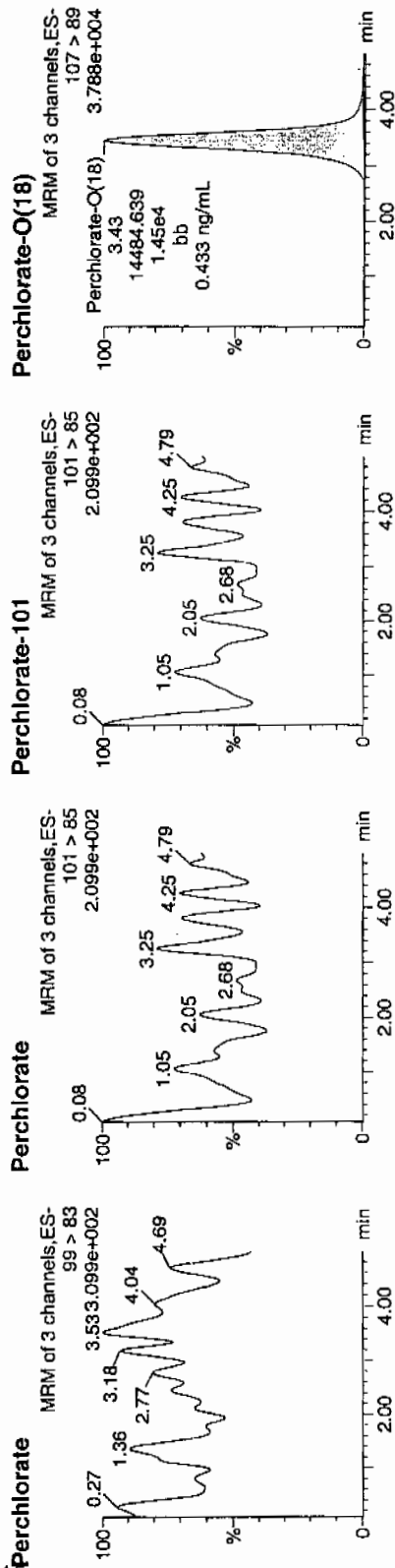
Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per031410a.qld

Last Altered: Monday, March 15, 2010 8:56:56 AM Eastern Standard Time
Printed: Monday, March 15, 2010 9:13:21 AM Eastern Standard Time

File Name: per0314036a
Date: 14-Mar-2010
Time: 20:23:35
ID: IPB005
Vial: 1:1,A

03-15-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB005	Perchlorate	99 > 83											
IPB005	Perchlorate-101	101 > 85											
IPB005	Perchlorate-O(18)	107 > 89	3.43	14484.639	14484.639	bb			0.4329	86.57	-13.43	330.725	0.00

MAF
3/16/10

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.ca

Calibration Report - MS1 Static

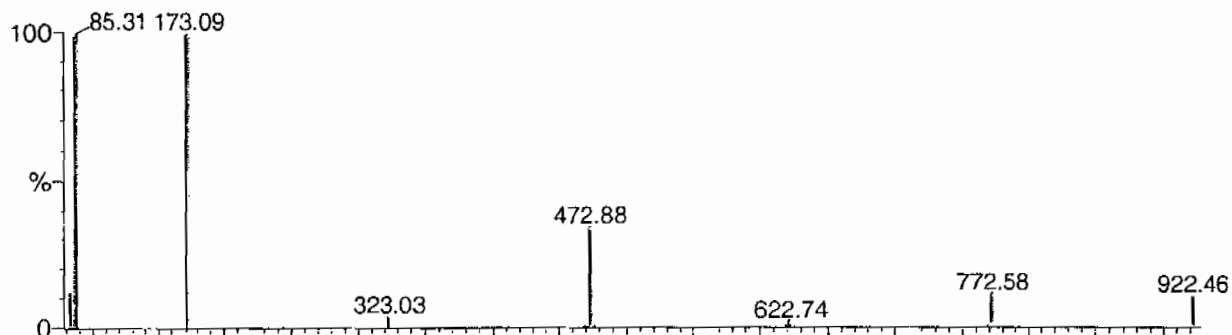
Page 1 of 1

Printed: Tue Jan 08 12:19:12 2008

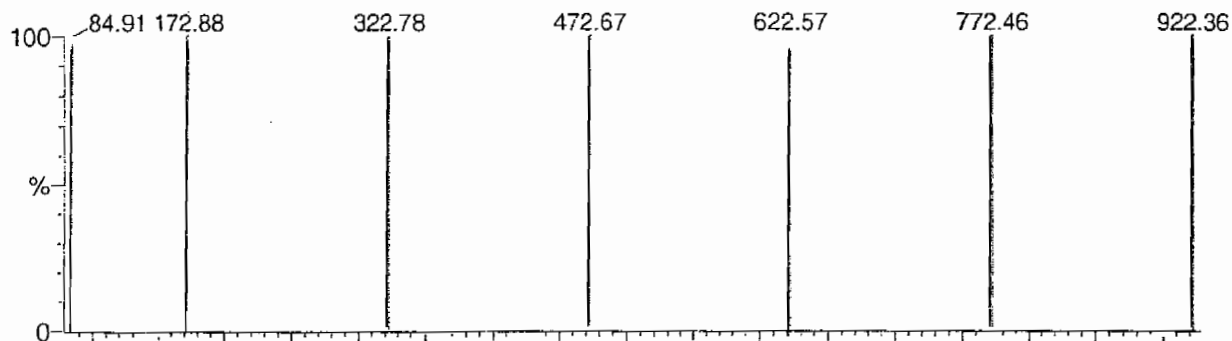
PARTS HIGHLIGHTED BY CASE 01-07-08

Data file: STATMS1 - Uncalibrated

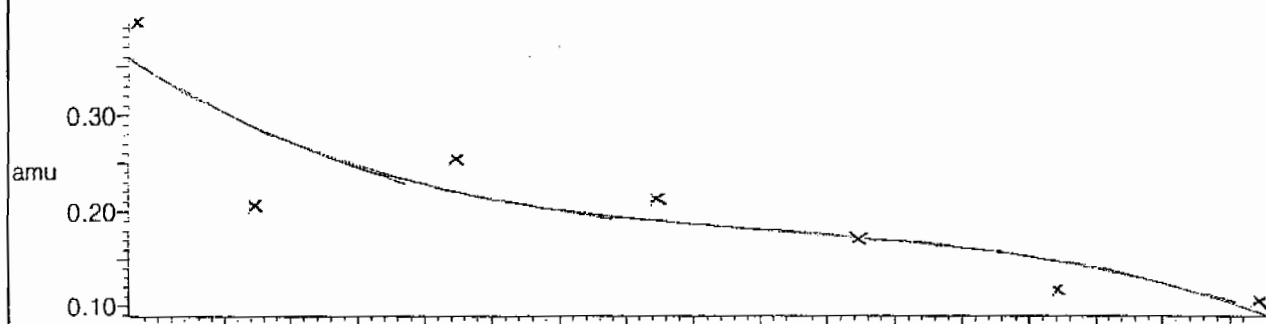
7 matches of 7 tested references



Reference file: Nairb

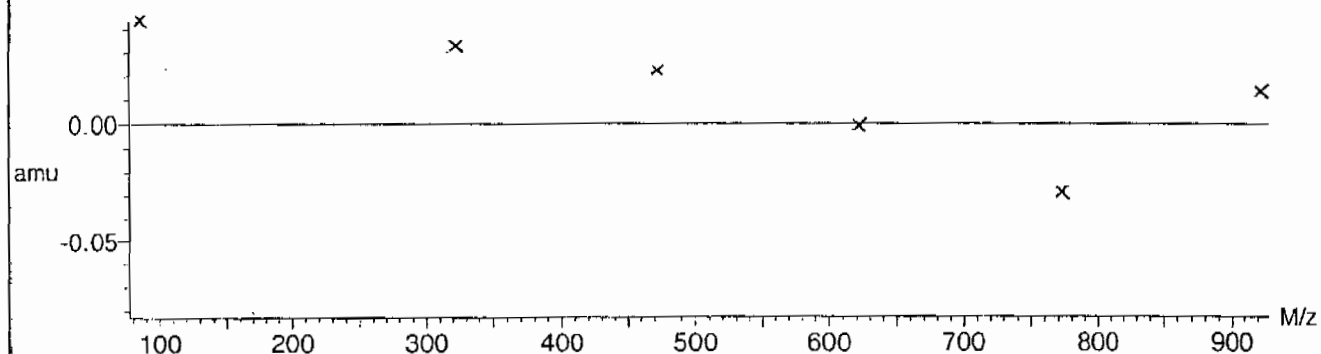


Mass difference (Raw - Ref mass)



Residuals

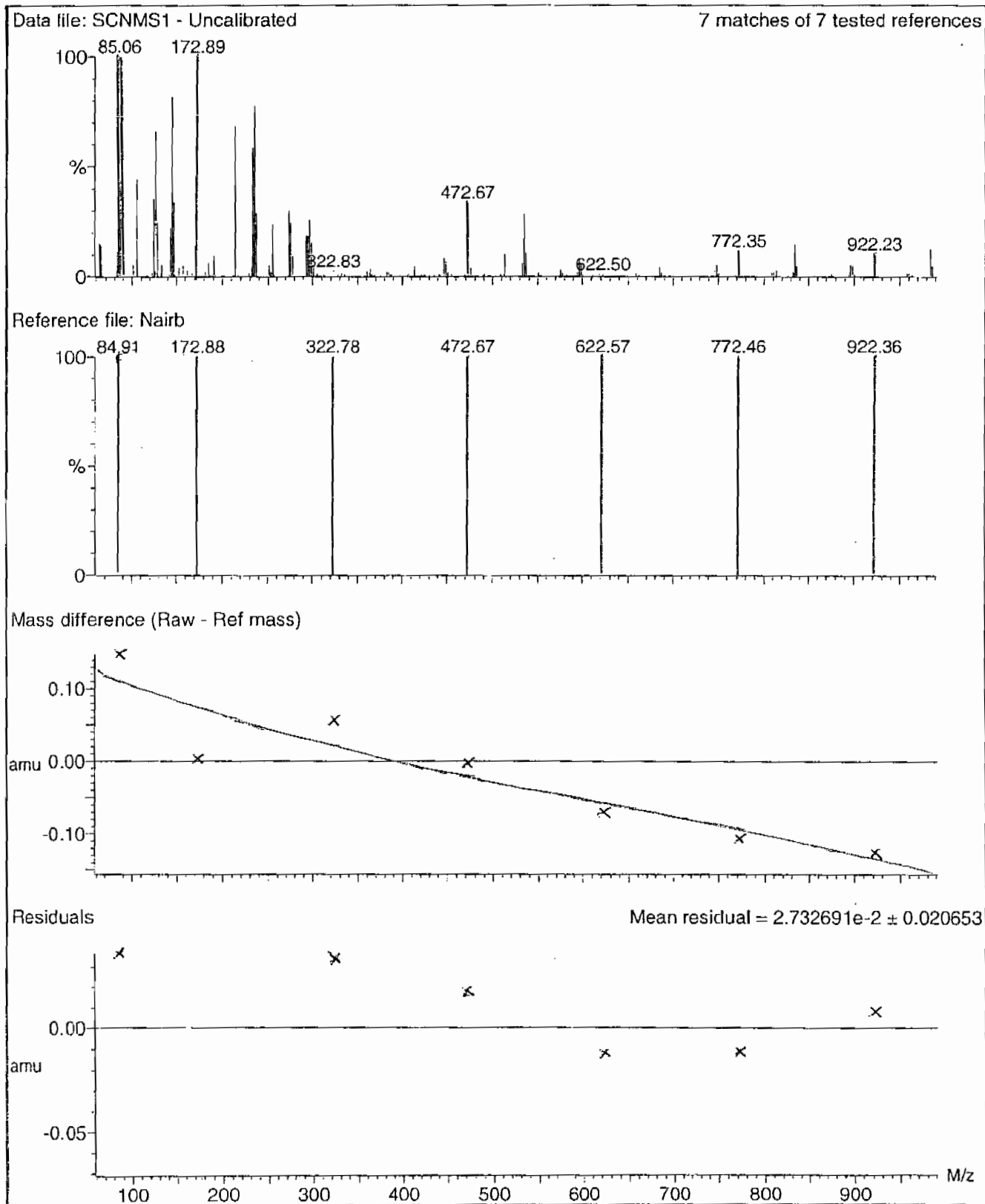
Mean residual = $3.212012 \times 10^{-2} \pm 0.024108$



Calibration Report - MS1 Scanning

Page 1 of 1

Printed: Tue Jan 08 12:20:09 2008



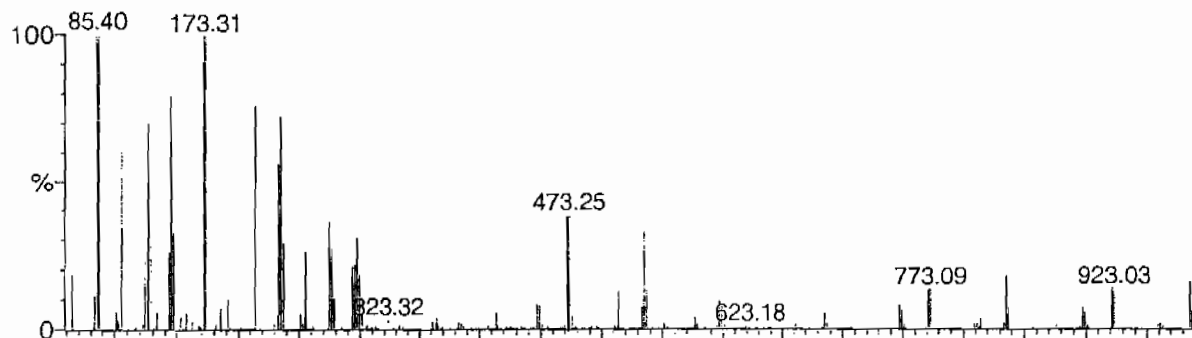
Calibration Report - MS1 Scan Speed Compensation

Page 1 of 1

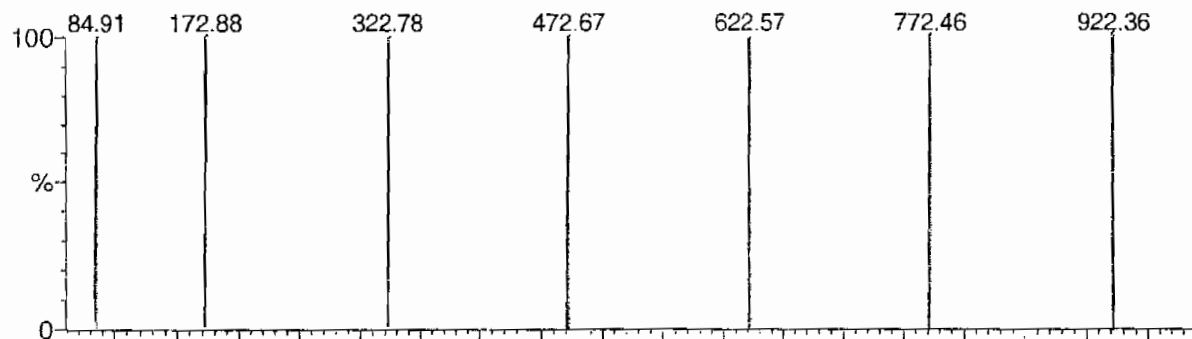
Printed: Tue Jan 08 12:21:04 2008

Data file: FASTMS1 - Uncalibrated

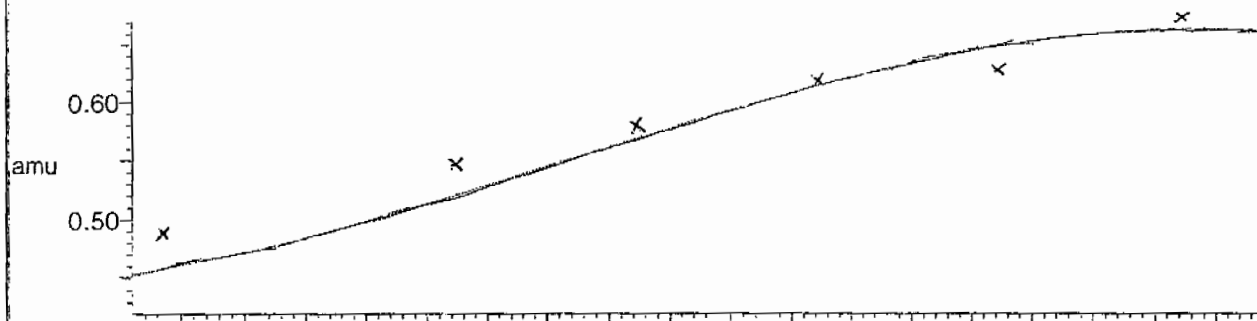
7 matches of 7 tested references



Reference file: Nairb

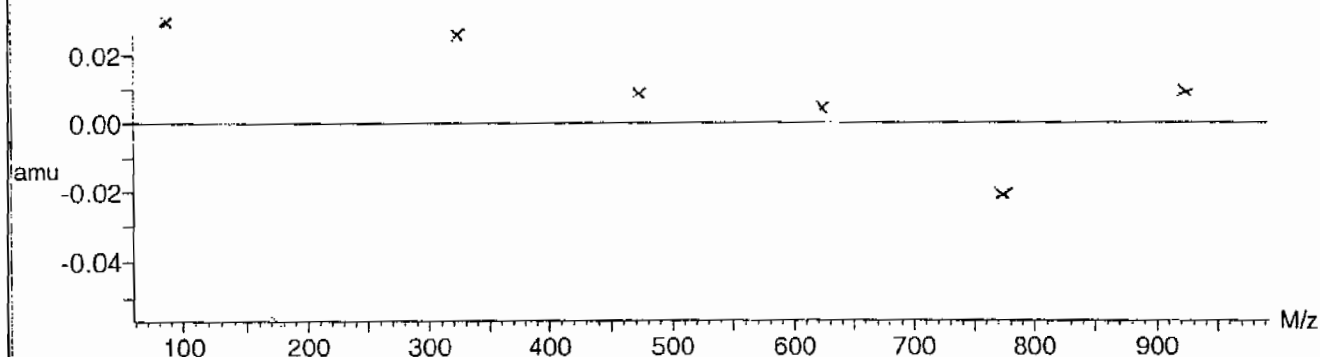


Mass difference (Raw - Ref mass)



Residuals

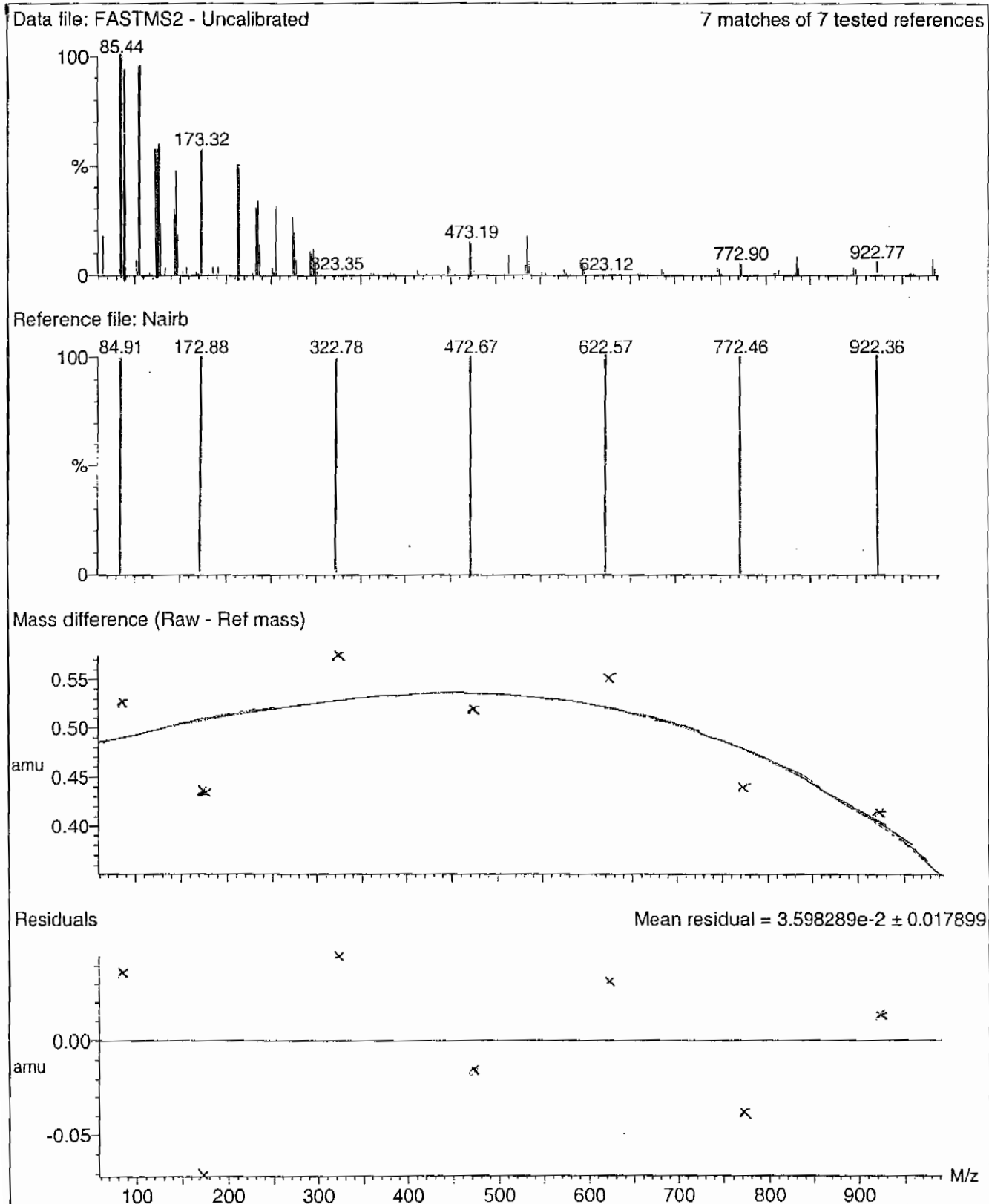
Mean residual = $2.224580 \times 10^{-2} \pm 0.016544$



Calibration Report - MS2 Scan Speed Compensation

Page 1 of 1

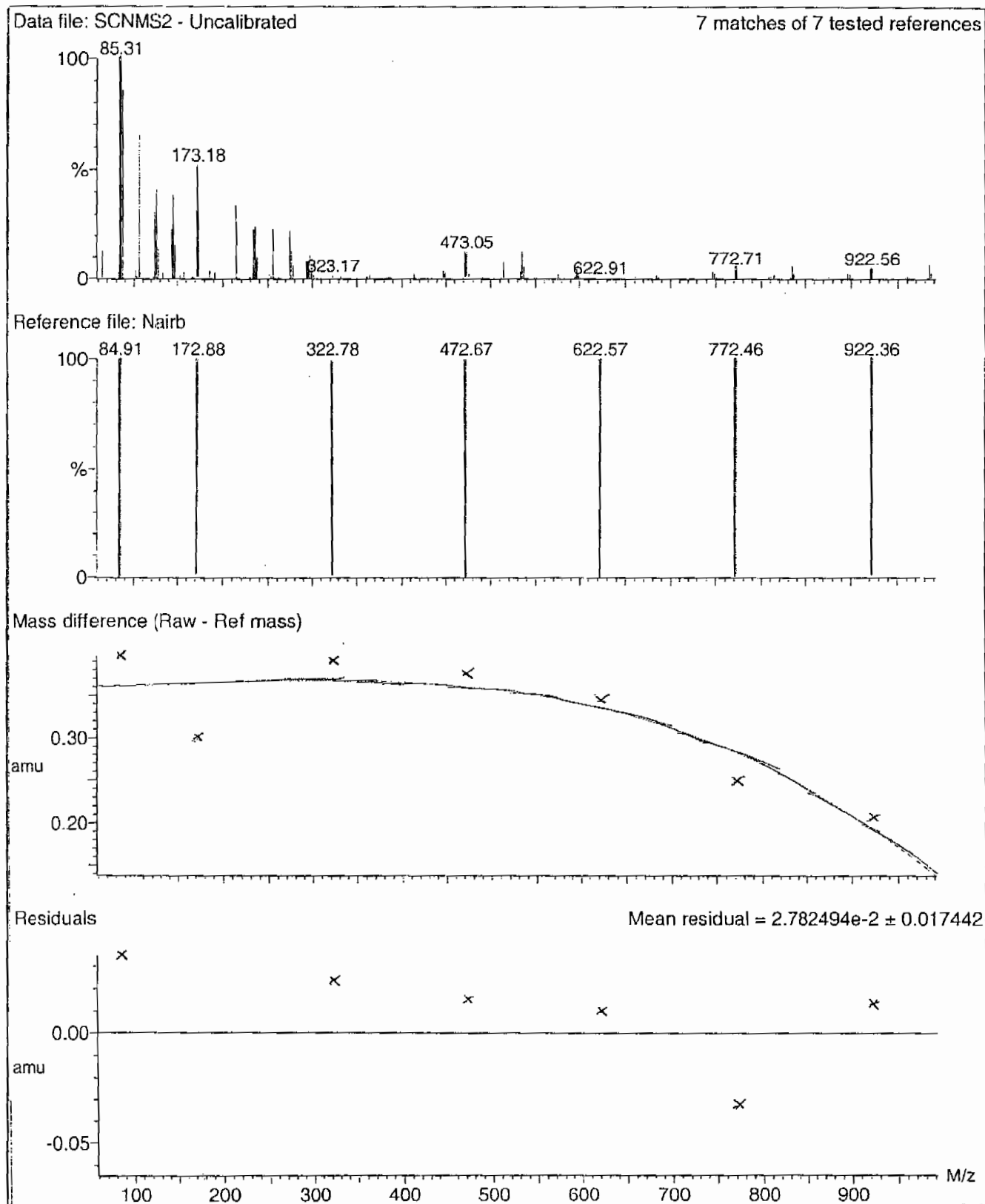
Printed: Tue Jan 08 12:23:51 2008



Calibration Report - MS2 Scanning

Page 1 of 1

Printed: Tue Jan 08 12:22:56 2008



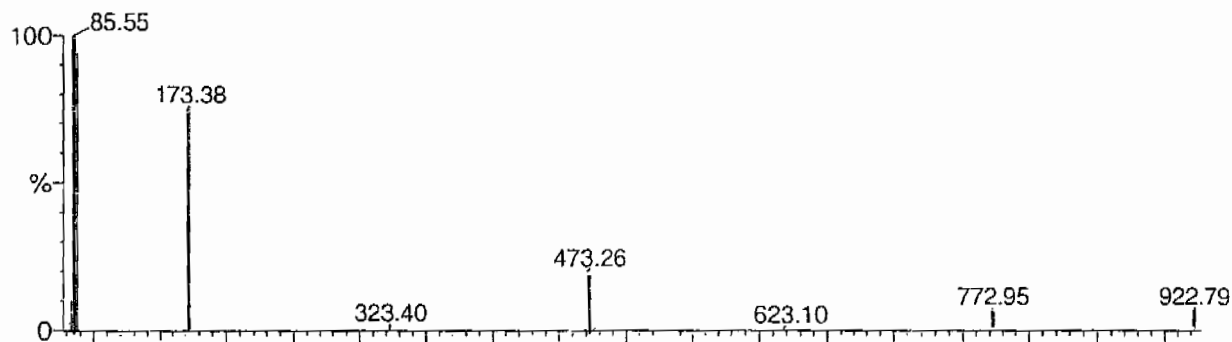
Calibration Report - MS2 Static

Page 1 of 1

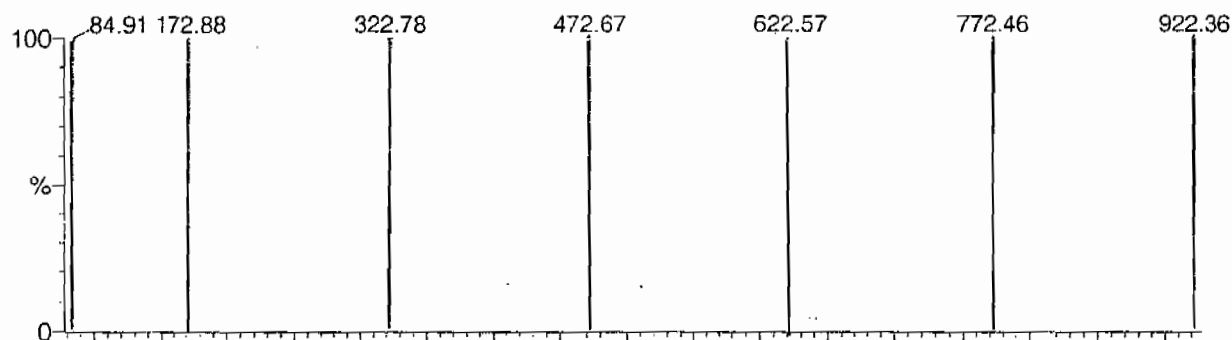
Printed: Tue Jan 08 12:21:59 2008

Data file: STATMS2 - Uncalibrated

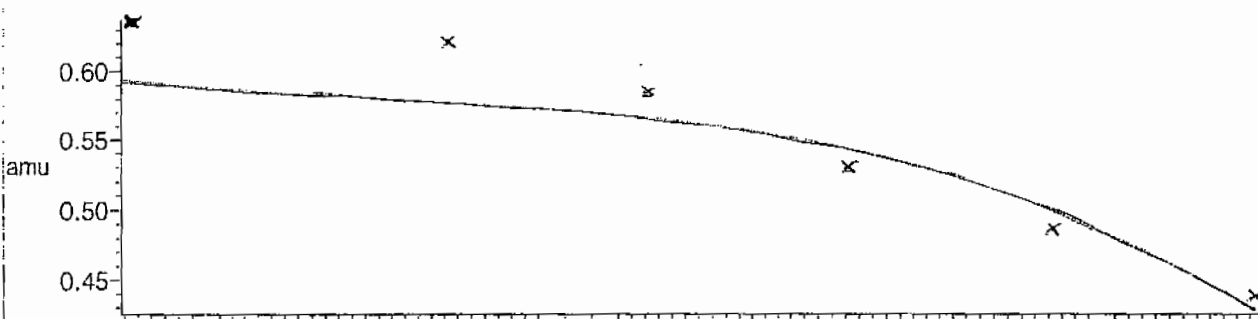
7 matches of 7 tested references



Reference file: Nairb

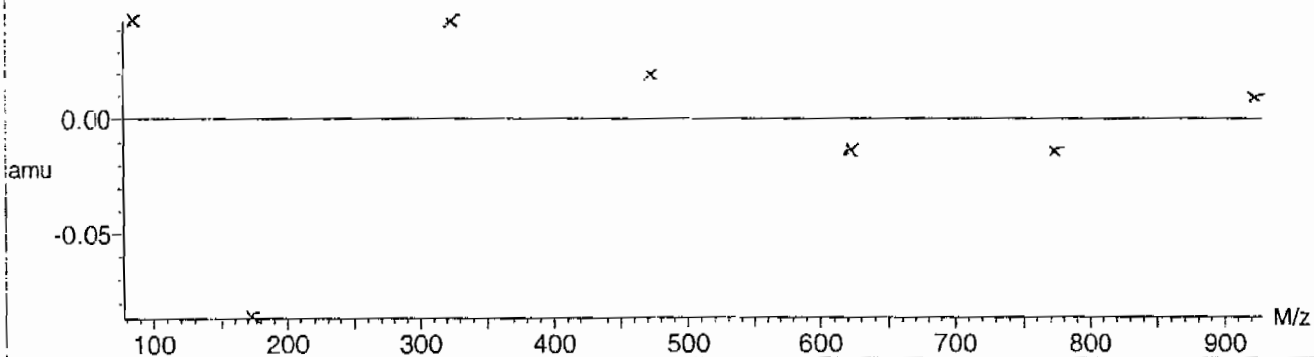


Mass difference (Raw - Ref mass)



Residuals

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



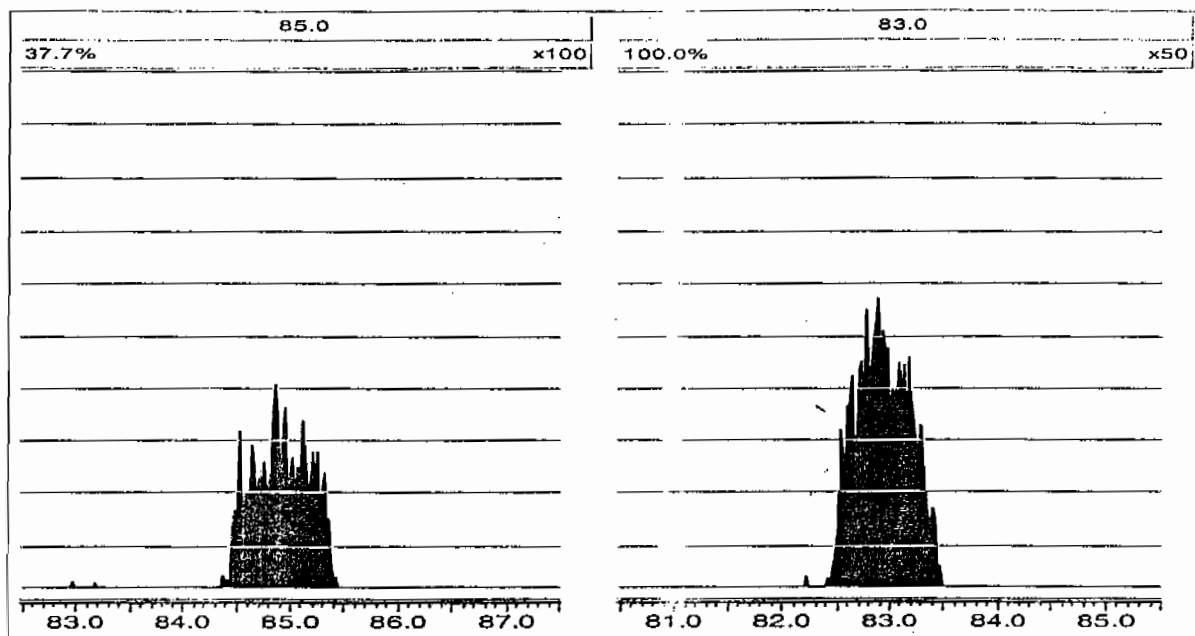
Tune Parameters

MassLynx 4.0 SP4

Page 1 of 1

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

Printed: Sunday, March 14, 2010 11:36:48 Eastern Standard Time



Perchlorate RT And Area Summary

Lab Name: General Engineering Laboratories GEL Job No.(SDG): 10-1981

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	per0314006a	14-MAR-10	17326				
Lower Area Limit			8663				
Upper Area Limit			34652				
1202054222	per0314012a	14-MAR-10 17:09	15696.9	3.48	3.45797	.994	
1202054223	per0314013a	14-MAR-10 17:17	15699.2	3.48	3.49522	1.004	
1202054226	per0314014a	14-MAR-10 17:25	17337.1	3.52	3.54497	1.007	
247790002	per0314031a	14-MAR-10 19:42	16606.3	3.45	3.45795	1.002	
247790003	per0314032a	14-MAR-10 19:51	16864.6	3.43	3.47042	1.012	

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: 957940

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-8386

Date Received: 23-FEB-10

GEL Job No (SDG): 10-1981

GEL Sample ID: 247790002

Date Filtered: 06-MAR-10

Injection Volume (uL): 20

%Solids: 94.6

CAS No.	Analyte [^]	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.529	2.11	0.529	ug/kg	U	1	14-MAR-10 19:42	per0314031a
	Perchlorate Isotope Ratio						1	14-MAR-10 19:42	per0314031a
14797-73-0	Perchlorate-101	.529	2.11	0.529	ug/kg	U	1	14-MAR-10 19:42	per0314031a
	Perchlorate-O(18)			5.25	ug/kg		1	14-MAR-10 19:42	per0314031a

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

*Concentration =

Instrument Value X Concentrated Extract Volume X 1
Aliquot %Solids

Quantify Sample Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per031410a.qld

Last Altered: Monday, March 15, 2010 8:56:56 AM Eastern Standard Time

Printed: Monday, March 15, 2010 9:13:21 AM Eastern Standard Time

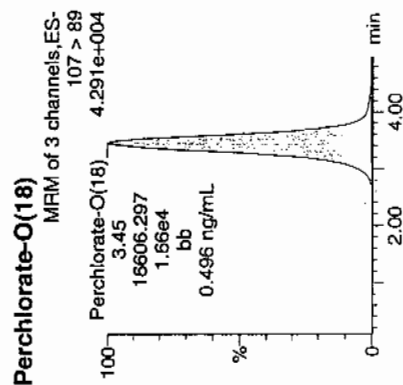
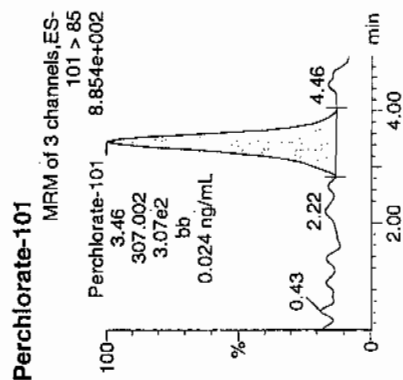
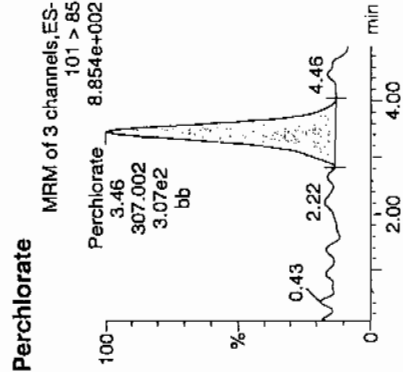
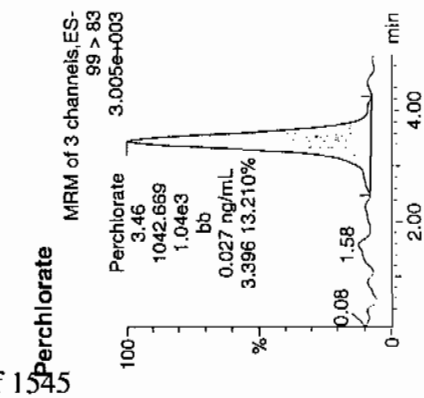
FN₂Name: per0314031a

Date: 14-Mar-2010

Time: 19:42:49

3D: 247790002

OVIat: 1:5,E



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
2477790002	Perchlorate	99 > 83	3.46	1042.669	1042.669	bb			0.0266			91.948	3.40
2477790002	Perchlorate-101	101 > 85	3.46	✓307.002	307.002	bb			0.0242			96.068	
2477790002	Perchlorate-O(18)	107 > 89	3.45	16606.297	16606.297	bb			0.4963	99.25	-0.75	5612.8...	

3/16/20

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: 957940

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-8387

Date Received: 23-FEB-10

GEL Job No (SDG): 10-1981

GEL Sample ID: 247790003

Date Filtered: 06-MAR-10

Injection Volume (uL): 20

%Solids: 94.3

CAS No.	Analyte [^]	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.53	2.12	0.530	ug/kg	U	1	14-MAR-10 19:51	per0314032a
	Perchlorate Isotope Ratio						1	14-MAR-10 19:51	per0314032a
14797-73-0	Perchlorate-101	.53	2.12	0.530	ug/kg	U	1	14-MAR-10 19:51	per0314032a
	Perchlorate-O(18)			5.35	ug/kg		1	14-MAR-10 19:51	per0314032a

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

*Concentration =

Instrument Value X Concentrated Extract Volume X 1
Aliquot %Solids

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

Dataset: C:\MassLynx\Perchlorate.PRO\per031410a.qld

Last Altered: Monday, March 15, 2010 8:56:56 AM Eastern Standard Time
Printed: Monday, March 15, 2010 9:13:21 AM Eastern Standard Time

Name: per0314032a

Date: 14-Mar-2010

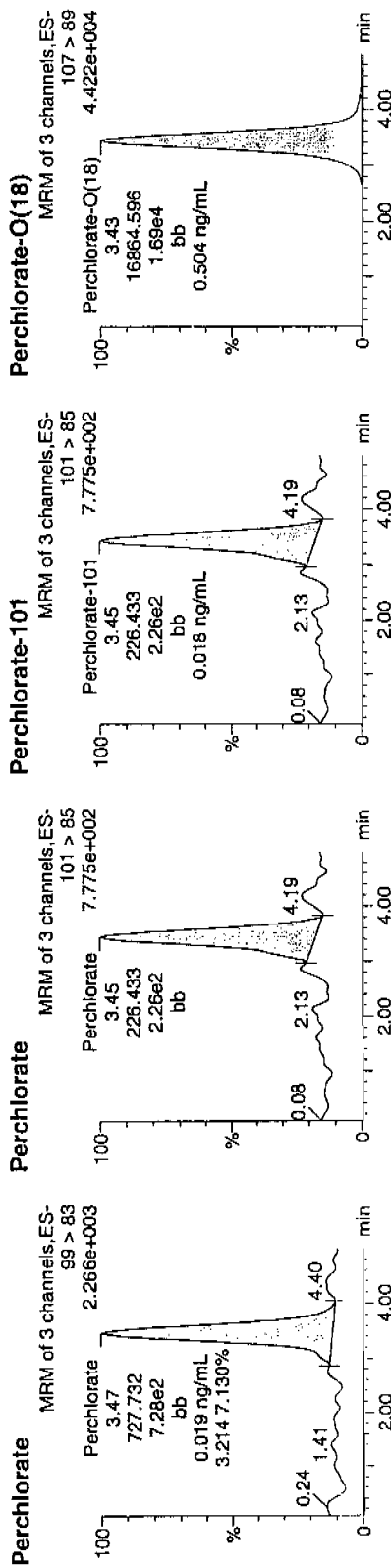
Time: 19:51:07

ID: 247790003

Vial: 1:5,F

03-15-10

1222-1957443 / 5020 / 11



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
247790003	Perchlorate	99 > 83	3.47	727.732	727.732	bb			0.0186			42.990	3.21
247790003	Perchlorate-101	101 > 85	3.45	226.433	226.433	bb			0.0179			27.108	
247790003	Perchlorate-O(18)	107 > 89	3.43	16864.596	16864.596	bb			0.5040	100.80	0.80	4374.9...	

100%
3/16/10

STANDARDS DATA

Form 2

Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories GEL Job No.(SDG): 10-1981

Lab Code: GEL

Instrument ID: LCMSMS Date Analyzed: 14-MAR-10

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

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

Paramname Perchlorate

Coefficient of Determination:

Calibration Curve: 39154.12

Response Type: External Standard

Curve Type: RF

Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories GEL Job No.(SDG): 10-1981

Lab Code: GEL

Instrument ID: LCMSMS Date Analyzed: 14-MAR-10

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

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

Paramname Perchlorate-101

Coefficient of Determination:

Calibration Curve: 12679.04

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\per031410a.qid

Last Altered: Monday, March 15, 2010 8:56:56 AM Eastern Standard Time
 Printed: Monday, March 15, 2010 9:13:21 AM Eastern Standard Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per031410a.mdb 15 Mar 2010 08:54:46
 Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per031410a.cdb 15 Mar 2010 08:56:54

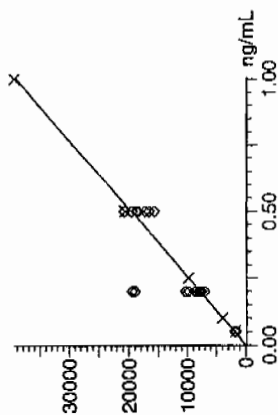
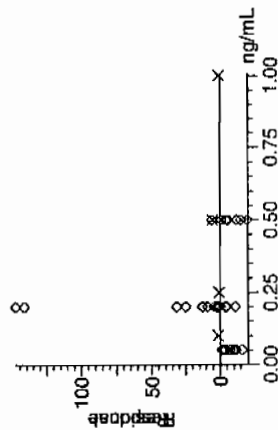
Compound name: Perchlorate

Response Factor: 39154.1

RRF SD: 1960.58, % Relative SD: 5.00734

Response type: External Std, Area

Curve type: RF



03-15-10

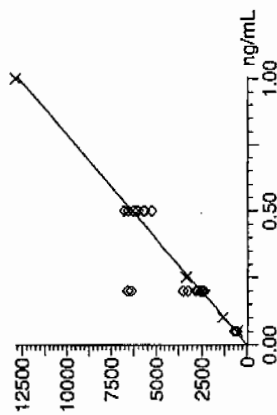
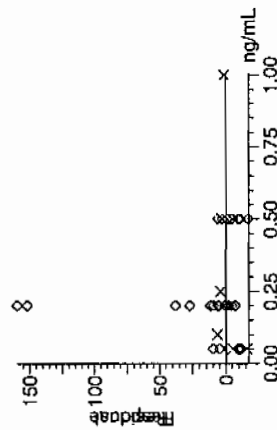
Compound name: Perchlorate-101

Response Factor: 12679

RRF SD: 1159.92, % Relative SD: 9.14836

Response type: External Std, Area

Curve type: RF



1477
3/16/10

Quantify Calibration Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per031410a.qld

Last Altered: Monday, March 15, 2010 8:56:56 AM Eastern Standard Time
 Printed: Monday, March 15, 2010 9:13:21 AM Eastern Standard Time

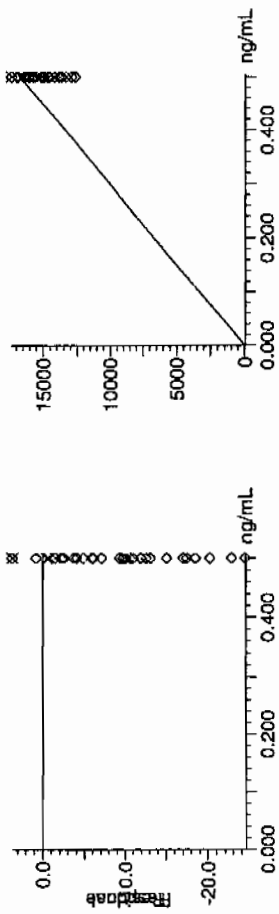
Compound name: Perchlorate-O₂(18)

Response Factor: 33462.4

RRF SD: 678.465, % Relative SD: 2.02755

Response type: External Std, Area

Curve type: RIF



Form 3

Perchlorate Initial Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-1981

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.53	105.94	14-MAR-10 16:45	per0314009a
Perchlorate Isotope Ratio		3.07		14-MAR-10 16:45	per0314009a
Perchlorate-101	.5	.53	106.4	14-MAR-10 16:45	per0314009a

Quantify Sample Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charlers W. Wilson

Page 9 of 118

Dataset: C:\MassLynx\Perchlorate.PRO\per031410a.qld

Last Altered: Monday, March 15, 2010 8:56:56 AM Eastern Standard Time
Printed: Monday, March 15, 2010 9:13:21 AM Eastern Standard Time

Name: per0314009a

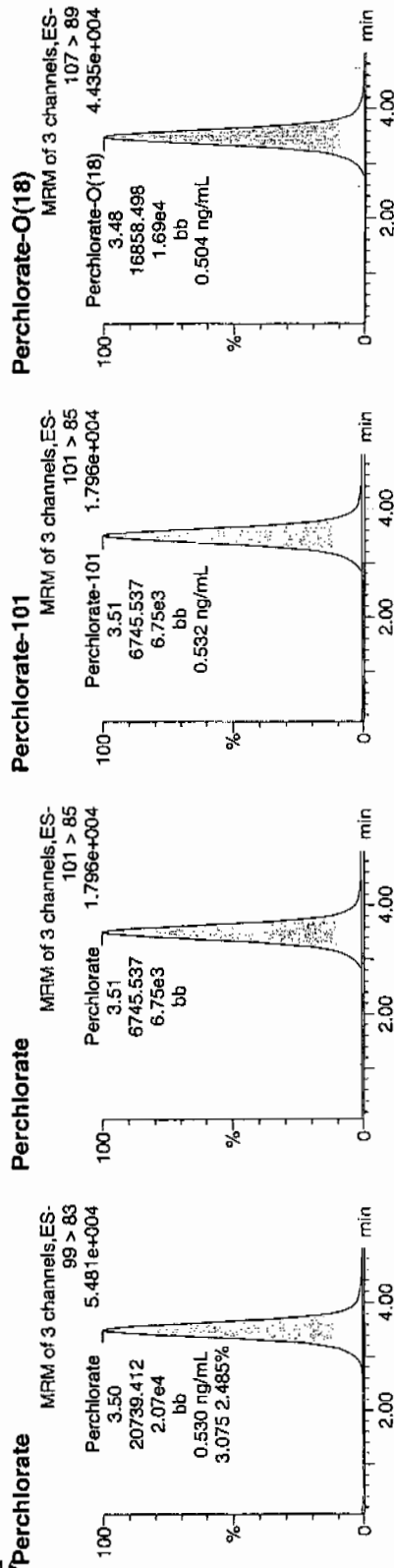
Date: 14-Mar-2010

Time: 16:45:39

ID: WCL100309-06ICV

Vial: 1:2,A

Run
603
03-15-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion.Ratio
WCL100309-06ICV	Perchlorate	99 > 83	3.50	20739.412	20739.412	bb			0.5297	105.94	5.94	4083.9...	3.07
WCL100309-06ICV	Perchlorate-101	101 > 85	3.51	6745.537	6745.537	bb			0.5320	106.40	6.40	253.341	
WCL100309-06ICV	Perchlorate-O(18)	107 > 89	3.48	16858.498	16858.498	bb			0.5038	100.76	0.76	7322.5...	

$$\frac{20739.412}{39154.1} = 0.5297$$

not
3/14/10

Form 3

Perchlorate Continuing Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-1981

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.5	99.52	14-MAR-10 18:30	per0314022a
Perchlorate Isotope Ratio		3.12		14-MAR-10 18:30	per0314022a
Perchlorate-101	.5	.49	98.56	14-MAR-10 18:30	per0314022a
Perchlorate	.5	.5	99.03	14-MAR-10 20:15	per0314035a
Perchlorate Isotope Ratio		2.97		14-MAR-10 20:15	per0314035a
Perchlorate-101	.5	.52	103.01	14-MAR-10 20:15	per0314035a

Quantity Sample Report MassLynx 4.0 SP4

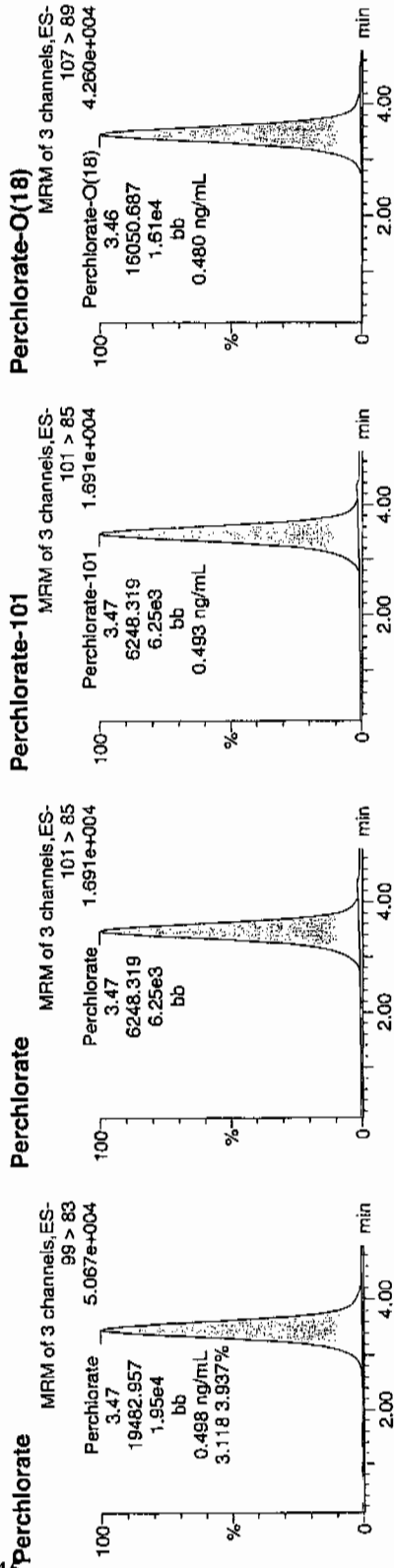
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per031410a.qid

Last Altered: Monday, March 15, 2010 8:56:56 AM Eastern Standard Time
 Printed: Monday, March 15, 2010 9:13:21 AM Eastern Standard Time

Sample Name: per0314022a
 Date: 14-Mar-2010
 Time: 18:30:11
 ID: WCL100309-06CCV
 Vial: 1:2,A

Per
 and
 03-15-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion.Ratio
WCL100309-06CCV	Perchlorate	99 > 83	3.47	19482.957	19482.957	bb			0.4976	99.52	-0.48	1472.0...	3.12
WCL100309-06CCV	Perchlorate-101	101 > 85	3.47	6248.319	6248.319	bb			0.4928	98.56	-1.44	709.723	
WCL100309-06CCV	Perchlorate-O(18)	107 > 89	3.46	16050.687	16050.687	bb			0.4797	95.93	-4.07	2122.7...	

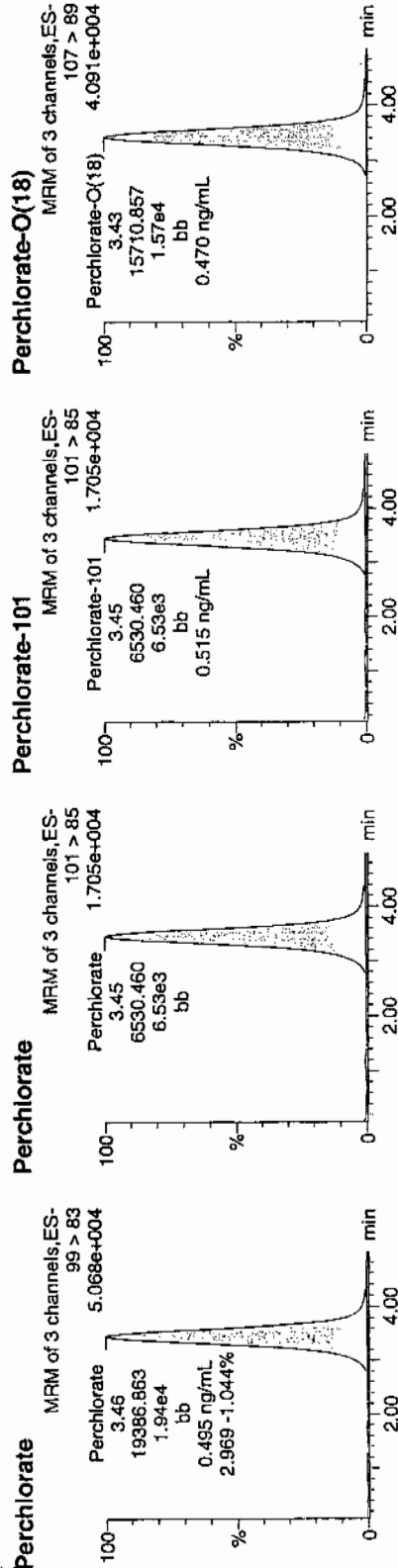
1477
 3/16/10

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

Dataset: C:\MassLynx\Perchlorate.PRO\per031410a.qld

Last Altered: Monday, March 15, 2010 8:56:56 AM Eastern Standard Time
Printed: Monday, March 15, 2010 9:13:21 AM Eastern Standard Time

Pass
03-15-10
Name: per0314035a
Date: 14-Mar-2010
Time: 20:15:24
ID: WCL100309-06CCV
Vial: 1:2,A



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100309-06CCV	Perchlorate	99 > 83	3.46	19386.863	19386.863	bb			0.4951	99.03	-0.97	5888.7...	2.97
WCL100309-06CCV	Perchlorate-101	101 > 85	3.45	6530.460	6530.460	bb			0.5151	103.01	3.01	2522.5...	
WCL100309-06CCV	Perchlorate-O(18)	107 > 89	3.43	15710.857	15710.857	bb			0.4695	93.90	-6.10	4011.6...	

Form 3

Perchlorate MDL Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-1981

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.05	.05	97.03	14-MAR-10 17:01	per0314011a
Perchlorate Isotope Ratio		2.72		14-MAR-10 17:01	per0314011a
Perchlorate-101	.05	.06	110.09	14-MAR-10 17:01	per0314011a
Perchlorate	.05	.05	98.74	14-MAR-10 18:46	per0314024a
Perchlorate Isotope Ratio		2.77		14-MAR-10 18:46	per0314024a
Perchlorate-101	.05	.06	110.06	14-MAR-10 18:46	per0314024a
Perchlorate	.05	.05	93.02	14-MAR-10 20:32	per0314037a
Perchlorate Isotope Ratio		2.73		14-MAR-10 20:32	per0314037a
Perchlorate-101	.05	.05	105.06	14-MAR-10 20:32	per0314037a

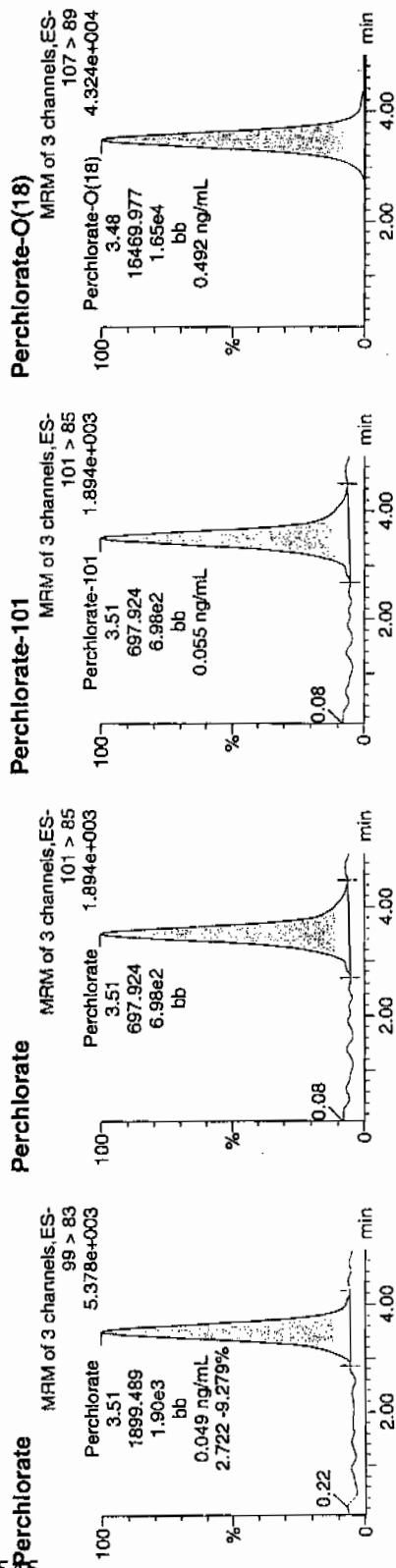
Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per031410a.qld

Last Altered: Monday, March 15, 2010 8:56:56 AM Eastern Standard Time
Printed: Monday, March 15, 2010 9:13:21 AM Eastern Standard Time

Name: per0314011a
Date: 14-Mar-2010
Time: 17:01:44
ID: WCL100309-07CRI
Vial: 1:2,B

Pure
03-15-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100309-07CRI	Perchlorate	99 > 83	3.51	1899.489	1899.489	bb			0.0485	97.03	-2.97	100.911	2.72
WCL100309-07CRI	Perchlorate-101	101 > 85	3.51	697.924	697.924	bb			0.0550	110.09	10.09	108.979	
WCL100309-07CRI	Perchlorate-O(18)	107 > 89	3.48	16469.977	16469.977	bb			0.4922	98.44	-1.56	5729.9...	

1899.489
59154.1 ~ 0.0485

1477
9/16/10

Quantify Sample Report MassLynx 4.0 SP4

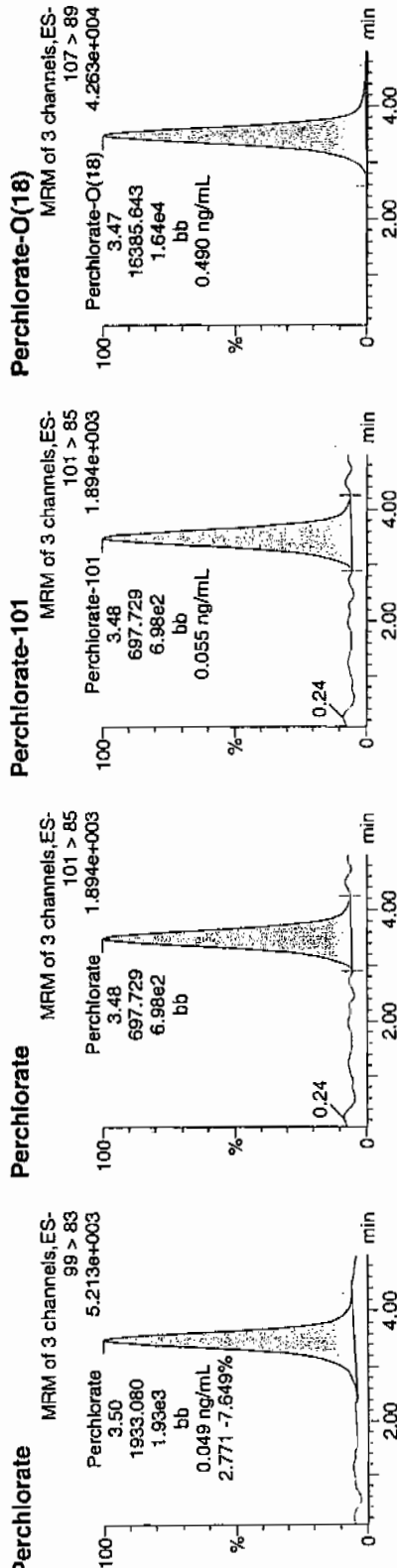
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per031410a.qld

Last Altered: Monday, March 15, 2010 8:56:56 AM Eastern Standard Time
 Printed: Monday, March 15, 2010 9:13:21 AM Eastern Standard Time

Page 398 of 154
 Name: per0314024a
 Date: 14-Mar-2010
 Time: 18:46:16
 ID: WCL100309-07CRI
 Vial: 1:2,B

Per
 and
 03-15-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100309-07CRI	Perchlorate	99 > 83	3.50	1933.080	1933.080	bb			0.0494	98.74	-1.26	118.141	2.77
WCL100309-07CRI	Perchlorate-101	101 > 85	3.48	697.729	697.729	bb			0.0550	110.06	10.06	138.112	
WCL100309-07CRI	Perchlorate-O(18)	107 > 89	3.47	16385.643	16385.643	bb			0.4897	97.93	-2.07	1621.0...	

MT
 3/16/10

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

Dataset: C:\MassLynx\Perchlorate.PRO\per031410a.qld

Last Altered: Monday, March 15, 2010 8:56:56 AM Eastern Standard Time
Printed: Monday, March 15, 2010 9:13:21 AM Eastern Standard Time

Page Name: per0314037a

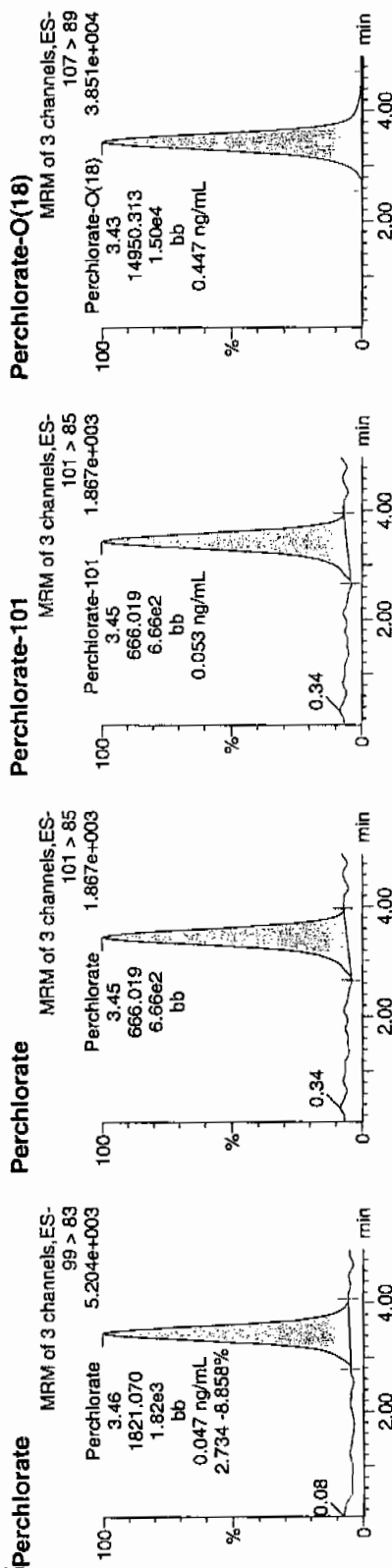
Date: 14-Mar-2010

Time: 20:32:00

ID: WCL100309-07CRI

Vial: 1:2,B

Rep
03-15-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100309-07CRI	Perchlorate	99 > 83	3.46	1821.070	1821.070	bb		0.0465	93.02	-6.98	81.504	2.73
WCL100309-07CRI	Perchlorate-101	101 > 85	3.45	666.019	666.019	bb		0.0525	105.06	5.06	97.852	
WCL100309-07CRI	Perchlorate-O(18)	107 > 89	3.43	14950.313	14950.313	bb		0.4468	89.36	-10.64	701.016	

3/16/10

QUALITY CONTROL

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: SOIL

Extraction Batch ID: 957940

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

MB

Date Received: 06-MAR-10

GEL Job No (SDG): 10-1981

GEL Sample ID: 1202054222

Date Filtered: 06-MAR-10

Injection Volume (uL): 20

% Solids: 100

CAS No.	Analyte [^]	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.5	2	0.500	ug/kg	U	1	14-MAR-10 17:09	per0314012a
	Perchlorate Isotope Ratio						1	14-MAR-10 17:09	per0314012a
14797-73-0	Perchlorate-101	.5	2	0.500	ug/kg	U	1	14-MAR-10 17:09	per0314012a
	Perchlorate-O(18)			4.69	ug/kg		1	14-MAR-10 17:09	per0314012a

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

*Concentration =

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

Quantify Sample Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per031410a.qld

Last Altered: Monday, March 15, 2010 8:56:56 AM Eastern Standard Time
 Printed: Monday, March 15, 2010 9:13:21 AM Eastern Standard Time

Name: per0314012a

Date: 14-Mar-2010

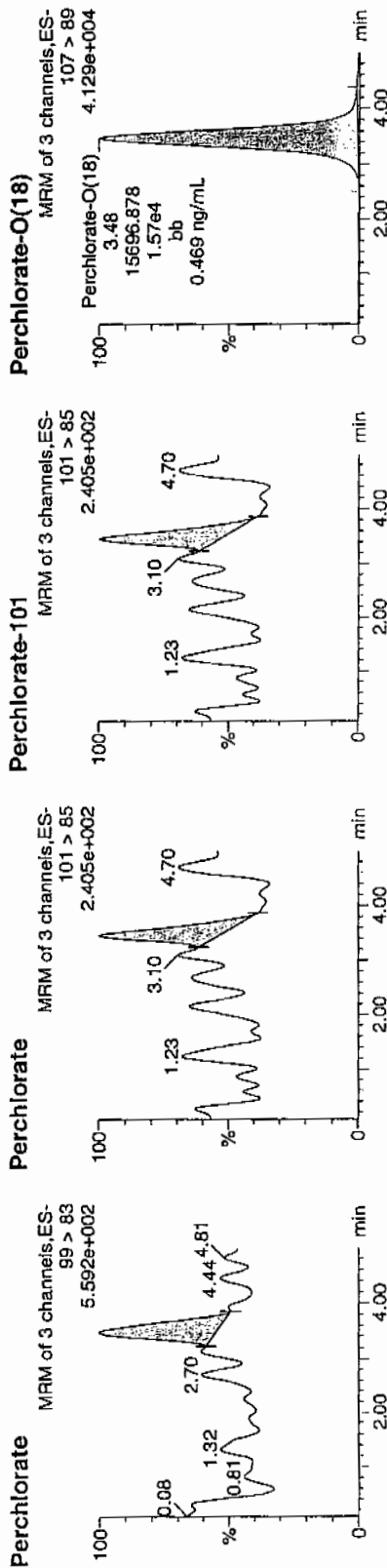
Time: 17:09:48

ID: 1202054222

Vial: 1:3,A

03-15-10

1202054222 | 1202054222 | 1202054222



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202054222	Perchlorate	99 > 83	3.46	79.881	79.881	bb			0.0020			8.584	2.57
1202054222	Perchlorate-101	101 > 85	3.46	31.131	31.131	bb			0.0025			4.972	
1202054222	Perchlorate-O(18)	107 > 89	3.48	15696.878	15696.878	bb			0.4691	93.82	-6.18	335.431	

12/12/10

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: SOIL

Extraction Batch ID: 957940

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

LCS

Date Received: 06-MAR-10

GEL Job No (SDG): 10-1981

GEL Sample ID: 1202054223

Date Filtered: 06-MAR-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	2.02	ug/kg		1	14-MAR-10 17:17	per0314013a
	Perchlorate Isotope Ratio			3.11			1	14-MAR-10 17:17	per0314013a
14797-73-0	Perchlorate-101	.5	2	2.01	ug/kg		1	14-MAR-10 17:17	per0314013a
	Perchlorate-O(18)			4.69	ug/kg		1	14-MAR-10 17:17	per0314013a

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

*Concentration =

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

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

Dataset: C:\MassLynx\Perchlorate.PRO\per031410a.qld

Last Altered: Monday, March 15, 2010 8:56:56 AM Eastern Standard Time
Printed: Monday, March 15, 2010 9:13:21 AM Eastern Standard Time

Name: per0314013a

Date: 14-Mar-2010

Time: 17:17:50

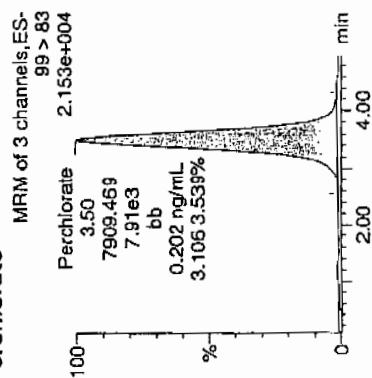
ID: 1202054223

Vial: 1:3,B

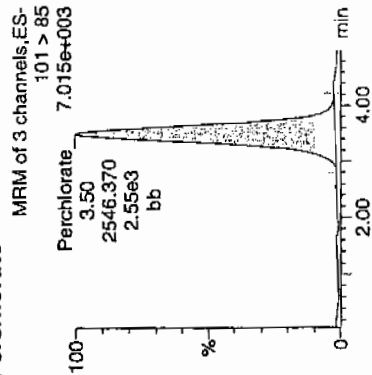
03-15-10

1202054223 | 50707 | 1.57e4

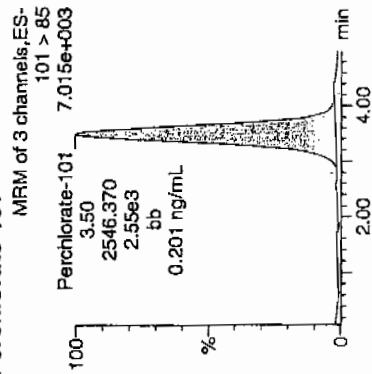
Perchlorate



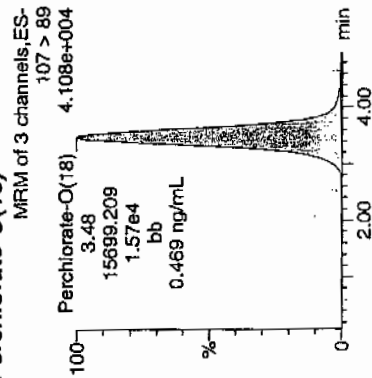
Perchlorate



Perchlorate-101



Perchlorate-O(18)



ID	Name	Trace	RT	Area	Response	Flags	Mod Date	Mod Time	ng/mL	% Rec	% Dev	S/N	Ion Ratio
1202054223	Perchlorate	99 > 83	3.50	7909.469	7909.469	bb			0.2020	101.00	1.00	696.498	3.11
1202054223	Perchlorate-101	101 > 85	3.50	2546.370	2546.370	bb			0.2008	100.42	0.42	342.500	
1202054223	Perchlorate-O(18)	107 > 89	3.48	15699.209	15699.209	bb			0.4692	93.83	-6.17	5403.0...	

$$\frac{7909.469}{39154.1} = 0.2020$$

3/16/10

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: 957940 Verified by:

Analyst: Jareth Shirley

Method: SW846 6850 Modified

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

Instrument: MicroMass Quattro Ultima

Sample ID	Run Date	Aliquot (g)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1202054222 NIB	06-MAR-2010 16:48:00	2	20	10
1202054223 LCS	06-MAR-2010 16:48:00	2	20	10
247539001	06-MAR-2010 16:48:00	2	20	10
247539002	06-MAR-2010 16:48:00	2	20	10
1202054224 MS (247539002)	06-MAR-2010 16:48:00	2	20	10
1202054225 MSD (247539002)	06-MAR-2010 16:48:00	2	20	10
247539003	06-MAR-2010 16:48:00	2	20	10
247539004	06-MAR-2010 16:48:00	2	20	10
247539005	06-MAR-2010 16:48:00	2	20	10
247539006	06-MAR-2010 16:48:00	2	20	10
247539007	06-MAR-2010 16:48:00	2	20	10
247539008	06-MAR-2010 16:48:00	2	20	10
247539009	06-MAR-2010 16:48:00	2	20	10
247539010	06-MAR-2010 16:48:00	2	20	10
247539011	06-MAR-2010 16:48:00	2	20	10
247790002	06-MAR-2010 16:48:00	2	20	10
247790003	06-MAR-2010 16:48:00	2	20	10
247794001	06-MAR-2010 16:48:00	2	20	10
247794002	06-MAR-2010 16:48:00	2	20	10
247794003	06-MAR-2010 16:48:00	2	20	10
247794004	06-MAR-2010 16:48:00	2	20	10
247794005	06-MAR-2010 16:48:00	2	20	10
1202054226 LCS	06-MAR-2010 16:48:00	2	20	10

Comments:

Type	Sample Id	Description	Serial Number	Spike Amt	Units
LCS	1202054226	10 ug/L ICV/CCV Second Source	UCL100226-01.1	4	mL
LCS	1202054225	10 ug/L ICV/CCV Second Source	UCL100226-01.1	4	mL
MS	1202054224	10 ug/L ICV/CCV Second Source	UCL100226-01.1	4	mL
MSD	1202054225	10 ug/L ICV/CCV Second Source	UCL100226-01.1	4	mL

Desalting cartridges used: 100217-1-H & 100304-1-Ba

GEL ORGANIC RUN LOG

INSTRUMENT ID: LCMSMS#2

Reviewed BY: MH
Date: 3/16/20
SOP: GL-OA-E-067 Rev.6
Alt Check Std. ID: WCL100309-06

Method: EPA 6850-Modified
Int. Std.: UCL100210-01
Mobile Phase Lot#: 1278668, 1271949
Standard-Samp Reagent Lot#: 1271949

Date: 03/14/10
Extr. Injection Volume: 20uL
Sequence Number: per031410a
Initial Calibration Date: 03/14/10

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC_Flag
per0314001a	IPB001	CWW	3/14/2010 15:41			1		USE	B
per0314002a	IPB001	CWW	3/14/2010 15:49			1		USE	B
per0314003a	WCLICAL-01	CWW	3/14/2010 15:57			1		USE	I
per0314004a	WCLICAL-02	CWW	3/14/2010 16:05			1		USE	I
per0314005a	WCLICAL-03	CWW	3/14/2010 16:13			1		USE	I
per0314006a	WCLICAL-04	CWW	3/14/2010 16:21			1		USE	I
per0314007a	WCLICAL-05	CWW	3/14/2010 16:29			1		USE	I
per0314008a	IPB002	CWW	3/14/2010 16:37			1		USE	B
per0314009a	WCLICV	CWW	3/14/2010 16:45			1		USE	C
per0314010a	IPB003	CWW	3/14/2010 16:53			1		USE	B
per0314011a	WCLCRI	CWW	3/14/2010 17:01			1		USE	C
per0314012a	1202054222	CWW	3/14/2010 17:09	957943	VARIOUS	1	LANL	USE	S
per0314013a	1202054223	CWW	3/14/2010 17:17	957943	VARIOUS	1	LANL	USE	S
per0314014a	1202054226	CWW	3/14/2010 17:25	957943	VARIOUS	1	LANL	USE	S
per0314015a	247539001	CWW	3/14/2010 17:33	957943	10-1960	1	LANL	USE	S
per0314016a	247539002	CWW	3/14/2010 17:41	957943	10-1960	1	LANL	USE	S
per0314017a	1202054224	CWW	3/14/2010 17:49	957943	10-1960	1	LANL	USE	S
per0314018a	1202054225	CWW	3/14/2010 17:58	957943	10-1960	1	LANL	USE	S
per0314019a	247539003	CWW	3/14/2010 18:06	957943	10-1960	1	LANL	USE	S
per0314020a	247539004	CWW	3/14/2010 18:14	957943	10-1960	1	LANL	USE	S
per0314021a	247539005	CWW	3/14/2010 18:22	957943	10-1960	1	LANL	USE	S
per0314022a	WCLCCV	CWW	3/14/2010 18:30			1		USE	C
per0314023a	IPB004	CWW	3/14/2010 18:38			1		USE	B
per0314024a	WCLCRI	CWW	3/14/2010 18:46			1		USE	C
per0314025a	247539006	CWW	3/14/2010 18:54	957943	10-1960	1	LANL	USE	S
per0314026a	247539007	CWW	3/14/2010 19:02	957943	10-1960	1	LANL	USE	S
per0314027a	247539008	CWW	3/14/2010 19:10	957943	10-1960	1	LANL	USE	S
per0314028a	247539009	CWW	3/14/2010 19:18	957943	10-1960	1	LANL	USE	S
per0314029a	247539010	CWW	3/14/2010 19:26	957943	10-1960	1	LANL	USE	S

per0314030a	247539011	CWW	3/14/2010 19:34	957943	10-1960	1	LANL	USE	S
per0314031a	247790002	CWW	3/14/2010 19:42	957943	10-1981	1	LANL	USE	S
per0314032a	247790003	CWW	3/14/2010 19:51	957943	10-1981	1	LANL	USE	S
per0314033a	247794001	CWW	3/14/2010 19:59	957943	10-1983-1	1	LANL	USE	S
per0314034a	247794002	CWW	3/14/2010 20:07	957943	10-1983-1	1	LANL	USE	S
per0314035a	WCLCCV	CWW	3/14/2010 20:15			1		USE	C
per0314036a	IPB005	CWW	3/14/2010 20:23			1		USE	B
per0314037a	WCLCRI	CWW	3/14/2010 20:32			1		USE	C
per0314038a	247794003	CWW	3/14/2010 20:40	957943	10-1983-1	1	LANL	USE	S
per0314039a	247794004	CWW	3/14/2010 20:48	957943	10-1983-1	1	LANL	USE	S
per0314040a	247794005	CWW	3/14/2010 20:56	957943	10-1983-1	1	LANL	USE	S
per0314041a	IPB006	CWW	3/14/2010 21:04			1		USE	B
per0314042a	1202056703	CWW	3/14/2010 21:12	959038	VARIOUS	1	LANL	USE	S
per0314043a	1202056704	CWW	3/14/2010 21:20	959038	VARIOUS	1	LANL	USE	S
per0314044a	1202056709	CWW	3/14/2010 21:28	959038	VARIOUS	1	LANL	USE	S
per0314045a	247431002	CWW	3/14/2010 21:36	959038	10-1927	1	LANL	USE	S
per0314046a	247817001	CWW	3/14/2010 21:44	959038	10-2001	1	LANL	USE	S
per0314047a	247829001	CWW	3/14/2010 21:53	959038	10-2006	1	LANL	USE	S
per0314048a	WCLCCV	CWW	3/14/2010 22:01			1		USE	C
per0314049a	IPB007	CWW	3/14/2010 22:09			1		USE	B
per0314050a	WCLCRI	CWW	3/14/2010 22:17			1		USE	C
per0314051a	248023001	CWW	3/14/2010 22:25	959038	10-2040	1	LANL	USE	S
per0314052a	248024002	CWW	3/14/2010 22:34	959038	10-2046	1	LANL	USE	S
per0314053a	248024004	CWW	3/14/2010 22:42	959038	10-2046	1	LANL	USE	S
per0314054a	248044001	CWW	3/14/2010 22:50	959038	10-2058	1	LANL	USE	S
per0314055a	1202056707	CWW	3/14/2010 22:58	959038	10-2058	1	LANL	USE	S
per0314056a	1202056708	CWW	3/14/2010 23:06	959038	10-2058	1	LANL	USE	S
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per0314058a	248044005	CWW	3/14/2010 23:22	959038	10-2058	1	LANL	USE	S
per0314059a	248044006	CWW	3/14/2010 23:30	959038	10-2058	1	LANL	USE	S
per0314060a	248164001	CWW	3/14/2010 23:38	959038	10-2111	1	LANL	USE	S
per0314061a	WCLCCV	CWW	3/14/2010 23:46			1		USE	C
per0314062a	IPB008	CWW	3/14/2010 23:54			1		USE	B
per0314063a	WCLCRI	CWW	3/15/2010 0:02			1		USE	C
per0314064a	248164003	CWW	3/15/2010 0:10	959038	10-2111	1	LANL	USE	S
per0314065a	IPB009	CWW	3/15/2010 0:19			1		USE	B
per0314066a	1202056594	CWW	3/15/2010 0:27	958963	VARIOUS	1	LANL	USE	S

per0314067a	1202056595	CWW	3/15/2010 0:35	958963	VARIOUS	1	LANL	USE	S
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per0314069a	248041001	CWW	3/15/2010 0:51	958963	10-2069-1	1	LANL	USE	S
per0314070a	248041002	CWW	3/15/2010 0:59	958963	10-2069-1	1	LANL	USE	S
per0314071a	248041003	CWW	3/15/2010 1:07	958963	10-2069-1	1	LANL	USE	S
per0314072a	248041004	CWW	3/15/2010 1:15	958963	10-2069-1	1	LANL	USE	S
per0314073a	248041005	CWW	3/15/2010 1:24	958963	10-2069-1	1	LANL	USE	S
per0314074a	WCLCCV	CWW	3/15/2010 1:32			1		USE	C
per0314075a	IPB010	CWW	3/15/2010 1:40			1		USE	B
per0314076a	WCLCRI	CWW	3/15/2010 1:48			1		USE	C
per0314077a	248054001	CWW	3/15/2010 1:56	958963	10-2081-1	1	LANL	USE	S
per0314078a	248054002	CWW	3/15/2010 2:04	958963	10-2081-1	1	LANL	USE	S
per0314079a	248054003	CWW	3/15/2010 2:12	958963	10-2081-1	1	LANL	USE	S
per0314080a	248054004	CWW	3/15/2010 2:21	958963	10-2081-1	1	LANL	USE	S
per0314081a	248068001	CWW	3/15/2010 2:29	958963	10-2088	1	LANL	USE	S
per0314082a	248068002	CWW	3/15/2010 2:37	958963	10-2088	1	LANL	USE	S
per0314083a	248110001	CWW	3/15/2010 2:45	958963	10-2090-1	1	LANL	USE	S
per0314084a	1202056596	CWW	3/15/2010 2:53	958963	10-2090-1	1	LANL	USE	S
per0314085a	1202056597	CWW	3/15/2010 3:01	958963	10-2090-1	1	LANL	USE	S
per0314086a	248110002	CWW	3/15/2010 3:09	958963	10-2090-1	1	LANL	USE	S
per0314087a	WCLCCV	CWW	3/15/2010 3:17			1		USE	C
per0314088a	IPB011	CWW	3/15/2010 3:25			1		USE	B
per0314089a	WCLCRI	CWW	3/15/2010 3:34			1		USE	C
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per0314091a	248110004	CWW	3/15/2010 3:50	958963	10-2090-1	1	LANL	USE	S
per0314092a	248110005	CWW	3/15/2010 3:58	958963	10-2090-1	1	LANL	USE	S
per0314093a	248110006	CWW	3/15/2010 4:06	958963	10-2090-1	1	LANL	USE	S
per0314094a	248110007	CWW	3/15/2010 4:14	958963	10-2090-1	1	LANL	USE	S
per0314095a	248110008	CWW	3/15/2010 4:22	958963	10-2090-1	1	LANL	USE	S
per0314096a	WCLCCV	CWW	3/15/2010 4:30			1		USE	C
per0314097a	IPB012	CWW	3/15/2010 4:39			1		USE	B
per0314098a	WCLCRI	CWW	3/15/2010 4:47			1		USE	C
per0314099a	1202056604	CWW	3/15/2010 4:55	958968	VARIOUS	1	LANL	DUSE_RA	S
per0314100a	1202056605	CWW	3/15/2010 5:03	958968	VARIOUS	1	LANL	DUSE_RA	S
per0314101a	1202056613	CWW	3/15/2010 5:11	958968	VARIOUS	1	LANL	DUSE_RA	S
per0314102a	248058001	CWW	3/15/2010 5:19	958968	10-2083	1	LANL	DUSE_RA	S
per0314103a	248058002	CWW	3/15/2010 5:27	958968	10-2083	1	LANL	DUSE_RA	S

per0314104a	248058003	CWW	3/15/2010 5:35	958968	10-2083	1	LANL	DUSE_RA	S
per0314105a	248058004	CWW	3/15/2010 5:43	958968	10-2083	1	LANL	DUSE_RA	S
per0314106a	WCLCCV	CWW	3/15/2010 5:52			1		DUSE	C
per0314107a	IPB013	CWW	3/15/2010 6:00			1		DUSE	B
per0314108a	WCLCRI	CWW	3/15/2010 6:08			1		DUSE	C
per0314109a	248058005	CWW	3/15/2010 6:16	958968	10-2093	1	LANL	DUSE-RA	S
per0314110a	248058006	CWW	3/15/2010 6:24	958968	10-2093	1	LANL	DUSE-RA	S
per0314111a	248058007	CWW	3/15/2010 6:32	958968	10-2093	1	LANL	DUSE-RA	S
per0314112a	248058008	CWW	3/15/2010 6:40	958968	10-2093	1	LANL	DUSE-RA	S
per0314113a	248065001	CWW	3/15/2010 6:49	958968	10-2086	1	LANL	DUSE-RA	S
per0314114a	1202056606	CWW	3/15/2010 6:57	958968	10-2086	1	LANL	DUSE-RA	S
per0314115a	1202056607	CWW	3/15/2010 7:05	958968	10-2086	1	LANL	DUSE-RA	S
per0314116a	WCLCCV	CWW	3/15/2010 7:13			1		DUSE	C
per0314117a	IPB014	CWW	3/15/2010 7:21			1		DUSE	B
per0314118a	WCLCRI	CWW	3/15/2010 7:29			1		DUSE	C

Quantify Sample Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charlers W. Wilson

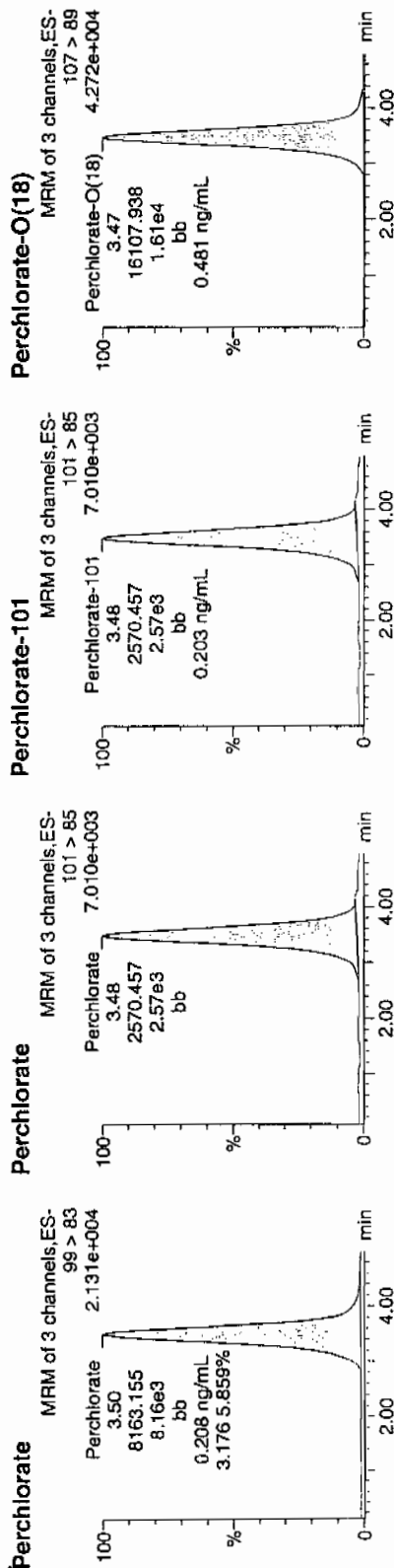
Dataset: C:\MassLynx\Perchlorate.PRO\per031410a.qld

Last Altered: Monday, March 15, 2010 8:56:56 AM Eastern Standard Time
 Printed: Monday, March 15, 2010 9:13:21 AM Eastern Standard Time

Sample Name: per0314017a
 Date: 14-Mar-2010
 Time: 17:49:59
 ID: 1202054224
 Vial: 1:3,F

03-15-10

1202054224 | 50720 | 15 | 1 |



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202054224	Perchlorate	99 > 83	3.50	8163.155	8163.155	bb			0.2085	104.24	4.24	601.123	3.18
1202054224	Perchlorate-101	101 > 85	3.48	2570.457	2570.457	bb			0.2027	101.37	1.37	897.235	
1202054224	Perchlorate-O(18)	107 > 89	3.47	16107.938	16107.938	bb			0.4814	96.27	-3.73	2806.3...	

$$\frac{8163.155}{39154.1} = 2.27$$

3/16/10

Quantify Sample Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charlers W. Wilson

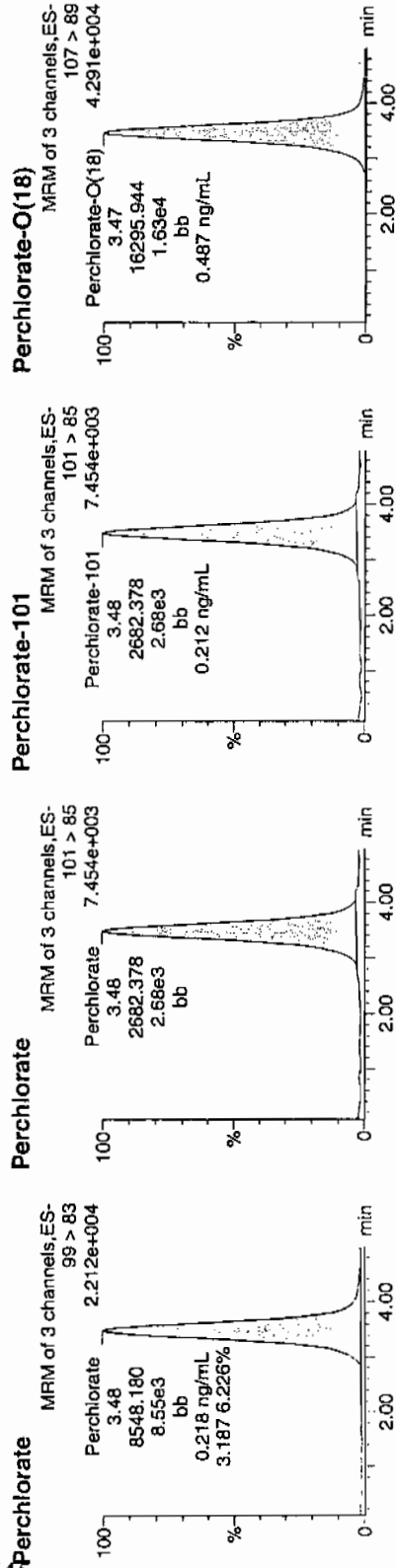
Dataset: C:\MassLynx\Perchlorate.PRO\per031410a.qld

Last Altered: Monday, March 15, 2010 8:56:56 AM Eastern Standard Time
 Printed: Monday, March 15, 2010 9:13:21 AM Eastern Standard Time

Page 412 of 1545
 Name: per0314018a
 Date: 14-Mar-2010
 Time: 17:58:00
 ID: 1202054225
 Vial: 1:4, A

03-15-10

1202054225 | 30020 | 150 | 11



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202054225	Perchlorate	99 > 83	3.48	8548.180	8548.180	bb			0.2183	109.16	9.16	1432.9...	3.19
1202054225	Perchlorate-101	101 > 85	3.48	2682.378	2682.378	bb			0.2116	105.78	5.78	402.666	
1202054225	Perchlorate-O(18)	107 > 89	3.47	16295.944	16295.944	bb			0.4870	97.40	-2.60	873.814	

3/16/10

Isotope Ratio Criteria

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

2.31-3.85

Tune Criteria

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

LC/MS/MS EXPLOSIVES ANALYSIS

**LC/MS/MS Case Narrative
Los Alamos National Laboratory (LANL)
SDG 10-1981**

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: 957200

Prep Batch Number: 957199

Sample Analysis

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

Sample ID	Client ID
247790002	RE15-10-8386
247790003	RE15-10-8387
1202052406	Method Blank (MB)
1202052407	Laboratory Control Sample (LCS)
1202052408	247799001(RE46-10-13335) Matrix Spike (MS)
1202052409	247799001(RE46-10-13335) 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.

10-1981-EXPLCMS

Page 1 of 5

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 247799001 (RE46-10-13335) from SDG 10-1990 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 in this SDG.

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.

10-1981-EXPLCMS

Page 2 of 5

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 247799001 (RE46-10-13335) from SDG 10-1990 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 standards were not added to the secondary analyte extracts.

Technical Information

Holding Time Specifications

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

Preparation/Analytical Method Verification

All procedures were performed as stated in the SOP.

Sample Dilutions

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

Sample Re-extraction/Re-analysis

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

Miscellaneous Information

Data Exception (DER) Documentation

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

Manual Integrations

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

Flagging Convention

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

Additional Comments

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

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

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

System Configuration

The laboratory utilizes a Waters LC 2795 liquid chromatography instrument for primary analyte analysis. It is coupled with either a Micromass Quattro Micro Mass Spectrometer/ Mass Spectrometer, or a Micromass Quattro Ultima Mass Spectrometer/ Mass Spectrometer. Each being designated as LCMSMS #1, and LCMSMS #2, respectively. It is fitted with an APCI (Atmospheric Pressure chemical Ionization) probe that is operated in the negative ionization mode for the primary analyte analysis. The laboratory also utilizes an Agilent 1100 liquid chromatography instrument for either primary or secondary analyte analysis. It is coupled with a Applied Biosystems 4000 Mass Spectrometer/ Mass Spectrometer, designated as either LCMSMS #3 or LCMSMS #4. It is fitted with a APCI (Atmospheric Pressure chemical Ionization) probe that is operated in the negative ionization mode for both the primary and secondary analyte analysis.

Chromatographic Columns

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

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

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

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

Certification Statement

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

Review Validation:

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

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

Reviewer: Herbert K. Maurer Date: 04/21/10

SAMPLE DATA SUMMARY

1
High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE15-10-8386

Lab Code: GEL

GEL Job No (SDG) 10-1981

Matrix: SOIL

GEL Sample ID: 247790002

Sample Amount 2

Moisture: 5.4

Amount Units g

Date Received: 23-FEB-10

Extraction Type Sonication

Extraction Batch ID: 957199

Concentrated Extract Volume (mL) 10

Date Extracted: 01-MAR-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0314016a

Date Analyzed: 14-MAR-10 22:21

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	X	<u>Concentrated Extract Volume</u>	X	Dilution
Value		<u>Sample Amount</u>		Factor

1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE15-10-8386

Lab Code: GEL

GEL Job No (SDG) 10-1981

Matrix: SOIL

GEL Sample ID: 247790002

Sample Amount 2

Moisture: 5.4

Amount Units g

Date Received: 23-FEB-10

Extraction Type Sonication

Extraction Batch ID: 957199

Concentrated Extract Volume (mL) 10

Date Extracted: 01-MAR-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS03050041.wiff

Date Analyzed: 06-MAR-10 03:35

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

1
High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE15-10-8387

Lab Code: GEL

GEL Job No (SDG) 10-1981

Matrix: SOIL

GEL Sample ID: 247790003

Sample Amount 2

Moisture: 5.7

Amount Units g

Date Received: 23-FEB-10

Extraction Type Sonication

Extraction Batch ID: 957199

Concentrated Extract Volume (mL) 10

Date Extracted: 01-MAR-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0314017a

Date Analyzed: 14-MAR-10 22:50

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: RE15-10-8387

Lab Code: GEL

GEL Job No (SDG) 10-1981

Matrix: SOIL

GEL Sample ID: 247790003

Sample Amount 2

Moisture: 5.7

Amount Units g

Date Received: 23-FEB-10

Extraction Type Sonication

Extraction Batch ID: 957199

Concentrated Extract Volume (mL) 10

Date Extracted: 01-MAR-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS03050042.wiff

Date Analyzed: 06-MAR-10 03:51

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

QUALITY CONTROL SUMMARY

High Explosives Surrogate Recovery Summary

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1981

Lab Code: GEL

HPLC Column: Phenomenex Ultracarb 5u ODS(20)

Lab Sample ID	Client Sample ID	DNT	QC Limits	Flg
247790002	RE15-10-8386	106	70 - 144	
247790002	RE15-10-8386	106	70 - 144	
247790003	RE15-10-8387	110	70 - 144	
247790003	RE15-10-8387	105	70 - 144	
1202052406	MB for batch 957199	96.3	70 - 144	
1202052406	MB for batch 957199	105	70 - 144	
1202052407	LCS for batch 957199	100	70 - 144	
1202052407	LCS for batch 957199	104	70 - 144	

DNT = 3,4-Dinitrotoluene

3B
High Explosives LCS/LCS Duplicate Summary

Lab Name: GEL Laboratories LLC

Client ID: LCS

Lab Code: GEL

GEL Job No (SDG) 10-1981

Extract Batch Code: 957199

Date Extracted: 01-MAR-10

GEL LCS ID: 1202052407

GEL LCSDUP ID:

Analysis Date/Time: 14-MAR-10 21:22

DUP Analysis Date/Time:

Reporting Units: ug/kg

QC Type: LCS/LCSD

Compound	Spike Added	LCS Conc	LCS Rec #	LCSD Conc	LCSD Rec #	RPD #	RPD	Recovery Limits
1,3,5-Trinitrobenzene	5000	3610	72.3					69 – 126
2,4,6-Trinitrotoluene	5000	4600	92.1					73 – 149
2,4-Dinitrotoluene	5000	4970	99.4					87 – 137
2,6-Dinitrotoluene	5000	4880	97.7					89 – 120
2-Amino-4,6-dinitrotoluene	5000	4580	91.7					90 – 130
4-Amino-2,6-dinitrotoluene	5000	4500	90.1					84 – 130
HMX	5000	4500	90.1					58 – 138
Nitrobenzene	5000	4740	94.8					71 – 122
PETN	5000	5070	101					64 – 137
RDX	5000	4410	88.2					81 – 137
Tetryl	5000	2850	57					51 – 112
m-Dinitrobenzene	5000	4790	95.7					83 – 122
m-Nitrotoluene	5000	5320	106					73 – 118
o-Nitrotoluene	5000	5010	100					72 – 119
p-Nitrotoluene	5000	4760	95.2					67 – 131

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

* Values outside of QC limits

3B
High Explosives LCS/LCS Duplicate Summary

Lab Name: GEL Laboratories LLC

Client ID: LCS

Lab Code: GEL

GEL Job No (SDG) 10-1981

Extract Batch Code: 957199

Date Extracted: 01-MAR-10

GEL LCS ID: 1202052407

GEL LCSDUP ID:

Analysis Date/Time: 06-MAR-10 03:04

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	4910	98.2					52 - 114
2,6-Diamino-4-nitrotoluene	5000	5290	106					64 - 122
3,5-Dinitroaniline	5000	5210	104					70 - 127
tris(o-cresyl) phosphate	5000	5000	100					84 - 119
TATB	5000	5390	108					28 - 162

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: RE46-10-13335

Lab Code: GEL

GEL Job No (SDG) 10-1981

Extract Batch Code: 957199

Date Extracted: 01-MAR-10

GEL Spike ID: 1202052408

GEL SpikeDup ID: 1202052409

Analysis Date/Time: 15-MAR-10 03:45

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
Tetryl	5000	0	4850	97	4550	90.9	6.46	30	36 - 124
2,4,6-Trinitrotoluene	5000	0	4980	99.6	5070	101	1.79	30	76 - 144
2,6-Dinitrotoluene	5000	0	4860	97.3	4680	93.6	3.82	30	90 - 118
4-Amino-2,6-dinitrotoluene	5000	0	4720	94.4	4620	92.3	2.21	30	72 - 143
RDX	5000	0	4310	86.2	4870	97.4	12.2	30	59 - 152
PETN	5000	0	4650	93.1	4630	92.6	.503	30	60 - 140
Nitrobenzene	5000	0	4740	94.8	4760	95.3	.475	30	70 - 122
HMX	5000	0	4230	84.6	4760	95.2	11.7	30	51 - 144
2-Amino-4,6-dinitrotoluene	5000	0	5190	104	5150	103	.769	30	85 - 137
2,4-Dinitrotoluene	5000	0	5140	103	4860	97.2	5.6	30	86 - 135
1,3,5-Trinitrobenzene	5000	0	4220	84.4	4240	84.7	.405	30	50 - 140
m-Dinitrobenzene	5000	0	4540	90.8	4480	89.6	1.24	30	85 - 118
m-Nitrotoluene	5000	0	4420	88.3	4160	83.3	5.88	30	70 - 120
o-Nitrotoluene	5000	0	4700	93.9	4410	88.2	6.31	30	69 - 123
p-Nitrotoluene	5000	0	4330	86.7	4220	84.5	2.58	30	65 - 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: RE46-10-13335

Lab Code: GEL

GEL Job No (SDG) 10-1981

Extract Batch Code: 957199

Date Extracted: 01-MAR-10

GEL Spike ID: 1202052408

GEL SpikeDup ID: 1202052409

Analysis Date/Time: 06-MAR-10 06:28

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	4550	91	4570	91.4	.439	26	34 - 135
2,6-Diamino-4-nitrotoluene	5000	0	4980	99.6	5010	100	.601	30	55 - 130
3,5-Dinitroaniline	5000	0	5230	105	5170	103	1.15	30	73 - 129
tris(o-cresyl) phosphate	5000	0	5180	104	5080	102	1.95	30	72 - 127
TATB	5000	0	5610	112	5060	101	10.3	30	29 - 155

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

Explosives Initial Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1981

Lab Code: GEL

Lab Sample ID: XIBLK01

Analysis Date: 14-MAR-10 14:59

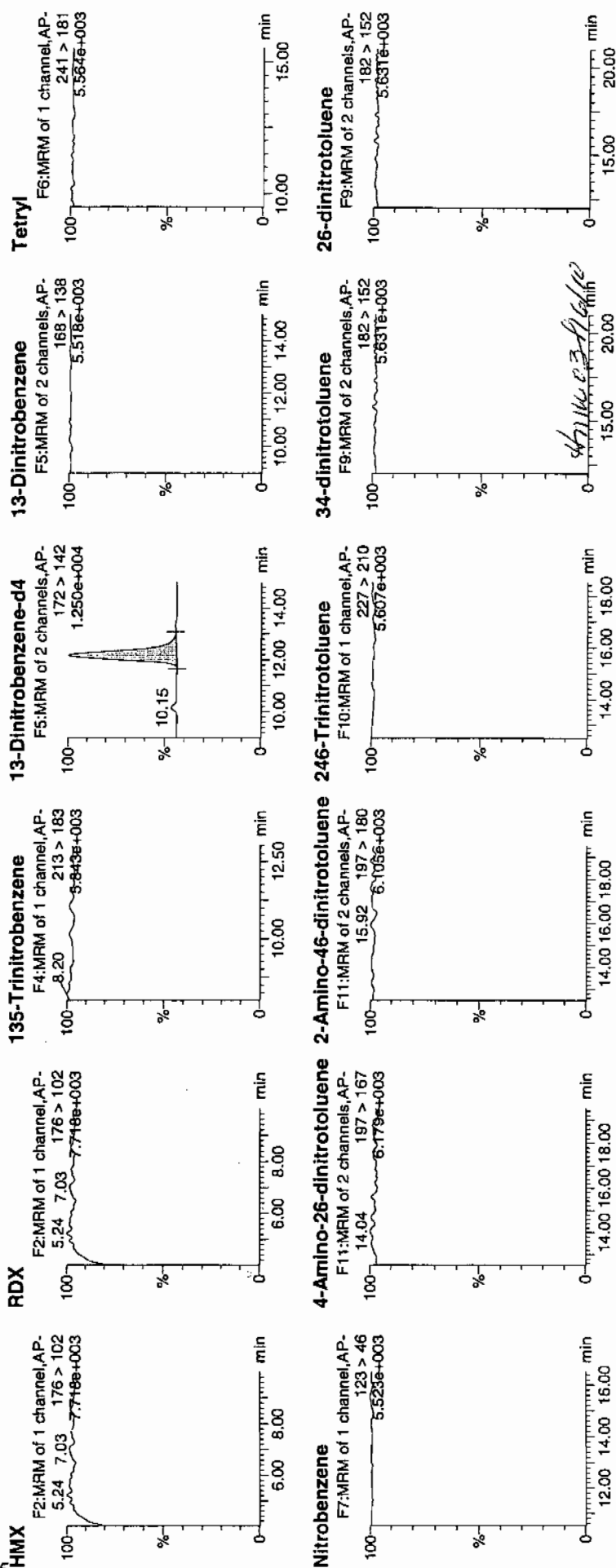
GEL Data File: EXP0314001a

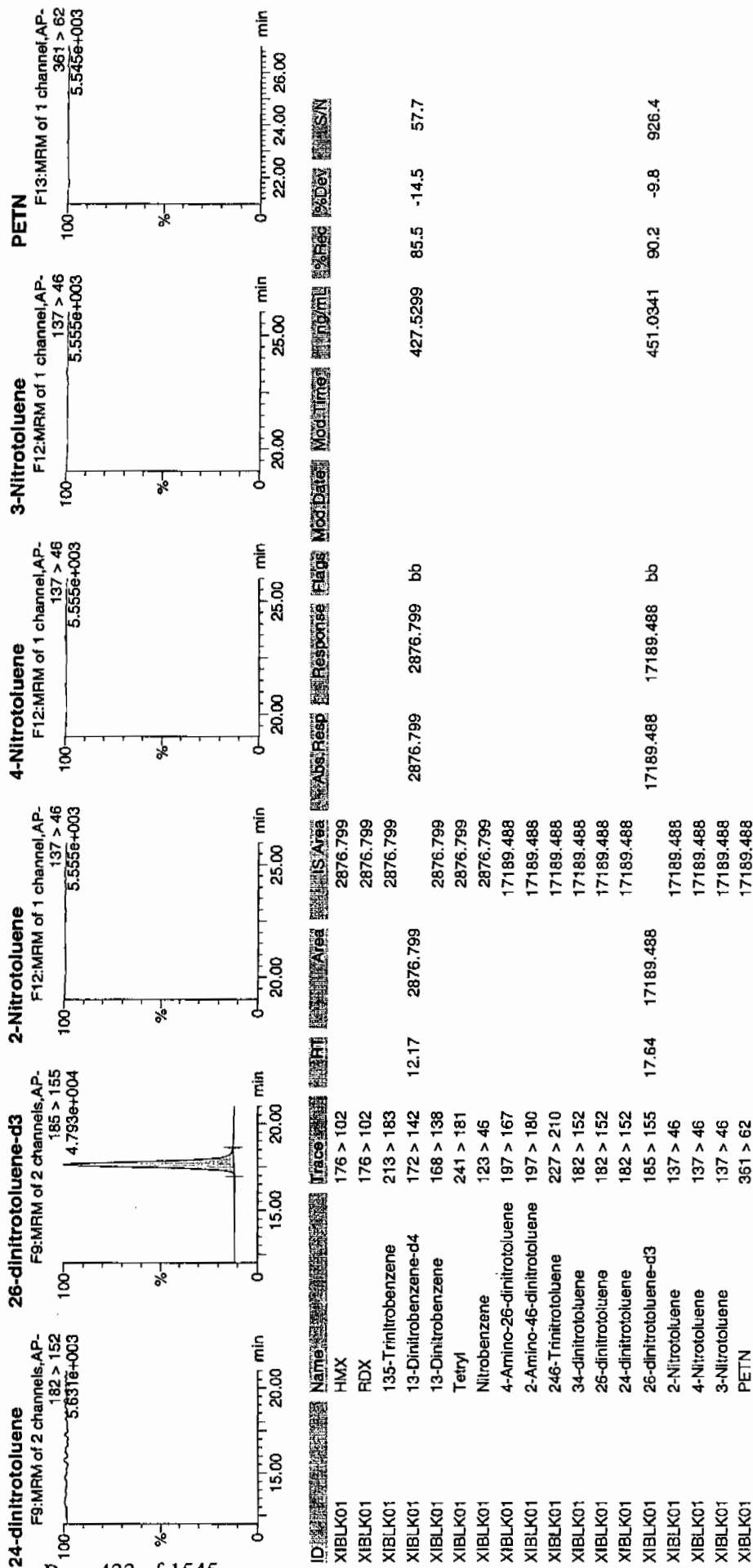
Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m-Dinitrobenzene	0	0
m-Nitrotoluene	0	0
o-Nitrotoluene	0	0
p-Nitrotoluene	0	0
3,4-Dinitrotoluene	0	0
1,3,5-Trinitrobenzene	0	0
1,3-Dinitrobenzene-d4	500	427.53
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	451.034
2-Amino-4,6-dinitrotoluene	0	0
4-Amino-2,6-dinitrotoluene	0	0
HMX	0	0

3/15/10





Explosives Initial Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1981

Lab Code: GEL

Lab Sample ID: XIBLK01

Analysis Date: 14-MAR-10 15:28

GEL Data File: EXP0314002a

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	439.79
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	459.668
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\031410expA.qld, Time: Mon Mar 15 10:15:48 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0314002a

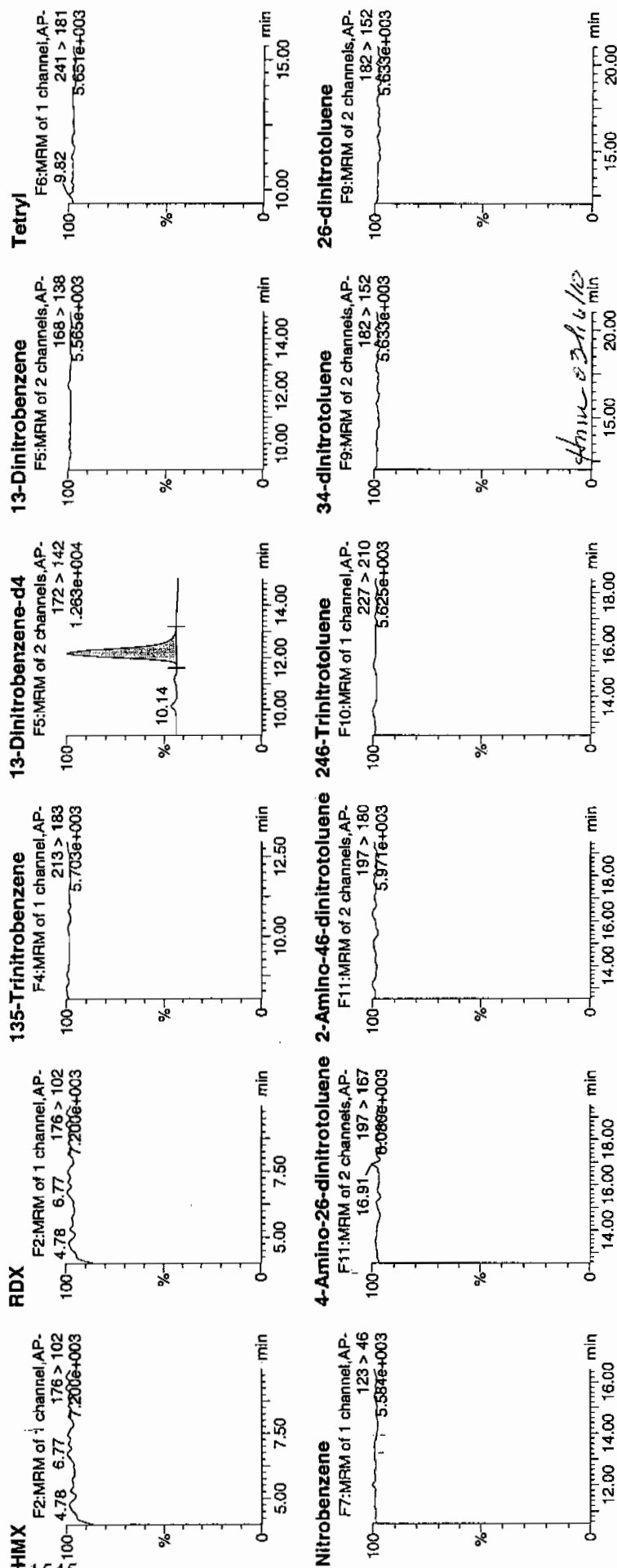
Date: 14-Mar-2010

Time: 15:28:30

ID: XIBLK01

Vial: 1:1,A

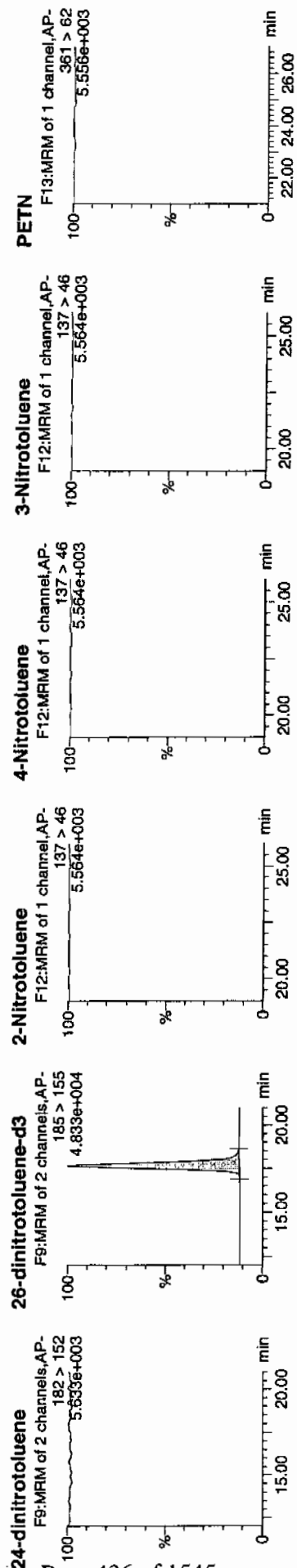
W
3/15/10



Quantify Sample Report

GEL Laboratories, LLC / Analyst: Michael A. Penny

Dataset: C:\MASSLYN\New_Exp.PRO\031410expA.qld, Time: Mon Mar 15 10:15:48 2010

[illegible]

Explosives Initial Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1981

Lab Code: GEL

Lab Sample ID: XIBLK01

Analysis Date: 05-MAR-10 17:07

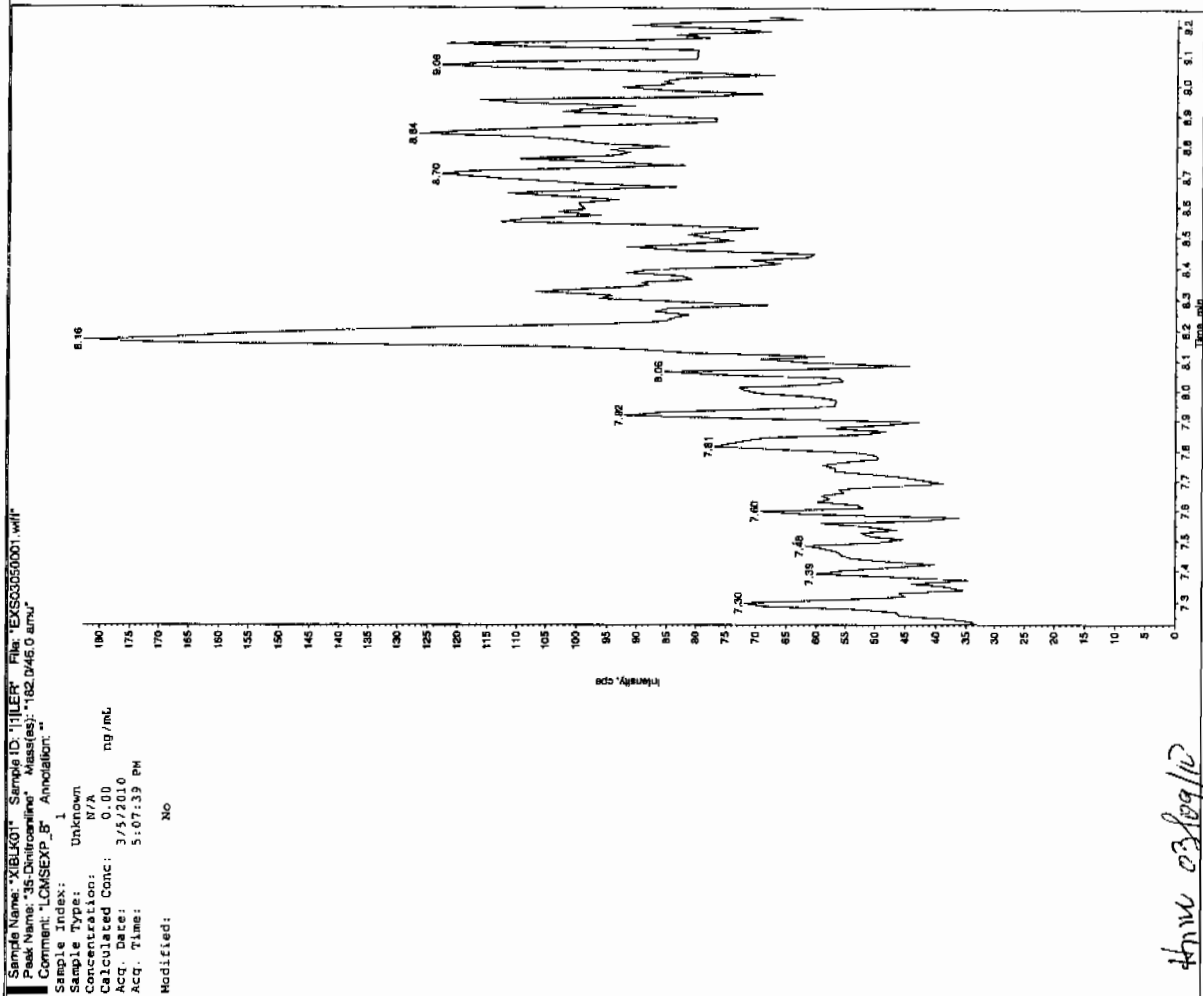
GEL Data File: EXS03050001.wiff

Instrument ID: LCMSMS

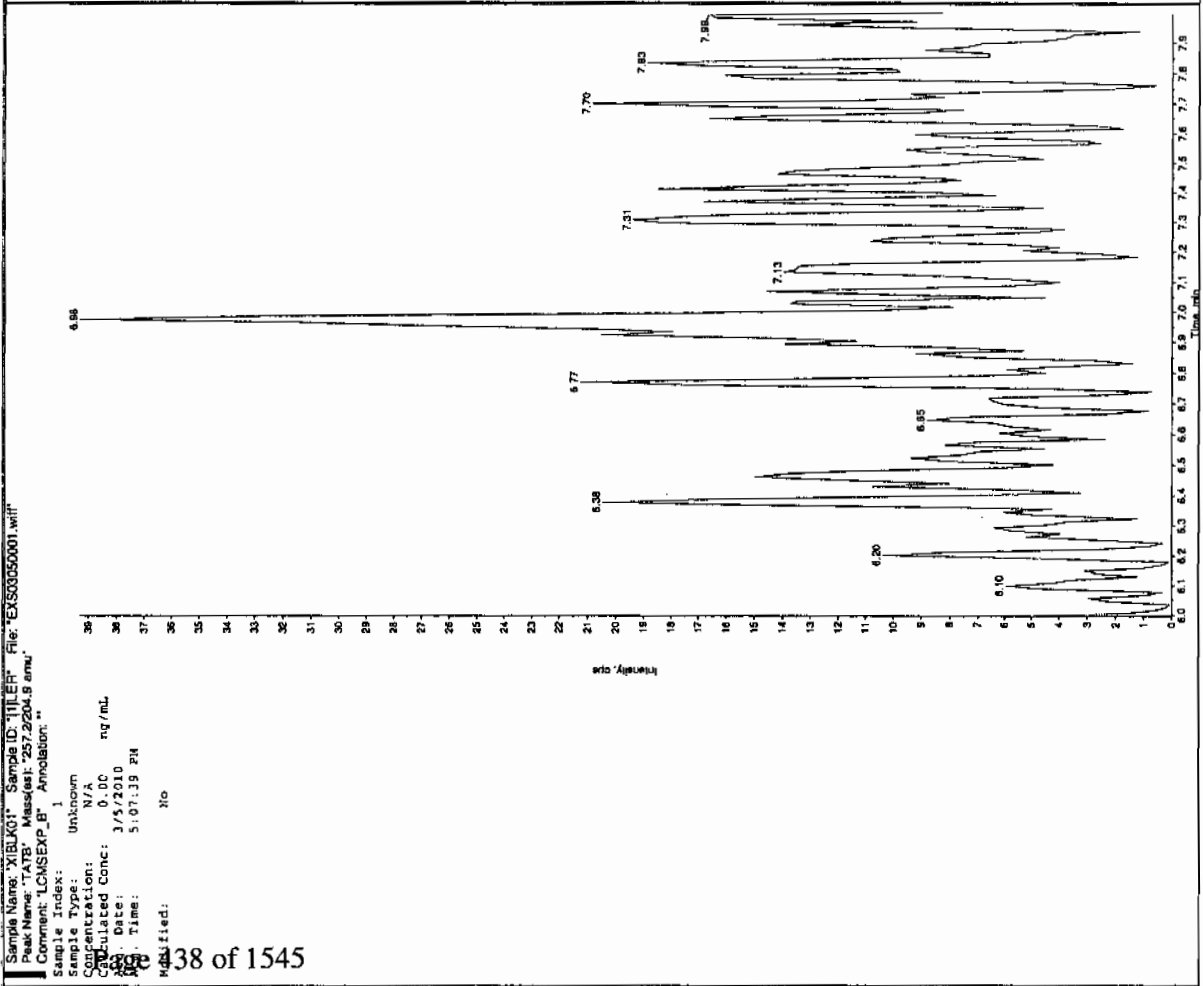
Column: Phenomenex Ultracarb 5u ODS(20)

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

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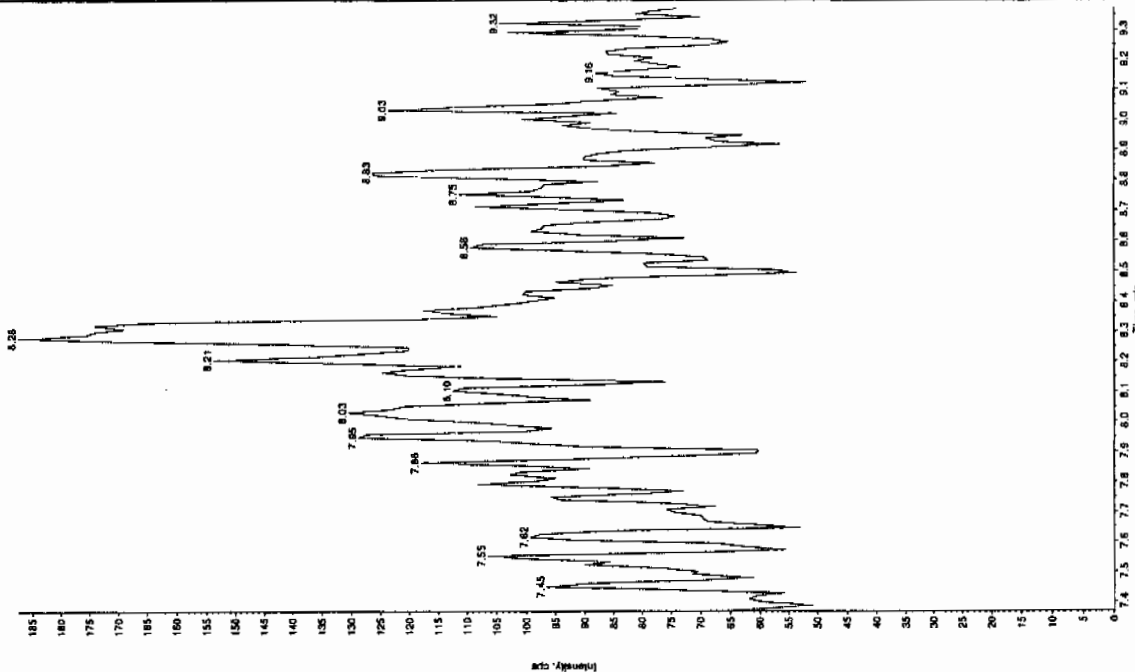
4/11/10 03:09/10



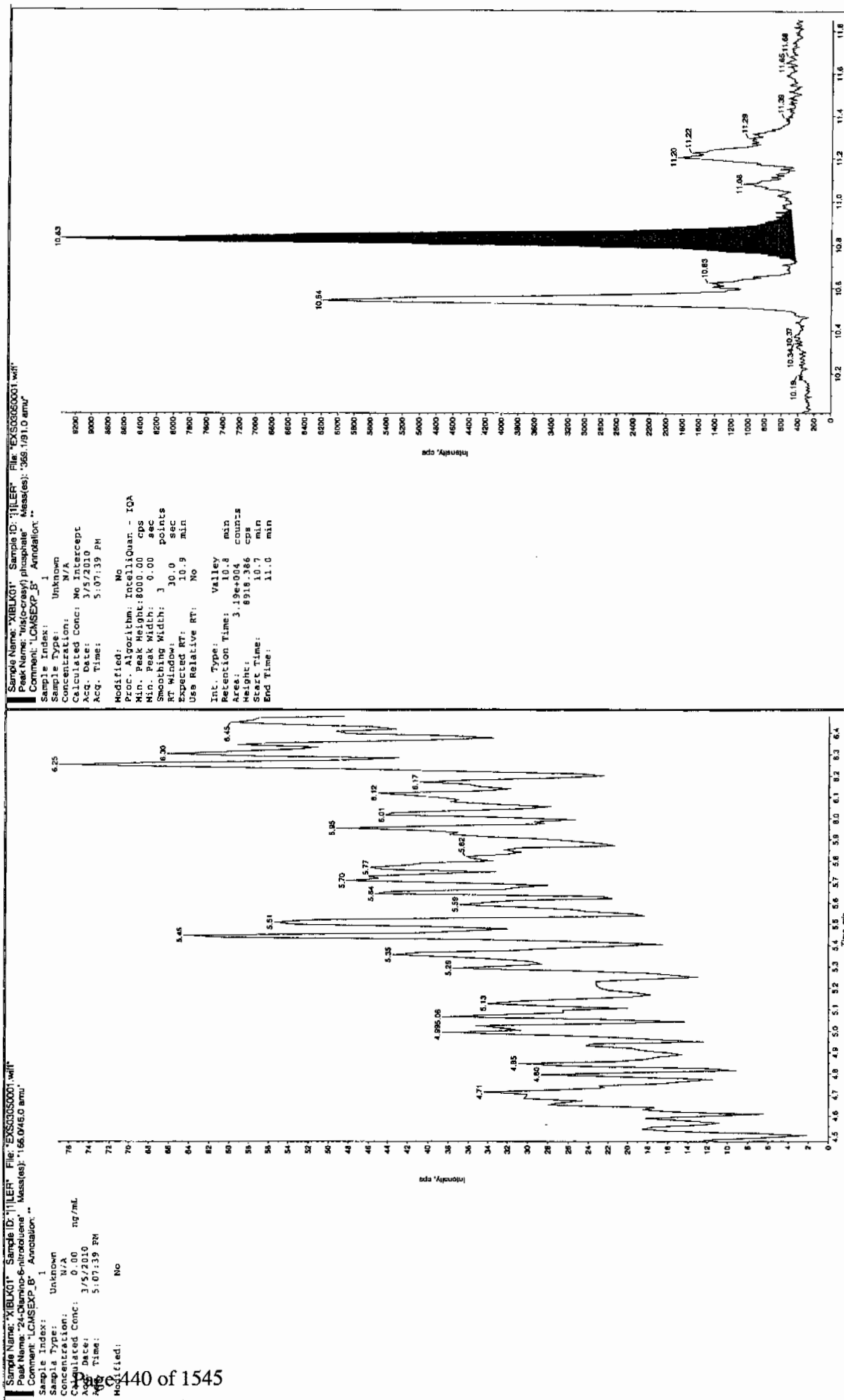
*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: XBL001 Sample ID: T1LER File: EXS0050001.wif
 Peak Name: 25-Dihydro-4-macrobene Mass(es): 156.0460 amu
 Comment: LCMSXP_B Annotation: 1

Sample Index: 64
 Sample Type: Unknown
 Concentration: N/A
 Calculated Conc: 0.00 ng/mL
 Acq. Date: 3/5/2010
 Acq. Time: 5:07:39 PM
 Modified: No



Sample Index: 185
 Sample Type: Unknown
 Concentration: N/A
 Calculated Conc: 0.00 ng/mL
 Acq. Date: 3/5/2010
 Acq. Time: 5:07:39 PM
 Modified: No



Explosives Initial Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1981

Lab Code: GEL

Lab Sample ID: XIBLK01

Analysis Date: 05-MAR-10 17:23

GEL Data File: EXS03050002.wiff

Instrument ID: LCMSMS

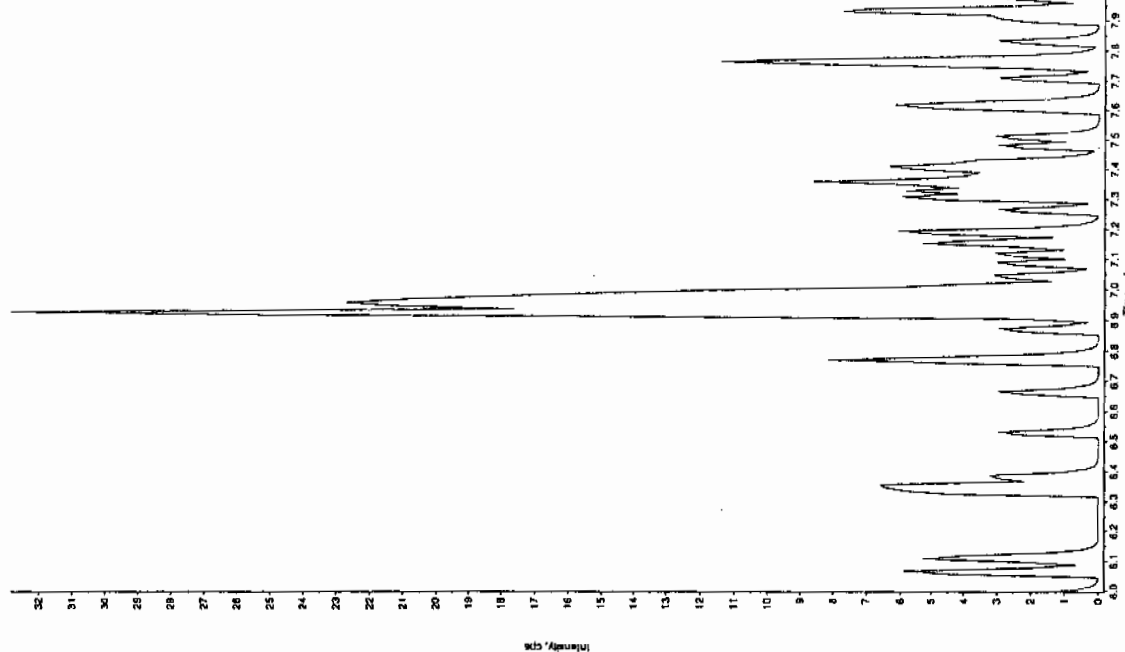
Column: Phenomenex Ultracarb 5u ODS(20)

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 31/10

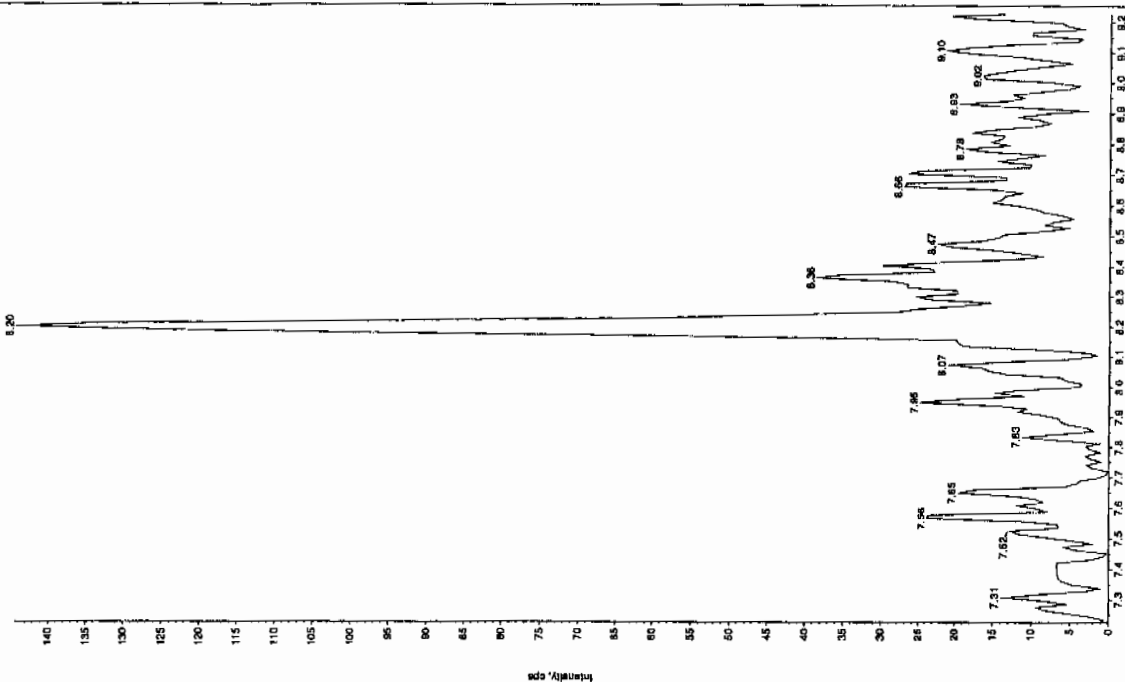
Sample Name: "XBLK01" Sample ID: "TILER" File: "EXS03050002.wif"
 Peak Name: "ATB" Mass(es): "237.2034.9 amu"
 Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A
 Calculated Conc: 0.00 ng/mL
 Acq. Date: 3/5/2010
 Acq. Time: 5:23:26 PM
 Modified: No

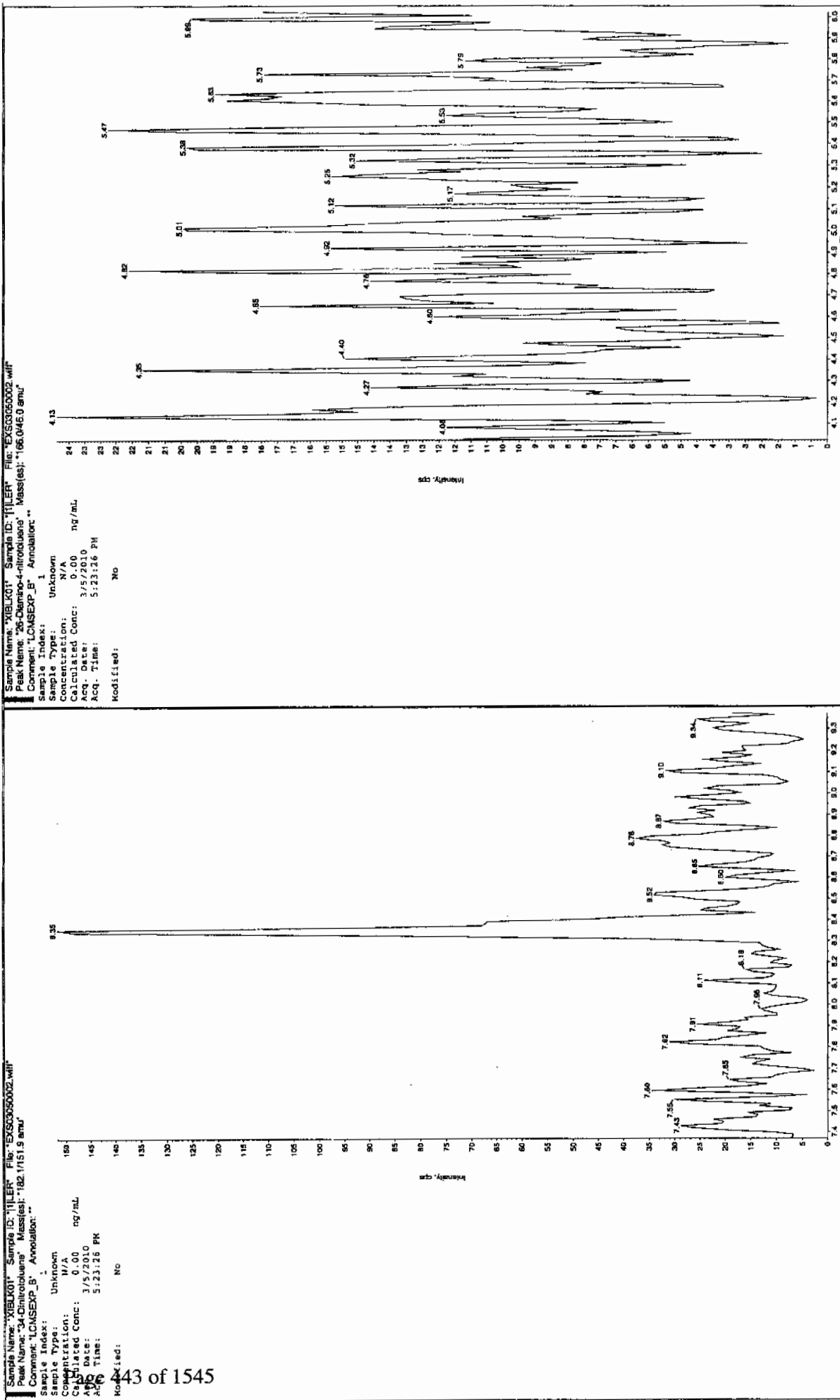


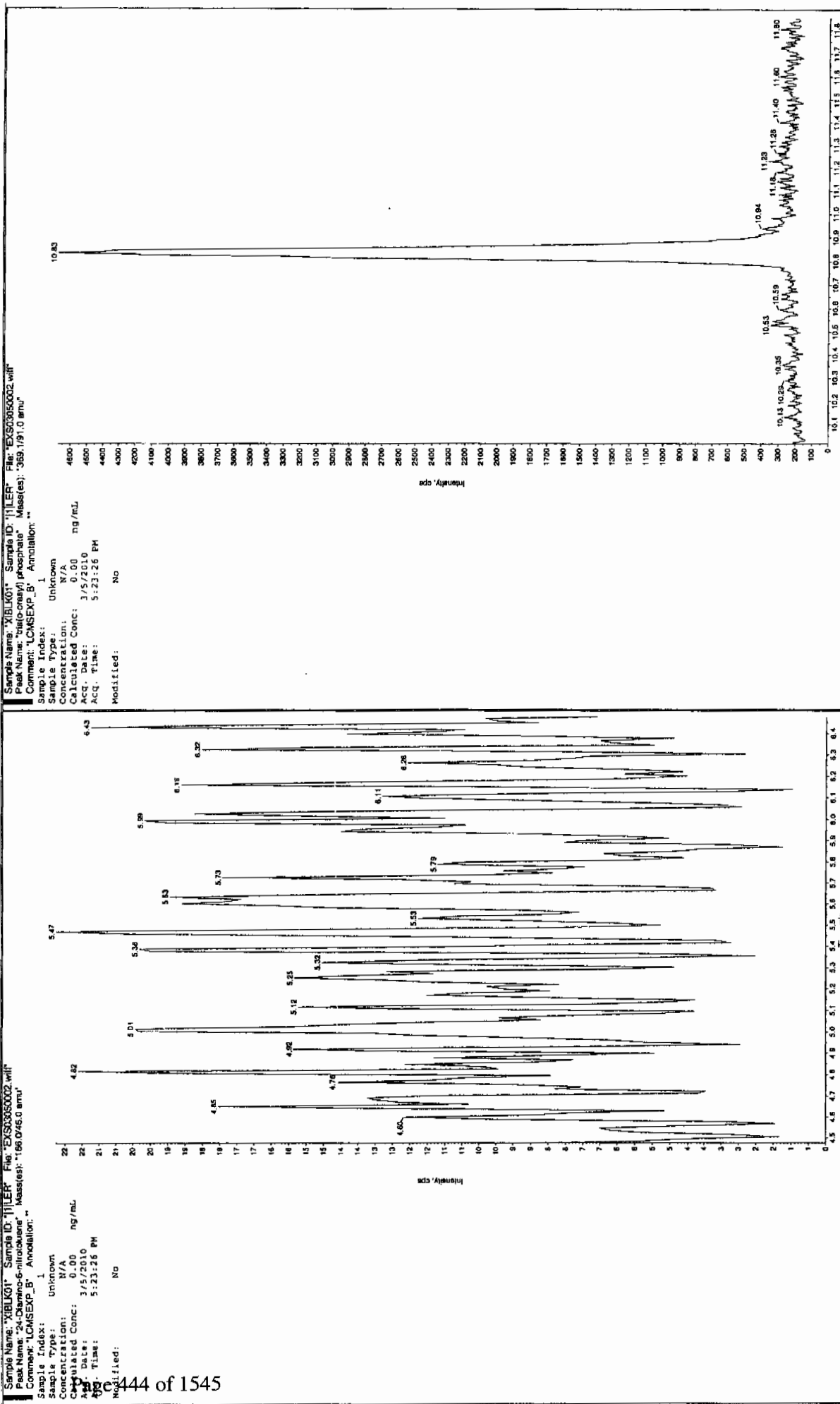
Sample Name: "XBLK01" Sample ID: "TILER" File: "EXS03050002.wif"
 Peak Name: "35-Ornicoline" Mass(es): "182.048.0 amu"
 Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A
 Calculated Conc: 3.50 ng/mL
 Acq. Date: 3/5/2010
 Acq. Time: 5:23:26 PM
 Modified: No



Jan 31/10





4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1981

Lab Code: GEL

Lab Sample ID: XIBLK02

Analysis Date: 14-MAR-10 18:54

GEL Data File: EXP0314009a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
p-Nitrotoluene	0	0
3,4-Dinitrotoluene	0	0
1,3,5-Trinitrobenzene	0	0
1,3-Dinitrobenzene-d4	500	430.467
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	459.165
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

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

Dataset: C:\MASSLYNX\New_Exp.PRO\031410expA.qid, Time: Mon Mar 15 10:15:48 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0314009a

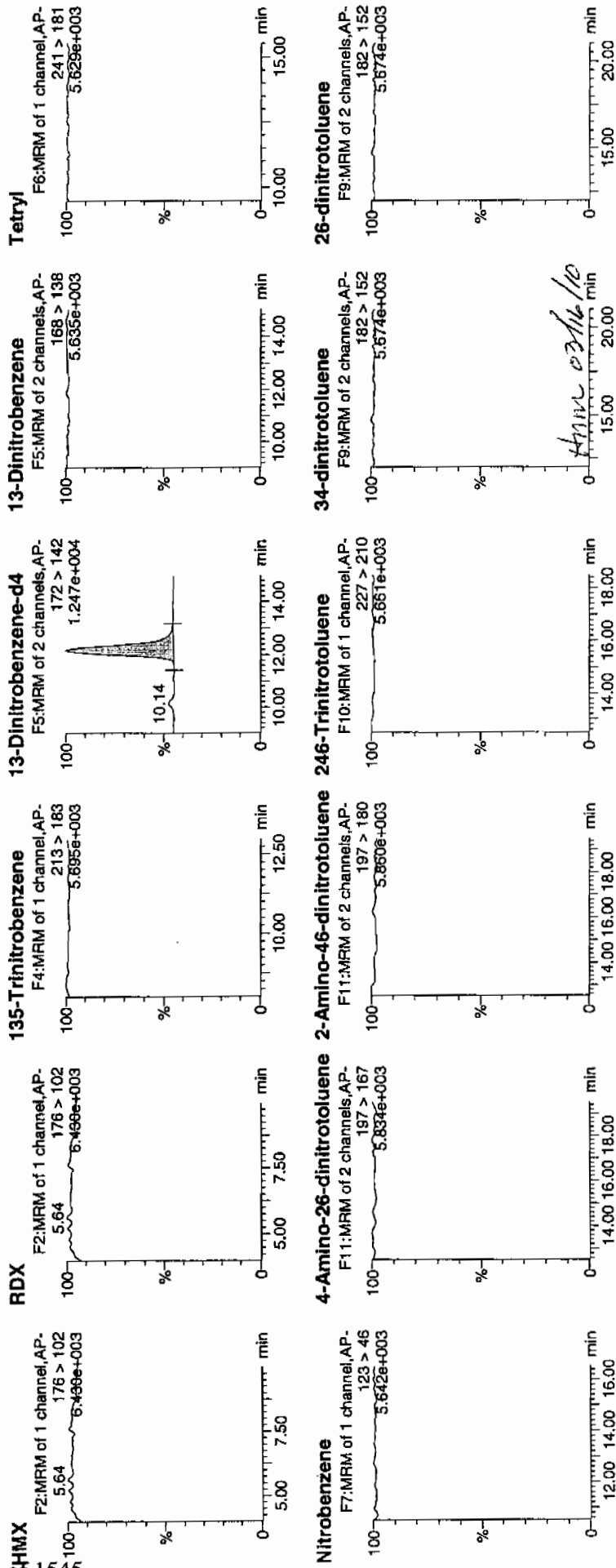
Date: 14-Mar-2010

Time: 18:54:49

ID: XIBLK02

Vial: 1:1,A

WAT
2/15/10



GEL Laboratories, LLC / Analyst : Michael A. Penny

24-dinitrotoluene
F9:MRM of 2 channels, AP-
182 > 152
5.674e+003

26-dinitrotoluene-d3
F9:MRM of 2 channels, AP-
185 > 155
4.882e+004

2-Nitrotoluene
F12:MRM of 1 channel, AP-
137 > 46
5.632e+003

4-Nitrotoluene
F12:MRM of 1 channel, AP-
137 > 46
5.632e+003

3-Nitrotoluene
F12:MRM of 1 channel, AP-
137 > 46
5.632e+003

PETN
F13:MRM of 1 channel, AP-
361 > 62
5.621e+003

min

26.00 24.00 22.00

100 % 0

min

25.00 20.00

100 % 0

min

25.00 20.00

100 % 0

min

25.00 20.00

100 % 0

min

25.00 20.00

100 % 0

ID	Name	Trace	RT	Area	IS Area	Abs. Resp	Response	Flags	Mod. Date	Mod. Time	ng/mL	%Rec	%Dev	IS/N
XIBLK02	HMX	176 > 102		2896.564										
XIBLK02	RDX	176 > 102		2896.564										
XIBLK02	135-Trinitrobenzene	213 > 183		2896.564										
XIBLK02	13-Dinitrobenzene-d4	172 > 142	12.18	2896.564		2896.564	2896.564	bb			430.4672	86.1	-13.9	128.8
XIBLK02	13-Dinitrobenzene	168 > 138			2896.564									
XIBLK02	Tetryl	241 > 181		2896.564										
XIBLK02	Nitrobenzene	123 > 46		2896.564										
XIBLK02	4-Amino-26-dinitrotoluene	197 > 167		17499.357										
XIBLK02	2-Amino-46-dinitrotoluene	197 > 180		17499.357										
XIBLK02	246-Trinitrotoluene	227 > 210		17499.357										
XIBLK02	34-dinitrotoluene	182 > 152		17499.357										
XIBLK02	26-dinitrotoluene	182 > 152		17499.357										
XIBLK02	24-dinitrotoluene	182 > 152		17499.357										
XIBLK02	26-dinitrotoluene-d3	185 > 155	17.64	17499.357		17499.357	17499.357		MM-	15-Mar-10	10:12:59			
XIBLK02	2-Nitrotoluene	137 > 46		17499.357										
XIBLK02	4-Nitrotoluene	137 > 46		17499.357										
XIBLK02	3-Nitrotoluene	137 > 46		17499.357										
XIBLK02	PETN	361 > 62		17499.357										
XIBLK02						17499.357	17499.357	bb			459.1647	91.8	-8.2	1234.5

4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1981

Lab Code: GEL

Lab Sample ID: XIBLK03

Analysis Date: 14-MAR-10 19:53

GEL Data File: EXP0314011a

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	441.78
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	488.086
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\031410expA.qld, Time: Mon Mar 15 10:15:48 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0314011a

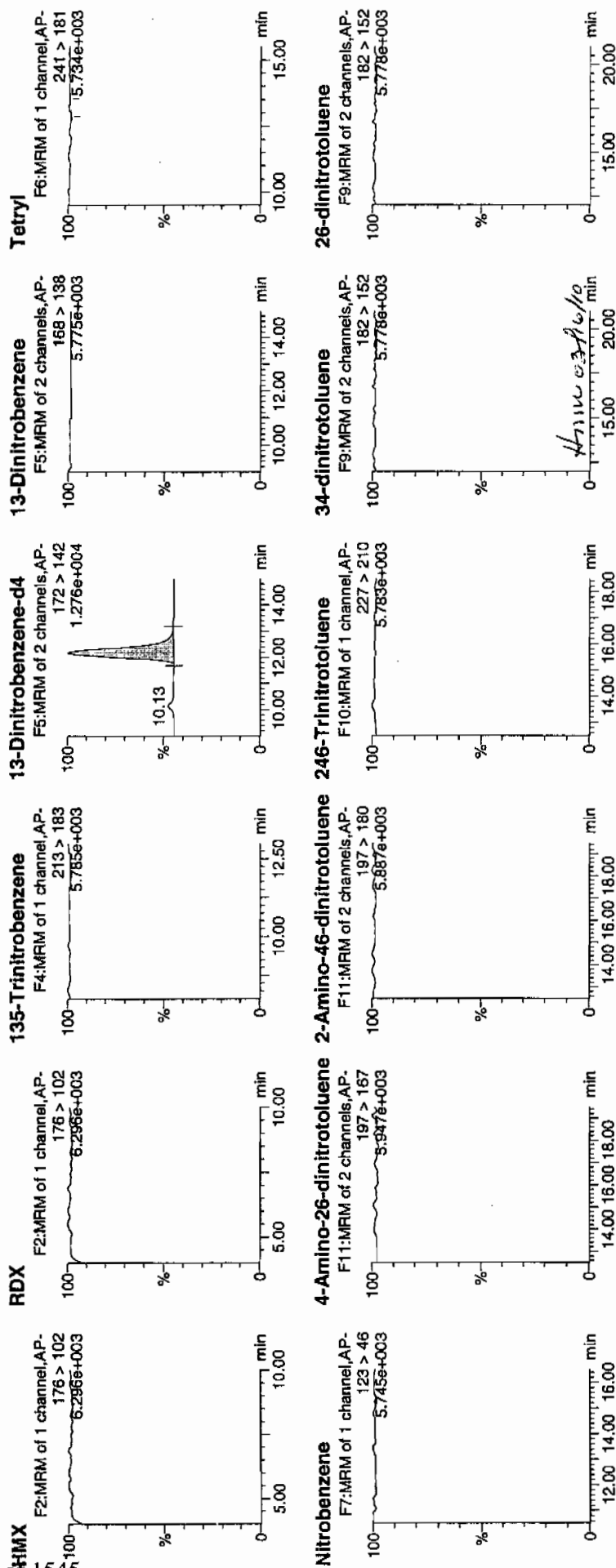
Date: 14-Mar-2010

Time: 19:53:46

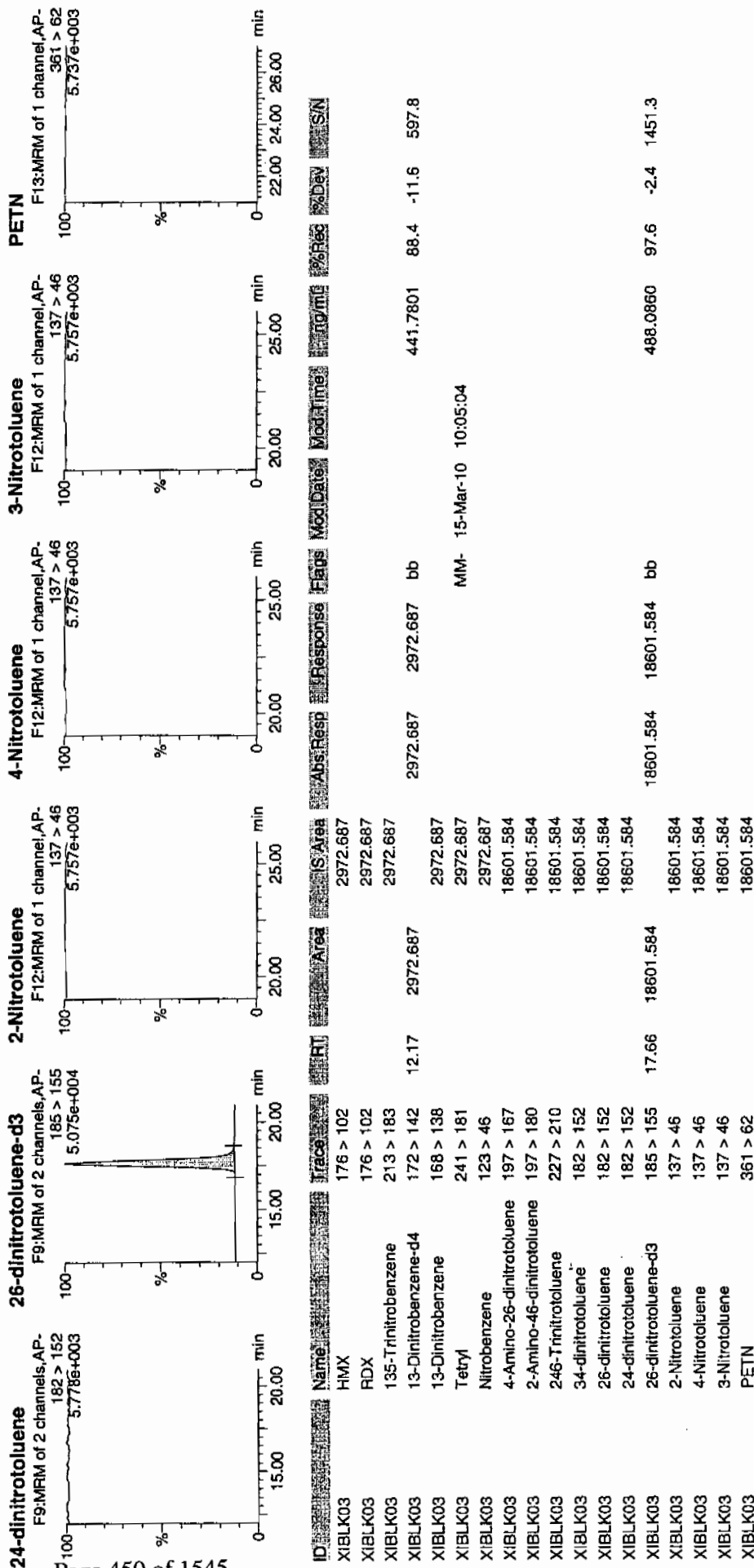
ID: XIBLK03

Vial: 1:1,A

MTT
3/15/10



Dataset: C:\MASSLYNX\New_Exp_PRO\031410expA.qld, Time: Mon Mar 15 10:15:48 2010



4A
Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1981

Lab Code: GEL

Lab Sample ID: XIBLK04

Analysis Date: 15-MAR-10 02:17

GEL Data File: EXP0314024a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
o-Nitrotoluene	0	0
p-Nitrotoluene	0	0
3,4-Dinitrotoluene	0	0
1,3,5-Trinitrobenzene	0	0
1,3-Dinitrobenzene-d4	500	519.294
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	524.66
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

Quantify Sample Report

GEL Laboratories, LLC / Analyst : Michael A. Penny

Printed: Mon Mar 15 10:16:43 2010, Page 47 of 77

Dataset: C:\MASSLYNX\New_Exp.PRO\031410expA.qld, Time: Mon Mar 15 10:15:48 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0314024a

Date: 15-Mar-2010

Time: 02:17:01

ID: XIBLK04

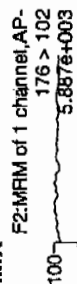
Vial: 1:1,A

452

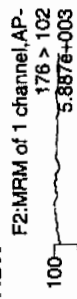
of

1545

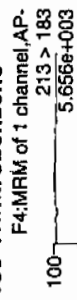
HMX



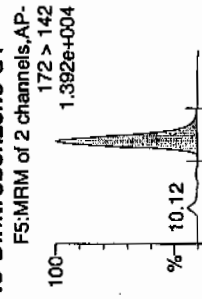
RDX



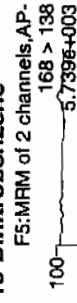
135-Trinitrobenzene



13-Dinitrobenzene-d4



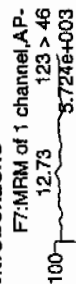
13-Dinitrobenzene



Tetryl



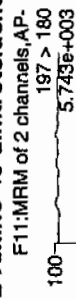
Nitrobenzene



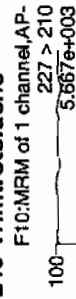
4-Amino-26-dinitrotoluene



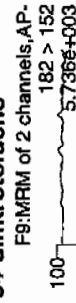
2-Amino-46-dinitrotoluene



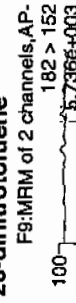
246-Trinitrotoluene



34-dinitrotoluene

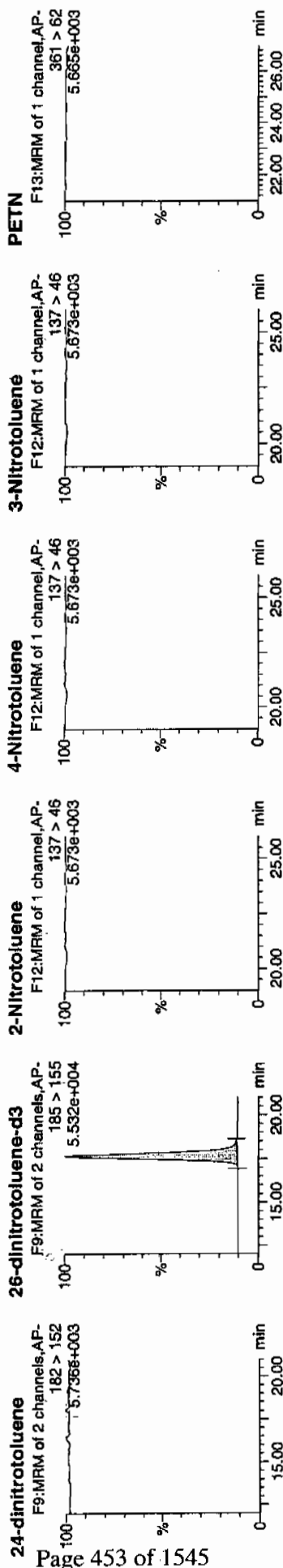


26-dinitrotoluene



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

Dataset: C:\MASSLYNX\New_Exp\PROV031410expA.qld, Time: Mon Mar 15 10:15:48 2010



ID	Name	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	Conc (ng/ml)	%Rec	%Dev	SN
XIBLK04	HMX	176 > 102		3494.266									
XIBLK04	RDX	176 > 102		3494.266									
XIBLK04	135-Trinitrobenzene	213 > 183		3494.266									
XIBLK04	13-Dinitrobenzene-d4	172 > 142	12.17	3494.266						519.2935	103.9	3.9	240.8
XIBLK04	13-Dinitrobenzene	168 > 138		3494.266									
XIBLK04	Tetryl	241 > 181		3494.266									
XIBLK04	Nitrobenzene	123 > 46		3494.266									
XIBLK04	4-Amino-26-dinitrotoluene	197 > 167		19995.482									
XIBLK04	2-Amino-46-dinitrotoluene	197 > 180		19995.482									
XIBLK04	246-Trinitrotoluene	227 > 210		19995.482									
XIBLK04	34-dinitrotoluene	182 > 152		19995.482									
XIBLK04	26-dinitrotoluene	182 > 152		19995.482									
XIBLK04	24-dinitrotoluene	182 > 152		19995.482									
XIBLK04	26-dinitrotoluene-d3	185 > 155	17.64	19995.482									
XIBLK04	2-Nitrotoluene	137 > 46		19995.482									
XIBLK04	4-Nitrotoluene	137 > 46		19995.482									
XIBLK04	3-Nitrotoluene	137 > 46		19995.482									
XIBLK04	PETN	361 > 62		19995.482									
					19995.482	19995.482	bb	MM-	15-Mar-10	10:10:34			
					19995.482	19995.482	bb	MM-	15-Mar-10	10:13:42			
										524.6604	104.9	4.9	1626.8

4A
Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1981

Lab Code: GEL

Lab Sample ID: XIBLK02

Analysis Date: 05-MAR-10 19:29

GEL Data File: EXS03050010.wiff

Instrument ID: LCMSMS

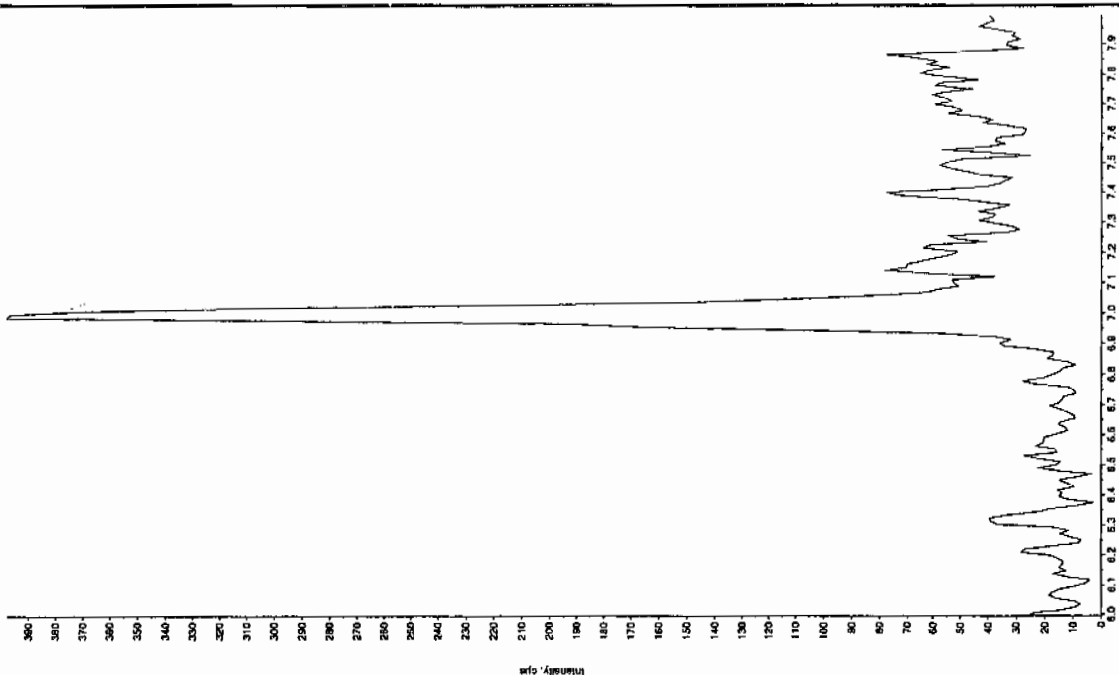
Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
tris(o-cresyl) phosphate	0	1.24
TATB	0	0
3,5-Dinitroaniline	0	0
2,4-Diamino-6-nitrotoluene	0	0
2,6-Diamino-4-nitrotoluene	0	0

Jan 31/10

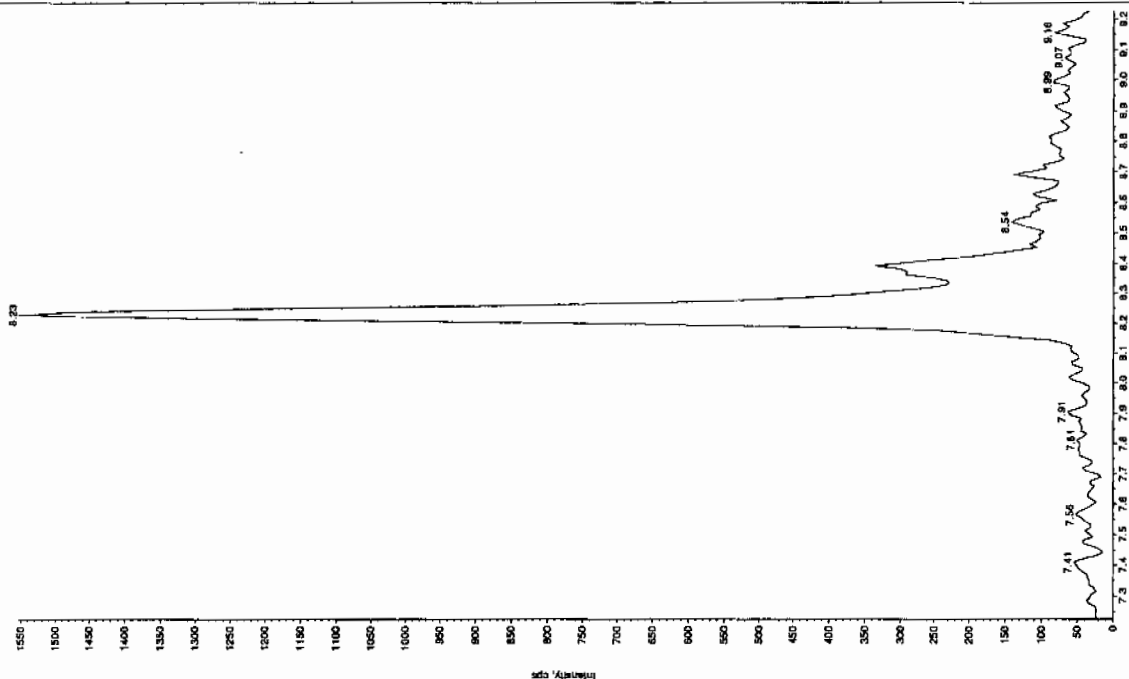
Sample Name: "XIBUX02" Sample ID: "TILER" File: "EXS03000010.will"
 Peak Name: "TATB" Mass(es): "257.2204.9 amu"
 Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A
 Calculated Conc: 0.00 ng/mL
 Acq. Date: 3/5/2010
 Acq. Time: 7:29:01 PM
 Modified: No

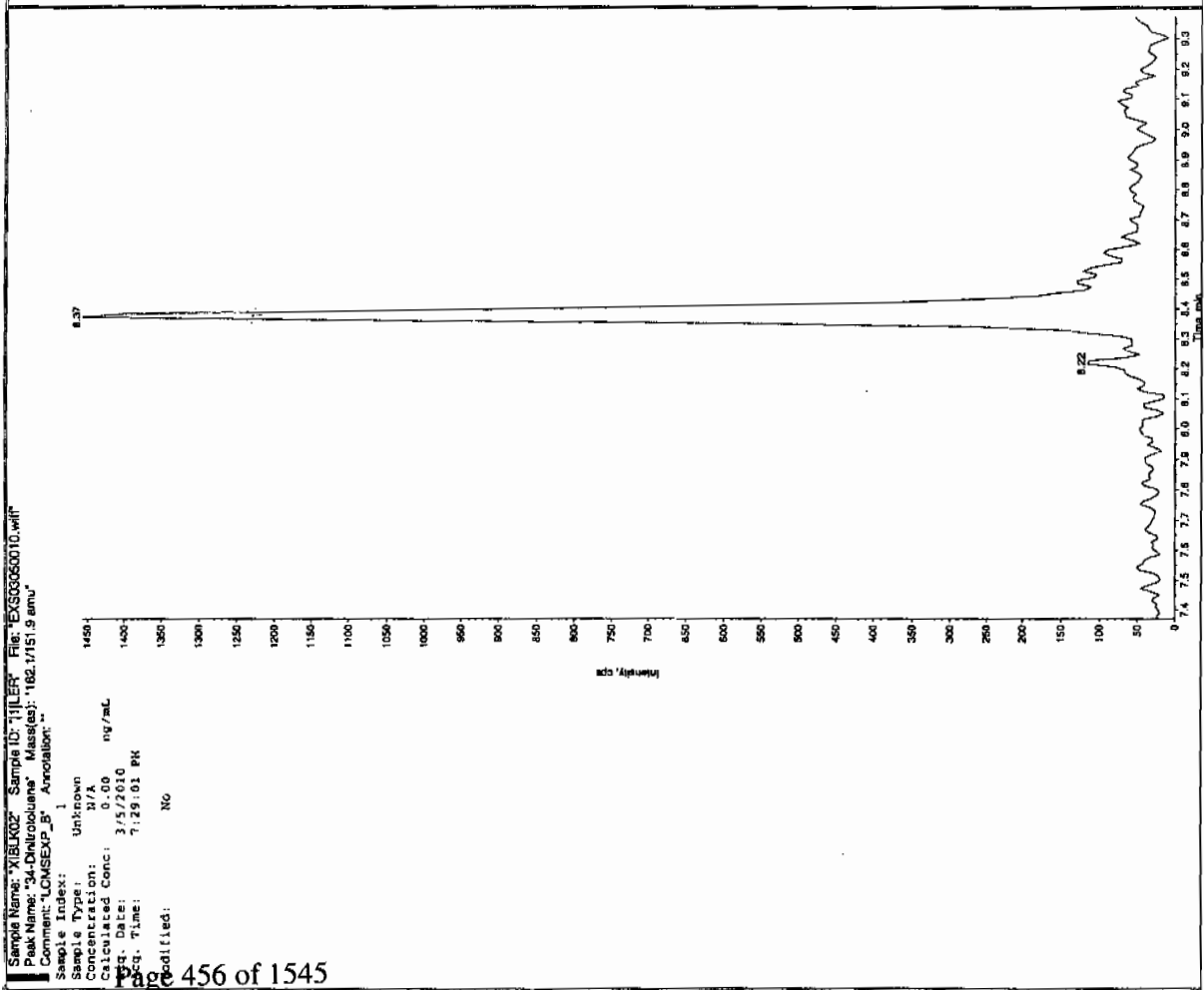
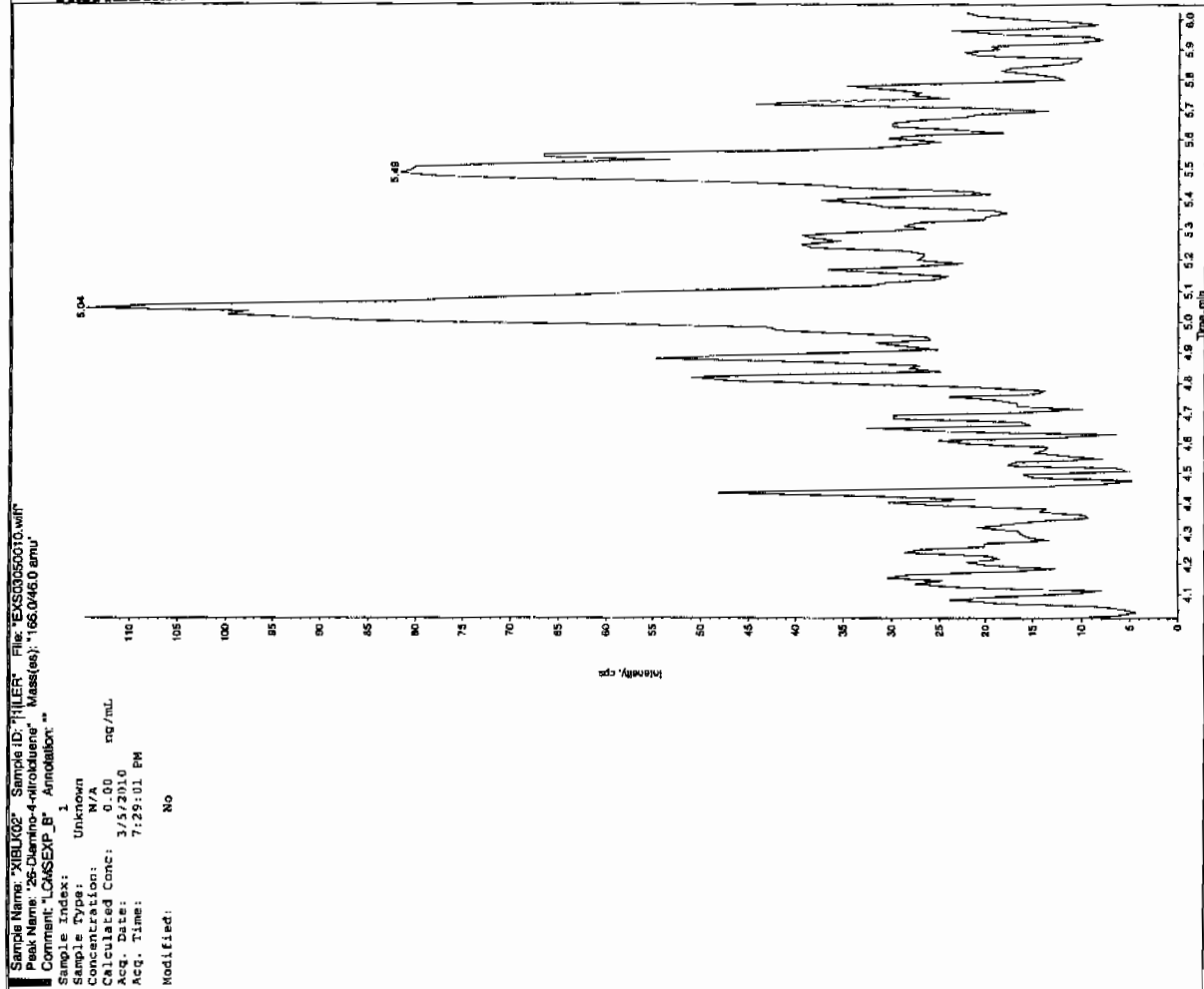


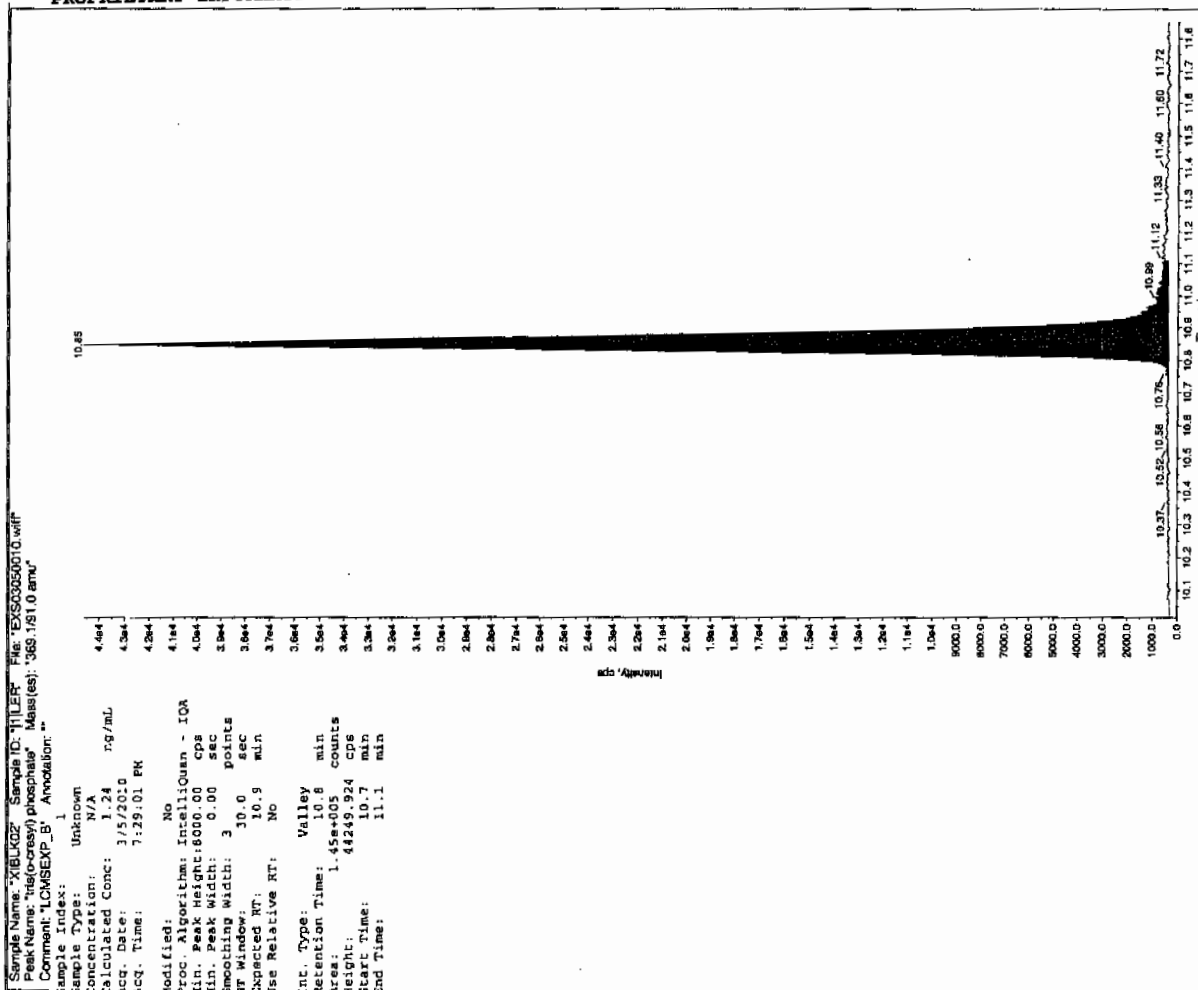
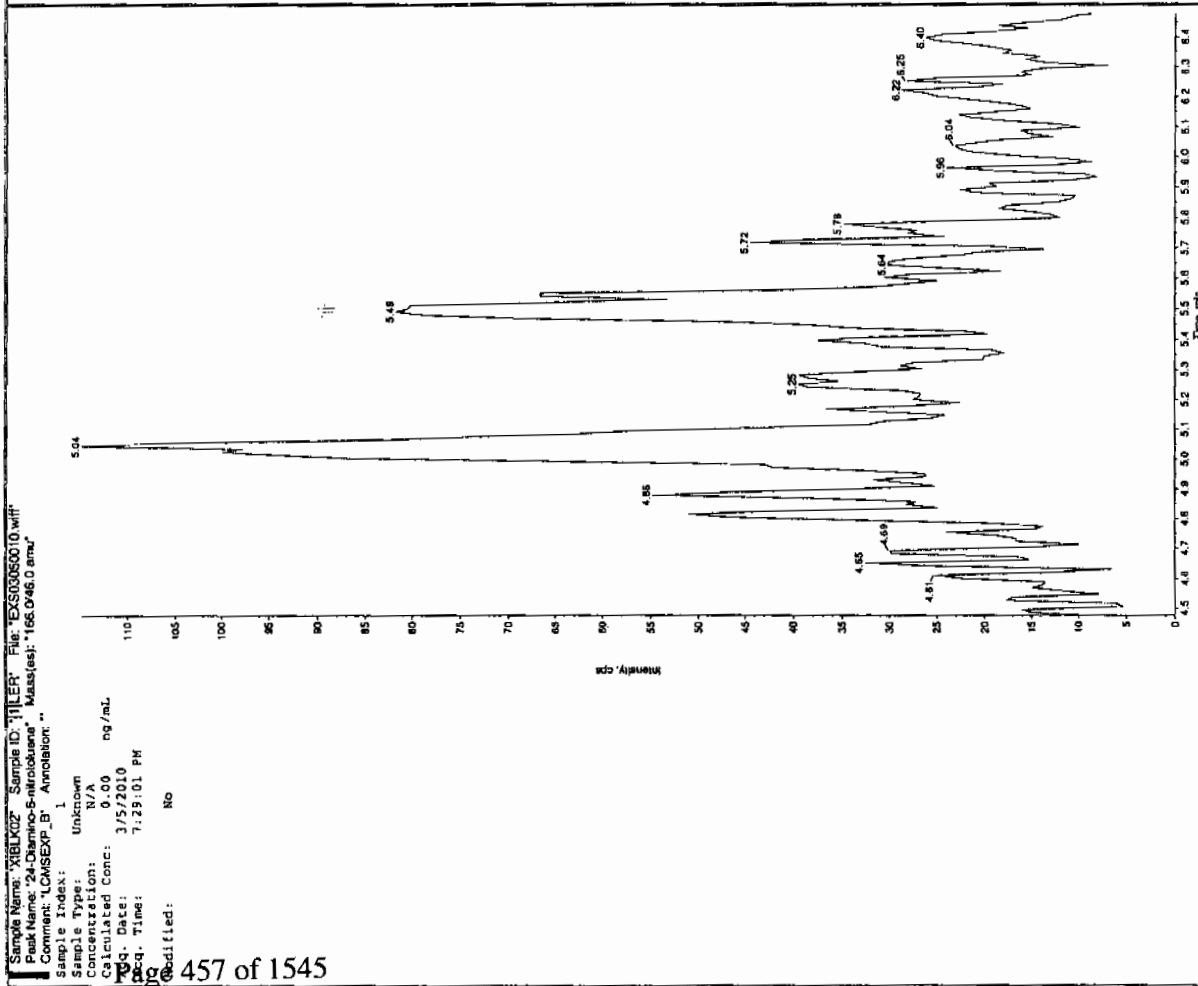
Sample Name: "XIBUX02" Sample ID: "TILER" File: "EXS03000010.will"
 Peak Name: "35-Dinitroaniline" Mass(es): "182.046.0 amu"
 Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A
 Calculated Conc: 0.00 ng/mL
 Acq. Date: 3/5/2010
 Acq. Time: 7:29:01 PM
 Modified: No



4/11/10





4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1981

Lab Code: GEL

Lab Sample ID: XIBLK03

Analysis Date: 05-MAR-10 20:00

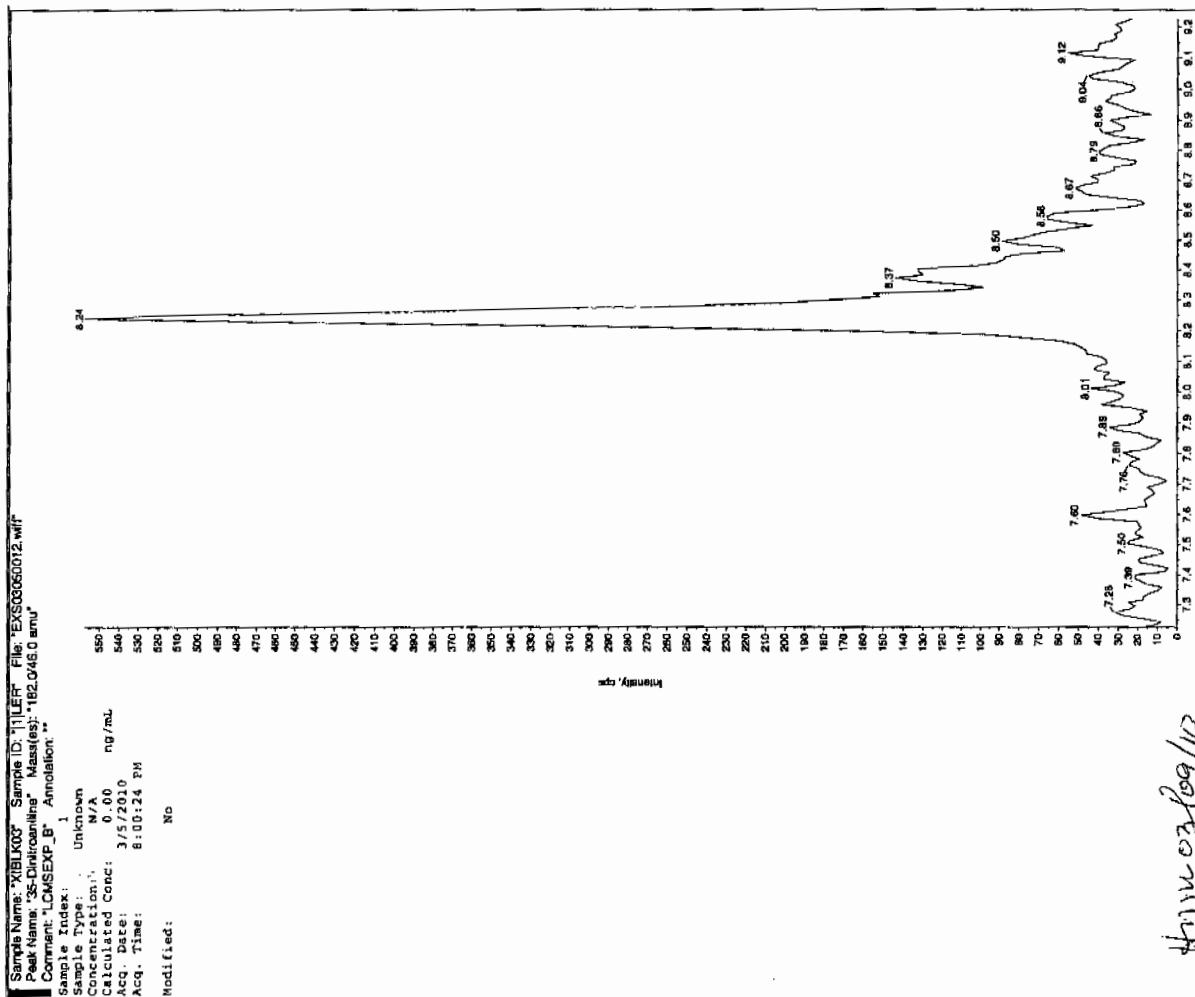
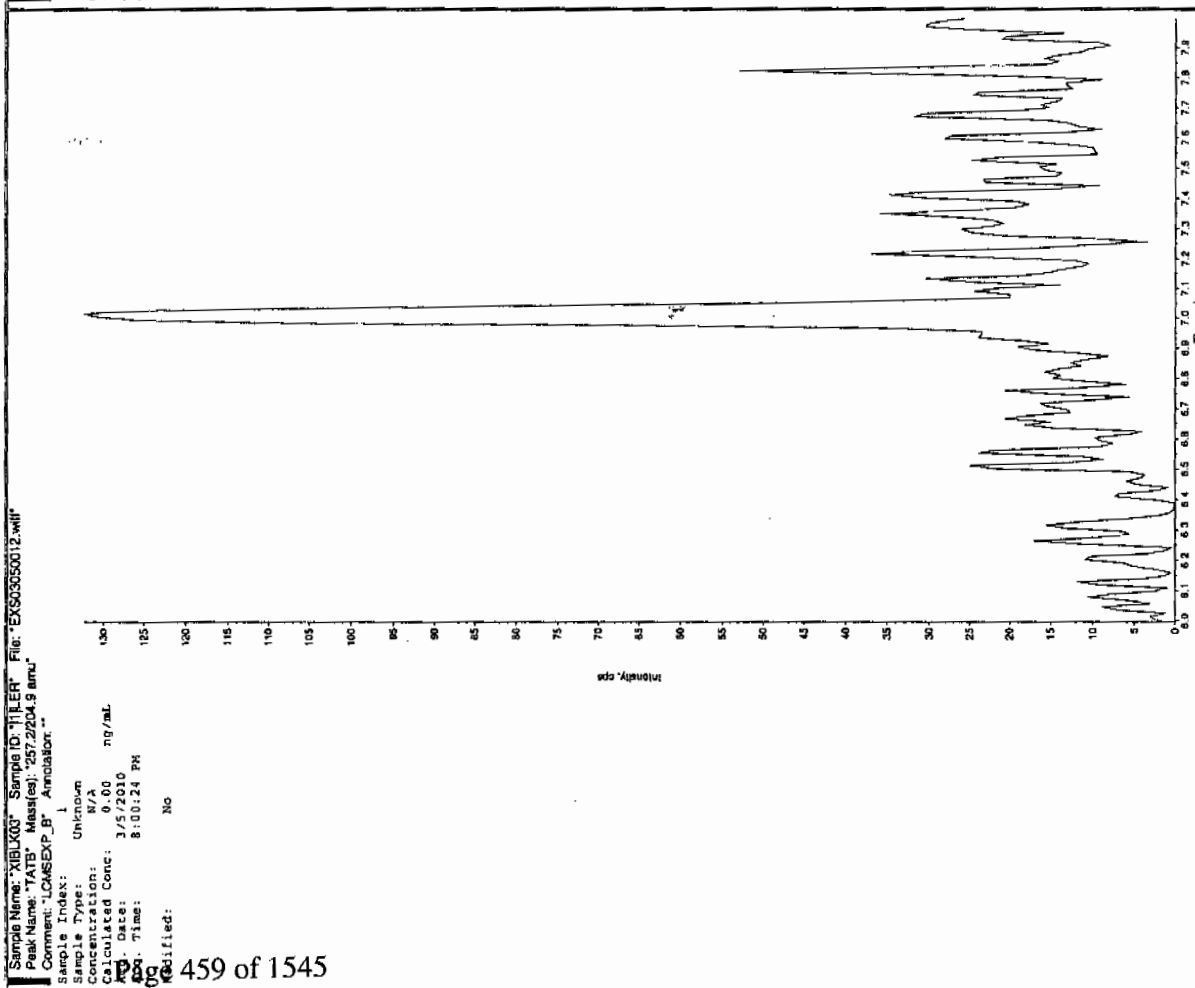
GEL Data File: EXS03050012.wiff

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

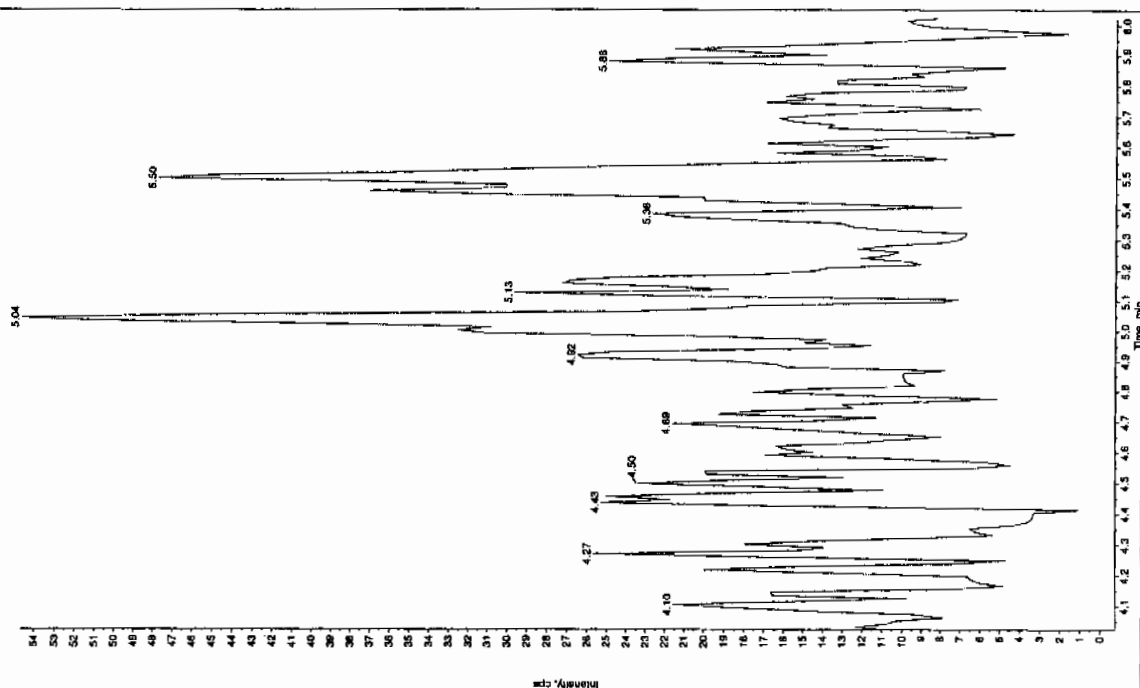
San 3/9/10



San 03/09/10

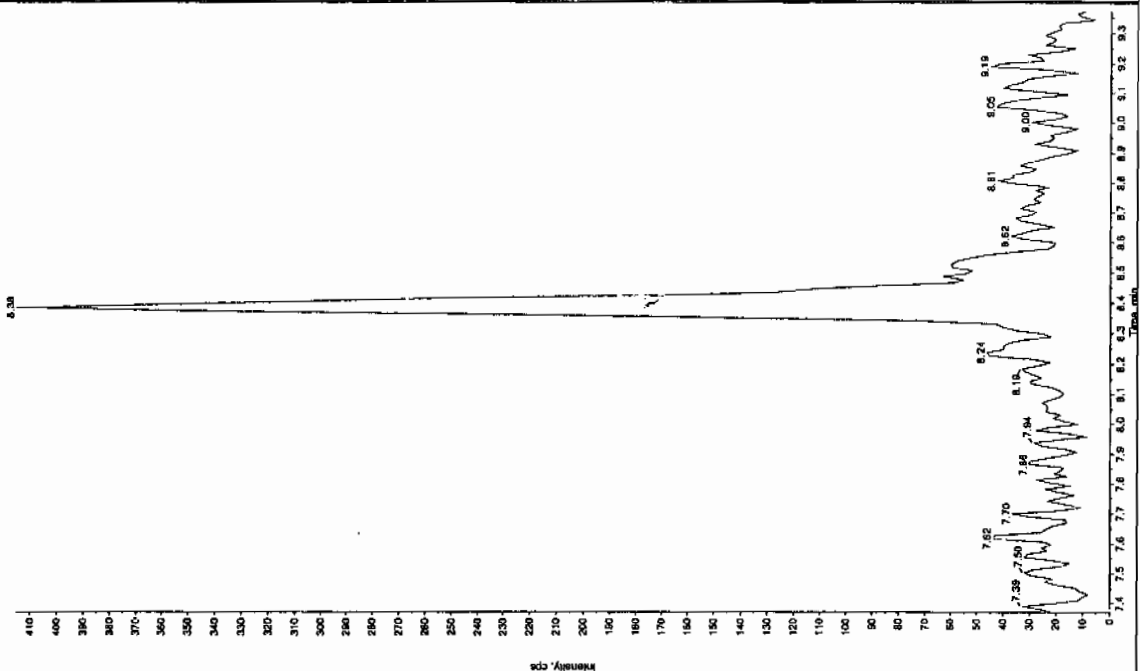
Sample Name: "XBLK03" Sample ID: "T1LER" File: "EXS03050012.will"
 Peak Name: "26-Diamino-4-nitrobenzene" Mass(es): "186.0466.0 amu"
 Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
 Sample Type: Unknown
 Concentration: 0.00 ng/mL
 Calculated Conc: 3/5/2010
 Acq. Date: 8:00:24 PM
 Acq. Time: 8:00:24 PM
 Modified: No



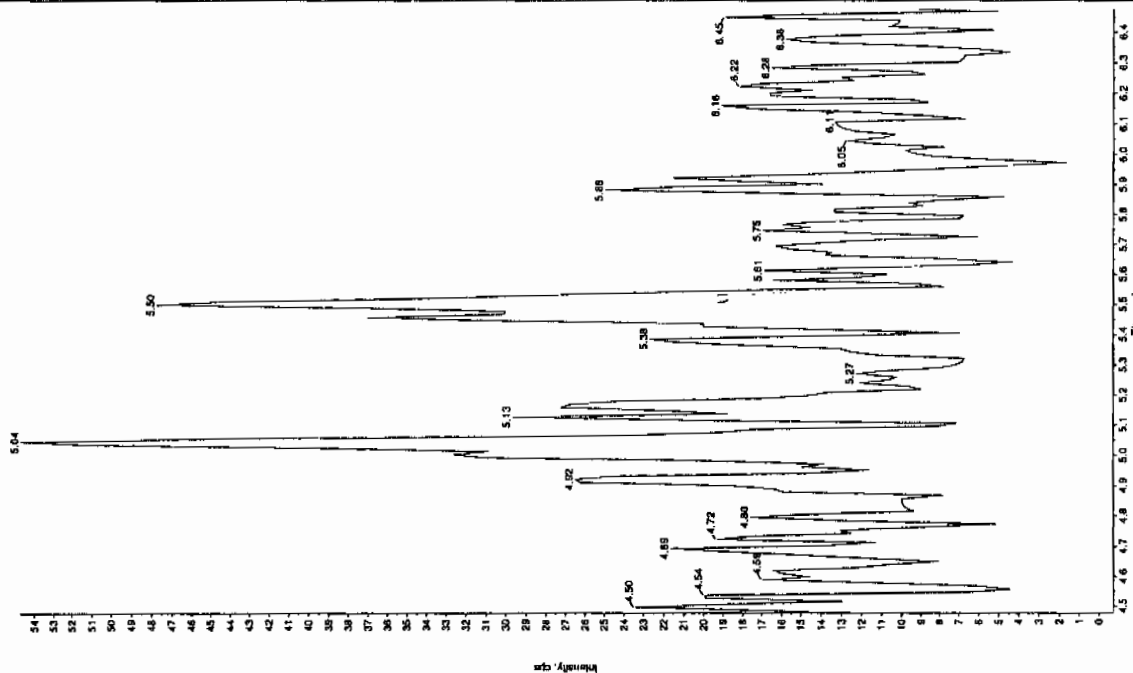
Sample Name: "XBLK03" Sample ID: "T1LER" File: "EXS03050012.will"
 Peak Name: "34-Dinitrobenzene" Mass(es): "182.1151.9 amu"
 Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A
 Calculated Conc: 3/5/2010
 Acq. Date: 8:00:24 PM
 Acq. Time: 8:00:24 PM
 Modified: No



Sample Name: "XIBU03" Sample ID: "111ER" File: "EXS03050012.wif"
 Peak Name: "1,10-dicyclohexylphosphazene" Mass(es): "358.1910 amu"
 Comment: "LCMSEXP_B" Annotation: "

Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A
 Accumulated Conc: 3.572010
 Acq. Date: 8:00:24 PM
 Acq. Time: 8:00:24 PM
 Modified: No
 Proc. Algorithm: IntelliQuan - IQA
 Min. Peak Height: 8000.00 cps
 Min. Peak Width: 0.00 sec
 Smoothing Width: 3 points
 RT Window: 30.0 sec
 Expected RT: 10.9 min
 Use Relative RT: No
 Int. Type: Valley
 Retention Time: 10.9 min
 Area: 7.77e+004 counts
 Height: 22750.788 cps
 Start Time: 10.0 min
 End Time: 11.1 min



4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1981

Lab Code: GEL

Lab Sample ID: XIBLK04

Analysis Date: 05-MAR-10 23:24

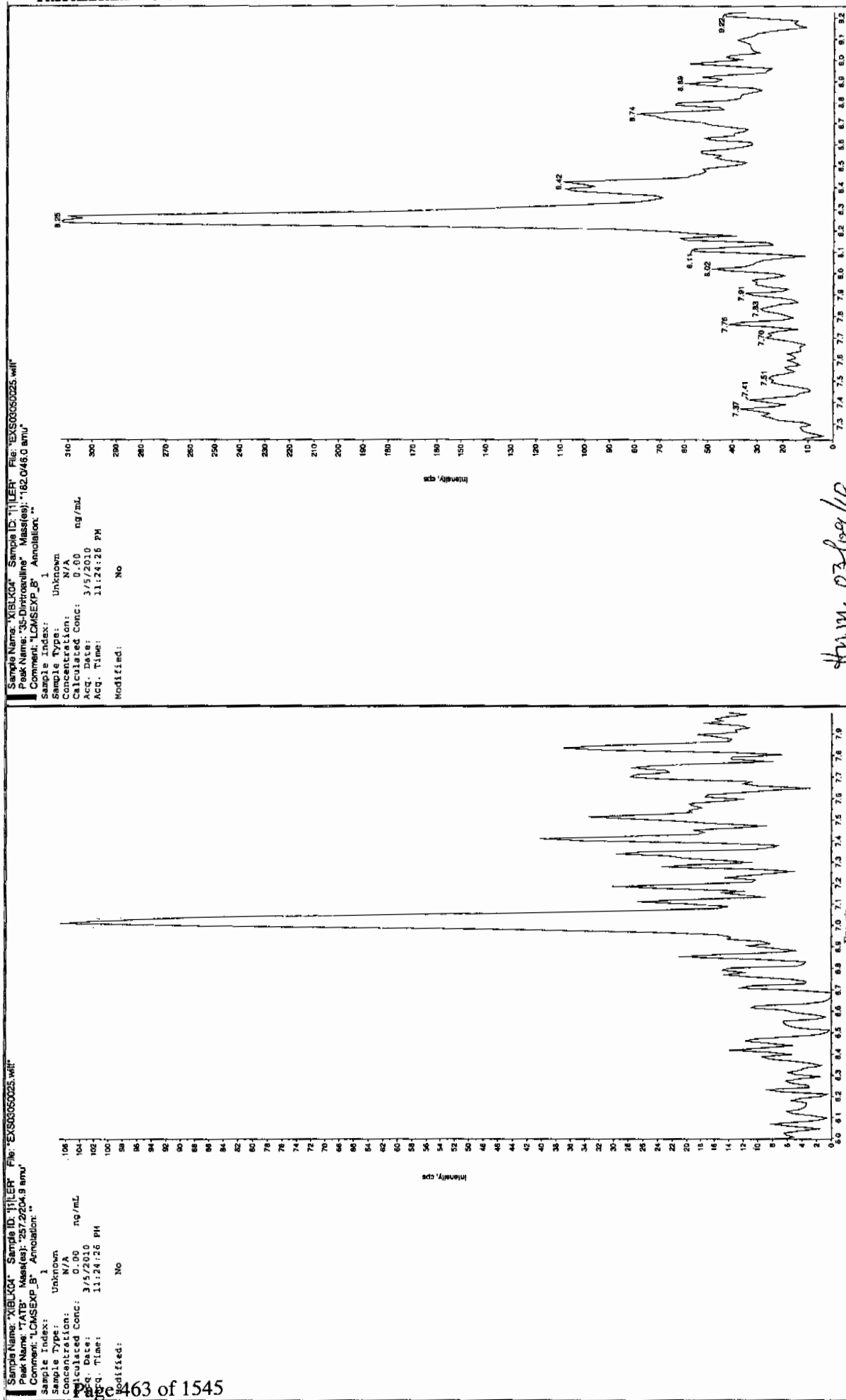
GEL Data File: EXS03050025.wiff

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

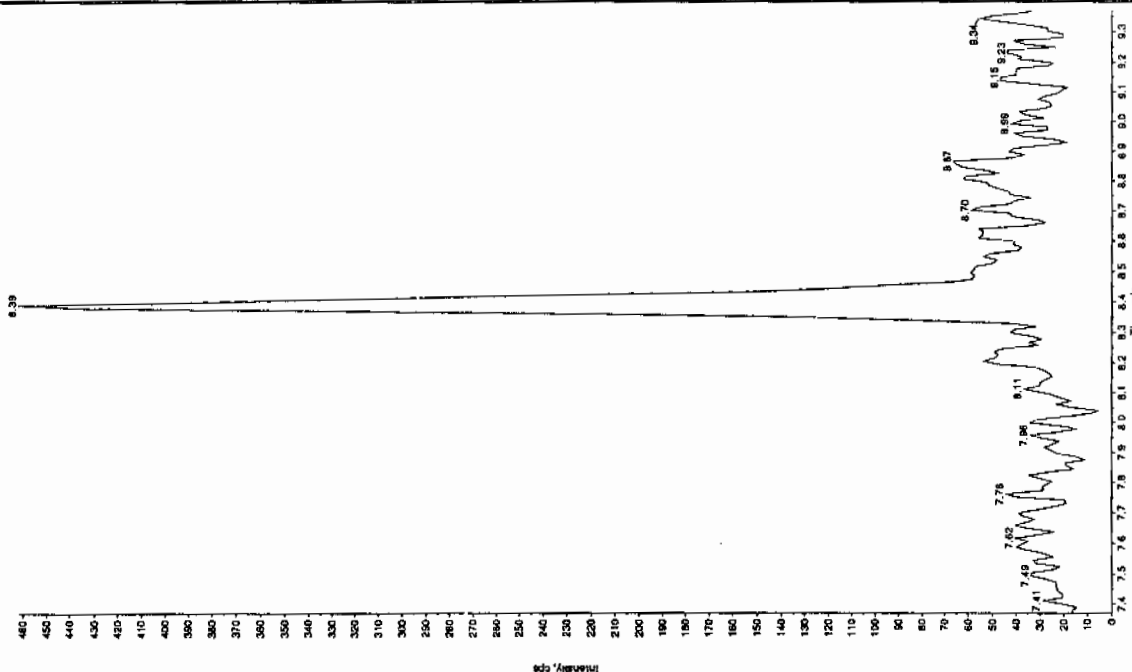
See 3/9/10



Hum 03/09/10

Sample Name: "XIBLX04" Sample ID: "111ER" File: "EX503050025.wif"
 Peak Name: "26-Diamino-4-nitrofluorene" Mass(es): "166.0460 amu"
 Comment: "LCMSEXP_B" Annotation: ""

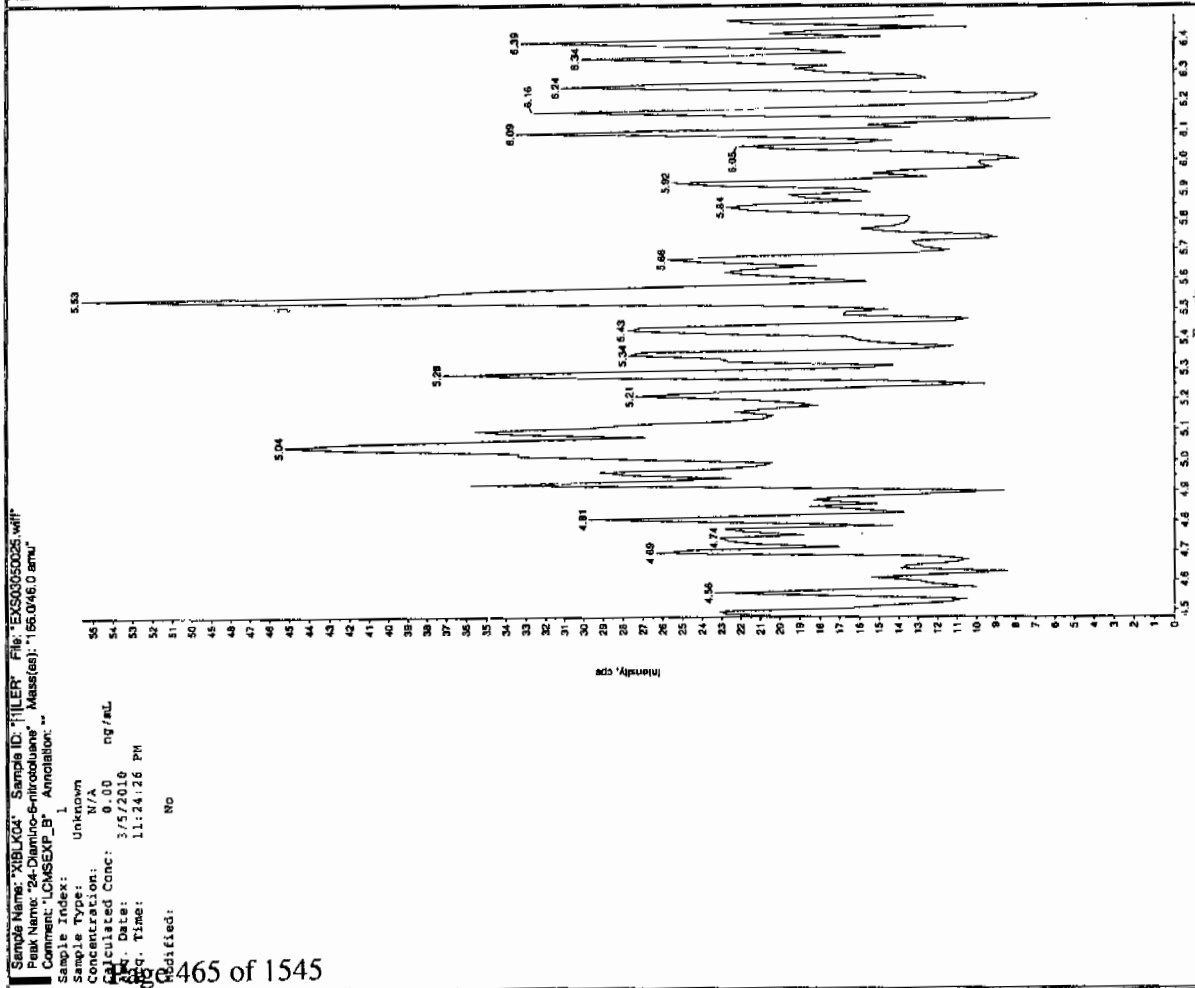
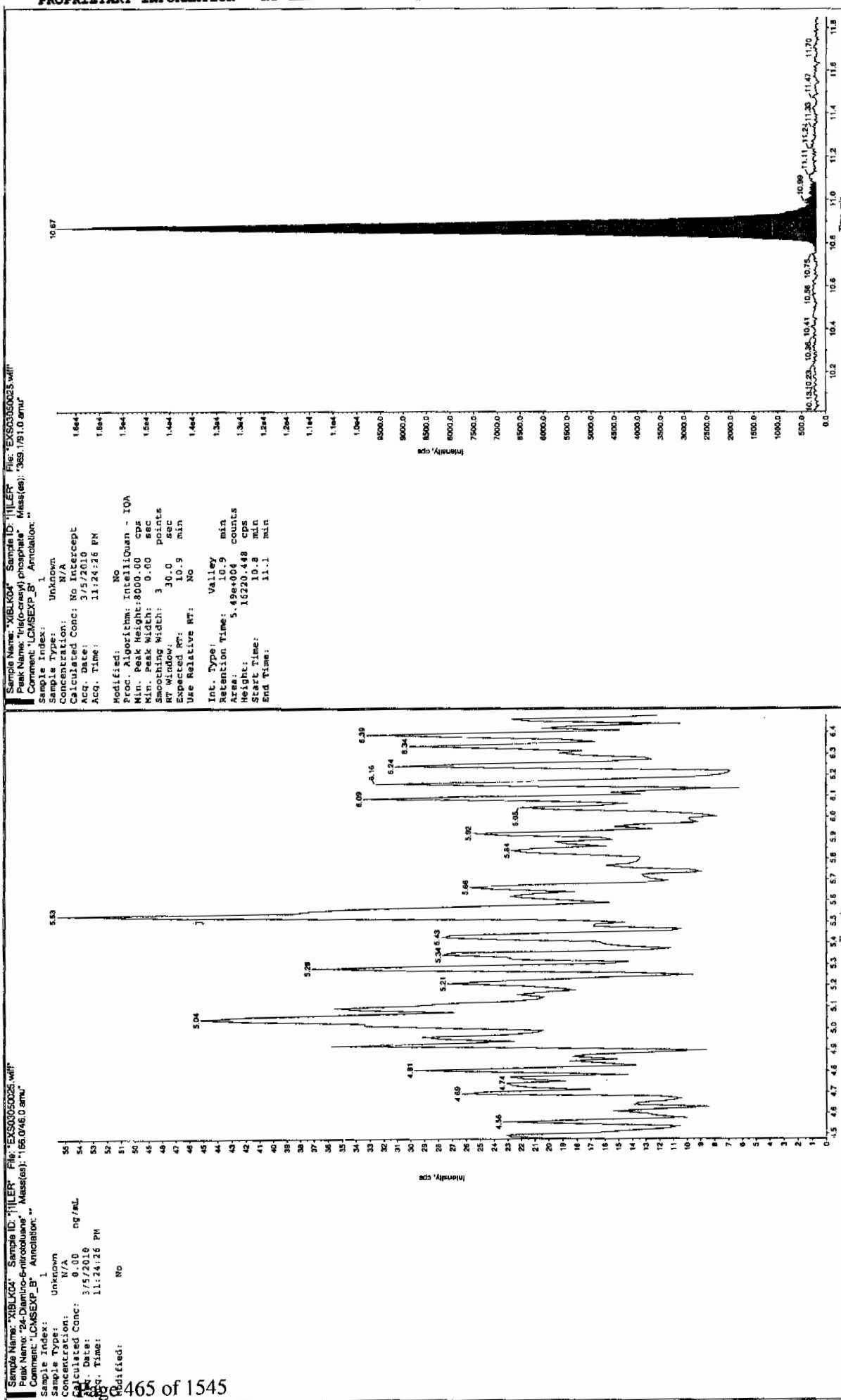
Sample Index: 1
 Sample Type: Unknown
 Concentration: 0.00 ng/mL
 Calculated Conc: 3/5/2010
 Acq. Date: 11:24:26 PM
 Acq. Time: 11:24:26 PM
 Modified: No



Sample Name: "XIBLX04" Sample ID: "111ER" File: "EX503050025.wif"
 Peak Name: "34-Nitrofluorene" Mass(es): "182.171519 amu"
 Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
 Sample Type: Unknown
 Concentration: 0.00 ng/mL
 Calculated Conc: 3/5/2010
 Acq. Date: 11:24:26 PM
 Acq. Time: 11:24:26 PM
 Modified: No





4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1981

Lab Code: GEL

Lab Sample ID: XIBLK05

Analysis Date: 06-MAR-10 02:17

GEL Data File: EXS03050036.wiff

Instrument ID: LCMSMS

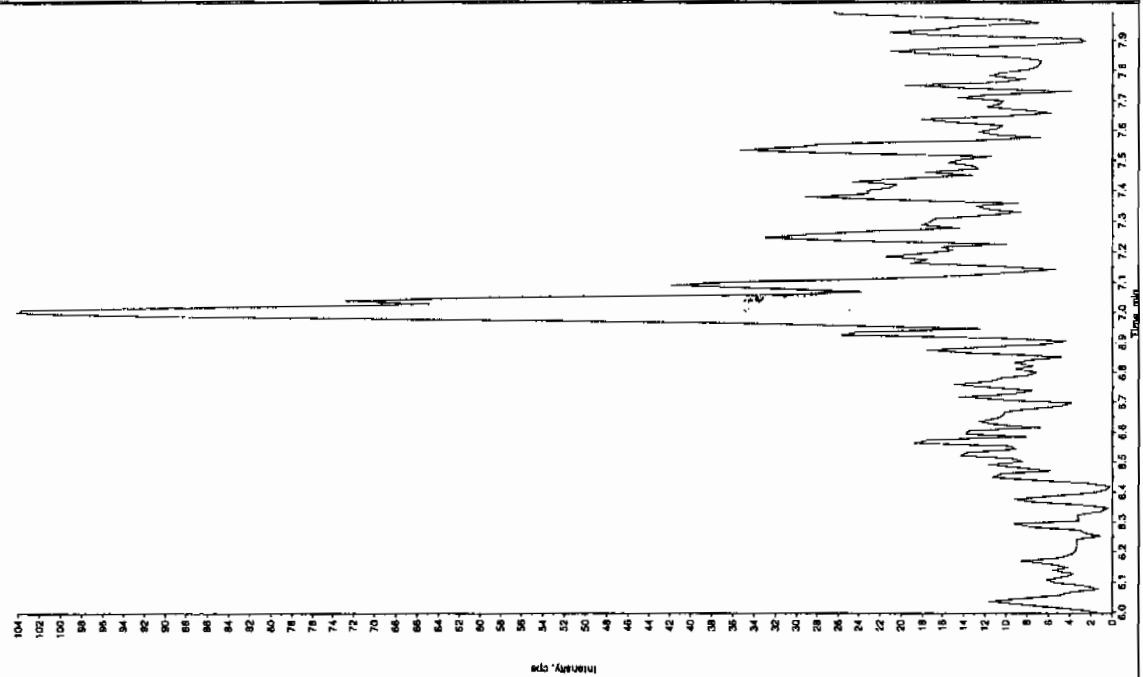
Column: Phenomenex Ultracarb 5u ODS(20)

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 3/9/10

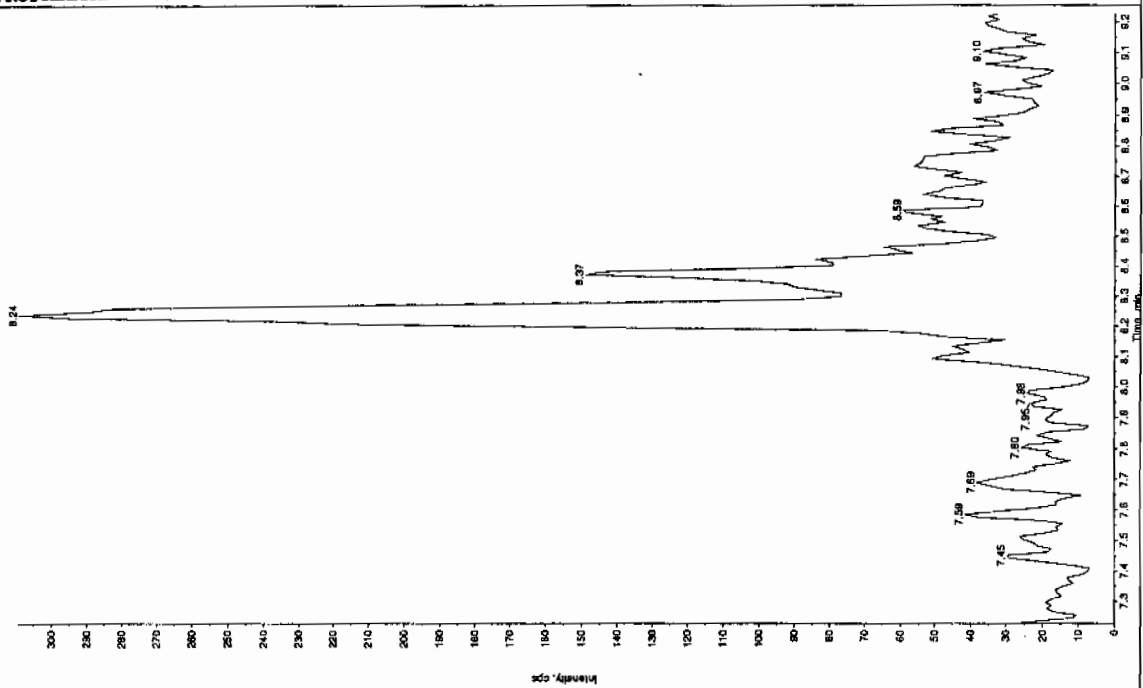
Sample Name: "XIBLK05" Sample ID: "11111" File: "EX503050305.will"
 Peak Name: "TA1TB" Mass(es): "257.2204.9 amu"
 Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A
 Calculated Conc: 0.00 ng/mL
 Acq. Date: 3/6/2010
 Acq. Time: 2:17:09 AM
 Modified: No

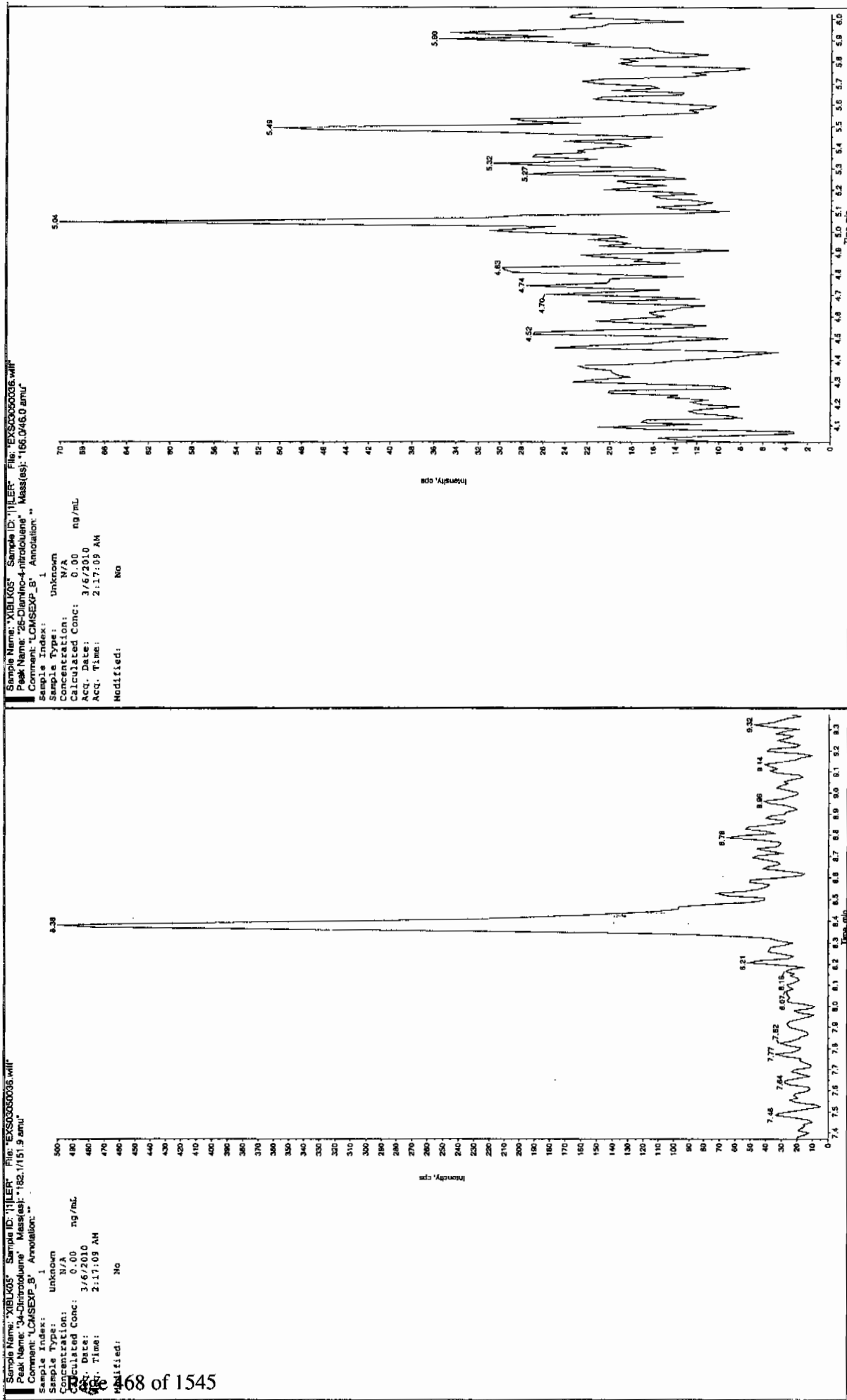


Sample Name: "XIBLK05" Sample ID: "11111" File: "EX503050305.will"
 Peak Name: "35-Dinitroaniline" Mass(es): "182.046.0 amu"
 Comment: "LCMSEXP_B" Annotation: ""

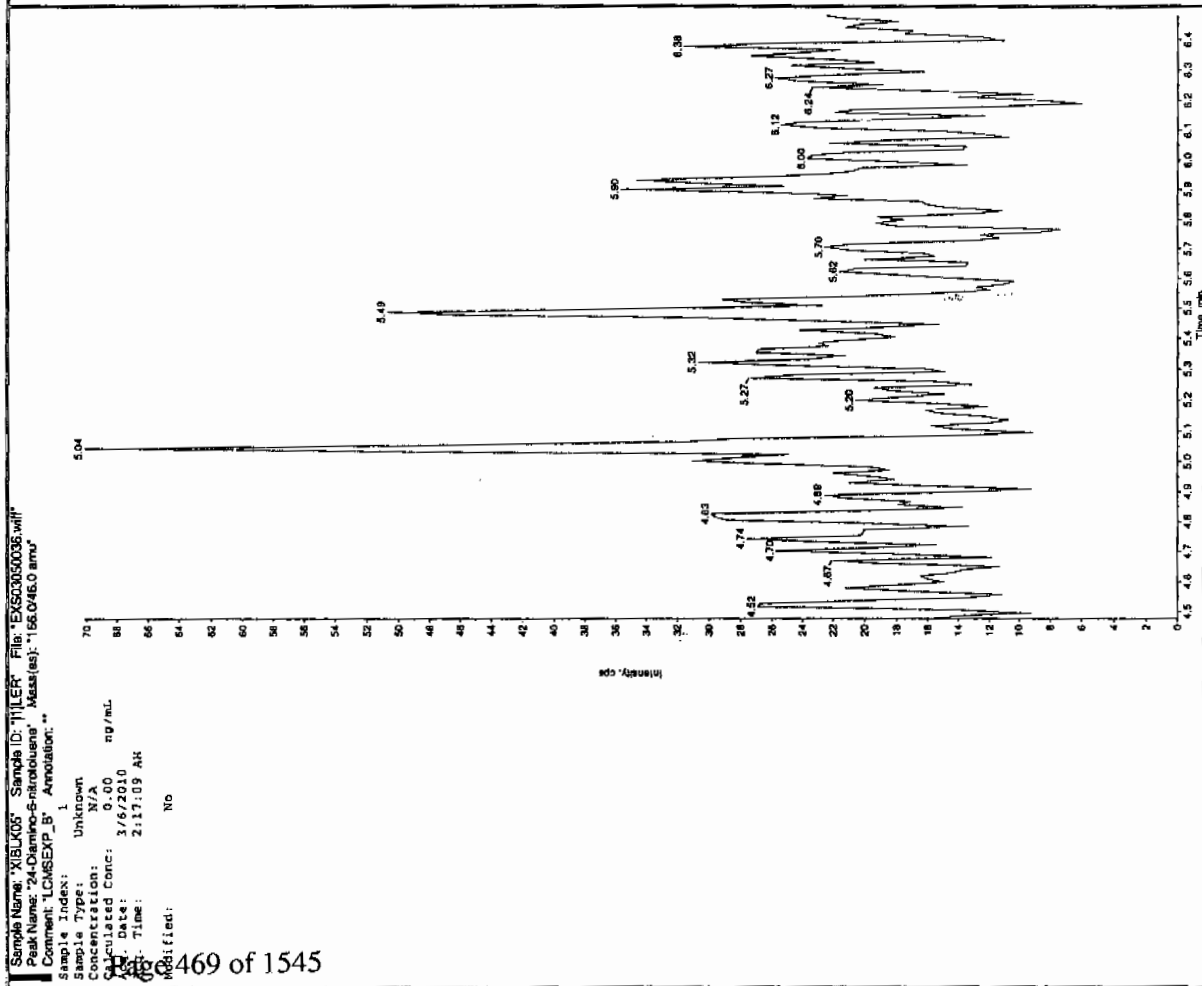
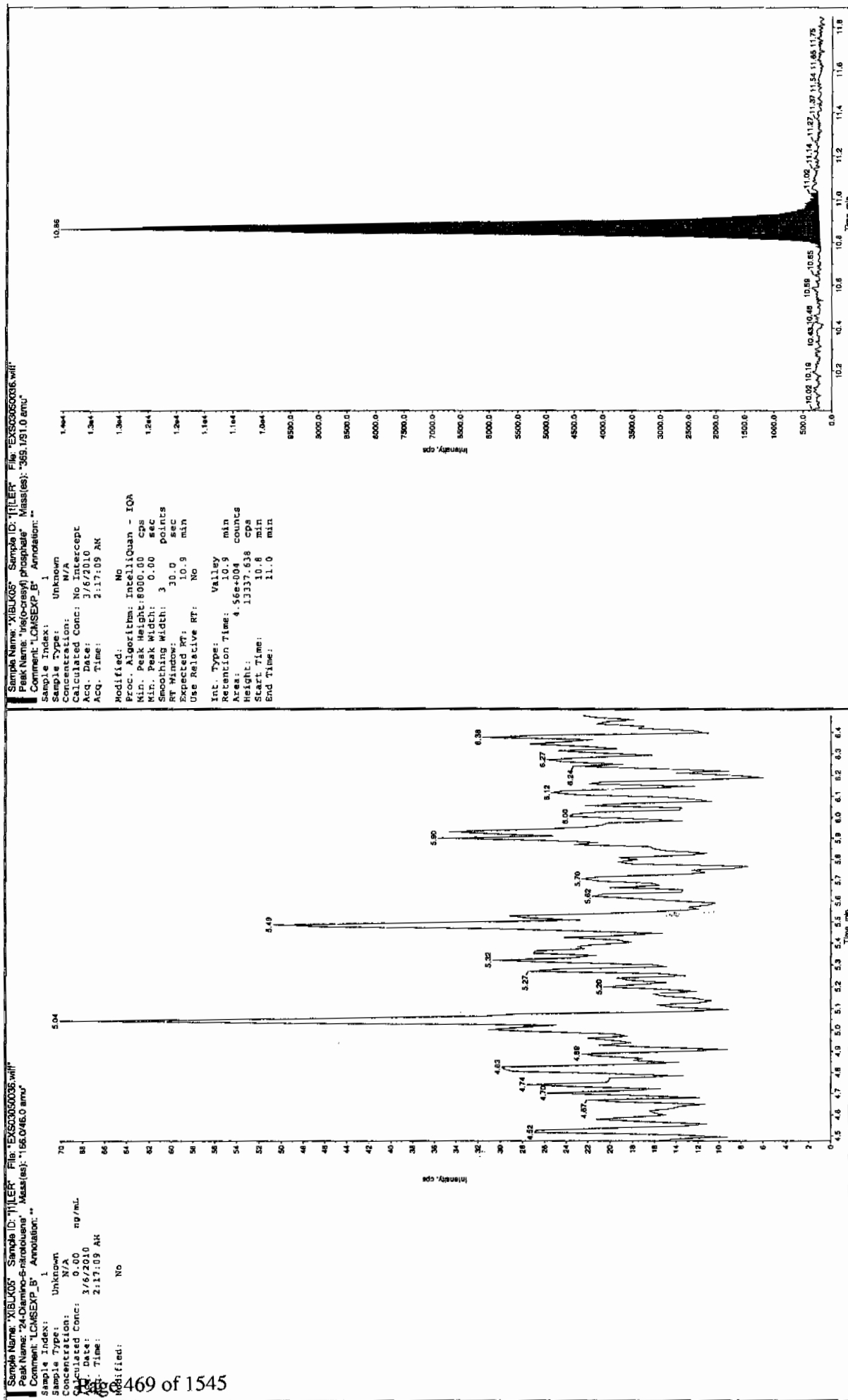
Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A
 Calculated Conc: 0.00 ng/mL
 Acq. Date: 3/6/2010
 Acq. Time: 2:17:09 AM
 Modified: No



See 3/9/10



*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): 10-1981

Lab Code: GEL

Lab Sample ID: XIBLK06

Analysis Date: 06-MAR-10 05:41

GEL Data File: EXS03050049.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

San 3/9/10

Sample Name: "XIBL005" Sample ID: "HILLER" File: "EX503050049.wif"

Peak Name: "35-Dinitrobenz" Mass(es): "182.045.0 amu"

Comment: "LCMSEXP_B" Annotation: "

Sample Index: 1

Sample Type: Unknown

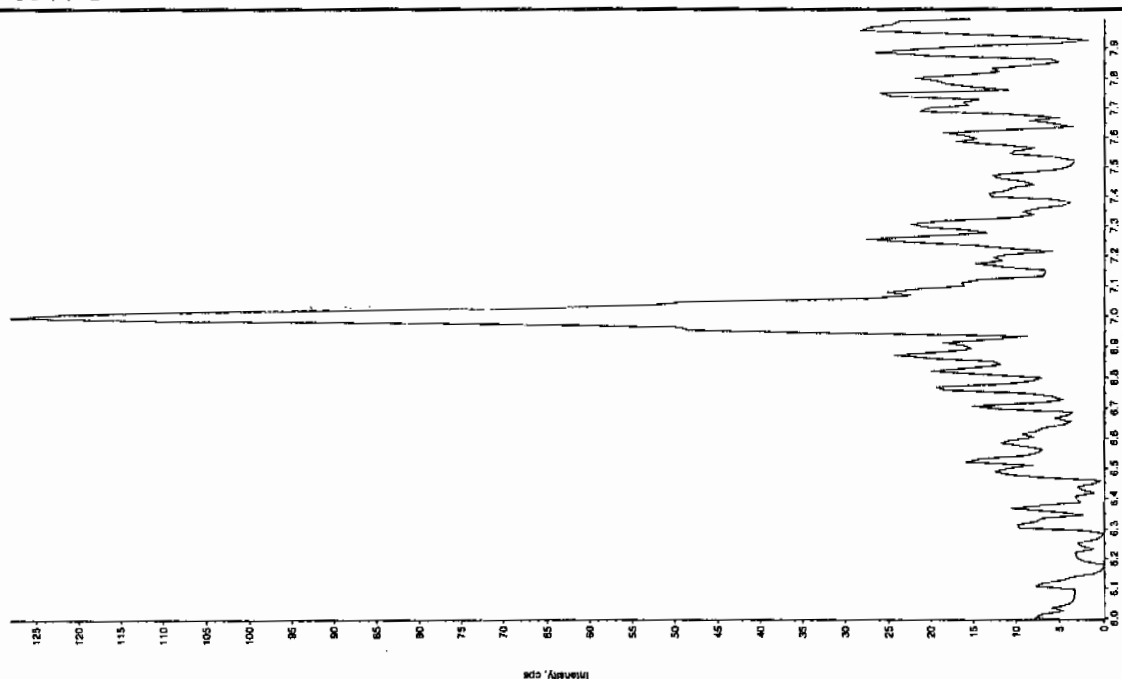
Concentration: N/A ng/mL

Calculated Conc: 0.00

Acq. Date: 3/6/2010

Acq. Time: 5:41:16 AM

Modified: No



Sample Name: "XIBL005" Sample ID: "HILLER" File: "EX503050049.wif"

Peak Name: "35-Dinitrobenz" Mass(es): "257.2204.9 amu"

Comment: "LCMSEXP_B" Annotation: "

Sample Index: 1

Sample Type: Unknown

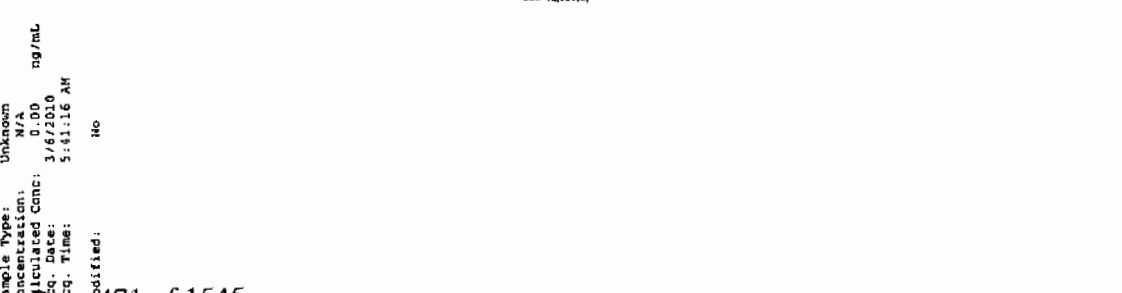
Concentration: N/A ng/mL

Calculated Conc: 0.00

Acq. Date: 3/6/2010

Acq. Time: 5:41:16 AM

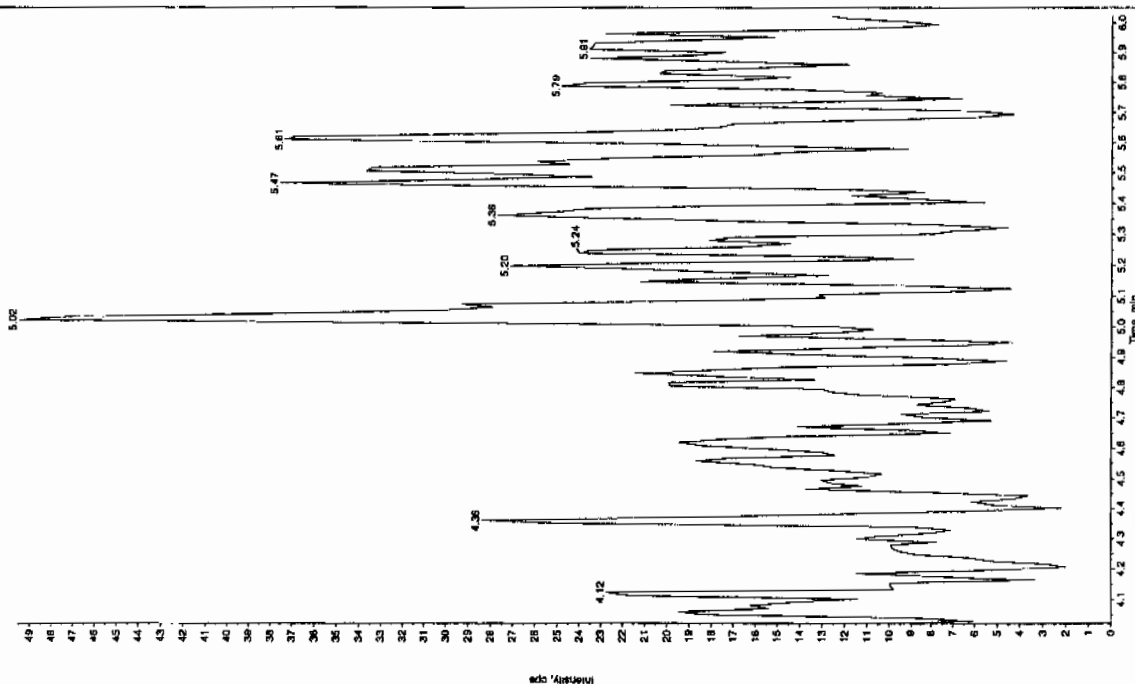
Modified: No



Time 03/09/10

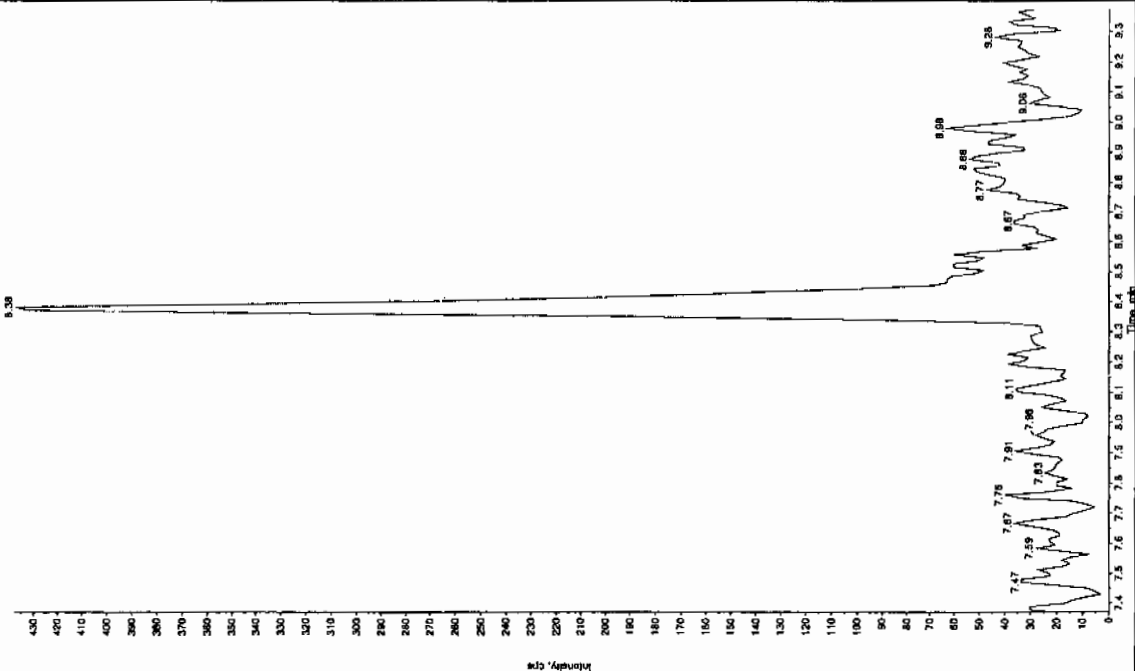
Sample Name: "XBLK06" Sample ID: "111ER" File: "EXS03050049.wif"
 Peak Name: "26-Diamino-4-nitrofluorene" Mass(es): "166.046.0 amu"
 Comment: "LCMSEXP_B" Annotation: ""

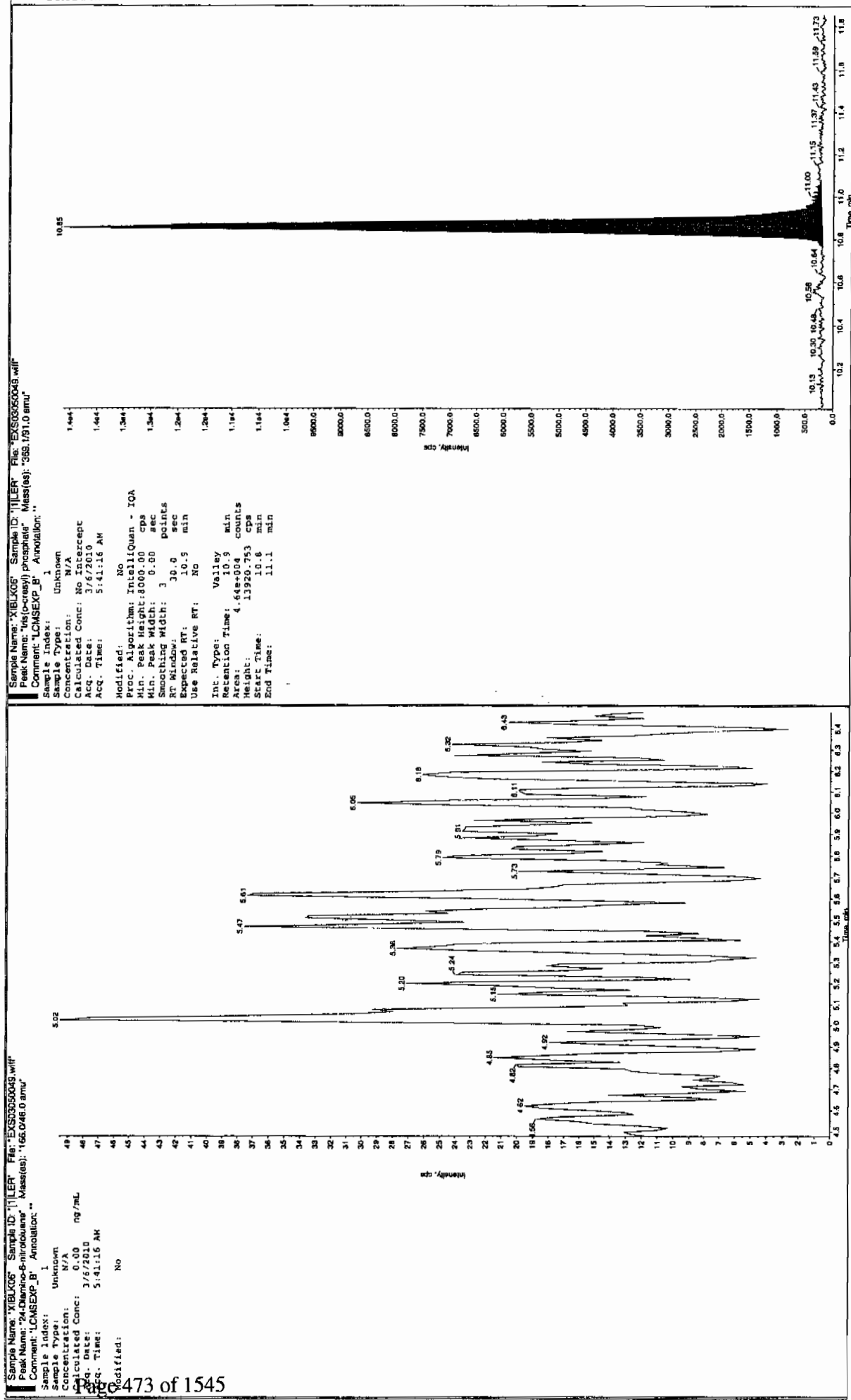
Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A ng/mL
 Calculated Conc: 0.00
 Acq. Date: 3/6/2010
 Acq. Time: 5:41:16 AM
 Modified: No



Sample Name: "XBLK06" Sample ID: "111ER" File: "EXS03050049.wif"
 Peak Name: "34-Dinitrofluorene" Mass(es): "182.171.9 amu"
 Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A ng/mL
 Calculated Conc: 0.00
 Acq. Date: 3/6/2010
 Acq. Time: 5:41:16 AM
 Modified: No





Nairb.ref

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

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

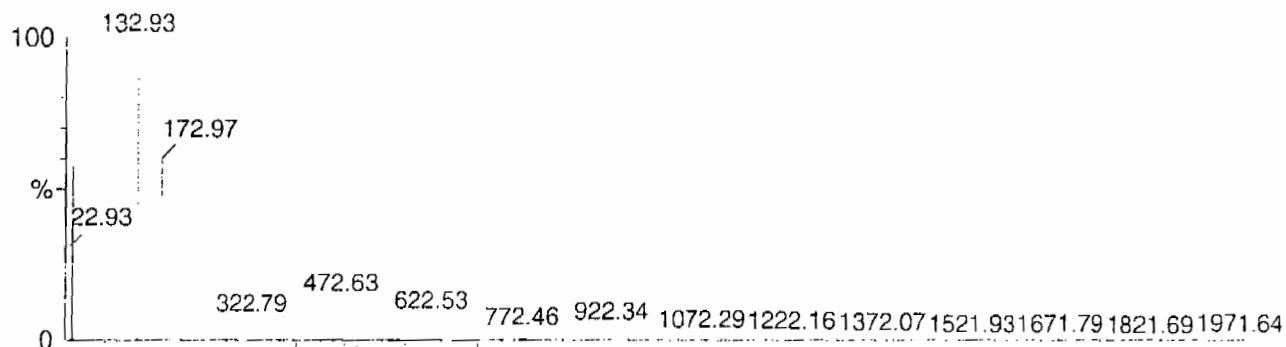
Calibration Report - MS1 Static

Page 1 of 1

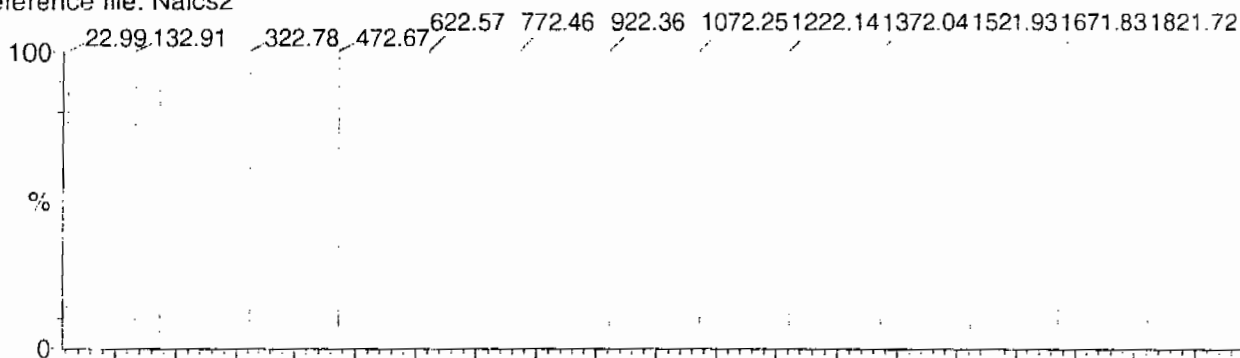
Printed: Fri Aug 25 10:50:01 2006

Data file: STATMS1 - Calibrated

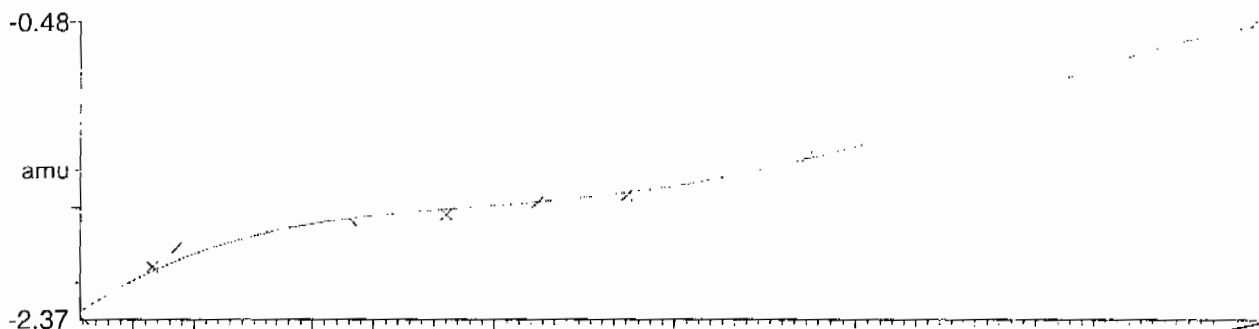
15 matches of 15 tested references



Reference file: Naics2

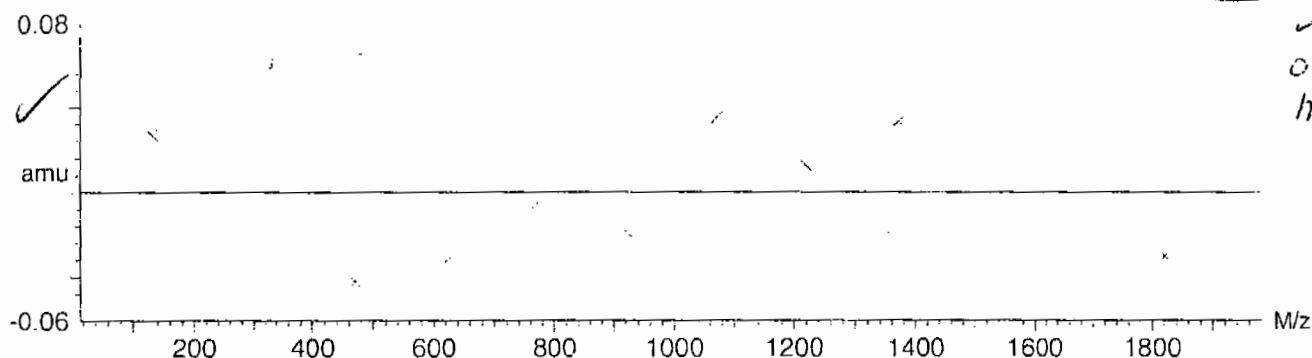


Mass difference (Raw - Ref mass)



Residuals

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



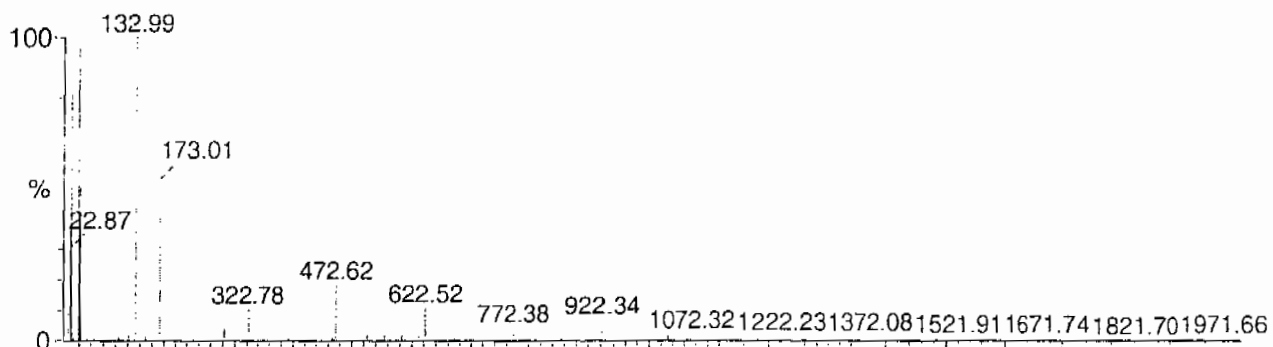
Calibration Report - MS1 Scanning

Page 1 of 1

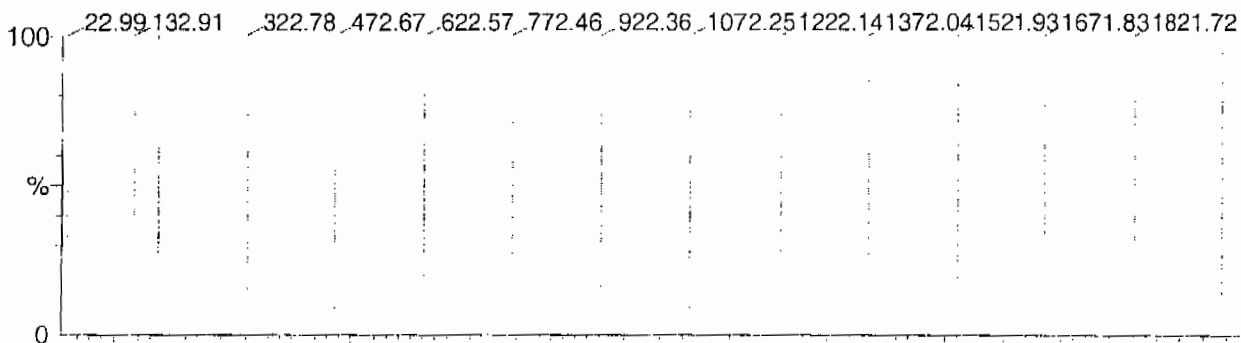
Printed: Fri Aug 25 10:51:06 2006

Data file: SCNMS1 - Calibrated

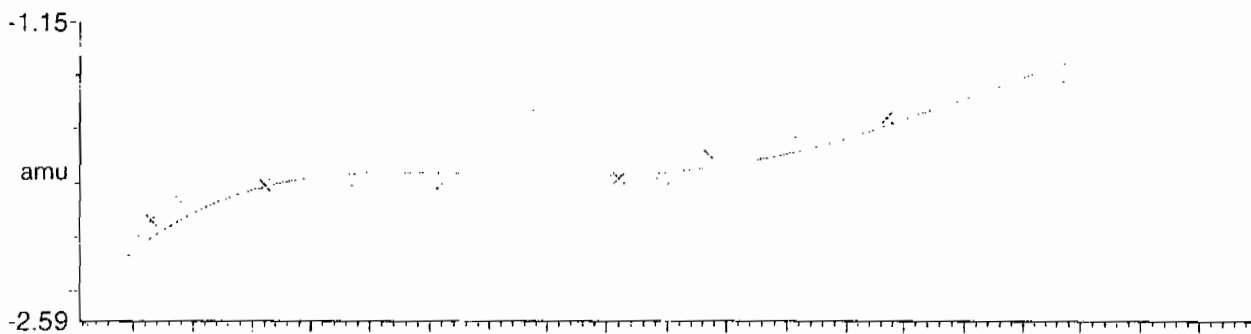
15 matches of 15 tested references



Reference file: Naics2

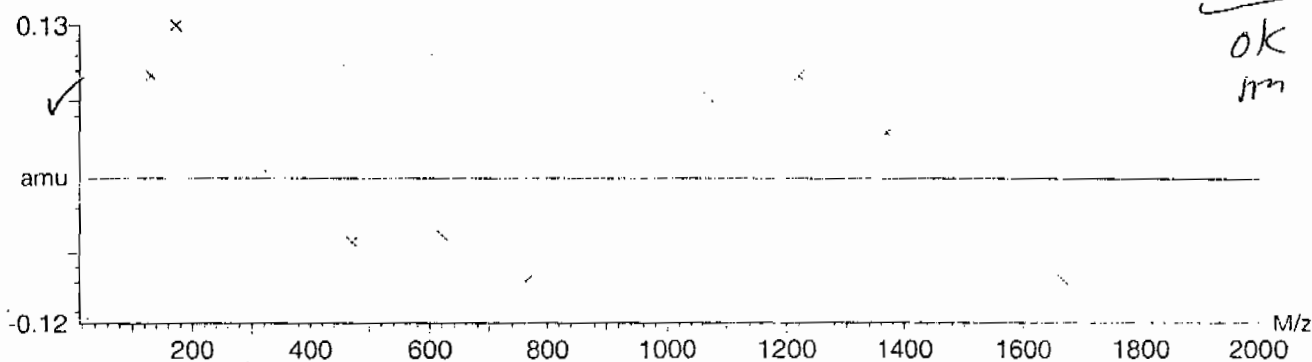


Mass difference (Raw - Ref mass)



Residuals

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



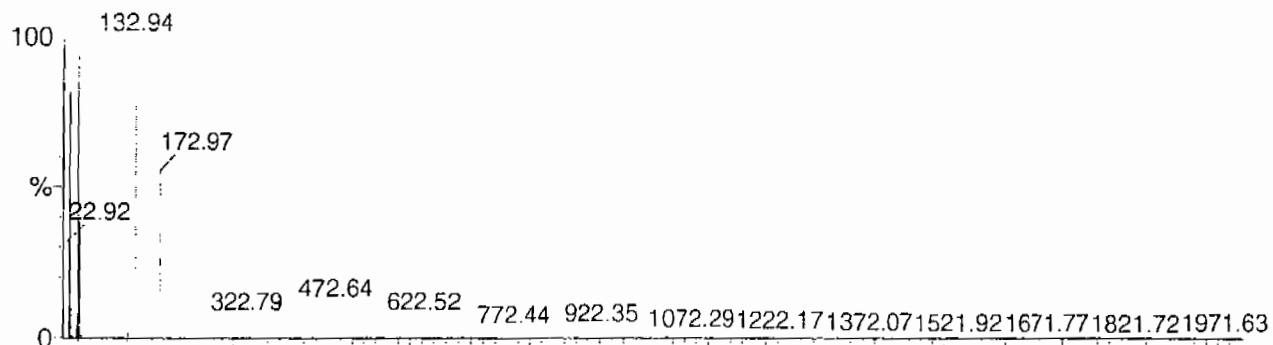
Calibration Report - MS1 Scan Speed Compensation

Page 1 of 1

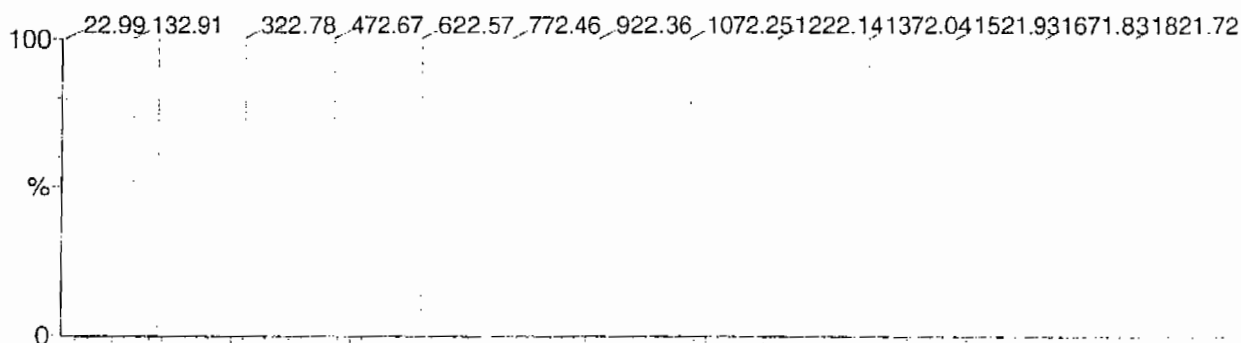
Printed: Fri Aug 25 10:52:01 2006

Data file: FASTMS1 - Calibrated

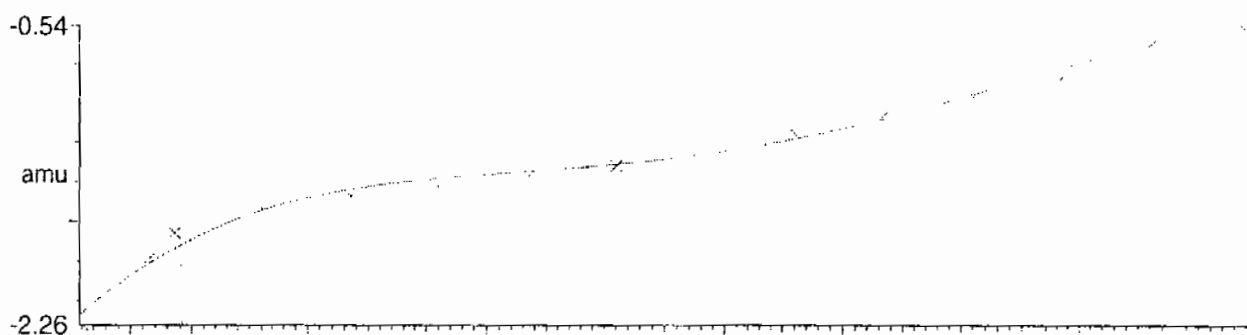
15 matches of 15 tested references



Reference file: Naics2

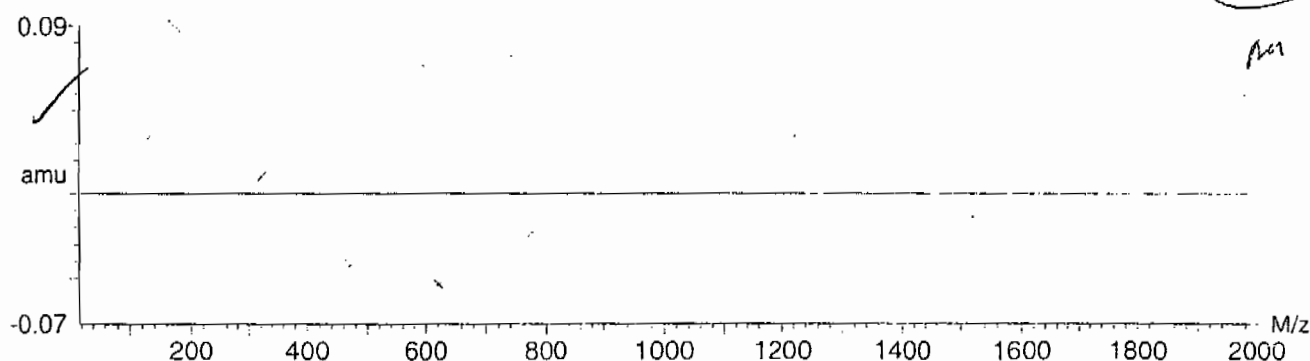


Mass difference (Raw - Ref mass)



Residuals

Mean residual = $3.486639 \times 10^{-9} \pm 0.040487$



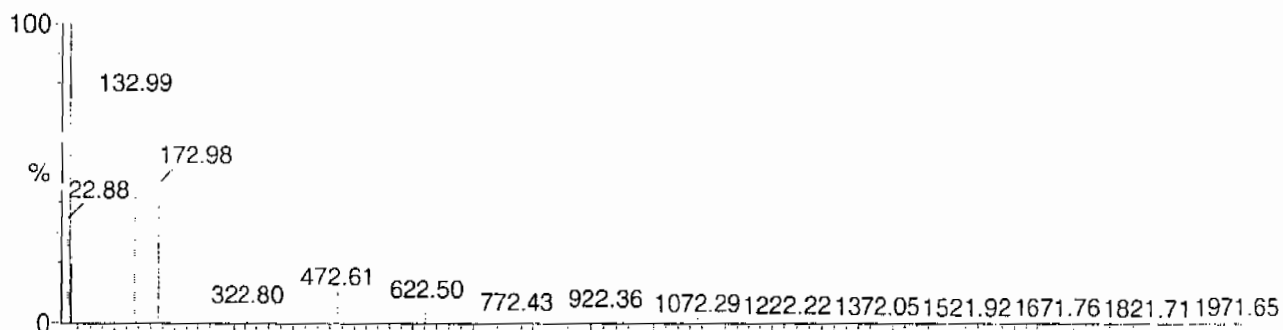
Calibration Report - MS2 Static

Page 1 of 1

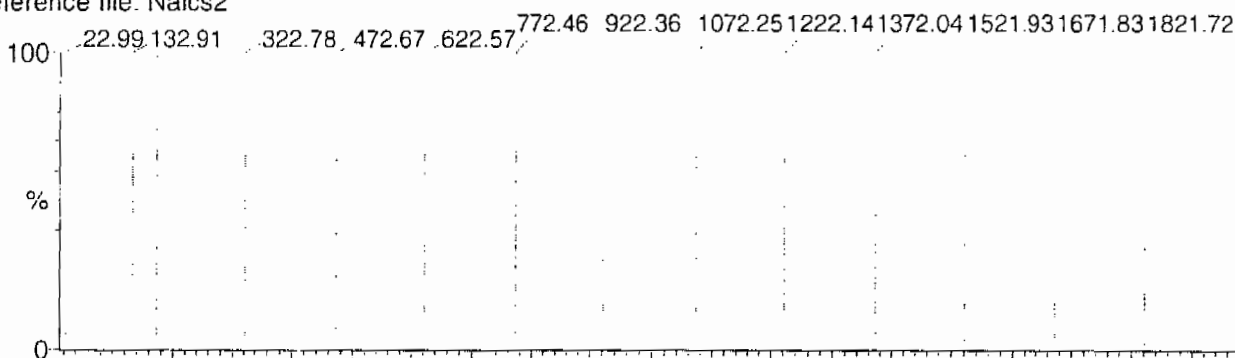
Printed: Fri Aug 25 10:52:54 2006

Data file: STATMS2 - Calibrated

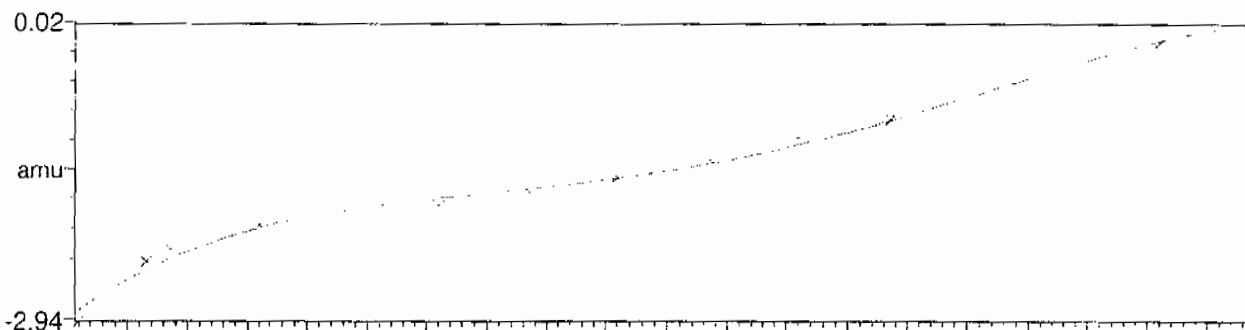
15 matches of 15 tested references



Reference file: Naics2

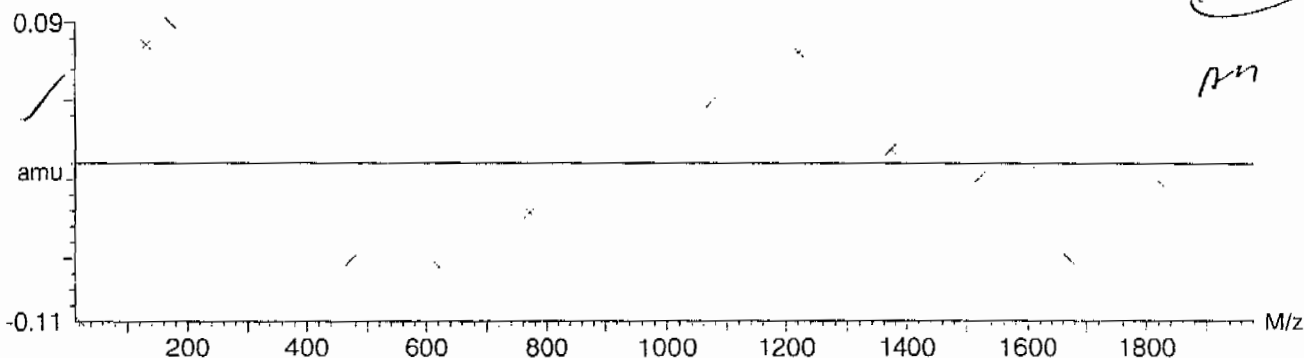


Mass difference (Raw - Ref mass)



Residuals

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



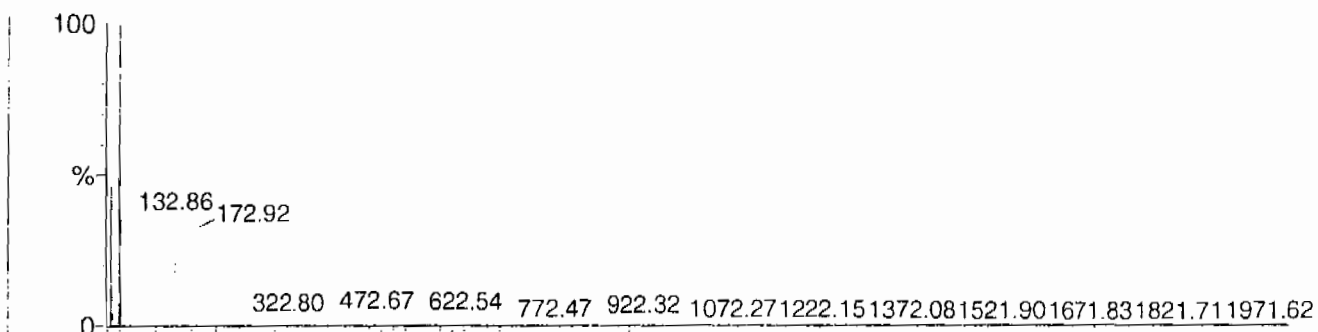
Calibration Report - MS2 Scanning

Page 1 of 1

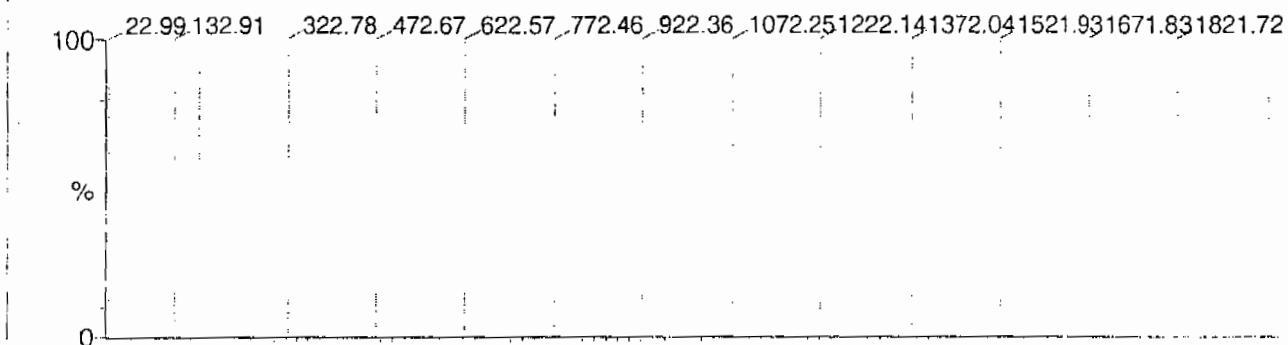
Printed: Fri Aug 25 10:54:00 2006

Data file: SCNMS2 - Calibrated

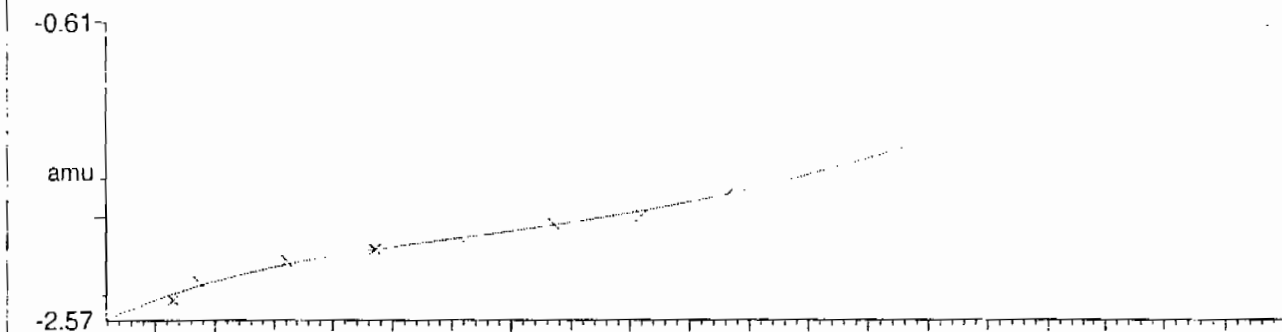
14 matches of 15 tested references



Reference file: Naics2

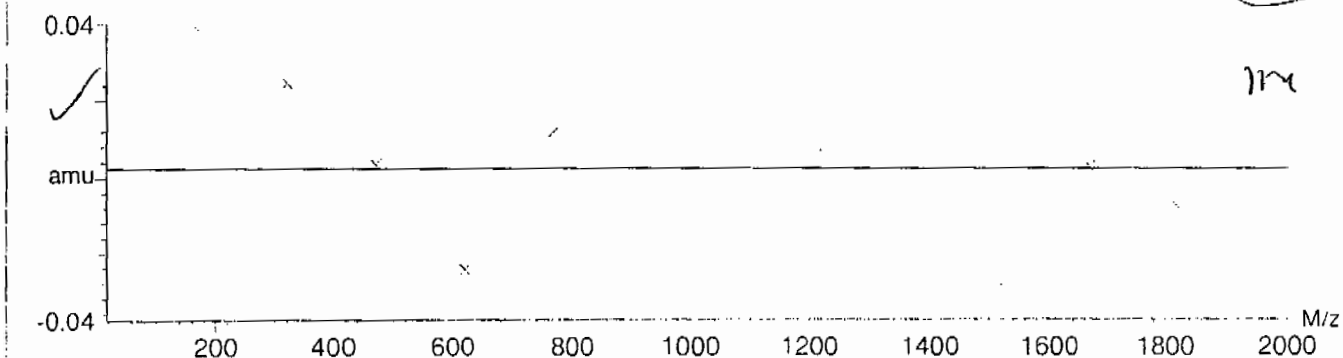


Mass difference (Raw - Ref mass)



Residuals

Mean residual = $-2.623502e-9 \pm 0.025622$



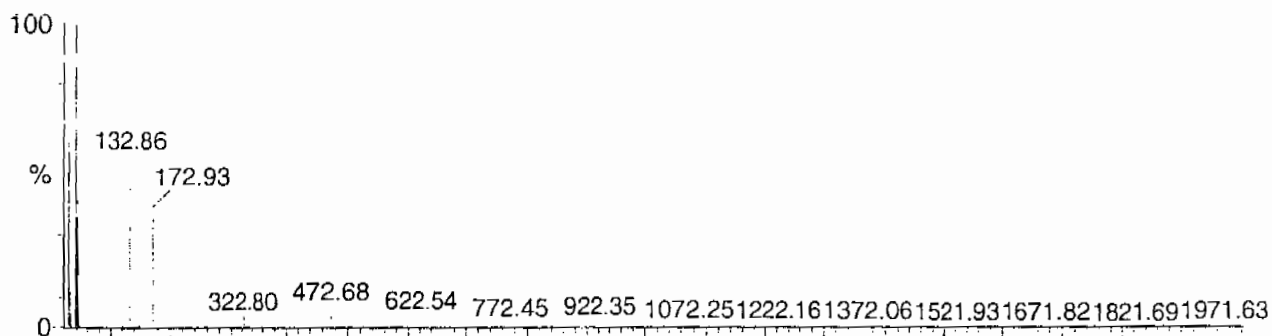
Calibration Report - MS2 Scan Speed Compensation

Page 1 of 1

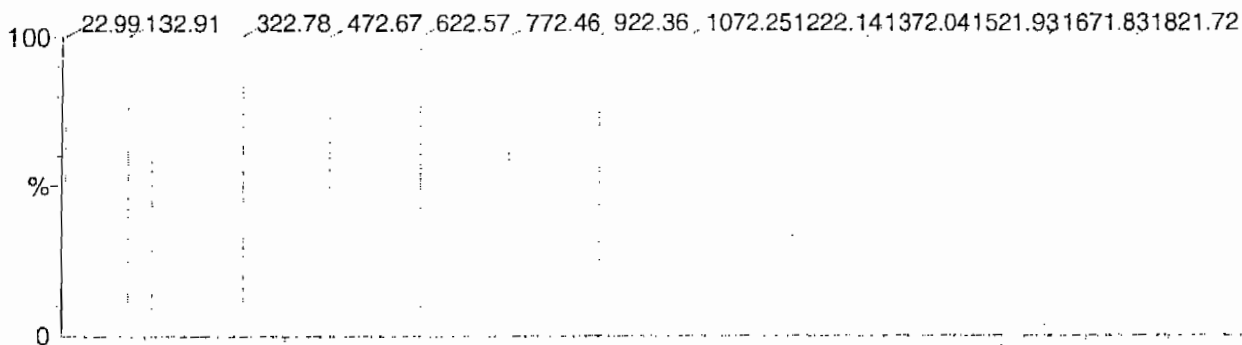
Printed: Fri Aug 25 10:54:54 2006

Data file: FASTMS2 - Calibrated

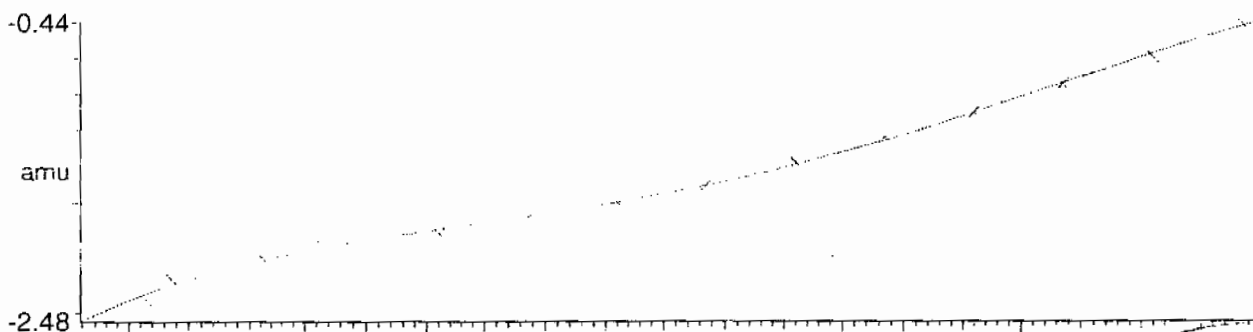
14 matches of 15 tested references



Reference file: Naics2

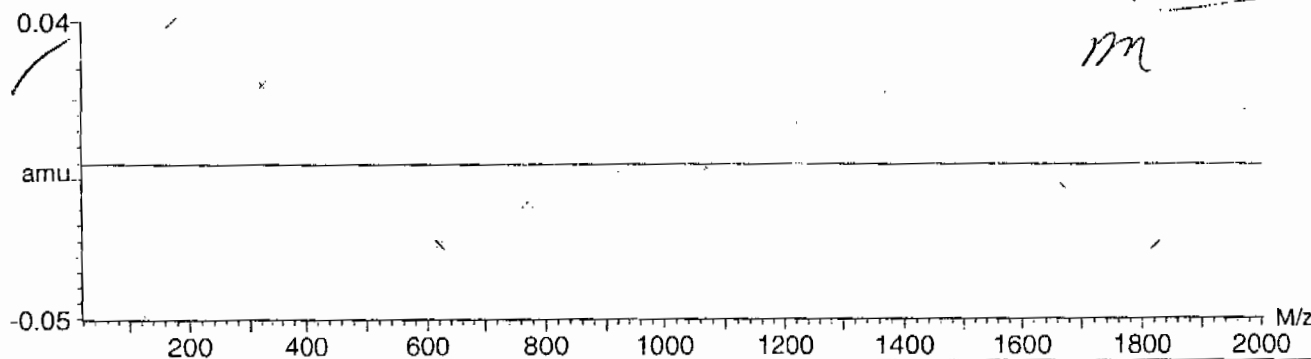


Mass difference (Raw - Ref mass)



Residuals

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

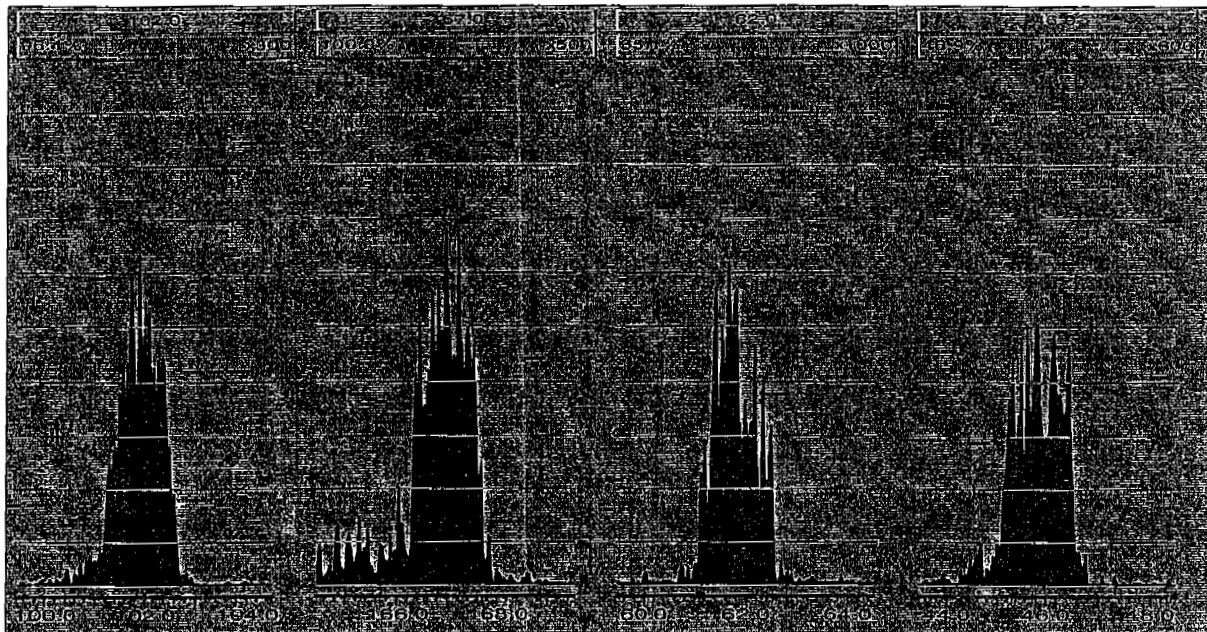


Quattro Micro Tune Parameters

Page 1

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

Printed : Sun Mar 14 12:47:33 2010



High Explosives Internal Standard Summary

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1981

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) #
			3364.442	12.175	19055.667	17.644
Upper Limit			4373.7746	12.675	24772.3671	18.144
Lower Limit			2355.1094	11.675	13338.9669	17.144
MB for batch 957199	14-mar-10 20:52	EXP0314013a	3086.87	12.169	19162.3	17.653
LCS for batch 957199	14-mar-10 21:22	EXP0314014a	3876.29	12.171	20024	17.638
RE15-10-8386	14-mar-10 22:21	EXP0314016a	3423.41	12.171	19779.8	17.66
RE15-10-8387	14-mar-10 22:50	EXP0314017a	3548.54	12.171	19581.3	17.642

IS1 (DNB) = 1,3-Dinitrobenzene-d4

IS2 (DNT) = 2,6-Dinitrotoluene-d3

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

Area Lower Limit = - 30% of average IS area from multipoint calibration

RT Upper Limit = +0.5 of average multipoint RT

RT Lower Limit = -0.5 of average multipoint RT

Column used to flag values outside QC limits with an asterisk

* Values outside of QC limits

SAMPLE DATA

1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE15-10-8386

Lab Code: GEL

GEL Job No (SDG) 10-1981

Matrix: SOIL

GEL Sample ID: 247790002

Sample Amount 2

Moisture: 5.4

Amount Units g

Date Received: 23-FEB-10

Extraction Type Sonication

Extraction Batch ID: 957199

Concentrated Extract Volume (mL) 10

Date Extracted: 01-MAR-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0314016a

Date Analyzed: 14-MAR-10 22:21

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\031410expA.qtd, Time: Mon Mar 15 10:15:48 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0314016a

Date: 14-Mar-2010

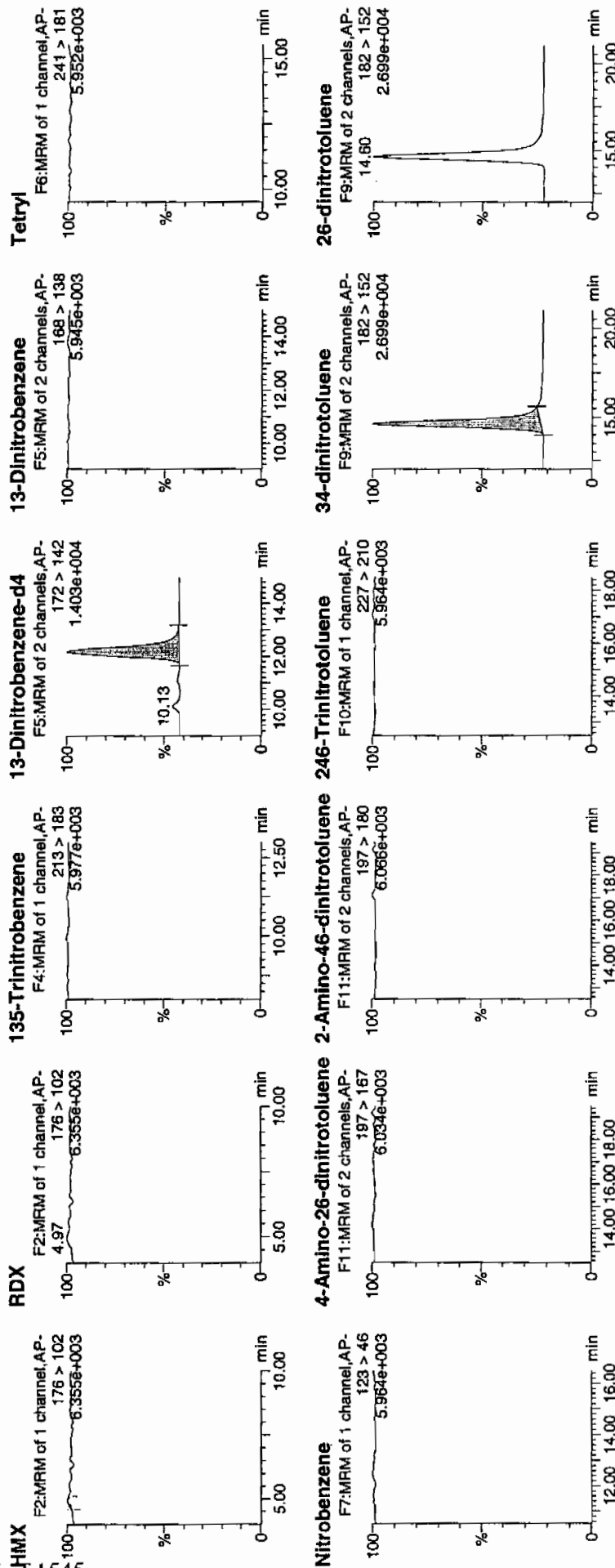
Time: 22:21:11

ID: 247790002

Vial: 2:1,D

1-107
3/15/10

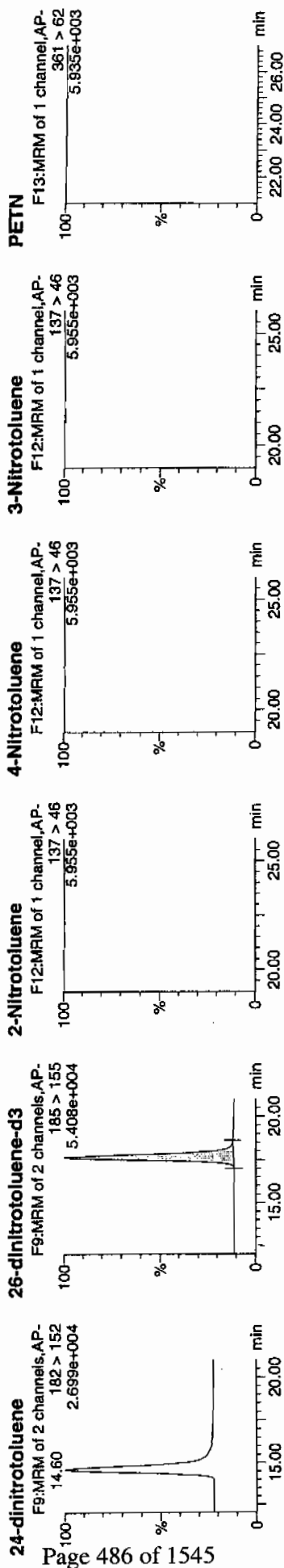
957200 / 8000 / 2 /



Amu 103-110

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

Dataset: C:\MASSLYNX\New_Exp\PRO\031410expA.qld, Time: Mon Mar 15 10:15:48 2010



ID	Name	Trace	RT	Area	IS Area	Abundance	Response	Peak	Mod Date	Mod Time	Mod User	%Rec	%Dev	S/N
247790002	HMX	176 > 102												
247790002	RDX	176 > 102												
247790002	135-Trinitrobenzene	213 > 183												
247790002	13-Dinitrobenzene-d4	172 > 142	12.17	3423.407	3423.407	3423.407	3423.407	bb	508.7630	101.8	1.8	599.6		
247790002	13-Dinitrobenzene	168 > 138												
247790002	Tetryl	241 > 181												
247790002	Nitrobenzene	123 > 46												
247790002	4-Amino-26-dinitrotoluene	197 > 167												
247790002	2-Amino-46-dinitrotoluene	197 > 180												
247790002	246-Trinitrotoluene	227 > 210												
247790002	34-dinitrotoluene	182 > 152	14.60	10079.795	19779.775	10079.795	254.801	bb	264.2463	105.7	5.7	497.8		
247790002	26-dinitrotoluene	182 > 152												
247790002	24-dinitrotoluene	182 > 152												
247790002	26-dinitrotoluene-d3	185 > 155	17.66	19779.775	19779.775	19779.775	19779.775	bb	519.0005	103.8	3.8	1462.1		
247790002	2-Nitrotoluene	137 > 46												
247790002	4-Nitrotoluene	137 > 46												
247790002	3-Nitrotoluene	137 > 46												
247790002	PETN	361 > 62												

1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE15-10-8386

Lab Code: GEL

GEL Job No (SDG) 10-1981

Matrix: SOIL

GEL Sample ID: 247790002

Sample Amount 2

Moisture: 5.4

Amount Units g

Date Received: 23-FEB-10

Extraction Type Sonication

Extraction Batch ID: 957199

Concentrated Extract Volume (mL) 10

Date Extracted: 01-MAR-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS03050041.wiff

Date Analyzed: 06-MAR-10 03:35

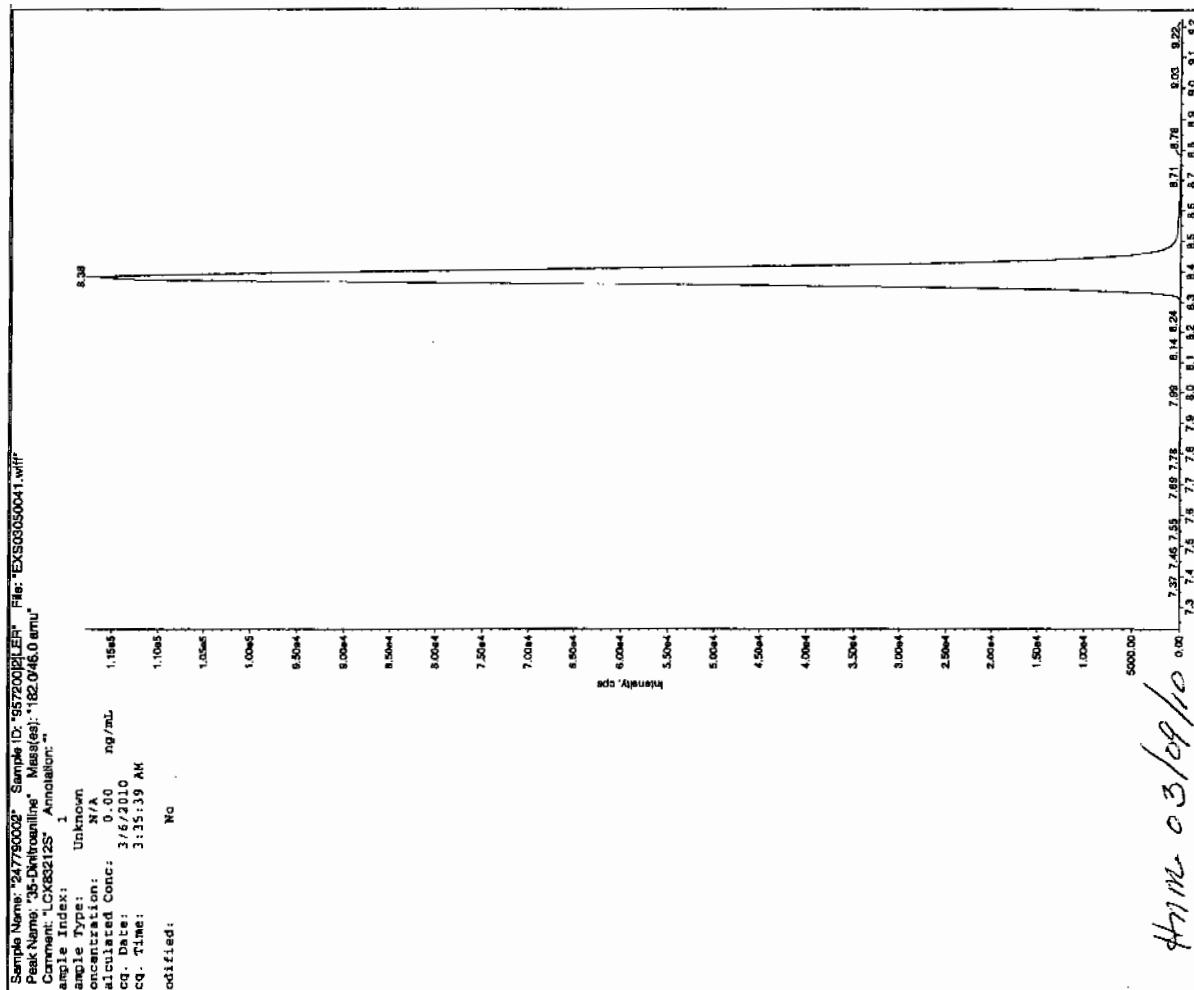
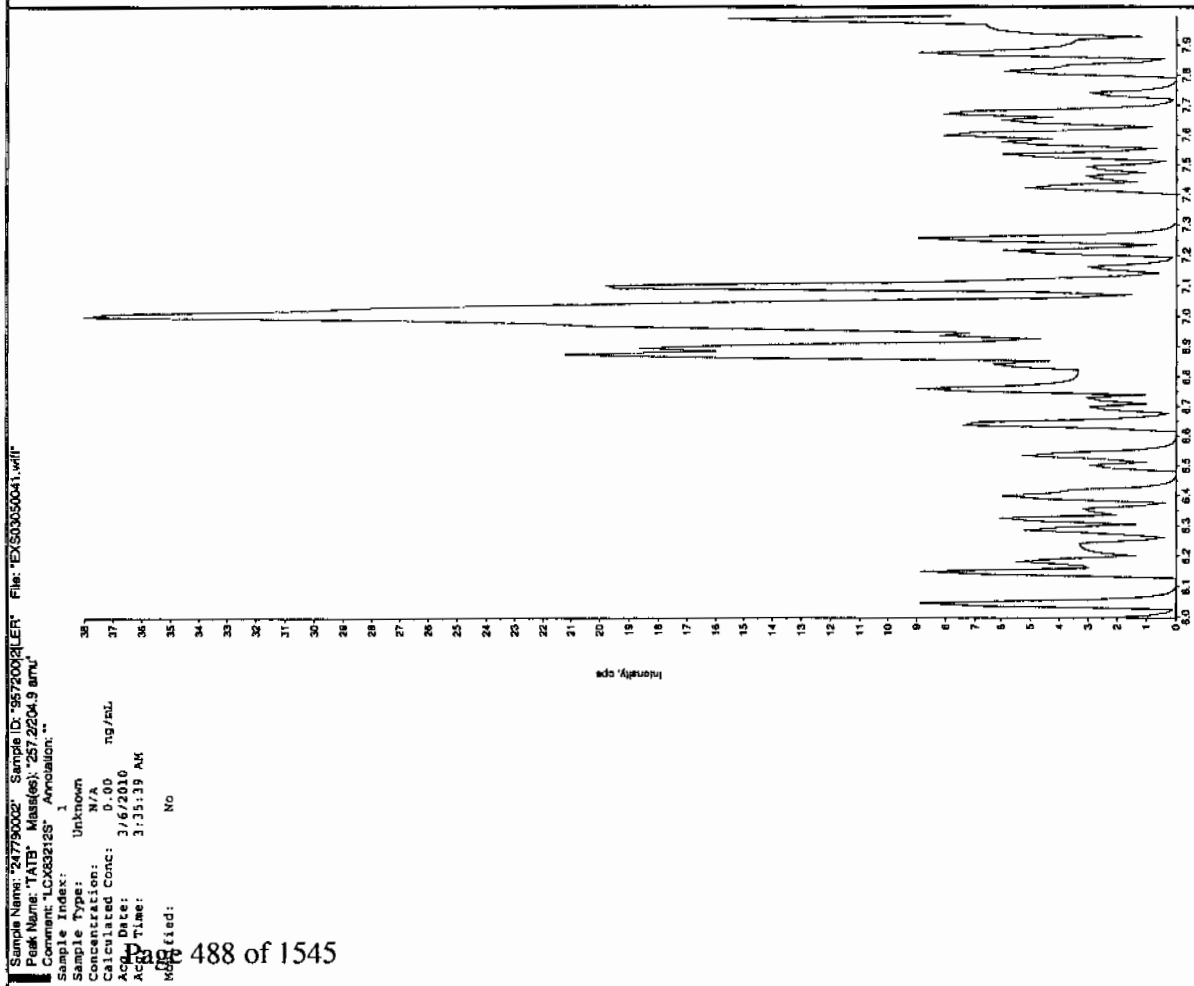
Units: ug/kg

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

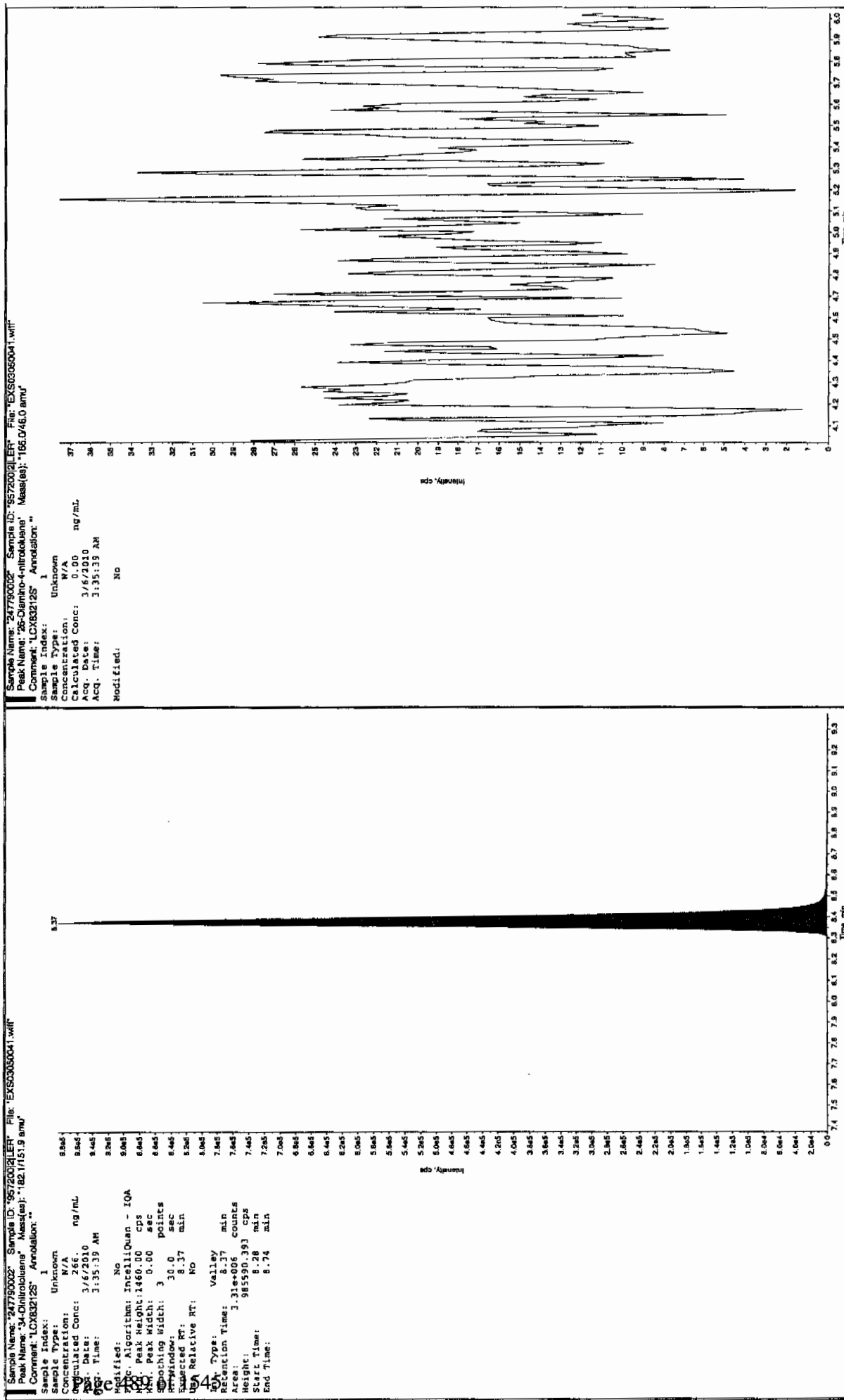
*Concentration =

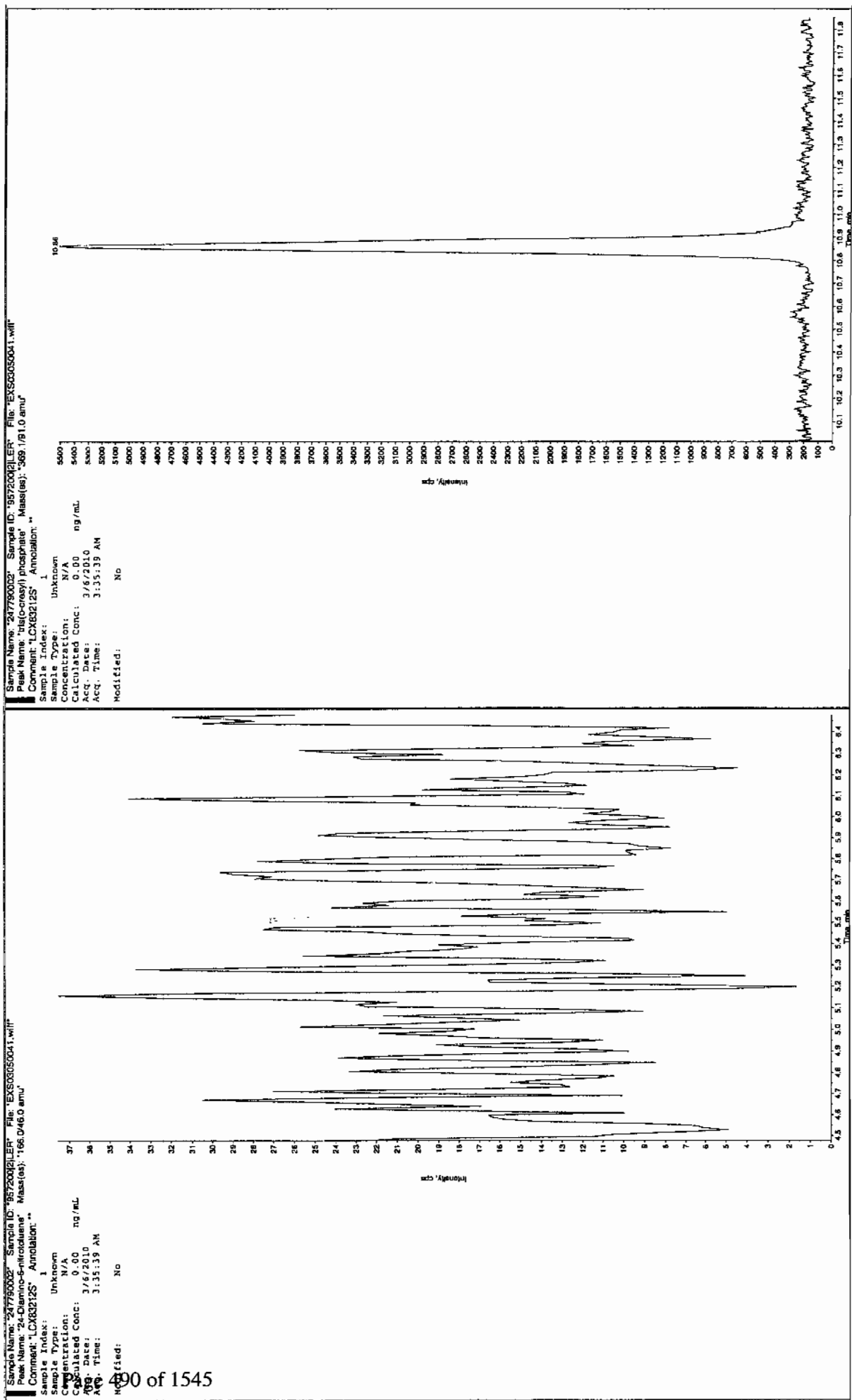
Instrument Value X $\frac{\text{Concentrated Extract Volume}}{\text{Sample Amount}}$ X Dilution Factor

Jan 31/10



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





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

1
High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE15-10-8387

Lab Code: GEL

GEL Job No (SDG) 10-1981

Matrix: SOIL

GEL Sample ID: 247790003

Sample Amount 2

Moisture: 5.7

Amount Units g

Date Received: 23-FEB-10

Extraction Type Sonication

Extraction Batch ID: 957199

Concentrated Extract Volume (mL) 10

Date Extracted: 01-MAR-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0314017a

Date Analyzed: 14-MAR-10 22:50

Units: ug/kg

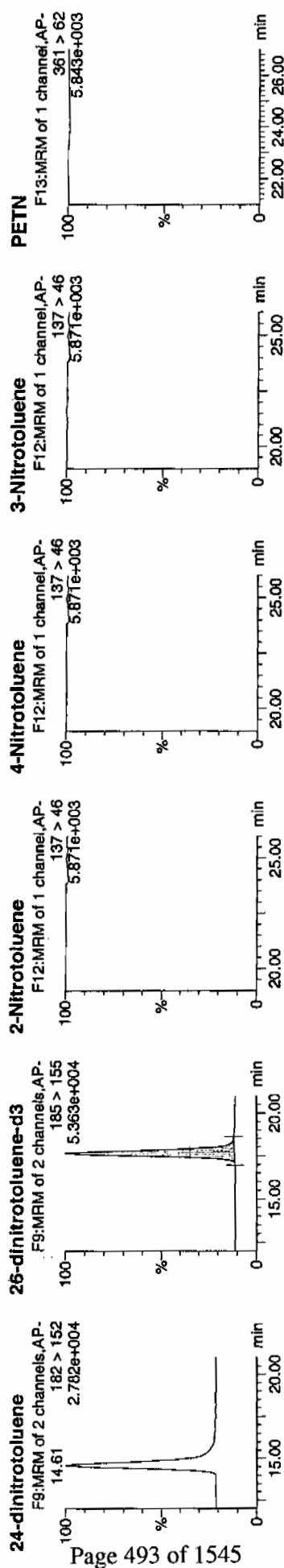
Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	500	U
121-14-2	2,4-Dinitrotoluene	500	U
121-82-4	RDX	500	U
19406-51-0	4-Amino-2,6-dinitrotoluene	500	U
2691-41-0	HMX	500	U
35572-78-2	2-Amino-4,6-dinitrotoluene	500	U
479-45-8	Tetryl	500	U
606-20-2	2,6-Dinitrotoluene	500	U
78-11-5	PETN	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	Concentrated Extract Volume	X	Dilution Factor
		Sample Amount		

Dataset: C:\MASSLYNX\New_Exp.PRO\031410expA.qld, Time: Mon Mar 15 10:15:48 2010

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



ID	Name	Trace	RT	Area	S Area	Abs Resp	Response	Flags	Mod Date	Mod Time	Inp Unit	%Rec	%Dev	SN
247790003	HMx	176 > 102			3548.543									
247790003	RDX	176 > 102			3548.543									
247790003	135-Trinitrobenzene	213 > 183			3548.543									
247790003	13-Dinitrobenzene-d4	172 > 142	12.17	3548.543		3548.543	3548.543	bb			527.3598	105.5	5.5	439.7
247790003	13-Dinitrobenzene	168 > 138			3548.543									
247790003	Tetryl	241 > 181			3548.543									
247790003	Nitrobenzene	123 > 46			3548.543									
247790003	4-Amino-26-dinitrotoluene	197 > 167			19581.309									
247790003	2-Amino-46-dinitrotoluene	197 > 180			19581.309									
247790003	246-Trinitrotoluene	227 > 210			19581.309									
247790003	34-dinitrotoluene	182 > 152	14.61	10373.045	19581.309	10373.045	264.871	bb			274.6902	109.9	9.9	791.6
247790003	26-dinitrotoluene	182 > 152			19581.309									
247790003	24-dinitrotoluene	182 > 152			19581.309									
247790003	26-dinitrotoluene-d3	185 > 155	17.64	19581.309		19581.309	19581.309	bb			513.7929	102.8	2.8	4432.1
247790003	2-Nitrotoluene	137 > 46			19581.309									
247790003	4-Nitrotoluene	137 > 46			19581.309									
247790003	3-Nitrotoluene	137 > 46			19581.309									
247790003	PETN	361 > 62			19581.309									

1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE15-10-8387

Lab Code: GEL

GEL Job No (SDG) 10-1981

Matrix: SOIL

GEL Sample ID: 247790003

Sample Amount 2

Moisture: 5.7

Amount Units g

Date Received: 23-FEB-10

Extraction Type Sonication

Extraction Batch ID: 957199

Concentrated Extract Volume (mL) 10

Date Extracted: 01-MAR-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS03050042.wiff

Date Analyzed: 06-MAR-10 03:51

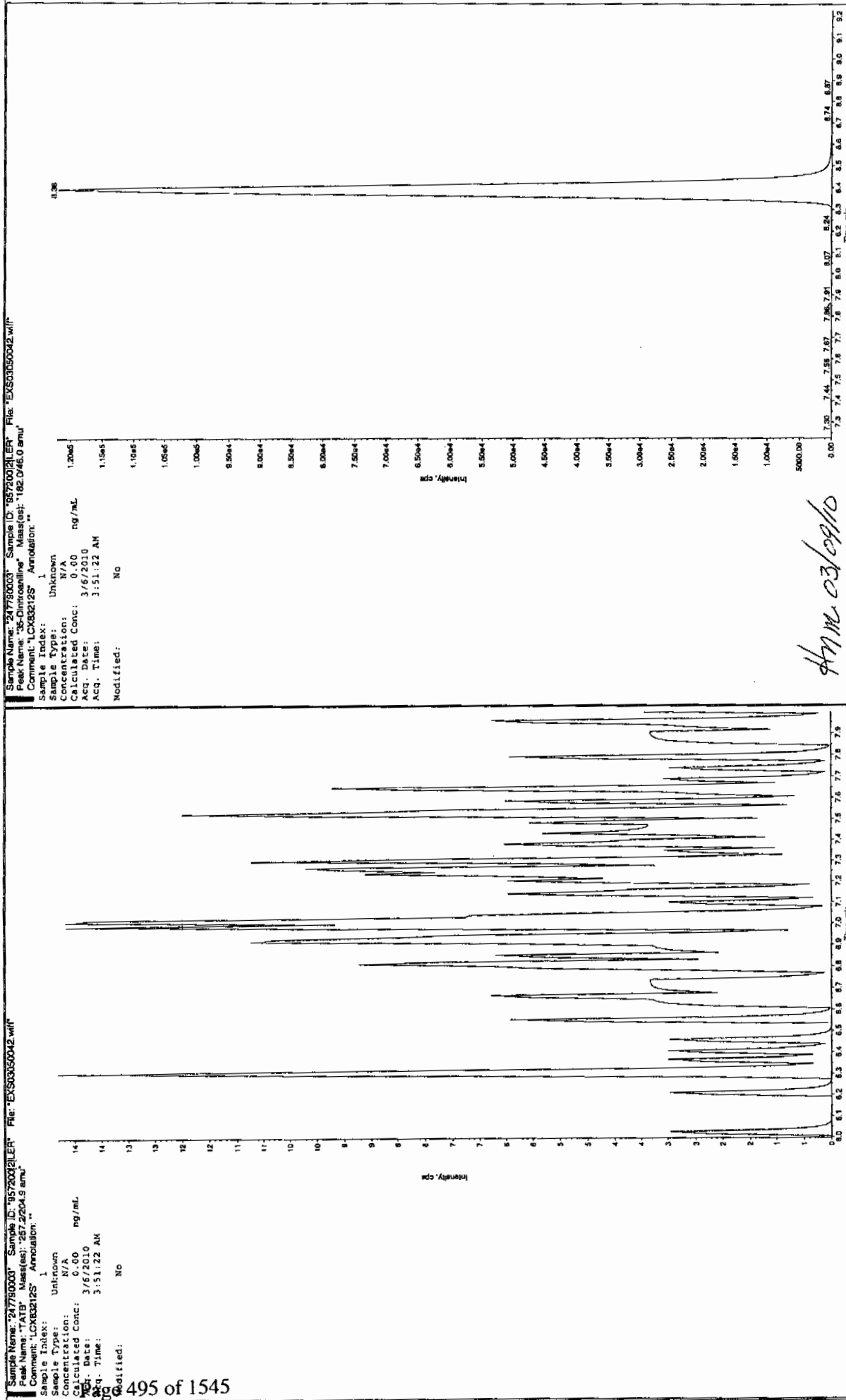
Units: ug/kg

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

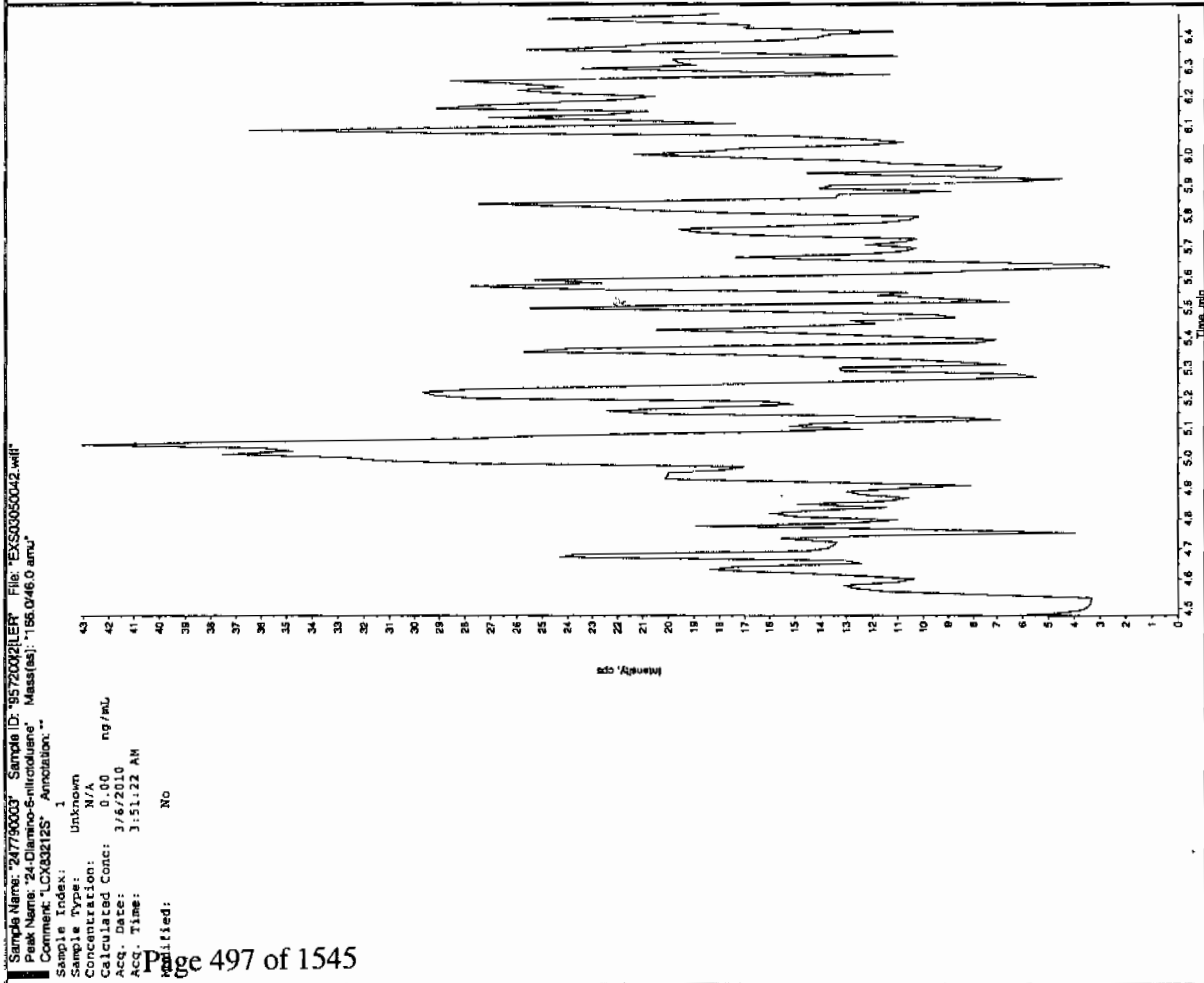
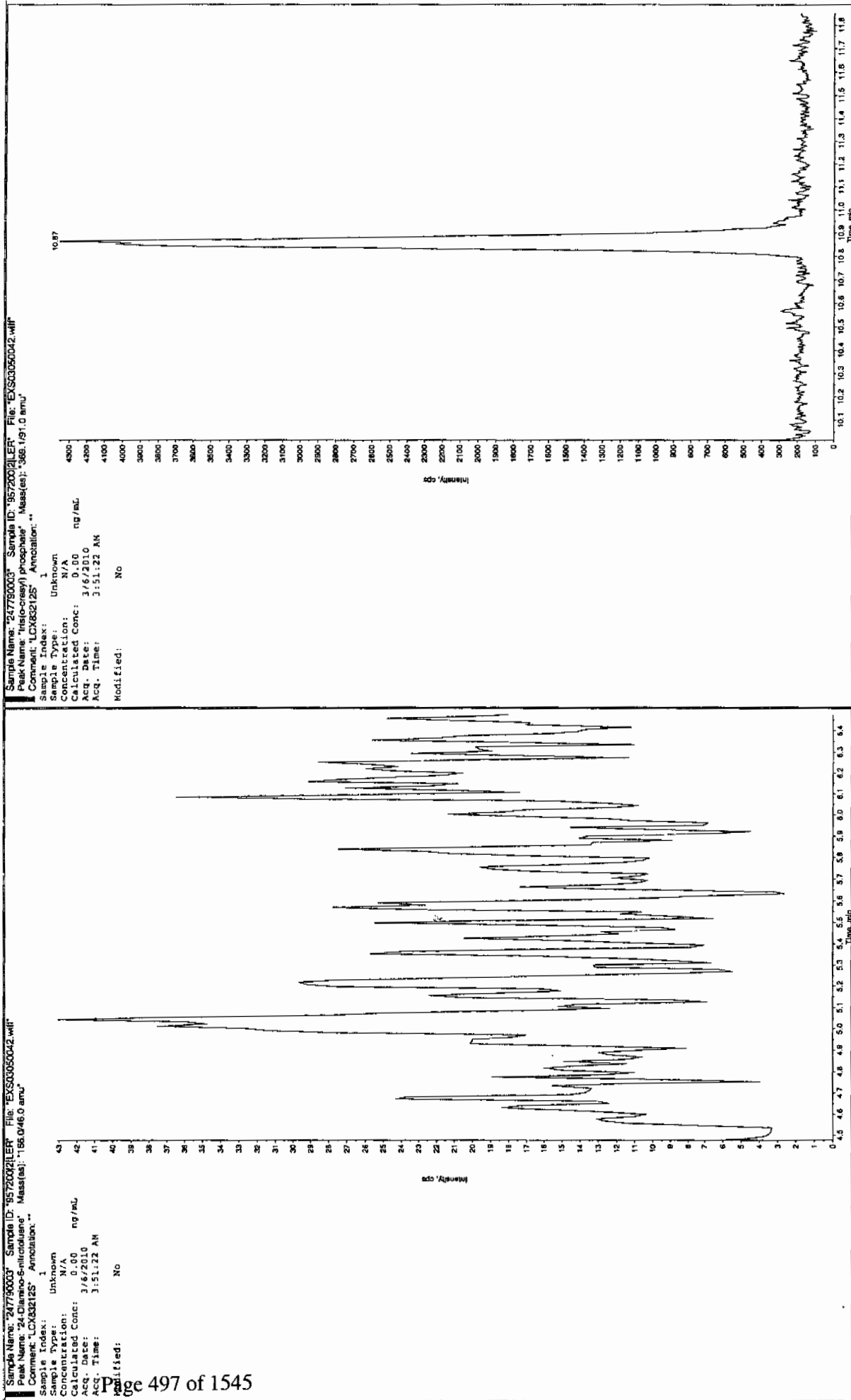
*Concentration =

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

Scan 3/9/10



47750003/03/09/10



*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

Form 6

Explosives Initial Calibration

Lab Name: GEL Laboratories LLC

GEL Job No: 10-1981

Lab Code: GEL

Run Date: 05-MAR-10 14-MAR-10

LCMSMS Instrument ID: LCMSMS

Method: 8321A Modified

HPLC Column: Phenomenex Ultracarb 5 QDS(20)

Calibration Type: Average RF

Paraname	1	2	3	4	5	6	Ave RF	RSD	Q
Calibration Level:	EXP0314003a	EXP0314004a	EXP0314005a	EXP0314006a	EXP0314007a	EXP0314008a			
Data File:									
1,3,5-Trinitrobenzene	4.451	3.979	3.11	3.373	3.491	3.675	3.680	12.966	
1,3-Dinitrobenzene-d4	7.232	6.43	7.14	5.899	6.486	7.186	6.729	8.056	
2,4,6-Trinitrotoluene	.44	.296	.315	.313	.354	.328	0.341	15.306	
2,4-Dinitrotoluene	.252	.223	.234	.242	.252	.234	0.240	4.731	
2,6-Dinitrotoluene	1.195	1.162	1.095	1.086	1.097	1.116	1.125	3.879	
2,6-Dinitrotoluene-d3	35.525	38.022	42.425	35.013	41.029	36.654	38.111	7.919	
2-Amino-4,6-dinitrotoluene	.392	.37	.428	.384	.501	.391	0.411	11.712	
3,4-Dinitrotoluene	1.071	.886	.91	.922	.978	1.019	0.964	7.42	
4-Amino-2,6-dinitrotoluene	.402	.261	.295	.271	.346	.292	0.311	17.091	
HMX	3.919	3.14	3.408	3.215	4.964	3.288	3.656	19.093	
Nitrobenzene	.752	.822	.825	.859	.954	.71	0.820	10.362	
RDX	2.726	2.425	2.36	2.61	3.317	2.517	2.659	13.073	
Tetryl	.976	1.142	1.014	.809	.966	.777	0.947	14.288	
m-Dinitrobenzene	1.722	1.421	1.218	1.133	1.277	1.2	1.329	16.246	
m-Nitrotoluene	.106	.087	.093	.088	.093	.081	0.091	9.224	
o-Nitrotoluene	.164	.147	.158	.15	.158	.134	0.152	7.077	
p-Nitrotoluene	.083	.077	.081	.072	.078	.067	0.076	7.669	

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

* Values outside of QC Limit

Form 6

Explosives Initial Calibration

Lab Name: GEL Laboratories LLC

GEL Job No:

10-1981

Lab Code: GEL

Run Date: 05-MAR-10.14-MAR-10

LCMSMS Instrument ID: LCMSMS

Method: 8321A Modified

HPLC Column: Phenomenex Ultracarb 5 ODS(20)

Calibration Type: 2nd Order

	1	2	3	4	5	6	X	X^2	Intercept	COD	Q
Calibration Level:											
Data File:	EXP0314003a	EXP0314004a	EXP0314005a	EXP0314006a	EXP0314007a	EXP0314008a					
Parname:											
PETN	1696.46	2772.34	8585.36	17112.5	31106.9	36853.7	1.094	-.0001328	18.561	.9909	

Quadratic Fit: $y = Ax^2 + Bx + C$
 where X^2 column above is coefficient A
 X column above is coefficient B
 intercept is C

COD is Coefficient of Determination

Q column used to flag COD outside of Limit (<0.990)

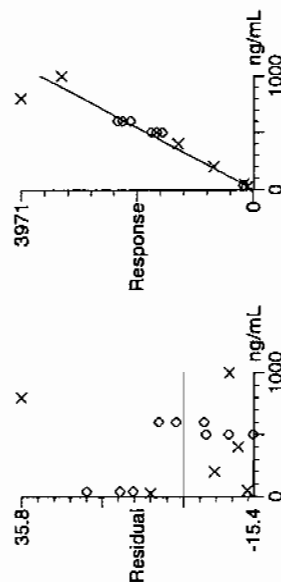
* Values outside of QC Limit

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

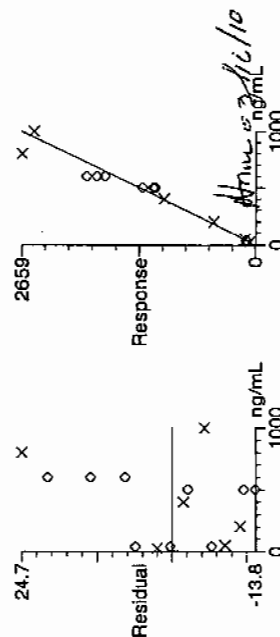
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Method: C:\MASSLYNX\New_Exp\PRO\MethDB\031410expa.mdb, Time: Mon Mar 15 09:25:32 2010
Calibration: Untitled, Time: Mon Mar 15 10:15:48 2010

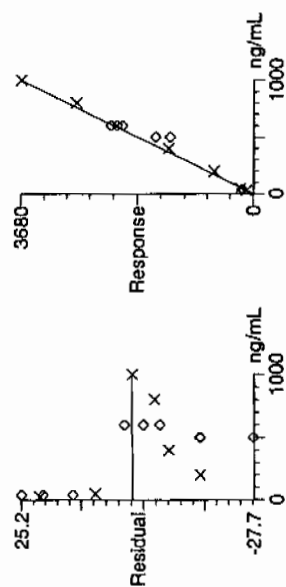
Compound name: HMX
Response Factor: 3.65571
RRF SD: 0.697998, % Relative SD: 19.0934
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF



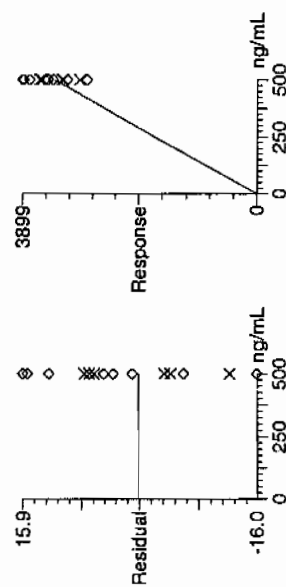
Compound name: RDX
Response Factor: 2.65919
RRF SD: 0.347639, % Relative SD: 13.0731
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF



Compound name: 135-Trinitrobenzene
Response Factor: 3.67993
RRF SD: 0.477131, % Relative SD: 12.9658
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF



Compound name: 13-Dinitrobenzene-d4
Response Factor: 6.72888
RRF SD: 0.54206, % Relative SD: 8.05572
Response type: External Std, Area
Curve type: RF



Quantify Calibration Report

GEL Laboratories, LLC / Analyst : Michael A. Penny

Printed: Mon Mar 15 10:16:43 2010, Page 3 of 9

Dataset: C:\MASSLYNX\New_Exp.PRO\031410expA.qld, Time: Mon Mar 15 10:15:48 2010

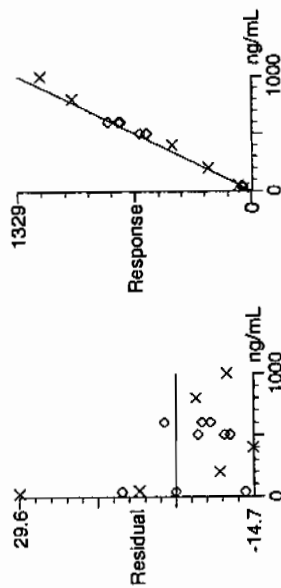
Compound name: 13-Dinitrobenzene

Response Factor: 1.32854

RRF SD: 0.215838, % Relative SD: 16.2463

Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)

Curve type: RF



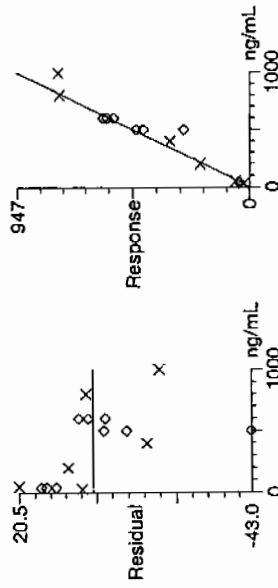
Compound name: Tetraol

Response Factor: 0.947232

RRF SD: 0.135343, % Relative SD: 14.2882

Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)

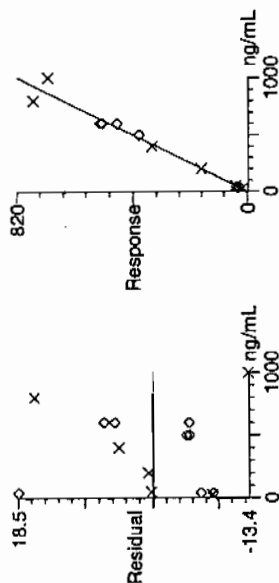
Curve type: RF



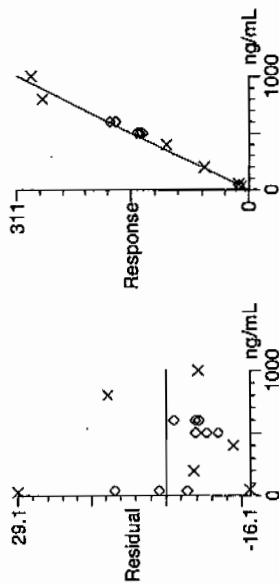
Quantify Calibration Report GEL Laboratories, LLC / Analyst: Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\031410expA.qld, Time: Mon Mar 15 10:15:48 2010

Compound name: Nitrobenzene
Response Factor: 0.820337
RRF SD: 0.0850068, % Relative SD: 10.3624
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF



Compound name: 4-Amino-26-dinitrotoluene
Response Factor: 0.311252
RRF SD: 0.053196, % Relative SD: 17.091
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

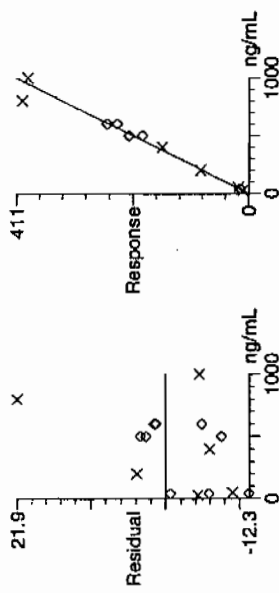


Quantify Calibration Report

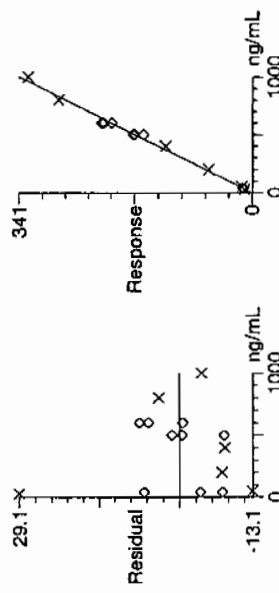
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYN\New_Exp\PRO\031410expA.qld, Time: Mon Mar 15 10:15:48 2010

Compound name: 2-Amino-46-dinitrotoluene
 Response Factor: 0.410915
 RRF SD: 0.0481257, % Relative SD: 11.7118
 Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
 Curve type: RF



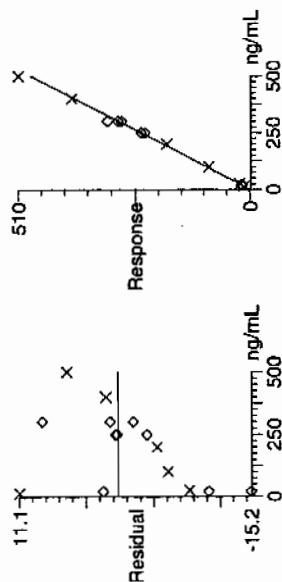
Compound name: 246-Trinitrotoluene
 Response Factor: 0.341077
 RRF SD: 0.0522035, % Relative SD: 15.3055
 Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
 Curve type: RF



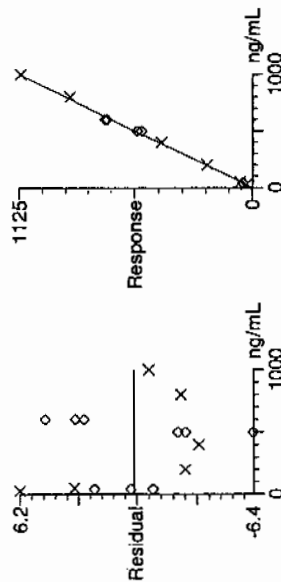
Quantify Calibration Report GEL Laboratories, LLC / Analyst: Michael A. Penny

Dataset: C:\MASSLYN\New_Exp.PRO\031410expA.qld, Time: Mon Mar 15 10:15:48 2010

Compound name: 34-dinitrotoluene
Response Factor: 0.964254
RRF SD: 0.0715434, % Relative SD: 7.41956
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: Rf



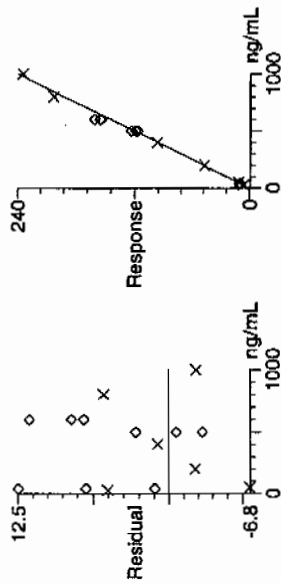
Compound name: 26-dinitrotoluene
Response Factor: 1.12508
RRF SD: 0.0436387, % Relative SD: 3.87872
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: Rf



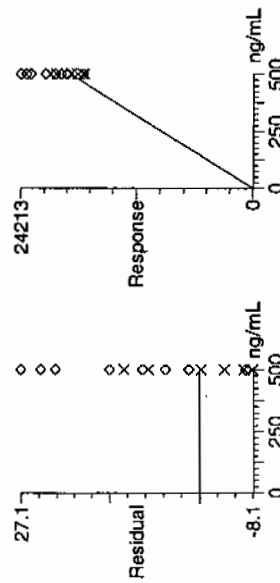
Quantify Calibration Report
 GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp\PRO1031410expA.qld, Time: Mon Mar 15 10:15:48 2010

Compound name: 24-dinitrotoluene
 Response Factor: 0.239516
 RRF SD: 0.0113317, % Relative SD: 4.73111
 Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
 Curve type: RF



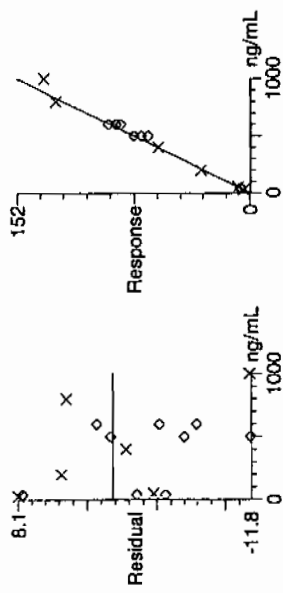
Compound name: 26-dinitrotoluene-d3
 Response Factor: 38.1113
 RRF SD: 3.01799, % Relative SD: 7.91889
 Response type: External Std, Area
 Curve type: RF



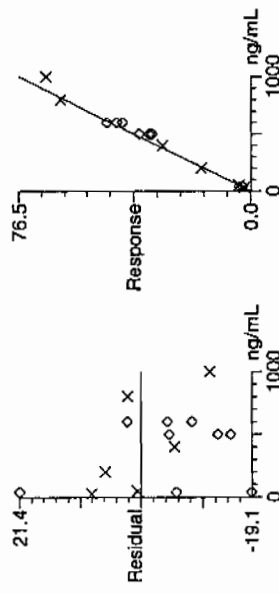
Quantify Calibration Report GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\031410expA.qld, Time: Mon Mar 15 10:15:48 2010

Compound name: 2-Nitrotoluene
Response Factor: 0.151748
RRF SD: 0.0107392, % Relative SD: 7.07703
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF



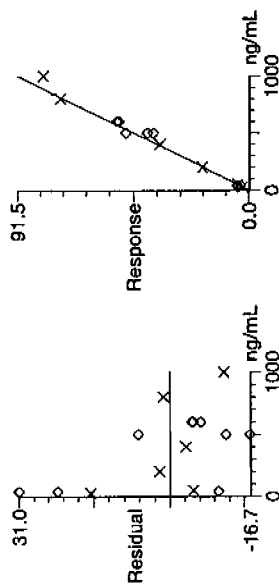
Compound name: 4-Nitrotoluene
Response Factor: 0.0764562
RRF SD: 0.00586344, % Relative SD: 7.66902
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF



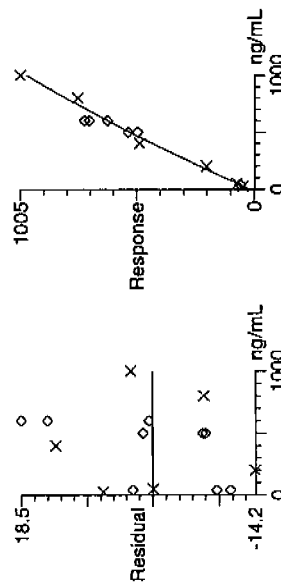
Quantify Calibration Report GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYN\New_Exp.PRO\031410expA.qld, Time: Mon Mar 15 10:15:48 2010

Compound name: 3-Nitrotoluene
Response Factor: 0.091452
RRF SD: 0.00843596, % Relative SD: 9.22446
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RIF



Compound name: PETN
Coefficient of Determination: 0.990878
Calibration curve: $-0.000132821 \cdot x^2 + 1.09448 \cdot x + 18.5607$
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: Null, Axis trans: None



Explosives Initial Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1981

Lab Code: GEL

GEL Sample ID: WXXICV

GEL Data File EXP0314010a

Analysis Date: 14-MAR-10 19:24

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
2,6-Dinitrotoluene-d3	500	464.57	93	
2-Amino-4,6-dinitrotoluene	600	568.004	95	
3,4-Dinitrotoluene	300	294.779	98	
4-Amino-2,6-dinitrotoluene	600	566.927	94	
HMX	600	573.087	96	
Nitrobenzene	600	640.134	107	
PETN	600	711.078	119	
RDX	600	646.997	108	
Tetryl	600	608.116	101	
m-Dinitrobenzene	600	613.453	102	
m-Nitrotoluene	600	573.227	96	
o-Nitrotoluene	600	608.034	101	
p-Nitrotoluene	600	614.277	102	
1,3,5-Trinitrobenzene	600	584.915	97	
1,3-Dinitrobenzene-d4	500	419.791	84	
2,4,6-Trinitrotoluene	600	596.891	99	
2,4-Dinitrotoluene	600	647.933	108	
2,6-Dinitrotoluene	600	619.219	103	

Recovery Limits:

3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,
2,4-Diamino-6-nitrotoluene 70-130%

Other Target Analytes 80-120%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

Quantify Sample Report

GEL Laboratories, LLC / Analyst: Michael A. Penny

Printed: Mon Mar 15 10:16:43 2010, Page 19 of 77

Dataset: C:\MASSLYNX\New_Exp.PRO\031410expA.qld, Time: Mon Mar 15 10:15:48 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0314010a

Date: 14-Mar-2010

Time: 19:24:18

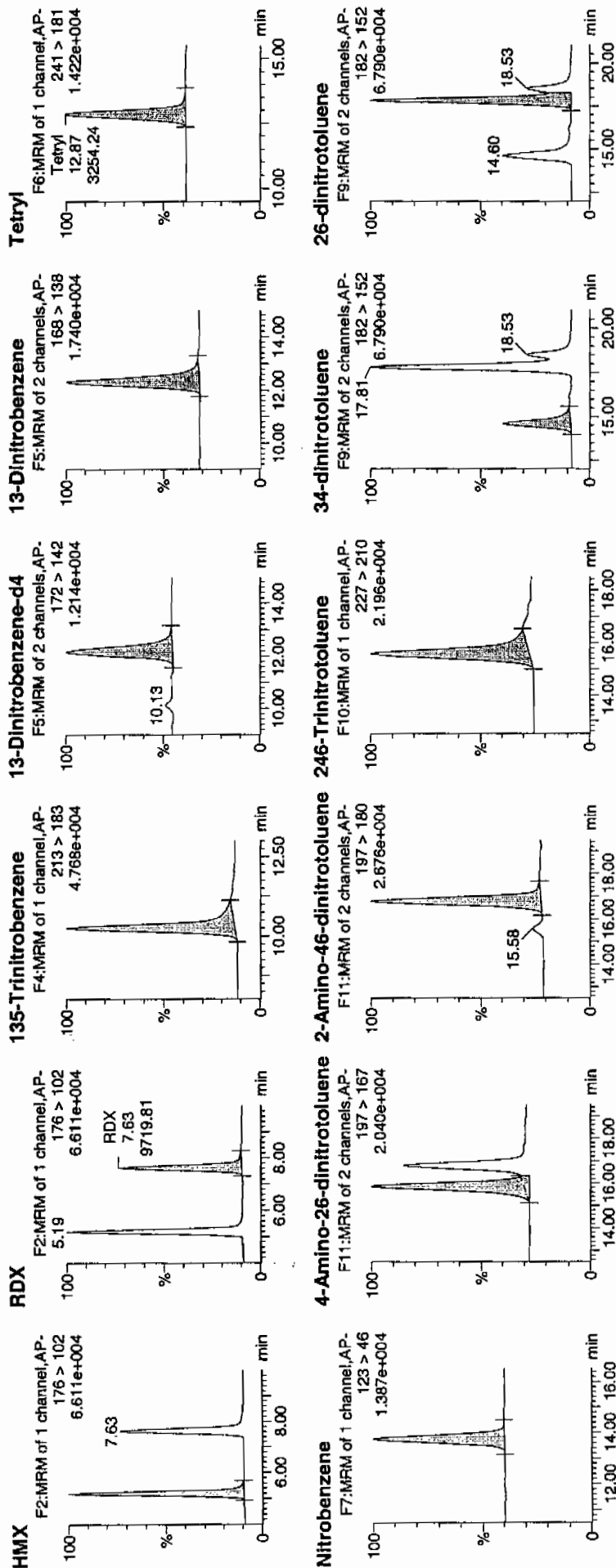
ID: WXX100314-07ICV

Vial: 1:1,B

WAT
3/15/10

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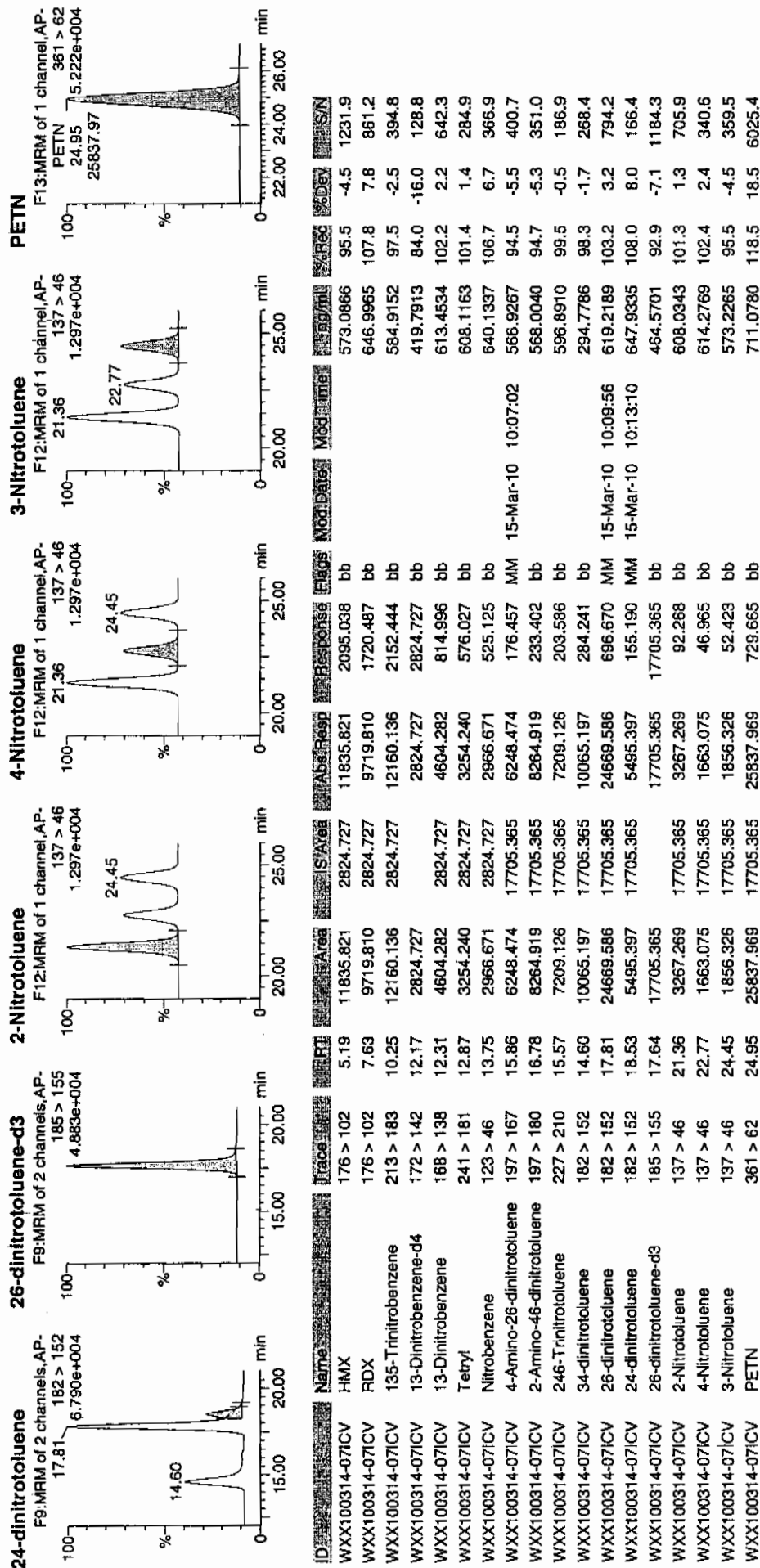
HW 0316110

Quantify Sample Report

GEL Laboratories, LLC / Analyst: Michael A. Penny

Printed: Mon Mar 15 10:16:43 2010, Page 20 of 77

Dataset: C:\MASSLYNX\New_Exp.PRO\031410expA.qld, Time: Mon Mar 15 10:15:48 2010



GRAND MEAN AVERAGE

Vendor: Restek
 Date of Analysis: 03/14/10
 Time of Injection: 1924
 Standard Number: WXX100314-07ICV
 Data File: EXP0314010a

HMX	95.5
RDX	107.8
135-TNB	97.5
13-DNB	102.2
Tetryl	101.4
Nitrobenzene	106.7
4A-26-DNT	94.5
2A-46-DNT	94.7
246-TNT	99.5
34-DNT(surr)	98.3
26-DNT	103.2
24-DNT	108.0
2-NT	101.3
4-NT	102.4
3-NT	95.5
PETN	118.5

*MTF
3/15/10*

Total 1627.0

Average 101.7

Link @ 3/16/10

ICV Limits 85-115%

CRI Limits 70-130%

CCV Limits 85-115%

No single analyte > +/- 60%

Form 6

Explosives Initial Calibration

Lab Name: GEL Laboratories LLC

GEL Job No: 10-1981

Lab Code: GEL

Run Date: 05-MAR-10 14-MAR-10

LCMSMS Instrument ID: LCMSMS4

Method: 8321A Modified

HPLC Column: YMC J-Sphere ODS-H80

Calibration Type: 2nd Order

Calibration Level:	19	20	21	22	23	24	25	X	X^2	Intercept	COD	Q
Data File:	EXS03050003.wif	EXS03050004.wif	EXS03050005.wif	EXS03050006.wif	EXS03050007.wif	EXS03050008.wif	EXS03050009.wif					
Parname:												
2,4-Diamino-6-nitrotoluene	85600	188000	436000	918000	1500000	1790000	3780000	-5040	1860	.016	.9992	
2,6-Diamino-4-nitrotoluene	126000	257000	638000	1300000	2090000	2570000	5220000	-13200	2690	-.037	.9996	
3,4-Dinitrotoluene	307000	593000	1470000	2930000	4500000	5680000	10400000	-66800	13500	-3.11	.9976	
3,5-Dinitroaniline	462000	868000	2040000	4020000	6030000	7500000	12600000	-18600	8840	-1.27	.9999	
TATB	63200	132000	333000	729000	1100000	1480000	3120000	-13200	1430	.069	1	
tris(o-cresyl) phosphate	950000	1920000	4370000	8500000	12200000	15100000	25100000	123000	17900	-2.71	.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

030510ICAL

Peak Name: TATB
No Internal Standard
Q1/Q3 Masses: 257.20/204.90 amu

Fit	Quadratic	Weighting	None	Iterate No
a0	-1.32e+004			
a1	1.43e+003			
a2	0.0686			
Correlation coefficient 1.0000				
Use Area				

Peak Name: 35-Dinitroaniline
No Internal Standard
Q1/Q3 Masses: 182.00/46.00 amu

Fit	Quadratic	Weighting	None	Iterate No
a0	-1.86e+004			
a1	8.84e+003			
a2	-1.27			
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	-6.68e+004			
a1	1.35e+004			
a2	-3.11			
Correlation coefficient 0.9976				
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	-1.32e+004			
a1	2.69e+003			
a2	-0.0366			
Correlation coefficient 0.9996				
Use Area				

See 3/9/10

*4/10/10
8/3/10*

030510ICAL

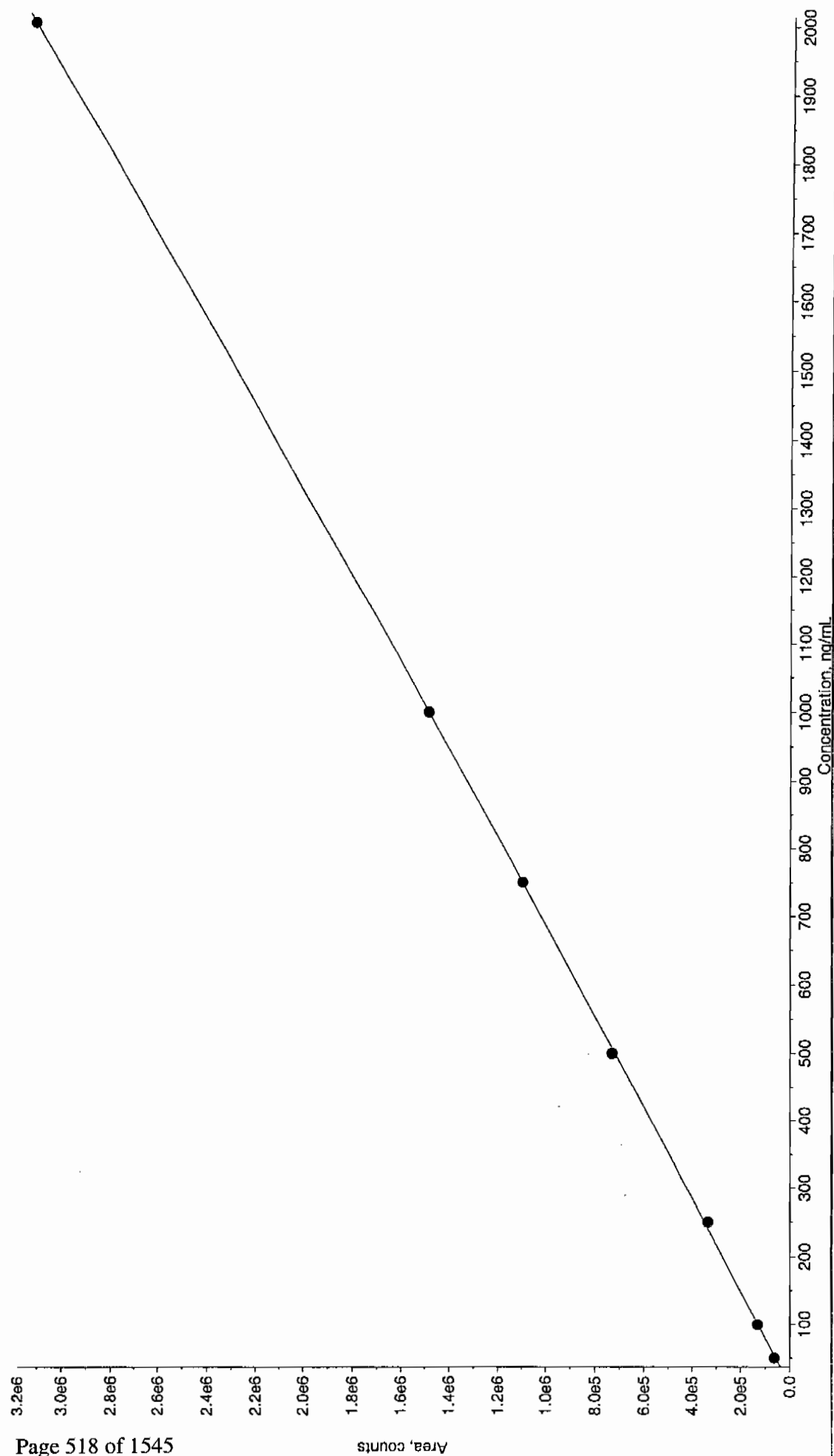
Peak Name: 24-Diamino-6-nitrotoluene
No Internal Standard
Q1/Q3 Masses: 165.97/46.00 amu

Fit	Quadratic	Weighting	None	Iterate No
a0	-5.04e+003			
a1	1.86e+003			
a2	0.0157			
Correlation coefficient 0.9992				
Use Area				

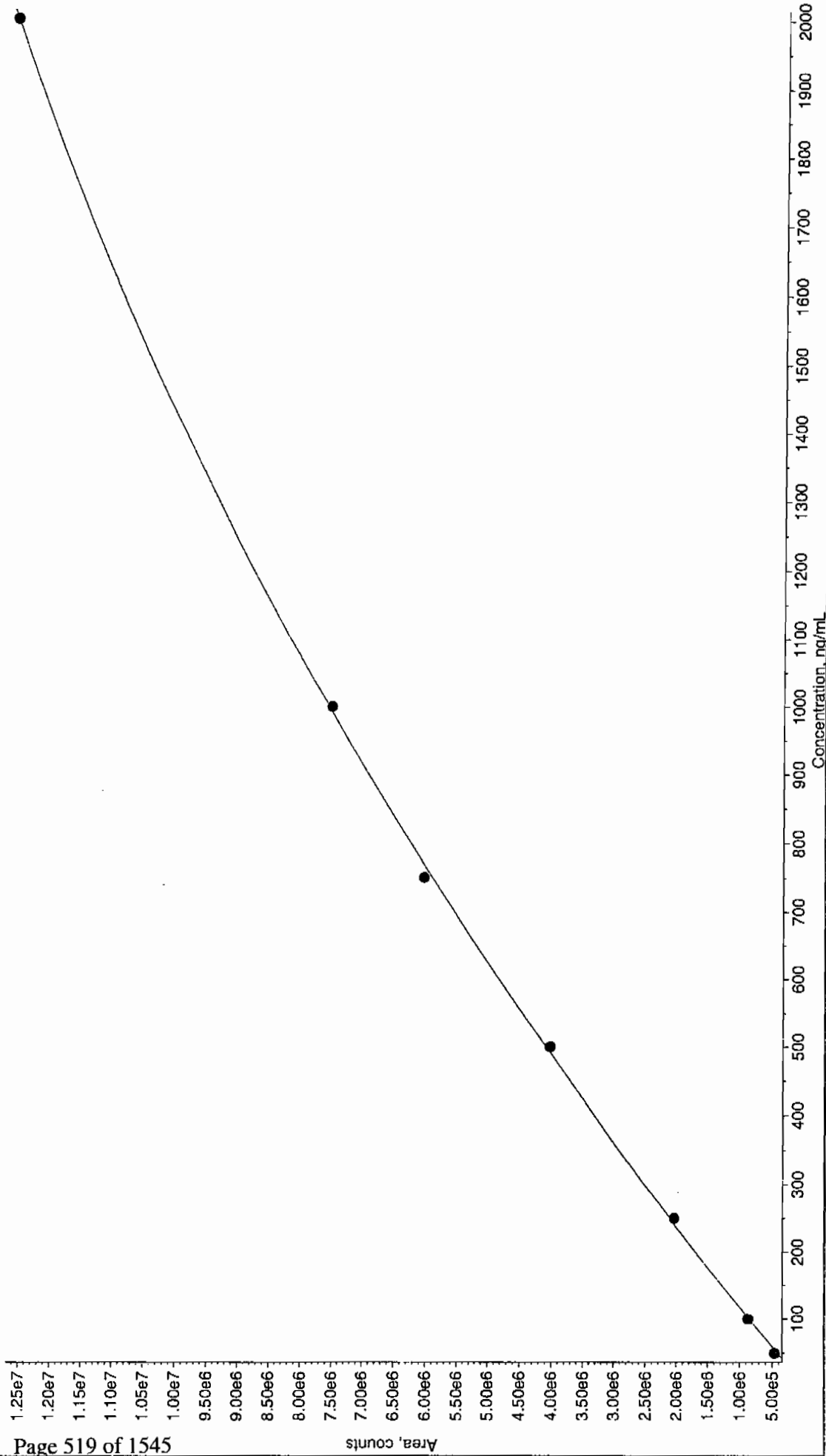
Peak Name: tris(o-cresyl) phosphate
No Internal Standard
Q1/Q3 Masses: 369.15/91.00 amu

Fit	Quadratic	Weighting	None	Iterate No
a0	1.23e+005			
a1	1.79e+004			
a2	-2.71			
Correlation coefficient 0.9999				
Use Area				

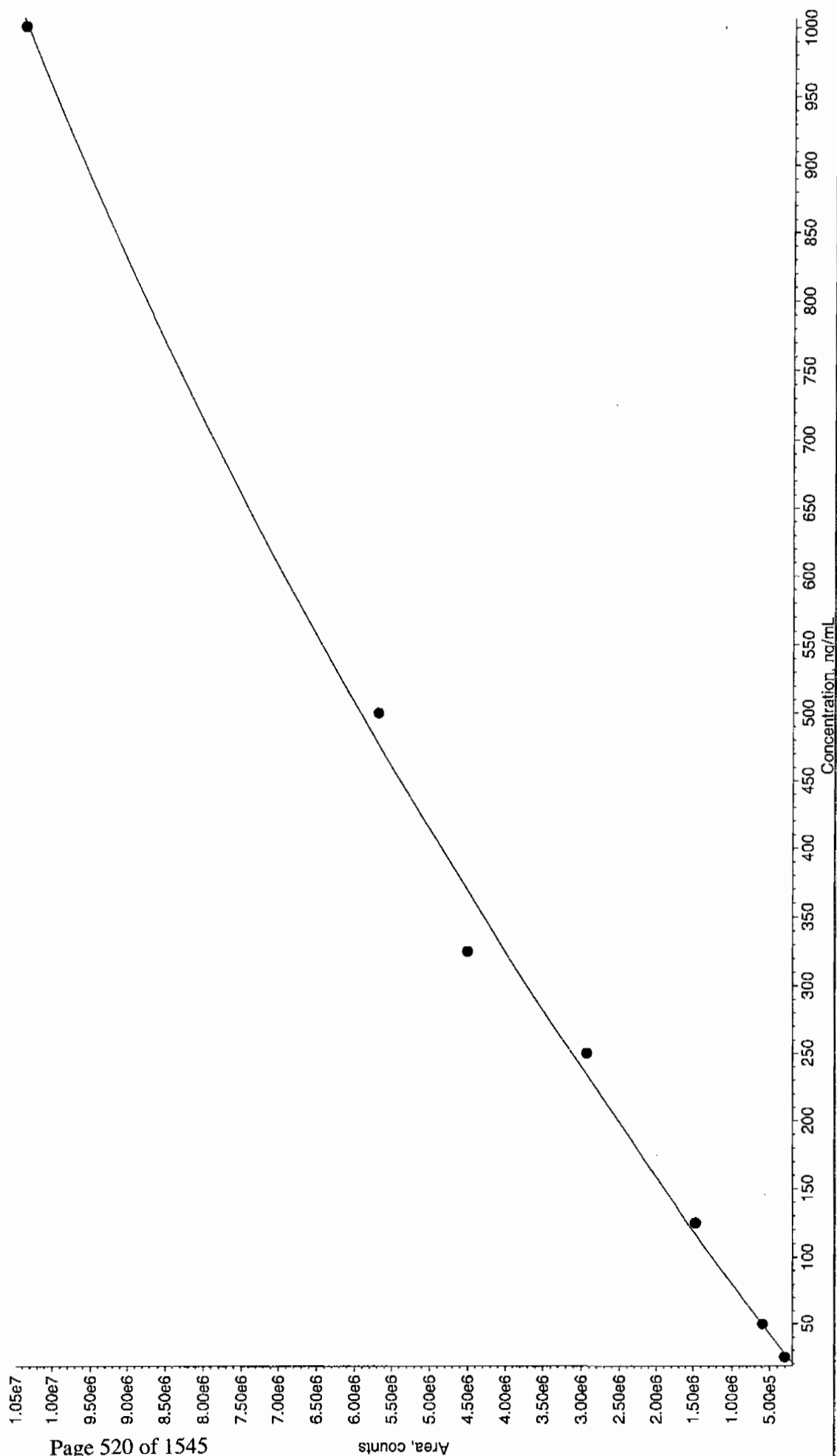
030510.rdb (TATB): "Quadratic" Regression ("No" weighting): $y = 0.0686 x^2 + 1.43e+003 x + -1.32e+004$ ($r = 1.0000$)



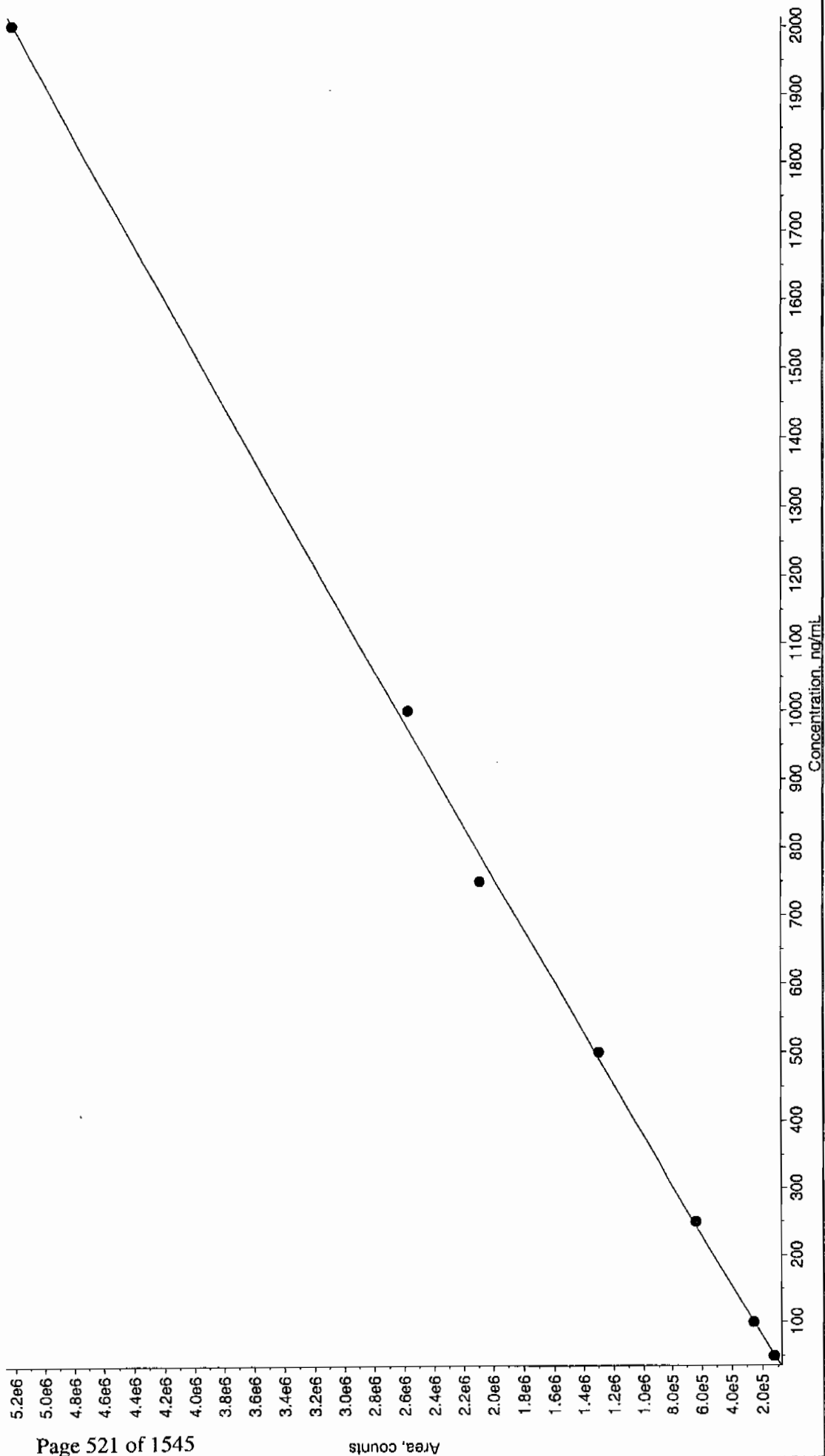
030510.rdb (35-Dinitroaniline): "Quadratic" Regression ("No" weighting): $y = -1.27 x^2 + 8.84e+003 x + -1.86e+004$ ($r = 0.9999$)



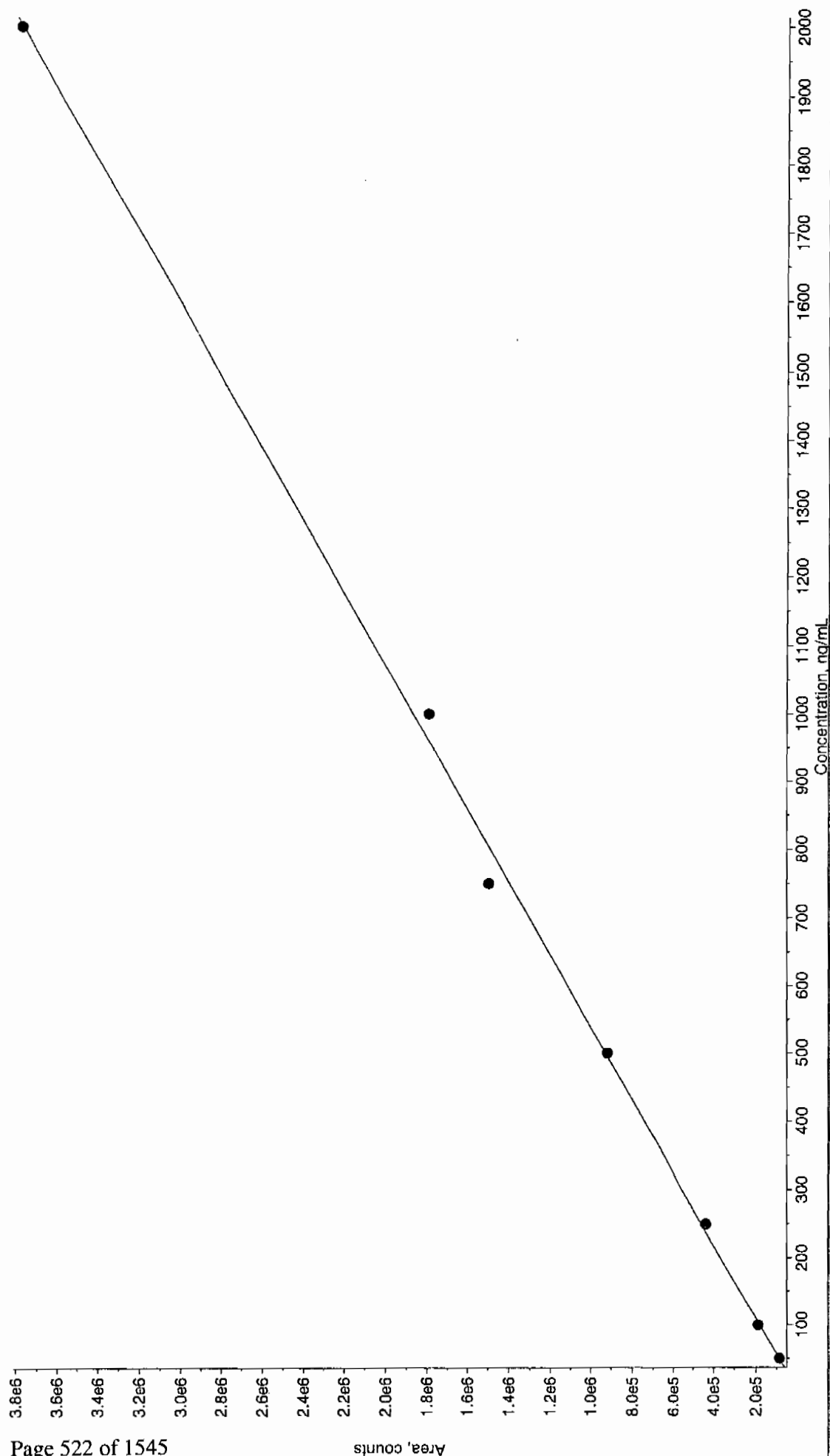
■ C30510.rdb (34-Dinitrotoluene): "Quadratic" Regression ("No" weighting): $y = -3.11 \times 10^{-4} x^2 + 1.35 \times 10^{-4} x + -6.68 \times 10^{-4}$ ($r = 0.9976$)



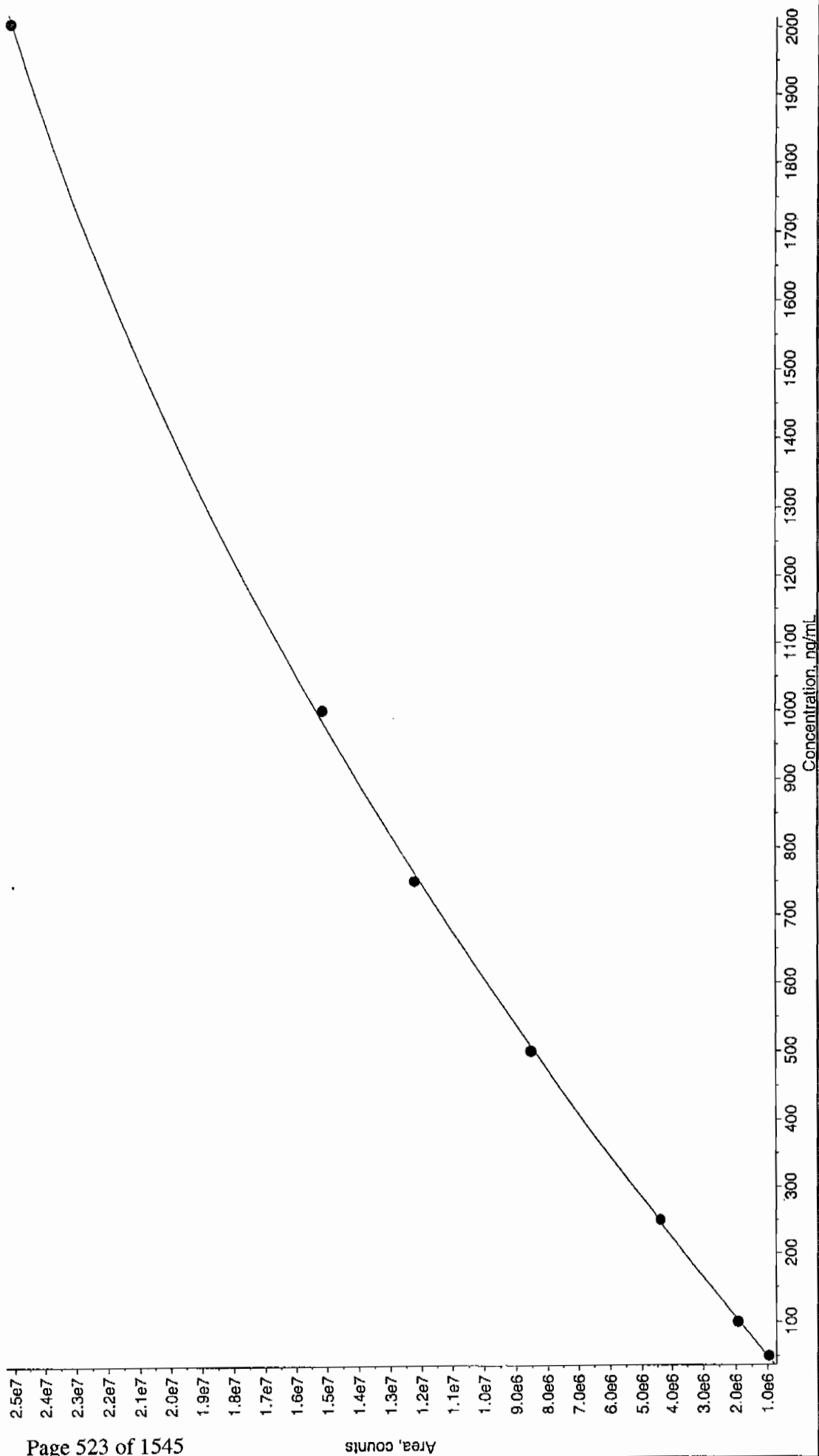
030510.rdb (26-Diamino-4-nitrotoluene): "Quadratic" Regression ("No" weighting): $y = -0.0366 x^2 + 2.69e+003 x + -1.32e+004$ ($r = 0.9996$)



030510.rdb (24-Diamino-6-nitrotoluene): "Quadratic" Regression ("No" weighting): $y = 0.0157 x^2 + 1.86e+003 x + -5.04e+003$ ($r = 0.9992$)



030510.rdb (tris(o-cresyl) phosphate): "Quadratic" Regression: $y = -2.71 x^2 + 1.79e+004 x + 1.23e+005$ ($r = 0.9999$)



Explosives Initial Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1981

Lab Code: GEL

GEL Sample ID: WXXICV

GEL Data File EXS03050011.wiff

Analysis Date: 05-MAR-10 19:44

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	500	484	97	
2,6-Diamino-4-nitrotoluene	500	507	101	
3,4-Dinitrotoluene	250	230	92	
3,5-Dinitroaniline	500	502	100	
TATB	500	503	101	
tris(o-cresyl) phosphate	500	506	101	

Recovery Limits:

3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,

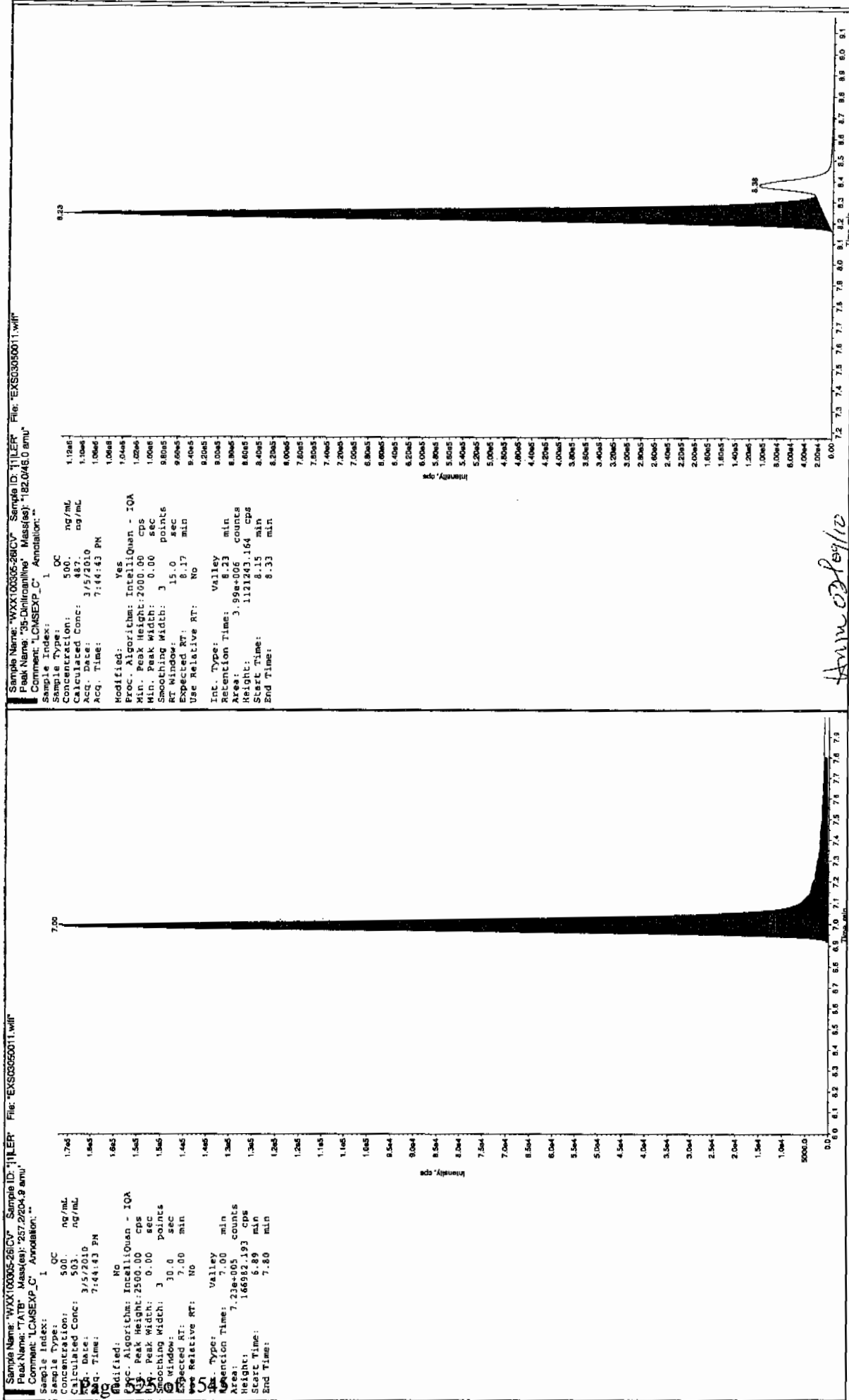
2,4-Diamino-6-nitrotoluene 70-130%

Other Target Analytes 80-120%

Column used to flag Recovery outside of Limits

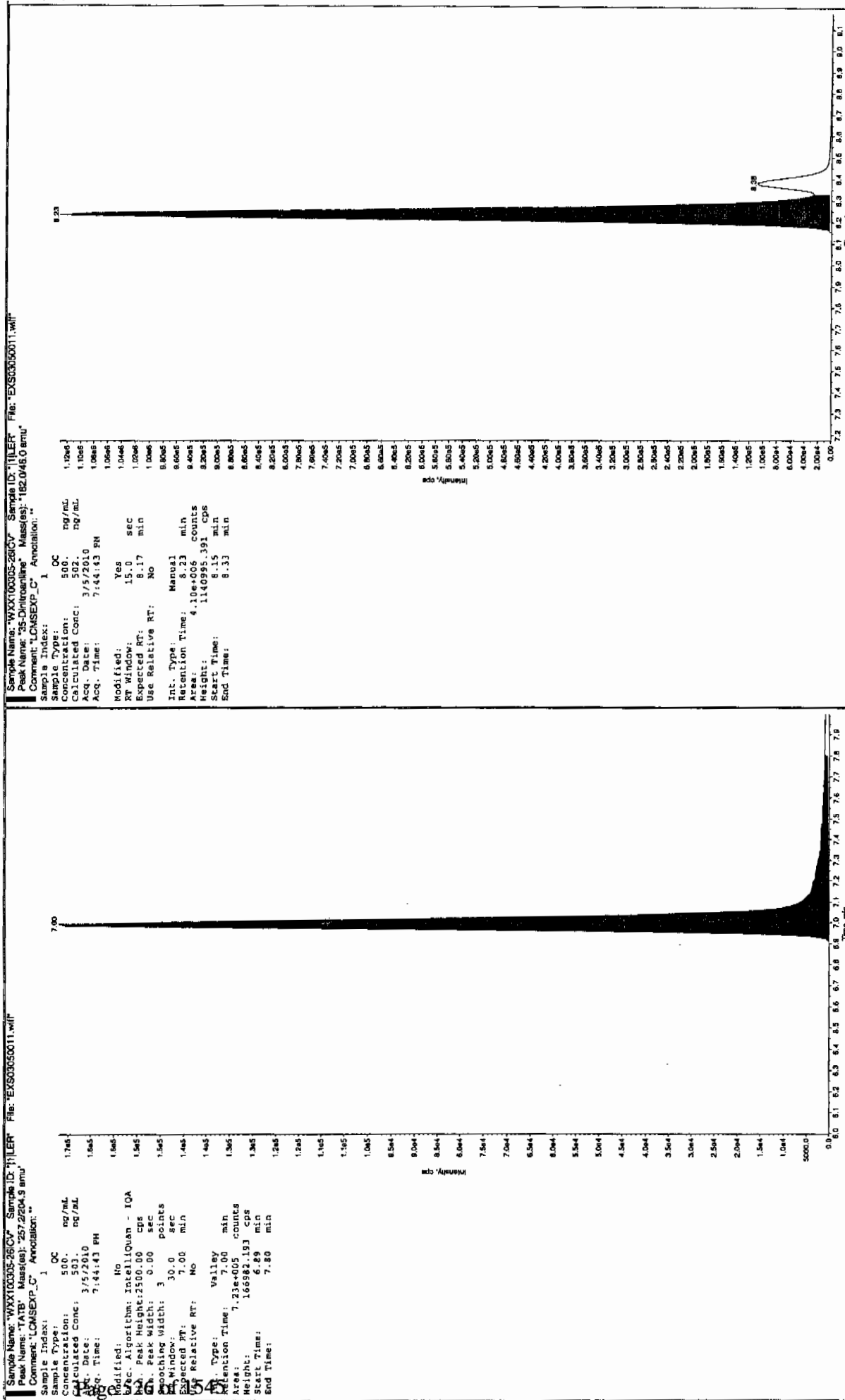
* Value outside of Recovery Limits

Before Jan 31/10

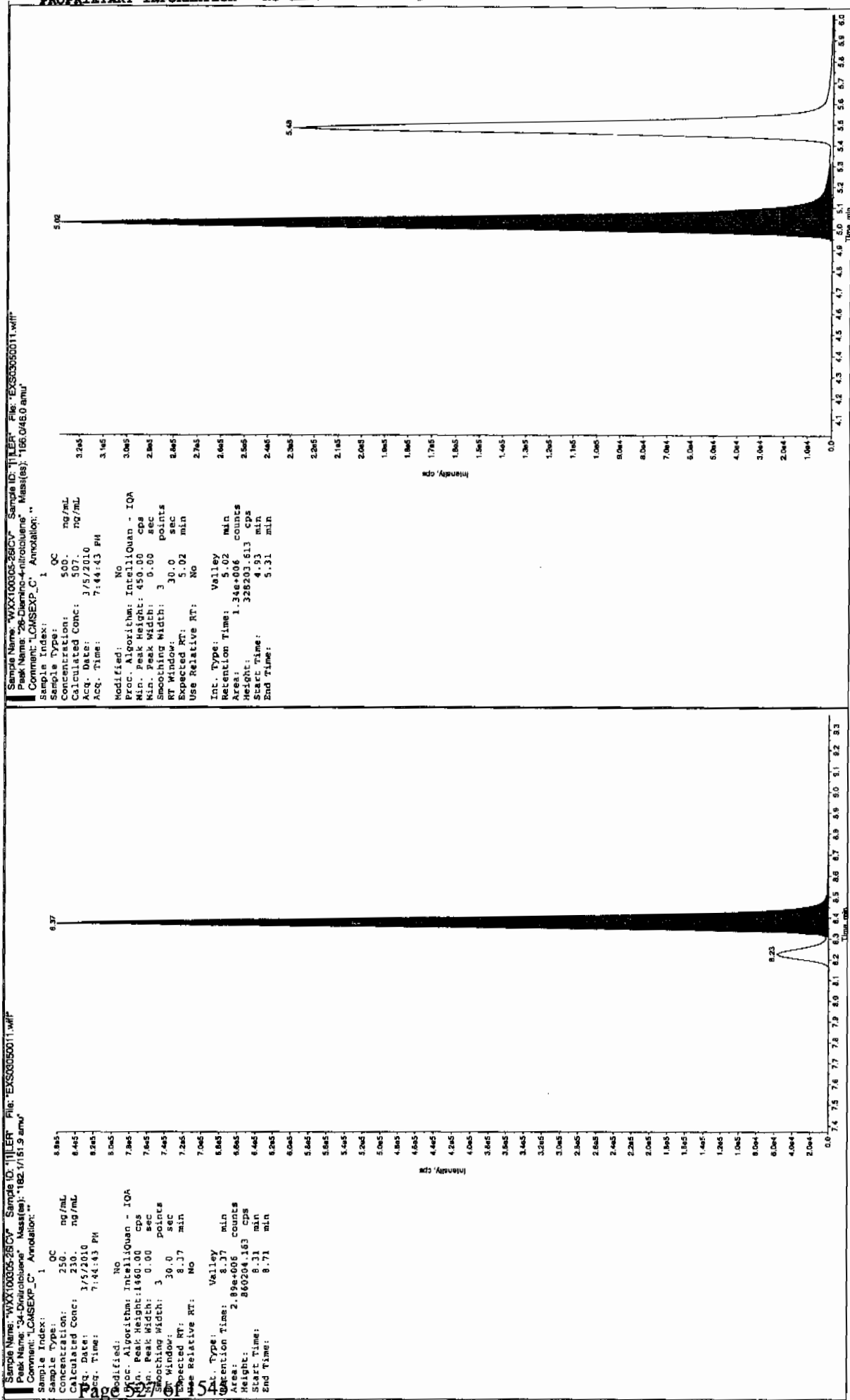


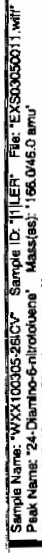
After 03/09/10

after Jan 31/91



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





7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1981

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP0314012a

Analysis Date: 14-MAR-10 20:23

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	40	45.353	113	
1,3-Dinitrobenzene-d4	500	469.423	94	
2,4,6-Trinitrotoluene	40	36.944	92	
2,4-Dinitrotoluene	40	44.992	112	
2,6-Dinitrotoluene	40	39.604	99	
2,6-Dinitrotoluene-d3	500	507.766	102	
2-Amino-4,6-dinitrotoluene	40	35.068	88	
3,4-Dinitrotoluene	20	17.939	90	
4-Amino-2,6-dinitrotoluene	40	40.541	101	
HMX	40	45.554	114	
Nitrobenzene	40	47.411	119	
PETN	40	41.119	103	
RDX	40	37.369	93	
Tetryl	40	45.238	113	
m-Dinitrobenzene	40	34.726	87	
m-Nitrotoluene	40	52.416	131	*
o-Nitrotoluene	40	43.094	108	
p-Nitrotoluene	40	37.564	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

Printed: Mon Mar 15 10:16:43 2010, Page 23 of 77

Dataset: C:\MASSLYNX\New_Exp.PRO\031410expA.qld, Time: Mon Mar 15 10:15:48 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0314012a

Date: 14-Mar-2010

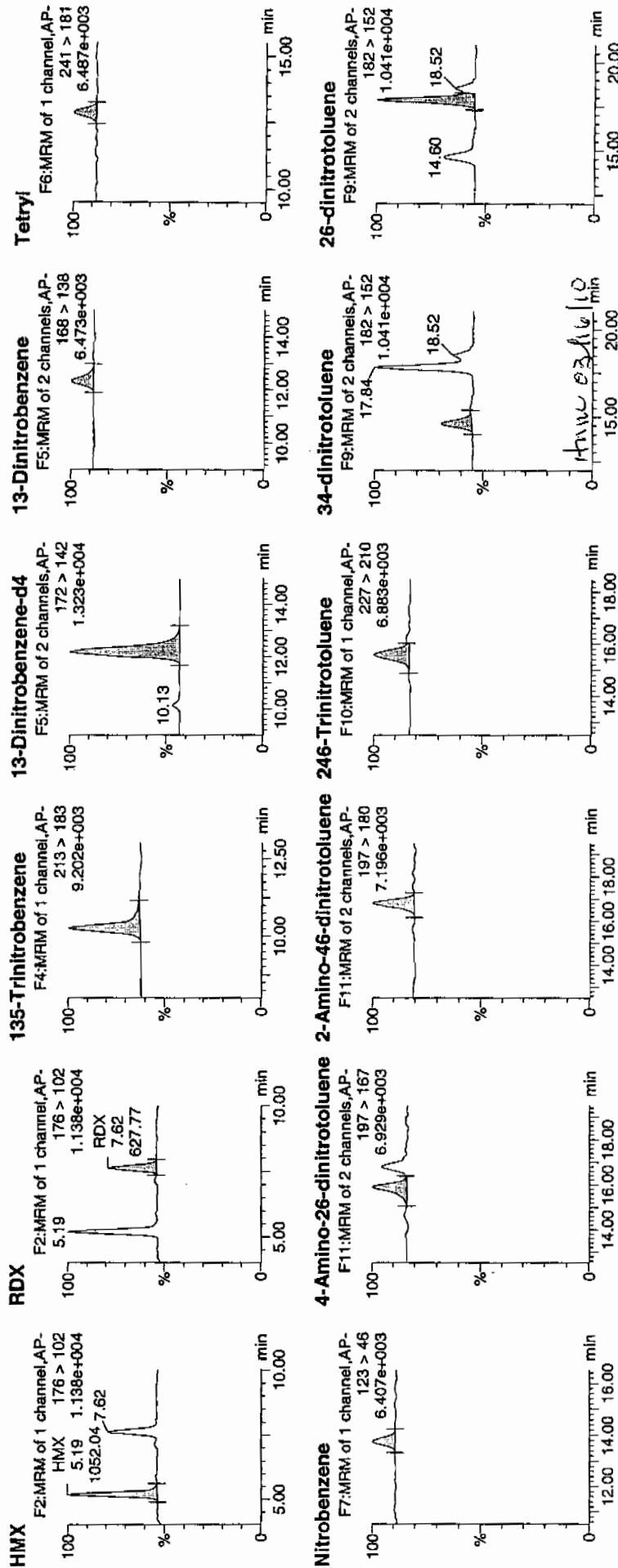
Time: 20:23:15

ID: WXX100314-08CRI

Vial: 1:1,C

Handwritten: 3/15/10

Page 530 of 1545



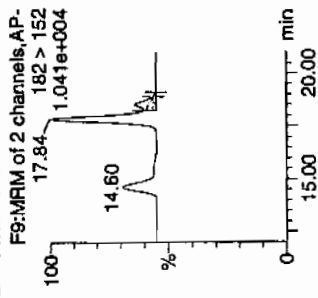
Quantify Sample Report

GEL Laboratories, LLC / Analyst : Michael A. Penny

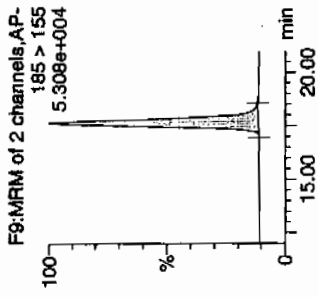
Printed: Mon Mar 15 10:16:43 2010, Page 24 of 77

Dataset: C:\WASSL\Y\N\New_Exp.PRO\031410expA.qtd, Time: Mon Mar 15 10:15:48 2010

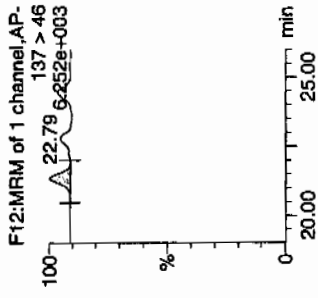
24-dinitrotoluene



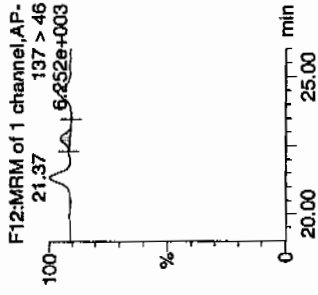
26-dinitrotoluene-d3



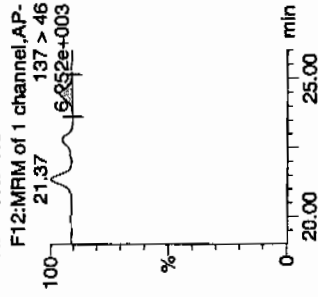
2-Nitrotoluene



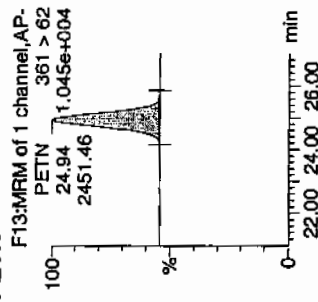
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	S/Area	Abs/Resp	Response	Flags	Mod Date	Mod Time	Mod	Ret	SN
WXX100314-08CRI	HMX	176 > 102	5.19	1052.037	3158.691	1052.037	166.531	bb				45.5535	113.9
WXX100314-08CRI	RDX	176 > 102	7.62	627.766	3158.691	627.766	99.371	bb				37.3690	93.4
WXX100314-08CRI	135-Trinitrobenzene	213 > 183	10.27	1054.332	3158.691	1054.332	166.894	bb				45.3525	113.4
WXX100314-08CRI	13-Dinitrobenzene-d4	172 > 142	12.17	3158.691	3158.691	3158.691	3158.691	bb				469.4227	93.9
WXX100314-08CRI	13-Dinitrobenzene	168 > 138	12.31	291.450	3158.691	291.450	46.135	bb				34.7259	86.8
WXX100314-08CRI	Tetryl	241 > 181	12.87	270.707	3158.691	270.707	42.851	bb				45.2383	113.1
WXX100314-08CRI	Nitrobenzene	123 > 46	13.76	245.701	3158.691	245.701	38.893	bb				47.4108	118.5
WXX100314-08CRI	4-Amino-26-dinitrotoluene	197 > 167	15.89	488.379	19351.625	488.379	12.619	MM	15-Mar-10	10:07:09		40.5413	101.4
WXX100314-08CRI	2-Amino-46-dinitrotoluene	197 > 180	16.79	557.705	19351.625	557.705	14.410	bb				35.0675	87.7
WXX100314-08CRI	246-Trinitrotoluene	227 > 210	15.58	487.691	19351.625	487.691	12.601	dd				36.9441	92.4
WXX100314-08CRI	34-dinitrotoluene	182 > 152	14.60	669.473	19351.625	669.473	17.298	bb				17.9388	89.7
WXX100314-08CRI	26-dinitrotoluene	182 > 152	17.84	1724.533	19351.625	1724.533	44.558	MM	15-Mar-10	10:10:06		39.6042	99.0
WXX100314-08CRI	24-dinitrotoluene	182 > 152	18.52	417.081	19351.625	417.081	10.776	MM	15-Mar-10	10:13:19		44.9924	112.5
WXX100314-08CRI	26-dinitrotoluene-d3	185 > 155	17.64	19351.625	19351.625	19351.625	19351.625	bb				507.7662	101.6
WXX100314-08CRI	2-Nitrotoluene	137 > 46	21.37	253.096	19351.625	253.096	6.539	bb				43.0939	107.7
WXX100314-08CRI	4-Nitrotoluene	137 > 46	22.79	111.157	19351.625	111.157	2.872	bb				37.5644	93.9
WXX100314-08CRI	3-Nitrotoluene	137 > 46	24.46	185.527	19351.625	185.527	4.794	bb				52.4163	131.0
WXX100314-08CRI	PETN	361 > 62	24.94	2451.459	19351.625	2451.459	63.340	bb				41.1187	102.8

GRAND MEAN AVERAGE

Vendor: UltraScientific
 Date of Analysis 03/14/10
 Time of Injection 2023
 Standard Number WXX100314-08CRI
 Data File EXP0314012a

HMX	113.9
RDX	93.4
135-TNB	113.4
13-DNB	86.8
Tetryl	113.1
Nitrobenzene	118.5
4A-26-DNT	101.4
2A-46-DNT	87.7
246-TNT	92.4
34-DNT(surr)	89.7
26-DNT	99.0
24-DNT	112.5
2-NT	107.7
4-NT	93.9
3-NT	131.0
PETN	102.8

1077
3/15/10

Total 1657.2

Average 103.6

WXX100314-08CRI

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): 10-1981

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXP0314023a

Analysis Date: 15-MAR-10 01:47

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	600	562.341	94	
1,3-Dinitrobenzene-d4	500	504.22	101	
2,4,6-Trinitrotoluene	600	632.951	105	
2,4-Dinitrotoluene	600	641.749	107	
2,6-Dinitrotoluene	600	629.098	105	
2,6-Dinitrotoluene-d3	500	542.493	108	
2-Amino-4,6-dinitrotoluene	600	610.437	102	
3,4-Dinitrotoluene	300	302.639	101	
4-Amino-2,6-dinitrotoluene	600	562.733	94	
HMX	600	609.823	102	
Nitrobenzene	600	631.179	105	
PETN	600	603.16	101	
RDX	600	680.646	113	
Tetryl	600	623.98	104	
m-Dinitrobenzene	600	569.786	95	
m-Nitrotoluene	600	571.208	95	
o-Nitrotoluene	600	576.388	96	
p-Nitrotoluene	600	572.801	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

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

Dataset: C:\MASSLYNX\New_Exp.PRO\031410expA.qld, Time: Mon Mar 15 10:15:48 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0314023a

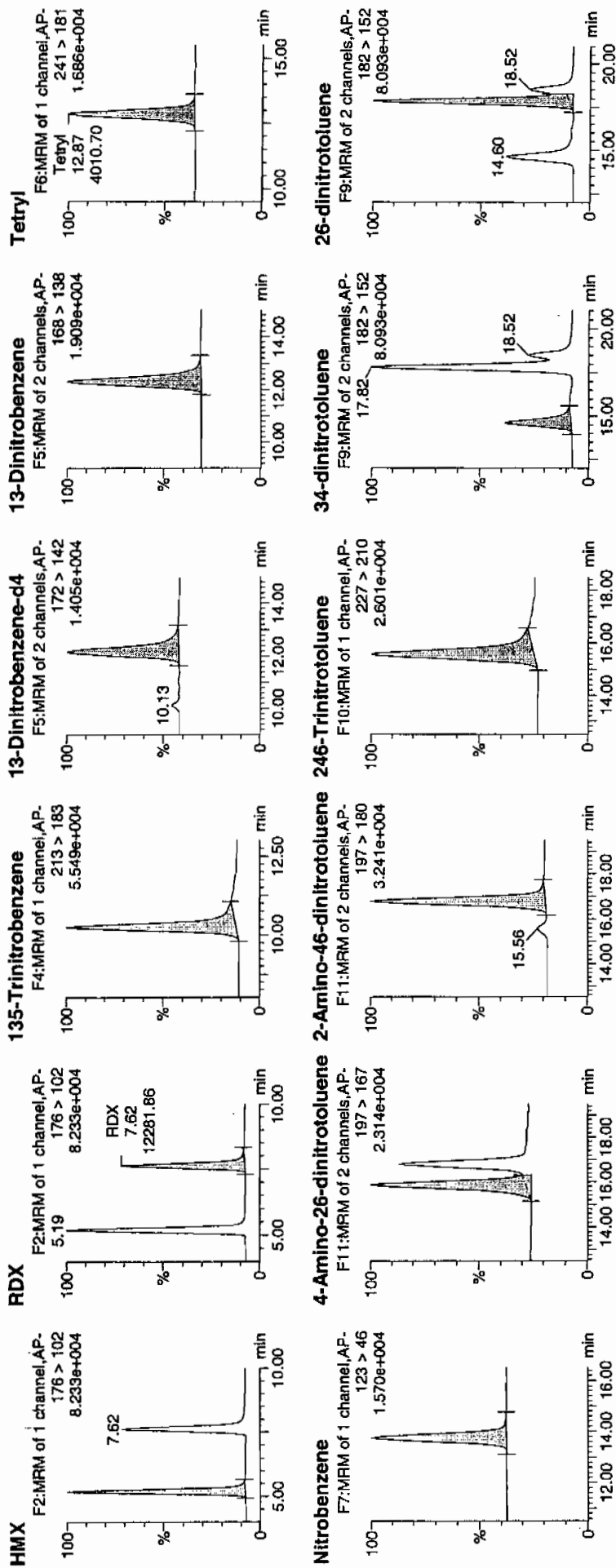
Date: 15-Mar-2010

Time: 01:47:26

ID: WXX100314-07CCV

Vial: 1:1,B

3/15/10



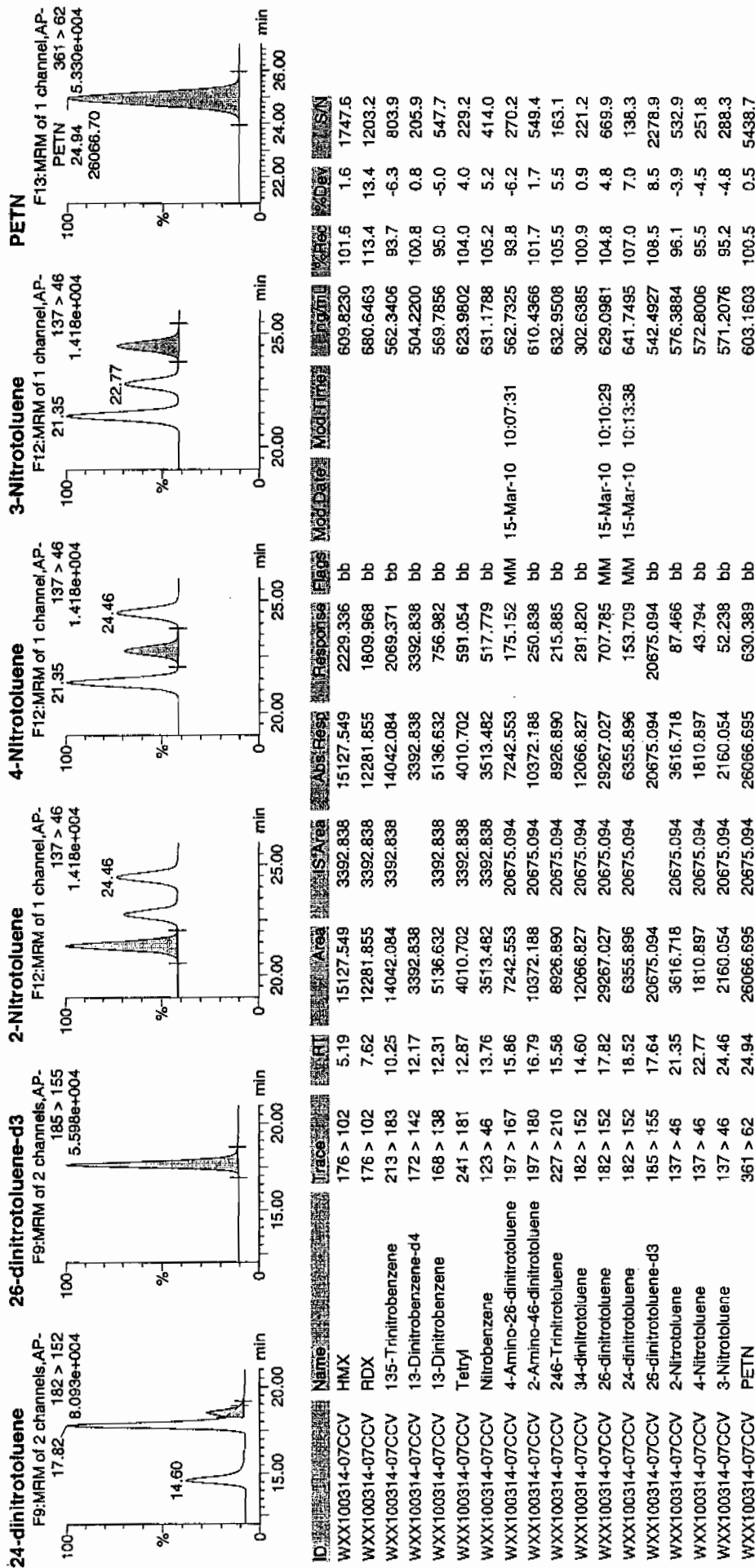
4/15/10

Quantify Sample Report

GEL Laboratories, LLC / Analyst : Michael A. Penny

Printed: Mon Mar 15 10:16:43 2010, Page 46 of 77

Dataset: C:\MASSLYNX\New_Exp.PRO\031410expA.qld, Time: Mon Mar 15 10:15:48 2010



GRAND MEAN AVERAGE

Vendor: Restek
 Date of Analysis: 03/15/10
 Time of Injection: 0147
 Standard Number: WXX100314-07CCV
 Data File: EXP0314023a

HMX	101.6
RDX	113.4
135-TNB	93.7
13-DNB	95.0
Tetryl	104.0
Nitrobenzene	105.2
4A-26-DNT	93.8
2A-46-DNT	101.7
246-TNT	105.5
34-DNT(surr)	100.9
26-DNT	104.8
24-DNT	107.0
2-NT	96.1
4-NT	95.5
3-NT	95.2
PETN	100.5

*MAF
3/15/10*

Total 1613.9

Average 100.9

done 03/16/10

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): 10-1981

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP0314025a

Analysis Date: 15-MAR-10 02:46

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	40	50.069	125	
1,3-Dinitrobenzene-d4	500	524.134	105	
2,4,6-Trinitrotoluene	40	38.531	96	
2,4-Dinitrotoluene	40	40.483	101	
2,6-Dinitrotoluene	40	40.862	102	
2,6-Dinitrotoluene-d3	500	567.612	114	
2-Amino-4,6-dinitrotoluene	40	37.43	94	
3,4-Dinitrotoluene	20	16.97	85	
4-Amino-2,6-dinitrotoluene	40	43.966	110	
HMX	40	44.421	111	
Nitrobenzene	40	36.612	92	
PETN	40	36.431	91	
RDX	40	40.127	100	
Tetryl	40	45.808	115	
m-Dinitrobenzene	40	44.086	110	
m-Nitrotoluene	40	49.167	123	
o-Nitrotoluene	40	38.212	96	
p-Nitrotoluene	40	48.579	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\031410expA.qld, Time: Mon Mar 15 10:15:48 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0314025a

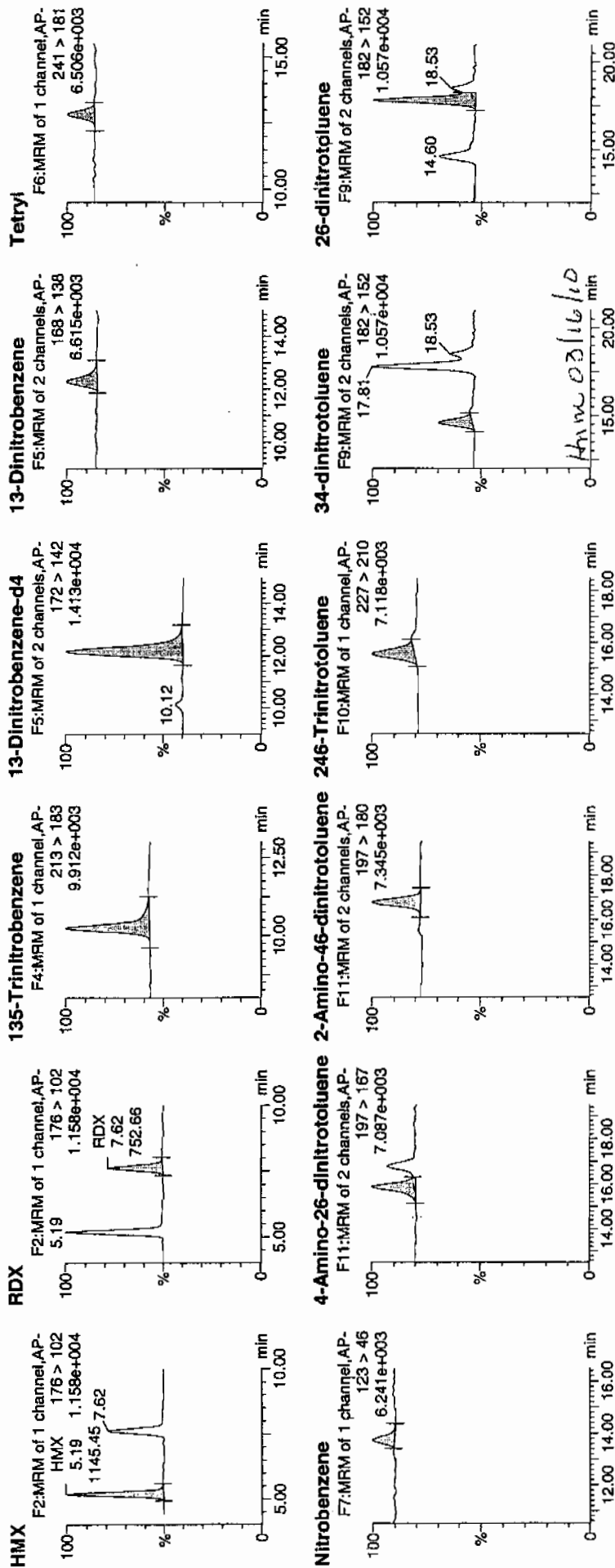
Date: 15-Mar-2010

Time: 02:46:30

ID: WXX100314-08CRI

Vial: 1:1,C

MF
3/15/10

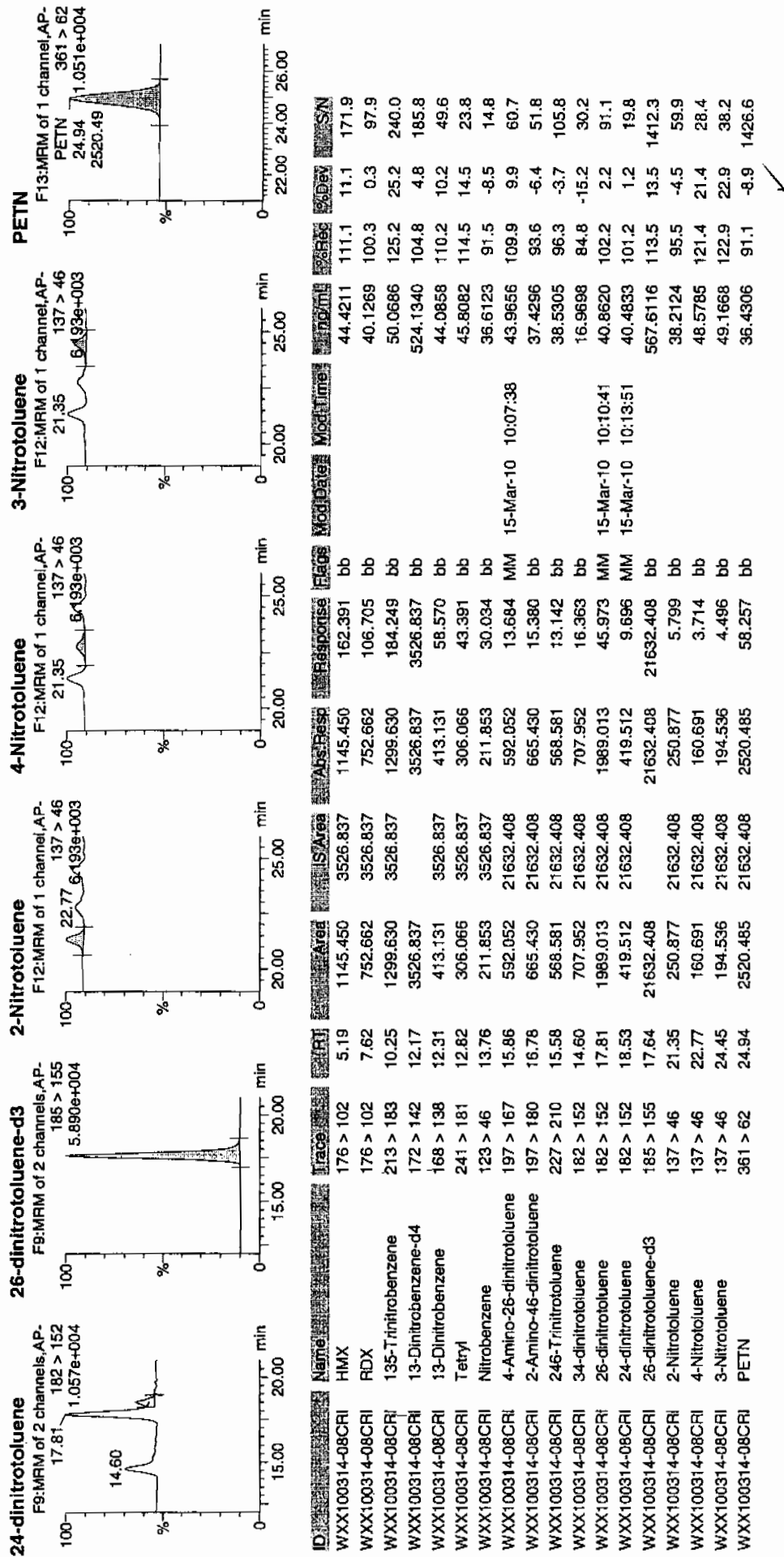


Quantify Sample Report

GEL Laboratories, LLC / Analyst: Michael A. Penny

Printed: Mon Mar 15 10:16:43 2010, Page 50 of 77

Dataset: C:\MASSLYN\New_Exp\PRO1031410expA.qld, Time: Mon Mar 15 10:15:48 2010



GRAND MEAN AVERAGE

Vendor: UltraScientific
 Date of Analysis 03/15/10
 Time of Injection 0246
 Standard Number WXX100314-08CRI
 Data File EXP0314025a

HMX	111.1
RDX	100.3
135-TNB	125.2
13-DNB	110.2
Tetryl	114.5
Nitrobenzene	91.5
4A-26-DNT	109.9
2A-46-DNT	93.6
246-TNT	96.3
34-DNT(surr)	84.8
26-DNT	102.2
24-DNT	101.2
2-NT	95.5
4-NT	121.4
3-NT	122.9
PETN	91.1

Handwritten: 2177
3/15/10

Total 1671.7

Average

104.5

Handwritten: 4711K 03/16/10

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): 10-1981

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXS03050013.wiff

Analysis Date: 05-MAR-10 20:16

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	100	102	102	
2,6-Diamino-4-nitrotoluene	100	104	104	
3,4-Dinitrotoluene	50	52	104	
3,5-Dinitroaniline	100	104	104	
TATB	100	108	108	
tris(o-cresyl) phosphate	100	100	100	

Recovery Limits:

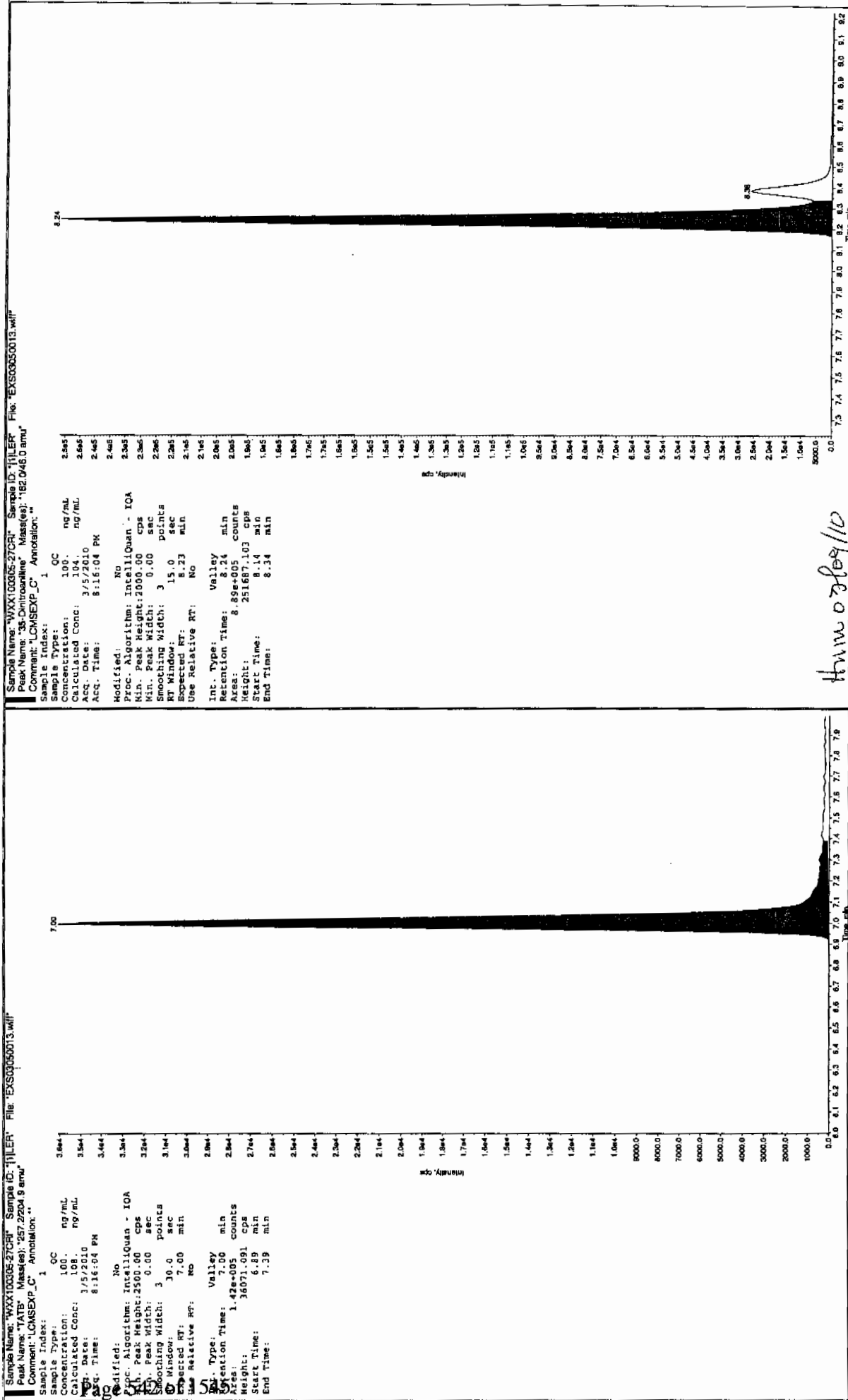
3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,
2,4-Diamino-6-nitrotoluene 50-150%

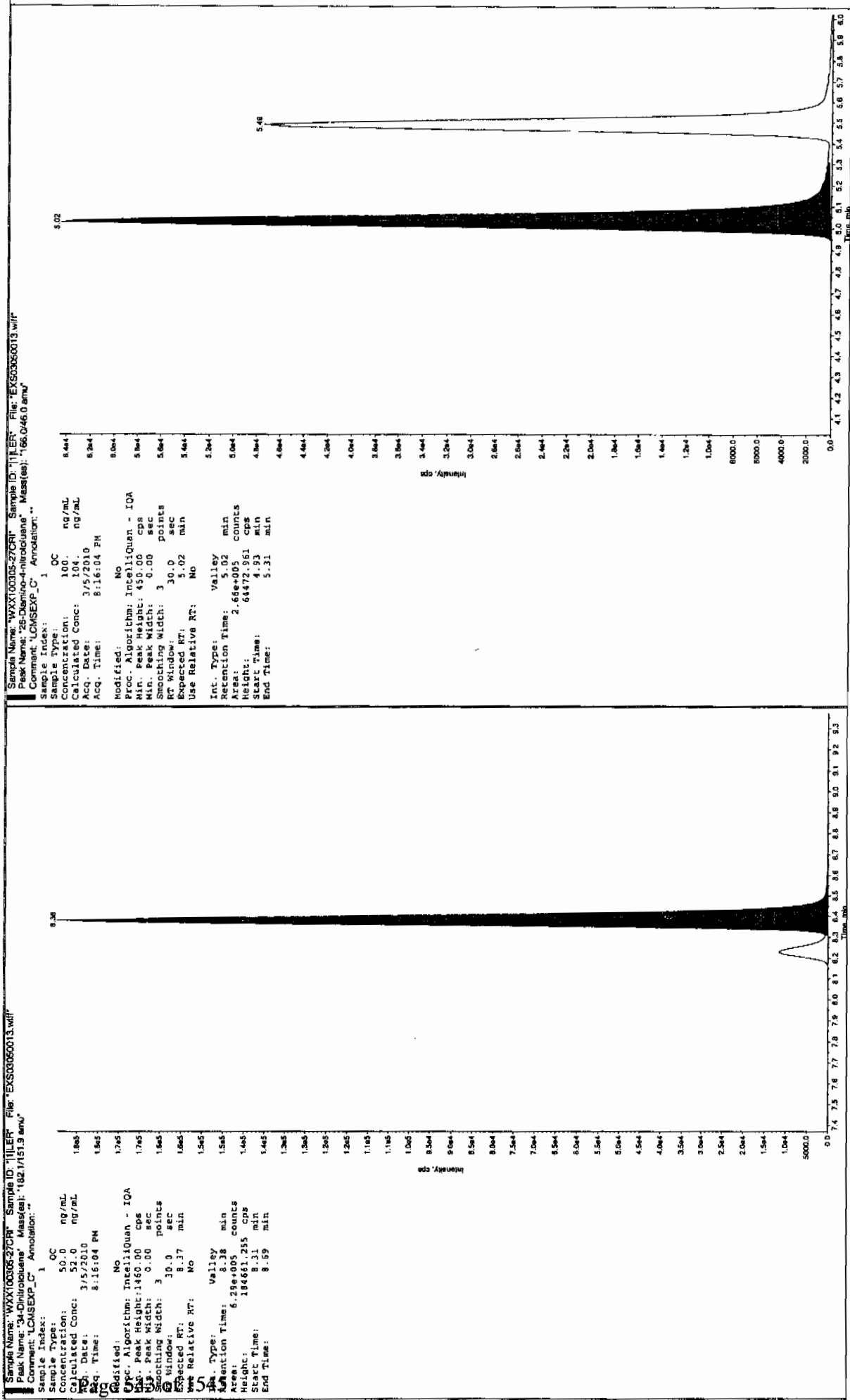
Other Target Analytes 70-130%

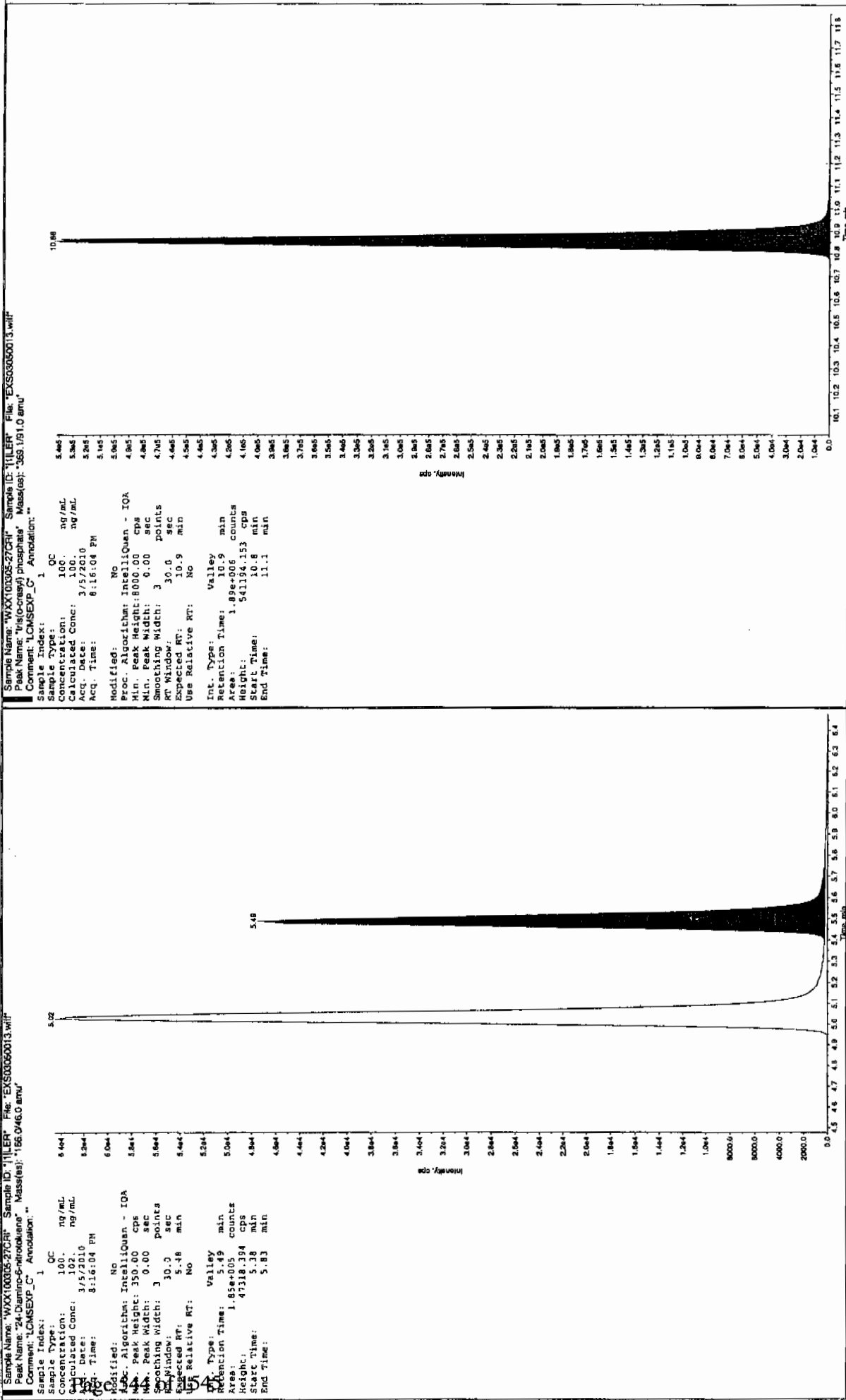
Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

See 3/9/10







7A

Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1981

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXS03050024.wiff

Analysis Date: 05-MAR-10 23:08

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	500	507	101	
2,6-Diamino-4-nitrotoluene	500	520	104	
3,4-Dinitrotoluene	250	237	95	
3,5-Dinitroaniline	500	509	102	
TATB	500	506	101	
tris(o-cresyl) phosphate	500	505	101	

Recovery Limits:

3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,

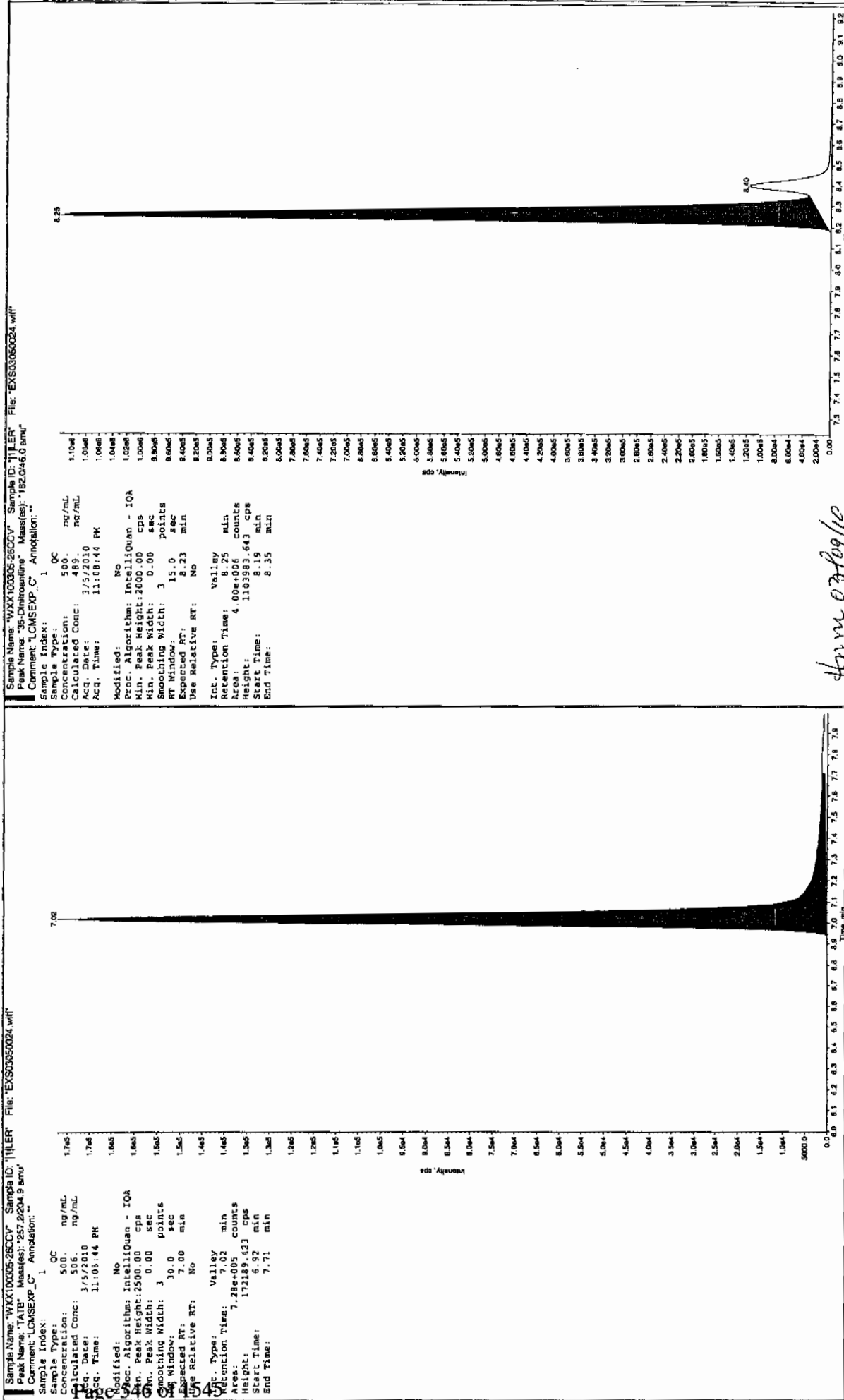
2,4-Diamino-6-nitrotoluene 70-130%

Other Target Analytes 80-120%

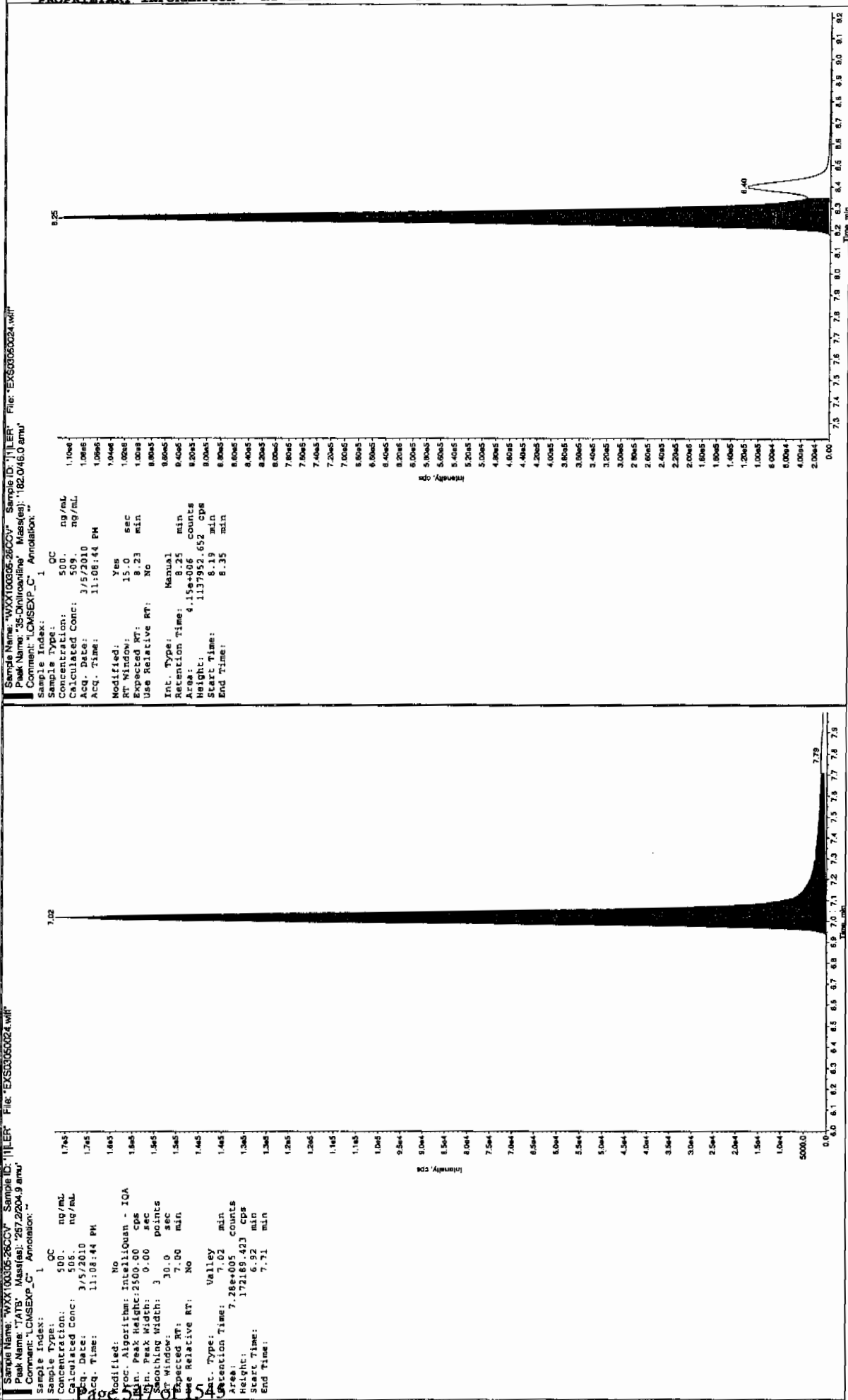
Column used to flag Recovery outside of Limits

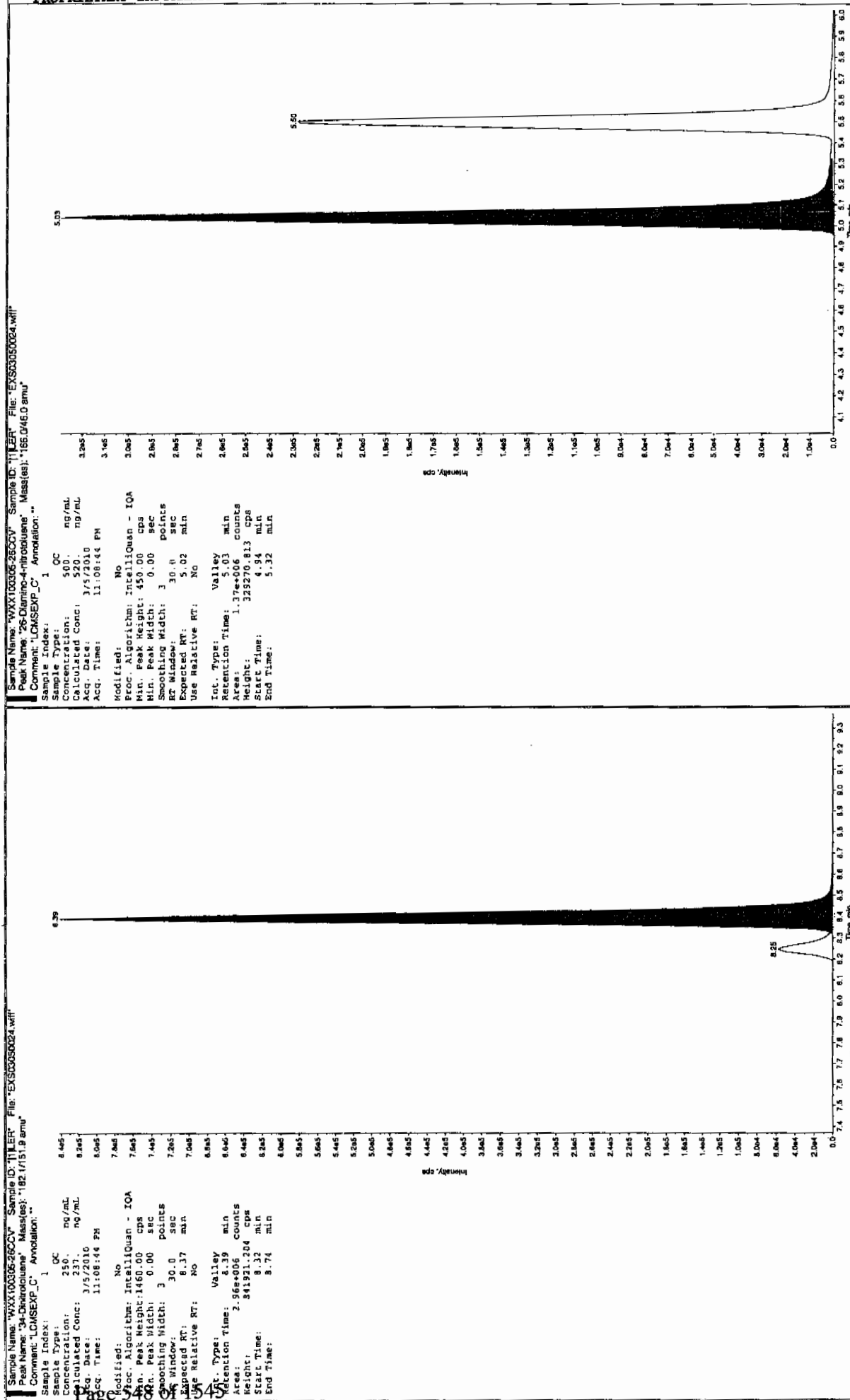
* Value outside of Recovery Limits

Before Jan 31/10



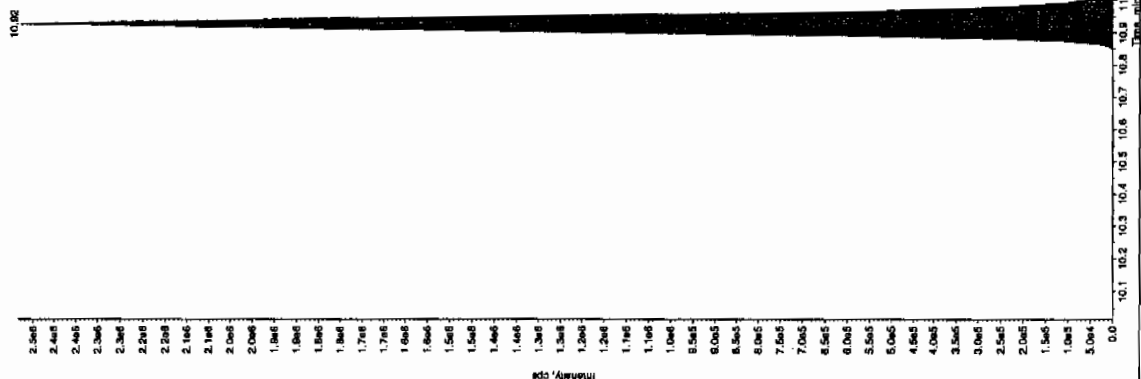
after Jan 3/9/10





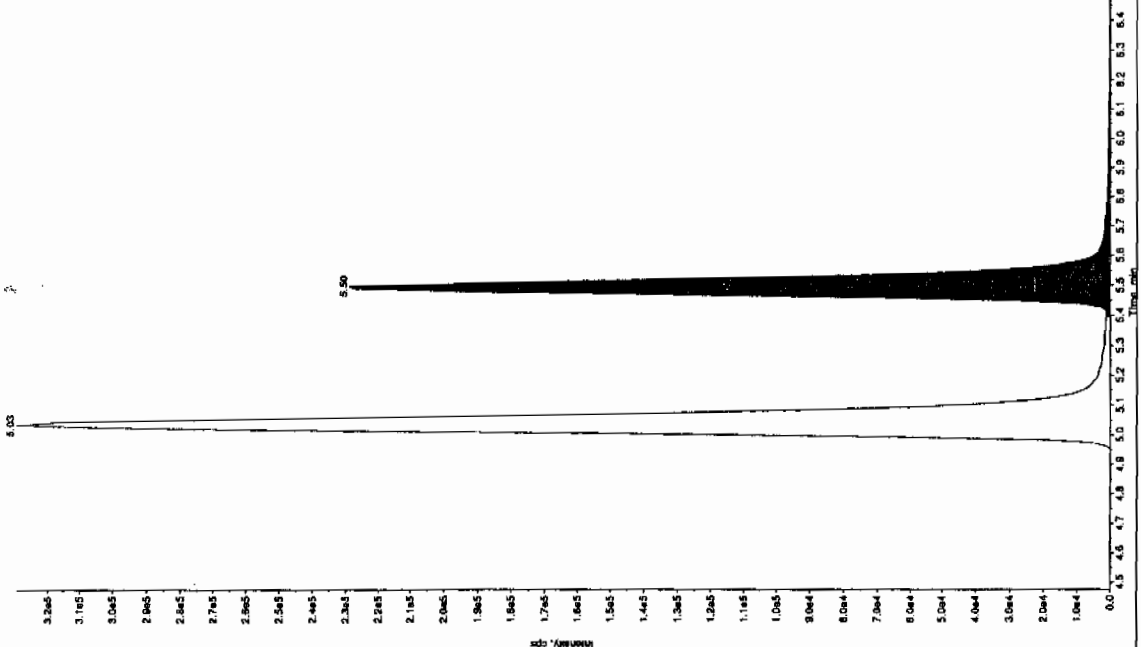
Sample Name: "WXX100005-260CV" Sample ID: "111ER" File: "EXS00050024.wif"
 Peak Name: "tris(0-cray) phosphata" Mass(es): "369.191.0 amu"
 Comment: "LCMEXP_C" Annotation: ""

Sample Index: 1
 Sample Type: QC
 Concentration: 500 ng/mL
 Expected Conc: 3/5/2010 ng/mL
 Acq. Date: 11:08:44 PM
 Acq. Time: 11:08:44 PM
 Modified: No
 Proc. Algorithm: IntelliQuan - IQA
 Min. Peak Height: 8000.00 cps
 Min. Peak Width: 0.00 sec
 Smoothing Width: 3 points
 RT Window: 30.0 sec
 Expected RT: 10.5 min
 Use Relative RT: No
 Int. Type: Valley
 Retention Time: 10.9 min
 Area: 6.48e+006 counts
 Height: 2481763.184 cps
 Start Time: 10.8 min
 End Time: 11.3 min



Sample Name: "WXX100005-260CV" Sample ID: "111ER" File: "EXS00050024.wif"
 Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "156.046.0 amu"
 Comment: "LCMEXP_C" Annotation: ""

Sample Index: 1
 Sample Type: QC
 Concentration: 500 ng/mL
 Expected Conc: 3/5/2010 ng/mL
 Acq. Date: 11:08:44 PM
 Acq. Time: 11:08:44 PM
 Modified: No
 Proc. Algorithm: IntelliQuan - IQA
 Min. Peak Height: 350.00 cps
 Min. Peak Width: 0.00 sec
 Smoothing Width: 3 points
 RT Window: 30.0 sec
 Expected RT: 5.48 min
 Use Relative RT: No
 Int. Type: Valley
 Retention Time: 5.50 min
 Area: 9.40e+005 counts
 Height: 22825.080 cps
 Start Time: 5.39 min
 End Time: 5.60 min



7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1981

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXS03050026.wiff

Analysis Date: 05-MAR-10 23:40

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	100	102	102	
2,6-Diamino-4-nitrotoluene	100	109	109	
3,4-Dinitrotoluene	50	51.8	104	
3,5-Dinitroaniline	100	105	105	
TATB	100	112	112	
tris(o-cresyl) phosphate	100	103	103	

Recovery Limits:

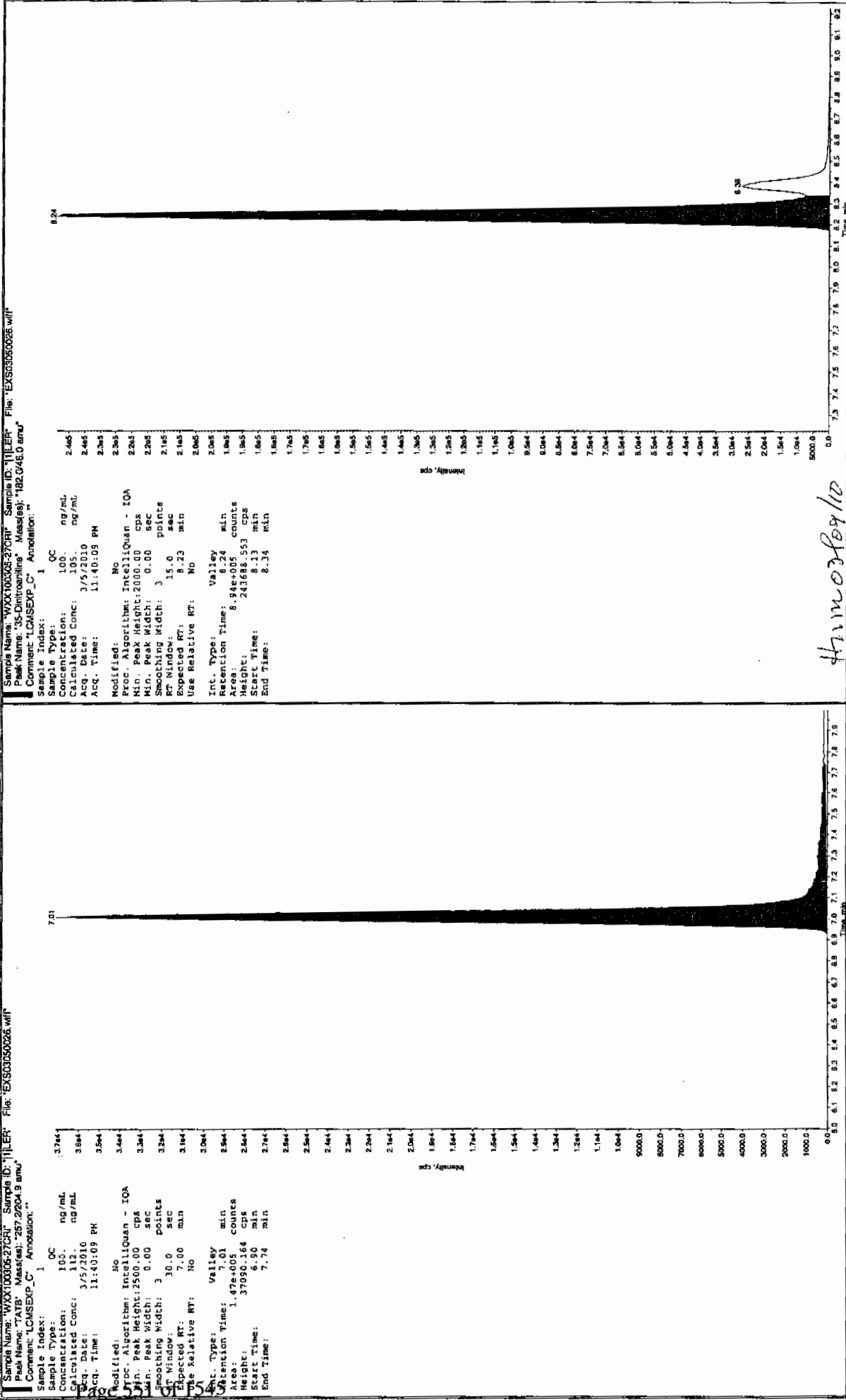
3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,
2,4-Diamino-6-nitrotoluene 50-150%

Other Target Analytes 70-130%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

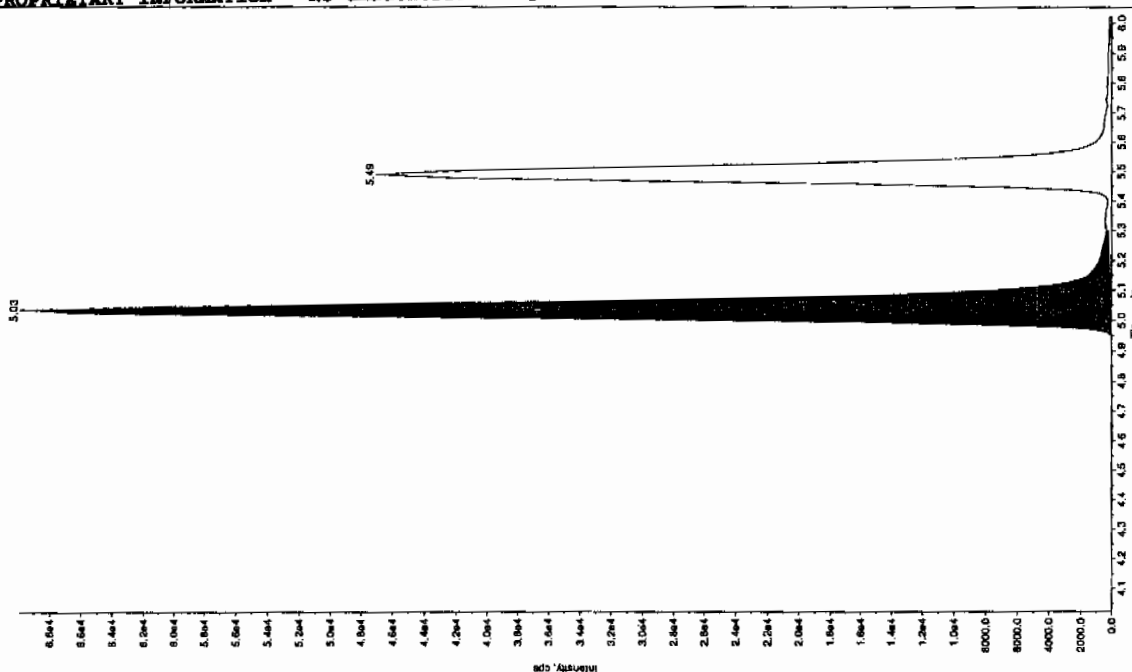
Run 3/19/10



4/11/2008 8/10

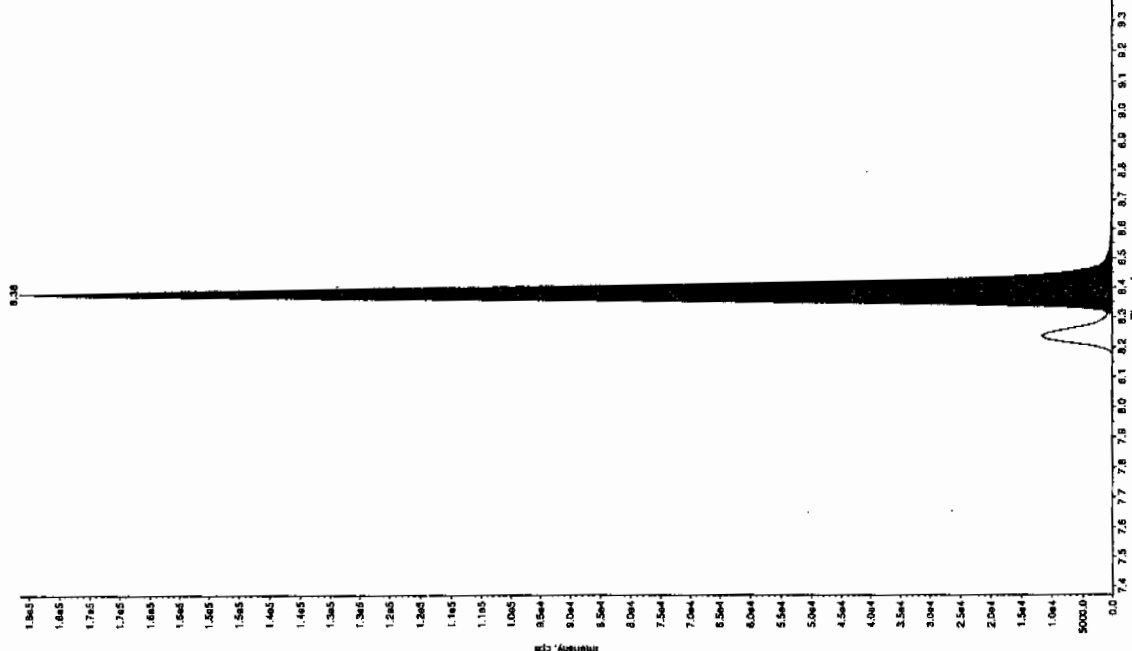
Sample Name: "WXX100305-27C91" Sample ID: "11LER" File: "EXS03050006.wif"
 Peak Name: "26-Dinitro-4-nitrotoluene" Mass(es): "156.045.0 amu"
 Comment: "LCMSEXP_C" Annotation: ""

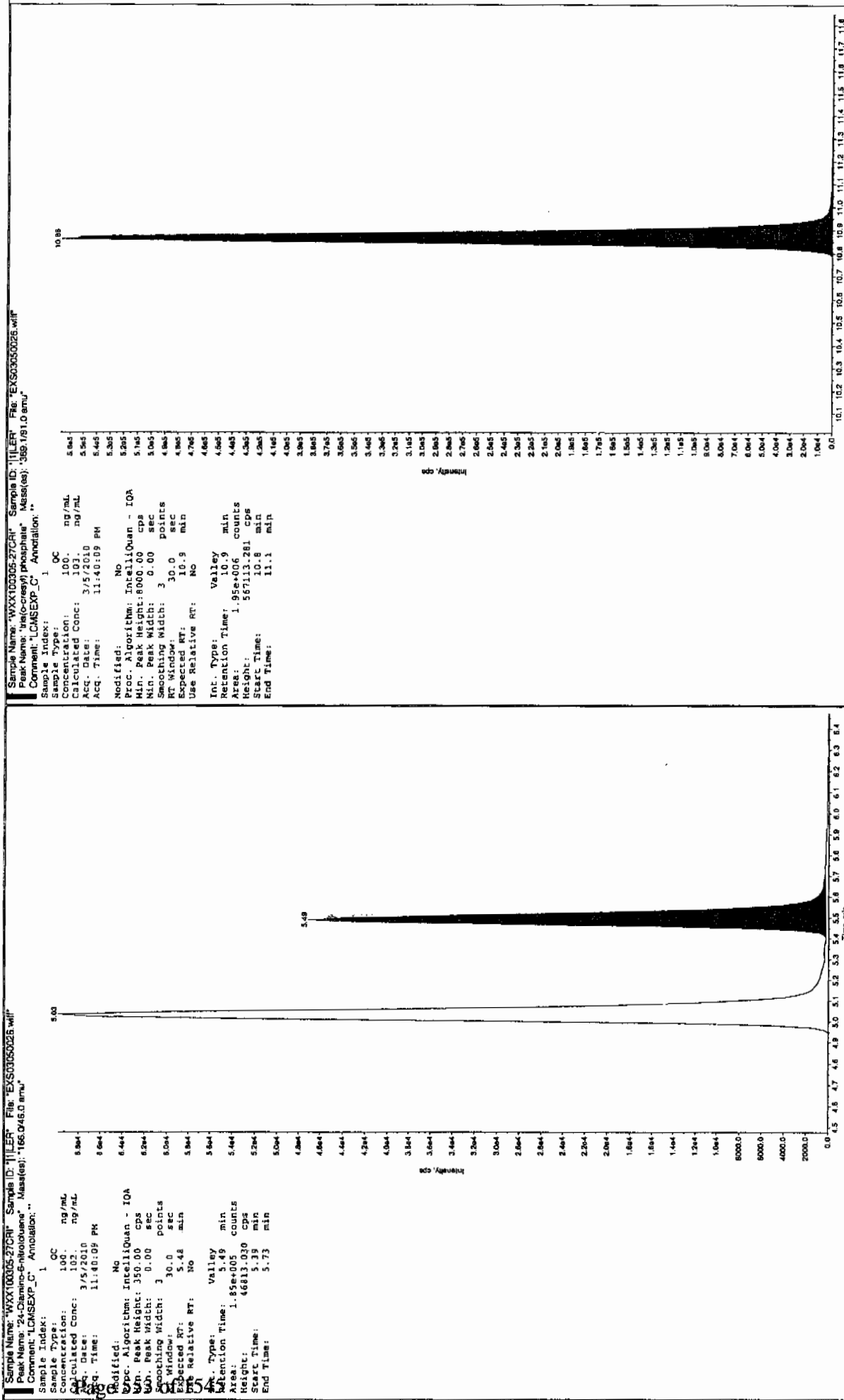
Sample Index: 1
 Sample Type: QC
 Concentration: 100 ng/mL
 Calculated Conc: 3/5/2010
 Acq. Date: 11:40:09 PM
 Acq. Time: 11:40:09 PM
 Modified: No
 Proc. Algorithm: IntelliQuan - IOA
 Min. Peak Height: 450.00 cps
 Min. Peak Width: 0.00 sec
 Smoothing Width: 3 points
 RT Window: 30.0 sec
 Expected RT: 5.02 min
 Use Relative RT: No
 Int. Type: Valley
 Retention Time: 5.03 min
 Area: 2.80e+005 counts
 Height: 69851.128 cps
 Start Time: 4.94 min
 End Time: 5.30 min



Sample Name: "WXX100305-27C91" Sample ID: "11LER" File: "EXS03050006.wif"
 Peak Name: "34-Dinitrotoluene" Mass(es): "182.1515.9 amu"
 Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
 Sample Type: QC
 Concentration: 50.0 ng/mL
 Calculated Conc: 3/5/2010
 Acq. Date: 11:40:09 PM
 Acq. Time: 11:40:09 PM
 Modified: No
 Proc. Algorithm: IntelliQuan - IOA
 Min. Peak Height: 1450.00 cps
 Min. Peak Width: 0.00 sec
 Smoothing Width: 3 points
 RT Window: 30.0 sec
 Expected RT: 8.37 min
 Use Relative RT: No
 Int. Type: Valley
 Retention Time: 8.38 min
 Area: 6.26e+005 counts
 Height: 181524.170 cps
 Start Time: 8.31 min
 End Time: 8.73 min





7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1981

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXS03050035.wiff

Analysis Date: 06-MAR-10 02:01

LCMSMS ID: 1358

Column ID: Sphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	500	509	102	
2,6-Diamino-4-nitrotoluene	500	531	106	
3,4-Dinitrotoluene	250	246	98	
3,5-Dinitroaniline	500	529	106	
TATB	500	534	107	
tris(o-cresyl) phosphate	500	503	101	

Recovery Limits:

3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,

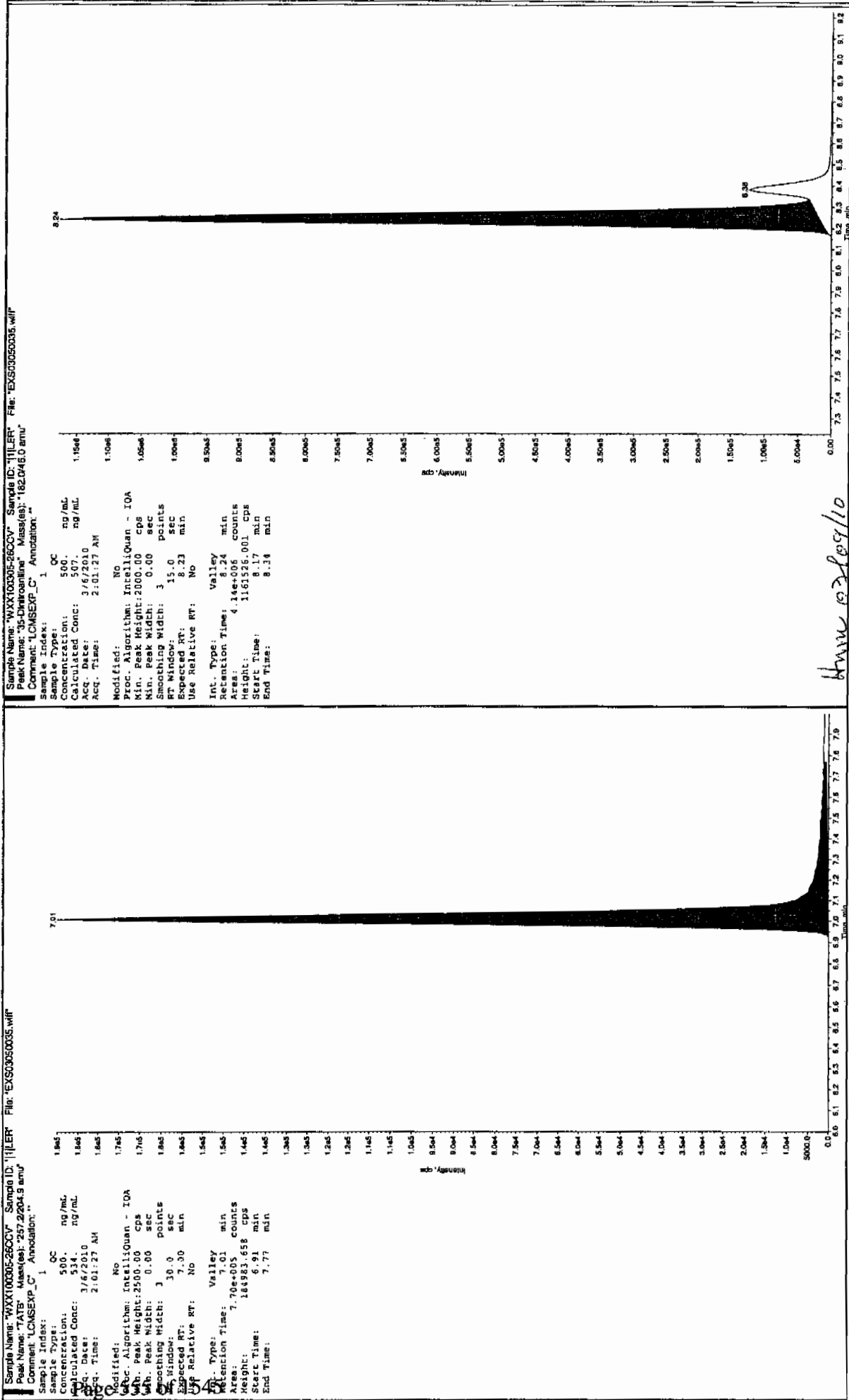
2,4-Diamino-6-nitrotoluene 70-130%

Other Target Analytes 80-120%

Column used to flag Recovery outside of Limits

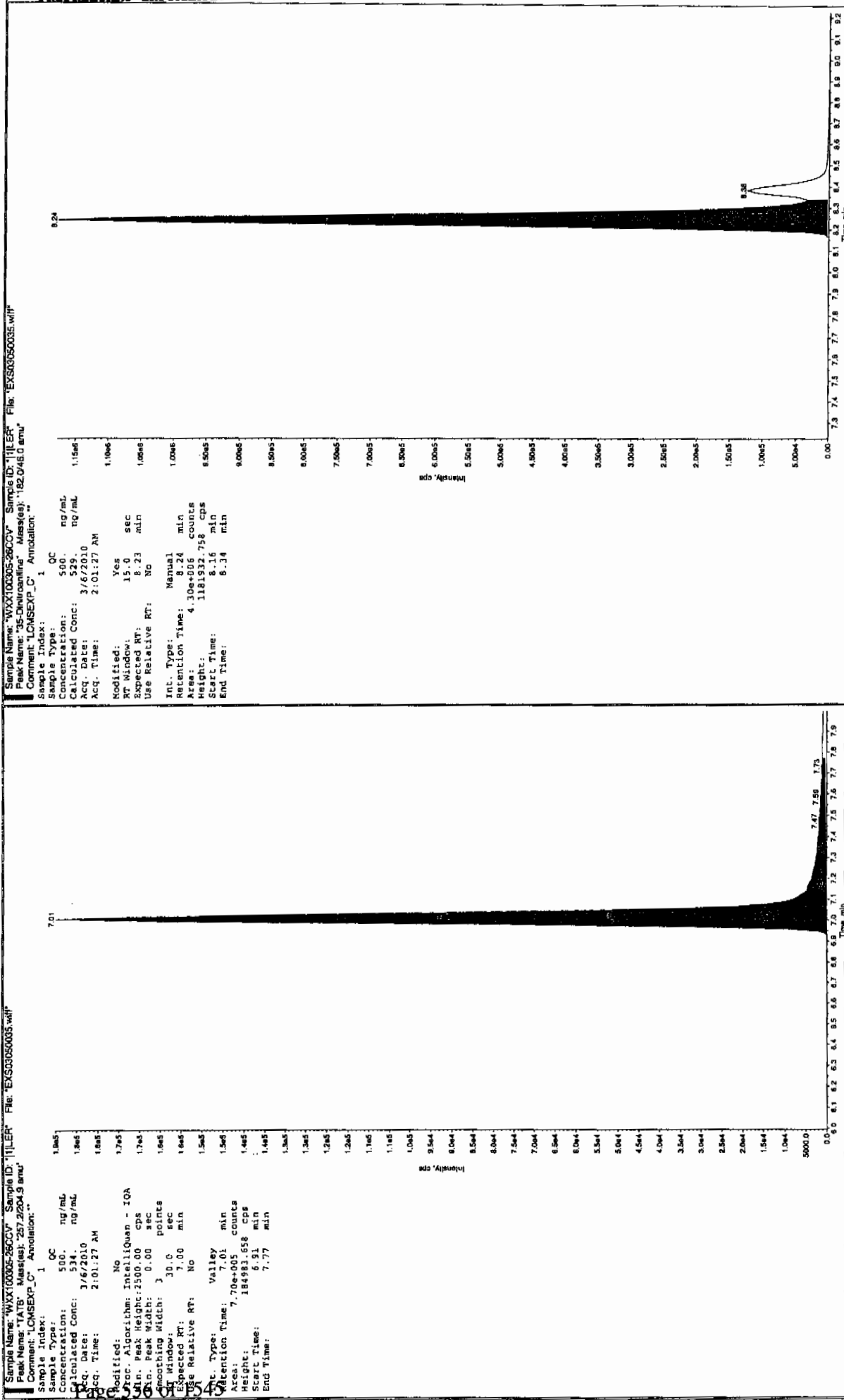
* Value outside of Recovery Limits

Before Jan 31/10

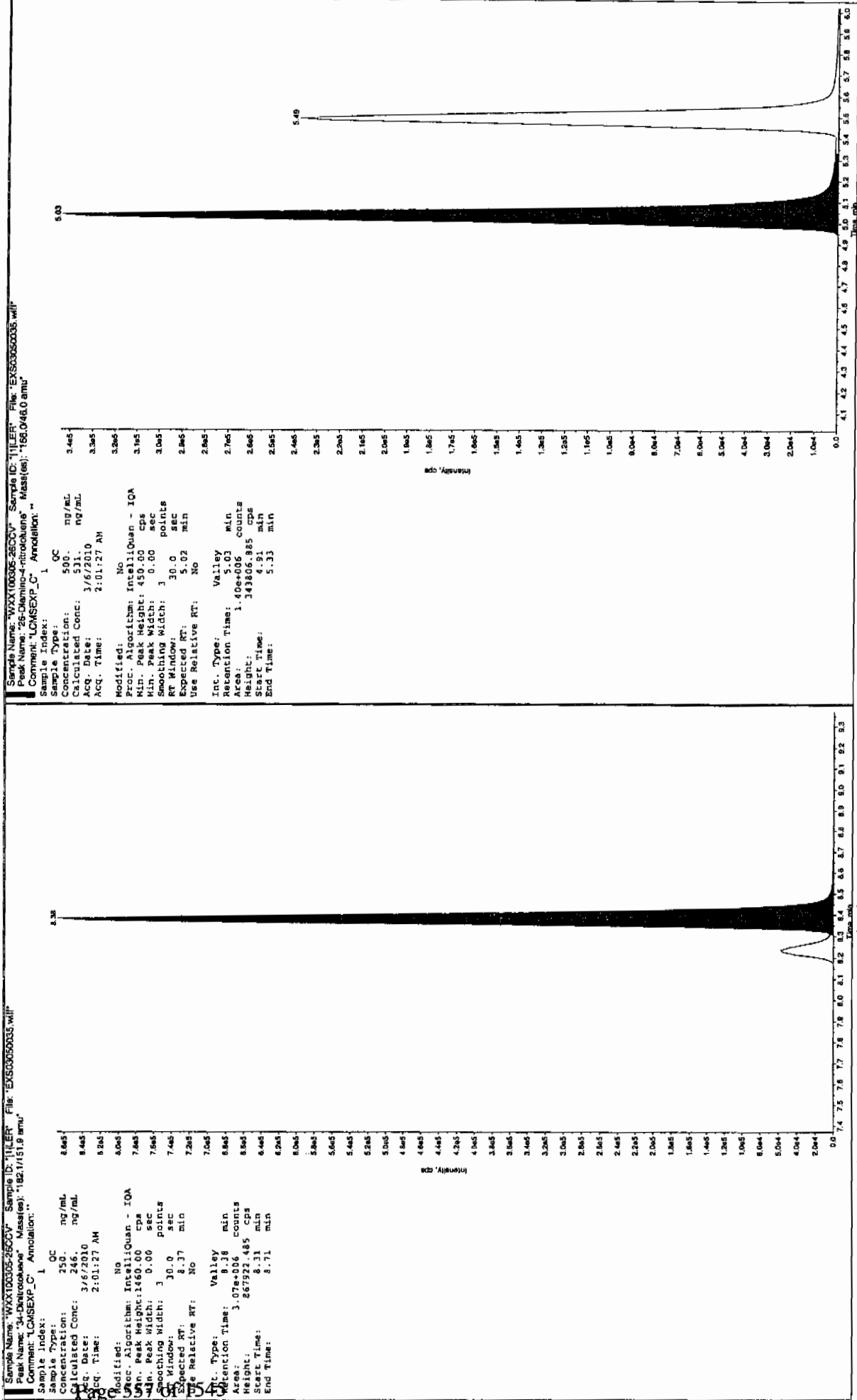


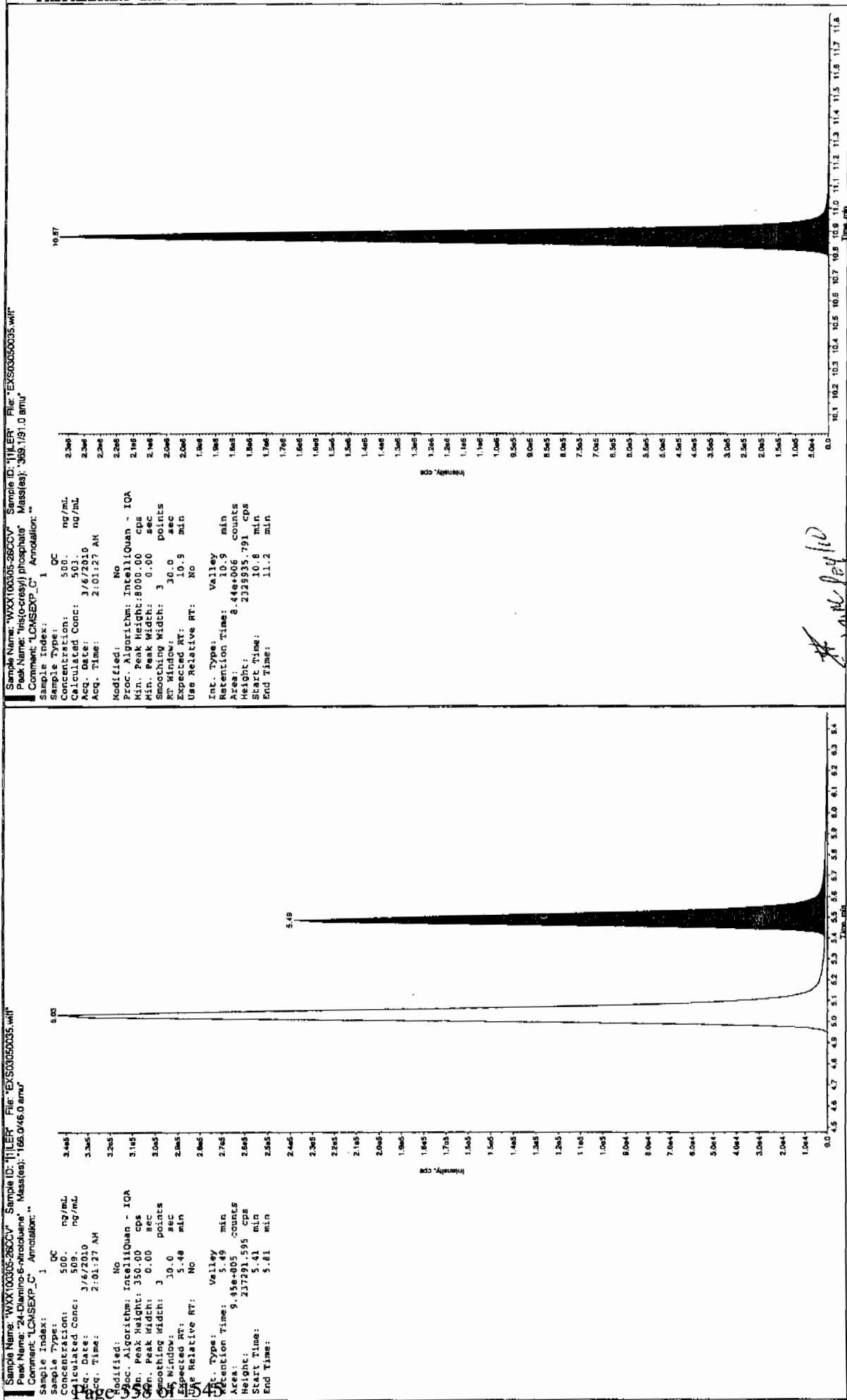
after Jan 3/9/10

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



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





7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1981

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXS03050037.wiff

Analysis Date: 06-MAR-10 02:32

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,6-Diamino-4-nitrotoluene	100	113	113	
3,4-Dinitrotoluene	50	52.5	105	
3,5-Dinitroaniline	100	110	110	
TATB	100	112	112	
tris(o-cresyl) phosphate	100	97.2	97	
2,4-Diamino-6-nitrotoluene	100	110	110	

Recovery Limits:

3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,

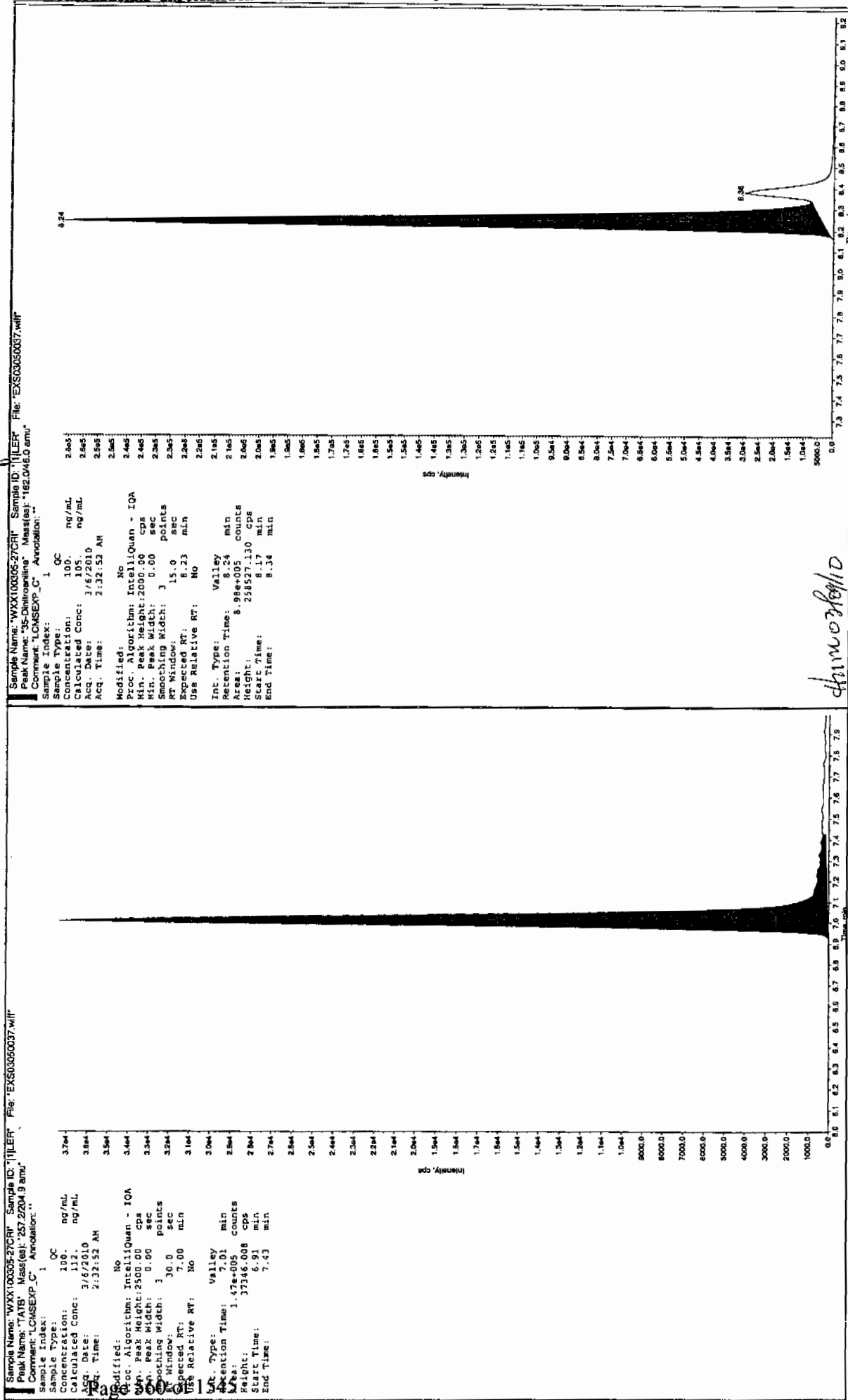
2,4-Diamino-6-nitrotoluene 50-150%

Other Target Analytes 70-130%

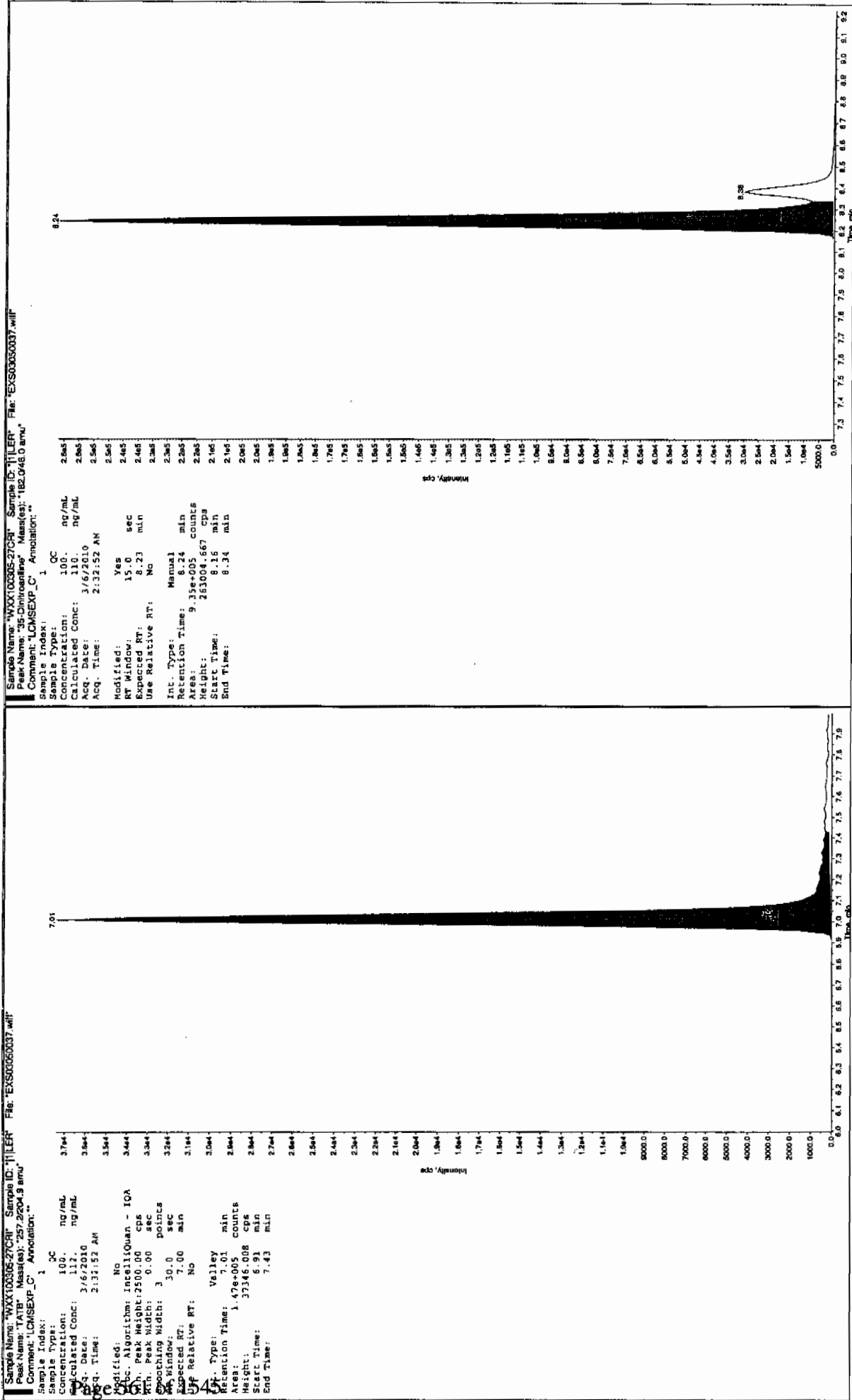
Column used to flag Recovery outside of Limits

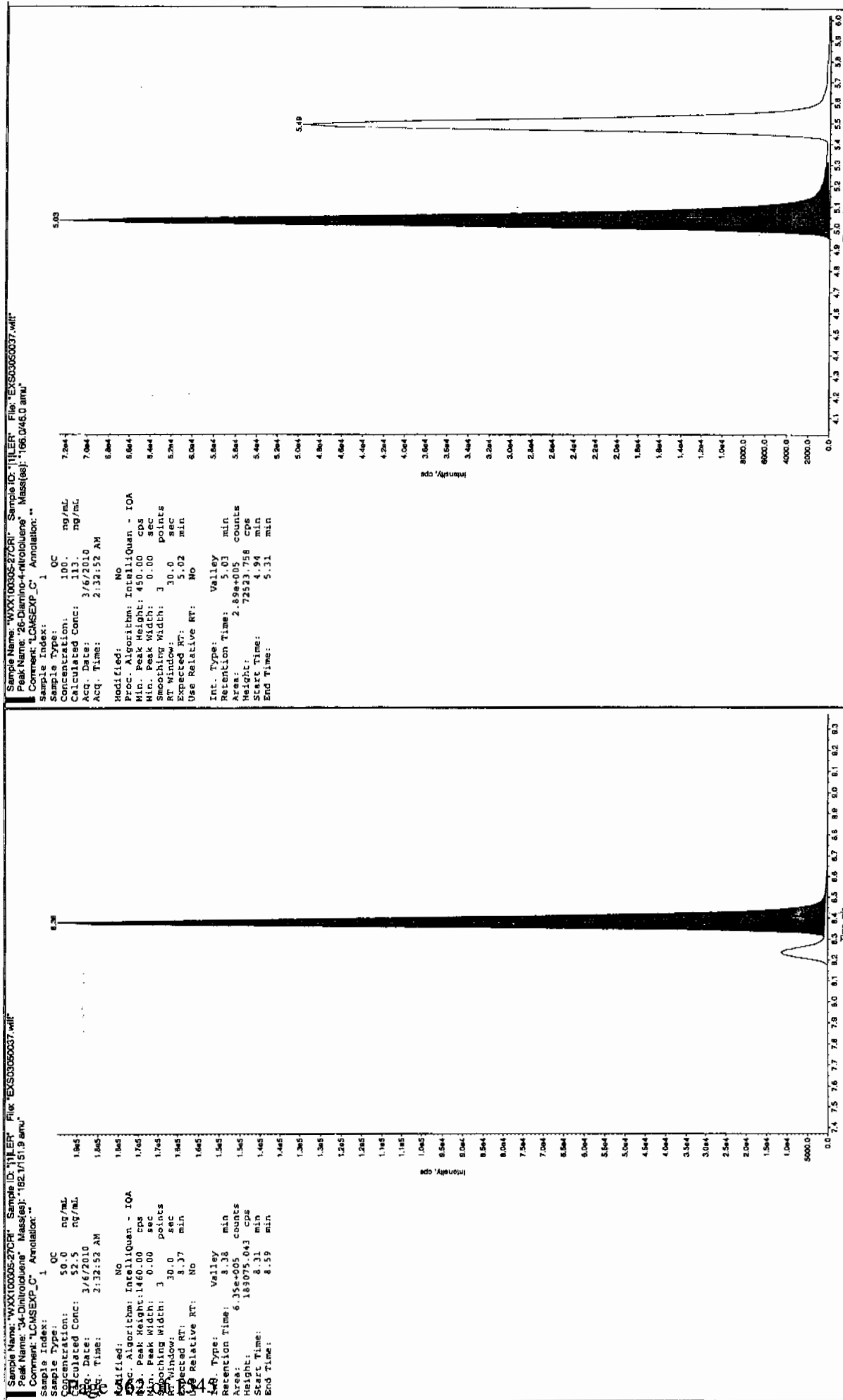
* Value outside of Recovery Limits

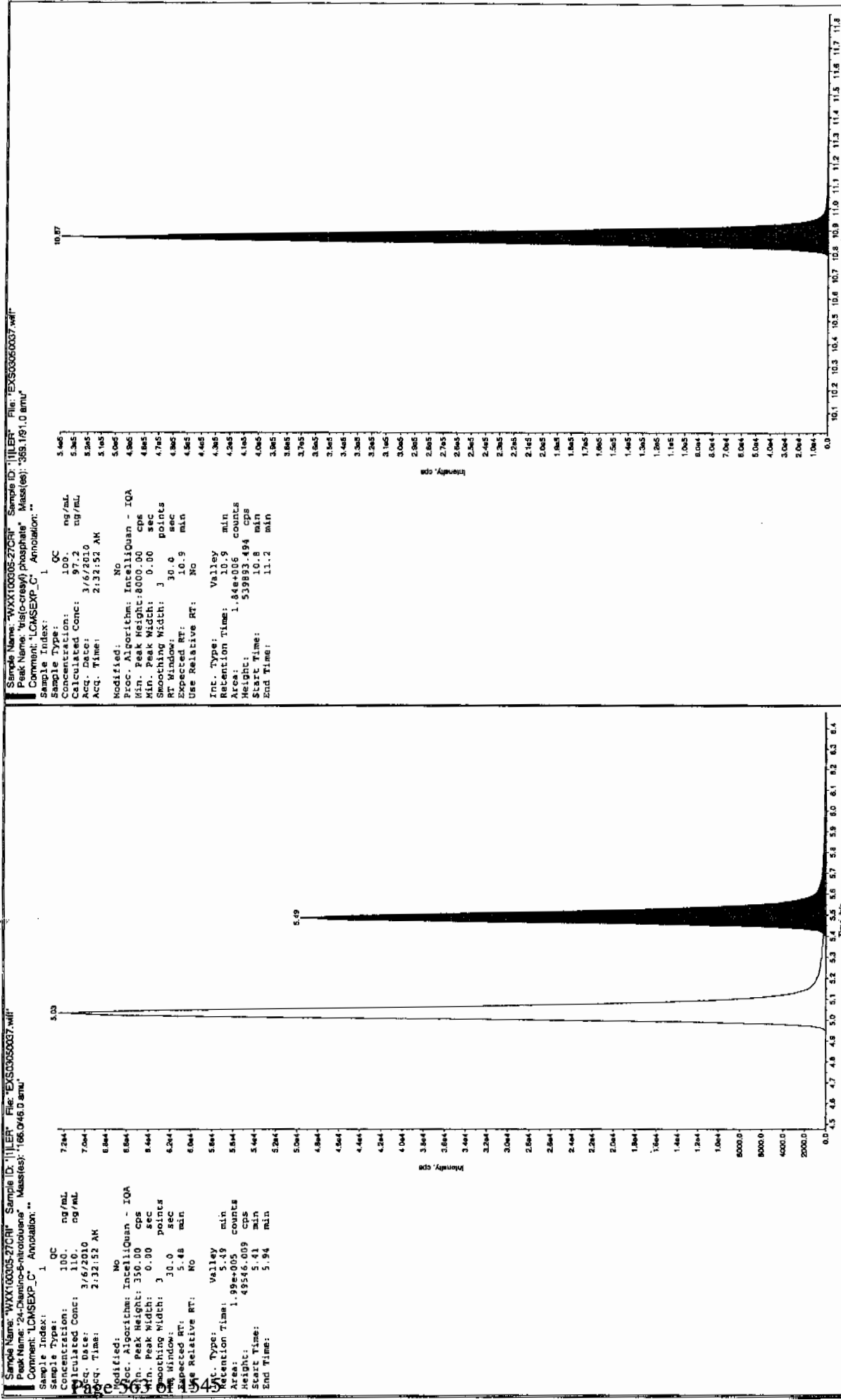
Before Jan 31/10



after Scan 3/9/10







7A

Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1981

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXS03050048.wiff

Analysis Date: 06-MAR-10 05:25

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	500	541	108	
2,6-Diamino-4-nitrotoluene	500	545	109	
3,4-Dinitrotoluene	250	237	95	
3,5-Dinitroaniline	500	507	101	
TATB	500	532	106	
tris(o-cresyl) phosphate	500	501	100	

Recovery Limits:

3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,

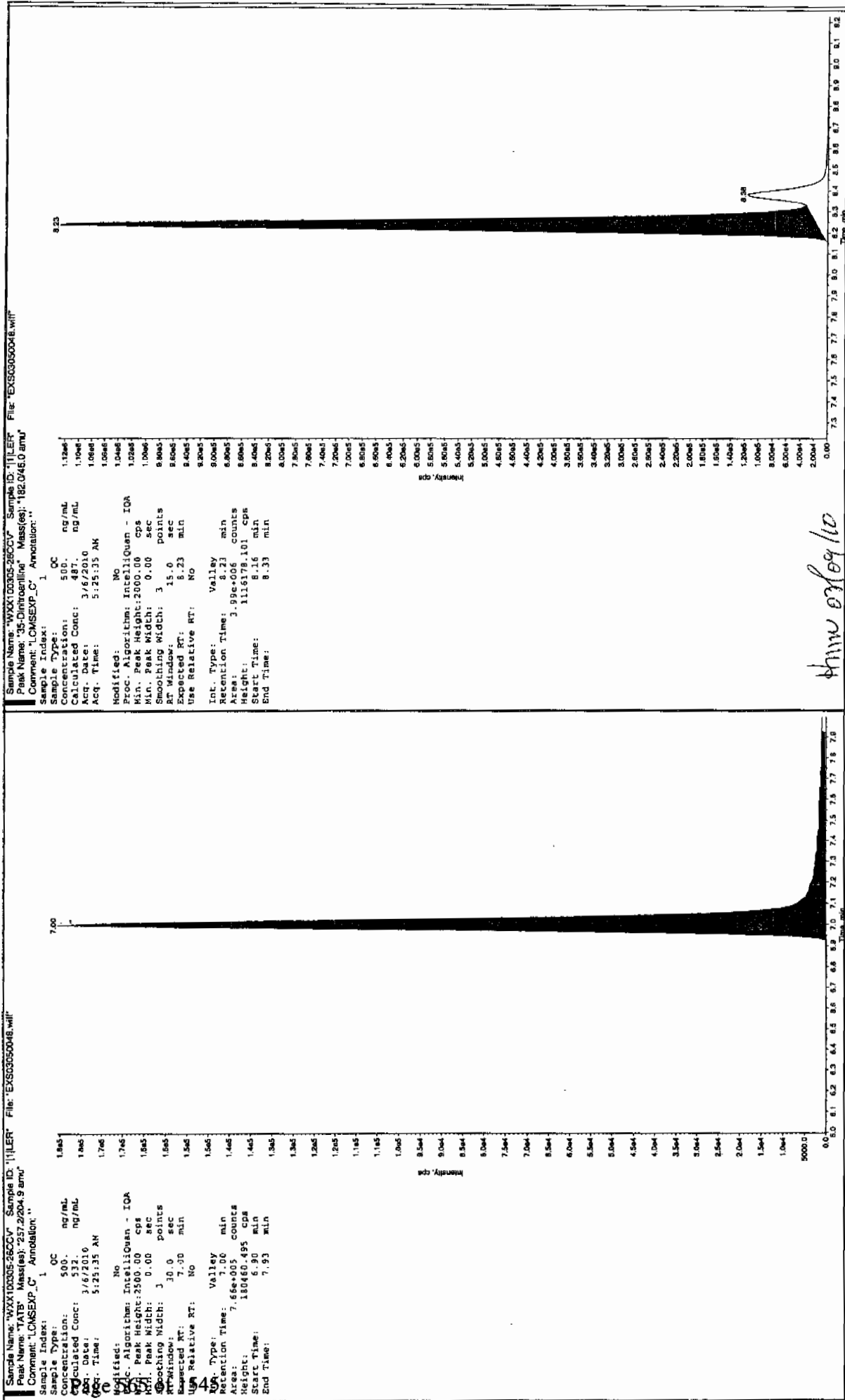
2,4-Diamino-6-nitrotoluene 70-130%

Other Target Analytes 80-120%

Column used to flag Recovery outside of Limits

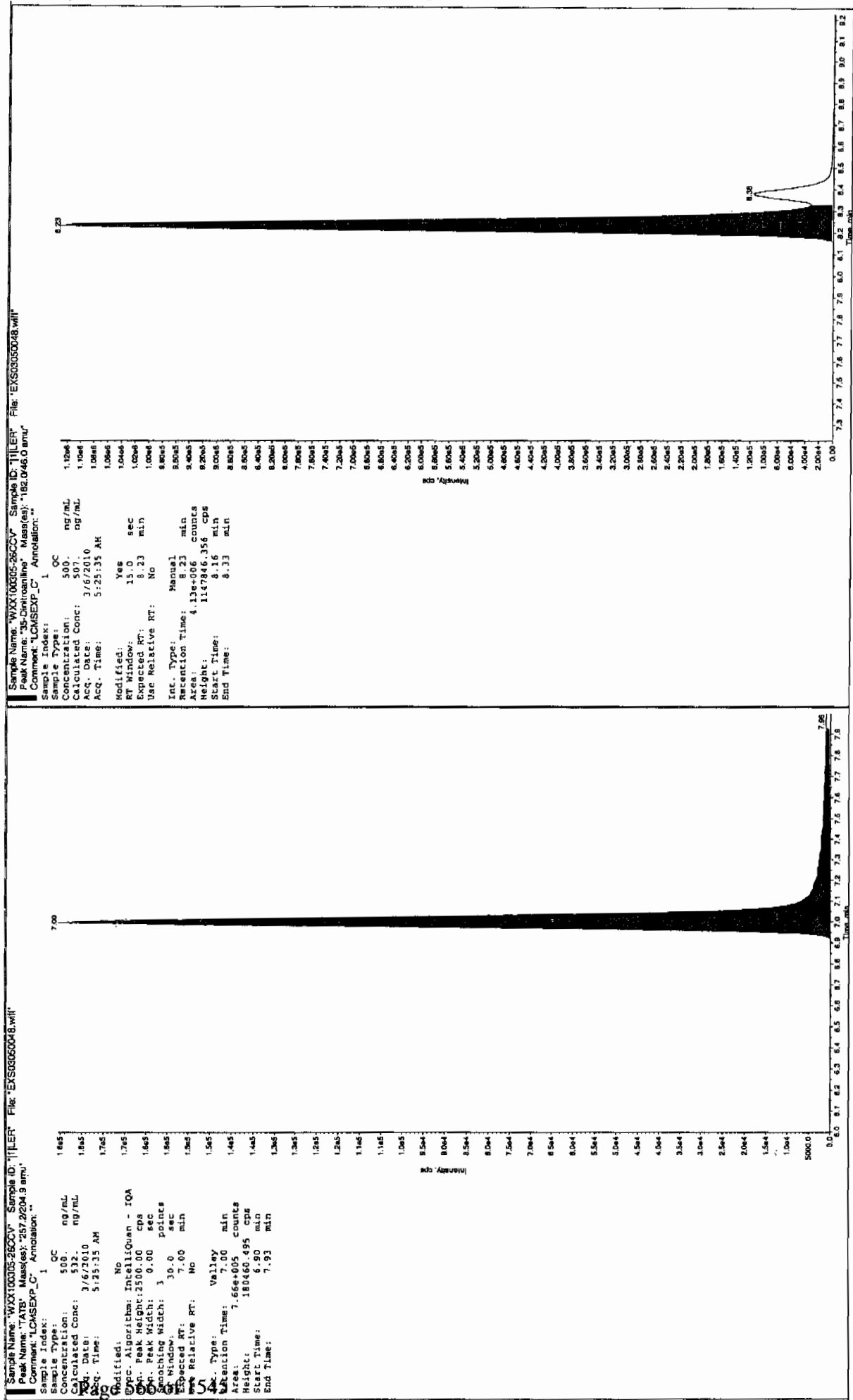
* Value outside of Recovery Limits

Before Jan 31/10

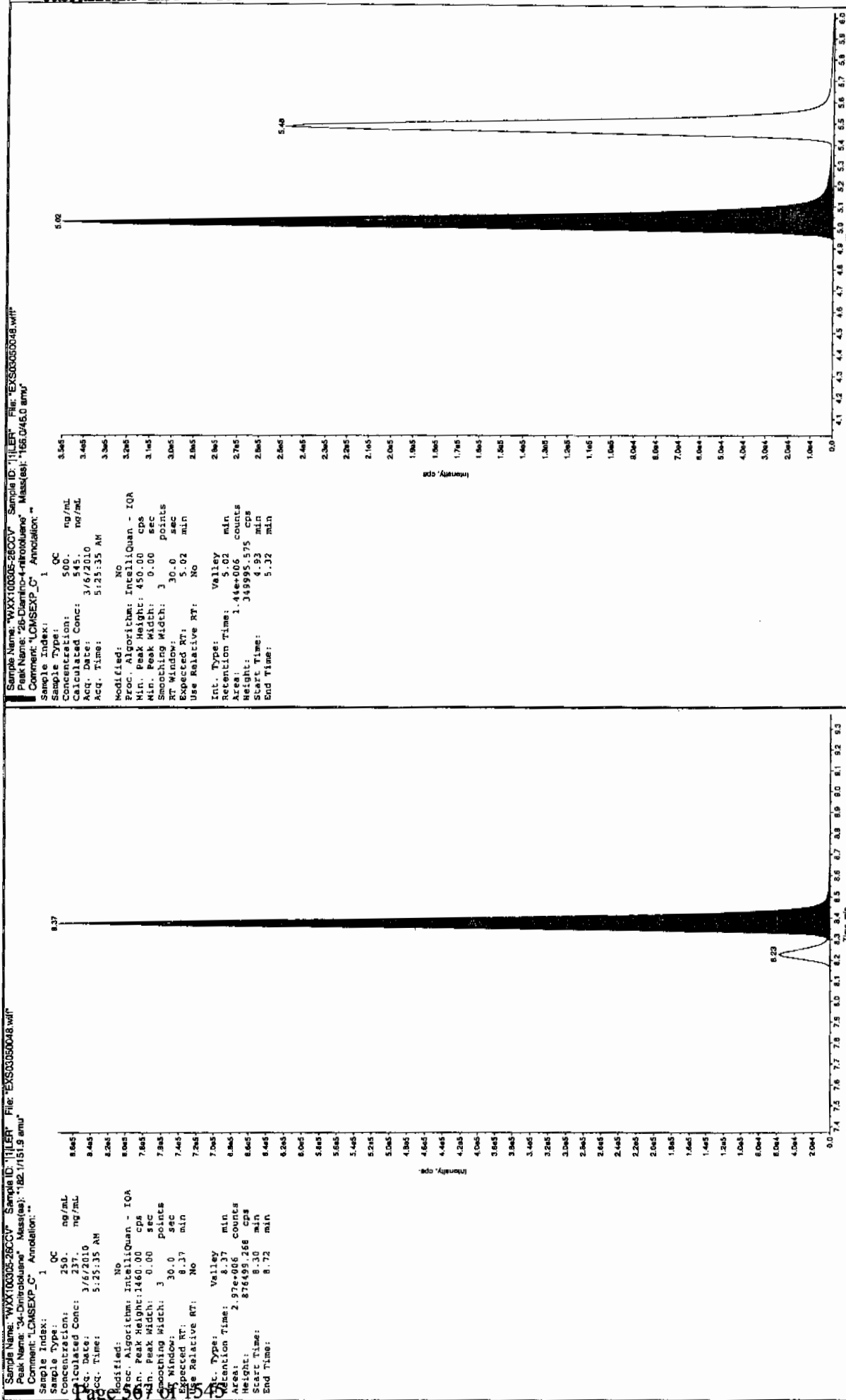


After 07/09/10

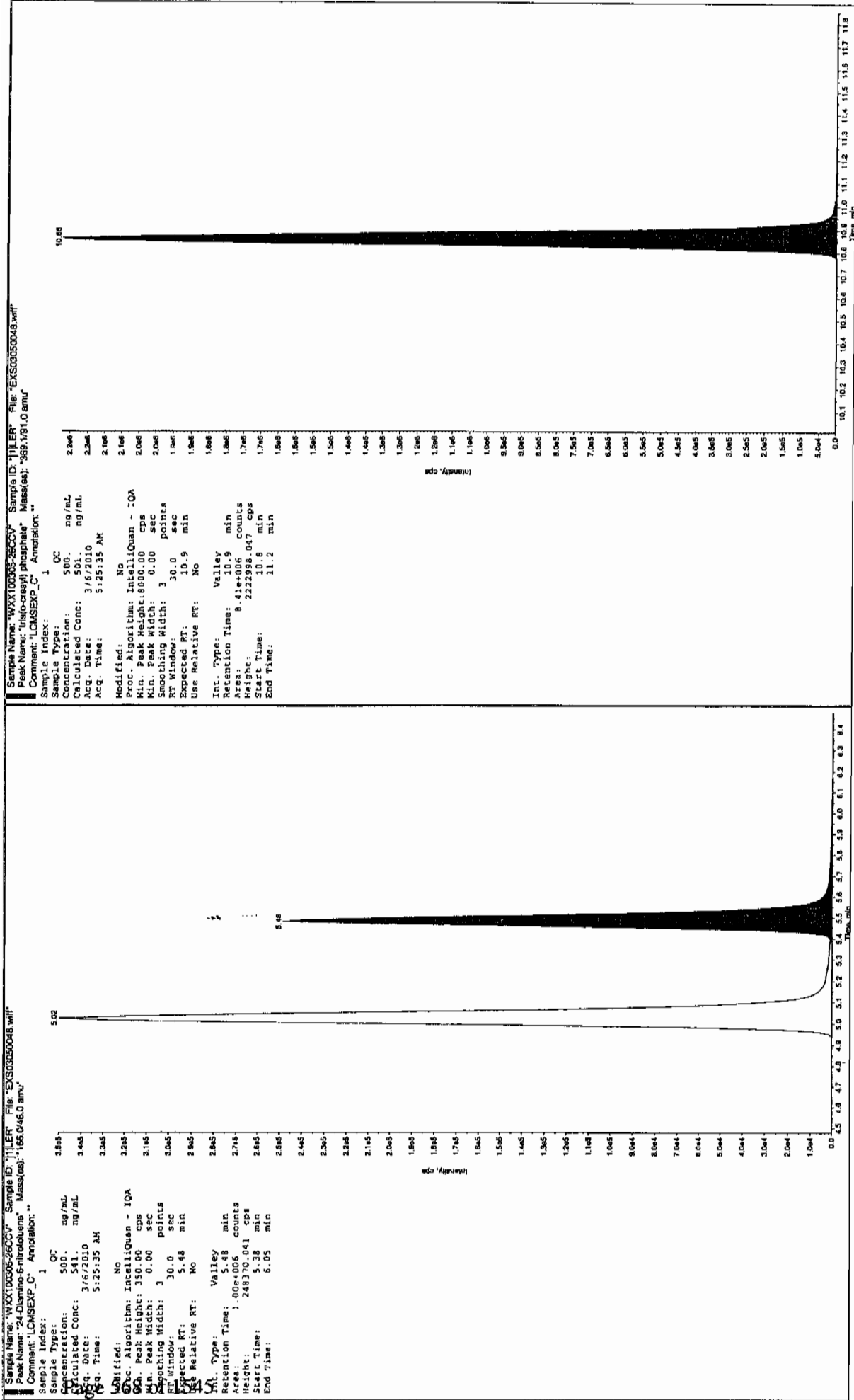
after Jan 30/10



*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): 10-1981

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXS03050050.wiff

Analysis Date: 06-MAR-10 05:56

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	100	105	105	
2,6-Diamino-4-nitrotoluene	100	111	111	
3,4-Dinitrotoluene	50	51.4	103	
3,5-Dinitroaniline	100	108	108	
TATB	100	110	110	
tris(o-cresyl) phosphate	100	101	101	

Recovery Limits:

3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,

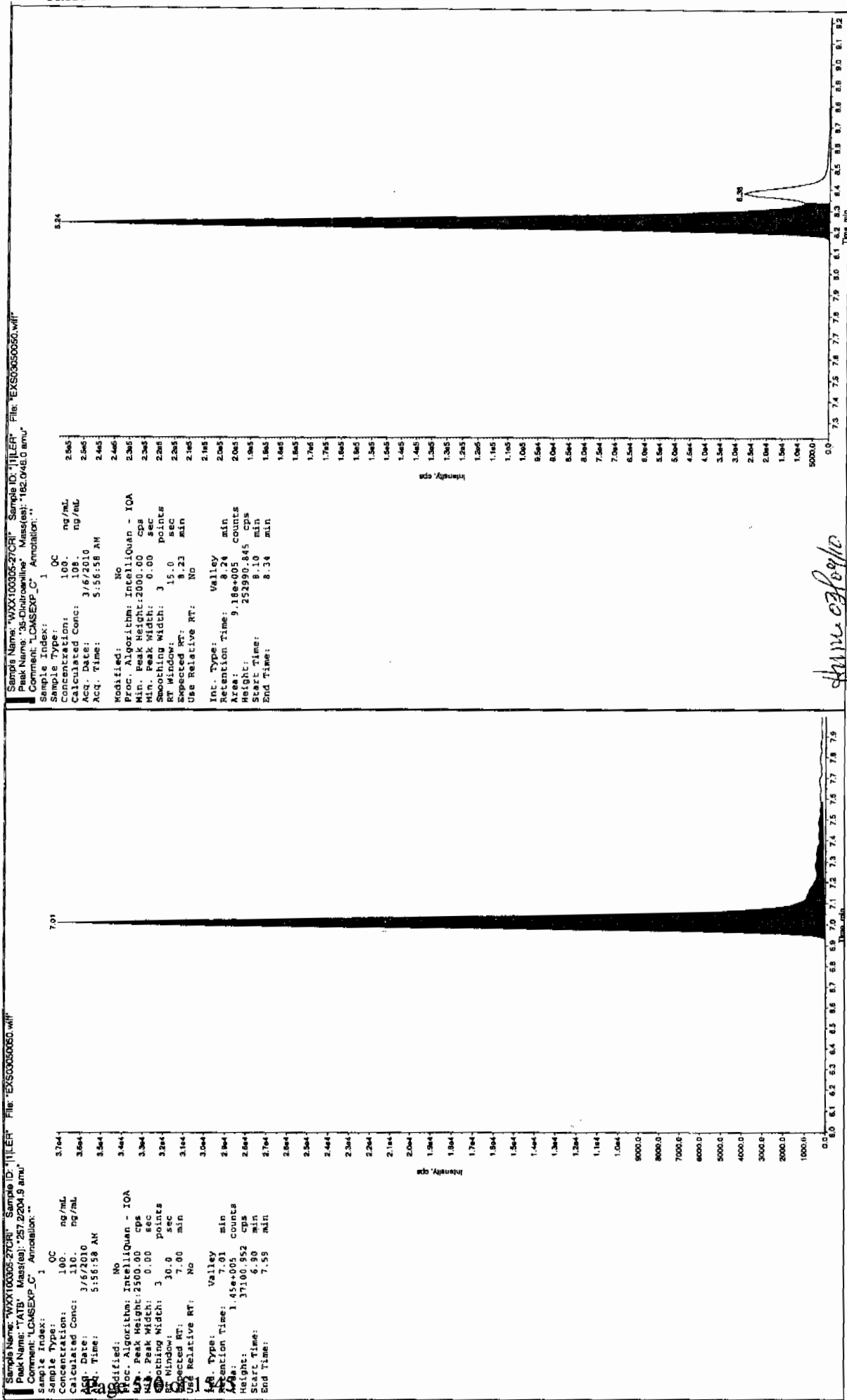
2,4-Diamino-6-nitrotoluene 50-150%

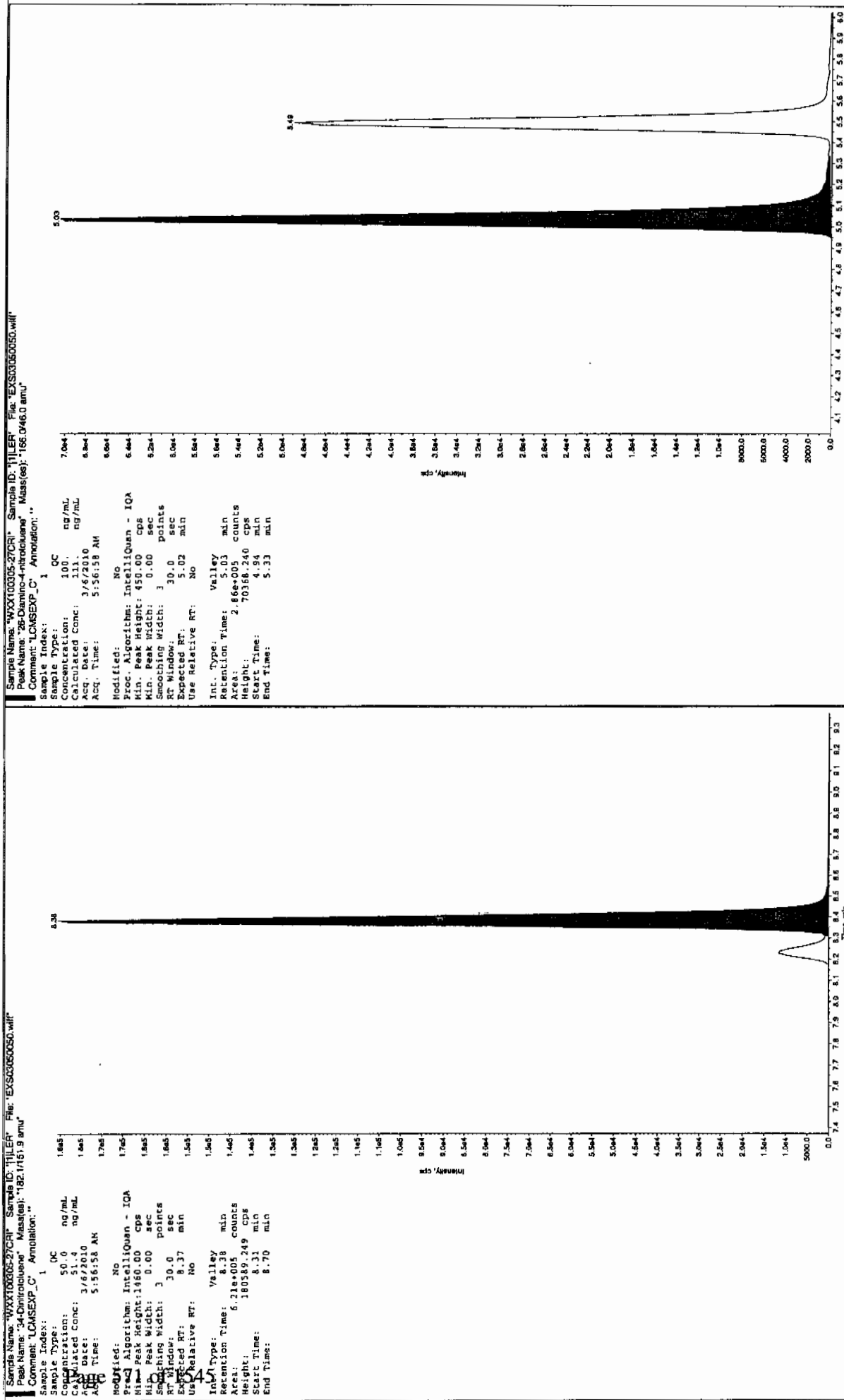
Other Target Analytes 70-130%

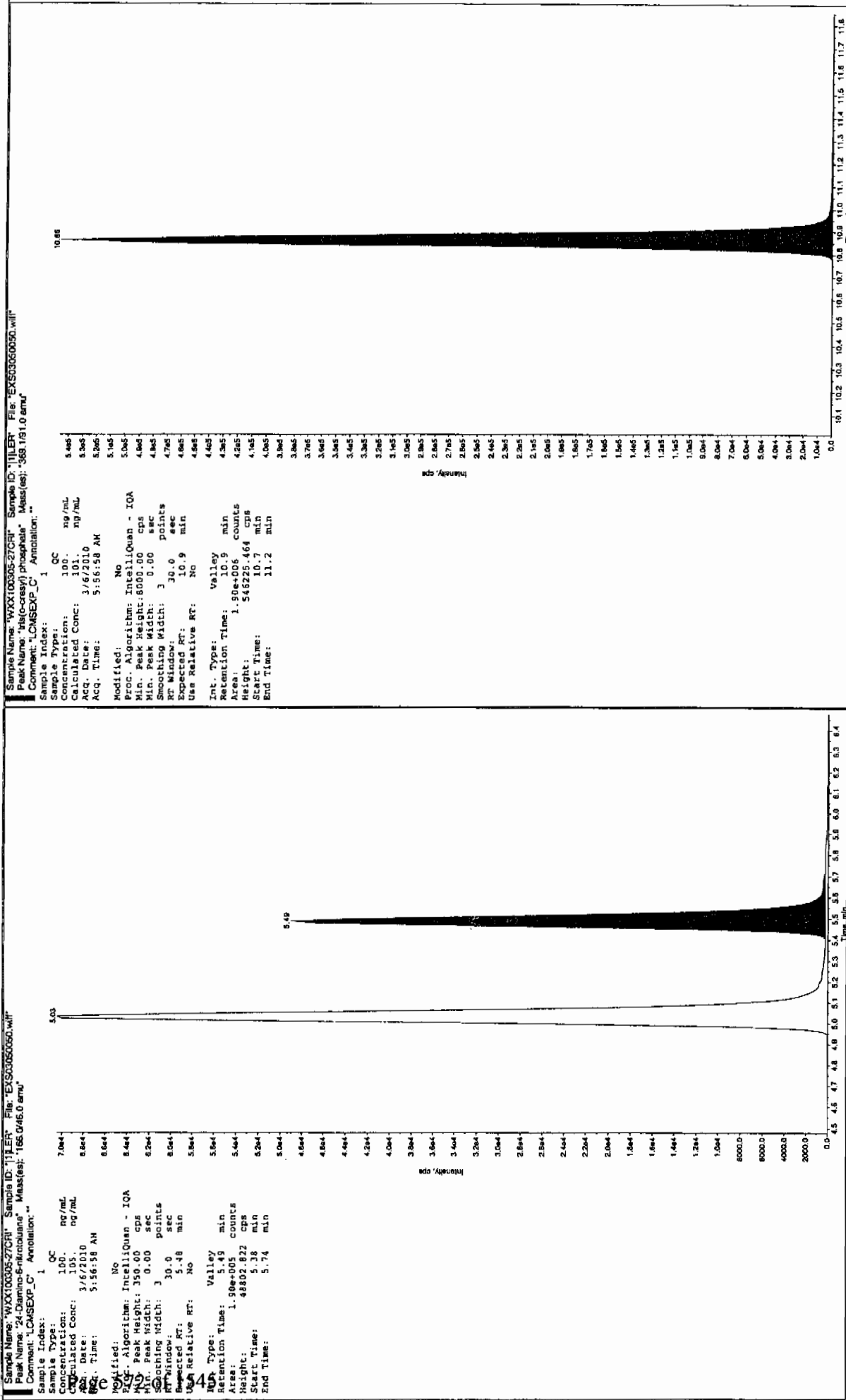
Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

Scan 31910







QUALITY CONTROL DATA

1
High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: MB for batch 957199

Lab Code: GEL

GEL Job No (SDG) 10-1981

Matrix: SOIL

GEL Sample ID: 1202052406

Sample Amount 2

Moisture:

Amount Units g

Date Received: 24-FEB-10

Extraction Type Sonication

Extraction Batch ID: 957199

Concentrated Extract Volume (mL) 10

Date Extracted: 01-MAR-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0314013a

Date Analyzed: 14-MAR-10 20:52

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	<u>Concentrated Extract Volume</u>	X	Dilution Factor
		Sample Amount		

Quantify Sample Report

GEL Laboratories, LLC / Analyst : Michael A. Penny

Printed: Mon Mar 15 10:16:43 2010, Page 25 of 77

Dataset: C:\MASSLYNX\New_Exp.PRO\031410expA.qtd, Time: Mon Mar 15 10:15:48 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0314013a

Date: 14-Mar-2010

Time: 20:52:43

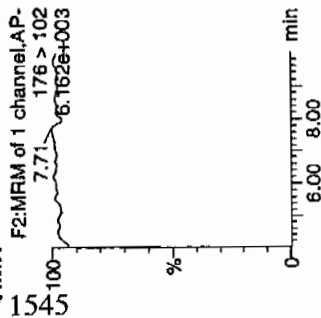
ID: 1202052406

Vial: 2:1,A

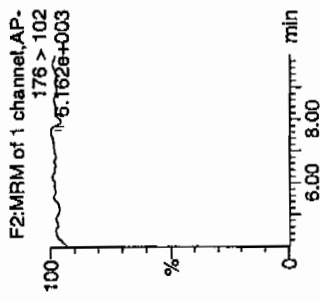
not
3/15/10

WAW 957200 / Save / 121

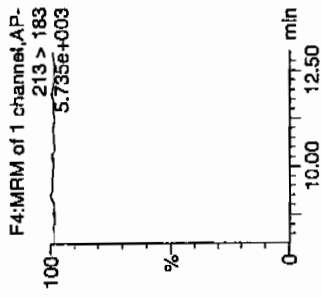
CHMX



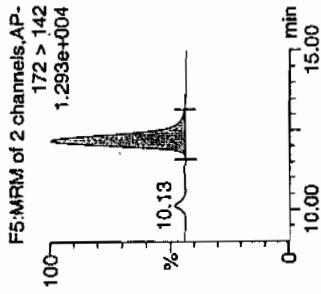
RDX



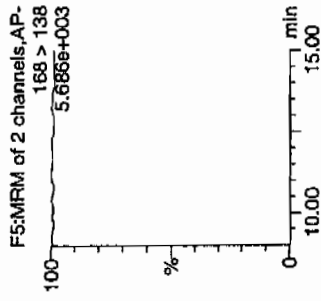
135-Trinitrobenzene



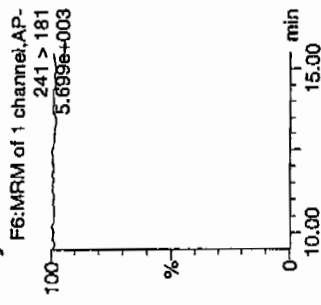
13-Dinitrobenzene-d4



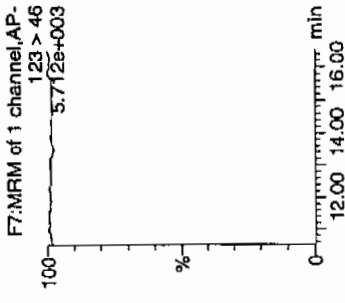
13-Dinitrobenzene



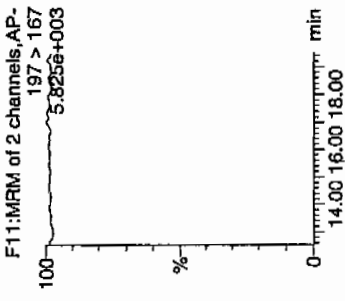
Tetryl



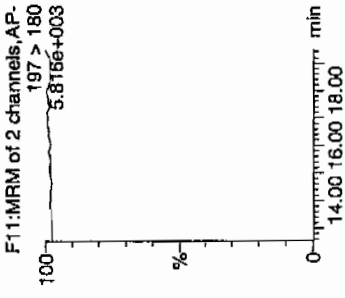
Nitrobenzene



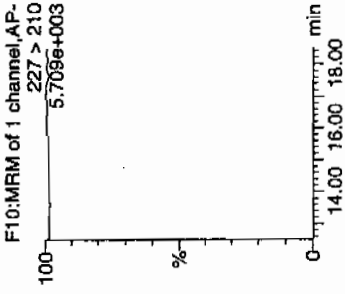
4-Amino-26-dinitrotoluene



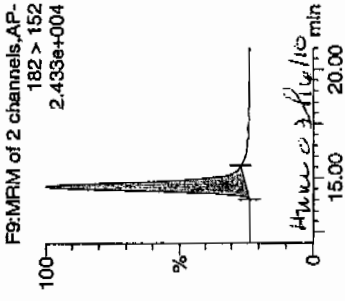
2-Amino-46-dinitrotoluene



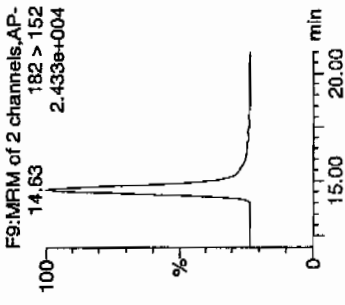
246-Trinitrotoluene



34-dinitrotoluene



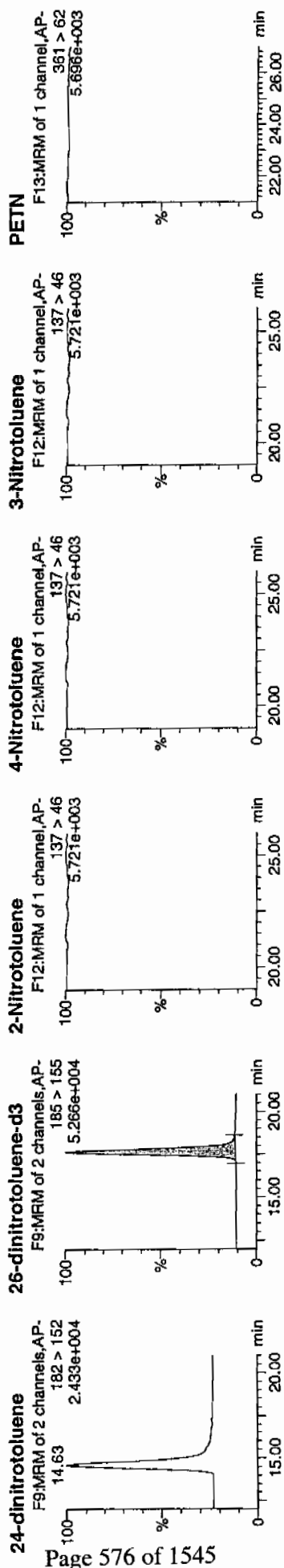
26-dinitrotoluene



Quantify Sample Report

Analyst: Michael A. Penny

Dataset: C:\MASSLYN\New_Exp.PRO\031410expA.qld, Time: Mon Mar 15 10:15:48 2010



ID	Name	Trace	Hit	Area	Slope	AbsResp	Response	Flags	ModDate	ModTime	Attn	Point	%Rec	%Dev
1202052406	HMX	176 > 102			3086.867				MM-	15-Mar-10	09:55:44			
1202052406	ROX	176 > 102			3086.867									
1202052406	135-Trinitrobenzene	213 > 183			3086.867									
1202052406	13-Dinitrobenzene-d4	172 > 142	12.17	3086.867		3086.867	3086.867	bb				458.7487	91.7	-8.3
1202052406	13-Dinitrobenzene	168 > 138			3086.867									278.6
1202052406	Tetryl	241 > 181			3086.867									
1202052406	Nitrobenzene	123 > 46			3086.867									
1202052406	4-Amino-26-dinitrotoluene	197 > 167			19162.287									
1202052406	2-Amino-46-dinitrotoluene	197 > 180			19162.287									
1202052406	246-Trinitrotoluene	227 > 210			19162.287									
1202052406	34-dinitrotoluene	182 > 152	14.63	8896.315	19162.287	8896.315	232.131	bb				240.7362	96.3	-3.7
1202052406	26-dinitrotoluene	182 > 152			19162.287									726.0
1202052406	24-dinitrotoluene	182 > 152			19162.287									
1202052406	26-dinitrotoluene-d3	185 > 155	17.65	19162.287		19162.287	19162.287	bb				502.7982	100.6	0.6
1202052406	2-Nitrotoluene	137 > 46			19162.287									2010.5
1202052406	4-Nitrotoluene	137 > 46			19162.287									
1202052406	3-Nitrotoluene	137 > 46			19162.287									
1202052406	PETN	361 > 62			19162.287									

1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: MB for batch 957199

Lab Code: GEL

GEL Job No (SDG) 10-1981

Matrix: SOIL

GEL Sample ID: 1202052406

Sample Amount 2

Moisture:

Amount Units g

Date Received: 24-FEB-10

Extraction Type Sonication

Extraction Batch ID: 957199

Concentrated Extract Volume (mL) 10

Date Extracted: 01-MAR-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS03050038.wiff

Date Analyzed: 06-MAR-10 02:48

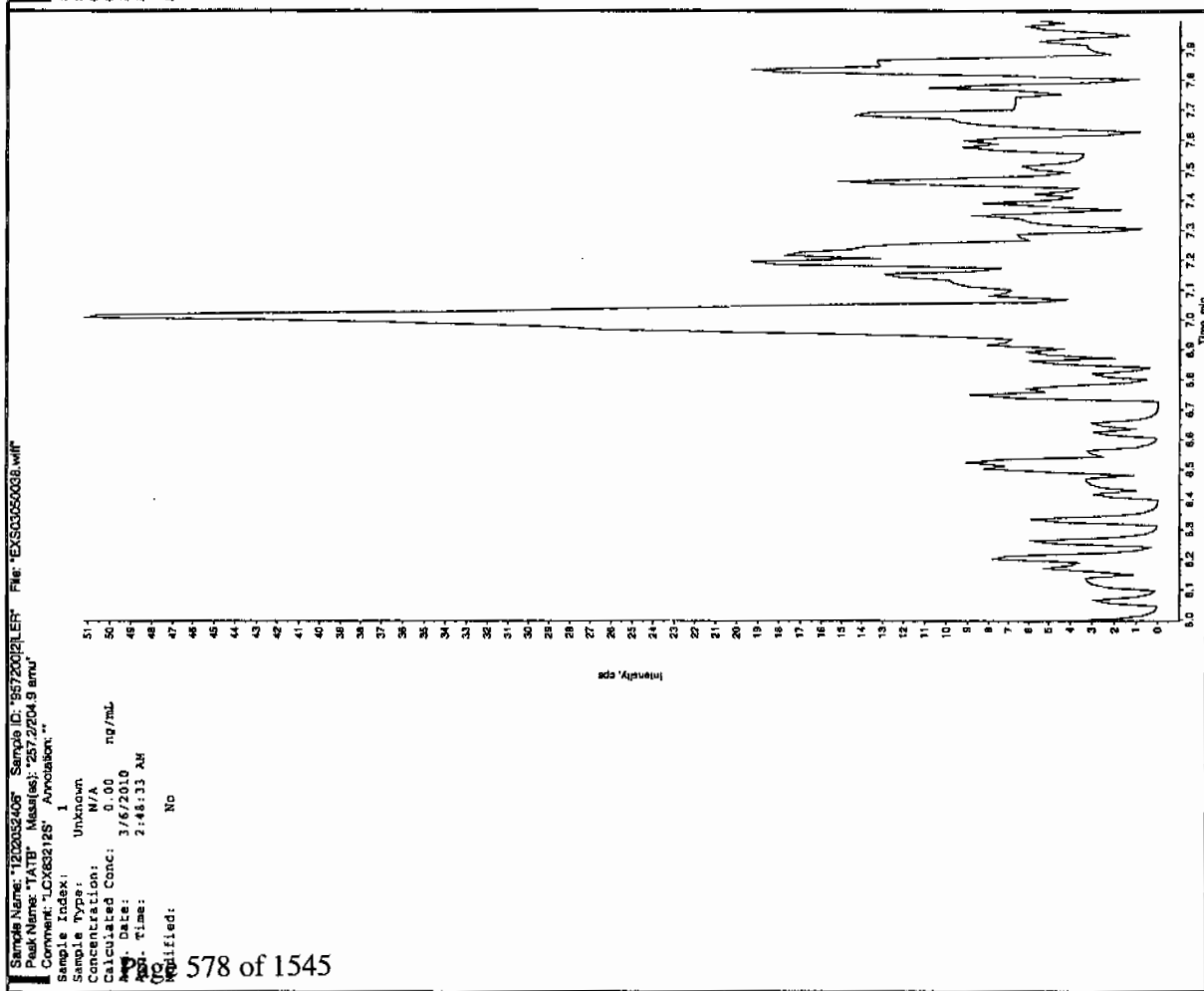
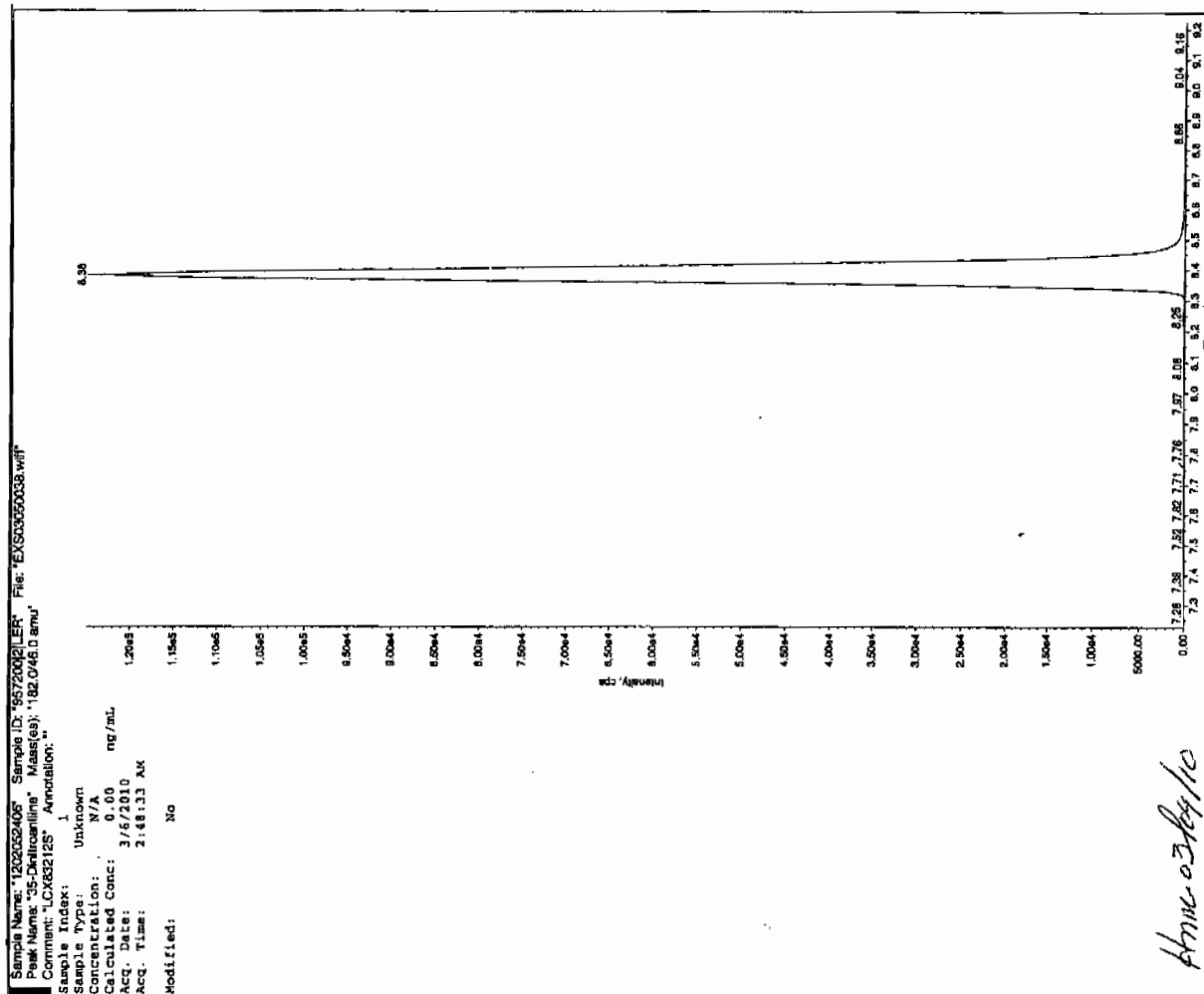
Units: ug/kg

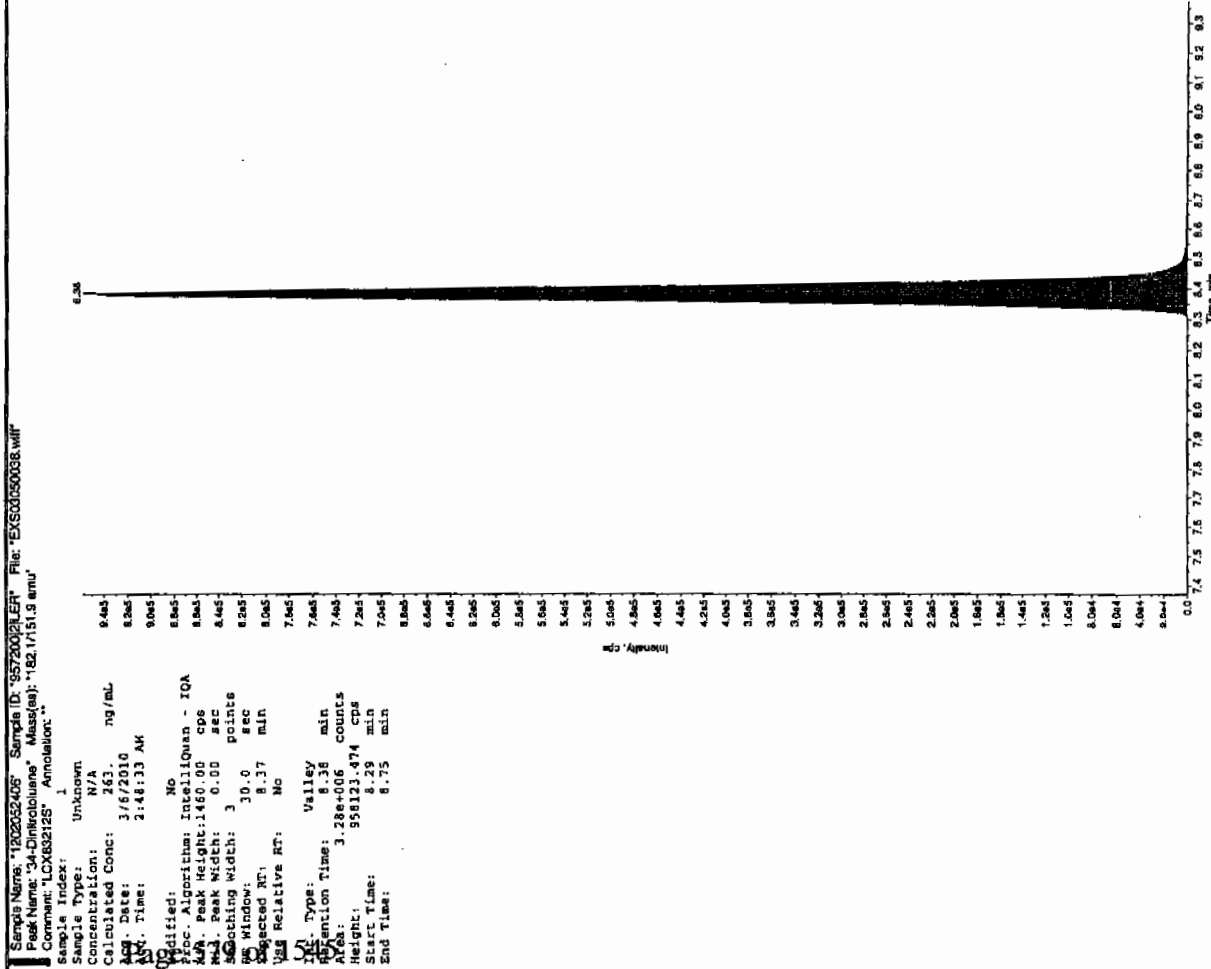
Cas No.	Compound	Concentration*	Q
3058-38-6	TATB	1000	U
59229-75-3	2,6-Diamino-4-nitrotoluene	2000	U
618-87-1	3,5-Dinitroaniline	1000	U
6629-29-4	2,4-Diamino-6-nitrotoluene	2000	U
78-30-8	tris(o-cresyl) phosphate	1000	U

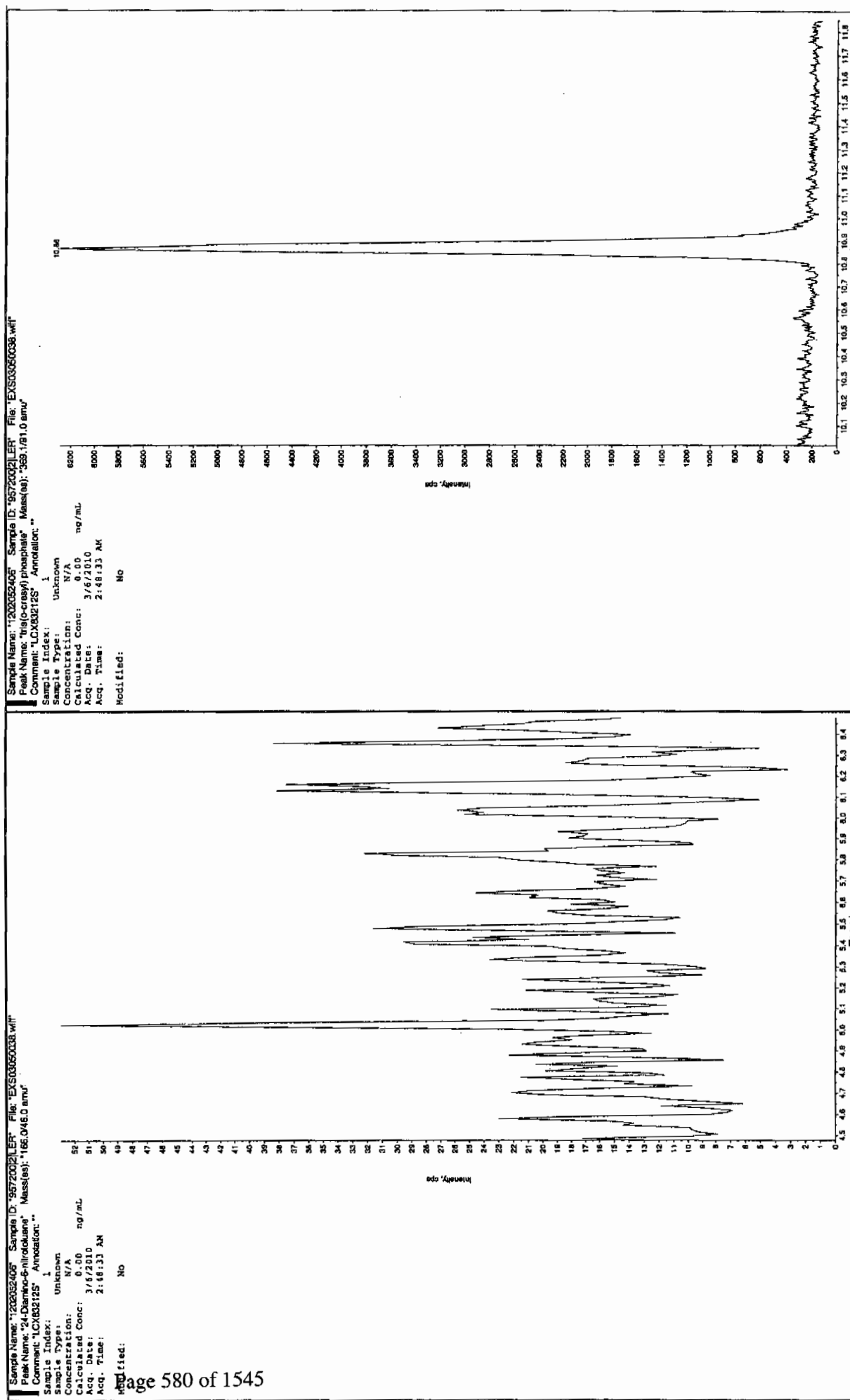
*Concentration =

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

Ren 3/9/10







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

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: LCS for batch 957199

Lab Code: GEL

GEL Job No (SDG) 10-1981

Matrix: SOIL

GEL Sample ID: 1202052407

Sample Amount 2

Moisture:

Amount Units g

Date Received: 24-FEB-10

Extraction Type Sonication

Extraction Batch ID: 957199

Concentrated Extract Volume (mL) 10

Date Extracted: 01-MAR-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0314014a

Date Analyzed: 14-MAR-10 21:22

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	4600	
121-14-2	2,4-Dinitrotoluene	4970	
121-82-4	RDX	4410	
19406-51-0	4-Amino-2,6-dinitrotoluene	4500	
2691-41-0	HMX	4500	
35572-78-2	2-Amino-4,6-dinitrotoluene	4580	
479-45-8	Tetryl	2850	
606-20-2	2,6-Dinitrotoluene	4880	
78-11-5	PETN	5070	
88-72-2	o-Nitrotoluene	5010	
98-95-3	Nitrobenzene	4740	
99-08-1	m-Nitrotoluene	5320	
99-35-4	1,3,5-Trinitrobenzene	3610	
99-65-0	m-Dinitrobenzene	4790	
99-99-0	p-Nitrotoluene	4760	

*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\031410expA.qld, Time: Mon Mar 15 10:15:48 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0314014a

Date: 14-Mar-2010

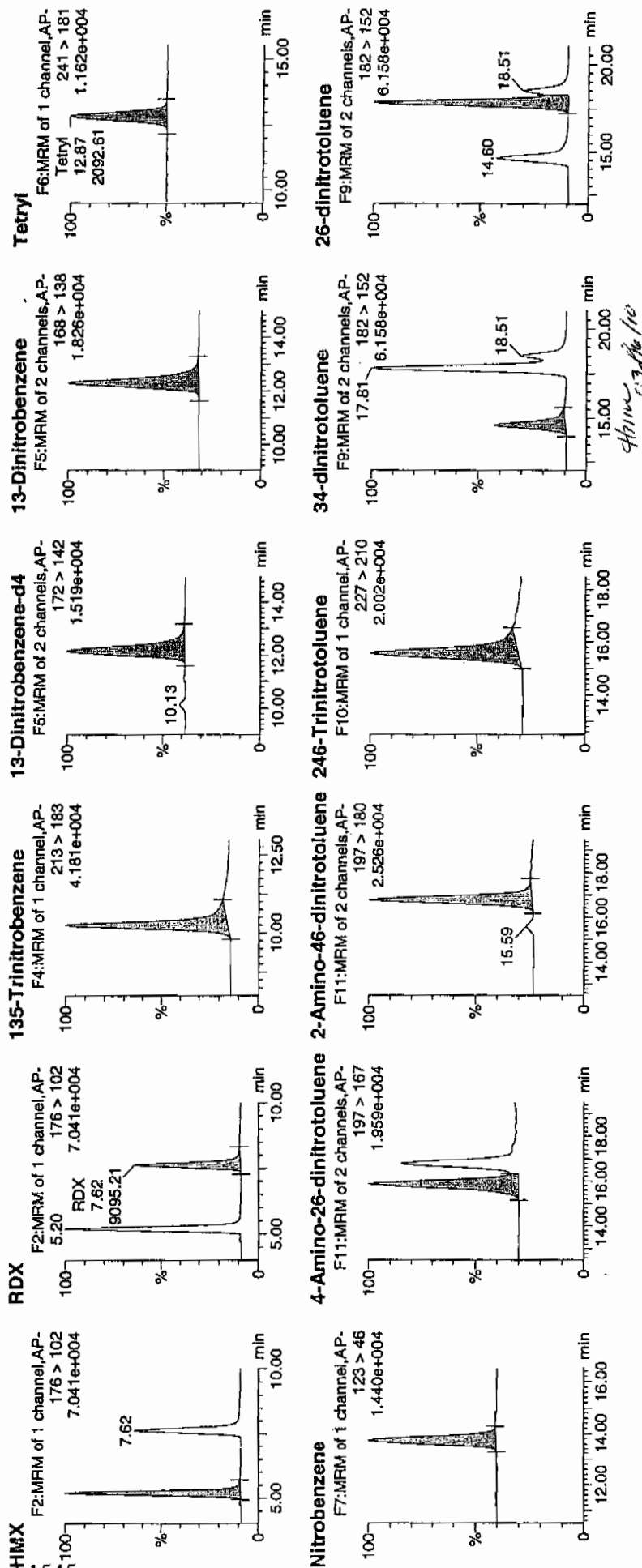
Time: 21:22:15

ID: 1202052407

Vial: 2:1,B

3/15/10

WAVE/957200 | 8000 | 1000 | 2000

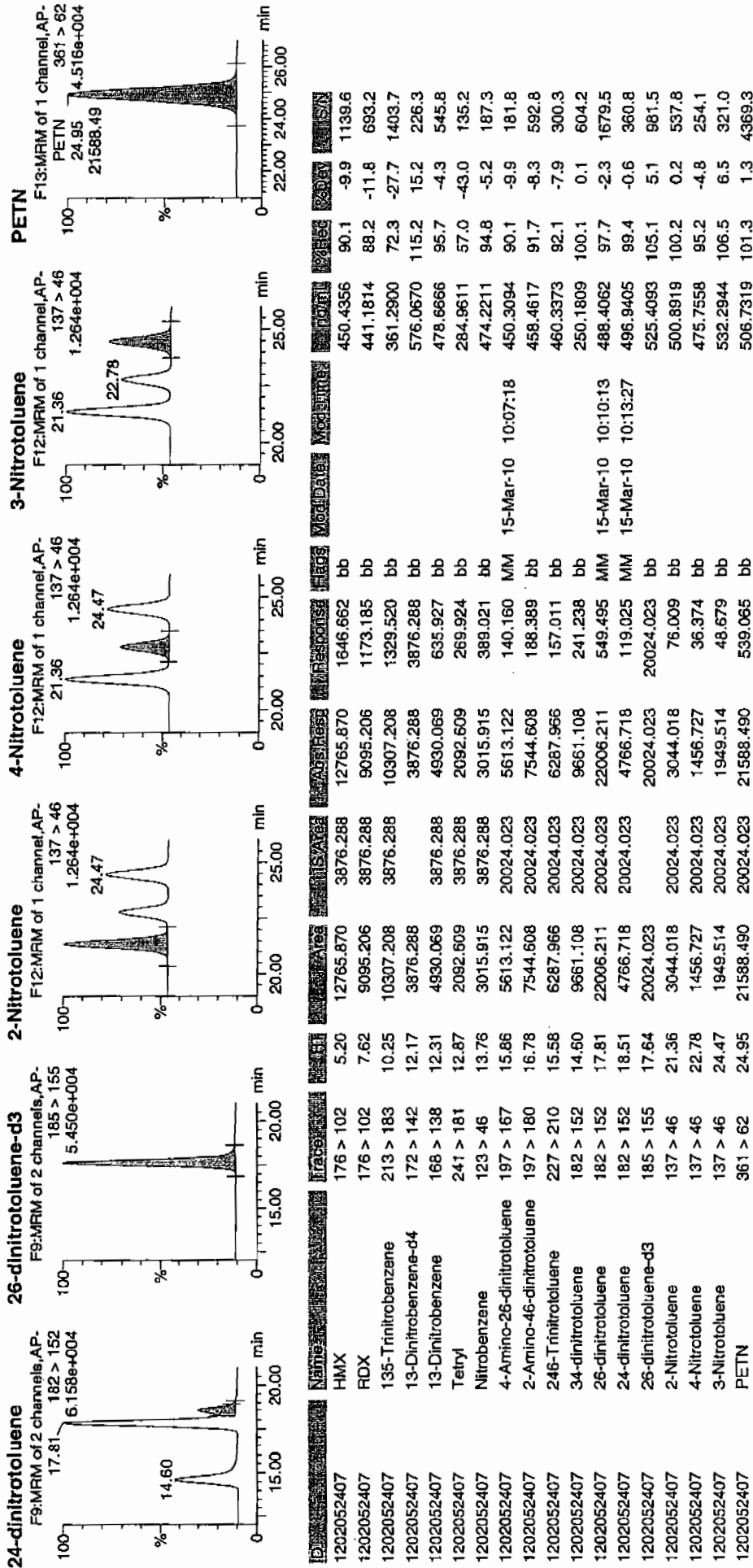


Quantify Sample Report

GEL Laboratories, LLC / Analyst : Michael A. Penny

Printed: Mon Mar 15 10:16:43 2010, Page 28 of 77

Dataset: C:\MASSLYNX\New_Exp.PRO\031410expA.qld, Time: Mon Mar 15 10:15:48 2010



1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: LCS for batch 957199

Lab Code: GEL

GEL Job No (SDG) 10-1981

Matrix: SOIL

GEL Sample ID: 1202052407

Sample Amount 2

Moisture:

Amount Units g

Date Received: 24-FEB-10

Extraction Type Sonication

Extraction Batch ID: 957199

Concentrated Extract Volume (mL) 10

Date Extracted: 01-MAR-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS03050039.wiff

Date Analyzed: 06-MAR-10 03:04

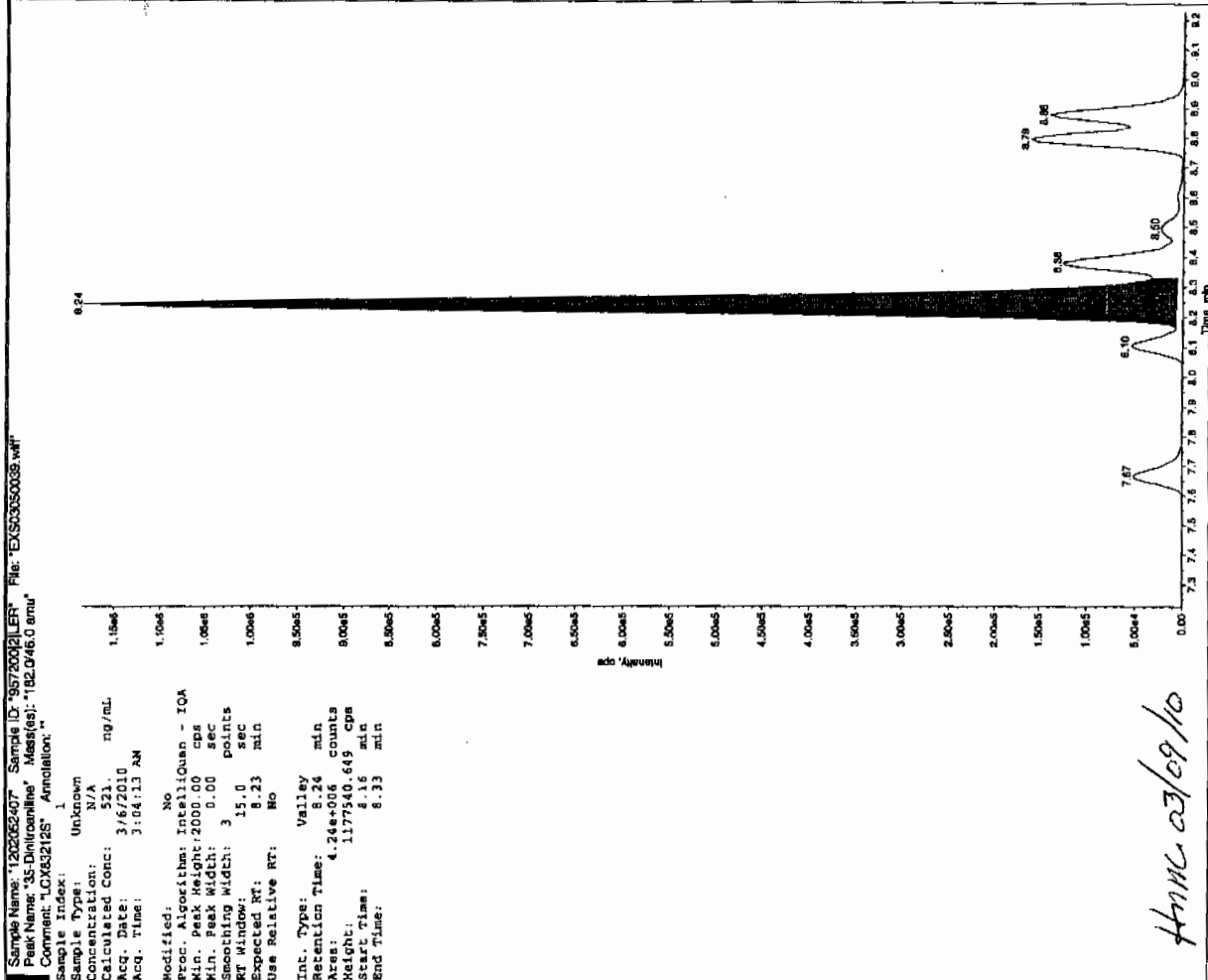
Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB	5390	
59229-75-3	2,6-Diamino-4-nitrotoluene	5290	
618-87-1	3,5-Dinitroaniline	5210	
6629-29-4	2,4-Diamino-6-nitrotoluene	4910	
78-30-8	tris(o-cresyl) phosphate	5000	

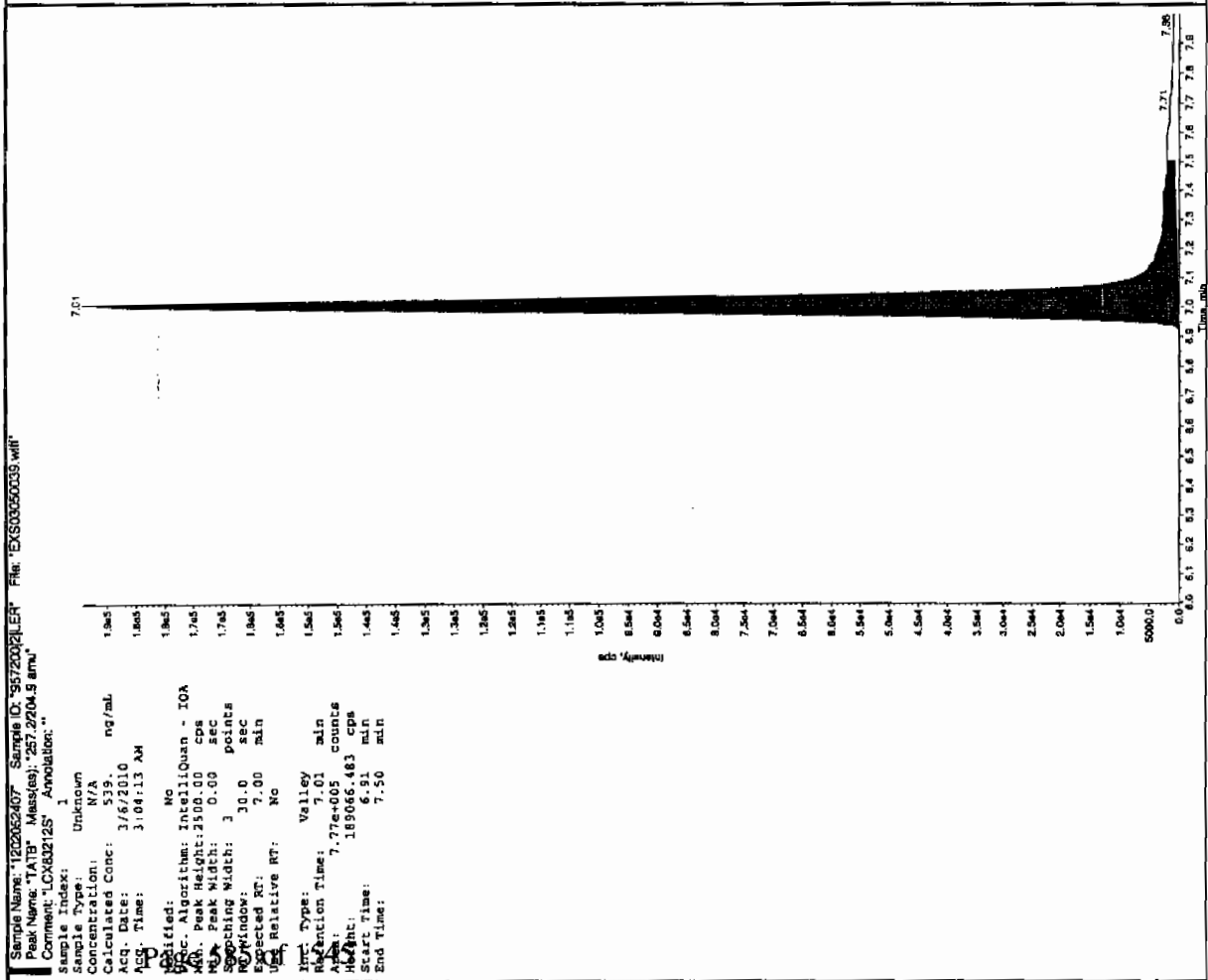
*Concentration =

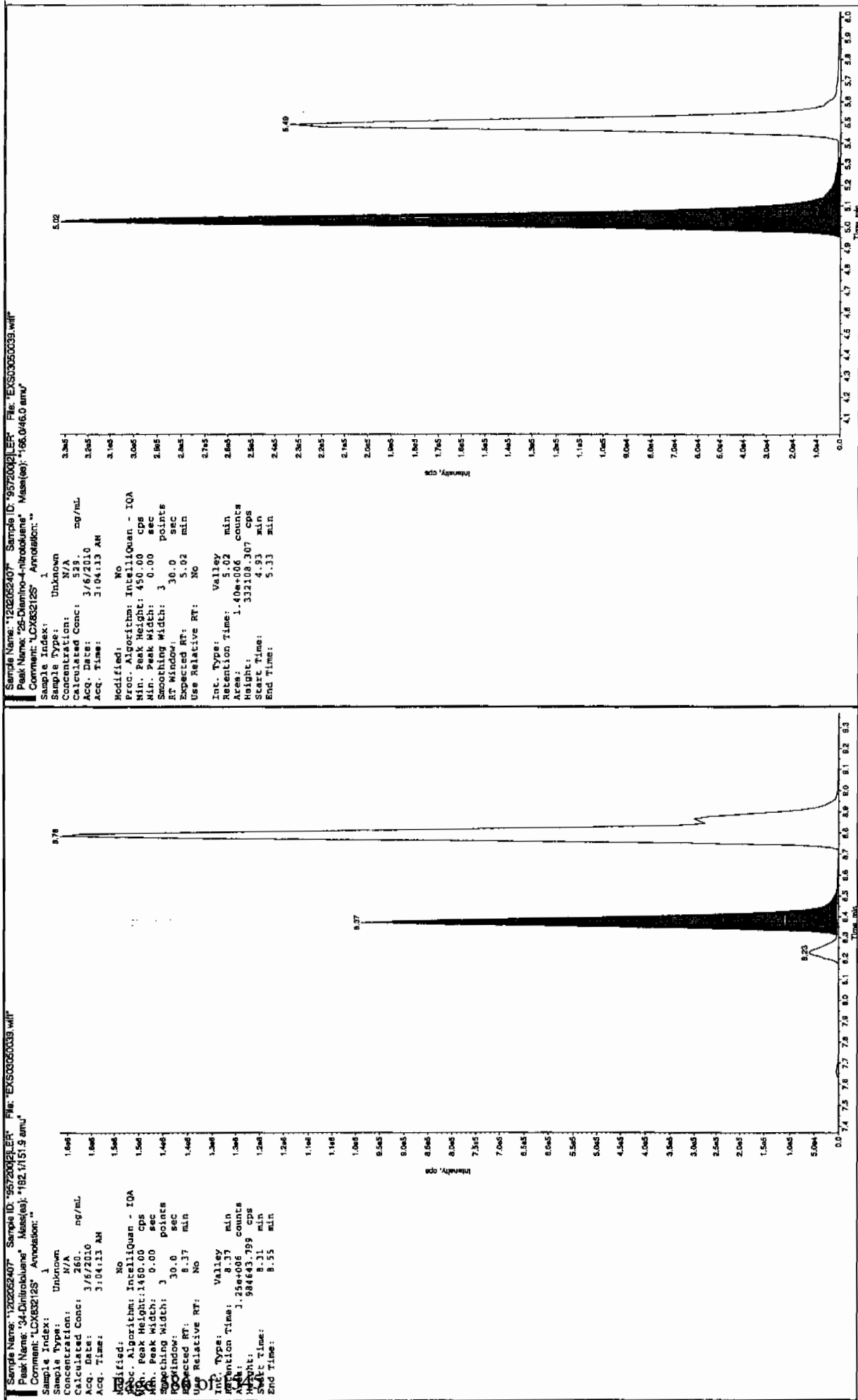
Instrument Value X $\frac{\text{Concentrated Extract Volume}}{\text{Sample Amount}}$ X Dilution Factor

Scan 3/9/10



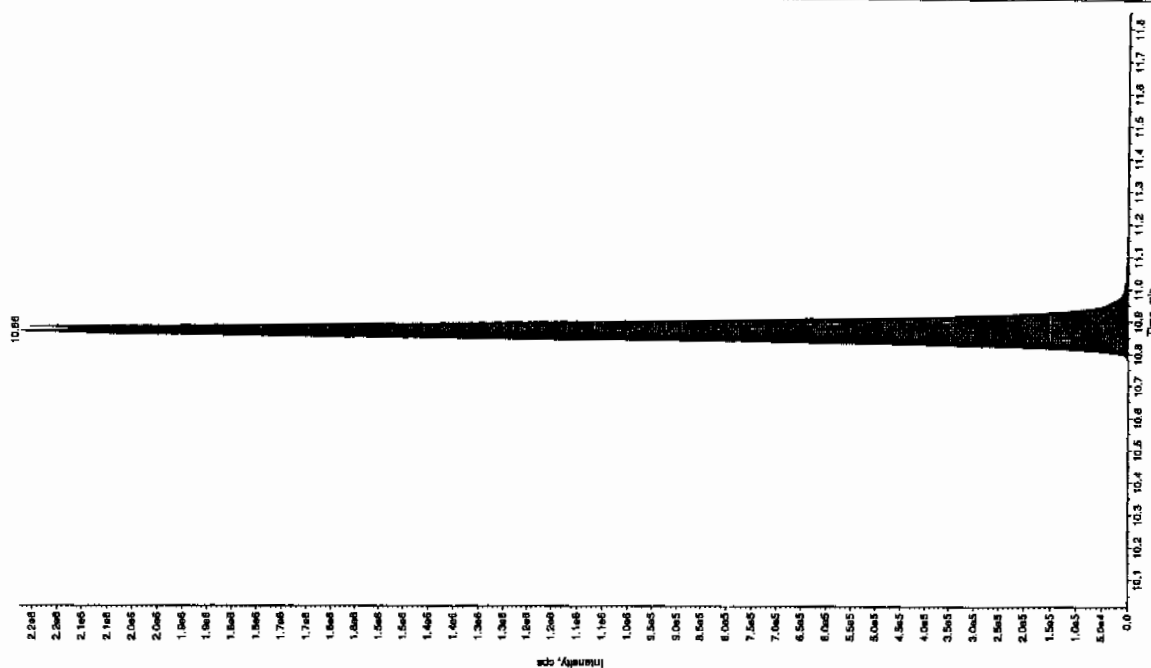
HNLC 03/09/10





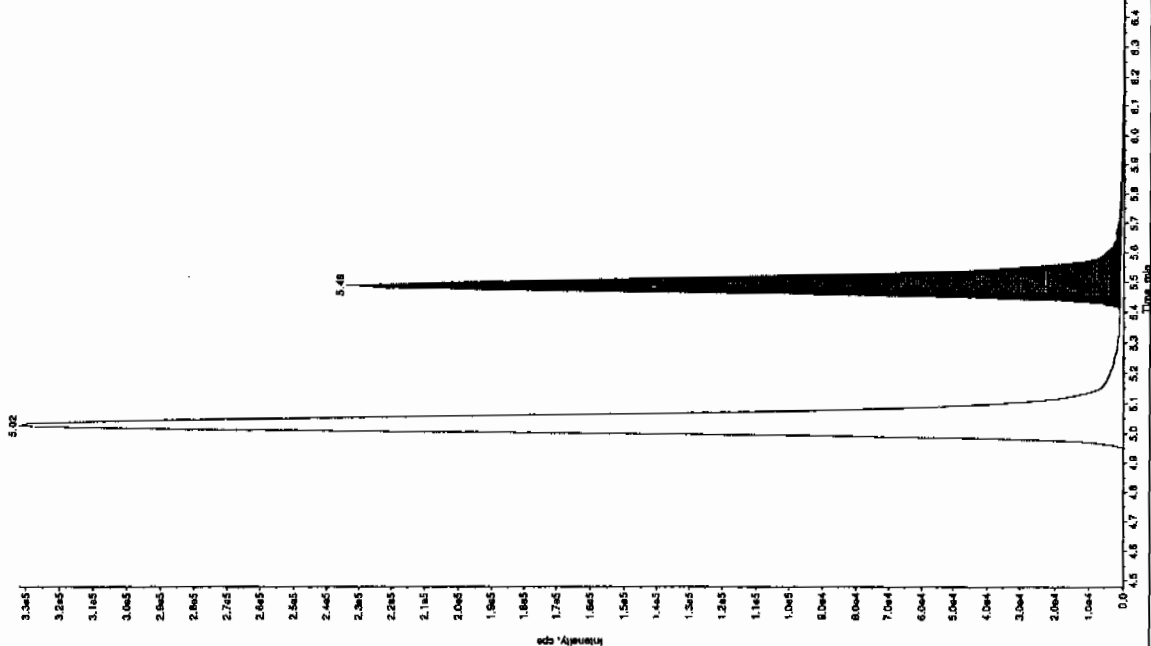
Sample Name: "1200052407" Sample ID: "95720021LRF" File: "EXS03050039.wif"
 Peak Name: "tris(o-cresyl) phosphate" Mass(es): "389.1791.0 amu"
 Comment: "LCX83212S" Annotation: ""

Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A
 Calculated Conc: 500. ng/mL
 Acq. Date: 3/6/2010
 Acq. Time: 3:04:13 AM
 Modified: No
 Proc. Algorithm: IntelliQuan - IOA
 Min. Peak Height: 8000.00 cps
 Min. Peak Width: 0.00 sec
 Retention Width: 3 points
 Retention Width: 30.0 min
 Expected RT: 10.9 min
 Use Relative RT: No
 Int. Type: Valley
 Retention Time: 10.9 min
 Area: 8.40e+006 counts
 Height: 2234251.709 cps
 Start Time: 10.8 min
 End Time: 11.3 min



Sample Name: "1200052407" Sample ID: "95720021LRF" File: "EXS03050039.wif"
 Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.048.0 amu"
 Comment: "LCX83212S" Annotation: ""

Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A
 Calculated Conc: 491. ng/mL
 Acq. Date: 3/6/2010
 Acq. Time: 3:04:13 AM
 Modified: No
 Proc. Algorithm: IntelliQuan - IOA
 Min. Peak Height: 350.00 cps
 Min. Peak Width: 0.00 sec
 Retention Width: 3 points
 Retention Width: 30.0 min
 Expected RT: 5.48 min
 Use Relative RT: No
 Int. Type: Valley
 Retention Time: 5.49 min
 Area: 9.10e+005 counts
 Height: 212582.779 cps
 Start Time: 5.41 min
 End Time: 5.68 min



MISCELLANEOUS DATA

Prep Logbook Nitroaromatics and Nitramines by High Performance Liquid Chromatography (HPLC)

Batch ID: 957199 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)
1202052406 MB	01-MAR-2010 16:03:00	2	10	5
1202052407 LCS	01-MAR-2010 16:03:00	2	10	5
247784002	01-MAR-2010 16:03:00	2	10	5
247790002	01-MAR-2010 16:03:00	2	10	5
247790003	01-MAR-2010 16:03:00	2	10	5
247791002	01-MAR-2010 16:03:00	2	10	5
247791003	01-MAR-2010 16:03:00	2	10	5
247791004	01-MAR-2010 16:03:00	2	10	5
247791005	01-MAR-2010 16:03:00	2	10	5
247791006	01-MAR-2010 16:03:00	2	10	5
247799001	01-MAR-2010 16:03:00	2	10	5
1202052408 MS (247799001)	01-MAR-2010 16:03:00	2	10	5
1202052409 MSD (247799001)	01-MAR-2010 16:03:00	2	10	5
247799002	01-MAR-2010 16:03:00	2	10	5
247799003	01-MAR-2010 16:03:00	2	10	5
247799004	01-MAR-2010 16:03:00	2	10	5
247799005	01-MAR-2010 16:03:00	2	10	5
247799006	01-MAR-2010 16:03:00	2	10	5
247799007	01-MAR-2010 16:03:00	2	10	5
247799008	01-MAR-2010 16:03:00	2	10	5
247799009	01-MAR-2010 16:03:00	2	10	5
247799010	01-MAR-2010 16:03:00	2	10	5

Type	Sample Id	Description	Serial Number	Spike Amt	Units	Comments:
LCS	1202052407	8321 Explosives LCS	DXX100225-03	.1	mL	Final Solvent: ACN
LCS	1202052407	8321 LANL Explosives Mix 10mg/L	UXXX100210-02.4	1	mL	
MS	1202052408	8321 Explosives LCS	DXX100225-03	.1	mL	
MS	1202052408	8321 LANL Explosives Mix 10mg/L	UXXX100210-02.4	1	mL	
MSD	1202052409	8321 Explosives LCS	DXX100225-03	.1	mL	
MSD	1202052409	8321 LANL Explosives Mix 10mg/L	UXXX100210-02.4	1	mL	
SURR	All	3,4-Dinitrotoluene (8330 Sur.) 100ppm	DXP100223-02	.05	mL	

GEL ORGANIC RUN LOG

INSTRUMENT ID: LCMSMS #1

Date: 03/14/10
 Extr. Injection Volume: 50µL
 Sequence Number: 031410expA
 Initial Calibration Date: 03/14/10
 Method: SW846 8321A-Modified
 Int. Std.: UXX100220-02.2
 Mobile Phase Lot#: 1283854, 1281642
 Standard-Samp Reagent Lot#: 1283379, 1271949
 Reviewed BY: *Amic*
 Date: *2/21/10*
 SOP: GL-OA-E-056 Rev.12
 Alt Check Std. ID: WXX100314-07

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC_Flag
EXP0314001a	XIBLK01	MAP	3/14/10 14:59			1		USE	B
EXP0314002a	XIBLK01	MAP	3/14/10 15:28			1		USE	B
EXP0314003a	WXXICAL-01	MAP	3/14/10 15:57			1		USE	I
EXP0314004a	WXXICAL-02	MAP	3/14/10 16:27			1		USE	I
EXP0314005a	WXXICAL-03	MAP	3/14/10 16:56			1		USE	I
EXP0314006a	WXXICAL-04	MAP	3/14/10 17:26			1		USE	I
EXP0314007a	WXXICAL-05	MAP	3/14/10 17:55			1		USE	I
EXP0314008a	WXXICAL-06	MAP	3/14/10 18:25			1		USE	I
EXP0314009a	XIBLK02	MAP	3/14/10 18:54			1		USE	B
EXP0314010a	WXXICV	MAP	3/14/10 19:24			1		USE	C
EXP0314011a	XIBLK03	MAP	3/14/10 19:53			1		USE	B
EXP0314012a	WXXICRI	MAP	3/14/10 20:23			1		USE	C
EXP0314013a	1202052406	MAP	3/14/10 20:52	957200	Various	2	LANL	USE	S
EXP0314014a	1202052407	MAP	3/14/10 21:22	957200	Various	2	LANL	USE	S
EXP0314015a	247784002	MAP	3/14/10 21:51	957200	10-1979	2	LANL	USE	S
EXP0314016a	247790002	MAP	3/14/10 22:21	957200	10-1981	2	LANL	USE	S
EXP0314017a	247790003	MAP	3/14/10 22:50	957200	10-1981	2	LANL	USE	S
EXP0314018a	247791002	MAP	3/14/10 23:20	957200	10-1982	2	LANL	USE	S
EXP0314019a	247791003	MAP	3/14/10 23:49	957200	10-1982	2	LANL	USE	S
EXP0314020a	247791004	MAP	3/15/10 0:19	957200	10-1982	2	LANL	USE	S
EXP0314021a	247791005	MAP	3/15/10 0:48	957200	10-1982	2	LANL	USE	S
EXP0314022a	247791006	MAP	3/15/10 1:17	957200	10-1982	2	LANL	USE	S
EXP0314023a	WXXCCV	MAP	3/15/10 1:47			1		USE	C
EXP0314024a	XIBLK04	MAP	3/15/10 2:17			1		USE	B
EXP0314025a	WXXICRI	MAP	3/15/10 2:46			1		USE	C
EXP0314026a	247799001	MAP	3/15/10 3:15	957200	10-1990	2	LANL	USE	S
EXP0314027a	1202052408	MAP	3/15/10 3:45	957200	10-1990	2	LANL	USE	S
EXP0314028a	1202052409	MAP	3/15/10 4:14	957200	10-1990	2	LANL	USE	S
EXP0314029a	247799002	MAP	3/15/10 4:44	957200	10-1990	2	LANL	USE	S

EXP0314030a	247799003	MAP	3/15/10 5:13	957200	10-1990	2	LANL	USE	S
EXP0314031a	247799004	MAP	3/15/10 5:43	957200	10-1990	2	LANL	USE	S
EXP0314032a	247799005	MAP	3/15/10 6:12	957200	10-1990	2	LANL	USE	S
EXP0314033a	247799006	MAP	3/15/10 6:42	957200	10-1990	2	LANL	USE	S
EXP0314034a	247799007	MAP	3/15/10 7:11	957200	10-1990	2	LANL	USE	S
EXP0314035a	247799008	MAP	3/15/10 7:41	957200	10-1990	2	LANL	USE	S
EXP0314036a	WXXCCV	MAP	3/15/10 8:10			1		USE	C
EXP0314037a	XIBLK05	MAP	3/15/10 8:40			1		USE	B
EXP0314038a	WXXCRI	MAP	3/15/10 9:09			1		USE	C
EXP0314039a	247799009	MAP	15/03/2010 09:39	957200	10-1990	2	LANL	USE	S
EXP0314040a	247799010	MAP	15/03/2010 10:08	957200	10-1990	2	LANL	USE	S
EXP0314041a	XIBLK06	MAP	15/03/2010 10:38			1	LANL	USE	B
EXP0314042a	1202045802	MAP	15/03/2010 11:07	954361	10-1839	2	LANL	USE	S
EXP0314043a	1202045803	MAP	15/03/2010 11:37	954361	10-1839	2	LANL	USE	S
EXP0314044a	247116002	MAP	15/03/2010 12:07	954361	10-1839	2	LANL	USE	S
EXP0314045a	1202045804	MAP	15/03/2010 12:36	954361	10-1839	2	LANL	USE	S
EXP0314046a	1202045805	MAP	15/03/2010 13:06	954361	10-1839	2	LANL	USE	S
EXP0314047a	247116003	MAP	15/03/2010 13:35	954361	10-1839	2	LANL	USE	S
EXP0314048a	247116004	MAP	15/03/2010 14:04	954361	10-1839	2	LANL	USE	S
EXP0314049a	WXXCCV	MAP	15/03/2010 14:34			1		USE	C
EXP0314050a	XIBLK07	MAP	15/03/2010 15:04			1		USE	B
EXP0314051a	WXXCRI	MAP	15/03/2010 15:33			1		USE	C
EXP0314052a	247116006	MAP	15/03/2010 16:03	954361	10-1839	2	LANL	USE	S
EXP0314053a	247116007	MAP	15/03/2010 16:32	954361	10-1839	2	LANL	USE	S
EXP0314054a	247116008	MAP	15/03/2010 17:02	954361	10-1839	2	LANL	USE	S
EXP0314055a	247116009	MAP	15/03/2010 17:31	954361	10-1839	2	LANL	USE	S
EXP0314056a	247116010	MAP	15/03/2010 18:01	954361	10-1839	2	LANL	USE	S
EXP0314057a	247116011	MAP	15/03/2010 18:30	954361	10-1839	2	LANL	USE	S
EXP0314058a	247116012	MAP	15/03/2010 19:00	954361	10-1839	2	LANL	USE	S
EXP0314059a	247116013	MAP	15/03/2010 19:29	954361	10-1839	2	LANL	USE	S
EXP0314060a	247116014	MAP	15/03/2010 19:59	954361	10-1839	2	LANL	USE	S
EXP0314061a	247116015	MAP	15/03/2010 20:28	954361	10-1839	2	LANL	USE	S
EXP0314062a	WXXCCV	MAP	15/03/2010 20:58			1		USE	C
EXP0314063a	XIBLK08	MAP	15/03/2010 21:27			1		USE	B
EXP0314064a	WXXCRI	MAP	15/03/2010 21:57			1		USE	C
EXP0314065a	247116016	MAP	15/03/2010 22:26	954361	10-1839	2	LANL	USE	S
EXP0314066a	247116017	MAP	15/03/2010 22:56	954361	10-1839	2	LANL	USE	S

EXP0314067a	1202041915	MAP	15/03/2010 23:25	952684	Various	2	LANL	DUSE	S
EXP0314068a	XIBLK09	MAP	15/03/2010 23:55			1		USE	B
EXP0314069a	1202055082	MAP	16/03/2010 00:24	958286	Various	2	LANL	USE	S
EXP0314070a	1202055083	MAP	16/03/2010 00:54	958286	Various	2	LANL	USE	S
EXP0314071a	248040007	MAP	16/03/2010 01:23	958286	10-2051	2	LANL	USE	S
EXP0314072a	1202055084	MAP	16/03/2010 01:53	958286	10-2051	2	LANL	USE	S
EXP0314073a	1202055085	MAP	16/03/2010 02:22	958286	10-2051	2	LANL	DUSE-RA	S
EXP0314074a	248259006	MAP	16/03/2010 02:52	958286	10-2148	2	LANL	USE-DL	S
EXP0314075a	WXXCCV	MAP	16/03/2010 03:21			1		USE	C
EXP0314076a	XIBLK10	MAP	16/03/2010 03:51			1		USE	B
EXP0314077a	WXXCRI	MAP	16/03/2010 04:20			1		USE	C

GEL ORGANIC RUN LOG

INSTRUMENT ID: LCMSMS4

Date: 03/05/10
 Extr. Injection Volume: 10uL
 Sequence Number: 030510exs
 Initial Calibration Date: 030510
 Method: 8321A-Modified
 Int. Std.: N/A
 Mobile Phase Lot#: 1268566, 1268568
 Standard-Samp Reagent Lot#: 1274562, 1261217
 SOP: GL-OA-E-056 Rev.12
 Alt Check Std. ID: WXX100305-26

Reviewed By: *AM*
 Date: *03/09/10*

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC Flag
EXS03050001.wiff	XIBLK01	LER	3/5/2010 17:07			1		USE	B
EXS03050002.wiff	XIBLK01	LER	3/5/2010 17:23			1		USE	B
EXS03050003.wiff	WXXICAL-19	LER	3/5/2010 17:39			1		USE	I
EXS03050004.wiff	WXXICAL-20	LER	3/5/2010 17:54			1		USE	I
EXS03050005.wiff	WXXICAL-21	LER	3/5/2010 18:10			1		USE	I
EXS03050006.wiff	WXXICAL-22	LER	3/5/2010 18:26			1		USE	I
EXS03050007.wiff	WXXICAL-23	LER	3/5/2010 18:41			1		USE	I
EXS03050008.wiff	WXXICAL-24	LER	3/5/2010 18:57			1		USE	I
EXS03050009.wiff	WXXICAL-25	LER	3/5/2010 19:13			1		USE	I
EXS03050010.wiff	XIBLK02	LER	3/5/2010 19:29			1		USE	B
EXS03050011.wiff	WXXICV	LER	3/5/2010 19:44			1		USE	C
EXS03050012.wiff	XIBLK03	LER	3/5/2010 20:00			1		USE	B
EXS03050013.wiff	WXXCRI	LER	3/5/2010 20:16			1		USE	C
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EXS03050015.wiff	1202045736	LER	3/5/2010 20:47	954321	VARIOUS	2	LANL	USE	S
EXS03050016.wiff	247126001	LER	3/5/2010 21:03	954321	10-1849	2	LANL	USE	S
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EXS03050019.wiff	247126002	LER	3/5/2010 21:50	954321	10-1849	2	LANL	USE	S
EXS03050020.wiff	247126003	LER	3/5/2010 22:05	954321	10-1849	2	LANL	USE	S
EXS03050021.wiff	247178001	LER	3/5/2010 22:21	954321	10-1861	2	LANL	USE	S
EXS03050022.wiff	247178002	LER	3/5/2010 22:37	954321	10-1861	2	LANL	USE	S
EXS03050023.wiff	247178003	LER	3/5/2010 22:53	954321	10-1861	2	LANL	USE	S
EXS03050024.wiff	WXXCCV	LER	3/5/2010 23:08			1		USE	C
EXS03050025.wiff	XIBLK04	LER	3/5/2010 23:24			1		USE	B
EXS03050026.wiff	WXXCRI	LER	3/5/2010 23:40			1		USE	C
EXS03050027.wiff	247178004	LER	3/5/2010 23:55	954321	10-1861	2	LANL	USE	S
EXS03050028.wiff	247178005	LER	3/6/2010 0:11	954321	10-1861	2	LANL	USE	S
EXS03050029.wiff	247178006	LER	3/6/2010 0:27	954321	10-1861	2	LANL	USE	S
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EXS03050033.wiff	247178010	LER	3/6/2010 1:30	954321	10-1861	2	LANL	USE	S
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EXS03050037.wiff	WXXCRI	LER	3/6/2010 2:32			1		USE	C
EXS03050038.wiff	1202052406	LER	3/6/2010 2:48	957200	VARIOUS	2	LANL	USE	S
EXS03050039.wiff	1202052407	LER	3/6/2010 3:04	957200	VARIOUS	2	LANL	USE	S
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EXS03050042.wiff	247790003	LER	3/6/2010 3:51	957200	10-1981	2	LANL	USE	S
EXS03050043.wiff	247791002	LER	3/6/2010 4:07	957200	10-1982	2	LANL	USE	S
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EXS03050045.wiff	247791004	LER	3/6/2010 4:38	957200	10-1982	2	LANL	USE	S
EXS03050046.wiff	247791005	LER	3/6/2010 4:54	957200	10-1982	2	LANL	USE	S
EXS03050047.wiff	247791006	LER	3/6/2010 5:09	957200	10-1982	2	LANL	USE	S
EXS03050048.wiff	WXXCCV	LER	3/6/2010 5:25			1		USE	C
EXS03050049.wiff	XIBLK06	LER	3/6/2010 5:41			1		USE	B
EXS03050050.wiff	WXXCRI	LER	3/6/2010 5:56			1		USE	C
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EXS03050052.wiff	1202052408	LER	3/6/2010 6:28	957200	10-1990	2	LANL	USE	S
EXS03050053.wiff	1202052409	LER	3/6/2010 6:44	957200	10-1990	2	LANL	USE	S
EXS03050054.wiff	247799002	LER	3/6/2010 6:59	957200	10-1990	2	LANL	USE	S
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EXS03050058.wiff	247799006	LER	3/6/2010 8:02	957200	10-1990	2	LANL	USE	S
EXS03050059.wiff	247799007	LER	3/6/2010 8:18	957200	10-1990	2	LANL	USE	S
EXS03050060.wiff	WXXCCV	LER	3/6/2010 8:34			1		USE	C
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EXS03050064.wiff	247799009	LER	3/6/2010 9:36	957200	10-1990	2	LANL	USE	S
EXS03050065.wiff	247799010	LER	3/6/2010 9:52	957200	10-1990	2	LANL	USE	S
EXS03050066.wiff	WXXCCV	LER	3/6/2010 10:08			1		USE	C
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EXS03050069.wiff	1202041953	LER	3/6/2010 10:55	952706	10-1758	2	USE	S
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EXS03050072.wiff	1202041955	LER	3/6/2010 11:42	952706	10-1758	2	USE	S
EXS03050073.wiff	1202041956	LER	3/6/2010 11:58	952706	10-1758	2	USE	S
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EXS03050076.wiff	246866005	LER	3/6/2010 12:45	952706	10-1758	2	USE	S
EXS03050077.wiff	246866006	LER	3/6/2010 13:01	952706	10-1758	2	USE	S
EXS03050078.wiff	246866007	LER	3/6/2010 13:16	952706	10-1758	2	USE	S
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EXS03050082.wiff	246866008	LER	3/6/2010 14:19	952706	10-1758	2	USE	S
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EXS03050102.wiff	1202047532	LER	3/6/2010 19:33	955065	10-1898	2	USE	S
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EXS03050107.wiff	XIBLK13	LER	3/6/2010 20:52			1		USE	B
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EXS03050111.wiff	247346006	LER	3/6/2010 21:54	955065	10-1911	2	LANL	USE	S
EXS03050112.wiff	247346007	LER	3/6/2010 22:10	955065	10-1911	2	LANL	USE	S
EXS03050113.wiff	247346008	LER	3/6/2010 22:26	955065	10-1911	2	LANL	USE	S
EXS03050114.wiff	247358001	LER	3/6/2010 22:41	955065	10-1914	2	LANL	USE	S
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EXS03050116.wiff	247358003	LER	3/6/2010 23:13	955065	10-1914	2	LANL	USE	S
EXS03050117.wiff	247358004	LER	3/6/2010 23:29	955065	10-1914	2	LANL	USE	S
EXS03050118.wiff	WXXCCV	LER	3/6/2010 23:44			1		USE	C
EXS03050119.wiff	XIBLK14	LER	3/7/2010 0:00			1		USE	B
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Date: 15-Mar-2010

Time: 03:45:29

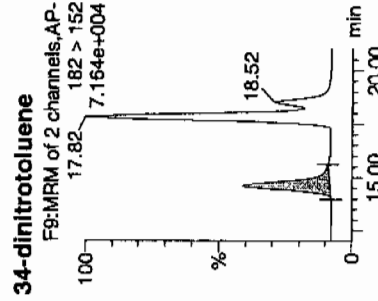
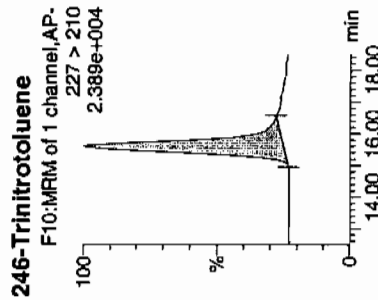
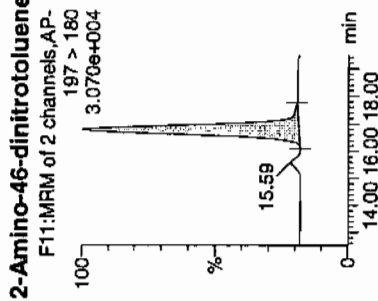
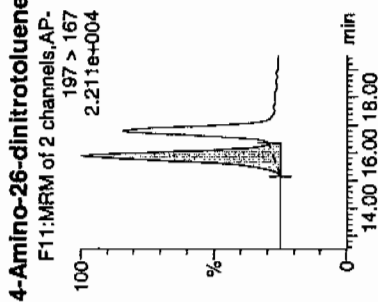
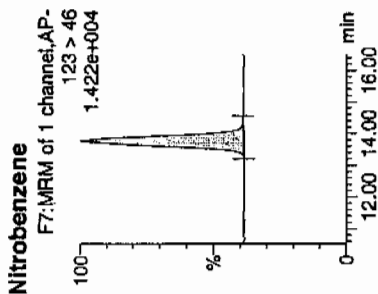
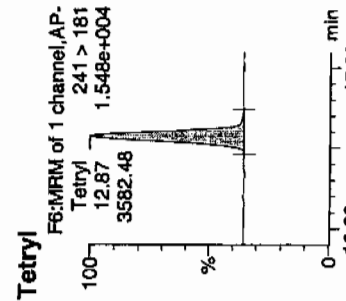
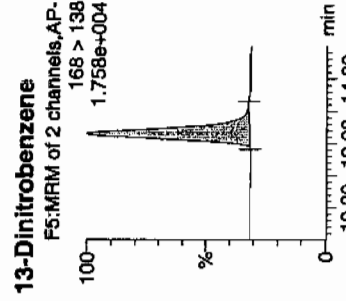
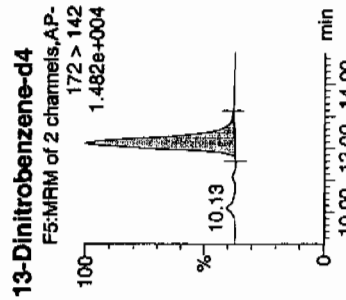
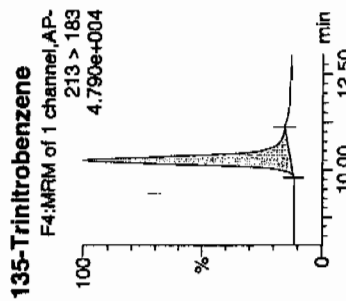
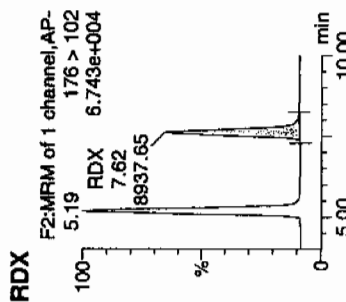
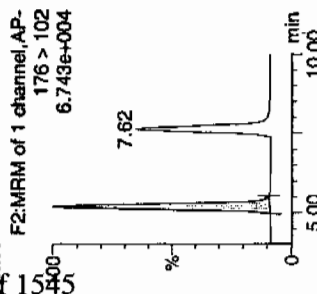
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Vial: 2-2,F

not
3/15/10

WAV 957200 | 24779001ms | 21

RMX



Amine 03/16/10

Dataset: C:\MASSLYN\New Exp.PRO\031410expA.qld, Time: Mon Mar 15 10:15:48 2010

24-dinitrotoluene

F9:MPM of 2 channels,AP-

F9:MRM of 2 channels

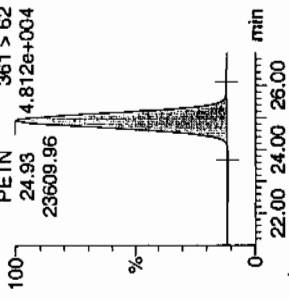
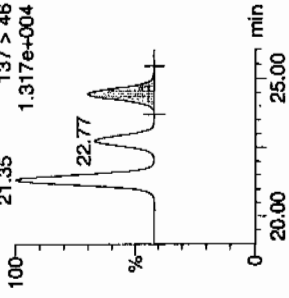
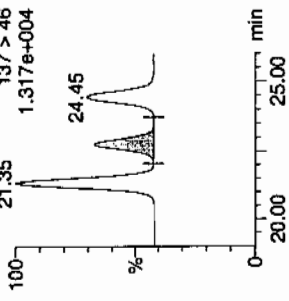
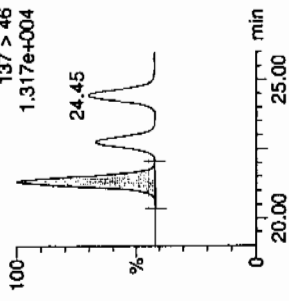
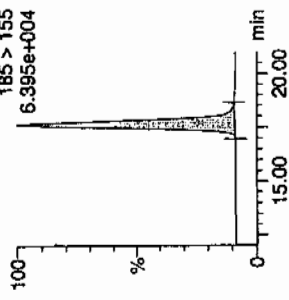
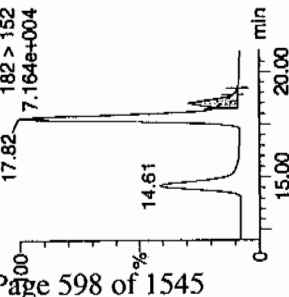
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F12:MAM of 1

F12:MRM of 1

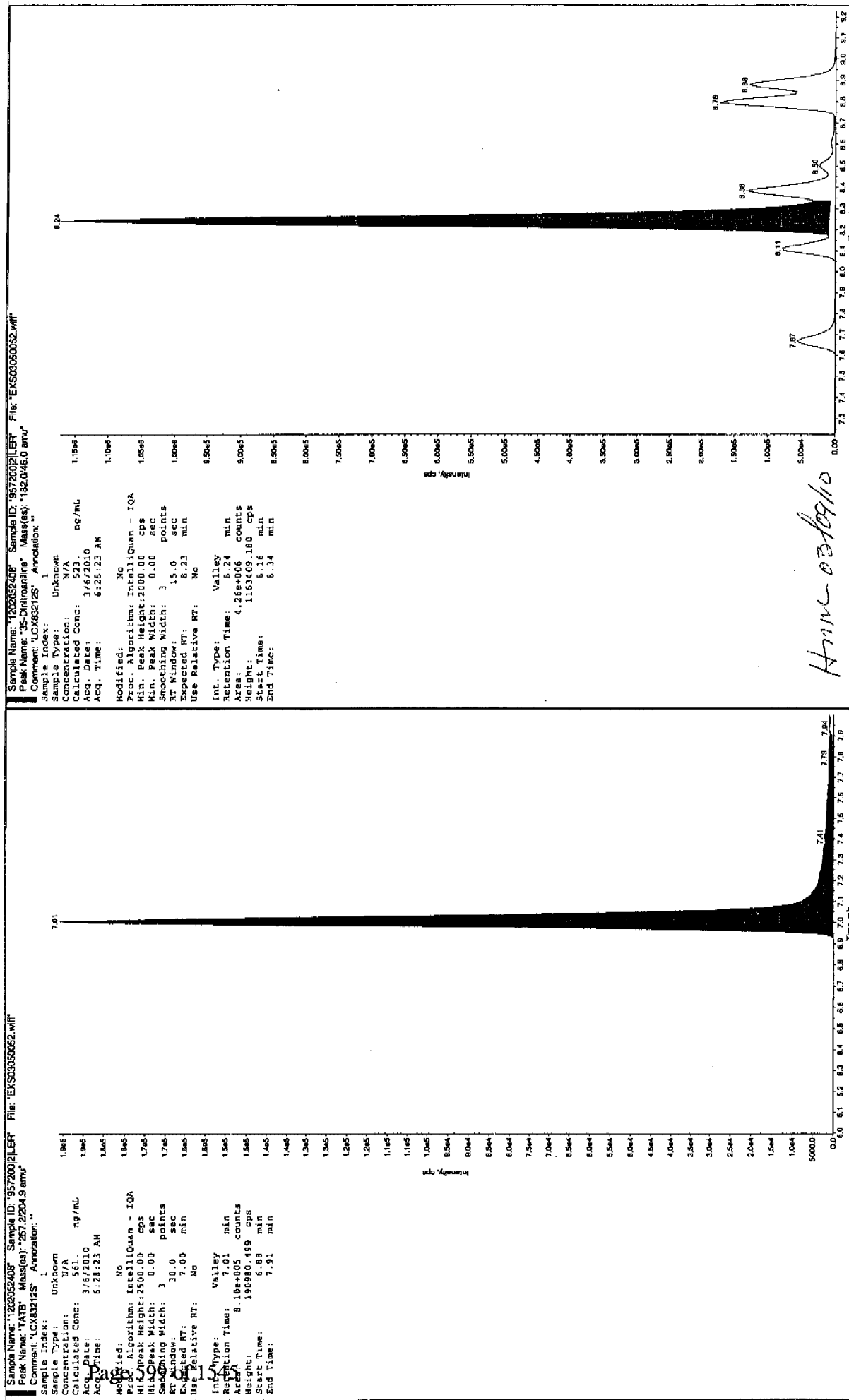
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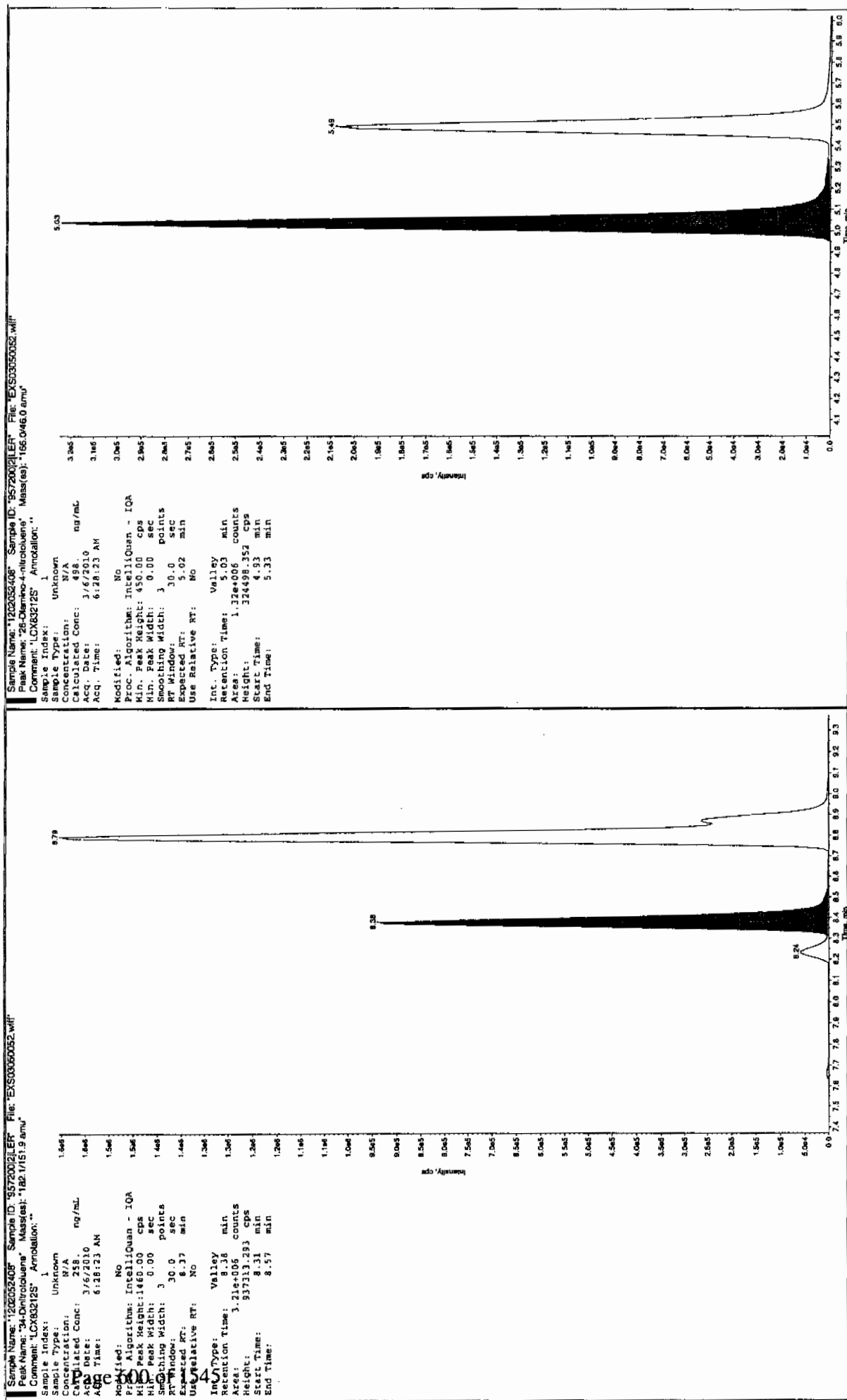
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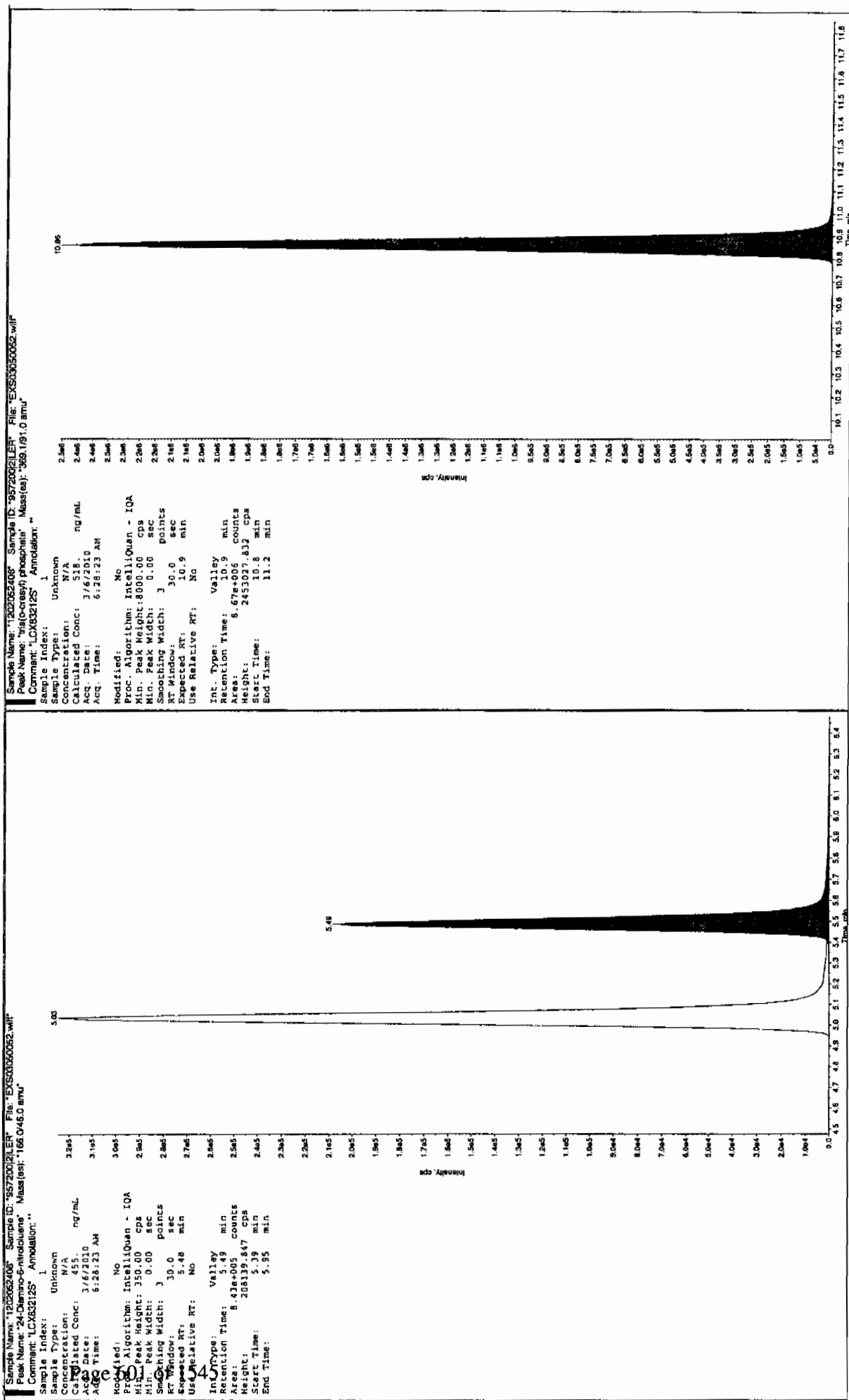


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1202052408	135-Trinitrobenzene	213 > 183	10.25	12108.952	3899.162	12108.952	1552.763	bb		421.9551	84.4	-15.6	581.1
1202052408	13-Dinitrobenzene-d4	172 > 142	12.17	3899.162	3899.162	3899.162	3899.162	bb		579.4664	115.9	15.9	335.5
1202052408	13-Dinitrobenzene	168 > 138	12.31	4701.336	3899.162	4701.336	602.865	bb		453.7809	90.8	-9.2	618.1
1202052408	Tetryl	241 > 181	12.87	3582.478	3899.162	3582.478	459.391	bb		484.9822	97.0	-3.0	260.8
1202052408	Nitrobenzene	123 > 46	13.76	3033.611	3899.162	3033.611	389.008	bb		474.2053	94.8	-5.2	267.7
1202052408	4-Amino-26-dinitrotoluene	197 > 167	15.86	6949.450	23651.404	6949.450	146.914	MM	15-Mar-10 10:07:57	472.0101	94.4	-5.6	290.7
1202052408	2-Amino-46-dinitrotoluene	197 > 180	16.79	10082.879	23651.404	10082.879	213.156	bb		518.7347	103.7	3.7	874.8
1202052408	246-Trinitrotoluene	227 > 210	15.58	8031.186	23651.404	8031.186	169.782	bb		497.7830	99.6	-0.4	373.8
1202052408	34-dinitrotoluene	182 > 152	14.61	11434.476	23651.404	11434.476	241.729	bb		250.6905	100.3	0.3	428.1
1202052408	26-dinitrotoluene	182 > 152	17.82	25884.150	23651.404	25884.150	547.201	MM	15-Mar-10 10:10:50	486.3671	97.3	-2.7	1192.6
1202052408	24-dinitrotoluene	182 > 152	18.52	5821.648	23651.404	5821.648	123.072	MM	15-Mar-10 10:13:58	513.8369	102.8	2.8	262.8
1202052408	26-dinitrotoluene-d3	185 > 155	17.64	23651.404	23651.404	23651.404	23651.404	bb		620.5879	124.1	24.1	1020.6
1202052408	2-Nitrotoluene	137 > 46	21.35	3370.626	23651.404	3370.626	71.256	bb		469.5715	93.9	-6.1	585.2
1202052408	4-Nitrotoluene	137 > 46	22.77	1567.574	23651.404	1567.574	33.139	bb		433.4394	86.7	-13.3	256.6
1202052408	3-Nitrotoluene	137 > 46	24.45	1910.419	23651.404	1910.419	40.387	bb		441.6199	88.3	-11.7	287.9
1202052408	PETN	361 > 62	24.93	23609.955	23651.404	23609.955	499.124	bb		465.3581	93.1	-6.9	4952.7

Scan 319110







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

Quantify Sample Report

GEL Laboratories, LLC / Analyst: Michael A. Penny

Printed: Mon Mar 15 10:16:43 2010, Page 55 of 77

Dataset: C:\MASSLYNX\New_Exp\PRO1031410expA.qld, Time: Mon Mar 15 10:15:48 2010

Name: C:\MASSLYNX\NEW_EXP\PRO1031410expA\EXP0314028a

Date: 15-Mar-2010

Time: 04:14:55

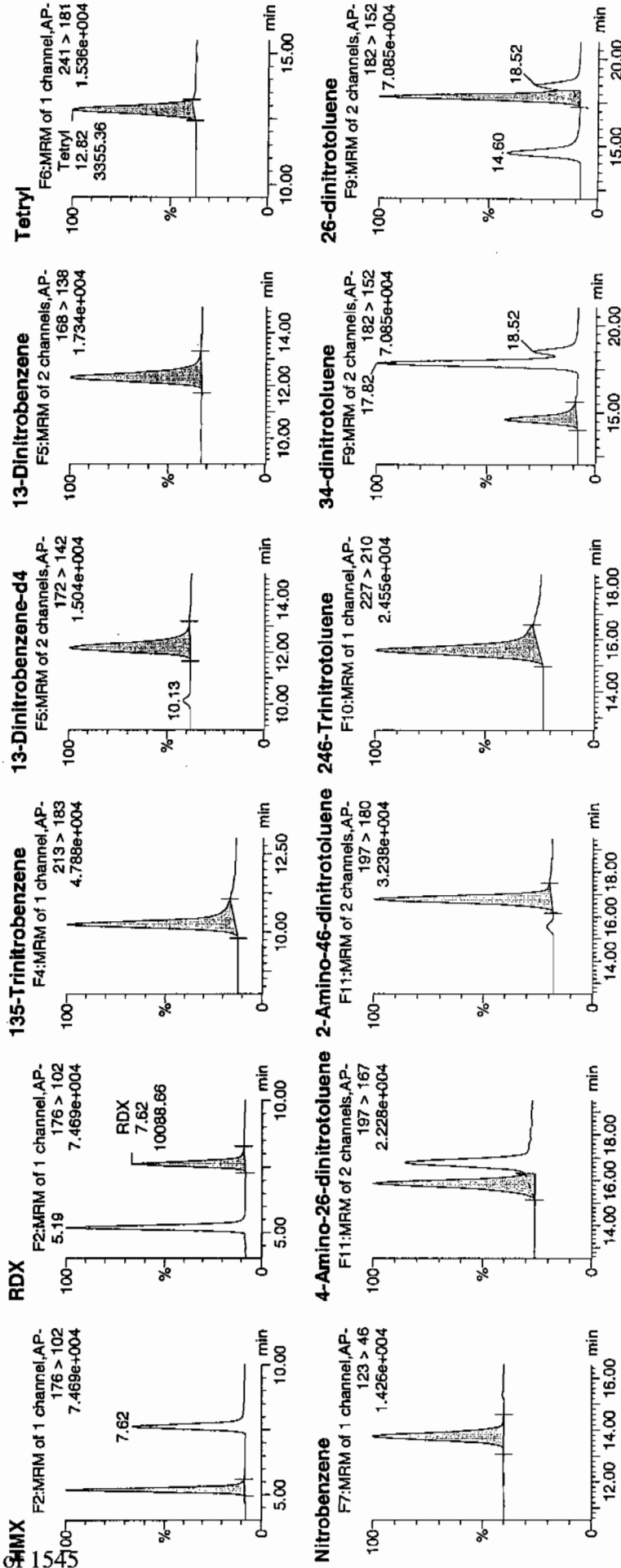
ID: 1202052409

Sample: 2:3,A

247799001 MS2 / 21

247799001 MS2 / 21

LAUW 957200 / SOLIS



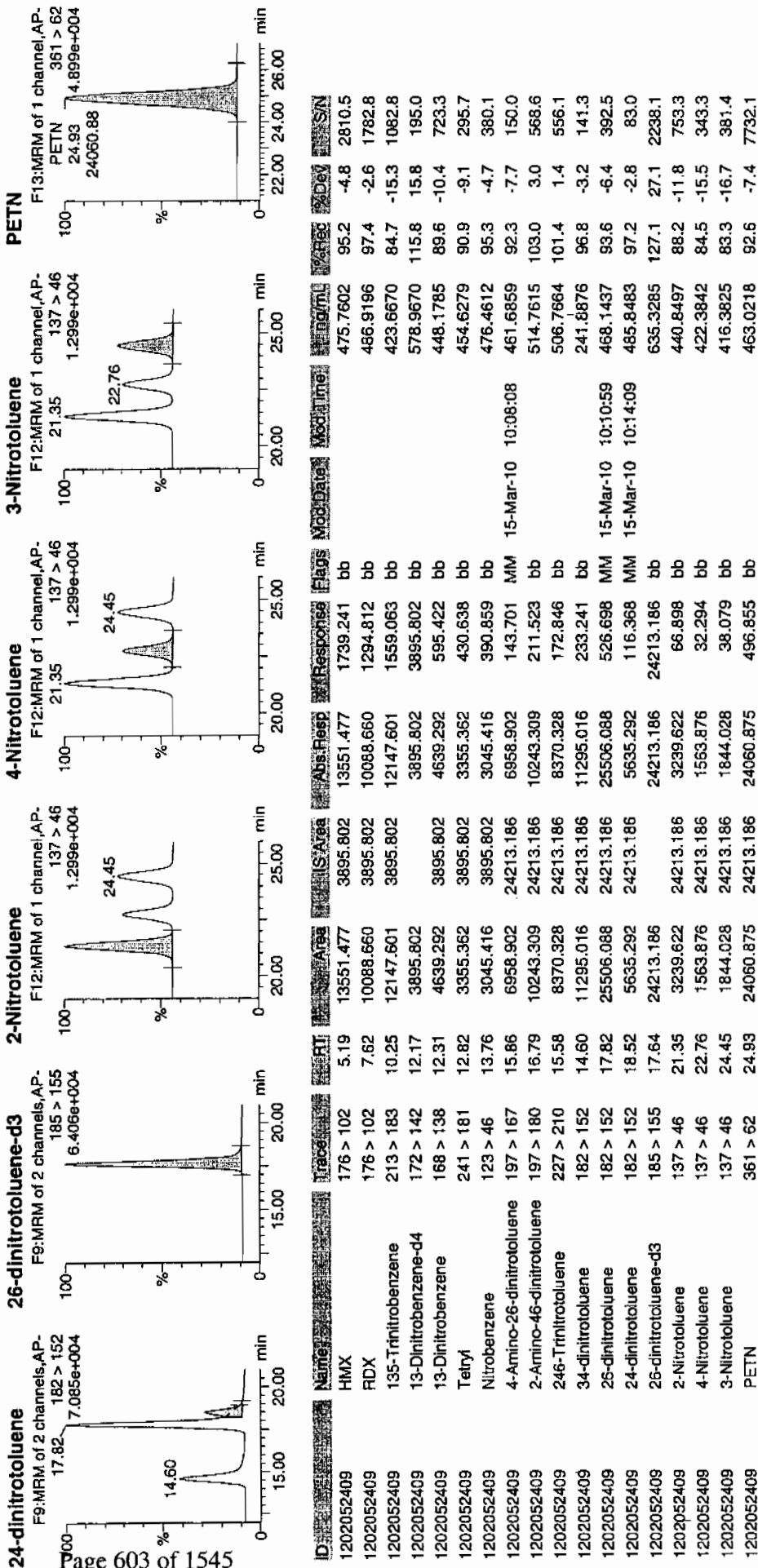
Amw 03/16/10

Quantify Sample Report

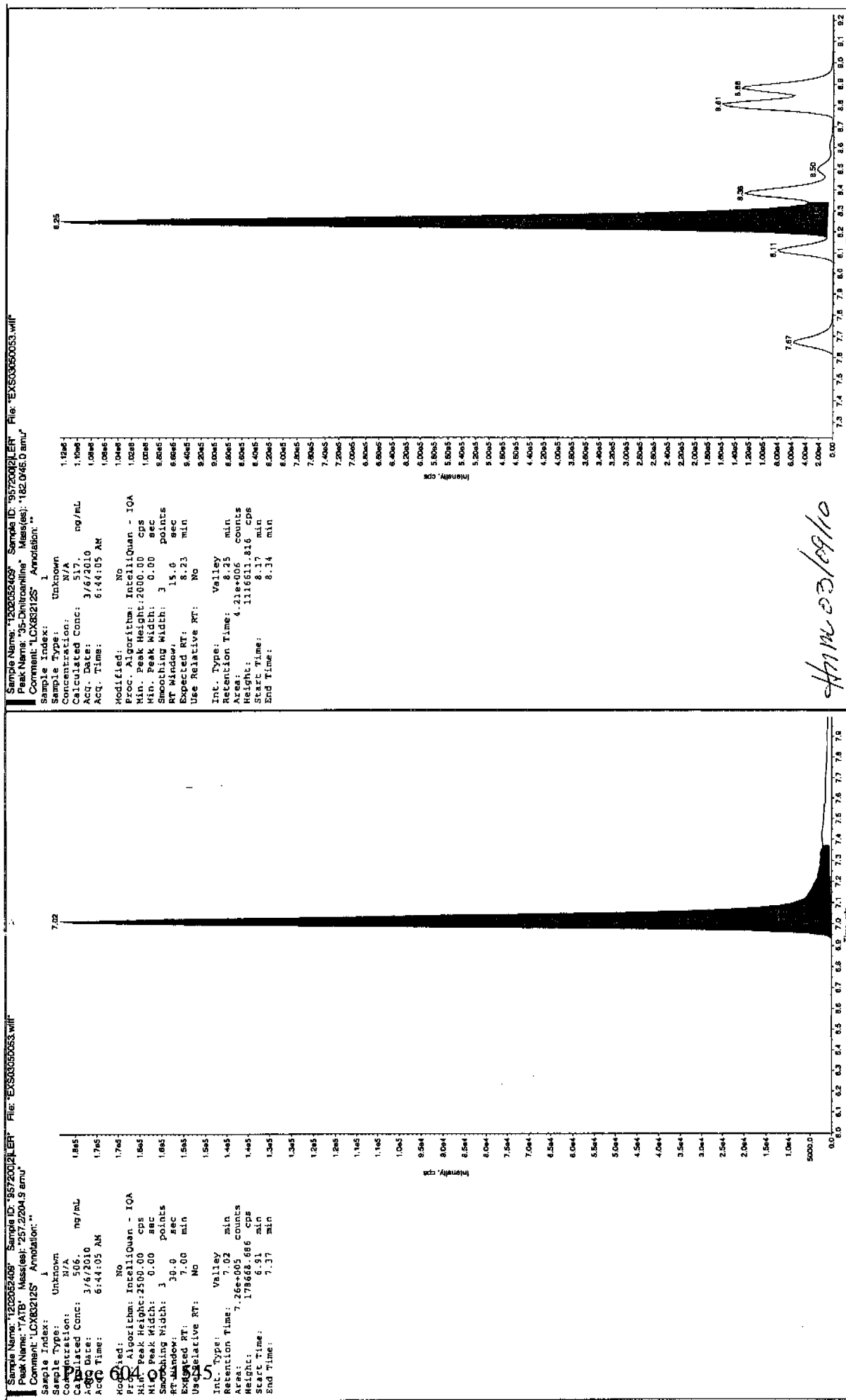
GEL Laboratories, LLC / Analyst: Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\031410expA.qld, Time: Mon Mar 15 10:15:48 2010

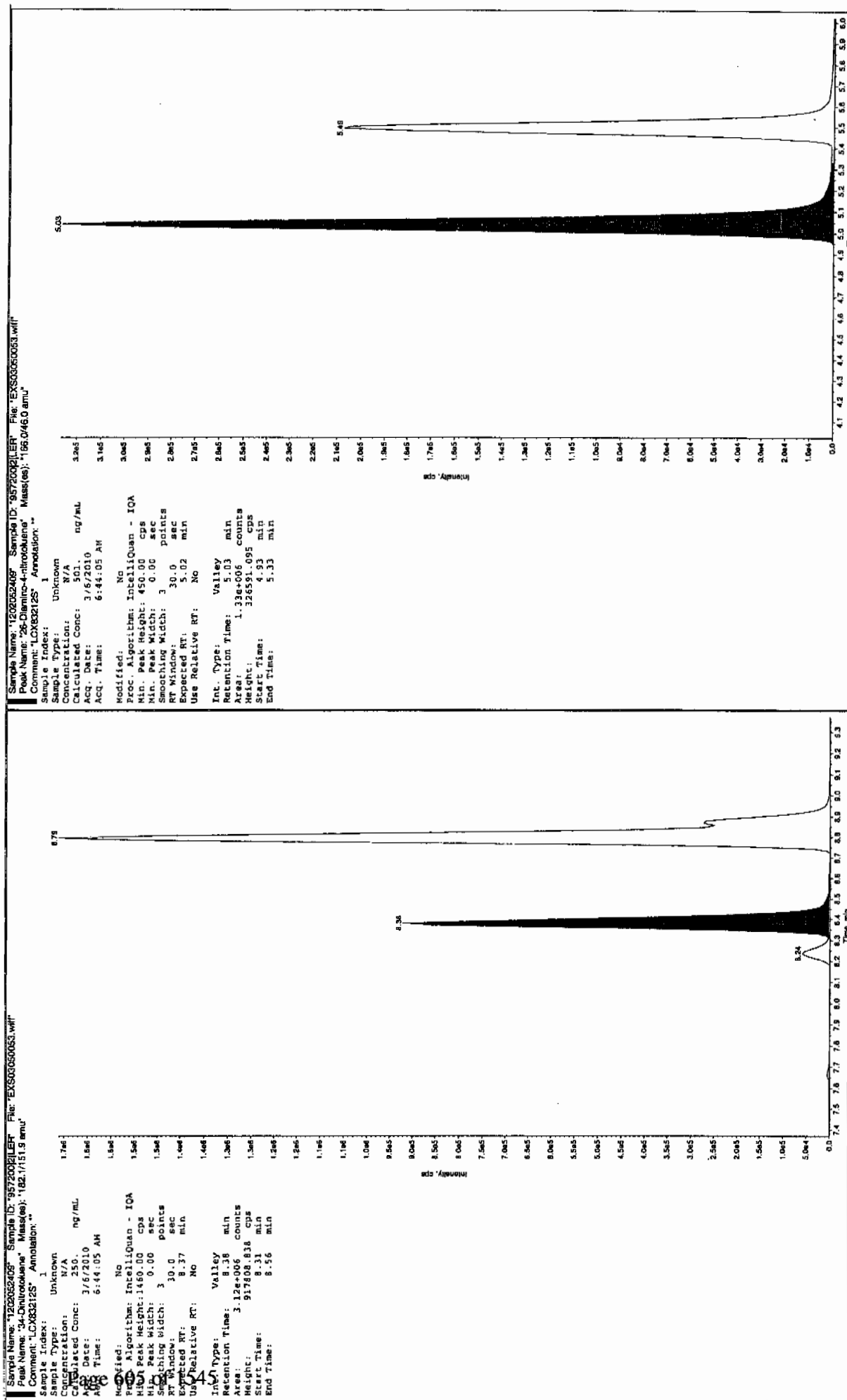
Printed: Mon Mar 15 10:16:43 2010, Page 56 of 77

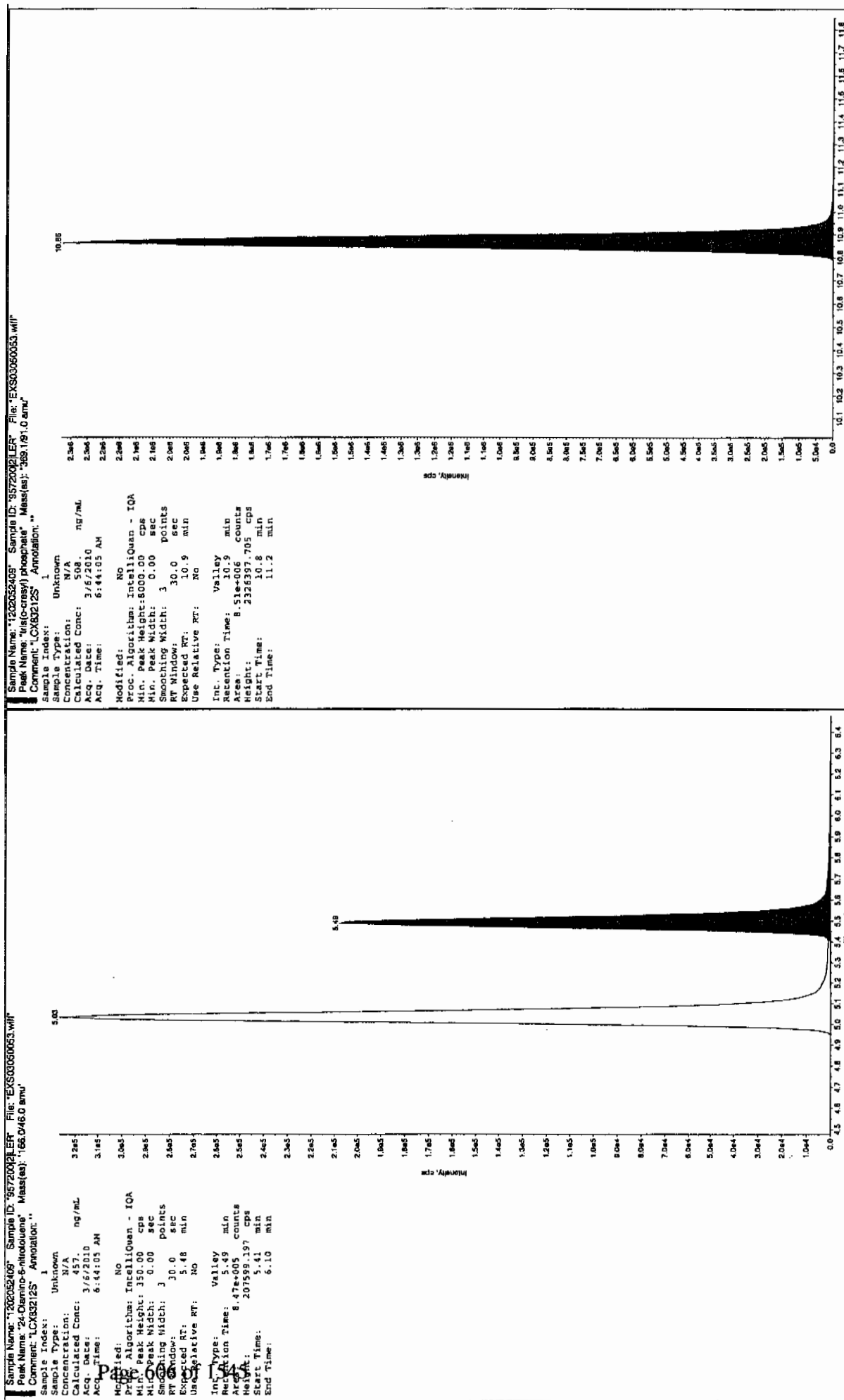


See 3/9/10



See 3/9/10





GC SEMIVOLATILE PCB ANALYSIS

PCB Case Narrative
Los Alamos National Laboratory (LANL)
SDG 10-1981

Method/Analysis Information

Procedure: Analysis of Polychlorinated Biphenyls by ECD
Analytical Method: SW846 8082
Prep Method: SW846 3550B
Analytical Batch Number: 958180
Prep Batch Number: 958178

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 8082:

Sample ID	Client ID
247790002	RE15-10-8386
247790003	RE15-10-8387
1202054828	Method Blank (MB)
1202054829	Laboratory Control Sample (LCS)
1202054830	247791002(RE15-10-8317) Matrix Spike (MS)
1202054831	247791002(RE15-10-8317) Matrix Spike Duplicate (MSD)

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

Preparation/Analytical Method Verification

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-040 REV# 15.

Raw data reports are processed and reviewed by the analyst using the Target software package. False positives have been removed from the Target quantitation reports per standard operating procedures (SOP) section 23.0.

Calibration Information

Please note that the 'Cal Date' indicated on each quantitation report reflects the date and time of the most recent calibrated analyte(s) in the Target processing method. Since the laboratory may calibrate with multiple solutions on different days using the same processing method, the Target software will update the 'Cal Date' to the last calibration file, date and time. The correct dates and times for all calibration files are located on the Calibration History report in the Standard Data section in the data package.

Due to software limitations, the Calibration Summary Form 6 may not indicate all the calibration files comprising the initial calibration. A complete list of the initial calibration data files are shown in the Calibration History report located in the Standard Data section of the data package.

Initial Calibration

All initial calibration requirements have been met for this sample delivery group (SDG).

The linear equation used in Target and indicated on the initial calibration summary form is not a conventional linear equation (slope intercept formula) and does not match the equation found in SW-846 method 8000B. The x and y axes are inversed in Target, so that the instrument response is treated as the independent variable (x) and the concentration ratio is treated as the dependent variable (y). The equation used in Target to calculate sample results is adjusted to account for the linear equation inversion and reciprocal slope. The adjusted calculation has been independently verified to produce valid results.

Continuing Calibration Verification (CCV) Requirements

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

Quality Control (QC) Information

Method Blank (MB) Statement

The MB analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries

All surrogate recoveries were within the established acceptance criteria for this SDG.

Laboratory Control Sample (LCS) Recovery

The LCS spike recoveries met the acceptance limits.

QC Sample Designation

A LANL sample of similar matrix associated with another SDG (#10-1982) was selected for the matrix spike and matrix spike duplicate analysis. A Form III and QC raw data are included in the package summarizing the results.

Matrix Spike (MS) Recovery Statement

The MS recoveries were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement

The MSD recoveries were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement

The RPD between the MS and MSD met the acceptance limits.

Technical Information

Holding Time Specifications

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

Preparation/Analytical Method Verification

All procedures were performed as stated in the SOP. All sample extracts were cleaned using alumina. Additionally, copper was added to all sample extracts to remove sulfur.

Sample Dilutions

The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis

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

Miscellaneous Information

Electronic Package Comment

The following package was generated using an electronic data processing program referred to as "virtual packaging". In an effort to increase quality and efficiency, the laboratory is developing systems to eventually generate all data packages electronically. The following change from "traditional" packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative of each electronic package will indicate the analyst, reviewer, and report specialist names associated with the generation of the data and package. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Data Exception (DER) Documentation

Data exception report (DER) is for documentation of any procedural anomalies that may deviate from referenced

SOP or contractual document. A DER was not required for this SDG.

Manual Integration

Certain standards and samples may have required manual integration to correctly position the baseline as set in the calibration standard injections. If manual integration was performed, copies of all manual integration peak profiles are included in the raw data section of this PCB fraction. .

Additional Comments

The additional comments field is used to address special issues associated with each analysis, clarify method/contractual issues pertaining to the analysis, and to list any report documents generated as a result of sample analysis or review. The following additional comments were required:

The higher results from either column have been chosen and reported in the data package for the client samples, MB and LCS.

The data reported on the form I and III may differ slightly from the data reported on the form X. This is due to software limitations in rounding differences between the forms.

Aroclors quantitated on the raw data report by the Target data system do not necessarily represent positive Aroclor identification. In order for positive identification to be made, the Aroclor must match in pattern and retention time; as well as quantitate relatively close between the primary and confirmation columns, as specified in SW846 method 8000. When these conditions are not met, the Aroclor is reported as a non-detect on the data report. These situations will be noted on the raw data as DMP, representing does not match pattern, or DNC does not confirm.

Due to software limitation, the Form VIIs will display the results either in the % difference or % drift depending on the type of the calibration curve. If the curve of all analytes is generated using an average response factor (RF), the Form VII will display results using the %difference calculation (RF). If the curve of one or more analytes is generated using a linear curve, the Form VII will display results using the % drift calculation (by concentration) for all analytes.

System Configuration

The Semi-Volatiles-PCB analysis was performed on the following instrument configuration:

Instrument ID	Instrument	System Configuration	Column ID	Column Description
ECD1A.1_1	HP Gas Chromatograph	HP6890 Series ECD	Rtx-CLP I	30m x 0.25mm, 0.25um (Rtx-CLPesticide)
ECD1A.1_2	HP Gas Chromatograph	HP6890 Series ECD	Rtx-CLP II	30m x 0.25mm, 0.20um (Rtx-CLPesticideII)

Certification Statement

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

Review Validation

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

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

Reviewer: _____ *Jimmy Cao* _____

Date: _____ *3/22/10* _____

Roadmap for LANL 10-1981 PCB

This roadmap was analyzed by yip00818 on 03-02-2010, 09:37.

This roadmap was reviewed by jen01212 on 03-02-2010, 15:01.

This roadmap was packaged by yml on 03-20-2010, 08:59.

This roadmap was validated by jim01140 on 03-22-2010, 08:56.

Front Sample Column

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	prebatchid	comment
<input type="checkbox"/>	N	/chem/ecd1a.i/030110.b/05365301.d	247790002	sample	01-MAR-2010	15:34	10-1981.sub	RE15-10-8386	1.00000	958180	UPLOAD BOTH COLUMNS, USE HIGHER
<input type="checkbox"/>	N	/chem/ecd1a.i/030110.b/05465401.d	247790003	sample	01-MAR-2010	15:47	10-1981.sub	RE15-10-8387	1.00000	958180	UPLOAD BOTH COLUMNS, USE HIGHER

Back Sample Column

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	prebatchid	comment
<input type="checkbox"/>	N	/chem/ecd1a.i/030110.b/05365301.d	247790002	sample	01-MAR-2010	15:34	10-1981.sub	RE15-10-8386	1.00000	958180	UPLOAD BOTH COLUMNS, USE HIGHER
<input type="checkbox"/>	N	/chem/ecd1a.i/030110.b/05465401.d	247790003	sample	01-MAR-2010	15:47	10-1981.sub	RE15-10-8387	1.00000	958180	UPLOAD BOTH COLUMNS, USE HIGHER

Front QC Sample Column

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	prebatchid	comment
<input type="checkbox"/>	N	/chem/ecd1a.i/030110.b/03863801-1.d	1202054828	mb	01-MAR-2010	12:33	10-1981.sub	PBLK01	1.00000	958180	
<input type="checkbox"/>	N	/chem/ecd1a.i/030110.b/03963901-1.d	1202054829	lcs	01-MAR-2010	12:44	10-1981.sub	PBLK01LCS	1.00000	958180	

Back QC Sample Column

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	prebatchid	comment
<input type="checkbox"/>	N	/chem/ecd1a.i/030110.b/03863801-1.d	1202054828	mb	01-MAR-2010	12:33	10-1981.sub	PBLK01	1.00000	958180	
<input type="checkbox"/>	N	/chem/ecd1a.i/030110.b/03963901-1.d	1202054829	lcs	01-MAR-2010	12:44	10-1981.sub	PBLK01LCS	1.00000	958180	

SAMPLE DATA SUMMARY

PCB
Certificate of Analysis
Sample Summary

SDG Number: 10-1981
Lab Sample ID: 247790002

Date Collected: 02/17/2010 12:00
Date Received: 02/23/2010 08:50
Client: LANL010
Method: SW846 8082
Inst: ECD1A.I
Analyst: YS1
Aliquot: 30.02 g
Column: 1 CLP1
2 CLP2

Matrix: R
%Moisture: 5.4
Project: LANL01004
SOP Ref: GL-OA-E-040
Dilution: 1
Inj. Vol: 1 uL
Final Volume: 1 mL
Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.52	ug/kg	1.17	3.52	1
11104-28-2	Aroclor-1221	U	3.52	ug/kg	1.17	3.52	1
11141-16-5	Aroclor-1232	U	3.52	ug/kg	1.17	3.52	1
53469-21-9	Aroclor-1242	U	3.52	ug/kg	1.17	3.52	1
12672-29-6	Aroclor-1248	U	3.52	ug/kg	1.17	3.52	1
11097-69-1	Aroclor-1254	U	3.52	ug/kg	1.17	3.52	1
11096-82-5	Aroclor-1260	U	3.52	ug/kg	1.17	3.52	1

PCB

Page 1 of 1

Certificate of Analysis

Sample Summary

SDG Number: 10-1981
Lab Sample ID: 247790003

Date Collected: 02/17/2010 12:00
Date Received: 02/23/2010 08:50
Client: LANL010
Method: SW846 8082
Inst: ECD1A.I
Analyst: YS1
Aliquot: 30.02 g
Column: 1 CLP1
2 CLP2

Matrix: R
%Moisture: 5.7
Project: LANL01004
SOP Ref: GL-OA-E-040
Dilution: 1
Inj. Vol: 1 uL
Final Volume: 1 mL
Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.53	ug/kg	1.18	3.53	1
11104-28-2	Aroclor-1221	U	3.53	ug/kg	1.18	3.53	1
11141-16-5	Aroclor-1232	U	3.53	ug/kg	1.18	3.53	1
53469-21-9	Aroclor-1242	U	3.53	ug/kg	1.18	3.53	1
12672-29-6	Aroclor-1248	U	3.53	ug/kg	1.18	3.53	1
11097-69-1	Aroclor-1254	U	3.53	ug/kg	1.18	3.53	1
11096-82-5	Aroclor-1260	U	3.53	ug/kg	1.18	3.53	1

QUALITY CONTROL SUMMARY

PCB

Page 1 of 1

Surrogate Recovery Report

SDG Number: 10-1981

Matrix Type: SOLID

CAP Column (1) : CLP1

CAP Column (2) : CLP2

Sample ID	Client ID	4CMX 1	4CMX 2	DCB 1	DCB 2
		%REC #	%REC #	%REC #	%REC #
1202054828	MB for batch 958178	77	76	92	86
1202054829	LCS for batch 958178	75	75	91	83
247790002	RE15-10-8386	69	70	77	71
247790003	RE15-10-8387	44	44	50	46

Surrogate

Acceptance Limits

4CMX = 4cmx

(32%-120%)

DCB = Decachlorobiphenyl

(30%-116%)

* Recovery outside Acceptance Limits

Column to be used to flag recovery values

D Sample Diluted

PCB

Page 1 of 1

Quality Control Summary
Spike Recovery Report

SDG Number: 10-1981

Sample Type: Laboratory Control Sample

Client ID: LCS for batch 958178

Matrix: SOIL

Lab Sample ID: 1202054829

Instrument: ECD1A.I

Analysis Date: 03/01/2010 12:44

Dilution: 1

Analyst: YS1

Pre Batch ID: 958178

Inj. Vol: 1 uL

Batch ID: 958180

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
12674-11-2	LCS Aroclor-1016	33.3	0.0	27.6	83	39-102
11096-82-5	LCS Aroclor-1260	33.3	0.0	35.6	107	45-118

PCB

Page 1 of 2

Quality Control Summary
Spike Recovery Report

SDG Number: 10-1982

Client ID: RE15-10-8317MS

Lab Sample ID:1202054830

Instrument: ECD1A.I

Analyst: YS1

Inj. Vol: 1 uL

Sample Type: Matrix Spike

Matrix: R

%Moisture: 6.3

Analysis Date: 03/01/2010 16:37

Dilution: 1

Prep Batch ID: 958178

Batch ID: 958180

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
12674-11-2	MS Aroclor-1016	35.5	0.00 U	30.2	85	23-119
11096-82-5	MS Aroclor-1260	35.5	0.00 U	39.3	111	28-124

Quality Control Summary
Spike Recovery Report

SDG Number: 10-1982

Client ID: RE15-10-8317MSD

Lab Sample ID:1202054831

Instrument: ECD1A.I

Analyst: YS1

Inj. Vol: 1 uL

Sample Type: Matrix Spike Duplicate

Matrix: R

%Moisture: 6.3

Analysis Date: 03/01/2010 16:50

Dilution: 1

Pre Batch ID 958178

Batch ID: 958180

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
12674-11-2	MSD Aroclor-1016	35.6	0.00 U	28.0	79	23-119	8	0-28
11096-82-5	MSD Aroclor-1260	35.6	0.00 U	37.0	104	28-124	6	0-30

Method Blank Summary

Page 1 of 1

SDG Number:	10-1981	Client:	LANL010	Matrix:	SOIL
Client ID:	MB for batch 958178	Instrument ID:	ECD1A.I_2	Data File:	038b3801-1.d
Lab Sample ID:	1202054828		ECD1A.I_1		038f3801-1.d
Column:	CLP2	Prep Date:	02/26/2010 20:38	Analyzed:	03/01/10 12:33
	CLP1	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 958178	1202054829	039f3901-1.d 039b3901-1.d	03/01/10	1244
02 RE15-10-8386	247790002	053f5301.d 053b5301.d	03/01/10	1534
03 RE15-10-8387	247790003	054f5401.d 054b5401.d	03/01/10	1547

SAMPLE DATA

PCB

Page 1 of 1

Certificate of Analysis
Sample SummarySDG Number: 10-1981
Lab Sample ID: 247790002Date Collected: 02/17/2010 12:00
Date Received: 02/23/2010 08:50
Client: LANL010
Method: SW846 8082
Inst: ECD1A.I
Analyst: YS1
Aliquot: 30.02 g
Column: 1 CLP1
2 CLP2Matrix: R
%Moisture: 5.4
Project: LANL01004
SOP Ref: GL-OA-E-040
Dilution: 1
Inj. Vol: 1 uL
Final Volume: 1 mL
Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.52	ug/kg	1.17	3.52	1
11104-28-2	Aroclor-1221	U	3.52	ug/kg	1.17	3.52	1
11141-16-5	Aroclor-1232	U	3.52	ug/kg	1.17	3.52	1
53469-21-9	Aroclor-1242	U	3.52	ug/kg	1.17	3.52	1
12672-29-6	Aroclor-1248	U	3.52	ug/kg	1.17	3.52	1
11097-69-1	Aroclor-1254	U	3.52	ug/kg	1.17	3.52	1
11096-82-5	Aroclor-1260	U	3.52	ug/kg	1.17	3.52	1

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL
Data file : /chem/ecd1a.i/030110.b/053f5301.d
Lab Smp Id: 247790002Client Smp ID: RE15-10-8386
Inj Date : 01-MAR-2010 15:34
Operator : YS1Inst ID: ecd1a.i
Smp Info : |247790002|1|
Misc Info : |ECD82P_1S|958180|SVA|LANL|SOIL|RE15-10-8386|||
Comment :
Method : /chem/ecd1a.i/030110.b/ECD1-F-8082-022210.m
Meth Date : 02-Mar-2010 06:38 yip00818Quant Type: ESTD
Cal Date : 22-FEB-2010 12:08Cal File: 036f3601.d
Als bottle: 53
Dil Factor: 1.00000
Integrator: FalconCompound Sublist: 10-1981.sub
Target Version: 3.50Sample Matrix: Soil
Processing Host: hpc1p1

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

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.02000	Weight of sample extracted (g)
M	5.40210	% Moisture

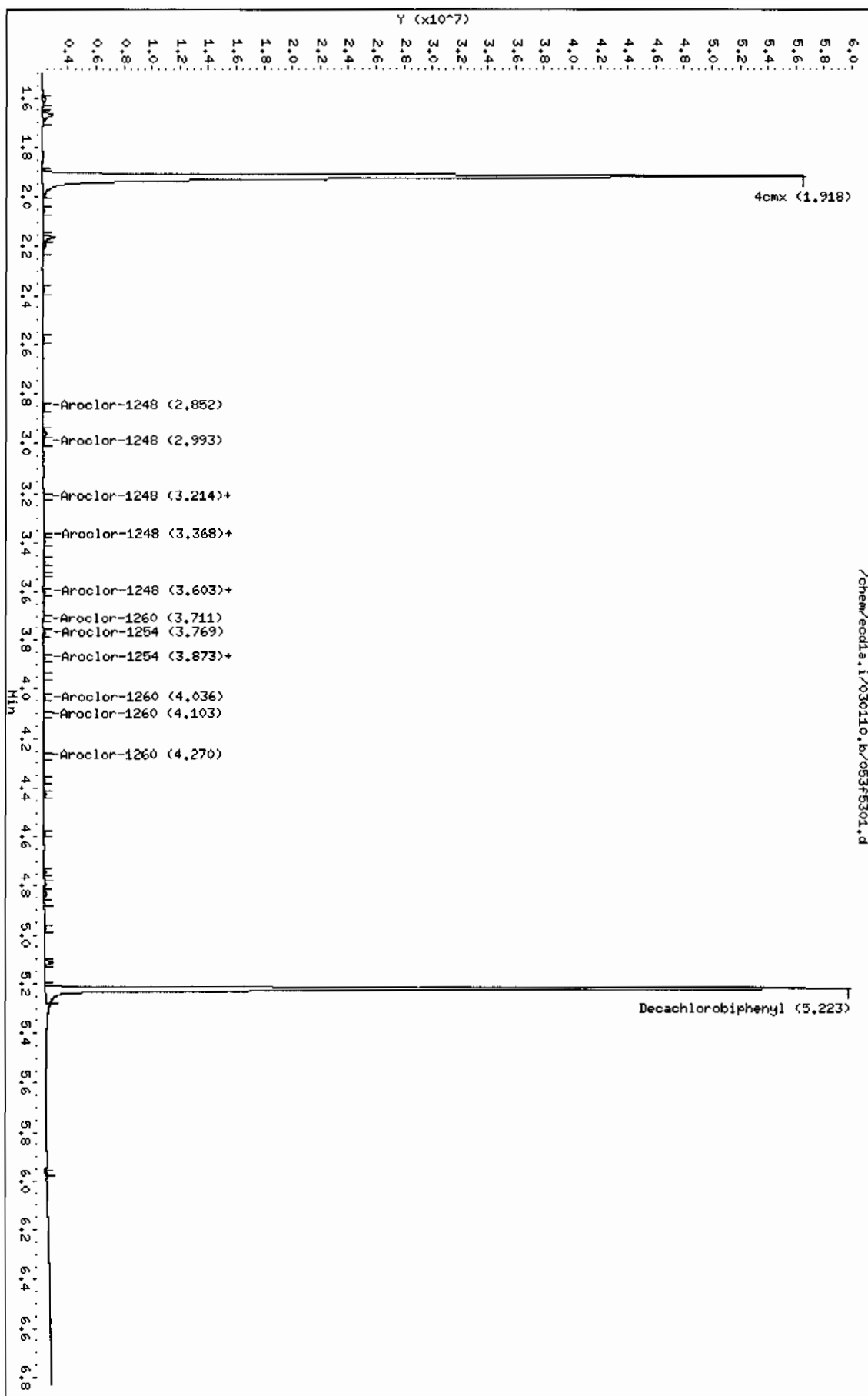
Cpnd VariableLocal Compound Variable

CONCENTRATIONS								
			ON-COL	FINAL				
RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/Kg)	TARGET RANCE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	
\$ 11 4cmx					CAS #: 877-09-8			
1.918	1.919	-0.001	59800273	138.865	4.9	80.00- 120.00	100.00	

\$ 12 Decachlorobiphenyl					CAS #: 2051-24-3			
5.223	5.227	-0.004	47297603	153.919	5.4	80.00- 120.00	100.00	

Data File: /chem/ecdda.i/030110.b/053f5301.d
 Date: 01-MAR-2010 15:34
 Client ID: RE15-10-8386
 Sample Info: 124790002111
 Volume Injected (uL): 1.0
 Column phase: CLP1

Instrument: ecdda.i
 Operator: YSL
 Column diameter: 0.25



Data File: /chem/ecd1a.i/030110.b/053b5301.d
Report Date: 02-Mar-2010 06:39

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GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/030110.b/053b5301.d
Lab Smp Id: 247790002 Client Smp ID: RE15-10-8386
Inj Date : 01-MAR-2010 15:34
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |247790002|1|
Misc Info : |ECD82P_1S|958180|SVA|LANL|SOIL|RE15-10-8386|||
Comment :
Method : /chem/ecd1a.i/030110.b/ECD1-B-8082-022210.m
Meth Date : 02-Mar-2010 06:39 yip00818 Quant Type: ESTD
Cal Date : 22-FEB-2010 12:08 Cal File: 036b3601.d
Als bottle: 53
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 10-1981.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpc1p1

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

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.02000	Weight of sample extracted (g)
M	5.40210	% Moisture

Cpnd Variable Local Compound Variable

CONCENTRATIONS								
				ON-COL	FINAL			
RT	EXP RT	DLT RT		RESPONSE (ug/L)	(ug/Kg)	TARGET RANGE	RATIO	
RT	EXP RT	DLT RT		RESPONSE (ug/L)	(ug/Kg)	TARGET RANGE	RATIO	
\$ 11 4cmx						CAS #: 877-09-8		
2.277	2.278	-0.001		41338590	139.001	4.9 80.00- 120.00	100.00	

\$ 12 Decachlorobiphenyl						CAS #: 2051-24-3		
5.919	5.923	-0.004		29825238	141.019	5.0 80.00- 120.00	100.00	

Data File: /chem/eodia.i/030110.b/053b5301.d

Date: 01-MAR-2010 15:34

Client ID: RE15-10-8386

Sample Info: 124779000211

Volume Injected (uL): 1.0

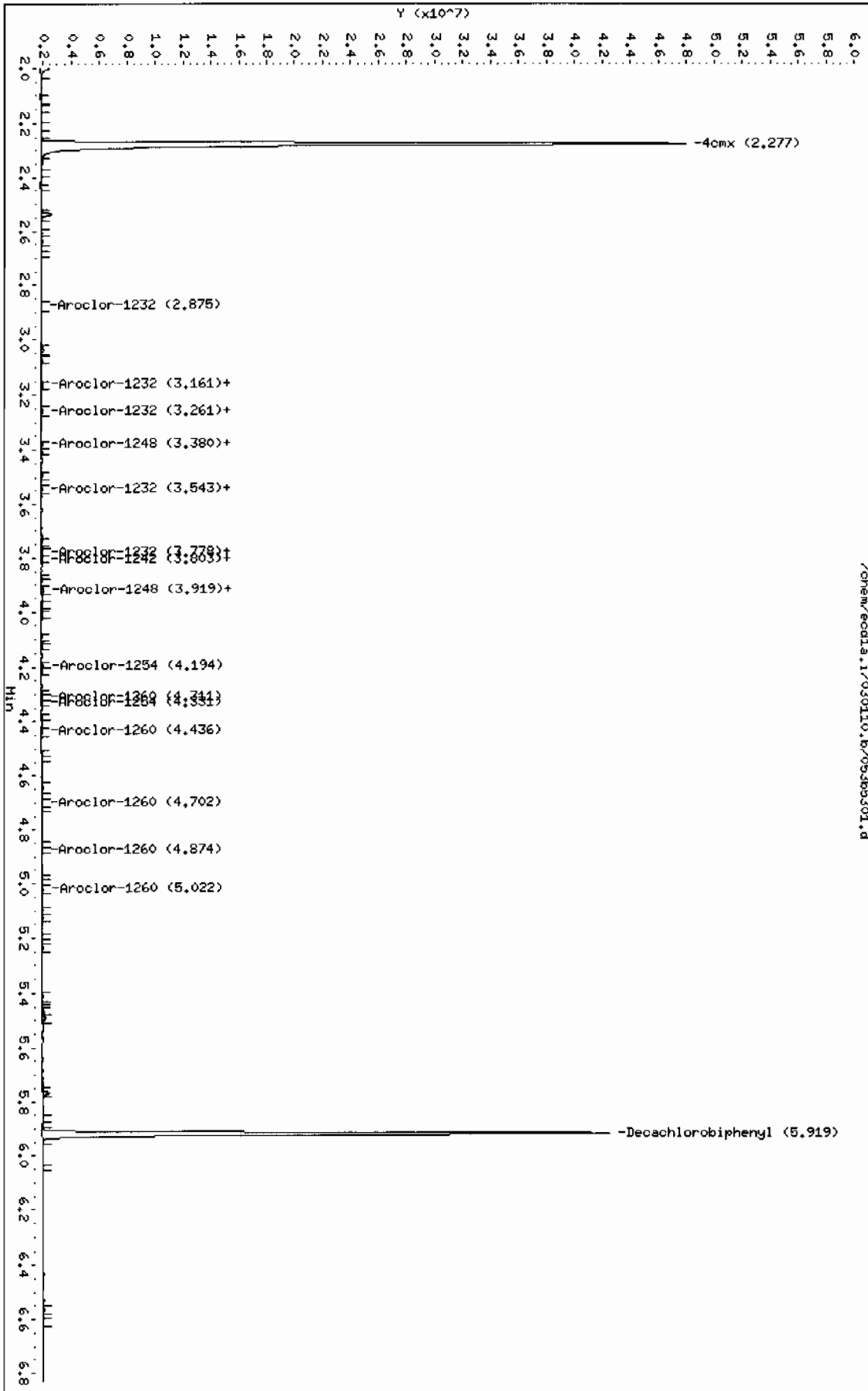
Column phase: CLP2

Instrument: eodia.i

Operator: YSI

Column diameter: 0.25

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PCB
Certificate of Analysis
Sample Summary

Page 1 of 1

SDG Number: 10-1981
Lab Sample ID: 247790003

Date Collected: 02/17/2010 12:00
Date Received: 02/23/2010 08:50
Client: LANL010
Method: SW846 8082
Inst: ECD1A.I
Analyst: YS1
Aliquot: 30.02 g
Column: 1 CLP1
2 CLP2

Matrix: R
%Moisture: 5.7
Project: LANL01004
SOP Ref: GL-OA-E-040
Dilution: 1
Inj. Vol: 1 uL
Final Volume: 1 mL
Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.53	ug/kg	1.18	3.53	1
11104-28-2	Aroclor-1221	U	3.53	ug/kg	1.18	3.53	1
11141-16-5	Aroclor-1232	U	3.53	ug/kg	1.18	3.53	1
53469-21-9	Aroclor-1242	U	3.53	ug/kg	1.18	3.53	1
12672-29-6	Aroclor-1248	U	3.53	ug/kg	1.18	3.53	1
11097-69-1	Aroclor-1254	U	3.53	ug/kg	1.18	3.53	1
11096-82-5	Aroclor-1260	U	3.53	ug/kg	1.18	3.53	1

Data File: /chem/ecdla.i/030110.b/054f5401.d
Report Date: 02-Mar-2010 06:40

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GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecdla.i/030110.b/054f5401.d
Lab Smp Id: 247790003 Client Smp ID: RE15-10-8387
Inj Date : 01-MAR-2010 15:47
Operator : YS1 Inst ID: ecdla.i
Smp Info : |247790003|1|
Misc Info : |ECD82P_1S|958180|SVA|LANL|SOIL|RE15-10-8387|||
Comment :
Method : /chem/ecdla.i/030110.b/ECD1-F-8082-022210.m
Meth Date : 02-Mar-2010 06:38 yip00818 Quant Type: ESTD
Cal Date : 22-FEB-2010 12:08 Cal File: 036f3601.d
Als bottle: 54
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 10-1981.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpc1p1

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

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.02000	Weight of sample extracted (g)
M	5.72260	% Moisture

Cpnd Variable Local Compound Variable

CONCENTRATIONS						
			ON-COL	FINAL		
RT	EXP RT	DLT RT	RESPONSE (ug/L)	(ug/Kg)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====
\$ 11 4cmx CAS #: 877-09-8						
1.918	1.919	-0.001	37659975 87.4518	3.1	80.00- 120.00	100.00

\$ 12 Decachlorobiphenyl CAS #: 2051-24-3						
5.222	5.227	-0.005	30629633 99.6768	3.5	80.00- 120.00	100.00

Data File: /chem/ecdl.a.i/030110.b/054f5401.d

Date : 01-MAR-2010 15:47

Client ID: RE15-10-8387

Sample Info: 124779000311

Volume Injected (uL): 1.0

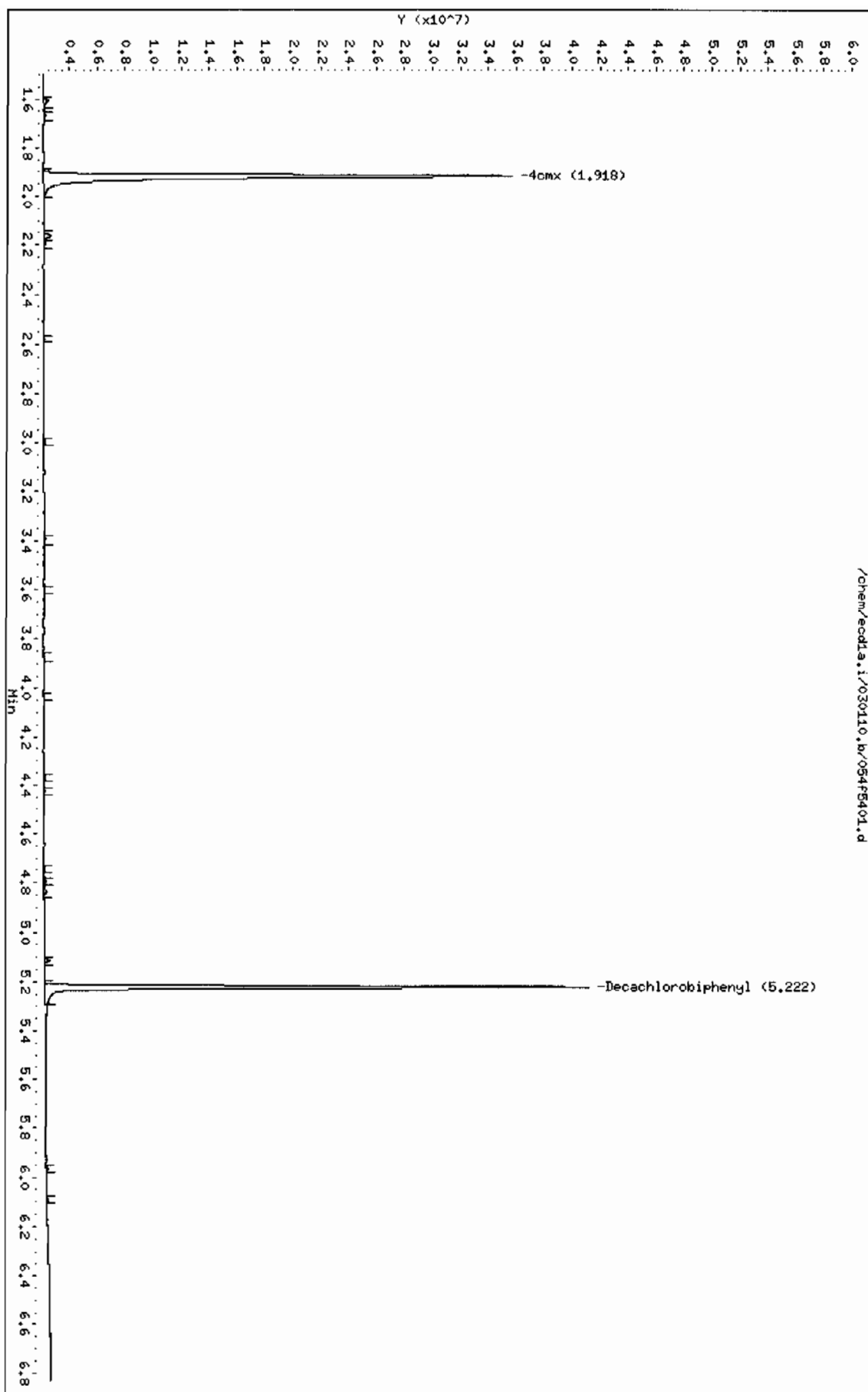
Column Phase: CLP1

Instrument: ecdl.a.i

Operator: YSL

Column diameter: 0.25

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Data File: /chem/ecdla.i/030110.b/054b5401.d
Report Date: 02-Mar-2010 06:45

Page 1

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecdla.i/030110.b/054b5401.d
Lab Smp Id: 247790003 Client Smp ID: RE15-10-8387
Inj Date : 01-MAR-2010 15:47
Operator : YS1 Inst ID: ecdla.i
Smp Info : |247790003|1|
Misc Info : |ECD82P_1S|958180|SVA|LANL|SOIL|RE15-10-8387|||
Comment :
Method : /chem/ecdla.i/030110.b/ECD1-B-8082-022210.m
Meth Date : 02-Mar-2010 06:45 yip00818 Quant Type: ESTD
Cal Date : 22-FEB-2010 12:08 Cal File: 036b3601.d
Als bottle: 54
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 10-1981.sub
Target Version: 3.50 Sample Matrix: Soil

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	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.02000	Weight of sample extracted (g)
M	5.72260	% Moisture

Cpnd Variable Local Compound Variable

CONCENTRATIONS						
			ON-COL	FINAL		
RT	EXP RT	DLT RT	RESPONSE (ug/L)	(ug/Kg)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====
\$ 11 4cmx CAS #: 877-09-8						
2.277	2.278	-0.001	26232512	88.2071	3.1 80.00- 120.00	100.00

\$ 12 Decachlorobiphenyl CAS #: 2051-24-3						
5.918	5.923	-0.005	19305950	91.2818	3.2 80.00- 120.00	100.00

Data File: /chem/ecdl1a.i/030110.b/054b5401.d

Date : 01-MAR-2010 15:47

Client ID: RE15-10-8387

Sample Info: 124790003111

Volume Injected (uL): 1.0

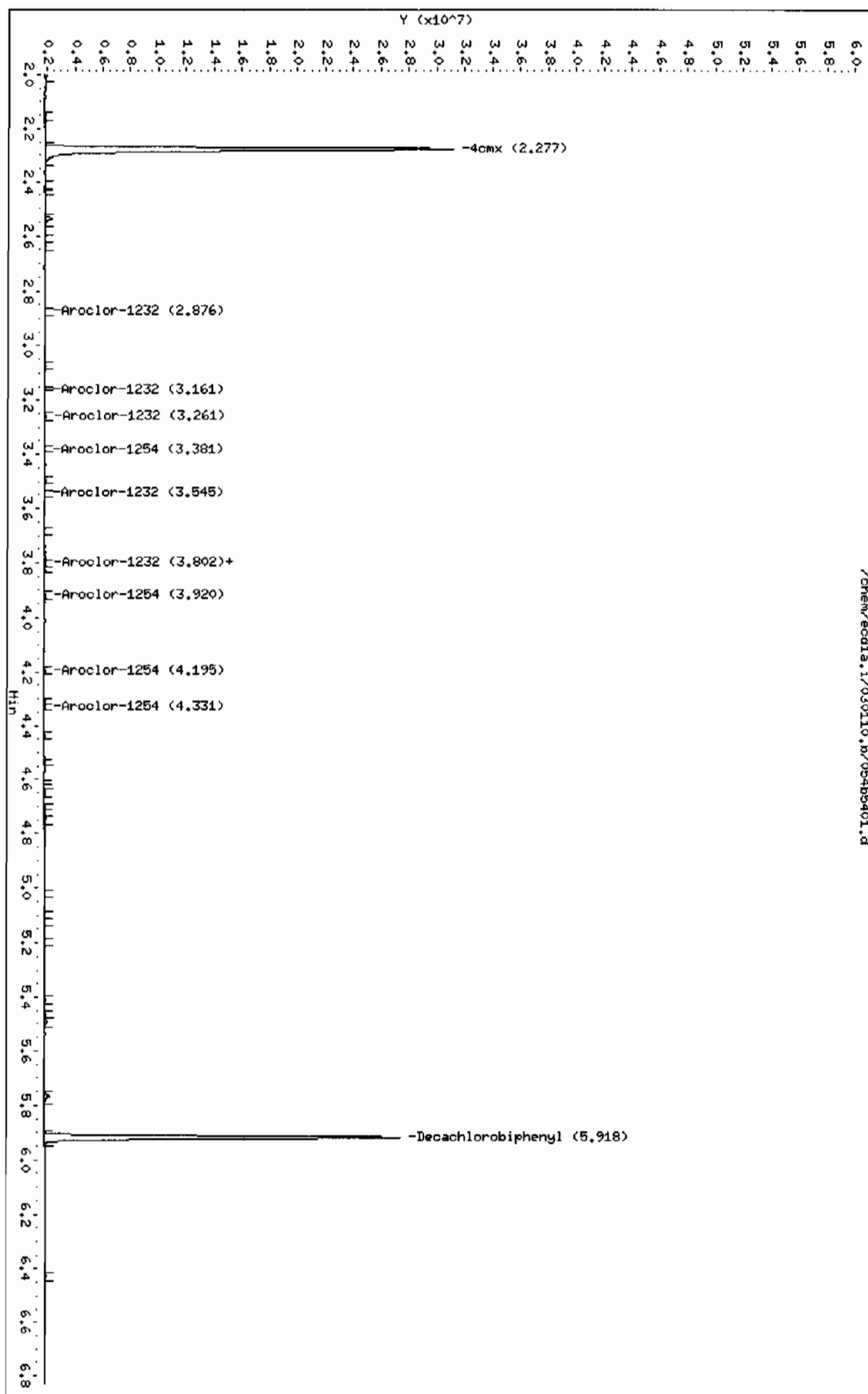
Column phase: CLP2

Instrument: ecdl1a.i

Operator: YSL

Column diameter: 0.25

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STANDARDS DATA

Report Date: 02-Mar-2010 09:17

Calibration History

Method : /chem/ecd1a.i/030110.b/ECD1-F-8082-022210.m
Start Cal Date: 22-FEB-2010 06:31
End Cal Date : 24-FEB-2010 02:39

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 100.00000		
22-FEB-2010 11:26	AR1268	/chem/ecd1a.i/022210.b/032f3201.d
22-FEB-2010 10:23	AR1248	/chem/ecd1a.i/022210.b/026f2601.d
22-FEB-2010 09:20	AR1242	/chem/ecd1a.i/022210.b/020f2001.d
22-FEB-2010 08:16	AR1254	/chem/ecd1a.i/022210.b/014f1401.d
22-FEB-2010 07:13	AR1660	/chem/ecd1a.i/022210.b/008f0801.d

Cal Level: 2 , Cal Amount: 250.00000		
22-FEB-2010 11:37	AR1268	/chem/ecd1a.i/022210.b/033f3301.d
22-FEB-2010 10:33	AR1248	/chem/ecd1a.i/022210.b/027f2701.d
22-FEB-2010 09:30	AR1242	/chem/ecd1a.i/022210.b/021f2101.d
22-FEB-2010 08:27	AR1254	/chem/ecd1a.i/022210.b/015f1501.d
22-FEB-2010 07:24	AR1660	/chem/ecd1a.i/022210.b/009f0901.d

Cal Level: 3 , Cal Amount: 500.00000		
22-FEB-2010 11:47	AR1268	/chem/ecd1a.i/022210.b/034f3401.d
22-FEB-2010 10:44	AR1248	/chem/ecd1a.i/022210.b/028f2801.d
22-FEB-2010 09:41	AR1242	/chem/ecd1a.i/022210.b/022f2201.d
22-FEB-2010 08:37	AR1254	/chem/ecd1a.i/022210.b/016f1601.d
22-FEB-2010 07:34	AR1660	/chem/ecd1a.i/022210.b/010f1001.d

Cal Level: 4 , Cal Amount: 1000.00000		
22-FEB-2010 11:58	AR1268	/chem/ecd1a.i/022210.b/035f3501.d
22-FEB-2010 11:05	AR1248	/chem/ecd1a.i/022210.b/030f3001.d
22-FEB-2010 09:51	AR1242	/chem/ecd1a.i/022210.b/023f2301.d
22-FEB-2010 08:48	AR1254	/chem/ecd1a.i/022210.b/017f1701.d
22-FEB-2010 07:45	AR1660	/chem/ecd1a.i/022210.b/011f1101.d
22-FEB-2010 07:03	AR1262	/chem/ecd1a.i/022210.b/007f0701.d
22-FEB-2010 06:52	AR1221	/chem/ecd1a.i/022210.b/006f0601.d
22-FEB-2010 06:41	AR1232	/chem/ecd1a.i/022210.b/005f0501.d
22-FEB-2010 06:31	DDTANALOGSTD	/chem/ecd1a.i/022210.b/004f0401.d

Cal Level: 5 , Cal Amount: 4000.00000		
22-FEB-2010 12:08	AR1268	/chem/ecd1a.i/022210.b/036f3601.d
22-FEB-2010 10:54	AR1248	/chem/ecd1a.i/022210.b/029f2901.d
22-FEB-2010 10:02	AR1242	/chem/ecd1a.i/022210.b/024f2401.d
22-FEB-2010 08:59	AR1254	/chem/ecd1a.i/022210.b/018f1801.d
22-FEB-2010 07:55	AR1660	/chem/ecd1a.i/022210.b/012f1201.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 4

| Ccal Level: 4 , Ccal Amount: 1000
| 01-MAR-2010 23:32 |AR1660 |/chem/ecd1a.i/030110.b/091f9101.d
| Ccal Level: 4 , Ccal Amount: 1000
| 01-MAR-2010 21:26 |AR1660 |/chem/ecd1a.i/030110.b/081f8101.d
| Ccal Level: 4 , Ccal Amount: 1000
| 01-MAR-2010 20:22 |AR1660 |/chem/ecd1a.i/030110.b/076f7601.d
| Ccal Level: 4 , Ccal Amount: 1000
| 01-MAR-2010 17:53 |AR1660 |/chem/ecd1a.i/030110.b/064f6401.d
| Ccal Level: 4 , Ccal Amount: 1000
| 01-MAR-2010 15:59 |AR1660 |/chem/ecd1a.i/030110.b/055f5501.d
| Ccal Level: 4 , Ccal Amount: 1000
| 01-MAR-2010 14:35 |AR1660 |/chem/ecd1a.i/030110.b/048f4801.d
| Ccal Level: 4 , Ccal Amount: 1000
| 01-MAR-2010 12:12 |AR1660 |/chem/ecd1a.i/030110.b/036f3601.d
| Ccal Level: 4 , Ccal Amount: 1000
| 01-MAR-2010 10:48 |AR1660 |/chem/ecd1a.i/030110.b/029f2901.d
| Ccal Level: 4 , Ccal Amount: 1000
| 01-MAR-2010 08:25 |AR1660 |/chem/ecd1a.i/030110.b/017f1701.d
| Ccal Level: 4 , Ccal Amount: 1000
| 01-MAR-2010 07:10 |AR1262 |/chem/ecd1a.i/030110.b/010f1001.d
| Ccal Level: 4 , Ccal Amount: 1000
| 01-MAR-2010 06:59 |AR1221 |/chem/ecd1a.i/030110.b/009f0901.d
| Ccal Level: 4 , Ccal Amount: 1000
| 01-MAR-2010 06:49 |AR1232 |/chem/ecd1a.i/030110.b/008f0801.d
| Ccal Level: 4 , Ccal Amount: 1000
| 01-MAR-2010 06:38 |AR1268 |/chem/ecd1a.i/030110.b/007f0701.d
| Ccal Level: 4 , Ccal Amount: 1000
| 01-MAR-2010 06:28 |AR1660 |/chem/ecd1a.i/030110.b/006f0601.d
| Ccal Level: 4 , Ccal Amount: 1000
| 01-MAR-2010 06:17 |AR1248 |/chem/ecd1a.i/030110.b/005f0501.d
| Ccal Level: 4 , Ccal Amount: 1000
| 01-MAR-2010 06:07 |AR1242 |/chem/ecd1a.i/030110.b/004f0401.d
| Ccal Level: 4 , Ccal Amount: 1000
| 01-MAR-2010 05:56 |AR1254 |/chem/ecd1a.i/030110.b/003f0301.d

| Ccal Level: 4 , Ccal Amount: 1000	|
+-----+	+
|01-MAR-2010 05:46 |AR1660	|/chem/ecdla.i/030110.b/002f0201.d
+-----+	+

Report Date: 02-Mar-2010 09:16

Calibration History

Method : /chem/ecd1a.i/030110.b/ECD1-B-8082-022210.m
Start Cal Date: 22-FEB-2010 06:31
End Cal Date : 24-FEB-2010 02:39

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 100.00000		
22-FEB-2010 11:26	AR1268	/chem/ecd1a.i/022210.b/032b3201.d
22-FEB-2010 10:23	AR1248	/chem/ecd1a.i/022210.b/026b2601.d
22-FEB-2010 09:20	AR1242	/chem/ecd1a.i/022210.b/020b2001.d
22-FEB-2010 08:16	AR1254	/chem/ecd1a.i/022210.b/014b1401.d
22-FEB-2010 07:13	AR1660	/chem/ecd1a.i/022210.b/008b0801.d

Cal Level: 2 , Cal Amount: 250.00000		
22-FEB-2010 11:37	AR1268	/chem/ecd1a.i/022210.b/033b3301.d
22-FEB-2010 10:33	AR1248	/chem/ecd1a.i/022210.b/027b2701.d
22-FEB-2010 09:30	AR1242	/chem/ecd1a.i/022210.b/021b2101.d
22-FEB-2010 08:27	AR1254	/chem/ecd1a.i/022210.b/015b1501.d
22-FEB-2010 07:24	AR1660	/chem/ecd1a.i/022210.b/009b0901.d

Cal Level: 3 , Cal Amount: 500.00000		
22-FEB-2010 11:47	AR1268	/chem/ecd1a.i/022210.b/034b3401.d
22-FEB-2010 10:44	AR1248	/chem/ecd1a.i/022210.b/028b2801.d
22-FEB-2010 09:41	AR1242	/chem/ecd1a.i/022210.b/022b2201.d
22-FEB-2010 08:37	AR1254	/chem/ecd1a.i/022210.b/016b1601.d
22-FEB-2010 07:34	AR1660	/chem/ecd1a.i/022210.b/010b1001.d

Cal Level: 4 , Cal Amount: 1000.00000		
22-FEB-2010 11:58	AR1268	/chem/ecd1a.i/022210.b/035b3501.d
22-FEB-2010 11:05	AR1248	/chem/ecd1a.i/022210.b/030b3001.d
22-FEB-2010 09:51	AR1242	/chem/ecd1a.i/022210.b/023b2301.d
22-FEB-2010 08:48	AR1254	/chem/ecd1a.i/022210.b/017b1701.d
22-FEB-2010 07:45	AR1660	/chem/ecd1a.i/022210.b/011b1101.d
22-FEB-2010 07:03	AR1262	/chem/ecd1a.i/022210.b/007b0701.d
22-FEB-2010 06:52	AR1221	/chem/ecd1a.i/022210.b/006b0601.d
22-FEB-2010 06:41	AR1232	/chem/ecd1a.i/022210.b/005b0501.d
22-FEB-2010 06:31	DDTANALOGSTD	/chem/ecd1a.i/022210.b/004b0401.d

Cal Level: 5 , Cal Amount: 4000.00000		
22-FEB-2010 12:08	AR1268	/chem/ecd1a.i/022210.b/036b3601.d
22-FEB-2010 10:54	AR1248	/chem/ecd1a.i/022210.b/029b2901.d
22-FEB-2010 10:02	AR1242	/chem/ecd1a.i/022210.b/024b2401.d
22-FEB-2010 08:59	AR1254	/chem/ecd1a.i/022210.b/018b1801.d
22-FEB-2010 07:55	AR1660	/chem/ecd1a.i/022210.b/012b1201.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 4

| Ccal Level: 4 , Ccal Amount: 1000		
01-MAR-2010 21:26	|AR1660	|/chem/ecdla.i/030110.b/081b8101.d
| Ccal Level: 4 , Ccal Amount: 1000		
01-MAR-2010 20:22	|AR1660	|/chem/ecdla.i/030110.b/076b7601.d
| Ccal Level: 4 , Ccal Amount: 1000		
01-MAR-2010 17:53	|AR1660	|/chem/ecdla.i/030110.b/064b6401.d
| Ccal Level: 4 , Ccal Amount: 1000		
01-MAR-2010 23:32	|AR1660	|/chem/ecdla.i/030110.b/091b9101.d
| Ccal Level: 4 , Ccal Amount: 1000		
01-MAR-2010 15:59	|AR1660	|/chem/ecdla.i/030110.b/055b5501.d
| Ccal Level: 4 , Ccal Amount: 1000		
01-MAR-2010 14:35	|AR1660	|/chem/ecdla.i/030110.b/048b4801.d
| Ccal Level: 4 , Ccal Amount: 1000		
01-MAR-2010 12:12	|AR1660	|/chem/ecdla.i/030110.b/036b3601.d
| Ccal Level: 4 , Ccal Amount: 1000		
01-MAR-2010 10:48	|AR1660	|/chem/ecdla.i/030110.b/029b2901.d
| Ccal Level: 4 , Ccal Amount: 1000		
01-MAR-2010 06:28	|AR1660	|/chem/ecdla.i/030110.b/006b0601.d
| Ccal Level: 4 , Ccal Amount: 1000		
01-MAR-2010 08:25	|AR1660	|/chem/ecdla.i/030110.b/017b1701.d
| Ccal Level: 4 , Ccal Amount: 1000		
01-MAR-2010 07:10	|AR1262	|/chem/ecdla.i/030110.b/010b1001.d
| Ccal Level: 4 , Ccal Amount: 1000		
01-MAR-2010 06:59	|AR1221	|/chem/ecdla.i/030110.b/009b0901.d
| Ccal Level: 4 , Ccal Amount: 1000		
01-MAR-2010 06:49	|AR1232	|/chem/ecdla.i/030110.b/008b0801.d
| Ccal Level: 4 , Ccal Amount: 1000		
01-MAR-2010 06:38	|AR1268	|/chem/ecdla.i/030110.b/007b0701.d
| Ccal Level: 4 , Ccal Amount: 1000		
01-MAR-2010 06:17	|AR1248	|/chem/ecdla.i/030110.b/005b0501.d
| Ccal Level: 4 , Ccal Amount: 1000		
01-MAR-2010 06:07	|AR1242	|/chem/ecdla.i/030110.b/004b0401.d
| Ccal Level: 4 , Ccal Amount: 1000		
01-MAR-2010 05:56	|AR1254	|/chem/ecdla.i/030110.b/003b0301.d
| Ccal Level: 4 , Ccal Amount: 1000		
01-MAR-2010 05:46	|AR1660	|/chem/ecdla.i/030110.b/002b0201.d

GEL Laboratories LLC

COMPOUND LISTING

Method file : /chem/ecdla.i/030110.b/ECD1-F-8082-022210.m
 Quant Method : ESTD Target Version : 3.50
 Last Update : 02-Mar-2010 06:55 Number of Cpnds : 15
 Data Type : GC MULTI COMP

Global Integrator : Falcon

Chromat Events Values

```

-----
Initial:Start Threshold      12031.000000
Initial:End Threshold        6015.500000
Initial:Area Threshold       15489.000000
Initial:P-P Resolution       1.000000
Initial:Bunch Factor         2.000000
Initial:Negative Peaks      OFF
Initial:Tension              0.500000
  
```

Compound	RT	RT Window	RF
1 Aroclor-1016	2.373	2.343-2.403	1.538e+04
	2.659	2.629-2.689	1.824e+04
	2.740	2.710-2.770	1.207e+04
	2.778	2.748-2.808	7.096e+03
	2.988	2.958-3.018	8.912e+03
63 4,4-DDD	3.900	3.880-3.920	3.060e+05
64 4,4-DDE	3.551	3.531-3.571	3.552e+05
62 4,4-DDT	4.064	4.044-4.084	2.080e+05
2 Aroclor-1221	2.031	2.001-2.061	4.398e+03
	2.123	2.093-2.153	2.431e+03
	2.149	2.119-2.179	1.042e+04
3 Aroclor-1232	2.372	2.342-2.402	6.218e+03
	2.659	2.629-2.689	7.488e+03
	2.739	2.709-2.769	4.887e+03
	2.854	2.824-2.884	2.191e+03
4 Aroclor-1242	3.241	3.211-3.271	2.731e+03
	2.372	2.342-2.402	1.256e+04
	2.659	2.629-2.689	1.461e+04
	2.777	2.747-2.807	5.629e+03
	2.988	2.958-3.018	7.310e+03
	3.241	3.211-3.271	6.183e+03

GEL Laboratories LLC

COMPOUND LISTING

Method file : /chem/ecdl1a.i/030110.b/ECD1-F-8082-022210.m

Compound	RT	RT Window	RF
5 Aroclor-1248	2.854	2.824-2.884	9.301e+03
	2.987	2.957-3.017	1.241e+04
	3.241	3.211-3.271	1.220e+04
	3.373	3.343-3.403	1.042e+04
	3.606	3.576-3.636	6.820e+03
6 Aroclor-1254	3.216	3.186-3.246	1.201e+04
	3.371	3.341-3.401	1.583e+04
	3.605	3.575-3.635	1.952e+04
	3.767	3.737-3.797	1.381e+04
	3.876	3.846-3.906	1.428e+04
7 Aroclor-1260	3.714	3.684-3.744	1.707e+04
	3.877	3.847-3.907	2.364e+04
	4.039	4.009-4.069	2.497e+04
	4.107	4.077-4.137	1.441e+04
	4.250	4.220-4.280	1.443e+04
8 Aroclor-1262	3.714	3.684-3.744	1.261e+04
	3.876	3.846-3.906	1.569e+04
	4.106	4.076-4.136	1.995e+04
	4.250	4.220-4.280	1.798e+04
	4.429	4.399-4.459	3.725e+04
9 Aroclor-1268	4.614	4.584-4.644	4.848e+04
	4.636	4.606-4.666	5.448e+04
	4.749	4.719-4.779	3.862e+04
	4.952	4.922-4.982	1.635e+04
	5.117	5.087-5.147	1.121e+05
M 10 Aroclor-Total	1.000	0.980-1.020	
\$ 11 4cmx	1.919	1.889-1.949	4.306e+05
\$ 12 Decachlorobiphenyl	5.227	5.197-5.257	3.073e+05

GEL Laboratories LLC

COMPOUND LISTING

Method file : /chem/ecdl1a.i/030110.b/ECD1-B-8082-022210.m
Quant Method : ESTD Target Version : 3.50
Last Update : 02-Mar-2010 06:55 Number of Cpnds : 15
Data Type : GC MULTI COMP

Global Integrator : Falcon

Chromat Events Values

Initial:Start Threshold 7222.000000
Initial:End Threshold 3611.000000
Initial:Area Threshold 6833.000000
Initial:P-P Resolution 0.000000
Initial:Bunch Factor 2.000000
Initial:Negative Peaks OFF
Initial:Tension 0.500000

Compound	RT	RT Window	RF
1 Aroclor-1016	3.174	3.144-3.204	1.279e+04
	3.257	3.227-3.287	8.918e+03
	3.320	3.290-3.350	5.406e+03
	3.547	3.517-3.577	6.916e+03
	3.623	3.593-3.653	6.425e+03
62 4,4-DDT	4.660	4.640-4.680	1.000e+05
63 4,4-DDE	4.128	4.108-4.148	2.505e+05
64 4,4-DDD	4.473	4.453-4.493	2.085e+05
2 Aroclor-1221	2.474	2.444-2.504	3.431e+03
	2.569	2.539-2.599	2.152e+03
	2.609	2.579-2.639	7.328e+03
3 Aroclor-1232	2.875	2.845-2.905	4.920e+03
	3.174	3.144-3.204	5.252e+03
	3.256	3.226-3.286	3.768e+03
	3.547	3.517-3.577	2.699e+03
4 Aroclor-1242	3.780	3.750-3.810	2.631e+03
	3.174	3.144-3.204	1.035e+04
	3.256	3.226-3.286	7.279e+03
	3.547	3.517-3.577	5.768e+03
	3.780	3.750-3.810	5.788e+03
	3.808	3.778-3.838	6.641e+03

GEL Laboratories LLC

COMPOUND LISTING

Method file : /chem/ecdl1a.i/030110.b/ECD1-B-8082-022210.m

Compound	RT	RT Window	RF
5 Aroclor-1248	3.382	3.352-3.412	7.602e+03
	3.547	3.517-3.577	9.360e+03
	3.781	3.751-3.811	1.065e+04
	3.808	3.778-3.838	1.210e+04
	3.945	3.915-3.975	1.150e+04
6 Aroclor-1254	3.382	3.352-3.412	6.068e+03
	3.804	3.774-3.834	1.074e+04
	3.920	3.890-3.950	1.164e+04
	4.196	4.166-4.226	1.590e+04
7 Aroclor-1260	4.331	4.301-4.361	1.198e+04
	4.314	4.284-4.344	1.321e+04
	4.439	4.409-4.469	1.557e+04
	4.704	4.674-4.734	1.184e+04
	4.878	4.848-4.908	1.220e+04
8 Aroclor-1262	5.024	4.994-5.054	2.653e+04
	4.437	4.407-4.467	1.126e+04
	4.703	4.673-4.733	1.550e+04
	4.877	4.847-4.907	1.407e+04
	5.024	4.994-5.054	2.845e+04
9 Aroclor-1268	5.237	5.207-5.267	1.972e+04
	5.236	5.206-5.266	3.730e+04
	5.264	5.234-5.294	3.492e+04
	5.413	5.383-5.443	2.658e+04
	5.577	5.547-5.607	1.223e+04
10 Aroclor-Total	5.770	5.740-5.800	7.433e+04
\$ 11 4cmx	1.000	0.980-1.020	
\$ 12 Decachlorobiphenyl	2.278	2.248-2.308	2.974e+05
	5.923	5.893-5.953	2.115e+05

GEL Laboratories LLC
INITIAL CALIBRATION DATA

Start Cal Date : 22-FEB-2010 06:31
 End Cal Date : 24-FEB-2010 02:39
 Quant Method : ESTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : Falcon
 Method file : /chem/ecdl1a.i/030110.b/ECD1-F-8082-022210.m
 Cal Date : 02-Mar-2010 06:55 yip00818
 Curve Type : Average

Calibration File Names:

Level 1: /chem/ecdl1a.i/022210.b/032f3201.d
 Level 2: /chem/ecdl1a.i/022210.b/033f3301.d
 Level 3: /chem/ecdl1a.i/022210.b/034f3401.d
 Level 4: /chem/ecdl1a.i/022210.b/035f3501.d
 Level 5: /chem/ecdl1a.i/022210.b/036f3601.d

Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	1000.000 Level 4	4000.000 Level 5	RRF	% RSD
1 Aroclor-1016(1)	18473	16312	15150	14238	12749	15384	14.060
(2)	20194	18537	17759	17625	17070	18237	6.651
(3)	14170	12473	11875	11163	10646	12065	11.317
(4)	8163	7198	6933	6624	6564	7096	9.135
(5)	10345	9178	8623	8273	8142	8912	10.051
63 4,4-DDD	++++	++++	++++	305990	++++	305990	0.000
64 4,4-DDE	++++	++++	++++	355239	++++	355239	0.000
62 4,4-DDT	++++	++++	++++	208015	++++	208015	0.000
2 Aroclor-1221(1)	++++	++++	++++	4398	++++	4398	0.000
(2)	++++	++++	++++	2431	++++	2431	0.000
(3)	++++	++++	++++	10418	++++	10418	0.000
3 Aroclor-1232(1)	++++	++++	++++	6218	++++	6218	0.000
(2)	++++	++++	++++	7488	++++	7488	0.000
(3)	++++	++++	++++	4887	++++	4887	0.000
(4)	++++	++++	++++	2191	++++	2191	0.000
(5)	++++	++++	++++	2731	++++	2731	0.000
4 Aroclor-1242(1)	14895	13406	12308	11554	10624	12557	13.200
(2)	15940	15326	14418	13613	13761	14612	6.870
(3)	6066	5934	5542	5337	5267	5629	6.326
(4)	8523	7616	7127	6725	6562	7310	10.814
(5)	6824	6256	5999	5817	6020	6183	6.317
5 Aroclor-1248(1)	10594	9810	9017	8885	8199	9301	9.911
(2)	14228	12736	11895	11712	11476	12409	9.043
(3)	12841	12156	11815	11785	12410	12201	3.615
(4)	11297	10503	10013	9956	10333	10420	5.179
(5)	7445	6917	6453	6460	6824	6820	5.977

GEL Laboratories LLC
INITIAL CALIBRATION DATA

Start Cal Date : 22-FEB-2010 06:31
 End Cal Date : 24-FEB-2010 02:39
 Quant Method : ESTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : Falcon
 Method file : /chem/ecdla.i/030110.b/ECD1-F-8082-022210.m
 Cal Date : 02-Mar-2010 06:55 yip00818
 Curve Type : Average

Compound	100.000	250.000	500.000	1000.000	4000.000	RRF	% RSD
Level 1	Level 2	Level 3	Level 4	Level 5			
6 Aroclor-1254(1)	13496	12213	11744	11466	11117	12007	7.694
(2)	16789	15969	15727	15423	15253	15832	3.802
(3)	20267	19353	19208	19481	19310	19524	2.185
(4)	14142	13669	13487	13772	13976	13809	1.858
(5)	15228	14234	13851	14228	13864	14281	3.932
7 Aroclor-1260(1)	19445	17307	16758	16208	15645	17072	8.574
(2)	25625	23757	23316	22992	22528	23643	5.056
(3)	27164	24948	24176	24127	24442	24971	5.079
(4)	16166	14596	13941	13551	13775	14406	7.345
(5)	15672	14437	13986	13647	14411	14431	5.316
8 Aroclor-1262(1)	++++	++++	++++	12612	++++	12612	0.000
(2)	++++	++++	++++	15693	++++	15693	0.000
(3)	++++	++++	++++	19946	++++	19946	0.000
(4)	++++	++++	++++	17981	++++	17981	0.000
(5)	++++	++++	++++	37250	++++	37250	0.000
9 Aroclor-1268(1)	49163	48928	48151	48132	48019	48478	1.086
(2)	55254	54719	54718	54649	53075	54483	1.512
(3)	39937	38826	38121	38191	38006	38616	2.083
(4)	16234	16191	16152	16347	16815	16348	1.657
(5)	114910	115297	111446	111050	107804	112101	2.753
M 10 Aroclor-Total	++++	++++	++++	++++	++++	++++	++++
\$ 11 4cmx	457836	439032	431646	423676	400995	430637	4.841
\$ 12 Decachlorobiphenyl	331580	312081	303953	298909	289924	307289	5.135

GEL Laboratories LLC
INITIAL CALIBRATION DATA

Start Cal Date : 22-FEB-2010 06:31
 End Cal Date : 24-FEB-2010 02:39
 Quant Method : ESTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : Falcon
 Method file : /chem/ecdl1a.i/030110.b/ECD1-B-8082-022210.m
 Cal Date : 02-Mar-2010 06:55 yip00818
 Curve Type : Average

Calibration File Names:

Level 1: /chem/ecdl1a.i/022210.b/032b3201.d
 Level 2: /chem/ecdl1a.i/022210.b/033b3301.d
 Level 3: /chem/ecdl1a.i/022210.b/034b3401.d
 Level 4: /chem/ecdl1a.i/022210.b/035b3501.d
 Level 5: /chem/ecdl1a.i/022210.b/036b3601.d

Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	1000.000 Level 4	4000.000 Level 5	RRF	% RSD
1 Aroclor-1016(1)	14790	13406	12599	11956	11198	12790	10.807
(2)	11020	9550	8735	8081	7204	8918	16.336
(3)	6667	5702	5261	4923	4477	5406	15.464
(4)	8469	7466	6811	6206	5627	6916	15.991
(5)	7861	6755	6366	5845	5300	6425	15.123
62 4,4-DDT	++++	++++	++++	100019	++++	100019	0.000
63 4,4-DDE	++++	++++	++++	250510	++++	250510	0.000
64 4,4-DDD	++++	++++	++++	208527	++++	208527	0.000
2 Aroclor-1221(1)	++++	++++	++++	3431	++++	3431	0.000
(2)	++++	++++	++++	2152	++++	2152	0.000
(3)	++++	++++	++++	7328	++++	7328	0.000
3 Aroclor-1232(1)	++++	++++	++++	4920	++++	4920	0.000
(2)	++++	++++	++++	5252	++++	5252	0.000
(3)	++++	++++	++++	3768	++++	3768	0.000
(4)	++++	++++	++++	2699	++++	2699	0.000
(5)	++++	++++	++++	2631	++++	2631	0.000
4 Aroclor-1242(1)	12162	10602	10267	9852	8873	10351	11.615
(2)	8972	7860	7095	6551	5917	7279	16.286
(3)	7172	6222	5595	5138	4714	5768	16.707
(4)	7092	6149	5608	5215	4876	5788	15.018
(5)	8262	7049	6439	5944	5512	6641	16.138
5 Aroclor-1248(1)	9375	8130	7334	6873	6297	7602	15.743
(2)	11273	9902	9059	8609	7955	9360	13.704
(3)	12356	11118	10348	9982	9432	10647	10.657
(4)	14147	12783	11698	11327	10532	12097	11.596
(5)	13387	12032	11069	10719	10286	11499	10.750

GEL Laboratories LLC
INITIAL CALIBRATION DATA

Start Cal Date : 22-FEB-2010 06:31
End Cal Date : 24-FEB-2010 02:39
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /chem/ecdl1a.i/030110.b/ECD1-B-8082-022210.m
Cal Date : 02-Mar-2010 06:55 yip00818
Curve Type : Average

Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	1000.000 Level 4	4000.000 Level 5	RRF	% RSD
6 Aroclor-1254(1)	7593	6474	5915	5463	4897	6068	16.986
(2)	13079	11278	10543	9836	8978	10743	14.511
(3)	14023	12144	11373	10769	9907	11643	13.419
(4)	18579	16173	15683	15087	13972	15899	10.745
(5)	14693	12059	11530	11303	10291	11975	13.772
7 Aroclor-1260(1)	16156	14478	12627	11898	10869	13206	15.988
(2)	18308	16389	15401	14483	13254	15567	12.332
(3)	14169	12468	11644	10875	10061	11844	13.319
(4)	14677	12787	11930	11182	10430	12201	13.416
(5)	30570	27429	26347	25126	23163	26527	10.405
8 Aroclor-1262(1)	++++	++++	++++	11265	++++	11265	0.000
(2)	++++	++++	++++	15504	++++	15504	0.000
(3)	++++	++++	++++	14070	++++	14070	0.000
(4)	++++	++++	++++	28448	++++	28448	0.000
(5)	++++	++++	++++	19723	++++	19723	0.000
9 Aroclor-1268(1)	41829	39003	36612	35751	33294	37298	8.721
(2)	39747	36378	33891	33096	31474	34917	9.246
(3)	30202	27679	25801	25188	24032	26580	9.093
(4)	14370	12834	11677	11309	10971	12232	11.329
(5)	81955	77588	73073	71224	67792	74326	7.452
10 Aroclor-Total	++++	++++	++++	++++	++++	++++	++++
\$ 11 4cmx	335261	308362	295849	285028	262485	297397	9.098
\$ 12 Decachlorobiphenyl	252219	220293	206273	196840	181867	211498	12.633

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A
 Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 10-1981
 Instrument ID: ECD1A Calibration Date: 03/01/10 Time: 0628
 Lab File ID: 006F0601 Init. Calib. Date(s): 02/22/10 02/22/10
 Heated Purge: (Y/N) N Init. Calib. Times: 0713 0755
 GC Column: CLP1 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	15384.345	13308.318	0.01	-13.5	15.0
(2)	18237.012	16936.020	0.01	-7.1	15.0
(3)	12065.482	11017.623	0.01	-8.7	15.0
(4)	7096.105	6662.826	0.01	-6.1	15.0
(5)	8912.192	8400.395	0.01	-5.7	15.0
Aroclor-1260	17072.421	16777.115	0.01	-1.7	15.0
(2)	23643.449	24986.460	0.01	5.7	15.0
(3)	24971.335	26723.350	0.01	7.0	15.0
(4)	14405.675	15046.298	0.01	4.4	15.0
(5)	14430.527	15540.140	0.01	7.7	15.0
4cmx	430636.91	389096.61	0.01	-9.6	15.0
Decachlorobiphenyl	307289.35	301986.93	0.01	-1.7	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A
 Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 10-1981
 Instrument ID: ECD1A Calibration Date: 03/01/10 Time: 0628
 Lab File ID: 006B0601 Init. Calib. Date(s): 02/22/10 02/22/10
 Heated Purge: (Y/N) N Init. Calib. Times: 0713 0755
 GC Column: CLP2 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	12789.782	11776.868	0.01	-7.9	15.0
(2)	8917.926	7964.740	0.01	-10.7	15.0
(3)	5406.011	4935.768	0.01	-8.7	15.0
(4)	6915.638	6222.912	0.01	-10.0	15.0
(5)	6425.213	5888.255	0.01	-8.4	15.0
Aroclor-1260	13205.642	12074.141	0.01	-8.6	15.0
(2)	15566.814	14772.970	0.01	-5.1	15.0
(3)	11843.501	11120.482	0.01	-6.1	15.0
(4)	12201.193	11500.807	0.01	-5.7	15.0
(5)	26527.172	25815.917	0.01	-2.7	15.0
4cmx	297396.93	270469.77	0.01	-9.0	15.0
Decachlorobiphenyl	211498.34	190980.67	0.01	-9.7	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A
 Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 10-1981
 Instrument ID: ECD1A Calibration Date: 03/01/10 Time: 1212
 Lab File ID: 036F3601 Init. Calib. Date(s): 02/22/10 02/22/10
 Heated Purge: (Y/N) N Init. Calib. Times: 0713 0755
 GC Column: CLP1 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	15384.345	13525.352	0.01	-12.1	15.0
(2)	18237.012	17409.150	0.01	-4.5	15.0
(3)	12065.482	11215.104	0.01	-7.0	15.0
(4)	7096.105	6744.345	0.01	-5.0	15.0
(5)	8912.192	8526.333	0.01	-4.3	15.0
Aroclor-1260	17072.421	16938.785	0.01	-0.8	15.0
(2)	23643.449	25150.228	0.01	6.4	15.0
(3)	24971.335	26981.861	0.01	8.0	15.0
(4)	14405.675	15195.982	0.01	5.5	15.0
(5)	14430.527	15770.812	0.01	9.3	15.0
4cmx	430636.91	396179.60	0.01	-8.0	15.0
Decachlorobiphenyl	307289.35	309403.25	0.01	0.7	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A
 Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 10-1981
 Instrument ID: ECD1A Calibration Date: 03/01/10 Time: 1212
 Lab File ID: 036B3601 Init. Calib. Date(s): 02/22/10 02/22/10
 Heated Purge: (Y/N) N Init. Calib. Times: 0713 0755
 GC Column: CLP2 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	12789.782	12107.372	0.01	-5.3	15.0
(2)	8917.926	7984.895	0.01	-10.5	15.0
(3)	5406.011	5002.187	0.01	-7.5	15.0
(4)	6915.638	6462.264	0.01	-6.6	15.0
(5)	6425.213	5969.635	0.01	-7.1	15.0
Aroclor-1260	13205.642	12142.700	0.01	-8.0	15.0
(2)	15566.814	14819.176	0.01	-4.8	15.0
(3)	11843.501	11142.127	0.01	-5.9	15.0
(4)	12201.193	11552.713	0.01	-5.3	15.0
(5)	26527.172	25985.688	0.01	-2.0	15.0
4cmx	297396.93	271731.35	0.01	-8.6	15.0
Decachlorobiphenyl	211498.34	195571.21	0.01	-7.5	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A
 Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 10-1981
 Instrument ID: ECD1A Calibration Date: 03/01/10 Time: 1435
 Lab File ID: 048F4801 Init. Calib. Date(s): 02/22/10 02/22/10
 Heated Purge: (Y/N) N Init. Calib. Times: 0713 0755
 GC Column: CLP1 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	15384.345	14316.548	0.01	-6.9	15.0
(2)	18237.012	17701.542	0.01	-2.9	15.0
(3)	12065.482	11565.050	0.01	-4.1	15.0
(4)	7096.105	6997.177	0.01	-1.4	15.0
(5)	8912.192	8944.812	0.01	0.4	15.0
Aroclor-1260	17072.421	17183.835	0.01	0.6	15.0
(2)	23643.449	25694.330	0.01	8.7	15.0
(3)	24971.335	27241.665	0.01	9.1	15.0
(4)	14405.675	15504.824	0.01	7.6	15.0
(5)	14430.527	16087.512	0.01	11.5	15.0
4cmx	430636.91	406177.29	0.01	-5.7	15.0
Decachlorobiphenyl	307289.35	311661.88	0.01	1.4	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A
 Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 10-1981
 Instrument ID: ECD1A Calibration Date: 03/01/10 Time: 1435
 Lab File ID: 048B4801 Init. Calib. Date(s): 02/22/10 02/22/10
 Heated Purge: (Y/N) N Init. Calib. Times: 0713 0755
 GC Column: CLP2 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	12789.782	12335.547	0.01	-3.6	15.0
(2)	8917.926	8263.560	0.01	-7.3	15.0
(3)	5406.011	5158.530	0.01	-4.6	15.0
(4)	6915.638	6685.218	0.01	-3.3	15.0
(5)	6425.213	6241.225	0.01	-2.9	15.0
Aroclor-1260	13205.642	12476.487	0.01	-5.5	15.0
(2)	15566.814	15274.344	0.01	-1.9	15.0
(3)	11843.501	11447.911	0.01	-3.3	15.0
(4)	12201.193	11901.933	0.01	-2.4	15.0
(5)	26527.172	26671.690	0.01	0.5	15.0
4cmx	297396.93	279665.69	0.01	-6.0	15.0
Decachlorobiphenyl	211498.34	200321.32	0.01	-5.3	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A
 Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 10-1981
 Instrument ID: ECD1A Calibration Date: 03/01/10 Time: 1559
 Lab File ID: 055F5501 Init. Calib. Date(s): 02/22/10 02/22/10
 Heated Purge: (Y/N) N Init. Calib. Times: 0713 0755
 GC Column: CLP1 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	15384.345	13715.234	0.01	-10.8	15.0
(2)	18237.012	17422.148	0.01	-4.5	15.0
(3)	12065.482	11372.597	0.01	-5.7	15.0
(4)	7096.105	6869.385	0.01	-3.2	15.0
(5)	8912.192	8675.649	0.01	-2.6	15.0
Aroclor-1260	17072.421	17202.584	0.01	0.8	15.0
(2)	23643.449	25581.062	0.01	8.2	15.0
(3)	24971.335	27240.169	0.01	9.1	15.0
(4)	14405.675	15422.358	0.01	7.0	15.0
(5)	14430.527	16053.358	0.01	11.2	15.0
4cmx	430636.91	400870.52	0.01	-6.9	15.0
Decachlorobiphenyl	307289.35	311862.34	0.01	1.5	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A
 Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 10-1981
 Instrument ID: ECD1A Calibration Date: 03/01/10 Time: 1559
 Lab File ID: 055B5501 Init. Calib. Date(s): 02/22/10 02/22/10
 Heated Purge: (Y/N) N Init. Calib. Times: 0713 0755
 GC Column: CLP2 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	12789.782	12227.620	0.01	-4.4	15.0
(2)	8917.926	8139.754	0.01	-8.7	15.0
(3)	5406.011	5085.619	0.01	-5.9	15.0
(4)	6915.638	6369.970	0.01	-7.9	15.0
(5)	6425.213	6103.953	0.01	-5.0	15.0
Aroclor-1260	13205.642	12349.358	0.01	-6.5	15.0
(2)	15566.814	15116.766	0.01	-2.9	15.0
(3)	11843.501	11375.494	0.01	-4.0	15.0
(4)	12201.193	11867.809	0.01	-2.7	15.0
(5)	26527.172	26547.824	0.01	0.1	15.0
4cmx	297396.93	276220.69	0.01	-7.1	15.0
Decachlorobiphenyl	211498.34	199761.09	0.01	-5.5	15.0

FORM VII PEST

Data File: /chem/ecdla.i/030110.b/003f0301.d
Report Date: 01-Mar-2010 11:54

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GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecdla.i/030110.b/003f0301.d

Lab Smp Id: WAR100219-54

Client Smp ID: AR125401

Inj Date : 01-MAR-2010 05:56

Operator : YS1

Inst ID: ecdla.i

Smp Info : |WAR100219-54

Misc Info :

Comment :

Method : /chem/ecdla.i/030110.b/ECD1-F-8082-022210.m

Meth Date : 01-Mar-2010 11:28 yip00818

Quant Type: ESTD

Cal Date : 22-FEB-2010 12:08

Cal File: 036f3601.d

Als bottle: 3

Continuing Calibration Sample

Dil Factor: 1.00000

Integrator: Falcon

Compound Sublist: AR1254.sub

Target Version: 3.50

Sample Matrix: None

AMOUNTS

CAL-AMT ON-COL

RT	EXP RT	DLT RT	RESPONSE (ug/L)	(ug/L)	TARGET RANGE	RATIO
----	--------	--------	------------------	---------	--------------	-------

6 Aroclor-1254				CAS #: 11097-69-1		
3.216	3.216	0.000	12428599	1000.00	1040 80.00- 120.00	100.00
3.371	3.371	0.000	16816364	1000.00	1060 89.40- 129.40	135.30
3.605	3.605	0.000	21942791	1000.00	1120 29.05- 69.05	176.55
3.767	3.767	0.000	16407992	1000.00	1190 9.00- 49.00	132.02
3.876	3.876	0.000	15998942	1000.00	1120 410.81- 450.81	128.73

Average of Peak Amounts = 1.11e+03

Data File: /chem/eodla.i/030110.b/003f0301.d

Date : 01-MAR-2010 05:56

Client ID: AR125401

Sample Info: 1MAR100219-54

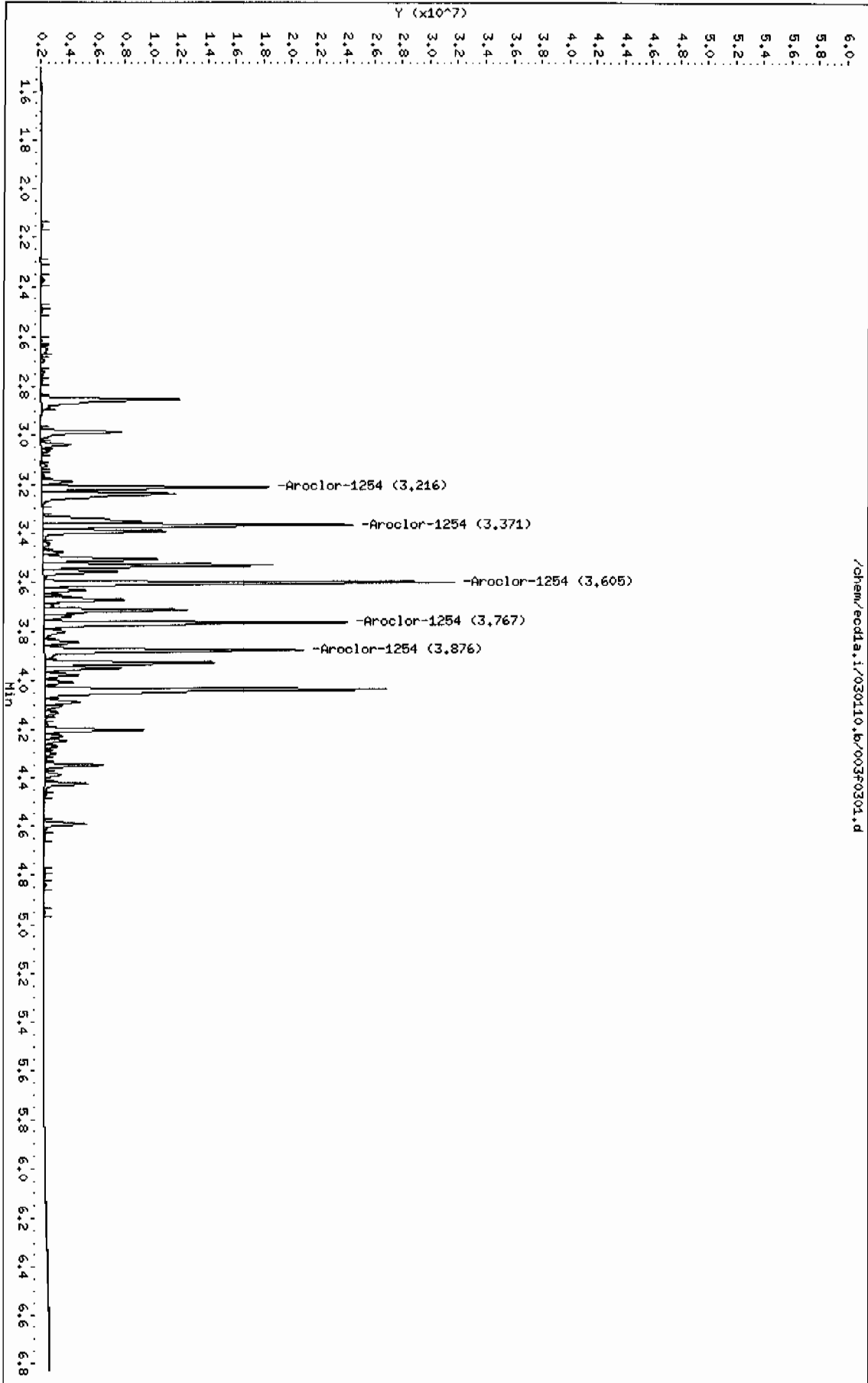
Column phase: CLP1

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Instrument: eodla.i

Operator: YS1

Column diameter: 0.25



Data File: /chem/ecd1a.i/030110.b/003b0301.d
Report Date: 01-Mar-2010 11:54

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GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/030110.b/003b0301.d
Lab Smp Id: WAR100219-54 Client Smp ID: AR125401
Inj Date : 01-MAR-2010 05:56
Operator : YSI Inst ID: ecd1a.i
Smp Info : |WAR100219-54
Misc Info :
Comment :
Method : /chem/ecd1a.i/030110.b/ECD1-B-8082-022210.m
Meth Date : 01-Mar-2010 11:24 yip00818 Quant Type: ESTD
Cal Date : 22-FEB-2010 12:08 Cal File: 036b3601.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1254.sub
Target Version: 3.50 Sample Matrix: None

AMOUNTS

RT	EXP RT	DLT RT	CAL-AMT RESPONSE (ug/L)	ON-COL (ug/L)	TARGET RANGE	RATIO
6 Aroclor-1254				CAS #: 11097-69-1		
3.382	3.382	0.000	5794257 1000.00	955 80.00-	120.00	100.00
3.804	3.804	0.000	10527751 1000.00	980 161.69-	201.69	181.69
3.920	3.920	0.000	11733937 1000.00	1010 182.51-	222.51	202.51
4.196	4.196	0.000	16479181 1000.00	1040 264.41-	304.41	284.41
4.331	4.331	0.000	12089892 1000.00	1010 188.65-	228.65	208.65
Average of Peak Amounts =				998		

Data File: /chem/ecdl1.i/030110.b/003b0301.d

Date : 01-MAR-2010 05:56

Client ID: AR125401

Sample Info: 1MAR100219-54

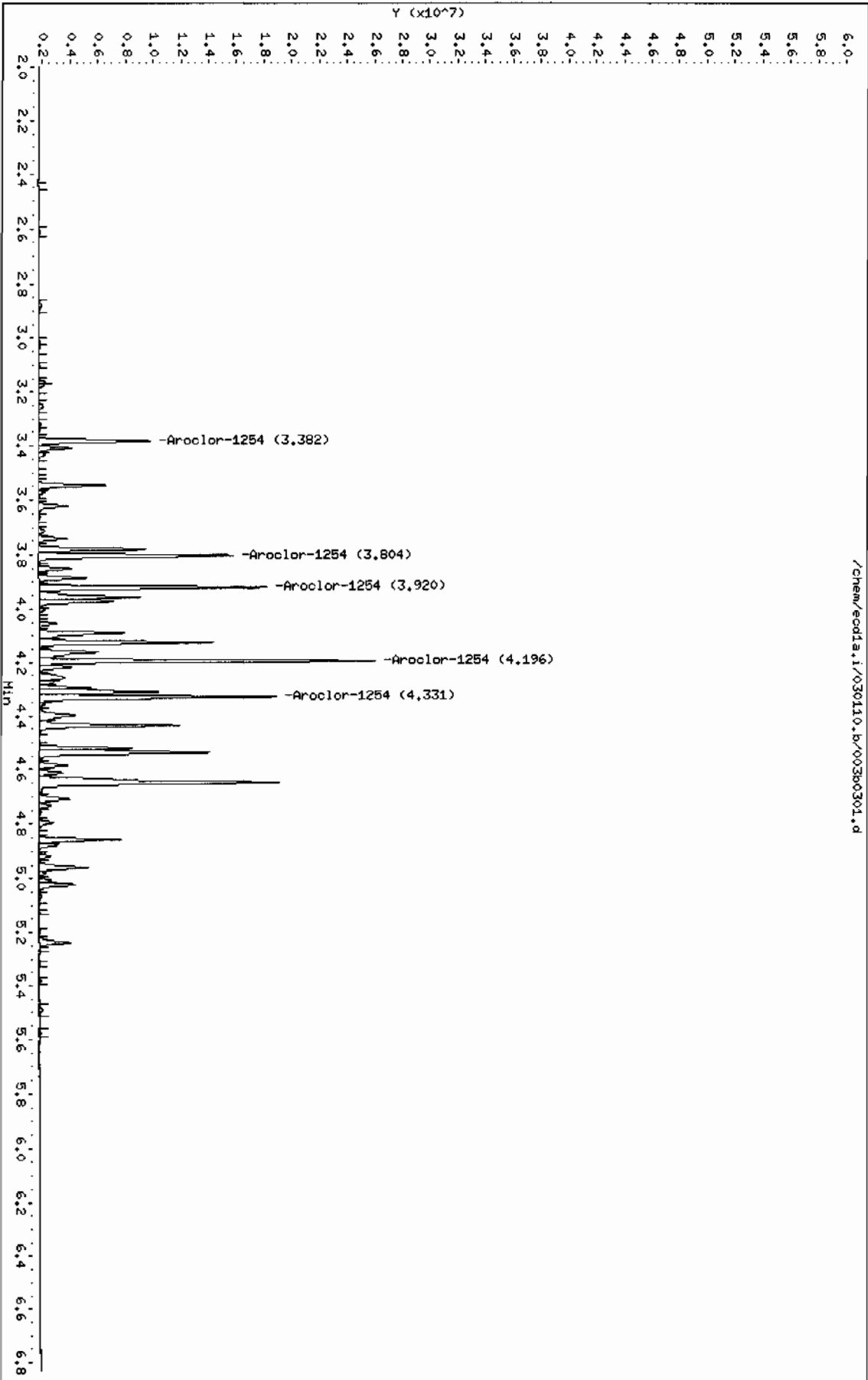
Column phase: CLP2

Instrument: ecdl1.i

Operator: YSL

Column diameter: 0.25

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GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecdla.i/030110.b/004f0401.d

Lab Smp Id: WAR100219-42 Client Smp ID: AR124201

Inj Date : 01-MAR-2010 06:07

Operator : YS1 Inst ID: ecdla.i

Smp Info : |WAR100219-42

Misc Info :

Comment :

Method : /chem/ecdla.i/030110.b/ECD1-F-8082-022210.m

Meth Date : 01-Mar-2010 11:28 yip00818 Quant Type: ESTD

Cal Date : 22-FEB-2010 12:08 Cal File: 036f3601.d

Als bottle: 4 Continuing Calibration Sample

Dil Factor: 1.00000

Integrator: Falcon Compound Sublist: AR1242.sub

Target Version: 3.50 Sample Matrix: None

AMOUNTS

CAL-AMT ON-COL

RT	EXP RT	DLT RT	RESPONSE (ug/L)	(ug/L)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====

4 Aroclor-1242

CAS #: 53469-21-9

2.372	2.372	0.000	11845552	1000.00	943 80.00- 120.00	100.00
2.659	2.659	0.000	14625693	1000.00	1000 105.80- 145.80	123.47
2.777	2.777	0.000	5644185	1000.00	1000 28.50- 68.50	47.65
2.988	2.988	0.000	7389796	1000.00	1010 41.07- 81.07	62.38
3.241	3.241	0.000	7202178	1000.00	1160 2.02- 42.02	60.80

Average of Peak Amounts : 1.02e+03

Data File: /chem/eodla.i/030110.b/004f0401.d

Date : 01-MAR-2010 06:07

Client ID: AR124201

Sample Info: 1MAR100219-42

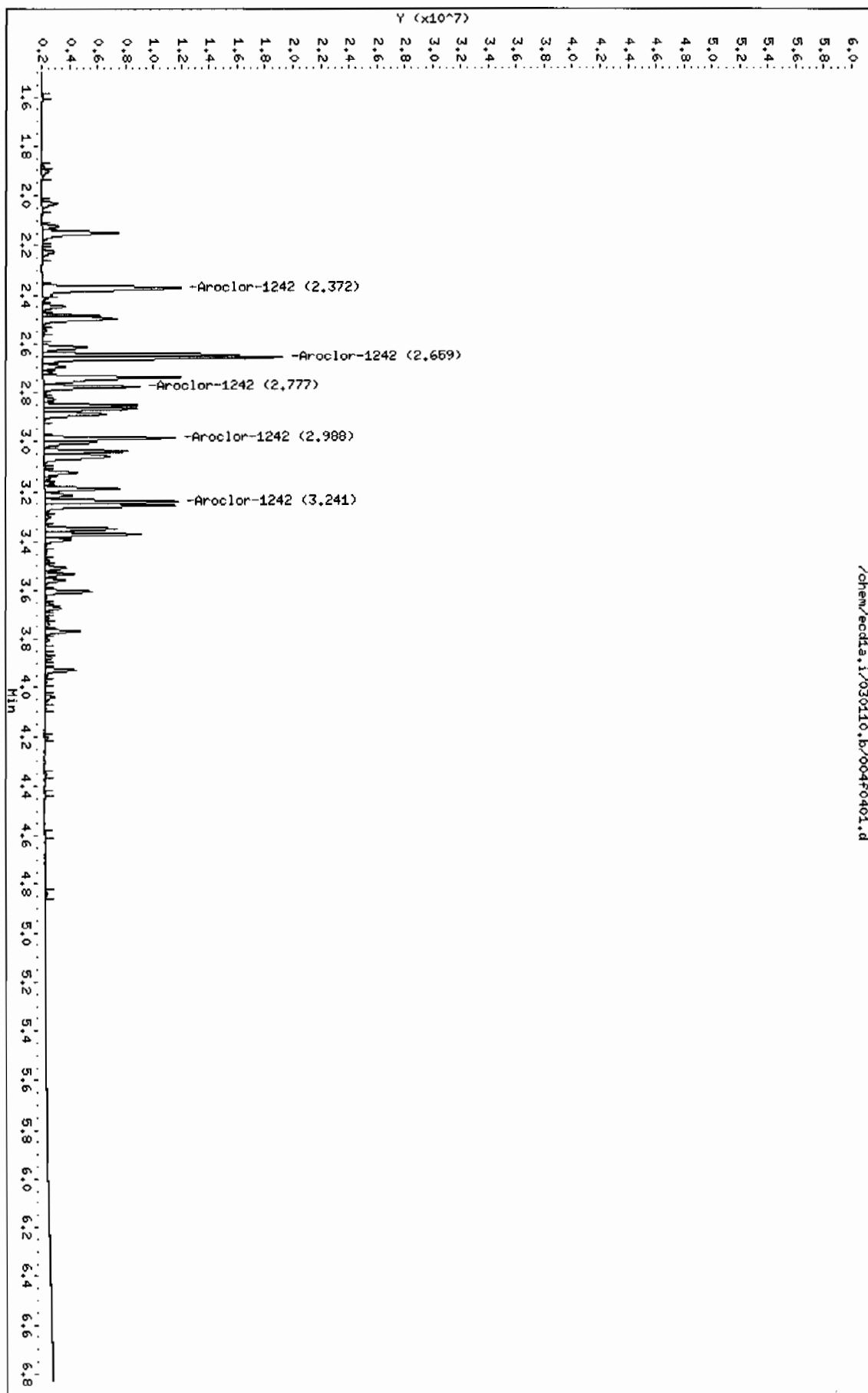
Column phase: CLP1

Instrument: eodla.i

Operator: YSL

Column diameter: 0.25

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Data File: /chem/ecdl1a.i/030110.b/004b0401.d
Report Date: 01-Mar-2010 11:54

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GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecdl1a.i/030110.b/004b0401.d
Lab Smp Id: WAR100219-42 Client Smp ID: AR124201
Inj Date : 01-MAR-2010 06:07
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR100219-42
Misc Info :
Comment :
Method : /chem/ecdl1a.i/030110.b/ECD1-B-8082-022210.m
Meth Date : 01-Mar-2010 11:24 yip00818 Quant Type: ESTD
Cal Date : 22-FEB-2010 12:08 Cal File: 036b3601.d
Als bottle: 4 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1242.sub
Target Version: 3.50 Sample Matrix: None

AMOUNTS

RT	EXP RT	DLT RT	CAL-AMT RESPONSE (ug/L)	ON-COL (ug/L)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====
4 Aroclor-1242			CAS #: 53469-21-9			
3.174	3.174	0.000	10228117 1000.00	988	80.00- 120.00	100.00
3.256	3.256	0.000	6860562 1000.00	942	47.08- 87.08	67.08
3.547	3.547	0.000	5452140 1000.00	945	33.31- 73.31	53.31
3.780	3.780	0.000	5763523 1000.00	996	36.35- 76.35	56.35
3.808	3.808	0.000	6419425 1000.00	966	42.76- 82.76	62.76
Average of Peak Amounts =			968			

Data File: /chem/ecdl.a.i/030110.b/004b0401.d

Date: 01-MAR-2010 06:07

Client ID: AR124201

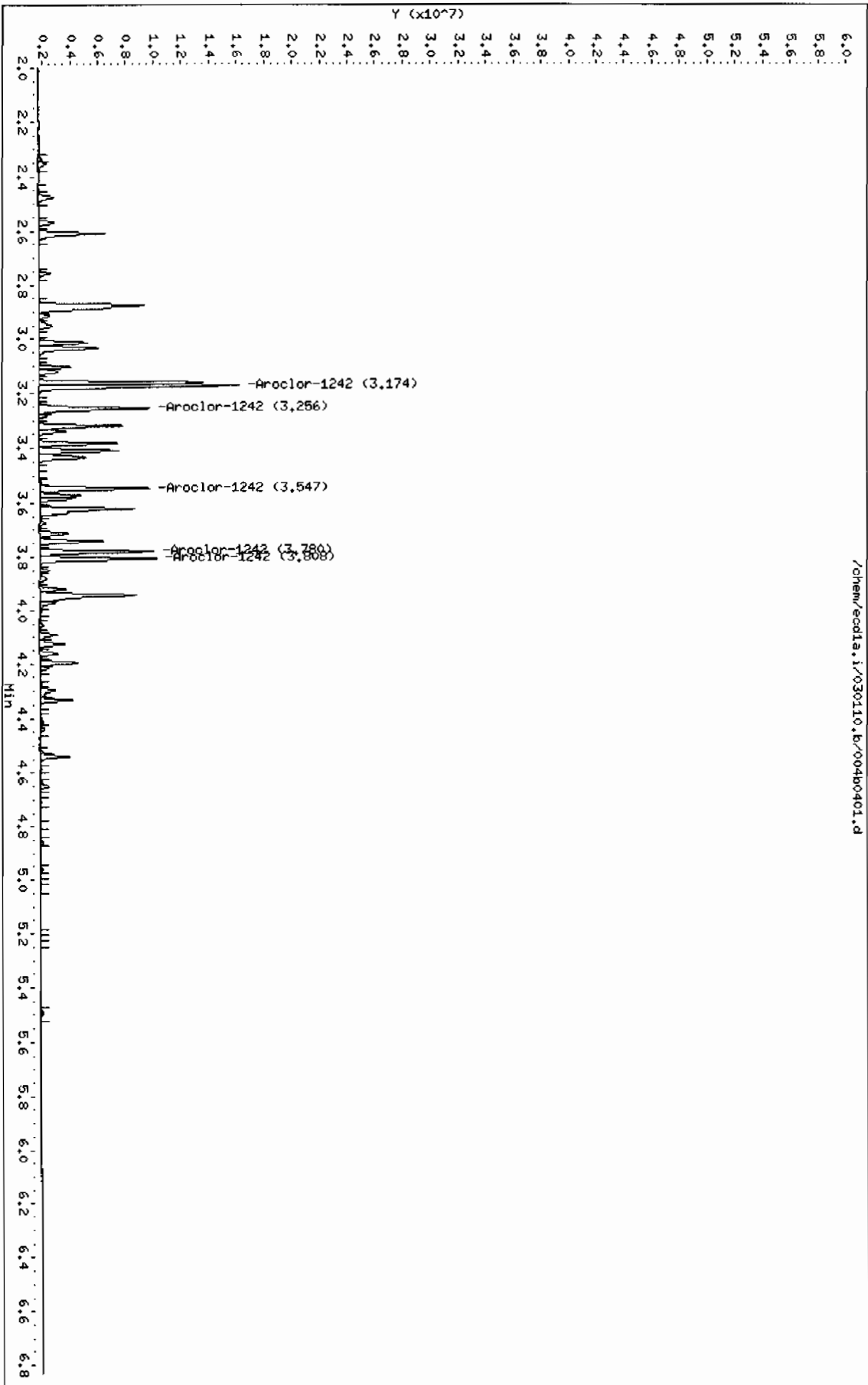
Sample Info: 1MAR100219-42

Column phase: CLP2

Instrument: ecdl.a.i

Operator: YSL

Column diameter: 0.25



Data File: /chem/ecdl1a.i/030110.b/005f0501.d
Report Date: 01-Mar-2010 11:55

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GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecdl1a.i/030110.b/005f0501.d

Lab Smp Id: WAR100223-48

Client Smp ID: AR124801

Inj Date : 01-MAR-2010 06:17

Operator : YS1

Inst ID: ecd1a.i

Smp Info : |WAR100223-48

Misc Info :

Comment :

Method : /chem/ecdl1a.i/030110.b/ECD1-F-8082-022210.m

Meth Date : 01-Mar-2010 11:28 yip00818 Quant Type: ESTD

Cal Date : 22-FEB-2010 12:08

Cal File: 036f3601.d

Als bottle: 5

Continuing Calibration Sample

Dil Factor: 1.00000

Integrator: Falcon

Compound Sublist: AR1248.sub

Target Version: 3.50

Sample Matrix: None

AMOUNTS

RT	EXP RT	DLT RT	CAL-AMT RESPONSE (ug/L)	ON-COL (ug/L)	TARGET RANGE	RATIO
2.854	2.854	0.000	9749371 1000.00	1050	80.00- 120.00	100.00
2.987	2.987	0.000	12679792 1000.00	1020	124.41- 164.41	130.06
3.241	3.241	0.000	14185001 1000.00	1160	32.08- 72.08	145.50
3.373	3.373	0.000	11371497 1000.00	1090	87.65- 127.65	116.64
3.606	3.606	0.000	7434507 1000.00	1090	28.27- 68.27	76.26

Average of Peak Amounts = 1.08e+03

Data File: /chem/eod1a.i/030110.b/005f0501.d

Date: 01-MAR-2010 06:17

Client ID: AR124801

Sample Info: 1MAR100223-48

Column phase: CLP1

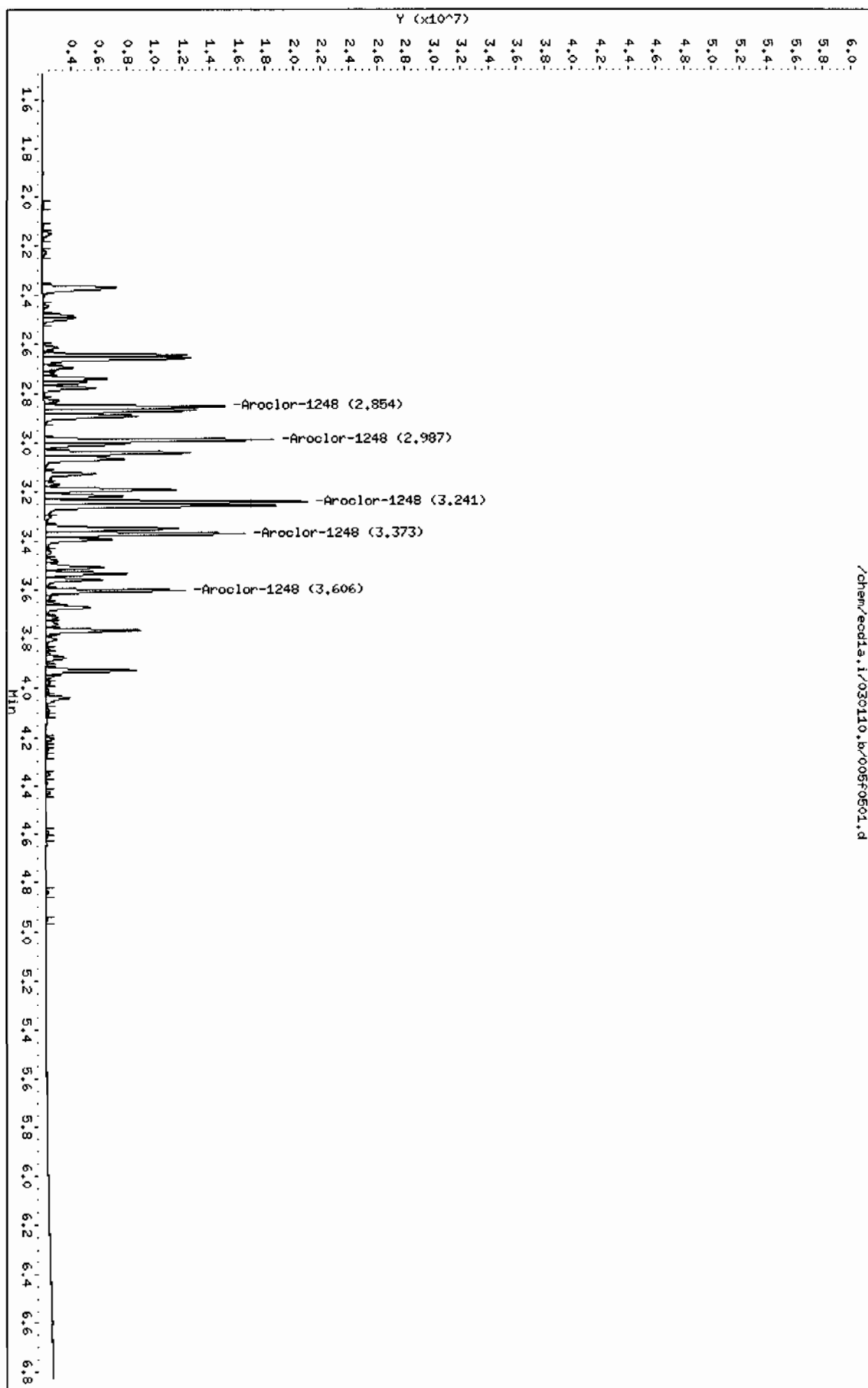
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Instrument: eod1a.i

Operator: YSI

Column diameter: 0.25

/chem/eod1a.i/030110.b/005f0501.d



Data File: /chem/ecdla.i/030110.b/005b0501.d
Report Date: 01-Mar-2010 11:55

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GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecdla.i/030110.b/005b0501.d
Lab Smp Id: WAR100223-48 Client Smp ID: AR124801
Inj Date : 01-MAR-2010 06:17
Operator : YS1 Inst ID: ecdla.i
Smp Info : |WAR100223-48
Misc Info :
Comment :
Method : /chem/ecdla.i/030110.b/ECD1-B-8082-022210.m
Meth Date : 01-Mar-2010 11:24 yip00818 Quant Type: ESTD
Cal Date : 22-FEB-2010 12:08 Cal File: 036b3601.d
Als bottle: 5 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1248.sub
Target Version: 3.50 Sample Matrix: None

AMOUNTS

RT	EXP RT	DLT RT	CAL-AMT RESPONSE (ug/L)	ON-COL (ug/L)	TARGET RANGE	RATIO
3.382	3.382	0.000	7459436 1000.00	981 80.00-	120.00	100.00
3.547	3.547	0.000	9385175 1000.00	1000 105.82-	145.82	125.82
3.781	3.781	0.000	10904454 1000.00	1020 126.18-	166.18	146.18
3.808	3.808	0.000	12146330 1000.00	1000 142.83-	182.83	162.83
3.945	3.945	0.000	11749045 1000.00	1020 137.51-	177.51	157.51

Average of Peak Amounts = 1.01e+03

Data File: /chem/ecdl1a.i/030110.b/005b0501.d

Date: 01-MAR-2010 06:17

Client ID: AR124801

Sample Info: 1MAR100223-48

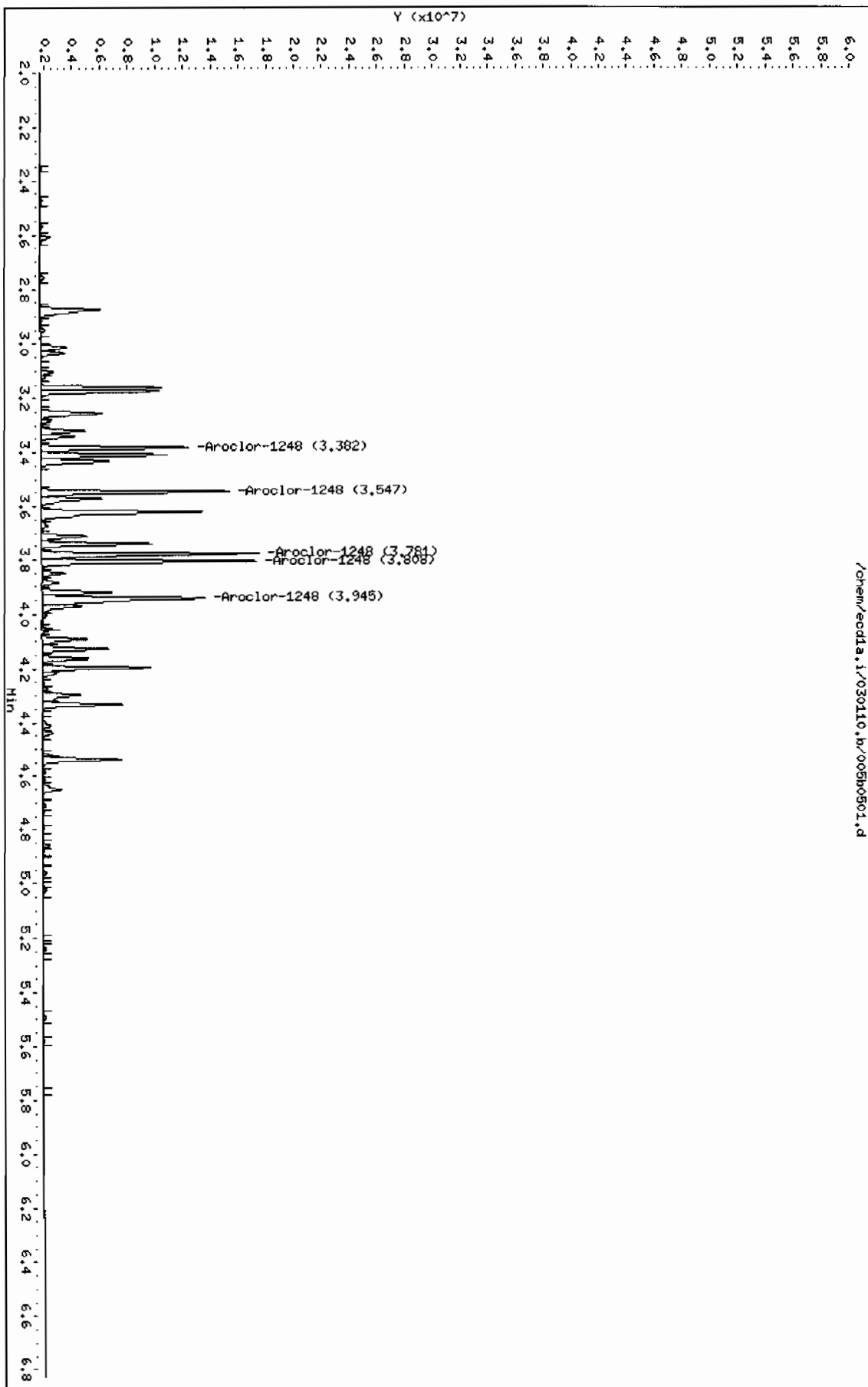
Column phase: CLP2

Instrument: ecdl1a.i

Operator: YSL

Column diameter: 0.25

/chem/ecdl1a.i/030110.b/005b0501.d



GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecdl1a.i/030110.b/006f0601.d
 Lab Smp Id: WAR100222-60 01 Client Smp ID: AR166001
 Inj Date : 01-MAR-2010 06:28
 Operator : YS1 Inst ID: ecd1a.i
 Smp Info : |WAR100222-60 01
 Misc Info :
 Comment :
 Method : /chem/ecdl1a.i/030110.b/ECD1-F-8082-022210.m
 Meth Date : 01-Mar-2010 11:28 yip00818 Quant Type: ESTD
 Cal Date : 22-FEB-2010 12:08 Cal File: 036f3601.d
 Als bottle: 6 Continuing Calibration Sample
 Dil Factor: 1.00000
 Integrator: Falcon Compound Sublist: AR1660.sub
 Target Version: 3.50 Sample Matrix: None

AMOUNTS							
			CAL-AMT		ON-COL		
RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)	TARGET RANGE	RATIO
-----	-----	-----	-----	-----	-----	-----	-----
\$ 11 4cmx					CAS #: 877-09-8		
1.919	1.919	0.000	38909661	100.000	90.4	80.00- 120.00	100.00

\$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.227	5.227	0.000	30198693	100.000	98.3	60.00- 120.00	100.00

1 Aroclor-1016					CAS #: 12674-11-2		
2.373	2.373	0.000	13308318	1000.00	865	80.00- 120.00	100.00
2.659	2.659	0.000	16936020	1000.00	929	105.80- 145.80	127.26
2.740	2.740	0.000	11017623	1000.00	913	60.67- 100.67	82.79
2.778	2.778	0.000	6662826	1000.00	939	28.50- 68.50	50.07
2.988	2.988	0.000	8400395	1000.00	942	41.07- 81.07	63.12
Average of Peak Amounts =					918		

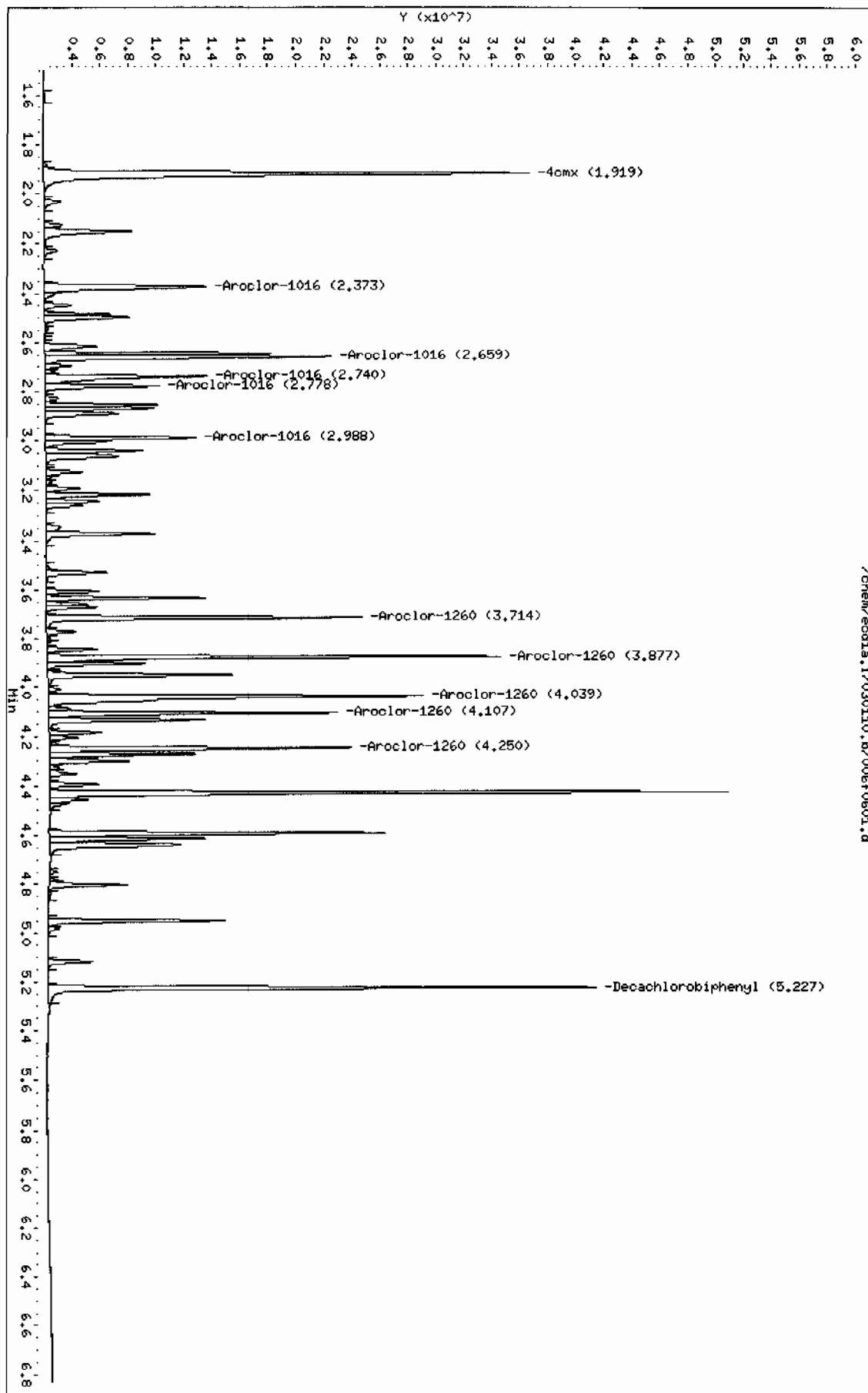
7 Aroclor-1260					CAS #: 11096-82-5		
3.714	3.714	0.000	16777115	1000.00	983	80.00- 120.00	100.00
3.877	3.877	0.000	24986460	1000.00	1060	129.35- 169.35	148.93
4.039	4.039	0.000	26723350	1000.00	1070	140.95- 180.95	159.28
4.107	4.107	0.000	15046298	1000.00	1040	70.53- 110.53	89.68
4.250	4.250	0.000	15540140	1000.00	1080	74.24- 114.24	92.63
Average of Peak Amounts =					1.05e+03		

Data File: /chem/ecdda.i/030110.b/006f0601.d
Date : 01-MAR-2010 06:28
Client ID: AR166001
Sample Info: 1MAR100222-60 01

Column phase: CLP1

Instrument: ecdda.i
Operator: YSL
Column diameter: 0.25

/chem/ecdda.i/030110.b/006f0601.d



Data File: /chem/ecdl1a.i/030110.b/006b0601.d
Report Date: 01-Mar-2010 11:55

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GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecdl1a.i/030110.b/006b0601.d
Lab Smp Id: WAR100222-60 01 Client Smp ID: AR166001
Inj Date : 01-MAR-2010 06:28
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR100222-60 01
Misc Info :
Comment :
Method : /chem/ecdl1a.i/030110.b/ECD1-B-8082-022210.m
Meth Date : 01-Mar-2010 11:24 yip00818 Quant Type: ESTD
Cal Date : 22-FEB-2010 12:08 Cal File: 036b3601.d
Als bottle: 6 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None

AMOUNTS							
		CAL-AMT		ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)	TARGET RANGE	RATIO
=====		=====	=====	=====	=====	=====	=====

\$ 11 4cmx					CAS #: 877-09-8		
2.278	2.278	0.000	27046977	100.000	90.9	80.00- 120.00	100.00

\$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.923	5.923	0.000	19098067	100.000	90.3	80.00- 120.00	100.00

1 Aroclor-1016					CAS #: 12674-11-2		
3.174	3.174	0.000	11776868	1000.00	921	80.00- 120.00	100.00 (M)
3.257	3.257	0.000	7964740	1000.00	893	44.57- 84.57	67.63
3.320	3.320	0.000	4935768	1000.00	913	20.24- 60.24	41.91
3.547	3.547	0.000	6222912	1000.00	900	30.33- 70.33	52.84
3.623	3.623	0.000	5888255	1000.00	916	28.07- 68.07	50.00
Average of Peak Amounts =					909		

7 Aroclor-1260					CAS #: 11096-82-5		
4.314	4.314	0.000	12074141	1000.00	914	80.00- 120.00	100.00
4.439	4.439	0.000	14772970	1000.00	949	102.26- 142.26	122.35
4.704	4.704	0.000	11120482	1000.00	939	71.55- 111.55	92.10
4.878	4.878	0.000	11500807	1000.00	942	75.28- 115.28	95.25
5.024	5.024	0.000	25815917	1000.00	973	192.38- 232.38	213.81
Average of Peak Amounts =					944		

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecdda.i/030110.b/006b0601.d

Date: 01-MAR-2010 06:28

Client ID: AR166001

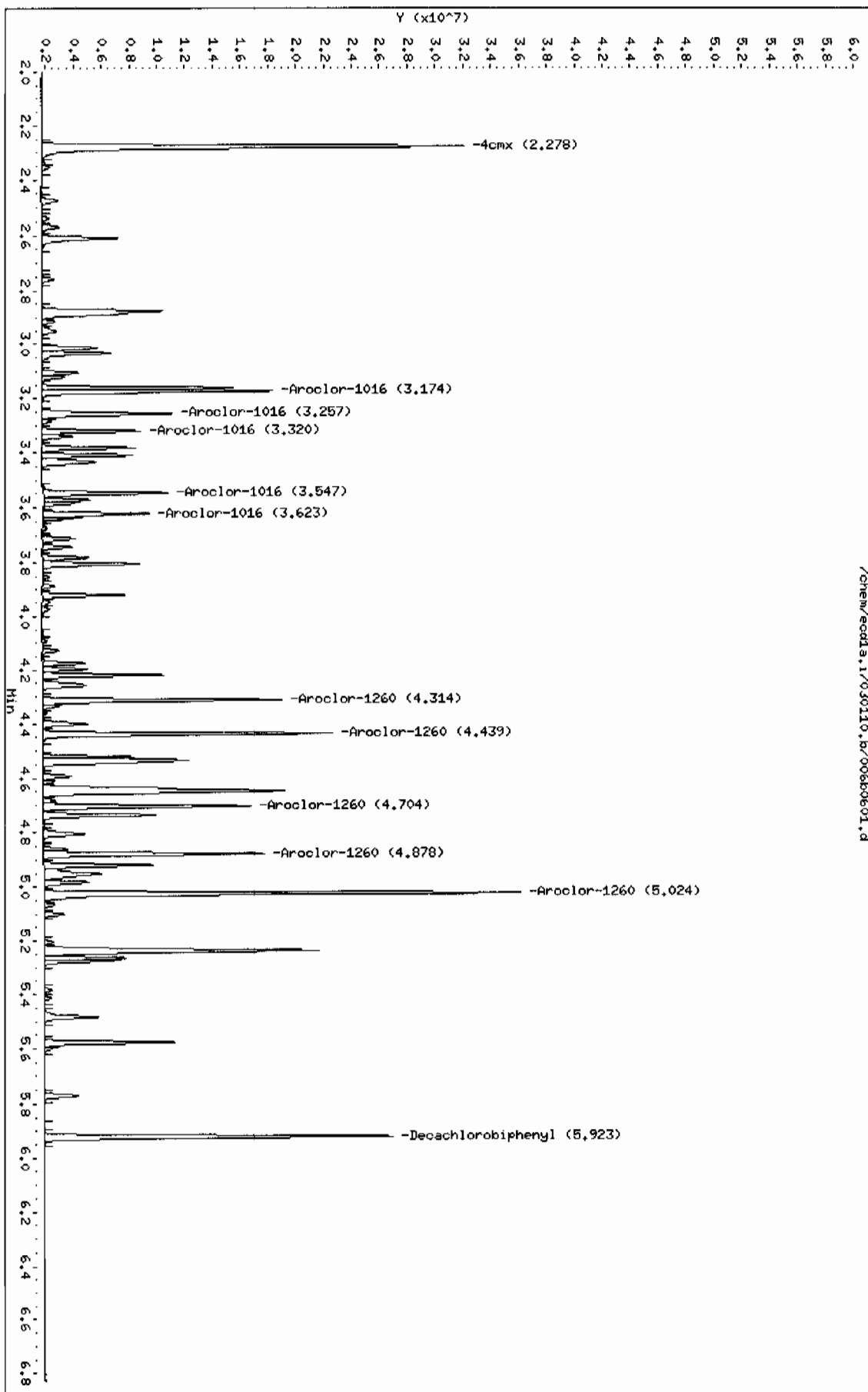
Sample Info: 1MAR100222-60 01

Column phase: CLP2

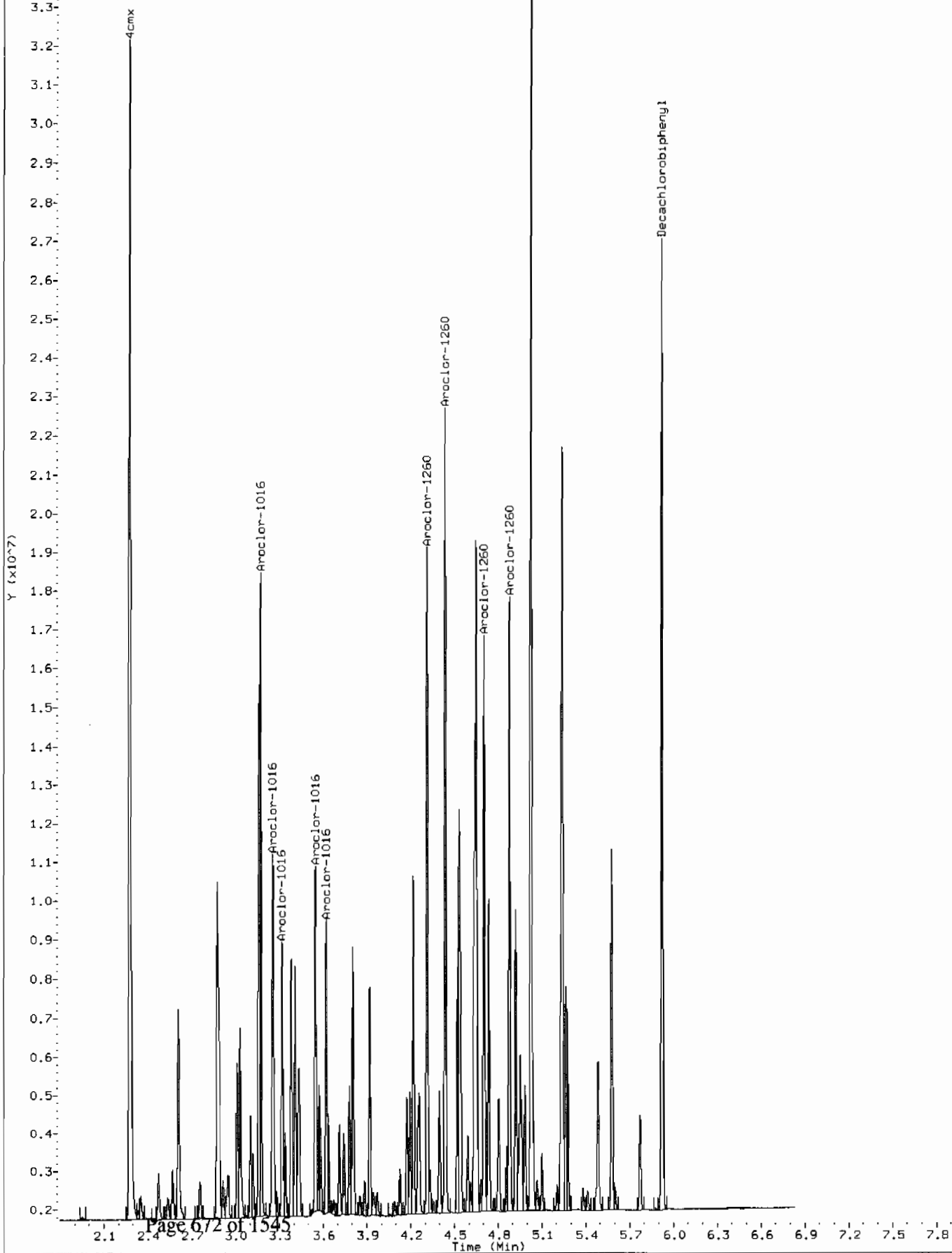
Instrument: ecdda.i

Operator: YSL

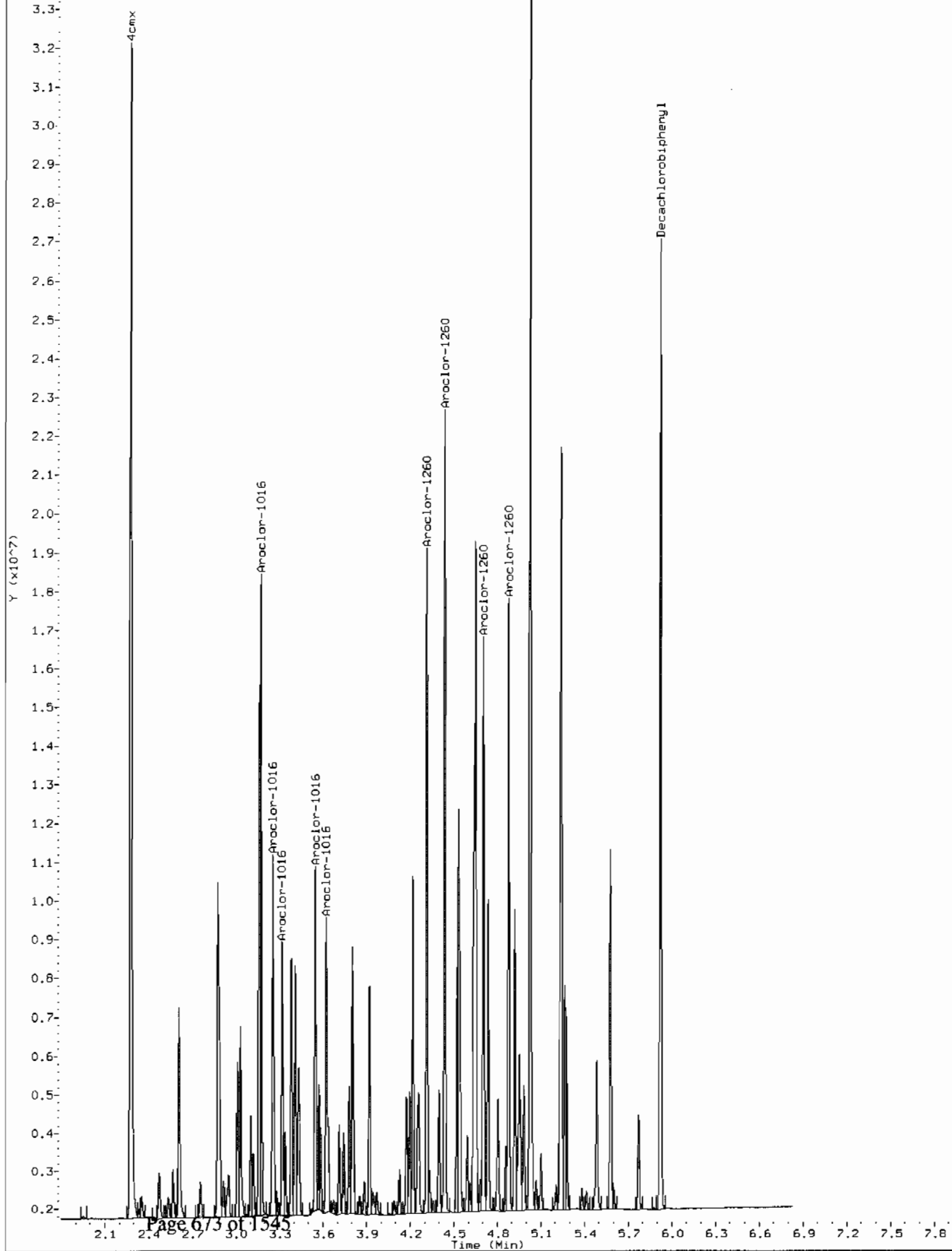
Column diameter: 0.25



Comment: Manually Integrated
Data File: /chem/ecdl.a.i/030110.b/006b0601.d
Operator: YS1
Injection Date: 01-MAR-2010 06:28
Instrument: ecdla.i
Client Sample ID: AR166001



Comment: Before manual integration
Data File: /chem/ecdl1a.i/030110.b/Orig-006b0601.d
Operator: YS1
Injection Date: 01-MAR-2010 06:28
Instrument: ecd1a.i
Client Sample ID: AR166001



Data File: /chem/ecdl1a.i/030110.b/008f0801.d
Report Date: 01-Mar-2010 11:55

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GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecdl1a.i/030110.b/008f0801.d

Lab Smp Id: WAR100104-32

Client Smp ID: AR123201

Inj Date : 01-MAR-2010 06:49

Operator : YSl

Inst ID: ecd1a.i

Smp Info : |WAR100104-32

Misc Info :

Comment :

Method : /chem/ecdl1a.i/030110.b/ECD1-F-8082-022210.m

Meth Date : 01-Mar-2010 11:28 yip00818 Quant Type: ESTD

Cal Date : 22-FEB-2010 12:08

Cal File: 036f3601.d

Als bottle: 8

Continuing Calibration Sample

Dil Factor: 1.00000

Integrator: Falcon

Compound Sublist: AR1232.sub

Target Version: 3.50

Sample Matrix: None

AMOUNTS

RT	EXP RT	DLT RT	CAL-AMT	ON-COL	RESPONSE (ug/L)	(ug/L)	TARGET RANGE	RATIO
2.372	2.372	0.000	6411010	1000.00	1030	80.00- 120.00	100.00	
2.659	2.659	0.000	7990266	1000.00	1070	105.80- 145.80	124.63	
2.739	2.739	0.000	5300618	1000.00	1080	60.67- 100.67	82.68	
2.854	2.854	0.000	2583763	1000.00	1180	22.29- 62.29	40.30	
3.241	3.241	0.000	3472287	1000.00	1270	2.02- 42.02	54.16	

Average of Peak Amounts = 1.13e+03

Data File: /chem/ecdda.i/030110.b/008f0801.d

Date : 01-MAR-2010 06:49

Client ID: AR123201

Sample Info: IMR100104-32

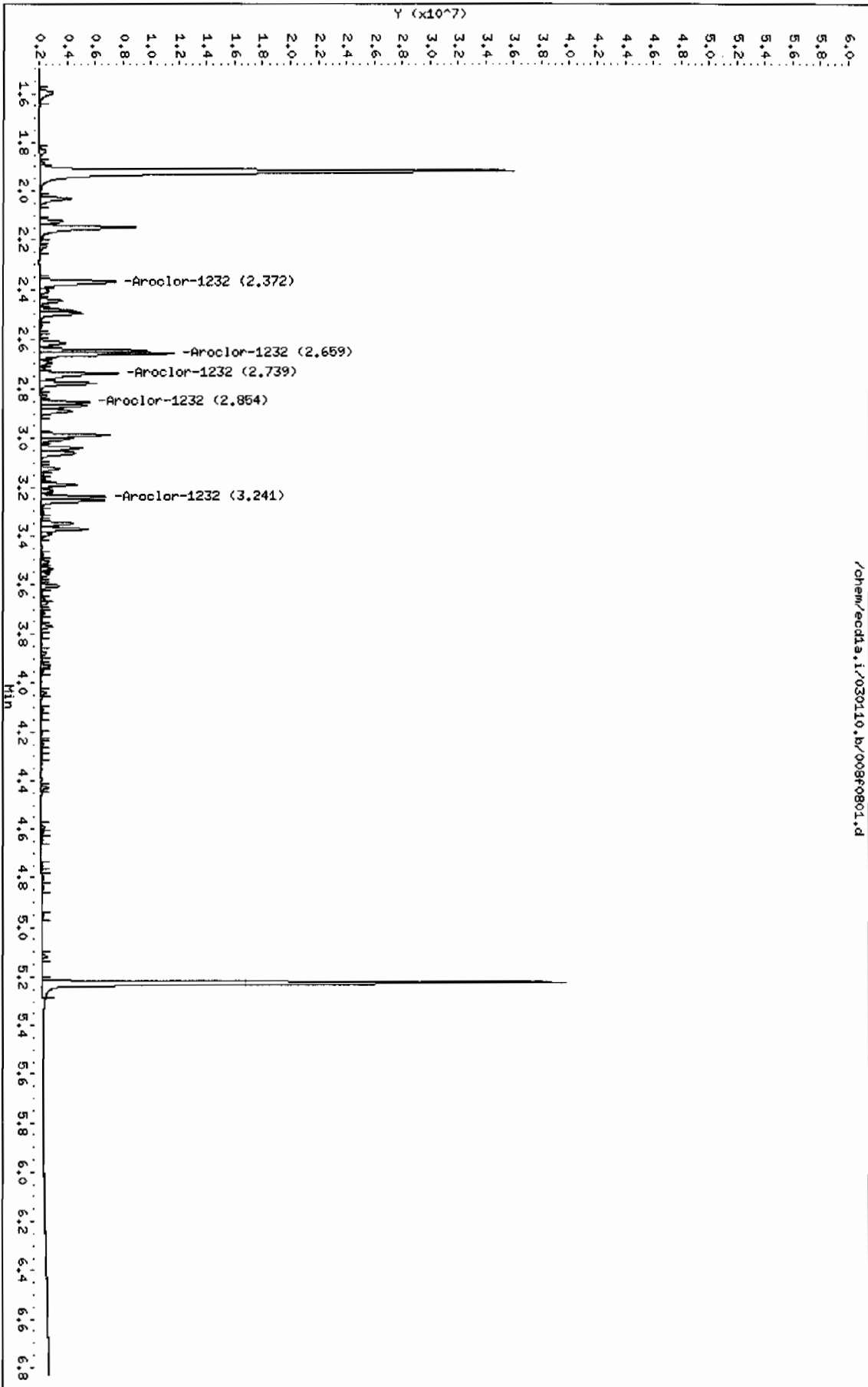
Column phase: CLP1

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Instrument: ecdda.i

Operator: YSI

Column diameter: 0.25



Data File: /chem/ecdla.i/030110.b/008b0801.d
Report Date: 01-Mar-2010 11:55

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GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecdla.i/030110.b/008b0801.d
Lab Smp Id: WAR100104-32 Client Smp ID: AR123201
Inj Date : 01-MAR-2010 06:49
Operator : YSl Inst ID: ecdla.i
Smp Info : |WAR100104-32
Misc Info :
Comment :
Method : /chem/ecdla.i/030110.b/ECD1-B-8082-022210.m
Meth Date : 01-Mar-2010 11:24 yip00818 Quant Type: ESTD
Cal Date : 22-FEB-2010 12:08 Cal File: 036b3601.d
Als bottle: 8 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1232.sub
Target Version: 3.50 Sample Matrix: None

AMOUNTS

RT	EXP RT	DLT RT	CAL-AMT RESPONSE (ug/L)	ON-COL (ug/L)	TARGET RANGE	RATIO
2.875	2.875	0.000	5144976 1000.00	1040	80.00- 120.00	100.00
3.174	3.174	0.000	5699021 1000.00	1080	90.77- 130.77	110.77
3.256	3.256	0.000	3960037 1000.00	1050	56.97- 96.97	76.97
3.547	3.547	0.000	2954233 1000.00	1090	37.42- 77.42	57.42
3.780	3.780	0.000	2947565 1000.00	1120	37.29- 77.29	57.29

Average of Peak Amounts = 1.08e+03

Data File: /chem/ecdia.i/030110.b/0080801.d

Date: 01-MAR-2010 06:49

Client ID: AR123201

Sample Info: 1MAR100104-32

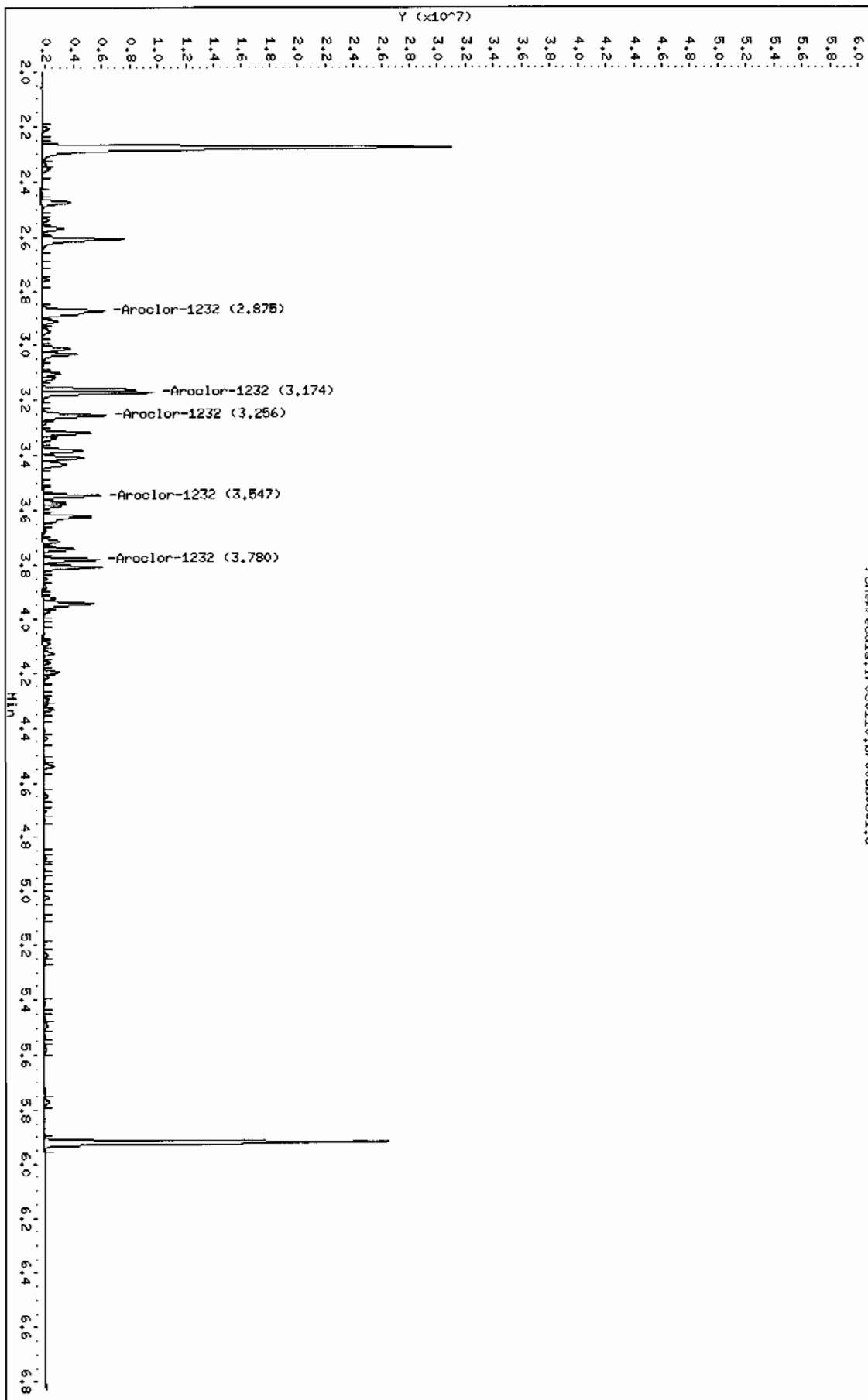
Instrument: ecdia.i

Operator: YSI

Column diameter: 0.25

Column phase: CLP2

/chem/ecdia.i/030110.b/0080801.d



GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecdla.i/030110.b/009f0901.d
 Lab Smp Id: WAR100104-21 Client Smp ID: AR122101
 Inj Date : 01-MAR-2010 06:59
 Operator : YS1 Inst ID: ecdla.i
 Smp Info : |WAR100104-21
 Misc Info :
 Comment :
 Method : /chem/ecdla.i/030110.b/ECD1-F-8082-022210.m
 Meth Date : 01-Mar-2010 11:28 yip00818 Quant Type: ESTD
 Cal Date : 22-FEB-2010 12:08 Cal File: 036f3601.d
 Als bottle: 9 Continuing Calibration Sample
 Dil Factor: 1.00000
 Integrator: Falcon Compound Sublist: AR1221.sub
 Target Version: 3.50 Sample Matrix: None

AMOUNTS

			CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE (ug/L)	(ug/L)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	
2 Aroclor-1221				CAS #: 11104-28-2			
2.031	2.031	0.000	4463092	1000.00	1010 80.00- 120.00	100.00	
2.123	2.123	0.000	2494077	1000.00	1020 74.31- 114.31	55.88	
2.149	2.149	0.000	10671634	1000.00	1020 528.48- 568.48	239.11	
Average of Peak Amounts =				1.02e+03			

Data File: /chem/ecdia.i/030110.b/009f0901.d

Date : 01-MAR-2010 06:59

Client ID: AR122101

Sample Info: 1MAR100104-21

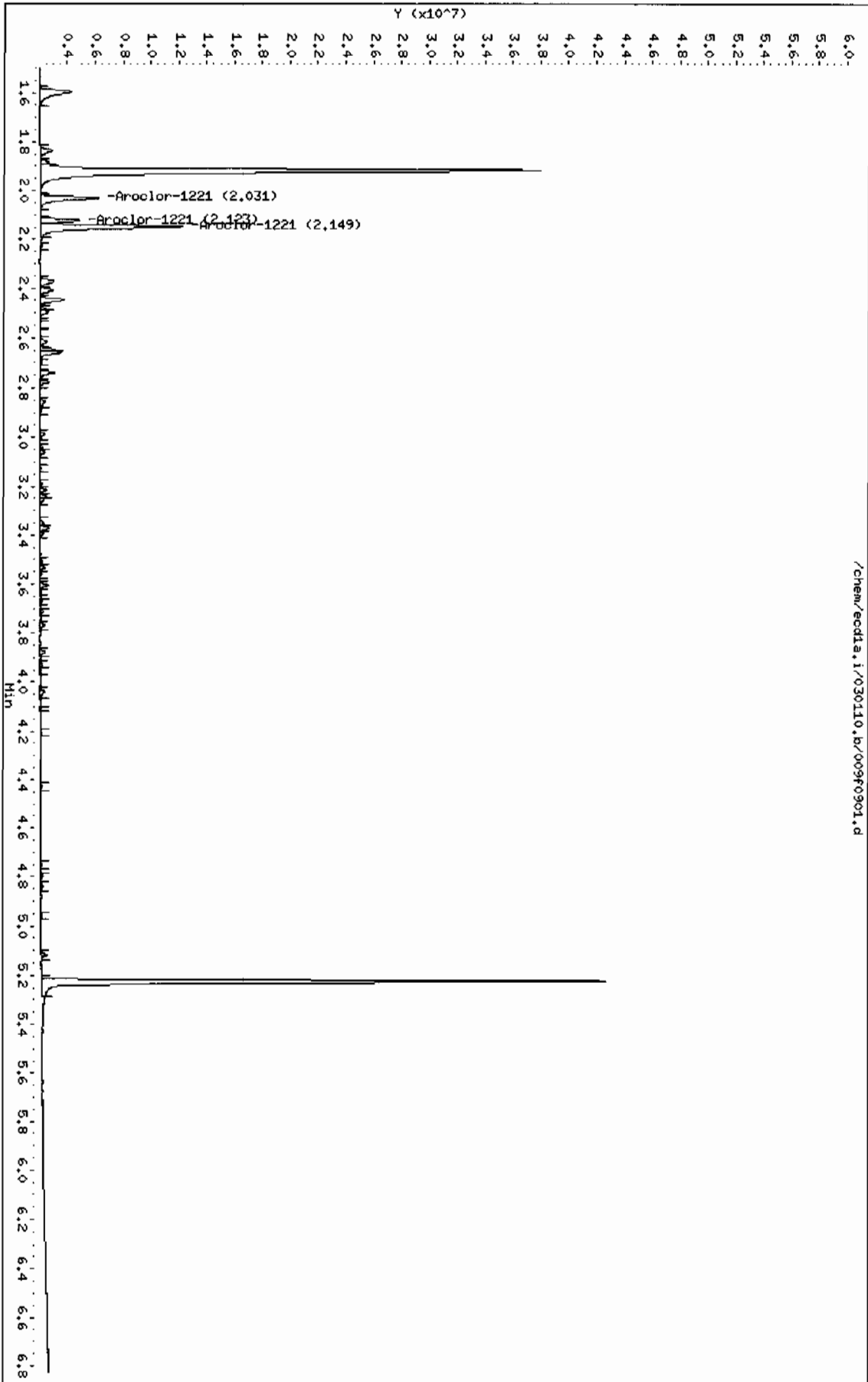
Column phase: CLP1

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Instrument: ecdia.i

Operator: YSL

Column diameter: 0.25



Data File: /chem/ecdl1a.i/030110.b/009b0901.d
Report Date: 01-Mar-2010 11:55

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GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecdl1a.i/030110.b/009b0901.d

Lab Smp Id: WAR100104-21

Client Smp ID: AR122101

Inj Date : 01-MAR-2010 06:59

Operator : YS1

Inst ID: ecd1a.i

Smp Info : |WAR100104-21

Misc Info :

Comment :

Method : /chem/ecdl1a.i/030110.b/ECD1-B-8082-022210.m

Meth Date : 01-Mar-2010 11:24 yip00818

Quant Type: ESTD

Cal Date : 22-FEB-2010 12:08

Cal File: 036b3601.d

Als bottle: 9

Continuing Calibration Sample

Dil Factor: 1.00000

Integrator: Falcon

Compound Sublist: AR1221.sub

Target Version: 3.50

Sample Matrix: None

AMOUNTS

RT	EXP RT	DLT RT	CAL-AMT RESPONSE (ug/L)	ON-COL (ug/L)	TARGET RANGE	RATIO
2	Aroclor-1221				CAS #: 11104-28-2	
2.474	2.474	0.000	3481091 1000.00	1010 80.00- 120.00	100.00	
2.569	2.569	0.000	2214332 1000.00	1030 43.61- 83.61	63.61	
2.609	2.609	0.000	7624830 1000.00	1040 199.04- 239.04	219.04	
Average of Peak Amounts =			1.03e+03			

Data File: /chem/eodla.i/030110.b/009b0901.d

Date: 01-MAR-2010 06:59

Client ID: AR122101

Sample Info: 1MAR100104-21

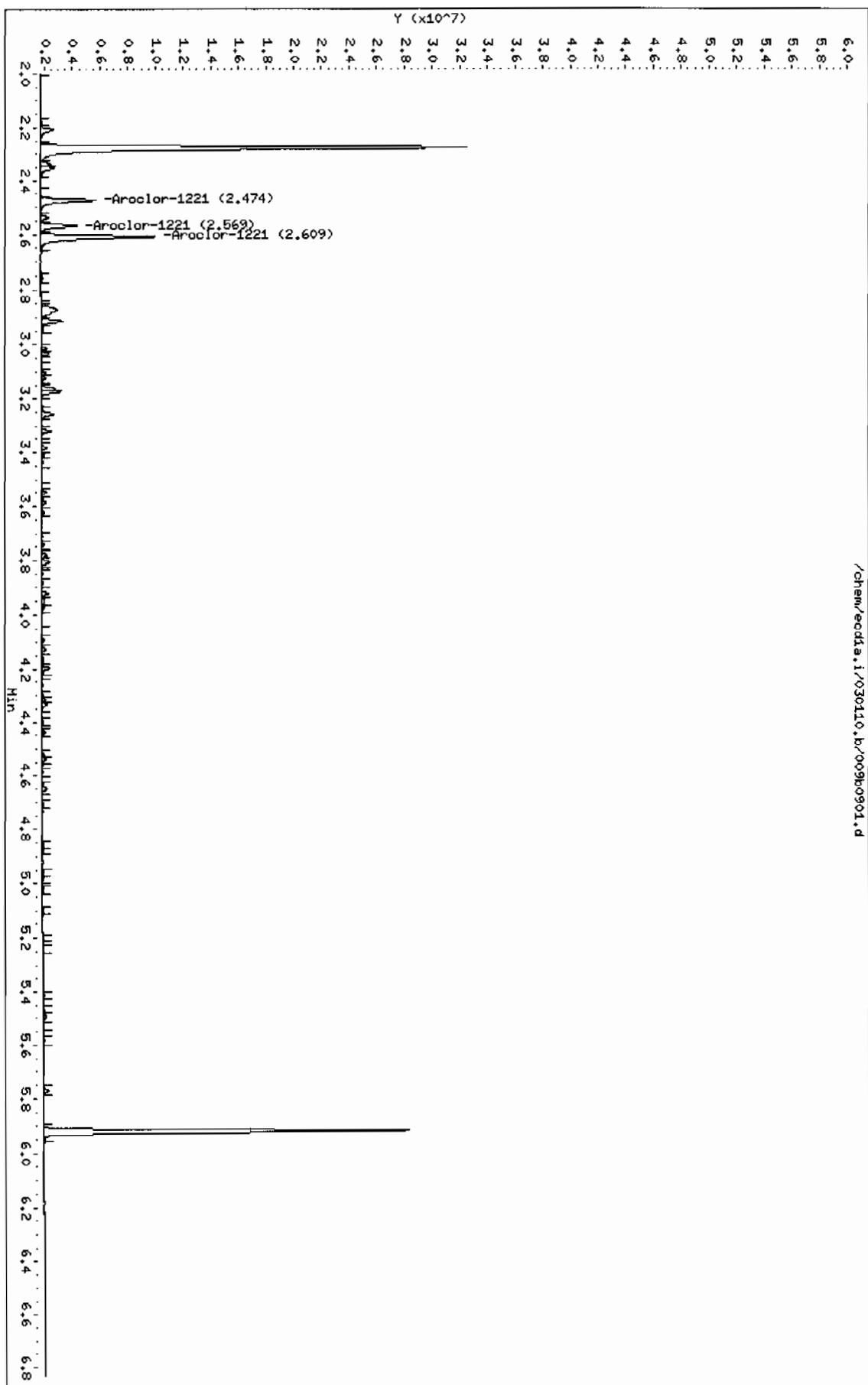
Column phase: CLP2

Instrument: eodla.i

Operator: YSL

Column diameter: 0.25

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GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecdla.i/030110.b/036f3601.d

Lab Smp Id: WAR100222-60 03

Client Smp ID: AR166003

Inj Date : 01-MAR-2010 12:12

Operator : YS1

Inst ID: ecdla.i

Smp Info : |WAR100222-60 03

Misc Info :

Comment :

Method : /chem/ecdla.i/030110.b/ECD1-F-8082-022210.m

Meth Date : 01-Mar-2010 12:26 yip00818

Quant Type: ESTD

Cal Date : 22-FEB-2010 12:08

Cal File: 036f3601.d

Als bottle: 36

Continuing Calibration Sample

Dil Factor: 1.00000

Integrator: Falcon

Compound Sublist: AR1660.sub

Target Version: 3.50

Sample Matrix: None

Processing Host: hpc1p1

AMOUNTS

RT	EXP RT	DLT RT	CAL-AMT RESPONSE (ug/L)	ON-COL (ug/L)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====
\$ 11 4cmx						
				CAS #: 877-09-8		
1.918	1.919	-0.001	39617960 100.000	92.0	80.00- 120.00	100.00

\$ 12 Decachlorobiphenyl						
				CAS #: 2051-24-3		
5.224	5.227	-0.003	30940325 100.000	101	80.00- 120.00	100.00

1 Aroclor-1016						
				CAS #: 12674-11-2		
2.371	2.373	-0.002	13525352 1000.00	879	80.00- 120.00	100.00
2.658	2.659	-0.001	17409149 1000.00	955	108.71- 148.71	128.71
2.738	2.740	-0.002	11215104 1000.00	930	62.92- 102.92	82.92
2.775	2.778	-0.003	6744345 1000.00	950	29.86- 69.86	49.86
2.986	2.988	-0.002	8526333 1000.00	957	43.04- 83.04	63.04
Average of Peak Amounts =				934		

7 Aroclor-1260						
				CAS #: 11096-82-5		
3.711	3.714	-0.003	16938785 1000.00	992	80.00- 120.00	100.00
3.874	3.877	-0.003	25150227 1000.00	1060	128.48- 168.48	148.48
4.035	4.039	-0.004	26981960 1000.00	1080	139.29- 179.29	159.29
4.104	4.107	-0.003	15195981 1000.00	1050	69.71- 109.71	89.71
4.247	4.250	-0.003	15770812 1000.00	1090	73.10- 113.10	93.10
Average of Peak Amounts =				1.06e+03		

Data File: /chem/eodla.i/030110.b/036f3601.d

Date : 01-MAR-2010 12:12

Client ID: AR166003

Sample Info: IMR100222-60 03

Column phase: CLP1

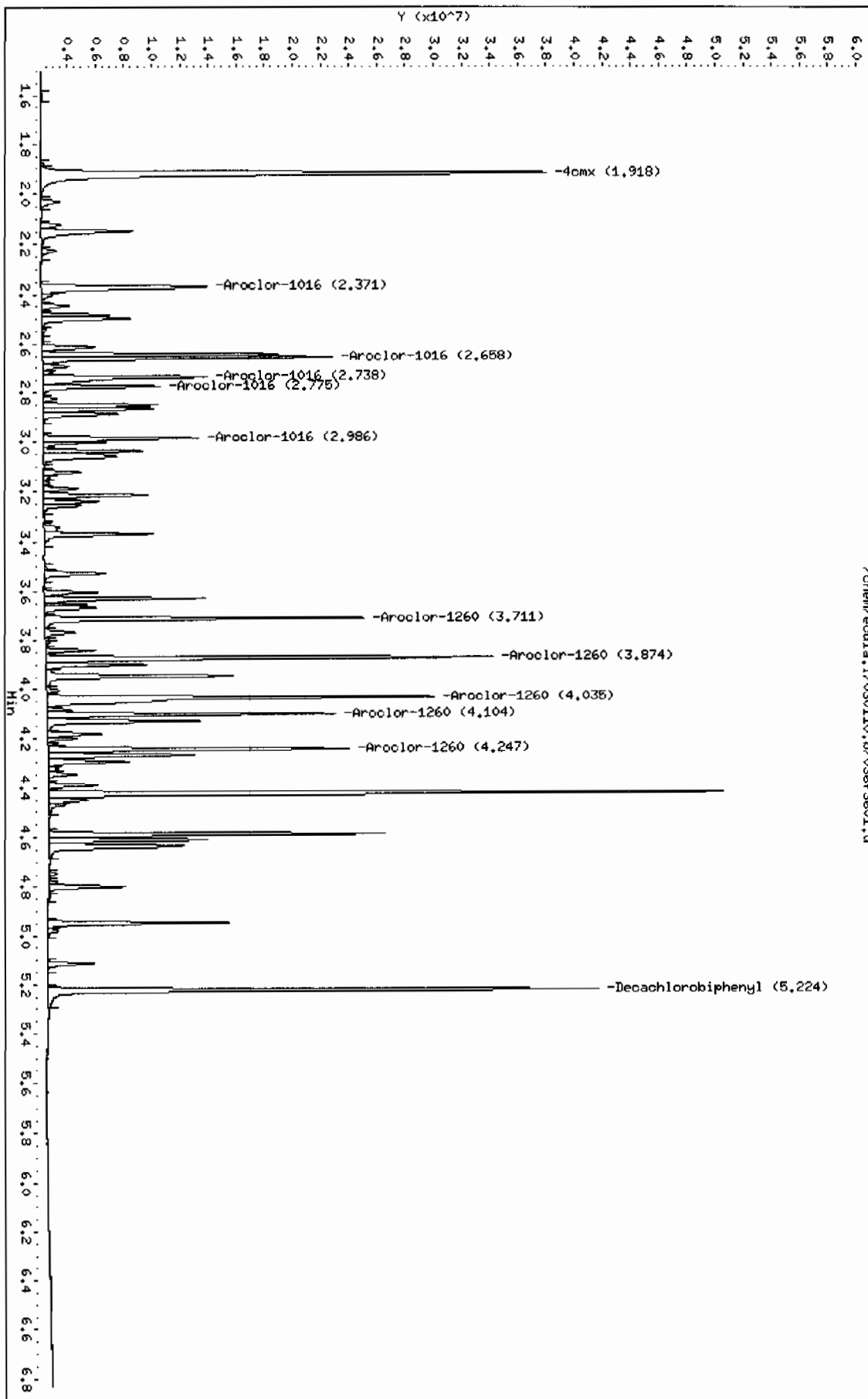
Instrument: eodla.i

Operator: YS1

Column diameter: 0.25

/chem/eodla.i/030110.b/036f3601.d

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GEI Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecdl1a.i/030110.b/036b3601.d
Lab Smp Id: WAR100222-60 03 Client Smp ID: AR166003
Inj Date : 01-MAR-2010 12:12
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR100222-60 03
Misc Info :
Comment :
Method : /chem/ecdl1a.i/030110.b/ECD1-B-8082-022210.m
Meth Date : 01-Mar-2010 12:26 yip00818 Quant Type: ESTD
Cal Date : 22-FEB-2010 12:08 Cal File: 036b3601.d
Als bottle: 36 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpc1pl

AMOUNTS

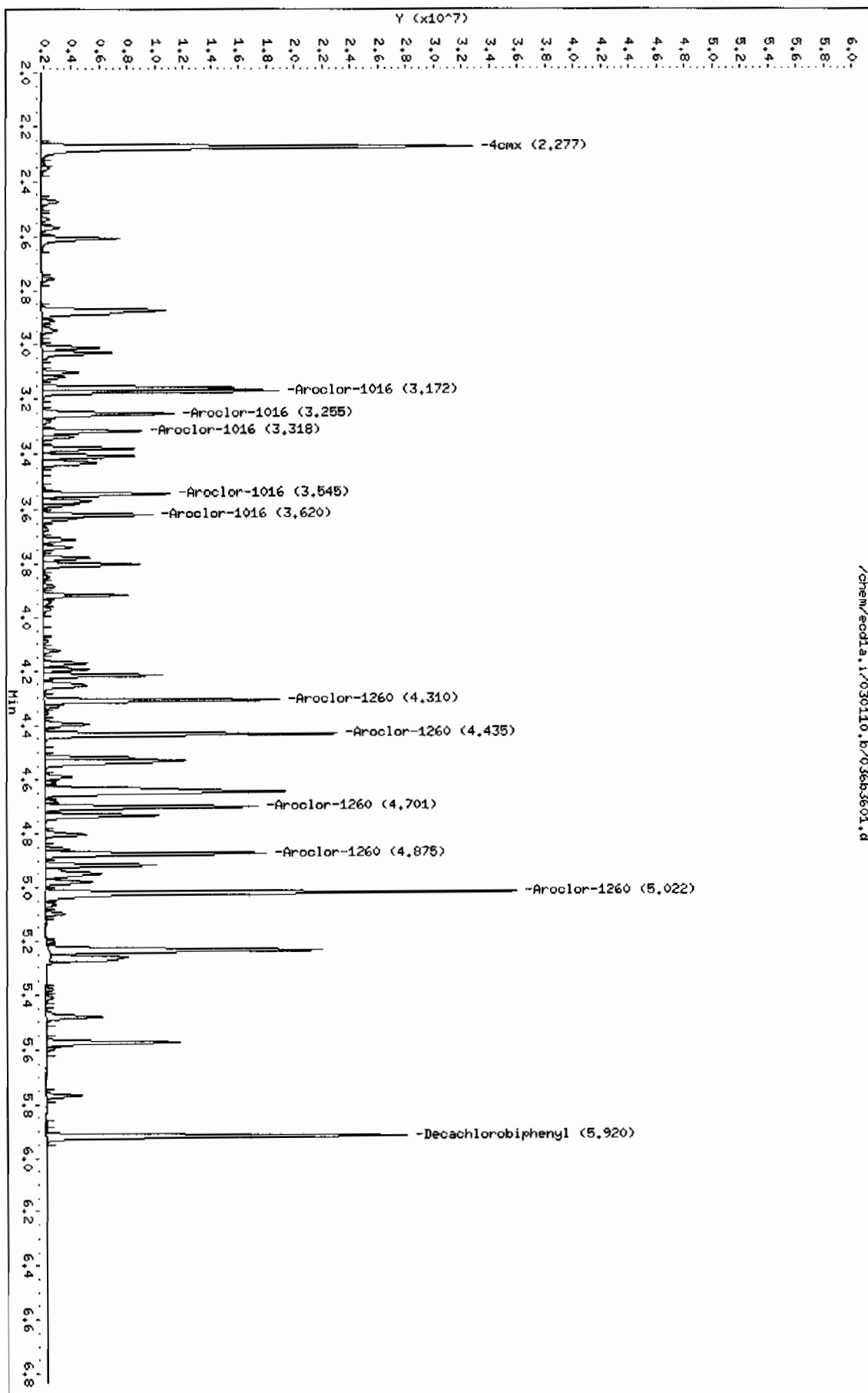
RT	EXP RT	DLT RT	CAL-AMT RESPONSE (ug/L)	ON-COL (ug/L)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====
<hr/>						
\$ 11 4cmx				CAS #: 877-09-8		
2.277	2.278	-0.001	27173135 100.000	91.4	80.00- 120.00	100.00
<hr/>						
\$ 12 Decachlorobiphenyl				CAS #: 2051-24-3		
5.920	5.923	-0.003	19557121 100.000	92.5	80.00- 120.00	100.00
<hr/>						
1 Aroclor-1016				CAS #: 12674-11-2		
3.172	3.174	-0.002	12107372 1000.00	947	80.00- 120.00	100.00
3.255	3.257	-0.002	7984894 1000.00	895	45.95- 85.95	65.95
3.318	3.320	-0.002	5002187 1000.00	925	21.32- 61.32	41.32
3.545	3.547	-0.002	6462264 1000.00	934	33.37- 73.37	53.37
3.620	3.623	-0.003	5969635 1000.00	929	29.31- 69.31	49.31
Average of Peak Amounts =				926		
<hr/>						
7 Aroclor-1260				CAS #: 11096-82-5		
4.310	4.314	-0.004	12142700 1000.00	920	80.00- 120.00	100.00
4.435	4.439	-0.004	14819175 1000.00	952	102.04- 142.04	122.04
4.701	4.704	-0.003	11142127 1000.00	941	71.76- 111.76	91.76
4.875	4.878	-0.003	11552713 1000.00	947	75.14- 115.14	95.14
5.022	5.024	-0.002	25985688 1000.00	980	194.00- 234.00	214.00
Average of Peak Amounts =				948		
<hr/>						

Data File: /chem/ecdda.i/030110.b/03603601.d
Date: 01-MAR-2010 12:12
Client ID: AR16003
Sample Info: IMR100222-60 03

Column phase: CLP2

Instrument: ecdda.i
Operator: YSL
Column diameter: 0.25

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GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecdla.i/030110.b/048f4801.d

Lab Smp Id: WAR100222-60 04

Client Smp ID: AR166004

Inj Date : 01-MAR-2010 14:35

Operator : YS1

Inst ID: ecdla.i

Smp Info : |WAR100222-60 04

Misc Info :

Comment :

Method : /chem/ecdla.i/030110.b/ECD1-F-8082-022210.m

Meth Date : 02-Mar-2010 06:38 yip00818

Quant Type: ESTD

Cal Date : 22-FEB-2010 12:08

Cal File: 036f3601.d

Als bottle: 48

Continuing Calibration Sample

Dil Factor: 1.00000

Integrator: Falcon

Compound Sublist: AR1660.sub

Target Version: 3.50

Sample Matrix: None

Processing Host: hpc1p1

AMOUNTS

RT	EXP RT	DLT RT	CAL-AMT RESPONSE (ug/L)	ON-COL (ug/L)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====

\$ 11 4cmx				CAS #: 877-09-6		
1.918	1.919	-0.001	40617729 100.000	94.3	80.00- 120.00	100.00

\$ 12 Decachlorobiphenyl				CAS #: 2051-24-3		
5.223	5.227	-0.004	31166188 100.000	101	80.00- 120.00	100.00

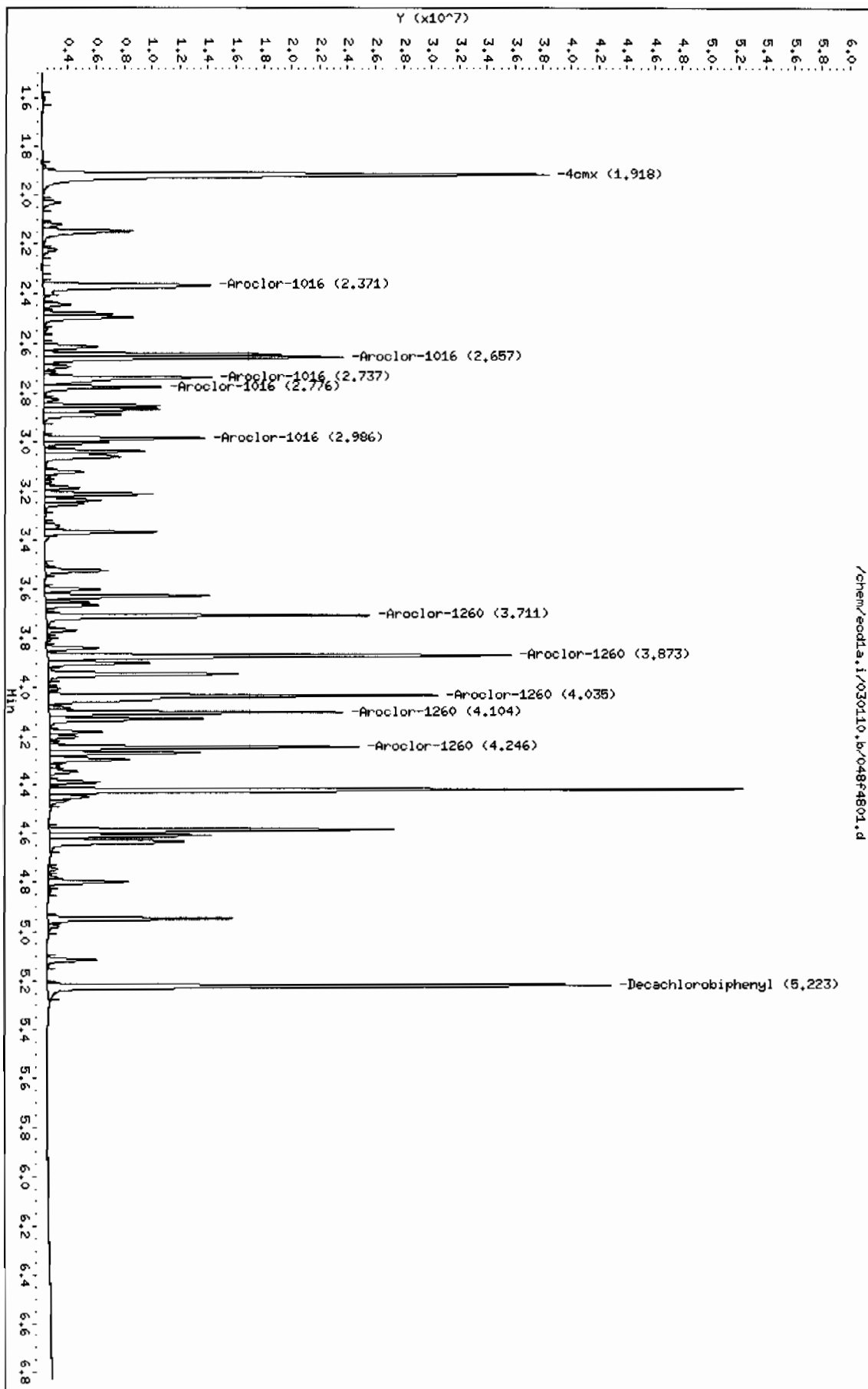
1 Aroclor-1016				CAS #: 12674-11-2		
2.371	2.373	-0.002	14316547 1000.00	930	80.00- 120.00	100.00
2.657	2.659	-0.002	17701542 1000.00	971	103.64- 143.64	123.64
2.737	2.740	-0.003	11565050 1000.00	958	60.78- 100.78	80.78
2.776	2.778	-0.002	6997176 1000.00	986	28.87- 68.87	48.87
2.986	2.988	-0.002	8944812 1000.00	1000	42.48- 82.48	62.48
Average of Peak Amounts =				970		

7 Aroclor-1260				CAS #: 11096-82-5		
3.711	3.714	-0.003	17183834 1000.00	1010	80.00- 120.00	100.00
3.873	3.877	-0.004	25694329 1000.00	1090	129.53- 169.53	149.53
4.035	4.039	-0.004	27241665 1000.00	1090	138.53- 178.53	158.53
4.104	4.107	-0.003	15504824 1000.00	1080	70.23- 110.23	90.23
4.246	4.250	-0.004	16087512 1000.00	1110	73.62- 113.62	93.62
Average of Peak Amounts =				1.08e+03		

Data File: /chem/ecda.i/030110.b/048f4801.d
Date: 01-MAR-2010 14:35
Client ID: AR166004
Sample Info: IMR100222-60 04

Column phase: CLP1

Instrument: ecda.i
Operator: YSL
Column diameter: 0.25



Data File: /chem/ecdl1a.i/030110.b/048b4801.d
Report Date: 02-Mar-2010 06:38

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GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecdl1a.i/030110.b/048b4801.d
Lab Smp Id: WAR100222-60 04 Client Smp ID: AR166004
Inj Date : 01-MAR-2010 14:35
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR100222-60 04
Misc Info :
Comment :
Method : /chem/ecdl1a.i/030110.b/ECD1-B-8082-022210.m
Meth Date : 02-Mar-2010 06:38 yip00818 Quant Type: ESTD
Cal Date : 22-FEB-2010 12:08 Cal File: 036b3601.d
Als bottle: 48 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpc1p1

AMOUNTS							
			CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====	=====
\$ 11 4cmx					CAS #: 877-09-8		
2.277	2.278	-0.001	27966569	100.000	94.0	80.00- 120.00	100.00

\$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.919	5.923	-0.004	20032132	100.000	94.7	80.00- 120.00	100.00

1 Aroclor-1016					CAS #: 12674-11-2		
3.171	3.174	-0.003	12335546	1000.00	964	80.00- 120.00	100.00
3.255	3.257	-0.002	8263559	1000.00	927	46.99- 86.99	66.99
3.318	3.320	-0.002	5158530	1000.00	954	21.82- 61.82	41.82
3.545	3.547	-0.002	6685217	1000.00	967	34.19- 74.19	54.19
3.621	3.623	-0.002	6241224	1000.00	971	30.60- 70.60	50.60
Average of Peak Amounts =					957		

7 Aroclor-1260					CAS #: 11096-82-5		
4.311	4.314	-0.003	12476487	1000.00	945	80.00- 120.00	100.00
4.435	4.439	-0.004	15274343	1000.00	981	102.43- 142.43	122.43
4.701	4.704	-0.003	11447910	1000.00	966	71.76- 111.76	91.76
4.874	4.878	-0.004	11901932	1000.00	975	75.39- 115.39	95.39
5.021	5.024	-0.003	26671689	1000.00	1000	193.78- 233.78	213.78
Average of Peak Amounts =					975		

Data File: /chem/ecda.i/030110.b/048b4801.d

Date: 01-MAR-2010 14:35

Client ID: AR166004

Sample Info: 11MAR100222-60 04

Column phase: CLP2

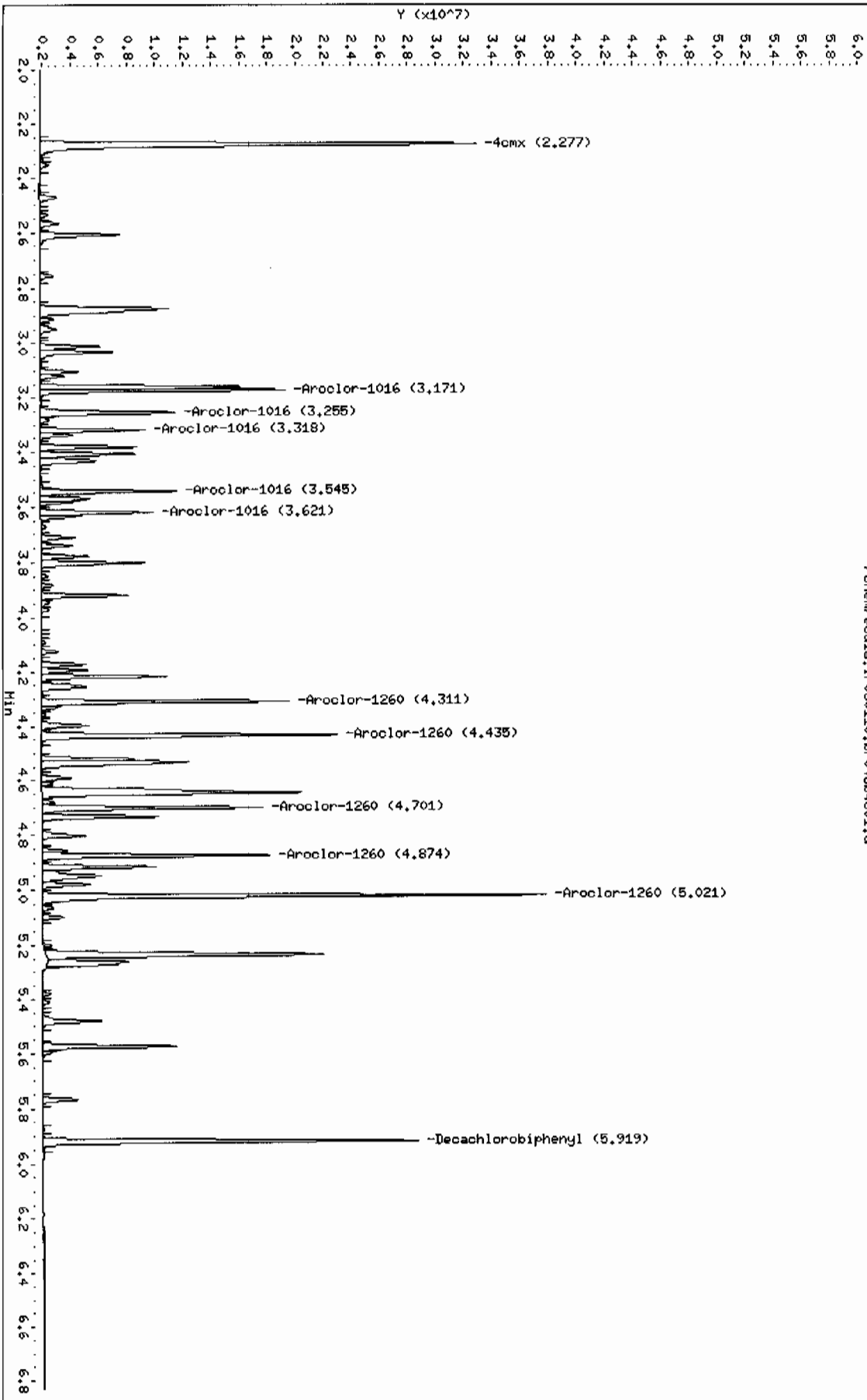
Instrument: ecda.i

Operator: YSI

Column diameter: 0.25

/chem/ecda.i/030110.b/048b4801.d

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GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecdl1a.i/030110.b/055f5501.d

Lab Smp Id: WAR100222-60 05

Client Smp ID: AR166005

Inj Date : 01-MAR-2010 15:59

Operator : YSl

Inst ID: ecd1a.i

Smp Info : |WAR100222-60 05

Misc Info :

Comment :

Method : /chem/ecdl1a.i/030110.b/ECD1-F-8082-022210.m

Meth Date : 02-Mar-2010 06:43 yip00818

Quant Type: ESTD

Cal Date : 22-FEB-2010 12:08

Cal File: 036f3601.d

Als bottle: 55

Continuing Calibration Sample

Dil Factor: 1.00000

Integrator: Falcon

Compound Sublist: AR1660.sub

Target Version: 3.50

Sample Matrix: None

AMOUNTS

CAL-AMT ON-COL

RT	EXP RT	DLT RT	RESPONSE (ug/L)	(ug/L)	TARGET RANGE	RATIO
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\$ 11 4cmx

CAS #: 877-09-8

1.917	1.919	-0.002	40087052	100.000	93.1	80.00- 120.00 100.00
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\$ 12 Decachlorobiphenyl

CAS #: 2051-24-3

5.224	5.227	-0.003	31186234	100.000	101	80.00- 120.00 100.00
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1 Aroclor-1016

CAS #: 12674-11-2

2.369	2.373	-0.004	13715233	1000.00	892	80.00- 120.00 100.00
2.657	2.659	-0.002	17422148	1000.00	955	107.66- 147.66 127.03
2.737	2.740	-0.003	11372597	1000.00	942	60.84- 100.84 82.92
2.775	2.778	-0.003	6869385	1000.00	968	28.62- 68.62 50.09
2.985	2.988	-0.003	8675648	1000.00	973	41.66- 81.66 63.26

Average of Peak Amounts =

946

7 Aroclor-1260

CAS #: 11096-82-5

3.712	3.714	-0.002	17202583	1000.00	1010	80.00- 120.00 100.00
3.874	3.877	-0.003	25581062	1000.00	1080	130.18- 170.18 148.70
4.037	4.039	-0.002	27240169	1000.00	1090	139.75- 179.75 158.35
4.105	4.107	-0.002	15422358	1000.00	1070	70.51- 110.51 89.65
4.247	4.250	-0.003	16053358	1000.00	1110	74.15- 114.15 93.32

Average of Peak Amounts =

1.07e+03

Data File: /chem/eod1a.i/030110.b/055f5501.d

Date: 01-MAR-2010 15:59

Client ID: AR166005

Sample Info: 1MR100222-60 05

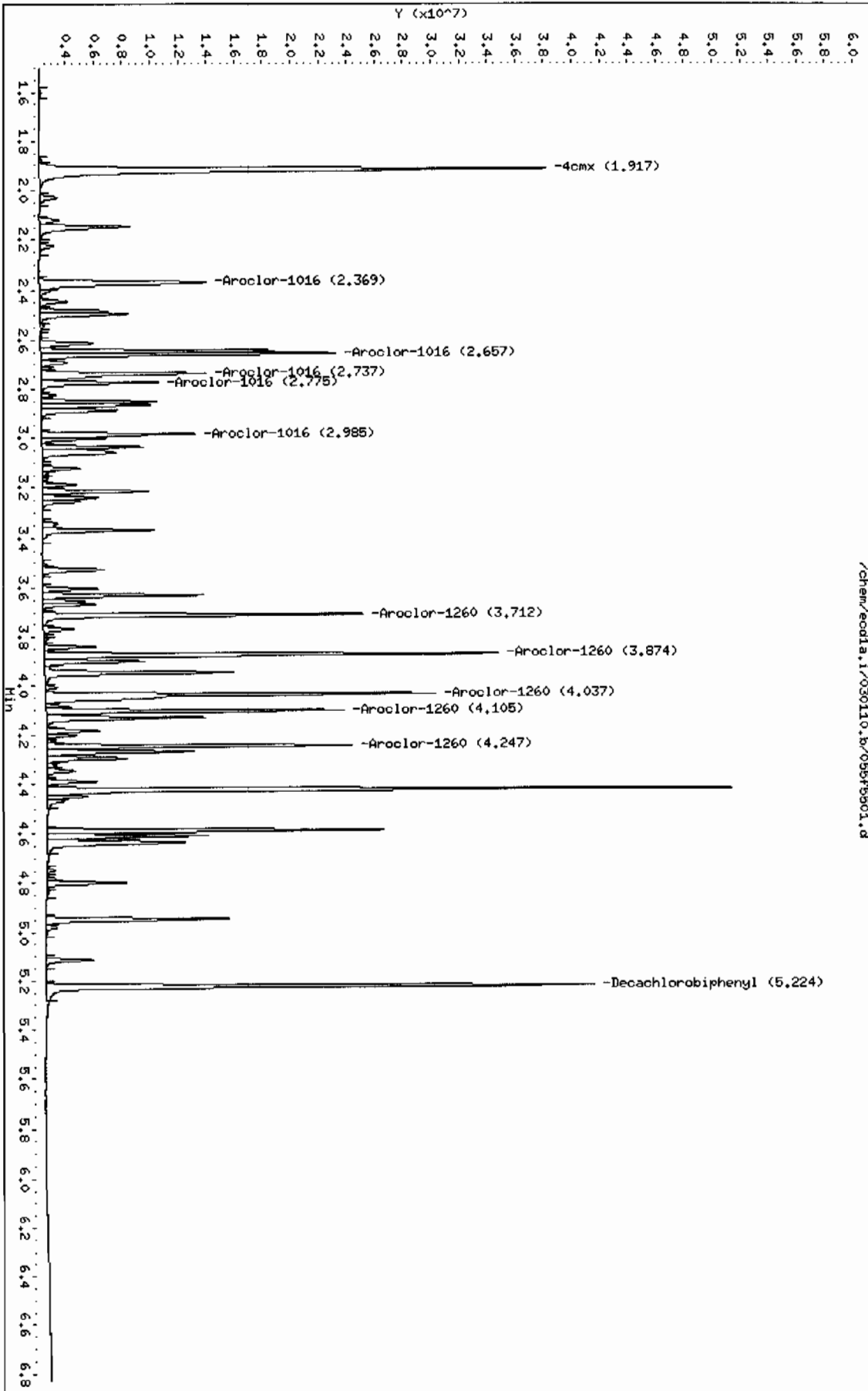
Column phase: CLP1

Instrument: eod1a.i

Operator: YSL

Column diameter: 0.25

Page 1



GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecdla.i/030110.b/055b5501.d

Lab Smp Id: WAR100222-60 05

Client Smp ID: AR166005

Inj Date : 01-MAR-2010 15:59

Operator : YSl

Inst ID: ecdla.i

Smp Info : |WAR100222-60 05

Misc Info :

Comment :

Method : /chem/ecdla.i/030110.b/ECD1-B-8082-022210.m

Meth Date : 02-Mar-2010 06:45 yip00818

Quant Type: ESTD

Cal Date : 22-FEB-2010 12:08

Cal File: 036b3601.d

Als bottle: 55

Continuing Calibration Sample

Dil Factor: 1.00000

Integrator: Falcon

Compound Sublist: AR1660.sub

Target Version: 3.50

Sample Matrix: None

Processing Host: hpc1pl

AMOUNTS

			CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE (ug/L)	(ug/L)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====
\$ 11 4cmx				CAS #: 877-09-8			
2.276	2.278	-0.002	27622069 100.000	92.9	80.00- 120.00	100.00	

\$ 12 Decachlorobiphenyl				CAS #: 2051-24-3			
5.920	5.923	-0.003	19976109 100.000	94.4	80.00- 120.00	100.00	

1 Aroclor-1016				CAS #: 12674-11-2			
3.172	3.174	-0.002	12227620 1000.00	956	80.00- 120.00	100.00 (M)	
3.254	3.257	-0.003	8139754 1000.00	913	46.57- 86.57	66.57	
3.318	3.320	-0.002	5085619 1000.00	941	21.59- 61.59	41.59	
3.545	3.547	-0.002	6369970 1000.00	921	32.09- 72.09	52.09	
3.621	3.623	-0.002	6103953 1000.00	950	29.92- 69.92	49.92	
Average of Peak Amounts =				936			

7 Aroclor-1260				CAS #: 11096-82-5			
4.312	4.314	-0.002	12349358 1000.00	935	80.00- 120.00	100.00	
4.437	4.439	-0.002	15116766 1000.00	971	102.41- 142.41	122.41	
4.702	4.704	-0.002	11375494 1000.00	960	72.11- 112.11	92.11	
4.875	4.878	-0.003	11867809 1000.00	973	76.10- 116.10	96.10	
5.022	5.024	-0.002	26547824 1000.00	1000	194.97- 234.97	214.97	
Average of Peak Amounts =				968			

Data File: /chem/ecdl.a.i/030110.b/055b5501.d
Report Date: 02-Mar-2010 06:45

Page 2

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecdda.i/030110.b/056b5501.d

Date : 01-MAR-2010 15:59

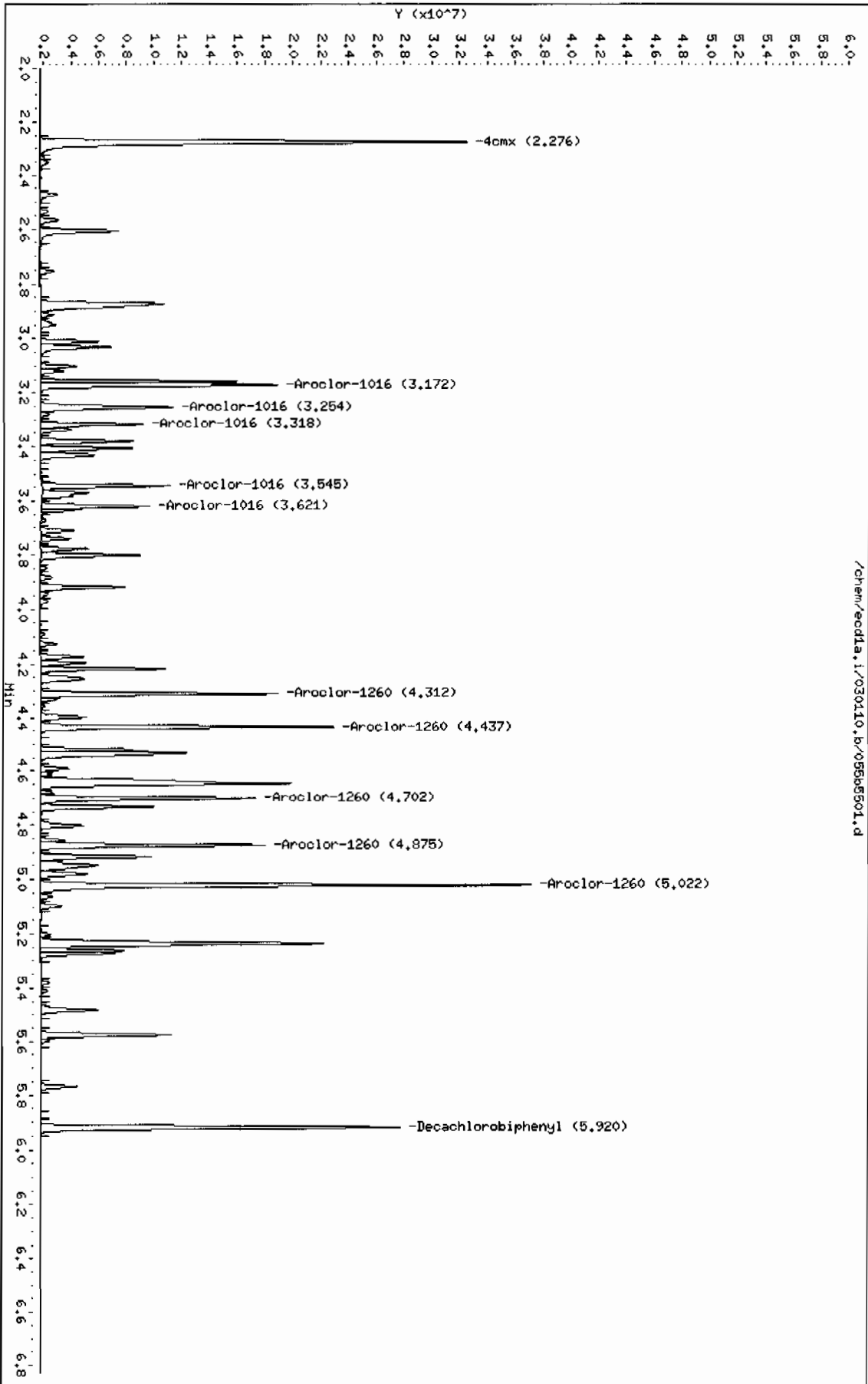
Client ID: AR16005

Sample Info: 1MAR100222-60 05

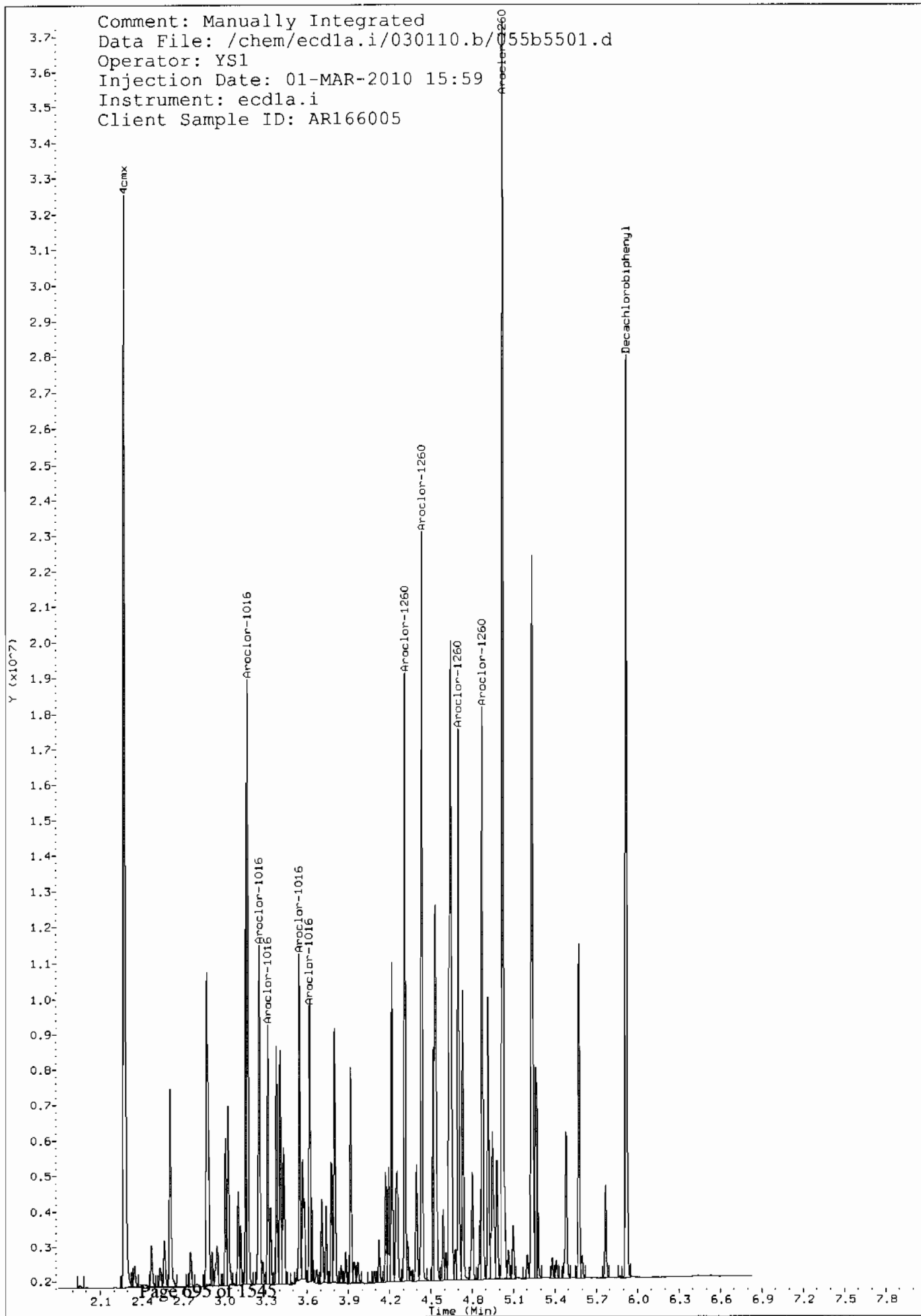
Page 1

Column phase: CLP2

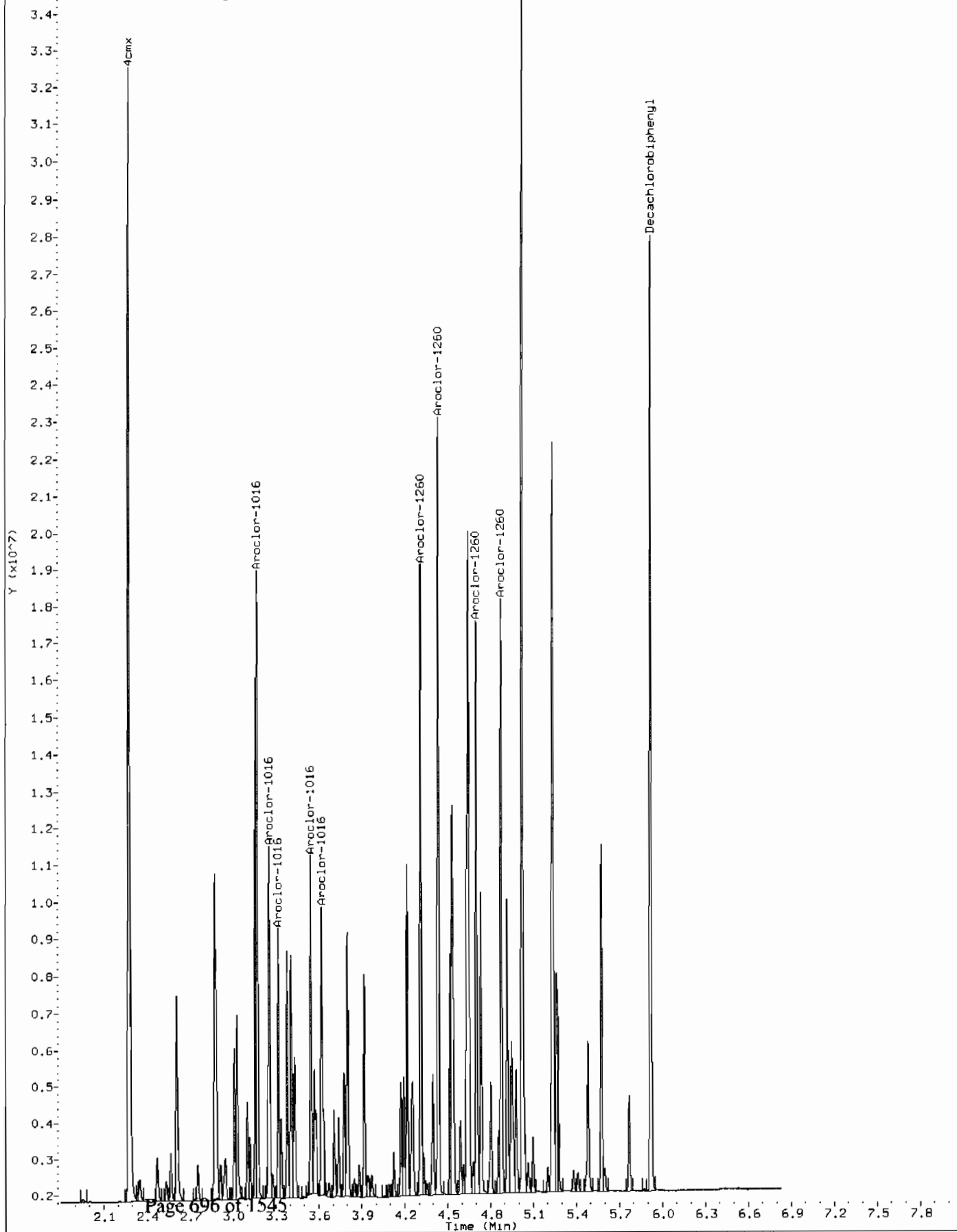
Instrument: ecdda.i
Operator: YSL
Column diameter: 0.25



Comment: Manually Integrated
Data File: /chem/ecdl1a.i/030110.b/055b5501.d
Operator: YS1
Injection Date: 01-MAR-2010 15:59
Instrument: ecd1a.i
Client Sample ID: AR166005



Comment: Before manual integration
Data File: /chem/ecdla.i/030110.b/Orig-055b5501.d
Operator: YS1
Injection Date: 01-MAR-2010 15:59
Instrument: ecdla.i
Client Sample ID: AR166005



8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 10-1981

GC Column: CLP1 ID: 0.25 (mm) Init. Calib. Date(s): 02/22/10 02/22/10

Instrument ID: ECD1A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION					
S1 : 1.92			DCB: 5.23		
EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	PIBLK01	WAR100219-99	02/22/10 0559	1.92	5.23
02	ZZZZZ	ZZZZZ	02/22/10 0610	1.92	5.23
03	ZZZZZ	ZZZZZ	02/22/10 0620	1.92	5.23
04	DDTANALOGSTD	WAR091219-DD	02/22/10 0631		
05	AR123201	WAR100104-32	02/22/10 0641		
06	AR122101	WAR100104-21	02/22/10 0652		
07	AR126201	WAR100104-62	02/22/10 0703		
08	AR166001	WAR100222-01	02/22/10 0713	1.92	5.23
09	AR166002	WAR100222-02	02/22/10 0724	1.92	5.23
10	AR166003	WAR100222-03	02/22/10 0734	1.92	5.23
11	AR166004	WAR100222-04	02/22/10 0745	1.92	5.23
12	AR166005	IAR100104-01	02/22/10 0755	1.92	5.23
13	AR166001	WAR100203-60	02/22/10 0806	1.92	5.23
14	AR125401	WAR100222-05	02/22/10 0816		
15	AR125402	WAR100222-06	02/22/10 0827		
16	AR125403	WAR100222-07	02/22/10 0837		
17	AR125404	WAR100222-08	02/22/10 0848		
18	AR125405	IAR100219-02	02/22/10 0859		
19	AR125401	WAR100219-54	02/22/10 0909		
20	AR124201	WAR100222-09	02/22/10 0920		
21	AR124202	WAR100222-10	02/22/10 0930		
22	AR124203	WAR100222-11	02/22/10 0941		
23	AR124204	WAR100222-12	02/22/10 0951		
24	AR124205	IAR100219-01	02/22/10 1002		
25	AR124201	WAR100219-42	02/22/10 1012		
26	AR124801	WAR100222-13	02/22/10 1023		
27	AR124802	WAR100222-14	02/22/10 1033		
28	AR124803	WAR100222-15	02/22/10 1044		
29	AR124805	IAR100211-01	02/22/10 1054		
30	AR124804	WAR100222-16	02/22/10 1105		
31	AR124801	WAR091217-48	02/22/10 1116		
32	AR126801	WAR100222-17	02/22/10 1126		

QC LIMITS

S1 = 4cmx (+/- 0.03 MINUTES)

DCB = Decachlorobiphenyl (+/- 0.03 MINUTES)

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

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 10-1981

GC Column: CLP1 ID: 0.25 (mm) Init. Calib. Date(s): 02/22/10 02/22/10

Instrument ID: ECD1A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION					
S1 : 1.92		DCB: 5.23			
EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	AR126802	WAR100222-18	02/22/10	1137	
02	AR126803	WAR100222-19	02/22/10	1147	
03	AR126804	WAR100222-20	02/22/10	1158	
04	AR126805	IAR100104-05	02/22/10	1208	
05	AR126801	WAR100107-68	02/22/10	1219	
06	PIBLK02	WAR100219-99	02/22/10	1229	1.92 5.23
07	ZZZZZ	ZZZZZ	02/22/10	1240	1.92 5.23
08	ZZZZZ	ZZZZZ	02/22/10	1250	1.93 5.23
09	ZZZZZ	ZZZZZ	02/22/10	1301	1.92 5.23
10	ZZZZZ	ZZZZZ	02/22/10	1314	1.92 5.23
11	ZZZZZ	ZZZZZ	02/22/10	1326	1.92 5.23
12	ZZZZZ	ZZZZZ	02/22/10	1339	1.92 5.23
13	ZZZZZ	ZZZZZ	02/22/10	1351	1.92 5.23
14	ZZZZZ	ZZZZZ	02/22/10	1404	1.92 5.23
15	ZZZZZ	ZZZZZ	02/22/10	1417	1.92 5.23
16	ZZZZZ	ZZZZZ	02/22/10	1430	1.92 5.23
17	AR166002	WAR100203-60	02/22/10	1442	1.92 5.23
18	PIBLK03	WAR100219-99	02/22/10	1453	1.92 5.23
19	ZZZZZ	ZZZZZ	02/22/10	1503	1.92 5.23
20	ZZZZZ	ZZZZZ	02/22/10	1516	1.92 5.23
21	ZZZZZ	ZZZZZ	02/22/10	1528	1.92 5.23
22	ZZZZZ	ZZZZZ	02/22/10	1541	1.92 5.23
23	ZZZZZ	ZZZZZ	02/22/10	1554	1.92 5.23
24	ZZZZZ	ZZZZZ	02/22/10	1606	1.92 5.23
25	ZZZZZ	ZZZZZ	02/22/10	1619	1.92 5.23
26	ZZZZZ	ZZZZZ	02/22/10	1632	1.92 5.23
27	ZZZZZ	ZZZZZ	02/22/10	1644	1.92 5.23
28	ZZZZZ	ZZZZZ	02/22/10	1657	1.92 5.23
29	AR166003	WAR100203-60	02/22/10	1710	1.92 5.23
30	PIBLK04	WAR100219-99	02/22/10	1722	1.92 5.23
31	ZZZZZ	ZZZZZ	02/22/10	1735	1.92 5.23
32	ZZZZZ	ZZZZZ	02/22/10	1748	1.92 5.23

S1 = 4cmx (QC LIMITS +/- 0.03 MINUTES)
DCB = Decachlorobiphenyl (QC LIMITS +/- 0.03 MINUTES)

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

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 10-1981

GC Column: CLP2 ID: 0.25 (mm) Init. Calib. Date(s): 02/22/10 02/22/10

Instrument ID: ECD1A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION							
S1 : 2.29				DCB: 5.94			
EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT	#	DCB RT	#
01	PIBLK01	WAR100219-99	02/22/10 0559	2.29		5.93	
02	ZZZZZ	ZZZZZ	02/22/10 0610	2.29		5.94	
03	ZZZZZ	ZZZZZ	02/22/10 0620	2.29		5.94	
04	DDTANALOGSTD	WAR091219-DD	02/22/10 0631				
05	AR123201	WAR100104-32	02/22/10 0641				
06	AR122101	WAR100104-21	02/22/10 0652				
07	AR126201	WAR100104-62	02/22/10 0703				
08	AR166001	WAR100222-01	02/22/10 0713	2.29		5.94	
09	AR166002	WAR100222-02	02/22/10 0724	2.29		5.94	
10	AR166003	WAR100222-03	02/22/10 0734	2.29		5.94	
11	AR166004	WAR100222-04	02/22/10 0745	2.29		5.94	
12	AR166005	IAR100104-01	02/22/10 0755	2.29		5.94	
13	AR166001	WAR100203-60	02/22/10 0806	2.29		5.94	
14	AR125401	WAR100222-05	02/22/10 0816				
15	AR125402	WAR100222-06	02/22/10 0827				
16	AR125403	WAR100222-07	02/22/10 0837				
17	AR125404	WAR100222-08	02/22/10 0848				
18	AR125405	IAR100219-02	02/22/10 0859				
19	AR125401	WAR100219-54	02/22/10 0909				
20	AR124201	WAR100222-09	02/22/10 0920				
21	AR124202	WAR100222-10	02/22/10 0930				
22	AR124203	WAR100222-11	02/22/10 0941				
23	AR124204	WAR100222-12	02/22/10 0951				
24	AR124205	IAR100219-01	02/22/10 1002				
25	AR124201	WAR100219-42	02/22/10 1012				
26	AR124801	WAR100222-13	02/22/10 1023				
27	AR124802	WAR100222-14	02/22/10 1033				
28	AR124803	WAR100222-15	02/22/10 1044				
29	AR124805	IAR100211-01	02/22/10 1054				
30	AR124804	WAR100222-16	02/22/10 1105				
31	AR124801	WAR091217-48	02/22/10 1116				
32	AR126801	WAR100222-17	02/22/10 1126				

QC LIMITS
S1 = 4cmx (+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl (+/- 0.03 MINUTES)

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

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A
 Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 10-1981
 GC Column: CLP2 ID: 0.25 (mm) Init. Calib. Date(s): 02/22/10 02/22/10
 Instrument ID: ECD1A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION						
S1 : 2.29			DCB: 5.94			
EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT	#	DCB RT
01	AR126802	WAR100222-18	02/22/10	1137		
02	AR126803	WAR100222-19	02/22/10	1147		
03	AR126804	WAR100222-20	02/22/10	1158		
04	AR126805	IAR100104-05	02/22/10	1208		
05	AR126801	WAR100107-68	02/22/10	1219		
06	PIBLK02	WAR100219-99	02/22/10	1229	2.29	5.94
07	ZZZZZ	ZZZZZ	02/22/10	1240	2.29	5.94
08	ZZZZZ	ZZZZZ	02/22/10	1250	2.29	5.94
09	ZZZZZ	ZZZZZ	02/22/10	1301	2.29	5.94
10	ZZZZZ	ZZZZZ	02/22/10	1314	2.29	5.94
11	ZZZZZ	ZZZZZ	02/22/10	1326	2.29	5.94
12	ZZZZZ	ZZZZZ	02/22/10	1339	2.29	5.93
13	ZZZZZ	ZZZZZ	02/22/10	1351	2.29	5.93
14	ZZZZZ	ZZZZZ	02/22/10	1404	2.29	5.94
15	ZZZZZ	ZZZZZ	02/22/10	1417	2.29	5.93
16	ZZZZZ	ZZZZZ	02/22/10	1430	2.29	5.93
17	AR166002	WAR100203-60	02/22/10	1442	2.29	5.94
18	PIBLK03	WAR100219-99	02/22/10	1453	2.29	5.94
19	ZZZZZ	ZZZZZ	02/22/10	1503	2.29	5.94
20	ZZZZZ	ZZZZZ	02/22/10	1516	2.29	5.93
21	ZZZZZ	ZZZZZ	02/22/10	1528	2.29	5.93
22	ZZZZZ	ZZZZZ	02/22/10	1541	2.29	5.94
23	ZZZZZ	ZZZZZ	02/22/10	1554	2.29	5.93
24	ZZZZZ	ZZZZZ	02/22/10	1606	2.29	5.93
25	ZZZZZ	ZZZZZ	02/22/10	1619	2.29	5.94
26	ZZZZZ	ZZZZZ	02/22/10	1632	2.29	5.93
27	ZZZZZ	ZZZZZ	02/22/10	1644	2.29	5.93
28	ZZZZZ	ZZZZZ	02/22/10	1657	2.29	5.93
29	AR166003	WAR100203-60	02/22/10	1710	2.29	5.93
30	PIBLK04	WAR100219-99	02/22/10	1722	2.29	5.93
31	ZZZZZ	ZZZZZ	02/22/10	1735	2.29	5.93
32	ZZZZZ	ZZZZZ	02/22/10	1748	2.29	5.94

QC LIMITS

S1 = 4cmx (+/- 0.03 MINUTES)
 DCB = Decachlorobiphenyl (+/- 0.03 MINUTES)

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

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 10-1981

GC Column: CLP1 ID: 0.25 (mm) Init. Calib. Date(s): 02/22/10 02/22/10

Instrument ID: ECD1A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION						
S1 : 1.92			DCB: 5.23			
EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #	
01	PIBLK01	WAR100219-99	03/01/10	0535	1.92	5.22
02	ZZZZZ	ZZZZZ	03/01/10	0546	1.92	5.23
03	AR125401	WAR100219-54	03/01/10	0556		
04	AR124201	WAR100219-42	03/01/10	0607		
05	AR124801	WAR100223-48	03/01/10	0617		
06	AR166001	WAR100222-60	03/01/10	0628	1.92	5.23
07	AR126801	WAR100107-68	03/01/10	0638		
08	AR123201	WAR100104-32	03/01/10	0649		
09	AR122101	WAR100104-21	03/01/10	0659		
10	AR126201	WAR100104-62	03/01/10	0710		
11	DDTANALOGSTD	WAR091219-DD	03/01/10	0720		
12	PIBLK02	WAR100219-99	03/01/10	0731	1.92	5.23
13	ZZZZZ	ZZZZZ	03/01/10	0741	1.92	5.23
14	ZZZZZ	ZZZZZ	03/01/10	0752	1.92	5.23
15	ZZZZZ	ZZZZZ	03/01/10	0802	1.92	5.23
16	ZZZZZ	ZZZZZ	03/01/10	0813	1.92	5.23
17	AR166002	WAR100222-60	03/01/10	0825	1.92	5.22
18	PIBLK03	WAR100219-99	03/01/10	0836	1.92	5.22
19	ZZZZZ	ZZZZZ	03/01/10	0847	1.92	5.23
20	ZZZZZ	ZZZZZ	03/01/10	0857	1.92	5.23
21	ZZZZZ	ZZZZZ	03/01/10	0907	1.94	5.24
22	ZZZZZ	ZZZZZ	03/01/10	0920	1.94	5.23
23	ZZZZZ	ZZZZZ	03/01/10	0933	1.94	5.23
24	ZZZZZ	ZZZZZ	03/01/10	0945	1.94	5.23
25	ZZZZZ	ZZZZZ	03/01/10	0958	1.94	5.23
26	ZZZZZ	ZZZZZ	03/01/10	1010	1.94	5.23
27	ZZZZZ	ZZZZZ	03/01/10	1023	1.92	5.22
28	ZZZZZ	ZZZZZ	03/01/10	1036	1.94	5.23
29	AR166003	WAR100222-60	03/01/10	1048	1.92	5.22
30	PIBLK04	WAR100219-99	03/01/10	1059	1.92	5.23
31	ZZZZZ	ZZZZZ	03/01/10	1109	1.94	5.23
32	ZZZZZ	ZZZZZ	03/01/10	1122	1.94	5.24

QC LIMITS

S1 = 4cmx (+/- 0.03 MINUTES)

DCB = Decachlorobiphenyl (+/- 0.03 MINUTES)

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

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 10-1981

GC Column: CLP1 ID: 0.25 (mm) Init. Calib. Date(s): 02/22/10 02/22/10

Instrument ID: ECD1A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION							
S1 : 1.92				DCB: 5.23			
EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT	#	DCB RT	#
01	ZZZZZ	03/01/10	1135	1.94		5.23	
02	ZZZZZ	03/01/10	1147	1.94		5.23	
03	ZZZZZ	03/01/10	1200	1.93		5.22	
04	AR166003	WAR100222-60	1212	1.92		5.22	
05	PIBLK04	WAR100219-99	1223	1.92		5.22	
06	PBLK01	1202054828	1233	1.92		5.22	
07	PBLK01LCS	1202054829	1244	1.92		5.23	
08	ZZZZZ	03/01/10	1255	1.92		5.23	
09	ZZZZZ	03/01/10	1307	1.92		5.22	
10	ZZZZZ	03/01/10	1320	1.92		5.22	
11	ZZZZZ	03/01/10	1332	1.92		5.22	
12	ZZZZZ	03/01/10	1345	1.92		5.22	
13	ZZZZZ	03/01/10	1358	1.92		5.22	
14	ZZZZZ	03/01/10	1410	1.92		5.22	
15	ZZZZZ	03/01/10	1423	1.92		5.22	
16	AR166004	WAR100222-60	1435	1.92		5.22	
17	PIBLK05	WAR100219-99	1446	1.92		5.23	
18	ZZZZZ	03/01/10	1456	1.92		5.22	
19	ZZZZZ	03/01/10	1509	1.92		5.22	
20	ZZZZZ	03/01/10	1521	1.92		5.22	
21	RE15-10-8386	247790002	1534	1.92		5.22	
22	RE15-10-8387	247790003	1547	1.92		5.22	
23	AR166005	WAR100222-60	1559	1.92		5.22	
24	PIBLK06	WAR100219-99	1612	1.92		5.22	
25	ZZZZZ	03/01/10	1625	1.92		5.22	
26	ZZZZZ	03/01/10	1637	1.92		5.22	
27	ZZZZZ	03/01/10	1650	1.92		5.22	
28	ZZZZZ	03/01/10	1702	1.92		5.22	
29	ZZZZZ	03/01/10	1715	1.92		5.22	
30	ZZZZZ	03/01/10	1728	1.92		5.22	
31	ZZZZZ	03/01/10	1740	1.92		5.22	
32	AR166006	WAR100222-60	1753	1.92		5.22	

QC LIMITS

S1 = 4cmx (+/- 0.03 MINUTES)

DCB = Decachlorobiphenyl (+/- 0.03 MINUTES)

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

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 10-1981

GC Column: CLP2 ID: 0.25 (mm) Init. Calib. Date(s): 02/22/10 02/22/10

Instrument ID: ECD1A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION					
S1 : 2.28			DCB: 5.92		
EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	PIBLK01	WAR100219-99	03/01/10 0535	2.27	5.92
02	ZZZZZ	ZZZZZ	03/01/10 0546	2.28	5.92
03	AR125401	WAR100219-54	03/01/10 0556		
04	AR124201	WAR100219-42	03/01/10 0607		
05	AR124801	WAR100223-48	03/01/10 0617		
06	AR166001	WAR100222-60	03/01/10 0628	2.28	5.92
07	AR126801	WAR100107-68	03/01/10 0638		
08	AR123201	WAR100104-32	03/01/10 0649		
09	AR122101	WAR100104-21	03/01/10 0659		
10	AR126201	WAR100104-62	03/01/10 0710		
11	DDTANALOGSTD	WAR091219-DD	03/01/10 0720		
12	PIBLK02	WAR100219-99	03/01/10 0731	2.28	5.92
13	ZZZZZ	ZZZZZ	03/01/10 0741	2.28	5.92
14	ZZZZZ	ZZZZZ	03/01/10 0752	2.28	5.92
15	ZZZZZ	ZZZZZ	03/01/10 0802	2.28	5.92
16	ZZZZZ	ZZZZZ	03/01/10 0813	2.28	5.92
17	AR166002	WAR100222-60	03/01/10 0825	2.28	5.92
18	PIBLK03	WAR100219-99	03/01/10 0836	2.28	5.92
19	ZZZZZ	ZZZZZ	03/01/10 0847	2.28	5.92
20	ZZZZZ	ZZZZZ	03/01/10 0857	2.28	5.92
21	ZZZZZ	ZZZZZ	03/01/10 0907	2.30	5.93
22	ZZZZZ	ZZZZZ	03/01/10 0920	2.30	5.92
23	ZZZZZ	ZZZZZ	03/01/10 0933	2.30	5.92
24	ZZZZZ	ZZZZZ	03/01/10 0945	2.30	5.92
25	ZZZZZ	ZZZZZ	03/01/10 0958	2.30	5.92
26	ZZZZZ	ZZZZZ	03/01/10 1010	2.29	5.92
27	ZZZZZ	ZZZZZ	03/01/10 1023	2.28	5.92
28	ZZZZZ	ZZZZZ	03/01/10 1036	2.30	5.92
29	AR166003	WAR100222-60	03/01/10 1048	2.28	5.92
30	PIBLK04	WAR100219-99	03/01/10 1059	2.28	5.92
31	ZZZZZ	ZZZZZ	03/01/10 1109	2.30	5.92
32	ZZZZZ	ZZZZZ	03/01/10 1122	2.30	5.93

QC LIMITS

S1 = 4cmx (+/- 0.03 MINUTES)

DCB = Decachlorobiphenyl (+/- 0.03 MINUTES)

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

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 10-1981

GC Column: CLP2 ID: 0.25 (mm) Init. Calib. Date(s): 02/22/10 02/22/10

Instrument ID: ECD1A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION					
S1 : 2.28			DCB: 5.92		
EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	ZZZZZ	03/01/10	1135	2.30	5.92
02	ZZZZZ	03/01/10	1147	2.30	5.92
03	ZZZZZ	03/01/10	1200	2.29	5.92
04	AR166003	WAR100222-60	1212	2.28	5.92
05	PIBLK04	WAR100219-99	1223	2.28	5.92
06	PBLK01	1202054828	1233	2.28	5.92
07	PBLK01LCS	1202054829	1244	2.28	5.92
08	ZZZZZ	03/01/10	1255	2.28	5.92
09	ZZZZZ	03/01/10	1307	2.28	5.92
10	ZZZZZ	03/01/10	1320	2.28	5.92
11	ZZZZZ	03/01/10	1332	2.28	5.92
12	ZZZZZ	03/01/10	1345	2.28	5.92
13	ZZZZZ	03/01/10	1358	2.28	5.92
14	ZZZZZ	03/01/10	1410	2.28	5.92
15	ZZZZZ	03/01/10	1423	2.28	5.92
16	AR166004	WAR100222-60	1435	2.28	5.92
17	PIBLK05	WAR100219-99	1446	2.28	5.92
18	ZZZZZ	03/01/10	1456	2.28	5.92
19	ZZZZZ	03/01/10	1509	2.28	5.92
20	ZZZZZ	03/01/10	1521	2.28	5.92
21	RE15-10-8386	247790002	1534	2.28	5.92
22	RE15-10-8387	247790003	1547	2.28	5.92
23	AR166005	WAR100222-60	1559	2.28	5.92
24	PIBLK06	WAR100219-99	1612	2.28	5.92
25	ZZZZZ	03/01/10	1625	2.28	5.92
26	ZZZZZ	03/01/10	1637	2.28	5.92
27	ZZZZZ	03/01/10	1650	2.28	5.92
28	ZZZZZ	03/01/10	1703	2.28	5.92
29	ZZZZZ	03/01/10	1715	2.28	5.92
30	ZZZZZ	03/01/10	1728	2.28	5.92
31	ZZZZZ	03/01/10	1740	2.28	5.92
32	AR166006	WAR100222-60	1753	2.28	5.92

QC LIMITS

S1 = 4cmx (+/- 0.03 MINUTES)

DCB = Decachlorobiphenyl (+/- 0.03 MINUTES)

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

page 2 of 2

FORM VIII PEST

OLM03.0

Identification Summary

Page 1 of 1

SDG Number: 10-1981

Client ID: LCS for batch 958178

Lab Sample ID: 1202054829

Data File: 039f3901.d

Data File: 039b3901.d

Inst: ECD1A.I_1

Inst: ECD1A.I_2

Column: CLP1

Column: CLP2

Analyzed: 01-MAR-10 12:44

Analyzed: 01-MAR-10 12:44

Analyte	Peak	RT	RT Window	Conc.	Ave Conc.	Units	RPD
Aroclor-1016							1.49
Column 1	1	2.37	2.34 – 2.4	25.8	27.6	ug/kg	
	2	2.66	2.63 – 2.69	27.9		ug/kg	
	3	2.74	2.71 – 2.77	27.5		ug/kg	
	4	2.78	2.75 – 2.81	28.2		ug/kg	
	5	2.99	2.96 – 3.02	28.8		ug/kg	
Column 2	1	3.17	3.14 – 3.2	27.5	27.2	ug/kg	
	2	3.26	3.23 – 3.29	26.8		ug/kg	
	3	3.32	3.29 – 3.35	26.8		ug/kg	
	4	3.55	3.52 – 3.58	27.2		ug/kg	
	5	3.62	3.59 – 3.65	27.8		ug/kg	
Aroclor-1260							9.95
Column 1	1	3.71	3.68 – 3.74	32.9	35.7	ug/kg	
	2	3.88	3.85 – 3.91	35.8		ug/kg	
	3	4.04	4.01 – 4.07	36.6		ug/kg	
	4	4.11	4.08 – 4.14	35.7		ug/kg	
	5	4.25	4.22 – 4.28	37.1		ug/kg	
Column 2	1	4.31	4.28 – 4.34	30.8	32.3	ug/kg	
	2	4.44	4.41 – 4.47	32.3		ug/kg	
	3	4.7	4.67 – 4.73	32.1		ug/kg	
	4	4.88	4.85 – 4.91	32.4		ug/kg	
	5	5.02	4.99 – 5.05	33.8		ug/kg	

QUALITY CONTROL DATA

PCB
Certificate of Analysis
Sample Summary

SDG Number: 10-1981	Matrix: SOIL	
Lab Sample ID: 1202054828		
Client Sample: QC for batch 958178	Client: LANL010	Project: QC
Client ID: MB for batch 958178	Method: SW846 8082	SOP Ref: GL-OA-E-040
Batch ID: 958180	Inst: ECD1A.I	Dilution: 1
Run Date: 03/01/2010 12:33	Analyst: YS1	Inj. Vol: 1 uL
Prep Date: 02/26/2010 20:38	Aliquot: 30 g	Final Volume: 1 mL
Data File: 038f3801-1.d	Column: 1 CLP1	Level: LOW
	2 CLP2	

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.33	ug/kg	1.11	3.33	1
11104-28-2	Aroclor-1221	U	3.33	ug/kg	1.11	3.33	1
11141-16-5	Aroclor-1232	U	3.33	ug/kg	1.11	3.33	1
53469-21-9	Aroclor-1242	U	3.33	ug/kg	1.11	3.33	1
12672-29-6	Aroclor-1248	U	3.33	ug/kg	1.11	3.33	1
11097-69-1	Aroclor-1254	U	3.33	ug/kg	1.11	3.33	1
11096-82-5	Aroclor-1260	U	3.33	ug/kg	1.11	3.33	1

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecdl1a.i/030110.b/038f3801-1.d
Lab Smp Id: 1202054828 Client Smp ID: PBLK01
Inj Date : 01-MAR-2010 12:33
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |1202054828|1|
Misc Info : |ECD82P_1S|958180|SVA|QC A|SOIL|MB|||
Comment :
Method : /chem/ecdl1a.i/030110.b/ECD1-F-8082-022210.m
Meth Date : 01-Mar-2010 12:26 yip00818 Quant Type: ESTD
Cal Date : 22-FEB-2010 12:08 Cal File: 036f3601.d
Als bottle: 38 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 10-1981.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

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

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

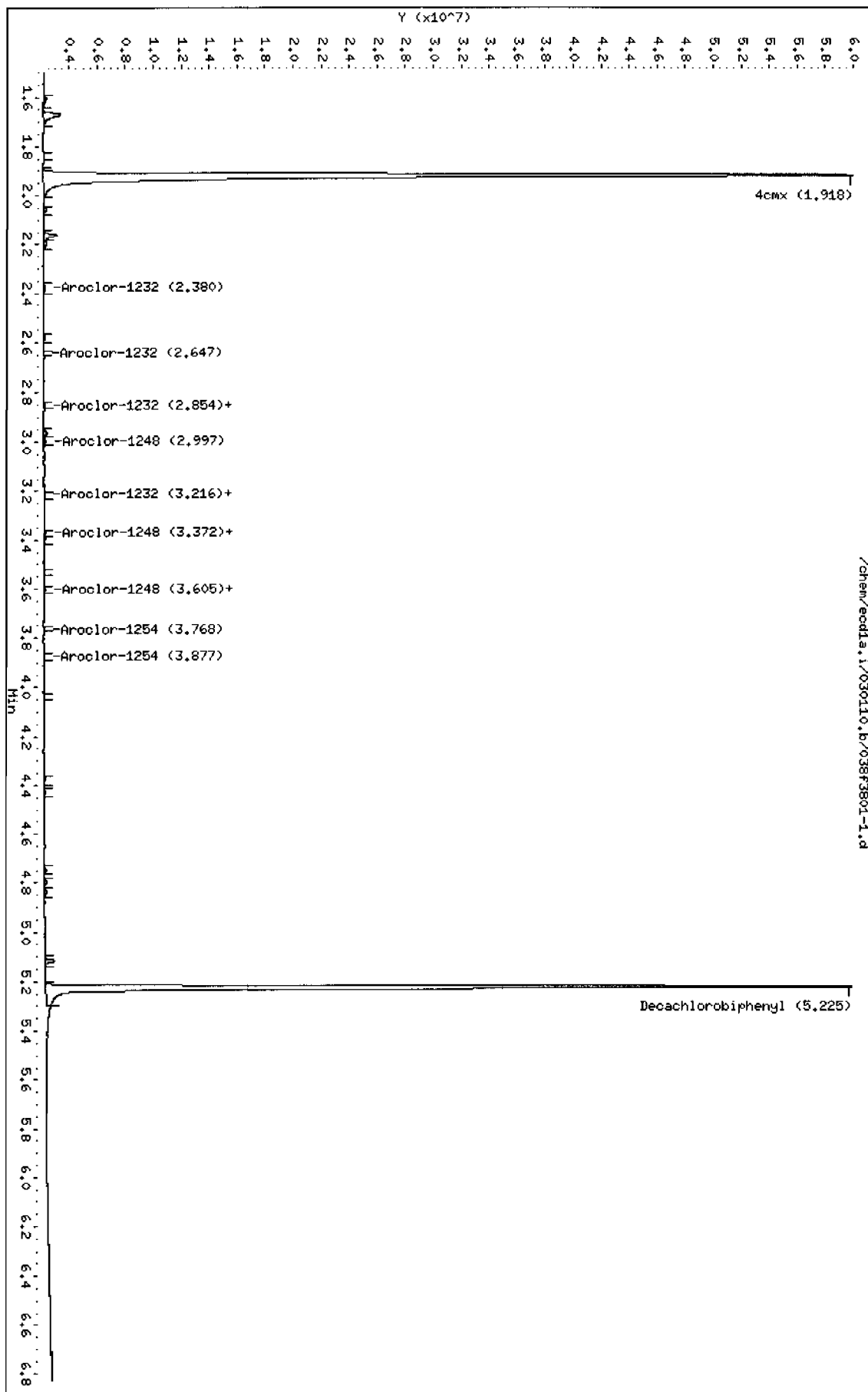
Cpnd Variable Local Compound Variable

CONCENTRATIONS						
			ON-COL	FINAL		
RT	EXP RT	DLT RT	RESPONSE (ug/L)	(ug/Kg)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====
\$ 11 4cmx				CAS #: 877-09-8		
1.918	1.919	-0.001	66268316 153.884	5.1	80.00- 120.00	100.00

\$ 12 Decachlorobiphenyl				CAS #: 2051-24-3		
5.225	5.227	-0.002	56771807 184.750	6.2	80.00- 120.00	100.00

Data File: /chem/ecdla.i/030110.b/038f3801-1.d
Date: 01-MAR-2010 12:33
Client ID: PLK01
Sample Info: 1120205482811
Volume Injected (uL): 1.0
Column phase: CLP1

Instrument: ecdla.i
Operator: YSL
Column diameter: 0.25



Data File: /chem/ecdla.i/030110.b/038b3801-1.d
Report Date: 01-Mar-2010 13:41

Page 1

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL
Data file : /chem/ecdla.i/030110.b/038b3801-1.d
Lab Smp Id: 1202054828 Client Smp ID: PBLK01
Inj Date : 01-MAR-2010 12:33
Operator : YS1 Inst ID: ecdla.i
Smp Info : |1202054828|1|
Misc Info : |ECD82P_1S|958180|SVA|QC A|SOIL|MB|||
Comment :
Method : /chem/ecdla.i/030110.b/ECD1-B-8082-022210.m
Meth Date : 01-Mar-2010 12:26 yip00818 Quant Type: ESTD
Cal Date : 22-FEB-2010 12:08 Cal File: 036b3601.d
Als bottle: 38 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 10-1981.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpc1p1

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

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

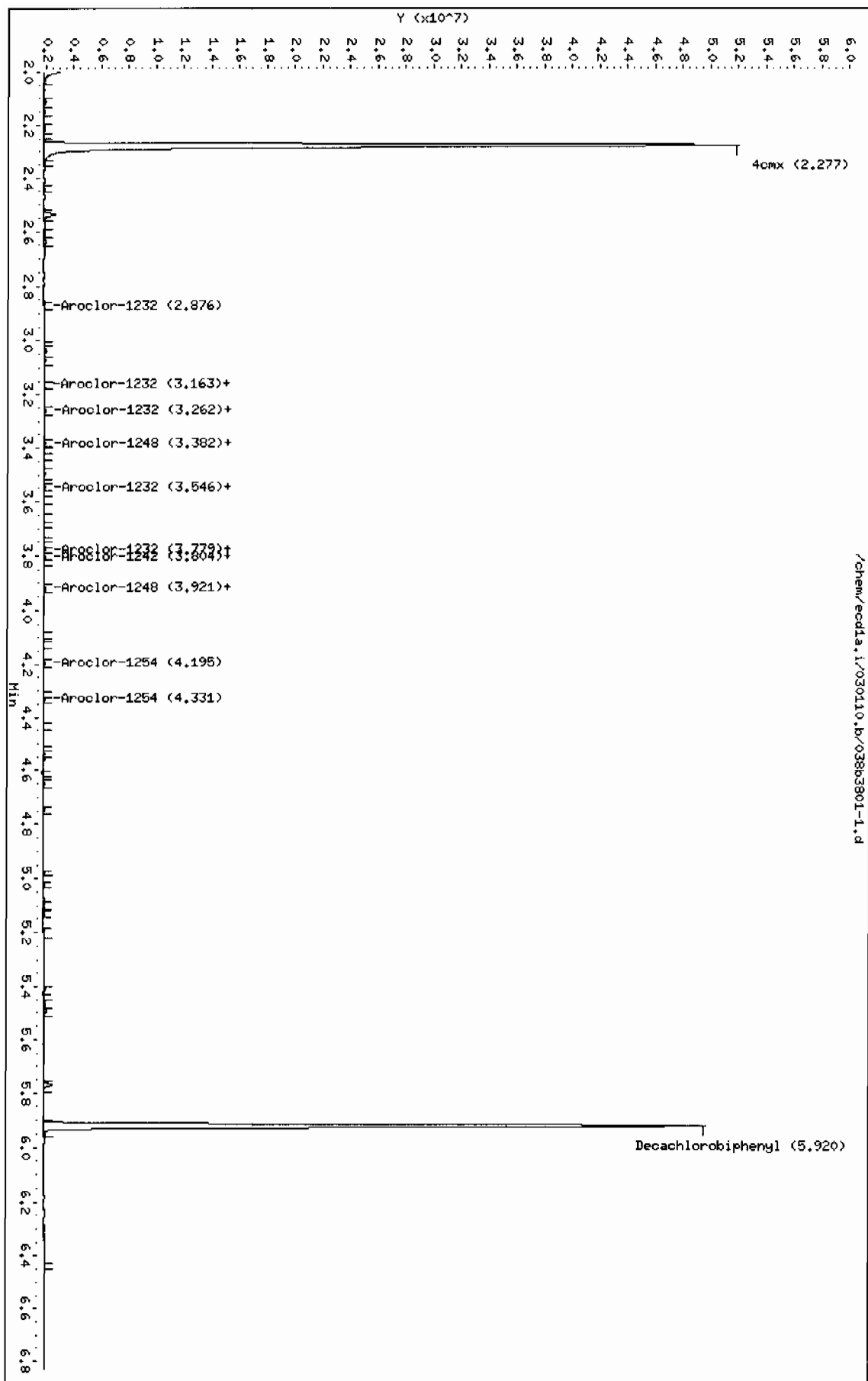
Cpnd Variable Local Compound Variable

CONCENTRATIONS						
			ON-COL	FINAL		
RT	EXP RT	DLT RT	RESPONSE (ug/L)	(ug/Kg)	TARGET RANGE	RATIO
==	=====	=====	*****	*****	*****	=====
\$ 11 4cmx CAS #: 877-09-8						
2.277	2.278	-0.001	45433195	152.770	5.1 80.00- 120.00	100.00

\$ 12 Decachlorobiphenyl CAS #: 2051-24-3						
5.920	5.923	-0.003	36179776	171.064	5.7 80.00- 120.00	100.00

Data File: /chem/ecdl1a.1/030110.b/038b3801-1.d
Date: 01-MAR-2010 12:33
Client ID: PELK01
Sample Info: 1120205482811
Volume Injected (uL): 1.0
Column Phase: CLP2

Instrument: ecdl1a.i
Operator: YS1
Column diameter: 0.25



PCB

Page 1 of 1

Certificate of Analysis
Sample Summary

SDG Number: 10-1981

Matrix: SOIL

Lab Sample ID: 1202054829

Client Sample: QC for batch 958178

Client: LANL010

Project: QC

Client ID: LCS for batch 958178

Method: SW846 8082

SOP Ref: GL-OA-E-040

Batch ID: 958180

Inst: ECD1A.I

Dilution: 1

Run Date: 03/01/2010 12:44

Analyst: YS1

Inj. Vol: 1 uL

Prep Date: 02/26/2010 20:38

Aliquot: 30 g

Final Volume: 1 mL

Data File: 039f3901-1.d

Column: 1 CLP1

Level: LOW

039b3901-1.d

2 CLP2

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016		27.6	ug/kg	1.11	3.33	1
11104-28-2	Aroclor-1221	U	3.33	ug/kg	1.11	3.33	1
11141-16-5	Aroclor-1232	U	3.33	ug/kg	1.11	3.33	1
53469-21-9	Aroclor-1242	U	3.33	ug/kg	1.11	3.33	1
12672-29-6	Aroclor-1248	U	3.33	ug/kg	1.11	3.33	1
11097-69-1	Aroclor-1254	U	3.33	ug/kg	1.11	3.33	1
11096-82-5	Aroclor-1260		35.6	ug/kg	1.11	3.33	1

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL
 Data file : /chem/ecdla.i/030110.b/039f3901-1.d
 Lab Smp Id: 1202054829 Client Smp ID: PBLK01LCS
 Inj Date : 01-MAR-2010 12:44
 Operator : YSl Inst ID: ecdla.i
 Smp Info : |1202054829|1|
 Misc Info : |ECD82P_1S|958180|SVA|QC A|SOIL|LCS|||
 Comment :
 Method : /chem/ecdla.i/030110.b/ECD1-F-8082-022210.m
 Meth Date : 01-Mar-2010 12:26 yip00818 Quant Type: ESTD
 Cal Date : 22-FEB-2010 12:08 Cal File: 036f3601.d
 Als bottle: 39 QC Sample: LCS
 Dil Factor: 1.00000
 Integrator: Falcon Compound Sublist: 10-1981.sub
 Target Version: 3.50 Sample Matrix: Soil
 Processing Host: hpc1p1

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

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

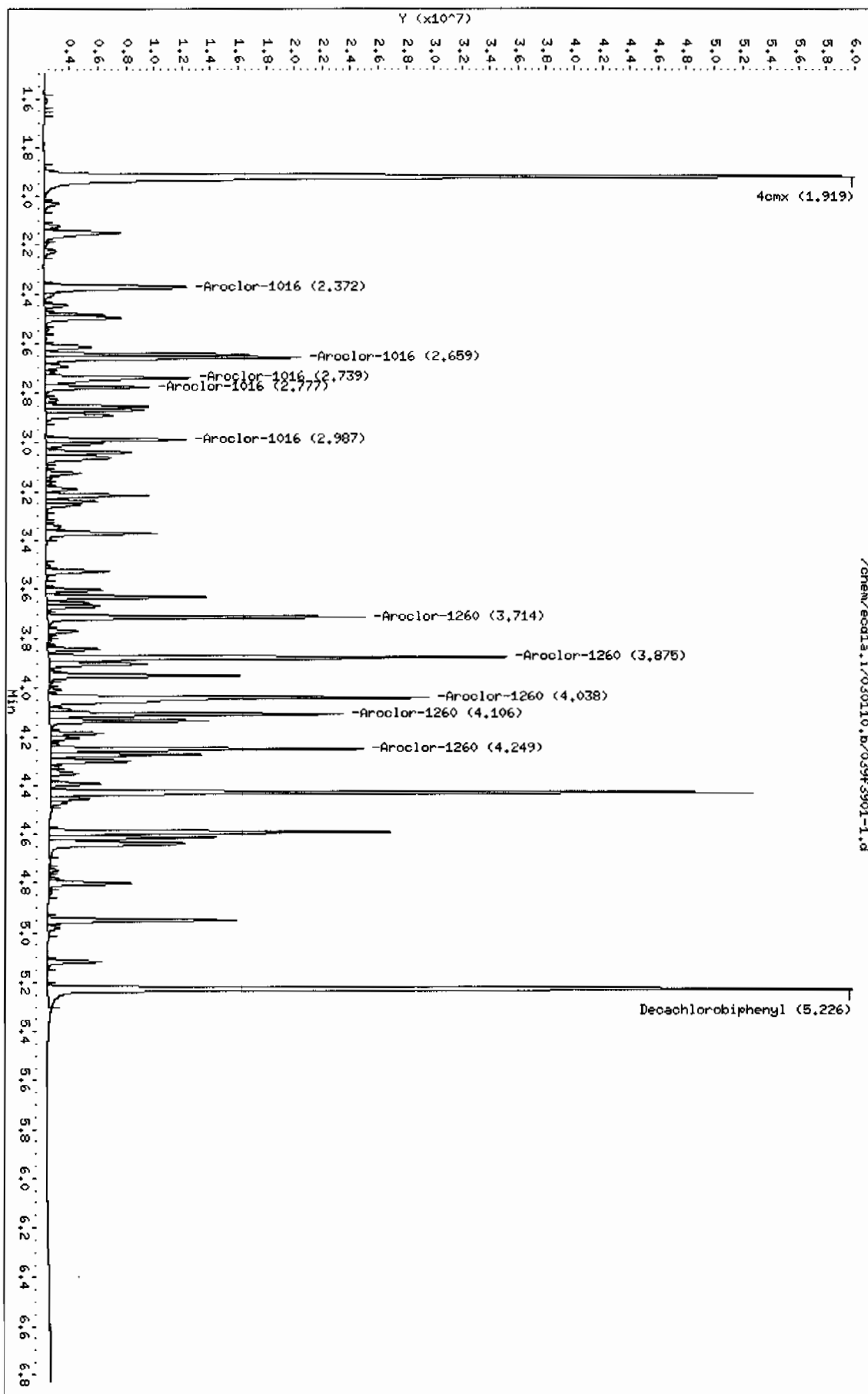
CONCENTRATIONS							
			ON-COL		FINAL		
RT	EXP RT	DLT RT	RESPONSE (ug/L)		(ug/Kg)	TARGET RANGE	RATIO
---	-----	-----	-----	-----	-----	-----	-----
\$ 11 4cmx					CAS #: 877-09-8		
1.919	1.919	0.000	65016140	150.977	5.0	80.00- 120.00	100.00
\$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.226	5.227	-0.001	56222628	182.963	6.1	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.372	2.373	-0.001	11897316	773.339	25.8	80.00- 120.00	100.00
2.659	2.659	0.000	15284104	838.082	27.9	108.71- 148.71	128.47
2.739	2.740	-0.001	9940700	823.896	27.5	62.92- 102.92	83.55
2.777	2.778	-0.001	6012518	847.298	28.2	29.86- 69.86	50.54

CONCENTRATIONS								
			ON-COL	FINAL				
RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/Kg)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	-----	
1 Aroclor-1016 (continued)								
2.987	2.988	-0.001	7703100	864.333	28.8	43.04-	83.04	64.75
Average of Peak Concentrations =					27.6			

7 Aroclor-1260					CAS #: 11096-82-5			
3.714	3.714	0.000	16855076	987.269	32.9	80.00-	120.00	100.00
3.875	3.877	-0.002	25429641	1075.55	35.8	128.48-	168.48	150.87
4.038	4.039	-0.001	27448733	1099.21	36.6	139.29-	179.29	162.85
4.106	4.107	-0.001	15447953	1072.35	35.7	69.71-	109.71	91.65
4.249	4.250	-0.001	16074151	1113.90	37.1	73.10-	113.10	95.37
Average of Peak Concentrations =					35.6			

Data File: /chem/eodla.i/030110.b/039f3901-1.d
Date : 01-MAR-2010 12:44
Client ID: BLK01CS
Sample Info: 1120205482911
Volume Injected (ul): 1.0
Column phase: CLP1

Instrument: eodla.i
Operator: YSI
Column diameter: 0.25



Data File: /chem/ecdl1a.i/030110.b/039b3901-1.d
Report Date: 03-Mar-2010 07:24

Page 1

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecdl1a.i/030110.b/039b3901-1.d
Lab Smp Id: 1202054829 Client Smp ID: PBLK01LCS
Inj Date : 01-MAR-2010 12:44
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |1202054829|1|
Misc Info : |ECD82P_1S|958180|SVA|QC A|SOIL|LCS|||
Comment :
Method : /chem/ecdl1a.i/030110.b/ECD1-B-8082-022210.m
Meth Date : 02-Mar-2010 06:55 yip00818 Quant Type: ESTD
Cal Date : 22-FEB-2010 12:08 Cal File: 036b3601.d
Als bottle: 39 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 10-1981.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

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

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

CONCENTRATIONS							
			ON-COL	FINAL			
RT	EXP RT	DLT RT	RESPONSE (ug/L)	(ug/Kg)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	
\$ 11 4cmx CAS #: 877-09-8							
2.278	2.278	0.000	44621841	150.041	5.0 80.00- 120.00	100.00	

\$ 12 Decachlorobiphenyl CAS #: 2051-24-3							
5.921	5.923	-0.002	35168695	166.284	5.5 80.00- 120.00	100.00	

1 Aroclor-1016 CAS #: 12674-11-2							
3.173	3.174	-0.001	10555697	825.323	27.5 80.00- 120.00	100.00 (M)	
3.256	3.257	-0.001	7173753	804.419	26.8 46.00- 86.00	67.96	
3.319	3.320	-0.001	4345059	803.746	26.8 21.30- 61.30	41.16	
3.547	3.547	0.000	5649612	816.933	27.2 33.45- 73.45	53.52	

		CONCENTRATIONS							
		ON-COL		FINAL					
RT	EXP RT	DLT RT	RESPONSE (ug/L)	(ug/Kg)	TARGET RANGE	RATIO			
==	=====	=====	=====	=====	=====	=====			
1 Aroclor-1016 (continued)									
3.622	3.623	-0.001	5366294	835.193	27.8 29.89- 69.89	50.84			
Average of Peak Concentrations				27.2					

7 Aroclor-1260				CAS #: 11096-82-5					
4.312	4.314	-0.002	12199778	923.831	30.8 80.00- 120.00	100.00			
4.437	4.439	-0.002	15083443	968.949	32.3 102.21- 142.21	123.64			
4.703	4.704	-0.001	11397671	962.357	32.1 72.03- 112.03	93.43			
4.876	4.878	-0.002	11875729	973.325	32.4 75.75- 115.75	97.34			
5.024	5.024	0.000	26871505	1012.98	33.8 194.38- 234.38	220.26			
Average of Peak Concentrations =				32.3					

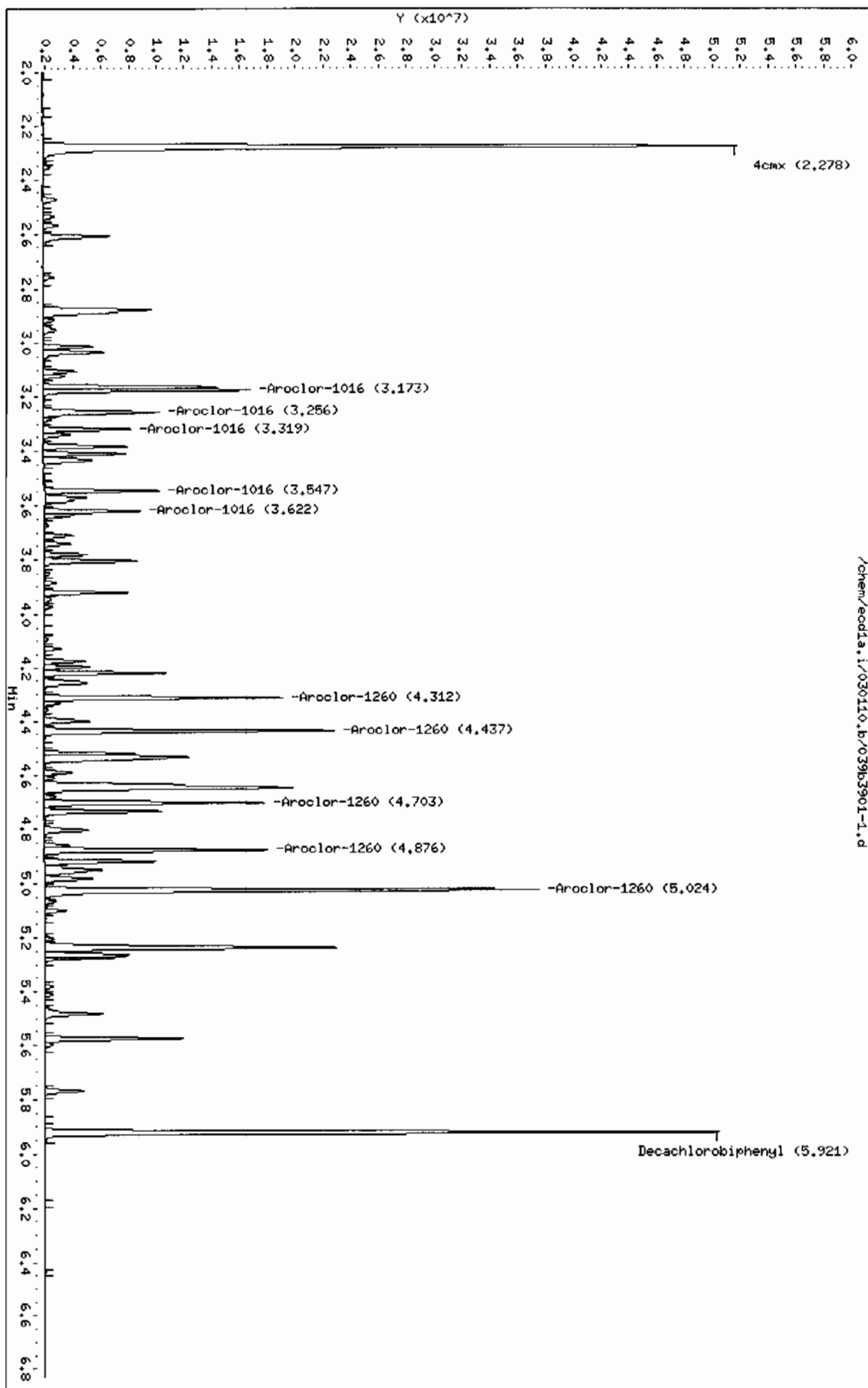
QC Flag Legend

M - Compound response manually integrated.

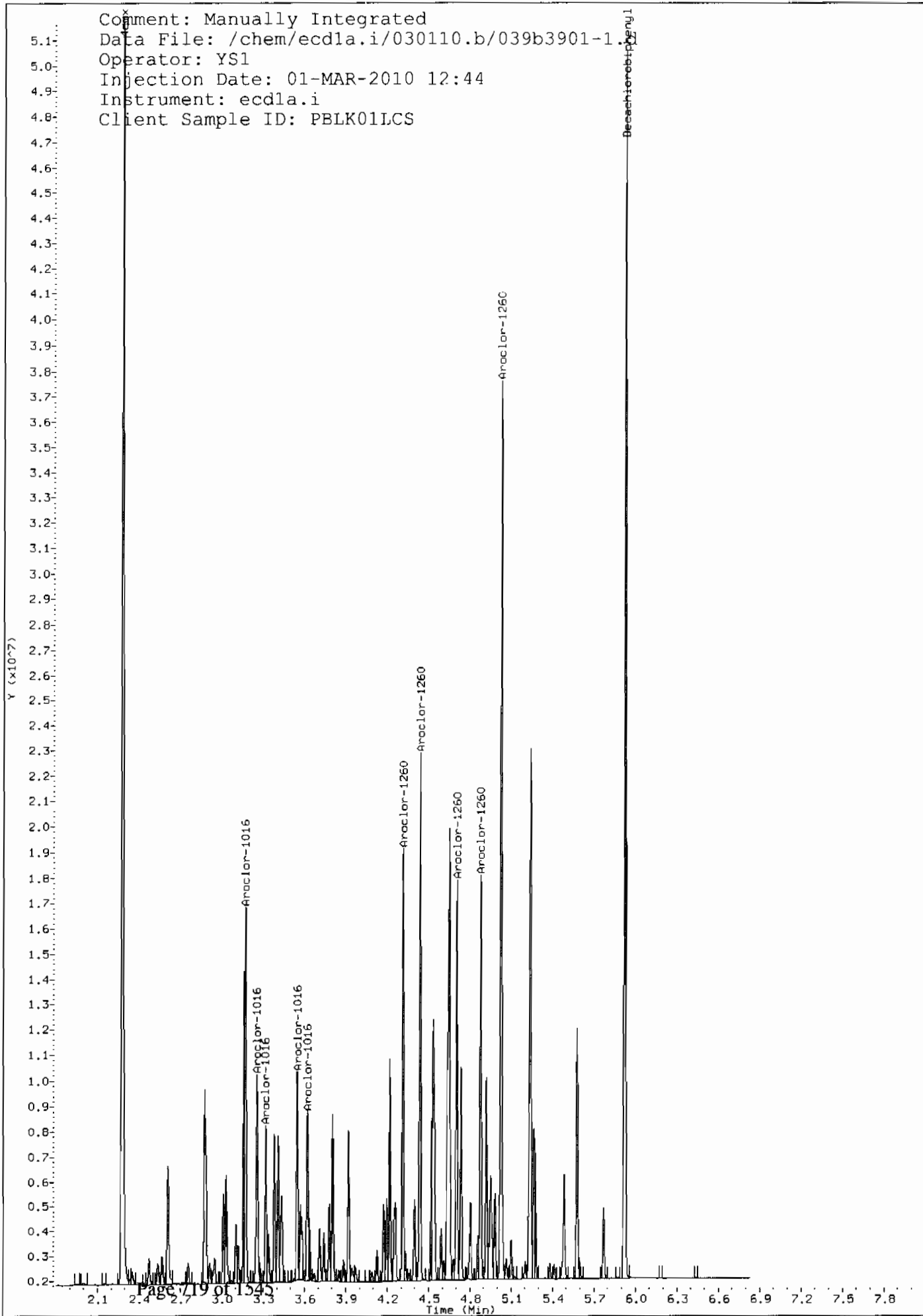
Data File: /chem/ecdda.i/030110.b/039b3901-1.d
Date: 01-MAR-2010 12:44
Client ID: PLK04LCS
Sample Info: 11202054829/11
Volume Injected (uL): 1.0
Column phase: CLP2

Instrument: ecdda.i
Operator: YSL
Column diameter: 0.25

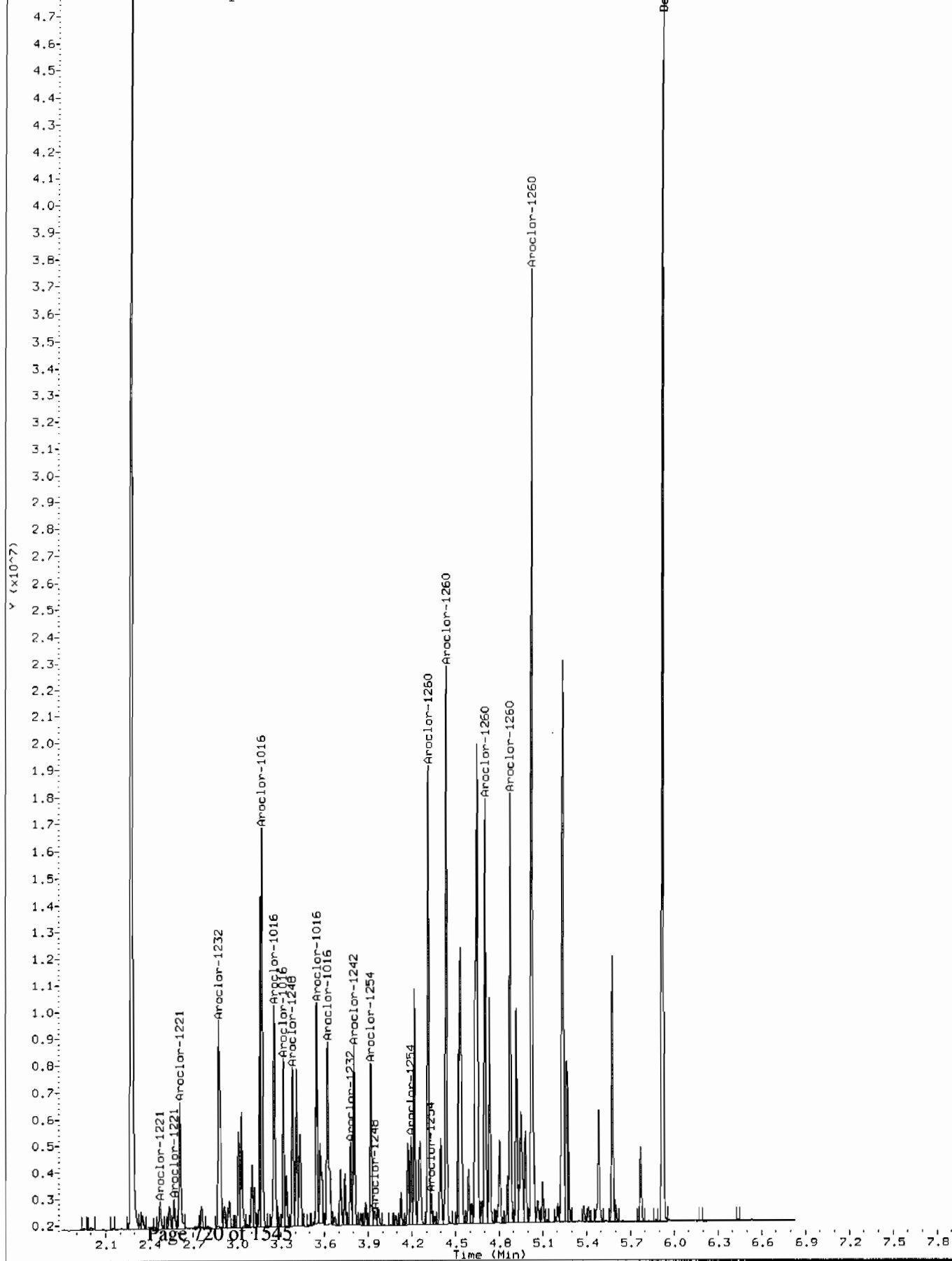
Page 1



Comment: Manually Integrated
Data File: /chem/ecdl1a.i/030110.b/039b3901-1.1
Operator: YS1
Injection Date: 01-MAR-2010 12:44
Instrument: ecdl1a.i
Client Sample ID: PBLK01LCS



Comment: Before manual integration
Data File: /chem/ecdl1.i/030110.b/orig-039b3901-1.d
Operator: YS1
Injection Date: 01-MAR-2010 12:44
Instrument: ecd1a.i
Client Sample ID: PBLK01LCS



MISCELLANEOUS DATA

GEL ORGANIC RUN LOG

INSTRUMENT ID: ECD1

DATE: 02/23/2010 METHOD: ECD1-F-8082-022210.m OPERATOR:YS1 REVIEWED BY: _____
DATE: _____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 1 on pg. 1

SOLVENT LOT DA699
ALUMINA LOT 1240553-A
COPPER LOT 236547-A

Calibration & QC Information

Initial Calibration Dates: See Calibration History and Standard Logbook.

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

GEL SOP GL-OA-E-040 Polychlorinated Biphenyl: EPA 8082

Chromatogram Abbreviation Legend: AB-Assign Baseline, AP-Assign Peak,

DNC-Do Not Call, DMP-Doesn't Match Pattern, NC-Not Confirmed, RT-Retention Time,

BF-Before, AF-After.

Sequence Number: /chem/ecd1a.i/022210.b Injection Volume: 0.5 ul

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
001f0101.d	WAR100219-99 01	YS1	22-FEB-2010 05:59		022210	1.0	CLEAN	
002f0201.d	WAR100203-60 01	YS1	22-FEB-2010 06:10		022210	1.0	DOSE RE-CAL	
003f0301.d	ARI1660-4	YS1	22-FEB-2010 06:20		022210	1.0	DOSE SCREEN	
004f0401.d	WAR091219-DDT	YS1	22-FEB-2010 06:31		022210	1.0	DDT ANALOG STANDARD	
005f0501.d	WAR100104-32	YS1	22-FEB-2010 06:41		022210	1.0	PATTERN ONLY	
006f0601.d	WAR100104-21	YS1	22-FEB-2010 06:52		022210	1.0	PATTERN ONLY	
007f0701.d	WAR100104-62	YS1	22-FEB-2010 07:03		022210	1.0	PATTERN ONLY	
008f0801.d	WAR100222-01 60	YS1	22-FEB-2010 07:13		022210	1.0	ARI1660 I-CAL LEVEL 1	
009f0901.d	WAR100222-02 60	YS1	22-FEB-2010 07:24		022210	1.0	ARI1660 I-CAL LEVEL 2	
010f1001.d	WAR100222-03 60	YS1	22-FEB-2010 07:34		022210	1.0	ARI1660 I-CAL LEVEL 3	
011f1101.d	WAR100222-04 60	YS1	22-FEB-2010 07:45		022210	1.0	ARI1660 I-CAL LEVEL 4	
012f1201.d	ARI100104-01	YS1	22-FEB-2010 07:55		022210	1.0	ARI1660 I-CAL LEVEL 5	
013f1301.d	WAR100203-60 01	YS1	22-FEB-2010 08:06		022210	1.0	PASSED ON BOTH COLUMNS	
014f1401.d	WAR100222-05 54	YS1	22-FEB-2010 08:16		022210	1.0	ARI1254 I-CAL LEVEL 1	
015f1501.d	WAR100222-06 54	YS1	22-FEB-2010 08:27		022210	1.0	ARI1254 I-CAL LEVEL 2	

Instrument Batch: /chem/ecd1a.i/022210.b

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Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
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016f1601.d	WAR100222-07 54	YS1	122-FEB-2010 08:37		022210	1.01	ARI254 I-CAL LEVEL 3
017f1701.d	WAR100222-08 54	YS1	122-FEB-2010 08:48		022210	1.01	ARI254 I-CAL LEVEL 4
018f1801.d	WAR100219-02	YS1	122-FEB-2010 08:59		022210	1.01	ARI254 I-CAL LEVEL 5
019f1901.d	WAR-00219-54	YS1	122-FEB-2010 09:09		022210	1.01	PASSED ON BOTH COLUMNS
020f2001.d	WAR100222-09 42	YS1	122-FEB-2010 09:20		022210	1.01	ARI242 I-CAL LEVEL 1
021f2101.d	WAR100222-10 42	YS1	22-FEB-2010 09:30		022210	1.01	ARI242 I-CAL LEVEL 2
022f2201.d	WAR100222-11 42	YS1	122-FEB-2010 09:41		022210	1.01	ARI242 I-CAL LEVEL 3
023f2301.d	WAR100222-12 42	YS1	22-FEB-2010 09:51		022210	1.01	ARI242 I-CAL LEVEL 4
024f2401.d	WAR100219-01	YS1	22-FEB-2010 10:02		022210	1.01	ARI242 I-CAL LEVEL 5
025f2501.d	WAR100219-42	YS1	22-FEB-2010 10:12		022210	1.01	PASSED ON BOTH COLUMNS
026f2601.d	WAR100222-13 48	YS1	22-FEB-2010 10:23		022210	1.01	ARI248 I-CAL LEVEL 1
027f2701.d	WAR100222-14 48	YS1	122-FEB-2010 10:33		022210	1.01	ARI248 I-CAL LEVEL 2
028f2801.d	WAR100222-15 48	YS1	122-FEB-2010 10:44		022210	1.01	ARI248 I-CAL LEVEL 3
029f2901.d	WAR100211-01	YS1	122-FEB-2010 10:54		022210	1.01	ARI248 I-CAL LEVEL 5
030f3001.d	WAR100222-16	YS1	122-FEB-2010 11:05		022210	1.01	ARI248 I-CAL LEVEL 4
031f3101.d	WAR091217-48	YS1	122-FEB-2010 11:16		022210	1.01	PASSED ON BOTH COLUMNS
032f3201.d	WAR100222-17 68	YS1	122-FEB-2010 11:26		022210	1.01	ARI268 I-CAL LEVEL 1
033f3301.d	WAR100222-18 68	YS1	122-FEB-2010 11:37		022210	1.01	ARI268 I-CAL LEVEL 2
034f3401.d	WAR100222-19 68	YS1	122-FEB-2010 11:47		022210	1.01	ARI268 I-CAL LEVEL 3
035f3501.d	WAR100222-20 68	YS1	122-FEB-2010 11:58		022210	1.01	ARI268 I-CAL LEVEL 4

Instrument Batch: /chem/ecdla.i/022210.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
036f3601.d	WAR100104-05	YS1	122-FEB-2010 12:08		022210	1.01	ARI268 I-CAL LEVEL 5	
037f3701.d	WAR100107-68	YS1	122-FEB-2010 12:19		022210	1.01	PASSED ON BOTH COLUMNS	
038f3801.d	WAR100219-99 02	YS1	122-FEB-2010 12:29		022210	1.01	CLEAN	
039f3901.d	d11202046866	YS1	122-FEB-2010 12:40	954781	110-1846	1.01QC A	UPLoad BOTH COLUMNS, USE HIGHER	
039f3901-2.d	11202046866	YS1	122-FEB-2010 12:40	954781	110-1848	1.01QC A	UPLoad BOTH COLUMNS, USE HIGHER	

1039f3901.d	1202046866	YS1	22-FEB-2010 12:40	954781	10-1808	1.0|QC A	UPLOAD BOTH COLUMNS, USE HIGHER
1040f4001-1.d	1202046867	YS1	22-FEB-2010 12:50	954781	10-1846	1.0|QC A	UPLOAD BOTH COLUMNS, USE HIGHER
1040f4001-2.d	1202046867	YS1	22-FEB-2010 12:50	954781	10-1848	1.0|QC A	UPLOAD BOTH COLUMNS, USE HIGHER
1040f4001.d	1202046867	YS1	22-FEB-2010 12:50	954781	10-1808	1.0|QC A	UPLOAD BOTH COLUMNS, USE HIGHER
1041f4101.d	246968001	YS1	22-FEB-2010 13:01	954781	10-1808	1.0|LANL	UPLOAD BOTH COLUMNS, USE HIGHER
1042f4201.d	246968002	YS1	22-FEB-2010 13:14	954781	10-1808	1.0|LANL	UPLOAD BOTH COLUMNS, USE HIGHER
1043f4301.d	246968003	YS1	22-FEB-2010 13:26	954781	10-1808	1.0|LANL	UPLOAD BOTH COLUMNS, USE HIGHER
1044f4401.d	246968004	YS1	22-FEB-2010 13:39	954781	10-1808	1.0|LANL	UPLOAD BOTH COLUMNS, USE HIGHER
1045f4501.d	246968005	YS1	22-FEB-2010 13:51	954781	10-1808	1.0|LANL	UPLOAD BOTH COLUMNS, USE HIGHER
1046f4601.d	246968006	YS1	22-FEB-2010 14:04	954781	10-1808	1.0|LANL	UPLOAD BOTH COLUMNS, USE HIGHER
1047f4701.d	246968007	YS1	22-FEB-2010 14:17	954781	10-1808	1.0|LANL	UPLOAD BOTH COLUMNS, USE HIGHER
1048f4801.d	246968008	YS1	22-FEB-2010 14:30	954781	10-1808	1.0|LANL	UPLOAD BOTH COLUMNS, USE HIGHER
1049f4901.d	WAR100203-60 02	YS1	22-FEB-2010 14:42		022210	1.0|	PASSED ON BOTH COLUMNS
1050f5001.d	WAR100219-99 03	YS1	22-FEB-2010 14:53		022210	1.0|	CLEAN
1051f5101.d	246968009	YS1	22-FEB-2010 15:03	954781	10-1808	1.0 LANL	UPLOAD BOTH COLUMNS, USE HIGHER

Instrument Batch: /chem/ecd1a.i/022210.b

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1052f5201.d	246968010	YS1	22-FEB-2010 15:16	954781	10-1808	1.0 LANL	UPLOAD BOTH COLUMNS, USE HIGHER
1053f5301.d	246968011	YS1	22-FEB-2010 15:28	954781	10-1808	1.0|LANL	UPLOAD BOTH COLUMNS, USE HIGHER
1054f5401.d	246968012	YS1	22-FEB-2010 15:41	954781	10-1808	1.0|LANL	UPLOAD BOTH COLUMNS, USE HIGHER
1055f5501.d	246968013	YS1	22-FEB-2010 15:54	954781	10-1808	1.0|LANL	UPLOAD BOTH COLUMNS, USE HIGHER
1056f5601.d	246968014	YS1	22-FEB-2010 16:06	954781	10-1808	1.0|LANL	UPLOAD BOTH COLUMNS, USE HIGHER
1057f5701.d	246968015	YS1	22-FEB-2010 16:19	954781	10-1808	1.0|LANL	UPLOAD BOTH COLUMNS, USE HIGHER
1058f5801.d	246968016	YS1	22-FEB-2010 16:32	954781	10-1808	1.0|LANL	UPLOAD BOTH COLUMNS, USE HIGHER
1059f5901.d	246968017	YS1	22-FEB-2010 16:44	954781	10-1808	1.0|LANL	UPLOAD BOTH COLUMNS, USE HIGHER
1060f6001.d	247121002	YS1	22-FEB-2010 16:57	954781	10-1846	1.0|LANL	UPLOAD BOTH COLUMNS, USE HIGHER

061f6101.d	WAR100203-60 03	YS1	22-FEB-2010 17:10		1022210	1.0	PASSED ON BOTH COLUMNS	
062f6201.d	WAR100219-99 04	YS1	22-FEB-2010 17:22		1022210	1.0	CLEAN	
063f6301.d	247123001	YS1	22-FEB-2010 17:35	954781	10-1848	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
064f6401.d	1202046868	YS1	22-FEB-2010 17:48	954781	10-1848	1.0	QC A	UPLOAD BOTH COLUMNS, USE HIGHER
065f6501.d	1202046869	YS1	22-FEB-2010 18:00	954781	10-1848	1.0	QC A	UPLOAD BOTH COLUMNS, USE HIGHER
066f6601.d	WAR100203-60 04	YS1	22-FEB-2010 18:13		1022210	1.0	PASSED ON BOTH COLUMNS	
067f6701.d	WAR100219-99 05	YS1	22-FEB-2010 18:26		1022210	1.0	CLEAN	
068f6801.d	1202048527	YS1	22-FEB-2010 18:38	955479	10-1818	1.0	QC A	UPLOAD BOTH COLUMNS, USE HIGHER
069f6901.d	1202048528	YS1	22-FEB-2010 18:51	955479	10-1818	1.0	QC A	UPLOAD BOTH COLUMNS, USE HIGHER
070f7001.d	247043003	YS1	22-FEB-2010 19:04	955479	10-1818	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
071f7101.d	1202048529	YS1	22-FEB-2010 19:16	955479	10-1818	1.0	QC A	UPLOAD BOTH COLUMNS, USE HIGHER

Instrument Batch: /chem/ecdl1a.i/022210.b

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Data File	GE Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
1072f7201.d	1202048530	YS1	22-FEB-2010 19:29	955479	10-1818	1.0	QC A	UPLOAD BOTH COLUMNS, USE HIGHER
1073f7301.d	247043004	YS1	22-FEB-2010 19:42	955479	10-1818	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
1074f7401.d	247043005	YS1	22-FEB-2010 19:54	955479	10-1818	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
1075f7501.d	247043006	YS1	22-FEB-2010 20:07	955479	10-1818	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
1076f7601.d	247043007	YS1	22-FEB-2010 20:20	955479	10-1818	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
1077f7701.d	247043008	YS1	22-FEB-2010 20:32	955479	10-1818	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
1078f7801.d	WAR100203-60 05	YS1	22-FEB-2010 20:45		1022210	1.0		PASSED ON BOTH COLUMNS
1079f7901.d	WAR100219-99 06	YS1	22-FEB-2010 20:58		1022210	1.0		CLEAN
1080f8001.d	247043009	YS1	22-FEB-2010 21:10	955479	10-1818	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
1081f8101.d	247043010	YS1	22-FEB-2010 21:23	955479	10-1818	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
1082f8201.d	247043011	YS1	22-FEB-2010 21:35	955479	10-1818	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
1083f8301.d	247043012	YS1	22-FEB-2010 21:48	955479	10-1818	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
1084f8401.d	247043013	YS1	22-FEB-2010 22:01	955479	10-1818	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
1085f8501.d	247043014	YS1	22-FEB-2010 22:13	955479	10-1818	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER

086f8601.d	1247043015	YS1	122-FEB-2010 22:26	955479	10-1818	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
087f8701.d	247043016	YS1	122-FEB-2010 22:39	955479	10-1818	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
088f8801.d	1247043017	YS1	122-FEB-2010 22:51	955479	10-1818	1.0	LANL	SURROGATE LOW RE
089f8901.d	1247043018	YS1	122-FEB-2010 23:04	955479	10-1818	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
090f9001.d	1247043019	YS1	122-FEB-2010 23:17		1022210	1.0		PASSED ON BOTH COLUMNS
091f9101.d	1247043020	YS1	122-FEB-2010 23:29		1022210	1.0		CLEAN

Instrument Batch: /chem/ecdl1.i/022210.b

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Data File	GEI Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
092f9201.d	11660	YS1	122-FEB-2010 23:42		1022210	1.0		DOSE SCREEN
093f9301.d	11660-4	YS1	122-FEB-2010 23:55		1022210	1.0		DOSE SCREEN

GEL ORGANIC RUN LOG

INSTRUMENT ID: ECD1

DATE: 03/02/2010

METHOD: ECD1-F-8082-022210.m

OPERATOR: YS1

REVIEWED BY: _____

DATE: _____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 1 on pg. 1

SOLVENT LOT DA936
ALUMINA LOT 1273992-A
COPPER LOT 1249397-ACalibration & QC Information
Initial Calibration Dates: See Calibration History and Standard Logbook.

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

GEL SOP GL-OA-E-040 Polychlorinated Biphenyl: EPA 8082

Chromatogram Abbreviation Legend: AB-Assign Baseline, AP-Assign Peak,

DNC-Do Not Call, DMP-Doesn't Match Pattern, NC-Not Confirmed, RT-Retention Time,

BF-Before, AF-After.

Sequence Number: /chem/ecd1a.i/030110.b

Injection Volume: 0.5 ul

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
001f0101.d	WAR100219-99 01	YS1	01-MAR-2010 05:35		030110	1.01	CLEAN	
002f0201.d	WAR100222-60 01	YS1	01-MAR-2010 05:46		030110	1.01	DCSE RR FILE 5	
003f0301.d	WAR100219-54	YS1	01-MAR-2010 05:56		030110	1.01	PASSED ON BOTH COLUMNS	
004f0401.d	WAR100219-42	YS1	01-MAR-2010 06:07		030110	1.01	PASSED ON BOTH COLUMNS	
005f0501.d	WAR100223-48	YS1	01-MAR-2010 06:17		030110	1.01	PASSED ON BOTH COLUMNS	
006f0601.d	WAR100222-60 01	YS1	01-MAR-2010 06:28		030110	1.01	PASSED ON BOTH COLUMNS	
007f0701.d	WAR100107-68	YS1	01-MAR-2010 06:38		030110	1.01	PASSED ON BOTH COLUMNS	
008f0801.d	WAR100104-32	YS1	01-MAR-2010 06:49		030110	1.01	PATTERN ONLY	
009f0901.d	WAR100104-21	YS1	01-MAR-2010 06:59		030110	1.01	PATTERN ONLY	
010f1001.d	WAR100104-62	YS1	01-MAR-2010 07:10		030110	1.01	PATTERN ONLY	
011f1101.d	WAR091219-DDT	YS1	01-MAR-2010 07:20		030110	1.01	EDT ANALOG STANDARD	
012f1201.d	WAR100219-99 02	YS1	01-MAR-2010 07:31		030110	1.01	CLEAN	
013f1301.d	1202055253	YS1	01-MAR-2010 07:41	958351	030110	1.0 QC A	UPLOAD BOTH COLUMNS, USE HIGHER	
014f1401.d	1202055254	YS1	01-MAR-2010 07:52	958351		1.0 QC A	UPLOAD BOTH COLUMNS, USE HIGHER	
015f1501.d	1202055257	YS1	01-MAR-2010 08:02	958351		1.0 QC A	UPLOAD BOTH COLUMNS, USE HIGHER	

Instrument Batch: /chem/ecd1a.i/030110.b

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Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
-----------	-------------------	---------	---------------------	-------	-----	----------	--------	----------

016f1601.d	1247750003	YS1	01-MAR-2010 08:13	958351	W09-053	1.0	PAES	UPLOAD BOTH COLUMNS, USE HIGHER
017f1701.d	1247750002	YS1	01-MAR-2010 08:25		030110	1.0		PASSED ON BOTH COLUMNS
018f1801.d	1247750003	YS1	01-MAR-2010 08:36		030110	1.0		CLEAN
019f1901.d	1202055052	YS1	01-MAR-2010 08:47	958272	SP4016	1.0	QC A	UPLOAD BOTH COLUMNS, USE HIGHER
020f2001.d	1202055053	YS1	01-MAR-2010 08:57	958272	SP4016	1.0	QC A	UPLOAD BOTH COLUMNS, USE HIGHER
021f2101.d	1247573001	YS1	01-MAR-2010 09:07	958272	SP4016	2.0	IORNL	UPLOAD BOTH COLUMNS, USE HIGHER
022f2201.d	1202055054	YS1	01-MAR-2010 09:20	958272	SP4016	2.0	QC A	UPLOAD BOTH COLUMNS, USE HIGHER
023f2301.d	1202055055	YS1	01-MAR-2010 09:33	958272	SP4016	2.0	QC A	UPLOAD BOTH COLUMNS, USE HIGHER
024f2401.d	1247573002	YS1	01-MAR-2010 09:45	958272	SP4016	2.0	IORNL	UPLOAD BOTH COLUMNS, USE HIGHER
025f2501.d	1247573003	YS1	01-MAR-2010 09:58	958272	SP4016	2.0	IORNL	UPLOAD BOTH COLUMNS, USE HIGHER
026f2601.d	1247573004	YS1	01-MAR-2010 10:10	958272	SP4016	2.0	IORNL	UPLOAD BOTH COLUMNS, USE HIGHER
027f2701.d	1247573005	YS1	01-MAR-2010 10:23	958272	SP4016	2.0	IORNL	UPLOAD BOTH COLUMNS, USE HIGHER
028f2801.d	1247573006	YS1	01-MAR-2010 10:36	958272	SP4016	2.0	IORNL	UPLOAD BOTH COLUMNS, USE HIGHER
029f2901.d	1247573007	YS1	01-MAR-2010 10:48		030110	1.0		PASSED ON BOTH COLUMNS
030f3001.d	1247573008	YS1	01-MAR-2010 10:59		030110	1.0		CLEAN
031f3101.d	1247573009	YS1	01-MAR-2010 11:09	958272	SP4016	2.0	IORNL	UPLOAD BOTH COLUMNS, USE HIGHER
032f3201.d	1247573010	YS1	01-MAR-2010 11:22	958272	SP4016	2.0	IORNL	UPLOAD BOTH COLUMNS, USE HIGHER
033f3301.d	1247573011	YS1	01-MAR-2010 11:35	958272	SP4016	2.0	IORNL	UPLOAD BOTH COLUMNS, USE HIGHER
034f3401.d	1247573012	YS1	01-MAR-2010 11:47	958272	SP4016	2.0	IORNL	UPLOAD BOTH COLUMNS, USE HIGHER
035f3501.d	1248057001	YS1	01-MAR-2010 12:00	958272	W4556	5.0	LBWL	UPLOAD BOTH COLUMNS, USE HIGHER

Instrument Batch: /chem/ecdl1a.i/030110.b

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Data File	GBL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
036f3601.d	1247573003	YS1	01-MAR-2010 12:12		030110	1.0		PASSED ON BOTH COLUMNS
037f3701.d	1247573004	YS1	01-MAR-2010 12:23		030110	1.0		CLEAN
038f3801.d	1202054828	YS1	01-MAR-2010 12:33	958180	10-1959	1.0	QC A	UPLOAD BOTH COLUMNS, USE HIGHER
039f3901.d	1202054829	YS1	01-MAR-2010 12:44	958180	10-1959	1.0	QC A	UPLOAD BOTH COLUMNS, USE HIGHER
040f4001.d	1247569002	YS1	01-MAR-2010 12:55	958180	10-1959	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER

041f4101.d	1247569003	YS1	01-MAR-2010 13:07	958180	10-1959	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
042f4201.d	1247569004	YS1	01-MAR-2010 13:20	958180	10-1959	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
043f4301.d	1247569005	YS1	01-MAR-2010 13:32	958180	10-1959	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
044f4401.d	1247569006	YS1	01-MAR-2010 13:45	958180	10-1959	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
045f4501.d	1247569007	YS1	01-MAR-2010 13:58	958180	10-1959	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
046f4601.d	1247569008	YS1	01-MAR-2010 14:10	958180	10-1959	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
047f4701.d	1247569009	YS1	01-MAR-2010 14:23	958180	10-1959	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
048f4801.d	1247569010	YS1	01-MAR-2010 14:35	958180	10-1959	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
049f4901.d	1247569011	YS1	01-MAR-2010 14:46	958180	10-1959	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
050f5001.d	1247569012	YS1	01-MAR-2010 14:56	958180	10-1959	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
051f5101.d	1247569013	YS1	01-MAR-2010 15:09	958180	10-1959	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
052f5201.d	1247569014	YS1	01-MAR-2010 15:21	958180	10-1959	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
053f5301.d	1247569015	YS1	01-MAR-2010 15:34	958180	10-1959	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
054f5401.d	1247569016	YS1	01-MAR-2010 15:47	958180	10-1959	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
055f5501.d	1247569017	YS1	01-MAR-2010 15:59	958180	10-1959	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER

Instrument Batch: /chem/ecd1a.i/030110.b

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056f5601.d	1247569018	YS1	01-MAR-2010 16:12	958180	10-1959	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
057f5701.d	1247569019	YS1	01-MAR-2010 16:25	958180	10-1959	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
058f5801.d	1247569020	YS1	01-MAR-2010 16:37	958180	10-1959	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
059f5901.d	1247569021	YS1	01-MAR-2010 16:50	958180	10-1959	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
060f6001.d	1247569022	YS1	01-MAR-2010 17:02	958180	10-1959	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
061f6101.d	1247569023	YS1	01-MAR-2010 17:15	958180	10-1959	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
062f6201.d	1247569024	YS1	01-MAR-2010 17:28	958180	10-1959	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
063f6301.d	1247569025	YS1	01-MAR-2010 17:40	958180	10-1959	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
064f6401.d	1247569026	YS1	01-MAR-2010 17:53	958180	10-1959	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER

1090f900i.d	1247820007	Y51	101-MAR-2010 23:19	1958315	110-1994	1.01	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
1091f910i.d	1WARI00222-60 09	Y51	101-MAR-2010 23:32		1030110	1.01		PASSED ON BOTH COLUMNS
1092f920i.d	1WARI00219-99 10	Y51	101-MAR-2010 23:44		1030110	1.01		CLEAN

Instrument Batch: /chem/ecdla.i/030110.b

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GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecdla.i/030110.b/058b5801.d
 Lab Smp Id: 1202054830 Client Smp ID: RE15-10-8317MS
 Inj Date : 01-MAR-2010 16:37
 Operator : YS1 Inst ID: ecdla.i
 Smp Info : |1202054830|1|
 Misc Info : |ECD82P_1S|958180|SVA|QC A|SOIL|MS|||
 Comment :
 Method : /chem/ecdla.i/030110.b/ECD1-B-8082-022210.m
 Meth Date : 02-Mar-2010 06:55 yip00818 Quant Type: ESTD
 Cal Date : 22-FEB-2010 12:08 Cal File: 036b3601.d
 Als bottle: 58 QC Sample: MS
 Dil Factor: 1.00000
 Integrator: Falcon Compound Sublist: 10-1982.sub
 Target Version: 3.50 Sample Matrix: Soil
 Processing Host: hpc1p1

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

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.06000	Weight of sample extracted (g)
M	6.34340	% Moisture

Cpnd Variable Local Compound Variable

CONCENTRATIONS							
		ON-COL		FINAL			
RT	EXP RT	DLT RT	RESPONSE (ug/L)	(ug/Kg)	TARGET RANGE	RATIO	
=====							
\$ 11 4cmx CAS #: 877-09-8							
2.277	2.278	-0.001	46719931	157.096	5.6 80.00- 120.00	100.00	

\$ 12 Decachlorobiphenyl CAS #: 2051-24-3							
5.918	5.923	-0.005	37118265	175.501	6.2 80.00- 120.00	100.00	

1 Aroclor-1016 CAS #: 12674-11-2							
3.172	3.174	-0.002	10892565	851.662	30.2 80.00- 120.00	100.00 (M)	
3.255	3.257	-0.002	7239034	811.740	28.8 45.07- 85.07	66.46	
3.318	3.320	-0.002	4412922	816.299	29.0 20.73- 60.73	40.51	
3.546	3.547	-0.001	5931297	857.665	30.5 32.70- 72.70	54.45	

CONCENTRATIONS									
			ON-COL		FINAL				
RT	EXP RT	DLT RT	RESPONSE (ug/L)		(ug/Kg)	TARGET RANGE		RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	=====
1 Aroclor-1016 (continued)									
3.620	3.623	-0.003	5545230	863.042	30.6	28.82-	68.82	50.91	
Average of Peak Concentrations =					29.8				

7 Aroclor-1260					CAS #: 11096-82-5				
4.311	4.314	-0.003	12569772	951.849	33.8	80.00-	120.00	100.00	
4.436	4.439	-0.003	15609190	1002.72	35.6	102.36-	142.36	124.18	
4.701	4.704	-0.003	11844271	1000.07	35.5	72.08-	112.08	94.23	
4.875	4.878	-0.003	12280992	1006.54	35.8	75.80-	115.80	97.70	
5.021	5.024	-0.003	27850663	1049.89	37.3	194.47-	234.47	221.57	
Average of Peak Concentrations =					35.6				

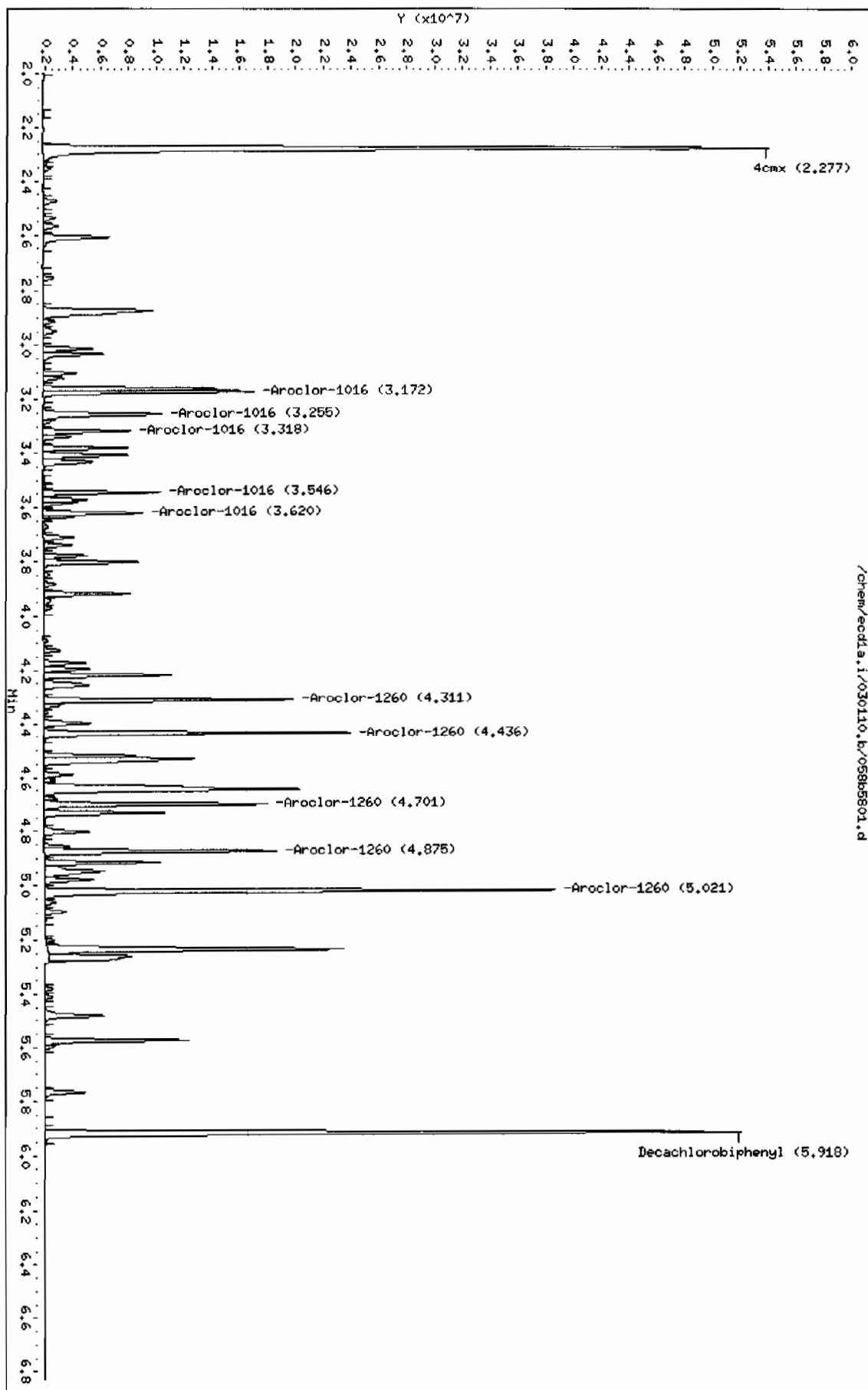
QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecda.i/030110.b/058b5801.d
Date : 01-MAR-2010 16:37
Client ID: RELS-10-8317MS
Sample Info: 11202054830111
Volume Injected (uL): 1.0
Column phase: CLP2

Instrument: ecda.i
Operator: YSL
Column diameter: 0.25

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Data File: /chem/ecdl1a.i/030110.b/058f5801.d
Report Date: 02-Mar-2010 07:22

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GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL
Data file : /chem/ecdl1a.i/030110.b/058f5801.d
Lab Smp Id: 1202054830 Client Smp ID: RE15-10-8317MS
Inj Date : 01-MAR-2010 16:37
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |1202054830|1|
Misc Info : |ECD82P_1S|958180|SVA|QC A|SOIL|MS|||
Comment :
Method : /chem/ecdl1a.i/030110.b/ECD1-F-8082-022210.m
Meth Date : 02-Mar-2010 06:55 yip00818 Quant Type: ESTD
Cal Date : 22-FEB-2010 12:08 Cal File: 036f3601.d
Als bottle: 58 QC Sample: MS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 10-1982.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

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

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.06000	Weight of sample extracted (g)
M	6.34340	% Moisture

Cpnd Variable Local Compound Variable

CONCENTRATIONS						
			ON-COL	FINAL		
RT	EXP RT	DLT RT	RESPONSE (ug/L)	(ug/Kg)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====
\$ 11 4cmx CAS #: 877-09-8						
1.919	1.919	0.000	68162315	158.283	5.6 80.00- 120.00	100.00

\$ 12 Decachlorobiphenyl CAS #: 2051-24-3						
5.223	5.227	-0.004	59422361	193.376	6.9 80.00- 120.00	100.00

1 Aroclor-1016 CAS #: 12674-11-2						
2.371	2.373	-0.002	12335294	801.808	28.5 80.00- 120.00	100.00
2.658	2.659	-0.001	15928459	873.414	31.0 110.29- 150.29	129.13
2.738	2.740	-0.002	10102950	837.343	29.7 62.85- 102.85	81.90
2.776	2.778	-0.002	6065760	854.801	30.4 29.99- 69.99	49.17

CONCENTRATIONS									
			ON-COL		FINAL				
RT	EXP RT	DLT RT	RESPONSE (ug/L)		(ug/Kg)	TARGET RANGE	RATIO		
==	=====	=====	=====	=====	=====	=====	=====		
1 Aroclor-1016 (continued)									
2.986	2.988	-0.002	7818690	877.303	31.2	43.89-	83.89	63.38	
Average of Peak Concentrations =					30.2				

7 Aroclor-1260					CAS #: 11096-82-5				
3.711	3.714	-0.003	17375481	1017.75	36.2	80.00-	120.00	100.00	
3.873	3.877	-0.004	26366853	1115.19	39.6	129.88-	169.88	151.75	
4.035	4.039	-0.004	28403152	1137.43	40.4	140.76-	180.76	163.47	
4.104	4.107	-0.003	16052112	1114.29	39.6	70.44-	110.44	92.38	
4.246	4.250	-0.004	16473734	1141.59	40.5	74.18-	114.18	94.81	
Average of Peak Concentrations =					39.3				

Data File: /chem/ecda.i/030110.b/058f5801.d

Date: 01-MAR-2010 16:37

Client ID: RE15-10-8317MS

Sample Info: 11202054830111

Volume Injected (uL): 1.0

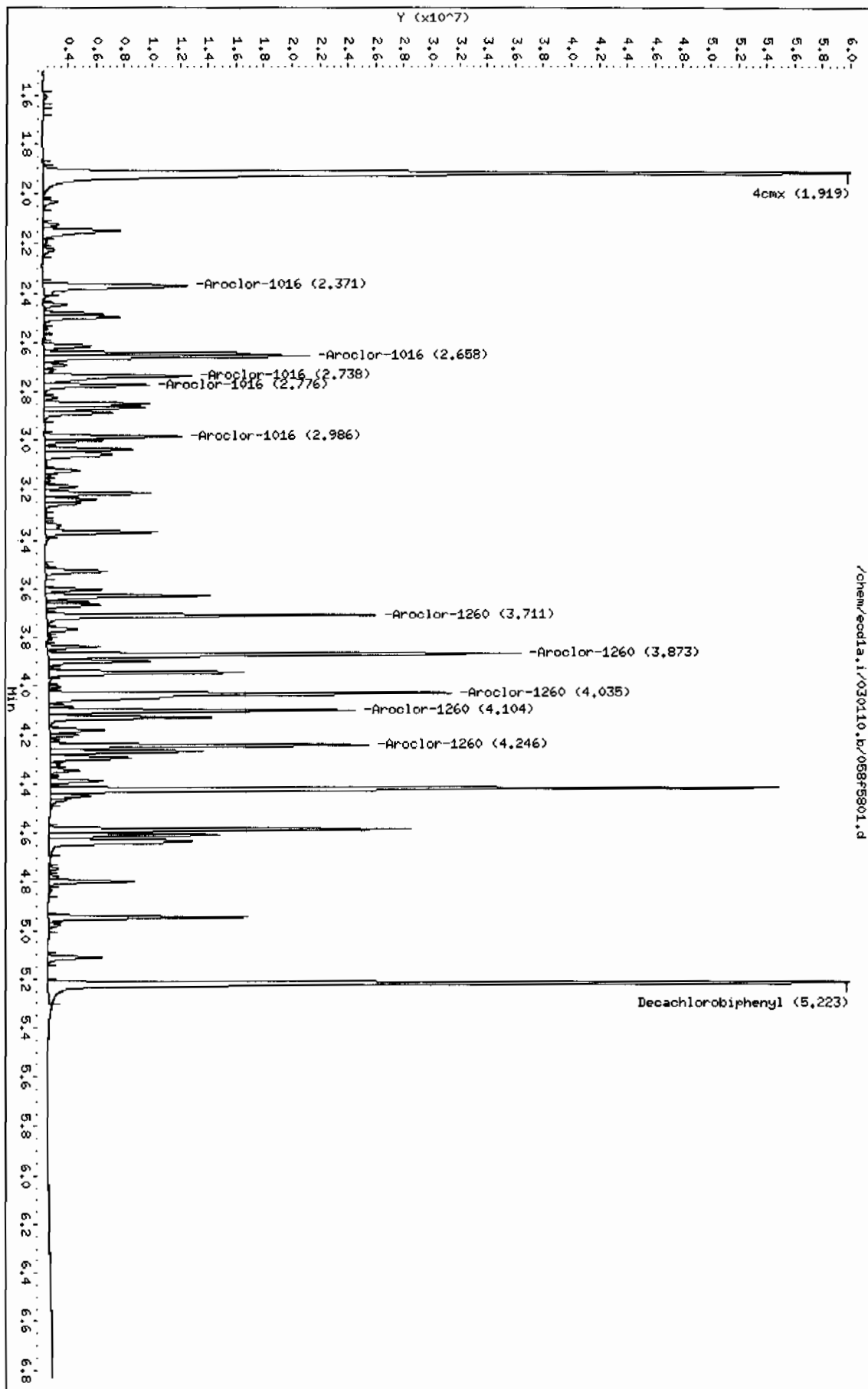
Column phase: CLP1

Instrument: ecda.i

Operator: YS1

Column diameter: 0.25

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Data File: /chem/ecdl1a.i/030110.b/059b5901.d
Report Date: 02-Mar-2010 07:23

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GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL
Data file : /chem/ecdl1a.i/030110.b/059b5901.d
Lab Smp Id: 1202054831 Client Smp ID: RE15-10-8317MSD
Inj Date : 01-MAR-2010 16:50
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |1202054831|1|
Misc Info : |ECD82P_1S|958180|SVA|QC A|SOIL|MSD|1|
Comment :
Method : /chem/ecdl1a.i/030110.b/ECD1-B-8082-022210.m
Meth Date : 02-Mar-2010 06:55 yip00818 Quant Type: ESTD
Cal Date : 22-FEB-2010 12:08 Cal File: 036b3601.d
Als bottle: 59 QC Sample: MSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 10-1982.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpc1p1

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

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.01000	Weight of sample extracted (g)
M	6.34340	% Moisture

Cpnd Variable Local Compound Variable

CONCENTRATIONS						
		ON-COL	FINAL			
RT	EXP RT	DLT RT	RESPONSE (ug/L)	(ug/Kg)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====
\$ 11 4cmx CAS #: 877-09-8						
2.277	2.278	-0.001	42929186	144.350	5.1 80.00- 120.00	100.00

\$ 12 Decachlorobiphenyl CAS #: 2051-24-3						
5.919	5.923	-0.004	34842387	164.741	5.9 80.00- 120.00	100.00

1 Aroclor-1016 CAS #: 12674-11-2						
3.172	3.174	-0.002	10553438	825.146	29.4 80.00- 120.00	100.00
3.255	3.257	-0.002	6819286	764.672	27.2 45.07- 85.07	64.62
3.318	3.320	-0.002	4156511	768.868	27.4 20.73- 60.73	39.39
3.545	3.547	-0.002	5575685	806.243	28.7 32.70- 72.70	52.83

CONCENTRATIONS									
			ON-COL		FINAL				
RT	EXP RT	DLT RT	RESPONSE (ug/L)		(ug/Kg)	TARGET RANGE	RATIO		
==	=====	=====	=====	=====	=====	=====	=====		
1 Aroclor-1016 (continued)									
3.621	3.623	-0.002	5199855	809.289	28.8	28.82-	68.82	49.27	
Average of Peak Concentrations =					28.3				

7 Aroclor-1260					CAS #: 11096-82-5				
4.311	4.314	-0.003	11882928	899.837	32.0	80.00-	120.00	100.00	
4.436	4.439	-0.003	14751817	947.645	33.7	102.36-	142.36	124.14	
4.702	4.704	-0.002	11169542	943.095	33.6	72.08-	112.08	94.00	
4.874	4.878	-0.004	11554667	947.011	33.7	75.80-	115.80	97.24	
5.022	5.024	-0.002	26321231	992.237	35.3	194.47-	234.47	221.50	
Average of Peak Concentrations =					33.7				

Data File: /chem/ecda.i/030110.b/059b5901.d

Date : 01-MAR-2010 16:50

Client ID: RE15-10-8317MSD

Sample Info: 11202054831111

Volume Injected (ul): 1.0

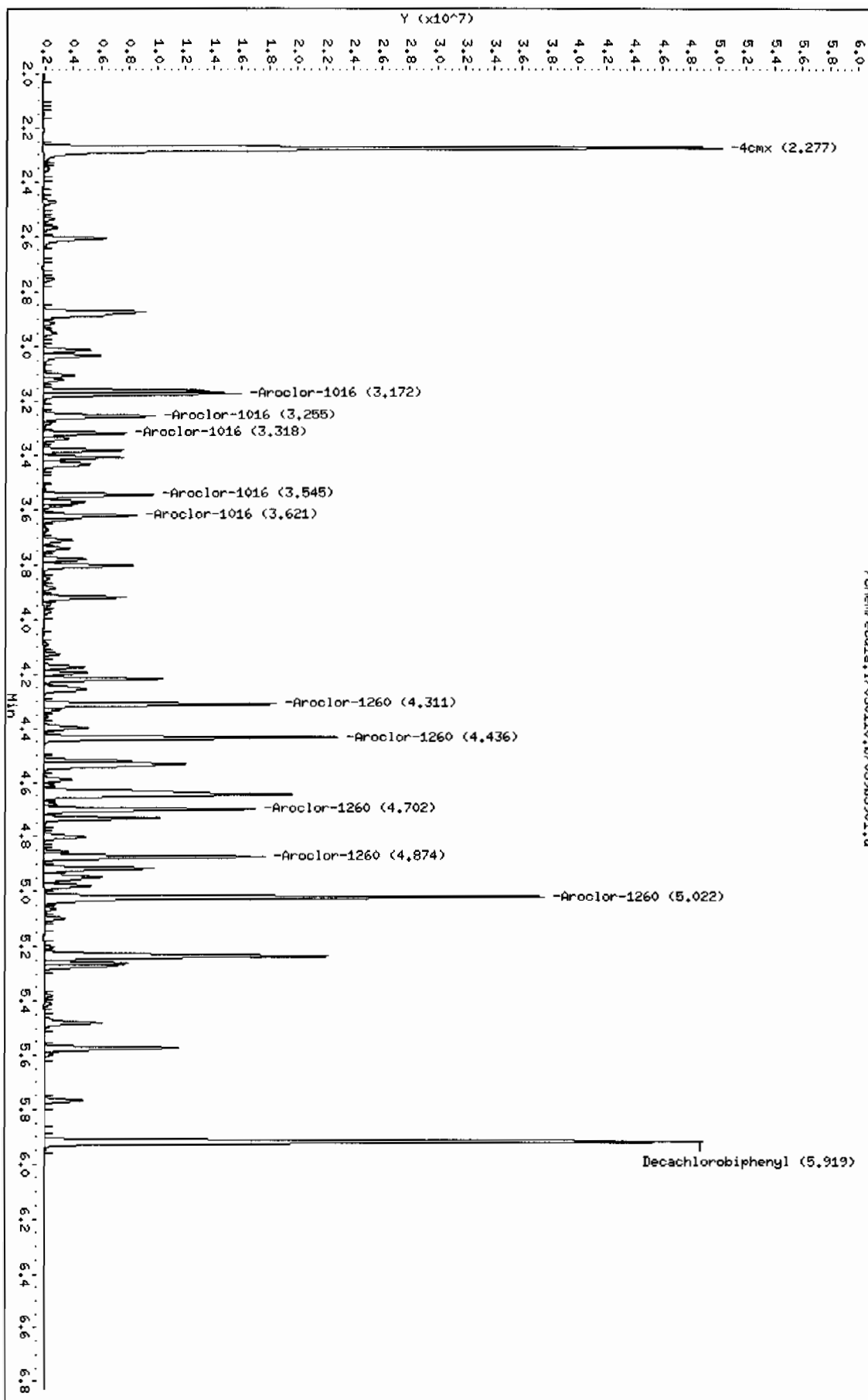
Column phase: CLP2

Instrument: ecda.i

Operator: YSI

Column diameter: 0.25

/chem/ecda.i/030110.b/059b5901.d



GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecdla.i/030110.b/059f5901.d
Lab Smp Id: 1202054831 Client Smp ID: RE15-10-8317MSD
Inj Date : 01-MAR-2010 16:50
Operator : YSl Inst ID: ecdla.i
Smp Info : |1202054831|||
Misc Info : |ECD82P_1S|958180|SVA|QC A|SOIL|MSD|||
Comment :
Method : /chem/ecdla.i/030110.b/ECD1-F-8082-022210.m
Meth Date : 02-Mar-2010 06:55 yip00818 Quant Type: ESTD
Cal Date : 22-FEB-2010 12:08 Cal File: 036f3601.d
Als bottle: 59 QC Sample: MSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 10-1982.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpc1p1

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

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.01000	Weight of sample extracted (g)
M	6.34340	% Moisture

Cpnd Variable Local Compound Variable

CONCENTRATIONS						
			ON-COL	FINAL		
RT	EXP RT	DLT RT	RESPONSE (ug/L)	(ug/Kg)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====
\$ 11 4cmx CAS #: 877-09-8						
1.918	1.919	-0.001	62547609	145.244	5.2 80.00- 120.00	100.00

\$ 12 Decachlorobiphenyl CAS #: 2051-24-3						
5.223	5.227	-0.004	55519258	180.674	6.4 80.00- 120.00	100.00

1 Aroclor-1016 CAS #: 12674-11-2						
2.371	2.373	-0.002	11229898	729.956	26.0 80.00- 120.00	100.00
2.658	2.659	-0.001	14439416	791.764	28.2 110.29- 150.29	128.58
2.738	2.740	-0.002	9477502	785.505	27.9 62.85- 102.85	84.40
2.775	2.778	-0.003	5686183	801.310	28.5 29.99- 69.99	50.63

CONCENTRATIONS								
			ON-COL	FINAL				
RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/Kg)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	
1 Aroclor-1016 (continued)								
2.986	2.988	-0.002	7329573	822.421	29.3	43.89- 83.89	65.27	
Average of Peak Concentrations =					28.0			

7 Aroclor-1260					CAS #: 11096-82-5			
3.712	3.714	-0.002	16351475	957.771	34.1	80.00- 120.00	100.00	
3.873	3.877	-0.004	24771180	1047.70	37.3	129.88- 169.88	151.49	
4.036	4.039	-0.003	26696489	1069.09	38.0	140.76- 180.76	163.27	
4.104	4.107	-0.003	15194908	1054.79	37.5	70.44- 110.44	92.93	
4.247	4.250	-0.003	15514199	1075.10	38.2	74.18- 114.18	94.88	
Average of Peak Concentrations					37.0			

Data File: /chem/eodla.i/030110.b/059F5901.d

Date : 01-MAR-2010 16:50

Client ID: RE15-10-8317MSD

Sample Info: 11202054831111

Volume Injected (uL): 1.0

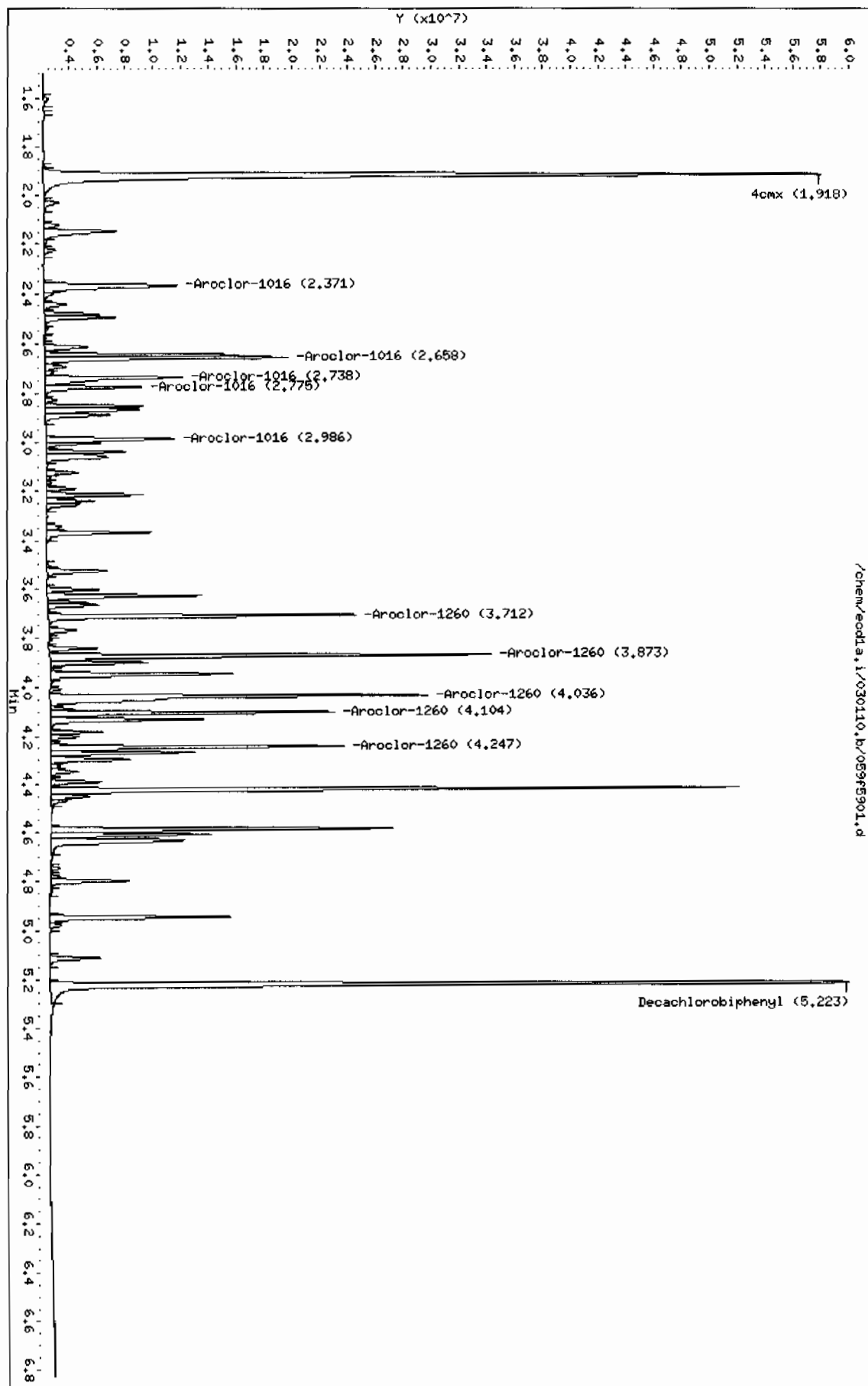
Column phase: CLP1

Instrument: eodla.i

Operator: YSA

Column diameter: 0.25

Page 1



Prep Logbook

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

Batch ID: 958178
 Analyst: Andrew Schwemin
 Method: SW846 3550B

Verified by: _____

Lab SOP: GL-OA-E-010 REV# 18
 Instrument: Semi-Volatiles Manual

Sample ID	Run Date	Aliquot (g)	Clean Up	Prior to Clean up (mL)	Amount Cleaned (mL)	After Clean up (mL)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1202054828 MB	26-FEB-2010 20:38:00	30	H2SO4/KM2	2	9	1	0.03333	
1202054829 LCS	26-FEB-2010 20:38:00	30	H2SO4/KM2	2	9	1	0.03333	
247569002	26-FEB-2010 20:38:00	30.04	H2SO4/KM2	2	9	1	0.03329	
247569003	26-FEB-2010 20:38:00	30.1	H2SO4/KM2	2	9	1	0.03322	
247569004	26-FEB-2010 20:38:00	30.1	H2SO4/KM2	2	9	1	0.03322	
247569005	26-FEB-2010 20:38:00	30.17	H2SO4/KM2	2	9	1	0.03315	
247569006	26-FEB-2010 20:38:00	30.03	H2SO4/KM2	2	9	1	0.0333	
247569007	26-FEB-2010 20:38:00	30.02	H2SO4/KM2	2	9	1	0.03331	
247569008	26-FEB-2010 20:38:00	30.04	H2SO4/KM2	2	9	1	0.03329	
247569009	26-FEB-2010 20:38:00	30.15	H2SO4/KM2	2	9	1	0.03317	
247569010	26-FEB-2010 20:38:00	30.17	H2SO4/KM2	2	9	1	0.03315	
247569011	26-FEB-2010 20:38:00	30.19	H2SO4/KM2	2	9	1	0.03312	
247569012	26-FEB-2010 20:38:00	30.02	H2SO4/KM2	2	9	1	0.03331	
247790002	26-FEB-2010 20:38:00	30.02	H2SO4/KM2	2	9	1	0.03331	
247790003	26-FEB-2010 20:38:00	30.02	H2SO4/KM2	2	9	1	0.03331	
247791002	26-FEB-2010 20:38:00	30.07	H2SO4/KM2	2	9	1	0.03326	
1202054830 MS (247791002)	26-FEB-2010 20:38:00	30.06	H2SO4/KM2	2	9	1	0.03327	
1202054831 MSD (247791002)	26-FEB-2010 20:38:00	30.01	H2SO4/KM2	2	9	1	0.03332	
247791003	26-FEB-2010 20:38:00	30.03	H2SO4/KM2	2	9	1	0.0333	
247791004	26-FEB-2010 20:38:00	30.02	H2SO4/KM2	2	9	1	0.03331	
247791005	26-FEB-2010 20:38:00	30.02	H2SO4/KM2	2	9	1	0.03331	
247791006	26-FEB-2010 20:38:00	30.12	H2SO4/KM2	2	9	1	0.0332	

Type	Sample Id	Description	Serial Number	Spike Amt	Units	Comments:
LCS	1202054829	PCB Laboratory Control	WE100224-07	1	mL	Clean up Date: 2/26/10
MS	1202054830	PCB Laboratory Control	WE100224-07	1	mL	Clean up Initials: AAW
MSD	1202054831	PCB Laboratory Control	WE100224-07	1	mL	Verified By: AAW
SURR	AI1	PEST LOW LEVEL SURROGATE 200 UG/L	UE091217-15	1	mL	Final Solvent: Hexane
REGNT	AI1	1:1 sulfuric acid	1260695a	5	mL	Clean Up SOP: GL-OA-E-037
REGNT	AI1	Hexane	1273340-B2	150	mL	
REGNT	AI1	Acetone	1273823-B1	150	mL	
REGNT	AI1	5% Potassium Permanganate	B1275177-F	5	mL	
SOURC	AI1	SODIUM SULFATE	1274910	30	g	

Metals Analysis

Case Narrative

**Metals Fractional Narrative
Los Alamos National Laboratory (LANL)
SDG 10-1981**

Sample Analysis

Sample ID	Client ID
247790002	RE15-10-8386
247790003	RE15-10-8387
1202053063	Method Blank (MB) ICP
1202053068	Laboratory Control Sample (LCS)
1202053065	247790002(RE15-10-8386L) Serial Dilution (SD)
1202053064	247790002(RE15-10-8386D) Sample Duplicate (DUP)
1202053066	247790002(RE15-10-8386S) Matrix Spike (MS)
1202053067	247790002(RE15-10-8386SD) Matrix Spike Duplicate (MSD)
1202053069	Method Blank (MB) ICP-MS
1202053074	Laboratory Control Sample (LCS)
1202053071	247790002(RE15-10-8386L) Serial Dilution (SD)
1202053070	247790002(RE15-10-8386D) Sample Duplicate (DUP)
1202053072	247790002(RE15-10-8386S) Matrix Spike (MS)
1202053073	247790002(RE15-10-8386SD) Matrix Spike Duplicate (MSD)
1202056063	Method Blank (MB) CVAA
1202056064	Laboratory Control Sample (LCS)
1202056071	247781001(RE11-10-1566L) Serial Dilution (SD)
1202056065	247781001(RE11-10-1566D) Sample Duplicate (DUP)
1202056066	247781001(RE11-10-1566S) Matrix Spike (MS)
1202056072	247781001(RE11-10-1566SD) Matrix Spike Duplicate (MSD)

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

Method/Analysis Information

Analytical Batch: 957496, 957498 and 958698
Prep Batch : 957495, 957497 and 958693
Standard Operating Procedures: GL-MA-E-013 REV# 20, GL-MA-E-009 REV# 19, GL-MA-E-014 REV# 21 and GL-MA-E-010 REV# 23
Analytical Method: SW846 3050B/6010B, SW846 3050B/6020 and SW846 7471A
Prep Method : SW846 3050B and SW846 7471A Prep

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

System Configuration

The Metals analysis-ICP was performed on a P E 5300 Optima radial/axial-viewing inductively coupled plasma atomic emission spectrometer. The instrument is equipped with a Burgener nebulizer, cyclonic spray chamber, and yttrium or scandium internal standard. Operating conditions for the ICP are set at a power level of 1500 watts. The instrument has a peristaltic pump flow rate of 1.4L/min, argon gas flows of 15 L/min and 0.2 L/min for the torch and auxiliary gases, and a flow setting of 0.65L/min for the nebulizer.

The Metals analysis - ICPMS was performed on a Perkin Elmer ELAN 6100E inductively coupled plasma mass spectrometer (ICP-MS). The instrument is equipped with a cross-flow nebulizer, quadrupole mass spectrometer, and dual mode electron multiplier detector. Internal standards of scandium, germanium, indium, tantalum, and/or lutetium were utilized to cover the mass spectrum. Operating conditions are set at 1400W power and combined argon pressures of 360+/-7 kPa for the plasma and auxiliary gases, and 0.85 L/min carrier gas flow, and an initial lens voltage of 5.2.

The Metals analysis - ICPMS was performed on a Perkin Elmer ELAN 9000 inductively coupled plasma mass spectrometer (ICP-MS). The instrument is equipped with a cross-flow nebulizer, quadrupole mass spectrometer, and dual mode electron multiplier detector. Internal standards of scandium, germanium, indium, tantalum, and/or lutetium were utilized to cover the mass spectrum. Operating conditions are set at 1400W power and combined argon pressures of 360+/-7 kPa for the plasma and auxiliary gases, and 0.85 L/min carrier gas flow, and an initial lens voltage of 5.2.

The Metals analysis-Mercury was performed on a Perkin-Elmer Flow Injection Mercury System (FIMS-100) automated mercury analyzer. The instrument consists of a cold vapor atomic

absorption spectrometer set to detect mercury at a wavelength of 253.7 nm. Sample introduction through the flow injection system is performed via a peristaltic pump at 9 mL/min and nitrogen carrier gas rate of 80 mL/min.

Calibration Information

Instrument Calibration

All initial calibration requirements have been met for this sample delivery group (SDG).

CRDL Requirements

All CRDL standards met the advisory control limits with the exceptions of beryllium, uranium and zinc, 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 laboratory control sample (LCS) met the recommended acceptance criteria for percent recovery (%R) for all elements of interest, with the exception of antimony. Silver and/or antimony did not meet the recovery acceptance criteria for the LCS. Per the DOE-AL statement of work, page forty, silver and antimony are exempt from the re-digestion requirement for LCS failures.

Quality Control (QC) Sample Statement

The following samples were selected as the quality control (QC) samples for this SDG: 247790002 (RE15-10-8386) and 247781001 (RE11-10-1566).

Matrix Spike (MS) Recovery Statement

The percent recoveries (%R) obtained from the MS analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MS met the recommended quality control acceptance criteria for percent recoveries for all applicable analytes with the exceptions of calcium, magnesium 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 exceptions of potassium, magnesium 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 calcium, as indicated by the "*" qualifier.

Duplicate Relative Percent Difference (RPD) Statement

The relative percent difference (RPD) obtained from the designated sample duplicate (DUP) is evaluated based on acceptance criteria of 20% when the sample is 5X the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the contract required detection limit (RL), a control of +/-RL is used to evaluate the DUP results. All applicable analytes met these requirements with the exceptions of nickel and uranium, 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: 807427 and 819407. 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 Fauson Date: 4/20/10

Sample Data Summary

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 10-1981

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 247790002

BASIS: Dry Weight

DATE COLLECTED 17-FEB-10

CLIENT ID: RE15-10-8386

LEVEL: Low

DATE RECEIVED 23-FEB-10

MATRIX: SOIL

%SOLIDS: 94.6

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	4680000	ug/Kg		7050	20700	20700	1	P	HSC	03/19/10 15:41	031910-1	957496
7440-36-0	Antimony	1040	ug/Kg	U	342	1040	1040	1	P	HSC	03/19/10 15:41	031910-1	957496
7440-38-2	Arsenic	1.05	mg/kg		0.21	1.05	1.05	2	MS	PRB	04/20/10 14:13	100420-2	957498
7440-39-3	Barium	59600	ug/Kg		104	518	518	1	P	HSC	03/19/10 15:41	031910-1	957496
7440-41-7	Beryllium	0.481	mg/kg		0.021	0.105	0.105	2	MS	PRB	04/20/10 14:13	100420-2	957498
7440-43-9	Cadmium	518	ug/Kg	U	104	518	518	1	P	HSC	03/19/10 15:41	031910-1	957496
7440-70-2	Calcium	1980000	ug/Kg	*N	8290	25900	25900	1	P	HSC	03/19/10 15:41	031910-1	957496
7440-47-3	Chromium	19100	ug/Kg		155	518	518	1	P	HSC	03/19/10 15:41	031910-1	957496
7440-48-4	Cobalt	1880	ug/Kg		155	518	518	1	P	HSC	03/19/10 15:41	031910-1	957496
7440-50-8	Copper	3740	ug/Kg		311	1040	1040	1	P	HSC	03/19/10 15:41	031910-1	957496
7439-89-6	Iron	10800000	ug/Kg		8290	25900	25900	1	P	HSC	03/19/10 15:41	031910-1	957496
7439-92-1	Lead	3930	ug/Kg		259	1040	1040	1	P	HSC	03/19/10 15:41	031910-1	957496
7439-95-4	Magnesium	1150000	ug/Kg	N	8810	31100	31100	1	P	HSC	03/19/10 15:41	031910-1	957496
7439-96-5	Manganese	228000	ug/Kg		207	1040	1040	1	P	HSC	03/19/10 15:41	031910-1	957496
7439-97-6	Mercury	8.3	ug/kg	J	4.21	12.4	12.4	1	AV	JXL1	03/02/10 16:46	030210S1-5	958698
7440-02-0	Nickel	7.4	mg/kg	*N	0.105	0.419	0.419	2	MS	PRB	04/20/10 14:13	100420-2	957498
7440-09-7	Potassium	869000	ug/Kg	N	6630	25900	25900	1	P	HSC	03/19/10 15:41	031910-1	957496
7782-49-2	Selenium	1.05	mg/kg	U	0.524	1.05	1.05	2	MS	PRB	04/20/10 14:13	100420-2	957498
7440-22-4	Silver	224	ug/Kg	J	104	518	518	1	P	HSC	03/19/10 15:41	031910-1	957496
7440-23-5	Sodium	342000	ug/Kg		7250	25900	25900	1	P	HSC	03/19/10 15:41	031910-1	957496
7440-28-0	Thallium	0.158	mg/kg	J	0.0629	0.21	0.21	2	MS	PRB	04/20/10 14:13	100420-2	957498
7440-61-1	Uranium	3.15	mg/kg	*	0.0138	0.0419	0.0419	2	MS	PRB	04/20/10 14:13	100420-2	957498
7440-62-2	Vanadium	11600	ug/Kg		104	518	518	1	P	HSC	03/19/10 15:41	031910-1	957496
7440-66-6	Zinc	31800	ug/Kg		342	1040	1040	1	P	HSC	03/19/10 15:41	031910-1	957496

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
957496	957495	SW846 3050B	0.51	g	50	mL	02/26/10	AXG2
957498	957497	SW846 3050B	0.504	g	50	mL	02/26/10	AXG2
958698	958693	SW846 7471A Prep	0.512	g	30	mL	03/01/10	TXB3

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 10-1981

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 247790003

BASIS: Dry Weight

DATE COLLECTED 17-FEB-10

CLIENT ID: RE15-10-8387

LEVEL: Low

DATE RECEIVED 23-FEB-10

MATRIX: SOIL

%SOLIDS: 94.3

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	3290000	ug/Kg		7000	20600	20600	1	P	HSC	03/19/10 16:30	031910-1	957496
7440-36-0	Antimony	1030	ug/Kg	U	340	1030	1030	1	P	HSC	03/19/10 16:30	031910-1	957496
7440-38-2	Arsenic	0.535	mg/kg	J	0.21	1.05	1.05	2	MS	PRB	04/20/10 14:37	100420-2	957498
7440-39-3	Barium	68800	ug/Kg		103	515	515	1	P	HSC	03/19/10 16:30	031910-1	957496
7440-41-7	Beryllium	0.306	mg/kg		0.021	0.105	0.105	2	MS	PRB	04/20/10 14:37	100420-2	957498
7440-43-9	Cadmium	515	ug/Kg	U	103	515	515	1	P	HSC	03/19/10 16:30	031910-1	957496
7440-70-2	Calcium	1380000	ug/Kg	*N	8240	25700	25700	1	P	HSC	03/19/10 16:30	031910-1	957496
7440-47-3	Chromium	32000	ug/Kg		154	515	515	1	P	HSC	03/19/10 16:30	031910-1	957496
7440-48-4	Cobalt	1930	ug/Kg		154	515	515	1	P	HSC	03/19/10 16:30	031910-1	957496
7440-50-8	Copper	3630	ug/Kg		309	1030	1030	1	P	HSC	03/19/10 16:30	031910-1	957496
7439-89-6	Iron	10100000	ug/Kg		8240	25700	25700	1	P	HSC	03/19/10 16:30	031910-1	957496
7439-92-1	Lead	2490	ug/Kg		257	1030	1030	1	P	HSC	03/19/10 16:30	031910-1	957496
7439-95-4	Magnesium	955000	ug/Kg	N	8750	30900	30900	1	P	HSC	03/19/10 16:30	031910-1	957496
7439-96-5	Manganese	318000	ug/Kg		206	1030	1030	1	P	HSC	03/19/10 16:30	031910-1	957496
7439-97-6	Mercury	8.74	ug/kg	J	4.18	12.3	12.3	1	AV	JXL1	03/02/10 16:48	030210S1-5	958698
7440-02-0	Nickel	5.45	mg/kg	*N	0.105	0.419	0.419	2	MS	PRB	04/20/10 14:37	100420-2	957498
7440-09-7	Potassium	810000	ug/Kg	N	6590	25700	25700	1	P	HSC	03/19/10 16:30	031910-1	957496
7782-49-2	Selenium	1.05	mg/kg	U	0.524	1.05	1.05	2	MS	PRB	04/20/10 14:37	100420-2	957498
7440-22-4	Silver	273	ug/Kg	J	103	515	515	1	P	HSC	03/19/10 16:30	031910-1	957496
7440-23-5	Sodium	457000	ug/Kg		7210	25700	25700	1	P	HSC	03/19/10 16:30	031910-1	957496
7440-28-0	Thallium	0.210	mg/kg	U	0.0629	0.21	0.21	2	MS	PRB	04/20/10 14:37	100420-2	957498
7440-61-1	Uranium	1.67	mg/kg	*	0.0138	0.0419	0.0419	2	MS	PRB	04/20/10 14:37	100420-2	957498
7440-62-2	Vanadium	8990	ug/Kg		103	515	515	1	P	HSC	03/19/10 16:30	031910-1	957496
7440-66-6	Zinc	34400	ug/Kg		340	1030	1030	1	P	HSC	03/19/10 16:30	031910-1	957496

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
957496	957495	SW846 3050B	0.515	g	50	mL	02/26/10	AXG2
957498	957497	SW846 3050B	0.506	g	50	mL	02/26/10	AXG2
958698	958693	SW846 7471A Prep	0.518	g	30	mL	03/01/10	TXB3

Quality Control Summary

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 10-1981

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
ICV01										
	Mercury	5.16	ug/L	5	ug/L	103.2	90.0 – 110.0	AV	02-MAR-10 08:46	030210S1-5
	Aluminum	5180	ug/L	5000	ug/L	103.7	90.0 – 110.0	P	19-MAR-10 07:43	031910-1
	Antimony	525	ug/L	500	ug/L	105	90.0 – 110.0	P	19-MAR-10 07:43	031910-1
	Barium	513	ug/L	500	ug/L	102.7	90.0 – 110.0	P	19-MAR-10 07:43	031910-1
	Cadmium	501	ug/L	500	ug/L	100.2	90.0 – 110.0	P	19-MAR-10 07:43	031910-1
	Calcium	5170	ug/L	5000	ug/L	103.5	90.0 – 110.0	P	19-MAR-10 07:43	031910-1
	Chromium	491	ug/L	500	ug/L	98.3	90.0 – 110.0	P	19-MAR-10 07:43	031910-1
	Cobalt	516	ug/L	500	ug/L	103.3	90.0 – 110.0	P	19-MAR-10 07:43	031910-1
	Copper	508	ug/L	500	ug/L	101.5	90.0 – 110.0	P	19-MAR-10 07:43	031910-1
	Iron	5240	ug/L	5000	ug/L	104.9	90.0 – 110.0	P	19-MAR-10 07:43	031910-1
	Lead	502	ug/L	500	ug/L	100.3	90.0 – 110.0	P	19-MAR-10 07:43	031910-1
	Magnesium	5440	ug/L	5000	ug/L	108.8	90.0 – 110.0	P	19-MAR-10 07:43	031910-1
	Manganese	516	ug/L	500	ug/L	103.3	90.0 – 110.0	P	19-MAR-10 07:43	031910-1
	Potassium	2560	ug/L	2500	ug/L	102.3	90.0 – 110.0	P	19-MAR-10 07:43	031910-1
	Silver	260	ug/L	250	ug/L	104.2	90.0 – 110.0	P	19-MAR-10 07:43	031910-1
	Sodium	2460	ug/L	2500	ug/L	98.5	90.0 – 110.0	P	19-MAR-10 07:43	031910-1
	Vanadium	516	ug/L	500	ug/L	103.3	90.0 – 110.0	P	19-MAR-10 07:43	031910-1
	Zinc	508	ug/L	500	ug/L	101.5	90.0 – 110.0	P	19-MAR-10 07:43	031910-1
	Arsenic	50.7	ug/L	50	ug/L	101.4	90.0 – 110.0	MS	20-APR-10 13:43	100420-2
	Beryllium	50.4	ug/L	50	ug/L	100.9	90.0 – 110.0	MS	20-APR-10 13:43	100420-2
	Nickel	52.2	ug/L	50	ug/L	104.4	90.0 – 110.0	MS	20-APR-10 13:43	100420-2
	Selenium	49.6	ug/L	50	ug/L	99.3	90.0 – 110.0	MS	20-APR-10 13:43	100420-2
	Thallium	49.9	ug/L	50	ug/L	99.8	90.0 – 110.0	MS	20-APR-10 13:43	100420-2
	Uranium	51.7	ug/L	50	ug/L	103.5	90.0 – 110.0	MS	20-APR-10 13:43	100420-2
CCV01										
	Mercury	5.01	ug/L	5	ug/L	100.3	80.0 – 120.0	AV	02-MAR-10 08:52	030210S1-5
	Aluminum	5010	ug/L	5000	ug/L	100.3	90.0 – 110.0	P	19-MAR-10 08:47	031910-1
	Antimony	519	ug/L	500	ug/L	103.9	90.0 – 110.0	P	19-MAR-10 08:47	031910-1
	Barium	496	ug/L	500	ug/L	99.1	90.0 – 110.0	P	19-MAR-10 08:47	031910-1
	Cadmium	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	19-MAR-10 08:47	031910-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 10-1981

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Calcium	5190	ug/L	5000	ug/L	103.9	90.0 – 110.0	P	19-MAR-10 08:47	031910-1
	Chromium	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	19-MAR-10 08:47	031910-1
	Cobalt	502	ug/L	500	ug/L	100.4	90.0 – 110.0	P	19-MAR-10 08:47	031910-1
	Copper	489	ug/L	500	ug/L	97.8	90.0 – 110.0	P	19-MAR-10 08:47	031910-1
	Iron	5300	ug/L	5000	ug/L	106	90.0 – 110.0	P	19-MAR-10 08:47	031910-1
	Lead	501	ug/L	500	ug/L	100.2	90.0 – 110.0	P	19-MAR-10 08:47	031910-1
	Magnesium	5370	ug/L	5000	ug/L	107.5	90.0 – 110.0	P	19-MAR-10 08:47	031910-1
	Manganese	499	ug/L	500	ug/L	99.8	90.0 – 110.0	P	19-MAR-10 08:47	031910-1
	Potassium	5210	ug/L	5000	ug/L	104.1	90.0 – 110.0	P	19-MAR-10 08:47	031910-1
	Silver	497	ug/L	500	ug/L	99.5	90.0 – 110.0	P	19-MAR-10 08:47	031910-1
	Sodium	10300	ug/L	10000	ug/L	103.1	90.0 – 110.0	P	19-MAR-10 08:47	031910-1
	Vanadium	500	ug/L	500	ug/L	100.1	90.0 – 110.0	P	19-MAR-10 08:47	031910-1
	Zinc	494	ug/L	500	ug/L	98.7	90.0 – 110.0	P	19-MAR-10 08:47	031910-1
	Arsenic	50.8	ug/L	50	ug/L	101.5	90.0 – 110.0	MS	20-APR-10 14:00	100420-2
	Beryllium	48.8	ug/L	50	ug/L	97.7	90.0 – 110.0	MS	20-APR-10 14:00	100420-2
	Nickel	51.4	ug/L	50	ug/L	102.8	90.0 – 110.0	MS	20-APR-10 14:00	100420-2
	Selenium	51.6	ug/L	50	ug/L	103.1	90.0 – 110.0	MS	20-APR-10 14:00	100420-2
	Thallium	50	ug/L	50	ug/L	99.9	90.0 – 110.0	MS	20-APR-10 14:00	100420-2
	Uranium	52.3	ug/L	50	ug/L	104.6	90.0 – 110.0	MS	20-APR-10 14:00	100420-2
CCV02	Mercury	5.14	ug/L	5	ug/L	102.8	80.0 – 120.0	AV	02-MAR-10 09:16	030210S1-5
	Aluminum	5140	ug/L	5000	ug/L	102.9	90.0 – 110.0	P	19-MAR-10 09:08	031910-1
	Antimony	517	ug/L	500	ug/L	103.4	90.0 – 110.0	P	19-MAR-10 09:08	031910-1
	Barium	500	ug/L	500	ug/L	100.1	90.0 – 110.0	P	19-MAR-10 09:08	031910-1
	Cadmium	501	ug/L	500	ug/L	100.1	90.0 – 110.0	P	19-MAR-10 09:08	031910-1
	Calcium	5190	ug/L	5000	ug/L	103.8	90.0 – 110.0	P	19-MAR-10 09:08	031910-1
	Chromium	500	ug/L	500	ug/L	100	90.0 – 110.0	P	19-MAR-10 09:08	031910-1
	Cobalt	508	ug/L	500	ug/L	101.5	90.0 – 110.0	P	19-MAR-10 09:08	031910-1
	Copper	494	ug/L	500	ug/L	98.8	90.0 – 110.0	P	19-MAR-10 09:08	031910-1
	Iron	5230	ug/L	5000	ug/L	104.7	90.0 – 110.0	P	19-MAR-10 09:08	031910-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 10-1981

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Lead	500	ug/L	500	ug/L	99.9	90.0 - 110.0	P	19-MAR-10 09:08	031910-1
	Magnesium	5410	ug/L	5000	ug/L	108.2	90.0 - 110.0	P	19-MAR-10 09:08	031910-1
	Manganese	492	ug/L	500	ug/L	98.4	90.0 - 110.0	P	19-MAR-10 09:08	031910-1
	Potassium	5220	ug/L	5000	ug/L	104.4	90.0 - 110.0	P	19-MAR-10 09:08	031910-1
	Silver	502	ug/L	500	ug/L	100.5	90.0 - 110.0	P	19-MAR-10 09:08	031910-1
	Sodium	9900	ug/L	10000	ug/L	99	90.0 - 110.0	P	19-MAR-10 09:08	031910-1
	Vanadium	505	ug/L	500	ug/L	101	90.0 - 110.0	P	19-MAR-10 09:08	031910-1
	Zinc	498	ug/L	500	ug/L	99.6	90.0 - 110.0	P	19-MAR-10 09:08	031910-1
	Arsenic	50.2	ug/L	50	ug/L	100.4	90.0 - 110.0	MS	20-APR-10 14:30	100420-2
	Beryllium	47.6	ug/L	50	ug/L	95.2	90.0 - 110.0	MS	20-APR-10 14:30	100420-2
	Nickel	50.8	ug/L	50	ug/L	101.6	90.0 - 110.0	MS	20-APR-10 14:30	100420-2
	Selenium	48.4	ug/L	50	ug/L	96.8	90.0 - 110.0	MS	20-APR-10 14:30	100420-2
	Thallium	49.8	ug/L	50	ug/L	99.5	90.0 - 110.0	MS	20-APR-10 14:30	100420-2
	Uranium	52.1	ug/L	50	ug/L	104.2	90.0 - 110.0	MS	20-APR-10 14:30	100420-2
CCV03	Mercury	5.21	ug/L	5	ug/L	104.2	80.0 - 120.0	AV	02-MAR-10 09:40	030210S1-5
	Aluminum	5090	ug/L	5000	ug/L	101.8	90.0 - 110.0	P	19-MAR-10 10:18	031910-1
	Antimony	519	ug/L	500	ug/L	103.8	90.0 - 110.0	P	19-MAR-10 10:18	031910-1
	Barium	498	ug/L	500	ug/L	99.6	90.0 - 110.0	P	19-MAR-10 10:18	031910-1
	Cadmium	498	ug/L	500	ug/L	99.7	90.0 - 110.0	P	19-MAR-10 10:18	031910-1
	Calcium	5200	ug/L	5000	ug/L	104	90.0 - 110.0	P	19-MAR-10 10:18	031910-1
	Chromium	498	ug/L	500	ug/L	99.7	90.0 - 110.0	P	19-MAR-10 10:18	031910-1
	Cobalt	505	ug/L	500	ug/L	101	90.0 - 110.0	P	19-MAR-10 10:18	031910-1
	Copper	491	ug/L	500	ug/L	98.2	90.0 - 110.0	P	19-MAR-10 10:18	031910-1
	Iron	5320	ug/L	5000	ug/L	106.4	90.0 - 110.0	P	19-MAR-10 10:18	031910-1
	Lead	499	ug/L	500	ug/L	99.8	90.0 - 110.0	P	19-MAR-10 10:18	031910-1
	Magnesium	5390	ug/L	5000	ug/L	107.7	90.0 - 110.0	P	19-MAR-10 10:18	031910-1
	Manganese	500	ug/L	500	ug/L	100.1	90.0 - 110.0	P	19-MAR-10 10:18	031910-1
	Potassium	5220	ug/L	5000	ug/L	104.3	90.0 - 110.0	P	19-MAR-10 10:18	031910-1
	Silver	499	ug/L	500	ug/L	99.8	90.0 - 110.0	P	19-MAR-10 10:18	031910-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 10-1981

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3.MER536.OPTIMA3

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Sodium	10500	ug/L	10000	ug/L	104.9	90.0 – 110.0	P	19-MAR-10 10:18	031910-1
	Vanadium	501	ug/L	500	ug/L	100.2	90.0 – 110.0	P	19-MAR-10 10:18	031910-1
	Zinc	495	ug/L	500	ug/L	99	90.0 – 110.0	P	19-MAR-10 10:18	031910-1
	Arsenic	50.3	ug/L	50	ug/L	100.6	90.0 – 110.0	MS	20-APR-10 14:57	100420-2
	Beryllium	47.4	ug/L	50	ug/L	94.7	90.0 – 110.0	MS	20-APR-10 14:57	100420-2
	Nickel	49.4	ug/L	50	ug/L	98.9	90.0 – 110.0	MS	20-APR-10 14:57	100420-2
	Selenium	47.9	ug/L	50	ug/L	95.8	90.0 – 110.0	MS	20-APR-10 14:57	100420-2
	Thallium	50	ug/L	50	ug/L	100	90.0 – 110.0	MS	20-APR-10 14:57	100420-2
	Uranium	52.1	ug/L	50	ug/L	104.2	90.0 – 110.0	MS	20-APR-10 14:57	100420-2
CCV04	Mercury	5	ug/L	5	ug/L	100.1	80.0 – 120.0	AV	02-MAR-10 10:08	030210S1-5
	Aluminum	5250	ug/L	5000	ug/L	105	90.0 – 110.0	P	19-MAR-10 11:38	031910-1
	Antimony	522	ug/L	500	ug/L	104.4	90.0 – 110.0	P	19-MAR-10 11:38	031910-1
	Barium	504	ug/L	500	ug/L	100.9	90.0 – 110.0	P	19-MAR-10 11:38	031910-1
	Cadmium	507	ug/L	500	ug/L	101.4	90.0 – 110.0	P	19-MAR-10 11:38	031910-1
	Calcium	5230	ug/L	5000	ug/L	104.7	90.0 – 110.0	P	19-MAR-10 11:38	031910-1
	Chromium	505	ug/L	500	ug/L	101	90.0 – 110.0	P	19-MAR-10 11:38	031910-1
	Cobalt	512	ug/L	500	ug/L	102.5	90.0 – 110.0	P	19-MAR-10 11:38	031910-1
	Copper	497	ug/L	500	ug/L	99.5	90.0 – 110.0	P	19-MAR-10 11:38	031910-1
	Iron	5270	ug/L	5000	ug/L	105.5	90.0 – 110.0	P	19-MAR-10 11:38	031910-1
	Lead	501	ug/L	500	ug/L	100.1	90.0 – 110.0	P	19-MAR-10 11:38	031910-1
	Magnesium	5330	ug/L	5000	ug/L	106.6	90.0 – 110.0	P	19-MAR-10 11:38	031910-1
	Manganese	494	ug/L	500	ug/L	98.9	90.0 – 110.0	P	19-MAR-10 11:38	031910-1
	Potassium	5370	ug/L	5000	ug/L	107.4	90.0 – 110.0	P	19-MAR-10 11:38	031910-1
	Silver	506	ug/L	500	ug/L	101.1	90.0 – 110.0	P	19-MAR-10 11:38	031910-1
	Sodium	10200	ug/L	10000	ug/L	102.5	90.0 – 110.0	P	19-MAR-10 11:38	031910-1
	Vanadium	508	ug/L	500	ug/L	101.5	90.0 – 110.0	P	19-MAR-10 11:38	031910-1
	Zinc	503	ug/L	500	ug/L	100.6	90.0 – 110.0	P	19-MAR-10 11:38	031910-1
CCV05	Mercury	5.08	ug/L	5	ug/L	101.7	80.0 – 120.0	AV	02-MAR-10 10:32	030210S1-5

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 10-1981

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: JCPMS3,MER536,OPTIMA3

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Aluminum	5150	ug/L	5000	ug/L	103	90.0 – 110.0	P	19-MAR-10 12:49	031910-1
	Antimony	523	ug/L	500	ug/L	104.6	90.0 – 110.0	P	19-MAR-10 12:49	031910-1
	Barium	506	ug/L	500	ug/L	101.2	90.0 – 110.0	P	19-MAR-10 12:49	031910-1
	Cadmium	507	ug/L	500	ug/L	101.4	90.0 – 110.0	P	19-MAR-10 12:49	031910-1
	Calcium	5210	ug/L	5000	ug/L	104.1	90.0 – 110.0	P	19-MAR-10 12:49	031910-1
	Chromium	506	ug/L	500	ug/L	101.3	90.0 – 110.0	P	19-MAR-10 12:49	031910-1
	Cobalt	513	ug/L	500	ug/L	102.5	90.0 – 110.0	P	19-MAR-10 12:49	031910-1
	Copper	499	ug/L	500	ug/L	99.9	90.0 – 110.0	P	19-MAR-10 12:49	031910-1
	Iron	5290	ug/L	5000	ug/L	105.9	90.0 – 110.0	P	19-MAR-10 12:49	031910-1
	Lead	505	ug/L	500	ug/L	101	90.0 – 110.0	P	19-MAR-10 12:49	031910-1
	Magnesium	5320	ug/L	5000	ug/L	106.5	90.0 – 110.0	P	19-MAR-10 12:49	031910-1
	Manganese	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	19-MAR-10 12:49	031910-1
	Potassium	5290	ug/L	5000	ug/L	105.8	90.0 – 110.0	P	19-MAR-10 12:49	031910-1
	Silver	509	ug/L	500	ug/L	101.7	90.0 – 110.0	P	19-MAR-10 12:49	031910-1
	Sodium	10400	ug/L	10000	ug/L	104.3	90.0 – 110.0	P	19-MAR-10 12:49	031910-1
	Vanadium	511	ug/L	500	ug/L	102.2	90.0 – 110.0	P	19-MAR-10 12:49	031910-1
	Zinc	504	ug/L	500	ug/L	100.7	90.0 – 110.0	P	19-MAR-10 12:49	031910-1
CCV06										
	Mercury	5.22	ug/L	5	ug/L	104.3	80.0 – 120.0	AV	02-MAR-10 10:56	030210S1-5
	Aluminum	5040	ug/L	5000	ug/L	100.8	90.0 – 110.0	P	19-MAR-10 13:15	031910-1
	Antimony	535	ug/L	500	ug/L	107	90.0 – 110.0	P	19-MAR-10 13:15	031910-1
	Barium	517	ug/L	500	ug/L	103.4	90.0 – 110.0	P	19-MAR-10 13:15	031910-1
	Cadmium	516	ug/L	500	ug/L	103.3	90.0 – 110.0	P	19-MAR-10 13:15	031910-1
	Calcium	5150	ug/L	5000	ug/L	103	90.0 – 110.0	P	19-MAR-10 13:15	031910-1
	Chromium	517	ug/L	500	ug/L	103.4	90.0 – 110.0	P	19-MAR-10 13:15	031910-1
	Cobalt	524	ug/L	500	ug/L	104.7	90.0 – 110.0	P	19-MAR-10 13:15	031910-1
	Copper	510	ug/L	500	ug/L	102	90.0 – 110.0	P	19-MAR-10 13:15	031910-1
	Iron	5230	ug/L	5000	ug/L	104.6	90.0 – 110.0	P	19-MAR-10 13:15	031910-1
	Lead	514	ug/L	500	ug/L	102.9	90.0 – 110.0	P	19-MAR-10 13:15	031910-1
	Magnesium	5290	ug/L	5000	ug/L	105.7	90.0 – 110.0	P	19-MAR-10 13:15	031910-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 10-1981

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Manganese	518	ug/L	500	ug/L	103.6	90.0 – 110.0	P	19-MAR-10 13:15	031910-1
	Potassium	5160	ug/L	5000	ug/L	103.3	90.0 – 110.0	P	19-MAR-10 13:15	031910-1
	Silver	518	ug/L	500	ug/L	103.6	90.0 – 110.0	P	19-MAR-10 13:15	031910-1
	Sodium	10000	ug/L	10000	ug/L	100.2	90.0 – 110.0	P	19-MAR-10 13:15	031910-1
	Vanadium	521	ug/L	500	ug/L	104.2	90.0 – 110.0	P	19-MAR-10 13:15	031910-1
	Zinc	512	ug/L	500	ug/L	102.4	90.0 – 110.0	P	19-MAR-10 13:15	031910-1
CCV07										
	Mercury	5.16	ug/L	5	ug/L	103.2	80.0 – 120.0	AV	02-MAR-10 11:19	030210S1-5
	Aluminum	5110	ug/L	5000	ug/L	102.1	90.0 – 110.0	P	19-MAR-10 14:17	031910-1
	Antimony	523	ug/L	500	ug/L	104.5	90.0 – 110.0	P	19-MAR-10 14:17	031910-1
	Barium	499	ug/L	500	ug/L	99.8	90.0 – 110.0	P	19-MAR-10 14:17	031910-1
	Cadmium	501	ug/L	500	ug/L	100.2	90.0 – 110.0	P	19-MAR-10 14:17	031910-1
	Calcium	5180	ug/L	5000	ug/L	103.7	90.0 – 110.0	P	19-MAR-10 14:17	031910-1
	Chromium	498	ug/L	500	ug/L	99.7	90.0 – 110.0	P	19-MAR-10 14:17	031910-1
	Cobalt	508	ug/L	500	ug/L	101.6	90.0 – 110.0	P	19-MAR-10 14:17	031910-1
	Copper	492	ug/L	500	ug/L	98.4	90.0 – 110.0	P	19-MAR-10 14:17	031910-1
	Iron	5250	ug/L	5000	ug/L	105.1	90.0 – 110.0	P	19-MAR-10 14:17	031910-1
	Lead	502	ug/L	500	ug/L	100.4	90.0 – 110.0	P	19-MAR-10 14:17	031910-1
	Magnesium	5350	ug/L	5000	ug/L	107	90.0 – 110.0	P	19-MAR-10 14:17	031910-1
	Manganese	490	ug/L	500	ug/L	98.1	90.0 – 110.0	P	19-MAR-10 14:17	031910-1
	Potassium	5270	ug/L	5000	ug/L	105.4	90.0 – 110.0	P	19-MAR-10 14:17	031910-1
	Silver	503	ug/L	500	ug/L	100.5	90.0 – 110.0	P	19-MAR-10 14:17	031910-1
	Sodium	10300	ug/L	10000	ug/L	102.9	90.0 – 110.0	P	19-MAR-10 14:17	031910-1
	Vanadium	502	ug/L	500	ug/L	100.3	90.0 – 110.0	P	19-MAR-10 14:17	031910-1
	Zinc	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	19-MAR-10 14:17	031910-1
CCV08										
	Mercury	5.23	ug/L	5	ug/L	104.6	80.0 – 120.0	AV	02-MAR-10 11:43	030210S1-5
	Aluminum	4930	ug/L	5000	ug/L	98.6	90.0 – 110.0	P	19-MAR-10 15:12	031910-1
	Antimony	526	ug/L	500	ug/L	105.1	90.0 – 110.0	P	19-MAR-10 15:12	031910-1
	Barium	505	ug/L	500	ug/L	101	90.0 – 110.0	P	19-MAR-10 15:12	031910-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 10-1981

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Cadmium	506	ug/L	500	ug/L	101.3	90.0 – 110.0	P	19-MAR-10 15:12	031910-1
	Calcium	4980	ug/L	5000	ug/L	99.6	90.0 – 110.0	P	19-MAR-10 15:12	031910-1
	Chromium	504	ug/L	500	ug/L	100.9	90.0 – 110.0	P	19-MAR-10 15:12	031910-1
	Cobalt	513	ug/L	500	ug/L	102.7	90.0 – 110.0	P	19-MAR-10 15:12	031910-1
	Copper	500	ug/L	500	ug/L	100.1	90.0 – 110.0	P	19-MAR-10 15:12	031910-1
	Iron	5040	ug/L	5000	ug/L	100.9	90.0 – 110.0	P	19-MAR-10 15:12	031910-1
	Lead	505	ug/L	500	ug/L	101	90.0 – 110.0	P	19-MAR-10 15:12	031910-1
	Magnesium	5180	ug/L	5000	ug/L	103.5	90.0 – 110.0	P	19-MAR-10 15:12	031910-1
	Manganese	505	ug/L	500	ug/L	101.1	90.0 – 110.0	P	19-MAR-10 15:12	031910-1
	Potassium	5070	ug/L	5000	ug/L	101.4	90.0 – 110.0	P	19-MAR-10 15:12	031910-1
	Silver	510	ug/L	500	ug/L	102	90.0 – 110.0	P	19-MAR-10 15:12	031910-1
	Sodium	9760	ug/L	10000	ug/L	97.6	90.0 – 110.0	P	19-MAR-10 15:12	031910-1
	Vanadium	509	ug/L	500	ug/L	101.7	90.0 – 110.0	P	19-MAR-10 15:12	031910-1
	Zinc	502	ug/L	500	ug/L	100.5	90.0 – 110.0	P	19-MAR-10 15:12	031910-1
CCV09										
	Mercury	3.17	ug/L	5	ug/L	63.3	80.0 – 120.0	AV	02-MAR-10 12:07	030210S1-5
	Aluminum	4950	ug/L	5000	ug/L	99	90.0 – 110.0	P	19-MAR-10 16:16	031910-1
	Antimony	516	ug/L	500	ug/L	103.2	90.0 – 110.0	P	19-MAR-10 16:16	031910-1
	Barium	505	ug/L	500	ug/L	101	90.0 – 110.0	P	19-MAR-10 16:16	031910-1
	Cadmium	506	ug/L	500	ug/L	101.3	90.0 – 110.0	P	19-MAR-10 16:16	031910-1
	Calcium	4990	ug/L	5000	ug/L	99.9	90.0 – 110.0	P	19-MAR-10 16:16	031910-1
	Chromium	505	ug/L	500	ug/L	101	90.0 – 110.0	P	19-MAR-10 16:16	031910-1
	Cobalt	513	ug/L	500	ug/L	102.6	90.0 – 110.0	P	19-MAR-10 16:16	031910-1
	Copper	500	ug/L	500	ug/L	100	90.0 – 110.0	P	19-MAR-10 16:16	031910-1
	Iron	5000	ug/L	5000	ug/L	100	90.0 – 110.0	P	19-MAR-10 16:16	031910-1
	Lead	502	ug/L	500	ug/L	100.4	90.0 – 110.0	P	19-MAR-10 16:16	031910-1
	Magnesium	5050	ug/L	5000	ug/L	101.1	90.0 – 110.0	P	19-MAR-10 16:16	031910-1
	Manganese	500	ug/L	500	ug/L	100	90.0 – 110.0	P	19-MAR-10 16:16	031910-1
	Potassium	5090	ug/L	5000	ug/L	101.8	90.0 – 110.0	P	19-MAR-10 16:16	031910-1
	Silver	510	ug/L	500	ug/L	102	90.0 – 110.0	P	19-MAR-10 16:16	031910-1

METALS

--2a--

Initial and Continuing Calibration Verification

SDG No: 10-1981

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
CCV10	Sodium	9640	ug/L	10000	ug/L	96.4	90.0 - 110.0	P	19-MAR-10 16:16	031910-1
	Vanadium	509	ug/L	500	ug/L	101.8	90.0 - 110.0	P	19-MAR-10 16:16	031910-1
	Zinc	502	ug/L	500	ug/L	100.4	90.0 - 110.0	P	19-MAR-10 16:16	031910-1
	Mercury	3.88	ug/L	5	ug/L	77.6	80.0 - 120.0	AV	02-MAR-10 12:26	030210S1-5
	Aluminum	4980	ug/L	5000	ug/L	99.5	90.0 - 110.0	P	19-MAR-10 17:13	031910-1
	Antimony	523	ug/L	500	ug/L	104.5	90.0 - 110.0	P	19-MAR-10 17:13	031910-1
	Barium	500	ug/L	500	ug/L	100.1	90.0 - 110.0	P	19-MAR-10 17:13	031910-1
	Cadmium	503	ug/L	500	ug/L	100.7	90.0 - 110.0	P	19-MAR-10 17:13	031910-1
	Calcium	5080	ug/L	5000	ug/L	101.6	90.0 - 110.0	P	19-MAR-10 17:13	031910-1
	Chromium	500	ug/L	500	ug/L	100	90.0 - 110.0	P	19-MAR-10 17:13	031910-1
	Cobalt	509	ug/L	500	ug/L	101.7	90.0 - 110.0	P	19-MAR-10 17:13	031910-1
	Copper	494	ug/L	500	ug/L	98.7	90.0 - 110.0	P	19-MAR-10 17:13	031910-1
	Iron	5170	ug/L	5000	ug/L	103.3	90.0 - 110.0	P	19-MAR-10 17:13	031910-1
	Lead	503	ug/L	500	ug/L	100.6	90.0 - 110.0	P	19-MAR-10 17:13	031910-1
	Magnesium	5250	ug/L	5000	ug/L	105.1	90.0 - 110.0	P	19-MAR-10 17:13	031910-1
	Manganese	502	ug/L	500	ug/L	100.3	90.0 - 110.0	P	19-MAR-10 17:13	031910-1
	Potassium	5150	ug/L	5000	ug/L	103	90.0 - 110.0	P	19-MAR-10 17:13	031910-1
	Silver	505	ug/L	500	ug/L	100.9	90.0 - 110.0	P	19-MAR-10 17:13	031910-1
	Sodium	10100	ug/L	10000	ug/L	101.4	90.0 - 110.0	P	19-MAR-10 17:13	031910-1
	Vanadium	504	ug/L	500	ug/L	100.9	90.0 - 110.0	P	19-MAR-10 17:13	031910-1
	Zinc	498	ug/L	500	ug/L	99.6	90.0 - 110.0	P	19-MAR-10 17:13	031910-1
CCV11	Mercury	4.28	ug/L	5	ug/L	85.6	80.0 - 120.0	AV	02-MAR-10 12:33	030210S1-5
CCV12	Mercury	4.59	ug/L	5	ug/L	91.8	80.0 - 120.0	AV	02-MAR-10 12:57	030210S1-5
CCV13	Mercury	4.5	ug/L	5	ug/L	90.1	80.0 - 120.0	AV	02-MAR-10 13:21	030210S1-5

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 10-1981

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
CCV14	Mercury	4.74	ug/L	5	ug/L	94.7	80.0 – 120.0	AV	02-MAR-10 13:28	030210S1-5
CCV15	Mercury	5.26	ug/L	5	ug/L	105.3	80.0 – 120.0	AV	02-MAR-10 13:55	030210S1-5
CCV16	Mercury	5.35	ug/L	5	ug/L	107	80.0 – 120.0	AV	02-MAR-10 14:19	030210S1-5
CCV17	Mercury	5.18	ug/L	5	ug/L	103.6	80.0 – 120.0	AV	02-MAR-10 14:35	030210S1-5
CCV18	Mercury	5.17	ug/L	5	ug/L	103.4	80.0 – 120.0	AV	02-MAR-10 14:59	030210S1-5
CCV19	Mercury	5.15	ug/L	5	ug/L	103	80.0 – 120.0	AV	02-MAR-10 15:23	030210S1-5
CCV20	Mercury	-.53	ug/L	5	ug/L	-10.5	80.0 – 120.0	AV	02-MAR-10 15:47	030210S1-5
CCV21	Mercury	5.16	ug/L	5	ug/L	103.2	80.0 – 120.0	AV	02-MAR-10 15:52	030210S1-5
CCV22	Mercury	5.45	ug/L	5	ug/L	109	80.0 – 120.0	AV	02-MAR-10 16:16	030210S1-5
CCV23	Mercury	5.23	ug/L	5	ug/L	104.7	80.0 – 120.0	AV	02-MAR-10 16:40	030210S1-5
CCV24	Mercury	5.6	ug/L	5	ug/L	112	80.0 – 120.0	AV	02-MAR-10 17:03	030210S1-5

METALS
-2b-
CRDL Standard for AA & ICP

SDG No: 10-1981

Contract: LANL01004

Lab Code: GEL

AA CRDL Standard Source: SPEX

ICP CRDL Standard Source Solutions Plus

Instrument ID: ICPMS3,MER536,OPTIMA3

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Advisory Limits (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
CRDL01										
	Mercury	.157	ug/L	.2	ug/L	78.6	70.0 – 130.0	AV	02-MAR-10 08:50	030210S1-5
	Selenium	5.85	ug/L	5	ug/L	117	70.0 – 130.0	MS	20-APR-10 13:50	100420-2
	Uranium	.291	ug/L	.2	ug/L	145.5	70.0 – 130.0	MS	20-APR-10 13:50	100420-2
	Nickel	2.4	ug/L	2	ug/L	119.9	70.0 – 130.0	MS	20-APR-10 13:50	100420-2
	Beryllium	.674	ug/L	.5	ug/L	134.8	70.0 – 130.0	MS	20-APR-10 13:50	100420-2
	Arsenic	6.11	ug/L	5	ug/L	122.2	70.0 – 130.0	MS	20-APR-10 13:50	100420-2
	Thallium	1.03	ug/L	1	ug/L	103.2	70.0 – 130.0	MS	20-APR-10 13:50	100420-2
PQL01										
	Manganese	10.6	ug/L	10	ug/L	106.1	70.0 – 130.0	P	19-MAR-10 07:57	031910-1
	Potassium	170	ug/L	150	ug/L	113.2	70.0 – 130.0	P	19-MAR-10 07:57	031910-1
	Silver	5.16	ug/L	5	ug/L	103.2	70.0 – 130.0	P	19-MAR-10 07:57	031910-1
	Sodium	286	ug/L	300	ug/L	95.2	70.0 – 130.0	P	19-MAR-10 07:57	031910-1
	Antimony	10.5	ug/L	10	ug/L	104.7	70.0 – 130.0	P	19-MAR-10 07:57	031910-1
	Barium	5.23	ug/L	5	ug/L	104.6	70.0 – 130.0	P	19-MAR-10 07:57	031910-1
	Cadmium	5.13	ug/L	5	ug/L	102.6	70.0 – 130.0	P	19-MAR-10 07:57	031910-1
	Magnesium	344	ug/L	300	ug/L	114.8	70.0 – 130.0	P	19-MAR-10 07:57	031910-1
	Lead	12.2	ug/L	10	ug/L	122.4	70.0 – 130.0	P	19-MAR-10 07:57	031910-1
	Iron	117	ug/L	100	ug/L	116.6	70.0 – 130.0	P	19-MAR-10 07:57	031910-1
	Aluminum	211	ug/L	200	ug/L	105.6	70.0 – 130.0	P	19-MAR-10 07:57	031910-1
	Chromium	5.11	ug/L	5	ug/L	102.1	70.0 – 130.0	P	19-MAR-10 07:57	031910-1
	Cobalt	5.16	ug/L	5	ug/L	103.2	70.0 – 130.0	P	19-MAR-10 07:57	031910-1
	Copper	10.4	ug/L	10	ug/L	104	70.0 – 130.0	P	19-MAR-10 07:57	031910-1
	Vanadium	4.92	ug/L	5	ug/L	98.3	70.0 – 130.0	P	19-MAR-10 07:57	031910-1
	Zinc	13.7	ug/L	10	ug/L	137.3	70.0 – 130.0	P	19-MAR-10 07:57	031910-1
	Calcium	223	ug/L	200	ug/L	111.7	70.0 – 130.0	P	19-MAR-10 07:57	031910-1
PQL02										
	Aluminum	211	ug/L	200	ug/L	105.6	70.0 – 130.0	P	19-MAR-10 10:25	031910-1
	Iron	107	ug/L	100	ug/L	107.5	70.0 – 130.0	P	19-MAR-10 10:25	031910-1
	Lead	12.1	ug/L	10	ug/L	121.3	70.0 – 130.0	P	19-MAR-10 10:25	031910-1
	Magnesium	384	ug/L	300	ug/L	128	70.0 – 130.0	P	19-MAR-10 10:25	031910-1

METALS
-2b-
CRDL Standard for AA & ICP

SDG No: 10-1981

Contract: LANL01004

Lab Code: GEL

AA CRDL Standard Source:

ICP CRDL Standard Source

Instrument ID: ICPMS3,MER536,OPTIMA3

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Advisory Limits (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Manganese	10.6	ug/L	10	ug/L	106.4	70.0 – 130.0	P	19-MAR-10 10:25	031910-1
	Potassium	171	ug/L	150	ug/L	113.7	70.0 – 130.0	P	19-MAR-10 10:25	031910-1
	Silver	5.08	ug/L	5	ug/L	101.7	70.0 – 130.0	P	19-MAR-10 10:25	031910-1
	Sodium	287	ug/L	300	ug/L	95.6	70.0 – 130.0	P	19-MAR-10 10:25	031910-1
	Antimony	11.8	ug/L	10	ug/L	117.6	70.0 – 130.0	P	19-MAR-10 10:25	031910-1
	Barium	5.33	ug/L	5	ug/L	106.6	70.0 – 130.0	P	19-MAR-10 10:25	031910-1
	Cadmium	5.26	ug/L	5	ug/L	105.3	70.0 – 130.0	P	19-MAR-10 10:25	031910-1
	Cobalt	5.4	ug/L	5	ug/L	108.1	70.0 – 130.0	P	19-MAR-10 10:25	031910-1
	Copper	10.1	ug/L	10	ug/L	101.2	70.0 – 130.0	P	19-MAR-10 10:25	031910-1
	Vanadium	5.01	ug/L	5	ug/L	100.3	70.0 – 130.0	P	19-MAR-10 10:25	031910-1
	Zinc	13.6	ug/L	10	ug/L	135.7	70.0 – 130.0	P	19-MAR-10 10:25	031910-1
	Calcium	221	ug/L	200	ug/L	110.5	70.0 – 130.0	P	19-MAR-10 10:25	031910-1
	Chromium	5.12	ug/L	5	ug/L	102.3	70.0 – 130.0	P	19-MAR-10 10:25	031910-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 10-1981

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
ICB01	Mercury	-0.112	+/- .2	J	0.068	0.2	SOL	AV	02-MAR-10 08:48	030210S1-5
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	19-MAR-10 07:50	031910-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	19-MAR-10 07:50	031910-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	19-MAR-10 07:50	031910-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	19-MAR-10 07:50	031910-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	19-MAR-10 07:50	031910-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	19-MAR-10 07:50	031910-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	19-MAR-10 07:50	031910-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	19-MAR-10 07:50	031910-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	19-MAR-10 07:50	031910-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	19-MAR-10 07:50	031910-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	19-MAR-10 07:50	031910-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	19-MAR-10 07:50	031910-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	19-MAR-10 07:50	031910-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	19-MAR-10 07:50	031910-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	19-MAR-10 07:50	031910-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	19-MAR-10 07:50	031910-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	19-MAR-10 07:50	031910-1
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	20-APR-10 13:46	100420-2
	Beryllium	0.1	+/- .5	U	0.1	0.5	SOL	MS	20-APR-10 13:46	100420-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	20-APR-10 13:46	100420-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	20-APR-10 13:46	100420-2
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	20-APR-10 13:46	100420-2
	Uranium	0.066	+/- .2	U	0.066	0.2	SOL	MS	20-APR-10 13:46	100420-2
CCB01	Mercury	0.068	+/- .2	U	0.068	0.2	SOL	AV	02-MAR-10 08:54	030210S1-5
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	19-MAR-10 08:54	031910-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	19-MAR-10 08:54	031910-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	19-MAR-10 08:54	031910-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	19-MAR-10 08:54	031910-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	19-MAR-10 08:54	031910-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 10-1981

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	19-MAR-10 08:54	031910-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	19-MAR-10 08:54	031910-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	19-MAR-10 08:54	031910-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	19-MAR-10 08:54	031910-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	19-MAR-10 08:54	031910-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	19-MAR-10 08:54	031910-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	19-MAR-10 08:54	031910-1
	Potassium	79.8	+/-250	J	64.0	250	SOL	P	19-MAR-10 08:54	031910-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	19-MAR-10 08:54	031910-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	19-MAR-10 08:54	031910-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	19-MAR-10 08:54	031910-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	19-MAR-10 08:54	031910-1
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	20-APR-10 14:03	100420-2
	Beryllium	0.1	+/-5	U	0.1	0.5	SOL	MS	20-APR-10 14:03	100420-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	20-APR-10 14:03	100420-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	20-APR-10 14:03	100420-2
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	20-APR-10 14:03	100420-2
	Uranium	0.066	+/-2	U	0.066	0.2	SOL	MS	20-APR-10 14:03	100420-2
CCB02	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	02-MAR-10 09:18	030210S1-5
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	19-MAR-10 09:15	031910-1
	Antimony	4.1	+/-10	J	3.3	10.0	SOL	P	19-MAR-10 09:15	031910-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	19-MAR-10 09:15	031910-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	19-MAR-10 09:15	031910-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	19-MAR-10 09:15	031910-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	19-MAR-10 09:15	031910-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	19-MAR-10 09:15	031910-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	19-MAR-10 09:15	031910-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	19-MAR-10 09:15	031910-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	19-MAR-10 09:15	031910-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	19-MAR-10 09:15	031910-1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 10-1981

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>
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	19-MAR-10 09:15	031910-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	19-MAR-10 09:15	031910-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	19-MAR-10 09:15	031910-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	19-MAR-10 09:15	031910-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	19-MAR-10 09:15	031910-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	19-MAR-10 09:15	031910-1
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	20-APR-10 14:33	100420-2
	Beryllium	0.1	+/-5	U	0.1	0.5	SOL	MS	20-APR-10 14:33	100420-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	20-APR-10 14:33	100420-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	20-APR-10 14:33	100420-2
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	20-APR-10 14:33	100420-2
	Uranium	0.066	+/-2	U	0.066	0.2	SOL	MS	20-APR-10 14:33	100420-2
CCB03	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	02-MAR-10 09:42	030210S1-5
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	19-MAR-10 10:32	031910-1
	Antimony	5.04	+/-10	J	3.3	10.0	SOL	P	19-MAR-10 10:32	031910-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	19-MAR-10 10:32	031910-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	19-MAR-10 10:32	031910-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	19-MAR-10 10:32	031910-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	19-MAR-10 10:32	031910-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	19-MAR-10 10:32	031910-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	19-MAR-10 10:32	031910-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	19-MAR-10 10:32	031910-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	19-MAR-10 10:32	031910-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	19-MAR-10 10:32	031910-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	19-MAR-10 10:32	031910-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	19-MAR-10 10:32	031910-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	19-MAR-10 10:32	031910-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	19-MAR-10 10:32	031910-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	19-MAR-10 10:32	031910-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	19-MAR-10 10:32	031910-1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 10-1981

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>
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	20-APR-10 15:00	100420-2
	Beryllium	0.1	+/-5	U	0.1	0.5	SOL	MS	20-APR-10 15:00	100420-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	20-APR-10 15:00	100420-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	20-APR-10 15:00	100420-2
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	20-APR-10 15:00	100420-2
	Uranium	0.066	+/-2	U	0.066	0.2	SOL	MS	20-APR-10 15:00	100420-2
CCB04										
	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	02-MAR-10 10:10	030210S1-5
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	19-MAR-10 11:45	031910-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	19-MAR-10 11:45	031910-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	19-MAR-10 11:45	031910-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	19-MAR-10 11:45	031910-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	19-MAR-10 11:45	031910-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	19-MAR-10 11:45	031910-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	19-MAR-10 11:45	031910-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	19-MAR-10 11:45	031910-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	19-MAR-10 11:45	031910-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	19-MAR-10 11:45	031910-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	19-MAR-10 11:45	031910-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	19-MAR-10 11:45	031910-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	19-MAR-10 11:45	031910-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	19-MAR-10 11:45	031910-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	19-MAR-10 11:45	031910-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	19-MAR-10 11:45	031910-1
	Zinc	4.13	+/-10	J	3.3	10.0	SOL	P	19-MAR-10 11:45	031910-1
CCB05										
	Mercury	-0.072	+/-2	J	0.068	0.2	SOL	AV	02-MAR-10 10:34	030210S1-5
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	19-MAR-10 12:56	031910-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	19-MAR-10 12:56	031910-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	19-MAR-10 12:56	031910-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	19-MAR-10 12:56	031910-1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 10-1981

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>
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	19-MAR-10 12:56	031910-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	19-MAR-10 12:56	031910-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	19-MAR-10 12:56	031910-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	19-MAR-10 12:56	031910-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	19-MAR-10 12:56	031910-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	19-MAR-10 12:56	031910-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	19-MAR-10 12:56	031910-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	19-MAR-10 12:56	031910-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	19-MAR-10 12:56	031910-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	19-MAR-10 12:56	031910-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	19-MAR-10 12:56	031910-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	19-MAR-10 12:56	031910-1
	Zinc	3.36	+/-10	J	3.3	10.0	SOL	P	19-MAR-10 12:56	031910-1
CCB06	Mercury	-0.074	+/-2	J	0.068	0.2	SOL	AV	02-MAR-10 10:58	030210S1-5
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	19-MAR-10 13:22	031910-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	19-MAR-10 13:22	031910-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	19-MAR-10 13:22	031910-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	19-MAR-10 13:22	031910-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	19-MAR-10 13:22	031910-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	19-MAR-10 13:22	031910-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	19-MAR-10 13:22	031910-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	19-MAR-10 13:22	031910-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	19-MAR-10 13:22	031910-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	19-MAR-10 13:22	031910-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	19-MAR-10 13:22	031910-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	19-MAR-10 13:22	031910-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	19-MAR-10 13:22	031910-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	19-MAR-10 13:22	031910-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	19-MAR-10 13:22	031910-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	19-MAR-10 13:22	031910-1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 10-1981

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>
CCB07	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	19-MAR-10 13:22	031910-1
	Mercury	-0.093	+/- .2	J	0.068	0.2	SOL	AV	02-MAR-10 11:22	030210S1-5
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	19-MAR-10 14:24	031910-1
	Antimony	3.73	+/-10	J	3.3	10.0	SOL	P	19-MAR-10 14:24	031910-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	19-MAR-10 14:24	031910-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	19-MAR-10 14:24	031910-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	19-MAR-10 14:24	031910-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	19-MAR-10 14:24	031910-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	19-MAR-10 14:24	031910-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	19-MAR-10 14:24	031910-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	19-MAR-10 14:24	031910-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	19-MAR-10 14:24	031910-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	19-MAR-10 14:24	031910-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	19-MAR-10 14:24	031910-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	19-MAR-10 14:24	031910-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	19-MAR-10 14:24	031910-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	19-MAR-10 14:24	031910-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	19-MAR-10 14:24	031910-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	19-MAR-10 14:24	031910-1
CCB08	Mercury	-0.114	+/- .2	J	0.068	0.2	SOL	AV	02-MAR-10 11:45	030210S1-5
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	19-MAR-10 15:19	031910-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	19-MAR-10 15:19	031910-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	19-MAR-10 15:19	031910-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	19-MAR-10 15:19	031910-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	19-MAR-10 15:19	031910-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	19-MAR-10 15:19	031910-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	19-MAR-10 15:19	031910-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	19-MAR-10 15:19	031910-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	19-MAR-10 15:19	031910-1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 10-1981

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	19-MAR-10 15:19	031910-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	19-MAR-10 15:19	031910-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	19-MAR-10 15:19	031910-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	19-MAR-10 15:19	031910-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	19-MAR-10 15:19	031910-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	19-MAR-10 15:19	031910-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	19-MAR-10 15:19	031910-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	19-MAR-10 15:19	031910-1
CCB09	Mercury	-0.078	+/-2	J	0.068	0.2	SOL	AV	02-MAR-10 12:09	030210S1-5
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	19-MAR-10 16:23	031910-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	19-MAR-10 16:23	031910-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	19-MAR-10 16:23	031910-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	19-MAR-10 16:23	031910-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	19-MAR-10 16:23	031910-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	19-MAR-10 16:23	031910-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	19-MAR-10 16:23	031910-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	19-MAR-10 16:23	031910-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	19-MAR-10 16:23	031910-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	19-MAR-10 16:23	031910-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	19-MAR-10 16:23	031910-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	19-MAR-10 16:23	031910-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	19-MAR-10 16:23	031910-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	19-MAR-10 16:23	031910-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	19-MAR-10 16:23	031910-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	19-MAR-10 16:23	031910-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	19-MAR-10 16:23	031910-1
CCB10	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	02-MAR-10 12:28	030210S1-5
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	19-MAR-10 17:20	031910-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	19-MAR-10 17:20	031910-1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 10-1981

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>
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	19-MAR-10 17:20	031910-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	19-MAR-10 17:20	031910-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	19-MAR-10 17:20	031910-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	19-MAR-10 17:20	031910-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	19-MAR-10 17:20	031910-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	19-MAR-10 17:20	031910-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	19-MAR-10 17:20	031910-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	19-MAR-10 17:20	031910-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	19-MAR-10 17:20	031910-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	19-MAR-10 17:20	031910-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	19-MAR-10 17:20	031910-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	19-MAR-10 17:20	031910-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	19-MAR-10 17:20	031910-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	19-MAR-10 17:20	031910-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	19-MAR-10 17:20	031910-1
CCB11	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	02-MAR-10 12:35	030210S1-5
CCB12	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	02-MAR-10 12:59	030210S1-5
CCB13	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	02-MAR-10 13:23	030210S1-5
CCB14	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	02-MAR-10 13:30	030210S1-5
CCB15	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	02-MAR-10 13:57	030210S1-5
CCB16	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	02-MAR-10 14:21	030210S1-5
CCB17	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	02-MAR-10 14:37	030210S1-5
CCB18	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	02-MAR-10 15:01	030210S1-5

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 10-1981

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>
CCB19	Mercury	0.068	+/- .2	U	0.068	0.2	SOL	AV	02-MAR-10 15:25	030210S1-5
CCB20	Mercury	-0.524	+/- .2		0.068	0.2	SOL	AV	02-MAR-10 15:49	030210S1-5
CCB21	Mercury	0.068	+/- .2	U	0.068	0.2	SOL	AV	02-MAR-10 15:54	030210S1-5
CCB22	Mercury	0.068	+/- .2	U	0.068	0.2	SOL	AV	02-MAR-10 16:18	030210S1-5
CCB23	Mercury	0.068	+/- .2	U	0.068	0.2	SOL	AV	02-MAR-10 16:42	030210S1-5
CCB24	Mercury	0.068	+/- .2	U	0.068	0.2	SOL	AV	02-MAR-10 17:05	030210S1-5

METALS
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PREPARATION BLANK SUMMARY

SDG NO. 10-1981
Contract: LANL01004
Matrix: MISC SOLID

<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>
1202053063								
	Sodium	6820	ug/Kg	+/-24400	U	P	6820	24400
	Vanadium	97.5	ug/Kg	+/-487	U	P	97.5	487
	Zinc	322	ug/Kg	+/-975	U	P	322	975
	Antimony	449	ug/Kg	+/-975	J	P	322	975
	Calcium	7800	ug/Kg	+/-24400	U	P	7800	24400
	Cadmium	97.5	ug/Kg	+/-487	U	P	97.5	487
	Barium	97.5	ug/Kg	+/-487	U	P	97.5	487
	Aluminum	6630	ug/Kg	+/-19500	U	P	6630	19500
	Chromium	146	ug/Kg	+/-487	U	P	146	487
	Silver	97.5	ug/Kg	+/-487	U	P	97.5	487
	Potassium	6240	ug/Kg	+/-24400	U	P	6240	24400
	Manganese	195	ug/Kg	+/-975	U	P	195	975
	Magnesium	8280	ug/Kg	+/-29200	U	P	8280	29200
	Lead	244	ug/Kg	+/-975	U	P	244	975
	Iron	7800	ug/Kg	+/-24400	U	P	7800	24400
	Copper	292	ug/Kg	+/-975	U	P	292	975
	Cobalt	146	ug/Kg	+/-487	U	P	146	487
1202053069								
	Arsenic	0.193	mg/kg	+/-0.967	U	MS	0.193	0.967
	Beryllium	0.0193	mg/kg	+/-0.0967	U	MS	0.0193	0.0967
	Nickel	0.0967	mg/kg	+/-0.387	U	MS	0.0967	0.387
	Selenium	0.484	mg/kg	+/-0.967	U	MS	0.484	0.967
	Thallium	0.058	mg/kg	+/-0.193	U	MS	0.058	0.193
	Uranium	0.0128	mg/kg	+/-0.0387	U	MS	0.0128	0.0387
1202056063								
	Mercury	-11.8	ug/kg	+/-11.9	J	AV	4.06	11.9

METALS

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Interference Check Sample

SDG No: 10-1981

Contract: LANL01004

Lab Code: GEL

ICS: O2Si

Instrument: OPTIMA3

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
ICSA01									
	Aluminum	512000	ug/L	500000	ug/L	103	80.0 – 120.0	19-MAR-10 08:04	031910-1
	Antimony	0.061	ug/L					19-MAR-10 08:04	031910-1
	Barium	0.525	ug/L					19-MAR-10 08:04	031910-1
	Cadmium	0.764	ug/L					19-MAR-10 08:04	031910-1
	Calcium	473000	ug/L	500000	ug/L	94.6	80.0 – 120.0	19-MAR-10 08:04	031910-1
	Chromium	0.655	ug/L					19-MAR-10 08:04	031910-1
	Cobalt	-1.25	ug/L					19-MAR-10 08:04	031910-1
	Copper	2.12	ug/L					19-MAR-10 08:04	031910-1
	Iron	185000	ug/L	200000	ug/L	92.5	80.0 – 120.0	19-MAR-10 08:04	031910-1
	Lead	-10.6	ug/L					19-MAR-10 08:04	031910-1
	Magnesium	488000	ug/L	500000	ug/L	97.7	80.0 – 120.0	19-MAR-10 08:04	031910-1
	Manganese	-2.72	ug/L					19-MAR-10 08:04	031910-1
	Potassium	-190.0	ug/L					19-MAR-10 08:04	031910-1
	Silver	-1.58	ug/L					19-MAR-10 08:04	031910-1
	Sodium	9.4	ug/L					19-MAR-10 08:04	031910-1
	Vanadium	-3.12	ug/L					19-MAR-10 08:04	031910-1
	Zinc	0.975	ug/L					19-MAR-10 08:04	031910-1
ICSAB01									
	Aluminum	514000	ug/L	500000	ug/L	103	80.0 – 120.0	19-MAR-10 08:11	031910-1
	Antimony	542	ug/L	500	ug/L	108	80.0 – 120.0	19-MAR-10 08:11	031910-1
	Barium	492	ug/L	500	ug/L	98.5	80.0 – 120.0	19-MAR-10 08:11	031910-1
	Cadmium	464	ug/L	500	ug/L	92.7	80.0 – 120.0	19-MAR-10 08:11	031910-1
	Calcium	478000	ug/L	500000	ug/L	95.5	80.0 – 120.0	19-MAR-10 08:11	031910-1
	Chromium	486	ug/L	500	ug/L	97.2	80.0 – 120.0	19-MAR-10 08:11	031910-1
	Cobalt	445	ug/L	500	ug/L	89	80.0 – 120.0	19-MAR-10 08:11	031910-1
	Copper	547	ug/L	500	ug/L	110	80.0 – 120.0	19-MAR-10 08:11	031910-1
	Iron	188000	ug/L	200000	ug/L	94	80.0 – 120.0	19-MAR-10 08:11	031910-1
	Lead	451	ug/L	500	ug/L	90.3	80.0 – 120.0	19-MAR-10 08:11	031910-1
	Magnesium	492000	ug/L	500000	ug/L	98.4	80.0 – 120.0	19-MAR-10 08:11	031910-1

METALS
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Interference Check Sample

SDG No: 10-1981

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	476	ug/L	500	ug/L	95.3	80.0 – 120.0	19-MAR-10 08:11	031910-1
	Potassium	5280	ug/L	5000	ug/L	106	80.0 – 120.0	19-MAR-10 08:11	031910-1
	Silver	274	ug/L	250	ug/L	110	80.0 – 120.0	19-MAR-10 08:11	031910-1
	Sodium	5500	ug/L	5000	ug/L	110	80.0 – 120.0	19-MAR-10 08:11	031910-1
	Vanadium	508	ug/L	500	ug/L	102	80.0 – 120.0	19-MAR-10 08:11	031910-1
	Zinc	493	ug/L	500	ug/L	98.5	80.0 – 120.0	19-MAR-10 08:11	031910-1

METALS

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Interference Check Sample

SDG No: 10-1981

Contract: LANL01004

Lab Code: GEL

ICS: O2Si

Instrument: ICPMS3

<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	0.502	ug/L					20-APR-10 13:53	100420-2
	Beryllium	0.096	ug/L					20-APR-10 13:53	100420-2
	Nickel	3.04	ug/L					20-APR-10 13:53	100420-2
	Selenium	-0.173	ug/L					20-APR-10 13:53	100420-2
	Thallium	-0.178	ug/L					20-APR-10 13:53	100420-2
	Uranium	-0.004	ug/L					20-APR-10 13:53	100420-2
ICSAB01									
	Arsenic	19.4	ug/L	20	ug/L	97	80.0 - 120.0	20-APR-10 13:56	100420-2
	Beryllium	19.4	ug/L	20	ug/L	97	80.0 - 120.0	20-APR-10 13:56	100420-2
	Nickel	20.0	ug/L	23.31	ug/L	85.6	80.0 - 120.0	20-APR-10 13:56	100420-2
	Selenium	18.9	ug/L	20	ug/L	94.5	80.0 - 120.0	20-APR-10 13:56	100420-2
	Thallium	19.6	ug/L	20	ug/L	98.2	80.0 - 120.0	20-APR-10 13:56	100420-2
	Uranium	19.7	ug/L	20	ug/L	98.4	80.0 - 120.0	20-APR-10 13:56	100420-2

METALS

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Matrix Spike Summary

SDG NO. 10-1981 Client ID RE15-10-8386S

Contract: LANL01004 Level: Low

Matrix: SOIL % Solids: 94.6

Sample ID: 247790002 Spike ID: 1202053066

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Vanadium	ug/Kg	75-125	64300		11600		52200	101		P
Zinc	ug/Kg	75-125	82600		31800		52200	97.2		P
Aluminum	ug/Kg		7540000		4680000		522000	548	N/A	P
Antimony	ug/Kg	75-125	46700		342	U	52200	89.4		P
Barium	ug/Kg	75-125	115000		59600		52200	106		P
Cadmium	ug/Kg	75-125	49000		104	U	52200	93.6		P
Calcium	ug/Kg	75-125	6270000		1980000		522000	821	N	P
Chromium	ug/Kg	75-125	69200		19100		52200	95.9		P
Cobalt	ug/Kg	75-125	51100		1880		52200	94.3		P
Copper	ug/Kg	75-125	59200		3740		52200	106		P
Iron	ug/Kg		11800000		10800000		522000	196	N/A	P
Lead	ug/Kg	75-125	54000		3930		52200	95.9		P
Magnesium	ug/Kg	75-125	1940000		1150000		522000	151	N	P
Manganese	ug/Kg		277000		228000		52200	94.3	N/A	P
Potassium	ug/Kg	75-125	1510000		869000		522000	123		P
Silver	ug/Kg	75-125	51600		224	J	52200	98.3		P
Sodium	ug/Kg	75-125	917000		342000		522000	110		P

METALS

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Matrix Spike Duplicate Summary

SDG NO. 10-1981 Client ID RE15-10-8386SD

Contract: LANL01004 Level: Low

Matrix: SOIL % Solids: 94.6

Sample ID: 247790002 Spike ID: 1202053067

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/Kg		7130000		4680000		517000	473	N/A	P
Antimony	ug/Kg	75-125	46300		342	U	51700	89.6		P
Barium	ug/Kg	75-125	117000		59600		51700	111		P
Cadmium	ug/Kg	75-125	49200		104	U	51700	95.1		P
Calcium	ug/Kg	75-125	2510000		1980000		517000	102		P
Chromium	ug/Kg	75-125	71200		19100		51700	101		P
Cobalt	ug/Kg	75-125	51300		1880		51700	95.6		P
Copper	ug/Kg	75-125	58900		3740		51700	107		P
Iron	ug/Kg		12500000		10800000		517000	319	N/A	P
Lead	ug/Kg	75-125	54000		3930		51700	96.7		P
Magnesium	ug/Kg	75-125	1850000		1150000		517000	135	N	P
Manganese	ug/Kg		292000		228000		51700	123	N/A	P
Potassium	ug/Kg	75-125	1530000		869000		517000	128	N	P
Silver	ug/Kg	75-125	51400		224	J	51700	99		P
Sodium	ug/Kg	75-125	955000		342000		517000	118		P
Vanadium	ug/Kg	75-125	63200		11600		51700	99.7		P
Zinc	ug/Kg	75-125	85000		31800		51700	103		P

METALS

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Matrix Spike Summary

SDG NO. 10-1981 Client ID RE15-10-8386S

Contract: LANL01004 Level: Low

Matrix: SOIL % Solids: 94.6

Sample ID: 247790002 Spike ID: 1202053072

<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	9.2		1.05		8.39	97.1		MS
Beryllium	mg/kg	75-125	4.89		0.481		5.24	84.1		MS
Nickel	mg/kg	75-125	10.5		7.4		5.24	58.9	N	MS
Selenium	mg/kg	75-125	1.83		0.524	U	2.1	84.7		MS
Thallium	mg/kg	75-125	10.5		0.158	J	10.5	98.8		MS
Uranium	mg/kg	75-125	7.89		3.15		5.24	90.3		MS

METALS

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Matrix Spike Duplicate Summary

SDG NO. 10-1981 Client ID RE15-10-8386SD

Contract: LANL01004 Level: Low

Matrix: SOIL % Solids: 94.6

Sample ID: 247790002 Spike ID: 1202053073

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Uranium	mg/kg	75-125	7.03		3.15		5.02	77.1		MS
Arsenic	mg/kg	75-125	8.46		1.05		8.04	92.1		MS
Beryllium	mg/kg	75-125	4.35		0.481		5.02	77.1		MS
Nickel	mg/kg	75-125	10.4		7.4		5.02	59	N	MS
Selenium	mg/kg	75-125	1.79		0.524	U	2.01	86.1		MS
Thallium	mg/kg	75-125	9.62		0.158	J	10	94.2		MS

METALS

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Matrix Spike Summary

SDG NO. 10-1981 Client ID RE11-10-1566S

Contract: LANL01004 Level: Low

Matrix: SOIL % Solids: 81

Sample ID: 247781001 Spike ID: 1202056066

<u>Analyte</u>	<u>Units</u>	<u>Acceptance Limit</u>	<u>Spiked Result</u>	<u>C</u>	<u>Sample Result</u>	<u>C</u>	<u>Spike Added</u>	<u>% Recovery</u>	<u>Qual</u>	<u>M</u>
Mercury	ug/kg	75-125	157		4.96	U	141	111		AV

METALS

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Matrix Spike Duplicate Summary

SDG NO. 10-1981 **Client ID** RE11-10-1566SD**Contract:** LANL01004 **Level:** Low**Matrix:** SOIL **% Solids:** 81**Sample ID:** 247781001 **Spike ID:** 1202056072

<u>Analyte</u>	<u>Units</u>	<u>Acceptance Limit</u>	<u>Spiked Result</u>	<u>C</u>	<u>Sample Result</u>	<u>C</u>	<u>Spike Added</u>	<u>% Recovery</u>	<u>Qual</u>	<u>M</u>
Mercury	ug/kg	75-125	163		4.96	U	145	112		AV

Metals

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Duplicate Sample Summary

SDG No.: 10-1981

Contract: LANL01004

Lab Code: GEL

Matrix: SOLID

Level: Low

Client ID: RE15-10-8386D

Sample ID: 247790002

Duplicate ID: 1202053064

Percent Solids for Dup: 94.6

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/Kg	+/-20%	4680000		4490000		4.14		P
Antimony	ug/Kg		342 U		339 U				P
Barium	ug/Kg	+/-20%	59600		54200		9.59		P
Cadmium	ug/Kg		104 U		103 U				P
Calcium	ug/Kg	+/-20%	1980000		1780000		10.4		P
Chromium	ug/Kg	+/-20%	19100		18100		5.15		P
Cobalt	ug/Kg	+/-513	1880		1780		5.28		P
Copper	ug/Kg	+/-1030	3740		3570		4.64		P
Iron	ug/Kg	+/-20%	10800000		11600000		7.3		P
Lead	ug/Kg	+/-1030	3930		4220		7.14		P
Magnesium	ug/Kg	+/-20%	1150000		1090000		4.96		P
Manganese	ug/Kg	+/-20%	228000		215000		5.87		P
Potassium	ug/Kg	+/-20%	869000		831000		4.39		P
Silver	ug/Kg	+/-513	224 J		329 J		37.7		P
Sodium	ug/Kg	+/-20%	342000		307000		10.7		P
Vanadium	ug/Kg	+/-20%	11600		12400		6.42		P
Zinc	ug/Kg	+/-20%	31800		33800		6.04		P

Metals

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Duplicate Sample Summary

SDG No.: 10-1981

Contract: LANL01004

Lab Code: GEL

Matrix: SOLID

Level: Low

Client ID: RE15-10-8386SD

Sample ID: 1202053066

Duplicate ID: 1202053067

Percent Solids for Dup: 94.6

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/Kg	+/-20	7540000		7130000		5.7		P
Antimony	ug/Kg	+/-20	46700		46300		.814		P
Barium	ug/Kg	+/-20	115000		117000		1.36		P
Cadmium	ug/Kg	+/-20	49000		49200		.518		P
Calcium	ug/Kg	+/-20	6270000		2510000		85.7	*	P
Chromium	ug/Kg	+/-20	69200		71200		2.96		P
Cobalt	ug/Kg	+/-20	51100		51300		.328		P
Copper	ug/Kg	+/-20	59200		58900		.497		P
Iron	ug/Kg	+/-20	11800000		12500000		5.17		P
Lead	ug/Kg	+/-20	54000		54000		.163		P
Magnesium	ug/Kg	+/-20	1940000		1850000		4.75		P
Manganese	ug/Kg	+/-20	277000		292000		5.11		P
Potassium	ug/Kg	+/-20	1510000		1530000		1.25		P
Silver	ug/Kg	+/-20	51600		51400		.331		P
Sodium	ug/Kg	+/-20	917000		955000		4		P
Vanadium	ug/Kg	+/-20	64300		63200		1.79		P
Zinc	ug/Kg	+/-20	82600		85000		2.81		P

Metals

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Duplicate Sample Summary

SDG No.: 10-1981

Contract: LANL01004

Lab Code: GEL

Matrix: SOLID

Level: Low

Client ID: RE15-10-8386D

Sample ID: 247790002

Duplicate ID: 1202053070

Percent Solids for Dup: 94.6

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	mg/kg	+/-1	1.05		0.768 J		31.1		MS
Beryllium	mg/kg	+/-1	0.481		0.405		17.1		MS
Nickel	mg/kg	+/-20%	7.4		5.31		32.9	*	MS
Selenium	mg/kg		0.524 U		0.501 U				MS
Thallium	mg/kg		0.158 J		0.0601 U		200		MS
Uranium	mg/kg	+/-20%	3.15		1.81		54.1	*	MS

Metals

-6-

Duplicate Sample Summary

SDG No.: 10-1981

Contract: LANL01004

Lab Code: GEL

Matrix: SOLID

Level: Low

Client ID: RE15-10-8386SD

Sample ID: 1202053072

Duplicate ID: 1202053073

Percent Solids for Dup: 94.6

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	mg/kg	+/-20	9.2		8.46		8.43		MS
Beryllium	mg/kg	+/-20	4.89		4.35		11.6		MS
Nickel	mg/kg	+/-20	10.5		10.4		1.19		MS
Selenium	mg/kg	+/-20	1.83		1.79		2.49		MS
Thallium	mg/kg	+/-20	10.5		9.62		8.94		MS
Uranium	mg/kg	+/-20	7.89		7.03		11.5		MS

Metals

-6-

Duplicate Sample Summary

SDG No.: 10-1981

Contract: LANL01004

Lab Code: GEL

Matrix: SOLID

Level: Low

Client ID: RE11-10-1566D

Sample ID: 247781001

Duplicate ID: 1202056065

Percent Solids for Dup: 81

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/kg		4.96 U		4.77 U				AV

Metals

-6-

Duplicate Sample Summary

SDG No.: 10-1981

Contract: LANL01004

Lab Code: GEL

Matrix: SOLID

Level: Low

Client ID: RE11-10-1566SD

Sample ID: 1202056066

Duplicate ID: 1202056072

Percent Solids for Dup: 81

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/kg	+/-20	157		163		3.91		AV

METALS

-7-

Laboratory Control Sample Summary

SDG NO. 10-1981

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>
1202053068								
	Aluminum	ug/Kg	10500000	9100000		86.7	56-144	P
	Antimony	ug/Kg	173000	113000		65.5	71-130	P
	Barium	ug/Kg	198000	191000		96.3	80-120	P
	Cadmium	ug/Kg	60700	56500		93.1	81-120	P
	Calcium	ug/Kg	9870000	9820000		99.5	83-117	P
	Chromium	ug/Kg	236000	230000		97.4	80-120	P
	Cobalt	ug/Kg	91200	88600		97.1	81-120	P
	Copper	ug/Kg	174000	178000		102	81-118	P
	Iron	ug/Kg	18000000	18200000		101	51-149	P
	Lead	ug/Kg	86000	83000		96.5	79-121	P
	Magnesium	ug/Kg	4000000	3750000		93.6	79-122	P
	Manganese	ug/Kg	558000	531000		95.2	81-119	P
	Potassium	ug/Kg	4300000	4120000		95.7	74-127	P
	Silver	ug/Kg	30100	30700		102	66-134	P
	Sodium	ug/Kg	1020000	1010000		99.4	74-127	P
	Vanadium	ug/Kg	115000	120000		104	79-121	P
	Zinc	ug/Kg	594000	560000		94.3	80-121	P

METALS

-7-

Laboratory Control Sample Summary

SDG NO. 10-1981

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>
1202053074								
	Beryllium	mg/kg	77.6	77.9		100	84-116	MS
	Nickel	mg/kg	134	145		108	78-123	MS
	Selenium	mg/kg	286	299		105	77-123	MS
	Thallium	mg/kg	121	126		104	78-122	MS
	Uranium	mg/kg	2.13	2.36		111	73-127	MS
	Arsenic	mg/kg	104	109		105	78-123	MS

METALS

-7-

Laboratory Control Sample Summary

SDG NO. 10-1981

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>
1202056064	Mercury	ug/kg	5150	5680		110	71.6-128.3	AV

METALS

-9-

Serial Dilution Sample Summary

SDG NO. 10-1981 **Client ID** RE15-10-8386L

Contract: LANL01004

Matrix: SOLID **Level:** Low

Sample ID: 247790002 **Serial Dilution ID:** 1202053065

<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>
Aluminum	45200		44500		1.66		10	P
Antimony	3.3	U	16.5	U				P
Barium	575		590		2.61		10	P
Cadmium	1	U	5	U				P
Calcium	19100		19000		.785		10	P
Chromium	184		189		2.45		10	P
Cobalt	18.2		19	J	4.4			P
Copper	36.1		34.9	J	3.46			P
Iron	104000		107000		2.4		10	P
Lead	37.9		43.5	J	14.6			P
Magnesium	11100		11100		0		10	P
Manganese	2200		2310		4.77		10	P
Potassium	8380		8350		.358		10	P
Silver	2.16	J	5	U	100			P
Sodium	3300		3370		1.97			P
Vanadium	112		114		1.34		10	P
Zinc	307		311		1.3		10	P

METALS

-9-

Serial Dilution Sample Summary

SDG NO. 10-1981 **Client ID** RE15-10-8386L**Contract:** LANL01004**Matrix:** SOLID **Level:** Low**Sample ID:** 247790002 **Serial Dilution ID:** 1202053071

<u>Analyte</u>	<u>Initial Value ng/L</u>	<u>C</u>	<u>Serial Value ng/L</u>	<u>C</u>	<u>% Difference</u>	<u>Qual</u>	<u>Acceptance Limit</u>	<u>M</u>
Arsenic	5.01		5	U	100			MS
Beryllium	2.29		2.8		22.1			MS
Nickel	35.3		39.8		12.7			MS
Selenium	2.5	U	12.5	U				MS
Thallium	.752	J	1.5	U	100			MS
Uranium	15		15.3		1.67		10	MS

METALS

-9-

Serial Dilution Sample Summary

SDG NO. 10-1981 Client ID RE11-10-1566L

Contract: LANL01004

Matrix: SOLID Level: Low

Sample ID: 247781001 Serial Dilution ID: 1202056071

<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	.068	U	.34	U				AV

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 10-1981

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	957495						
1202053063	MB for batch 957495	MB	S	26-FEB-10	.513g	50mL	
1202053068	LCS for batch 957495	LCS	S	26-FEB-10	.509g	50mL	
1202053066	RE15-10-8386S	MS	S	26-FEB-10	.506g	50mL	
1202053067	RE15-10-8386SD	MSD	S	26-FEB-10	.511g	50mL	
1202053064	RE15-10-8386D	DUP	S	26-FEB-10	.515g	50mL	
247790002	RE15-10-8386	SAMPLE	S	26-FEB-10	.51g	50mL	
247790003	RE15-10-8387	SAMPLE	S	26-FEB-10	.515g	50mL	

SW846

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 10-1981

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	957497						
1202053069	MB for batch 957497	MB	S	26-FEB-10	.517g	50mL	
1202053074	LCS for batch 957497	LCS	S	26-FEB-10	.503g	50mL	
1202053072	RE15-10-8386S	MS	S	26-FEB-10	.504g	50mL	
1202053073	RE15-10-8386SD	MSD	S	26-FEB-10	.526g	50mL	
1202053070	RE15-10-8386D	DUP	S	26-FEB-10	.528g	50mL	
247790002	RE15-10-8386	SAMPLE	S	26-FEB-10	.504g	50mL	
247790003	RE15-10-8387	SAMPLE	S	26-FEB-10	.506g	50mL	

SW846

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 10-1981

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	958693						
1202056063	MB for batch 958693	MB	S	01-MAR-10	.503g	30mL	
1202056064	LCS for batch 958693	LCS	S	01-MAR-10	.204g	30mL	
1202056066	RE11-10-1566S	MS	S	01-MAR-10	.525g	30mL	
1202056072	RE11-10-1566SD	MSD	S	01-MAR-10	.509g	30mL	
1202056065	RE11-10-1566D	DUP	S	01-MAR-10	.527g	30mL	
247790002	RE15-10-8386	SAMPLE	S	01-MAR-10	.512g	30mL	
247790003	RE15-10-8387	SAMPLE	S	01-MAR-10	.518g	30mL	

SW846

Metals
-14-
Analysis Run Log

Contract: LANL01004

Lab Code: GEL

Inst Name: OPTIMA3

Start Date: 19-MAR-10

End Date: 19-MAR-10

Client Sdg: 10-1981

Method P

Data File: 031910-1

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	07:10:00	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
S0.1	1	07:17:00		X		X		X		X	X	X		X		X			X		X				X	X
S0.5	1	07:23:00	X	X		X		X	X	X	X	X		X	X	X			X		X				X	X
SCAL	1	07:30:00	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
S10	1	07:37:00	X						X				X		X							X				
ICV01	1	07:43:00	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ICB01	1	07:50:00	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
PQL01	1	07:57:00	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ICSA01	1	08:04:00	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ICSAB01	1	08:11:00	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
LR01	1	08:18:00	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
LR02	1	08:24:00	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	08:31:00																								
ZZZZZZ	1	08:38:00																								
CCV01	1	08:47:00	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB01	1	08:54:00	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
LR03	1	09:01:00	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCV02	1	09:08:00	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB02	1	09:15:00	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	09:29:00																								
ZZZZZZ	1	09:36:00																								
ZZZZZZ	1	09:43:00																								
ZZZZZZ	1	09:49:00																								
ZZZZZZ	20	09:56:00																								
ZZZZZZ	20	10:03:00																								
ZZZZZZ	10	10:11:00																								
CCV03	1	10:18:00	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
PQL02	1	10:25:00	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB03	1	10:32:00	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	10:42:00																								
ZZZZZZ	1	10:49:00																								
ZZZZZZ	1	10:56:00																								
ZZZZZZ	1	11:03:00																								
ZZZZZZ	1	11:10:00																								
ZZZZZZ	1	11:17:00																								
ZZZZZZ	5	11:24:00																								
ZZZZZZ	1	11:31:00																								
CCV04	1	11:38:00	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB04	1	11:45:00	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	11:52:00																								

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Metals
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Analysis Run Log

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Ti	U	V	Zn
ZZZZZZ	1	16:52:00																								
ZZZZZZ	1	16:59:00																								
ZZZZZZ	1	17:06:00																								
CCV10	1	17:13:00	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB10	1	17:20:00	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X

Metals
-14-
Analysis Run Log

Contract: LANL01004

Lab Code: GEL

Inst Name: MER536

Start Date: 02-MAR-10

End Date: 02-MAR-10

Client Sdg: 10-1981

Method: AV

Data File: 030210S1-5

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
S0.0	1	08:34:00															X									
S0.2	1	08:36:00															X									
S0.5	1	08:38:00															X									
S2.0	1	08:40:00															X									
S5.0	1	08:42:00															X									
S10	1	08:44:00															X									
ICV01	1	08:46:00															X									
ICB01	1	08:48:00															X									
CRDL01	1	08:50:00															X									
CCV01	1	08:52:00															X									
CCB01	1	08:54:00															X									
ZZZZZZ	1	08:56:00																								
ZZZZZZ	10	08:58:00																								
ZZZZZZ	1	09:00:00																								
ZZZZZZ	1	09:02:00																								
ZZZZZZ	1	09:04:00																								
ZZZZZZ	1	09:06:00																								
ZZZZZZ	5	09:08:00																								
ZZZZZZ	1	09:10:00																								
ZZZZZZ	1	09:12:00																								
ZZZZZZ	1	09:14:00																								
CCV02	1	09:16:00															X									
CCB02	1	09:18:00															X									
ZZZZZZ	1	09:20:00																								
ZZZZZZ	1	09:22:00																								
ZZZZZZ	1	09:24:00																								
ZZZZZZ	1	09:26:00																								
ZZZZZZ	1	09:28:00																								
ZZZZZZ	1	09:30:00																								
ZZZZZZ	1	09:32:00																								
ZZZZZZ	1	09:34:00																								
ZZZZZZ	1	09:36:00																								
ZZZZZZ	1	09:38:00																								
CCV03	1	09:40:00															X									
CCB03	1	09:42:00															X									
ZZZZZZ	1	09:49:00																								
ZZZZZZ	1	09:51:00																								
ZZZZZZ	1	09:52:00																								
ZZZZZZ	1	09:54:00																								
ZZZZZZ	10	09:56:00																								

Samp No.	D/F	Run Time
ZZZZZZ	1	09:58:00
ZZZZZZ	1	10:00:00
ZZZZZZ	1	10:02:00
ZZZZZZ	1	10:04:00
ZZZZZZ	5	10:06:00
CCV04	1	10:08:00
CCB04	1	10:10:00
ZZZZZZ	1	10:12:00
ZZZZZZ	1	10:14:00
ZZZZZZ	1	10:16:00
ZZZZZZ	1	10:18:00
ZZZZZZ	1	10:20:00
ZZZZZZ	1	10:22:00
ZZZZZZ	1	10:24:00
ZZZZZZ	1	10:26:00
ZZZZZZ	1	10:28:00
ZZZZZZ	1	10:30:00
CCV05	1	10:32:00
CCB05	1	10:34:00
ZZZZZZ	1	10:36:00
ZZZZZZ	1	10:38:00
ZZZZZZ	1	10:40:00
ZZZZZZ	1	10:42:00
ZZZZZZ	1	10:44:00
ZZZZZZ	1	10:46:00
ZZZZZZ	10	10:48:00
ZZZZZZ	1	10:50:00
ZZZZZZ	1	10:52:00
ZZZZZZ	1	10:54:00
CCV06	1	10:56:00
CCB06	1	10:58:00
ZZZZZZ	1	11:00:00
ZZZZZZ	1	11:02:00
ZZZZZZ	5	11:04:00
ZZZZZZ	1	11:06:00
ZZZZZZ	1	11:08:00
ZZZZZZ	1	11:10:00
ZZZZZZ	1	11:12:00
ZZZZZZ	1	11:14:00
ZZZZZZ	1	11:15:00

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	11:17:00																								
CCV07	1	11:19:00															X									
CCB07	1	11:22:00															X									
ZZZZZZ	1	11:24:00																								
ZZZZZZ	1	11:25:00																								
ZZZZZZ	1	11:27:00																								
ZZZZZZ	1	11:29:00																								
ZZZZZZ	1	11:31:00																								
ZZZZZZ	1	11:34:00																								
ZZZZZZ	1	11:35:00																								
ZZZZZZ	1	11:37:00																								
ZZZZZZ	10	11:39:00																								
ZZZZZZ	1	11:41:00																								
CCV08	1	11:43:00															X									
CCB08	1	11:45:00															X									
ZZZZZZ	1	11:47:00																								
ZZZZZZ	1	11:49:00																								
ZZZZZZ	1	11:51:00																								
ZZZZZZ	5	11:53:00																								
ZZZZZZ	1	11:55:00																								
ZZZZZZ	1	11:57:00																								
ZZZZZZ	1	11:59:00																								
ZZZZZZ	1	12:01:00																								
ZZZZZZ	1	12:03:00																								
ZZZZZZ	1	12:05:00																								
CCV09	1	12:07:00															X									
CCB09	1	12:09:00															X									
ZZZZZZ	1	12:11:00																								
ZZZZZZ	1	12:13:00																								
ZZZZZZ	1	12:15:00																								
ZZZZZZ	1	12:17:00																								
CCV10	1	12:26:00															X									
CCB10	1	12:28:00															X									
CCV11	1	12:33:00															X									
CCB11	1	12:35:00															X									
ZZZZZZ	20	12:37:00																								
ZZZZZZ	1	12:39:00																								
ZZZZZZ	1	12:41:00																								
ZZZZZZ	1	12:43:00																								
ZZZZZZ	5	12:45:00																								

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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	14:11:00																								
ZZZZZZ	1	14:13:00																								
ZZZZZZ	1	14:15:00																								
ZZZZZZ	1	14:17:00																								
CCV16	1	14:19:00															X									
CCB16	1	14:21:00															X									
ZZZZZZ	1	14:23:00																								
ZZZZZZ	10	14:25:00																								
ZZZZZZ	1	14:27:00																								
ZZZZZZ	1	14:29:00																								
ZZZZZZ	1	14:31:00																								
ZZZZZZ	1	14:32:00																								
CCV17	1	14:35:00															X									
CCB17	1	14:37:00															X									
ZZZZZZ	1	14:39:00																								
ZZZZZZ	10	14:41:00																								
ZZZZZZ	1	14:43:00																								
ZZZZZZ	1	14:45:00																								
ZZZZZZ	1	14:47:00																								
ZZZZZZ	1	14:49:00																								
ZZZZZZ	5	14:51:00																								
ZZZZZZ	1	14:53:00																								
ZZZZZZ	1	14:55:00																								
ZZZZZZ	1	14:57:00																								
CCV18	1	14:59:00															X									
CCB18	1	15:01:00															X									
ZZZZZZ	1	15:03:00																								
ZZZZZZ	1	15:05:00																								
ZZZZZZ	1	15:07:00																								
ZZZZZZ	1	15:09:00																								
ZZZZZZ	1	15:11:00																								
ZZZZZZ	1	15:13:00																								
ZZZZZZ	1	15:15:00																								
ZZZZZZ	1	15:17:00																								
ZZZZZZ	1	15:19:00																								
1202056063	1	15:21:00															X									
CCV19	1	15:23:00															X									
CCB19	1	15:25:00															X									
ZZZZZZ	10	15:27:00																								
ZZZZZZ	1	15:29:00																								

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	16:52:00																								
ZZZZZZ	1	16:54:00																								
ZZZZZZ	1	16:56:00																								
ZZZZZZ	1	16:58:00																								
ZZZZZZ	1	16:59:00																								
ZZZZZZ	1	17:01:00																								
CCV24	1	17:03:00															X									
CCB24	1	17:05:00															X									

Metals
-14-
Analysis Run Log

Contract: LANL01004

Lab Code: GEL

Inst Name: ICPMS3

Start Date: 20-APR-10

End Date: 20-APR-10

Client Sdg: 10-1981

Method MS

Data File: 100420-2

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	Ti	U	V	Zn
S0.0	1	13:33:00			X		X											X	X				X	X		
S10	1	13:36:00			X		X											X	X				X	X		
S100	1	13:40:00			X		X											X	X				X	X		
ICV01	1	13:43:00			X		X											X	X				X	X		
ICB01	1	13:46:00			X		X											X	X				X	X		
CRDL01	1	13:50:00			X		X											X	X				X	X		
ICSA01	1	13:53:00			X		X											X	X				X	X		
ICSAB01	1	13:56:00			X		X											X	X				X	X		
CCV01	1	14:00:00			X		X											X	X				X	X		
CCB01	1	14:03:00			X		X											X	X				X	X		
1202053069	2	14:06:00			X		X											X	X				X	X		
1202053074	40	14:10:00			X		X											X	X				X	X		
247790002	2	14:13:00			X		X											X	X				X	X		
1202053070	2	14:16:00			X		X											X	X				X	X		
1202053072	2	14:20:00			X		X											X	X				X	X		
1202053073	2	14:23:00			X		X											X	X				X	X		
1202053071	10	14:27:00			X		X											X	X				X	X		
CCV02	1	14:30:00			X		X											X	X				X	X		
CCB02	1	14:33:00			X		X											X	X				X	X		
247790003	2	14:37:00			X		X											X	X				X	X		
ZZZZZZ	2	14:40:00																								
ZZZZZZ	2	14:43:00																								
ZZZZZZ	2	14:47:00																								
ZZZZZZ	2	14:50:00																								
ZZZZZZ	2	14:54:00																								
CCV03	1	14:57:00			X		X											X	X				X	X		
CCB03	1	15:00:00			X		X											X	X				X	X		

Standards

METALS
-10-
Instrument Detection Limits

SDG NO. 10-1981

Contract: LANL01004

Lab Code: GEL

MDL Effective Date: 01-JUL-09

ICP/MS	<u>Analyte</u>	<u>Wavelength (nm)</u>	<u>MDL</u>	<u>RDL</u>
			<u>ug/L</u>	<u>ug/L</u>
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. 10-1981

Contract: LANL01004

Lab Code: GEL

MDL Effective Date: 15-JUN-09

		<u>Wavelength</u> <u>(nm)</u>	<u>MDL</u> <u>ug/L</u>	<u>RDL</u> <u>ug/L</u>
MERCURY	<u>Analyte</u>			
SOLID	Mercury		0.068	.2

METALS
-10-
Instrument Detection Limits

SDG NO. 10-1981

Contract: LANL01004

Lab Code: GEL

MDL Effective Date: 01-JUL-09

ICP	<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	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-
Interement Correction Factors

Lab Code: GEL

GEL Job No: 10-1981

Contract: LANL01004

Instrument: OPTIMA3

Effective Dates: 01-FEB-10

Interement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Aluminum	Antimony	Arsenic	Barium	Beryllium
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.02697	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	-0.48147	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	-0.21356	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	-0.05186	0.00000	0.00000	0.00000	0.00000
Silica	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.18741	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GELGEL Job No: **10-1981**

Contract: LANL01004

Instrument: OPTIMA3

Effective Dates: **01-FEB-10**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Boron	Cadmium	Chromium	Cobalt	Copper
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	2.85580	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.44491	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	-29.9151	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.57616
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.60374	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	198.62
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silica	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	4.37985	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.36147	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	2.23785	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.36818	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	1.35273

METALS
-11-
Interelement Correction Factors

Lab Code: GELGEL Job No: **10-1981**

Contract: LANL01004

Instrument: OPTIMA3

Effective Dates: **01-FEB-10**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Iron	Lead	Magnesium	Manganese	Molybdenum
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	48.4946
Antimony	206.836	-0.02515	0.00000	0.00000	0.00000	-20.5057
Arsenic	188.979	-0.23424	0.00000	0.00000	0.00000	2.41902
Barium	233.527	-0.03042	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.16240	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.10329	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	-0.01944	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.01444	0.00000	0.00000	0.00000	-2.33100
Copper	324.752	-0.05293	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.09554	0.00000	0.00000	0.00000	-2.48774
Magnesium	279.077	1.04597	0.00000	0.00000	0.00000	-10.4683
Manganese	257.61	-0.09877	0.00000	0.04089	0.00000	0.00000
Molybdenum	202.031	-0.07763	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.80543	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.00000	0.39429	1.18725
Selenium	196.026	-3.27508	0.00000	0.00000	0.00000	-3.07287
Silica	251.611	0.00000	0.00000	0.00000	0.00000	27.2377
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	12.3082
Silver	328.068	-0.32385	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	-4.77918	0.00000
Tin	189.927	-0.01682	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.08168	0.00000	0.00000
Uranium	409.014	0.11400	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.14564	0.00000	-0.01931	0.00000	-14.1293
Zinc	213.857	0.09701	0.00000	0.00000	0.00000	0.00000

METALS
--11--
Interelement Correction Factors

Lab Code: GELGEL Job No: **10-1981**

Contract: LANL01004

Instrument: OPTIMA3

Effective Dates: **01-FEB-10**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Nickel	Phosphorous	Potassium	Selenium	Silica
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	-0.84443	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	-0.63547	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silica	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	6.37026	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GELGEL Job No: **10-1981**

Contract: LANL01004

Instrument: OPTIMA3

Effective Dates: **01-FEB-10**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Silicon	Silver	Strontium	Sulfur	Thallium
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silica	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL

GEL Job No: 10-1981

Contract: LANL01004

Instrument: OPTIMA3

Effective Dates: 01-FEB-10

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

		Tin	Titanium	Uranium	Vanadium	Zinc
Parmname	Wavelength					
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	-15.4932	3.30431	0.00000	-2.81282	0.00000
Arsenic	188.979	0.00000	-8.66313	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	-2.20293	0.00000
Beryllium	313.107	0.00000	-2.27027	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	-0.19473	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.39645	-1.41250	0.00000
Cobalt	228.616	0.00000	2.09497	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.55360	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	-9.37529	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silica	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.81635	-4.04400	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	-8.29801	0.00000	1.88584	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.43915	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	1.05947	-1.91382	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
-12-
Linear Ranges

SDG NO. 10-1981

Contract: LANL01004

Lab Code: GEL

Instrument ID ICPMS5

<u>Analyte</u>	<u>Integration Time (msec)</u>	<u>LDR</u>	<u>Units</u>	<u>Effective Date</u>
Aluminum	1	50000	ug/L	01-FEB-10
Antimony	1000	250	ug/L	01-FEB-10
Arsenic	1000	1000	ug/L	01-FEB-10
Barium	1000	1000	ug/L	01-FEB-10
Beryllium	1000	1000	ug/L	01-FEB-10
Cadmium	1000	1000	ug/L	01-FEB-10
Calcium	500	50000	ug/L	01-FEB-10
Chromium	1000	1000	ug/L	01-FEB-10
Cobalt	1000	1000	ug/L	01-FEB-10
Copper	1000	1000	ug/L	01-FEB-10
Iron	500	50000	ug/L	01-FEB-10
Lead	1000	5000	ug/L	01-FEB-10
Magnesium	1	50000	ug/L	01-FEB-10
Manganese	1000	1000	ug/L	01-FEB-10
Nickel	1000	1000	ug/L	01-FEB-10
Potassium	1	50000	ug/L	01-FEB-10
Selenium	1000	500	ug/L	01-FEB-10
Silver	1000	250	ug/L	01-FEB-10
Sodium	1	50000	ug/L	01-FEB-10
Thallium	1000	500	ug/L	01-FEB-10
Uranium	1000	5000	ug/L	01-FEB-10
Vanadium	1000	100	ug/L	01-FEB-10
Zinc	1000	2500	ug/L	01-FEB-10

METALS
-12-
Linear Ranges

SDG NO. 10-1981

Contract: LANL01004

Lab Code: GEL

Instrument ID ICPMS6

<u>Analyte</u>	<u>Integration Time (msec)</u>	<u>LDR</u>	<u>Units</u>	<u>Effective Date</u>
Aluminum	1	50000	ug/L	01-FEB-10
Antimony	1000	250	ug/L	01-FEB-10
Arsenic	1000	1000	ug/L	01-FEB-10
Barium	1000	1000	ug/L	01-FEB-10
Beryllium	1000	1000	ug/L	01-FEB-10
Cadmium	1000	1000	ug/L	01-FEB-10
Calcium	500	50000	ug/L	01-FEB-10
Chromium	1000	1000	ug/L	01-FEB-10
Cobalt	1000	1000	ug/L	01-FEB-10
Copper	1000	1000	ug/L	01-FEB-10
Iron	500	50000	ug/L	01-FEB-10
Lead	1000	5000	ug/L	01-FEB-10
Magnesium	1	50000	ug/L	01-FEB-10
Manganese	1000	1000	ug/L	01-FEB-10
Nickel	1000	1000	ug/L	01-FEB-10
Potassium	1	50000	ug/L	01-FEB-10
Selenium	1000	500	ug/L	01-FEB-10
Silver	1000	250	ug/L	01-FEB-10
Sodium	1	50000	ug/L	01-FEB-10
Thallium	1000	500	ug/L	01-FEB-10
Uranium	1000	5000	ug/L	01-FEB-10
Vanadium	1000	100	ug/L	01-FEB-10
Zinc	1000	2500	ug/L	01-FEB-10

METALS
-12-
Linear Ranges

SDG NO. 10-1981

Contract: LANL01004

Lab Code: GEL

Instrument ID OPTIMA3

<u>Analyte</u>	<u>Integration Time (sec)</u>	<u>LDR</u>	<u>Units</u>	<u>Effective Date</u>
Aluminum	20	500000	ug/L	01-FEB-10
Antimony	20	10000	ug/L	01-FEB-10
Arsenic	20	10000	ug/L	01-FEB-10
Barium	20	15000	ug/L	01-FEB-10
Beryllium	20	3000	ug/L	01-FEB-10
Cadmium	20	10000	ug/L	01-FEB-10
Calcium	20	500000	ug/L	01-FEB-10
Chromium	20	25000	ug/L	01-FEB-10
Cobalt	20	10000	ug/L	01-FEB-10
Copper	20	20000	ug/L	01-FEB-10
Iron	20	500000	ug/L	01-FEB-10
Lead	20	25000	ug/L	01-FEB-10
Magnesium	20	500000	ug/L	01-FEB-10
Manganese	20	10000	ug/L	01-FEB-10
Nickel	20	10000	ug/L	01-FEB-10
Potassium	20	300000	ug/L	01-FEB-10
Selenium	20	10000	ug/L	01-FEB-10
Silver	20	1000	ug/L	01-FEB-10
Sodium	20	500000	ug/L	01-FEB-10
Thallium	20	10000	ug/L	01-FEB-10
Uranium	20	15000	ug/L	01-FEB-10
Vanadium	20	10000	ug/L	01-FEB-10
Zinc	20	15000	ug/L	01-FEB-10

METALS
-12-
Linear Ranges

SDG NO. 10-1981

Contract: LANL01004

Lab Code: GEL

Instrument ID ICPMS3

<u>Analyte</u>	<u>Integration Time (msec)</u>	<u>LDR</u>	<u>Units</u>	<u>Effective Date</u>
Aluminum	1	50000	ug/L	01-FEB-10
Antimony	1000	250	ug/L	01-FEB-10
Arsenic	1000	1000	ug/L	01-FEB-10
Barium	1000	1000	ug/L	01-FEB-10
Beryllium	1000	1000	ug/L	01-FEB-10
Cadmium	1000	1000	ug/L	01-FEB-10
Calcium	500	50000	ug/L	01-FEB-10
Chromium	1000	1000	ug/L	01-FEB-10
Cobalt	1000	1000	ug/L	01-FEB-10
Copper	1000	1000	ug/L	01-FEB-10
Iron	500	50000	ug/L	01-FEB-10
Lead	1000	5000	ug/L	01-FEB-10
Magnesium	1	50000	ug/L	01-FEB-10
Manganese	1000	1000	ug/L	01-FEB-10
Nickel	1000	1000	ug/L	01-FEB-10
Potassium	1	50000	ug/L	01-FEB-10
Selenium	1000	500	ug/L	01-FEB-10
Silver	1000	250	ug/L	01-FEB-10
Sodium	1	50000	ug/L	01-FEB-10
Thallium	1000	500	ug/L	01-FEB-10
Uranium	1000	5000	ug/L	01-FEB-10
Vanadium	1000	100	ug/L	01-FEB-10
Zinc	1000	2500	ug/L	01-FEB-10

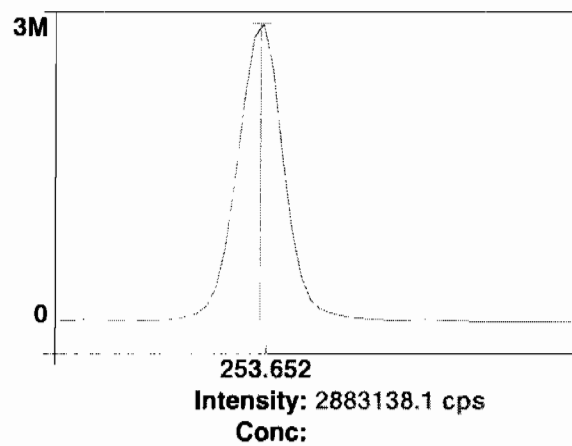
Raw Data

Method: Hg_ReAlign
Result: 042010

Sample ID: Hg_ReAlign

Hg 253.652

Rep: 1



1

3/19/2010 06:54:45 Hg ReAlign... Actual peak offset (nm): -0.009
Drift (nm): -0.000 Slit adjustment: 0

Analysis Begun

Start Time: 3/19/2010 07:10:13

Plasma On Time: 3/15/2010 06:51:19

Logged In Analyst: Optima3

Technique: ICP Continuous

Spectrometer Model: Optima 5300 DV, S/N 077C7090601 Autosampler Model: S10

Sample Information File: C:\pe\Optima3\Sample Information\031910.sif

Batch ID:

Results Data Set: 031910

Results Library: C:\pe\Optima3\Results\Results.mdb

Method Loaded

Method Name: General Eng.2AX

Method Last Saved: 3/18/2010 18:42:02

IEC File: 011110.iec

MSF File:

Method Description:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Al 396.153Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
B 249.677	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Be 313.107	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ca 317.933Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Cd 226.502	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cr 267.716	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Fe 238.204 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
K 766.490 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mg 279.077 IEC	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mn 257.610	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Na 589.592 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Ni 231.604	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
P 214.914	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
S 181.975 Axial	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sc 361.383	Lin Thru 0	Peak Area	Axial	n/a	n/a
Sc Radial	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Se 196.026	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Si 251.611	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Ti 334.940	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
U 409.014	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y 371.029	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Zn 213.857	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y RADIAL	Lin, Calc Int	Peak Area	Radial	n/a	n/a
SiO2	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes

Sequence No.: 1

Autosampler Location: 8

Sample ID: S0

Date Collected: 3/19/2010 07:10:15

Analyst:

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Replicate Data: S0

Net

Corrected

Calib.

Analysis

Repl#	Analyte	Intensity	Intensity	Conc. Units	Time
1	Sc Radial	4353.7	4353.7	0.000 %	07:12:08
1	Y RADIAL	4701.2	4701.2	0.000 %	07:12:08
1	Al 396.153Radial†	-70.7	-71.4	[0.00] ug/L	07:12:28
1	Ca 317.933Radial†	17.3	17.5	[0.00] ug/L	07:12:28
1	Fe 238.204 Radial†	9.7	9.8	[0.00] ug/L	07:12:28
1	K 766.490 Radial†	2594.9	2619.5	[0.00] ug/L	07:12:08
1	Mg 279.077 IEC†	0.4	0.4	[0.00] ug/L	07:12:28
1	Na 589.592 Radial†	-880.1	-888.4	[0.00] ug/L	07:12:08
1	Sr 421.552†	28.7	28.9	[0.00] ug/L	07:12:08
1	Sc 361.383	813923.1	813923.1	0.0000 %	07:13:24
1	Y 371.029	687856.7	687856.7	0.0000 %	07:13:24
1	Ag 328.068†	163.2	164.2	[0.00] ug/L	07:13:24
1	As 188.979†	-27.2	-27.4	[0.00] ug/L	07:13:44
1	B 249.677†	-533.0	-536.2	[0.00] ug/L	07:13:44
1	Ba 233.527†	-6.3	-6.3	[0.00] ug/L	07:13:44
1	Be 313.107†	-3672.2	-3694.3	[0.00] ug/L	07:13:24
1	Cd 226.502†	-177.2	-178.3	[0.00] ug/L	07:13:44
1	Co 228.616†	-39.2	-39.4	[0.00] ug/L	07:13:44
1	Cr 267.716†	70.5	70.9	[0.00] ug/L	07:13:44
1	Cu 324.752†	5494.6	5527.6	[0.00] ug/L	07:13:24
1	Mn 257.610†	391.2	393.5	[0.00] ug/L	07:13:44
1	Mo 202.031†	4.3	4.3	[0.00] ug/L	07:13:44
1	Ni 231.604†	78.3	78.8	[0.00] ug/L	07:13:44
1	P 214.914†	181.5	182.6	[0.00] ug/L	07:13:44
1	Pb 220.353†	-56.8	-57.2	[0.00] ug/L	07:13:44
1	S 181.975 Axial†	28.5	28.7	[0.00] ug/L	07:13:44
1	Sb 206.836†	27.2	27.4	[0.00] ug/L	07:13:44
1	Se 196.026†	-14.5	-14.6	[0.00] ug/L	07:13:44
1	Si 251.611†	480.1	483.0	[0.00] ug/L	07:13:44
1	Sn 189.927†	11.1	11.2	[0.00] ug/L	07:13:44
1	Ti 334.940†	-1120.6	-1127.3	[0.00] ug/L	07:13:24
1	Tl 190.801†	-33.9	-34.1	[0.00] ug/L	07:13:44
1	U 409.014†	-2254.8	-2268.4	[0.00] ug/L	07:13:24
1	V 292.402†	-1344.0	-1352.1	[0.00] ug/L	07:13:24
1	Zn 213.857†	561.6	565.0	[0.00] ug/L	07:13:44
1	SiO2†	511.8	514.9	[0.00] ug/L	07:14:55
2	Sc Radial	4414.0	4414.0	0.000 %	07:12:33
2	Y RADIAL	4778.8	4778.8	0.000 %	07:12:33
2	Al 396.153Radial†	-78.8	-78.5	[0.00] ug/L	07:12:53
2	Ca 317.933Radial†	16.9	16.9	[0.00] ug/L	07:12:53
2	Fe 238.204 Radial†	7.2	7.2	[0.00] ug/L	07:12:53
2	K 766.490 Radial†	2539.4	2528.4	[0.00] ug/L	07:12:33
2	Mg 279.077 IEC†	1.1	1.0	[0.00] ug/L	07:12:53
2	Na 589.592 Radial†	-865.3	-861.6	[0.00] ug/L	07:12:33
2	Sr 421.552†	13.8	13.7	[0.00] ug/L	07:12:33
2	Sc 361.383	820260.9	820260.9	0.0000 %	07:13:50
2	Y 371.029	692610.2	692610.2	0.0000 %	07:13:50
2	Ag 328.068†	188.4	188.1	[0.00] ug/L	07:13:50
2	As 188.979†	-24.0	-23.9	[0.00] ug/L	07:14:10
2	B 249.677†	-538.2	-537.3	[0.00] ug/L	07:14:10
2	Ba 233.527†	-4.3	-4.3	[0.00] ug/L	07:14:10
2	Be 313.107†	-3734.7	-3728.2	[0.00] ug/L	07:13:50
2	Cd 226.502†	-161.4	-161.2	[0.00] ug/L	07:14:10
2	Co 228.616†	-38.5	-38.4	[0.00] ug/L	07:14:10
2	Cr 267.716†	73.2	73.0	[0.00] ug/L	07:14:10
2	Cu 324.752†	5607.8	5597.9	[0.00] ug/L	07:13:50
2	Mn 257.610†	387.1	386.5	[0.00] ug/L	07:14:10
2	Mo 202.031†	6.2	6.2	[0.00] ug/L	07:14:10
2	Ni 231.604†	95.9	95.7	[0.00] ug/L	07:14:10
2	P 214.914†	197.1	196.7	[0.00] ug/L	07:14:10
2	Pb 220.353†	-49.7	-49.6	[0.00] ug/L	07:14:10
2	S 181.975 Axial†	30.2	30.2	[0.00] ug/L	07:14:10
2	Sb 206.836†	22.6	22.5	[0.00] ug/L	07:14:10
2	Se 196.026†	-17.3	-17.3	[0.00] ug/L	07:14:10
2	Si 251.611†	500.7	499.8	[0.00] ug/L	07:14:10
2	Sn 189.927†	4.3	4.3	[0.00] ug/L	07:14:10
2	Ti 334.940†	-1112.7	-1110.8	[0.00] ug/L	07:13:50
2	Tl 190.801†	-27.8	-27.8	[0.00] ug/L	07:14:10
2	U 409.014†	-2181.2	-2177.4	[0.00] ug/L	07:13:50
2	V 292.402†	-1308.1	-1305.8	[0.00] ug/L	07:13:50

2	Zn 213.857†	572.4	571.4	[0.00] ug/L	07:14:10
2	SiO2†	481.0	480.2	[0.00] ug/L	07:15:15
3	Sc Radial	4417.5	4417.5	0.000 %	07:12:58
3	Y RADIAL	4801.7	4801.7	0.000 %	07:12:58
3	Al 396.153Radial†	-84.8	-84.4	[0.00] ug/L	07:13:18
3	Ca 317.933Radial†	12.8	12.8	[0.00] ug/L	07:13:18
3	Fe 238.204 Radial†	8.5	8.4	[0.00] ug/L	07:13:18
3	K 766.490 Radial†	2661.8	2648.3	[0.00] ug/L	07:12:58
3	Mg 279.077 IEC†	3.1	3.1	[0.00] ug/L	07:13:18
3	Na 589.592 Radial†	-879.8	-875.3	[0.00] ug/L	07:12:58
3	Sr 421.552†	19.9	19.8	[0.00] ug/L	07:12:58
3	Sc 361.383	822290.3	822290.3	0.0000 %	07:14:15
3	Y 371.029	694473.4	694473.4	0.0000 %	07:14:15
3	Ag 328.068†	204.0	203.1	[0.00] ug/L	07:14:15
3	As 188.979†	-29.2	-29.1	[0.00] ug/L	07:14:35
3	B 249.677†	-540.9	-538.6	[0.00] ug/L	07:14:35
3	Ba 233.527†	8.5	8.5	[0.00] ug/L	07:14:35
3	Be 313.107†	-3786.6	-3770.6	[0.00] ug/L	07:14:15
3	Cd 226.502†	-173.2	-172.5	[0.00] ug/L	07:14:35
3	Co 228.616†	-61.1	-60.8	[0.00] ug/L	07:14:35
3	Cr 267.716†	70.8	70.5	[0.00] ug/L	07:14:35
3	Cu 324.752†	5553.8	5530.4	[0.00] ug/L	07:14:15
3	Mn 257.610†	388.8	387.2	[0.00] ug/L	07:14:35
3	Mo 202.031†	15.1	15.1	[0.00] ug/L	07:14:35
3	Ni 231.604†	78.0	77.7	[0.00] ug/L	07:14:35
3	P 214.914†	183.3	182.6	[0.00] ug/L	07:14:35
3	Pb 220.353†	-68.4	-68.2	[0.00] ug/L	07:14:35
3	S 181.975 Axial†	31.8	31.7	[0.00] ug/L	07:14:35
3	Sb 206.836†	21.2	21.1	[0.00] ug/L	07:14:35
3	Se 196.026†	-19.1	-19.0	[0.00] ug/L	07:14:35
3	Si 251.611†	483.8	481.8	[0.00] ug/L	07:14:35
3	Sn 189.927†	6.0	6.0	[0.00] ug/L	07:14:35
3	Ti 334.940†	-1130.3	-1125.5	[0.00] ug/L	07:14:15
3	Tl 190.801†	-25.5	-25.4	[0.00] ug/L	07:14:35
3	U 409.014†	-2176.0	-2166.9	[0.00] ug/L	07:14:15
3	V 292.402†	-1299.9	-1294.4	[0.00] ug/L	07:14:15
3	Zn 213.857†	576.3	573.9	[0.00] ug/L	07:14:35
3	SiO2†	505.1	502.9	[0.00] ug/L	07:15:35

Mean Data: S0

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc. Units	Calib
Sc 361.383	818824.8	4364.54	0.53%	0.0000 %	
Sc Radial	4395.1	35.85	0.82%	0.000 %	
Y 371.029	691646.8	3411.92	0.49%	0.0000 %	
Y RADIAL	4760.6	52.66	1.11%	0.000 %	
Ag 328.068†	185.1	19.62	10.60%	[0.00] ug/L	
Al 396.153Radial†	-78.1	6.49	8.31%	[0.00] ug/L	
As 188.979†	-26.8	2.63	9.80%	[0.00] ug/L	
B 249.677†	-537.4	1.22	0.23%	[0.00] ug/L	
Ba 233.527†	-0.7	8.03	>999.9%	[0.00] ug/L	
Be 313.107†	-3731.0	38.23	1.02%	[0.00] ug/L	
Ca 317.933Radial†	15.7	2.56	16.28%	[0.00] ug/L	
Cd 226.502†	-170.6	8.70	5.10%	[0.00] ug/L	
Co 228.616†	-46.2	12.65	27.38%	[0.00] ug/L	
Cr 267.716†	71.5	1.34	1.87%	[0.00] ug/L	
Cu 324.752†	5552.0	39.81	0.72%	[0.00] ug/L	
Fe 238.204 Radial†	8.5	1.30	15.32%	[0.00] ug/L	
K 766.490 Radial†	2598.8	62.57	2.41%	[0.00] ug/L	
Mg 279.077 IEC†	1.5	1.42	93.27%	[0.00] ug/L	
Mn 257.610†	389.1	3.91	1.00%	[0.00] ug/L	
Mo 202.031†	8.5	5.74	67.28%	[0.00] ug/L	
Na 589.592 Radial†	-875.1	13.40	1.53%	[0.00] ug/L	
Ni 231.604†	84.1	10.11	12.03%	[0.00] ug/L	
P 214.914†	187.3	8.17	4.36%	[0.00] ug/L	
Pb 220.353†	-58.3	9.33	16.01%	[0.00] ug/L	
S 181.975 Axial†	30.2	1.49	4.94%	[0.00] ug/L	
Sb 206.836†	23.7	3.28	13.84%	[0.00] ug/L	
Se 196.026†	-17.0	2.24	13.19%	[0.00] ug/L	
Si 251.611†	488.2	10.08	2.06%	[0.00] ug/L	

Sn 189.927†	7.2	3.58	49.92%	[0.00]	ug/L
Sr 421.552†	20.8	7.65	36.76%	[0.00]	ug/L
Ti 334.940†	-1121.2	9.07	0.81%	[0.00]	ug/L
Tl 190.801†	-29.1	4.53	15.58%	[0.00]	ug/L
U 409.014†	-2204.2	55.80	2.53%	[0.00]	ug/L
V 292.402†	-1317.4	30.53	2.32%	[0.00]	ug/L
Zn 213.857†	570.1	4.60	0.81%	[0.00]	ug/L
SiO2†	499.3	17.63	3.53%	[0.00]	ug/L

Sequence No.: 2
 Sample ID: S0.1
 Analyst:
 Initial Sample Wt:
 Dilution:

Autosampler Location: 2
 Date Collected: 3/19/2010 07:17:46
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:

Replicate Data: S0.1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib.	Analysis Time
1	Sc Radial	4299.2	4299.2	97.8	%	07:19:44
1	Y RADIAL	4673.1	4673.1	98.16	%	07:19:44
1	K 766.490 Radial†	7813.6	5389.1	[1000]	ug/L	07:19:39
1	Sr 421.552†	12088.1	12336.8	[100]	ug/L	07:19:44
1	Sc 361.383	819565.4	819565.4	100.09	%	07:20:11
1	Y 371.029	689971.2	689971.2	99.758	%	07:20:11
1	Ag 328.068†	19793.2	19590.2	[100]	ug/L	07:20:11
1	As 188.979†	168.5	195.1	[100]	ug/L	07:20:31
1	B 249.677†	2888.3	3423.0	[100]	ug/L	07:20:11
1	Ba 233.527†	10948.2	10939.0	[100]	ug/L	07:20:11
1	Be 313.107†	234967.8	238486.5	[100]	ug/L	07:20:11
1	Cd 226.502†	6701.2	6865.8	[100]	ug/L	07:20:31
1	Co 228.616†	3917.8	3960.4	[100]	ug/L	07:20:31
1	Cr 267.716†	7686.1	7607.7	[100]	ug/L	07:20:11
1	Cu 324.752†	36199.8	30615.1	[100]	ug/L	07:20:11
1	Mn 257.610†	79100.7	78640.2	[100]	ug/L	07:20:11
1	Mo 202.031†	1143.2	1133.6	[100]	ug/L	07:20:31
1	Ni 231.604†	3285.2	3198.1	[100]	ug/L	07:20:31
1	P 214.914†	856.5	668.4	[500]	ug/L	07:20:31
1	Pb 220.353†	619.7	677.4	[100]	ug/L	07:20:31
1	S 181.975 Axial†	142.1	111.8	[200]	ug/L	07:20:31
1	Sb 206.836†	263.5	239.6	[100]	ug/L	07:20:31
1	Se 196.026†	105.0	121.8	[100]	ug/L	07:20:31
1	Si 251.611†	13768.7	13268.1	[500]	ug/L	07:20:11
1	Sn 189.927†	444.8	437.2	[100]	ug/L	07:20:31
1	Ti 334.940†	56944.7	58014.5	[100]	ug/L	07:20:11
1	Tl 190.801†	236.6	265.5	[100]	ug/L	07:20:31
1	U 409.014†	1277.7	3480.8	[100]	ug/L	07:20:11
1	V 292.402†	11266.0	12573.2	[100]	ug/L	07:20:11
1	Zn 213.857†	8992.7	8414.5	[100]	ug/L	07:20:11
1	SiO2†	13699.9	13188.2	[1069.5]	ug/L	07:21:27
2	Sc Radial	4351.7	4351.7	99.0	%	07:19:54
2	Y RADIAL	4736.2	4736.2	99.49	%	07:19:54
2	K 766.490 Radial†	7639.5	5116.9	[1000]	ug/L	07:19:49
2	Sr 421.552†	12186.1	12286.7	[100]	ug/L	07:19:54
2	Sc 361.383	806559.5	806559.5	98.502	%	07:20:36
2	Y 371.029	679008.4	679008.4	98.173	%	07:20:36
2	Ag 328.068†	19410.1	19520.1	[100]	ug/L	07:20:36
2	As 188.979†	160.0	189.2	[100]	ug/L	07:20:57
2	B 249.677†	2853.4	3434.1	[100]	ug/L	07:20:36
2	Ba 233.527†	10778.3	10943.0	[100]	ug/L	07:20:36
2	Be 313.107†	231279.8	238527.9	[100]	ug/L	07:20:36
2	Cd 226.502†	6685.7	6958.0	[100]	ug/L	07:20:57
2	Co 228.616†	3912.0	4017.7	[100]	ug/L	07:20:57
2	Cr 267.716†	7564.8	7608.4	[100]	ug/L	07:20:36
2	Cu 324.752†	35581.8	30570.9	[100]	ug/L	07:20:36
2	Mn 257.610†	77938.0	78734.1	[100]	ug/L	07:20:36
2	Mo 202.031†	1144.1	1152.9	[100]	ug/L	07:20:57
2	Ni 231.604†	3297.2	3263.3	[100]	ug/L	07:20:57
2	P 214.914†	848.3	673.9	[500]	ug/L	07:20:57
2	Pb 220.353†	620.7	688.5	[100]	ug/L	07:20:57
2	S 181.975 Axial†	146.4	118.4	[200]	ug/L	07:20:57
2	Sb 206.836†	264.3	244.6	[100]	ug/L	07:20:57
2	Se 196.026†	107.5	126.1	[100]	ug/L	07:20:57
2	Si 251.611†	13541.3	13259.0	[500]	ug/L	07:20:36
2	Sn 189.927†	446.3	445.9	[100]	ug/L	07:20:57
2	Ti 334.940†	56083.7	58057.7	[100]	ug/L	07:20:36
2	Tl 190.801†	232.7	265.4	[100]	ug/L	07:20:57
2	U 409.014†	1337.0	3561.5	[100]	ug/L	07:20:36

2	V 292.402†	11053.6	12539.2	[100]	ug/L	07:20:36
2	Zn 213.857†	8858.1	8422.7	[100]	ug/L	07:20:36
2	SiO2†	13722.0	13431.3	[1069.5]	ug/L	07:21:32
3	Sc Radial	4298.2	4298.2	97.8	%	07:20:04
3	Y RADIAL	4680.6	4680.6	98.32	%	07:20:04
3	K 766.490 Radial†	7824.1	5401.6	[1000]	ug/L	07:19:59
3	Sr 421.552†	12067.8	12318.9	[100]	ug/L	07:20:04
3	Sc 361.383	819475.4	819475.4	100.08	%	07:21:02
3	Y 371.029	690004.4	690004.4	99.763	%	07:21:02
3	Ag 328.068†	19783.4	19582.5	[100]	ug/L	07:21:02
3	As 188.979†	160.2	186.9	[100]	ug/L	07:21:22
3	B 249.677†	2918.4	3453.5	[100]	ug/L	07:21:02
3	Ba 233.527†	10967.6	10959.6	[100]	ug/L	07:21:02
3	Be 313.107†	234959.9	238504.4	[100]	ug/L	07:21:02
3	Cd 226.502†	6644.2	6809.6	[100]	ug/L	07:21:22
3	Co 228.616†	3875.7	3918.8	[100]	ug/L	07:21:22
3	Cr 267.716†	7681.2	7603.6	[100]	ug/L	07:21:02
3	Cu 324.752†	36243.6	30662.8	[100]	ug/L	07:21:02
3	Mn 257.610†	79237.9	78785.9	[100]	ug/L	07:21:02
3	Mo 202.031†	1142.7	1133.3	[100]	ug/L	07:21:22
3	Ni 231.604†	3256.6	3170.0	[100]	ug/L	07:21:22
3	P 214.914†	855.5	667.5	[500]	ug/L	07:21:22
3	Pb 220.353†	594.6	652.4	[100]	ug/L	07:21:22
3	S 181.975 Axial†	141.7	111.4	[200]	ug/L	07:21:22
3	Sb 206.836†	256.8	232.9	[100]	ug/L	07:21:22
3	Se 196.026†	97.7	114.6	[100]	ug/L	07:21:22
3	Si 251.611†	13838.2	13339.0	[500]	ug/L	07:21:02
3	Sn 189.927†	447.8	440.3	[100]	ug/L	07:21:22
3	Ti 334.940†	57007.2	58083.1	[100]	ug/L	07:21:02
3	Tl 190.801†	233.6	262.6	[100]	ug/L	07:21:22
3	U 409.014†	1393.7	3596.8	[100]	ug/L	07:21:02
3	V 292.402†	11249.5	12558.0	[100]	ug/L	07:21:02
3	Zn 213.857†	9030.1	8452.9	[100]	ug/L	07:21:02
3	SiO2†	13379.9	12869.9	[1069.5]	ug/L	07:21:37

Mean Data: S0.1

Analyte	Mean Corrected			Calib	
	Intensity	Std.Dev.	RSD	Conc.	Units
Sc 361.383	815200.1	7483.11	0.92%	99.557	%
Sc Radial	4316.4	30.60	0.71%	98.2	%
Y 371.029	686328.0	6339.00	0.92%	99.231	%
Y RADIAL	4696.6	34.45	0.73%	98.66	%
Ag 328.068†	19564.3	38.44	0.20%	[100]	ug/L
As 188.979†	190.4	4.23	2.22%	[100]	ug/L
B 249.677†	3436.9	15.41	0.45%	[100]	ug/L
Ba 233.527†	10947.2	10.95	0.10%	[100]	ug/L
Be 313.107†	238506.3	20.75	0.01%	[100]	ug/L
Cd 226.502†	6877.8	74.92	1.09%	[100]	ug/L
Co 228.616†	3965.6	49.63	1.25%	[100]	ug/L
Cr 267.716†	7606.6	2.55	0.03%	[100]	ug/L
Cu 324.752†	30616.3	45.95	0.15%	[100]	ug/L
K 766.490 Radial†	5302.5	160.89	3.03%	[1000]	ug/L
Mn 257.610†	78720.1	73.87	0.09%	[100]	ug/L
Mo 202.031†	1139.9	11.27	0.99%	[100]	ug/L
Ni 231.604†	3210.5	47.86	1.49%	[100]	ug/L
P 214.914†	670.0	3.47	0.52%	[500]	ug/L
Pb 220.353†	672.8	18.46	2.74%	[100]	ug/L
S 181.975 Axial†	113.9	3.97	3.49%	[200]	ug/L
Sb 206.836†	239.0	5.88	2.46%	[100]	ug/L
Se 196.026†	120.8	5.83	4.83%	[100]	ug/L
Si 251.611†	13288.7	43.81	0.33%	[500]	ug/L
Sn 189.927†	441.1	4.43	1.00%	[100]	ug/L
Sr 421.552†	12314.1	25.41	0.21%	[100]	ug/L
Ti 334.940†	58051.8	34.72	0.06%	[100]	ug/L
Tl 190.801†	264.5	1.66	0.63%	[100]	ug/L
U 409.014†	3546.4	59.46	1.68%	[100]	ug/L
V 292.402†	12556.8	17.06	0.14%	[100]	ug/L
Zn 213.857†	8430.0	20.23	0.24%	[100]	ug/L
SiO2†	13163.2	281.55	2.14%	[1069.5]	ug/L

Sequence No.: 3
 Sample ID: S0.5
 Analyst:
 Initial Sample Wt:
 Dilution:

Autosampler Location: 3
 Date Collected: 3/19/2010 07:23:48
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:

Replicate Data: S0.5

Rep#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib. Units	Analysis Time
1	Sc Radial	4176.8	4176.8	95.0	%	07:26:01
1	Y RADIAL	4651.6	4651.6	97.71	%	07:25:41
1	Al 396.153Radial†	4914.3	5249.1	[5000]	ug/L	07:25:41
1	Ca 317.933Radial†	2634.9	2756.9	[5000]	ug/L	07:26:01
1	K 766.490 Radial†	28253.2	27130.7	[5000]	ug/L	07:25:41
1	Mg 279.077 IEC†	121.5	126.4	[5000]	ug/L	07:26:01
1	Sr 421.552†	60226.2	63352.3	[500]	ug/L	07:25:41
1	Sc 361.383	821637.6	821637.6	100.34	%	07:26:58
1	Y 371.029	685019.0	685019.0	99.042	%	07:26:58
1	Ag 328.068†	98692.4	98169.4	[500]	ug/L	07:27:03
1	As 188.979†	887.8	911.5	[500]	ug/L	07:27:23
1	B 249.677†	17522.6	18000.0	[500]	ug/L	07:27:03
1	Ba 233.527†	54446.1	54260.5	[500]	ug/L	07:27:03
1	Be 313.107†	1185449.4	1185122.2	[500]	ug/L	07:26:58
1	Cd 226.502†	35110.5	35160.9	[500]	ug/L	07:27:03
1	Co 228.616†	20009.0	19986.7	[500]	ug/L	07:27:03
1	Cr 267.716†	38103.4	37901.5	[500]	ug/L	07:27:03
1	Cu 324.752†	159261.1	153163.9	[500]	ug/L	07:27:03
1	Mn 257.610†	382996.5	381296.3	[500]	ug/L	07:26:58
1	Mo 202.031†	5661.9	5634.0	[500]	ug/L	07:27:23
1	Ni 231.604†	16362.9	16222.8	[500]	ug/L	07:27:03
1	P 214.914†	3554.2	3354.8	[2500]	ug/L	07:27:23
1	Pb 220.353†	3215.7	3263.0	[500]	ug/L	07:27:23
1	S 181.975 Axial†	589.7	557.5	[1000]	ug/L	07:27:23
1	Sb 206.836†	1218.1	1190.2	[500]	ug/L	07:27:23
1	Se 196.026†	576.1	591.1	[500]	ug/L	07:27:23
1	Si 251.611†	67712.5	66992.5	[2500]	ug/L	07:27:03
1	Sn 189.927†	2220.6	2205.8	[500]	ug/L	07:27:23
1	Ti 334.940†	286976.2	287114.9	[500]	ug/L	07:27:03
1	Tl 190.801†	1277.6	1302.4	[500]	ug/L	07:27:23
1	U 409.014†	14882.9	17036.1	[500]	ug/L	07:27:03
1	V 292.402†	62512.7	63616.1	[500]	ug/L	07:27:03
1	Zn 213.857†	42904.3	42187.4	[500]	ug/L	07:27:03
1	SiO2†	66118.3	65392.6	[5347.5]	ug/L	07:28:31
2	Sc Radial	4187.9	4187.9	95.3	%	07:26:26
2	Y RADIAL	4622.9	4622.9	97.11	%	07:26:06
2	Al 396.153Radial†	4898.9	5219.3	[5000]	ug/L	07:26:06
2	Ca 317.933Radial†	2632.3	2746.8	[5000]	ug/L	07:26:26
2	K 766.490 Radial†	28051.2	26840.0	[5000]	ug/L	07:26:06
2	Mg 279.077 IEC†	123.8	128.4	[5000]	ug/L	07:26:26
2	Sr 421.552†	59628.2	62556.9	[500]	ug/L	07:26:06
2	Sc 361.383	825022.8	825022.8	100.76	%	07:27:29
2	Y 371.029	687439.8	687439.8	99.392	%	07:27:29
2	Ag 328.068†	97697.4	96778.3	[500]	ug/L	07:27:34
2	As 188.979†	890.6	910.7	[500]	ug/L	07:27:54
2	B 249.677†	17330.0	17737.2	[500]	ug/L	07:27:34
2	Ba 233.527†	53830.4	53426.7	[500]	ug/L	07:27:34
2	Be 313.107†	1189558.3	1184352.8	[500]	ug/L	07:27:29
2	Cd 226.502†	34616.6	34527.2	[500]	ug/L	07:27:34
2	Co 228.616†	19815.7	19713.0	[500]	ug/L	07:27:34
2	Cr 267.716†	37703.7	37349.0	[500]	ug/L	07:27:34
2	Cu 324.752†	157566.2	150830.5	[500]	ug/L	07:27:34
2	Mn 257.610†	384618.0	381339.5	[500]	ug/L	07:27:29
2	Mo 202.031†	5644.3	5593.4	[500]	ug/L	07:27:54
2	Ni 231.604†	16177.2	15971.6	[500]	ug/L	07:27:34
2	P 214.914†	3569.2	3355.1	[2500]	ug/L	07:27:54
2	Pb 220.353†	3211.8	3245.9	[500]	ug/L	07:27:54
2	S 181.975 Axial†	589.2	554.6	[1000]	ug/L	07:27:54
2	Sb 206.836†	1221.4	1188.5	[500]	ug/L	07:27:54

2	Se 196.026†	590.5	603.1	[500]	ug/L	07:27:54
2	Si 251.611†	66983.6	65992.2	[2500]	ug/L	07:27:34
2	Sn 189.927†	2206.0	2182.2	[500]	ug/L	07:27:54
2	Ti 334.940†	284172.9	283159.3	[500]	ug/L	07:27:34
2	Tl 190.801†	1271.4	1291.0	[500]	ug/L	07:27:54
2	U 409.014†	14780.1	16873.3	[500]	ug/L	07:27:34
2	V 292.402†	61704.6	62558.5	[500]	ug/L	07:27:34
2	Zn 213.857†	42493.9	41604.6	[500]	ug/L	07:27:34
2	SiO2†	66791.9	65790.8	[5347.5]	ug/L	07:28:36
3	Sc Radial	4203.5	4203.5	95.6	%	07:26:51
3	Y RADIAL	4694.9	4694.9	98.62	%	07:26:31
3	Al 396.153Radial†	4935.9	5239.0	[5000]	ug/L	07:26:31
3	Ca 317.933Radial†	2631.7	2735.9	[5000]	ug/L	07:26:51
3	K 766.490 Radial†	28217.2	26904.4	[5000]	ug/L	07:26:31
3	Mg 279.077 IEC†	124.5	128.6	[5000]	ug/L	07:26:51
3	Sr 421.552†	60103.1	62821.5	[500]	ug/L	07:26:31
3	Sc 361.383	826571.9	826571.9	100.95	%	07:28:00
3	Y 371.029	687898.7	687898.7	99.458	%	07:28:00
3	Ag 328.068†	99152.7	98038.2	[500]	ug/L	07:28:05
3	As 188.979†	889.6	908.1	[500]	ug/L	07:28:25
3	B 249.677†	17693.7	18065.2	[500]	ug/L	07:28:05
3	Ba 233.527†	54817.6	54304.6	[500]	ug/L	07:28:05
3	Be 313.107†	1190349.2	1182923.6	[500]	ug/L	07:28:00
3	Cd 226.502†	35274.6	35114.6	[500]	ug/L	07:28:05
3	Co 228.616†	20091.0	19948.9	[500]	ug/L	07:28:05
3	Cr 267.716†	38295.2	37864.7	[500]	ug/L	07:28:05
3	Cu 324.752†	160283.3	153229.1	[500]	ug/L	07:28:05
3	Mn 257.610†	385572.6	381569.8	[500]	ug/L	07:28:00
3	Mo 202.031†	5688.1	5626.2	[500]	ug/L	07:28:25
3	Ni 231.604†	16456.1	16217.8	[500]	ug/L	07:28:05
3	P 214.914†	3559.1	3338.4	[2500]	ug/L	07:28:25
3	Pb 220.353†	3226.6	3254.6	[500]	ug/L	07:28:25
3	S 181.975 Axial†	594.2	558.4	[1000]	ug/L	07:28:25
3	Sb 206.836†	1241.9	1206.6	[500]	ug/L	07:28:25
3	Se 196.026†	590.7	602.1	[500]	ug/L	07:28:25
3	Si 251.611†	68168.0	67040.9	[2500]	ug/L	07:28:05
3	Sn 189.927†	2212.7	2184.8	[500]	ug/L	07:28:25
3	Ti 334.940†	289122.7	287534.1	[500]	ug/L	07:28:05
3	Tl 190.801†	1277.8	1294.9	[500]	ug/L	07:28:25
3	U 409.014†	15107.2	17169.8	[500]	ug/L	07:28:05
3	V 292.402†	62733.4	63462.9	[500]	ug/L	07:28:05
3	Zn 213.857†	43215.4	42240.3	[500]	ug/L	07:28:05
3	SiO2†	66865.0	65739.0	[5347.5]	ug/L	07:28:41

Mean Data: S0.5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc. Units
Sc 361.383	824410.7	2523.46	0.31%	100.68 %
Sc Radial	4189.4	13.40	0.32%	95.3 %
Y 371.029	686785.8	1547.25	0.23%	99.297 %
Y RADIAL	4656.5	36.25	0.78%	97.81 %
Ag 328.068†	97662.0	768.09	0.79%	[500] ug/L
Al 396.153Radial†	5235.8	15.16	0.29%	[5000] ug/L
As 188.979†	910.1	1.80	0.20%	[500] ug/L
B 249.677†	17934.1	173.65	0.97%	[500] ug/L
Ba 233.527†	53997.2	494.58	0.92%	[500] ug/L
Be 313.107†	1184132.9	1115.71	0.09%	[500] ug/L
Ca 317.933Radial†	2746.5	10.52	0.38%	[5000] ug/L
Cd 226.502†	34934.2	353.27	1.01%	[500] ug/L
Co 228.616†	19882.9	148.31	0.75%	[500] ug/L
Cr 267.716†	37705.1	308.91	0.82%	[500] ug/L
Cu 324.752†	152407.8	1366.39	0.90%	[500] ug/L
K 766.490 Radial†	26958.4	152.71	0.57%	[5000] ug/L
Mg 279.077 IEC†	127.8	1.24	0.97%	[5000] ug/L
Mn 257.610†	381401.8	147.04	0.04%	[500] ug/L
Mo 202.031†	5617.9	21.56	0.38%	[500] ug/L
Ni 231.604†	16137.4	143.62	0.89%	[500] ug/L
P 214.914†	3349.4	9.54	0.28%	[2500] ug/L
Pb 220.353†	3254.5	8.54	0.26%	[500] ug/L
S 181.975 Axial†	556.8	1.98	0.36%	[1000] ug/L

Sb 206.836†	1195.1	9.96	0.83%	[500]	ug/L
Se 196.026†	598.8	6.64	1.11%	[500]	ug/L
Si 251.611†	66675.2	592.00	0.89%	[2500]	ug/L
Sn 189.927†	2190.9	12.95	0.59%	[500]	ug/L
Sr 421.552†	62910.2	405.09	0.64%	[500]	ug/L
Ti 334.940†	285936.1	2413.92	0.84%	[500]	ug/L
Tl 190.801†	1296.1	5.78	0.45%	[500]	ug/L
U 409.014†	17026.4	148.49	0.87%	[500]	ug/L
V 292.402†	63212.5	571.55	0.90%	[500]	ug/L
Zn 213.857†	42010.8	352.73	0.84%	[500]	ug/L
SiO2†	65640.8	216.53	0.33%	[5347.5]	ug/L

Sequence No.: 4
 Sample ID: SCAL
 Analyst:
 Initial Sample Wt:
 Dilution:

Autosampler Location: 4
 Date Collected: 3/19/2010 07:30:51
 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	4344.4	4344.4	98.8	%	07:32:44
1	Y RADIAL	4668.8	4668.8	98.07	%	07:32:44
1	Al 396.153Radial†	9900.0	10093.5	[10000]	ug/L	07:32:44
1	Ca 317.933Radial†	5333.2	5379.7	[10000]	ug/L	07:32:44
1	Fe 238.204 Radial†	855.1	856.7	[10000]	ug/L	07:33:04
1	K 766.490 Radial†	54124.1	52156.7	[10000]	ug/L	07:32:44
1	Mg 279.077 IEC†	245.6	246.9	[10000]	ug/L	07:33:04
1	Na 589.592 Radial†	26296.6	27478.5	[10000]	ug/L	07:32:44
1	Sr 421.552†	122992.3	124406.1	[1000]	ug/L	07:32:44
1	Sc 361.383	819368.6	819368.6	100.07	%	07:34:03
1	Y 371.029	681762.9	681762.9	98.571	%	07:34:03
1	Ag 328.068†	192124.2	191811.5	[1000]	ug/L	07:34:03
1	As 188.979†	1787.9	1813.5	[1000]	ug/L	07:34:23
1	B 249.677†	35038.7	35552.8	[1000]	ug/L	07:34:03
1	Ba 233.527†	106549.2	106479.2	[1000]	ug/L	07:34:03
1	Be 313.107†	2343163.6	2345339.4	[1000]	ug/L	07:34:03
1	Cd 226.502†	68574.5	68699.6	[1000]	ug/L	07:34:03
1	Co 228.616†	38220.4	38241.3	[1000]	ug/L	07:34:23
1	Cr 267.716†	74436.4	74315.5	[1000]	ug/L	07:34:03
1	Cu 324.752†	307593.6	301837.4	[1000]	ug/L	07:34:03
1	Mn 257.610†	760183.6	759290.0	[1000]	ug/L	07:34:03
1	Mo 202.031†	11214.5	11198.6	[1000]	ug/L	07:34:23
1	Ni 231.604†	31271.9	31167.1	[1000]	ug/L	07:34:23
1	P 214.914†	6883.9	6692.0	[5000]	ug/L	07:34:23
1	Pb 220.353†	6420.7	6474.7	[1000]	ug/L	07:34:23
1	S 181.975 Axial†	1148.2	1117.2	[2000]	ug/L	07:34:23
1	Sb 206.836†	2390.0	2364.7	[1000]	ug/L	07:34:23
1	Se 196.026†	1177.1	1193.2	[1000]	ug/L	07:34:23
1	Si 251.611†	131710.3	131134.7	[5000]	ug/L	07:34:03
1	Sn 189.927†	4409.0	4398.9	[1000]	ug/L	07:34:23
1	Ti 334.940†	574509.8	575249.8	[1000]	ug/L	07:34:03
1	Tl 190.801†	2539.4	2566.8	[1000]	ug/L	07:34:23
1	U 409.014†	30310.0	32494.1	[1000]	ug/L	07:34:03
1	V 292.402†	123779.9	125015.2	[1000]	ug/L	07:34:03
1	Zn 213.857†	82765.8	82140.8	[1000]	ug/L	07:34:03
1	SiO2†	132053.9	131467.0	[10695]	ug/L	07:35:24
2	Sc Radial	4357.0	4357.0	99.1	%	07:33:09
2	Y RADIAL	4710.6	4710.6	98.95	%	07:33:09
2	Al 396.153Radial†	9962.0	10127.1	[10000]	ug/L	07:33:09
2	Ca 317.933Radial†	5341.3	5372.3	[10000]	ug/L	07:33:09
2	Fe 238.204 Radial†	854.5	853.6	[10000]	ug/L	07:33:29
2	K 766.490 Radial†	54185.4	52060.1	[10000]	ug/L	07:33:09
2	Mg 279.077 IEC†	247.3	247.9	[10000]	ug/L	07:33:29
2	Na 589.592 Radial†	26245.8	27350.2	[10000]	ug/L	07:33:09
2	Sr 421.552†	123608.6	124667.8	[1000]	ug/L	07:33:09
2	Sc 361.383	825030.9	825030.9	100.76	%	07:34:31
2	Y 371.029	685551.0	685551.0	99.119	%	07:34:31
2	Ag 328.068†	193526.5	191885.6	[1000]	ug/L	07:34:31
2	As 188.979†	1800.1	1813.4	[1000]	ug/L	07:34:51
2	B 249.677†	35389.2	35660.3	[1000]	ug/L	07:34:31
2	Ba 233.527†	107337.0	106530.3	[1000]	ug/L	07:34:31
2	Be 313.107†	2360060.0	2346038.1	[1000]	ug/L	07:34:31
2	Cd 226.502†	69252.4	68902.1	[1000]	ug/L	07:34:31
2	Co 228.616†	38675.7	38431.0	[1000]	ug/L	07:34:51
2	Cr 267.716†	75156.9	74520.0	[1000]	ug/L	07:34:31
2	Cu 324.752†	310179.0	302293.8	[1000]	ug/L	07:34:31
2	Mn 257.610†	766947.4	760789.2	[1000]	ug/L	07:34:31
2	Mo 202.031†	11357.1	11263.1	[1000]	ug/L	07:34:51
2	Ni 231.604†	31613.1	31291.2	[1000]	ug/L	07:34:51

2	P 214.914†	6950.8	6711.2	[5000]	ug/L	07:34:51
2	Pb 220.353†	6501.7	6511.1	[1000]	ug/L	07:34:51
2	S 181.975 Axial†	1154.9	1116.1	[2000]	ug/L	07:34:51
2	Sb 206.836†	2442.5	2400.4	[1000]	ug/L	07:34:51
2	Se 196.026†	1199.8	1207.7	[1000]	ug/L	07:34:51
2	Si 251.611†	132902.2	131414.3	[5000]	ug/L	07:34:31
2	Sn 189.927†	4443.2	4402.6	[1000]	ug/L	07:34:51
2	Ti 334.940†	579279.1	576042.9	[1000]	ug/L	07:34:31
2	Tl 190.801†	2581.0	2590.7	[1000]	ug/L	07:34:51
2	U 409.014†	30791.4	32764.0	[1000]	ug/L	07:34:31
2	V 292.402†	124696.3	125075.7	[1000]	ug/L	07:34:31
2	Zn 213.857†	83432.2	82234.5	[1000]	ug/L	07:34:31
2	SiO2†	132062.1	130569.4	[10695]	ug/L	07:35:29
3	Sc Radial	4286.2	4286.2	97.5	%	07:33:35
3	Y RADIAL	4648.8	4648.8	97.65	%	07:33:35
3	Al 396.153Radial†	9858.2	10186.7	[10000]	ug/L	07:33:35
3	Ca 317.933Radial†	5285.1	5403.6	[10000]	ug/L	07:33:35
3	Fe 238.204 Radial†	857.4	870.7	[10000]	ug/L	07:33:55
3	K 766.490 Radial†	53393.5	52151.0	[10000]	ug/L	07:33:55
3	Mg 279.077 IEC†	248.5	253.3	[10000]	ug/L	07:33:55
3	Na 589.592 Radial†	25596.1	27121.3	[10000]	ug/L	07:33:35
3	Sr 421.552†	121376.4	124438.7	[1000]	ug/L	07:33:35
3	Sc 361.383	819528.5	819528.5	100.09	%	07:34:58
3	Y 371.029	680490.9	680490.9	98.387	%	07:34:58
3	Ag 328.068†	192351.3	192001.0	[1000]	ug/L	07:34:58
3	As 188.979†	1810.4	1835.6	[1000]	ug/L	07:35:18
3	B 249.677†	35087.9	35595.1	[1000]	ug/L	07:34:58
3	Ba 233.527†	106371.3	106280.7	[1000]	ug/L	07:34:58
3	Be 313.107†	2336429.7	2338154.4	[1000]	ug/L	07:34:58
3	Cd 226.502†	68339.3	68451.2	[1000]	ug/L	07:34:58
3	Co 228.616†	38543.9	38557.0	[1000]	ug/L	07:35:18
3	Cr 267.716†	74336.2	74200.8	[1000]	ug/L	07:34:58
3	Cu 324.752†	308824.8	303007.6	[1000]	ug/L	07:34:58
3	Mn 257.610†	760159.6	759117.9	[1000]	ug/L	07:34:58
3	Mo 202.031†	11311.6	11293.3	[1000]	ug/L	07:35:18
3	Ni 231.604†	31511.2	31400.1	[1000]	ug/L	07:35:18
3	P 214.914†	6937.1	6743.8	[5000]	ug/L	07:35:18
3	Pb 220.353†	6481.7	6534.5	[1000]	ug/L	07:35:18
3	S 181.975 Axial†	1151.4	1120.2	[2000]	ug/L	07:35:18
3	Sb 206.836†	2431.5	2405.7	[1000]	ug/L	07:35:18
3	Se 196.026†	1185.9	1201.9	[1000]	ug/L	07:35:18
3	Si 251.611†	131907.0	131305.6	[5000]	ug/L	07:34:58
3	Sn 189.927†	4448.1	4437.1	[1000]	ug/L	07:35:18
3	Ti 334.940†	575356.7	575983.9	[1000]	ug/L	07:34:58
3	Tl 190.801†	2562.9	2589.7	[1000]	ug/L	07:35:18
3	U 409.014†	30555.8	32733.8	[1000]	ug/L	07:34:58
3	V 292.402†	123490.0	124701.4	[1000]	ug/L	07:34:58
3	Zn 213.857†	82686.9	82045.8	[1000]	ug/L	07:34:58
3	SiO2†	131524.8	130912.6	[10695]	ug/L	07:35:34

Mean Data: SCAL

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc. Units
Sc 361.383	821309.3	3223.93	0.39%	100.30 %
Sc Radial	4329.2	37.77	0.87%	98.5 %
Y 371.029	682601.6	2632.21	0.39%	98.692 %
Y RADIAL	4676.1	31.56	0.67%	98.22 %
Ag 328.068†	191899.4	95.49	0.05%	[1000] ug/L
Al 396.153Radial†	10135.8	47.17	0.47%	[10000] ug/L
As 188.979†	1820.9	12.80	0.70%	[1000] ug/L
B 249.677†	35602.8	54.15	0.15%	[1000] ug/L
Ba 233.527†	106430.1	131.89	0.12%	[1000] ug/L
Be 313.107†	2343177.3	4363.95	0.19%	[1000] ug/L
Ca 317.933Radial†	5385.2	16.38	0.30%	[10000] ug/L
Cd 226.502†	68684.3	225.84	0.33%	[1000] ug/L
Co 228.616†	38409.7	158.92	0.41%	[1000] ug/L
Cr 267.716†	74345.5	161.70	0.22%	[1000] ug/L
Cu 324.752†	302379.6	589.80	0.20%	[1000] ug/L
Fe 238.204 Radial†	860.3	9.13	1.06%	[10000] ug/L
K 766.490 Radial†	52122.6	54.20	0.10%	[10000] ug/L

Mg 279.077 IEC†	249.4	3.39	1.36%	[10000]	ug/L
Mn 257.610†	759732.4	919.29	0.12%	[1000]	ug/L
Mo 202.031†	11251.7	48.40	0.43%	[1000]	ug/L
Na 589.592 Radial†	27316.7	180.92	0.66%	[10000]	ug/L
Ni 231.604†	31286.1	116.56	0.37%	[1000]	ug/L
P 214.914†	6715.7	26.19	0.39%	[5000]	ug/L
Pb 220.353†	6506.8	30.09	0.46%	[1000]	ug/L
S 181.975 Axial†	1117.8	2.14	0.19%	[2000]	ug/L
Sb 206.836†	2390.3	22.30	0.93%	[1000]	ug/L
Se 196.026†	1201.0	7.29	0.61%	[1000]	ug/L
Si 251.611†	131284.9	140.98	0.11%	[5000]	ug/L
Sn 189.927†	4412.9	21.08	0.48%	[1000]	ug/L
Sr 421.552†	124504.2	142.63	0.11%	[1000]	ug/L
Ti 334.940†	575758.8	441.87	0.08%	[1000]	ug/L
Tl 190.801†	2582.4	13.54	0.52%	[1000]	ug/L
U 409.014†	32663.9	147.89	0.45%	[1000]	ug/L
V 292.402†	124930.8	200.93	0.16%	[1000]	ug/L
Zn 213.857†	82140.4	94.36	0.11%	[1000]	ug/L
SiO2†	130983.0	452.91	0.35%	[10695]	ug/L

Sequence No.: 5

Sample ID: S10

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 5

Date Collected: 3/19/2010 07:37:45

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	4263.0	4263.0	97.0 %		07:39:59
1	Y RADIAL	4575.6	4575.6	96.11 %		07:39:59
1	Al 396.153Radial†	49831.2	51453.0	[50000] ug/L		07:39:39
1	Ca 317.933Radial†	25954.1	26742.4	[50000] ug/L		07:39:39
1	Fe 238.204 Radial†	1687.7	1731.5	[20000] ug/L		07:39:59
1	Mg 279.077 IEC†	1178.7	1213.7	[50000] ug/L		07:39:59
1	Na 589.592 Radial†	55567.4	58164.0	[20000] ug/L		07:39:39
1	Sc 361.383	789692.1	789692.1	96.442 %		07:40:56
1	Y 371.029	653528.4	653528.4	94.489 %		07:40:56
2	Sc Radial	4290.8	4290.8	97.6 %		07:40:24
2	Y RADIAL	4619.8	4619.8	97.04 %		07:40:24
2	Al 396.153Radial†	48689.3	49950.4	[50000] ug/L		07:40:04
2	Ca 317.933Radial†	25266.7	25864.9	[50000] ug/L		07:40:04
2	Fe 238.204 Radial†	1692.1	1724.8	[20000] ug/L		07:40:24
2	Mg 279.077 IEC†	1181.2	1208.4	[50000] ug/L		07:40:24
2	Na 589.592 Radial†	54008.3	56195.6	[20000] ug/L		07:40:04
2	Sc 361.383	793240.2	793240.2	96.875 %		07:41:02
2	Y 371.029	656699.3	656699.3	94.947 %		07:41:02
3	Sc Radial	4280.8	4280.8	97.4 %		07:40:49
3	Y RADIAL	4602.7	4602.7	96.68 %		07:40:49
3	Al 396.153Radial†	49877.2	51287.3	[50000] ug/L		07:40:29
3	Ca 317.933Radial†	25897.8	26573.7	[50000] ug/L		07:40:29
3	Fe 238.204 Radial†	1689.6	1726.2	[20000] ug/L		07:40:49
3	Mg 279.077 IEC†	1178.0	1207.9	[50000] ug/L		07:40:49
3	Na 589.592 Radial†	55072.5	57418.3	[20000] ug/L		07:40:29
3	Sc 361.383	800906.3	800906.3	97.812 %		07:41:07
3	Y 371.029	662694.7	662694.7	95.814 %		07:41:07

Mean Data: S10

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc. Units	Calib
Sc 361.383	794612.9	5731.76	0.72%	97.043 %	
Sc Radial	4278.2	14.08	0.33%	97.3 %	
Y 371.029	657640.8	4655.12	0.71%	95.083 %	
Y RADIAL	4599.4	22.30	0.48%	96.61 %	
Al 396.153Radial†	50896.9	823.85	1.62%	[50000] ug/L	
Ca 317.933Radial†	26393.7	465.66	1.76%	[50000] ug/L	
Fe 238.204 Radial†	1727.5	3.53	0.20%	[20000] ug/L	
Mg 279.077 IEC†	1210.0	3.21	0.27%	[50000] ug/L	
Na 589.592 Radial†	57259.3	993.78	1.74%	[20000] ug/L	

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	3	Lin Thru 0	0.0	192.6	0.00000	0.999974	
Al 396.153Radial	3	Lin Thru 0	0.0	1.018	0.00000	0.999996	
As 188.979	3	Lin Thru 0	0.0	1.821	0.00000	0.999992	
B 249.677	3	Lin Thru 0	0.0	35.65	0.00000	0.999990	
Ba 233.527	3	Lin Thru 0	0.0	106.8	0.00000	0.999980	
Be 313.107	3	Lin Thru 0	0.0	2348	0.00000	0.999990	
Ca 317.933Radial	3	Lin Thru 0	0.0	0.5285	0.00000	0.999985	
Cd 226.502	3	Lin Thru 0	0.0	68.92	0.00000	0.999977	
Co 228.616	3	Lin Thru 0	0.0	38.69	0.00000	0.999900	
Cr 267.716	3	Lin Thru 0	0.0	74.57	0.00000	0.999982	
Cu 324.752	3	Lin Thru 0	0.0	302.9	0.00000	0.999994	
Fe 238.204 Radia	2	Lin Thru 0	0.0	0.0863	0.00000	0.999999	
K 766.490 Radial	3	Lin Thru 0	0.0	5.249	0.00000	0.999907	

Mg 279.077 IEC	3	Lin Thru 0	0.0	0.0242	0.00000	0.999969
Mn 257.610	3	Lin Thru 0	0.0	760.6	0.00000	0.999994
Mo 202.031	3	Lin Thru 0	0.0	11.25	0.00000	0.999999
Na 589.592 Radia	2	Lin Thru 0	0.0	2.837	0.00000	0.999829
Ni 231.604	3	Lin Thru 0	0.0	31.49	0.00000	0.999920
P 214.914	3	Lin Thru 0	0.0	1.342	0.00000	0.999999
Pb 220.353	3	Lin Thru 0	0.0	6.509	0.00000	0.999995
S 181.975 Axial	3	Lin Thru 0	0.0	0.5586	0.00000	0.999997
Sb 206.836	3	Lin Thru 0	0.0	2.390	0.00000	1.000000
Se 196.026	3	Lin Thru 0	0.0	1.200	0.00000	0.999999
Si 251.611	3	Lin Thru 0	0.0	26.34	0.00000	0.999980
Sn 189.927	3	Lin Thru 0	0.0	4.407	0.00000	0.999996
Sr 421.552	3	Lin Thru 0	0.0	124.8	0.00000	0.999990
Ti 334.940	3	Lin Thru 0	0.0	575.0	0.00000	0.999996
Tl 190.801	3	Lin Thru 0	0.0	2.585	0.00000	0.999997
U 409.014	3	Lin Thru 0	0.0	32.96	0.00000	0.999836
V 292.402	3	Lin Thru 0	0.0	125.2	0.00000	0.999989
Zn 213.857	3	Lin Thru 0	0.0	82.53	0.00000	0.999957
SiO2	3	Lin Thru 0	0.0	12.25	0.00000	1.000000

Sequence No.: 6

Sample ID: ICV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 9

Date Collected: 3/19/2010 07:43:19

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	4236.5	4236.5	96.4 %		07:45:31
1	Y RADIAL	4746.7	4746.7	99.71 %		07:45:11
1	Al 396.153Radial†	5043.7	5310.7	5190.6 ug/L	5190.6 ppb	07:45:11
1	Ca 317.933Radial†	2646.9	2730.3	5166.3 ug/L	5166.3 ppb	07:45:31
1	Fe 238.204 Radial†	443.6	451.8	5249.8 ug/L	5249.8 ppb	07:45:31
1	K 766.490 Radial†	15378.7	13355.8	2541.1 ug/L	2541.1 ppb	07:45:11
1	Mg 279.077 IEC†	129.9	133.2	5494.7 ug/L	5494.7 ppb	07:45:31
1	Na 589.592 Radial†	5945.3	7043.0	2482.8 ug/L	2482.8 ppb	07:45:11
1	Sr 421.552†	65683.4	68121.9	546.01 ug/L	546.01 ppb	07:45:11
1	Sc 361.383	828020.8	828020.8	101.12 %		07:46:29
1	Y 371.029	691853.4	691853.4	100.03 %		07:46:29
1	Ag 328.068†	50281.0	49537.5	260.39 ug/L	260.39 ppb	07:46:29
1	As 188.979†	842.0	859.4	476.13 ug/L	476.13 ppb	07:46:29
1	B 249.677†	18333.9	18667.6	521.37 ug/L	521.37 ppb	07:46:29
1	Ba 233.527†	55293.2	54679.8	513.44 ug/L	513.44 ppb	07:46:29
1	Be 313.107†	620824.3	617660.4	264.14 ug/L	264.14 ppb	07:46:29
1	Cd 226.502†	34825.2	34609.1	502.04 ug/L	502.04 ppb	07:46:29
1	Co 228.616†	20188.0	20010.0	517.35 ug/L	517.35 ppb	07:46:29
1	Cr 267.716†	37007.0	36524.5	490.87 ug/L	490.87 ppb	07:46:29
1	Cu 324.752†	161407.2	154062.6	508.63 ug/L	508.63 ppb	07:46:29
1	Mn 257.610†	397858.6	393050.9	517.08 ug/L	517.08 ppb	07:46:29
1	Mo 202.031†	6082.7	6006.6	534.40 ug/L	534.40 ppb	07:46:49
1	Ni 231.604†	16297.5	16032.5	508.84 ug/L	508.84 ppb	07:46:29
1	P 214.914†	3585.3	3358.2	2402.7 ug/L	2402.7 ppb	07:46:49
1	Pb 220.353†	3230.6	3253.0	501.29 ug/L	501.29 ppb	07:46:49
1	S 181.975 Axial†	1435.1	1389.0	2485.7 ug/L	2485.7 ppb	07:46:49
1	Sb 206.836†	1237.1	1199.7	521.16 ug/L	521.16 ppb	07:46:49
1	Se 196.026†	3117.5	3099.8	2600.8 ug/L	2600.8 ppb	07:46:49
1	Si 251.611†	132565.1	130604.6	4951.6 ug/L	4951.6 ppb	07:46:29
1	Sn 189.927†	2396.2	2362.4	536.72 ug/L	536.72 ppb	07:46:49
1	Ti 334.940†	289993.6	287894.1	500.51 ug/L	500.51 ppb	07:46:29
1	Tl 190.801†	1336.3	1350.6	525.90 ug/L	525.90 ppb	07:46:49
1	U 409.014†	14608.3	16650.2	503.45 ug/L	503.45 ppb	07:46:29
1	V 292.402†	63227.7	63842.9	516.94 ug/L	516.94 ppb	07:46:29
1	Zn 213.857†	43406.0	42353.9	508.47 ug/L	508.47 ppb	07:46:29
1	SiO2†	131517.0	129557.0	10559 ug/L	10559 ppb	07:47:47
2	Sc Radial	4236.2	4236.2	96.4 %		07:45:57
2	Y RADIAL	4735.0	4735.0	99.46 %		07:45:37
2	Al 396.153Radial†	5034.3	5301.2	5181.0 ug/L	5181.0 ppb	07:45:37
2	Ca 317.933Radial†	2653.7	2737.5	5180.0 ug/L	5180.0 ppb	07:45:57
2	Fe 238.204 Radial†	444.4	452.6	5259.7 ug/L	5259.7 ppb	07:45:57
2	K 766.490 Radial†	15389.8	13368.3	2543.5 ug/L	2543.5 ppb	07:45:37
2	Mg 279.077 IEC†	128.0	131.2	5414.3 ug/L	5414.3 ppb	07:45:57
2	Na 589.592 Radial†	5861.5	6956.4	2452.3 ug/L	2452.3 ppb	07:45:37
2	Sr 421.552†	65138.0	67560.5	541.51 ug/L	541.51 ppb	07:45:37
2	Sc 361.383	820882.8	820882.8	100.25 %		07:46:55
2	Y 371.029	687024.5	687024.5	99.332 %		07:46:55
2	Ag 328.068†	49859.0	49548.8	260.46 ug/L	260.46 ppb	07:46:55
2	As 188.979†	857.3	882.0	488.48 ug/L	488.48 ppb	07:47:15
2	B 249.677†	18074.8	18566.8	518.55 ug/L	518.55 ppb	07:46:55
2	Ba 233.527†	54807.3	54670.6	513.35 ug/L	513.35 ppb	07:46:55
2	Be 313.107†	615521.6	617709.5	264.16 ug/L	264.16 ppb	07:46:55
2	Cd 226.502†	34435.0	34519.3	500.74 ug/L	500.74 ppb	07:46:55
2	Co 228.616†	19937.1	19933.4	515.39 ug/L	515.39 ppb	07:46:55
2	Cr 267.716†	36766.8	36603.1	491.93 ug/L	491.93 ppb	07:46:55
2	Cu 324.752†	159435.0	153483.3	506.73 ug/L	506.73 ppb	07:46:55
2	Mn 257.610†	393797.0	392420.7	516.26 ug/L	516.26 ppb	07:46:55
2	Mo 202.031†	6112.4	6088.6	541.69 ug/L	541.69 ppb	07:47:15
2	Ni 231.604†	16226.6	16101.8	511.04 ug/L	511.04 ppb	07:46:55

2	P 214.914†	3616.6	3420.3	2449.3 ug/L	2449.3 ppb	07:47:15
2	Pb 220.353†	3236.1	3286.3	506.43 ug/L	506.43 ppb	07:47:15
2	S 181.975 Axial†	1446.8	1413.0	2528.5 ug/L	2528.5 ppb	07:47:15
2	Sb 206.836†	1247.3	1220.5	530.13 ug/L	530.13 ppb	07:47:15
2	Se 196.026†	3136.4	3145.5	2638.9 ug/L	2638.9 ppb	07:47:15
2	Si 251.611†	131086.9	130270.1	4938.8 ug/L	4938.8 ppb	07:46:55
2	Sn 189.927†	2402.1	2388.9	542.72 ug/L	542.72 ppb	07:47:15
2	Ti 334.940†	287075.9	287477.4	499.80 ug/L	499.80 ppb	07:46:55
2	Tl 190.801†	1363.4	1389.1	540.79 ug/L	540.79 ppb	07:47:15
2	U 409.014†	14162.5	16331.2	493.76 ug/L	493.76 ppb	07:46:55
2	V 292.402†	62608.2	63768.7	516.43 ug/L	516.43 ppb	07:46:55
2	Zn 213.857†	42973.0	42295.1	507.75 ug/L	507.75 ppb	07:46:55
2	SiO2†	129984.9	129159.7	10526 ug/L	10526 ppb	07:47:52
3	Sc Radial	4249.4	4249.4	96.7 %		07:46:22
3	Y RADIAL	4742.6	4742.6	99.62 %		07:46:02
3	Al 396.153Radial†	5051.7	5303.0	5183.1 ug/L	5183.1 ppb	07:46:02
3	Ca 317.933Radial†	2658.2	2733.6	5172.6 ug/L	5172.6 ppb	07:46:22
3	Fe 238.204 Radial†	442.5	449.2	5220.7 ug/L	5220.7 ppb	07:46:22
3	K 766.490 Radial†	15649.2	13587.0	2585.2 ug/L	2585.2 ppb	07:46:02
3	Mg 279.077 IEC†	128.5	131.3	5417.7 ug/L	5417.7 ppb	07:46:22
3	Na 589.592 Radial†	5869.2	6945.6	2448.5 ug/L	2448.5 ppb	07:46:02
3	Sr 421.552†	65487.0	67711.5	542.72 ug/L	542.72 ppb	07:46:02
3	Sc 361.383	827095.9	827095.9	101.01 %		07:47:21
3	Y 371.029	692361.2	692361.2	100.10 %		07:47:21
3	Ag 328.068†	50259.5	49571.7	260.55 ug/L	260.55 ppb	07:47:21
3	As 188.979†	842.1	860.4	476.66 ug/L	476.66 ppb	07:47:41
3	B 249.677†	18172.4	18528.1	517.47 ug/L	517.47 ppb	07:47:21
3	Ba 233.527†	55205.3	54653.9	513.19 ug/L	513.19 ppb	07:47:21
3	Be 313.107†	620935.3	618456.9	264.48 ug/L	264.48 ppb	07:47:21
3	Cd 226.502†	34701.6	34525.3	500.83 ug/L	500.83 ppb	07:47:21
3	Co 228.616†	20116.9	19961.9	516.11 ug/L	516.11 ppb	07:47:21
3	Cr 267.716†	37016.0	36574.3	491.54 ug/L	491.54 ppb	07:47:21
3	Cu 324.752†	160873.9	153713.2	507.48 ug/L	507.48 ppb	07:47:21
3	Mn 257.610†	396517.7	392163.4	515.92 ug/L	515.92 ppb	07:47:21
3	Mo 202.031†	6064.4	5995.2	533.39 ug/L	533.39 ppb	07:47:41
3	Ni 231.604†	16302.2	16055.1	509.55 ug/L	509.55 ppb	07:47:21
3	P 214.914†	3576.3	3353.2	2399.2 ug/L	2399.2 ppb	07:47:41
3	Pb 220.353†	3197.5	3223.8	496.81 ug/L	496.81 ppb	07:47:41
3	S 181.975 Axial†	1440.1	1395.5	2497.3 ug/L	2497.3 ppb	07:47:41
3	Sb 206.836†	1240.5	1204.4	523.11 ug/L	523.11 ppb	07:47:41
3	Se 196.026†	3103.0	3088.9	2591.7 ug/L	2591.7 ppb	07:47:41
3	Si 251.611†	131993.1	130185.0	4935.6 ug/L	4935.6 ppb	07:47:21
3	Sn 189.927†	2394.1	2363.0	536.84 ug/L	536.84 ppb	07:47:41
3	Ti 334.940†	289182.3	287411.7	499.68 ug/L	499.68 ppb	07:47:21
3	Tl 190.801†	1341.9	1357.6	528.61 ug/L	528.61 ppb	07:47:41
3	U 409.014†	14513.2	16572.3	501.08 ug/L	501.08 ppb	07:47:21
3	V 292.402†	62962.4	63650.2	515.39 ug/L	515.39 ppb	07:47:21
3	Zn 213.857†	43202.6	42200.5	506.62 ug/L	506.62 ppb	07:47:21
3	SiO2†	131712.1	129895.6	10586 ug/L	10586 ppb	07:47:57

Mean Data: ICV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	825333.2	100.79 %	0.474			0.47%
Sc Radial	4240.7	96.5 %	0.17			0.18%
Y 371.029	690413.1	99.82 %	0.4259			0.43%
Y RADIAL	4741.4	99.60 %	0.126			0.13%
Ag 328.068†	49552.7	260.47 ug/L	0.083	260.47 ppb	0.083	0.03%
QC value within limits for Ag 328.068 Recovery = 104.19%						
Al 396.153Radial†	5304.9	5184.9 ug/L	5.08	5184.9 ppb	5.08	0.10%
QC value within limits for Al 396.153Radial Recovery = 103.70%						
As 188.979†	867.3	480.42 ug/L	6.979	480.42 ppb	6.979	1.45%
QC value within limits for As 188.979 Recovery = 96.08%						
B 249.677†	18587.5	519.13 ug/L	2.017	519.13 ppb	2.017	0.39%
QC value within limits for B 249.677 Recovery = 103.83%						
Ba 233.527†	54668.1	513.32 ug/L	0.125	513.32 ppb	0.125	0.02%
QC value within limits for Ba 233.527 Recovery = 102.66%						
Be 313.107†	617942.3	264.26 ug/L	0.189	264.26 ppb	0.189	0.07%
QC value within limits for Be 313.107 Recovery = 105.70%						
Ca 317.933Radial†	2733.8	5173.0 ug/L	6.84	5173.0 ppb	6.84	0.13%

QC value within limits for Ca 317.933 Radial Recovery = 103.46%							
Cd	226.502†	34551.2	501.21 ug/L	0.728	501.21 ppb	0.728	0.15%
QC value within limits for Cd 226.502 Recovery = 100.24%							
Co	228.616†	19968.4	516.29 ug/L	0.993	516.29 ppb	0.993	0.19%
QC value within limits for Co 228.616 Recovery = 103.26%							
Cr	267.716†	36567.3	491.45 ug/L	0.535	491.45 ppb	0.535	0.11%
QC value within limits for Cr 267.716 Recovery = 98.29%							
Cu	324.752†	153753.0	507.61 ug/L	0.960	507.61 ppb	0.960	0.19%
QC value within limits for Cu 324.752 Recovery = 101.52%							
Fe	238.204 Radial†	451.2	5243.4 ug/L	20.29	5243.4 ppb	20.29	0.39%
QC value within limits for Fe 238.204 Radial Recovery = 104.87%							
K	766.490 Radial†	13437.0	2556.6 ug/L	24.79	2556.6 ppb	24.79	0.97%
QC value within limits for K 766.490 Radial Recovery = 102.26%							
Mg	279.077 IEC†	131.9	5442.2 ug/L	45.49	5442.2 ppb	45.49	0.84%
QC value within limits for Mg 279.077 IEC Recovery = 108.84%							
Mn	257.610†	392545.0	516.42 ug/L	0.600	516.42 ppb	0.600	0.12%
QC value within limits for Mn 257.610 Recovery = 103.28%							
Mo	202.031†	6030.1	536.49 ug/L	4.528	536.49 ppb	4.528	0.84%
QC value within limits for Mo 202.031 Recovery = 107.30%							
Na	589.592 Radial†	6981.7	2461.2 ug/L	18.82	2461.2 ppb	18.82	0.76%
QC value within limits for Na 589.592 Radial Recovery = 98.45%							
Ni	231.604†	16063.1	509.81 ug/L	1.124	509.81 ppb	1.124	0.22%
QC value within limits for Ni 231.604 Recovery = 101.96%							
P	214.914†	3377.2	2417.1 ug/L	27.99	2417.1 ppb	27.99	1.16%
QC value within limits for P 214.914 Recovery = 96.68%							
Pb	220.353†	3254.4	501.51 ug/L	4.813	501.51 ppb	4.813	0.96%
QC value within limits for Pb 220.353 Recovery = 100.30%							
S	181.975 Axial†	1399.2	2503.8 ug/L	22.17	2503.8 ppb	22.17	0.89%
QC value within limits for S 181.975 Axial Recovery = 100.15%							
Sb	206.836†	1208.2	524.80 ug/L	4.720	524.80 ppb	4.720	0.90%
QC value within limits for Sb 206.836 Recovery = 104.96%							
Se	196.026†	3111.4	2610.5 ug/L	25.06	2610.5 ppb	25.06	0.96%
QC value within limits for Se 196.026 Recovery = 104.42%							
Si	251.611†	130353.2	4942.0 ug/L	8.43	4942.0 ppb	8.43	0.17%
QC value within limits for Si 251.611 Recovery = 98.84%							
Sn	189.927†	2371.4	538.76 ug/L	3.429	538.76 ppb	3.429	0.64%
QC value within limits for Sn 189.927 Recovery = 107.75%							
Sr	421.552†	67798.0	543.41 ug/L	2.329	543.41 ppb	2.329	0.43%
QC value within limits for Sr 421.552 Recovery = 108.68%							
Ti	334.940†	287594.4	499.99 ug/L	0.450	499.99 ppb	0.450	0.09%
QC value within limits for Ti 334.940 Recovery = 100.00%							
Tl	190.801†	1365.7	531.77 ug/L	7.929	531.77 ppb	7.929	1.49%
QC value within limits for Tl 190.801 Recovery = 106.35%							
U	409.014†	16517.9	499.43 ug/L	5.048	499.43 ppb	5.048	1.01%
QC value within limits for U 409.014 Recovery = 99.89%							
V	292.402†	63753.9	516.25 ug/L	0.792	516.25 ppb	0.792	0.15%
QC value within limits for V 292.402 Recovery = 103.25%							
Zn	213.857†	42283.2	507.61 ug/L	0.936	507.61 ppb	0.936	0.18%
QC value within limits for Zn 213.857 Recovery = 101.52%							
SiO2†		129537.4	10557 ug/L	30.2	10557 ppb	30.2	0.29%
QC value within limits for SiO2 Recovery = 98.71%							

All analyte(s) passed QC.

Sequence No.: 7

Sample ID: ICB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 10

Date Collected: 3/19/2010 07:50:08

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	4227.6	4227.6	96.2 %		07:52:21
1	Y RADIAL	4774.1	4774.1	100.3 %		07:52:01
1	Al 396.153Radial†	-68.9	6.4	6.3185 ug/L	6.3185 ppb	07:52:21
1	Ca 317.933Radial†	18.9	4.0	7.5299 ug/L	7.5299 ppb	07:52:21
1	Fe 238.204 Radial†	9.1	1.0	11.562 ug/L	11.562 ppb	07:52:21
1	K 766.490 Radial†	2602.7	107.0	20.388 ug/L	20.388 ppb	07:52:01
1	Mg 279.077 IEC†	1.1	-0.4	-16.653 ug/L	-16.653 ppb	07:52:21
1	Na 589.592 Radial†	-877.3	-37.0	-13.028 ug/L	-13.028 ppb	07:52:01
1	Sr 421.552†	-2.3	-23.2	-0.1857 ug/L	-0.1857 ppb	07:52:01
1	Sc 361.383	822500.8	822500.8	100.45 %		07:53:18
1	Y 371.029	694388.9	694388.9	100.40 %		07:53:18
1	Ag 328.068†	219.4	33.2	0.1721 ug/L	0.1721 ppb	07:53:18
1	As 188.979†	-14.3	12.6	6.8925 ug/L	6.8925 ppb	07:53:38
1	B 249.677†	-143.2	394.8	11.075 ug/L	11.075 ppb	07:53:38
1	Ba 233.527†	3.8	4.5	0.0412 ug/L	0.0412 ppb	07:53:38
1	Be 313.107†	-3620.9	126.3	0.0535 ug/L	0.0535 ppb	07:53:18
1	Cd 226.502†	-170.4	1.0	0.0130 ug/L	0.0130 ppb	07:53:38
1	Co 228.616†	-53.3	-6.9	-0.1775 ug/L	-0.1775 ppb	07:53:38
1	Cr 267.716†	81.7	9.8	0.1311 ug/L	0.1311 ppb	07:53:38
1	Cu 324.752†	5460.0	-116.4	-0.3851 ug/L	-0.3851 ppb	07:53:18
1	Mn 257.610†	435.0	44.0	0.0597 ug/L	0.0597 ppb	07:53:38
1	Mo 202.031†	12.1	3.5	0.3106 ug/L	0.3106 ppb	07:53:38
1	Ni 231.604†	74.1	-10.3	-0.3261 ug/L	-0.3261 ppb	07:53:38
1	P 214.914†	199.0	10.8	8.1501 ug/L	8.1501 ppb	07:53:38
1	Pb 220.353†	-64.9	-6.3	-0.9611 ug/L	-0.9611 ppb	07:53:38
1	S 181.975 Axial†	28.0	-2.3	-4.1877 ug/L	-4.1877 ppb	07:53:38
1	Sb 206.836†	25.3	1.5	0.6355 ug/L	0.6355 ppb	07:53:38
1	Se 196.026†	-18.2	-1.2	-0.9475 ug/L	-0.9475 ppb	07:53:38
1	Si 251.611†	523.3	32.7	1.2394 ug/L	1.2394 ppb	07:53:38
1	Sn 189.927†	9.4	2.2	0.5039 ug/L	0.5039 ppb	07:53:38
1	Ti 334.940†	-1203.2	-76.6	-0.1322 ug/L	-0.1322 ppb	07:53:18
1	Tl 190.801†	-32.0	-2.7	-1.0626 ug/L	-1.0626 ppb	07:53:38
1	U 409.014†	-2124.4	89.3	2.7075 ug/L	2.7075 ppb	07:53:18
1	V 292.402†	-1376.1	-52.5	-0.4113 ug/L	-0.4113 ppb	07:53:18
1	Zn 213.857†	569.1	-3.5	-0.0418 ug/L	-0.0418 ppb	07:53:38
1	SiO2†	542.5	40.7	3.3134 ug/L	3.3134 ppb	07:54:49
2	Sc Radial	4262.1	4262.1	97.0 %		07:52:47
2	Y RADIAL	4708.4	4708.4	98.90 %		07:52:27
2	Al 396.153Radial†	-75.6	0.2	0.1122 ug/L	0.1122 ppb	07:52:47
2	Ca 317.933Radial†	15.6	0.4	0.7040 ug/L	0.7040 ppb	07:52:47
2	Fe 238.204 Radial†	8.1	-0.1	-1.2667 ug/L	-1.2667 ppb	07:52:47
2	K 766.490 Radial†	2562.5	43.7	8.3262 ug/L	8.3262 ppb	07:52:27
2	Mg 279.077 IEC†	0.5	-1.0	-43.214 ug/L	-43.214 ppb	07:52:47
2	Na 589.592 Radial†	-902.5	-55.5	-19.565 ug/L	-19.565 ppb	07:52:27
2	Sr 421.552†	-0.1	-20.9	-0.1676 ug/L	-0.1676 ppb	07:52:27
2	Sc 361.383	809397.3	809397.3	98.849 %		07:53:44
2	Y 371.029	684094.8	684094.8	98.908 %		07:53:44
2	Ag 328.068†	108.4	-75.5	-0.3948 ug/L	-0.3948 ppb	07:53:44
2	As 188.979†	-26.5	-0.0	-0.0164 ug/L	-0.0164 ppb	07:54:04
2	B 249.677†	-133.5	402.3	11.288 ug/L	11.288 ppb	07:54:04
2	Ba 233.527†	-10.0	-9.4	-0.0882 ug/L	-0.0882 ppb	07:54:04
2	Be 313.107†	-3759.4	-72.2	-0.0306 ug/L	-0.0306 ppb	07:53:44
2	Cd 226.502†	-175.0	-6.4	-0.0927 ug/L	-0.0927 ppb	07:54:04
2	Co 228.616†	-54.4	-8.9	-0.2262 ug/L	-0.2262 ppb	07:54:04
2	Cr 267.716†	75.5	4.9	0.0640 ug/L	0.0640 ppb	07:54:04
2	Cu 324.752†	5612.9	126.3	0.4151 ug/L	0.4151 ppb	07:53:44
2	Mn 257.610†	405.8	21.5	0.0299 ug/L	0.0299 ppb	07:54:04
2	Mo 202.031†	22.9	14.6	1.3019 ug/L	1.3019 ppb	07:54:04
2	Ni 231.604†	81.9	-1.2	-0.0393 ug/L	-0.0393 ppb	07:54:04

2	P 214.914†	176.7	-8.5	-6.4383 ug/L	-6.4383 ppb	07:54:04
2	Pb 220.353†	-50.1	7.6	1.1742 ug/L	1.1742 ppb	07:54:04
2	S 181.975 Axial†	28.6	-1.2	-2.1912 ug/L	-2.1912 ppb	07:54:04
2	Sb 206.836†	26.4	3.0	1.2919 ug/L	1.2919 ppb	07:54:04
2	Se 196.026†	-26.5	-9.8	-8.1711 ug/L	-8.1711 ppb	07:54:04
2	Si 251.611†	511.4	29.2	1.0927 ug/L	1.0927 ppb	07:54:04
2	Sn 189.927†	7.7	0.6	0.1470 ug/L	0.1470 ppb	07:54:04
2	Ti 334.940†	-1067.3	41.5	0.0743 ug/L	0.0743 ppb	07:53:44
2	Tl 190.801†	-29.0	-0.3	-0.1073 ug/L	-0.1073 ppb	07:54:04
2	U 409.014†	-2072.2	107.9	3.2725 ug/L	3.2725 ppb	07:53:44
2	V 292.402†	-1292.4	10.0	0.1038 ug/L	0.1038 ppb	07:53:44
2	Zn 213.857†	554.3	-9.3	-0.1129 ug/L	-0.1129 ppb	07:54:04
2	SiO2†	534.3	41.2	3.3239 ug/L	3.3239 ppb	07:55:09
3	Sc Radial	4234.0	4234.0	96.3 %		07:53:12
3	Y RADIAL	4724.6	4724.6	99.24 %		07:52:52
3	Al 396.153Radial†	-81.6	-6.6	-6.5359 ug/L	-6.5359 ppb	07:53:12
3	Ca 317.933Radial†	16.3	1.3	2.3818 ug/L	2.3818 ppb	07:53:12
3	Fe 238.204 Radial†	9.4	1.3	15.504 ug/L	15.504 ppb	07:53:12
3	K 766.490 Radial†	2538.1	35.9	6.8490 ug/L	6.8490 ppb	07:52:52
3	Mg 279.077 IEC†	4.4	3.0	123.58 ug/L	123.58 ppb	07:53:12
3	Na 589.592 Radial†	-910.3	-69.8	-24.604 ug/L	-24.604 ppb	07:52:52
3	Sr 421.552†	52.7	33.9	0.2718 ug/L	0.2718 ppb	07:52:52
3	Sc 361.383	824073.6	824073.6	100.64 %		07:54:09
3	Y 371.029	697428.4	697428.4	100.84 %		07:54:09
3	Ag 328.068†	260.6	73.8	0.3839 ug/L	0.3839 ppb	07:54:09
3	As 188.979†	-24.2	2.7	1.4956 ug/L	1.4956 ppb	07:54:29
3	B 249.677†	-133.9	404.3	11.340 ug/L	11.340 ppb	07:54:29
3	Ba 233.527†	24.9	25.4	0.2395 ug/L	0.2395 ppb	07:54:29
3	Be 313.107†	-3640.4	113.8	0.0487 ug/L	0.0487 ppb	07:54:09
3	Cd 226.502†	-164.0	7.7	0.1121 ug/L	0.1121 ppb	07:54:29
3	Co 228.616†	-49.5	-3.0	-0.0776 ug/L	-0.0776 ppb	07:54:29
3	Cr 267.716†	78.7	6.7	0.0889 ug/L	0.0889 ppb	07:54:29
3	Cu 324.752†	5545.9	-41.4	-0.1401 ug/L	-0.1401 ppb	07:54:09
3	Mn 257.610†	423.7	31.9	0.0384 ug/L	0.0384 ppb	07:54:29
3	Mo 202.031†	12.7	4.1	0.3639 ug/L	0.3639 ppb	07:54:29
3	Ni 231.604†	92.7	8.1	0.2558 ug/L	0.2558 ppb	07:54:29
3	P 214.914†	185.9	-2.6	-1.9063 ug/L	-1.9063 ppb	07:54:29
3	Pb 220.353†	-55.4	3.3	0.4986 ug/L	0.4986 ppb	07:54:29
3	S 181.975 Axial†	25.6	-4.7	-8.4722 ug/L	-8.4722 ppb	07:54:29
3	Sb 206.836†	24.2	0.4	0.1882 ug/L	0.1882 ppb	07:54:29
3	Se 196.026†	-16.5	0.5	0.4855 ug/L	0.4855 ppb	07:54:29
3	Si 251.611†	522.6	31.1	1.1761 ug/L	1.1761 ppb	07:54:29
3	Sn 189.927†	14.3	7.0	1.5931 ug/L	1.5931 ppb	07:54:29
3	Ti 334.940†	-1072.1	56.0	0.0843 ug/L	0.0843 ppb	07:54:09
3	Tl 190.801†	-26.9	2.3	0.9032 ug/L	0.9032 ppb	07:54:29
3	U 409.014†	-1972.4	244.3	7.4112 ug/L	7.4112 ppb	07:54:09
3	V 292.402†	-1263.2	62.3	0.5170 ug/L	0.5170 ppb	07:54:09
3	Zn 213.857†	568.9	-4.8	-0.0621 ug/L	-0.0621 ppb	07:54:29
3	SiO2†	526.0	23.4	1.8968 ug/L	1.8968 ppb	07:55:29

Mean Data: ICB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	818657.3	99.980 %	0.9841			0.98%
Sc Radial	4241.2	96.5 %	0.42			0.43%
Y 371.029	691970.7	100.05 %	1.010			1.01%
Y RADIAL	4735.7	99.48 %	0.719			0.72%
Ag 328.068†	10.5	0.0537 ug/L	0.40263	0.0537 ppb	0.40263	749.28%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	-0.0	-0.0351 ug/L	6.42850	-0.0351 ppb	6.42850	>999.9%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	5.1	2.7906 ug/L	3.63190	2.7906 ppb	3.63190	130.15%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	400.5	11.235 ug/L	0.1403	11.235 ppb	0.1403	1.25%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	6.8	0.0642 ug/L	0.16504	0.0642 ppb	0.16504	257.23%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	56.0	0.0239 ug/L	0.04720	0.0239 ppb	0.04720	197.83%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	1.9	3.5386 ug/L	3.55694	3.5386 ppb	3.55694	100.52%

QC value within limits for Ca 317.933 Radial Recovery = Not calculated					
Cd 226.502†	0.7	0.0108 ug/L	0.10245	0.0108 ppb	0.10245 947.92%
QC value within limits for Cd 226.502 Recovery = Not calculated					
Co 228.616†	-6.3	-0.1604 ug/L	0.07575	-0.1604 ppb	0.07575 47.21%
QC value within limits for Co 228.616 Recovery = Not calculated					
Cr 267.716†	7.1	0.0947 ug/L	0.03391	0.0947 ppb	0.03391 35.82%
QC value within limits for Cr 267.716 Recovery = Not calculated					
Cu 324.752†	-10.5	-0.0367 ug/L	0.41001	-0.0367 ppb	0.41001 >999.9%
QC value within limits for Cu 324.752 Recovery = Not calculated					
Fe 238.204 Radial†	0.7	8.5999 ug/L	8.76910	8.5999 ppb	8.76910 101.97%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated					
K 766.490 Radial†	62.2	11.854 ug/L	7.4269	11.854 ppb	7.4269 62.65%
QC value within limits for K 766.490 Radial Recovery = Not calculated					
Mg 279.077 IEC†	0.5	21.237 ug/L	89.6187	21.237 ppb	89.6187 422.00%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated					
Mn 257.610†	32.5	0.0427 ug/L	0.01531	0.0427 ppb	0.01531 35.88%
QC value within limits for Mn 257.610 Recovery = Not calculated					
Mo 202.031†	7.4	0.6588 ug/L	0.55759	0.6588 ppb	0.55759 84.64%
QC value within limits for Mo 202.031 Recovery = Not calculated					
Na 589.592 Radial†	-54.1	-19.066 ug/L	5.8042	-19.066 ppb	5.8042 30.44%
QC value within limits for Na 589.592 Radial Recovery = Not calculated					
Ni 231.604†	-1.2	-0.0366 ug/L	0.29096	-0.0366 ppb	0.29096 795.90%
QC value within limits for Ni 231.604 Recovery = Not calculated					
P 214.914†	-0.1	-0.0648 ug/L	7.46648	-0.0648 ppb	7.46648 >999.9%
QC value within limits for P 214.914 Recovery = Not calculated					
Pb 220.353†	1.5	0.2372 ug/L	1.09140	0.2372 ppb	1.09140 460.05%
QC value within limits for Pb 220.353 Recovery = Not calculated					
S 181.975 Axial†	-2.8	-4.9504 ug/L	3.20920	-4.9504 ppb	3.20920 64.83%
QC value within limits for S 181.975 Axial Recovery = Not calculated					
Sb 206.836†	1.6	0.7052 ug/L	0.55515	0.7052 ppb	0.55515 78.72%
QC value within limits for Sb 206.836 Recovery = Not calculated					
Se 196.026†	-3.5	-2.8777 ug/L	4.63988	-2.8777 ppb	4.63988 161.23%
QC value within limits for Se 196.026 Recovery = Not calculated					
Si 251.611†	31.0	1.1694 ug/L	0.07358	1.1694 ppb	0.07358 6.29%
QC value within limits for Si 251.611 Recovery = Not calculated					
Sn 189.927†	3.3	0.7480 ug/L	0.75332	0.7480 ppb	0.75332 100.71%
QC value within limits for Sn 189.927 Recovery = Not calculated					
Sr 421.552†	-3.4	-0.0272 ug/L	0.25907	-0.0272 ppb	0.25907 952.37%
QC value within limits for Sr 421.552 Recovery = Not calculated					
Ti 334.940†	6.9	0.0088 ug/L	0.12217	0.0088 ppb	0.12217 >999.9%
QC value within limits for Ti 334.940 Recovery = Not calculated					
Tl 190.801†	-0.2	-0.0889 ug/L	0.98302	-0.0889 ppb	0.98302 >999.9%
QC value within limits for Tl 190.801 Recovery = Not calculated					
U 409.014†	147.2	4.4637 ug/L	2.56816	4.4637 ppb	2.56816 57.53%
QC value within limits for U 409.014 Recovery = Not calculated					
V 292.402†	6.6	0.0698 ug/L	0.46509	0.0698 ppb	0.46509 666.11%
QC value within limits for V 292.402 Recovery = Not calculated					
Zn 213.857†	-5.9	-0.0723 ug/L	0.03665	-0.0723 ppb	0.03665 50.72%
QC value within limits for Zn 213.857 Recovery = Not calculated					
SiO2†	35.1	2.8447 ug/L	0.82097	2.8447 ppb	0.82097 28.86%
QC value within limits for SiO2 Recovery = Not calculated					

All analyte(s) passed QC.

Sequence No.: 8

Sample ID: PQL

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 11

Date Collected: 3/19/2010 07:57:41

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	4245.6	4245.6	96.6 %		07:59:54
1	Y RADIAL	4767.8	4767.8	100.2 %		07:59:34
1	Al 396.153Radial†	133.0	215.8	211.49 ug/L	211.49 ppb	07:59:54
1	Ca 317.933Radial†	126.9	115.7	218.92 ug/L	218.92 ppb	07:59:54
1	Fe 238.204 Radial†	17.7	9.9	114.61 ug/L	114.61 ppb	07:59:54
1	K 766.490 Radial†	3386.5	907.0	172.60 ug/L	172.60 ppb	07:59:34
1	Mg 279.077 IEC†	8.9	7.7	318.80 ug/L	318.80 ppb	07:59:54
1	Na 589.592 Radial†	-60.9	812.1	286.28 ug/L	286.28 ppb	07:59:34
1	Sr 421.552†	640.5	642.3	5.1465 ug/L	5.1465 ppb	07:59:34
1	Sc 361.383	812136.9	812136.9	99.183 %		08:00:50
1	Y 371.029	686807.1	686807.1	99.300 %		08:00:50
1	Ag 328.068†	1209.8	1034.6	5.3773 ug/L	5.3773 ppb	08:00:50
1	As 188.979†	35.4	62.5	34.339 ug/L	34.339 ppb	08:01:10
1	B 249.677†	1543.2	2093.3	58.692 ug/L	58.692 ppb	08:00:50
1	Ba 233.527†	549.9	555.1	5.2128 ug/L	5.2128 ppb	08:01:10
1	Be 313.107†	8135.1	11933.1	5.0926 ug/L	5.0926 ppb	08:00:50
1	Cd 226.502†	189.2	361.4	5.2462 ug/L	5.2462 ppb	08:01:10
1	Co 228.616†	146.1	193.5	5.0142 ug/L	5.0142 ppb	08:01:10
1	Cr 267.716†	456.1	388.3	5.2039 ug/L	5.2039 ppb	08:01:10
1	Cu 324.752†	8656.8	3176.1	10.462 ug/L	10.462 ppb	08:00:50
1	Mn 257.610†	8403.4	8083.6	10.627 ug/L	10.627 ppb	08:00:50
1	Mo 202.031†	123.8	116.3	10.352 ug/L	10.352 ppb	08:01:10
1	Ni 231.604†	241.6	159.5	5.0629 ug/L	5.0629 ppb	08:01:10
1	P 214.914†	390.7	206.6	151.89 ug/L	151.89 ppb	08:01:10
1	Pb 220.353†	30.8	89.3	13.777 ug/L	13.777 ppb	08:01:10
1	S 181.975 Axial†	80.2	50.7	90.708 ug/L	90.708 ppb	08:01:10
1	Sb 206.836†	48.7	25.4	10.975 ug/L	10.975 ppb	08:01:10
1	Se 196.026†	23.6	40.7	34.377 ug/L	34.377 ppb	08:01:10
1	Si 251.611†	3086.7	2623.9	99.485 ug/L	99.485 ppb	08:01:10
1	Sn 189.927†	45.2	38.4	8.7521 ug/L	8.7521 ppb	08:01:10
1	Ti 334.940†	1751.7	2887.3	4.9985 ug/L	4.9985 ppb	08:00:50
1	Tl 190.801†	25.5	54.8	21.246 ug/L	21.246 ppb	08:01:10
1	U 409.014†	-392.1	1808.8	54.852 ug/L	54.852 ppb	08:00:50
1	V 292.402†	-753.3	557.9	4.6884 ug/L	4.6884 ppb	08:00:50
1	Zn 213.857†	1676.7	1120.5	13.513 ug/L	13.513 ppb	08:01:10
1	SiO2†	3159.0	2685.6	218.90 ug/L	218.90 ppb	08:02:07
2	Sc Radial	4256.7	4256.7	96.9 %		08:00:19
2	Y RADIAL	4740.6	4740.6	99.58 %		07:59:59
2	Al 396.153Radial†	133.7	216.1	211.76 ug/L	211.76 ppb	08:00:19
2	Ca 317.933Radial†	133.1	121.7	230.30 ug/L	230.30 ppb	08:00:19
2	Fe 238.204 Radial†	19.0	11.2	129.88 ug/L	129.88 ppb	08:00:19
2	K 766.490 Radial†	3378.3	889.3	169.24 ug/L	169.24 ppb	07:59:59
2	Mg 279.077 IEC†	10.6	9.4	386.96 ug/L	386.96 ppb	08:00:19
2	Na 589.592 Radial†	-44.7	829.0	292.24 ug/L	292.24 ppb	07:59:59
2	Sr 421.552†	676.8	678.0	5.4327 ug/L	5.4327 ppb	07:59:59
2	Sc 361.383	801259.4	801259.4	97.855 %		08:01:16
2	Y 371.029	678307.1	678307.1	98.071 %		08:01:16
2	Ag 328.068†	1161.0	1001.3	5.2110 ug/L	5.2110 ppb	08:01:16
2	As 188.979†	31.1	58.6	32.207 ug/L	32.207 ppb	08:01:36
2	B 249.677†	1398.3	1966.3	55.127 ug/L	55.127 ppb	08:01:16
2	Ba 233.527†	552.1	564.9	5.3055 ug/L	5.3055 ppb	08:01:36
2	Be 313.107†	7983.7	11889.7	5.0737 ug/L	5.0737 ppb	08:01:16
2	Cd 226.502†	167.9	342.2	4.9656 ug/L	4.9656 ppb	08:01:36
2	Co 228.616†	157.6	207.3	5.3712 ug/L	5.3712 ppb	08:01:36
2	Cr 267.716†	439.2	377.4	5.0596 ug/L	5.0596 ppb	08:01:36
2	Cu 324.752†	8568.0	3203.8	10.554 ug/L	10.554 ppb	08:01:16
2	Mn 257.610†	8238.3	8029.8	10.555 ug/L	10.555 ppb	08:01:16
2	Mo 202.031†	129.4	123.7	11.006 ug/L	11.006 ppb	08:01:36
2	Ni 231.604†	255.4	176.9	5.6155 ug/L	5.6155 ppb	08:01:36

2	P 214.914†	384.2	205.3	150.90 ug/L	150.90 ppb	08:01:36
2	Pb 220.353†	12.7	71.3	11.005 ug/L	11.005 ppb	08:01:36
2	S 181.975 Axial†	79.4	50.9	91.168 ug/L	91.168 ppb	08:01:36
2	Sb 206.836†	45.8	23.1	10.044 ug/L	10.044 ppb	08:01:36
2	Se 196.026†	19.7	37.1	31.393 ug/L	31.393 ppb	08:01:36
2	Si 251.611†	3082.1	2661.5	100.90 ug/L	100.90 ppb	08:01:36
2	Sn 189.927†	45.7	39.6	9.0109 ug/L	9.0109 ppb	08:01:36
2	Ti 334.940†	1629.0	2785.9	4.8185 ug/L	4.8185 ppb	08:01:16
2	Tl 190.801†	25.8	55.4	21.494 ug/L	21.494 ppb	08:01:36
2	U 409.014†	-410.1	1785.1	54.130 ug/L	54.130 ppb	08:01:16
2	V 292.402†	-698.7	603.5	5.0593 ug/L	5.0593 ppb	08:01:16
2	Zn 213.857†	1690.2	1157.1	13.951 ug/L	13.951 ppb	08:01:36
2	SiO2†	3155.7	2725.5	222.13 ug/L	222.13 ppb	08:02:12
3	Sc Radial	4251.9	4251.9	96.7 %		08:00:44
3	Y RADIAL	4745.3	4745.3	99.68 %		08:00:24
3	Al 396.153Radial†	131.9	214.4	210.14 ug/L	210.14 ppb	08:00:44
3	Ca 317.933Radial†	128.1	116.7	220.87 ug/L	220.87 ppb	08:00:44
3	Fe 238.204 Radial†	17.0	9.1	105.35 ug/L	105.35 ppb	08:00:44
3	K 766.490 Radial†	3366.8	881.4	167.74 ug/L	167.74 ppb	08:00:24
3	Mg 279.077 IEC†	9.2	7.9	327.36 ug/L	327.36 ppb	08:00:44
3	Na 589.592 Radial†	-82.1	790.3	278.59 ug/L	278.59 ppb	08:00:24
3	Sr 421.552†	676.9	678.9	5.4400 ug/L	5.4400 ppb	08:00:24
3	Sc 361.383	809668.4	809668.4	98.882 %		08:01:41
3	Y 371.029	684999.1	684999.1	99.039 %		08:01:41
3	Ag 328.068†	1111.9	939.3	4.8848 ug/L	4.8848 ppb	08:01:41
3	As 188.979†	39.5	66.8	36.695 ug/L	36.695 ppb	08:02:01
3	B 249.677†	1432.9	1986.5	55.697 ug/L	55.697 ppb	08:01:41
3	Ba 233.527†	543.7	550.5	5.1700 ug/L	5.1700 ppb	08:02:01
3	Be 313.107†	8221.7	12045.7	5.1405 ug/L	5.1405 ppb	08:01:41
3	Cd 226.502†	183.8	356.5	5.1759 ug/L	5.1759 ppb	08:02:01
3	Co 228.616†	148.7	196.6	5.0937 ug/L	5.0937 ppb	08:02:01
3	Cr 267.716†	443.8	377.3	5.0573 ug/L	5.0573 ppb	08:02:01
3	Cu 324.752†	8543.8	3088.5	10.174 ug/L	10.174 ppb	08:01:41
3	Mn 257.610†	8388.1	8093.9	10.639 ug/L	10.639 ppb	08:01:41
3	Mo 202.031†	121.9	114.7	10.207 ug/L	10.207 ppb	08:02:01
3	Ni 231.604†	260.7	179.6	5.7006 ug/L	5.7006 ppb	08:02:01
3	P 214.914†	386.5	203.6	149.69 ug/L	149.69 ppb	08:02:01
3	Pb 220.353†	18.8	77.4	11.941 ug/L	11.941 ppb	08:02:01
3	S 181.975 Axial†	81.1	51.8	92.740 ug/L	92.740 ppb	08:02:01
3	Sb 206.836†	47.2	24.0	10.393 ug/L	10.393 ppb	08:02:01
3	Se 196.026†	12.7	29.8	25.236 ug/L	25.236 ppb	08:02:01
3	Si 251.611†	3109.9	2656.9	100.74 ug/L	100.74 ppb	08:02:01
3	Sn 189.927†	47.7	41.0	9.3474 ug/L	9.3474 ppb	08:02:01
3	Ti 334.940†	1745.7	2886.7	4.9992 ug/L	4.9992 ppb	08:01:41
3	Tl 190.801†	26.8	56.2	21.792 ug/L	21.792 ppb	08:02:01
3	U 409.014†	-546.4	1651.6	50.085 ug/L	50.085 ppb	08:01:41
3	V 292.402†	-711.5	597.9	4.9984 ug/L	4.9984 ppb	08:01:41
3	Zn 213.857†	1689.0	1138.0	13.723 ug/L	13.723 ppb	08:02:01
3	SiO2†	3182.7	2719.4	221.65 ug/L	221.65 ppb	08:02:17

Mean Data: PQL

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	807688.2	98.640 %	0.6965			0.71%
Sc Radial	4251.4	96.7 %	0.13			0.13%
Y 371.029	683371.1	98.803 %	0.6474			0.66%
Y RADIAL	4751.3	99.80 %	0.306			0.31%
Ag 328.068†	991.8	5.1577 ug/L	0.25053	5.1577 ppb	0.25053	4.86%
QC value within limits for Ag 328.068 Recovery = 103.15%						
Al 396.153Radial†	215.5	211.13 ug/L	0.870	211.13 ppb	0.870	0.41%
QC value within limits for Al 396.153Radial Recovery = 105.57%						
As 188.979†	62.6	34.414 ug/L	2.2453	34.414 ppb	2.2453	6.52%
QC value within limits for As 188.979 Recovery = 114.71%						
B 249.677†	2015.4	56.505 ug/L	1.9154	56.505 ppb	1.9154	3.39%
QC value within limits for B 249.677 Recovery = 113.01%						
Ba 233.527†	556.8	5.2294 ug/L	0.06925	5.2294 ppb	0.06925	1.32%
QC value within limits for Ba 233.527 Recovery = 104.59%						
Be 313.107†	11956.2	5.1023 ug/L	0.03444	5.1023 ppb	0.03444	0.68%
QC value within limits for Be 313.107 Recovery = 102.05%						
Ca 317.933Radial†	118.0	223.36 ug/L	6.081	223.36 ppb	6.081	2.72%

QC value within limits for Ca 317.933 Radial Recovery = 111.68%							
Cd 226.502†	353.4	5.1292 ug/L	0.14600	5.1292 ppb	0.14600	2.85%	
QC value within limits for Cd 226.502 Recovery = 102.58%							
Co 228.616†	199.1	5.1597 ug/L	0.18742	5.1597 ppb	0.18742	3.63%	
QC value within limits for Co 228.616 Recovery = 103.19%							
Cr 267.716†	381.0	5.1070 ug/L	0.08399	5.1070 ppb	0.08399	1.64%	
QC value within limits for Cr 267.716 Recovery = 102.14%							
Cu 324.752†	3156.1	10.397 ug/L	0.1981	10.397 ppb	0.1981	1.91%	
QC value within limits for Cu 324.752 Recovery = 103.97%							
Fe 238.204 Radial†	10.1	116.61 ug/L	12.388	116.61 ppb	12.388	10.62%	
QC value within limits for Fe 238.204 Radial Recovery = 116.61%							
K 766.490 Radial†	892.6	169.86 ug/L	2.490	169.86 ppb	2.490	1.47%	
QC value within limits for K 766.490 Radial Recovery = 113.24%							
Mg 279.077 IEC†	8.3	344.37 ug/L	37.126	344.37 ppb	37.126	10.78%	
QC value within limits for Mg 279.077 IEC Recovery = 114.79%							
Mn 257.610†	8069.1	10.607 ug/L	0.0455	10.607 ppb	0.0455	0.43%	
QC value within limits for Mn 257.610 Recovery = 106.07%							
Mo 202.031†	118.2	10.522 ug/L	0.4257	10.522 ppb	0.4257	4.05%	
QC value within limits for Mo 202.031 Recovery = 105.22%							
Na 589.592 Radial†	810.5	285.70 ug/L	6.845	285.70 ppb	6.845	2.40%	
QC value within limits for Na 589.592 Radial Recovery = 95.23%							
Ni 231.604†	172.0	5.4597 ug/L	0.34627	5.4597 ppb	0.34627	6.34%	
QC value within limits for Ni 231.604 Recovery = 109.19%							
P 214.914†	205.2	150.83 ug/L	1.104	150.83 ppb	1.104	0.73%	
QC value within limits for P 214.914 Recovery = 100.55%							
Pb 220.353†	79.3	12.241 ug/L	1.4102	12.241 ppb	1.4102	11.52%	
QC value within limits for Pb 220.353 Recovery = 122.41%							
S 181.975 Axial†	51.2	91.538 ug/L	1.0656	91.538 ppb	1.0656	1.16%	
QC value within limits for S 181.975 Axial Recovery = 91.54%							
Sb 206.836†	24.2	10.471 ug/L	0.4701	10.471 ppb	0.4701	4.49%	
QC value within limits for Sb 206.836 Recovery = 104.71%							
Se 196.026†	35.9	30.335 ug/L	4.6611	30.335 ppb	4.6611	15.37%	
QC value within limits for Se 196.026 Recovery = 101.12%							
Si 251.611†	2647.5	100.38 ug/L	0.775	100.38 ppb	0.775	0.77%	
QC value within limits for Si 251.611 Recovery = 100.38%							
Sn 189.927†	39.7	9.0368 ug/L	0.29853	9.0368 ppb	0.29853	3.30%	
QC value within limits for Sn 189.927 Recovery = 90.37%							
Sr 421.552†	666.4	5.3397 ug/L	0.16737	5.3397 ppb	0.16737	3.13%	
QC value within limits for Sr 421.552 Recovery = 106.79%							
Ti 334.940†	2853.3	4.9388 ug/L	0.10410	4.9388 ppb	0.10410	2.11%	
QC value within limits for Ti 334.940 Recovery = 98.78%							
Tl 190.801†	55.4	21.511 ug/L	0.2730	21.511 ppb	0.2730	1.27%	
QC value within limits for Tl 190.801 Recovery = 107.55%							
U 409.014†	1748.5	53.022 ug/L	2.5696	53.022 ppb	2.5696	4.85%	
QC value within limits for U 409.014 Recovery = 106.04%							
V 292.402†	586.4	4.9153 ug/L	0.19891	4.9153 ppb	0.19891	4.05%	
QC value within limits for V 292.402 Recovery = 98.31%							
Zn 213.857†	1138.5	13.729 ug/L	0.2193	13.729 ppb	0.2193	1.60%	
QC value greater than the upper limit for Zn 213.857 Recovery = 137.29%							
SiO2†	2710.2	220.90 ug/L	1.746	220.90 ppb	1.746	0.79%	
QC value within limits for SiO2 Recovery = 103.71%							
QC Failed. Continue with analysis.							

Sequence No.: 9

Sample ID: ICSA

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 13

Date Collected: 3/19/2010 08:04:28

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	3920.8	3920.8	89.2 %		08:06:41
1	Y RADIAL	4255.0	4255.0	89.38 %		08:06:41
1	Al 396.153Radial†	468586.1	525352.2	516040 ug/L	516040 ppb	08:06:21
1	Ca 317.933Radial†	224935.9	252132.2	477090 ug/L	477090 ppb	08:06:21
1	Fe 238.204 Radial†	14279.3	15998.3	185370 ug/L	185370 ppb	08:06:41
1	K 766.490 Radial†	2233.0	-95.6	-177.79 ug/L	-177.79 ppb	08:06:21
1	Mg 279.077 IEC†	10594.3	11874.5	489650 ug/L	489650 ppb	08:06:41
1	Na 589.592 Radial†	-736.1	50.0	17.626 ug/L	17.626 ppb	08:06:41
1	Sr 421.552†	455.0	489.2	0.3587 ug/L	0.3587 ppb	08:06:41
1	Sc 361.383	711859.2	711859.2	86.937 %		08:07:38
1	Y 371.029	589005.7	589005.7	85.160 %		08:07:38
1	Ag 328.068†	-8544.0	-10013.0	-1.1206 ug/L	-1.1206 ppb	08:07:38
1	As 188.979†	-91.2	-78.1	0.3558 ug/L	0.3558 ppb	08:07:58
1	B 249.677†	234.3	806.9	-7.4693 ug/L	-7.4693 ppb	08:07:38
1	Ba 233.527†	-483.4	-555.4	0.4708 ug/L	0.4708 ppb	08:07:58
1	Be 313.107†	-3961.7	-826.0	-0.4074 ug/L	-0.4074 ppb	08:07:38
1	Cd 226.502†	1036.4	1362.8	0.6368 ug/L	0.6368 ppb	08:07:58
1	Co 228.616†	-1.8	44.2	-1.5292 ug/L	-1.5292 ppb	08:07:58
1	Cr 267.716†	-1170.5	-1417.9	0.6295 ug/L	0.6295 ppb	08:07:58
1	Cu 324.752†	2762.6	-2374.2	1.9508 ug/L	1.9508 ppb	08:07:58
1	Mn 257.610†	-266.0	-695.1	-2.6341 ug/L	-2.6341 ppb	08:07:38
1	Mo 202.031†	-207.6	-247.3	-1.9158 ug/L	-1.9158 ppb	08:07:58
1	Ni 231.604†	165.6	106.5	3.3806 ug/L	3.3806 ppb	08:07:58
1	P 214.914†	163.7	1.0	-19.106 ug/L	-19.106 ppb	08:07:58
1	Pb 220.353†	-643.0	-681.3	-10.248 ug/L	-10.248 ppb	08:07:58
1	S 181.975 Axial†	34.7	9.8	-79.226 ug/L	-79.226 ppb	08:07:58
1	Sb 206.836†	61.2	46.7	1.8899 ug/L	1.8899 ppb	08:07:58
1	Se 196.026†	-737.5	-831.3	4.6258 ug/L	4.6258 ppb	08:07:58
1	Si 251.611†	353.1	-82.0	-2.8425 ug/L	-2.8425 ppb	08:07:58
1	Sn 189.927†	-323.4	-379.2	-11.932 ug/L	-11.932 ppb	08:07:58
1	Ti 334.940†	-13245.3	-14114.4	-0.5760 ug/L	-0.5760 ppb	08:07:38
1	Tl 190.801†	-56.4	-35.8	-14.081 ug/L	-14.081 ppb	08:07:58
1	U 409.014†	-766.4	1322.6	19.037 ug/L	19.037 ppb	08:07:38
1	V 292.402†	470.2	1858.3	-2.8990 ug/L	-2.8990 ppb	08:07:58
1	Zn 213.857†	2564.8	2380.1	1.0881 ug/L	1.0881 ppb	08:07:58
1	SiO2†	380.9	-61.2	-4.3969 ug/L	-4.3969 ppb	08:08:55
2	Sc Radial	3895.3	3895.3	88.6 %		08:07:06
2	Y RADIAL	4206.8	4206.8	88.37 %		08:07:06
2	Al 396.153Radial†	461570.8	520869.5	511640 ug/L	511640 ppb	08:06:46
2	Ca 317.933Radial†	221149.1	249507.4	472120 ug/L	472120 ppb	08:06:46
2	Fe 238.204 Radial†	14177.3	15987.8	185250 ug/L	185250 ppb	08:07:06
2	K 766.490 Radial†	2093.1	-237.1	-203.08 ug/L	-203.08 ppb	08:06:46
2	Mg 279.077 IEC†	10491.8	11836.4	488080 ug/L	488080 ppb	08:07:06
2	Na 589.592 Radial†	-755.5	22.6	7.9842 ug/L	7.9842 ppb	08:07:06
2	Sr 421.552†	436.5	471.7	0.2555 ug/L	0.2555 ppb	08:07:06
2	Sc 361.383	718309.4	718309.4	87.724 %		08:08:04
2	Y 371.029	594864.3	594864.3	86.007 %		08:08:04
2	Ag 328.068†	-8802.7	-10219.6	-2.1639 ug/L	-2.1639 ppb	08:08:04
2	As 188.979†	-71.1	-54.2	13.461 ug/L	13.461 ppb	08:08:24
2	B 249.677†	320.1	902.3	-4.7766 ug/L	-4.7766 ppb	08:08:04
2	Ba 233.527†	-494.1	-562.5	0.3993 ug/L	0.3993 ppb	08:08:24
2	Be 313.107†	-3916.5	-733.5	-0.3687 ug/L	-0.3687 ppb	08:08:04
2	Cd 226.502†	1052.8	1370.8	0.7640 ug/L	0.7640 ppb	08:08:24
2	Co 228.616†	24.8	74.5	-0.7426 ug/L	-0.7426 ppb	08:08:24
2	Cr 267.716†	-1176.9	-1413.1	0.6812 ug/L	0.6812 ppb	08:08:24
2	Cu 324.752†	2830.9	-2325.0	2.1075 ug/L	2.1075 ppb	08:08:24
2	Mn 257.610†	-401.1	-846.3	-2.7806 ug/L	-2.7806 ppb	08:08:04
2	Mo 202.031†	-202.8	-239.7	-1.3101 ug/L	-1.3101 ppb	08:08:24
2	Ni 231.604†	157.8	95.8	3.0425 ug/L	3.0425 ppb	08:08:24

2	P 214.914†	142.0	-25.4	-39.810 ug/L	-39.810 ppb	08:08:24
2	Pb 220.353†	-626.2	-655.5	-7.3083 ug/L	-7.3083 ppb	08:08:24
2	S 181.975 Axial†	33.1	7.6	-82.324 ug/L	-82.324 ppb	08:08:24
2	Sb 206.836†	57.9	42.3	0.2175 ug/L	0.2175 ppb	08:08:24
2	Se 196.026†	-747.2	-834.8	-0.0402 ug/L	-0.0402 ppb	08:08:24
2	Si 251.611†	394.3	-38.6	-1.2048 ug/L	-1.2048 ppb	08:08:24
2	Sn 189.927†	-320.8	-372.8	-11.367 ug/L	-11.367 ppb	08:08:24
2	Ti 334.940†	-13503.6	-14272.0	-1.3874 ug/L	-1.3874 ppb	08:08:04
2	Tl 190.801†	-66.2	-46.4	-18.205 ug/L	-18.205 ppb	08:08:24
2	U 409.014†	-803.9	1287.9	17.995 ug/L	17.995 ppb	08:08:04
2	V 292.402†	431.2	1808.9	-3.2983 ug/L	-3.2983 ppb	08:08:24
2	Zn 213.857†	2544.3	2330.3	0.5041 ug/L	0.5041 ppb	08:08:24
2	SiO2†	365.5	-82.7	-6.1658 ug/L	-6.1658 ppb	08:09:00
3	Sc Radial	3942.4	3942.4	89.7 %		08:07:32
3	Y RADIAL	4260.7	4260.7	89.50 %		08:07:32
3	Al 396.153Radial†	465460.7	518986.8	509790 ug/L	509790 ppb	08:07:12
3	Ca 317.933Radial†	222404.3	247926.9	469130 ug/L	469130 ppb	08:07:12
3	Fe 238.204 Radial†	14272.6	15903.0	184260 ug/L	184260 ppb	08:07:32
3	K 766.490 Radial†	2182.7	-165.4	-188.41 ug/L	-188.41 ppb	08:07:12
3	Mg 279.077 IEC†	10595.7	11810.8	487020 ug/L	487020 ppb	08:07:32
3	Na 589.592 Radial†	-778.4	7.4	2.5977 ug/L	2.5977 ppb	08:07:32
3	Sr 421.552†	437.6	467.0	0.2402 ug/L	0.2402 ppb	08:07:32
3	Sc 361.383	710682.9	710682.9	86.793 %		08:08:29
3	Y 371.029	587564.2	587564.2	84.951 %		08:08:29
3	Ag 328.068†	-8544.3	-10029.6	-1.4420 ug/L	-1.4420 ppb	08:08:29
3	As 188.979†	-70.5	-54.5	13.089 ug/L	13.089 ppb	08:08:49
3	B 249.677†	259.8	836.6	-6.4560 ug/L	-6.4560 ppb	08:08:29
3	Ba 233.527†	-457.9	-526.8	0.7037 ug/L	0.7037 ppb	08:08:49
3	Be 313.107†	-3965.0	-837.3	-0.4118 ug/L	-0.4118 ppb	08:08:29
3	Cd 226.502†	1043.0	1372.4	0.8901 ug/L	0.8901 ppb	08:08:49
3	Co 228.616†	-1.0	45.0	-1.4890 ug/L	-1.4890 ppb	08:08:49
3	Cr 267.716†	-1159.4	-1407.3	0.6536 ug/L	0.6536 ppb	08:08:49
3	Cu 324.752†	2863.3	-2253.0	2.2920 ug/L	2.2920 ppb	08:08:49
3	Mn 257.610†	-330.0	-769.3	-2.7332 ug/L	-2.7332 ppb	08:08:29
3	Mo 202.031†	-196.9	-235.4	-1.0397 ug/L	-1.0397 ppb	08:08:49
3	Ni 231.604†	178.7	121.9	3.8690 ug/L	3.8690 ppb	08:08:49
3	P 214.914†	162.7	0.1	-20.545 ug/L	-20.545 ppb	08:08:49
3	Pb 220.353†	-656.2	-697.7	-14.099 ug/L	-14.099 ppb	08:08:49
3	S 181.975 Axial†	42.3	18.6	-62.284 ug/L	-62.284 ppb	08:08:49
3	Sb 206.836†	52.8	37.1	-1.9255 ug/L	-1.9255 ppb	08:08:49
3	Se 196.026†	-745.0	-841.4	-8.9102 ug/L	-8.9102 ppb	08:08:49
3	Si 251.611†	372.9	-58.6	-1.9659 ug/L	-1.9659 ppb	08:08:49
3	Sn 189.927†	-328.8	-386.0	-14.835 ug/L	-14.835 ppb	08:08:49
3	Ti 334.940†	-13136.3	-14014.0	-1.2548 ug/L	-1.2548 ppb	08:08:29
3	Tl 190.801†	-69.7	-51.2	-20.066 ug/L	-20.066 ppb	08:08:49
3	U 409.014†	-736.8	1355.3	20.153 ug/L	20.153 ppb	08:08:29
3	V 292.402†	426.1	1808.4	-3.1711 ug/L	-3.1711 ppb	08:08:49
3	Zn 213.857†	2566.5	2386.9	1.3317 ug/L	1.3317 ppb	08:08:49
3	SiO2†	334.0	-114.6	-8.7798 ug/L	-8.7798 ppb	08:09:05

Mean Data: ICSEA

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	713617.2	87.151 %		0.5014			0.58%
Sc Radial	3919.5	89.2 %		0.54			0.60%
Y 371.029	590478.1	85.373 %		0.5590			0.65%
Y RADIAL	4240.8	89.08 %		0.622			0.70%
Ag 328.068†	-10087.4	-1.5755 ug/L		0.53429	-1.5755 ppb	0.53429	33.91%
QC value within limits for Ag 328.068 Recovery = Not calculated							
Al 396.153Radial†	521736.2	512490 ug/L		3212.1	512490 ppb	3212.1	0.63%
QC value within limits for Al 396.153Radial Recovery = 102.50%							
As 188.979†	-62.3	8.9685 ug/L		7.46115	8.9685 ppb	7.46115	83.19%
QC value within limits for As 188.979 Recovery = Not calculated							
B 249.677†	848.6	-6.2340 ug/L		1.36000	-6.2340 ppb	1.36000	21.82%
QC value within limits for B 249.677 Recovery = Not calculated							
Ba 233.527†	-548.2	0.5246 ug/L		0.15915	0.5246 ppb	0.15915	30.34%
QC value within limits for Ba 233.527 Recovery = Not calculated							
Be 313.107†	-798.9	-0.3960 ug/L		0.02374	-0.3960 ppb	0.02374	5.99%
QC value within limits for Be 313.107 Recovery = Not calculated							
Ca 317.933Radial†	249855.5	472780 ug/L		4019.3	472780 ppb	4019.3	0.85%

QC value within limits for Ca 317.933 Radial Recovery = 94.56%							
Cd 226.502†	1368.7	0.7636 ug/L	0.12665	0.7636 ppb	0.12665	16.59%	
QC value within limits for Cd 226.502 Recovery = Not calculated							
Co 228.616†	54.6	-1.2536 ug/L	0.44296	-1.2536 ppb	0.44296	35.33%	
QC value within limits for Co 228.616 Recovery = Not calculated							
Cr 267.716†	-1412.8	0.6548 ug/L	0.02586	0.6548 ppb	0.02586	3.95%	
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu 324.752†	-2317.4	2.1168 ug/L	0.17081	2.1168 ppb	0.17081	8.07%	
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe 238.204 Radial†	15963.0	184960 ug/L	605.0	184960 ppb	605.0	0.33%	
QC value within limits for Fe 238.204 Radial Recovery = 92.48%							
K 766.490 Radial†	-166.0	-189.76 ug/L	12.700	-189.76 ppb	12.700	6.69%	
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg 279.077 IEC†	11840.6	488250 ug/L	1320.7	488250 ppb	1320.7	0.27%	
QC value within limits for Mg 279.077 IEC Recovery = 97.65%							
Mn 257.610†	-770.2	-2.7160 ug/L	0.07477	-2.7160 ppb	0.07477	2.75%	
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo 202.031†	-240.8	-1.4219 ug/L	0.44861	-1.4219 ppb	0.44861	31.55%	
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na 589.592 Radial†	26.7	9.4025 ug/L	7.61365	9.4025 ppb	7.61365	80.97%	
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni 231.604†	108.1	3.4307 ug/L	0.41549	3.4307 ppb	0.41549	12.11%	
QC value within limits for Ni 231.604 Recovery = Not calculated							
P 214.914†	-8.1	-26.487 ug/L	11.5606	-26.487 ppb	11.5606	43.65%	
QC value within limits for P 214.914 Recovery = Not calculated							
Pb 220.353†	-678.2	-10.552 ug/L	3.4057	-10.552 ppb	3.4057	32.28%	
QC value within limits for Pb 220.353 Recovery = Not calculated							
S 181.975 Axial†	12.0	-74.612 ug/L	10.7874	-74.612 ppb	10.7874	14.46%	
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb 206.836†	42.0	0.0607 ug/L	1.91250	0.0607 ppb	1.91250	>999.9%	
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	-835.9	-1.4415 ug/L	6.87597	-1.4415 ppb	6.87597	476.99%	
QC value within limits for Se 196.026 Recovery = Not calculated							
Si 251.611†	-59.7	-2.0044 ug/L	0.81955	-2.0044 ppb	0.81955	40.89%	
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn 189.927†	-379.4	-12.711 ug/L	1.8610	-12.711 ppb	1.8610	14.64%	
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr 421.552†	475.9	0.2848 ug/L	0.06445	0.2848 ppb	0.06445	22.63%	
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti 334.940†	-14133.4	-1.0727 ug/L	0.43523	-1.0727 ppb	0.43523	40.57%	
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl 190.801†	-44.5	-17.450 ug/L	3.0630	-17.450 ppb	3.0630	17.55%	
QC value within limits for Tl 190.801 Recovery = Not calculated							
U 409.014†	1321.9	19.062 ug/L	1.0788	19.062 ppb	1.0788	5.66%	
QC value within limits for U 409.014 Recovery = Not calculated							
V 292.402†	1825.2	-3.1228 ug/L	0.20398	-3.1228 ppb	0.20398	6.53%	
QC value within limits for V 292.402 Recovery = Not calculated							
Zn 213.857†	2365.8	0.9747 ug/L	0.42531	0.9747 ppb	0.42531	43.64%	
QC value within limits for Zn 213.857 Recovery = Not calculated							
SiO2†	-86.1	-6.4475 ug/L	2.20499	-6.4475 ppb	2.20499	34.20%	
QC value within limits for SiO2 Recovery = Not calculated							

All analyte(s) passed QC.

Sequence No.: 10

Sample ID: ICSAB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 14

Date Collected: 3/19/2010 08:11:16

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	3929.4	3929.4	89.4 %		08:13:28
1	Y RADIAL	4274.8	4274.8	89.80 %		08:13:28
1	Al 396.153Radial†	461471.5	516235.9	507060 ug/L	507060 ppb	08:13:08
1	Ca 317.933Radial†	222675.9	249048.2	471250 ug/L	471250 ppb	08:13:08
1	Fe 238.204 Radial†	14573.7	16292.3	188790 ug/L	188790 ppb	08:13:28
1	K 766.490 Radial†	27582.5	28252.3	5222.4 ug/L	5222.4 ppb	08:13:08
1	Mg 279.077 IEC†	10715.6	11983.9	494160 ug/L	494160 ppb	08:13:28
1	Na 589.592 Radial†	12902.7	15306.9	5396.0 ug/L	5396.0 ppb	08:13:08
1	Sr 421.552†	56906.9	63629.8	506.52 ug/L	506.52 ppb	08:13:08
1	Sc 361.383	720288.2	720288.2	87.966 %		08:14:26
1	Y 371.029	594435.6	594435.6	85.945 %		08:14:26
1	Ag 328.068†	37624.4	42586.3	274.73 ug/L	274.73 ppb	08:14:26
1	As 188.979†	754.1	884.0	532.66 ug/L	532.66 ppb	08:14:46
1	B 249.677†	16639.1	19452.7	513.79 ug/L	513.79 ppb	08:14:26
1	Ba 233.527†	45572.8	51808.0	492.14 ug/L	492.14 ppb	08:14:26
1	Be 313.107†	509360.8	582773.2	249.25 ug/L	249.25 ppb	08:14:26
1	Cd 226.502†	29115.2	33268.9	463.61 ug/L	463.61 ppb	08:14:46
1	Co 228.616†	15201.6	17327.4	445.24 ug/L	445.24 ppb	08:14:46
1	Cr 267.716†	30631.0	34749.9	486.52 ug/L	486.52 ppb	08:14:26
1	Cu 324.752†	148588.6	163363.8	549.04 ug/L	549.04 ppb	08:14:26
1	Mn 257.610†	320306.8	363736.2	476.68 ug/L	476.68 ppb	08:14:26
1	Mo 202.031†	4633.3	5258.6	487.71 ug/L	487.71 ppb	08:14:46
1	Ni 231.604†	12601.2	14241.0	451.98 ug/L	451.98 ppb	08:14:46
1	P 214.914†	3139.5	3381.7	2390.1 ug/L	2390.1 ppb	08:14:46
1	Pb 220.353†	1997.6	2329.2	450.62 ug/L	450.62 ppb	08:14:46
1	S 181.975 Axial†	1333.5	1485.8	2564.9 ug/L	2564.9 ppb	08:14:46
1	Sb 206.836†	1162.5	1297.9	543.31 ug/L	543.31 ppb	08:14:46
1	Se 196.026†	1939.8	2222.1	2556.9 ug/L	2556.9 ppb	08:14:46
1	Si 251.611†	121964.3	138161.0	5239.2 ug/L	5239.2 ppb	08:14:26
1	Sn 189.927†	1579.3	1788.2	478.67 ug/L	478.67 ppb	08:14:46
1	Ti 334.940†	244598.2	279180.8	507.93 ug/L	507.93 ppb	08:14:26
1	Tl 190.801†	961.9	1122.5	437.65 ug/L	437.65 ppb	08:14:46
1	U 409.014†	13648.4	17719.7	515.02 ug/L	515.02 ppb	08:14:26
1	V 292.402†	56031.7	65014.4	508.15 ug/L	508.15 ppb	08:14:26
1	Zn 213.857†	38636.8	43352.3	493.43 ug/L	493.43 ppb	08:14:26
1	SiO2†	120760.5	136781.4	11150 ug/L	11150 ppb	08:15:44
2	Sc Radial	3946.5	3946.5	89.8 %		08:13:54
2	Y RADIAL	4277.8	4277.8	89.86 %		08:13:54
2	Al 396.153Radial†	472937.5	526772.2	517410 ug/L	517410 ppb	08:13:34
2	Ca 317.933Radial†	228578.7	254544.5	481650 ug/L	481650 ppb	08:13:34
2	Fe 238.204 Radial†	14556.7	16202.9	187750 ug/L	187750 ppb	08:13:54
2	K 766.490 Radial†	28173.1	28776.6	5318.7 ug/L	5318.7 ppb	08:13:34
2	Mg 279.077 IEC†	10699.3	11913.9	491280 ug/L	491280 ppb	08:13:54
2	Na 589.592 Radial†	13381.9	15778.1	5562.1 ug/L	5562.1 ppb	08:13:34
2	Sr 421.552†	58340.8	64951.3	517.04 ug/L	517.04 ppb	08:13:34
2	Sc 361.383	719730.9	719730.9	87.898 %		08:14:52
2	Y 371.029	594594.5	594594.5	85.968 %		08:14:52
2	Ag 328.068†	37665.4	42666.1	274.69 ug/L	274.69 ppb	08:14:52
2	As 188.979†	733.5	861.3	519.90 ug/L	519.90 ppb	08:15:12
2	B 249.677†	16494.5	19302.8	509.76 ug/L	509.76 ppb	08:14:52
2	Ba 233.527†	45632.5	51915.9	493.12 ug/L	493.12 ppb	08:14:52
2	Be 313.107†	509580.7	583471.7	249.55 ug/L	249.55 ppb	08:14:52
2	Cd 226.502†	29008.1	33172.6	462.32 ug/L	462.32 ppb	08:15:12
2	Co 228.616†	15102.4	17227.9	442.69 ug/L	442.69 ppb	08:15:12
2	Cr 267.716†	30639.4	34786.4	486.90 ug/L	486.90 ppb	08:14:52
2	Cu 324.752†	148069.9	162904.5	547.47 ug/L	547.47 ppb	08:14:52
2	Mn 257.610†	319951.8	363614.3	476.54 ug/L	476.54 ppb	08:14:52
2	Mo 202.031†	4644.0	5274.9	489.20 ug/L	489.20 ppb	08:15:12
2	Ni 231.604†	12562.9	14208.5	450.95 ug/L	450.95 ppb	08:15:12

2	P 214.914†	3115.9	3357.6	2375.9 ug/L	2375.9 ppb	08:15:12
2	Pb 220.353†	1987.6	2319.6	451.73 ug/L	451.73 ppb	08:15:12
2	S 181.975 Axial†	1323.2	1475.2	2544.0 ug/L	2544.0 ppb	08:15:12
2	Sb 206.836†	1137.8	1270.8	531.74 ug/L	531.74 ppb	08:15:12
2	Se 196.026†	1929.4	2212.0	2548.8 ug/L	2548.8 ppb	08:15:12
2	Si 251.611†	121859.8	138149.5	5238.8 ug/L	5238.8 ppb	08:14:52
2	Sn 189.927†	1577.9	1788.0	480.53 ug/L	480.53 ppb	08:15:12
2	Ti 334.940†	244000.0	278715.6	508.76 ug/L	508.76 ppb	08:14:52
2	Tl 190.801†	973.5	1136.6	443.10 ug/L	443.10 ppb	08:15:12
2	U 409.014†	13501.3	17564.4	510.42 ug/L	510.42 ppb	08:14:52
2	V 292.402†	56069.0	65106.1	508.99 ug/L	508.99 ppb	08:14:52
2	Zn 213.857†	38575.9	43317.0	493.16 ug/L	493.16 ppb	08:14:52
2	SiO2†	121690.4	137945.6	11245 ug/L	11245 ppb	08:15:49
3	Sc Radial	3955.1	3955.1	90.0 %		08:14:19
3	Y RADIAL	4282.0	4282.0	89.95 %		08:14:19
3	Al 396.153Radial†	473789.5	526577.2	517220 ug/L	517220 ppb	08:13:59
3	Ca 317.933Radial†	228286.7	253668.2	479990 ug/L	479990 ppb	08:13:59
3	Fe 238.204 Radial†	14574.2	16187.1	187570 ug/L	187570 ppb	08:14:19
3	K 766.490 Radial†	28154.5	28687.9	5302.4 ug/L	5302.4 ppb	08:13:59
3	Mg 279.077 IEC†	10706.9	11896.6	490560 ug/L	490560 ppb	08:14:19
3	Na 589.592 Radial†	13327.1	15684.9	5529.2 ug/L	5529.2 ppb	08:13:59
3	Sr 421.552†	58635.9	65138.4	518.55 ug/L	518.55 ppb	08:13:59
3	Sc 361.383	717692.3	717692.3	87.649 %		08:15:18
3	Y 371.029	592016.4	592016.4	85.595 %		08:15:18
3	Ag 328.068†	37419.2	42507.0	273.82 ug/L	273.82 ppb	08:15:18
3	As 188.979†	734.9	865.3	522.04 ug/L	522.04 ppb	08:15:38
3	B 249.677†	16478.1	19337.4	510.75 ug/L	510.75 ppb	08:15:18
3	Ba 233.527†	45400.4	51798.6	492.01 ug/L	492.01 ppb	08:15:18
3	Be 313.107†	505147.9	580061.1	248.09 ug/L	248.09 ppb	08:15:18
3	Cd 226.502†	29070.9	33338.0	464.74 ug/L	464.74 ppb	08:15:38
3	Co 228.616†	15202.6	17391.1	446.92 ug/L	446.92 ppb	08:15:38
3	Cr 267.716†	30397.7	34609.6	484.51 ug/L	484.51 ppb	08:15:18
3	Cu 324.752†	147241.9	162438.3	545.92 ug/L	545.92 ppb	08:15:18
3	Mn 257.610†	318560.0	363060.3	475.82 ug/L	475.82 ppb	08:15:18
3	Mo 202.031†	4659.6	5307.7	492.08 ug/L	492.08 ppb	08:15:38
3	Ni 231.604†	12615.1	14308.6	454.13 ug/L	454.13 ppb	08:15:38
3	P 214.914†	3126.1	3379.3	2392.5 ug/L	2392.5 ppb	08:15:38
3	Pb 220.353†	1981.7	2319.2	451.65 ug/L	451.65 ppb	08:15:38
3	S 181.975 Axial†	1326.1	1482.7	2557.5 ug/L	2557.5 ppb	08:15:38
3	Sb 206.836†	1177.2	1319.5	552.20 ug/L	552.20 ppb	08:15:38
3	Se 196.026†	1947.1	2238.4	2570.2 ug/L	2570.2 ppb	08:15:38
3	Si 251.611†	121149.0	137732.4	5222.9 ug/L	5222.9 ppb	08:15:18
3	Sn 189.927†	1579.5	1795.0	481.83 ug/L	481.83 ppb	08:15:38
3	Ti 334.940†	242971.7	278330.9	507.93 ug/L	507.93 ppb	08:15:18
3	Tl 190.801†	945.2	1107.5	431.81 ug/L	431.81 ppb	08:15:38
3	U 409.014†	13527.8	17638.3	512.69 ug/L	512.69 ppb	08:15:18
3	V 292.402†	55602.3	64754.9	506.25 ug/L	506.25 ppb	08:15:18
3	Zn 213.857†	38305.4	43133.0	490.94 ug/L	490.94 ppb	08:15:18
3	SiO2†	121243.0	137828.4	11236 ug/L	11236 ppb	08:15:54

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	719237.2	87.838 %		0.1669			0.19%
Sc Radial	3943.7	89.7 %		0.30			0.33%
Y 371.029	593682.2	85.836 %		0.2089			0.24%
Y RADIAL	4278.2	89.87 %		0.076			0.08%
Ag 328.068†	42586.5	274.42 ug/L		0.516	274.42 ppb	0.516	0.19%
QC value within limits for Ag 328.068 Recovery = 109.77%							
Al 396.153Radial†	523195.1	513900 ug/L		5920.7	513900 ppb	5920.7	1.15%
QC value within limits for Al 396.153Radial Recovery = 102.78%							
As 188.979†	870.2	524.87 ug/L		6.835	524.87 ppb	6.835	1.30%
QC value within limits for As 188.979 Recovery = 104.97%							
B 249.677†	19364.3	511.43 ug/L		2.100	511.43 ppb	2.100	0.41%
QC value within limits for B 249.677 Recovery = 102.29%							
Ba 233.527†	51840.8	492.43 ug/L		0.607	492.43 ppb	0.607	0.12%
QC value within limits for Ba 233.527 Recovery = 98.49%							
Be 313.107†	582102.0	248.96 ug/L		0.768	248.96 ppb	0.768	0.31%
QC value within limits for Be 313.107 Recovery = 99.59%							
Ca 317.933Radial†	252420.3	477630 ug/L		5587.7	477630 ppb	5587.7	1.17%

QC value within limits for Ca 317.933 Radial Recovery = 95.53%							
Cd	226.502†	33259.8	463.56 ug/L	1.211	463.56 ppb	1.211	0.26%
QC value within limits for Cd 226.502 Recovery = 92.71%							
Co	228.616†	17315.5	444.95 ug/L	2.129	444.95 ppb	2.129	0.48%
QC value within limits for Co 228.616 Recovery = 88.99%							
Cr	267.716†	34715.3	485.98 ug/L	1.287	485.98 ppb	1.287	0.26%
QC value within limits for Cr 267.716 Recovery = 97.20%							
Cu	324.752†	162902.2	547.48 ug/L	1.559	547.48 ppb	1.559	0.28%
QC value within limits for Cu 324.752 Recovery = 109.50%							
Fe	238.204 Radial†	16227.4	188040 ug/L	657.2	188040 ppb	657.2	0.35%
QC value within limits for Fe 238.204 Radial Recovery = 94.02%							
K	766.490 Radial†	28572.3	5281.2 ug/L	51.56	5281.2 ppb	51.56	0.98%
QC value within limits for K 766.490 Radial Recovery = 105.62%							
Mg	279.077 IEC†	11931.5	492000 ug/L	1907.0	492000 ppb	1907.0	0.39%
QC value within limits for Mg 279.077 IEC Recovery = 98.40%							
Mn	257.610†	363470.3	476.34 ug/L	0.461	476.34 ppb	0.461	0.10%
QC value within limits for Mn 257.610 Recovery = 95.27%							
Mo	202.031†	5280.4	489.66 ug/L	2.224	489.66 ppb	2.224	0.45%
QC value within limits for Mo 202.031 Recovery = 97.93%							
Na	589.592 Radial†	15589.9	5495.8 ug/L	87.97	5495.8 ppb	87.97	1.60%
QC value within limits for Na 589.592 Radial Recovery = 109.92%							
Ni	231.604†	14252.7	452.36 ug/L	1.621	452.36 ppb	1.621	0.36%
QC value within limits for Ni 231.604 Recovery = 90.47%							
P	214.914†	3372.9	2386.2 ug/L	8.95	2386.2 ppb	8.95	0.38%
QC value within limits for P 214.914 Recovery = 95.45%							
Pb	220.353†	2322.7	451.34 ug/L	0.618	451.34 ppb	0.618	0.14%
QC value within limits for Pb 220.353 Recovery = 90.27%							
S	181.975 Axial†	1481.2	2555.4 ug/L	10.60	2555.4 ppb	10.60	0.41%
QC value within limits for S 181.975 Axial Recovery = 102.22%							
Sb	206.836†	1296.0	542.42 ug/L	10.256	542.42 ppb	10.256	1.89%
QC value within limits for Sb 206.836 Recovery = 108.48%							
Se	196.026†	2224.2	2558.7 ug/L	10.81	2558.7 ppb	10.81	0.42%
QC value within limits for Se 196.026 Recovery = 102.35%							
Si	251.611†	138014.3	5233.7 ug/L	9.30	5233.7 ppb	9.30	0.18%
QC value within limits for Si 251.611 Recovery = 104.67%							
Sn	189.927†	1790.4	480.34 ug/L	1.588	480.34 ppb	1.588	0.33%
QC value within limits for Sn 189.927 Recovery = 96.07%							
Sr	421.552†	64573.1	514.03 ug/L	6.551	514.03 ppb	6.551	1.27%
QC value within limits for Sr 421.552 Recovery = 102.81%							
Ti	334.940†	278742.4	508.21 ug/L	0.478	508.21 ppb	0.478	0.09%
QC value within limits for Ti 334.940 Recovery = 101.64%							
Tl	190.801†	1122.2	437.52 ug/L	5.646	437.52 ppb	5.646	1.29%
QC value within limits for Tl 190.801 Recovery = 87.50%							
U	409.014†	17640.8	512.71 ug/L	2.298	512.71 ppb	2.298	0.45%
QC value within limits for U 409.014 Recovery = 102.54%							
V	292.402†	64958.4	507.80 ug/L	1.406	507.80 ppb	1.406	0.28%
QC value within limits for V 292.402 Recovery = 101.56%							
Zn	213.857†	43267.4	492.51 ug/L	1.364	492.51 ppb	1.364	0.28%
QC value within limits for Zn 213.857 Recovery = 98.50%							
SiO2†		137518.5	11210 ug/L	52.3	11210 ppb	52.3	0.47%
QC value within limits for SiO2 Recovery = 104.82%							

All analyte(s) passed QC.

Sequence No.: 11

Sample ID: LR1

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 15

Date Collected: 3/19/2010 08:18:04

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	3858.3	3858.3	87.8 %		08:20:17
1	Y RADIAL	4204.0	4204.0	88.31 %		08:20:17
1	Al 396.153Radial†	464225.3	528893.5	519520 ug/L	519520 ppb	08:19:57
1	Ca 317.933Radial†	223881.2	255015.3	482540 ug/L	482540 ppb	08:19:57
1	Fe 238.204 Radial†	33047.8	37637.5	436100 ug/L	436100 ppb	08:20:17
1	K 766.490 Radial†	2465.2	209.4	-328.44 ug/L	-328.44 ppb	08:19:57
1	Mg 279.077 IEC†	10432.1	11882.0	489700 ug/L	489700 ppb	08:20:17
1	Na 589.592 Radial†	1320643.5	1505266.9	530640 ug/L	530640 ppb	08:19:57
1	Sr 421.552†	1394.9	1568.2	8.9670 ug/L	8.9670 ppb	08:20:17
1	Sc 361.383	692124.4	692124.4	84.527 %		08:21:15
1	Y 371.029	573747.0	573747.0	82.954 %		08:21:15
1	Ag 328.068†	-19613.3	-23388.8	-5.2352 ug/L	-5.2352 ppb	08:21:15
1	As 188.979†	-142.9	-142.3	23.974 ug/L	23.974 ppb	08:21:35
1	B 249.677†	872.5	1569.6	-26.808 ug/L	-26.808 ppb	08:21:15
1	Ba 233.527†	-1321.0	-1562.1	-1.3183 ug/L	-1.3183 ppb	08:21:35
1	Be 313.107†	-9468.2	-7470.4	-3.2304 ug/L	-3.2304 ppb	08:21:15
1	Cd 226.502†	2655.0	3311.7	5.9163 ug/L	5.9163 ppb	08:21:35
1	Co 228.616†	194.4	276.1	0.7761 ug/L	0.7761 ppb	08:21:35
1	Cr 267.716†	-1023.6	-1282.5	23.115 ug/L	23.115 ppb	08:21:35
1	Cu 324.752†	582.4	-4862.9	-1.2373 ug/L	-1.2373 ppb	08:21:15
1	Mn 257.610†	-20079.9	-24144.8	-8.7155 ug/L	-8.7155 ppb	08:21:15
1	Mo 202.031†	-437.4	-526.0	-7.1607 ug/L	-7.1607 ppb	08:21:35
1	Ni 231.604†	224.5	181.6	5.7615 ug/L	5.7615 ppb	08:21:35
1	P 214.914†	473.6	373.1	58.508 ug/L	58.508 ppb	08:21:35
1	Pb 220.353†	-449.8	-473.9	-13.265 ug/L	-13.265 ppb	08:21:35
1	S 181.975 Axial†	45.7	23.9	-54.613 ug/L	-54.613 ppb	08:21:35
1	Sb 206.836†	49.4	34.7	-6.5923 ug/L	-6.5923 ppb	08:21:35
1	Se 196.026†	-1806.4	-2120.1	-347.16 ug/L	-347.16 ppb	08:21:35
1	Si 251.611†	-299.5	-842.5	-31.407 ug/L	-31.407 ppb	08:21:35
1	Sn 189.927†	-339.4	-408.7	-32.054 ug/L	-32.054 ppb	08:21:35
1	Ti 334.940†	-11536.9	-12527.6	-3.6494 ug/L	-3.6494 ppb	08:21:15
1	Tl 190.801†	-84.5	-70.9	-27.844 ug/L	-27.844 ppb	08:21:35
1	U 409.014†	414094.0	492102.3	14880 ug/L	14880 ppb	08:21:15
1	V 292.402†	1055.9	2566.7	-5.6116 ug/L	-5.6116 ppb	08:21:35
1	Zn 213.857†	4619.7	4895.3	-5.9615 ug/L	-5.9615 ppb	08:21:35
1	SiO2†	-253.8	-799.6	-63.985 ug/L	-63.985 ppb	08:22:32
2	Sc Radial	3862.7	3862.7	87.9 %		08:20:43
2	Y RADIAL	4199.0	4199.0	88.20 %		08:20:43
2	Al 396.153Radial†	461838.3	525564.2	516250 ug/L	516250 ppb	08:20:23
2	Ca 317.933Radial†	223024.1	253744.3	480140 ug/L	480140 ppb	08:20:23
2	Fe 238.204 Radial†	33136.1	37694.2	436750 ug/L	436750 ppb	08:20:43
2	K 766.490 Radial†	2317.4	38.0	-359.39 ug/L	-359.39 ppb	08:20:23
2	Mg 279.077 IEC†	10466.5	11907.4	490740 ug/L	490740 ppb	08:20:43
2	Na 589.592 Radial†	1316291.1	1498569.5	528280 ug/L	528280 ppb	08:20:23
2	Sr 421.552†	1406.5	1579.6	9.0762 ug/L	9.0762 ppb	08:20:43
2	Sc 361.383	730532.2	730532.2	89.217 %		08:21:41
2	Y 371.029	605265.0	605265.0	87.511 %		08:21:41
2	Ag 328.068†	-19445.3	-21980.6	2.9810 ug/L	2.9810 ppb	08:21:41
2	As 188.979†	-136.7	-126.4	32.829 ug/L	32.829 ppb	08:22:01
2	B 249.677†	952.3	1604.8	-25.925 ug/L	-25.925 ppb	08:21:41
2	Ba 233.527†	-1364.7	-1528.9	-0.9888 ug/L	-0.9888 ppb	08:22:01
2	Be 313.107†	-9512.7	-6931.4	-3.0000 ug/L	-3.0000 ppb	08:21:41
2	Cd 226.502†	2640.5	3130.3	3.0561 ug/L	3.0561 ppb	08:22:01
2	Co 228.616†	193.3	262.9	0.4413 ug/L	0.4413 ppb	08:22:01
2	Cr 267.716†	-1053.2	-1252.0	23.918 ug/L	23.918 ppb	08:22:01
2	Cu 324.752†	530.5	-4957.4	-1.0589 ug/L	-1.0589 ppb	08:21:41
2	Mn 257.610†	-20279.0	-23119.0	-7.3448 ug/L	-7.3448 ppb	08:21:41
2	Mo 202.031†	-388.0	-443.4	0.2051 ug/L	0.2051 ppb	08:22:01
2	Ni 231.604†	244.4	189.9	6.0255 ug/L	6.0255 ppb	08:22:01

2	P 214.914†	460.8	329.2	24.570 ug/L	24.570 ppb	08:22:01
2	Pb 220.353†	-451.1	-447.3	-10.020 ug/L	-10.020 ppb	08:22:01
2	S 181.975 Axial†	65.6	43.3	-19.239 ug/L	-19.239 ppb	08:22:01
2	Sb 206.836†	71.3	56.2	2.7172 ug/L	2.7172 ppb	08:22:01
2	Se 196.026†	-1799.4	-2000.0	-246.22 ug/L	-246.22 ppb	08:22:01
2	Si 251.611†	-238.1	-755.1	-28.180 ug/L	-28.180 ppb	08:22:01
2	Sn 189.927†	-334.8	-382.4	-26.547 ug/L	-26.547 ppb	08:22:01
2	Ti 334.940†	-11966.2	-12291.2	-3.2854 ug/L	-3.2854 ppb	08:21:41
2	Tl 190.801†	-81.0	-61.7	-24.259 ug/L	-24.259 ppb	08:22:01
2	U 409.014†	412871.2	464975.3	14057 ug/L	14057 ppb	08:21:41
2	V 292.402†	1032.4	2474.6	-7.8937 ug/L	-7.8937 ppb	08:22:01
2	Zn 213.857†	4602.5	4588.7	-9.7762 ug/L	-9.7762 ppb	08:22:01
2	SiO2†	-292.8	-827.5	-66.459 ug/L	-66.459 ppb	08:22:37
3	Sc Radial	3792.3	3792.3	86.3 %		08:21:08
3	Y RADIAL	4133.1	4133.1	86.82 %		08:21:08
3	Al 396.153Radial†	464025.1	537857.3	528320 ug/L	528320 ppb	08:20:48
3	Ca 317.933Radial†	223657.0	259190.2	490440 ug/L	490440 ppb	08:20:48
3	Fe 238.204 Radial†	32562.1	37729.2	437160 ug/L	437160 ppb	08:21:08
3	K 766.490 Radial†	2391.3	172.7	-341.14 ug/L	-341.14 ppb	08:20:48
3	Mg 279.077 IEC†	10258.7	11887.7	489930 ug/L	489930 ppb	08:21:08
3	Na 589.592 Radial†	1317202.9	1527439.6	538460 ug/L	538460 ppb	08:20:48
3	Sr 421.552†	1379.4	1577.8	8.9853 ug/L	8.9853 ppb	08:21:08
3	Sc 361.383	694267.4	694267.4	84.788 %		08:22:07
3	Y 371.029	575265.2	575265.2	83.173 %		08:22:07
3	Ag 328.068†	-19833.7	-23577.2	-6.0148 ug/L	-6.0148 ppb	08:22:07
3	As 188.979†	-136.5	-134.2	28.664 ug/L	28.664 ppb	08:22:27
3	B 249.677†	971.8	1683.5	-23.784 ug/L	-23.784 ppb	08:22:07
3	Ba 233.527†	-1352.4	-1594.4	-1.5876 ug/L	-1.5876 ppb	08:22:27
3	Be 313.107†	-9518.2	-7494.8	-3.2398 ug/L	-3.2398 ppb	08:22:07
3	Cd 226.502†	2641.5	3286.0	5.4396 ug/L	5.4396 ppb	08:22:27
3	Co 228.616†	198.7	280.6	0.8817 ug/L	0.8817 ppb	08:22:27
3	Cr 267.716†	-1048.2	-1307.7	22.878 ug/L	22.878 ppb	08:22:27
3	Cu 324.752†	478.2	-4988.0	-1.6100 ug/L	-1.6100 ppb	08:22:07
3	Mn 257.610†	-20061.9	-24050.2	-8.4958 ug/L	-8.4958 ppb	08:22:07
3	Mo 202.031†	-407.4	-489.1	-3.7020 ug/L	-3.7020 ppb	08:22:27
3	Ni 231.604†	237.1	195.5	6.2055 ug/L	6.2055 ppb	08:22:27
3	P 214.914†	471.4	368.6	56.630 ug/L	56.630 ppb	08:22:27
3	Pb 220.353†	-461.8	-486.3	-13.261 ug/L	-13.261 ppb	08:22:27
3	S 181.975 Axial†	57.5	37.6	-31.678 ug/L	-31.678 ppb	08:22:27
3	Sb 206.836†	68.6	57.3	2.6559 ug/L	2.6559 ppb	08:22:27
3	Se 196.026†	-1780.3	-2082.7	-310.14 ug/L	-310.14 ppb	08:22:27
3	Si 251.611†	-272.2	-809.2	-30.184 ug/L	-30.184 ppb	08:22:27
3	Sn 189.927†	-340.5	-408.7	-30.723 ug/L	-30.723 ppb	08:22:27
3	Ti 334.940†	-11350.1	-12265.2	-2.1655 ug/L	-2.1655 ppb	08:22:07
3	Tl 190.801†	-95.1	-83.0	-32.522 ug/L	-32.522 ppb	08:22:27
3	U 409.014†	416181.0	493051.5	14909 ug/L	14909 ppb	08:22:07
3	V 292.402†	1073.7	2583.8	-5.5239 ug/L	-5.5239 ppb	08:22:27
3	Zn 213.857†	4591.0	4844.6	-6.7377 ug/L	-6.7377 ppb	08:22:27
3	SiO2†	-295.7	-848.1	-68.030 ug/L	-68.030 ppb	08:22:42

Mean Data: LRL

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	705641.3	86.177 %	2.6358			3.06%
Sc Radial	3837.8	87.3 %	0.90			1.03%
Y 371.029	584759.1	84.546 %	2.5699			3.04%
Y RADIAL	4178.7	87.78 %	0.831			0.95%
Ag 328.068†	-22982.2	-2.7564 ug/L	4.98395	-2.7564 ppb	4.98395	180.82%
Al 396.153Radial†	530771.7	521360 ug/L	6245.4	521360 ppb	6245.4	1.20%
QC value within limits for Al 396.153Radial Recovery = 104.27%						
As 188.979†	-134.3	28.489 ug/L	4.4300	28.489 ppb	4.4300	15.55%
B 249.677†	1619.3	-25.506 ug/L	1.5552	-25.506 ppb	1.5552	6.10%
Ba 233.527†	-1561.8	-1.2983 ug/L	0.29988	-1.2983 ppb	0.29988	23.10%
Be 313.107†	-7298.9	-3.1567 ug/L	0.13583	-3.1567 ppb	0.13583	4.30%
Ca 317.933Radial†	255983.3	484370 ug/L	5391.1	484370 ppb	5391.1	1.11%
QC value within limits for Ca 317.933Radial Recovery = 96.87%						
Cd 226.502†	3242.6	4.8040 ug/L	1.53236	4.8040 ppb	1.53236	31.90%
Co 228.616†	273.2	0.6997 ug/L	0.22995	0.6997 ppb	0.22995	32.86%
Cr 267.716†	-1280.7	23.303 ug/L	0.5453	23.303 ppb	0.5453	2.34%
Cu 324.752†	-4936.1	-1.3021 ug/L	0.28121	-1.3021 ppb	0.28121	21.60%

Fe 238.204 Radial†	37687.0	436670 ug/L	536.3	436670 ppb	536.3	0.12%
QC value less than the lower limit for Fe 238.204 Radial Recovery = 87.33%						
K 766.490 Radial†	140.0	-342.99 ug/L	15.557	-342.99 ppb	15.557	4.54%
Mg 279.077 IEC†	11892.4	490120 ug/L	550.1	490120 ppb	550.1	0.11%
QC value within limits for Mg 279.077 IEC Recovery = 98.02%						
Mn 257.610†	-23771.3	-8.1853 ug/L	0.73620	-8.1853 ppb	0.73620	8.99%
Mo 202.031†	-486.1	-3.5526 ug/L	3.68516	-3.5526 ppb	3.68516	103.73%
Na 589.592 Radial†	1510425.3	532460 ug/L	5326.8	532460 ppb	5326.8	1.00%
QC value within limits for Na 589.592 Radial Recovery = 106.49%						
Ni 231.604†	189.0	5.9975 ug/L	0.22333	5.9975 ppb	0.22333	3.72%
P 214.914†	357.0	46.570 ug/L	19.0751	46.570 ppb	19.0751	40.96%
Pb 220.353†	-469.2	-12.182 ug/L	1.8719	-12.182 ppb	1.8719	15.37%
S 181.975 Axial†	34.9	-35.177 ug/L	17.9448	-35.177 ppb	17.9448	51.01%
Sb 206.836†	49.4	-0.4064 ug/L	5.35721	-0.4064 ppb	5.35721	>999.9%
Se 196.026†	-2067.6	-301.17 ug/L	51.066	-301.17 ppb	51.066	16.96%
Si 251.611†	-802.2	-29.924 ug/L	1.6288	-29.924 ppb	1.6288	5.44%
Sn 189.927†	-399.9	-29.775 ug/L	2.8732	-29.775 ppb	2.8732	9.65%
Sr 421.552†	1575.2	9.0095 ug/L	0.05848	9.0095 ppb	0.05848	0.65%
Ti 334.940†	-12361.3	-3.0334 ug/L	0.77339	-3.0334 ppb	0.77339	25.50%
Tl 190.801†	-71.9	-28.208 ug/L	4.1435	-28.208 ppb	4.1435	14.69%
U 409.014†	483376.4	14615 ug/L	483.7	14615 ppb	483.7	3.31%
QC value within limits for U 409.014 Recovery = 97.43%						
V 292.402†	2541.7	-6.3431 ug/L	1.34363	-6.3431 ppb	1.34363	21.18%
Zn 213.857†	4776.2	-7.4918 ug/L	2.01607	-7.4918 ppb	2.01607	26.91%
SiO2†	-825.1	-66.158 ug/L	2.0394	-66.158 ppb	2.0394	3.08%

QC Failed. Continue with analysis.

Sequence No.: 12

Sample ID: LR2

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 16

Date Collected: 3/19/2010 08:24:52

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: LR2

Rep#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib. Units	Sample Conc.	Analysis Time
1	Sc Radial	4137.8	4137.8	94.1 %			08:27:10
1	Y RADIAL	4644.1	4644.1	97.55 %			08:26:50
1	Al 396.153Radial†	390.0	492.3	15.191 ug/L		15.191 ppb	08:26:50
1	Ca 317.933Radial†	33.8	20.2	38.282 ug/L		38.282 ppb	08:27:10
1	Fe 238.204 Radial†	-17.3	-26.9	-23.574 ug/L		-23.574 ppb	08:27:10
1	K 766.490 Radial†	1547401.2	1641029.2	312650 ug/L		312650 ppb	08:26:45
1	Mg 279.077 IEC†	-3.3	-5.0	-105.68 ug/L		-105.68 ppb	08:27:10
1	Na 589.592 Radial†	-347.1	506.4	178.52 ug/L		178.52 ppb	08:26:50
1	Sr 421.552†	1216543.4	1292174.6	10358 ug/L		10358 ppb	08:26:45
1	Sc 361.383	804970.1	804970.1	98.308 %			08:28:28
1	Y 371.029	666238.5	666238.5	96.326 %			08:28:28
1	Ag 328.068†	-6177.1	-6468.5	7.0301 ug/L		7.0301 ppb	08:28:33
1	As 188.979†	17708.3	18039.8	9966.6 ug/L		9966.6 ppb	08:28:33
1	B 249.677†	175916.7	179481.8	5007.7 ug/L		5007.7 ppb	08:28:28
1	Ba 233.527†	1479029.4	1504486.3	14114 ug/L		14114 ppb	08:28:28
1	Be 313.107†	6728544.3	6848082.8	2938.4 ug/L		2938.4 ppb	08:28:21
1	Cd 226.502†	658581.0	670086.7	9729.0 ug/L		9729.0 ppb	08:28:28
1	Co 228.616†	365808.7	372151.0	9616.9 ug/L		9616.9 ppb	08:28:28
1	Cr 267.716†	1773359.1	1803809.5	24204 ug/L		24204 ppb	08:28:28
1	Cu 324.752†	6042194.5	6140637.0	20273 ug/L		20273 ppb	08:28:21
1	Mn 257.610†	7074413.2	7195784.5	9461.1 ug/L		9461.1 ppb	08:28:21
1	Mo 202.031†	106826.9	108657.0	9658.6 ug/L		9658.6 ppb	08:28:33
1	Ni 231.604†	306782.5	311978.6	9901.8 ug/L		9901.8 ppb	08:28:28
1	P 214.914†	23485.0	23701.9	13724 ug/L		13724 ppb	08:28:33
1	Pb 220.353†	155065.2	157792.4	24255 ug/L		24255 ppb	08:28:28
1	S 181.975 Axial†	28593.5	29055.4	52015 ug/L		52015 ppb	08:28:33
1	Sb 206.836†	24495.7	24893.6	10774 ug/L		10774 ppb	08:28:33
1	Se 196.026†	12052.6	12277.0	10257 ug/L		10257 ppb	08:28:33
1	Si 251.611†	1232990.0	1253723.3	47476 ug/L		47476 ppb	08:28:28
1	Sn 189.927†	43906.6	44655.1	10133 ug/L		10133 ppb	08:28:33
1	Ti 334.940†	5587153.3	5684437.1	9876.8 ug/L		9876.8 ppb	08:28:21
1	Tl 190.801†	24418.9	24868.3	9687.0 ug/L		9687.0 ppb	08:28:33
1	U 409.014†	-1200.6	983.0	-24.275 ug/L		-24.275 ppb	08:28:28
1	V 292.402†	1238824.8	1261464.1	10190 ug/L		10190 ppb	08:28:28
1	Zn 213.857†	1148798.8	1168001.2	14062 ug/L		14062 ppb	08:28:28
1	SiO2†	1231318.9	1252012.3	101920 ug/L		101920 ppb	08:29:19
2	Sc Radial	4145.5	4145.5	94.3 %			08:27:41
2	Y RADIAL	4527.2	4527.2	95.10 %			08:27:21
2	Al 396.153Radial†	369.2	469.5	-8.7245 ug/L		-8.7245 ppb	08:27:21
2	Ca 317.933Radial†	32.2	18.5	34.943 ug/L		34.943 ppb	08:27:41
2	Fe 238.204 Radial†	-18.2	-27.8	-32.856 ug/L		-32.856 ppb	08:27:41
2	K 766.490 Radial†	1542370.3	1632628.8	311050 ug/L		311050 ppb	08:27:16
2	Mg 279.077 IEC†	-5.6	-7.4	-205.17 ug/L		-205.17 ppb	08:27:41
2	Na 589.592 Radial†	-354.2	499.6	176.11 ug/L		176.11 ppb	08:27:21
2	Sr 421.552†	1209601.5	1282403.8	10279 ug/L		10279 ppb	08:27:16
2	Sc 361.383	811868.5	811868.5	99.150 %			08:28:48
2	Y 371.029	670978.1	670978.1	97.012 %			08:28:48
2	Ag 328.068†	-6279.8	-6518.8	6.8157 ug/L		6.8157 ppb	08:28:53
2	As 188.979†	17949.0	18129.6	10015 ug/L		10015 ppb	08:28:53
2	B 249.677†	177983.5	180045.9	5023.5 ug/L		5023.5 ppb	08:28:48
2	Ba 233.527†	1494980.9	1507790.9	14145 ug/L		14145 ppb	08:28:48
2	Be 313.107†	6732933.5	6794353.7	2915.3 ug/L		2915.3 ppb	08:28:41
2	Cd 226.502†	666918.4	672803.4	9768.4 ug/L		9768.4 ppb	08:28:48
2	Co 228.616†	370193.2	373411.3	9649.8 ug/L		9649.8 ppb	08:28:48
2	Cr 267.716†	1791743.9	1807024.5	24247 ug/L		24247 ppb	08:28:48
2	Cu 324.752†	6030940.7	6077063.1	20063 ug/L		20063 ppb	08:28:41
2	Mn 257.610†	7074899.8	7135130.0	9381.4 ug/L		9381.4 ppb	08:28:41
2	Mo 202.031†	108087.3	109004.9	9689.6 ug/L		9689.6 ppb	08:28:53
2	Ni 231.604†	310630.5	313208.0	9940.8 ug/L		9940.8 ppb	08:28:48

2	P 214.914†	23794.6	23811.2	13848 ug/L	13848 ppb	08:28:53
2	Pb 220.353†	156895.5	158298.2	24333 ug/L	24333 ppb	08:28:48
2	S 181.975 Axial†	29039.9	29258.5	52379 ug/L	52379 ppb	08:28:53
2	Sb 206.836†	24818.6	25007.5	10823 ug/L	10823 ppb	08:28:53
2	Se 196.026†	12224.9	12346.6	10315 ug/L	10315 ppb	08:28:53
2	Si 251.611†	1246148.3	1256337.3	47575 ug/L	47575 ppb	08:28:48
2	Sn 189.927†	44475.4	44849.3	10178 ug/L	10178 ppb	08:28:53
2	Ti 334.940†	5582866.5	5631822.9	9785.3 ug/L	9785.3 ppb	08:28:41
2	Tl 190.801†	24653.6	24894.0	9695.6 ug/L	9695.6 ppb	08:28:53
2	U 409.014†	-1298.1	895.0	-27.040 ug/L	-27.040 ppb	08:28:48
2	V 292.402†	1250891.0	1262926.4	10202 ug/L	10202 ppb	08:28:48
2	Zn 213.857†	1161089.0	1170467.4	14092 ug/L	14092 ppb	08:28:48
2	SiO2†	1234688.1	1244767.8	101320 ug/L	101320 ppb	08:29:25
3	Sc Radial	4156.1	4156.1	94.6 %		08:28:11
3	Y RADIAL	4593.1	4593.1	96.48 %		08:27:51
3	Al 396.153Radial†	406.4	507.9	24.084 ug/L	24.084 ppb	08:27:51
3	Ca 317.933Radial†	32.6	18.8	35.616 ug/L	35.616 ppb	08:28:11
3	Fe 238.204 Radial†	-11.3	-20.4	53.420 ug/L	53.420 ppb	08:28:11
3	K 766.490 Radial†	1534339.9	1619978.5	308640 ug/L	308640 ppb	08:27:46
3	Mg 279.077 IEC†	-5.4	-7.2	-196.31 ug/L	-196.31 ppb	08:28:11
3	Na 589.592 Radial†	-370.0	483.8	170.55 ug/L	170.55 ppb	08:27:51
3	Sr 421.552†	1205944.7	1275275.8	10222 ug/L	10222 ppb	08:27:46
3	Sc 361.383	799541.9	799541.9	97.645 %		08:29:08
3	Y 371.029	660328.4	660328.4	95.472 %		08:29:08
3	Ag 328.068†	-6237.4	-6572.9	6.6426 ug/L	6.6426 ppb	08:29:13
3	As 188.979†	17849.2	18306.5	10114 ug/L	10114 ppb	08:29:13
3	B 249.677†	175494.5	180264.3	5029.5 ug/L	5029.5 ppb	08:29:08
3	Ba 233.527†	1476470.2	1512079.6	14185 ug/L	14185 ppb	08:29:08
3	Be 313.107†	6787317.6	6954741.4	2984.1 ug/L	2984.1 ppb	08:29:01
3	Cd 226.502†	659516.8	675593.3	9808.9 ug/L	9808.9 ppb	08:29:08
3	Co 228.616†	365913.6	374784.7	9685.0 ug/L	9685.0 ppb	08:29:08
3	Cr 267.716†	1770674.5	1813307.1	24331 ug/L	24331 ppb	08:29:08
3	Cu 324.752†	6079322.5	6220388.3	20537 ug/L	20537 ppb	08:29:01
3	Mn 257.610†	7133186.6	7304831.8	9604.5 ug/L	9604.5 ppb	08:29:01
3	Mo 202.031†	107562.7	110148.3	9791.2 ug/L	9791.2 ppb	08:29:13
3	Ni 231.604†	306847.3	314163.7	9971.1 ug/L	9971.1 ppb	08:29:08
3	P 214.914†	23753.0	24138.6	13999 ug/L	13999 ppb	08:29:13
3	Pb 220.353†	155100.2	158899.1	24425 ug/L	24425 ppb	08:29:08
3	S 181.975 Axial†	28855.2	29520.9	52849 ug/L	52849 ppb	08:29:13
3	Sb 206.836†	24631.3	25201.6	10908 ug/L	10908 ppb	08:29:13
3	Se 196.026†	12064.9	12372.8	10337 ug/L	10337 ppb	08:29:13
3	Si 251.611†	1229504.0	1258668.3	47662 ug/L	47662 ppb	08:29:08
3	Sn 189.927†	44342.4	45404.7	10304 ug/L	10304 ppb	08:29:13
3	Ti 334.940†	5623242.8	5759982.3	10008 ug/L	10008 ppb	08:29:01
3	Tl 190.801†	24541.9	25162.9	9802.4 ug/L	9802.4 ppb	08:29:13
3	U 409.014†	-1135.1	1041.7	-22.786 ug/L	-22.786 ppb	08:29:08
3	V 292.402†	1234480.5	1265570.5	10225 ug/L	10225 ppb	08:29:08
3	Zn 213.857†	1148149.8	1175270.1	14149 ug/L	14149 ppb	08:29:08
3	SiO2†	1217210.0	1246066.7	101430 ug/L	101430 ppb	08:29:31

Mean Data: LR2

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	805460.2	98.368 %	0.7545			0.77%
Sc Radial	4146.4	94.3 %	0.21			0.22%
Y 371.029	665848.3	96.270 %	0.7714			0.80%
Y RADIAL	4588.1	96.38 %	1.231			1.28%
Ag 328.068†	-6520.1	6.8295 ug/L	0.19414	6.8295 ppb	0.19414	2.84%
Al 396.153Radial†	489.9	10.184 ug/L	16.9680	10.184 ppb	16.9680	166.62%
As 188.979†	18158.6	10032 ug/L	75.0	10032 ppb	75.0	0.75%
QC value within limits for As 188.979 Recovery = 100.32%						
B 249.677†	179930.7	5020.2 ug/L	11.23	5020.2 ppb	11.23	0.22%
QC value within limits for B 249.677 Recovery = 100.40%						
Ba 233.527†	1508118.9	14148 ug/L	35.7	14148 ppb	35.7	0.25%
QC value within limits for Ba 233.527 Recovery = 94.32%						
Be 313.107†	6865726.0	2945.9 ug/L	35.01	2945.9 ppb	35.01	1.19%
QC value within limits for Be 313.107 Recovery = 98.20%						
Ca 317.933Radial†	19.2	36.280 ug/L	1.7659	36.280 ppb	1.7659	4.87%
Cd 226.502†	672827.8	9768.8 ug/L	39.97	9768.8 ppb	39.97	0.41%
QC value within limits for Cd 226.502 Recovery = 97.69%						

Co 228.616†	373449.0	9650.6 ug/L	34.05	9650.6 ppb	34.05	0.35%
QC value within limits for Co 228.616 Recovery = 96.51%						
Cr 267.716†	1808047.0	24260 ug/L	64.8	24260 ppb	64.8	0.27%
QC value within limits for Cr 267.716 Recovery = 97.04%						
Cu 324.752†	6146029.5	20291 ug/L	237.1	20291 ppb	237.1	1.17%
QC value within limits for Cu 324.752 Recovery = 101.46%						
Fe 238.204 Radial†	-25.0	-1.0033 ug/L	47.36013	-1.0033 ppb	47.36013	>999.9%
K 766.490 Radial†	1631212.1	310780 ug/L	2019.1	310780 ppb	2019.1	0.65%
QC value within limits for K 766.490 Radial Recovery = 103.59%						
Mg 279.077 IEC†	-6.6	-169.05 ug/L	55.058	-169.05 ppb	55.058	32.57%
Mn 257.610†	7211915.4	9482.4 ug/L	113.07	9482.4 ppb	113.07	1.19%
QC value within limits for Mn 257.610 Recovery = 94.82%						
Mo 202.031†	109270.1	9713.1 ug/L	69.35	9713.1 ppb	69.35	0.71%
QC value within limits for Mo 202.031 Recovery = 97.13%						
Na 589.592 Radial†	496.6	175.06 ug/L	4.087	175.06 ppb	4.087	2.33%
Ni 231.604†	313116.8	9937.9 ug/L	34.77	9937.9 ppb	34.77	0.35%
QC value within limits for Ni 231.604 Recovery = 99.38%						
P 214.914†	23883.9	13857 ug/L	137.5	13857 ppb	137.5	0.99%
QC value within limits for P 214.914 Recovery = 92.38%						
Pb 220.353†	158329.9	24337 ug/L	85.2	24337 ppb	85.2	0.35%
QC value within limits for Pb 220.353 Recovery = 97.35%						
S 181.975 Axial†	29278.3	52414 ug/L	417.8	52414 ppb	417.8	0.80%
QC value within limits for S 181.975 Axial Recovery = 104.83%						
Sb 206.836†	25034.3	10835 ug/L	67.7	10835 ppb	67.7	0.63%
QC value within limits for Sb 206.836 Recovery = 108.35%						
Se 196.026†	12332.1	10303 ug/L	41.5	10303 ppb	41.5	0.40%
QC value within limits for Se 196.026 Recovery = 103.03%						
Si 251.611†	1256243.0	47571 ug/L	93.1	47571 ppb	93.1	0.20%
QC value within limits for Si 251.611 Recovery = 95.14%						
Sn 189.927†	44969.7	10205 ug/L	88.3	10205 ppb	88.3	0.87%
QC value within limits for Sn 189.927 Recovery = 102.05%						
Sr 421.552†	1283284.7	10286 ug/L	68.0	10286 ppb	68.0	0.66%
QC value within limits for Sr 421.552 Recovery = 102.86%						
Ti 334.940†	5692080.8	9890.1 ug/L	112.01	9890.1 ppb	112.01	1.13%
QC value within limits for Ti 334.940 Recovery = 98.90%						
Tl 190.801†	24975.1	9728.3 ug/L	64.27	9728.3 ppb	64.27	0.66%
QC value within limits for Tl 190.801 Recovery = 97.28%						
U 409.014†	973.2	-24.700 ug/L	2.1584	-24.700 ppb	2.1584	8.74%
V 292.402†	1263320.3	10206 ug/L	17.5	10206 ppb	17.5	0.17%
QC value within limits for V 292.402 Recovery = 102.06%						
Zn 213.857†	1171246.2	14101 ug/L	44.3	14101 ppb	44.3	0.31%
QC value within limits for Zn 213.857 Recovery = 94.01%						
SiO2†	1247615.6	101560 ug/L	316.3	101560 ppb	316.3	0.31%
QC value within limits for SiO2 Recovery = 94.91%						
All analyte(s) passed QC.						

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Analysis Begun

Start Time: 3/19/2010 08:47:07

Plasma On Time: 3/15/2010 06:51:19

Logged In Analyst: Optima3

Technique: ICP Continuous

Spectrometer Model: Optima 5300 DV, S/N 077C7090601 Autosampler Model: S10

Sample Information File: C:\pe\Optima3\Sample Information\031910.sif

Batch ID:

Results Data Set: 031910

Results Library: C:\pe\Optima3\Results\Results.mdb
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Method Loaded

Method Name: General Eng.2AX

Method Last Saved: 3/19/2010 07:15:37

IEC File: 011110.iec

MSF File:

Method Description:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Al 396.153Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
B 249.677	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Be 313.107	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ca 317.933Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Cd 226.502	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cr 267.716	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Fe 238.204 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
K 766.490 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mg 279.077 IEC	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mn 257.610	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Na 589.592 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Ni 231.604	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
P 214.914	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
S 181.975 Axial	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sc 361.383	Lin Thru 0	Peak Area	Axial	n/a	n/a
Sc Radial	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Se 196.026	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Si 251.611	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Ti 334.940	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
U 409.014	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y 371.029	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Zn 213.857	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y RADIAL	Lin, Calc Int	Peak Area	Radial	n/a	n/a
SiO2	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes

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Sequence No.: 1

Autosampler Location: 7

Sample ID: CCV

Date Collected: 3/19/2010 08:47:08

Analyst:

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:
=====

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4305.8	4305.8	98.0 %		08:49:20
1	Y RADIAL	4716.7	4716.7	99.08 %		08:49:00
1	Al 396.153Radial†	4931.5	5111.8	4997.3 ug/L	4997.3 ppb	08:49:00

1	Ca 317.933Radial†	2710.1	2750.6	5204.7 ug/L	5204.7 ppb	08:49:20
1	Fe 238.204 Radial†	455.7	456.7	5306.4 ug/L	5306.4 ppb	08:49:20
1	K 766.490 Radial†	29165.1	27171.3	5170.4 ug/L	5170.4 ppb	08:49:00
1	Mg 279.077 IEC†	127.8	129.0	5319.9 ug/L	5319.9 ppb	08:49:20
1	Na 589.592 Radial†	27601.2	29048.8	10240 ug/L	10240 ppb	08:49:00
1	Sr 421.552†	62875.2	64158.5	514.24 ug/L	514.24 ppb	08:49:00
1	Sc 361.383	842688.6	842688.6	102.91 %		08:50:18
1	Y 371.029	702082.9	702082.9	101.51 %		08:50:18
1	Ag 328.068†	97152.7	94216.3	492.30 ug/L	492.30 ppb	08:50:23
1	As 188.979†	915.3	916.2	507.22 ug/L	507.22 ppb	08:50:43
1	B 249.677†	17731.7	17766.9	496.15 ug/L	496.15 ppb	08:50:23
1	Ba 233.527†	53823.5	52300.0	491.10 ug/L	491.10 ppb	08:50:23
1	Be 313.107†	1211376.0	1180802.4	503.88 ug/L	503.88 ppb	08:50:18
1	Cd 226.502†	34646.6	33836.1	490.81 ug/L	490.81 ppb	08:50:23
1	Co 228.616†	19740.5	19227.7	497.07 ug/L	497.07 ppb	08:50:23
1	Cr 267.716†	37683.1	36544.5	491.12 ug/L	491.12 ppb	08:50:23
1	Cu 324.752†	156492.6	146509.0	483.70 ug/L	483.70 ppb	08:50:23
1	Mn 257.610†	390297.8	378856.0	498.43 ug/L	498.43 ppb	08:50:18
1	Mo 202.031†	5708.4	5538.2	492.77 ug/L	492.77 ppb	08:50:43
1	Ni 231.604†	16164.2	15622.4	495.83 ug/L	495.83 ppb	08:50:23
1	P 214.914†	3592.6	3303.6	2366.4 ug/L	2366.4 ppb	08:50:43
1	Pb 220.353†	3247.3	3213.6	495.10 ug/L	495.10 ppb	08:50:43
1	S 181.975 Axial†	591.1	544.2	973.26 ug/L	973.26 ppb	08:50:43
1	Sb 206.836†	1250.0	1190.9	516.03 ug/L	516.03 ppb	08:50:43
1	Se 196.026†	596.8	596.8	515.55 ug/L	515.55 ppb	08:50:43
1	Si 251.611†	66710.0	64332.6	2436.2 ug/L	2436.2 ppb	08:50:23
1	Sn 189.927†	2261.3	2190.1	497.61 ug/L	497.61 ppb	08:50:43
1	Ti 334.940†	283251.6	276351.5	480.46 ug/L	480.46 ppb	08:50:23
1	Tl 190.801†	1282.3	1275.1	496.57 ug/L	496.57 ppb	08:50:43
1	U 409.014†	14644.3	16433.8	496.87 ug/L	496.87 ppb	08:50:23
1	V 292.402†	61720.7	61290.3	495.97 ug/L	495.97 ppb	08:50:23
1	Zn 213.857†	42521.3	40747.1	489.11 ug/L	489.11 ppb	08:50:23
1	SiO2†	66780.4	64389.9	5241.6 ug/L	5241.6 ppb	08:51:50
2	Sc Radial	4310.3	4310.3	98.1 %		08:49:46
2	Y RADIAL	4803.0	4803.0	100.9 %		08:49:26
2	Al 396.153Radial†	5008.9	5185.5	5069.2 ug/L	5069.2 ppb	08:49:26
2	Ca 317.933Radial†	2706.8	2744.3	5192.8 ug/L	5192.8 ppb	08:49:46
2	Fe 238.204 Radial†	454.3	454.8	5284.6 ug/L	5284.6 ppb	08:49:46
2	K 766.490 Radial†	29710.5	27696.0	5270.2 ug/L	5270.2 ppb	08:49:26
2	Mg 279.077 IEC†	130.0	131.0	5404.3 ug/L	5404.3 ppb	08:49:46
2	Na 589.592 Radial†	28243.8	29674.3	10461 ug/L	10461 ppb	08:49:26
2	Sr 421.552†	64090.9	65330.4	523.63 ug/L	523.63 ppb	08:49:26
2	Sc 361.383	835415.1	835415.1	102.03 %		08:50:49
2	Y 371.029	696746.4	696746.4	100.74 %		08:50:49
2	Ag 328.068†	98655.9	96511.5	504.24 ug/L	504.24 ppb	08:50:54
2	As 188.979†	915.8	924.4	511.79 ug/L	511.79 ppb	08:51:14
2	B 249.677†	18161.0	18337.7	512.14 ug/L	512.14 ppb	08:50:54
2	Ba 233.527†	54512.5	53430.6	501.72 ug/L	501.72 ppb	08:50:54
2	Be 313.107†	1202410.4	1182263.0	504.53 ug/L	504.53 ppb	08:50:49
2	Cd 226.502†	35172.4	34644.5	502.56 ug/L	502.56 ppb	08:50:54
2	Co 228.616†	20017.6	19666.3	508.40 ug/L	508.40 ppb	08:50:54
2	Cr 267.716†	38195.4	37365.3	502.14 ug/L	502.14 ppb	08:50:54
2	Cu 324.752†	159175.9	150462.8	496.75 ug/L	496.75 ppb	08:50:54
2	Mn 257.610†	387381.3	379299.3	499.01 ug/L	499.01 ppb	08:50:49
2	Mo 202.031†	5767.0	5643.9	502.17 ug/L	502.17 ppb	08:51:14
2	Ni 231.604†	16383.4	15974.0	506.99 ug/L	506.99 ppb	08:50:54
2	P 214.914†	3601.9	3343.1	2393.4 ug/L	2393.4 ppb	08:51:14
2	Pb 220.353†	3277.1	3270.3	503.85 ug/L	503.85 ppb	08:51:14
2	S 181.975 Axial†	602.5	560.3	1002.1 ug/L	1002.1 ppb	08:51:14
2	Sb 206.836†	1254.1	1205.5	522.43 ug/L	522.43 ppb	08:51:14
2	Se 196.026†	611.7	616.6	531.97 ug/L	531.97 ppb	08:51:14
2	Si 251.611†	67838.4	66003.0	2499.5 ug/L	2499.5 ppb	08:50:54
2	Sn 189.927†	2268.7	2216.5	503.59 ug/L	503.59 ppb	08:51:14
2	Ti 334.940†	287345.1	282760.0	491.58 ug/L	491.58 ppb	08:50:54
2	Tl 190.801†	1298.2	1301.6	506.83 ug/L	506.83 ppb	08:51:14
2	U 409.014†	15075.3	16980.2	513.43 ug/L	513.43 ppb	08:50:54
2	V 292.402†	62616.3	62690.3	507.30 ug/L	507.30 ppb	08:50:54
2	Zn 213.857†	43043.2	41618.3	499.58 ug/L	499.58 ppb	08:50:54
2	SiO2†	67536.8	65696.3	5347.9 ug/L	5347.9 ppb	08:51:56
3	Sc Radial	4320.9	4320.9	98.3 %		08:50:11
3	Y RADIAL	4722.3	4722.3	99.20 %		08:49:51

3	Al 396.153Radial†	4930.1	5092.8	4978.3 ug/L	4978.3 ppb	08:49:51
3	Ca 317.933Radial†	2709.3	2740.1	5184.9 ug/L	5184.9 ppb	08:50:11
3	Fe 238.204 Radial†	457.4	456.8	5308.2 ug/L	5308.2 ppb	08:50:11
3	K 766.490 Radial†	29302.8	27207.3	5177.2 ug/L	5177.2 ppb	08:49:51
3	Mg 279.077 IEC†	130.2	130.9	5398.3 ug/L	5398.3 ppb	08:50:11
3	Na 589.592 Radial†	27688.5	29039.1	10237 ug/L	10237 ppb	08:49:51
3	Sr 421.552†	62909.5	63969.0	512.72 ug/L	512.72 ppb	08:49:51
3	Sc 361.383	833064.0	833064.0	101.74 %		08:51:20
3	Y 371.029	694093.3	694093.3	100.35 %		08:51:20
3	Ag 328.068†	96658.0	94820.7	495.44 ug/L	495.44 ppb	08:51:25
3	As 188.979†	909.2	920.4	509.56 ug/L	509.56 ppb	08:51:45
3	B 249.677†	17772.0	18005.6	502.84 ug/L	502.84 ppb	08:51:25
3	Ba 233.527†	53540.6	52626.1	494.16 ug/L	494.16 ppb	08:51:25
3	Be 313.107†	1198980.6	1182217.9	504.49 ug/L	504.49 ppb	08:51:20
3	Cd 226.502†	34489.0	34070.1	494.21 ug/L	494.21 ppb	08:51:25
3	Co 228.616†	19647.2	19357.6	500.44 ug/L	500.44 ppb	08:51:25
3	Cr 267.716†	37544.8	36831.6	494.97 ug/L	494.97 ppb	08:51:25
3	Cu 324.752†	155601.0	147389.4	486.61 ug/L	486.61 ppb	08:51:25
3	Mn 257.610†	386953.3	379950.2	499.87 ug/L	499.87 ppb	08:51:20
3	Mo 202.031†	5728.1	5621.6	500.19 ug/L	500.19 ppb	08:51:45
3	Ni 231.604†	16137.8	15777.9	500.76 ug/L	500.76 ppb	08:51:25
3	P 214.914†	3584.6	3336.0	2390.0 ug/L	2390.0 ppb	08:51:45
3	Pb 220.353†	3264.9	3267.4	503.37 ug/L	503.37 ppb	08:51:45
3	S 181.975 Axial†	592.3	552.0	987.22 ug/L	987.22 ppb	08:51:45
3	Sb 206.836†	1243.0	1198.1	519.27 ug/L	519.27 ppb	08:51:45
3	Se 196.026†	592.4	599.2	517.57 ug/L	517.57 ppb	08:51:45
3	Si 251.611†	66318.2	64696.5	2449.9 ug/L	2449.9 ppb	08:51:25
3	Sn 189.927†	2253.3	2207.6	501.58 ug/L	501.58 ppb	08:51:45
3	Ti 334.940†	281695.2	278001.5	483.32 ug/L	483.32 ppb	08:51:25
3	Tl 190.801†	1289.9	1297.0	505.05 ug/L	505.05 ppb	08:51:45
3	U 409.014†	14513.9	16470.0	497.96 ug/L	497.96 ppb	08:51:25
3	V 292.402†	61261.2	61531.5	498.00 ug/L	498.00 ppb	08:51:25
3	Zn 213.857†	42320.7	41027.2	492.47 ug/L	492.47 ppb	08:51:25
3	SiO2†	66750.8	65110.6	5300.2 ug/L	5300.2 ppb	08:52:01

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	837055.9	102.23 %	0.613			0.60%
Sc Radial	4312.3	98.1 %	0.18			0.18%
Y 371.029	697640.9	100.87 %	0.588			0.58%
Y RADIAL	4747.3	99.72 %	1.014			1.02%
Ag 328.068†	95182.9	497.33 ug/L	6.190	497.33 ppb	6.190	1.24%
QC value within limits for Ag 328.068 Recovery = 99.47%						
Al 396.153Radial†	5130.0	5014.9 ug/L	47.95	5014.9 ppb	47.95	0.96%
QC value within limits for Al 396.153Radial Recovery = 100.30%						
As 188.979†	920.3	509.52 ug/L	2.282	509.52 ppb	2.282	0.45%
QC value within limits for As 188.979 Recovery = 101.90%						
B 249.677†	18036.7	503.71 ug/L	8.027	503.71 ppb	8.027	1.59%
QC value within limits for B 249.677 Recovery = 100.74%						
Ba 233.527†	52785.6	495.66 ug/L	5.463	495.66 ppb	5.463	1.10%
QC value within limits for Ba 233.527 Recovery = 99.13%						
Be 313.107†	1181761.1	504.30 ug/L	0.363	504.30 ppb	0.363	0.07%
QC value within limits for Be 313.107 Recovery = 100.86%						
Ca 317.933Radial†	2745.0	5194.1 ug/L	9.96	5194.1 ppb	9.96	0.19%
QC value within limits for Ca 317.933Radial Recovery = 103.88%						
Cd 226.502†	34183.6	495.86 ug/L	6.043	495.86 ppb	6.043	1.22%
QC value within limits for Cd 226.502 Recovery = 99.17%						
Co 228.616†	19417.2	501.97 ug/L	5.822	501.97 ppb	5.822	1.16%
QC value within limits for Co 228.616 Recovery = 100.39%						
Cr 267.716†	36913.8	496.08 ug/L	5.590	496.08 ppb	5.590	1.13%
QC value within limits for Cr 267.716 Recovery = 99.22%						
Cu 324.752†	148120.4	489.02 ug/L	6.848	489.02 ppb	6.848	1.40%
QC value within limits for Cu 324.752 Recovery = 97.80%						
Fe 238.204 Radial†	456.1	5299.7 ug/L	13.14	5299.7 ppb	13.14	0.25%
QC value within limits for Fe 238.204 Radial Recovery = 105.99%						
K 766.490 Radial†	27358.2	5205.9 ug/L	55.79	5205.9 ppb	55.79	1.07%
QC value within limits for K 766.490 Radial Recovery = 104.12%						
Mg 279.077 IEC†	130.3	5374.1 ug/L	47.09	5374.1 ppb	47.09	0.88%
QC value within limits for Mg 279.077 IEC Recovery = 107.48%						

Mn 257.610†	379368.5	499.10 ug/L	0.722	499.10 ppb	0.722	0.14%
QC value within limits for Mn 257.610 Recovery = 99.82%						
Mo 202.031†	5601.2	498.37 ug/L	4.955	498.37 ppb	4.955	0.99%
QC value within limits for Mo 202.031 Recovery = 99.67%						
Na 589.592 Radial†	29254.1	10313 ug/L	128.3	10313 ppb	128.3	1.24%
QC value within limits for Na 589.592 Radial Recovery = 103.13%						
Ni 231.604†	15791.4	501.19 ug/L	5.592	501.19 ppb	5.592	1.12%
QC value within limits for Ni 231.604 Recovery = 100.24%						
P 214.914†	3327.6	2383.3 ug/L	14.70	2383.3 ppb	14.70	0.62%
QC value within limits for P 214.914 Recovery = 95.33%						
Pb 220.353†	3250.5	500.77 ug/L	4.917	500.77 ppb	4.917	0.98%
QC value within limits for Pb 220.353 Recovery = 100.15%						
S 181.975 Axial†	552.2	987.54 ug/L	14.439	987.54 ppb	14.439	1.46%
QC value within limits for S 181.975 Axial Recovery = 98.75%						
Sb 206.836†	1198.2	519.24 ug/L	3.201	519.24 ppb	3.201	0.62%
QC value within limits for Sb 206.836 Recovery = 103.85%						
Se 196.026†	604.2	521.70 ug/L	8.953	521.70 ppb	8.953	1.72%
QC value within limits for Se 196.026 Recovery = 104.34%						
Si 251.611†	65010.7	2461.9 ug/L	33.30	2461.9 ppb	33.30	1.35%
QC value within limits for Si 251.611 Recovery = 98.47%						
Sn 189.927†	2204.7	500.93 ug/L	3.046	500.93 ppb	3.046	0.61%
QC value within limits for Sn 189.927 Recovery = 100.19%						
Sr 421.552†	64486.0	516.86 ug/L	5.911	516.86 ppb	5.911	1.14%
QC value within limits for Sr 421.552 Recovery = 103.37%						
Ti 334.940†	279037.7	485.12 ug/L	5.777	485.12 ppb	5.777	1.19%
QC value within limits for Ti 334.940 Recovery = 97.02%						
Tl 190.801†	1291.2	502.82 ug/L	5.485	502.82 ppb	5.485	1.09%
QC value within limits for Tl 190.801 Recovery = 100.56%						
U 409.014†	16628.0	502.75 ug/L	9.259	502.75 ppb	9.259	1.84%
QC value within limits for U 409.014 Recovery = 100.55%						
V 292.402†	61837.4	500.42 ug/L	6.043	500.42 ppb	6.043	1.21%
QC value within limits for V 292.402 Recovery = 100.08%						
Zn 213.857†	41130.9	493.72 ug/L	5.346	493.72 ppb	5.346	1.08%
QC value within limits for Zn 213.857 Recovery = 98.74%						
SiO2†	65065.6	5296.6 ug/L	53.27	5296.6 ppb	53.27	1.01%
QC value within limits for SiO2 Recovery = 99.05%						

All analyte(s) passed QC.

Sequence No.: 2

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 3/19/2010 08:54:10

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	4278.0	4278.0	97.3 %		08:56:23
1	Y RADIAL	4838.9	4838.9	101.6 %		08:56:03
1	Al 396.153Radial†	-75.6	0.4	0.3184 ug/L	0.3184 ppb	08:56:23
1	Ca 317.933Radial†	23.5	8.5	16.044 ug/L	16.044 ppb	08:56:23
1	Fe 238.204 Radial†	8.5	0.3	3.4993 ug/L	3.4993 ppb	08:56:23
1	K 766.490 Radial†	2965.1	447.5	85.252 ug/L	85.252 ppb	08:56:03
1	Mg 279.077 IEC†	0.2	-1.3	-54.781 ug/L	-54.781 ppb	08:56:23
1	Na 589.592 Radial†	-832.8	19.5	6.8849 ug/L	6.8849 ppb	08:56:03
1	Sr 421.552†	5.5	-15.1	-0.1214 ug/L	-0.1214 ppb	08:56:03
1	Sc 361.383	825108.5	825108.5	100.77 %		08:57:20
1	Y 371.029	697408.9	697408.9	100.83 %		08:57:20
1	Ag 328.068†	183.8	-2.8	-0.0178 ug/L	-0.0178 ppb	08:57:20
1	As 188.979†	-22.6	4.4	2.4163 ug/L	2.4163 ppb	08:57:40
1	B 249.677†	152.9	689.1	19.332 ug/L	19.332 ppb	08:57:40
1	Ba 233.527†	8.3	9.0	0.0838 ug/L	0.0838 ppb	08:57:40
1	Be 313.107†	-3650.8	108.0	0.0460 ug/L	0.0460 ppb	08:57:20
1	Cd 226.502†	-153.3	18.5	0.2683 ug/L	0.2683 ppb	08:57:40
1	Co 228.616†	-54.3	-7.7	-0.1957 ug/L	-0.1957 ppb	08:57:40
1	Cr 267.716†	76.4	4.3	0.0557 ug/L	0.0557 ppb	08:57:40
1	Cu 324.752†	5642.6	47.6	0.1550 ug/L	0.1550 ppb	08:57:20
1	Mn 257.610†	411.6	19.4	0.0280 ug/L	0.0280 ppb	08:57:40
1	Mo 202.031†	21.9	13.2	1.1724 ug/L	1.1724 ppb	08:57:40
1	Ni 231.604†	74.1	-10.5	-0.3340 ug/L	-0.3340 ppb	08:57:40
1	P 214.914†	178.9	-9.7	-7.2705 ug/L	-7.2705 ppb	08:57:40
1	Pb 220.353†	-46.9	11.7	1.8038 ug/L	1.8038 ppb	08:57:40
1	S 181.975 Axial†	20.4	-10.0	-17.833 ug/L	-17.833 ppb	08:57:40
1	Sb 206.836†	27.2	3.4	1.4349 ug/L	1.4349 ppb	08:57:40
1	Se 196.026†	-14.3	2.8	2.3246 ug/L	2.3246 ppb	08:57:40
1	Si 251.611†	553.7	61.4	2.3149 ug/L	2.3149 ppb	08:57:40
1	Sn 189.927†	9.9	2.6	0.6033 ug/L	0.6033 ppb	08:57:40
1	Ti 334.940†	-1116.7	13.0	0.0274 ug/L	0.0274 ppb	08:57:20
1	Tl 190.801†	-32.2	-2.9	-1.1249 ug/L	-1.1249 ppb	08:57:40
1	U 409.014†	-2076.1	144.0	4.3671 ug/L	4.3671 ppb	08:57:20
1	V 292.402†	-1348.4	-20.7	-0.1418 ug/L	-0.1418 ppb	08:57:20
1	Zn 213.857†	714.3	138.7	1.6825 ug/L	1.6825 ppb	08:57:40
1	SiO2†	559.1	55.5	4.4993 ug/L	4.4993 ppb	08:58:51
2	Sc Radial	4424.5	4424.5	101 %		08:56:48
2	Y RADIAL	4835.4	4835.4	101.6 %		08:56:28
2	Al 396.153Radial†	-71.2	7.3	7.2099 ug/L	7.2099 ppb	08:56:48
2	Ca 317.933Radial†	25.5	9.7	18.317 ug/L	18.317 ppb	08:56:48
2	Fe 238.204 Radial†	8.6	0.1	0.7604 ug/L	0.7604 ppb	08:56:48
2	K 766.490 Radial†	2915.1	296.9	56.563 ug/L	56.563 ppb	08:56:28
2	Mg 279.077 IEC†	3.1	1.5	63.159 ug/L	63.159 ppb	08:56:48
2	Na 589.592 Radial†	-851.2	29.6	10.439 ug/L	10.439 ppb	08:56:28
2	Sr 421.552†	16.7	-4.2	-0.0342 ug/L	-0.0342 ppb	08:56:28
2	Sc 361.383	825546.1	825546.1	100.82 %		08:57:45
2	Y 371.029	698004.5	698004.5	100.92 %		08:57:45
2	Ag 328.068†	154.1	-32.2	-0.1736 ug/L	-0.1736 ppb	08:57:45
2	As 188.979†	-11.3	15.6	8.5484 ug/L	8.5484 ppb	08:58:05
2	B 249.677†	122.5	658.9	18.485 ug/L	18.485 ppb	08:58:05
2	Ba 233.527†	17.0	17.6	0.1635 ug/L	0.1635 ppb	08:58:05
2	Be 313.107†	-3632.3	128.3	0.0547 ug/L	0.0547 ppb	08:57:45
2	Cd 226.502†	-153.8	18.0	0.2625 ug/L	0.2625 ppb	08:58:05
2	Co 228.616†	-45.7	0.9	0.0233 ug/L	0.0233 ppb	08:58:05
2	Cr 267.716†	76.5	4.4	0.0564 ug/L	0.0564 ppb	08:58:05
2	Cu 324.752†	5580.6	-16.8	-0.0581 ug/L	-0.0581 ppb	08:57:45
2	Mn 257.610†	421.9	29.4	0.0362 ug/L	0.0362 ppb	08:58:05
2	Mo 202.031†	10.0	1.3	0.1193 ug/L	0.1193 ppb	08:58:05
2	Ni 231.604†	82.3	-2.4	-0.0773 ug/L	-0.0773 ppb	08:58:05

2	P 214.914†	185.7	-3.1	-2.2742 ug/L	-2.2742 ppb	08:58:05
2	Pb 220.353†	-49.8	8.9	1.3690 ug/L	1.3690 ppb	08:58:05
2	S 181.975 Axial†	27.7	-2.8	-4.9384 ug/L	-4.9384 ppb	08:58:05
2	Sb 206.836†	29.2	5.3	2.2297 ug/L	2.2297 ppb	08:58:05
2	Se 196.026†	-19.2	-2.0	-1.6916 ug/L	-1.6916 ppb	08:58:05
2	Si 251.611†	540.1	47.5	1.8023 ug/L	1.8023 ppb	08:58:05
2	Sn 189.927†	16.4	9.1	2.0790 ug/L	2.0790 ppb	08:58:05
2	Ti 334.940†	-1116.9	13.4	0.0185 ug/L	0.0185 ppb	08:57:45
2	Tl 190.801†	-24.0	5.3	2.0373 ug/L	2.0373 ppb	08:58:05
2	U 409.014†	-2063.9	157.2	4.7674 ug/L	4.7674 ppb	08:57:45
2	V 292.402†	-1400.4	-71.6	-0.5599 ug/L	-0.5599 ppb	08:57:45
2	Zn 213.857†	717.9	141.9	1.7202 ug/L	1.7202 ppb	08:58:05
2	SiO2†	559.9	56.0	4.5655 ug/L	4.5655 ppb	08:59:11
3	Sc Radial	4211.4	4211.4	95.8 %		08:57:13
3	Y RADIAL	4686.7	4686.7	98.45 %		08:56:53
3	Al 396.153Radial†	-80.5	-5.9	-5.8397 ug/L	-5.8397 ppb	08:57:13
3	Ca 317.933Radial†	17.0	2.1	3.9096 ug/L	3.9096 ppb	08:57:13
3	Fe 238.204 Radial†	8.0	-0.1	-1.4023 ug/L	-1.4023 ppb	08:57:13
3	K 766.490 Radial†	2980.9	512.2	97.574 ug/L	97.574 ppb	08:56:53
3	Mg 279.077 IEC†	0.9	-0.6	-23.241 ug/L	-23.241 ppb	08:57:13
3	Na 589.592 Radial†	-766.9	74.7	26.347 ug/L	26.347 ppb	08:56:53
3	Sr 421.552†	23.5	3.7	0.0298 ug/L	0.0298 ppb	08:56:53
3	Sc 361.383	820504.7	820504.7	100.21 %		08:58:10
3	Y 371.029	693341.7	693341.7	100.25 %		08:58:10
3	Ag 328.068†	152.8	-32.7	-0.1715 ug/L	-0.1715 ppb	08:58:10
3	As 188.979†	-18.3	8.5	4.6781 ug/L	4.6781 ppb	08:58:30
3	B 249.677†	121.5	658.6	18.475 ug/L	18.475 ppb	08:58:30
3	Ba 233.527†	8.5	9.2	0.0850 ug/L	0.0850 ppb	08:58:30
3	Be 313.107†	-3659.6	78.9	0.0335 ug/L	0.0335 ppb	08:58:10
3	Cd 226.502†	-158.0	13.0	0.1883 ug/L	0.1883 ppb	08:58:30
3	Co 228.616†	-37.5	8.8	0.2269 ug/L	0.2269 ppb	08:58:30
3	Cr 267.716†	79.8	8.1	0.1083 ug/L	0.1083 ppb	08:58:30
3	Cu 324.752†	5690.0	126.4	0.4174 ug/L	0.4174 ppb	08:58:10
3	Mn 257.610†	401.9	12.0	0.0166 ug/L	0.0166 ppb	08:58:30
3	Mo 202.031†	9.7	1.2	0.1027 ug/L	0.1027 ppb	08:58:30
3	Ni 231.604†	74.0	-10.2	-0.3245 ug/L	-0.3245 ppb	08:58:30
3	P 214.914†	199.3	11.7	8.5967 ug/L	8.5967 ppb	08:58:30
3	Pb 220.353†	-37.5	20.9	3.2128 ug/L	3.2128 ppb	08:58:30
3	S 181.975 Axial†	33.5	3.2	5.7488 ug/L	5.7488 ppb	08:58:30
3	Sb 206.836†	23.2	-0.5	-0.2012 ug/L	-0.2012 ppb	08:58:30
3	Se 196.026†	-15.7	1.3	1.0768 ug/L	1.0768 ppb	08:58:30
3	Si 251.611†	542.7	53.5	2.0283 ug/L	2.0283 ppb	08:58:30
3	Sn 189.927†	7.9	0.8	0.1757 ug/L	0.1757 ppb	08:58:30
3	Ti 334.940†	-1147.9	-24.4	-0.0399 ug/L	-0.0399 ppb	08:58:10
3	Tl 190.801†	-29.0	0.2	0.0650 ug/L	0.0650 ppb	08:58:30
3	U 409.014†	-2219.3	-10.6	-0.3213 ug/L	-0.3213 ppb	08:58:10
3	V 292.402†	-1372.5	-52.2	-0.4166 ug/L	-0.4166 ppb	08:58:10
3	Zn 213.857†	704.0	132.5	1.6069 ug/L	1.6069 ppb	08:58:30
3	SiO2†	572.1	71.6	5.8426 ug/L	5.8426 ppb	08:59:31

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	823719.8	100.60 %		0.341			0.34%
Sc Radial	4304.6	97.9 %		2.48			2.53%
Y 371.029	696251.7	100.67 %		0.367			0.36%
Y RADIAL	4787.0	100.6 %		1.83			1.82%
Ag 328.068†	-22.6	-0.1210 ug/L		0.08936	-0.1210 ppb	0.08936	73.87%
QC value within limits for Ag 328.068 Recovery = Not calculated							
Al 396.153Radial†	0.6	0.5629 ug/L		6.52825	0.5629 ppb	6.52825	>999.9%
QC value within limits for Al 396.153Radial Recovery = Not calculated							
As 188.979†	9.5	5.2142 ug/L		3.10101	5.2142 ppb	3.10101	59.47%
QC value within limits for As 188.979 Recovery = Not calculated							
B 249.677†	668.9	18.764 ug/L		0.4917	18.764 ppb	0.4917	2.62%
QC value within limits for B 249.677 Recovery = Not calculated							
Ba 233.527†	11.9	0.1107 ug/L		0.04564	0.1107 ppb	0.04564	41.21%
QC value within limits for Ba 233.527 Recovery = Not calculated							
Be 313.107†	105.1	0.0447 ug/L		0.01065	0.0447 ppb	0.01065	23.81%
QC value within limits for Be 313.107 Recovery = Not calculated							
Ca 317.933Radial†	6.7	12.757 ug/L		7.7459	12.757 ppb	7.7459	60.72%

QC value within limits for Ca 317.933 Radial Recovery = Not calculated									
Cd	226.502†	16.5	0.2397 ug/L	0.04458	0.2397 ppb	0.04458	18.60%		
QC value within limits for Cd 226.502 Recovery = Not calculated									
Co	228.616†	0.7	0.0182 ug/L	0.21136	0.0182 ppb	0.21136	>999.9%		
QC value within limits for Co 228.616 Recovery = Not calculated									
Cr	267.716†	5.6	0.0734 ug/L	0.03018	0.0734 ppb	0.03018	41.09%		
QC value within limits for Cr 267.716 Recovery = Not calculated									
Cu	324.752†	52.4	0.1714 ug/L	0.23815	0.1714 ppb	0.23815	138.91%		
QC value within limits for Cu 324.752 Recovery = Not calculated									
Fe	238.204 Radial†	0.1	0.9525 ug/L	2.45646	0.9525 ppb	2.45646	257.90%		
QC value within limits for Fe 238.204 Radial Recovery = Not calculated									
K	766.490 Radial†	418.9	79.796 ug/L	21.0429	79.796 ppb	21.0429	26.37%		
QC value within limits for K 766.490 Radial Recovery = Not calculated									
Mg	279.077 IEC†	-0.1	-4.9541 ug/L	61.05970	-4.9541 ppb	61.05970	>999.9%		
QC value within limits for Mg 279.077 IEC Recovery = Not calculated									
Mn	257.610†	20.3	0.0269 ug/L	0.00982	0.0269 ppb	0.00982	36.45%		
QC value within limits for Mn 257.610 Recovery = Not calculated									
Mo	202.031†	5.2	0.4648 ug/L	0.61286	0.4648 ppb	0.61286	131.86%		
QC value within limits for Mo 202.031 Recovery = Not calculated									
Na	589.592 Radial†	41.3	14.557 ug/L	10.3641	14.557 ppb	10.3641	71.20%		
QC value within limits for Na 589.592 Radial Recovery = Not calculated									
Ni	231.604†	-7.7	-0.2453 ug/L	0.14554	-0.2453 ppb	0.14554	59.34%		
QC value within limits for Ni 231.604 Recovery = Not calculated									
P	214.914†	-0.4	-0.3160 ug/L	8.11280	-0.3160 ppb	8.11280	>999.9%		
QC value within limits for P 214.914 Recovery = Not calculated									
Pb	220.353†	13.8	2.1285 ug/L	0.96384	2.1285 ppb	0.96384	45.28%		
QC value within limits for Pb 220.353 Recovery = Not calculated									
S	181.975 Axial†	-3.2	-5.6743 ug/L	11.80827	-5.6743 ppb	11.80827	208.10%		
QC value within limits for S 181.975 Axial Recovery = Not calculated									
Sb	206.836†	2.7	1.1544 ug/L	1.23947	1.1544 ppb	1.23947	107.37%		
QC value within limits for Sb 206.836 Recovery = Not calculated									
Se	196.026†	0.7	0.5699 ug/L	2.05554	0.5699 ppb	2.05554	360.68%		
QC value within limits for Se 196.026 Recovery = Not calculated									
Si	251.611†	54.1	2.0485 ug/L	0.25687	2.0485 ppb	0.25687	12.54%		
QC value within limits for Si 251.611 Recovery = Not calculated									
Sn	189.927†	4.2	0.9526 ug/L	0.99861	0.9526 ppb	0.99861	104.83%		
QC value within limits for Sn 189.927 Recovery = Not calculated									
Sr	421.552†	-5.2	-0.0419 ug/L	0.07592	-0.0419 ppb	0.07592	181.15%		
QC value within limits for Sr 421.552 Recovery = Not calculated									
Ti	334.940†	0.7	0.0020 ug/L	0.03653	0.0020 ppb	0.03653	>999.9%		
QC value within limits for Ti 334.940 Recovery = Not calculated									
Tl	190.801†	0.8	0.3258 ug/L	1.59716	0.3258 ppb	1.59716	490.27%		
QC value within limits for Tl 190.801 Recovery = Not calculated									
U	409.014†	96.8	2.9377 ug/L	2.82949	2.9377 ppb	2.82949	96.32%		
QC value within limits for U 409.014 Recovery = Not calculated									
V	292.402†	-48.2	-0.3728 ug/L	0.21249	-0.3728 ppb	0.21249	57.01%		
QC value within limits for V 292.402 Recovery = Not calculated									
Zn	213.857†	137.7	1.6699 ug/L	0.05769	1.6699 ppb	0.05769	3.45%		
QC value within limits for Zn 213.857 Recovery = Not calculated									
SiO2†		61.0	4.9691 ug/L	0.75715	4.9691 ppb	0.75715	15.24%		
QC value within limits for SiO2 Recovery = Not calculated									

All analyte(s) passed QC.

Sequence No.: 3

Sample ID: LR1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 37

Date Collected: 3/19/2010 09:01:41

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	4168.4	4168.4	94.8 %		09:03:54
1	Y RADIAL	4671.2	4671.2	98.12 %		09:03:34
1	Al 396.153Radial†	-95.9	-23.0	-21.536 ug/L	-21.536 ppb	09:03:54
1	Ca 317.933Radial†	10.9	-4.2	-7.9891 ug/L	-7.9891 ppb	09:03:54
1	Fe 238.204 Radial†	31552.6	33259.8	385370 ug/L	385370 ppb	09:03:34
1	K 766.490 Radial†	2463.6	-1.2	-0.1828 ug/L	-0.1828 ppb	09:03:34
1	Mg 279.077 IEC†	8.2	7.1	-111.04 ug/L	-111.04 ppb	09:03:54
1	Na 589.592 Radial†	-839.1	-9.6	-3.3743 ug/L	-3.3743 ppb	09:03:34
1	Sr 421.552†	108.5	93.6	0.7503 ug/L	0.7503 ppb	09:03:34
1	Sc 361.383	804663.0	804663.0	98.270 %		09:04:52
1	Y 371.029	675570.8	675570.8	97.676 %		09:04:52
1	Ag 328.068†	-22147.7	-22722.6	1.3619 ug/L	1.3619 ppb	09:04:52
1	As 188.979†	-157.8	-133.8	16.851 ug/L	16.851 ppb	09:05:12
1	B 249.677†	1573.3	2138.4	-2.6414 ug/L	-2.6414 ppb	09:04:52
1	Ba 233.527†	-1501.1	-1526.9	-2.4607 ug/L	-2.4607 ppb	09:04:52
1	Be 313.107†	-3547.0	121.6	0.0516 ug/L	0.0516 ppb	09:04:52
1	Cd 226.502†	2545.1	2760.5	0.2621 ug/L	0.2621 ppb	09:04:52
1	Co 228.616†	597.4	654.1	11.286 ug/L	11.286 ppb	09:05:12
1	Cr 267.716†	-466.6	-546.3	33.551 ug/L	33.551 ppb	09:05:12
1	Cu 324.752†	-1345.0	-6920.6	-2.4866 ug/L	-2.4866 ppb	09:04:52
1	Mn 257.610†	-31215.4	-32153.8	-4.2266 ug/L	-4.2266 ppb	09:04:52
1	Mo 202.031†	-238.6	-251.3	7.5762 ug/L	7.5762 ppb	09:04:52
1	Ni 231.604†	179.0	98.1	3.1049 ug/L	3.1049 ppb	09:05:12
1	P 214.914†	594.2	417.4	5.0000 ug/L	5.0000 ppb	09:05:12
1	Pb 220.353†	167.3	228.6	-19.764 ug/L	-19.764 ppb	09:05:12
1	S 181.975 Axial†	39.8	10.3	18.462 ug/L	18.462 ppb	09:05:12
1	Sb 206.836†	21.4	-1.9	-5.4959 ug/L	-5.4959 ppb	09:05:12
1	Se 196.026†	-1587.1	-1598.1	-223.50 ug/L	-223.50 ppb	09:05:12
1	Si 251.611†	-466.5	-962.8	-36.277 ug/L	-36.277 ppb	09:04:52
1	Sn 189.927†	-22.6	-30.2	-28.971 ug/L	-28.971 ppb	09:05:12
1	Ti 334.940†	-1147.3	-46.2	-0.1313 ug/L	-0.1313 ppb	09:04:52
1	Tl 190.801†	-24.1	4.6	1.3905 ug/L	1.3905 ppb	09:05:12
1	U 409.014†	-57.2	2146.0	21.189 ug/L	21.189 ppb	09:04:52
1	V 292.402†	5156.9	6565.1	-3.8861 ug/L	-3.8861 ppb	09:04:52
1	Zn 213.857†	3563.3	3056.0	-20.632 ug/L	-20.632 ppb	09:05:12
1	SiO2†	-531.6	-1040.3	-84.290 ug/L	-84.290 ppb	09:06:09
2	Sc Radial	4220.4	4220.4	96.0 %		09:04:19
2	Y RADIAL	4695.8	4695.8	98.64 %		09:03:59
2	Al 396.153Radial†	-97.7	-23.6	-22.030 ug/L	-22.030 ppb	09:04:19
2	Ca 317.933Radial†	15.8	0.8	1.4196 ug/L	1.4196 ppb	09:04:19
2	Fe 238.204 Radial†	31639.3	32940.5	381670 ug/L	381670 ppb	09:03:59
2	K 766.490 Radial†	2419.9	-78.7	-14.957 ug/L	-14.957 ppb	09:03:59
2	Mg 279.077 IEC†	9.6	8.5	-49.042 ug/L	-49.042 ppb	09:04:19
2	Na 589.592 Radial†	-819.9	21.3	7.4941 ug/L	7.4941 ppb	09:03:59
2	Sr 421.552†	73.1	55.3	0.4436 ug/L	0.4436 ppb	09:03:59
2	Sc 361.383	814772.9	814772.9	99.505 %		09:05:18
2	Y 371.029	684115.4	684115.4	98.911 %		09:05:18
2	Ag 328.068†	-22528.6	-22825.8	-0.3166 ug/L	-0.3166 ppb	09:05:18
2	As 188.979†	-170.1	-144.2	10.308 ug/L	10.308 ppb	09:05:38
2	B 249.677†	1557.8	2102.9	-3.0390 ug/L	-3.0390 ppb	09:05:18
2	Ba 233.527†	-1537.5	-1544.4	-2.7386 ug/L	-2.7386 ppb	09:05:18
2	Be 313.107†	-3576.5	136.7	0.0579 ug/L	0.0579 ppb	09:05:18
2	Cd 226.502†	2505.0	2688.1	-0.4074 ug/L	-0.4074 ppb	09:05:18
2	Co 228.616†	636.8	686.2	12.164 ug/L	12.164 ppb	09:05:38
2	Cr 267.716†	-490.7	-564.7	32.914 ug/L	32.914 ppb	09:05:38
2	Cu 324.752†	-1389.0	-6947.9	-2.7705 ug/L	-2.7705 ppb	09:05:18
2	Mn 257.610†	-31480.4	-32026.0	-4.4264 ug/L	-4.4264 ppb	09:05:18
2	Mo 202.031†	-265.9	-275.8	5.1133 ug/L	5.1133 ppb	09:05:18
2	Ni 231.604†	160.0	76.7	2.4260 ug/L	2.4260 ppb	09:05:38

2	P 214.914†	604.0	419.7	9.7533 ug/L	9.7533 ppb	09:05:38
2	Pb 220.353†	148.9	207.9	-22.419 ug/L	-22.419 ppb	09:05:38
2	S 181.975 Axial†	36.7	6.7	12.001 ug/L	12.001 ppb	09:05:38
2	Sb 206.836†	26.7	3.2	-3.3702 ug/L	-3.3702 ppb	09:05:38
2	Se 196.026†	-1602.6	-1593.6	-230.43 ug/L	-230.43 ppb	09:05:38
2	Si 251.611†	-451.6	-942.0	-35.459 ug/L	-35.459 ppb	09:05:18
2	Sn 189.927†	-21.3	-28.6	-28.391 ug/L	-28.391 ppb	09:05:38
2	Ti 334.940†	-1185.9	-70.6	-0.1755 ug/L	-0.1755 ppb	09:05:18
2	Tl 190.801†	-35.9	-7.0	-3.0798 ug/L	-3.0798 ppb	09:05:38
2	U 409.014†	-170.3	2033.0	18.184 ug/L	18.184 ppb	09:05:18
2	V 292.402†	5184.7	6527.9	-3.6800 ug/L	-3.6800 ppb	09:05:18
2	Zn 213.857†	3582.0	3029.7	-20.392 ug/L	-20.392 ppb	09:05:38
2	SiO2†	-332.9	-833.9	-67.390 ug/L	-67.390 ppb	09:06:14
3	Sc Radial	4150.7	4150.7	94.4 %		09:04:44
3	Y RADIAL	4717.7	4717.7	99.10 %		09:04:24
3	Al 396.153Radial†	-105.7	-33.8	-31.932 ug/L	-31.932 ppb	09:04:44
3	Ca 317.933Radial†	13.3	-1.6	-3.0737 ug/L	-3.0737 ppb	09:04:44
3	Fe 238.204 Radial†	31506.1	33352.3	386440 ug/L	386440 ppb	09:04:24
3	K 766.490 Radial†	2562.8	114.9	21.945 ug/L	21.945 ppb	09:04:24
3	Mg 279.077 IEC†	10.3	9.3	-19.131 ug/L	-19.131 ppb	09:04:44
3	Na 589.592 Radial†	-841.1	-15.4	-5.4450 ug/L	-5.4450 ppb	09:04:24
3	Sr 421.552†	63.7	46.6	0.3735 ug/L	0.3735 ppb	09:04:24
3	Sc 361.383	818472.2	818472.2	99.957 %		09:05:44
3	Y 371.029	686196.9	686196.9	99.212 %		09:05:44
3	Ag 328.068†	-22590.8	-22785.7	1.3597 ug/L	1.3597 ppb	09:05:44
3	As 188.979†	-159.6	-132.8	17.658 ug/L	17.658 ppb	09:06:04
3	B 249.677†	1700.5	2238.6	-0.0015 ug/L	-0.0015 ppb	09:05:44
3	Ba 233.527†	-1597.3	-1597.3	-3.0907 ug/L	-3.0907 ppb	09:05:44
3	Be 313.107†	-3601.1	128.4	0.0547 ug/L	0.0547 ppb	09:05:44
3	Cd 226.502†	2563.1	2734.9	-0.2206 ug/L	-0.2206 ppb	09:05:44
3	Co 228.616†	596.2	642.6	10.963 ug/L	10.963 ppb	09:06:04
3	Cr 267.716†	-477.4	-549.1	33.624 ug/L	33.624 ppb	09:06:04
3	Cu 324.752†	-1475.3	-7027.9	-2.7850 ug/L	-2.7850 ppb	09:05:44
3	Mn 257.610†	-31871.3	-32274.1	-4.2829 ug/L	-4.2829 ppb	09:05:44
3	Mo 202.031†	-289.1	-297.8	3.5310 ug/L	3.5310 ppb	09:05:44
3	Ni 231.604†	163.4	79.4	2.5118 ug/L	2.5118 ppb	09:06:04
3	P 214.914†	601.0	414.0	1.6780 ug/L	1.6780 ppb	09:06:04
3	Pb 220.353†	165.2	223.6	-20.698 ug/L	-20.698 ppb	09:06:04
3	S 181.975 Axial†	38.6	8.5	15.150 ug/L	15.150 ppb	09:06:04
3	Sb 206.836†	22.5	-1.2	-5.3079 ug/L	-5.3079 ppb	09:06:04
3	Se 196.026†	-1604.4	-1588.1	-212.13 ug/L	-212.13 ppb	09:06:04
3	Si 251.611†	-406.7	-895.1	-33.654 ug/L	-33.654 ppb	09:05:44
3	Sn 189.927†	-25.3	-32.4	-29.546 ug/L	-29.546 ppb	09:06:04
3	Ti 334.940†	-1114.8	5.9	-0.0482 ug/L	-0.0482 ppb	09:05:44
3	Tl 190.801†	-40.4	-11.4	-4.7656 ug/L	-4.7656 ppb	09:06:04
3	U 409.014†	-3.7	2200.5	22.719 ug/L	22.719 ppb	09:05:44
3	V 292.402†	5104.1	6423.7	-5.2245 ug/L	-5.2245 ppb	09:05:44
3	Zn 213.857†	3569.3	3000.7	-21.457 ug/L	-21.457 ppb	09:06:04
3	SiO2†	-395.4	-894.9	-72.310 ug/L	-72.310 ppb	09:06:19

Mean Data: LR1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	812636.0	99.244 %	0.8730			0.88%
Sc Radial	4179.8	95.1 %	0.82			0.87%
Y 371.029	681961.1	98.600 %	0.8142			0.83%
Y RADIAL	4694.9	98.62 %	0.488			0.49%
Ag 328.068†	-22778.0	0.8017 ug/L	0.96844	0.8017 ppb	0.96844	120.80%
Al 396.153Radial†	-26.8	-25.166 ug/L	5.8648	-25.166 ppb	5.8648	23.30%
As 188.979†	-136.9	14.939 ug/L	4.0310	14.939 ppb	4.0310	26.98%
B 249.677†	2160.0	-1.8940 ug/L	1.65089	-1.8940 ppb	1.65089	87.17%
Ba 233.527†	-1556.2	-2.7633 ug/L	0.31570	-2.7633 ppb	0.31570	11.42%
Be 313.107†	128.9	0.0547 ug/L	0.00317	0.0547 ppb	0.00317	5.79%
Ca 317.933Radial†	-1.7	-3.2144 ug/L	4.70597	-3.2144 ppb	4.70597	146.40%
Cd 226.502†	2727.8	-0.1220 ug/L	0.34551	-0.1220 ppb	0.34551	283.27%
Co 228.616†	661.0	11.471 ug/L	0.6212	11.471 ppb	0.6212	5.42%
Cr 267.716†	-553.4	33.363 ug/L	0.3909	33.363 ppb	0.3909	1.17%
Cu 324.752†	-6965.5	-2.6807 ug/L	0.16824	-2.6807 ppb	0.16824	6.28%
Fe 238.204 Radial†	33184.2	384500 ug/L	2503.3	384500 ppb	2503.3	0.65%
K 766.490 Radial†	11.7	2.2685 ug/L	18.57239	2.2685 ppb	18.57239	818.72%

Mg 279.077 IEC†	8.3	-59.738 ug/L	46.8800	-59.738 ppb	46.8800	78.48%
Mn 257.610†	-32151.3	-4.3119 ug/L	0.10299	-4.3119 ppb	0.10299	2.39%
Mo 202.031†	-275.0	5.4068 ug/L	2.03849	5.4068 ppb	2.03849	37.70%
Na 589.592 Radial†	-1.3	-0.4417 ug/L	6.95019	-0.4417 ppb	6.95019	>999.9%
Ni 231.604†	84.7	2.6809 ug/L	0.36971	2.6809 ppb	0.36971	13.79%
P 214.914†	417.1	5.4771 ug/L	4.05878	5.4771 ppb	4.05878	74.10%
Pb 220.353†	220.0	-20.960 ug/L	1.3465	-20.960 ppb	1.3465	6.42%
S 181.975 Axial†	8.5	15.204 ug/L	3.2307	15.204 ppb	3.2307	21.25%
Sb 206.836†	0.0	-4.7247 ug/L	1.17674	-4.7247 ppb	1.17674	24.91%
Se 196.026†	-1593.3	-222.02 ug/L	9.239	-222.02 ppb	9.239	4.16%
Si 251.611†	-933.3	-35.130 ug/L	1.3424	-35.130 ppb	1.3424	3.82%
Sn 189.927†	-30.4	-28.970 ug/L	0.5777	-28.970 ppb	0.5777	1.99%
Sr 421.552†	65.2	0.5225 ug/L	0.20038	0.5225 ppb	0.20038	38.35%
Ti 334.940†	-37.0	-0.1184 ug/L	0.06463	-0.1184 ppb	0.06463	54.61%
Tl 190.801†	-4.6	-2.1516 ug/L	3.18128	-2.1516 ppb	3.18128	147.86%
U 409.014†	2126.5	20.697 ug/L	2.3074	20.697 ppb	2.3074	11.15%
V 292.402†	6505.6	-4.2635 ug/L	0.83854	-4.2635 ppb	0.83854	19.67%
Zn 213.857†	3028.8	-20.827 ug/L	0.5589	-20.827 ppb	0.5589	2.68%
SiO2†	-923.0	-74.663 ug/L	8.6924	-74.663 ppb	8.6924	11.64%

Sequence No.: 4
 Sample ID: CCV
 Analyst:
 Initial Sample Wt:
 Dilution:

Autosampler Location: 7
 Date Collected: 3/19/2010 09:08:31
 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	4270.1	4270.1	97.2 %		09:10:44
1	Y RADIAL	4722.2	4722.2	99.19 %		09:10:24
1	Al 396.153Radial†	5015.6	5240.5	5123.3 ug/L	5123.3 ppb	09:10:24
1	Ca 317.933Radial†	2685.2	2748.1	5200.0 ug/L	5200.0 ppb	09:10:44
1	Fe 238.204 Radial†	444.5	449.0	5218.2 ug/L	5218.2 ppb	09:10:44
1	K 766.490 Radial†	29180.3	27435.6	5220.8 ug/L	5220.8 ppb	09:10:24
1	Mg 279.077 IEC†	125.9	128.1	5282.8 ug/L	5282.8 ppb	09:10:44
1	Na 589.592 Radial†	26587.3	28240.6	9955.4 ug/L	9955.4 ppb	09:10:24
1	Sr 421.552†	62098.4	63895.1	512.13 ug/L	512.13 ppb	09:10:24
1	Sc 361.383	835263.3	835263.3	102.01 %		09:11:41
1	Y 371.029	695826.9	695826.9	100.60 %		09:11:41
1	Ag 328.068†	98312.6	96192.6	502.56 ug/L	502.56 ppb	09:11:46
1	As 188.979†	917.6	926.3	512.83 ug/L	512.83 ppb	09:12:06
1	B 249.677†	17862.9	18048.7	504.04 ug/L	504.04 ppb	09:11:46
1	Ba 233.527†	54434.3	53363.7	501.08 ug/L	501.08 ppb	09:11:46
1	Be 313.107†	1200300.9	1180409.2	503.74 ug/L	503.74 ppb	09:11:41
1	Cd 226.502†	35059.9	34540.6	501.05 ug/L	501.05 ppb	09:11:46
1	Co 228.616†	20023.4	19675.5	508.65 ug/L	508.65 ppb	09:11:46
1	Cr 267.716†	38027.8	37207.9	500.02 ug/L	500.02 ppb	09:11:46
1	Cu 324.752†	158463.8	149793.1	494.54 ug/L	494.54 ppb	09:11:46
1	Mn 257.610†	382150.2	374240.2	492.36 ug/L	492.36 ppb	09:11:46
1	Mo 202.031†	5765.9	5643.9	502.16 ug/L	502.16 ppb	09:12:06
1	Ni 231.604†	16343.9	15938.2	505.85 ug/L	505.85 ppb	09:11:46
1	P 214.914†	3636.1	3377.2	2419.3 ug/L	2419.3 ppb	09:12:06
1	Pb 220.353†	3269.8	3263.8	502.86 ug/L	502.86 ppb	09:12:06
1	S 181.975 Axial†	600.7	558.7	999.26 ug/L	999.26 ppb	09:12:06
1	Sb 206.836†	1248.4	1200.2	520.17 ug/L	520.17 ppb	09:12:06
1	Se 196.026†	601.5	606.7	523.56 ug/L	523.56 ppb	09:12:06
1	Si 251.611†	67607.5	65788.7	2491.4 ug/L	2491.4 ppb	09:11:46
1	Sn 189.927†	2258.0	2206.4	501.31 ug/L	501.31 ppb	09:12:06
1	Ti 334.940†	286341.1	281827.0	489.97 ug/L	489.97 ppb	09:11:46
1	Tl 190.801†	1304.7	1308.1	509.32 ug/L	509.32 ppb	09:12:06
1	U 409.014†	14816.5	16729.1	505.82 ug/L	505.82 ppb	09:11:46
1	V 292.402†	62225.1	62317.9	504.32 ug/L	504.32 ppb	09:11:46
1	Zn 213.857†	42974.6	41558.7	498.88 ug/L	498.88 ppb	09:11:46
1	SiO2†	67784.3	65950.9	5368.7 ug/L	5368.7 ppb	09:13:13
2	Sc Radial	4267.1	4267.1	97.1 %		09:11:09
2	Y RADIAL	4754.5	4754.5	99.87 %		09:10:49
2	Al 396.153Radial†	5038.4	5267.6	5150.2 ug/L	5150.2 ppb	09:10:49
2	Ca 317.933Radial†	2668.0	2732.4	5170.2 ug/L	5170.2 ppb	09:11:09
2	Fe 238.204 Radial†	442.2	447.0	5194.2 ug/L	5194.2 ppb	09:11:09
2	K 766.490 Radial†	29100.8	27375.1	5209.4 ug/L	5209.4 ppb	09:10:49
2	Mg 279.077 IEC†	129.6	131.9	5441.6 ug/L	5441.6 ppb	09:11:09
2	Na 589.592 Radial†	26364.9	28031.0	9881.5 ug/L	9881.5 ppb	09:10:49
2	Sr 421.552†	62039.1	63879.7	512.00 ug/L	512.00 ppb	09:10:49
2	Sc 361.383	836951.4	836951.4	102.21 %		09:12:12
2	Y 371.029	697139.4	697139.4	100.79 %		09:12:12
2	Ag 328.068†	97894.3	95589.0	499.41 ug/L	499.41 ppb	09:12:17
2	As 188.979†	901.5	908.8	503.18 ug/L	503.18 ppb	09:12:37
2	B 249.677†	17816.6	17968.1	501.79 ug/L	501.79 ppb	09:12:17
2	Ba 233.527†	54115.2	52943.9	497.14 ug/L	497.14 ppb	09:12:17
2	Be 313.107†	1204879.6	1182515.5	504.63 ug/L	504.63 ppb	09:12:12
2	Cd 226.502†	34879.3	34294.5	497.48 ug/L	497.48 ppb	09:12:17
2	Co 228.616†	19921.4	19536.2	505.04 ug/L	505.04 ppb	09:12:17
2	Cr 267.716†	37895.4	37003.2	497.27 ug/L	497.27 ppb	09:12:17
2	Cu 324.752†	157529.2	148565.4	490.48 ug/L	490.48 ppb	09:12:17
2	Mn 257.610†	380465.2	371836.1	489.19 ug/L	489.19 ppb	09:12:17
2	Mo 202.031†	5705.9	5573.8	495.93 ug/L	495.93 ppb	09:12:37
2	Ni 231.604†	16330.3	15892.5	504.40 ug/L	504.40 ppb	09:12:17

2	P 214.914†	3580.1	3315.3	2373.9 ug/L	2373.9 ppb	09:12:37
2	Pb 220.353†	3237.2	3225.4	496.97 ug/L	496.97 ppb	09:12:37
2	S 181.975 Axial†	591.9	548.9	981.65 ug/L	981.65 ppb	09:12:37
2	Sb 206.836†	1238.0	1187.5	514.66 ug/L	514.66 ppb	09:12:37
2	Se 196.026†	596.5	600.5	518.35 ug/L	518.35 ppb	09:12:37
2	Si 251.611†	67153.8	65211.2	2469.5 ug/L	2469.5 ppb	09:12:17
2	Sn 189.927†	2240.3	2184.6	496.37 ug/L	496.37 ppb	09:12:37
2	Ti 334.940†	284868.9	279820.4	486.47 ug/L	486.47 ppb	09:12:17
2	Tl 190.801†	1280.9	1282.3	499.31 ug/L	499.31 ppb	09:12:37
2	U 409.014†	14705.3	16591.0	501.64 ug/L	501.64 ppb	09:12:17
2	V 292.402†	62071.6	62044.7	502.05 ug/L	502.05 ppb	09:12:17
2	Zn 213.857†	42755.3	41259.3	495.27 ug/L	495.27 ppb	09:12:17
2	SiO2†	68107.0	66132.6	5383.7 ug/L	5383.7 ppb	09:13:18
3	Sc Radial	4261.7	4261.7	97.0 %		09:11:34
3	Y RADIAL	4762.6	4762.6	100.0 %		09:11:14
3	Al 396.153Radial†	5041.6	5277.5	5159.8 ug/L	5159.8 ppb	09:11:14
3	Ca 317.933Radial†	2678.0	2746.1	5196.2 ug/L	5196.2 ppb	09:11:34
3	Fe 238.204 Radial†	449.7	455.3	5290.6 ug/L	5290.6 ppb	09:11:34
3	K 766.490 Radial†	29132.2	27445.0	5222.7 ug/L	5222.7 ppb	09:11:14
3	Mg 279.077 IEC†	130.7	133.3	5498.4 ug/L	5498.4 ppb	09:11:34
3	Na 589.592 Radial†	26247.0	27943.4	9850.6 ug/L	9850.6 ppb	09:11:14
3	Sr 421.552†	62138.9	64062.5	513.47 ug/L	513.47 ppb	09:11:14
3	Sc 361.383	831297.4	831297.4	101.52 %		09:12:42
3	Y 371.029	692170.0	692170.0	100.08 %		09:12:42
3	Ag 328.068†	98276.5	96616.8	504.80 ug/L	504.80 ppb	09:12:48
3	As 188.979†	900.4	913.7	505.94 ug/L	505.94 ppb	09:13:08
3	B 249.677†	17875.0	18144.2	506.70 ug/L	506.70 ppb	09:12:48
3	Ba 233.527†	54411.2	53595.5	503.26 ug/L	503.26 ppb	09:12:48
3	Be 313.107†	1194741.7	1180547.0	503.80 ug/L	503.80 ppb	09:12:42
3	Cd 226.502†	35068.4	34712.9	503.55 ug/L	503.55 ppb	09:12:48
3	Co 228.616†	19944.2	19691.1	509.03 ug/L	509.03 ppb	09:12:48
3	Cr 267.716†	38090.4	37447.4	503.24 ug/L	503.24 ppb	09:12:48
3	Cu 324.752†	158408.5	150479.8	496.81 ug/L	496.81 ppb	09:12:48
3	Mn 257.610†	381751.2	375634.4	494.19 ug/L	494.19 ppb	09:12:48
3	Mo 202.031†	5698.4	5604.4	498.66 ug/L	498.66 ppb	09:13:08
3	Ni 231.604†	16336.3	16007.2	508.04 ug/L	508.04 ppb	09:12:48
3	P 214.914†	3559.0	3318.3	2374.9 ug/L	2374.9 ppb	09:13:08
3	Pb 220.353†	3230.4	3240.2	499.23 ug/L	499.23 ppb	09:13:08
3	S 181.975 Axial†	591.9	552.9	988.76 ug/L	988.76 ppb	09:13:08
3	Sb 206.836†	1233.3	1191.2	516.26 ug/L	516.26 ppb	09:13:08
3	Se 196.026†	600.5	608.5	525.25 ug/L	525.25 ppb	09:13:08
3	Si 251.611†	67511.8	66010.7	2499.8 ug/L	2499.8 ppb	09:12:48
3	Sn 189.927†	2230.4	2189.7	497.53 ug/L	497.53 ppb	09:13:08
3	Ti 334.940†	286639.6	283460.1	492.80 ug/L	492.80 ppb	09:12:48
3	Tl 190.801†	1274.1	1284.1	500.05 ug/L	500.05 ppb	09:13:08
3	U 409.014†	14726.7	16710.0	505.23 ug/L	505.23 ppb	09:12:48
3	V 292.402†	62390.5	62771.8	507.88 ug/L	507.88 ppb	09:12:48
3	Zn 213.857†	42899.3	41685.6	500.39 ug/L	500.39 ppb	09:12:48
3	SiO2†	68263.8	66740.2	5433.2 ug/L	5433.2 ppb	09:13:23

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	834504.1	101.91 %	0.354			0.35%
Sc Radial	4266.3	97.1 %	0.10			0.10%
Y 371.029	695045.4	100.49 %	0.372			0.37%
Y RADIAL	4746.4	99.70 %	0.449			0.45%
Ag 328.068†	96132.8	502.25 ug/L	2.706	502.25 ppb	2.706	0.54%
QC value within limits for Ag 328.068 Recovery = 100.45%						
Al 396.153Radial†	5261.9	5144.4 ug/L	18.91	5144.4 ppb	18.91	0.37%
QC value within limits for Al 396.153Radial Recovery = 102.89%						
As 188.979†	916.3	507.32 ug/L	4.968	507.32 ppb	4.968	0.98%
QC value within limits for As 188.979 Recovery = 101.46%						
B 249.677†	18053.7	504.18 ug/L	2.459	504.18 ppb	2.459	0.49%
QC value within limits for B 249.677 Recovery = 100.84%						
Ba 233.527†	53301.0	500.49 ug/L	3.101	500.49 ppb	3.101	0.62%
QC value within limits for Ba 233.527 Recovery = 100.10%						
Be 313.107†	1181157.2	504.06 ug/L	0.496	504.06 ppb	0.496	0.10%
QC value within limits for Be 313.107 Recovery = 100.81%						
Ca 317.933Radial†	2742.2	5188.8 ug/L	16.23	5188.8 ppb	16.23	0.31%

QC value within limits for Ca 317.933 Radial Recovery = 103.78%

Cd 226.502†	34516.0	500.69 ug/L	3.048	500.69 ppb	3.048	0.61%
QC value within limits for Cd 226.502 Recovery = 100.14%						
Co 228.616†	19634.3	507.57 ug/L	2.204	507.57 ppb	2.204	0.43%
QC value within limits for Co 228.616 Recovery = 101.51%						
Cr 267.716†	37219.5	500.17 ug/L	2.991	500.17 ppb	2.991	0.60%
QC value within limits for Cr 267.716 Recovery = 100.03%						
Cu 324.752†	149612.8	493.94 ug/L	3.203	493.94 ppb	3.203	0.65%
QC value within limits for Cu 324.752 Recovery = 98.79%						
Fe 238.204 Radial†	450.4	5234.3 ug/L	50.20	5234.3 ppb	50.20	0.96%
QC value within limits for Fe 238.204 Radial Recovery = 104.69%						
K 766.490 Radial†	27418.6	5217.6 ug/L	7.22	5217.6 ppb	7.22	0.14%
QC value within limits for K 766.490 Radial Recovery = 104.35%						
Mg 279.077 IEC†	131.1	5407.6 ug/L	111.73	5407.6 ppb	111.73	2.07%
QC value within limits for Mg 279.077 IEC Recovery = 108.15%						
Mn 257.610†	373903.6	491.91 ug/L	2.530	491.91 ppb	2.530	0.51%
QC value within limits for Mn 257.610 Recovery = 98.38%						
Mo 202.031†	5607.4	498.92 ug/L	3.125	498.92 ppb	3.125	0.63%
QC value within limits for Mo 202.031 Recovery = 99.78%						
Na 589.592 Radial†	28071.7	9895.9 ug/L	53.83	9895.9 ppb	53.83	0.54%
QC value within limits for Na 589.592 Radial Recovery = 98.96%						
Ni 231.604†	15946.0	506.09 ug/L	1.832	506.09 ppb	1.832	0.36%
QC value within limits for Ni 231.604 Recovery = 101.22%						
P 214.914†	3336.9	2389.4 ug/L	25.93	2389.4 ppb	25.93	1.09%
QC value within limits for P 214.914 Recovery = 95.57%						
Pb 220.353†	3243.1	499.68 ug/L	2.973	499.68 ppb	2.973	0.59%
QC value within limits for Pb 220.353 Recovery = 99.94%						
S 181.975 Axial†	553.5	989.89 ug/L	8.861	989.89 ppb	8.861	0.90%
QC value within limits for S 181.975 Axial Recovery = 98.99%						
Sb 206.836†	1193.0	517.03 ug/L	2.832	517.03 ppb	2.832	0.55%
QC value within limits for Sb 206.836 Recovery = 103.41%						
Se 196.026†	605.2	522.39 ug/L	3.594	522.39 ppb	3.594	0.69%
QC value within limits for Se 196.026 Recovery = 104.48%						
Si 251.611†	65670.2	2486.9 ug/L	15.64	2486.9 ppb	15.64	0.63%
QC value within limits for Si 251.611 Recovery = 99.48%						
Sn 189.927†	2193.6	498.40 ug/L	2.582	498.40 ppb	2.582	0.52%
QC value within limits for Sn 189.927 Recovery = 99.68%						
Sr 421.552†	63945.7	512.53 ug/L	0.813	512.53 ppb	0.813	0.16%
QC value within limits for Sr 421.552 Recovery = 102.51%						
Ti 334.940†	281702.5	489.75 ug/L	3.169	489.75 ppb	3.169	0.65%
QC value within limits for Ti 334.940 Recovery = 97.95%						
Tl 190.801†	1291.5	502.89 ug/L	5.573	502.89 ppb	5.573	1.11%
QC value within limits for Tl 190.801 Recovery = 100.58%						
U 409.014†	16676.7	504.23 ug/L	2.261	504.23 ppb	2.261	0.45%
QC value within limits for U 409.014 Recovery = 100.85%						
V 292.402†	62378.1	504.75 ug/L	2.939	504.75 ppb	2.939	0.58%
QC value within limits for V 292.402 Recovery = 100.95%						
Zn 213.857†	41501.2	498.18 ug/L	2.631	498.18 ppb	2.631	0.53%
QC value within limits for Zn 213.857 Recovery = 99.64%						
SiO2†	66274.6	5395.2 ug/L	33.76	5395.2 ppb	33.76	0.63%
QC value within limits for SiO2 Recovery = 100.89%						

All analyte(s) passed QC.

Sequence No.: 5

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 3/19/2010 09:15:34

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4271.6	4271.6	97.2 %		09:17:46
1	Y RADIAL	4777.6	4777.6	100.4 %		09:17:26
1	Al 396.153Radial†	-79.6	-3.9	-3.8423 ug/L	-3.8423 ppb	09:17:46
1	Ca 317.933Radial†	19.6	4.5	8.4521 ug/L	8.4521 ppb	09:17:46
1	Fe 238.204 Radial†	6.5	-1.8	-20.460 ug/L	-20.460 ppb	09:17:46
1	K 766.490 Radial†	2764.2	245.3	46.730 ug/L	46.730 ppb	09:17:26
1	Mg 279.077 IEC†	2.5	1.0	42.322 ug/L	42.322 ppb	09:17:46
1	Na 589.592 Radial†	-782.7	69.8	24.603 ug/L	24.603 ppb	09:17:26
1	Sr 421.552†	33.1	13.2	0.1058 ug/L	0.1058 ppb	09:17:26
1	Sc 361.383	814482.5	814482.5	99.470 %		09:18:43
1	Y 371.029	687746.5	687746.5	99.436 %		09:18:43
1	Ag 328.068†	219.3	35.3	0.1775 ug/L	0.1775 ppb	09:18:43
1	As 188.979†	-17.3	9.4	5.1795 ug/L	5.1795 ppb	09:19:03
1	B 249.677†	-3.5	533.8	14.980 ug/L	14.980 ppb	09:19:03
1	Ba 233.527†	9.2	10.0	0.0933 ug/L	0.0933 ppb	09:19:03
1	Be 313.107†	-3582.3	129.6	0.0550 ug/L	0.0550 ppb	09:18:43
1	Cd 226.502†	-164.5	5.3	0.0788 ug/L	0.0788 ppb	09:19:03
1	Co 228.616†	-51.3	-5.3	-0.1349 ug/L	-0.1349 ppb	09:19:03
1	Cr 267.716†	75.2	4.1	0.0529 ug/L	0.0529 ppb	09:19:03
1	Cu 324.752†	5609.0	87.0	0.2858 ug/L	0.2858 ppb	09:18:43
1	Mn 257.610†	401.8	14.9	0.0159 ug/L	0.0159 ppb	09:19:03
1	Mo 202.031†	20.3	11.9	1.0542 ug/L	1.0542 ppb	09:19:03
1	Ni 231.604†	83.5	-0.1	-0.0036 ug/L	-0.0036 ppb	09:19:03
1	P 214.914†	187.8	1.5	1.0765 ug/L	1.0765 ppb	09:19:03
1	Pb 220.353†	-53.2	4.8	0.7489 ug/L	0.7489 ppb	09:19:03
1	S 181.975 Axial†	27.3	-2.7	-4.8368 ug/L	-4.8368 ppb	09:19:03
1	Sb 206.836†	39.0	15.5	6.5154 ug/L	6.5154 ppb	09:19:03
1	Se 196.026†	-12.3	4.6	3.7725 ug/L	3.7725 ppb	09:19:03
1	Si 251.611†	533.6	48.3	1.8197 ug/L	1.8197 ppb	09:19:03
1	Sn 189.927†	8.7	1.6	0.3694 ug/L	0.3694 ppb	09:19:03
1	Ti 334.940†	-1171.1	-56.1	-0.1001 ug/L	-0.1001 ppb	09:18:43
1	Tl 190.801†	-28.6	0.4	0.1418 ug/L	0.1418 ppb	09:19:03
1	U 409.014†	-2178.9	13.7	0.4170 ug/L	0.4170 ppb	09:18:43
1	V 292.402†	-1286.3	24.2	0.2131 ug/L	0.2131 ppb	09:18:43
1	Zn 213.857†	690.5	124.1	1.5064 ug/L	1.5064 ppb	09:19:03
1	SiO2†	541.5	45.1	3.6495 ug/L	3.6495 ppb	09:19:59
2	Sc Radial	4262.8	4262.8	97.0 %		09:18:11
2	Y RADIAL	4796.9	4796.9	100.8 %		09:17:51
2	Al 396.153Radial†	-78.0	-2.3	-2.3148 ug/L	-2.3148 ppb	09:18:11
2	Ca 317.933Radial†	19.3	4.3	8.0475 ug/L	8.0475 ppb	09:18:11
2	Fe 238.204 Radial†	7.2	-1.0	-11.440 ug/L	-11.440 ppb	09:18:11
2	K 766.490 Radial†	2748.7	235.2	44.821 ug/L	44.821 ppb	09:17:51
2	Mg 279.077 IEC†	2.8	1.3	55.437 ug/L	55.437 ppb	09:18:11
2	Na 589.592 Radial†	-871.9	-23.9	-8.4179 ug/L	-8.4179 ppb	09:17:51
2	Sr 421.552†	16.5	-3.9	-0.0310 ug/L	-0.0310 ppb	09:17:51
2	Sc 361.383	817570.3	817570.3	99.847 %		09:19:08
2	Y 371.029	690582.6	690582.6	99.846 %		09:19:08
2	Ag 328.068†	196.2	11.4	0.0530 ug/L	0.0530 ppb	09:19:08
2	As 188.979†	-27.6	-0.8	-0.4463 ug/L	-0.4463 ppb	09:19:28
2	B 249.677†	-4.1	533.3	14.962 ug/L	14.962 ppb	09:19:28
2	Ba 233.527†	26.6	27.4	0.2550 ug/L	0.2550 ppb	09:19:28
2	Be 313.107†	-3673.1	52.3	0.0223 ug/L	0.0223 ppb	09:19:08
2	Cd 226.502†	-163.4	7.0	0.1028 ug/L	0.1028 ppb	09:19:28
2	Co 228.616†	-52.3	-6.2	-0.1578 ug/L	-0.1578 ppb	09:19:28
2	Cr 267.716†	111.6	40.2	0.5373 ug/L	0.5373 ppb	09:19:28
2	Cu 324.752†	5650.1	106.8	0.3513 ug/L	0.3513 ppb	09:19:08
2	Mn 257.610†	409.8	21.4	0.0247 ug/L	0.0247 ppb	09:19:28
2	Mo 202.031†	15.6	7.1	0.6264 ug/L	0.6264 ppb	09:19:28
2	Ni 231.604†	69.7	-14.3	-0.4542 ug/L	-0.4542 ppb	09:19:28

2	P 214.914†	180.2	-6.8	-5.1075 ug/L	-5.1075 ppb	09:19:28
2	Pb 220.353†	-55.0	3.2	0.4903 ug/L	0.4903 ppb	09:19:28
2	S 181.975 Axial†	28.5	-1.6	-2.9431 ug/L	-2.9431 ppb	09:19:28
2	Sb 206.836†	34.7	11.1	4.6710 ug/L	4.6710 ppb	09:19:28
2	Se 196.026†	-15.5	1.4	1.1515 ug/L	1.1515 ppb	09:19:28
2	Si 251.611†	555.3	68.0	2.5719 ug/L	2.5719 ppb	09:19:28
2	Sn 189.927†	8.7	1.6	0.3569 ug/L	0.3569 ppb	09:19:28
2	Ti 334.940†	-1114.5	5.0	0.0047 ug/L	0.0047 ppb	09:19:08
2	Tl 190.801†	-19.5	9.5	3.6905 ug/L	3.6905 ppb	09:19:28
2	U 409.014†	-2170.8	30.1	0.9119 ug/L	0.9119 ppb	09:19:08
2	V 292.402†	-1366.1	-50.8	-0.3922 ug/L	-0.3922 ppb	09:19:08
2	Zn 213.857†	683.1	114.1	1.3864 ug/L	1.3864 ppb	09:19:28
2	SiO2†	541.1	42.6	3.4608 ug/L	3.4608 ppb	09:20:04
3	Sc Radial	4286.3	4286.3	97.5 %		09:18:36
3	Y RADIAL	4854.7	4854.7	102.0 %		09:18:16
3	Al 396.153Radial†	-90.4	-14.6	-14.360 ug/L	-14.360 ppb	09:18:36
3	Ca 317.933Radial†	24.9	9.9	18.648 ug/L	18.648 ppb	09:18:36
3	Fe 238.204 Radial†	7.6	-0.7	-7.7386 ug/L	-7.7386 ppb	09:18:36
3	K 766.490 Radial†	2787.2	259.2	49.398 ug/L	49.398 ppb	09:18:16
3	Mg 279.077 IEC†	3.8	2.3	96.474 ug/L	96.474 ppb	09:18:36
3	Na 589.592 Radial†	-957.9	-107.1	-37.767 ug/L	-37.767 ppb	09:18:16
3	Sr 421.552†	10.2	-10.4	-0.0832 ug/L	-0.0832 ppb	09:18:16
3	Sc 361.383	814846.7	814846.7	99.514 %		09:19:34
3	Y 371.029	688863.2	688863.2	99.598 %		09:19:34
3	Ag 328.068†	112.3	-72.3	-0.3809 ug/L	-0.3809 ppb	09:19:34
3	As 188.979†	-19.8	6.9	3.8016 ug/L	3.8016 ppb	09:19:54
3	B 249.677†	-11.6	525.7	14.748 ug/L	14.748 ppb	09:19:54
3	Ba 233.527†	13.2	14.0	0.1296 ug/L	0.1296 ppb	09:19:54
3	Be 313.107†	-3646.0	67.2	0.0286 ug/L	0.0286 ppb	09:19:34
3	Cd 226.502†	-174.8	-5.1	-0.0723 ug/L	-0.0723 ppb	09:19:54
3	Co 228.616†	-45.4	0.6	0.0137 ug/L	0.0137 ppb	09:19:54
3	Cr 267.716†	81.6	10.5	0.1380 ug/L	0.1380 ppb	09:19:54
3	Cu 324.752†	5635.8	111.3	0.3662 ug/L	0.3662 ppb	09:19:34
3	Mn 257.610†	399.2	12.1	0.0112 ug/L	0.0112 ppb	09:19:54
3	Mo 202.031†	4.4	-4.1	-0.3630 ug/L	-0.3630 ppb	09:19:54
3	Ni 231.604†	77.0	-6.7	-0.2117 ug/L	-0.2117 ppb	09:19:54
3	P 214.914†	186.2	-0.2	-0.1874 ug/L	-0.1874 ppb	09:19:54
3	Pb 220.353†	-67.8	-9.8	-1.5113 ug/L	-1.5113 ppb	09:19:54
3	S 181.975 Axial†	31.5	1.5	2.6801 ug/L	2.6801 ppb	09:19:54
3	Sb 206.836†	26.2	2.7	1.1279 ug/L	1.1279 ppb	09:19:54
3	Se 196.026†	-24.8	-7.9	-6.6490 ug/L	-6.6490 ppb	09:19:54
3	Si 251.611†	539.9	54.4	2.0696 ug/L	2.0696 ppb	09:19:54
3	Sn 189.927†	11.4	4.3	0.9890 ug/L	0.9890 ppb	09:19:54
3	Ti 334.940†	-1124.0	-8.2	-0.0205 ug/L	-0.0205 ppb	09:19:34
3	Tl 190.801†	-21.4	7.6	2.9459 ug/L	2.9459 ppb	09:19:54
3	U 409.014†	-2140.4	53.3	1.6188 ug/L	1.6188 ppb	09:19:34
3	V 292.402†	-1367.7	-56.9	-0.4537 ug/L	-0.4537 ppb	09:19:34
3	Zn 213.857†	679.6	112.8	1.3688 ug/L	1.3688 ppb	09:19:54
3	SiO2†	581.9	85.4	6.9819 ug/L	6.9819 ppb	09:20:09

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	815633.2	99.610 %		0.2061			0.21%
Sc Radial	4273.6	97.2 %		0.27			0.28%
Y 371.029	689064.1	99.627 %		0.2066			0.21%
Y RADIAL	4809.8	101.0 %		0.84			0.83%
Ag 328.068†	-8.5	-0.0502 ug/L		0.29315	-0.0502 ppb	0.29315	584.39%
QC value within limits for Ag 328.068 Recovery = Not calculated							
Al 396.153Radial†	-6.9	-6.8391 ug/L		6.55807	-6.8391 ppb	6.55807	95.89%
QC value within limits for Al 396.153Radial Recovery = Not calculated							
As 188.979†	5.2	2.8450 ug/L		2.93238	2.8450 ppb	2.93238	103.07%
QC value within limits for As 188.979 Recovery = Not calculated							
B 249.677†	530.9	14.897 ug/L		0.1288	14.897 ppb	0.1288	0.86%
QC value within limits for B 249.677 Recovery = Not calculated							
Ba 233.527†	17.1	0.1593 ug/L		0.08483	0.1593 ppb	0.08483	53.25%
QC value within limits for Ba 233.527 Recovery = Not calculated							
Be 313.107†	83.0	0.0353 ug/L		0.01733	0.0353 ppb	0.01733	49.14%
QC value within limits for Be 313.107 Recovery = Not calculated							
Ca 317.933Radial†	6.2	11.716 ug/L		6.0069	11.716 ppb	6.0069	51.27%

QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	2.4	0.0364 ug/L	0.09492	0.0364 ppb	0.09492	260.66%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-3.6	-0.0930 ug/L	0.09311	-0.0930 ppb	0.09311	100.13%
QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	18.3	0.2428 ug/L	0.25864	0.2428 ppb	0.25864	106.54%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	101.7	0.3344 ug/L	0.04278	0.3344 ppb	0.04278	12.79%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	-1.1	-13.213 ug/L	6.5433	-13.213 ppb	6.5433	49.52%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated						
K 766.490 Radial†	246.6	46.983 ug/L	2.2993	46.983 ppb	2.2993	4.89%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	1.6	64.745 ug/L	28.2505	64.745 ppb	28.2505	43.63%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated						
Mn 257.610†	16.1	0.0173 ug/L	0.00685	0.0173 ppb	0.00685	39.68%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	5.0	0.4392 ug/L	0.72693	0.4392 ppb	0.72693	165.51%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	-20.4	-7.1939 ug/L	31.20291	-7.1939 ppb	31.20291	433.74%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	-7.0	-0.2232 ug/L	0.22549	-0.2232 ppb	0.22549	101.04%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	-1.8	-1.4062 ug/L	3.26718	-1.4062 ppb	3.26718	232.35%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	-0.6	-0.0907 ug/L	1.23706	-0.0907 ppb	1.23706	>999.9%
QC value within limits for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	-1.0	-1.6999 ug/L	3.90961	-1.6999 ppb	3.90961	229.99%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	9.8	4.1048 ug/L	2.73805	4.1048 ppb	2.73805	66.70%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	-0.6	-0.5750 ug/L	5.42099	-0.5750 ppb	5.42099	942.80%
QC value within limits for Se 196.026 Recovery = Not calculated						
Si 251.611†	56.9	2.1537 ug/L	0.38312	2.1537 ppb	0.38312	17.79%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	2.5	0.5717 ug/L	0.36138	0.5717 ppb	0.36138	63.21%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	-0.3	-0.0028 ug/L	0.09757	-0.0028 ppb	0.09757	>999.9%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	-19.8	-0.0386 ug/L	0.05470	-0.0386 ppb	0.05470	141.60%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	5.8	2.2594 ug/L	1.87131	2.2594 ppb	1.87131	82.82%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 409.014†	32.4	0.9826 ug/L	0.60400	0.9826 ppb	0.60400	61.47%
QC value within limits for U 409.014 Recovery = Not calculated						
V 292.402†	-27.8	-0.2109 ug/L	0.36853	-0.2109 ppb	0.36853	174.72%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	117.0	1.4205 ug/L	0.07489	1.4205 ppb	0.07489	5.27%
QC value within limits for Zn 213.857 Recovery = Not calculated						
SiO2†	57.7	4.6974 ug/L	1.98072	4.6974 ppb	1.98072	42.17%
QC value within limits for SiO2 Recovery = Not calculated						
All analyte(s) passed QC.						

Sequence No.: 8

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 3/19/2010 10:18:17

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4308.1	4308.1	98.0 %		10:20:30
1	Y RADIAL	4796.2	4796.2	100.7 %		10:20:10
1	Al 396.153Radial†	5020.5	5200.0	5083.7 ug/L	5083.7 ppb	10:20:10
1	Ca 317.933Radial†	2703.2	2742.1	5188.6 ug/L	5188.6 ppb	10:20:30
1	Fe 238.204 Radial†	458.1	458.9	5332.4 ug/L	5332.4 ppb	10:20:30
1	K 766.490 Radial†	29265.8	27258.0	5186.8 ug/L	5186.8 ppb	10:20:10
1	Mg 279.077 IEC†	128.8	129.9	5357.8 ug/L	5357.8 ppb	10:20:30
1	Na 589.592 Radial†	28262.5	29708.3	10473 ug/L	10473 ppb	10:20:10
1	Sr 421.552†	64065.1	65338.0	523.69 ug/L	523.69 ppb	10:20:10
1	Sc 361.383	840877.0	840877.0	102.69 %		10:21:27
1	Y 371.029	700106.4	700106.4	101.22 %		10:21:27
1	Ag 328.068†	98277.1	95514.6	499.06 ug/L	499.06 ppb	10:21:32
1	As 188.979†	922.7	925.3	512.29 ug/L	512.29 ppb	10:21:52
1	B 249.677†	17605.6	17681.2	493.72 ug/L	493.72 ppb	10:21:32
1	Ba 233.527†	54539.2	53109.6	498.70 ug/L	498.70 ppb	10:21:32
1	Be 313.107†	1210018.3	1182016.3	504.42 ug/L	504.42 ppb	10:21:27
1	Cd 226.502†	35152.8	34401.5	499.02 ug/L	499.02 ppb	10:21:32
1	Co 228.616†	20041.6	19562.2	505.71 ug/L	505.71 ppb	10:21:32
1	Cr 267.716†	38225.6	37151.6	499.27 ug/L	499.27 ppb	10:21:32
1	Cu 324.752†	158350.9	148646.1	490.76 ug/L	490.76 ppb	10:21:32
1	Mn 257.610†	390746.5	380110.0	500.08 ug/L	500.08 ppb	10:21:27
1	Mo 202.031†	5748.3	5589.0	497.29 ug/L	497.29 ppb	10:21:52
1	Ni 231.604†	16393.2	15879.2	503.98 ug/L	503.98 ppb	10:21:32
1	P 214.914†	3610.4	3328.4	2383.6 ug/L	2383.6 ppb	10:21:52
1	Pb 220.353†	3267.4	3240.1	499.18 ug/L	499.18 ppb	10:21:52
1	S 181.975 Axial†	599.3	553.4	989.74 ug/L	989.74 ppb	10:21:52
1	Sb 206.836†	1241.7	1185.5	513.90 ug/L	513.90 ppb	10:21:52
1	Se 196.026†	601.0	602.2	520.13 ug/L	520.13 ppb	10:21:52
1	Si 251.611†	67756.7	65491.6	2480.1 ug/L	2480.1 ppb	10:21:32
1	Sn 189.927†	2265.7	2199.2	499.66 ug/L	499.66 ppb	10:21:52
1	Ti 334.940†	286425.2	280034.8	486.85 ug/L	486.85 ppb	10:21:32
1	Tl 190.801†	1289.6	1284.9	500.36 ug/L	500.36 ppb	10:21:52
1	U 409.014†	14815.8	16631.5	502.85 ug/L	502.85 ppb	10:21:32
1	V 292.402†	62323.9	62006.9	501.75 ug/L	501.75 ppb	10:21:32
1	Zn 213.857†	42998.2	41300.5	495.75 ug/L	495.75 ppb	10:21:32
1	SiO2†	68433.6	66139.6	5384.2 ug/L	5384.2 ppb	10:23:00
2	Sc Radial	4303.6	4303.6	97.9 %		10:20:55
2	Y RADIAL	4888.7	4888.7	102.7 %		10:20:35
2	Al 396.153Radial†	5077.0	5263.0	5145.6 ug/L	5145.6 ppb	10:20:35
2	Ca 317.933Radial†	2703.5	2745.3	5194.6 ug/L	5194.6 ppb	10:20:55
2	Fe 238.204 Radial†	454.5	455.7	5294.9 ug/L	5294.9 ppb	10:20:55
2	K 766.490 Radial†	29796.5	27831.0	5295.9 ug/L	5295.9 ppb	10:20:35
2	Mg 279.077 IEC†	129.3	130.5	5384.2 ug/L	5384.2 ppb	10:20:55
2	Na 589.592 Radial†	28793.9	30281.0	10675 ug/L	10675 ppb	10:20:35
2	Sr 421.552†	65177.3	66541.7	533.34 ug/L	533.34 ppb	10:20:35
2	Sc 361.383	841989.2	841989.2	102.83 %		10:21:58
2	Y 371.029	701176.2	701176.2	101.38 %		10:21:58
2	Ag 328.068†	98955.0	96047.5	501.82 ug/L	501.82 ppb	10:22:03
2	As 188.979†	911.1	912.8	505.43 ug/L	505.43 ppb	10:22:23
2	B 249.677†	17727.0	17776.7	496.40 ug/L	496.40 ppb	10:22:03
2	Ba 233.527†	54790.6	53284.0	500.33 ug/L	500.33 ppb	10:22:03
2	Be 313.107†	1215519.9	1185810.1	506.04 ug/L	506.04 ppb	10:21:58
2	Cd 226.502†	35405.2	34601.8	501.93 ug/L	501.93 ppb	10:22:03
2	Co 228.616†	20165.2	19656.6	508.15 ug/L	508.15 ppb	10:22:03
2	Cr 267.716†	38383.2	37255.7	500.66 ug/L	500.66 ppb	10:22:03
2	Cu 324.752†	159218.3	149285.9	492.87 ug/L	492.87 ppb	10:22:03
2	Mn 257.610†	392163.2	380985.2	501.23 ug/L	501.23 ppb	10:21:58
2	Mo 202.031†	5763.9	5596.8	497.98 ug/L	497.98 ppb	10:22:23
2	Ni 231.604†	16452.0	15915.3	505.12 ug/L	505.12 ppb	10:22:03

2	P 214.914†	3642.1	3354.6	2402.7 ug/L	2402.7 ppb	10:22:23
2	Pb 220.353†	3262.6	3231.1	497.83 ug/L	497.83 ppb	10:22:23
2	S 181.975 Axial†	607.5	560.6	1002.6 ug/L	1002.6 ppb	10:22:23
2	Sb 206.836†	1261.5	1203.1	521.27 ug/L	521.27 ppb	10:22:23
2	Se 196.026†	606.4	606.7	523.77 ug/L	523.77 ppb	10:22:23
2	Si 251.611†	68049.2	65688.9	2487.6 ug/L	2487.6 ppb	10:22:03
2	Sn 189.927†	2268.5	2198.9	499.61 ug/L	499.61 ppb	10:22:23
2	Ti 334.940†	288221.2	281413.1	489.25 ug/L	489.25 ppb	10:22:03
2	Tl 190.801†	1312.0	1305.0	508.15 ug/L	508.15 ppb	10:22:23
2	U 409.014†	14914.3	16708.1	505.18 ug/L	505.18 ppb	10:22:03
2	V 292.402†	62602.0	62197.1	503.29 ug/L	503.29 ppb	10:22:03
2	Zn 213.857†	43197.0	41438.5	497.42 ug/L	497.42 ppb	10:22:03
2	SiO2†	68330.5	65951.3	5368.8 ug/L	5368.8 ppb	10:23:05
3	Sc Radial	4308.5	4308.5	98.0 %		10:21:20
3	Y RADIAL	4759.8	4759.8	99.98 %		10:21:00
3	Al 396.153Radial†	4982.1	5160.3	5044.7 ug/L	5044.7 ppb	10:21:00
3	Ca 317.933Radial†	2717.2	2756.1	5215.0 ug/L	5215.0 ppb	10:21:20
3	Fe 238.204 Radial†	458.5	459.2	5336.0 ug/L	5336.0 ppb	10:21:20
3	K 766.490 Radial†	29151.9	27138.8	5164.1 ug/L	5164.1 ppb	10:21:00
3	Mg 279.077 IEC†	130.2	131.2	5413.8 ug/L	5413.8 ppb	10:21:20
3	Na 589.592 Radial†	27882.2	29317.5	10335 ug/L	10335 ppb	10:21:00
3	Sr 421.552†	63477.4	64731.9	518.84 ug/L	518.84 ppb	10:21:00
3	Sc 361.383	841584.9	841584.9	102.78 %		10:22:29
3	Y 371.029	700121.4	700121.4	101.23 %		10:22:29
3	Ag 328.068†	97908.8	95075.7	496.77 ug/L	496.77 ppb	10:22:34
3	As 188.979†	915.3	917.4	507.90 ug/L	507.90 ppb	10:22:54
3	B 249.677†	17549.2	17611.9	491.79 ug/L	491.79 ppb	10:22:34
3	Ba 233.527†	54162.2	52698.1	494.84 ug/L	494.84 ppb	10:22:34
3	Be 313.107†	1208532.2	1179579.3	503.37 ug/L	503.37 ppb	10:22:29
3	Cd 226.502†	34838.9	34067.3	494.17 ug/L	494.17 ppb	10:22:34
3	Co 228.616†	19861.8	19370.8	500.77 ug/L	500.77 ppb	10:22:34
3	Cr 267.716†	37945.5	36847.8	495.19 ug/L	495.19 ppb	10:22:34
3	Cu 324.752†	157797.9	147978.4	488.55 ug/L	488.55 ppb	10:22:34
3	Mn 257.610†	390735.5	379779.2	499.65 ug/L	499.65 ppb	10:22:29
3	Mo 202.031†	5752.3	5588.2	497.22 ug/L	497.22 ppb	10:22:54
3	Ni 231.604†	16284.0	15759.5	500.18 ug/L	500.18 ppb	10:22:34
3	P 214.914†	3613.2	3328.2	2383.8 ug/L	2383.8 ppb	10:22:54
3	Pb 220.353†	3273.8	3243.6	499.72 ug/L	499.72 ppb	10:22:54
3	S 181.975 Axial†	608.0	561.3	1004.0 ug/L	1004.0 ppb	10:22:54
3	Sb 206.836†	1261.0	1203.2	521.27 ug/L	521.27 ppb	10:22:54
3	Se 196.026†	609.0	609.5	526.24 ug/L	526.24 ppb	10:22:54
3	Si 251.611†	67209.5	64903.6	2457.8 ug/L	2457.8 ppb	10:22:34
3	Sn 189.927†	2261.1	2192.7	498.21 ug/L	498.21 ppb	10:22:54
3	Ti 334.940†	284900.4	278316.7	483.86 ug/L	483.86 ppb	10:22:34
3	Tl 190.801†	1308.4	1302.1	507.01 ug/L	507.01 ppb	10:22:54
3	U 409.014†	14819.6	16623.0	502.60 ug/L	502.60 ppb	10:22:34
3	V 292.402†	61893.7	61537.3	498.00 ug/L	498.00 ppb	10:22:34
3	Zn 213.857†	42671.0	40946.9	491.50 ug/L	491.50 ppb	10:22:34
3	SiO2†	68350.8	66003.0	5373.1 ug/L	5373.1 ppb	10:23:10

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	841483.7	102.77 %	0.069			0.07%
Sc Radial	4306.7	98.0 %	0.06			0.06%
Y 371.029	700468.0	101.28 %	0.089			0.09%
Y RADIAL	4814.9	101.1 %	1.40			1.38%
Ag 328.068†	95546.0	499.22 ug/L	2.529	499.22 ppb	2.529	0.51%
QC value within limits for Ag 328.068 Recovery = 99.84%						
Al 396.153Radial†	5207.8	5091.3 ug/L	50.85	5091.3 ppb	50.85	1.00%
QC value within limits for Al 396.153Radial Recovery = 101.83%						
As 188.979†	918.5	508.54 ug/L	3.473	508.54 ppb	3.473	0.68%
QC value within limits for As 188.979 Recovery = 101.71%						
B 249.677†	17689.9	493.97 ug/L	2.314	493.97 ppb	2.314	0.47%
QC value within limits for B 249.677 Recovery = 98.79%						
Ba 233.527†	53030.6	497.96 ug/L	2.823	497.96 ppb	2.823	0.57%
QC value within limits for Ba 233.527 Recovery = 99.59%						
Be 313.107†	1182468.6	504.61 ug/L	1.343	504.61 ppb	1.343	0.27%
QC value within limits for Be 313.107 Recovery = 100.92%						
Ca 317.933Radial†	2747.8	5199.4 ug/L	13.84	5199.4 ppb	13.84	0.27%

QC value within limits for Ca 317.933 Radial Recovery = 103.99%

Cd 226.502†	34356.9	498.37 ug/L	3.922	498.37 ppb	3.922	0.79%
QC value within limits for Cd 226.502 Recovery = 99.67%						
Co 228.616†	19529.9	504.88 ug/L	3.759	504.88 ppb	3.759	0.74%
QC value within limits for Co 228.616 Recovery = 100.98%						
Cr 267.716†	37085.1	498.38 ug/L	2.844	498.38 ppb	2.844	0.57%
QC value within limits for Cr 267.716 Recovery = 99.68%						
Cu 324.752†	148636.8	490.73 ug/L	2.157	490.73 ppb	2.157	0.44%
QC value within limits for Cu 324.752 Recovery = 98.15%						
Fe 238.204 Radial†	457.9	5321.1 ug/L	22.78	5321.1 ppb	22.78	0.43%
QC value within limits for Fe 238.204 Radial Recovery = 106.42%						
K 766.490 Radial†	27409.3	5215.6 ug/L	70.44	5215.6 ppb	70.44	1.35%
QC value within limits for K 766.490 Radial Recovery = 104.31%						
Mg 279.077 IEC†	130.6	5385.2 ug/L	28.03	5385.2 ppb	28.03	0.52%
QC value within limits for Mg 279.077 IEC Recovery = 107.70%						
Mn 257.610†	380291.5	500.32 ug/L	0.817	500.32 ppb	0.817	0.16%
QC value within limits for Mn 257.610 Recovery = 100.06%						
Mo 202.031†	5591.3	497.49 ug/L	0.422	497.49 ppb	0.422	0.08%
QC value within limits for Mo 202.031 Recovery = 99.50%						
Na 589.592 Radial†	29768.9	10494 ug/L	170.8	10494 ppb	170.8	1.63%
QC value within limits for Na 589.592 Radial Recovery = 104.94%						
Ni 231.604†	15851.3	503.09 ug/L	2.588	503.09 ppb	2.588	0.51%
QC value within limits for Ni 231.604 Recovery = 100.62%						
P 214.914†	3337.1	2390.0 ug/L	10.97	2390.0 ppb	10.97	0.46%
QC value within limits for P 214.914 Recovery = 95.60%						
Pb 220.353†	3238.3	498.91 ug/L	0.975	498.91 ppb	0.975	0.20%
QC value within limits for Pb 220.353 Recovery = 99.78%						
S 181.975 Axial†	558.4	998.75 ug/L	7.834	998.75 ppb	7.834	0.78%
QC value within limits for S 181.975 Axial Recovery = 99.88%						
Sb 206.836†	1197.3	518.82 ug/L	4.257	518.82 ppb	4.257	0.82%
QC value within limits for Sb 206.836 Recovery = 103.76%						
Se 196.026†	606.1	523.38 ug/L	3.070	523.38 ppb	3.070	0.59%
QC value within limits for Se 196.026 Recovery = 104.68%						
Si 251.611†	65361.4	2475.2 ug/L	15.50	2475.2 ppb	15.50	0.63%
QC value within limits for Si 251.611 Recovery = 99.01%						
Sn 189.927†	2196.9	499.16 ug/L	0.823	499.16 ppb	0.823	0.16%
QC value within limits for Sn 189.927 Recovery = 99.83%						
Sr 421.552†	65537.2	525.29 ug/L	7.384	525.29 ppb	7.384	1.41%
QC value within limits for Sr 421.552 Recovery = 105.06%						
Ti 334.940†	279921.5	486.65 ug/L	2.696	486.65 ppb	2.696	0.55%
QC value within limits for Ti 334.940 Recovery = 97.33%						
Tl 190.801†	1297.3	505.18 ug/L	4.211	505.18 ppb	4.211	0.83%
QC value within limits for Tl 190.801 Recovery = 101.04%						
U 409.014†	16654.2	503.54 ug/L	1.421	503.54 ppb	1.421	0.28%
QC value within limits for U 409.014 Recovery = 100.71%						
V 292.402†	61913.8	501.01 ug/L	2.717	501.01 ppb	2.717	0.54%
QC value within limits for V 292.402 Recovery = 100.20%						
Zn 213.857†	41228.6	494.89 ug/L	3.055	494.89 ppb	3.055	0.62%
QC value within limits for Zn 213.857 Recovery = 98.98%						
SiO2†	66031.3	5375.4 ug/L	7.95	5375.4 ppb	7.95	0.15%
QC value within limits for SiO2 Recovery = 100.52%						

All analyte(s) passed QC.

Sequence No.: 9

Sample ID: PQL

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 11

Date Collected: 3/19/2010 10:25:21

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	4401.9	4401.9	100 %		10:27:15
1	Y RADIAL	4788.6	4788.6	100.6 %		10:27:15
1	Al 396.153Radial†	146.5	224.3	219.87 ug/L	219.87 ppb	10:27:35
1	Ca 317.933Radial†	136.1	120.2	227.52 ug/L	227.52 ppb	10:27:35
1	Fe 238.204 Radial†	19.2	10.7	124.60 ug/L	124.60 ppb	10:27:35
1	K 766.490 Radial†	3512.0	907.8	172.76 ug/L	172.76 ppb	10:27:15
1	Mg 279.077 IEC†	10.2	8.7	357.89 ug/L	357.89 ppb	10:27:35
1	Na 589.592 Radial†	-57.8	817.4	288.14 ug/L	288.14 ppb	10:27:15
1	Sr 421.552†	647.2	625.4	5.0111 ug/L	5.0111 ppb	10:27:15
1	Sc 361.383	822284.0	822284.0	100.42 %		10:28:32
1	Y 371.029	695589.3	695589.3	100.57 %		10:28:32
1	Ag 328.068†	1144.7	954.7	4.9620 ug/L	4.9620 ppb	10:28:32
1	As 188.979†	36.5	63.1	34.698 ug/L	34.698 ppb	10:28:52
1	B 249.677†	1493.9	2025.0	56.772 ug/L	56.772 ppb	10:28:32
1	Ba 233.527†	582.9	581.2	5.4571 ug/L	5.4571 ppb	10:28:52
1	Be 313.107†	8407.8	12103.5	5.1650 ug/L	5.1650 ppb	10:28:32
1	Cd 226.502†	205.0	374.8	5.4403 ug/L	5.4403 ppb	10:28:52
1	Co 228.616†	171.5	216.9	5.6192 ug/L	5.6192 ppb	10:28:52
1	Cr 267.716†	442.0	368.7	4.9398 ug/L	4.9398 ppb	10:28:52
1	Cu 324.752†	8629.8	3041.5	10.015 ug/L	10.015 ppb	10:28:32
1	Mn 257.610†	8561.3	8136.2	10.695 ug/L	10.695 ppb	10:28:32
1	Mo 202.031†	123.8	114.8	10.213 ug/L	10.213 ppb	10:28:52
1	Ni 231.604†	263.1	177.9	5.6471 ug/L	5.6471 ppb	10:28:52
1	P 214.914†	398.2	209.3	153.94 ug/L	153.94 ppb	10:28:52
1	Pb 220.353†	22.2	80.4	12.408 ug/L	12.408 ppb	10:28:52
1	S 181.975 Axial†	91.1	60.5	108.34 ug/L	108.34 ppb	10:28:52
1	Sb 206.836†	52.8	28.9	12.468 ug/L	12.468 ppb	10:28:52
1	Se 196.026†	20.4	37.2	31.477 ug/L	31.477 ppb	10:28:52
1	Si 251.611†	3185.3	2683.8	101.76 ug/L	101.76 ppb	10:28:52
1	Sn 189.927†	52.1	44.7	10.174 ug/L	10.174 ppb	10:28:52
1	Ti 334.940†	1753.5	2867.3	4.9598 ug/L	4.9598 ppb	10:28:32
1	Tl 190.801†	14.1	43.1	16.750 ug/L	16.750 ppb	10:28:52
1	U 409.014†	-246.9	1958.4	59.388 ug/L	59.388 ppb	10:28:32
1	V 292.402†	-752.2	568.4	4.7786 ug/L	4.7786 ppb	10:28:32
1	Zn 213.857†	1728.5	1151.2	13.880 ug/L	13.880 ppb	10:28:52
1	SiO2†	3288.3	2775.2	226.21 ug/L	226.21 ppb	10:29:48
2	Sc Radial	4445.8	4445.8	101 %		10:27:40
2	Y RADIAL	4794.0	4794.0	100.7 %		10:27:40
2	Al 396.153Radial†	128.3	204.9	200.78 ug/L	200.78 ppb	10:28:00
2	Ca 317.933Radial†	134.8	117.6	222.53 ug/L	222.53 ppb	10:28:00
2	Fe 238.204 Radial†	17.2	8.5	99.164 ug/L	99.164 ppb	10:28:00
2	K 766.490 Radial†	3570.5	931.1	177.19 ug/L	177.19 ppb	10:27:40
2	Mg 279.077 IEC†	10.9	9.3	382.08 ug/L	382.08 ppb	10:28:00
2	Na 589.592 Radial†	-46.0	829.6	292.46 ug/L	292.46 ppb	10:27:40
2	Sr 421.552†	645.8	617.6	4.9488 ug/L	4.9488 ppb	10:27:40
2	Sc 361.383	837271.4	837271.4	102.25 %		10:28:57
2	Y 371.029	706698.5	706698.5	102.18 %		10:28:57
2	Ag 328.068†	1173.1	962.1	4.9980 ug/L	4.9980 ppb	10:28:57
2	As 188.979†	26.2	52.4	28.810 ug/L	28.810 ppb	10:29:17
2	B 249.677†	1558.8	2061.8	57.810 ug/L	57.810 ppb	10:28:57
2	Ba 233.527†	574.9	562.9	5.2872 ug/L	5.2872 ppb	10:29:17
2	Be 313.107†	8476.9	12021.1	5.1302 ug/L	5.1302 ppb	10:28:57
2	Cd 226.502†	192.3	358.7	5.2089 ug/L	5.2089 ppb	10:29:17
2	Co 228.616†	160.2	202.9	5.2573 ug/L	5.2573 ppb	10:29:17
2	Cr 267.716†	476.6	394.6	5.2868 ug/L	5.2868 ppb	10:29:17
2	Cu 324.752†	8870.3	3122.9	10.284 ug/L	10.284 ppb	10:28:57
2	Mn 257.610†	8683.2	8102.8	10.648 ug/L	10.648 ppb	10:28:57
2	Mo 202.031†	129.1	117.7	10.475 ug/L	10.475 ppb	10:29:17
2	Ni 231.604†	264.0	174.1	5.5251 ug/L	5.5251 ppb	10:29:17

2	P 214.914†	395.3	199.3	146.52 ug/L	146.52 ppb	10:29:17
2	Pb 220.353†	27.6	85.3	13.165 ug/L	13.165 ppb	10:29:17
2	S 181.975 Axial†	84.9	52.8	94.531 ug/L	94.531 ppb	10:29:17
2	Sb 206.836†	44.5	19.9	8.7098 ug/L	8.7098 ppb	10:29:17
2	Se 196.026†	19.1	35.7	30.097 ug/L	30.097 ppb	10:29:17
2	Si 251.611†	3158.6	2600.8	98.606 ug/L	98.606 ppb	10:29:17
2	Sn 189.927†	61.3	52.8	12.017 ug/L	12.017 ppb	10:29:17
2	Ti 334.940†	1832.6	2913.4	5.0386 ug/L	5.0386 ppb	10:28:57
2	Tl 190.801†	27.5	56.0	21.724 ug/L	21.724 ppb	10:29:17
2	U 409.014†	-357.4	1854.6	56.243 ug/L	56.243 ppb	10:28:57
2	V 292.402†	-677.4	654.9	5.4708 ug/L	5.4708 ppb	10:28:57
2	Zn 213.857†	1716.0	1108.1	13.363 ug/L	13.363 ppb	10:29:17
2	SiO2†	3289.2	2717.4	221.49 ug/L	221.49 ppb	10:29:53
3	Sc Radial	4483.3	4483.3	102 %		10:28:05
3	Y RADIAL	4841.5	4841.5	101.7 %		10:28:05
3	Al 396.153Radial†	141.9	217.2	212.85 ug/L	212.85 ppb	10:28:25
3	Ca 317.933Radial†	130.9	112.7	213.20 ug/L	213.20 ppb	10:28:25
3	Fe 238.204 Radial†	17.3	8.5	98.662 ug/L	98.662 ppb	10:28:25
3	K 766.490 Radial†	3517.4	849.4	161.64 ug/L	161.64 ppb	10:28:05
3	Mg 279.077 IEC†	11.7	10.0	411.68 ug/L	411.68 ppb	10:28:25
3	Na 589.592 Radial†	-82.3	794.4	280.04 ug/L	280.04 ppb	10:28:05
3	Sr 421.552†	670.9	636.9	5.1036 ug/L	5.1036 ppb	10:28:05
3	Sc 361.383	836240.4	836240.4	102.13 %		10:29:23
3	Y 371.029	705188.3	705188.3	101.96 %		10:29:23
3	Ag 328.068†	1229.5	1018.7	5.2884 ug/L	5.2884 ppb	10:29:23
3	As 188.979†	36.9	62.9	34.584 ug/L	34.584 ppb	10:29:43
3	B 249.677†	1533.7	2039.1	57.173 ug/L	57.173 ppb	10:29:23
3	Ba 233.527†	569.0	557.9	5.2383 ug/L	5.2383 ppb	10:29:43
3	Be 313.107†	8522.5	12076.1	5.1539 ug/L	5.1539 ppb	10:29:23
3	Cd 226.502†	187.5	354.2	5.1435 ug/L	5.1435 ppb	10:29:43
3	Co 228.616†	163.0	205.8	5.3306 ug/L	5.3306 ppb	10:29:43
3	Cr 267.716†	463.5	382.4	5.1218 ug/L	5.1218 ppb	10:29:43
3	Cu 324.752†	8786.4	3051.5	10.048 ug/L	10.048 ppb	10:29:23
3	Mn 257.610†	8625.6	8056.9	10.586 ug/L	10.586 ppb	10:29:23
3	Mo 202.031†	124.3	113.2	10.075 ug/L	10.075 ppb	10:29:43
3	Ni 231.604†	259.0	169.5	5.3803 ug/L	5.3803 ppb	10:29:43
3	P 214.914†	398.5	202.9	149.24 ug/L	149.24 ppb	10:29:43
3	Pb 220.353†	12.0	70.1	10.819 ug/L	10.819 ppb	10:29:43
3	S 181.975 Axial†	85.1	53.1	95.060 ug/L	95.060 ppb	10:29:43
3	Sb 206.836†	57.7	32.9	14.105 ug/L	14.105 ppb	10:29:43
3	Se 196.026†	20.8	37.3	31.498 ug/L	31.498 ppb	10:29:43
3	Si 251.611†	3182.8	2628.4	99.656 ug/L	99.656 ppb	10:29:43
3	Sn 189.927†	53.7	45.4	10.337 ug/L	10.337 ppb	10:29:43
3	Ti 334.940†	1907.5	2989.0	5.1660 ug/L	5.1660 ppb	10:29:23
3	Tl 190.801†	25.8	54.4	21.092 ug/L	21.092 ppb	10:29:43
3	U 409.014†	-327.0	1884.0	57.134 ug/L	57.134 ppb	10:29:23
3	V 292.402†	-763.5	569.9	4.7882 ug/L	4.7882 ppb	10:29:23
3	Zn 213.857†	1721.2	1115.3	13.451 ug/L	13.451 ppb	10:29:43
3	SiO2†	3260.7	2693.5	219.55 ug/L	219.55 ppb	10:29:58

Mean Data: PQL

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	831931.9	101.60 %		1.022			1.01%
Sc Radial	4443.7	101 %		0.9			0.92%
Y 371.029	702492.0	101.57 %		0.871			0.86%
Y RADIAL	4808.0	101.0 %		0.61			0.61%
Ag 328.068†	978.5	5.0828 ug/L		0.17895	5.0828 ppb	0.17895	3.52%
QC value within limits for Ag 328.068 Recovery = 101.66%							
Al 396.153Radial†	215.5	211.17 ug/L		9.660	211.17 ppb	9.660	4.57%
QC value within limits for Al 396.153Radial Recovery = 105.58%							
As 188.979†	59.5	32.697 ug/L		3.3670	32.697 ppb	3.3670	10.30%
QC value within limits for As 188.979 Recovery = 108.99%							
B 249.677†	2041.9	57.252 ug/L		0.5232	57.252 ppb	0.5232	0.91%
QC value within limits for B 249.677 Recovery = 114.50%							
Ba 233.527†	567.3	5.3275 ug/L		0.11484	5.3275 ppb	0.11484	2.16%
QC value within limits for Ba 233.527 Recovery = 106.55%							
Be 313.107†	12066.9	5.1497 ug/L		0.01781	5.1497 ppb	0.01781	0.35%
QC value within limits for Be 313.107 Recovery = 102.99%							
Ca 317.933Radial†	116.8	221.08 ug/L		7.270	221.08 ppb	7.270	3.29%

QC value within limits for Ca 317.933 Radial Recovery = 110.54%

Cd 226.502†	362.6	5.2642 ug/L	0.15594	5.2642 ppb	0.15594	2.96%
QC value within limits for Cd 226.502 Recovery = 105.28%						
Co 228.616†	208.5	5.4024 ug/L	0.19132	5.4024 ppb	0.19132	3.54%
QC value within limits for Co 228.616 Recovery = 108.05%						
Cr 267.716†	381.9	5.1161 ug/L	0.17357	5.1161 ppb	0.17357	3.39%
QC value within limits for Cr 267.716 Recovery = 102.32%						
Cu 324.752†	3071.9	10.116 ug/L	0.1468	10.116 ppb	0.1468	1.45%
QC value within limits for Cu 324.752 Recovery = 101.16%						
Fe 238.204 Radial†	9.3	107.47 ug/L	14.830	107.47 ppb	14.830	13.80%
QC value within limits for Fe 238.204 Radial Recovery = 107.47%						
K 766.490 Radial†	896.1	170.53 ug/L	8.011	170.53 ppb	8.011	4.70%
QC value within limits for K 766.490 Radial Recovery = 113.69%						
Mg 279.077 IEC†	9.3	383.89 ug/L	26.941	383.89 ppb	26.941	7.02%
QC value within limits for Mg 279.077 IEC Recovery = 127.96%						
Mn 257.610†	8098.6	10.643 ug/L	0.0547	10.643 ppb	0.0547	0.51%
QC value within limits for Mn 257.610 Recovery = 106.43%						
Mo 202.031†	115.2	10.254 ug/L	0.2030	10.254 ppb	0.2030	1.98%
QC value within limits for Mo 202.031 Recovery = 102.54%						
Na 589.592 Radial†	813.8	286.88 ug/L	6.307	286.88 ppb	6.307	2.20%
QC value within limits for Na 589.592 Radial Recovery = 95.63%						
Ni 231.604†	173.8	5.5175 ug/L	0.13352	5.5175 ppb	0.13352	2.42%
QC value within limits for Ni 231.604 Recovery = 110.35%						
P 214.914†	203.8	149.90 ug/L	3.755	149.90 ppb	3.755	2.50%
QC value within limits for P 214.914 Recovery = 99.93%						
Pb 220.353†	78.6	12.131 ug/L	1.1974	12.131 ppb	1.1974	9.87%
QC value within limits for Pb 220.353 Recovery = 121.31%						
S 181.975 Axial†	55.5	99.309 ug/L	7.8229	99.309 ppb	7.8229	7.88%
QC value within limits for S 181.975 Axial Recovery = 99.31%						
Sb 206.836†	27.2	11.761 ug/L	2.7662	11.761 ppb	2.7662	23.52%
QC value within limits for Sb 206.836 Recovery = 117.61%						
Se 196.026†	36.8	31.024 ug/L	0.8032	31.024 ppb	0.8032	2.59%
QC value within limits for Se 196.026 Recovery = 103.41%						
Si 251.611†	2637.7	100.01 ug/L	1.605	100.01 ppb	1.605	1.60%
QC value within limits for Si 251.611 Recovery = 100.01%						
Sn 189.927†	47.6	10.843 ug/L	1.0204	10.843 ppb	1.0204	9.41%
QC value within limits for Sn 189.927 Recovery = 108.43%						
Sr 421.552†	626.6	5.0212 ug/L	0.07790	5.0212 ppb	0.07790	1.55%
QC value within limits for Sr 421.552 Recovery = 100.42%						
Ti 334.940†	2923.2	5.0548 ug/L	0.10406	5.0548 ppb	0.10406	2.06%
QC value within limits for Ti 334.940 Recovery = 101.10%						
Tl 190.801†	51.2	19.855 ug/L	2.7075	19.855 ppb	2.7075	13.64%
QC value within limits for Tl 190.801 Recovery = 99.28%						
U 409.014†	1899.0	57.588 ug/L	1.6212	57.588 ppb	1.6212	2.82%
QC value within limits for U 409.014 Recovery = 115.18%						
V 292.402†	597.7	5.0125 ug/L	0.39690	5.0125 ppb	0.39690	7.92%
QC value within limits for V 292.402 Recovery = 100.25%						
Zn 213.857†	1124.9	13.565 ug/L	0.2770	13.565 ppb	0.2770	2.04%
QC value greater than the upper limit for Zn 213.857 Recovery = 135.65%						
SiO2†	2728.7	222.41 ug/L	3.427	222.41 ppb	3.427	1.54%
QC value within limits for SiO2 Recovery = 104.42%						

QC Failed. Continue with analysis.

Sequence No.: 10
 Sample ID: CCB
 Analyst:
 Initial Sample Wt:
 Dilution:

Autosampler Location: 8
 Date Collected: 3/19/2010 10:32:10
 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	4467.1	4467.1	102 %		10:34:02
1	Y RADIAL	4880.5	4880.5	102.5 %		10:34:02
1	Al 396.153Radial†	-80.8	-1.4	-1.4230 ug/L	-1.4230 ppb	10:34:22
1	Ca 317.933Radial†	21.9	5.8	11.020 ug/L	11.020 ppb	10:34:22
1	Fe 238.204 Radial†	9.9	1.3	14.506 ug/L	14.506 ppb	10:34:22
1	K 766.490 Radial†	2657.3	15.7	2.9980 ug/L	2.9980 ppb	10:34:02
1	Mg 279.077 IEC†	0.7	-0.8	-34.124 ug/L	-34.124 ppb	10:34:22
1	Na 589.592 Radial†	-924.0	-34.0	-11.981 ug/L	-11.981 ppb	10:34:02
1	Sr 421.552†	21.1	-0.1	-0.0006 ug/L	-0.0006 ppb	10:34:02
1	Sc 361.383	815849.0	815849.0	99.637 %		10:35:19
1	Y 371.029	689649.4	689649.4	99.711 %		10:35:19
1	Ag 328.068†	248.9	64.7	0.3382 ug/L	0.3382 ppb	10:35:19
1	As 188.979†	-18.2	8.5	4.6577 ug/L	4.6577 ppb	10:35:39
1	B 249.677†	-318.6	217.6	6.1019 ug/L	6.1019 ppb	10:35:39
1	Ba 233.527†	7.9	8.6	0.0808 ug/L	0.0808 ppb	10:35:39
1	Be 313.107†	-3623.2	94.6	0.0402 ug/L	0.0402 ppb	10:35:19
1	Cd 226.502†	-173.7	-3.7	-0.0547 ug/L	-0.0547 ppb	10:35:39
1	Co 228.616†	-45.6	0.5	0.0135 ug/L	0.0135 ppb	10:35:39
1	Cr 267.716†	76.1	4.9	0.0662 ug/L	0.0662 ppb	10:35:39
1	Cu 324.752†	5630.0	98.6	0.3251 ug/L	0.3251 ppb	10:35:19
1	Mn 257.610†	436.1	48.7	0.0668 ug/L	0.0668 ppb	10:35:39
1	Mo 202.031†	13.8	5.3	0.4709 ug/L	0.4709 ppb	10:35:39
1	Ni 231.604†	78.0	-5.8	-0.1828 ug/L	-0.1828 ppb	10:35:39
1	P 214.914†	190.4	3.8	2.7615 ug/L	2.7615 ppb	10:35:39
1	Pb 220.353†	-44.4	13.7	2.1042 ug/L	2.1042 ppb	10:35:39
1	S 181.975 Axial†	28.0	-2.1	-3.6725 ug/L	-3.6725 ppb	10:35:39
1	Sb 206.836†	44.0	20.5	8.5973 ug/L	8.5973 ppb	10:35:39
1	Se 196.026†	-15.0	1.9	1.6296 ug/L	1.6296 ppb	10:35:39
1	Si 251.611†	543.0	56.8	2.1517 ug/L	2.1517 ppb	10:35:39
1	Sn 189.927†	11.5	4.4	0.9946 ug/L	0.9946 ppb	10:35:39
1	Ti 334.940†	-1142.7	-25.7	-0.0413 ug/L	-0.0413 ppb	10:35:19
1	Tl 190.801†	-30.9	-1.9	-0.7441 ug/L	-0.7441 ppb	10:35:39
1	U 409.014†	-2131.9	64.5	1.9553 ug/L	1.9553 ppb	10:35:19
1	V 292.402†	-1328.1	-15.5	-0.1162 ug/L	-0.1162 ppb	10:35:19
1	Zn 213.857†	714.3	146.8	1.7773 ug/L	1.7773 ppb	10:35:39
1	SiO2†	550.1	52.8	4.2972 ug/L	4.2972 ppb	10:36:35
2	Sc Radial	4480.4	4480.4	102 %		10:34:27
2	Y RADIAL	4876.8	4876.8	102.4 %		10:34:27
2	Al 396.153Radial†	-82.1	-2.5	-2.4574 ug/L	-2.4574 ppb	10:34:47
2	Ca 317.933Radial†	28.0	11.8	22.307 ug/L	22.307 ppb	10:34:47
2	Fe 238.204 Radial†	8.1	-0.5	-5.7454 ug/L	-5.7454 ppb	10:34:47
2	K 766.490 Radial†	2699.4	49.2	9.3714 ug/L	9.3714 ppb	10:34:27
2	Mg 279.077 IEC†	0.5	-1.0	-40.966 ug/L	-40.966 ppb	10:34:47
2	Na 589.592 Radial†	-910.7	-18.3	-6.4367 ug/L	-6.4367 ppb	10:34:27
2	Sr 421.552†	-14.0	-34.6	-0.2774 ug/L	-0.2774 ppb	10:34:27
2	Sc 361.383	818594.5	818594.5	99.972 %		10:35:44
2	Y 371.029	691573.4	691573.4	99.989 %		10:35:44
2	Ag 328.068†	183.2	-1.9	-0.0151 ug/L	-0.0151 ppb	10:35:44
2	As 188.979†	-18.7	8.1	4.4279 ug/L	4.4279 ppb	10:36:04
2	B 249.677†	-356.2	181.1	5.0804 ug/L	5.0804 ppb	10:36:04
2	Ba 233.527†	12.6	13.3	0.1235 ug/L	0.1235 ppb	10:36:04
2	Be 313.107†	-3656.6	73.3	0.0312 ug/L	0.0312 ppb	10:35:44
2	Cd 226.502†	-161.3	9.3	0.1357 ug/L	0.1357 ppb	10:36:04
2	Co 228.616†	-43.0	3.2	0.0842 ug/L	0.0842 ppb	10:36:04
2	Cr 267.716†	47.3	-24.2	-0.3265 ug/L	-0.3265 ppb	10:36:04
2	Cu 324.752†	5641.1	90.7	0.2980 ug/L	0.2980 ppb	10:35:44
2	Mn 257.610†	423.6	34.6	0.0466 ug/L	0.0466 ppb	10:36:04
2	Mo 202.031†	11.0	2.5	0.2183 ug/L	0.2183 ppb	10:36:04
2	Ni 231.604†	94.5	10.4	0.3309 ug/L	0.3309 ppb	10:36:04

2	P 214.914†	171.8	-15.5	-11.576 ug/L	-11.576 ppb	10:36:04
2	Pb 220.353†	-62.1	-3.8	-0.5818 ug/L	-0.5818 ppb	10:36:04
2	S 181.975 Axial†	28.6	-1.6	-2.8708 ug/L	-2.8708 ppb	10:36:04
2	Sb 206.836†	32.1	8.4	3.5319 ug/L	3.5319 ppb	10:36:04
2	Se 196.026†	-19.4	-2.4	-2.0415 ug/L	-2.0415 ppb	10:36:04
2	Si 251.611†	545.7	57.7	2.1873 ug/L	2.1873 ppb	10:36:04
2	Sn 189.927†	7.4	0.3	0.0664 ug/L	0.0664 ppb	10:36:04
2	Ti 334.940†	-1137.7	-16.8	-0.0238 ug/L	-0.0238 ppb	10:35:44
2	Tl 190.801†	-27.1	1.9	0.7540 ug/L	0.7540 ppb	10:36:04
2	U 409.014†	-2129.2	74.5	2.2602 ug/L	2.2602 ppb	10:35:44
2	V 292.402†	-1364.3	-47.2	-0.3696 ug/L	-0.3696 ppb	10:35:44
2	Zn 213.857†	727.3	157.4	1.9055 ug/L	1.9055 ppb	10:36:04
2	SiO2†	549.9	50.7	4.1340 ug/L	4.1340 ppb	10:36:40
3	Sc Radial	4415.9	4415.9	100 %		10:34:52
3	Y RADIAL	4804.7	4804.7	100.9 %		10:34:52
3	Al 396.153Radial†	-69.6	8.8	8.6302 ug/L	8.6302 ppb	10:35:12
3	Ca 317.933Radial†	26.4	10.6	19.996 ug/L	19.996 ppb	10:35:12
3	Fe 238.204 Radial†	7.2	-1.3	-14.518 ug/L	-14.518 ppb	10:35:12
3	K 766.490 Radial†	2636.1	25.0	4.7603 ug/L	4.7603 ppb	10:34:52
3	Mg 279.077 IEC†	1.4	-0.2	-6.9036 ug/L	-6.9036 ppb	10:35:12
3	Na 589.592 Radial†	-934.4	-54.9	-19.340 ug/L	-19.340 ppb	10:34:52
3	Sr 421.552†	23.2	2.2	0.0179 ug/L	0.0179 ppb	10:34:52
3	Sc 361.383	837815.6	837815.6	102.32 %		10:36:09
3	Y 371.029	707201.2	707201.2	102.25 %		10:36:09
3	Ag 328.068†	256.6	65.6	0.3313 ug/L	0.3313 ppb	10:36:09
3	As 188.979†	-21.0	6.2	3.4192 ug/L	3.4192 ppb	10:36:29
3	B 249.677†	-354.2	191.2	5.3659 ug/L	5.3659 ppb	10:36:29
3	Ba 233.527†	13.5	13.9	0.1289 ug/L	0.1289 ppb	10:36:29
3	Be 313.107†	-3751.0	65.0	0.0280 ug/L	0.0280 ppb	10:36:09
3	Cd 226.502†	-171.4	3.1	0.0472 ug/L	0.0472 ppb	10:36:29
3	Co 228.616†	-49.6	-2.3	-0.0579 ug/L	-0.0579 ppb	10:36:29
3	Cr 267.716†	79.9	6.6	0.0846 ug/L	0.0846 ppb	10:36:29
3	Cu 324.752†	5709.2	27.8	0.0887 ug/L	0.0887 ppb	10:36:09
3	Mn 257.610†	417.8	19.2	0.0241 ug/L	0.0241 ppb	10:36:29
3	Mo 202.031†	15.3	6.4	0.5693 ug/L	0.5693 ppb	10:36:29
3	Ni 231.604†	91.9	5.8	0.1838 ug/L	0.1838 ppb	10:36:29
3	P 214.914†	172.1	-19.0	-14.192 ug/L	-14.192 ppb	10:36:29
3	Pb 220.353†	-53.9	5.6	0.8719 ug/L	0.8719 ppb	10:36:29
3	S 181.975 Axial†	27.2	-3.6	-6.5009 ug/L	-6.5009 ppb	10:36:29
3	Sb 206.836†	31.6	7.2	3.0043 ug/L	3.0043 ppb	10:36:29
3	Se 196.026†	-18.2	-0.8	-0.7030 ug/L	-0.7030 ppb	10:36:29
3	Si 251.611†	521.0	21.0	0.7911 ug/L	0.7911 ppb	10:36:29
3	Sn 189.927†	4.8	-2.5	-0.5546 ug/L	-0.5546 ppb	10:36:29
3	Ti 334.940†	-1064.9	80.4	0.1412 ug/L	0.1412 ppb	10:36:09
3	Tl 190.801†	-27.7	2.1	0.7968 ug/L	0.7968 ppb	10:36:29
3	U 409.014†	-2109.5	142.5	4.3242 ug/L	4.3242 ppb	10:36:09
3	V 292.402†	-1381.1	-32.4	-0.2403 ug/L	-0.2403 ppb	10:36:09
3	Zn 213.857†	738.5	151.7	1.8389 ug/L	1.8389 ppb	10:36:29
3	SiO2†	535.3	23.8	1.9278 ug/L	1.9278 ppb	10:36:45

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	824086.4	100.64 %		1.462			1.45%
Sc Radial	4454.5	101 %		0.8			0.77%
Y 371.029	696141.3	100.65 %		1.392			1.38%
Y RADIAL	4854.0	102.0 %		0.90			0.88%
Ag 328.068†	42.8	0.2181 ug/L		0.20203	0.2181 ppb	0.20203	92.62%
QC value within limits for Ag 328.068 Recovery = Not calculated							
Al 396.153Radial†	1.6	1.5833 ug/L		6.12472	1.5833 ppb	6.12472	386.84%
QC value within limits for Al 396.153Radial Recovery = Not calculated							
As 188.979†	7.6	4.1683 ug/L		0.65881	4.1683 ppb	0.65881	15.81%
QC value within limits for As 188.979 Recovery = Not calculated							
B 249.677†	196.6	5.5161 ug/L		0.52706	5.5161 ppb	0.52706	9.56%
QC value within limits for B 249.677 Recovery = Not calculated							
Ba 233.527†	11.9	0.1111 ug/L		0.02632	0.1111 ppb	0.02632	23.70%
QC value within limits for Ba 233.527 Recovery = Not calculated							
Be 313.107†	77.6	0.0331 ug/L		0.00631	0.0331 ppb	0.00631	19.05%
QC value within limits for Be 313.107 Recovery = Not calculated							
Ca 317.933Radial†	9.4	17.774 ug/L		5.9625	17.774 ppb	5.9625	33.55%

QC value within limits for Ca 317.933	Radial	Recovery = Not calculated		
Cd 226.502†	2.9	0.0427 ug/L	0.09529	0.0427 ppb
QC value within limits for Cd 226.502		Recovery = Not calculated	0.09529	222.93%
Co 228.616†	0.5	0.0133 ug/L	0.07108	0.0133 ppb
QC value within limits for Co 228.616		Recovery = Not calculated	0.07108	535.29%
Cr 267.716†	-4.2	-0.0586 ug/L	0.23221	-0.0586 ppb
QC value within limits for Cr 267.716		Recovery = Not calculated	0.23221	396.54%
Cu 324.752†	72.4	0.2373 ug/L	0.12938	0.2373 ppb
QC value within limits for Cu 324.752		Recovery = Not calculated	0.12938	54.53%
Fe 238.204 Radial†	-0.2	-1.9190 ug/L	14.88554	-1.9190 ppb
QC value within limits for Fe 238.204 Radial		Recovery = Not calculated	14.88554	775.71%
K 766.490 Radial†	30.0	5.7099 ug/L	3.29108	5.7099 ppb
QC value within limits for K 766.490 Radial		Recovery = Not calculated	3.29108	57.64%
Mg 279.077 IEC†	-0.7	-27.331 ug/L	18.0188	-27.331 ppb
QC value within limits for Mg 279.077 IEC		Recovery = Not calculated	18.0188	65.93%
Mn 257.610†	34.2	0.0459 ug/L	0.02135	0.0459 ppb
QC value within limits for Mn 257.610		Recovery = Not calculated	0.02135	46.54%
Mo 202.031†	4.7	0.4195 ug/L	0.18103	0.4195 ppb
QC value within limits for Mo 202.031		Recovery = Not calculated	0.18103	43.15%
Na 589.592 Radial†	-35.7	-12.586 ug/L	6.4730	-12.586 ppb
QC value within limits for Na 589.592 Radial		Recovery = Not calculated	6.4730	51.43%
Ni 231.604†	3.5	0.1106 ug/L	0.26452	0.1106 ppb
QC value within limits for Ni 231.604		Recovery = Not calculated	0.26452	239.14%
P 214.914†	-10.2	-7.6690 ug/L	9.12731	-7.6690 ppb
QC value within limits for P 214.914		Recovery = Not calculated	9.12731	119.02%
Pb 220.353†	5.2	0.7981 ug/L	1.34456	0.7981 ppb
QC value within limits for Pb 220.353		Recovery = Not calculated	1.34456	168.47%
S 181.975 Axial†	-2.4	-4.3480 ug/L	1.90700	-4.3480 ppb
QC value within limits for S 181.975 Axial		Recovery = Not calculated	1.90700	43.86%
Sb 206.836†	12.0	5.0445 ug/L	3.08810	5.0445 ppb
QC value within limits for Sb 206.836		Recovery = Not calculated	3.08810	61.22%
Se 196.026†	-0.4	-0.3716 ug/L	1.85785	-0.3716 ppb
QC value within limits for Se 196.026		Recovery = Not calculated	1.85785	499.98%
Si 251.611†	45.2	1.7101 ug/L	0.79602	1.7101 ppb
QC value within limits for Si 251.611		Recovery = Not calculated	0.79602	46.55%
Sn 189.927†	0.7	0.1688 ug/L	0.77966	0.1688 ppb
QC value within limits for Sn 189.927		Recovery = Not calculated	0.77966	461.89%
Sr 421.552†	-10.8	-0.0867 ug/L	0.16540	-0.0867 ppb
QC value within limits for Sr 421.552		Recovery = Not calculated	0.16540	190.77%
Ti 334.940†	12.7	0.0254 ug/L	0.10069	0.0254 ppb
QC value within limits for Ti 334.940		Recovery = Not calculated	0.10069	396.59%
Tl 190.801†	0.7	0.2689 ug/L	0.87754	0.2689 ppb
QC value within limits for Tl 190.801		Recovery = Not calculated	0.87754	326.36%
U 409.014†	93.8	2.8466 ug/L	1.28871	2.8466 ppb
QC value within limits for U 409.014		Recovery = Not calculated	1.28871	45.27%
V 292.402†	-31.7	-0.2420 ug/L	0.12674	-0.2420 ppb
QC value within limits for V 292.402		Recovery = Not calculated	0.12674	52.37%
Zn 213.857†	152.0	1.8406 ug/L	0.06408	1.8406 ppb
QC value within limits for Zn 213.857		Recovery = Not calculated	0.06408	3.48%
SiO2†	42.4	3.4530 ug/L	1.32338	3.4530 ppb
QC value within limits for SiO2		Recovery = Not calculated	1.32338	38.33%

All analyte(s) passed QC.

Sequence No.: 9

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 3/19/2010 11:38:19

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	4231.5	4231.5	96.3 %		11:40:31
1	Y RADIAL	4688.3	4688.3	98.48 %		11:40:11
1	Al 396.153Radial†	5078.5	5352.8	5233.5 ug/L	5233.5 ppb	11:40:11
1	Ca 317.933Radial†	2683.8	2771.8	5244.9 ug/L	5244.9 ppb	11:40:31
1	Fe 238.204 Radial†	447.0	455.9	5297.3 ug/L	5297.3 ppb	11:40:31
1	K 766.490 Radial†	29712.9	28262.5	5378.2 ug/L	5378.2 ppb	11:40:11
1	Mg 279.077 IEC†	125.8	129.1	5327.4 ug/L	5327.4 ppb	11:40:31
1	Na 589.592 Radial†	27281.4	29210.9	10297 ug/L	10297 ppb	11:40:11
1	Sr 421.552†	63681.7	66122.0	529.98 ug/L	529.98 ppb	11:40:11
1	Sc 361.383	836694.1	836694.1	102.18 %		11:41:28
1	Y 371.029	695496.4	695496.4	100.56 %		11:41:28
1	Ag 328.068†	99816.9	97499.9	509.39 ug/L	509.39 ppb	11:41:34
1	As 188.979†	930.2	937.1	518.83 ug/L	518.83 ppb	11:41:54
1	B 249.677†	17942.6	18096.7	505.35 ug/L	505.35 ppb	11:41:34
1	Ba 233.527†	55244.6	54065.5	507.67 ug/L	507.67 ppb	11:41:34
1	Be 313.107†	1219044.5	1196740.3	510.71 ug/L	510.71 ppb	11:41:28
1	Cd 226.502†	35788.8	35195.1	510.55 ug/L	510.55 ppb	11:41:34
1	Co 228.616†	20347.1	19958.7	515.95 ug/L	515.95 ppb	11:41:34
1	Cr 267.716†	38697.3	37799.4	507.96 ug/L	507.96 ppb	11:41:34
1	Cu 324.752†	160727.0	151742.3	500.97 ug/L	500.97 ppb	11:41:34
1	Mn 257.610†	387247.8	378588.3	498.08 ug/L	498.08 ppb	11:41:34
1	Mo 202.031†	5787.3	5655.2	503.17 ug/L	503.17 ppb	11:41:54
1	Ni 231.604†	16666.6	16226.6	515.00 ug/L	515.00 ppb	11:41:34
1	P 214.914†	3658.7	3393.2	2429.9 ug/L	2429.9 ppb	11:41:54
1	Pb 220.353†	3286.4	3274.5	504.53 ug/L	504.53 ppb	11:41:54
1	S 181.975 Axial†	609.8	566.5	1013.3 ug/L	1013.3 ppb	11:41:54
1	Sb 206.836†	1273.0	1222.2	529.40 ug/L	529.40 ppb	11:41:54
1	Se 196.026†	607.6	611.6	527.92 ug/L	527.92 ppb	11:41:54
1	Si 251.611†	69000.0	67038.2	2538.8 ug/L	2538.8 ppb	11:41:34
1	Sn 189.927†	2266.5	2210.9	502.34 ug/L	502.34 ppb	11:41:54
1	Ti 334.940†	290738.2	285650.1	496.62 ug/L	496.62 ppb	11:41:34
1	Tl 190.801†	1309.7	1310.8	510.40 ug/L	510.40 ppb	11:41:54
1	U 409.014†	15042.5	16925.4	511.75 ug/L	511.75 ppb	11:41:34
1	V 292.402†	63168.1	63136.4	510.86 ug/L	510.86 ppb	11:41:34
1	Zn 213.857†	43730.0	42225.9	506.89 ug/L	506.89 ppb	11:41:34
1	SiO2†	68926.3	66954.9	5450.6 ug/L	5450.6 ppb	11:43:01
2	Sc Radial	4265.7	4265.7	97.1 %		11:40:56
2	Y RADIAL	4839.5	4839.5	101.7 %		11:40:36
2	Al 396.153Radial†	5150.2	5384.5	5265.0 ug/L	5265.0 ppb	11:40:36
2	Ca 317.933Radial†	2698.8	2764.9	5231.8 ug/L	5231.8 ppb	11:40:56
2	Fe 238.204 Radial†	449.8	455.0	5286.7 ug/L	5286.7 ppb	11:40:56
2	K 766.490 Radial†	29893.9	28201.7	5366.7 ug/L	5366.7 ppb	11:40:36
2	Mg 279.077 IEC†	131.2	133.7	5513.6 ug/L	5513.6 ppb	11:40:56
2	Na 589.592 Radial†	27374.6	29079.9	10251 ug/L	10251 ppb	11:40:36
2	Sr 421.552†	64071.5	65993.7	528.95 ug/L	528.95 ppb	11:40:36
2	Sc 361.383	848819.8	848819.8	103.66 %		11:41:59
2	Y 371.029	706333.9	706333.9	102.12 %		11:41:59
2	Ag 328.068†	99812.0	96099.8	502.10 ug/L	502.10 ppb	11:42:04
2	As 188.979†	913.1	907.6	502.60 ug/L	502.60 ppb	11:42:25
2	B 249.677†	17949.1	17852.2	498.51 ug/L	498.51 ppb	11:42:04
2	Ba 233.527†	55297.9	53344.6	500.90 ug/L	500.90 ppb	11:42:04
2	Be 313.107†	1237185.8	1197198.0	510.89 ug/L	510.89 ppb	11:41:59
2	Cd 226.502†	35790.9	34696.8	503.31 ug/L	503.31 ppb	11:42:04
2	Co 228.616†	20379.5	19705.5	509.40 ug/L	509.40 ppb	11:42:04
2	Cr 267.716†	38754.5	37313.5	501.44 ug/L	501.44 ppb	11:42:04
2	Cu 324.752†	160790.4	149556.5	493.76 ug/L	493.76 ppb	11:42:04
2	Mn 257.610†	386901.3	372840.2	490.51 ug/L	490.51 ppb	11:42:04
2	Mo 202.031†	5780.9	5568.1	495.43 ug/L	495.43 ppb	11:42:25
2	Ni 231.604†	16669.3	15996.2	507.69 ug/L	507.69 ppb	11:42:04

2	P 214.914†	3643.5	3327.5	2382.3 ug/L	2382.3 ppb	11:42:25
2	Pb 220.353†	3274.7	3217.3	495.73 ug/L	495.73 ppb	11:42:25
2	S 181.975 Axial†	602.1	550.6	984.78 ug/L	984.78 ppb	11:42:25
2	Sb 206.836†	1250.5	1182.6	512.53 ug/L	512.53 ppb	11:42:25
2	Se 196.026†	602.0	597.7	516.28 ug/L	516.28 ppb	11:42:25
2	Si 251.611†	69005.4	66078.7	2502.5 ug/L	2502.5 ppb	11:42:04
2	Sn 189.927†	2253.2	2166.4	492.23 ug/L	492.23 ppb	11:42:25
2	Ti 334.940†	291171.1	282003.1	490.27 ug/L	490.27 ppb	11:42:04
2	Tl 190.801†	1306.3	1289.2	502.00 ug/L	502.00 ppb	11:42:25
2	U 409.014†	15074.6	16746.1	506.33 ug/L	506.33 ppb	11:42:04
2	V 292.402†	63254.1	62336.3	504.37 ug/L	504.37 ppb	11:42:04
2	Zn 213.857†	43730.3	41614.9	499.54 ug/L	499.54 ppb	11:42:04
2	SiO2†	68517.6	65597.0	5340.0 ug/L	5340.0 ppb	11:43:06
3	Sc Radial	4269.7	4269.7	97.1 %		11:41:22
3	Y RADIAL	4809.0	4809.0	101.0 %		11:41:01
3	Al 396.153Radial†	5136.6	5365.6	5246.2 ug/L	5246.2 ppb	11:41:01
3	Ca 317.933Radial†	2697.3	2760.8	5224.0 ug/L	5224.0 ppb	11:41:22
3	Fe 238.204 Radial†	445.9	450.6	5236.1 ug/L	5236.1 ppb	11:41:22
3	K 766.490 Radial†	29946.0	28226.7	5371.5 ug/L	5371.5 ppb	11:41:01
3	Mg 279.077 IEC†	122.8	124.9	5152.6 ug/L	5152.6 ppb	11:41:22
3	Na 589.592 Radial†	27228.5	28903.2	10189 ug/L	10189 ppb	11:41:01
3	Sr 421.552†	63894.3	65749.9	527.00 ug/L	527.00 ppb	11:41:01
3	Sc 361.383	838817.3	838817.3	102.44 %		11:42:30
3	Y 371.029	698716.9	698716.9	101.02 %		11:42:30
3	Ag 328.068†	99235.4	96685.1	505.14 ug/L	505.14 ppb	11:42:35
3	As 188.979†	918.9	923.8	511.49 ug/L	511.49 ppb	11:42:55
3	B 249.677†	17901.0	18011.7	502.99 ug/L	502.99 ppb	11:42:35
3	Ba 233.527†	55002.2	53691.9	504.16 ug/L	504.16 ppb	11:42:35
3	Be 313.107†	1222413.8	1197009.5	510.81 ug/L	510.81 ppb	11:42:30
3	Cd 226.502†	35634.8	34956.1	507.08 ug/L	507.08 ppb	11:42:35
3	Co 228.616†	20235.0	19798.9	511.82 ug/L	511.82 ppb	11:42:35
3	Cr 267.716†	38586.2	37595.0	505.22 ug/L	505.22 ppb	11:42:35
3	Cu 324.752†	160008.7	150643.0	497.34 ug/L	497.34 ppb	11:42:35
3	Mn 257.610†	385207.0	375636.8	494.20 ug/L	494.20 ppb	11:42:35
3	Mo 202.031†	5767.3	5621.3	500.15 ug/L	500.15 ppb	11:42:55
3	Ni 231.604†	16538.7	16060.4	509.73 ug/L	509.73 ppb	11:42:35
3	P 214.914†	3658.9	3384.4	2424.1 ug/L	2424.1 ppb	11:42:55
3	Pb 220.353†	3276.9	3257.1	501.86 ug/L	501.86 ppb	11:42:55
3	S 181.975 Axial†	611.1	566.4	1013.0 ug/L	1013.0 ppb	11:42:55
3	Sb 206.836†	1263.9	1210.1	524.31 ug/L	524.31 ppb	11:42:55
3	Se 196.026†	606.1	608.6	525.28 ug/L	525.28 ppb	11:42:55
3	Si 251.611†	68566.9	66444.5	2516.3 ug/L	2516.3 ppb	11:42:35
3	Sn 189.927†	2275.7	2214.3	503.11 ug/L	503.11 ppb	11:42:55
3	Ti 334.940†	289344.8	283569.7	493.02 ug/L	493.02 ppb	11:42:35
3	Tl 190.801†	1294.0	1292.3	503.22 ug/L	503.22 ppb	11:42:55
3	U 409.014†	14750.9	16603.5	502.00 ug/L	502.00 ppb	11:42:35
3	V 292.402†	62942.9	62760.1	507.80 ug/L	507.80 ppb	11:42:35
3	Zn 213.857†	43510.6	41903.4	503.03 ug/L	503.03 ppb	11:42:35
3	SiO2†	67364.1	65259.2	5312.3 ug/L	5312.3 ppb	11:43:11

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	841443.7	102.76 %	0.791			0.77%
Sc Radial	4255.6	96.8 %	0.48			0.49%
Y 371.029	700182.4	101.23 %	0.805			0.79%
Y RADIAL	4778.9	100.4 %	1.68			1.67%
Ag 328.068†	96761.6	505.54 ug/L	3.664	505.54 ppb	3.664	0.72%
QC value within limits for Ag 328.068 Recovery = 101.11%						
Al 396.153Radial†	5367.6	5248.3 ug/L	15.85	5248.3 ppb	15.85	0.30%
QC value within limits for Al 396.153Radial Recovery = 104.97%						
As 188.979†	922.8	510.97 ug/L	8.127	510.97 ppb	8.127	1.59%
QC value within limits for As 188.979 Recovery = 102.19%						
B 249.677†	17986.9	502.29 ug/L	3.474	502.29 ppb	3.474	0.69%
QC value within limits for B 249.677 Recovery = 100.46%						
Ba 233.527†	53700.7	504.25 ug/L	3.384	504.25 ppb	3.384	0.67%
QC value within limits for Ba 233.527 Recovery = 100.85%						
Be 313.107†	1196982.6	510.80 ug/L	0.091	510.80 ppb	0.091	0.02%
QC value within limits for Be 313.107 Recovery = 102.16%						
Ca 317.933Radial†	2765.8	5233.6 ug/L	10.57	5233.6 ppb	10.57	0.20%

QC value within limits for Ca 317.933 Radial Recovery = 104.67%

Cd 226.502†	34949.3	506.98 ug/L	3.619	506.98 ppb	3.619	0.71%
QC value within limits for Cd 226.502 Recovery = 101.40%						
Co 228.616†	19821.0	512.39 ug/L	3.312	512.39 ppb	3.312	0.65%
QC value within limits for Co 228.616 Recovery = 102.48%						
Cr 267.716†	37569.3	504.87 ug/L	3.275	504.87 ppb	3.275	0.65%
QC value within limits for Cr 267.716 Recovery = 100.97%						
Cu 324.752†	150647.3	497.36 ug/L	3.607	497.36 ppb	3.607	0.73%
QC value within limits for Cu 324.752 Recovery = 99.47%						
Fe 238.204 Radial†	453.8	5273.4 ug/L	32.71	5273.4 ppb	32.71	0.62%
QC value within limits for Fe 238.204 Radial Recovery = 105.47%						
K 766.490 Radial†	28230.3	5372.1 ug/L	5.80	5372.1 ppb	5.80	0.11%
QC value within limits for K 766.490 Radial Recovery = 107.44%						
Mg 279.077 IEC†	129.2	5331.2 ug/L	180.50	5331.2 ppb	180.50	3.39%
QC value within limits for Mg 279.077 IEC Recovery = 106.62%						
Mn 257.610†	375688.4	494.26 ug/L	3.784	494.26 ppb	3.784	0.77%
QC value within limits for Mn 257.610 Recovery = 98.85%						
Mo 202.031†	5614.9	499.58 ug/L	3.902	499.58 ppb	3.902	0.78%
QC value within limits for Mo 202.031 Recovery = 99.92%						
Na 589.592 Radial†	29064.7	10246 ug/L	54.4	10246 ppb	54.4	0.53%
QC value within limits for Na 589.592 Radial Recovery = 102.46%						
Ni 231.604†	16094.4	510.81 ug/L	3.773	510.81 ppb	3.773	0.74%
QC value within limits for Ni 231.604 Recovery = 102.16%						
P 214.914†	3368.4	2412.1 ug/L	25.99	2412.1 ppb	25.99	1.08%
QC value within limits for P 214.914 Recovery = 96.48%						
Pb 220.353†	3249.7	500.70 ug/L	4.513	500.70 ppb	4.513	0.90%
QC value within limits for Pb 220.353 Recovery = 100.14%						
S 181.975 Axial†	561.2	1003.7 ug/L	16.36	1003.7 ppb	16.36	1.63%
QC value within limits for S 181.975 Axial Recovery = 100.37%						
Sb 206.836†	1205.0	522.08 ug/L	8.656	522.08 ppb	8.656	1.66%
QC value within limits for Sb 206.836 Recovery = 104.42%						
Se 196.026†	606.0	523.16 ug/L	6.101	523.16 ppb	6.101	1.17%
QC value within limits for Se 196.026 Recovery = 104.63%						
Si 251.611†	66520.5	2519.2 ug/L	18.34	2519.2 ppb	18.34	0.73%
QC value within limits for Si 251.611 Recovery = 100.77%						
Sn 189.927†	2197.2	499.23 ug/L	6.070	499.23 ppb	6.070	1.22%
QC value within limits for Sn 189.927 Recovery = 99.85%						
Sr 421.552†	65955.2	528.64 ug/L	1.515	528.64 ppb	1.515	0.29%
QC value within limits for Sr 421.552 Recovery = 105.73%						
Ti 334.940†	283741.0	493.30 ug/L	3.187	493.30 ppb	3.187	0.65%
QC value within limits for Ti 334.940 Recovery = 98.66%						
Tl 190.801†	1297.4	505.20 ug/L	4.539	505.20 ppb	4.539	0.90%
QC value within limits for Tl 190.801 Recovery = 101.04%						
U 409.014†	16758.3	506.69 ug/L	4.887	506.69 ppb	4.887	0.96%
QC value within limits for U 409.014 Recovery = 101.34%						
V 292.402†	62744.3	507.68 ug/L	3.249	507.68 ppb	3.249	0.64%
QC value within limits for V 292.402 Recovery = 101.54%						
Zn 213.857†	41914.8	503.15 ug/L	3.675	503.15 ppb	3.675	0.73%
QC value within limits for Zn 213.857 Recovery = 100.63%						
SiO2†	65937.0	5367.6 ug/L	73.18	5367.6 ppb	73.18	1.36%
QC value within limits for SiO2 Recovery = 100.38%						

All analyte(s) passed QC.

Sequence No.: 10
 Sample ID: CCB
 Analyst:
 Initial Sample Wt:
 Dilution:

Autosampler Location: 8
 Date Collected: 3/19/2010 11:45:21
 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	4343.7	4343.7	98.8 %		11:47:14
1	Y RADIAL	4752.6	4752.6	99.83 %		11:47:14
1	Al 396.153Radial†	-72.3	4.9	4.8133 ug/L	4.8133 ppb	11:47:34
1	Ca 317.933Radial†	26.1	10.7	20.319 ug/L	20.319 ppb	11:47:34
1	Fe 238.204 Radial†	7.8	-0.6	-6.4728 ug/L	-6.4728 ppb	11:47:34
1	K 766.490 Radial†	2857.2	292.2	55.678 ug/L	55.678 ppb	11:47:14
1	Mg 279.077 IEC†	3.4	1.9	79.741 ug/L	79.741 ppb	11:47:34
1	Na 589.592 Radial†	-927.8	-63.7	-22.449 ug/L	-22.449 ppb	11:47:14
1	Sr 421.552†	28.1	7.6	0.0605 ug/L	0.0605 ppb	11:47:14
1	Sc 361.383	828290.0	828290.0	101.16 %		11:48:31
1	Y 371.029	698408.7	698408.7	100.98 %		11:48:31
1	Ag 328.068†	104.7	-81.6	-0.4271 ug/L	-0.4271 ppb	11:48:31
1	As 188.979†	-31.6	-4.5	-2.4585 ug/L	-2.4585 ppb	11:48:51
1	B 249.677†	-193.4	346.2	9.7120 ug/L	9.7120 ppb	11:48:51
1	Ba 233.527†	14.1	14.7	0.1368 ug/L	0.1368 ppb	11:48:51
1	Be 313.107†	-3650.4	122.4	0.0523 ug/L	0.0523 ppb	11:48:31
1	Cd 226.502†	-158.0	14.5	0.2110 ug/L	0.2110 ppb	11:48:51
1	Co 228.616†	-45.0	1.8	0.0456 ug/L	0.0456 ppb	11:48:51
1	Cr 267.716†	83.6	11.2	0.1488 ug/L	0.1488 ppb	11:48:51
1	Cu 324.752†	5611.4	-4.7	-0.0160 ug/L	-0.0160 ppb	11:48:31
1	Mn 257.610†	476.0	81.5	0.1032 ug/L	0.1032 ppb	11:48:51
1	Mo 202.031†	9.0	0.3	0.0289 ug/L	0.0289 ppb	11:48:51
1	Ni 231.604†	93.0	7.8	0.2484 ug/L	0.2484 ppb	11:48:51
1	P 214.914†	189.1	-0.4	-0.2430 ug/L	-0.2430 ppb	11:48:51
1	Pb 220.353†	-55.8	3.1	0.4814 ug/L	0.4814 ppb	11:48:51
1	S 181.975 Axial†	32.8	2.2	3.9603 ug/L	3.9603 ppb	11:48:51
1	Sb 206.836†	25.8	1.8	0.7907 ug/L	0.7907 ppb	11:48:51
1	Se 196.026†	-13.3	3.9	3.1912 ug/L	3.1912 ppb	11:48:51
1	Si 251.611†	646.0	150.5	5.7129 ug/L	5.7129 ppb	11:48:51
1	Sn 189.927†	15.0	7.7	1.7470 ug/L	1.7470 ppb	11:48:51
1	Ti 334.940†	-1081.0	52.5	0.0874 ug/L	0.0874 ppb	11:48:31
1	Tl 190.801†	-17.1	12.2	4.7325 ug/L	4.7325 ppb	11:48:51
1	U 409.014†	-2223.2	6.4	0.1952 ug/L	0.1952 ppb	11:48:31
1	V 292.402†	-1356.9	-23.9	-0.1879 ug/L	-0.1879 ppb	11:48:31
1	Zn 213.857†	920.4	339.8	4.1165 ug/L	4.1165 ppb	11:48:51
1	SiO2†	681.4	174.2	14.218 ug/L	14.218 ppb	11:50:02
2	Sc Radial	4441.9	4441.9	101 %		11:47:39
2	Y RADIAL	4833.4	4833.4	101.5 %		11:47:39
2	Al 396.153Radial†	-89.0	-10.0	-9.8127 ug/L	-9.8127 ppb	11:47:59
2	Ca 317.933Radial†	25.8	9.9	18.681 ug/L	18.681 ppb	11:47:59
2	Fe 238.204 Radial†	8.3	-0.3	-3.2666 ug/L	-3.2666 ppb	11:47:59
2	K 766.490 Radial†	2698.1	70.9	13.499 ug/L	13.499 ppb	11:47:39
2	Mg 279.077 IEC†	4.0	2.4	99.388 ug/L	99.388 ppb	11:47:59
2	Na 589.592 Radial†	-871.7	12.7	4.4605 ug/L	4.4605 ppb	11:47:39
2	Sr 421.552†	31.8	10.7	0.0855 ug/L	0.0855 ppb	11:47:39
2	Sc 361.383	822220.7	822220.7	100.41 %		11:48:56
2	Y 371.029	694053.4	694053.4	100.35 %		11:48:56
2	Ag 328.068†	97.9	-87.6	-0.4532 ug/L	-0.4532 ppb	11:48:56
2	As 188.979†	-18.2	8.7	4.7808 ug/L	4.7808 ppb	11:49:16
2	B 249.677†	-207.3	330.9	9.2829 ug/L	9.2829 ppb	11:49:16
2	Ba 233.527†	8.6	9.2	0.0863 ug/L	0.0863 ppb	11:49:16
2	Be 313.107†	-3738.2	8.3	0.0032 ug/L	0.0032 ppb	11:48:56
2	Cd 226.502†	-172.2	-0.9	-0.0129 ug/L	-0.0129 ppb	11:49:16
2	Co 228.616†	-48.8	-2.4	-0.0611 ug/L	-0.0611 ppb	11:49:16
2	Cr 267.716†	62.0	-9.8	-0.1300 ug/L	-0.1300 ppb	11:49:16
2	Cu 324.752†	5614.1	38.9	0.1304 ug/L	0.1304 ppb	11:48:56
2	Mn 257.610†	501.3	110.2	0.1405 ug/L	0.1405 ppb	11:49:16
2	Mo 202.031†	10.8	2.2	0.1973 ug/L	0.1973 ppb	11:49:16
2	Ni 231.604†	90.3	5.9	0.1874 ug/L	0.1874 ppb	11:49:16

2	P 214.914†	180.7	-7.3	-5.4650 ug/L	-5.4650 ppb	11:49:16
2	Pb 220.353†	-39.7	18.7	2.8759 ug/L	2.8759 ppb	11:49:16
2	S 181.975 Axial†	29.8	-0.5	-0.8807 ug/L	-0.8807 ppb	11:49:16
2	Sb 206.836†	23.8	0.1	0.0562 ug/L	0.0562 ppb	11:49:16
2	Se 196.026†	-17.5	-0.5	-0.3920 ug/L	-0.3920 ppb	11:49:16
2	Si 251.611†	640.6	149.7	5.6822 ug/L	5.6822 ppb	11:49:16
2	Sn 189.927†	13.4	6.2	1.4045 ug/L	1.4045 ppb	11:49:16
2	Ti 334.940†	-1200.9	-74.7	-0.1338 ug/L	-0.1338 ppb	11:48:56
2	Tl 190.801†	-29.2	0.0	0.0028 ug/L	0.0028 ppb	11:49:16
2	U 409.014†	-2336.4	-122.6	-3.7174 ug/L	-3.7174 ppb	11:48:56
2	V 292.402†	-1326.4	-3.5	-0.0295 ug/L	-0.0295 ppb	11:48:56
2	Zn 213.857†	929.9	356.0	4.3122 ug/L	4.3122 ppb	11:49:16
2	SiO2†	659.8	157.7	12.866 ug/L	12.866 ppb	11:50:22
3	Sc Radial	4304.4	4304.4	97.9 %		11:48:04
3	Y RADIAL	4703.3	4703.3	98.80 %		11:48:04
3	Al 396.153Radial†	-76.9	-0.5	-0.4680 ug/L	-0.4680 ppb	11:48:24
3	Ca 317.933Radial†	24.4	9.2	17.441 ug/L	17.441 ppb	11:48:24
3	Fe 238.204 Radial†	8.1	-0.2	-2.3264 ug/L	-2.3264 ppb	11:48:24
3	K 766.490 Radial†	2757.5	216.8	41.316 ug/L	41.316 ppb	11:48:04
3	Mg 279.077 IEC†	-1.8	-3.4	-138.98 ug/L	-138.98 ppb	11:48:24
3	Na 589.592 Radial†	-956.3	-101.3	-35.712 ug/L	-35.712 ppb	11:48:04
3	Sr 421.552†	17.2	-3.2	-0.0261 ug/L	-0.0261 ppb	11:48:04
3	Sc 361.383	833215.2	833215.2	101.76 %		11:49:21
3	Y 371.029	704277.1	704277.1	101.83 %		11:49:21
3	Ag 328.068†	241.3	52.0	0.2686 ug/L	0.2686 ppb	11:49:21
3	As 188.979†	-21.5	5.7	3.1078 ug/L	3.1078 ppb	11:49:41
3	B 249.677†	-197.2	343.6	9.6384 ug/L	9.6384 ppb	11:49:41
3	Ba 233.527†	18.2	18.6	0.1741 ug/L	0.1741 ppb	11:49:41
3	Be 313.107†	-3699.6	95.4	0.0407 ug/L	0.0407 ppb	11:49:21
3	Cd 226.502†	-179.9	-6.1	-0.0885 ug/L	-0.0885 ppb	11:49:41
3	Co 228.616†	-44.9	2.1	0.0532 ug/L	0.0532 ppb	11:49:41
3	Cr 267.716†	100.4	27.1	0.3634 ug/L	0.3634 ppb	11:49:41
3	Cu 324.752†	5718.7	67.9	0.2234 ug/L	0.2234 ppb	11:49:21
3	Mn 257.610†	479.2	81.9	0.1131 ug/L	0.1131 ppb	11:49:41
3	Mo 202.031†	10.6	1.9	0.1659 ug/L	0.1659 ppb	11:49:41
3	Ni 231.604†	99.0	13.2	0.4195 ug/L	0.4195 ppb	11:49:41
3	P 214.914†	193.1	2.5	1.8356 ug/L	1.8356 ppb	11:49:41
3	Pb 220.353†	-58.2	1.1	0.1647 ug/L	0.1647 ppb	11:49:41
3	S 181.975 Axial†	28.0	-2.6	-4.7374 ug/L	-4.7374 ppb	11:49:41
3	Sb 206.836†	29.2	5.0	2.1114 ug/L	2.1114 ppb	11:49:41
3	Se 196.026†	-18.5	-1.2	-1.0177 ug/L	-1.0177 ppb	11:49:41
3	Si 251.611†	635.3	136.2	5.1683 ug/L	5.1683 ppb	11:49:41
3	Sn 189.927†	11.5	4.1	0.9329 ug/L	0.9329 ppb	11:49:41
3	Ti 334.940†	-1105.7	34.6	0.0732 ug/L	0.0732 ppb	11:49:21
3	Tl 190.801†	-32.3	-2.6	-1.0229 ug/L	-1.0229 ppb	11:49:41
3	U 409.014†	-2206.7	35.6	1.0801 ug/L	1.0801 ppb	11:49:21
3	V 292.402†	-1323.5	16.7	0.1356 ug/L	0.1356 ppb	11:49:21
3	Zn 213.857†	913.1	327.3	3.9630 ug/L	3.9630 ppb	11:49:41
3	SiO2†	667.1	156.3	12.748 ug/L	12.748 ppb	11:50:42

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	827908.6	101.11 %		0.673			0.67%
Sc Radial	4363.4	99.3 %		1.61			1.62%
Y 371.029	698913.0	101.05 %		0.742			0.73%
Y RADIAL	4763.1	100.1 %		1.38			1.38%
Ag 328.068†	-39.1	-0.2039 ug/L		0.40937	-0.2039 ppb	0.40937	200.79%
QC value within limits for Ag 328.068 Recovery = Not calculated							
Al 396.153Radial†	-1.8	-1.8225 ug/L		7.40648	-1.8225 ppb	7.40648	406.40%
QC value within limits for Al 396.153Radial Recovery = Not calculated							
As 188.979†	3.3	1.8100 ug/L		3.79014	1.8100 ppb	3.79014	209.40%
QC value within limits for As 188.979 Recovery = Not calculated							
B 249.677†	340.2	9.5444 ug/L		0.22946	9.5444 ppb	0.22946	2.40%
QC value within limits for B 249.677 Recovery = Not calculated							
Ba 233.527†	14.2	0.1324 ug/L		0.04406	0.1324 ppb	0.04406	33.28%
QC value within limits for Ba 233.527 Recovery = Not calculated							
Be 313.107†	75.3	0.0321 ug/L		0.02566	0.0321 ppb	0.02566	79.97%
QC value within limits for Be 313.107 Recovery = Not calculated							
Ca 317.933Radial†	9.9	18.814 ug/L		1.4439	18.814 ppb	1.4439	7.67%

QC value within limits for Ca 317.933 Radial Recovery = Not calculated						
Cd 226.502†	2.5	0.0365 ug/L	0.15575	0.0365 ppb	0.15575	426.34%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	0.5	0.0126 ug/L	0.06393	0.0126 ppb	0.06393	508.85%
QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	9.5	0.1274 ug/L	0.24741	0.1274 ppb	0.24741	194.22%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	34.0	0.1126 ug/L	0.12073	0.1126 ppb	0.12073	107.22%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	-0.3	-4.0220 ug/L	2.17392	-4.0220 ppb	2.17392	54.05%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated						
K 766.490 Radial†	193.3	36.831 ug/L	21.4438	36.831 ppb	21.4438	58.22%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	0.3	13.382 ug/L	132.3172	13.382 ppb	132.3172	988.75%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated						
Mn 257.610†	91.2	0.1189 ug/L	0.01931	0.1189 ppb	0.01931	16.23%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	1.5	0.1307 ug/L	0.08959	0.1307 ppb	0.08959	68.54%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	-50.8	-17.900 ug/L	20.4690	-17.900 ppb	20.4690	114.35%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	9.0	0.2851 ug/L	0.12032	0.2851 ppb	0.12032	42.20%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	-1.7	-1.2908 ug/L	3.76140	-1.2908 ppb	3.76140	291.40%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	7.6	1.1740 ug/L	1.48236	1.1740 ppb	1.48236	126.27%
QC value within limits for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	-0.3	-0.5526 ug/L	4.35816	-0.5526 ppb	4.35816	788.67%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	2.3	0.9861 ug/L	1.04143	0.9861 ppb	1.04143	105.61%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	0.7	0.5938 ug/L	2.27102	0.5938 ppb	2.27102	382.45%
QC value within limits for Se 196.026 Recovery = Not calculated						
Si 251.611†	145.5	5.5211 ug/L	0.30596	5.5211 ppb	0.30596	5.54%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	6.0	1.3615 ug/L	0.40877	1.3615 ppb	0.40877	30.02%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	5.0	0.0400 ug/L	0.05856	0.0400 ppb	0.05856	146.55%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	4.1	0.0089 ug/L	0.12382	0.0089 ppb	0.12382	>999.9%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	3.2	1.2375 ug/L	3.06995	1.2375 ppb	3.06995	248.08%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 409.014†	-26.8	-0.8140 ug/L	2.55300	-0.8140 ppb	2.55300	313.63%
QC value within limits for U 409.014 Recovery = Not calculated						
V 292.402†	-3.5	-0.0273 ug/L	0.16176	-0.0273 ppb	0.16176	593.25%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	341.0	4.1306 ug/L	0.17503	4.1306 ppb	0.17503	4.24%
QC value within limits for Zn 213.857 Recovery = Not calculated						
SiO2†	162.7	13.278 ug/L	0.8169	13.278 ppb	0.8169	6.15%
QC value within limits for SiO2 Recovery = Not calculated						

All analyte(s) passed QC.

Sequence No.: 19

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 3/19/2010 12:49:40

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	4261.9	4261.9	97.0 %		12:51:52
1	Y RADIAL	4786.4	4786.4	100.5 %		12:51:32
1	Al 396.153Radial†	5093.9	5331.2	5212.3 ug/L	5212.3 ppb	12:51:32
1	Ca 317.933Radial†	2683.5	2751.7	5206.8 ug/L	5206.8 ppb	12:51:52
1	Fe 238.204 Radial†	446.8	452.3	5256.6 ug/L	5256.6 ppb	12:51:52
1	K 766.490 Radial†	29720.1	28050.1	5337.7 ug/L	5337.7 ppb	12:51:32
1	Mg 279.077 IEC†	127.0	129.4	5338.2 ug/L	5338.2 ppb	12:51:52
1	Na 589.592 Radial†	28222.6	29979.7	10568 ug/L	10568 ppb	12:51:32
1	Sr 421.552†	64501.3	66496.3	532.98 ug/L	532.98 ppb	12:51:32
1	Sc 361.383	828749.8	828749.8	101.21 %		12:52:49
1	Y 371.029	689872.4	689872.4	99.743 %		12:52:49
1	Ag 328.068†	99303.8	97929.4	511.61 ug/L	511.61 ppb	12:52:54
1	As 188.979†	907.6	923.5	511.35 ug/L	511.35 ppb	12:53:14
1	B 249.677†	17583.9	17910.7	500.15 ug/L	500.15 ppb	12:52:54
1	Ba 233.527†	54830.6	54174.7	508.70 ug/L	508.70 ppb	12:52:54
1	Be 313.107†	1202781.6	1192108.2	508.74 ug/L	508.74 ppb	12:52:49
1	Cd 226.502†	35321.1	35068.8	508.72 ug/L	508.72 ppb	12:52:54
1	Co 228.616†	20083.2	19888.9	514.15 ug/L	514.15 ppb	12:52:54
1	Cr 267.716†	38399.6	37868.2	508.88 ug/L	508.88 ppb	12:52:54
1	Cu 324.752†	159658.3	152194.2	502.46 ug/L	502.46 ppb	12:52:54
1	Mn 257.610†	384664.4	379668.6	499.50 ug/L	499.50 ppb	12:52:54
1	Mo 202.031†	5739.0	5661.7	503.75 ug/L	503.75 ppb	12:53:14
1	Ni 231.604†	16468.1	16186.9	513.74 ug/L	513.74 ppb	12:52:54
1	P 214.914†	3605.0	3374.5	2415.7 ug/L	2415.7 ppb	12:53:14
1	Pb 220.353†	3261.4	3280.6	505.46 ug/L	505.46 ppb	12:53:14
1	S 181.975 Axial†	600.7	563.3	1007.5 ug/L	1007.5 ppb	12:53:14
1	Sb 206.836†	1234.1	1195.7	518.37 ug/L	518.37 ppb	12:53:14
1	Se 196.026†	590.6	600.5	518.57 ug/L	518.57 ppb	12:53:14
1	Si 251.611†	68245.0	66939.6	2535.0 ug/L	2535.0 ppb	12:52:54
1	Sn 189.927†	2253.1	2219.0	504.17 ug/L	504.17 ppb	12:53:14
1	Ti 334.940†	288608.1	286273.0	497.70 ug/L	497.70 ppb	12:52:54
1	Tl 190.801†	1286.6	1300.3	506.37 ug/L	506.37 ppb	12:53:14
1	U 409.014†	14990.3	17015.0	514.47 ug/L	514.47 ppb	12:52:54
1	V 292.402†	62830.4	63395.4	512.95 ug/L	512.95 ppb	12:52:54
1	Zn 213.857†	43245.4	42157.4	506.07 ug/L	506.07 ppb	12:52:54
1	SiO2†	68507.2	67187.4	5469.6 ug/L	5469.6 ppb	12:54:21
2	Sc Radial	4304.5	4304.5	97.9 %		12:52:17
2	Y RADIAL	4714.5	4714.5	99.03 %		12:51:57
2	Al 396.153Radial†	4972.9	5155.6	5039.8 ug/L	5039.8 ppb	12:51:57
2	Ca 317.933Radial†	2695.0	2736.0	5177.2 ug/L	5177.2 ppb	12:52:17
2	Fe 238.204 Radial†	451.1	452.1	5254.2 ug/L	5254.2 ppb	12:52:17
2	K 766.490 Radial†	29193.9	27209.2	5177.6 ug/L	5177.6 ppb	12:51:57
2	Mg 279.077 IEC†	128.3	129.4	5339.6 ug/L	5339.6 ppb	12:52:17
2	Na 589.592 Radial†	27372.0	28822.9	10161 ug/L	10161 ppb	12:51:57
2	Sr 421.552†	62671.0	63968.4	512.72 ug/L	512.72 ppb	12:51:57
2	Sc 361.383	832371.4	832371.4	101.65 %		12:53:20
2	Y 371.029	695164.8	695164.8	100.51 %		12:53:20
2	Ag 328.068†	99890.0	98079.2	512.40 ug/L	512.40 ppb	12:53:25
2	As 188.979†	910.5	922.5	510.80 ug/L	510.80 ppb	12:53:45
2	B 249.677†	17865.0	18111.6	505.77 ug/L	505.77 ppb	12:53:25
2	Ba 233.527†	55189.0	54291.6	509.80 ug/L	509.80 ppb	12:53:25
2	Be 313.107†	1218747.3	1202643.5	513.23 ug/L	513.23 ppb	12:53:20
2	Cd 226.502†	35688.8	35278.6	511.76 ug/L	511.76 ppb	12:53:25
2	Co 228.616†	20324.8	20040.3	518.06 ug/L	518.06 ppb	12:53:25
2	Cr 267.716†	38700.7	37999.3	510.64 ug/L	510.64 ppb	12:53:25
2	Cu 324.752†	160866.7	152696.7	504.12 ug/L	504.12 ppb	12:53:25
2	Mn 257.610†	387332.0	380639.2	500.77 ug/L	500.77 ppb	12:53:25
2	Mo 202.031†	5751.8	5649.6	502.67 ug/L	502.67 ppb	12:53:45
2	Ni 231.604†	16569.9	16216.2	514.67 ug/L	514.67 ppb	12:53:25

2	P 214.914†	3628.3	3381.9	2420.9 ug/L	2420.9 ppb	12:53:45
2	Pb 220.353†	3281.8	3286.7	506.36 ug/L	506.36 ppb	12:53:45
2	S 181.975 Axial†	602.5	562.5	1006.1 ug/L	1006.1 ppb	12:53:45
2	Sb 206.836†	1262.4	1218.2	527.79 ug/L	527.79 ppb	12:53:45
2	Se 196.026†	608.2	615.3	530.79 ug/L	530.79 ppb	12:53:45
2	Si 251.611†	68655.1	67049.6	2539.2 ug/L	2539.2 ppb	12:53:25
2	Sn 189.927†	2273.0	2228.8	506.39 ug/L	506.39 ppb	12:53:45
2	Ti 334.940†	290598.2	286990.0	498.94 ug/L	498.94 ppb	12:53:25
2	Tl 190.801†	1294.9	1302.9	507.38 ug/L	507.38 ppb	12:53:45
2	U 409.014†	15118.1	17076.2	516.32 ug/L	516.32 ppb	12:53:25
2	V 292.402†	63417.0	63702.4	515.38 ug/L	515.38 ppb	12:53:25
2	Zn 213.857†	43539.1	42260.5	507.31 ug/L	507.31 ppb	12:53:25
2	SiO2†	68156.5	66548.0	5417.4 ug/L	5417.4 ppb	12:54:27
3	Sc Radial	4246.7	4246.7	96.6 %		12:52:42
3	Y RADIAL	4814.1	4814.1	101.1 %		12:52:22
3	Al 396.153Radial†	5061.9	5316.9	5198.5 ug/L	5198.5 ppb	12:52:22
3	Ca 317.933Radial†	2688.3	2766.6	5234.9 ug/L	5234.9 ppb	12:52:42
3	Fe 238.204 Radial†	454.8	462.2	5370.5 ug/L	5370.5 ppb	12:52:42
3	K 766.490 Radial†	29670.6	28108.9	5348.9 ug/L	5348.9 ppb	12:52:22
3	Mg 279.077 IEC†	125.5	128.4	5294.8 ug/L	5294.8 ppb	12:52:42
3	Na 589.592 Radial†	28072.0	29928.3	10550 ug/L	10550 ppb	12:52:22
3	Sr 421.552†	64332.8	66560.5	533.49 ug/L	533.49 ppb	12:52:22
3	Sc 361.383	837178.6	837178.6	102.24 %		12:53:51
3	Y 371.029	698029.1	698029.1	100.92 %		12:53:51
3	Ag 328.068†	98356.8	96015.3	501.68 ug/L	501.68 ppb	12:53:56
3	As 188.979†	909.8	916.6	507.54 ug/L	507.54 ppb	12:54:16
3	B 249.677†	17499.0	17652.8	492.92 ug/L	492.92 ppb	12:53:56
3	Ba 233.527†	54300.7	53110.9	498.72 ug/L	498.72 ppb	12:53:56
3	Be 313.107†	1209735.4	1186944.8	506.52 ug/L	506.52 ppb	12:53:51
3	Cd 226.502†	35124.3	34524.9	500.81 ug/L	500.81 ppb	12:53:56
3	Co 228.616†	19951.5	19560.3	505.66 ug/L	505.66 ppb	12:53:56
3	Cr 267.716†	38093.5	37186.8	499.75 ug/L	499.75 ppb	12:53:56
3	Cu 324.752†	157873.2	148860.1	491.46 ug/L	491.46 ppb	12:53:56
3	Mn 257.610†	381533.0	372779.4	490.45 ug/L	490.45 ppb	12:53:56
3	Mo 202.031†	5739.4	5605.0	498.72 ug/L	498.72 ppb	12:54:16
3	Ni 231.604†	16305.4	15863.9	503.49 ug/L	503.49 ppb	12:53:56
3	P 214.914†	3597.0	3330.9	2385.2 ug/L	2385.2 ppb	12:54:16
3	Pb 220.353†	3275.3	3261.8	502.55 ug/L	502.55 ppb	12:54:16
3	S 181.975 Axial†	599.8	556.4	995.14 ug/L	995.14 ppb	12:54:16
3	Sb 206.836†	1256.7	1205.4	522.26 ug/L	522.26 ppb	12:54:16
3	Se 196.026†	602.6	606.3	523.72 ug/L	523.72 ppb	12:54:16
3	Si 251.611†	67639.5	65668.4	2486.8 ug/L	2486.8 ppb	12:53:56
3	Sn 189.927†	2253.0	2196.4	499.04 ug/L	499.04 ppb	12:54:16
3	Ti 334.940†	285965.2	280817.1	488.22 ug/L	488.22 ppb	12:53:56
3	Tl 190.801†	1292.6	1293.3	503.60 ug/L	503.60 ppb	12:54:16
3	U 409.014†	14765.8	16646.3	503.29 ug/L	503.29 ppb	12:53:56
3	V 292.402†	62348.1	62298.6	504.09 ug/L	504.09 ppb	12:53:56
3	Zn 213.857†	42944.7	41433.1	497.36 ug/L	497.36 ppb	12:53:56
3	SiO2†	68149.5	66156.1	5385.5 ug/L	5385.5 ppb	12:54:32

Mean Data: CCV

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	832766.6	101.70 %		0.516			0.51%
Sc Radial	4271.0	97.2 %		0.68			0.70%
Y 371.029	694355.4	100.39 %		0.598			0.60%
Y RADIAL	4771.7	100.2 %		1.08			1.08%
Ag 328.068†	97341.3	508.57 ug/L		5.972	508.57 ppb	5.972	1.17%
QC value within limits for Ag 328.068 Recovery = 101.71%							
Al 396.153Radial†	5267.9	5150.2 ug/L		95.84	5150.2 ppb	95.84	1.86%
QC value within limits for Al 396.153Radial Recovery = 103.00%							
As 188.979†	920.9	509.90 ug/L		2.058	509.90 ppb	2.058	0.40%
QC value within limits for As 188.979 Recovery = 101.98%							
B 249.677†	17891.7	499.61 ug/L		6.445	499.61 ppb	6.445	1.29%
QC value within limits for B 249.677 Recovery = 99.92%							
Ba 233.527†	53859.0	505.74 ug/L		6.104	505.74 ppb	6.104	1.21%
QC value within limits for Ba 233.527 Recovery = 101.15%							
Be 313.107†	1193898.8	509.49 ug/L		3.418	509.49 ppb	3.418	0.67%
QC value within limits for Be 313.107 Recovery = 101.90%							
Ca 317.933Radial†	2751.4	5206.3 ug/L		28.88	5206.3 ppb	28.88	0.55%

QC value within limits for Ca 317.933 Radial Recovery = 104.13%

Cd 226.502†	34957.4	507.10 ug/L	5.656	507.10 ppb	5.656	1.12%
QC value within limits for Cd 226.502 Recovery = 101.42%						
Co 228.616†	19829.8	512.62 ug/L	6.337	512.62 ppb	6.337	1.24%
QC value within limits for Co 228.616 Recovery = 102.52%						
Cr 267.716†	37684.8	506.43 ug/L	5.848	506.43 ppb	5.848	1.15%
QC value within limits for Cr 267.716 Recovery = 101.29%						
Cu 324.752†	151250.3	499.35 ug/L	6.877	499.35 ppb	6.877	1.38%
QC value within limits for Cu 324.752 Recovery = 99.87%						
Fe 238.204 Radial†	455.6	5293.8 ug/L	66.47	5293.8 ppb	66.47	1.26%
QC value within limits for Fe 238.204 Radial Recovery = 105.88%						
K 766.490 Radial†	27789.4	5288.1 ug/L	95.80	5288.1 ppb	95.80	1.81%
QC value within limits for K 766.490 Radial Recovery = 105.76%						
Mg 279.077 IEC†	129.1	5324.2 ug/L	25.49	5324.2 ppb	25.49	0.48%
QC value within limits for Mg 279.077 IEC Recovery = 106.48%						
Mn 257.610†	377695.8	496.91 ug/L	5.627	496.91 ppb	5.627	1.13%
QC value within limits for Mn 257.610 Recovery = 99.38%						
Mo 202.031†	5638.8	501.71 ug/L	2.649	501.71 ppb	2.649	0.53%
QC value within limits for Mo 202.031 Recovery = 100.34%						
Na 589.592 Radial†	29576.9	10427 ug/L	230.4	10427 ppb	230.4	2.21%
QC value within limits for Na 589.592 Radial Recovery = 104.27%						
Ni 231.604†	16089.0	510.63 ug/L	6.204	510.63 ppb	6.204	1.21%
QC value within limits for Ni 231.604 Recovery = 102.13%						
P 214.914†	3362.4	2407.3 ug/L	19.27	2407.3 ppb	19.27	0.80%
QC value within limits for P 214.914 Recovery = 96.29%						
Pb 220.353†	3276.4	504.79 ug/L	1.993	504.79 ppb	1.993	0.39%
QC value within limits for Pb 220.353 Recovery = 100.96%						
S 181.975 Axial†	560.8	1002.9 ug/L	6.76	1002.9 ppb	6.76	0.67%
QC value within limits for S 181.975 Axial Recovery = 100.29%						
Sb 206.836†	1206.4	522.80 ug/L	4.735	522.80 ppb	4.735	0.91%
QC value within limits for Sb 206.836 Recovery = 104.56%						
Se 196.026†	607.4	524.36 ug/L	6.133	524.36 ppb	6.133	1.17%
QC value within limits for Se 196.026 Recovery = 104.87%						
Si 251.611†	66552.5	2520.4 ug/L	29.11	2520.4 ppb	29.11	1.15%
QC value within limits for Si 251.611 Recovery = 100.81%						
Sn 189.927†	2214.7	503.20 ug/L	3.770	503.20 ppb	3.770	0.75%
QC value within limits for Sn 189.927 Recovery = 100.64%						
Sr 421.552†	65675.1	526.40 ug/L	11.850	526.40 ppb	11.850	2.25%
QC value within limits for Sr 421.552 Recovery = 105.28%						
Ti 334.940†	284693.4	494.95 ug/L	5.860	494.95 ppb	5.860	1.18%
QC value within limits for Ti 334.940 Recovery = 98.99%						
Tl 190.801†	1298.9	505.78 ug/L	1.953	505.78 ppb	1.953	0.39%
QC value within limits for Tl 190.801 Recovery = 101.16%						
U 409.014†	16912.5	511.36 ug/L	7.050	511.36 ppb	7.050	1.38%
QC value within limits for U 409.014 Recovery = 102.27%						
V 292.402†	63132.1	510.81 ug/L	5.942	510.81 ppb	5.942	1.16%
QC value within limits for V 292.402 Recovery = 102.16%						
Zn 213.857†	41950.3	503.58 ug/L	5.424	503.58 ppb	5.424	1.08%
QC value within limits for Zn 213.857 Recovery = 100.72%						
SiO2†	66630.5	5424.2 ug/L	42.42	5424.2 ppb	42.42	0.78%
QC value within limits for SiO2 Recovery = 101.43%						

All analyte(s) passed QC.

Sequence No.: 20

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 3/19/2010 12:56:41

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	4122.8	4122.8	93.8 %		12:58:54
1	Y RADIAL	4237.6	4237.6	89.01 %		12:58:34
1	Al 396.153Radial†	-72.2	1.1	1.0140 ug/L	1.0140 ppb	12:58:54
1	Ca 317.933Radial†	19.5	5.1	9.5949 ug/L	9.5949 ppb	12:58:54
1	Fe 238.204 Radial†	6.3	-1.8	-20.749 ug/L	-20.749 ppb	12:58:54
1	K 766.490 Radial†	2742.0	324.3	61.784 ug/L	61.784 ppb	12:58:34
1	Mg 279.077 IEC†	1.8	0.4	16.217 ug/L	16.217 ppb	12:58:54
1	Na 589.592 Radial†	-841.8	-22.3	-7.8636 ug/L	-7.8636 ppb	12:58:34
1	Sr 421.552†	22.9	3.5	0.0283 ug/L	0.0283 ppb	12:58:34
1	Sc 361.383	820286.5	820286.5	100.18 %		12:59:51
1	Y 371.029	693929.7	693929.7	100.33 %		12:59:51
1	Ag 328.068†	165.9	-19.6	-0.1098 ug/L	-0.1098 ppb	12:59:51
1	As 188.979†	-22.3	4.5	2.4690 ug/L	2.4690 ppb	13:00:11
1	B 249.677†	-310.7	227.2	6.3770 ug/L	6.3770 ppb	13:00:11
1	Ba 233.527†	3.2	3.9	0.0347 ug/L	0.0347 ppb	13:00:11
1	Be 313.107†	-3607.0	130.5	0.0559 ug/L	0.0559 ppb	12:59:51
1	Cd 226.502†	-163.0	7.9	0.1166 ug/L	0.1166 ppb	13:00:11
1	Co 228.616†	-31.6	14.7	0.3824 ug/L	0.3824 ppb	13:00:11
1	Cr 267.716†	71.5	-0.2	-0.0048 ug/L	-0.0048 ppb	13:00:11
1	Cu 324.752†	5624.1	62.1	0.2040 ug/L	0.2040 ppb	12:59:51
1	Mn 257.610†	486.4	96.5	0.1241 ug/L	0.1241 ppb	13:00:11
1	Mo 202.031†	19.0	10.5	0.9285 ug/L	0.9285 ppb	13:00:11
1	Ni 231.604†	92.7	8.4	0.2679 ug/L	0.2679 ppb	13:00:11
1	P 214.914†	184.0	-3.6	-2.7086 ug/L	-2.7086 ppb	13:00:11
1	Pb 220.353†	-51.3	7.1	1.0952 ug/L	1.0952 ppb	13:00:11
1	S 181.975 Axial†	27.2	-3.0	-5.4258 ug/L	-5.4258 ppb	13:00:11
1	Sb 206.836†	23.9	0.2	0.0873 ug/L	0.0873 ppb	13:00:11
1	Se 196.026†	-13.7	3.3	2.6542 ug/L	2.6542 ppb	13:00:11
1	Si 251.611†	636.7	147.4	5.5832 ug/L	5.5832 ppb	13:00:11
1	Sn 189.927†	6.6	-0.6	-0.1354 ug/L	-0.1354 ppb	13:00:11
1	Ti 334.940†	-1033.3	89.8	0.1561 ug/L	0.1561 ppb	12:59:51
1	Tl 190.801†	-27.9	1.2	0.4639 ug/L	0.4639 ppb	13:00:11
1	U 409.014†	-2215.6	-7.5	-0.2238 ug/L	-0.2238 ppb	12:59:51
1	V 292.402†	-1375.0	-55.2	-0.4246 ug/L	-0.4246 ppb	12:59:51
1	Zn 213.857†	851.6	280.0	3.3939 ug/L	3.3939 ppb	13:00:11
1	SiO2†	638.6	138.1	11.247 ug/L	11.247 ppb	13:01:22
2	Sc Radial	4186.6	4186.6	95.3 %		12:59:19
2	Y RADIAL	4679.1	4679.1	98.29 %		12:58:59
2	Al 396.153Radial†	-87.4	-13.7	-13.461 ug/L	-13.461 ppb	12:59:19
2	Ca 317.933Radial†	22.7	8.1	15.366 ug/L	15.366 ppb	12:59:19
2	Fe 238.204 Radial†	7.5	-0.6	-6.4238 ug/L	-6.4238 ppb	12:59:19
2	K 766.490 Radial†	2754.6	293.0	55.823 ug/L	55.823 ppb	12:58:59
2	Mg 279.077 IEC†	0.8	-0.7	-27.119 ug/L	-27.119 ppb	12:59:19
2	Na 589.592 Radial†	-886.4	-55.5	-19.549 ug/L	-19.549 ppb	12:58:59
2	Sr 421.552†	21.0	1.2	0.0097 ug/L	0.0097 ppb	12:58:59
2	Sc 361.383	820591.8	820591.8	100.22 %		13:00:16
2	Y 371.029	693619.7	693619.7	100.29 %		13:00:16
2	Ag 328.068†	137.4	-48.0	-0.2526 ug/L	-0.2526 ppb	13:00:16
2	As 188.979†	-25.6	1.3	0.6986 ug/L	0.6986 ppb	13:00:36
2	B 249.677†	-293.6	244.4	6.8564 ug/L	6.8564 ppb	13:00:36
2	Ba 233.527†	9.0	9.7	0.0893 ug/L	0.0893 ppb	13:00:36
2	Be 313.107†	-3652.3	86.6	0.0372 ug/L	0.0372 ppb	13:00:16
2	Cd 226.502†	-166.4	4.6	0.0669 ug/L	0.0669 ppb	13:00:36
2	Co 228.616†	-41.3	5.0	0.1287 ug/L	0.1287 ppb	13:00:36
2	Cr 267.716†	79.9	8.2	0.1090 ug/L	0.1090 ppb	13:00:36
2	Cu 324.752†	5675.4	111.2	0.3674 ug/L	0.3674 ppb	13:00:16
2	Mn 257.610†	483.2	93.1	0.1229 ug/L	0.1229 ppb	13:00:36
2	Mo 202.031†	10.6	2.1	0.1845 ug/L	0.1845 ppb	13:00:36
2	Ni 231.604†	97.8	13.5	0.4294 ug/L	0.4294 ppb	13:00:36

2	P 214.914†	186.5	-1.2	-0.9377 ug/L	-0.9377 ppb	13:00:36
2	Pb 220.353†	-61.1	-2.6	-0.4083 ug/L	-0.4083 ppb	13:00:36
2	S 181.975 Axial†	29.3	-0.9	-1.6210 ug/L	-1.6210 ppb	13:00:36
2	Sb 206.836†	26.0	2.3	0.9839 ug/L	0.9839 ppb	13:00:36
2	Se 196.026†	-13.8	3.2	2.6731 ug/L	2.6731 ppb	13:00:36
2	Si 251.611†	652.9	163.3	6.1968 ug/L	6.1968 ppb	13:00:36
2	Sn 189.927†	12.5	5.3	1.2124 ug/L	1.2124 ppb	13:00:36
2	Ti 334.940†	-1036.2	87.3	0.1565 ug/L	0.1565 ppb	13:00:16
2	Tl 190.801†	-29.8	-0.7	-0.2529 ug/L	-0.2529 ppb	13:00:36
2	U 409.014†	-2247.7	-38.6	-1.1711 ug/L	-1.1711 ppb	13:00:16
2	V 292.402†	-1381.9	-61.5	-0.4908 ug/L	-0.4908 ppb	13:00:16
2	Zn 213.857†	850.6	278.7	3.3742 ug/L	3.3742 ppb	13:00:36
2	SiO2†	638.7	138.0	11.256 ug/L	11.256 ppb	13:01:42
3	Sc Radial	4228.2	4228.2	96.2 %		12:59:44
3	Y RADIAL	4655.5	4655.5	97.79 %		12:59:24
3	Al 396.153Radial†	-73.3	1.9	1.8952 ug/L	1.8952 ppb	12:59:44
3	Ca 317.933Radial†	27.0	12.4	23.461 ug/L	23.461 ppb	12:59:44
3	Fe 238.204 Radial†	6.2	-2.0	-23.574 ug/L	-23.574 ppb	12:59:44
3	K 766.490 Radial†	2678.8	185.7	35.373 ug/L	35.373 ppb	12:59:24
3	Mg 279.077 IEC†	3.6	2.2	90.892 ug/L	90.892 ppb	12:59:44
3	Na 589.592 Radial†	-859.2	-18.0	-6.3412 ug/L	-6.3412 ppb	12:59:24
3	Sr 421.552†	27.4	7.6	0.0609 ug/L	0.0609 ppb	12:59:24
3	Sc 361.383	819441.0	819441.0	100.08 %		13:00:41
3	Y 371.029	693279.0	693279.0	100.24 %		13:00:41
3	Ag 328.068†	227.2	41.9	0.2062 ug/L	0.2062 ppb	13:00:41
3	As 188.979†	-19.4	7.4	4.0824 ug/L	4.0824 ppb	13:01:01
3	B 249.677†	-335.2	202.4	5.6818 ug/L	5.6818 ppb	13:01:01
3	Ba 233.527†	13.3	14.0	0.1308 ug/L	0.1308 ppb	13:01:01
3	Be 313.107†	-3646.0	87.7	0.0377 ug/L	0.0377 ppb	13:00:41
3	Cd 226.502†	-169.5	1.3	0.0222 ug/L	0.0222 ppb	13:01:01
3	Co 228.616†	-41.7	4.6	0.1177 ug/L	0.1177 ppb	13:01:01
3	Cr 267.716†	71.9	0.3	0.0001 ug/L	0.0001 ppb	13:01:01
3	Cu 324.752†	5660.5	104.2	0.3398 ug/L	0.3398 ppb	13:00:41
3	Mn 257.610†	483.4	94.0	0.1175 ug/L	0.1175 ppb	13:01:01
3	Mo 202.031†	5.8	-2.7	-0.2418 ug/L	-0.2418 ppb	13:01:01
3	Ni 231.604†	81.9	-2.2	-0.0710 ug/L	-0.0710 ppb	13:01:01
3	P 214.914†	187.3	-0.1	-0.1132 ug/L	-0.1132 ppb	13:01:01
3	Pb 220.353†	-50.0	8.3	1.2784 ug/L	1.2784 ppb	13:01:01
3	S 181.975 Axial†	34.3	4.0	7.2446 ug/L	7.2446 ppb	13:01:01
3	Sb 206.836†	28.6	4.9	2.0605 ug/L	2.0605 ppb	13:01:01
3	Se 196.026†	-21.1	-4.1	-3.4948 ug/L	-3.4948 ppb	13:01:01
3	Si 251.611†	646.5	157.9	5.9962 ug/L	5.9962 ppb	13:01:01
3	Sn 189.927†	12.3	5.1	1.1633 ug/L	1.1633 ppb	13:01:01
3	Ti 334.940†	-1046.5	75.5	0.1245 ug/L	0.1245 ppb	13:00:41
3	Tl 190.801†	-30.8	-1.7	-0.6569 ug/L	-0.6569 ppb	13:01:01
3	U 409.014†	-2022.8	183.0	5.5531 ug/L	5.5531 ppb	13:00:41
3	V 292.402†	-1297.7	20.7	0.1779 ug/L	0.1779 ppb	13:00:41
3	Zn 213.857†	843.6	272.9	3.3102 ug/L	3.3102 ppb	13:01:01
3	SiO2†	641.2	141.4	11.549 ug/L	11.549 ppb	13:02:02

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	820106.4	100.16 %		0.073			0.07%
Sc Radial	4179.2	95.1 %		1.21			1.27%
Y 371.029	693609.5	100.28 %		0.047			0.05%
Y RADIAL	4524.1	95.03 %		5.217			5.49%
Ag 328.068†	-8.6	-0.0521 ug/L		0.23480	-0.0521 ppb	0.23480	450.92%
QC value within limits for Ag 328.068 Recovery = Not calculated							
Al 396.153Radial†	-3.6	-3.5172 ug/L		8.62256	-3.5172 ppb	8.62256	245.16%
QC value within limits for Al 396.153Radial Recovery = Not calculated							
As 188.979†	4.4	2.4167 ug/L		1.69248	2.4167 ppb	1.69248	70.03%
QC value within limits for As 188.979 Recovery = Not calculated							
B 249.677†	224.7	6.3051 ug/L		0.59056	6.3051 ppb	0.59056	9.37%
QC value within limits for B 249.677 Recovery = Not calculated							
Ba 233.527†	9.2	0.0849 ug/L		0.04816	0.0849 ppb	0.04816	56.71%
QC value within limits for Ba 233.527 Recovery = Not calculated							
Be 313.107†	101.6	0.0436 ug/L		0.01067	0.0436 ppb	0.01067	24.49%
QC value within limits for Be 313.107 Recovery = Not calculated							
Ca 317.933Radial†	8.5	16.141 ug/L		6.9654	16.141 ppb	6.9654	43.15%

QC value within limits for Ca 317.933 Radial Recovery = Not calculated							
Cd 226.502†	4.6	0.0686 ug/L	0.04722	0.0686 ppb	0.04722	68.89%	
QC value within limits for Cd 226.502 Recovery = Not calculated							
Co 228.616†	8.1	0.2096 ug/L	0.14974	0.2096 ppb	0.14974	71.44%	
QC value within limits for Co 228.616 Recovery = Not calculated							
Cr 267.716†	2.8	0.0347 ug/L	0.06433	0.0347 ppb	0.06433	185.23%	
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu 324.752†	92.5	0.3037 ug/L	0.08749	0.3037 ppb	0.08749	28.81%	
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe 238.204 Radial†	-1.5	-16.916 ug/L	9.1955	-16.916 ppb	9.1955	54.36%	
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K 766.490 Radial†	267.6	50.993 ug/L	13.8523	50.993 ppb	13.8523	27.17%	
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg 279.077 IEC†	0.6	26.663 ug/L	59.6950	26.663 ppb	59.6950	223.88%	
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn 257.610†	94.5	0.1215 ug/L	0.00352	0.1215 ppb	0.00352	2.90%	
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo 202.031†	3.3	0.2904 ug/L	0.59228	0.2904 ppb	0.59228	203.93%	
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na 589.592 Radial†	-31.9	-11.251 ug/L	7.2261	-11.251 ppb	7.2261	64.23%	
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni 231.604†	6.6	0.2088 ug/L	0.25541	0.2088 ppb	0.25541	122.34%	
QC value within limits for Ni 231.604 Recovery = Not calculated							
P 214.914†	-1.6	-1.2532 ug/L	1.32612	-1.2532 ppb	1.32612	105.82%	
QC value within limits for P 214.914 Recovery = Not calculated							
Pb 220.353†	4.2	0.6551 ug/L	0.92549	0.6551 ppb	0.92549	141.28%	
QC value within limits for Pb 220.353 Recovery = Not calculated							
S 181.975 Axial†	0.0	0.0660 ug/L	6.50146	0.0660 ppb	6.50146	>999.9%	
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb 206.836†	2.5	1.0439 ug/L	0.98794	1.0439 ppb	0.98794	94.64%	
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	0.8	0.6108 ug/L	3.55557	0.6108 ppb	3.55557	582.11%	
QC value within limits for Se 196.026 Recovery = Not calculated							
Si 251.611†	156.2	5.9254 ug/L	0.31285	5.9254 ppb	0.31285	5.28%	
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn 189.927†	3.3	0.7467 ug/L	0.76437	0.7467 ppb	0.76437	102.36%	
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr 421.552†	4.1	0.0330 ug/L	0.02594	0.0330 ppb	0.02594	78.72%	
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti 334.940†	84.2	0.1457 ug/L	0.01835	0.1457 ppb	0.01835	12.59%	
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl 190.801†	-0.4	-0.1486 ug/L	0.56763	-0.1486 ppb	0.56763	381.86%	
QC value within limits for Tl 190.801 Recovery = Not calculated							
U 409.014†	45.6	1.3860 ug/L	3.63969	1.3860 ppb	3.63969	262.60%	
QC value within limits for U 409.014 Recovery = Not calculated							
V 292.402†	-32.0	-0.2458 ug/L	0.36848	-0.2458 ppb	0.36848	149.89%	
QC value within limits for V 292.402 Recovery = Not calculated							
Zn 213.857†	277.2	3.3594 ug/L	0.04376	3.3594 ppb	0.04376	1.30%	
QC value within limits for Zn 213.857 Recovery = Not calculated							
SiO2†	139.2	11.351 ug/L	0.1715	11.351 ppb	0.1715	1.51%	
QC value within limits for SiO2 Recovery = Not calculated							

All analyte(s) passed QC.

===== Analysis Begun

Start Time: 3/19/2010 13:15:22

Plasma On Time: 3/15/2010 06:51:19

Logged In Analyst: Optima3

Technique: ICP Continuous

Spectrometer Model: Optima 5300 DV, S/N 077C7090601 Autosampler Model: S10

Sample Information File: C:\pe\Optima3\Sample Information\031910.sif

Batch ID:

Results Data Set: 031910

Results Library: C:\pe\Optima3\Results\Results.mdb

Sequence No.: 1

Autosampler Location: 7

Sample ID: CCV

Date Collected: 3/19/2010 13:15:23

Analyst:

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

===== Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4422.0	4422.0	101 %		13:17:15
1	Y RADIAL	4780.1	4780.1	100.4 %		13:17:15
1	Al 396.153Radial†	4976.3	5024.0	4910.8 ug/L	4910.8 ppb	13:17:15
1	Ca 317.933Radial†	2700.5	2668.4	5049.1 ug/L	5049.1 ppb	13:17:35
1	Fe 238.204 Radial†	452.2	441.0	5124.8 ug/L	5124.8 ppb	13:17:35
1	K 766.490 Radial†	28954.1	26178.8	4981.5 ug/L	4981.5 ppb	13:17:15
1	Mg 279.077 IEC†	127.2	124.9	5152.1 ug/L	5152.1 ppb	13:17:35
1	Na 589.592 Radial†	27030.2	27740.5	9779.1 ug/L	9779.1 ppb	13:17:15
1	Sr 421.552†	62430.7	62029.2	497.17 ug/L	497.17 ppb	13:17:15
1	Sc 361.383	836041.4	836041.4	102.10 %		13:18:32
1	Y 371.029	695666.9	695666.9	100.58 %		13:18:32
1	Ag 328.068†	99741.5	97502.4	509.35 ug/L	509.35 ppb	13:18:37
1	As 188.979†	902.8	911.0	504.45 ug/L	504.45 ppb	13:18:57
1	B 249.677†	17798.3	17969.1	501.80 ug/L	501.80 ppb	13:18:37
1	Ba 233.527†	55289.1	54151.2	508.47 ug/L	508.47 ppb	13:18:37
1	Be 313.107†	1212462.2	1191224.9	508.36 ug/L	508.36 ppb	13:18:32
1	Cd 226.502†	35617.7	35054.9	508.53 ug/L	508.53 ppb	13:18:37
1	Co 228.616†	20302.2	19930.3	515.21 ug/L	515.21 ppb	13:18:37
1	Cr 267.716†	38592.6	37726.3	506.96 ug/L	506.96 ppb	13:18:37
1	Cu 324.752†	160977.9	152110.9	502.18 ug/L	502.18 ppb	13:18:37
1	Mn 257.610†	392889.1	384409.3	505.72 ug/L	505.72 ppb	13:18:32
1	Mo 202.031†	5733.6	5606.9	498.87 ug/L	498.87 ppb	13:18:57
1	Ni 231.604†	16562.6	16137.5	512.17 ug/L	512.17 ppb	13:18:37
1	P 214.914†	3592.6	3331.3	2383.6 ug/L	2383.6 ppb	13:18:57
1	Pb 220.353†	3245.5	3237.0	498.70 ug/L	498.70 ppb	13:18:57
1	S 181.975 Axial†	595.4	552.9	988.90 ug/L	988.90 ppb	13:18:57
1	Sb 206.836†	1246.1	1196.8	518.64 ug/L	518.64 ppb	13:18:57
1	Se 196.026†	605.1	609.6	525.69 ug/L	525.69 ppb	13:18:57
1	Si 251.611†	68974.5	67066.0	2539.9 ug/L	2539.9 ppb	13:18:37
1	Sn 189.927†	2249.7	2196.2	498.98 ug/L	498.98 ppb	13:18:57
1	Ti 334.940†	291047.8	286175.5	497.52 ug/L	497.52 ppb	13:18:37
1	Tl 190.801†	1279.6	1282.3	499.44 ug/L	499.44 ppb	13:18:57
1	U 409.014†	15153.6	17045.7	515.42 ug/L	515.42 ppb	13:18:37
1	V 292.402†	63088.1	63106.3	510.59 ug/L	510.59 ppb	13:18:37
1	Zn 213.857†	43547.5	42080.7	505.17 ug/L	505.17 ppb	13:18:37
1	SiO2†	69192.6	67268.3	5476.3 ug/L	5476.3 ppb	13:20:05
2	Sc Radial	4371.3	4371.3	99.5 %		13:17:40
2	Y RADIAL	4764.2	4764.2	100.1 %		13:17:40
2	Al 396.153Radial†	5013.3	5118.7	5001.8 ug/L	5001.8 ppb	13:17:40
2	Ca 317.933Radial†	2726.3	2725.5	5157.2 ug/L	5157.2 ppb	13:18:00
2	Fe 238.204 Radial†	455.1	449.1	5219.7 ug/L	5219.7 ppb	13:18:00
2	K 766.490 Radial†	29490.7	27052.7	5147.8 ug/L	5147.8 ppb	13:17:40
2	Mg 279.077 IEC†	130.5	129.7	5350.0 ug/L	5350.0 ppb	13:18:00
2	Na 589.592 Radial†	27159.9	28183.1	9935.1 ug/L	9935.1 ppb	13:17:40
2	Sr 421.552†	63189.5	63513.1	509.07 ug/L	509.07 ppb	13:17:40
2	Sc 361.383	780265.1	780265.1	95.291 %		13:19:03
2	Y 371.029	650259.2	650259.2	94.016 %		13:19:03

2	Ag 328.068†	98573.2	103259.4	539.38 ug/L	539.38 ppb	13:19:08
2	As 188.979†	919.2	991.5	548.84 ug/L	548.84 ppb	13:19:28
2	B 249.677†	17450.0	18849.7	526.40 ug/L	526.40 ppb	13:19:08
2	Ba 233.527†	54777.2	57485.0	539.77 ug/L	539.77 ppb	13:19:08
2	Be 313.107†	1214795.0	1278559.6	545.62 ug/L	545.62 ppb	13:19:03
2	Cd 226.502†	35129.2	37035.9	537.29 ug/L	537.29 ppb	13:19:08
2	Co 228.616†	20097.6	21137.0	546.43 ug/L	546.43 ppb	13:19:08
2	Cr 267.716†	38463.9	40293.3	541.43 ug/L	541.43 ppb	13:19:08
2	Cu 324.752†	159071.0	161380.1	532.77 ug/L	532.77 ppb	13:19:08
2	Mn 257.610†	393681.2	412747.3	542.98 ug/L	542.98 ppb	13:19:03
2	Mo 202.031†	5788.9	6066.5	539.72 ug/L	539.72 ppb	13:19:28
2	Ni 231.604†	16444.8	17173.4	545.05 ug/L	545.05 ppb	13:19:08
2	P 214.914†	3636.2	3628.6	2599.3 ug/L	2599.3 ppb	13:19:28
2	Pb 220.353†	3292.1	3513.1	541.22 ug/L	541.22 ppb	13:19:28
2	S 181.975 Axial†	596.4	595.7	1065.5 ug/L	1065.5 ppb	13:19:28
2	Sb 206.836†	1259.5	1298.0	562.53 ug/L	562.53 ppb	13:19:28
2	Se 196.026†	593.8	640.1	551.52 ug/L	551.52 ppb	13:19:28
2	Si 251.611†	67834.1	70698.2	2677.3 ug/L	2677.3 ppb	13:19:08
2	Sn 189.927†	2279.1	2384.6	541.74 ug/L	541.74 ppb	13:19:28
2	Ti 334.940†	288492.3	303870.4	528.27 ug/L	528.27 ppb	13:19:08
2	Tl 190.801†	1298.1	1391.4	541.85 ug/L	541.85 ppb	13:19:28
2	U 409.014†	15019.8	17966.3	543.26 ug/L	543.26 ppb	13:19:08
2	V 292.402†	62992.3	67422.8	545.63 ug/L	545.63 ppb	13:19:08
2	Zn 213.857†	42669.0	44207.5	530.68 ug/L	530.68 ppb	13:19:08
2	SiO2†	67938.2	70796.3	5763.1 ug/L	5763.1 ppb	13:20:10
3	Sc Radial	4235.6	4235.6	96.4 %		13:18:05
3	Y RADIAL	4578.7	4578.7	96.18 %		13:18:05
3	Al 396.153Radial†	5061.7	5330.3	5211.5 ug/L	5211.5 ppb	13:18:05
3	Ca 317.933Radial†	2685.3	2770.7	5242.7 ug/L	5242.7 ppb	13:18:25
3	Fe 238.204 Radial†	451.0	459.5	5339.8 ug/L	5339.8 ppb	13:18:25
3	K 766.490 Radial†	29654.4	28171.8	5360.9 ug/L	5360.9 ppb	13:18:05
3	Mg 279.077 IEC†	126.6	129.9	5356.3 ug/L	5356.3 ppb	13:18:25
3	Na 589.592 Radial†	27458.7	29367.4	10353 ug/L	10353 ppb	13:18:05
3	Sr 421.552†	63431.8	65798.5	527.38 ug/L	527.38 ppb	13:18:05
3	Sc 361.383	836309.7	836309.7	102.14 %		13:19:34
3	Y 371.029	697379.0	697379.0	100.83 %		13:19:34
3	Ag 328.068†	98803.2	96552.4	504.47 ug/L	504.47 ppb	13:19:39
3	As 188.979†	902.8	910.7	504.29 ug/L	504.29 ppb	13:19:59
3	B 249.677†	17576.7	17746.6	495.54 ug/L	495.54 ppb	13:19:39
3	Ba 233.527†	54612.1	53471.0	502.09 ug/L	502.09 ppb	13:19:39
3	Be 313.107†	1217346.2	1195625.9	510.22 ug/L	510.22 ppb	13:19:34
3	Cd 226.502†	35283.2	34716.1	503.59 ug/L	503.59 ppb	13:19:39
3	Co 228.616†	20062.5	19689.2	508.99 ug/L	508.99 ppb	13:19:39
3	Cr 267.716†	38307.3	37434.9	503.08 ug/L	503.08 ppb	13:19:39
3	Cu 324.752†	158684.0	149814.3	494.61 ug/L	494.61 ppb	13:19:39
3	Mn 257.610†	392833.1	384231.0	505.50 ug/L	505.50 ppb	13:19:34
3	Mo 202.031†	5772.3	5643.1	502.10 ug/L	502.10 ppb	13:19:59
3	Ni 231.604†	16433.1	16005.4	507.98 ug/L	507.98 ppb	13:19:39
3	P 214.914†	3637.4	3374.1	2416.9 ug/L	2416.9 ppb	13:19:59
3	Pb 220.353†	3275.8	3265.6	503.14 ug/L	503.14 ppb	13:19:59
3	S 181.975 Axial†	595.7	553.1	989.20 ug/L	989.20 ppb	13:19:59
3	Sb 206.836†	1259.7	1209.7	524.15 ug/L	524.15 ppb	13:19:59
3	Se 196.026†	604.4	608.7	525.65 ug/L	525.65 ppb	13:19:59
3	Si 251.611†	67839.7	65933.2	2496.8 ug/L	2496.8 ppb	13:19:39
3	Sn 189.927†	2259.5	2205.1	501.02 ug/L	501.02 ppb	13:19:59
3	Ti 334.940†	287629.2	282736.9	491.56 ug/L	491.56 ppb	13:19:39
3	Tl 190.801†	1293.5	1295.6	504.55 ug/L	504.55 ppb	13:19:59
3	U 409.014†	14827.1	16721.4	505.57 ug/L	505.57 ppb	13:19:39
3	V 292.402†	62590.7	62599.5	506.55 ug/L	506.55 ppb	13:19:39
3	Zn 213.857†	43091.5	41620.4	499.60 ug/L	499.60 ppb	13:19:39
3	SiO2†	68658.1	66723.3	5431.7 ug/L	5431.7 ppb	13:20:15

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	817538.8	99.843 %	3.9423			3.95%
Sc Radial	4343.0	98.8 %	2.19			2.22%
Y 371.029	681101.7	98.475 %	3.8638			3.92%
Y RADIAL	4707.7	98.89 %	2.352			2.38%
Ag 328.068†	99104.7	517.73 ug/L	18.906	517.73 ppb	18.906	3.65%

QC value within limits for Ag 328.068 Recovery = 103.55%						
Al 396.153Radial†	5157.7	5041.4 ug/L	154.20	5041.4 ppb	154.20	3.06%
QC value within limits for Al 396.153Radial Recovery = 100.83%						
As 188.979†	937.7	519.19 ug/L	25.673	519.19 ppb	25.673	4.94%
QC value within limits for As 188.979 Recovery = 103.84%						
B 249.677†	18188.5	507.92 ug/L	16.313	507.92 ppb	16.313	3.21%
QC value within limits for B 249.677 Recovery = 101.58%						
Ba 233.527†	55035.7	516.78 ug/L	20.167	516.78 ppb	20.167	3.90%
QC value within limits for Ba 233.527 Recovery = 103.36%						
Be 313.107†	1221803.4	521.40 ug/L	20.994	521.40 ppb	20.994	4.03%
QC value within limits for Be 313.107 Recovery = 104.28%						
Ca 317.933Radial†	2721.5	5149.7 ug/L	97.02	5149.7 ppb	97.02	1.88%
QC value within limits for Ca 317.933Radial Recovery = 102.99%						
Cd 226.502†	35602.3	516.47 ug/L	18.200	516.47 ppb	18.200	3.52%
QC value within limits for Cd 226.502 Recovery = 103.29%						
Co 228.616†	20252.2	523.54 ug/L	20.061	523.54 ppb	20.061	3.83%
QC value within limits for Co 228.616 Recovery = 104.71%						
Cr 267.716†	38484.8	517.16 ug/L	21.113	517.16 ppb	21.113	4.08%
QC value within limits for Cr 267.716 Recovery = 103.43%						
Cu 324.752†	154435.1	509.85 ug/L	20.203	509.85 ppb	20.203	3.96%
QC value within limits for Cu 324.752 Recovery = 101.97%						
Fe 238.204 Radial†	449.9	5228.1 ug/L	107.73	5228.1 ppb	107.73	2.06%
QC value within limits for Fe 238.204 Radial Recovery = 104.56%						
K 766.490 Radial†	27134.5	5163.4 ug/L	190.20	5163.4 ppb	190.20	3.68%
QC value within limits for K 766.490 Radial Recovery = 103.27%						
Mg 279.077 IEC†	128.1	5286.1 ug/L	116.14	5286.1 ppb	116.14	2.20%
QC value within limits for Mg 279.077 IEC Recovery = 105.72%						
Mn 257.610†	393795.9	518.07 ug/L	21.577	518.07 ppb	21.577	4.16%
QC value within limits for Mn 257.610 Recovery = 103.61%						
Mo 202.031†	5772.2	513.56 ug/L	22.713	513.56 ppb	22.713	4.42%
QC value within limits for Mo 202.031 Recovery = 102.71%						
Na 589.592 Radial†	28430.3	10022 ug/L	296.5	10022 ppb	296.5	2.96%
QC value within limits for Na 589.592 Radial Recovery = 100.22%						
Ni 231.604†	16438.8	521.74 ug/L	20.300	521.74 ppb	20.300	3.89%
QC value within limits for Ni 231.604 Recovery = 104.35%						
P 214.914†	3444.7	2466.6 ug/L	116.16	2466.6 ppb	116.16	4.71%
QC value within limits for P 214.914 Recovery = 98.66%						
Pb 220.353†	3338.6	514.35 ug/L	23.371	514.35 ppb	23.371	4.54%
QC value within limits for Pb 220.353 Recovery = 102.87%						
S 181.975 Axial†	567.2	1014.5 ug/L	44.16	1014.5 ppb	44.16	4.35%
QC value within limits for S 181.975 Axial Recovery = 101.45%						
Sb 206.836†	1234.8	535.11 ug/L	23.909	535.11 ppb	23.909	4.47%
QC value within limits for Sb 206.836 Recovery = 107.02%						
Se 196.026†	619.5	534.29 ug/L	14.922	534.29 ppb	14.922	2.79%
QC value within limits for Se 196.026 Recovery = 106.86%						
Si 251.611†	67899.1	2571.3 ug/L	94.24	2571.3 ppb	94.24	3.66%
QC value within limits for Si 251.611 Recovery = 102.85%						
Sn 189.927†	2262.0	513.91 ug/L	24.123	513.91 ppb	24.123	4.69%
QC value within limits for Sn 189.927 Recovery = 102.78%						
Sr 421.552†	63780.3	511.21 ug/L	15.220	511.21 ppb	15.220	2.98%
QC value within limits for Sr 421.552 Recovery = 102.24%						
Ti 334.940†	290927.6	505.78 ug/L	19.700	505.78 ppb	19.700	3.90%
QC value within limits for Ti 334.940 Recovery = 101.16%						
Tl 190.801†	1323.1	515.28 ug/L	23.152	515.28 ppb	23.152	4.49%
QC value within limits for Tl 190.801 Recovery = 103.06%						
U 409.014†	17244.4	521.42 ug/L	19.550	521.42 ppb	19.550	3.75%
QC value within limits for U 409.014 Recovery = 104.28%						
V 292.402†	64376.2	520.92 ug/L	21.493	520.92 ppb	21.493	4.13%
QC value within limits for V 292.402 Recovery = 104.18%						
Zn 213.857†	42636.2	511.81 ug/L	16.570	511.81 ppb	16.570	3.24%
QC value within limits for Zn 213.857 Recovery = 102.36%						
SiO2†	68262.6	5557.1 ug/L	179.84	5557.1 ppb	179.84	3.24%
QC value within limits for SiO2 Recovery = 103.92%						
All analyte(s) passed QC.						

Sequence No.: 2

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 3/19/2010 13:22:26

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4214.0	4214.0	95.9 %		13:24:38
1	Y RADIAL	4617.8	4617.8	97.00 %		13:24:18
1	Al 396.153Radial†	-78.0	-3.3	-3.2278 ug/L	-3.2278 ppb	13:24:38
1	Ca 317.933Radial†	25.8	11.2	21.266 ug/L	21.266 ppb	13:24:38
1	Fe 238.204 Radial†	6.9	-1.3	-14.901 ug/L	-14.901 ppb	13:24:38
1	K 766.490 Radial†	2560.2	71.4	13.599 ug/L	13.599 ppb	13:24:18
1	Mg 279.077 IEC†	2.3	0.9	37.080 ug/L	37.080 ppb	13:24:38
1	Na 589.592 Radial†	-866.0	-28.1	-9.9122 ug/L	-9.9122 ppb	13:24:18
1	Sr 421.552†	25.6	5.9	0.0470 ug/L	0.0470 ppb	13:24:18
1	Sc 361.383	828827.6	828827.6	101.22 %		13:25:35
1	Y 371.029	700055.9	700055.9	101.22 %		13:25:35
1	Ag 328.068†	206.7	19.1	0.0888 ug/L	0.0888 ppb	13:25:35
1	As 188.979†	-29.4	-2.3	-1.2633 ug/L	-1.2633 ppb	13:25:55
1	B 249.677†	-290.5	250.3	7.0258 ug/L	7.0258 ppb	13:25:55
1	Ba 233.527†	1.9	2.6	0.0237 ug/L	0.0237 ppb	13:25:55
1	Be 313.107†	-3640.9	134.1	0.0571 ug/L	0.0571 ppb	13:25:35
1	Cd 226.502†	-168.1	4.6	0.0690 ug/L	0.0690 ppb	13:25:55
1	Co 228.616†	-49.5	-2.7	-0.0682 ug/L	-0.0682 ppb	13:25:55
1	Cr 267.716†	72.4	0.0	-0.0036 ug/L	-0.0036 ppb	13:25:55
1	Cu 324.752†	5691.7	71.0	0.2304 ug/L	0.2304 ppb	13:25:35
1	Mn 257.610†	475.1	80.3	0.1026 ug/L	0.1026 ppb	13:25:55
1	Mo 202.031†	16.0	7.2	0.6416 ug/L	0.6416 ppb	13:25:55
1	Ni 231.604†	93.4	8.3	0.2620 ug/L	0.2620 ppb	13:25:55
1	P 214.914†	183.1	-6.4	-4.8145 ug/L	-4.8145 ppb	13:25:55
1	Pb 220.353†	-56.0	3.0	0.4595 ug/L	0.4595 ppb	13:25:55
1	S 181.975 Axial†	32.6	2.0	3.5771 ug/L	3.5771 ppb	13:25:55
1	Sb 206.836†	30.2	6.2	2.6171 ug/L	2.6171 ppb	13:25:55
1	Se 196.026†	-6.0	11.1	9.1807 ug/L	9.1807 ppb	13:25:55
1	Si 251.611†	640.7	144.8	5.4888 ug/L	5.4888 ppb	13:25:55
1	Sn 189.927†	10.5	3.2	0.7280 ug/L	0.7280 ppb	13:25:55
1	Ti 334.940†	-1118.9	15.8	0.0248 ug/L	0.0248 ppb	13:25:35
1	Tl 190.801†	-30.5	-1.0	-0.3917 ug/L	-0.3917 ppb	13:25:55
1	U 409.014†	-2040.5	188.3	5.7146 ug/L	5.7146 ppb	13:25:35
1	V 292.402†	-1357.2	-23.4	-0.1643 ug/L	-0.1643 ppb	13:25:35
1	Zn 213.857†	824.2	244.1	2.9585 ug/L	2.9585 ppb	13:25:55
1	SiO2†	614.0	107.2	8.7346 ug/L	8.7346 ppb	13:26:51
2	Sc Radial	4287.6	4287.6	97.6 %		13:25:03
2	Y RADIAL	4853.5	4853.5	102.0 %		13:24:43
2	Al 396.153Radial†	-79.3	-3.2	-3.2285 ug/L	-3.2285 ppb	13:25:03
2	Ca 317.933Radial†	28.5	13.5	25.522 ug/L	25.522 ppb	13:25:03
2	Fe 238.204 Radial†	7.8	-0.5	-5.6203 ug/L	-5.6203 ppb	13:25:03
2	K 766.490 Radial†	2708.7	177.8	33.882 ug/L	33.882 ppb	13:24:43
2	Mg 279.077 IEC†	1.9	0.4	15.487 ug/L	15.487 ppb	13:25:03
2	Na 589.592 Radial†	-956.7	-105.6	-37.211 ug/L	-37.211 ppb	13:24:43
2	Sr 421.552†	37.2	17.3	0.1382 ug/L	0.1382 ppb	13:24:43
2	Sc 361.383	836907.6	836907.6	102.21 %		13:26:00
2	Y 371.029	707095.7	707095.7	102.23 %		13:26:00
2	Ag 328.068†	124.8	-63.0	-0.3304 ug/L	-0.3304 ppb	13:26:00
2	As 188.979†	-22.0	5.3	2.8864 ug/L	2.8864 ppb	13:26:20
2	B 249.677†	-270.3	272.9	7.6575 ug/L	7.6575 ppb	13:26:20
2	Ba 233.527†	16.9	17.3	0.1616 ug/L	0.1616 ppb	13:26:20
2	Be 313.107†	-3628.8	180.7	0.0773 ug/L	0.0773 ppb	13:26:00
2	Cd 226.502†	-169.9	4.4	0.0656 ug/L	0.0656 ppb	13:26:20
2	Co 228.616†	-50.5	-3.2	-0.0794 ug/L	-0.0794 ppb	13:26:20
2	Cr 267.716†	64.1	-8.8	-0.1196 ug/L	-0.1196 ppb	13:26:20
2	Cu 324.752†	5653.3	-20.8	-0.0701 ug/L	-0.0701 ppb	13:26:00
2	Mn 257.610†	476.1	76.8	0.0998 ug/L	0.0998 ppb	13:26:20
2	Mo 202.031†	21.7	12.7	1.1268 ug/L	1.1268 ppb	13:26:20
2	Ni 231.604†	91.6	5.5	0.1758 ug/L	0.1758 ppb	13:26:20

2	P 214.914†	183.5	-7.7	-5.7343 ug/L	-5.7343 ppb	13:26:20
2	Pb 220.353†	-52.7	6.8	1.0466 ug/L	1.0466 ppb	13:26:20
2	S 181.975 Axial†	36.4	5.4	9.6328 ug/L	9.6328 ppb	13:26:20
2	Sb 206.836†	20.4	-3.7	-1.5352 ug/L	-1.5352 ppb	13:26:20
2	Se 196.026†	-17.9	-0.6	-0.4926 ug/L	-0.4926 ppb	13:26:20
2	Si 251.611†	636.7	134.8	5.1028 ug/L	5.1028 ppb	13:26:20
2	Sn 189.927†	9.4	2.0	0.4691 ug/L	0.4691 ppb	13:26:20
2	Ti 334.940†	-1040.5	103.2	0.1808 ug/L	0.1808 ppb	13:26:00
2	Tl 190.801†	-17.0	12.4	4.8149 ug/L	4.8149 ppb	13:26:20
2	U 409.014†	-2187.0	64.5	1.9568 ug/L	1.9568 ppb	13:26:00
2	V 292.402†	-1336.3	10.0	0.1004 ug/L	0.1004 ppb	13:26:00
2	Zn 213.857†	847.0	258.7	3.1339 ug/L	3.1339 ppb	13:26:20
2	SiO2†	672.8	159.0	12.943 ug/L	12.943 ppb	13:26:56
3	Sc Radial	4223.8	4223.8	96.1 %		13:25:29
3	Y RADIAL	4787.5	4787.5	100.6 %		13:25:08
3	Al 396.153Radial†	-68.0	7.3	7.1801 ug/L	7.1801 ppb	13:25:29
3	Ca 317.933Radial†	26.0	11.4	21.587 ug/L	21.587 ppb	13:25:29
3	Fe 238.204 Radial†	10.4	2.3	27.019 ug/L	27.019 ppb	13:25:29
3	K 766.490 Radial†	2761.7	274.9	52.379 ug/L	52.379 ppb	13:25:08
3	Mg 279.077 IEC†	3.9	2.5	103.77 ug/L	103.77 ppb	13:25:29
3	Na 589.592 Radial†	-913.7	-75.6	-26.662 ug/L	-26.662 ppb	13:25:08
3	Sr 421.552†	26.1	6.3	0.0504 ug/L	0.0504 ppb	13:25:08
3	Sc 361.383	826019.3	826019.3	100.88 %		13:26:26
3	Y 371.029	699154.6	699154.6	101.09 %		13:26:26
3	Ag 328.068†	254.0	66.6	0.3502 ug/L	0.3502 ppb	13:26:26
3	As 188.979†	-18.3	8.7	4.7742 ug/L	4.7742 ppb	13:26:46
3	B 249.677†	-276.0	263.7	7.3939 ug/L	7.3939 ppb	13:26:46
3	Ba 233.527†	2.5	3.1	0.0295 ug/L	0.0295 ppb	13:26:46
3	Be 313.107†	-3722.1	41.4	0.0180 ug/L	0.0180 ppb	13:26:26
3	Cd 226.502†	-167.3	4.8	0.0667 ug/L	0.0667 ppb	13:26:46
3	Co 228.616†	-48.2	-1.5	-0.0409 ug/L	-0.0409 ppb	13:26:46
3	Cr 267.716†	91.7	19.4	0.2616 ug/L	0.2616 ppb	13:26:46
3	Cu 324.752†	5709.6	107.9	0.3559 ug/L	0.3559 ppb	13:26:26
3	Mn 257.610†	484.6	91.3	0.1185 ug/L	0.1185 ppb	13:26:46
3	Mo 202.031†	5.8	-2.7	-0.2411 ug/L	-0.2411 ppb	13:26:46
3	Ni 231.604†	81.5	-3.3	-0.1050 ug/L	-0.1050 ppb	13:26:46
3	P 214.914†	185.3	-3.6	-2.7581 ug/L	-2.7581 ppb	13:26:46
3	Pb 220.353†	-51.2	7.5	1.1535 ug/L	1.1535 ppb	13:26:46
3	S 181.975 Axial†	29.6	-0.8	-1.4364 ug/L	-1.4364 ppb	13:26:46
3	Sb 206.836†	21.4	-2.5	-0.9971 ug/L	-0.9971 ppb	13:26:46
3	Se 196.026†	-25.5	-8.3	-6.8747 ug/L	-6.8747 ppb	13:26:46
3	Si 251.611†	640.1	146.4	5.5592 ug/L	5.5592 ppb	13:26:46
3	Sn 189.927†	19.1	11.8	2.6769 ug/L	2.6769 ppb	13:26:46
3	Ti 334.940†	-1044.7	85.7	0.1419 ug/L	0.1419 ppb	13:26:26
3	Tl 190.801†	-23.1	6.2	2.3838 ug/L	2.3838 ppb	13:26:46
3	U 409.014†	-2122.7	99.9	3.0285 ug/L	3.0285 ppb	13:26:26
3	V 292.402†	-1369.3	-39.9	-0.3187 ug/L	-0.3187 ppb	13:26:26
3	Zn 213.857†	853.0	275.4	3.3336 ug/L	3.3336 ppb	13:26:46
3	SiO2†	645.5	140.5	11.476 ug/L	11.476 ppb	13:27:01

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	830584.8	101.44 %		0.690			0.68%
Sc Radial	4241.8	96.5 %		0.91			0.94%
Y 371.029	702102.1	101.51 %		0.629			0.62%
Y RADIAL	4753.0	99.84 %		2.554			2.56%
Ag 328.068†	7.6	0.0362 ug/L		0.34331	0.0362 ppb	0.34331	948.38%
QC value within limits for Ag 328.068 Recovery = Not calculated							
Al 396.153Radial†	0.3	0.2413 ug/L		6.00919	0.2413 ppb	6.00919	>999.9%
QC value within limits for Al 396.153Radial Recovery = Not calculated							
As 188.979†	3.9	2.1324 ug/L		3.08859	2.1324 ppb	3.08859	144.84%
QC value within limits for As 188.979 Recovery = Not calculated							
B 249.677†	262.3	7.3591 ug/L		0.31728	7.3591 ppb	0.31728	4.31%
QC value within limits for B 249.677 Recovery = Not calculated							
Ba 233.527†	7.7	0.0716 ug/L		0.07804	0.0716 ppb	0.07804	108.99%
QC value within limits for Ba 233.527 Recovery = Not calculated							
Be 313.107†	118.7	0.0508 ug/L		0.03019	0.0508 ppb	0.03019	59.42%
QC value within limits for Be 313.107 Recovery = Not calculated							
Ca 317.933Radial†	12.0	22.792 ug/L		2.3703	22.792 ppb	2.3703	10.40%

QC value within limits for Ca 317.933 Radial Recovery = Not calculated							
Cd 226.502†	4.6	0.0671 ug/L	0.00174	0.0671 ppb	0.00174	2.59%	
QC value within limits for Cd 226.502 Recovery = Not calculated							
Co 228.616†	-2.5	-0.0628 ug/L	0.01978	-0.0628 ppb	0.01978	31.48%	
QC value within limits for Co 228.616 Recovery = Not calculated							
Cr 267.716†	3.5	0.0461 ug/L	0.19542	0.0461 ppb	0.19542	423.60%	
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu 324.752†	52.7	0.1720 ug/L	0.21892	0.1720 ppb	0.21892	127.26%	
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe 238.204 Radial†	0.2	2.1660 ug/L	22.01818	2.1660 ppb	22.01818	>999.9%	
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K 766.490 Radial†	174.7	33.287 ug/L	19.3971	33.287 ppb	19.3971	58.27%	
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg 279.077 IEC†	1.3	52.114 ug/L	46.0235	52.114 ppb	46.0235	88.31%	
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn 257.610†	82.8	0.1069 ug/L	0.01008	0.1069 ppb	0.01008	9.43%	
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo 202.031†	5.7	0.5091 ug/L	0.69348	0.5091 ppb	0.69348	136.22%	
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na 589.592 Radial†	-69.8	-24.595 ug/L	13.7661	-24.595 ppb	13.7661	55.97%	
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni 231.604†	3.5	0.1110 ug/L	0.19193	0.1110 ppb	0.19193	172.99%	
QC value within limits for Ni 231.604 Recovery = Not calculated							
P 214.914†	-5.9	-4.4357 ug/L	1.52384	-4.4357 ppb	1.52384	34.35%	
QC value within limits for P 214.914 Recovery = Not calculated							
Pb 220.353†	5.8	0.8865 ug/L	0.37365	0.8865 ppb	0.37365	42.15%	
QC value within limits for Pb 220.353 Recovery = Not calculated							
S 181.975 Axial†	2.2	3.9245 ug/L	5.54276	3.9245 ppb	5.54276	141.24%	
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb 206.836†	-0.0	0.0283 ug/L	2.25812	0.0283 ppb	2.25812	>999.9%	
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	0.7	0.6045 ug/L	8.08370	0.6045 ppb	8.08370	>999.9%	
QC value within limits for Se 196.026 Recovery = Not calculated							
Si 251.611†	142.0	5.3836 ug/L	0.24572	5.3836 ppb	0.24572	4.56%	
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn 189.927†	5.7	1.2913 ug/L	1.20690	1.2913 ppb	1.20690	93.46%	
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr 421.552†	9.8	0.0785 ug/L	0.05168	0.0785 ppb	0.05168	65.82%	
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti 334.940†	68.2	0.1159 ug/L	0.08122	0.1159 ppb	0.08122	70.10%	
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl 190.801†	5.9	2.2690 ug/L	2.60522	2.2690 ppb	2.60522	114.82%	
QC value within limits for Tl 190.801 Recovery = Not calculated							
U 409.014†	117.6	3.5666 ug/L	1.93587	3.5666 ppb	1.93587	54.28%	
QC value within limits for U 409.014 Recovery = Not calculated							
V 292.402†	-17.8	-0.1275 ug/L	0.21193	-0.1275 ppb	0.21193	166.18%	
QC value within limits for V 292.402 Recovery = Not calculated							
Zn 213.857†	259.4	3.1420 ug/L	0.18772	3.1420 ppb	0.18772	5.97%	
QC value within limits for Zn 213.857 Recovery = Not calculated							
SiO2†	135.6	11.051 ug/L	2.1364	11.051 ppb	2.1364	19.33%	
QC value within limits for SiO2 Recovery = Not calculated							
All analyte(s) passed QC.							

Sequence No.: 10

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 3/19/2010 14:17:09

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	4286.6	4286.6	97.5 %		14:19:21
1	Y RADIAL	4712.3	4712.3	98.99 %		14:19:01
1	Al 396.153Radial†	4948.0	5151.3	5035.7 ug/L	5035.7 ppb	14:19:01
1	Ca 317.933Radial†	2681.9	2734.1	5173.4 ug/L	5173.4 ppb	14:19:21
1	Fe 238.204 Radial†	445.8	448.7	5213.7 ug/L	5213.7 ppb	14:19:21
1	K 766.490 Radial†	29143.9	27282.4	5191.6 ug/L	5191.6 ppb	14:19:01
1	Mg 279.077 IEC†	128.4	130.2	5369.0 ug/L	5369.0 ppb	14:19:21
1	Na 589.592 Radial†	27278.3	28843.5	10168 ug/L	10168 ppb	14:19:01
1	Sr 421.552†	62479.4	64039.2	513.28 ug/L	513.28 ppb	14:19:01
1	Sc 361.383	831477.9	831477.9	101.55 %		14:20:18
1	Y 371.029	692747.3	692747.3	100.16 %		14:20:18
1	Ag 328.068†	98324.6	96643.2	504.90 ug/L	504.90 ppb	14:20:24
1	As 188.979†	905.4	918.4	508.54 ug/L	508.54 ppb	14:20:44
1	B 249.677†	17422.4	17694.6	494.10 ug/L	494.10 ppb	14:20:24
1	Ba 233.527†	54391.7	53564.7	502.96 ug/L	502.96 ppb	14:20:24
1	Be 313.107†	1194858.5	1180406.6	503.74 ug/L	503.74 ppb	14:20:18
1	Cd 226.502†	35200.5	34835.4	505.33 ug/L	505.33 ppb	14:20:24
1	Co 228.616†	20048.9	19790.0	511.60 ug/L	511.60 ppb	14:20:24
1	Cr 267.716†	37955.7	37306.6	501.34 ug/L	501.34 ppb	14:20:24
1	Cu 324.752†	157713.0	149761.0	494.43 ug/L	494.43 ppb	14:20:24
1	Mn 257.610†	381470.8	375276.7	493.72 ug/L	493.72 ppb	14:20:24
1	Mo 202.031†	5726.4	5630.7	500.99 ug/L	500.99 ppb	14:20:44
1	Ni 231.604†	16346.0	16013.1	508.23 ug/L	508.23 ppb	14:20:24
1	P 214.914†	3603.1	3360.9	2407.2 ug/L	2407.2 ppb	14:20:44
1	Pb 220.353†	3243.2	3252.2	501.06 ug/L	501.06 ppb	14:20:44
1	S 181.975 Axial†	604.1	564.7	1010.0 ug/L	1010.0 ppb	14:20:44
1	Sb 206.836†	1248.8	1206.2	522.61 ug/L	522.61 ppb	14:20:44
1	Se 196.026†	598.5	606.4	523.26 ug/L	523.26 ppb	14:20:44
1	Si 251.611†	68567.2	67035.6	2538.7 ug/L	2538.7 ppb	14:20:24
1	Sn 189.927†	2241.0	2199.7	499.80 ug/L	499.80 ppb	14:20:44
1	Ti 334.940†	287050.0	283803.0	493.40 ug/L	493.40 ppb	14:20:24
1	Tl 190.801†	1277.2	1286.9	501.13 ug/L	501.13 ppb	14:20:44
1	U 409.014†	14715.7	16695.9	504.81 ug/L	504.81 ppb	14:20:24
1	V 292.402†	61985.5	62359.7	504.63 ug/L	504.63 ppb	14:20:24
1	Zn 213.857†	42736.7	41516.3	498.35 ug/L	498.35 ppb	14:20:24
1	SiO2†	68779.3	67233.3	5473.4 ug/L	5473.4 ppb	14:21:51
2	Sc Radial	4298.9	4298.9	97.8 %		14:19:46
2	Y RADIAL	4801.9	4801.9	100.9 %		14:19:26
2	Al 396.153Radial†	5052.3	5243.4	5126.5 ug/L	5126.5 ppb	14:19:26
2	Ca 317.933Radial†	2690.8	2735.3	5175.8 ug/L	5175.8 ppb	14:19:46
2	Fe 238.204 Radial†	448.2	449.8	5226.7 ug/L	5226.7 ppb	14:19:46
2	K 766.490 Radial†	29575.8	27638.4	5259.4 ug/L	5259.4 ppb	14:19:26
2	Mg 279.077 IEC†	124.6	125.8	5189.8 ug/L	5189.8 ppb	14:19:46
2	Na 589.592 Radial†	27711.8	29206.6	10296 ug/L	10296 ppb	14:19:26
2	Sr 421.552†	63721.4	65125.5	521.99 ug/L	521.99 ppb	14:19:26
2	Sc 361.383	838934.0	838934.0	102.46 %		14:20:49
2	Y 371.029	696901.9	696901.9	100.76 %		14:20:49
2	Ag 328.068†	98089.8	95553.4	499.22 ug/L	499.22 ppb	14:20:54
2	As 188.979†	897.0	902.3	499.63 ug/L	499.63 ppb	14:21:15
2	B 249.677†	17432.6	17552.1	490.12 ug/L	490.12 ppb	14:20:54
2	Ba 233.527†	54141.6	52844.5	496.20 ug/L	496.20 ppb	14:20:54
2	Be 313.107†	1207828.3	1182607.7	504.67 ug/L	504.67 ppb	14:20:49
2	Cd 226.502†	34973.2	34305.6	497.64 ug/L	497.64 ppb	14:20:54
2	Co 228.616†	19965.7	19533.3	504.96 ug/L	504.96 ppb	14:20:54
2	Cr 267.716†	37713.6	36738.1	493.71 ug/L	493.71 ppb	14:20:54
2	Cu 324.752†	157185.6	147865.8	488.18 ug/L	488.18 ppb	14:20:54
2	Mn 257.610†	379619.5	370131.0	486.96 ug/L	486.96 ppb	14:20:54
2	Mo 202.031†	5693.9	5548.9	493.72 ug/L	493.72 ppb	14:21:15
2	Ni 231.604†	16251.4	15777.8	500.76 ug/L	500.76 ppb	14:20:54

2	P 214.914†	3594.4	3321.0	2378.6 ug/L	2378.6 ppb	14:21:15
2	Pb 220.353†	3259.7	3239.8	499.16 ug/L	499.16 ppb	14:21:15
2	S 181.975 Axial†	605.2	560.5	1002.5 ug/L	1002.5 ppb	14:21:15
2	Sb 206.836†	1248.3	1194.7	517.64 ug/L	517.64 ppb	14:21:15
2	Se 196.026†	589.8	592.6	511.83 ug/L	511.83 ppb	14:21:15
2	Si 251.611†	68173.9	66051.6	2501.4 ug/L	2501.4 ppb	14:20:54
2	Sn 189.927†	2257.8	2196.6	499.08 ug/L	499.08 ppb	14:21:15
2	Ti 334.940†	285541.1	279817.9	486.49 ug/L	486.49 ppb	14:20:54
2	Tl 190.801†	1275.8	1274.3	496.22 ug/L	496.22 ppb	14:21:15
2	U 409.014†	14699.2	16551.0	500.43 ug/L	500.43 ppb	14:20:54
2	V 292.402†	61693.6	61532.2	497.92 ug/L	497.92 ppb	14:20:54
2	Zn 213.857†	42687.0	41093.7	493.29 ug/L	493.29 ppb	14:20:54
2	SiO2†	69054.8	66900.2	5446.4 ug/L	5446.4 ppb	14:21:56
3	Sc Radial	4285.5	4285.5	97.5 %		14:20:11
3	Y RADIAL	4880.2	4880.2	102.5 %		14:19:51
3	Al 396.153Radial†	5069.9	5277.6	5159.6 ug/L	5159.6 ppb	14:19:51
3	Ca 317.933Radial†	2697.6	2750.8	5205.1 ug/L	5205.1 ppb	14:20:11
3	Fe 238.204 Radial†	454.8	458.0	5322.0 ug/L	5322.0 ppb	14:20:11
3	K 766.490 Radial†	29958.4	28125.4	5352.1 ug/L	5352.1 ppb	14:19:51
3	Mg 279.077 IEC†	131.4	133.2	5495.5 ug/L	5495.5 ppb	14:20:11
3	Na 589.592 Radial†	27959.3	29549.0	10417 ug/L	10417 ppb	14:19:51
3	Sr 421.552†	64362.6	65986.8	528.89 ug/L	528.89 ppb	14:19:51
3	Sc 361.383	825187.1	825187.1	100.78 %		14:21:20
3	Y 371.029	686685.7	686685.7	99.283 %		14:21:20
3	Ag 328.068†	97337.1	96401.4	503.67 ug/L	503.67 ppb	14:21:25
3	As 188.979†	913.9	933.6	516.86 ug/L	516.86 ppb	14:21:45
3	B 249.677†	17209.9	17614.5	491.84 ug/L	491.84 ppb	14:21:25
3	Ba 233.527†	53489.1	53077.4	498.40 ug/L	498.40 ppb	14:21:25
3	Be 313.107†	1185936.7	1180523.9	503.79 ug/L	503.79 ppb	14:21:20
3	Cd 226.502†	34609.4	34513.2	500.64 ug/L	500.64 ppb	14:21:25
3	Co 228.616†	19749.9	19643.9	507.83 ug/L	507.83 ppb	14:21:25
3	Cr 267.716†	37555.4	37194.3	499.84 ug/L	499.84 ppb	14:21:25
3	Cu 324.752†	155986.3	149231.7	492.69 ug/L	492.69 ppb	14:21:25
3	Mn 257.610†	376330.0	373039.4	490.78 ug/L	490.78 ppb	14:21:25
3	Mo 202.031†	5723.8	5671.2	504.59 ug/L	504.59 ppb	14:21:45
3	Ni 231.604†	16186.7	15977.8	507.11 ug/L	507.11 ppb	14:21:25
3	P 214.914†	3581.7	3366.8	2411.9 ug/L	2411.9 ppb	14:21:45
3	Pb 220.353†	3250.7	3283.9	505.96 ug/L	505.96 ppb	14:21:45
3	S 181.975 Axial†	603.6	568.8	1017.3 ug/L	1017.3 ppb	14:21:45
3	Sb 206.836†	1251.1	1217.8	527.67 ug/L	527.67 ppb	14:21:45
3	Se 196.026†	597.0	609.3	526.11 ug/L	526.11 ppb	14:21:45
3	Si 251.611†	67487.4	66478.9	2517.5 ug/L	2517.5 ppb	14:21:25
3	Sn 189.927†	2258.7	2234.1	507.59 ug/L	507.59 ppb	14:21:45
3	Ti 334.940†	283433.1	282369.0	490.90 ug/L	490.90 ppb	14:21:25
3	Tl 190.801†	1286.7	1305.8	508.45 ug/L	508.45 ppb	14:21:45
3	U 409.014†	14522.6	16614.8	502.34 ug/L	502.34 ppb	14:21:25
3	V 292.402†	61245.5	62090.7	502.52 ug/L	502.52 ppb	14:21:25
3	Zn 213.857†	42292.7	41396.5	496.90 ug/L	496.90 ppb	14:21:25
3	SiO2†	68089.2	67064.8	5459.5 ug/L	5459.5 ppb	14:22:01

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	831866.4	101.59 %	0.840			0.83%
Sc Radial	4290.4	97.6 %	0.17			0.17%
Y 371.029	692111.7	100.07 %	0.743			0.74%
Y RADIAL	4798.1	100.8 %	1.76			1.75%
Ag 328.068†	96199.3	502.60 ug/L	2.987	502.60 ppb	2.987	0.59%
QC value within limits for Ag 328.068 Recovery = 100.52%						
Al 396.153Radial†	5224.1	5107.2 ug/L	64.17	5107.2 ppb	64.17	1.26%
QC value within limits for Al 396.153Radial Recovery = 102.14%						
As 188.979†	918.1	508.34 ug/L	8.615	508.34 ppb	8.615	1.69%
QC value within limits for As 188.979 Recovery = 101.67%						
B 249.677†	17620.4	492.02 ug/L	1.996	492.02 ppb	1.996	0.41%
QC value within limits for B 249.677 Recovery = 98.40%						
Ba 233.527†	53162.2	499.19 ug/L	3.449	499.19 ppb	3.449	0.69%
QC value within limits for Ba 233.527 Recovery = 99.84%						
Be 313.107†	1181179.4	504.07 ug/L	0.520	504.07 ppb	0.520	0.10%
QC value within limits for Be 313.107 Recovery = 100.81%						
Ca 317.933Radial†	2740.1	5184.8 ug/L	17.64	5184.8 ppb	17.64	0.34%

QC value within limits for Ca 317.933 Radial Recovery = 103.70%

Cd 226.502†	34551.4	501.20 ug/L	3.878	501.20 ppb	3.878	0.77%
QC value within limits for Cd 226.502 Recovery = 100.24%						
Co 228.616†	19655.7	508.13 ug/L	3.329	508.13 ppb	3.329	0.66%
QC value within limits for Co 228.616 Recovery = 101.63%						
Cr 267.716†	37079.7	498.30 ug/L	4.043	498.30 ppb	4.043	0.81%
QC value within limits for Cr 267.716 Recovery = 99.66%						
Cu 324.752†	148952.8	491.77 ug/L	3.228	491.77 ppb	3.228	0.66%
QC value within limits for Cu 324.752 Recovery = 98.35%						
Fe 238.204 Radial†	452.2	5254.2 ug/L	59.13	5254.2 ppb	59.13	1.13%
QC value within limits for Fe 238.204 Radial Recovery = 105.08%						
K 766.490 Radial†	27682.1	5267.7 ug/L	80.57	5267.7 ppb	80.57	1.53%
QC value within limits for K 766.490 Radial Recovery = 105.35%						
Mg 279.077 IEC†	129.7	5351.4 ug/L	153.62	5351.4 ppb	153.62	2.87%
QC value within limits for Mg 279.077 IEC Recovery = 107.03%						
Mn 257.610†	372815.7	490.48 ug/L	3.388	490.48 ppb	3.388	0.69%
QC value within limits for Mn 257.610 Recovery = 98.10%						
Mo 202.031†	5616.9	499.77 ug/L	5.539	499.77 ppb	5.539	1.11%
QC value within limits for Mo 202.031 Recovery = 99.95%						
Na 589.592 Radial†	29199.7	10294 ug/L	124.4	10294 ppb	124.4	1.21%
QC value within limits for Na 589.592 Radial Recovery = 102.94%						
Ni 231.604†	15922.9	505.36 ug/L	4.029	505.36 ppb	4.029	0.80%
QC value within limits for Ni 231.604 Recovery = 101.07%						
P 214.914†	3349.6	2399.2 ug/L	17.98	2399.2 ppb	17.98	0.75%
QC value within limits for P 214.914 Recovery = 95.97%						
Pb 220.353†	3258.6	502.06 ug/L	3.508	502.06 ppb	3.508	0.70%
QC value within limits for Pb 220.353 Recovery = 100.41%						
S 181.975 Axial†	564.7	1009.9 ug/L	7.41	1009.9 ppb	7.41	0.73%
QC value within limits for S 181.975 Axial Recovery = 100.99%						
Sb 206.836†	1206.2	522.64 ug/L	5.013	522.64 ppb	5.013	0.96%
QC value within limits for Sb 206.836 Recovery = 104.53%						
Se 196.026†	602.8	520.40 ug/L	7.558	520.40 ppb	7.558	1.45%
QC value within limits for Se 196.026 Recovery = 104.08%						
Si 251.611†	66522.0	2519.2 ug/L	18.69	2519.2 ppb	18.69	0.74%
QC value within limits for Si 251.611 Recovery = 100.77%						
Sn 189.927†	2210.1	502.15 ug/L	4.722	502.15 ppb	4.722	0.94%
QC value within limits for Sn 189.927 Recovery = 100.43%						
Sr 421.552†	65050.5	521.39 ug/L	7.823	521.39 ppb	7.823	1.50%
QC value within limits for Sr 421.552 Recovery = 104.28%						
Ti 334.940†	281996.6	490.26 ug/L	3.499	490.26 ppb	3.499	0.71%
QC value within limits for Ti 334.940 Recovery = 98.05%						
Tl 190.801†	1289.0	501.94 ug/L	6.156	501.94 ppb	6.156	1.23%
QC value within limits for Tl 190.801 Recovery = 100.39%						
U 409.014†	16620.6	502.53 ug/L	2.197	502.53 ppb	2.197	0.44%
QC value within limits for U 409.014 Recovery = 100.51%						
V 292.402†	61994.2	501.69 ug/L	3.433	501.69 ppb	3.433	0.68%
QC value within limits for V 292.402 Recovery = 100.34%						
Zn 213.857†	41335.5	496.18 ug/L	2.608	496.18 ppb	2.608	0.53%
QC value within limits for Zn 213.857 Recovery = 99.24%						
SiO2†	67066.1	5459.8 ug/L	13.50	5459.8 ppb	13.50	0.25%
QC value within limits for SiO2 Recovery = 102.10%						

All analyte(s) passed QC.

Sequence No.: 11

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 3/19/2010 14:24:11

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	4205.6	4205.6	95.7 %		14:26:24
1	Y RADIAL	4674.8	4674.8	98.20 %		14:26:04
1	Al 396.153Radial†	-79.0	-4.5	-4.4237 ug/L	-4.4237 ppb	14:26:24
1	Ca 317.933Radial†	19.5	4.7	8.8716 ug/L	8.8716 ppb	14:26:24
1	Fe 238.204 Radial†	6.8	-1.3	-15.152 ug/L	-15.152 ppb	14:26:24
1	K 766.490 Radial†	2657.1	178.0	33.925 ug/L	33.925 ppb	14:26:04
1	Mg 279.077 IEC†	2.1	0.7	28.443 ug/L	28.443 ppb	14:26:24
1	Na 589.592 Radial†	-889.3	-54.3	-19.138 ug/L	-19.138 ppb	14:26:04
1	Sr 421.552†	24.1	4.3	0.0345 ug/L	0.0345 ppb	14:26:04
1	Sc 361.383	823769.2	823769.2	100.60 %		14:27:21
1	Y 371.029	695270.5	695270.5	100.52 %		14:27:21
1	Ag 328.068†	239.9	53.4	0.2721 ug/L	0.2721 ppb	14:27:21
1	As 188.979†	-22.7	4.3	2.3396 ug/L	2.3396 ppb	14:27:41
1	B 249.677†	-326.0	213.3	5.9855 ug/L	5.9855 ppb	14:27:41
1	Ba 233.527†	2.4	3.1	0.0279 ug/L	0.0279 ppb	14:27:41
1	Be 313.107†	-3704.2	49.1	0.0210 ug/L	0.0210 ppb	14:27:21
1	Cd 226.502†	-181.7	-10.0	-0.1442 ug/L	-0.1442 ppb	14:27:41
1	Co 228.616†	-39.1	7.3	0.1900 ug/L	0.1900 ppb	14:27:41
1	Cr 267.716†	76.1	4.1	0.0536 ug/L	0.0536 ppb	14:27:41
1	Cu 324.752†	5545.9	-39.4	-0.1306 ug/L	-0.1306 ppb	14:27:21
1	Mn 257.610†	381.1	-10.3	-0.0162 ug/L	-0.0162 ppb	14:27:41
1	Mo 202.031†	14.0	5.4	0.4818 ug/L	0.4818 ppb	14:27:41
1	Ni 231.604†	72.9	-11.6	-0.3696 ug/L	-0.3696 ppb	14:27:41
1	P 214.914†	183.4	-5.0	-3.6798 ug/L	-3.6798 ppb	14:27:41
1	Pb 220.353†	-46.8	11.8	1.8119 ug/L	1.8119 ppb	14:27:41
1	S 181.975 Axial†	32.0	1.6	2.8912 ug/L	2.8912 ppb	14:27:41
1	Sb 206.836†	43.9	20.0	8.3742 ug/L	8.3742 ppb	14:27:41
1	Se 196.026†	-22.6	-5.5	-4.6659 ug/L	-4.6659 ppb	14:27:41
1	Si 251.611†	500.4	9.2	0.3440 ug/L	0.3440 ppb	14:27:41
1	Sn 189.927†	7.2	0.0	0.0045 ug/L	0.0045 ppb	14:27:41
1	Ti 334.940†	-1115.0	12.9	0.0215 ug/L	0.0215 ppb	14:27:21
1	Tl 190.801†	-27.7	1.5	0.5959 ug/L	0.5959 ppb	14:27:41
1	U 409.014†	-2231.3	-13.8	-0.4157 ug/L	-0.4157 ppb	14:27:21
1	V 292.402†	-1342.4	-17.0	-0.1266 ug/L	-0.1266 ppb	14:27:21
1	Zn 213.857†	544.5	-28.8	-0.3443 ug/L	-0.3443 ppb	14:27:41
1	SiO2†	528.6	26.1	2.1191 ug/L	2.1191 ppb	14:28:52
2	Sc Radial	4264.1	4264.1	97.0 %		14:26:49
2	Y RADIAL	4759.1	4759.1	99.97 %		14:26:29
2	Al 396.153Radial†	-70.3	5.6	5.5009 ug/L	5.5009 ppb	14:26:49
2	Ca 317.933Radial†	18.4	3.2	6.0968 ug/L	6.0968 ppb	14:26:49
2	Fe 238.204 Radial†	5.2	-3.1	-35.431 ug/L	-35.431 ppb	14:26:49
2	K 766.490 Radial†	2765.0	251.1	47.845 ug/L	47.845 ppb	14:26:29
2	Mg 279.077 IEC†	0.2	-1.3	-52.606 ug/L	-52.606 ppb	14:26:49
2	Na 589.592 Radial†	-846.1	3.0	1.0656 ug/L	1.0656 ppb	14:26:29
2	Sr 421.552†	8.3	-12.3	-0.0986 ug/L	-0.0986 ppb	14:26:29
2	Sc 361.383	820046.7	820046.7	100.15 %		14:27:46
2	Y 371.029	692570.4	692570.4	100.13 %		14:27:46
2	Ag 328.068†	155.7	-29.7	-0.1663 ug/L	-0.1663 ppb	14:27:46
2	As 188.979†	-21.4	5.4	2.9797 ug/L	2.9797 ppb	14:28:06
2	B 249.677†	-341.2	196.7	5.5226 ug/L	5.5226 ppb	14:28:06
2	Ba 233.527†	10.9	11.6	0.1074 ug/L	0.1074 ppb	14:28:06
2	Be 313.107†	-3692.5	44.0	0.0186 ug/L	0.0186 ppb	14:27:46
2	Cd 226.502†	-177.9	-7.0	-0.0978 ug/L	-0.0978 ppb	14:28:06
2	Co 228.616†	-34.2	12.0	0.3131 ug/L	0.3131 ppb	14:28:06
2	Cr 267.716†	63.7	-7.9	-0.1096 ug/L	-0.1096 ppb	14:28:06
2	Cu 324.752†	5570.5	10.2	0.0316 ug/L	0.0316 ppb	14:27:46
2	Mn 257.610†	410.2	20.5	0.0256 ug/L	0.0256 ppb	14:28:06
2	Mo 202.031†	16.5	7.9	0.7010 ug/L	0.7010 ppb	14:28:06
2	Ni 231.604†	72.9	-11.2	-0.3570 ug/L	-0.3570 ppb	14:28:06

2	P 214.914†	186.8	-0.8	-0.5492 ug/L	-0.5492 ppb	14:28:06
2	Pb 220.353†	-58.2	0.2	0.0395 ug/L	0.0395 ppb	14:28:06
2	S 181.975 Axial†	27.1	-3.1	-5.5952 ug/L	-5.5952 ppb	14:28:06
2	Sb 206.836†	28.8	5.1	2.1640 ug/L	2.1640 ppb	14:28:06
2	Se 196.026†	-18.2	-1.2	-1.1286 ug/L	-1.1286 ppb	14:28:06
2	Si 251.611†	504.7	15.7	0.5887 ug/L	0.5887 ppb	14:28:06
2	Sn 189.927†	9.4	2.2	0.4997 ug/L	0.4997 ppb	14:28:06
2	Ti 334.940†	-1163.2	-40.2	-0.0649 ug/L	-0.0649 ppb	14:27:46
2	Tl 190.801†	-24.2	5.0	1.9222 ug/L	1.9222 ppb	14:28:06
2	U 409.014†	-2198.7	8.8	0.2707 ug/L	0.2707 ppb	14:27:46
2	V 292.402†	-1351.3	-31.9	-0.2400 ug/L	-0.2400 ppb	14:27:46
2	Zn 213.857†	568.5	-2.4	-0.0213 ug/L	-0.0213 ppb	14:28:06
2	SiO2†	525.9	25.8	2.0856 ug/L	2.0856 ppb	14:29:12
3	Sc Radial	4260.5	4260.5	96.9 %		14:27:14
3	Y RADIAL	4745.0	4745.0	99.67 %		14:26:54
3	Al 396.153Radial†	-75.0	0.8	0.7173 ug/L	0.7173 ppb	14:27:14
3	Ca 317.933Radial†	17.2	2.0	3.8392 ug/L	3.8392 ppb	14:27:14
3	Fe 238.204 Radial†	9.8	1.6	18.570 ug/L	18.570 ppb	14:27:14
3	K 766.490 Radial†	2583.2	66.1	12.593 ug/L	12.593 ppb	14:26:54
3	Mg 279.077 IEC†	4.2	2.8	116.12 ug/L	116.12 ppb	14:27:14
3	Na 589.592 Radial†	-905.2	-58.7	-20.689 ug/L	-20.689 ppb	14:26:54
3	Sr 421.552†	51.1	31.9	0.2554 ug/L	0.2554 ppb	14:26:54
3	Sc 361.383	830623.4	830623.4	101.44 %		14:28:11
3	Y 371.029	700309.7	700309.7	101.25 %		14:28:11
3	Ag 328.068†	154.3	-33.0	-0.1667 ug/L	-0.1667 ppb	14:28:11
3	As 188.979†	-19.3	7.8	4.2894 ug/L	4.2894 ppb	14:28:31
3	B 249.677†	-338.5	203.7	5.7097 ug/L	5.7097 ppb	14:28:31
3	Ba 233.527†	3.3	4.0	0.0384 ug/L	0.0384 ppb	14:28:31
3	Be 313.107†	-3793.1	-8.2	-0.0031 ug/L	-0.0031 ppb	14:28:11
3	Cd 226.502†	-163.4	9.5	0.1367 ug/L	0.1367 ppb	14:28:31
3	Co 228.616†	-38.1	8.6	0.2236 ug/L	0.2236 ppb	14:28:31
3	Cr 267.716†	71.6	-1.0	-0.0114 ug/L	-0.0114 ppb	14:28:31
3	Cu 324.752†	5605.6	-26.0	-0.0864 ug/L	-0.0864 ppb	14:28:11
3	Mn 257.610†	397.9	3.2	0.0012 ug/L	0.0012 ppb	14:28:31
3	Mo 202.031†	14.3	5.6	0.4998 ug/L	0.4998 ppb	14:28:31
3	Ni 231.604†	66.4	-18.6	-0.5896 ug/L	-0.5896 ppb	14:28:31
3	P 214.914†	183.4	-6.5	-4.8409 ug/L	-4.8409 ppb	14:28:31
3	Pb 220.353†	-56.2	2.9	0.4381 ug/L	0.4381 ppb	14:28:31
3	S 181.975 Axial†	30.1	-0.5	-0.8845 ug/L	-0.8845 ppb	14:28:31
3	Sb 206.836†	25.6	1.6	0.6614 ug/L	0.6614 ppb	14:28:31
3	Se 196.026†	-20.1	-2.8	-2.3008 ug/L	-2.3008 ppb	14:28:31
3	Si 251.611†	507.2	11.8	0.4437 ug/L	0.4437 ppb	14:28:31
3	Sn 189.927†	3.8	-3.4	-0.7653 ug/L	-0.7653 ppb	14:28:31
3	Ti 334.940†	-1039.1	96.9	0.1583 ug/L	0.1583 ppb	14:28:11
3	Tl 190.801†	-26.5	2.9	1.1346 ug/L	1.1346 ppb	14:28:31
3	U 409.014†	-2141.1	93.5	2.8347 ug/L	2.8347 ppb	14:28:11
3	V 292.402†	-1290.2	45.6	0.3759 ug/L	0.3759 ppb	14:28:11
3	Zn 213.857†	545.0	-32.8	-0.3965 ug/L	-0.3965 ppb	14:28:31
3	SiO2†	528.5	21.6	1.7513 ug/L	1.7513 ppb	14:29:32

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	824813.1	100.73 %		0.655			0.65%
Sc Radial	4243.4	96.5 %		0.75			0.77%
Y 371.029	696050.2	100.64 %		0.568			0.56%
Y RADIAL	4726.3	99.28 %		0.949			0.96%
Ag 328.068†	-3.1	-0.0203 ug/L		0.25322	-0.0203 ppb	0.25322	>999.9%
QC value within limits for Ag 328.068 Recovery = Not calculated							
Al 396.153Radial†	0.6	0.5982 ug/L		4.96338	0.5982 ppb	4.96338	829.76%
QC value within limits for Al 396.153Radial Recovery = Not calculated							
As 188.979†	5.8	3.2029 ug/L		0.99385	3.2029 ppb	0.99385	31.03%
QC value within limits for As 188.979 Recovery = Not calculated							
B 249.677†	204.5	5.7393 ug/L		0.23288	5.7393 ppb	0.23288	4.06%
QC value within limits for B 249.677 Recovery = Not calculated							
Ba 233.527†	6.2	0.0579 ug/L		0.04318	0.0579 ppb	0.04318	74.57%
QC value within limits for Ba 233.527 Recovery = Not calculated							
Be 313.107†	28.3	0.0121 ug/L		0.01325	0.0121 ppb	0.01325	109.09%
QC value within limits for Be 313.107 Recovery = Not calculated							
Ca 317.933Radial†	3.3	6.2692 ug/L		2.52066	6.2692 ppb	2.52066	40.21%

QC value within limits for Ca 317.933 Radial Recovery = Not calculated						
Cd 226.502†	-2.5	-0.0351 ug/L	0.15058	-0.0351 ppb	0.15058	429.43%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	9.3	0.2423 ug/L	0.06365	0.2423 ppb	0.06365	26.27%
QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	-1.6	-0.0225 ug/L	0.08221	-0.0225 ppb	0.08221	365.69%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	-18.4	-0.0618 ug/L	0.08382	-0.0618 ppb	0.08382	135.61%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	-0.9	-10.671 ug/L	27.2781	-10.671 ppb	27.2781	255.63%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated						
K 766.490 Radial†	165.1	31.454 ug/L	17.7553	31.454 ppb	17.7553	56.45%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	0.7	30.653 ug/L	84.3857	30.653 ppb	84.3857	275.29%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated						
Mn 257.610†	4.5	0.0036 ug/L	0.02100	0.0036 ppb	0.02100	589.65%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	6.3	0.5609 ug/L	0.12168	0.5609 ppb	0.12168	21.69%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	-36.7	-12.921 ug/L	12.1373	-12.921 ppb	12.1373	93.94%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	-13.8	-0.4387 ug/L	0.13079	-0.4387 ppb	0.13079	29.81%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	-4.1	-3.0233 ug/L	2.21992	-3.0233 ppb	2.21992	73.43%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	4.9	0.7632 ug/L	0.92984	0.7632 ppb	0.92984	121.84%
QC value within limits for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	-0.7	-1.1962 ug/L	4.25178	-1.1962 ppb	4.25178	355.45%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	8.9	3.7332 ug/L	4.08887	3.7332 ppb	4.08887	109.53%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	-3.2	-2.6985 ug/L	1.80185	-2.6985 ppb	1.80185	66.77%
QC value within limits for Se 196.026 Recovery = Not calculated						
Si 251.611†	12.3	0.4588 ug/L	0.12302	0.4588 ppb	0.12302	26.81%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	-0.4	-0.0870 ug/L	0.63746	-0.0870 ppb	0.63746	732.63%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	8.0	0.0638 ug/L	0.17881	0.0638 ppb	0.17881	280.39%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	23.2	0.0383 ug/L	0.11258	0.0383 ppb	0.11258	294.02%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	3.1	1.2176 ug/L	0.66700	1.2176 ppb	0.66700	54.78%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 409.014†	29.5	0.8966 ug/L	1.71320	0.8966 ppb	1.71320	191.08%
QC value within limits for U 409.014 Recovery = Not calculated						
V 292.402†	-1.1	0.0031 ug/L	0.32780	0.0031 ppb	0.32780	>999.9%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	-21.3	-0.2541 ug/L	0.20321	-0.2541 ppb	0.20321	79.99%
QC value within limits for Zn 213.857 Recovery = Not calculated						
SiO2†	24.5	1.9853 ug/L	0.20340	1.9853 ppb	0.20340	10.25%
QC value within limits for SiO2 Recovery = Not calculated						

All analyte(s) passed QC.

Sequence No.: 18

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 3/19/2010 15:12:45

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	4404.0	4404.0	100 %		15:14:37
1	Y RADIAL	4730.6	4730.6	99.37 %		15:14:37
1	Al 396.153Radial†	5002.3	5070.3	4955.5 ug/L	4955.5 ppb	15:14:37
1	Ca 317.933Radial†	2665.0	2643.9	5002.8 ug/L	5002.8 ppb	15:14:57
1	Fe 238.204 Radial†	445.1	435.7	5064.4 ug/L	5064.4 ppb	15:14:57
1	K 766.490 Radial†	29328.0	26670.1	5075.1 ug/L	5075.1 ppb	15:14:37
1	Mg 279.077 IEC†	128.1	126.4	5212.2 ug/L	5212.2 ppb	15:14:57
1	Na 589.592 Radial†	26896.2	27717.1	9770.9 ug/L	9770.9 ppb	15:14:37
1	Sr 421.552†	62531.5	62384.5	500.02 ug/L	500.02 ppb	15:14:37
1	Sc 361.383	815981.5	815981.5	99.653 %		15:15:54
1	Y 371.029	678972.4	678972.4	98.168 %		15:15:54
1	Ag 328.068†	99323.4	99484.4	519.65 ug/L	519.65 ppb	15:15:59
1	As 188.979†	916.3	946.3	523.88 ug/L	523.88 ppb	15:16:19
1	B 249.677†	17665.7	18264.6	510.08 ug/L	510.08 ppb	15:15:59
1	Ba 233.527†	54677.6	54868.8	515.21 ug/L	515.21 ppb	15:15:59
1	Be 313.107†	1198712.4	1206620.3	514.94 ug/L	514.94 ppb	15:15:54
1	Cd 226.502†	35251.0	35544.4	515.65 ug/L	515.65 ppb	15:15:59
1	Co 228.616†	20174.1	20290.6	524.53 ug/L	524.53 ppb	15:15:59
1	Cr 267.716†	38269.8	38331.7	515.08 ug/L	515.08 ppb	15:15:59
1	Cu 324.752†	159857.8	154862.8	511.26 ug/L	511.26 ppb	15:15:59
1	Mn 257.610†	387826.8	388789.1	511.47 ug/L	511.47 ppb	15:15:54
1	Mo 202.031†	5749.0	5760.5	512.51 ug/L	512.51 ppb	15:16:19
1	Ni 231.604†	16400.6	16373.6	519.67 ug/L	519.67 ppb	15:15:59
1	P 214.914†	3631.4	3456.8	2475.4 ug/L	2475.4 ppb	15:16:19
1	Pb 220.353†	3246.5	3316.2	510.91 ug/L	510.91 ppb	15:16:19
1	S 181.975 Axial†	607.6	579.5	1036.6 ug/L	1036.6 ppb	15:16:19
1	Sb 206.836†	1250.0	1230.7	533.32 ug/L	533.32 ppb	15:16:19
1	Se 196.026†	594.8	613.8	529.04 ug/L	529.04 ppb	15:16:19
1	Si 251.611†	69143.7	68896.5	2609.2 ug/L	2609.2 ppb	15:15:59
1	Sn 189.927†	2261.0	2261.7	513.83 ug/L	513.83 ppb	15:16:19
1	Ti 334.940†	289769.3	291900.3	507.46 ug/L	507.46 ppb	15:15:59
1	Tl 190.801†	1279.6	1313.1	511.41 ug/L	511.41 ppb	15:16:19
1	U 409.014†	14956.9	17213.2	520.49 ug/L	520.49 ppb	15:15:59
1	V 292.402†	62622.7	64158.3	519.19 ug/L	519.19 ppb	15:15:59
1	Zn 213.857†	43109.4	42689.5	512.50 ug/L	512.50 ppb	15:15:59
1	SiO2†	68460.8	68200.0	5552.0 ug/L	5552.0 ppb	15:17:27
2	Sc Radial	4392.0	4392.0	99.9 %		15:15:02
2	Y RADIAL	4731.1	4731.1	99.38 %		15:15:02
2	Al 396.153Radial†	4974.3	5055.8	4942.1 ug/L	4942.1 ppb	15:15:02
2	Ca 317.933Radial†	2657.5	2643.6	5002.3 ug/L	5002.3 ppb	15:15:22
2	Fe 238.204 Radial†	442.7	434.5	5050.3 ug/L	5050.3 ppb	15:15:22
2	K 766.490 Radial†	29402.7	26824.3	5104.5 ug/L	5104.5 ppb	15:15:02
2	Mg 279.077 IEC†	126.8	125.3	5170.3 ug/L	5170.3 ppb	15:15:22
2	Na 589.592 Radial†	26914.6	27808.3	9803.0 ug/L	9803.0 ppb	15:15:02
2	Sr 421.552†	62368.6	62390.9	500.07 ug/L	500.07 ppb	15:15:02
2	Sc 361.383	834394.9	834394.9	101.90 %		15:16:25
2	Y 371.029	694397.6	694397.6	100.40 %		15:16:25
2	Ag 328.068†	99525.8	97483.5	509.22 ug/L	509.22 ppb	15:16:30
2	As 188.979†	888.4	898.6	497.66 ug/L	497.66 ppb	15:16:50
2	B 249.677†	17654.2	17862.1	498.82 ug/L	498.82 ppb	15:16:30
2	Ba 233.527†	54672.4	53652.9	503.79 ug/L	503.79 ppb	15:16:30
2	Be 313.107†	1208362.9	1189545.5	507.64 ug/L	507.64 ppb	15:16:25
2	Cd 226.502†	35289.2	34801.3	504.86 ug/L	504.86 ppb	15:16:30
2	Co 228.616†	20123.5	19794.2	511.69 ug/L	511.69 ppb	15:16:30
2	Cr 267.716†	38179.5	37395.5	502.52 ug/L	502.52 ppb	15:16:30
2	Cu 324.752†	159882.0	151346.5	499.65 ug/L	499.65 ppb	15:16:30
2	Mn 257.610†	391166.3	383477.9	504.49 ug/L	504.49 ppb	15:16:25
2	Mo 202.031†	5685.1	5570.5	495.62 ug/L	495.62 ppb	15:16:50
2	Ni 231.604†	16441.2	16050.3	509.41 ug/L	509.41 ppb	15:16:30

2	P 214.914†	3569.9	3316.0	2372.7 ug/L	2372.7 ppb	15:16:50
2	Pb 220.353†	3236.1	3234.0	498.25 ug/L	498.25 ppb	15:16:50
2	S 181.975 Axial†	595.9	554.6	991.99 ug/L	991.99 ppb	15:16:50
2	Sb 206.836†	1237.5	1190.8	516.03 ug/L	516.03 ppb	15:16:50
2	Se 196.026†	584.8	590.9	509.84 ug/L	509.84 ppb	15:16:50
2	Si 251.611†	69211.5	67431.8	2553.8 ug/L	2553.8 ppb	15:16:30
2	Sn 189.927†	2235.2	2186.3	496.74 ug/L	496.74 ppb	15:16:50
2	Ti 334.940†	289447.9	285167.9	495.76 ug/L	495.76 ppb	15:16:30
2	Tl 190.801†	1270.6	1276.0	496.99 ug/L	496.99 ppb	15:16:50
2	U 409.014†	15111.0	17033.2	515.06 ug/L	515.06 ppb	15:16:30
2	V 292.402†	62576.2	62725.9	507.52 ug/L	507.52 ppb	15:16:30
2	Zn 213.857†	43153.1	41777.8	501.53 ug/L	501.53 ppb	15:16:30
2	SiO2†	68493.7	66716.3	5431.3 ug/L	5431.3 ppb	15:17:32
3	Sc Radial	4459.3	4459.3	101 %		15:15:27
3	Y RADIAL	4814.6	4814.6	101.1 %		15:15:27
3	Al 396.153Radial†	4993.1	4999.3	4886.3 ug/L	4886.3 ppb	15:15:27
3	Ca 317.933Radial†	2664.6	2610.6	4939.8 ug/L	4939.8 ppb	15:15:47
3	Fe 238.204 Radial†	446.8	431.9	5019.7 ug/L	5019.7 ppb	15:15:47
3	K 766.490 Radial†	29415.5	26393.2	5022.4 ug/L	5022.4 ppb	15:15:27
3	Mg 279.077 IEC†	128.2	124.8	5148.6 ug/L	5148.6 ppb	15:15:47
3	Na 589.592 Radial†	27038.4	27524.2	9702.9 ug/L	9702.9 ppb	15:15:27
3	Sr 421.552†	62826.9	61901.4	496.15 ug/L	496.15 ppb	15:15:27
3	Sc 361.383	833630.7	833630.7	101.81 %		15:16:56
3	Y 371.029	692553.2	692553.2	100.13 %		15:16:56
3	Ag 328.068†	97710.7	95790.2	500.40 ug/L	500.40 ppb	15:17:01
3	As 188.979†	899.6	910.4	504.02 ug/L	504.02 ppb	15:17:21
3	B 249.677†	17246.9	17477.9	488.07 ug/L	488.07 ppb	15:17:01
3	Ba 233.527†	53738.1	52784.4	495.64 ug/L	495.64 ppb	15:17:01
3	Be 313.107†	1192189.2	1174746.1	501.32 ug/L	501.32 ppb	15:16:56
3	Cd 226.502†	34796.6	34349.3	498.29 ug/L	498.29 ppb	15:17:01
3	Co 228.616†	19805.2	19499.7	504.11 ug/L	504.11 ppb	15:17:01
3	Cr 267.716†	37606.7	36867.3	495.42 ug/L	495.42 ppb	15:17:01
3	Cu 324.752†	156722.8	148387.3	489.89 ug/L	489.89 ppb	15:17:01
3	Mn 257.610†	387453.6	380183.1	500.16 ug/L	500.16 ppb	15:16:56
3	Mo 202.031†	5766.5	5655.5	503.17 ug/L	503.17 ppb	15:17:21
3	Ni 231.604†	16153.9	15783.0	500.92 ug/L	500.92 ppb	15:17:01
3	P 214.914†	3634.3	3382.5	2424.3 ug/L	2424.3 ppb	15:17:21
3	Pb 220.353†	3285.2	3285.1	506.12 ug/L	506.12 ppb	15:17:21
3	S 181.975 Axial†	600.0	559.2	1000.1 ug/L	1000.1 ppb	15:17:21
3	Sb 206.836†	1263.4	1217.3	527.40 ug/L	527.40 ppb	15:17:21
3	Se 196.026†	606.3	612.5	527.75 ug/L	527.75 ppb	15:17:21
3	Si 251.611†	67911.9	66217.5	2507.6 ug/L	2507.6 ppb	15:17:01
3	Sn 189.927†	2271.2	2223.7	505.20 ug/L	505.20 ppb	15:17:21
3	Ti 334.940†	284631.4	280697.4	487.99 ug/L	487.99 ppb	15:17:01
3	Tl 190.801†	1292.7	1298.8	505.78 ug/L	505.78 ppb	15:17:21
3	U 409.014†	14495.0	16441.7	497.14 ug/L	497.14 ppb	15:17:01
3	V 292.402†	61439.3	61665.5	499.14 ug/L	499.14 ppb	15:17:01
3	Zn 213.857†	42394.5	41071.4	493.05 ug/L	493.05 ppb	15:17:01
3	SiO2†	69769.2	68030.7	5538.4 ug/L	5538.4 ppb	15:17:37

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	828002.3	101.12 %	1.272			1.26%
Sc Radial	4418.4	101 %	0.8			0.81%
Y 371.029	688641.1	99.565 %	1.2179			1.22%
Y RADIAL	4758.8	99.96 %	1.015			1.02%
Ag 328.068†	97586.0	509.75 ug/L	9.638	509.75 ppb	9.638	1.89%
QC value within limits for Ag 328.068 Recovery = 101.95%						
Al 396.153Radial†	5041.8	4928.0 ug/L	36.71	4928.0 ppb	36.71	0.74%
QC value within limits for Al 396.153Radial Recovery = 98.56%						
As 188.979†	918.4	508.52 ug/L	13.678	508.52 ppb	13.678	2.69%
QC value within limits for As 188.979 Recovery = 101.70%						
B 249.677†	17868.2	498.99 ug/L	11.003	498.99 ppb	11.003	2.21%
QC value within limits for B 249.677 Recovery = 99.80%						
Ba 233.527†	53768.7	504.88 ug/L	9.830	504.88 ppb	9.830	1.95%
QC value within limits for Ba 233.527 Recovery = 100.98%						
Be 313.107†	1190304.0	507.97 ug/L	6.814	507.97 ppb	6.814	1.34%
QC value within limits for Be 313.107 Recovery = 101.59%						
Ca 317.933Radial†	2632.7	4981.6 ug/L	36.27	4981.6 ppb	36.27	0.73%

QC value within limits for Ca 317.933 Radial Recovery = 99.63%

Cd 226.502†	34898.3	506.26 ug/L	8.762	506.26 ppb	8.762	1.73%
QC value within limits for Cd 226.502 Recovery = 101.25%						
Co 228.616†	19861.5	513.44 ug/L	10.324	513.44 ppb	10.324	2.01%
QC value within limits for Co 228.616 Recovery = 102.69%						
Cr 267.716†	37531.5	504.34 ug/L	9.957	504.34 ppb	9.957	1.97%
QC value within limits for Cr 267.716 Recovery = 100.87%						
Cu 324.752†	151532.2	500.27 ug/L	10.697	500.27 ppb	10.697	2.14%
QC value within limits for Cu 324.752 Recovery = 100.05%						
Fe 238.204 Radial†	434.1	5044.8 ug/L	22.84	5044.8 ppb	22.84	0.45%
QC value within limits for Fe 238.204 Radial Recovery = 100.90%						
K 766.490 Radial†	26629.2	5067.3 ug/L	41.59	5067.3 ppb	41.59	0.82%
QC value within limits for K 766.490 Radial Recovery = 101.35%						
Mg 279.077 IEC†	125.5	5177.0 ug/L	32.36	5177.0 ppb	32.36	0.63%
QC value within limits for Mg 279.077 IEC Recovery = 103.54%						
Mn 257.610†	384150.0	505.37 ug/L	5.710	505.37 ppb	5.710	1.13%
QC value within limits for Mn 257.610 Recovery = 101.07%						
Mo 202.031†	5662.2	503.77 ug/L	8.461	503.77 ppb	8.461	1.68%
QC value within limits for Mo 202.031 Recovery = 100.75%						
Na 589.592 Radial†	27683.2	9758.9 ug/L	51.14	9758.9 ppb	51.14	0.52%
QC value within limits for Na 589.592 Radial Recovery = 97.59%						
Ni 231.604†	16069.0	510.00 ug/L	9.387	510.00 ppb	9.387	1.84%
QC value within limits for Ni 231.604 Recovery = 102.00%						
P 214.914†	3385.1	2424.1 ug/L	51.37	2424.1 ppb	51.37	2.12%
QC value within limits for P 214.914 Recovery = 96.96%						
Pb 220.353†	3278.4	505.09 ug/L	6.393	505.09 ppb	6.393	1.27%
QC value within limits for Pb 220.353 Recovery = 101.02%						
S 181.975 Axial†	564.4	1009.6 ug/L	23.75	1009.6 ppb	23.75	2.35%
QC value within limits for S 181.975 Axial Recovery = 100.96%						
Sb 206.836†	1212.9	525.58 ug/L	8.789	525.58 ppb	8.789	1.67%
QC value within limits for Sb 206.836 Recovery = 105.12%						
Se 196.026†	605.7	522.21 ug/L	10.735	522.21 ppb	10.735	2.06%
QC value within limits for Se 196.026 Recovery = 104.44%						
Si 251.611†	67515.3	2556.9 ug/L	50.86	2556.9 ppb	50.86	1.99%
QC value within limits for Si 251.611 Recovery = 102.28%						
Sn 189.927†	2223.9	505.26 ug/L	8.547	505.26 ppb	8.547	1.69%
QC value within limits for Sn 189.927 Recovery = 101.05%						
Sr 421.552†	62225.6	498.75 ug/L	2.251	498.75 ppb	2.251	0.45%
QC value within limits for Sr 421.552 Recovery = 99.75%						
Ti 334.940†	285921.8	497.07 ug/L	9.800	497.07 ppb	9.800	1.97%
QC value within limits for Ti 334.940 Recovery = 99.41%						
Tl 190.801†	1296.0	504.73 ug/L	7.266	504.73 ppb	7.266	1.44%
QC value within limits for Tl 190.801 Recovery = 100.95%						
U 409.014†	16896.0	510.90 ug/L	12.223	510.90 ppb	12.223	2.39%
QC value within limits for U 409.014 Recovery = 102.18%						
V 292.402†	62849.9	508.61 ug/L	10.069	508.61 ppb	10.069	1.98%
QC value within limits for V 292.402 Recovery = 101.72%						
Zn 213.857†	41846.3	502.36 ug/L	9.752	502.36 ppb	9.752	1.94%
QC value within limits for Zn 213.857 Recovery = 100.47%						
SiO2†	67649.0	5507.2 ug/L	66.08	5507.2 ppb	66.08	1.20%
QC value within limits for SiO2 Recovery = 102.99%						

All analyte(s) passed QC.

Sequence No.: 19

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 3/19/2010 15:19:47

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	4561.2	4561.2	104 %		15:21:39
1	Y RADIAL	4943.3	4943.3	103.8 %		15:21:39
1	Al 396.153Radial†	-82.3	-1.3	-1.2627 ug/L	-1.2627 ppb	15:21:59
1	Ca 317.933Radial†	20.9	4.4	8.3378 ug/L	8.3378 ppb	15:21:59
1	Fe 238.204 Radial†	7.8	-0.9	-10.521 ug/L	-10.521 ppb	15:21:59
1	K 766.490 Radial†	2758.8	59.5	11.332 ug/L	11.332 ppb	15:21:39
1	Mg 279.077 IEC†	2.6	1.0	39.950 ug/L	39.950 ppb	15:21:59
1	Na 589.592 Radial†	-843.2	62.6	22.070 ug/L	22.070 ppb	15:21:39
1	Sr 421.552†	26.0	4.2	0.0335 ug/L	0.0335 ppb	15:21:39
1	Sc 361.383	812531.2	812531.2	99.231 %		15:22:56
1	Y 371.029	687107.4	687107.4	99.344 %		15:22:56
1	Ag 328.068†	225.0	41.6	0.2104 ug/L	0.2104 ppb	15:22:56
1	As 188.979†	-22.2	4.5	2.4473 ug/L	2.4473 ppb	15:23:16
1	B 249.677†	-303.9	231.1	6.4852 ug/L	6.4852 ppb	15:23:16
1	Ba 233.527†	3.7	4.4	0.0400 ug/L	0.0400 ppb	15:23:16
1	Be 313.107†	-3705.1	-2.7	-0.0013 ug/L	-0.0013 ppb	15:22:56
1	Cd 226.502†	-168.8	0.5	0.0088 ug/L	0.0088 ppb	15:23:16
1	Co 228.616†	-45.5	0.4	0.0116 ug/L	0.0116 ppb	15:23:16
1	Cr 267.716†	74.3	3.4	0.0438 ug/L	0.0438 ppb	15:23:16
1	Cu 324.752†	5446.3	-63.5	-0.2108 ug/L	-0.2108 ppb	15:22:56
1	Mn 257.610†	438.5	52.9	0.0668 ug/L	0.0668 ppb	15:23:16
1	Mo 202.031†	15.7	7.3	0.6438 ug/L	0.6438 ppb	15:23:16
1	Ni 231.604†	66.2	-17.3	-0.5503 ug/L	-0.5503 ppb	15:23:16
1	P 214.914†	186.1	0.3	0.2556 ug/L	0.2556 ppb	15:23:16
1	Pb 220.353†	-59.8	-2.0	-0.3012 ug/L	-0.3012 ppb	15:23:16
1	S 181.975 Axial†	32.2	2.2	4.0167 ug/L	4.0167 ppb	15:23:16
1	Sb 206.836†	42.0	18.7	7.7890 ug/L	7.7890 ppb	15:23:16
1	Se 196.026†	-9.1	7.8	6.4898 ug/L	6.4898 ppb	15:23:16
1	Si 251.611†	517.9	33.8	1.2738 ug/L	1.2738 ppb	15:23:16
1	Sn 189.927†	-0.6	-7.7	-1.7537 ug/L	-1.7537 ppb	15:23:16
1	Ti 334.940†	-1144.0	-31.6	-0.0576 ug/L	-0.0576 ppb	15:22:56
1	Tl 190.801†	-20.8	8.1	3.1394 ug/L	3.1394 ppb	15:23:16
1	U 409.014†	-2158.3	29.2	0.8862 ug/L	0.8862 ppb	15:22:56
1	V 292.402†	-1354.7	-47.7	-0.3679 ug/L	-0.3679 ppb	15:22:56
1	Zn 213.857†	584.1	18.5	0.2295 ug/L	0.2295 ppb	15:23:16
1	SiO2†	515.7	20.4	1.6444 ug/L	1.6444 ppb	15:24:27
2	Sc Radial	4315.7	4315.7	98.2 %		15:22:05
2	Y RADIAL	4683.2	4683.2	98.37 %		15:22:05
2	Al 396.153Radial†	-77.4	-0.7	-0.6792 ug/L	-0.6792 ppb	15:22:25
2	Ca 317.933Radial†	16.9	1.6	2.9400 ug/L	2.9400 ppb	15:22:25
2	Fe 238.204 Radial†	12.0	3.8	43.926 ug/L	43.926 ppb	15:22:25
2	K 766.490 Radial†	2745.9	197.6	37.644 ug/L	37.644 ppb	15:22:05
2	Mg 279.077 IEC†	0.9	-0.6	-24.744 ug/L	-24.744 ppb	15:22:25
2	Na 589.592 Radial†	-812.0	48.1	16.974 ug/L	16.974 ppb	15:22:05
2	Sr 421.552†	39.4	19.4	0.1551 ug/L	0.1551 ppb	15:22:05
2	Sc 361.383	830170.6	830170.6	101.39 %		15:23:22
2	Y 371.029	701100.0	701100.0	101.37 %		15:23:22
2	Ag 328.068†	161.1	-26.3	-0.1273 ug/L	-0.1273 ppb	15:23:22
2	As 188.979†	-26.5	0.7	0.3885 ug/L	0.3885 ppb	15:23:42
2	B 249.677†	-305.1	236.5	6.6262 ug/L	6.6262 ppb	15:23:42
2	Ba 233.527†	0.3	1.0	0.0108 ug/L	0.0108 ppb	15:23:42
2	Be 313.107†	-3685.3	96.1	0.0413 ug/L	0.0413 ppb	15:23:22
2	Cd 226.502†	-165.1	7.8	0.1093 ug/L	0.1093 ppb	15:23:42
2	Co 228.616†	-36.9	9.8	0.2516 ug/L	0.2516 ppb	15:23:42
2	Cr 267.716†	87.9	15.2	0.2059 ug/L	0.2059 ppb	15:23:42
2	Cu 324.752†	5508.2	-119.1	-0.3942 ug/L	-0.3942 ppb	15:23:22
2	Mn 257.610†	409.3	14.6	0.0246 ug/L	0.0246 ppb	15:23:42
2	Mo 202.031†	7.6	-1.1	-0.0920 ug/L	-0.0920 ppb	15:23:42
2	Ni 231.604†	72.4	-12.6	-0.4018 ug/L	-0.4018 ppb	15:23:42

2	P 214.914†	194.2	4.3	3.2216 ug/L	3.2216 ppb	15:23:42
2	Pb 220.353†	-59.1	0.0	-0.0005 ug/L	-0.0005 ppb	15:23:42
2	S 181.975 Axial†	32.1	1.4	2.5716 ug/L	2.5716 ppb	15:23:42
2	Sb 206.836†	28.8	4.7	1.9615 ug/L	1.9615 ppb	15:23:42
2	Se 196.026†	-20.5	-3.3	-2.6269 ug/L	-2.6269 ppb	15:23:42
2	Si 251.611†	502.8	7.7	0.2951 ug/L	0.2951 ppb	15:23:42
2	Sn 189.927†	3.6	-3.6	-0.8238 ug/L	-0.8238 ppb	15:23:42
2	Ti 334.940†	-1041.5	93.9	0.1629 ug/L	0.1629 ppb	15:23:22
2	Tl 190.801†	-31.4	-1.9	-0.7308 ug/L	-0.7308 ppb	15:23:42
2	U 409.014†	-2028.3	203.6	6.1723 ug/L	6.1723 ppb	15:23:22
2	V 292.402†	-1316.9	18.5	0.1514 ug/L	0.1514 ppb	15:23:22
2	Zn 213.857†	587.0	8.9	0.1045 ug/L	0.1045 ppb	15:23:42
2	SiO2†	533.5	26.8	2.1935 ug/L	2.1935 ppb	15:24:47
3	Sc Radial	4508.6	4508.6	103 %		15:22:30
3	Y RADIAL	4909.7	4909.7	103.1 %		15:22:30
3	Al 396.153Radial†	-70.5	9.3	9.1260 ug/L	9.1260 ppb	15:22:50
3	Ca 317.933Radial†	15.7	-0.3	-0.6519 ug/L	-0.6519 ppb	15:22:50
3	Fe 238.204 Radial†	8.7	0.1	0.5782 ug/L	0.5782 ppb	15:22:50
3	K 766.490 Radial†	2587.6	-76.3	-14.548 ug/L	-14.548 ppb	15:22:30
3	Mg 279.077 IEC†	1.4	-0.2	-7.9990 ug/L	-7.9990 ppb	15:22:50
3	Na 589.592 Radial†	-873.2	23.9	8.4342 ug/L	8.4342 ppb	15:22:30
3	Sr 421.552†	25.7	4.2	0.0337 ug/L	0.0337 ppb	15:22:30
3	Sc 361.383	814827.9	814827.9	99.512 %		15:23:47
3	Y 371.029	686828.7	686828.7	99.303 %		15:23:47
3	Ag 328.068†	97.6	-87.1	-0.4563 ug/L	-0.4563 ppb	15:23:47
3	As 188.979†	-25.2	1.5	0.8026 ug/L	0.8026 ppb	15:24:07
3	B 249.677†	-327.7	208.0	5.8359 ug/L	5.8359 ppb	15:24:07
3	Ba 233.527†	-5.0	-4.3	-0.0411 ug/L	-0.0411 ppb	15:24:07
3	Be 313.107†	-3699.6	13.2	0.0055 ug/L	0.0055 ppb	15:23:47
3	Cd 226.502†	-177.6	-7.8	-0.1132 ug/L	-0.1132 ppb	15:24:07
3	Co 228.616†	-50.0	-4.0	-0.1022 ug/L	-0.1022 ppb	15:24:07
3	Cr 267.716†	68.5	-2.6	-0.0370 ug/L	-0.0370 ppb	15:24:07
3	Cu 324.752†	5513.3	-11.7	-0.0402 ug/L	-0.0402 ppb	15:23:47
3	Mn 257.610†	419.8	32.8	0.0435 ug/L	0.0435 ppb	15:24:07
3	Mo 202.031†	17.2	8.8	0.7797 ug/L	0.7797 ppb	15:24:07
3	Ni 231.604†	63.2	-20.6	-0.6526 ug/L	-0.6526 ppb	15:24:07
3	P 214.914†	191.3	4.9	3.6842 ug/L	3.6842 ppb	15:24:07
3	Pb 220.353†	-45.4	12.7	1.9561 ug/L	1.9561 ppb	15:24:07
3	S 181.975 Axial†	30.9	0.9	1.5220 ug/L	1.5220 ppb	15:24:07
3	Sb 206.836†	21.1	-2.5	-1.0139 ug/L	-1.0139 ppb	15:24:07
3	Se 196.026†	-17.9	-1.0	-0.8526 ug/L	-0.8526 ppb	15:24:07
3	Si 251.611†	522.0	36.3	1.3701 ug/L	1.3701 ppb	15:24:07
3	Sn 189.927†	9.5	2.4	0.5431 ug/L	0.5431 ppb	15:24:07
3	Ti 334.940†	-1157.4	-41.8	-0.0736 ug/L	-0.0736 ppb	15:23:47
3	Tl 190.801†	-26.3	2.6	1.0117 ug/L	1.0117 ppb	15:24:07
3	U 409.014†	-2090.9	103.0	3.1251 ug/L	3.1251 ppb	15:23:47
3	V 292.402†	-1369.2	-58.5	-0.4501 ug/L	-0.4501 ppb	15:23:47
3	Zn 213.857†	584.1	16.9	0.2084 ug/L	0.2084 ppb	15:24:07
3	SiO2†	531.2	34.5	2.7955 ug/L	2.7955 ppb	15:25:07

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	819176.6	100.04 %		1.171			1.17%
Sc Radial	4461.8	102 %		2.9			2.90%
Y 371.029	691678.7	100.00 %		1.180			1.18%
Y RADIAL	4845.4	101.8 %		2.97			2.92%
Ag 328.068†	-23.9	-0.1244 ug/L		0.33336	-0.1244 ppb	0.33336	267.92%
QC value within limits for Ag 328.068 Recovery = Not calculated							
Al 396.153Radial†	2.5	2.3947 ug/L		5.83674	2.3947 ppb	5.83674	243.73%
QC value within limits for Al 396.153Radial Recovery = Not calculated							
As 188.979†	2.2	1.2128 ug/L		1.08894	1.2128 ppb	1.08894	89.79%
QC value within limits for As 188.979 Recovery = Not calculated							
B 249.677†	225.2	6.3158 ug/L		0.42150	6.3158 ppb	0.42150	6.67%
QC value within limits for B 249.677 Recovery = Not calculated							
Ba 233.527†	0.4	0.0032 ug/L		0.04111	0.0032 ppb	0.04111	>999.9%
QC value within limits for Ba 233.527 Recovery = Not calculated							
Be 313.107†	35.5	0.0152 ug/L		0.02288	0.0152 ppb	0.02288	150.99%
QC value within limits for Be 313.107 Recovery = Not calculated							
Ca 317.933Radial†	1.9	3.5420 ug/L		4.52499	3.5420 ppb	4.52499	127.75%

QC value within limits for Ca 317.933 Radial Recovery = Not calculated					
Cd 226.502†	0.2	0.0016 ug/L	0.11138	0.0016 ppb	0.11138 >999.9%
QC value within limits for Cd 226.502 Recovery = Not calculated					
Co 228.616†	2.0	0.0537 ug/L	0.18063	0.0537 ppb	0.18063 336.65%
QC value within limits for Co 228.616 Recovery = Not calculated					
Cr 267.716†	5.3	0.0709 ug/L	0.12370	0.0709 ppb	0.12370 174.51%
QC value within limits for Cr 267.716 Recovery = Not calculated					
Cu 324.752†	-64.8	-0.2151 ug/L	0.17704	-0.2151 ppb	0.17704 82.32%
QC value within limits for Cu 324.752 Recovery = Not calculated					
Fe 238.204 Radial†	1.0	11.328 ug/L	28.7716	11.328 ppb	28.7716 253.99%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated					
K 766.490 Radial†	60.3	11.476 ug/L	26.0963	11.476 ppb	26.0963 227.40%
QC value within limits for K 766.490 Radial Recovery = Not calculated					
Mg 279.077 IEC†	0.1	2.4023 ug/L	33.57814	2.4023 ppb	33.57814 >999.9%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated					
Mn 257.610†	33.4	0.0450 ug/L	0.02116	0.0450 ppb	0.02116 47.05%
QC value within limits for Mn 257.610 Recovery = Not calculated					
Mo 202.031†	5.0	0.4438 ug/L	0.46896	0.4438 ppb	0.46896 105.66%
QC value within limits for Mo 202.031 Recovery = Not calculated					
Na 589.592 Radial†	44.9	15.826 ug/L	6.8900	15.826 ppb	6.8900 43.54%
QC value within limits for Na 589.592 Radial Recovery = Not calculated					
Ni 231.604†	-16.8	-0.5349 ug/L	0.12613	-0.5349 ppb	0.12613 23.58%
QC value within limits for Ni 231.604 Recovery = Not calculated					
P 214.914†	3.2	2.3871 ug/L	1.86043	2.3871 ppb	1.86043 77.94%
QC value within limits for P 214.914 Recovery = Not calculated					
Pb 220.353†	3.6	0.5514 ug/L	1.22574	0.5514 ppb	1.22574 222.28%
QC value within limits for Pb 220.353 Recovery = Not calculated					
S 181.975 Axial†	1.5	2.7034 ug/L	1.25258	2.7034 ppb	1.25258 46.33%
QC value within limits for S 181.975 Axial Recovery = Not calculated					
Sb 206.836†	7.0	2.9122 ug/L	4.47781	2.9122 ppb	4.47781 153.76%
QC value within limits for Sb 206.836 Recovery = Not calculated					
Se 196.026†	1.2	1.0034 ug/L	4.83345	1.0034 ppb	4.83345 481.70%
QC value within limits for Se 196.026 Recovery = Not calculated					
Si 251.611†	25.9	0.9797 ug/L	0.59481	0.9797 ppb	0.59481 60.72%
QC value within limits for Si 251.611 Recovery = Not calculated					
Sn 189.927†	-3.0	-0.6781 ug/L	1.15533	-0.6781 ppb	1.15533 170.37%
QC value within limits for Sn 189.927 Recovery = Not calculated					
Sr 421.552†	9.2	0.0741 ug/L	0.07015	0.0741 ppb	0.07015 94.68%
QC value within limits for Sr 421.552 Recovery = Not calculated					
Ti 334.940†	6.8	0.0106 ug/L	0.13217	0.0106 ppb	0.13217 >999.9%
QC value within limits for Ti 334.940 Recovery = Not calculated					
Tl 190.801†	2.9	1.1401 ug/L	1.93830	1.1401 ppb	1.93830 170.01%
QC value within limits for Tl 190.801 Recovery = Not calculated					
U 409.014†	111.9	3.3945 ug/L	2.65336	3.3945 ppb	2.65336 78.17%
QC value within limits for U 409.014 Recovery = Not calculated					
V 292.402†	-29.2	-0.2222 ug/L	0.32618	-0.2222 ppb	0.32618 146.79%
QC value within limits for V 292.402 Recovery = Not calculated					
Zn 213.857†	14.8	0.1808 ug/L	0.06693	0.1808 ppb	0.06693 37.01%
QC value within limits for Zn 213.857 Recovery = Not calculated					
SiO2†	27.2	2.2111 ug/L	0.57579	2.2111 ppb	0.57579 26.04%
QC value within limits for SiO2 Recovery = Not calculated					

All analyte(s) passed QC.

Sequence No.: 20

Sample ID: 1202053063|957496|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 38

Date Collected: 3/19/2010 15:27:18

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 1202053063|957496|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4311.3	4311.3	98.1 %		15:29:30
1	Y RADIAL	4747.7	4747.7	99.73 %		15:29:10
1	Al 396.153Radial†	-71.8	4.9	4.7583 ug/L	4.7583 ppb	15:29:30
1	Ca 317.933Radial†	21.0	5.7	10.842 ug/L	10.842 ppb	15:29:30
1	Fe 238.204 Radial†	8.5	0.2	2.3420 ug/L	2.3420 ppb	15:29:30
1	K 766.490 Radial†	2728.7	183.0	34.849 ug/L	34.849 ppb	15:29:10
1	Mg 279.077 IEC†	3.4	2.0	80.811 ug/L	80.811 ppb	15:29:30
1	Na 589.592 Radial†	-789.0	70.8	24.967 ug/L	24.967 ppb	15:29:10
1	Sr 421.552†	50.0	30.1	0.2415 ug/L	0.2415 ppb	15:29:10
1	Sc 361.383	826346.2	826346.2	100.92 %		15:30:27
1	Y 371.029	697539.6	697539.6	100.85 %		15:30:27
1	Ag 328.068†	165.6	-21.1	-0.1107 ug/L	-0.1107 ppb	15:30:27
1	As 188.979†	-23.6	3.4	1.8886 ug/L	1.8886 ppb	15:30:47
1	B 249.677†	-312.4	227.8	6.3895 ug/L	6.3895 ppb	15:30:47
1	Ba 233.527†	0.3	1.0	0.0104 ug/L	0.0104 ppb	15:30:47
1	Be 313.107†	-3681.2	83.3	0.0364 ug/L	0.0364 ppb	15:30:27
1	Cd 226.502†	-165.5	6.7	0.0972 ug/L	0.0972 ppb	15:30:47
1	Co 228.616†	-43.2	3.4	0.0878 ug/L	0.0878 ppb	15:30:47
1	Cr 267.716†	107.8	35.3	0.4730 ug/L	0.4730 ppb	15:30:47
1	Cu 324.752†	5642.8	39.4	0.1283 ug/L	0.1283 ppb	15:30:27
1	Mn 257.610†	709.8	314.3	0.4101 ug/L	0.4101 ppb	15:30:47
1	Mo 202.031†	16.8	8.1	0.7231 ug/L	0.7231 ppb	15:30:47
1	Ni 231.604†	92.1	7.2	0.2285 ug/L	0.2285 ppb	15:30:47
1	P 214.914†	197.2	8.1	6.0207 ug/L	6.0207 ppb	15:30:47
1	Pb 220.353†	-48.1	10.7	1.6403 ug/L	1.6403 ppb	15:30:47
1	S 181.975 Axial†	33.1	2.6	4.6441 ug/L	4.6441 ppb	15:30:47
1	Sb 206.836†	42.5	18.4	7.7344 ug/L	7.7344 ppb	15:30:47
1	Se 196.026†	-13.5	3.6	3.0323 ug/L	3.0323 ppb	15:30:47
1	Si 251.611†	996.4	499.1	18.939 ug/L	18.939 ppb	15:30:47
1	Sn 189.927†	12.2	5.0	1.1269 ug/L	1.1269 ppb	15:30:47
1	Ti 334.940†	-904.4	225.1	0.3845 ug/L	0.3845 ppb	15:30:27
1	Tl 190.801†	-21.6	7.7	2.9737 ug/L	2.9737 ppb	15:30:47
1	U 409.014†	-2100.9	122.5	3.7137 ug/L	3.7137 ppb	15:30:27
1	V 292.402†	-1293.8	35.4	0.3009 ug/L	0.3009 ppb	15:30:27
1	Zn 213.857†	770.3	193.2	2.3394 ug/L	2.3394 ppb	15:30:47
1	SiO2†	1053.8	544.8	44.445 ug/L	44.445 ppb	15:31:43
2	Sc Radial	4313.5	4313.5	98.1 %		15:29:56
2	Y RADIAL	4820.0	4820.0	101.2 %		15:29:36
2	Al 396.153Radial†	-56.5	20.5	20.180 ug/L	20.180 ppb	15:29:56
2	Ca 317.933Radial†	23.5	8.2	15.599 ug/L	15.599 ppb	15:29:56
2	Fe 238.204 Radial†	10.8	2.6	29.828 ug/L	29.828 ppb	15:29:56
2	K 766.490 Radial†	2763.7	217.2	41.361 ug/L	41.361 ppb	15:29:36
2	Mg 279.077 IEC†	4.5	3.0	124.37 ug/L	124.37 ppb	15:29:56
2	Na 589.592 Radial†	-807.3	52.6	18.540 ug/L	18.540 ppb	15:29:36
2	Sr 421.552†	45.7	25.7	0.2062 ug/L	0.2062 ppb	15:29:36
2	Sc 361.383	826597.8	826597.8	100.95 %		15:30:53
2	Y 371.029	697109.8	697109.8	100.79 %		15:30:53
2	Ag 328.068†	215.3	28.2	0.1495 ug/L	0.1495 ppb	15:30:53
2	As 188.979†	-21.5	5.5	3.0294 ug/L	3.0294 ppb	15:31:13
2	B 249.677†	-326.4	214.1	6.0009 ug/L	6.0009 ppb	15:31:13
2	Ba 233.527†	18.2	18.8	0.1760 ug/L	0.1760 ppb	15:31:13
2	Be 313.107†	-3759.2	7.2	0.0041 ug/L	0.0041 ppb	15:30:53
2	Cd 226.502†	-166.6	5.6	0.0785 ug/L	0.0785 ppb	15:31:13
2	Co 228.616†	-55.5	-8.8	-0.2289 ug/L	-0.2289 ppb	15:31:13
2	Cr 267.716†	97.4	25.0	0.3356 ug/L	0.3356 ppb	15:31:13
2	Cu 324.752†	5686.5	81.0	0.2662 ug/L	0.2662 ppb	15:30:53
2	Mn 257.610†	712.0	316.3	0.4137 ug/L	0.4137 ppb	15:31:13
2	Mo 202.031†	5.9	-2.7	-0.2378 ug/L	-0.2378 ppb	15:31:13
2	Ni 231.604†	81.8	-3.0	-0.0950 ug/L	-0.0950 ppb	15:31:13

2	P 214.914†	183.9	-5.1	-3.8867 ug/L	-3.8867 ppb	15:31:13
2	Pb 220.353†	-54.3	4.5	0.6934 ug/L	0.6934 ppb	15:31:13
2	S 181.975 Axial†	24.8	-5.7	-10.124 ug/L	-10.124 ppb	15:31:13
2	Sb 206.836†	32.6	8.6	3.6245 ug/L	3.6245 ppb	15:31:13
2	Se 196.026†	-17.4	-0.3	-0.1583 ug/L	-0.1583 ppb	15:31:13
2	Si 251.611†	983.9	486.5	18.470 ug/L	18.470 ppb	15:31:13
2	Sn 189.927†	16.8	9.4	2.1414 ug/L	2.1414 ppb	15:31:13
2	Ti 334.940†	-860.9	268.4	0.4563 ug/L	0.4563 ppb	15:30:53
2	Tl 190.801†	-27.0	2.3	0.9112 ug/L	0.9112 ppb	15:31:13
2	U 409.014†	-2051.5	172.0	5.2141 ug/L	5.2141 ppb	15:30:53
2	V 292.402†	-1378.0	-47.6	-0.3760 ug/L	-0.3760 ppb	15:30:53
2	Zn 213.857†	757.6	180.4	2.1818 ug/L	2.1818 ppb	15:31:13
2	SiO2†	1014.4	505.5	41.264 ug/L	41.264 ppb	15:31:48
3	Sc Radial	4284.1	4284.1	97.5 %		15:30:21
3	Y RADIAL	4829.7	4829.7	101.5 %		15:30:01
3	Al 396.153Radial†	-69.2	7.1	6.9835 ug/L	6.9835 ppb	15:30:21
3	Ca 317.933Radial†	27.5	12.5	23.705 ug/L	23.705 ppb	15:30:21
3	Fe 238.204 Radial†	9.6	1.4	16.590 ug/L	16.590 ppb	15:30:21
3	K 766.490 Radial†	2652.8	122.7	23.370 ug/L	23.370 ppb	15:30:01
3	Mg 279.077 IEC†	2.3	0.9	35.605 ug/L	35.605 ppb	15:30:21
3	Na 589.592 Radial†	-797.4	57.1	20.112 ug/L	20.112 ppb	15:30:01
3	Sr 421.552†	38.1	18.3	0.1466 ug/L	0.1466 ppb	15:30:01
3	Sc 361.383	813841.3	813841.3	99.391 %		15:31:18
3	Y 371.029	686956.7	686956.7	99.322 %		15:31:18
3	Ag 328.068†	241.3	57.7	0.3006 ug/L	0.3006 ppb	15:31:18
3	As 188.979†	-24.8	1.9	1.0287 ug/L	1.0287 ppb	15:31:38
3	B 249.677†	-340.1	195.2	5.4743 ug/L	5.4743 ppb	15:31:38
3	Ba 233.527†	3.5	4.2	0.0396 ug/L	0.0396 ppb	15:31:38
3	Be 313.107†	-3657.0	51.6	0.0223 ug/L	0.0223 ppb	15:31:18
3	Cd 226.502†	-180.0	-10.5	-0.1525 ug/L	-0.1525 ppb	15:31:38
3	Co 228.616†	-52.7	-6.8	-0.1762 ug/L	-0.1762 ppb	15:31:38
3	Cr 267.716†	98.2	27.3	0.3661 ug/L	0.3661 ppb	15:31:38
3	Cu 324.752†	5603.4	85.8	0.2819 ug/L	0.2819 ppb	15:31:18
3	Mn 257.610†	722.6	338.0	0.4445 ug/L	0.4445 ppb	15:31:38
3	Mo 202.031†	11.7	3.2	0.2862 ug/L	0.2862 ppb	15:31:38
3	Ni 231.604†	87.7	4.2	0.1323 ug/L	0.1323 ppb	15:31:38
3	P 214.914†	196.5	10.4	7.6609 ug/L	7.6609 ppb	15:31:38
3	Pb 220.353†	-55.4	2.5	0.3912 ug/L	0.3912 ppb	15:31:38
3	S 181.975 Axial†	26.1	-3.9	-6.9898 ug/L	-6.9898 ppb	15:31:38
3	Sb 206.836†	29.4	5.9	2.4708 ug/L	2.4708 ppb	15:31:38
3	Se 196.026†	-10.8	6.1	5.1012 ug/L	5.1012 ppb	15:31:38
3	Si 251.611†	1000.5	518.5	19.679 ug/L	19.679 ppb	15:31:38
3	Sn 189.927†	8.1	1.0	0.2222 ug/L	0.2222 ppb	15:31:38
3	Ti 334.940†	-1030.6	84.3	0.1451 ug/L	0.1451 ppb	15:31:18
3	Tl 190.801†	-32.8	-3.9	-1.4993 ug/L	-1.4993 ppb	15:31:38
3	U 409.014†	-2064.6	127.0	3.8494 ug/L	3.8494 ppb	15:31:18
3	V 292.402†	-1327.4	-18.1	-0.1351 ug/L	-0.1351 ppb	15:31:18
3	Zn 213.857†	751.0	185.5	2.2437 ug/L	2.2437 ppb	15:31:38
3	SiO2†	981.7	488.4	39.849 ug/L	39.849 ppb	15:31:53

Mean Data: 1202053063|957496|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	822261.7	100.42	%	0.891			0.89%
Sc Radial	4302.9	97.9	%	0.37			0.38%
Y 371.029	693868.7	100.32	%	0.866			0.86%
Y RADIAL	4799.1	100.8	%	0.94			0.93%
Ag 328.068†	21.6	0.1131	ug/L	0.20800	0.1131 ppb	0.20800	183.87%
Al 396.153Radial†	10.8	10.641	ug/L	8.3361	10.641 ppb	8.3361	78.34%
As 188.979†	3.6	1.9822	ug/L	1.00365	1.9822 ppb	1.00365	50.63%
B 249.677†	212.3	5.9549	ug/L	0.45937	5.9549 ppb	0.45937	7.71%
Ba 233.527†	8.0	0.0753	ug/L	0.08839	0.0753 ppb	0.08839	117.35%
Be 313.107†	47.4	0.0209	ug/L	0.01616	0.0209 ppb	0.01616	77.23%
Ca 317.933Radial†	8.8	16.715	ug/L	6.5034	16.715 ppb	6.5034	38.91%
Cd 226.502†	0.6	0.0077	ug/L	0.13910	0.0077 ppb	0.13910	>999.9%
Co 228.616†	-4.1	-0.1058	ug/L	0.16968	-0.1058 ppb	0.16968	160.41%
Cr 267.716†	29.2	0.3916	ug/L	0.07214	0.3916 ppb	0.07214	18.42%
Cu 324.752†	68.7	0.2254	ug/L	0.08452	0.2254 ppb	0.08452	37.49%
Fe 238.204 Radial†	1.4	16.253	ug/L	13.7462	16.253 ppb	13.7462	84.57%
K 766.490 Radial†	174.3	33.193	ug/L	9.1092	33.193 ppb	9.1092	27.44%

Mg 279.077 IEC†	1.9	80.261 ug/L	44.3837	80.261 ppb	44.3837	55.30%
Mn 257.610†	322.8	0.4228 ug/L	0.01893	0.4228 ppb	0.01893	4.48%
Mo 202.031†	2.9	0.2572 ug/L	0.48107	0.2572 ppb	0.48107	187.06%
Na 589.592 Radial†	60.2	21.206 ug/L	3.3507	21.206 ppb	3.3507	15.80%
Ni 231.604†	2.8	0.0886 ug/L	0.16609	0.0886 ppb	0.16609	187.44%
P 214.914†	4.4	3.2650 ug/L	6.24755	3.2650 ppb	6.24755	191.35%
Pb 220.353†	5.9	0.9083 ug/L	0.65170	0.9083 ppb	0.65170	71.75%
S 181.975 Axial†	-2.3	-4.1566 ug/L	7.78111	-4.1566 ppb	7.78111	187.20%
Sb 206.836†	11.0	4.6099 ug/L	2.76670	4.6099 ppb	2.76670	60.02%
Se 196.026†	3.1	2.6584 ug/L	2.64962	2.6584 ppb	2.64962	99.67%
Si 251.611†	501.3	19.029 ug/L	0.6093	19.029 ppb	0.6093	3.20%
Sn 189.927†	5.1	1.1635 ug/L	0.96010	1.1635 ppb	0.96010	82.52%
Sr 421.552†	24.7	0.1981 ug/L	0.04798	0.1981 ppb	0.04798	24.22%
Ti 334.940†	192.6	0.3286 ug/L	0.16295	0.3286 ppb	0.16295	49.58%
Tl 190.801†	2.0	0.7952 ug/L	2.23874	0.7952 ppb	2.23874	281.53%
U 409.014†	140.5	4.2591 ug/L	0.82984	4.2591 ppb	0.82984	19.48%
V 292.402†	-10.1	-0.0701 ug/L	0.34310	-0.0701 ppb	0.34310	489.72%
Zn 213.857†	186.4	2.2550 ug/L	0.07939	2.2550 ppb	0.07939	3.52%
SiO2†	512.9	41.853 ug/L	2.3539	41.853 ppb	2.3539	5.62%

Sequence No.: 21
 Sample ID: 1202053068|957496|1
 Analyst: HSC
 Initial Sample Wt:
 Dilution:

Autosampler Location: 39
 Date Collected: 3/19/2010 15:34:04
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:

Replicate Data: 1202053068|957496|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4524.4	4524.4	103 %		15:36:17
1	Y RADIAL	5423.6	5423.6	113.9 %		15:36:17
1	Al 396.153Radial†	94841.7	92208.8	90551 ug/L	90551 ppb	15:35:57
1	Ca 317.933Radial†	53418.6	51875.9	98160 ug/L	98160 ppb	15:35:57
1	Fe 238.204 Radial†	16176.3	15705.5	182000 ug/L	182000 ppb	15:35:57
1	K 766.490 Radial†	225055.6	216023.7	41119 ug/L	41119 ppb	15:35:57
1	Mg 279.077 IEC†	956.2	927.3	38068 ug/L	38068 ppb	15:36:17
1	Na 589.592 Radial†	28777.6	28830.1	10163 ug/L	10163 ppb	15:35:57
1	Sr 421.552†	289228.7	280940.3	2251.2 ug/L	2251.2 ppb	15:35:57
1	Sc 361.383	819446.2	819446.2	100.08 %		15:37:21
1	Y 371.029	751771.9	751771.9	108.69 %		15:37:21
1	Ag 328.068†	48413.6	48191.8	310.30 ug/L	310.30 ppb	15:37:21
1	As 188.979†	1816.4	1841.8	1102.6 ug/L	1102.6 ppb	15:37:41
1	B 249.677†	53266.0	53762.9	1476.1 ug/L	1476.1 ppb	15:37:21
1	Ba 233.527†	206502.3	206346.4	1941.0 ug/L	1941.0 ppb	15:37:21
1	Be 313.107†	1835774.3	1838113.1	795.77 ug/L	795.77 ppb	15:37:15
1	Cd 226.502†	40891.6	41031.3	577.36 ug/L	577.36 ppb	15:37:41
1	Co 228.616†	35476.0	35495.3	903.76 ug/L	903.76 ppb	15:37:41
1	Cr 267.716†	173001.2	172798.5	2338.3 ug/L	2338.3 ppb	15:37:21
1	Cu 324.752†	550787.8	544818.1	1808.4 ug/L	1808.4 ppb	15:37:21
1	Mn 257.610†	4104139.5	4100638.0	5408.0 ug/L	5408.0 ppb	15:37:15
1	Mo 202.031†	5370.0	5357.4	491.52 ug/L	491.52 ppb	15:37:41
1	Ni 231.604†	41527.2	41411.6	1314.6 ug/L	1314.6 ppb	15:37:21
1	P 214.914†	12058.9	11862.4	8364.7 ug/L	8364.7 ppb	15:37:41
1	Pb 220.353†	5490.7	5544.8	847.54 ug/L	847.54 ppb	15:37:41
1	S 181.975 Axial†	2210.9	2179.0	3884.0 ug/L	3884.0 ppb	15:37:41
1	Sb 206.836†	2771.3	2745.5	1155.2 ug/L	1155.2 ppb	15:37:41
1	Se 196.026†	2945.0	2959.7	3019.2 ug/L	3019.2 ppb	15:37:41
1	Si 251.611†	1184141.1	1182754.9	44895 ug/L	44895 ppb	15:37:15
1	Sn 189.927†	4484.2	4473.6	1022.2 ug/L	1022.2 ppb	15:37:41
1	Ti 334.940†	3316804.8	3315410.6	5774.9 ug/L	5774.9 ppb	15:37:15
1	Tl 190.801†	2969.8	2996.6	1226.6 ug/L	1226.6 ppb	15:37:41
1	U 409.014†	-6913.9	-4704.5	-168.66 ug/L	-168.66 ppb	15:37:21
1	V 292.402†	154688.7	155888.9	1218.5 ug/L	1218.5 ppb	15:37:21
1	Zn 213.857†	474549.1	473619.1	5700.7 ug/L	5700.7 ppb	15:37:21
1	SiO2†	1178055.1	1176662.4	96016 ug/L	96016 ppb	15:38:51
2	Sc Radial	4485.4	4485.4	102 %		15:36:42
2	Y RADIAL	5374.4	5374.4	112.9 %		15:36:42
2	Al 396.153Radial†	97911.7	96017.7	94292 ug/L	94292 ppb	15:36:22
2	Ca 317.933Radial†	54713.1	53595.4	101410 ug/L	101410 ppb	15:36:22
2	Fe 238.204 Radial†	16517.2	16176.1	187460 ug/L	187460 ppb	15:36:22
2	K 766.490 Radial†	230443.5	223203.1	42486 ug/L	42486 ppb	15:36:22
2	Mg 279.077 IEC†	952.5	931.8	38247 ug/L	38247 ppb	15:36:42
2	Na 589.592 Radial†	29511.3	29792.0	10502 ug/L	10502 ppb	15:36:22
2	Sr 421.552†	298432.6	292400.7	2343.1 ug/L	2343.1 ppb	15:36:22
2	Sc 361.383	819256.0	819256.0	100.05 %		15:37:53
2	Y 371.029	752490.4	752490.4	108.80 %		15:37:53
2	Ag 328.068†	48689.4	48478.6	313.45 ug/L	313.45 ppb	15:37:53
2	As 188.979†	1818.5	1844.3	1105.4 ug/L	1105.4 ppb	15:38:13
2	B 249.677†	53463.3	53972.6	1481.1 ug/L	1481.1 ppb	15:37:53
2	Ba 233.527†	206678.8	206570.8	1943.3 ug/L	1943.3 ppb	15:37:53
2	Be 313.107†	1834125.5	1836891.1	795.27 ug/L	795.27 ppb	15:37:47
2	Cd 226.502†	40731.3	40880.4	574.61 ug/L	574.61 ppb	15:38:13
2	Co 228.616†	35386.3	35413.9	901.56 ug/L	901.56 ppb	15:38:13
2	Cr 267.716†	173157.0	172994.3	2341.6 ug/L	2341.6 ppb	15:37:53
2	Cu 324.752†	553122.3	547279.2	1816.8 ug/L	1816.8 ppb	15:37:53
2	Mn 257.610†	4109456.9	4106904.7	5416.8 ug/L	5416.8 ppb	15:37:47
2	Mo 202.031†	5351.5	5340.1	490.45 ug/L	490.45 ppb	15:38:13
2	Ni 231.604†	41617.0	41511.0	1317.7 ug/L	1317.7 ppb	15:37:53

2	P 214.914†	12056.7	11863.1	8360.1 ug/L	8360.1 ppb	15:38:13
2	Pb 220.353†	5454.6	5510.1	842.29 ug/L	842.29 ppb	15:38:13
2	S 181.975 Axial†	2209.3	2177.9	3881.3 ug/L	3881.3 ppb	15:38:13
2	Sb 206.836†	2782.4	2757.3	1159.9 ug/L	1159.9 ppb	15:38:13
2	Se 196.026†	2933.6	2949.0	3027.2 ug/L	3027.2 ppb	15:38:13
2	Si 251.611†	1185166.2	1184054.2	44944 ug/L	44944 ppb	15:37:47
2	Sn 189.927†	4472.9	4463.4	1020.1 ug/L	1020.1 ppb	15:38:13
2	Ti 334.940†	3320344.5	3319717.9	5782.9 ug/L	5782.9 ppb	15:37:47
2	Tl 190.801†	2966.6	2994.1	1225.7 ug/L	1225.7 ppb	15:38:13
2	U 409.014†	-7020.8	-4812.9	-172.57 ug/L	-172.57 ppb	15:37:53
2	V 292.402†	155109.4	156345.2	1221.3 ug/L	1221.3 ppb	15:37:53
2	Zn 213.857†	475337.7	474517.4	5710.7 ug/L	5710.7 ppb	15:37:53
2	SiO2†	1191618.3	1190491.7	97145 ug/L	97145 ppb	15:38:57
3	Sc Radial	4522.4	4522.4	103 %		15:37:07
3	Y RADIAL	5425.5	5425.5	114.0 %		15:37:07
3	Al 396.153Radial†	97569.8	94901.7	93196 ug/L	93196 ppb	15:36:47
3	Ca 317.933Radial†	54544.8	52993.9	100280 ug/L	100280 ppb	15:36:47
3	Fe 238.204 Radial†	16485.1	16012.6	185560 ug/L	185560 ppb	15:36:47
3	K 766.490 Radial†	230350.7	221268.4	42118 ug/L	42118 ppb	15:36:47
3	Mg 279.077 IEC†	956.3	927.8	38086 ug/L	38086 ppb	15:37:07
3	Na 589.592 Radial†	29192.9	29246.4	10310 ug/L	10310 ppb	15:36:47
3	Sr 421.552†	296437.8	288073.4	2308.4 ug/L	2308.4 ppb	15:36:47
3	Sc 361.383	818264.8	818264.8	99.932 %		15:38:25
3	Y 371.029	752176.4	752176.4	108.75 %		15:38:25
3	Ag 328.068†	48674.2	48522.4	313.10 ug/L	313.10 ppb	15:38:25
3	As 188.979†	1787.1	1815.1	1088.7 ug/L	1088.7 ppb	15:38:45
3	B 249.677†	53422.3	53996.2	1482.1 ug/L	1482.1 ppb	15:38:25
3	Ba 233.527†	206139.3	206281.1	1940.5 ug/L	1940.5 ppb	15:38:25
3	Be 313.107†	1831063.2	1836047.3	794.87 ug/L	794.87 ppb	15:38:19
3	Cd 226.502†	40669.1	40867.6	574.62 ug/L	574.62 ppb	15:38:45
3	Co 228.616†	35264.5	35334.9	899.58 ug/L	899.58 ppb	15:38:45
3	Cr 267.716†	172897.8	172944.6	2340.7 ug/L	2340.7 ppb	15:38:25
3	Cu 324.752†	551252.5	546077.7	1812.8 ug/L	1812.8 ppb	15:38:25
3	Mn 257.610†	4091759.9	4094171.2	5399.9 ug/L	5399.9 ppb	15:38:19
3	Mo 202.031†	5348.5	5343.6	490.60 ug/L	490.60 ppb	15:38:45
3	Ni 231.604†	41487.5	41431.8	1315.2 ug/L	1315.2 ppb	15:38:25
3	P 214.914†	11955.4	11776.2	8297.4 ug/L	8297.4 ppb	15:38:45
3	Pb 220.353†	5457.8	5519.8	843.80 ug/L	843.80 ppb	15:38:45
3	S 181.975 Axial†	2186.7	2158.0	3845.8 ug/L	3845.8 ppb	15:38:45
3	Sb 206.836†	2750.1	2728.3	1147.8 ug/L	1147.8 ppb	15:38:45
3	Se 196.026†	2911.0	2930.0	3005.5 ug/L	3005.5 ppb	15:38:45
3	Si 251.611†	1178100.9	1178418.9	44730 ug/L	44730 ppb	15:38:19
3	Sn 189.927†	4449.8	4445.7	1016.0 ug/L	1016.0 ppb	15:38:45
3	Ti 334.940†	3307763.1	3311148.1	5767.8 ug/L	5767.8 ppb	15:38:19
3	Tl 190.801†	2952.6	2983.7	1221.5 ug/L	1221.5 ppb	15:38:45
3	U 409.014†	-6960.0	-4760.5	-170.77 ug/L	-170.77 ppb	15:38:25
3	V 292.402†	154853.1	156276.5	1221.1 ug/L	1221.1 ppb	15:38:25
3	Zn 213.857†	473762.8	473516.9	5698.9 ug/L	5698.9 ppb	15:38:25
3	SiO2†	1187645.3	1187958.8	96938 ug/L	96938 ppb	15:39:03

Mean Data: 1202053068|957496|1

Analyte	Mean Corrected	Calib.	Std.Dev.	Sample	Std.Dev.	RSD
	Intensity	Conc. Units		Conc. Units		
Sc 361.383	818989.0	100.02 %	0.077			0.08%
Sc Radial	4510.7	103 %	0.5			0.49%
Y 371.029	752146.2	108.75 %	0.052			0.05%
Y RADIAL	5407.8	113.6 %	0.61			0.54%
Ag 328.068†	48397.6	312.28 ug/L	1.727	312.28 ppb	1.727	0.55%
Al 396.153Radial†	94376.0	92680 ug/L	1923.4	92680 ppb	1923.4	2.08%
As 188.979†	1833.7	1098.9 ug/L	8.92	1098.9 ppb	8.92	0.81%
B 249.677†	53910.6	1479.7 ug/L	3.21	1479.7 ppb	3.21	0.22%
Ba 233.527†	206399.4	1941.6 ug/L	1.48	1941.6 ppb	1.48	0.08%
Be 313.107†	1837017.2	795.30 ug/L	0.449	795.30 ppb	0.449	0.06%
Ca 317.933Radial†	52821.7	99950 ug/L	1651.0	99950 ppb	1651.0	1.65%
Cd 226.502†	40926.4	575.53 ug/L	1.586	575.53 ppb	1.586	0.28%
Co 228.616†	35414.7	901.63 ug/L	2.094	901.63 ppb	2.094	0.23%
Cr 267.716†	172912.4	2340.2 ug/L	1.66	2340.2 ppb	1.66	0.07%
Cu 324.752†	546058.3	1812.7 ug/L	4.21	1812.7 ppb	4.21	0.23%
Fe 238.204 Radial†	15964.7	185010 ug/L	2768.3	185010 ppb	2768.3	1.50%
K 766.490 Radial†	220165.1	41907 ug/L	707.1	41907 ppb	707.1	1.69%

Mg 279.077 IEC†	929.0	38134 ug/L	98.7	38134 ppb	98.7	0.26%
Mn 257.610†	4100571.3	5408.2 ug/L	8.46	5408.2 ppb	8.46	0.16%
Mo 202.031†	5347.1	490.86 ug/L	0.584	490.86 ppb	0.584	0.12%
Na 589.592 Radial†	29289.5	10325 ug/L	170.0	10325 ppb	170.0	1.65%
Ni 231.604†	41451.5	1315.8 ug/L	1.67	1315.8 ppb	1.67	0.13%
P 214.914†	11833.9	8340.7 ug/L	37.59	8340.7 ppb	37.59	0.45%
Pb 220.353†	5524.9	844.54 ug/L	2.703	844.54 ppb	2.703	0.32%
S 181.975 Axial†	2171.7	3870.4 ug/L	21.32	3870.4 ppb	21.32	0.55%
Sb 206.836†	2743.7	1154.3 ug/L	6.10	1154.3 ppb	6.10	0.53%
Se 196.026†	2946.2	3017.3 ug/L	10.97	3017.3 ppb	10.97	0.36%
Si 251.611†	1181742.7	44857 ug/L	112.0	44857 ppb	112.0	0.25%
Sn 189.927†	4460.9	1019.4 ug/L	3.15	1019.4 ppb	3.15	0.31%
Sr 421.552†	287138.1	2300.9 ug/L	46.38	2300.9 ppb	46.38	2.02%
Ti 334.940†	3315425.5	5775.2 ug/L	7.52	5775.2 ppb	7.52	0.13%
Tl 190.801†	2991.5	1224.6 ug/L	2.72	1224.6 ppb	2.72	0.22%
U 409.014†	-4759.3	-170.67 ug/L	1.960	-170.67 ppb	1.960	1.15%
V 292.402†	156170.2	1220.3 ug/L	1.56	1220.3 ppb	1.56	0.13%
Zn 213.857†	473884.5	5703.4 ug/L	6.37	5703.4 ppb	6.37	0.11%
SiO2†	1185037.6	96700 ug/L	600.9	96700 ppb	600.9	0.62%

Sequence No.: 22

Sample ID: 247790002|957496|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 40

Date Collected: 3/19/2010 15:41:13

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 247790002|957496|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4548.6	4548.6	103 %		15:43:06
1	Y RADIAL	5625.6	5625.6	118.2 %		15:43:06
1	Al 396.153Radial†	47147.9	45634.3	44825 ug/L	44825 ppb	15:43:06
1	Ca 317.933Radial†	10388.4	10022.0	18964 ug/L	18964 ppb	15:43:06
1	Fe 238.204 Radial†	9282.9	8961.1	103830 ug/L	103830 ppb	15:43:06
1	K 766.490 Radial†	47987.0	43768.1	8330.5 ug/L	8330.5 ppb	15:43:06
1	Mg 279.077 IEC†	275.7	264.9	10819 ug/L	10819 ppb	15:43:26
1	Na 589.592 Radial†	8818.2	9395.6	3312.1 ug/L	3312.1 ppb	15:43:06
1	Sr 421.552†	18628.4	17978.7	143.97 ug/L	143.97 ppb	15:43:06
1	Sc 361.383	843241.2	843241.2	102.98 %		15:44:24
1	Y 371.029	801423.1	801423.1	115.87 %		15:44:24
1	Ag 328.068†	-5876.4	-5891.4	1.9630 ug/L	1.9630 ppb	15:44:29
1	As 188.979†	-60.0	-31.5	38.007 ug/L	38.007 ppb	15:44:49
1	B 249.677†	861.7	1374.1	21.610 ug/L	21.610 ppb	15:44:29
1	Ba 233.527†	63108.0	61281.3	577.43 ug/L	577.43 ppb	15:44:29
1	Be 313.107†	-12488.0	-8395.4	4.5412 ug/L	4.5412 ppb	15:44:29
1	Cd 226.502†	628.6	781.0	0.6346 ug/L	0.6346 ppb	15:44:49
1	Co 228.616†	1040.3	1056.4	18.515 ug/L	18.515 ppb	15:44:49
1	Cr 267.716†	13451.5	12990.5	185.47 ug/L	185.47 ppb	15:44:29
1	Cu 324.752†	15251.0	9257.4	36.172 ug/L	36.172 ppb	15:44:29
1	Mn 257.610†	1718471.6	1668323.3	2203.4 ug/L	2203.4 ppb	15:44:24
1	Mo 202.031†	6.9	-1.9	8.1197 ug/L	8.1197 ppb	15:44:49
1	Ni 231.604†	3509.7	3324.0	105.54 ug/L	105.54 ppb	15:44:49
1	P 214.914†	2996.6	2722.6	1949.4 ug/L	1949.4 ppb	15:44:49
1	Pb 220.353†	228.7	280.4	38.466 ug/L	38.466 ppb	15:44:49
1	S 181.975 Axial†	134.8	100.7	171.84 ug/L	171.84 ppb	15:44:49
1	Sb 206.836†	57.1	31.8	-0.6308 ug/L	-0.6308 ppb	15:44:49
1	Se 196.026†	-427.8	-398.4	-19.131 ug/L	-19.131 ppb	15:44:49
1	Si 251.611†	1095661.8	1063448.3	40372 ug/L	40372 ppb	15:44:24
1	Sn 189.927†	-53.8	-59.4	-16.066 ug/L	-16.066 ppb	15:44:49
1	Ti 334.940†	2115805.9	2055663.0	3576.6 ug/L	3576.6 ppb	15:44:24
1	Tl 190.801†	-139.9	-106.8	-1.5290 ug/L	-1.5290 ppb	15:44:49
1	U 409.014†	-9225.1	-6753.8	-217.12 ug/L	-217.12 ppb	15:44:24
1	V 292.402†	15605.8	16471.4	112.37 ug/L	112.37 ppb	15:44:29
1	Zn 213.857†	28264.0	26875.5	309.39 ug/L	309.39 ppb	15:44:29
1	SiO2†	1103835.4	1071374.0	87437 ug/L	87437 ppb	15:45:57
2	Sc Radial	4486.4	4486.4	102 %		15:43:31
2	Y RADIAL	5559.2	5559.2	116.8 %		15:43:31
2	Al 396.153Radial†	47037.4	46158.2	45340 ug/L	45340 ppb	15:43:31
2	Ca 317.933Radial†	10354.1	10127.7	19164 ug/L	19164 ppb	15:43:31
2	Fe 238.204 Radial†	9226.0	9029.7	104630 ug/L	104630 ppb	15:43:31
2	K 766.490 Radial†	47760.6	44189.8	8410.8 ug/L	8410.8 ppb	15:43:31
2	Mg 279.077 IEC†	281.0	273.8	11185 ug/L	11185 ppb	15:43:51
2	Na 589.592 Radial†	8686.8	9385.1	3308.5 ug/L	3308.5 ppb	15:43:31
2	Sr 421.552†	18561.4	18162.8	145.45 ug/L	145.45 ppb	15:43:31
2	Sc 361.383	847926.1	847926.1	103.55 %		15:44:55
2	Y 371.029	804661.4	804661.4	116.34 %		15:44:55
2	Ag 328.068†	-5949.5	-5930.5	2.0027 ug/L	2.0027 ppb	15:45:00
2	As 188.979†	-69.3	-40.1	33.408 ug/L	33.408 ppb	15:45:20
2	B 249.677†	772.4	1283.2	18.933 ug/L	18.933 ppb	15:45:00
2	Ba 233.527†	63212.0	61043.3	575.23 ug/L	575.23 ppb	15:45:00
2	Be 313.107†	-12335.2	-8180.8	4.6209 ug/L	4.6209 ppb	15:45:00
2	Cd 226.502†	633.5	782.4	0.5719 ug/L	0.5719 ppb	15:45:20
2	Co 228.616†	1025.5	1036.5	17.999 ug/L	17.999 ppb	15:45:20
2	Cr 267.716†	13385.3	12854.4	183.73 ug/L	183.73 ppb	15:45:00
2	Cu 324.752†	15280.6	9204.2	36.038 ug/L	36.038 ppb	15:45:00
2	Mn 257.610†	1723339.6	1663804.6	2197.5 ug/L	2197.5 ppb	15:44:55
2	Mo 202.031†	6.8	-2.0	8.1744 ug/L	8.1744 ppb	15:45:20
2	Ni 231.604†	3466.0	3263.0	103.61 ug/L	103.61 ppb	15:45:20

2	P 214.914†	2978.7	2689.1	1924.0 ug/L	1924.0 ppb	15:45:20
2	Pb 220.353†	222.7	273.4	37.393 ug/L	37.393 ppb	15:45:20
2	S 181.975 Axial†	129.9	95.2	161.95 ug/L	161.95 ppb	15:45:20
2	Sb 206.836†	68.5	42.4	3.8169 ug/L	3.8169 ppb	15:45:20
2	Se 196.026†	-428.1	-396.4	-15.010 ug/L	-15.010 ppb	15:45:20
2	Si 251.611†	1100566.8	1062306.6	40328 ug/L	40328 ppb	15:44:55
2	Sn 189.927†	-54.6	-59.9	-16.189 ug/L	-16.189 ppb	15:45:20
2	Ti 334.940†	2124494.0	2052701.5	3571.4 ug/L	3571.4 ppb	15:44:55
2	Tl 190.801†	-138.9	-105.1	-0.9313 ug/L	-0.9313 ppb	15:45:20
2	U 409.014†	-9195.2	-6675.4	-214.83 ug/L	-214.83 ppb	15:44:55
2	V 292.402†	15733.0	16510.4	112.58 ug/L	112.58 ppb	15:45:00
2	Zn 213.857†	28235.0	26695.9	307.11 ug/L	307.11 ppb	15:45:00
2	SiO2†	1106382.3	1067911.4	87154 ug/L	87154 ppb	15:46:03
3	Sc Radial	4388.9	4388.9	99.9 %		15:43:56
3	Y RADIAL	5470.7	5470.7	114.9 %		15:43:56
3	Al 396.153Radial†	46027.1	46169.8	45351 ug/L	45351 ppb	15:43:56
3	Ca 317.933Radial†	10104.5	10102.9	19117 ug/L	19117 ppb	15:43:56
3	Fe 238.204 Radial†	9026.7	9030.9	104640 ug/L	104640 ppb	15:43:56
3	K 766.490 Radial†	46700.0	44166.8	8406.5 ug/L	8406.5 ppb	15:43:56
3	Mg 279.077 IEC†	276.3	275.1	11241 ug/L	11241 ppb	15:44:16
3	Na 589.592 Radial†	8421.7	9308.6	3281.5 ug/L	3281.5 ppb	15:43:56
3	Sr 421.552†	18097.0	18101.6	144.96 ug/L	144.96 ppb	15:43:56
3	Sc 361.383	841505.0	841505.0	102.77 %		15:45:26
3	Y 371.029	799664.3	799664.3	115.62 %		15:45:26
3	Ag 328.068†	-5801.4	-5830.2	2.5268 ug/L	2.5268 ppb	15:45:31
3	As 188.979†	-60.6	-32.2	37.735 ug/L	37.735 ppb	15:45:51
3	B 249.677†	711.3	1229.5	17.423 ug/L	17.423 ppb	15:45:31
3	Ba 233.527†	62467.7	60784.8	572.81 ug/L	572.81 ppb	15:45:31
3	Be 313.107†	-12437.4	-8371.2	4.5288 ug/L	4.5288 ppb	15:45:31
3	Cd 226.502†	615.3	769.4	0.3823 ug/L	0.3823 ppb	15:45:51
3	Co 228.616†	1015.7	1034.5	17.955 ug/L	17.955 ppb	15:45:51
3	Cr 267.716†	13291.7	12862.0	183.83 ug/L	183.83 ppb	15:45:31
3	Cu 324.752†	15156.5	9196.1	36.012 ug/L	36.012 ppb	15:45:31
3	Mn 257.610†	1707721.7	1661306.3	2194.2 ug/L	2194.2 ppb	15:45:26
3	Mo 202.031†	1.9	-6.7	7.7554 ug/L	7.7554 ppb	15:45:51
3	Ni 231.604†	3504.1	3325.6	105.59 ug/L	105.59 ppb	15:45:51
3	P 214.914†	2966.7	2699.5	1931.7 ug/L	1931.7 ppb	15:45:51
3	Pb 220.353†	224.8	277.0	37.953 ug/L	37.953 ppb	15:45:51
3	S 181.975 Axial†	124.8	91.3	154.92 ug/L	154.92 ppb	15:45:51
3	Sb 206.836†	51.8	26.7	-2.7707 ug/L	-2.7707 ppb	15:45:51
3	Se 196.026†	-435.5	-406.8	-23.652 ug/L	-23.652 ppb	15:45:51
3	Si 251.611†	1089036.8	1059197.0	40210 ug/L	40210 ppb	15:45:26
3	Sn 189.927†	-54.6	-60.3	-16.291 ug/L	-16.291 ppb	15:45:51
3	Ti 334.940†	2105547.1	2049919.8	3566.6 ug/L	3566.6 ppb	15:45:26
3	Tl 190.801†	-128.9	-96.4	2.3729 ug/L	2.3729 ppb	15:45:51
3	U 409.014†	-9188.7	-6736.9	-216.70 ug/L	-216.70 ppb	15:45:26
3	V 292.402†	15522.4	16421.4	111.87 ug/L	111.87 ppb	15:45:31
3	Zn 213.857†	27874.1	26552.7	305.36 ug/L	305.36 ppb	15:45:31
3	SiO2†	1092436.9	1062494.3	86712 ug/L	86712 ppb	15:46:09

Mean Data: 247790002|957496|1

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	844224.1	103.10 %		0.406			0.39%
Sc Radial	4474.7	102 %		1.8			1.80%
Y 371.029	801916.3	115.94 %		0.366			0.32%
Y RADIAL	5551.8	116.6 %		1.63			1.40%
Ag 328.068†	-5884.0	2.1642 ug/L		0.31470	2.1642 ppb	0.31470	14.54%
Al 396.153Radial†	45987.4	45172 ug/L		300.5	45172 ppb	300.5	0.67%
As 188.979†	-34.6	36.383 ug/L		2.5804	36.383 ppb	2.5804	7.09%
B 249.677†	1295.6	19.322 ug/L		2.1206	19.322 ppb	2.1206	10.98%
Ba 233.527†	61036.5	575.16 ug/L		2.315	575.16 ppb	2.315	0.40%
Be 313.107†	-8315.8	4.5636 ug/L		0.04995	4.5636 ppb	0.04995	1.09%
Ca 317.933Radial†	10084.2	19081 ug/L		104.6	19081 ppb	104.6	0.55%
Cd 226.502†	777.6	0.5296 ug/L		0.13137	0.5296 ppb	0.13137	24.81%
Co 228.616†	1042.5	18.156 ug/L		0.3109	18.156 ppb	0.3109	1.71%
Cr 267.716†	12902.3	184.35 ug/L		0.977	184.35 ppb	0.977	0.53%
Cu 324.752†	9219.2	36.074 ug/L		0.0861	36.074 ppb	0.0861	0.24%
Fe 238.204 Radial†	9007.2	104370 ug/L		463.3	104370 ppb	463.3	0.44%
K 766.490 Radial†	44041.6	8382.6 ug/L		45.14	8382.6 ppb	45.14	0.54%

Mg 279.077 IEC†	271.3	11082 ug/L	229.0	11082 ppb	229.0	2.07%
Mn 257.610†	1664478.1	2198.3 ug/L	4.64	2198.3 ppb	4.64	0.21%
Mo 202.031†	-3.5	8.0165 ug/L	0.22778	8.0165 ppb	0.22778	2.84%
Na 589.592 Radial†	9363.1	3300.7 ug/L	16.73	3300.7 ppb	16.73	0.51%
Ni 231.604†	3304.2	104.92 ug/L	1.133	104.92 ppb	1.133	1.08%
P 214.914†	2703.7	1935.1 ug/L	13.01	1935.1 ppb	13.01	0.67%
Pb 220.353†	276.9	37.938 ug/L	0.5370	37.938 ppb	0.5370	1.42%
S 181.975 Axial†	95.7	162.90 ug/L	8.498	162.90 ppb	8.498	5.22%
Sb 206.836†	33.6	0.1385 ug/L	3.36053	0.1385 ppb	3.36053	>999.9%
Se 196.026†	-400.5	-19.264 ug/L	4.3225	-19.264 ppb	4.3225	22.44%
Si 251.611†	1061650.6	40303 ug/L	83.5	40303 ppb	83.5	0.21%
Sn 189.927†	-59.8	-16.182 ug/L	0.1123	-16.182 ppb	0.1123	0.69%
Sr 421.552†	18081.0	144.79 ug/L	0.751	144.79 ppb	0.751	0.52%
Ti 334.940†	2052761.4	3571.5 ug/L	5.00	3571.5 ppb	5.00	0.14%
Tl 190.801†	-102.7	-0.0291 ug/L	2.10156	-0.0291 ppb	2.10156	>999.9%
U 409.014†	-6722.0	-216.22 ug/L	1.219	-216.22 ppb	1.219	0.56%
V 292.402†	16467.7	112.27 ug/L	0.368	112.27 ppb	0.368	0.33%
Zn 213.857†	26708.0	307.29 ug/L	2.022	307.29 ppb	2.022	0.66%
SiO2†	1067259.9	87101 ug/L	365.3	87101 ppb	365.3	0.42%

Sequence No.: 23

Sample ID: 1202053064|957496|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 41

Date Collected: 3/19/2010 15:48:20

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 1202053064|957496|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4313.7	4313.7	98.1 %		15:50:32
1	Y RADIAL	5708.3	5708.3	119.9 %		15:50:12
1	Al 396.153Radial†	44673.1	45594.4	44786 ug/L	44786 ppb	15:50:12
1	Ca 317.933Radial†	9283.4	9442.9	17868 ug/L	17868 ppb	15:50:12
1	Fe 238.204 Radial†	9868.5	10046.3	116400 ug/L	116400 ppb	15:50:12
1	K 766.490 Radial†	45318.5	43575.1	8294.3 ug/L	8294.3 ppb	15:50:12
1	Mg 279.077 IEC†	260.1	263.5	10748 ug/L	10748 ppb	15:50:32
1	Na 589.592 Radial†	7756.9	8778.4	3094.6 ug/L	3094.6 ppb	15:50:12
1	Sr 421.552†	17124.7	17427.1	139.56 ug/L	139.56 ppb	15:50:12
1	Sc 361.383	849457.7	849457.7	103.74 %		15:51:30
1	Y 371.029	818670.2	818670.2	118.37 %		15:51:30
1	Ag 328.068†	-6219.1	-6179.9	4.4115 ug/L	4.4115 ppb	15:51:35
1	As 188.979†	-55.3	-26.5	44.832 ug/L	44.832 ppb	15:51:55
1	B 249.677†	667.5	1180.8	14.147 ug/L	14.147 ppb	15:51:35
1	Ba 233.527†	57626.1	55548.7	524.14 ug/L	524.14 ppb	15:51:35
1	Be 313.107†	-12991.1	-8791.6	4.6700 ug/L	4.6700 ppb	15:51:35
1	Cd 226.502†	670.9	817.3	-0.1423 ug/L	-0.1423 ppb	15:51:55
1	Co 228.616†	1032.6	1041.6	17.653 ug/L	17.653 ppb	15:51:55
1	Cr 267.716†	12726.8	12196.4	176.17 ug/L	176.17 ppb	15:51:35
1	Cu 324.752†	14641.2	8561.2	34.545 ug/L	34.545 ppb	15:51:35
1	Mn 257.610†	1649903.0	1590015.6	2101.6 ug/L	2101.6 ppb	15:51:30
1	Mo 202.031†	1.2	-7.4	8.5945 ug/L	8.5945 ppb	15:51:55
1	Ni 231.604†	3409.0	3202.0	101.67 ug/L	101.67 ppb	15:51:55
1	P 214.914†	3424.1	3113.3	2230.8 ug/L	2230.8 ppb	15:51:55
1	Pb 220.353†	253.6	302.8	40.093 ug/L	40.093 ppb	15:51:55
1	S 181.975 Axial†	118.1	83.6	141.35 ug/L	141.35 ppb	15:51:55
1	Sb 206.836†	52.9	27.4	-3.0250 ug/L	-3.0250 ppb	15:51:55
1	Se 196.026†	-456.1	-422.7	-3.2470 ug/L	-3.2470 ppb	15:51:55
1	Si 251.611†	1067375.6	1028396.1	39041 ug/L	39041 ppb	15:51:30
1	Sn 189.927†	-47.8	-53.2	-15.589 ug/L	-15.589 ppb	15:51:55
1	Ti 334.940†	2209576.8	2131016.9	3707.5 ug/L	3707.5 ppb	15:51:30
1	Tl 190.801†	-140.3	-106.1	-0.6964 ug/L	-0.6964 ppb	15:51:55
1	U 409.014†	-9644.7	-7092.6	-228.81 ug/L	-228.81 ppb	15:51:30
1	V 292.402†	16829.3	17539.9	118.91 ug/L	118.91 ppb	15:51:35
1	Zn 213.857†	30120.0	28463.8	326.78 ug/L	326.78 ppb	15:51:35
1	SiO2†	1059078.4	1020386.9	83276 ug/L	83276 ppb	15:53:04
2	Sc Radial	4370.1	4370.1	99.4 %		15:50:58
2	Y RADIAL	5667.1	5667.1	119.0 %		15:50:38
2	Al 396.153Radial†	44001.1	44331.1	43545 ug/L	43545 ppb	15:50:38
2	Ca 317.933Radial†	9069.5	9105.7	17230 ug/L	17230 ppb	15:50:38
2	Fe 238.204 Radial†	9659.1	9706.0	112460 ug/L	112460 ppb	15:50:38
2	K 766.490 Radial†	44716.7	42374.0	8065.7 ug/L	8065.7 ppb	15:50:38
2	Mg 279.077 IEC†	257.0	257.0	10482 ug/L	10482 ppb	15:50:58
2	Na 589.592 Radial†	7545.9	8464.2	2983.8 ug/L	2983.8 ppb	15:50:38
2	Sr 421.552†	16810.0	16885.4	135.22 ug/L	135.22 ppb	15:50:38
2	Sc 361.383	852317.6	852317.6	104.09 %		15:52:01
2	Y 371.029	821449.1	821449.1	118.77 %		15:52:01
2	Ag 328.068†	-6415.1	-6348.2	2.3439 ug/L	2.3439 ppb	15:52:06
2	As 188.979†	-67.6	-38.2	37.436 ug/L	37.436 ppb	15:52:26
2	B 249.677†	622.8	1135.7	13.520 ug/L	13.520 ppb	15:52:06
2	Ba 233.527†	58893.3	56579.8	533.69 ug/L	533.69 ppb	15:52:06
2	Be 313.107†	-13360.8	-9104.8	4.5232 ug/L	4.5232 ppb	15:52:06
2	Cd 226.502†	682.2	826.0	0.3905 ug/L	0.3905 ppb	15:52:26
2	Co 228.616†	1029.7	1035.5	17.568 ug/L	17.568 ppb	15:52:26
2	Cr 267.716†	12983.9	12402.2	178.52 ug/L	178.52 ppb	15:52:06
2	Cu 324.752†	15006.5	8864.8	35.341 ug/L	35.341 ppb	15:52:06
2	Mn 257.610†	1652289.1	1586971.4	2097.3 ug/L	2097.3 ppb	15:52:01
2	Mo 202.031†	2.3	-6.3	8.3735 ug/L	8.3735 ppb	15:52:26
2	Ni 231.604†	3426.2	3207.5	101.85 ug/L	101.85 ppb	15:52:26

2	P 214.914†	3407.9	3086.7	2213.7 ug/L	2213.7 ppb	15:52:26
2	Pb 220.353†	270.8	318.5	42.790 ug/L	42.790 ppb	15:52:26
2	S 181.975 Axial†	113.3	78.7	132.72 ug/L	132.72 ppb	15:52:26
2	Sb 206.836†	60.8	34.8	0.1670 ug/L	0.1670 ppb	15:52:26
2	Se 196.026†	-462.2	-427.0	-18.581 ug/L	-18.581 ppb	15:52:26
2	Si 251.611†	1068796.1	1026308.4	38962 ug/L	38962 ppb	15:52:01
2	Sn 189.927†	-52.6	-57.7	-16.494 ug/L	-16.494 ppb	15:52:26
2	Ti 334.940†	2213485.9	2127625.5	3701.5 ug/L	3701.5 ppb	15:52:01
2	Tl 190.801†	-127.7	-93.6	4.0676 ug/L	4.0676 ppb	15:52:26
2	U 409.014†	-9807.3	-7217.7	-232.17 ug/L	-232.17 ppb	15:52:01
2	V 292.402†	17327.5	17964.0	122.86 ug/L	122.86 ppb	15:52:06
2	Zn 213.857†	30762.9	28984.0	333.67 ug/L	333.67 ppb	15:52:06
2	SiO2†	1059342.0	1017214.6	83017 ug/L	83017 ppb	15:53:10
3	Sc Radial	4343.0	4343.0	98.8 %		15:51:23
3	Y RADIAL	5559.7	5559.7	116.8 %		15:51:03
3	Al 396.153Radial†	43141.3	43736.3	42961 ug/L	42961 ppb	15:51:03
3	Ca 317.933Radial†	8877.1	8967.7	16969 ug/L	16969 ppb	15:51:03
3	Fe 238.204 Radial†	9497.4	9602.7	111260 ug/L	111260 ppb	15:51:03
3	K 766.490 Radial†	43806.9	41733.0	7943.7 ug/L	7943.7 ppb	15:51:03
3	Mg 279.077 IEC†	261.0	262.6	10718 ug/L	10718 ppb	15:51:23
3	Na 589.592 Radial†	7286.8	8249.2	2908.0 ug/L	2908.0 ppb	15:51:03
3	Sr 421.552†	16454.0	16630.3	133.18 ug/L	133.18 ppb	15:51:03
3	Sc 361.383	864342.6	864342.6	105.56 %		15:52:32
3	Y 371.029	833654.1	833654.1	120.53 %		15:52:32
3	Ag 328.068†	-6325.9	-6177.9	2.8475 ug/L	2.8475 ppb	15:52:37
3	As 188.979†	-65.4	-35.1	38.644 ug/L	38.644 ppb	15:52:57
3	B 249.677†	578.0	1084.9	12.293 ug/L	12.293 ppb	15:52:37
3	Ba 233.527†	58767.9	55673.7	525.16 ug/L	525.16 ppb	15:52:37
3	Be 313.107†	-13394.7	-8958.3	4.5383 ug/L	4.5383 ppb	15:52:37
3	Cd 226.502†	670.1	805.5	0.2166 ug/L	0.2166 ppb	15:52:57
3	Co 228.616†	1016.8	1009.4	16.951 ug/L	16.951 ppb	15:52:57
3	Cr 267.716†	12959.5	12205.5	175.75 ug/L	175.75 ppb	15:52:37
3	Cu 324.752†	14952.3	8612.9	34.442 ug/L	34.442 ppb	15:52:37
3	Mn 257.610†	1662738.9	1574787.0	2081.1 ug/L	2081.1 ppb	15:52:32
3	Mo 202.031†	-4.4	-12.7	7.7066 ug/L	7.7066 ppb	15:52:57
3	Ni 231.604†	3408.5	3144.9	99.858 ug/L	99.858 ppb	15:52:57
3	P 214.914†	3395.9	3029.7	2172.3 ug/L	2172.3 ppb	15:52:57
3	Pb 220.353†	259.1	303.7	40.557 ug/L	40.557 ppb	15:52:57
3	S 181.975 Axial†	106.5	70.7	118.52 ug/L	118.52 ppb	15:52:57
3	Sb 206.836†	62.9	35.9	0.8162 ug/L	0.8162 ppb	15:52:57
3	Se 196.026†	-460.3	-419.1	-15.551 ug/L	-15.551 ppb	15:52:57
3	Si 251.611†	1078806.5	1021506.4	38779 ug/L	38779 ppb	15:52:32
3	Sn 189.927†	-29.7	-35.3	-11.390 ug/L	-11.390 ppb	15:52:57
3	Ti 334.940†	2232066.8	2115643.3	3680.6 ug/L	3680.6 ppb	15:52:32
3	Tl 190.801†	-128.3	-92.5	4.2738 ug/L	4.2738 ppb	15:52:57
3	U 409.014†	-9716.4	-7000.5	-225.43 ug/L	-225.43 ppb	15:52:32
3	V 292.402†	17286.4	17693.5	120.91 ug/L	120.91 ppb	15:52:37
3	Zn 213.857†	30722.2	28534.2	328.42 ug/L	328.42 ppb	15:52:37
3	SiO2†	1061450.6	1005053.3	82024 ug/L	82024 ppb	15:53:16

Mean Data: 1202053064|957496|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	855372.6	104.46 %	0.965			0.92%
Sc Radial	4342.3	98.8 %	0.64			0.65%
Y 371.029	824591.2	119.22 %	1.152			0.97%
Y RADIAL	5645.1	118.6 %	1.61			1.36%
Ag 328.068†	-6235.3	3.2009 ug/L	1.07816	3.2009 ppb	1.07816	33.68%
Al 396.153Radial†	44553.9	43764 ug/L	932.0	43764 ppb	932.0	2.13%
As 188.979†	-33.3	40.304 ug/L	3.9674	40.304 ppb	3.9674	9.84%
B 249.677†	1133.8	13.320 ug/L	0.9429	13.320 ppb	0.9429	7.08%
Ba 233.527†	55934.1	527.66 ug/L	5.242	527.66 ppb	5.242	0.99%
Be 313.107†	-8951.6	4.5772 ug/L	0.08073	4.5772 ppb	0.08073	1.76%
Ca 317.933Radial†	9172.1	17356 ug/L	462.5	17356 ppb	462.5	2.66%
Cd 226.502†	816.3	0.1549 ug/L	0.27169	0.1549 ppb	0.27169	175.39%
Co 228.616†	1028.8	17.391 ug/L	0.3831	17.391 ppb	0.3831	2.20%
Cr 267.716†	12268.0	176.81 ug/L	1.493	176.81 ppb	1.493	0.84%
Cu 324.752†	8679.7	34.776 ug/L	0.4918	34.776 ppb	0.4918	1.41%
Fe 238.204 Radial†	9785.0	113380 ug/L	2689.6	113380 ppb	2689.6	2.37%
K 766.490 Radial†	42560.7	8101.2 ug/L	177.97	8101.2 ppb	177.97	2.20%

Mg 279.077 IEC†	261.0	10649 ug/L	145.3	10649 ppb	145.3	1.36%
Mn 257.610†	1583924.7	2093.3 ug/L	10.81	2093.3 ppb	10.81	0.52%
Mo 202.031†	-8.8	8.2249 ug/L	0.46221	8.2249 ppb	0.46221	5.62%
Na 589.592 Radial†	8497.3	2995.5 ug/L	93.83	2995.5 ppb	93.83	3.13%
Ni 231.604†	3184.8	101.13 ug/L	1.101	101.13 ppb	1.101	1.09%
P 214.914†	3076.6	2205.6 ug/L	30.11	2205.6 ppb	30.11	1.37%
Pb 220.353†	308.3	41.147 ug/L	1.4419	41.147 ppb	1.4419	3.50%
S 181.975 Axial†	77.7	130.86 ug/L	11.527	130.86 ppb	11.527	8.81%
Sb 206.836†	32.7	-0.6806 ug/L	2.05607	-0.6806 ppb	2.05607	302.10%
Se 196.026†	-422.9	-12.459 ug/L	8.1208	-12.459 ppb	8.1208	65.18%
Si 251.611†	1025403.6	38927 ug/L	134.1	38927 ppb	134.1	0.34%
Sn 189.927†	-48.8	-14.491 ug/L	2.7233	-14.491 ppb	2.7233	18.79%
Sr 421.552†	16981.0	135.99 ug/L	3.258	135.99 ppb	3.258	2.40%
Ti 334.940†	2124761.9	3696.6 ug/L	14.10	3696.6 ppb	14.10	0.38%
Tl 190.801†	-97.4	2.5483 ug/L	2.81187	2.5483 ppb	2.81187	110.34%
U 409.014†	-7103.6	-228.80 ug/L	3.366	-228.80 ppb	3.366	1.47%
V 292.402†	17732.5	120.89 ug/L	1.977	120.89 ppb	1.977	1.64%
Zn 213.857†	28660.7	329.62 ug/L	3.601	329.62 ppb	3.601	1.09%
SiO2†	1014218.2	82772 ug/L	660.6	82772 ppb	660.6	0.80%

Sequence No.: 24
 Sample ID: 1202053066|957496|1
 Analyst: HSC
 Initial Sample Wt:
 Dilution:

Autosampler Location: 42
 Date Collected: 3/19/2010 15:55:26
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:

Replicate Data: 1202053066|957496|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4471.9	4471.9	102 %			15:57:39
1	Y RADIAL	5520.1	5520.1	116.0 %			15:57:39
1	Al 396.153Radial†	73740.9	72552.4	71244 ug/L		71244 ppb	15:57:19
1	Ca 317.933Radial†	31924.5	31360.5	59341 ug/L		59341 ppb	15:57:19
1	Fe 238.204 Radial†	9884.0	9705.8	112470 ug/L		112470 ppb	15:57:19
1	K 766.490 Radial†	78942.1	74987.5	14262 ug/L		14262 ppb	15:57:19
1	Mg 279.077 IEC†	456.1	446.8	18318 ug/L		18318 ppb	15:57:39
1	Na 589.592 Radial†	24365.9	24822.5	8750.5 ug/L		8750.5 ppb	15:57:19
1	Sr 421.552†	84543.9	83071.0	665.43 ug/L		665.43 ppb	15:57:19
1	Sc 361.383	839680.4	839680.4	102.55 %			15:58:38
1	Y 371.029	802186.5	802186.5	115.98 %			15:58:38
1	Ag 328.068†	90382.7	87952.7	492.94 ug/L		492.94 ppb	15:58:38
1	As 188.979†	833.9	840.0	527.25 ug/L		527.25 ppb	15:58:58
1	B 249.677†	18371.4	18452.5	497.98 ug/L		497.98 ppb	15:58:38
1	Ba 233.527†	119830.9	116855.3	1099.3 ug/L		1099.3 ppb	15:58:38
1	Be 313.107†	1191062.3	1165210.2	506.86 ug/L		506.86 ppb	15:58:38
1	Cd 226.502†	33714.5	33047.7	468.32 ug/L		468.32 ppb	15:58:58
1	Co 228.616†	19767.2	19322.5	489.25 ug/L		489.25 ppb	15:58:58
1	Cr 267.716†	49613.3	48309.5	660.54 ug/L		660.54 ppb	15:58:38
1	Cu 324.752†	179888.8	169868.8	566.63 ug/L		566.63 ppb	15:58:38
1	Mn 257.610†	2056367.5	2004903.2	2646.4 ug/L		2646.4 ppb	15:58:38
1	Mo 202.031†	5338.7	5197.6	471.46 ug/L		471.46 ppb	15:58:58
1	Ni 231.604†	18981.7	18426.1	584.86 ug/L		584.86 ppb	15:58:58
1	P 214.914†	4044.0	3756.2	2618.0 ug/L		2618.0 ppb	15:58:58
1	Pb 220.353†	3356.5	3331.4	513.24 ug/L		513.24 ppb	15:58:58
1	S 181.975 Axial†	2975.9	2871.8	5127.7 ug/L		5127.7 ppb	15:58:58
1	Sb 206.836†	1131.4	1079.7	451.52 ug/L		451.52 ppb	15:58:58
1	Se 196.026†	161.6	174.5	492.84 ug/L		492.84 ppb	15:58:58
1	Si 251.611†	1010364.3	984781.1	37379 ug/L		37379 ppb	15:58:38
1	Sn 189.927†	2005.9	1948.9	446.35 ug/L		446.35 ppb	15:58:58
1	Ti 334.940†	2780081.2	2712151.8	4722.7 ug/L		4722.7 ppb	15:58:38
1	Tl 190.801†	1093.1	1095.0	472.00 ug/L		472.00 ppb	15:58:58
1	U 409.014†	6627.5	8667.1	248.67 ug/L		248.67 ppb	15:58:38
1	V 292.402†	79426.2	78770.9	614.77 ug/L		614.77 ppb	15:58:38
1	Zn 213.857†	69159.9	66872.1	788.95 ug/L		788.95 ppb	15:58:38
1	SiO2†	1008517.3	982968.8	80209 ug/L		80209 ppb	15:59:59
2	Sc Radial	4290.7	4290.7	97.6 %			15:58:04
2	Y RADIAL	5325.9	5325.9	111.9 %			15:58:04
2	Al 396.153Radial†	72673.8	74520.4	73177 ug/L		73177 ppb	15:57:44
2	Ca 317.933Radial†	31341.3	32088.2	60718 ug/L		60718 ppb	15:57:44
2	Fe 238.204 Radial†	9659.7	9886.3	114570 ug/L		114570 ppb	15:57:44
2	K 766.490 Radial†	77840.5	77135.9	14671 ug/L		14671 ppb	15:57:44
2	Mg 279.077 IEC†	452.9	462.4	18961 ug/L		18961 ppb	15:58:04
2	Na 589.592 Radial†	23657.1	25107.9	8851.1 ug/L		8851.1 ppb	15:57:44
2	Sr 421.552†	82843.7	84838.8	679.59 ug/L		679.59 ppb	15:57:44
2	Sc 361.383	834506.2	834506.2	101.92 %			15:59:05
2	Y 371.029	797146.2	797146.2	115.25 %			15:59:05
2	Ag 328.068†	89853.8	87980.2	493.71 ug/L		493.71 ppb	15:59:05
2	As 188.979†	823.6	834.9	525.05 ug/L		525.05 ppb	15:59:26
2	B 249.677†	18269.4	18463.5	497.94 ug/L		497.94 ppb	15:59:05
2	Ba 233.527†	119678.3	117430.1	1104.8 ug/L		1104.8 ppb	15:59:05
2	Be 313.107†	1186805.0	1168234.4	508.17 ug/L		508.17 ppb	15:59:05
2	Cd 226.502†	33545.6	33085.9	468.65 ug/L		468.65 ppb	15:59:26
2	Co 228.616†	19673.5	19350.0	489.91 ug/L		489.91 ppb	15:59:26
2	Cr 267.716†	49422.9	48422.6	662.28 ug/L		662.28 ppb	15:59:05
2	Cu 324.752†	178314.1	169411.3	565.23 ug/L		565.23 ppb	15:59:05
2	Mn 257.610†	2050327.5	2011410.1	2655.2 ug/L		2655.2 ppb	15:59:05
2	Mo 202.031†	5324.2	5215.7	473.24 ug/L		473.24 ppb	15:59:26
2	Ni 231.604†	18892.2	18453.1	585.72 ug/L		585.72 ppb	15:59:26

2	P 214.914†	4038.8	3775.6	2631.5 ug/L	2631.5 ppb	15:59:26
2	Pb 220.353†	3387.1	3381.7	521.13 ug/L	521.13 ppb	15:59:26
2	S 181.975 Axial†	2948.5	2862.9	5111.5 ug/L	5111.5 ppb	15:59:26
2	Sb 206.836†	1106.1	1061.7	443.95 ug/L	443.95 ppb	15:59:26
2	Se 196.026†	164.4	178.3	502.62 ug/L	502.62 ppb	15:59:26
2	Si 251.611†	1004867.6	985496.7	37407 ug/L	37407 ppb	15:59:05
2	Sn 189.927†	1999.8	1955.0	447.86 ug/L	447.86 ppb	15:59:26
2	Ti 334.940†	2767894.2	2717003.1	4731.2 ug/L	4731.2 ppb	15:59:05
2	Tl 190.801†	1088.8	1097.5	473.05 ug/L	473.05 ppb	15:59:26
2	U 409.014†	6690.5	8769.0	251.52 ug/L	251.52 ppb	15:59:05
2	V 292.402†	79075.5	78907.0	615.58 ug/L	615.58 ppb	15:59:05
2	Zn 213.857†	68979.3	67113.0	791.56 ug/L	791.56 ppb	15:59:05
2	SiO2†	1005678.2	986280.9	80479 ug/L	80479 ppb	16:00:05
3	Sc Radial	4436.4	4436.4	101 %		15:58:29
3	Y RADIAL	5485.3	5485.3	115.2 %		15:58:29
3	Al 396.153Radial†	74176.8	73563.7	72237 ug/L	72237 ppb	15:58:09
3	Ca 317.933Radial†	31972.3	31658.7	59905 ug/L	59905 ppb	15:58:09
3	Fe 238.204 Radial†	9850.8	9750.6	112990 ug/L	112990 ppb	15:58:09
3	K 766.490 Radial†	79285.1	75947.6	14445 ug/L	14445 ppb	15:58:09
3	Mg 279.077 IEC†	454.6	448.9	18403 ug/L	18403 ppb	15:58:29
3	Na 589.592 Radial†	24162.9	24812.9	8747.1 ug/L	8747.1 ppb	15:58:09
3	Sr 421.552†	84320.6	83514.1	668.98 ug/L	668.98 ppb	15:58:09
3	Sc 361.383	834025.9	834025.9	101.86 %		15:59:33
3	Y 371.029	798137.7	798137.7	115.40 %		15:59:33
3	Ag 328.068†	90038.0	88211.9	494.45 ug/L	494.45 ppb	15:59:33
3	As 188.979†	828.4	840.1	527.59 ug/L	527.59 ppb	15:59:53
3	B 249.677†	18369.1	18571.7	501.24 ug/L	501.24 ppb	15:59:33
3	Ba 233.527†	119591.8	117412.8	1104.6 ug/L	1104.6 ppb	15:59:33
3	Be 313.107†	1189823.4	1171868.5	509.73 ug/L	509.73 ppb	15:59:33
3	Cd 226.502†	33555.6	33114.7	469.23 ug/L	469.23 ppb	15:59:53
3	Co 228.616†	19639.3	19327.5	489.34 ug/L	489.34 ppb	15:59:53
3	Cr 267.716†	49515.0	48541.0	663.70 ug/L	663.70 ppb	15:59:33
3	Cu 324.752†	178998.9	170184.4	567.70 ug/L	567.70 ppb	15:59:33
3	Mn 257.610†	2050095.8	2012341.4	2656.3 ug/L	2656.3 ppb	15:59:33
3	Mo 202.031†	5315.8	5210.3	472.64 ug/L	472.64 ppb	15:59:53
3	Ni 231.604†	18878.0	18449.8	585.62 ug/L	585.62 ppb	15:59:53
3	P 214.914†	4035.6	3774.8	2631.4 ug/L	2631.4 ppb	15:59:53
3	Pb 220.353†	3362.0	3359.1	517.65 ug/L	517.65 ppb	15:59:53
3	S 181.975 Axial†	2942.4	2858.6	5104.0 ug/L	5104.0 ppb	15:59:53
3	Sb 206.836†	1111.2	1067.3	446.31 ug/L	446.31 ppb	15:59:53
3	Se 196.026†	144.7	159.1	481.77 ug/L	481.77 ppb	15:59:53
3	Si 251.611†	1006456.3	987624.3	37487 ug/L	37487 ppb	15:59:33
3	Sn 189.927†	2002.0	1958.4	448.56 ug/L	448.56 ppb	15:59:53
3	Ti 334.940†	2771003.5	2721619.9	4739.2 ug/L	4739.2 ppb	15:59:33
3	Tl 190.801†	1075.6	1085.1	468.34 ug/L	468.34 ppb	15:59:53
3	U 409.014†	6674.7	8757.3	251.34 ug/L	251.34 ppb	15:59:33
3	V 292.402†	79272.3	79144.9	617.69 ug/L	617.69 ppb	15:59:33
3	Zn 213.857†	69023.0	67194.9	792.78 ug/L	792.78 ppb	15:59:33
3	SiO2†	1004767.2	985954.8	80453 ug/L	80453 ppb	16:00:11

Mean Data: 1202053066|957496|1

Analyte	Mean Corrected	Conc.	Calib.	Std.Dev.	Sample	Std.Dev.	RSD
	Intensity		Units		Conc. Units		
Sc 361.383	836070.9	102.11	%	0.383			0.37%
Sc Radial	4399.7	100	%	2.2			2.18%
Y 371.029	799156.8	115.54	%	0.386			0.33%
Y RADIAL	5443.8	114.4	%	2.18			1.90%
Ag 328.068†	88048.2	493.70	ug/L	0.754	493.70 ppb	0.754	0.15%
Al 396.153Radial†	73545.5	72219	ug/L	966.6	72219 ppb	966.6	1.34%
As 188.979†	838.3	526.63	ug/L	1.383	526.63 ppb	1.383	0.26%
B 249.677†	18495.9	499.05	ug/L	1.892	499.05 ppb	1.892	0.38%
Ba 233.527†	117232.7	1102.9	ug/L	3.09	1102.9 ppb	3.09	0.28%
Be 313.107†	1168437.7	508.25	ug/L	1.438	508.25 ppb	1.438	0.28%
Ca 317.933Radial†	31702.5	59988	ug/L	692.2	59988 ppb	692.2	1.15%
Cd 226.502†	33082.8	468.73	ug/L	0.465	468.73 ppb	0.465	0.10%
Co 228.616†	19333.3	489.50	ug/L	0.363	489.50 ppb	0.363	0.07%
Cr 267.716†	48424.4	662.17	ug/L	1.584	662.17 ppb	1.584	0.24%
Cu 324.752†	169821.5	566.52	ug/L	1.238	566.52 ppb	1.238	0.22%
Fe 238.204 Radial†	9780.9	113340	ug/L	1089.4	113340 ppb	1089.4	0.96%
K 766.490 Radial†	76023.7	14460	ug/L	204.8	14460 ppb	204.8	1.42%

Mg 279.077 IEC†	452.7	18560 ug/L	349.4	18560 ppb	349.4	1.88%
Mn 257.610†	2009551.6	2652.6 ug/L	5.39	2652.6 ppb	5.39	0.20%
Mo 202.031†	5207.9	472.45 ug/L	0.907	472.45 ppb	0.907	0.19%
Na 589.592 Radial†	24914.4	8782.9 ug/L	59.10	8782.9 ppb	59.10	0.67%
Ni 231.604†	18443.0	585.40 ug/L	0.467	585.40 ppb	0.467	0.08%
P 214.914†	3768.9	2627.0 ug/L	7.79	2627.0 ppb	7.79	0.30%
Pb 220.353†	3357.4	517.34 ug/L	3.954	517.34 ppb	3.954	0.76%
S 181.975 Axial†	2864.4	5114.4 ug/L	12.14	5114.4 ppb	12.14	0.24%
Sb 206.836†	1069.5	447.26 ug/L	3.877	447.26 ppb	3.877	0.87%
Se 196.026†	170.6	492.41 ug/L	10.432	492.41 ppb	10.432	2.12%
Si 251.611†	985967.4	37425 ug/L	56.1	37425 ppb	56.1	0.15%
Sn 189.927†	1954.1	447.59 ug/L	1.131	447.59 ppb	1.131	0.25%
Sr 421.552†	83808.0	671.33 ug/L	7.368	671.33 ppb	7.368	1.10%
Ti 334.940†	2716925.0	4731.0 ug/L	8.27	4731.0 ppb	8.27	0.17%
Tl 190.801†	1092.5	471.13 ug/L	2.473	471.13 ppb	2.473	0.52%
U 409.014†	8731.1	250.51 ug/L	1.596	250.51 ppb	1.596	0.64%
V 292.402†	78940.9	616.01 ug/L	1.504	616.01 ppb	1.504	0.24%
Zn 213.857†	67060.0	791.10 ug/L	1.955	791.10 ppb	1.955	0.25%
SiO2†	985068.2	80380 ug/L	148.9	80380 ppb	148.9	0.19%

Sequence No.: 25

Sample ID: 1202053067|957496|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 43

Date Collected: 3/19/2010 16:02:22

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 1202053067|957496|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4312.9	4312.9	98.1 %		16:04:34
1	Y RADIAL	5407.2	5407.2	113.6 %		16:04:34
1	Al 396.153Radial†	68423.8	69806.1	68546 ug/L	68546 ppb	16:04:14
1	Ca 317.933Radial†	12493.5	12715.9	24061 ug/L	24061 ppb	16:04:14
1	Fe 238.204 Radial†	10167.8	10353.2	119970 ug/L	119970 ppb	16:04:14
1	K 766.490 Radial†	78742.0	77644.1	14780 ug/L	14780 ppb	16:04:14
1	Mg 279.077 IEC†	438.9	445.7	18266 ug/L	18266 ppb	16:04:34
1	Na 589.592 Radial†	24832.9	26181.3	9229.5 ug/L	9229.5 ppb	16:04:14
1	Sr 421.552†	83386.1	84954.7	680.79 ug/L	680.79 ppb	16:04:14
1	Sc 361.383	831431.7	831431.7	101.54 %		16:05:33
1	Y 371.029	802169.9	802169.9	115.98 %		16:05:33
1	Ag 328.068†	89772.4	88226.1	497.15 ug/L	497.15 ppb	16:05:33
1	As 188.979†	836.4	850.5	534.20 ug/L	534.20 ppb	16:05:54
1	B 249.677†	18351.1	18610.2	501.15 ug/L	501.15 ppb	16:05:33
1	Ba 233.527†	121859.3	120012.3	1129.1 ug/L	1129.1 ppb	16:05:33
1	Be 313.107†	1190616.2	1176294.1	511.43 ug/L	511.43 ppb	16:05:33
1	Cd 226.502†	34283.5	33934.3	480.41 ug/L	480.41 ppb	16:05:54
1	Co 228.616†	20011.3	19754.0	500.46 ug/L	500.46 ppb	16:05:54
1	Cr 267.716†	51215.5	50367.5	688.93 ug/L	688.93 ppb	16:05:33
1	Cu 324.752†	178770.3	170507.6	569.14 ug/L	569.14 ppb	16:05:33
1	Mn 257.610†	2168823.5	2135548.8	2819.0 ug/L	2819.0 ppb	16:05:33
1	Mo 202.031†	5396.5	5306.1	481.27 ug/L	481.27 ppb	16:05:54
1	Ni 231.604†	19368.5	18990.7	602.79 ug/L	602.79 ppb	16:05:54
1	P 214.914†	4046.4	3797.8	2642.1 ug/L	2642.1 ppb	16:05:54
1	Pb 220.353†	3430.6	3436.8	527.31 ug/L	527.31 ppb	16:05:54
1	S 181.975 Axial†	3027.2	2951.1	5270.2 ug/L	5270.2 ppb	16:05:54
1	Sb 206.836†	1112.1	1071.5	448.91 ug/L	448.91 ppb	16:05:54
1	Se 196.026†	154.4	169.0	509.00 ug/L	509.00 ppb	16:05:54
1	Si 251.611†	1018278.6	1002350.4	38046 ug/L	38046 ppb	16:05:33
1	Sn 189.927†	2095.1	2056.2	463.99 ug/L	463.99 ppb	16:05:54
1	Ti 334.940†	2713653.2	2673627.6	4651.0 ug/L	4651.0 ppb	16:05:33
1	Tl 190.801†	1109.9	1122.1	482.71 ug/L	482.71 ppb	16:05:54
1	U 409.014†	6277.4	8386.4	239.24 ug/L	239.24 ppb	16:05:33
1	V 292.402†	78275.7	78406.3	610.95 ug/L	610.95 ppb	16:05:33
1	Zn 213.857†	71461.6	69807.9	823.29 ug/L	823.29 ppb	16:05:33
1	SiO2†	1036057.2	1019848.2	83219 ug/L	83219 ppb	16:06:54
2	Sc Radial	4399.5	4399.5	100 %		16:05:00
2	Y RADIAL	5510.8	5510.8	115.8 %		16:05:00
2	Al 396.153Radial†	69867.9	69876.5	68615 ug/L	68615 ppb	16:04:40
2	Ca 317.933Radial†	12822.4	12794.0	24209 ug/L	24209 ppb	16:04:40
2	Fe 238.204 Radial†	10388.6	10369.8	120170 ug/L	120170 ppb	16:04:40
2	K 766.490 Radial†	79973.0	77294.8	14713 ug/L	14713 ppb	16:04:40
2	Mg 279.077 IEC†	435.1	433.1	17747 ug/L	17747 ppb	16:05:00
2	Na 589.592 Radial†	25239.2	26089.2	9197.0 ug/L	9197.0 ppb	16:04:40
2	Sr 421.552†	85039.4	84934.0	680.63 ug/L	680.63 ppb	16:04:40
2	Sc 361.383	837839.2	837839.2	102.32 %		16:06:01
2	Y 371.029	808076.5	808076.5	116.83 %		16:06:01
2	Ag 328.068†	90590.2	88349.2	497.86 ug/L	497.86 ppb	16:06:01
2	As 188.979†	826.2	834.2	525.37 ug/L	525.37 ppb	16:06:21
2	B 249.677†	18510.9	18628.2	501.64 ug/L	501.64 ppb	16:06:01
2	Ba 233.527†	123099.9	120306.9	1131.9 ug/L	1131.9 ppb	16:06:01
2	Be 313.107†	1201603.2	1178064.4	512.20 ug/L	512.20 ppb	16:06:01
2	Cd 226.502†	34179.7	33574.7	475.17 ug/L	475.17 ppb	16:06:21
2	Co 228.616†	19951.1	19544.5	495.01 ug/L	495.01 ppb	16:06:21
2	Cr 267.716†	51707.4	50462.4	690.23 ug/L	690.23 ppb	16:06:01
2	Cu 324.752†	180427.1	170780.3	570.05 ug/L	570.05 ppb	16:06:01
2	Mn 257.610†	2189700.6	2139617.3	2824.4 ug/L	2824.4 ppb	16:06:01
2	Mo 202.031†	5393.3	5262.3	477.39 ug/L	477.39 ppb	16:06:21
2	Ni 231.604†	19314.2	18791.8	596.47 ug/L	596.47 ppb	16:06:21

2	P 214.914†	4062.5	3783.0	2630.7 ug/L	2630.7 ppb	16:06:21
2	Pb 220.353†	3414.4	3395.2	520.89 ug/L	520.89 ppb	16:06:21
2	S 181.975 Axial†	3006.2	2907.8	5192.7 ug/L	5192.7 ppb	16:06:21
2	Sb 206.836†	1124.7	1075.5	450.39 ug/L	450.39 ppb	16:06:21
2	Se 196.026†	132.0	145.9	490.32 ug/L	490.32 ppb	16:06:21
2	Si 251.611†	1028711.0	1004876.7	38142 ug/L	38142 ppb	16:06:01
2	Sn 189.927†	2095.4	2040.7	460.49 ug/L	460.49 ppb	16:06:21
2	Ti 334.940†	2738706.2	2677673.7	4658.1 ug/L	4658.1 ppb	16:06:01
2	Tl 190.801†	1120.4	1124.0	483.55 ug/L	483.55 ppb	16:06:21
2	U 409.014†	6235.3	8298.0	236.53 ug/L	236.53 ppb	16:06:01
2	V 292.402†	79026.6	78550.6	611.99 ug/L	611.99 ppb	16:06:01
2	Zn 213.857†	72017.3	69812.8	823.36 ug/L	823.36 ppb	16:06:01
2	SiO2†	1028087.6	1004256.2	81946 ug/L	81946 ppb	16:07:00
3	Sc Radial	4401.4	4401.4	100 %		16:05:25
3	Y RADIAL	5490.3	5490.3	115.3 %		16:05:25
3	Al 396.153Radial†	70809.9	70786.2	69509 ug/L	69509 ppb	16:05:05
3	Ca 317.933Radial†	12939.1	12904.8	24419 ug/L	24419 ppb	16:05:05
3	Fe 238.204 Radial†	10506.1	10482.5	121470 ug/L	121470 ppb	16:05:05
3	K 766.490 Radial†	80815.1	78100.1	14867 ug/L	14867 ppb	16:05:05
3	Mg 279.077 IEC†	432.0	429.8	17608 ug/L	17608 ppb	16:05:25
3	Na 589.592 Radial†	25450.9	26289.4	9267.6 ug/L	9267.6 ppb	16:05:05
3	Sr 421.552†	85981.3	85836.9	687.86 ug/L	687.86 ppb	16:05:05
3	Sc 361.383	843740.5	843740.5	103.04 %		16:06:28
3	Y 371.029	814234.6	814234.6	117.72 %		16:06:28
3	Ag 328.068†	90735.6	87871.1	495.77 ug/L	495.77 ppb	16:06:28
3	As 188.979†	823.3	825.8	520.94 ug/L	520.94 ppb	16:06:48
3	B 249.677†	18614.9	18602.6	500.72 ug/L	500.72 ppb	16:06:28
3	Ba 233.527†	123329.7	119688.4	1126.1 ug/L	1126.1 ppb	16:06:28
3	Be 313.107†	1209475.6	1177490.7	511.93 ug/L	511.93 ppb	16:06:28
3	Cd 226.502†	34195.7	33356.5	471.87 ug/L	471.87 ppb	16:06:48
3	Co 228.616†	19987.4	19443.3	492.40 ug/L	492.40 ppb	16:06:48
3	Cr 267.716†	51826.1	50224.1	687.17 ug/L	687.17 ppb	16:06:28
3	Cu 324.752†	181242.7	170338.6	568.66 ug/L	568.66 ppb	16:06:28
3	Mn 257.610†	2197360.4	2132083.1	2814.6 ug/L	2814.6 ppb	16:06:28
3	Mo 202.031†	5408.3	5240.0	475.51 ug/L	475.51 ppb	16:06:48
3	Ni 231.604†	19359.3	18703.5	593.67 ug/L	593.67 ppb	16:06:48
3	P 214.914†	4063.2	3755.9	2610.0 ug/L	2610.0 ppb	16:06:48
3	Pb 220.353†	3409.6	3367.3	516.61 ug/L	516.61 ppb	16:06:48
3	S 181.975 Axial†	3013.8	2894.6	5168.9 ug/L	5168.9 ppb	16:06:48
3	Sb 206.836†	1118.9	1062.2	444.76 ug/L	444.76 ppb	16:06:48
3	Se 196.026†	136.4	149.4	497.20 ug/L	497.20 ppb	16:06:48
3	Si 251.611†	1031581.4	1000630.5	37981 ug/L	37981 ppb	16:06:28
3	Sn 189.927†	2102.5	2033.3	458.77 ug/L	458.77 ppb	16:06:48
3	Ti 334.940†	2751033.4	2670916.3	4646.3 ug/L	4646.3 ppb	16:06:28
3	Tl 190.801†	1128.9	1124.7	483.66 ug/L	483.66 ppb	16:06:48
3	U 409.014†	6282.4	8301.1	236.49 ug/L	236.49 ppb	16:06:28
3	V 292.402†	79382.0	78355.3	610.23 ug/L	610.23 ppb	16:06:28
3	Zn 213.857†	72116.5	69416.8	818.38 ug/L	818.38 ppb	16:06:28
3	SiO2†	1019424.9	988821.8	80687 ug/L	80687 ppb	16:07:06

Mean Data: 1202053067|957496|1

Analyte	Mean Corrected	Conc.	Calib.	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	837670.5	102.30	%	0.752				0.73%
Sc Radial	4371.2	99.5	%	1.15				1.16%
Y 371.029	808160.3	116.85	%	0.872				0.75%
Y RADIAL	5469.4	114.9	%	1.15				1.00%
Ag 328.068†	88148.8	496.93	ug/L	1.062	496.93	ppb	1.062	0.21%
Al 396.153Radial†	70156.3	68890	ug/L	537.1	68890	ppb	537.1	0.78%
As 188.979†	836.8	526.84	ug/L	6.750	526.84	ppb	6.750	1.28%
B 249.677†	18613.6	501.17	ug/L	0.462	501.17	ppb	0.462	0.09%
Ba 233.527†	120002.5	1129.0	ug/L	2.88	1129.0	ppb	2.88	0.25%
Be 313.107†	1177283.1	511.85	ug/L	0.390	511.85	ppb	0.390	0.08%
Ca 317.933Radial†	12804.9	24230	ug/L	179.6	24230	ppb	179.6	0.74%
Cd 226.502†	33621.8	475.82	ug/L	4.308	475.82	ppb	4.308	0.91%
Co 228.616†	19580.6	495.96	ug/L	4.110	495.96	ppb	4.110	0.83%
Cr 267.716†	50351.3	688.77	ug/L	1.536	688.77	ppb	1.536	0.22%
Cu 324.752†	170542.2	569.28	ug/L	0.706	569.28	ppb	0.706	0.12%
Fe 238.204 Radial†	10401.8	120540	ug/L	815.1	120540	ppb	815.1	0.68%
K 766.490 Radial†	77679.7	14787	ug/L	76.9	14787	ppb	76.9	0.52%

Mg 279.077 IEC†	436.2	17874 ug/L	346.5	17874 ppb	346.5	1.94%
Mn 257.610†	2135749.8	2819.3 ug/L	4.89	2819.3 ppb	4.89	0.17%
Mo 202.031†	5269.5	478.06 ug/L	2.934	478.06 ppb	2.934	0.61%
Na 589.592 Radial†	26186.7	9231.4 ug/L	35.33	9231.4 ppb	35.33	0.38%
Ni 231.604†	18828.7	597.64 ug/L	4.669	597.64 ppb	4.669	0.78%
P 214.914†	3778.9	2627.6 ug/L	16.27	2627.6 ppb	16.27	0.62%
Pb 220.353†	3399.8	521.60 ug/L	5.385	521.60 ppb	5.385	1.03%
S 181.975 Axial†	2917.8	5210.6 ug/L	52.96	5210.6 ppb	52.96	1.02%
Sb 206.836†	1069.7	448.02 ug/L	2.919	448.02 ppb	2.919	0.65%
Se 196.026†	154.8	498.84 ug/L	9.450	498.84 ppb	9.450	1.89%
Si 251.611†	1002619.2	38057 ug/L	81.1	38057 ppb	81.1	0.21%
Sn 189.927†	2043.4	461.08 ug/L	2.659	461.08 ppb	2.659	0.58%
Sr 421.552†	85241.8	683.10 ug/L	4.130	683.10 ppb	4.130	0.60%
Ti 334.940†	2674072.5	4651.8 ug/L	5.90	4651.8 ppb	5.90	0.13%
Tl 190.801†	1123.6	483.31 ug/L	0.522	483.31 ppb	0.522	0.11%
U 409.014†	8328.5	237.42 ug/L	1.577	237.42 ppb	1.577	0.66%
V 292.402†	78437.4	611.06 ug/L	0.888	611.06 ppb	0.888	0.15%
Zn 213.857†	69679.2	821.67 ug/L	2.852	821.67 ppb	2.852	0.35%
SiO2†	1004308.8	81951 ug/L	1266.0	81951 ppb	1266.0	1.54%

Sequence No.: 26

Sample ID: 1202053065|957496|5

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 44

Date Collected: 3/19/2010 16:09:17

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 1202053065|957496|5

Rep#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib.	Sample Conc. Units	Analysis Time
1	Sc Radial	4420.1	4420.1	101 %			16:11:10
1	Y RADIAL	4931.1	4931.1	103.6 %			16:11:10
1	Al 396.153Radial†	9048.0	9074.8	8913.9 ug/L		8913.9 ppb	16:11:10
1	Ca 317.933Radial†	2066.2	2038.8	3857.8 ug/L		3857.8 ppb	16:11:30
1	Fe 238.204 Radial†	1893.0	1873.8	21711 ug/L		21711 ppb	16:11:30
1	K 766.490 Radial†	11603.5	8939.0	1701.4 ug/L		1701.4 ppb	16:11:10
1	Mg 279.077 IEC†	60.3	58.4	2385.7 ug/L		2385.7 ppb	16:11:30
1	Na 589.592 Radial†	1056.6	1925.8	678.88 ug/L		678.88 ppb	16:11:10
1	Sr 421.552†	3672.8	3631.1	29.077 ug/L		29.077 ppb	16:11:10
1	Sc 361.383	824757.2	824757.2	100.72 %			16:12:27
1	Y 371.029	710862.0	710862.0	102.78 %			16:12:27
1	Ag 328.068†	-985.7	-1163.8	0.7621 ug/L		0.7621 ppb	16:12:27
1	As 188.979†	-30.2	-3.2	9.6606 ug/L		9.6606 ppb	16:12:47
1	B 249.677†	-36.9	500.7	10.504 ug/L		10.504 ppb	16:12:27
1	Ba 233.527†	12620.3	12530.2	118.08 ug/L		118.08 ppb	16:12:27
1	Be 313.107†	-5512.9	-1742.2	0.9222 ug/L		0.9222 ppb	16:12:27
1	Cd 226.502†	-10.7	160.0	0.0843 ug/L		0.0843 ppb	16:12:47
1	Co 228.616†	173.7	218.6	3.8437 ug/L		3.8437 ppb	16:12:47
1	Cr 267.716†	2693.5	2602.6	37.256 ug/L		37.256 ppb	16:12:27
1	Cu 324.752†	7356.4	1751.5	6.9543 ug/L		6.9543 ppb	16:12:27
1	Mn 257.610†	352061.6	349140.1	461.10 ug/L		461.10 ppb	16:12:27
1	Mo 202.031†	12.4	3.8	2.0676 ug/L		2.0676 ppb	16:12:47
1	Ni 231.604†	766.8	677.2	21.503 ug/L		21.503 ppb	16:12:47
1	P 214.914†	757.4	564.6	404.12 ug/L		404.12 ppb	16:12:47
1	Pb 220.353†	1.6	59.9	8.1344 ug/L		8.1344 ppb	16:12:47
1	S 181.975 Axial†	39.2	8.7	13.927 ug/L		13.927 ppb	16:12:47
1	Sb 206.836†	32.1	8.2	0.4999 ug/L		0.4999 ppb	16:12:47
1	Se 196.026†	-97.3	-79.6	-1.0894 ug/L		-1.0894 ppb	16:12:47
1	Si 251.611†	219978.6	217908.1	8272.4 ug/L		8272.4 ppb	16:12:27
1	Sn 189.927†	-24.9	-31.9	-7.8011 ug/L		-7.8011 ppb	16:12:47
1	Ti 334.940†	423393.5	421469.3	733.28 ug/L		733.28 ppb	16:12:27
1	Tl 190.801†	-45.9	-16.5	1.8062 ug/L		1.8062 ppb	16:12:47
1	U 409.014†	-3573.2	-1343.3	-43.307 ug/L		-43.307 ppb	16:12:27
1	V 292.402†	2084.8	3387.3	23.070 ug/L		23.070 ppb	16:12:27
1	Zn 213.857†	6019.6	5406.2	62.112 ug/L		62.112 ppb	16:12:27
1	SiO2†	222619.2	220518.6	17997 ug/L		17997 ppb	16:13:44
2	Sc Radial	4509.7	4509.7	103 %			16:11:35
2	Y RADIAL	5012.7	5012.7	105.3 %			16:11:35
2	Al 396.153Radial†	9168.3	9013.3	8853.4 ug/L		8853.4 ppb	16:11:35
2	Ca 317.933Radial†	2054.3	1986.4	3758.7 ug/L		3758.7 ppb	16:11:55
2	Fe 238.204 Radial†	1877.3	1821.1	21101 ug/L		21101 ppb	16:11:55
2	K 766.490 Radial†	11521.5	8629.8	1642.5 ug/L		1642.5 ppb	16:11:35
2	Mg 279.077 IEC†	56.2	53.2	2174.6 ug/L		2174.6 ppb	16:11:55
2	Na 589.592 Radial†	1078.5	1926.2	679.01 ug/L		679.01 ppb	16:11:35
2	Sr 421.552†	3763.2	3646.7	29.203 ug/L		29.203 ppb	16:11:35
2	Sc 361.383	819697.7	819697.7	100.11 %			16:12:53
2	Y 371.029	706189.3	706189.3	102.10 %			16:12:53
2	Ag 328.068†	-1014.8	-1198.8	0.3875 ug/L		0.3875 ppb	16:12:53
2	As 188.979†	-32.6	-5.8	8.1204 ug/L		8.1204 ppb	16:13:13
2	B 249.677†	-95.0	442.5	8.9707 ug/L		8.9707 ppb	16:12:53
2	Ba 233.527†	12535.5	12522.8	117.99 ug/L		117.99 ppb	16:12:53
2	Be 313.107†	-5478.2	-1741.3	0.9231 ug/L		0.9231 ppb	16:12:53
2	Cd 226.502†	1.9	172.5	0.3300 ug/L		0.3300 ppb	16:13:13
2	Co 228.616†	171.8	217.8	3.8305 ug/L		3.8305 ppb	16:13:13
2	Cr 267.716†	2746.8	2672.3	38.124 ug/L		38.124 ppb	16:12:53
2	Cu 324.752†	7354.6	1794.8	7.0635 ug/L		7.0635 ppb	16:12:53
2	Mn 257.610†	349873.8	349112.1	461.01 ug/L		461.01 ppb	16:12:53
2	Mo 202.031†	12.1	3.5	1.9955 ug/L		1.9955 ppb	16:13:13
2	Ni 231.604†	777.7	692.9	22.000 ug/L		22.000 ppb	16:13:13

2	P 214.914†	743.6	555.5	397.77 ug/L	397.77 ppb	16:13:13
2	Pb 220.353†	-7.7	50.6	6.7768 ug/L	6.7768 ppb	16:13:13
2	S 181.975 Axial†	47.3	17.1	28.927 ug/L	28.927 ppb	16:13:13
2	Sb 206.836†	34.8	11.1	1.7382 ug/L	1.7382 ppb	16:13:13
2	Se 196.026†	-98.9	-81.8	-4.6902 ug/L	-4.6902 ppb	16:13:13
2	Si 251.611†	218893.1	218171.9	8282.4 ug/L	8282.4 ppb	16:12:53
2	Sn 189.927†	-19.5	-26.7	-6.5983 ug/L	-6.5983 ppb	16:13:13
2	Ti 334.940†	420949.7	421622.6	733.55 ug/L	733.55 ppb	16:12:53
2	Tl 190.801†	-52.9	-23.7	-0.9765 ug/L	-0.9765 ppb	16:13:13
2	U 409.014†	-3465.0	-1257.1	-40.625 ug/L	-40.625 ppb	16:12:53
2	V 292.402†	1976.5	3291.8	22.396 ug/L	22.396 ppb	16:12:53
2	Zn 213.857†	5989.9	5413.5	62.287 ug/L	62.287 ppb	16:12:53
2	SiO2†	220900.7	220166.2	17968 ug/L	17968 ppb	16:13:49
3	Sc Radial	4532.2	4532.2	103 %		16:12:00
3	Y RADIAL	5054.1	5054.1	106.2 %		16:12:00
3	Al 396.153Radial†	9250.3	9048.6	8888.1 ug/L	8888.1 ppb	16:12:00
3	Ca 317.933Radial†	2067.1	1988.9	3763.4 ug/L	3763.4 ppb	16:12:20
3	Fe 238.204 Radial†	1889.5	1823.8	21133 ug/L	21133 ppb	16:12:20
3	K 766.490 Radial†	11709.1	8756.1	1666.6 ug/L	1666.6 ppb	16:12:00
3	Mg 279.077 IEC†	55.0	51.8	2114.1 ug/L	2114.1 ppb	16:12:20
3	Na 589.592 Radial†	1030.4	1874.4	660.76 ug/L	660.76 ppb	16:12:00
3	Sr 421.552†	3759.8	3625.2	29.031 ug/L	29.031 ppb	16:12:00
3	Sc 361.383	828755.4	828755.4	101.21 %		16:13:18
3	Y 371.029	714645.9	714645.9	103.33 %		16:13:18
3	Ag 328.068†	-1073.5	-1245.8	0.1521 ug/L	0.1521 ppb	16:13:18
3	As 188.979†	-35.8	-8.6	6.5658 ug/L	6.5658 ppb	16:13:38
3	B 249.677†	-105.8	432.9	8.6961 ug/L	8.6961 ppb	16:13:18
3	Ba 233.527†	12682.4	12531.1	118.07 ug/L	118.07 ppb	16:13:18
3	Be 313.107†	-5529.8	-1732.5	0.9265 ug/L	0.9265 ppb	16:13:18
3	Cd 226.502†	-7.1	163.6	0.1978 ug/L	0.1978 ppb	16:13:38
3	Co 228.616†	170.1	214.3	3.7389 ug/L	3.7389 ppb	16:13:38
3	Cr 267.716†	2736.0	2631.7	37.582 ug/L	37.582 ppb	16:13:18
3	Cu 324.752†	7386.1	1745.6	6.9013 ug/L	6.9013 ppb	16:13:18
3	Mn 257.610†	353142.8	348522.2	460.24 ug/L	460.24 ppb	16:13:18
3	Mo 202.031†	10.2	1.6	1.8238 ug/L	1.8238 ppb	16:13:38
3	Ni 231.604†	771.7	678.4	21.539 ug/L	21.539 ppb	16:13:38
3	P 214.914†	755.2	558.8	400.29 ug/L	400.29 ppb	16:13:38
3	Pb 220.353†	21.0	79.0	11.152 ug/L	11.152 ppb	16:13:38
3	S 181.975 Axial†	48.6	17.8	30.205 ug/L	30.205 ppb	16:13:38
3	Sb 206.836†	31.9	7.9	0.4110 ug/L	0.4110 ppb	16:13:38
3	Se 196.026†	-97.8	-79.6	-2.7566 ug/L	-2.7566 ppb	16:13:38
3	Si 251.611†	220758.9	217625.5	8261.7 ug/L	8261.7 ppb	16:13:18
3	Sn 189.927†	-16.8	-23.8	-5.9421 ug/L	-5.9421 ppb	16:13:38
3	Ti 334.940†	425498.2	421520.9	733.38 ug/L	733.38 ppb	16:13:18
3	Tl 190.801†	-38.1	-8.6	4.8827 ug/L	4.8827 ppb	16:13:38
3	U 409.014†	-3413.2	-1168.1	-37.927 ug/L	-37.927 ppb	16:13:18
3	V 292.402†	2019.6	3312.8	22.561 ug/L	22.561 ppb	16:13:18
3	Zn 213.857†	6051.4	5408.8	62.229 ug/L	62.229 ppb	16:13:18
3	SiO2†	219093.6	215968.9	17626 ug/L	17626 ppb	16:13:54

Mean Data: 1202053065|957496|5

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	824403.4	100.68 %		0.554			0.55%
Sc Radial	4487.3	102 %		1.3			1.32%
Y 371.029	710565.7	102.74 %		0.612			0.60%
Y RADIAL	4999.3	105.0 %		1.31			1.25%
Ag 328.068†	-1202.8	0.4339 ug/L		0.30764	0.4339 ppb	0.30764	70.90%
Al 396.153Radial†	9045.5	8885.1 ug/L		30.32	8885.1 ppb	30.32	0.34%
As 188.979†	-5.9	8.1156 ug/L		1.54745	8.1156 ppb	1.54745	19.07%
B 249.677†	458.7	9.3903 ug/L		0.97437	9.3903 ppb	0.97437	10.38%
Ba 233.527†	12528.0	118.05 ug/L		0.049	118.05 ppb	0.049	0.04%
Be 313.107†	-1738.7	0.9239 ug/L		0.00228	0.9239 ppb	0.00228	0.25%
Ca 317.933Radial†	2004.7	3793.3 ug/L		55.88	3793.3 ppb	55.88	1.47%
Cd 226.502†	165.4	0.2041 ug/L		0.12297	0.2041 ppb	0.12297	60.26%
Co 228.616†	216.9	3.8043 ug/L		0.05709	3.8043 ppb	0.05709	1.50%
Cr 267.716†	2635.6	37.654 ug/L		0.4386	37.654 ppb	0.4386	1.16%
Cu 324.752†	1764.0	6.9730 ug/L		0.08270	6.9730 ppb	0.08270	1.19%
Fe 238.204 Radial†	1839.6	21315 ug/L		343.7	21315 ppb	343.7	1.61%
K 766.490 Radial†	8775.0	1670.2 ug/L		29.60	1670.2 ppb	29.60	1.77%

Mg 279.077 IEC†	54.5	2224.8 ug/L	142.58	2224.8 ppb	142.58	6.41%
Mn 257.610†	348924.8	460.79 ug/L	0.472	460.79 ppb	0.472	0.10%
Mo 202.031†	3.0	1.9623 ug/L	0.12523	1.9623 ppb	0.12523	6.38%
Na 589.592 Radial†	1908.8	672.88 ug/L	10.496	672.88 ppb	10.496	1.56%
Ni 231.604†	682.8	21.681 ug/L	0.2770	21.681 ppb	0.2770	1.28%
P 214.914†	559.7	400.72 ug/L	3.199	400.72 ppb	3.199	0.80%
Pb 220.353†	63.2	8.6877 ug/L	2.23948	8.6877 ppb	2.23948	25.78%
S 181.975 Axial†	14.5	24.353 ug/L	9.0518	24.353 ppb	9.0518	37.17%
Sb 206.836†	9.0	0.8830 ug/L	0.74193	0.8830 ppb	0.74193	84.02%
Se 196.026†	-80.4	-2.8454 ug/L	1.80204	-2.8454 ppb	1.80204	63.33%
Si 251.611†	217901.8	8272.2 ug/L	10.37	8272.2 ppb	10.37	0.13%
Sn 189.927†	-27.5	-6.7805 ug/L	0.94279	-6.7805 ppb	0.94279	13.90%
Sr 421.552†	3634.4	29.104 ug/L	0.0891	29.104 ppb	0.0891	0.31%
Ti 334.940†	421537.6	733.41 ug/L	0.136	733.41 ppb	0.136	0.02%
Tl 190.801†	-16.3	1.9041 ug/L	2.93080	1.9041 ppb	2.93080	153.92%
U 409.014†	-1256.2	-40.620 ug/L	2.6897	-40.620 ppb	2.6897	6.62%
V 292.402†	3330.6	22.676 ug/L	0.3510	22.676 ppb	0.3510	1.55%
Zn 213.857†	5409.5	62.209 ug/L	0.0894	62.209 ppb	0.0894	0.14%
SiO2†	218884.6	17864 ug/L	206.6	17864 ppb	206.6	1.16%

Sequence No.: 27

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 3/19/2010 16:16:05

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	4402.2	4402.2	100 %		16:17:58
1	Y RADIAL	4731.1	4731.1	99.38 %		16:17:58
1	Al 396.153Radial†	5010.2	5080.2	4965.9 ug/L	4965.9 ppb	16:17:58
1	Ca 317.933Radial†	2670.1	2650.1	5014.5 ug/L	5014.5 ppb	16:18:18
1	Fe 238.204 Radial†	441.4	432.2	5023.5 ug/L	5023.5 ppb	16:18:18
1	K 766.490 Radial†	29509.5	26863.0	5111.9 ug/L	5111.9 ppb	16:17:58
1	Mg 279.077 IEC†	125.0	123.3	5085.3 ug/L	5085.3 ppb	16:18:18
1	Na 589.592 Radial†	26730.0	27561.9	9716.2 ug/L	9716.2 ppb	16:17:58
1	Sr 421.552†	62391.5	62269.8	499.10 ug/L	499.10 ppb	16:17:58
1	Sc 361.383	835922.3	835922.3	102.09 %		16:19:15
1	Y 371.029	696126.9	696126.9	100.65 %		16:19:15
1	Ag 328.068†	99594.6	97372.5	508.64 ug/L	508.64 ppb	16:19:20
1	As 188.979†	903.3	911.6	504.79 ug/L	504.79 ppb	16:19:40
1	B 249.677†	17815.0	17988.0	502.36 ug/L	502.36 ppb	16:19:20
1	Ba 233.527†	54809.1	53688.8	504.13 ug/L	504.13 ppb	16:19:20
1	Be 313.107†	1199453.4	1178651.4	503.00 ug/L	503.00 ppb	16:19:15
1	Cd 226.502†	35326.2	34774.3	504.47 ug/L	504.47 ppb	16:19:20
1	Co 228.616†	20209.3	19842.2	512.94 ug/L	512.94 ppb	16:19:20
1	Cr 267.716†	38328.3	37472.9	503.55 ug/L	503.55 ppb	16:19:20
1	Cu 324.752†	160134.4	151307.1	499.52 ug/L	499.52 ppb	16:19:20
1	Mn 257.610†	388179.2	379850.5	499.72 ug/L	499.72 ppb	16:19:15
1	Mo 202.031†	5733.9	5608.1	498.96 ug/L	498.96 ppb	16:19:40
1	Ni 231.604†	16489.1	16067.7	509.96 ug/L	509.96 ppb	16:19:20
1	P 214.914†	3617.5	3356.2	2402.7 ug/L	2402.7 ppb	16:19:40
1	Pb 220.353†	3232.9	3225.1	496.89 ug/L	496.89 ppb	16:19:40
1	S 181.975 Axial†	600.5	558.0	998.05 ug/L	998.05 ppb	16:19:40
1	Sb 206.836†	1231.6	1182.8	512.76 ug/L	512.76 ppb	16:19:40
1	Se 196.026†	598.3	603.0	519.86 ug/L	519.86 ppb	16:19:40
1	Si 251.611†	69465.6	67556.6	2558.5 ug/L	2558.5 ppb	16:19:20
1	Sn 189.927†	2243.4	2190.4	497.66 ug/L	497.66 ppb	16:19:40
1	Ti 334.940†	290256.3	285440.8	496.25 ug/L	496.25 ppb	16:19:20
1	Tl 190.801†	1273.2	1276.3	497.06 ug/L	497.06 ppb	16:19:40
1	U 409.014†	15022.1	16919.0	511.60 ug/L	511.60 ppb	16:19:20
1	V 292.402†	62771.7	62805.3	508.19 ug/L	508.19 ppb	16:19:20
1	Zn 213.857†	43186.0	41732.7	500.99 ug/L	500.99 ppb	16:19:20
1	SiO2†	70045.9	68113.8	5545.3 ug/L	5545.3 ppb	16:20:48
2	Sc Radial	4400.2	4400.2	100 %		16:18:23
2	Y RADIAL	4740.2	4740.2	99.57 %		16:18:23
2	Al 396.153Radial†	4966.4	5038.7	4924.8 ug/L	4924.8 ppb	16:18:23
2	Ca 317.933Radial†	2661.4	2642.6	5000.3 ug/L	5000.3 ppb	16:18:43
2	Fe 238.204 Radial†	440.0	431.1	5010.2 ug/L	5010.2 ppb	16:18:43
2	K 766.490 Radial†	29249.7	26616.9	5065.1 ug/L	5065.1 ppb	16:18:23
2	Mg 279.077 IEC†	125.0	123.3	5087.1 ug/L	5087.1 ppb	16:18:43
2	Na 589.592 Radial†	26393.4	27237.8	9601.9 ug/L	9601.9 ppb	16:18:23
2	Sr 421.552†	61692.4	61599.8	493.73 ug/L	493.73 ppb	16:18:23
2	Sc 361.383	826781.9	826781.9	100.97 %		16:19:46
2	Y 371.029	688677.6	688677.6	99.57 %		16:19:46
2	Ag 328.068†	99730.1	98585.2	514.95 ug/L	514.95 ppb	16:19:51
2	As 188.979†	904.5	922.6	510.83 ug/L	510.83 ppb	16:20:11
2	B 249.677†	17837.7	18203.4	508.39 ug/L	508.39 ppb	16:19:51
2	Ba 233.527†	54922.3	54394.5	510.75 ug/L	510.75 ppb	16:19:51
2	Be 313.107†	1187758.3	1180058.2	503.62 ug/L	503.62 ppb	16:19:46
2	Cd 226.502†	35516.9	35345.8	512.76 ug/L	512.76 ppb	16:19:51
2	Co 228.616†	20183.2	20035.2	517.93 ug/L	517.93 ppb	16:19:51
2	Cr 267.716†	38401.5	37960.4	510.10 ug/L	510.10 ppb	16:19:51
2	Cu 324.752†	159894.7	152803.8	504.46 ug/L	504.46 ppb	16:19:51
2	Mn 257.610†	384237.7	380150.7	500.12 ug/L	500.12 ppb	16:19:46
2	Mo 202.031†	5749.5	5685.7	505.86 ug/L	505.86 ppb	16:20:11
2	Ni 231.604†	16483.3	16240.6	515.44 ug/L	515.44 ppb	16:19:51

2	P 214.914†	3591.6	3369.8	2411.9 ug/L	2411.9 ppb	16:20:11
2	Pb 220.353†	3259.5	3286.4	506.33 ug/L	506.33 ppb	16:20:11
2	S 181.975 Axial†	608.7	572.6	1024.2 ug/L	1024.2 ppb	16:20:11
2	Sb 206.836†	1231.1	1195.6	518.40 ug/L	518.40 ppb	16:20:11
2	Se 196.026†	609.9	621.0	534.85 ug/L	534.85 ppb	16:20:11
2	Si 251.611†	69567.4	68409.8	2590.8 ug/L	2590.8 ppb	16:19:51
2	Sn 189.927†	2257.0	2228.1	506.23 ug/L	506.23 ppb	16:20:11
2	Ti 334.940†	290413.7	288740.0	501.98 ug/L	501.98 ppb	16:19:51
2	Tl 190.801†	1301.1	1317.7	513.10 ug/L	513.10 ppb	16:20:11
2	U 409.014†	14982.4	17042.5	515.33 ug/L	515.33 ppb	16:19:51
2	V 292.402†	62794.7	63507.7	513.90 ug/L	513.90 ppb	16:19:51
2	Zn 213.857†	43252.2	42265.9	507.41 ug/L	507.41 ppb	16:19:51
2	SiO2†	69267.5	68101.6	5544.1 ug/L	5544.1 ppb	16:20:53
3	Sc Radial	4425.7	4425.7	101 %		16:18:48
3	Y RADIAL	4782.7	4782.7	100.5 %		16:18:48
3	Al 396.153Radial†	5033.1	5076.3	4962.1 ug/L	4962.1 ppb	16:18:48
3	Ca 317.933Radial†	2658.8	2624.7	4966.4 ug/L	4966.4 ppb	16:19:08
3	Fe 238.204 Radial†	439.0	427.5	4968.7 ug/L	4968.7 ppb	16:19:08
3	K 766.490 Radial†	29541.6	26738.3	5088.2 ug/L	5088.2 ppb	16:18:48
3	Mg 279.077 IEC†	123.3	120.9	4986.7 ug/L	4986.7 ppb	16:19:08
3	Na 589.592 Radial†	26560.3	27251.5	9606.8 ug/L	9606.8 ppb	16:18:48
3	Sr 421.552†	62301.6	61849.4	495.73 ug/L	495.73 ppb	16:18:48
3	Sc 361.383	831615.2	831615.2	101.56 %		16:20:17
3	Y 371.029	693496.3	693496.3	100.27 %		16:20:17
3	Ag 328.068†	98591.3	96889.8	506.10 ug/L	506.10 ppb	16:20:22
3	As 188.979†	899.5	912.5	505.20 ug/L	505.20 ppb	16:20:42
3	B 249.677†	17618.1	17884.5	499.47 ug/L	499.47 ppb	16:20:22
3	Ba 233.527†	54141.2	53309.2	500.56 ug/L	500.56 ppb	16:20:22
3	Be 313.107†	1195119.8	1180469.7	503.77 ug/L	503.77 ppb	16:20:17
3	Cd 226.502†	34953.8	34586.8	501.75 ug/L	501.75 ppb	16:20:22
3	Co 228.616†	19939.1	19678.7	508.72 ug/L	508.72 ppb	16:20:22
3	Cr 267.716†	37938.4	37283.4	501.00 ug/L	501.00 ppb	16:20:22
3	Cu 324.752†	158213.3	150228.0	495.96 ug/L	495.96 ppb	16:20:22
3	Mn 257.610†	386066.1	379739.2	499.57 ug/L	499.57 ppb	16:20:17
3	Mo 202.031†	5709.6	5613.3	499.41 ug/L	499.41 ppb	16:20:42
3	Ni 231.604†	16250.7	15916.7	505.16 ug/L	505.16 ppb	16:20:22
3	P 214.914†	3588.3	3345.9	2395.8 ug/L	2395.8 ppb	16:20:42
3	Pb 220.353†	3252.5	3260.8	502.39 ug/L	502.39 ppb	16:20:42
3	S 181.975 Axial†	595.0	555.7	993.81 ug/L	993.81 ppb	16:20:42
3	Sb 206.836†	1235.1	1192.4	516.82 ug/L	516.82 ppb	16:20:42
3	Se 196.026†	601.3	609.0	524.74 ug/L	524.74 ppb	16:20:42
3	Si 251.611†	68558.9	67016.2	2538.0 ug/L	2538.0 ppb	16:20:22
3	Sn 189.927†	2236.2	2194.6	498.62 ug/L	498.62 ppb	16:20:42
3	Ti 334.940†	287124.5	283829.7	493.45 ug/L	493.45 ppb	16:20:22
3	Tl 190.801†	1275.0	1284.5	500.25 ug/L	500.25 ppb	16:20:42
3	U 409.014†	14819.1	16795.4	507.86 ug/L	507.86 ppb	16:20:22
3	V 292.402†	62008.3	62372.1	504.74 ug/L	504.74 ppb	16:20:22
3	Zn 213.857†	42612.5	41387.0	496.84 ug/L	496.84 ppb	16:20:22
3	SiO2†	68765.6	67208.7	5471.4 ug/L	5471.4 ppb	16:20:58

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	831439.8	101.54 %	0.558			0.55%
Sc Radial	4409.4	100 %	0.3			0.32%
Y 371.029	692766.9	100.16 %	0.546			0.55%
Y RADIAL	4751.3	99.81 %	0.578			0.58%
Ag 328.068†	97615.8	509.90 ug/L	4.555	509.90 ppb	4.555	0.89%
QC value within limits for Ag 328.068 Recovery = 101.98%						
Al 396.153Radial†	5065.1	4951.0 ug/L	22.71	4951.0 ppb	22.71	0.46%
QC value within limits for Al 396.153Radial Recovery = 99.02%						
As 188.979†	915.6	506.94 ug/L	3.380	506.94 ppb	3.380	0.67%
QC value within limits for As 188.979 Recovery = 101.39%						
B 249.677†	18025.3	503.41 ug/L	4.549	503.41 ppb	4.549	0.90%
QC value within limits for B 249.677 Recovery = 100.68%						
Ba 233.527†	53797.5	505.15 ug/L	5.169	505.15 ppb	5.169	1.02%
QC value within limits for Ba 233.527 Recovery = 101.03%						
Be 313.107†	1179726.4	503.46 ug/L	0.406	503.46 ppb	0.406	0.08%
QC value within limits for Be 313.107 Recovery = 100.69%						
Ca 317.933Radial†	2639.1	4993.7 ug/L	24.71	4993.7 ppb	24.71	0.49%

QC value within limits for Ca 317.933 Radial Recovery = 99.87%							
Cd 226.502†	34902.3	506.33 ug/L	5.738	506.33 ppb	5.738	1.13%	
QC value within limits for Cd 226.502 Recovery = 101.27%							
Co 228.616†	19852.0	513.19 ug/L	4.611	513.19 ppb	4.611	0.90%	
QC value within limits for Co 228.616 Recovery = 102.64%							
Cr 267.716†	37572.2	504.88 ug/L	4.690	504.88 ppb	4.690	0.93%	
QC value within limits for Cr 267.716 Recovery = 100.98%							
Cu 324.752†	151446.3	499.98 ug/L	4.270	499.98 ppb	4.270	0.85%	
QC value within limits for Cu 324.752 Recovery = 100.00%							
Fe 238.204 Radial†	430.3	5000.8 ug/L	28.54	5000.8 ppb	28.54	0.57%	
QC value within limits for Fe 238.204 Radial Recovery = 100.02%							
K 766.490 Radial†	26739.4	5088.4 ug/L	23.43	5088.4 ppb	23.43	0.46%	
QC value within limits for K 766.490 Radial Recovery = 101.77%							
Mg 279.077 IEC†	122.5	5053.1 ug/L	57.45	5053.1 ppb	57.45	1.14%	
QC value within limits for Mg 279.077 IEC Recovery = 101.06%							
Mn 257.610†	379913.5	499.80 ug/L	0.280	499.80 ppb	0.280	0.06%	
QC value within limits for Mn 257.610 Recovery = 99.96%							
Mo 202.031†	5635.7	501.41 ug/L	3.857	501.41 ppb	3.857	0.77%	
QC value within limits for Mo 202.031 Recovery = 100.28%							
Na 589.592 Radial†	27350.4	9641.6 ug/L	64.60	9641.6 ppb	64.60	0.67%	
QC value within limits for Na 589.592 Radial Recovery = 96.42%							
Ni 231.604†	16075.0	510.19 ug/L	5.144	510.19 ppb	5.144	1.01%	
QC value within limits for Ni 231.604 Recovery = 102.04%							
P 214.914†	3357.3	2403.5 ug/L	8.11	2403.5 ppb	8.11	0.34%	
QC value within limits for P 214.914 Recovery = 96.14%							
Pb 220.353†	3257.4	501.87 ug/L	4.738	501.87 ppb	4.738	0.94%	
QC value within limits for Pb 220.353 Recovery = 100.37%							
S 181.975 Axial†	562.1	1005.4 ug/L	16.46	1005.4 ppb	16.46	1.64%	
QC value within limits for S 181.975 Axial Recovery = 100.54%							
Sb 206.836†	1190.3	515.99 ug/L	2.908	515.99 ppb	2.908	0.56%	
QC value within limits for Sb 206.836 Recovery = 103.20%							
Se 196.026†	611.0	526.48 ug/L	7.645	526.48 ppb	7.645	1.45%	
QC value within limits for Se 196.026 Recovery = 105.30%							
Si 251.611†	67660.9	2562.4 ug/L	26.63	2562.4 ppb	26.63	1.04%	
QC value within limits for Si 251.611 Recovery = 102.50%							
Sn 189.927†	2204.4	500.83 ug/L	4.695	500.83 ppb	4.695	0.94%	
QC value within limits for Sn 189.927 Recovery = 100.17%							
Sr 421.552†	61906.3	496.19 ug/L	2.714	496.19 ppb	2.714	0.55%	
QC value within limits for Sr 421.552 Recovery = 99.24%							
Ti 334.940†	286003.5	497.22 ug/L	4.348	497.22 ppb	4.348	0.87%	
QC value within limits for Ti 334.940 Recovery = 99.44%							
Tl 190.801†	1292.8	503.47 ug/L	8.490	503.47 ppb	8.490	1.69%	
QC value within limits for Tl 190.801 Recovery = 100.69%							
U 409.014†	16919.0	511.60 ug/L	3.735	511.60 ppb	3.735	0.73%	
QC value within limits for U 409.014 Recovery = 102.32%							
V 292.402†	62895.0	508.95 ug/L	4.625	508.95 ppb	4.625	0.91%	
QC value within limits for V 292.402 Recovery = 101.79%							
Zn 213.857†	41795.2	501.74 ug/L	5.323	501.74 ppb	5.323	1.06%	
QC value within limits for Zn 213.857 Recovery = 100.35%							
SiO2†	67808.0	5520.3 ug/L	42.32	5520.3 ppb	42.32	0.77%	
QC value within limits for SiO2 Recovery = 103.23%							

All analyte(s) passed QC.

Sequence No.: 28

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 3/19/2010 16:23:09

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	4402.0	4402.0	100 %		16:25:02
1	Y RADIAL	4757.6	4757.6	99.94 %		16:25:02
1	Al 396.153Radial†	-77.9	0.3	0.3043 ug/L	0.3043 ppb	16:25:22
1	Ca 317.933Radial†	14.3	-1.4	-2.6093 ug/L	-2.6093 ppb	16:25:22
1	Fe 238.204 Radial†	7.9	-0.6	-6.4503 ug/L	-6.4503 ppb	16:25:22
1	K 766.490 Radial†	2716.1	113.1	21.549 ug/L	21.549 ppb	16:25:02
1	Mg 279.077 IEC†	0.0	-1.5	-62.540 ug/L	-62.540 ppb	16:25:22
1	Na 589.592 Radial†	-895.3	-18.8	-6.6244 ug/L	-6.6244 ppb	16:25:02
1	Sr 421.552†	32.7	11.8	0.0947 ug/L	0.0947 ppb	16:25:02
1	Sc 361.383	821746.9	821746.9	100.36 %		16:26:19
1	Y 371.029	694626.5	694626.5	100.43 %		16:26:19
1	Ag 328.068†	108.0	-77.5	-0.4023 ug/L	-0.4023 ppb	16:26:19
1	As 188.979†	-22.1	4.8	2.6249 ug/L	2.6249 ppb	16:26:39
1	B 249.677†	-206.5	331.6	9.3033 ug/L	9.3033 ppb	16:26:39
1	Ba 233.527†	4.3	5.0	0.0466 ug/L	0.0466 ppb	16:26:39
1	Be 313.107†	-3672.1	71.9	0.0306 ug/L	0.0306 ppb	16:26:19
1	Cd 226.502†	-188.8	-17.4	-0.2531 ug/L	-0.2531 ppb	16:26:39
1	Co 228.616†	-41.3	5.0	0.1295 ug/L	0.1295 ppb	16:26:39
1	Cr 267.716†	83.9	12.1	0.1627 ug/L	0.1627 ppb	16:26:39
1	Cu 324.752†	5590.5	18.6	0.0614 ug/L	0.0614 ppb	16:26:19
1	Mn 257.610†	421.8	31.3	0.0411 ug/L	0.0411 ppb	16:26:39
1	Mo 202.031†	13.9	5.3	0.4734 ug/L	0.4734 ppb	16:26:39
1	Ni 231.604†	76.1	-8.2	-0.2605 ug/L	-0.2605 ppb	16:26:39
1	P 214.914†	185.6	-2.4	-1.7755 ug/L	-1.7755 ppb	16:26:39
1	Pb 220.353†	-53.2	5.3	0.8103 ug/L	0.8103 ppb	16:26:39
1	S 181.975 Axial†	26.2	-4.0	-7.2355 ug/L	-7.2355 ppb	16:26:39
1	Sb 206.836†	32.7	8.9	3.7302 ug/L	3.7302 ppb	16:26:39
1	Se 196.026†	-18.7	-1.6	-1.3633 ug/L	-1.3633 ppb	16:26:39
1	Si 251.611†	648.1	157.6	5.9844 ug/L	5.9844 ppb	16:26:39
1	Sn 189.927†	3.4	-3.8	-0.8572 ug/L	-0.8572 ppb	16:26:39
1	Ti 334.940†	-1130.0	-4.8	-0.0084 ug/L	-0.0084 ppb	16:26:19
1	Tl 190.801†	-22.7	6.5	2.5070 ug/L	2.5070 ppb	16:26:39
1	U 409.014†	-2156.6	55.2	1.6755 ug/L	1.6755 ppb	16:26:19
1	V 292.402†	-1339.7	-17.5	-0.1400 ug/L	-0.1400 ppb	16:26:19
1	Zn 213.857†	570.6	-1.5	-0.0186 ug/L	-0.0186 ppb	16:26:39
1	SiO2†	681.3	179.5	14.649 ug/L	14.649 ppb	16:27:50
2	Sc Radial	4432.0	4432.0	101 %		16:25:27
2	Y RADIAL	4821.0	4821.0	101.3 %		16:25:27
2	Al 396.153Radial†	-72.5	6.2	6.0880 ug/L	6.0880 ppb	16:25:47
2	Ca 317.933Radial†	15.4	-0.4	-0.8179 ug/L	-0.8179 ppb	16:25:47
2	Fe 238.204 Radial†	7.2	-1.4	-15.743 ug/L	-15.743 ppb	16:25:47
2	K 766.490 Radial†	2711.7	90.3	17.205 ug/L	17.205 ppb	16:25:27
2	Mg 279.077 IEC†	1.1	-0.5	-19.869 ug/L	-19.869 ppb	16:25:47
2	Na 589.592 Radial†	-904.2	-21.5	-7.5925 ug/L	-7.5925 ppb	16:25:27
2	Sr 421.552†	13.6	-7.3	-0.0586 ug/L	-0.0586 ppb	16:25:27
2	Sc 361.383	822185.5	822185.5	100.41 %		16:26:44
2	Y 371.029	693807.7	693807.7	100.31 %		16:26:44
2	Ag 328.068†	147.6	-38.2	-0.1982 ug/L	-0.1982 ppb	16:26:44
2	As 188.979†	-12.6	14.3	7.8372 ug/L	7.8372 ppb	16:27:04
2	B 249.677†	-195.2	342.9	9.6208 ug/L	9.6208 ppb	16:27:04
2	Ba 233.527†	10.5	11.2	0.1047 ug/L	0.1047 ppb	16:27:04
2	Be 313.107†	-3724.4	21.8	0.0093 ug/L	0.0093 ppb	16:26:44
2	Cd 226.502†	-167.3	4.0	0.0581 ug/L	0.0581 ppb	16:27:04
2	Co 228.616†	-30.2	16.1	0.4160 ug/L	0.4160 ppb	16:27:04
2	Cr 267.716†	68.5	-3.3	-0.0441 ug/L	-0.0441 ppb	16:27:04
2	Cu 324.752†	5462.6	-111.7	-0.3688 ug/L	-0.3688 ppb	16:26:44
2	Mn 257.610†	444.6	53.7	0.0706 ug/L	0.0706 ppb	16:27:04
2	Mo 202.031†	16.6	8.0	0.7089 ug/L	0.7089 ppb	16:27:04
2	Ni 231.604†	69.5	-14.9	-0.4717 ug/L	-0.4717 ppb	16:27:04

2	P 214.914†	186.4	-1.6	-1.2135 ug/L	-1.2135 ppb	16:27:04
2	Pb 220.353†	-53.2	5.3	0.8163 ug/L	0.8163 ppb	16:27:04
2	S 181.975 Axial†	33.2	2.8	5.0836 ug/L	5.0836 ppb	16:27:04
2	Sb 206.836†	27.9	4.1	1.7026 ug/L	1.7026 ppb	16:27:04
2	Se 196.026†	-12.2	4.8	4.0243 ug/L	4.0243 ppb	16:27:04
2	Si 251.611†	658.6	167.7	6.3669 ug/L	6.3669 ppb	16:27:04
2	Sn 189.927†	10.4	3.2	0.7291 ug/L	0.7291 ppb	16:27:04
2	Ti 334.940†	-1124.6	1.2	0.0021 ug/L	0.0021 ppb	16:26:44
2	Tl 190.801†	-32.7	-3.5	-1.3397 ug/L	-1.3397 ppb	16:27:04
2	U 409.014†	-2098.0	114.8	3.4824 ug/L	3.4824 ppb	16:26:44
2	V 292.402†	-1355.0	-32.0	-0.2557 ug/L	-0.2557 ppb	16:26:44
2	Zn 213.857†	580.1	7.6	0.0924 ug/L	0.0924 ppb	16:27:04
2	SiO2†	668.5	166.4	13.583 ug/L	13.583 ppb	16:28:10
3	Sc Radial	4423.7	4423.7	101 %		16:25:52
3	Y RADIAL	4803.4	4803.4	100.9 %		16:25:52
3	Al 396.153Radial†	-83.2	-4.6	-4.5035 ug/L	-4.5035 ppb	16:26:12
3	Ca 317.933Radial†	15.6	-0.2	-0.3575 ug/L	-0.3575 ppb	16:26:12
3	Fe 238.204 Radial†	7.7	-0.8	-8.9431 ug/L	-8.9431 ppb	16:26:12
3	K 766.490 Radial†	2752.6	136.0	25.911 ug/L	25.911 ppb	16:25:52
3	Mg 279.077 IEC†	1.4	-0.2	-6.6434 ug/L	-6.6434 ppb	16:26:12
3	Na 589.592 Radial†	-868.6	12.1	4.2660 ug/L	4.2660 ppb	16:25:52
3	Sr 421.552†	4.3	-16.5	-0.1326 ug/L	-0.1326 ppb	16:25:52
3	Sc 361.383	832106.3	832106.3	101.62 %		16:27:09
3	Y 371.029	702928.2	702928.2	101.63 %		16:27:09
3	Ag 328.068†	198.6	10.3	0.0537 ug/L	0.0537 ppb	16:27:09
3	As 188.979†	-19.5	7.6	4.1733 ug/L	4.1733 ppb	16:27:30
3	B 249.677†	-240.1	301.1	8.4460 ug/L	8.4460 ppb	16:27:30
3	Ba 233.527†	2.5	3.1	0.0294 ug/L	0.0294 ppb	16:27:30
3	Be 313.107†	-3735.5	55.1	0.0235 ug/L	0.0235 ppb	16:27:09
3	Cd 226.502†	-164.7	8.6	0.1248 ug/L	0.1248 ppb	16:27:30
3	Co 228.616†	-43.2	3.7	0.0957 ug/L	0.0957 ppb	16:27:30
3	Cr 267.716†	75.6	2.9	0.0384 ug/L	0.0384 ppb	16:27:30
3	Cu 324.752†	5608.0	-33.5	-0.1108 ug/L	-0.1108 ppb	16:27:09
3	Mn 257.610†	409.7	14.1	0.0186 ug/L	0.0186 ppb	16:27:30
3	Mo 202.031†	7.5	-1.2	-0.1033 ug/L	-0.1033 ppb	16:27:30
3	Ni 231.604†	82.8	-2.6	-0.0827 ug/L	-0.0827 ppb	16:27:30
3	P 214.914†	198.1	7.7	5.7109 ug/L	5.7109 ppb	16:27:30
3	Pb 220.353†	-40.8	18.2	2.7924 ug/L	2.7924 ppb	16:27:30
3	S 181.975 Axial†	33.5	2.8	5.0300 ug/L	5.0300 ppb	16:27:30
3	Sb 206.836†	21.6	-2.4	-1.0212 ug/L	-1.0212 ppb	16:27:30
3	Se 196.026†	-25.7	-8.4	-6.9686 ug/L	-6.9686 ppb	16:27:30
3	Si 251.611†	663.2	164.4	6.2424 ug/L	6.2424 ppb	16:27:30
3	Sn 189.927†	13.4	6.0	1.3681 ug/L	1.3681 ppb	16:27:30
3	Ti 334.940†	-1129.3	9.9	0.0172 ug/L	0.0172 ppb	16:27:09
3	Tl 190.801†	-15.3	14.0	5.4354 ug/L	5.4354 ppb	16:27:30
3	U 409.014†	-2077.7	159.7	4.8441 ug/L	4.8441 ppb	16:27:09
3	V 292.402†	-1357.4	-18.3	-0.1459 ug/L	-0.1459 ppb	16:27:09
3	Zn 213.857†	578.2	-1.1	-0.0131 ug/L	-0.0131 ppb	16:27:30
3	SiO2†	635.6	126.1	10.293 ug/L	10.293 ppb	16:28:30

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	825346.3	100.80 %	0.715			0.71%
Sc Radial	4419.2	101 %	0.4			0.35%
Y 371.029	697120.8	100.79 %	0.730			0.72%
Y RADIAL	4794.0	100.7 %	0.69			0.68%
Ag 328.068†	-35.1	-0.1823 ug/L	0.22842	-0.1823 ppb	0.22842	125.31%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	0.6	0.6296 ug/L	5.30325	0.6296 ppb	5.30325	842.29%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	8.9	4.8785 ug/L	2.67674	4.8785 ppb	2.67674	54.87%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	325.2	9.1234 ug/L	0.60771	9.1234 ppb	0.60771	6.66%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	6.4	0.0602 ug/L	0.03944	0.0602 ppb	0.03944	65.50%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	49.6	0.0211 ug/L	0.01086	0.0211 ppb	0.01086	51.39%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	-0.7	-1.2616 ug/L	1.18962	-1.2616 ppb	1.18962	94.30%

QC value within limits for Ca 317.933 Radial Recovery = Not calculated					
Cd 226.502†	-1.6	-0.0234 ug/L	0.20174	-0.0234 ppb	0.20174 862.88%
QC value within limits for Cd 226.502 Recovery = Not calculated					
Co 228.616†	8.3	0.2137 ug/L	0.17599	0.2137 ppb	0.17599 82.34%
QC value within limits for Co 228.616 Recovery = Not calculated					
Cr 267.716†	3.9	0.0523 ug/L	0.10407	0.0523 ppb	0.10407 198.81%
QC value within limits for Cr 267.716 Recovery = Not calculated					
Cu 324.752†	-42.2	-0.1394 ug/L	0.21654	-0.1394 ppb	0.21654 155.34%
QC value within limits for Cu 324.752 Recovery = Not calculated					
Fe 238.204 Radial†	-0.9	-10.379 ug/L	4.8096	-10.379 ppb	4.8096 46.34%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated					
K 766.490 Radial†	113.1	21.555 ug/L	4.3531	21.555 ppb	4.3531 20.20%
QC value within limits for K 766.490 Radial Recovery = Not calculated					
Mg 279.077 IEC†	-0.7	-29.684 ug/L	29.2124	-29.684 ppb	29.2124 98.41%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated					
Mn 257.610†	33.0	0.0434 ug/L	0.02609	0.0434 ppb	0.02609 60.09%
QC value within limits for Mn 257.610 Recovery = Not calculated					
Mo 202.031†	4.0	0.3597 ug/L	0.41791	0.3597 ppb	0.41791 116.19%
QC value within limits for Mo 202.031 Recovery = Not calculated					
Na 589.592 Radial†	-9.4	-3.3170 ug/L	6.58490	-3.3170 ppb	6.58490 198.52%
QC value within limits for Na 589.592 Radial Recovery = Not calculated					
Ni 231.604†	-8.6	-0.2717 ug/L	0.19475	-0.2717 ppb	0.19475 71.69%
QC value within limits for Ni 231.604 Recovery = Not calculated					
P 214.914†	1.2	0.9073 ug/L	4.16952	0.9073 ppb	4.16952 459.54%
QC value within limits for P 214.914 Recovery = Not calculated					
Pb 220.353†	9.6	1.4730 ug/L	1.14262	1.4730 ppb	1.14262 77.57%
QC value within limits for Pb 220.353 Recovery = Not calculated					
S 181.975 Axial†	0.5	0.9594 ug/L	7.09704	0.9594 ppb	7.09704 739.76%
QC value within limits for S 181.975 Axial Recovery = Not calculated					
Sb 206.836†	3.5	1.4705 ug/L	2.38418	1.4705 ppb	2.38418 162.13%
QC value within limits for Sb 206.836 Recovery = Not calculated					
Se 196.026†	-1.7	-1.4359 ug/L	5.49684	-1.4359 ppb	5.49684 382.82%
QC value within limits for Se 196.026 Recovery = Not calculated					
Si 251.611†	163.3	6.1979 ug/L	0.19510	6.1979 ppb	0.19510 3.15%
QC value within limits for Si 251.611 Recovery = Not calculated					
Sn 189.927†	1.8	0.4133 ug/L	1.14577	0.4133 ppb	1.14577 277.20%
QC value within limits for Sn 189.927 Recovery = Not calculated					
Sr 421.552†	-4.0	-0.0322 ug/L	0.11597	-0.0322 ppb	0.11597 360.52%
QC value within limits for Sr 421.552 Recovery = Not calculated					
Ti 334.940†	2.1	0.0037 ug/L	0.01287	0.0037 ppb	0.01287 351.41%
QC value within limits for Ti 334.940 Recovery = Not calculated					
Tl 190.801†	5.7	2.2009 ug/L	3.39793	2.2009 ppb	3.39793 154.39%
QC value within limits for Tl 190.801 Recovery = Not calculated					
U 409.014†	109.9	3.3340 ug/L	1.58950	3.3340 ppb	1.58950 47.68%
QC value within limits for U 409.014 Recovery = Not calculated					
V 292.402†	-22.6	-0.1805 ug/L	0.06515	-0.1805 ppb	0.06515 36.09%
QC value within limits for V 292.402 Recovery = Not calculated					
Zn 213.857†	1.7	0.0202 ug/L	0.06256	0.0202 ppb	0.06256 309.04%
QC value within limits for Zn 213.857 Recovery = Not calculated					
SiO2†	157.4	12.842 ug/L	2.2707	12.842 ppb	2.2707 17.68%
QC value within limits for SiO2 Recovery = Not calculated					
All analyte(s) passed QC.					

User canceled analysis.

=====
Analysis Begun

Start Time: 3/19/2010 16:30:53

Plasma On Time: 3/15/2010 06:51:19

Logged In Analyst: Optima3

Technique: ICP Continuous

Spectrometer Model: Optima 5300 DV, S/N 077C7090601Autosampler Model: S10

Sample Information File: C:\pe\Optima3\Sample Information\031910.sif

Batch ID:

Results Data Set: 031910

Results Library: C:\pe\Optima3\Results\Results.mdb

Sequence No.: 29

Autosampler Location: 45

Sample ID: 247790003|957496|1

Date Collected: 3/19/2010 16:30:55

Analyst: HSC

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Replicate Data: 247790003|957496|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4566.0	4566.0	104 %		16:32:47
1	Y RADIAL	5784.0	5784.0	121.5 %		16:32:47
1	Al 396.153Radial†	33589.8	32410.4	31835 ug/L	31835 ppb	16:32:47
1	Ca 317.933Radial†	7398.9	7106.2	13446 ug/L	13446 ppb	16:32:47
1	Fe 238.204 Radial†	8810.1	8471.8	98161 ug/L	98161 ppb	16:32:47
1	K 766.490 Radial†	45536.4	41232.8	7848.6 ug/L	7848.6 ppb	16:32:47
1	Mg 279.077 IEC†	235.2	224.9	9174.6 ug/L	9174.6 ppb	16:33:07
1	Na 589.592 Radial†	12182.8	12601.8	4442.4 ug/L	4442.4 ppb	16:32:47
1	Sr 421.552†	12367.4	11883.6	95.155 ug/L	95.155 ppb	16:32:47
1	Sc 361.383	852145.3	852145.3	104.07 %		16:34:05
1	Y 371.029	831432.5	831432.5	120.21 %		16:34:05
1	Ag 328.068†	-5508.9	-5478.6	2.3715 ug/L	2.3715 ppb	16:34:10
1	As 188.979†	-57.7	-28.7	35.800 ug/L	35.800 ppb	16:34:30
1	B 249.677†	422.8	943.6	10.455 ug/L	10.455 ppb	16:34:10
1	Ba 233.527†	74454.7	71544.1	673.33 ug/L	673.33 ppb	16:34:10
1	Be 313.107†	-14159.2	-9874.5	3.2802 ug/L	3.2802 ppb	16:34:10
1	Cd 226.502†	579.7	727.7	0.4746 ug/L	0.4746 ppb	16:34:30
1	Co 228.616†	1035.8	1041.5	18.796 ug/L	18.796 ppb	16:34:30
1	Cr 267.716†	23595.6	22601.5	313.74 ug/L	313.74 ppb	16:34:10
1	Cu 324.752†	15330.2	9178.8	35.644 ug/L	35.644 ppb	16:34:10
1	Mn 257.610†	2441370.7	2345519.5	3093.3 ug/L	3093.3 ppb	16:34:05
1	Mo 202.031†	73.2	61.8	13.275 ug/L	13.275 ppb	16:34:30
1	Ni 231.604†	5572.6	5270.6	167.37 ug/L	167.37 ppb	16:34:30
1	P 214.914†	3222.6	2909.3	2090.0 ug/L	2090.0 ppb	16:34:30
1	Pb 220.353†	158.3	210.5	25.597 ug/L	25.597 ppb	16:34:30
1	S 181.975 Axial†	102.1	68.0	115.69 ug/L	115.69 ppb	16:34:30
1	Sb 206.836†	56.1	30.3	0.2795 ug/L	0.2795 ppb	16:34:30
1	Se 196.026†	-404.1	-371.3	-16.963 ug/L	-16.963 ppb	16:34:30
1	Si 251.611†	981111.0	942259.5	35771 ug/L	35771 ppb	16:34:05
1	Sn 189.927†	-19.6	-26.0	-9.1370 ug/L	-9.1370 ppb	16:34:30
1	Ti 334.940†	1971773.5	1895794.7	3297.9 ug/L	3297.9 ppb	16:34:05
1	Tl 190.801†	-156.9	-121.7	-5.2923 ug/L	-5.2923 ppb	16:34:30
1	U 409.014†	-11246.0	-8602.1	-272.84 ug/L	-272.84 ppb	16:34:05
1	V 292.402†	12472.5	13302.2	88.077 ug/L	88.077 ppb	16:34:10
1	Zn 213.857†	30878.2	29100.8	336.81 ug/L	336.81 ppb	16:34:10
1	SiO2†	972464.5	933940.0	76220 ug/L	76220 ppb	16:35:39
2	Sc Radial	4535.6	4535.6	103 %		16:33:12
2	Y RADIAL	5736.6	5736.6	120.5 %		16:33:12
2	Al 396.153Radial†	33471.2	32512.1	31935 ug/L	31935 ppb	16:33:12
2	Ca 317.933Radial†	7349.7	7106.2	13446 ug/L	13446 ppb	16:33:12
2	Fe 238.204 Radial†	8732.7	8453.6	97951 ug/L	97951 ppb	16:33:12
2	K 766.490 Radial†	45284.2	41282.1	7857.9 ug/L	7857.9 ppb	16:33:12
2	Mg 279.077 IEC†	237.6	228.7	9331.6 ug/L	9331.6 ppb	16:33:33
2	Na 589.592 Radial†	12059.9	12561.3	4428.1 ug/L	4428.1 ppb	16:33:12
2	Sr 421.552†	12245.9	11845.6	94.850 ug/L	94.850 ppb	16:33:12
2	Sc 361.383	851715.3	851715.3	104.02 %		16:34:36

2	Y 371.029	831582.0	831582.0	120.23 %		16:34:36
2	Ag 328.068†	-5458.7	-5433.0	2.5380 ug/L	2.5380 ppb	16:34:41
2	As 188.979†	-49.9	-21.2	39.839 ug/L	39.839 ppb	16:35:01
2	B 249.677†	328.1	852.8	7.9416 ug/L	7.9416 ppb	16:34:41
2	Ba 233.527†	73679.6	70835.1	666.68 ug/L	666.68 ppb	16:34:41
2	Be 313.107†	-14273.3	-9991.1	3.2239 ug/L	3.2239 ppb	16:34:41
2	Cd 226.502†	577.2	725.6	0.4675 ug/L	0.4675 ppb	16:35:01
2	Co 228.616†	1030.3	1036.7	18.679 ug/L	18.679 ppb	16:35:01
2	Cr 267.716†	23319.2	22347.2	310.31 ug/L	310.31 ppb	16:34:41
2	Cu 324.752†	15178.9	9040.8	35.176 ug/L	35.176 ppb	16:34:41
2	Mn 257.610†	2438843.8	2344274.5	3091.6 ug/L	3091.6 ppb	16:34:36
2	Mo 202.031†	69.1	57.9	12.907 ug/L	12.907 ppb	16:35:01
2	Ni 231.604†	5622.1	5320.9	168.96 ug/L	168.96 ppb	16:35:01
2	P 214.914†	3237.9	2925.5	2102.4 ug/L	2102.4 ppb	16:35:01
2	Pb 220.353†	149.5	202.1	24.358 ug/L	24.358 ppb	16:35:01
2	S 181.975 Axial†	106.0	71.7	122.41 ug/L	122.41 ppb	16:35:01
2	Sb 206.836†	64.9	38.7	3.8774 ug/L	3.8774 ppb	16:35:01
2	Se 196.026†	-413.6	-380.6	-25.320 ug/L	-25.320 ppb	16:35:01
2	Si 251.611†	979661.3	941341.8	35736 ug/L	35736 ppb	16:34:36
2	Sn 189.927†	-1.7	-8.8	-5.2305 ug/L	-5.2305 ppb	16:35:01
2	Ti 334.940†	1969039.7	1894123.0	3295.0 ug/L	3295.0 ppb	16:34:36
2	Tl 190.801†	-146.4	-111.7	-1.4664 ug/L	-1.4664 ppb	16:35:01
2	U 409.014†	-11166.6	-8531.2	-270.66 ug/L	-270.66 ppb	16:34:36
2	V 292.402†	12359.0	13199.2	87.291 ug/L	87.291 ppb	16:34:41
2	Zn 213.857†	30596.4	28844.8	333.73 ug/L	333.73 ppb	16:34:41
2	SiO2†	975540.2	937368.7	76500 ug/L	76500 ppb	16:35:45
3	Sc Radial	4515.9	4515.9	103 %		16:33:38
3	Y RADIAL	5729.8	5729.8	120.4 %		16:33:38
3	Al 396.153Radial†	33437.4	32620.6	32042 ug/L	32042 ppb	16:33:38
3	Ca 317.933Radial†	7310.2	7098.8	13432 ug/L	13432 ppb	16:33:38
3	Fe 238.204 Radial†	8733.5	8491.3	98387 ug/L	98387 ppb	16:33:38
3	K 766.490 Radial†	45194.8	41386.6	7877.9 ug/L	7877.9 ppb	16:33:38
3	Mg 279.077 IEC†	236.4	228.5	9324.8 ug/L	9324.8 ppb	16:33:58
3	Na 589.592 Radial†	12078.2	12630.1	4452.4 ug/L	4452.4 ppb	16:33:38
3	Sr 421.552†	12296.7	11946.8	95.662 ug/L	95.662 ppb	16:33:38
3	Sc 361.383	853271.7	853271.7	104.21 %		16:35:07
3	Y 371.029	832982.1	832982.1	120.43 %		16:35:07
3	Ag 328.068†	-5396.4	-5363.7	3.0312 ug/L	3.0312 ppb	16:35:12
3	As 188.979†	-57.5	-28.4	35.913 ug/L	35.913 ppb	16:35:32
3	B 249.677†	361.1	883.9	8.7427 ug/L	8.7427 ppb	16:35:12
3	Ba 233.527†	73621.1	70649.7	664.96 ug/L	664.96 ppb	16:35:12
3	Be 313.107†	-14094.1	-9794.1	3.2898 ug/L	3.2898 ppb	16:35:12
3	Cd 226.502†	578.4	725.7	0.4222 ug/L	0.4222 ppb	16:35:32
3	Co 228.616†	1033.3	1037.8	18.716 ug/L	18.716 ppb	16:35:32
3	Cr 267.716†	23237.8	22228.2	308.76 ug/L	308.76 ppb	16:35:12
3	Cu 324.752†	15116.5	8954.3	34.914 ug/L	34.914 ppb	16:35:12
3	Mn 257.610†	2434556.4	2335883.3	3080.6 ug/L	3080.6 ppb	16:35:07
3	Mo 202.031†	67.9	56.6	12.832 ug/L	12.832 ppb	16:35:32
3	Ni 231.604†	5575.1	5266.0	167.22 ug/L	167.22 ppb	16:35:32
3	P 214.914†	3243.3	2925.1	2101.7 ug/L	2101.7 ppb	16:35:32
3	Pb 220.353†	138.3	191.1	22.627 ug/L	22.627 ppb	16:35:32
3	S 181.975 Axial†	97.2	63.1	106.88 ug/L	106.88 ppb	16:35:32
3	Sb 206.836†	68.1	41.7	5.1133 ug/L	5.1133 ppb	16:35:32
3	Se 196.026†	-426.4	-392.3	-33.709 ug/L	-33.709 ppb	16:35:32
3	Si 251.611†	977825.2	937861.8	35604 ug/L	35604 ppb	16:35:07
3	Sn 189.927†	-10.7	-17.4	-7.2103 ug/L	-7.2103 ppb	16:35:32
3	Ti 334.940†	1967874.4	1889551.8	3287.1 ug/L	3287.1 ppb	16:35:07
3	Tl 190.801†	-150.7	-115.6	-3.0759 ug/L	-3.0759 ppb	16:35:32
3	U 409.014†	-11244.6	-8586.5	-272.38 ug/L	-272.38 ppb	16:35:07
3	V 292.402†	12270.9	13092.9	86.383 ug/L	86.383 ppb	16:35:12
3	Zn 213.857†	30464.5	28664.5	331.49 ug/L	331.49 ppb	16:35:12
3	SiO2†	989663.9	949211.4	77467 ug/L	77467 ppb	16:35:50

Mean Data: 247790003|957496|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	852377.4	104.10 %	0.098			0.09%
Sc Radial	4539.2	103 %	0.6			0.56%
Y 371.029	831998.9	120.29 %	0.124			0.10%
Y RADIAL	5750.1	120.8 %	0.62			0.51%

Ag 328.068†	-5425.1	2.6469 ug/L	0.34306	2.6469 ppb	0.34306	12.96%
Al 396.153Radial†	32514.3	31938 ug/L	103.3	31938 ppb	103.3	0.32%
As 188.979†	-26.1	37.184 ug/L	2.3000	37.184 ppb	2.3000	6.19%
B 249.677†	893.5	9.0465 ug/L	1.28415	9.0465 ppb	1.28415	14.19%
Ba 233.527†	71009.6	668.32 ug/L	4.422	668.32 ppb	4.422	0.66%
Be 313.107†	-9886.6	3.2646 ug/L	0.03557	3.2646 ppb	0.03557	1.09%
Ca 317.933Radial†	7103.7	13442 ug/L	8.0	13442 ppb	8.0	0.06%
Cd 226.502†	726.3	0.4548 ug/L	0.02840	0.4548 ppb	0.02840	6.24%
Co 228.616†	1038.7	18.730 ug/L	0.0595	18.730 ppb	0.0595	0.32%
Cr 267.716†	22392.3	310.94 ug/L	2.551	310.94 ppb	2.551	0.82%
Cu 324.752†	9057.9	35.245 ug/L	0.3696	35.245 ppb	0.3696	1.05%
Fe 238.204 Radial†	8472.2	98166 ug/L	218.4	98166 ppb	218.4	0.22%
K 766.490 Radial†	41300.5	7861.4 ug/L	14.96	7861.4 ppb	14.96	0.19%
Mg 279.077 IEC†	227.4	9277.0 ug/L	88.73	9277.0 ppb	88.73	0.96%
Mn 257.610†	2341892.4	3088.5 ug/L	6.88	3088.5 ppb	6.88	0.22%
Mo 202.031†	58.8	13.005 ug/L	0.2370	13.005 ppb	0.2370	1.82%
Na 589.592 Radial†	12597.7	4441.0 ug/L	12.20	4441.0 ppb	12.20	0.27%
Ni 231.604†	5285.8	167.85 ug/L	0.967	167.85 ppb	0.967	0.58%
P 214.914†	2920.0	2098.0 ug/L	6.99	2098.0 ppb	6.99	0.33%
Pb 220.353†	201.2	24.194 ug/L	1.4917	24.194 ppb	1.4917	6.17%
S 181.975 Axial†	67.6	114.99 ug/L	7.790	114.99 ppb	7.790	6.77%
Sb 206.836†	36.9	3.0901 ug/L	2.51120	3.0901 ppb	2.51120	81.27%
Se 196.026†	-381.4	-25.331 ug/L	8.3731	-25.331 ppb	8.3731	33.06%
Si 251.611†	940487.7	35704 ug/L	88.1	35704 ppb	88.1	0.25%
Sn 189.927†	-17.4	-7.1926 ug/L	1.95331	-7.1926 ppb	1.95331	27.16%
Sr 421.552†	11892.0	95.223 ug/L	0.4099	95.223 ppb	0.4099	0.43%
Ti 334.940†	1893156.5	3293.3 ug/L	5.63	3293.3 ppb	5.63	0.17%
Tl 190.801†	-116.3	-3.2782 ug/L	1.92096	-3.2782 ppb	1.92096	58.60%
U 409.014†	-8573.2	-271.96 ug/L	1.151	-271.96 ppb	1.151	0.42%
V 292.402†	13198.1	87.250 ug/L	0.8475	87.250 ppb	0.8475	0.97%
Zn 213.857†	28870.0	334.01 ug/L	2.670	334.01 ppb	2.670	0.80%
SiO2†	940173.4	76729 ug/L	653.9	76729 ppb	653.9	0.85%

Sequence No.: 35

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 1

Date Collected: 3/19/2010 17:13:34

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4409.1	4409.1	100 %		17:15:26
1	Y RADIAL	4770.5	4770.5	100.2 %		17:15:26
1	Al 396.153Radial†	5041.8	5103.8	4989.2 ug/L	4989.2 ppb	17:15:26
1	Ca 317.933Radial†	2707.7	2683.4	5077.5 ug/L	5077.5 ppb	17:15:46
1	Fe 238.204 Radial†	457.3	447.4	5199.1 ug/L	5199.1 ppb	17:15:46
1	K 766.490 Radial†	29717.2	27023.8	5142.3 ug/L	5142.3 ppb	17:15:26
1	Mg 279.077 IEC†	130.1	128.2	5288.4 ug/L	5288.4 ppb	17:15:46
1	Na 589.592 Radial†	28142.3	28927.8	10198 ug/L	10198 ppb	17:15:26
1	Sr 421.552†	63922.3	63697.9	510.55 ug/L	510.55 ppb	17:15:26
1	Sc 361.383	843711.2	843711.2	103.04 %		17:16:44
1	Y 371.029	702661.7	702661.7	101.59 %		17:16:44
1	Ag 328.068†	99412.1	96294.7	503.08 ug/L	503.08 ppb	17:16:49
1	As 188.979†	911.4	911.3	504.62 ug/L	504.62 ppb	17:17:09
1	B 249.677†	17621.4	17639.0	492.55 ug/L	492.55 ppb	17:16:49
1	Ba 233.527†	54798.5	53182.9	499.38 ug/L	499.38 ppb	17:16:49
1	Be 313.107†	1217454.2	1185274.8	505.81 ug/L	505.81 ppb	17:16:44
1	Cd 226.502†	35499.2	34622.7	502.25 ug/L	502.25 ppb	17:16:49
1	Co 228.616†	20188.5	19639.2	507.69 ug/L	507.69 ppb	17:16:49
1	Cr 267.716†	38370.0	37166.7	499.46 ug/L	499.46 ppb	17:16:49
1	Cu 324.752†	159562.0	149303.5	492.92 ug/L	492.92 ppb	17:16:49
1	Mn 257.610†	392941.7	380962.3	501.19 ug/L	501.19 ppb	17:16:44
1	Mo 202.031†	5766.5	5587.9	497.18 ug/L	497.18 ppb	17:17:09
1	Ni 231.604†	16495.4	15924.7	505.42 ug/L	505.42 ppb	17:16:49
1	P 214.914†	3634.7	3340.2	2392.0 ug/L	2392.0 ppb	17:17:09
1	Pb 220.353†	3290.1	3251.4	500.92 ug/L	500.92 ppb	17:17:09
1	S 181.975 Axial†	608.2	560.1	1001.7 ug/L	1001.7 ppb	17:17:09
1	Sb 206.836†	1259.8	1198.9	519.53 ug/L	519.53 ppb	17:17:09
1	Se 196.026†	613.1	611.9	527.84 ug/L	527.84 ppb	17:17:09
1	Si 251.611†	69303.3	66770.9	2528.7 ug/L	2528.7 ppb	17:16:49
1	Sn 189.927†	2276.0	2201.7	500.23 ug/L	500.23 ppb	17:17:09
1	Ti 334.940†	289593.2	282172.4	490.56 ug/L	490.56 ppb	17:16:49
1	Tl 190.801†	1307.5	1298.0	505.48 ug/L	505.48 ppb	17:17:09
1	U 409.014†	14904.2	16668.8	503.99 ug/L	503.99 ppb	17:16:49
1	V 292.402†	62763.7	62229.8	503.54 ug/L	503.54 ppb	17:16:49
1	Zn 213.857†	43263.2	41417.0	497.17 ug/L	497.17 ppb	17:16:49
1	SiO2†	69849.8	67290.1	5478.1 ug/L	5478.1 ppb	17:18:16
2	Sc Radial	4326.0	4326.0	98.4 %		17:15:51
2	Y RADIAL	4647.1	4647.1	97.62 %		17:15:51
2	Al 396.153Radial†	4947.8	5104.9	4989.9 ug/L	4989.9 ppb	17:15:51
2	Ca 317.933Radial†	2694.3	2721.6	5149.9 ug/L	5149.9 ppb	17:16:11
2	Fe 238.204 Radial†	451.1	449.8	5227.6 ug/L	5227.6 ppb	17:16:11
2	K 766.490 Radial†	29435.1	27306.3	5196.1 ug/L	5196.1 ppb	17:15:51
2	Mg 279.077 IEC†	128.3	128.8	5312.3 ug/L	5312.3 ppb	17:16:11
2	Na 589.592 Radial†	27557.4	28872.5	10178 ug/L	10178 ppb	17:15:51
2	Sr 421.552†	62842.9	63825.4	511.57 ug/L	511.57 ppb	17:15:51
2	Sc 361.383	835050.7	835050.7	101.98 %		17:17:15
2	Y 371.029	694943.8	694943.8	100.48 %		17:17:15
2	Ag 328.068†	99343.8	97228.3	507.94 ug/L	507.94 ppb	17:17:20
2	As 188.979†	910.9	920.0	509.39 ug/L	509.39 ppb	17:17:40
2	B 249.677†	17614.7	17809.8	497.33 ug/L	497.33 ppb	17:17:20
2	Ba 233.527†	54530.3	53471.4	502.09 ug/L	502.09 ppb	17:17:20
2	Be 313.107†	1202715.9	1183076.9	504.88 ug/L	504.88 ppb	17:17:15
2	Cd 226.502†	35302.9	34787.6	504.64 ug/L	504.64 ppb	17:17:20
2	Co 228.616†	20128.7	19783.8	511.44 ug/L	511.44 ppb	17:17:20
2	Cr 267.716†	38090.7	37279.0	500.97 ug/L	500.97 ppb	17:17:20
2	Cu 324.752†	159454.9	150804.5	497.87 ug/L	497.87 ppb	17:17:20
2	Mn 257.610†	389286.4	381333.1	501.68 ug/L	501.68 ppb	17:17:15
2	Mo 202.031†	5781.4	5660.5	503.64 ug/L	503.64 ppb	17:17:40
2	Ni 231.604†	16386.2	15983.7	507.29 ug/L	507.29 ppb	17:17:20

2	P 214.914†	3646.8	3388.6	2427.1 ug/L	2427.1 ppb	17:17:40
2	Pb 220.353†	3297.7	3292.0	507.16 ug/L	507.16 ppb	17:17:40
2	S 181.975 Axial†	610.2	568.2	1016.3 ug/L	1016.3 ppb	17:17:40
2	Sb 206.836†	1264.6	1216.3	527.01 ug/L	527.01 ppb	17:17:40
2	Se 196.026†	616.6	621.6	535.96 ug/L	535.96 ppb	17:17:40
2	Si 251.611†	69107.6	67276.6	2547.8 ug/L	2547.8 ppb	17:17:20
2	Sn 189.927†	2277.8	2226.4	505.85 ug/L	505.85 ppb	17:17:40
2	Ti 334.940†	289022.4	284527.6	494.66 ug/L	494.66 ppb	17:17:20
2	Tl 190.801†	1301.7	1305.5	508.39 ug/L	508.39 ppb	17:17:40
2	U 409.014†	15028.9	16941.1	512.25 ug/L	512.25 ppb	17:17:20
2	V 292.402†	62467.0	62570.6	506.36 ug/L	506.36 ppb	17:17:20
2	Zn 213.857†	43096.7	41689.2	500.45 ug/L	500.45 ppb	17:17:20
2	SiO2†	69859.7	68002.9	5536.1 ug/L	5536.1 ppb	17:18:21
3	Sc Radial	4448.9	4448.9	101 %		17:16:16
3	Y RADIAL	4790.1	4790.1	100.6 %		17:16:16
3	Al 396.153Radial†	5049.0	5066.0	4952.1 ug/L	4952.1 ppb	17:16:16
3	Ca 317.933Radial†	2695.2	2646.8	5008.4 ug/L	5008.4 ppb	17:16:36
3	Fe 238.204 Radial†	450.3	436.3	5070.9 ug/L	5070.9 ppb	17:16:36
3	K 766.490 Radial†	29831.9	26872.0	5113.5 ug/L	5113.5 ppb	17:16:16
3	Mg 279.077 IEC†	128.2	125.2	5163.2 ug/L	5163.2 ppb	17:16:36
3	Na 589.592 Radial†	27913.0	28450.2	10029 ug/L	10029 ppb	17:16:16
3	Sr 421.552†	63987.5	63192.0	506.49 ug/L	506.49 ppb	17:16:16
3	Sc 361.383	843734.6	843734.6	103.04 %		17:17:46
3	Y 371.029	702967.9	702967.9	101.64 %		17:17:46
3	Ag 328.068†	99387.3	96267.9	502.90 ug/L	502.90 ppb	17:17:51
3	As 188.979†	907.7	907.7	502.57 ug/L	502.57 ppb	17:18:11
3	B 249.677†	17673.9	17689.5	493.99 ug/L	493.99 ppb	17:17:51
3	Ba 233.527†	54834.3	53216.1	499.69 ug/L	499.69 ppb	17:17:51
3	Be 313.107†	1221640.0	1189304.2	507.52 ug/L	507.52 ppb	17:17:46
3	Cd 226.502†	35570.5	34690.9	503.25 ug/L	503.25 ppb	17:17:51
3	Co 228.616†	20136.2	19587.9	506.37 ug/L	506.37 ppb	17:17:51
3	Cr 267.716†	38361.0	37157.0	499.32 ug/L	499.32 ppb	17:17:51
3	Cu 324.752†	158721.7	148483.7	490.21 ug/L	490.21 ppb	17:17:51
3	Mn 257.610†	393553.5	381545.5	501.95 ug/L	501.95 ppb	17:17:46
3	Mo 202.031†	5766.4	5587.6	497.15 ug/L	497.15 ppb	17:18:11
3	Ni 231.604†	16529.5	15957.4	506.46 ug/L	506.46 ppb	17:17:51
3	P 214.914†	3640.4	3345.6	2396.6 ug/L	2396.6 ppb	17:18:11
3	Pb 220.353†	3286.8	3248.1	500.42 ug/L	500.42 ppb	17:18:11
3	S 181.975 Axial†	608.2	560.0	1001.6 ug/L	1001.6 ppb	17:18:11
3	Sb 206.836†	1264.6	1203.5	521.40 ug/L	521.40 ppb	17:18:11
3	Se 196.026†	605.8	604.9	521.59 ug/L	521.59 ppb	17:18:11
3	Si 251.611†	69096.7	66568.6	2521.0 ug/L	2521.0 ppb	17:17:51
3	Sn 189.927†	2259.5	2185.6	496.58 ug/L	496.58 ppb	17:18:11
3	Ti 334.940†	288901.4	281493.3	489.38 ug/L	489.38 ppb	17:17:51
3	Tl 190.801†	1289.8	1280.8	498.82 ug/L	498.82 ppb	17:18:11
3	U 409.014†	14852.7	16618.4	502.48 ug/L	502.48 ppb	17:17:51
3	V 292.402†	62683.4	62150.3	502.92 ug/L	502.92 ppb	17:17:51
3	Zn 213.857†	43190.9	41345.6	496.32 ug/L	496.32 ppb	17:17:51
3	SiO2†	69346.6	66800.0	5438.1 ug/L	5438.1 ppb	17:18:26

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	840832.2	102.69 %	0.611			0.60%
Sc Radial	4394.7	100.0 %	1.43			1.43%
Y 371.029	700191.2	101.24 %	0.657			0.65%
Y RADIAL	4735.9	99.48 %	1.629			1.64%
Ag 328.068†	96597.0	504.64 ug/L	2.859	504.64 ppb	2.859	0.57%
QC value within limits for Ag 328.068 Recovery = 100.93%						
Al 396.153Radial†	5091.6	4977.1 ug/L	21.66	4977.1 ppb	21.66	0.44%
QC value within limits for Al 396.153Radial Recovery = 99.54%						
As 188.979†	913.0	505.53 ug/L	3.503	505.53 ppb	3.503	0.69%
QC value within limits for As 188.979 Recovery = 101.11%						
B 249.677†	17712.8	494.62 ug/L	2.450	494.62 ppb	2.450	0.50%
QC value within limits for B 249.677 Recovery = 98.92%						
Ba 233.527†	53290.1	500.39 ug/L	1.484	500.39 ppb	1.484	0.30%
QC value within limits for Ba 233.527 Recovery = 100.08%						
Be 313.107†	1185885.3	506.07 ug/L	1.339	506.07 ppb	1.339	0.26%
QC value within limits for Be 313.107 Recovery = 101.21%						
Ca 317.933Radial†	2683.9	5078.6 ug/L	70.78	5078.6 ppb	70.78	1.39%

QC value within limits for Ca 317.933 Radial Recovery = 101.57%

Cd 226.502†	34700.4	503.38 ug/L	1.201	503.38 ppb	1.201	0.24%
QC value within limits for Cd 226.502 Recovery = 100.68%						
Co 228.616†	19670.3	508.50 ug/L	2.628	508.50 ppb	2.628	0.52%
QC value within limits for Co 228.616 Recovery = 101.70%						
Cr 267.716†	37200.9	499.92 ug/L	0.916	499.92 ppb	0.916	0.18%
QC value within limits for Cr 267.716 Recovery = 99.98%						
Cu 324.752†	149530.6	493.67 ug/L	3.887	493.67 ppb	3.887	0.79%
QC value within limits for Cu 324.752 Recovery = 98.73%						
Fe 238.204 Radial†	444.5	5165.9 ug/L	83.47	5165.9 ppb	83.47	1.62%
QC value within limits for Fe 238.204 Radial Recovery = 103.32%						
K 766.490 Radial†	27067.4	5150.6 ug/L	41.94	5150.6 ppb	41.94	0.81%
QC value within limits for K 766.490 Radial Recovery = 103.01%						
Mg 279.077 IEC†	127.4	5254.6 ug/L	80.07	5254.6 ppb	80.07	1.52%
QC value within limits for Mg 279.077 IEC Recovery = 105.09%						
Mn 257.610†	381280.3	501.61 ug/L	0.385	501.61 ppb	0.385	0.08%
QC value within limits for Mn 257.610 Recovery = 100.32%						
Mo 202.031†	5612.0	499.32 ug/L	3.738	499.32 ppb	3.738	0.75%
QC value within limits for Mo 202.031 Recovery = 99.86%						
Na 589.592 Radial†	28750.2	10135 ug/L	92.1	10135 ppb	92.1	0.91%
QC value within limits for Na 589.592 Radial Recovery = 101.35%						
Ni 231.604†	15955.3	506.39 ug/L	0.937	506.39 ppb	0.937	0.18%
QC value within limits for Ni 231.604 Recovery = 101.28%						
P 214.914†	3358.1	2405.2 ug/L	19.09	2405.2 ppb	19.09	0.79%
QC value within limits for P 214.914 Recovery = 96.21%						
Pb 220.353†	3263.8	502.83 ug/L	3.756	502.83 ppb	3.756	0.75%
QC value within limits for Pb 220.353 Recovery = 100.57%						
S 181.975 Axial†	562.8	1006.5 ug/L	8.42	1006.5 ppb	8.42	0.84%
QC value within limits for S 181.975 Axial Recovery = 100.65%						
Sb 206.836†	1206.3	522.65 ug/L	3.892	522.65 ppb	3.892	0.74%
QC value within limits for Sb 206.836 Recovery = 104.53%						
Se 196.026†	612.8	528.47 ug/L	7.204	528.47 ppb	7.204	1.36%
QC value within limits for Se 196.026 Recovery = 105.69%						
Si 251.611†	66872.1	2532.5 ug/L	13.80	2532.5 ppb	13.80	0.54%
QC value within limits for Si 251.611 Recovery = 101.30%						
Sn 189.927†	2204.6	500.89 ug/L	4.668	500.89 ppb	4.668	0.93%
QC value within limits for Sn 189.927 Recovery = 100.18%						
Sr 421.552†	63571.8	509.54 ug/L	2.685	509.54 ppb	2.685	0.53%
QC value within limits for Sr 421.552 Recovery = 101.91%						
Ti 334.940†	282731.1	491.53 ug/L	2.771	491.53 ppb	2.771	0.56%
QC value within limits for Ti 334.940 Recovery = 98.31%						
Tl 190.801†	1294.8	504.23 ug/L	4.907	504.23 ppb	4.907	0.97%
QC value within limits for Tl 190.801 Recovery = 100.85%						
U 409.014†	16742.7	506.24 ug/L	5.258	506.24 ppb	5.258	1.04%
QC value within limits for U 409.014 Recovery = 101.25%						
V 292.402†	62316.9	504.28 ug/L	1.834	504.28 ppb	1.834	0.36%
QC value within limits for V 292.402 Recovery = 100.86%						
Zn 213.857†	41483.9	497.98 ug/L	2.178	497.98 ppb	2.178	0.44%
QC value within limits for Zn 213.857 Recovery = 99.60%						
SiO2†	67364.3	5484.1 ug/L	49.27	5484.1 ppb	49.27	0.90%
QC value within limits for SiO2 Recovery = 102.56%						

All analyte(s) passed QC.

Sequence No.: 36

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 6

Date Collected: 3/19/2010 17:20:36

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4503.5	4503.5	102 %		17:22:28
1	Y RADIAL	4860.9	4860.9	102.1 %		17:22:28
1	Al 396.153Radial†	-77.0	2.9	2.8653 ug/L	2.8653 ppb	17:22:48
1	Ca 317.933Radial†	16.1	-0.0	-0.0436 ug/L	-0.0436 ppb	17:22:48
1	Fe 238.204 Radial†	7.7	-0.9	-10.748 ug/L	-10.748 ppb	17:22:48
1	K 766.490 Radial†	2619.4	-42.5	-8.0961 ug/L	-8.0961 ppb	17:22:28
1	Mg 279.077 IEC†	1.6	0.0	0.5237 ug/L	0.5237 ppb	17:22:48
1	Na 589.592 Radial†	-840.9	54.5	19.207 ug/L	19.207 ppb	17:22:28
1	Sr 421.552†	33.6	11.9	0.0957 ug/L	0.0957 ppb	17:22:28
1	Sc 361.383	833138.7	833138.7	101.75 %		17:23:45
1	Y 371.029	704182.7	704182.7	101.81 %		17:23:45
1	Ag 328.068†	257.2	67.7	0.3464 ug/L	0.3464 ppb	17:23:45
1	As 188.979†	-22.3	4.9	2.6933 ug/L	2.6933 ppb	17:24:05
1	B 249.677†	-336.1	207.0	5.8092 ug/L	5.8092 ppb	17:24:05
1	Ba 233.527†	6.3	6.9	0.0642 ug/L	0.0642 ppb	17:24:05
1	Be 313.107†	-3663.1	130.9	0.0554 ug/L	0.0554 ppb	17:23:45
1	Cd 226.502†	-173.4	0.2	0.0042 ug/L	0.0042 ppb	17:24:05
1	Co 228.616†	-45.9	1.1	0.0290 ug/L	0.0290 ppb	17:24:05
1	Cr 267.716†	85.5	12.5	0.1653 ug/L	0.1653 ppb	17:24:05
1	Cu 324.752†	5577.8	-70.0	-0.2330 ug/L	-0.2330 ppb	17:23:45
1	Mn 257.610†	420.8	24.5	0.0312 ug/L	0.0312 ppb	17:24:05
1	Mo 202.031†	8.2	-0.5	-0.0422 ug/L	-0.0422 ppb	17:24:05
1	Ni 231.604†	61.4	-23.7	-0.7541 ug/L	-0.7541 ppb	17:24:05
1	P 214.914†	201.3	10.6	7.9331 ug/L	7.9331 ppb	17:24:05
1	Pb 220.353†	-74.3	-14.7	-2.2625 ug/L	-2.2625 ppb	17:24:05
1	S 181.975 Axial†	30.0	-0.7	-1.2452 ug/L	-1.2452 ppb	17:24:05
1	Sb 206.836†	30.0	5.9	2.4707 ug/L	2.4707 ppb	17:24:05
1	Se 196.026†	-20.2	-2.9	-2.4540 ug/L	-2.4540 ppb	17:24:05
1	Si 251.611†	552.3	54.6	2.0738 ug/L	2.0738 ppb	17:24:05
1	Sn 189.927†	14.2	6.8	1.5484 ug/L	1.5484 ppb	17:24:05
1	Ti 334.940†	-1220.1	-77.9	-0.1366 ug/L	-0.1366 ppb	17:23:45
1	Tl 190.801†	-24.1	5.4	2.0705 ug/L	2.0705 ppb	17:24:05
1	U 409.014†	-2163.4	78.0	2.3668 ug/L	2.3668 ppb	17:23:45
1	V 292.402†	-1329.7	10.5	0.0897 ug/L	0.0897 ppb	17:23:45
1	Zn 213.857†	590.1	9.9	0.1270 ug/L	0.1270 ppb	17:24:05
1	SiO2†	550.0	41.2	3.3657 ug/L	3.3657 ppb	17:25:01
2	Sc Radial	4482.3	4482.3	102 %		17:22:54
2	Y RADIAL	4855.5	4855.5	102.0 %		17:22:54
2	Al 396.153Radial†	-74.4	5.1	5.0272 ug/L	5.0272 ppb	17:23:14
2	Ca 317.933Radial†	16.1	0.1	0.2028 ug/L	0.2028 ppb	17:23:14
2	Fe 238.204 Radial†	9.3	0.7	8.0057 ug/L	8.0057 ppb	17:23:14
2	K 766.490 Radial†	2773.7	120.9	23.036 ug/L	23.036 ppb	17:22:54
2	Mg 279.077 IEC†	0.9	-0.6	-24.638 ug/L	-24.638 ppb	17:23:14
2	Na 589.592 Radial†	-889.8	2.7	0.9423 ug/L	0.9423 ppb	17:22:54
2	Sr 421.552†	20.7	-0.5	-0.0041 ug/L	-0.0041 ppb	17:22:54
2	Sc 361.383	833212.5	833212.5	101.76 %		17:24:11
2	Y 371.029	702995.6	702995.6	101.64 %		17:24:11
2	Ag 328.068†	186.5	-1.9	-0.0120 ug/L	-0.0120 ppb	17:24:11
2	As 188.979†	-14.0	13.0	7.1584 ug/L	7.1584 ppb	17:24:31
2	B 249.677†	-345.9	197.4	5.5391 ug/L	5.5391 ppb	17:24:31
2	Ba 233.527†	0.2	0.9	0.0084 ug/L	0.0084 ppb	17:24:31
2	Be 313.107†	-3698.2	96.7	0.0416 ug/L	0.0416 ppb	17:24:11
2	Cd 226.502†	-180.9	-7.1	-0.1037 ug/L	-0.1037 ppb	17:24:31
2	Co 228.616†	-65.5	-18.1	-0.4689 ug/L	-0.4689 ppb	17:24:31
2	Cr 267.716†	71.4	-1.3	-0.0191 ug/L	-0.0191 ppb	17:24:31
2	Cu 324.752†	5671.8	21.9	0.0697 ug/L	0.0697 ppb	17:24:11
2	Mn 257.610†	428.6	32.1	0.0440 ug/L	0.0440 ppb	17:24:31
2	Mo 202.031†	9.2	0.5	0.0466 ug/L	0.0466 ppb	17:24:31
2	Ni 231.604†	75.0	-10.3	-0.3279 ug/L	-0.3279 ppb	17:24:31

2	P 214.914†	199.9	9.2	6.7923 ug/L	6.7923 ppb	17:24:31
2	Pb 220.353†	-54.8	4.5	0.6839 ug/L	0.6839 ppb	17:24:31
2	S 181.975 Axial†	29.8	-0.9	-1.5486 ug/L	-1.5486 ppb	17:24:31
2	Sb 206.836†	27.5	3.3	1.3643 ug/L	1.3643 ppb	17:24:31
2	Se 196.026†	-14.4	2.8	2.3984 ug/L	2.3984 ppb	17:24:31
2	Si 251.611†	547.4	49.7	1.8880 ug/L	1.8880 ppb	17:24:31
2	Sn 189.927†	-0.4	-7.6	-1.7168 ug/L	-1.7168 ppb	17:24:31
2	Ti 334.940†	-1014.8	123.9	0.2153 ug/L	0.2153 ppb	17:24:11
2	Tl 190.801†	-26.1	3.4	1.3359 ug/L	1.3359 ppb	17:24:31
2	U 409.014†	-2067.8	172.1	5.2216 ug/L	5.2216 ppb	17:24:11
2	V 292.402†	-1356.2	-15.4	-0.1141 ug/L	-0.1141 ppb	17:24:11
2	Zn 213.857†	595.4	15.1	0.1833 ug/L	0.1833 ppb	17:24:31
2	SiO2†	589.4	79.9	6.5188 ug/L	6.5188 ppb	17:25:06
3	Sc Radial	4421.7	4421.7	101 %		17:23:19
3	Y RADIAL	4838.4	4838.4	101.6 %		17:23:19
3	Al 396.153Radial†	-74.4	4.1	4.0218 ug/L	4.0218 ppb	17:23:39
3	Ca 317.933Radial†	17.7	1.9	3.5393 ug/L	3.5393 ppb	17:23:39
3	Fe 238.204 Radial†	10.2	1.7	19.134 ug/L	19.134 ppb	17:23:39
3	K 766.490 Radial†	2675.4	60.6	11.543 ug/L	11.543 ppb	17:23:19
3	Mg 279.077 IEC†	4.5	3.0	122.85 ug/L	122.85 ppb	17:23:39
3	Na 589.592 Radial†	-882.3	-1.9	-0.6664 ug/L	-0.6664 ppb	17:23:19
3	Sr 421.552†	15.0	-5.9	-0.0470 ug/L	-0.0470 ppb	17:23:19
3	Sc 361.383	833605.8	833605.8	101.81 %		17:24:36
3	Y 371.029	704512.9	704512.9	101.86 %		17:24:36
3	Ag 328.068†	126.0	-61.4	-0.3157 ug/L	-0.3157 ppb	17:24:36
3	As 188.979†	-18.2	8.9	4.8742 ug/L	4.8742 ppb	17:24:56
3	B 249.677†	-337.3	206.0	5.7763 ug/L	5.7763 ppb	17:24:56
3	Ba 233.527†	12.9	13.4	0.1264 ug/L	0.1264 ppb	17:24:56
3	Be 313.107†	-3697.8	98.8	0.0424 ug/L	0.0424 ppb	17:24:36
3	Cd 226.502†	-170.8	2.9	0.0409 ug/L	0.0409 ppb	17:24:56
3	Co 228.616†	-53.8	-6.6	-0.1700 ug/L	-0.1700 ppb	17:24:56
3	Cr 267.716†	67.3	-5.4	-0.0715 ug/L	-0.0715 ppb	17:24:56
3	Cu 324.752†	5634.2	-17.7	-0.0600 ug/L	-0.0600 ppb	17:24:36
3	Mn 257.610†	419.3	22.8	0.0268 ug/L	0.0268 ppb	17:24:56
3	Mo 202.031†	17.9	9.0	0.8031 ug/L	0.8031 ppb	17:24:56
3	Ni 231.604†	87.6	2.0	0.0632 ug/L	0.0632 ppb	17:24:56
3	P 214.914†	187.1	-3.5	-2.5974 ug/L	-2.5974 ppb	17:24:56
3	Pb 220.353†	-45.6	13.5	2.0789 ug/L	2.0789 ppb	17:24:56
3	S 181.975 Axial†	26.1	-4.6	-8.1918 ug/L	-8.1918 ppb	17:24:56
3	Sb 206.836†	33.3	9.0	3.7885 ug/L	3.7885 ppb	17:24:56
3	Se 196.026†	-12.9	4.3	3.6286 ug/L	3.6286 ppb	17:24:56
3	Si 251.611†	553.4	55.4	2.0934 ug/L	2.0934 ppb	17:24:56
3	Sn 189.927†	7.7	0.4	0.0839 ug/L	0.0839 ppb	17:24:56
3	Ti 334.940†	-1054.1	85.8	0.1378 ug/L	0.1378 ppb	17:24:36
3	Tl 190.801†	-24.7	4.8	1.8557 ug/L	1.8557 ppb	17:24:56
3	U 409.014†	-2093.5	147.8	4.4815 ug/L	4.4815 ppb	17:24:36
3	V 292.402†	-1314.7	26.0	0.2271 ug/L	0.2271 ppb	17:24:36
3	Zn 213.857†	593.1	12.5	0.1478 ug/L	0.1478 ppb	17:24:56
3	SiO2†	584.2	74.5	6.0608 ug/L	6.0608 ppb	17:25:11

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	833319.0	101.77 %	0.031			0.03%
Sc Radial	4469.2	102 %	1.0			0.95%
Y 371.029	703897.1	101.77 %	0.115			0.11%
Y RADIAL	4851.6	101.9 %	0.25			0.24%
Ag 328.068†	1.5	0.0062 ug/L	0.33143	0.0062 ppb	0.33143	>999.9%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	4.1	3.9714 ug/L	1.08184	3.9714 ppb	1.08184	27.24%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	8.9	4.9086 ug/L	2.23275	4.9086 ppb	2.23275	45.49%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	203.5	5.7082 ug/L	0.14736	5.7082 ppb	0.14736	2.58%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	7.0	0.0663 ug/L	0.05901	0.0663 ppb	0.05901	88.98%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	108.8	0.0465 ug/L	0.00774	0.0465 ppb	0.00774	16.65%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	0.7	1.2328 ug/L	2.00123	1.2328 ppb	2.00123	162.33%

QC value within limits for Ca 317.933 Radial Recovery = Not calculated						
Cd 226.502†	-1.3	-0.0196 ug/L	0.07515	-0.0196 ppb	0.07515	384.30%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-7.9	-0.2033 ug/L	0.25059	-0.2033 ppb	0.25059	123.26%
QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	1.9	0.0249 ug/L	0.12441	0.0249 ppb	0.12441	499.39%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	-22.0	-0.0744 ug/L	0.15185	-0.0744 ppb	0.15185	204.00%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	0.5	5.4640 ug/L	15.10249	5.4640 ppb	15.10249	276.40%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated						
K 766.490 Radial†	46.3	8.8276 ug/L	15.74271	8.8276 ppb	15.74271	178.34%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	0.8	32.912 ug/L	78.8985	32.912 ppb	78.8985	239.72%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated						
Mn 257.610†	26.5	0.0340 ug/L	0.00893	0.0340 ppb	0.00893	26.26%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	3.0	0.2692 ug/L	0.46452	0.2692 ppb	0.46452	172.55%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	18.4	6.4943 ug/L	11.03877	6.4943 ppb	11.03877	169.98%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	-10.7	-0.3396 ug/L	0.40877	-0.3396 ppb	0.40877	120.38%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	5.4	4.0427 ug/L	5.77866	4.0427 ppb	5.77866	142.94%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	1.1	0.1667 ug/L	2.21641	0.1667 ppb	2.21641	>999.9%
QC value within limits for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	-2.0	-3.6619 ug/L	3.92597	-3.6619 ppb	3.92597	107.21%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	6.1	2.5412 ug/L	1.21364	2.5412 ppb	1.21364	47.76%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	1.4	1.1910 ug/L	3.21606	1.1910 ppb	3.21606	270.03%
QC value within limits for Se 196.026 Recovery = Not calculated						
Si 251.611†	53.3	2.0184 ug/L	0.11336	2.0184 ppb	0.11336	5.62%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	-0.1	-0.0282 ug/L	1.63546	-0.0282 ppb	1.63546	>999.9%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	1.9	0.0149 ug/L	0.07320	0.0149 ppb	0.07320	492.72%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	44.0	0.0721 ug/L	0.18487	0.0721 ppb	0.18487	256.24%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	4.5	1.7540 ug/L	0.37771	1.7540 ppb	0.37771	21.53%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 409.014†	132.6	4.0233 ug/L	1.48156	4.0233 ppb	1.48156	36.82%
QC value within limits for U 409.014 Recovery = Not calculated						
V 292.402†	7.1	0.0676 ug/L	0.17167	0.0676 ppb	0.17167	254.14%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	12.5	0.1527 ug/L	0.02849	0.1527 ppb	0.02849	18.66%
QC value within limits for Zn 213.857 Recovery = Not calculated						
SiO2†	65.2	5.3151 ug/L	1.70367	5.3151 ppb	1.70367	32.05%
QC value within limits for SiO2 Recovery = Not calculated						

All analyte(s) passed QC.

ICPMS#3 Daily Performance Report

Sample ID: Sample

Sample Date/Time: Tuesday, April 20, 2010 12:50:55

Sample Description:

Method File: c:\elandata\Method\daily2.mth

Dataset File: c:\elandata\Dataset\default\Sample.8297

Tuning File: c:\elandata\Tuning\default2.tun

Optimization File: c:\elandata\Optimize\default.dac

Dual Detector Mode: Pulse

Acq. Dead Time(ns): 35

Current Dead Time (ns): 35

Number of Replicates: 5

Summary

Analyte	Mass	Meas. Intens.	Mean	Net Intens.	Mean	Net Intens.	SD	Net Intens.	RSD
Be	9.0		1055.0		1055.039		35.527		3.4
Mg	24.0		7070.3		7070.350		158.540		2.2
Co	58.9		22832.0		22832.034		306.240		1.3
Rh	102.9		69087.3		69087.262		551.509		0.8
In	114.9		97980.1		97980.085		1034.898		1.1
Pb	208.0		80634.1		80634.132		522.676		0.6
[> Ba	137.9		79714.1		79714.135		934.401		1.2
[Ba++	69.0		1297.2		0.016		0.000		1.4
[> Ce	139.9		103461.7		103461.706		487.799		0.5
[CeO	155.9		2503.6		0.024		0.001		3.0
Bkgd	220.0		3.5		3.500		0.791		22.6

Current Optimization File Data

Current Value	Description
1.09	Nebulizer Gas Flow
6.00	Lens Voltage
1450.00	ICP RF Power
-1975.00	Analog Stage Voltage
1400.00	Pulse Stage Voltage
70.00	Discriminator Threshold
-7.00	AC Rod Offset
60.00	Service DAC 1
0.00	Quadrupole Rod Offset

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	13	5.8	950.4
Co	59	13	6.5	21779.6
In	115	13	7.3	124445.3

ICPMS#3 Instrument Tuning Report

File Name: 100420.tun
File Path: C:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas Peak W
He	3.0	3.0	588	2060	0.636
Be	9.0	9.0	2069	2040	0.656
Mg	24.0	24.0	5708	2110	0.605
Mg	25.0	24.9	5883	2020	0.672
Mg	26.0	26.0	6215	2140	0.643
Co	58.9	59.0	14208	2115	0.633
Rh	102.9	102.9	24900	2165	0.657
In	114.9	114.9	27825	2180	0.652
Ce	139.9	139.9	33913	2220	0.615
Pb	206.0	206.0	49991	2280	0.624
Pb	207.0	206.9	50272	2310	0.626
Pb	208.0	208.0	50486	2300	0.631
U	238.1	238.0	57839	2340	0.658

ICPMS#3 - Summary Report

Sample ID: Blank

Sample Date/Time: Tuesday, April 20, 2010 13:33:23

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\misc.mth

Dataset File: C:\elandata\Dataset\100420\Blank.010

Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	ug/L		4	
> Sc	45	ug/L		181124	
V	51	ug/L		3584	
Ni	60	ug/L		34	
Zn	66	ug/L		306	
Zn	67	ug/L		2723	
Zn	68	ug/L		449	
> Ge	74	ug/L		136986	
As	75	ug/L		138	
Se	77	ug/L		973	
Se	82	ug/L		-0	
Kr	83	ug/L		34	
> Lu	175	ug/L		216975	
Tl	205	ug/L		2616	
U	238	ug/L		120	

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	
Sc	45Linear Thru Zero	
V	51Linear Thru Zero	
Ni	60Linear 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	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	
U	238Linear Thru Zero	

QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Be	9				
> Sc	45				
V	51				
Ni	60				
Zn	66				
Zn	67				
Zn	68				
> Ge	74				
As	75				
Se	77				

Sample ID: Blank

Report Date/Time: Tuesday, April 20, 2010 13:34:26

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	Se	82
	Kr	83
[>	Lu	175
	Tl	205
	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#3 - Summary Report

Sample ID: Standard 1

Sample Date/Time: Tuesday, April 20, 2010 13:36:44

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\misc.mth

Dataset File: C:\elandata\Dataset\100420\Standard 1.011

Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	10.000 ug/L	10.830	720	0.004
>	Sc	45	ug/L		182727	182727.487
|	V	51	10.000 ug/L	3.811	21388	0.097
|	Ni	60	10.000 ug/L	3.329	3379	0.018
[	Zn	66	10.000 ug/L	4.277	3232	0.021
|	Zn	67	ug/L		3454	0.005
|	Zn	68	ug/L		3118	0.019
>	Ge	74	ug/L		139302	139301.666
|	As	75	10.000 ug/L	1.372	4077	0.028
|	Se	77	ug/L		1389	0.003
|	Se	82	10.000 ug/L	1.186	390	0.003
|	Kr	83	ug/L		23	-0.000
>	Lu	175	ug/L		219168	219167.744
|	Tl	205	10.000 ug/L	1.357	107679	0.479
|	U	238	10.000 ug/L	0.522	153997	0.702

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
V	51Linear Thru Zero	1.0000
Ni	60Linear 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	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Be	9				
>	Sc	45				
|	V	51				
|	Ni	60				
[	Zn	66				
|	Zn	67				
|	Zn	68				
>	Ge	74				
	As	75				
	Se	77				

Sample ID: Standard 1

Report Date/Time: Tuesday, April 20, 2010 13:37:44

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	Se	82
	Kr	83
[>	Lu	175
	Tl	205
	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#3 - Summary Report

Sample ID: Standard 2

Sample Date/Time: Tuesday, April 20, 2010 13:40:03

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\misc.mth

Dataset File: C:\elandata\Dataset\100420\Standard 2.012

Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	99.933 ug/L	7.836	6470	0.037
>	Sc	45	ug/L		176300	176300.162
|	V	51	100.017 ug/L	2.910	177962	0.990
[	Ni	60	99.953 ug/L	0.572	30835	0.175
[	Zn	66	100.018 ug/L	0.442	28517	0.213
|	Zn	67	ug/L		8200	0.042
|	Zn	68	ug/L		24922	0.185
>	Ge	74	ug/L		132216	132215.584
|	As	75	100.060 ug/L	0.910	39915	0.301
|	Se	77	ug/L		4374	0.026
|	Se	82	100.080 ug/L	1.439	4032	0.031
[	Kr	83	ug/L		26	-0.000
>	Lu	175	ug/L		213822	213821.892
|	Tl	205	99.985 ug/L	0.801	1011920	4.721
[	U	238	99.977 ug/L	0.600	1467886	6.865

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Be	9				
>	Sc	45				
|	V	51				
[	Ni	60				
[	Zn	66				
|	Zn	67				
|	Zn	68				
>	Ge	74				
	As	75				
	Se	77				

Sample ID: Standard 2

Report Date/Time: Tuesday, April 20, 2010 13:41:02

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	Se	82
	Kr	83
>	Lu	175
	Tl	205
	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#3 - Summary Report

Sample ID: QC Std 1

Sample Date/Time: Tuesday, April 20, 2010 13:43:22

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\misc.mth

Dataset File: C:\elandata\Dataset\100420\QC Std 1.013

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	50.432	ug/L	8.966	3338	0.018
> Sc	45		ug/L		180259	180259.466
V	51	48.853	ug/L	2.522	90729	0.484
Ni	60	52.210	ug/L	1.674	16485	0.091
Zn	66	50.651	ug/L	3.547	14976	0.108
Zn	67		ug/L		5706	0.022
Zn	68		ug/L		13047	0.093
> Ge	74		ug/L		135744	135743.556
As	75	50.717	ug/L	0.453	20842	0.153
Se	77		ug/L		2687	0.013
Se	82	49.632	ug/L	4.296	2053	0.015
Kr	83		ug/L		20	-0.000
> Lu	175		ug/L		217492	217492.056
Tl	205	49.890	ug/L	1.050	514898	2.356
U	238	51.723	ug/L	1.000	772468	3.551

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Be	9	100.865				
> Sc	45		99.5			
V	51	97.706				
Ni	60	104.420				
Zn	66	101.303				
Zn	67					
Zn	68					
> Ge	74		99.1			
As	75	101.434				
Se	77					

Sample ID: QC Std 1

Report Date/Time: Tuesday, April 20, 2010 13:44:22

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	Se	82	99.264	
	Kr	83		
{>	Lu	175		100.2
	Tl	205	99.781	
	U	238	103.446	

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 2

Sample Date/Time: Tuesday, April 20, 2010 13:46:43

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\misc.mth

Dataset File: C:\elandata\Dataset\100420\QC Std 2.014

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	-0.016	ug/L	152.736	3	-0.000
Sc	45		ug/L		182699	182699.227
V	51	-0.122	ug/L	190.084	3386	-0.001
Ni	60	-0.023	ug/L	56.484	27	-0.000
Zn	66	-0.048	ug/L	189.265	289	-0.000
Zn	67		ug/L		2816	0.001
Zn	68		ug/L		466	0.000
Ge	74		ug/L		135290	135290.394
As	75	0.016	ug/L	798.046	143	0.000
Se	77		ug/L		1036	0.001
Se	82	0.691	ug/L	14.418	28	0.000
Kr	83		ug/L		15	-0.000
Lu	175		ug/L		216138	216137.824
Tl	205	-0.009	ug/L	423.740	2520	-0.000
U	238	-0.001	ug/L	48.432	112	-0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Be	9					
Sc	45		100.9			
V	51					
Ni	60					
Zn	66					
Zn	67					
Zn	68					
Ge	74		98.8			
As	75					
Se	77					

Sample ID: QC Std 2

Report Date/Time: Tuesday, April 20, 2010 13:47:46

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	Se	82	
	Kr	83	
[>	Lu	175	99.6
	Tl	205	
	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#3 - Summary Report

Sample ID: QC Std 3

Sample Date/Time: Tuesday, April 20, 2010 13:50:05

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\misc.mth

Dataset File: C:\elandata\Dataset\100420\QC Std 3.015

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	0.674	ug/L	7.749	50	0.000
Sc	45		ug/L		184617	184617.098
V	51	11.389	ug/L	8.724	24438	0.113
Ni	60	2.398	ug/L	2.126	808	0.004
Zn	66	11.973	ug/L	1.355	3808	0.026
Zn	67		ug/L		3577	0.006
Zn	68		ug/L		3469	0.022
Ge	74		ug/L		137075	137074.554
As	75	6.111	ug/L	10.292	2657	0.018
Se	77		ug/L		1261	0.002
Se	82	5.851	ug/L	5.070	244	0.002
Kr	83		ug/L		18	-0.000
Lu	175		ug/L		217855	217854.611
Tl	205	1.032	ug/L	0.492	13241	0.049
U	238	0.291	ug/L	1.140	4472	0.020

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Be	9	134.802				
Sc	45		101.9			
V	51	113.893				
Ni	60	119.907				
Zn	66	119.726				
Zn	67					
Zn	68					
Ge	74		100.1			
As	75	122.224				
Se	77					

Sample ID: QC Std 3

Report Date/Time: Tuesday, April 20, 2010 13:51:06

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	Se	82	117.027	
	Kr	83		
[>	Lu	175		100.4
	Tl	205	103.198	
	U	238	145.442	

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 3	Be	9CRDL is out of limits
QC Std 3	U	238CRDL is out of limits

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 4

Sample Date/Time: Tuesday, April 20, 2010 13:53:25

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\misc.mth

Dataset File: C:\elandata\Dataset\100420\QC Std 4.016

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	0.096	ug/L	108.017	8	0.000
> Sc	45		ug/L		146033	146033.064
V	51	-1.905	ug/L	22.162	137	-0.019
Ni	60	3.036	ug/L	4.019	802	0.005
Zn	66	2.872	ug/L	5.119	955	0.006
Zn	67		ug/L		1962	-0.003
Zn	68		ug/L		484	0.001
> Ge	74		ug/L		114234	114233.716
As	75	0.502	ug/L	131.692	288	0.002
Se	77		ug/L		1361	0.005
Se	82	-0.173	ug/L	235.710	-6	-0.000
Kr	83		ug/L		72	0.000
> Lu	175		ug/L		173870	173870.092
Tl	205	-0.178	ug/L	2.554	633	-0.008
U	238	-0.004	ug/L	11.885	44	-0.000

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
V	51Linear Thru Zero	1.0000
Ni	60Linear 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	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Be	9					
> Sc	45		80.6			
V	51					
Ni	60	91.729				
Zn	66	76.396				
Zn	67					
Zn	68					
> Ge	74		83.4			
As	75					
Se	77					

Sample ID: QC Std 4

Report Date/Time: Tuesday, April 20, 2010 13:54:26

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	Se	82	
	Kr	83	
[>	Lu	175	80.1
	Tl	205	
	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#3 - Summary Report

Sample ID: QC Std 5

Sample Date/Time: Tuesday, April 20, 2010 13:56:46

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\misc.mth

Dataset File: C:\elandata\Dataset\100420\QC Std 5.017

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	19.389	ug/L	4.639	1315	0.007
Sc	45		ug/L		184321	184320.743
V	51	18.936	ug/L	5.961	38161	0.187
Ni	60	19.960	ug/L	2.502	6467	0.035
Zn	66	20.444	ug/L	1.966	6237	0.044
Zn	67		ug/L		4051	0.010
Zn	68		ug/L		5562	0.038
Ge	74		ug/L		135985	135984.583
As	75	19.400	ug/L	1.233	8072	0.058
Se	77		ug/L		1620	0.005
Se	82	18.899	ug/L	5.890	783	0.006
Kr	83		ug/L		23	-0.000
Lu	175		ug/L		220515	220515.148
Tl	205	19.638	ug/L	0.841	207115	0.927
U	238	19.676	ug/L	0.965	298029	1.351

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Be	9	96.945				
Sc	45		101.8			
V	51	94.678				
Ni	60	85.630				
Zn	66	86.045				
Zn	67					
Zn	68					
Ge	74		99.3			
As	75	97.001				
Se	77					

Sample ID: QC Std 5

Report Date/Time: Tuesday, April 20, 2010 13:57:48

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	Se	82	94.494	
	Kr	83		
>	Lu	175		101.6
	Tl	205	98.188	
	U	238	98.381	

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Tuesday, April 20, 2010 14:00:07

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\misc.mth

Dataset File: C:\elandata\Dataset\100420\QC Std 6.018

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	48.844	ug/L	6.470	3282	0.018
> Sc	45		ug/L		183015	183014.911
V	51	49.482	ug/L	2.283	93255	0.490
Ni	60	51.421	ug/L	0.535	16483	0.090
Zn	66	51.145	ug/L	1.272	14968	0.109
Zn	67		ug/L		5845	0.024
Zn	68		ug/L		13203	0.095
> Ge	74		ug/L		134382	134382.483
As	75	50.755	ug/L	1.251	20648	0.153
Se	77		ug/L		2798	0.014
Se	82	51.554	ug/L	3.613	2111	0.016
Kr	83		ug/L		22	-0.000
> Lu	175		ug/L		216548	216548.097
Tl	205	49.968	ug/L	1.580	513461	2.359
U	238	52.297	ug/L	1.451	777696	3.591

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Be	9	97.688				
> Sc	45		101.0			
V	51	98.965				
Ni	60	102.841				
Zn	66	102.291				
Zn	67					
Zn	68					
> Ge	74		98.1			
As	75	101.510				
Se	77					

Sample ID: QC Std 6

Report Date/Time: Tuesday, April 20, 2010 14:01:09

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	Se	82	103.107	
	Kr	83		
[>	Lu	175		99.8
	Tl	205	99.935	
	U	238	104.595	

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Tuesday, April 20, 2010 14:03:30

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\misc.mth

Dataset File: C:\elandata\Dataset\100420\QC Std 7.019

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	0.013	ug/L	209.553	5	0.000
> Sc	45		ug/L		187970	187970.345
V	51	-0.407	ug/L	39.083	2968	-0.004
Ni	60	-0.019	ug/L	97.466	29	-0.000
Zn	66	0.077	ug/L	71.325	331	0.000
Zn	67		ug/L		3083	0.002
Zn	68		ug/L		486	0.000
> Ge	74		ug/L		138003	138003.435
As	75	-0.033	ug/L	1090.234	125	-0.000
Se	77		ug/L		1049	0.000
Se	82	0.692	ug/L	12.928	29	0.000
Kr	83		ug/L		22	-0.000
> Lu	175		ug/L		218730	218730.358
Tl	205	0.022	ug/L	167.989	2870	0.001
U	238	0.000	ug/L	499.983	124	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Be	9					
> Sc	45		103.8			
V	51					
Ni	60					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		100.7			
As	75					
Se	77					

Sample ID: QC Std 7

Report Date/Time: Tuesday, April 20, 2010 14:04:33

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	Se	82	
	Kr	83	
[>	Lu	175	100.8
	Tl	205	
	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#3 - Summary Report

Sample ID: 1202053069

Sample Date/Time: Tuesday, April 20, 2010 14:06:52

Sample Type:

Sample Description: LANL 6020 MB

Number of Replicates: 3

Batch ID: 957498|2|prb

Method File: c:\elandata\Method\misc.mth

Dataset File: C:\elandata\Dataset\100420\1202053069.020

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	0.001	ug/L	1624.422	4	0.000
> Sc	45		ug/L		192734	192734.392
V	51	-0.655	ug/L	8.137	2562	-0.006
Ni	60	0.042	ug/L	32.443	50	0.000
Zn	66	0.279	ug/L	21.497	391	0.001
Zn	67		ug/L		2512	-0.002
Zn	68		ug/L		522	0.001
> Ge	74		ug/L		138109	138109.452
As	75	0.045	ug/L	237.726	158	0.000
Se	77		ug/L		835	-0.001
Se	82	0.432	ug/L	69.178	18	0.000
Kr	83		ug/L		15	-0.000
> Lu	175		ug/L		225451	225451.429
Tl	205	-0.137	ug/L	7.274	1263	-0.006
U	238	0.012	ug/L	8.932	308	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Be	9					
> Sc	45		106.4			
V	51					
Ni	60					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		100.8			
As	75					
Se	77					

Sample ID: 1202053069

Report Date/Time: Tuesday, April 20, 2010 14:07:53

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	Se	82	
	Kr	83	
[>	Lu	175	103.9
	Tl	205	
[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#3 - Summary Report

Sample ID: 1202053074

Sample Date/Time: Tuesday, April 20, 2010 14:10:13

Sample Type:

Sample Description: LANL 6020 LCS

Number of Replicates: 3

Batch ID: 957498|40|prb

Method File: c:\elandata\Method\misc.mth

Dataset File: C:\elandata\Dataset\100420\1202053074.021

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	19.583	ug/L	0.193	1373	0.007
Sc	45		ug/L		190737	190737.211
V	51	21.353	ug/L	3.141	44077	0.211
Ni	60	36.448	ug/L	1.785	12185	0.064
Zn	66	158.314	ug/L	1.255	47209	0.338
Zn	67		ug/L		11302	0.062
Zn	68		ug/L		41536	0.296
Ge	74		ug/L		138812	138811.573
As	75	27.469	ug/L	2.314	11606	0.083
Se	77		ug/L		3531	0.018
Se	82	75.174	ug/L	1.377	3180	0.023
Kr	83		ug/L		26	-0.000
Lu	175		ug/L		221937	221936.886
Tl	205	31.773	ug/L	1.355	335600	1.500
U	238	0.593	ug/L	1.718	9155	0.041

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Be	9					
Sc	45		105.3			
V	51					
Ni	60					
Zn	66					
Zn	67					
Zn	68					
Ge	74		101.3			
As	75					
Se	77					

Sample ID: 1202053074

Report Date/Time: Tuesday, April 20, 2010 14:11:14

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	Se	82	
	Kr	83	
>	Lu	175	102.3
	Tl	205	
	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#3 - Summary Report

Sample ID: 247790002

Sample Date/Time: Tuesday, April 20, 2010 14:13:34

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 957498[2]prb

Method File: c:\elandata\Method\misc.mth

Dataset File: C:\elandata\Dataset\100420\247790002.022

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	2.294	ug/L	5.837	172	0.001
> Sc	45		ug/L		199419	199418.992
V	51	61.173	ug/L	2.426	124695	0.606
Ni	60	35.285	ug/L	1.190	12336	0.062
Zn	66	135.189	ug/L	0.854	37420	0.288
Zn	67		ug/L		9246	0.052
Zn	68		ug/L		36491	0.280
> Ge	74		ug/L		128711	128710.514
As	75	5.009	ug/L	9.441	2069	0.015
Se	77		ug/L		733	-0.001
Se	82	0.261	ug/L	175.643	10	0.000
Kr	83		ug/L		76	0.000
> Lu	175		ug/L		222337	222337.402
Tl	205	0.752	ug/L	4.539	10570	0.035
U	238	15.031	ug/L	0.806	229591	1.032

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Be	9					
> Sc	45		110.1			
V	51					
Ni	60					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		94.0			
As	75					
Se	77					

Sample ID: 247790002

Report Date/Time: Tuesday, April 20, 2010 14:14:35

Page 1

|	Se	82	
|	Kr	83	
[>	Lu	175	102.5
|	Tl	205	
	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#3 - Summary Report

Sample ID: 1202053070

Sample Date/Time: Tuesday, April 20, 2010 14:16:56

Sample Type:

Sample Description: LANL 6020 DUP

Number of Replicates: 3

Batch ID: 957498[2]prb

Method File: c:\elandata\Method\misc.mth

Dataset File: C:\elandata\Dataset\100420\1202053070.023

Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	2.025 ug/L	10.767	153	0.001
>	Sc	45	ug/L		200806	200805.973
|	V	51	43.047 ug/L	2.160	89532	0.426
|	Ni	60	26.509 ug/L	1.073	9341	0.046
[	Zn	66	106.024 ug/L	1.700	29802	0.226
|	Zn	67	ug/L		7547	0.038
|	Zn	68	ug/L		27822	0.210
>	Ge	74	ug/L		130425	130424.983
|	As	75	3.835 ug/L	12.170	1636	0.012
|	Se	77	ug/L		709	-0.002
|	Se	82	0.620 ug/L	105.413	24	0.000
|	Kr	83	ug/L		49	0.000
>	Lu	175	ug/L		226690	226690.375
|	Tl	205	0.293 ug/L	3.006	5874	0.014
|	U	238	9.045 ug/L	0.587	140903	0.621

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
V	51Linear Thru Zero	1.0000
Ni	60Linear 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	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Be	9			
>	Sc	45	110.9		
|	V	51			
|	Ni	60			
[	Zn	66			
|	Zn	67			
|	Zn	68			
>	Ge	74	95.2		
|	As	75			
	Se	77			

Sample ID: 1202053070

Report Date/Time: Tuesday, April 20, 2010 14:17:57

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	Se	82	
	Kr	83	
>	Lu	175	104.5
	Tl	205	
	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#3 - Summary Report

Sample ID: 1202053072

Sample Date/Time: Tuesday, April 20, 2010 14:20:17

Sample Type:

Sample Description: LANL 6020 MS

Number of Replicates: 3

Batch ID: 957498|2|prb

Method File: c:\elandata\Method\misc.mth

Dataset File: C:\elandata\Dataset\100420\1202053072.024

Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be 9	23.312	ug/L	3.004	1727	0.009
> Sc 45		ug/L		201543	201542.554
V 51	69.304	ug/L	3.288	142229	0.686
Ni 60	49.999	ug/L	1.843	17648	0.087
Zn 66	136.053	ug/L	2.228	37710	0.290
Zn 67		ug/L		9070	0.050
Zn 68		ug/L		35298	0.271
> Ge 74		ug/L		128900	128899.876
As 75	43.860	ug/L	0.814	17132	0.132
Se 77		ug/L		953	0.000
Se 82	8.727	ug/L	3.298	343	0.003
Kr 83		ug/L		54	0.000
> Lu 175		ug/L		224516	224516.447
Tl 205	50.159	ug/L	0.865	534392	2.368
U 238	37.599	ug/L	0.872	579714	2.582

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
V	51Linear Thru Zero	1.0000
Ni	60Linear 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	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Be 9					
> Sc 45		111.3			
V 51					
Ni 60					
Zn 66					
Zn 67					
Zn 68					
> Ge 74		94.1			
As 75					
Se 77					

Sample ID: 1202053072

Report Date/Time: Tuesday, April 20, 2010 14:21:19

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	Se	82	
	Kr	83	
>	Lu	175	103.5
	Tl	205	
	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#3 - Summary Report

Sample ID: 1202053073

Sample Date/Time: Tuesday, April 20, 2010 14:23:40

Sample Type:

Sample Description: LANL 6020 MSD

Number of Replicates: 3

Batch ID: 957498|2|prb

Method File: c:\elandata\Method\misc.mth

Dataset File: C:\elandata\Dataset\100420\1202053073.025

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	21.662	ug/L	5.304	1592	0.008
> Sc	45		ug/L		199942	199941.980
V	51	75.540	ug/L	1.477	153461	0.748
Ni	60	51.565	ug/L	0.875	18056	0.090
Zn	66	133.999	ug/L	1.684	36737	0.286
Zn	67		ug/L		9121	0.052
Zn	68		ug/L		34923	0.271
> Ge	74		ug/L		127469	127469.467
As	75	42.073	ug/L	0.871	16258	0.127
Se	77		ug/L		899	-0.000
Se	82	8.884	ug/L	5.618	345	0.003
Kr	83		ug/L		56	0.000
> Lu	175		ug/L		222623	222622.768
Tl	205	47.870	ug/L	0.046	505851	2.260
U	238	34.965	ug/L	0.829	534576	2.401

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Be	9					
> Sc	45		110.4			
V	51					
Ni	60					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		93.1			
As	75					
Se	77					

Sample ID: 1202053073

Report Date/Time: Tuesday, April 20, 2010 14:24:42

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	Se	82	
	Kr	83	
[>	Lu	175	102.6
	Tl	205	
	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#3 - Summary Report

Sample ID: 1202053071

Sample Date/Time: Tuesday, April 20, 2010 14:27:04

Sample Type:

Sample Description: LANL 6020 SDILT

Number of Replicates: 3

Batch ID: 957498|10|prb

Method File: c:\elandata\Method\misc.mth

Dataset File: C:\elandata\Dataset\100420\1202053071.026

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	0.559	ug/L	16.471	43	0.000
> Sc	45		ug/L		190583	190583.358
V	51	12.609	ug/L	2.988	27560	0.125
Ni	60	7.962	ug/L	1.331	2688	0.014
Zn	66	32.441	ug/L	2.292	9495	0.069
Zn	67		ug/L		4370	0.013
Zn	68		ug/L		8851	0.063
> Ge	74		ug/L		132840	132839.840
As	75	0.859	ug/L	16.632	477	0.003
Se	77		ug/L		781	-0.001
Se	82	0.381	ug/L	60.725	15	0.000
Kr	83		ug/L		27	-0.000
> Lu	175		ug/L		221891	221890.920
Tl	205	0.107	ug/L	5.075	3794	0.005
U	238	3.050	ug/L	1.444	46587	0.209

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Be	9					
> Sc	45		105.2			
V	51					
Ni	60					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		97.0			
As	75					
Se	77					

Sample ID: 1202053071

Report Date/Time: Tuesday, April 20, 2010 14:28:06

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	Se	82	
	Kr	83	
[>	Lu	175	102.3
	Tl	205	
	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#3 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Tuesday, April 20, 2010 14:30:26

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\misc.mth

Dataset File: C:\elandata\Dataset\100420\QC Std 6.027

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	47.584	ug/L	7.879	3313	0.017
> Sc	45		ug/L		189531	189531.043
V	51	48.478	ug/L	2.705	94672	0.480
Ni	60	50.814	ug/L	1.206	16866	0.089
Zn	66	51.080	ug/L	1.420	15344	0.109
Zn	67		ug/L		5916	0.023
Zn	68		ug/L		13604	0.095
> Ge	74		ug/L		137938	137937.530
As	75	50.196	ug/L	0.723	20961	0.151
Se	77		ug/L		2766	0.013
Se	82	48.395	ug/L	2.797	2034	0.015
Kr	83		ug/L		24	-0.000
> Lu	175		ug/L		219488	219487.858
Tl	205	49.751	ug/L	1.304	518175	2.349
U	238	52.119	ug/L	0.984	785545	3.579

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Be	9	95.167				
> Sc	45		104.6			
V	51	96.956				
Ni	60	101.628				
Zn	66	102.160				
Zn	67					
Zn	68					
> Ge	74		100.7			
As	75	100.392				
Se	77					

Sample ID: QC Std 6

Report Date/Time: Tuesday, April 20, 2010 14:31:28

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	Se	82	96.790	
	Kr	83		
[>	Lu	175		101.2
	Tl	205	99.501	
	U	238	104.237	

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Tuesday, April 20, 2010 14:33:49

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\misc.mth

Dataset File: C:\elandata\Dataset\100420\QC Std 7.028

Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be 9	0.001	ug/L	5243.308	4	0.000
>	Sc 45		ug/L		192429	192428.706
|	V 51	0.294	ug/L	108.369	4359	0.003
|	Ni 60	-0.024	ug/L	71.557	28	-0.000
[	Zn 66	0.250	ug/L	59.824	380	0.001
|	Zn 67		ug/L		2990	0.002
|	Zn 68		ug/L		507	0.000
>	Ge 74		ug/L		137232	137232.084
|	As 75	0.219	ug/L	119.381	229	0.001
|	Se 77		ug/L		1098	0.001
|	Se 82	0.561	ug/L	11.137	23	0.000
|	Kr 83		ug/L		23	-0.000
>	Lu 175		ug/L		220497	220496.897
|	Tl 205	-0.053	ug/L	57.762	2108	-0.002
|	U 238	-0.002	ug/L	10.479	96	-0.000

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
V	51Linear Thru Zero	1.0000
Ni	60Linear 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	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Be 9					
>	Sc 45		106.2			
|	V 51					
|	Ni 60					
[	Zn 66					
|	Zn 67					
|	Zn 68					
>	Ge 74		100.2			
|	As 75					
|	Se 77					

Sample ID: QC Std 7

Report Date/Time: Tuesday, April 20, 2010 14:34:52

Page 1

|	Se	82	
|	Kr	83	
|>	Lu	175	101.6
|	Tl	205	
	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#3 - Summary Report

Sample ID: 247790003

Sample Date/Time: Tuesday, April 20, 2010 14:37:12

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 957498|2|prb

Method File: c:\elandata\Method\misc.mth

Dataset File: C:\elandata\Dataset\100420\247790003.029

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	1.462	ug/L	5.305	113	0.001
> Sc	45		ug/L		203104	203104.483
V	51	20.858	ug/L	3.042	45947	0.206
Ni	60	25.987	ug/L	1.171	9263	0.045
Zn	66	114.093	ug/L	0.700	32007	0.243
Zn	67		ug/L		8024	0.042
Zn	68		ug/L		29329	0.222
> Ge	74		ug/L		130279	130278.778
As	75	2.553	ug/L	8.839	1132	0.008
Se	77		ug/L		722	-0.002
Se	82	0.491	ug/L	36.580	19	0.000
Kr	83		ug/L		52	0.000
> Lu	175		ug/L		228069	228069.242
Tl	205	0.241	ug/L	1.654	5343	0.011
U	238	7.946	ug/L	1.835	124543	0.546

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Be	9					
> Sc	45		112.1			
V	51					
Ni	60					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		95.1			
As	75					
Se	77					

Sample ID: 247790003

Report Date/Time: Tuesday, April 20, 2010 14:38:13

Page 1

|	Se	82	
|	Kr	83	
|	Lu	175	105.1
|	Tl	205	
|	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#3 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Tuesday, April 20, 2010 14:57:26

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\misc.mth

Dataset File: C:\elandata\Dataset\100420\QC Std 6.035

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	47.371	ug/L	9.491	3286	0.017
> Sc	45		ug/L		188810	188810.075
V	51	46.430	ug/L	3.285	90486	0.460
Ni	60	49.428	ug/L	1.072	16349	0.086
Zn	66	52.694	ug/L	3.179	15201	0.112
Zn	67		ug/L		5646	0.023
Zn	68		ug/L		13275	0.097
> Ge	74		ug/L		132557	132557.190
As	75	50.320	ug/L	3.476	20190	0.151
Se	77		ug/L		2594	0.012
Se	82	47.879	ug/L	2.943	1934	0.015
Kr	83		ug/L		22	-0.000
> Lu	175		ug/L		216622	216621.663
Tl	205	49.973	ug/L	1.851	513645	2.359
U	238	52.081	ug/L	1.430	774662	3.576

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Be	9	94.742				
> Sc	45		104.2			
V	51	92.860				
Ni	60	98.856				
Zn	66	105.389				
Zn	67					
Zn	68					
> Ge	74		96.8			
As	75	100.641				
Se	77					

Sample ID: QC Std 6

Report Date/Time: Tuesday, April 20, 2010 14:58:27

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	Se	82	95.757	
	Kr	83		
[>	Lu	175		99.8
	Tl	205	99.945	
	U	238	104.161	

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#3 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Tuesday, April 20, 2010 15:00:49

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\misc.mth

Dataset File: C:\elandata\Dataset\100420\QC Std 7.036

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	0.011	ug/L	394.889	5	0.000
> Sc	45		ug/L		191719	191718.561
V	51	0.320	ug/L	56.695	4399	0.003
Ni	60	-0.030	ug/L	54.744	26	-0.000
Zn	66	0.400	ug/L	13.432	417	0.001
Zn	67		ug/L		2961	0.002
Zn	68		ug/L		574	0.001
> Ge	74		ug/L		135207	135207.221
As	75	0.298	ug/L	129.202	258	0.001
Se	77		ug/L		1041	0.001
Se	82	0.673	ug/L	20.512	27	0.000
Kr	83		ug/L		20	-0.000
> Lu	175		ug/L		216522	216522.342
Tl	205	-0.039	ug/L	97.167	2211	-0.002
U	238	-0.001	ug/L	11.825	102	-0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Be	9					
> Sc	45		105.8			
V	51					
Ni	60					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		98.7			
As	75					
Se	77					

Sample ID: QC Std 7

Report Date/Time: Tuesday, April 20, 2010 15:01:51

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	Se	82	
	Kr	83	
[>	Lu	175	99.8
	Tl	205	
	U	238	

QC Out Of Limits

Measurement Type Analyte

MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

Method Name: SOIL
 Method Description: 7471A, ILM04 ANALYST JXL1
 Element: Hg

Date: 03/02/2010
 Technique: FI-MHS
 Calibration Type:
 Hg, Calc. Intercept : Linear
 Wavelength: 253.7 nm
 Sample Info Name: 030210S1.SIF Results Data Set Name: 030210S1

Element: Hg Seq. No.: 1 AS Loc.: 1 Date: 03/02/2010
 Sample ID: Calib Blank

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1			0.0050	0.0050	08:34:11	No
2			0.0049	0.0049	08:34:46	No
Mean:			0.0050			
SD :			0.0001			
%RSD:			2.2999			

Auto-zero performed.

Element: Hg Seq. No.: 2 AS Loc.: 2 Date: 03/02/2010
 Sample ID: S0.2

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1			0.0026	0.0076	08:36:09	No
2			0.0026	0.0076	08:36:45	No
Mean:			0.0026			
SD :			0.0000			
%RSD:			0.4799			

[Hg] Standard number 1 applied. [0.200]

Correlation Coefficient: 1.00000

Slope: 0.01318

Intercept : 0.00000

Element: Hg Seq. No.: 3 AS Loc.: 3 Date: 03/02/2010
 Sample ID: S0.5

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1			0.0054	0.0104	08:38:07	No
2			0.0054	0.0104	08:38:43	No
Mean:			0.0054			
SD :			0.0000			
%RSD:			0.7607			

[Hg] Standard number 2 applied. [0.500]

Correlation Coefficient: 0.99502

Slope: 0.01071

Intercept : 0.00019

Element: Hg Seq. No.: 4 AS Loc.: 4 Date: 03/02/2010
 Sample ID: S2.0

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1			0.0211	0.0261	08:40:07	No
2			0.0213	0.0262	08:40:42	No
Mean:			0.0212			
SD :			0.0001			
%RSD:			0.4540			

[Hg] Standard number 3 applied. [2.000]

Correlation Coefficient: 0.99972
Intercept : 0.00023

Slope: 0.01049

=====

Element: Hg Seq. No.: 5 AS Loc.: 5 Date: 03/02/2010
Sample ID: S5.0

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1			0.0517	0.0567	08:42:07	No
2			0.0520	0.0569	08:42:42	No
Mean:			0.0519			
SD :			0.0002			
%RSD:			0.3292			

[Hg] Standard number 4 applied. [5.000]
Correlation Coefficient: 0.99994 Slope: 0.01033
Intercept : 0.00032

=====

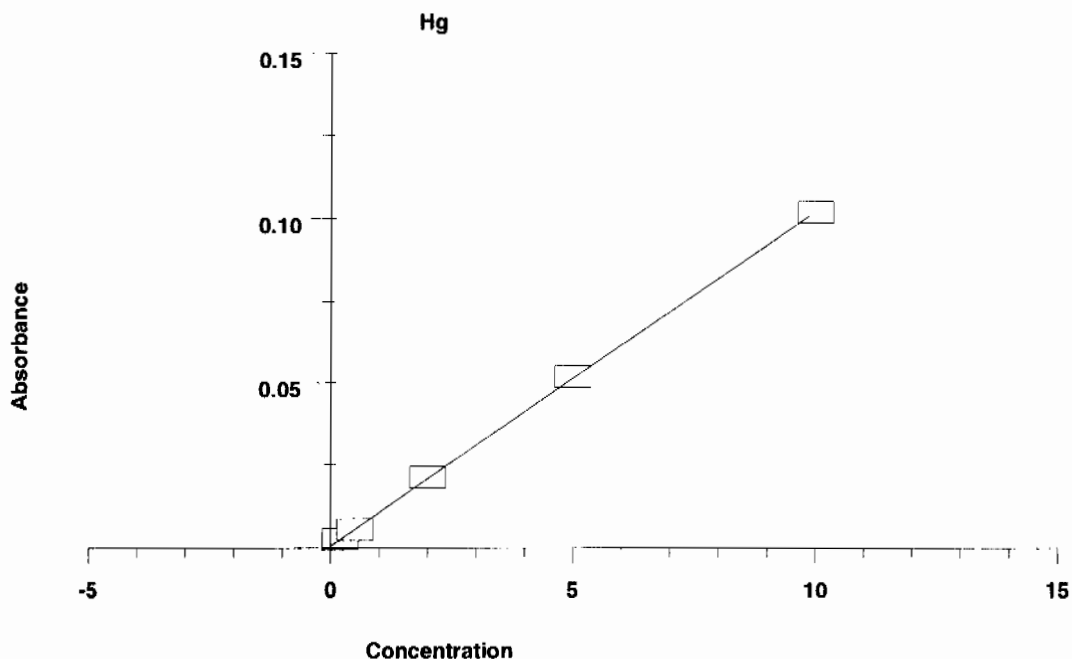
Element: Hg Seq. No.: 6 AS Loc.: 6 Date: 03/02/2010
Sample ID: S10

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1			0.1011	0.1060	08:44:08	No
2			0.1030	0.1080	08:44:42	No
Mean:			0.1020			
SD :			0.0014			
%RSD:			1.3403			

[Hg] Standard number 5 applied. [10.00]
Correlation Coefficient: 0.99996 Slope: 0.01018
Intercept : 0.00048

Calibration data for Hg

Standard ID	Mean Signal (Pk Height)	Entered Concentration (µg/L)	Calculated Concentration (µg/L)	Standard Deviation	%RSD
Calib Blank	0.0050	---	----	----	----
S0.2	0.0026	0.200	0.212	0.0000	0.5
S0.5	0.0054	0.500	0.485	0.0000	0.8
S2.0	0.0212	2.000	2.035	0.0001	0.5
S5.0	0.0519	5.000	5.045	0.0002	0.3
S10	0.1020	10.000	9.971	0.0014	1.3
Correlation Coefficient: 0.99996		Slope:	0.01018	Intercept:	0.0005



=====
 Element: Hg Seq. No.: 7 AS Loc.: 9 Date: 03/02/2010
 Sample ID: ICV

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	5.166	5.166	0.0531	0.0581	08:46:11	No
2	5.156	5.156	0.0530	0.0580	08:46:45	No
Mean:	5.161	5.161	0.0530			
SD :	0.0074	0.0074	0.0001			
%RSD:	0.1	0.1	0.1419			

QC value within specified limits.

=====
 Element: Hg Seq. No.: 8 AS Loc.: 10 Date: 03/02/2010
 Sample ID: ICB

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	-0.109	-0.109	-0.0006	0.0043	08:48:08	No
2	-0.114	-0.114	-0.0007	0.0043	08:48:43	No
Mean:	-0.112	-0.112	-0.0007			
SD :	0.0037	0.0037	0.0000			
%RSD:	3.3	3.3	5.6706			

QC value within specified limits.

=====
 Element: Hg Seq. No.: 9 AS Loc.: 11 Date: 03/02/2010
 Sample ID: CRDL

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.158	0.158	0.0021	0.0071	08:50:04	No
2	0.156	0.156	0.0021	0.0070	08:50:39	No
Mean:	0.157	0.157	0.0021			
SD :	0.0015	0.0015	0.0000			
%RSD:	0.9	0.9	0.7131			

QC value within specified limits.

=====

Element: Hg Seq. No.: 10 AS Loc.: 7 Date: 03/02/2010

Sample ID: CCV

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	4.999	4.999	0.0514	0.0564	08:52:04	No
2	5.030	5.030	0.0517	0.0567	08:52:39	No
Mean:	5.014	5.014	0.0515			
SD :	0.0216	0.0216	0.0002			
%RSD:	0.4	0.4	0.4272			

QC value within specified limits.

=====

Element: Hg Seq. No.: 11 AS Loc.: 8 Date: 03/02/2010

Sample ID: CCB

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	-0.027	-0.027	0.0002	0.0052	08:54:07	No
2	-0.033	-0.033	0.0001	0.0051	08:54:42	No
Mean:	-0.030	-0.030	0.0002			
SD :	0.0037	0.0037	0.0000			
%RSD:	12.4	12.4	22.0391			

QC value within specified limits.

=====

Element: Hg Seq. No.: 12 AS Loc.: 12 Date: 03/02/2010

Sample ID: 1202055865|i||958596|MB

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	-0.084	-0.084	-0.0004	0.0046	08:56:08	No
2	-0.090	-0.090	-0.0004	0.0045	08:56:43	No
Mean:	-0.087	-0.087	-0.0004			
SD :	0.0041	0.0041	0.0000			
%RSD:	4.8	4.8	10.4650			

=====

Element: Hg Seq. No.: 13 AS Loc.: 13 Date: 03/02/2010

Sample ID: 1202055866|i|10|LCS

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	3.382	3.382	0.0349	0.0399	08:58:10	No
2	3.354	3.354	0.0346	0.0396	08:58:45	No
Mean:	3.368	3.368	0.0348			
SD :	0.0204	0.0204	0.0002			
%RSD:	0.6	0.6	0.5984			

=====

Element: Hg Seq. No.: 14 AS Loc.: 14 Date: 03/02/2010

Sample ID: 246974001|i|||

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.150	0.150	0.0020	0.0070	09:00:11	No
2	0.138	0.138	0.0019	0.0069	09:00:47	No
Mean:	0.144	0.144	0.0019			
SD :	0.0080	0.0080	0.0001			
%RSD:	5.6	5.6	4.2068			

=====

Element: Hg Seq. No.: 15 AS Loc.: 15 Date: 03/02/2010

Sample ID: 1202055867|i|||DUP

%RSD: 8.6 8.6 6.9133

=====
 Element: Hg Seq. No.: 21 AS Loc.: 21 Date: 03/02/2010
 Sample ID: 246974004|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.061	0.061	0.0011	0.0061	09:14:03	No
2	0.047	0.047	0.0010	0.0059	09:14:38	No
Mean:	0.054	0.054	0.0010			
SD :	0.0102	0.0102	0.0001			
%RSD:	18.9	18.9	10.1144			

=====
 Element: Hg Seq. No.: 22 AS Loc.: 7 Date: 03/02/2010
 Sample ID: CCV

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	5.108	5.108	0.0525	0.0575	09:16:03	No
2	5.176	5.176	0.0532	0.0582	09:16:38	No
Mean:	5.142	5.142	0.0528			
SD :	0.0487	0.0487	0.0005			
%RSD:	0.9	0.9	0.9381			

QC value within specified limits.

=====
 Element: Hg Seq. No.: 23 AS Loc.: 8 Date: 03/02/2010
 Sample ID: CCB

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.058	-0.058	-0.0001	0.0049	09:18:06	No
2	-0.062	-0.062	-0.0001	0.0048	09:18:41	No
Mean:	-0.060	-0.060	-0.0001			
SD :	0.0030	0.0030	0.0000			
%RSD:	5.0	5.0	23.6596			

QC value within specified limits.

=====
 Element: Hg Seq. No.: 24 AS Loc.: 22 Date: 03/02/2010
 Sample ID: 246974005|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.105	0.105	0.0015	0.0065	09:20:07	No
2	0.112	0.112	0.0016	0.0066	09:20:41	No
Mean:	0.108	0.108	0.0016			
SD :	0.0050	0.0050	0.0001			
%RSD:	4.7	4.7	3.2436			

=====
 Element: Hg Seq. No.: 25 AS Loc.: 23 Date: 03/02/2010
 Sample ID: 246974006|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.002	0.002	0.0005	0.0055	09:22:04	No
2	-0.012	-0.012	0.0004	0.0053	09:22:39	No
Mean:	-0.005	-0.005	0.0004			
SD :	0.0097	0.0097	0.0001			
%RSD:	191.4	191.4	23.1013			

=====
 Element: Hg Seq. No.: 26 AS Loc.: 24 Date: 03/02/2010
 Sample ID: 246974007|i|||

%RSD: 5.5 5.5 4.3407

=====
 Element: Hg Seq. No.: 32 AS Loc.: 30 Date: 03/02/2010
 Sample ID: 246974013|i|||

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.238	0.238	0.0029	0.0079	09:36:05	No
2	0.220	0.220	0.0027	0.0077	09:36:41	No
Mean:	0.229	0.229	0.0028			
SD :	0.0127	0.0127	0.0001			
%RSD:	5.6	5.6	4.6159			

=====
 Element: Hg Seq. No.: 33 AS Loc.: 31 Date: 03/02/2010
 Sample ID: 246974014|i|||

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.299	0.299	0.0035	0.0085	09:38:09	No
2	0.281	0.281	0.0033	0.0083	09:38:44	No
Mean:	0.290	0.290	0.0034			
SD :	0.0123	0.0123	0.0001			
%RSD:	4.2	4.2	3.6474			

=====
 Element: Hg Seq. No.: 34 AS Loc.: 7 Date: 03/02/2010
 Sample ID: CCV

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	5.207	5.207	0.0535	0.0585	09:40:11	No
2	5.207	5.207	0.0535	0.0585	09:40:46	No
Mean:	5.207	5.207	0.0535			
SD :	0.0001	0.0001	0.0000			
%RSD:						

QC value within specified limits.

=====
 Element: Hg Seq. No.: 35 AS Loc.: 8 Date: 03/02/2010
 Sample ID: CCB

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	-0.060	-0.060	-0.0001	0.0048	09:42:14	No
2	-0.068	-0.068	-0.0002	0.0048	09:42:49	No
Mean:	-0.064	-0.064	-0.0002			
SD :	0.0055	0.0055	0.0001			
%RSD:	8.6	8.6	32.2218			

=====
 Element: Hg Seq. No.: 36 AS Loc.: 32 Date: 03/02/2010
 Sample ID: 246974015|i|||

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.625	0.625	0.0068	0.0118	09:48:33	No
2	0.615	0.615	0.0067	0.0117	09:49:08	No
Mean:	0.620	0.620	0.0068			
SD :	0.0072	0.0072	0.0001			
%RSD:	1.2	1.2	1.0753			

=====
 Element: Hg Seq. No.: 37 AS Loc.: 33 Date: 03/02/2010
 Sample ID: 246974016|i|||


```

=====
Element: Hg      Seq. No.: 43      AS Loc.: 39      Date: 03/02/2010
Sample ID: 1202055874|i|||MS
-----
Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      ug/L      ug/L      Signal    Height    Stored
1      2.492      2.492      0.0259    0.0308    10:02:10  No
2      2.510      2.510      0.0260    0.0310    10:02:45  No
Mean:   2.501      2.501      0.0260
SD :    0.0128      0.0128      0.0001
%RSD:   0.5         0.5         0.5042
=====

Element: Hg      Seq. No.: 44      AS Loc.: 40      Date: 03/02/2010
Sample ID: 1202055876|i|||MSD
-----
Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      ug/L      ug/L      Signal    Height    Stored
1      2.497      2.497      0.0259    0.0309    10:04:09  No
2      2.458      2.458      0.0255    0.0305    10:04:44  No
Mean:   2.478      2.478      0.0257
SD :    0.0277      0.0277      0.0003
%RSD:   1.1         1.1         1.0962
=====

Element: Hg      Seq. No.: 45      AS Loc.: 41      Date: 03/02/2010
Sample ID: 1202055875|i|5||SDILT
-----
Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      ug/L      ug/L      Signal    Height    Stored
1      -0.158      -0.158     -0.0011    0.0038    10:06:08  No
2      -0.174      -0.174     -0.0013    0.0037    10:06:43  No
Mean:   -0.166      -0.166     -0.0012
SD :    0.0114      0.0114      0.0001
%RSD:   6.9         6.9         9.5625
=====

Element: Hg      Seq. No.: 46      AS Loc.: 7       Date: 03/02/2010
Sample ID: CCV
-----
Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      ug/L      ug/L      Signal    Height    Stored
1      4.937      4.937      0.0508    0.0557    10:08:08  No
2      5.072      5.072      0.0521    0.0571    10:08:43  No
Mean:   5.005      5.005      0.0514
SD :    0.0956      0.0956      0.0010
%RSD:   1.9         1.9         1.8929
QC value within specified limits.
=====

Element: Hg      Seq. No.: 47      AS Loc.: 8       Date: 03/02/2010
Sample ID: CCB
-----
Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      ug/L      ug/L      Signal    Height    Stored
1      -0.061      -0.061     -0.0001    0.0048    10:10:11  No
2      -0.058      -0.058     -0.0001    0.0049    10:10:46  No
Mean:   -0.060      -0.060     -0.0001
SD :    0.0021      0.0021      0.0000
%RSD:   3.5         3.5         16.4149
QC value within specified limits.
=====

Element: Hg      Seq. No.: 48      AS Loc.: 42      Date: 03/02/2010
Sample ID: 246982002|i|||
-----
Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      ug/L      ug/L      Signal    Height    Stored
1      0.256      0.256      0.0031    0.0081    10:12:12  No

```


Sample ID: 247097001|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.026	-0.026	0.0002	0.0052	10:24:15	No
2	-0.022	-0.022	0.0003	0.0052	10:24:50	No
Mean:	-0.024	-0.024	0.0002			
SD :	0.0030	0.0030	0.0000			
%RSD:	12.8	12.8	13.0146			

=====
 Element: Hg Seq. No.: 55 AS Loc.: 49 Date: 03/02/2010
 Sample ID: 247097002|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.602	0.602	0.0066	0.0116	10:26:10	No
2	0.576	0.576	0.0063	0.0113	10:26:45	No
Mean:	0.589	0.589	0.0065			
SD :	0.0189	0.0189	0.0002			
%RSD:	3.2	3.2	2.9714			

=====
 Element: Hg Seq. No.: 56 AS Loc.: 50 Date: 03/02/2010
 Sample ID: 247097003|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.167	0.167	0.0022	0.0071	10:28:05	No
2	0.152	0.152	0.0020	0.0070	10:28:40	No
Mean:	0.159	0.159	0.0021			
SD :	0.0107	0.0107	0.0001			
%RSD:	6.7	6.7	5.1973			

=====
 Element: Hg Seq. No.: 57 AS Loc.: 51 Date: 03/02/2010
 Sample ID: 247097004|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.003	0.003	0.0005	0.0055	10:30:01	No
2	-0.017	-0.017	0.0003	0.0053	10:30:36	No
Mean:	-0.007	-0.007	0.0004			
SD :	0.0145	0.0145	0.0001			
%RSD:	213.5	213.5	36.0254			

=====
 Element: Hg Seq. No.: 58 AS Loc.: 7 Date: 03/02/2010
 Sample ID: CCV

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	5.059	5.059	0.0520	0.0570	10:32:00	No
2	5.110	5.110	0.0525	0.0575	10:32:34	No
Mean:	5.084	5.084	0.0523			
SD :	0.0358	0.0358	0.0004			
%RSD:	0.7	0.7	0.6977			

QC value within specified limits.

=====
 Element: Hg Seq. No.: 59 AS Loc.: 8 Date: 03/02/2010
 Sample ID: CCB

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.063	-0.063	-0.0002	0.0048	10:34:02	No
2	-0.081	-0.081	-0.0003	0.0046	10:34:37	No

Mean: -0.072 -0.072 -0.0003
 SD : 0.0124 0.0124 0.0001
 %RSD: 17.2 17.2 49.2422
 QC value within specified limits.

=====
 Element: Hg Seq. No.: 60 AS Loc.: 52 Date: 03/02/2010
 Sample ID: 247097005|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	1.705	1.705	0.0178	0.0228	10:36:02	No
2	1.692	1.692	0.0177	0.0227	10:36:37	No
Mean:	1.699	1.699	0.0178			
SD :	0.0091	0.0091	0.0001			
%RSD:	0.5	0.5	0.5195			

=====
 Element: Hg Seq. No.: 61 AS Loc.: 53 Date: 03/02/2010
 Sample ID: 247097006|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.023	-0.023	0.0002	0.0052	10:37:59	No
2	-0.029	-0.029	0.0002	0.0051	10:38:34	No
Mean:	-0.026	-0.026	0.0002			
SD :	0.0047	0.0047	0.0000			
%RSD:	18.1	18.1	22.2486			

=====
 Element: Hg Seq. No.: 62 AS Loc.: 54 Date: 03/02/2010
 Sample ID: 247097007|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.405	0.405	0.0046	0.0096	10:39:56	No
2	0.416	0.416	0.0047	0.0097	10:40:31	No
Mean:	0.411	0.411	0.0047			
SD :	0.0073	0.0073	0.0001			
%RSD:	1.8	1.8	1.5981			

=====
 Element: Hg Seq. No.: 63 AS Loc.: 55 Date: 03/02/2010
 Sample ID: 247097008|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.676	0.676	0.0074	0.0123	10:41:54	No
2	0.647	0.647	0.0071	0.0120	10:42:29	No
Mean:	0.661	0.661	0.0072			
SD :	0.0205	0.0205	0.0002			
%RSD:	3.1	3.1	2.8985			

=====
 Element: Hg Seq. No.: 64 AS Loc.: 56 Date: 03/02/2010
 Sample ID: 247097009|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.546	0.546	0.0060	0.0110	10:43:52	No
2	0.568	0.568	0.0063	0.0112	10:44:28	No
Mean:	0.557	0.557	0.0062			
SD :	0.0156	0.0156	0.0002			
%RSD:	2.8	2.8	2.5883			

=====
 Element: Hg Seq. No.: 65 AS Loc.: 57 Date: 03/02/2010

Sample ID: 1202055890|i||958612|MB

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	-0.082	-0.082	-0.0004	0.0046	10:45:52	No
2	-0.096	-0.096	-0.0005	0.0045	10:46:27	No
Mean:	-0.089	-0.089	-0.0004			
SD :	0.0094	0.0094	0.0001			
%RSD:	10.6	10.6	22.3827			

=====
 Element: Hg Seq. No.: 66 AS Loc.: 58 Date: 03/02/2010
 Sample ID: 1202055891|i||10||LCS

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	4.226	4.226	0.0435	0.0485	10:47:51	No
2	4.168	4.168	0.0429	0.0479	10:48:26	No
Mean:	4.197	4.197	0.0432			
SD :	0.0409	0.0409	0.0004			
%RSD:	1.0	1.0	0.9648			

=====
 Element: Hg Seq. No.: 67 AS Loc.: 59 Date: 03/02/2010
 Sample ID: 247094002|i|||

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	0.179	0.179	0.0023	0.0073	10:49:50	No
2	0.148	0.148	0.0020	0.0070	10:50:24	No
Mean:	0.163	0.163	0.0021			
SD :	0.0216	0.0216	0.0002			
%RSD:	13.2	13.2	10.2726			

=====
 Element: Hg Seq. No.: 68 AS Loc.: 60 Date: 03/02/2010
 Sample ID: 247103001|i|||

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	0.689	0.689	0.0075	0.0125	10:51:49	No
2	0.688	0.688	0.0075	0.0125	10:52:24	No
Mean:	0.689	0.689	0.0075			
SD :	0.0005	0.0005	0.0000			
%RSD:						

=====
 Element: Hg Seq. No.: 69 AS Loc.: 61 Date: 03/02/2010
 Sample ID: 1202055892|i|||DUP

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	0.686	0.686	0.0075	0.0124	10:53:50	No
2	0.646	0.646	0.0071	0.0120	10:54:24	No
Mean:	0.666	0.666	0.0073			
SD :	0.0283	0.0283	0.0003			
%RSD:	4.3	4.3	3.9750			

=====
 Element: Hg Seq. No.: 70 AS Loc.: 7 Date: 03/02/2010
 Sample ID: CCV

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	5.248	5.248	0.0539	0.0589	10:55:50	No
2	5.183	5.183	0.0533	0.0582	10:56:26	No
Mean:	5.216	5.216	0.0536			

SD : 0.0466 0.0466 0.0005
 %RSD: 0.9 0.9 0.8863
 QC value within specified limits.

=====
 Element: Hg Seq. No.: 71 AS Loc.: 8 Date: 03/02/2010
 Sample ID: CCB

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	-0.070	-0.070	-0.0002	0.0047	10:57:54	No
2	-0.077	-0.077	-0.0003	0.0047	10:58:29	No
Mean:	-0.073	-0.073	-0.0003			
SD :	0.0053	0.0053	0.0001			
%RSD:	7.2	7.2	20.0130			

QC value within specified limits.

=====
 Element: Hg Seq. No.: 72 AS Loc.: 62 Date: 03/02/2010
 Sample ID: 1202055893|i||MS

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	3.319	3.319	0.0343	0.0392	10:59:56	No
2	3.304	3.304	0.0341	0.0391	11:00:31	No
Mean:	3.311	3.311	0.0342			
SD :	0.0109	0.0109	0.0001			
%RSD:	0.3	0.3	0.3250			

=====
 Element: Hg Seq. No.: 73 AS Loc.: 63 Date: 03/02/2010
 Sample ID: 1202055895|i||MSD

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	2.919	2.919	0.0302	0.0352	11:01:54	No
2	2.929	2.929	0.0303	0.0353	11:02:29	No
Mean:	2.924	2.924	0.0303			
SD :	0.0070	0.0070	0.0001			
%RSD:	0.2	0.2	0.2360			

=====
 Element: Hg Seq. No.: 74 AS Loc.: 64 Date: 03/02/2010
 Sample ID: 1202055894|i|5|SDILT

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	-0.068	-0.068	-0.0002	0.0048	11:03:49	No
2	-0.085	-0.085	-0.0004	0.0046	11:04:23	No
Mean:	-0.076	-0.076	-0.0003			
SD :	0.0125	0.0125	0.0001			
%RSD:	16.3	16.3	42.5035			

=====
 Element: Hg Seq. No.: 75 AS Loc.: 65 Date: 03/02/2010
 Sample ID: 247103002|i||

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	2.985	2.985	0.0309	0.0358	11:05:42	No
2	2.978	2.978	0.0308	0.0358	11:06:17	No
Mean:	2.982	2.982	0.0308			
SD :	0.0046	0.0046	0.0000			
%RSD:	0.2	0.2	0.1521			

=====
 Element: Hg Seq. No.: 76 AS Loc.: 66 Date: 03/02/2010

1	0.244	0.244	0.0030	0.0079	11:17:22	No
2	0.243	0.243	0.0030	0.0079	11:17:57	No
Mean:	0.243	0.243	0.0030			
SD :	0.0003	0.0003	0.0000			
%RSD:	0.1	0.1	0.1092			

=====
 Element: Hg Seq. No.: 82 AS Loc.: 7 Date: 03/02/2010
 Sample ID: CCV

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	5.194	5.194	0.0534	0.0583	11:19:23	No
2	5.124	5.124	0.0527	0.0576	11:19:58	No
Mean:	5.159	5.159	0.0530			
SD :	0.0493	0.0493	0.0005			
%RSD:	1.0	1.0	0.9475			

QC value within specified limits.

=====
 Element: Hg Seq. No.: 83 AS Loc.: 8 Date: 03/02/2010
 Sample ID: CCB

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	-0.094	-0.094	-0.0005	0.0045	11:21:25	No
2	-0.091	-0.091	-0.0005	0.0045	11:22:00	No
Mean:	-0.093	-0.093	-0.0005			
SD :	0.0020	0.0020	0.0000			
%RSD:	2.1	2.1	4.3424			

QC value within specified limits.

=====
 Element: Hg Seq. No.: 84 AS Loc.: 72 Date: 03/02/2010
 Sample ID: 247103009|i|||

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.094	0.094	0.0014	0.0064	11:23:26	No
2	0.084	0.084	0.0013	0.0063	11:24:01	No
Mean:	0.089	0.089	0.0014			
SD :	0.0069	0.0069	0.0001			
%RSD:	7.7	7.7	5.0487			

=====
 Element: Hg Seq. No.: 85 AS Loc.: 73 Date: 03/02/2010
 Sample ID: 247103010|i|||

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	2.606	2.606	0.0270	0.0320	11:25:25	No
2	2.539	2.539	0.0263	0.0313	11:25:59	No
Mean:	2.573	2.573	0.0267			
SD :	0.0473	0.0473	0.0005			
%RSD:	1.8	1.8	1.8069			

=====
 Element: Hg Seq. No.: 86 AS Loc.: 74 Date: 03/02/2010
 Sample ID: 247103011|i|||

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.315	0.315	0.0037	0.0087	11:27:23	No
2	0.312	0.312	0.0037	0.0086	11:27:58	No
Mean:	0.314	0.314	0.0037			
SD :	0.0020	0.0020	0.0000			
%RSD:	0.6	0.6	0.5478			

SD : 0.0284 0.0284 0.0003
 %RSD: 0.7 0.7 0.6860

=====
 Element: Hg Seq. No.: 93 AS Loc.: 81 Date: 03/02/2010
 Sample ID: 247040001|i|||

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	0.314	0.314	0.0037	0.0086	11:41:05	No
2	0.301	0.301	0.0035	0.0085	11:41:40	No
Mean:	0.308	0.308	0.0036			
SD :	0.0097	0.0097	0.0001			
%RSD:	3.2	3.2	2.7324			

=====
 Element: Hg Seq. No.: 94 AS Loc.: 7 Date: 03/02/2010
 Sample ID: CCV

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	5.271	5.271	0.0542	0.0591	11:43:05	No
2	5.193	5.193	0.0534	0.0583	11:43:40	No
Mean:	5.232	5.232	0.0538			
SD :	0.0554	0.0554	0.0006			
%RSD:	1.1	1.1	1.0491			

QC value within specified limits.

=====
 Element: Hg Seq. No.: 95 AS Loc.: 8 Date: 03/02/2010
 Sample ID: CCB

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	-0.113	-0.113	-0.0007	0.0043	11:45:08	No
2	-0.114	-0.114	-0.0007	0.0043	11:45:43	No
Mean:	-0.114	-0.114	-0.0007			
SD :	0.0003	0.0003	0.0000			
%RSD:	0.2	0.2	0.4007			

QC value within specified limits.

=====
 Element: Hg Seq. No.: 96 AS Loc.: 82 Date: 03/02/2010
 Sample ID: 1202055883|i|||DUP

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	0.144	0.144	0.0019	0.0069	11:47:07	No
2	0.150	0.150	0.0020	0.0070	11:47:42	No
Mean:	0.147	0.147	0.0020			
SD :	0.0040	0.0040	0.0000			
%RSD:	2.7	2.7	2.0372			

=====
 Element: Hg Seq. No.: 97 AS Loc.: 83 Date: 03/02/2010
 Sample ID: 1202055884|i|||MS

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	2.505	2.505	0.0260	0.0310	11:49:03	No
2	2.495	2.495	0.0259	0.0309	11:49:38	No
Mean:	2.500	2.500	0.0259			
SD :	0.0073	0.0073	0.0001			
%RSD:	0.3	0.3	0.2850			

=====
 Element: Hg Seq. No.: 98 AS Loc.: 84 Date: 03/02/2010

SD : 0.0797 0.0797 0.0008
 %RSD: 1.5 1.5 1.4431

=====
 Element: Hg Seq. No.: 104 AS Loc.: 90 Date: 03/02/2010
 Sample ID: 247040006|i|||

Repl #	SampleConc µg/L	StdndConc µg/L	BlncCorr Signal	Peak Height	Time	Peak Stored
1	24.73	24.73	0.2523	0.2573	12:02:50	No
Sample absorbance is greater than that of the highest standard.						
2	23.90	23.90	0.2439	0.2489	12:03:25	No
Sample absorbance is greater than that of the highest standard.						
Mean:	24.32	24.32	0.2481			
SD :	0.5874	0.5874	0.0060			
%RSD:	2.4	2.4	2.4109			
Sample absorbance is greater than that of the highest standard.						

=====
 Element: Hg Seq. No.: 105 AS Loc.: 91 Date: 03/02/2010
 Sample ID: 247040007|i|||

Repl #	SampleConc µg/L	StdndConc µg/L	BlncCorr Signal	Peak Height	Time	Peak Stored
1	0.021	0.021	0.0007	0.0057	12:04:50	No
2	0.019	0.019	0.0007	0.0056	12:05:25	No
Mean:	0.020	0.020	0.0007			
SD :	0.0020	0.0020	0.0000			
%RSD:	10.0	10.0	2.9704			

=====
 Element: Hg Seq. No.: 106 AS Loc.: 7 Date: 03/02/2010
 Sample ID: CCV

Repl #	SampleConc µg/L	StdndConc µg/L	BlncCorr Signal	Peak Height	Time	Peak Stored
1	3.121	3.121	0.0323	0.0372	12:06:52	No
2	3.211	3.211	0.0332	0.0381	12:07:27	No
Mean:	3.166	3.166	0.0327			
SD :	0.0635	0.0635	0.0006			
%RSD:	2.0	2.0	1.9764			
QC failed, value less than lower limit for Hg.						
Current analysis method being continued.						

=====
 Element: Hg Seq. No.: 107 AS Loc.: 8 Date: 03/02/2010
 Sample ID: CCB

Repl #	SampleConc µg/L	StdndConc µg/L	BlncCorr Signal	Peak Height	Time	Peak Stored
1	-0.077	-0.077	-0.0003	0.0047	12:08:55	No
2	-0.079	-0.079	-0.0003	0.0046	12:09:29	No
Mean:	-0.078	-0.078	-0.0003			
SD :	0.0009	0.0009	0.0000			
%RSD:	1.1	1.1	2.8257			
QC value within specified limits.						

=====
 Element: Hg Seq. No.: 108 AS Loc.: 92 Date: 03/02/2010
 Sample ID: 247040008|i|||

Repl #	SampleConc µg/L	StdndConc µg/L	BlncCorr Signal	Peak Height	Time	Peak Stored
1	31.34	31.34	0.3196	0.3246	12:10:52	No
Sample absorbance is greater than that of the highest standard.						
2	30.05	30.05	0.3065	0.3115	12:11:27	No
Sample absorbance is greater than that of the highest standard.						

Mean: 30.69 30.69 0.3131
 SD : 0.9113 0.9113 0.0093
 %RSD: 3.0 3.0 2.9646

Sample absorbance is greater than that of the highest standard.

=====
 Element: Hg Seq. No.: 109 AS Loc.: 93 Date: 03/02/2010
 Sample ID: 247040009|i|||

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	-0.090	-0.090	-0.0004	0.0045	12:12:46	No
2	-0.091	-0.091	-0.0004	0.0045	12:13:20	No
Mean:	-0.090	-0.090	-0.0004			
SD :	0.0009	0.0009	0.0000			
%RSD:	1.0	1.0	2.0063			

=====
 Element: Hg Seq. No.: 110 AS Loc.: 94 Date: 03/02/2010
 Sample ID: 247040010|i|||

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	67.21	67.21	0.6849	0.6899	12:14:40	No
2	63.17	63.17	0.6438	0.6488	12:15:15	No
Mean:	65.19	65.19	0.6644			
SD :	2.856	2.856	0.0291			
%RSD:	4.4	4.4	4.3778			

Sample absorbance is greater than that of the highest standard.

=====
 Element: Hg Seq. No.: 111 AS Loc.: 95 Date: 03/02/2010
 Sample ID: 247040011|i|||

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	-0.161	-0.161	-0.0012	0.0038	12:16:36	No
2	-0.137	-0.137	-0.0009	0.0041	12:17:11	No
Mean:	-0.149	-0.149	-0.0010			
SD :	0.0168	0.0168	0.0002			
%RSD:	11.3	11.3	16.4844			

=====
 Element: Hg Seq. No.: 112 AS Loc.: 96 Date: 03/02/2010
 Sample ID: 247040012|i|||

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	-0.161	-0.161	-0.0012	0.0038	12:16:36	No
2	-0.137	-0.137	-0.0009	0.0041	12:17:11	No

=====
 Element: Hg Seq. No.: 112 AS Loc.: 7 Date: 03/02/2010
 Sample ID: CCV

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	3.884	3.884	0.0400	0.0450	12:26:15	No
2	3.875	3.875	0.0399	0.0449	12:26:49	No
Mean:	3.880	3.880	0.0400			
SD :	0.0065	0.0065	0.0001			
%RSD:	0.2	0.2	0.1658			

QC failed, value less than lower limit for Hg.
 Current analysis method being continued.

=====
 Element: Hg Seq. No.: 113 AS Loc.: 8 Date: 03/02/2010

Sample ID: CCB

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.026	0.026	0.0007	0.0057	12:28:17	No
2	0.009	0.009	0.0006	0.0055	12:28:53	No
Mean:	0.018	0.018	0.0007			
SD :	0.0118	0.0118	0.0001			
%RSD:	66.4	66.4	18.2467			

=====

Element: Hg Seq. No.: 114 AS Loc.: 7 Date: 03/02/2010

Sample ID: Sample007

=====

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	4.326	4.326	0.0445	0.0495	12:30:50	No
2	4.268	4.268	0.0440	0.0489	12:31:24	No
Mean:	4.297	4.297	0.0442			
SD :	0.0405	0.0405	0.0004			
%RSD:	0.9	0.9	0.9322			


```

=====
Element: Hg      Seq. No.: 115      AS Loc.: 7      Date: 03/02/2010
Sample ID: CCV
-----
Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      ug/L      ug/L      Signal    Height    Height    Stored
1      4.297      4.297      0.0442    0.0492    12:33:18  No
2      4.260      4.260      0.0439    0.0488    12:33:53  No
Mean:   4.279      4.279      0.0441
SD :    0.0259      0.0259      0.0003
%RSD:   0.6        0.6        0.5976
QC value within specified limits.

```

```

=====
Element: Hg      Seq. No.: 116      AS Loc.: 8      Date: 03/02/2010
Sample ID: CCB
-----
Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      ug/L      ug/L      Signal    Height    Height    Stored
1      0.025      0.025      0.0007    0.0057    12:35:21  No
2      0.021      0.021      0.0007    0.0057    12:35:55  No
Mean:   0.023      0.023      0.0007
SD :    0.0031      0.0031      0.0000
%RSD:  13.2        13.2        4.3654
QC value within specified limits.

```

```

=====
Element: Hg      Seq. No.: 117      AS Loc.: 66     Date: 03/02/2010
Sample ID: 247103003|i|20|958612|
-----
Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      ug/L      ug/L      Signal    Height    Height    Stored
1      1.432      1.432      0.0151    0.0200    12:37:19  No
2      1.392      1.392      0.0147    0.0196    12:37:54  No
Mean:   1.412      1.412      0.0149
SD :    0.0279      0.0279      0.0003
%RSD:   2.0        2.0        1.9125

```

```

=====
Element: Hg      Seq. No.: 118      AS Loc.: 82     Date: 03/02/2010
Sample ID: 1202055883|i||958606|
-----
Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      ug/L      ug/L      Signal    Height    Height    Stored
1      0.007      0.007      0.0005    0.0055    12:39:16  No
2      -0.008      -0.008      0.0004    0.0054    12:39:51  No
Mean:  -0.001      -0.001      0.0005
SD :    0.0105      0.0105      0.0001
%RSD:  1166        1166      22.7192

```

```

=====
Element: Hg      Seq. No.: 119      AS Loc.: 83     Date: 03/02/2010
Sample ID: 1202055884|i||MS
-----
Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      ug/L      ug/L      Signal    Height    Height    Stored
1      1.853      1.853      0.0194    0.0243    12:41:12  No
2      1.817      1.817      0.0190    0.0239    12:41:47  No
Mean:   1.835      1.835      0.0192
SD :    0.0257      0.0257      0.0003
%RSD:   1.4        1.4        1.3668

```

```

=====
Element: Hg      Seq. No.: 120      AS Loc.: 84     Date: 03/02/2010
Sample ID: 1202055886|i||MSD
-----
Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      ug/L      ug/L      Signal    Height    Height    Stored
1      1.922      1.922      0.0201    0.0250    12:43:09  No

```


Sample ID: 247040006|i|10||

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	3.459	3.459	0.0357	0.0407	12:54:59	No
2	3.400	3.400	0.0351	0.0401	12:55:34	No
Mean:	3.430	3.430	0.0354			
SD :	0.0419	0.0419	0.0004			
%RSD:	1.2	1.2	1.2063			

=====
 Element: Hg Seq. No.: 127 AS Loc.: 7 Date: 03/02/2010
 Sample ID: CCV

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	4.617	4.617	0.0475	0.0525	12:57:00	No
2	4.558	4.558	0.0469	0.0519	12:57:35	No
Mean:	4.587	4.587	0.0472			
SD :	0.0415	0.0415	0.0004			
%RSD:	0.9	0.9	0.8963			

QC value within specified limits.

=====
 Element: Hg Seq. No.: 128 AS Loc.: 8 Date: 03/02/2010
 Sample ID: CCB

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	-0.014	-0.014	0.0003	0.0053	12:59:03	No
2	-0.003	-0.003	0.0005	0.0054	12:59:38	No
Mean:	-0.008	-0.008	0.0004			
SD :	0.0083	0.0083	0.0001			
%RSD:	98.0	98.0	21.5451			

QC value within specified limits.

=====
 Element: Hg Seq. No.: 129 AS Loc.: 91 Date: 03/02/2010
 Sample ID: 247040007|i|10||

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.116	0.116	0.0017	0.0066	13:01:04	No
2	0.091	0.091	0.0014	0.0064	13:01:39	No
Mean:	0.103	0.103	0.0015			
SD :	0.0179	0.0179	0.0002			
%RSD:	17.3	17.3	11.8762			

=====
 Element: Hg Seq. No.: 130 AS Loc.: 92 Date: 03/02/2010
 Sample ID: 247040008|i|10||

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	4.065	4.065	0.0419	0.0468	13:03:02	No
2	4.079	4.079	0.0420	0.0470	13:03:36	No
Mean:	4.072	4.072	0.0419			
SD :	0.0095	0.0095	0.0001			
%RSD:	0.2	0.2	0.2299			

=====
 Element: Hg Seq. No.: 131 AS Loc.: 93 Date: 03/02/2010
 Sample ID: 247040009|i|10||

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.002	0.002	0.0005	0.0055	13:04:57	No

=====
 Element: Hg Seq. No.: 137 AS Loc.: 99 Date: 03/02/2010
 Sample ID: 247040015|i|||
 =====

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	-0.169	-0.169	-0.0012	0.0037	13:16:33	No
2	-0.158	-0.158	-0.0011	0.0038	13:17:07	No
Mean:	-0.164	-0.164	-0.0012			
SD :	0.0079	0.0079	0.0001			
%RSD:	4.8	4.8	6.7951			

=====
 Element: Hg Seq. No.: 138 AS Loc.: 100 Date: 03/02/2010
 Sample ID: 247040016|i|||
 =====

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	-0.182	-0.182	-0.0014	0.0036	13:18:29	No
2	-0.192	-0.192	-0.0015	0.0035	13:19:03	No
Mean:	-0.187	-0.187	-0.0014			
SD :	0.0070	0.0070	0.0001			
%RSD:	3.8	3.8	5.0299			

=====
 Element: Hg Seq. No.: 139 AS Loc.: 7 Date: 03/02/2010
 Sample ID: CCV
 =====

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	4.558	4.558	0.0469	0.0519	13:20:27	No
2	4.451	4.451	0.0458	0.0508	13:21:02	No
Mean:	4.504	4.504	0.0464			
SD :	0.0754	0.0754	0.0008			
%RSD:	1.7	1.7	1.6559			

QC value within specified limits.

=====
 Element: Hg Seq. No.: 140 AS Loc.: 8 Date: 03/02/2010
 Sample ID: CCB
 =====

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	-0.017	-0.017	0.0003	0.0053	13:22:30	No
2	-0.022	-0.022	0.0003	0.0052	13:23:05	No
Mean:	-0.019	-0.019	0.0003			
SD :	0.0041	0.0041	0.0000			
%RSD:	21.1	21.1	14.8483			

QC value within specified limits.


```

=====
Element: Hg      Seq. No.: 141      AS Loc.: 97      Date: 03/02/2010
Sample ID: 247040013|i|100||

```

```

-----
Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      ug/L      ug/L      Signal    Height    Height    Stored
1      0.833      0.833      0.0090    0.0139    13:25:25  No
2      0.827      0.827      0.0089    0.0139    13:26:00  No
Mean:   0.830      0.830      0.0089
SD :    0.0040      0.0040      0.0000
%RSD:   0.5        0.5        0.4600

```

```

=====
Element: Hg      Seq. No.: 142      AS Loc.: 7      Date: 03/02/2010
Sample ID: CCV

```

```

-----
Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      ug/L      ug/L      Signal    Height    Height    Stored
1      4.802      4.802      0.0494    0.0544    13:27:25  No
2      4.671      4.671      0.0480    0.0530    13:28:00  No
Mean:   4.737      4.737      0.0487
SD :    0.0932      0.0932      0.0009
%RSD:   2.0        2.0        1.9485
QC value within specified limits.

```

```

=====
Element: Hg      Seq. No.: 143      AS Loc.: 8      Date: 03/02/2010
Sample ID: CCB

```

```

-----
Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      ug/L      ug/L      Signal    Height    Height    Stored
1      -0.006      -0.006      0.0004    0.0054    13:29:28  No
2      0.006       0.006      0.0005    0.0055    13:30:03  No
Mean:   0.000      0.000      0.0005
SD :    0.0087      0.0087      0.0001
%RSD:   3573      3573      18.5720
QC value within specified limits.

```


SD : 0.0035 0.0035 0.0000
 %RSD: 0.2 0.2 0.1784

=====
 Element: Hg Seq. No.: 150 AS Loc.: 18 Date: 03/02/2010
 Sample ID: 1202055906|i|5||SDILT

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	-0.244	-0.244	-0.0020	0.0030	13:46:40	No
2	-0.251	-0.251	-0.0021	0.0029	13:47:15	No
Mean:	-0.248	-0.248	-0.0020			
SD :	0.0048	0.0048	0.0000			
%RSD:	1.9	1.9	2.3962			

=====
 Element: Hg Seq. No.: 151 AS Loc.: 19 Date: 03/02/2010
 Sample ID: 247188002|i|||

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	-0.113	-0.113	-0.0007	0.0043	13:48:37	No
2	-0.131	-0.131	-0.0009	0.0041	13:49:12	No
Mean:	-0.122	-0.122	-0.0008			
SD :	0.0126	0.0126	0.0001			
%RSD:	10.3	10.3	16.7515			

=====
 Element: Hg Seq. No.: 152 AS Loc.: 20 Date: 03/02/2010
 Sample ID: 247188003|i|||

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	-0.200	-0.200	-0.0016	0.0034	13:50:35	No
2	-0.192	-0.192	-0.0015	0.0035	13:51:10	No
Mean:	-0.196	-0.196	-0.0015			
SD :	0.0058	0.0058	0.0001			
%RSD:	3.0	3.0	3.9102			

=====
 Element: Hg Seq. No.: 153 AS Loc.: 21 Date: 03/02/2010
 Sample ID: 247188004|i|||

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	-0.118	-0.118	-0.0007	0.0042	13:52:32	No
2	-0.140	-0.140	-0.0009	0.0040	13:53:06	No
Mean:	-0.129	-0.129	-0.0008			
SD :	0.0154	0.0154	0.0002			
%RSD:	12.0	12.0	18.8977			

=====
 Element: Hg Seq. No.: 154 AS Loc.: 7 Date: 03/02/2010
 Sample ID: CCV

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	5.269	5.269	0.0541	0.0591	13:54:31	No
2	5.257	5.257	0.0540	0.0590	13:55:06	No
Mean:	5.263	5.263	0.0541			
SD :	0.0085	0.0085	0.0001			
%RSD:	0.2	0.2	0.1602			

QC value within specified limits.

=====
 Element: Hg Seq. No.: 155 AS Loc.: 8 Date: 03/02/2010
 Sample ID: CCB


```

-----
Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      ug/L       ug/L       Signal    Height    Stored
1      0.036      0.036     0.0008    0.0058    13:56:34  No
2      0.031      0.031     0.0008    0.0058    13:57:08  No
Mean:   0.033      0.033     0.0008
SD :    0.0035     0.0035     0.0000
%RSD:   10.4       10.4       4.3417
QC value within specified limits.

```

```

=====
Element: Hg      Seq. No.: 156      AS Loc.: 22      Date: 03/02/2010
Sample ID: 247188005|i|||

```

```

-----
Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      ug/L       ug/L       Signal    Height    Stored
1      -0.150     -0.150    -0.0010    0.0039    13:58:33  No
2      -0.152     -0.152    -0.0011    0.0039    13:59:08  No
Mean:   -0.151     -0.151    -0.0011
SD :    0.0018     0.0018     0.0000
%RSD:    1.2       1.2       1.6962

```

```

=====
Element: Hg      Seq. No.: 157      AS Loc.: 23      Date: 03/02/2010
Sample ID: 247188006|i|||

```

```

-----
Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      ug/L       ug/L       Signal    Height    Stored
1      -0.175     -0.175    -0.0013    0.0037    14:00:31  No
2      -0.174     -0.174    -0.0013    0.0037    14:01:07  No
Mean:   -0.175     -0.175    -0.0013
SD :    0.0006     0.0006     0.0000
%RSD:    0.4       0.4       0.5001

```

```

=====
Element: Hg      Seq. No.: 158      AS Loc.: 24      Date: 03/02/2010
Sample ID: 247188007|i|||

```

```

-----
Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      ug/L       ug/L       Signal    Height    Stored
1      -0.092     -0.092    -0.0005    0.0045    14:02:31  No
2      -0.107     -0.107    -0.0006    0.0044    14:03:06  No
Mean:   -0.099     -0.099    -0.0005
SD :    0.0106     0.0106     0.0001
%RSD:   10.7       10.7      20.4251

```

```

=====
Element: Hg      Seq. No.: 159      AS Loc.: 25      Date: 03/02/2010
Sample ID: 247188008|i|||

```

```

-----
Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      ug/L       ug/L       Signal    Height    Stored
1      -0.088     -0.088    -0.0004    0.0046    14:04:30  No
2      -0.089     -0.089    -0.0004    0.0045    14:05:05  No
Mean:   -0.089     -0.089    -0.0004
SD :    0.0011     0.0011     0.0000
%RSD:    1.2       1.2       2.6041

```

```

=====
Element: Hg      Seq. No.: 160      AS Loc.: 26      Date: 03/02/2010
Sample ID: 247188009|i|||

```

```

-----
Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      ug/L       ug/L       Signal    Height    Stored
1      -0.063     -0.063    -0.0002    0.0048    14:06:30  No
2      -0.065     -0.065    -0.0002    0.0048    14:07:05  No
Mean:   -0.064     -0.064    -0.0002

```


SD : 0.0013 0.0013 0.0000
 %RSD: 2.1 2.1 7.8918

=====
 Element: Hg Seq. No.: 161 AS Loc.: 27 Date: 03/02/2010
 Sample ID: 247188010|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.089	-0.089	-0.0004	0.0045	14:08:31	No
2	-0.086	-0.086	-0.0004	0.0046	14:09:05	No
Mean:	-0.087	-0.087	-0.0004			
SD :	0.0021	0.0021	0.0000			
%RSD:	2.5	2.5	5.3347			

=====
 Element: Hg Seq. No.: 162 AS Loc.: 28 Date: 03/02/2010
 Sample ID: 247188011|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.131	-0.131	-0.0009	0.0041	14:10:31	No
2	-0.130	-0.130	-0.0008	0.0041	14:11:07	No
Mean:	-0.130	-0.130	-0.0008			
SD :	0.0009	0.0009	0.0000			
%RSD:	0.7	0.7	1.1095			

=====
 Element: Hg Seq. No.: 163 AS Loc.: 29 Date: 03/02/2010
 Sample ID: 247188012|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.145	-0.145	-0.0010	0.0040	14:12:33	No
2	-0.146	-0.146	-0.0010	0.0040	14:13:08	No
Mean:	-0.145	-0.145	-0.0010			
SD :	0.0011	0.0011	0.0000			
%RSD:	0.8	0.8	1.1577			

=====
 Element: Hg Seq. No.: 164 AS Loc.: 30 Date: 03/02/2010
 Sample ID: 247188013|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.105	-0.105	-0.0006	0.0044	14:14:34	No
2	-0.117	-0.117	-0.0007	0.0043	14:15:09	No
Mean:	-0.111	-0.111	-0.0007			
SD :	0.0079	0.0079	0.0001			
%RSD:	7.1	7.1	12.2764			

=====
 Element: Hg Seq. No.: 165 AS Loc.: 31 Date: 03/02/2010
 Sample ID: 247188014|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.132	-0.132	-0.0009	0.0041	14:16:37	No
2	-0.142	-0.142	-0.0010	0.0040	14:17:12	No
Mean:	-0.137	-0.137	-0.0009			
SD :	0.0069	0.0069	0.0001			
%RSD:	5.0	5.0	7.6508			

=====
 Element: Hg Seq. No.: 166 AS Loc.: 7 Date: 03/02/2010
 Sample ID: CCV

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	5.298	5.298	0.0544	0.0594	14:18:39	No
2	5.401	5.401	0.0555	0.0604	14:19:14	No
Mean:	5.349	5.349	0.0550			
SD :	0.0723	0.0723	0.0007			
%RSD:	1.4	1.4	1.3393			

QC value within specified limits.

=====
 Element: Hg Seq. No.: 167 AS Loc.: 8 Date: 03/02/2010
 Sample ID: CCB
 =====

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.011	0.011	0.0006	0.0056	14:20:42	No
2	0.016	0.016	0.0006	0.0056	14:21:17	No
Mean:	0.013	0.013	0.0006			
SD :	0.0034	0.0034	0.0000			
%RSD:	25.5	25.5	5.5975			

QC value within specified limits.

=====
 Element: Hg Seq. No.: 168 AS Loc.: 32 Date: 03/02/2010
 Sample ID: 1202055973|i||958657|MB
 =====

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.410	0.410	0.0047	0.0096	14:22:42	No
2	0.407	0.407	0.0046	0.0096	14:23:17	No
Mean:	0.408	0.408	0.0046			
SD :	0.0017	0.0017	0.0000			
%RSD:	0.4	0.4	0.3768			

=====
 Element: Hg Seq. No.: 169 AS Loc.: 33 Date: 03/02/2010
 Sample ID: 1202055974|i|10||LCS
 =====

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	3.523	3.523	0.0364	0.0413	14:24:36	No
2	3.444	3.444	0.0356	0.0405	14:25:11	No
Mean:	3.483	3.483	0.0360			
SD :	0.0558	0.0558	0.0006			
%RSD:	1.6	1.6	1.5817			

=====
 Element: Hg Seq. No.: 170 AS Loc.: 34 Date: 03/02/2010
 Sample ID: 247558001|i|||
 =====

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	-0.041	-0.041	0.0001	0.0050	14:26:32	No
2	-0.043	-0.043	0.0000	0.0050	14:27:07	No
Mean:	-0.042	-0.042	0.0001			
SD :	0.0019	0.0019	0.0000			
%RSD:	4.5	4.5	36.7291			

=====
 Element: Hg Seq. No.: 171 AS Loc.: 35 Date: 03/02/2010
 Sample ID: 1202055975|i|||DUP
 =====

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	-0.088	-0.088	-0.0004	0.0046	14:28:29	No
2	-0.088	-0.088	-0.0004	0.0045	14:29:03	No
Mean:	-0.088	-0.088	-0.0004			

SD : 0.0003 0.0003 0.0000
 %RSD: 0.4 0.4 0.7571

=====
 Element: Hg Seq. No.: 172 AS Loc.: 36 Date: 03/02/2010
 Sample ID: 1202055976|i||MS

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	2.180	2.180	0.0227	0.0276	14:30:25	No
2	2.157	2.157	0.0224	0.0274	14:31:00	No
Mean:	2.168	2.168	0.0226			
SD :	0.0166	0.0166	0.0002			
%RSD:	0.8	0.8	0.7475			

=====
 Element: Hg Seq. No.: 173 AS Loc.: 37 Date: 03/02/2010
 Sample ID: 1202055978|i||MSD

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	2.167	2.167	0.0225	0.0275	14:32:22	No
2	2.070	2.070	0.0216	0.0265	14:32:57	No
Mean:	2.118	2.118	0.0221			
SD :	0.0682	0.0682	0.0007			
%RSD:	3.2	3.2	3.1481			

=====
 Element: Hg Seq. No.: 174 AS Loc.: 38 Date: 03/02/2010
 Sample ID: 1202055977|i|5|SDILT

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	5.189	5.189	0.0533	0.0583	14:35:20	No
2	5.167	5.167	0.0531	0.0581	14:35:55	No
Mean:	5.178	5.178	0.0532			
SD :	0.0156	0.0156	0.0002			
%RSD:	0.3	0.3	0.2991			

=====
 Element: Hg Seq. No.: 174 AS Loc.: 7 Date: 03/02/2010
 Sample ID: CCV

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	5.189	5.189	0.0533	0.0583	14:35:20	No
2	5.167	5.167	0.0531	0.0581	14:35:55	No
Mean:	5.178	5.178	0.0532			
SD :	0.0156	0.0156	0.0002			
%RSD:	0.3	0.3	0.2991			

QC value within specified limits.

=====
 Element: Hg Seq. No.: 175 AS Loc.: 8 Date: 03/02/2010
 Sample ID: CCB

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.009	-0.009	0.0004	0.0054	14:37:23	No
2	-0.021	-0.021	0.0003	0.0052	14:37:58	No
Mean:	-0.015	-0.015	0.0003			
SD :	0.0083	0.0083	0.0001			
%RSD:	56.2	56.2	25.6776			

QC value within specified limits.

=====
 Element: Hg Seq. No.: 176 AS Loc.: 32 Date: 03/02/2010
 Sample ID: 1202055973|i||958657|MB

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.122	-0.122	-0.0008	0.0042	14:39:22	No

Sample ID: 1202055977|i|5||SDILT

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.205	-0.205	-0.0016	0.0034	14:50:58	No
2	-0.206	-0.206	-0.0016	0.0033	14:51:33	No
Mean:	-0.205	-0.205	-0.0016			
SD :	0.0014	0.0014	0.0000			
%RSD:	0.7	0.7	0.8558			

=====
 Element: Hg Seq. No.: 183 AS Loc.: 39 Date: 03/02/2010
 Sample ID: 247558002|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.017	-0.017	0.0003	0.0053	14:52:56	No
2	-0.013	-0.013	0.0003	0.0053	14:53:30	No
Mean:	-0.015	-0.015	0.0003			
SD :	0.0028	0.0028	0.0000			
%RSD:	18.3	18.3	8.7703			

=====
 Element: Hg Seq. No.: 184 AS Loc.: 40 Date: 03/02/2010
 Sample ID: 247558003|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.294	0.294	0.0035	0.0084	14:54:53	No
2	0.291	0.291	0.0034	0.0084	14:55:28	No
Mean:	0.292	0.292	0.0035			
SD :	0.0018	0.0018	0.0000			
%RSD:	0.6	0.6	0.5411			

=====
 Element: Hg Seq. No.: 185 AS Loc.: 41 Date: 03/02/2010
 Sample ID: 247558004|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.178	0.178	0.0023	0.0073	14:56:53	No
2	0.173	0.173	0.0022	0.0072	14:57:28	No
Mean:	0.176	0.176	0.0023			
SD :	0.0035	0.0035	0.0000			
%RSD:	2.0	2.0	1.5693			

=====
 Element: Hg Seq. No.: 186 AS Loc.: 7 Date: 03/02/2010
 Sample ID: CCV

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	5.158	5.158	0.0530	0.0580	14:58:53	No
2	5.180	5.180	0.0532	0.0582	14:59:28	No
Mean:	5.169	5.169	0.0531			
SD :	0.0151	0.0151	0.0002			
%RSD:	0.3	0.3	0.2887			

QC value within specified limits.

=====
 Element: Hg Seq. No.: 187 AS Loc.: 8 Date: 03/02/2010
 Sample ID: CCB

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.001	0.001	0.0005	0.0055	15:00:56	No
2	-0.018	-0.018	0.0003	0.0053	15:01:31	No

Mean: -0.009 -0.009 0.0004
 SD : 0.0131 0.0131 0.0001
 %RSD: 151.7 151.7 34.1428
 QC value within specified limits.

=====
 Element: Hg Seq. No.: 188 AS Loc.: 42 Date: 03/02/2010
 Sample ID: 247558005|i|||

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.271	0.271	0.0032	0.0082	15:02:58	No
2	0.259	0.259	0.0031	0.0081	15:03:33	No
Mean:	0.265	0.265	0.0032			
SD :	0.0084	0.0084	0.0001			
%RSD:	3.2	3.2	2.6956			

=====
 Element: Hg Seq. No.: 189 AS Loc.: 43 Date: 03/02/2010
 Sample ID: 247561001|i|||

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.008	0.008	0.0006	0.0055	15:04:58	No
2	0.006	0.006	0.0005	0.0055	15:05:33	No
Mean:	0.007	0.007	0.0005			
SD :	0.0013	0.0013	0.0000			
%RSD:	19.1	19.1	2.4327			

=====
 Element: Hg Seq. No.: 190 AS Loc.: 44 Date: 03/02/2010
 Sample ID: 247561002|i|||

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.082	0.082	0.0013	0.0063	15:06:59	No
2	0.063	0.063	0.0011	0.0061	15:07:34	No
Mean:	0.073	0.073	0.0012			
SD :	0.0137	0.0137	0.0001			
%RSD:	18.9	18.9	11.4574			

=====
 Element: Hg Seq. No.: 191 AS Loc.: 45 Date: 03/02/2010
 Sample ID: 247561003|i|||

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	-0.046	-0.046	0.0000	0.0050	15:09:00	No
2	-0.060	-0.060	-0.0001	0.0048	15:09:36	No
Mean:	-0.053	-0.053	-0.0001			
SD :	0.0098	0.0098	0.0001			
%RSD:	18.3	18.3	158.2439			

=====
 Element: Hg Seq. No.: 192 AS Loc.: 46 Date: 03/02/2010
 Sample ID: 247561004|i|||

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	-0.069	-0.069	-0.0002	0.0047	15:11:02	No
2	-0.089	-0.089	-0.0004	0.0045	15:11:37	No
Mean:	-0.079	-0.079	-0.0003			
SD :	0.0142	0.0142	0.0001			
%RSD:	18.0	18.0	44.5968			

=====
 Element: Hg Seq. No.: 193 AS Loc.: 47 Date: 03/02/2010

Sample ID: 247561005|i|||

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	-0.127	-0.127	-0.0008	0.0041	15:13:04	No
2	-0.147	-0.147	-0.0010	0.0039	15:13:39	No
Mean:	-0.137	-0.137	-0.0009			
SD :	0.0140	0.0140	0.0001			
%RSD:	10.2	10.2	15.5405			

=====
 Element: Hg Seq. No.: 194 AS Loc.: 48 Date: 03/02/2010
 Sample ID: 247561006|i|||

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	-0.063	-0.063	-0.0002	0.0048	15:15:03	No
2	-0.074	-0.074	-0.0003	0.0047	15:15:38	No
Mean:	-0.068	-0.068	-0.0002			
SD :	0.0074	0.0074	0.0001			
%RSD:	10.8	10.8	34.6638			

=====
 Element: Hg Seq. No.: 195 AS Loc.: 49 Date: 03/02/2010
 Sample ID: 247561007|i|||

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	-0.028	-0.028	0.0002	0.0052	15:16:58	No
2	-0.034	-0.034	0.0001	0.0051	15:17:33	No
Mean:	-0.031	-0.031	0.0002			
SD :	0.0040	0.0040	0.0000			
%RSD:	12.9	12.9	24.4346			

=====
 Element: Hg Seq. No.: 196 AS Loc.: 50 Date: 03/02/2010
 Sample ID: 247561008|i|||

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	-0.029	-0.029	0.0002	0.0051	15:18:53	No
2	-0.027	-0.027	0.0002	0.0052	15:19:28	No
Mean:	-0.028	-0.028	0.0002			
SD :	0.0015	0.0015	0.0000			
%RSD:	5.3	5.3	7.9074			

=====
 Element: Hg Seq. No.: 197 AS Loc.: 51 Date: 03/02/2010
 Sample ID: 1202056063|i||958698|MB

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	-0.185	-0.185	-0.0014	0.0036	15:20:49	No
2	-0.211	-0.211	-0.0017	0.0033	15:21:23	No
Mean:	-0.198	-0.198	-0.0015			
SD :	0.0186	0.0186	0.0002			
%RSD:	9.4	9.4	12.3217			

=====
 Element: Hg Seq. No.: 198 AS Loc.: 7 Date: 03/02/2010
 Sample ID: CCV

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	5.118	5.118	0.0526	0.0576	15:22:48	No
2	5.177	5.177	0.0532	0.0582	15:23:23	No
Mean:	5.147	5.147	0.0529			

SD : 0.0422 0.0422 0.0004
 %RSD: 0.8 0.8 0.8124
 QC value within specified limits.

=====
 Element: Hg Seq. No.: 199 AS Loc.: 8 Date: 03/02/2010
 Sample ID: CCB

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	-0.054	-0.054	-0.0001	0.0049	15:24:51	No
2	-0.064	-0.064	-0.0002	0.0048	15:25:26	No
Mean:	-0.059	-0.059	-0.0001			
SD :	0.0067	0.0067	0.0001			
%RSD:	11.3	11.3	55.1886			

QC value within specified limits.

=====
 Element: Hg Seq. No.: 200 AS Loc.: 52 Date: 03/02/2010
 Sample ID: 1202056064|i|10||LCS

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	3.972	3.972	0.0409	0.0459	15:26:50	No
2	3.975	3.975	0.0410	0.0459	15:27:24	No
Mean:	3.973	3.973	0.0409			
SD :	0.0021	0.0021	0.0000			
%RSD:						

=====
 Element: Hg Seq. No.: 201 AS Loc.: 53 Date: 03/02/2010
 Sample ID: 247781001|i|||

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	-0.050	-0.050	0.0000	0.0049	15:28:46	No
2	-0.062	-0.062	-0.0002	0.0048	15:29:21	No
Mean:	-0.056	-0.056	-0.0001			
SD :	0.0087	0.0087	0.0001			
%RSD:	15.5	15.5	94.9723			

=====
 Element: Hg Seq. No.: 202 AS Loc.: 54 Date: 03/02/2010
 Sample ID: 1202056065|i|||DUP

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	-0.058	-0.058	-0.0001	0.0049	15:30:43	No
2	-0.046	-0.046	0.0000	0.0050	15:31:18	No
Mean:	-0.052	-0.052	0.0000			
SD :	0.0084	0.0084	0.0001			
%RSD:	16.2	16.2	181.7535			

=====
 Element: Hg Seq. No.: 203 AS Loc.: 55 Date: 03/02/2010
 Sample ID: 1202056066|i|||MS

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	2.195	2.195	0.0228	0.0278	15:32:42	No
2	2.166	2.166	0.0225	0.0275	15:33:17	No
Mean:	2.181	2.181	0.0227			
SD :	0.0202	0.0202	0.0002			
%RSD:	0.9	0.9	0.9068			

=====
 Element: Hg Seq. No.: 204 AS Loc.: 56 Date: 03/02/2010

SD : 0.0052 0.0052 0.0001
 %RSD: 1.0 1.0 1.0927

=====
 Element: Hg Seq. No.: 210 AS Loc.: 7 Date: 03/02/2010
 Sample ID: CCV

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.524	-0.524	-0.0049	0.0001	15:46:40	No
2	-0.529	-0.529	-0.0049	0.0001	15:47:15	No
Mean:	-0.527	-0.527	-0.0049			
SD :	0.0042	0.0042	0.0000			
%RSD:	0.8	0.8	0.8674			

QC failed, value less than lower limit for Hg.
 Current analysis method being continued.

=====
 Element: Hg Seq. No.: 211 AS Loc.: 8 Date: 03/02/2010
 Sample ID: CCB

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.520	-0.520	-0.0048	0.0001	15:48:43	No
2	-0.528	-0.528	-0.0049	0.0001	15:49:18	No
Mean:	-0.524	-0.524	-0.0049			
SD :	0.0057	0.0057	0.0001			
%RSD:	1.1	1.1	1.1979			

=====
 Element: Hg Seq. No.: 212 AS Loc.: 7 Date: 03/02/2010
 Sample ID: CCV

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	5.142	5.142	0.0528	0.0578	15:52:07	No
2	5.173	5.173	0.0532	0.0581	15:52:41	No
Mean:	5.158	5.158	0.0530			
SD :	0.0221	0.0221	0.0002			
%RSD:	0.4	0.4	0.4254			

QC value within specified limits.

=====
 Element: Hg Seq. No.: 213 AS Loc.: 8 Date: 03/02/2010
 Sample ID: CCB

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.040	-0.040	0.0001	0.0050	15:54:09	No
2	-0.058	-0.058	-0.0001	0.0049	15:54:43	No
Mean:	-0.049	-0.049	0.0000			
SD :	0.0132	0.0132	0.0001			
%RSD:	27.0	27.0	666.2354			

QC value within specified limits.

=====
 Element: Hg Seq. No.: 214 AS Loc.: 52 Date: 03/02/2010
 Sample ID: 1202056064|i|10|958698|LC

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	3.914	3.914	0.0403	0.0453	15:56:08	No
2	3.815	3.815	0.0393	0.0443	15:56:42	No
Mean:	3.864	3.864	0.0398			
SD :	0.0698	0.0698	0.0007			
%RSD:	1.8	1.8	1.7835			

=====
 Element: Hg Seq. No.: 215 AS Loc.: 53 Date: 03/02/2010
 Sample ID: 247781001|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.050	-0.050	0.0000	0.0049	15:58:05	No
2	-0.058	-0.058	-0.0001	0.0049	15:58:40	No
Mean:	-0.054	-0.054	-0.0001			
SD :	0.0058	0.0058	0.0001			
%RSD:	10.7	10.7	85.0786			

=====
 Element: Hg Seq. No.: 216 AS Loc.: 54 Date: 03/02/2010
 Sample ID: 1202056065|i|||DUP

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.060	-0.060	-0.0001	0.0048	16:00:02	No
2	-0.071	-0.071	-0.0002	0.0047	16:00:37	No
Mean:	-0.065	-0.065	-0.0002			
SD :	0.0077	0.0077	0.0001			
%RSD:	11.7	11.7	41.8409			

=====
 Element: Hg Seq. No.: 217 AS Loc.: 55 Date: 03/02/2010
 Sample ID: 1202056066|i|||MS

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	2.214	2.214	0.0230	0.0280	16:02:00	No
2	2.242	2.242	0.0233	0.0283	16:02:35	No
Mean:	2.228	2.228	0.0232			
SD :	0.0194	0.0194	0.0002			
%RSD:	0.9	0.9	0.8548			

=====
 Element: Hg Seq. No.: 218 AS Loc.: 56 Date: 03/02/2010
 Sample ID: 1202056072|i|||MSD

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	2.242	2.242	0.0233	0.0283	16:03:58	No
2	2.250	2.250	0.0234	0.0284	16:04:33	No
Mean:	2.246	2.246	0.0234			
SD :	0.0061	0.0061	0.0001			
%RSD:	0.3	0.3	0.2652			

=====
 Element: Hg Seq. No.: 219 AS Loc.: 57 Date: 03/02/2010
 Sample ID: 1202056071|i|5|SDILT

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.154	-0.154	-0.0011	0.0039	16:05:57	No
2	-0.161	-0.161	-0.0012	0.0038	16:06:32	No
Mean:	-0.158	-0.158	-0.0011			
SD :	0.0050	0.0050	0.0001			
%RSD:	3.2	3.2	4.5356			

=====
 Element: Hg Seq. No.: 220 AS Loc.: 58 Date: 03/02/2010
 Sample ID: 247781002|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.035	0.035	0.0008	0.0058	16:07:57	No


```

2      0.031    0.031    0.0008    0.0058    16:08:31    No
Mean:   0.033    0.033    0.0008
SD :    0.0034    0.0034    0.0000
%RSD:   10.3      10.3     4.2359

```

```

=====
Element: Hg      Seq. No.: 221      AS Loc.: 59      Date: 03/02/2010
Sample ID: 247781003|i|||

```

```

-----
Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      µg/L       µg/L       Signal    Height    Height    Stored
1      0.150       0.150     0.0020    0.0070    16:09:56    No
2      0.141       0.141     0.0019    0.0069    16:10:30    No
Mean:   0.146       0.146     0.0020
SD :    0.0062     0.0062    0.0001
%RSD:   4.3        4.3       3.2276

```

```

=====
Element: Hg      Seq. No.: 222      AS Loc.: 60      Date: 03/02/2010
Sample ID: 247781004|i|||

```

```

-----
Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      µg/L       µg/L       Signal    Height    Height    Stored
1      0.106       0.106     0.0016    0.0065    16:11:55    No
2      0.094       0.094     0.0014    0.0064    16:12:30    No
Mean:   0.100       0.100     0.0015
SD :    0.0081     0.0081    0.0001
%RSD:   8.1        8.1       5.5162

```

```

=====
Element: Hg      Seq. No.: 223      AS Loc.: 61      Date: 03/02/2010
Sample ID: 247781005|i|||

```

```

-----
Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      µg/L       µg/L       Signal    Height    Height    Stored
1      0.111       0.111     0.0016    0.0066    16:13:56    No
2      0.106       0.106     0.0016    0.0065    16:14:31    No
Mean:   0.108       0.108     0.0016
SD :    0.0031     0.0031    0.0000
%RSD:   2.9        2.9       1.9989

```

```

=====
Element: Hg      Seq. No.: 224      AS Loc.: 7       Date: 03/02/2010
Sample ID: CCV

```

```

-----
Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      µg/L       µg/L       Signal    Height    Height    Stored
1      5.447       5.447     0.0559    0.0609    16:15:57    No
2      5.454       5.454     0.0560    0.0610    16:16:32    No
Mean:   5.450       5.450     0.0560
SD :    0.0049     0.0049    0.0000
%RSD:

```

QC value within specified limits.

```

=====
Element: Hg      Seq. No.: 225      AS Loc.: 8       Date: 03/02/2010
Sample ID: CCB

```

```

-----
Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      µg/L       µg/L       Signal    Height    Height    Stored
1      -0.056      -0.056    -0.0001    0.0049    16:18:01    No
2      -0.051      -0.051     0.0000     0.0049    16:18:36    No
Mean:   -0.053      -0.053    -0.0001
SD :    0.0034     0.0034    0.0000
%RSD:   6.3        6.3       52.4701

```

QC value within specified limits.

2	0.122	0.122	0.0017	0.0067	16:30:18	No
Mean:	0.113	0.113	0.0016			
SD :	0.0137	0.0137	0.0001			
%RSD:	12.1	12.1	8.5659			

=====

Element: Hg Seq. No.: 232 AS Loc.: 68 Date: 03/02/2010
Sample ID: 247781012|i|

Repl #	SampleConc µg/L	StdConc µg/L	BlncCorr Signal	Peak Height	Time	Peak Stored
1	0.430	0.430	0.0049	0.0098	16:31:40	No
2	0.436	0.436	0.0049	0.0099	16:32:15	No
Mean:	0.433	0.433	0.0049			
SD :	0.0041	0.0041	0.0000			
%RSD:	1.0	1.0	0.8573			

=====

Element: Hg Seq. No.: 233 AS Loc.: 69 Date: 03/02/2010
Sample ID: 247781013|i|

Repl #	SampleConc µg/L	StdConc µg/L	BlncCorr Signal	Peak Height	Time	Peak Stored
1	-0.076	-0.076	-0.0003	0.0047	16:33:37	No
2	-0.082	-0.082	-0.0004	0.0046	16:34:12	No
Mean:	-0.079	-0.079	-0.0003			
SD :	0.0040	0.0040	0.0000			
%RSD:	5.1	5.1	12.4976			

=====

Element: Hg Seq. No.: 234 AS Loc.: 70 Date: 03/02/2010
Sample ID: 247781014|i|

Repl #	SampleConc µg/L	StdConc µg/L	BlncCorr Signal	Peak Height	Time	Peak Stored
1	0.154	0.154	0.0020	0.0070	16:35:35	No
2	0.148	0.148	0.0020	0.0070	16:36:10	No
Mean:	0.151	0.151	0.0020			
SD :	0.0039	0.0039	0.0000			
%RSD:	2.6	2.6	1.9512			

=====

Element: Hg Seq. No.: 235 AS Loc.: 71 Date: 03/02/2010
Sample ID: 247781015|i|

Repl #	SampleConc µg/L	StdConc µg/L	BlncCorr Signal	Peak Height	Time	Peak Stored
1	-0.022	-0.022	0.0003	0.0052	16:37:33	No
2	-0.032	-0.032	0.0002	0.0051	16:38:07	No
Mean:	-0.027	-0.027	0.0002			
SD :	0.0073	0.0073	0.0001			
%RSD:	26.8	26.8	36.5648			

=====

Element: Hg Seq. No.: 236 AS Loc.: 7 Date: 03/02/2010
Sample ID: CCV

Repl #	SampleConc µg/L	StdConc µg/L	BlncCorr Signal	Peak Height	Time	Peak Stored
1	5.279	5.279	0.0542	0.0592	16:39:32	No
2	5.186	5.186	0.0533	0.0583	16:40:07	No
Mean:	5.233	5.233	0.0538			
SD :	0.0661	0.0661	0.0007			
%RSD:	1.3	1.3	1.2520			

QC value within specified limits.

Element: Hg Seq. No.: 237 AS Loc.: 8 Date: 03/02/2010
 Sample ID: CCB

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	-0.025	-0.025	0.0002	0.0052	16:41:36	No
2	-0.010	-0.010	0.0004	0.0053	16:42:11	No
Mean:	-0.018	-0.018	0.0003			
SD :	0.0110	0.0110	0.0001			
%RSD:	62.9	62.9	37.2905			

QC value within specified limits.

=====
 Element: Hg Seq. No.: 238 AS Loc.: 72 Date: 03/02/2010
 Sample ID: 247784002|i|

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.158	0.158	0.0021	0.0071	16:43:37	No
2	0.153	0.153	0.0020	0.0070	16:44:11	No
Mean:	0.155	0.155	0.0021			
SD :	0.0039	0.0039	0.0000			
%RSD:	2.5	2.5	1.9449			

=====
 Element: Hg Seq. No.: 239 AS Loc.: 73 Date: 03/02/2010
 Sample ID: 247790002|i|

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.122	0.122	0.0017	0.0067	16:45:35	No
2	0.146	0.146	0.0020	0.0069	16:46:10	No
Mean:	0.134	0.134	0.0018			
SD :	0.0164	0.0164	0.0002			
%RSD:	12.2	12.2	9.0653			

=====
 Element: Hg Seq. No.: 240 AS Loc.: 74 Date: 03/02/2010
 Sample ID: 247790003|i|

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.140	0.140	0.0019	0.0069	16:47:34	No
2	0.144	0.144	0.0019	0.0069	16:48:09	No
Mean:	0.142	0.142	0.0019			
SD :	0.0025	0.0025	0.0000			
%RSD:	1.7	1.7	1.3056			

=====
 Element: Hg Seq. No.: 241 AS Loc.: 75 Date: 03/02/2010
 Sample ID: 247855002|i|

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	-0.065	-0.065	-0.0002	0.0048	16:49:33	No
2	-0.095	-0.095	-0.0005	0.0045	16:50:08	No
Mean:	-0.080	-0.080	-0.0003			
SD :	0.0212	0.0212	0.0002			
%RSD:	26.4	26.4	63.9782			

=====
 Element: Hg Seq. No.: 242 AS Loc.: 76 Date: 03/02/2010
 Sample ID: 1202056552|i|958940|MB

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	-0.027	-0.027	0.0002	0.0052	16:51:34	No


```

2      -0.063   -0.063   -0.0002   0.0048   16:52:10   No
Mean:   -0.045   -0.045    0.0000
SD :    0.0254   0.0254    0.0003
%RSD:    56.5     56.5 1200.4396

```

```

=====
Element: Hg      Seq. No.: 243      AS Loc.: 77      Date: 03/02/2010
Sample ID: 1202056553|i|||LCS

```

```

-----
Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      µg/L       µg/L       Signal    Height    Stored
1      2.264      2.264      0.0235    0.0285    16:53:36   No
2      2.302      2.302      0.0239    0.0289    16:54:10   No
Mean:   2.283      2.283      0.0237
SD :    0.0271     0.0271     0.0003
%RSD:    1.2       1.2      1.1613

```

```

=====
Element: Hg      Seq. No.: 244      AS Loc.: 78      Date: 03/02/2010
Sample ID: 247283001|i|||

```

```

-----
Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      µg/L       µg/L       Signal    Height    Stored
1      0.188      0.188      0.0024    0.0074    16:55:33   No
2      0.023      0.023      0.0007    0.0057    16:56:08   No
Mean:   0.105      0.105      0.0016
SD :    0.1168     0.1168     0.0012
%RSD:  111.0      111.0     76.7094

```

```

=====
Element: Hg      Seq. No.: 245      AS Loc.: 79      Date: 03/02/2010
Sample ID: 1202056554|i|||DUP

```

```

-----
Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      µg/L       µg/L       Signal    Height    Stored
1     -0.022     -0.022      0.0003    0.0052    16:57:27   No
2     -0.056     -0.056     -0.0001    0.0049    16:58:02   No
Mean:  -0.039     -0.039      0.0001
SD :    0.0243     0.0243      0.0002
%RSD:   62.1      62.1    306.0849

```

```

=====
Element: Hg      Seq. No.: 246      AS Loc.: 80      Date: 03/02/2010
Sample ID: 1202056555|i|||MS

```

```

-----
Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      µg/L       µg/L       Signal    Height    Stored
1      2.198      2.198      0.0229    0.0278    16:59:22   No
2      2.228      2.228      0.0232    0.0281    16:59:57   No
Mean:   2.213      2.213      0.0230
SD :    0.0211     0.0211      0.0002
%RSD:    1.0       1.0     0.9341

```

```

=====
Element: Hg      Seq. No.: 247      AS Loc.: 81      Date: 03/02/2010
Sample ID: 1202056556|i|||MSD

```

```

-----
Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      µg/L       µg/L       Signal    Height    Stored
1      2.198      2.198      0.0229    0.0278    17:01:17   No
2      2.140      2.140      0.0223    0.0272    17:01:52   No
Mean:   2.169      2.169      0.0226
SD :    0.0407     0.0407      0.0004
%RSD:    1.9       1.9     1.8378

```

```

=====
Element: Hg      Seq. No.: 248      AS Loc.: 7      Date: 03/02/2010

```


Sample ID: CCV

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	5.592	5.592	0.0574	0.0624	17:03:16	No
2	5.603	5.603	0.0575	0.0625	17:03:51	No
Mean:	5.598	5.598	0.0575			
SD :	0.0079	0.0079	0.0001			
%RSD:	0.1	0.1	0.1392			

QC value within specified limits.

=====
 Element: Hg Seq. No.: 249 AS Loc.: 8 Date: 03/02/2010
 Sample ID: CCB

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.070	-0.070	-0.0002	0.0047	17:05:20	No
2	-0.061	-0.061	-0.0001	0.0048	17:05:55	No
Mean:	-0.065	-0.065	-0.0002			
SD :	0.0069	0.0069	0.0001			
%RSD:	10.5	10.5	37.4480			

QC value within specified limits.

=====
 Element: Hg Seq. No.: 250 AS Loc.: 82 Date: 03/02/2010
 Sample ID: 1202056557|i|5|SDILT

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.107	-0.107	-0.0006	0.0044	17:07:19	No
2	-0.145	-0.145	-0.0010	0.0040	17:07:54	No
Mean:	-0.126	-0.126	-0.0008			
SD :	0.0268	0.0268	0.0003			
%RSD:	21.3	21.3	33.9261			

=====
 Element: Hg Seq. No.: 251 AS Loc.: 83 Date: 03/02/2010
 Sample ID: 1202056476|i||958901|MB

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.060	-0.060	-0.0001	0.0048	17:09:15	No
2	-0.085	-0.085	-0.0004	0.0046	17:09:50	No
Mean:	-0.073	-0.073	-0.0003			
SD :	0.0175	0.0175	0.0002			
%RSD:	24.0	24.0	67.7983			

=====
 Element: Hg Seq. No.: 252 AS Loc.: 84 Date: 03/02/2010
 Sample ID: 1202056477|i||LCS

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	2.267	2.267	0.0236	0.0285	17:11:12	No
2	2.258	2.258	0.0235	0.0284	17:11:47	No
Mean:	2.263	2.263	0.0235			
SD :	0.0066	0.0066	0.0001			
%RSD:	0.3	0.3	0.2848			

=====
 Element: Hg Seq. No.: 253 AS Loc.: 85 Date: 03/02/2010
 Sample ID: 248061001|i||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.178	-0.178	-0.0013	0.0036	17:13:09	No

Miscellaneous

Prep Logbook

Acid Digestion of Sediments, Sludges, and Soils

Batch ID: 957497.0 Verified by: _____ Lab SOP: GL-MA-E-009 REV# 19
Analyst: Anthony Green Instrument: BAL-001
Method: SW846 3050B

Sample ID	Run Date	Initial Weight (g)	Final Volume (mL)	Prep Factor (mL/g)	pH Check
1202053069 MB	26-FEB-2010 06:00:00	0.517	50	96.7118	1
1202053074 LCS	26-FEB-2010 06:00:00	0.503	50	99.40358	
247790002	26-FEB-2010 06:00:00	0.504	50	99.20635	
1202053070 DUP (247790002)	26-FEB-2010 06:00:00	0.528	50	94.69697	
1202053071 SDILT (247790002)	26-FEB-2010 06:00:00	0.504	50	99.20635	
1202053072 MS (247790002)	26-FEB-2010 06:00:00	0.504	50	99.20635	
1202053073 MSD (247790002)	26-FEB-2010 06:00:00	0.526	50	95.05703	
247790003	26-FEB-2010 06:00:00	0.506	50	98.81423	
247794001	26-FEB-2010 06:00:00	0.508	50	98.4252	
247794002	26-FEB-2010 06:00:00	0.525	50	95.2381	
247794003	26-FEB-2010 06:00:00	0.519	50	96.33911	
247794004	26-FEB-2010 06:00:00	0.52	50	96.15385	
247794005	26-FEB-2010 06:00:00	0.515	50	97.08738	

Type	Sample Id	Description	Serial Number	Spike Amt	Units	Comments:
LCS	1202053074	Metals Soil LCS SRM ICPMS	U1062540-MS	.503	g	
MS	1202053072	ICP-MS Spike for soil products.	U1090827-A	.5	mL	Sample 247790002 consist of tan, rocky soil.
MS	1202053072	ICP-MS Spike for Soil Products	U1090827-B	.5	mL	
MSD	1202053073	ICP-MS Spike for soil products.	U1090827-A	.5	mL	
MSD	1202053073	ICP-MS Spike for Soil Products	U1090827-B	.5	mL	
REGNT All		Hydrogen Peroxide 30%	1250038-02	1.5	mL	
REGNT All		Nitric Acid CONC.	1274969	.5	mL	

Prep Logbook

Acid Digestion of Sediments, Sludges, and Soils

Batch ID: 957495.0			Verified by:	Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units	
Analyst:	Anthony Green			LCS	1202053068	Metals Soil LCS SRM ICP/Hg	U1062540-I	.509	g	
Method:	SW846 3050B			MS	1202053066	Metals Spike Mix I	U1100205-01	.25	mL	
Lab SOP:	GL-MA-E-009 REV# 19			MS	1202053066	Metals Spike Mix II	U1100205-06	.25	mL	
Instrument:	BAL-001			MSD	1202053067	Metals Spike Mix I	U1100205-01	.25	mL	
				MSD	1202053067	Metals Spike Mix II	U1100205-06	.25	mL	
Sample ID	Run Date	Matrix	Initial Weight (g)	Final Volume (mL)	Prep Factor (mL/g)	pH Check				
1202053063 MB	26-FEB-2010 07:30:00	Soil	0.513	50	97.46589					
1202053068 LCS	26-FEB-2010 07:30:00	Soil	0.509	50	98.23183					
247790002	26-FEB-2010 07:30:00	Soil	0.51	50	98.03922					
1202053064 DUP (247790002)	26-FEB-2010 07:30:00	Soil	0.515	50	97.08738					
1202053065 SDILT (247790002)	26-FEB-2010 07:30:00	Soil	0.51	50	98.03922					
1202053066 MS (247790002)	26-FEB-2010 07:30:00	Soil	0.506	50	98.81423					
1202053067 MSD (247790002)	26-FEB-2010 07:30:00	Soil	0.511	50	97.84736					
247790003	26-FEB-2010 07:30:00	Soil	0.515	50	97.08738					
247794001	26-FEB-2010 07:30:00	Soil	0.502	50	99.60159					
247794002	26-FEB-2010 07:30:00	Soil	0.518	50	96.5251					
247794003	26-FEB-2010 07:30:00	Soil	0.516	50	96.89922					
247794004	26-FEB-2010 07:30:00	Soil	0.502	50	99.60159					
247794005	26-FEB-2010 07:30:00	Soil	0.516	50	96.89922					

Reagent/Solvent	Lot ID	Description	Amount	Comments:
1265209		HYDROCHLORIC ACID	10 mL	Sample 247790002 consist of tan, rocky soil.
1274969		Nitric Acid CONC.	1.25 mL	

Prep Logbook

Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer

Batch ID:	958693.0	Verified by:		Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
Analyst:	Tara Griffin			LCS	1202056064	Metals LCS Soil SRM	U1031809A	.204	g
Method:	SW846 7471A Prep			MS	1202056066	Mercury soil working intermediate standard for MS	WHG100301-14	.3	mL
Lab SOP:	GL-MA-E-010 REV# 23			MSD	1202056072	Mercury soil working intermediate standard for MS	WHG100301-14	.3	mL
Instrument:	BAL-002								

Sample ID	Run Date	Matrix	Initial Weight (g)	Final Volume (mL)	Prep Factor (mL/g)	pH Check 1
1202056063 MB	01-MAR-2010 18:30:00	Soil	0.503	30	59.64215	
1202056064 LCS	01-MAR-2010 18:30:00	Soil	0.204	30	147.05882	
247781001	01-MAR-2010 18:30:00	Soil	0.507	30	59.1716	
1202056065 DUP (247781001)	01-MAR-2010 18:30:00	Soil	0.527	30	56.926	
1202056066 MS (247781001)	01-MAR-2010 18:30:00	Soil	0.525	30	57.14286	
1202056072 MSD (247781001)	01-MAR-2010 18:30:00	Soil	0.509	30	58.9391	
1202056071 SDIL.T (247781001)	01-MAR-2010 18:30:00	Soil	0.507	30	59.1716	
247781002	01-MAR-2010 18:30:00	Soil	0.532	30	56.39098	
247781003	01-MAR-2010 18:30:00	Soil	0.517	30	58.02708	
247781004	01-MAR-2010 18:30:00	Soil	0.503	30	59.64215	
247781005	01-MAR-2010 18:30:00	Soil	0.521	30	57.58157	
247781006	01-MAR-2010 18:30:00	Soil	0.512	30	58.59375	
247781007	01-MAR-2010 18:30:00	Soil	0.546	30	54.94505	
247781008	01-MAR-2010 18:30:00	Soil	0.541	30	55.45287	
247781009	01-MAR-2010 18:30:00	Soil	0.521	30	57.58157	
247781010	01-MAR-2010 18:30:00	Soil	0.582	30	51.54639	
247781011	01-MAR-2010 18:30:00	Soil	0.583	30	51.45798	
247781012	01-MAR-2010 18:30:00	Soil	0.544	30	55.14706	
247781013	01-MAR-2010 18:30:00	Soil	0.536	30	55.97015	
247781014	01-MAR-2010 18:30:00	Soil	0.584	30	51.36986	
247781015	01-MAR-2010 18:30:00	Soil	0.529	30	56.71078	
247784002	01-MAR-2010 18:30:00	Soil	0.513	30	58.47953	
247790002	01-MAR-2010 18:30:00	Soil	0.512	30	58.59375	
247790003	01-MAR-2010 18:30:00	Soil	0.518	30	57.91506	
247855002	01-MAR-2010 18:30:00	Soil	0.541	30	55.45287	

Reagent/Solvent Lot ID	Description	Amount
Analytical Logbook version 1 11-04-2002		

GEL Laboratories LLC

Prep Logbook

Batch ID: 958693.0
Analyst: Tara Griffin
Method: SW846 7471A Prep
Lab SOP: GL-MA-E-010 REV# 23
Instrument: BAL-002

Verified by:

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1202056064	Metals LCS Soil SRM	UI031809A	.204	g
MS	1202056066	Mercury soil working intermediate standard for MS	WHG100301-14	.3	mL
MSD	1202056072	Mercury soil working intermediate standard for MS	WHG100301-14	.3	mL

Sample ID	Run Date	Matrix	Initial Weight (g)	Final Volume (mL)	Prep Factor (mL/g)	pH Check 1
1255532-C	Hg reducing agent	2 mL				
1274391-1	NITRIC ACID	.375 mL				
1274394-A	Hydrochloric Acid Conc.	1.125 mL				
1274397-C	5% KMnO4 solution	7.5 mL				
WHG100301-07	Mercury Working Standard 1st Source	CAL S 30 uL				
WHG100301-08	Mercury Working Standard 1st Source	CAL S 75 uL				
WHG100301-09	Mercury Working 1st Source	CAL S 2.0 300 uL				
WHG100301-10	Mercury Working 1st Source	CAL S 5.0/CCV 750 uL				
WHG100301-11	Mercury Working 1st Source	CAL S 10.0 1.5 mL				
WHG100301-12	Mercury Working 2nd Source	S 5.0/ICV 750 uL				

Comments:

Sample 247781001 is a brown soil.
Digestion Start Date: 01-MAR-10 18:30
Digestion End Date: 01-MAR-10 19:00

DATA EXCEPTION REPORT

Mo. Day Yr.
22-MAR-10

Division:
Industrial

Quality Criteria:
Specifications

Type:
Process

Instrument Type:
ICP

Test / Method:
SW846 3050B/6010B

Matrix Type:
Solid

Client Code:
LANL

Batch ID:
957496

Sample Numbers:
See Below

Potentially affected work order(s)(SDG): 247790(10-1981),247794(10-1983-1)

Application Issues:

Failed Recovery for MS/PS
Failed RPD for MS/MSD, or PS/PSD
Failed Recovery for MSD/PSD
Failed Recovery for LCS/LCSD

**Specification and Requirements
Exception Description:**

1. Failed Recovery for MS/PS:
QC 1202053066MS
2. Failed RPD for MS/MSD, or PS/PSD:
QC 1202053067MSD
3. Failed Recovery for LCS/LCSD:
QC 1202053068LCS
4. Failed Recovery for MSD/PSD:
QC 1202053067MSD

DER Disposition:

1. The matrix spike recovery failed outside of the control limits for calcium and magnesium due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported.
2. The matrix spike and matrix spike duplicate % RPD failed outside of the control limits for calcium 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.
3. Silver and/or antimony did not meet the recovery acceptance criteria for the LCS. Per the DOE-AL statement of work, page forty, silver and antimony are exempt from the re-digestion requirement for LCS failures.
4. The matrix spike duplicate recovery failed outside of the control limits for magnesium and potassium due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported.

Originator's Name:

Helen Camello 22-MAR-10

Data Validator/Group Leader:

Christopher Louviere 22-MAR-10

DATA EXCEPTION REPORT

Mo. Day Yr. 20-APR-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: 957498	Sample Numbers: See Below		

Potentially affected work order(s)(SDG): 247790(10-1981),247794(10-1983-1)

Application Issues:

Failed RPD for DUP

Failed Recovery for MSD/PSD

Failed Recovery for MS/PS

**Specification and Requirements
Exception Description:**

1. Failed Recovery for MS/PS:
QC 1202053072MS
2. Failed RPD for DUP:
QC 1202053070DUP
3. Failed Recovery for MSD/PSD:
QC 1202053073MSD

DER Disposition:

The matrix spike failed outside of the control limits for Ni. The matrix spike duplicate failed outside of the control limits for Ni. The sample and sample duplicate % RPD failed outside the control limits for Ni and U. These failures were due to possible matrix interferences and/or sample non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported.

Originator's Name:

Paul Boyd 20-APR-10

Data Validator/Group Leader:

Kristen Parson 20-APR-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:** 12-JUN-10
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:** 12-JUN-10
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: UI090421-40 **Opened:** 09-OCT-09 **Amount :** 250 mL
Name: TRACE ICP Na-1000SOUR **Received:** 21-APR-09 **Catalog Number :** HP100052-1
Type: Source Material **Expires:** 09-OCT-10 **Lot Number :** 0830227
Employee: Helen Camello **Solvent :** 1%HNO3
Supplier: ENVIRONMENTAL EXPRESS
Description: Sodium 1000 +/- 3 ug/mL in 1% HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration
Sodium	1000 ug/mL		

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: UI090612-02 **Opened:** 12-JUN-09 **Catalog Number :** 060074-06-01
Name: ICPMS Tungsten - 10mg/L **Received:** 12-JUN-09 **Lot Number :** 1016377
Type: Source Material **Expires:** 12-JUN-10 **Solvent :** 2% HNO3
Employee: Paul Boyd
Supplier: O2SI
Description: ICPMS Tungsten standard SPIKE - 10mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Tungsten	10 mg/L		

Standard Logbook

Serial ID: UI090701-09 **Opened:** 01-JUL-09 **Amount :** 250 mL
Name: ICP-MS CRDL Master #1 **Received:** 01-JUL-09 **Catalog Number :** 160044-09-02
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016477
Employee: Paul Boyd **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: 02SI
Description: ICPMS CRDL Master Soln #1
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	15 mg/L	Arsenic	5 mg/L
Barium	2 mg/L	Beryllium	.5 mg/L
Boron	15 mg/L	Cadmium	1 mg/L
Calcium	100 mg/L	Chromium	3 mg/L
Cobalt	1 mg/L	Copper	1 mg/L
Iron	25 mg/L	Lead	2 mg/L
Lithium	10 mg/L	Magnesium	15 mg/L
Manganese	5 mg/L	Nickel	2 mg/L
Phosphorous	50 mg/L	Potassium	300 mg/L
Selenium	5 mg/L	Sodium	250 mg/L
Strontium	10 mg/L	Thallium	1 mg/L
Thorium	1 mg/L	Uranium	.2 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID: UI090701-10 **Opened:** 01-JUL-09 **Amount :** 250 mL
Name: ICP-MS CRDL Master #2 **Received:** 01-JUL-09 **Catalog Number :** 160044-08-02
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016476
Employee: Paul Boyd **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: 02SI
Description: ICPMS CRDL Soln #2
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Molybdenum	.5 mg/L
Silver	1 mg/L	Tin	2 mg/L
Titanium	10 mg/L	Tungsten	5 mg/L
Zirconium	2 mg/L		

Serial ID: UI090701-40 **Opened:** 01-JUL-09 **Amount :** 500 mL
Name: TRACE ICP Stock PQL St **Received:** 30-JUN-09 **Catalog Number :** 160543-01-03
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016475
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3+TrHF
Supplier: 02si
Description: TRACE ICP Stock PQL Standard
Comments: None

Analyte	Concentration	Analyte	Concentration
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Standard Logbook

Analyte	Concentration	Analyte	Concentration
Aluminum	100 mg/L	Antimony	5 mg/L
Arsenic	15 mg/L	Barium	2.5 mg/L
Beryllium	2.5 mg/L	Boron	25 mg/L
Cadmium	2.5 mg/L	Calcium	100 mg/L
Chromium	2.5 mg/L	Cobalt	2.5 mg/L
Copper	5 mg/L	Iron	50 mg/L
Lead	5 mg/L	Magnesium	150 mg/L
Manganese	5 mg/L	Molybdenum	5 mg/L
Nickel	2.5 mg/L	Phosphorous	75 mg/L
Potassium	75 mg/L	Selenium	15 mg/L
Silicon	50 mg/L	Silver	2.5 mg/L
Sodium	150 mg/L	Strontium	2.5 mg/L
Sulfur	50 mg/L	Thallium	10 mg/L
Tin	5 mg/L	Titanium	2.5 mg/L
Uranium	25 mg/L	Vanadium	2.5 mg/L
Zinc	5 mg/L		

Serial ID: UI090827-A **Opened:** 27-AUG-09 **Catalog Number :** 160067-03
Name: ICP-MS DOE SOIL SPIKE **Received:** 27-AUG-09 **Lot Number :** 1017142
Type: Source Material **Expires:** 27-AUG-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: UI090827-B **Opened:** 27-AUG-09 **Catalog Number :** 160067-03
Name: ICP-MS DOE SOIL SPIKE **Received:** 27-AUG-09 **Lot Number :** 1017142
Type: Source Material **Expires:** 27-AUG-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: UI090925-40 **Opened:** 23-OCT-09 **Amount :** 500 mL
Name: SECOND SOURCE STD -1 **Received:** 25-SEP-09 **Catalog Number :** SGELMX38-500N
Type: Source Material **Expires:** 30-SEP-10 **Lot Number :** 4909129
Employee: Helen Camello **Solvent :** 5%HNO3
Supplier: SPECTRO PURE
Description: SECOND SOURCE STD #1A 5%HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Arsenic	100 mg/L
Barium	100 mg/L	Boron	100 mg/L
Cadmium	100 mg/L	Calcium	1000 mg/L
Chromium	100 mg/L	Cobalt	100 mg/L
Copper	100 mg/L	Iron	1000 mg/L
Lead	100 mg/L	Phosphorous	500 mg/L
Potassium	500 mg/L	Selenium	500 mg/L
Sodium	500 mg/L	Strontium	100 mg/L

Serial ID: UI090925-41 **Opened:** 23-OCT-09 **Amount :** 500 mL
Name: SECOND SOURCE STD -1 **Received:** 25-SEP-09 **Catalog Number :** SGELMX39-500B
Type: Source Material **Expires:** 30-SEP-10 **Lot Number :** 4909130
Employee: Helen Camello **Solvent :** 5%HNO3,TR.HF
Supplier: SPECTRO PURE
Description: SECOND SOURCE STD #1B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 mg/L	Beryllium	50 mg/L
Magnesium	1000 mg/L	Manganese	100 mg/L
Molybdenum	100 mg/L	Nickel	100 mg/L
Silver	50 mg/L	Sulfur	500 mg/L
Thallium	100 mg/L	Tin	100 mg/L
Titanium	100 mg/L	Uranium	100 mg/L

Standard Logbook

Analyte	Concentration	Analyte	Concentration
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: 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
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Standard Logbook

Analyte	Concentration	Analyte	Concentration
Antimony	200 mg/L	Molybdenum	200 mg/L
Silver	200 mg/L	Sulfur	400 mg/L
Tin	200 mg/L	Titanium	200 mg/L

Serial ID: UI091102-42 **Opened:** 17-NOV-09 **Amount :** 200 mL
Name: SILICON **Received:** 02-NOV-09 **Catalog Number :** HP100050-4F
Type: Source Material **Expires:** 17-NOV-10 **Lot Number :** 0921924
Employee: Helen Camello **Solvent :** H2O/tr HF
Supplier: ENVIRNMENTAL EXPRESS
Description: SILICON 1000mg/L H2O/tr HF
Comments: None

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID: UI100205-01 **Opened:** 05-FEB-10 **Lot Number :** 1018514
Name: METALSPIKE-1 **Received:** 05-FEB-10
Type: Source Material **Expires:** 05-FEB-11
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: UI100205-06 **Opened:** 05-FEB-10 **Lot Number :** 1018515
Name: METALSPIKE-2 **Received:** 05-FEB-10
Type: Source Material **Expires:** 05-FEB-11
Employee: Francena Armstrong
Supplier: OS2I
Description: Metals Spike Mix II
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 ug/mL	Chromium	100 ug/mL
Copper	100 ug/mL	Manganese	100 ug/mL

Standard Logbook

Analyte	Concentration	Analyte	Concentration
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
Uranium-235	.72 ug/mL	Uranium-238	99.28 ug/mL
Vanadium	100 ug/mL	Zinc	100 ug/mL

Serial ID: UI100310-48 **Opened:** 19-MAR-10 **Amount :** 1000 mL
Name: Trace ICP ICSA **Received:** 12-MAR-10 **Catalog Number :** 160005-02
Type: Source Material **Expires:** 19-MAR-11 **Lot Number :** 1019141
Employee: Helen Camello **Solvent :** 3% HCl + 1% HNO3
Supplier: o2si
Description: Trace ICP Interferent Check Standard A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 UG/L	Calcium	500000 UG/L
Iron	200000 UG/L	Magnesium	500000 UG/L

Serial ID: UI100312-40 **Opened:** 14-MAR-10 **Amount :** 500 mL
Name: ICP HIGH RANGE STD-A **Received:** 12-MAR-10 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 14-MAR-11 **Lot Number :** 1018981
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STD SOLUTION A
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10000 ug/L	Arsenic	10000 ug/L
Barium	15000 ug/L	Beryllium	3000 ug/L
Boron	5000 ug/L	Cadmium	10000 ug/L
Chromium	25000 ug/L	Cobalt	10000 ug/L
Copper	20000 ug/L	Lead	25000 ug/L
Manganese	10000 ug/L	Molybdenum	10000 ug/L
Nickel	10000 ug/L	Phosphorous	15000 ug/L
Potassium	300000 ug/L	Selenium	10000 ug/L
Silica	107000 ug/L	Silicon	50000 ug/L
Silver	1000 ug/L	Strontium	10000 ug/L
Sulfur	50000 ug/L	Thallium	10000 ug/L
Tin	10000 ug/L	Titanium	10000 ug/L
Vanadium	10000 ug/L	Zinc	15000 ug/L

Standard Logbook

Serial ID: UI100312-41 **Opened:** 14-MAR-10 **Amount :** 500 mL
Name: ICP HIGH RANGE STD B **Received:** 12-MAR-10 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 14-MAR-11 **Lot Number :** 1018981
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: UI100317-06 **Opened:** 17-MAR-10 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master A **Received:** 17-MAR-10 **Catalog Number :** 160055-01
Type: Source Material **Expires:** 17-MAR-11 **Lot Number :** 1019161
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV SOLN A - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	2020 mg/L	Calcium	2000 mg/L
Iron	2000 mg/L	Magnesium	2000 mg/L
Phosphorous	2000 mg/L	Potassium	2000 mg/L
Sodium	2000 mg/L		

Serial ID: UI100317-07 **Opened:** 17-MAR-10 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master B **Received:** 17-MAR-10 **Catalog Number :** 160054-02
Type: Source Material **Expires:** 17-MAR-11 **Lot Number :** 1019162
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV Soln B - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	20 mg/L	Barium	20 mg/L
Beryllium	20 mg/L	Boron	40 mg/L
Cadmium	20 mg/L	Chromium	20 mg/L
Cobalt	20 mg/L	Copper	20 mg/L
Lead	20 mg/L	Lithium	20 mg/L
Manganese	20 mg/L	Nickel	20 mg/L
Selenium	20 mg/L	Strontium	20 mg/L
Thallium	20 mg/L	Thorium	20 mg/L
Uranium	20 mg/L	Vanadium	20 mg/L
Zinc	20 mg/L		

Standard Logbook

Serial ID: UI100317-08 **Opened:** 17-MAR-10 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master C **Received:** 17-MAR-10 **Catalog Number :** 160054-03
Type: Source Material **Expires:** 17-MAR-11 **Lot Number :** 1019163
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: UI100405-12 **Opened:** 05-APR-10 **Amount :** 250 mL
Name: ICP-MS ICSAB Master B **Received:** 05-APR-10 **Catalog Number :** 160033-02
Type: Source Material **Expires:** 05-APR-11 **Lot Number :** 1019466
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: UI100405-13 **Opened:** 05-APR-10 **Amount :** 250 mL
Name: ICP-MS ICSAB Master C **Received:** 05-APR-10 **Catalog Number :** 160033-03
Type: Source Material **Expres:** 05-APR-11 **Lot Number :** 1019467
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: UI100415-11 **Opened:** 15-APR-10 **Amount :** 1000 mL
Name: ICP-MS ICSA Master A **Received:** 15-APR-10 **Catalog Number :** 160013-01-01L
Type: Source Material **Expires:** 15-APR-11 **Lot Number :** 1018321
Employee: Paul Boyd **Solvent :** 2% HNO3
Supplier: 02SI
Description: ICP-MS ICSA Master A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Carbon	2000 mg/L	Chloride	10000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Molybdenum	20 mg/L	Phosphorous	1000 mg/L
Potassium	1000 mg/L	Sodium	1000 mg/L
Sulfur	1000 mg/L	Titanium	20 mg/L

Serial ID: UMS100415-01 **Opened:** 15-APR-10 **Amount :** 250 mL
Name: ICPMSCaSPIKEB **Received:** 15-APR-10 **Catalog Number :** ZGEL-100-250
Type: Source Material **Expires:** 28-FEB-11 **Lot Number :** 22-20JB
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution B
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	10 mg/L	Barium	10 mg/L
Beryllium	10 mg/L	Boron	20 mg/L
Cadmium	10 mg/L	Chromium	10 mg/L
Cobalt	10 mg/L	Copper	10 mg/L
Lead	10 mg/L	Lithium	10 mg/L
Manganese	10 mg/L	Nickel	10 mg/L
Selenium	10 mg/L	Silver	10 mg/L
Strontium	10 mg/L	Thallium	10 mg/L
Thorium	10 mg/L	Uranium	10 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID: UMS100415-02 **Opened:** 15-APR-10 **Catalog Number :** ZGEL-102-250
Name: ICPMSCaSPIKEA **Received:** 15-APR-10 **Lot Number :** 22-21JB
Type: Source Material **Expires:** 28-FEB-11
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

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Iron	1000 mg/L	Magnesium	1000 mg/L
Phosphorous	1000 mg/L	Potassium	1000 mg/L
Sodium	1000 mg/L		

Serial ID: UMS100415-03 **Opened:** 15-APR-11 **Amount :** 250 ml
Name: ICPMSCaSPIKEC **Received:** 15-APR-10 **Catalog Number :** ZGEL-101-250
Type: Source Material **Expires:** 28-FEB-11 **Lot Number :** 22-22JB
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: IHG100301-01 **Opened:** 01-MAR-10 **Instrument Id :** Mercury
Name: MHGINTER1 **Received:** 01-MAR-10 **Pipet Id :** Minou1
Type: Intermediate **Expires:** 02-MAR-10 **Solvent :** 1mL HNO3 + Typel H2O
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Intermediate 1st Source 200 ug/L
Comments: Prepare fresh daily

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG1167639-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: IHG100301-02 **Opened:** 01-MAR-10 **Pipet Id :** Minou1
Name: MHGINTER2 **Received:** 01-MAR-10 **Solvent :** 2% HNO3-1274391
Type: Intermediate **Expires:** 02-MAR-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: WHG100301-07 **Opened:** 01-MAR-10 **Pipet Id :** Hg1289245
Name: MHGWORKCALS0.2CRA **Received:** 01-MAR-10 **Solvent :** 2% HNO3-1274391
Type: Working **Expires:** 08-MAR-10
Employee: Tara Griffin
Supplier: GEL

Standard Logbook

Description: Mercury Working Standard 1st Source CAL S 0.2/CRA

Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG100301-01	Mercury	200 ug/L	30 uL	30 mL	.2 ug/L

Serial ID: WHG100301-08 Opened: 01-MAR-10 Pipet Id : Hg1289245
 Name: MHGWORKCALS0.5 Received: 01-MAR-10 Solvent : 2% HNO3-1274391
 Type: Working Expires: 08-MAR-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.
IHG100301-01	Mercury	200 ug/L	75 uL	30 mL	.5 ug/L

Serial ID: WHG100301-09 Opened: 01-MAR-10 Pipet Id : Hg1289245
 Name: MHGWORKCALS2.0 Received: 01-MAR-10 Solvent : 2% HNO3-1274391
 Type: Working Expires: 08-MAR-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.
IHG100301-01	Mercury	200 ug/L	300 uL	30 mL	2 ug/L

Serial ID: WHG100301-10 Opened: 01-MAR-10 Pipet Id : Hg1289245
 Name: MHGWORKCALS5.0CCV Received: 01-MAR-10 Solvent : 2% HNO3-1274391
 Type: Working Expires: 08-MAR-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.
IHG100301-01	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Serial ID: WHG100301-11 Opened: 01-MAR-10 Pipet Id : Hg1289245
 Name: MHGWORKCALS10.0 Received: 01-MAR-10 Solvent : 2% HNO3-1274391
 Type: Working Expires: 08-MAR-10
 Employee: Tara Griffin
 Supplier: GEL

Description: Mercury Working 1st Source CAL S 10.0

Standard Logbook

Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG100301-01	Mercury	200 ug/L	1.5 mL	30 mL	10 ug/L

Serial ID: WHG100301-12 **Opened:** 01-MAR-10 **Pipet Id :** Hg1289245
Name: MHGWORKS5.0ICV **Received:** 01-MAR-10 **Solvent :** 2% HNO3-1274391
Type: Working **Expires:** 08-MAR-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.
IHG100301-02	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Serial ID: WHG100301-14 **Opened:** 01-MAR-10 **Pipet Id :** Hg1289245
Name: MHGSOILMSSPIKE **Received:** 01-MAR-10 **Solvent :** 2% HNO3-1274391
Type: Working **Expires:** 08-MAR-10
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury soil working intermediate standard for MS
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG1167639-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WI100319-42 **Opened:** 19-MAR-10 **Balance Id :** 216
Name: TRACE ICP 0.1 PPM STD. **Received:** 02-NOV-09 **Pipet Id :** 3581809
Type: Working **Expires:** 20-MAR-10 **Solvent :** 3%HCL and 1%HNO3 -1285629
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.
WI100319-44	Aluminum	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100319-44	Antimony	1000 ug/L	10 mL	100 mL	100 ug/L
WI100319-44	Arsenic	1000 ug/L	10 mL	100 mL	100 ug/L
WI100319-44	Barium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100319-44	Beryllium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100319-44	Boron	1000 ug/L	10 mL	100 mL	100 ug/L
WI100319-44	Cadmium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100319-44	Calcium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100319-44	Chromium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100319-44	Cobalt	1000 ug/L	10 mL	100 mL	100 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WI100319-44	Copper	1000 ug/L	10 mL	100 mL	100 ug/L
WI100319-44	Iron	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100319-44	Lead	1000 ug/L	10 mL	100 mL	100 ug/L
WI100319-44	Magnesium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100319-44	Manganese	1000 ug/L	10 mL	100 mL	100 ug/L
WI100319-44	Molybdenum	1000 ug/L	10 mL	100 mL	100 ug/L
WI100319-44	Nickel	1000 ug/L	10 mL	100 mL	100 ug/L
WI100319-44	Phosphorous	5000 ug/L	10 mL	100 mL	500 ug/L
WI100319-44	Potassium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100319-44	Selenium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100319-44	Silica	10698 ug/L	10 mL	100 mL	1069 ug/L
WI100319-44	Silicon	5000 ug/L	10 mL	100 mL	500 ug/L
WI100319-44	Silver	1000 ug/L	10 mL	100 mL	100 ug/L
WI100319-44	Sodium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100319-44	Strontium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100319-44	Sulfur	2000 ug/L	10 mL	100 mL	200 ug/L
WI100319-44	Thallium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100319-44	Tin	1000 ug/L	10 mL	100 mL	100 ug/L
WI100319-44	Titanium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100319-44	Uranium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100319-44	Vanadium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100319-44	Zinc	1000 ug/L	10 mL	100 mL	100 ug/L

Serial ID: WI100319-43 **Opened:** 19-MAR-10 **Balance Id :** 216
Name: TRACE ICP 0.5/CCV STD. **Received:** 02-NOV-09 **Pipet Id :** 3581809
Type: Working **Expires:** 20-MAR-10 **Solvent :** 3%HCL and 1%HNO3 --1285629
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.
UI090421-40	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

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091102-40	Iron	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Lead	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Magnesium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Manganese	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Nickel	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Phosphorous	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI091102-40	Potassium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Selenium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Sodium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Strontium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Thallium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Uranium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Vanadium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Zinc	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Antimony	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Molybdenum	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Silver	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Sulfur	400 mg/L	2.5 mL	1000 mL	1000 UG/L
UI091102-41	Tin	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Titanium	200 mg/L	2.5 mL	1000 mL	500 UG/L

Serial ID: WI100319-44 **Opened:** 19-MAR-10 **Balance Id :** 216
Name: TRACE ICP SCAL 1.0 **Received:** 02-NOV-09 **Pipet Id :** 3581809
Type: Working **Expires:** 20-MAR-10 **Solvent :** 3%HCL and 1 %HNO3-1285629
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

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091102-40	Manganese	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Nickel	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Phosphorous	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI091102-40	Potassium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Selenium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Sodium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Strontium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Thallium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Uranium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Vanadium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Zinc	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-41	Antimony	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-41	Molybdenum	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-41	Silver	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-41	Sulfur	400 mg/L	2.5 mL	500 mL	2000 ug/L
UI091102-41	Tin	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-41	Titanium	200 mg/L	2.5 mL	500 mL	1000 ug/L

Serial ID: WI100319-45 **Opened:** 19-MAR-10 **Balance Id :** 216
Name: TRACE ICP S-10 STD **Received:** 22-APR-09 **Pipet Id :** 3581809
Type: Working **Expires:** 20-MAR-10 **Solvent :** 3%HCL and 1%HNO3 -1285629
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP S-10 CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090421-40	Sodium	1000 ug/mL	10 mL	500 mL	20000 UG/L
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

Serial ID: WI100319-46 **Opened:** 19-MAR-10 **Balance Id :** 216
Name: ICP TRACE ICV **Received:** 25-SEP-09 **Pipet Id :** 3581809
Type: Working **Expires:** 20-MAR-10 **Solvent :** 3%HCL AND 1%HNO3-1285629
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

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090925-40	Boron	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Cadmium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Calcium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090925-40	Chromium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Cobalt	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Copper	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Iron	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090925-40	Lead	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Phosphorous	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-40	Potassium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-40	Selenium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-40	Sodium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-40	Strontium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Antimony	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Beryllium	50 mg/L	2.5 mL	500 mL	250 ug/L
UI090925-41	Magnesium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090925-41	Manganese	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Molybdenum	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Nickel	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Silver	50 mg/L	2.5 mL	500 mL	250 ug/L
UI090925-41	Sulfur	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-41	Thallium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Tin	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Titanium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Uranium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Vanadium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Zinc	100 mg/L	2.5 mL	500 mL	500 ug/L
UI091102-42	Silica	2139 mg/L	2.5 mL	500 mL	10695 ug/L
UI091102-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L

Serial ID: WI100319-47

Name: PQL Working Standard

Type: Working

Employee: Helen Camello

Supplier: 02si

Description: PQL Working Standard

Comments: None

Opened: 19-MAR-10

Received: 30-JUN-09

Expires: 20-MAR-10

Balance Id : 216

Pipet Id : 3581809

Solvent : 3%HCL & 1%HNO3-1285629

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

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-40	Cadmium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Calcium	100 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Chromium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Cobalt	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Copper	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Iron	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Lead	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Magnesium	150 mg/L	2 mL	1000 mL	300 ug/L
UI090701-40	Manganese	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Molybdenum	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Nickel	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Phosphorous	75 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Potassium	75 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Selenium	15 mg/L	2 mL	1000 mL	15 ug/L
UI090701-40	Silicon	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Silver	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Sodium	150 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Strontium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Sulfur	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Thallium	10 mg/L	2 mL	1000 mL	20 ug/L
UI090701-40	Tin	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Titanium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Uranium	25 mg/L	2 mL	1000 mL	50 ug/L
UI090701-40	Vanadium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Zinc	5 mg/L	2 mL	1000 mL	10 ug/L

Serial ID: WMS100420-04 **Opened:** 20-APR-10 **Amount:** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 20-APR-10 **Balance Id:** 4025216
Type: Working **Expires:** 21-APR-10 **Pipet Id:** 3541598
Employee: Paul Boyd **Solvent:** 2%HNO3/1%HCl-1303289
Supplier: GEL
Description: ICPMS Calibration Standard (100 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090612-02	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS100415-01	Arsenic	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100415-01	Barium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100415-01	Beryllium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100415-01	Boron	20 mg/L	.5 mL	50 mL	200 ug/l
UMS100415-01	Cadmium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100415-01	Chromium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100415-01	Cobalt	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100415-01	Copper	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100415-01	Lead	10 mg/L	.5 mL	50 mL	100 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UMS100415-01	Lithium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100415-01	Manganese	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100415-01	Nickel	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100415-01	Selenium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100415-01	Silver	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100415-01	Strontium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100415-01	Thallium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100415-01	Thorium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100415-01	Uranium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100415-01	Vanadium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100415-01	Zinc	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100415-02	Aluminum	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100415-02	Calcium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100415-02	Iron	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100415-02	Magnesium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100415-02	Phosphorous	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100415-02	Potassium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100415-02	Sodium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100415-03	Antimony	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100415-03	Molybdenum	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100415-03	Tin	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100415-03	Titanium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100415-03	Zirconium	10 mg/L	.5 mL	50 mL	100 ug/l

Serial ID: WMS100420-04A **Opened:** 20-APR-10 **Balance Id :** 4025216
Name: ICPMS Cal Standard 10 **Received:** 20-APR-10 **Pipet Id :** 3541598
Type: Working **Expires:** 21-APR-10 **Solvent :** 2%HNO3/1%HCl - 1303289
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS Calibration Standard (10 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS100420-04	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100420-04	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS100420-04	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS100420-04	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100420-04	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100420-04	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS100420-04	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100420-04	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100420-04	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100420-04	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS100420-04	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS100420-04	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS100420-04	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS100420-04	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100420-04	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100420-04	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS100420-04	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS100420-04	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS100420-04	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100420-04	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100420-04	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100420-04	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS100420-04	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100420-04	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100420-04	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100420-04	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100420-04	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS100420-04	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100420-04	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS100420-04	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100420-04	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100420-04	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS100420-04	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

Serial ID: WMS100420-05 **Opened:** 20-APR-10 **Balance Id :** 40245216
Name: ICPMS ICV **Received:** 20-APR-10 **Pipet Id :** 3541598
Type: Working **Expires:** 21-APR-10 **Solvent :** 2%HNO3/1%HCl - 1303289
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100317-06	Aluminum	2020 mg/L	.125 mL	50 mL	5050 ug/L
UI100317-06	Calcium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI100317-06	Iron	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI100317-06	Magnesium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI100317-06	Phosphorous	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI100317-06	Potassium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI100317-06	Sodium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI100317-07	Arsenic	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L
UI100317-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100317-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L

Serial ID: WMS100420-06 **Opened:** 20-APR-10 **Balance Id :** 40245216
Name: ICPMS CRDL **Received:** 20-APR-10 **Pipet Id :** 3820544
Type: Working **Expires:** 21-APR-10 **Solvent :** 2%HNO3/1%HCl - 1303289
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS CRDL
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Aluminum	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Calcium	100 mg/L	.05 mL	50 mL	100 ug/L
UI090701-09	Chromium	3 mg/L	.05 mL	50 mL	3 ug/L
UI090701-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Iron	25 mg/L	.05 mL	50 mL	25 ug/L
UI090701-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI090701-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L
UI090701-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI090701-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI090701-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

Serial ID: WMS100420-07 **Opened:** 20-APR-10 **Balance Id :** 40245216
Name: ICPMS ICSA **Received:** 20-APR-10 **Lot Number :** 1010773
Type: Working **Expires:** 21-APR-10 **Pipet Id :** 3541598
Employee: Paul Boyd **Solvent :** 2%HNO3/1%HCl - 1303289
Supplier: GEL
Description: ICPMS ICSA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100415-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100415-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100415-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI100415-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100415-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100415-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI100415-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100415-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100415-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100415-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100415-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS100420-08 **Opened:** 20-APR-10 **Balance Id :** 40245216
Name: ICPMS ICSAB **Received:** 20-APR-10 **Pipet Id :** 1758088
Type: Working **Expires:** 21-APR-10 **Solvent :** 2%HNO3/1%HCl - 1303289
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICSAB

Standard Logbook

Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100405-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI100405-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100405-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100405-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L
UI100405-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI100405-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI100405-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI100405-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI100405-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI100405-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100405-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI100405-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI100405-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100405-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100405-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100405-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100405-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100405-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100405-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI100405-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI100405-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI100405-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI100405-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI100405-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100415-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100415-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100415-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI100415-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100415-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100415-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI100415-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100415-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100415-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100415-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100415-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: 1156689-A **Opened:** 20-JUL-09 **Lot Number :** 41226920
Name: B-KMnO4(VWR)-MER **Received:** 20-JUL-09
Type: Reagent/Solvent **Expires:** 20-JUL-10
Employee: Tara Griffin **Verified:** 07-AUG-07
Supplier: VWR
Description: Potassium Permanganate
Comments: None

Standard Logbook

Serial ID: 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: 1250038-02 **Opened:** 04-JAN-10 **Lot Number :** ZU74081198 mL
Name: B-H2O2 **Received:** 04-JAN-10
Type: Reagent/Solvent **Expires:** 04-JAN-11
Employee: Bryan Davis
Supplier: EM SCIENCE
Description: Hydrogen Peroxide 30%
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.	Allquot	Final Vol.	Final Conc.
1228372-A	B-NH2OH.HCl-MER	N/A	120 g	1000 mL	N/A

Serial ID: 1265209 **Opened:** 04-FEB-10 **Lot Number :** J02039
Name: I-HCL **Received:** 04-FEB-10 **Preservative Id :** 5 none
Type: Reagent/Solvent **Expires:** 04-FEB-11
Employee: Bryan Davis
Supplier: J.T. BAKER
Description: HYDROCHLORIC ACID
Comments: None

Serial ID: 1274391-1 **Opened:** 24-FEB-10 **Instrument Id :** MERCURY
Name: B-HNO3-MER **Received:** 24-FEB-10 **Lot Number :** H44025
Type: Reagent/Solvent **Expires:** 24-FEB-11
Employee: Tara Griffin
Supplier: Mallinckrodt Chemicals
Description: NITRIC ACID
Comments: None

Standard Logbook

Serial ID: 1274394-A **Opened:** 24-FEB-10 **Lot Number :** J02039
Name: B-HCl-MER **Received:** 24-FEB-10
Type: Reagent/Solvent **Expires:** 01-MAR-10
Employee: Tara Griffin
Supplier: J T Baker
Description: Hydrochloric Acid Conc.
Comments: None

Serial ID: 1274397-C **Opened:** 24-FEB-10 **Balance Id :** BAL-002
Name: B-KMnO4-MER **Received:** 24-FEB-10
Type: Reagent/Solvent **Expires:** 20-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: 1274969 **Opened:** 24-FEB-10 **Lot Number :** J 04043 L
Name: I-HNO3 **Received:** 24-FEB-10
Type: Reagent/Solvent **Expires:** 24-FEB-11
Employee: Francena Armstrong
Supplier: BAKER
Description: Nitric Acid CONC.
Comments: None

Serial ID: 1277916 **Opened:** 02-MAR-10 **Lot Number :** J02039
Name: I-HCL **Received:** 02-MAR-10 **Preservative Id :** 5 none
Type: Reagent/Solvent **Expires:** 02-MAR-11
Employee: Francena Armstrong
Supplier: J.T. BAKER
Description: HYDROCHLORIC ACID
Comments: None

Serial ID: 1285629 **Opened:** 15-MAR-10 **Amount :** 20 L
Name: B-ICP-RINSE SOLN **Received:** 05-MAR-10 **Lot Number :** H04040+G34050
Type: Reagent/Solvent **Expires:** 21-MAR-10 **Solvent :** 3%HCL+1%HNO3
Employee: Helen Camello
Supplier: GEL
Description: 3%HCL+1%HNO3 RINSE SOLN.
Comments: None

Standard Logbook

Serial ID: 1291278 **Opened:** 25-MAR-10 **Lot Number :** J 08035 L
Name: I-HNO3 **Received:** 25-MAR-10
Type: Reagent/Solvent **Expires:** 25-MAR-11
Employee: Anthony Green
Supplier: BAKER
Description: Nitric Acid CONC.
Comments: None

Serial ID: 1303289 **Opened:** 19-APR-10 **Solvent :** Type I Water
Name: B-2%HNO3/1%HCl-ICPMS **Received:** 19-APR-10
Type: Reagent/Solvent **Expires:** 26-APR-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.
1277916	I-HCL	36.5-38.0	90 mL	9 l	N/A
1291278	I-HNO3	69.0-70.0	180 mL	9 l	N/A

General Chemistry

Analysis

Case Narrative

**General Chemistry Narrative
Los Alamos National Laboratory (LANL)
SDG 10-1981**

Method/Analysis Information

Product: pH

Analytical Batch: 956998 **Method:** SW9045C pH

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 9045C/9045D:

Sample ID	Client ID
247790002	RE15-10-8386
247790003	RE15-10-8387
1202051942	247784002(WST15-10-11622) Sample Duplicate (DUP)
1202051943	247790002(RE15-10-8386) Sample Duplicate (DUP)
1202051944	Laboratory Control Sample (LCS)

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

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-008 REV# 17.

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 Electrode analysis was performed on a PerpHect pH Meter Orion 370.

Initial Calibration

All initial calibration requirements have been met for this SDG.

Calibration Verification Information (CCV)

All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

Quality Control (QC) Information

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: 247784002 (WST15-10-11622) and 247790002 (RE15-10-8386).

Duplicate Relative Percent Difference (RPD) Statement

The RPD between the sample and its duplicate met the acceptance limits.

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times

The following samples from this sample group were received by the lab outside of the method specified holding time: 1202051942 (WST15-10-11622), 1202051943 (RE15-10-8386), 247790002 (RE15-10-8386) and 247790003 (RE15-10-8387).

Sample Re-analysis

The samples in this SDG did not require re-analysis.

Miscellaneous Information

Data Exception (DER) Documentation

A DER was not required for this SDG.

Additional Comments

Additional comments were not required for this SDG.

Electronic Packaging Comment

This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Method/Analysis Information

Product: Cyanide, Total
Analytical Batch: 957569 **Method:** SW9012A Cyanide and Total
Prep Batch : 957568 **Method:** SSW846 9010B Prep

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 9012A:

Sample ID	Client ID
247790002	RE15-10-8386
247790003	RE15-10-8387
1202053263	Method Blank (MB)
1202053264	247770008(RE15-10-8256) Sample Duplicate (DUP)
1202053265	247770009(RE15-10-8262) Sample Duplicate (DUP)
1202053266	247770008(RE15-10-8256) Matrix Spike (MS)
1202053267	247770009(RE15-10-8262) Matrix Spike (MS)
1202053268	247770008(RE15-10-8256) Matrix Spike Duplicate (MSD)
1202053269	247770009(RE15-10-8262) Matrix Spike Duplicate (MSD)
1202053270	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: 247770008 (RE15-10-8256) and 247770009 (RE15-10-8262).

Matrix Spike (MS)/Post Spike (PS) Recovery Statement

The MS/PS recoveries for this sample set were within the required acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement

The MSD recoveries for this sample set were within the required acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement

The RPDs between the spike and spike duplicate met the acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement

The RPD between the sample and its duplicate met the acceptance limits.

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times

All samples in this SDG met the specified holding time.

Sample Preservation/Integrity

All the samples from this sample group met the preservation and integrity requirements of the method.

Sample Dilutions

The following sample in this sample group was diluted due to high concentration: 1202053270 (LCS).

Sample Re-analysis

The samples in this SDG did not require re-analysis.

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

A DER was not required for this SDG.

Additional Comments

Additional comments were not required for this SDG.

Electronic Packaging Comment

This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Method/Analysis Information

Product: Ion Chromatography

Analytical Batch: 957881 **Method:** EPA 300.0 Nitrate in Soil

Prep Batch : 957878 **Method:** EPA 300.0 PREP

Sample Analysis

The following samples were analyzed using the analytical protocol as established in EPA 300.0:

Sample ID	Client ID
247790002	RE15-10-8386
247790003	RE15-10-8387
1202054065	Method Blank (MB)
1202054066	247546004(RE46-10-13380) Sample Duplicate (DUP)
1202054067	247822006(CAPU-10-12538) Sample Duplicate (DUP)
1202054068	247546004(RE46-10-13380) Matrix Spike (MS)
1202054069	247822006(CAPU-10-12538) Matrix Spike (MS)
1202054070	247546004(RE46-10-13380) Matrix Spike Duplicate (MSD)
1202054071	247822006(CAPU-10-12538) Matrix Spike Duplicate (MSD)
1202054072	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-086 REV# 17.

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 Ion Chromatography analysis was performed on a Dionex ICS-3000 Ion Chromatograph.

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: 247546004 (RE46-10-13380) and 247822006 (CAPU-10-12538).

Matrix Spike (MS)/Post Spike (PS) Recovery Statement

The MS/PS recoveries for this sample set were within the required acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement

The MSD recoveries for this sample set were within the required acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement

The RPDs between the spike and spike duplicate met the acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement

The RPD between the sample and its duplicate met the acceptance limits.

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times

All samples in this SDG met the specified holding time.

Sample Dilutions

The samples in this SDG did not require dilutions.

Sample Re-analysis

The samples in this SDG did not require re-analysis.

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

A DER was not required for this SDG.

Manual Integrations

The following samples from this sample group had to be manually integrated due to errors in the instrument software peak integration: 1202054066 (RE46-10-13380) and 247790003 (RE15-10-8387).

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

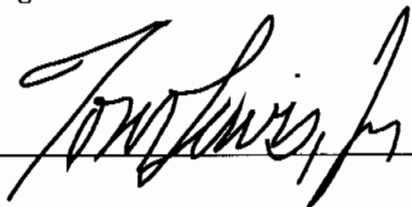
Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

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: _____

20Mar10

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: 10-1981 GEL Work Order: 247790

The Qualifiers in this report are defined as follows:

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

Reviewed by



GEL LABORATORIES LLC

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

Certificate of Analysis

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

Report Date: March 17, 2010

Client SDG: 10-1981

Client Sample ID: RE15-10-8386
Sample ID: 247790002
Matrix: R
Collect Date: 17-FEB-10 12:00
Receive Date: 23-FEB-10
Collector: Client
Moisture: 5.4%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Electrode Analysis											
<i>SW9045C pH "As Received"</i>											
pH at Temp 19.8C	H	8.89	0.010	0.100	SU	1	TXT1	02/24/10	1512	956998	1
Flow Injection Analysis											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	64.2	236	ug/kg	1	AXC2	03/02/10	1702	957569	2
Ion Chromatography											
<i>EPA 300.0 Nitrate in Soil "Dry Weight Corrected"</i>											
Nitrate-N		1.26	0.317	1.06	mg/kg	1	MAR1	03/10/10	1626	957881	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	03/10/10	1030	957878
SW846 9010B Prep	SW846 9010B Prep	AXS5	03/02/10	1528	957568

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

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: March 17, 2010

Client SDG: 10-1981

Client Sample ID: RE15-10-8387
Sample ID: 247790003
Matrix: R
Collect Date: 17-FEB-10 12:00
Receive Date: 23-FEB-10
Collector: Client
Moisture: 5.72%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Electrode Analysis											
<i>SW9045C pH "As Received"</i>											
pH at Temp 19.6C	H	8.96	0.010	0.100	SU	1	TXT1	02/24/10	1516	956998	1
Flow Injection Analysis											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	63.3	233	ug/kg	1	AXC2	03/02/10	1703	957569	2
Ion Chromatography											
<i>EPA 300.0 Nitrate in Soil "Dry Weight Corrected"</i>											
Nitrate-N		1.08	0.318	1.06	mg/kg	1	MAR1	03/10/10	1655	957881	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	03/10/10	1030	957878
SW846 9010B Prep	SW846 9010B Prep	AXS5	03/02/10	1528	957568

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

Quality Control Summary

GEL LABORATORIES LLC

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

QC Summary

Report Date: March 17, 2010

Page 1 of 3

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

Contact: Ms. Joylene Valdez

Workorder: 247790

Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Electrode Analysis											
Batch	956998										
QC1202051942	247784002	DUP									
pH		H	8.39	H	8.43	SU	0.476	(0%-10%)	TXT1	02/24/10	15:10
QC1202051943	247790002	DUP									
pH		H	8.89	H	8.91	SU	0.225	(0%-10%)		02/24/10	15:13
QC1202051944	LCS										
pH	7.00				6.98	SU		99.7	(95%-105%)		02/24/10 15:02
Flow Injection Analysis											
Batch	957569										
QC1202053264	247770008	DUP									
Cyanide, Total		U	ND	U	ND	ug/kg	N/A		AXC2	03/02/10	16:49
QC1202053265	247770009	DUP									
Cyanide, Total		U	ND	U	ND	ug/kg	N/A			03/02/10	16:53
QC1202053270	LCS										
Cyanide, Total	67900				71000	ug/kg		105	(32%-157%)		03/02/10 16:48
QC1202053263	MB										
Cyanide, Total				U	250	ug/kg					03/02/10 16:43
QC1202053266	247770008	MS									
Cyanide, Total	5040	U	ND		5350	ug/kg		106	(26%-158%)		03/02/10 16:50
QC1202053267	247770009	MS									
Cyanide, Total	4890	U	ND		5920	ug/kg		121	(26%-158%)		03/02/10 16:54
QC1202053268	247770008	MSD									
Cyanide, Total	5040	U	ND		5500	ug/kg	2.79	109	(0%-30%)		03/02/10 16:51
QC1202053269	247770009	MSD									
Cyanide, Total	4710	U	ND		4900	ug/kg	18.9	104	(0%-30%)		03/02/10 16:55
Ion Chromatography											
Batch	957881										
QC1202054066	247546004	DUP									
Nitrate-N			1.28		1.26	mg/kg	1.53	^	(+/-1.22)	GXM3	03/10/10 14:02
QC1202054067	247822006	DUP									
Nitrate-N			9.71		9.76	mg/kg	0.512		(0%-20%)	MAR1	03/11/10 19:33
QC1202054072	LCS										
Nitrate-N	50.0				51.8	mg/kg		104	(90%-110%)	GXM3	03/10/10 13:04
QC1202054065	MB										
Nitrate-N				U	1.00	mg/kg					03/10/10 12:35
QC1202054068	247546004	MS									
Nitrate-N	61.1		1.28		61.7	mg/kg		98.9	(90%-110%)		03/10/10 14:31
QC1202054069	247822006	MS									
Nitrate-N	56.7		9.71		63.5	mg/kg		94.9	(90%-110%)	MAR1	03/11/10 20:01
QC1202054070	247546004	MSD									
Nitrate-N	61.1		1.28		62.6	mg/kg	1.39	100	(0%-20%)	GXM3	03/10/10 15:00
QC1202054071	247822006	MSD									
Nitrate-N	56.7		9.71		63.4	mg/kg	0.100	94.8	(0%-20%)	MAR1	03/11/10 20:30

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QC Summary

Workorder: 247790

Page 2 of 3

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
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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
- JNX Non Calibrated Compound
- 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
- UJ Compound cannot be extracted
- UJ Gamma Spectroscopy--Uncertain identification
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Y QC Samples were not spiked with this compound
- Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
- ^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
- d 5-day BOD--The 2:1 depletion requirement was not met for this sample
- h Preparation or preservation holding time was exceeded

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QC Summary

Workorder: 247790

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
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N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

Instrument QC Data Summary

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 17-MAR-2010 09:03

GEL Laboratories LLC

Contract: LANL01004

SDG #: 10-1981

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	02-MAR-2010 08:53:45	OM_3-2-2010_08-43-10	144	150	96	(90%-110%)	Yes
CCV	02-MAR-2010 16:31:55	OM_3-2-2010_14-50-22	105	100	105	(90%-110%)	Yes
CCV	02-MAR-2010 16:44:28	OM_3-2-2010_14-50-22	104	100	104	(90%-110%)	Yes
CCV	02-MAR-2010 16:57:04	OM_3-2-2010_14-50-22	105	100	105	(90%-110%)	Yes
CCV	02-MAR-2010 17:09:44	OM_3-2-2010_14-50-22	106	100	106	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	02-MAR-2010 08:55:35	OM_3-2-2010_08-43-10	-1.14	10	Yes
CCB	02-MAR-2010 16:33:45	OM_3-2-2010_14-50-22	-2.09	10	Yes
CCB	02-MAR-2010 16:46:19	OM_3-2-2010_14-50-22	-1.95	10	Yes
CCB	02-MAR-2010 16:58:55	OM_3-2-2010_14-50-22	-2.55	10	Yes
CCB	02-MAR-2010 17:11:35	OM_3-2-2010_14-50-22	-1.98	10	Yes

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 17-MAR-2010 09:03

GEL Laboratories LLC

Contract: LANL01004

SDG #: 10-1981

Ion Chromatography

Method: EPA 300.0

Concentration Units:mg/L

Instrument: Dionex ICS-3000 Ion Chromatograph

Parmname: Nitrate-N

Sample Type	Run Date	Data File	Result	Nominal	Recovery	Limits	Within Limits
ICV	10-MAR-2010 11:37:00	100310	5.1832	5	104	(90%-110%)	Yes
CCV	10-MAR-2010 17:24:00	100310	7.8416	7.5	105	(90%-110%)	Yes
ICV	11-MAR-2010 18:06:00	100311	4.5323	5	90.6	(90%-110%)	Yes
CCV	11-MAR-2010 20:59:00	100311	4.5121	5	90.2	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	10-MAR-2010 12:06:00	100310	0	0.1	Yes
CCB	10-MAR-2010 17:53:00	100310	0	0.1	Yes
ICB	11-MAR-2010 18:35:00	100311	0	0.1	Yes
CCB	11-MAR-2010 21:28:00	100311	0	0.1	Yes

Cyanide, Total

Prep Logbook

Cyanide Sample Distillation

Batch ID: 957568.0	Verified by:	Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
Analyst: Alan Stanley		LCS	1202053270	Total Cyanide Solid LCS	URF1200957-01	.25	g
Method: SW846 9010B Prep		MS	1202053266	Secondary source standard for CN and phenol. Used to spike LCS. MS, ICV	URF1269274-02	.025	mL
Lab SOP: GL-GC-E-067 REV# 13		MS	1202053267	Secondary source standard for CN and phenol. Used to spike LCS. MS, ICV	URF1269274-02	.025	mL
Instrument: Sartorius Balance B-007		MSD	1202053268	Secondary source standard for CN and phenol. Used to spike LCS. MS, ICV	URF1269274-02	.025	mL
		MSD	1202053269	Secondary source standard for CN and phenol. Used to spike LCS. MS, ICV	URF1269274-02	.025	mL

Sample ID	Run Date	Matrix	Initial Weight (g)	Final Volume (mL)	Prep Factor (mL/g)	pH Check 1
1202053263 MB	02-MAR-2010 15:28:00	Soil	0.5	25	50	>12
1202053270 LCS	02-MAR-2010 15:28:00	Soil	0.25	25	100	>12
247770008	02-MAR-2010 15:28:00	Soil	0.5	25	50	>12
1202053264 DUP (247770008)	02-MAR-2010 15:28:00	Soil	0.5	25	50	>12
1202053266 MS (247770008)	02-MAR-2010 15:28:00	Soil	0.51	25	49.01961	>12
1202053268 MSD (247770008)	02-MAR-2010 15:28:00	Soil	0.51	25	49.01961	>12
247770009	02-MAR-2010 15:28:00	Soil	0.53	25	47.16981	>12
1202053265 DUP (247770009)	02-MAR-2010 15:28:00	Soil	0.55	25	45.45455	>12
1202053267 MS (247770009)	02-MAR-2010 15:28:00	Soil	0.52	25	48.07692	>12
1202053269 MSD (247770009)	02-MAR-2010 15:28:00	Soil	0.54	25	46.2963	>12
247770010	02-MAR-2010 15:28:00	Soil	0.54	25	46.2963	>12
247770011	02-MAR-2010 15:28:00	Soil	0.58	25	43.10345	>12
247784002	02-MAR-2010 15:28:00	Soil	0.51	25	49.01961	>12
247790002	02-MAR-2010 15:28:00	Soil	0.56	25	44.64286	>12
247790003	02-MAR-2010 15:28:00	Soil	0.57	25	43.85965	>12
247794001	02-MAR-2010 15:28:00	Soil	0.52	25	48.07692	>12
247794002	02-MAR-2010 15:28:00	Soil	0.51	25	49.01961	>12
247794003	02-MAR-2010 15:28:00	Soil	0.56	25	44.64286	>12
247794004	02-MAR-2010 15:28:00	Soil	0.55	25	45.45455	>12
247794005	02-MAR-2010 15:28:00	Soil	0.57	25	43.85965	>12
247806001	02-MAR-2010 15:28:00	Soil	0.51	25	49.01961	>12

Analytical Logbook version 1.11-04-2002

GEL Laboratories LLC

Prep Logbook

Batch ID: 957568.0
Analyst: Alan Stanley
Method: SW846 9010B Prep
Lab SOP: GL-GC-E-067 REV# 13
Instrument: Sartorius Balance B-007

Verified by:

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1202053270	Total Cyanide Solid LCS	URF1200957-01	.25	g
MS	1202053266	Secondary source standard for CN and phenol. Used to spike LCS.	URF1269274-02	.025	mL
MS	1202053267	MS, ICV Secondary source standard for CN and phenol. Used to spike LCS.	URF1269274-02	.025	mL
MSD	1202053268	MS, ICV Secondary source standard for CN and phenol. Used to spike LCS.	URF1269274-02	.025	mL
MSD	1202053269	MS, ICV Secondary source standard for CN and phenol. Used to spike LCS.	URF1269274-02	.025	mL

Sample ID	Run Date	Matrix	Initial Weight (g)	Final Volume (mL)	Prep Factor (mL/g)	pH Check 1
247806002	02-MAR-2010 15:28:00	Soil	0.53	25	47.16981	>12
247806003	02-MAR-2010 15:28:00	Soil	0.52	25	48.07692	>12
247806004	02-MAR-2010 15:28:00	Soil	0.53	25	47.16981	>12
247806005	02-MAR-2010 15:28:00	Soil	0.51	25	49.01961	>12
247806006	02-MAR-2010 15:28:00	Soil	0.5	25	50	>12
247855002	02-MAR-2010 15:28:00	Soil	0.5	25	50	>12
247902001	02-MAR-2010 15:28:00	Misc Solid	0.53	25	47.16981	>12

Reagent/Solvent Lot ID	Description	Amount	Comments:
1260189-C	50% H2SO4 CN Prep	2.5 mL	
1270661-C	Bismuth Nitrate Solution	1.25 mL	
1270663-C	0.8N H3NO3S	1.25 mL	
1270669-C	51% MgCl2 Soln	1 mL	
1273851-C	0.25N Sodium Hydroxide Solution	25 mL	
WCN100302-07	150 ppb CN Distilled ICV Standard	.0375 mL	

This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
200 ppb		1	axc2	3/2/2010 8:46:36	OM_3-2-2010_08-43-10
150 ppb		1	axc2	3/2/2010 8:47:27	OM_3-2-2010_08-43-10
100 ppb		1	axc2	3/2/2010 8:48:20	OM_3-2-2010_08-43-10
50 ppb		1	axc2	3/2/2010 8:49:13	OM_3-2-2010_08-43-10
10 ppb		1	axc2	3/2/2010 8:50:06	OM_3-2-2010_08-43-10
CRDL 5.0 ppb		1	axc2	3/2/2010 8:51:00	OM_3-2-2010_08-43-10
ICAL-00		1	axc2	3/2/2010 8:51:54	OM_3-2-2010_08-43-10
ICV		1	axc2	3/2/2010 8:53:45	OM_3-2-2010_08-43-10
ICB		1	axc2	3/2/2010 8:55:35	OM_3-2-2010_08-43-10
CRDL		1	axc2	3/2/2010 8:57:25	OM_3-2-2010_08-43-10
1202053271	957571	1	axc2	3/2/2010 8:59:13	OM_3-2-2010_08-43-10
1202053278*	957571	25	axc2	3/2/2010 9:00:05	OM_3-2-2010_08-43-10
247806007	957571	1	axc2	3/2/2010 9:00:59	OM_3-2-2010_08-43-10
1202053272	957571	1	axc2	3/2/2010 9:01:53	OM_3-2-2010_08-43-10
1202053274	957571	1	axc2	3/2/2010 9:02:46	OM_3-2-2010_08-43-10
1202053276	957571	1	axc2	3/2/2010 9:03:40	OM_3-2-2010_08-43-10
247806008	957571	1	axc2	3/2/2010 9:04:33	OM_3-2-2010_08-43-10
1202053273	957571	1	axc2	3/2/2010 9:05:26	OM_3-2-2010_08-43-10
1202053275	957571	1	axc2	3/2/2010 9:06:19	OM_3-2-2010_08-43-10
1202053277	957571	1	axc2	3/2/2010 9:07:12	OM_3-2-2010_08-43-10
CCV		1	axc2	3/2/2010 9:08:05	OM_3-2-2010_08-43-10
CCB		1	axc2	3/2/2010 9:09:55	OM_3-2-2010_08-43-10
1202053278	957571	25	axc2	3/2/2010 9:11:42	OM_3-2-2010_08-43-10
247806009	957571	1	axc2	3/2/2010 9:12:35	OM_3-2-2010_08-43-10
247806010	957571	1	axc2	3/2/2010 9:13:28	OM_3-2-2010_08-43-10
247806011	957571	1	axc2	3/2/2010 9:14:20	OM_3-2-2010_08-43-10
247806012	957571	1	axc2	3/2/2010 9:15:13	OM_3-2-2010_08-43-10
247822001	957571	1	axc2	3/2/2010 9:16:04	OM_3-2-2010_08-43-10
247822002	957571	1	axc2	3/2/2010 9:16:57	OM_3-2-2010_08-43-10
247822003	957571	1	axc2	3/2/2010 9:17:49	OM_3-2-2010_08-43-10
247822004	957571	1	axc2	3/2/2010 9:18:43	OM_3-2-2010_08-43-10
247822005	957571	1	axc2	3/2/2010 9:19:37	OM_3-2-2010_08-43-10
CCV		1	axc2	3/2/2010 9:20:30	OM_3-2-2010_08-43-10
CCB		1	axc2	3/2/2010 9:22:20	OM_3-2-2010_08-43-10
247822006	957571	1	axc2	3/2/2010 9:24:10	OM_3-2-2010_08-43-10
247840001	957571	1	axc2	3/2/2010 9:25:03	OM_3-2-2010_08-43-10
247840002	957571	1	axc2	3/2/2010 9:25:56	OM_3-2-2010_08-43-10
247840003	957571	1	axc2	3/2/2010 9:26:50	OM_3-2-2010_08-43-10
247842001	957571	1	axc2	3/2/2010 9:27:43	OM_3-2-2010_08-43-10
247842002	957571	1	axc2	3/2/2010 9:28:37	OM_3-2-2010_08-43-10
247842003	957571	1	axc2	3/2/2010 9:29:29	OM_3-2-2010_08-43-10
247842004	957571	1	axc2	3/2/2010 9:30:22	OM_3-2-2010_08-43-10
247905001	957571	1	axc2	3/2/2010 9:31:14	OM_3-2-2010_08-43-10
1202053252	957563	1	axc2	3/2/2010 9:32:07	OM_3-2-2010_08-43-10
CCV		1	axc2	3/2/2010 9:32:59	OM_3-2-2010_08-43-10
CCB		1	axc2	3/2/2010 9:34:51	OM_3-2-2010_08-43-10
1202053254	957563	1	axc2	3/2/2010 9:36:38	OM_3-2-2010_08-43-10
247831001	957563	1	axc2	3/2/2010 9:37:31	OM_3-2-2010_08-43-10
1202053253	957563	1	axc2	3/2/2010 9:38:22	OM_3-2-2010_08-43-10
247840001	957563	1	axc2	3/2/2010 9:39:17	OM_3-2-2010_08-43-10
247840002	957563	1	axc2	3/2/2010 9:40:12	OM_3-2-2010_08-43-10
247840003	957563	1	axc2	3/2/2010 9:41:05	OM_3-2-2010_08-43-10
247842001	957563	1	axc2	3/2/2010 9:41:59	OM_3-2-2010_08-43-10
247842002	957563	1	axc2	3/2/2010 9:42:53	OM_3-2-2010_08-43-10
247842003	957563	1	axc2	3/2/2010 9:43:46	OM_3-2-2010_08-43-10
247842004	957563	1	axc2	3/2/2010 9:44:39	OM_3-2-2010_08-43-10
CCV		1	axc2	3/2/2010 9:45:32	OM_3-2-2010_08-43-10
CCB		1	axc2	3/2/2010 9:47:22	OM_3-2-2010_08-43-10

247902001	957563	1	axc2	3/2/2010	9:49:11	OM_3-2-2010_08-43-10
247905001	957563	1	axc2	3/2/2010	9:50:04	OM_3-2-2010_08-43-10
1202054733	958153	1	axc2	3/2/2010	9:50:57	OM_3-2-2010_08-43-10
1202054740	958153	25	axc2	3/2/2010	9:51:50	OM_3-2-2010_08-43-10
247838002	958153	1	axc2	3/2/2010	9:52:42	OM_3-2-2010_08-43-10
248037001	958153	1	axc2	3/2/2010	9:53:36	OM_3-2-2010_08-43-10
1202054734	958153	1	axc2	3/2/2010	9:54:28	OM_3-2-2010_08-43-10
1202054736	958153	1	axc2	3/2/2010	9:55:20	OM_3-2-2010_08-43-10
1202054738	958153	1	axc2	3/2/2010	9:56:14	OM_3-2-2010_08-43-10
248037002	958153	1	axc2	3/2/2010	9:57:09	OM_3-2-2010_08-43-10
CCV		1	axc2	3/2/2010	9:58:00	OM_3-2-2010_08-43-10
CCB		1	axc2	3/2/2010	9:59:51	OM_3-2-2010_08-43-10
1202054735	958153	1	axc2	3/2/2010	10:01:42	OM_3-2-2010_08-43-10
1202054737	958153	1	axc2	3/2/2010	10:02:36	OM_3-2-2010_08-43-10
1202054739	958153	1	axc2	3/2/2010	10:03:30	OM_3-2-2010_08-43-10
248037003	958153	1	axc2	3/2/2010	10:04:24	OM_3-2-2010_08-43-10
248037004	958153	1	axc2	3/2/2010	10:05:18	OM_3-2-2010_08-43-10
248037005	958153	1	axc2	3/2/2010	10:06:10	OM_3-2-2010_08-43-10
248037006	958153	1	axc2	3/2/2010	10:07:03	OM_3-2-2010_08-43-10
248037007	958153	1	axc2	3/2/2010	10:07:56	OM_3-2-2010_08-43-10
248037008	958153	1	axc2	3/2/2010	10:08:50	OM_3-2-2010_08-43-10
248037009	958153	1	axc2	3/2/2010	10:09:42	OM_3-2-2010_08-43-10
CCV		1	axc2	3/2/2010	10:10:35	OM_3-2-2010_08-43-10
CCB		1	axc2	3/2/2010	10:12:25	OM_3-2-2010_08-43-10
248037010*	958153	1	axc2	3/2/2010	10:14:13	OM_3-2-2010_08-43-10
248037011*	958153	1	axc2	3/2/2010	10:15:06	OM_3-2-2010_08-43-10
248037012*	958153	1	axc2	3/2/2010	10:15:59	OM_3-2-2010_08-43-10
248037013*	958153	1	axc2	3/2/2010	10:16:53	OM_3-2-2010_08-43-10
248037014*	958153	1	axc2	3/2/2010	10:17:48	OM_3-2-2010_08-43-10
248037015*	958153	1	axc2	3/2/2010	10:18:42	OM_3-2-2010_08-43-10
248037016*	958153	1	axc2	3/2/2010	10:19:36	OM_3-2-2010_08-43-10
248037017*	958153	1	axc2	3/2/2010	10:20:31	OM_3-2-2010_08-43-10
248037018*	958153	1	axc2	3/2/2010	10:21:26	OM_3-2-2010_08-43-10
248037019*	958153	1	axc2	3/2/2010	10:22:19	OM_3-2-2010_08-43-10
CCV		1	axc2	3/2/2010	10:23:11	OM_3-2-2010_08-43-10

Original Run Filename: OM_3-2-2010_08-43-10.OMN created 3/2/2010 08:43:10
 Original Run Author's Signature: [axc2]
 Current Run Filename: OM_3-2-2010_08-43-10.OMN last modified 3/2/2010 10:24:17
 Current Run Author's Signature: [axc2]
 Description: GL-GC-E-095 EPA 335.1, 335.3, 335.4, 9012A, CLP335.2-M
 Liquid LCS nominal 50 ug/L

Sample	Rep.	Cup No.	Channel 1		Detection Time	ADF	MDF	Description
			TCYANIDE	Area (Vs)				
			Conc. (ug/L)					
WCN100302-01	1	S1	200	9.17	3/2/2010@08:46:36			200 ppb
WCN100302-02	1	S2	150	7.02	3/2/2010@08:47:27			150 ppb
WCN100302-03	1	S3	100	4.67	3/2/2010@08:48:20			100 ppb
WCN100302-04	1	S4	50.0	2.38	3/2/2010@08:49:13			50 ppb
WCN100302-05	1	S5	10.0	0.547	3/2/2010@08:50:06			10 ppb
WCN100302-06	1	S6	5.00	0.398	3/2/2010@08:51:00			CRDL 5.0 ppb
WCN100302-08	1	S7	0.00	0.0805	3/2/2010@08:51:54			0.0 ppb
DQM Test: Minimum Correlation Coefficient								
			Result:	0.99991 > 0.99500				
			Message	Pass				
			Action	Continue				
WCN100302-07	1	S8	144	6.68	3/2/2010@08:53:45			ICV
			Known Conc:	150				
DQM Test: > + Percent Relative Difference								
			Result:	-3.9 < 10.0				
			Message	ICV Passed				
			Action	Continue				
DQM Test: < - Percent Relative Difference								
			Result:	-3.9 < 10.0				
			Message	ICV Passed				
			Action	Continue				
			Calibration:	Table/Fig. 1				
WCN100302-08	1	S7	-1.14	0.0645	3/2/2010@08:55:35			ICB/CCB
			Known Conc:	0.00				
DQM Test: > + Concentration Limit								
			Result:	-1.14 < 5.01				
			Message	ICB/CCB Passed				
			Action	Continue				
DQM Test: < - Concentration Limit								
			Result:	-1.14 > -5.01				
			Message	ICB/CCB Passed				
			Action	Continue				
WCN100302-06	1	S6	4.39	0.316	3/2/2010@08:57:25			CRDL
			Known Conc:	5.00				
DQM Test: > + Concentration Limit								
			Result:	4.39 < 7.50				
			Message	CRDL Passed				
			Action	Continue				
DQM Test: < - Concentration Limit								
			Result:	4.39 > 2.50				
			Message	Pass				
			Action	None				
1202053271|957571|MB	1	29	-1.73	0.0380	3/2/2010@08:59:13			
1202053278|LCS	1	30	491	22.5	3/2/2010@09:00:05		25.00	
247806007	1	31	-1.20	0.0620	3/2/2010@09:00:59			
1202053272|DUP	1	32	0.127	0.122	3/2/2010@09:01:53			
1202053274|MS	1	33	89.2	4.18	3/2/2010@09:02:46			
1202053276|MSD	1	34	73.9	3.48	3/2/2010@09:03:40			
247806008	1	35	2.38	0.225	3/2/2010@09:04:33			
1202053273|DUP	1	36	2.16	0.215	3/2/2010@09:05:26			
1202053275|MS	1	37	51.3	2.45	3/2/2010@09:06:19			
1202053277|MSD	1	38	45.8	2.20	3/2/2010@09:07:12			
WCN100302-03	1	S3	106	4.92	3/2/2010@09:08:05			CCV
			Known Conc:	100				
DQM Test: > + Percent Relative Difference								
			Result:	5.6 < 10.0				

			Message	CCV Passed				
			Action	Continue				
DQM Test: < - Percent Relative Difference								
			Result:	5.6 < 10.0				
			Message	CCV Passed				
			Action	Continue				
WCN100302-08	1	S7		-1.95	0.0279	3/2/2010@09:09:55		CCB
			Known Conc:	0.00				
DQM Test: > + Concentration Limit								
			Result:	-1.95 < 5.00				
			Message	CCB Passed				
			Action	Continue				
DQM Test: < - Concentration Limit								
			Result:	-1.95 > -5.00				
			Message	CCB Passed				
			Action	Continue				
1202053278||LCS	1	30		19.6	1.01	3/2/2010@09:11:42	25.00	
247806009	1	39		-1.05	0.0686	3/2/2010@09:12:35		
247806010	1	40		-0.889	0.0760	3/2/2010@09:13:28		
247806011	1	41		-1.37	0.0543	3/2/2010@09:14:20		
247806012	1	42		-2.58	-8.78e-4	3/2/2010@09:15:13		
247822001	1	43		-1.79	0.0348	3/2/2010@09:16:04		
247822002	1	44		-2.00	0.0255	3/2/2010@09:16:57		
247822003	1	45		-1.52	0.0472	3/2/2010@09:17:49		
247822004	1	46		-2.00	0.0252	3/2/2010@09:18:43		
247822005	1	47		-2.01	0.0252	3/2/2010@09:19:37		
WCN100302-03	1	S3		106	4.92	3/2/2010@09:20:30		CCV
			Known Conc:	100				
DQM Test: > + Percent Relative Difference								
			Result:	5.6 < 10.0				
			Message	CCV Passed				
			Action	Continue				
DQM Test: < - Percent Relative Difference								
			Result:	5.6 < 10.0				
			Message	CCV Passed				
			Action	Continue				
WCN100302-08	1	S7		-2.66	-0.00455	3/2/2010@09:22:20		CCB
			Known Conc:	0.00				
DQM Test: > + Concentration Limit								
			Result:	-2.66 < 5.00				
			Message	CCB Passed				
			Action	Continue				
DQM Test: < - Concentration Limit								
			Result:	-2.66 > -5.00				
			Message	CCB Passed				
			Action	Continue				
247822006	1	48		-0.812	0.0795	3/2/2010@09:24:10		
247840001	1	49		-0.505	0.0935	3/2/2010@09:25:03		
247840002	1	50		-1.81	0.0341	3/2/2010@09:25:56		
247840003	1	51		-0.808	0.0797	3/2/2010@09:26:50		
247842001	1	52		-0.181	0.108	3/2/2010@09:27:43		
247842002	1	53		3.80	0.289	3/2/2010@09:28:37		
247842003	1	54		-0.365	0.0999	3/2/2010@09:29:29		
247842004	1	55		0.0716	0.120	3/2/2010@09:30:22		
247905001	1	56		1.52e+3	69.3	3/2/2010@09:31:14		
1202053252|957563|MB	1	57		0.312	0.131	3/2/2010@09:32:07		
WCN100302-03	1	S3		107	5.00	3/2/2010@09:32:59		CCV
			Known Conc:	100				
DQM Test: > + Percent Relative Difference								
			Result:	7.2 < 10.0				
			Message	CCV Passed				
			Action	Continue				
DQM Test: < - Percent Relative Difference								
			Result:	7.2 < 10.0				
			Message	CCV Passed				
			Action	Continue				
WCN100302-08	1	S7		-2.71	-0.00706	3/2/2010@09:34:51		CCB
			Known Conc:	0.00				

DQM Test: > + Concentration Limit						
Result:		-2.71 < 5.00				
Message		CCB Passed				
Action		Continue				
DQM Test: < - Concentration Limit						
Result:		-2.71 > -5.00				
Message		CCB Passed				
Action		Continue				
1202053254||LCS	1	58	-1.30	0.0574	3/2/2010@09:36:38	
247831001	1	59	21.5	1.10	3/2/2010@09:37:31	
1202053253||DUP	1	60	18.0	0.935	3/2/2010@09:38:22	
247840001	1	61	18.8	0.974	3/2/2010@09:39:17	
247840002	1	62	-0.323	0.102	3/2/2010@09:40:12	
247840003	1	63	18.0	0.935	3/2/2010@09:41:05	
247842001	1	64	20.6	1.06	3/2/2010@09:41:59	
247842002	1	65	19.2	0.992	3/2/2010@09:42:53	
247842003	1	66	14.2	0.761	3/2/2010@09:43:46	
247842004	1	67	20.6	1.05	3/2/2010@09:44:39	
WCN100302-03	1	S3	107	4.99	3/2/2010@09:45:32	CCV
Known Conc:			100			
DQM Test: > + Percent Relative Difference						
Result:		7.1 < 10.0				
Message		CCV Passed				
Action		Continue				
DQM Test: < - Percent Relative Difference						
Result:		7.1 < 10.0				
Message		CCV Passed				
Action		Continue				
WCN100302-08	1	S7	-2.56	-1.26e-4	3/2/2010@09:47:22	CCB
Known Conc:			0.00			
DQM Test: > + Concentration Limit						
Result:		-2.56 < 5.00				
Message		CCB Passed				
Action		Continue				
DQM Test: < - Concentration Limit						
Result:		-2.56 > -5.00				
Message		CCB Passed				
Action		Continue				
247902001	1	68	1.41e+3	64.1	3/2/2010@09:49:11	
247905001	1	69	1.23e+3	56.2	3/2/2010@09:50:04	
1202054733|958153|MB	1	70	-0.200	0.107	3/2/2010@09:50:57	
1202054740||LCS	1	71	17.4	0.907	3/2/2010@09:51:50	25.00
247838002	1	72	-0.972	0.0723	3/2/2010@09:52:42	
248037001	1	73	-1.62	0.0428	3/2/2010@09:53:36	
1202054734||DUP	1	74	-1.80	0.0346	3/2/2010@09:54:28	
1202054736||MS	1	75	107	4.98	3/2/2010@09:55:20	
1202054738||MSD	1	76	104	4.83	3/2/2010@09:56:14	
248037002	1	77	-0.939	0.0738	3/2/2010@09:57:09	
WCN100302-03	1	S3	107	5.00	3/2/2010@09:58:00	CCV
Known Conc:			100			
DQM Test: > + Percent Relative Difference						
Result:		7.2 < 10.0				
Message		CCV Passed				
Action		Continue				
DQM Test: < - Percent Relative Difference						
Result:		7.2 < 10.0				
Message		CCV Passed				
Action		Continue				
WCN100302-08	1	S7	-2.55	3.95e-4	3/2/2010@09:59:51	CCB
Known Conc:			0.00			
DQM Test: > + Concentration Limit						
Result:		-2.55 < 5.00				
Message		CCB Passed				
Action		Continue				
DQM Test: < - Concentration Limit						
Result:		-2.55 > -5.00				
Message		CCB Passed				
Action		Continue				

1202054735	DUP	1	78	-1.07	0.0678	3/2/2010@10:01:42		
1202054737	MS	1	79	98.6	4.61	3/2/2010@10:02:36		
1202054739	MSD	1	80	96.1	4.49	3/2/2010@10:03:30		
248037003		1	81	0.707	0.149	3/2/2010@10:04:24		
248037004		1	82	1.09	0.166	3/2/2010@10:05:18		
248037005		1	83	0.359	0.133	3/2/2010@10:06:10		
248037006		1	84	0.328	0.131	3/2/2010@10:07:03		
248037007		1	85	0.0201	0.117	3/2/2010@10:07:56		
248037008		1	86	-2.66	-0.00454	3/2/2010@10:08:50		
248037009		1	87	-2.26	0.0136	3/2/2010@10:09:42		
WCN100302-03		1	S3	108	5.03	3/2/2010@10:10:35		CCV
Known Conc:				100				
DQM Test: > + Percent Relative Difference								
Result:				7.8 < 10.0				
Message				CCV Passed				
Action				Continue				
DQM Test: < - Percent Relative Difference								
Result:				7.8 < 10.0				
Message				CCV Passed				
Action				Continue				
WCN100302-08		1	S7	-2.63	-0.00301	3/2/2010@10:12:25		CCB
Known Conc:				0.00				
DQM Test: > + Concentration Limit								
Result:				-2.63 < 5.00				
Message				CCB Passed				
Action				Continue				
DQM Test: < - Concentration Limit								
Result:				-2.63 > -5.00				
Message				CCB Passed				
Action				Continue				
248037010		1	88	0.394	0.134	3/2/2010@10:14:13		
248037011		1	89	0.366	0.133	3/2/2010@10:15:06		
248037012		1	90	-2.34	0.00976	3/2/2010@10:15:59		
248037013		1	91	-1.30	0.0573	3/2/2010@10:16:53		
248037014		1	92	1.83	0.200	3/2/2010@10:17:48		
248037015		1	93	0.0806	0.120	3/2/2010@10:18:42		
248037016		1	94	-1.39	0.0532	3/2/2010@10:19:36		
248037017		1	95	0.328	0.131	3/2/2010@10:20:31		
248037018		1	96	-1.63	0.0424	3/2/2010@10:21:26		
248037019		1	97	-0.215	0.107	3/2/2010@10:22:19		
WCN100302-03		1	S3	118	5.48	3/2/2010@10:23:11		CCV
Known Conc:				100				
DQM Test: > + Percent Relative Difference								
Result:				17.8 > 10.0				
Message				CCV Failed				
Action				Stop Run				
DQM Test: < - Percent Relative Difference								
Result:				17.8 > 10.0				
Message				CCV Passed				
Action				Continue				

Analyte Properties Table for OM_3-2-2010_08-43-10.OMN

Property	Channel 1
	TCYANIDE
Concentration Units	ug/L
Calibration Fit Type	First Order
Clear Calibration	True
Force Through Zero	False
Calibration Weighting	None
Auto Dilution Trigger	True
% of High Standard	100
Quik Chem Method	10-204-00-1-A
Chemistry	Direct/Bipolar
Calibration by Height	False
Inject to Peak Start	22
Peak Base Width	39

Channel 1: Current View

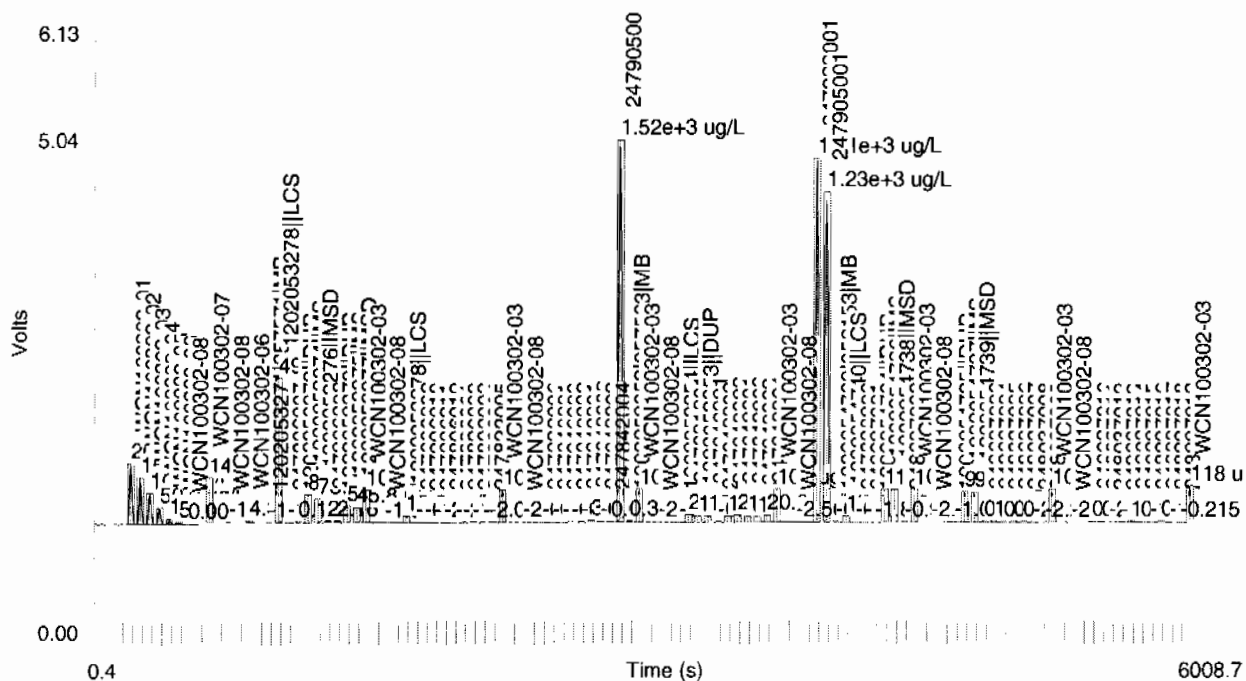
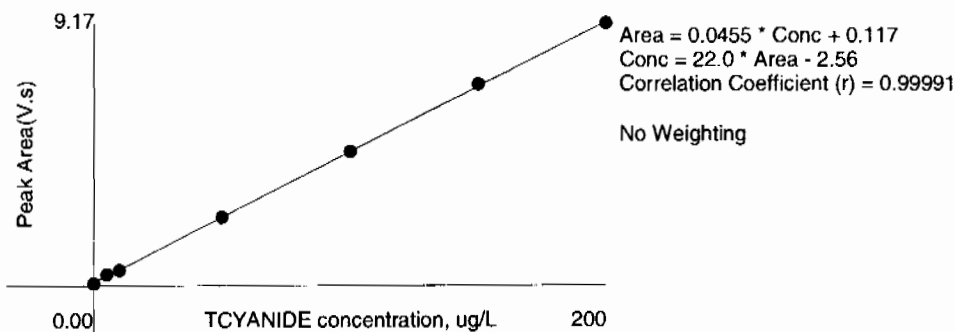


Table 1: TCYANIDE

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	9.17	0.613	0.6	3/2/2010	08:47:39
2	150	1	7.02	0.465	-1.1	3/2/2010	08:48:31
3	100	1	4.67	0.309	0.1	3/2/2010	08:49:23
4	50.0	1	2.38	0.162	0.5	3/2/2010	08:50:16
5	10.0	1	0.547	0.0492	4.4	3/2/2010	08:51:09
6	5.00	1	0.398	0.0229	-15.5	3/2/2010	08:52:03
7	0.00	1	0.0805	0.00272		3/2/2010	08:52:57

Figure 1: TCYANIDE



This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
CCV		1	axc2	3/2/2010 14:51:53	OM_3-2-2010_14-50-22
CCB		1	axc2	3/2/2010 14:53:44	OM_3-2-2010_14-50-22
247539011	956938	1	axc2	3/2/2010 14:55:33	OM_3-2-2010_14-50-22
247546001	956938	1	axc2	3/2/2010 14:56:26	OM_3-2-2010_14-50-22
247546002	956938	1	axc2	3/2/2010 14:57:19	OM_3-2-2010_14-50-22
247546003	956938	1	axc2	3/2/2010 14:58:12	OM_3-2-2010_14-50-22
247546004	956938	1	axc2	3/2/2010 14:59:05	OM_3-2-2010_14-50-22
247550001	956938	1	axc2	3/2/2010 14:59:57	OM_3-2-2010_14-50-22
247770001	956938	1	axc2	3/2/2010 15:00:49	OM_3-2-2010_14-50-22
247770002	956938	1	axc2	3/2/2010 15:01:42	OM_3-2-2010_14-50-22
247831001	956938	1	axc2	3/2/2010 15:02:33	OM_3-2-2010_14-50-22
1202049763*	955994	1	axc2	3/2/2010 15:03:26	OM_3-2-2010_14-50-22
CCV		1	axc2	3/2/2010 15:04:18	OM_3-2-2010_14-50-22
CCB		1	axc2	3/2/2010 15:06:08	OM_3-2-2010_14-50-22
1202049763	955994	1	axc2	3/2/2010 15:07:57	OM_3-2-2010_14-50-22
1202049770	955994	25	axc2	3/2/2010 15:08:48	OM_3-2-2010_14-50-22
247321007	955994	1	axc2	3/2/2010 15:09:43	OM_3-2-2010_14-50-22
1202049764	955994	1	axc2	3/2/2010 15:10:37	OM_3-2-2010_14-50-22
1202049766	955994	1	axc2	3/2/2010 15:11:30	OM_3-2-2010_14-50-22
1202049768	955994	1	axc2	3/2/2010 15:12:23	OM_3-2-2010_14-50-22
247325001	955994	1	axc2	3/2/2010 15:13:17	OM_3-2-2010_14-50-22
1202049765	955994	1	axc2	3/2/2010 15:14:10	OM_3-2-2010_14-50-22
1202049767	955994	1	axc2	3/2/2010 15:15:03	OM_3-2-2010_14-50-22
1202049769	955994	1	axc2	3/2/2010 15:15:56	OM_3-2-2010_14-50-22
CCV		1	axc2	3/2/2010 15:16:48	OM_3-2-2010_14-50-22
CCB		1	axc2	3/2/2010 15:18:39	OM_3-2-2010_14-50-22
247456001	955994	1	axc2	3/2/2010 15:20:27	OM_3-2-2010_14-50-22
247456002	955994	1	axc2	3/2/2010 15:21:20	OM_3-2-2010_14-50-22
247456003	955994	1	axc2	3/2/2010 15:22:12	OM_3-2-2010_14-50-22
247456004	955994	1	axc2	3/2/2010 15:23:05	OM_3-2-2010_14-50-22
247456005	955994	1	axc2	3/2/2010 15:23:57	OM_3-2-2010_14-50-22
247456006	955994	1	axc2	3/2/2010 15:24:49	OM_3-2-2010_14-50-22
247463001	955994	1	axc2	3/2/2010 15:25:41	OM_3-2-2010_14-50-22
247463002	955994	1	axc2	3/2/2010 15:26:35	OM_3-2-2010_14-50-22
247463003	955994	1	axc2	3/2/2010 15:27:29	OM_3-2-2010_14-50-22
247463004	955994	1	axc2	3/2/2010 15:28:23	OM_3-2-2010_14-50-22
CCV		1	axc2	3/2/2010 15:29:15	OM_3-2-2010_14-50-22
CCB		1	axc2	3/2/2010 15:31:06	OM_3-2-2010_14-50-22
247463005	955994	1	axc2	3/2/2010 15:32:56	OM_3-2-2010_14-50-22
247463006	955994	1	axc2	3/2/2010 15:33:49	OM_3-2-2010_14-50-22
247469001	955994	1	axc2	3/2/2010 15:34:42	OM_3-2-2010_14-50-22
247469002	955994	1	axc2	3/2/2010 15:35:36	OM_3-2-2010_14-50-22
247469003*	955994	1	axc2	3/2/2010 15:36:28	OM_3-2-2010_14-50-22
247539001	955994	1	axc2	3/2/2010 15:37:21	OM_3-2-2010_14-50-22
247539002	955994	1	axc2	3/2/2010 15:38:14	OM_3-2-2010_14-50-22
247539003	955994	1	axc2	3/2/2010 15:39:07	OM_3-2-2010_14-50-22
1202051809	956940	1	axc2	3/2/2010 15:39:59	OM_3-2-2010_14-50-22
1202051813	956940	1	axc2	3/2/2010 15:40:51	OM_3-2-2010_14-50-22
CCV		1	axc2	3/2/2010 15:41:44	OM_3-2-2010_14-50-22
CCB		1	axc2	3/2/2010 15:43:34	OM_3-2-2010_14-50-22
247771001	956940	1	axc2	3/2/2010 15:45:22	OM_3-2-2010_14-50-22
1202053279	956940	1	axc2	3/2/2010 15:46:14	OM_3-2-2010_14-50-22
1202053280	956940	1	axc2	3/2/2010 15:47:08	OM_3-2-2010_14-50-22
1202053281	956940	1	axc2	3/2/2010 15:48:02	OM_3-2-2010_14-50-22
247780001	956940	1	axc2	3/2/2010 15:48:57	OM_3-2-2010_14-50-22
247793001	956940	1	axc2	3/2/2010 15:49:50	OM_3-2-2010_14-50-22
247807001	956940	1	axc2	3/2/2010 15:50:43	OM_3-2-2010_14-50-22
247807002	956940	1	axc2	3/2/2010 15:51:37	OM_3-2-2010_14-50-22

247807003	956940	1	axc2	3/2/2010	15:52:31	OM_3-2-2010_14-50-22
247807004	956940	1	axc2	3/2/2010	15:53:24	OM_3-2-2010_14-50-22
CCV		1	axc2	3/2/2010	15:54:17	OM_3-2-2010_14-50-22
CCB		1	axc2	3/2/2010	15:56:06	OM_3-2-2010_14-50-22
247817002	956940	1	axc2	3/2/2010	15:57:55	OM_3-2-2010_14-50-22
1202051810	956940	1	axc2	3/2/2010	15:58:48	OM_3-2-2010_14-50-22
1202051811	956940	1	axc2	3/2/2010	15:59:41	OM_3-2-2010_14-50-22
1202051812	956940	1	axc2	3/2/2010	16:00:34	OM_3-2-2010_14-50-22
247819001	956940	1	axc2	3/2/2010	16:01:26	OM_3-2-2010_14-50-22
247858001	956940	1	axc2	3/2/2010	16:02:19	OM_3-2-2010_14-50-22
247858002	956940	1	axc2	3/2/2010	16:03:11	OM_3-2-2010_14-50-22
247858003	956940	1	axc2	3/2/2010	16:04:05	OM_3-2-2010_14-50-22
247858004	956940	1	axc2	3/2/2010	16:05:00	OM_3-2-2010_14-50-22
247858005	956940	1	axc2	3/2/2010	16:05:54	OM_3-2-2010_14-50-22
CCV		1	axc2	3/2/2010	16:06:46	OM_3-2-2010_14-50-22
CCB		1	axc2	3/2/2010	16:08:37	OM_3-2-2010_14-50-22
247858006	956940	1	axc2	3/2/2010	16:10:27	OM_3-2-2010_14-50-22
1202053255	957567	1	axc2	3/2/2010	16:11:21	OM_3-2-2010_14-50-22
1202053262	957567	25	axc2	3/2/2010	16:12:15	OM_3-2-2010_14-50-22
247770003	957567	1	axc2	3/2/2010	16:13:08	OM_3-2-2010_14-50-22
247770004	957567	1	axc2	3/2/2010	16:14:01	OM_3-2-2010_14-50-22
247770005	957567	1	axc2	3/2/2010	16:14:54	OM_3-2-2010_14-50-22
247770006	957567	1	axc2	3/2/2010	16:15:47	OM_3-2-2010_14-50-22
247770007	957567	1	axc2	3/2/2010	16:16:41	OM_3-2-2010_14-50-22
247781001	957567	1	axc2	3/2/2010	16:17:34	OM_3-2-2010_14-50-22
1202053256	957567	1	axc2	3/2/2010	16:18:26	OM_3-2-2010_14-50-22
CCV		1	axc2	3/2/2010	16:19:18	OM_3-2-2010_14-50-22
CCB		1	axc2	3/2/2010	16:21:08	OM_3-2-2010_14-50-22
1202053258	957567	1	axc2	3/2/2010	16:22:57	OM_3-2-2010_14-50-22
1202053260	957567	1	axc2	3/2/2010	16:23:49	OM_3-2-2010_14-50-22
247781002	957567	1	axc2	3/2/2010	16:24:44	OM_3-2-2010_14-50-22
1202053257	957567	1	axc2	3/2/2010	16:25:38	OM_3-2-2010_14-50-22
1202053259	957567	1	axc2	3/2/2010	16:26:32	OM_3-2-2010_14-50-22
1202053261	957567	1	axc2	3/2/2010	16:27:27	OM_3-2-2010_14-50-22
247781003	957567	1	axc2	3/2/2010	16:28:21	OM_3-2-2010_14-50-22
247781004	957567	1	axc2	3/2/2010	16:29:15	OM_3-2-2010_14-50-22
247781005	957567	1	axc2	3/2/2010	16:30:09	OM_3-2-2010_14-50-22
247781006	957567	1	axc2	3/2/2010	16:31:03	OM_3-2-2010_14-50-22
CCV		1	axc2	3/2/2010	16:31:55	OM_3-2-2010_14-50-22
CCB		1	axc2	3/2/2010	16:33:45	OM_3-2-2010_14-50-22
247781007	957567	1	axc2	3/2/2010	16:35:34	OM_3-2-2010_14-50-22
247781008	957567	1	axc2	3/2/2010	16:36:28	OM_3-2-2010_14-50-22
247781009	957567	1	axc2	3/2/2010	16:37:21	OM_3-2-2010_14-50-22
247781010	957567	1	axc2	3/2/2010	16:38:14	OM_3-2-2010_14-50-22
247781011	957567	1	axc2	3/2/2010	16:39:07	OM_3-2-2010_14-50-22
247781012	957567	1	axc2	3/2/2010	16:40:00	OM_3-2-2010_14-50-22
247781013	957567	1	axc2	3/2/2010	16:40:52	OM_3-2-2010_14-50-22
247781014	957567	1	axc2	3/2/2010	16:41:47	OM_3-2-2010_14-50-22
247781015	957567	1	axc2	3/2/2010	16:42:42	OM_3-2-2010_14-50-22
1202053263	957569	1	axc2	3/2/2010	16:43:36	OM_3-2-2010_14-50-22
CCV		1	axc2	3/2/2010	16:44:28	OM_3-2-2010_14-50-22
CCB		1	axc2	3/2/2010	16:46:19	OM_3-2-2010_14-50-22
1202053270	957569	25	axc2	3/2/2010	16:48:09	OM_3-2-2010_14-50-22
247770008	957569	1	axc2	3/2/2010	16:49:03	OM_3-2-2010_14-50-22
1202053264	957569	1	axc2	3/2/2010	16:49:57	OM_3-2-2010_14-50-22
1202053266	957569	1	axc2	3/2/2010	16:50:51	OM_3-2-2010_14-50-22
1202053268	957569	1	axc2	3/2/2010	16:51:45	OM_3-2-2010_14-50-22
247770009	957569	1	axc2	3/2/2010	16:52:39	OM_3-2-2010_14-50-22
1202053265	957569	1	axc2	3/2/2010	16:53:32	OM_3-2-2010_14-50-22
1202053267	957569	1	axc2	3/2/2010	16:54:26	OM_3-2-2010_14-50-22

1202053269	957569	1	axc2	3/2/2010	16:55:19	OM_3-2-2010_14-50-22
247770010	957569	1	axc2	3/2/2010	16:56:12	OM_3-2-2010_14-50-22
CCV		1	axc2	3/2/2010	16:57:04	OM_3-2-2010_14-50-22
CCB		1	axc2	3/2/2010	16:58:55	OM_3-2-2010_14-50-22
247770011	957569	1	axc2	3/2/2010	17:00:44	OM_3-2-2010_14-50-22
247784002	957569	1	axc2	3/2/2010	17:01:37	OM_3-2-2010_14-50-22
247790002	957569	1	axc2	3/2/2010	17:02:32	OM_3-2-2010_14-50-22
247790003	957569	1	axc2	3/2/2010	17:03:26	OM_3-2-2010_14-50-22
247794001	957569	1	axc2	3/2/2010	17:04:21	OM_3-2-2010_14-50-22
247794002	957569	1	axc2	3/2/2010	17:05:15	OM_3-2-2010_14-50-22
247794003	957569	1	axc2	3/2/2010	17:06:10	OM_3-2-2010_14-50-22
247794004	957569	1	axc2	3/2/2010	17:07:04	OM_3-2-2010_14-50-22
247794005	957569	1	axc2	3/2/2010	17:07:58	OM_3-2-2010_14-50-22
247806001	957569	1	axc2	3/2/2010	17:08:52	OM_3-2-2010_14-50-22
CCV		1	axc2	3/2/2010	17:09:44	OM_3-2-2010_14-50-22
CCB		1	axc2	3/2/2010	17:11:35	OM_3-2-2010_14-50-22
247806002	957569	1	axc2	3/2/2010	17:13:25	OM_3-2-2010_14-50-22
247806003	957569	1	axc2	3/2/2010	17:14:18	OM_3-2-2010_14-50-22
247806004	957569	1	axc2	3/2/2010	17:15:12	OM_3-2-2010_14-50-22
247806005*	957569	1	axc2	3/2/2010	17:16:06	OM_3-2-2010_14-50-22
247806006	957569	1	axc2	3/2/2010	17:16:59	OM_3-2-2010_14-50-22
247855002	957569	1	axc2	3/2/2010	17:17:52	OM_3-2-2010_14-50-22
247902001	957569	1	axc2	3/2/2010	17:18:45	OM_3-2-2010_14-50-22
247806005*	957569	1	axc2	3/2/2010	17:19:38	OM_3-2-2010_14-50-22
247858001	956940	2	axc2	3/2/2010	17:20:31	OM_3-2-2010_14-50-22
247858002	956940	2	axc2	3/2/2010	17:21:23	OM_3-2-2010_14-50-22
CCV		1	axc2	3/2/2010	17:22:15	OM_3-2-2010_14-50-22
CCB		1	axc2	3/2/2010	17:24:05	OM_3-2-2010_14-50-22
247469003	955994	1	axc2	3/2/2010	17:25:55	OM_3-2-2010_14-50-22
247902001	957569	50	axc2	3/2/2010	17:26:48	OM_3-2-2010_14-50-22
247806005	957569	1	axc2	3/2/2010	17:27:41	OM_3-2-2010_14-50-22
CCV		1	axc2	3/2/2010	17:28:34	OM_3-2-2010_14-50-22
CCB		1	axc2	3/2/2010	17:30:24	OM_3-2-2010_14-50-22

Original Run Filename: OM_3-2-2010_14-50-22.OMN created 3/2/2010 14:50:22
 Original Run Author's Signature: [axc2]
 Current Run Filename: OM_3-2-2010_14-50-22.OMN last modified 3/2/2010 17:31:29
 Current Run Author's Signature: [axc2]
 Description: GL-GC-E-095 EPA 335.1, 335.3, 335.4, 9012A, CLP335.2-M
 Liquid LCS nominal 50 ug/L

Sample	Rep.	Cup No.	Channel 1		Detection Time	ADF	MDF	Description
			TCYANIDE	Area				
			Conc. (ug/L)	(Vs)				
WCN100302-03	1	S3	107	4.98	3/2/2010@14:51:53			CCV
Known Conc:			100					
DQM Test: > + Percent Relative Difference								
Result:			6.9 < 10.0					
Message			CCV Passed					
Action			Continue					
DQM Test: < - Percent Relative Difference								
Result:			6.9 < 10.0					
Message			CCV Passed					
Action			Continue					
WCN100302-08	1	S7	-1.63	0.0424	3/2/2010@14:53:44			CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			-1.63 < 5.00					
Message			CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			-1.63 > -5.00					
Message			CCB Passed					
Action			Continue					
247539011|956938|	1	16	-0.875	0.0767	3/2/2010@14:55:33			
247546001	1	21	-2.72	-0.00747	3/2/2010@14:56:26			
247546002	1	22	-1.55	0.0460	3/2/2010@14:57:19			
247546003	1	23	-2.56	0.00	3/2/2010@14:58:12			
247546004	1	24	-2.51	0.00213	3/2/2010@14:59:05			
247550001	1	25	-1.50	0.0482	3/2/2010@14:59:57			
247770001	1	26	-2.55	3.43e-4	3/2/2010@15:00:49			
247770002	1	27	-2.56	-1.49e-4	3/2/2010@15:01:42			
247831001	1	28	-0.925	0.0744	3/2/2010@15:02:33			
1202049763|955994|MB	1	29	6.09	0.394	3/2/2010@15:03:26			
WCN100302-03	1	S3	107	4.97	3/2/2010@15:04:18			CCV
Known Conc:			100					
DQM Test: > + Percent Relative Difference								
Result:			6.7 < 10.0					
Message			CCV Passed					
Action			Continue					
DQM Test: < - Percent Relative Difference								
Result:			6.7 < 10.0					
Message			CCV Passed					
Action			Continue					
WCN100302-08	1	S7	-2.56	-1.64e-4	3/2/2010@15:06:08			CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			-2.56 < 5.00					
Message			CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			-2.56 > -5.00					
Message			CCB Passed					
Action			Continue					
1202049763|955994|MB	1	29	-1.20	0.0618	3/2/2010@15:07:57			
1202049770|LCS	1	30	26.0	1.30	3/2/2010@15:08:48		25.00	
247321007	1	31	-0.848	0.0779	3/2/2010@15:09:43			
1202049764|DUP	1	32	-1.10	0.0663	3/2/2010@15:10:37			
1202049766|MS	1	33	38.7	1.88	3/2/2010@15:11:30			
1202049768|MSD	1	34	55.0	2.62	3/2/2010@15:12:23			

247325001	1	35	2.97	0.252	3/2/2010@15:13:17		
1202049765|DUP	1	36	-1.44	0.0511	3/2/2010@15:14:10		
1202049767|MS	1	37	105	4.89	3/2/2010@15:15:03		
1202049769|MSD	1	38	100	4.68	3/2/2010@15:15:56		
WCN100302-03	1	S3	106	4.94	3/2/2010@15:16:48		CCV
Known Conc:			100				
DQM Test: > + Percent Relative Difference							
Result:			5.9 < 10.0				
Message			CCV Passed				
Action			Continue				
DQM Test: < - Percent Relative Difference							
Result:			5.9 < 10.0				
Message			CCV Passed				
Action			Continue				
WCN100302-08	1	S7	-1.63	0.0424	3/2/2010@15:18:39		CCB
Known Conc:			0.00				
DQM Test: > + Concentration Limit							
Result:			-1.63 < 5.00				
Message			CCB Passed				
Action			Continue				
DQM Test: < - Concentration Limit							
Result:			-1.63 > -5.00				
Message			CCB Passed				
Action			Continue				
247456001	1	39	-1.60	0.0434	3/2/2010@15:20:27		
247456002	1	40	5.61	0.372	3/2/2010@15:21:20		
247456003	1	41	-0.655	0.0867	3/2/2010@15:22:12		
247456004	1	42	0.189	0.125	3/2/2010@15:23:05		
247456005	1	43	-1.49	0.0487	3/2/2010@15:23:57		
247456006	1	44	-2.76	-0.00917	3/2/2010@15:24:49		
247463001	1	45	3.46	0.274	3/2/2010@15:25:41		
247463002	1	46	-1.67	0.0403	3/2/2010@15:26:35		
247463003	1	47	-1.52	0.0473	3/2/2010@15:27:29		
247463004	1	48	-1.35	0.0551	3/2/2010@15:28:23		
WCN100302-03	1	S3	107	4.97	3/2/2010@15:29:15		CCV
Known Conc:			100				
DQM Test: > + Percent Relative Difference							
Result:			6.6 < 10.0				
Message			CCV Passed				
Action			Continue				
DQM Test: < - Percent Relative Difference							
Result:			6.6 < 10.0				
Message			CCV Passed				
Action			Continue				
WCN100302-08	1	S7	-2.57	-4.02e-4	3/2/2010@15:31:06		CCB
Known Conc:			0.00				
DQM Test: > + Concentration Limit							
Result:			-2.57 < 5.00				
Message			CCB Passed				
Action			Continue				
DQM Test: < - Concentration Limit							
Result:			-2.57 > -5.00				
Message			CCB Passed				
Action			Continue				
247463005	1	49	-1.35	0.0551	3/2/2010@15:32:56		
247463006	1	50	-2.56	0.00	3/2/2010@15:33:49		
247469001	1	51	-3.03	-0.0213	3/2/2010@15:34:42		
247469002	1	52	-1.91	0.0295	3/2/2010@15:35:36		
247469003	1	53	12.1	0.667	3/2/2010@15:36:28		
247539001	1	54	2.67	0.238	3/2/2010@15:37:21		
247539002	1	55	-1.81	0.0340	3/2/2010@15:38:14		
247539003	1	56	-1.67	0.0406	3/2/2010@15:39:07		
1202051809|956940|MB	1	57	-1.40	0.0526	3/2/2010@15:39:59		
1202051813|LCS	1	58	54.8	2.61	3/2/2010@15:40:51		
WCN100302-03	1	S3	107	5.00	3/2/2010@15:41:44		CCV
Known Conc:			100				
DQM Test: > + Percent Relative Difference							
Result:			7.3 < 10.0				

Message						
Action						
DQM Test: < - Percent Relative Difference						
Result: 7.3 < 10.0						
Message						
Action						
WCN100302-08	1	S7	-0.884	0.0763	3/2/2010@15:43:34	CCB
Known Conc: 0.00						
DQM Test: > + Concentration Limit						
Result: -0.884 < 5.00						
Message						
Action						
DQM Test: < - Concentration Limit						
Result: -0.884 > -5.00						
Message						
Action						
247771001	1	59	-1.58	0.0446	3/2/2010@15:45:22	
1202053279||DUP	1	60	-2.56	-2.17e-4	3/2/2010@15:46:14	
1202053280||MS	1	61	117	5.44	3/2/2010@15:47:08	
1202053281||MSD	1	62	115	5.35	3/2/2010@15:48:02	
247780001	1	63	-2.82	-0.0117	3/2/2010@15:48:57	
247793001	1	64	-2.05	0.0233	3/2/2010@15:49:50	
247807001	1	65	-2.55	3.61e-4	3/2/2010@15:50:43	
247807002	1	66	-2.09	0.0216	3/2/2010@15:51:37	
247807003	1	67	-2.55	3.04e-4	3/2/2010@15:52:31	
247807004	1	68	-2.56	-1.55e-4	3/2/2010@15:53:24	
WCN100302-03	1	S3	106	4.96	3/2/2010@15:54:17	CCV
Known Conc: 100						
DQM Test: > + Percent Relative Difference						
Result: 6.3 < 10.0						
Message						
Action						
DQM Test: < - Percent Relative Difference						
Result: 6.3 < 10.0						
Message						
Action						
WCN100302-08	1	S7	-2.36	0.00888	3/2/2010@15:56:06	CCB
Known Conc: 0.00						
DQM Test: > + Concentration Limit						
Result: -2.36 < 5.00						
Message						
Action						
DQM Test: < - Concentration Limit						
Result: -2.36 > -5.00						
Message						
Action						
247817002	1	69	-1.44	0.0509	3/2/2010@15:57:55	
1202051810||DUP	1	70	-2.52	0.00194	3/2/2010@15:58:48	
1202051811||MS	1	71	114	5.31	3/2/2010@15:59:41	
1202051812||MSD	1	72	105	4.92	3/2/2010@16:00:34	
247819001	1	73	31.6	1.55	3/2/2010@16:01:26	
247858001	1	74	209	9.63	3/2/2010@16:02:19	
247858002	1	75	209	9.62	3/2/2010@16:03:11	
247858003	1	76	18.8	0.973	3/2/2010@16:04:05	
247858004	1	77	80.7	3.79	3/2/2010@16:05:00	
247858005	1	78	45.1	2.17	3/2/2010@16:05:54	
WCN100302-03	1	S3	107	5.00	3/2/2010@16:06:46	CCV
Known Conc: 100						
DQM Test: > + Percent Relative Difference						
Result: 7.2 < 10.0						
Message						
Action						
DQM Test: < - Percent Relative Difference						
Result: 7.2 < 10.0						
Message						
Action						
WCN100302-08	1	S7	-1.91	0.0295	3/2/2010@16:08:37	CCB
Known Conc: 0.00						

DQM Test: > + Concentration Limit									
Result:		-1.91 < 5.00							
Message		CCB Passed							
Action		Continue							
DQM Test: < - Concentration Limit									
Result:		-1.91 > -5.00							
Message		CCB Passed							
Action		Continue							
247858006	1	79	-0.616	0.0885	3/2/2010@16:10:27				
1202053255|957567|MB	1	80	-2.57	-3.76e-4	3/2/2010@16:11:21				
1202053262|LCS	1	81	15.5	0.824	3/2/2010@16:12:15	25.00			
247770003	1	82	-2.10	0.0209	3/2/2010@16:13:08				
247770004	1	83	-2.01	0.0248	3/2/2010@16:14:01				
247770005	1	84	-2.68	-0.00534	3/2/2010@16:14:54				
247770006	1	85	-2.55	2.76e-4	3/2/2010@16:15:47				
247770007	1	86	-2.45	0.00519	3/2/2010@16:16:41				
247781001	1	87	-0.808	0.0797	3/2/2010@16:17:34				
1202053256|DUP	1	88	-0.969	0.0724	3/2/2010@16:18:26				
WCN100302-03	1	S3	107	5.00	3/2/2010@16:19:18			CCV	
Known Conc:		100							
DQM Test: > + Percent Relative Difference									
Result:		7.2 < 10.0							
Message		CCV Passed							
Action		Continue							
DQM Test: < - Percent Relative Difference									
Result:		7.2 < 10.0							
Message		CCV Passed							
Action		Continue							
WCN100302-08	1	S7	-2.72	-0.00736	3/2/2010@16:21:08			CCB	
Known Conc:		0.00							
DQM Test: > + Concentration Limit									
Result:		-2.72 < 5.00							
Message		CCB Passed							
Action		Continue							
DQM Test: < - Concentration Limit									
Result:		-2.72 > -5.00							
Message		CCB Passed							
Action		Continue							
1202053258|MS	1	89	97.5	4.56	3/2/2010@16:22:57				
1202053260|MSD	1	90	105	4.92	3/2/2010@16:23:49				
247781002	1	91	-2.75	-0.00887	3/2/2010@16:24:44				
1202053257|DUP	1	92	-2.62	-0.00284	3/2/2010@16:25:38				
1202053259|MS	1	93	110	5.13	3/2/2010@16:26:32				
1202053261|MSD	1	94	104	4.86	3/2/2010@16:27:27				
247781003	1	95	-1.94	0.0281	3/2/2010@16:28:21				
247781004	1	96	-2.57	-3.51e-4	3/2/2010@16:29:15				
247781005	1	97	4.38	0.316	3/2/2010@16:30:09				
247781006	1	98	-2.66	-0.00478	3/2/2010@16:31:03				
WCN100302-03	1	S3	105	4.91	3/2/2010@16:31:55			CCV	
Known Conc:		100							
DQM Test: > + Percent Relative Difference									
Result:		5.2 < 10.0							
Message		CCV Passed							
Action		Continue							
DQM Test: < - Percent Relative Difference									
Result:		5.2 < 10.0							
Message		CCV Passed							
Action		Continue							
WCN100302-08	1	S7	-2.09	0.0214	3/2/2010@16:33:45			CCB	
Known Conc:		0.00							
DQM Test: > + Concentration Limit									
Result:		-2.09 < 5.00							
Message		CCB Passed							
Action		Continue							
DQM Test: < - Concentration Limit									
Result:		-2.09 > -5.00							
Message		CCB Passed							
Action		Continue							

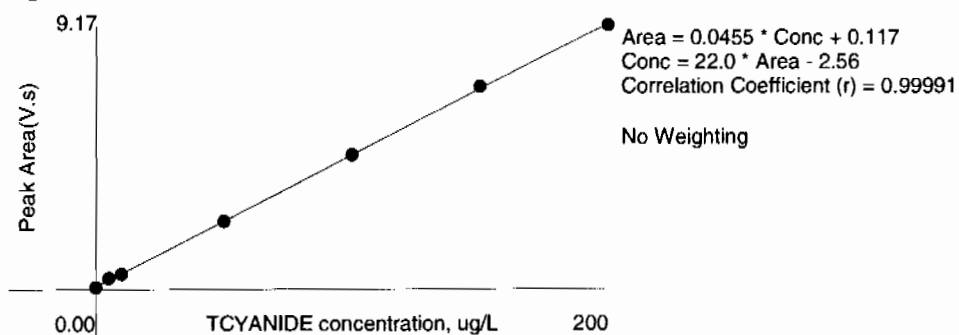
247781007	1	99	-2.56	1.11e-4	3/2/2010@16:35:34		
247781008	1	100	-2.55	3.30e-4	3/2/2010@16:36:28		
247781009	1	101	-2.12	0.0202	3/2/2010@16:37:21		
247781010	1	102	0.184	0.125	3/2/2010@16:38:14		
247781011	1	103	-0.587	0.0898	3/2/2010@16:39:07		
247781012	1	104	11.5	0.639	3/2/2010@16:40:00		
247781013	1	105	-2.62	-0.00267	3/2/2010@16:40:52		
247781014	1	106	2.25	0.219	3/2/2010@16:41:47		
247781015	1	107	-1.14	0.0648	3/2/2010@16:42:42		
1202053263|957569|MB	1	108	-2.86	-0.0138	3/2/2010@16:43:36		
WCN100302-03	1	S3	104	4.87	3/2/2010@16:44:28		CCV
Known Conc:			100				
DQM Test: > + Percent Relative Difference							
Result:			4.4 < 10.0				
Message			CCV Passed				
Action			Continue				
DQM Test: < - Percent Relative Difference							
Result:			4.4 < 10.0				
Message			CCV Passed				
Action			Continue				
WCN100302-08	1	S7	-1.95	0.0280	3/2/2010@16:46:19		CCB
Known Conc:			0.00				
DQM Test: > + Concentration Limit							
Result:			-1.95 < 5.00				
Message			CCB Passed				
Action			Continue				
DQM Test: < - Concentration Limit							
Result:			-1.95 > -5.00				
Message			CCB Passed				
Action			Continue				
1202053270|LCS	1	109	28.4	1.41	3/2/2010@16:48:09	25.00	
247770008	1	110	-1.72	0.0381	3/2/2010@16:49:03		
1202053264|DUP	1	111	-1.87	0.0315	3/2/2010@16:49:57		
1202053266|MS	1	112	106	4.96	3/2/2010@16:50:51		
1202053268|MSD	1	113	109	5.07	3/2/2010@16:51:45		
247770009	1	114	-2.46	0.00432	3/2/2010@16:52:39		
1202053265|DUP	1	115	-2.01	0.0249	3/2/2010@16:53:32		
1202053267|MS	1	116	121	5.63	3/2/2010@16:54:26		
1202053269|MSD	1	117	104	4.87	3/2/2010@16:55:19		
247770010	1	118	-1.54	0.0462	3/2/2010@16:56:12		
WCN100302-03	1	S3	105	4.90	3/2/2010@16:57:04		CCV
Known Conc:			100				
DQM Test: > + Percent Relative Difference							
Result:			5.1 < 10.0				
Message			CCV Passed				
Action			Continue				
DQM Test: < - Percent Relative Difference							
Result:			5.1 < 10.0				
Message			CCV Passed				
Action			Continue				
WCN100302-08	1	S7	-2.55	3.56e-4	3/2/2010@16:58:55		CCB
Known Conc:			0.00				
DQM Test: > + Concentration Limit							
Result:			-2.55 < 5.00				
Message			CCB Passed				
Action			Continue				
DQM Test: < - Concentration Limit							
Result:			-2.55 > -5.00				
Message			CCB Passed				
Action			Continue				
247770011	1	119	-2.56	-1.49e-4	3/2/2010@17:00:44		
247784002	1	120	-1.29	0.0576	3/2/2010@17:01:37		
247790002	1	121	-2.12	0.0200	3/2/2010@17:02:32		
247790003	1	122	-2.56	0.00	3/2/2010@17:03:26		
247794001	1	123	-2.56	-1.49e-4	3/2/2010@17:04:21		
247794002	1	124	-2.55	3.61e-4	3/2/2010@17:05:15		
247794003	1	125	-2.72	-0.00709	3/2/2010@17:06:10		
247794004	1	126	-2.78	-0.00991	3/2/2010@17:07:04		

247794005	1	127	-1.86	0.0318	3/2/2010@17:07:58		
Calibration:			Table/Fig. 1				
247806001	1	128	-1.31	0.0567	3/2/2010@17:08:52		
WCN100302-03	1	S3	106	4.93	3/2/2010@17:09:44		CCV
Known Conc:			100				
DQM Test: > + Percent Relative Difference							
Result:			5.7 < 10.0				
Message			CCV Passed				
Action			Continue				
DQM Test: < - Percent Relative Difference							
Result:			5.7 < 10.0				
Message			CCV Passed				
Action			Continue				
WCN100302-08	1	S7	-1.98	0.0263	3/2/2010@17:11:35		CCB
Known Conc:			0.00				
DQM Test: > + Concentration Limit							
Result:			-1.98 < 5.00				
Message			CCB Passed				
Action			Continue				
DQM Test: < - Concentration Limit							
Result:			-1.98 > -5.00				
Message			CCB Passed				
Action			Continue				
247806002	1	129	-2.57	-6.55e-4	3/2/2010@17:13:25		
247806003	1	130	-1.47	0.0495	3/2/2010@17:14:18		
247806004	1	131	-1.86	0.0317	3/2/2010@17:15:12		
247806005	1	132	8.20	0.490	3/2/2010@17:16:06		
247806006	1	133	-0.684	0.0854	3/2/2010@17:16:59		
247855002	1	134	-2.09	0.0216	3/2/2010@17:17:52		
247902001	1	135	1.78e+3	81.4	3/2/2010@17:18:45		
247806005	1	132	6.30	0.403	3/2/2010@17:19:38		
247858001|956940	1	74	125	5.79	3/2/2010@17:20:31	2.00	
247858002	1	75	103	4.82	3/2/2010@17:21:23	2.00	
WCN100302-03	1	S3	106	4.94	3/2/2010@17:22:15		CCV
Known Conc:			100				
DQM Test: > + Percent Relative Difference							
Result:			5.8 < 10.0				
Message			CCV Passed				
Action			Continue				
DQM Test: < - Percent Relative Difference							
Result:			5.8 < 10.0				
Message			CCV Passed				
Action			Continue				
WCN100302-08	1	S7	-2.56	-1.85e-4	3/2/2010@17:24:05		CCB
Known Conc:			0.00				
DQM Test: > + Concentration Limit							
Result:			-2.56 < 5.00				
Message			CCB Passed				
Action			Continue				
DQM Test: < - Concentration Limit							
Result:			-2.56 > -5.00				
Message			CCB Passed				
Action			Continue				
247469003|955994	1	53	-1.40	0.0528	3/2/2010@17:25:55		
247902001|957569	1	135	66.2	3.13	3/2/2010@17:26:48	50.00	
247806005	1	132	-1.46	0.0501	3/2/2010@17:27:41		
WCN100302-03	1	S3	106	4.94	3/2/2010@17:28:34		CCV
Known Conc:			100				
DQM Test: > + Percent Relative Difference							
Result:			6.0 < 10.0				
Message			CCV Passed				
Action			Continue				
DQM Test: < - Percent Relative Difference							
Result:			6.0 < 10.0				
Message			CCV Passed				
Action			Continue				
WCN100302-08	1	S7	-0.316	0.102	3/2/2010@17:30:24		CCB
Known Conc:			0.00				

Table 1: TCYANIDE

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	9.17	0.613	0.6	3/2/2010	08:47:39
2	150	1	7.02	0.465	-1.1	3/2/2010	08:48:31
3	100	1	4.67	0.309	0.1	3/2/2010	08:49:23
4	50.0	1	2.38	0.162	0.5	3/2/2010	08:50:16
5	10.0	1	0.547	0.0492	4.4	3/2/2010	08:51:09
6	5.00	1	0.398	0.0229	-15.5	3/2/2010	08:52:03
7	0.00	1	0.0805	0.00272		3/2/2010	08:52:57

Figure 1: TCYANIDE



Ion Chromatography

Prep Logbook

Ion Chromatography (IC)

Batch ID:	957878.0	Verified by:		Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
Analyst:	Mary Sherwood			LCS	1202054072	GEL-ANION-4C Spiking Solution	UIC100224SPK	.8	mL
Method:	EPA 300.0 PREP			MS	1202054068	GEL-ANION-4C Spiking Solution	UIC100224SPK	.8	mL
Lab SOP:	GL-GC-E-086 REV# 17			MS	1202054069	GEL-ANION-4C Spiking Solution	UIC100224SPK	.8	mL
Instrument:	Sartorius Balance B-001			MSD	1202054070	GEL-ANION-4C Spiking Solution	UIC100224SPK	.8	mL
				MSD	1202054071	GEL-ANION-4C Spiking Solution	UIC100224SPK	.8	mL

Sample ID	Run Date	Matrix	Initial Weight (g)	Final Volume (mL)	Prep Factor (mL/g)	pH Check	1
1202054065 MB	10-MAR-2010 10:30:00	Soil	4	40	10		
1202054072 LCS	10-MAR-2010 10:30:00	Soil	4	40	10		
247546004	10-MAR-2010 10:30:00	Soil	4	40	10		
1202054066 DUP (247546004)	10-MAR-2010 10:30:00	Soil	4	40	10		
1202054068 MS (247546004)	10-MAR-2010 10:30:00	Soil	4	40	10		
1202054070 MSD (247546004)	10-MAR-2010 10:30:00	Soil	4	40	10		
247551001	10-MAR-2010 10:30:00	Soil	4	40	10		
247551002	10-MAR-2010 10:30:00	Soil	4	40	10		
247790002	10-MAR-2010 10:30:00	Soil	4	40	10		
247790003	10-MAR-2010 10:30:00	Soil	4	40	10		
247794001	10-MAR-2010 10:30:00	Soil	4	40	10		
247794002	10-MAR-2010 10:30:00	Soil	4	40	10		
247794003	10-MAR-2010 10:30:00	Soil	4	40	10		
247794004	10-MAR-2010 10:30:00	Soil	4	40	10		
247794005	10-MAR-2010 10:30:00	Soil	4	40	10		
247822001	10-MAR-2010 10:30:00	Soil	4	40	10		
247822002	10-MAR-2010 10:30:00	Soil	4	40	10		
247822003	10-MAR-2010 10:30:00	Soil	4	40	10		
247822004	10-MAR-2010 10:30:00	Soil	4	40	10		
247822005	10-MAR-2010 10:30:00	Soil	4	40	10		
247822006	10-MAR-2010 10:30:00	Soil	4	40	10		
1202054067 DUP (247822006)	10-MAR-2010 10:30:00	Soil	4	40	10		
1202054069 MS (247822006)	10-MAR-2010 10:30:00	Soil	4	40	10		

Analytical Logbook version 1 11-04-2002

GEL Laboratories LLC

Prep Logbook

Batch ID: 957878.0
Analyst: Mary Sherwood
Method: EPA 300.0 PREP
Lab SOP: GL-GC-E-086 REV# 17
Instrument: Sartorius Balance B-001

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1202054072	GEL-ANION-4C Spiking Solution	UIC100224SPK	.8	mL
MS	1202054068	GEL-ANION-4C Spiking Solution	UIC100224SPK	.8	mL
MS	1202054069	GEL-ANION-4C Spiking Solution	UIC100224SPK	.8	mL
MSD	1202054070	GEL-ANION-4C Spiking Solution	UIC100224SPK	.8	mL
MSD	1202054071	GEL-ANION-4C Spiking Solution	UIC100224SPK	.8	mL

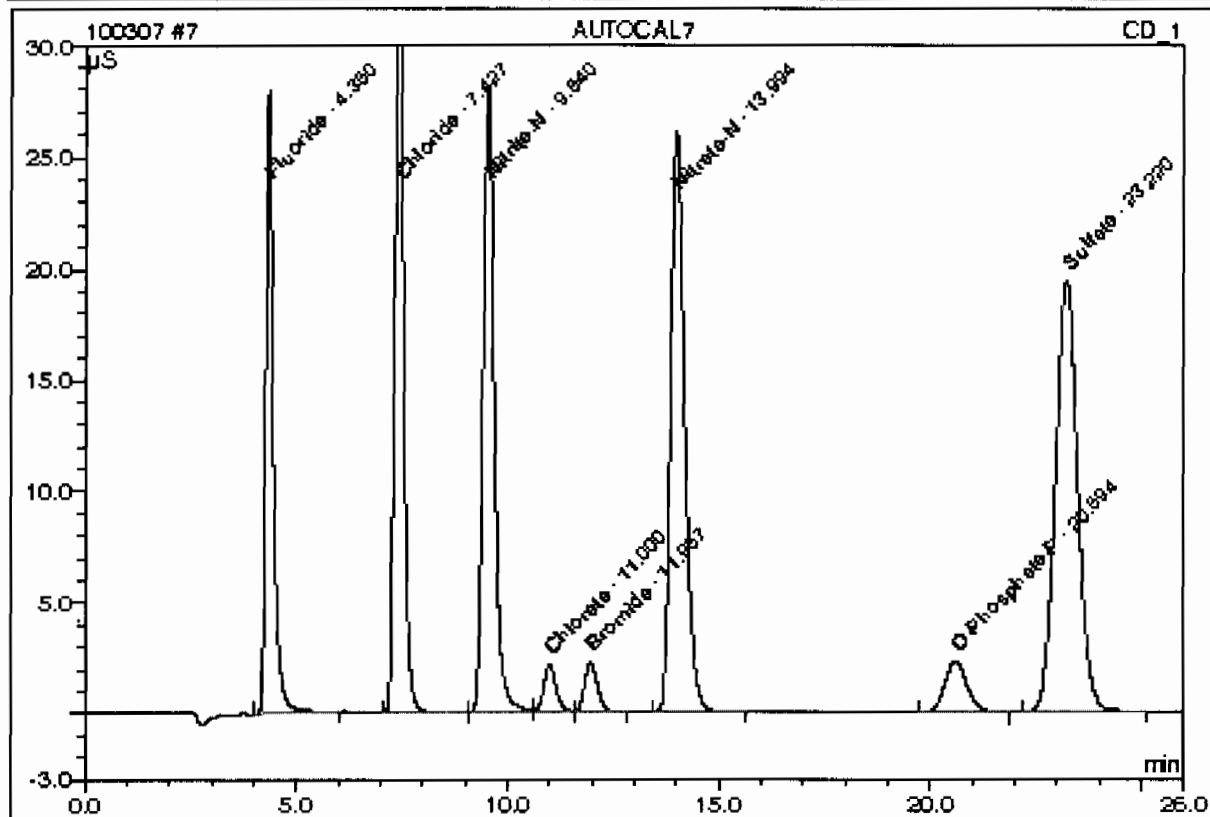
Sample ID	Run Date	Matrix	Initial Weight (g)	Final Volume (mL)	Prep Factor (mL/g)	pH Check
1202054071 MSD (247822006)	10-MAR-2010 10:30:00	Soil	4	40	10	1
Reagent/Solvent Lot ID	Description	Amount	Comments:			

This is runlog for Sequence 100308.seq for IC6

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
ICAL-07	02/26/10 14:11		1	100308	MAR1
ICAL-06	02/26/10 14:40		1	100308	MAR1
ICAL-05	02/26/10 15:09		1	100308	MAR1
ICAL-04	02/26/10 15:38		1	100308	MAR1
ICAL-03	02/26/10 16:07		1	100308	MAR1
ICAL-02	02/26/10 16:36		1	100308	MAR1
ICAL-01	02/26/10 17:04		1	100308	MAR1

7 AUTOCAL7

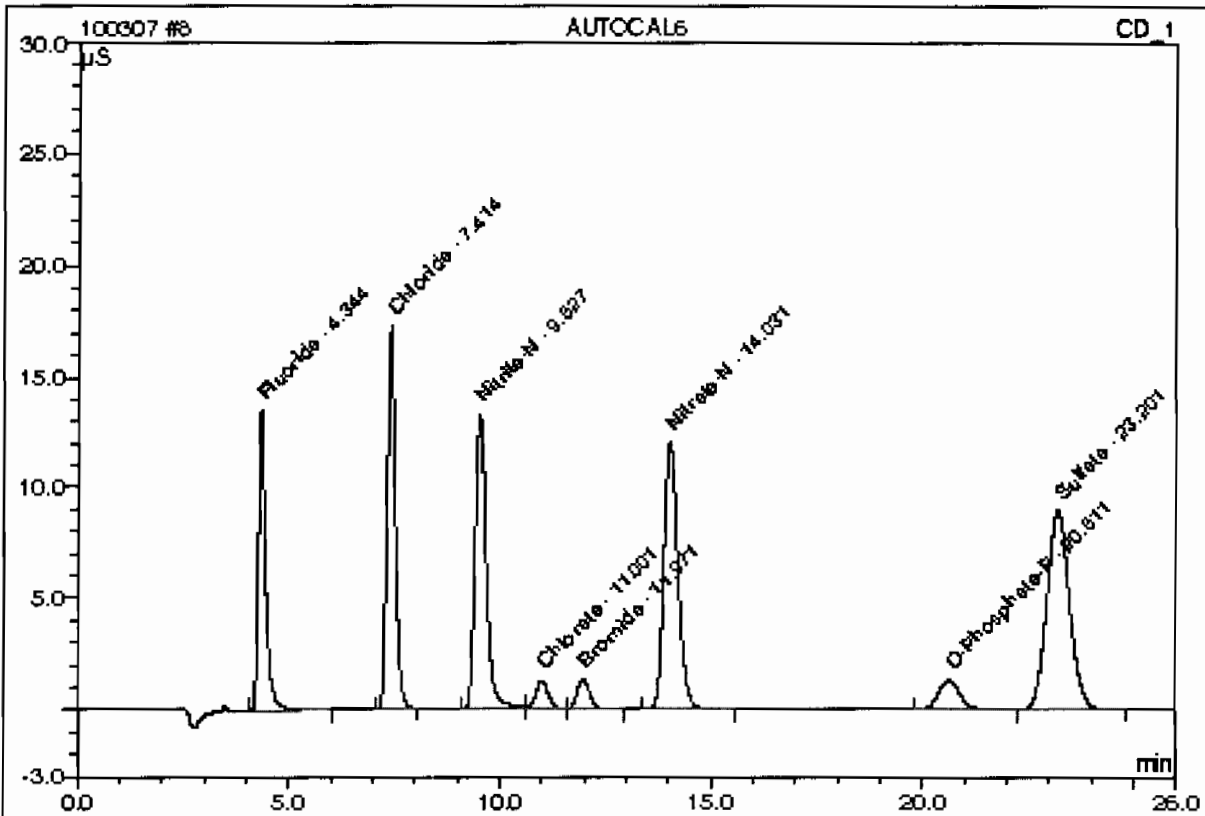
Sample Name:	AUTOCAL7	Injection Volume:	1.0
Vial Number:	3	Channel:	CD_1
Sample Type:	standard	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	2/26/2010 14:11	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GC ED86;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.35	Fluoride	10.0000	10.0855		5.77442	12.08
2	7.43	Chloride	20.0000	20.3596		8.66452	18.13
3	9.54	Nitrite-N	10.0000	10.0634		8.38569	17.54
4	11.00	Chlorate	5.0000	5.0096		0.72691	1.52
5	11.97	Bromide	5.0000	4.9733		0.76589	1.60
6	13.99	Nitrate-N	10.0000	10.1518		10.17664	21.30
7	20.59	O-Phosphate-P	5.0000	5.0713		1.40399	2.94
8	23.22	Sulfate	40.0000	40.4933		11.89615	24.89
Total:				106.2078	0.000	47.798	100.00

8 AUTOCAL6

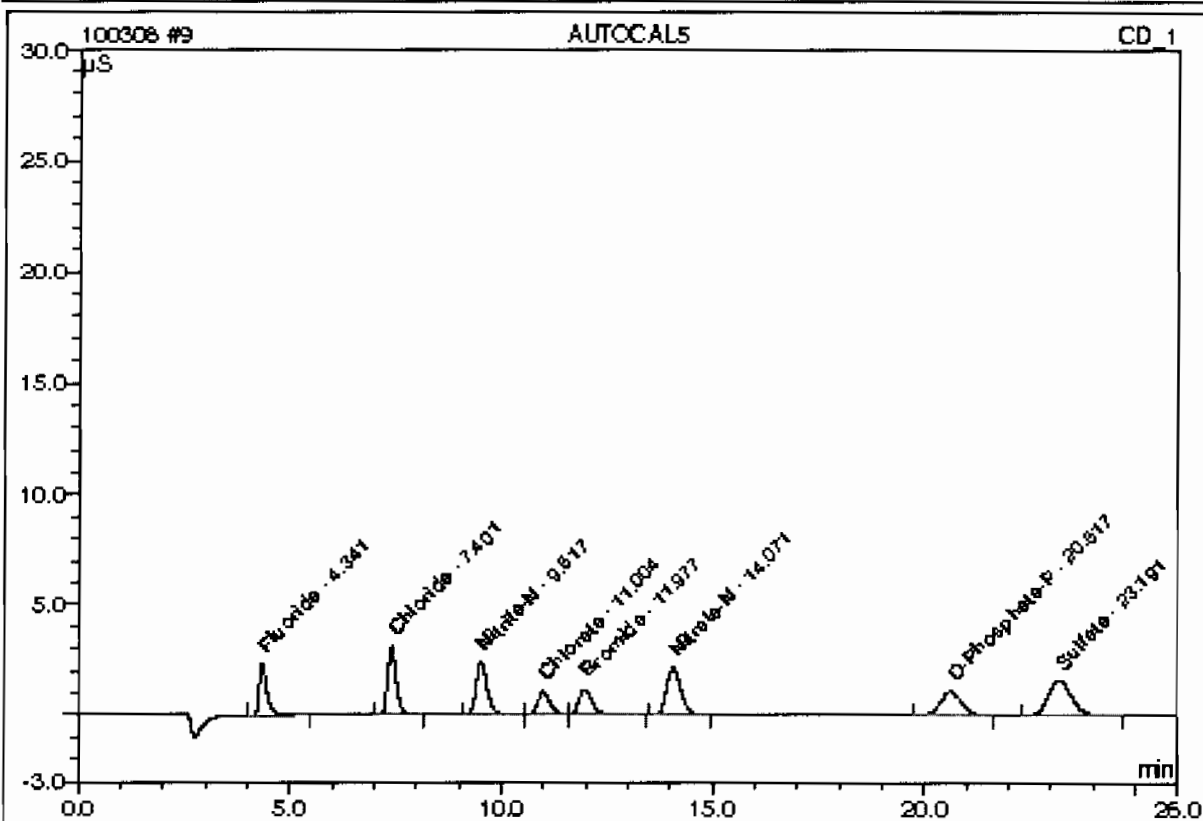
Sample Name:	AUTOCAL6	Injection Volume:	1.0
Vial Number:	4	Channel:	CD_1
Sample Type:	standard	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	2/26/2010 14:40	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GC E086;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area μS*min	Rel. Area %
1	4.34	Fluoride	5.0000	4.8384		2.75186	12.16
2	7.41	Chloride	10.0000	9.2955		3.91334	17.29
3	9.53	Nitrite-N	5.0000	4.8861		4.04396	17.86
4	11.00	Chlorate	3.0000	3.0997		0.44848	1.98
5	11.97	Bromide	3.0000	2.9841		0.45913	2.03
6	14.03	Nitrate-N	5.0000	4.7080		4.67150	20.63
7	20.61	O-Phosphate-P	3.0000	2.9561		0.60102	3.54
8	23.20	Sulfate	20.0000	19.0431		5.55000	24.51
Total:				51.8110	0.000	22.639	100.00

9 AUTOCAL5

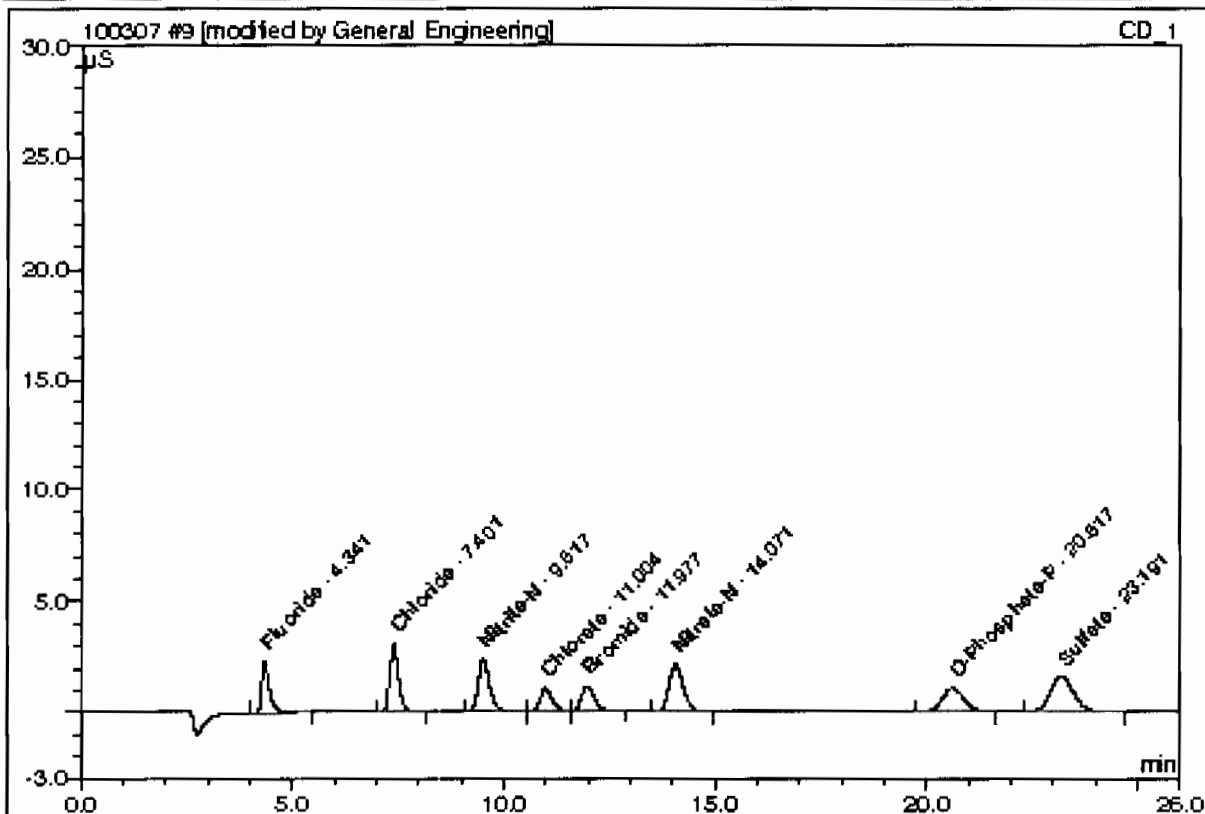
Sample Name:	AUTOCAL5	Injection Volume:	1.0
Vial Number:	5	Channel:	CD_1
Sample Type:	standard	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	2/26/2010 15:09	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCE086;300;0056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area μS*min	Rel.Area %
1	4.34	Fluoride	1.0000	0.9456		0.50946	9.66
2	7.40	Chloride	2.0000	1.8831		0.73030	13.85
3	9.52	Nitrite-N	1.0000	0.9352		0.73136	13.87
4	11.00	Chlorate	2.5000	2.4073		0.34799	6.60
5	11.98	Bromide	2.5000	2.6793		0.41530	7.88
6	14.07	Nitrate-N	1.0000	0.9238		0.84323	15.99
7	20.62	O-Phosphate-P	2.5000	2.4571		0.65802	12.48
8	23.19	Sulfate	4.0000	3.7265		1.03648	19.66
Total:				15.9578	0.000	5.272	100.00

9 AUTOCAL5

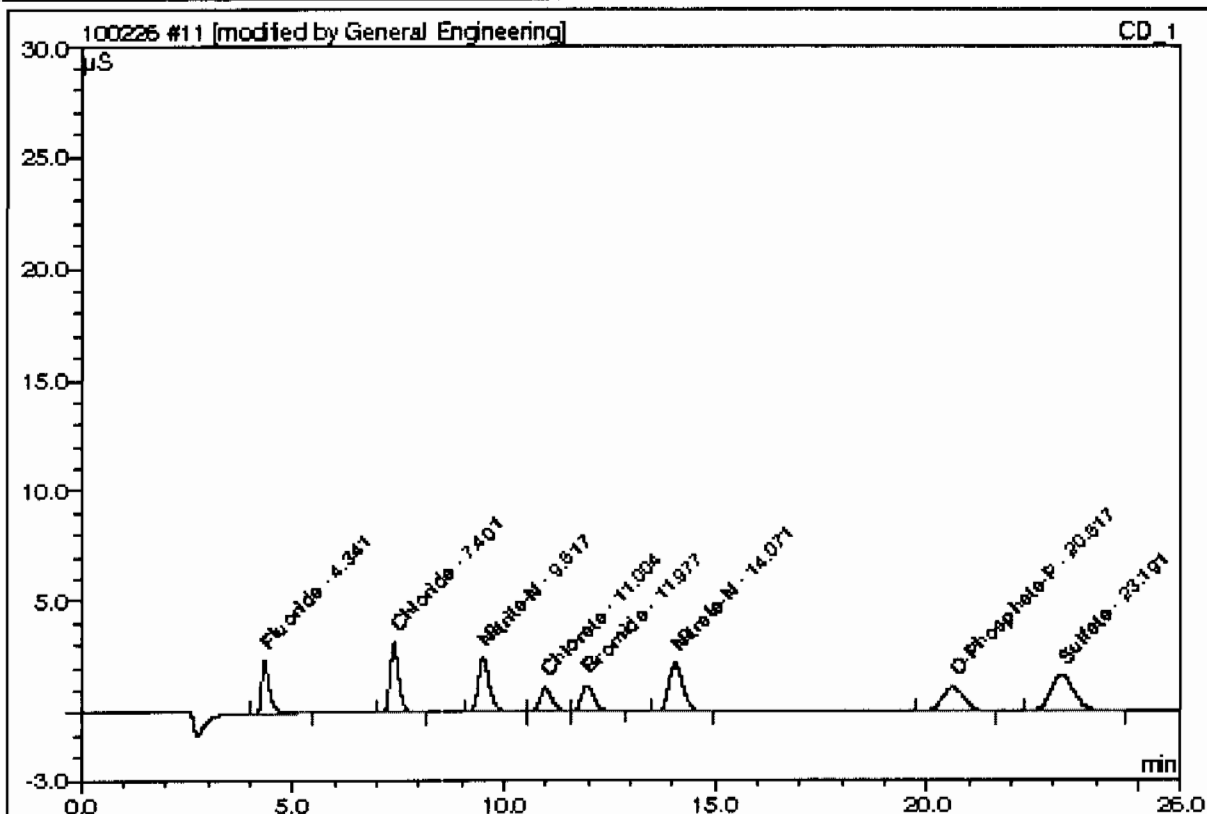
Sample Name:	AUTOCAL5	Injection Volume:	1.0
Vial Number:	5	Channel:	CD_1
Sample Type:	standard	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	2/26/2010 15:09	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCE086;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.34	Fluoride	1.0000	0.9456		0.50946	9.72
2	7.40	Chloride	2.0000	1.8831		0.73030	13.93
3	9.52	Nitrite-N	1.0000	0.9315		0.72762	13.88
4	11.00	Chlorate	2.5000	2.3673		0.34093	6.50
5	11.98	Bromide	2.5000	2.5838		0.39739	7.58
6	14.07	Nitrate-N	1.0000	0.9238		0.84323	16.08
7	20.62	O-Phosphate-P	2.5000	2.4544		0.65802	12.55
8	23.19	Sulfate	4.0000	3.7873		1.03648	19.77
Total:				15.8767	0.000	5.243	100.00

11 AUTOCAL5

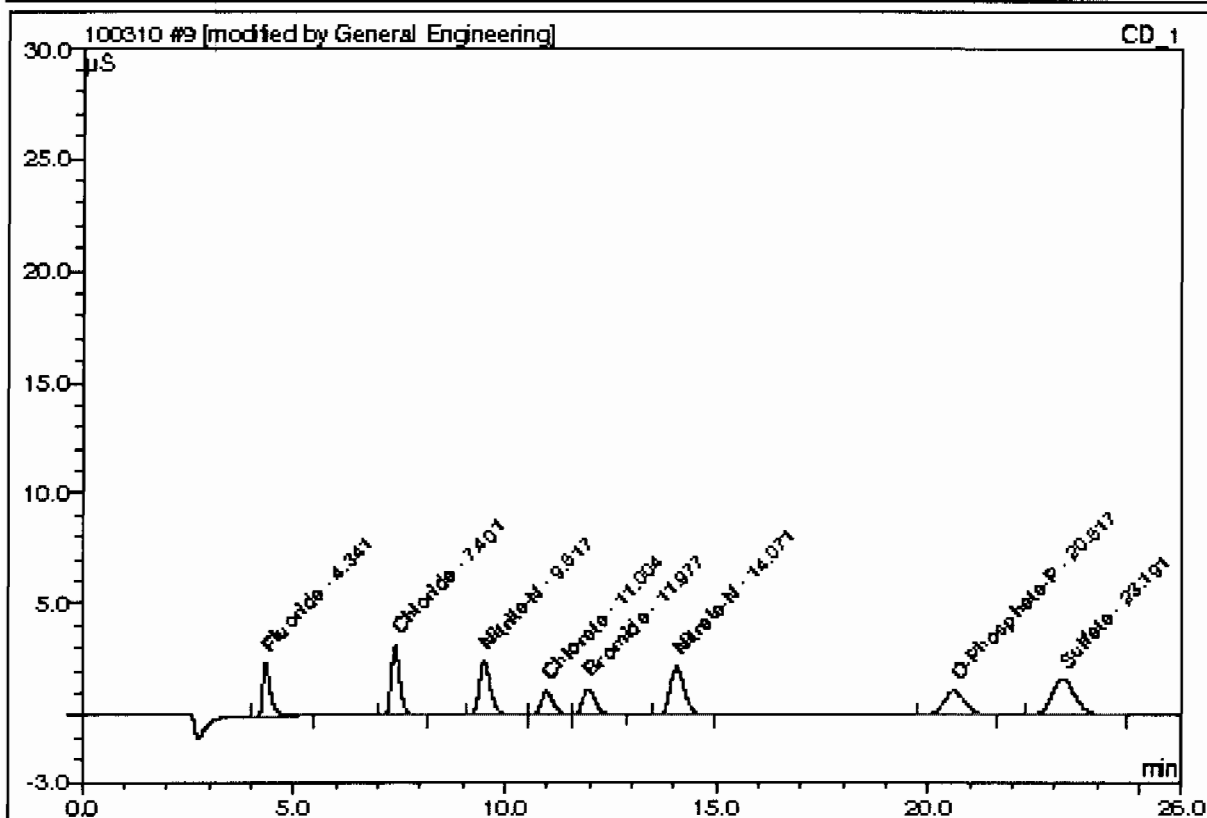
Sample Name:	AUTOCAL5	Injection Volume:	1.0
Vial Number:	5	Channel:	CD_1
Sample Type:	standard	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	2/26/2010 15:09	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GC E086;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.34	Fluoride	1.0000	0.9456		0.50946	9.72
2	7.40	Chloride	2.0000	1.8831		0.73030	13.93
3	9.52	Nitrite-N	1.0000	0.9315		0.72762	13.88
4	11.00	Chlorate	2.5000	2.3673		0.34093	6.50
5	11.98	Bromide	2.5000	2.5838		0.39739	7.58
6	14.07	Nitrate-N	1.0000	0.9238		0.84323	16.08
7	20.62	O-Phosphate-P	2.5000	2.4544		0.65802	12.55
8	23.19	Sulfate	4.0000	3.7873		1.03648	19.77
Total:				15.8767	0.000	5.243	100.00

9 AUTOCAL5

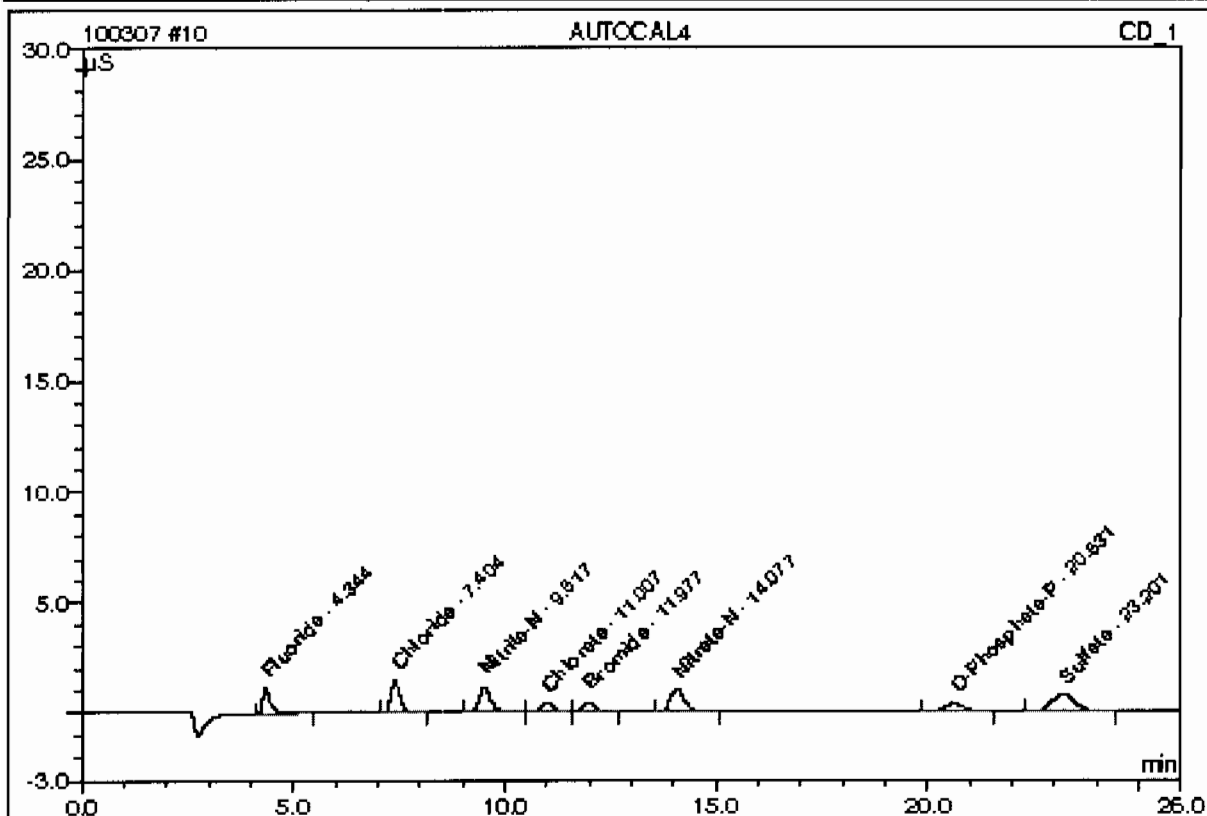
Sample Name:	AUTOCAL5	Injection Volume:	1.0
Vial Number:	5	Channel:	CD_1
Sample Type:	standard	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	2/26/2010 15:09	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCE086;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.34	Fluoride	1.0000	0.9456		0.50946	9.72
2	7.40	Chloride	2.0000	1.8831		0.73030	13.93
3	9.52	Nitrite-N	1.0000	0.9315		0.72762	13.88
4	11.00	Chlorate	2.5000	2.3673		0.34093	6.50
5	11.98	Bromide	2.5000	2.5838		0.39739	7.58
6	14.07	Nitrate-N	1.0000	0.9238		0.84323	16.08
7	20.62	O-Phosphate-P	2.5000	2.4544		0.65802	12.55
8	23.19	Sulfate	4.0000	3.7873		1.03648	19.77
Total:				15.8767	0.000	5.243	100.00

10 AUTOCAL4

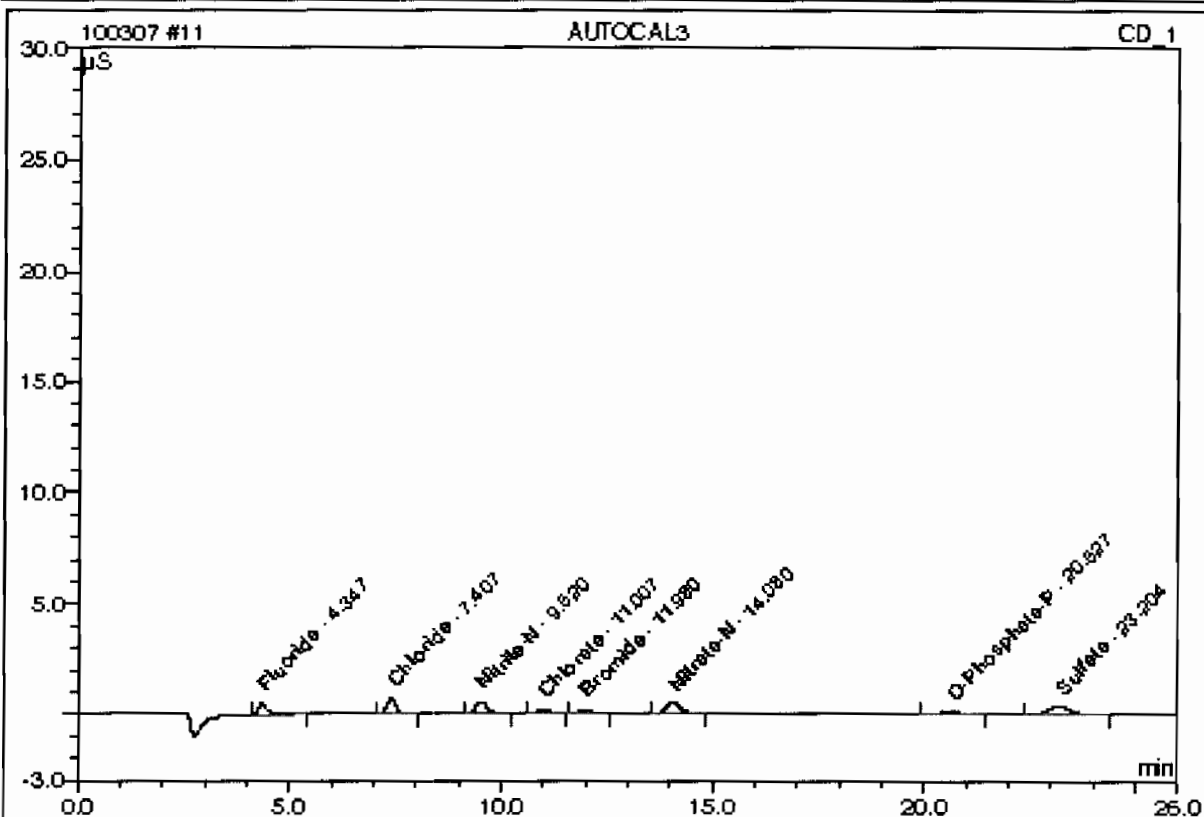
Sample Name:	AUTOCAL4	Injection Volume:	1.0
Vial Number:	6	Channel:	CD_1
Sample Type:	standard	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	2/26/2010 15:38	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCE086;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.34	Fluoride	0.5000	0.4893		0.24663	10.36
2	7.40	Chloride	1.0000	0.9971		0.34985	14.69
3	9.52	Nitrite-N	0.5000	0.4896		0.35700	14.99
4	11.01	Chlorate	1.0000	0.9843		0.13787	5.79
5	11.98	Bromide	1.0000	0.9852		0.15086	6.34
6	14.08	Nitrate-N	0.5000	0.4953		0.40975	17.21
7	20.63	O-Phosphate-P	1.0000	0.9197		0.22053	9.26
8	23.20	Sulfate	2.0000	2.0029		0.50858	21.36
Total:				7.3634	0.000	2.381	100.00

11 AUTOCAL3

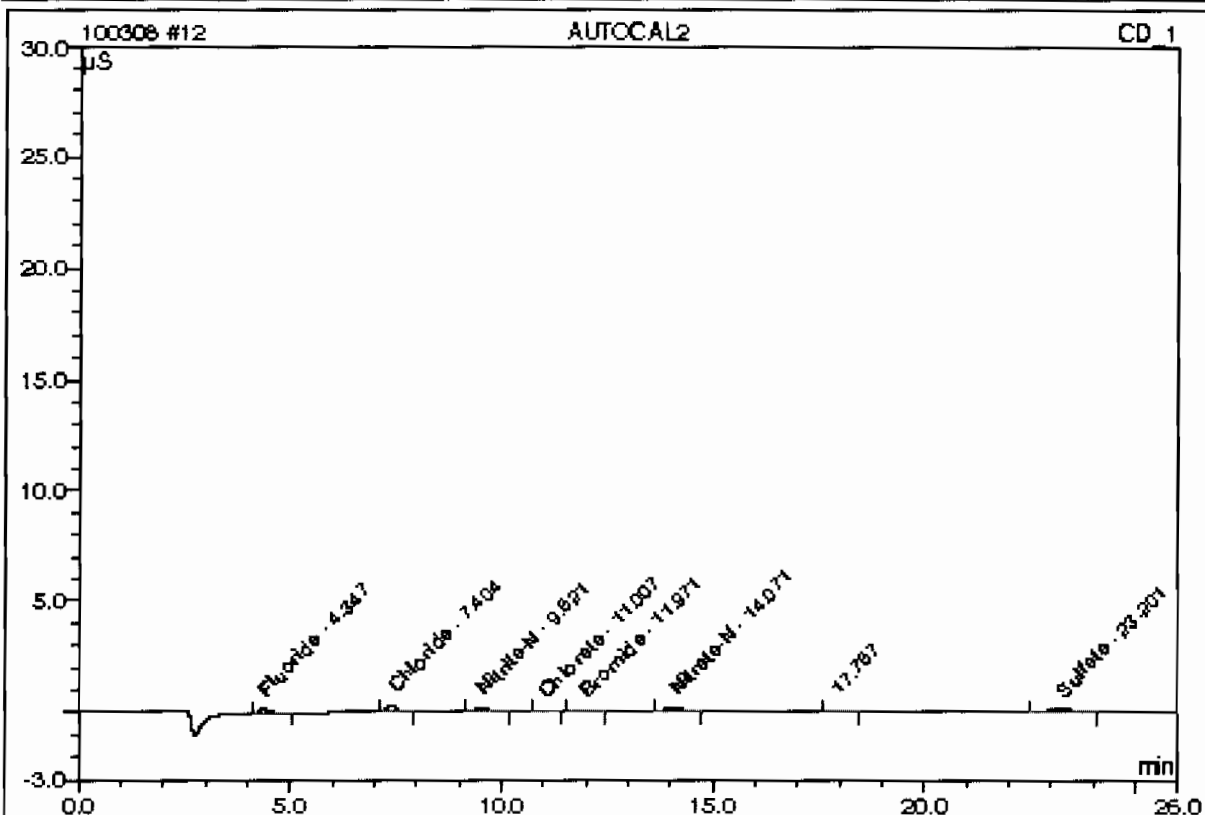
Sample Name:	AUTOCAL3	Injection Volume:	1.0
Vial Number:	7	Channel:	CD_1
Sample Type:	standard	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	2/26/2010 16:07	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GLGCED86;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.35	Fluoride	0.2500	0.2826		0.12755	10.86
2	7.41	Chloride	0.5000	0.6142		0.18541	15.79
3	9.52	Nitrite-N	0.2500	0.2703		0.17315	14.75
4	11.01	Chlorate	0.5000	0.5046		0.06743	5.74
5	11.98	Bromide	0.5000	0.4768		0.07246	6.17
6	14.08	Nitrate-N	0.2500	0.2969		0.20912	17.81
7	20.63	O-Phosphate-P	0.5000	0.4301		0.08097	6.90
8	23.20	Sulfate	1.0000	1.1562		0.25806	21.98
Total:				4.0318	0.000	1.174	100.00

12 AUTOCAL2

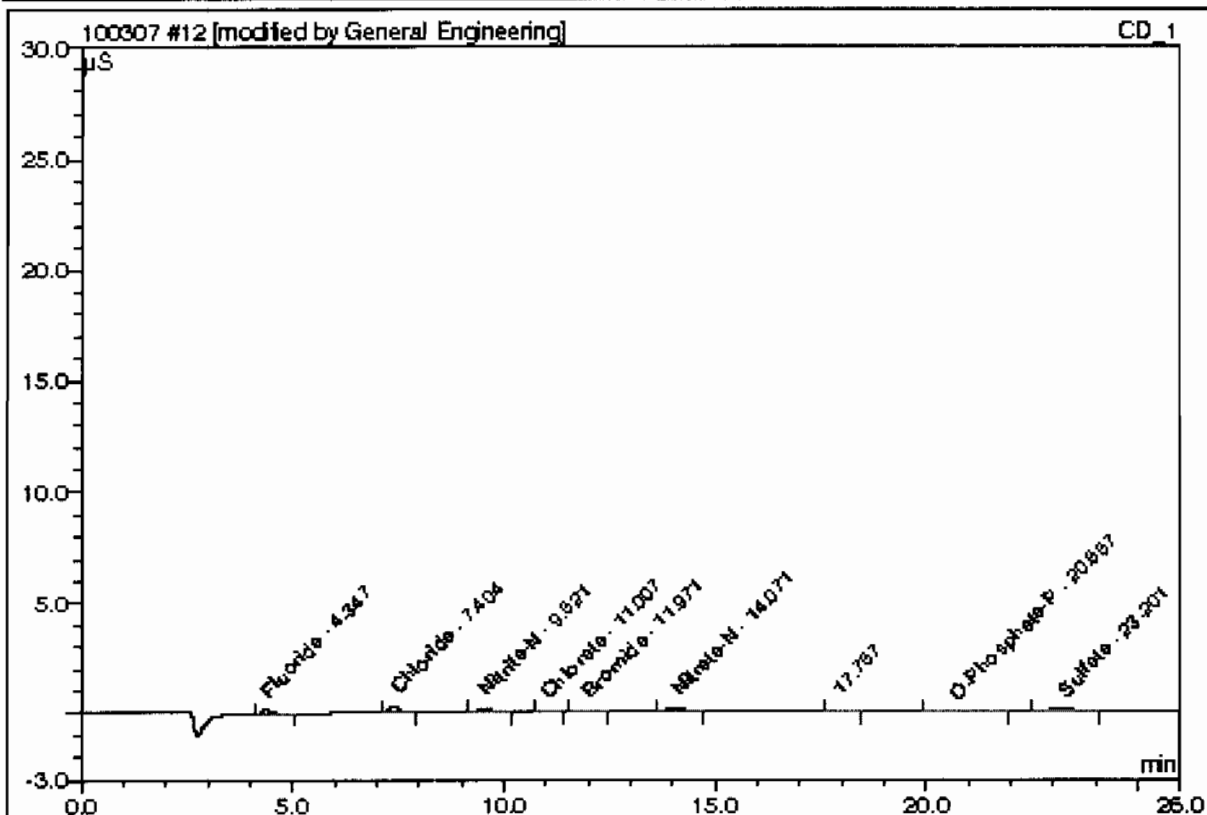
Sample Name:	AUTOCAL2	Injection Volume:	1.0
Vial Number:	8	Channel:	CD_1
Sample Type:	standard	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	2/26/2010 16:36	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GC ED86;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.35	Fluoride	0.1000	0.1475		0.04972	10.74
2	7.40	Chloride	0.2000	0.3681		0.07973	17.22
3	9.52	Nitrite-N	0.1000	0.1444		0.06824	14.74
4	11.01	Chlorate	0.2000	0.1849		0.02108	4.55
5	11.97	Bromide	0.2000	0.1801		0.02821	6.10
6	14.07	Nitrate-N	0.1000	0.1840		0.09485	20.49
n.a.	n.a.	O-Phosphate-P	0.2000	n.a.	n.a.	n.a.	n.a.
8	23.20	Sulfate	0.4000	0.5652		0.10336	22.33
Total:				1.7742	0.000	0.445	96.18

12 AUTOCAL2

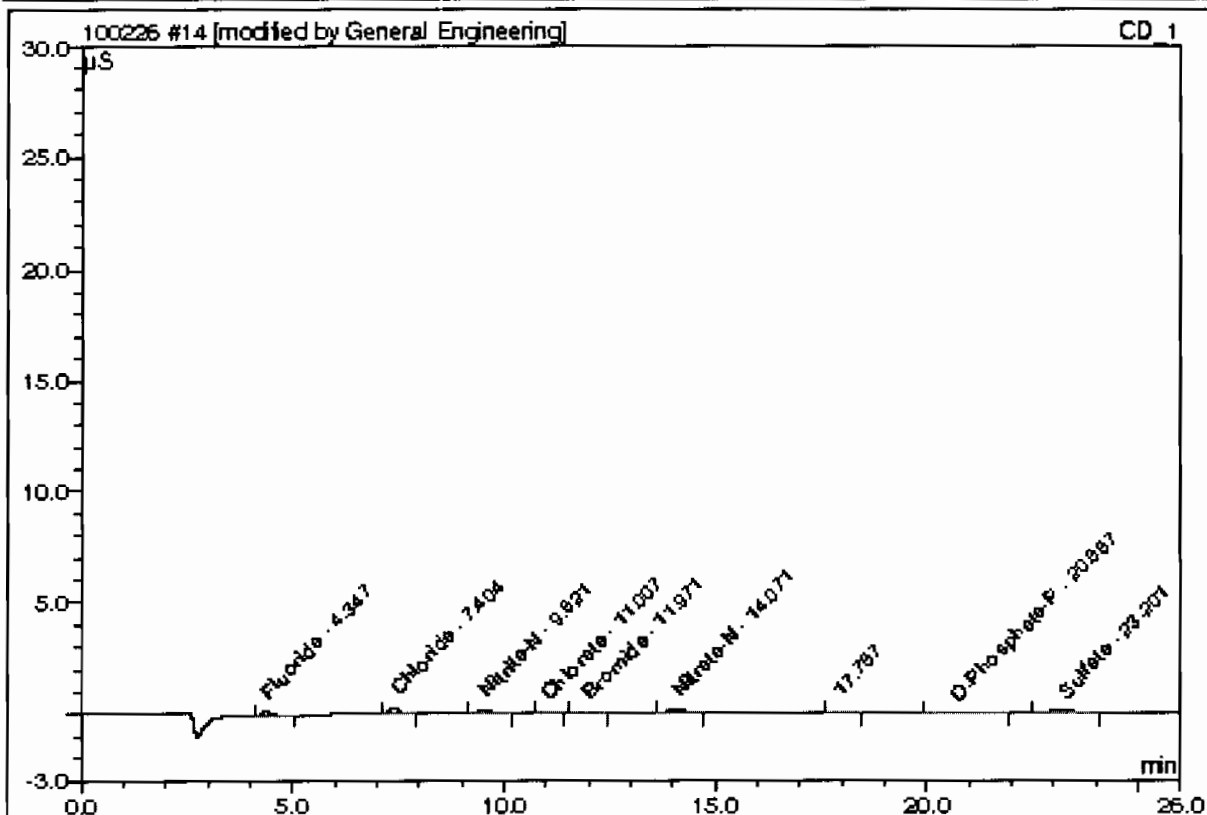
Sample Name:	AUTOCAL2	Injection Volume:	1.0
Vial Number:	8	Channel:	CD_1
Sample Type:	standard	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	2/26/2010 16:36	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCE086;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.35	Fluoride	0.1000	0.1475		0.04972	10.26
2	7.40	Chloride	0.2000	0.3681		0.07973	16.45
3	9.52	Nitrite-N	0.1000	0.1452		0.06824	14.08
4	11.01	Chlorate	0.2000	0.1890		0.02108	4.35
5	11.97	Bromide	0.2000	0.1899		0.02821	5.82
6	14.07	Nitrate-N	0.1000	0.1840		0.09485	19.57
8	20.66	O-Phosphate-P	0.2000	0.2223		0.02173	4.48
9	23.20	Sulfate	0.4000	0.6333		0.10336	21.33
Total:				2.0793	0.000	0.467	96.35

14 AUTOCAL2

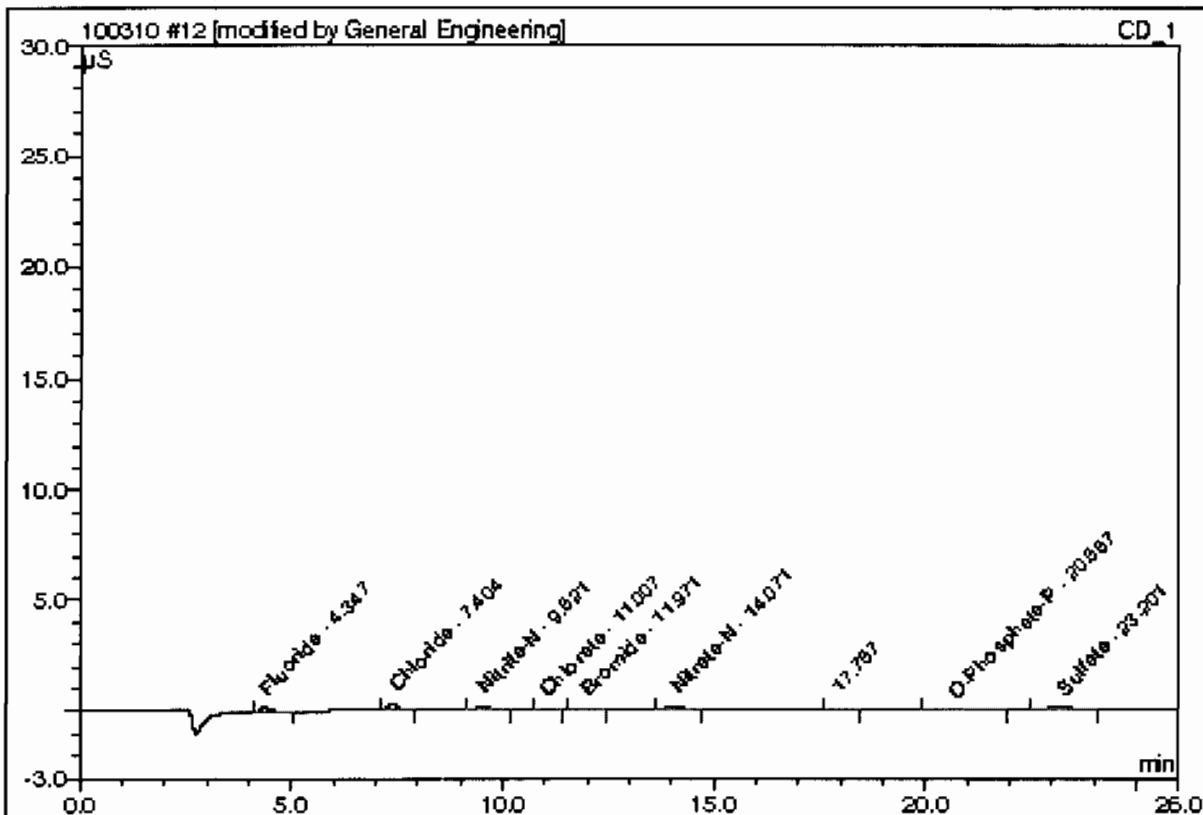
Sample Name:	AUTOCAL2	Injection Volume:	1.0
Vial Number:	8	Channel:	CD_1
Sample Type:	standard	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	2/26/2010 16:36	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GC E086;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.35	Fluoride	0.1000	0.1475		0.04972	10.26
2	7.40	Chloride	0.2000	0.3681		0.07973	16.45
3	9.52	Nitrite-N	0.1000	0.1452		0.06824	14.08
4	11.01	Chlorate	0.2000	0.1890		0.02108	4.35
5	11.97	Bromide	0.2000	0.1899		0.02821	5.82
6	14.07	Nitrate-N	0.1000	0.1840		0.09485	19.57
8	20.66	O-Phosphate-P	0.2000	0.2223		0.02173	4.48
9	23.20	Sulfate	0.4000	0.6333		0.10336	21.33
Total:				2.0793	0.000	0.467	96.35

12 AUTOCAL2

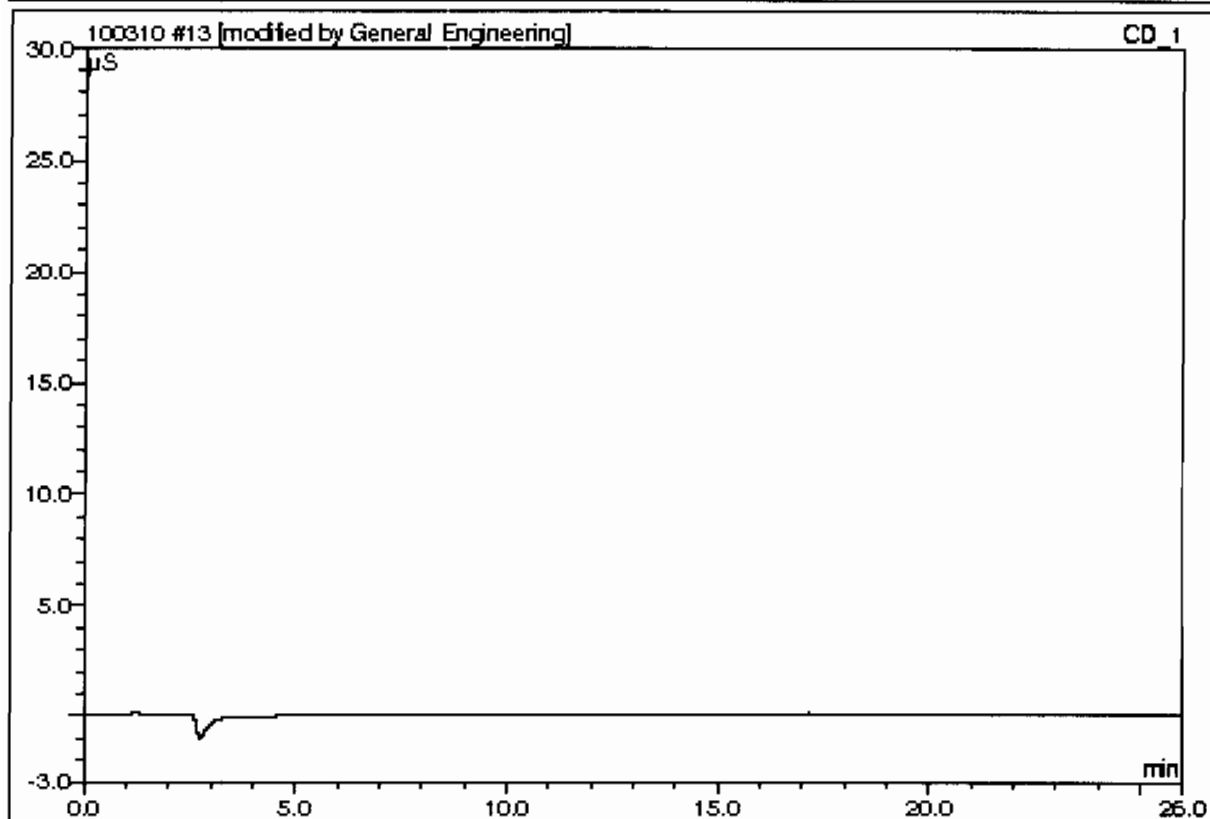
Sample Name:	AUTOCAL2	Injection Volume:	1.0
Vial Number:	8	Channel:	CD_1
Sample Type:	standard	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	2/26/2010 16:36	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCED86;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.35	Fluoride	0.1000	0.1475		0.04972	10.26
2	7.40	Chloride	0.2000	0.3681		0.07973	16.45
3	9.52	Nitrate-N	0.1000	0.1452		0.06824	14.08
4	11.01	Chlorate	0.2000	0.1890		0.02108	4.35
5	11.97	Bromide	0.2000	0.1899		0.02821	5.82
6	14.07	Nitrate-N	0.1000	0.1840		0.09485	19.57
8	20.86	O-Phosphate-P	0.2000	0.2223		0.02173	4.48
9	23.20	Sulfate	0.4000	0.6333		0.10336	21.33
Total:				2.0793	0.000	0.467	96.35

13 AUTOCAL1

Sample Name:	AUTOCAL1	Injection Volume:	1.0
Vial Number:	9	Channel:	CD_1
Sample Type:	standard	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	2/26/2010 17:04	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCE086;300;9058



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
n.a.	n.a.	Fluoride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	0.0000	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

13 AUTOCAL1

Sample Name: AUTOCAL1

Vial Number: 9

Sample Type: standard

Control Program: AS23

Quantif. Method: 100225an

Recording Time: 2/26/2010 17:04

Run Time (min): 26.00

Injection Volume: 1.0

Channel: CD_1

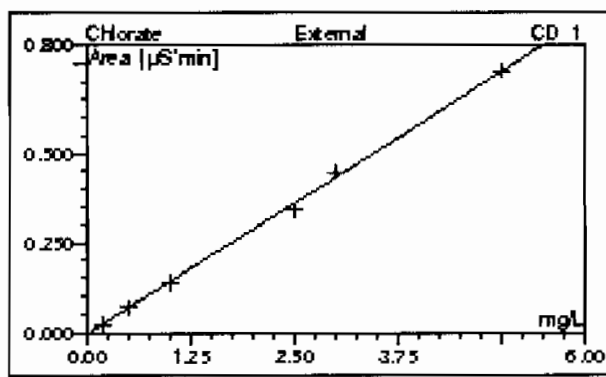
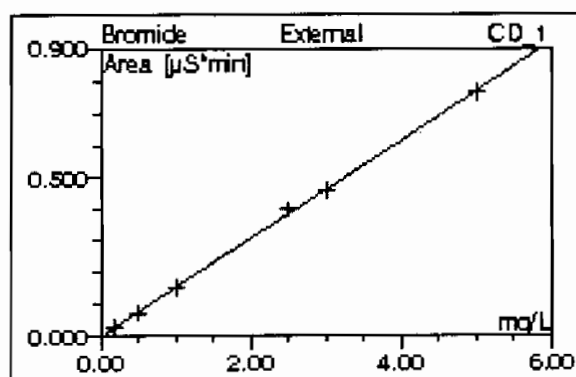
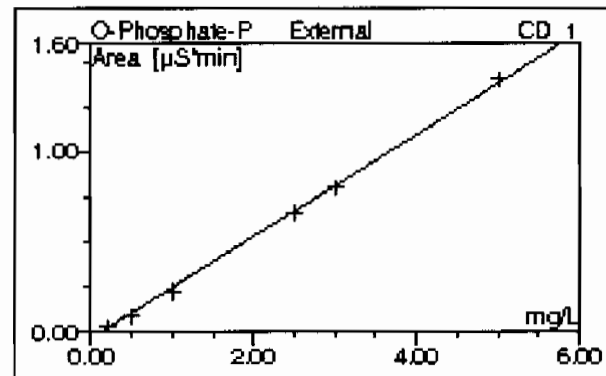
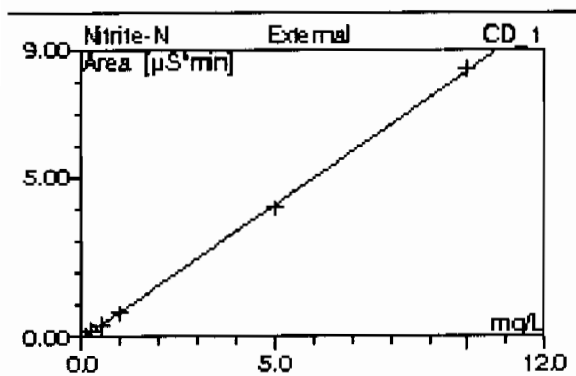
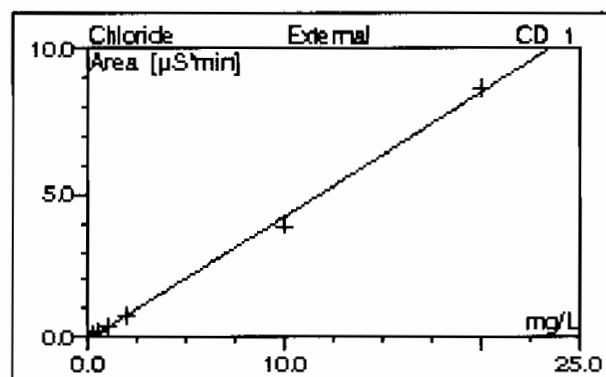
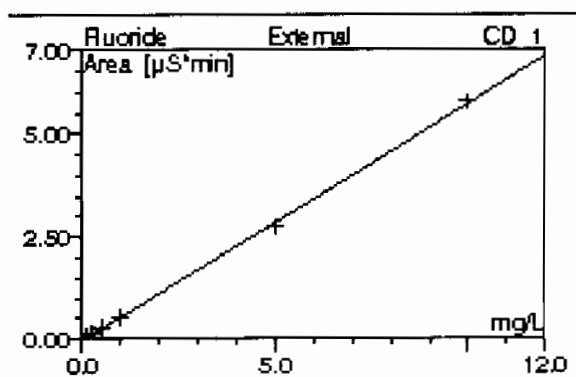
Dilution Factor: 1.0000

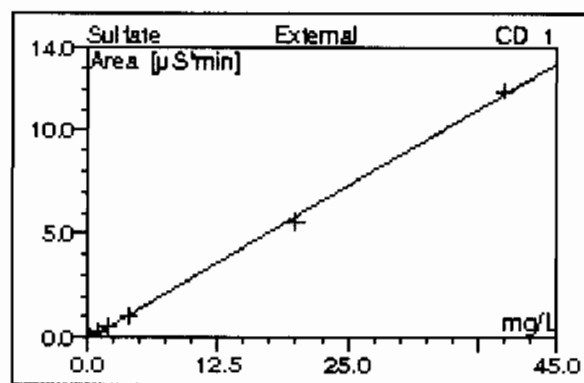
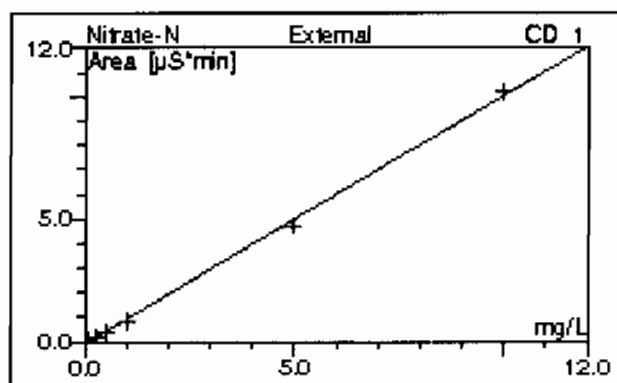
Sample Weight: 1.0000

Sample Amount: 1.0000

Analyst: MAR1

Column: AS23-002712; GL GCE086;300;9056

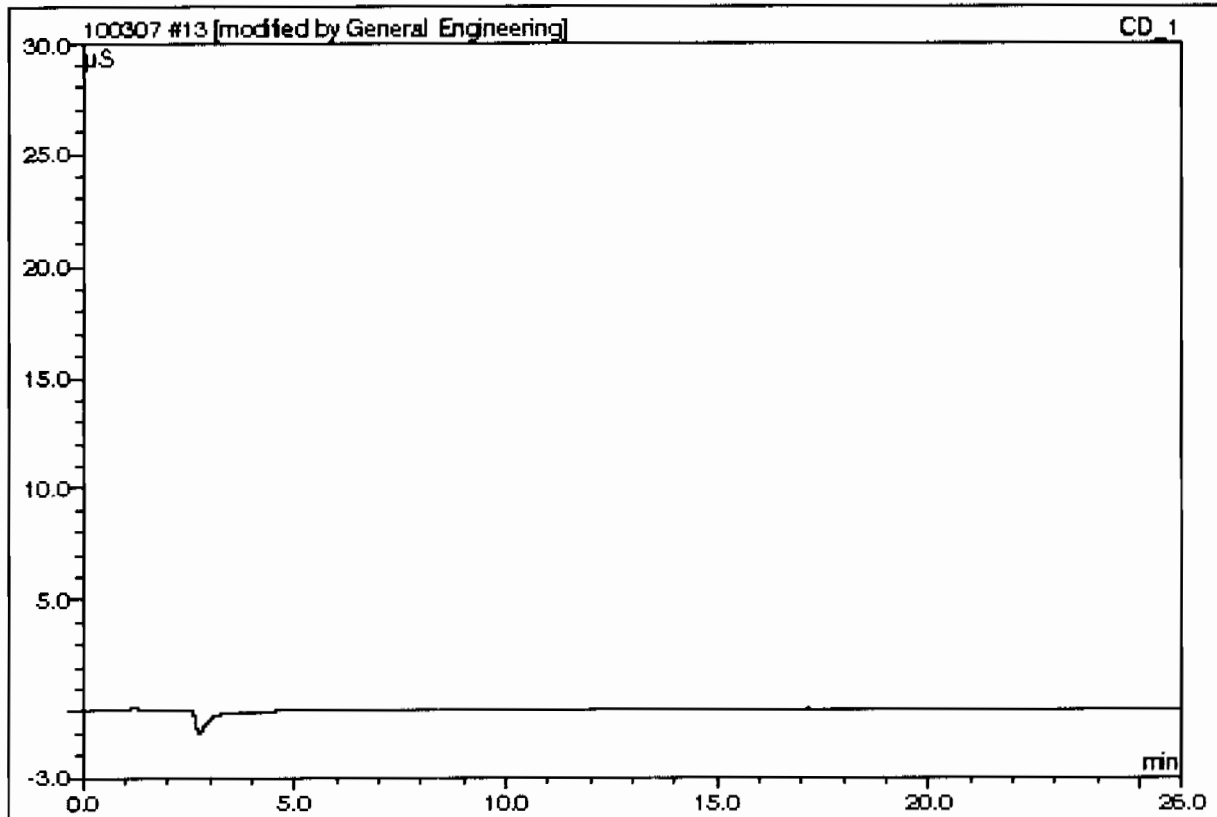




No. CD_1	Ret.Time CD_1 min	Peak Name CD_1	Cal.Type CD_1	Coeff.Det. CD_1 %	Offset CD_1	Slope CD_1	Curve CD_1
n.a.	n.a.	Fluoride	OLO#	99.9498	-0.0352	0.5760	0.0000
n.a.	n.a.	Chloride	OLO#	99.7865	-0.0783	0.4294	0.0000
n.a.	n.a.	Nitrite-N	OLO#	99.9694	-0.0536	0.8386	0.0000
n.a.	n.a.	Chlorate	OLO#	99.8345	-0.0067	0.1468	0.0000
n.a.	n.a.	Bromide	OLO#	99.9472	-0.0011	0.1542	0.0000
n.a.	n.a.	Nitrate-N	OLO#	99.8450	-0.0913	1.0116	0.0000
n.a.	n.a.	O-Phosphate-P	OLO#	99.8794	-0.0416	0.2851	0.0000
n.a.	n.a.	Sulfate	OLO#	99.8991	-0.0840	0.2959	0.0000
Average:				99.8889	-0.0490	0.4672	0.0000

13 AUTOCAL1

Sample Name:	AUTOCAL1	Injection Volume:	1.0
Vial Number:	9	Channel:	CD_1
Sample Type:	standard	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantit. Method:	100225an	Sample Amount:	1.0000
Recording Time:	2/26/2010 17:04	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCE086;300;0056



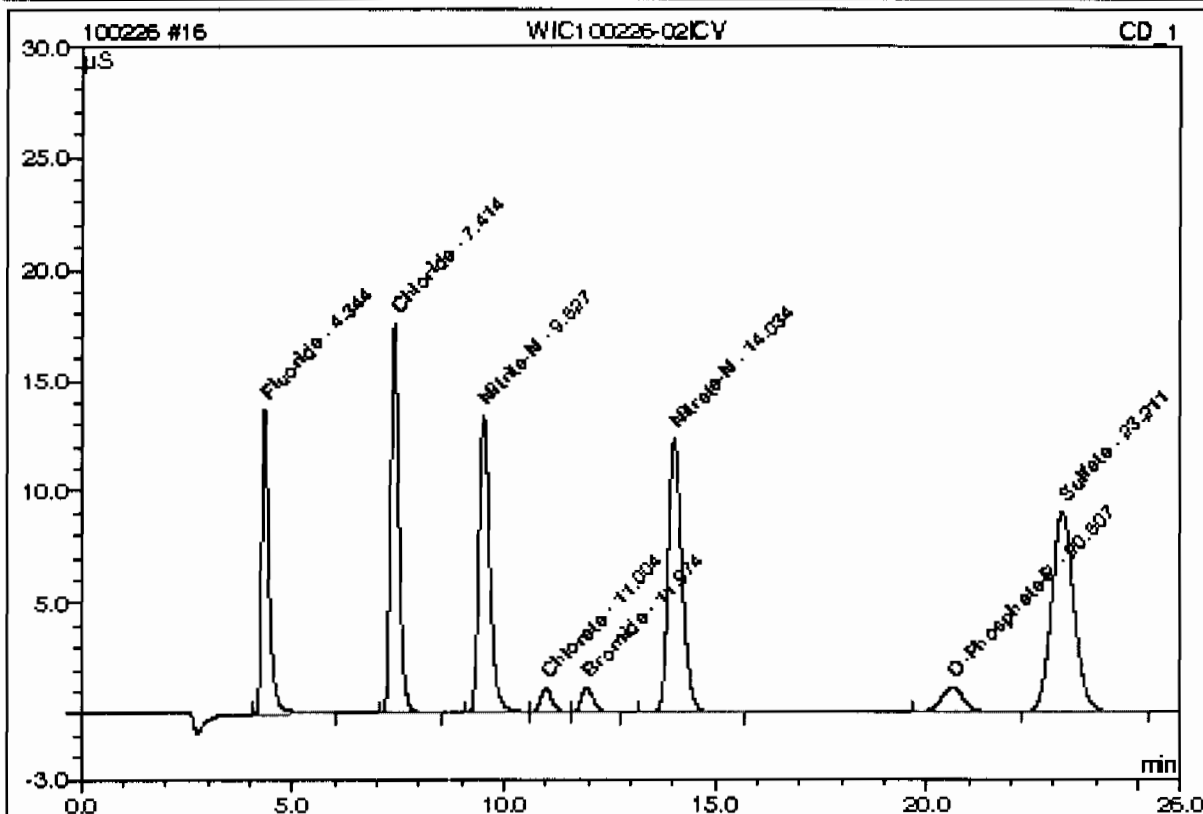
No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area μS*min	Rel. Area %
n.a.	n.a.	Fluoride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	0.0000	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

This is runlog for Sequence 100226.seq for IC6

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
BLK	02/26/10 13:14		1	100226	MAR1
BLK	02/26/10 13:42		1	100226	MAR1
ICAL-07	02/26/10 14:11		1	100226	MAR1
ICAL-06	02/26/10 14:40		1	100226	MAR1
ICAL-05	02/26/10 15:09		1	100226	MAR1
ICAL-04	02/26/10 15:38		1	100226	MAR1
ICAL-03	02/26/10 16:07		1	100226	MAR1
ICAL-02	02/26/10 16:36		1	100226	MAR1
ICAL-01	02/26/10 17:04		1	100226	MAR1
ICV	02/26/10 17:33		1	100226	MAR1
ICB	02/26/10 18:02		1	100226	MAR1
1202055176	02/26/10 18:31	958323	1	100226	MAR1
1202055181	02/26/10 18:59	958323	1	100226	MAR1
248133001	02/26/10 19:28	958323	1	100226	MAR1
1202055177	02/26/10 19:57	958323	1	100226	MAR1
1202055179	02/26/10 20:26	958323	1	100226	MAR1
248133002	02/26/10 20:55	958323	1	100226	MAR1
248133003	02/26/10 21:24	958323	1	100226	MAR1
248133005	02/26/10 21:53	958323	1	100226	MAR1
248133006	02/26/10 22:22	958323	1	100226	MAR1
248133007	02/26/10 22:50	958323	1	100226	MAR1
CVH	02/26/10 23:19		1	100226	MAR1
CCB	02/26/10 23:48		1	100226	MAR1

16 WIC100226-02ICV

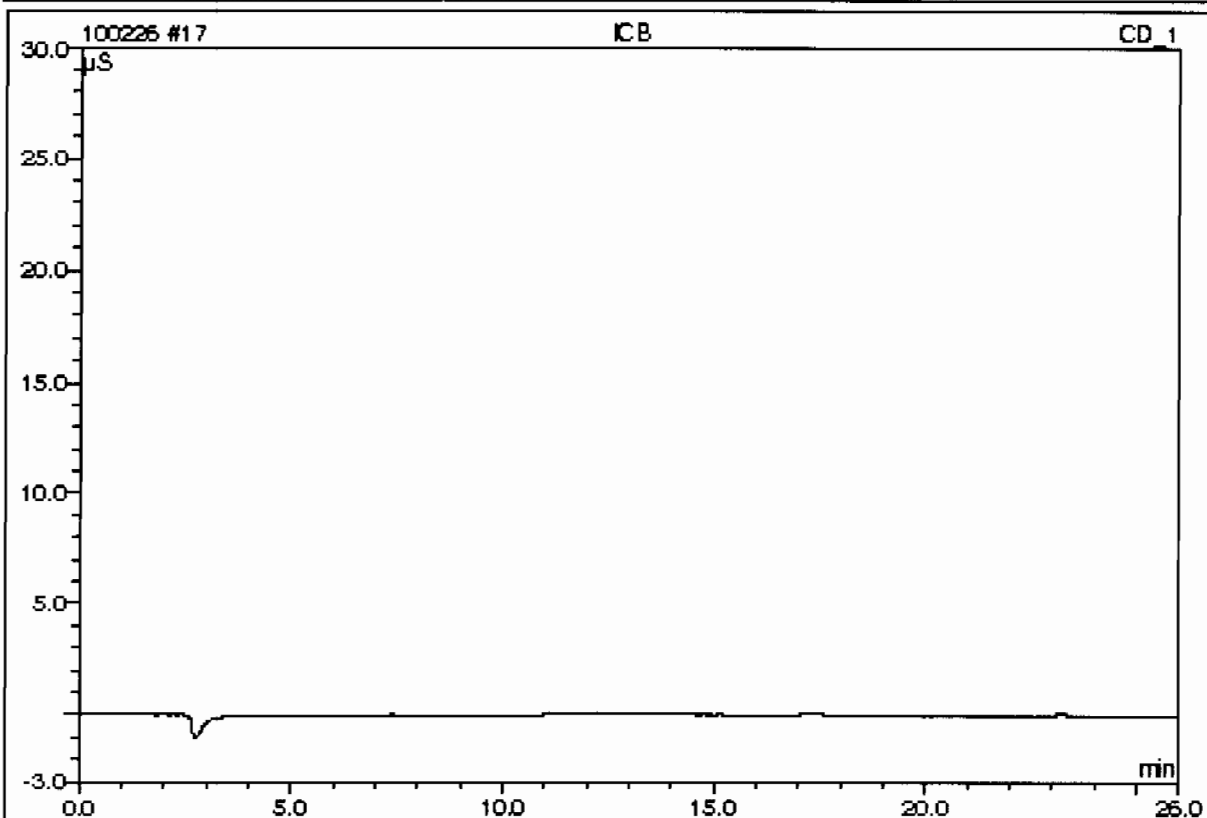
Sample Name:	WIC100226-02ICV	Injection Volume:	1.0
Vial Number:	10	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	2/26/2010 17:33	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCED86;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.34	Fluoride	n.a.	4.8533		2.76044	12.27
2	7.41	Chloride	n.a.	9.4181		3.96602	17.63
3	9.53	Nitrite-N	n.a.	4.8245		3.99229	17.75
4	11.00	Chlorate	n.a.	2.4815		0.35771	1.59
5	11.97	Bromide	n.a.	2.4889		0.38276	1.70
6	14.03	Nitrate-N	n.a.	4.7766		4.74087	21.07
7	20.61	O-Phosphate-P	n.a.	2.7182		0.73321	3.26
8	23.21	Sulfate	n.a.	19.0842		5.56215	24.73
Total:				50.6453	0.000	22.495	100.00

17 ICB

Sample Name:	ICB	Injection Volume:	1.0
Vial Number:	11	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	2/26/2010 18:02	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCE086;300;9056



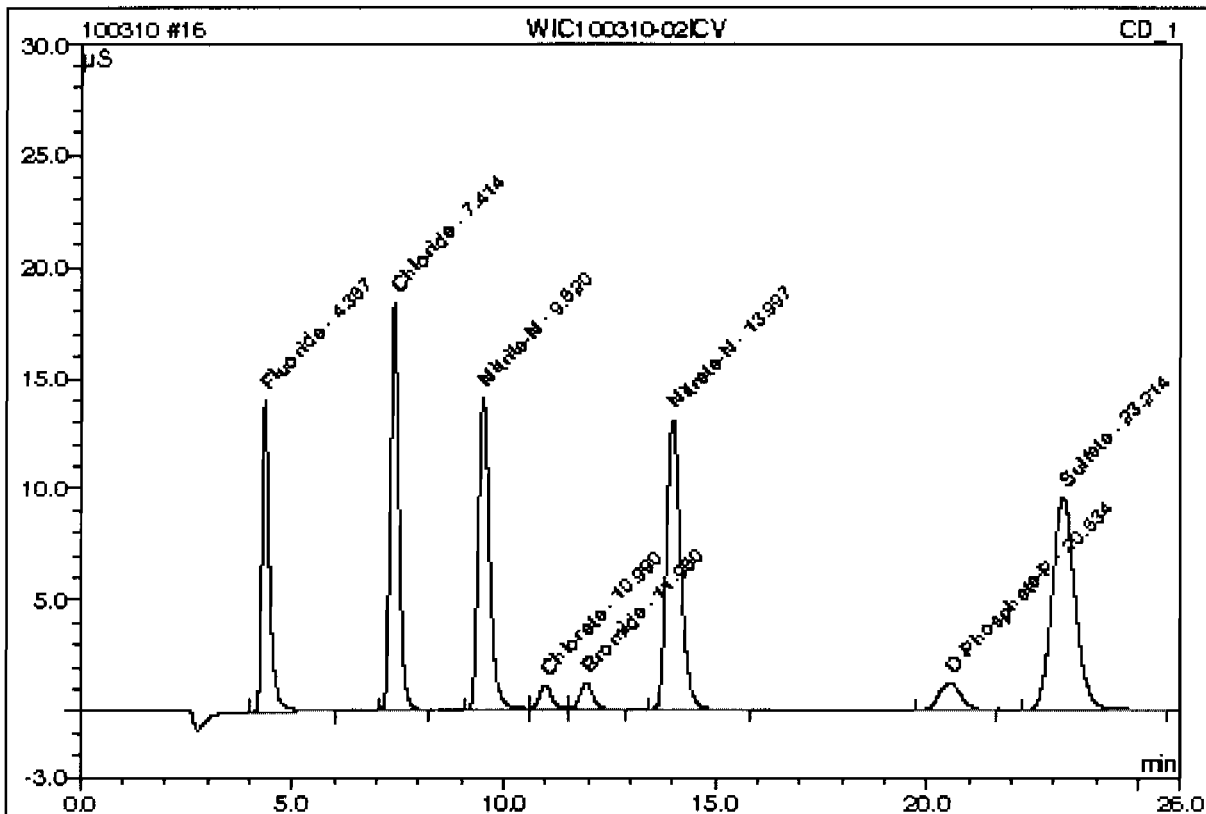
No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

This is runlog for Sequence 100310.seq for IC6

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
BLK	03/10/10 10:40		1	100310	MAR1
BLK	03/10/10 11:08		1	100310	MAR1
ICV	03/10/10 11:37		1	100310	MAR1
ICB	03/10/10 12:06		1	100310	MAR1
1202054065	03/10/10 12:35	957881	1	100310	GXM3
1202054072	03/10/10 13:04	957881	1	100310	GXM3
247546004	03/10/10 13:33	957881	1	100310	GXM3
1202054066	03/10/10 14:02	957881	1	100310	GXM3
1202054068	03/10/10 14:31	957881	1	100310	GXM3
1202054070	03/10/10 15:00	957881	1	100310	GXM3
247551001	03/10/10 15:29	957881	1	100310	MAR1
247551002	03/10/10 15:57	957881	1	100310	MAR1
247790002	03/10/10 16:26	957881	1	100310	MAR1
247790003	03/10/10 16:55	957881	1	100310	MAR1
CVH	03/10/10 17:24		1	100310	MAR1
CCB	03/10/10 17:53		1	100310	MAR1
247794001	03/10/10 18:22	957881	1	100310	MAR1
247794002	03/10/10 18:51	957881	1	100310	MAR1
247794003	03/10/10 19:20	957881	1	100310	MAR1
247794004	03/10/10 19:49	957881	1	100310	MAR1
247794005	03/10/10 20:18	957881	1	100310	MAR1
247822001	03/10/10 20:46	957881	1	100310	MAR1
247822002	03/10/10 21:15	957881	1	100310	MAR1
247822003	03/10/10 21:44	957881	1	100310	MAR1
247822004	03/10/10 22:13	957881	1	100310	MAR1
247822005	03/10/10 22:42	957881	1	100310	MAR1
CCV	03/10/10 23:11		1	100310	MAR1
CCB	03/10/10 23:40		1	100310	MAR1

16 WIC100310-02ICV

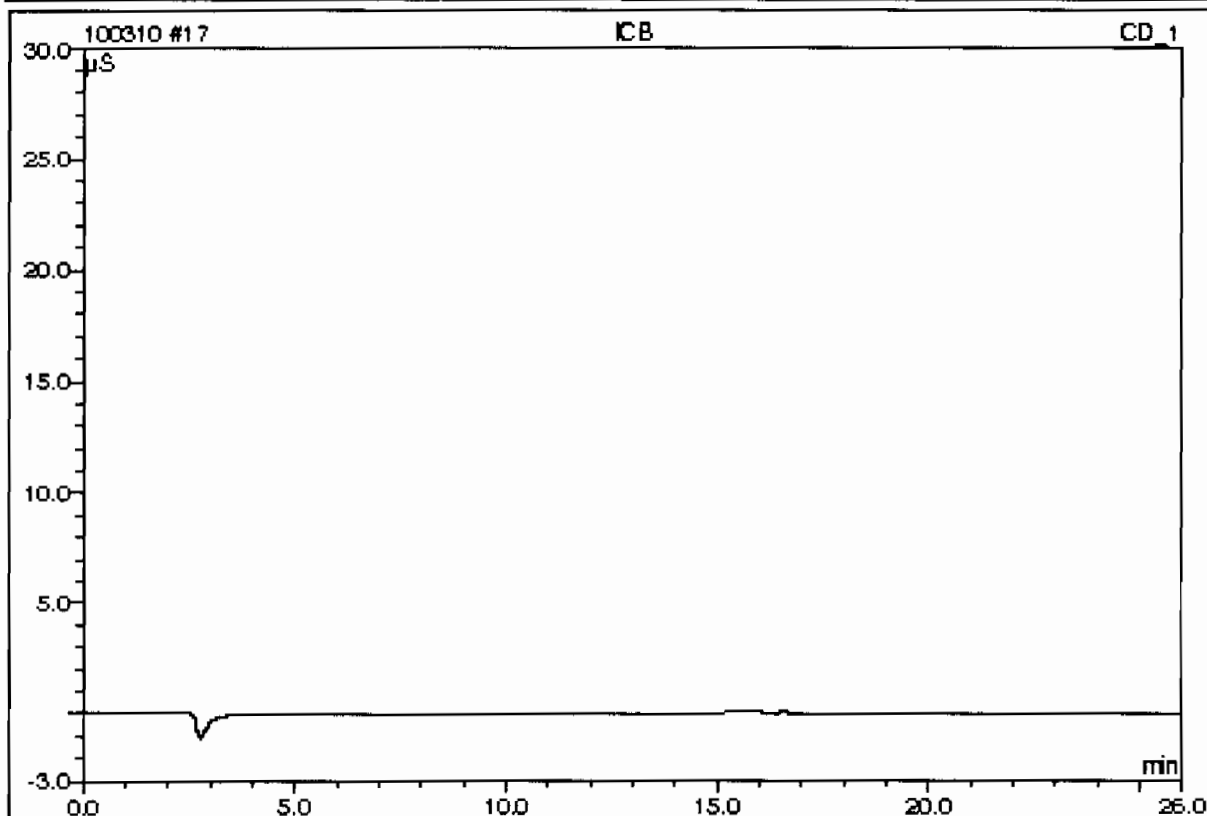
Sample Name:	WIC100310-02ICV	Injection Volume:	1.0
Vial Number:	3	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	3/10/2010 11:37	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCE086,300,0056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.36	Fluoride	n.a.	5.2152		2.96892	12.18
2	7.41	Chloride	n.a.	10.1363		4.27442	17.53
3	9.52	Nitrite-N	n.a.	5.1895		4.29844	17.63
4	10.99	Chlorate	n.a.	2.6073		0.37617	1.54
5	11.95	Bromide	n.a.	2.8530		0.43891	1.80
6	14.00	Nitrate-N	n.a.	5.1832		5.15223	21.13
7	20.53	O-Phosphate-P	n.a.	2.8401		0.76797	3.15
8	23.21	Sulfate	n.a.	20.9195		6.10515	25.04
Total:				54.9442	0.000	24.382	100.00

17 ICB

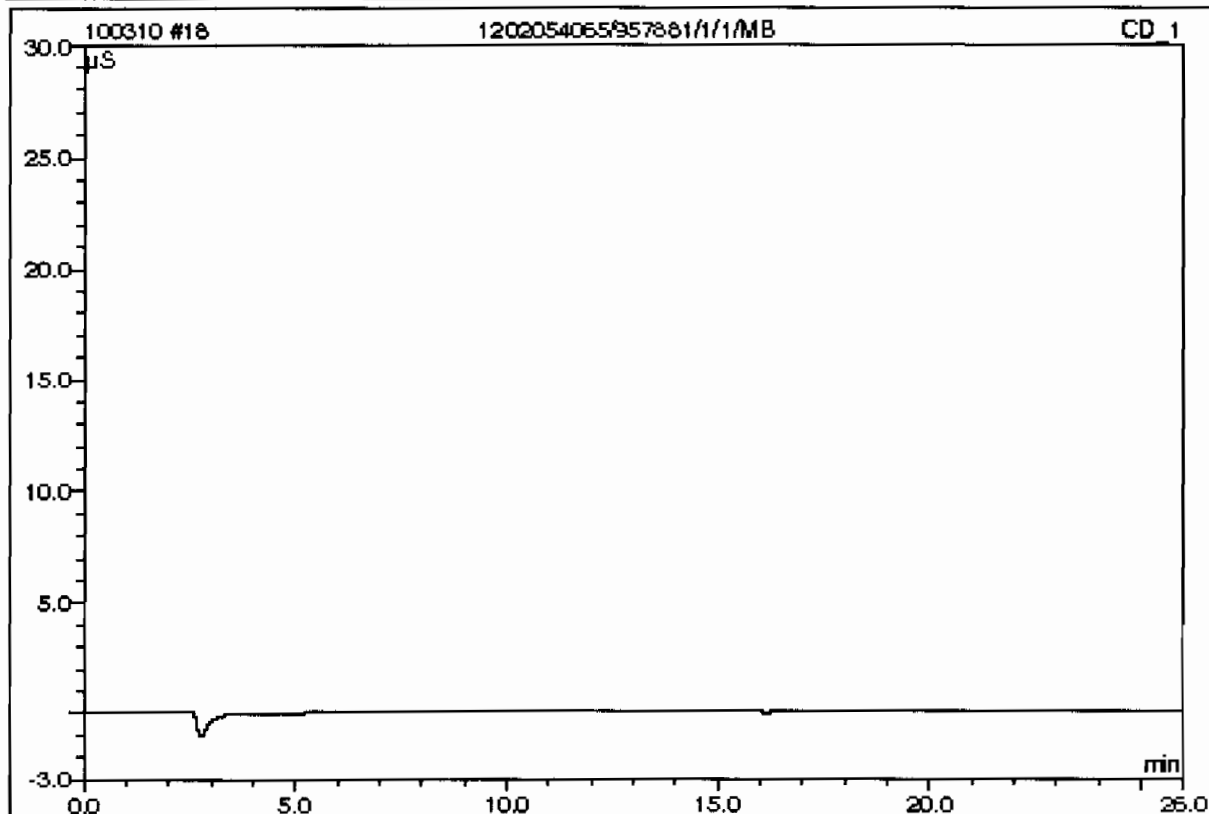
Sample Name:	ICB	Injection Volume:	1.0
Vial Number:	4	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	3/10/2010 12:06	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCE086;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

18 1202054065/957881/1/1/MB

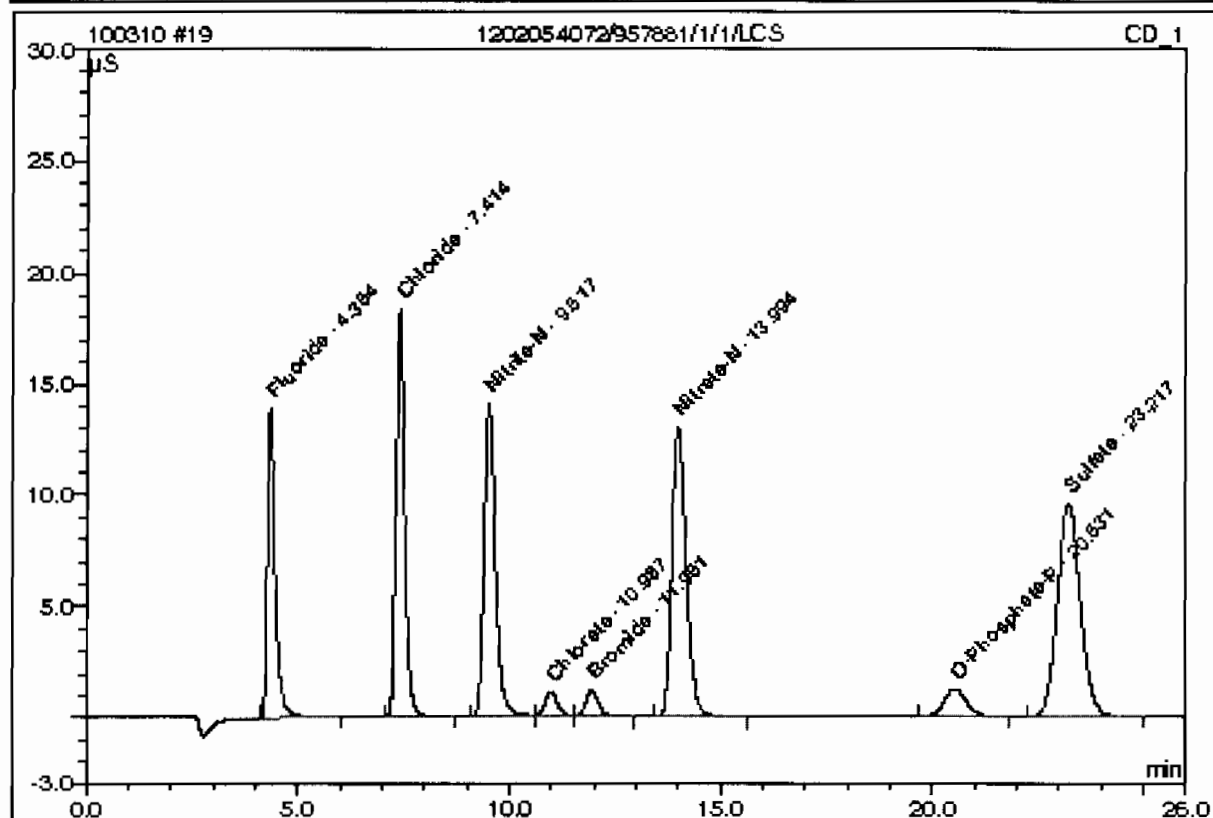
Sample Name:	1202054065/957881/1/1/MB	Injection Volume:	1.0
Vial Number:	5	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	3/10/2010 12:35	Analyst:	GXM3
Run Time (min):	26.00	Column:	AS23-001528; GL GC E086;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

19 1202054072/957881/1/1/LCS

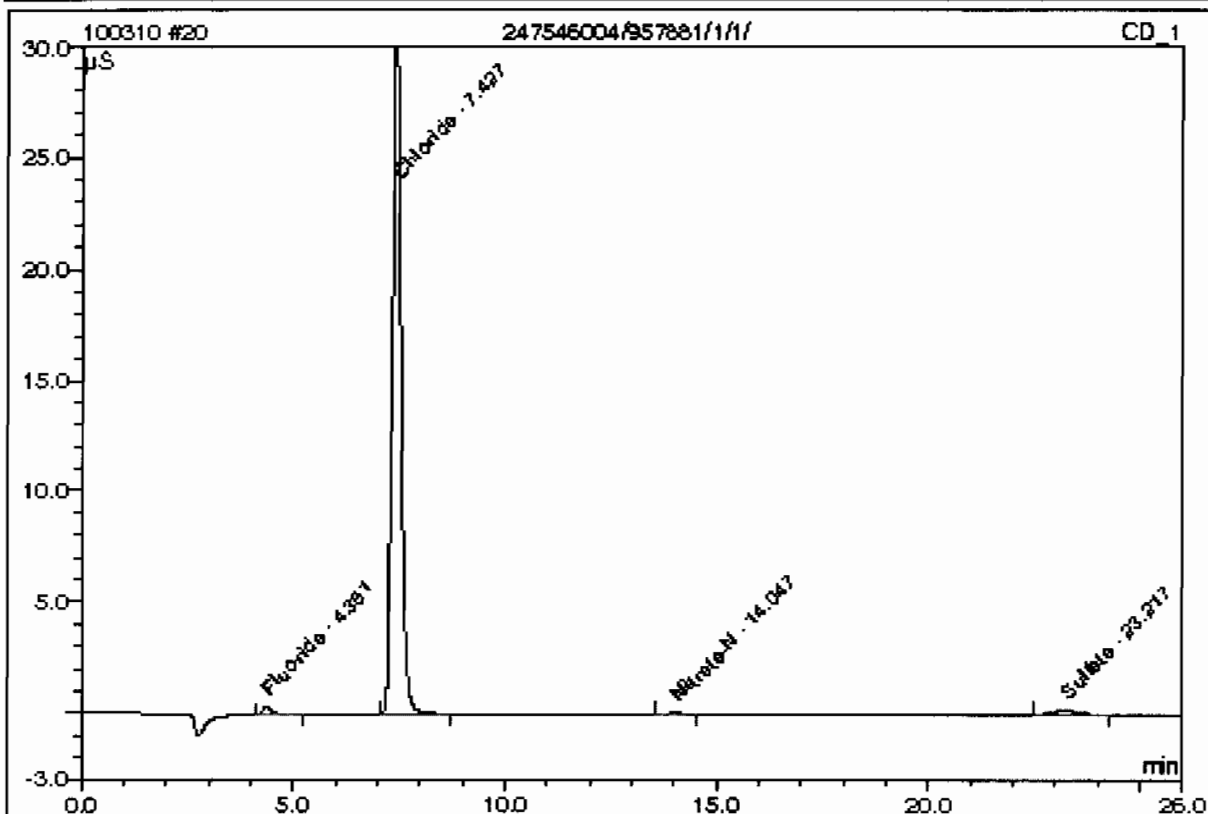
Sample Name:	1202054072/957881/1/1/LCS	Injection Volume:	1.0
Vial Number:	6	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	3/10/2010 13:04	Analyst:	GXM3
Run Time (min):	26.00	Column:	AS23-001528; GL GC E086;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area μS*min	Rel. Area %
1	4.35	Fluoride	n.a.	5.1956		2.95761	12.15
2	7.41	Chloride	n.a.	10.2070		4.30476	17.68
3	9.52	Nitrate-N	n.a.	5.2151		4.31991	17.74
4	10.99	Chlorate	n.a.	2.6718		0.38565	1.58
5	11.95	Bromide	n.a.	2.7158		0.41774	1.72
6	13.99	Nitrate-N	n.a.	5.1788		5.14778	21.14
7	20.53	O-Phosphate-P	n.a.	2.8617		0.77413	3.18
8	23.22	Sulfate	n.a.	20.6913		6.03764	24.80
Total:				54.7372	0.000	24.345	100.00

20 247546004/957881/1/1/

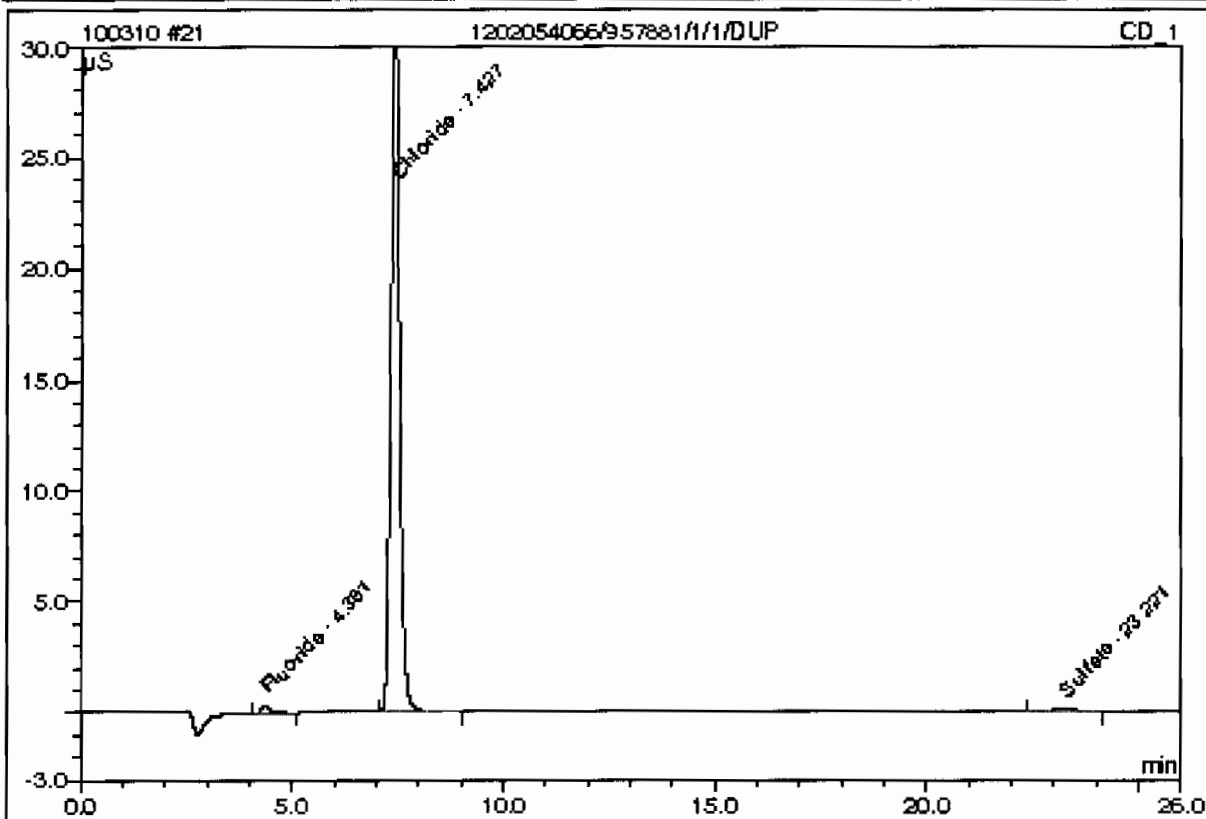
Sample Name:	247546004/957881/1/1/	Injection Volume:	1.0
Vial Number:	7	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	3/10/2010 13:33	Analyst:	GXM3
Run Time (min):	26.00	Column:	AS23-001528; GL GCED86;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.36	Fluoride	n.a.	0.2159		0.08916	1.16
2	7.43	Chloride	n.a.	17.6481		7.50014	97.19
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
3	14.05	Nitrate-N	n.a.	0.1051		0.01505	0.19
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
4	23.22	Sulfate	n.a.	0.6646		0.11264	1.46
Total:				18.6337	0.000	7.717	100.00

21 1202054066/957881/1/1/DUP

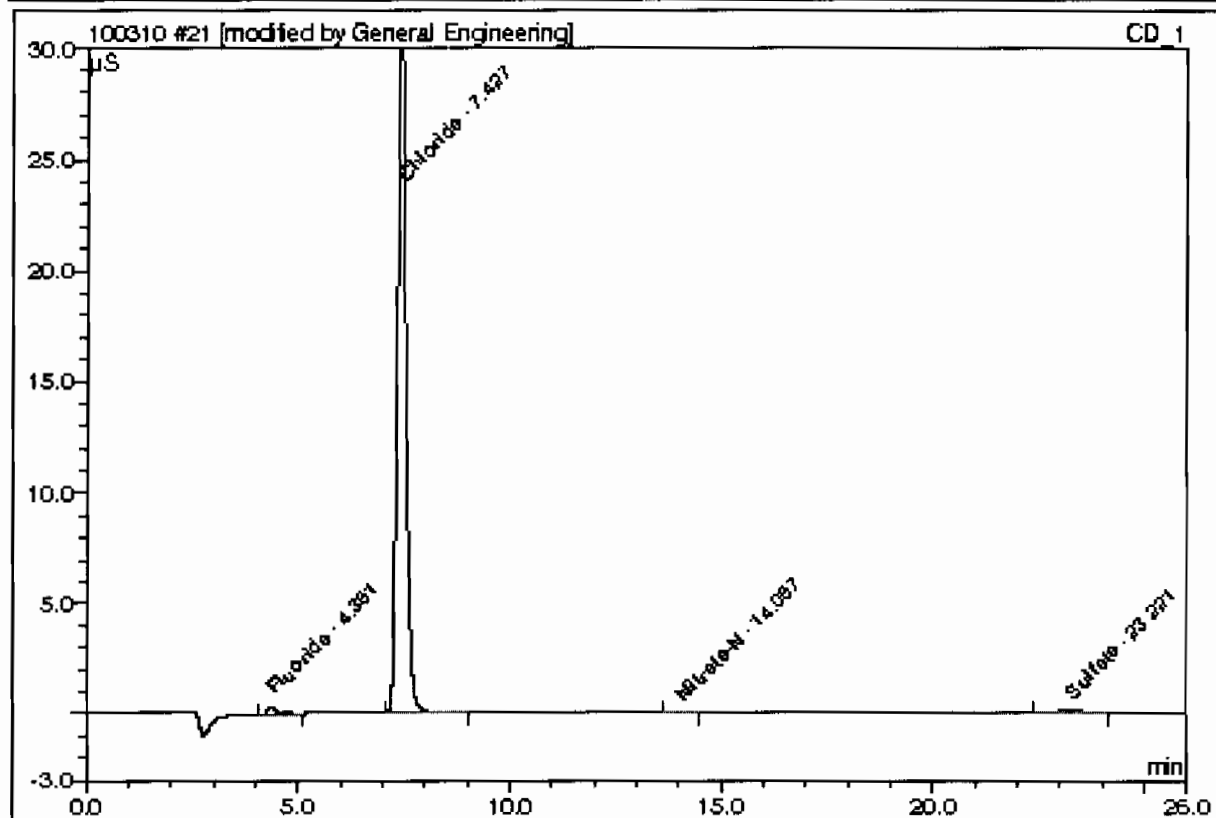
Sample Name:	1202054066/957881/1/1/DUP	Injection Volume:	1.0
Vial Number:	8	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	3/10/2010 14:02	Analyst:	GXM3
Run Time (min):	28.00	Column:	AS23-001528; GL GC E088;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.36	Fluoride	n.a.	0.2135		0.08773	1.12
2	7.43	Chloride	n.a.	17.9332		7.62259	97.47
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
3	23.22	Sulfate	n.a.	0.6567		0.11029	1.41
Total:				18.8034	0.000	7.821	100.00

21 1202054066/957881/1/1/DUP

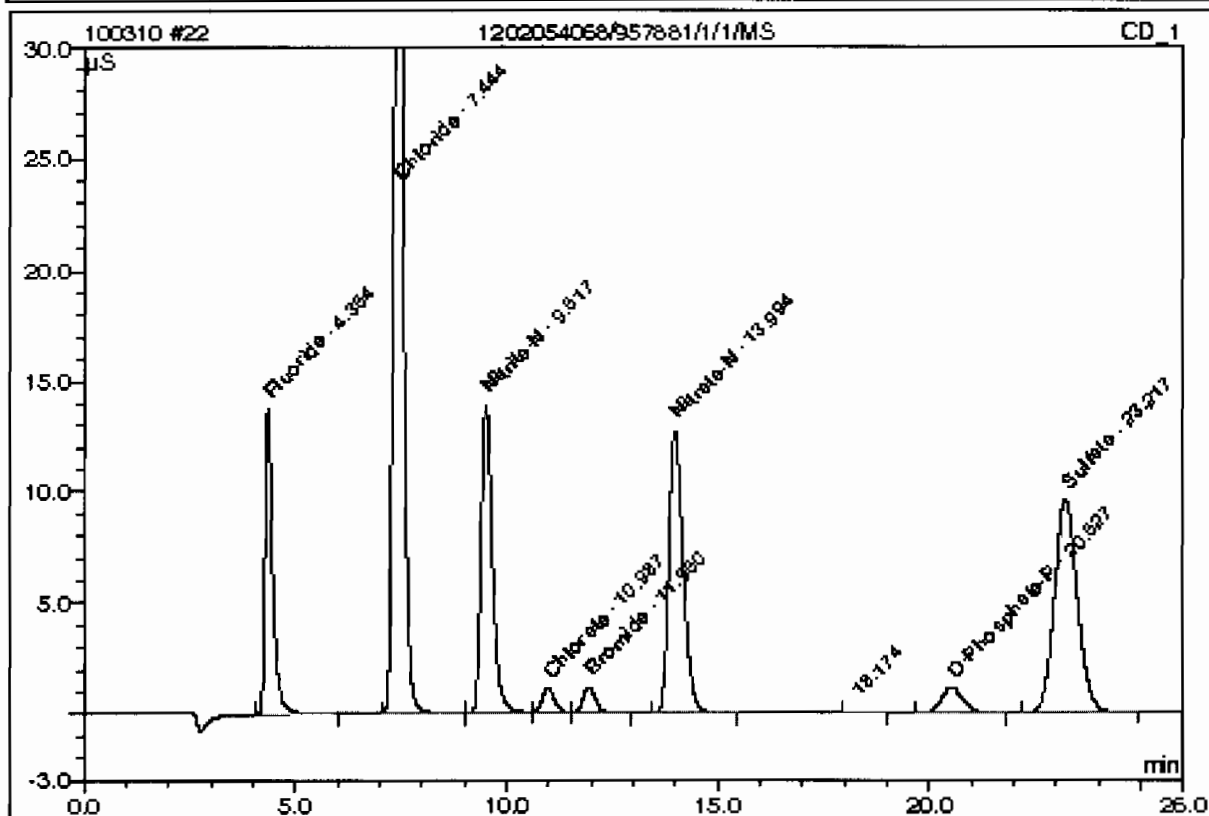
Sample Name:	1202054066/957881/1/1/DUP	Injection Volume:	1.0
Vial Number:	8	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	3/10/2010 14:02	Analyst:	GXM3
Run Time (min):	26.00	Column:	AS23-001528; GL GC ED86;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.36	Fluoride	n.a.	0.2135		0.08773	1.12
2	7.43	Chloride	n.a.	17.9332		7.62259	97.30
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
3	14.06	Nitrate-N	n.a.	0.1035		0.01341	0.17
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
4	23.22	Sulfate	n.a.	0.6567		0.11029	1.41
Total:				18.9069	0.000	7.834	100.00

22 1202054068/957881/1/1/MS

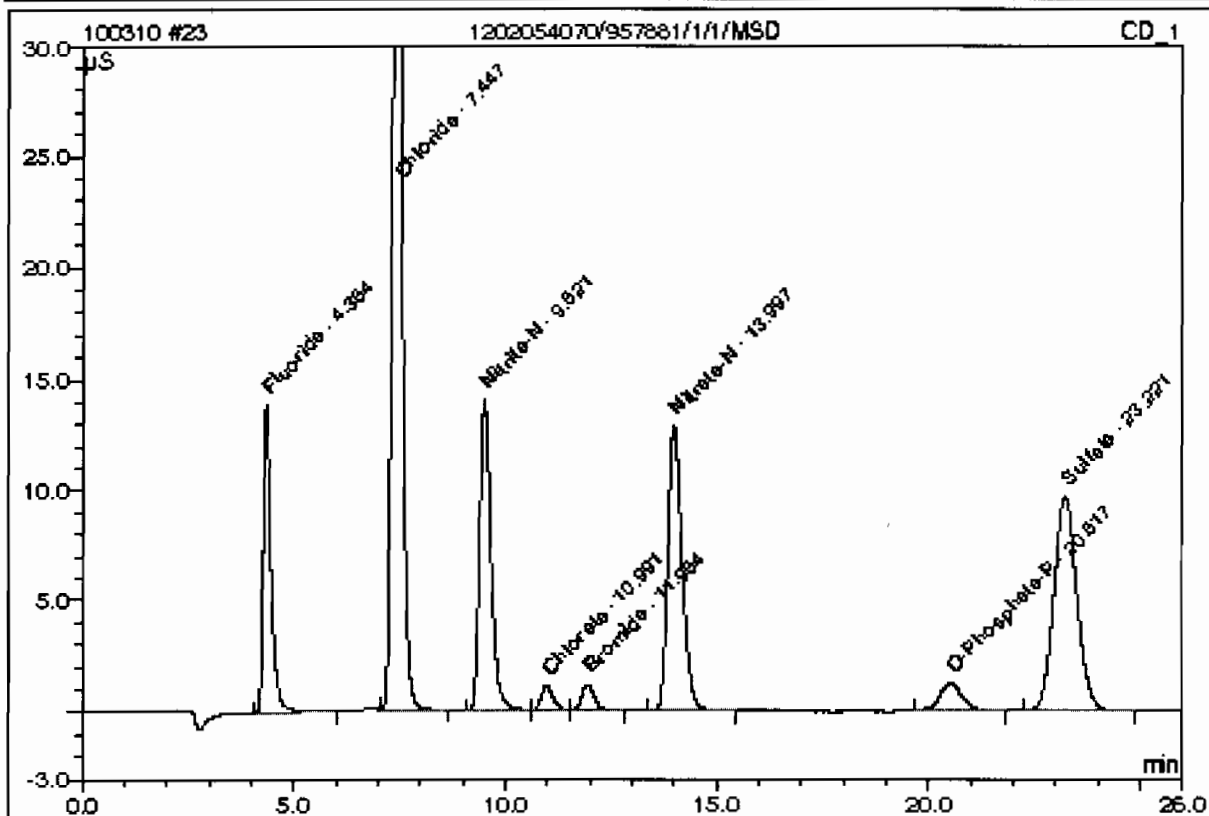
Sample Name:	1202054068/957881/1/1/MS	Injection Volume:	1.0
Vial Number:	9	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	3/10/2010 14:31	Analyst:	GXM3
Run Time (min):	26.00	Column:	AS23-001528; GL GCED86;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area μS*min	Rel. Area %
1	4.35	Fluoride	n.a.	5.2028		2.96177	9.06
2	7.44	Chloride	n.a.	30.1685		12.87667	39.38
3	9.52	Nitrate-N	n.a.	5.1519		4.26687	13.05
4	10.99	Chlorate	n.a.	2.6707		0.38548	1.18
5	11.95	Bromide	n.a.	2.6694		0.41060	1.26
6	13.99	Nitrate-N	n.a.	5.0508		5.01825	15.35
8	20.53	O-Phosphate-P	n.a.	2.6336		0.70910	2.17
9	23.22	Sulfate	n.a.	20.7415		6.05247	18.51
Total:				74.2891	0.000	32.681	99.95

23 1202054070/957881/1/1/MSD

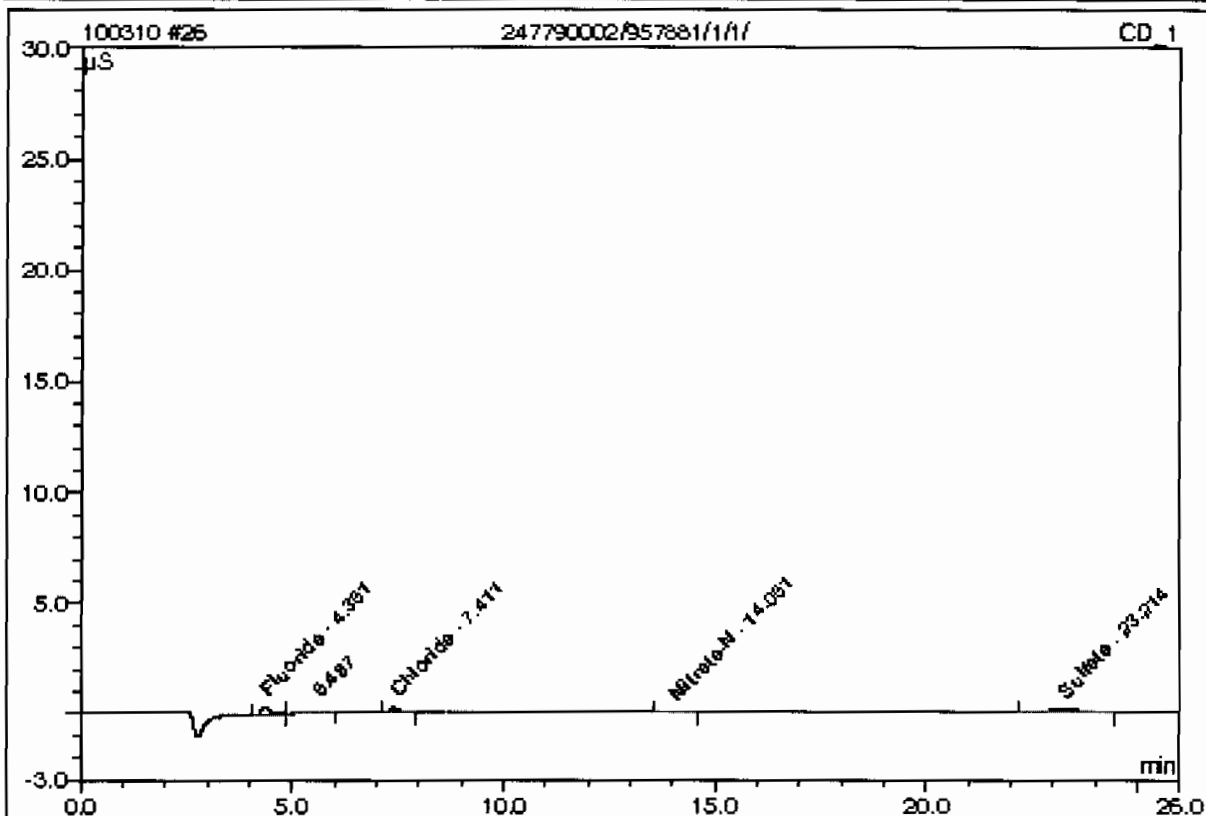
Sample Name:	1202054070/957881/1/1/MSD	Injection Volume:	1.0
Vial Number:	10	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	3/10/2010 15:00	Analyst:	GXM3
Run Time (min):	26.00	Column:	AS23-001528; GL GCE086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.35	Fluoride	n.a.	5.2608		2.99521	9.05
2	7.45	Chloride	n.a.	30.5554		13.04285	39.41
3	9.52	Nitrate-N	n.a.	5.1947		4.30275	13.00
4	10.99	Chlorate	n.a.	2.6083		0.37632	1.14
5	11.95	Bromide	n.a.	2.6340		0.40514	1.22
6	14.00	Nitrate-N	n.a.	5.1217		5.09001	15.38
7	20.52	O-Phosphate-P	n.a.	2.8533		0.77173	2.33
8	23.22	Sulfate	n.a.	20.9331		6.10915	18.46
Total:				75.1614	0.000	33.093	100.00

26 247790002/957881/1/1/

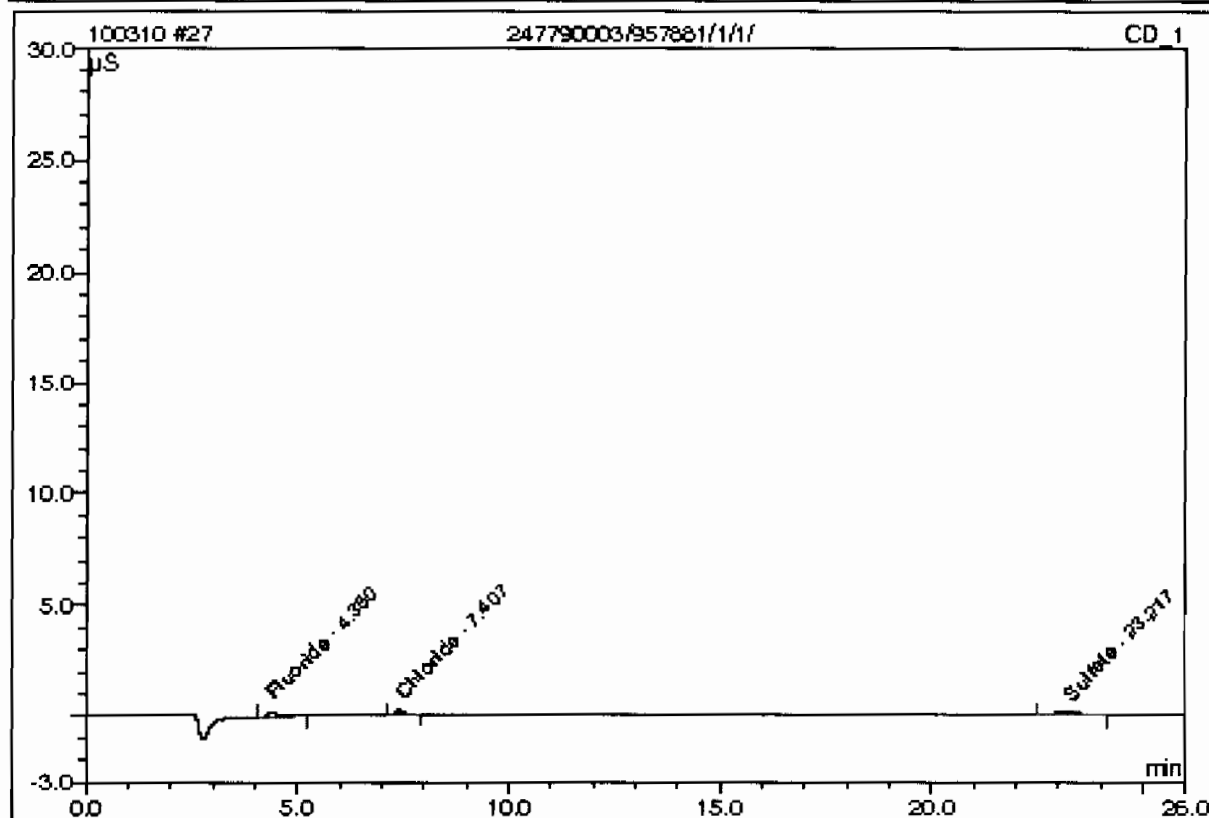
Sample Name:	247790002/957881/1/1/	Injection Volume:	1.0
Vial Number:	13	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	3/10/2010 16:26	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GC E086;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area uS*min	Rel. Area %
1	4.36	Fluoride	n.a.	0.2022		0.08125	24.04
3	7.41	Chloride	n.a.	0.3172		0.05789	17.13
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
4	14.05	Nitrate-N	n.a.	0.1193		0.02941	8.70
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
5	23.21	Sulfate	n.a.	0.7950		0.15122	44.75
Total:				1.4338	0.000	0.320	94.63

27 247790003/957881/1/1/

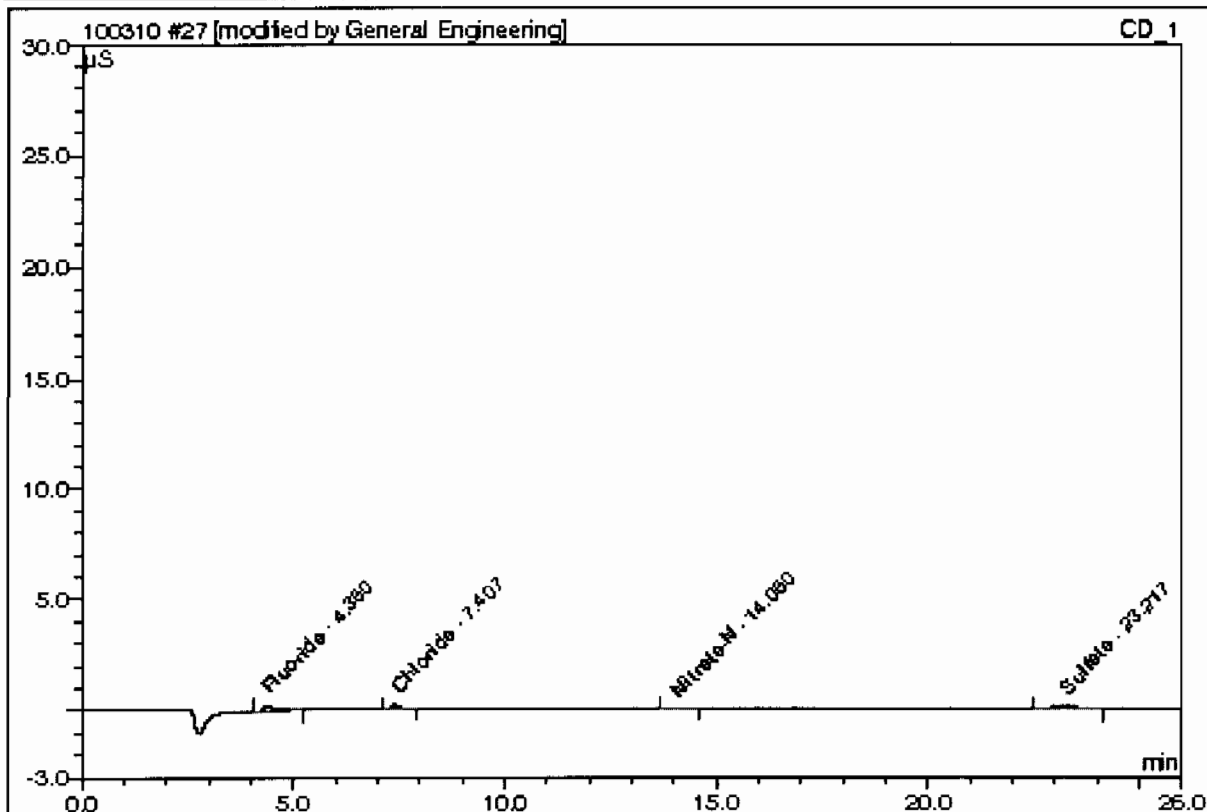
Sample Name:	247790003/957881/1/1/	Injection Volume:	1.0
Vial Number:	14	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	3/10/2010 16:55	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCE086;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.36	Fluoride	n.a.	0.1673		0.06116	27.51
2	7.41	Chloride	n.a.	0.3072		0.05359	24.11
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
3	23.22	Sulfate	n.a.	0.6475		0.10756	48.38
Total:				1.1220	0.000	0.222	100.00

27 247790003/957881/1/1/

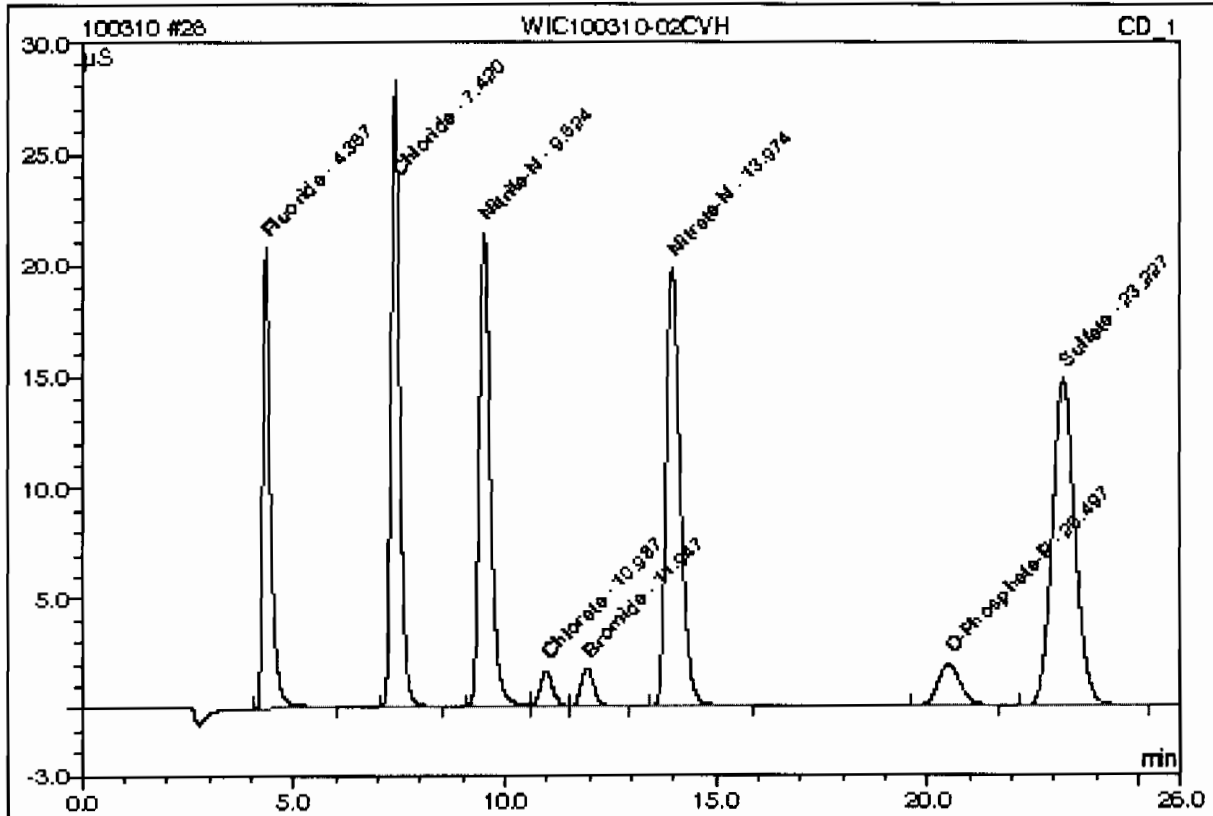
Sample Name:	247790003/957881/1/1/	Injection Volume:	1.0
Vial Number:	14	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	3/10/2010 16:55	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GC E086;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.36	Fluoride	n.a.	0.1673		0.06116	26.15
2	7.41	Chloride	n.a.	0.3072		0.05359	22.91
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
3	14.05	Nitrate-N	n.a.	0.1017		0.01160	4.96
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
4	23.22	Sulfate	n.a.	0.6475		0.10756	45.98
Total:				1.2237	0.000	0.234	100.00

28 WIC100310-02CVH

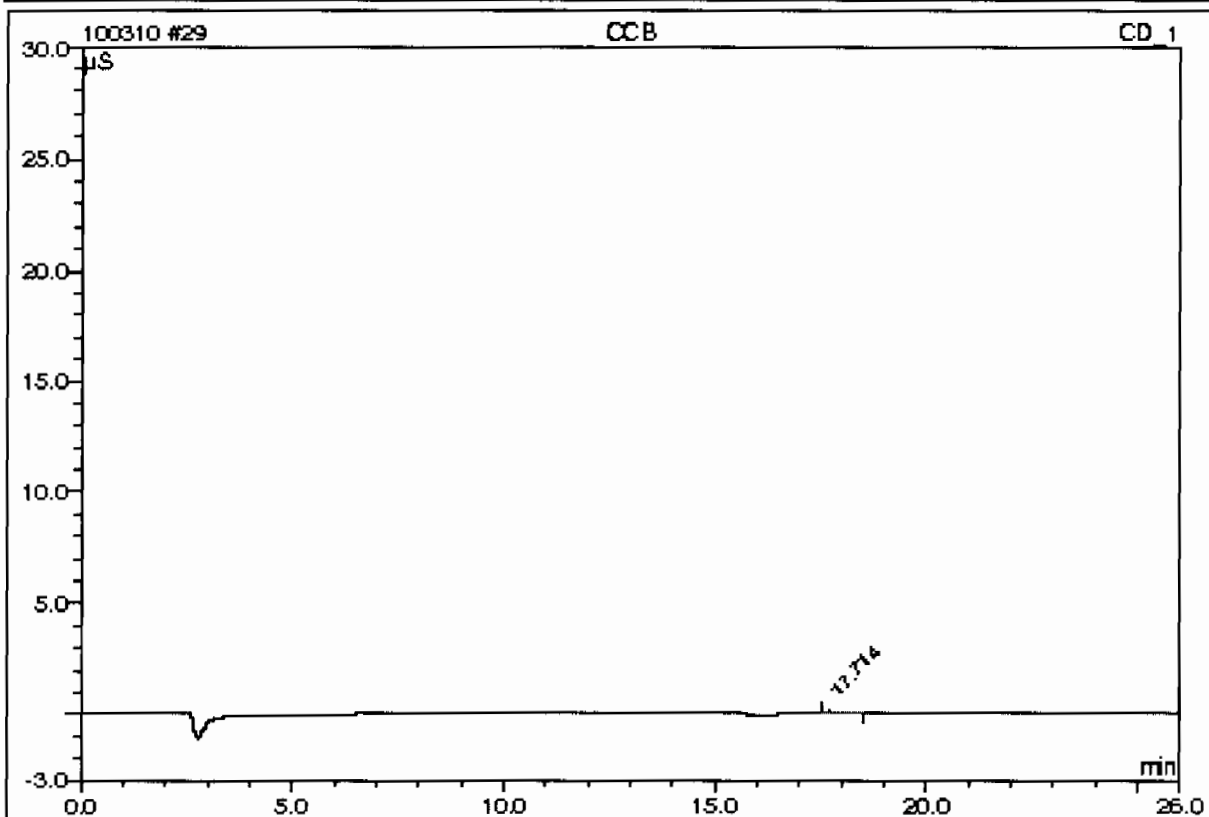
Sample Name:	WIC100310-02CVH	Injection Volume:	1.0
Vial Number:	15	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	3/10/2010 17:24	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCED86;300;8056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.36	Fluoride	n.a.	7.7556		4.43230	12.00
2	7.42	Chloride	n.a.	15.5459		6.59740	17.86
3	9.52	Nitrite-N	n.a.	7.8454		6.52566	17.66
4	10.99	Chlorate	n.a.	3.8324		0.55605	1.51
5	11.95	Bromide	n.a.	3.9159		0.60282	1.63
6	13.97	Nitrate-N	n.a.	7.8416		7.84154	21.23
7	20.50	O-Phosphate-P	n.a.	4.2024		1.15629	3.13
8	23.23	Sulfate	n.a.	31.4879		9.23186	24.99
Total:				82.4270	0.000	36.944	100.00

29 CCB

Sample Name:	CCB	Injection Volume:	1.0
Vial Number:	16	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	3/10/2010 17:53	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCE086;300;9058



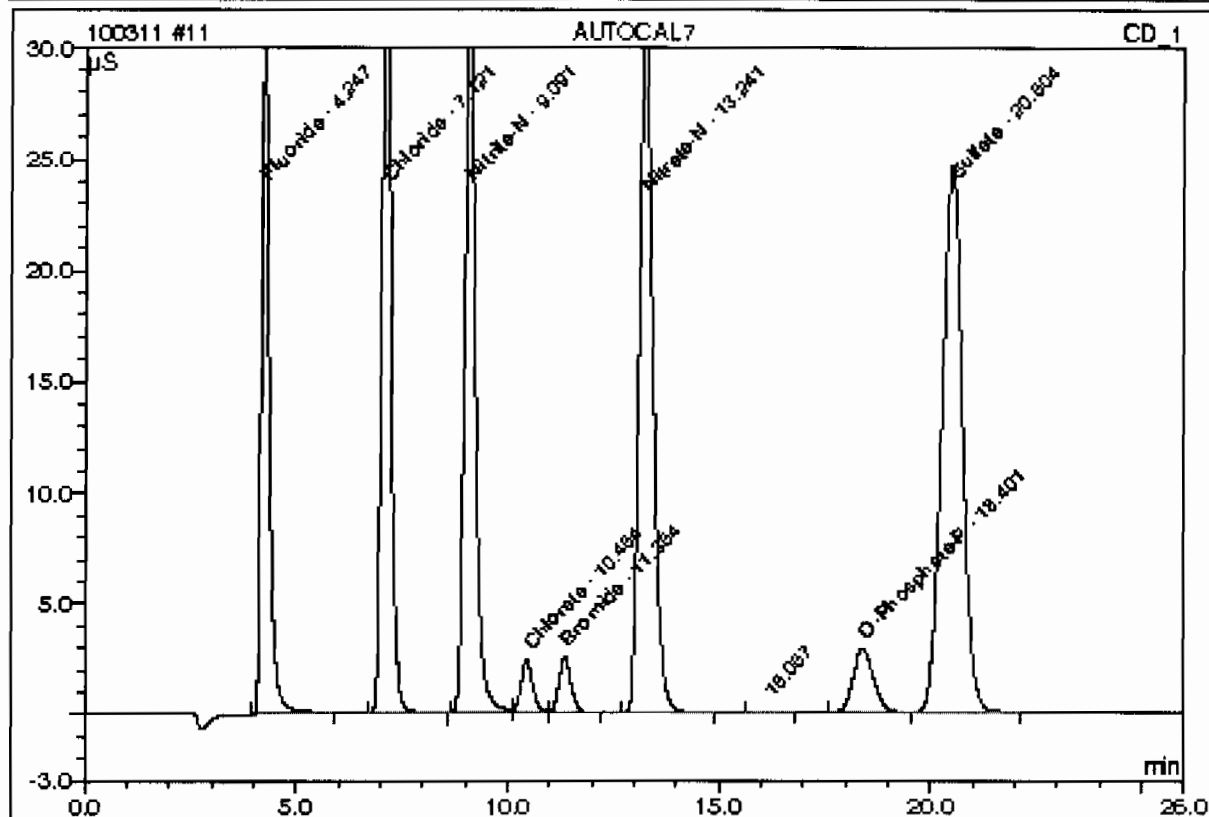
No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

This is runlog for Sequence 100311.seq for IC6

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
BLK	03/11/10 09:28		1	100311	MAR1
BLK	03/11/10 10:25		1	100311	MAR1
BLK	03/11/10 10:54		1	100311	MAR1
ICAL-07	03/11/10 11:23		1	100311	MAR1
ICAL-06	03/11/10 11:52		1	100311	MAR1
ICAL-05	03/11/10 12:21		1	100311	MAR1
ICAL-04	03/11/10 12:49		1	100311	MAR1
ICAL-03	03/11/10 13:18		1	100311	MAR1
ICAL-02	03/11/10 15:10		1	100311	MAR1
ICAL-01	03/11/10 17:37		1	100311	MAR1
ICV	03/11/10 18:06		1	100311	MAR1
ICB	03/11/10 18:35		1	100311	MAR1
247822006	03/11/10 19:04	957881	1	100311	MAR1
1202054067	03/11/10 19:33	957881	1	100311	MAR1
1202054069	03/11/10 20:01	957881	1	100311	MAR1
1202054071	03/11/10 20:30	957881	1	100311	MAR1
CCV	03/11/10 20:59		1	100311	MAR1
CCB	03/11/10 21:28		1	100311	MAR1
LOSALAMOS-1	03/11/10 21:57		1	100311	MAR1
LOSALAMOS-2	03/11/10 22:26		1	100311	MAR1
LOSALAMOS-3	03/11/10 22:55		1	100311	MAR1
LOSALAMOS-4	03/11/10 23:24		1	100311	MAR1
LOSALAMOS-5	03/11/10 23:53		1	100311	MAR1

11 AUTOCAL7

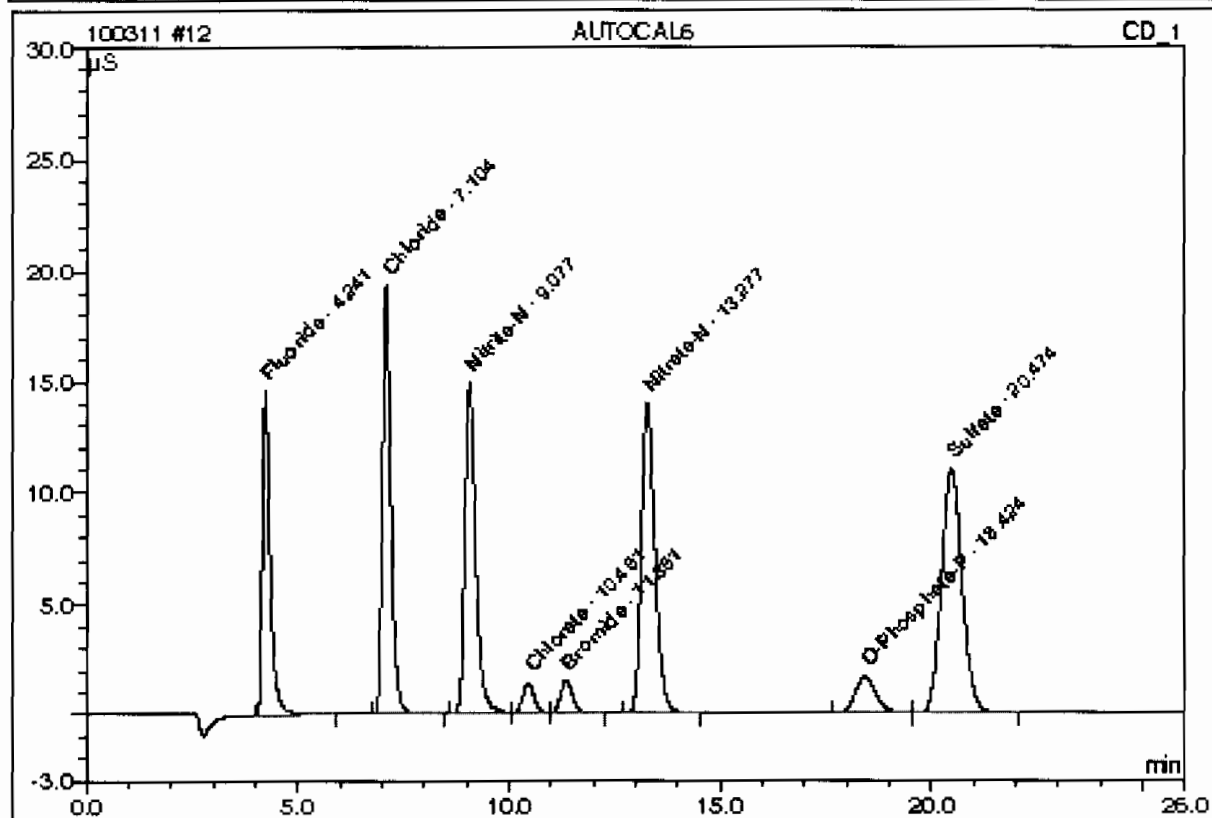
Sample Name:	AUTOCAL7	Injection Volume:	1.0
Vial Number:	5	Channel:	CD_1
Sample Type:	standard	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100311an	Sample Amount:	1.0000
Recording Time:	3/11/2010 11:23	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528;GL GC E086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.25	Fluoride	10.0000	10.0146		6.46105	11.84
2	7.12	Chloride	20.0000	20.0364		9.90618	18.15
3	9.09	Nitrite-N	10.0000	10.0156		9.47937	17.36
4	10.45	Chlorate	5.0000	5.0000		0.79276	1.45
5	11.35	Bromide	5.0000	5.1708		0.84275	1.54
6	13.24	Nitrate-N	10.0000	10.0000		11.71709	21.46
8	18.40	O-Phosphate-P	5.0000	5.0030		1.63876	3.00
9	20.50	Sulfate	40.0000	40.1381		13.73387	25.16
Total:				105.3786	0.000	54.572	99.97

12 AUTOCAL6

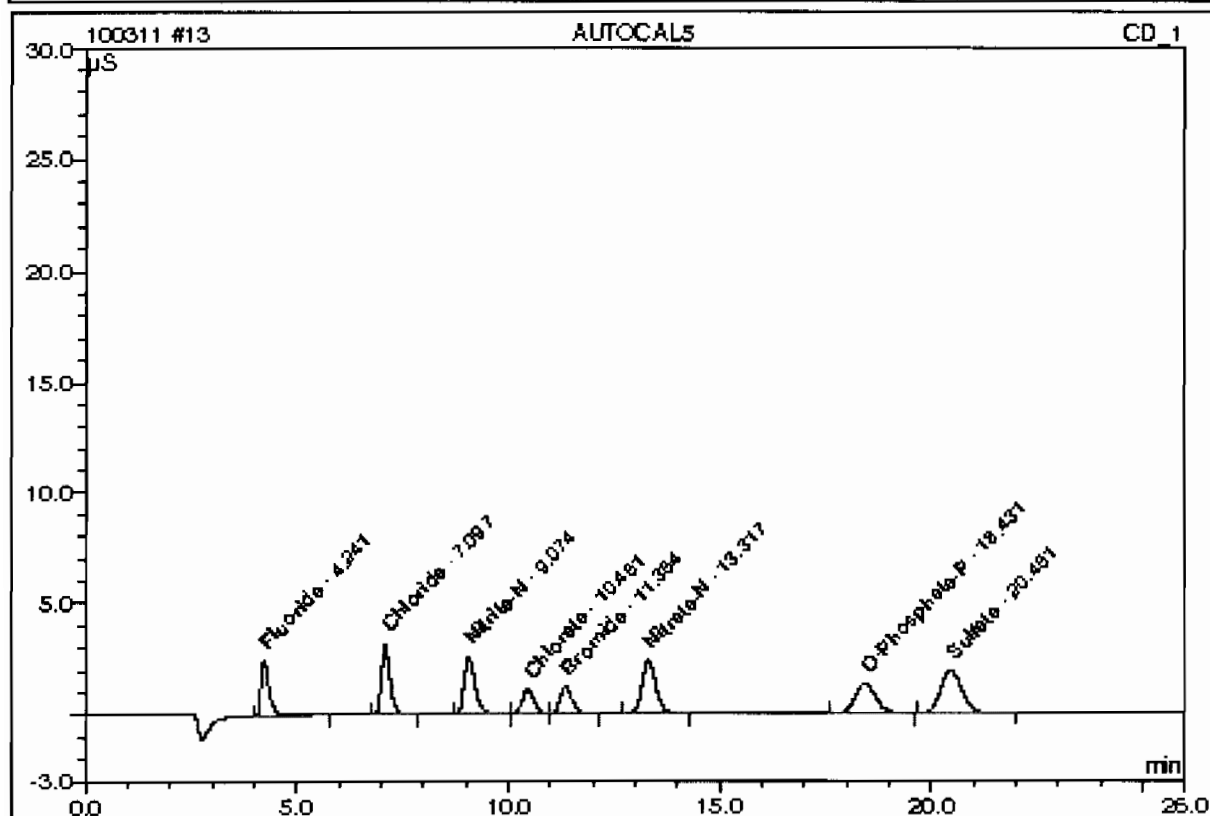
Sample Name:	AUTOCAL6	Injection Volume:	1.0
Vial Number:	6	Channel:	CD_1
Sample Type:	standard	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100311an	Sample Amount:	1.0000
Recording Time:	3/11/2010 11:52	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GC E086;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area $\mu\text{S}^*\text{min}$	Rel. Area %
1	4.24	Fluoride	5.0000	4.7911		3.03900	12.01
2	7.10	Chloride	10.0000	9.1952		4.40744	17.41
3	9.08	Nitrite-N	5.0000	4.7841		4.44578	17.56
4	10.46	Chlorate	3.0000	2.9821		0.47134	1.86
5	11.36	Bromide	3.0000	3.0524		0.50958	2.01
6	13.28	Nitrate-N	5.0000	4.8474		5.23885	20.70
7	18.42	O-Phosphate-P	3.0000	2.9723		0.95993	3.79
8	20.47	Sulfate	20.0000	18.8589		6.24121	24.66
Total:				51.2835	0.000	25.313	100.00

13 AUTOCAL5

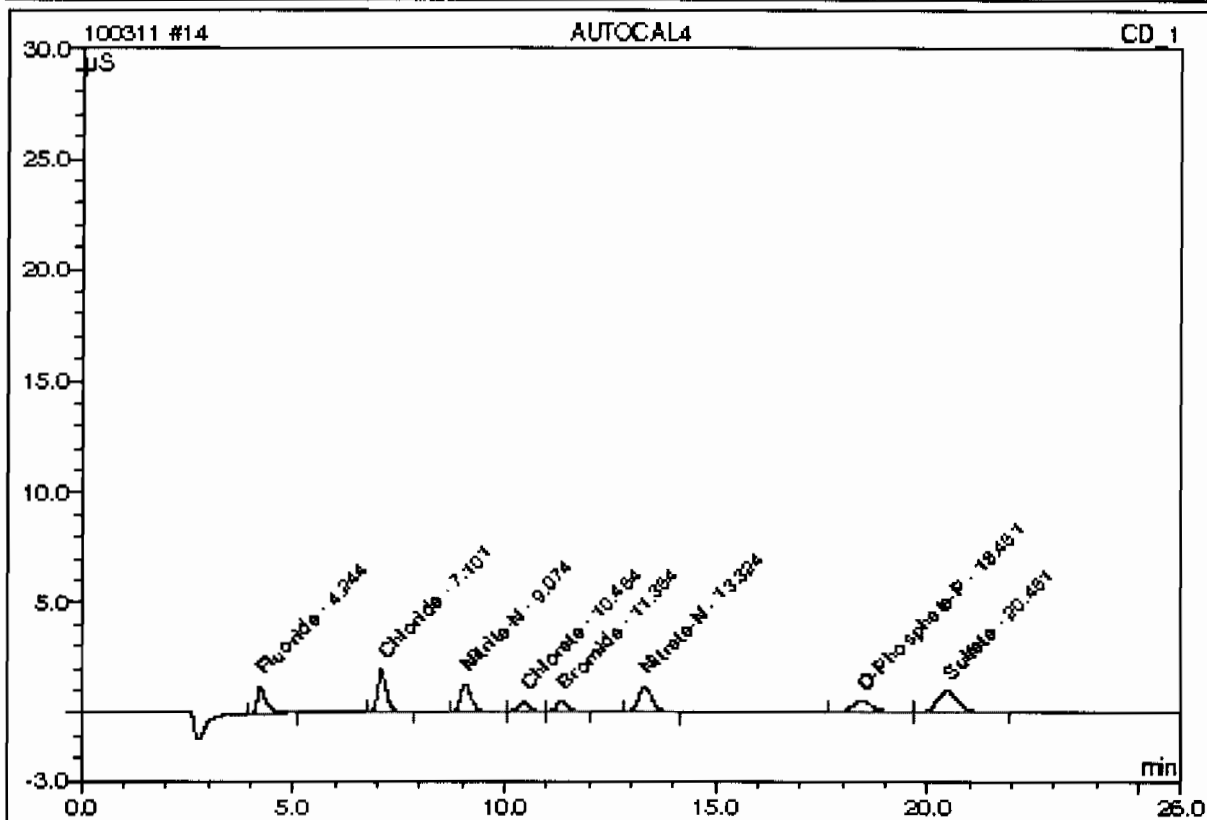
Sample Name:	AUTOCAL5	Injection Volume:	1.0
Vial Number:	7	Channel:	CD_1
Sample Type:	standard	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100311an	Sample Amount:	1.0000
Recording Time:	3/11/2010 12:21	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCE086;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.24	Fluoride	1.0000	0.9360		0.55400	9.66
2	7.10	Chloride	2.0000	1.7966		0.76155	13.28
3	9.07	Nitrite-N	1.0000	0.9334		0.80029	13.96
4	10.46	Chlorate	2.5000	2.3962		0.37297	6.51
5	11.36	Bromide	2.5000	2.4819		0.41426	7.23
6	13.32	Nitrate-N	1.0000	0.9765		0.91953	16.04
7	18.43	O-Phosphate-P	2.5000	2.4518		0.78316	13.66
8	20.46	Sulfate	4.0000	3.8881		1.12776	19.67
Total:				15.8606	0.000	5.734	100.00

14 AUTOCAL4

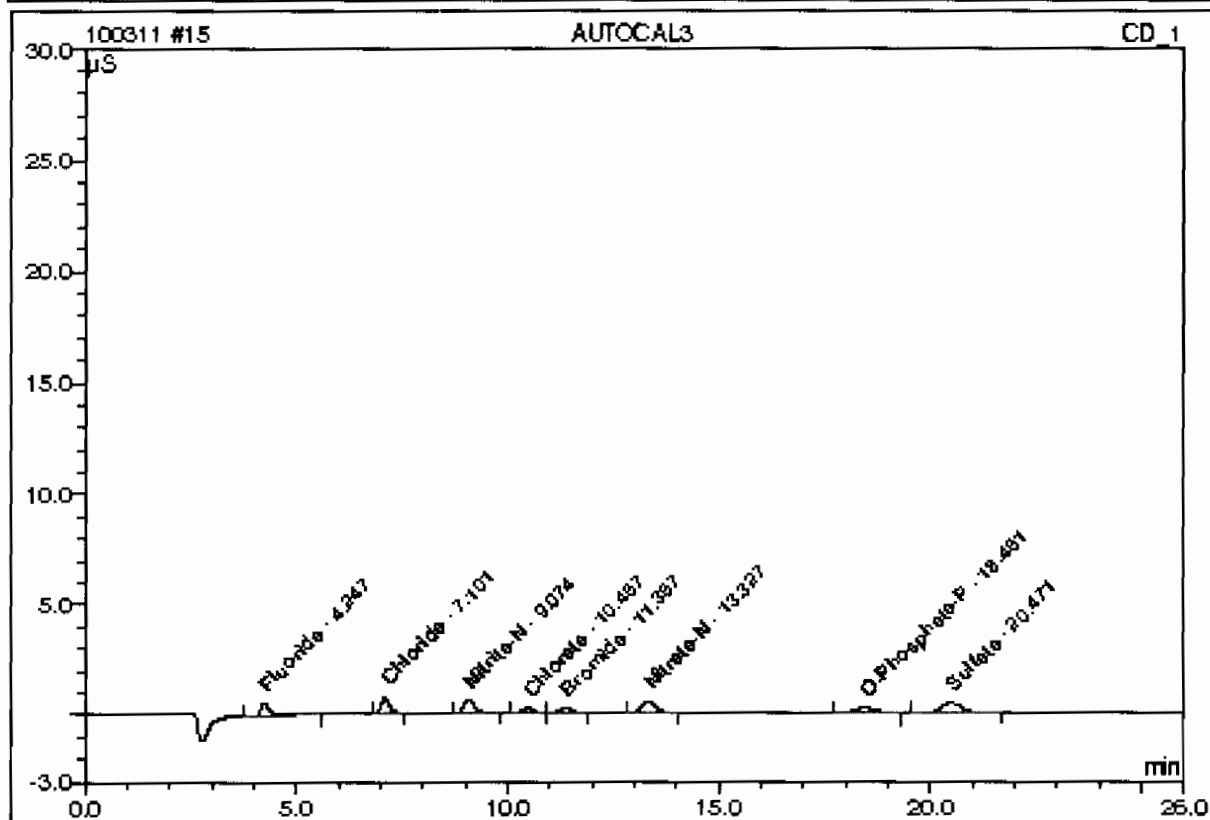
Sample Name:	AUTOCAL4	Injection Volume:	1.0
Vial Number:	8	Channel:	CD_1
Sample Type:	standard	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100311an	Sample Amount:	1.0000
Recording Time:	3/11/2010 12:49	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GC ED86;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.24	Fluoride	0.5000	0.5214		0.28453	10.32
2	7.10	Chloride	1.0000	1.1416		0.44169	16.02
3	9.07	Nitrate-N	0.5000	0.5056		0.39138	14.20
4	10.48	Chlorate	1.0000	1.0244		0.15709	5.70
5	11.36	Bromide	1.0000	0.9896		0.16148	5.86
6	13.32	Nitrate-N	0.5000	0.5447		0.43595	15.81
7	18.45	O-Phosphate-P	1.0000	1.0073		0.30542	11.08
8	20.46	Sulfate	2.0000	2.1856		0.57944	21.02
Total:				7.9202	0.000	2.757	100.00

15 AUTOCAL3

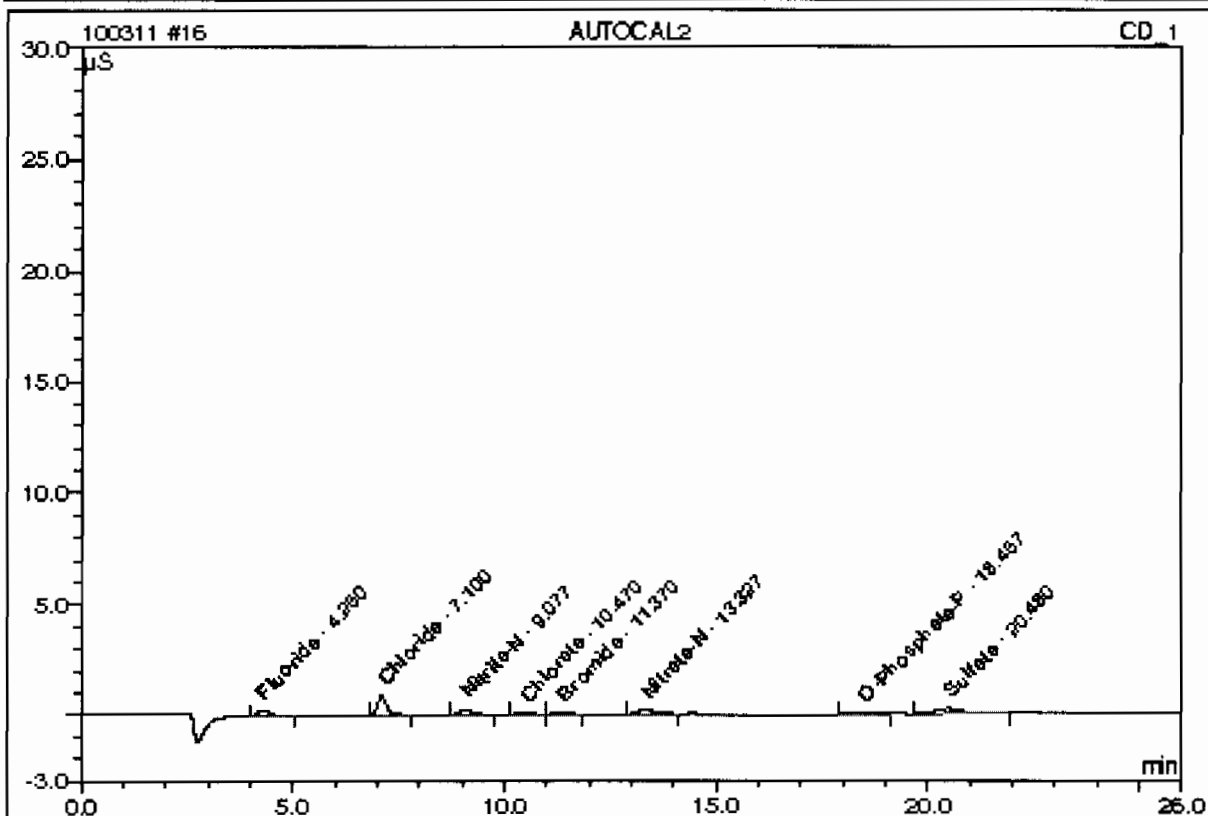
Sample Name:	AUTOCAL3	Injection Volume:	1.0
Vial Number:	9	Channel:	CD_1
Sample Type:	standard	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100311an	Sample Amount:	1.0000
Recording Time:	3/11/2010 13:18	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCE086;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.25	Fluoride	0.2500	0.3104		0.14910	11.33
2	7.10	Chloride	0.5000	0.6474		0.18906	14.37
3	9.07	Nitrate-N	0.2500	0.2998		0.19182	14.58
4	10.47	Chlorate	0.5000	0.4997		0.07407	5.63
5	11.37	Bromide	0.5000	0.5007		0.08111	6.16
6	13.33	Nitrate-N	0.2500	0.3268		0.20999	15.96
7	18.46	O-Phosphate-P	0.5000	0.4714		0.13346	10.14
8	20.47	Sulfate	1.0000	1.2891		0.28737	21.84
Total:				4.3452	0.000	1.316	100.00

16 AUTOCAL2

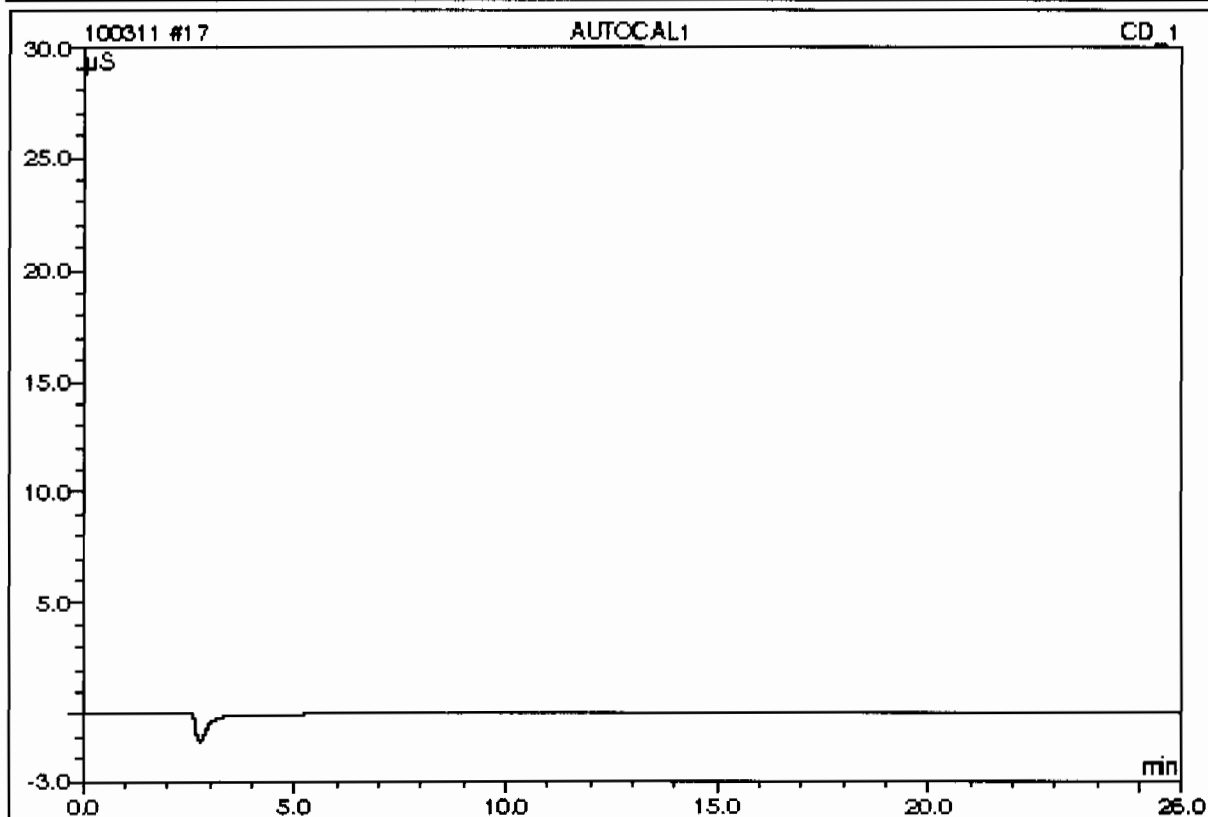
Sample Name:	AUTOCAL2	Injection Volume:	1.0
Vial Number:	10	Channel:	CD_1
Sample Type:	standard	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100311an	Sample Amount:	1.0000
Recording Time:	3/11/2010 15:10	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GC ED86;300;3056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area μS*min	Rel. Area %
1	4.25	Fluoride	0.1000	0.1773		0.07602	10.36
2	7.10	Chloride	0.2000	0.6011		0.21547	29.37
3	9.08	Nitrite-N	0.1000	0.1634		0.07798	10.63
4	10.47	Chlorate	0.2000	0.2072		0.02820	3.84
5	11.37	Bromide	0.2000	0.2037		0.03107	4.23
6	13.33	Nitrate-N	0.1000	0.1962		0.08609	11.73
7	18.47	O-Phosphate-P	0.2000	0.1970		0.04275	5.83
8	20.48	Sulfate	0.4000	0.8498		0.17615	24.01
Total:				2.5956	0.000	0.734	100.00

17 AUTOCAL1

Sample Name:	AUTOCAL1	Injection Volume:	1.0
Vial Number:	11	Channel:	CD_1
Sample Type:	standard	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100311an	Sample Amount:	1.0000
Recording Time:	3/11/2010 17:37	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GC BD86;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	0.0000	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

17 AUTOCAL1

Sample Name: AUTOCAL1

Vial Number: 11

Sample Type: standard

Control Program: AS23

Quantif. Method: 100311an

Recording Time: 3/11/2010 17:37

Run Time (min): 26.00

Injection Volume: 1.0

Channel: CD_1

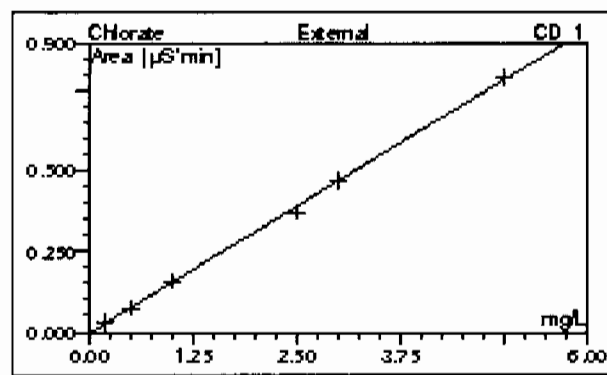
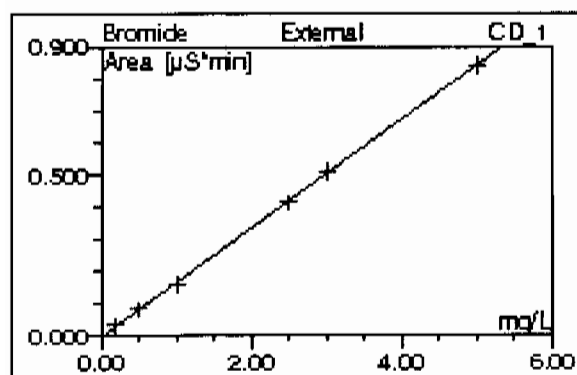
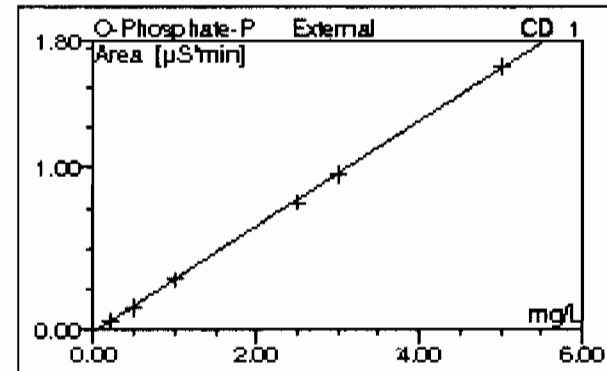
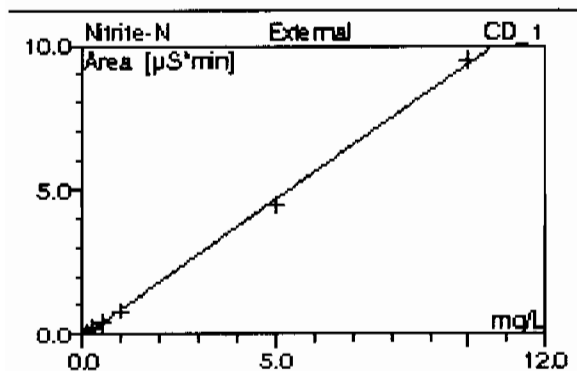
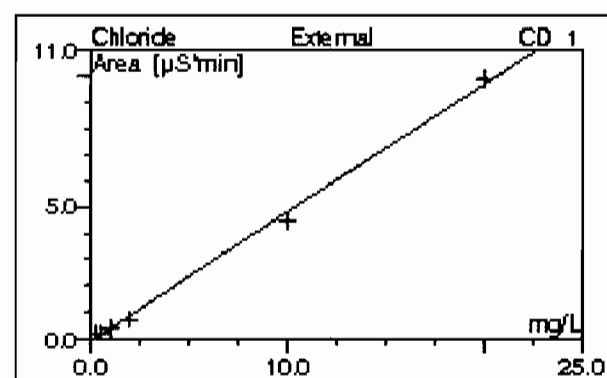
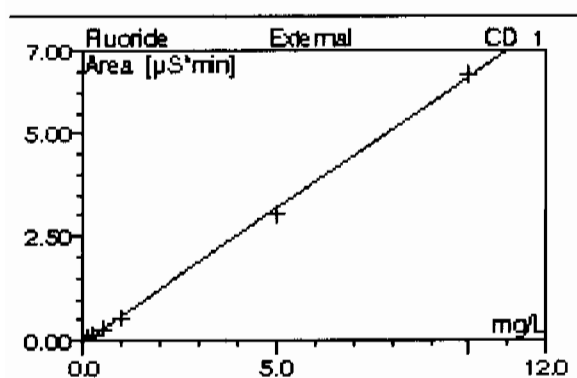
Dilution Factor: 1.0000

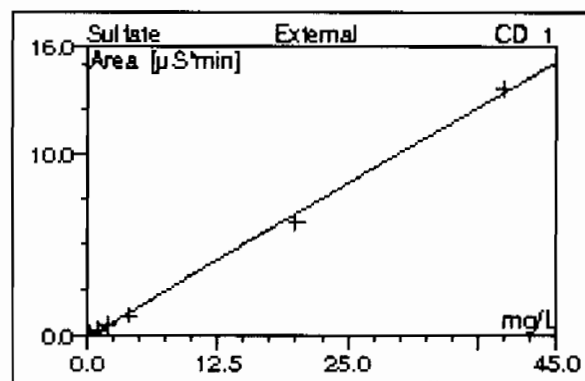
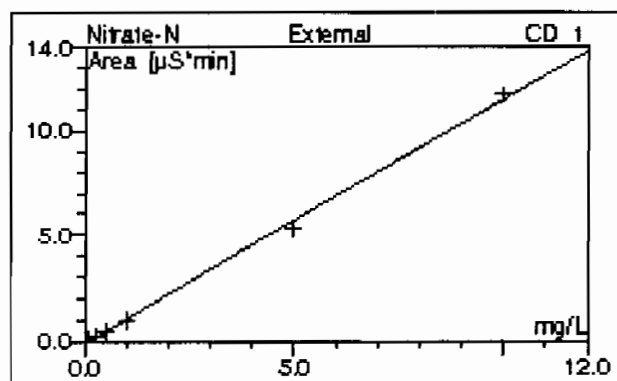
Sample Weight: 1.0000

Sample Amount: 1.0000

Analyst: MAR1

Column: AS23-002712; GL GC E086;300;9056

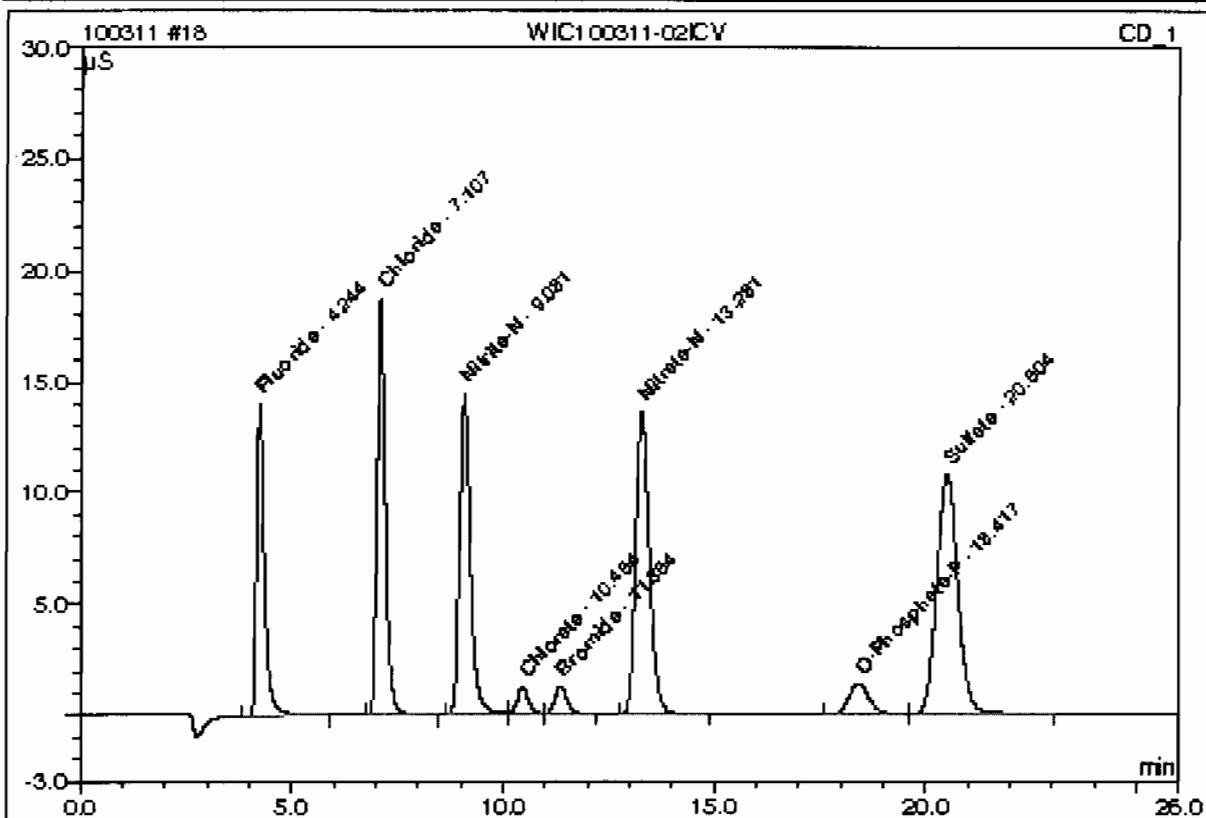




No. CD_1	Ret.Time CD_1 min	Peak Name CD_1	Cal.Type CD_1	Coeff.Det. CD_1 %	Offset CD_1	Slope CD_1	Curve CD_1
n.a.	n.a.	Fluoride	OLO#	99.9098	-0.0379	0.8427	0.0000
n.a.	n.a.	Chloride	OLO#	99.6532	-0.0783	0.4887	0.0000
n.a.	n.a.	Nitrite-N	OLO#	99.9132	-0.0764	0.9449	0.0000
n.a.	n.a.	Chlorate	OLO#	99.9105	-0.0045	0.1580	0.0000
n.a.	n.a.	Bromide	OLO#	99.9841	-0.0034	0.1692	0.0000
n.a.	n.a.	Nitrate-N	OLO#	99.7528	-0.1422	1.1634	0.0000
n.a.	n.a.	O-Phosphate-P	OLO#	99.9648	-0.0221	0.3294	0.0000
n.a.	n.a.	Sulfate	OLO#	99.7960	-0.1130	0.3403	0.0000
Average:				99.8605	-0.0597	0.5296	0.0000

18 WIC100311-02ICV

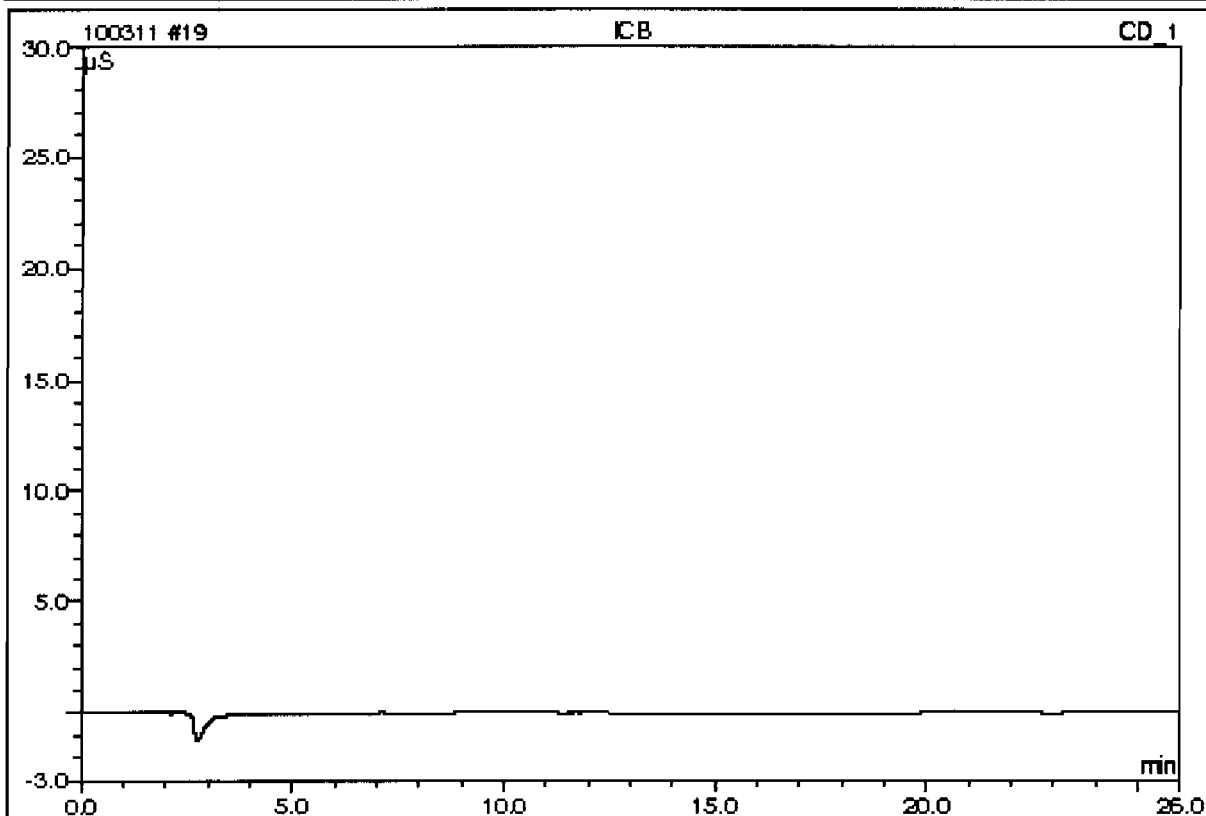
Sample Name:	WIC100311-02ICV	Injection Volume:	1.0
Vial Number:	12	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100311an	Sample Amount:	1.0000
Recording Time:	3/11/2010 18:06	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCED86;300;3056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.24	Fluoride	n.a.	4.6408		2.94463	12.05
2	7.11	Chloride	n.a.	8.9307		4.28622	17.54
3	9.08	Nitrite-N	n.a.	4.6443		4.31196	17.65
4	10.46	Chlorate	n.a.	2.5443		0.39759	1.63
5	11.36	Bromide	n.a.	2.4922		0.41825	1.71
6	13.28	Nitrate-N	n.a.	4.5323		5.13052	21.00
7	18.42	O-Phosphate-P	n.a.	2.4519		0.78547	3.21
8	20.50	Sulfate	n.a.	18.4235		6.15671	25.20
Total:				48.6601	0.000	24.431	100.00

19 ICB

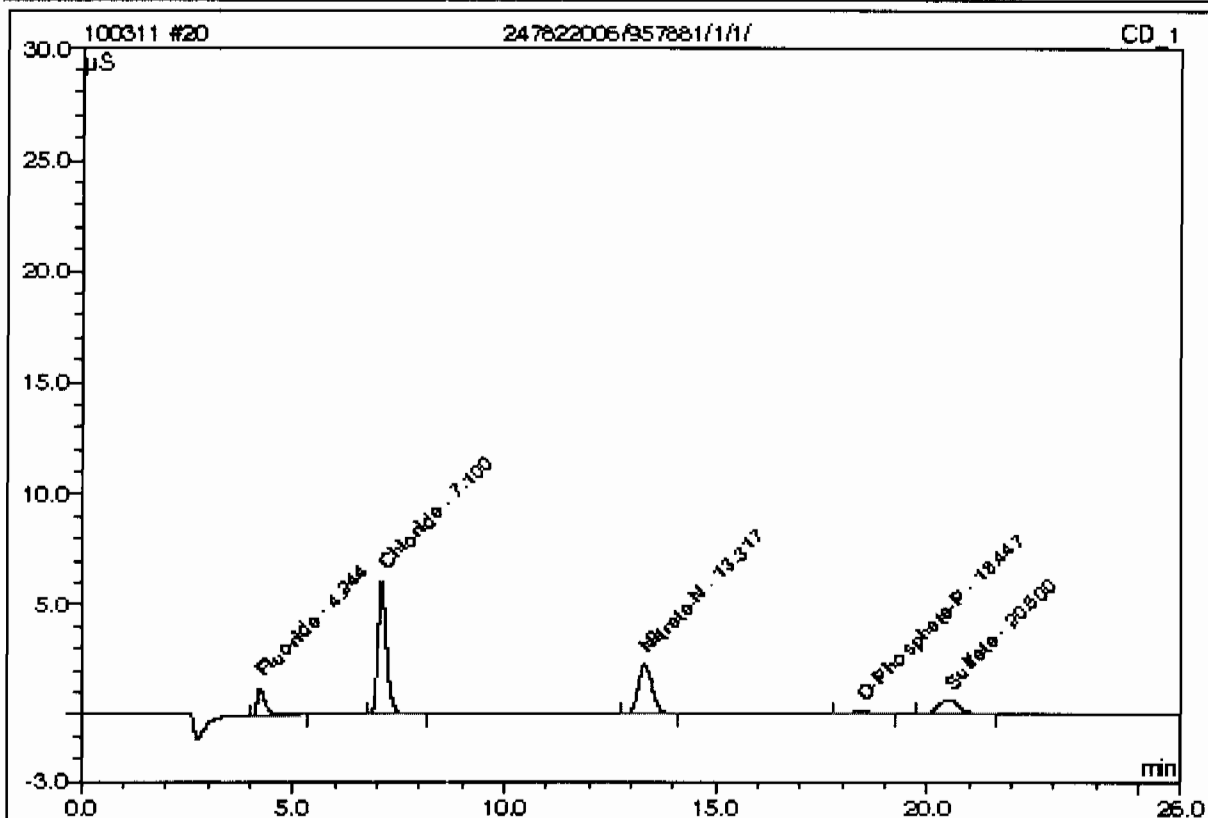
Sample Name:	ICB	Injection Volume:	1.0
Vial Number:	13	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100311an	Sample Amount:	1.0000
Recording Time:	3/11/2010 18:35	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCE086;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	<u>n.a.</u>	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	<u>n.a.</u>	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	<u>n.a.</u>	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	<u>n.a.</u>	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	<u>n.a.</u>	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	<u>n.a.</u>	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	<u>n.a.</u>	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	<u>n.a.</u>	n.a.
Total:				0.0000	0.000	0.000	0.00

20 247822006/957881/1/1/

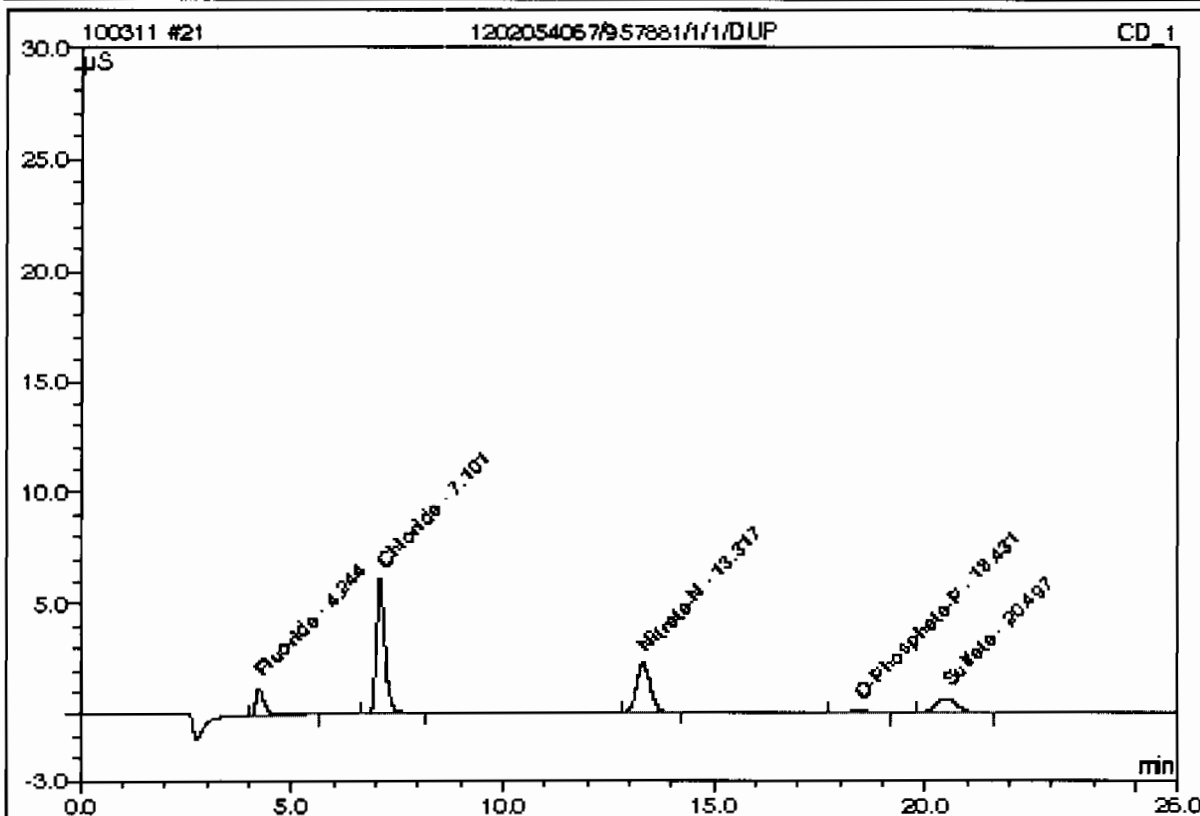
Sample Name:	247822006/957881/1/1/	Injection Volume:	1.0
Vial Number:	14	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100311an	Sample Amount:	1.0000
Recording Time:	3/11/2010 19:04	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCE086;300;0056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.24	Fluoride	n.a.	0.4933		0.27912	9.19
2	7.10	Chloride	n.a.	3.0819		1.42786	46.99
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
3	13.32	Nitrate-N	n.a.	0.8573		0.85521	26.14
4	18.45	O-Phosphate-P	n.a.	0.2944		0.07484	2.46
5	20.50	Sulfate	n.a.	1.5122		0.40159	13.22
Total:				6.2392	0.000	3.039	100.00

21 1202054067/957881/1/1/DUP

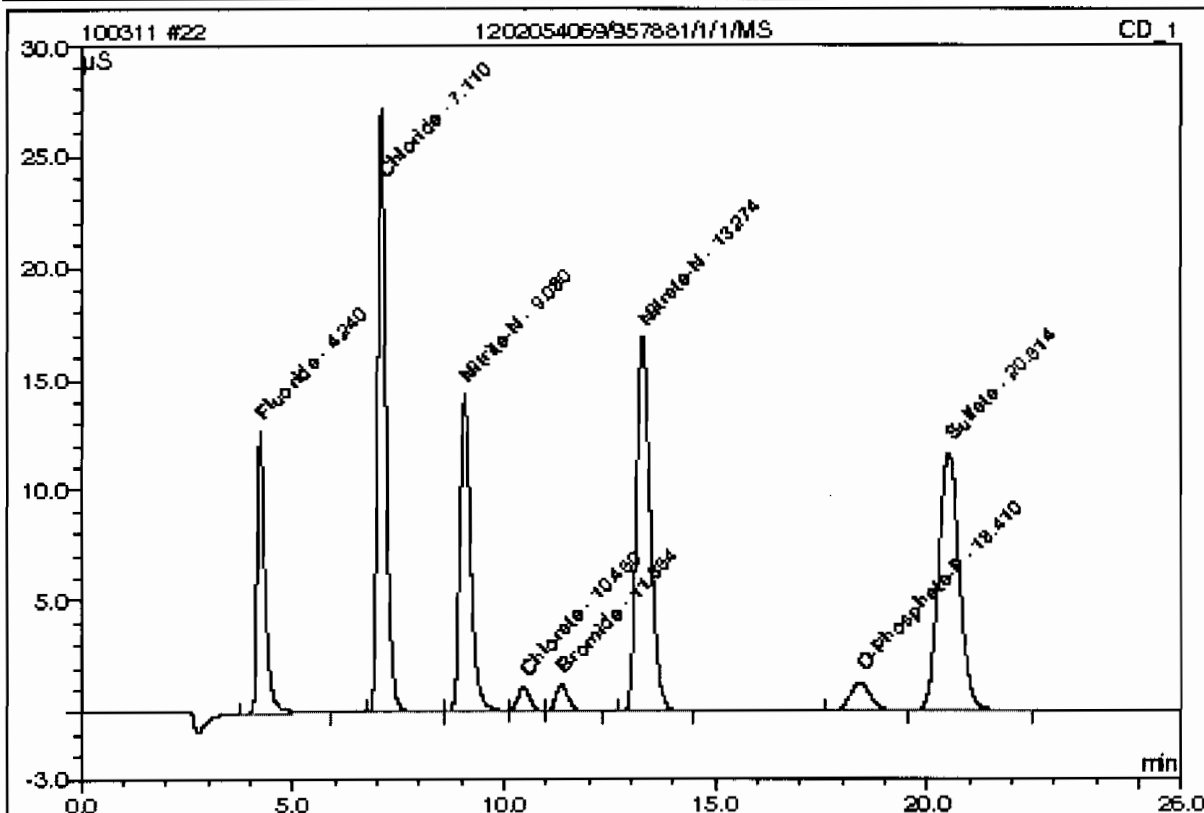
Sample Name:	1202054067/957881/1/1/DUP	Injection Volume:	1.0
Vial Number:	15	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100311an	Sample Amount:	1.0000
Recording Time:	3/11/2010 19:33	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCE086;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.24	Fluoride	n.a.	0.5075		0.28824	9.35
2	7.10	Chloride	n.a.	3.1402		1.45637	47.24
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
3	13.32	Nitrate-N	n.a.	0.8617		0.86029	27.90
4	18.43	O-Phosphate-P	n.a.	0.3018		0.07728	2.51
5	20.50	Sulfate	n.a.	1.5103		0.40093	13.00
Total:				6.3215	0.000	3.083	100.00

22 1202054069/957881/1/1/MS

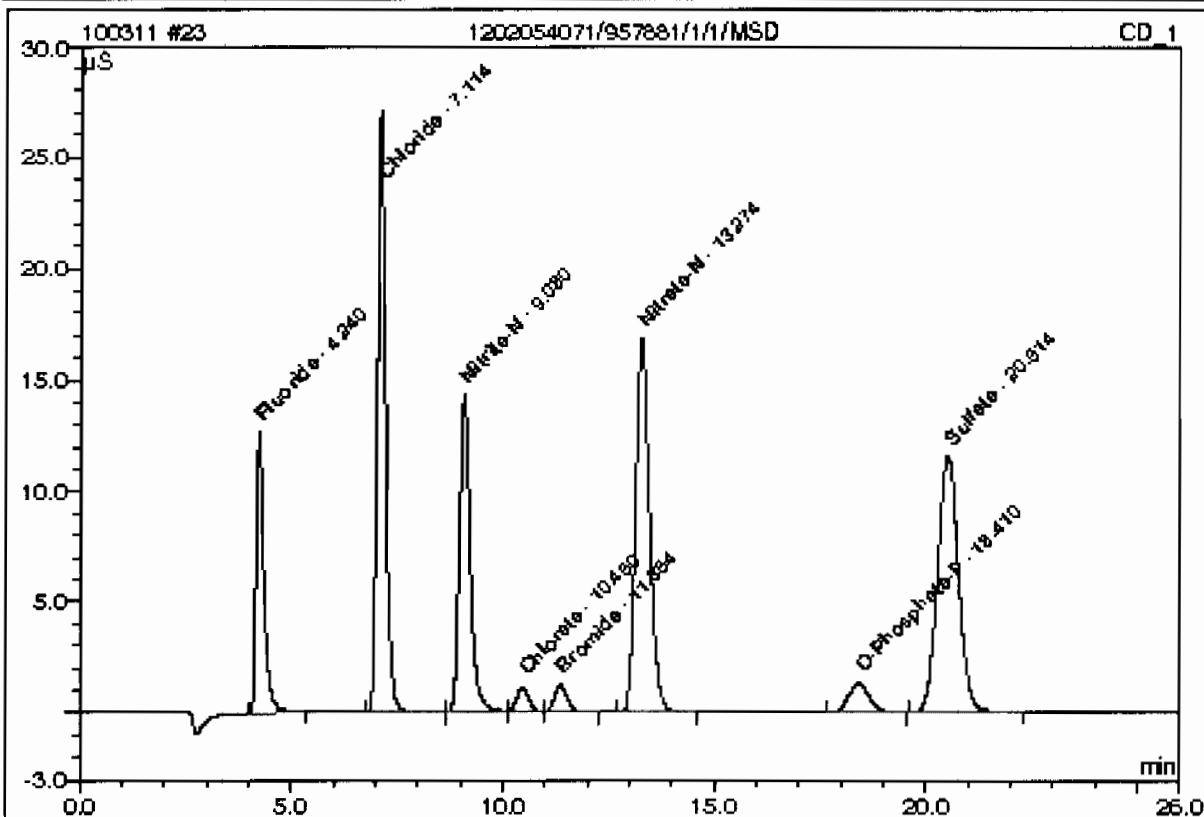
Sample Name:	1202054069/957881/1/1/MS	Injection Volume:	1.0
Vial Number:	16	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100311a	Sample Amount:	1.0000
Recording Time:	3/11/2010 20:01	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GC ED86;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.24	Fluoride	n.a.	4.2573		2.69817	9.75
2	7.11	Chloride	n.a.	12.7716		6.16330	22.28
3	9.08	Nitrite-N	n.a.	4.6211		4.29010	15.51
4	10.46	Chlorate	n.a.	2.5038		0.39119	1.41
5	11.36	Bromide	n.a.	2.4729		0.41497	1.50
6	13.27	Nitrate-N	n.a.	5.6025		6.37558	23.05
7	18.41	O-Phosphate-P	n.a.	2.3099		0.73668	2.67
8	20.51	Sulfate	n.a.	19.6997		6.59102	23.83
Total:				54.2389	0.000	27.663	100.00

23 1202054071/957881/1/1/MSD

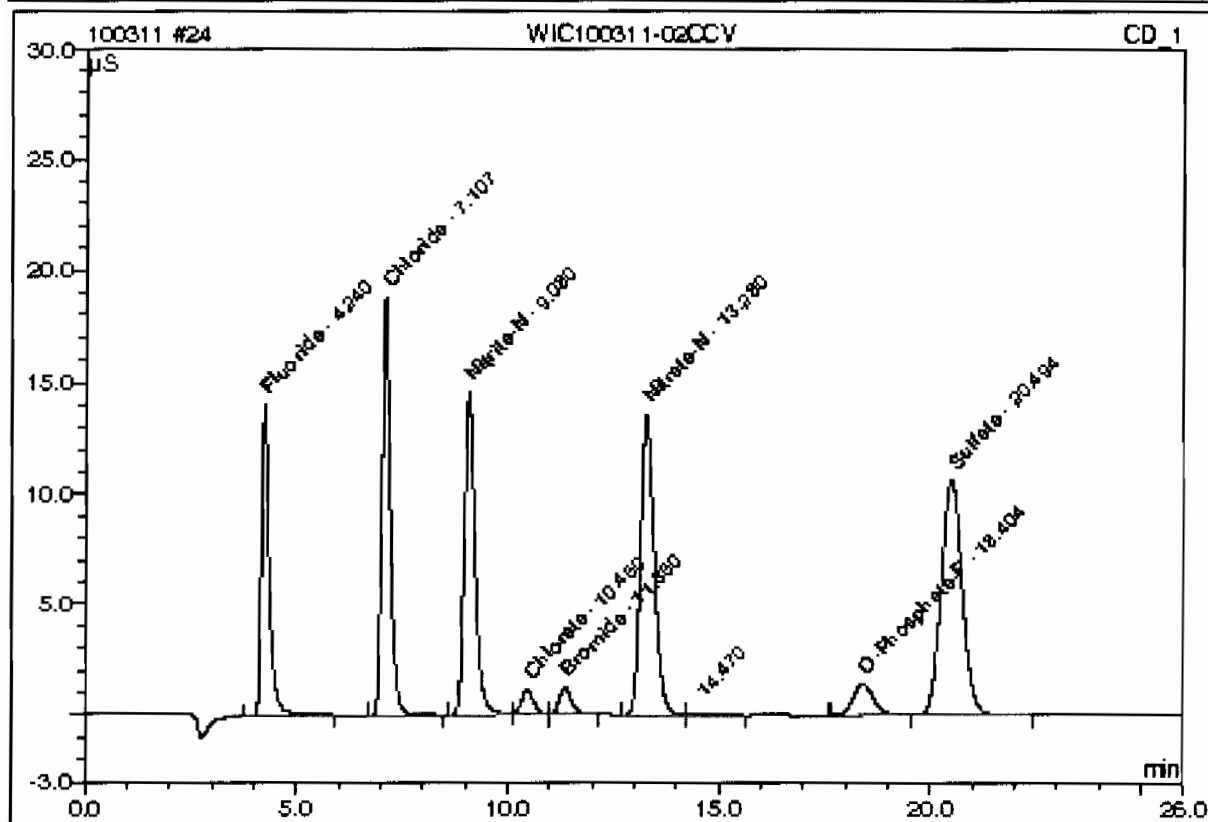
Sample Name:	1202054071/957881/1/1/MSD	Injection Volume:	1.0
Vial Number:	17	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100311an	Sample Amount:	1.0000
Recording Time:	3/11/2010 20:30	Analyst:	MAR1
Run Time (min):	28.00	Column:	AS23-001528; GL GC ED86;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area μS*min	Rel. Area %
1	4.24	Fluoride	n.a.	4.1821		2.64984	9.60
2	7.11	Chloride	n.a.	12.7900		6.17230	22.36
3	9.08	Nitrite-N	n.a.	4.6346		4.30279	15.58
4	10.46	Chlorate	n.a.	2.4926		0.38941	1.41
5	11.36	Bromide	n.a.	2.4940		0.41854	1.52
6	13.27	Nitrate-N	n.a.	5.5969		6.36911	23.07
7	18.41	O-Phosphate-P	n.a.	2.3234		0.74313	2.69
8	20.51	Sulfate	n.a.	19.6201		6.56392	23.77
Total:				54.1336	0.000	27.609	100.00

24 WIC100311-02CCV

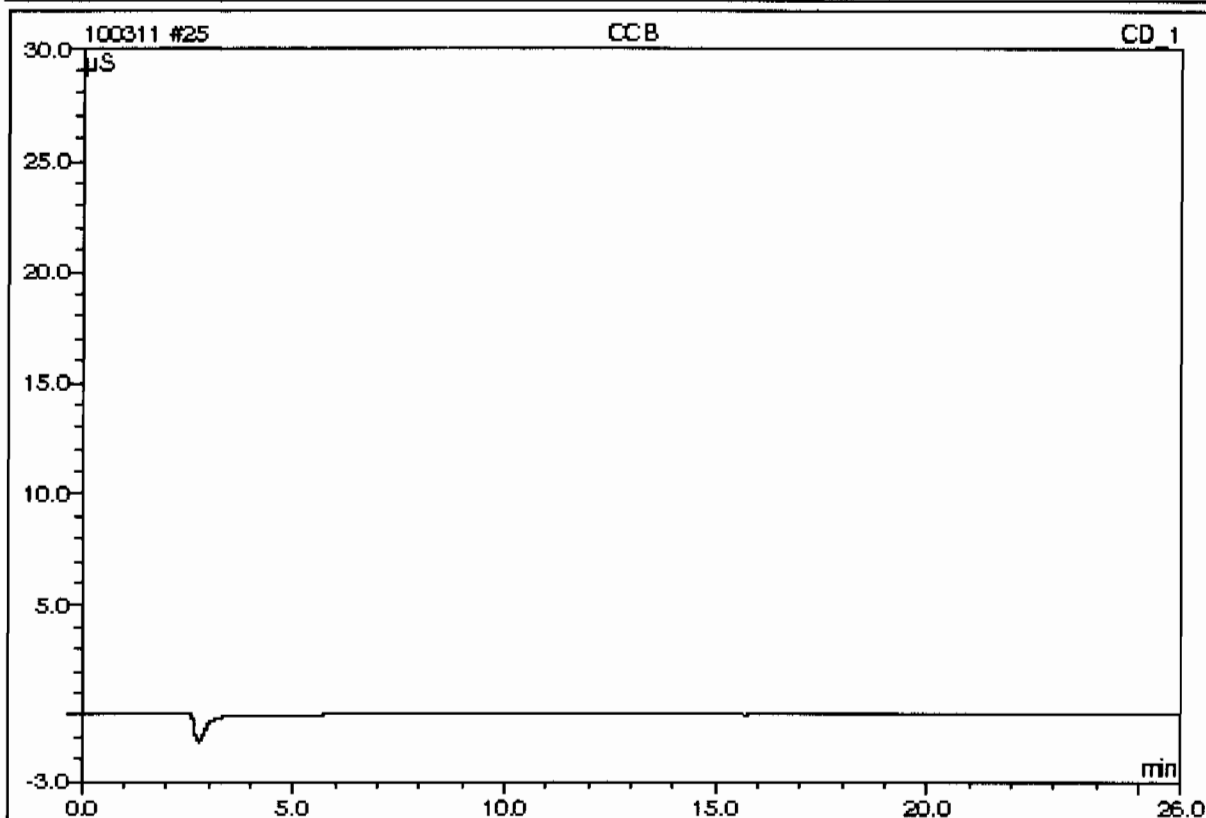
Sample Name:	WIC100311-02CCV	Injection Volume:	1.0
Vial Number:	18	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100311an	Sample Amount:	1.0000
Recording Time:	3/11/2010 20:59	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCE086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.24	Fluoride	n.a.	4.8553		2.95394	12.08
2	7.11	Chloride	n.a.	8.9289		4.28532	17.52
3	9.08	Nitrite-N	n.a.	4.6698		4.33605	17.73
4	10.46	Chlorate	n.a.	2.4483		0.38242	1.56
5	11.36	Bromide	n.a.	2.4634		0.41336	1.69
6	13.28	Nitrate-N	n.a.	4.5121		5.10710	20.88
8	18.40	O-Phosphate-P	n.a.	2.5128		0.80552	3.29
9	20.49	Sulfate	n.a.	18.3184		6.12025	25.02
Total:				48.5089	0.000	24.404	99.77

25 CCB

Sample Name:	CCB	Injection Volume:	1.0
Vial Number:	19	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight	1.0000
Quantif. Method:	100311an	Sample Amount:	1.0000
Recording Time:	3/11/2010 21:28	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCE086;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

pH

pH / Corrosivity LogBook

Analyst: TXT1
 Batch: 956998
 Lab SOP: GL-GC-E-008 REV# 17
 Description: pH
 Method: SW846 9045C/9045D

Sample id	Parent Sample Id	Matrix	Start Time	Stop Time	Run Date	Parname	Initial Wt(g)	Final Vol(mL)	Ph	Temp	Nc(mg/L)	Recovery(%)	Rpd(%)	Description
1202051944 LCS		Soil	24-FEB-2010 10:30:00	24-FEB-2010 10:35:00	24-FEB-10 15:02	pH	20	20	6.98	19.8°C	7	99.714		PH 7 BUFFER FOR PH
1202051944 LCS		Soil	24-FEB-2010 10:30:00	24-FEB-2010 10:35:00	24-FEB-10 15:02	pH 2	20	20	6.98	19.8°C	7	99.714		LCS BUFFER SOLUTION
247784002		Soil	24-FEB-2010 10:30:00	24-FEB-2010 10:35:00	24-FEB-10 15:07	pH	20	20	8.39	19.8°C				
247784002		Soil	24-FEB-2010 10:30:00	24-FEB-2010 10:35:00	24-FEB-10 15:07	pH 2	20	20	8.4	19.8°C				
1202051942 DUP	247784002	Soil	24-FEB-2010 10:30:00	24-FEB-2010 10:35:00	24-FEB-10 15:10	pH	20	20	8.43	19.9°C			.476	
1202051942 DUP	247784002	Soil	24-FEB-2010 10:30:00	24-FEB-2010 10:35:00	24-FEB-10 15:10	pH 2	20	20	8.43	19.9°C			.357	
247790002		Soil	24-FEB-2010 10:30:00	24-FEB-2010 10:35:00	24-FEB-10 15:12	pH	20	20	8.89	19.8°C				
247790002		Soil	24-FEB-2010 10:30:00	24-FEB-2010 10:35:00	24-FEB-10 15:12	pH 2	20	20	8.88	19.9°C				
1202051943 DUP	247790002	Soil	24-FEB-2010 10:30:00	24-FEB-2010 10:35:00	24-FEB-10 15:13	pH	20	20	8.91	19.8°C			.225	
1202051943 DUP	247790002	Soil	24-FEB-2010 10:30:00	24-FEB-2010 10:35:00	24-FEB-10 15:13	pH 2	20	20	8.91	19.8°C			.337	
CCV			24-FEB-2010 10:30:00	24-FEB-2010 10:35:00	24-FEB-10 15:15	pH	20	20	7	18.9°C	7	100		
CCV			24-FEB-2010 10:30:00	24-FEB-2010 10:35:00	24-FEB-10 15:15	pH 2	20	20	7	19.0°C	7	100		
247790003		Soil	24-FEB-2010 10:30:00	24-FEB-2010 10:35:00	24-FEB-10 15:16	pH	20	20	8.96	19.6°C				
247790003		Soil	24-FEB-2010 10:30:00	24-FEB-2010 10:35:00	24-FEB-10 15:16	pH 2	20	20	8.96	19.6°C				
247794001		Soil	24-FEB-2010 10:30:00	24-FEB-2010 10:35:00	24-FEB-10 15:18	pH	20	20	7.59	19.8°C				
247794001		Soil	24-FEB-2010 10:30:00	24-FEB-2010 10:35:00	24-FEB-10 15:18	pH 2	20	20	7.58	19.8°C				
247794002		Soil	24-FEB-2010 10:30:00	24-FEB-2010 10:35:00	24-FEB-10 15:27	pH	20	20	7.96	19.4°C				
247794002		Soil	24-FEB-2010 10:30:00	24-FEB-2010 10:35:00	24-FEB-10 15:27	pH 2	20	20	7.95	19.5°C				
247794003		Soil	24-FEB-2010 10:30:00	24-FEB-2010 10:35:00	24-FEB-10 15:28	pH	20	20	7.41	19.5°C				
247794003		Soil	24-FEB-2010 10:30:00	24-FEB-2010 10:35:00	24-FEB-10 15:28	pH 2	20	20	7.39	19.5°C				
247794004		Soil	24-FEB-2010 10:30:00	24-FEB-2010 10:35:00	24-FEB-10 15:36	pH	20	20	7.71	19.4°C				
247794004		Soil	24-FEB-2010 10:30:00	24-FEB-2010 10:35:00	24-FEB-10 15:36	pH 2	20	20	7.69	19.4°C				

GEL Laboratories LLC

Page#

pH / Corrosivity LogBook

Analyst: TXT1
 Batch: 956998
 Lab SOP: GL-GC-E-008 REV# I7
 Description: pH
 Method: SW846 9045C/9045D

Analyst:	Batch:	Lab SOP:	Description:	Method:	TXT1	Parent Sample Id	Matrix	Start Time	Stop Time	Run Date	Sample Id		Serial Number	Description			
											Type	Sample Id		Initial Wt(g)	Final Vol(mL)	Ph	Temp	Nc(mg/L)	Recovery(%)	Rpd(%)
	956998	GL-GC-E-008 REV# 17	pH	SW846 9045C/9045D				24-FEB-2010 10:30:00	24-FEB-2010 10:35:00	24-FEB-10 15:40	pH	240	IMM091029-PH	PH 7 BUFFER FOR PH			
								24-FEB-2010 10:30:00	24-FEB-2010 10:35:00	24-FEB-10 15:40	pH 2	1202051944	IMM100209-01	LCS BUFFER SOLUTION			
247794005							Soil	24-FEB-2010 10:30:00	24-FEB-2010 10:35:00	24-FEB-10 15:41	pH	20	20	7.9	19.3°C		
247794005							Soil	24-FEB-2010 10:30:00	24-FEB-2010 10:35:00	24-FEB-10 15:41	pH 2	20	20	7.88	19.3°C		
247822001							Soil	24-FEB-2010 10:30:00	24-FEB-2010 10:35:00	24-FEB-10 15:46	pH	20	20	10.46	19.2°C		
247822001							Soil	24-FEB-2010 10:30:00	24-FEB-2010 10:35:00	24-FEB-10 15:46	pH 2	20	20	10.46	19.2°C		
247822002							Soil	24-FEB-2010 10:30:00	24-FEB-2010 10:35:00	24-FEB-10 15:47	pH	20	20	8.47	19.3°C		
247822002							Soil	24-FEB-2010 10:30:00	24-FEB-2010 10:35:00	24-FEB-10 15:47	pH 2	20	20	8.45	19.3°C		
247822003							Soil	24-FEB-2010 10:30:00	24-FEB-2010 10:35:00	24-FEB-10 15:50	pH	20	20	9.37	19.2°C		
247822003							Soil	24-FEB-2010 10:30:00	24-FEB-2010 10:35:00	24-FEB-10 15:50	pH 2	20	20	9.36	19.2°C		
247822004							Soil	24-FEB-2010 10:30:00	24-FEB-2010 10:35:00	24-FEB-10 15:51	pH	20	20	8.17	19.0°C		
247822004							Soil	24-FEB-2010 10:30:00	24-FEB-2010 10:35:00	24-FEB-10 15:51	pH 2	20	20	8.14	19.0°C		
CCV								24-FEB-2010 10:30:00	24-FEB-2010 10:35:00	24-FEB-10 15:52	pH	20	20	7	17.8°C	7	100
CCV								24-FEB-2010 10:30:00	24-FEB-2010 10:35:00	24-FEB-10 15:52	pH 2	20	20	7	17.8°C	7	100
247822005							Soil	24-FEB-2010 10:30:00	24-FEB-2010 10:35:00	24-FEB-10 15:54	pH	20	20	8.8	19.0°C		
247822005							Soil	24-FEB-2010 10:30:00	24-FEB-2010 10:35:00	24-FEB-10 15:54	pH 2	20	20	8.8	19.0°C		
247822006							Soil	24-FEB-2010 10:30:00	24-FEB-2010 10:35:00	24-FEB-10 15:55	pH	20	20	7.93	19.0°C		
247822006							Soil	24-FEB-2010 10:30:00	24-FEB-2010 10:35:00	24-FEB-10 15:55	pH 2	20	20	7.94	19.1°C		
247855002							Soil	24-FEB-2010 10:30:00	24-FEB-2010 10:35:00	24-FEB-10 15:57	pH	20	20	7.86	19.1°C		
247855002							Soil	24-FEB-2010 10:30:00	24-FEB-2010 10:35:00	24-FEB-10 15:57	pH 2	20	20	7.84	19.1°C		
CCV								24-FEB-2010 10:30:00	24-FEB-2010 10:35:00	24-FEB-10 15:59	pH	20	20	7	17.9°C	7	100
CCV								24-FEB-2010 10:30:00	24-FEB-2010 10:35:00	24-FEB-10 15:59	pH 2	20	20	7	17.9°C	7	100

GEL Laboratories LLC

Page# _____

pH / Corrosivity LogBook

Analyst: TXT1
Batch: 956998
Lab SOP: GL-GC-E-008 REV# 17
Description: pH
Method: SW846 9045C/9045D

Type	Sample Id	Serial Number	Description
CCV	240	IMM091029-PH	PH 7 BUFFER FOR PH
LCS	1202051944	IMM100209-01	LCS BUFFER SOLUTION

Sample id	Parent Sample Id	Matrix	Start Time	Stop Time	Run Date	Parname	Initial Wt(g)	Final Vol(mL)	Ph	Temp	Nc(mg/L)	Recovery(%)	Rpd(%)
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Comments:

Calibration Information:													
Run Date: 24-FEB-10 08:19													
Instrument: PHX370													
Analyst: LXA1													
08:19	IMM100224-PH1	Standard	Observed	Theoretical	C	%Recovery							
08:19	IMM100224-PH2		4.01	4	SU	20.7	100.25						
08:19	IMM100224-PH3		7.01	7	SU	20.7	100.14						
08:19	UPH100224-PH4		10.04	10	SU	20.7	100.4						
08:19	UPH100224-PH5		2.09	2	SU	20.7	104.5						
08:19	UPH100224-PH6		12.01	12	SU	20.7	100.08						
08:19	IMM100224-PH6		7.03	7	SU	20.7	100.43						

RADIOLOGICAL ANALYSIS

**Radiochemistry Case Narrative
Los Alamos National Laboratory (LANL)
SDG 10-1981**

Method/Analysis Information

Product: Dry Weight-Percent Moisture

Analytical Method: Dry Soil Prep

Analytical Batch Number: 957080

Sample ID	Client ID
247790002	RE15-10-8386
247790003	RE15-10-8387
1202052116	247782001(RE11-10-1566) 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 solutions for these analysis are NIST traceable or verified with a NIST traceable standard and used before the expiration dates.

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: 247782001 (RE11-10-1566). The QC was from LANL work order 247782.

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:	957123
Prep Batch Number:	957080

Sample ID	Client ID
247790002	RE15-10-8386
247790003	RE15-10-8387
1202052216	Method Blank (MB)
1202052217	247790002(RE15-10-8386) Sample Duplicate (DUP)
1202052218	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 solutions for these analysis are NIST traceable or verified with a NIST traceable standard and used before the expiration dates.

Sample Geometry

All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information

Aliquot for sample 1202052216 (MB) was changed to 1.0 per client request.

Designated QC

The following sample was used for QC: 247790002 (RE15-10-8386). The QC was from LANL work order 247790.

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. Sample, 1202052218 (LCS), 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:	ISOPU
Analytical Method:	DOE EML HASL-300, Pu-11-RC Modified
Prep Method:	Dry Soil Prep
Analytical Batch Number:	957124
Prep Batch Number:	957080

Sample ID	Client ID
247790002	RE15-10-8386
247790003	RE15-10-8387
1202052219	Method Blank (MB)
1202052220	247790002(RE15-10-8386) Sample Duplicate (DUP)
1202052221	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 solutions for these analysis are NIST traceable or verified with a NIST traceable standard and used before the expiration dates.

Sample Geometry

All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:**Blank Information**

Aliquot for sample 1202052219 (MB) was changed to 1.0 per client request.

Designated QC

The following sample was used for QC: 247790002 (RE15-10-8386). The QC was from LANL work order 247790.

QC Information

All of the QC samples met the required acceptance limits.

CSU

The Pu238 blank result is greater than 1.65 times the CSU but less than the MDC.

Technical Information:**Holding Time**

All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis

None of the samples in this sample set required reprep or reanalysis.

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

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

Manual Integration

No manual integrations were performed on data in this batch.

Additional Comments

The MDCs are calculated using a blank population.

Blank Decision Level

The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product: ISOU
Analytical Method: DOE EML HASL-300, U-02-RC Modified
Prep Method: Dry Soil Prep
Analytical Batch Number: 957125
Prep Batch Number: 957080

Sample ID	Client ID
247790002	RE15-10-8386
247790003	RE15-10-8387
1202052222	Method Blank (MB)
1202052223	247790002(RE15-10-8386) Sample Duplicate (DUP)
1202052224	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 solutions for these analysis are NIST traceable or verified with a NIST traceable standard and used before the expiration dates.

Sample Geometry

All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information

Aliquot for sample 1202052222 (MB) was changed to 1.0 per client request.

Designated QC

The following sample was used for QC: 247790002 (RE15-10-8386). The QC was from LANL work order 247790.

QC Information

All of the QC samples met the required acceptance limits.

CSU

The U238 blank result is greater than 1.65 times the CSU but less than the MDC.

Technical Information:**Holding Time**

All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis

None of the samples in this sample set required reprep or reanalysis.

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

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

Manual Integration

No manual integrations were performed on data in this batch.

Additional Comments

The MDCs are calculated using a blank population. Sample, 247790003 (RE15-10-8387), 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:	957136
Prep Batch Number:	957080

Sample ID	Client ID
247790002	RE15-10-8386
247790003	RE15-10-8387
1202052272	Method Blank (MB)
1202052273	247809001(RE46-10-13335) Sample Duplicate (DUP)
1202052274	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# 19.

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met. The initial Calibrations were performed in March 2009, June 2009, October 2009, November 2009 and February 2010.

Standards Information

Standard solutions for these analysis are NIST traceable or verified with a NIST traceable standard and used before the expiration dates.

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: 247809001 (RE46-10-13335). The QC was from LANL work order 247809.

QC Information

All of the QC samples met the required acceptance limits.

CSU

The blank 1202052272 (MB) result is greater than 1.65 times the CSU but less than the MDC for Am-241, Cs-134, and Y-88.

Technical Information:

Holding Time

All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis

None of the samples in this sample set required reprep or reanalysis.

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

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

Additional Comments

Additional comments were not required for this sample set.

Blank Decision Level

The blank result is less than the decision level.

Qualifier information

Qualifier	Reason	Analyte	Sample	Client Sample
UI	Data rejected due to interference.	Bismuth-211	247790002	RE15-10-8386
			247790003	RE15-10-8387
			1202052273	RE46-10-13335(247809001DUP)
		Cadmium-109	247790002	RE15-10-8386
			247790003	RE15-10-8387
			1202052273	RE46-10-13335(247809001DUP)
		Radium-224	247790002	RE15-10-8386
			247790003	RE15-10-8387
			1202052273	RE46-10-13335(247809001DUP)
	Data rejected due to low abundance.	Bismuth-214	247790003	RE15-10-8387
			1202052273	RE46-10-13335(247809001DUP)
			247790003	RE15-10-8387
			1202052273	RE46-10-13335(247809001DUP)

Method/Analysis Information

Product: H3
Analytical Method: GL-RAD-A-002
Analytical Batch Number: 960231

Sample ID	Client ID
247790002	RE15-10-8386
247790003	RE15-10-8387
1202059613	Method Blank (MB)
1202059614	248137001(WST16-10-13288) Sample Duplicate (DUP)
1202059615	Laboratory Control Sample (LCS)

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

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-002 REV# 18.

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

Standards Information

Standard solutions for these analysis are NIST traceable or verified with a NIST traceable standard and used before the expiration dates.

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: 248137001 (WST16-10-13288). The QC was from LANL work order 248137.

QC Information

All of the QC samples met the required acceptance limits.

CSU

The blank result is less than 1.65 times the CSU.

Technical Information:**Holding Time**

All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis

None of the samples in this sample set required reprep or reanalysis.

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

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

Additional Comments

Additional comments were not required for this sample set.

Blank Decision Level

The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Certification Statement

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

Review Validation:

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

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

Reviewer/Date: 

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: 10-1981 GEL Work Order: 247790

The Qualifiers in this report are defined as follows:

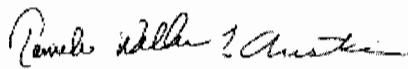
- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.

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: March 11, 2010

Client Sample ID: RE15-10-8386
Sample ID: 247790002
Matrix: R
Collect Date: 17-FEB-10
Receive Date: 23-FEB-10
Collector: Client
Moisture: 5.4%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids												
<i>"As Received"</i>												
Rad Alpha Spec Analysis												
<i>AM241 "Dry Weight Corrected"</i>												
Americium-241	U	-4.23E-05	0.0209	+/-0.00173	0.050	pCi/g		JXH2	03/03/10	2039	957123	2
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.0111	0.026	+/-0.00511	0.050	pCi/g		JXH2	03/01/10	1821	957124	3
Plutonium-239/240	U	0.0108	0.0196	+/-0.00602	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		0.921	0.0659	+/-0.0799	0.100	pCi/g		JXH2	03/04/10	0905	957125	4
Uranium-235/236		0.0646	0.042	+/-0.0158	0.100	pCi/g						
Uranium-238		1.14	0.045	+/-0.0953	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	-0.0628	0.220	+/-0.0759	0.200	pCi/g		MXR1	03/05/10	1026	957136	5
Bismuth-211	UI	3.42	0.290	+/-0.292		pCi/g						
Bismuth-214		1.05	0.106	+/-0.0914	0.200	pCi/g						
Cadmium-109	UI	3.87	1.08	+/-0.381		pCi/g						
Cerium-139	U	-0.00318	0.0435	+/-0.013	0.050	pCi/g						
Cesium-134	U	0.0715	0.0906	+/-0.0245	0.100	pCi/g						
Cesium-137	U	-0.0248	0.060	+/-0.0195	0.100	pCi/g						
Cobalt-60	U	0.00764	0.0621	+/-0.0187	0.100	pCi/g						
Europium-152	U	-0.0965	0.132	+/-0.0455	0.200	pCi/g						
Lanthanum-140	U	-0.00744	0.121	+/-0.038		pCi/g						
Lead-212		1.39	0.0827	+/-0.0979	0.100	pCi/g						
Lead-214		1.24	0.105	+/-0.111	0.100	pCi/g						
Mercury-203	U	-0.0366	0.056	+/-0.0185	0.100	pCi/g						
Potassium-40		34.6	0.515	+/-1.79	1.00	pCi/g						
Radium-223	U	-0.116	0.930	+/-0.332		pCi/g						
Radium-224	UI	3.87	0.886	+/-0.623		pCi/g						
Radium-226		1.05	0.106	+/-0.0914		pCi/g						
Radium-228		1.61	0.192	+/-0.189	0.500	pCi/g						
Ruthenium-106	U	0.029	0.470	+/-0.142	0.800	pCi/g						
Sodium-22	U	-0.0198	0.0683	+/-0.0222	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: March 11, 2010

Client Sample ID: RE15-10-8386
Sample ID: 247790002

Project: LANL01004
Client ID: LANL010

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

GAMMA SPEC "Dry Weight Corrected"

Strontium-85	U	0.0348	0.0632	+/-0.0178		pCi/g						
Thallium-208		0.459	0.0537	+/-0.045	0.080	pCi/g						
Thorium-227	U	-0.107	0.400	+/-0.125		pCi/g						
Thorium-231	U	-0.116	0.930	+/-0.332		pCi/g						
Thorium-234		2.43	1.77	+/-0.905	2.00	pCi/g						
Tin-113	U	-0.029	0.0661	+/-0.0204	0.100	pCi/g						
Uranium-235	U	-0.042	0.294	+/-0.089	0.500	pCi/g						
Yttrium-88	U	0.0128	0.0488	+/-0.0134	0.100	pCi/g						

Rad Liquid Scintillation Analysis

H3 "As Received"

Tritium		3.43E+05	726	+/-24200	250	pCi/L	KXK2	03/10/10	0905	960231	6	
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The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE EML HASL-300, Am-05-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	DOE HASL 300, 4.5.2.3/Ga-01-R
6	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	88.9	(50%-105%)
Plutonium-236 Tracer	ISOPU "Dry Weight Corrected"	101	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	93.3	(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

GEL LABORATORIES LLC

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Certificate of Analysis

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

Report Date: March 11, 2010

Client Sample ID: RE15-10-8386
Sample ID: 247790002

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
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C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
E General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
E Organics--Concentration of the target analyte exceeds the instrument calibration range
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
JNX Non Calibrated Compound
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.
U1 Gamma Spectroscopy--Uncertain identification
UJ Compound cannot be extracted
UJ Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d 5-day BOD--The 2:1 depletion requirement was not met for this sample
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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

Report Date: March 11, 2010

Client Sample ID: RE15-10-8387
Sample ID: 247790003
Matrix: R
Collect Date: 17-FEB-10
Receive Date: 23-FEB-10
Collector: Client
Moisture: 5.72%

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	0.00155	0.0252	+/-0.00169	0.050	pCi/g		JXH2	03/03/10	2039	957123	2
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	-8.73E-05	0.0335	+/-0.00641	0.050	pCi/g		JXH2	03/01/10	1821	957124	3
Plutonium-239/240	U	-8.73E-05	0.0253	+/-0.00641	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		0.585	0.0567	+/-0.0539	0.100	pCi/g		JXH2	03/04/10	0906	957125	4
Uranium-235/236		0.0639	0.0361	+/-0.0145	0.100	pCi/g						
Uranium-238		0.654	0.0387	+/-0.0587	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	-0.317	0.358	+/-0.112	0.200	pCi/g		MXR1	03/05/10	1026	957136	5
Bismuth-211	UI	3.04	0.362	+/-0.256		pCi/g						
Bismuth-214	UI	0.889	0.285	+/-0.0947	0.200	pCi/g						
Cadmium-109	UI	2.32	1.48	+/-0.511		pCi/g						
Cerium-139	U	0.0297	0.056	+/-0.0163	0.050	pCi/g						
Cesium-134	U	0.017	0.0993	+/-0.029	0.100	pCi/g						
Cesium-137	U	-0.00218	0.0726	+/-0.0225	0.100	pCi/g						
Cobalt-60	U	0.00954	0.0713	+/-0.0213	0.100	pCi/g						
Europium-152	U	-0.0221	0.176	+/-0.0648	0.200	pCi/g						
Lanthanum-140	U	-0.0155	0.152	+/-0.0473		pCi/g						
Lead-212		1.42	0.105	+/-0.0789	0.100	pCi/g						
Lead-214		1.10	0.143	+/-0.0977	0.100	pCi/g						
Mercury-203	U	-0.00133	0.0782	+/-0.023	0.100	pCi/g						
Potassium-40		33.6	0.658	+/-1.70	1.00	pCi/g						
Radium-223	U	-1.26	1.12	+/-0.384		pCi/g						
Radium-224	UI	4.25	1.13	+/-0.595		pCi/g						
Radium-226	UI	0.889	0.285	+/-0.0947		pCi/g						
Radium-228		1.66	0.296	+/-0.197	0.500	pCi/g						
Ruthenium-106	U	-0.44	0.594	+/-0.202	0.800	pCi/g						
Sodium-22	U	-0.0138	0.0914	+/-0.0289	0.080	pCi/g						

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

Report Date: March 11, 2010

Client Sample ID: RE15-10-8387
Sample ID: 247790003

Project: LANL01004
Client ID: LANL010

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

GAMMA SPEC "Dry Weight Corrected"

Strontium-85	U	0.0382	0.0853	+/-0.0281		pCi/g						
Thallium-208		0.488	0.0718	+/-0.051	0.080	pCi/g						
Thorium-227	U	-0.0276	0.452	+/-0.141		pCi/g						
Thorium-231	U	-1.26	1.12	+/-0.384		pCi/g						
Thorium-234	U	0.574	3.11	+/-0.929	2.00	pCi/g						
Tin-113	U	-0.0299	0.0848	+/-0.0264	0.100	pCi/g						
Uranium-235	U	0.0206	0.387	+/-0.117	0.500	pCi/g						
Yttrium-88	U	0.0204	0.0717	+/-0.0197	0.100	pCi/g						

Rad Liquid Scintillation Analysis

H3 "As Received"

Tritium		382	164	+/-61.5	250	pCi/L	KXX2	03/10/10	0917	960231	6	
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The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE EML HASL-300, Am-05-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	DOE HASL 300, 4.5.2.3/Ga-01-R
6	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	75.8	(50%-105%)
Plutonium-236 Tracer	ISOPU "Dry Weight Corrected"	74.7	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	107 *	(50%-105%)

Notes:

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

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low

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Certificate of Analysis

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

Report Date: March 11, 2010

Client Sample ID: RE15-10-8387 Project: LANL01004
Sample ID: 247790003 Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
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C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
E General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
E Organics--Concentration of the target analyte exceeds the instrument calibration range
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
JNX Non Calibrated Compound
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M Matrix Related Failure
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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
UJ Compound cannot be extracted
UJ Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d 5-day BOD--The 2:1 depletion requirement was not met for this sample
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

QUALITY CONTROL DATA

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QC Summary

Report Date: March 11, 2010

Page 1 of 7

Client : Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico
Contact: Ms. Joylene Valdez
Workorder: 247790

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch	957123									
QC1202052217	247790002	DUP								
Americium-241	U	-4.23E-05	U	-0.000349	pCi/g	0.0478		(0-1)	JXH2	03/03/1020:39
	TPU:	+/-0.00173		+/-0.00148						
	Yield:	88.9		83.8						
QC1202052218	LCS									
Americium-241	33.2			30.4	pCi/g		91.6	(75%-125%)		03/03/1020:39
	TPU:			+/-2.16						
	Yield:			106						
QC1202052216	MB									
Americium-241			U	-2.06E-06	pCi/g					03/03/1020:39
	TPU:			+/-0.0022						
	Yield:			87.6						
Batch	957124									
QC1202052220	247790002	DUP								
Plutonium-238	U	0.0111	U	0.0132	pCi/g	0.106		(0-1)	JXH2	03/01/1018:21
	TPU:	+/-0.00511		+/-0.00498						
	Yield:	101		96.3						
Plutonium-239/240	U	0.0108	U	0.016	pCi/g	0.232		(0-1)		
	TPU:	+/-0.00602		+/-0.00512						
	Yield:	101		96.3						
QC1202052221	LCS									
Plutonium-238				7.75	pCi/g			(75%-125%)		
	TPU:			+/-0.585						
	Yield:			88.9						
Plutonium-239/240	41.8			40.9	pCi/g		98	(75%-125%)		
	TPU:			+/-2.50						
	Yield:			88.9						
QC1202052219	MB									
Plutonium-238			U	0.0139	pCi/g					
	TPU:			+/-0.00609						
	Yield:			96.2						
Plutonium-239/240			U	0.00909	pCi/g					
	TPU:			+/-0.00666						
	Yield:			96.2						
Batch	957125									
QC1202052223	247790002	DUP								
Uranium-233/234		0.921		0.956	pCi/g	0.109		(0-1)	JXH2	03/03/1009:36
	TPU:	+/-0.0799		+/-0.0846						
	Yield:	93.3		98.3						
Uranium-235/236		0.0646		0.0535	pCi/g	0.180		(0-1)		
	TPU:	+/-0.0158		+/-0.0152						
	Yield:	93.3		98.3						
Uranium-238		1.14		1.22	pCi/g	0.204		(0-1)		
	TPU:	+/-0.0953		+/-0.103						

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QC Summary

Workorder: 247790

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Par	name	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date	Time
Rad Alpha Spec												
Batch	957125											
	QC1202052224	LCS	Yield:	93.3	98.3							
	Uranium-233/234				5.59	pCi/g						
			TPU:		+/-0.489							
			Yield:		103							
	Uranium-235/236				0.284	pCi/g						
			TPU:		+/-0.0686							
			Yield:		103							
	Uranium-238	5.75			5.43	pCi/g		94.4	(75%-125%)			
			TPU:		+/-0.477							
			Yield:		103							
	QC1202052222	MB										
	Uranium-233/234			U	0.00906	pCi/g						
			TPU:		+/-0.00632							
			Yield:		95.9							
	Uranium-235/236			U	0.00196	pCi/g						
			TPU:		+/-0.0034							
			Yield:		95.9							
	Uranium-238			U	0.00794	pCi/g						
			TPU:		+/-0.00424							
			Yield:		95.9							
Rad Gamma Spec												
Batch	957136											
	QC1202052273	247809001	DUP									
	Americium-241		U	-0.0807	U	0.0349	pCi/g	0.228	(0-1)	MXR1	03/05/10	13:05
			TPU:	+/-0.156		+/-0.098						
	Bismuth-211		UI	3.89	UI	4.37	pCi/g	0.356	(0-1)			
			TPU:	+/-0.332		+/-0.348						
	Bismuth-214			1.18		1.31	pCi/g	0.279	(0-1)			
			TPU:	+/-0.113		+/-0.114						
	Cadmium-109		UI	2.81	UI	2.54	pCi/g	0.120	(0-1)			
			TPU:	+/-0.650		+/-0.474						
	Cerium-139		U	0.00264	U	-0.00471	pCi/g	0.104	(0-1)			
			TPU:	+/-0.0191		+/-0.0162						
	Cesium-134		U	0.0955	UI	0.149	pCi/g	0.400	(0-1)			
			TPU:	+/-0.0302		+/-0.036						
	Cesium-137			0.131		0.125	pCi/g	0.0462	(0-1)			
			TPU:	+/-0.0344		+/-0.0283						
	Cobalt-60		U	0.00483	U	-0.014	pCi/g	0.203	(0-1)			
			TPU:	+/-0.0231		+/-0.0233						
	Europium-152		U	0.00217	U	-0.0271	pCi/g	0.114	(0-1)			
			TPU:	+/-0.0734		+/-0.0549						
	Lanthanum-140		U	0.0062	U	-0.0765	pCi/g	0.468	(0-1)			
			TPU:	+/-0.045		+/-0.0434						
	Lead-212			1.90		1.96	pCi/g	0.117	(0-1)			
			TPU:	+/-0.134		+/-0.139						
	Lead-214			1.41		1.59	pCi/g	0.336	(0-1)			
			TPU:	+/-0.127		+/-0.134						
	Mercury-203		U	0.0663	U	0.00818	pCi/g	0.565	(0-1)			
			TPU:	+/-0.0283		+/-0.0232						

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QC Summary

Workorder: 247790

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Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	957136										
Potassium-40		35.0		34.1	pCi/g	0.111		(0-1)			
		TPU: +/-2.04		+/-1.93							
Radium-223		U 0.0554	U	-0.402	pCi/g	0.260		(0-1)			
		TPU: +/-0.471		+/-0.408							
Radium-224		UI 5.10	UI	5.18	pCi/g	0.0268		(0-1)			
		TPU: +/-0.808		+/-0.702							
Radium-226		1.18		1.31	pCi/g	0.279		(0-1)			
		TPU: +/-0.113		+/-0.114							
Radium-228		2.01		2.09	pCi/g	0.100		(0-1)			
		TPU: +/-0.199		+/-0.210							
Ruthenium-106		U -0.0461	U	0.0329	pCi/g	0.111		(0-1)			
		TPU: +/-0.188		+/-0.167							
Sodium-22		U 0.0103	U	-0.0124	pCi/g	0.213		(0-1)			
		TPU: +/-0.028		+/-0.0254							
Strontium-85		UI 0.141	UI	0.0795	pCi/g	0.643		(0-1)			
		TPU: +/-0.025		+/-0.0225							
Thallium-208		0.544		0.575	pCi/g	0.139		(0-1)			
		TPU: +/-0.056		+/-0.0534							
Thorium-227		U 0.300	U	0.139	pCi/g	0.266		(0-1)			
		TPU: +/-0.164		+/-0.138							
Thorium-231		U 0.0554	U	-0.402	pCi/g	0.260		(0-1)			
		TPU: +/-0.471		+/-0.408							
Thorium-234		U 0.232		3.26	pCi/g	0.585		(0-1)			
		TPU: +/-1.23		+/-1.36							
Tin-113		U -0.00652	U	-0.0245	pCi/g	0.172		(0-1)			
		TPU: +/-0.0267		+/-0.0255							
Uranium-235		U 0.197	U	0.116	pCi/g	0.163		(0-1)			
		TPU: +/-0.136		+/-0.111							
Yttrium-88		U -0.0195	U	0.00747	pCi/g	0.362		(0-1)			
		TPU: +/-0.0187		+/-0.0186							
QC1202052274	LCS										
Americium-241	15.9			14.8	pCi/g		93.3	(75%-125%)		03/08/1009:46	
		TPU: +/-0.762		2.45	pCi/g						
Bismuth-211				0.768	pCi/g						
		TPU: +/-0.381		+/-0.144							
Bismuth-214				33.0	pCi/g						
		TPU: +/-2.24		0.0168	pCi/g						
Cadmium-109			U	+/-0.0233							
Cerium-139			U	0.112	pCi/g						
		TPU: +/-0.049		5.56	pCi/g		100	(75%-125%)			
Cesium-134				+/-0.277							
Cesium-137	5.55			6.66	pCi/g		105	(75%-125%)			
		TPU: +/-0.359		-0.0694	pCi/g						
Cobalt-60	6.36			+/-0.103							
		TPU: -0.103		+/-0.0497							
Europium-152			U								
		TPU: +/-0.103		-0.103	pCi/g						
Lanthanum-140			U								
		TPU: +/-0.0497									

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QC Summary

Workorder: 247790

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Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	957136										
Lead-212				1.19	pCi/g						
	TPU:			+/-0.119							
Lead-214				0.887	pCi/g						
	TPU:			+/-0.141							
Mercury-203			U	0.025	pCi/g						
	TPU:			+/-0.0325							
Potassium-40			U	0.669	pCi/g						
	TPU:			+/-0.355							
Radium-223			U	-0.247	pCi/g						
	TPU:			+/-0.622							
Radium-224				2.82	pCi/g						
	TPU:			+/-0.680							
Radium-226				0.768	pCi/g						
	TPU:			+/-0.144							
Radium-228				0.824	pCi/g						
	TPU:			+/-0.225							
Ruthenium-106			U	-0.893	pCi/g						
	TPU:			+/-0.313							
Sodium-22			U	-0.0166	pCi/g						
	TPU:			+/-0.0315							
Strontium-85			U	-0.126	pCi/g						
	TPU:			+/-0.0426							
Thallium-208				0.478	pCi/g						
	TPU:			+/-0.0741							
Thorium-227			U	0.239	pCi/g						
	TPU:			+/-0.232							
Thorium-231			U	-0.247	pCi/g						
	TPU:			+/-0.622							
Thorium-234			U	0.392	pCi/g						
	TPU:			+/-1.30							
Tin-113			U	0.00831	pCi/g						
	TPU:			+/-0.0466							
Uranium-235			U	0.170	pCi/g						
	TPU:			+/-0.164							
Yttrium-88			U	-0.0339	pCi/g						
	TPU:			+/-0.0261							
QC1202052272	MB										
Americium-241			U	0.0922	pCi/g						03/05/1010:54
	TPU:			+/-0.049							
Bismuth-211			U	0.00244	pCi/g						
	TPU:			+/-0.0604							
Bismuth-214			U	-0.0209	pCi/g						
	TPU:			+/-0.0217							
Cadmium-109			U	0.0132	pCi/g						
	TPU:			+/-0.156							
Cerium-139			U	0.00141	pCi/g						
	TPU:			+/-0.00645							
Cesium-134			U	0.0188	pCi/g						
	TPU:			+/-0.00984							
Cesium-137			U	-0.00469	pCi/g						
	TPU:			+/-0.00929							

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QC Summary

Workorder: 247790

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Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	957136										
Cobalt-60			U	0.000795	pCi/g						
	TPU:			+/-0.0101							
Europium-152			U	-0.0328	pCi/g						
	TPU:			+/-0.0237							
Lanthanum-140			U	-0.0247	pCi/g						
	TPU:			+/-0.014							
Lead-212			U	0.0169	pCi/g						
	TPU:			+/-0.0155							
Lcad-214			U	-0.0168	pCi/g						
	TPU:			+/-0.0214							
Mercury-203			U	0.0057	pCi/g						
	TPU:			+/-0.00835							
Potassium-40			U	-0.0373	pCi/g						
	TPU:			+/-0.129							
Radium-223			U	-0.107	pCi/g						
	TPU:			+/-0.143							
Radium-224			U	-0.105	pCi/g						
	TPU:			+/-0.145							
Radium-226			U	-0.0209	pCi/g						
	TPU:			+/-0.0217							
Radium-228			U	0.0381	pCi/g						
	TPU:			+/-0.0386							
Ruthenium-106			U	1.18E-05	pCi/g						
	TPU:			+/-0.0653							
Sodium-22			U	-0.00821	pCi/g						
	TPU:			+/-0.00989							
Strontium-85			U	-0.0284	pCi/g						
	TPU:			+/-0.0136							
Thallium-208			U	0.000722	pCi/g						
	TPU:			+/-0.0103							
Thorium-227			U	-0.0684	pCi/g						
	TPU:			+/-0.0616							
Thorium-231			U	-0.107	pCi/g						
	TPU:			+/-0.143							
Thorium-234			U	-0.933	pCi/g						
	TPU:			+/-0.433							
Tin-113			U	-0.0114	pCi/g						
	TPU:			+/-0.00983							
Uranium-235			U	-0.0601	pCi/g						
	TPU:			+/-0.0485							
Yttrium-88			U	0.0144	pCi/g						
	TPU:			+/-0.00644							
Rad Liquid Scintillation											
Batch	960231										
QC1202059614	248137001	DUP									
Tritium			225	U	145	pCi/L	0.375	(0-1)	KXK2	03/10/1019:06	
			TPU:	+/-54.6	+/-51.8						
QC1202059615	LCS										
Tritium	5540				5740	pCi/L	104	(80%-120%)		03/10/1020:44	
			TPU:		+/-417						

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QC Summary

Workorder: 247790

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Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date	Time
Rad Liquid Scintillation											
Batch	960231										
QC1202059613	MB										
Tritium			U	75.9	pCi/L					03/10/10	17:28
	TPU:			+/-49.5							

Notes:

The Qualifiers in this report are defined as follows:

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- E General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
- 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
- JNX Non Calibrated Compound
- 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
- UJ Compound cannot be extracted
- UJ Gamma Spectroscopy--Uncertain identification
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Y QC Samples were not spiked with this compound
- Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
- ^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
- d 5-day BOD--The 2:1 depletion requirement was not met for this sample
- h Preparation or preservation holding time was exceeded

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QC Summary

Workorder: 247790

Page 7 of 7

Paramname	NOM	Sample Qual	QC	Units	RER	REC%	Range	Anlst	Date	Time
-----------	-----	-------------	----	-------	-----	------	-------	-------	------	------

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# 457123 Product: Am Date: 3/5/10

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to 100 mg for GAB.			N/A
Samples have been blank corrected (if required)	✓		
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits.	✓		
Instrument bkg check is within limits.	✓		
Method 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 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:

30, LML - 3/5/10

Secondary Review Performed By:

E. J. 3/5/10

3/9

Blank Correction Report

Batch ID 957123

GEL Sample ID	Client sample ID	Parameter	Allquot	Result	TPU	MDA	Allquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1202052217	DUP	Americium-241	1.25 g	-0.000349	0.00148	0.0221	-0.00000165	pCi/g	YES
1202052218	LCS	Americium-241	0.110 g	30.4	2.16	0.200	-0.00001873	pCi/g	NO
1202052216	MB	Americium-241	1.00 g	-2.08E-06	0.0022	0.0267	-0.00000206	pCi/g	NO
247782001	RE11-10-1566	Americium-241	1.24 g	0.0111	0.00455	0.0233	-0.00000166	pCi/g	NO
247782002	RE11-10-1560	Americium-241	1.25 g	-0.000354	0.00147	0.022	-0.00000165	pCi/g	YES
247782003	RE11-10-1563	Americium-241	1.25 g	-0.00345	0.00224	0.0209	-0.00000165	pCi/g	YES
247782004	RE11-10-1576	Americium-241	1.26 g	0.00385	0.00323	0.0259	-0.00000163	pCi/g	NO
247782005	RE11-10-1564	Americium-241	1.25 g	0.0189	0.00577	0.0213	-0.00000165	pCi/g	NO
247782006	RE11-10-1581	Americium-241	1.25 g	-0.00595	0.00252	0.0215	-0.00000165	pCi/g	YES
247782007	RE11-10-1565	Americium-241	1.25 g	0.00103	0.00143	0.0214	-0.00000165	pCi/g	NO
247782008	RE11-10-1589	Americium-241	1.25 g	0.00159	0.00228	0.0225	-0.00000165	pCi/g	NO
247782009	RE11-10-1571	Americium-241	1.25 g	0.00228	0.00177	0.0205	-0.00000165	pCi/g	NO
247782010	RE11-10-1570	Americium-241	1.25 g	0.00753	0.00346	0.0234	-0.00000165	pCi/g	NO
247782011	RE11-10-1562	Americium-241	1.25 g	0.00156	0.00253	0.0198	-0.00000165	pCi/g	NO
247782012	RE11-10-1572	Americium-241	1.26 g	0.00158	0.0017	0.0254	-0.00000163	pCi/g	NO
247782013	RE11-10-1573	Americium-241	1.24 g	8.44E-05	0.00185	0.0224	-0.00000166	pCi/g	NO
247782014	RE11-10-1568	Americium-241	1.25 g	0.0126	0.00504	0.0226	-0.00000165	pCi/g	NO
247782015	RE11-10-1567	Americium-241	1.24 g	0.0016	0.00229	0.0226	-0.00000166	pCi/g	NO
247784002	WST15-10-11622	Americium-241	1.24 g	0.00105	0.00145	0.0216	-0.00000166	pCi/g	NO
247790002	RE15-10-8386	Americium-241	1.25 g	-4.23E-05	0.00173	0.0209	-0.00000165	pCi/g	YES
247790003	RE15-10-8387	Americium-241	1.25 g	0.00155	0.00169	0.0252	-0.00000165	pCi/g	NO
247855002	WSTPU-10-13243	Americium-241	1.26 g	-0.00644	0.00244	0.0192	-0.00000163	pCi/g	YES

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 957123	CHAMBER : 251	LIB FILE : ENV_ALPHA_AM
SAMPLE ID : S0247790002_AM	DETECTOR S/N : 79444	BKG FILE : B251.CNF;85
SAMPLE QTY : 1.245 G	AVERAGE %EFFICIENCY : 40.4400	BKG DATE : 28-FEB-2010
SAMPLE DATE : 17-FEB-2010 00:00:00	COUNT DATE : 3-MAR-2010 20:39:29	BKG LIVE TIME(SEC) : 60000.00
ANALYST : JXH2	ELAPSED LIVE TIME(SEC) : 43200.00	EFF FILE : W251.CNF;31
% YIELD : 88.867		CAL DATE : 28-FEB-2010

TRACER	MS/MSD	LCS/LCSD
ID : 445-96-2-SS	ID : 0244-B	ID : 0244-B
NUCLIDE : AM243	NUCLIDE : AM-241	NUCLIDE : AM-241
NOMINAL : 2.9166E+00 dpm	NOMINAL : 3.3153E+01 pCi/G	NOMINAL : 3.3153E+01 pCi/G
RESULTS : 2.5918E+00 dpm		

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
AM-241	5479.150	5498.350	88.904	2.000	-0.030	0.720	2.8409	99.94000	-4.23E-05	1.73E-03	8.58E-03	2.09E-02	1.72E-03
AM243	5270.000	5281.857	35.958	753.000	5.000	0.000	0.0000	99.78000	1.06E+00	7.66E-02	0.00E+00	3.80E-03	3.85E-02
CM-242	6102.000	6035.994	103.722	5.000	5.000	0.000	4.3413	100.0000	7.46E-03	3.37E-03	1.31E-02	3.00E-02	3.33E-03
CM-3/4	5795.020	5768.764	4.939	1.000	0.280	0.720	5.1799	100.0000	3.92E-04	1.73E-03	1.56E-02	3.50E-02	1.73E-03
CM-5/6	5386.000	5380.690	0.000	7.000	7.000	0.000	14.2480	86.09000	1.14E-02	4.36E-03	4.99E-02	1.04E-01	4.30E-03
CM-247	4946.000	4936.740	7.254	5.000	1.400	3.600	13.7917	79.30000	2.47E-03	4.86E-03	5.25E-02	1.10E-01	4.86E-03
CM-248	5078.600	5070.361	38.021	13.000	12.280	0.720	19.5080	91.00000	1.89E-02	5.77E-03	6.47E-02	1.34E-01	5.65E-03

NOTES:

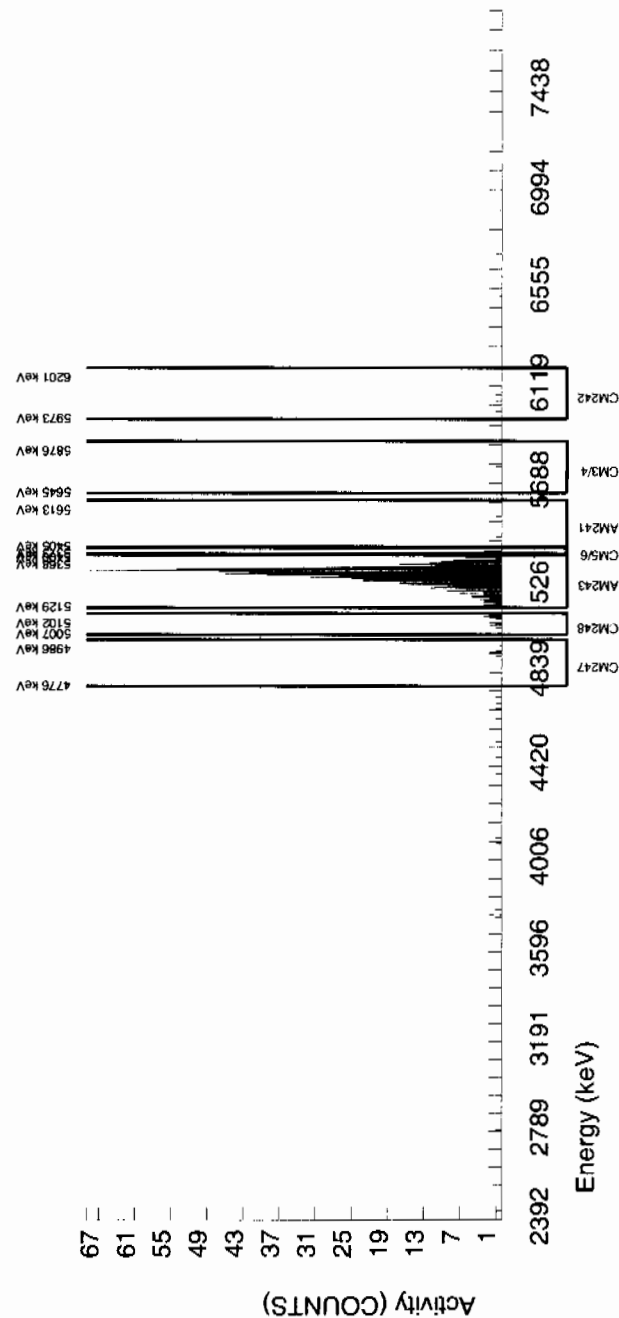
* Sg calculated via blank population.

(Sg updated 10-FEB-2010)

* Sg of AM243 calculated as sqrt(BKG AREA).

* Corrections made to the following net area due to tracer impurity:

AM-241



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 957123	CHAMBER : 252	LIB FILE : ENV_ALPHA_AM
SAMPLE ID : S0247790003_AM	DETECTOR S/N : 79445	BKG FILE : B252.CNF.85
SAMPLE QTY : 1.254 G	AVERAGE %EFFICIENCY : 39.1229	BKG DATE : 28-FEB-2010
SAMPLE DATE : 17-FEB-2010 00:00:00	COUNT DATE : 3-MAR-2010 20:39:31	BKG LIVE TIME(SEC) : 60000.00
ANALYST : JXH2	ELAPSED LIVE TIME(SEC) : 43200.00	EFF FILE : W252.CNF.31
% YIELD : 75.756		CAL DATE : 28-FEB-2010

TRACER ID : 445-96-2-SS	MS/MSD ID : 0244-B	LCS/LCSD ID : 0244-B
NUCLIDE : AM243	NUCLIDE : AM-241	NUCLIDE : AM-241
NOMINAL : 2.9166E+00 dpm	NOMINAL : 3.3153E+01 pCi/G	NOMINAL : 3.3153E+01 pCi/G
RESULTS : 2.2095E+00 dpm		

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
AM-241	5479.150	5563.588	24.697	2.000	0.919	0.000	2.8409	99.94000	1.55E-03	1.69E-03	1.03E-02	2.52E-02	1.68E-03
AM243	5270.000	5279.211	51.379	621.000	621.000	0.000	0.0000	99.78000	1.05E+00	8.01E-02	0.00E+00	4.57E-03	4.20E-02
CM-242	6102.000	6047.103	4.939	1.000	1.000	0.000	4.3413	100.0000	1.80E-03	1.80E-03	1.58E-02	3.61E-02	1.80E-03
CM-3/4	5795.020	5795.732	117.929	6.000	6.000	0.000	5.1799	100.0000	1.01E-02	4.18E-03	1.88E-02	4.22E-02	4.13E-03
CM-5/6	5386.000	5381.238	7.255	5.000	5.000	0.000	14.2480	86.09000	9.78E-03	4.42E-03	6.01E-02	1.26E-01	4.37E-03
CM-247	4946.000	4919.598	163.001	7.000	7.000	0.000	13.7917	79.30000	1.49E-02	5.70E-03	6.32E-02	1.32E-01	5.62E-03
CM-248	5078.600	5074.381	0.000	13.000	13.000	0.000	19.5080	91.00000	2.40E-02	6.85E-03	7.79E-02	1.61E-01	6.67E-03

NOTES:

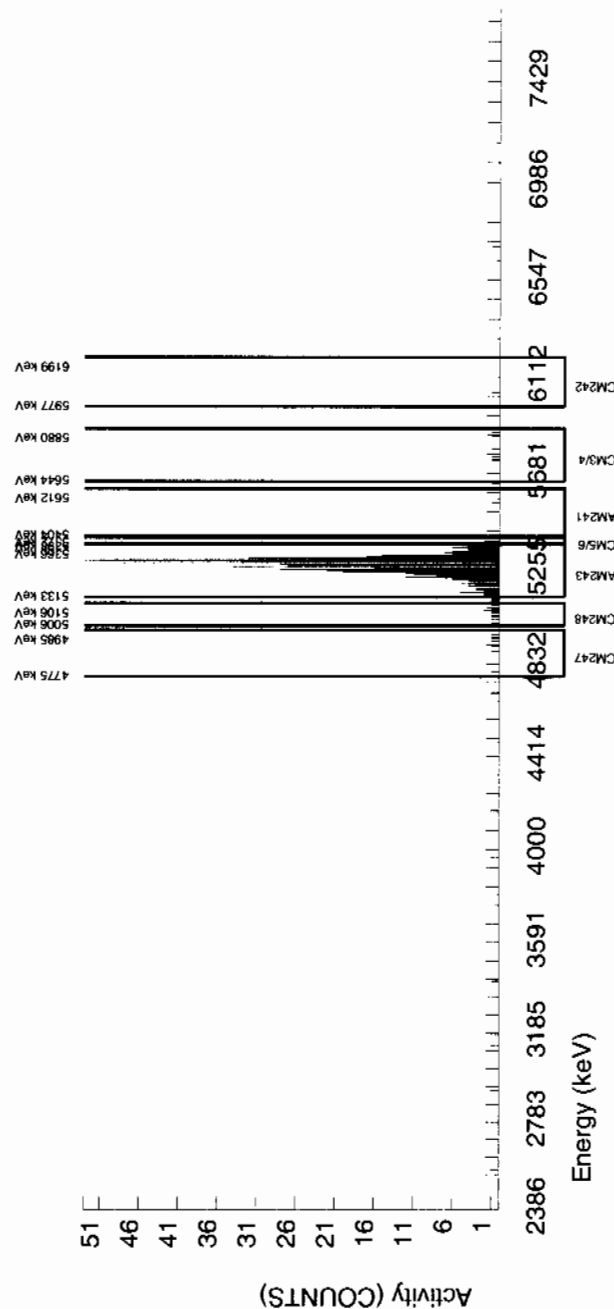
* Sg calculated via blank population.

(Sg updated 10-FEB-2010)

* Sg of AM243 calculated as sqrt(BKG AREA).

* Corrections made to the following net area due to tracer impurity:

AM-241



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER	957123
SAMPLE ID	S1202052216_AM
SAMPLE QTY	1.000 G
SAMPLE DATE	26-FEB-2010 00:00
ANALYST	JXH2
% YIELD	87.563

CHAMBER : 254
DETECTOR S/N : 79447
AVERAGE %EFFICIENCY : 40.1306
COUNT DATE : 3-MAR-2010 20:39:38
ELAPSED LIVE TIME(SEC) : 43200.00

```
LIB FILE : ENV_ALPHA_AM
BKG FILE : B254.CNF;85
BKG DATE : 28-FEB-2010
BKG LIVE TIME(SEC) : 60000.00
EFF FILE : W254.CNF;30
CAL DATE : 28-FEB-2010
```

TRACER

NUCLIDE : AM243
NOMINAL : 2.9165E+00 dpm
RESULTS : 2.5538E+00 dpm

MS/MSD

ID : 0244-B
NUCLIDE : AM-241
NOMINAL : 3.3152E+01 pCi/G

CS/CSD

ID : 0244-B
 NUCLIDE : AM-241
 NOMINAL : 3.3152E+01 pCi/G

NUCLIDE ACTIVITY SUMMARY

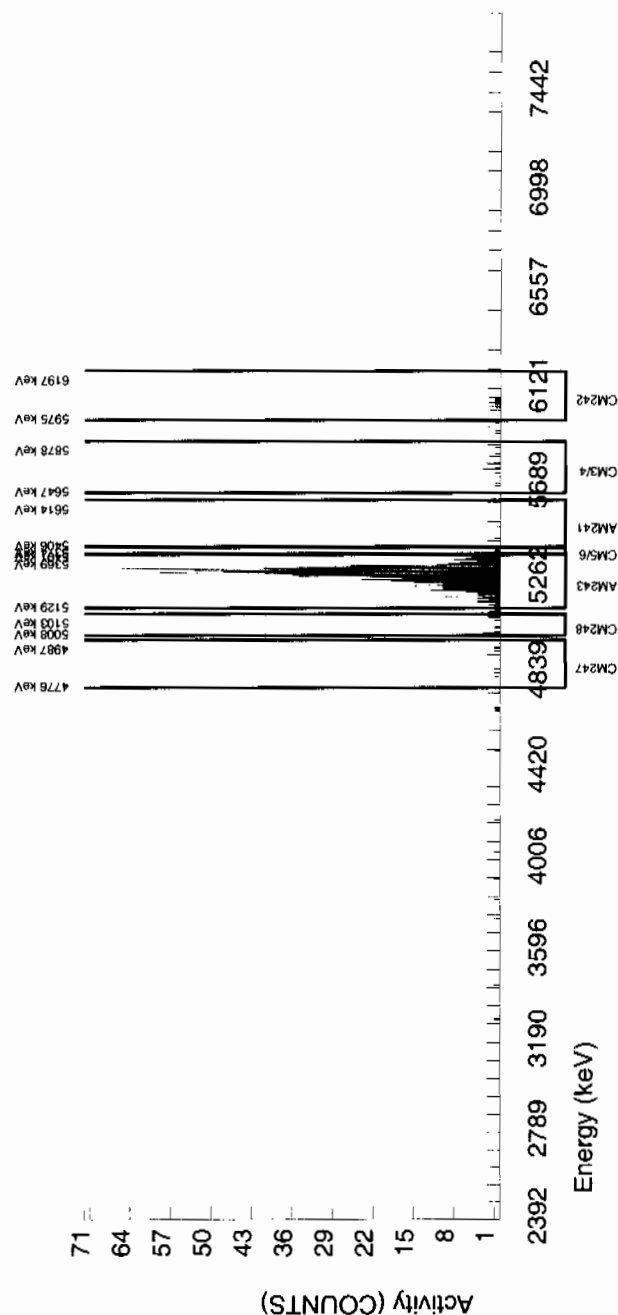
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/g	TPU 1-SIGMA	DLC pCi/g	MDC pCi/g	UNC pCi/g
AM-241	5479.150	5475.247	54.290	2.000	-0.001	0.720	2.8409	99.94000	-2.06E-06	2.20E-03	1.09E-02	2.67E-02	2.20E-03
AM-243	5270.000	5283.259	32.487	737.000	736.280	0.720	0.8485	99.78000	1.31E+00	9.60E-02	3.27E-03	1.14E-02	4.85E-02
CM-242	6102.000	6057.999	59.225	12.000	12.000	0.000	4.3413	100.0000	2.19E-02	6.48E-03	1.67E-02	3.82E-02	6.33E-03
CM-3/4	5795.020	5782.667	57.940	15.000	15.000	0.000	5.1799	100.0000	2.67E-02	7.10E-03	1.99E-02	4.46E-02	6.90E-03
CM-5/6	5386.000	5383.454	7.249	5.000	4.280	0.720	14.2480	86.09000	8.85E-03	4.89E-03	6.36E-02	1.33E-01	4.86E-03
CM-247	4946.000	4895.015	4.935	11.000	9.560	1.440	13.7917	79.30000	2.15E-02	7.91E-03	6.68E-02	1.40E-01	7.79E-03
CM-248	5078.600	5055.738	69.014	12.000	12.000	0.000	19.5080	91.00000	2.35E-02	6.94E-03	8.23E-02	1.70E-01	6.78E-03

NOTES:

* Sg calculated via blank population.
(Sg updated 10-FEB-2010)

* Sg of AM243 calculated as $\sqrt{\text{BKG AREA}}$.

* Corrections made to the following net area due to tracer impurity:
AM-241



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

```
LIB FILE : ENV_ALPHA_AM
BKG FILE : B255.CNF:85
BKG DATE : 28-FEB-2010
BKG LIVE TIME(SEC) : 60000.00
EFF FILE : W255.CNF:30
CAL DATE : 28-FEB-2010
```

CHAMBER	255
DETECTOR S/N	79448
AVERAGE %EFFICIENCY	40.4666
COUNT DATE	3-MAR-2010 20:39:40
ELAPSED LIVE TIME(SEC)	43200.00

BATCH NUMBER	:	957123
SAMPLE ID	:	S1202052217_AM
SAMPLE QTY	:	1.250 G
SAMPLE DATE	:	17-FEB-2010 00:00:00
ANALYST	:	JXH2
% YIELD	:	83.803

LCS/LCSD
ID : 0244-B
NUCLIDE : AM-241
NOMINAL : 3.3153E+01 pCi/G

MS/MSD
ID : 0244-B
NUCLIDE : AM-241
NOMINAL : 3.3153E+01 pCi/G

TRACER	:	445-96-2-SS
ID	:	AM243
NUCLIDE	:	2.9166E+00 dpm
NOMINAL	:	2.4442E+00 dpm
RESULTS	:	

NUCLIDE ACTIVITY SUMMARY

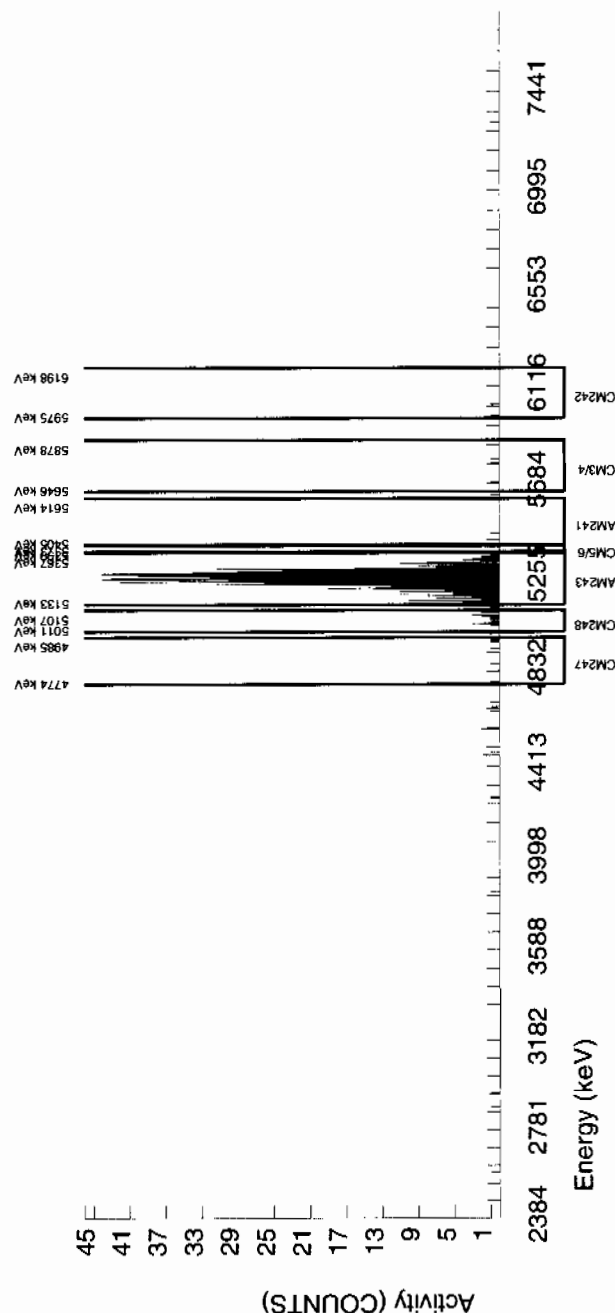
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/g	TPU 1-SIGMA	DLC pCi/g	MDC pCi/g	UNC pCi/g
AM-241	5479.150	5463.531	4.930	1.000	-0.236	0.000	2.8409	99.94000	-3.49E-04	1.48E-03	9.05E-03	2.21E-02	1.48E-03
AM243	5270.000	5255.068	70.042	712.000	710.560	1.440	1.2000	99.78000	1.05E+00	7.75E-02	3.83E-03	1.17E-02	3.95E-02
CM-242	6102.000	6028.177	54.226	5.000	5.000	0.000	4.3413	100.0000	7.87E-03	3.55E-03	1.38E-02	3.16E-02	3.52E-03
CM-3/4	5795.020	5757.104	98.593	3.000	2.280	0.720	5.1799	100.0000	3.37E-03	2.78E-03	1.65E-02	3.70E-02	2.77E-03
CM-5/6	5386.000	5378.004	4.930	1.000	1.000	0.000	14.2480	86.09000	1.71E-03	1.72E-03	5.27E-02	1.10E-01	1.71E-03
CM-247	4946.000	4902.611	0.900	9.000	6.840	2.160	13.7917	79.30000	1.27E-02	6.10E-03	5.54E-02	1.16E-01	6.05E-03
CM-248	5078.600	5071.163	0.000	22.000	21.280	0.720	19.5080	91.00000	3.45E-02	8.00E-03	6.83E-02	1.41E-01	7.70E-03

NOTES:

* Sg calculated via blank population.
(Sg updated 10-FEB-2010)

* Sg of AM243 calculated as $\sqrt{\text{BKG AREA}}$.

* Corrections made to the following net area due to tracer impurity:
AM-24†



GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 957123	CHAMBER : 256	LIB FILE : ENV_ALPHA_AM
SAMPLE ID : S1202052218_AM	DETECTOR S/N : 79449	BKG FILE : B256.CNF:87
SAMPLE QTY : 0.110 G	AVERAGE %EFFICIENCY : 40.3572	BKG DATE : 28-FEB-2010
SAMPLE DATE : 26-FEB-2010 00:00:00	COUNT DATE : 3-MAR-2010 20:39:43	BKG LIVE TIME(SEC) : 60000.00
ANALYST : JXH2	ELAPSED LIVE TIME(SEC) : 43200.00	EFF FILE : W256.CNF:30
% YIELD : 105.653		CAL DATE : 28-FEB-2010

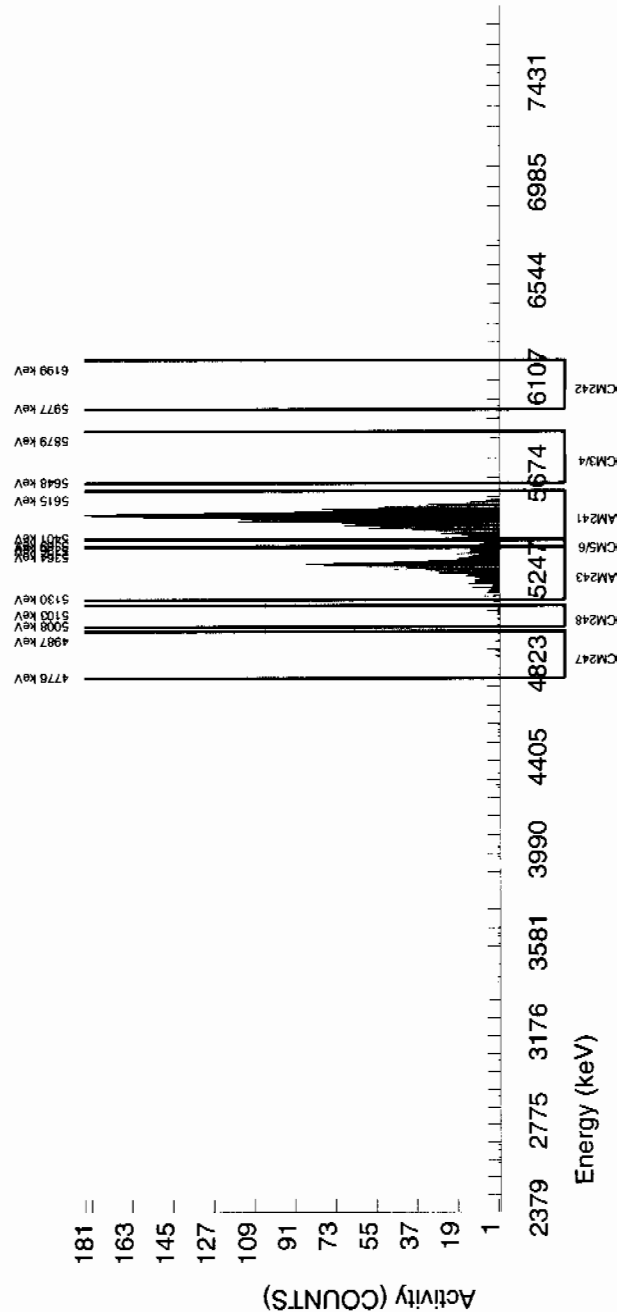
TRACER	MS/MSD	LCS/LCSD
ID : 445-96-2-SS	ID : 0244-B	ID : 0244-B
NUCLIDE : AM243	NUCLIDE : AM-241	NUCLIDE : AM-241
NOMINAL : 2.9165E+00 dpm	NOMINAL : 3.3152E+01 pCi/G	NOMINAL : 3.3152E+01 pCi/G
RESULTS : 3.0814E+00 dpm		

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
AM-241	5479.150	5499.788	46.626	2284.000	2278.845	3.600	2.8409	99.94000	3.04E+01	2.16E+00	8.18E-02	2.00E-01	6.38E-01
AM-243	5270.000	5279.684	32.207	897.000	893.400	3.600	1.8974	99.78000	1.19E+01	9.04E-01	5.47E-02	1.46E-01	4.01E-01
CM-242	6102.000	6036.304	4.920	4.000	4.000	0.000	4.3413	100.00000	5.48E-02	2.76E-02	1.25E-01	2.86E-01	2.74E-02
CM-3/4	5795.020	5763.292	0.000	1.000	0.280	0.720	5.1799	100.00000	3.74E-03	1.65E-02	1.49E-01	3.34E-01	1.64E-02
CM-5/6	5386.000	5383.073	0.000	68.000	68.000	0.000	14.2480	86.09000	1.05E+00	1.46E-01	4.76E-01	9.95E-01	1.28E-01
CM-247	4946.000	4906.690	68.681	11.000	11.000	0.000	13.7917	79.30000	1.85E-01	5.72E-02	5.00E-01	1.05E+00	5.58E-02
CM-248	5078.600	5074.465	0.000	16.000	16.000	0.000	19.5080	91.00000	2.35E-01	6.08E-02	6.17E-01	1.27E+00	5.86E-02

NOTES:

- * Sg calculated via blank population.
(Sg updated 10-FEB-2010)
- * Sg of AM243 calculated as sqrt(BKG AREA).
- * Corrections made to the following net area due to tracer impurity:
AM-241



Radiochemistry Batch Checklist, Rev10

Batch# 957124 Product: Pu Date: 3/5/10

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to 100 mg for GAB.			N/A
Samples have been blank corrected (if required)	✓		
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits.	✓		
Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%.	✓		
Or meets the client's required RER acceptance criteria.			
Tracer yield is 15-125% . Carrier yield 25-125%.	✓		
Or meets the client's contract acceptance criteria.			
Method blank is less than the RDL/ LLD.	✓		
(If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.			N/A
Smears Taken for Radioactive batches.			N/A
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms.	✓		
All line outs initialed and dated.			
No transcription errors are apparent.			
Aux data is correct.			N/A
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			N/A
Batch entered into Case Narrative.	✓		
Batch Data Exception Reports (DER) completed, if applicable.			N/A
Batch Data Exception Reports (DER) second reviewed and disposition verified to be completed.			N/A
Aliquot Correction completed if required.			N/A
Review sample historical results if available (if REMF, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

RADcheckdistrev10, revised 1/13/2010

Primary Review Performed By: J. L. M. - 3/5/10

Secondary Review Performed By: [Signature] 3/5/10

Plutonium Que Sheet

24-FEB-10

Batch #: 957124 ²³⁶ Pu-238 Analyst: JXH2 First Client Due Date: 09-MAR-10 Internal Due Date: 27-FEB-10

Tracer Isotope(s): Pu-242/Pu-238 Tracer Code: 1-30-B Expiration Date: 1-27-11 Vol: 0.1

LCS Isotope(s): Pu-239/Pu-238 LCS Code: --- Expiration Date: --- Vol: ---

Spike Isotope(s): Pu-239/Pu-238 Spike Code: --- Expiration Date: --- Vol: ---

Prep Date: 2-26-10 Initials: JET Pipet ID: 297058 Balance ID: 50410272

Witness: due 2/26/10

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry Aliquot (g/1/10)	Pu Det #
247782001-1	RE11-10-1566	SAMPLE	.05 pCi/g		SOIL	LANL010	16-FEB-10	1	1	1.244	40 48 *
247782002-1	RE11-10-1560	SAMPLE	.05 pCi/g		SOIL	LANL010	16-FEB-10	2	2	1.252	65 *
247782003-1	RE11-10-1563	SAMPLE	.05 pCi/g		SOIL	LANL010	16-FEB-10	3	3	1.248	44 66 *
247782004-1	RE11-10-1576	SAMPLE	.05 pCi/g		SOIL	LANL010	16-FEB-10	4	4	1.255	67 *
247782005-1	RE11-10-1564	SAMPLE	.05 pCi/g		SOIL	LANL010	16-FEB-10	5	5	1.252	45 68 *
247782006-1	RE11-10-1561	SAMPLE	.05 pCi/g		SOIL	LANL010	16-FEB-10	6	6	1.251	69 *
247782007-1	RE11-10-1565	SAMPLE	.05 pCi/g		SOIL	LANL010	16-FEB-10	7	7	1.245	46 70 *
247782008-1	RE11-10-1569	SAMPLE	.05 pCi/g		SOIL	LANL010	16-FEB-10	8	8	1.245	71 *
247782009-1	RE11-10-1571	SAMPLE	.05 pCi/g		SOIL	LANL010	16-FEB-10	9	9	1.245	72 *
247782010-1	RE11-10-1570	SAMPLE	.05 pCi/g		SOIL	LANL010	16-FEB-10	10	10	1.246	77 73 *
247782011-1	RE11-10-1562	SAMPLE	.05 pCi/g		SOIL	LANL010	16-FEB-10	11	11	1.248	74 *
247782012-1	RE11-10-1572	SAMPLE	.05 pCi/g		SOIL	LANL010	16-FEB-10	12	12	1.256	48 75 *
247782013-1	RE11-10-1573	SAMPLE	.05 pCi/g		SOIL	LANL010	16-FEB-10	13	13	1.244	76 *
247782014-1	RE11-10-1568	SAMPLE	.05 pCi/g		SOIL	LANL010	16-FEB-10	14	14	1.248	65 83 *
247782015-1	RE11-10-1567	SAMPLE	.05 pCi/g		SOIL	LANL010	16-FEB-10	15	15	1.241	84 *
247782002-1	WST15-10-11622	SAMPLE	.05 pCi/g		SOIL	LANL010	17-FEB-10	16	16	1.244	85 *
247790002-1	RE15-10-8386	SAMPLE	.05 pCi/g		SOIL	LANL010	17-FEB-10	17	17	1.245	86 *
247790003-1	RE15-10-8387	SAMPLE	.05 pCi/g		SOIL	LANL010	17-FEB-10	18	18	1.254	87 *
247855002-1	WSTPU-10-13243	SAMPLE	.05 pCi/g		SOIL	LANL010	17-FEB-10	19	19	1.260	88 *
1202052219-1	MB for batch 957124	MB	.05 pCi/g		SOIL	QC ACCOUNT		20	20		89
1202052220-1	RE15-10-8386(247790002DUP)	DUP	.05 pCi/g		SOIL	QC ACCOUNT	17-FEB-10	21	21	1.250	90
1202052221-1	LCS for batch 957124	LCS	.05 pCi/g		SOIL	QC ACCOUNT		22	22	0.116	91

*SRM 0244-B exp 4-30-20

Solid Sample Dissolution by: LEACH or DIGESTION
Circle One

Data Reviewed By: Sup ALF-3/5/10

Choose SOP Used: GL-RAD-A-011, GL-RAD-A-036, GL-RAD-A-045, GL-RAD-A-043

GEL Laboratories LLC, Radiochemistry Division

Blank Correction Report

Batch ID 957124

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1202052220	DUP	Plutonium-238	1.25 g	0.0132	0.00498	0.0246	.01112	pCi/g	YES
		Plutonium-239/240	1.25 g	0.016	0.00512	0.0186	.007272	pCi/g	YES
1202052221	LCS	Plutonium-238	0.110 g	7.75	0.585	0.285	.126363636	pCi/g	NO
		Plutonium-239/240	0.110 g	40.9	2.50	0.215	.082636364	pCi/g	NO
1202052219	MB	Plutonium-238	1.00 g	0.0139	0.00609	0.0339	.0139	pCi/g	YES
		Plutonium-239/240	1.00 g	0.00909	0.00666	0.0256	.00909	pCi/g	YES
247782001	RE11-10-1566	Plutonium-238	1.24 g	0.0183	0.00708	0.0355	.011209677	pCi/g	YES
		Plutonium-239/240	1.24 g	0.0305	0.0095	0.0269	.007330645	pCi/g	YES
247782002	RE11-10-1560	Plutonium-238	1.25 g	0.0195	0.00816	0.0253	.01112	pCi/g	YES
		Plutonium-239/240	1.25 g	0.00705	0.00389	0.0191	.007272	pCi/g	YES
247782003	RE11-10-1563	Plutonium-238	1.25 g	0.022	0.00706	0.032	.01112	pCi/g	YES
		Plutonium-239/240	1.25 g	0.00327	0.00428	0.0243	.007272	pCi/g	YES
247782004	RE11-10-1576	Plutonium-238	1.26 g	0.00686	0.00503	0.0256	.011031746	pCi/g	YES
		Plutonium-239/240	1.26 g	0.00879	0.00427	0.0193	.007214286	pCi/g	YES
247782005	RE11-10-1564	Plutonium-238	1.25 g	0.0202	0.0068	0.0326	.01112	pCi/g	YES
		Plutonium-239/240	1.25 g	0.0392	0.00978	0.0247	.007272	pCi/g	NO
247782006	RE11-10-1561	Plutonium-238	1.25 g	0.0122	0.00493	0.0257	.01112	pCi/g	YES
		Plutonium-239/240	1.25 g	0.00597	0.00413	0.0194	.007272	pCi/g	YES
247782007	RE11-10-1565	Plutonium-238	1.25 g	0.0189	0.00687	0.0305	.01112	pCi/g	YES
		Plutonium-239/240	1.25 g	0.0115	0.00528	0.0232	.007272	pCi/g	YES
247782008	RE11-10-1569	Plutonium-238	1.25 g	0.0148	0.0078	0.0242	.01112	pCi/g	YES
		Plutonium-239/240	1.25 g	0.00404	0.00354	0.0183	.007272	pCi/g	YES
247782009	RE11-10-1571	Plutonium-238	1.25 g	0.0249	0.00999	0.0287	.01112	pCi/g	YES
		Plutonium-239/240	1.25 g	0.0053	0.00479	0.0217	.007272	pCi/g	YES
247782010	RE11-10-1570	Plutonium-238	1.25 g	0.0101	0.00649	0.0327	.01112	pCi/g	YES
		Plutonium-239/240	1.25 g	0.0123	0.00565	0.0248	.007272	pCi/g	YES
247782011	RE11-10-1562	Plutonium-238	1.25 g	0.0135	0.00508	0.0251	.01112	pCi/g	YES
		Plutonium-239/240	1.25 g	0.0125	0.00637	0.0189	.007272	pCi/g	YES
247782012	RE11-10-1572	Plutonium-238	1.26 g	0.0206	0.008	0.0317	.011031746	pCi/g	YES
		Plutonium-239/240	1.26 g	0.00972	0.00683	0.024	.007214286	pCi/g	YES
247782013	RE11-10-1573	Plutonium-238	1.24 g	0.00402	0.00331	0.027	.011209677	pCi/g	YES
		Plutonium-239/240	1.24 g	0.0141	0.00503	0.0204	.007330645	pCi/g	YES
247782014	RE11-10-1568	Plutonium-238	1.25 g	0.00466	0.00739	0.0347	.01112	pCi/g	YES
		Plutonium-239/240	1.25 g	0.0203	0.00734	0.0263	.007272	pCi/g	YES
247782015	RE11-10-1567	Plutonium-238	1.24 g	0.0114	0.00461	0.0241	.011209677	pCi/g	YES
		Plutonium-239/240	1.24 g	0.0047	0.00272	0.0182	.007330645	pCi/g	YES
247784002	WST15-10-11622	Plutonium-238	1.24 g	0.00802	0.00468	0.027	.011209677	pCi/g	YES
		Plutonium-239/240	1.24 g	0.00626	0.00433	0.0204	.007330645	pCi/g	YES
247790002	RE15-10-8386	Plutonium-238	1.25 g	0.0111	0.00511	0.026	.01112	pCi/g	YES

Blank Correction Report

GEL Sample ID	Client sample ID	Parameter	Allquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
247790002	RE15-10-8386	Plutonium-239/240	1.25 g	0.0108	0.00602	0.0196	.007272	pCi/g	YES
247790003	RE15-10-8387	Plutonium-238	1.25 g	-8.73E-05	0.00641	0.0335	.01112	pCi/g	YES
		Plutonium-239/240	1.25 g	-8.73E-05	0.00641	0.0253	.007272	pCi/g	YES
247855002	WSTPU-10-13243	Plutonium-238	1.26 g	-0.00361	0.007	0.0248	.011031746	pCi/g	YES
		Plutonium-239/240	1.26 g	0.00458	0.00414	0.0187	.007214286	pCi/g	YES

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 957124	LIB FILE : ENV_ALPHA_PU
SAMPLE ID : S0247790002_PU	BKG FILE : B086.CNF;1028
SAMPLE QTY : 1.245 G	BKG DATE : 28-FEB-2010
SAMPLE DATE : 17-FEB-2010 00:00:00	BKG LIVE TIME(SEC) : 60000.00
ANALYST : JXH2	EFF FILE : W086.CNF;283
% YIELD : 101.059	CAL DATE : 9-FEB-2010

TRACER	MS/MSD	LCS/LCSD
ID : 1430-B	ID : 0244-B	ID : 0244-B
NUCLIDE : PU-236	NUCLIDE : PU-9/0	NUCLIDE : PU-9/0
NOMINAL : 6.5769E+00 dpm	NOMINAL : 4.1778E+01 pCi/G	NOMINAL : 4.1778E+01 pCi/G
RESULTS : 6.6466E+00 dpm		

NUCLIDE ACTIVITY SUMMARY

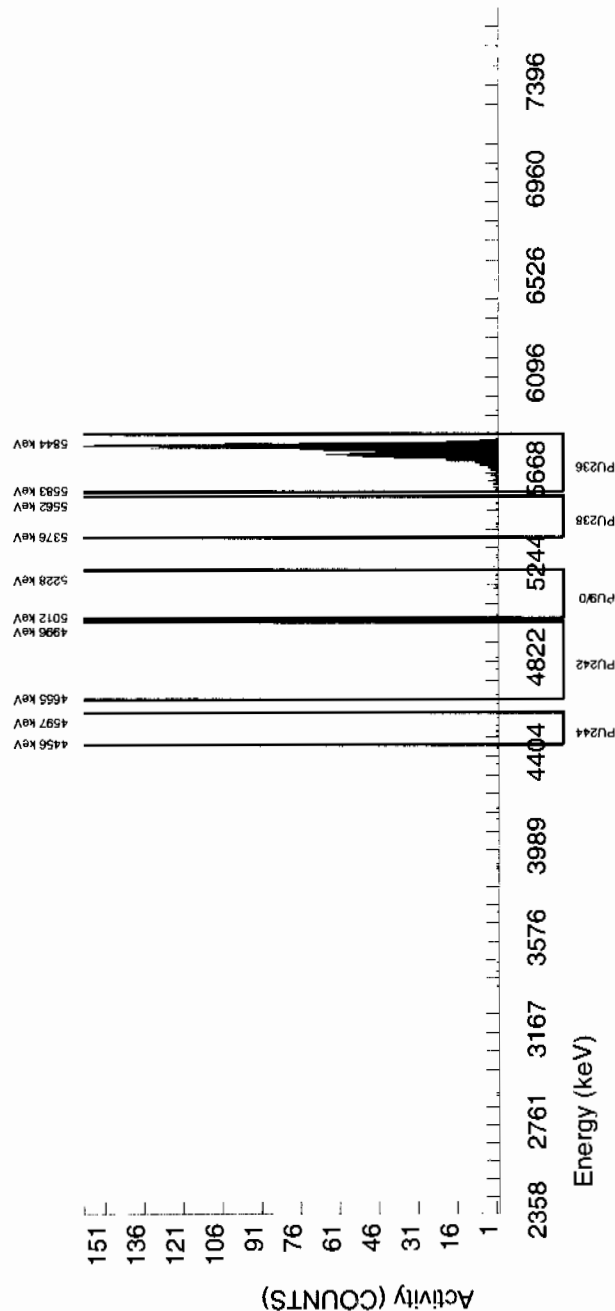
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-236	5749.000	5776.680	28.900	1398.000	1396.560	1.440	1.2000	100.0000	2.38E+00	1.30E-01	4.37E-03	1.33E-02	6.37E-02
PU-238	5499.000	5469.462	150.619	8.000	6.560	1.440	2.9312	99.900000	1.11E-02	5.11E-03	1.07E-02	2.60E-02	5.08E-03
PU-9/0	5155.000	5154.415	19.978	10.000	6.400	3.600	2.0604	99.900000	1.08E-02	6.02E-03	7.52E-03	1.96E-02	6.00E-03
PU242	4890.000	4771.566	160.660	3.000	1.560	1.440	*****	100.0000	2.64E-03	3.40E-03	4.68E-01	9.40E-01	3.39E-03
PU-244	4589.000	4521.268	50.206	4.000	3.280	0.720	3.7241	99.900000	5.55E-03	3.60E-03	1.36E-02	3.18E-02	3.59E-03

NOTES:

* Sg calculated via blank population.

(Sg updated 10-FEB-2010)

* Sg of PU-236 calculated as sqrt(BKG AREA).



GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 957124	CHAMBER : 087	LIB FILE : ENV_ALPHA_PU
SAMPLE ID : S0247790003_PU	DETECTOR S/N : 78199	BKG FILE : B087.CNF;1035
SAMPLE QTY : 1.254 G	AVERAGE %EFFICIENCY : 30.6587	BKG DATE : 28-FEB-2010
SAMPLE DATE : 17-FEB-2010 00:00:00	COUNT DATE : 1-MAR-2010 18:21:34	BKG LIVE TIME(SEC) : 60000.00
ANALYST : JXH2	ELAPSED LIVE TIME(SEC) : 43200.00	EFF FILE : W087.CNF;276
% YIELD : 74.657		CAL DATE : 9-FEB-2010

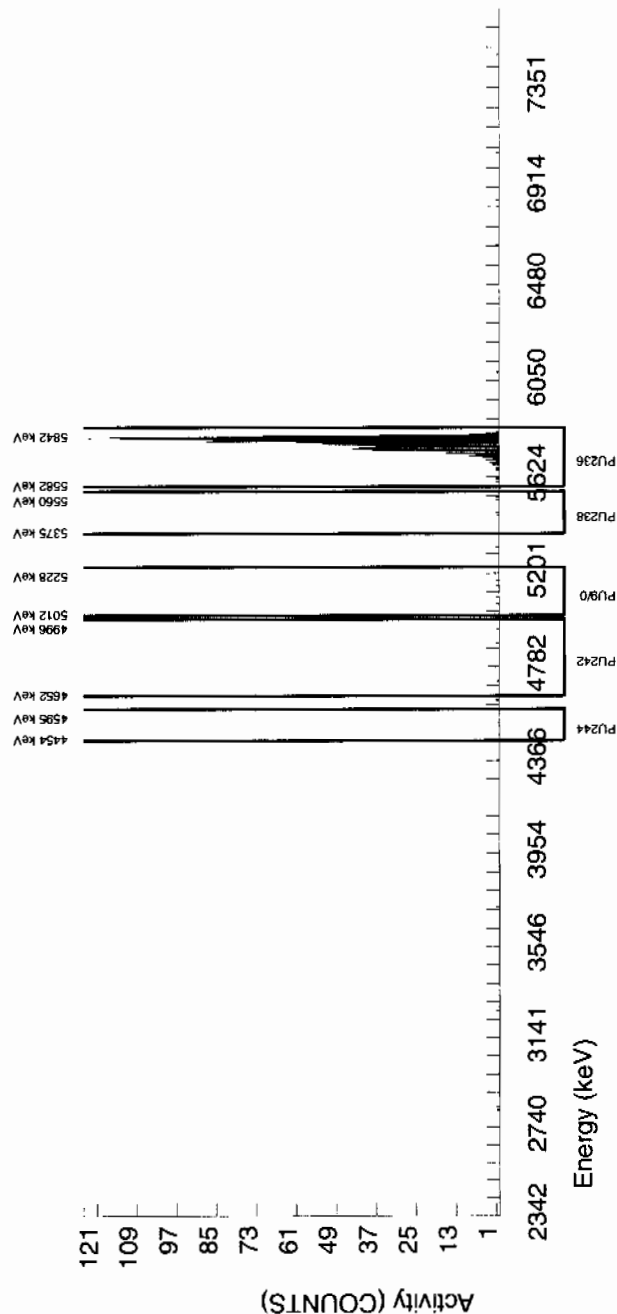
TRACER ID : 1430-B	MS/MSD ID : 0244-B	LCS/LCSD ID : 0244-B
NUCLIDE : PU-236	NUCLIDE : PU-9/0	NUCLIDE : PU-9/0
NOMINAL : 6.5769E+00 dpm	NOMINAL : 4.1778E+01 pCi/G	NOMINAL : 4.1778E+01 pCi/G
RESULTS : 4.9102E+00 dpm		

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-236	5749.000	5780.479	30.606	1076.000	1074.560	1.440	1.2000	100.0000	2.36E+00	1.38E-01	5.64E-03	1.72E-02	7.22E-02
PU-238	5499.000	5496.807	0.000	5.000	-0.040	5.040	2.9312	99.900000	-8.73E-05	6.41E-03	1.38E-02	3.35E-02	6.41E-03
PU-9/0	5155.000	5129.717	103.911	5.000	-0.040	5.040	2.0604	99.900000	-8.73E-05	6.41E-03	9.70E-03	2.53E-02	6.41E-03
PU242	4890.000	4810.739	277.097	4.000	-1.040	5.040	*****	100.0000	-2.27E-03	6.02E-03	6.03E-01	1.21E+00	6.02E-03
PU-244	4589.000	4524.449	0.000	0.000	-1.440	1.440	3.7241	99.900000	-3.14E-03	3.12E-03	1.75E-02	4.10E-02	3.11E-03

NOTES:

- * Sg calculated via blank population.
- (Sg updated 10-FEB-2010)
- * Sg of PU-236 calculated as sqrt(BKG AREA).



GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 957124 SAMPLE ID : S1202052219_PU SAMPLE QTY : 1.000 G SAMPLE DATE : 26-FEB-2010 00:00:00 ANALYST : JXH2 % YIELD : 96.230		CHAMBER : 089 DETECTOR S/N : 78262 AVERAGE %EFFICIENCY : 29.4965 COUNT DATE : 1-MAR-2010 18:21:35 ELAPSED LIVE TIME(SEC) : 43199.99	LIB FILE : ENV_ALPHA_PU BKG FILE : B089.CNF:723 BKG DATE : 28-FEB-2010 BKG LIVE TIME(SEC) : 59999.99 EFF FILE : W089.CNF:195 CAL DATE : 9-FEB-2010
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TRACER ID : 1430-B NUCLIDE : PU-236 NOMINAL : 6.5378E+00 dpm RESULTS : 6.2913E+00 dpm	MS/MSD ID : 0244-B NUCLIDE : PU-9/0 NOMINAL : 4.1778E+01 pCi/G	LCS/LCSD ID : 0244-B NUCLIDE : PU-9/0 NOMINAL : 4.1778E+01 pCi/G
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NUCLIDE ACTIVITY SUMMARY

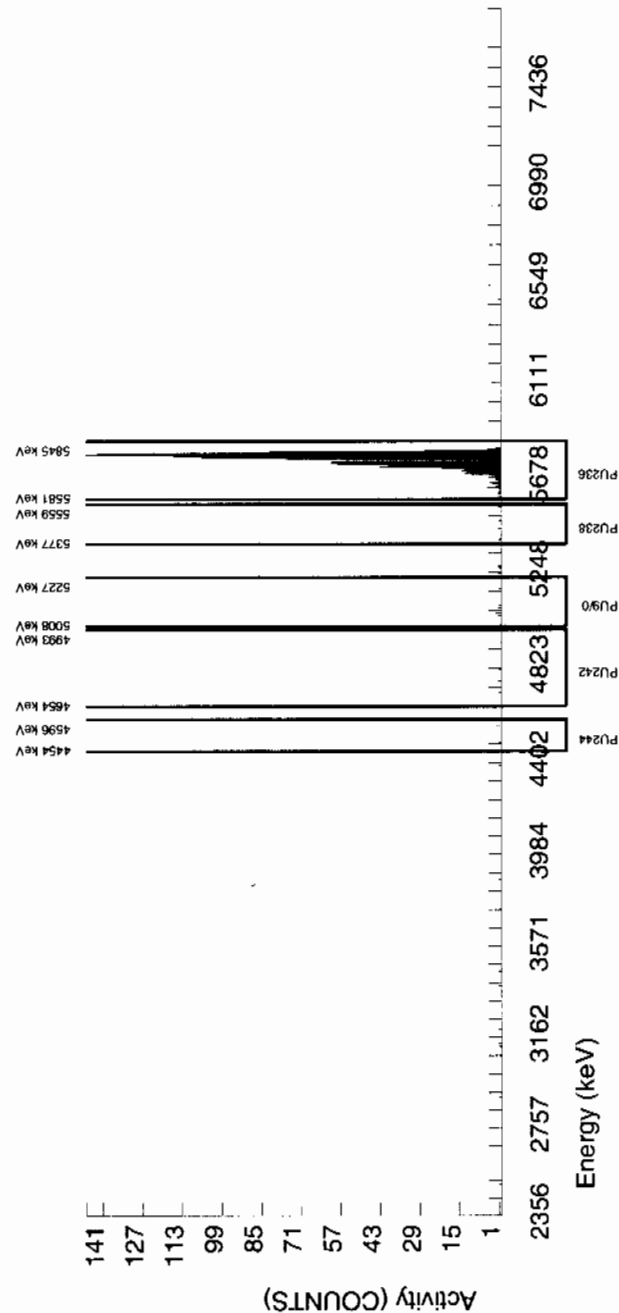
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-236	5749.000	5768.731	30.867	1334.000	1332.560	1.440	1.2000	100.0000	2.94E+00	1.63E-01	5.71E-03	1.74E-02	8.07E-02
PU-238	5499.000	5479.310	149.646	7.000	6.280	0.720	2.9312	99.900000	1.39E-02	6.09E-03	1.40E-02	3.39E-02	6.05E-03
PU-9/0	5155.000	5107.273	4.988	7.000	4.120	2.880	2.0604	99.900000	9.09E-03	6.66E-03	9.81E-03	2.56E-02	6.65E-03
PU242	4890.000	4814.062	213.868	6.000	3.120	2.880	*****	100.0000	6.88E-03	6.27E-03	6.10E-01	1.23E+00	6.26E-03
PU-244	4589.000	4496.003	4.988	1.000	0.280	0.720	3.7241	99.900000	6.18E-04	2.72E-03	1.77E-02	4.14E-02	2.72E-03

NOTES:

* Sg calculated via blank population.

(Sg updated 10-FEB-2010)

* Sg of PU-236 calculated as sqrt(BKG AREA).



GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 957124
 SAMPLE ID : S1202052220_PU
 SAMPLE QTY : 1.250 G
 SAMPLE DATE : 17-FEB-2010 00:00:00
 ANALYST : JXH2
 % YIELD : 96.274

CHAMBER : 090
 DETECTOR S/N : 78263
 AVERAGE %EFFICIENCY : 32.5428
 COUNT DATE : 1-MAR-2010 18:21:35
 ELAPSED LIVE TIME(SEC) : 43199.99

LIB FILE : ENV_ALPHA_PU
 BKG FILE : B090.CNF;731
 BKG DATE : 28-FEB-2010
 BKG LIVE TIME(SEC) : 59999.99
 EFF FILE : W090.CNF;201
 CAL DATE : 9-FEB-2010

TRACER
 ID : 1430-B
 NUCLEIDE : PU-236
 NOMINAL : 6.5769E+00 dpm
 RESULTS : 6.3319E+00 dpm

MS/MSD
 ID : 0244-B
 NUCLEIDE : PU-9/0
 NOMINAL : 4.1778E+01 pCi/G

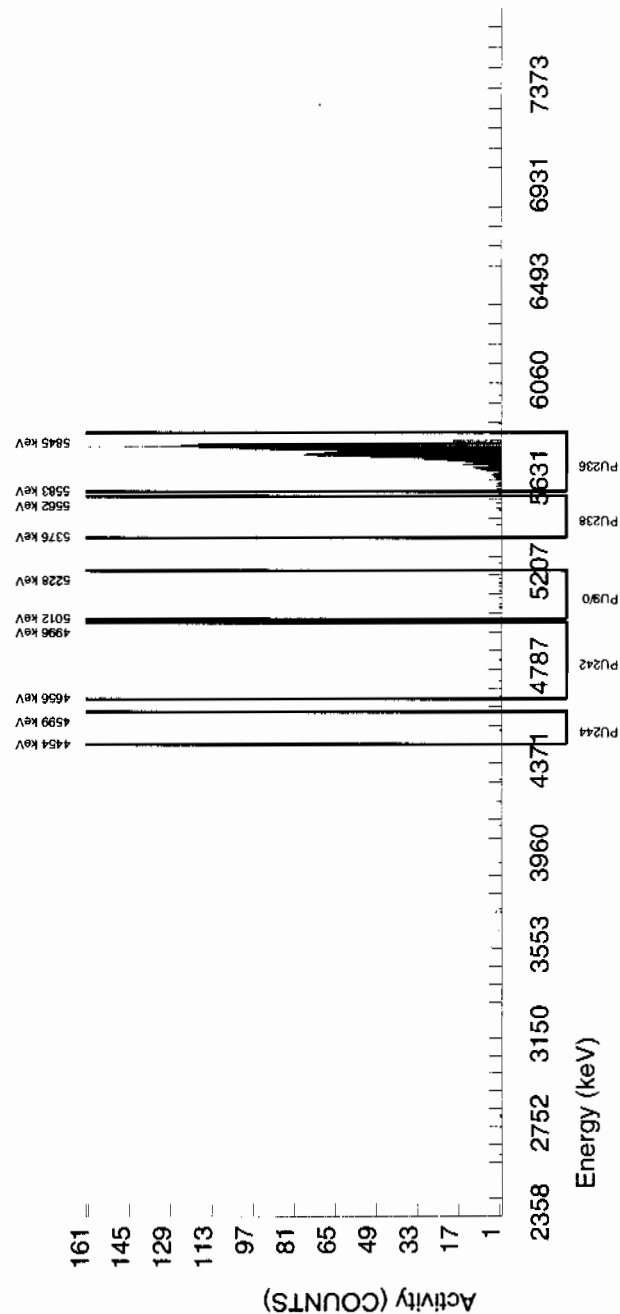
LCS/LCSD
 ID : 0244-B
 NUCLEIDE : PU-9/0
 NOMINAL : 4.1778E+01 pCi/G

NUCLEIDE ACTIVITY SUMMARY

NUCLEIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-236	5749.000	5767.541	29.830	1473.000	1470.840	2.160	1.4697	100.0000	2.37E+00	1.32E-01	5.07E-03	1.45E-02	6.19E-02
PU-238	5499.000	5505.863	92.985	9.000	8.280	0.720	2.9312	99.900000	1.32E-02	4.98E-03	1.01E-02	2.46E-02	4.93E-03
PU-9/0	5155.000	5133.027	126.630	10.000	10.000	0.000	2.0604	99.900000	1.60E-02	5.12E-03	7.11E-03	1.85E-02	5.06E-03
PU242	4890.000	4769.826	161.500	4.000	3.280	0.720	*****	100.0000	5.24E-03	3.41E-03	4.42E-01	8.89E-01	3.40E-03
PU-244	4589.000	4521.300	4.894	1.000	1.000	0.000	3.7241	99.900000	1.60E-03	1.60E-03	1.28E-02	3.00E-02	1.60E-03

NOTES:

- * Sg calculated via blank population.
(Sg updated 10-FEB-2010)
- * Sg of PU-236 calculated as sqrt(BKG AREA).



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

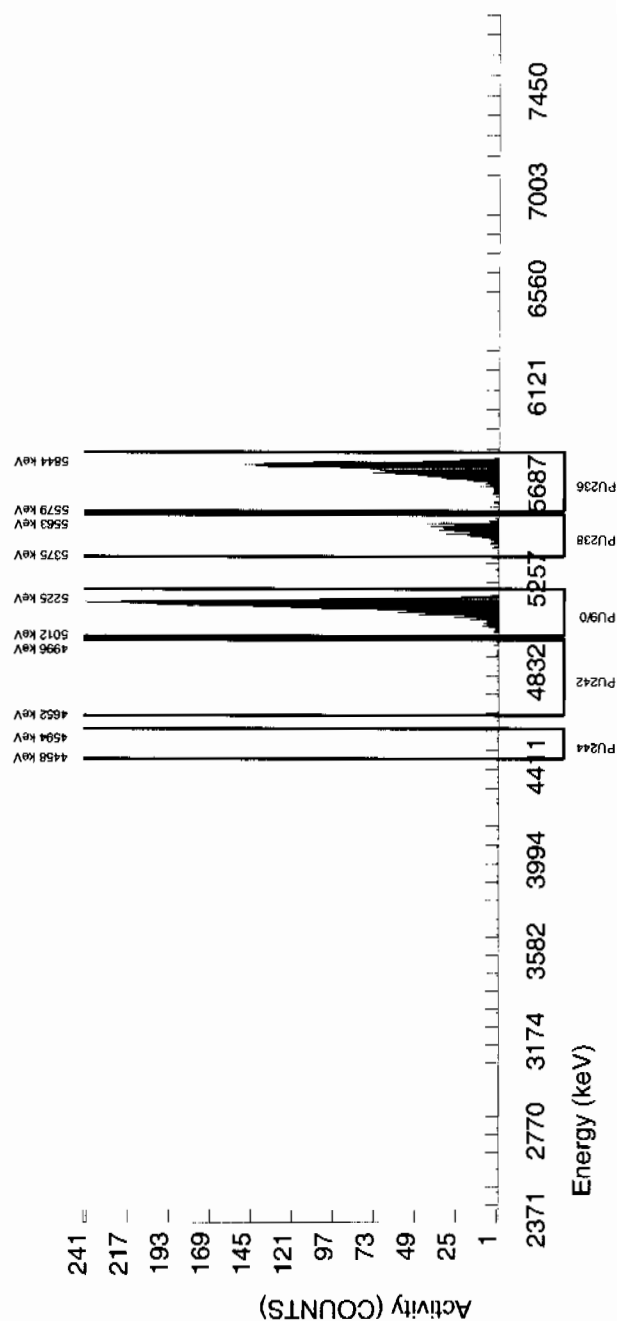
BATCH NUMBER : 957124 SAMPLE ID : S1202052221_PU SAMPLE QTY : 0.110 G SAMPLE DATE : 26-FEB-2010 00:00:00 ANALYST : JXH2 % YIELD : 88.915				CHAMBER : 091 DETECTOR S/N : 78259 AVERAGE %EFFICIENCY : 34.5001 COUNT DATE : 1-MAR-2010 18:21:35 ELAPSED LIVE TIME(SEC) : 43199.99				LIB FILE : ENV_ALPHA.PU BKG FILE : B091.CNF;729 BKG DATE : 28-FEB-2010 BKG LIVE TIME(SEC) : 59999.99 EFF FILE : W091.CNF;192 CAL DATE : 9-FEB-2010					
TRACER ID : 1430-B NUCLIDE : PU-236 NOMINAL : 6.5378E+00 dpm RESULTS : 5.8130E+00 dpm				MS/MSD ID : 0244-B NUCLIDE : PU-9/0 NOMINAL : 4.1778E+01 pCi/G				LCS/LCSD ID : 0244-B NUCLIDE : PU-9/0 NOMINAL : 4.1778E+01 pCi/G					
NUCLIDE ACTIVITY SUMMARY													
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-236	5749.000	5774.284	33.166	1443.000	1440.120	2.880	1.6971	100.0000	2.68E+01	1.69E+00	6.79E-02	1.86E-01	7.07E-01
PU-238	5499.000	5499.145	50.709	419.000	417.560	1.440	2.9312	99.900000	7.75E+00	5.85E-01	1.17E-01	2.85E-01	3.80E-01
PU-9/0	5155.000	5156.048	38.198	2205.000	2205.000	0.000	2.0604	99.900000	4.09E+01	2.50E+00	8.25E-02	2.15E-01	8.71E-01
PU242	4890.000	4894.804	0.000	26.000	25.280	0.720	*****	100.0000	4.69E-01	9.92E-02	5.13E+00	1.03E+01	9.55E-02
PU-244	4589.000	4503.624	0.000	7.000	7.000	0.000	3.7241	99.900000	1.30E-01	4.97E-02	1.49E-01	3.49E-01	4.91E-02

NOTES:

* Sg calculated via blank population.

(Sg updated 10-FEB-2010)

* Sg of PU-236 calculated as sqrt(BKG AREA).



Radiochemistry Batch Checklist, Rev10

Batch# 957125 Product: U Date: 3/5/10

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to 100 mg for GAB.			N/A
Samples have been blank corrected (if required)	✓		
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits.	✓		
Instrument bkg check is within limits.	✓		
Method 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.	✓		Case narrative
Method blank is less than the RDL/ LLD.	✓		
(If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.			N/A
Smears Taken for Radioactive batches.			N/A
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms.	✓		
All line outs initialed and dated.	✓		
No transcription errors are apparent.			
Aux data is correct.			N/A
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			N/A
Batch entered into Case Narrative.	✓		
Batch Data Exception Reports (DER) completed, if applicable.			N/A
Batch Data Exception Reports (DER) second reviewed and disposition verified to be completed.			N/A
Aliquot Correction completed if required.			N/A
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

RADchecklistrev10, revised 1/13/2010

Primary Review Performed By: J. L. M. - 3/5/10

Secondary Review Performed By: [Signature] 3/5/10

3/9
LANL

Uranium Que Sheet

24-FEB-10

Batch #: 957125 Analyst: JXH2 First Client Due Date: 09-MAR-10 Internal Due Date: 27-FEB-10
 Tracer Isotope: U-232 DU-236 Tracer Code: 1283-H Expiration Date: 12-09-10 Vol: 0.1
 LCS Isotope: U-238 LCS Code: --- Expiration Date: --- Vol: ---
 Spike Isotope: U-238 Spike Code: --- Expiration Date: --- Vol: ---
 Prep Date: 2-26-10 Initials: JEH Pipet ID: 2971058 Balance ID: 50410272

Witness: ME 2/26/10

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet Aliquot (g/l/n)	U Det #
247782001-1	RE11-10-1566	SAMPLE		.1 pCi/g	SOIL	LANL010	16-FEB-10	1	1	0.500	113
247782002-1	RE11-10-1560	SAMPLE		.1 pCi/g	SOIL	LANL010	16-FEB-10	2	2	0.501	114
247782003-1	RE11-10-1563	SAMPLE		.1 pCi/g	SOIL	LANL010	16-FEB-10	3	3	0.495	115
247782004-1	RE11-10-1576	SAMPLE		.1 pCi/g	SOIL	LANL010	16-FEB-10	4	4	0.499	118
247782005-1	RE11-10-1564	SAMPLE		.1 pCi/g	SOIL	LANL010	16-FEB-10	5	5	0.499	119
247782006-1	RE11-10-1561	SAMPLE		.1 pCi/g	SOIL	LANL010	16-FEB-10	6	6	0.495	120
247782007-1	RE11-10-1565	SAMPLE		.1 pCi/g	SOIL	LANL010	16-FEB-10	7	7	0.497	121
247782008-1	RE11-10-1569	SAMPLE		.1 pCi/g	SOIL	LANL010	16-FEB-10	8	8	0.494	122
247782009-1	RE11-10-1571	SAMPLE		.1 pCi/g	SOIL	LANL010	16-FEB-10	9	9	0.495	123
247782010-1	RE11-10-1570	SAMPLE		.1 pCi/g	SOIL	LANL010	16-FEB-10	10	10	0.502	124
247782011-1	RE11-10-1562	SAMPLE		.1 pCi/g	SOIL	LANL010	16-FEB-10	11	11	0.495	125
247782012-1	RE11-10-1572	SAMPLE		.1 pCi/g	SOIL	LANL010	16-FEB-10	12	12	0.494	126
247782013-1	RE11-10-1573	SAMPLE		.1 pCi/g	SOIL	LANL010	16-FEB-10	13	13	0.502	127
247782014-1	RE11-10-1568	SAMPLE		.1 pCi/g	SOIL	LANL010	16-FEB-10	14	14	0.497	128
247782015-1	RE11-10-1567	SAMPLE		.1 pCi/g	SOIL	LANL010	16-FEB-10	15	15	0.509	129
247784002-1	WST15-10-11622	SAMPLE		.1 pCi/g	SOIL	LANL010	17-FEB-10	16	16	0.495	130
247790002-1	RE15-10-8386	SAMPLE		.1 pCi/g	SOIL	LANL010	17-FEB-10	17	17	0.491	131
247790003-1	RE15-10-8387	SAMPLE		.1 pCi/g	SOIL	LANL010	17-FEB-10	18	18	0.512	132
247855002-1	WSTPU-10-13243	SAMPLE		.1 pCi/g	SOIL	LANL010	17-FEB-10	19	19	0.492	133
1202052222-1	MB for batch 957125	MB		.1 pCi/g	SOIL	QC ACCOUNT		20	20	1	2
1202052223-1	RE15-10-8386(247790002DUP)	DUP		.1 pCi/g	SOIL	QC ACCOUNT	17-FEB-10	21	21	0.511	3
1202052224-1	LCS for batch 957125	LCS		.1 pCi/g	SOIL	QC ACCOUNT		22	22	0.119	4

*SAM 0244-A exp 10-31-20

Choose SOP used: GL-RAD-A-011

Solid Sample Dissolution by: LEACH or DIGESTION
 Circle One

Data Reviewed By: JSL ML-3/5/10

Blank Correction Report

Batch ID 957125

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1202052223	DUP	Uranium-233/234	0.511 g	0.956	0.0846	0.0728	.017729941	pCi/g	NO
		Uranium-235/236	0.511 g	0.0535	0.0152	0.0464	.003835616	pCi/g	NO
		Uranium-238	0.511 g	1.22	0.103	0.0497	.015538160	pCi/g	NO
1202052224	LCS	Uranium-233/234	0.119 g	5.59	0.489	0.306	.076134454	pCi/g	NO
		Uranium-235/236	0.119 g	0.284	0.0686	0.195	.016470588	pCi/g	NO
		Uranium-238	0.119 g	5.43	0.477	0.209	.066722689	pCi/g	NO
1202052222	MB	Uranium-233/234	1.00 g	0.00906	0.00632	0.0401	.00906	pCi/g	YES
		Uranium-235/236	1.00 g	0.00196	0.0034	0.0256	.00196	pCi/g	YES
		Uranium-238	1.00 g	0.00794	0.00424	0.0274	.00794	pCi/g	YES
247782001	RE11-10-1566	Uranium-233/234	0.500 g	1.77	0.151	0.0977	.01812	pCi/g	NO
		Uranium-235/236	0.500 g	0.115	0.0248	0.0623	.00392	pCi/g	NO
		Uranium-238	0.500 g	2.28	0.187	0.0667	.01588	pCi/g	NO
247782002	RE11-10-1560	Uranium-233/234	0.501 g	1.11	0.102	0.0948	.018083832	pCi/g	NO
		Uranium-235/236	0.501 g	0.065	0.018	0.0604	.003912176	pCi/g	NO
		Uranium-238	0.501 g	1.13	0.103	0.0647	.015848303	pCi/g	NO
247782003	RE11-10-1563	Uranium-233/234	0.495 g	1.18	0.108	0.099	.018303030	pCi/g	NO
		Uranium-235/236	0.495 g	0.0679	0.0188	0.0631	.003959596	pCi/g	NO
		Uranium-238	0.495 g	1.12	0.103	0.0676	.016040404	pCi/g	NO
247782004	RE11-10-1576	Uranium-233/234	0.499 g	0.952	0.0888	0.090	.018156313	pCi/g	NO
		Uranium-235/236	0.499 g	0.0794	0.0195	0.0574	.003927856	pCi/g	NO
		Uranium-238	0.499 g	1.01	0.0931	0.0615	.015911824	pCi/g	NO
247782005	RE11-10-1564	Uranium-233/234	0.499 g	1.23	0.111	0.0989	.018156313	pCi/g	NO
		Uranium-235/236	0.499 g	0.0533	0.0165	0.0631	.003927856	pCi/g	NO
		Uranium-238	0.499 g	1.62	0.140	0.0675	.015911824	pCi/g	NO
247782006	RE11-10-1561	Uranium-233/234	0.495 g	0.945	0.0869	0.0846	.018303030	pCi/g	NO
		Uranium-235/236	0.495 g	0.0787	0.0189	0.0539	.003959596	pCi/g	NO
		Uranium-238	0.495 g	0.962	0.0882	0.0578	.016040404	pCi/g	NO
247782007	RE11-10-1565	Uranium-233/234	0.497 g	0.920	0.088	0.0945	.018229376	pCi/g	NO
		Uranium-235/236	0.497 g	0.0555	0.0165	0.0602	.003943662	pCi/g	NO
		Uranium-238	0.497 g	0.865	0.0834	0.0645	.015975855	pCi/g	NO
247782008	RE11-10-1569	Uranium-233/234	0.494 g	0.761	0.0752	0.091	.018340081	pCi/g	NO
		Uranium-235/236	0.494 g	0.0669	0.0179	0.058	.003967611	pCi/g	NO
		Uranium-238	0.494 g	0.783	0.0767	0.0622	.016072874	pCi/g	NO
247782009	RE11-10-1571	Uranium-233/234	0.495 g	0.832	0.0792	0.0858	.018303030	pCi/g	NO
		Uranium-235/236	0.495 g	0.0378	0.0129	0.0547	.003959596	pCi/g	NO
		Uranium-238	0.495 g	0.643	0.0649	0.0586	.016040404	pCi/g	NO
247782010	RE11-10-1570	Uranium-233/234	0.502 g	0.886	0.0873	0.103	.018047809	pCi/g	NO
		Uranium-235/236	0.502 g	0.0606	0.018	0.0657	.003904382	pCi/g	NO
		Uranium-238	0.502 g	1.07	0.101	0.0704	.015816733	pCi/g	NO
247782011	RE11-10-1562	Uranium-233/234	0.495 g	1.33	0.118	0.0964	.018303030	pCi/g	NO
		Uranium-235/236	0.495 g	0.0849	0.0209	0.0614	.003959596	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
247782011	RE11-10-1562	Uranium-238	0.495 g	1.51	0.131	0.0658	.016040404	pCi/g	NO
247782012	RE11-10-1572	Uranium-233/234	0.494 g	0.923	0.0876	0.094	.016340081	pCi/g	NO
		Uranium-235/236	0.494 g	0.0875	0.022	0.0599	.003967611	pCi/g	NO
		Uranium-238	0.494 g	1.24	0.111	0.0642	.016072874	pCi/g	NO
247782013	RE11-10-1573	Uranium-233/234	0.502 g	1.03	0.0973	0.102	.018047809	pCi/g	NO
		Uranium-235/236	0.502 g	0.0548	0.017	0.0648	.003904382	pCi/g	NO
		Uranium-238	0.502 g	1.09	0.102	0.0694	.015816733	pCi/g	NO
247782014	RE11-10-1568	Uranium-233/234	0.497 g	0.939	0.0932	0.111	.018229376	pCi/g	NO
		Uranium-235/236	0.497 g	0.0381	0.0166	0.0709	.003943662	pCi/g	NO
		Uranium-238	0.497 g	1.13	0.108	0.0759	.015975855	pCi/g	NO
247782015	RE11-10-1567	Uranium-233/234	0.509 g	1.06	0.0879	0.060	.017799607	pCi/g	NO
		Uranium-235/236	0.509 g	0.0617	0.0141	0.0383	.003850688	pCi/g	NO
		Uranium-238	0.509 g	0.892	0.0764	0.041	.015599214	pCi/g	NO
247784002	WST15-10-11622	Uranium-233/234	0.493 g	2.75	0.204	0.0608	.018377282	pCi/g	NO
		Uranium-235/236	0.493 g	0.221	0.0297	0.0388	.003975659	pCi/g	NO
		Uranium-238	0.493 g	4.04	0.293	0.0415	.016105477	pCi/g	NO
247790002	RE15-10-8386	Uranium-233/234	0.491 g	0.921	0.0799	0.0659	.018452138	pCi/g	NO
		Uranium-235/236	0.491 g	0.0646	0.0158	0.042	.003991853	pCi/g	NO
		Uranium-238	0.491 g	1.14	0.0953	0.045	.016171079	pCi/g	NO
247790003	RE15-10-8387	Uranium-233/234	0.512 g	0.585	0.0539	0.0567	.017695313	pCi/g	NO
		Uranium-235/236	0.512 g	0.0639	0.0145	0.0361	.003828125	pCi/g	NO
		Uranium-238	0.512 g	0.654	0.0587	0.0387	.015507813	pCi/g	NO
247855002	WSTPU-10-13243	Uranium-233/234	0.492 g	1.35	0.111	0.0697	.018414634	pCi/g	NO
		Uranium-235/236	0.492 g	0.102	0.020	0.0444	.003983740	pCi/g	NO
		Uranium-238	0.492 g	1.44	0.117	0.0476	.016138211	pCi/g	NO

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

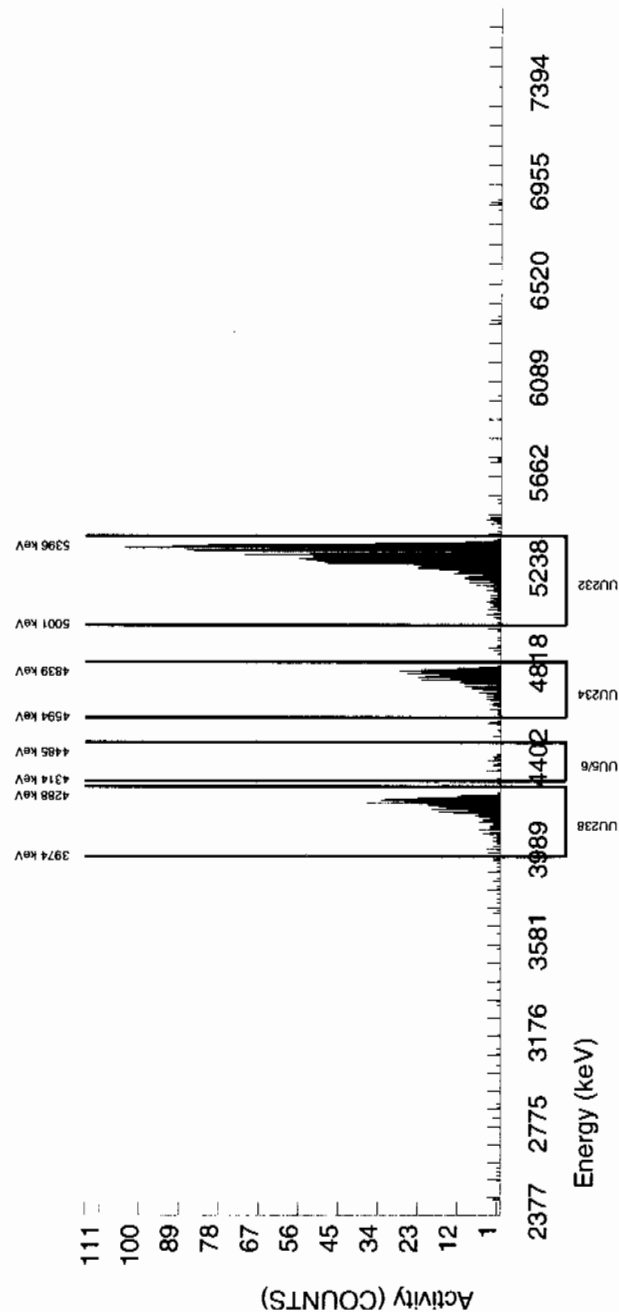
BATCH NUMBER : 957125 SAMPLE ID : S0247790002_UU SAMPLE QTY : 0.491 G SAMPLE DATE : 17-FEB-2010 00:00:00 ANALYST : JXH2 % YIELD : 93.256		CHAMBER : 169 DETECTOR S/N : 72548 AVERAGE %EFFICIENCY : 37.6596 COUNT DATE : 4-MAR-2010 09:05:58 ELAPSED LIVE TIME(SEC) : 60000.00	LIB FILE : ENV_ALPHA_UU BKG FILE : B169.CNF;177 BKG DATE : 28-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W169.CNF;68 CAL DATE : 22-FEB-2010
TRACER ID : 1283-H NUCLIDE : U232 NOMINAL : 4.5037E+00 dpm RESULTS : 4.1999E+00 dpm	MS/MSD ID : 0244-A NUCLIDE : U-238 NOMINAL : 5.7500E+00 pCi/G	LCS/LCSD ID : 0244-A NUCLIDE : U-238 NOMINAL : 5.7500E+00 pCi/G	
NUCLIDE ACTIVITY SUMMARY			
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	FWHM PEAK GROSS AREA NET AREA BKG AREA Sg %ABUN ACTIVITY pCi/G TPU 1-SIGMA DLC pCi/G MDC pCi/G UNC pCi/G
U232	5302.100	5307.968	50.376 1585.000 1581.000 4.000 2.0000 100.0000 4.13E+00 3.01E-01 1.22E-02 1.04E-01
U-3/4	4763.020	4766.775	52.000 355.000 352.399 1.000 4.8416 100.0000 9.21E-01 7.99E-02 2.94E-02 6.59E-02
U-235	4391.000	4396.336	5.741 21.000 20.000 1.000 2.2152 80.90000 6.46E-02 1.58E-02 1.66E-02 4.20E-02
U-238	4184.730	4191.382	51.666 437.000 437.000 0.000 3.1208 100.0000 1.14E+00 9.53E-02 1.90E-02 4.50E-02

NOTES:

* Sg calculated via blank population.

(Sg updated 10-FEB-2010)

* Sg of U232 calculated as sqrt(BKG AREA).

* Corrections made to the following net area
due to tracer impurity:
U-3/4

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER :	957125
SAMPLE ID :	S0247790003_UU
SAMPLE QTY :	0.512 G
SAMPLE DATE :	17-FEB-2010 00:00:00
ANALYST :	JXH2
% YIELD :	106.834

CHAMBER	:	170
DETECTOR S/N	:	72549
AVERAGE %EFFICIENCY	:	36.6577
COUNT DATE	:	4-MAR-2010 09:06:01
ELAPSED LIVE TIME(SEC)	:	60000.00

LIB FILE :	ENV_ALPHA_UU
BKG FILE :	B170.CNF:175
BKG DATE :	28-FEB-2010
BKG LIVE TIME(SEC)	60000.00
EFF FILE :	W170.CNF:58
CAL DATE :	22-FEB-2010

TRACER ID : 1283-H
NUCLIDE : U232
NOMINAL : 4.5037E+00 dpm
RESULTS : 4.8114E+00 dpm

MS/MSD
ID : 0244-A
NUCLIDE : U-238
NOMINAL : 5.7500E+00 pCi/G

LCS/LCSD
ID : 0244-A
NUCLIDE : U-238
NOMINAL : 5.7500E+00 pCi/G

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U232	5302.100	5307.544	58.759	1770.000	1763.000	7.000	2.6458	100.0000	3.96E+00	2.85E-01	1.38E-02	3.37E-02	9.47E-02
U-3/4	4763.020	4763.306	46.593	263.000	260.215	1.000	4.8416	100.0000	5.85E-01	5.39E-02	2.53E-02	5.67E-02	3.64E-02
U-235	4391.000	4417.516	44.365	24.000	23.000	1.000	2.2152	80.90000	6.39E-02	1.45E-02	1.43E-02	3.61E-02	1.39E-02
U-238	4184.730	4196.785	43.837	291.000	291.000	0.000	3.1208	100.0000	6.54E-01	5.87E-02	1.63E-02	3.87E-02	3.83E-02

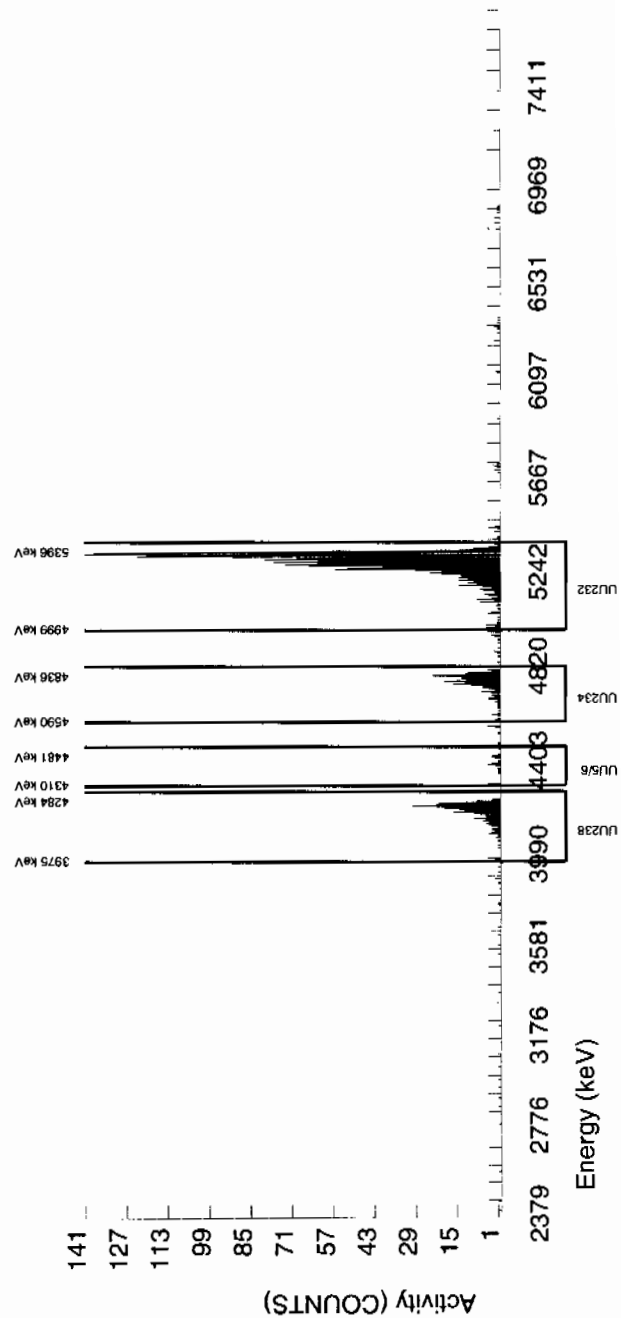
NOTES:

* Sg calculated via blank population.

(Sg updated 10-FEB-2010)

* Sg of U232 calculated as $\sqrt{\text{BKG AREA}}$.

* Corrections made to the following net area due to tracer impurity:



GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

BATCH NUMBER	: 957125	CHAMBER	: 002	LIB FILE	: ENV_ALPHA_UU
SAMPLE ID	: S1202052222_UU	DETECTOR S/N	: 79452	BKG FILE	: B002.CNF;1119
SAMPLE QTY	: 1.000 G	AVERAGE %EFFICIENCY	: 29.5805	BKG DATE	: 28-FEB-2010
SAMPLE DATE	: 26-FEB-2010 00:00:00	COUNT DATE	: 3-MAR-2010 09:36:07	BKG LIVE TIME(SEC)	: 60000.00
ANALYST	: JXH2	ELAPSED LIVE TIME(SEC)	: 60000.00	EFF FILE	: W002.CNF;328
% YIELD	: 95.894			CAL DATE	: 3-FEB-2010

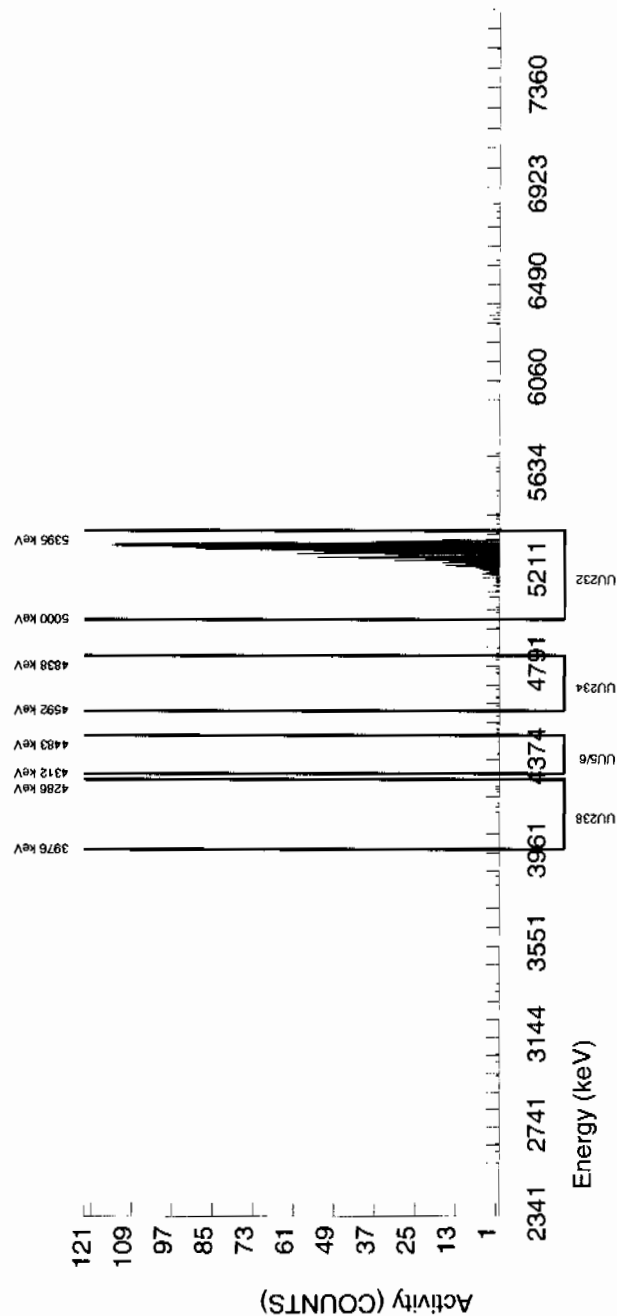
TRACER		MS/MSD		LCS/LCSD	
ID :	1283-H	ID :	0244-A	ID :	0244-A
NUCLIDE :	U232	NUCLIDE :	U-238	NUCLIDE :	U-238
NOMINAL :	4.5026E+00 dpm	NOMINAL :	5.7500E+00 pCi/G	NOMINAL :	5.7500E+00 pCi/G
RESULTS :	4.3177E+00 dpm				

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U232	5302.100	5311.194	36.476	1280.000	1277.000	3.000	1.7321	100.0000	2.03E+00	1.52E-01	6.40E-03	1.71E-02	5.69E-02
U-3/4	4763.020	4726.269	4.978	12.000	5.707	5.000	4.8416	100.0000	9.06E-03	6.32E-03	1.79E-02	4.01E-02	6.29E-03
U-235	4391.000	4361.193	89.612	2.000	1.000	1.000	2.2152	80.90000	1.96E-03	3.40E-03	1.01E-02	2.56E-02	3.40E-03
U-238	4184.730	4207.605	114.504	6.000	5.000	1.000	3.1208	100.0000	7.94E-03	4.24E-03	1.15E-02	2.74E-02	4.20E-03

NOTES:

- * Sg calculated via blank population.
(Sg updated 10-FEB-2010)
- * Sg of U232 calculated as sqrt(BKG AREA).
- * Corrections made to the following net area due to tracer impurity:
U-3/4



GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 957125 SAMPLE ID : S1202052223_UU SAMPLE QTY : 0.511 G SAMPLE DATE : 17-FEB-2010 00:00:00 ANALYST : JXH2 % YIELD : 98.299	CHAMBER : 003 DETECTOR S/N : 79453 AVERAGE %EFFICIENCY : 31.0941 COUNT DATE : 3-MAR-2010 09:36:07 ELAPSED LIVE TIME(SEC) : 60000.00	LIB FILE : ENV_ALPHA_UU BKG FILE : B003.CNF;1114 BKG DATE : 28-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W003.CNF;341 CAL DATE : 3-FEB-2010
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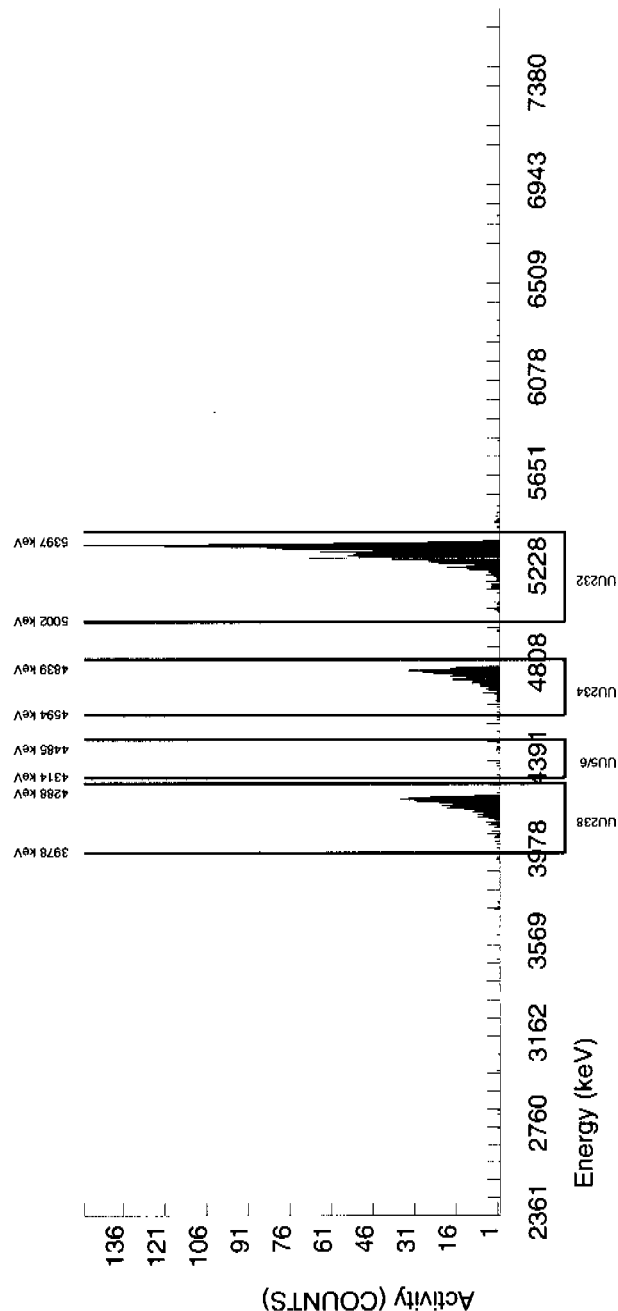
TRACER ID : 1283-H NUCLIDE : U232 NOMINAL : 4.5037E+00 dpm RESULTS : 4.4271E+00 dpm	MS/MSD ID : 0244-A NUCLIDE : U-238 NOMINAL : 5.7500E+00 pCi/G	LCS/LCSD ID : 0244-A NUCLIDE : U-238 NOMINAL : 5.7500E+00 pCi/G
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NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U232	5302.100	5310.411	28.556	1380.000	1376.000	4.000	2.0000	100.0000	3.97E+00	2.95E-01	1.34E-02	3.47E-02	1.07E-01
U-3/4	4763.020	4765.279	47.788	334.000	331.607	1.000	4.8416	100.0000	9.56E-01	8.46E-02	3.25E-02	7.28E-02	5.27E-02
U-235	4391.000	4399.688	126.511	16.000	15.000	1.000	2.2152	80.90000	5.35E-02	1.52E-02	1.84E-02	4.64E-02	1.47E-02
U-238	4184.730	4191.729	59.499	424.000	424.000	0.000	3.1208	100.0000	1.22E+00	1.03E-01	2.09E-02	4.97E-02	5.94E-02

NOTES:

- * Sg calculated via blank population.
(Sg updated 10-FEB-2010)
- * Sg of U232 calculated as sqrt(BKG AREA).
- * Corrections made to the following net area due to tracer impurity:
U-3/4



GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 957125	CHAMBER : 004	LIB FILE : ENV_ALPHA_UU
SAMPLE ID : S1202052224_UU	DETECTOR S/N : 68548	BKG FILE : B004.CNF;1123
SAMPLE QTY : 0.119 G	AVERAGE %EFFICIENCY : 30.4786	BKG DATE : 28-FEB-2010
SAMPLE DATE : 26-FEB-2010 00:00:00	COUNT DATE : 3-MAR-2010 09:36:07	BKG LIVE TIME(SEC) : 60000.00
ANALYST : JXH2	ELAPSED LIVE TIME(SEC) : 60000.00	EFF FILE : W004.CNF;330
% YIELD : 102.543		CAL DATE : 3-FEB-2010

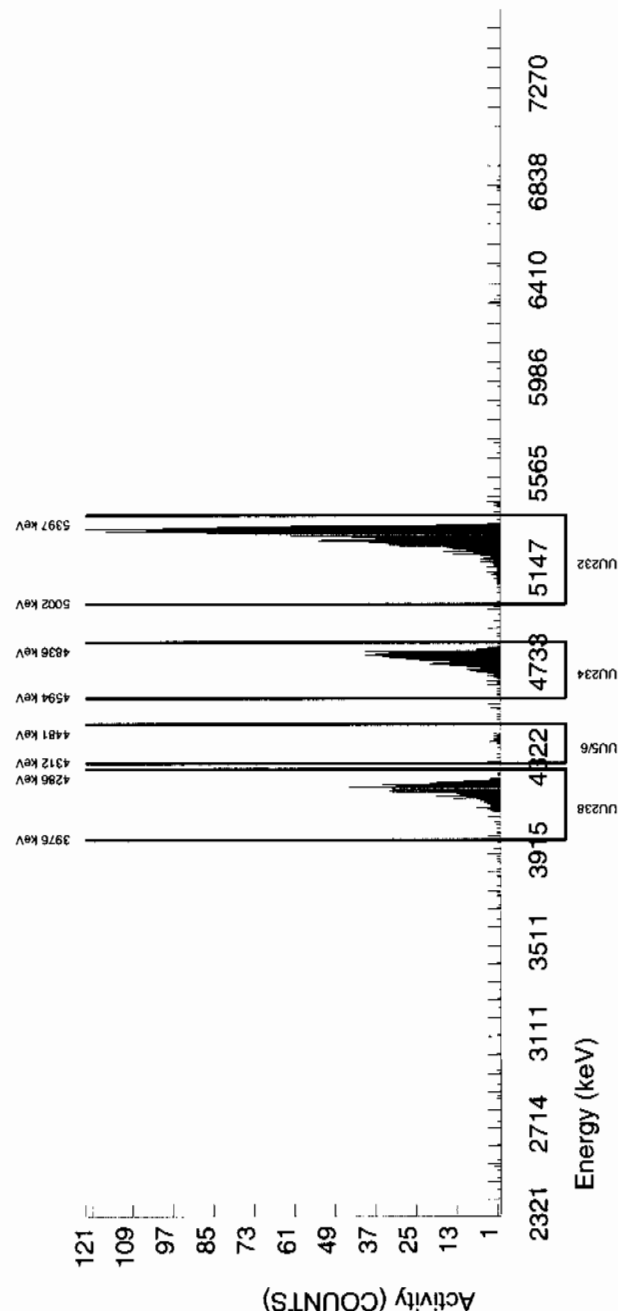
TRACER ID : 1283-H	MS/MSD ID : 0244-A	LCS/LCSD ID : 0244-A
NUCLIDE : U232	NUCLIDE : U-238	NUCLIDE : U-238
NOMINAL : 4.5026E+00 dpm	NOMINAL : 5.7500E+00 pCi/G	NOMINAL : 5.7500E+00 pCi/G
RESULTS : 4.6171E+00 dpm		

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U232	5302.100	5307.940	44.228	1410.000	1407.000	3.000	1.7321	100.0000	1.70E+01	1.34E+00	4.88E-02	1.30E-01	4.55E-01
U-3/4	4763.020	4766.416	58.879	463.000	461.575	0.000	4.8416	100.0000	5.59E+00	4.89E-01	1.36E-01	3.06E-01	2.60E-01
U-235	4391.000	4416.519	32.783	19.000	19.000	0.000	2.2152	80.90000	2.84E-01	6.86E-02	7.72E-02	1.95E-01	6.53E-02
U-238	4184.730	4194.669	41.073	452.000	448.000	4.000	3.1208	100.0000	5.43E+00	4.77E-01	8.79E-02	2.09E-01	2.59E-01

NOTES:

- * Sg calculated via blank population.
(Sg updated 10-FEB-2010)
- * Sg of U232 calculated as sqrt(BKG AREA).
- * Corrections made to the following net area due to tracer impurity:
U-3/4



Radiochemistry Batch Checklist, Rev10

Batch# 957136 Product: 8-5 Date: 3/8/10

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.			NA
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 stasured.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			NA
Batch entered into Case Narrative.	✓		
Batch Data Exception Reports (DER) completed, if applicable.			NA
Batch Data Exception Reports (DER) second reviewed and disposition verified to be completed.			NA
Aliquot Correction completed if required.			NA
Review sample historical results if available (If REMF, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

RADchecklistrev10, revised 1/13/2010

Primary Review Performed By: K. Ost 3/8/10

Secondary Review Performed By: G. Hunt 3/8/10

LANL
3/9

Gamma Spec Que Sheet

03/05/2010

Batch #: 957136 Analyst: CROMX12-1 First Client Due Date: 03/09/2010 Internal Due Date: 02/27/2010

Gamma Spike Isotope: Mixed Gamma Spike Code: MS Expiration Date: 2/2/10 Vol: 1.0mL Nominal Concentration: 5.553 pm 2M 6.38

Gamma LCS Isotope: Mixed Gamma LCS Code: 1032-A Expiration Date: 2/2/10 Vol: 1.0mL Nominal Concentration: 5.553 pm 2M 15.90

Initials: MS Prep Date: 2/26/10 Library: SOLID Witness: MS

Sample ID	Client Description / Container ID	Type	Hazard Code	Client	Matrix	Collect Date	Geometry	Detector	Sealing Date/Time (If Applicable)
247784002-1	WST15-10-11622	SAMPLE		LANL010	SOIL	17-FEB-10 12:00:00	CG	120.70	2/26/10
247790002-1	RE15-10-8386	SAMPLE		LANL010	SOIL	17-FEB-10 12:00:00	CG	120.93	
247790003-1	RE15-10-8387	SAMPLE		LANL010	SOIL	17-FEB-10 12:00:00	CG	111.09	
247797001-1	RE15-10-8317	SAMPLE		LANL010	SOIL	17-FEB-10 12:00:00	CG	128.85	
247797002-1	RE15-10-8319	SAMPLE		LANL010	SOIL	17-FEB-10 12:00:00	CG	143.98	
247797003-1	RE15-10-8316	SAMPLE		LANL010	SOIL	17-FEB-10 12:00:00	CG	129.87	
247797004-1	RE15-10-8326	SAMPLE		LANL010	SOIL	17-FEB-10 12:00:00	CG	138.46	
247797005-1	RE15-10-8318	SAMPLE		LANL010	SOIL	17-FEB-10 12:00:00	CG	134.33	
247809001-1	RE46-10-13335	SAMPLE		LANL010	SOIL	19-FEB-10 12:00:00	CG	132.54	
247809002-1	RE46-10-13322	SAMPLE		LANL010	SOIL	19-FEB-10 12:00:00	CG	117.29	
247809003-1	RE46-10-13321	SAMPLE		LANL010	SOIL	19-FEB-10 12:00:00	CG	126.49	
247809004-1	RE46-10-13333	SAMPLE		LANL010	SOIL	19-FEB-10 12:00:00	CG	126.04	
247809005-1	RE46-10-13336	SAMPLE		LANL010	SOIL	19-FEB-10 12:00:00	CG	117.52	
247809006-1	RE46-10-13327	SAMPLE		LANL010	SOIL	19-FEB-10 12:00:00	CG	134.91	
247809008-1	RE46-10-13325	SAMPLE		LANL010	SOIL	19-FEB-10 12:00:00	CG	129.75	
247809009-1	RE46-10-13326	SAMPLE		LANL010	SOIL	19-FEB-10 12:00:00	CG	127.53	
247809012-1	RE46-10-13362	SAMPLE		LANL010	SOIL	19-FEB-10 12:00:00	CG	124.74	
1202052272-1	MB	MB		QC ACCOUNT	SOIL	2/26/10	CG	143.98	
1202052273-1	DUP RE46-10-13335(247809001)	DUP		QC ACCOUNT	SOIL	19-FEB-10 12:00:00	CG	132.54	
1202052274-1	LCS	LCS		QC ACCOUNT	SOIL	2/26/10	CG	155.44	

GEL Laboratories LLC, Radiochemistry Division

Data Reviewed By: W. B. B. 3/18/10

See history
10/1/10

Failed RDL Report

Batch Id	Samp Id	Sample Type	Run Date	YIELD	Parmname	Result	MDA	RDL
957136	247784002	SAMPLE	05-MAR-10		Americium-241	0.2994	0.361	0.200
					Cerium-139	-0.01999	0.05579	0.050
					Sodium-22	0.02689	0.08853	0.080
957136	247790002	SAMPLE	05-MAR-10		Americium-241	-0.06284	0.2197	0.200
957136	247790003	SAMPLE	05-MAR-10		Americium-241	-0.3174	0.3583	0.200
					Cerium-139	0.02974	0.05596	0.050
					Sodium-22	-0.01377	0.09138	0.080
					Thorium-234	0.5738	3.105	2.00
957136	247797001	SAMPLE	05-MAR-10		Cerium-139	0.0387	0.06366	0.050
					Cesium-134	0.05422	0.1113	0.100
					Sodium-22	0.04605	0.1035	0.080
957136	247797002	SAMPLE	05-MAR-10		Cerium-139	0.00688	0.05351	0.050
957136	247797003	SAMPLE	05-MAR-10					
957136	247797004	SAMPLE	05-MAR-10		Americium-241	0.09625	0.3947	0.200
					Thorium-234	-0.1887	3.168	2.00
957136	247797005	SAMPLE	05-MAR-10		Americium-241	-0.1616	0.3462	0.200
					Cerium-139	-0.00268	0.06017	0.050
					Cesium-134	0.1134	0.1184	0.100
					Europium-152	0.0672	0.2058	0.200
					Sodium-22	0.00205	0.09402	0.080
					Thorium-234	1.696	3.085	2.00
957136	247809001	SAMPLE	05-MAR-10		Americium-241	-0.08072	0.5404	0.200
					Cerium-139	0.00264	0.06395	0.050
					Cesium-134	0.09552	0.1113	0.100
					Europium-152	0.00217	0.2167	0.200
					Sodium-22	0.01033	0.09235	0.080
					Thorium-234	0.2318	4.262	2.00
957136	247809002	SAMPLE	05-MAR-10		Americium-241	0.04182	0.2429	0.200
					Cerium-139	-0.02171	0.05053	0.050
957136	247809003	SAMPLE	05-MAR-10		Americium-241	-0.04399	0.3105	0.200
					Cerium-139	0.00601	0.05826	0.050
					Sodium-22	0.01431	0.09405	0.080
					Thorium-234	2.003	2.965	2.00
957136	247809004	SAMPLE	05-MAR-10		Americium-241	-0.1439	0.2695	0.200
					Cerium-139	-0.00138	0.05387	0.050
					Sodium-22	0.01853	0.08392	0.080
					Thorium-234	-0.09398	2.429	2.00
957136	247809005	SAMPLE	05-MAR-10		Americium-241	-0.1277	0.246	0.200
					Cerium-139	0.01313	0.05544	0.050
					Sodium-22	0.05543	0.09111	0.080
					Thorium-234	0.9532	2.303	2.00
957136	247809006	SAMPLE	05-MAR-10		Cesium-134	0.09935	0.1107	0.100
					Cesium-137	0.07992	0.1016	0.100
					Sodium-22	-0.00021	0.09581	0.080

Failed RDL Report

Batch Id	Samp Id	Sample Type	Run Date	YIELD	Parmname	Result	MDA	RDL
957136	247809008	SAMPLE	05-MAR-10		Americium-241	-0.02271	0.293	0.200
					Thorium-234	0.7292	2.544	2.00
957136	247809009	SAMPLE	05-MAR-10		Sodium-22	0.01264	0.09505	0.080
957136	247809012	SAMPLE	05-MAR-10		Cerium-139	0.01201	0.05097	0.050
					Sodium-22	0.0278	0.08419	0.080
957136	1202052272	MB	05-MAR-10					
957136	1202052273	DUP	05-MAR-10		Americium-241	0.03488	0.3213	0.200
					Cerium-139	-0.00471	0.05414	0.050
					Sodium-22	-0.01237	0.08179	0.080
957136	1202052274	LCS	08-MAR-10		Cerium-139	0.01681	0.0818	0.050
					Cesium-134	0.112	0.1771	0.100
					Europium-152	-0.06939	0.3047	0.200
					Mercury-203	0.02499	0.1171	0.100
					Ruthenium-106	-0.8931	0.9587	0.800
					Sodium-22	-0.01664	0.1013	0.080
					Thorium-234	0.3924	4.497	2.00
					Tin-113	0.00831	0.1603	0.100
					Uranium-235	0.1704	0.5833	0.500

GEL QUALS

Batch ID: 957136

Report run on: March 8, 2010 12:04 PM

Samp Id	Parname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
247784002-1 05-MAR-2010 10:25	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.213			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.806			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1448		.1	.1
	Cesium-137	UI	UI	UI	Data rejected due to high peak-width.		.1387		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.213			
247790002-1 05-MAR-2010 10:26	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.416			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.87			
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.873			
247790003-1 05-MAR-2010 10:26	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.04			
	Bismuth-214	UI	UI	UI	Data rejected due to low abundance.		.8893		.2	.2
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.319			
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.25			
	Radium-226	UI	UI	UI	Data rejected due to low abundance.		.8893			
247797001-1 05-MAR-2010 10:27	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.856			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		5.488			
	Radium-224	UI	UI	UI	Data rejected due to interference.		6.48			
247797002-1 05-MAR-2010 10:28	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.708			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.722			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1194		.1	.1
	Mercury-203	UI	UI	UI	Data rejected due to interference.		.06999		.1	.1

GEL QUALS

Batch ID: 957136

Report run on: March 8, 2010 12:04 PM

Samp Id	Parname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
247797002-1 05-MAR-2010 10:28	Radium-224	UI	UI	UI	Data rejected due to interference.		5.789			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.08566			
247797003-1 05-MAR-2010 10:29	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.99			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.926			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.09815		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.376			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.0744			
247797004-1 05-MAR-2010 10:29	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.608			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.703			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.102		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.579			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.07566			
247797005-1 05-MAR-2010 10:30	Bismuth-211	UI	UI	UI	Data rejected due to interference.		5.155			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.492			
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.254			
247809001-1 05-MAR-2010 10:31	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.887			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.81			
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.098			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1406			

GEL QUALS

Batch ID: 957136

Report run on: March 8, 2010 12:04 PM

Samp Id	Parname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
247809002-1 05-MAR-2010 10:32	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.174			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.187			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1207	.1	.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		6.118			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.2135			
247809003-1 05-MAR-2010 10:33	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.774			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.318			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1196	.1	.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.133			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.122			
247809004-1 05-MAR-2010 10:34	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.979			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.498			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1197	.1	.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.542			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.0826			
247809005-1 05-MAR-2010 10:35	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.427			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.102			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1382	.1	.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.395			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.09389			

GEL QUALS

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Samp Id	Parname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
247809008-1 05-MAR-2010 10:35	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.349			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.361			
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.655			
247809008-1 05-MAR-2010 10:36	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.616			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.45			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.08371		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.978			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.07514			
247809009-1 05-MAR-2010 10:37	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.558			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		4.31			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1482		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.791			
247809012-1 05-MAR-2010 10:38	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.485			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.425			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1501		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.541			
1202052273-1 DUP 05-MAR-2010 13:05	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.371			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.54			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1485		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.179			

GEL QUALS

Batch ID: 957136

Report run on: March 8, 2010 12:04 PM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
1202052273-1 DUP 05-MAR-2010 13:05	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.07953			

Neptunium-237	INT	1.127	0.1621	pCi/g	0.3515	N	87.24	3	1.077	IDENTIFIED	8.604	<input type="checkbox"/>	
Potassium-40	✓	34.57	1.788	pCi/g	0.5153	1.00	1461	1	1.923	IDENTIFIED	2.725	<input type="checkbox"/>	
Radium-224	INT	3.873	0.6232	pCi/g	0.8859	Y	241.6	1	1.737	IDENTIFIED	15.12	<input checked="" type="checkbox"/>	✓
Radium-226	✓	1.046	0.09136	pCi/g	0.1061	Y	609.3	2	1.084	IDENTIFIED	6.932	<input type="checkbox"/>	
Radium-228	✓	1.609	0.1886	pCi/g	0.1915	0.500	911.4	3	1.73	IDENTIFIED	10.01	<input type="checkbox"/>	
Thallium-208	✓	0.4589	0.04501	pCi/g	0.05369	0.080	583.2	1	1.342	IDENTIFIED	8.469	<input type="checkbox"/>	
Thorium-228	NR	1.385	0.09785	pCi/g	0.08265	N	238.6	2	0.931	IDENTIFIED	3.828	<input type="checkbox"/>	
Thorium-232	NR	1.609	0.1886	pCi/g	0.1915	N	911.4	3	1.73	IDENTIFIED	10.01	<input type="checkbox"/>	
Thorium-234	✓	2.426	0.9054	pCi/g	1.767	2.00	63.65	2	1.194	IDENTIFIED	36.24	<input type="checkbox"/>	
Tin-126	NR	0.3778	0.03718	pCi/g	0.1059	N	87.24	3	1.077	IDENTIFIED	8.604	<input type="checkbox"/>	
Total Uranium	✓	7.1967	2.69E-06	ug/g	2.6303	N		0				<input type="checkbox"/>	
Uranium-238	HE	2.426	0.9054	pCi/g	1.767	N	63.65	2	1.194	IDENTIFIED	36.24	<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		
247790003	17-FEB-10 12:00	05-MAR-10 10:26	15.9	SAMPLE	LOAD	1	LANL	LANL01004JGEL	N	RGSP		
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act Rpt Err(%)	Qual	Qual Comment		
Actinium-228	✓	1.655	0.197	pCi/g	0.2956	N	910.4	3	2.207	IDENTIFIED 10.32	<input type="checkbox"/>	
Annihilation Rad. HE		0.08871	0.04252	pCi/g	0.05998	N	510.2	1	2.474	IDENTIFIED 47.84	<input type="checkbox"/>	
Bismuth-211	INT	3.04	0.2558	pCi/g	0.3616	Y	351.4	2	1.336	IDENTIFIED 7.759	<input checked="" type="checkbox"/>	UI
Bismuth-212	HE	1.436	0.419	pCi/g	1.304	N	0	5	0	FAIL_ABUND 0	<input type="checkbox"/>	
Bismuth-214	✓	0.8893	0.09469	pCi/g	0.285	0.200	0	5	0	FAIL_ABUND 0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Cadmium-109	INT	2.319	0.5107	pCi/g	1.479	Y	87.01	3	0.8834	IDENTIFIED 21.49	<input checked="" type="checkbox"/>	UI
Cerium-143	—	1258	205.4	pCi/g	0	N	0	5	0	SHORT_HLIF 0	<input type="checkbox"/>	
Cesium-135	HE	0.4496	0.1424	pCi/g	0.2924	N	269.6	1	0.8403	IDENTIFIED 31.43	<input type="checkbox"/>	
Gross Gamma	—	8.266	1.291	pCi/g	2.724	N		0			<input type="checkbox"/>	
Lead-212	✓	1.416	0.07889	pCi/g	0.1051	0.100	238.3	2	1.109	IDENTIFIED 4.228	<input type="checkbox"/>	
Lead-214	✓	1.103	0.09769	pCi/g	0.143	0.100	351.4	2	1.336	IDENTIFIED 7.759	<input type="checkbox"/>	
Neptunium-237	HE	0.6754	0.1648	pCi/g	0.4636	N	87.01	3	0.8834	IDENTIFIED 21.49	<input type="checkbox"/>	
Niobium-95m	HE	0.481	0.09587	pCi/g	0.3071	N	0	5	0	NOT_IDENTI 0	<input type="checkbox"/>	
Potassium-40	✓	33.57	1.695	pCi/g	0.6584	1.00	1459	1	2.305	IDENTIFIED 3.389	<input type="checkbox"/>	
Radium-224	INT	4.25	0.5953	pCi/g	1.126	Y	241.2	1	2.281	IDENTIFIED 13.72	<input checked="" type="checkbox"/>	UI
Radium-226	LA	0.8893	0.09469	pCi/g	0.285	Y	0	5	0	FAIL_ABUND 0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Radium-228	✓	1.655	0.197	pCi/g	0.2956	0.500	910.4	3	2.207	IDENTIFIED 10.32	<input type="checkbox"/>	
Thallium-208	✓	0.4877	0.05098	pCi/g	0.07181	0.080	582.5	1	1.543	IDENTIFIED 9.937	<input type="checkbox"/>	
Thorium-228	NR	1.416	0.07889	pCi/g	0.1051	N	238.3	2	1.109	IDENTIFIED 4.228	<input type="checkbox"/>	
Thorium-232	NR	1.655	0.197	pCi/g	0.2956	N	910.4	3	2.207	IDENTIFIED 10.32	<input type="checkbox"/>	
Tin-126	HE	0.2264	0.04985	pCi/g	0.1522	N	87.01	3	0.8834	IDENTIFIED 21.49	<input type="checkbox"/>	

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Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue		
247797001	17-FEB-10 12:00	05-MAR-10 10:27	15.9	SAMPLE	LOAD	1	LANL	LANL01004JGEL	N	RGSP		
Name	Result	Uncert.	Units	MDA	RDL	Energy	*** FWHM	Comb Act Rpt Err(%)	Qual	Qual Comment		
Actinium-228	✓	2.151	0.2188	pCi/g	0.2727	N	910.2	3 1.532	IDENTIFIED	7.947	<input type="checkbox"/>	
Annihilation Rad.	HE	0.1207	0.04627	pCi/g	0.0593	N	510.1	1 2.476	IDENTIFIED	38.2	<input type="checkbox"/>	
Bismuth-211	INT	4.856	0.3555	pCi/g	0.4018	Y	351.3	2 1.519	IDENTIFIED	6.159	<input checked="" type="checkbox"/>	✓
Bismuth-212	—	2.876	0.6385	pCi/g	1.534	N	0	5 0	FAIL_ABUND	0	<input type="checkbox"/>	
Bismuth-214	✓	1.672	0.1239	pCi/g	0.1516	0.200	608.6	2 1.475	IDENTIFIED	6.093	<input type="checkbox"/>	

Cadmium-109	INT	5.488	0.5402	pCi/g 1.155	Y	86.73	3	1.539	IDENTIFIED	9.074	<input checked="" type="checkbox"/>	UI
Cerium-143	—	2704	349.8	pCi/g 0	N	0	5	0	SHORT_HLIF	0	<input type="checkbox"/>	
Cesium-135	HE	0.4954	0.1246	pCi/g 0.2889	N	269.5	1	0.7655	IDENTIFIED	24.59	<input type="checkbox"/>	
Gross Gamma	—	12.18	1.576	pCi/g 4.118	N			0			<input type="checkbox"/>	
Iodine-133	HE	6907	7247	pCi/g 0	N	0	5	0	SHORT_HLIF	0	<input type="checkbox"/>	
Iodine-135	—	1.45E+15	0	pCi/g 0	N	0	5	0	SHORT_HLIF	0	<input type="checkbox"/>	
Lead-210	✓	2.544	0.6122	pCi/g 0.959	N	46.12	1	1.392	IDENTIFIED	23.75	<input type="checkbox"/>	
Lead-212	✓	2.245	0.1392	pCi/g 0.1133	0.100	238.1	2	1.266	IDENTIFIED	3.027	<input type="checkbox"/>	
Lead-214	✓	1.762	0.1379	pCi/g 0.1462	0.100	351.3	2	1.519	IDENTIFIED	6.159	<input type="checkbox"/>	
Neptunium-237	INT	1.599	0.2299	pCi/g 0.335	N	86.73	3	1.539	IDENTIFIED	9.074	<input type="checkbox"/>	
Niobium-95m	—	1.748	0.1444	pCi/g 0.4198	N	0	5	0	NOT_IDENTI	0	<input type="checkbox"/>	
Potassium-40	✓	36.11	1.544	pCi/g 0.6908	1.00	1459	1	2.233	IDENTIFIED	2.933	<input type="checkbox"/>	
Radium-224	INT	6.48	0.7577	pCi/g 1.214	Y	241.2	1	1.732	IDENTIFIED	10.62	<input checked="" type="checkbox"/>	UI
Radium-226	✓	1.672	0.1239	pCi/g 0.1516	Y	608.6	2	1.475	IDENTIFIED	6.093	<input type="checkbox"/>	
Radium-228	✓	2.151	0.2188	pCi/g 0.2727	0.500	910.2	3	1.532	IDENTIFIED	7.947	<input type="checkbox"/>	
Thallium-208	✓	0.7045	0.06107	pCi/g 0.07516	0.080	582.6	1	1.407	IDENTIFIED	7.853	<input type="checkbox"/>	
Thorium-228	NR	2.245	0.1392	pCi/g 0.1133	N	238.1	2	1.266	IDENTIFIED	3.027	<input type="checkbox"/>	
Thorium-232	NR	2.151	0.2188	pCi/g 0.2727	N	910.2	3	1.532	IDENTIFIED	7.947	<input type="checkbox"/>	
Thorium-234	✓	1.959	0.5944	pCi/g 1.263	2.00	62.93	2	1.168	IDENTIFIED	28.95	<input type="checkbox"/>	
Tin-126	NR	0.5358	0.05274	pCi/g 0.1126	N	86.73	3	1.539	IDENTIFIED	9.074	<input type="checkbox"/>	
Total Uranium	—	5.9643	1.77E-06 ug/g	1.8821	N			0			<input type="checkbox"/>	
Uranium-238	HE	1.959	0.5944	pCi/g 1.263	N	62.93	2	1.168	IDENTIFIED	28.95	<input type="checkbox"/>	

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Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project	Quals	Zero?	queue	
247797002	17-FEB-10 12:00	05-MAR-10 10:28	15.9	SAMPLE	LOAD	1	LANL	LANL01004GEL		N	RGSP	
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment	
Actinium-228	✓	2.343	0.2055	pCi/g 0.2335	N	911.6	3	1.887	IDENTIFIED	6.402	<input type="checkbox"/>	
Annihilation Rad.	—	0.198	0.03682	pCi/g 0.04727	N	511.1	1	2.03	IDENTIFIED	18.06	<input type="checkbox"/>	
Bismuth-211	INT	4.708	0.3407	pCi/g 0.3628	Y	352.1	2	1.184	IDENTIFIED	5.678	<input checked="" type="checkbox"/>	UI
Bismuth-212	—	2.266	0.3764	pCi/g 1.252	N	0	4	0	FAIL_ABUND	0	<input type="checkbox"/>	
Bismuth-214	✓	1.556	0.118	pCi/g 0.1154	0.200	609.6	2	1.711	IDENTIFIED	5.523	<input type="checkbox"/>	
Cadmium-109	INT	2.722	0.5467	pCi/g 1.232	Y	87.36	3	1.218	IDENTIFIED	19.53	<input checked="" type="checkbox"/>	UI
Cerium-143	—	1023	165.7	pCi/g 0	N	0	4	0	SHORT_HLIF	0	<input type="checkbox"/>	
Cesium-134	LA	0.1194	0.04244	pCi/g 0.09375	0.100	0	4	0	FAIL_ABUND	0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Gross Gamma	—	11.89	1.61	pCi/g 4.762	N			0			<input type="checkbox"/>	
Lead-212	✓	2.209	0.1222	pCi/g 0.09701	0.100	238.8	2	1.1	IDENTIFIED	2.741	<input type="checkbox"/>	
Lead-214	✓	1.709	0.1323	pCi/g 0.132	0.100	352.1	2	1.184	IDENTIFIED	5.678	<input type="checkbox"/>	
Mercury-203	INT	0.06999	0.02745	pCi/g 0.06607	0.100	278.1	1	0.8814	IDENTIFIED	38.98	<input checked="" type="checkbox"/>	UI
Neptunium-237	INT	0.7929	0.1796	pCi/g 0.4019	N	87.36	3	1.218	IDENTIFIED	19.53	<input type="checkbox"/>	
Potassium-40	✓	37	1.849	pCi/g 0.5419	1.00	1461	1	1.864	IDENTIFIED	2.556	<input type="checkbox"/>	
Radium-224	INT	5.789	0.6547	pCi/g 1.04	Y	241.8	1	1.828	IDENTIFIED	10.49	<input checked="" type="checkbox"/>	UI
Radium-226	✓	1.556	0.118	pCi/g 0.1154	Y	609.6	2	1.711	IDENTIFIED	5.523	<input type="checkbox"/>	
Radium-228	✓	2.343	0.2055	pCi/g 0.2335	0.500	911.6	3	1.887	IDENTIFIED	6.402	<input type="checkbox"/>	
Strontium-85	LA	0.08566	0.02137	pCi/g 0.07371	Y	0	4	0	NOT_IDENTI	0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Thallium-208	✓	0.6982	0.05521	pCi/g 0.05674	0.080	583.5	1	1.426	IDENTIFIED	6.301	<input type="checkbox"/>	
Thorium-228	NR	2.209	0.1222	pCi/g 0.09701	N	238.8	2	1.1	IDENTIFIED	2.741	<input type="checkbox"/>	

Thorium-232	NR	2.343	0.2055	pCi/g	0.2335	N	911.6	3	1.887	IDENTIFIED	6.402	<input type="checkbox"/>	
Tin-126	NR	0.2657	0.05337	pCi/g	0.1206	N	87.36	3	1.218	IDENTIFIED	19.53	<input type="checkbox"/>	
Total Uranium	✓	4.1718	2.19E-06	ug/g	2.5576	N	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
247797003	17-FEB-10 12:00	05-MAR-10 10:29	15.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act Rpt Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.93	0.1967	pCi/g	0.2453	N	911.6	3	1.664 IDENTIFIED 8.056	<input type="checkbox"/>	
Annihilation Rad. —	0.1455	0.03744	pCi/g	0.04584	N	511.1	1	1.596 IDENTIFIED 25.17	<input type="checkbox"/>	
Bismuth-211 INT	4.99	0.4094	pCi/g	0.3028	Y	352	2	1.17 IDENTIFIED 4.906	<input checked="" type="checkbox"/>	UI
Bismuth-212 HE	2.071	0.4233	pCi/g	1.231	N	0	5	0 FAIL_ABUND 0	<input type="checkbox"/>	
Bismuth-214 ✓	1.437	0.1117	pCi/g	0.09625	0.200	609.4	2	1.294 IDENTIFIED 5.323	<input type="checkbox"/>	
Cadmium-109 INT	3.926	0.5168	pCi/g	1.035	Y	87.29	3	1.191 IDENTIFIED 12.29	<input checked="" type="checkbox"/>	UI
Cerium-143 —	510.3	129.6	pCi/g	0	N	0	5	0 SHORT_HLIF 0	<input type="checkbox"/>	
Cesium-134 LA	0.09815	0.04584	pCi/g	0.0963	0.100	0	5	0 FAIL_ABUND 0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Gross Gamma —	11.7	1.522	pCi/g	3.41	N	0			<input type="checkbox"/>	
Iodine-133 HE	6019	5093	pCi/g	0	N	0	5	0 SHORT_HLIF 0	<input type="checkbox"/>	
Lead-212 ✓	2.109	0.1594	pCi/g	0.09212	0.100	238.6	2	0.9118 IDENTIFIED 2.811	<input type="checkbox"/>	
Lead-214 ✓	1.811	0.1568	pCi/g	0.1101	0.100	352	2	1.17 IDENTIFIED 4.906	<input type="checkbox"/>	
Neptunium-237 INT	1.144	0.1925	pCi/g	0.305	N	87.29	3	1.191 IDENTIFIED 12.29	<input type="checkbox"/>	
Potassium-40 ✓	40.93	2.023	pCi/g	0.5393	1.00	1461	1	1.905 IDENTIFIED 2.396	<input type="checkbox"/>	
Radium-224 INT	4.376	0.6136	pCi/g	0.9875	Y	241.7	1	1.433 IDENTIFIED 12.31	<input checked="" type="checkbox"/>	UI
Radium-226 ✓	1.437	0.1117	pCi/g	0.09625	Y	609.4	2	1.294 IDENTIFIED 5.323	<input type="checkbox"/>	
Radium-228 ✓	1.93	0.1967	pCi/g	0.2453	0.500	911.6	3	1.664 IDENTIFIED 8.056	<input type="checkbox"/>	
Strontium-85 LA	0.0744	0.02029	pCi/g	0.06872	Y	0	5	0 NOT_IDENTI 0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Thallium-208 ✓	0.6044	0.04901	pCi/g	0.05759	0.080	583.4	1	1.211 IDENTIFIED 6.055	<input type="checkbox"/>	
Thorium-228 NR	2.109	0.1594	pCi/g	0.09212	N	238.6	2	0.9118 IDENTIFIED 2.811	<input type="checkbox"/>	
Thorium-232 NR	1.93	0.1967	pCi/g	0.2453	N	911.6	3	1.664 IDENTIFIED 8.056	<input type="checkbox"/>	
Tin-126 NR	0.3833	0.05045	pCi/g	0.1014	N	87.29	3	1.191 IDENTIFIED 12.29	<input type="checkbox"/>	
Total Uranium —	4.3618	2.20E-06	ug/g	2.497	N	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
247797004	17-FEB-10 12:00	05-MAR-10 10:29	15.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act Rpt Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.972	0.2017	pCi/g	0.2263	N	912.1	3	1.617 IDENTIFIED 8.542	<input type="checkbox"/>	
Annihilation Rad. HE	0.1033	0.03244	pCi/g	0.04808	N	511.1	1	1.419 IDENTIFIED 31.27	<input type="checkbox"/>	
Bismuth-211 INT	4.608	0.2816	pCi/g	0.3096	Y	352.2	2	1.316 IDENTIFIED 5.096	<input checked="" type="checkbox"/>	UI
Bismuth-212 ✓	1.823	0.4117	pCi/g	0.8577	N	727.8	1	0.9303 IDENTIFIED 21.95	<input type="checkbox"/>	
Bismuth-214 ✓	1.324	0.108	pCi/g	0.1132	0.200	610	2	1.355 IDENTIFIED 7.267	<input type="checkbox"/>	
Cadmium-109 INT	3.703	0.4953	pCi/g	1.358	Y	87.24	3	1.1 IDENTIFIED 11.97	<input checked="" type="checkbox"/>	UI
Cerium-143 —	453.3	124.2	pCi/g	0	N	0	5	0 SHORT_HLIF 0	<input type="checkbox"/>	
Cesium-134 LA	0.102	0.05326	pCi/g	0.09539	0.100	0	5	0 FAIL_ABUND 0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Gross Gamma —	10.83	1.48	pCi/g	3.304	N	0			<input type="checkbox"/>	
Iodine-133 HE	4057	5230	pCi/g	0	N	0	5	0 SHORT_HLIF 0	<input type="checkbox"/>	
Lead-212 ✓	1.998	0.1008	pCi/g	0.09182	0.100	238.8	2	1.149 IDENTIFIED 3.017	<input type="checkbox"/>	
Lead-214 ✓	1.673	0.1121	pCi/g	0.1126	0.100	352.2	2	1.316 IDENTIFIED 5.096	<input type="checkbox"/>	

Bismuth-212	HE	2.048	0.5334	pCi/g	1.328	N	0	4	0	FAIL_ABUND 0	<input type="checkbox"/>	
Bismuth-214	✓	1.181	0.1128	pCi/g	0.147	0.200	609.4	2	1.575	IDENTIFIED 8.152	<input type="checkbox"/>	
Cadmium-109	INT	2.81	0.6502	pCi/g	1.99	Y	87.25	3	1.165	IDENTIFIED 22.3	✓ <input checked="" type="checkbox"/>	UI
Cerium-143	—	511.2	82.41	pCi/g	0	N	0	4	0	SHORT_HLIF 0	<input type="checkbox"/>	
Cesium-137	✓	0.1311	0.03443	pCi/g	0.08688	0.100	661.5	2	1.058	IDENTIFIED 25.94	<input type="checkbox"/>	
Gross Gamma	—	10.09	1.521	pCi/g	3.96	N		0			<input type="checkbox"/>	
Lead-212	✓	1.896	0.1336	pCi/g	0.1207	0.100	238.7	2	1.318	IDENTIFIED 3.738	<input type="checkbox"/>	
Lead-214	✓	1.411	0.1266	pCi/g	0.1577	0.100	352.1	2	1.483	IDENTIFIED 6.95	<input type="checkbox"/>	
Neptunium-237	HE	0.8212	0.2086	pCi/g	0.5501	N	87.25	3	1.165	IDENTIFIED 22.3	<input type="checkbox"/>	
Niobium-95m	—	0.512	0.09706	pCi/g	0.3167	N	0	4	0	NOT_IDENTI 0	<input type="checkbox"/>	
Potassium-40	✓	34.95	2.035	pCi/g	0.6605	1.00	1461	1	2	IDENTIFIED 3.124	<input type="checkbox"/>	
Radium-224	INT	5.098	0.8076	pCi/g	1.293	Y	241.8	1	1.854	IDENTIFIED 14.85	✓ <input checked="" type="checkbox"/>	UI
Radium-226	✓	1.181	0.1128	pCi/g	0.147	Y	609.4	2	1.575	IDENTIFIED 8.152	<input type="checkbox"/>	
Radium-228	✓	2.011	0.1989	pCi/g	0.3027	0.500	911.2	3	1.673	IDENTIFIED 7.817	<input type="checkbox"/>	
Strontium-85	LA	0.1406	0.02497	pCi/g	0.09352	Y	0	4	0	NOT_IDENTI 0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Thallium-208	✓	0.5444	0.056	pCi/g	0.07274	0.080	583.3	1	1.709	IDENTIFIED 9.214	<input type="checkbox"/>	
Thorium-228	NR	1.896	0.1336	pCi/g	0.1207	N	238.7	2	1.318	IDENTIFIED 3.738	<input type="checkbox"/>	
Thorium-232	NR	2.011	0.1989	pCi/g	0.3027	N	911.2	3	1.673	IDENTIFIED 7.817	<input type="checkbox"/>	
Tin-126	HE	0.2752	0.06367	pCi/g	0.2024	N	87.25	3	1.165	IDENTIFIED 22.3	<input type="checkbox"/>	

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Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue		
247809002	19-FEB-10 12:00	05-MAR-10 10:32	13.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP		
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act Rpt Err (%)	Qual	Qual Comment		
Actinium-228	✓	1.955	0.2222	pCi/g	0.2287	N	911.6	3	2.192	IDENTIFIED 9.131	<input type="checkbox"/>	
Annihilation Rad.	—	0.2254	0.03999	pCi/g	0.04341	N	511.3	1	2.325	IDENTIFIED 17.02	<input type="checkbox"/>	
Bismuth-211	INT	4.174	0.3212	pCi/g	0.3373	Y	352	2	1.268	IDENTIFIED 5.043	✓ <input checked="" type="checkbox"/>	UI
Bismuth-212	HE	1.315	0.4016	pCi/g	1.092	N	0	7	0	FAIL_ABUND 0	<input type="checkbox"/>	
Bismuth-214	✓	1.463	0.12	pCi/g	0.116	0.200	609.3	2	1.752	IDENTIFIED 5.763	<input type="checkbox"/>	
Cadmium-109	INT	3.187	0.535	pCi/g	1.311	Y	86.86	3	1.241	IDENTIFIED 16.12	✓ <input checked="" type="checkbox"/>	UI
Cerium-143	—	543.6	82.09	pCi/g	0	N	0	7	0	SHORT_HLIF 0	<input type="checkbox"/>	
Cesium-134	LA	0.1207	0.03665	pCi/g	0.08512	0.100	0	7	0	FAIL_ABUND 0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Cesium-135	HE	0.329	0.1027	pCi/g	0.309	N	0	7	0	NOT_IDENTI 0	<input type="checkbox"/>	
Gross Gamma	—	11.49	1.419	pCi/g	2.609	N		0			<input type="checkbox"/>	
Iodine-133	HE	2320	1182	pCi/g	0	N	0	7	0	SHORT_HLIF 0	<input type="checkbox"/>	
Lead-212	✓	2.166	0.1558	pCi/g	0.09429	0.100	238.7	2	1.287	IDENTIFIED 2.796	<input type="checkbox"/>	
Lead-214	✓	1.515	0.1238	pCi/g	0.1267	0.100	352	2	1.268	IDENTIFIED 5.043	<input type="checkbox"/>	
Neptunium-237	INT	0.9311	0.1843	pCi/g	0.324	N	86.86	3	1.241	IDENTIFIED 16.12	<input type="checkbox"/>	
Niobium-95m	HE	0.2861	0.07815	pCi/g	0.2382	N	0	7	0	NOT_IDENTI 0	<input type="checkbox"/>	
Potassium-40	✓	41.46	2.107	pCi/g	0.5014	1.00	1461	1	2.661	IDENTIFIED 2.202	<input type="checkbox"/>	
Radium-224	INT	6.118	0.7456	pCi/g	1.01	Y	241.7	1	1.886	IDENTIFIED 10.45	✓ <input checked="" type="checkbox"/>	UI
Radium-226	✓	1.463	0.12	pCi/g	0.116	Y	609.3	2	1.752	IDENTIFIED 5.763	<input type="checkbox"/>	
Radium-228	✓	1.955	0.2222	pCi/g	0.2287	0.500	911.6	3	2.192	IDENTIFIED 9.131	<input type="checkbox"/>	
Strontium-85	LA	0.2135	0.02396	pCi/g	0.08381	Y	0	7	0	NOT_IDENTI 0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Thallium-208	✓	0.6115	0.0487	pCi/g	0.05379	0.080	583.2	1	1.679	IDENTIFIED 5.838	<input type="checkbox"/>	
Thorium-228	NR	2.166	0.1558	pCi/g	0.09429	N	238.7	2	1.287	IDENTIFIED 2.796	<input type="checkbox"/>	
Thorium-232	NR	1.955	0.2222	pCi/g	0.2287	N	911.6	3	2.192	IDENTIFIED 9.131	<input type="checkbox"/>	

Thorium-234	✓	2.36	1.002	pCi/g	2.056	2.00	63.07	2	1.073	IDENTIFIED	41.51	<input type="checkbox"/>	
Tin-126	NR	0.312	0.05239	pCi/g	0.1292	N	86.86	3	1.241	IDENTIFIED	16.12	<input type="checkbox"/>	
Total Uranium	✓	7.1077	2.98E-06	ug/g	3.0611	N		0				<input type="checkbox"/>	
Uranium-238	HE	2.36	1.002	pCi/g	2.056	N	63.07	2	1.073	IDENTIFIED	41.51	<input type="checkbox"/>	

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Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
247809003	19-FEB-10 12:00	05-MAR-10 10:33	13.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment		
Actinium-228	✓	1.755	0.2119	pCi/g	0.2593	N	911.7	3	2.094	IDENTIFIED	10.5	<input type="checkbox"/>	
Annihilation Rad.	—	0.1772	0.04109	pCi/g	0.05608	N	511.4	1	1.951	IDENTIFIED	22.8	<input type="checkbox"/>	
Bismuth-211	INT	3.774	0.3229	pCi/g	0.3815	Y	352.1	2	1.369	IDENTIFIED	7.251	<input checked="" type="checkbox"/>	UI
Bismuth-212	HE	1.372	0.4236	pCi/g	1.293	N	0	6	0	FAIL_ABUND	0	<input type="checkbox"/>	
Bismuth-214	✓	1.235	0.1141	pCi/g	0.1339	0.200	609.8	2	1.564	IDENTIFIED	7.805	<input type="checkbox"/>	
Cadmium-109	INT	2.318	0.6496	pCi/g	1.468	Y	87.63	3	1.161	IDENTIFIED	27.63	<input checked="" type="checkbox"/>	UI
Cerium-143	—	184.5	51.15	pCi/g	0	N	0	6	0	SHORT_HLIF	0	<input type="checkbox"/>	
Cesium-134	LA	0.1196	0.04001	pCi/g	0.1096	0.100	0	6	0	FAIL_ABUND	0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Gross Gamma	—	9.504	1.493	pCi/g	3.64	N	0					<input type="checkbox"/>	
Iodine-133	HE	1224	1275	pCi/g	0	N	0	6	0	SHORT_HLIF	0	<input type="checkbox"/>	
Iodine-135	HE	3.28E+13	2.06E+14	pCi/g	0	N	0	6	0	SHORT_HLIF	0	<input type="checkbox"/>	
Lead-212	✓	1.735	0.1096	pCi/g	0.1085	0.100	239	2	1.228	IDENTIFIED	3.746	<input type="checkbox"/>	
Lead-214	✓	1.37	0.1231	pCi/g	0.1387	0.100	352.1	2	1.369	IDENTIFIED	7.251	<input type="checkbox"/>	
Neptunium-237	HE	0.6772	0.2027	pCi/g	0.4968	N	87.63	3	1.161	IDENTIFIED	27.63	<input type="checkbox"/>	
Potassium-40	✓	35.09	1.87	pCi/g	0.5895	1.00	1461	1	1.981	IDENTIFIED	2.939	<input type="checkbox"/>	
Radium-224	INT	4.133	0.6191	pCi/g	1.163	Y	242	1	1.553	IDENTIFIED	14.27	<input checked="" type="checkbox"/>	UI
Radium-226	✓	1.235	0.1141	pCi/g	0.1339	Y	609.8	2	1.564	IDENTIFIED	7.805	<input type="checkbox"/>	
Radium-228	✓	1.755	0.2119	pCi/g	0.2593	0.500	911.7	3	2.094	IDENTIFIED	10.5	<input type="checkbox"/>	
Strontium-85	LA	0.122	0.02771	pCi/g	0.09243	Y	0	6	0	NOT_IDENTI	0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Thallium-208	✓	0.4097	0.05356	pCi/g	0.07031	0.080	583.8	1	1.641	IDENTIFIED	12.26	<input type="checkbox"/>	
Thorium-228	NR	1.735	0.1096	pCi/g	0.1085	N	239	2	1.228	IDENTIFIED	3.746	<input type="checkbox"/>	
Thorium-232	NR	1.755	0.2119	pCi/g	0.2593	N	911.7	3	2.094	IDENTIFIED	10.5	<input type="checkbox"/>	
Tin-126	HE	0.2269	0.06361	pCi/g	0.1795	N	87.63	3	1.161	IDENTIFIED	27.63	<input type="checkbox"/>	
Total Uranium	—	5.8919	2.55E-06	ug/g	4.4137	N	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
247809004	19-FEB-10 12:00	05-MAR-10 10:34	13.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment		
Actinium-228	✓	1.908	0.178	pCi/g	0.235	N	911.5	3	2.127	IDENTIFIED	7.288	<input type="checkbox"/>	
Annihilation Rad.	—	0.1573	0.03595	pCi/g	0.04805	N	510.7	1	1.731	IDENTIFIED	22.65	<input type="checkbox"/>	
Bismuth-211	INT	3.979	0.2903	pCi/g	0.3511	Y	351.6	2	1.454	IDENTIFIED	6.561	<input checked="" type="checkbox"/>	UI
Bismuth-212	—	2.472	0.5016	pCi/g	1.276	N	0	6	0	FAIL_ABUND	0	<input type="checkbox"/>	
Bismuth-214	✓	1.252	0.09686	pCi/g	0.1218	0.200	609.3	2	1.608	IDENTIFIED	6.642	<input type="checkbox"/>	
Cadmium-109	INT	3.498	0.5093	pCi/g	1.317	Y	87.26	3	1.186	IDENTIFIED	13.86	<input checked="" type="checkbox"/>	UI
Cerium-143	—	583.8	80.04	pCi/g	0	N	0	6	0	SHORT_HLIF	0	<input type="checkbox"/>	
Cesium-134	LA	0.1197	0.04168	pCi/g	0.08807	0.100	0	6	0	FAIL_ABUND	0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Europium-155	HE	0.2123	0.05846	pCi/g	0.2094	N	0	6	0	FAIL_ABUND	0	<input type="checkbox"/>	
Gross Gamma	—	9.962	1.451	pCi/g	3.595	N		0				<input type="checkbox"/>	

Lead-212	✓	1.8	0.08875 pCi/g	0.0993	0.100	238.5	2	1.352	IDENTIFIED	3.323	<input type="checkbox"/>	
Lead-214	✓	1.444	0.1127 pCi/g	0.1277	0.100	351.6	2	1.454	IDENTIFIED	6.561	<input type="checkbox"/>	
Neptunium-237	INT	1.022	0.1834 pCi/g	0.371	N	87.26	3	1.186	IDENTIFIED	13.86	<input type="checkbox"/>	
Niobium-95m	—	0.5371	0.08633 pCi/g	0.2819	N	0	6	0	NOT_IDENTI	0	<input type="checkbox"/>	
Potassium-40	✓	30.91	1.487 pCi/g	0.605	1.00	1461	1	2.084	IDENTIFIED	3.048	<input type="checkbox"/>	
Radium-224	INT	4.542	0.6542 pCi/g	1.064	Y	241.5	1	1.798	IDENTIFIED	14.12	<input checked="" type="checkbox"/>	UI
Radium-226	✓	1.252	0.09686 pCi/g	0.1218	Y	609.3	2	1.608	IDENTIFIED	6.642	<input type="checkbox"/>	
Radium-228	✓	1.908	0.178 pCi/g	0.235	0.500	911.5	3	2.127	IDENTIFIED	7.288	<input type="checkbox"/>	
Strontium-85	LA	0.0826	0.02214 pCi/g	0.07445	Y	0	6	0	NOT_IDENTI	0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Thallium-208	✓	0.5445	0.04585 pCi/g	0.06138	0.080	583.2	1	1.67	IDENTIFIED	7.706	<input type="checkbox"/>	
Thorium-228	NR	1.8	0.08875 pCi/g	0.0993	N	238.5	2	1.352	IDENTIFIED	3.323	<input type="checkbox"/>	
Thorium-232	NR	1.908	0.178 pCi/g	0.235	N	911.5	3	2.127	IDENTIFIED	7.288	<input type="checkbox"/>	
Tin-126	NR	0.3426	0.04987 pCi/g	0.1295	N	87.26	3	1.186	IDENTIFIED	13.86	<input type="checkbox"/>	

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Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue		
247809005	19-FEB-10 12:00	05-MAR-10 10:35	13.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP		
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment	
Actinium-228	✓	1.969	0.2327	pCi/g 0.262	N	911.3	3	1.677	IDENTIFIED	10.16	<input type="checkbox"/>	
Annihilation Rad.	—	0.1621	0.03423	pCi/g 0.05118	N	510.8	1	2.193	IDENTIFIED	20.91	<input type="checkbox"/>	
Bismuth-211	INT	4.427	0.2608	pCi/g 0.3641	Y	351.7	2	1.287	IDENTIFIED	4.966	<input checked="" type="checkbox"/>	UI
Bismuth-212	—	2.692	0.52	pCi/g 1.401	N	0	10	0	FAIL_ABUND	0	<input type="checkbox"/>	
Bismuth-214	✓	1.357	0.1057	pCi/g 0.1371	0.200	609.4	2	1.728	IDENTIFIED	6.694	<input type="checkbox"/>	
Cadmium-109	INT	2.102	0.6535	pCi/g 1.578	Y	87.61	3	1.077	IDENTIFIED	30.78	<input checked="" type="checkbox"/>	UI
Cerium-143	—	714.3	92.9	pCi/g 0	N	0	10	0	SHORT_HLIF	0	<input type="checkbox"/>	
Cesium-134	LA	0.1382	0.0484	pCi/g 0.1008	0.100	0	10	0	FAIL_ABUND	0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Cesium-135	HE	0.4934	0.1037	pCi/g 0.3412	N	0	10	0	NOT_IDENTI	0	<input type="checkbox"/>	
Gross Gamma	—	10.72	1.58	pCi/g 4.712	N	0					<input type="checkbox"/>	
Iodine-133	HE	1782	1196	pCi/g 0	N	0	10	0	SHORT_HLIF	0	<input type="checkbox"/>	
Iodine-135	HE	7.91E+13	1.71E+14	pCi/g 0	N	0	10	0	SHORT_HLIF	0	<input type="checkbox"/>	
Lead-212	✓	2.042	0.09692	pCi/g 0.09984	0.100	238.5	2	1.352	IDENTIFIED	3.004	<input type="checkbox"/>	
Lead-214	✓	1.607	0.1045	pCi/g 0.1329	0.100	351.7	2	1.287	IDENTIFIED	4.966	<input type="checkbox"/>	
Neptunium-237	HE	0.6143	0.2015	pCi/g 0.4756	N	87.61	3	1.077	IDENTIFIED	30.78	<input type="checkbox"/>	
Niobium-95	HE	0.1051	0.02748	pCi/g 0.09095	N	0	10	0	NOT_IDENTI	0	<input type="checkbox"/>	
Niobium-95m	—	0.7484	0.09302	pCi/g 0.3101	N	0	10	0	NOT_IDENTI	0	<input type="checkbox"/>	
Potassium-40	✓	33.16	1.565	pCi/g 0.6029	1.00	1461	1	2.143	IDENTIFIED	3.014	<input type="checkbox"/>	
Radium-224	INT	5.395	0.7298	pCi/g 1.069	Y	241.4	1	2.062	IDENTIFIED	13.22	<input checked="" type="checkbox"/>	UI
Radium-226	✓	1.357	0.1057	pCi/g 0.1371	Y	609.4	2	1.728	IDENTIFIED	6.694	<input type="checkbox"/>	
Radium-228	✓	1.969	0.2327	pCi/g 0.262	0.500	911.3	3	1.677	IDENTIFIED	10.16	<input type="checkbox"/>	
Sodium-24	—	2.18E+05	1.01E+05	pCi/g 0	N	0	10	0	SHORT_HLIF	0	<input type="checkbox"/>	
Strontium-85	LA	0.09389	0.02295	pCi/g 0.0765	Y	0	10	0	NOT_IDENTI	0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Thallium-208	✓	0.5549	0.04743	pCi/g 0.06704	0.080	583.2	1	1.339	IDENTIFIED	7.837	<input type="checkbox"/>	
Thorium-228	NR	2.042	0.09692	pCi/g 0.09984	N	238.5	2	1.352	IDENTIFIED	3.004	<input type="checkbox"/>	
Thorium-232	NR	1.969	0.2327	pCi/g 0.262	N	911.3	3	1.677	IDENTIFIED	10.16	<input type="checkbox"/>	
Tin-126	HE	0.2059	0.064	pCi/g 0.1651	N	87.61	3	1.077	IDENTIFIED	30.78	<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
247809006	19-FEB-10 12:00	05-MAR-10 10:35	13.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act Rpt Err(%)	Qual	Qual Comment
Actinium-228 ✓	2.094	0.217	pCi/g	0.229	N	910.5	3	1.484 IDENTIFIED	8.558	<input type="checkbox"/>
Annihilation Rad. HE	0.1233	0.038	pCi/g	0.05182	N	510.7	1	1.777 IDENTIFIED	30.48	<input type="checkbox"/>
Bismuth-211 INT	3.349	0.276	pCi/g	0.3426	Y	351.7	2	1.219 IDENTIFIED	6.796	<input checked="" type="checkbox"/> UI
Bismuth-212 HE	2.416	0.5916	pCi/g	1.455	N	0	3	0 FAIL_ABUND	0	<input type="checkbox"/>
Bismuth-214 ✓	1.297	0.1157	pCi/g	0.1312	0.200	608.8	2	1.469 IDENTIFIED	7.315	<input type="checkbox"/>
Cadmium-109 INT	3.361	0.434	pCi/g	0.9634	Y	87.18	3	1.162 IDENTIFIED	11.96	<input checked="" type="checkbox"/> UI
Cerium-143 —	301.7	56.01	pCi/g	0	N	0	3	0 SHORT_HLIF	0	<input type="checkbox"/>
Cesium-135 HE	0.4438	0.1445	pCi/g	0.2456	N	269.5	1	1.137 IDENTIFIED	32.15	<input type="checkbox"/>
Gross Gamma —	9.666	1.526	pCi/g	4.325	N	0				<input type="checkbox"/>
Iodine-135 HE	1.11E+14	2.40E+14	pCi/g	0	N	0	3	0 SHORT_HLIF	0	<input type="checkbox"/>
Lead-210 HE	1.373	0.4328	pCi/g	0.7882	N	46.57	1	0.8012 IDENTIFIED	31.05	<input type="checkbox"/>
Lead-212 ✓	1.523	0.097	pCi/g	0.09471	0.100	238.5	2	1.003 IDENTIFIED	3.862	<input type="checkbox"/>
Lead-214 ✓	1.215	0.1056	pCi/g	0.121	0.100	351.7	2	1.219 IDENTIFIED	6.796	<input type="checkbox"/>
Neptunium-237 INT	0.982	0.1633	pCi/g	0.2802	N	87.18	3	1.162 IDENTIFIED	11.96	<input type="checkbox"/>
Potassium-40 ✓	30.93	1.785	pCi/g	0.7169	1.00	1460	1	2.059 IDENTIFIED	3.69	<input type="checkbox"/>
Radium-224 INT	3.655	0.7391	pCi/g	1.016	Y	241.3	1	1.82 IDENTIFIED	19.71	<input checked="" type="checkbox"/> UI
Radium-226 ✓	1.297	0.1157	pCi/g	0.1312	Y	608.8	2	1.469 IDENTIFIED	7.315	<input type="checkbox"/>
Radium-228 ✓	2.094	0.217	pCi/g	0.229	0.500	910.5	3	1.484 IDENTIFIED	8.558	<input type="checkbox"/>
Thallium-208 ✓	0.5192	0.05616	pCi/g	0.0788	0.080	582.9	1	1.086 IDENTIFIED	9.731	<input type="checkbox"/>
Thorium-228 NR	1.523	0.097	pCi/g	0.09471	N	238.5	2	1.003 IDENTIFIED	3.862	<input type="checkbox"/>
Thorium-232 NR	2.094	0.217	pCi/g	0.229	N	910.5	3	1.484 IDENTIFIED	8.558	<input type="checkbox"/>
Thorium-234 ✓	2.068	0.5009	pCi/g	1.009	2.00	63.11	2	1.054 IDENTIFIED	22.27	<input type="checkbox"/>
Tin-126 NR	0.3291	0.04249	pCi/g	0.09421	N	87.18	3	1.162 IDENTIFIED	11.96	<input type="checkbox"/>
Total Uranium —	6.2289	1.49E-06	ug/g	1.5032	N	0				<input type="checkbox"/>
Uranium-238 NR	2.068	0.5009	pCi/g	1.009	N	63.11	2	1.054 IDENTIFIED	22.27	<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
247809008	19-FEB-10 12:00	05-MAR-10 10:36	13.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act Rpt Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.702	0.1611	pCi/g	0.1726	N	910.8	3	1.635 IDENTIFIED	6.614	<input type="checkbox"/>
Annihilation Rad. HE	0.07925	0.02519	pCi/g	0.03779	N	510.8	1	1.912 IDENTIFIED	31.61	<input type="checkbox"/>
Bismuth-211 INT	3.616	0.2272	pCi/g	0.2618	Y	351.9	2	1.413 IDENTIFIED	5.402	<input checked="" type="checkbox"/> UI
Bismuth-212 —	2.084	0.4675	pCi/g	0.9673	N	0	6	0 FAIL_ABUND	0	<input type="checkbox"/>
Bismuth-214 ✓	1.073	0.08528	pCi/g	0.08936	0.200	609.1	2	1.716 IDENTIFIED	6.553	<input type="checkbox"/>
Cadmium-109 INT	2.45	0.4872	pCi/g	1.091	Y	87.11	3	1.253 IDENTIFIED	19.35	<input checked="" type="checkbox"/> UI
Cerium-143 —	372.9	54.61	pCi/g	0	N	0	6	0 SHORT_HLIF	0	<input type="checkbox"/>
Cesium-134 LA	0.08371	0.02753	pCi/g	0.07074	0.100	0	6	0 FAIL_ABUND	0	<input checked="" type="checkbox"/> UI Data rejected due to low abundance
Cesium-135 HE	0.2856	0.07224	pCi/g	0.2359	N	0	6	0 NOT_IDENTI	0	<input type="checkbox"/>
Gross Gamma —	9.469	1.252	pCi/g	2.581	N	0				<input type="checkbox"/>
Iodine-135 HE	4.35E+13	1.50E+14	pCi/g	0	N	0	6	0 SHORT_HLIF	0	<input type="checkbox"/>
Lead-212 ✓	1.701	0.07879	pCi/g	0.07584	0.100	238.7	2	1.277 IDENTIFIED	2.907	<input type="checkbox"/>
Lead-214 ✓	1.312	0.09006	pCi/g	0.09519	0.100	351.9	2	1.413 IDENTIFIED	5.402	<input type="checkbox"/>

Annihilation Rad.	—	0.1426	0.03156	pCi/g	0.04626	N	511	1	1.785	IDENTIFIED	21.65	<input type="checkbox"/>	
Bismuth-211	INT	4.485	0.3178	pCi/g	0.3417	Y	352	2	1.252	IDENTIFIED	5.225	<input checked="" type="checkbox"/>	UI
Bismuth-212	✓	2.446	0.4549	pCi/g	0.8212	N	727.6	1	1.126	IDENTIFIED	17.32	<input type="checkbox"/>	
Bismuth-214	✓	1.534	0.1208	pCi/g	0.1121	0.200	609.6	2	1.439	IDENTIFIED	5.555	<input type="checkbox"/>	
Cadmium-109	INT	3.425	0.527	pCi/g	1.218	Y	87.36	3	1.186	IDENTIFIED	14.65	<input checked="" type="checkbox"/>	UI
Cerium-143	—	310.7	57.33	pCi/g	0	N	0	4	0	SHORT_HLIF	0	<input type="checkbox"/>	
Cesium-134	LA	0.1501	0.03655	pCi/g	0.1007	0.100	0	4	0	FAIL_ABUND	0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Cesium-135	HE	0.3059	0.08674	pCi/g	0.2859	N	0	4	0	NOT_IDENTI	0	<input type="checkbox"/>	
Gross Gamma	—	11.82	1.467	pCi/g	4.719	N	0					<input type="checkbox"/>	
Lead-212	✓	2.079	0.1264	pCi/g	0.09227	0.100	238.7	2	1.053	IDENTIFIED	2.909	<input type="checkbox"/>	
Lead-214	✓	1.628	0.1238	pCi/g	0.1276	0.100	352	2	1.252	IDENTIFIED	5.225	<input type="checkbox"/>	
Neptunium-237	INT	1.001	0.1863	pCi/g	0.4139	N	87.36	3	1.186	IDENTIFIED	14.65	<input type="checkbox"/>	
Potassium-40	✓	39.88	2.008	pCi/g	0.4964	1.00	1461	1	1.836	IDENTIFIED	2.517	<input type="checkbox"/>	
Radium-224	INT	5.541	0.6484	pCi/g	0.9887	Y	241.7	1	1.729	IDENTIFIED	10.65	<input checked="" type="checkbox"/>	UI
Radium-226	✓	1.534	0.1208	pCi/g	0.1121	Y	609.6	2	1.439	IDENTIFIED	5.555	<input type="checkbox"/>	
Radium-228	✓	1.958	0.1955	pCi/g	0.2256	0.500	911.4	3	1.37	IDENTIFIED	7.757	<input type="checkbox"/>	
Sodium-24	HE	91930	95250	pCi/g	0	N	0	4	0	SHORT_HLIF	0	<input type="checkbox"/>	
Thallium-208	✓	0.6521	0.05451	pCi/g	0.05876	0.080	583.4	1	1.345	IDENTIFIED	6.596	<input type="checkbox"/>	
Thorium-228	NR	2.079	0.1264	pCi/g	0.09227	N	238.7	2	1.053	IDENTIFIED	2.909	<input type="checkbox"/>	
Thorium-232	NR	1.958	0.1955	pCi/g	0.2256	N	911.4	3	1.37	IDENTIFIED	7.757	<input type="checkbox"/>	
Thorium-234	✓	2.395	1.027	pCi/g	1.812	2.00	62.98	2	0.9753	IDENTIFIED	41.95	<input type="checkbox"/>	
Tin-126	NR	0.3354	0.05161	pCi/g	0.1196	N	87.36	3	1.186	IDENTIFIED	14.65	<input type="checkbox"/>	
Total Uranium	—	7.1208	3.06E-06	ug/g	2.6977	N	0					<input type="checkbox"/>	
Uranium-238	HE	2.395	1.027	pCi/g	1.812	N	62.98	2	0.9753	IDENTIFIED	41.95	<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
1202052272		05-MAR-10 10:54	0	MB	LOAD	1		GEL	N	RGSP
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act Rpt Err (%)	Qual	Qual Comment
Iodine-133 HE	4.006	3.032	pCi/g	0	N	0	2	0	SHORT_HLIF	0
Iodine-135 HE	2.73E+06	4.77E+06	pCi/g	0	N	0	2	0	SHORT_HLIF	0

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1202052273	19-FEB-10 12:00	05-MAR-10 13:05	14	DUP	LOAD	1		LANL01004K6EL	N	RGSP
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act Rpt Err (%)	Qual	Qual Comment
Actinium-228	✓	2.093	0.2095	pCi/g	0.2625	N	910.6	3	1.924	IDENTIFIED
Annihilation Rad.	—	0.1958	0.04043	pCi/g	0.05143	N	510.4	1	1.69	IDENTIFIED
Barium-137m	HE	0.1186	0.0268	pCi/g	0.06705	N	661.2	2	1.261	IDENTIFIED
Bismuth-211	INT	4.371	0.3483	pCi/g	0.3561	Y	351.6	2	1.312	IDENTIFIED
Bismuth-212	—	2.544	0.5093	pCi/g	1.394	N	0	6	0	FAIL_ABUND
Bismuth-214	✓	1.308	0.1144	pCi/g	0.1263	0.200	608.8	2	1.573	IDENTIFIED
Cadmium-109	INT	2.54	0.474	pCi/g	1.381	Y	86.9	3	0.8682	IDENTIFIED
Cerium-143	—	591.5	90.54	pCi/g	0	N	0	6	0	SHORT_HLIF
Cesium-134	LA	0.1485	0.03599	pCi/g	0.1055	0.100	0	6	0	FAIL_ABUND
Cesium-135	HE	0.3935	0.09621	pCi/g	0.3219	N	0	6	0	NOT_IDENTI
Cesium-137	✓	0.1253	0.02831	pCi/g	0.07084	0.100	661.2	2	1.261	IDENTIFIED
Gross Gamma	✓	10.89	1.586	pCi/g	3.876	N	0			

Iodine-133	HE	743.6	1474	pCi/g 0	N	0	6	0	SHORT_HLIF 0	<input type="checkbox"/>	
Lead-212	✓	1.96	0.1393	pCi/g 0.09883	0.100	238.3	2	1.106	IDENTIFIED 3.269	<input type="checkbox"/>	
Lead-214	✓	1.586	0.1337	pCi/g 0.1295	0.100	351.6	2	1.312	IDENTIFIED 5.502	<input type="checkbox"/>	
Neptunium-237	INT	0.7421	0.1588	pCi/g 0.4116	N	86.9	3	0.8682	IDENTIFIED 17.99	<input type="checkbox"/>	
Potassium-40	✓	34.07	1.928	pCi/g 0.6641	1.00	1460	1	2.248	IDENTIFIED 3.071	<input type="checkbox"/>	
Radium-224	INT	5.179	0.7018	pCi/g 1.06	Y	241.3	1	1.723	IDENTIFIED 12.2	<input checked="" type="checkbox"/>	UI
Radium-226	✓	1.308	0.1144	pCi/g 0.1263	Y	608.8	2	1.573	IDENTIFIED 6.949	<input type="checkbox"/>	
Radium-228	✓	2.093	0.2095	pCi/g 0.2625	0.500	910.6	3	1.924	IDENTIFIED 7.707	<input type="checkbox"/>	
Strontium-85	LA	0.07953	0.02254	pCi/g 0.0746	Y	0	6	0	NOT_IDENTI 0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Thallium-208	✓	0.5749	0.05339	pCi/g 0.06488	0.080	582.8	1	1.345	IDENTIFIED 7.823	<input type="checkbox"/>	
Thorium-228	NR	1.96	0.1393	pCi/g 0.09883	N	238.3	2	1.106	IDENTIFIED 3.269	<input type="checkbox"/>	
Thorium-232	NR	2.093	0.2095	pCi/g 0.2625	N	910.6	3	1.924	IDENTIFIED 7.707	<input type="checkbox"/>	
Thorium-234	✓	3.257	1.357	pCi/g 2.557	2.00	62.5	2	1.033	IDENTIFIED 40.68	<input type="checkbox"/>	
Tin-126	NR	0.2487	0.04641	pCi/g 0.136	N	86.9	3	0.8682	IDENTIFIED 17.99	<input type="checkbox"/>	
Total Uranium	-	9.7422	4.04E-06 ug/g	3.8069	N	0				<input type="checkbox"/>	
Uranium-238	HE	3.257	1.357	pCi/g 2.557	N	62.5	2	1.033	IDENTIFIED 40.68	<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
1202052274		08-MAR-10 09:46	0	LCS	LOAD	1		GEL		N	RGSP
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act	Rpt Err (%)	Qual	Qual Comment
Actinium-228	HE	0.8237	0.2252	pCi/g 0.573	N	910.9	3	1.309	IDENTIFIED 26.58	<input type="checkbox"/>	
Americium-241	✓	14.84	0.7621	pCi/g 0.6275	0.200	59.18	1	1.009	IDENTIFIED 3.08	<input type="checkbox"/>	
Barium-137m		5.262	0.2615	pCi/g 0.1217	N	661.2	2	1.561	IDENTIFIED 2.471	<input type="checkbox"/>	
Bismuth-211		2.445	0.3813	pCi/g 0.7451	Y	351.6	2	1.181	IDENTIFIED 14.49	<input type="checkbox"/>	
Bismuth-214		0.7682	0.1436	pCi/g 0.2166	0.200	609.1	2	1.113	IDENTIFIED 17.92	<input type="checkbox"/>	
Cadmium-109		32.98	2.239	pCi/g 2.343	Y	87.73	3	1.05	IDENTIFIED 4.585	<input type="checkbox"/>	
Cerium-143	HE	57.02	14.22	pCi/g 44.57	N	0	4	0	NOT_IDENTI 0	<input type="checkbox"/>	
Cesium-137	✓	5.559	0.2766	pCi/g 0.1285	0.100	661.2	2	1.561	IDENTIFIED 2.471	<input type="checkbox"/>	
Cobalt-57		0.1982	0.03721	pCi/g 0.07159	N	121.8	1	0.9876	IDENTIFIED 18.3	<input type="checkbox"/>	
Cobalt-60	✓	6.655	0.3587	pCi/g 0.09702	0.100	1332	1	1.908	IDENTIFIED 2.717	<input type="checkbox"/>	
Gross Gamma		27.64	2.657	pCi/g 4.72	N	0				<input type="checkbox"/>	
Iodine-133	HE	50.96	140.1	pCi/g 0	N	0	4	0	SHORT_HLIF 0	<input type="checkbox"/>	
Lead-212		1.188	0.119	pCi/g 0.2237	0.100	238.3	2	0.972	IDENTIFIED 7.783	<input type="checkbox"/>	
Lead-214		0.8874	0.1405	pCi/g 0.2624	0.100	351.6	2	1.181	IDENTIFIED 14.49	<input type="checkbox"/>	
Neptunium-237		9.689	1.21	pCi/g 0.7023	N	87.73	3	1.05	IDENTIFIED 4.585	<input type="checkbox"/>	
Radium-224		2.821	0.6803	pCi/g 2.332	Y	0	4	0	NOT_IDENTI 0	<input type="checkbox"/>	
Radium-226		0.7682	0.1436	pCi/g 0.2166	Y	609.1	2	1.113	IDENTIFIED 17.92	<input type="checkbox"/>	
Radium-228		0.8237	0.2252	pCi/g 0.573	0.500	910.9	3	1.309	IDENTIFIED 26.58	<input type="checkbox"/>	
Silver-110m		0.3007	0.05027	pCi/g 0.1778	N	0	4	0	NOT_IDENTI 0	<input type="checkbox"/>	
Thallium-208		0.4778	0.07405	pCi/g 0.1132	0.080	582.9	1	1.603	IDENTIFIED 14.67	<input type="checkbox"/>	
Thorium-228		1.188	0.119	pCi/g 0.2237	N	238.3	2	0.972	IDENTIFIED 7.783	<input type="checkbox"/>	
Thorium-232	HE	0.8237	0.2252	pCi/g 0.573	N	910.9	3	1.309	IDENTIFIED 26.58	<input type="checkbox"/>	
Tin-126		3.247	0.2205	pCi/g 0.232	N	87.73	3	1.05	IDENTIFIED 4.585	<input type="checkbox"/>	

*** = Number of isotopes identified with a keyline at this energy.

Result Greater Than DL

Batch Id	Sample Id	Sample Type	Run Date	Paramname	Result	Uncertainty	Units	DL	RDL
957136	247009012	SAMPLE	05-MAR-10	Thorium-234	2.395	1.027	pCi/g	0.9084	2.00
957136	1202052272	MB	05-MAR-10	Iodine-135	2.73E+06	4.77E+06	pCi/g	0	N
957136	1202052273	DUP	05-MAR-10	Bismuth-211	4.371	0.3483	pCi/g	0.1782	Y
				Bismuth-214	1.308	0.1144	pCi/g	0.0632	0.200
				Cadmium-109	2.54	0.474	pCi/g	0.691	Y
				Cerium-143	581.5	90.54	pCi/g	0	N
				Cesium-134	0.1485	0.03589	pCi/g	0.05277	0.100
				Cesium-137	0.1253	0.02831	pCi/g	0.03544	0.100
				Gross Gamma	10.89	1.586	pCi/g	1.881	N
				Iodine-133	743.6	1474	pCi/g	0	N
				Lead-212	1.96	0.1393	pCi/g	0.04944	0.100
				Lead-214	1.586	0.1337	pCi/g	0.06479	0.100
				Potassium-40	34.07	1.928	pCi/g	0.3322	1.00
				Protactinium-234m	5.259	2.867	pCi/g	5.055	N
				Radium-224	5.179	0.7018	pCi/g	0.5302	Y
				Radium-226	1.308	0.1144	pCi/g	0.0632	Y
				Radium-228	2.093	0.2085	pCi/g	0.1313	0.500
				Strontium-85	0.07953	0.02254	pCi/g	0.03732	Y
				Thallium-208	0.5749	0.05339	pCi/g	0.03246	0.080
				Thorium-234	3.257	1.357	pCi/g	1.279	2.00
957136	1202052274	LCS	08-MAR-10	Americium-241	14.84	0.7821	pCi/g	0.3139	0.200
				Barium-137m	5.262	0.2615	pCi/g	0.06086	N
				Bismuth-211	2.445	0.3813	pCi/g	0.3728	Y
				Bismuth-214	0.7682	0.1436	pCi/g	0.1084	0.200
				Cadmium-109	32.98	2.239	pCi/g	1.172	Y
				Cerium-143	57.02	14.22	pCi/g	22.3	N
				Cesium-134	0.112	0.04899	pCi/g	0.0886	0.100
				Cesium-137	5.559	0.2766	pCi/g	0.0643	0.100
				Cobalt-60	6.655	0.3587	pCi/g	0.04854	0.100
				Gross Gamma	27.64	2.657	pCi/g	2.287	N
				Iodine-133	50.96	140.1	pCi/g	0	N
				Lead-212	1.188	0.119	pCi/g	0.1119	0.100
				Lead-214	0.8874	0.1405	pCi/g	0.1313	0.100
				Neptunium-237	9.689	1.21	pCi/g	0.3514	N
				Potassium-40	0.669	0.3553	pCi/g	0.3398	1.00
				Radium-224	2.821	0.6803	pCi/g	1.187	Y
				Radium-226	0.7682	0.1436	pCi/g	0.1084	Y

VAX/VMS Nuclide Identification Report Generated 5-MAR-2010 12:26:41.95

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*****
*                               GEL Laboratories LLC                      *
*                               2040 Savage Road                        *
*                               Charleston, SC 29414                    *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G247790002.CNF;1
Sample date        : 17-FEB-2010 12:00:00 Acquisition date : 5-MAR-2010 10:26:00.
Sample ID          : G247790002 Sample quantity : 1.20930E+02 GRAM
Detector name      : GAM16 Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00 Elapsed real time: 0 02:00:01.84 0.0%
Energy tolerance   : 1.50000 keV Analyst Initials : MXR1
Abundance limit    : 75.00000 Sensitivity : 5.00000
Batch ID           : 957136 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	63.65*	104	409	1.19	127.50	123	8	1.44E-02	36.2	
2	4	74.87	380	394	0.96	149.92	146	19	5.28E-02	9.6	8.61E-01
3	4	77.12*	566	299	0.81	154.43	146	19	7.86E-02	6.3	
4	5	87.24	282	192	1.08	174.66	172	20	3.91E-02	8.6	2.30E+00
5	5	89.92	163	312	1.24	180.03	172	20	2.27E-02	19.7	
6	5	92.81*	341	322	1.34	185.81	172	20	4.74E-02	11.5	
7	0	185.84*	182	319	1.41	371.87	367	10	2.53E-02	20.8	
8	0	209.68	90	260	1.04	419.54	415	10	1.25E-02	35.1	
9	5	238.59*	1016	163	0.93	477.38	473	16	1.41E-01	3.8	1.10E+00
10	5	241.56	265	209	1.74	483.30	473	16	3.68E-02	15.1	
11	0	270.07*	116	190	1.42	540.34	535	11	1.62E-02	25.0	
12	0	295.07	309	218	1.19	590.32	586	10	4.30E-02	10.5	
13	0	327.73	84	159	2.40	655.66	651	12	1.17E-02	31.6	
14	0	338.24*	163	192	0.93	676.66	673	10	2.26E-02	18.1	
15	0	351.88*	560	179	1.27	703.95	697	13	7.78E-02	6.6	
16	0	511.03*	159	128	2.00	1022.22	1014	19	2.21E-02	21.0	
17	0	583.23*	335	101	1.34	1166.60	1160	13	4.66E-02	8.5	
18	0	609.34*	395	86	1.08	1218.81	1214	11	5.48E-02	6.9	
19	0	727.25	85	68	1.39	1454.59	1450	10	1.18E-02	21.1	
20	0	837.48	37	57	3.85	1675.00	1668	12	5.11E-03	44.2	
21	0	861.68	39	83	1.38	1723.40	1715	13	5.38E-03	51.5	
22	0	911.37*	244	61	1.73	1822.74	1816	17	3.39E-02	10.0	
23	0	969.03*	132	61	1.34	1938.03	1933	12	1.83E-02	15.1	
24	0	1121.58*	61	68	1.95	2243.03	2234	13	8.54E-03	31.0	
25	0	1377.77	30	10	1.53	2755.22	2750	11	4.14E-03	28.1	
26	0	1460.90*	1434	15	1.92	2921.41	2914	15	1.99E-01	2.7	
27	0	1588.63	22	5	1.10	3176.74	3171	10	3.04E-03	28.7	
28	0	1764.57*	58	8	2.06	3528.42	3523	10	8.08E-03	17.0	

Flag: "*" = Peak area was modified by background subtraction


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Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G247790002.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 17-FEB-2010 12:00:00 Acquisition date : 5-MAR-2010 10:26:00
Sample ID        : G247790002 Sample quantity : 120.93 GRAM
Sample type      : SOLID Sample geometry :
Detector name    : GAMMA16 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.84 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	+	1460.82	*	3.457E+01	3.576E+00	5.164E-01	4.539E-02	66.954
CD-109	+	88.03	*	3.870E+00	7.616E-01	1.046E+00	1.008E-01	3.698
SN-126	+	64.28		9.349E-01	6.912E-01	6.996E-01	1.019E-01	1.336
	+	86.94		1.571E+00	7.066E-01	4.720E-01	1.961E-01	3.328
	+	87.57	*	3.778E-01	7.436E-02	1.026E-01	9.840E-03	3.682
TL-208		277.37		6.581E-01	3.735E-01	6.377E-01	9.581E-02	1.032
	+	583.19	*	4.589E-01	9.002E-02	5.320E-02	5.267E-03	8.625
	+	860.56		5.014E-01	5.184E-01	4.812E-01	4.816E-02	1.042
BI-211		72.87		7.665E-01	2.852E+00	4.462E+00	3.627E-01	0.172
	+	351.06	*	3.416E+00	5.835E-01	2.851E-01	3.118E-02	11.981
PB-212	+	74.82		2.248E+00	5.182E-01	4.824E-01	6.166E-02	4.659
	+	77.11		1.914E+00	2.920E-01	2.769E-01	2.352E-02	6.915
	+	238.63	*	1.385E+00	1.957E-01	8.101E-02	9.624E-03	17.093
		300.09		9.032E-01	8.845E-01	1.340E+00	1.767E-01	0.674
BI-214	+	609.32	*	1.046E+00	1.827E-01	1.052E-01	1.117E-02	9.946
	+	1120.29		8.445E-01	5.319E-01	4.714E-01	5.084E-02	1.791
	+	1764.49		1.118E+00	3.915E-01	2.943E-01	2.436E-02	3.800
PB-214	+	74.82		3.984E+00	8.907E-01	8.551E-01	9.811E-02	4.659
	+	77.11		3.375E+00	5.852E-01	4.881E-01	5.778E-02	6.915
	+	242.00		2.190E+00	7.162E-01	4.928E-01	6.148E-02	4.444
	+	295.22		1.162E+00	2.908E-01	2.104E-01	2.835E-02	5.522
	+	351.93	*	1.240E+00	2.225E-01	1.037E-01	1.268E-02	11.955
RA-224	+	240.99	*	3.873E+00	1.246E+00	8.685E-01	9.571E-02	4.459
RA-226	+	609.32	*	1.046E+00	1.827E-01	1.052E-01	1.117E-02	9.946
	+	1120.29		8.445E-01	5.319E-01	4.714E-01	5.084E-02	1.791
	+	1764.49		1.118E+00	3.915E-01	2.943E-01	2.436E-02	3.800
AC-228	+	338.32		1.105E+00	6.139E-01	3.494E-01	1.476E-01	3.162
	+	911.20	*	1.609E+00	3.773E-01	1.908E-01	2.329E-02	8.434
	+	968.97		1.498E+00	5.840E-01	4.815E-01	1.184E-01	3.112
RA-228	+	338.32		1.105E+00	6.139E-01	3.494E-01	1.476E-01	3.162
	+	911.20	*	1.609E+00	3.773E-01	1.908E-01	2.329E-02	8.434
	+	968.97		1.498E+00	5.840E-01	4.815E-01	1.184E-01	3.112
TH-228	+	74.82		2.248E+00	4.706E-01	4.824E-01	4.039E-02	4.659
	+	77.11		1.914E+00	2.920E-01	2.769E-01	2.352E-02	6.915

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	238.63	*	1.385E+00	1.957E-01	8.101E-02	9.624E-03	17.093
		300.09		9.032E-01	1.039E+00	1.340E+00	8.270E-01	0.674
TH-232	+	338.32		1.105E+00	4.166E-01	3.494E-01	3.814E-02	3.162
	+	911.20	*	1.609E+00	3.773E-01	1.908E-01	2.329E-02	8.434
	+	968.97		1.498E+00	5.840E-01	4.815E-01	1.184E-01	3.112
TH-234	+	63.29	*	2.426E+00	1.811E+00	1.705E+00	3.039E-01	1.423
	+	92.59		3.795E+00	1.218E+00	8.606E-01	1.921E-01	4.410
U-235	+	89.96		2.273E+00	1.061E+00	1.071E+00	2.667E-01	2.123
	+	93.35		2.867E+00	9.402E-01	6.467E-01	1.507E-01	4.432
		143.76	*	-4.196E-02	1.779E-01	2.859E-01	4.838E-02	-0.147
		163.33		-1.081E-01	3.800E-01	6.176E-01	1.120E-01	-0.175
	+	185.72		1.608E-01	6.875E-02	5.815E-02	5.555E-03	2.765
		205.31		7.270E-02	4.815E-01	7.073E-01	1.335E-01	0.103
NP-237	+	86.48	*	1.127E+00	3.242E-01	3.404E-01	7.831E-02	3.312
		95.86		-7.362E-02	8.224E-01	1.247E+00	3.008E-01	-0.059
U-238	+	63.29	*	2.426E+00	1.811E+00	1.705E+00	3.039E-01	1.423
	+	92.59		3.795E+00	9.424E-01	8.606E-01	7.926E-02	4.410
ANH-511	+	511.00	*	1.667E-01	7.168E-02	4.357E-02	4.144E-03	3.825

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.60	*	2.331E-01	3.053E-01	5.324E-01	5.385E-02	0.438
NA-22		1274.54	*	-1.980E-02	4.441E-02	6.833E-02	5.685E-03	-0.290
NA-24		1368.63	*	-5.208E-02	4.441E-02	Half-Life too short		
SC-46		889.28	*	-2.828E-02	3.800E-02	5.872E-02	5.551E-03	-0.482
	+	1120.55		1.438E-01	9.007E-02	1.202E-01	1.015E-02	1.197
V-48		944.13		-4.714E-01	9.005E-01	1.419E+00	1.326E-01	-0.332
		983.53	*	3.346E-02	7.037E-02	1.220E-01	1.123E-02	0.274
		1312.11		1.891E-02	8.512E-02	1.413E-01	1.186E-02	0.134
CR-51		320.08	*	6.862E-02	3.606E-01	5.783E-01	6.758E-02	0.119
MN-54		834.85	*	1.477E-02	4.131E-02	6.291E-02	5.908E-03	0.235
CO-56		846.77	*	2.944E-02	3.809E-02	6.797E-02	6.396E-03	0.433
		1037.84		5.309E-03	3.116E-01	5.150E-01	4.837E-02	0.010
		1238.28		1.500E-01	9.803E-02	1.763E-01	1.496E-02	0.851
		1771.35		-4.363E-01	2.702E-01	3.032E-01	2.505E-02	-1.439
CO-57		122.06	*	6.443E-03	2.171E-02	3.684E-02	3.061E-03	0.175
		136.47		-8.807E-02	1.851E-01	3.014E-01	2.738E-02	-0.292
CO-58		810.76	*	-3.213E-02	3.300E-02	4.960E-02	4.647E-03	-0.648
FE-59		1099.45	*	-9.198E-03	9.078E-02	1.475E-01	1.371E-02	-0.062
		1291.59		9.046E-02	1.156E-01	2.044E-01	1.951E-02	0.443
CO-60		1173.23		-3.356E-03	5.195E-02	8.438E-02	6.785E-03	-0.040
		1332.49	*	7.636E-03	3.743E-02	6.212E-02	5.240E-03	0.123
ZN-65		1115.54	*	-8.830E-02	1.083E-01	1.359E-01	1.154E-02	-0.650
SE-75		121.12		-1.844E-02	1.115E-01	1.854E-01	2.011E-02	-0.099
		136.00		-5.620E-03	3.544E-02	5.862E-02	4.976E-03	-0.096
		264.66	*	7.529E-03	4.476E-02	6.480E-02	7.563E-03	0.116
		279.54		-1.641E-01	1.064E-01	1.497E-01	1.832E-02	-1.096

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		400.66		-1.053E-01	2.363E-01	3.841E-01	4.462E-02	-0.274
SR-85		514.00	*	3.475E-02	3.564E-02	6.251E-02	5.943E-03	0.556
Y-88		898.04		-5.419E-03	3.928E-02	6.471E-02	6.145E-03	-0.084
		1836.06	*	1.284E-02	2.679E-02	4.902E-02	3.980E-03	0.262
Y-91		1204.77	*	-2.302E+01	2.478E+01	3.693E+01	3.003E+00	-0.623
NB-94		702.65	*	2.239E-02	3.315E-02	5.638E-02	5.097E-03	0.397
		871.09		2.649E-04	3.105E-02	5.200E-02	4.908E-03	0.005
NB-95		765.81	*	-3.398E-02	4.427E-02	6.483E-02	5.993E-03	-0.524
NB-95M		235.69	*	7.151E-02	1.233E-01	1.845E-01	2.197E-02	0.388
ZR-95		724.19		5.520E-02	8.882E-02	1.351E-01	1.325E-02	0.408
		756.73	*	8.126E-02	7.031E-02	1.241E-01	1.250E-02	0.655
MO-99		140.51		-5.156E+00	2.446E+01	3.947E+01	9.354E+00	-0.131
		181.07		-1.043E+01	2.120E+01	2.992E+01	5.738E+00	-0.349
		366.42		-1.442E+01	1.009E+02	1.685E+02	1.704E+01	-0.086
		739.50	*	-1.772E+00	1.444E+01	2.286E+01	3.672E+00	-0.078
		777.92		-2.625E+01	4.119E+01	6.099E+01	5.657E+00	-0.430
TC-99M		140.51	*	-6.917E+10	4.119E+01	Half-Life too short		
RU-103		497.08	*	-1.570E-02	3.878E-02	6.198E-02	9.010E-03	-0.253
	+	610.33		1.096E+01	2.375E+00	2.805E+00	4.674E-01	3.906
RH-106		621.93	*	2.896E-02	2.839E-01	4.656E-01	6.334E-02	0.062
		1050.41		9.462E-01	2.602E+00	4.436E+00	3.944E-01	0.213
RU-106		621.93	*	2.896E-02	2.839E-01	4.656E-01	4.258E-02	0.062
		1050.41		9.462E-01	2.602E+00	4.436E+00	3.944E-01	0.213
AG-108M		433.94	*	7.917E-04	2.445E-02	4.088E-02	3.956E-03	0.019
		614.28		2.920E-02	3.567E-02	5.564E-02	5.260E-03	0.525
		722.91		-2.884E-02	4.054E-02	5.102E-02	4.783E-03	-0.565
AG-110M		657.76	*	-1.299E-02	3.655E-02	5.733E-02	5.248E-03	-0.227
		677.62		-3.385E-02	3.036E-01	4.849E-01	4.452E-02	-0.070
		706.68		-4.754E-02	2.260E-01	3.569E-01	3.316E-02	-0.133
		763.94		-5.092E-02	1.574E-01	2.436E-01	2.305E-02	-0.209
		884.68		3.034E-02	4.635E-02	8.204E-02	7.961E-03	0.370
		937.49		-4.589E-02	1.094E-01	1.746E-01	1.684E-02	-0.263
		1384.29		8.072E-02	1.644E-01	2.610E-01	2.279E-02	0.309
		1505.03		-9.424E-02	2.393E-01	3.743E-01	3.201E-02	-0.252
SN-113		391.69	*	-2.904E-02	4.081E-02	6.512E-02	6.181E-03	-0.446
CD-115		260.90		-1.307E+02	1.685E+02	2.561E+02	2.956E+01	-0.510
		492.35		1.774E+01	4.433E+01	7.558E+01	7.192E+00	0.235
		527.90	*	-1.017E+00	1.360E+01	2.224E+01	2.111E+00	-0.046
SN-117M		156.02		-2.586E+00	2.058E+00	3.176E+00	2.802E-01	-0.814
		158.56	*	1.222E-02	5.039E-02	8.421E-02	7.479E-03	0.145
TE-123M		159.00	*	1.847E-02	2.503E-02	4.270E-02	3.819E-03	0.433
SB-124		602.73		-1.122E-02	3.542E-02	5.391E-02	4.987E-03	-0.208
		645.85		4.916E-02	4.493E-01	7.355E-01	6.963E-02	0.067
		722.78		-2.511E-01	4.083E-01	5.220E-01	4.854E-02	-0.481
		1690.97	*	-1.243E-02	5.697E-02	8.910E-02	7.822E-03	-0.140
SB-125		427.87	*	5.489E-02	7.982E-02	1.395E-01	1.332E-02	0.393
		463.37		4.012E-01	2.764E-01	4.956E-01	4.997E-02	0.809
		600.60		1.803E-01	1.506E-01	2.698E-01	2.659E-02	0.668
		635.95		-3.856E-02	2.642E-01	4.229E-01	4.113E-02	-0.091

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TE-125M	109.28	*		-1.524E+00	8.291E+00	1.385E+01	1.431E+00	-0.110
I-126	388.63			1.548E-01	1.639E-01	2.903E-01	2.716E-02	0.533
	666.33	*		3.804E-02	2.327E-01	3.813E-01	3.391E-02	0.100
	753.82			1.379E+00	1.882E+00	3.211E+00	2.957E-01	0.429
SB-126	414.70			-4.665E-02	7.089E-02	1.129E-01	1.055E-02	-0.413
	666.50			3.702E-02	7.803E-02	1.311E-01	1.167E-02	0.282
	695.00			-8.666E-03	7.884E-02	1.257E-01	1.133E-02	-0.069
	697.00			5.736E-02	2.659E-01	4.367E-01	3.938E-02	0.131
	720.70	*		1.333E-02	1.512E-01	2.364E-01	2.152E-02	0.056
	856.80			1.056E-01	5.566E-01	8.304E-01	7.825E-02	0.127
SB-127	252.40			1.999E+00	4.618E+00	7.498E+00	3.167E+00	0.267
	473.00			-1.735E+00	1.834E+00	2.800E+00	3.804E-01	-0.620
	685.70	*		-9.416E-01	1.650E+00	2.524E+00	2.998E-01	-0.373
	783.70			4.859E+00	4.015E+00	7.053E+00	9.201E-01	0.689
I-131	80.19			1.114E+00	4.034E+00	6.949E+00	6.147E-01	0.160
	284.31			-2.887E-02	1.432E+00	2.282E+00	2.801E-01	-0.013
	364.49	*		1.830E-02	1.049E-01	1.790E-01	1.894E-02	0.102
	636.99			5.976E-01	1.609E+00	2.694E+00	2.567E-01	0.222
TE-132	49.72			2.537E+00	2.016E+01	3.191E+01	3.457E+00	0.079
	111.76			2.187E+01	3.397E+01	5.855E+01	6.477E+00	0.374
	116.30			5.300E+00	2.874E+01	4.865E+01	5.360E+00	0.109
	228.16	*		-9.378E-02	7.812E-01	1.255E+00	2.157E-01	-0.075
BA-133	81.00			-1.757E-02	8.405E-02	1.279E-01	2.002E-02	-0.137
	276.40			4.376E-01	3.457E-01	5.818E-01	9.514E-02	0.752
	302.85			-2.848E-01	1.471E-01	1.929E-01	2.942E-02	-1.477
	356.01	*		-1.806E-02	3.776E-02	5.351E-02	7.611E-03	-0.338
	383.85			7.361E-02	2.631E-01	4.502E-01	5.885E-02	0.163
I-133	529.87	*		1.677E-03	2.631E-01	Half-Life	too short	
	875.33			-8.220E-02	2.631E-01	Half-Life	too short	
	1298.22			-2.537E-04	2.631E-01	Half-Life	too short	
CS-134	563.25			6.623E-02	3.512E-01	5.835E-01	5.535E-02	0.113
	569.33			-1.422E-01	1.949E-01	2.977E-01	2.828E-02	-0.478
	604.72			-5.445E-03	3.187E-02	4.440E-02	4.111E-03	-0.123
	795.86	*		7.149E-02	4.891E-02	9.014E-02	8.452E-03	0.793
	801.95			-2.384E-01	3.895E-01	6.072E-01	5.693E-02	-0.393
	1365.19			-1.973E-02	1.066E+00	1.712E+00	1.520E-01	-0.012
CS-135	268.22	*		9.153E-02	1.610E-01	2.363E-01	3.013E-02	0.387
I-135	546.56			-1.634E+10	1.610E-01	Half-Life	too short	
	836.80			3.020E+11	1.610E-01	Half-Life	too short	
	1038.76			-3.172E+10	1.610E-01	Half-Life	too short	
	1131.51			8.498E+09	1.610E-01	Half-Life	too short	
	1260.41	*		-1.060E+10	1.610E-01	Half-Life	too short	
	1457.56			3.537E+12	1.610E-01	Half-Life	too short	
	1678.03			-8.077E+09	1.610E-01	Half-Life	too short	
	1791.20			-5.233E+10	1.610E-01	Half-Life	too short	
CS-136	153.25			6.511E-01	7.707E-01	1.321E+00	1.371E-01	0.493
	176.60			-3.032E-01	4.703E-01	7.464E-01	7.578E-02	-0.406
	273.65			-8.074E-01	5.911E-01	7.336E-01	9.104E-02	-1.101
	340.55			2.281E-01	1.426E-01	2.373E-01	2.639E-02	0.961

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		818.51		2.324E-02	7.475E-02	1.290E-01	1.209E-02	0.180
		1048.07	*	1.055E-01	1.173E-01	2.086E-01	1.930E-02	0.506
		1235.36		-3.197E-01	6.873E-01	1.074E+00	1.232E-01	-0.298
BA-137M		661.66	*	-2.349E-02	3.692E-02	5.636E-02	5.002E-03	-0.417
CS-137		661.66	*	-2.482E-02	3.900E-02	5.954E-02	5.293E-03	-0.417
CE-139		165.86	*	-3.176E-03	2.592E-02	4.247E-02	3.852E-03	-0.075
BA-140		162.66		1.571E-01	7.377E-01	1.230E+00	1.174E-01	0.128
		304.85		1.043E-01	1.196E+00	1.911E+00	5.788E-01	0.055
		423.72		6.576E-01	1.816E+00	3.090E+00	1.023E+00	0.213
		537.26	*	6.548E-02	2.349E-01	3.939E-01	1.345E-01	0.166
LA-140	+	328.76		7.408E-01	4.757E-01	5.275E-01	6.083E-02	1.404
		487.02		-8.360E-02	1.304E-01	2.040E-01	2.040E-02	-0.410
		815.77		3.294E-02	3.228E-01	5.356E-01	5.516E-02	0.061
		1596.21	*	-7.439E-03	7.607E-02	1.216E-01	1.036E-02	-0.061
CE-141		145.44	*	-6.103E-02	5.814E-02	8.957E-02	7.835E-03	-0.681
CE-143		57.36		2.546E-04	5.814E-02	Half-Life	too short	
		293.27	*	5.608E-04	5.814E-02	Half-Life	too short	
		664.57		4.583E-04	5.814E-02	Half-Life	too short	
		721.93		-6.555E-04	5.814E-02	Half-Life	too short	
CE-144		80.12		5.858E-01	2.037E+00	3.511E+00	3.083E-01	0.167
		133.52	*	2.006E-02	1.779E-01	2.981E-01	4.519E-02	0.067
PM-144		476.78		-1.948E-03	6.104E-02	1.009E-01	1.028E-02	-0.019
		618.01		-1.601E-02	2.962E-02	4.568E-02	4.291E-03	-0.351
		696.49	*	-7.700E-03	3.424E-02	5.403E-02	4.874E-03	-0.143
PR-144		696.51	*	-5.724E-01	2.564E+00	4.047E+00	3.649E-01	-0.141
		1489.16		-2.942E+00	1.047E+01	1.666E+01	1.425E+00	-0.177
PM-146		453.88	*	4.137E-02	4.025E-02	7.116E-02	8.038E-03	0.581
		633.25		3.501E-01	1.352E+00	2.234E+00	8.556E-01	0.157
		735.93		1.162E-02	1.396E-01	2.257E-01	6.363E-02	0.051
		747.24		-7.875E-03	9.519E-02	1.512E-01	2.257E-02	-0.052
ND-147	+	91.11		7.751E-01	3.159E-01	4.569E-01	4.569E-02	1.697
		319.41		1.201E+00	3.287E+00	5.336E+00	6.059E-01	0.225
		531.02	*	1.996E-01	5.214E-01	8.839E-01	1.367E-01	0.226
PM-149		285.90	*	5.681E+01	1.096E+02	1.800E+02	3.168E+01	0.316
EU-152		121.78		1.136E-02	6.212E-02	1.049E-01	1.010E-02	0.108
		244.70		-1.851E-01	3.185E-01	4.341E-01	4.827E-02	-0.426
		344.28	*	-9.649E-02	9.109E-02	1.303E-01	1.456E-02	-0.740
		778.90		-9.832E-02	2.360E-01	3.588E-01	3.329E-02	-0.274
		964.08		5.093E-01	3.312E-01	5.534E-01	5.134E-02	0.920
		1085.87		3.892E-02	4.013E-01	6.659E-01	5.781E-02	0.058
		1112.07		1.428E-02	3.160E-01	5.070E-01	4.313E-02	0.028
		1408.01		7.736E-02	1.790E-01	3.050E-01	2.598E-02	0.254
GD-153		69.67		-1.571E-01	1.425E+00	2.436E+00	1.920E-01	-0.064
		97.43	*	2.546E-02	8.070E-02	1.236E-01	1.098E-02	0.206
		103.18		-5.651E-02	9.728E-02	1.601E-01	1.380E-02	-0.353
EU-154		123.07		9.990E-03	4.467E-02	7.551E-02	8.393E-03	0.132
		723.31		-1.128E-01	1.851E-01	2.371E-01	2.358E-02	-0.476
		873.19		5.939E-02	2.491E-01	4.265E-01	5.332E-02	0.139
		996.26		-1.334E-01	3.550E-01	5.647E-01	1.002E-01	-0.236

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-155	+	1004.73		-1.220E-01	2.202E-01	3.444E-01	4.135E-02	-0.354
		1274.44	*	-2.256E-02	1.232E-01	1.956E-01	2.180E-02	-0.115
		86.55		4.583E-01	9.037E-02	1.686E-01	1.610E-02	2.718
		105.31	*	3.920E-02	9.593E-02	1.643E-01	1.421E-02	0.239
TB-160	+	86.79		1.225E+00	2.411E-01	4.573E-01	4.343E-02	2.679
		197.04		-1.403E-01	5.084E-01	8.038E-01	7.915E-02	-0.175
		215.65		-5.978E-02	6.513E-01	1.052E+00	1.088E-01	-0.057
		298.57		5.304E-02	1.257E-01	1.835E-01	2.154E-02	0.289
HO-166M	+	879.36	*	-4.203E-02	1.223E-01	1.970E-01	1.861E-02	-0.213
		962.29		8.186E-02	6.036E-01	9.575E-01	8.889E-02	0.085
		966.15		5.708E-01	2.781E-01	4.694E-01	4.351E-02	1.216
		1177.93		-2.355E-01	4.145E-01	6.421E-01	5.171E-02	-0.367
		1271.85		-4.181E-02	7.319E-01	1.180E+00	9.796E-02	-0.035
		80.57		1.723E-02	2.192E-01	3.750E-01	3.309E-02	0.046
		184.41		1.277E-01	5.462E-02	5.975E-02	5.687E-03	2.138
		280.46		-8.945E-02	7.621E-02	1.105E-01	1.325E-02	-0.810
		410.95		2.451E-01	2.310E-01	4.056E-01	3.786E-02	0.604
		711.68	*	-1.480E-02	6.340E-02	9.982E-02	9.056E-03	-0.148
		752.31		-3.890E-01	3.002E-01	4.182E-01	3.850E-02	-0.930
		810.29		-4.069E-02	4.953E-02	7.599E-02	7.104E-03	-0.535
TA-182		67.75		9.644E-02	9.761E-02	1.584E-01	1.225E-02	0.609
		100.11		-6.175E-02	1.529E-01	2.541E-01	2.222E-02	-0.243
		152.43		-1.590E-01	3.020E-01	4.872E-01	4.257E-02	-0.326
		222.11		3.091E-03	3.275E-01	5.311E-01	5.586E-02	0.006
		1121.30		3.977E-01	2.491E-01	3.315E-01	2.799E-02	1.200
		1189.05		-2.099E-01	3.512E-01	5.420E-01	4.383E-02	-0.387
IR-192	+	1221.41	*	2.152E-02	2.169E-01	3.561E-01	2.912E-02	0.060
		1231.02		3.078E-01	5.380E-01	9.148E-01	7.504E-02	0.336
		295.96		8.660E-01	2.094E-01	2.776E-01	3.283E-02	3.120
		308.46		1.387E-02	8.513E-02	1.367E-01	1.586E-02	0.101
		316.51	*	-5.341E-03	3.210E-02	5.021E-02	5.738E-03	-0.106
		468.07		3.745E-02	6.260E-02	1.081E-01	1.089E-02	0.346
HG-203		70.83		4.882E-01	1.226E+00	1.929E+00	3.032E-01	0.253
		72.87		1.932E-01	7.193E-01	1.124E+00	1.717E-01	0.172
		279.20	*	-3.658E-02	3.708E-02	5.502E-02	6.696E-03	-0.665
BI-207	+	72.81		4.485E-02	1.643E-01	2.571E-01	2.089E-02	0.174
		74.97		6.478E-01	1.354E-01	2.110E-01	1.752E-02	3.071
		569.70		-1.028E-02	2.922E-02	4.616E-02	4.334E-03	-0.223
		1063.66	*	4.392E-02	5.509E-02	9.712E-02	8.561E-03	0.452
PB-210		1770.23		-2.141E+00	7.190E-01	5.777E-01	4.775E-02	-3.705
		46.54	*	-1.756E+00	3.316E+00	5.049E+00	4.668E-01	-0.348
PB-211		404.85	*	4.287E-01	7.012E-01	1.167E+00	5.664E-01	0.367
		427.09		2.842E-01	1.369E+00	2.309E+00	1.072E+00	0.123
BI-212	+	832.01		3.063E-01	9.858E-01	1.484E+00	7.715E-01	0.206
		727.33	*	1.782E+00	7.856E-01	1.182E+00	1.515E-01	1.507
		785.37		2.078E+00	3.059E+00	5.423E+00	5.040E-01	0.383
		1620.50		1.107E+00	2.199E+00	3.990E+00	3.389E-01	0.278
RN-219	+	271.23		6.988E-01	3.616E-01	4.048E-01	5.283E-02	1.726
		401.81	*	-1.622E-01	3.778E-01	6.142E-01	9.382E-02	-0.264

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-223		81.07		-4.128E-02	1.902E-01	2.893E-01	2.568E-02	-0.143
		83.79		1.210E-01	1.330E-01	1.751E-01	1.603E-02	0.691
		94.87		3.287E-01	4.082E-01	6.470E-01	5.851E-02	0.508
		144.24		-4.336E-01	5.989E-01	9.386E-01	8.989E-02	-0.462
		154.21		4.472E-01	3.345E-01	5.830E-01	5.590E-02	0.767
	+	269.46		5.430E-01	2.795E-01	3.203E-01	3.808E-02	1.695
		323.87	*	-1.162E-01	6.631E-01	9.145E-01	1.718E-01	-0.127
	+	338.28		4.384E+00	1.694E+00	2.214E+00	3.056E-01	1.980
		79.69		2.328E-01	1.014E+00	1.744E+00	3.017E-01	0.133
		235.96		7.135E-02	1.483E-01	2.205E-01	2.711E-02	0.324
AC-227		256.23	*	-1.071E-01	2.506E-01	3.919E-01	5.561E-02	-0.273
		299.98		9.574E-01	9.727E-01	1.467E+00	2.198E-01	0.653
		304.50		1.837E-01	1.382E+00	2.216E+00	4.053E-01	0.083
		334.37		-9.091E-01	2.043E+00	2.457E+00	4.183E-01	-0.370
		79.80		3.672E-01	1.341E+00	2.306E+00	5.034E-01	0.159
		235.96		7.135E-02	1.483E-01	2.205E-01	2.603E-02	0.324
TH-227		256.23	*	-1.071E-01	2.507E-01	3.919E-01	6.087E-02	-0.273
		299.98		9.574E-01	9.727E-01	1.467E+00	2.198E-01	0.653
		304.50		1.837E-01	1.382E+00	2.216E+00	4.053E-01	0.083
		334.37		-9.091E-01	2.043E+00	2.457E+00	4.183E-01	-0.370
		85.43		5.662E-02	1.840E-01	2.843E-01	2.656E-02	0.199
	+	88.47		5.825E-01	1.146E-01	1.997E-01	1.915E-02	2.917
TH-229		193.51	*	5.985E-03	4.633E-01	7.578E-01	7.393E-02	0.008
	+	210.85		1.750E+00	1.243E+00	1.343E+00	1.372E-01	1.303
		283.69	*	2.021E-01	1.287E+00	2.076E+00	3.482E-01	0.097
PA-231		301.36		8.608E-01	5.530E-01	9.393E-01	1.362E-01	0.916
		81.07		-4.128E-02	1.902E-01	2.893E-01	2.568E-02	-0.143
TH-231		83.79		1.210E-01	1.330E-01	1.751E-01	1.603E-02	0.691
		94.87		3.287E-01	4.082E-01	6.470E-01	5.851E-02	0.508
		144.24		-4.336E-01	5.989E-01	9.386E-01	8.989E-02	-0.462
		154.21		4.472E-01	3.345E-01	5.830E-01	5.590E-02	0.767
	+	269.46		5.430E-01	2.795E-01	3.203E-01	3.808E-02	1.695
		323.87	*	-1.162E-01	6.631E-01	9.145E-01	1.718E-01	-0.127
	+	338.28		4.384E+00	1.694E+00	2.214E+00	3.056E-01	1.980
		300.13		4.555E-01	4.433E-01	6.679E-01	1.123E-01	0.682
		311.90	*	-1.504E-02	6.196E-02	9.653E-02	1.129E-02	-0.156
		340.48		9.903E-01	6.276E-01	9.810E-01	2.448E-01	1.010
PA-233		94.67		2.649E-01	1.536E-01	2.489E-01	3.163E-02	1.064
		98.44		6.232E-02	8.837E-02	1.342E-01	7.490E-02	0.465
		111.00		-4.034E-02	1.588E-01	2.642E-01	3.153E-02	-0.153
		131.20		-1.295E-01	9.645E-02	1.506E-01	1.260E-02	-0.860
		569.50		-1.993E-01	2.682E-01	4.091E-01	3.841E-02	-0.487
		733.00		-2.846E-01	4.047E-01	5.396E-01	1.209E-01	-0.528
PA-234		880.51		-7.318E-02	2.543E-01	4.055E-01	3.830E-02	-0.180
		883.24		-2.922E-02	2.683E-01	4.354E-01	2.932E-01	-0.067
		926.50		-2.673E-02	1.567E-01	2.561E-01	6.543E-02	-0.104
		946.00	*	2.252E-01	3.063E-01	5.376E-01	1.027E-01	0.419
		949.00		6.459E-01	4.621E-01	8.530E-01	7.956E-02	0.757
		766.42		-2.825E+00	1.165E+01	1.788E+01	9.093E+00	-0.158
PA-234M								

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NP-239	1001.03	*		6.306E-01	4.841E+00	8.066E+00	8.397E-01	0.078
	99.53			-1.886E-02	1.431E-01	2.368E-01	2.077E-02	-0.080
	103.37			-3.377E-02	8.761E-02	1.455E-01	1.252E-02	-0.232
	106.12			5.405E-02	7.456E-02	1.291E-01	1.100E-02	0.419
	117.23	*		-1.578E-01	3.417E-01	5.612E-01	4.671E-02	-0.281
	228.18			-2.306E-02	1.938E-01	3.116E-01	3.327E-02	-0.074
AM-241	277.60			3.345E-01	1.661E-01	2.895E-01	3.465E-02	1.155
	59.54	*		-6.284E-02	1.518E-01	2.119E-01	1.663E-02	-0.297
CM-247	278.00			1.237E+00	7.062E-01	1.222E+00	1.463E-01	1.012
	287.50			1.370E-01	1.163E+00	1.869E+00	2.225E-01	0.073
CF-249	402.40	*		-1.683E-02	3.569E-02	5.798E-02	5.390E-03	-0.290
	252.80			2.060E-03	8.814E-01	1.417E+00	1.606E-01	0.001
	333.37			-1.084E-02	2.024E-01	2.558E-01	2.823E-02	-0.042
CF-251	388.16	*		3.223E-02	3.788E-02	6.674E-02	6.256E-03	0.483
	177.52	*		1.678E-02	1.174E-01	1.942E-01	1.815E-02	0.086
	227.38			-1.679E-01	3.287E-01	5.162E-01	5.501E-02	-0.325
	285.41			3.888E-01	2.029E+00	3.277E+00	3.911E-01	0.119

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]G247790002      *
* Acquisition date   : 5-MAR-2010 10:26:00 Detector SN# :                   *
* Detector ID        : GAM16 Sensitivity : 5.000                          *
* Geometry           : CAN Energy tolerance: 1.500                        *
* Elapsed live time  : 0 02:00:00.00 Abundance limit : 75.000             *
* Elapsed real time  : 0 02:00:01.84 Half life ratio : 8.000              *
*****
*                                     SAMPLE DATA                            *
*                                     *                                       *
* Sample date       : 17-FEB-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G247790002 Analyst initials: MXR1                  *
* Batch Number      : 957136 Sample Quantity : 1.2093E+02 GRAM           *
* Recovery          : 1.00000 Carrier Weight : 0.00000                   *
*****
*                                     QC DATA                               *
*                                     *                                       *
* Standard Weight   : 0.00000                                              *
* CALIB. DATE/TIME : 16-NOV-2009 11:22:16 MS Isotope :                   *
* MSD DPM           : 0.000 MSD Isotope :                               *
* LCS DPM           : 0.000 LCS Isotope :                               *
* LCSD DPM          : 0.000 LCSD Isotope :                               *
*****

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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.457E+01	3.504E+00	5.153E-01	0.000E+00
CD-109	3.870E+00	7.464E-01	1.080E+00	0.000E+00
SN-126	3.778E-01	7.287E-02	1.059E-01	0.000E+00
TL-208	4.589E-01	8.822E-02	5.369E-02	0.000E+00
BI-211	3.416E+00	5.718E-01	2.895E-01	0.000E+00
PB-212	1.385E+00	1.918E-01	8.265E-02	0.000E+00
BI-214	1.046E+00	1.791E-01	1.061E-01	0.000E+00
PB-214	1.240E+00	2.181E-01	1.053E-01	0.000E+00
RA-224	3.873E+00	1.222E+00	8.859E-01	0.000E+00
RA-226	1.046E+00	1.791E-01	1.061E-01	0.000E+00
AC-228	1.609E+00	3.697E-01	1.915E-01	0.000E+00
RA-228	1.609E+00	3.697E-01	1.915E-01	0.000E+00
TH-228	1.385E+00	1.918E-01	8.265E-02	0.000E+00
TH-232	1.609E+00	3.697E-01	1.915E-01	0.000E+00
TH-234	2.426E+00	1.775E+00	1.767E+00	0.000E+00
U-235	-4.196E-02	1.743E-01	2.935E-01	0.000E+00
NP-237	1.127E+00	3.177E-01	3.515E-01	0.000E+00
U-238	2.426E+00	1.775E+00	1.767E+00	0.000E+00
ANH-511	1.667E-01	7.025E-02	4.404E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error) Ided	MDA (pCi/GRAM)	
BE-7	2.331E-01	2.992E-01	5.386E-01	0.000E+00 NOT IDENT.
NA-22	-1.980E-02	4.352E-02	6.830E-02	0.000E+00 NOT IDENT.
NA-24	0.000E+00	1.456E+06	0.000E+00	0.000E+00 SHORT HLIF
SC-46	-2.828E-02	3.724E-02	5.895E-02	0.000E+00 FAIL ABUN
V-48	3.346E-02	6.896E-02	1.223E-01	0.000E+00 NOT IDENT.
CR-51	6.862E-02	3.534E-01	5.879E-01	0.000E+00 NOT IDENT.
MN-54	1.477E-02	4.048E-02	6.321E-02	0.000E+00 NOT IDENT.
CO-56	2.944E-02	3.733E-02	6.829E-02	0.000E+00 NOT IDENT.

CO-57	6.443E-03	2.128E-02	3.788E-02	0.000E+00	NOT IDENT.
CO-58	-3.213E-02	3.234E-02	4.986E-02	0.000E+00	NOT IDENT.
FE-59	-9.198E-03	8.897E-02	1.478E-01	0.000E+00	NOT IDENT.
CO-60	7.636E-03	3.668E-02	6.206E-02	0.000E+00	NOT IDENT.
ZN-65	-8.830E-02	1.061E-01	1.361E-01	0.000E+00	NOT IDENT.
SE-75	7.529E-03	4.387E-02	6.603E-02	0.000E+00	NOT IDENT.
SR-85	3.475E-02	3.493E-02	6.318E-02	0.000E+00	NOT IDENT.
Y-88	1.284E-02	2.625E-02	4.878E-02	0.000E+00	NOT IDENT.
Y-91	-2.302E+01	2.428E+01	3.694E+01	0.000E+00	NOT IDENT.
NB-94	2.239E-02	3.249E-02	5.678E-02	0.000E+00	NOT IDENT.
NB-95	-3.398E-02	4.338E-02	6.521E-02	0.000E+00	NOT IDENT.
NB-95M	7.151E-02	1.208E-01	1.882E-01	0.000E+00	NOT IDENT.
ZR-95	8.126E-02	6.891E-02	1.249E-01	0.000E+00	NOT IDENT.
MO-99	-1.772E+00	1.415E+01	2.300E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	3.219E+17	0.000E+00	0.000E+00	SHORT HLIF
RU-103	-1.570E-02	3.801E-02	6.267E-02	0.000E+00	FAIL ABUN
RH-106	2.896E-02	2.782E-01	4.696E-01	0.000E+00	NOT IDENT.
RU-106	2.896E-02	2.782E-01	4.696E-01	0.000E+00	NOT IDENT.
AG-108M	7.917E-04	2.396E-02	4.141E-02	0.000E+00	NOT IDENT.
AG-110M	-1.299E-02	3.582E-02	5.778E-02	0.000E+00	NOT IDENT.
SN-113	-2.904E-02	3.999E-02	6.605E-02	0.000E+00	NOT IDENT.
CD-115	-1.017E+00	1.333E+01	2.247E+01	0.000E+00	NOT IDENT.
SN-117M	1.222E-02	4.938E-02	8.634E-02	0.000E+00	NOT IDENT.
TE-123M	1.847E-02	2.453E-02	4.377E-02	0.000E+00	NOT IDENT.
SB-124	-1.243E-02	5.583E-02	8.874E-02	0.000E+00	NOT IDENT.
SB-125	5.489E-02	7.822E-02	1.413E-01	0.000E+00	NOT IDENT.
TE-125M	-1.524E+00	8.125E+00	1.426E+01	0.000E+00	NOT IDENT.
I-126	3.804E-02	2.280E-01	3.842E-01	0.000E+00	NOT IDENT.
SB-126	1.333E-02	1.482E-01	2.379E-01	0.000E+00	NOT IDENT.
SB-127	-9.416E-01	1.617E+00	2.542E+00	0.000E+00	NOT IDENT.
I-131	1.830E-02	1.028E-01	1.817E-01	0.000E+00	NOT IDENT.
TE-132	-9.378E-02	7.656E-01	1.282E+00	0.000E+00	NOT IDENT.
BA-133	-1.806E-02	3.701E-02	5.433E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	1.030E+04	0.000E+00	0.000E+00	SHORT HLIF
CS-134	7.149E-02	4.793E-02	9.063E-02	0.000E+00	NOT IDENT.
CS-135	9.153E-02	1.578E-01	2.407E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	5.329E+16	0.000E+00	0.000E+00	SHORT HLIF
CS-136	1.055E-01	1.150E-01	2.090E-01	0.000E+00	NOT IDENT.
BA-137M	-2.349E-02	3.618E-02	5.679E-02	0.000E+00	NOT IDENT.
CS-137	-2.482E-02	3.822E-02	6.000E-02	0.000E+00	NOT IDENT.
CE-139	-3.176E-03	2.540E-02	4.352E-02	0.000E+00	NOT IDENT.
BA-140	6.548E-02	2.302E-01	3.980E-01	0.000E+00	NOT IDENT.
LA-140	-7.439E-03	7.455E-02	1.212E-01	0.000E+00	FAIL ABUN
CE-141	-6.103E-02	5.698E-02	9.192E-02	0.000E+00	NOT IDENT.
CE-143	0.000E+00	2.561E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	2.006E-02	1.743E-01	3.062E-01	0.000E+00	NOT IDENT.
PM-144	-7.700E-03	3.356E-02	5.441E-02	0.000E+00	NOT IDENT.
PR-144	-5.724E-01	2.513E+00	4.075E+00	0.000E+00	NOT IDENT.
PM-146	4.137E-02	3.944E-02	7.204E-02	0.000E+00	NOT IDENT.
ND-147	1.996E-01	5.110E-01	8.931E-01	0.000E+00	FAIL ABUN
PM-149	5.681E+01	1.074E+02	1.833E+02	0.000E+00	NOT IDENT.
EU-152	-9.649E-02	8.926E-02	1.324E-01	0.000E+00	NOT IDENT.
GD-153	2.546E-02	7.909E-02	1.274E-01	0.000E+00	NOT IDENT.
EU-154	-2.256E-02	1.208E-01	1.955E-01	0.000E+00	NOT IDENT.
EU-155	3.920E-02	9.401E-02	1.693E-01	0.000E+00	FAIL ABUN
TB-160	-4.203E-02	1.199E-01	1.979E-01	0.000E+00	FAIL ABUN
HO-166M	-1.480E-02	6.214E-02	1.005E-01	0.000E+00	FAIL ABUN
TA-182	2.152E-02	2.126E-01	3.561E-01	0.000E+00	FAIL ABUN
IR-192	-5.341E-03	3.146E-02	5.105E-02	0.000E+00	FAIL ABUN
HG-203	-3.658E-02	3.634E-02	5.603E-02	0.000E+00	NOT IDENT.
BI-207	4.392E-02	5.399E-02	9.729E-02	0.000E+00	FAIL ABUN
PB-210	-1.756E+00	3.250E+00	5.251E+00	0.000E+00	NOT IDENT.
PB-211	4.287E-01	6.872E-01	1.183E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	7.699E-01	1.190E+00	0.000E+00	FAIL ABUN
RN-219	-1.622E-01	3.702E-01	6.227E-01	0.000E+00	FAIL ABUN
RA-223	-1.162E-01	6.499E-01	9.296E-01	0.000E+00	FAIL ABUN
AC-227	-1.071E-01	2.456E-01	3.995E-01	0.000E+00	NOT IDENT.
TH-227	-1.071E-01	2.457E-01	3.995E-01	0.000E+00	NOT IDENT.
TH-229	5.985E-03	4.541E-01	7.751E-01	0.000E+00	FAIL ABUN
PA-231	2.021E-01	1.261E+00	2.113E+00	0.000E+00	NOT IDENT.
TH-231	-1.162E-01	6.499E-01	9.296E-01	0.000E+00	FAIL ABUN
PA-233	-1.504E-02	6.072E-02	9.817E-02	0.000E+00	NOT IDENT.
PA-234	2.252E-01	3.002E-01	5.394E-01	0.000E+00	NOT IDENT.
PA-234M	6.306E-01	4.744E+00	8.086E+00	0.000E+00	NOT IDENT.
NP-239	-1.578E-01	3.348E-01	5.774E-01	0.000E+00	NOT IDENT.
AM-241	-6.284E-02	1.488E-01	2.197E-01	0.000E+00	NOT IDENT.
CM-247	-1.683E-02	3.498E-02	5.878E-02	0.000E+00	NOT IDENT.
CF-249	3.223E-02	3.712E-02	6.769E-02	0.000E+00	NOT IDENT.

CF-251	1.678E-02	1.151E-01	1.988E-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]G247790002.CNF;1
Sample date        : 17-FEB-2010 12:00:00 Acquisition date : 5-MAR-2010 10:26:00.
Sample ID          : G247790002          Sample quantity  : 1.20930E+02 GRAM
Detector name      : GAM16              Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00      Elapsed real time: 0 02:00:01.84  0.0%
Energy tolerance   : 1.50000 keV        Analyst Initials : MXR1
Abundance limit    : 75.00000           Sensitivity       : 5.00000
Batch ID           : 957136             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	1460.82	1434	10.66*	1.208E+00	3.457E+01	3.457E+01	10.34
CD-109	88.03	282	3.70*	6.258E+00	3.778E+00	3.870E+00	19.68
SN-126	64.28	104	9.60	3.586E+00	9.349E-01	9.349E-01	73.93
	86.94	282	8.90	6.258E+00	1.571E+00	1.571E+00	44.98
	87.57	282	37.00*	6.258E+00	3.778E-01	3.778E-01	19.68
TL-208	277.37	---	6.60	4.694E+00	-----	Line Not Found	-----
	583.19	335	85.00*	2.667E+00	4.589E-01	4.589E-01	19.62
	860.56	39	12.50	1.917E+00	5.014E-01	5.014E-01	103.39
BI-211	72.87	---	1.23	4.872E+00	-----	Line Not Found	-----
	351.06	560	12.92*	3.940E+00	3.416E+00	3.416E+00	17.08
PB-212	74.82	380	10.28	5.111E+00	2.248E+00	2.248E+00	23.06
	77.11	566	17.10	5.364E+00	1.914E+00	1.914E+00	15.25
	238.63	1016	43.60*	5.225E+00	1.385E+00	1.385E+00	14.13
	300.09	---	3.30	4.433E+00	-----	Line Not Found	-----
BI-214	609.32	395	45.49*	2.574E+00	1.046E+00	1.046E+00	17.46
	1120.29	61	14.92	1.515E+00	8.445E-01	8.445E-01	62.99
	1764.49	58	15.30	1.056E+00	1.118E+00	1.118E+00	35.01
PB-214	74.82	380	5.80	5.111E+00	3.984E+00	3.984E+00	22.36
	77.11	566	9.70	5.364E+00	3.375E+00	3.375E+00	17.34
	242.00	265	7.25	5.180E+00	2.190E+00	2.190E+00	32.70
	295.22	309	18.42	4.488E+00	1.162E+00	1.162E+00	25.02
	351.93	560	35.60*	3.940E+00	1.240E+00	1.240E+00	17.95
RA-224	240.99	265	4.10*	5.180E+00	3.873E+00	3.873E+00	32.19
RA-226	609.32	395	45.49*	2.574E+00	1.046E+00	1.046E+00	17.46
	1120.29	61	14.92	1.515E+00	8.445E-01	8.445E-01	62.99
	1764.49	58	15.30	1.056E+00	1.118E+00	1.118E+00	35.01
AC-228	338.32	163	11.27	4.058E+00	1.105E+00	1.105E+00	55.57
	911.20	244	25.80*	1.824E+00	1.609E+00	1.609E+00	23.44
	968.97	132	15.80	1.727E+00	1.498E+00	1.498E+00	38.98
RA-228	338.32	163	11.27	4.058E+00	1.105E+00	1.105E+00	55.57
	911.20	244	25.80*	1.824E+00	1.609E+00	1.609E+00	23.44
	968.97	132	15.80	1.727E+00	1.498E+00	1.498E+00	38.98

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
TH-228	74.82	380	10.28	5.111E+00	2.248E+00	2.248E+00	20.94
	77.11	566	17.10	5.364E+00	1.914E+00	1.914E+00	15.25
	238.63	1016	43.60*	5.225E+00	1.385E+00	1.385E+00	14.13
	300.09	-----	3.30	4.433E+00	-----	Line Not Found	-----
TH-232	338.32	163	11.27	4.058E+00	1.105E+00	1.105E+00	37.71
	911.20	244	25.80*	1.824E+00	1.609E+00	1.609E+00	23.44
	968.97	132	15.80	1.727E+00	1.498E+00	1.498E+00	38.98
	63.29	104	3.70*	3.586E+00	2.426E+00	2.426E+00	74.65
TH-234	92.59	341	4.23	6.597E+00	3.795E+00	3.795E+00	32.09
	89.96	163	3.47	6.433E+00	2.273E+00	2.273E+00	46.69
	93.35	341	5.60	6.597E+00	2.867E+00	2.867E+00	32.80
	143.76	-----	10.96*	6.943E+00	-----	Line Not Found	-----
U-235	163.33	-----	5.08	6.588E+00	-----	Line Not Found	-----
	185.72	182	57.20	6.146E+00	1.608E-01	1.608E-01	42.76
	205.31	-----	5.01	5.780E+00	-----	Line Not Found	-----
	86.48	282	12.40*	6.258E+00	1.127E+00	1.127E+00	28.76
NP-237	95.86	-----	2.68	6.742E+00	-----	Line Not Found	-----
	63.29	104	3.70*	3.586E+00	2.426E+00	2.426E+00	74.65
U-238	92.59	341	4.23	6.597E+00	3.795E+00	3.795E+00	24.83
	511.00	159	100.00*	2.963E+00	1.667E-01	1.667E-01	43.01

Flag: "*" = Keyline

Total number of lines in spectrum 28
Number of unidentified lines 2
Number of lines tentatively identified by NID 26 92.86%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.25E+09Y	1.00	3.457E+01	3.457E+01	0.358E+01	10.34	
CD-109	461.40D	1.02	3.778E+00	3.870E+00	0.762E+00	19.68	
SN-126	2.30E+05Y	1.00	3.778E-01	3.778E-01	0.744E-01	19.68	
TL-208	1.41E+10Y	1.00	4.589E-01	4.589E-01	0.900E-01	19.62	
BI-211	7.04E+08Y	1.00	3.416E+00	3.416E+00	0.583E+00	17.08	
PB-212	1.41E+10Y	1.00	1.385E+00	1.385E+00	0.196E+00	14.13	
BI-214	1600.00Y	1.00	1.046E+00	1.046E+00	0.183E+00	17.46	
PB-214	1600.00Y	1.00	1.240E+00	1.240E+00	0.223E+00	17.95	
RA-224	1.41E+10Y	1.00	3.873E+00	3.873E+00	1.246E+00	32.19	
RA-226	1600.00Y	1.00	1.046E+00	1.046E+00	0.183E+00	17.46	
AC-228	1.41E+10Y	1.00	1.609E+00	1.609E+00	0.377E+00	23.44	
RA-228	1.41E+10Y	1.00	1.609E+00	1.609E+00	0.377E+00	23.44	
TH-228	1.41E+10Y	1.00	1.385E+00	1.385E+00	0.196E+00	14.13	
TH-232	1.41E+10Y	1.00	1.609E+00	1.609E+00	0.377E+00	23.44	
TH-234	4.47E+09Y	1.00	2.426E+00	2.426E+00	1.811E+00	74.65	
U-235	7.04E+08Y	1.00	1.608E-01	1.608E-01	0.688E-01	42.76	K
NP-237	2.14E+06Y	1.00	1.127E+00	1.127E+00	0.324E+00	28.76	
U-238	4.47E+09Y	1.00	2.426E+00	2.426E+00	1.811E+00	74.65	
ANH-511	1.00E+09Y	1.00	1.667E-01	1.667E-01	0.717E-01	43.01	

Total Activity : 6.371E+01 6.380E+01

Grand Total Activity : 6.371E+01 6.380E+01

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G247790002

Page : 4
Acquisition date : 5-MAR-2010 10:26:00

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	209.68	90	260	1.04	419.54	415	10	1.25E-02	70.3	5.70E+00	T
0	270.07	116	190	1.42	540.34	535	11	1.62E-02	50.1	4.79E+00	T
0	327.73	84	159	2.40	655.66	651	12	1.17E-02	63.2	4.15E+00	T
0	727.25	85	68	1.39	1454.59	1450	10	1.18E-02	42.2	2.22E+00	T
0	837.48	37	57	3.85	1675.00	1668	12	5.11E-03	88.5	1.97E+00	T
0	1377.77	30	10	1.53	2755.22	2750	11	4.14E-03	56.3	1.27E+00	
0	1588.63	22	5	1.10	3176.74	3171	10	3.04E-03	57.4	1.13E+00	

Flags: "T" = Tentatively associated


```

*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                    *
*****
*                                     DETECTOR DATA                          *
*
* Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G247790002.CNF;1
* Acquisition date   : 5-MAR-2010 10:26:00.  Detector SN#      :
* Detector ID        : GAM16                      Sensitivity    : 5.00000
* Geometry           : CAN                      Energy tolerance: 1.50000
* Elapsed live time  : 0 02:00:00.00           Abundance limit  : 75.00000
* Elapsed real time  : 0 02:00:01.84           Half life ratio  : 8.00000
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 17-FEB-2010 12:00:00  Nuclide Library : SOLID
* Sample ID          : G247790002           Analyst initials: MXR1
* Batch Number       : 957136               Sample Quantity : 1.20930E+02 GRAM
*****
*                                     QC DATA                               *
*
* CALIB. DATE/TIME   : 16-NOV-2009 11:22:16.1MS Isotope      :
* MSD ID             :                      MSD Isotope       :
* LCS ID             : 1032-A              LCS Isotope        :
*****

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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.457E+01	3.576E+00	5.164E-01	4.539E-02	66.954
CD-109	3.870E+00	7.616E-01	1.046E+00	1.008E-01	3.698
SN-126	3.778E-01	7.436E-02	1.026E-01	9.840E-03	3.682
TL-208	4.589E-01	9.002E-02	5.320E-02	5.267E-03	8.625
BI-211	3.416E+00	5.835E-01	2.851E-01	3.118E-02	11.981
PB-212	1.385E+00	1.957E-01	8.101E-02	9.624E-03	17.093
BI-214	1.046E+00	1.827E-01	1.052E-01	1.117E-02	9.946
PB-214	1.240E+00	2.225E-01	1.037E-01	1.268E-02	11.955
RA-224	3.873E+00	1.246E+00	8.685E-01	9.571E-02	4.459
RA-226	1.046E+00	1.827E-01	1.052E-01	1.117E-02	9.946
AC-228	1.609E+00	3.773E-01	1.908E-01	2.329E-02	8.434
RA-228	1.609E+00	3.773E-01	1.908E-01	2.329E-02	8.434
TH-228	1.385E+00	1.957E-01	8.101E-02	9.624E-03	17.093
TH-232	1.609E+00	3.773E-01	1.908E-01	2.329E-02	8.434
TH-234	2.426E+00	1.811E+00	1.705E+00	3.039E-01	1.423
U-235	1.608E-01	6.875E-02	2.859E-01	4.838E-02	0.562
NP-237	1.127E+00	3.242E-01	3.404E-01	7.831E-02	3.312
U-238	2.426E+00	1.811E+00	1.705E+00	3.039E-01	1.423

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ANH-511	1.667E-01	7.168E-02	4.357E-02	4.144E-03	3.825

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	2.331E-01		3.053E-01	5.324E-01	5.385E-02	0.438
NA-22	-1.980E-02		4.441E-02	6.833E-02	5.685E-03	-0.290
NA-24	-5.208E-02		7.428E-01	Half-Life too short		
SC-46	-2.828E-02		3.800E-02	5.872E-02	5.551E-03	-0.482
V-48	3.346E-02		7.037E-02	1.220E-01	1.123E-02	0.274
CR-51	6.862E-02		3.606E-01	5.783E-01	6.758E-02	0.119
MN-54	1.477E-02		4.131E-02	6.291E-02	5.908E-03	0.235
CO-56	2.944E-02		3.809E-02	6.797E-02	6.396E-03	0.433
CO-57	6.443E-03		2.171E-02	3.684E-02	3.061E-03	0.175
CO-58	-3.213E-02		3.300E-02	4.960E-02	4.647E-03	-0.648
FE-59	-9.198E-03		9.078E-02	1.475E-01	1.371E-02	-0.062
CO-60	7.636E-03		3.743E-02	6.212E-02	5.240E-03	0.123
ZN-65	-8.830E-02		1.083E-01	1.359E-01	1.154E-02	-0.650
SE-75	7.529E-03		4.476E-02	6.480E-02	7.563E-03	0.116
SR-85	3.475E-02		3.564E-02	6.251E-02	5.943E-03	0.556
Y-88	1.284E-02		2.679E-02	4.902E-02	3.980E-03	0.262
Y-91	-2.302E+01		2.478E+01	3.693E+01	3.003E+00	-0.623
NB-94	2.239E-02		3.315E-02	5.638E-02	5.097E-03	0.397
NB-95	-3.398E-02		4.427E-02	6.483E-02	5.993E-03	-0.524
NB-95M	7.151E-02		1.233E-01	1.845E-01	2.197E-02	0.388
ZR-95	8.126E-02		7.031E-02	1.241E-01	1.250E-02	0.655
MO-99	-1.772E+00		1.444E+01	2.286E+01	3.672E+00	-0.078
TC-99M	-6.917E+10		1.643E+11	Half-Life too short		
RU-103	-1.570E-02		3.878E-02	6.198E-02	9.010E-03	-0.253
RH-106	2.896E-02		2.839E-01	4.656E-01	6.334E-02	0.062
RU-106	2.896E-02		2.839E-01	4.656E-01	4.258E-02	0.062
AG-108M	7.917E-04		2.445E-02	4.088E-02	3.956E-03	0.019
AG-110M	-1.299E-02		3.655E-02	5.733E-02	5.248E-03	-0.227
SN-113	-2.904E-02		4.081E-02	6.512E-02	6.181E-03	-0.446
CD-115	-1.017E+00		1.360E+01	2.224E+01	2.111E+00	-0.046
SN-117M	1.222E-02		5.039E-02	8.421E-02	7.479E-03	0.145
TE-123M	1.847E-02		2.503E-02	4.270E-02	3.819E-03	0.433
SB-124	-1.243E-02		5.697E-02	8.910E-02	7.822E-03	-0.140
SB-125	5.489E-02		7.982E-02	1.395E-01	1.332E-02	0.393
TE-125M	-1.524E+00		8.291E+00	1.385E+01	1.431E+00	-0.110
I-126	3.804E-02		2.327E-01	3.813E-01	3.391E-02	0.100
SB-126	1.333E-02		1.512E-01	2.364E-01	2.152E-02	0.056
SB-127	-9.416E-01		1.650E+00	2.524E+00	2.998E-01	-0.373
I-131	1.830E-02		1.049E-01	1.790E-01	1.894E-02	0.102
TE-132	-9.378E-02		7.812E-01	1.255E+00	2.157E-01	-0.075
BA-133	-1.806E-02		3.776E-02	5.351E-02	7.611E-03	-0.338
I-133	1.677E-03		5.257E-03	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CS-134	7.149E-02		4.891E-02	9.014E-02	8.452E-03	0.793
CS-135	9.153E-02		1.610E-01	2.363E-01	3.013E-02	0.387
I-135	-1.060E+10		2.719E+10	Half-Life	too short	
CS-136	1.055E-01		1.173E-01	2.086E-01	1.930E-02	0.506
BA-137M	-2.349E-02		3.692E-02	5.636E-02	5.002E-03	-0.417
CS-137	-2.482E-02		3.900E-02	5.954E-02	5.293E-03	-0.417
CE-139	-3.176E-03		2.592E-02	4.247E-02	3.852E-03	-0.075
BA-140	6.548E-02		2.349E-01	3.939E-01	1.345E-01	0.166
LA-140	-7.439E-03		7.607E-02	1.216E-01	1.036E-02	-0.061
CE-141	-6.103E-02		5.814E-02	8.957E-02	7.835E-03	-0.681
CE-143	5.608E-04		1.306E-04	Half-Life	too short	
CE-144	2.006E-02		1.779E-01	2.981E-01	4.519E-02	0.067
PM-144	-7.700E-03		3.424E-02	5.403E-02	4.874E-03	-0.143
PR-144	-5.724E-01		2.564E+00	4.047E+00	3.649E-01	-0.141
PM-146	4.137E-02		4.025E-02	7.116E-02	8.038E-03	0.581
ND-147	1.996E-01		5.214E-01	8.839E-01	1.367E-01	0.226
PM-149	5.681E+01		1.096E+02	1.800E+02	3.168E+01	0.316
EU-152	-9.649E-02		9.109E-02	1.303E-01	1.456E-02	-0.740
GD-153	2.546E-02		8.070E-02	1.236E-01	1.098E-02	0.206
EU-154	-2.256E-02		1.232E-01	1.956E-01	2.180E-02	-0.115
EU-155	3.920E-02		9.593E-02	1.643E-01	1.421E-02	0.239
TB-160	-4.203E-02		1.223E-01	1.970E-01	1.861E-02	-0.213
HO-166M	-1.480E-02		6.340E-02	9.982E-02	9.056E-03	-0.148
TA-182	2.152E-02		2.169E-01	3.561E-01	2.912E-02	0.060
IR-192	-5.341E-03		3.210E-02	5.021E-02	5.738E-03	-0.106
HG-203	-3.658E-02		3.708E-02	5.502E-02	6.696E-03	-0.665
BI-207	4.392E-02		5.509E-02	9.712E-02	8.561E-03	0.452
PB-210	-1.756E+00		3.316E+00	5.049E+00	4.668E-01	-0.348
PB-211	4.287E-01		7.012E-01	1.167E+00	5.664E-01	0.367
BI-212	1.782E+00	+	7.856E-01	1.182E+00	1.515E-01	1.507
RN-219	-1.622E-01		3.778E-01	6.142E-01	9.382E-02	-0.264
RA-223	-1.162E-01		6.631E-01	9.145E-01	1.718E-01	-0.127
AC-227	-1.071E-01		2.506E-01	3.919E-01	5.561E-02	-0.273
TH-227	-1.071E-01		2.507E-01	3.919E-01	6.087E-02	-0.273
TH-229	5.985E-03		4.633E-01	7.578E-01	7.393E-02	0.008
PA-231	2.021E-01		1.287E+00	2.076E+00	3.482E-01	0.097
TH-231	-1.162E-01		6.631E-01	9.145E-01	1.718E-01	-0.127
PA-233	-1.504E-02		6.196E-02	9.653E-02	1.129E-02	-0.156
PA-234	2.252E-01		3.063E-01	5.376E-01	1.027E-01	0.419
PA-234M	6.306E-01		4.841E+00	8.066E+00	8.397E-01	0.078
NP-239	-1.578E-01		3.417E-01	5.612E-01	4.671E-02	-0.281
AM-241	-6.284E-02		1.518E-01	2.119E-01	1.663E-02	-0.297
CM-247	-1.683E-02		3.569E-02	5.798E-02	5.390E-03	-0.290
CF-249	3.223E-02		3.788E-02	6.674E-02	6.256E-03	0.483
CF-251	1.678E-02		1.174E-01	1.942E-01	1.815E-02	0.086

VAX/VMS Nuclide Identification Report Generated

```

*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                           *
*****
*                               DETECTOR DATA                               *
*
* Configuration      : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G247790002             *
* Acquisition date   : 5-MAR-2010 10:26:00 Detector SN#      :                 *
* Detector ID        : GAM16                      Sensitivity  : 5.000          *
* Geometry           : CAN                        Energy tolerance: 1.500        *
* Elapsed live time  : 0 02:00:00.00             Abundance limit : 75.000       *
* Elapsed real time  : 0 02:00:01.84             Half life ratio : 8.000        *
*****
*                               SAMPLE DATA                               *
*
* Sample date        : 17-FEB-2010 12:00:00 Nuclide Library : SOLID             *
* Sample ID          : G247790002                 Analyst initials: MXR1         *
* Batch Number       : 957136                     Sample Quantity : 1.2093E+02 GRAM  *
* Recovery           : 1.00000                     Carrier Weight  : 0.00000      *
*****
*                               QC DATA                               *
*
* CALIB. DATE/TIME   : 16-NOV-2009 11:22:16 MS Isotope      :                 *
* MSD DPM             : 0.000                      MSD Isotope   :                 *
* LCS DPM             : 0.000                      LCS Isotope    :                 *
* LCSD DPM            : 0.000                      LCSD Isotope   :                 *
*****

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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.457E+01	3.504E+00	2.578E-01	1.788E+00
CD-109	3.870E+00	7.464E-01	5.405E-01	3.808E-01
SN-126	3.778E-01	7.287E-02	5.301E-02	3.718E-02
TL-208	4.589E-01	8.822E-02	2.686E-02	4.501E-02
BI-211	3.416E+00	5.718E-01	1.448E-01	2.917E-01
PB-212	1.385E+00	1.918E-01	4.135E-02	9.785E-02
BI-214	1.046E+00	1.791E-01	5.309E-02	9.136E-02
PB-214	1.240E+00	2.181E-01	5.268E-02	1.113E-01
RA-224	3.873E+00	1.222E+00	4.432E-01	6.232E-01
RA-226	1.046E+00	1.791E-01	5.309E-02	9.136E-02
AC-228	1.609E+00	3.697E-01	9.581E-02	1.886E-01
RA-228	1.609E+00	3.697E-01	9.581E-02	1.886E-01
TH-228	1.385E+00	1.918E-01	4.135E-02	9.785E-02
TH-232	1.609E+00	3.697E-01	9.581E-02	1.886E-01
TH-234	2.426E+00	1.775E+00	8.838E-01	9.054E-01
U-235	-4.196E-02	1.743E-01	1.468E-01	8.895E-02
NP-237	1.127E+00	3.177E-01	1.759E-01	1.621E-01
U-238	2.426E+00	1.775E+00	8.838E-01	9.054E-01
ANH-511	1.667E-01	7.025E-02	2.203E-02	3.584E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	2.331E-01	2.992E-01	2.695E-01	1.527E-01	NOT IDENT.
NA-22	-1.980E-02	4.352E-02	3.417E-02	2.221E-02	NOT IDENT.
NA-24	-5.208E+04	1.456E+06	0.000E+00	7.428E+05	SHORT HLIF
SC-46	-2.828E-02	3.724E-02	2.949E-02	1.900E-02	FAIL ABUN
V-48	3.346E-02	6.896E-02	6.119E-02	3.519E-02	NOT IDENT.
CR-51	6.862E-02	3.534E-01	2.941E-01	1.803E-01	NOT IDENT.
MN-54	1.477E-02	4.048E-02	3.162E-02	2.065E-02	NOT IDENT.
CO-56	2.944E-02	3.733E-02	3.417E-02	1.904E-02	NOT IDENT.

CO-57	6.443E-03	2.128E-02	1.895E-02	1.085E-02	NOT IDENT.
CO-58	-3.213E-02	3.234E-02	2.494E-02	1.650E-02	NOT IDENT.
FE-59	-9.198E-03	8.897E-02	7.392E-02	4.539E-02	NOT IDENT.
CO-60	7.636E-03	3.668E-02	3.105E-02	1.872E-02	NOT IDENT.
ZN-65	-8.830E-02	1.061E-01	6.809E-02	5.415E-02	NOT IDENT.
SE-75	7.529E-03	4.387E-02	3.304E-02	2.238E-02	NOT IDENT.
SR-85	3.475E-02	3.493E-02	3.161E-02	1.782E-02	NOT IDENT.
Y-88	1.284E-02	2.625E-02	2.440E-02	1.340E-02	NOT IDENT.
Y-91	-2.302E+01	2.428E+01	1.848E+01	1.239E+01	NOT IDENT.
NB-94	2.239E-02	3.249E-02	2.840E-02	1.658E-02	NOT IDENT.
NB-95	-3.398E-02	4.338E-02	3.263E-02	2.213E-02	NOT IDENT.
NB-95M	7.151E-02	1.208E-01	9.417E-02	6.163E-02	NOT IDENT.
ZR-95	8.126E-02	6.891E-02	6.247E-02	3.516E-02	NOT IDENT.
MO-99	-1.772E+00	1.415E+01	1.151E+01	7.222E+00	NOT IDENT.
TC-99M	-6.917E+16	3.219E+17	0.000E+00	0.000E+00	SHORT HLIF
RU-103	-1.570E-02	3.801E-02	3.136E-02	1.939E-02	FAIL ABUN
RH-106	2.896E-02	2.782E-01	2.349E-01	1.419E-01	NOT IDENT.
RU-106	2.896E-02	2.782E-01	2.349E-01	1.419E-01	NOT IDENT.
AG-108M	7.917E-04	2.396E-02	2.072E-02	1.222E-02	NOT IDENT.
AG-110M	-1.299E-02	3.582E-02	2.891E-02	1.828E-02	NOT IDENT.
SN-113	-2.904E-02	3.999E-02	3.304E-02	2.040E-02	NOT IDENT.
CD-115	-1.017E+00	1.333E+01	1.124E+01	6.801E+00	NOT IDENT.
SN-117M	1.222E-02	4.938E-02	4.319E-02	2.519E-02	NOT IDENT.
TE-123M	1.847E-02	2.453E-02	2.190E-02	1.251E-02	NOT IDENT.
SB-124	-1.243E-02	5.583E-02	4.440E-02	2.849E-02	NOT IDENT.
SB-125	5.489E-02	7.822E-02	7.071E-02	3.991E-02	NOT IDENT.
TE-125M	-1.524E+00	8.125E+00	7.134E+00	4.145E+00	NOT IDENT.
I-126	3.804E-02	2.280E-01	1.922E-01	1.163E-01	NOT IDENT.
SB-126	1.333E-02	1.482E-01	1.190E-01	7.559E-02	NOT IDENT.
SB-127	-9.416E-01	1.617E+00	1.272E+00	8.250E-01	NOT IDENT.
I-131	1.830E-02	1.028E-01	9.092E-02	5.245E-02	NOT IDENT.
TE-132	-9.378E-02	7.656E-01	6.411E-01	3.906E-01	NOT IDENT.
BA-133	-1.806E-02	3.701E-02	2.718E-02	1.888E-02	NOT IDENT.
I-133	1.677E+03	1.030E+04	0.000E+00	5.257E+03	SHORT HLIF
CS-134	7.149E-02	4.793E-02	4.534E-02	2.445E-02	NOT IDENT.
CS-135	9.153E-02	1.578E-01	1.204E-01	8.050E-02	NOT IDENT.
I-135	-1.060E+16	5.329E+16	0.000E+00	0.000E+00	SHORT HLIF
CS-136	1.055E-01	1.150E-01	1.046E-01	5.867E-02	NOT IDENT.
BA-137M	-2.349E-02	3.618E-02	2.841E-02	1.846E-02	NOT IDENT.
CS-137	-2.482E-02	3.822E-02	3.002E-02	1.950E-02	NOT IDENT.
CE-139	-3.176E-03	2.540E-02	2.177E-02	1.296E-02	NOT IDENT.
BA-140	6.548E-02	2.302E-01	1.991E-01	1.175E-01	NOT IDENT.
LA-140	-7.439E-03	7.455E-02	6.063E-02	3.803E-02	FAIL ABUN
CE-141	-6.103E-02	5.698E-02	4.599E-02	2.907E-02	NOT IDENT.
CE-143	5.608E+02	2.561E+02	0.000E+00	1.306E+02	SHORT HLIF
CE-144	2.006E-02	1.743E-01	1.532E-01	8.895E-02	NOT IDENT.
PM-144	-7.700E-03	3.356E-02	2.722E-02	1.712E-02	NOT IDENT.
PR-144	-5.724E-01	2.513E+00	2.039E+00	1.282E+00	NOT IDENT.
PM-146	4.137E-02	3.944E-02	3.604E-02	2.012E-02	NOT IDENT.
ND-147	1.996E-01	5.110E-01	4.468E-01	2.607E-01	FAIL ABUN
PM-149	5.681E+01	1.074E+02	9.170E+01	5.479E+01	NOT IDENT.
EU-152	-9.649E-02	8.926E-02	6.622E-02	4.554E-02	NOT IDENT.
GD-153	2.546E-02	7.909E-02	6.375E-02	4.035E-02	NOT IDENT.
EU-154	-2.256E-02	1.208E-01	9.782E-02	6.161E-02	NOT IDENT.
EU-155	3.920E-02	9.401E-02	8.468E-02	4.797E-02	FAIL ABUN
TB-160	-4.203E-02	1.199E-01	9.899E-02	6.115E-02	FAIL ABUN
HO-166M	-1.480E-02	6.214E-02	5.028E-02	3.170E-02	FAIL ABUN
TA-182	2.152E-02	2.126E-01	1.782E-01	1.085E-01	FAIL ABUN
IR-192	-5.341E-03	3.146E-02	2.554E-02	1.605E-02	FAIL ABUN
HG-203	-3.658E-02	3.634E-02	2.803E-02	1.854E-02	NOT IDENT.
BI-207	4.392E-02	5.399E-02	4.868E-02	2.755E-02	FAIL ABUN
PB-210	-1.756E+00	3.250E+00	2.627E+00	1.658E+00	NOT IDENT.
PB-211	4.287E-01	6.872E-01	5.920E-01	3.506E-01	NOT IDENT.
BI-212	1.782E+00	7.699E-01	5.954E-01	3.928E-01	FAIL ABUN
RN-219	-1.622E-01	3.702E-01	3.116E-01	1.889E-01	FAIL ABUN
RA-223	-1.162E-01	6.499E-01	4.651E-01	3.316E-01	FAIL ABUN
AC-227	-1.071E-01	2.456E-01	1.998E-01	1.253E-01	NOT IDENT.
TH-227	-1.071E-01	2.457E-01	1.998E-01	1.254E-01	NOT IDENT.
TH-229	5.985E-03	4.541E-01	3.878E-01	2.317E-01	FAIL ABUN
PA-231	2.021E-01	1.261E+00	1.057E+00	6.436E-01	NOT IDENT.
TH-231	-1.162E-01	6.499E-01	4.651E-01	3.316E-01	FAIL ABUN
PA-233	-1.504E-02	6.072E-02	4.911E-02	3.098E-02	NOT IDENT.
PA-234	2.252E-01	3.002E-01	2.699E-01	1.531E-01	NOT IDENT.
PA-234M	6.306E-01	4.744E+00	4.046E+00	2.421E+00	NOT IDENT.
NP-239	-1.578E-01	3.348E-01	2.889E-01	1.708E-01	NOT IDENT.
AM-241	-6.284E-02	1.488E-01	1.099E-01	7.591E-02	NOT IDENT.
CM-247	-1.683E-02	3.498E-02	2.941E-02	1.785E-02	NOT IDENT.
CF-249	3.223E-02	3.712E-02	3.386E-02	1.894E-02	NOT IDENT.

CF-251

1.678E-02

1.151E-01

9.948E-02

5.872E-02 NOT IDENT.

 * GEL Laboratories LLC *
 * 2040 SAVAGE ROAD *
 * CHARLESTON ,SC 29417 *
 * GAMMA SPECTROSCOPY BACKGROUND REPORT *

ENERGY	MDA COUNTS
46.54	238.6518
49.72	219.6409
57.36	0.0000
59.54	262.1008
63.29	237.9881
63.29	237.9881
64.28	293.4006
67.75	246.9184
69.67	307.3892
70.83	300.2908
72.81	328.2175
72.87	328.2631
72.87	328.2631
74.82	307.7748
74.82	307.7748
74.82	307.7748
74.97	307.8822
77.11	309.3911
77.11	309.3911
77.11	309.3911
79.69	311.1851
79.80	311.2610
80.12	311.4795
80.19	311.5276
80.57	311.7887
81.00	311.2257
81.07	311.2737
81.07	311.2737
83.79	251.0076
83.79	251.0076
85.43	284.3431
86.48	329.2135
86.55	329.2617
86.79	329.4258
86.94	329.5320
87.57	273.0139
88.03	273.2743
88.47	273.5234
89.96	274.3603
91.11	275.0007
92.59	275.8200
92.59	275.8200
93.35	276.2385
94.67	238.1520
94.87	251.4812
94.87	251.4812
95.86	247.9913
97.43	239.4374
98.44	220.7107
99.53	250.1970
100.11	259.3865
103.18	269.8479
103.37	261.8730
105.31	263.7101
106.12	243.3691
109.28	238.4133
111.00	248.2338
111.76	223.0718
116.30	213.8203
117.23	234.3803
121.12	215.5624
121.78	214.8721
122.06	214.0458
123.07	220.8988
131.20	289.6241
133.52	238.7677
136.00	238.7340

136.47	248.3835
140.51	235.5978
140.51	0.0000
143.76	216.6086
144.24	228.2698
144.24	228.2698
145.44	243.0837
152.43	230.0060
153.25	201.1230
154.21	186.7988
154.21	186.7988
156.02	243.8431
158.56	212.3997
159.00	197.8348
162.66	206.6953
163.33	216.7326
165.86	206.5933
176.60	225.5310
177.52	209.7377
181.07	211.6812
184.41	200.4130
185.72	200.7352
193.51	192.3948
197.04	195.2514
205.31	194.5305
210.85	169.1257
215.65	172.1246
222.11	188.1327
227.38	192.3788
228.16	172.3260
228.18	172.3293
235.69	172.0709
235.96	176.9456
235.96	176.9456
238.63	163.4498
238.63	163.4498
240.99	163.8410
242.00	164.0080
244.70	160.6650
252.40	140.6331
252.80	151.5943
256.23	180.5493
256.23	180.5493
260.90	164.8712
264.66	130.7136
268.22	132.8101
269.46	137.3960
269.46	137.3960
271.23	129.8516
273.65	191.8761
276.40	136.0462
277.37	121.6559
277.60	111.6353
278.00	118.3766
279.20	166.5761
279.54	177.8107
280.46	148.8592
283.69	122.3522
284.31	126.9112
285.41	132.6564
285.90	123.7187
287.50	136.2825
293.27	0.0000
295.22	145.1458
295.96	146.3743
298.57	155.2315
299.98	141.7570
299.98	141.7570
300.09	141.7697
300.09	141.7697
300.13	141.7748
301.36	123.1150
302.85	189.4721
304.50	106.2995
304.50	106.2995
304.85	106.3317
308.46	105.5084
311.90	131.1144

316.51	116.6066
319.41	112.2549
320.08	120.4214
323.87	118.4708
323.87	118.4708
328.76	116.6056
333.37	114.6922
334.37	133.5242
334.37	133.5242
338.28	122.4798
338.28	122.4798
338.32	122.4840
338.32	122.4840
338.32	122.4840
340.48	91.7966
340.55	91.8014
344.28	125.1180
351.06	101.4460
351.93	101.5121
356.01	94.3231
364.49	90.7869
366.42	92.7167
383.85	97.5369
388.16	99.6628
388.63	96.0374
391.69	113.6597
400.66	111.6004
401.81	112.6121
402.40	120.0441
404.85	98.9721
410.95	86.3786
414.70	103.3562
423.72	84.3050
427.09	86.3693
427.87	76.0809
433.94	73.5523
453.88	79.2626
463.37	88.3740
468.07	79.9579
473.00	104.3531
476.78	87.1587
477.60	75.5744
487.02	84.7684
492.35	69.3955
497.08	90.1694
511.00	80.0248
514.00	80.1595
527.90	73.8035
529.87	0.0000
531.02	61.9432
537.26	57.1426
546.56	0.0000
563.25	78.2736
569.33	85.6611
569.50	85.6688
569.70	75.4792
583.19	69.8428
600.60	46.6273
602.73	69.9411
604.72	63.1286
609.32	72.8476
609.32	72.8476
610.33	83.2935
614.28	56.7508
618.01	71.0671
621.93	59.6858
621.93	59.6858
633.25	62.1167
635.95	69.5771
636.99	61.1736
645.85	57.1937
657.76	84.1400
661.66	87.4929
661.66	87.4929
664.57	0.0000
666.33	73.7800
666.50	66.3007
677.62	66.6375

685.70	86.2988
695.00	69.3262
696.49	74.7907
696.51	74.7928
697.00	62.8817
702.65	63.0392
706.68	82.7493
711.68	77.4742
720.70	62.5977
721.93	0.0000
722.78	68.4176
722.91	70.1758
723.31	70.1875
724.19	45.6396
727.33	67.0129
733.00	70.4805
735.93	57.3368
739.50	58.5268
747.24	60.9334
752.31	89.9286
753.82	54.4356
756.73	45.6032
763.94	68.0498
765.81	80.3826
766.42	73.7042
777.92	58.3429
778.90	53.8755
783.70	47.2321
785.37	58.5175
795.86	58.7634
801.95	66.1563
810.29	51.8260
810.76	52.7452
815.77	48.2926
818.51	52.9038
832.01	44.3177
834.85	59.6632
836.80	0.0000
846.77	47.0256
856.80	58.6189
860.56	63.9530
871.09	46.5247
873.19	41.9041
875.33	0.0000
879.36	45.7329
880.51	42.9509
883.24	43.9282
884.68	42.0809
889.28	59.0133
898.04	51.6820
911.20	38.7088
911.20	38.7088
911.20	38.7088
926.50	44.6144
937.49	58.1257
944.13	57.3047
946.00	46.8287
949.00	42.0943
962.29	75.6815
964.08	52.8892
966.15	70.5690
968.97	82.8380
968.97	82.8380
968.97	82.8380
983.53	42.5896
996.26	55.4066
1001.03	53.5471
1004.73	62.3859
1037.84	50.2479
1038.76	0.0000
1048.07	45.4699
1050.41	48.4712
1050.41	48.4712
1063.66	46.6879
1085.87	52.0127
1099.45	50.2197
1112.07	52.6532
1115.54	68.9673

1120.29	54.5801
1120.29	54.5801
1120.55	54.5827
1121.30	43.8115
1131.51	0.0000
1173.23	72.8894
1177.93	77.0984
1189.05	77.3438
1204.77	83.9070
1221.41	69.7284
1231.02	69.9149
1235.36	91.9359
1238.28	54.3715
1260.41	0.0000
1271.85	45.3726
1274.44	44.3502
1274.54	48.5740
1291.59	27.5806
1298.22	0.0000
1312.11	36.2628
1332.49	27.8776
1365.19	20.5437
1368.63	0.0000
1384.29	21.7295
1408.01	24.0442
1457.56	0.0000
1460.82	21.2190
1489.16	16.7183
1505.03	20.5095
1596.21	15.5753
1620.50	11.4834
1678.03	0.0000
1690.97	8.7444
1764.49	10.8518
1764.49	10.8518
1770.23	58.2726
1771.35	28.6495
1791.20	0.0000
1836.06	6.0046

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G247790002

Total Uranium Activity	7.1967E+00	ug/g
Total Uranium Counting Unc.	5.2799E+00	ug/g
Total Uranium Tpu	2.6938E-06	ug/g
Total Uranium Mda	2.6303E+00	ug/g


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*****
*
*               GEL Laboratories LLC               *
*               2040 SAVAGE ROAD                   *
*               CHARLESTON , SC 29417              *
*               GROSS GAMMA REPORT                 *
*
*****
*
*  BATCH ID      : 957136          SAMPLE ID   : G247790002
*  ANALYST       : MXR1            DETECTOR    : GAM16
*  SAMPLE DATE   : 17-FEB-2010 12:00:00.00  COUNT TIME : 0 02:00:00.00
*  ANALYSIS DATE: 5-MAR-2010 10:26:00.27  SAMPLE ALQT: 120.930 GRAM
*
*****

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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 8.889E+00
GROSS GAMMA ERROR   (pCi/GRAM ) : 1.188E+00
GROSS GAMMA MDA      (pCi/GRAM ) : 2.769E+00
GROSS GAMMA DLC      (pCi/GRAM ) : 1.340E+00

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VAX/VMS Nuclide Identification Report Generated 5-MAR-2010 12:27:33.52

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*****
*                               GEL Laboratories LLC                      *
*                               2040 Savage Road                        *
*                               Charleston, SC 29414                    *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G247790003.CNF;1
Sample date        : 17-FEB-2010 12:00:00 Acquisition date : 5-MAR-2010 10:26:46.
Sample ID          : G247790003 Sample quantity : 1.11690E+02 GRAM
Detector name      : GAM23 Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00 Elapsed real time: 0 02:00:01.51 0.0%
Energy tolerance   : 1.50000 keV Analyst Initials : MXR1
Abundance limit    : 75.00000 Sensitivity : 5.00000
Batch ID           : 957136 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	4	74.57	203	264	0.83	149.14	143	15	2.82E-02	13.7	2.63E+00
2	4	76.97	421	306	1.14	153.94	143	15	5.85E-02	8.6	
3	0	84.13	89	271	1.04	168.27	165	7	1.24E-02	32.3	
4	0	87.01	130	259	0.88	174.02	172	6	1.80E-02	21.5	
5	0	89.69	75	238	0.98	179.38	178	5	1.04E-02	32.9	
6	0	92.96*	176	342	1.02	185.91	182	9	2.45E-02	21.9	
7	0	185.63*	142	306	1.21	371.26	364	12	1.97E-02	27.0	
8	0	209.08	88	194	1.23	418.16	414	9	1.22E-02	30.5	
9	6	238.30*	852	149	1.11	476.59	471	17	1.18E-01	4.2	2.42E+00
10	6	241.19*	238	159	2.28	482.38	471	17	3.31E-02	13.7	
11	0	269.58	91	179	0.84	539.17	532	12	1.26E-02	31.4	
12	1	294.89	298	130	1.67	589.79	584	33	4.14E-02	8.9	3.28E+00
13	1	299.45	69	105	1.67	598.89	584	33	9.64E-03	32.3	
14	0	337.98	166	200	1.29	675.97	669	14	2.31E-02	19.6	
15	0	351.45*	402	130	1.34	702.89	698	13	5.59E-02	7.8	
16	0	462.60	86	85	2.19	925.20	919	14	1.19E-02	25.1	
17	0	510.19*	67	153	2.47	1020.39	1013	16	9.34E-03	47.8	
18	0	582.54	281	105	1.54	1165.08	1159	15	3.90E-02	9.9	
19	0	608.48*	264	82	1.67	1216.96	1209	15	3.67E-02	9.9	
20	0	726.68	53	51	1.24	1453.37	1449	10	7.43E-03	28.7	
21	0	836.86	31	46	1.10	1673.71	1667	14	4.28E-03	49.8	
22	0	910.40	194	48	2.21	1820.79	1814	13	2.69E-02	10.3	
23	0	968.37	106	46	1.59	1936.73	1931	12	1.47E-02	16.5	
24	0	1459.48*	1062	39	2.31	2918.96	2908	19	1.48E-01	3.4	
25	0	1762.93	46	12	3.18	3525.87	3519	16	6.32E-03	22.6	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 5-MAR-2010 12:27:39

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G247790003.CNF;1
 Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
 Sample title : MXR1
 Sample date : 17-FEB-2010 12:00:00 Acquisition date : 5-MAR-2010 10:26:46
 Sample ID : G247790003 Sample quantity : 111.69 GRAM
 Sample type : SOLID Sample geometry :
 Detector name : GAMMA23 Detector geometry: CAN
 Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.51 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	+	1460.82	*	3.357E+01	3.389E+00	6.618E-01	4.951E-02	50.728
CD-109	+	88.03	*	2.319E+00	1.021E+00	1.453E+00	1.419E-01	1.595
SN-126		64.28		3.878E-01	6.920E-01	1.142E+00	1.739E-01	0.339
	+	86.94		9.410E-01	5.628E-01	7.594E-01	3.159E-01	1.239
	+	87.57	*	2.264E-01	9.971E-02	1.496E-01	1.455E-02	1.514
CS-135	+	268.22	*	4.496E-01	2.847E-01	2.899E-01	2.215E-02	1.551
TL-208		277.37		6.976E-02	4.802E-01	7.723E-01	8.333E-02	0.090
	+	583.19	*	4.877E-01	1.020E-01	7.164E-02	4.639E-03	6.808
		860.56		3.757E-01	3.747E-01	6.736E-01	6.088E-02	0.558
BI-211		72.87		1.073E+01	4.848E+00	7.662E+00	6.758E-01	1.400
	+	351.06	*	3.040E+00	5.116E-01	3.592E-01	2.341E-02	8.462
PB-212	+	74.82		1.650E+00	5.001E-01	7.025E-01	9.259E-02	2.348
	+	77.11		1.929E+00	3.760E-01	3.908E-01	3.516E-02	4.935
	+	238.63	*	1.416E+00	1.578E-01	1.041E-01	7.551E-03	13.606
	+	300.09		1.812E+00	1.179E+00	1.374E+00	1.160E-01	1.319
PB-214	+	74.82		2.924E+00	8.710E-01	1.245E+00	1.484E-01	2.348
	+	77.11		3.400E+00	7.197E-01	6.890E-01	8.409E-02	4.935
	+	242.00		2.403E+00	6.876E-01	5.849E-01	4.729E-02	4.109
	+	295.22		1.377E+00	2.728E-01	2.426E-01	2.127E-02	5.675
	+	351.93	*	1.103E+00	1.954E-01	1.421E-01	1.213E-02	7.766
RA-224	+	240.99	*	4.250E+00	1.191E+00	1.116E+00	6.287E-02	3.808
AC-228	+	338.32		1.396E+00	7.950E-01	4.620E-01	1.906E-01	3.022
	+	911.20	*	1.655E+00	3.940E-01	2.959E-01	3.515E-02	5.591
	+	968.97		1.563E+00	6.405E-01	4.594E-01	1.117E-01	3.403
RA-228	+	338.32		1.396E+00	7.950E-01	4.620E-01	1.906E-01	3.022
	+	911.20	*	1.655E+00	3.940E-01	2.959E-01	3.515E-02	5.591
	+	968.97		1.563E+00	6.405E-01	4.594E-01	1.117E-01	3.403
TH-228	+	74.82		1.650E+00	4.741E-01	7.025E-01	6.301E-02	2.348
	+	77.11		1.929E+00	3.760E-01	3.908E-01	3.516E-02	4.935
	+	238.63	*	1.416E+00	1.578E-01	1.041E-01	7.551E-03	13.606
	+	300.09		1.812E+00	1.607E+00	1.374E+00	8.364E-01	1.319
TH-229	+	85.43		4.090E-01	2.670E-01	3.815E-01	3.643E-02	1.072
	+	88.47		1.939E-01	1.289E-01	2.228E-01	2.154E-02	0.870
		193.51	*	3.674E-01	5.919E-01	9.875E-01	5.230E-02	0.372

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-232	+	210.85		1.306E+00	1.182E+00	1.785E+00	9.691E-02	0.732
	+	338.32		1.396E+00	5.543E-01	4.620E-01	2.729E-02	3.022
	+	911.20	*	1.655E+00	3.940E-01	2.959E-01	3.515E-02	5.591
	+	968.97		1.563E+00	6.405E-01	4.594E-01	1.117E-01	3.403
U-235	+	89.96		1.341E+00	9.435E-01	1.875E+00	4.666E-01	0.715
	+	93.35		1.890E+00	9.356E-01	7.407E-01	1.715E-01	2.551
		143.76	*	2.063E-02	2.342E-01	3.817E-01	5.944E-02	0.054
		163.33		-4.081E-01	4.968E-01	7.696E-01	1.275E-01	-0.530
	+	185.72		1.515E-01	8.222E-02	7.292E-02	3.818E-03	2.077
		205.31		-1.402E-01	6.385E-01	8.763E-01	1.477E-01	-0.160
NP-237	+	86.48	*	6.754E-01	3.295E-01	4.555E-01	1.051E-01	1.483
		95.86		-8.822E-01	1.210E+00	1.660E+00	3.968E-01	-0.532
ANH-511	+	511.00	*	8.871E-02	8.503E-02	5.978E-02	3.472E-03	1.484

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.60	*	4.360E-02	3.604E-01	5.993E-01	4.071E-02	0.073
NA-22		1274.54	*	-1.377E-02	5.782E-02	9.174E-02	6.161E-03	-0.150
NA-24		1368.63	*	-1.534E+00	5.782E-02	Half-Life too short		
SC-46		889.28	*	-2.482E-02	4.609E-02	7.240E-02	6.469E-03	-0.343
		1120.55		1.373E-01	7.802E-02	1.441E-01	9.385E-03	0.953
V-48		944.13		-1.507E-01	1.196E+00	1.962E+00	1.710E-01	-0.077
		983.53	*	-9.113E-02	8.811E-02	1.286E-01	1.070E-02	-0.708
		1312.11		2.646E-02	1.069E-01	1.790E-01	1.274E-02	0.148
CR-51		320.08	*	2.691E-01	4.292E-01	7.451E-01	4.879E-02	0.361
MN-54		834.85	*	-9.683E-03	5.217E-02	7.339E-02	5.811E-03	-0.132
CO-56		846.77	*	-2.898E-02	5.256E-02	8.352E-02	6.795E-03	-0.347
		1037.84		4.835E-02	3.931E-01	6.570E-01	5.379E-02	0.074
		1238.28		2.490E-02	1.283E-01	2.127E-01	1.415E-02	0.117
		1771.35		-1.553E-01	2.658E-01	3.823E-01	2.365E-02	-0.406
CO-57		122.06	*	-8.036E-03	2.929E-02	4.758E-02	2.805E-03	-0.169
		136.47		-9.441E-02	2.422E-01	3.900E-01	2.531E-02	-0.242
CO-58		810.76	*	-2.288E-02	4.756E-02	7.605E-02	5.713E-03	-0.301
FE-59		1099.45	*	2.267E-02	1.201E-01	2.012E-01	1.549E-02	0.113
		1291.59		4.867E-03	1.492E-01	2.439E-01	2.025E-02	0.020
CO-60		1173.23		-1.908E-02	6.355E-02	1.013E-01	5.712E-03	-0.188
		1332.49	*	9.539E-03	4.260E-02	7.156E-02	5.253E-03	0.133
ZN-65		1115.54	*	-1.006E-01	1.394E-01	2.154E-01	1.422E-02	-0.467
SE-75		121.12		-1.067E-01	1.542E-01	2.453E-01	2.248E-02	-0.435
		136.00		2.088E-02	4.605E-02	7.696E-02	4.348E-03	0.271
		264.66	*	1.044E-02	5.980E-02	8.456E-02	4.924E-03	0.123
		279.54		-7.890E-02	1.312E-01	2.144E-01	1.350E-02	-0.368
		400.66		5.589E-02	2.968E-01	4.990E-01	4.524E-02	0.112
SR-85		514.00	*	3.818E-02	5.626E-02	8.498E-02	4.932E-03	0.449
Y-88		898.04		-5.175E-02	4.780E-02	6.979E-02	6.381E-03	-0.741
		1836.06	*	2.039E-02	3.946E-02	7.216E-02	4.249E-03	0.283
Y-91		1204.77	*	-1.686E+01	3.161E+01	4.912E+01	2.930E+00	-0.343

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-94	702.65	*		4.580E-03	4.454E-02	7.248E-02	4.142E-03	0.063
	871.09			-1.331E-04	4.508E-02	7.357E-02	6.318E-03	-0.002
NB-95	765.81	*		5.848E-02	5.944E-02	1.027E-01	6.900E-03	0.570
NB-95M	235.69	*		4.810E-01	1.917E-01	3.042E-01	2.251E-02	1.581
ZR-95	724.19			2.527E-01	1.400E-01	2.324E-01	1.637E-02	1.087
	756.73	*		2.420E-02	9.496E-02	1.561E-01	1.204E-02	0.155
MO-99	140.51			-1.803E+01	3.222E+01	4.987E+01	1.137E+01	-0.361
	181.07			-2.642E+01	2.906E+01	3.814E+01	6.670E+00	-0.693
	366.42			1.587E+01	1.399E+02	2.349E+02	1.377E+01	0.068
	739.50	*		-2.399E+00	1.953E+01	3.104E+01	4.536E+00	-0.077
	777.92			-4.755E+01	5.529E+01	8.571E+01	5.934E+00	-0.555
TC-99M	140.51	*		-2.422E+11	5.529E+01	Half-Life	too short	
RU-103	497.08	*		2.135E-02	4.642E-02	7.896E-02	9.823E-03	0.270
	610.33			8.252E+00	1.875E+00	2.820E+00	4.206E-01	2.926
RH-106	621.93	*		-4.404E-01	4.069E-01	5.927E-01	6.765E-02	-0.743
	1050.41			-2.851E+00	3.136E+00	4.643E+00	3.493E-01	-0.614
RU-106	621.93	*		-4.404E-01	4.045E-01	5.927E-01	3.184E-02	-0.743
	1050.41			-2.851E+00	3.136E+00	4.643E+00	3.493E-01	-0.614
AG-108M	433.94	*		-8.167E-03	3.394E-02	5.515E-02	3.447E-03	-0.148
	614.28			-1.361E-02	4.837E-02	6.548E-02	3.835E-03	-0.208
	722.91			3.292E-02	5.181E-02	7.786E-02	4.996E-03	0.423
AG-110M	657.76	*		-4.033E-03	4.058E-02	6.508E-02	3.617E-03	-0.062
	677.62			7.004E-02	3.800E-01	6.248E-01	3.581E-02	0.112
	706.68			7.138E-02	2.737E-01	4.513E-01	2.771E-02	0.158
	763.94			3.209E-02	2.284E-01	3.709E-01	2.593E-02	0.087
	884.68			-3.641E-03	5.633E-02	9.325E-02	8.501E-03	-0.039
	937.49			-1.248E-01	1.324E-01	1.972E-01	1.790E-02	-0.633
	1384.29			-1.935E-02	1.932E-01	3.084E-01	2.335E-02	-0.063
	1505.03			2.205E-01	2.727E-01	5.082E-01	3.609E-02	0.434
SN-113	391.69	*		-2.992E-02	5.277E-02	8.434E-02	5.196E-03	-0.355
CD-115	260.90			6.674E+01	2.024E+02	3.303E+02	1.897E+01	0.202
	492.35			-2.301E+01	5.749E+01	9.143E+01	5.337E+00	-0.252
	527.90	*		-1.825E+00	1.712E+01	2.779E+01	1.604E+00	-0.066
SN-117M	156.02			-7.453E-01	2.745E+00	4.422E+00	2.314E-01	-0.169
	158.56	*		3.171E-02	6.629E-02	1.104E-01	5.737E-03	0.287
TE-123M	159.00	*		3.329E-02	3.290E-02	5.602E-02	2.956E-03	0.594
SB-124	602.73			-2.726E-02	5.397E-02	7.107E-02	3.896E-03	-0.384
	645.85			-3.399E-01	6.313E-01	9.733E-01	5.843E-02	-0.349
	722.78			3.286E-01	5.250E-01	7.881E-01	4.969E-02	0.417
	1690.97	*		-4.031E-02	6.212E-02	8.122E-02	5.684E-03	-0.496
SB-125	427.87	*		-2.022E-02	1.009E-01	1.645E-01	9.994E-03	-0.123
	463.37			1.000E+00	5.072E-01	6.481E-01	4.393E-02	1.543
	600.60			8.260E-02	2.335E-01	3.572E-01	2.303E-02	0.231
	635.95			1.017E-01	3.202E-01	5.346E-01	3.402E-02	0.190
TE-125M	109.28	*		6.827E-01	1.148E+01	1.899E+01	1.727E+00	0.036
I-126	388.63			-1.271E-01	2.063E-01	3.288E-01	1.902E-02	-0.387
	666.33	*		-4.223E-03	2.675E-01	4.323E-01	2.237E-02	-0.010
	753.82			-1.104E-01	2.390E+00	3.823E+00	2.494E-01	-0.029
SB-126	414.70			-1.465E-02	8.657E-02	1.417E-01	8.249E-03	-0.103

---- Non-Identified Nuclides ----

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SB-127		666.50		-1.443E-02	9.326E-02	1.487E-01	7.699E-03	-0.097
		695.00		-3.307E-02	1.077E-01	1.692E-01	9.474E-03	-0.195
		697.00		5.203E-01	3.577E-01	6.451E-01	3.631E-02	0.807
		720.70	*	2.766E-02	2.115E-01	2.989E-01	1.791E-02	0.093
		856.80		3.943E-01	6.433E-01	1.127E+00	9.378E-02	0.350
		252.40		8.737E+00	6.527E+00	9.586E+00	3.939E+00	0.911
		473.00		-2.574E-01	2.097E+00	3.419E+00	3.877E-01	-0.075
		685.70	*	-7.800E-01	1.921E+00	2.983E+00	2.835E-01	-0.261
I-131		783.70		3.479E+00	5.330E+00	9.363E+00	1.080E+00	0.372
		80.19		6.198E+00	8.131E+00	9.257E+00	8.543E-01	0.670
		284.31		4.313E-01	1.877E+00	3.201E+00	2.074E-01	0.135
		364.49	*	3.550E-02	1.391E-01	2.359E-01	1.542E-02	0.151
TE-132		636.99		-1.318E+00	2.002E+00	3.039E+00	1.842E-01	-0.434
		49.72		-3.311E+00	3.415E+01	5.723E+01	6.333E+00	-0.058
		111.76		-3.109E+01	4.707E+01	7.530E+01	7.389E+00	-0.413
		116.30		5.931E+00	4.103E+01	6.628E+01	6.344E+00	0.089
BA-133		228.16	*	2.243E-01	1.026E+00	1.669E+00	2.429E-01	0.134
		81.00		8.116E-02	1.565E-01	1.740E-01	2.760E-02	0.466
		276.40		2.700E-01	4.432E-01	7.295E-01	9.186E-02	0.370
		302.85		3.008E-02	1.507E-01	2.561E-01	2.931E-02	0.117
I-133		356.01	*	4.452E-02	5.370E-02	8.341E-02	9.442E-03	0.534
		383.85		2.474E-01	3.496E-01	6.059E-01	6.462E-02	0.408
		529.87	*	-4.443E-03	3.496E-01	Half-Life	too short	
		875.33		-4.173E-02	3.496E-01	Half-Life	too short	
CS-134		1298.22		-3.824E-01	3.496E-01	Half-Life	too short	
		563.25		1.890E-01	3.940E-01	6.707E-01	3.880E-02	0.282
		569.33		1.020E-01	2.319E-01	3.806E-01	2.213E-02	0.268
		604.72		-7.889E-03	4.683E-02	6.448E-02	3.549E-03	-0.122
I-135		795.86	*	1.697E-02	5.790E-02	9.935E-02	7.256E-03	0.171
		801.95		9.704E-02	5.031E-01	8.546E-01	6.317E-02	0.114
		1365.19		-1.238E-01	1.653E+00	2.654E+00	2.065E-01	-0.047
		546.56		8.748E+10	1.653E+00	Half-Life	too short	
+ I-135		836.80		3.266E+11	1.653E+00	Half-Life	too short	
		1038.76		0.000E+00	1.653E+00	Half-Life	too short	
		1131.51		3.955E+10	1.653E+00	Half-Life	too short	
		1260.41	*	-7.307E+08	1.653E+00	Half-Life	too short	
CS-136		1457.56		1.271E+13	1.653E+00	Half-Life	too short	
		1678.03		3.522E+10	1.653E+00	Half-Life	too short	
		1791.20		2.129E+10	1.653E+00	Half-Life	too short	
		153.25		1.492E-01	1.024E+00	1.682E+00	1.291E-01	0.089
		176.60		1.910E-01	6.114E-01	1.007E+00	6.595E-02	0.190
		273.65		-3.014E-01	7.656E-01	1.031E+00	7.048E-02	-0.292
		340.55		3.723E-01	2.025E-01	3.335E-01	2.126E-02	1.116
		818.51		-7.751E-04	9.457E-02	1.582E-01	1.208E-02	-0.005
		1048.07	*	2.867E-02	1.382E-01	2.329E-01	1.855E-02	0.123
		1235.36		6.123E-01	9.031E-01	1.532E+00	1.559E-01	0.400
		661.66	*	-2.065E-03	4.260E-02	6.865E-02	3.507E-03	-0.030
		661.66	*	-2.182E-03	4.500E-02	7.252E-02	3.725E-03	-0.030
CE-139		165.86	*	2.974E-02	3.253E-02	5.526E-02	2.818E-03	0.538

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BA-140	162.66			-1.809E-01	9.607E-01	1.551E+00	9.403E-02	-0.117
	304.85			9.386E-01	1.601E+00	2.739E+00	7.829E-01	0.343
	423.72			-1.761E+00	2.313E+00	3.489E+00	1.126E+00	-0.505
	537.26	*		-3.638E-01	3.571E-01	4.990E-01	1.662E-01	-0.729
LA-140	328.76			1.935E-01	3.550E-01	6.124E-01	4.046E-02	0.316
	487.02			2.637E-02	1.560E-01	2.602E-01	1.719E-02	0.101
	815.77			3.789E-01	4.177E-01	7.525E-01	6.554E-02	0.504
	1596.21	*		-1.553E-02	9.459E-02	1.531E-01	1.050E-02	-0.101
CE-141	145.44	*		-1.901E-02	7.227E-02	1.168E-01	6.587E-03	-0.163
CE-143	57.36			1.507E-03	7.227E-02	Half-Life	too short	
	293.27	*		1.258E-03	7.227E-02	Half-Life	too short	
	664.57			1.083E-03	7.227E-02	Half-Life	too short	
	721.93			1.795E-03	7.227E-02	Half-Life	too short	
CE-144	80.12			3.231E+00	4.110E+00	4.688E+00	4.298E-01	0.689
	133.52	*		1.309E-01	2.315E-01	3.877E-01	5.355E-02	0.338
PM-144	476.78			-6.022E-03	7.344E-02	1.202E-01	8.295E-03	-0.050
	618.01			1.875E-02	3.868E-02	6.547E-02	3.780E-03	0.286
	696.49	*		1.980E-02	4.465E-02	7.474E-02	4.205E-03	0.265
PR-144	696.51	*		1.493E+00	3.344E+00	5.598E+00	3.147E-01	0.267
	1489.16			8.420E-01	1.097E+01	1.802E+01	1.286E+00	0.047
PM-146	453.88	*		-1.062E-02	5.077E-02	8.254E-02	7.013E-03	-0.129
	633.25			-4.130E-01	1.702E+00	2.687E+00	1.010E+00	-0.154
	735.93			-2.765E-02	1.915E-01	3.037E-01	8.317E-02	-0.091
	747.24			4.133E-03	1.164E-01	1.878E-01	2.517E-02	0.022
ND-147	91.11	+		4.573E-01	3.044E-01	6.837E-01	6.725E-02	0.669
	319.41			5.264E+00	4.013E+00	7.210E+00	4.260E-01	0.730
	531.02	*		-3.148E-02	7.340E-01	1.176E+00	1.588E-01	-0.027
PM-149	285.90	*		-7.243E+01	1.381E+02	2.256E+02	3.202E+01	-0.321
EU-152	121.78			-1.892E-02	8.433E-02	1.373E-01	1.052E-02	-0.138
	244.70			4.437E-01	3.859E-01	5.913E-01	3.345E-02	0.750
	344.28	*		-2.211E-02	1.297E-01	1.748E-01	1.158E-02	-0.126
	778.90			-3.531E-01	3.247E-01	4.913E-01	3.410E-02	-0.719
	964.08			3.854E-01	4.408E-01	6.898E-01	5.877E-02	0.559
	1085.87			-2.367E-02	5.284E-01	8.662E-01	6.094E-02	-0.027
	1112.07			-3.607E-01	4.325E-01	6.543E-01	4.349E-02	-0.551
	1408.01			1.583E-02	2.372E-01	3.875E-01	2.818E-02	0.041
GD-153	69.67			9.115E-01	2.609E+00	3.899E+00	3.407E-01	0.234
	97.43	*		-6.038E-02	1.126E-01	1.585E-01	1.295E-02	-0.381
	103.18			-1.192E-01	1.331E-01	2.114E-01	1.579E-02	-0.564
EU-154	123.07			2.616E-02	5.914E-02	9.905E-02	9.335E-03	0.264
	723.31			2.036E-01	2.426E-01	3.717E-01	2.686E-02	0.548
	873.19			-1.895E-01	3.723E-01	5.774E-01	6.871E-02	-0.328
	996.26			3.480E-01	4.284E-01	7.599E-01	1.311E-01	0.458
	1004.73			1.467E-01	2.703E-01	4.695E-01	5.280E-02	0.312
EU-155	1274.44	*		-4.071E-02	1.636E-01	2.592E-01	2.593E-02	-0.157
	86.55	+		2.745E-01	1.210E-01	2.147E-01	2.087E-02	1.279
	105.31	*		-6.776E-03	1.234E-01	2.033E-01	1.498E-02	-0.033
TB-160	86.79	+		7.339E-01	3.233E-01	5.668E-01	5.477E-02	1.295
	197.04			4.235E-01	6.741E-01	1.106E+00	5.886E-02	0.383

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
HO-166M		215.65		-2.805E-01	8.925E-01	1.415E+00	7.732E-02	-0.198
	+	298.57		2.571E-01	1.666E-01	2.509E-01	1.474E-02	1.025
		879.36	*	-5.188E-02	1.765E-01	2.860E-01	2.501E-02	-0.181
		962.29		8.648E-01	7.850E-01	1.262E+00	1.078E-01	0.685
		966.15		9.959E-01	3.861E-01	6.628E-01	5.634E-02	1.503
		1177.93		1.802E-01	5.056E-01	8.544E-01	4.861E-02	0.211
		1271.85		-3.670E-01	9.452E-01	1.473E+00	9.833E-02	-0.249
		80.57		9.627E-02	4.666E-01	5.046E-01	4.640E-02	0.191
	+	184.41		1.203E-01	6.532E-02	7.826E-02	4.090E-03	1.538
		280.46		-1.023E-01	1.015E-01	1.621E-01	9.442E-03	-0.631
TA-182		410.95		-6.788E-02	2.670E-01	4.347E-01	2.527E-02	-0.156
		711.68	*	2.566E-02	7.191E-02	1.199E-01	7.016E-03	0.214
		752.31		1.330E-01	3.326E-01	5.554E-01	3.609E-02	0.239
		810.29		-7.405E-02	7.157E-02	1.077E-01	8.059E-03	-0.687
		67.75		4.743E-02	1.539E-01	2.517E-01	2.192E-02	0.188
		100.11		3.419E-01	2.099E-01	3.671E-01	2.873E-02	0.931
		152.43		1.116E-01	3.974E-01	6.570E-01	3.472E-02	0.170
		222.11		1.165E-02	4.141E-01	6.676E-01	3.679E-02	0.017
		1121.30		2.275E-01	2.150E-01	3.808E-01	2.476E-02	0.597
		1189.05		2.626E-01	4.356E-01	7.502E-01	4.353E-02	0.350
IR-192		1221.41	*	-2.656E-02	2.980E-01	4.835E-01	2.967E-02	-0.055
		1231.02		-3.616E-01	7.669E-01	1.207E+00	7.529E-02	-0.300
	+	295.96		1.026E+00	1.922E-01	3.125E-01	1.863E-02	3.284
		308.46		-1.099E-01	1.271E-01	1.719E-01	1.024E-02	-0.639
		316.51	*	-3.706E-02	4.138E-02	6.574E-02	3.900E-03	-0.564
		468.07		-5.175E-02	8.479E-02	1.121E-01	7.562E-03	-0.462
		70.83		-6.025E-01	2.032E+00	2.940E+00	4.745E-01	-0.205
		72.87		2.703E+00	1.271E+00	1.931E+00	3.021E-01	1.400
		279.20	*	-1.326E-03	4.606E-02	7.757E-02	4.764E-03	-0.017
		72.81		5.717E-01	2.773E-01	4.369E-01	3.853E-02	1.309
BI-207	+	74.97		4.755E-01	1.365E-01	2.945E-01	2.621E-02	1.614
		569.70		1.346E-02	3.705E-02	6.047E-02	3.407E-03	0.223
		1063.66	*	1.384E-02	6.363E-02	1.073E-01	7.880E-03	0.129
		1770.23		3.220E-01	4.956E-01	8.588E-01	5.317E-02	0.375
		46.54	*	2.468E+00	5.930E+00	9.888E+00	7.638E-01	0.250
		404.85	*	-7.447E-01	8.579E-01	1.203E+00	5.772E-01	-0.619
		427.09		4.043E-01	1.668E+00	2.795E+00	1.281E+00	0.145
		832.01		1.062E+00	1.304E+00	1.930E+00	9.984E-01	0.550
	+	727.33	*	1.436E+00	8.380E-01	1.303E+00	1.416E-01	1.102
		785.37		2.691E+00	4.097E+00	7.213E+00	5.084E-01	0.373
BI-214		1620.50		1.968E+00	2.164E+00	4.253E+00	2.885E-01	0.463
	+	609.32	*	8.893E-01	1.894E-01	2.844E-01	2.156E-02	3.127
		1120.29		8.060E-01	4.612E-01	8.457E-01	7.907E-02	0.953
		1764.49		8.702E-01	4.515E-01	8.430E-01	5.241E-02	1.032
		271.23		2.127E-01	3.422E-01	4.978E-01	3.994E-02	0.427
		401.81	*	6.992E-04	4.564E-01	7.578E-01	1.018E-01	0.001
		81.07		1.817E-01	3.535E-01	3.936E-01	3.632E-02	0.462
	+	83.79		2.434E-01	1.589E-01	2.505E-01	2.360E-02	0.972
		94.87		6.581E-01	5.777E-01	8.889E-01	7.588E-02	0.740

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		144.24		3.356E-01	7.714E-01	1.276E+00	8.801E-02	0.263
		154.21		1.693E-01	4.459E-01	7.398E-01	4.826E-02	0.229
	+	269.46		5.175E-01	3.268E-01	3.955E-01	2.387E-02	1.308
		323.87	*	-1.264E+00	7.671E-01	1.111E+00	1.795E-01	-1.138
	+	338.28		5.541E+00	2.249E+00	2.715E+00	2.799E-01	2.041
RA-226	+	609.32	*	8.893E-01	1.894E-01	2.844E-01	2.156E-02	3.127
		1120.29		8.060E-01	4.612E-01	8.457E-01	7.907E-02	0.953
		1764.49		8.702E-01	4.515E-01	8.430E-01	5.241E-02	1.032
AC-227		79.69		1.244E+00	2.184E+00	2.430E+00	4.253E-01	0.512
		235.96		1.428E+00	2.709E-01	4.464E-01	3.573E-02	3.199
		256.23	*	-2.764E-02	2.815E-01	4.477E-01	4.557E-02	-0.062
	+	299.98		1.993E+00	1.305E+00	1.857E+00	2.048E-01	1.073
		304.50		1.059E+00	1.824E+00	3.152E+00	4.818E-01	0.336
		334.37		1.413E+00	2.147E+00	3.290E+00	4.694E-01	0.429
TH-227		79.80		1.437E+00	2.874E+00	3.176E+00	6.984E-01	0.453
		235.96		1.428E+00	2.665E-01	4.464E-01	3.228E-02	3.199
		256.23	*	-2.764E-02	2.815E-01	4.477E-01	5.363E-02	-0.062
	+	299.98		1.993E+00	1.305E+00	1.857E+00	2.048E-01	1.073
		304.50		1.059E+00	1.824E+00	3.152E+00	4.818E-01	0.336
		334.37		1.413E+00	2.147E+00	3.290E+00	4.694E-01	0.429
PA-231		283.69	*	1.111E+00	1.698E+00	2.947E+00	3.870E-01	0.377
		301.36		1.056E+00	6.527E-01	1.171E+00	1.217E-01	0.901
TH-231		81.07		1.817E-01	3.535E-01	3.936E-01	3.632E-02	0.462
	+	83.79		2.434E-01	1.589E-01	2.505E-01	2.360E-02	0.972
		94.87		6.581E-01	5.777E-01	8.889E-01	7.588E-02	0.740
		144.24		3.356E-01	7.714E-01	1.276E+00	8.801E-02	0.263
		154.21		1.693E-01	4.459E-01	7.398E-01	4.826E-02	0.229
	+	269.46		5.175E-01	3.268E-01	3.955E-01	2.387E-02	1.308
		323.87	*	-1.264E+00	7.671E-01	1.111E+00	1.795E-01	-1.138
	+	338.28		5.541E+00	2.249E+00	2.715E+00	2.799E-01	2.041
PA-233	+	300.13		9.017E-01	5.943E-01	8.392E-01	1.126E-01	1.074
		311.90	*	3.853E-02	7.611E-02	1.209E-01	7.563E-03	0.319
		340.48		1.722E+00	9.233E-01	1.397E+00	3.245E-01	1.233
PA-234		94.67		4.541E-01	2.143E-01	3.363E-01	4.159E-02	1.350
		98.44		1.025E-01	1.271E-01	1.821E-01	1.014E-01	0.563
		111.00		-1.481E-01	2.160E-01	3.449E-01	3.730E-02	-0.430
		131.20		-1.844E-01	1.247E-01	1.907E-01	1.078E-02	-0.967
		569.50		1.628E-01	3.213E-01	5.303E-01	2.988E-02	0.307
		733.00		9.117E-02	5.428E-01	8.047E-01	1.720E-01	0.113
		880.51		1.275E-01	3.344E-01	5.778E-01	5.065E-02	0.221
		883.24		7.434E-02	3.329E-01	5.611E-01	3.774E-01	0.132
		926.50		-4.329E-03	2.160E-01	3.583E-01	9.089E-02	-0.012
		946.00	*	2.691E-01	4.060E-01	7.081E-01	1.331E-01	0.380
		949.00		6.291E-01	5.838E-01	1.057E+00	9.163E-02	0.595
PA-234M		766.42		1.930E+01	1.845E+01	2.758E+01	1.391E+01	0.700
		1001.03	*	-1.866E+00	6.024E+00	9.664E+00	9.221E-01	-0.193
TH-234		63.29	*	5.738E-01	1.857E+00	3.043E+00	5.599E-01	0.189
	+	92.59		2.502E+00	1.227E+00	1.550E+00	3.441E-01	1.614
U-238		63.29	*	5.738E-01	1.857E+00	3.043E+00	5.599E-01	0.189

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NP-239	+	92.59		2.502E+00	1.117E+00	1.550E+00	1.380E-01	1.614
		99.53		3.119E-01	1.935E-01	3.381E-01	2.670E-02	0.923
		103.37		-8.914E-02	1.198E-01	1.916E-01	1.428E-02	-0.465
		106.12		-6.937E-04	9.878E-02	1.631E-01	1.169E-02	-0.004
		117.23	*	-2.488E-01	4.777E-01	7.482E-01	4.657E-02	-0.333
		228.18		5.792E-02	2.546E-01	4.144E-01	2.301E-02	0.140
		277.60		2.869E-02	2.188E-01	3.516E-01	2.044E-02	0.082
AM-241		59.54	*	-3.174E-01	2.236E-01	3.510E-01	3.266E-02	-0.904
CM-247		278.00		-6.702E-02	8.857E-01	1.488E+00	8.655E-02	-0.045
		287.50		-1.026E+00	1.523E+00	2.320E+00	1.356E-01	-0.442
CF-249		402.40	*	-2.044E-02	4.248E-02	6.814E-02	3.949E-03	-0.300
		252.80		1.732E+00	1.058E+00	1.855E+00	1.057E-01	0.934
		333.37		5.553E-02	2.310E-01	3.434E-01	2.029E-02	0.162
CF-251		388.16	*	-2.651E-02	4.757E-02	7.618E-02	4.407E-03	-0.348
		177.52	*	1.108E-02	1.529E-01	2.491E-01	1.289E-02	0.044
		227.38		-1.998E-01	4.199E-01	6.578E-01	3.649E-02	-0.304
		285.41		6.295E-01	2.498E+00	4.265E+00	2.491E-01	0.148

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]G247790003      *
* Acquisition date   : 5-MAR-2010 10:26:46 Detector SN#      :              *
* Detector ID        : GAM23          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 02:00:01.51   Half life ratio  :    : 8.000          *
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 17-FEB-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID          : G247790003      Analyst initials:    : MXR1           *
* Batch Number       : 957136          Sample Quantity :    : 1.1169E+02 GRAM  *
* Recovery           : 1.00000         Carrier Weight  :    : 0.00000         *
*****
*                                     QC DATA                               *
*
* Standard Weight    : 0.00000                                                *
* CALIB. DATE/TIME   : 2-JUN-2009 11:17:00 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	3.357E+01	3.321E+00	6.584E-01	0.000E+00
CD-109	2.319E+00	1.001E+00	1.479E+00	0.000E+00
SN-126	2.264E-01	9.772E-02	1.522E-01	0.000E+00
CS-135	4.496E-01	2.790E-01	2.924E-01	0.000E+00
TL-208	4.877E-01	9.992E-02	7.181E-02	0.000E+00
BI-211	3.040E+00	5.013E-01	3.616E-01	0.000E+00
PB-212	1.416E+00	1.546E-01	1.051E-01	0.000E+00
PB-214	1.103E+00	1.915E-01	1.430E-01	0.000E+00
RA-224	4.250E+00	1.167E+00	1.126E+00	0.000E+00
AC-228	1.655E+00	3.862E-01	2.956E-01	0.000E+00
RA-228	1.655E+00	3.862E-01	2.956E-01	0.000E+00
TH-228	1.416E+00	1.546E-01	1.051E-01	0.000E+00
TH-229	3.674E-01	5.800E-01	9.986E-01	0.000E+00
TH-232	1.655E+00	3.862E-01	2.956E-01	0.000E+00
U-235	2.063E-02	2.295E-01	3.870E-01	0.000E+00
NP-237	6.754E-01	3.229E-01	4.636E-01	0.000E+00
ANH-511	8.871E-02	8.333E-02	5.998E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error) Ided	MDA (pCi/GRAM)	
BE-7	4.360E-02	3.532E-01	6.017E-01	0.000E+00 NOT IDENT.
NA-22	-1.377E-02	5.666E-02	9.138E-02	0.000E+00 NOT IDENT.
NA-24	0.000E+00	2.490E+06	0.000E+00	0.000E+00 SHORT HLIF
SC-46	-2.482E-02	4.517E-02	7.233E-02	0.000E+00 NOT IDENT.
V-48	-9.113E-02	8.635E-02	1.284E-01	0.000E+00 NOT IDENT.
CR-51	2.691E-01	4.206E-01	7.505E-01	0.000E+00 NOT IDENT.
MN-54	-9.683E-03	5.113E-02	7.335E-02	0.000E+00 NOT IDENT.
CO-56	-2.898E-02	5.151E-02	8.347E-02	0.000E+00 NOT IDENT.
CO-57	-8.036E-03	2.871E-02	4.830E-02	0.000E+00 NOT IDENT.
CO-58	-2.288E-02	4.661E-02	7.603E-02	0.000E+00 NOT IDENT.

FE-59	2.267E-02	1.177E-01	2.006E-01	0.000E+00	NOT IDENT.
CO-60	9.539E-03	4.175E-02	7.126E-02	0.000E+00	NOT IDENT.
ZN-65	-1.006E-01	1.366E-01	2.148E-01	0.000E+00	NOT IDENT.
SE-75	1.044E-02	5.861E-02	8.530E-02	0.000E+00	NOT IDENT.
SR-85	3.818E-02	5.513E-02	8.528E-02	0.000E+00	NOT IDENT.
Y-88	2.039E-02	3.867E-02	7.166E-02	0.000E+00	NOT IDENT.
Y-91	-1.686E+01	3.098E+01	4.895E+01	0.000E+00	NOT IDENT.
NB-94	4.580E-03	4.365E-02	7.254E-02	0.000E+00	NOT IDENT.
NB-95	5.848E-02	5.825E-02	1.027E-01	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	1.879E-01	3.071E-01	0.000E+00	NOT IDENT.
ZR-95	2.420E-02	9.306E-02	1.561E-01	0.000E+00	NOT IDENT.
MO-99	-2.399E+00	1.914E+01	3.105E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	4.266E+17	0.000E+00	0.000E+00	SHORT HLIF
RU-103	2.135E-02	4.549E-02	7.925E-02	0.000E+00	NOT IDENT.
RH-106	-4.404E-01	3.988E-01	5.938E-01	0.000E+00	NOT IDENT.
RU-106	-4.404E-01	3.964E-01	5.938E-01	0.000E+00	NOT IDENT.
AG-108M	-8.167E-03	3.326E-02	5.541E-02	0.000E+00	NOT IDENT.
AG-110M	-4.033E-03	3.977E-02	6.517E-02	0.000E+00	NOT IDENT.
SN-113	-2.992E-02	5.171E-02	8.482E-02	0.000E+00	NOT IDENT.
CD-115	-1.825E+00	1.677E+01	2.788E+01	0.000E+00	NOT IDENT.
SN-117M	3.171E-02	6.496E-02	1.118E-01	0.000E+00	NOT IDENT.
TE-123M	3.329E-02	3.224E-02	5.674E-02	0.000E+00	NOT IDENT.
SB-124	-4.031E-02	6.088E-02	8.072E-02	0.000E+00	NOT IDENT.
SB-125	-2.022E-02	9.888E-02	1.653E-01	0.000E+00	FAIL ABUN
TE-125M	6.827E-01	1.125E+01	1.929E+01	0.000E+00	NOT IDENT.
I-126	-4.223E-03	2.622E-01	4.328E-01	0.000E+00	NOT IDENT.
SB-126	2.766E-02	2.073E-01	2.991E-01	0.000E+00	NOT IDENT.
SB-127	-7.800E-01	1.882E+00	2.986E+00	0.000E+00	NOT IDENT.
I-131	3.550E-02	1.363E-01	2.373E-01	0.000E+00	NOT IDENT.
TE-132	2.243E-01	1.006E+00	1.685E+00	0.000E+00	NOT IDENT.
BA-133	4.452E-02	5.263E-02	8.395E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	1.339E+04	0.000E+00	0.000E+00	SHORT HLIF
CS-134	1.697E-02	5.674E-02	9.934E-02	0.000E+00	NOT IDENT.
I-135	0.000E+00	7.015E+16	0.000E+00	0.000E+00	SHORT HLIF
CS-136	2.867E-02	1.355E-01	2.324E-01	0.000E+00	NOT IDENT.
BA-137M	-2.065E-03	4.175E-02	6.874E-02	0.000E+00	NOT IDENT.
CS-137	-2.182E-03	4.410E-02	7.262E-02	0.000E+00	NOT IDENT.
CE-139	2.974E-02	3.188E-02	5.596E-02	0.000E+00	NOT IDENT.
BA-140	-3.638E-01	3.499E-01	5.005E-01	0.000E+00	NOT IDENT.
LA-140	-1.553E-02	9.269E-02	1.522E-01	0.000E+00	NOT IDENT.
CE-141	-1.901E-02	7.082E-02	1.184E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	4.027E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	1.309E-01	2.268E-01	3.932E-01	0.000E+00	NOT IDENT.
PM-144	1.980E-02	4.375E-02	7.481E-02	0.000E+00	NOT IDENT.
PR-144	1.493E+00	3.277E+00	5.604E+00	0.000E+00	NOT IDENT.
PM-146	-1.062E-02	4.976E-02	8.291E-02	0.000E+00	NOT IDENT.
ND-147	-3.148E-02	7.194E-01	1.180E+00	0.000E+00	FAIL ABUN
PM-149	-7.243E+01	1.354E+02	2.274E+02	0.000E+00	NOT IDENT.
EU-152	-2.211E-02	1.271E-01	1.760E-01	0.000E+00	NOT IDENT.
GD-153	-6.038E-02	1.103E-01	1.611E-01	0.000E+00	NOT IDENT.
EU-154	-4.071E-02	1.603E-01	2.582E-01	0.000E+00	NOT IDENT.
EU-155	-6.776E-03	1.209E-01	2.066E-01	0.000E+00	FAIL ABUN
TB-160	-5.188E-02	1.730E-01	2.857E-01	0.000E+00	FAIL ABUN
HO-166M	2.566E-02	7.048E-02	1.200E-01	0.000E+00	FAIL ABUN
TA-182	-2.656E-02	2.921E-01	4.817E-01	0.000E+00	NOT IDENT.
IR-192	-3.706E-02	4.056E-02	6.623E-02	0.000E+00	FAIL ABUN
HG-203	-1.326E-03	4.514E-02	7.822E-02	0.000E+00	NOT IDENT.
BI-207	1.384E-02	6.235E-02	1.070E-01	0.000E+00	FAIL ABUN
PB-210	2.468E+00	5.812E+00	1.011E+01	0.000E+00	NOT IDENT.
PB-211	-7.447E-01	8.407E-01	1.210E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	8.212E-01	1.304E+00	0.000E+00	FAIL ABUN
BI-214	0.000E+00	1.856E-01	2.850E-01	0.000E+00	FAIL ABUN
RN-219	6.992E-04	4.473E-01	7.620E-01	0.000E+00	NOT IDENT.
RA-223	-1.264E+00	7.518E-01	1.119E+00	0.000E+00	FAIL ABUN
RA-226	0.000E+00	1.856E-01	2.850E-01	0.000E+00	FAIL ABUN
AC-227	-2.764E-02	2.759E-01	4.517E-01	0.000E+00	FAIL ABUN
TH-227	-2.764E-02	2.759E-01	4.517E-01	0.000E+00	FAIL ABUN
PA-231	1.111E+00	1.664E+00	2.971E+00	0.000E+00	NOT IDENT.
TH-231	-1.264E+00	7.518E-01	1.119E+00	0.000E+00	FAIL ABUN
PA-233	3.853E-02	7.458E-02	1.218E-01	0.000E+00	FAIL ABUN
PA-234	2.691E-01	3.979E-01	7.071E-01	0.000E+00	NOT IDENT.
PA-234M	-1.866E+00	5.903E+00	9.645E+00	0.000E+00	NOT IDENT.
TH-234	5.738E-01	1.820E+00	3.105E+00	0.000E+00	FAIL ABUN
U-238	5.738E-01	1.820E+00	3.105E+00	0.000E+00	FAIL ABUN
NP-239	-2.488E-01	4.681E-01	7.597E-01	0.000E+00	NOT IDENT.
AM-241	-3.174E-01	2.191E-01	3.583E-01	0.000E+00	NOT IDENT.
CM-247	-2.044E-02	4.163E-02	6.851E-02	0.000E+00	NOT IDENT.
CF-249	-2.651E-02	4.662E-02	7.661E-02	0.000E+00	NOT IDENT.

CF-251

1.108E-02

1.498E-01

2.521E-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]G247790003.CNF;1
Sample date        : 17-FEB-2010 12:00:00 Acquisition date : 5-MAR-2010 10:26:46.
Sample ID          : G247790003          Sample quantity  : 1.11690E+02 GRAM
Detector name      : GAM23              Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00      Elapsed real time: 0 02:00:01.51  0.0%
Energy tolerance   : 1.50000 keV        Analyst Initials  : MXR1
Abundance limit    : 75.00000           Sensitivity       : 5.00000
Batch ID           : 957136             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	1460.82	1062	10.66*	9.974E-01	3.357E+01	3.357E+01	10.10
CD-109	88.03	130	3.70*	5.210E+00	2.264E+00	2.319E+00	44.05
SN-126	64.28	-----	9.60	2.723E+00	-----	Line Not Found	-----
	86.94	130	8.90	5.210E+00	9.410E-01	9.410E-01	59.81
	87.57	130	37.00*	5.210E+00	2.264E-01	2.264E-01	44.05
CS-135	268.22	91	16.00*	4.230E+00	4.496E-01	4.496E-01	63.33
TL-208	277.37	-----	6.60	4.139E+00	-----	Line Not Found	-----
	583.19	281	85.00*	2.278E+00	4.877E-01	4.877E-01	20.90
	860.56	-----	12.50	1.609E+00	-----	Line Not Found	-----
BI-211	72.87	-----	1.23	3.829E+00	-----	Line Not Found	-----
	351.06	402	12.92*	3.442E+00	3.040E+00	3.040E+00	16.83
PB-212	74.82	203	10.28	4.028E+00	1.650E+00	1.650E+00	30.32
	77.11	421	17.10	4.295E+00	1.929E+00	1.929E+00	19.49
	238.63	852	43.60*	4.639E+00	1.416E+00	1.416E+00	11.14
	300.09	69	3.30	3.902E+00	1.812E+00	1.812E+00	65.08
PB-214	74.82	203	5.80	4.028E+00	2.924E+00	2.924E+00	29.79
	77.11	421	9.70	4.295E+00	3.400E+00	3.400E+00	21.17
	242.00	238	7.25	4.598E+00	2.403E+00	2.403E+00	28.61
	295.22	298	18.42	3.949E+00	1.377E+00	1.377E+00	19.81
	351.93	402	35.60*	3.442E+00	1.103E+00	1.103E+00	17.71
RA-224	240.99	238	4.10*	4.598E+00	4.250E+00	4.250E+00	28.02
AC-228	338.32	166	11.27	3.550E+00	1.396E+00	1.396E+00	56.94
	911.20	194	25.80*	1.527E+00	1.655E+00	1.655E+00	23.82
	968.97	106	15.80	1.441E+00	1.563E+00	1.563E+00	40.97
RA-228	338.32	166	11.27	3.550E+00	1.396E+00	1.396E+00	56.94
	911.20	194	25.80*	1.527E+00	1.655E+00	1.655E+00	23.82
	968.97	106	15.80	1.441E+00	1.563E+00	1.563E+00	40.97
TH-228	74.82	203	10.28	4.028E+00	1.650E+00	1.650E+00	28.74
	77.11	421	17.10	4.295E+00	1.929E+00	1.929E+00	19.49
	238.63	852	43.60*	4.639E+00	1.416E+00	1.416E+00	11.14
	300.09	69	3.30	3.902E+00	1.812E+00	1.812E+00	88.72
TH-229	85.43	89	14.70	4.981E+00	4.090E-01	4.090E-01	65.30

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	88.47	75	24.00	5.400E+00	1.939E-01	1.939E-01	66.47
	193.51	-----	4.41*	5.353E+00	-----	Line Not Found	-----
	210.85	-----	2.80	5.059E+00	-----	Line Not Found	-----
TH-232	338.32	166	11.27	3.550E+00	1.396E+00	1.396E+00	39.70
	911.20	194	25.80*	1.527E+00	1.655E+00	1.655E+00	23.82
	968.97	106	15.80	1.441E+00	1.563E+00	1.563E+00	40.97
U-235	89.96	75	3.47	5.400E+00	1.341E+00	1.341E+00	70.35
	93.35	176	5.60	5.603E+00	1.890E+00	1.890E+00	49.51
	143.76	-----	10.96*	6.189E+00	-----	Line Not Found	-----
	163.33	-----	5.08	5.887E+00	-----	Line Not Found	-----
	185.72	142	57.20	5.492E+00	1.515E-01	1.515E-01	54.27
	205.31	-----	5.01	5.150E+00	-----	Line Not Found	-----
NP-237	86.48	130	12.40*	5.210E+00	6.754E-01	6.754E-01	48.79
	95.86	-----	2.68	5.757E+00	-----	Line Not Found	-----
ANH-511	511.00	67	100.00*	2.547E+00	8.871E-02	8.871E-02	95.85

Flag: "*" = Keyline

Total number of lines in spectrum 25
Number of unidentified lines 2
Number of lines tentatively identified by NID 23 92.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.25E+09Y	1.00	3.357E+01	3.357E+01	0.339E+01	10.10	
CD-109	461.40D	1.02	2.264E+00	2.319E+00	1.021E+00	44.05	
SN-126	2.30E+05Y	1.00	2.264E-01	2.264E-01	0.997E-01	44.05	
CS-135	2.30E+06Y	1.00	4.496E-01	4.496E-01	2.847E-01	63.33	
TL-208	1.41E+10Y	1.00	4.877E-01	4.877E-01	1.020E-01	20.90	
BI-211	7.04E+08Y	1.00	3.040E+00	3.040E+00	0.512E+00	16.83	
PB-212	1.41E+10Y	1.00	1.416E+00	1.416E+00	0.158E+00	11.14	
PB-214	1600.00Y	1.00	1.103E+00	1.103E+00	0.195E+00	17.71	
RA-224	1.41E+10Y	1.00	4.250E+00	4.250E+00	1.191E+00	28.02	
AC-228	1.41E+10Y	1.00	1.655E+00	1.655E+00	0.394E+00	23.82	
RA-228	1.41E+10Y	1.00	1.655E+00	1.655E+00	0.394E+00	23.82	
TH-228	1.41E+10Y	1.00	1.416E+00	1.416E+00	0.158E+00	11.14	
TH-229	7340.00Y	1.00	1.939E-01	1.939E-01	1.289E-01	66.47	K
TH-232	1.41E+10Y	1.00	1.655E+00	1.655E+00	0.394E+00	23.82	
U-235	7.04E+08Y	1.00	1.515E-01	1.515E-01	0.822E-01	54.27	K
NP-237	2.14E+06Y	1.00	6.754E-01	6.754E-01	3.295E-01	48.79	
ANH-511	1.00E+09Y	1.00	8.871E-02	8.871E-02	8.503E-02	95.85	

Total Activity : 5.430E+01 5.435E+01

Grand Total Activity : 5.430E+01 5.435E+01

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G247790003

Page : 4
Acquisition date : 5-MAR-2010 10:26:46

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	209.08	88	194	1.23	418.16	414	9	1.22E-02	61.1	5.09E+00	
0	462.60	86	85	2.19	925.20	919	14	1.19E-02	50.3	2.76E+00	T
0	608.48	264	82	1.67	1216.96	1209	15	3.67E-02	19.9	2.19E+00	T
0	726.68	53	51	1.24	1453.37	1449	10	7.43E-03	57.3	1.88E+00	T
0	836.86	31	46	1.10	1673.71	1667	14	4.28E-03	99.7	1.65E+00	T
0	1762.93	46	12	3.18	3525.87	3519	16	6.32E-03	45.2	8.74E-01	

Flags: "T" = Tentatively associated


```

*****
*                                     GEL Laboratories LLC
*                                     2040 Savage Road
*                                     Charleston, SC 29414
*****
*
*                               DETECTOR DATA
*
* Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G247790003.CNF;1
* Acquisition date   : 5-MAR-2010 10:26:46. Detector SN#      :
* Detector ID        : GAM23 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 02:00:01.51 Half life ratio : 8.00000
*****
*
*                               SAMPLE DATA
*
* Sample date        : 17-FEB-2010 12:00:00 Nuclide Library : SOLID
* Sample ID          : G247790003 Analyst initials: MXR1
* Batch Number       : 957136 Sample Quantity : 1.11690E+02 GRAM
*****
*
*                               QC DATA
*
* CALIB. DATE/TIME   : 2-JUN-2009 11:17:00.62MS 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	3.357E+01	3.389E+00	6.618E-01	4.951E-02	50.728
CD-109	2.319E+00	1.021E+00	1.453E+00	1.419E-01	1.595
SN-126	2.264E-01	9.971E-02	1.496E-01	1.455E-02	1.514
CS-135	4.496E-01	2.847E-01	2.899E-01	2.215E-02	1.551
TL-208	4.877E-01	1.020E-01	7.164E-02	4.639E-03	6.808
BI-211	3.040E+00	5.116E-01	3.592E-01	2.341E-02	8.462
PB-212	1.416E+00	1.578E-01	1.041E-01	7.551E-03	13.606
PB-214	1.103E+00	1.954E-01	1.421E-01	1.213E-02	7.766
RA-224	4.250E+00	1.191E+00	1.116E+00	6.287E-02	3.808
AC-228	1.655E+00	3.940E-01	2.959E-01	3.515E-02	5.591
RA-228	1.655E+00	3.940E-01	2.959E-01	3.515E-02	5.591
TH-228	1.416E+00	1.578E-01	1.041E-01	7.551E-03	13.606
TH-229	1.939E-01	1.289E-01	9.875E-01	5.230E-02	0.196
TH-232	1.655E+00	3.940E-01	2.959E-01	3.515E-02	5.591
U-235	1.515E-01	8.222E-02	3.817E-01	5.944E-02	0.397
NP-237	6.754E-01	3.295E-01	4.555E-01	1.051E-01	1.483
ANH-511	8.871E-02	8.503E-02	5.978E-02	3.472E-03	1.484

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	4.360E-02		3.604E-01	5.993E-01	4.071E-02	0.073

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NA-22	-1.377E-02		5.782E-02	9.174E-02	6.161E-03	-0.150
NA-24	-1.534E+00		1.271E+00	Half-Life too short		
SC-46	-2.482E-02		4.609E-02	7.240E-02	6.469E-03	-0.343
V-48	-9.113E-02		8.811E-02	1.286E-01	1.070E-02	-0.708
CR-51	2.691E-01		4.292E-01	7.451E-01	4.879E-02	0.361
MN-54	-9.683E-03		5.217E-02	7.339E-02	5.811E-03	-0.132
CO-56	-2.898E-02		5.256E-02	8.352E-02	6.795E-03	-0.347
CO-57	-8.036E-03		2.929E-02	4.758E-02	2.805E-03	-0.169
CO-58	-2.288E-02		4.756E-02	7.605E-02	5.713E-03	-0.301
FE-59	2.267E-02		1.201E-01	2.012E-01	1.549E-02	0.113
CO-60	9.539E-03		4.260E-02	7.156E-02	5.253E-03	0.133
ZN-65	-1.006E-01		1.394E-01	2.154E-01	1.422E-02	-0.467
SE-75	1.044E-02		5.980E-02	8.456E-02	4.924E-03	0.123
SR-85	3.818E-02		5.626E-02	8.498E-02	4.932E-03	0.449
Y-88	2.039E-02		3.946E-02	7.216E-02	4.249E-03	0.283
Y-91	-1.686E+01		3.161E+01	4.912E+01	2.930E+00	-0.343
NB-94	4.580E-03		4.454E-02	7.248E-02	4.142E-03	0.063
NB-95	5.848E-02		5.944E-02	1.027E-01	6.900E-03	0.570
NB-95M	4.810E-01		1.917E-01	3.042E-01	2.251E-02	1.581
ZR-95	2.420E-02		9.496E-02	1.561E-01	1.204E-02	0.155
MO-99	-2.399E+00		1.953E+01	3.104E+01	4.536E+00	-0.077
TC-99M	-2.422E+11		2.177E+11	Half-Life too short		
RU-103	2.135E-02		4.642E-02	7.896E-02	9.823E-03	0.270
RH-106	-4.404E-01		4.069E-01	5.927E-01	6.765E-02	-0.743
RU-106	-4.404E-01		4.045E-01	5.927E-01	3.184E-02	-0.743
AG-108M	-8.167E-03		3.394E-02	5.515E-02	3.447E-03	-0.148
AG-110M	-4.033E-03		4.058E-02	6.508E-02	3.617E-03	-0.062
SN-113	-2.992E-02		5.277E-02	8.434E-02	5.196E-03	-0.355
CD-115	-1.825E+00		1.712E+01	2.779E+01	1.604E+00	-0.066
SN-117M	3.171E-02		6.629E-02	1.104E-01	5.737E-03	0.287
TE-123M	3.329E-02		3.290E-02	5.602E-02	2.956E-03	0.594
SB-124	-4.031E-02		6.212E-02	8.122E-02	5.684E-03	-0.496
SB-125	-2.022E-02		1.009E-01	1.645E-01	9.994E-03	-0.123
TE-125M	6.827E-01		1.148E+01	1.899E+01	1.727E+00	0.036
I-126	-4.223E-03		2.675E-01	4.323E-01	2.237E-02	-0.010
SB-126	2.766E-02		2.115E-01	2.989E-01	1.791E-02	0.093
SB-127	-7.800E-01		1.921E+00	2.983E+00	2.835E-01	-0.261
I-131	3.550E-02		1.391E-01	2.359E-01	1.542E-02	0.151
TE-132	2.243E-01		1.026E+00	1.669E+00	2.429E-01	0.134
BA-133	4.452E-02		5.370E-02	8.341E-02	9.442E-03	0.534
I-133	-4.443E-03		6.830E-03	Half-Life too short		
CS-134	1.697E-02		5.790E-02	9.935E-02	7.256E-03	0.171
I-135	-7.307E+08		3.579E+10	Half-Life too short		
CS-136	2.867E-02		1.382E-01	2.329E-01	1.855E-02	0.123
BA-137M	-2.065E-03		4.260E-02	6.865E-02	3.507E-03	-0.030
CS-137	-2.182E-03		4.500E-02	7.252E-02	3.725E-03	-0.030
CE-139	2.974E-02		3.253E-02	5.526E-02	2.818E-03	0.538
BA-140	-3.638E-01		3.571E-01	4.990E-01	1.662E-01	-0.729

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
LA-140	-1.553E-02		9.459E-02	1.531E-01	1.050E-02	-0.101
CE-141	-1.901E-02		7.227E-02	1.168E-01	6.587E-03	-0.163
CE-143	1.258E-03		2.054E-04	Half-Life too short		
CE-144	1.309E-01		2.315E-01	3.877E-01	5.355E-02	0.338
PM-144	1.980E-02		4.465E-02	7.474E-02	4.205E-03	0.265
PR-144	1.493E+00		3.344E+00	5.598E+00	3.147E-01	0.267
PM-146	-1.062E-02		5.077E-02	8.254E-02	7.013E-03	-0.129
ND-147	-3.148E-02		7.340E-01	1.176E+00	1.588E-01	-0.027
PM-149	-7.243E+01		1.381E+02	2.256E+02	3.202E+01	-0.321
EU-152	-2.211E-02		1.297E-01	1.748E-01	1.158E-02	-0.126
GD-153	-6.038E-02		1.126E-01	1.585E-01	1.295E-02	-0.381
EU-154	-4.071E-02		1.636E-01	2.592E-01	2.593E-02	-0.157
EU-155	-6.776E-03		1.234E-01	2.033E-01	1.498E-02	-0.033
TB-160	-5.188E-02		1.765E-01	2.860E-01	2.501E-02	-0.181
HO-166M	2.566E-02		7.191E-02	1.199E-01	7.016E-03	0.214
TA-182	-2.656E-02		2.980E-01	4.835E-01	2.967E-02	-0.055
IR-192	-3.706E-02		4.138E-02	6.574E-02	3.900E-03	-0.564
HG-203	-1.326E-03		4.606E-02	7.757E-02	4.764E-03	-0.017
BI-207	1.384E-02		6.363E-02	1.073E-01	7.880E-03	0.129
PB-210	2.468E+00		5.930E+00	9.888E+00	7.638E-01	0.250
PB-211	-7.447E-01		8.579E-01	1.203E+00	5.772E-01	-0.619
BI-212	1.436E+00	+	8.380E-01	1.303E+00	1.416E-01	1.102
BI-214	8.893E-01	+	1.894E-01	2.844E-01	2.156E-02	3.127
RN-219	6.992E-04		4.564E-01	7.578E-01	1.018E-01	0.001
RA-223	-1.264E+00		7.671E-01	1.111E+00	1.795E-01	-1.138
RA-226	8.893E-01	+	1.894E-01	2.844E-01	2.156E-02	3.127
AC-227	-2.764E-02		2.815E-01	4.477E-01	4.557E-02	-0.062
TH-227	-2.764E-02		2.815E-01	4.477E-01	5.363E-02	-0.062
PA-231	1.111E+00		1.698E+00	2.947E+00	3.870E-01	0.377
TH-231	-1.264E+00		7.671E-01	1.111E+00	1.795E-01	-1.138
PA-233	3.853E-02		7.611E-02	1.209E-01	7.563E-03	0.319
PA-234	2.691E-01		4.060E-01	7.081E-01	1.331E-01	0.380
PA-234M	-1.866E+00		6.024E+00	9.664E+00	9.221E-01	-0.193
TH-234	5.738E-01		1.857E+00	3.043E+00	5.599E-01	0.189
U-238	5.738E-01		1.857E+00	3.043E+00	5.599E-01	0.189
NP-239	-2.488E-01		4.777E-01	7.482E-01	4.657E-02	-0.333
AM-241	-3.174E-01		2.236E-01	3.510E-01	3.266E-02	-0.904
CM-247	-2.044E-02		4.248E-02	6.814E-02	3.949E-03	-0.300
CF-249	-2.651E-02		4.757E-02	7.618E-02	4.407E-03	-0.348
CF-251	1.108E-02		1.529E-01	2.491E-01	1.289E-02	0.044

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]G247790003      *
* Acquisition date   : 5-MAR-2010 10:26:46 Detector SN#      :      *
* Detector ID        : GAM23                      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 02:00:01.51           Half life ratio : 8.000  *
*****
*                               SAMPLE DATA                            *
*
* Sample date        : 17-FEB-2010 12:00:00 Nuclide Library : SOLID      *
* Sample ID          : G247790003           Analyst initials: MXR1      *
* Batch Number       : 957136              Sample Quantity : 1.1169E+02 GRAM *
* Recovery           : 1.00000             Carrier Weight  : 0.00000      *
*****
*                               QC DATA                               *
*
* CALIB. DATE/TIME   : 2-JUN-2009 11:17:00 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	3.357E+01	3.321E+00	3.294E-01	1.695E+00
CD-109	2.319E+00	1.001E+00	7.399E-01	5.107E-01
SN-126	2.264E-01	9.772E-02	7.614E-02	4.985E-02
CS-135	4.496E-01	2.790E-01	1.463E-01	1.424E-01
TL-208	4.877E-01	9.992E-02	3.593E-02	5.098E-02
BI-211	3.040E+00	5.013E-01	1.809E-01	2.558E-01
PB-212	1.416E+00	1.546E-01	5.258E-02	7.889E-02
PB-214	1.103E+00	1.915E-01	7.153E-02	9.769E-02
RA-224	4.250E+00	1.167E+00	5.636E-01	5.953E-01
AC-228	1.655E+00	3.862E-01	1.479E-01	1.970E-01
RA-228	1.655E+00	3.862E-01	1.479E-01	1.970E-01
TH-228	1.416E+00	1.546E-01	5.258E-02	7.889E-02
TH-229	3.674E-01	5.800E-01	4.996E-01	2.959E-01
TH-232	1.655E+00	3.862E-01	1.479E-01	1.970E-01
U-235	2.063E-02	2.295E-01	1.936E-01	1.171E-01
NP-237	6.754E-01	3.229E-01	2.319E-01	1.648E-01
ANH-511	8.871E-02	8.333E-02	3.001E-02	4.252E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	4.360E-02	3.532E-01	3.010E-01	1.802E-01 NOT IDENT.
NA-22	-1.377E-02	5.666E-02	4.572E-02	2.891E-02 NOT IDENT.
NA-24	-1.534E+06	2.490E+06	0.000E+00	1.271E+06 SHORT HLIF
SC-46	-2.482E-02	4.517E-02	3.619E-02	2.305E-02 NOT IDENT.
V-48	-9.113E-02	8.635E-02	6.423E-02	4.405E-02 NOT IDENT.
CR-51	2.691E-01	4.206E-01	3.755E-01	2.146E-01 NOT IDENT.
MN-54	-9.683E-03	5.113E-02	3.670E-02	2.608E-02 NOT IDENT.
CO-56	-2.898E-02	5.151E-02	4.176E-02	2.628E-02 NOT IDENT.
CO-57	-8.036E-03	2.871E-02	2.416E-02	1.465E-02 NOT IDENT.
CO-58	-2.288E-02	4.661E-02	3.804E-02	2.378E-02 NOT IDENT.

FE-59	2.267E-02	1.177E-01	1.004E-01	6.004E-02	NOT IDENT.
CO-60	9.539E-03	4.175E-02	3.565E-02	2.130E-02	NOT IDENT.
ZN-65	-1.006E-01	1.366E-01	1.075E-01	6.970E-02	NOT IDENT.
SE-75	1.044E-02	5.861E-02	4.268E-02	2.990E-02	NOT IDENT.
SR-85	3.818E-02	5.513E-02	4.266E-02	2.813E-02	NOT IDENT.
Y-88	2.039E-02	3.867E-02	3.585E-02	1.973E-02	NOT IDENT.
Y-91	-1.686E+01	3.098E+01	2.449E+01	1.580E+01	NOT IDENT.
NB-94	4.580E-03	4.365E-02	3.629E-02	2.227E-02	NOT IDENT.
NB-95	5.848E-02	5.825E-02	5.138E-02	2.972E-02	NOT IDENT.
NB-95M	4.810E-01	1.879E-01	1.537E-01	9.587E-02	NOT IDENT.
ZR-95	2.420E-02	9.306E-02	7.812E-02	4.748E-02	NOT IDENT.
MO-99	-2.399E+00	1.914E+01	1.554E+01	9.763E+00	NOT IDENT.
TC-99M	-2.422E+17	4.266E+17	0.000E+00	0.000E+00	SHORT HLIF
RU-103	2.135E-02	4.549E-02	3.965E-02	2.321E-02	NOT IDENT.
RH-106	-4.404E-01	3.988E-01	2.971E-01	2.035E-01	NOT IDENT.
RU-106	-4.404E-01	3.964E-01	2.971E-01	2.022E-01	NOT IDENT.
AG-108M	-8.167E-03	3.326E-02	2.772E-02	1.697E-02	NOT IDENT.
AG-110M	-4.033E-03	3.977E-02	3.261E-02	2.029E-02	NOT IDENT.
SN-113	-2.992E-02	5.171E-02	4.243E-02	2.638E-02	NOT IDENT.
CD-115	-1.825E+00	1.677E+01	1.395E+01	8.558E+00	NOT IDENT.
SN-117M	3.171E-02	6.496E-02	5.594E-02	3.314E-02	NOT IDENT.
TE-123M	3.329E-02	3.224E-02	2.839E-02	1.645E-02	NOT IDENT.
SB-124	-4.031E-02	6.088E-02	4.038E-02	3.106E-02	NOT IDENT.
SB-125	-2.022E-02	9.888E-02	8.270E-02	5.045E-02	FAIL ABUN
TE-125M	6.827E-01	1.125E+01	9.649E+00	5.738E+00	NOT IDENT.
I-126	-4.223E-03	2.622E-01	2.165E-01	1.338E-01	NOT IDENT.
SB-126	2.766E-02	2.073E-01	1.496E-01	1.058E-01	NOT IDENT.
SB-127	-7.800E-01	1.882E+00	1.494E+00	9.603E-01	NOT IDENT.
I-131	3.550E-02	1.363E-01	1.187E-01	6.956E-02	NOT IDENT.
TE-132	2.243E-01	1.006E+00	8.432E-01	5.130E-01	NOT IDENT.
BA-133	4.452E-02	5.263E-02	4.200E-02	2.685E-02	NOT IDENT.
I-133	-4.443E+03	1.339E+04	0.000E+00	6.830E+03	SHORT HLIF
CS-134	1.697E-02	5.674E-02	4.970E-02	2.895E-02	NOT IDENT.
I-135	-7.307E+14	7.015E+16	0.000E+00	0.000E+00	SHORT HLIF
CS-136	2.867E-02	1.355E-01	1.163E-01	6.911E-02	NOT IDENT.
BA-137M	-2.065E-03	4.175E-02	3.439E-02	2.130E-02	NOT IDENT.
CS-137	-2.182E-03	4.410E-02	3.633E-02	2.250E-02	NOT IDENT.
CE-139	2.974E-02	3.188E-02	2.799E-02	1.627E-02	NOT IDENT.
BA-140	-3.638E-01	3.499E-01	2.504E-01	1.785E-01	NOT IDENT.
LA-140	-1.553E-02	9.269E-02	7.614E-02	4.729E-02	NOT IDENT.
CE-141	-1.901E-02	7.082E-02	5.921E-02	3.613E-02	NOT IDENT.
CE-143	1.258E+03	4.027E+02	0.000E+00	2.054E+02	SHORT HLIF
CE-144	1.309E-01	2.268E-01	1.967E-01	1.157E-01	NOT IDENT.
PM-144	1.980E-02	4.375E-02	3.743E-02	2.232E-02	NOT IDENT.
PR-144	1.493E+00	3.277E+00	2.804E+00	1.672E+00	NOT IDENT.
PM-146	-1.062E-02	4.976E-02	4.148E-02	2.539E-02	NOT IDENT.
ND-147	-3.148E-02	7.194E-01	5.902E-01	3.70E-01	FAIL ABUN
PM-149	-7.243E+01	1.354E+02	1.138E+02	6.906E+01	NOT IDENT.
EU-152	-2.211E-02	1.271E-01	8.803E-02	6.483E-02	NOT IDENT.
GD-153	-6.038E-02	1.103E-01	8.060E-02	5.629E-02	NOT IDENT.
EU-154	-4.071E-02	1.603E-01	1.292E-01	8.180E-02	NOT IDENT.
EU-155	-6.776E-03	1.209E-01	1.034E-01	6.168E-02	FAIL ABUN
TB-160	-5.188E-02	1.730E-01	1.430E-01	8.826E-02	FAIL ABUN
HO-166M	2.566E-02	7.048E-02	6.002E-02	3.596E-02	FAIL ABUN
TA-182	-2.656E-02	2.921E-01	2.410E-01	1.490E-01	NOT IDENT.
IR-192	-3.706E-02	4.056E-02	3.313E-02	2.069E-02	FAIL ABUN
HG-203	-1.326E-03	4.514E-02	3.913E-02	2.303E-02	NOT IDENT.
BI-207	1.384E-02	6.235E-02	5.354E-02	3.181E-02	FAIL ABUN
PB-210	2.468E+00	5.812E+00	5.059E+00	2.965E+00	NOT IDENT.
PB-211	-7.447E-01	8.407E-01	6.051E-01	4.289E-01	NOT IDENT.
BI-212	1.436E+00	8.212E-01	6.525E-01	4.190E-01	FAIL ABUN
BI-214	8.893E-01	1.856E-01	1.426E-01	9.469E-02	FAIL ABUN
RN-219	6.992E-04	4.473E-01	3.812E-01	2.282E-01	NOT IDENT.
RA-223	-1.264E+00	7.518E-01	5.599E-01	3.836E-01	FAIL ABUN
RA-226	8.893E-01	1.856E-01	1.426E-01	9.469E-02	FAIL ABUN
AC-227	-2.764E-02	2.759E-01	2.260E-01	1.407E-01	FAIL ABUN
TH-227	-2.764E-02	2.759E-01	2.260E-01	1.407E-01	FAIL ABUN
PA-231	1.111E+00	1.664E+00	1.486E+00	8.491E-01	NOT IDENT.
TH-231	-1.264E+00	7.518E-01	5.599E-01	3.836E-01	FAIL ABUN
PA-233	3.853E-02	7.458E-02	6.095E-02	3.805E-02	FAIL ABUN
PA-234	2.691E-01	3.979E-01	3.537E-01	2.030E-01	NOT IDENT.
PA-234M	-1.866E+00	5.903E+00	4.825E+00	3.012E+00	NOT IDENT.
TH-234	5.738E-01	1.820E+00	1.553E+00	9.287E-01	FAIL ABUN
U-238	5.738E-01	1.820E+00	1.553E+00	9.287E-01	FAIL ABUN
NP-239	-2.488E-01	4.681E-01	3.801E-01	2.388E-01	NOT IDENT.
AM-241	-3.174E-01	2.191E-01	1.792E-01	1.118E-01	NOT IDENT.
CM-247	-2.044E-02	4.163E-02	3.427E-02	2.124E-02	NOT IDENT.
CF-249	-2.651E-02	4.662E-02	3.833E-02	2.378E-02	NOT IDENT.

CF-251	1.108E-02	1.498E-01	1.261E-01	7.643E-02 NOT IDENT.
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 * GEL Laboratories LLC *
 * 2040 SAVAGE ROAD *
 * CHARLESTON ,SC 29417 *
 * GAMMA SPECTROSCOPY BACKGROUND REPORT *

ENERGY	MDA COUNTS
46.54	218.6460
49.72	237.1585
57.36	0.0000
59.54	351.8971
63.29	317.7173
63.29	317.7173
64.28	320.9857
67.75	351.6337
69.67	370.6221
70.83	402.7982
72.81	382.8247
72.87	382.8572
72.87	382.8572
74.82	351.3994
74.82	351.3994
74.82	351.3994
74.97	351.4718
77.11	339.6121
77.11	339.6121
77.11	339.6121
79.69	308.0771
79.80	308.1216
80.12	270.1967
80.19	270.2216
80.57	308.4355
81.00	278.1298
81.07	278.1555
81.07	278.1555
83.79	345.6749
83.79	345.6749
85.43	333.3708
86.48	349.1620
86.55	349.1939
86.79	349.2980
86.94	506.7708
87.57	345.7988
88.03	315.2426
88.47	330.8013
89.96	508.6782
91.11	382.0479
92.59	332.4771
92.59	332.4771
93.35	222.8871
94.67	249.5942
94.87	277.5658
94.87	277.5658
95.86	308.9419
97.43	297.0712
98.44	256.9353
99.53	244.5925
100.11	241.8308
103.18	315.0931
103.37	307.3306
105.31	280.5363
106.12	283.7347
109.28	278.8135
111.00	296.1159
111.76	302.2857
116.30	256.1025
117.23	269.2694
121.12	274.3464
121.78	263.5498
122.06	263.6254
123.07	243.9041
131.20	317.4321
133.52	251.4867
136.00	249.0480

136.47	275.4946
140.51	264.3442
140.51	0.0000
143.76	249.8450
144.24	231.5912
144.24	231.5912
145.44	262.4862
152.43	244.6149
153.25	254.0479
154.21	248.0863
154.21	248.0863
156.02	264.9783
158.56	238.6981
159.00	222.2486
162.66	241.6127
163.33	253.1627
165.86	194.4374
176.60	232.8788
177.52	238.3005
181.07	256.0324
184.41	223.7749
185.72	214.7063
193.51	196.6543
197.04	205.7060
205.31	212.7632
210.85	206.7290
215.65	219.3240
222.11	199.7002
227.38	208.0523
228.16	190.7253
228.18	190.7280
235.69	220.8369
235.96	198.0880
235.96	198.0880
238.63	181.0994
238.63	181.0994
240.99	181.3827
242.00	154.8830
244.70	125.1834
252.40	115.1758
252.80	116.3129
256.23	146.5417
256.23	146.5417
260.90	140.2927
264.66	148.2105
268.22	158.8259
269.46	158.9461
269.46	158.9461
271.23	181.0825
273.65	192.1219
276.40	167.4863
277.37	176.5819
277.60	175.4810
278.00	181.8247
279.20	173.8484
279.54	187.3980
280.46	192.9082
283.69	147.2173
284.31	156.3061
285.41	147.3666
285.90	164.5931
287.50	167.4620
293.27	0.0000
295.22	127.2988
295.96	127.3535
298.57	127.5432
299.98	127.6458
299.98	127.6458
300.09	127.6543
300.09	127.6543
300.13	127.6577
301.36	127.7466
302.85	127.8542
304.50	127.9739
304.50	127.9739
304.85	127.9995
308.46	146.5820
311.90	110.1475

316.51	154.5981
319.41	106.9163
320.08	118.0203
323.87	163.5370
323.87	163.5370
328.76	128.7650
333.37	123.8200
334.37	111.4966
334.37	111.4966
338.28	139.6600
338.28	139.6600
338.32	139.6619
338.32	139.6619
338.32	139.6619
340.48	116.5176
340.55	116.5222
344.28	113.9461
351.06	104.6602
351.93	123.7726
356.01	98.6605
364.49	100.0272
366.42	108.6239
383.85	101.9347
388.16	121.2376
388.63	120.3106
391.69	117.6172
400.66	101.7921
401.81	98.0032
402.40	107.6414
404.85	105.8387
410.95	96.4893
414.70	90.8560
423.72	97.0520
427.09	79.7028
427.87	88.4817
433.94	92.6215
453.88	97.3649
463.37	81.9595
468.07	82.4524
473.00	77.3354
476.78	79.4424
477.60	73.5095
487.02	66.8143
492.35	82.9504
497.08	70.0923
511.00	94.6477
514.00	100.8087
527.90	72.9773
529.87	0.0000
531.02	72.0504
537.26	90.5319
546.56	0.0000
563.25	57.5230
569.33	60.7400
569.50	60.7444
569.70	65.8969
583.19	78.6366
600.60	69.9050
602.73	81.6170
604.72	81.6724
609.32	53.9561
609.32	53.9561
610.33	60.9395
614.28	74.9718
618.01	62.8491
621.93	89.1566
621.93	89.1566
633.25	66.3361
635.95	57.9662
636.99	69.5836
645.85	77.1936
657.76	61.5754
661.66	65.9068
661.66	65.9068
664.57	0.0000
666.33	61.7496
666.50	64.9465
677.62	60.9076

685.70	70.7083
695.00	81.6647
696.49	69.8782
696.51	69.8782
697.00	54.8362
702.65	77.5529
706.68	69.0234
711.68	55.0902
720.70	59.5775
721.93	0.0000
722.78	56.0021
722.91	56.0046
723.31	57.8190
724.19	56.0273
727.33	81.4087
733.00	66.7931
735.93	68.5633
739.50	65.3687
747.24	54.6021
752.31	52.4977
753.82	62.3702
756.73	62.4245
763.94	81.2157
765.81	71.3778
766.42	69.1939
777.92	72.5517
778.90	75.3285
783.70	64.3945
785.37	63.5055
795.86	62.7747
801.95	53.6375
810.29	65.8157
810.76	59.3346
815.77	44.5645
818.51	53.8900
832.01	33.5764
834.85	60.8050
836.80	0.0000
846.77	69.2997
856.80	56.3440
860.56	52.6413
871.09	49.9635
873.19	55.6510
875.33	0.0000
879.36	55.7434
880.51	43.4750
883.24	41.6143
884.68	43.5227
889.28	50.2072
898.04	54.1217
911.20	55.5346
911.20	55.5346
911.20	55.5346
926.50	48.7858
937.49	55.6376
944.13	55.7320
946.00	49.9910
949.00	43.2944
962.29	52.9542
964.08	62.9110
966.15	72.8827
968.97	44.7545
968.97	44.7545
968.97	44.7545
983.53	53.3730
996.26	36.0176
1001.03	52.6278
1004.73	44.8713
1037.84	46.2121
1038.76	0.0000
1048.07	43.3662
1050.41	53.2529
1050.41	53.2529
1063.66	41.5471
1085.87	54.6867
1099.45	48.8704
1112.07	71.0144
1115.54	89.0869

1120.29	58.1204
1120.29	58.1204
1120.55	58.1227
1121.30	67.1527
1131.51	0.0000
1173.23	66.9104
1177.93	57.8442
1189.05	56.9661
1204.77	73.4854
1221.41	79.8884
1231.02	98.5234
1235.36	72.9327
1238.28	77.0874
1260.41	0.0000
1271.85	47.6078
1274.44	46.5967
1274.54	46.5985
1291.59	33.2500
1298.22	0.0000
1312.11	33.3867
1332.49	20.9513
1365.19	29.5187
1368.63	0.0000
1384.29	25.3945
1408.01	27.6345
1457.56	0.0000
1460.82	20.2398
1489.16	8.6309
1505.03	8.6553
1596.21	15.0759
1620.50	5.6769
1678.03	0.0000
1690.97	7.6582
1764.49	13.5610
1764.49	13.5610
1770.23	5.0900
1771.35	13.5757
1791.20	0.0000
1836.06	7.8359

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G247790003

Total Uranium Activity	1.7166E+00	ug/g
Total Uranium Counting Unc.	5.4164E+00	ug/g
Total Uranium Tpu	2.7635E-06	ug/g
Total Uranium Mda	4.6222E+00	ug/g


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*****
*
*               GEL Laboratories LLC               *
*               2040 SAVAGE ROAD                   *
*               CHARLESTON ,SC 29417               *
*               GROSS GAMMA REPORT                 *
*
*****
*
*  BATCH ID      : 957136                      SAMPLE ID   : G247790003
*  ANALYST       : MXR1                        DETECTOR    : GAM23
*  SAMPLE DATE   : 17-FEB-2010 12:00:00.00    COUNT TIME   : 0 02:00:00.00
*  ANALYSIS DATE : 5-MAR-2010 10:26:46.38    SAMPLE ALQT  : 111.690 GRAM
*
*****

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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 8.266E+00
GROSS GAMMA ERROR   (pCi/GRAM ) : 1.291E+00
GROSS GAMMA MDA     (pCi/GRAM ) : 2.724E+00
GROSS GAMMA DLC     (pCi/GRAM ) : 1.319E+00

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VAX/VMS Nuclide Identification Report Generated 5-MAR-2010 12:35:11.46

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G247809001.CNF;1
Sample date        : 19-FEB-2010 12:00:00 Acquisition date : 5-MAR-2010 10:31:36.
Sample ID          : G247809001      Sample quantity   : 1.32540E+02 GRAM
Detector name      : GAM15           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           : 957136          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	2	74.82*	286	495	1.60	148.56	142	20	3.97E-02	17.3	1.62E+00
2	2	77.26*	556	510	1.61	153.44	142	20	7.72E-02	9.1	
3	0	87.25	160	409	1.17	173.43	171	7	2.22E-02	22.3	
4	0	186.10*	194	315	1.47	371.10	367	10	2.69E-02	19.5	
5	0	209.88	204	365	2.20	418.66	413	14	2.83E-02	21.3	
6	2	238.74*	1201	219	1.32	476.38	469	19	1.67E-01	3.7	1.70E+00
7	2	241.77*	301	251	1.85	482.44	469	19	4.18E-02	14.9	
8	0	270.36	89	242	1.82	539.63	536	12	1.24E-02	36.4	
9	0	277.09	70	274	1.22	553.08	547	13	9.71E-03	50.2	
10	1	295.40*	394	155	1.74	589.70	583	21	5.48E-02	8.1	1.33E+00
11	1	300.12	82	178	1.74	599.14	583	21	1.13E-02	32.2	
12	0	328.39	69	172	1.65	655.68	651	10	9.62E-03	37.4	
13	0	338.32	189	202	0.99	675.54	671	10	2.63E-02	15.8	
14	0	352.06*	557	203	1.48	703.01	697	13	7.73E-02	6.9	
15	0	409.55	44	65	1.64	818.01	815	6	6.10E-03	32.9	
16	0	510.70*	106	199	2.27	1020.30	1014	19	1.47E-02	36.1	
17	0	583.34*	358	144	1.71	1165.59	1160	14	4.97E-02	9.2	
18	0	609.42*	401	140	1.58	1217.76	1210	14	5.58E-02	8.2	
19	0	661.47	78	78	1.06	1321.86	1314	13	1.08E-02	25.9	
20	0	726.85*	88	83	1.95	1452.64	1444	15	1.23E-02	25.3	
21	0	768.46	41	54	1.77	1535.87	1532	7	5.68E-03	33.7	
22	0	860.37*	65	47	1.51	1719.70	1714	13	9.05E-03	25.8	
23	0	911.21*	274	44	1.67	1821.40	1816	11	3.80E-02	7.8	
24	3	964.53	50	46	2.66	1928.07	1922	22	6.99E-03	32.7	3.38E+00
25	3	968.86*	150	58	2.04	1936.73	1922	22	2.08E-02	13.3	
26	0	1120.31*	92	83	1.77	2239.69	2233	14	1.28E-02	23.9	
27	0	1460.59*	1271	47	2.00	2920.44	2910	21	1.77E-01	3.1	
28	0	1730.02	19	15	1.80	3459.50	3454	14	2.59E-03	48.9	
29	0	1764.50	79	7	1.58	3528.48	3521	14	1.10E-02	13.3	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 5-MAR-2010 12:35:16

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Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G247809001.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 19-FEB-2010 12:00:00 Acquisition date : 5-MAR-2010 10:31:36
Sample ID        : G247809001 Sample quantity : 132.54 GRAM
Sample type      : SOLID Sample geometry :
Detector name    : GAMMA15 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

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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	+	1460.82	*	3.495E+01	4.069E+00	6.595E-01	6.481E-02	52.988
CD-109	+	88.03	*	2.810E+00	1.300E+00	1.894E+00	2.351E-01	1.484
SN-126		64.28		-9.010E-02	8.950E-01	1.461E+00	2.473E-01	-0.062
	+	86.94		1.144E+00	7.032E-01	8.102E-01	3.426E-01	1.412
	+	87.57	*	2.752E-01	1.273E-01	1.926E-01	2.384E-02	1.429
BA-137M	+	661.66	*	1.241E-01	6.518E-02	8.098E-02	6.658E-03	1.532
CS-137	+	661.66	*	1.311E-01	6.886E-02	8.555E-02	7.048E-03	1.532
TL-208	+	277.37		8.095E-01	8.203E-01	7.829E-01	1.107E-01	1.034
	+	583.19	*	5.444E-01	1.120E-01	7.147E-02	6.537E-03	7.616
	+	860.56		9.366E-01	4.919E-01	5.196E-01	5.080E-02	1.803
BI-211		72.87		7.436E+00	5.574E+00	8.428E+00	9.653E-01	0.882
	+	351.06	*	3.887E+00	6.642E-01	4.336E-01	4.318E-02	8.966
PB-212	+	74.82		2.437E+00	9.189E-01	8.246E-01	1.242E-01	2.956
	+	77.11		2.631E+00	5.665E-01	4.599E-01	5.331E-02	5.720
	+	238.63	*	1.896E+00	2.672E-01	1.168E-01	1.395E-02	16.235
	+	300.09		1.997E+00	1.309E+00	1.608E+00	1.958E-01	1.242
BI-214	+	609.32	*	1.181E+00	2.256E-01	1.445E-01	1.440E-02	8.169
	+	1120.29		1.423E+00	6.983E-01	5.816E-01	6.299E-02	2.446
	+	1764.49		1.707E+00	4.790E-01	3.626E-01	3.180E-02	4.708
PB-214	+	74.82		4.320E+00	1.610E+00	1.462E+00	2.042E-01	2.956
	+	77.11		4.638E+00	1.069E+00	8.108E-01	1.154E-01	5.720
	+	242.00		2.883E+00	9.286E-01	7.099E-01	8.844E-02	4.061
	+	295.22		1.710E+00	3.495E-01	2.769E-01	3.452E-02	6.174
	+	351.93	*	1.411E+00	2.533E-01	1.536E-01	1.746E-02	9.186
RA-224	+	240.99	*	5.098E+00	1.615E+00	1.251E+00	1.380E-01	4.074
RA-226	+	609.32	*	1.181E+00	2.256E-01	1.445E-01	1.440E-02	8.169
	+	1120.29		1.423E+00	6.983E-01	5.816E-01	6.299E-02	2.446
	+	1764.49		1.707E+00	4.790E-01	3.626E-01	3.180E-02	4.708
AC-228	+	338.32		1.475E+00	7.745E-01	4.943E-01	2.075E-01	2.985
	+	911.20	*	2.011E+00	3.978E-01	2.998E-01	3.631E-02	6.710
	+	968.97		1.905E+00	6.886E-01	4.733E-01	1.163E-01	4.025
RA-228	+	338.32		1.475E+00	7.745E-01	4.943E-01	2.075E-01	2.985
	+	911.20	*	2.011E+00	3.978E-01	2.998E-01	3.631E-02	6.710
	+	968.97		1.905E+00	6.886E-01	4.733E-01	1.163E-01	4.025

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-228	+	74.82		2.437E+00	8.883E-01	8.246E-01	9.535E-02	2.956
	+	77.11		2.631E+00	5.665E-01	4.599E-01	5.331E-02	5.720
	+	238.63	*	1.896E+00	2.672E-01	1.168E-01	1.395E-02	16.235
	+	300.09		1.997E+00	1.779E+00	1.608E+00	9.894E-01	1.242
TH-232	+	338.32		1.475E+00	4.871E-01	4.943E-01	4.873E-02	2.985
	+	911.20	*	2.011E+00	3.978E-01	2.998E-01	3.631E-02	6.710
	+	968.97		1.905E+00	6.886E-01	4.733E-01	1.163E-01	4.025
NP-237	+	86.48	*	8.212E-01	4.172E-01	5.235E-01	1.272E-01	1.569
		95.86		-4.572E+00	1.785E+00	1.993E+00	4.990E-01	-2.294
ANH-511	+	511.00	*	1.237E-01	9.001E-02	5.256E-02	4.542E-03	2.353

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.60	*	9.059E-02	3.797E-01	6.291E-01	5.847E-02	0.144
NA-22		1274.54	*	1.033E-02	5.591E-02	9.199E-02	8.357E-03	0.112
NA-24		1368.63	*	-6.588E-02	5.591E-02	Half-Life too short		
SC-46		889.28	*	-1.965E-02	4.897E-02	7.808E-02	7.256E-03	-0.252
	+	1120.55		2.383E-01	1.159E-01	1.585E-01	1.348E-02	1.503
V-48		944.13		-2.597E-01	1.047E+00	1.686E+00	1.559E-01	-0.154
		983.53	*	-6.341E-03	8.699E-02	1.419E-01	1.297E-02	-0.045
		1312.11		-4.466E-02	9.595E-02	1.463E-01	1.379E-02	-0.305
CR-51		320.08	*	-8.742E-02	4.723E-01	7.767E-01	8.243E-02	-0.113
MN-54		834.85	*	1.562E-04	4.616E-02	7.653E-02	6.945E-03	0.002
CO-56		846.77	*	5.700E-03	4.496E-02	7.528E-02	6.869E-03	0.076
		1037.84		-9.418E-02	3.758E-01	6.005E-01	5.631E-02	-0.157
		1238.28		1.768E-01	1.246E-01	2.195E-01	1.972E-02	0.805
		1771.35		-1.337E+00	4.315E-01	3.391E-01	2.962E-02	-3.943
CO-57		122.06	*	9.354E-03	3.263E-02	5.360E-02	5.399E-03	0.175
		136.47		1.429E-01	2.690E-01	4.439E-01	4.716E-02	0.322
CO-58		810.76	*	-1.811E-02	4.417E-02	7.067E-02	6.353E-03	-0.256
FE-59		1099.45	*	7.989E-02	1.137E-01	1.966E-01	1.834E-02	0.406
		1291.59		3.559E-02	1.488E-01	2.465E-01	2.546E-02	0.144
CO-60		1173.23		-1.756E-02	5.406E-02	8.506E-02	6.924E-03	-0.206
		1332.49	*	4.831E-03	4.617E-02	7.538E-02	7.246E-03	0.064
ZN-65		1115.54	*	-2.355E-02	1.344E-01	1.834E-01	1.567E-02	-0.128
SE-75		121.12		5.815E-02	1.675E-01	2.758E-01	3.377E-02	0.211
		136.00		1.224E-02	5.157E-02	8.426E-02	8.531E-03	0.145
		264.66	*	5.459E-02	6.136E-02	9.779E-02	1.072E-02	0.558
		279.54		1.944E-01	1.583E-01	2.457E-01	2.721E-02	0.791
		400.66		1.689E-01	3.126E-01	5.293E-01	5.799E-02	0.319
SR-85		514.00	*	1.406E-01	4.994E-02	9.169E-02	7.921E-03	1.533
Y-88		898.04		-3.678E-02	5.097E-02	7.865E-02	7.365E-03	-0.468
		1836.06	*	-1.949E-02	3.734E-02	5.436E-02	4.578E-03	-0.358
Y-91		1204.77	*	6.673E+00	3.028E+01	4.993E+01	4.209E+00	0.134
NB-94		702.65	*	1.012E-02	4.211E-02	7.156E-02	6.041E-03	0.141
		871.09		1.116E-02	4.238E-02	7.158E-02	6.602E-03	0.156
NB-95		765.81	*	9.507E-02	5.986E-02	9.814E-02	8.599E-03	0.969

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-95M	235.69	*		5.120E-01	1.941E-01	3.064E-01	3.692E-02	1.671
ZR-95	724.19			1.090E-01	1.261E-01	1.965E-01	1.825E-02	0.555
	756.73	*		5.760E-02	8.079E-02	1.418E-01	1.363E-02	0.406
MO-99	140.51			-2.737E+01	2.319E+01	3.396E+01	8.263E+00	-0.806
	181.07			9.957E+00	1.951E+01	2.797E+01	5.560E+00	0.356
	366.42			4.920E+00	9.011E+01	1.492E+02	1.367E+01	0.033
	739.50	*		-3.223E+00	1.053E+01	1.711E+01	2.698E+00	-0.188
	777.92			-1.164E+01	3.121E+01	5.033E+01	4.439E+00	-0.231
TC-99M	140.51	*		-2.444E+09	3.121E+01	Half-Life too short		
RU-103	497.08	*		2.677E-02	4.599E-02	7.772E-02	1.086E-02	0.344
	610.33		+	1.194E+01	2.748E+00	3.194E+00	5.193E-01	3.736
RH-106	621.93	*		-4.607E-02	3.759E-01	5.984E-01	7.849E-02	-0.077
	1050.41			-1.562E-01	3.027E+00	4.927E+00	4.378E-01	-0.032
RU-106	621.93	*		-4.607E-02	3.758E-01	5.984E-01	5.029E-02	-0.077
	1050.41			-1.562E-01	3.027E+00	4.927E+00	4.378E-01	-0.032
AG-108M	433.94	*		-8.606E-03	3.523E-02	5.675E-02	5.015E-03	-0.152
	614.28			-5.394E-03	4.892E-02	6.701E-02	5.845E-03	-0.081
	722.91			6.622E-03	4.951E-02	7.234E-02	6.386E-03	0.092
AG-110M	657.76	*		1.488E-03	4.859E-02	7.063E-02	6.010E-03	0.021
	677.62			3.521E-02	3.815E-01	6.435E-01	5.512E-02	0.055
	706.68			-1.023E-01	2.631E-01	4.244E-01	3.699E-02	-0.241
	763.94			1.790E-02	2.244E-01	3.247E-01	2.918E-02	0.055
	884.68			1.117E-02	5.795E-02	9.736E-02	9.281E-03	0.115
	937.49			-1.178E-01	1.347E-01	2.034E-01	1.942E-02	-0.579
	1384.29			-1.704E-01	2.026E-01	3.048E-01	3.000E-02	-0.559
	1505.03			-2.226E-01	3.492E-01	5.306E-01	5.071E-02	-0.420
SN-113	391.69	*		-6.518E-03	5.348E-02	8.735E-02	7.586E-03	-0.075
CD-115	260.90			-1.443E+02	1.246E+02	1.959E+02	2.147E+01	-0.737
	492.35			-3.970E+01	3.269E+01	4.817E+01	4.162E+00	-0.824
	527.90	*		-2.542E+00	9.412E+00	1.495E+01	1.290E+00	-0.170
SN-117M	156.02			-1.064E+00	2.763E+00	4.382E+00	4.567E-01	-0.243
	158.56	*		-9.668E-03	6.685E-02	1.071E-01	1.122E-02	-0.090
TE-123M	159.00	*		1.737E-02	3.653E-02	5.992E-02	6.314E-03	0.290
SB-124	602.73			-1.854E-02	5.984E-02	8.055E-02	6.826E-03	-0.230
	645.85			1.545E-01	5.795E-01	9.506E-01	8.378E-02	0.163
	722.78			4.815E-02	4.895E-01	7.125E-01	6.232E-02	0.068
	1690.97	*		-9.086E-03	1.013E-01	1.647E-01	1.551E-02	-0.055
SB-125	427.87	*		5.566E-02	1.103E-01	1.863E-01	1.622E-02	0.299
	463.37			7.074E-01	3.754E-01	6.672E-01	6.181E-02	1.060
	600.60			6.059E-02	2.450E-01	3.789E-01	3.459E-02	0.160
	635.95			-2.755E-02	3.394E-01	5.417E-01	4.912E-02	-0.051
TE-125M	109.28	*		-1.653E+01	1.277E+01	1.956E+01	2.322E+00	-0.845
I-126	388.63			-9.348E-02	1.933E-01	3.088E-01	2.627E-02	-0.303
	666.33	*		1.593E-01	2.850E-01	4.352E-01	3.589E-02	0.366
	753.82			-1.582E+00	2.021E+00	3.153E+00	2.744E-01	-0.502
SB-126	414.70			7.040E-02	9.113E-02	1.440E-01	1.224E-02	0.489
	666.50			5.664E-02	9.767E-02	1.494E-01	1.232E-02	0.379
	695.00			3.904E-02	9.190E-02	1.580E-01	1.328E-02	0.247
	697.00			7.247E-02	3.090E-01	5.252E-01	4.419E-02	0.138

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity Key	(pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SB-127		720.70	*	-5.375E-02	1.844E-01	2.570E-01	2.194E-02	-0.209
		856.80		4.943E-01	5.421E-01	8.603E-01	7.885E-02	0.575
		252.40		-2.641E+00	4.581E+00	7.253E+00	3.046E+00	-0.364
		473.00		-3.396E-01	1.666E+00	2.680E+00	3.343E-01	-0.127
I-131		685.70	*	-2.013E-01	1.309E+00	2.169E+00	2.349E-01	-0.093
		783.70		3.450E+00	3.329E+00	5.925E+00	7.234E-01	0.582
		80.19		-1.648E+00	6.602E+00	9.407E+00	1.109E+00	-0.175
		284.31		-9.377E-01	1.837E+00	2.806E+00	3.118E-01	-0.334
TE-132		364.49	*	-8.311E-02	1.262E-01	1.997E-01	1.926E-02	-0.416
		636.99		-1.993E-01	1.716E+00	2.729E+00	2.413E-01	-0.073
		49.72		8.084E-02	4.363E+01	7.253E+01	1.087E+01	0.001
		111.76		2.392E-01	3.358E+01	5.473E+01	6.562E+00	0.004
BA-133		116.30		2.283E+01	2.905E+01	4.848E+01	5.775E+00	0.471
		228.16	*	3.250E-01	7.203E-01	1.229E+00	2.096E-01	0.264
		81.00		-2.629E-01	1.583E-01	2.005E-01	3.508E-02	-1.311
	+	276.40		7.481E-01	7.596E-01	8.068E-01	1.256E-01	0.927
I-133		302.85		7.718E-02	2.075E-01	3.070E-01	4.418E-02	0.251
		356.01	*	4.479E-02	5.905E-02	8.926E-02	1.206E-02	0.502
		383.85		2.149E-01	3.721E-01	6.313E-01	7.861E-02	0.340
		529.87	*	-2.229E-03	3.721E-01	Half-Life	too short	
CS-134		875.33		-6.639E-03	3.721E-01	Half-Life	too short	
		1298.22		-6.299E-02	3.721E-01	Half-Life	too short	
		563.25		1.941E-01	4.517E-01	7.523E-01	6.517E-02	0.258
		569.33		1.149E-01	2.581E-01	4.131E-01	3.588E-02	0.278
CS-135		604.72		-7.871E-03	5.040E-02	6.887E-02	5.847E-03	-0.114
		795.86	*	9.552E-02	6.039E-02	1.100E-01	9.859E-03	0.868
		801.95		-1.458E-01	5.242E-01	8.517E-01	7.646E-02	-0.171
		1365.19		3.203E-01	1.247E+00	2.157E+00	2.155E-01	0.148
I-135		268.22	*	4.362E-02	2.351E-01	3.457E-01	4.148E-02	0.126
CS-136		546.56		1.763E+08	2.351E-01	Half-Life	too short	
		836.80		1.297E+09	2.351E-01	Half-Life	too short	
		1038.76		3.835E+07	2.351E-01	Half-Life	too short	
		1131.51		-1.167E+08	2.351E-01	Half-Life	too short	
CE-139		1260.41	*	-4.684E+08	2.351E-01	Half-Life	too short	
		1457.56		5.896E+10	2.351E-01	Half-Life	too short	
		1678.03		1.334E+06	2.351E-01	Half-Life	too short	
		1791.20		-6.160E+08	2.351E-01	Half-Life	too short	
BA-140		153.25		9.300E-01	1.034E+00	1.717E+00	2.020E-01	0.542
		176.60		-2.021E-01	6.155E-01	9.736E-01	1.117E-01	-0.208
		273.65		6.161E-01	9.048E-01	9.644E-01	1.104E-01	0.639
		340.55		6.848E-01	2.272E-01	3.695E-01	3.731E-02	1.853
BA-140		818.51		-2.782E-02	7.786E-02	1.249E-01	1.126E-02	-0.223
		1048.07	*	4.403E-02	1.224E-01	2.068E-01	1.912E-02	0.213
		1235.36		9.607E-02	7.736E-01	1.264E+00	1.495E-01	0.076
		165.86	*	2.637E-03	3.812E-02	6.150E-02	6.565E-03	0.043
BA-140		162.66		-3.947E-01	1.026E+00	1.596E+00	1.766E-01	-0.247
		304.85		8.025E-01	1.793E+00	2.650E+00	7.918E-01	0.303
		423.72		8.141E-01	2.232E+00	3.717E+00	1.222E+00	0.219
		537.26	*	1.003E-02	3.070E-01	4.988E-01	1.692E-01	0.020

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
LA-140	+	328.76		6.271E-01	4.741E-01	6.462E-01	6.776E-02	0.971
		487.02		1.362E-01	1.641E-01	2.811E-01	2.577E-02	0.485
		815.77		1.366E-01	3.339E-01	5.739E-01	5.719E-02	0.238
		1596.21	*	6.204E-03	8.997E-02	1.505E-01	1.411E-02	0.041
CE-141		145.44	*	5.974E-02	8.064E-02	1.336E-01	1.381E-02	0.447
CE-143		57.36		-7.642E-04	8.064E-02	Half-Life	too short	
		293.27	*	5.112E-04	8.064E-02	Half-Life	too short	
		664.57		1.210E-03	8.064E-02	Half-Life	too short	
		721.93		-2.693E-04	8.064E-02	Half-Life	too short	
CE-144		80.12		-4.301E-01	3.958E+00	5.679E+00	6.675E-01	-0.076
		133.52	*	-2.903E-01	2.698E-01	4.126E-01	6.657E-02	-0.704
PM-144		476.78		-4.695E-02	8.040E-02	1.256E-01	1.178E-02	-0.374
		618.01		1.528E-03	3.881E-02	6.264E-02	5.428E-03	0.024
PR-144		696.49	*	2.815E-02	4.316E-02	7.519E-02	6.325E-03	0.374
		696.51	*	1.456E+00	3.267E+00	5.622E+00	4.728E-01	0.259
PM-146		1489.16		-6.149E+00	1.345E+01	2.068E+01	1.981E+00	-0.297
		453.88	*	-4.183E-02	5.148E-02	7.916E-02	8.371E-03	-0.528
		633.25		9.216E-01	1.771E+00	2.908E+00	1.109E+00	0.317
		735.93		-3.731E-02	1.701E-01	2.786E-01	7.806E-02	-0.134
ND-147		747.24		1.425E-01	1.136E-01	2.042E-01	2.984E-02	0.698
		91.11		2.242E-01	4.279E-01	6.258E-01	7.749E-02	0.358
		319.41		-1.330E+00	4.104E+00	6.701E+00	6.864E-01	-0.198
		531.02	*	1.261E-01	6.059E-01	9.979E-01	1.492E-01	0.126
PM-149		285.90	*	1.024E+01	8.143E+01	1.366E+02	2.296E+01	0.075
EU-152		121.78		2.799E-02	9.382E-02	1.542E-01	1.725E-02	0.182
		244.70		2.942E-01	4.686E-01	7.082E-01	7.806E-02	0.415
		344.28	*	2.171E-03	1.468E-01	2.110E-01	2.148E-02	0.010
		778.90		-1.926E-01	2.961E-01	4.648E-01	4.102E-02	-0.414
	+	964.08		6.885E-01	4.549E-01	6.577E-01	6.049E-02	1.047
		1085.87		-3.115E-02	4.713E-01	7.644E-01	6.656E-02	-0.041
		1112.07		7.286E-03	4.175E-01	6.305E-01	5.395E-02	0.012
		1408.01		1.003E-01	2.105E-01	3.706E-01	3.571E-02	0.271
GD-153		69.67		9.479E-01	3.057E+00	4.491E+00	5.126E-01	0.211
		97.43	*	-2.281E-01	1.207E-01	1.798E-01	1.984E-02	-1.268
EU-154		103.18		-1.672E-01	1.448E-01	2.242E-01	2.370E-02	-0.746
		123.07		3.306E-02	6.614E-02	1.093E-01	1.364E-02	0.302
		723.31		8.452E-02	2.216E-01	3.322E-01	3.133E-02	0.254
		873.19		2.144E-01	3.454E-01	5.988E-01	7.393E-02	0.358
		996.26		-2.614E-01	4.648E-01	7.212E-01	1.277E-01	-0.362
		1004.73		-2.136E-01	2.847E-01	4.349E-01	5.208E-02	-0.491
		1274.44	*	2.019E-02	1.592E-01	2.605E-01	3.055E-02	0.078
		86.55	*	3.335E-01	1.544E-01	2.485E-01	3.066E-02	1.342
EU-155	+	105.31	*	2.436E-01	1.374E-01	2.350E-01	2.476E-02	1.036
TB-160	+	86.79		8.754E-01	4.051E-01	6.493E-01	7.983E-02	1.348
		197.04		-1.368E-01	7.013E-01	1.111E+00	1.212E-01	-0.123
		215.65		8.546E-01	1.019E+00	1.563E+00	1.719E-01	0.547
		298.57		4.018E-01	1.558E-01	2.768E-01	2.929E-02	1.451
		879.36	*	-6.698E-02	1.618E-01	2.571E-01	2.379E-02	-0.261
		962.29		1.184E+00	6.833E-01	1.147E+00	1.056E-01	1.032

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
HO-166M		966.15		1.301E+00	3.309E-01	6.248E-01	5.743E-02	2.082
		1177.93		1.115E-01	4.360E-01	7.245E-01	5.928E-02	0.154
		1271.85		-6.134E-01	9.266E-01	1.394E+00	1.262E-01	-0.440
		80.57		-4.964E-01	4.340E-01	5.864E-01	6.910E-02	-0.846
		184.41		1.418E-01	5.582E-02	8.489E-02	9.179E-03	1.670
		280.46		1.890E-02	1.236E-01	1.812E-01	1.956E-02	0.104
	+	410.95		3.924E-01	2.600E-01	5.313E-01	4.510E-02	0.739
		711.68	*	-1.462E-02	7.282E-02	1.200E-01	1.018E-02	-0.122
TA-182		752.31		-1.213E-01	3.195E-01	5.163E-01	4.490E-02	-0.235
		810.29		-1.855E-02	6.707E-02	1.086E-01	9.743E-03	-0.171
		67.75		-1.335E-01	1.949E-01	3.000E-01	3.424E-02	-0.445
		100.11		1.427E-01	2.226E-01	3.719E-01	4.014E-02	0.384
		152.43		3.540E-01	4.457E-01	7.392E-01	7.645E-02	0.479
		222.11		5.997E-02	4.378E-01	7.409E-01	8.165E-02	0.081
	+	1121.30		6.619E-01	3.219E-01	4.404E-01	3.743E-02	1.503
		1189.05		7.942E-02	3.837E-01	6.342E-01	5.254E-02	0.125
IR-192		1221.41	*	1.910E-01	2.442E-01	4.211E-01	3.614E-02	0.454
		1231.02		-3.112E-01	6.519E-01	1.015E+00	8.799E-02	-0.307
	+	295.96		1.250E+00	2.426E-01	3.560E-01	3.797E-02	3.512
		308.46		2.452E-02	1.223E-01	2.054E-01	2.150E-02	0.119
		316.51	*	3.970E-02	4.481E-02	7.731E-02	7.971E-03	0.514
		468.07		-1.563E-01	9.439E-02	1.367E-01	1.264E-02	-1.144
HG-203		70.83		1.185E+00	2.292E+00	3.384E+00	5.997E-01	0.350
		72.87		1.819E+00	1.384E+00	2.062E+00	3.561E-01	0.882
		279.20	*	6.626E-02	5.650E-02	8.732E-02	9.596E-03	0.759
BI-207		72.81		3.649E-01	3.185E-01	4.796E-01	5.493E-02	0.761
	+	74.97		7.024E-01	2.559E-01	3.418E-01	3.934E-02	2.055
		569.70		1.621E-02	3.845E-02	6.397E-02	5.479E-03	0.253
		1063.66	*	-1.547E-02	6.513E-02	1.015E-01	8.956E-03	-0.152
PB-210		1770.23		2.343E-01	4.247E-01	7.138E-01	6.240E-02	0.328
		46.54	*	-7.398E+00	1.325E+01	2.122E+01	2.612E+00	-0.349
PB-211		404.85	*	4.368E-01	1.019E+00	1.472E+00	7.121E-01	0.297
		427.09		1.304E+00	1.963E+00	3.195E+00	1.478E+00	0.408
BI-212		832.01		-2.575E-01	1.238E+00	2.007E+00	1.042E+00	-0.128
	+	727.33	*	2.048E+00	1.067E+00	1.310E+00	1.627E-01	1.564
		785.37		5.399E+00	3.778E+00	6.887E+00	6.098E-01	0.784
		1620.50		1.814E+00	2.952E+00	5.284E+00	4.919E-01	0.343
RN-219	+	271.23		6.198E-01	4.571E-01	5.427E-01	6.631E-02	1.142
		401.81	*	-1.797E-01	5.072E-01	8.150E-01	1.204E-01	-0.221
RA-223		81.07		-5.931E-01	3.501E-01	4.542E-01	5.367E-02	-1.306
		83.79		2.127E-01	2.528E-01	2.799E-01	3.365E-02	0.760
		94.87		4.535E-01	6.640E-01	1.106E+00	1.252E-01	0.410
		144.24		8.749E-01	9.069E-01	1.497E+00	1.653E-01	0.585
		154.21		1.774E-01	5.037E-01	8.230E-01	9.115E-02	0.216
AC-227	+	269.46		4.815E-01	3.542E-01	4.167E-01	4.598E-02	1.156
		323.87	*	5.543E-02	9.428E-01	1.364E+00	2.475E-01	0.041
	+	338.28		5.855E+00	1.995E+00	2.817E+00	3.658E-01	2.078
		79.69		3.392E+00	2.086E+00	3.078E+00	5.843E-01	1.102
		235.96		1.103E+00	2.768E-01	4.242E-01	5.272E-02	2.600

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-227		256.23	*	2.995E-01	3.264E-01	5.637E-01	7.801E-02	0.531
	+	299.98		2.197E+00	1.448E+00	2.058E+00	2.901E-01	1.067
		304.50		-2.197E-02	2.342E+00	3.382E+00	5.945E-01	-0.006
		334.37		1.429E-01	3.018E+00	3.431E+00	5.612E-01	0.042
		79.80		1.396E+00	2.690E+00	3.941E+00	9.139E-01	0.354
		235.96		1.103E+00	2.742E-01	4.242E-01	5.067E-02	2.600
TH-229		256.23	*	2.995E-01	3.270E-01	5.637E-01	8.575E-02	0.531
	+	299.98		2.197E+00	1.448E+00	2.058E+00	2.901E-01	1.067
		304.50		-2.197E-02	2.342E+00	3.382E+00	5.945E-01	-0.006
		334.37		1.429E-01	3.018E+00	3.431E+00	5.612E-01	0.042
		85.43		7.852E-01	3.279E-01	5.008E-01	6.093E-02	1.568
	+	88.47		4.243E-01	1.963E-01	3.219E-01	3.967E-02	1.318
PA-231		193.51	*	-2.886E-01	6.856E-01	1.075E+00	1.170E-01	-0.268
	+	210.85		4.582E+00	2.016E+00	2.141E+00	2.351E-01	2.140
		283.69	*	-5.420E-01	2.057E+00	3.070E+00	4.896E-01	-0.177
TH-231	+	301.36		1.411E+00	9.287E-01	1.318E+00	1.790E-01	1.071
		81.07		-5.931E-01	3.501E-01	4.542E-01	5.367E-02	-1.306
		83.79		2.127E-01	2.528E-01	2.799E-01	3.365E-02	0.760
PA-233		94.87		4.535E-01	6.640E-01	1.106E+00	1.252E-01	0.410
		144.24		8.749E-01	9.069E-01	1.497E+00	1.653E-01	0.585
		154.21		1.774E-01	5.037E-01	8.230E-01	9.115E-02	0.216
	+	269.46		4.815E-01	3.542E-01	4.167E-01	4.598E-02	1.156
		323.87	*	5.543E-02	9.428E-01	1.364E+00	2.475E-01	0.041
	+	338.28		5.855E+00	1.995E+00	2.817E+00	3.658E-01	2.078
	+	300.13		9.941E-01	6.596E-01	9.301E-01	1.491E-01	1.069
		311.90	*	-2.722E-02	8.497E-02	1.389E-01	1.470E-02	-0.196
		340.48		3.220E+00	1.264E+00	1.692E+00	4.149E-01	1.903
		94.67		4.340E-01	2.469E-01	4.125E-01	5.952E-02	1.052
PA-234		98.44		6.237E-02	1.221E-01	1.952E-01	1.097E-01	0.320
		111.00		5.149E-02	2.363E-01	3.882E-01	5.153E-02	0.133
		131.20		1.023E-01	1.400E-01	2.326E-01	2.335E-02	0.440
		569.50		1.791E-01	3.387E-01	5.675E-01	4.861E-02	0.316
		733.00		1.780E-01	4.908E-01	7.331E-01	1.627E-01	0.243
		880.51		-2.603E-01	3.351E-01	5.131E-01	4.751E-02	-0.507
		883.24		8.924E-02	3.419E-01	5.691E-01	3.830E-01	0.157
		926.50		2.435E-02	2.080E-01	3.462E-01	8.832E-02	0.070
		946.00	*	-4.772E-02	4.063E-01	6.623E-01	1.262E-01	-0.072
		949.00		8.606E-01	5.708E-01	1.044E+00	9.638E-02	0.825
PA-234M		766.42		2.741E+01	2.163E+01	2.739E+01	1.390E+01	1.001
		1001.03	*	3.182E+00	6.308E+00	1.061E+01	1.100E+00	0.300
TH-234		63.29	*	2.318E-01	2.456E+00	4.035E+00	8.002E-01	0.057
		92.59		2.051E+00	1.160E+00	1.725E+00	4.041E-01	1.189
U-235		89.96		-4.085E+00	1.873E+00	1.989E+00	5.173E-01	-2.054
		93.35		9.020E-01	7.751E-01	1.260E+00	3.065E-01	0.716
		143.76	*	1.968E-01	2.723E-01	4.444E-01	7.908E-02	0.443
U-238		163.33		-1.677E-01	5.859E-01	9.145E-01	1.736E-01	-0.183
	+	185.72		1.978E-01	8.012E-02	1.106E-01	1.197E-02	1.789
		205.31		4.174E-01	7.062E-01	1.012E+00	1.960E-01	0.412
		63.29	*	2.318E-01	2.456E+00	4.035E+00	8.002E-01	0.057

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NP-239		92.59		2.051E+00	1.082E+00	1.725E+00	2.006E-01	1.189
		99.53		2.575E-01	2.093E-01	3.550E-01	3.848E-02	0.725
		103.37		-8.724E-02	1.297E-01	2.058E-01	2.174E-02	-0.424
		106.12		1.736E-01	1.093E-01	1.864E-01	1.940E-02	0.931
		117.23	*	2.669E-02	5.273E-01	8.596E-01	8.676E-02	0.031
		228.18		1.219E-01	2.748E-01	4.698E-01	5.182E-02	0.259
	+	277.60		3.700E-01	3.734E-01	3.967E-01	4.295E-02	0.933
AM-241		59.54	*	-8.072E-02	3.117E-01	5.111E-01	6.000E-02	-0.158
CM-247	+	278.00		1.571E+00	1.586E+00	1.689E+00	1.828E-01	0.930
		287.50		1.572E+00	1.622E+00	2.679E+00	2.872E-01	0.587
CF-249		402.40	*	-1.927E-02	4.668E-02	7.479E-02	6.325E-03	-0.258
		252.80		-4.557E-02	1.220E+00	2.040E+00	2.244E-01	-0.022
		333.37		-6.395E-02	3.882E-01	3.641E-01	3.629E-02	-0.176
CF-251		388.16	*	-2.292E-02	4.997E-02	7.998E-02	6.818E-03	-0.287
		177.52	*	-1.321E-01	1.737E-01	2.689E-01	2.894E-02	-0.491
		227.38		2.539E-01	4.458E-01	7.653E-01	8.441E-02	0.332
		285.41		-1.478E+00	2.804E+00	4.552E+00	4.892E-01	-0.325

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]G247809001      *
* Acquisition date   : 5-MAR-2010 10:31:36 Detector SN# :                   *
* Detector ID        : GAM15 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        : 19-FEB-2010 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G247809001 Analyst initials: MXR1                 *
* Batch Number       : 957136 Sample Quantity : 1.3254E+02 GRAM          *
* Recovery           : 1.00000 Carrier Weight : 0.00000                  *
*****
*                                     QC DATA                               *
*                                     *                                     *
* Standard Weight    : 0.00000                                             *
* CALIB. DATE/TIME   : 3-FEB-2010 11:04:32 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	3.495E+01	3.988E+00	6.605E-01	0.000E+00
CD-109	2.810E+00	1.274E+00	1.990E+00	0.000E+00
SN-126	2.752E-01	1.248E-01	2.024E-01	0.000E+00
BA-137M	1.241E-01	6.388E-02	8.224E-02	0.000E+00
CS-137	1.311E-01	6.749E-02	8.688E-02	0.000E+00
TL-208	5.444E-01	1.098E-01	7.274E-02	0.000E+00
BI-211	3.887E+00	6.509E-01	4.451E-01	0.000E+00
PB-212	1.896E+00	2.619E-01	1.207E-01	0.000E+00
BI-214	1.181E+00	2.211E-01	1.470E-01	0.000E+00
PB-214	1.411E+00	2.482E-01	1.577E-01	0.000E+00
RA-224	5.098E+00	1.583E+00	1.293E+00	0.000E+00
RA-226	1.181E+00	2.211E-01	1.470E-01	0.000E+00
AC-228	2.011E+00	3.898E-01	3.027E-01	0.000E+00
RA-228	2.011E+00	3.898E-01	3.027E-01	0.000E+00
TH-228	1.896E+00	2.619E-01	1.207E-01	0.000E+00
TH-232	2.011E+00	3.898E-01	3.027E-01	0.000E+00
NP-237	8.212E-01	4.088E-01	5.501E-01	0.000E+00
ANH-511	1.237E-01	8.821E-02	5.362E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error) Ided	MDA (pCi/GRAM)	
BE-7	9.059E-02	3.721E-01	6.425E-01	0.000E+00 NOT IDENT.
NA-22	1.033E-02	5.479E-02	9.235E-02	0.000E+00 NOT IDENT.
NA-24	0.000E+00	2.119E+05	0.000E+00	0.000E+00 SHORT HLIF
SC-46	-1.965E-02	4.799E-02	7.888E-02	0.000E+00 FAIL ABUN
V-48	-6.341E-03	8.525E-02	1.431E-01	0.000E+00 NOT IDENT.
CR-51	-8.742E-02	4.629E-01	7.987E-01	0.000E+00 NOT IDENT.
MN-54	1.562E-04	4.524E-02	7.741E-02	0.000E+00 NOT IDENT.
CO-56	5.700E-03	4.406E-02	7.612E-02	0.000E+00 NOT IDENT.
CO-57	9.354E-03	3.198E-02	5.601E-02	0.000E+00 NOT IDENT.

CO-58	-1.811E-02	4.329E-02	7.151E-02	0.000E+00	NOT IDENT.
FE-59	7.989E-02	1.114E-01	1.978E-01	0.000E+00	NOT IDENT.
CO-60	4.831E-03	4.525E-02	7.561E-02	0.000E+00	NOT IDENT.
ZN-65	-2.355E-02	1.317E-01	1.846E-01	0.000E+00	NOT IDENT.
SE-75	5.459E-02	6.013E-02	1.009E-01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	4.894E-02	9.352E-02	0.000E+00	NOT IDENT.
Y-88	-1.949E-02	3.659E-02	5.422E-02	0.000E+00	NOT IDENT.
Y-91	6.673E+00	2.967E+01	5.018E+01	0.000E+00	NOT IDENT.
NB-94	1.012E-02	4.127E-02	7.259E-02	0.000E+00	NOT IDENT.
NB-95	9.507E-02	5.866E-02	9.941E-02	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	1.902E-01	3.167E-01	0.000E+00	NOT IDENT.
ZR-95	5.760E-02	7.917E-02	1.437E-01	0.000E+00	NOT IDENT.
MO-99	-3.223E+00	1.032E+01	1.734E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	2.053E+15	0.000E+00	0.000E+00	SHORT HLIF
RU-103	2.677E-02	4.507E-02	7.932E-02	0.000E+00	FAIL ABUN
RH-106	-4.607E-02	3.683E-01	6.084E-01	0.000E+00	NOT IDENT.
RU-106	-4.607E-02	3.683E-01	6.084E-01	0.000E+00	NOT IDENT.
AG-108M	-8.606E-03	3.453E-02	5.805E-02	0.000E+00	NOT IDENT.
AG-110M	1.488E-03	4.762E-02	7.173E-02	0.000E+00	NOT IDENT.
SN-113	-6.518E-03	5.241E-02	8.951E-02	0.000E+00	NOT IDENT.
CD-115	-2.542E+00	9.224E+00	1.524E+01	0.000E+00	NOT IDENT.
SN-117M	-9.668E-03	6.551E-02	1.114E-01	0.000E+00	NOT IDENT.
TE-123M	1.737E-02	3.580E-02	6.234E-02	0.000E+00	NOT IDENT.
SB-124	-9.086E-03	9.929E-02	1.645E-01	0.000E+00	NOT IDENT.
SB-125	5.566E-02	1.081E-01	1.906E-01	0.000E+00	NOT IDENT.
TE-125M	-1.653E+01	1.252E+01	2.047E+01	0.000E+00	NOT IDENT.
I-126	1.593E-01	2.793E-01	4.419E-01	0.000E+00	NOT IDENT.
SB-126	-5.375E-02	1.807E-01	2.606E-01	0.000E+00	NOT IDENT.
SB-127	-2.013E-01	1.283E+00	2.202E+00	0.000E+00	NOT IDENT.
I-131	-8.311E-02	1.237E-01	2.049E-01	0.000E+00	NOT IDENT.
TE-132	3.250E-01	7.059E-01	1.271E+00	0.000E+00	NOT IDENT.
BA-133	4.479E-02	5.786E-02	9.162E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	2.815E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	9.552E-02	5.919E-02	1.113E-01	0.000E+00	NOT IDENT.
CS-135	4.362E-02	2.304E-01	3.565E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	4.444E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	4.403E-02	1.199E-01	2.083E-01	0.000E+00	NOT IDENT.
CE-139	2.637E-03	3.736E-02	6.395E-02	0.000E+00	NOT IDENT.
BA-140	1.003E-02	3.009E-01	5.084E-01	0.000E+00	NOT IDENT.
LA-140	6.204E-03	8.817E-02	1.505E-01	0.000E+00	FAIL ABUN
CE-141	5.974E-02	7.902E-02	1.392E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.615E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-2.903E-01	2.644E-01	4.305E-01	0.000E+00	NOT IDENT.
PM-144	2.815E-02	4.229E-02	7.629E-02	0.000E+00	NOT IDENT.
PR-144	1.456E+00	3.202E+00	5.704E+00	0.000E+00	NOT IDENT.
PM-146	-4.183E-02	5.045E-02	8.092E-02	0.000E+00	NOT IDENT.
ND-147	1.261E-01	5.938E-01	1.017E+00	0.000E+00	NOT IDENT.
PM-149	1.024E+01	7.981E+01	1.407E+02	0.000E+00	NOT IDENT.
EU-152	2.171E-03	1.439E-01	2.167E-01	0.000E+00	FAIL ABUN
GD-153	-2.281E-01	1.183E-01	1.886E-01	0.000E+00	NOT IDENT.
EU-154	2.019E-02	1.560E-01	2.615E-01	0.000E+00	NOT IDENT.
EU-155	2.436E-01	1.347E-01	2.462E-01	0.000E+00	FAIL ABUN
TB-160	-6.698E-02	1.585E-01	2.598E-01	0.000E+00	FAIL ABUN
HO-166M	-1.462E-02	7.137E-02	1.217E-01	0.000E+00	FAIL ABUN
TA-182	1.910E-01	2.393E-01	4.230E-01	0.000E+00	FAIL ABUN
IR-192	3.970E-02	4.391E-02	7.952E-02	0.000E+00	FAIL ABUN
HG-203	6.626E-02	5.537E-02	9.000E-02	0.000E+00	NOT IDENT.
BI-207	-1.547E-02	6.383E-02	1.022E-01	0.000E+00	FAIL ABUN
PB-210	-7.398E+00	1.299E+01	2.252E+01	0.000E+00	NOT IDENT.
PB-211	4.368E-01	9.987E-01	1.508E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	1.045E+00	1.328E+00	0.000E+00	FAIL ABUN
RN-219	-1.797E-01	4.971E-01	8.348E-01	0.000E+00	FAIL ABUN
RA-223	5.543E-02	9.240E-01	1.402E+00	0.000E+00	FAIL ABUN
AC-227	2.995E-01	3.199E-01	5.818E-01	0.000E+00	FAIL ABUN
TH-227	2.995E-01	3.204E-01	5.818E-01	0.000E+00	FAIL ABUN
TH-229	-2.886E-01	6.719E-01	1.115E+00	0.000E+00	FAIL ABUN
PA-231	-5.420E-01	2.016E+00	3.164E+00	0.000E+00	FAIL ABUN
TH-231	5.543E-02	9.240E-01	1.402E+00	0.000E+00	FAIL ABUN
PA-233	-2.722E-02	8.327E-02	1.429E-01	0.000E+00	FAIL ABUN
PA-234	-4.772E-02	3.982E-01	6.684E-01	0.000E+00	NOT IDENT.
PA-234M	3.182E+00	6.182E+00	1.070E+01	0.000E+00	NOT IDENT.
TH-234	2.318E-01	2.407E+00	4.262E+00	0.000E+00	NOT IDENT.
U-235	1.968E-01	2.669E-01	4.632E-01	0.000E+00	FAIL ABUN
U-238	2.318E-01	2.407E+00	4.262E+00	0.000E+00	NOT IDENT.
NP-239	2.669E-02	5.168E-01	8.989E-01	0.000E+00	FAIL ABUN
AM-241	-8.072E-02	3.055E-01	5.404E-01	0.000E+00	NOT IDENT.
CM-247	-1.927E-02	4.575E-02	7.661E-02	0.000E+00	FAIL ABUN
CF-249	-2.292E-02	4.897E-02	8.197E-02	0.000E+00	NOT IDENT.

CF-251	-1.321E-01	1.703E-01	2.793E-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]G247809001.CNF;1
Sample date        : 19-FEB-2010 12:00:00 Acquisition date : 5-MAR-2010 10:31:36.
Sample ID          : G247809001 Sample quantity : 1.32540E+02 GRAM
Detector name      : GAM15 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           : 957136 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	1460.82	1271	10.66*	9.662E-01	3.495E+01	3.495E+01	11.64
CD-109	88.03	160	3.70*	4.440E+00	2.752E+00	2.810E+00	46.27
SN-126	64.28	-----	9.60	1.941E+00	-----	Line Not Found	-----
	86.94	160	8.90	4.440E+00	1.144E+00	1.144E+00	61.46
	87.57	160	37.00*	4.440E+00	2.752E-01	2.752E-01	46.27
BA-137M	661.66	78	89.90*	1.982E+00	1.240E-01	1.241E-01	52.53
CS-137	661.66	78	85.10*	1.982E+00	1.310E-01	1.311E-01	52.54
TL-208	277.37	70	6.60	3.708E+00	8.095E-01	8.095E-01	101.33
	583.19	358	85.00*	2.190E+00	5.444E-01	5.444E-01	20.57
	860.56	65	12.50	1.576E+00	9.366E-01	9.366E-01	52.52
BI-211	72.87	-----	1.23	3.001E+00	-----	Line Not Found	-----
	351.06	557	12.92*	3.140E+00	3.887E+00	3.887E+00	17.09
PB-212	74.82	286	10.28	3.228E+00	2.437E+00	2.437E+00	37.70
	77.11	556	17.10	3.501E+00	2.631E+00	2.631E+00	21.54
	238.63	1201	43.60*	4.114E+00	1.896E+00	1.896E+00	14.09
	300.09	82	3.30	3.507E+00	1.997E+00	1.997E+00	65.53
BI-214	609.32	401	45.49*	2.117E+00	1.181E+00	1.181E+00	19.11
	1120.29	92	14.92	1.226E+00	1.423E+00	1.423E+00	49.09
	1764.49	79	15.30	8.554E-01	1.707E+00	1.707E+00	28.05
PB-214	74.82	286	5.80	3.228E+00	4.320E+00	4.320E+00	37.28
	77.11	556	9.70	3.501E+00	4.638E+00	4.638E+00	23.06
	242.00	301	7.25	4.078E+00	2.883E+00	2.883E+00	32.21
	295.22	394	18.42	3.546E+00	1.710E+00	1.710E+00	20.44
	351.93	557	35.60*	3.140E+00	1.411E+00	1.411E+00	17.95
RA-224	240.99	301	4.10*	4.078E+00	5.098E+00	5.098E+00	31.68
RA-226	609.32	401	45.49*	2.117E+00	1.181E+00	1.181E+00	19.11
	1120.29	92	14.92	1.226E+00	1.423E+00	1.423E+00	49.09
	1764.49	79	15.30	8.554E-01	1.707E+00	1.707E+00	28.05
AC-228	338.32	189	11.27	3.228E+00	1.475E+00	1.475E+00	52.49
	911.20	274	25.80*	1.494E+00	2.011E+00	2.011E+00	19.78
	968.97	150	15.80	1.410E+00	1.905E+00	1.905E+00	36.14
RA-228	338.32	189	11.27	3.228E+00	1.475E+00	1.475E+00	52.49

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
TH-228	911.20	274	25.80*	1.494E+00	2.011E+00	2.011E+00	19.78
	968.97	150	15.80	1.410E+00	1.905E+00	1.905E+00	36.14
	74.82	286	10.28	3.228E+00	2.437E+00	2.437E+00	36.44
	77.11	556	17.10	3.501E+00	2.631E+00	2.631E+00	21.54
TH-232	238.63	1201	43.60*	4.114E+00	1.896E+00	1.896E+00	14.09
	300.09	82	3.30	3.507E+00	1.997E+00	1.997E+00	89.05
	338.32	189	11.27	3.228E+00	1.475E+00	1.475E+00	33.01
	911.20	274	25.80*	1.494E+00	2.011E+00	2.011E+00	19.78
NP-237	968.97	150	15.80	1.410E+00	1.905E+00	1.905E+00	36.14
	86.48	160	12.40*	4.440E+00	8.212E-01	8.212E-01	50.80
	95.86	-----	2.68	5.004E+00	-----	Line Not Found	-----
ANH-511	511.00	106	100.00*	2.420E+00	1.237E-01	1.237E-01	72.78

Flag: "*" = Keyline

Total number of lines in spectrum 29
Number of unidentified lines 2
Number of lines tentatively identified by NID 27 93.10%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.25E+09Y	1.00	3.495E+01	3.495E+01	0.407E+01	11.64	
CD-109	461.40D	1.02	2.752E+00	2.810E+00	1.300E+00	46.27	
SN-126	2.30E+05Y	1.00	2.752E-01	2.752E-01	1.273E-01	46.27	
BA-137M	30.08Y	1.00	1.240E-01	1.241E-01	0.652E-01	52.53	
CS-137	30.08Y	1.00	1.310E-01	1.311E-01	0.689E-01	52.54	
TL-208	1.41E+10Y	1.00	5.444E-01	5.444E-01	1.120E-01	20.57	
BI-211	7.04E+08Y	1.00	3.887E+00	3.887E+00	0.664E+00	17.09	
PB-212	1.41E+10Y	1.00	1.896E+00	1.896E+00	0.267E+00	14.09	
BI-214	1600.00Y	1.00	1.181E+00	1.181E+00	0.226E+00	19.11	
PB-214	1600.00Y	1.00	1.411E+00	1.411E+00	0.253E+00	17.95	
RA-224	1.41E+10Y	1.00	5.098E+00	5.098E+00	1.615E+00	31.68	
RA-226	1600.00Y	1.00	1.181E+00	1.181E+00	0.226E+00	19.11	
AC-228	1.41E+10Y	1.00	2.011E+00	2.011E+00	0.398E+00	19.78	
RA-228	1.41E+10Y	1.00	2.011E+00	2.011E+00	0.398E+00	19.78	
TH-228	1.41E+10Y	1.00	1.896E+00	1.896E+00	0.267E+00	14.09	
TH-232	1.41E+10Y	1.00	2.011E+00	2.011E+00	0.398E+00	19.78	
NP-237	2.14E+06Y	1.00	8.212E-01	8.212E-01	4.172E-01	50.80	
ANH-511	1.00E+09Y	1.00	1.237E-01	1.237E-01	0.900E-01	72.78	
Total Activity :			6.230E+01	6.236E+01			

Grand Total Activity : 6.230E+01 6.236E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	186.10	194	315	1.47	371.10	367	10	2.69E-02	39.0	4.86E+00	T
0	209.88	204	365	2.20	418.66	413	14	2.83E-02	42.6	4.49E+00	T
0	270.36	89	242	1.82	539.63	536	12	1.24E-02	72.7	3.77E+00	T
0	328.39	69	172	1.65	655.68	651	10	9.62E-03	74.9	3.29E+00	T
0	409.55	44	65	1.64	818.01	815	6	6.10E-03	65.7	2.83E+00	T
0	726.85	88	83	1.95	1452.64	1444	15	1.23E-02	50.6	1.83E+00	T
0	768.46	41	54	1.77	1535.87	1532	7	5.68E-03	67.4	1.75E+00	
3	964.53	50	46	2.66	1928.07	1922	22	6.99E-03	65.4	1.42E+00	T
0	1730.02	19	15	1.80	3459.50	3454	14	2.59E-03	97.7	8.64E-01	

Flags: "T" = Tentatively associated


```

*****
*                                     GEL Laboratories LLC
*                                     2040 Savage Road
*                                     Charleston, SC 29414
*****
*
*                               DETECTOR DATA
*
* Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G247809001.CNF;1
* Acquisition date   : 5-MAR-2010 10:31:36.   Detector SN#      :
* Detector ID        : GAM15                   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        : 19-FEB-2010 12:00:00   Nuclide Library : SOLID
* Sample ID          : G247809001             Analyst initials: MXR1
* Batch Number       : 957136                 Sample Quantity : 1.32540E+02 GRAM
*****
*
*                               QC DATA
*
* CALIB. DATE/TIME   : 3-FEB-2010 11:04:32.11MS 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	3.495E+01	4.069E+00	6.595E-01	6.481E-02	52.988
CD-109	2.810E+00	1.300E+00	1.894E+00	2.351E-01	1.484
SN-126	2.752E-01	1.273E-01	1.926E-01	2.384E-02	1.429
BA-137M	1.241E-01	6.518E-02	8.098E-02	6.658E-03	1.532
CS-137	1.311E-01	6.886E-02	8.555E-02	7.048E-03	1.532
TL-208	5.444E-01	1.120E-01	7.147E-02	6.537E-03	7.616
BI-211	3.887E+00	6.642E-01	4.336E-01	4.318E-02	8.966
PB-212	1.896E+00	2.672E-01	1.168E-01	1.395E-02	16.235
BI-214	1.181E+00	2.256E-01	1.445E-01	1.440E-02	8.169
PB-214	1.411E+00	2.533E-01	1.536E-01	1.746E-02	9.186
RA-224	5.098E+00	1.615E+00	1.251E+00	1.380E-01	4.074
RA-226	1.181E+00	2.256E-01	1.445E-01	1.440E-02	8.169
AC-228	2.011E+00	3.978E-01	2.998E-01	3.631E-02	6.710
RA-228	2.011E+00	3.978E-01	2.998E-01	3.631E-02	6.710
TH-228	1.896E+00	2.672E-01	1.168E-01	1.395E-02	16.235
TH-232	2.011E+00	3.978E-01	2.998E-01	3.631E-02	6.710
NP-237	8.212E-01	4.172E-01	5.235E-01	1.272E-01	1.569
ANH-511	1.237E-01	9.001E-02	5.256E-02	4.542E-03	2.353

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	9.059E-02		3.797E-01	6.291E-01	5.847E-02	0.144
NA-22	1.033E-02		5.591E-02	9.199E-02	8.357E-03	0.112
NA-24	-6.588E-02		1.081E-01	Half-Life too short		
SC-46	-1.965E-02		4.897E-02	7.808E-02	7.256E-03	-0.252
V-48	-6.341E-03		8.699E-02	1.419E-01	1.297E-02	-0.045
CR-51	-8.742E-02		4.723E-01	7.767E-01	8.243E-02	-0.113
MN-54	1.562E-04		4.616E-02	7.653E-02	6.945E-03	0.002
CO-56	5.700E-03		4.496E-02	7.528E-02	6.869E-03	0.076
CO-57	9.354E-03		3.263E-02	5.360E-02	5.399E-03	0.175
CO-58	-1.811E-02		4.417E-02	7.067E-02	6.353E-03	-0.256
FE-59	7.989E-02		1.137E-01	1.966E-01	1.834E-02	0.406
CO-60	4.831E-03		4.617E-02	7.538E-02	7.246E-03	0.064
ZN-65	-2.355E-02		1.344E-01	1.834E-01	1.567E-02	-0.128
SE-75	5.459E-02		6.136E-02	9.779E-02	1.072E-02	0.558
SR-85	1.406E-01		4.994E-02	9.169E-02	7.921E-03	1.533
Y-88	-1.949E-02		3.734E-02	5.436E-02	4.578E-03	-0.358
Y-91	6.673E+00		3.028E+01	4.993E+01	4.209E+00	0.134
NB-94	1.012E-02		4.211E-02	7.156E-02	6.041E-03	0.141
NB-95	9.507E-02		5.986E-02	9.814E-02	8.599E-03	0.969
NB-95M	5.120E-01		1.941E-01	3.064E-01	3.692E-02	1.671
ZR-95	5.760E-02		8.079E-02	1.418E-01	1.363E-02	0.406
MO-99	-3.223E+00		1.053E+01	1.711E+01	2.698E+00	-0.188
TC-99M	-2.444E+09		1.047E+09	Half-Life too short		
RU-103	2.677E-02		4.599E-02	7.772E-02	1.086E-02	0.344
RH-106	-4.607E-02		3.759E-01	5.984E-01	7.849E-02	-0.077
RU-106	-4.607E-02		3.758E-01	5.984E-01	5.029E-02	-0.077
AG-108M	-8.606E-03		3.523E-02	5.675E-02	5.015E-03	-0.152
AG-110M	1.488E-03		4.859E-02	7.063E-02	6.010E-03	0.021
SN-113	-6.518E-03		5.348E-02	8.735E-02	7.586E-03	-0.075
CD-115	-2.542E+00		9.412E+00	1.495E+01	1.290E+00	-0.170
SN-117M	-9.668E-03		6.685E-02	1.071E-01	1.122E-02	-0.090
TE-123M	1.737E-02		3.653E-02	5.992E-02	6.314E-03	0.290
SB-124	-9.086E-03		1.013E-01	1.647E-01	1.551E-02	-0.055
SB-125	5.566E-02		1.103E-01	1.863E-01	1.622E-02	0.299
TE-125M	-1.653E+01		1.277E+01	1.956E+01	2.322E+00	-0.845
I-126	1.593E-01		2.850E-01	4.352E-01	3.589E-02	0.366
SB-126	-5.375E-02		1.844E-01	2.570E-01	2.194E-02	-0.209
SB-127	-2.013E-01		1.309E+00	2.169E+00	2.349E-01	-0.093
I-131	-8.311E-02		1.262E-01	1.997E-01	1.926E-02	-0.416
TE-132	3.250E-01		7.203E-01	1.229E+00	2.096E-01	0.264
BA-133	4.479E-02		5.905E-02	8.926E-02	1.206E-02	0.502
I-133	-2.229E-03		1.436E-03	Half-Life too short		
CS-134	9.552E-02		6.039E-02	1.100E-01	9.859E-03	0.868
CS-135	4.362E-02		2.351E-01	3.457E-01	4.148E-02	0.126
I-135	-4.684E+08		2.267E+08	Half-Life too short		
CS-136	4.403E-02		1.224E-01	2.068E-01	1.912E-02	0.213
CE-139	2.637E-03		3.812E-02	6.150E-02	6.565E-03	0.043
BA-140	1.003E-02		3.070E-01	4.988E-01	1.692E-01	0.020

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
LA-140	6.204E-03		8.997E-02	1.505E-01	1.411E-02	0.041
CE-141	5.974E-02		8.064E-02	1.336E-01	1.381E-02	0.447
CE-143	5.112E-04		8.241E-05	Half-Life	too short	
CE-144	-2.903E-01		2.698E-01	4.126E-01	6.657E-02	-0.704
PM-144	2.815E-02		4.316E-02	7.519E-02	6.325E-03	0.374
PR-144	1.456E+00		3.267E+00	5.622E+00	4.728E-01	0.259
PM-146	-4.183E-02		5.148E-02	7.916E-02	8.371E-03	-0.528
ND-147	1.261E-01		6.059E-01	9.979E-01	1.492E-01	0.126
PM-149	1.024E+01		8.143E+01	1.366E+02	2.296E+01	0.075
EU-152	2.171E-03		1.468E-01	2.110E-01	2.148E-02	0.010
GD-153	-2.281E-01		1.207E-01	1.798E-01	1.984E-02	-1.268
EU-154	2.019E-02		1.592E-01	2.605E-01	3.055E-02	0.078
EU-155	2.436E-01		1.374E-01	2.350E-01	2.476E-02	1.036
TB-160	-6.698E-02		1.618E-01	2.571E-01	2.379E-02	-0.261
HO-166M	-1.462E-02		7.282E-02	1.200E-01	1.018E-02	-0.122
TA-182	1.910E-01		2.442E-01	4.211E-01	3.614E-02	0.454
IR-192	3.970E-02		4.481E-02	7.731E-02	7.971E-03	0.514
HG-203	6.626E-02		5.650E-02	8.732E-02	9.596E-03	0.759
BI-207	-1.547E-02		6.513E-02	1.015E-01	8.956E-03	-0.152
PB-210	-7.398E+00		1.325E+01	2.122E+01	2.612E+00	-0.349
PB-211	4.368E-01		1.019E+00	1.472E+00	7.121E-01	0.297
BI-212	2.048E+00	+	1.067E+00	1.310E+00	1.627E-01	1.564
RN-219	-1.797E-01		5.072E-01	8.150E-01	1.204E-01	-0.221
RA-223	5.543E-02		9.428E-01	1.364E+00	2.475E-01	0.041
AC-227	2.995E-01		3.264E-01	5.637E-01	7.801E-02	0.531
TH-227	2.995E-01		3.270E-01	5.637E-01	8.575E-02	0.531
TH-229	-2.886E-01		6.856E-01	1.075E+00	1.170E-01	-0.268
PA-231	-5.420E-01		2.057E+00	3.070E+00	4.896E-01	-0.177
TH-231	5.543E-02		9.428E-01	1.364E+00	2.475E-01	0.041
PA-233	-2.722E-02		8.497E-02	1.389E-01	1.470E-02	-0.196
PA-234	-4.772E-02		4.063E-01	6.623E-01	1.262E-01	-0.072
PA-234M	3.182E+00		6.308E+00	1.061E+01	1.100E+00	0.300
TH-234	2.318E-01		2.456E+00	4.035E+00	8.002E-01	0.057
U-235	1.968E-01		2.723E-01	4.444E-01	7.908E-02	0.443
U-238	2.318E-01		2.456E+00	4.035E+00	8.002E-01	0.057
NP-239	2.669E-02		5.273E-01	8.596E-01	8.676E-02	0.031
AM-241	-8.072E-02		3.117E-01	5.111E-01	6.000E-02	-0.158
CM-247	-1.927E-02		4.668E-02	7.479E-02	6.325E-03	-0.258
CF-249	-2.292E-02		4.997E-02	7.998E-02	6.818E-03	-0.287
CF-251	-1.321E-01		1.737E-01	2.689E-01	2.894E-02	-0.491

VAX/VMS Nuclide Identification Report Generated

```

*****
*                                     GEL Laboratories LLC
*                                     2040 Savage Road
*                                     Charleston, SC 29414
*****
*
*                                     DETECTOR DATA
*
* Configuration      : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G247809001
* Acquisition date   : 5-MAR-2010 10:31:36 Detector SN#      :
* Detector ID        : GAM15 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        : 19-FEB-2010 12:00:00 Nuclide Library : SOLID
* Sample ID          : G247809001 Analyst initials: MXR1
* Batch Number       : 957136 Sample Quantity : 1.3254E+02 GRAM
* Recovery           : 1.00000 Carrier Weight : 0.00000
*****
*
*                                     QC DATA
*
* CALIB. DATE/TIME  : 3-FEB-2010 11:04:32 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	3.495E+01	3.988E+00	3.304E-01	2.035E+00
CD-109	2.810E+00	1.274E+00	9.956E-01	6.502E-01
SN-126	2.752E-01	1.248E-01	1.013E-01	6.367E-02
BA-137M	1.241E-01	6.388E-02	4.115E-02	3.259E-02
CS-137	1.311E-01	6.749E-02	4.347E-02	3.443E-02
TL-208	5.444E-01	1.098E-01	3.639E-02	5.600E-02
BI-211	3.887E+00	6.509E-01	2.227E-01	3.321E-01
PB-212	1.896E+00	2.619E-01	6.038E-02	1.336E-01
BI-214	1.181E+00	2.211E-01	7.354E-02	1.128E-01
PB-214	1.411E+00	2.482E-01	7.889E-02	1.266E-01
RA-224	5.098E+00	1.583E+00	6.468E-01	8.076E-01
RA-226	1.181E+00	2.211E-01	7.354E-02	1.128E-01
AC-228	2.011E+00	3.898E-01	1.514E-01	1.989E-01
RA-228	2.011E+00	3.898E-01	1.514E-01	1.989E-01
TH-228	1.896E+00	2.619E-01	6.038E-02	1.336E-01
TH-232	2.011E+00	3.898E-01	1.514E-01	1.989E-01
NP-237	8.212E-01	4.088E-01	2.752E-01	2.086E-01
ANH-511	1.237E-01	8.821E-02	2.683E-02	4.500E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	9.059E-02	3.721E-01	3.214E-01	1.898E-01 NOT IDENT.
NA-22	1.033E-02	5.479E-02	4.620E-02	2.795E-02 NOT IDENT.
NA-24	-6.588E+04	2.119E+05	0.000E+00	1.081E+05 SHORT HLIF
SC-46	-1.965E-02	4.799E-02	3.947E-02	2.449E-02 FAIL ABUN
V-48	-6.341E-03	8.525E-02	7.161E-02	4.349E-02 NOT IDENT.
CR-51	-8.742E-02	4.629E-01	3.996E-01	2.361E-01 NOT IDENT.
MN-54	1.562E-04	4.524E-02	3.873E-02	2.308E-02 NOT IDENT.
CO-56	5.700E-03	4.406E-02	3.808E-02	2.248E-02 NOT IDENT.
CO-57	9.354E-03	3.198E-02	2.802E-02	1.632E-02 NOT IDENT.

CO-58	-1.811E-02	4.329E-02	3.578E-02	2.208E-02	NOT IDENT.
FE-59	7.989E-02	1.114E-01	9.898E-02	5.686E-02	NOT IDENT.
CO-60	4.831E-03	4.525E-02	3.783E-02	2.309E-02	NOT IDENT.
ZN-65	-2.355E-02	1.317E-01	9.235E-02	6.721E-02	NOT IDENT.
SE-75	5.459E-02	6.013E-02	5.047E-02	3.068E-02	NOT IDENT.
SR-85	1.406E-01	4.894E-02	4.679E-02	2.497E-02	NOT IDENT.
Y-88	-1.949E-02	3.659E-02	2.713E-02	1.867E-02	NOT IDENT.
Y-91	6.673E+00	2.967E+01	2.510E+01	1.514E+01	NOT IDENT.
NB-94	1.012E-02	4.127E-02	3.632E-02	2.106E-02	NOT IDENT.
NB-95	9.507E-02	5.866E-02	4.974E-02	2.993E-02	NOT IDENT.
NB-95M	5.120E-01	1.902E-01	1.585E-01	9.706E-02	NOT IDENT.
ZR-95	5.760E-02	7.917E-02	7.189E-02	4.039E-02	NOT IDENT.
MO-99	-3.223E+00	1.032E+01	8.678E+00	5.263E+00	NOT IDENT.
TC-99M	-2.444E+15	2.053E+15	0.000E+00	1.047E+15	SHORT HLIF
RU-103	2.677E-02	4.507E-02	3.968E-02	2.299E-02	FAIL ABUN
RH-106	-4.607E-02	3.683E-01	3.044E-01	1.879E-01	NOT IDENT.
RU-106	-4.607E-02	3.683E-01	3.044E-01	1.879E-01	NOT IDENT.
AG-108M	-8.606E-03	3.453E-02	2.904E-02	1.762E-02	NOT IDENT.
AG-110M	1.488E-03	4.762E-02	3.589E-02	2.429E-02	NOT IDENT.
SN-113	-6.518E-03	5.241E-02	4.478E-02	2.674E-02	NOT IDENT.
CD-115	-2.542E+00	9.224E+00	7.626E+00	4.706E+00	NOT IDENT.
SN-117M	-9.668E-03	6.551E-02	5.573E-02	3.342E-02	NOT IDENT.
TE-123M	1.737E-02	3.580E-02	3.119E-02	1.826E-02	NOT IDENT.
SB-124	-9.086E-03	9.929E-02	8.232E-02	5.066E-02	NOT IDENT.
SB-125	5.566E-02	1.081E-01	9.538E-02	5.513E-02	NOT IDENT.
TE-125M	-1.653E+01	1.252E+01	1.024E+01	6.387E+00	NOT IDENT.
I-126	1.593E-01	2.793E-01	2.211E-01	1.425E-01	NOT IDENT.
SB-126	-5.375E-02	1.807E-01	1.304E-01	9.220E-02	NOT IDENT.
SB-127	-2.013E-01	1.283E+00	1.101E+00	6.547E-01	NOT IDENT.
I-131	-8.311E-02	1.237E-01	1.025E-01	6.312E-02	NOT IDENT.
TE-132	3.250E-01	7.059E-01	6.361E-01	3.602E-01	NOT IDENT.
BA-133	4.479E-02	5.786E-02	4.584E-02	2.952E-02	FAIL ABUN
I-133	-2.229E+03	2.815E+03	0.000E+00	1.436E+03	SHORT HLIF
CS-134	9.552E-02	5.919E-02	5.571E-02	3.020E-02	NOT IDENT.
CS-135	4.362E-02	2.304E-01	1.784E-01	1.176E-01	NOT IDENT.
I-135	-4.684E+14	4.444E+14	0.000E+00	2.267E+14	SHORT HLIF
CS-136	4.403E-02	1.199E-01	1.042E-01	6.119E-02	NOT IDENT.
CE-139	2.637E-03	3.736E-02	3.199E-02	1.906E-02	NOT IDENT.
BA-140	1.003E-02	3.009E-01	2.543E-01	1.535E-01	NOT IDENT.
LA-140	6.204E-03	8.817E-02	7.528E-02	4.499E-02	FAIL ABUN
CE-141	5.974E-02	7.902E-02	6.963E-02	4.032E-02	NOT IDENT.
CE-143	5.112E+02	1.615E+02	0.000E+00	8.241E+01	SHORT HLIF
CE-144	-2.903E-01	2.644E-01	2.154E-01	1.349E-01	NOT IDENT.
PM-144	2.815E-02	4.229E-02	3.817E-02	2.158E-02	NOT IDENT.
PR-144	1.456E+00	3.202E+00	2.854E+00	1.634E+00	NOT IDENT.
PM-146	-4.183E-02	5.045E-02	4.048E-02	2.574E-02	NOT IDENT.
ND-147	1.261E-01	5.938E-01	5.089E-01	3.029E-01	NOT IDENT.
PM-149	1.024E+01	7.981E+01	7.039E+01	4.072E+01	NOT IDENT.
EU-152	2.171E-03	1.439E-01	1.084E-01	7.341E-02	FAIL ABUN
GD-153	-2.281E-01	1.183E-01	9.435E-02	6.037E-02	NOT IDENT.
EU-154	2.019E-02	1.560E-01	1.308E-01	7.959E-02	NOT IDENT.
EU-155	2.436E-01	1.347E-01	1.232E-01	6.871E-02	FAIL ABUN
TB-160	-6.698E-02	1.585E-01	1.300E-01	8.088E-02	FAIL ABUN
HO-166M	-1.462E-02	7.137E-02	6.087E-02	3.641E-02	FAIL ABUN
TA-182	1.910E-01	2.393E-01	2.116E-01	1.221E-01	FAIL ABUN
IR-192	3.970E-02	4.391E-02	3.978E-02	2.240E-02	FAIL ABUN
HG-203	6.626E-02	5.537E-02	4.503E-02	2.825E-02	NOT IDENT.
BI-207	-1.547E-02	6.383E-02	5.115E-02	3.256E-02	FAIL ABUN
PB-210	-7.398E+00	1.299E+01	1.127E+01	6.625E+00	NOT IDENT.
PB-211	4.368E-01	9.987E-01	7.544E-01	5.095E-01	NOT IDENT.
BI-212	2.048E+00	1.045E+00	6.643E-01	5.334E-01	FAIL ABUN
RN-219	-1.797E-01	4.971E-01	4.177E-01	2.536E-01	FAIL ABUN
RA-223	5.543E-02	9.240E-01	7.014E-01	4.714E-01	FAIL ABUN
AC-227	2.995E-01	3.199E-01	2.911E-01	1.632E-01	FAIL ABUN
TH-227	2.995E-01	3.204E-01	2.911E-01	1.635E-01	FAIL ABUN
TH-229	-2.886E-01	6.719E-01	5.579E-01	3.428E-01	FAIL ABUN
PA-231	-5.420E-01	2.016E+00	1.583E+00	1.029E+00	FAIL ABUN
TH-231	5.543E-02	9.240E-01	7.014E-01	4.714E-01	FAIL ABUN
PA-233	-2.722E-02	8.327E-02	7.150E-02	4.249E-02	FAIL ABUN
PA-234	-4.772E-02	3.982E-01	3.344E-01	2.032E-01	NOT IDENT.
PA-234M	3.182E+00	6.182E+00	5.351E+00	3.154E+00	NOT IDENT.
TH-234	2.318E-01	2.407E+00	2.132E+00	1.228E+00	NOT IDENT.
U-235	1.968E-01	2.669E-01	2.317E-01	1.362E-01	FAIL ABUN
U-238	2.318E-01	2.407E+00	2.132E+00	1.228E+00	NOT IDENT.
NP-239	2.669E-02	5.168E-01	4.497E-01	2.637E-01	FAIL ABUN
AM-241	-8.072E-02	3.055E-01	2.704E-01	1.559E-01	NOT IDENT.
CM-247	-1.927E-02	4.575E-02	3.833E-02	2.334E-02	FAIL ABUN
CF-249	-2.292E-02	4.897E-02	4.101E-02	2.499E-02	NOT IDENT.

CF-251	-1.321E-01	1.703E-01	1.397E-01	8.686E-02 NOT IDENT.
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 * GEL Laboratories LLC *
 * 2040 SAVAGE ROAD *
 * CHARLESTON ,SC 29417 *
 * GAMMA SPECTROSCOPY BACKGROUND REPORT *

ENERGY	MDA COUNTS
46.54	339.5922
49.72	321.3606
57.36	0.0000
59.54	378.8814
63.29	389.7873
63.29	389.7873
64.28	403.0655
67.75	452.8110
69.67	408.5067
70.83	415.4738
72.81	460.9395
72.87	460.9759
72.87	460.9759
74.82	431.7974
74.82	431.7974
74.82	431.7974
74.97	431.8837
77.11	433.0917
77.11	433.0917
77.11	433.0917
79.69	418.7443
79.80	471.5535
80.12	471.7443
80.19	471.7857
80.57	500.8134
81.00	528.3001
81.07	528.3464
81.07	528.3464
83.79	397.6043
83.79	397.6043
85.43	400.8180
86.48	465.7991
86.55	465.8396
86.79	566.3413
86.94	584.5888
87.57	584.0226
88.03	550.0312
88.47	623.6288
89.96	823.8040
91.11	627.1979
92.59	469.4510
92.59	469.4510
93.35	496.6071
94.67	470.9179
94.87	514.7710
94.87	514.7710
95.86	628.4035
97.43	487.6988
98.44	344.2274
99.53	316.0100
100.11	328.4928
103.18	400.4483
103.37	377.9376
105.31	309.7759
106.12	318.2844
109.28	418.5662
111.00	357.1960
111.76	375.0925
116.30	339.3599
117.23	367.8111
121.12	331.5788
121.78	340.1674
122.06	343.4025
123.07	332.2125
131.20	368.5998
133.52	415.9674
136.00	356.4489

136.47	347.0508
140.51	419.6891
140.51	0.0000
143.76	349.3311
144.24	338.7909
144.24	338.7909
145.44	356.2667
152.43	328.2906
153.25	324.2102
154.21	346.0341
154.21	346.0341
156.02	358.4390
158.56	340.8086
159.00	322.5317
162.66	344.1334
163.33	337.8049
165.86	322.1714
176.60	331.5106
177.52	351.5186
181.07	310.1828
184.41	337.4745
185.72	341.3452
193.51	312.4140
197.04	296.4981
205.31	274.4848
210.85	314.2704
215.65	245.4418
222.11	274.0414
227.38	256.7914
228.16	264.2126
228.18	264.2161
235.69	263.9859
235.96	264.0316
235.96	264.0316
238.63	253.1707
238.63	253.1707
240.99	253.5514
242.00	253.7148
244.70	240.9492
252.40	248.8923
252.80	235.9964
256.23	214.2354
256.23	214.2354
260.90	256.6948
264.66	198.4155
268.22	244.4309
269.46	233.7036
269.46	233.7036
271.23	224.5898
273.65	168.6819
276.40	215.8833
277.37	211.3083
277.60	211.3385
278.00	214.5168
279.20	205.2659
279.54	192.7681
280.46	213.2554
283.69	220.8297
284.31	223.9406
285.41	222.6645
285.90	207.6277
287.50	175.9349
293.27	0.0000
295.22	188.7925
295.96	188.8702
298.57	189.1447
299.98	199.7538
299.98	199.7538
300.09	199.7666
300.09	199.7666
300.13	199.7717
301.36	209.4243
302.85	203.2448
304.50	193.8914
304.50	193.8914
304.85	176.4433
308.46	187.3006
311.90	204.8804

316.51	172.7534
319.41	202.8171
320.08	198.0789
323.87	186.2698
323.87	186.2698
328.76	167.4258
333.37	183.9604
334.37	167.9103
334.37	167.9103
338.28	186.3633
338.28	186.3633
338.32	186.3680
338.32	186.3680
338.32	186.3680
340.48	174.9111
340.55	174.9166
344.28	183.3583
351.06	179.0947
351.93	170.0493
356.01	140.3606
364.49	150.4469
366.42	144.6816
383.85	139.9260
388.16	154.1277
388.63	150.1816
391.69	137.4458
400.66	131.0096
401.81	149.0873
402.40	151.1290
404.85	128.5855
410.95	135.6345
414.70	109.2633
423.72	120.2333
427.09	115.3498
427.87	115.3888
433.94	119.7501
453.88	129.9735
463.37	121.2366
468.07	185.2910
473.00	123.7749
476.78	124.9969
477.60	104.3695
487.02	103.7256
492.35	124.7329
497.08	90.5981
511.00	93.1811
514.00	93.2876
527.90	97.9929
529.87	0.0000
531.02	87.5593
537.26	100.4504
546.56	0.0000
563.25	99.2689
569.33	90.9268
569.50	96.2820
569.70	99.4982
583.19	102.1204
600.60	109.4963
602.73	129.8672
604.72	120.9304
609.32	111.7183
609.32	111.7183
610.33	101.2699
614.28	95.9719
618.01	89.2030
621.93	87.1406
621.93	87.1406
633.25	79.8152
635.95	90.8279
636.99	85.3868
645.85	77.9492
657.76	92.8913
661.66	119.8050
661.66	119.8050
664.57	0.0000
666.33	85.2508
666.50	85.2564
677.62	90.5730

685.70	92.6554
695.00	95.7096
696.49	92.0350
696.51	97.6129
697.00	93.9087
702.65	97.7966
706.68	93.2556
711.68	89.6602
720.70	86.6953
721.93	0.0000
722.78	80.3223
722.91	80.3258
723.31	75.5160
724.19	81.9643
727.33	85.2581
733.00	69.2886
735.93	79.0251
739.50	77.2253
747.24	57.5784
752.31	80.3516
753.82	88.8976
756.73	62.4712
763.94	86.1786
765.81	74.8366
766.42	81.3581
777.92	77.1356
778.90	77.1570
783.70	62.9546
785.37	61.0755
795.86	71.7850
801.95	85.3297
810.29	67.2685
810.76	69.1992
815.77	52.9333
818.51	63.5682
832.01	81.2024
834.85	83.1988
836.80	0.0000
846.77	62.1146
856.80	46.7109
860.56	60.3942
871.09	65.4460
873.19	59.6175
875.33	0.0000
879.36	65.5878
880.51	71.4821
883.24	57.8140
884.68	58.8159
889.28	74.5898
898.04	76.7241
911.20	76.9828
911.20	76.9828
911.20	76.9828
926.50	58.4550
937.49	74.5117
944.13	68.6631
946.00	78.6496
949.00	50.8122
962.29	47.9785
964.08	61.7143
966.15	64.0313
968.97	64.0755
968.97	64.0755
968.97	64.0755
983.53	68.3196
996.26	75.5814
1001.03	62.5512
1004.73	82.8008
1037.84	62.0723
1038.76	0.0000
1048.07	54.0589
1050.41	56.1302
1050.41	56.1302
1063.66	56.2980
1085.87	57.6087
1099.45	55.7183
1112.07	64.8417
1115.54	74.5547

1120.29	65.3020
1120.29	65.3020
1120.55	65.3071
1121.30	67.5391
1131.51	0.0000
1173.23	63.9487
1177.93	59.8157
1189.05	64.1622
1204.77	85.4758
1221.41	61.4150
1231.02	95.4858
1235.36	101.9414
1238.28	76.5000
1260.41	0.0000
1271.85	64.1797
1274.44	53.5095
1274.54	52.4413
1291.59	44.0263
1298.22	0.0000
1312.11	48.5156
1332.49	33.5531
1365.19	21.4703
1368.63	0.0000
1384.29	45.9033
1408.01	27.2866
1457.56	0.0000
1460.82	26.5986
1489.16	21.9588
1505.03	34.4657
1596.21	20.4199
1620.50	19.5257
1678.03	0.0000
1690.97	20.7371
1764.49	12.9864
1764.49	12.9864
1770.23	5.2491
1771.35	64.0000
1791.20	0.0000
1836.06	15.1481

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G247809001

Total Uranium Activity	7.8057E-01	ug/g
Total Uranium Counting Unc.	7.1626E+00	ug/g
Total Uranium Tpu	3.6544E-06	ug/g
Total Uranium Mda	6.3449E+00	ug/g


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*****
*
*               GEL Laboratories LLC               *
*               2040 SAVAGE ROAD                   *
*               CHARLESTON ,SC 29417                *
*               GROSS GAMMA REPORT                  *
*
*****
*
*  BATCH ID      : 957136                          SAMPLE ID   : G247809001
*  ANALYST       : MXR1                             DETECTOR    : GAM15
*  SAMPLE DATE   : 19-FEB-2010 12:00:00.00          COUNT TIME   : 0 02:00:00.00
*  ANALYSIS DATE : 5-MAR-2010 10:31:36.54           SAMPLE ALQT  : 132.540 GRAM
*
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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 1.009E+01
GROSS GAMMA ERROR   (pCi/GRAM ) : 1.521E+00
GROSS GAMMA MDA     (pCi/GRAM ) : 3.960E+00
GROSS GAMMA DLC     (pCi/GRAM ) : 1.927E+00

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VAX/VMS Nuclide Identification Report Generated 5-MAR-2010 12:55:11.93

```
*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202052272.CNF;1
Sample date        : 26-FEB-2010 00:00:00 Acquisition date : 5-MAR-2010 10:54:48.
Sample ID          : G1202052272      Sample quantity   : 1.43980E+02 GRAM
Detector name      : GAM10             Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00     Elapsed real time: 0 02:00:00.38 0.0%
Energy tolerance   : 1.50000 keV       Analyst Initials : MXR1
Abundance limit    : 75.00000          Sensitivity       : 5.00000
Batch ID           : 957136            Detector SN#      :
Matrix Spike ID    :                   LCS ID           : 1032-A
*****
```

No peaks were found


```

Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202052272.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 26-FEB-2010 00:00:00 Acquisition date : 5-MAR-2010 10:54:48
Sample ID        : G1202052272 Sample quantity : 143.98 GRAM
Sample type      : SOLID Sample geometry :
Detector name    : GAMMA10 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:00.38 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

---- Non-Identified Nuclides ----

	Line Energy		Activity	Act error	MDA	MDA error	Act/MDA
Nuclide	Ided (keV)	Key	(pCi/GRAM)		(pCi/GRAM)		
BE-7	477.60	*	-1.847E-03	1.453E-01	2.343E-01	1.742E-02	-0.008
NA-22	1274.54	*	-8.205E-03	1.978E-02	3.001E-02	2.324E-03	-0.273
NA-24	1368.63	*	-3.503E-05	1.978E-02	Half-Life	too short	
K-40	1460.82	*	-3.727E-02	2.587E-01	4.703E-01	4.051E-02	-0.079
SC-46	889.28	*	5.776E-03	1.329E-02	2.387E-02	2.362E-03	0.242
	1120.55		-2.023E-02	2.463E-02	3.492E-02	2.508E-03	-0.579
V-48	944.13		4.979E-02	2.501E-01	4.249E-01	4.117E-02	0.117
	983.53	*	-5.735E-03	2.066E-02	3.131E-02	2.895E-03	-0.183
	1312.11		-2.451E-03	1.777E-02	2.813E-02	2.348E-03	-0.087
CR-51	320.08	*	1.529E-03	1.400E-01	2.322E-01	1.675E-02	0.007
MN-54	834.85	*	-8.030E-04	1.669E-02	2.720E-02	2.323E-03	-0.030
CO-56	846.77	*	-9.967E-03	2.024E-02	3.066E-02	2.707E-03	-0.325
	1037.84		-7.682E-02	1.235E-01	1.692E-01	1.519E-02	-0.454
	1238.28		-4.464E-02	3.434E-02	4.374E-02	3.262E-03	-1.020
	1771.35		-1.468E-01	1.491E-01	1.666E-01	1.104E-02	-0.881
CO-57	122.06	*	1.049E-02	1.034E-02	1.825E-02	1.204E-03	0.575
	136.47		3.799E-02	9.056E-02	1.512E-01	1.056E-02	0.251
CO-58	810.76	*	-1.332E-02	1.701E-02	2.394E-02	1.916E-03	-0.556
FE-59	1099.45	*	-3.483E-03	3.183E-02	4.977E-02	4.152E-03	-0.070
	1291.59		-2.082E-02	5.830E-02	9.036E-02	8.362E-03	-0.230
CO-60	1173.23		1.807E-03	1.905E-02	3.246E-02	2.002E-03	0.056
	1332.49	*	7.949E-04	2.013E-02	3.365E-02	2.924E-03	0.024
ZN-65	1115.54	*	3.467E-02	4.068E-02	7.552E-02	5.500E-03	0.459
SE-75	121.12		1.622E-02	5.428E-02	9.033E-02	8.710E-03	0.180
	136.00		9.427E-03	1.692E-02	2.857E-02	1.775E-03	0.330
	264.66	*	1.665E-03	1.978E-02	3.336E-02	2.129E-03	0.050
	279.54		-1.301E-02	5.217E-02	8.519E-02	5.843E-03	-0.153
	400.66		-1.305E-02	1.147E-01	1.848E-01	1.799E-02	-0.071
SR-85	514.00	*	-2.843E-02	2.716E-02	3.965E-02	2.533E-03	-0.717
Y-88	898.04		5.135E-03	1.996E-02	3.400E-02	3.454E-03	0.151
	1836.06	*	1.438E-02	1.289E-02	2.989E-02	1.834E-03	0.481
Y-91	1204.77	*	2.643E+00	7.345E+00	1.317E+01	8.747E-01	0.201
NB-94	702.65	*	-1.184E-03	1.676E-02	2.761E-02	1.572E-03	-0.043
	871.09		3.932E-03	1.760E-02	2.985E-02	2.816E-03	0.132

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-95	765.81	*		2.702E-04	1.673E-02	2.772E-02	1.935E-03	0.010
NB-95M	235.69	*		-3.901E-02	5.162E-02	8.154E-02	6.345E-03	-0.478
ZR-95	724.19			2.513E-02	3.758E-02	6.831E-02	4.853E-03	0.368
	756.73	*		8.804E-03	3.007E-02	5.205E-02	4.112E-03	0.169
MO-99	140.51			-1.289E-01	1.376E+00	2.196E+00	5.035E-01	-0.059
	181.07			8.088E-01	1.207E+00	2.018E+00	3.552E-01	0.401
	366.42			-1.947E+00	6.677E+00	1.059E+01	7.172E-01	-0.184
	739.50	*		6.398E-01	8.723E-01	1.588E+00	2.330E-01	0.403
	777.92			1.012E+00	2.275E+00	4.033E+00	2.920E-01	0.251
TC-99M	140.51	*		-9.774E-01	2.275E+00	Half-Life too short		
RU-103	497.08	*		-1.294E-02	1.971E-02	2.900E-02	3.701E-03	-0.446
	610.33			1.329E-01	3.245E-01	5.692E-01	8.515E-02	0.234
RH-106	621.93	*		1.176E-05	1.306E-01	2.191E-01	2.506E-02	0.000
	1050.41			-1.043E+00	1.109E+00	1.367E+00	1.140E-01	-0.763
RU-106	621.93	*		1.176E-05	1.306E-01	2.191E-01	1.190E-02	0.000
	1050.41			-1.043E+00	1.109E+00	1.367E+00	1.140E-01	-0.763
AG-108M	433.94	*		7.544E-03	1.502E-02	2.583E-02	1.832E-03	0.292
	614.28			-4.394E-03	1.647E-02	2.668E-02	1.587E-03	-0.165
	722.91			-3.662E-03	1.798E-02	2.898E-02	1.877E-03	-0.126
CD-109	88.03	*		1.316E-02	3.124E-01	5.153E-01	5.842E-02	0.026
AG-110M	657.76	*		-2.367E-03	1.468E-02	2.392E-02	1.296E-03	-0.099
	677.62			1.388E-02	1.380E-01	2.336E-01	1.313E-02	0.059
	706.68			-4.426E-02	1.078E-01	1.693E-01	1.039E-02	-0.261
	763.94			2.847E-02	6.262E-02	1.115E-01	8.065E-03	0.255
	884.68			2.916E-04	2.123E-02	3.481E-02	3.489E-03	0.008
	937.49			-5.118E-02	4.986E-02	6.725E-02	6.748E-03	-0.761
	1384.29			-3.458E-02	8.156E-02	1.214E-01	1.070E-02	-0.285
	1505.03			-1.255E-01	1.419E-01	1.712E-01	1.403E-02	-0.733
SN-113	391.69	*		-1.137E-02	1.966E-02	2.979E-02	2.124E-03	-0.382
CD-115	260.90			-1.349E+00	6.072E+00	9.972E+00	6.278E-01	-0.135
	492.35			1.231E+00	1.823E+00	3.185E+00	2.074E-01	0.386
	527.90	*		-2.023E-01	4.940E-01	7.407E-01	4.663E-02	-0.273
SN-117M	156.02			3.784E-01	5.960E-01	1.015E+00	5.744E-02	0.373
	158.56	*		-1.266E-02	1.532E-02	2.238E-02	1.255E-03	-0.565
TE-123M	159.00	*		-5.519E-03	1.116E-02	1.694E-02	9.619E-04	-0.326
SB-124	602.73			-3.198E-03	1.790E-02	2.945E-02	1.662E-03	-0.109
	645.85			1.965E-01	2.000E-01	3.798E-01	2.254E-02	0.517
	722.78			-3.368E-02	1.654E-01	2.665E-01	1.696E-02	-0.126
	1690.97	*		1.826E-04	3.508E-02	5.712E-02	4.353E-03	0.003
SB-125	427.87	*		-1.506E-03	4.162E-02	6.739E-02	4.688E-03	-0.022
	463.37			2.840E-02	1.223E-01	2.041E-01	1.524E-02	0.139
	600.60			-5.020E-03	8.804E-02	1.470E-01	9.693E-03	-0.034
	635.95			3.166E-02	1.319E-01	2.279E-01	1.446E-02	0.139
TE-125M	109.28	*		1.827E-01	3.637E+00	5.950E+00	5.800E-01	0.031
I-126	388.63			3.020E-02	5.202E-02	9.075E-02	6.166E-03	0.333
	666.33	*		1.715E-02	7.084E-02	1.220E-01	6.121E-03	0.141
	753.82			4.381E-01	5.155E-01	9.672E-01	6.503E-02	0.453
SB-126	414.70			6.147E-03	2.346E-02	3.945E-02	2.673E-03	0.156
	666.50			-4.587E-04	2.429E-02	4.044E-02	2.030E-03	-0.011

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SN-126	695.00			2.849E-03	2.591E-02	4.373E-02	2.426E-03	0.065
	697.00			-3.254E-02	8.812E-02	1.393E-01	7.780E-03	-0.234
	720.70	*		-9.161E-03	4.418E-02	7.107E-02	4.297E-03	-0.129
	856.80			2.893E-02	1.356E-01	2.307E-01	2.094E-02	0.125
	64.28			-1.334E-01	2.953E-01	4.572E-01	7.817E-02	-0.292
SB-127	86.94			-3.340E-02	1.383E-01	2.218E-01	9.312E-02	-0.151
	87.57	*		6.455E-04	3.128E-02	5.151E-02	5.829E-03	0.013
	252.40			-8.459E-02	5.274E-01	8.713E-01	3.540E-01	-0.097
I-131	473.00			2.531E-02	2.138E-01	3.505E-01	3.405E-02	0.072
	685.70	*		1.362E-01	1.569E-01	2.920E-01	1.977E-02	0.466
	783.70			-1.083E-01	3.499E-01	5.429E-01	5.281E-02	-0.199
	80.19			-1.593E-01	9.578E-01	1.557E+00	1.710E-01	-0.102
	284.31			2.305E-01	3.645E-01	6.421E-01	4.482E-02	0.359
TE-132	364.49	*		1.209E-02	2.769E-02	4.775E-02	3.487E-03	0.253
	636.99			3.885E-02	3.878E-01	6.581E-01	3.927E-02	0.059
	49.72			-1.121E+00	3.109E+00	5.051E+00	6.618E-01	-0.222
	111.76			-1.785E+00	2.627E+00	3.993E+00	3.277E-01	-0.447
	116.30			-7.528E-01	2.170E+00	3.402E+00	2.662E-01	-0.221
BA-133	228.16	*		7.415E-02	6.188E-02	1.131E-01	1.504E-02	0.656
	81.00			-1.206E-02	3.881E-02	6.221E-02	1.055E-02	-0.194
	276.40			1.044E-01	1.776E-01	3.100E-01	3.993E-02	0.337
	302.85			-5.939E-02	6.107E-02	8.998E-02	1.063E-02	-0.660
	356.01	*		-5.388E-03	1.861E-02	2.955E-02	3.485E-03	-0.182
I-133	383.85			-4.682E-02	1.339E-01	2.096E-01	2.355E-02	-0.223
	529.87	*		4.006E-06	1.339E-01	Half-Life	too short	
	875.33			-4.851E-05	1.339E-01	Half-Life	too short	
	1298.22			-2.289E-04	1.339E-01	Half-Life	too short	
	563.25			-9.580E-02	1.951E-01	2.902E-01	1.781E-02	-0.330
CS-134	569.33			-1.240E-01	1.169E-01	1.609E-01	9.875E-03	-0.770
	604.72			6.426E-03	1.800E-02	3.137E-02	1.774E-03	0.205
	795.86	*		1.875E-02	1.967E-02	3.732E-02	2.877E-03	0.502
	801.95			3.754E-02	1.938E-01	3.289E-01	2.575E-02	0.114
	1365.19			1.615E-01	5.866E-01	1.034E+00	9.334E-02	0.156
CS-135	268.22	*		-3.983E-03	7.137E-02	1.188E-01	9.600E-03	-0.034
I-135	546.56			-9.703E+00	7.137E-02	Half-Life	too short	
	836.80			2.041E+00	7.137E-02	Half-Life	too short	
	1038.76			-2.526E+01	7.137E-02	Half-Life	too short	
	1131.51			7.571E-01	7.137E-02	Half-Life	too short	
	1260.41	*		2.727E+00	7.137E-02	Half-Life	too short	
	1457.56			-2.331E+01	7.137E-02	Half-Life	too short	
	1678.03			-2.339E+01	7.137E-02	Half-Life	too short	
	1791.20			-1.979E+00	7.137E-02	Half-Life	too short	
	153.25			-5.257E-02	2.282E-01	3.572E-01	2.852E-02	-0.147
	176.60			-9.875E-02	1.503E-01	2.233E-01	1.528E-02	-0.442
CS-136	273.65			-1.639E-01	1.666E-01	2.536E-01	1.860E-02	-0.646
	340.55			-5.445E-04	4.595E-02	7.574E-02	5.392E-03	-0.007
	818.51			2.326E-02	2.531E-02	4.720E-02	3.852E-03	0.493
	1048.07	*		-8.612E-03	2.834E-02	4.221E-02	3.691E-03	-0.204
	1235.36			2.501E-02	1.346E-01	2.330E-01	2.495E-02	0.107

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BA-137M	661.66	*		-4.439E-03	1.759E-02	2.838E-02	1.400E-03	-0.156
CS-137	661.66	*		-4.689E-03	1.858E-02	2.998E-02	1.488E-03	-0.156
CE-139	165.86	*		1.414E-03	1.289E-02	2.079E-02	1.135E-03	0.068
BA-140	162.66			-1.994E-01	2.678E-01	3.673E-01	2.348E-02	-0.543
	304.85			-1.689E-02	3.880E-01	6.414E-01	1.843E-01	-0.026
	423.72			6.262E-01	6.019E-01	1.051E+00	3.410E-01	0.596
	537.26	*		6.249E-02	8.207E-02	1.422E-01	4.747E-02	0.439
LA-140	328.76			6.910E-02	8.069E-02	1.457E-01	1.063E-02	0.474
	487.02			-3.779E-02	4.333E-02	6.054E-02	4.376E-03	-0.624
	815.77			4.575E-02	1.114E-01	1.945E-01	1.782E-02	0.235
	1596.21	*		-2.473E-02	2.808E-02	3.194E-02	2.479E-03	-0.774
CE-141	145.44	*		-1.212E-02	2.301E-02	3.515E-02	2.151E-03	-0.345
CE-143	57.36			-4.837E+00	1.550E+01	2.519E+01	3.413E+00	-0.192
	293.27	*		-1.629E+00	1.391E+00	1.911E+00	3.881E-01	-0.853
	664.57			4.708E+00	1.202E+01	2.097E+01	6.064E+00	0.225
	721.93			-5.722E+00	1.336E+01	2.065E+01	5.588E+00	-0.277
CE-144	80.12			-4.709E-01	1.011E+00	1.599E+00	1.754E-01	-0.295
	133.52	*		-3.320E-02	8.881E-02	1.384E-01	1.946E-02	-0.240
PM-144	476.78			1.672E-02	3.338E-02	5.716E-02	4.306E-03	0.293
	618.01			4.088E-03	1.320E-02	2.315E-02	1.353E-03	0.177
	696.49	*		-6.584E-03	1.736E-02	2.742E-02	1.529E-03	-0.240
PR-144	696.51	*		-4.978E-01	1.293E+00	2.041E+00	1.138E-01	-0.244
	1489.16			-6.115E+00	6.770E+00	8.089E+00	6.680E-01	-0.756
PM-146	453.88	*		-3.475E-04	2.019E-02	3.264E-02	2.964E-03	-0.011
	633.25			1.740E-01	7.172E-01	1.233E+00	4.635E-01	0.141
	735.93			-7.348E-02	7.450E-02	9.946E-02	2.727E-02	-0.739
	747.24			-4.094E-02	4.216E-02	5.656E-02	7.626E-03	-0.724
ND-147	91.11			-1.964E-01	8.607E-02	1.198E-01	1.336E-02	-1.640
	319.41			9.939E-02	9.548E-01	1.599E+00	1.061E-01	0.062
	531.02	*		1.322E-01	1.621E-01	2.890E-01	3.968E-02	0.458
PM-149	285.90	*		2.221E+00	3.948E+00	6.898E+00	9.960E-01	0.322
EU-152	121.78			2.901E-02	3.070E-02	5.381E-02	4.420E-03	0.539
	244.70			-1.091E-01	1.348E-01	2.088E-01	1.288E-02	-0.523
	344.28	*		-3.277E-02	4.742E-02	7.228E-02	5.323E-03	-0.453
	778.90			-1.769E-02	1.078E-01	1.726E-01	1.253E-02	-0.103
	964.08			-6.966E-02	1.271E-01	1.849E-01	1.752E-02	-0.377
	1085.87			5.154E-03	1.500E-01	2.435E-01	1.895E-02	0.021
	1112.07			-3.606E-02	1.394E-01	2.113E-01	1.549E-02	-0.171
	1408.01			2.005E-02	9.566E-02	1.651E-01	1.408E-02	0.121
GD-153	69.67			-3.954E-01	7.559E-01	1.192E+00	1.329E-01	-0.332
	97.43	*		6.652E-03	3.186E-02	5.318E-02	4.952E-03	0.125
	103.18			-1.408E-02	4.462E-02	7.067E-02	5.975E-03	-0.199
EU-154	123.07			-5.730E-03	2.171E-02	3.428E-02	3.383E-03	-0.167
	723.31			-1.917E-02	8.265E-02	1.327E-01	9.660E-03	-0.144
	873.19			-1.137E-02	1.288E-01	2.074E-01	2.600E-02	-0.055
	996.26			-1.011E-02	1.640E-01	2.624E-01	4.646E-02	-0.039
	1004.73			3.685E-03	8.722E-02	1.426E-01	1.698E-02	0.026
	1274.44	*		-3.473E-02	5.862E-02	8.535E-02	9.152E-03	-0.407
EU-155	86.55			1.403E-03	3.958E-02	6.528E-02	7.389E-03	0.021

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TB-160	105.31	*		-1.587E-04	4.416E-02	7.201E-02	5.970E-03	-0.002
	86.79			-1.917E-02	9.961E-02	1.612E-01	1.816E-02	-0.119
	197.04			1.031E-03	2.588E-01	3.865E-01	2.217E-02	0.003
	215.65			2.008E-01	2.966E-01	5.289E-01	3.127E-02	0.380
	298.57			1.804E-02	4.836E-02	8.315E-02	5.435E-03	0.217
	879.36	*		5.939E-03	5.757E-02	9.605E-02	9.261E-03	0.062
	962.29			1.322E-01	2.019E-01	3.672E-01	3.486E-02	0.360
	966.15			-1.450E-02	8.021E-02	1.259E-01	1.189E-02	-0.115
	1177.93			-4.194E-03	1.213E-01	2.015E-01	1.257E-02	-0.021
	1271.85			6.543E-02	2.907E-01	5.059E-01	3.891E-02	0.129
HO-166M	80.57			-2.362E-02	1.099E-01	1.779E-01	1.954E-02	-0.133
	184.41			-1.211E-02	1.836E-02	2.828E-02	1.588E-03	-0.428
	280.46			-1.222E-02	4.218E-02	6.858E-02	4.410E-03	-0.178
	410.95			-1.136E-01	1.200E-01	1.726E-01	1.170E-02	-0.658
	711.68	*		-1.226E-02	3.054E-02	4.785E-02	2.808E-03	-0.256
	752.31			-1.578E-02	1.282E-01	2.080E-01	1.392E-02	-0.076
	810.29			-1.977E-02	2.993E-02	4.205E-02	3.351E-03	-0.470
	67.75			-2.535E-02	4.962E-02	7.843E-02	8.860E-03	-0.323
	100.11			-1.852E-02	6.940E-02	1.106E-01	9.825E-03	-0.168
	152.43			-6.691E-02	1.374E-01	2.096E-01	1.203E-02	-0.319
TA-182	222.11			1.172E-01	1.361E-01	2.467E-01	1.473E-02	0.475
	1121.30			-4.879E-02	6.662E-02	9.607E-02	6.886E-03	-0.508
	1189.05			3.887E-02	1.159E-01	2.066E-01	1.323E-02	0.188
	1221.41	*		1.724E-02	6.374E-02	1.128E-01	7.776E-03	0.153
	1231.02			-2.647E-04	1.581E-01	2.636E-01	1.857E-02	-0.001
	295.96			-8.439E-04	4.977E-02	7.951E-02	5.252E-03	-0.011
	308.46			2.850E-03	4.139E-02	6.919E-02	4.597E-03	0.041
	316.51	*		-6.671E-03	1.504E-02	2.374E-02	1.578E-03	-0.281
	468.07			1.900E-02	2.966E-02	5.187E-02	3.850E-03	0.366
	70.83			-6.647E-03	5.358E-01	8.870E-01	1.553E-01	-0.007
HG-203	72.87			-1.816E-01	3.515E-01	5.422E-01	9.201E-02	-0.335
	279.20	*		5.704E-03	1.671E-02	2.870E-02	1.927E-03	0.199
	72.81			-4.834E-02	9.088E-02	1.403E-01	1.543E-02	-0.345
	74.97			-1.235E-02	5.271E-02	8.628E-02	9.445E-03	-0.143
	569.70			-2.233E-02	1.796E-02	2.386E-02	1.423E-03	-0.936
	1063.66	*		1.422E-02	2.303E-02	4.183E-02	3.405E-03	0.340
	1770.23			-3.884E-01	3.362E-01	3.548E-01	2.354E-02	-1.095
	277.37			1.142E-01	1.915E-01	3.348E-01	3.724E-02	0.341
	583.19	*		7.217E-04	2.066E-02	3.503E-02	2.348E-03	0.021
	860.56			7.009E-02	1.170E-01	2.128E-01	2.078E-02	0.329
PB-210	46.54	*		2.584E+00	4.090E+00	6.797E+00	6.670E-01	0.380
	72.87			-8.176E-01	1.579E+00	2.441E+00	2.684E-01	-0.335
	351.06	*		2.437E-03	1.207E-01	1.954E-01	1.425E-02	0.012
	404.85	*		-1.647E-01	3.453E-01	5.153E-01	2.479E-01	-0.320
	427.09			1.727E-01	6.819E-01	1.139E+00	5.236E-01	0.152
	832.01			7.761E-02	4.147E-01	7.018E-01	3.638E-01	0.111
	727.33	*		5.427E-02	2.313E-01	3.970E-01	4.332E-02	0.137
	785.37			8.642E-01	1.268E+00	2.337E+00	1.730E-01	0.370
	1620.50			-5.768E-01	1.537E+00	2.277E+00	1.736E-01	-0.253

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PB-212	74.82			-4.504E-02	1.838E-01	3.005E-01	4.401E-02	-0.150
	77.11			-7.230E-02	9.278E-02	1.432E-01	1.565E-02	-0.505
	238.63	*		1.694E-02	3.095E-02	5.053E-02	3.864E-03	0.335
	300.09			-1.679E-01	3.646E-01	5.785E-01	5.160E-02	-0.290
BI-214	609.32	*		-2.090E-02	4.334E-02	6.379E-02	4.895E-03	-0.328
	1120.29			-1.641E-01	1.632E-01	2.222E-01	2.184E-02	-0.739
	1764.49			-1.170E-02	1.708E-01	2.811E-01	1.877E-02	-0.042
PB-214	74.82			-7.984E-02	3.257E-01	5.326E-01	7.201E-02	-0.150
	77.11			-1.275E-01	1.639E-01	2.524E-01	3.457E-02	-0.505
	242.00			-9.690E-02	1.581E-01	2.520E-01	2.128E-02	-0.385
	295.22			-1.308E-02	7.271E-02	1.145E-01	1.055E-02	-0.114
RN-219	351.93	*		-1.681E-02	4.272E-02	6.636E-02	6.069E-03	-0.253
	271.23			1.158E-02	1.093E-01	1.845E-01	1.559E-02	0.063
	401.81	*		6.934E-02	1.772E-01	3.034E-01	4.215E-02	0.229
RA-223	81.07			-2.681E-02	8.794E-02	1.411E-01	1.552E-02	-0.190
	83.79			4.185E-03	5.660E-02	9.088E-02	1.009E-02	0.046
	94.87			-4.252E-01	2.079E-01	2.742E-01	2.679E-02	-1.550
	144.24			-2.655E-01	3.321E-01	4.648E-01	3.396E-02	-0.571
RA-224	154.21			-8.180E-03	1.537E-01	2.448E-01	1.685E-02	-0.033
	269.46			1.011E-01	8.255E-02	1.521E-01	1.002E-02	0.665
	323.87	*		-1.072E-01	2.865E-01	4.537E-01	7.461E-02	-0.236
	338.28			1.855E-01	4.498E-01	7.720E-01	8.328E-02	0.240
RA-226	240.99	*		-1.048E-01	2.899E-01	4.736E-01	2.907E-02	-0.221
	609.32	*		-2.090E-02	4.334E-02	6.379E-02	4.895E-03	-0.328
	1120.29			-1.641E-01	1.632E-01	2.222E-01	2.184E-02	-0.739
	1764.49			-1.170E-02	1.708E-01	2.811E-01	1.877E-02	-0.042
AC-227	79.69			-1.497E-01	5.061E-01	8.123E-01	1.504E-01	-0.184
	235.96			-4.790E-02	6.779E-02	1.076E-01	8.987E-03	-0.445
	256.23	*		-6.835E-02	1.231E-01	1.962E-01	2.059E-02	-0.348
	299.98			-1.627E-01	4.032E-01	6.436E-01	7.336E-02	-0.253
TH-227	304.50			2.208E-01	6.975E-01	1.196E+00	1.860E-01	0.185
	334.37			-3.276E-01	7.225E-01	1.128E+00	1.647E-01	-0.291
	79.80			-3.352E-01	6.821E-01	1.071E+00	2.442E-01	-0.313
	235.96			-4.790E-02	6.777E-02	1.076E-01	8.195E-03	-0.445
AC-228	256.23	*		-6.835E-02	1.232E-01	1.962E-01	2.403E-02	-0.348
	299.98			-1.627E-01	4.032E-01	6.436E-01	7.336E-02	-0.253
	304.50			2.208E-01	6.975E-01	1.196E+00	1.860E-01	0.185
	334.37			-3.276E-01	7.225E-01	1.128E+00	1.647E-01	-0.291
RA-228	338.32			4.861E-02	1.152E-01	1.952E-01	8.073E-02	0.249
	911.20	*		3.806E-02	7.722E-02	1.412E-01	1.787E-02	0.270
	968.97			5.260E-02	1.206E-01	2.092E-01	5.159E-02	0.251
TH-228	338.32			4.861E-02	1.152E-01	1.952E-01	8.073E-02	0.249
	911.20	*		3.806E-02	7.722E-02	1.412E-01	1.787E-02	0.270
	968.97			5.260E-02	1.206E-01	2.092E-01	5.159E-02	0.251
TH-229	74.82			-4.504E-02	1.837E-01	3.005E-01	3.309E-02	-0.150
	77.11			-7.230E-02	9.278E-02	1.432E-01	1.565E-02	-0.505
	238.63	*		1.694E-02	3.095E-02	5.053E-02	3.864E-03	0.335
	300.09			-1.679E-01	3.784E-01	5.785E-01	3.527E-01	-0.290
TH-229	85.43			-4.745E-02	9.297E-02	1.420E-01	1.588E-02	-0.334

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		88.47		4.117E-03	4.715E-02	7.805E-02	8.755E-03	0.053
		193.51	*	-2.088E-01	2.411E-01	3.476E-01	1.982E-02	-0.601
		210.85		1.417E-01	3.653E-01	6.379E-01	3.743E-02	0.222
PA-231		283.69	*	3.449E-02	7.006E-01	1.174E+00	1.575E-01	0.029
		301.36		-1.809E-02	2.365E-01	3.899E-01	4.204E-02	-0.046
TH-231		81.07		-2.681E-02	8.794E-02	1.411E-01	1.552E-02	-0.190
		83.79		4.185E-03	5.660E-02	9.088E-02	1.009E-02	0.046
		94.87		-4.252E-01	2.079E-01	2.742E-01	2.679E-02	-1.550
		144.24		-2.655E-01	3.321E-01	4.648E-01	3.396E-02	-0.571
		154.21		-8.180E-03	1.537E-01	2.448E-01	1.685E-02	-0.033
		269.46		1.011E-01	8.255E-02	1.521E-01	1.002E-02	0.665
		323.87	*	-1.072E-01	2.865E-01	4.537E-01	7.461E-02	-0.236
		338.28		1.855E-01	4.498E-01	7.720E-01	8.328E-02	0.240
TH-232		338.32		4.861E-02	1.135E-01	1.952E-01	1.308E-02	0.249
		911.20	*	3.806E-02	7.722E-02	1.412E-01	1.787E-02	0.270
		968.97		5.260E-02	1.206E-01	2.092E-01	5.159E-02	0.251
PA-233		300.13		-8.720E-02	1.814E-01	2.868E-01	3.936E-02	-0.304
		311.90	*	1.206E-02	2.917E-02	5.043E-02	3.491E-03	0.239
		340.48		4.755E-03	2.944E-01	4.865E-01	1.141E-01	0.010
PA-234		94.67		-9.747E-02	7.188E-02	1.020E-01	1.353E-02	-0.955
		98.44		5.344E-03	3.622E-02	5.988E-02	3.346E-02	0.089
		111.00		-6.885E-02	7.595E-02	1.121E-01	1.272E-02	-0.614
		131.20		-3.204E-03	4.663E-02	7.485E-02	4.689E-03	-0.043
		569.50		-1.842E-01	1.610E-01	2.182E-01	1.302E-02	-0.844
		733.00		1.300E-01	1.637E-01	3.010E-01	6.441E-02	0.432
		880.51		5.714E-02	1.288E-01	2.273E-01	2.199E-02	0.251
		883.24		5.724E-02	1.325E-01	2.249E-01	1.515E-01	0.255
		926.50		2.167E-02	7.720E-02	1.325E-01	3.408E-02	0.164
		946.00	*	5.336E-03	1.265E-01	2.077E-01	4.002E-02	0.026
		949.00		-6.146E-02	2.051E-01	3.135E-01	3.021E-02	-0.196
PA-234M		766.42		2.015E-01	4.961E+00	8.250E+00	4.165E+00	0.024
		1001.03	*	4.157E-01	2.293E+00	3.676E+00	3.794E-01	0.113
TH-234		63.29	*	-9.327E-01	8.660E-01	1.250E+00	2.506E-01	-0.746
		92.59		-3.983E-02	3.279E-01	5.542E-01	1.261E-01	-0.072
U-235		89.96		-7.507E-01	4.154E-01	5.056E-01	1.288E-01	-1.485
		93.35		-1.226E-01	2.399E-01	3.930E-01	9.306E-02	-0.312
		143.76	*	-6.006E-02	9.709E-02	1.373E-01	2.164E-02	-0.437
		163.33		-1.808E-01	2.177E-01	2.919E-01	4.871E-02	-0.619
		185.72		-1.048E-03	2.316E-02	3.738E-02	2.104E-03	-0.028
		205.31		1.581E-01	2.303E-01	3.939E-01	6.694E-02	0.401
NP-237		86.48	*	1.201E-03	9.762E-02	1.607E-01	3.824E-02	0.007
		95.86		-6.885E-01	4.230E-01	5.305E-01	1.292E-01	-1.298
U-238		63.29	*	-9.327E-01	8.660E-01	1.250E+00	2.506E-01	-0.746
		92.59		-3.983E-02	3.278E-01	5.542E-01	5.670E-02	-0.072
NP-239		99.53		-9.877E-03	6.607E-02	1.065E-01	9.556E-03	-0.093
		103.37		-1.749E-02	4.177E-02	6.548E-02	5.519E-03	-0.267
		106.12		1.127E-02	3.592E-02	6.016E-02	4.865E-03	0.187
		117.23	*	-4.635E-02	1.556E-01	2.449E-01	1.708E-02	-0.189
		228.18		1.151E-01	9.537E-02	1.760E-01	1.061E-02	0.654

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	277.60			5.959E-02	8.688E-02	1.531E-01	9.819E-03	0.389
AM-241	59.54	*		9.220E-02	9.799E-02	1.741E-01	2.236E-02	0.530
CM-247	278.00			2.729E-01	3.712E-01	6.565E-01	4.211E-02	0.416
	287.50			-4.780E-01	6.109E-01	9.424E-01	6.101E-02	-0.507
	402.40	*		-2.227E-03	1.677E-02	2.693E-02	1.828E-03	-0.083
CF-249	252.80			-1.690E-01	4.664E-01	7.585E-01	4.729E-02	-0.223
	333.37			-2.575E-02	7.071E-02	1.115E-01	7.455E-03	-0.231
	388.16	*		1.619E-02	1.886E-02	3.381E-02	2.297E-03	0.479
CF-251	177.52	*		-1.243E-02	5.886E-02	9.171E-02	5.093E-03	-0.136
	227.38			1.732E-01	1.496E-01	2.763E-01	1.663E-02	0.627
	285.41			7.249E-01	1.035E+00	1.833E+00	1.184E-01	0.396
ANH-511	511.00	*		-3.095E-02	2.845E-02	5.076E-02	3.252E-03	-0.610

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]G1202052272
* Acquisition date   : 5-MAR-2010 10:54:48 Detector SN#      :
* Detector ID        : GAM10                               Sensitivity      : 5.000
* Geometry           : CAN                                  Energy tolerance: 1.500
* Elapsed live time  : 0 02:00:00.00                       Abundance limit : 75.000
* Elapsed real time  : 0 02:00:00.38                       Half life ratio  : 8.000
*****
*
*                               SAMPLE DATA
*
* Sample date        : 26-FEB-2010 00:00:00 Nuclide Library : SOLID
* Sample ID          : G1202052272                      Analyst initials: MXR1
* Batch Number       : 957136                            Sample Quantity : 1.4398E+02 GRAM
* Recovery           : 1.00000                           Carrier Weight  : 0.00000
*****
*
*                               QC DATA
*
* Standard Weight    : 0.00000
* CALIB. DATE/TIME   : 16-MAR-2009 13:18:08 MS Isotope      :
* MSD DPM            : 0.000                               MSD Isotope      :
* LCS DPM            : 0.000                               LCS Isotope      :
* LCSD DPM           : 0.000                               LCSD Isotope     :
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Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)
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---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error) Ided	MDA (pCi/GRAM)	
BE-7	-1.847E-03	1.424E-01	2.415E-01	0.000E+00 NOT IDENT.
NA-22	-8.205E-03	1.939E-02	3.025E-02	0.000E+00 NOT IDENT.
NA-24	0.000E+00	7.423E+01	0.000E+00	0.000E+00 SHORT HLIF
K-40	-3.727E-02	2.536E-01	4.726E-01	0.000E+00 NOT IDENT.
SC-46	5.776E-03	1.302E-02	2.426E-02	0.000E+00 NOT IDENT.
V-48	-5.735E-03	2.025E-02	3.175E-02	0.000E+00 NOT IDENT.
CR-51	1.529E-03	1.372E-01	2.414E-01	0.000E+00 NOT IDENT.
MN-54	-8.030E-04	1.636E-02	2.768E-02	0.000E+00 NOT IDENT.
CO-56	-9.967E-03	1.984E-02	3.120E-02	0.000E+00 NOT IDENT.
CO-57	1.049E-02	1.013E-02	1.936E-02	0.000E+00 NOT IDENT.
CO-58	-1.332E-02	1.667E-02	2.439E-02	0.000E+00 NOT IDENT.
FE-59	-3.483E-03	3.119E-02	5.034E-02	0.000E+00 NOT IDENT.
CO-60	7.949E-04	1.973E-02	3.389E-02	0.000E+00 NOT IDENT.
ZN-65	3.467E-02	3.987E-02	7.637E-02	0.000E+00 NOT IDENT.
SE-75	1.665E-03	1.938E-02	3.483E-02	0.000E+00 NOT IDENT.
SR-85	-2.843E-02	2.662E-02	4.080E-02	0.000E+00 NOT IDENT.
Y-88	1.438E-02	1.263E-02	2.988E-02	0.000E+00 NOT IDENT.
Y-91	2.643E+00	7.198E+00	1.330E+01	0.000E+00 NOT IDENT.
NB-94	-1.184E-03	1.642E-02	2.821E-02	0.000E+00 NOT IDENT.
NB-95	2.702E-04	1.639E-02	2.828E-02	0.000E+00 NOT IDENT.
NB-95M	-3.901E-02	5.059E-02	8.534E-02	0.000E+00 NOT IDENT.
ZR-95	8.804E-03	2.947E-02	5.310E-02	0.000E+00 NOT IDENT.
MO-99	6.398E-01	8.549E-01	1.621E+00	0.000E+00 NOT IDENT.
TC-99M	0.000E+00	1.022E+07	0.000E+00	0.000E+00 SHORT HLIF
RU-103	-1.294E-02	1.931E-02	2.987E-02	0.000E+00 NOT IDENT.
RH-106	1.176E-05	1.280E-01	2.245E-01	0.000E+00 NOT IDENT.

RU-106	1.176E-05	1.280E-01	2.245E-01	0.000E+00	NOT IDENT.
AG-108M	7.544E-03	1.472E-02	2.668E-02	0.000E+00	NOT IDENT.
CD-109	1.316E-02	3.062E-01	5.505E-01	0.000E+00	NOT IDENT.
AG-110M	-2.367E-03	1.439E-02	2.448E-02	0.000E+00	NOT IDENT.
SN-113	-1.137E-02	1.927E-02	3.084E-02	0.000E+00	NOT IDENT.
CD-115	-2.023E-01	4.841E-01	7.618E-01	0.000E+00	NOT IDENT.
SN-117M	-1.266E-02	1.502E-02	2.362E-02	0.000E+00	NOT IDENT.
TE-123M	-5.519E-03	1.094E-02	1.787E-02	0.000E+00	NOT IDENT.
SB-124	1.826E-04	3.437E-02	5.721E-02	0.000E+00	NOT IDENT.
SB-125	-1.506E-03	4.079E-02	6.962E-02	0.000E+00	NOT IDENT.
TE-125M	1.827E-01	3.564E+00	6.328E+00	0.000E+00	NOT IDENT.
I-126	1.715E-02	6.942E-02	1.248E-01	0.000E+00	NOT IDENT.
SB-126	-9.161E-03	4.330E-02	7.258E-02	0.000E+00	NOT IDENT.
SN-126	6.455E-04	3.065E-02	5.503E-02	0.000E+00	NOT IDENT.
SB-127	1.362E-01	1.537E-01	2.985E-01	0.000E+00	NOT IDENT.
I-131	1.209E-02	2.714E-02	4.951E-02	0.000E+00	NOT IDENT.
TE-132	7.415E-02	6.065E-02	1.184E-01	0.000E+00	NOT IDENT.
BA-133	-5.388E-03	1.824E-02	3.066E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	5.943E+00	0.000E+00	0.000E+00	SHORT HLIF
CS-134	1.875E-02	1.928E-02	3.803E-02	0.000E+00	NOT IDENT.
CS-135	-3.983E-03	6.994E-02	1.240E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	9.345E+06	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-8.612E-03	2.777E-02	4.275E-02	0.000E+00	NOT IDENT.
BA-137M	-4.439E-03	1.724E-02	2.904E-02	0.000E+00	NOT IDENT.
CS-137	-4.689E-03	1.821E-02	3.068E-02	0.000E+00	NOT IDENT.
CE-139	1.414E-03	1.263E-02	2.192E-02	0.000E+00	NOT IDENT.
BA-140	6.249E-02	8.043E-02	1.462E-01	0.000E+00	NOT IDENT.
LA-140	-2.473E-02	2.752E-02	3.204E-02	0.000E+00	NOT IDENT.
CE-141	-1.212E-02	2.255E-02	3.716E-02	0.000E+00	NOT IDENT.
CE-143	-1.629E+00	1.363E+00	1.990E+00	0.000E+00	NOT IDENT.
CE-144	-3.320E-02	8.704E-02	1.466E-01	0.000E+00	NOT IDENT.
PM-144	-6.584E-03	1.701E-02	2.803E-02	0.000E+00	NOT IDENT.
PR-144	-4.978E-01	1.267E+00	2.086E+00	0.000E+00	NOT IDENT.
PM-146	-3.475E-04	1.978E-02	3.368E-02	0.000E+00	NOT IDENT.
ND-147	1.322E-01	1.588E-01	2.972E-01	0.000E+00	NOT IDENT.
PM-149	2.221E+00	3.869E+00	7.190E+00	0.000E+00	NOT IDENT.
EU-152	-3.277E-02	4.647E-02	7.503E-02	0.000E+00	NOT IDENT.
GD-153	6.652E-03	3.123E-02	5.670E-02	0.000E+00	NOT IDENT.
EU-154	-3.473E-02	5.745E-02	8.605E-02	0.000E+00	NOT IDENT.
EU-155	-1.587E-04	4.328E-02	7.665E-02	0.000E+00	NOT IDENT.
TB-160	5.939E-03	5.641E-02	9.765E-02	0.000E+00	NOT IDENT.
HO-166M	-1.226E-02	2.992E-02	4.888E-02	0.000E+00	NOT IDENT.
TA-182	1.724E-02	6.246E-02	1.138E-01	0.000E+00	NOT IDENT.
IR-192	-6.671E-03	1.474E-02	2.468E-02	0.000E+00	NOT IDENT.
HG-203	5.704E-03	1.637E-02	2.993E-02	0.000E+00	NOT IDENT.
BI-207	1.422E-02	2.257E-02	4.235E-02	0.000E+00	NOT IDENT.
TL-208	7.217E-04	2.025E-02	3.594E-02	0.000E+00	NOT IDENT.
PB-210	2.584E+00	4.009E+00	7.356E+00	0.000E+00	NOT IDENT.
BI-211	2.437E-03	1.183E-01	2.027E-01	0.000E+00	NOT IDENT.
PB-211	-1.647E-01	3.384E-01	5.331E-01	0.000E+00	NOT IDENT.
BI-212	5.427E-02	2.267E-01	4.053E-01	0.000E+00	NOT IDENT.
PB-212	1.694E-02	3.033E-02	5.287E-02	0.000E+00	NOT IDENT.
BI-214	-2.090E-02	4.248E-02	6.540E-02	0.000E+00	NOT IDENT.
PB-214	-1.681E-02	4.187E-02	6.885E-02	0.000E+00	NOT IDENT.
RN-219	6.934E-02	1.736E-01	3.138E-01	0.000E+00	NOT IDENT.
RA-223	-1.072E-01	2.807E-01	4.716E-01	0.000E+00	NOT IDENT.
RA-224	-1.048E-01	2.841E-01	4.954E-01	0.000E+00	NOT IDENT.
RA-226	-2.090E-02	4.248E-02	6.540E-02	0.000E+00	NOT IDENT.
AC-227	-6.835E-02	1.207E-01	2.050E-01	0.000E+00	NOT IDENT.
TH-227	-6.835E-02	1.207E-01	2.050E-01	0.000E+00	NOT IDENT.
AC-228	3.806E-02	7.568E-02	1.434E-01	0.000E+00	NOT IDENT.
RA-228	3.806E-02	7.568E-02	1.434E-01	0.000E+00	NOT IDENT.
TH-228	1.694E-02	3.033E-02	5.287E-02	0.000E+00	NOT IDENT.
TH-229	-2.088E-01	2.363E-01	3.653E-01	0.000E+00	NOT IDENT.
PA-231	3.449E-02	6.866E-01	1.223E+00	0.000E+00	NOT IDENT.
TH-231	-1.072E-01	2.807E-01	4.716E-01	0.000E+00	NOT IDENT.
TH-232	3.806E-02	7.568E-02	1.434E-01	0.000E+00	NOT IDENT.
PA-233	1.206E-02	2.858E-02	5.246E-02	0.000E+00	NOT IDENT.
PA-234	5.336E-03	1.240E-01	2.108E-01	0.000E+00	NOT IDENT.
PA-234M	4.157E-01	2.247E+00	3.727E+00	0.000E+00	NOT IDENT.
TH-234	-9.327E-01	8.487E-01	1.344E+00	0.000E+00	NOT IDENT.
U-235	-6.006E-02	9.515E-02	1.452E-01	0.000E+00	NOT IDENT.
NP-237	1.201E-03	9.567E-02	1.717E-01	0.000E+00	NOT IDENT.
U-238	-9.327E-01	8.487E-01	1.344E+00	0.000E+00	NOT IDENT.
NP-239	-4.635E-02	1.525E-01	2.601E-01	0.000E+00	NOT IDENT.
AM-241	9.220E-02	9.603E-02	1.875E-01	0.000E+00	NOT IDENT.
CM-247	-2.227E-03	1.643E-02	2.786E-02	0.000E+00	NOT IDENT.
CF-249	1.619E-02	1.849E-02	3.501E-02	0.000E+00	NOT IDENT.

CF-251	-1.243E-02	5.768E-02	9.656E-02	0.000E+00	NOT IDENT.
ANH-511	-3.095E-02	2.789E-02	5.224E-02	0.000E+00	NOT IDENT.


```
*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                           *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202052272.CNF;1
Sample date        : 26-FEB-2010 00:00:00 Acquisition date : 5-MAR-2010 10:54:48.
Sample ID          : G1202052272 Sample quantity   : 1.43980E+02 GRAM
Detector name      : GAM10 Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00 Elapsed real time: 0 02:00:00.38 0.0%
Energy tolerance   : 1.50000 keV Analyst Initials : MXR1
Abundance limit    : 75.00000 Sensitivity          : 5.00000
Batch ID           : 957136 Detector SN#          :
Matrix Spike ID    : LCS ID                        : 1032-A
*****
```

Nuclide Line Activity Report

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : G1202052272

Page : 2
Acquisition date : 5-MAR-2010 10:54:48

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G1202052272

Page : 3
Acquisition date : 5-MAR-2010 10:54:48

None

Flags: "T" = Tentatively associated


```

*****
*                                     GEL Laboratories LLC
*                                     2040 Savage Road
*                                     Charleston, SC 29414
*****
*
*                               DETECTOR DATA
*
* Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202052272.CNF;1
* Acquisition date   : 5-MAR-2010 10:54:48. Detector SN#      :
* Detector ID        : GAM10 Sensitivity      : 5.00000
* Geometry           : CAN Energy tolerance: 1.50000
* Elapsed live time  : 0 02:00:00.00 Abundance limit : 75.00000
* Elapsed real time  : 0 02:00:00.38 Half life ratio : 8.00000
*****
*
*                               SAMPLE DATA
*
* Sample date        : 26-FEB-2010 00:00:00 Nuclide Library : SOLID
* Sample ID          : G1202052272 Analyst initials: MXR1
* Batch Number       : 957136 Sample Quantity : 1.43980E+02 GRAM
*****
*
*                               QC DATA
*
* CALIB. DATE/TIME   : 16-MAR-2009 13:18:08.8MS Isotope      :
* MSD ID              : MSD Isotope      :
* LCS ID              : 1032-A LCS Isotope :
*****

```

Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-1.847E-03		1.453E-01	2.343E-01	1.742E-02	-0.008
NA-22	-8.205E-03		1.978E-02	3.001E-02	2.324E-03	-0.273
NA-24	-3.503E-05		3.787E-05	Half-Life too short		
K-40	-3.727E-02		2.587E-01	4.703E-01	4.051E-02	-0.079
SC-46	5.776E-03		1.329E-02	2.387E-02	2.362E-03	0.242
V-48	-5.735E-03		2.066E-02	3.131E-02	2.895E-03	-0.183
CR-51	1.529E-03		1.400E-01	2.322E-01	1.675E-02	0.007
MN-54	-8.030E-04		1.669E-02	2.720E-02	2.323E-03	-0.030
CO-56	-9.967E-03		2.024E-02	3.066E-02	2.707E-03	-0.325
CO-57	1.049E-02		1.034E-02	1.825E-02	1.204E-03	0.575
CO-58	-1.332E-02		1.701E-02	2.394E-02	1.916E-03	-0.556
FE-59	-3.483E-03		3.183E-02	4.977E-02	4.152E-03	-0.070
CO-60	7.949E-04		2.013E-02	3.365E-02	2.924E-03	0.024
ZN-65	3.467E-02		4.068E-02	7.552E-02	5.500E-03	0.459
SE-75	1.665E-03		1.978E-02	3.336E-02	2.129E-03	0.050
SR-85	-2.843E-02		2.716E-02	3.965E-02	2.533E-03	-0.717
Y-88	1.438E-02		1.289E-02	2.989E-02	1.834E-03	0.481

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
Y-91	2.643E+00		7.345E+00	1.317E+01	8.747E-01	0.201
NB-94	-1.184E-03		1.676E-02	2.761E-02	1.572E-03	-0.043
NB-95	2.702E-04		1.673E-02	2.772E-02	1.935E-03	0.010
NB-95M	-3.901E-02		5.162E-02	8.154E-02	6.345E-03	-0.478
ZR-95	8.804E-03		3.007E-02	5.205E-02	4.112E-03	0.169
MO-99	6.398E-01		8.723E-01	1.588E+00	2.330E-01	0.403
TC-99M	-9.774E-01		5.217E+00	Half-Life too short		
RU-103	-1.294E-02		1.971E-02	2.900E-02	3.701E-03	-0.446
RH-106	1.176E-05		1.306E-01	2.191E-01	2.506E-02	0.000
RU-106	1.176E-05		1.306E-01	2.191E-01	1.190E-02	0.000
AG-108M	7.544E-03		1.502E-02	2.583E-02	1.832E-03	0.292
CD-109	1.316E-02		3.124E-01	5.153E-01	5.842E-02	0.026
AG-110M	-2.367E-03		1.468E-02	2.392E-02	1.296E-03	-0.099
SN-113	-1.137E-02		1.966E-02	2.979E-02	2.124E-03	-0.382
CD-115	-2.023E-01		4.940E-01	7.407E-01	4.663E-02	-0.273
SN-117M	-1.266E-02		1.532E-02	2.238E-02	1.255E-03	-0.565
TE-123M	-5.519E-03		1.116E-02	1.694E-02	9.619E-04	-0.326
SB-124	1.826E-04		3.508E-02	5.712E-02	4.353E-03	0.003
SB-125	-1.506E-03		4.162E-02	6.739E-02	4.688E-03	-0.022
TE-125M	1.827E-01		3.637E+00	5.950E+00	5.800E-01	0.031
I-126	1.715E-02		7.084E-02	1.220E-01	6.121E-03	0.141
SB-126	-9.161E-03		4.418E-02	7.107E-02	4.297E-03	-0.129
SN-126	6.455E-04		3.128E-02	5.151E-02	5.829E-03	0.013
SB-127	1.362E-01		1.569E-01	2.920E-01	1.977E-02	0.466
I-131	1.209E-02		2.769E-02	4.775E-02	3.487E-03	0.253
TE-132	7.415E-02		6.188E-02	1.131E-01	1.504E-02	0.656
BA-133	-5.388E-03		1.861E-02	2.955E-02	3.485E-03	-0.182
I-133	4.006E-06		3.032E-06	Half-Life too short		
CS-134	1.875E-02		1.967E-02	3.732E-02	2.877E-03	0.502
CS-135	-3.983E-03		7.137E-02	1.188E-01	9.600E-03	-0.034
I-135	2.727E+00		4.768E+00	Half-Life too short		
CS-136	-8.612E-03		2.834E-02	4.221E-02	3.691E-03	-0.204
BA-137M	-4.439E-03		1.759E-02	2.838E-02	1.400E-03	-0.156
CS-137	-4.689E-03		1.858E-02	2.998E-02	1.488E-03	-0.156
CE-139	1.414E-03		1.289E-02	2.079E-02	1.135E-03	0.068
BA-140	6.249E-02		8.207E-02	1.422E-01	4.747E-02	0.439
LA-140	-2.473E-02		2.808E-02	3.194E-02	2.479E-03	-0.774
CE-141	-1.212E-02		2.301E-02	3.515E-02	2.151E-03	-0.345
CE-143	-1.629E+00		1.391E+00	1.911E+00	3.881E-01	-0.853
CE-144	-3.320E-02		8.881E-02	1.384E-01	1.946E-02	-0.240
PM-144	-6.584E-03		1.736E-02	2.742E-02	1.529E-03	-0.240
PR-144	-4.978E-01		1.293E+00	2.041E+00	1.138E-01	-0.244
PM-146	-3.475E-04		2.019E-02	3.264E-02	2.964E-03	-0.011
ND-147	1.322E-01		1.621E-01	2.890E-01	3.968E-02	0.458
PM-149	2.221E+00		3.948E+00	6.898E+00	9.960E-01	0.322
EU-152	-3.277E-02		4.742E-02	7.228E-02	5.323E-03	-0.453
GD-153	6.652E-03		3.186E-02	5.318E-02	4.952E-03	0.125
EU-154	-3.473E-02		5.862E-02	8.535E-02	9.152E-03	-0.407

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-155	-1.587E-04		4.416E-02	7.201E-02	5.970E-03	-0.002
TB-160	5.939E-03		5.757E-02	9.605E-02	9.261E-03	0.062
HO-166M	-1.226E-02		3.054E-02	4.785E-02	2.808E-03	-0.256
TA-182	1.724E-02		6.374E-02	1.128E-01	7.776E-03	0.153
IR-192	-6.671E-03		1.504E-02	2.374E-02	1.578E-03	-0.281
HG-203	5.704E-03		1.671E-02	2.870E-02	1.927E-03	0.199
BI-207	1.422E-02		2.303E-02	4.183E-02	3.405E-03	0.340
TL-208	7.217E-04		2.066E-02	3.503E-02	2.348E-03	0.021
PB-210	2.584E+00		4.090E+00	6.797E+00	6.670E-01	0.380
BI-211	2.437E-03		1.207E-01	1.954E-01	1.425E-02	0.012
PB-211	-1.647E-01		3.453E-01	5.153E-01	2.479E-01	-0.320
BI-212	5.427E-02		2.313E-01	3.970E-01	4.332E-02	0.137
PB-212	1.694E-02		3.095E-02	5.053E-02	3.864E-03	0.335
BI-214	-2.090E-02		4.334E-02	6.379E-02	4.895E-03	-0.328
PB-214	-1.681E-02		4.272E-02	6.636E-02	6.069E-03	-0.253
RN-219	6.934E-02		1.772E-01	3.034E-01	4.215E-02	0.229
RA-223	-1.072E-01		2.865E-01	4.537E-01	7.461E-02	-0.236
RA-224	-1.048E-01		2.899E-01	4.736E-01	2.907E-02	-0.221
RA-226	-2.090E-02		4.334E-02	6.379E-02	4.895E-03	-0.328
AC-227	-6.835E-02		1.231E-01	1.962E-01	2.059E-02	-0.348
TH-227	-6.835E-02		1.232E-01	1.962E-01	2.403E-02	-0.348
AC-228	3.806E-02		7.722E-02	1.412E-01	1.787E-02	0.270
RA-228	3.806E-02		7.722E-02	1.412E-01	1.787E-02	0.270
TH-228	1.694E-02		3.095E-02	5.053E-02	3.864E-03	0.335
TH-229	-2.088E-01		2.411E-01	3.476E-01	1.982E-02	-0.601
PA-231	3.449E-02		7.006E-01	1.174E+00	1.575E-01	0.029
TH-231	-1.072E-01		2.865E-01	4.537E-01	7.461E-02	-0.236
TH-232	3.806E-02		7.722E-02	1.412E-01	1.787E-02	0.270
PA-233	1.206E-02		2.917E-02	5.043E-02	3.491E-03	0.239
PA-234	5.336E-03		1.265E-01	2.077E-01	4.002E-02	0.026
PA-234M	4.157E-01		2.293E+00	3.676E+00	3.794E-01	0.113
TH-234	-9.327E-01		8.660E-01	1.250E+00	2.506E-01	-0.746
U-235	-6.006E-02		9.709E-02	1.373E-01	2.164E-02	-0.437
NP-237	1.201E-03		9.762E-02	1.607E-01	3.824E-02	0.007
U-238	-9.327E-01		8.660E-01	1.250E+00	2.506E-01	-0.746
NP-239	-4.635E-02		1.556E-01	2.449E-01	1.708E-02	-0.189
AM-241	9.220E-02		9.799E-02	1.741E-01	2.236E-02	0.530
CM-247	-2.227E-03		1.677E-02	2.693E-02	1.828E-03	-0.083
CF-249	1.619E-02		1.886E-02	3.381E-02	2.297E-03	0.479
CF-251	-1.243E-02		5.886E-02	9.171E-02	5.093E-03	-0.136
ANH-511	-3.095E-02		2.845E-02	5.076E-02	3.252E-03	-0.610

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]G1202052272          *
* Acquisition date   : 5-MAR-2010 10:54:48 Detector SN#      :              *
* Detector ID        : GAM10 Sensitivity      : 5.000          *
* Geometry           : CAN Energy tolerance: 1.500          *
* Elapsed live time  : 0 02:00:00.00 Abundance limit : 75.000   *
* Elapsed real time  : 0 02:00:00.38 Half life ratio : 8.000   *
*****
*
*                                     SAMPLE DATA                            *
*
* Sample date        : 26-FEB-2010 00:00:00 Nuclide Library : SOLID          *
* Sample ID          : G1202052272 Analyst initials: MXR1          *
* Batch Number       : 957136 Sample Quantity : 1.4398E+02 GRAM   *
* Recovery           : 1.00000 Carrier Weight : 0.00000          *
*****
*
*                                     QC DATA                               *
*
* CALIB. DATE/TIME  : 16-MAR-2009 13:18:08 MS Isotope      :              *
* MSD DPM           : 0.000 MSD Isotope      :              *
* LCS DPM           : 0.000 LCS Isotope      :              *
* LCSD DPM          : 0.000 LCSD Isotope     :              *
*****

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Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act Error	DLC (pCi/GRAM)	TPU
---- Non-Identified Nuclides ----				
BE-7	-1.847E-03	1.424E-01	1.208E-01	7.267E-02 NOT IDENT.
NA-22	-8.205E-03	1.939E-02	1.513E-02	9.892E-03 NOT IDENT.
NA-24	-3.503E+01	7.423E+01	0.000E+00	3.787E+01 SHORT HLIF
K-40	-3.727E-02	2.536E-01	2.364E-01	1.294E-01 NOT IDENT.
SC-46	5.776E-03	1.302E-02	1.214E-02	6.645E-03 NOT IDENT.
V-48	-5.735E-03	2.025E-02	1.588E-02	1.033E-02 NOT IDENT.
CR-51	1.529E-03	1.372E-01	1.208E-01	7.002E-02 NOT IDENT.
MN-54	-8.030E-04	1.636E-02	1.385E-02	8.346E-03 NOT IDENT.
CO-56	-9.967E-03	1.984E-02	1.561E-02	1.012E-02 NOT IDENT.
CO-57	1.049E-02	1.013E-02	9.687E-03	5.168E-03 NOT IDENT.
CO-58	-1.332E-02	1.667E-02	1.220E-02	8.506E-03 NOT IDENT.
FE-59	-3.483E-03	3.119E-02	2.519E-02	1.591E-02 NOT IDENT.
CO-60	7.949E-04	1.973E-02	1.695E-02	1.006E-02 NOT IDENT.
ZN-65	3.467E-02	3.987E-02	3.821E-02	2.034E-02 NOT IDENT.
SE-75	1.665E-03	1.938E-02	1.742E-02	9.888E-03 NOT IDENT.
SR-85	-2.843E-02	2.662E-02	2.041E-02	1.358E-02 NOT IDENT.
Y-88	1.438E-02	1.263E-02	1.495E-02	6.444E-03 NOT IDENT.
Y-91	2.643E+00	7.198E+00	6.653E+00	3.673E+00 NOT IDENT.
NB-94	-1.184E-03	1.642E-02	1.411E-02	8.379E-03 NOT IDENT.
NB-95	2.702E-04	1.639E-02	1.415E-02	8.364E-03 NOT IDENT.
NB-95M	-3.901E-02	5.059E-02	4.270E-02	2.581E-02 NOT IDENT.
ZR-95	8.804E-03	2.947E-02	2.657E-02	1.504E-02 NOT IDENT.
MO-99	6.398E-01	8.549E-01	8.108E-01	4.361E-01 NOT IDENT.
TC-99M	-9.774E+05	1.022E+07	0.000E+00	5.217E+06 SHORT HLIF
RU-103	-1.294E-02	1.931E-02	1.494E-02	9.853E-03 NOT IDENT.
RH-106	1.176E-05	1.280E-01	1.123E-01	6.531E-02 NOT IDENT.

RU-106	1.176E-05	1.280E-01	1.123E-01	6.531E-02	NOT IDENT.
AG-108M	7.544E-03	1.472E-02	1.335E-02	7.509E-03	NOT IDENT.
CD-109	1.316E-02	3.062E-01	2.754E-01	1.562E-01	NOT IDENT.
AG-110M	-2.367E-03	1.439E-02	1.225E-02	7.342E-03	NOT IDENT.
SN-113	-1.137E-02	1.927E-02	1.543E-02	9.829E-03	NOT IDENT.
CD-115	-2.023E-01	4.841E-01	3.811E-01	2.470E-01	NOT IDENT.
SN-117M	-1.266E-02	1.502E-02	1.182E-02	7.662E-03	NOT IDENT.
TE-123M	-5.519E-03	1.094E-02	8.942E-03	5.580E-03	NOT IDENT.
SB-124	1.826E-04	3.437E-02	2.862E-02	1.754E-02	NOT IDENT.
SB-125	-1.506E-03	4.079E-02	3.483E-02	2.081E-02	NOT IDENT.
TE-125M	1.827E-01	3.564E+00	3.166E+00	1.819E+00	NOT IDENT.
I-126	1.715E-02	6.942E-02	6.246E-02	3.542E-02	NOT IDENT.
SB-126	-9.161E-03	4.330E-02	3.631E-02	2.209E-02	NOT IDENT.
SN-126	6.455E-04	3.065E-02	2.753E-02	1.564E-02	NOT IDENT.
SB-127	1.362E-01	1.537E-01	1.493E-01	7.844E-02	NOT IDENT.
I-131	1.209E-02	2.714E-02	2.477E-02	1.385E-02	NOT IDENT.
TE-132	7.415E-02	6.065E-02	5.925E-02	3.094E-02	NOT IDENT.
BA-133	-5.388E-03	1.824E-02	1.534E-02	9.304E-03	NOT IDENT.
I-133	4.006E+00	5.943E+00	0.000E+00	3.032E+00	SHORT HLIF
CS-134	1.875E-02	1.928E-02	1.902E-02	9.836E-03	NOT IDENT.
CS-135	-3.983E-03	6.994E-02	6.203E-02	3.569E-02	NOT IDENT.
I-135	2.727E+06	9.345E+06	0.000E+00	4.768E+06	SHORT HLIF
CS-136	-8.612E-03	2.777E-02	2.139E-02	1.417E-02	NOT IDENT.
BA-137M	-4.439E-03	1.724E-02	1.453E-02	8.794E-03	NOT IDENT.
CS-137	-4.689E-03	1.821E-02	1.535E-02	9.290E-03	NOT IDENT.
CE-139	1.414E-03	1.263E-02	1.096E-02	6.446E-03	NOT IDENT.
BA-140	6.249E-02	8.043E-02	7.313E-02	4.103E-02	NOT IDENT.
LA-140	-2.473E-02	2.752E-02	1.603E-02	1.404E-02	NOT IDENT.
CE-141	-1.212E-02	2.255E-02	1.859E-02	1.151E-02	NOT IDENT.
CE-143	-1.629E+00	1.363E+00	9.958E-01	6.954E-01	NOT IDENT.
CE-144	-3.320E-02	8.704E-02	7.334E-02	4.441E-02	NOT IDENT.
PM-144	-6.584E-03	1.701E-02	1.402E-02	8.679E-03	NOT IDENT.
PR-144	-4.978E-01	1.267E+00	1.044E+00	6.465E-01	NOT IDENT.
PM-146	-3.475E-04	1.978E-02	1.685E-02	1.009E-02	NOT IDENT.
ND-147	1.322E-01	1.588E-01	1.487E-01	8.103E-02	NOT IDENT.
PM-149	2.221E+00	3.869E+00	3.597E+00	1.974E+00	NOT IDENT.
EU-152	-3.277E-02	4.647E-02	3.754E-02	2.371E-02	NOT IDENT.
GD-153	6.652E-03	3.123E-02	2.837E-02	1.593E-02	NOT IDENT.
EU-154	-3.473E-02	5.745E-02	4.305E-02	2.931E-02	NOT IDENT.
EU-155	-1.587E-04	4.328E-02	3.835E-02	2.208E-02	NOT IDENT.
TB-160	5.939E-03	5.641E-02	4.886E-02	2.878E-02	NOT IDENT.
HO-166M	-1.226E-02	2.992E-02	2.446E-02	1.527E-02	NOT IDENT.
TA-182	1.724E-02	6.246E-02	5.694E-02	3.187E-02	NOT IDENT.
IR-192	-6.671E-03	1.474E-02	1.235E-02	7.519E-03	NOT IDENT.
HG-203	5.704E-03	1.637E-02	1.497E-02	8.353E-03	NOT IDENT.
BI-207	1.422E-02	2.257E-02	2.119E-02	1.152E-02	NOT IDENT.
TL-208	7.217E-04	2.025E-02	1.798E-02	1.033E-02	NOT IDENT.
PB-210	2.584E+00	4.009E+00	3.680E+00	2.045E+00	NOT IDENT.
BI-211	2.437E-03	1.183E-01	1.014E-01	6.037E-02	NOT IDENT.
PB-211	-1.647E-01	3.384E-01	2.667E-01	1.727E-01	NOT IDENT.
BI-212	5.427E-02	2.267E-01	2.028E-01	1.156E-01	NOT IDENT.
PB-212	1.694E-02	3.033E-02	2.645E-02	1.547E-02	NOT IDENT.
BI-214	-2.090E-02	4.248E-02	3.272E-02	2.167E-02	NOT IDENT.
PB-214	-1.681E-02	4.187E-02	3.445E-02	2.136E-02	NOT IDENT.
RN-219	6.934E-02	1.736E-01	1.570E-01	8.859E-02	NOT IDENT.
RA-223	-1.072E-01	2.807E-01	2.360E-01	1.432E-01	NOT IDENT.
RA-224	-1.048E-01	2.841E-01	2.479E-01	1.450E-01	NOT IDENT.
RA-226	-2.090E-02	4.248E-02	3.272E-02	2.167E-02	NOT IDENT.
AC-227	-6.835E-02	1.207E-01	1.025E-01	6.156E-02	NOT IDENT.
TH-227	-6.835E-02	1.207E-01	1.025E-01	6.160E-02	NOT IDENT.
AC-228	3.806E-02	7.568E-02	7.175E-02	3.861E-02	NOT IDENT.
RA-228	3.806E-02	7.568E-02	7.175E-02	3.861E-02	NOT IDENT.
TH-228	1.694E-02	3.033E-02	2.645E-02	1.547E-02	NOT IDENT.
TH-229	-2.088E-01	2.363E-01	1.828E-01	1.206E-01	NOT IDENT.
PA-231	3.449E-02	6.866E-01	6.120E-01	3.503E-01	NOT IDENT.
TH-231	-1.072E-01	2.807E-01	2.360E-01	1.432E-01	NOT IDENT.
TH-232	3.806E-02	7.568E-02	7.175E-02	3.861E-02	NOT IDENT.
PA-233	1.206E-02	2.858E-02	2.625E-02	1.458E-02	NOT IDENT.
PA-234	5.336E-03	1.240E-01	1.055E-01	6.326E-02	NOT IDENT.
PA-234M	4.157E-01	2.247E+00	1.864E+00	1.146E+00	NOT IDENT.
TH-234	-9.327E-01	8.487E-01	6.724E-01	4.330E-01	NOT IDENT.
U-235	-6.006E-02	9.515E-02	7.264E-02	4.854E-02	NOT IDENT.
NP-237	1.201E-03	9.567E-02	8.592E-02	4.881E-02	NOT IDENT.
U-238	-9.327E-01	8.487E-01	6.724E-01	4.330E-01	NOT IDENT.
NP-239	-4.635E-02	1.525E-01	1.301E-01	7.780E-02	NOT IDENT.
AM-241	9.220E-02	9.603E-02	9.380E-02	4.900E-02	NOT IDENT.
CM-247	-2.227E-03	1.643E-02	1.394E-02	8.385E-03	NOT IDENT.
CF-249	1.619E-02	1.849E-02	1.751E-02	9.432E-03	NOT IDENT.

CF-251	-1.243E-02	5.768E-02	4.831E-02	2.943E-02 NOT IDENT.
ANH-511	-3.095E-02	2.789E-02	2.613E-02	1.423E-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
46.54	63.9500
49.72	68.1873
57.36	74.2130
59.54	59.4912
63.29	76.2024
63.29	76.2024
64.28	59.1890
67.75	66.3780
69.67	66.6532
70.83	65.8484
72.81	79.7349
72.87	79.7449
72.87	79.7449
74.82	76.1588
74.82	76.1588
74.82	76.1588
74.97	76.1822
77.11	91.2247
77.11	91.2247
77.11	91.2247
79.69	70.0004
79.80	74.9459
80.12	74.9926
80.19	68.0949
80.57	70.1203
81.00	73.1441
81.07	73.1539
81.07	73.1539
83.79	64.5914
83.79	64.5914
85.43	73.7617
86.48	72.9068
86.55	72.9165
86.79	78.9442
86.94	78.9662
87.57	69.0505
88.03	68.1072
88.47	67.1595
89.96	118.6008
91.11	95.6813
92.59	55.5405
92.59	55.5405
93.35	54.6037
94.67	94.2573
94.87	111.5257
94.87	111.5257
95.86	90.3897
97.43	51.9362
98.44	55.0860
99.53	60.2979
100.11	63.4257
103.18	64.7781
103.37	66.8557
105.31	63.9725
106.12	63.0232
109.28	61.2657
111.00	71.8438
111.76	70.8869
116.30	59.8363
117.23	56.7669
121.12	61.3270
121.78	51.8614
122.06	49.7649
123.07	65.7448
131.20	74.0228
133.52	79.6427
136.00	64.7955

136.47	66.9983
140.51	70.6236
140.51	0.0000
143.76	76.3845
144.24	82.9835
144.24	82.9835
145.44	75.4589
152.43	67.3107
153.25	60.7527
154.21	57.5077
154.21	57.5077
156.02	47.6620
158.56	67.8258
159.00	63.4124
162.66	70.4001
163.33	69.3382
165.86	67.3053
176.60	73.8305
177.52	69.3597
181.07	66.2129
184.41	68.7512
185.72	59.6701
193.51	75.2197
197.04	63.8864
205.31	60.6298
210.85	58.3205
215.65	53.2727
222.11	43.7819
227.38	43.1060
228.16	46.7326
228.18	46.7334
235.69	80.5517
235.96	80.5721
235.96	80.5721
238.63	60.8051
238.63	60.8051
240.99	74.5790
242.00	71.9168
244.70	59.3174
252.40	64.3208
252.80	67.1008
256.23	68.2255
256.23	68.2255
260.90	60.1708
264.66	52.9357
268.22	55.8902
269.46	41.9616
269.46	41.9616
271.23	56.9660
273.65	74.8608
276.40	58.1496
277.37	57.2573
277.60	55.3908
278.00	55.4088
279.20	55.4637
279.54	64.8823
280.46	63.9907
283.69	54.7237
284.31	46.2553
285.41	45.3516
285.90	46.3151
287.50	65.3024
293.27	68.4569
295.22	57.1353
295.96	54.3099
298.57	49.6474
299.98	56.3928
299.98	56.3928
300.09	56.3973
300.09	56.3973
300.13	56.3991
301.36	44.0143
302.85	52.6862
304.50	38.3661
304.50	38.3661
304.85	43.1735
308.46	44.2551
311.90	38.5834

316.51	48.3971
319.41	42.6814
320.08	42.7029
323.87	44.7689
323.87	44.7689
328.76	29.3019
333.37	35.2798
334.37	41.1893
334.37	41.1893
338.28	44.2550
338.28	44.2550
338.32	44.2564
338.32	44.2564
338.32	44.2564
340.48	50.2343
340.55	50.2374
344.28	52.3449
351.06	43.6623
351.93	44.6814
356.01	38.8328
364.49	33.0488
366.42	40.1111
383.85	37.5318
388.16	29.4991
388.63	31.5430
391.69	39.7611
400.66	36.9113
401.81	27.7037
402.40	33.8726
404.85	40.0926
410.95	47.4677
414.70	33.0972
423.72	20.7993
427.09	27.0938
427.87	31.2767
433.94	32.4361
453.88	31.7555
463.37	27.6702
468.07	25.6091
473.00	34.2393
476.78	31.0939
477.60	32.1808
487.02	34.5029
492.35	27.0332
497.08	44.4465
511.00	44.7746
514.00	99.5333
527.90	27.5406
529.87	0.0000
531.02	18.7572
537.26	17.7095
546.56	0.0000
563.25	36.9971
569.33	42.7280
569.50	42.7314
569.70	42.7349
583.19	19.0154
600.60	31.0375
602.73	33.8095
604.72	34.7548
609.32	30.2454
609.32	30.2454
610.33	29.3422
614.28	28.4767
618.01	17.4827
621.93	19.3568
621.93	19.3568
633.25	25.0132
635.95	23.1885
636.99	23.1989
645.85	13.9735
657.76	20.6003
661.66	28.1382
661.66	28.1382
664.57	22.5387
666.33	23.4949
666.50	26.3163
677.62	19.8300

685.70	16.1073
695.00	26.6321
696.49	30.4547
696.51	30.4555
697.00	29.5098
702.65	26.7155
706.68	30.5820
711.68	27.7709
720.70	23.0666
721.93	26.9240
722.78	25.0091
722.91	25.0104
723.31	25.9770
724.19	16.3613
727.33	19.2729
733.00	12.5553
735.93	29.0076
739.50	16.4609
747.24	22.3374
752.31	20.4355
753.82	11.6842
756.73	16.5713
763.94	12.7071
765.81	18.5853
766.42	19.5679
777.92	13.7573
778.90	15.7285
783.70	15.7566
785.37	10.8394
795.86	10.8818
801.95	18.8381
810.29	19.8901
810.76	21.8829
815.77	17.9367
818.51	13.9648
832.01	13.0302
834.85	18.0602
836.80	0.0000
846.77	26.1968
856.80	14.1555
860.56	10.1245
871.09	17.2743
873.19	15.2531
875.33	0.0000
879.36	13.2472
880.51	12.2329
883.24	11.2240
884.68	13.2710
889.28	7.1572
898.04	16.4074
911.20	9.2698
911.20	9.2698
911.20	9.2698
926.50	11.3870
937.49	14.5445
944.13	9.3702
946.00	11.4595
949.00	15.6416
962.29	10.4719
964.08	19.9083
966.15	16.7758
968.97	14.6918
968.97	14.6918
968.97	14.6918
983.53	11.5965
996.26	13.7592
1001.03	11.6596
1004.73	10.6116
1037.84	13.9337
1038.76	0.0000
1048.07	10.7510
1050.41	16.1375
1050.41	16.1375
1063.66	8.6406
1085.87	8.6965
1099.45	9.8213
1112.07	14.2372
1115.54	9.8662

1120.29	17.5633
1120.29	17.5633
1120.55	14.2714
1121.30	12.0785
1131.51	0.0000
1173.23	12.0669
1177.93	9.2940
1189.05	9.3217
1204.77	8.4247
1221.41	7.5215
1231.02	9.4255
1235.36	9.4360
1238.28	13.2201
1260.41	0.0000
1271.85	9.5243
1274.44	15.2493
1274.54	13.3432
1291.59	16.2723
1298.22	0.0000
1312.11	4.8104
1332.49	10.6357
1365.19	6.8217
1368.63	0.0000
1384.29	11.7476
1408.01	8.8597
1457.56	0.0000
1460.82	6.9749
1489.16	11.0300
1505.03	11.0689
1596.21	9.2355
1620.50	11.3451
1678.03	0.0000
1690.97	4.1851
1764.49	4.2458
1764.49	4.2458
1770.23	13.8141
1771.35	11.6915
1791.20	0.0000
1836.06	0.0000

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1202052272

Total Uranium Activity	-2.8026E+00	ug/g
Total Uranium Counting Unc.	2.5253E+00	ug/g
Total Uranium Tpu	1.2884E-06	ug/g
Total Uranium Mda	2.0006E+00	ug/g

THERE ARE NO PEAKS !

VAX/VMS Nuclide Identification Report Generated 5-MAR-2010 15:06:12.67

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202052273.CNF;1
Sample date       : 19-FEB-2010 12:00:00 Acquisition date : 5-MAR-2010 13:05:38.
Sample ID        : G1202052273      Sample quantity   : 1.32540E+02 GRAM
Detector name    : GAM02            Detector geometry: CAN
Elapsed live time: 0 02:00:00.00    Elapsed real time: 0 02:00:03.72  0.1%
Energy tolerance : 1.50000 keV      Analyst Initials  : MXR1
Abundance limit  : 75.00000         Sensitivity     : 5.00000
Batch ID        : 957136            Detector SN#    :
Matrix Spike ID  :                  LCS ID           : 1032-A
*****

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Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	62.50*	105	483	1.03	124.19	120	9	1.46E-02	40.7	
2	2	74.44*	411	363	1.04	148.10	142	14	5.71E-02	9.1	2.72E+00
3	2	76.78	612	387	0.94	152.77	142	14	8.50E-02	6.5	
4	5	86.90	170	371	0.87	173.03	168	23	2.36E-02	18.0	3.51E+00
5	5	89.64	110	328	0.89	178.50	168	23	1.52E-02	25.9	
6	5	92.41*	241	451	1.28	184.04	168	23	3.35E-02	18.7	
7	0	185.53*	221	381	1.24	370.37	365	10	3.07E-02	19.1	
8	0	209.26	145	345	1.07	417.86	412	10	2.01E-02	25.5	
9	4	238.32*	1345	191	1.11	476.02	470	18	1.87E-01	3.3	8.05E-01
10	4	241.28	331	222	1.72	481.94	470	18	4.60E-02	12.2	
11	0	270.01	119	198	1.10	539.43	535	9	1.65E-02	23.3	
12	0	276.73	66	194	1.22	552.87	548	9	9.14E-03	40.1	
13	0	294.93*	406	242	1.24	589.29	584	11	5.64E-02	9.1	
14	0	299.81	115	132	1.36	599.07	595	8	1.59E-02	19.8	
15	0	327.43	109	182	1.15	654.33	649	11	1.51E-02	25.8	
16	0	337.81	196	187	0.99	675.11	671	9	2.72E-02	14.5	
17	0	351.57*	668	155	1.31	702.63	698	12	9.28E-02	5.5	
18	0	462.79	102	85	1.14	925.20	920	11	1.42E-02	20.1	
19	0	510.42*	176	169	1.69	1020.52	1014	16	2.44E-02	20.0	
20	0	582.83*	395	123	1.35	1165.42	1159	13	5.49E-02	7.8	
21	0	608.84*	465	113	1.57	1217.48	1211	15	6.46E-02	6.9	
22	0	661.25*	78	63	1.26	1322.36	1318	9	1.08E-02	22.2	
23	0	727.21	115	83	1.41	1454.36	1449	13	1.59E-02	19.0	
24	0	771.47	70	179	7.87	1542.95	1529	28	9.78E-03	55.4	
25	0	794.46*	71	52	1.67	1588.96	1584	11	9.80E-03	23.8	
26	0	860.75	42	94	1.59	1721.61	1716	15	5.81E-03	51.2	
27	0	910.55*	299	48	1.92	1821.29	1814	13	4.16E-02	7.7	
28	0	933.44	63	36	1.10	1867.09	1860	13	8.79E-03	23.2	
29	2	963.99	70	56	2.19	1928.24	1921	37	9.76E-03	24.7	1.31E+00
30	2	968.43	183	47	2.05	1937.14	1921	37	2.54E-02	10.7	
31	0	1120.05*	68	83	1.13	2240.58	2232	14	9.45E-03	31.5	
32	0	1460.14*	1318	47	2.25	2921.27	2911	21	1.83E-01	3.1	
33	0	1729.51	28	8	1.15	3460.48	3456	10	3.92E-03	27.7	
34	0	1763.99*	77	14	1.21	3529.50	3523	14	1.07E-02	16.4	

Flag: "*" = Peak area was modified by background subtraction


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Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202052273.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 19-FEB-2010 12:00:00 Acquisition date : 5-MAR-2010 13:05:38
Sample ID         : G1202052273 Sample quantity : 132.54 GRAM
Sample type       : SOLID Sample geometry :
Detector name     : GAMMA2 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:03.72 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
K-40	+	1460.82	*	3.407E+01	3.856E+00	6.631E-01	6.304E-02	51.372
CD-109	+	88.03	*	2.540E+00	9.481E-01	1.315E+00	1.320E-01	1.932
SN-126		64.28		9.579E-02	6.285E-01	9.831E-01	1.458E-01	0.097
	+	86.94		1.034E+00	5.690E-01	5.424E-01	2.259E-01	1.906
	+	87.57	*	2.487E-01	9.282E-02	1.294E-01	1.294E-02	1.921
BA-137M	+	661.66	*	1.186E-01	5.360E-02	6.603E-02	5.689E-03	1.797
CS-137	+	661.66	*	1.253E-01	5.662E-02	6.975E-02	6.021E-03	1.797
TL-208	+	277.37		7.066E-01	5.764E-01	6.957E-01	1.068E-01	1.016
	+	583.19	*	5.749E-01	1.068E-01	6.375E-02	6.379E-03	9.018
	+	860.56		5.739E-01	5.914E-01	5.372E-01	5.661E-02	1.068
BI-211		72.87		8.431E+00	3.509E+00	6.231E+00	5.363E-01	1.353
	+	351.06	*	4.371E+00	6.965E-01	3.468E-01	4.002E-02	12.602
PB-212	+	74.82		2.805E+00	6.275E-01	5.979E-01	7.825E-02	4.692
	+	77.11		2.357E+00	3.710E-01	3.502E-01	3.132E-02	6.730
	+	238.63	*	1.960E+00	2.786E-01	9.563E-02	1.207E-02	20.498
	+	300.09		2.609E+00	1.093E+00	1.271E+00	1.729E-01	2.053
BI-214	+	609.32	*	1.308E+00	2.287E-01	1.242E-01	1.318E-02	10.527
	+	1120.29		9.951E-01	6.360E-01	5.069E-01	5.544E-02	1.963
	+	1764.49		1.578E+00	5.356E-01	4.305E-01	3.648E-02	3.665
PB-214	+	74.82		4.972E+00	1.076E+00	1.060E+00	1.252E-01	4.692
	+	77.11		4.155E+00	7.383E-01	6.173E-01	7.510E-02	6.730
	+	242.00		2.929E+00	8.117E-01	5.821E-01	7.662E-02	5.032
	+	295.22		1.636E+00	3.730E-01	2.337E-01	3.240E-02	7.000
	+	351.93	*	1.586E+00	2.675E-01	1.261E-01	1.611E-02	12.575
RA-224	+	240.99	*	5.179E+00	1.404E+00	1.026E+00	1.210E-01	5.050
RA-226	+	609.32	*	1.308E+00	2.287E-01	1.242E-01	1.318E-02	10.527
	+	1120.29		9.951E-01	6.360E-01	5.069E-01	5.544E-02	1.963
	+	1764.49		1.578E+00	5.356E-01	4.305E-01	3.648E-02	3.665
AC-228	+	338.32		1.427E+00	7.325E-01	4.468E-01	1.894E-01	3.195
	+	911.20	*	2.093E+00	4.191E-01	2.599E-01	3.323E-02	8.050
	+	968.97		2.213E+00	7.250E-01	4.142E-01	1.028E-01	5.344
RA-228	+	338.32		1.427E+00	7.325E-01	4.468E-01	1.894E-01	3.195
	+	911.20	*	2.093E+00	4.191E-01	2.599E-01	3.323E-02	8.050
	+	968.97		2.213E+00	7.250E-01	4.142E-01	1.028E-01	5.344

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-228	+	74.82		2.805E+00	5.660E-01	5.979E-01	5.281E-02	4.692
	+	77.11		2.357E+00	3.710E-01	3.502E-01	3.132E-02	6.730
	+	238.63	*	1.960E+00	2.786E-01	9.563E-02	1.207E-02	20.498
	+	300.09		2.609E+00	1.916E+00	1.271E+00	7.859E-01	2.053
TH-229	+	85.43		6.260E-01	2.336E-01	3.610E-01	3.521E-02	1.734
	+	88.47		2.392E-01	1.259E-01	1.974E-01	1.970E-02	1.212
		193.51	*	5.229E-02	5.737E-01	9.221E-01	9.997E-02	0.057
		210.85		7.735E-01	1.079E+00	1.591E+00	1.784E-01	0.486
TH-232	+	338.32		1.427E+00	4.441E-01	4.468E-01	5.136E-02	3.195
	+	911.20	*	2.093E+00	4.191E-01	2.599E-01	3.323E-02	8.050
	+	968.97		2.213E+00	7.250E-01	4.142E-01	1.028E-01	5.344
TH-234	+	63.29	*	3.257E+00	2.714E+00	2.421E+00	4.367E-01	1.345
	+	92.59		2.897E+00	1.262E+00	1.074E+00	2.410E-01	2.698
U-235	+	89.96		1.655E+00	9.510E-01	1.343E+00	3.364E-01	1.232
	+	93.35		2.188E+00	9.648E-01	8.060E-01	1.887E-01	2.715
		143.76	*	1.164E-01	2.216E-01	3.640E-01	6.265E-02	0.320
		163.33		-1.893E-01	4.922E-01	7.725E-01	1.446E-01	-0.245
	+	185.72		2.066E-01	8.192E-02	7.260E-02	7.748E-03	2.846
		205.31		3.355E-01	6.065E-01	8.644E-01	1.681E-01	0.388
NP-237	+	86.48	*	7.421E-01	3.177E-01	3.917E-01	9.077E-02	1.895
		95.86		-1.240E+00	1.075E+00	1.448E+00	3.505E-01	-0.856
U-238	+	63.29	*	3.257E+00	2.714E+00	2.421E+00	4.367E-01	1.345
	+	92.59		2.897E+00	1.116E+00	1.074E+00	1.020E-01	2.698
ANH-511	+	511.00	*	1.958E-01	8.087E-02	5.042E-02	4.998E-03	3.883

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.60	*	2.192E-02	3.677E-01	5.960E-01	6.319E-02	0.037
NA-22		1274.54	*	-1.237E-02	5.077E-02	8.148E-02	7.224E-03	-0.152
NA-24		1368.63	*	-1.981E-02	5.077E-02	Half-Life too short		
SC-46		889.28	*	-3.197E-02	4.944E-02	7.334E-02	7.457E-03	-0.436
	+	1120.55		1.668E-01	1.060E-01	1.392E-01	1.202E-02	1.199
V-48		944.13		-1.149E-01	9.758E-01	1.556E+00	1.558E-01	-0.074
		983.53	*	3.945E-02	8.452E-02	1.381E-01	1.351E-02	0.286
		1312.11		-1.473E-02	9.070E-02	1.462E-01	1.339E-02	-0.101
CR-51		320.08	*	4.249E-02	4.206E-01	7.031E-01	8.574E-02	0.060
MN-54		834.85	*	2.811E-02	4.408E-02	7.538E-02	7.405E-03	0.373
CO-56		846.77	*	-2.979E-02	4.461E-02	6.803E-02	6.736E-03	-0.438
		1037.84		4.311E-02	3.302E-01	5.596E-01	5.489E-02	0.077
		1238.28		1.064E-01	1.158E-01	2.033E-01	1.794E-02	0.523
		1771.35		-1.104E+00	4.184E-01	4.311E-01	3.641E-02	-2.561
CO-57		122.06	*	1.309E-02	2.594E-02	4.357E-02	3.642E-03	0.300
		136.47		1.422E-01	2.191E-01	3.673E-01	3.465E-02	0.387
CO-58		810.76	*	-7.984E-03	4.282E-02	6.882E-02	6.665E-03	-0.116
FE-59		1099.45	*	-5.137E-02	9.453E-02	1.490E-01	1.420E-02	-0.345
		1291.59		-2.893E-02	1.406E-01	2.260E-01	2.286E-02	-0.128
CO-60		1173.23		-1.728E-03	5.205E-02	8.600E-02	6.925E-03	-0.020

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	1332.49	*		-1.397E-02	4.659E-02	7.368E-02	6.865E-03	-0.190
ZN-65	1115.54	*		-3.451E-03	1.169E-01	1.669E-01	1.452E-02	-0.021
SE-75	121.12			2.367E-02	1.312E-01	2.178E-01	2.370E-02	0.109
	136.00			4.120E-02	4.230E-02	7.170E-02	6.347E-03	0.575
	264.66	*		5.944E-03	4.821E-02	7.603E-02	9.294E-03	0.078
	279.54			2.415E-02	1.316E-01	1.971E-01	2.489E-02	0.123
	400.66			8.501E-02	2.741E-01	4.571E-01	5.584E-02	0.186
SR-85	514.00	*		7.953E-02	4.509E-02	7.313E-02	7.240E-03	1.087
Y-88	898.04			-7.196E-03	4.923E-02	7.714E-02	7.911E-03	-0.093
	1836.06	*		7.465E-03	3.712E-02	6.359E-02	5.187E-03	0.117
Y-91	1204.77	*		-1.373E+00	2.593E+01	4.268E+01	3.544E+00	-0.032
NB-94	702.65	*		2.836E-02	3.610E-02	6.315E-02	5.631E-03	0.449
	871.09			2.829E-02	3.766E-02	6.532E-02	6.568E-03	0.433
NB-95	765.81	*		1.731E-03	5.941E-02	8.441E-02	7.903E-03	0.021
NB-95M	235.69	*		3.775E-02	1.490E-01	2.265E-01	2.869E-02	0.167
ZR-95	724.19			1.637E-01	1.216E-01	1.957E-01	1.911E-02	0.836
	756.73	*		1.640E-02	8.368E-02	1.397E-01	1.417E-02	0.117
MO-99	140.51			-3.370E+00	1.798E+01	2.865E+01	6.840E+00	-0.118
	181.07			7.994E+00	1.646E+01	2.414E+01	4.770E+00	0.331
	366.42			-1.029E+02	8.110E+01	1.211E+02	1.307E+01	-0.849
	739.50	*		-9.611E-02	1.106E+01	1.822E+01	2.928E+00	-0.005
	777.92			-6.809E+00	3.656E+01	5.077E+01	4.796E+00	-0.134
TC-99M	140.51	*		-3.936E+08	3.656E+01	Half-Life too short		
RU-103	497.08	*		1.806E-02	4.441E-02	7.349E-02	1.090E-02	0.246
	610.33		+	1.324E+01	2.874E+00	2.979E+00	4.963E-01	4.446
RH-106	621.93	*		3.286E-02	3.345E-01	5.630E-01	7.635E-02	0.058
	1050.41			-1.481E+00	3.082E+00	4.944E+00	4.594E-01	-0.299
RU-106	621.93	*		3.286E-02	3.344E-01	5.630E-01	5.113E-02	0.058
	1050.41			-1.481E+00	3.082E+00	4.944E+00	4.594E-01	-0.299
AG-108M	433.94	*		1.963E-02	3.354E-02	5.658E-02	5.835E-03	0.347
	614.28			7.929E-03	4.329E-02	6.416E-02	6.048E-03	0.124
	722.91			1.643E-02	4.742E-02	7.043E-02	6.568E-03	0.233
AG-110M	657.76	*		2.533E-02	4.315E-02	6.621E-02	5.907E-03	0.383
	677.62			8.490E-02	3.468E-01	5.861E-01	5.262E-02	0.145
	706.68			3.485E-02	2.285E-01	3.825E-01	3.513E-02	0.091
	763.94			1.539E-01	2.013E-01	3.105E-01	2.971E-02	0.496
	884.68			-1.053E-02	5.825E-02	9.294E-02	9.642E-03	-0.113
	937.49			9.340E-03	1.316E-01	1.852E-01	1.910E-02	0.050
	1384.29			-9.376E-02	1.622E-01	2.420E-01	2.308E-02	-0.388
	1505.03			-3.840E-02	3.138E-01	4.990E-01	4.604E-02	-0.077
SN-113	391.69	*		-2.449E-02	5.095E-02	8.092E-02	8.281E-03	-0.303
CD-115	260.90			-2.502E+01	1.022E+02	1.701E+02	2.065E+01	-0.147
	492.35			1.114E+01	2.961E+01	4.904E+01	4.896E+00	0.227
	527.90	*		7.960E+00	9.555E+00	1.620E+01	1.593E+00	0.491
SN-117M	156.02			-2.030E+00	2.336E+00	3.634E+00	3.531E-01	-0.559
	158.56	*		-1.859E-02	5.578E-02	8.904E-02	8.772E-03	-0.209
TE-123M	159.00	*		-7.483E-03	3.013E-02	4.828E-02	4.790E-03	-0.155
SB-124	602.73			-8.430E-04	4.717E-02	6.864E-02	6.367E-03	-0.012
	645.85			-2.673E-01	5.336E-01	8.538E-01	7.937E-02	-0.313

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SB-125		722.78		1.630E-01	4.705E-01	6.988E-01	6.464E-02	0.233
		1690.97	*	-1.305E-02	8.011E-02	1.294E-01	1.180E-02	-0.101
		427.87	*	1.729E-02	9.708E-02	1.600E-01	1.634E-02	0.108
	+	463.37		1.010E+00	4.204E-01	5.784E-01	6.140E-02	1.745
		600.60		-6.853E-02	2.029E-01	3.228E-01	3.192E-02	-0.212
TE-125M		635.95		1.859E-01	3.090E-01	5.366E-01	5.153E-02	0.346
		109.28	*	1.147E+00	9.915E+00	1.650E+01	1.717E+00	0.070
	I-126	388.63		1.190E-01	1.755E-01	2.992E-01	3.023E-02	0.398
SB-126		666.33	*	-3.752E-02	2.586E-01	3.673E-01	3.177E-02	-0.102
		753.82		2.093E+00	1.903E+00	3.387E+00	3.143E-01	0.618
		414.70		-2.695E-02	7.449E-02	1.184E-01	1.190E-02	-0.228
		666.50		-2.325E-02	8.783E-02	1.230E-01	1.064E-02	-0.189
		695.00		3.673E-02	7.667E-02	1.317E-01	1.167E-02	0.279
SB-127		697.00		5.024E-02	2.593E-01	4.361E-01	3.871E-02	0.115
		720.70	*	3.431E-02	1.650E-01	2.527E-01	2.286E-02	0.136
		856.80		2.522E-01	5.481E-01	8.164E-01	8.135E-02	0.309
		252.40		-1.648E+00	3.836E+00	6.243E+00	2.639E+00	-0.264
		473.00		-1.701E-01	1.705E+00	2.623E+00	3.544E-01	-0.065
I-131		685.70	*	4.919E-01	1.254E+00	2.138E+00	2.395E-01	0.230
		783.70		4.643E+00	3.466E+00	6.167E+00	7.836E-01	0.753
		80.19		9.962E-01	4.611E+00	7.041E+00	6.522E-01	0.141
		284.31		-4.997E-01	1.437E+00	2.364E+00	2.993E-01	-0.211
		364.49	*	1.047E-01	1.133E-01	1.963E-01	2.200E-02	0.533
TE-132		636.99		1.260E+00	1.609E+00	2.827E+00	2.654E-01	0.445
		49.72		-1.073E+01	2.371E+01	3.588E+01	3.889E+00	-0.299
		111.76		-2.057E+00	2.825E+01	4.568E+01	4.838E+00	-0.045
		116.30		1.679E+01	2.278E+01	3.866E+01	4.070E+00	0.434
		228.16	*	-5.278E-01	6.810E-01	1.024E+00	1.784E-01	-0.515
BA-133		81.00		-1.378E-01	1.019E-01	1.511E-01	2.403E-02	-0.911
	+	276.40		6.530E-01	5.344E-01	6.945E-01	1.157E-01	0.940
		302.85		7.640E-02	1.494E-01	2.280E-01	3.560E-02	0.335
		356.01	*	-3.680E-02	5.216E-02	7.057E-02	1.037E-02	-0.521
		383.85		-5.092E-02	3.193E-01	5.186E-01	7.060E-02	-0.098
I-133		529.87	*	7.436E-04	3.193E-01	Half-Life	too short	
		875.33		-2.662E-02	3.193E-01	Half-Life	too short	
		1298.22		-9.198E-02	3.193E-01	Half-Life	too short	
CS-134		563.25		3.079E-01	4.132E-01	7.266E-01	7.034E-02	0.424
		569.33		3.200E-02	2.120E-01	3.604E-01	3.484E-02	0.089
		604.72		-9.097E-03	4.031E-02	5.737E-02	5.321E-03	-0.159
	+	795.86	*	1.485E-01	7.198E-02	1.042E-01	1.003E-02	1.425
		801.95		1.009E-01	4.686E-01	7.490E-01	7.229E-02	0.135
CS-135		1365.19		-7.409E-01	1.488E+00	2.278E+00	2.208E-01	-0.325
		268.22	*	3.935E-01	1.924E-01	3.121E-01	4.129E-02	1.261
	I-135	546.56		2.702E+08	1.924E-01	Half-Life	too short	
		836.80		2.868E+09	1.924E-01	Half-Life	too short	
		1038.76		2.804E+08	1.924E-01	Half-Life	too short	
		1131.51		1.064E+08	1.924E-01	Half-Life	too short	
		1260.41	*	-1.452E+08	1.924E-01	Half-Life	too short	
		1457.56		8.949E+10	1.924E-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-136	1678.03			-4.898E+08	1.924E-01	Half-Life	too short	
	1791.20			4.710E+08	1.924E-01	Half-Life	too short	
	153.25			6.143E-01	8.694E-01	1.450E+00	1.606E-01	0.424
	176.60			-1.430E-01	5.245E-01	8.336E-01	9.353E-02	-0.172
	273.65			1.419E-01	6.903E-01	7.650E-01	9.827E-02	0.185
	340.55			4.929E-02	1.671E-01	2.483E-01	2.904E-02	0.199
CE-139	818.51			4.778E-02	8.142E-02	1.394E-01	1.356E-02	0.343
	1048.07	*		5.749E-02	1.192E-01	2.072E-01	1.998E-02	0.278
	1235.36			2.468E-01	7.127E-01	1.203E+00	1.408E-01	0.205
	165.86	*		-4.708E-03	3.243E-02	5.207E-02	5.342E-03	-0.090
	162.66			1.738E-02	8.467E-01	1.356E+00	1.435E-01	0.013
	304.85			-3.958E-01	1.383E+00	2.091E+00	6.373E-01	-0.189
BA-140	423.72			-1.525E-01	1.961E+00	3.177E+00	1.058E+00	-0.048
	537.26	*		1.444E-01	2.853E-01	4.675E-01	1.600E-01	0.309
	328.76	+		9.252E-01	4.905E-01	5.908E-01	7.129E-02	1.566
	487.02			-8.131E-03	1.434E-01	2.301E-01	2.407E-02	-0.035
	815.77			4.736E-02	3.575E-01	5.908E-01	6.267E-02	0.080
	1596.21	*		-7.654E-02	8.675E-02	1.251E-01	1.131E-02	-0.612
CE-141	145.44	*		-2.422E-02	6.506E-02	1.043E-01	9.744E-03	-0.232
CE-143	57.36			3.900E-04	6.506E-02	Half-Life	too short	
	293.27	*		5.915E-04	6.506E-02	Half-Life	too short	
	664.57			4.867E-04	6.506E-02	Half-Life	too short	
	721.93			8.918E-05	6.506E-02	Half-Life	too short	
CE-144	80.12			6.611E-01	2.731E+00	4.175E+00	3.846E-01	0.158
PM-144	133.52	*		-1.425E-01	2.128E-01	3.369E-01	5.165E-02	-0.423
	476.78			-1.791E-02	7.556E-02	1.199E-01	1.279E-02	-0.149
	618.01			4.718E-03	3.439E-02	5.807E-02	5.429E-03	0.081
PR-144	696.49	*		1.061E-02	3.621E-02	6.132E-02	5.442E-03	0.173
	696.51	*		7.896E-01	2.708E+00	4.586E+00	4.068E-01	0.172
	1489.16			-7.383E-01	1.353E+01	2.173E+01	2.010E+00	-0.034
PM-146	453.88	*		-1.723E-03	4.797E-02	7.645E-02	9.020E-03	-0.023
	633.25			-8.460E-01	1.619E+00	2.542E+00	9.730E-01	-0.333
	735.93			2.795E-03	1.689E-01	2.787E-01	7.859E-02	0.010
ND-147	747.24			-6.134E-02	1.082E-01	1.690E-01	2.527E-02	-0.363
	91.11	+		1.069E+00	4.136E-01	5.129E-01	5.284E-02	2.084
	319.41			2.666E+00	3.638E+00	6.254E+00	7.427E-01	0.426
	531.02	*		-6.639E-02	6.159E-01	9.772E-01	1.531E-01	-0.068
PM-149	285.90	*		-1.248E+01	6.802E+01	1.128E+02	2.017E+01	-0.111
EU-152	121.78			2.890E-02	7.445E-02	1.245E-01	1.204E-02	0.232
	244.70			-1.541E-01	3.655E-01	5.303E-01	6.294E-02	-0.291
	344.28	*		-2.709E-02	1.099E-01	1.792E-01	2.106E-02	-0.151
	778.90			-1.927E-01	3.441E-01	4.544E-01	4.295E-02	-0.424
GD-153	964.08	+		9.137E-01	4.608E-01	6.458E-01	6.392E-02	1.415
	1085.87			2.360E-02	4.478E-01	7.505E-01	6.740E-02	0.031
	1112.07			2.128E-01	4.006E-01	6.119E-01	5.340E-02	0.348
	1408.01			9.906E-02	2.211E-01	3.738E-01	3.483E-02	0.265
	69.67			1.119E+00	1.973E+00	3.052E+00	2.557E-01	0.367
	97.43	*		7.551E-02	9.736E-02	1.500E-01	1.363E-02	0.504
	103.18			2.515E-02	1.158E-01	1.940E-01	1.699E-02	0.130

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-154		123.07		-6.477E-03	5.393E-02	8.829E-02	9.859E-03	-0.073
		723.31		6.667E-02	2.165E-01	3.202E-01	3.170E-02	0.208
		873.19		-1.785E-01	3.089E-01	4.715E-01	6.121E-02	-0.379
		996.26		-6.591E-01	4.565E-01	6.015E-01	1.084E-01	-1.096
		1004.73		-4.298E-02	2.586E-01	4.285E-01	5.318E-02	-0.100
		1274.44	*	-3.506E-02	1.439E-01	2.310E-01	2.670E-02	-0.152
EU-155	+	86.55		3.014E-01	1.126E-01	1.974E-01	1.965E-02	1.527
		105.31	*	5.285E-02	1.141E-01	1.924E-01	1.687E-02	0.275
TB-160	+	86.79		7.919E-01	2.956E-01	5.161E-01	5.112E-02	1.534
		197.04		5.045E-04	5.951E-01	9.513E-01	1.039E-01	0.001
		215.65		1.533E-01	8.306E-01	1.331E+00	1.506E-01	0.115
	+	298.57		3.637E-01	1.507E-01	2.280E-01	2.781E-02	1.595
		879.36	*	8.484E-02	1.483E-01	2.538E-01	2.565E-02	0.334
		962.29		1.241E+00	6.994E-01	1.153E+00	1.143E-01	1.076
		966.15		1.521E+00	3.379E-01	6.257E-01	6.186E-02	2.431
		1177.93		4.739E-02	4.060E-01	6.793E-01	5.496E-02	0.070
		1271.85		-2.498E-01	8.221E-01	1.311E+00	1.159E-01	-0.191
		80.57		-1.977E-01	2.849E-01	4.444E-01	4.113E-02	-0.445
HO-166M	+	184.41		1.641E-01	6.509E-02	8.232E-02	8.762E-03	1.994
		280.46		9.770E-02	9.954E-02	1.563E-01	1.936E-02	0.625
		410.95		1.553E-01	2.644E-01	4.474E-01	4.496E-02	0.347
		711.68	*	4.651E-02	6.310E-02	1.103E-01	9.909E-03	0.422
		752.31		8.646E-02	2.919E-01	4.923E-01	4.563E-02	0.176
		810.29		-1.256E-02	6.460E-02	1.038E-01	1.003E-02	-0.121
		67.75		-1.608E-02	1.167E-01	1.969E-01	1.623E-02	-0.082
TA-182		100.11		-2.012E-01	1.850E-01	2.933E-01	2.615E-02	-0.686
		152.43		2.283E-01	3.683E-01	6.132E-01	5.845E-02	0.372
		222.11		-2.104E-01	3.968E-01	6.107E-01	6.987E-02	-0.344
	+	1121.30		4.633E-01	2.945E-01	3.814E-01	3.292E-02	1.215
		1189.05		4.068E-01	3.574E-01	6.436E-01	5.263E-02	0.632
		1221.41	*	-3.145E-02	2.230E-01	3.638E-01	3.069E-02	-0.086
IR-192		1231.02		-1.734E-01	6.179E-01	9.983E-01	8.497E-02	-0.174
	+	295.96		1.197E+00	2.620E-01	3.226E-01	3.959E-02	3.712
		308.46		2.304E-02	9.775E-02	1.651E-01	1.996E-02	0.140
		316.51	*	1.216E-02	3.982E-02	6.727E-02	8.032E-03	0.181
		468.07		-2.794E-02	9.146E-02	1.254E-01	1.328E-02	-0.223
HG-203		70.83		-6.466E-01	1.523E+00	2.243E+00	3.583E-01	-0.288
		72.87		2.066E+00	9.004E-01	1.527E+00	2.371E-01	1.353
		279.20	*	8.175E-03	4.632E-02	6.934E-02	8.706E-03	0.118
BI-207		72.81		4.024E-01	1.980E-01	3.503E-01	3.013E-02	1.149
	+	74.97		8.085E-01	1.628E-01	2.603E-01	2.282E-02	3.106
		569.70		3.370E-03	3.267E-02	5.536E-02	5.291E-03	0.061
		1063.66	*	1.577E-02	6.381E-02	1.087E-01	9.982E-03	0.145
		1770.23		-2.621E-01	6.718E-01	8.614E-01	7.279E-02	-0.304
PB-210		46.54	*	4.446E+00	6.257E+00	9.893E+00	9.411E-01	0.449
PB-211		404.85	*	-4.884E-01	8.304E-01	1.249E+00	6.078E-01	-0.391
		427.09		2.871E-01	1.646E+00	2.704E+00	1.259E+00	0.106
		832.01		-1.116E+00	1.289E+00	1.716E+00	8.933E-01	-0.651
BI-212	+	727.33	*	2.544E+00	1.019E+00	1.375E+00	1.758E-01	1.850

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		785.37		3.437E+00	3.789E+00	6.610E+00	6.277E-01	0.520
		1620.50		3.080E+00	2.762E+00	5.256E+00	4.720E-01	0.586
RN-219	+	271.23		7.651E-01	3.716E-01	4.821E-01	6.503E-02	1.587
		401.81	*	-2.466E-01	4.487E-01	7.048E-01	1.109E-01	-0.350
RA-223		81.07		-3.271E-01	2.171E-01	3.424E-01	3.185E-02	-0.955
		83.79		7.825E-02	1.445E-01	2.205E-01	2.112E-02	0.355
		94.87		-1.560E-01	4.975E-01	7.328E-01	6.806E-02	-0.213
		144.24		3.795E-01	7.344E-01	1.209E+00	1.220E-01	0.314
		154.21		2.830E-01	4.163E-01	6.937E-01	7.192E-02	0.408
	+	269.46		5.945E-01	2.870E-01	3.872E-01	4.797E-02	1.535
		323.87	*	-4.021E-01	8.152E-01	1.141E+00	2.180E-01	-0.352
AC-227	+	338.28		5.663E+00	1.826E+00	2.524E+00	3.602E-01	2.244
		79.69		1.177E+00	1.359E+00	2.114E+00	3.703E-01	0.557
		235.96		4.540E-01	2.048E-01	3.273E-01	4.265E-02	1.387
		256.23	*	1.394E-01	2.751E-01	4.739E-01	6.971E-02	0.294
	+	299.98		2.870E+00	1.219E+00	1.790E+00	2.747E-01	1.603
		304.50		9.324E-02	1.755E+00	2.728E+00	5.071E-01	0.034
TH-227		334.37		-1.058E+00	2.224E+00	3.106E+00	5.405E-01	-0.341
		79.80		1.017E+00	1.809E+00	2.785E+00	6.130E-01	0.365
		235.96		4.540E-01	2.042E-01	3.273E-01	4.114E-02	1.387
		256.23	*	1.394E-01	2.753E-01	4.739E-01	7.587E-02	0.294
	+	299.98		2.870E+00	1.219E+00	1.790E+00	2.747E-01	1.603
		304.50		9.324E-02	1.755E+00	2.728E+00	5.071E-01	0.034
		334.37		-1.058E+00	2.224E+00	3.106E+00	5.405E-01	-0.341
PA-231		283.69	*	-4.912E-01	1.508E+00	2.482E+00	4.236E-01	-0.198
		301.36		1.213E+00	6.923E-01	1.104E+00	1.643E-01	1.098
TH-231		81.07		-3.271E-01	2.171E-01	3.424E-01	3.185E-02	-0.955
		83.79		7.825E-02	1.445E-01	2.205E-01	2.112E-02	0.355
		94.87		-1.560E-01	4.975E-01	7.328E-01	6.806E-02	-0.213
		144.24		3.795E-01	7.344E-01	1.209E+00	1.220E-01	0.314
		154.21		2.830E-01	4.163E-01	6.937E-01	7.192E-02	0.408
	+	269.46		5.945E-01	2.870E-01	3.872E-01	4.797E-02	1.535
		323.87	*	-4.021E-01	8.152E-01	1.141E+00	2.180E-01	-0.352
PA-233	+	338.28		5.663E+00	1.826E+00	2.524E+00	3.602E-01	2.244
	+	300.13		1.299E+00	5.606E-01	8.088E-01	1.386E-01	1.606
		311.90	*	-6.421E-03	6.737E-02	1.116E-01	1.360E-02	-0.058
PA-234		340.48		2.355E-01	7.567E-01	1.123E+00	2.833E-01	0.210
		94.67		1.415E-01	1.793E-01	2.774E-01	3.575E-02	0.510
		98.44		1.253E-01	1.221E-01	1.661E-01	9.276E-02	0.754
		111.00		-4.044E-02	1.910E-01	3.134E-01	3.759E-02	-0.129
		131.20		-8.401E-02	1.141E-01	1.811E-01	1.561E-02	-0.464
		569.50		3.663E-02	2.920E-01	4.955E-01	4.737E-02	0.074
		733.00		-2.774E-01	5.050E-01	6.708E-01	1.503E-01	-0.413
		880.51		4.334E-02	3.126E-01	5.142E-01	5.200E-02	0.084
		883.24		2.075E-01	3.470E-01	5.471E-01	3.689E-01	0.379
		926.50		2.133E-01	2.161E-01	3.342E-01	8.628E-02	0.638
		946.00	*	4.880E-02	3.651E-01	5.959E-01	1.158E-01	0.082
		949.00		6.373E-01	5.336E-01	9.456E-01	9.440E-02	0.674
PA-234M		766.42		3.431E+00	1.671E+01	2.402E+01	1.222E+01	0.143

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NP-239	1001.03	*		5.259E+00	5.734E+00	1.002E+01	1.091E+00	0.525
	99.53			6.404E-02	1.691E-01	2.854E-01	2.554E-02	0.224
	103.37			4.048E-02	1.059E-01	1.784E-01	1.560E-02	0.227
	106.12			6.158E-03	8.923E-02	1.484E-01	1.281E-02	0.041
	117.23	*		7.613E-03	3.968E-01	6.553E-01	5.493E-02	0.012
AM-241	228.18			-1.959E-01	2.532E-01	3.829E-01	4.427E-02	-0.512
	277.60		+	3.230E-01	2.618E-01	3.539E-01	4.382E-02	0.913
	59.54	*		3.488E-02	1.960E-01	3.039E-01	2.490E-02	0.115
CM-247	278.00		+	1.372E+00	1.112E+00	1.517E+00	1.879E-01	0.904
CF-249	287.50			4.061E-01	1.259E+00	2.144E+00	2.643E-01	0.189
	402.40	*		-2.538E-02	4.094E-02	6.409E-02	6.429E-03	-0.396
	252.80			-6.254E-01	1.031E+00	1.688E+00	2.027E-01	-0.370
	333.37			-9.444E-02	2.748E-01	3.267E-01	3.791E-02	-0.289
CF-251	388.16	*		3.939E-02	4.423E-02	7.622E-02	7.713E-03	0.517
	177.52	*		-1.556E-01	1.478E-01	2.249E-01	2.361E-02	-0.692
	227.38			-1.154E-01	4.120E-01	6.424E-01	7.417E-02	-0.180
	285.41			-1.286E+00	2.279E+00	3.697E+00	4.564E-01	-0.348

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]G1202052273      *
* Acquisition date   : 5-MAR-2010 13:05:38 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 02:00:03.72 Half life ratio : 8.000                *
*****
*                                     SAMPLE DATA                            *
*                                     *                                       *
* Sample date       : 19-FEB-2010 12:00:00 Nuclide Library : SOLID           *
* Sample ID         : G1202052273 Analyst initials: MXR1                   *
* Batch Number      : 957136 Sample Quantity : 1.3254E+02 GRAM             *
* Recovery          : 1.00000 Carrier Weight : 0.00000                     *
*****
*                                     QC DATA                                *
*                                     *                                       *
* Standard Weight   : 0.00000                                                *
* CALIB. DATE/TIME  : 29-OCT-2009 10:28:07 MS Isotope :                     *
* MSD DPM           : 0.000 MSD Isotope :                                   *
* LCS DPM           : 0.000 LCS Isotope :                                   *
* LCSD DPM          : 0.000 LCSD Isotope :                                   *
*****

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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.407E+01	3.779E+00	6.641E-01	0.000E+00
CD-109	2.540E+00	9.291E-01	1.381E+00	0.000E+00
SN-126	2.487E-01	9.096E-02	1.360E-01	0.000E+00
BA-137M	1.186E-01	5.252E-02	6.705E-02	0.000E+00
CS-137	1.253E-01	5.549E-02	7.084E-02	0.000E+00
TL-208	5.749E-01	1.046E-01	6.488E-02	0.000E+00
BI-211	4.371E+00	6.826E-01	3.561E-01	0.000E+00
PB-212	1.960E+00	2.730E-01	9.883E-02	0.000E+00
BI-214	1.308E+00	2.241E-01	1.263E-01	0.000E+00
PB-214	1.586E+00	2.621E-01	1.295E-01	0.000E+00
RA-224	5.179E+00	1.376E+00	1.060E+00	0.000E+00
RA-226	1.308E+00	2.241E-01	1.263E-01	0.000E+00
AC-228	2.093E+00	4.107E-01	2.625E-01	0.000E+00
RA-228	2.093E+00	4.107E-01	2.625E-01	0.000E+00
TH-228	1.960E+00	2.730E-01	9.883E-02	0.000E+00
TH-229	5.229E-02	5.622E-01	9.563E-01	0.000E+00
TH-232	2.093E+00	4.107E-01	2.625E-01	0.000E+00
TH-234	3.257E+00	2.660E+00	2.557E+00	0.000E+00
U-235	1.164E-01	2.172E-01	3.793E-01	0.000E+00
NP-237	7.421E-01	3.113E-01	4.116E-01	0.000E+00
U-238	3.257E+00	2.660E+00	2.557E+00	0.000E+00
ANH-511	1.958E-01	7.925E-02	5.143E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error) Ided	MDA (pCi/GRAM)	
BE-7	2.192E-02	3.604E-01	6.087E-01	0.000E+00 NOT IDENT.
NA-22	-1.237E-02	4.975E-02	8.179E-02	0.000E+00 NOT IDENT.
NA-24	0.000E+00	2.596E+05	0.000E+00	0.000E+00 SHORT HLIF
SC-46	-3.197E-02	4.845E-02	7.410E-02	0.000E+00 FAIL ABUN
V-48	3.945E-02	8.283E-02	1.393E-01	0.000E+00 NOT IDENT.

CR-51	4.249E-02	4.122E-01	7.230E-01	0.000E+00	NOT IDENT.
MN-54	2.811E-02	4.320E-02	7.624E-02	0.000E+00	NOT IDENT.
CO-56	-2.979E-02	4.371E-02	6.879E-02	0.000E+00	NOT IDENT.
CO-57	1.309E-02	2.542E-02	4.553E-02	0.000E+00	NOT IDENT.
CO-58	-7.984E-03	4.196E-02	6.965E-02	0.000E+00	NOT IDENT.
FE-59	-5.137E-02	9.264E-02	1.500E-01	0.000E+00	NOT IDENT.
CO-60	-1.397E-02	4.565E-02	7.391E-02	0.000E+00	NOT IDENT.
ZN-65	-3.451E-03	1.146E-01	1.680E-01	0.000E+00	NOT IDENT.
SE-75	5.944E-03	4.724E-02	7.843E-02	0.000E+00	NOT IDENT.
SR-85	0.000E+00	4.419E-02	7.460E-02	0.000E+00	NOT IDENT.
Y-88	7.465E-03	3.638E-02	6.343E-02	0.000E+00	NOT IDENT.
Y-91	-1.373E+00	2.541E+01	4.289E+01	0.000E+00	NOT IDENT.
NB-94	2.836E-02	3.538E-02	6.407E-02	0.000E+00	NOT IDENT.
NB-95	1.731E-03	5.822E-02	8.551E-02	0.000E+00	NOT IDENT.
NB-95M	3.775E-02	1.461E-01	2.342E-01	0.000E+00	NOT IDENT.
ZR-95	1.640E-02	8.201E-02	1.416E-01	0.000E+00	NOT IDENT.
MO-99	-9.611E-02	1.084E+01	1.847E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	2.059E+15	0.000E+00	0.000E+00	SHORT HLIF
RU-103	1.806E-02	4.353E-02	7.500E-02	0.000E+00	FAIL ABUN
RH-106	3.286E-02	3.278E-01	5.724E-01	0.000E+00	NOT IDENT.
RU-106	3.286E-02	3.278E-01	5.724E-01	0.000E+00	NOT IDENT.
AG-108M	1.963E-02	3.287E-02	5.788E-02	0.000E+00	NOT IDENT.
AG-110M	2.533E-02	4.229E-02	6.725E-02	0.000E+00	NOT IDENT.
SN-113	-2.449E-02	4.993E-02	8.293E-02	0.000E+00	NOT IDENT.
CD-115	7.960E+00	9.364E+00	1.652E+01	0.000E+00	NOT IDENT.
SN-117M	-1.859E-02	5.467E-02	9.265E-02	0.000E+00	NOT IDENT.
TE-123M	-7.483E-03	2.953E-02	5.023E-02	0.000E+00	NOT IDENT.
SB-124	-1.305E-02	7.851E-02	1.292E-01	0.000E+00	NOT IDENT.
SB-125	1.729E-02	9.514E-02	1.637E-01	0.000E+00	FAIL ABUN
TE-125M	1.147E+00	9.717E+00	1.727E+01	0.000E+00	NOT IDENT.
I-126	-3.752E-02	2.534E-01	3.729E-01	0.000E+00	NOT IDENT.
SB-126	3.431E-02	1.617E-01	2.563E-01	0.000E+00	NOT IDENT.
SB-127	4.919E-01	1.229E+00	2.170E+00	0.000E+00	NOT IDENT.
I-131	1.047E-01	1.111E-01	2.014E-01	0.000E+00	NOT IDENT.
TE-132	-5.278E-01	6.674E-01	1.059E+00	0.000E+00	NOT IDENT.
BA-133	-3.680E-02	5.111E-02	7.243E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	2.888E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	7.054E-02	1.055E-01	0.000E+00	FAIL ABUN
CS-135	0.000E+00	1.886E-01	3.219E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	5.172E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	5.749E-02	1.168E-01	2.087E-01	0.000E+00	NOT IDENT.
CE-139	-4.708E-03	3.178E-02	5.414E-02	0.000E+00	NOT IDENT.
BA-140	1.444E-01	2.796E-01	4.765E-01	0.000E+00	NOT IDENT.
LA-140	-7.654E-02	8.501E-02	1.251E-01	0.000E+00	FAIL ABUN
CE-141	-2.422E-02	6.376E-02	1.087E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.775E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-1.425E-01	2.085E-01	3.516E-01	0.000E+00	NOT IDENT.
PM-144	1.061E-02	3.549E-02	6.222E-02	0.000E+00	NOT IDENT.
PR-144	7.896E-01	2.654E+00	4.653E+00	0.000E+00	NOT IDENT.
PM-146	-1.723E-03	4.701E-02	7.815E-02	0.000E+00	NOT IDENT.
ND-147	-6.639E-02	6.036E-01	9.962E-01	0.000E+00	FAIL ABUN
PM-149	-1.248E+01	6.666E+01	1.162E+02	0.000E+00	NOT IDENT.
EU-152	-2.709E-02	1.077E-01	1.840E-01	0.000E+00	FAIL ABUN
GD-153	7.551E-02	9.541E-02	1.573E-01	0.000E+00	NOT IDENT.
EU-154	-3.506E-02	1.411E-01	2.319E-01	0.000E+00	NOT IDENT.
EU-155	5.285E-02	1.118E-01	2.016E-01	0.000E+00	FAIL ABUN
TE-160	8.484E-02	1.454E-01	2.564E-01	0.000E+00	FAIL ABUN
HO-166M	4.651E-02	6.184E-02	1.119E-01	0.000E+00	FAIL ABUN
TA-182	-3.145E-02	2.186E-01	3.655E-01	0.000E+00	FAIL ABUN
IR-192	1.216E-02	3.902E-02	6.918E-02	0.000E+00	FAIL ABUN
HG-203	8.175E-03	4.539E-02	7.147E-02	0.000E+00	NOT IDENT.
BI-207	1.577E-02	6.253E-02	1.095E-01	0.000E+00	FAIL ABUN
PB-210	4.446E+00	6.132E+00	1.050E+01	0.000E+00	NOT IDENT.
PB-211	-4.884E-01	8.138E-01	1.279E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	9.983E-01	1.394E+00	0.000E+00	FAIL ABUN
RN-219	-2.466E-01	4.397E-01	7.219E-01	0.000E+00	FAIL ABUN
RA-223	-4.021E-01	7.989E-01	1.173E+00	0.000E+00	FAIL ABUN
AC-227	1.394E-01	2.696E-01	4.891E-01	0.000E+00	FAIL ABUN
TH-227	1.394E-01	2.698E-01	4.891E-01	0.000E+00	FAIL ABUN
PA-231	-4.912E-01	1.478E+00	2.558E+00	0.000E+00	NOT IDENT.
TH-231	-4.021E-01	7.989E-01	1.173E+00	0.000E+00	FAIL ABUN
PA-233	-6.421E-03	6.602E-02	1.148E-01	0.000E+00	FAIL ABUN
PA-234	4.880E-02	3.578E-01	6.014E-01	0.000E+00	NOT IDENT.
PA-234M	5.259E+00	5.620E+00	1.010E+01	0.000E+00	NOT IDENT.
NP-239	7.613E-03	3.889E-01	6.853E-01	0.000E+00	FAIL ABUN
AM-241	3.488E-02	1.921E-01	3.213E-01	0.000E+00	NOT IDENT.
CM-247	-2.538E-02	4.012E-02	6.565E-02	0.000E+00	FAIL ABUN
CF-249	3.939E-02	4.335E-02	7.812E-02	0.000E+00	NOT IDENT.

CF-251	-1.556E-01	1.448E-01	2.336E-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]G1202052273.CNF;1
Sample date        : 19-FEB-2010 12:00:00 Acquisition date : 5-MAR-2010 13:05:38.
Sample ID          : G1202052273          Sample quantity  : 1.32540E+02 GRAM
Detector name      : GAM02                Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00        Elapsed real time: 0 02:00:03.72  0.1%
Energy tolerance   : 1.50000 keV          Analyst Initials : MXR1
Abundance limit    : 75.00000             Sensitivity       : 5.00000
Batch ID           : 957136                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	1460.82	1318	10.66*	1.028E+00	3.407E+01	3.407E+01	11.32
CD-109	88.03	170	3.70*	5.223E+00	2.487E+00	2.540E+00	37.32
SN-126	64.28	-----	9.60	2.716E+00	-----	Line Not Found	-----
	86.94	170	8.90	5.223E+00	1.034E+00	1.034E+00	55.04
	87.57	170	37.00*	5.223E+00	2.487E-01	2.487E-01	37.32
BA-137M	661.66	78	89.90*	2.071E+00	1.185E-01	1.186E-01	45.17
CS-137	661.66	78	85.10*	2.071E+00	1.252E-01	1.253E-01	45.17
TL-208	277.37	66	6.60	3.997E+00	7.066E-01	7.066E-01	81.58
	583.19	395	85.00*	2.292E+00	5.749E-01	5.749E-01	18.57
	860.56	42	12.50	1.651E+00	5.739E-01	5.739E-01	103.04
BI-211	72.87	-----	1.23	3.848E+00	-----	Line Not Found	-----
	351.06	668	12.92*	3.352E+00	4.371E+00	4.371E+00	15.94
PB-212	74.82	411	10.28	4.035E+00	2.805E+00	2.805E+00	22.37
	77.11	612	17.10	4.299E+00	2.357E+00	2.357E+00	15.74
	238.63	1345	43.60*	4.458E+00	1.960E+00	1.960E+00	14.21
	300.09	115	3.30	3.769E+00	2.609E+00	2.609E+00	41.88
BI-214	609.32	465	45.49*	2.214E+00	1.308E+00	1.308E+00	17.49
	1120.29	68	14.92	1.298E+00	9.951E-01	9.951E-01	63.91
	1764.49	77	15.30	9.005E-01	1.578E+00	1.578E+00	33.95
PB-214	74.82	411	5.80	4.035E+00	4.972E+00	4.972E+00	21.65
	77.11	612	9.70	4.299E+00	4.154E+00	4.155E+00	17.77
	242.00	331	7.25	4.419E+00	2.929E+00	2.929E+00	27.71
	295.22	406	18.42	3.814E+00	1.636E+00	1.636E+00	22.81
	351.93	668	35.60*	3.352E+00	1.586E+00	1.586E+00	16.86
RA-224	240.99	331	4.10*	4.419E+00	5.179E+00	5.179E+00	27.10
RA-226	609.32	465	45.49*	2.214E+00	1.308E+00	1.308E+00	17.49
	1120.29	68	14.92	1.298E+00	9.951E-01	9.951E-01	63.91
	1764.49	77	15.30	9.005E-01	1.578E+00	1.578E+00	33.95
AC-228	338.32	196	11.27	3.452E+00	1.427E+00	1.427E+00	51.33
	911.20	299	25.80*	1.570E+00	2.093E+00	2.093E+00	20.03
	968.97	183	15.80	1.484E+00	2.213E+00	2.213E+00	32.76
RA-228	338.32	196	11.27	3.452E+00	1.427E+00	1.427E+00	51.33

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
TH-228	911.20	299	25.80*	1.570E+00	2.093E+00	2.093E+00	20.03
	968.97	183	15.80	1.484E+00	2.213E+00	2.213E+00	32.76
	74.82	411	10.28	4.035E+00	2.805E+00	2.805E+00	20.18
	77.11	612	17.10	4.299E+00	2.357E+00	2.357E+00	15.74
	238.63	1345	43.60*	4.458E+00	1.960E+00	1.960E+00	14.21
TH-229	300.09	115	3.30	3.769E+00	2.609E+00	2.609E+00	73.42
	85.43	170	14.70	5.223E+00	6.260E-01	6.260E-01	37.32
	88.47	110	24.00	5.412E+00	2.392E-01	2.392E-01	52.65
	193.51	-----	4.41*	5.151E+00	-----	Line Not Found	-----
	210.85	-----	2.80	4.862E+00	-----	Line Not Found	-----
TH-232	338.32	196	11.27	3.452E+00	1.427E+00	1.427E+00	31.12
	911.20	299	25.80*	1.570E+00	2.093E+00	2.093E+00	20.03
	968.97	183	15.80	1.484E+00	2.213E+00	2.213E+00	32.76
TH-234	63.29	105	3.70*	2.467E+00	3.257E+00	3.257E+00	83.34
	92.59	241	4.23	5.579E+00	2.897E+00	2.897E+00	43.56
U-235	89.96	110	3.47	5.412E+00	1.655E+00	1.655E+00	57.48
	93.35	241	5.60	5.579E+00	2.188E+00	2.188E+00	44.08
	143.76	-----	10.96*	6.030E+00	-----	Line Not Found	-----
	163.33	-----	5.08	5.697E+00	-----	Line Not Found	-----
	185.72	221	57.20	5.292E+00	2.066E-01	2.066E-01	39.66
NP-237	205.31	-----	5.01	4.952E+00	-----	Line Not Found	-----
	86.48	170	12.40*	5.223E+00	7.421E-01	7.421E-01	42.81
	95.86	-----	2.68	5.755E+00	-----	Line Not Found	-----
	63.29	105	3.70*	2.467E+00	3.257E+00	3.257E+00	83.34
U-238	92.59	241	4.23	5.579E+00	2.897E+00	2.897E+00	38.53
	511.00	176	100.00*	2.540E+00	1.958E-01	1.958E-01	41.30

Flag: "*" = Keyline

Total number of lines in spectrum 34
Number of unidentified lines 4
Number of lines tentatively identified by NID 30 88.24%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.25E+09Y	1.00	3.407E+01	3.407E+01	0.386E+01	11.32	
CD-109	461.40D	1.02	2.487E+00	2.540E+00	0.948E+00	37.32	
SN-126	2.30E+05Y	1.00	2.487E-01	2.487E-01	0.928E-01	37.32	
BA-137M	30.08Y	1.00	1.185E-01	1.186E-01	0.536E-01	45.17	
CS-137	30.08Y	1.00	1.252E-01	1.253E-01	0.566E-01	45.17	
TL-208	1.41E+10Y	1.00	5.749E-01	5.749E-01	1.068E-01	18.57	
BI-211	7.04E+08Y	1.00	4.371E+00	4.371E+00	0.697E+00	15.94	
PB-212	1.41E+10Y	1.00	1.960E+00	1.960E+00	0.279E+00	14.21	
BI-214	1600.00Y	1.00	1.308E+00	1.308E+00	0.229E+00	17.49	
PB-214	1600.00Y	1.00	1.586E+00	1.586E+00	0.267E+00	16.86	
RA-224	1.41E+10Y	1.00	5.179E+00	5.179E+00	1.404E+00	27.10	
RA-226	1600.00Y	1.00	1.308E+00	1.308E+00	0.229E+00	17.49	
AC-228	1.41E+10Y	1.00	2.093E+00	2.093E+00	0.419E+00	20.03	
RA-228	1.41E+10Y	1.00	2.093E+00	2.093E+00	0.419E+00	20.03	
TH-228	1.41E+10Y	1.00	1.960E+00	1.960E+00	0.279E+00	14.21	
TH-229	7340.00Y	1.00	2.392E-01	2.392E-01	1.259E-01	52.65	K
TH-232	1.41E+10Y	1.00	2.093E+00	2.093E+00	0.419E+00	20.03	
TH-234	4.47E+09Y	1.00	3.257E+00	3.257E+00	2.714E+00	83.34	
U-235	7.04E+08Y	1.00	2.066E-01	2.066E-01	0.819E-01	39.66	K
NP-237	2.14E+06Y	1.00	7.421E-01	7.421E-01	3.177E-01	42.81	
U-238	4.47E+09Y	1.00	3.257E+00	3.257E+00	2.714E+00	83.34	
ANH-511	1.00E+09Y	1.00	1.958E-01	1.958E-01	0.809E-01	41.30	

Total Activity : 6.947E+01 6.952E+01

Grand Total Activity : 6.947E+01 6.952E+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	209.26	145	345	1.07	417.86	412	10	2.01E-02	50.9	4.89E+00	
0	270.01	119	198	1.10	539.43	535	9	1.65E-02	46.7	4.07E+00	T
0	327.43	109	182	1.15	654.33	649	11	1.51E-02	51.6	3.53E+00	T
0	462.79	102	85	1.14	925.20	920	11	1.42E-02	40.3	2.74E+00	T
0	727.21	115	83	1.41	1454.36	1449	13	1.59E-02	37.9	1.91E+00	T
0	771.47	70	179	7.87	1542.95	1529	28	9.78E-03	****	1.82E+00	
0	794.46	71	52	1.67	1588.96	1584	11	9.80E-03	47.5	1.77E+00	T
0	933.44	63	36	1.10	1867.09	1860	13	8.79E-03	46.4	1.53E+00	
2	963.99	70	56	2.19	1928.24	1921	37	9.76E-03	49.4	1.49E+00	T
0	1729.51	28	8	1.15	3460.48	3456	10	3.92E-03	55.3	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]G1202052273.CNF;1 *
* Acquisition date   : 5-MAR-2010 13:05:38.  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 02:00:03.72          Half life ratio  : 8.00000      *
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 19-FEB-2010 12:00:00  Nuclide Library   : SOLID        *
* Sample ID          : G1202052273          Analyst initials: MXR1         *
* Batch Number       : 957136               Sample Quantity  : 1.32540E+02 GRAM *
*****
*                                     QC DATA                                *
*
* CALIB. DATE/TIME   : 29-OCT-2009 10:28:07.3MS Isotope       :             *
* MSD ID             :                      MSD Isotope       :             *
* LCS ID             : 1032-A               LCS Isotope       :             *
*****

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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.407E+01	3.856E+00	6.631E-01	6.304E-02	51.372
CD-109	2.540E+00	9.481E-01	1.315E+00	1.320E-01	1.932
SN-126	2.487E-01	9.282E-02	1.294E-01	1.294E-02	1.921
BA-137M	1.186E-01	5.360E-02	6.603E-02	5.689E-03	1.797
CS-137	1.253E-01	5.662E-02	6.975E-02	6.021E-03	1.797
TL-208	5.749E-01	1.068E-01	6.375E-02	6.379E-03	9.018
BI-211	4.371E+00	6.965E-01	3.468E-01	4.002E-02	12.602
PB-212	1.960E+00	2.786E-01	9.563E-02	1.207E-02	20.498
BI-214	1.308E+00	2.287E-01	1.242E-01	1.318E-02	10.527
PB-214	1.586E+00	2.675E-01	1.261E-01	1.611E-02	12.575
RA-224	5.179E+00	1.404E+00	1.026E+00	1.210E-01	5.050
RA-226	1.308E+00	2.287E-01	1.242E-01	1.318E-02	10.527
AC-228	2.093E+00	4.191E-01	2.599E-01	3.323E-02	8.050
RA-228	2.093E+00	4.191E-01	2.599E-01	3.323E-02	8.050
TH-228	1.960E+00	2.786E-01	9.563E-02	1.207E-02	20.498
TH-229	2.392E-01	1.259E-01	9.221E-01	9.997E-02	0.259
TH-232	2.093E+00	4.191E-01	2.599E-01	3.323E-02	8.050
TH-234	3.257E+00	2.714E+00	2.421E+00	4.367E-01	1.345

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
U-235	2.066E-01	8.192E-02	3.640E-01	6.265E-02	0.568
NP-237	7.421E-01	3.177E-01	3.917E-01	9.077E-02	1.895
U-238	3.257E+00	2.714E+00	2.421E+00	4.367E-01	1.345
ANH-511	1.958E-01	8.087E-02	5.042E-02	4.998E-03	3.883

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	2.192E-02		3.677E-01	5.960E-01	6.319E-02	0.037
NA-22	-1.237E-02		5.077E-02	8.148E-02	7.224E-03	-0.152
NA-24	-1.981E-02		1.324E-01	Half-Life too short		
SC-46	-3.197E-02		4.944E-02	7.334E-02	7.457E-03	-0.436
V-48	3.945E-02		8.452E-02	1.381E-01	1.351E-02	0.286
CR-51	4.249E-02		4.206E-01	7.031E-01	8.574E-02	0.060
MN-54	2.811E-02		4.408E-02	7.538E-02	7.405E-03	0.373
CO-56	-2.979E-02		4.461E-02	6.803E-02	6.736E-03	-0.438
CO-57	1.309E-02		2.594E-02	4.357E-02	3.642E-03	0.300
CO-58	-7.984E-03		4.282E-02	6.882E-02	6.665E-03	-0.116
FE-59	-5.137E-02		9.453E-02	1.490E-01	1.420E-02	-0.345
CO-60	-1.397E-02		4.659E-02	7.368E-02	6.865E-03	-0.190
ZN-65	-3.451E-03		1.169E-01	1.669E-01	1.452E-02	-0.021
SE-75	5.944E-03		4.821E-02	7.603E-02	9.294E-03	0.078
SR-85	7.953E-02		4.509E-02	7.313E-02	7.240E-03	1.087
Y-88	7.465E-03		3.712E-02	6.359E-02	5.187E-03	0.117
Y-91	-1.373E+00		2.593E+01	4.268E+01	3.544E+00	-0.032
NB-94	2.836E-02		3.610E-02	6.315E-02	5.631E-03	0.449
NB-95	1.731E-03		5.941E-02	8.441E-02	7.903E-03	0.021
NB-95M	3.775E-02		1.490E-01	2.265E-01	2.869E-02	0.167
ZR-95	1.640E-02		8.368E-02	1.397E-01	1.417E-02	0.117
MO-99	-9.611E-02		1.106E+01	1.822E+01	2.928E+00	-0.005
TC-99M	-3.936E+08		1.051E+09	Half-Life too short		
RU-103	1.806E-02		4.441E-02	7.349E-02	1.090E-02	0.246
RH-106	3.286E-02		3.345E-01	5.630E-01	7.635E-02	0.058
RU-106	3.286E-02		3.344E-01	5.630E-01	5.113E-02	0.058
AG-108M	1.963E-02		3.354E-02	5.658E-02	5.835E-03	0.347
AG-110M	2.533E-02		4.315E-02	6.621E-02	5.907E-03	0.383
SN-113	-2.449E-02		5.095E-02	8.092E-02	8.281E-03	-0.303
CD-115	7.960E+00		9.555E+00	1.620E+01	1.593E+00	0.491
SN-117M	-1.859E-02		5.578E-02	8.904E-02	8.772E-03	-0.209
TE-123M	-7.483E-03		3.013E-02	4.828E-02	4.790E-03	-0.155
SB-124	-1.305E-02		8.011E-02	1.294E-01	1.180E-02	-0.101
SB-125	1.729E-02		9.708E-02	1.600E-01	1.634E-02	0.108
TE-125M	1.147E+00		9.915E+00	1.650E+01	1.717E+00	0.070
I-126	-3.752E-02		2.586E-01	3.673E-01	3.177E-02	-0.102
SB-126	3.431E-02		1.650E-01	2.527E-01	2.286E-02	0.136
SB-127	4.919E-01		1.254E+00	2.138E+00	2.395E-01	0.230
I-131	1.047E-01		1.133E-01	1.963E-01	2.200E-02	0.533

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TE-132	-5.278E-01		6.810E-01	1.024E+00	1.784E-01	-0.515
BA-133	-3.680E-02		5.216E-02	7.057E-02	1.037E-02	-0.521
I-133	7.436E-04		1.474E-03	Half-Life	too short	
CS-134	1.485E-01	+	7.198E-02	1.042E-01	1.003E-02	1.425
CS-135	3.935E-01		1.924E-01	3.121E-01	4.129E-02	1.261
I-135	-1.452E+08		2.639E+08	Half-Life	too short	
CS-136	5.749E-02		1.192E-01	2.072E-01	1.998E-02	0.278
CE-139	-4.708E-03		3.243E-02	5.207E-02	5.342E-03	-0.090
BA-140	1.444E-01		2.853E-01	4.675E-01	1.600E-01	0.309
LA-140	-7.654E-02		8.675E-02	1.251E-01	1.131E-02	-0.612
CE-141	-2.422E-02		6.506E-02	1.043E-01	9.744E-03	-0.232
CE-143	5.915E-04		9.054E-05	Half-Life	too short	
CE-144	-1.425E-01		2.128E-01	3.369E-01	5.165E-02	-0.423
PM-144	1.061E-02		3.621E-02	6.132E-02	5.442E-03	0.173
PR-144	7.896E-01		2.708E+00	4.586E+00	4.068E-01	0.172
PM-146	-1.723E-03		4.797E-02	7.645E-02	9.020E-03	-0.023
ND-147	-6.639E-02		6.159E-01	9.772E-01	1.531E-01	-0.068
PM-149	-1.248E+01		6.802E+01	1.128E+02	2.017E+01	-0.111
EU-152	-2.709E-02		1.099E-01	1.792E-01	2.106E-02	-0.151
GD-153	7.551E-02		9.736E-02	1.500E-01	1.363E-02	0.504
EU-154	-3.506E-02		1.439E-01	2.310E-01	2.670E-02	-0.152
EU-155	5.285E-02		1.141E-01	1.924E-01	1.687E-02	0.275
TB-160	8.484E-02		1.483E-01	2.538E-01	2.565E-02	0.334
HO-166M	4.651E-02		6.310E-02	1.103E-01	9.909E-03	0.422
TA-182	-3.145E-02		2.230E-01	3.638E-01	3.069E-02	-0.086
IR-192	1.216E-02		3.982E-02	6.727E-02	8.032E-03	0.181
HG-203	8.175E-03		4.632E-02	6.934E-02	8.706E-03	0.118
BI-207	1.577E-02		6.381E-02	1.087E-01	9.982E-03	0.145
PB-210	4.446E+00		6.257E+00	9.893E+00	9.411E-01	0.449
PB-211	-4.884E-01		8.304E-01	1.249E+00	6.078E-01	-0.391
BI-212	2.544E+00	+	1.019E+00	1.375E+00	1.758E-01	1.850
RN-219	-2.466E-01		4.487E-01	7.048E-01	1.109E-01	-0.350
RA-223	-4.021E-01		8.152E-01	1.141E+00	2.180E-01	-0.352
AC-227	1.394E-01		2.751E-01	4.739E-01	6.971E-02	0.294
TH-227	1.394E-01		2.753E-01	4.739E-01	7.587E-02	0.294
PA-231	-4.912E-01		1.508E+00	2.482E+00	4.236E-01	-0.198
TH-231	-4.021E-01		8.152E-01	1.141E+00	2.180E-01	-0.352
PA-233	-6.421E-03		6.737E-02	1.116E-01	1.360E-02	-0.058
PA-234	4.880E-02		3.651E-01	5.959E-01	1.158E-01	0.082
PA-234M	5.259E+00		5.734E+00	1.002E+01	1.091E+00	0.525
NP-239	7.613E-03		3.968E-01	6.553E-01	5.493E-02	0.012
AM-241	3.488E-02		1.960E-01	3.039E-01	2.490E-02	0.115
CM-247	-2.538E-02		4.094E-02	6.409E-02	6.429E-03	-0.396
CF-249	3.939E-02		4.423E-02	7.622E-02	7.713E-03	0.517
CF-251	-1.556E-01		1.478E-01	2.249E-01	2.361E-02	-0.692

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]G1202052273        *
* Acquisition date   : 5-MAR-2010 13:05:38 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 02:00:03.72 Half life ratio : 8.000             *
*                               *****                                    *
*                               *                                           *
*                               SAMPLE DATA                               *
*                               *                                           *
* Sample date       : 19-FEB-2010 12:00:00 Nuclide Library : SOLID        *
* Sample ID         : G1202052273 Analyst initials: MXR1                 *
* Batch Number      : 957136 Sample Quantity : 1.3254E+02 GRAM          *
* Recovery          : 1.00000 Carrier Weight : 0.00000                  *
*                               *****                                    *
*                               *                                           *
*                               QC DATA                                   *
*                               *                                           *
* CALIB. DATE/TIME  : 29-OCT-2009 10:28:07 MS Isotope :                 *
* MSD DPM           : 0.000 MSD Isotope :                               *
* LCS DPM           : 0.000 LCS Isotope :                               *
* LCSD DPM          : 0.000 LCSD Isotope :                               *
*                               *****

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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.407E+01	3.779E+00	3.322E-01	1.928E+00
CD-109	2.540E+00	9.291E-01	6.910E-01	4.740E-01
SN-126	2.487E-01	9.096E-02	6.804E-02	4.641E-02
BA-137M	1.186E-01	5.252E-02	3.355E-02	2.680E-02
CS-137	1.253E-01	5.549E-02	3.544E-02	2.831E-02
TL-208	5.749E-01	1.046E-01	3.246E-02	5.339E-02
BI-211	4.371E+00	6.826E-01	1.782E-01	3.483E-01
PB-212	1.960E+00	2.730E-01	4.944E-02	1.393E-01
BI-214	1.308E+00	2.241E-01	6.320E-02	1.144E-01
PB-214	1.586E+00	2.621E-01	6.479E-02	1.337E-01
RA-224	5.179E+00	1.376E+00	5.302E-01	7.018E-01
RA-226	1.308E+00	2.241E-01	6.320E-02	1.144E-01
AC-228	2.093E+00	4.107E-01	1.313E-01	2.095E-01
RA-228	2.093E+00	4.107E-01	1.313E-01	2.095E-01
TH-228	1.960E+00	2.730E-01	4.944E-02	1.393E-01
TH-229	5.229E-02	5.622E-01	4.784E-01	2.869E-01
TH-232	2.093E+00	4.107E-01	1.313E-01	2.095E-01
TH-234	3.257E+00	2.660E+00	1.279E+00	1.357E+00
U-235	1.164E-01	2.172E-01	1.898E-01	1.108E-01
NP-237	7.421E-01	3.113E-01	2.059E-01	1.588E-01
U-238	3.257E+00	2.660E+00	1.279E+00	1.357E+00
ANH-511	1.958E-01	7.925E-02	2.573E-02	4.043E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	2.192E-02	3.604E-01	3.045E-01	1.839E-01 NOT IDENT.
NA-22	-1.237E-02	4.975E-02	4.092E-02	2.538E-02 NOT IDENT.
NA-24	-1.981E+04	2.596E+05	0.000E+00	1.324E+05 SHORT HLIF
SC-46	-3.197E-02	4.845E-02	3.707E-02	2.472E-02 FAIL ABUN
V-48	3.945E-02	8.283E-02	6.970E-02	4.226E-02 NOT IDENT.

CR-51	4.249E-02	4.122E-01	3.617E-01	2.103E-01	NOT IDENT.
MN-54	2.811E-02	4.320E-02	3.814E-02	2.204E-02	NOT IDENT.
CO-56	-2.979E-02	4.371E-02	3.442E-02	2.230E-02	NOT IDENT.
CO-57	1.309E-02	2.542E-02	2.278E-02	1.297E-02	NOT IDENT.
CO-58	-7.984E-03	4.196E-02	3.484E-02	2.141E-02	NOT IDENT.
FE-59	-5.137E-02	9.264E-02	7.502E-02	4.727E-02	NOT IDENT.
CO-60	-1.397E-02	4.565E-02	3.698E-02	2.329E-02	NOT IDENT.
ZN-65	-3.451E-03	1.146E-01	8.405E-02	5.845E-02	NOT IDENT.
SE-75	5.944E-03	4.724E-02	3.924E-02	2.410E-02	NOT IDENT.
SR-85	7.953E-02	4.419E-02	3.732E-02	2.254E-02	NOT IDENT.
Y-88	7.465E-03	3.638E-02	3.173E-02	1.856E-02	NOT IDENT.
Y-91	-1.373E+00	2.541E+01	2.146E+01	1.296E+01	NOT IDENT.
NB-94	2.836E-02	3.538E-02	3.205E-02	1.805E-02	NOT IDENT.
NB-95	1.731E-03	5.822E-02	4.278E-02	2.971E-02	NOT IDENT.
NB-95M	3.775E-02	1.461E-01	1.172E-01	7.452E-02	NOT IDENT.
ZR-95	1.640E-02	8.201E-02	7.082E-02	4.184E-02	NOT IDENT.
MO-99	-9.611E-02	1.084E+01	9.241E+00	5.532E+00	NOT IDENT.
TC-99M	-3.936E+14	2.059E+15	0.000E+00	1.051E+15	SHORT HLIF
RU-103	1.806E-02	4.353E-02	3.752E-02	2.221E-02	FAIL ABUN
RH-106	3.286E-02	3.278E-01	2.864E-01	1.672E-01	NOT IDENT.
RU-106	3.286E-02	3.278E-01	2.864E-01	1.672E-01	NOT IDENT.
AG-108M	1.963E-02	3.287E-02	2.896E-02	1.677E-02	NOT IDENT.
AG-110M	2.533E-02	4.229E-02	3.364E-02	2.158E-02	NOT IDENT.
SN-113	-2.449E-02	4.993E-02	4.149E-02	2.548E-02	NOT IDENT.
CD-115	7.960E+00	9.364E+00	8.265E+00	4.777E+00	NOT IDENT.
SN-117M	-1.859E-02	5.467E-02	4.635E-02	2.789E-02	NOT IDENT.
TE-123M	-7.483E-03	2.953E-02	2.513E-02	1.507E-02	NOT IDENT.
SB-124	-1.305E-02	7.851E-02	6.466E-02	4.005E-02	NOT IDENT.
SB-125	1.729E-02	9.514E-02	8.191E-02	4.854E-02	FAIL ABUN
TE-125M	1.147E+00	9.717E+00	8.641E+00	4.958E+00	NOT IDENT.
I-126	-3.752E-02	2.534E-01	1.866E-01	1.293E-01	NOT IDENT.
SB-126	3.431E-02	1.617E-01	1.282E-01	8.252E-02	NOT IDENT.
SB-127	4.919E-01	1.229E+00	1.086E+00	6.272E-01	NOT IDENT.
I-131	1.047E-01	1.111E-01	1.008E-01	5.666E-02	NOT IDENT.
TE-132	-5.278E-01	6.674E-01	5.300E-01	3.405E-01	NOT IDENT.
BA-133	-3.680E-02	5.111E-02	3.624E-02	2.608E-02	FAIL ABUN
I-133	7.436E+02	2.888E+03	0.000E+00	1.474E+03	SHORT HLIF
CS-134	1.485E-01	7.054E-02	5.277E-02	3.599E-02	FAIL ABUN
CS-135	3.935E-01	1.886E-01	1.611E-01	9.621E-02	NOT IDENT.
I-135	-1.452E+14	5.172E+14	0.000E+00	2.639E+14	SHORT HLIF
CS-136	5.749E-02	1.168E-01	1.044E-01	5.959E-02	NOT IDENT.
CE-139	-4.708E-03	3.178E-02	2.709E-02	1.621E-02	NOT IDENT.
BA-140	1.444E-01	2.796E-01	2.384E-01	1.426E-01	NOT IDENT.
LA-140	-7.654E-02	8.501E-02	6.257E-02	4.337E-02	FAIL ABUN
CE-141	-2.422E-02	6.376E-02	5.437E-02	3.253E-02	NOT IDENT.
CE-143	5.915E+02	1.775E+02	0.000E+00	9.054E+01	SHORT HLIF
CE-144	-1.425E-01	2.085E-01	1.759E-01	1.064E-01	NOT IDENT.
PM-144	1.061E-02	3.549E-02	3.113E-02	1.811E-02	NOT IDENT.
PR-144	7.896E-01	2.654E+00	2.328E+00	1.354E+00	NOT IDENT.
PM-146	-1.723E-03	4.701E-02	3.910E-02	2.399E-02	NOT IDENT.
ND-147	-6.639E-02	6.036E-01	4.984E-01	3.080E-01	FAIL ABUN
PM-149	-1.248E+01	6.666E+01	5.816E+01	3.401E+01	NOT IDENT.
EU-152	-2.709E-02	1.077E-01	9.207E-02	5.493E-02	FAIL ABUN
GD-153	7.551E-02	9.541E-02	7.869E-02	4.868E-02	NOT IDENT.
EU-154	-3.506E-02	1.411E-01	1.160E-01	7.197E-02	NOT IDENT.
EU-155	5.285E-02	1.118E-01	1.009E-01	5.704E-02	FAIL ABUN
TE-160	8.484E-02	1.454E-01	1.283E-01	7.416E-02	FAIL ABUN
HO-166M	4.651E-02	6.184E-02	5.598E-02	3.155E-02	FAIL ABUN
TA-182	-3.145E-02	2.186E-01	1.829E-01	1.115E-01	FAIL ABUN
IR-192	1.216E-02	3.902E-02	3.461E-02	1.991E-02	FAIL ABUN
HG-203	8.175E-03	4.539E-02	3.575E-02	2.316E-02	NOT IDENT.
BI-207	1.577E-02	6.253E-02	5.479E-02	3.190E-02	FAIL ABUN
PB-210	4.446E+00	6.132E+00	5.253E+00	3.129E+00	NOT IDENT.
PB-211	-4.884E-01	8.138E-01	6.400E-01	4.152E-01	NOT IDENT.
BI-212	2.544E+00	9.983E-01	6.973E-01	5.093E-01	FAIL ABUN
RN-219	-2.466E-01	4.397E-01	3.612E-01	2.244E-01	FAIL ABUN
RA-223	-4.021E-01	7.989E-01	5.868E-01	4.076E-01	FAIL ABUN
AC-227	1.394E-01	2.696E-01	2.447E-01	1.376E-01	FAIL ABUN
TH-227	1.394E-01	2.698E-01	2.447E-01	1.376E-01	FAIL ABUN
PA-231	-4.912E-01	1.478E+00	1.280E+00	7.541E-01	NOT IDENT.
TH-231	-4.021E-01	7.989E-01	5.868E-01	4.076E-01	FAIL ABUN
PA-233	-6.421E-03	6.602E-02	5.745E-02	3.368E-02	FAIL ABUN
PA-234	4.880E-02	3.578E-01	3.009E-01	1.825E-01	NOT IDENT.
PA-234M	5.259E+00	5.620E+00	5.055E+00	2.867E+00	NOT IDENT.
NP-239	7.613E-03	3.889E-01	3.428E-01	1.984E-01	FAIL ABUN
AM-241	3.488E-02	1.921E-01	1.607E-01	9.800E-02	NOT IDENT.
CM-247	-2.538E-02	4.012E-02	3.284E-02	2.047E-02	FAIL ABUN
CF-249	3.939E-02	4.335E-02	3.908E-02	2.212E-02	NOT IDENT.

CF-251	-1.556E-01	1.448E-01	1.169E-01	7.388E-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
46.54	255.4146
49.72	285.7599
57.36	0.0000
59.54	280.8718
63.29	307.5052
63.29	307.5052
64.28	292.7161
67.75	332.5861
69.67	299.8700
70.83	347.4093
72.81	360.4187
72.87	360.4762
72.87	360.4762
74.82	362.3400
74.82	362.3400
74.82	362.3400
74.97	362.4818
77.11	388.4064
77.11	388.4064
77.11	388.4064
79.69	329.6556
79.80	347.4597
80.12	360.0110
80.19	360.0754
80.57	397.5496
81.00	418.7473
81.07	422.8293
81.07	422.8293
83.79	377.0343
83.79	377.0343
85.43	424.1136
86.48	366.5437
86.55	366.6043
86.79	366.8102
86.94	366.9415
87.57	367.4867
88.03	367.8824
88.47	368.2600
89.96	369.5332
91.11	370.5075
92.59	371.7534
92.59	371.7534
93.35	372.3894
94.67	310.4559
94.87	344.4765
94.87	344.4765
95.86	355.1346
97.43	283.9500
98.44	273.1890
99.53	302.3546
100.11	346.5209
103.18	312.3619
103.37	309.6107
105.31	323.3689
106.12	322.9432
109.28	302.7023
111.00	311.5283
111.76	295.4222
116.30	252.7935
117.23	265.0678
121.12	259.0751
121.78	266.3493
122.06	266.4869
123.07	291.8897
131.20	338.6395
133.52	318.6986
136.00	274.1937

136.47	278.4931
140.51	293.7505
140.51	0.0000
143.76	273.6506
144.24	267.6628
144.24	267.6628
145.44	307.5381
152.43	274.3452
153.25	278.8936
154.21	276.1602
154.21	276.1602
156.02	316.9527
158.56	287.5335
159.00	280.3225
162.66	269.1111
163.33	288.5468
165.86	284.2891
176.60	283.2996
177.52	309.7502
181.07	258.8595
184.41	277.6067
185.72	278.1008
193.51	248.7985
197.04	247.7175
205.31	228.3584
210.85	233.3448
215.65	237.5737
222.11	247.4761
227.38	246.6951
228.16	257.3514
228.18	257.3582
235.69	258.1795
235.96	255.4510
235.96	255.4510
238.63	198.8535
238.63	198.8535
240.99	199.3777
242.00	199.6018
244.70	197.0094
252.40	202.7728
252.80	210.9041
256.23	189.2532
256.23	189.2532
260.90	179.3721
264.66	162.8806
268.22	149.6744
269.46	172.7818
269.46	172.7818
271.23	142.1177
273.65	142.4676
276.40	175.8281
277.37	193.6011
277.60	193.6430
278.00	190.7852
279.20	183.6670
279.54	179.3215
280.46	150.0590
283.69	169.7261
284.31	175.3650
285.41	173.7055
285.90	163.6202
287.50	149.0631
293.27	0.0000
295.22	155.2103
295.96	141.8784
298.57	142.2286
299.98	143.9156
299.98	143.9156
300.09	143.9320
300.09	143.9320
300.13	143.9367
301.36	141.1010
302.85	121.7551
304.50	143.0195
304.50	143.0195
304.85	149.3407
308.46	136.9331
311.90	145.8907

316.51	168.3817
319.41	160.2352
320.08	174.6453
323.87	171.5984
323.87	171.5984
328.76	175.4142
333.37	169.9387
334.37	173.1789
334.37	173.1789
338.28	173.7613
338.28	173.7613
338.32	173.7668
338.32	173.7668
338.32	173.7668
340.48	156.9889
340.55	156.9988
344.28	159.8334
351.06	130.3577
351.93	130.4531
356.01	148.0156
364.49	109.0063
366.42	143.9114
383.85	126.7825
388.16	113.0715
388.63	118.1613
391.69	144.7565
400.66	115.1639
401.81	132.6045
402.40	132.6620
404.85	136.9934
410.95	110.9095
414.70	112.2433
423.72	108.8292
427.09	104.9345
427.87	102.9140
433.94	106.4871
453.88	103.7242
463.37	103.9606
468.07	128.2178
473.00	114.6990
476.78	114.9822
477.60	108.5916
487.02	96.2723
492.35	84.6591
497.08	93.6216
511.00	94.4339
514.00	75.6862
527.90	85.4219
529.87	0.0000
531.02	100.0305
537.26	82.5499
546.56	0.0000
563.25	93.3136
569.33	89.9967
569.50	90.0064
569.70	89.1068
583.19	88.8630
600.60	102.7588
602.73	94.1335
604.72	94.2328
609.32	90.1276
609.32	90.1276
610.33	90.1773
614.28	86.9486
618.01	81.2088
621.93	78.5695
621.93	78.5695
633.25	92.2052
635.95	79.1417
636.99	74.4714
645.85	87.1192
657.76	73.0355
661.66	86.8566
661.66	86.8566
664.57	0.0000
666.33	82.9131
666.50	82.9194
677.62	77.9230

685.70	80.1590
695.00	68.8766
696.49	72.8082
696.51	72.8082
697.00	69.9135
702.65	69.1262
706.68	76.0862
711.68	60.6210
720.70	75.7435
721.93	0.0000
722.78	76.9870
722.91	76.9908
723.31	78.6445
724.19	75.3976
727.33	86.6680
733.00	88.8684
735.93	80.0884
739.50	82.1996
747.24	79.5059
752.31	63.7484
753.82	59.8052
756.73	78.8438
763.94	66.7480
765.81	86.8444
766.42	93.5498
777.92	77.2319
778.90	80.6230
783.70	65.6427
785.37	73.7753
795.86	65.9855
801.95	59.9370
810.29	65.3672
810.76	66.4012
815.77	67.5646
818.51	61.4927
832.01	84.5104
834.85	72.2268
836.80	0.0000
846.77	73.6140
856.80	55.5208
860.56	70.8953
871.09	49.2066
873.19	62.8682
875.33	0.0000
879.36	48.3157
880.51	56.7448
883.24	50.4938
884.68	67.3625
889.28	74.8637
898.04	62.4210
911.20	63.7998
911.20	63.7998
911.20	63.7998
926.50	39.2144
937.49	48.3245
944.13	61.3613
946.00	64.6348
949.00	50.6868
962.29	54.1846
964.08	54.2188
966.15	54.2603
968.97	54.3152
968.97	54.3152
968.97	54.3152
983.53	58.2396
996.26	83.3662
1001.03	48.3452
1004.73	73.3447
1037.84	51.9303
1038.76	0.0000
1048.07	57.6961
1050.41	72.6426
1050.41	72.6426
1063.66	64.5443
1085.87	59.3676
1099.45	56.7896
1112.07	55.3923
1115.54	65.2400

1120.29	55.5370
1120.29	55.5370
1120.55	55.5417
1121.30	62.0919
1131.51	0.0000
1173.23	65.8750
1177.93	62.0885
1189.05	53.5386
1204.77	76.2861
1221.41	70.7695
1231.02	97.5820
1235.36	96.7200
1238.28	81.9868
1260.41	0.0000
1271.85	55.8542
1274.44	54.8971
1274.54	54.8993
1291.59	50.1506
1298.22	0.0000
1312.11	47.4131
1332.49	43.6229
1365.19	39.9172
1368.63	0.0000
1384.29	30.8630
1408.01	30.0207
1457.56	0.0000
1460.82	30.4325
1489.16	21.1377
1505.03	26.5259
1596.21	27.8896
1620.50	15.8936
1678.03	0.0000
1690.97	15.1998
1764.49	20.2734
1764.49	20.2734
1770.23	21.9899
1771.35	63.8109
1791.20	0.0000
1836.06	12.7411

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1202052273

Total Uranium Activity	9.7422E+00	ug/g
Total Uranium Counting Unc.	7.9132E+00	ug/g
Total Uranium Tpu	4.0373E-06	ug/g
Total Uranium Mda	3.8069E+00	ug/g


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*****
*
*               GEL Laboratories LLC               *
*               2040 SAVAGE ROAD                   *
*               CHARLESTON ,SC 29417                *
*               GROSS GAMMA REPORT                  *
*
*****
*
*  BATCH ID      : 957136          SAMPLE ID   : G1202052273   *
*  ANALYST       : MXR1            DETECTOR    : GAM02         *
*  SAMPLE DATE   : 19-FEB-2010 12:00:00.00  COUNT TIME : 0 02:00:00.00 *
*  ANALYSIS DATE: 5-MAR-2010 13:05:38.92  SAMPLE ALQT: 132.540 GRAM *
*
*****

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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 1.089E+01
GROSS GAMMA ERROR   (pCi/GRAM ) : 1.586E+00
GROSS GAMMA MDA     (pCi/GRAM ) : 3.876E+00
GROSS GAMMA DLC     (pCi/GRAM ) : 1.881E+00

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VAX/VMS Nuclide Identification Report Generated 8-MAR-2010 10:47:12.53

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*****
*                               GEL Laboratories LLC                      *
*                               2040 Savage Road                        *
*                               Charleston, SC 29414                    *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202052274.CNF;1
Sample date        : 26-FEB-2010 00:00:00 Acquisition date : 8-MAR-2010 09:46:42.
Sample ID          : G1202052274 Sample quantity : 1.55440E+02 GRAM
Detector name      : GAM02 Detector geometry: CAN
Elapsed live time  : 0 01:00:00.00 Elapsed real time: 0 01:00:02.71 0.1%
Energy tolerance   : 1.50000 keV Analyst Initials : MXR1
Abundance limit    : 75.00000 Sensitivity : 5.00000
Batch ID           : 957136 Detector SN# :
Matrix Spike ID    : LCS ID : 1032-A
*****

```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	59.18	2212	644	1.01	117.54	112	11	6.14E-01	3.1	
2	2	74.43	146	379	1.08	148.06	145	14	4.06E-02	23.6	1.11E+00
3	2	76.87*	234	365	1.09	152.95	145	14	6.49E-02	15.3	
4	0	87.73	1314	615	1.05	174.68	169	11	3.65E-01	4.6	
5	0	92.31*	77	342	0.92	183.84	180	8	2.14E-02	45.6	
6	0	121.78	213	374	0.99	242.81	238	10	5.93E-02	18.3	
7	0	238.29*	478	295	0.97	475.95	472	8	1.33E-01	7.8	
8	0	294.96*	162	187	0.97	589.36	586	9	4.49E-02	17.2	
9	0	338.22*	149	260	1.56	675.91	669	15	4.14E-02	25.2	
10	0	351.57*	219	212	1.18	702.64	699	10	6.09E-02	14.5	
11	0	582.88*	193	142	1.60	1165.52	1157	13	5.35E-02	14.7	
12	0	609.15*	160	143	1.11	1218.09	1211	14	4.45E-02	17.9	
13	0	661.21	2027	112	1.56	1322.29	1316	13	5.63E-01	2.5	
14	0	726.82	48	47	1.51	1453.58	1450	7	1.34E-02	27.6	
15	0	910.88*	69	90	1.31	1821.94	1820	7	1.92E-02	26.6	
16	0	968.26*	52	83	1.41	1936.78	1933	9	1.44E-02	34.9	
17	0	1172.58	1600	63	1.85	2345.73	2339	14	4.44E-01	2.7	
18	0	1331.81	1524	33	1.91	2664.42	2656	19	4.23E-01	2.7	
19	8	1405.61	18	4	2.39	2812.13	2808	12	5.05E-03	28.0	1.92E+00
20	8	1408.03	8	4	1.58	2816.99	2808	12	2.28E-03	55.9	
21	0	1460.30*	15	9	1.08	2921.60	2914	12	4.22E-03	52.9	
22	0	1763.90*	33	7	2.57	3529.32	3524	13	9.15E-03	24.7	

Flag: "*" = Peak area was modified by background subtraction


```

Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202052274.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 26-FEB-2010 00:00:00 Acquisition date : 8-MAR-2010 09:46:42
Sample ID         : G1202052274 Sample quantity : 155.44 GRAM
Sample type       : SOLID Sample geometry :
Detector name     : GAMMA2 Detector geometry: CAN
Elapsed live time: 0 01:00:00.00 Elapsed real time: 0 01:00:02.71 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
K-40	+	1460.82	*	6.690E-01	7.106E-01	6.735E-01	6.403E-02	0.993
CO-57	+	122.06	*	1.982E-01	7.442E-02	6.647E-02	5.556E-03	2.982
		136.47		3.407E-01	3.377E-01	5.750E-01	5.424E-02	0.592
CO-60	+	1173.23		6.242E+00	6.064E-01	1.215E-01	9.787E-03	51.359
	+	1332.49	*	6.655E+00	7.175E-01	9.595E-02	8.940E-03	69.357
CD-109	+	88.03	*	3.298E+01	4.479E+00	2.158E+00	2.167E-01	15.282
SN-126		64.28		-2.247E-01	9.040E-01	1.482E+00	2.199E-01	-0.152
	+	86.94		1.350E+01	5.760E+00	8.955E-01	3.729E-01	15.076
	+	87.57	*	3.247E+00	4.409E-01	2.137E-01	2.136E-02	15.196
BA-137M	+	661.66	*	5.262E+00	5.229E-01	1.180E-01	1.017E-02	44.591
CS-137	+	661.66	*	5.559E+00	5.532E-01	1.247E-01	1.076E-02	44.591
TL-208		277.37		6.747E-01	6.952E-01	1.209E+00	1.856E-01	0.558
	+	583.19	*	4.778E-01	1.481E-01	1.095E-01	1.095E-02	4.365
		860.56		3.749E-01	7.092E-01	1.183E+00	1.247E-01	0.317
BI-211		72.87		6.013E+00	5.616E+00	8.937E+00	7.692E-01	0.673
	+	351.06	*	2.445E+00	7.626E-01	7.107E-01	8.199E-02	3.441
PB-212	+	74.82		1.701E+00	8.323E-01	9.638E-01	1.261E-01	1.765
	+	77.11		1.532E+00	4.895E-01	5.469E-01	4.891E-02	2.802
	+	238.63	*	1.188E+00	2.380E-01	2.113E-01	2.666E-02	5.623
		300.09		1.838E+00	1.691E+00	2.642E+00	3.593E-01	0.696
BI-214	+	609.32	*	7.682E-01	2.871E-01	2.096E-01	2.225E-02	3.664
		1120.29		1.306E+00	7.424E-01	1.346E+00	1.472E-01	0.970
	+	1764.49		1.154E+00	5.782E-01	4.238E-01	3.592E-02	2.724
PB-214	+	74.82		3.015E+00	1.465E+00	1.708E+00	2.018E-01	1.765
	+	77.11		2.701E+00	8.912E-01	9.641E-01	1.173E-01	2.802
		242.00		1.943E+00	7.397E-01	1.205E+00	1.586E-01	1.613
	+	295.22		1.112E+00	4.130E-01	4.380E-01	6.072E-02	2.540
	+	351.93	*	8.874E-01	2.811E-01	2.503E-01	3.196E-02	3.546
RA-226	+	609.32	*	7.682E-01	2.871E-01	2.096E-01	2.225E-02	3.664
		1120.29		1.306E+00	7.424E-01	1.346E+00	1.472E-01	0.970
	+	1764.49		1.154E+00	5.782E-01	4.238E-01	3.592E-02	2.724
AC-228	+	338.32		1.850E+00	1.218E+00	7.154E-01	3.034E-01	2.587
	+	911.20	*	8.237E-01	4.504E-01	5.607E-01	7.168E-02	1.469
	+	968.97		1.067E+00	7.900E-01	1.071E+00	2.660E-01	0.996

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-228	+	338.32		1.850E+00	1.218E+00	7.154E-01	3.034E-01	2.587
	+	911.20	*	8.237E-01	4.504E-01	5.607E-01	7.168E-02	1.469
	+	968.97		1.067E+00	7.900E-01	1.071E+00	2.660E-01	0.996
TH-228	+	74.82		1.701E+00	8.159E-01	9.638E-01	8.514E-02	1.765
	+	77.11		1.532E+00	4.895E-01	5.469E-01	4.891E-02	2.802
	+	238.63	*	1.188E+00	2.380E-01	2.113E-01	2.666E-02	5.623
		300.09		1.838E+00	2.022E+00	2.642E+00	1.633E+00	0.696
TH-232	+	338.32		1.850E+00	9.550E-01	7.154E-01	8.225E-02	2.587
	+	911.20	*	8.237E-01	4.504E-01	5.607E-01	7.168E-02	1.469
	+	968.97		1.067E+00	7.900E-01	1.071E+00	2.660E-01	0.996
NP-237	+	86.48	*	9.689E+00	2.420E+00	6.466E-01	1.498E-01	14.985
		95.86		-4.090E-01	1.496E+00	2.196E+00	5.316E-01	-0.186
AM-241	+	59.54	*	1.484E+01	1.524E+00	5.725E-01	4.690E-02	25.919

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.60	*	4.726E-01	6.714E-01	1.128E+00	1.196E-01	0.419
NA-22		1274.54	*	-1.664E-02	6.309E-02	1.000E-01	8.868E-03	-0.166
NA-24		1368.63	*	-3.566E-03	6.309E-02	Half-Life too short		
SC-46		889.28	*	-1.450E-01	9.856E-02	1.404E-01	1.427E-02	-1.033
		1120.55		2.028E-01	1.187E-01	2.163E-01	1.868E-02	0.938
V-48		944.13		-1.238E+00	2.113E+00	3.272E+00	3.274E-01	-0.378
		983.53	*	8.174E-02	1.602E-01	2.663E-01	2.605E-02	0.307
		1312.11		-2.401E-02	1.003E-01	1.590E-01	1.456E-02	-0.151
CR-51		320.08	*	-7.587E-02	6.337E-01	1.047E+00	1.277E-01	-0.072
MN-54		834.85	*	9.716E-02	7.924E-02	1.399E-01	1.374E-02	0.694
CO-56		846.77	*	-1.158E-02	8.601E-02	1.387E-01	1.373E-02	-0.084
		1037.84		-2.615E-01	6.730E-01	1.093E+00	1.072E-01	-0.239
		1238.28		8.777E-02	1.062E-01	1.931E-01	1.703E-02	0.455
		1771.35		-8.203E-01	4.356E-01	4.190E-01	3.539E-02	-1.958
CO-58		810.76	*	-4.850E-02	8.501E-02	1.328E-01	1.286E-02	-0.365
FE-59		1099.45	*	7.205E-02	2.121E-01	3.614E-01	3.445E-02	0.199
		1291.59		-2.819E-02	1.660E-01	2.661E-01	2.691E-02	-0.106
ZN-65		1115.54	*	-3.099E-01	2.259E-01	3.386E-01	2.945E-02	-0.915
SE-75	+	121.12		1.020E+00	3.896E-01	4.619E-01	5.027E-02	2.209
		136.00		3.599E-02	6.400E-02	1.072E-01	9.492E-03	0.336
		264.66	*	-6.394E-02	7.897E-02	1.270E-01	1.553E-02	-0.503
		279.54		-5.453E-02	1.944E-01	3.216E-01	4.062E-02	-0.170
		400.66		-9.540E-02	5.330E-01	8.631E-01	1.054E-01	-0.111
SR-85		514.00	*	-1.261E-01	8.529E-02	1.231E-01	1.218E-02	-1.025
Y-88		898.04		-1.240E-01	1.109E-01	1.645E-01	1.687E-02	-0.754
		1836.06	*	-3.394E-02	5.226E-02	7.272E-02	5.932E-03	-0.467
Y-91		1204.77	*	-1.350E+01	2.969E+01	4.643E+01	3.855E+00	-0.291
NB-94		702.65	*	3.879E-02	6.409E-02	1.106E-01	9.863E-03	0.351
		871.09		3.158E-02	8.496E-02	1.417E-01	1.424E-02	0.223
NB-95		765.81	*	2.266E-02	8.352E-02	1.395E-01	1.306E-02	0.163
NB-95M		235.69	*	9.923E-02	2.265E-01	3.480E-01	4.407E-02	0.285

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-95	724.19			1.647E-01	1.897E-01	2.954E-01	2.884E-02	0.558
	756.73	*		3.054E-02	1.488E-01	2.482E-01	2.517E-02	0.123
MO-99	140.51			-7.748E+00	1.086E+01	1.688E+01	4.029E+00	-0.459
	181.07			-8.114E+00	8.876E+00	1.333E+01	2.635E+00	-0.608
	366.42			2.280E+01	6.260E+01	1.051E+02	1.133E+01	0.217
	739.50	*		-4.396E+00	7.553E+00	1.182E+01	1.899E+00	-0.372
	777.92			-1.157E+01	2.402E+01	3.815E+01	3.604E+00	-0.303
TC-99M	140.51	*		-9.268E+04	2.402E+01	Half-Life too short		
RU-103	497.08	*		3.832E-02	7.765E-02	1.288E-01	1.911E-02	0.298
	610.33			7.293E+00	2.883E+00	3.400E+00	5.664E-01	2.145
RH-106	621.93	*		-8.931E-01	6.320E-01	9.284E-01	1.259E-01	-0.962
	1050.41			2.622E-01	6.138E+00	1.030E+01	9.570E-01	0.025
RU-106	621.93	*		-8.931E-01	6.256E-01	9.284E-01	8.431E-02	-0.962
	1050.41			2.622E-01	6.138E+00	1.030E+01	9.570E-01	0.025
AG-108M	433.94	*		3.887E-02	6.459E-02	1.086E-01	1.120E-02	0.358
	614.28			-5.872E-03	7.938E-02	1.147E-01	1.081E-02	-0.051
	722.91			2.481E-02	7.981E-02	1.182E-01	1.102E-02	0.210
AG-110M	657.76	*		3.007E-01	1.005E-01	1.724E-01	1.538E-02	1.744
	677.62			-6.666E-01	6.300E-01	9.590E-01	8.610E-02	-0.695
	706.68			-1.824E-02	4.101E-01	6.762E-01	6.211E-02	-0.027
	763.94			-1.831E-01	3.443E-01	5.422E-01	5.187E-02	-0.338
	884.68			2.382E-02	1.181E-01	1.946E-01	2.019E-02	0.122
	937.49			-2.677E-01	3.139E-01	4.758E-01	4.906E-02	-0.563
	1384.29			-9.062E-02	1.913E-01	2.807E-01	2.678E-02	-0.323
	1505.03			1.512E-01	4.297E-01	7.383E-01	6.811E-02	0.205
SN-113	391.69	*		8.305E-03	9.312E-02	1.534E-01	1.569E-02	0.054
CD-115	260.90			-1.650E+01	5.738E+01	9.534E+01	1.157E+01	-0.173
	492.35			-1.453E+00	1.956E+01	3.134E+01	3.129E+00	-0.046
	527.90	*		-1.477E+00	5.614E+00	8.812E+00	8.663E-01	-0.168
SN-117M	156.02			6.613E-01	2.879E+00	4.723E+00	4.589E-01	0.140
	158.56	*		8.906E-03	6.868E-02	1.121E-01	1.104E-02	0.079
TE-123M	159.00	*		-5.510E-03	4.343E-02	6.993E-02	6.938E-03	-0.079
SB-124	602.73			-3.345E-02	8.600E-02	1.208E-01	1.121E-02	-0.277
	645.85			4.728E-01	9.517E-01	1.638E+00	1.523E-01	0.289
	722.78			2.178E-01	7.579E-01	1.119E+00	1.035E-01	0.195
	1690.97	*		9.515E-02	9.667E-02	1.952E-01	1.780E-02	0.487
SB-125	427.87	*		1.582E-01	2.036E-01	3.449E-01	3.521E-02	0.459
	463.37			7.439E-01	6.336E-01	1.084E+00	1.150E-01	0.687
	600.60			-1.440E-01	3.876E-01	6.170E-01	6.101E-02	-0.233
	635.95			-1.670E-01	5.708E-01	9.331E-01	8.962E-02	-0.179
TE-125M	109.28	*		-4.007E+00	1.461E+01	2.390E+01	2.484E+00	-0.168
I-126	388.63			-3.856E-02	2.751E-01	4.476E-01	4.523E-02	-0.086
	666.33	*		-4.744E-02	3.869E-01	5.513E-01	4.769E-02	-0.086
	753.82			2.688E-01	3.053E+00	5.055E+00	4.691E-01	0.053
SB-126	414.70			-1.313E-01	1.245E-01	1.892E-01	1.902E-02	-0.694
	666.50			-6.339E-03	1.307E-01	1.877E-01	1.624E-02	-0.034
	695.00			-1.538E-03	1.175E-01	1.935E-01	1.715E-02	-0.008
	697.00			-1.810E-01	4.151E-01	6.654E-01	5.905E-02	-0.272
	720.70	*		-1.040E-01	2.356E-01	3.523E-01	3.187E-02	-0.295

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SB-127		856.80		-4.356E-01	9.061E-01	1.424E+00	1.419E-01	-0.306
		252.40		1.423E+00	3.379E+00	5.731E+00	2.409E+00	0.248
		473.00		-1.843E+00	1.724E+00	2.583E+00	3.297E-01	-0.714
		685.70	*	-8.161E-01	1.143E+00	1.790E+00	1.842E-01	-0.456
I-131		783.70		1.731E+00	3.075E+00	5.245E+00	6.246E-01	0.330
		80.19		-3.769E+00	5.277E+00	7.669E+00	7.088E-01	-0.491
		284.31		2.498E-01	1.770E+00	2.990E+00	3.781E-01	0.084
		364.49	*	4.900E-02	1.673E-01	2.797E-01	3.131E-02	0.175
TE-132		636.99		8.120E-01	2.175E+00	3.715E+00	3.480E-01	0.219
		49.72		-6.492E+00	2.047E+01	3.127E+01	3.115E+00	-0.208
		111.76		-9.188E+00	1.904E+01	3.074E+01	2.978E+00	-0.299
		116.30		5.779E+00	1.663E+01	2.665E+01	2.565E+00	0.217
BA-133		228.16	*	-1.130E-01	5.051E-01	7.892E-01	1.332E-01	-0.143
		81.00		-1.122E-01	1.673E-01	2.429E-01	3.863E-02	-0.462
		276.40		4.191E-01	6.509E-01	1.120E+00	1.867E-01	0.374
		302.85		-1.143E-01	2.654E-01	4.323E-01	6.750E-02	-0.264
I-133		356.01	*	-2.823E-02	9.130E-02	1.288E-01	1.893E-02	-0.219
		383.85		5.074E-02	5.843E-01	9.639E-01	1.312E-01	0.053
		529.87	*	5.096E-05	5.843E-01	Half-Life	too short	
		875.33		-8.905E-03	5.843E-01	Half-Life	too short	
CS-134		1298.22		3.514E-03	5.843E-01	Half-Life	too short	
		563.25		3.834E-02	7.086E-01	1.197E+00	1.159E-01	0.032
		569.33		-1.467E-01	3.682E-01	5.985E-01	5.786E-02	-0.245
		604.72		-2.408E-02	7.247E-02	1.022E-01	9.475E-03	-0.236
CS-135		795.86	*	1.120E-01	9.798E-02	1.727E-01	1.661E-02	0.649
		801.95		2.283E-02	8.502E-01	1.394E+00	1.346E-01	0.016
		1365.19		-1.521E+00	1.491E+00	1.847E+00	1.791E-01	-0.824
		268.22	*	3.339E-01	2.993E-01	5.231E-01	6.920E-02	0.638
I-135		546.56		-4.721E+04	2.993E-01	Half-Life	too short	
		836.80		1.644E+05	2.993E-01	Half-Life	too short	
		1038.76		-1.177E+05	2.993E-01	Half-Life	too short	
		1131.51		-7.870E+04	2.993E-01	Half-Life	too short	
CS-136		1260.41	*	-1.317E+04	2.993E-01	Half-Life	too short	
		1457.56		1.766E+05	2.993E-01	Half-Life	too short	
		1678.03		-1.459E+05	2.993E-01	Half-Life	too short	
		1791.20		9.246E+04	2.993E-01	Half-Life	too short	
CE-139		153.25		6.513E-01	1.062E+00	1.772E+00	1.963E-01	0.367
		176.60		2.049E-01	6.347E-01	1.038E+00	1.165E-01	0.197
		273.65		-9.430E-01	7.483E-01	1.166E+00	1.497E-01	-0.809
		340.55		2.084E-01	2.235E-01	3.468E-01	4.055E-02	0.601
BA-140		818.51		5.886E-02	1.328E-01	2.239E-01	2.177E-02	0.263
		1048.07	*	7.657E-02	2.059E-01	3.530E-01	3.405E-02	0.217
		1235.36		9.711E-01	5.528E-01	1.079E+00	1.263E-01	0.900
		165.86	*	1.681E-02	4.652E-02	7.654E-02	7.852E-03	0.220
LA-140		162.66		-2.714E-01	1.023E+00	1.634E+00	1.729E-01	-0.166
		304.85		-9.591E-01	1.919E+00	3.079E+00	9.385E-01	-0.311
		423.72		3.264E-01	3.202E+00	5.246E+00	1.747E+00	0.062
		537.26	*	-1.479E-01	4.498E-01	6.974E-01	2.387E-01	-0.212
LA-140		328.76		2.074E-01	4.338E-01	7.369E-01	8.892E-02	0.281

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		487.02		4.479E-02	2.355E-01	3.841E-01	4.019E-02	0.117
		815.77		-2.088E-01	5.748E-01	9.126E-01	9.681E-02	-0.229
		1596.21	*	-1.031E-01	9.942E-02	1.322E-01	1.196E-02	-0.780
CE-141		145.44	*	-2.259E-02	9.338E-02	1.504E-01	1.405E-02	-0.150
CE-143		57.36		6.471E+02	3.006E+02	4.894E+02	4.895E+01	1.322
		293.27	*	5.702E+01	2.845E+01	4.231E+01	9.834E+00	1.348
		664.57		9.999E+02	4.170E+02	5.272E+02	1.587E+02	1.897
		721.93		-1.156E+02	2.756E+02	3.737E+02	1.055E+02	-0.309
CE-144		80.12		-3.010E+00	4.245E+00	6.171E+00	5.685E-01	-0.488
		133.52	*	-2.791E-01	3.281E-01	5.117E-01	7.844E-02	-0.546
PM-144		476.78		1.318E-01	1.477E-01	2.500E-01	2.669E-02	0.527
		618.01		6.164E-02	6.409E-02	1.134E-01	1.061E-02	0.543
		696.49	*	3.794E-03	6.796E-02	1.130E-01	1.003E-02	0.034
PR-144		696.51	*	2.460E-01	5.071E+00	8.427E+00	7.476E-01	0.029
		1489.16		1.039E+00	1.570E+01	2.584E+01	2.390E+00	0.040
PM-146		453.88	*	-4.359E-02	1.009E-01	1.593E-01	1.880E-02	-0.274
		633.25		1.267E+00	2.876E+00	4.876E+00	1.866E+00	0.260
		735.93		4.110E-01	2.969E-01	5.034E-01	1.419E-01	0.817
		747.24		-6.386E-02	2.014E-01	3.233E-01	4.835E-02	-0.198
ND-147	+	91.11		4.612E-01	4.232E-01	5.369E-01	5.531E-02	0.859
		319.41		-2.003E+00	4.804E+00	7.802E+00	9.266E-01	-0.257
		531.02	*	2.907E-01	8.745E-01	1.427E+00	2.236E-01	0.204
PM-149		285.90	*	1.945E+00	3.815E+01	6.411E+01	1.145E+01	0.030
EU-152	+	121.78		5.771E-01	2.185E-01	2.634E-01	2.548E-02	2.191
		244.70		-1.359E+00	6.016E-01	8.731E-01	1.036E-01	-1.557
		344.28	*	-6.939E-02	2.057E-01	2.904E-01	3.413E-02	-0.239
		778.90		-1.147E-01	5.568E-01	9.039E-01	8.543E-02	-0.127
		964.08		8.776E-02	8.399E-01	1.177E+00	1.165E-01	0.075
		1085.87		1.735E-01	9.164E-01	1.550E+00	1.391E-01	0.112
		1112.07		3.667E-01	7.120E-01	1.227E+00	1.071E-01	0.299
	+	1408.01		1.781E-01	1.999E-01	5.147E-01	4.796E-02	0.346
GD-153		69.67		-1.393E+00	2.782E+00	4.616E+00	3.867E-01	-0.302
		97.43	*	-5.242E-02	1.268E-01	2.070E-01	1.881E-02	-0.253
		103.18		-8.197E-02	1.667E-01	2.705E-01	2.368E-02	-0.303
EU-154	+	123.07		4.078E-01	1.561E-01	1.699E-01	1.897E-02	2.400
		723.31		9.419E-02	3.676E-01	5.408E-01	5.353E-02	0.174
		873.19		1.755E-01	6.858E-01	1.135E+00	1.473E-01	0.155
		996.26		2.114E-01	8.629E-01	1.411E+00	2.544E-01	0.150
		1004.73		-7.907E-02	5.012E-01	8.322E-01	1.033E-01	-0.095
		1274.44	*	-4.725E-02	1.792E-01	2.841E-01	3.284E-02	-0.166
EU-155	+	86.55		3.930E+00	5.358E-01	4.937E-01	4.914E-02	7.960
		105.31	*	7.690E-02	1.657E-01	2.804E-01	2.458E-02	0.274
TB-160	+	86.79		9.983E+00	1.356E+00	1.366E+00	1.353E-01	7.308
		197.04		4.539E-01	9.611E-01	1.570E+00	1.714E-01	0.289
		215.65		-1.374E+00	1.317E+00	1.959E+00	2.216E-01	-0.701
		298.57		9.639E-02	2.300E-01	3.474E-01	4.237E-02	0.277
		879.36	*	2.843E-01	3.186E-01	5.494E-01	5.552E-02	0.517
		962.29		2.055E-01	1.423E+00	2.099E+00	2.080E-01	0.098
		966.15		8.298E-01	5.772E-01	8.942E-01	8.840E-02	0.928

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
HO-166M	1177.93			-2.233E-01	7.158E-01	9.742E-01	7.882E-02	-0.229
	1271.85			1.711E-01	8.985E-01	1.519E+00	1.342E-01	0.113
	80.57			-3.899E-01	4.706E-01	6.792E-01	6.285E-02	-0.574
	184.41			4.614E-02	6.228E-02	1.080E-01	1.149E-02	0.427
	280.46			-7.208E-02	1.553E-01	2.542E-01	3.149E-02	-0.284
	410.95			2.676E-01	5.273E-01	8.842E-01	8.886E-02	0.303
TA-182	711.68	*		3.933E-02	1.206E-01	2.041E-01	1.833E-02	0.193
	752.31			1.313E-01	5.783E-01	9.674E-01	8.967E-02	0.136
	810.29			-5.924E-02	1.316E-01	2.075E-01	2.005E-02	-0.285
	67.75			-7.336E-02	1.781E-01	2.970E-01	2.448E-02	-0.247
	100.11			-4.108E-02	2.581E-01	4.264E-01	3.801E-02	-0.096
	152.43			3.741E-02	5.454E-01	8.891E-01	8.475E-02	0.042
IR-192	222.11			-6.787E-01	6.374E-01	9.439E-01	1.080E-01	-0.719
	1121.30			5.149E-01	3.222E-01	5.859E-01	5.057E-02	0.879
	1189.05			8.226E-02	4.734E-01	7.977E-01	6.524E-02	0.103
	1221.41	*		-1.221E-02	2.610E-01	4.285E-01	3.614E-02	-0.029
	1231.02			-9.176E-01	5.800E-01	7.261E-01	6.181E-02	-1.264
	295.96			7.868E-01	2.877E-01	4.087E-01	5.017E-02	1.925
HG-203	308.46			-9.209E-02	1.735E-01	2.805E-01	3.391E-02	-0.328
	316.51	*		1.520E-02	6.182E-02	1.042E-01	1.244E-02	0.146
	468.07			1.092E-01	1.515E-01	2.543E-01	2.693E-02	0.429
	70.83			1.699E+00	2.172E+00	3.415E+00	5.455E-01	0.498
	72.87			1.395E+00	1.316E+00	2.074E+00	3.220E-01	0.673
	279.20	*		2.499E-02	6.498E-02	1.110E-01	1.394E-02	0.225
BI-207	72.81			3.032E-01	3.216E-01	5.096E-01	4.384E-02	0.595
	74.97			4.901E-01	2.350E-01	3.325E-01	2.915E-02	1.474
	569.70			-2.547E-02	5.668E-02	9.172E-02	8.767E-03	-0.278
	1063.66	*		4.282E-02	1.242E-01	2.125E-01	1.951E-02	0.201
	1770.23			4.027E-02	6.775E-01	9.821E-01	8.299E-02	0.041
	46.54	*		3.561E+00	1.105E+01	1.744E+01	1.659E+00	0.204
PB-210	404.85	*		-4.527E-02	1.541E+00	2.515E+00	1.224E+00	-0.018
	427.09			1.722E+00	3.459E+00	5.639E+00	2.626E+00	0.305
	832.01			-1.965E+00	2.486E+00	3.454E+00	1.799E+00	-0.569
	727.33	*		1.830E+00	1.036E+00	1.950E+00	2.494E-01	0.938
	785.37			-3.411E+00	6.900E+00	1.089E+01	1.034E+00	-0.313
	1620.50			6.689E-01	3.489E+00	6.034E+00	5.419E-01	0.111
RN-219	271.23			4.683E-01	4.479E-01	7.807E-01	1.053E-01	0.600
	401.81	*		3.465E-02	8.657E-01	1.419E+00	2.233E-01	0.024
	81.07			-1.062E-01	3.705E-01	5.517E-01	5.131E-02	-0.193
	83.79			1.051E-01	2.239E-01	3.458E-01	3.311E-02	0.304
	94.87			-1.311E-01	7.102E-01	1.051E+00	9.765E-02	-0.125
	144.24			4.933E-01	1.102E+00	1.832E+00	1.849E-01	0.269
RA-223	154.21			9.156E-02	6.378E-01	1.043E+00	1.081E-01	0.088
	269.46			4.105E-01	3.486E-01	6.106E-01	7.563E-02	0.672
	323.87	*		-2.469E-01	1.243E+00	2.043E+00	3.904E-01	-0.121
	338.28			7.343E+00	3.840E+00	3.746E+00	5.345E-01	1.960
	240.99	*		2.821E+00	1.361E+00	2.203E+00	2.600E-01	1.281
	79.69			-9.970E-01	2.134E+00	3.139E+00	5.499E-01	-0.318
AC-227	235.96			4.180E-01	3.029E-01	4.818E-01	6.278E-02	0.868

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-227		256.23	*	2.394E-01	4.630E-01	7.979E-01	1.174E-01	0.300
		299.98		2.115E+00	1.872E+00	2.920E+00	4.480E-01	0.724
		304.50		-8.352E-01	2.945E+00	4.834E+00	8.987E-01	-0.173
		334.37		2.967E+00	3.569E+00	5.476E+00	9.528E-01	0.542
		79.80		-1.919E+00	2.860E+00	4.130E+00	9.088E-01	-0.465
		235.96		4.180E-01	3.026E-01	4.818E-01	6.056E-02	0.868
		256.23	*	2.394E-01	4.632E-01	7.979E-01	1.277E-01	0.300
TH-229		299.98		2.115E+00	1.872E+00	2.920E+00	4.480E-01	0.724
		304.50		-8.352E-01	2.945E+00	4.834E+00	8.987E-01	-0.173
		334.37		2.967E+00	3.569E+00	5.476E+00	9.528E-01	0.542
		85.43		3.449E-01	3.938E-01	6.154E-01	6.001E-02	0.561
	+	88.47		5.006E+00	6.798E-01	6.723E-01	6.711E-02	7.446
		193.51	*	-2.343E-01	9.645E-01	1.525E+00	1.653E-01	-0.154
		210.85		-5.256E-01	1.654E+00	2.589E+00	2.903E-01	-0.203
PA-231		283.69	*	-5.475E-01	2.600E+00	4.310E+00	7.356E-01	-0.127
TH-231		301.36		6.593E-01	1.081E+00	1.796E+00	2.671E-01	0.367
		81.07		-1.062E-01	3.705E-01	5.517E-01	5.131E-02	-0.193
		83.79		1.051E-01	2.239E-01	3.458E-01	3.311E-02	0.304
		94.87		-1.311E-01	7.102E-01	1.051E+00	9.765E-02	-0.125
		144.24		4.933E-01	1.102E+00	1.832E+00	1.849E-01	0.269
		154.21		9.156E-02	6.378E-01	1.043E+00	1.081E-01	0.088
		269.46		4.105E-01	3.486E-01	6.106E-01	7.563E-02	0.672
PA-233		323.87	*	-2.469E-01	1.243E+00	2.043E+00	3.904E-01	-0.121
	+	338.28		7.343E+00	3.840E+00	3.746E+00	5.345E-01	1.960
		300.13		8.994E-01	8.462E-01	1.313E+00	2.250E-01	0.685
		311.90	*	7.274E-02	1.236E-01	2.118E-01	2.580E-02	0.343
		340.48		1.234E+00	1.260E+00	1.915E+00	4.830E-01	0.644
		94.67		1.000E-01	2.550E-01	3.901E-01	5.028E-02	0.256
		98.44		4.024E-02	1.376E-01	2.289E-01	1.278E-01	0.176
PA-234		111.00		6.442E-02	2.822E-01	4.718E-01	5.659E-02	0.137
		131.20		-3.141E-02	1.722E-01	2.801E-01	2.413E-02	-0.112
		569.50		-2.414E-01	5.071E-01	8.191E-01	7.830E-02	-0.295
		733.00		-2.785E-01	7.657E-01	1.187E+00	2.660E-01	-0.235
		880.51		1.870E-02	6.807E-01	1.107E+00	1.120E-01	0.017
		883.24		9.910E-02	6.942E-01	1.134E+00	7.644E-01	0.087
		926.50		-1.588E-01	4.811E-01	7.567E-01	1.954E-01	-0.210
		946.00	*	1.375E-01	8.824E-01	1.437E+00	2.793E-01	0.096
		949.00		7.506E-01	1.331E+00	2.219E+00	2.215E-01	0.338
		766.42		3.775E+00	2.388E+01	3.944E+01	2.006E+01	0.096
	1001.03	*		-1.008E+01	1.161E+01	1.749E+01	1.903E+00	-0.576
	TH-234	63.29	*	3.924E-01	2.598E+00	4.109E+00	7.412E-01	0.096
	+	92.59		1.575E+00	1.479E+00	1.924E+00	4.317E-01	0.819
	U-235	89.96		1.522E+00	1.683E+00	2.110E+00	5.284E-01	0.722
	+	93.35		1.190E+00	1.120E+00	1.386E+00	3.245E-01	0.858
U-238		143.76	*	1.704E-01	3.270E-01	5.438E-01	9.359E-02	0.313
		163.33		-2.016E-01	7.091E-01	1.130E+00	2.116E-01	-0.178
		185.72		6.771E-02	8.047E-02	1.395E-01	1.489E-02	0.485
		205.31		-3.624E-01	8.628E-01	1.341E+00	2.608E-01	-0.270
		63.29	*	3.924E-01	2.598E+00	4.109E+00	7.412E-01	0.096

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NP-239	+	92.59		1.575E+00	1.444E+00	1.924E+00	1.827E-01	0.819
		99.53		1.009E-02	2.467E-01	4.109E-01	3.677E-02	0.025
		103.37		-4.334E-02	1.541E-01	2.527E-01	2.210E-02	-0.172
		106.12		1.164E-01	1.321E-01	2.269E-01	1.959E-02	0.513
		117.23	*	-5.485E-01	7.257E-01	1.020E+00	8.548E-02	-0.538
CM-247		228.18		-9.477E-02	4.167E-01	6.511E-01	7.528E-02	-0.146
		277.60		3.092E-01	3.191E-01	5.566E-01	6.891E-02	0.556
		278.00		1.370E+00	1.361E+00	2.376E+00	2.943E-01	0.577
		287.50		1.132E+00	2.263E+00	3.879E+00	4.780E-01	0.292
		402.40	*	-1.613E-02	8.068E-02	1.305E-01	1.309E-02	-0.124
CF-249		252.80		7.132E-01	1.749E+00	3.007E+00	3.610E-01	0.237
		333.37		2.511E-01	3.713E-01	5.678E-01	6.588E-02	0.442
CF-251		388.16	*	1.372E-03	8.469E-02	1.390E-01	1.407E-02	0.010
		177.52	*	7.595E-02	2.114E-01	3.464E-01	3.636E-02	0.219
		227.38		-2.945E-01	6.817E-01	1.053E+00	1.216E-01	-0.280
ANH-511		285.41		2.989E-01	3.984E+00	6.703E+00	8.275E-01	0.045
		511.00	*	3.801E-02	7.711E-02	1.361E-01	1.349E-02	0.279

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]G1202052274      *
* Acquisition date   : 8-MAR-2010 09:46:42 Detector SN#      :              *
* Detector ID        : GAM02                      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 01:00:02.71           Half life ratio  : 8.000        *
*****
*
*                                     SAMPLE DATA                            *
*
* Sample date        : 26-FEB-2010 00:00:00 Nuclide Library : SOLID          *
* Sample ID          : G1202052274           Analyst initials: MXR1          *
* Batch Number       : 957136                Sample Quantity : 1.5544E+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	6.690E-01	6.964E-01	6.792E-01	0.000E+00
CO-57	1.982E-01	7.293E-02	7.159E-02	0.000E+00
CO-60	6.655E+00	7.031E-01	9.702E-02	0.000E+00
CD-109	3.298E+01	4.389E+00	2.343E+00	0.000E+00
SN-126	3.247E+00	4.321E-01	2.320E-01	0.000E+00
BA-137M	5.262E+00	5.125E-01	1.217E-01	0.000E+00
CS-137	5.559E+00	5.422E-01	1.285E-01	0.000E+00
TL-208	4.778E-01	1.451E-01	1.132E-01	0.000E+00
BI-211	2.445E+00	7.473E-01	7.451E-01	0.000E+00
PB-212	1.188E+00	2.332E-01	2.237E-01	0.000E+00
BI-214	7.682E-01	2.814E-01	2.166E-01	0.000E+00
PB-214	8.874E-01	2.754E-01	2.624E-01	0.000E+00
RA-226	7.682E-01	2.814E-01	2.166E-01	0.000E+00
AC-228	8.237E-01	4.414E-01	5.730E-01	0.000E+00
RA-228	8.237E-01	4.414E-01	5.730E-01	0.000E+00
TH-228	1.188E+00	2.332E-01	2.237E-01	0.000E+00
TH-232	8.237E-01	4.414E-01	5.730E-01	0.000E+00
NP-237	9.689E+00	2.372E+00	7.023E-01	0.000E+00
AM-241	1.484E+01	1.494E+00	6.275E-01	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error) Ided	MDA (pCi/GRAM)	
BE-7	4.726E-01	6.580E-01	1.173E+00	0.000E+00 NOT IDENT.
NA-22	-1.664E-02	6.183E-02	1.013E-01	0.000E+00 NOT IDENT.
NA-24	0.000E+00	4.475E+03	0.000E+00	0.000E+00 SHORT HLIF
SC-46	-1.450E-01	9.659E-02	1.435E-01	0.000E+00 NOT IDENT.
V-48	8.174E-02	1.570E-01	2.716E-01	0.000E+00 NOT IDENT.
CR-51	-7.587E-02	6.210E-01	1.100E+00	0.000E+00 NOT IDENT.
MN-54	9.716E-02	7.766E-02	1.433E-01	0.000E+00 NOT IDENT.
CO-56	-1.158E-02	8.429E-02	1.420E-01	0.000E+00 NOT IDENT.

CO-58	-4.850E-02	8.331E-02	1.361E-01	0.000E+00	NOT IDENT.
FE-59	7.205E-02	2.079E-01	3.674E-01	0.000E+00	NOT IDENT.
ZN-65	-3.099E-01	2.213E-01	3.441E-01	0.000E+00	NOT IDENT.
SE-75	-6.394E-02	7.739E-02	1.342E-01	0.000E+00	FAIL ABUN
SR-85	-1.261E-01	8.358E-02	1.277E-01	0.000E+00	NOT IDENT.
Y-88	-3.394E-02	5.122E-02	7.287E-02	0.000E+00	NOT IDENT.
Y-91	-1.350E+01	2.910E+01	4.708E+01	0.000E+00	NOT IDENT.
NB-94	3.879E-02	6.281E-02	1.138E-01	0.000E+00	NOT IDENT.
NB-95	2.266E-02	8.185E-02	1.432E-01	0.000E+00	NOT IDENT.
NB-95M	9.923E-02	2.220E-01	3.686E-01	0.000E+00	NOT IDENT.
ZR-95	3.054E-02	1.458E-01	2.550E-01	0.000E+00	NOT IDENT.
MO-99	-4.396E+00	7.402E+00	1.215E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.269E+11	0.000E+00	0.000E+00	SHORT HLIF
RU-103	3.832E-02	7.610E-02	1.338E-01	0.000E+00	FAIL ABUN
RH-106	-8.931E-01	6.194E-01	9.587E-01	0.000E+00	NOT IDENT.
RU-106	-8.931E-01	6.131E-01	9.587E-01	0.000E+00	NOT IDENT.
AG-108M	3.887E-02	6.330E-02	1.132E-01	0.000E+00	NOT IDENT.
AG-110M	0.000E+00	9.852E-02	1.778E-01	0.000E+00	NOT IDENT.
SN-113	8.305E-03	9.125E-02	1.603E-01	0.000E+00	NOT IDENT.
CD-115	-1.477E+00	5.502E+00	9.140E+00	0.000E+00	NOT IDENT.
SN-117M	8.906E-03	6.731E-02	1.199E-01	0.000E+00	NOT IDENT.
TE-123M	-5.510E-03	4.256E-02	7.482E-02	0.000E+00	NOT IDENT.
SB-124	9.515E-02	9.473E-02	1.961E-01	0.000E+00	NOT IDENT.
SB-125	1.582E-01	1.995E-01	3.597E-01	0.000E+00	NOT IDENT.
TE-125M	-4.007E+00	1.432E+01	2.581E+01	0.000E+00	NOT IDENT.
I-126	-4.744E-02	3.791E-01	5.682E-01	0.000E+00	NOT IDENT.
SB-126	-1.040E-01	2.309E-01	3.624E-01	0.000E+00	NOT IDENT.
SB-127	-8.161E-01	1.121E+00	1.844E+00	0.000E+00	NOT IDENT.
I-131	4.900E-02	1.639E-01	2.930E-01	0.000E+00	NOT IDENT.
TE-132	-1.130E-01	4.950E-01	8.367E-01	0.000E+00	NOT IDENT.
BA-133	-2.823E-02	8.947E-02	1.350E-01	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.747E+02	0.000E+00	0.000E+00	SHORT HLIF
CS-134	1.120E-01	9.602E-02	1.771E-01	0.000E+00	NOT IDENT.
CS-135	3.339E-01	2.933E-01	5.523E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	5.467E+10	0.000E+00	0.000E+00	SHORT HLIF
CS-136	7.657E-02	2.018E-01	3.594E-01	0.000E+00	NOT IDENT.
CE-139	1.681E-02	4.559E-02	8.180E-02	0.000E+00	NOT IDENT.
BA-140	-1.479E-01	4.408E-01	7.230E-01	0.000E+00	NOT IDENT.
LA-140	-1.031E-01	9.743E-02	1.330E-01	0.000E+00	NOT IDENT.
CE-141	-2.259E-02	9.151E-02	1.613E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	2.788E+01	4.457E+01	0.000E+00	NOT IDENT.
CE-144	-2.791E-01	3.215E-01	5.499E-01	0.000E+00	NOT IDENT.
PM-144	3.794E-03	6.660E-02	1.163E-01	0.000E+00	NOT IDENT.
PR-144	2.460E-01	4.969E+00	8.675E+00	0.000E+00	NOT IDENT.
PM-146	-4.359E-02	9.892E-02	1.659E-01	0.000E+00	NOT IDENT.
ND-147	2.907E-01	8.570E-01	1.480E+00	0.000E+00	FAIL ABUN
PM-149	1.945E+00	3.739E+01	6.757E+01	0.000E+00	NOT IDENT.
EU-152	-6.939E-02	2.016E-01	3.047E-01	0.000E+00	FAIL ABUN
GD-153	-5.242E-02	1.242E-01	2.242E-01	0.000E+00	NOT IDENT.
EU-154	-4.725E-02	1.756E-01	2.876E-01	0.000E+00	FAIL ABUN
EU-155	7.690E-02	1.624E-01	3.031E-01	0.000E+00	FAIL ABUN
TB-160	2.843E-01	3.122E-01	5.620E-01	0.000E+00	FAIL ABUN
HO-166M	3.933E-02	1.182E-01	2.100E-01	0.000E+00	NOT IDENT.
TA-182	-1.221E-02	2.557E-01	4.343E-01	0.000E+00	NOT IDENT.
IR-192	1.520E-02	6.059E-02	1.096E-01	0.000E+00	FAIL ABUN
HG-203	2.499E-02	6.368E-02	1.171E-01	0.000E+00	NOT IDENT.
BI-207	4.282E-02	1.217E-01	2.163E-01	0.000E+00	FAIL ABUN
PB-210	3.561E+00	1.083E+01	1.922E+01	0.000E+00	NOT IDENT.
PB-211	-4.527E-02	1.510E+00	2.627E+00	0.000E+00	NOT IDENT.
BI-212	1.830E+00	1.015E+00	2.005E+00	0.000E+00	FAIL ABUN
RN-219	3.465E-02	8.483E-01	1.483E+00	0.000E+00	NOT IDENT.
RA-223	-2.469E-01	1.219E+00	2.147E+00	0.000E+00	FAIL ABUN
RA-224	0.000E+00	1.333E+00	2.332E+00	0.000E+00	NOT IDENT.
AC-227	2.394E-01	4.537E-01	8.434E-01	0.000E+00	NOT IDENT.
TH-227	2.394E-01	4.540E-01	8.434E-01	0.000E+00	NOT IDENT.
TH-229	-2.343E-01	9.452E-01	1.623E+00	0.000E+00	FAIL ABUN
PA-231	-5.475E-01	2.548E+00	4.544E+00	0.000E+00	NOT IDENT.
TH-231	-2.469E-01	1.219E+00	2.147E+00	0.000E+00	FAIL ABUN
PA-233	7.274E-02	1.212E-01	2.227E-01	0.000E+00	NOT IDENT.
PA-234	1.375E-01	8.648E-01	1.467E+00	0.000E+00	NOT IDENT.
PA-234M	-1.008E+01	1.138E+01	1.783E+01	0.000E+00	NOT IDENT.
TH-234	3.924E-01	2.546E+00	4.497E+00	0.000E+00	FAIL ABUN
U-235	1.704E-01	3.204E-01	5.833E-01	0.000E+00	FAIL ABUN
U-238	3.924E-01	2.546E+00	4.497E+00	0.000E+00	FAIL ABUN
NP-239	-5.485E-01	7.112E-01	1.099E+00	0.000E+00	NOT IDENT.
CM-247	-1.613E-02	7.906E-02	1.363E-01	0.000E+00	NOT IDENT.
CF-249	1.372E-03	8.300E-02	1.454E-01	0.000E+00	NOT IDENT.
CF-251	7.595E-02	2.071E-01	3.696E-01	0.000E+00	NOT IDENT.

ANH-511	3.801E-02	7.557E-02	1.413E-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]G1202052274.CNF;1
Sample date        : 26-FEB-2010 00:00:00 Acquisition date : 8-MAR-2010 09:46:42.
Sample ID          : G1202052274          Sample quantity  : 1.55440E+02 GRAM
Detector name      : GAM02                Detector geometry: CAN
Elapsed live time  : 0 01:00:00.00        Elapsed real time: 0 01:00:02.71  0.1%
Energy tolerance   : 1.50000 keV          Analyst Initials  : MXR1
Abundance limit    : 75.00000             Sensitivity         : 5.00000
Batch ID           : 957136               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	1460.82	15	10.66*	1.028E+00	6.690E-01	6.690E-01	106.22
CO-57	122.06	213	85.60*	6.236E+00	1.930E-01	1.982E-01	37.55
	136.47	-----	10.68	6.129E+00	-----	Line Not Found	-----
CO-60	1173.23	1600	99.85	1.245E+00	6.218E+00	6.242E+00	9.72
	1332.49	1524	99.98*	1.111E+00	6.630E+00	6.655E+00	10.78
CD-109	88.03	1314	3.70*	5.283E+00	3.247E+01	3.298E+01	13.58
SN-126	64.28	-----	9.60	2.716E+00	-----	Line Not Found	-----
	86.94	1314	8.90	5.283E+00	1.350E+01	1.350E+01	42.67
	87.57	1314	37.00*	5.283E+00	3.247E+00	3.247E+00	13.58
BA-137M	661.66	2027	89.90*	2.071E+00	5.259E+00	5.262E+00	9.94
CS-137	661.66	2027	85.10*	2.071E+00	5.555E+00	5.559E+00	9.95
TL-208	277.37	-----	6.60	3.991E+00	-----	Line Not Found	-----
	583.19	193	85.00*	2.292E+00	4.778E-01	4.778E-01	31.00
	860.56	-----	12.50	1.651E+00	-----	Line Not Found	-----
BI-211	72.87	-----	1.23	3.848E+00	-----	Line Not Found	-----
	351.06	219	12.92*	3.352E+00	2.445E+00	2.445E+00	31.19
PB-212	74.82	146	10.28	4.033E+00	1.701E+00	1.701E+00	48.93
	77.11	234	17.10	4.309E+00	1.532E+00	1.532E+00	31.94
	238.63	478	43.60*	4.459E+00	1.188E+00	1.188E+00	20.04
	300.09	-----	3.30	3.766E+00	-----	Line Not Found	-----
BI-214	609.32	160	45.49*	2.213E+00	7.682E-01	7.682E-01	37.38
	1120.29	-----	14.92	1.298E+00	-----	Line Not Found	-----
	1764.49	33	15.30	9.005E-01	1.154E+00	1.154E+00	50.08
PB-214	74.82	146	5.80	4.033E+00	3.015E+00	3.015E+00	48.60
	77.11	234	9.70	4.309E+00	2.701E+00	2.701E+00	32.99
	242.00	-----	7.25	4.409E+00	-----	Line Not Found	-----
	295.22	162	18.42	3.814E+00	1.112E+00	1.112E+00	37.13
	351.93	219	35.60*	3.352E+00	8.874E-01	8.874E-01	31.67
RA-226	609.32	160	45.49*	2.213E+00	7.682E-01	7.682E-01	37.38
	1120.29	-----	14.92	1.298E+00	-----	Line Not Found	-----
	1764.49	33	15.30	9.005E-01	1.154E+00	1.154E+00	50.08
AC-228	338.32	149	11.27	3.449E+00	1.850E+00	1.850E+00	65.80

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
RA-228	911.20	69	25.80*	1.569E+00	8.237E-01	8.237E-01	54.68
	968.97	52	15.80	1.484E+00	1.067E+00	1.067E+00	74.05
	338.32	149	11.27	3.449E+00	1.850E+00	1.850E+00	65.80
	911.20	69	25.80*	1.569E+00	8.237E-01	8.237E-01	54.68
TH-228	968.97	52	15.80	1.484E+00	1.067E+00	1.067E+00	74.05
	74.82	146	10.28	4.033E+00	1.701E+00	1.701E+00	47.97
	77.11	234	17.10	4.309E+00	1.532E+00	1.532E+00	31.94
	238.63	478	43.60*	4.459E+00	1.188E+00	1.188E+00	20.04
TH-232	300.09	-----	3.30	3.766E+00	-----	Line Not Found	-----
	338.32	149	11.27	3.449E+00	1.850E+00	1.850E+00	51.61
	911.20	69	25.80*	1.569E+00	8.237E-01	8.237E-01	54.68
	968.97	52	15.80	1.484E+00	1.067E+00	1.067E+00	74.05
NP-237	86.48	1314	12.40*	5.283E+00	9.689E+00	9.689E+00	24.98
	95.86	-----	2.68	5.755E+00	-----	Line Not Found	-----
AM-241	59.54	2212	35.90*	2.005E+00	1.484E+01	1.484E+01	10.27

Flag: "*" = Keyline

Total number of lines in spectrum 22
Number of unidentified lines 1
Number of lines tentatively identified by NID 21 95.45%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.25E+09Y	1.00	6.690E-01	6.690E-01	7.106E-01	106.22	
CO-57	271.74D	1.03	1.930E-01	1.982E-01	0.744E-01	37.55	
CO-60	5.27Y	1.00	6.630E+00	6.655E+00	0.717E+00	10.78	
CD-109	461.40D	1.02	3.247E+01	3.298E+01	0.448E+01	13.58	
SN-126	2.30E+05Y	1.00	3.247E+00	3.247E+00	0.441E+00	13.58	
BA-137M	30.08Y	1.00	5.259E+00	5.262E+00	0.523E+00	9.94	
CS-137	30.08Y	1.00	5.555E+00	5.559E+00	0.553E+00	9.95	
TL-208	1.41E+10Y	1.00	4.778E-01	4.778E-01	1.481E-01	31.00	
BI-211	7.04E+08Y	1.00	2.445E+00	2.445E+00	0.763E+00	31.19	
PB-212	1.41E+10Y	1.00	1.188E+00	1.188E+00	0.238E+00	20.04	
BI-214	1600.00Y	1.00	7.682E-01	7.682E-01	2.871E-01	37.38	
PB-214	1600.00Y	1.00	8.874E-01	8.874E-01	2.811E-01	31.67	
RA-226	1600.00Y	1.00	7.682E-01	7.682E-01	2.871E-01	37.38	
AC-228	1.41E+10Y	1.00	8.237E-01	8.237E-01	4.504E-01	54.68	
RA-228	1.41E+10Y	1.00	8.237E-01	8.237E-01	4.504E-01	54.68	
TH-228	1.41E+10Y	1.00	1.188E+00	1.188E+00	0.238E+00	20.04	
TH-232	1.41E+10Y	1.00	8.237E-01	8.237E-01	4.504E-01	54.68	
NP-237	2.14E+06Y	1.00	9.689E+00	9.689E+00	2.420E+00	24.98	
AM-241	432.60Y	1.00	1.484E+01	1.484E+01	0.152E+01	10.27	

Total Activity : 8.875E+01 8.930E+01

Grand Total Activity : 8.875E+01 8.930E+01

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G1202052274

Page : 4
Acquisition date : 8-MAR-2010 09:46:42

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	92.31	77	342	0.92	183.84	180	8	2.14E-02	91.2	5.57E+00	T
0	726.82	48	47	1.51	1453.58	1450	7	1.34E-02	55.1	1.91E+00	T
8	1405.61	18	4	2.39	2812.13	2808	12	5.05E-03	56.1	1.06E+00	
8	1408.03	8	4	1.58	2816.99	2808	12	2.28E-03	***	1.06E+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]G1202052274.CNF;1
* Acquisition date   : 8-MAR-2010 09:46:42. Detector SN#      :
* Detector ID        : GAM02 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 01:00:02.71 Half life ratio : 8.00000
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 26-FEB-2010 00:00:00 Nuclide Library : SOLID
* Sample ID          : G1202052274 Analyst initials: MXR1
* Batch Number       : 957136 Sample Quantity : 1.55440E+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	6.690E-01	7.106E-01	6.735E-01	6.403E-02	0.993
CO-57	1.982E-01	7.442E-02	6.647E-02	5.556E-03	2.982
CO-60	6.655E+00	7.175E-01	9.595E-02	8.940E-03	69.357
CD-109	3.298E+01	4.479E+00	2.158E+00	2.167E-01	15.282
SN-126	3.247E+00	4.409E-01	2.137E-01	2.136E-02	15.196
BA-137M	5.262E+00	5.229E-01	1.180E-01	1.017E-02	44.591
CS-137	5.559E+00	5.532E-01	1.247E-01	1.076E-02	44.591
TL-208	4.778E-01	1.481E-01	1.095E-01	1.095E-02	4.365
BI-211	2.445E+00	7.626E-01	7.107E-01	8.199E-02	3.441
PB-212	1.188E+00	2.380E-01	2.113E-01	2.666E-02	5.623
BI-214	7.682E-01	2.871E-01	2.096E-01	2.225E-02	3.664
PB-214	8.874E-01	2.811E-01	2.503E-01	3.196E-02	3.546
RA-226	7.682E-01	2.871E-01	2.096E-01	2.225E-02	3.664
AC-228	8.237E-01	4.504E-01	5.607E-01	7.168E-02	1.469
RA-228	8.237E-01	4.504E-01	5.607E-01	7.168E-02	1.469
TH-228	1.188E+00	2.380E-01	2.113E-01	2.666E-02	5.623
TH-232	8.237E-01	4.504E-01	5.607E-01	7.168E-02	1.469
NP-237	9.689E+00	2.420E+00	6.466E-01	1.498E-01	14.985

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AM-241	1.484E+01	1.524E+00	5.725E-01	4.690E-02	25.919

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	4.726E-01		6.714E-01	1.128E+00	1.196E-01	0.419
NA-22	-1.664E-02		6.309E-02	1.000E-01	8.868E-03	-0.166
NA-24	-3.566E-03		2.283E-03	Half-Life too short		
SC-46	-1.450E-01		9.856E-02	1.404E-01	1.427E-02	-1.033
V-48	8.174E-02		1.602E-01	2.663E-01	2.605E-02	0.307
CR-51	-7.587E-02		6.337E-01	1.047E+00	1.277E-01	-0.072
MN-54	9.716E-02		7.924E-02	1.399E-01	1.374E-02	0.694
CO-56	-1.158E-02		8.601E-02	1.387E-01	1.373E-02	-0.084
CO-58	-4.850E-02		8.501E-02	1.328E-01	1.286E-02	-0.365
FE-59	7.205E-02		2.121E-01	3.614E-01	3.445E-02	0.199
ZN-65	-3.099E-01		2.259E-01	3.386E-01	2.945E-02	-0.915
SE-75	-6.394E-02		7.897E-02	1.270E-01	1.553E-02	-0.503
SR-85	-1.261E-01		8.529E-02	1.231E-01	1.218E-02	-1.025
Y-88	-3.394E-02		5.226E-02	7.272E-02	5.932E-03	-0.467
Y-91	-1.350E+01		2.969E+01	4.643E+01	3.855E+00	-0.291
NB-94	3.879E-02		6.409E-02	1.106E-01	9.863E-03	0.351
NB-95	2.266E-02		8.352E-02	1.395E-01	1.306E-02	0.163
NB-95M	9.923E-02		2.265E-01	3.480E-01	4.407E-02	0.285
ZR-95	3.054E-02		1.488E-01	2.482E-01	2.517E-02	0.123
MO-99	-4.396E+00		7.553E+00	1.182E+01	1.899E+00	-0.372
TC-99M	-9.268E+04		6.477E+04	Half-Life too short		
RU-103	3.832E-02		7.765E-02	1.288E-01	1.911E-02	0.298
RH-106	-8.931E-01		6.320E-01	9.284E-01	1.259E-01	-0.962
RU-106	-8.931E-01		6.256E-01	9.284E-01	8.431E-02	-0.962
AG-108M	3.887E-02		6.459E-02	1.086E-01	1.120E-02	0.358
AG-110M	3.007E-01		1.005E-01	1.724E-01	1.538E-02	1.744
SN-113	8.305E-03		9.312E-02	1.534E-01	1.569E-02	0.054
CD-115	-1.477E+00		5.614E+00	8.812E+00	8.663E-01	-0.168
SN-117M	8.906E-03		6.868E-02	1.121E-01	1.104E-02	0.079
TE-123M	-5.510E-03		4.343E-02	6.993E-02	6.938E-03	-0.079
SB-124	9.515E-02		9.667E-02	1.952E-01	1.780E-02	0.487
SB-125	1.582E-01		2.036E-01	3.449E-01	3.521E-02	0.459
TE-125M	-4.007E+00		1.461E+01	2.390E+01	2.484E+00	-0.168
I-126	-4.744E-02		3.869E-01	5.513E-01	4.769E-02	-0.086
SB-126	-1.040E-01		2.356E-01	3.523E-01	3.187E-02	-0.295
SB-127	-8.161E-01		1.143E+00	1.790E+00	1.842E-01	-0.456
I-131	4.900E-02		1.673E-01	2.797E-01	3.131E-02	0.175
TE-132	-1.130E-01		5.051E-01	7.892E-01	1.332E-01	-0.143
BA-133	-2.823E-02		9.130E-02	1.288E-01	1.893E-02	-0.219
I-133	5.096E-05		1.401E-04	Half-Life too short		
CS-134	1.120E-01		9.798E-02	1.727E-01	1.661E-02	0.649
CS-135	3.339E-01		2.993E-01	5.231E-01	6.920E-02	0.638

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
I-135	-1.317E+04		2.789E+04	Half-Life too short		
CS-136	7.657E-02		2.059E-01	3.530E-01	3.405E-02	0.217
CE-139	1.681E-02		4.652E-02	7.654E-02	7.852E-03	0.220
BA-140	-1.479E-01		4.498E-01	6.974E-01	2.387E-01	-0.212
LA-140	-1.031E-01		9.942E-02	1.322E-01	1.196E-02	-0.780
CE-141	-2.259E-02		9.338E-02	1.504E-01	1.405E-02	-0.150
CE-143	5.702E+01		2.845E+01	4.231E+01	9.834E+00	1.348
CE-144	-2.791E-01		3.281E-01	5.117E-01	7.844E-02	-0.546
PM-144	3.794E-03		6.796E-02	1.130E-01	1.003E-02	0.034
PR-144	2.460E-01		5.071E+00	8.427E+00	7.476E-01	0.029
PM-146	-4.359E-02		1.009E-01	1.593E-01	1.880E-02	-0.274
ND-147	2.907E-01		8.745E-01	1.427E+00	2.236E-01	0.204
PM-149	1.945E+00		3.815E+01	6.411E+01	1.145E+01	0.030
EU-152	-6.939E-02		2.057E-01	2.904E-01	3.413E-02	-0.239
GD-153	-5.242E-02		1.268E-01	2.070E-01	1.881E-02	-0.253
EU-154	-4.725E-02		1.792E-01	2.841E-01	3.284E-02	-0.166
EU-155	7.690E-02		1.657E-01	2.804E-01	2.458E-02	0.274
TB-160	2.843E-01		3.186E-01	5.494E-01	5.552E-02	0.517
HO-166M	3.933E-02		1.206E-01	2.041E-01	1.833E-02	0.193
TA-182	-1.221E-02		2.610E-01	4.285E-01	3.614E-02	-0.029
IR-192	1.520E-02		6.182E-02	1.042E-01	1.244E-02	0.146
HG-203	2.499E-02		6.498E-02	1.110E-01	1.394E-02	0.225
BI-207	4.282E-02		1.242E-01	2.125E-01	1.951E-02	0.201
PB-210	3.561E+00		1.105E+01	1.744E+01	1.659E+00	0.204
PB-211	-4.527E-02		1.541E+00	2.515E+00	1.224E+00	-0.018
BI-212	1.830E+00	+	1.036E+00	1.950E+00	2.494E-01	0.938
RN-219	3.465E-02		8.657E-01	1.419E+00	2.233E-01	0.024
RA-223	-2.469E-01		1.243E+00	2.043E+00	3.904E-01	-0.121
RA-224	2.821E+00		1.361E+00	2.203E+00	2.600E-01	1.281
AC-227	2.394E-01		4.630E-01	7.979E-01	1.174E-01	0.300
TH-227	2.394E-01		4.632E-01	7.979E-01	1.277E-01	0.300
TH-229	-2.343E-01		9.645E-01	1.525E+00	1.653E-01	-0.154
PA-231	-5.475E-01		2.600E+00	4.310E+00	7.356E-01	-0.127
TH-231	-2.469E-01		1.243E+00	2.043E+00	3.904E-01	-0.121
PA-233	7.274E-02		1.236E-01	2.118E-01	2.580E-02	0.343
PA-234	1.375E-01		8.824E-01	1.437E+00	2.793E-01	0.096
PA-234M	-1.008E+01		1.161E+01	1.749E+01	1.903E+00	-0.576
TH-234	3.924E-01		2.598E+00	4.109E+00	7.412E-01	0.096
U-235	1.704E-01		3.270E-01	5.438E-01	9.359E-02	0.313
U-238	3.924E-01		2.598E+00	4.109E+00	7.412E-01	0.096
NP-239	-5.485E-01		7.257E-01	1.020E+00	8.548E-02	-0.538
CM-247	-1.613E-02		8.068E-02	1.305E-01	1.309E-02	-0.124
CF-249	1.372E-03		8.469E-02	1.390E-01	1.407E-02	0.010
CF-251	7.595E-02		2.114E-01	3.464E-01	3.636E-02	0.219
ANH-511	3.801E-02		7.711E-02	1.361E-01	1.349E-02	0.279

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]G1202052274          *
* Acquisition date   : 8-MAR-2010 09:46:42 Detector SN#      :              *
* Detector ID        : GAM02                      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 01:00:02.71             Half life ratio : 8.000      *
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 26-FEB-2010 00:00:00 Nuclide Library : SOLID          *
* Sample ID          : G1202052274             Analyst initials: MXR1         *
* Batch Number       : 957136                  Sample Quantity : 1.5544E+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	6.690E-01	6.964E-01	3.398E-01	3.553E-01
CO-57	1.982E-01	7.293E-02	3.582E-02	3.721E-02
CO-60	6.655E+00	7.031E-01	4.854E-02	3.587E-01
CD-109	3.298E+01	4.389E+00	1.172E+00	2.239E+00
SN-126	3.247E+00	4.321E-01	1.161E-01	2.205E-01
BA-137M	5.262E+00	5.125E-01	6.086E-02	2.615E-01
CS-137	5.559E+00	5.422E-01	6.430E-02	2.766E-01
TL-208	4.778E-01	1.451E-01	5.665E-02	7.405E-02
BI-211	2.445E+00	7.473E-01	3.728E-01	3.813E-01
PB-212	1.188E+00	2.332E-01	1.119E-01	1.190E-01
BI-214	7.682E-01	2.814E-01	1.084E-01	1.436E-01
PA-214	8.874E-01	2.754E-01	1.313E-01	1.405E-01
RA-226	7.682E-01	2.814E-01	1.084E-01	1.436E-01
AC-228	8.237E-01	4.414E-01	2.867E-01	2.252E-01
RA-228	8.237E-01	4.414E-01	2.867E-01	2.252E-01
TH-228	1.188E+00	2.332E-01	1.119E-01	1.190E-01
TH-232	8.237E-01	4.414E-01	2.867E-01	2.252E-01
NP-237	9.689E+00	2.372E+00	3.514E-01	1.210E+00
AM-241	1.484E+01	1.494E+00	3.139E-01	7.621E-01

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	4.726E-01	6.580E-01	5.870E-01	3.357E-01	NOT IDENT.
NA-22	-1.664E-02	6.183E-02	5.066E-02	3.154E-02	NOT IDENT.
NA-24	-3.566E+03	4.475E+03	0.000E+00	2.283E+03	SHORT HLIF
SC-46	-1.450E-01	9.659E-02	7.181E-02	4.928E-02	NOT IDENT.
V-48	8.174E-02	1.570E-01	1.359E-01	8.009E-02	NOT IDENT.
CR-51	-7.587E-02	6.210E-01	5.504E-01	3.168E-01	NOT IDENT.
MN-54	9.716E-02	7.766E-02	7.170E-02	3.962E-02	NOT IDENT.
CO-56	-1.158E-02	8.429E-02	7.103E-02	4.301E-02	NOT IDENT.

CO-58	-4.850E-02	8.331E-02	6.810E-02	4.250E-02	NOT IDENT.
FE-59	7.205E-02	2.079E-01	1.838E-01	1.061E-01	NOT IDENT.
ZN-65	-3.099E-01	2.213E-01	1.721E-01	1.129E-01	NOT IDENT.
SE-75	-6.394E-02	7.739E-02	6.713E-02	3.949E-02	FAIL ABUN
SR-85	-1.261E-01	8.358E-02	6.390E-02	4.264E-02	NOT IDENT.
Y-88	-3.394E-02	5.122E-02	3.646E-02	2.613E-02	NOT IDENT.
Y-91	-1.350E+01	2.910E+01	2.356E+01	1.485E+01	NOT IDENT.
NB-94	3.879E-02	6.281E-02	5.696E-02	3.205E-02	NOT IDENT.
NB-95	2.266E-02	8.185E-02	7.164E-02	4.176E-02	NOT IDENT.
NB-95M	9.923E-02	2.220E-01	1.844E-01	1.132E-01	NOT IDENT.
ZR-95	3.054E-02	1.458E-01	1.276E-01	7.438E-02	NOT IDENT.
MO-99	-4.396E+00	7.402E+00	6.077E+00	3.776E+00	NOT IDENT.
TC-99M	-9.268E+10	1.269E+11	0.000E+00	6.477E+10	SHORT HLIF
RU-103	3.832E-02	7.610E-02	6.693E-02	3.883E-02	FAIL ABUN
RH-106	-8.931E-01	6.194E-01	4.796E-01	3.160E-01	NOT IDENT.
RU-106	-8.931E-01	6.131E-01	4.796E-01	3.128E-01	NOT IDENT.
AG-108M	3.887E-02	6.330E-02	5.664E-02	3.230E-02	NOT IDENT.
AG-110M	3.007E-01	9.852E-02	8.893E-02	5.027E-02	NOT IDENT.
SN-113	8.305E-03	9.125E-02	8.021E-02	4.656E-02	NOT IDENT.
CD-115	-1.477E+00	5.502E+00	4.573E+00	2.807E+00	NOT IDENT.
SN-117M	8.906E-03	6.731E-02	5.999E-02	3.434E-02	NOT IDENT.
TE-123M	-5.510E-03	4.256E-02	3.743E-02	2.172E-02	NOT IDENT.
SB-124	9.515E-02	9.473E-02	9.810E-02	4.833E-02	NOT IDENT.
SB-125	1.582E-01	1.995E-01	1.018E-01	1.018E-01	NOT IDENT.
TE-125M	-4.007E+00	1.432E+01	1.291E+01	7.304E+00	NOT IDENT.
I-126	-4.744E-02	3.791E-01	2.843E-01	1.934E-01	NOT IDENT.
SB-126	-1.040E-01	2.309E-01	1.813E-01	1.178E-01	NOT IDENT.
SB-127	-8.161E-01	1.121E+00	9.225E-01	5.717E-01	NOT IDENT.
I-131	4.900E-02	1.639E-01	1.466E-01	8.364E-02	NOT IDENT.
TE-132	-1.130E-01	4.950E-01	4.186E-01	2.526E-01	NOT IDENT.
BA-133	-2.823E-02	8.947E-02	6.753E-02	4.565E-02	NOT IDENT.
I-133	5.096E+01	2.747E+02	0.000E+00	1.401E+02	SHORT HLIF
CS-134	1.120E-01	9.602E-02	8.860E-02	4.899E-02	NOT IDENT.
CS-135	3.339E-01	2.933E-01	2.763E-01	1.497E-01	NOT IDENT.
I-135	-1.317E+10	5.467E+10	0.000E+00	2.789E+10	SHORT HLIF
CS-136	7.657E-02	2.018E-01	1.798E-01	1.030E-01	NOT IDENT.
CE-139	1.681E-02	4.559E-02	4.093E-02	2.326E-02	NOT IDENT.
BA-140	-1.479E-01	4.408E-01	3.617E-01	2.249E-01	NOT IDENT.
LA-140	-1.031E-01	9.743E-02	6.653E-02	4.971E-02	NOT IDENT.
CE-141	-2.259E-02	9.151E-02	8.070E-02	4.669E-02	NOT IDENT.
CE-143	5.702E+01	2.788E+01	2.230E+01	1.422E+01	NOT IDENT.
CE-144	-2.791E-01	3.215E-01	2.751E-01	1.640E-01	NOT IDENT.
PM-144	3.794E-03	6.660E-02	5.820E-02	3.398E-02	NOT IDENT.
PR-144	2.460E-01	4.969E+00	4.340E+00	2.535E+00	NOT IDENT.
PM-146	-4.359E-02	9.892E-02	8.301E-02	5.047E-02	NOT IDENT.
ND-147	2.907E-01	8.570E-01	7.403E-01	4.373E-01	FAIL ABUN
PM-149	1.945E+00	3.739E+01	3.381E+01	1.908E+01	NOT IDENT.
EU-152	-6.939E-02	2.016E-01	1.524E-01	1.029E-01	FAIL ABUN
GD-153	-5.242E-02	1.242E-01	1.122E-01	6.339E-02	NOT IDENT.
EU-154	-4.725E-02	1.756E-01	1.439E-01	8.961E-02	FAIL ABUN
EU-155	7.690E-02	1.624E-01	1.516E-01	8.287E-02	FAIL ABUN
TB-160	2.843E-01	3.122E-01	2.812E-01	1.593E-01	FAIL ABUN
HO-166M	3.933E-02	1.182E-01	1.051E-01	6.030E-02	NOT IDENT.
TA-182	-1.221E-02	2.557E-01	2.173E-01	1.305E-01	NOT IDENT.
IR-192	1.520E-02	6.059E-02	5.482E-02	3.091E-02	FAIL ABUN
HG-203	2.499E-02	6.368E-02	5.857E-02	3.249E-02	NOT IDENT.
BI-207	4.282E-02	1.217E-01	1.082E-01	6.210E-02	FAIL ABUN
PB-210	3.561E+00	1.083E+01	9.617E+00	5.527E+00	NOT IDENT.
PB-211	-4.527E-02	1.510E+00	1.314E+00	7.704E-01	NOT IDENT.
BI-212	1.830E+00	1.015E+00	1.003E+00	5.179E-01	FAIL ABUN
RN-219	3.465E-02	8.483E-01	7.418E-01	4.328E-01	NOT IDENT.
RA-223	-2.469E-01	1.219E+00	1.074E+00	6.217E-01	FAIL ABUN
RA-224	2.821E+00	1.333E+00	1.167E+00	6.803E-01	NOT IDENT.
AC-227	2.394E-01	4.537E-01	4.220E-01	2.315E-01	NOT IDENT.
TH-227	2.394E-01	4.540E-01	4.220E-01	2.316E-01	NOT IDENT.
TH-229	-2.343E-01	9.452E-01	8.120E-01	4.823E-01	FAIL ABUN
PA-231	-5.475E-01	2.548E+00	2.273E+00	1.300E+00	NOT IDENT.
TH-231	-2.469E-01	1.219E+00	1.074E+00	6.217E-01	FAIL ABUN
PA-233	7.274E-02	1.212E-01	1.114E-01	6.182E-02	NOT IDENT.
PA-234	1.375E-01	8.648E-01	7.340E-01	4.412E-01	NOT IDENT.
PA-234M	-1.008E+01	1.138E+01	8.918E+00	5.805E+00	NOT IDENT.
TH-234	3.924E-01	2.546E+00	2.250E+00	1.299E+00	FAIL ABUN
U-235	1.704E-01	3.204E-01	2.918E-01	1.635E-01	FAIL ABUN
U-238	3.924E-01	2.546E+00	2.250E+00	1.299E+00	FAIL ABUN
NP-239	-5.485E-01	7.112E-01	5.500E-01	3.628E-01	NOT IDENT.
CM-247	-1.613E-02	7.906E-02	6.818E-02	4.034E-02	NOT IDENT.
CF-249	1.372E-03	8.300E-02	7.273E-02	4.235E-02	NOT IDENT.
CF-251	7.595E-02	2.071E-01	1.849E-01	1.057E-01	NOT IDENT.

ANH-511	3.801E-02	7.557E-02	7.067E-02	3.856E-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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46.54	299.8345
49.72	353.1444
57.36	408.2271
59.54	353.8812
63.29	259.2946
63.29	259.2946
64.28	270.7624
67.75	285.0738
69.67	299.8700
70.83	258.2276
72.81	295.7396
72.87	295.7868
72.87	295.7868
74.82	323.7741
74.82	323.7741
74.82	323.7741
74.97	323.9008
77.11	325.7020
77.11	325.7020
77.11	325.7020
79.69	313.3090
79.80	324.2957
80.12	324.5554
80.19	324.6135
80.57	333.1116
81.00	340.3005
81.07	319.8558
81.07	319.8558
83.79	321.9928
83.79	321.9928
85.43	360.5656
86.48	343.4616
86.55	343.5184
86.79	343.7114
86.94	343.8344
87.57	344.3452
88.03	344.7161
88.47	345.0699
89.96	254.1123
91.11	254.7822
92.59	273.8989
92.59	273.8989
93.35	216.6800
94.67	222.9638
94.87	240.0041
94.87	240.0041
95.86	240.5294
97.43	239.4645
98.44	211.5317
99.53	220.5857
100.11	228.4753
103.18	241.4577
103.37	238.6782
105.31	233.8650
106.12	223.6502
109.28	255.1625
111.00	224.8845
111.76	252.5226
116.30	213.6450
117.23	258.6628
121.12	236.2447
121.78	236.5341
122.06	236.6563
123.07	230.1247
131.20	255.7487
133.52	268.9654
136.00	233.4214

136.47	221.3663
140.51	252.6665
140.51	0.0000
143.76	218.9204
144.24	224.2581
144.24	224.2581
145.44	252.6576
152.43	227.2249
153.25	210.7429
154.21	234.1586
154.21	234.1586
156.02	221.1298
158.56	209.3075
159.00	207.3329
162.66	211.6723
163.33	209.7554
165.86	198.7886
176.60	198.6353
177.52	195.6317
181.07	228.2770
184.41	230.4245
185.72	239.6283
193.51	248.7985
197.04	227.6323
205.31	230.0499
210.85	261.1646
215.65	242.1424
222.11	238.2677
227.38	235.1132
228.16	230.6889
228.18	230.6950
235.69	217.4882
235.96	216.1508
235.96	216.1508
238.63	333.6516
238.63	333.6516
240.99	210.3170
242.00	165.3339
244.70	260.4351
252.40	184.9074
252.80	188.5626
256.23	183.8716
256.23	183.8716
260.90	190.1885
264.66	198.1713
268.22	187.0930
269.46	189.1506
269.46	189.1506
271.23	189.4902
273.65	230.1400
276.40	178.5754
277.37	164.0842
277.60	166.8704
278.00	166.9370
279.20	173.5653
279.54	189.2430
280.46	190.3322
283.69	171.5709
284.31	163.3663
285.41	170.9336
285.90	171.0155
287.50	162.0251
293.27	160.8794
295.22	187.4837
295.96	215.0578
298.57	187.1429
299.98	166.4025
299.98	166.4025
300.09	166.4214
300.09	166.4214
300.13	166.4268
301.36	172.6235
302.85	189.7726
304.50	166.5425
304.50	166.5425
304.85	172.2438
308.46	172.8191
311.90	155.3641

316.51	150.3069
319.41	169.7730
320.08	163.1931
323.87	174.2797
323.87	174.2797
328.76	159.6423
333.37	139.0408
334.37	137.6154
334.37	137.6154
338.28	153.2047
338.28	153.2047
338.32	153.2096
338.32	153.2096
338.32	153.2096
340.48	130.5650
340.55	130.5732
344.28	149.6977
351.06	188.1855
351.93	176.5530
356.01	151.1649
364.49	170.4463
366.42	156.8138
383.85	141.8757
388.16	161.5308
388.63	164.6179
391.69	162.9776
400.66	166.1214
401.81	159.1254
402.40	168.3788
404.85	164.5966
410.95	155.0679
414.70	171.9690
423.72	145.1056
427.09	146.4928
427.87	145.5350
433.94	136.7628
453.88	178.8714
463.37	146.9935
468.07	150.6559
473.00	189.7357
476.78	132.1758
477.60	125.7943
487.02	128.7236
492.35	132.4155
497.08	111.0396
511.00	142.7489
514.00	198.0162
527.90	116.4844
529.87	0.0000
531.02	101.1420
537.26	120.4783
546.56	0.0000
563.25	105.9970
569.33	98.1782
569.50	98.1888
569.70	96.3808
583.19	90.0845
600.60	129.4761
602.73	121.9106
604.72	106.5912
609.32	88.2693
609.32	88.2693
610.33	86.7686
614.28	104.0278
618.01	85.8760
621.93	115.9836
621.93	115.9836
633.25	87.5008
635.95	107.4066
636.99	95.2103
645.85	89.0131
657.76	95.2637
661.66	95.4468
661.66	95.4468
664.57	81.2480
666.33	94.0745
666.50	92.4871
677.62	107.7453

685.70	100.4402
695.00	89.2485
696.49	93.1945
696.51	93.1945
697.00	101.9572
702.65	77.8887
706.68	88.7672
711.68	83.1095
720.70	94.5041
721.93	94.9675
722.78	75.3490
722.91	75.3527
723.31	78.6445
724.19	73.7585
727.33	76.8193
733.00	87.7713
735.93	54.3810
739.50	90.1224
747.24	91.4317
752.31	87.6541
753.82	95.6883
756.73	92.8161
763.94	109.1330
765.81	94.1928
766.42	100.2319
777.92	98.7226
778.90	90.7009
783.70	78.7712
785.37	105.1045
795.86	76.1371
801.95	87.5306
810.29	96.0080
810.76	101.1342
815.77	96.2284
818.51	86.0897
832.01	109.2452
834.85	73.2586
836.80	0.0000
846.77	92.2767
856.80	120.7578
860.56	98.0023
871.09	95.2723
873.19	93.2544
875.33	0.0000
879.36	79.8260
880.51	94.5747
883.24	91.5199
884.68	91.5709
889.28	128.6391
898.04	139.6538
911.20	102.0797
911.20	102.0797
911.20	102.0797
926.50	120.8515
937.49	143.8995
944.13	142.0998
946.00	130.3468
949.00	129.4131
962.29	123.8504
964.08	126.5104
966.15	112.1379
968.97	124.9249
968.97	124.9249
968.97	124.9249
983.53	105.9232
996.26	84.4631
1001.03	107.6780
1004.73	94.4313
1037.84	86.2415
1038.76	0.0000
1048.07	90.2665
1050.41	92.2002
1050.41	92.2002
1063.66	83.2528
1085.87	83.8684
1099.45	94.6492
1112.07	81.7308
1115.54	134.1497

1120.29	80.0386
1120.29	80.0386
1120.55	79.0925
1121.30	75.3001
1131.51	0.0000
1173.23	44.8393
1177.93	56.5449
1189.05	40.8840
1204.77	41.0771
1221.41	34.4019
1231.02	41.3984
1235.36	15.7910
1238.28	22.7192
1260.41	0.0000
1271.85	21.9427
1274.44	29.9438
1274.54	29.9451
1291.59	27.0813
1298.22	0.0000
1312.11	28.2461
1332.49	22.3187
1365.19	17.3998
1368.63	0.0000
1384.29	15.4315
1408.01	15.9716
1457.56	0.0000
1460.82	10.7938
1489.16	9.5120
1505.03	14.8545
1596.21	20.4524
1620.50	12.1539
1678.03	0.0000
1690.97	3.7999
1764.49	6.7578
1764.49	6.7578
1770.23	6.7661
1771.35	27.0713
1791.20	0.0000
1836.06	12.7411

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1202052274

Total Uranium Activity	1.2464E+00	ug/g
Total Uranium Counting Unc.	7.5765E+00	ug/g
Total Uranium Tpu	3.8655E-06	ug/g
Total Uranium Mda	6.6947E+00	ug/g


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*****
*
*               GEL Laboratories LLC
*               2040 SAVAGE ROAD
*               CHARLESTON ,SC 29417
*               GROSS GAMMA REPORT
*
*****
*
*  BATCH ID      : 957136          SAMPLE ID   : G1202052274
*  ANALYST       : MXR1           DETECTOR    : GAM02
*  SAMPLE DATE   : 26-FEB-2010 00:00:00.00 COUNT TIME : 0 01:00:00.00
*  ANALYSIS DATE: 8-MAR-2010 09:46:42.32 SAMPLE ALQT: 155.440 GRAM
*
*****

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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 2.764E+01
GROSS GAMMA ERROR (pCi/GRAM ) : 2.657E+00
GROSS GAMMA MDA (pCi/GRAM ) : 4.720E+00
GROSS GAMMA DLC (pCi/GRAM ) : 2.287E+00

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Radiochemistry Batch Checklist, Rev10

Batch#

960231

Product:

Tritium

Date:

3/11/10

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 stated.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			NA
Batch entered into Case Narrative.	✓		
Batch Data Exception Reports (DER) completed, if applicable.			NA
Batch Data Exception Reports (DER) second reviewed and disposition verified to be completed.			NA
Aliquot Correction completed if required.			NA
Review sample historical results if available (If REMF, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

RADchecklistrev10, revised 1/13/2010

Primary Review Performed By:

L. Anderson

Secondary Review Performed By:

L. Anderson 3/11/10

LANL 3/19/10

Tritium Que Sheet

09-MAR-10

Batch #: 960231 Analyst: KKK2 First Client Due Date 19-MAR-10 Internal Due Date: 07-MAR-10
 Spike Isotope: Hydrogen-3 Spike Code: 0124-K Expiration Date: 3/27/10 Vol: 0.1
 LCS Isotope: Hydrogen-3 LCS Code: 0124-K Expiration Date: 3/27/10 Vol: 0.1

Prep Date: 3/19/10 Initials: ppf Pipet ID: 2970968 Witness: MSP 3/19/10 copied: ppf 3/19/10

Sample ID	Client Samp ID	Type	Hazard Code	Min CRDL	Matrix	Client	Sample Date	Aliquot in Vial (gmL)	LSC Rack #	Dist Rig #	Vol added for Dist (mL)	Initial Sample Aliquot (gmL)	Final Wt (g)	Total moisture Dist (mL)
247774001-1	RE15-10-8259	SAMPLE		.25 pCi/mL SOIL		LANL010	16-FEB-10	10	44-2	1		493.53	480.20	13.33
247774002-1	RE15-10-8261	SAMPLE		.25 pCi/mL SOIL		LANL010	16-FEB-10	5	44-3	2		551.82	542.99	8.83
247774004-1	RE15-10-8260	SAMPLE		.25 pCi/mL SOIL		LANL010	16-FEB-10	10	44-4	3		517.50	509.14	7.76
247774005-1	RE15-10-8258	SAMPLE		.25 pCi/mL SOIL		LANL010	16-FEB-10	5	44-5	4		500.25	492.25	8.00
247774006-1	RE15-10-8263	SAMPLE		.25 pCi/mL SOIL		LANL010	16-FEB-10	8	44-6	5		573.79	563.46	10.33
247774007-1	RE15-10-8255	SAMPLE		.25 pCi/mL SOIL		LANL010	16-FEB-10	7	44-7	6		497.90	491.93	5.97
247774008-1	RE15-10-8256	SAMPLE		.25 pCi/mL SOIL		LANL010	16-FEB-10	6	44-8	7		528.92	514.11	14.81
247774009-1	RE15-10-8262	SAMPLE		.25 pCi/mL SOIL		LANL010	16-FEB-10	9	44-9	8		541.41	532.21	9.20
247774010-1	RE15-10-8265	SAMPLE		.25 pCi/mL SOIL		LANL010	16-FEB-10	9	44-10	9		533.20	524.14	9.06
247774011-1	RE15-10-8386	SAMPLE		.25 pCi/mL SOIL		LANL010	16-FEB-10	7	44-11	10		511.34	502.14	9.20
247790002-1	RE15-10-8387	SAMPLE		.25 pCi/mL SOIL		LANL010	16-FEB-10	6	44-12	11		426.67	403.63	23.40
247790003-1	RE15-10-8387	SAMPLE		.25 pCi/mL SOIL		LANL010	16-FEB-10	10	57-1	12		416.97	393.20	23.77
248137001-1	WST16-10-13288	SAMPLE		.25 pCi/mL SOIL		LANL010	23-FEB-10	10	57-2	13		544.92	491.52	53.40
248137002-1	WST16-10-13286	SAMPLE		.25 pCi/mL SOIL		LANL010	23-FEB-10	10	57-3	14		575.98	544.30	31.68
248137003-1	WST16-10-13285	SAMPLE		.25 pCi/mL SOIL		LANL010	23-FEB-10	10	57-4	15		540.27	485.10	55.17
248137004-1	WST16-10-13287	SAMPLE		.25 pCi/mL SOIL		LANL010	23-FEB-10	10	57-5	16		539.07	481.93	57.14
1202059613-1	MB for batch 960231	MB		.25 pCi/mL SOIL		QC ACCOUNT	23-FEB-10	10	57-6	17		20.00	0.00	20.00
1202059614-1	WST16-10-13288(248137001DUP)	DUP		.25 pCi/mL SOIL		QC ACCOUNT	23-FEB-10	10	57-7	13		544.92	491.52	53.40
1202059615-1	LCS for batch 960231	LCS		.25 pCi/mL SOIL		QC ACCOUNT		10	57-8	18		20.00	0.00	20.00

Bkg Rack #: 44-1

Comments:

Bkg prepared with dead water? Yes No

Instrument Used (circle as appropriate): LS6000 (Red) 7065155, LS6500 (Blue) 7067083, LS6500 (Gold) 7070506, LS6500 (Green) 7067404, Wallac (Yellow) 4140127, LS6000 (Brown) 7060655, Wallac (Pink) 2200082, Wallac (White) 4140299, Purple 7069123, Silver 7060656, Orange DGC06095168

Calibration Used : Ecosci Ultra (10 mL sample/13 mL Ecosci Ultra)
 Data Reviewed By: ppf 3/19/10

GEL Laboratories LLC, Radiochemistry Division

Page 1 of 1

DATE	3/3/2010	INITIALS	KXK2	BATCH NUMBER	960231	
Sample #	Sample Wet (g)	% Moisture of Sample (Balance Interface using % Moisture Batch)	Total Moisture in Sample (mL)	Sample Dry (g)	mLs aliquoted into LSC vial	Collection Tube Number
247774001	493.53	0.027	13.33	480.20	10	
247774002	551.82	0.016	8.83	542.99	5	
247774003	0.00	0.012	0.00	0.00	10	
247774004	517.50	0.015	7.76	509.74	7	
247774005	500.25	0.016	8.00	492.25	5	
247774006	573.79	0.018	10.33	563.46	8	
247774007	497.90	0.012	5.97	491.93	6	
247774008	528.92	0.028	14.81	514.11	6	
247774009	541.41	0.017	9.20	532.21	9	
247774010	533.20	0.017	9.06	524.14	9	
247774011	511.34	0.018	9.20	502.14	7	
247790002	426.67	0.054	23.04	403.63	6	
247790003	416.97	0.057	23.77	393.20	10	
248137001	544.92	0.098	53.40	491.52	10	
248137002	575.98	0.055	31.68	544.30	10	
248137003	540.27	0.101	54.57	485.70	10	
248137004	539.07	0.106	57.14	481.93	10	
MB	20.00	1.000	20.00	0.00	10	
DUP	544.92	0.098	53.40	491.52	10	
LCS	20.00	1.000	20.00	0.00	10	

T960231

Tritium Solid

Filename : H3VAC.XLS
File type : Excel
Version # : 1.2.6

Batch : 960231
Analyst : KKK2
Prep Date : 3/9/2010

H-3 Abundance : 1

Method Uncertainty : 0.0691

Geometry: 10mL DW/13mL
Ecoscint Ultra

Spike S/N :
Spike Exp Date :
Spike Activity (dpm/ml):
Spike Volume Added:

LCS S/N :
LCS Exp Date :
LCS Activity (dpm/ml):
LCS Volume Added:

Procedure Code : LSC_VH3S
Palmname : Tritium
Required MDC : 250 pCi/L
Half-life of Tritium : 12.32 years

Pipet, 0.1 ml Stdev : +/-
Pipet, 0.5 ml Stdev : +/-
Pipet, 1.0 ml Stdev : +/-
Pipet, 5.0 ml Stdev : +/-

Sample Characteristics									
Pos.	Sample ID	Wet Sample Weight (g)	Total Moisture L	Sample Aliquot in Vial L	Sample Aliquot Stdev. L	Dry Sample Weight (g)	% Moisture of Sample	Rig number	Sample Date/Time
1	247774001.1	493.53	0.0133	0.0100	2.5729E-05	480.20	2.70%	1	2/16/2010 12:00
2	247774002.1	551.82	0.0088	0.0050	2.5729E-05	542.99	1.60%	2	2/16/2010 12:00
3	247774004.1	517.50	0.0078	0.0070	2.5729E-05	509.74	1.50%	3	2/16/2010 12:00
4	247774005.1	500.25	0.0080	0.0050	2.5729E-05	492.25	1.60%	4	2/16/2010 12:00
5	247774006.1	573.79	0.0103	0.0080	2.5729E-05	563.46	1.80%	5	2/16/2010 12:00
6	247774007.1	497.80	0.0060	0.0060	2.5729E-05	491.93	1.20%	6	2/16/2010 12:00
7	247774008.1	528.92	0.0148	0.0060	2.5729E-05	514.11	2.80%	7	2/16/2010 12:00
8	247774009.1	541.41	0.0082	0.0090	2.5729E-05	532.21	1.70%	8	2/16/2010 12:00
9	247774010.1	533.20	0.0091	0.0090	2.5729E-05	524.14	1.70%	9	2/16/2010 12:00
10	247774011.1	511.34	0.0092	0.0070	2.5729E-05	502.14	1.80%	10	2/16/2010 12:00
11	247790002.1	426.67	0.0230	0.0060	2.5729E-05	403.63	5.40%	11	2/17/2010 12:00
12	247790003.1	416.97	0.0238	0.0100	2.5729E-05	393.20	5.70%	12	2/17/2010 12:00
13	248137001.1	544.92	0.0534	0.0100	2.5729E-05	491.52	9.80%	13	2/23/2010 12:00
14	248137002.1	575.98	0.0317	0.0100	2.5729E-05	544.30	5.50%	14	2/23/2010 12:00
15	248137003.1	540.27	0.0546	0.0100	2.5729E-05	485.70	10.10%	15	2/23/2010 12:00
16	248137004.1	539.07	0.0571	0.0100	2.5729E-05	481.93	10.60%	16	2/23/2010 12:00
17	1202059613.1	20.00	0.0200	0.0100	2.5729E-05	0.00	100.00%	17	3/9/2010 0:00
18	1202059614.1	544.92	0.0534	0.0100	2.5729E-05	491.52	9.80%	13	2/23/2010 12:00
19	1202059615.1	20.00	0.0200	0.0100	2.5729E-05	0.00	100.00%	18	3/9/2010 0:00

Count raw Data			Counting		Background		Count		Sample		Calibration Data			Detector		Backgrounds	
Pos.	Rack		Time	Quench#	Gross	Count	Start	Decay	Counted	Calibration	Due	Detector	Efficiency	Position #	Count		
	Position #	(min.)			cpm	(min.)	Date/Time		on	Date	Date	Efficiency	Error		Start	Date/Time	
1	44-2	7.4	110.1	1361.95	3.00	95	3/10/2010 6:08	0.997	LSCBROWN	9/9/2009	9/30/2010	0.2365	0.00792	44-1	3/10/2010 4:32		
2	44-3	14	109.2	715.29	3.00	95	3/10/2010 6:17	0.997	LSCBROWN	9/9/2009	9/30/2010	0.2370	0.00792	44-1	3/10/2010 4:32		
3	44-4	95	108.2	6.12	3.00	95	3/10/2010 6:34	0.997	LSCBROWN	9/9/2009	9/30/2010	0.2370	0.00792	44-1	3/10/2010 4:32		
4	44-5	12.8	108.3	783.2	3.00	95	3/10/2010 8:10	0.997	LSCBROWN	9/9/2009	9/30/2010	0.2369	0.00792	44-1	3/10/2010 4:32		
5	44-6	7.05	109.2	1426.38	3.00	95	3/10/2010 8:24	0.997	LSCBROWN	9/9/2009	9/30/2010	0.2370	0.00792	44-1	3/10/2010 4:32		
6	44-7	6.25	109.2	1602.56	3.00	95	3/10/2010 8:33	0.997	LSCBROWN	9/9/2009	9/30/2010	0.2370	0.00792	44-1	3/10/2010 4:32		
7	44-8	1.55	109.6	6497.42	3.00	95	3/10/2010 8:40	0.997	LSCBROWN	9/9/2009	9/30/2010	0.2368	0.00792	44-1	3/10/2010 4:32		
8	44-9	2.7	108.4	3725.93	3.00	95	3/10/2010 8:42	0.997	LSCBROWN	9/9/2009	9/30/2010	0.2374	0.00792	44-1	3/10/2010 4:32		
9	44-10	8.15	108.9	1231.53	3.00	95	3/10/2010 8:46	0.997	LSCBROWN	9/9/2009	9/30/2010	0.2371	0.00792	44-1	3/10/2010 4:32		
10	44-11	8.05	109.5	1243.73	3.00	95	3/10/2010 8:55	0.997	LSCBROWN	9/9/2009	9/30/2010	0.2368	0.00792	44-1	3/10/2010 4:32		
11	44-12	9.3	110.1	1080.54	3.00	95	3/10/2010 9:05	0.997	LSCBROWN	9/9/2009	9/30/2010	0.2365	0.00792	44-1	3/10/2010 4:32		
12	57-1	95	108.9	5	3.00	95	3/10/2010 9:17	0.997	LSCBROWN	9/9/2009	9/30/2010	0.2366	0.00792	44-1	3/10/2010 4:32		
13	57-2	95	108.7	4.18	3.00	95	3/10/2010 10:55	0.998	LSCBROWN	9/9/2009	9/30/2010	0.2372	0.00792	44-1	3/10/2010 4:32		
14	57-3	95	108.8	3.98	3.00	95	3/10/2010 12:34	0.998	LSCBROWN	9/9/2009	9/30/2010	0.2372	0.00792	44-1	3/10/2010 4:32		
15	57-4	95	108.3	3.57	3.00	95	3/10/2010 14:12	0.998	LSCBROWN	9/9/2009	9/30/2010	0.2374	0.00792	44-1	3/10/2010 4:32		
16	57-5	95	108.9	3.88	3.00	95	3/10/2010 15:50	0.998	LSCBROWN	9/9/2009	9/30/2010	0.2371	0.00792	44-1	3/10/2010 4:32		
17	57-6	95	108	3.4	3.00	95	3/10/2010 17:28	1.000	LSCBROWN	9/9/2009	9/30/2010	0.2375	0.00792	44-1	3/10/2010 4:32		
18	57-7	95	108.9	3.76	3.00	95	3/10/2010 19:06	0.998	LSCBROWN	9/9/2009	9/30/2010	0.2371	0.00792	44-1	3/10/2010 4:32		
19	57-8	95	109.4	33.17	3.00	95	3/10/2010 20:44	1.000	LSCBROWN	9/9/2009	9/30/2010	0.2369	0.00792	44-1	3/10/2010 4:32		

Notes:

- 1 - Results are decay corrected to Sample Date/Time
 2 - Reference date for Spike Activity (dpm/mi) is the batch Prep Date
 3 - Spike Nominals are decay corrected to Sample Date/Time

Results		Decision	Critical	Required	MDC	MDC	Sample Act.	Sample Act.	Net Count	Net Count	Rate Error	Counting	1 SIGMA	1 SIGMA	Sample	Sample	RPD	RER	Nominal	Recovery
Pos.	pCv/L	Level	pCv/L	pCv/L	pCv/L	pCv/L	Conc.	pCv/L	Rate	Rate	CPM	CPM	pCv/L	pCv/L	Type	QC			pCv/L	
1	294.3255	207.7963	250	493.0617	259567.7268	0.013	1358.350	13.565	2592.0616	18263.1263					SAMPLE					
2	440.8812	311.1247	250	703.9855	271692.3246	0.015	712.290	7.150	2727.2927	19194.7499					SAMPLE					
3	159.5383	112.6354	250	233.8746	850.0604	0.100	3.120	0.310	84.4172	103.1572					SAMPLE					
4	458.4328	323.6575	250	736.7335	297681.3668	0.015	780.200	7.824	2885.1071	21029.0256					SAMPLE					
5	375.5545	265.1447	250	631.7362	339333.8297	0.014	1423.380	14.225	3391.2769	23893.7812					SAMPLE					
6	529.7338	373.8966	250	900.5693	508447.2816	0.014	1599.560	16.014	5090.2519	35861.0022					SAMPLE					
7	1039.6307	733.9892	250	2083.7252	2066114.6026	0.014	6494.420	64.745	20597.7745	145711.6351					SAMPLE					
8	526.9643	372.0413	250	979.1842	787672.8567	0.013	3722.930	37.148	7859.6190	55437.0005					SAMPLE					
9	311.9597	220.2462	250	518.4489	260179.8870	0.013	1228.530	12.294	2603.6166	18312.7118					SAMPLE					
10	403.8829	285.1448	250	671.8911	338261.0212	0.014	1240.730	12.431	3389.0983	23834.6600					SAMPLE					
11	441.5547	311.7414	250	726.2057	343133.0007	0.014	1077.540	10.780	3432.9466	24200.9919					SAMPLE					
12	111.8299	78.9528	250	163.9366	381.9601	0.145	2.000	0.290	55.4206	61.4747					SAMPLE					
13	111.4465	78.6822	250	163.3747	224.5840	0.233	1.180	0.275	52.3236	54.6115					SAMPLE					
14	111.4698	78.6987	250	163.4089	186.5579	0.277	0.980	0.271	51.6005	53.2112					SAMPLE					
15	111.3627	78.6231	250	163.2519	108.4038	0.461	0.570	0.263	50.0139	50.5806					SAMPLE					
16	111.4945	78.7161	250	163.4451	167.5585	0.306	0.880	0.288	51.2408	52.5530					SAMPLE					
17	111.0718	78.4176	250	162.8253	75.8742	0.649	0.400	0.260	49.2337	49.5164					SAMPLE					
18	111.4968	78.7178	250	163.4485	144.7127	0.351	0.760	0.267	50.7931	51.7834					MB	248137001.1	43.3%	0.3754	5536.7931	103.6%
19	111.3816	78.6364	250	163.2795	5738.7724	0.022	30.170	0.617	117.3697	416.5678					LCS					

ID: TRITIUM

10 MAR 2010 04:40

USER: 7

COMMENT: BROWN

PRESET TIME : 95.00

DATA CALC : CPM H# : YES SAMPLE REPEATS: 1 PRINTER : STD

COUNT BLANK : NO IC# : NO REPLICATES : 1 RS232 : EDIT

TWO PHASE : NO AQC : NO CYCLE REPEATS : 1 DISK : OFF

SCINTILLATOR: LIQUID LUMEX: YES LOW SAMPLE REJ: 0

LOW LEVEL : NO HALF LIFE CORRECTION DATE: none

CHAN: 0.0 - 240.0 %ERROR: 2.00 FACTOR: 1.000000 BKG. SUB: 0

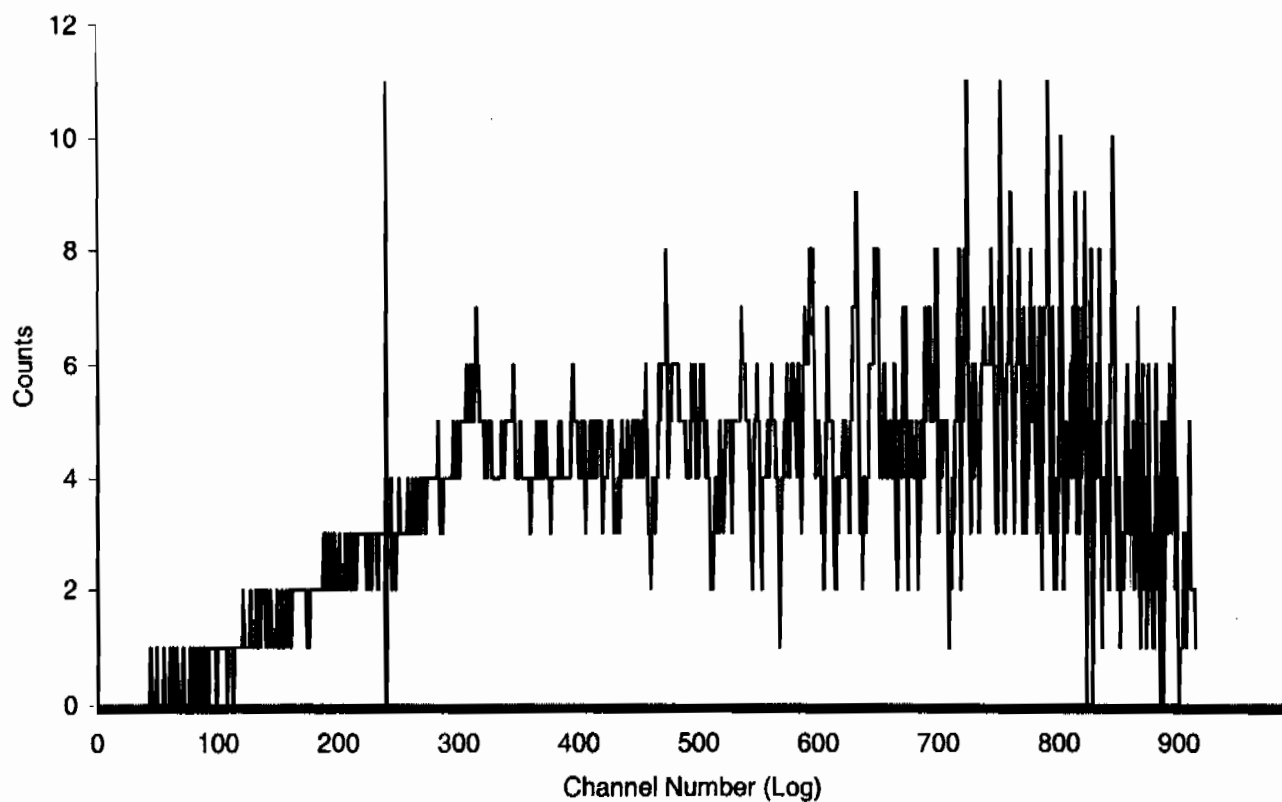
CHAN: 0.0 - 900.0 %ERROR: 2.00 FACTOR: 1.000000 BKG. SUB: 0

SAM NO	POS	TIME MIN	H#	WIND1		WIND2		LUMEX %	ELAPSED TIME
				CPM	%ERROR	CPM	%ERROR		
1	44-1	95.00	107.9	3.00	12.53	34.78	3.50	0.89	97.66
2	44-2	7.40	110.1	1361.35	1.99	1816.08	1.73	0.03	106.18
3	44-3	14.00	109.2	715.29	2.00	965.50	1.72	0.07	121.42
4	44-4	95.00	109.2	6.12	8.74	38.58	3.33	1.40	219.71
5	44-5	12.80	109.3	783.20	2.00	1060.00	1.72	0.05	233.75
6	44-6	7.05	109.2	1426.38	1.99	1900.28	1.73	0.04	241.91
7	44-7	6.25	109.2	1602.56	2.00	2133.12	1.73	0.03	249.24
8	44-8	1.55	109.6	6497.42	1.99	8569.03	1.74	0.01	251.74
9	44-9	2.70	108.4	3725.93	1.99	4888.15	1.74	0.02	255.42
10	44-10	8.15	108.9	1231.53	2.00	1632.76	1.73	0.04	264.66
11	44-11	8.05	109.5	1243.73	2.00	1668.32	1.73	0.06	273.84
12	44-12	9.30	110.1	1080.54	2.00	1454.30	1.72	0.05	284.29
13	57-1	95.00	109.9	5.00	9.78	36.83	3.41	1.48	382.70
14	57-2	95.00	108.7	4.18	10.60	35.69	3.46	1.09	480.90
15	57-3	95.00	108.8	3.98	10.95	34.87	3.50	1.23	579.15
16	57-4	95.00	108.3	3.57	11.56	36.64	3.41	1.04	677.37
17	57-5	95.00	108.9	3.88	10.89	37.08	3.39	0.84	775.52
18	57-6	95.00	108.0	3.40	11.48	35.53	3.45	0.55	873.58
19	57-7	95.00	108.9	3.76	11.01	35.61	3.45	0.74	971.71
20	57-8	95.00	109.4	33.17	3.57	75.16	2.37	0.26	1069.75

Sample Count Start Time:	10 Mar 2010 04:32:42		
Data Capture Date	10 Mar 2010 06:09:20		
User Filename	S07031044-1A.XLS		
	U07031044-1A.XLS		
Spectrum Type	Log Counts		
User Number	07		
User Id	TRITIUM		
User Comment	BROWN		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	1	44-1	95.00
H#, Total Counts:	107.9	3333	
Win1: Tritium - Start, End, Counts:	0	240	288
Win2: - Start, End, Counts:	0	990	3333

SPECTRUM PLOT

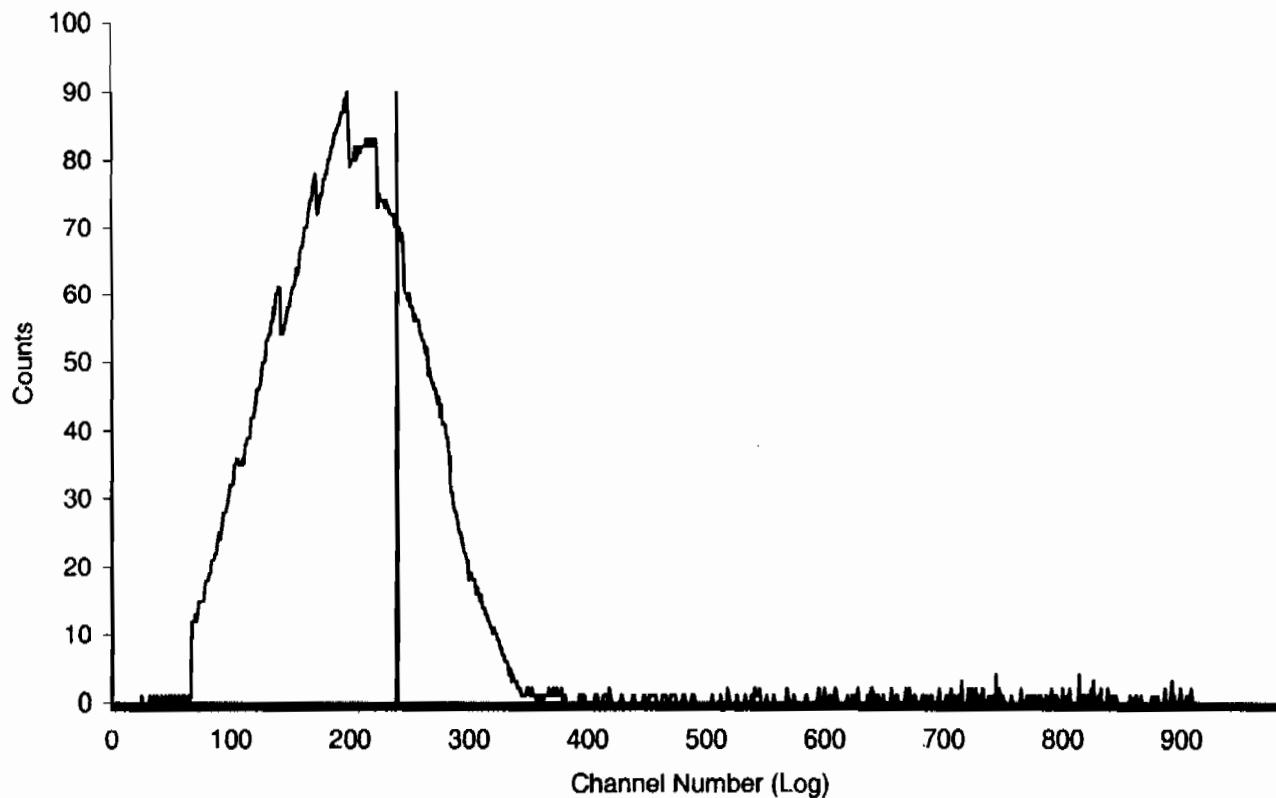
USER 07 - TRITIUM



Sample Count Start Time:	10 Mar 2010 06:08:49		
Data Capture Date	10 Mar 2010 06:16:40		
User Filename	S07031044-2A.XLS		
	U07031044-1A.XLS		
Spectrum Type	Log Counts		
User Number	07		
User Id	TRITIUM		
User Comment	BROWN		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	2	44-2	7.40
H#, Total Counts:	110.1	13347	
Win1: Tritium - Start, End, Counts:	0	240	10048
Win2: - Start, End, Counts:	0	990	13347

SPECTRUM PLOT

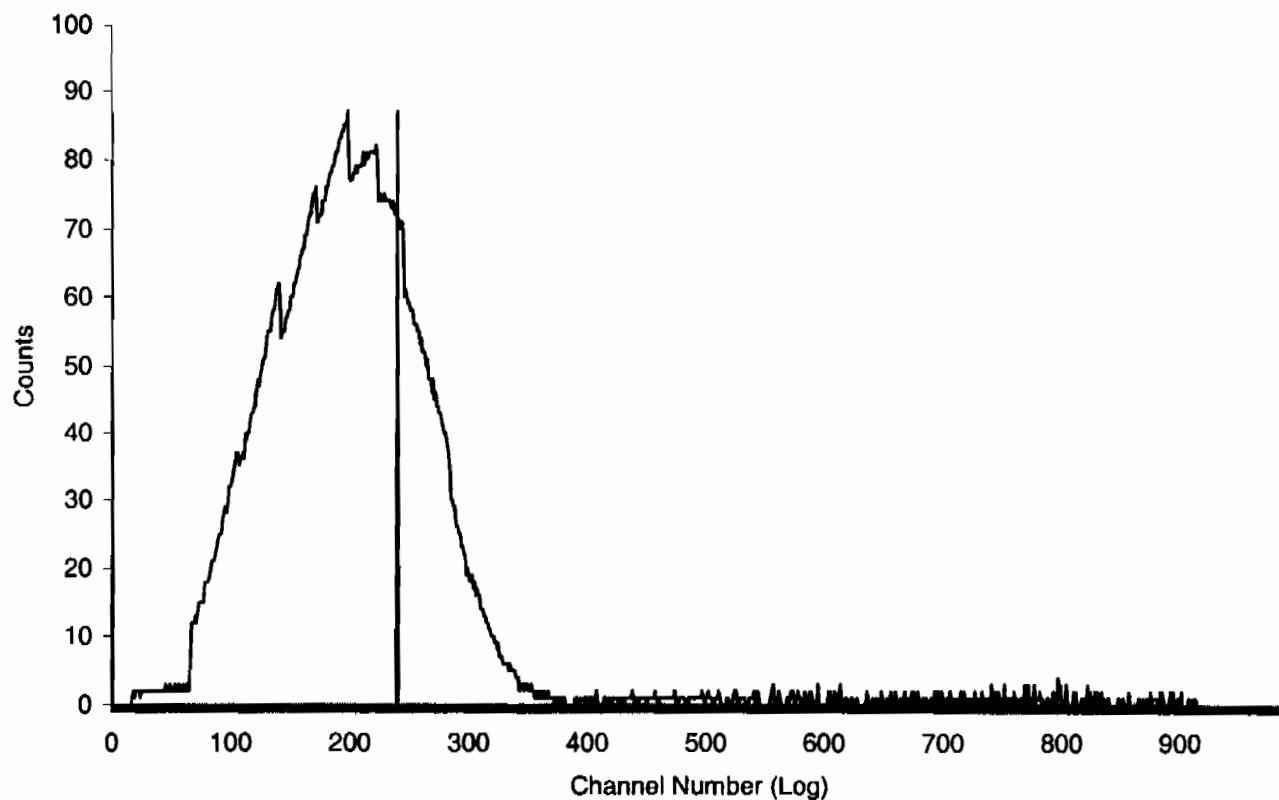
USER 07 - TRITIUM



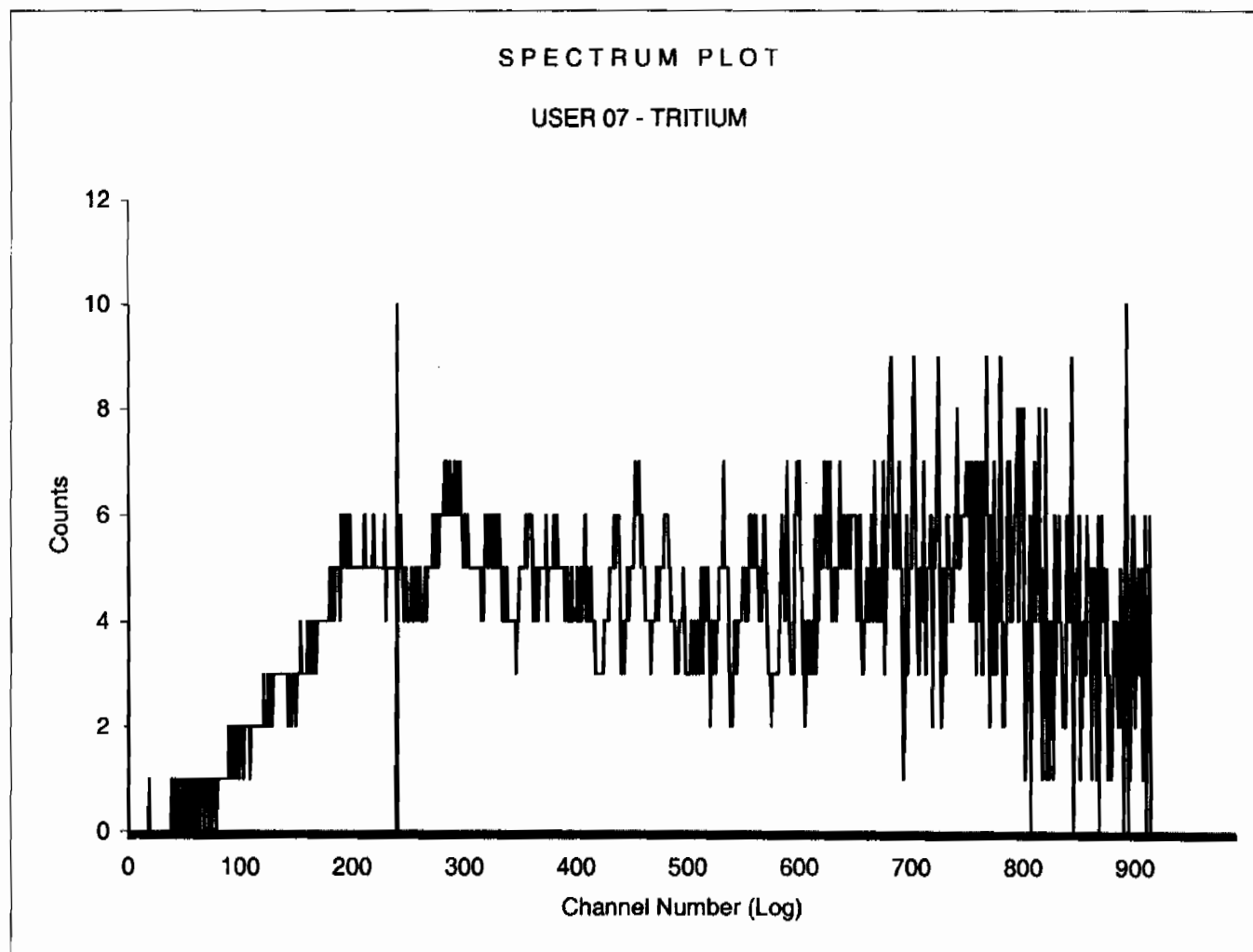
Sample Count Start Time:	10 Mar 2010 06:17:27		
Data Capture Date	10 Mar 2010 06:32:13		
User Filename	S07031044-3A.XLS		
	U07031044-1A.XLS		
Spectrum Type	Log Counts		
User Number	07		
User Id	TRITIUM		
User Comment	BROWN		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	3	44-3	14.00
H#, Total Counts:	109.2	13524	
Win1: Tritium - Start, End, Counts:	0	240	10085
Win2: - Start, End, Counts:	0	990	13524

SPECTRUM PLOT

USER 07 - TRITIUM



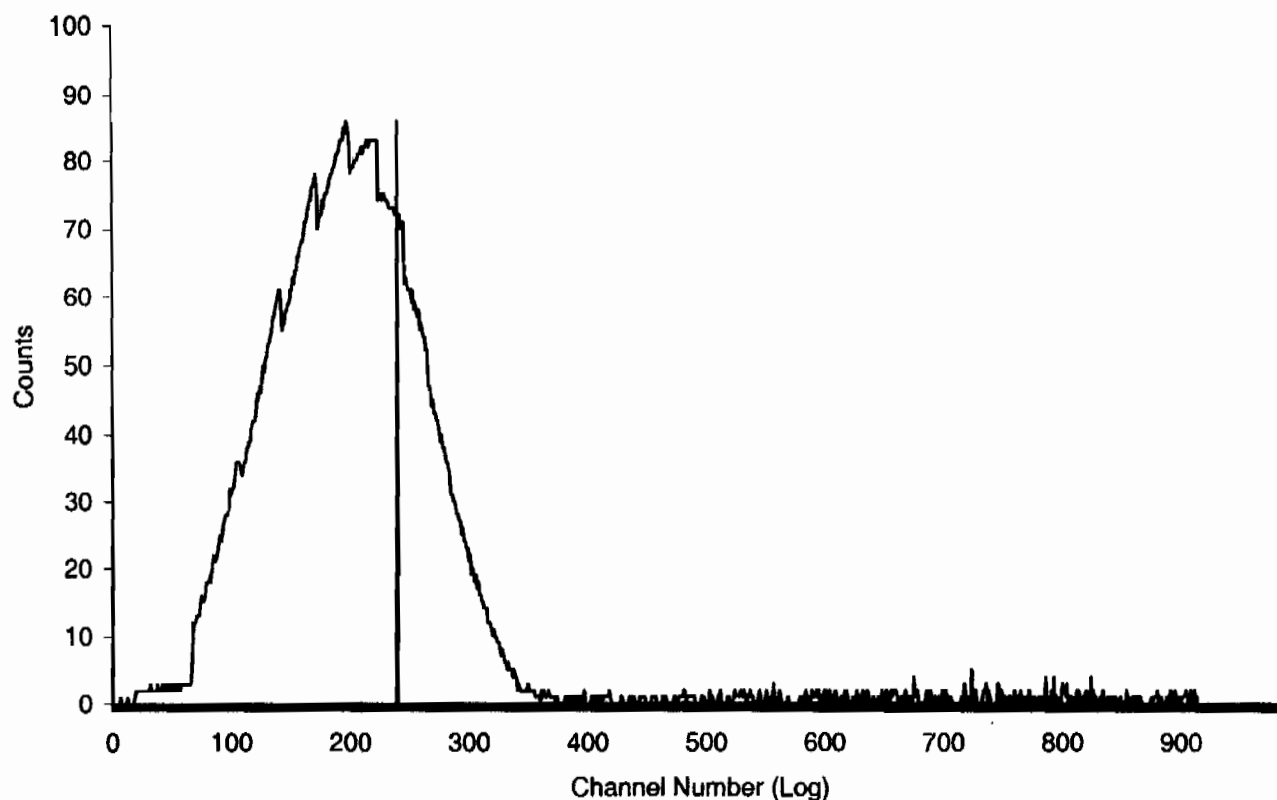
Sample Count Start Time:	10 Mar 2010 06:34:45		
Data Capture Date	10 Mar 2010 08:10:09		
User Filename	S07031044-4A.XLS		
	U07031044-1A.XLS		
Spectrum Type	Log Counts		
User Number	07		
User Id	TRITIUM		
User Comment	BROWN		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	4	44-4	95.00
H#, Total Counts:	109.2	3712	
Win1: Tritium - Start, End, Counts:	0	240	585
Win2: - Start, End, Counts:	0	990	3711



Sample Count Start Time:	10 Mar 2010 08:10:59		
Data Capture Date	10 Mar 2010 08:25:02		
User Filename	S07031044-5A.XLS		
	U07031044-1A.XLS		
Spectrum Type	Log Counts		
User Number	07		
User Id	TRITIUM		
User Comment	BROWN		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	5	44-5	12.80
H#, Total Counts:	109.3	13580	
Win1: Tritium - Start, End, Counts:	0	240	10094
Win2: - Start, End, Counts:	0	990	13579

SPECTRUM PLOT

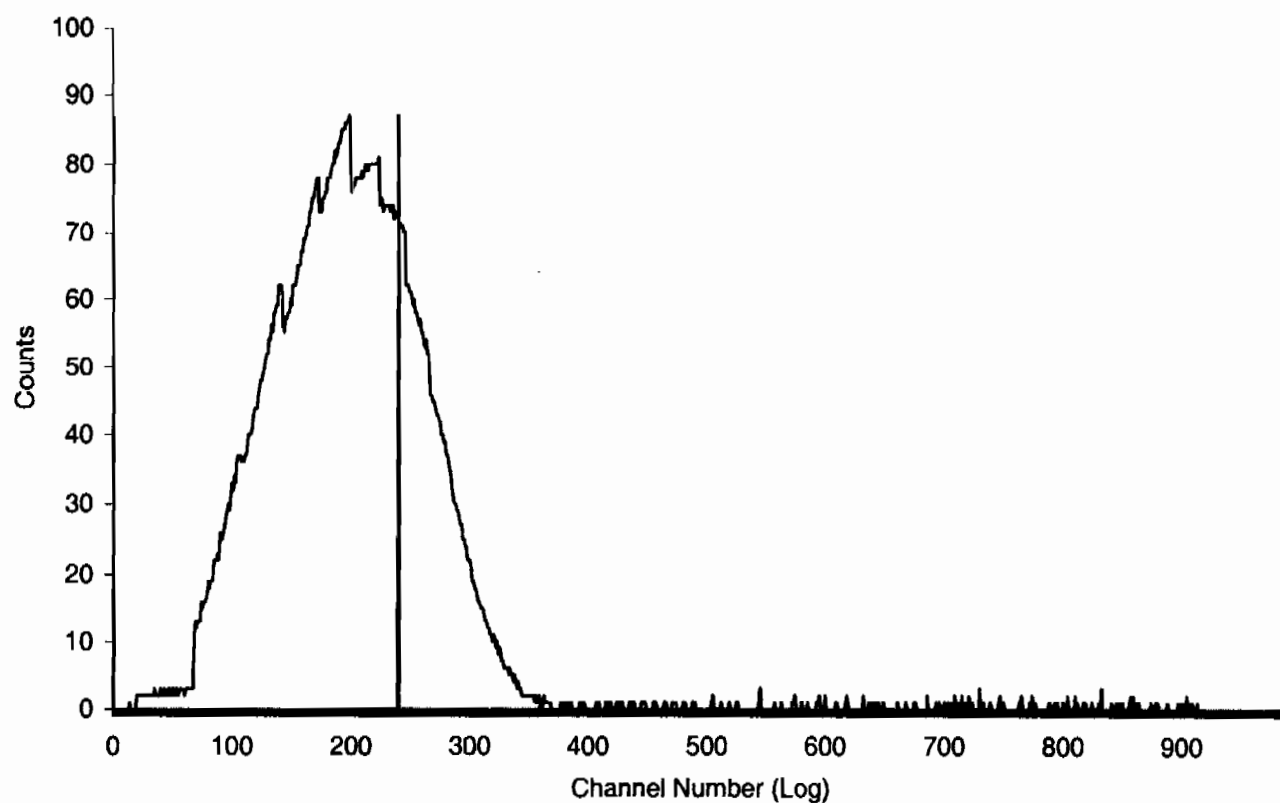
USER 07 - TRITIUM



Sample Count Start Time:	10 Mar 2010 08:24:54		
Data Capture Date	10 Mar 2010 08:32:19		
User Filename	S07031044-6A.XLS		
	U07031044-1A.XLS		
Spectrum Type	Log Counts		
User Number	07		
User Id	TRITIUM		
User Comment	BROWN		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	6	44-6	7.05
H#, Total Counts:	109.2	13403	
Win1: Tritium - Start, End, Counts:	0	240	10127
Win2: - Start, End, Counts:	0	990	13403

SPECTRUM PLOT

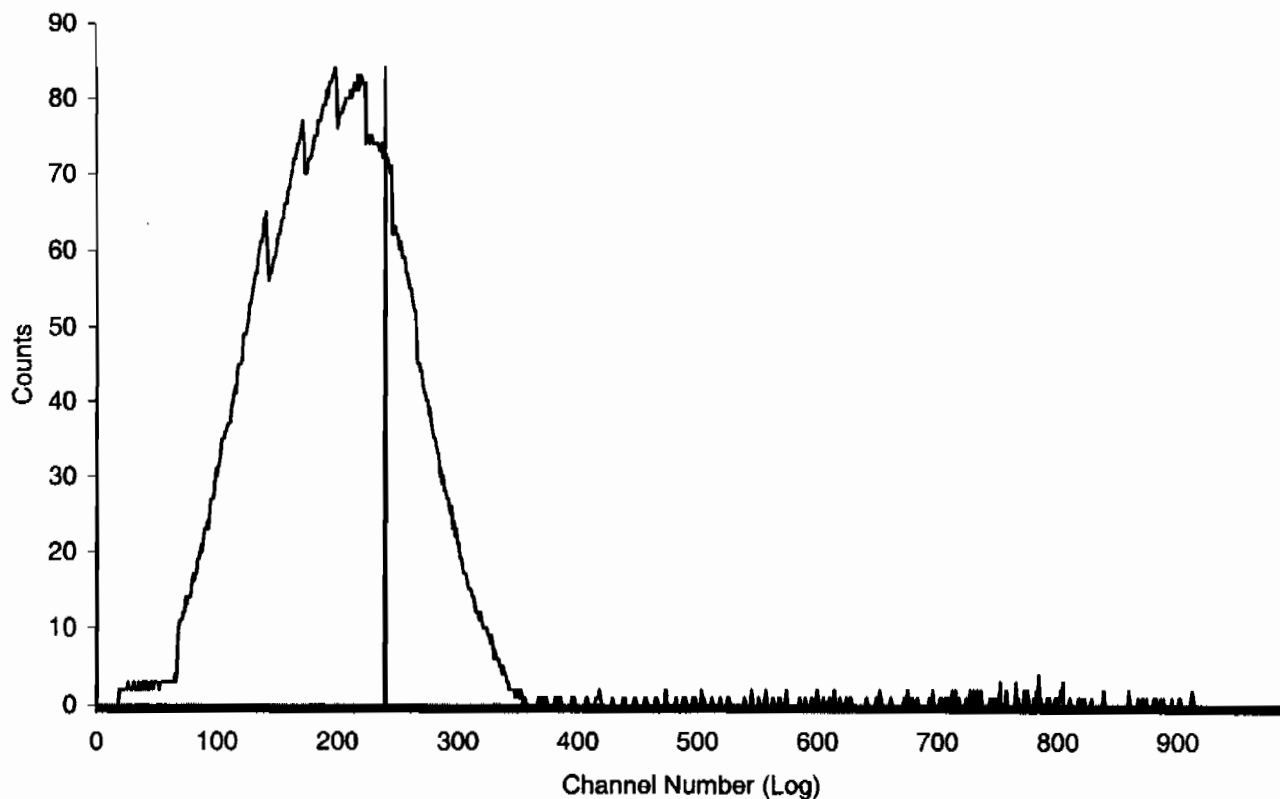
USER 07 - TRITIUM



Sample Count Start Time:	10 Mar 2010 08:33:01
Data Capture Date	10 Mar 2010 08:39:39
User Filename	S07031044-7A.XLS
	U07031044-1A.XLS
Spectrum Type	Log Counts
User Number	07
User Id	TRITIUM
User Comment	BROWN
Scintillator	LIQUID
Sample, Rack-Pos, Time:	7 44-7 6.25
H#, Total Counts:	109.2 13338
Win1: Tritium - Start, End, Counts:	0 240 10088
Win2: - Start, End, Counts:	0 990 13338

SPECTRUM PLOT

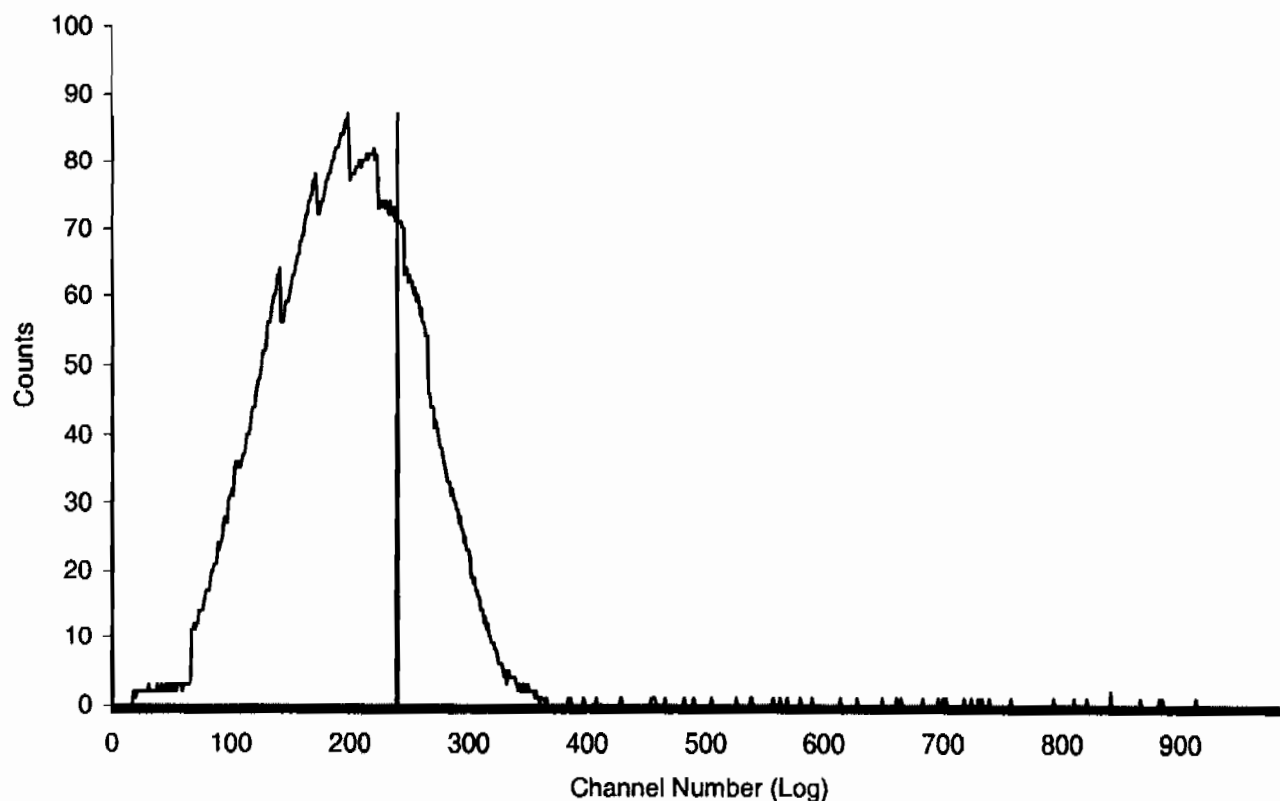
USER 07 - TRITIUM



Sample Count Start Time:	10 Mar 2010 08:40:13		
Data Capture Date	10 Mar 2010 08:42:08		
User Filename	S07031044-8A.XLS		
	U07031044-1A.XLS		
Spectrum Type	Log Counts		
User Number	07		
User Id	TRITIUM		
User Comment	BROWN		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	8	44-8	1.55
H#, Total Counts:	109.6	13283	
Win1: Tritium - Start, End, Counts:	0	240	10141
Win2: - Start, End, Counts:	0	990	13282

SPECTRUM PLOT

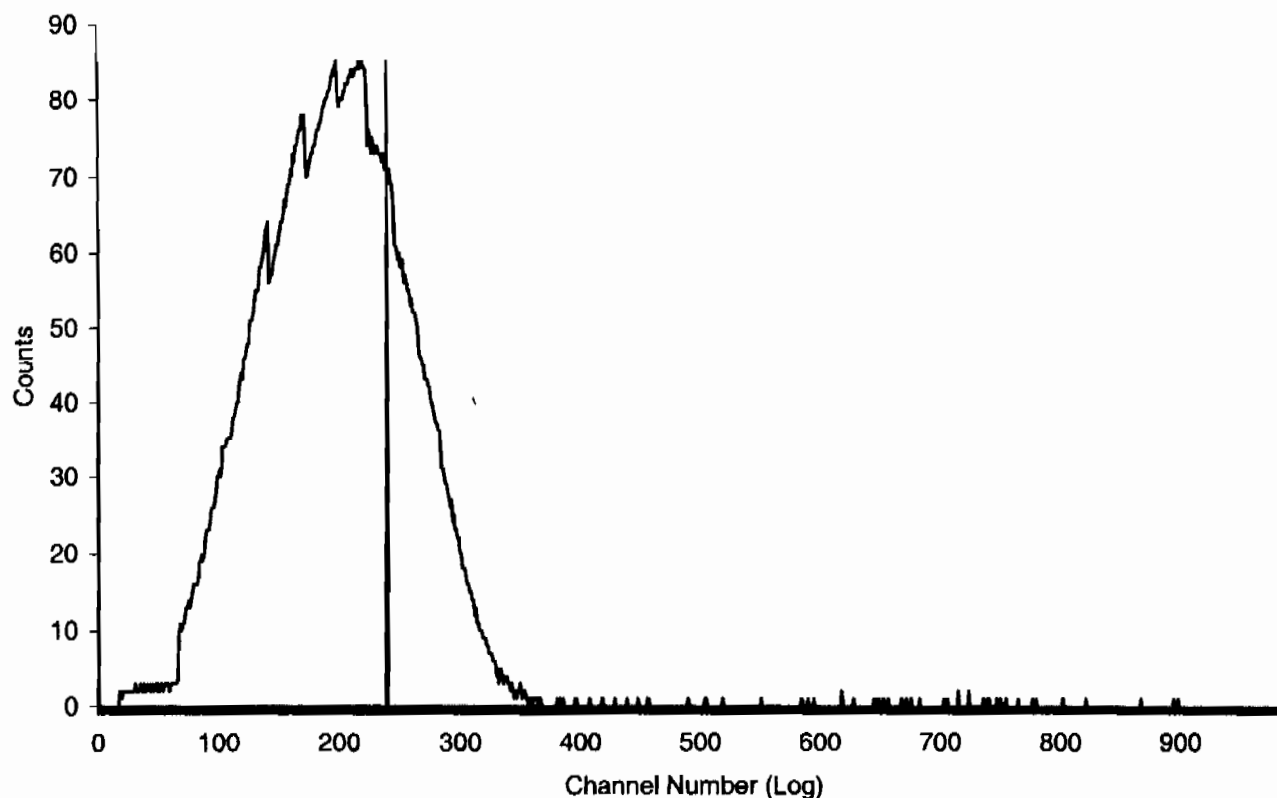
USER 07 - TRITIUM



Sample Count Start Time:	10 Mar 2010 08:42:45		
Data Capture Date	10 Mar 2010 08:45:48		
User Filename	S07031044-9A.XLS		
	U07031044-1A.XLS		
Spectrum Type	Log Counts		
User Number	07		
User Id	TRITIUM		
User Comment	BROWN		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	9	44-9	2.70
H#, Total Counts:	108.4	13198	
Win1: Tritium - Start, End, Counts:	0	240	10130
Win2: - Start, End, Counts:	0	990	13198

SPECTRUM PLOT

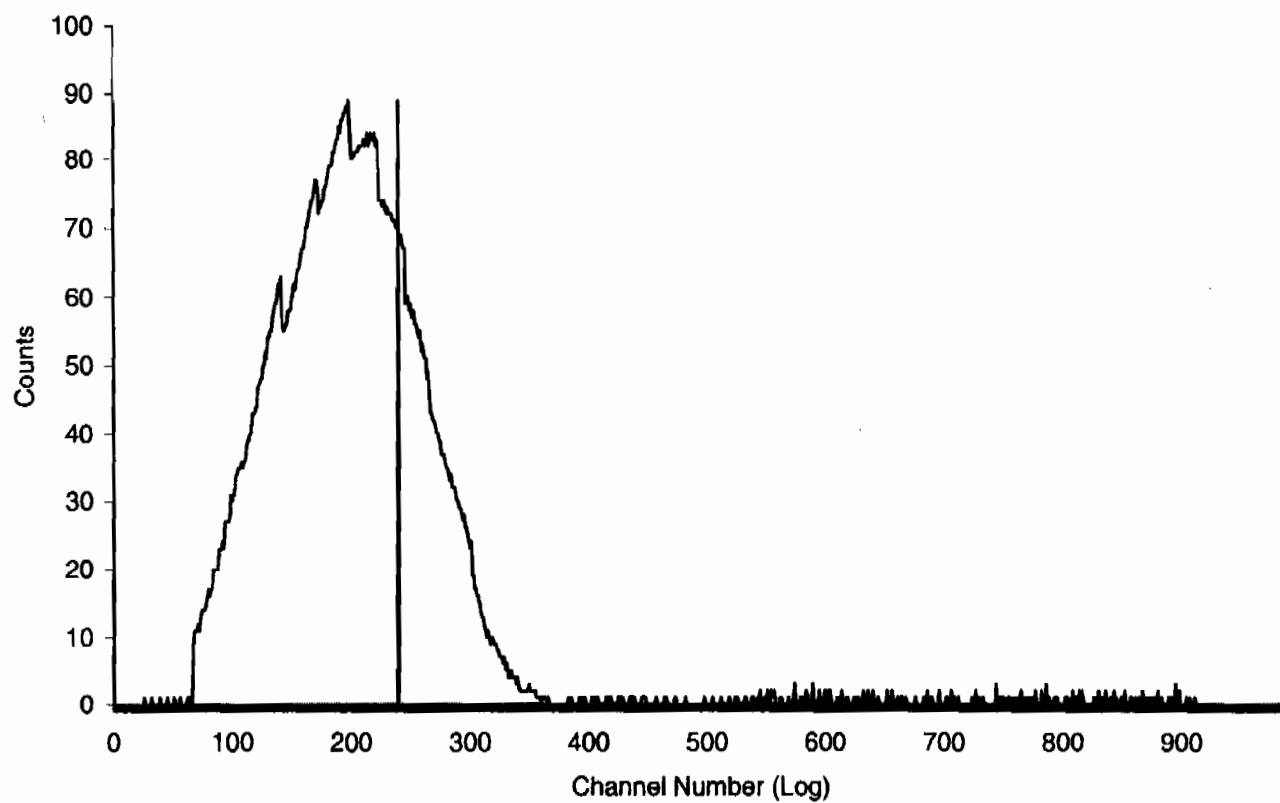
USER 07 - TRITIUM



Sample Count Start Time:	10 Mar 2010 08:46:33		
Data Capture Date	10 Mar 2010 08:55:04		
User Filename	S07031044-10A.XLS		
	U07031044-1A.XLS		
Spectrum Type	Log Counts		
User Number	07		
User Id	TRITIUM		
User Comment	BROWN		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	10	44-10	8.15
H#, Total Counts:	108.9	13214	
Win1: Tritium - Start, End, Counts:	0	240	10009
Win2: - Start, End, Counts:	0	990	13214

SPECTRUM PLOT

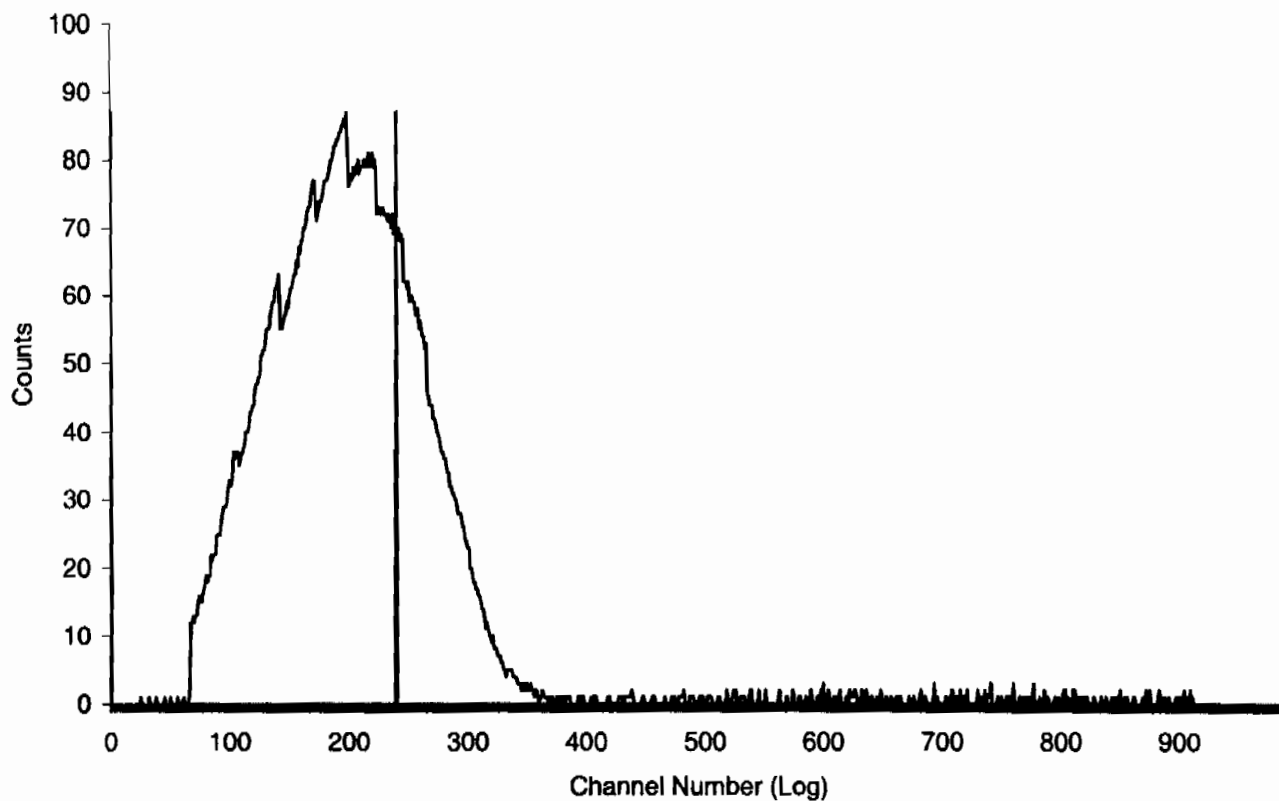
USER 07 - TRITIUM



Sample Count Start Time:	10 Mar 2010 08:55:49		
Data Capture Date	10 Mar 2010 09:04:16		
User Filename	S07031044-11A.XLS		
	U07031044-1A.XLS		
Spectrum Type	Log Counts		
User Number	07		
User Id	TRITIUM		
User Comment	BROWN		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	11	44-11	8.05
H#, Total Counts:	109.5	13342	
Win1: Tritium - Start, End, Counts:	0	240	9984
Win2: - Start, End, Counts:	0	990	13341

SPECTRUM PLOT

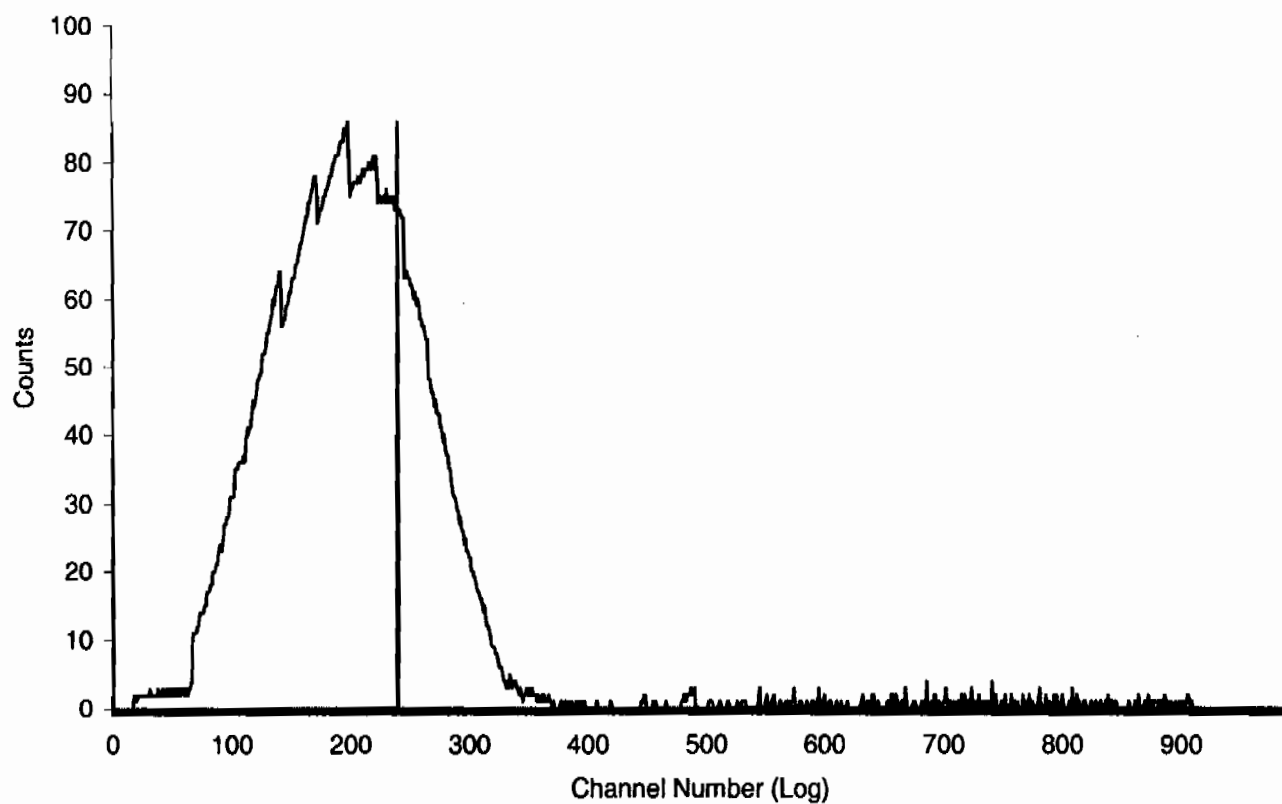
USER 07 - TRITIUM



Sample Count Start Time:	10 Mar 2010 09:05:01		
Data Capture Date	10 Mar 2010 09:14:43		
User Filename	S07031044-12A.XLS		
	U07031044-1A.XLS		
Spectrum Type	Log Counts		
User Number	07		
User Id	TRITIUM		
User Comment	BROWN		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	12	44-12	9.30
H#, Total Counts:	110.1	13542	
Win1: Tritium - Start, End, Counts:	0	240	10122
Win2: - Start, End, Counts:	0	990	13542

SPECTRUM PLOT

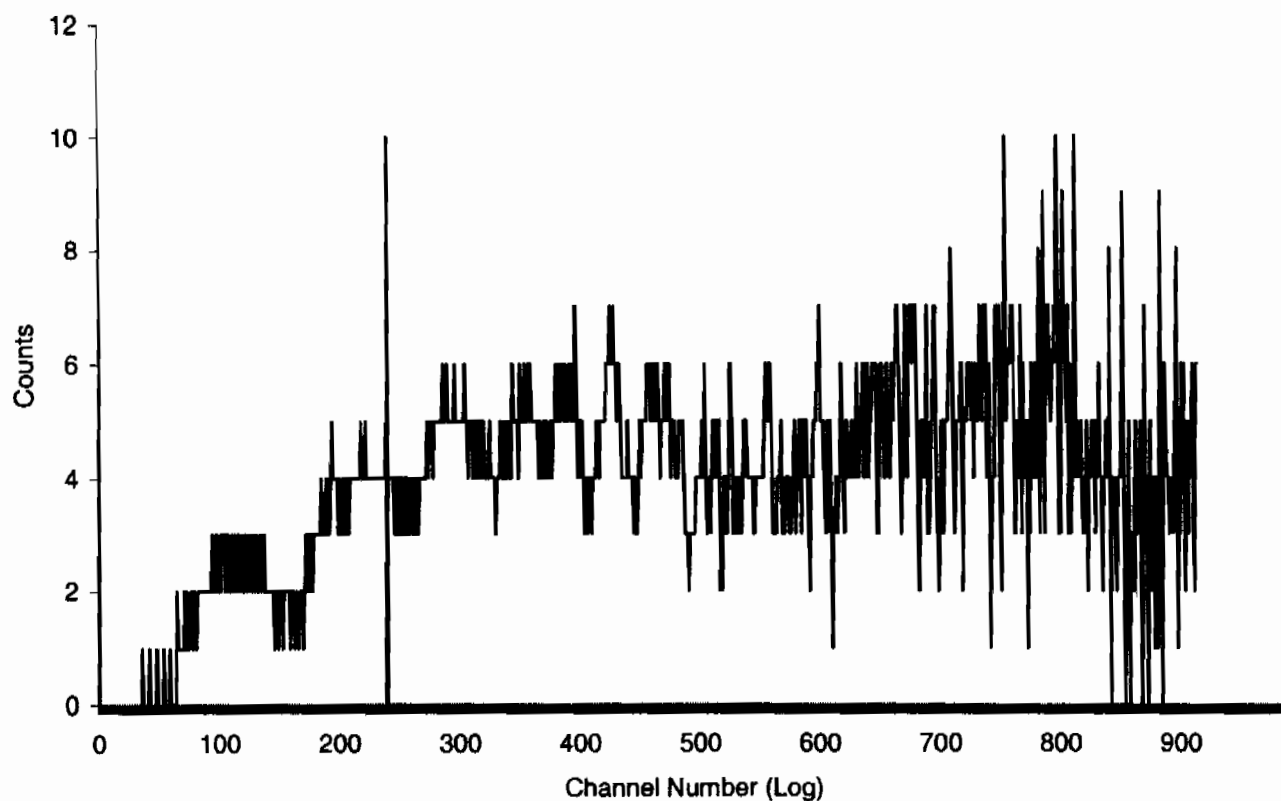
USER 07 - TRITIUM



Sample Count Start Time:	10 Mar 2010 09:17:44		
Data Capture Date	10 Mar 2010 10:53:08		
User Filename	S07031057-1A.XLS		
	U07031044-1A.XLS		
Spectrum Type	Log Counts		
User Number	07		
User Id	TRITIUM		
User Comment	BROWN		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	13	57-1	95.00
H#, Total Counts:	109.9	3562	
Win1: Tritium - Start, End, Counts:	0	240	479
Win2: - Start, End, Counts:	0	990	3562

SPECTRUM PLOT

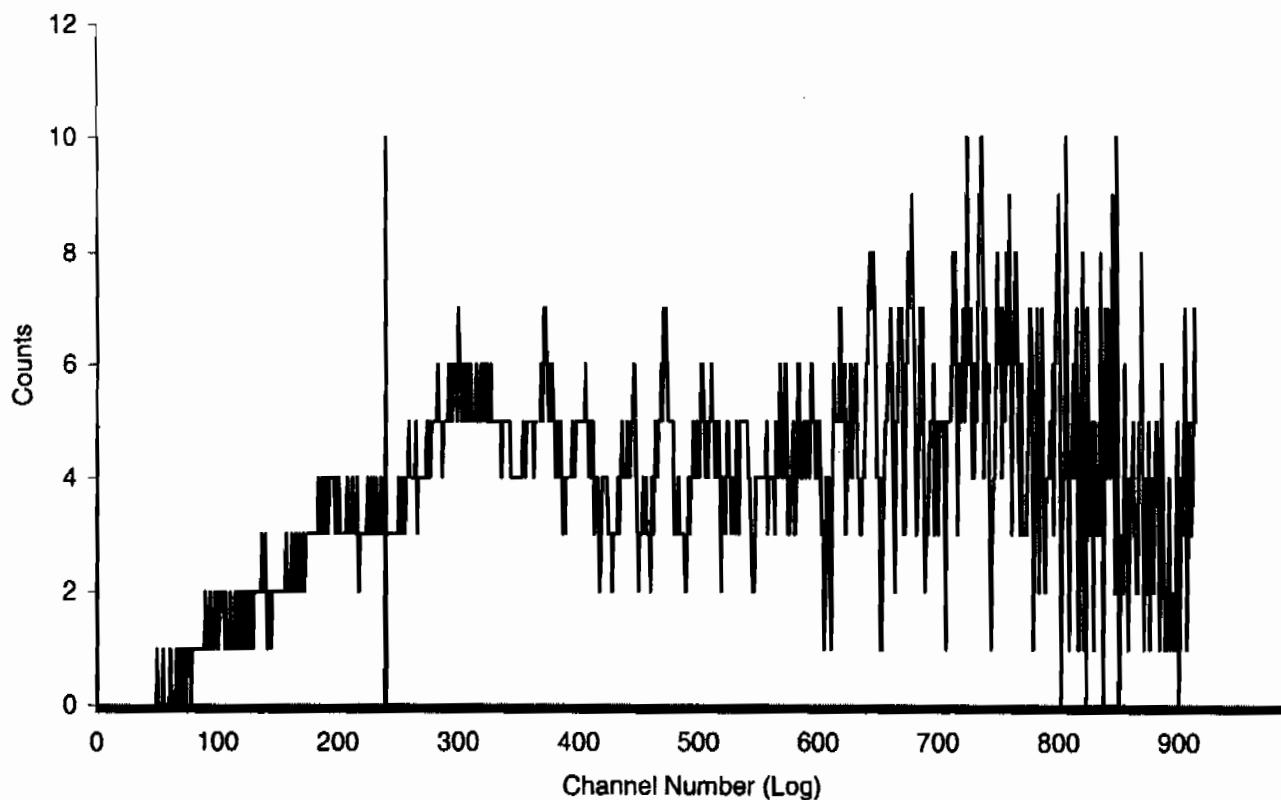
USER 07 - TRITIUM



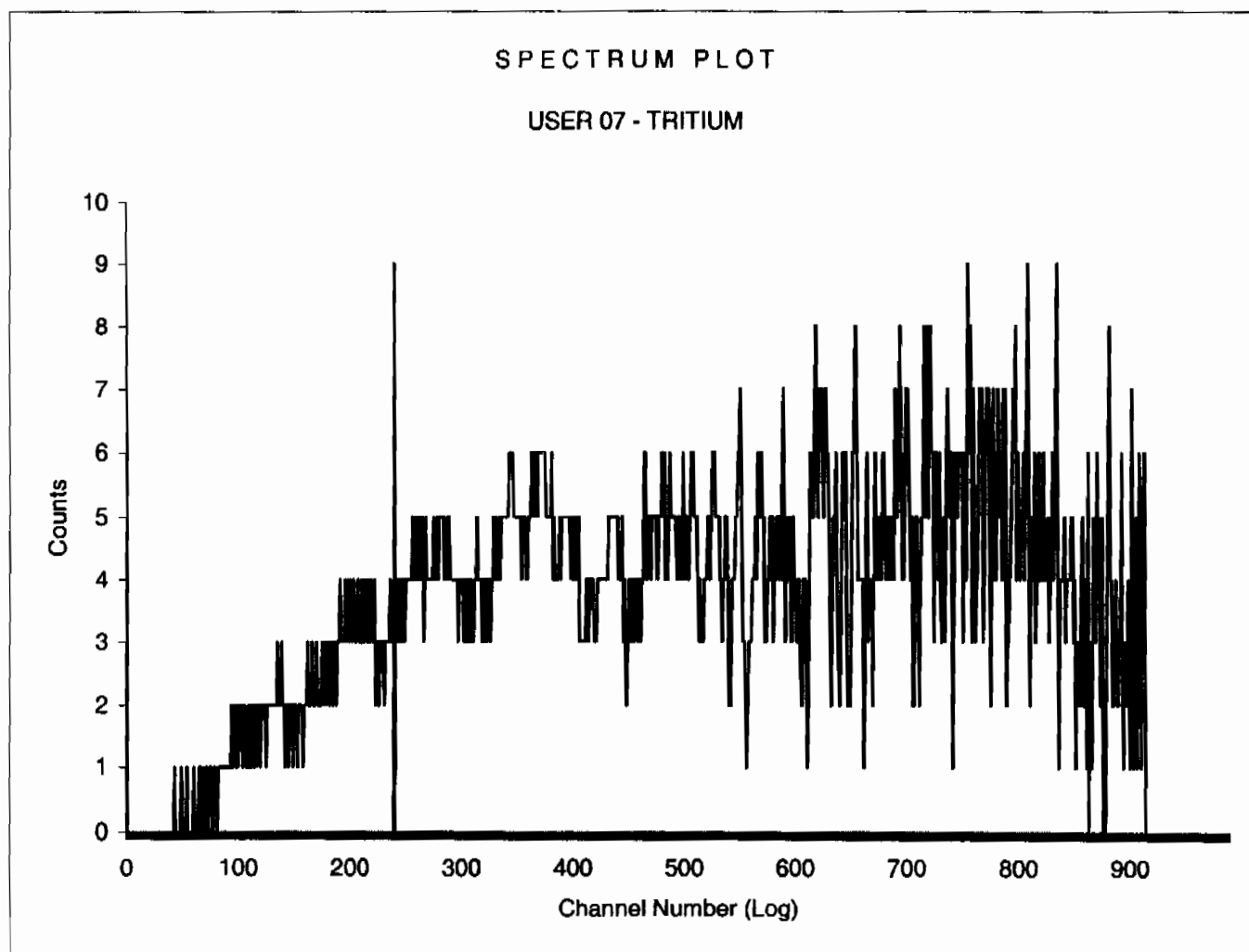
Sample Count Start Time:	10 Mar 2010 10:55:56		
Data Capture Date	10 Mar 2010 12:31:21		
User Filename	S07031057-2A.XLS		
	U07031044-1A.XLS		
Spectrum Type	Log Counts		
User Number	07		
User Id	TRITIUM		
User Comment	BROWN		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	14	57-2	95.00
H#, Total Counts:	108.7	3447	
Win1: Tritium - Start, End, Counts:	0	240	400
Win2: - Start, End, Counts:	0	990	3447

SPECTRUM PLOT

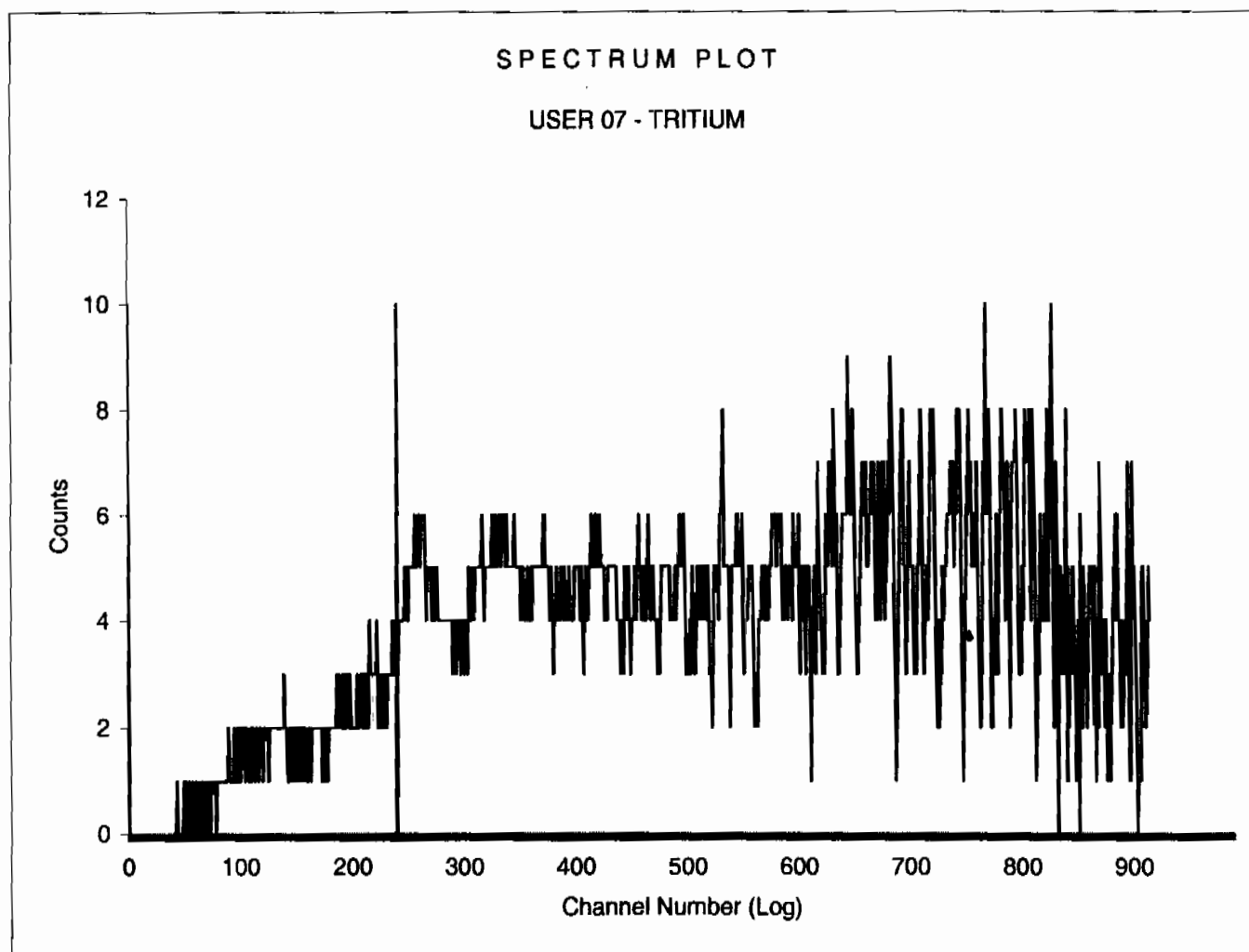
USER 07 - TRITIUM



Sample Count Start Time:	10 Mar 2010 12:34:11		
Data Capture Date	10 Mar 2010 14:09:36		
User Filename	S07031057-3A.XLS		
	U07031044-1A.XLS		
Spectrum Type	Log Counts		
User Number	07		
User Id	TRITIUM		
User Comment	BROWN		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	15	57-3	95.00
H#, Total Counts:	108.8	3364	
Win1: Tritium - Start, End, Counts:	0	240	381
Win2: - Start, End, Counts:	0	990	3364



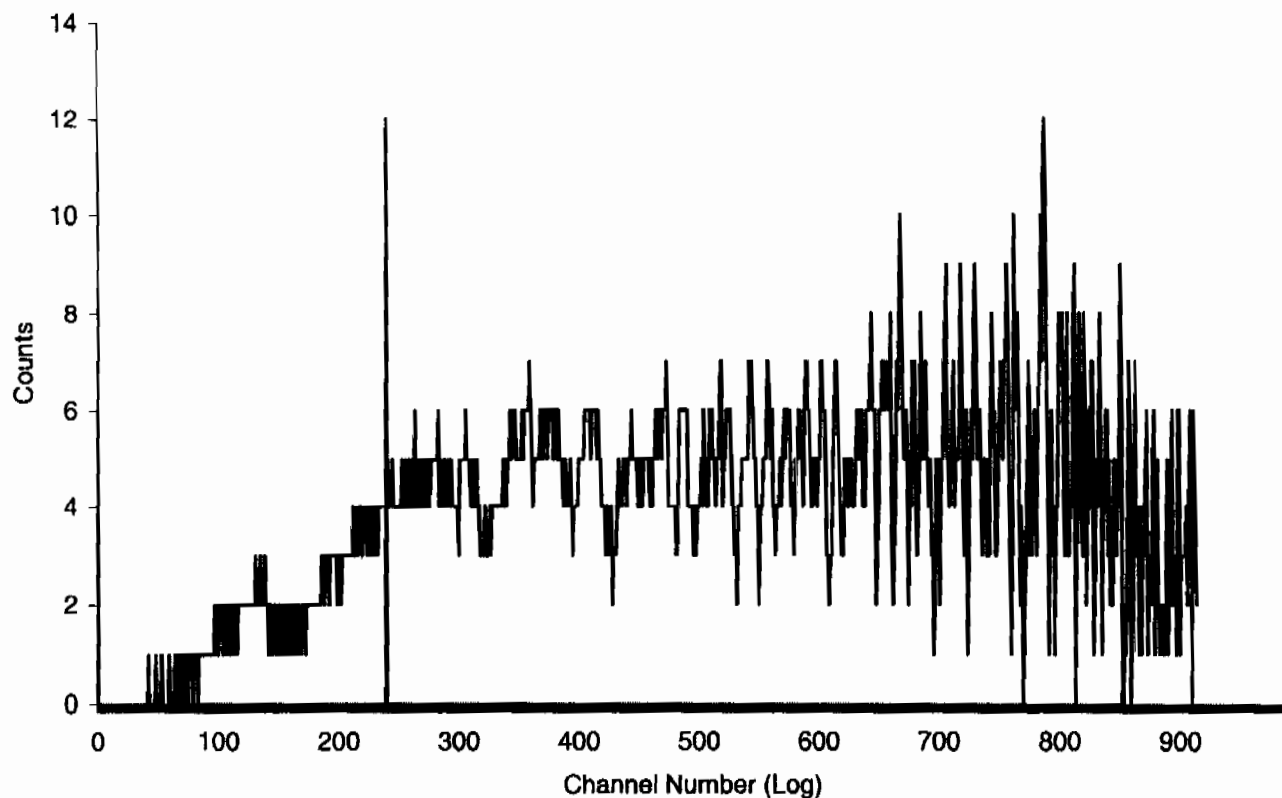
Sample Count Start Time:	10 Mar 2010 14:12:24		
Data Capture Date	10 Mar 2010 15:47:49		
User Filename	S07031057-4A.XLS		
	U07031044-1A.XLS		
Spectrum Type	Log Counts		
User Number	07		
User Id	TRITIUM		
User Comment	BROWN		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	16	57-4	95.00
H#, Total Counts:	108.3	3521	
Win1: Tritium - Start, End, Counts:	0	240	342
Win2: - Start, End, Counts:	0	990	3521



Sample Count Start Time:	10 Mar 2010 15:50:33		
Data Capture Date	10 Mar 2010 17:25:58		
User Filename	S07031057-5A.XLS		
	U07031044-1A.XLS		
Spectrum Type	Log Counts		
User Number	07		
User Id	TRITIUM		
User Comment	BROWN		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	17	57-5	95.00
H#, Total Counts:	108.9	3572	
Win1: Tritium - Start, End, Counts:	0	240	374
Win2: - Start, End, Counts:	0	990	3572

SPECTRUM PLOT

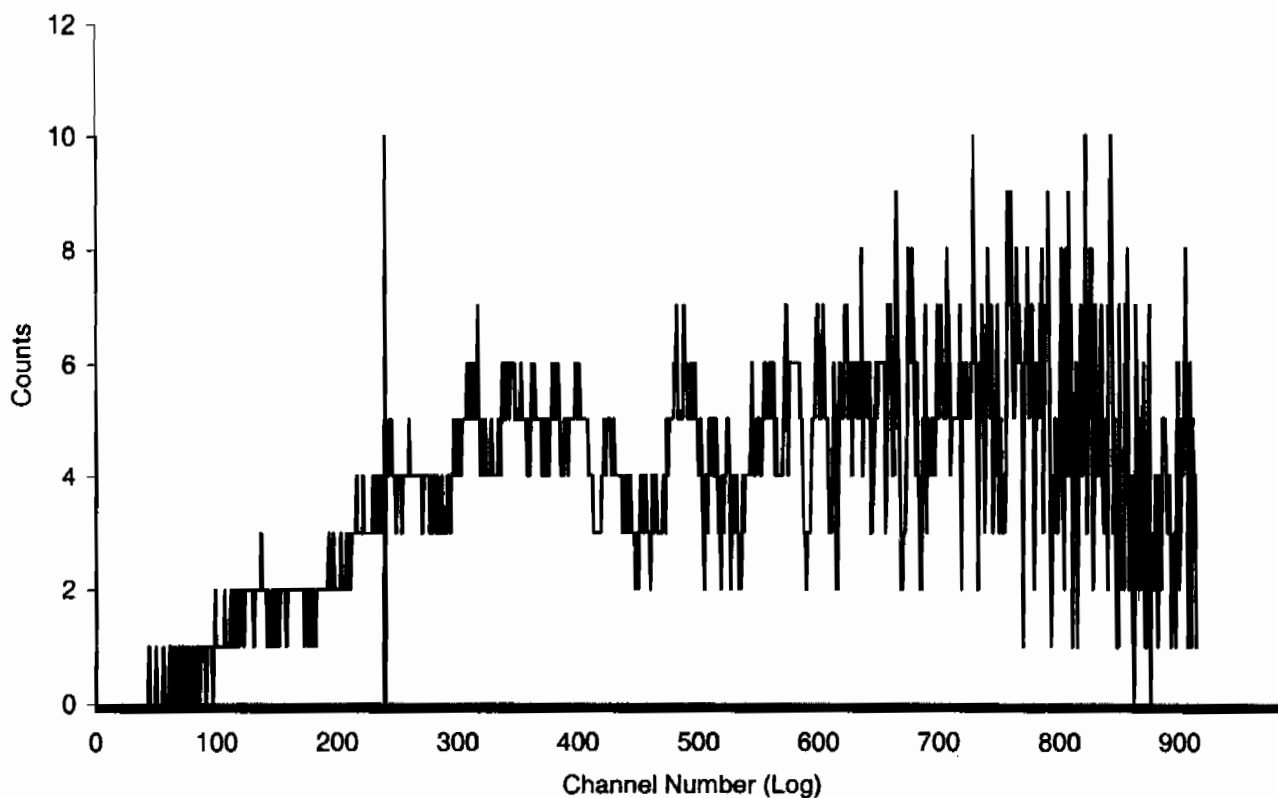
USER 07 - TRITIUM



Sample Count Start Time:	10 Mar 2010 17:28:37		
Data Capture Date	10 Mar 2010 19:04:35		
User Filename	S07031057-6A.XLS		
	U07031044-1A.XLS		
Spectrum Type	Log Counts		
User Number	07		
User Id	TRITIUM		
User Comment	BROWN		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	18	57-6	95.00
H#, Total Counts:	108.0	3430	
Win1: Tritium - Start, End, Counts:	0	240	328
Win2: - Start, End, Counts:	0	990	3430

SPECTRUM PLOT

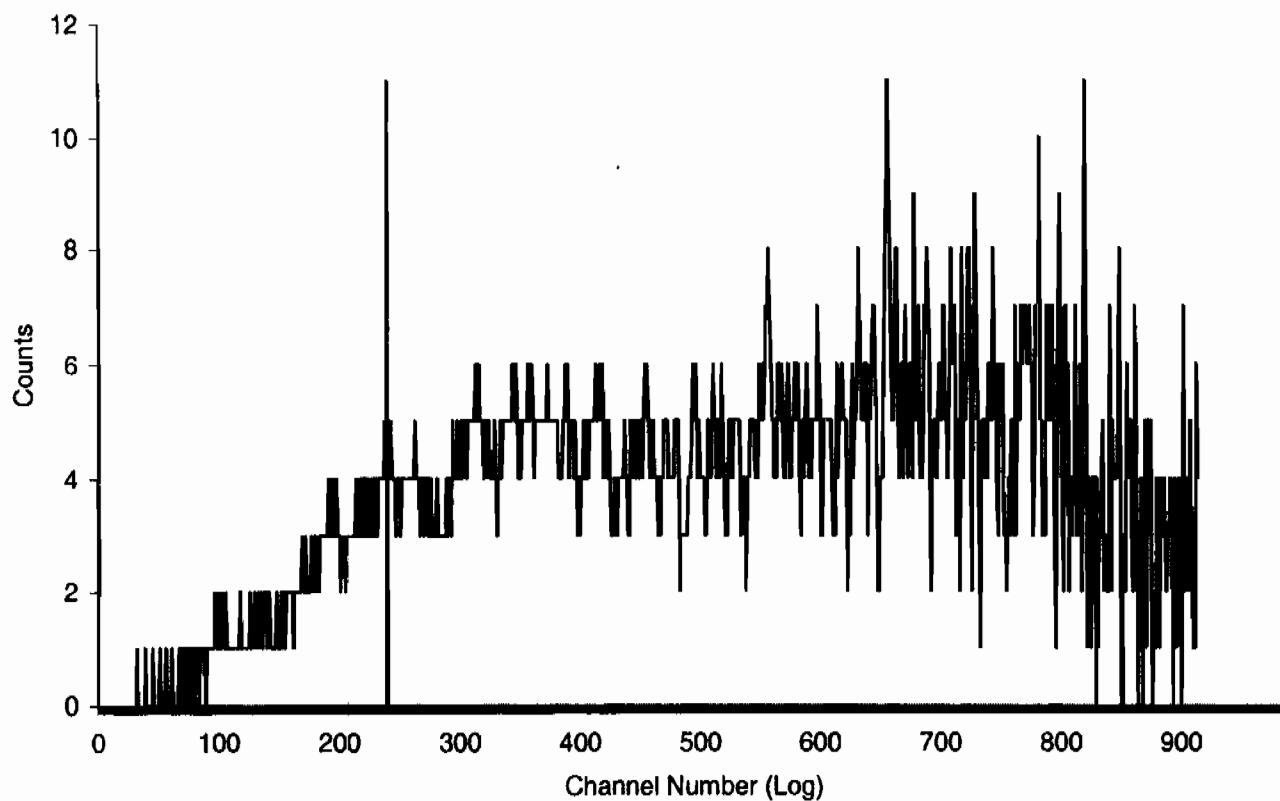
USER 07 - TRITIUM



Sample Count Start Time:	10 Mar 2010 19:06:45		
Data Capture Date	10 Mar 2010 20:42:10		
User Filename	S07031057-7A.XLS		
	U07031044-1A.XLS		
Spectrum Type	Log Counts		
User Number	07		
User Id	TRITIUM		
User Comment	BROWN		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	19	57-7	95.00
H#, Total Counts:	108.9	3427	
Win1: Tritium - Start, End, Counts:	0	240	360
Win2: - Start, End, Counts:	0	990	3426

SPECTRUM PLOT

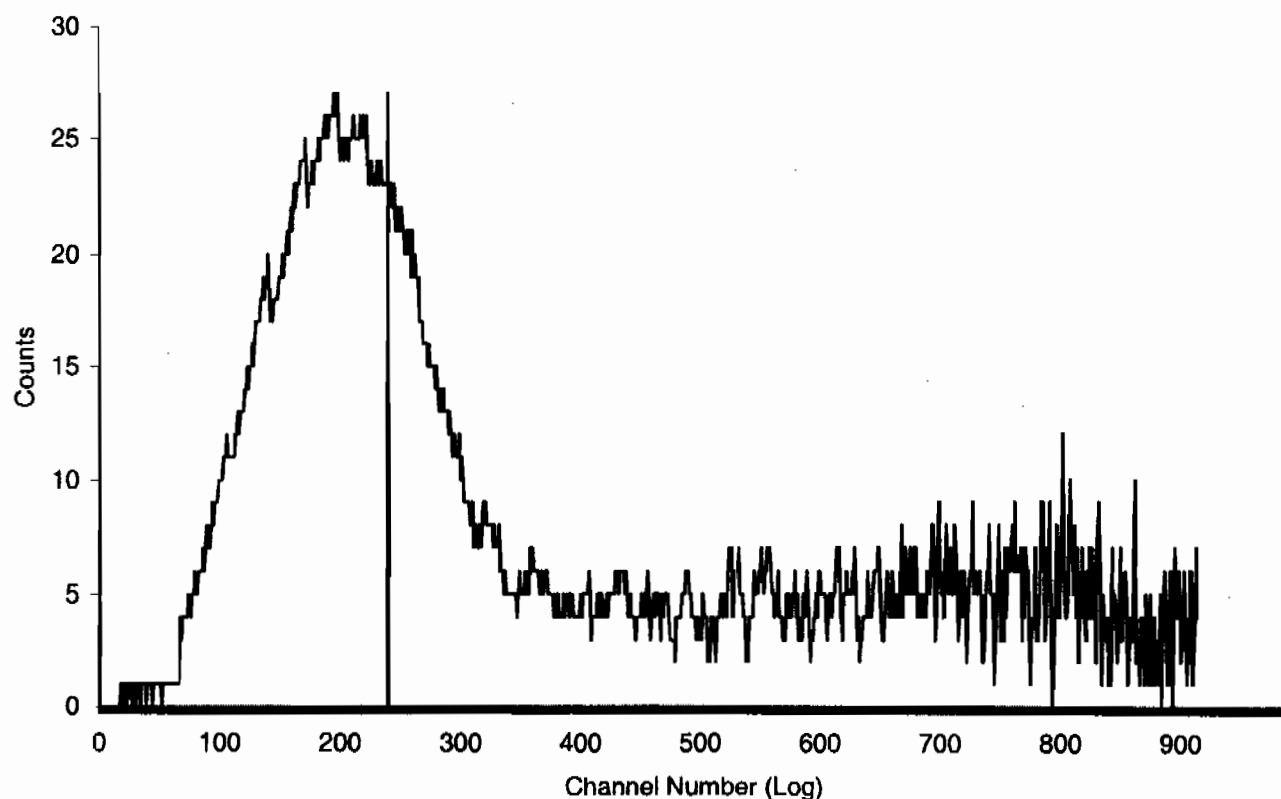
USER 07 - TRITIUM



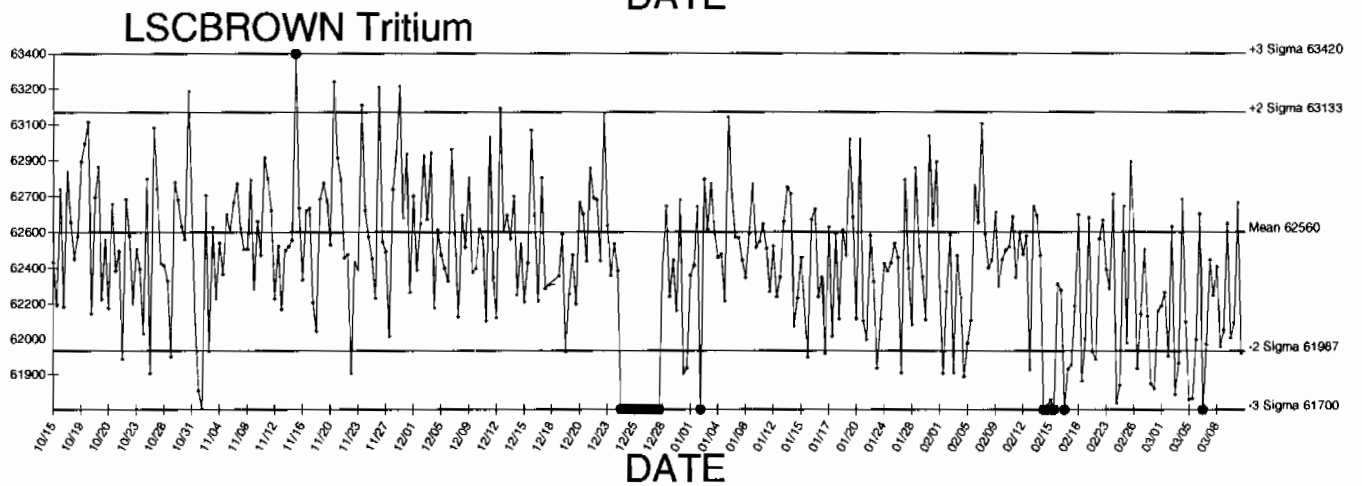
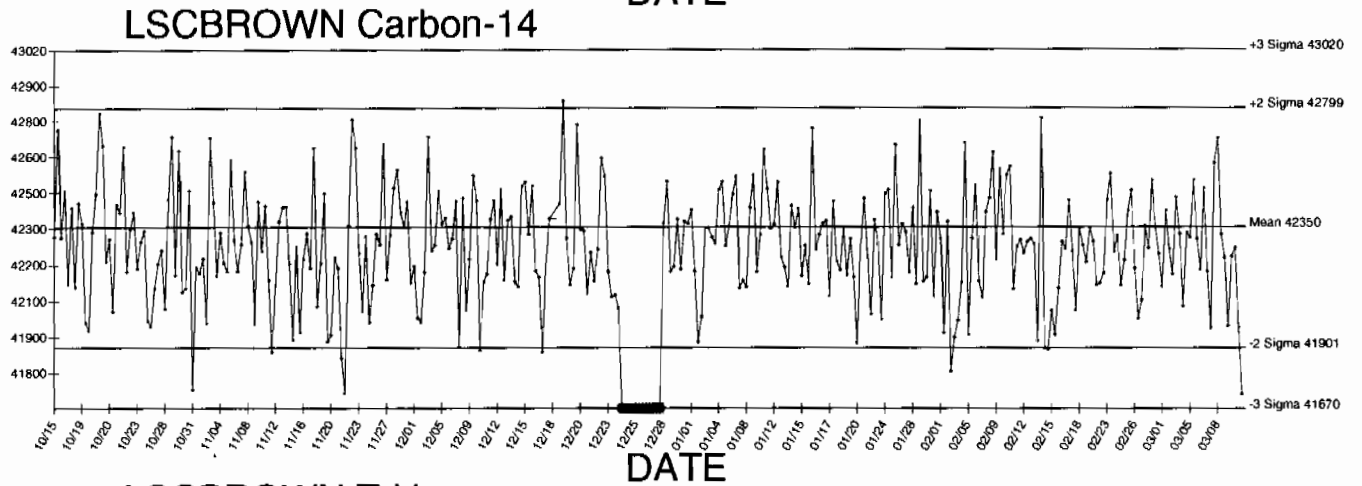
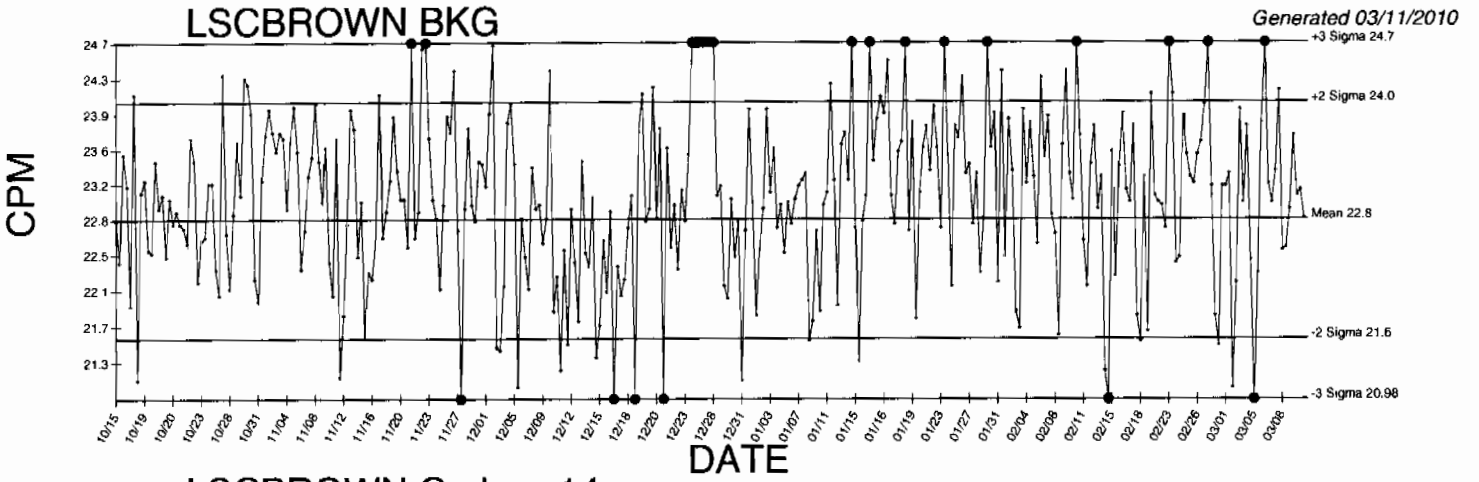
Sample Count Start Time:	10 Mar 2010 20:44:47		
Data Capture Date	10 Mar 2010 22:20:13		
User Filename	S07031057-8A.XLS		
	U07031044-1A.XLS		
Spectrum Type	Log Counts		
User Number	07		
User Id	TRITIUM		
User Comment	BROWN		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	20	57-8	95.00
H#, Total Counts:	109.4	7191	
Win1: Tritium - Start, End, Counts:	0	240	3172
Win2: - Start, End, Counts:	0	990	7190

SPECTRUM PLOT

USER 07 - TRITIUM

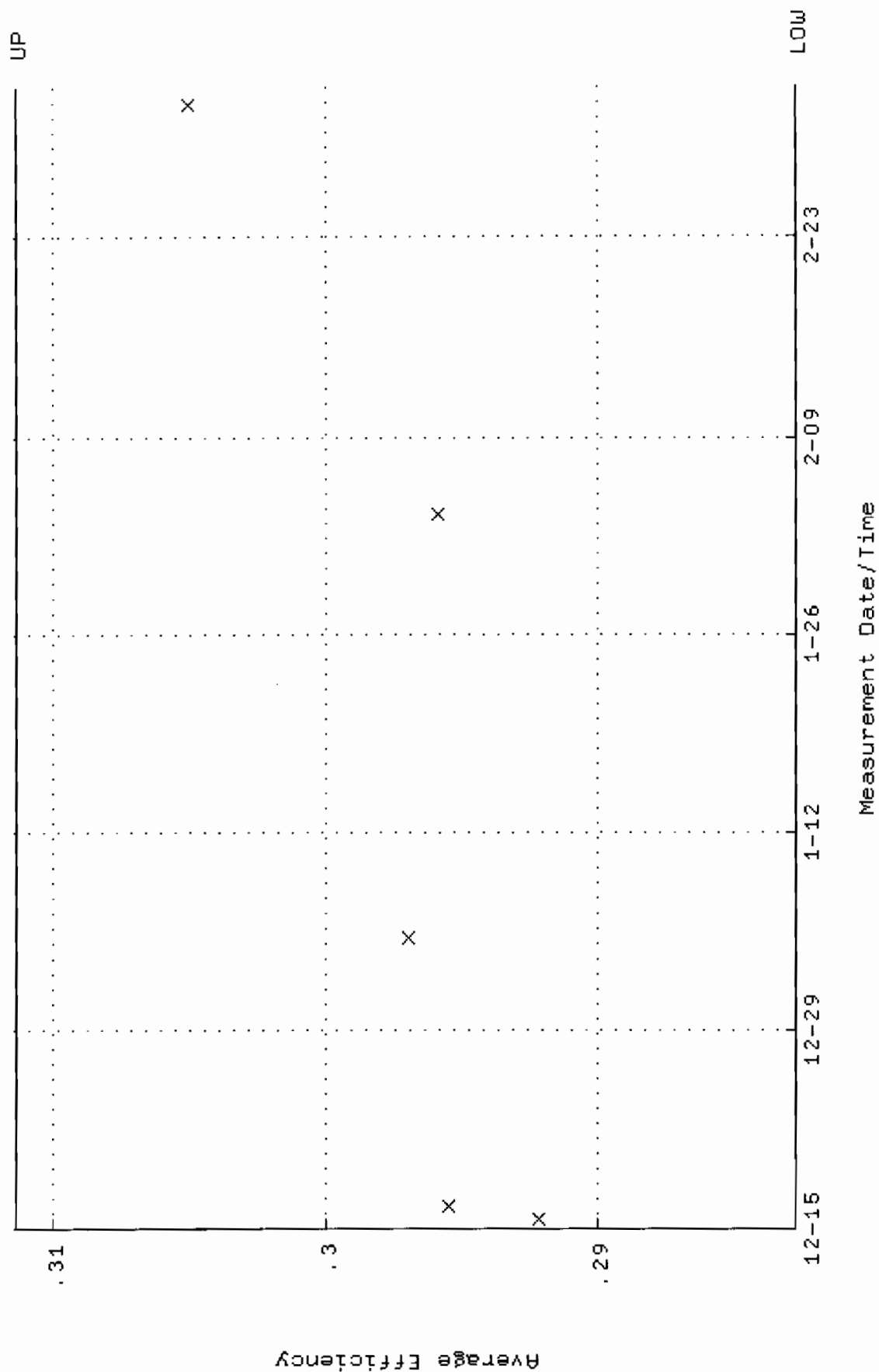


BACKGROUND AND EFFICIENCY DATA

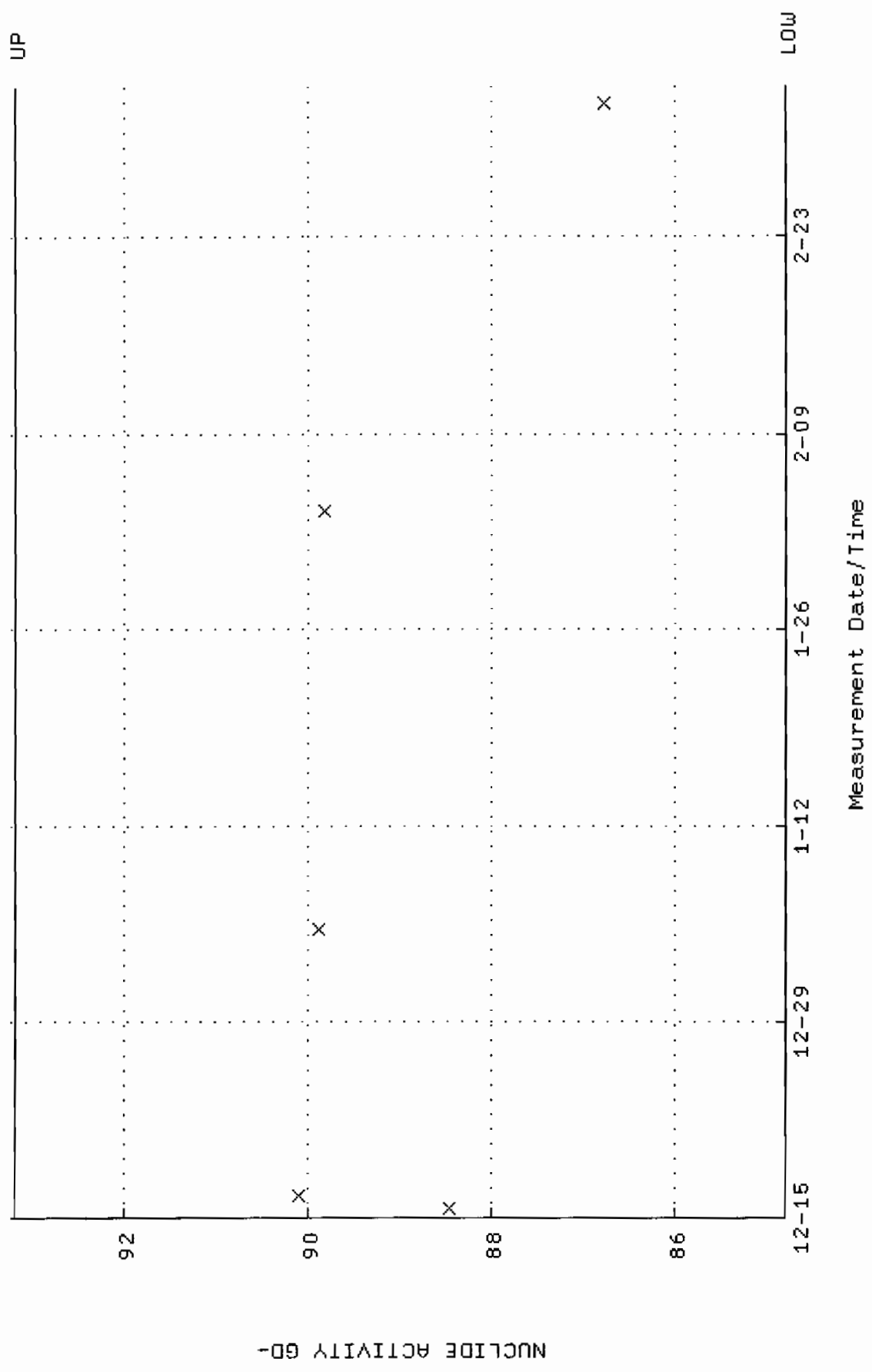


● Denotes Outlier

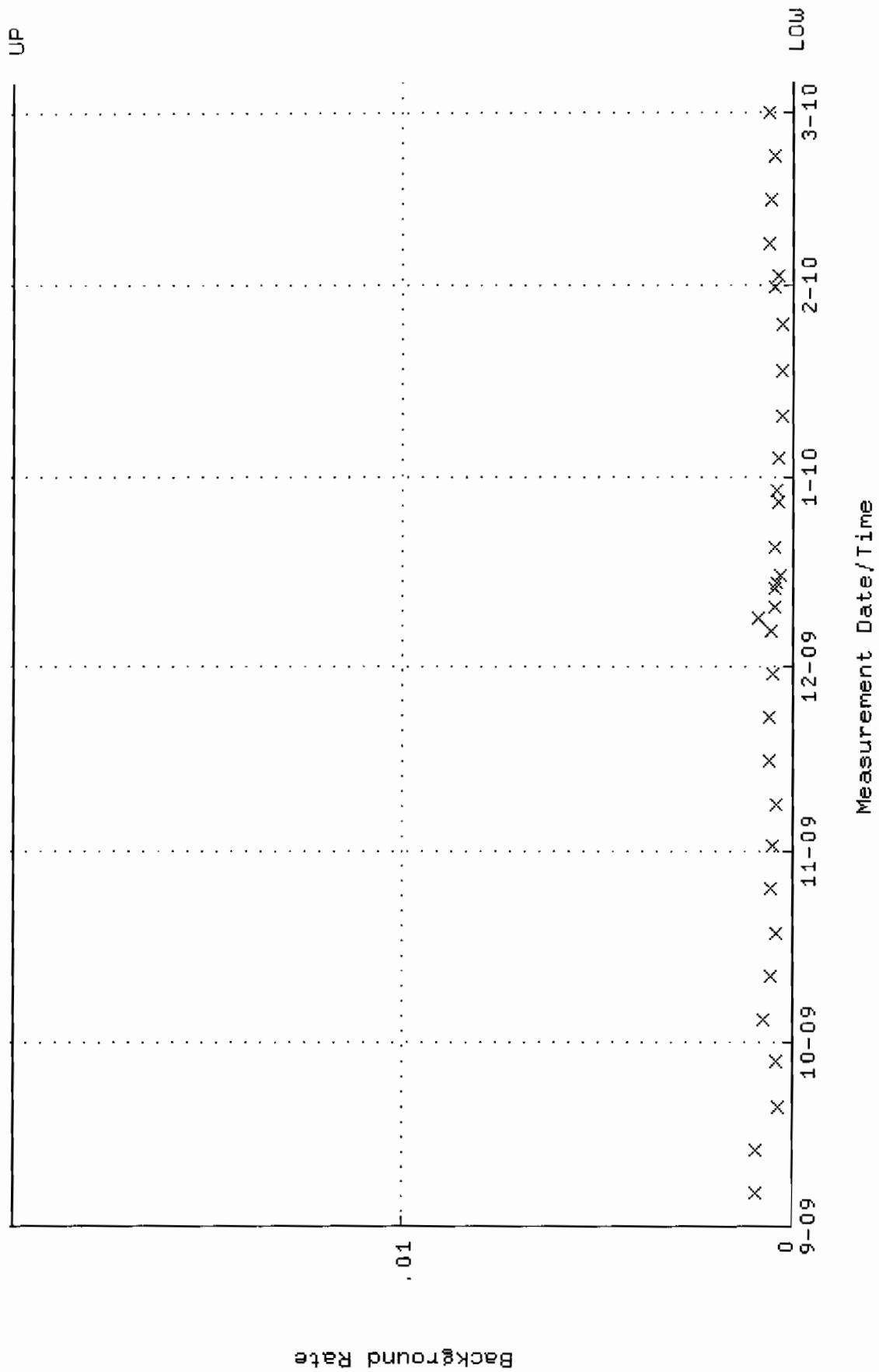
QA filename : DKA100:[ENV_ALPHA.QA.W]W002.QAF;4
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 15-DEC-2009 14:48:34 through 5-MAR-2010 12:00:00
 Lower/Upper Lmts: 0.282705 through 0.311367



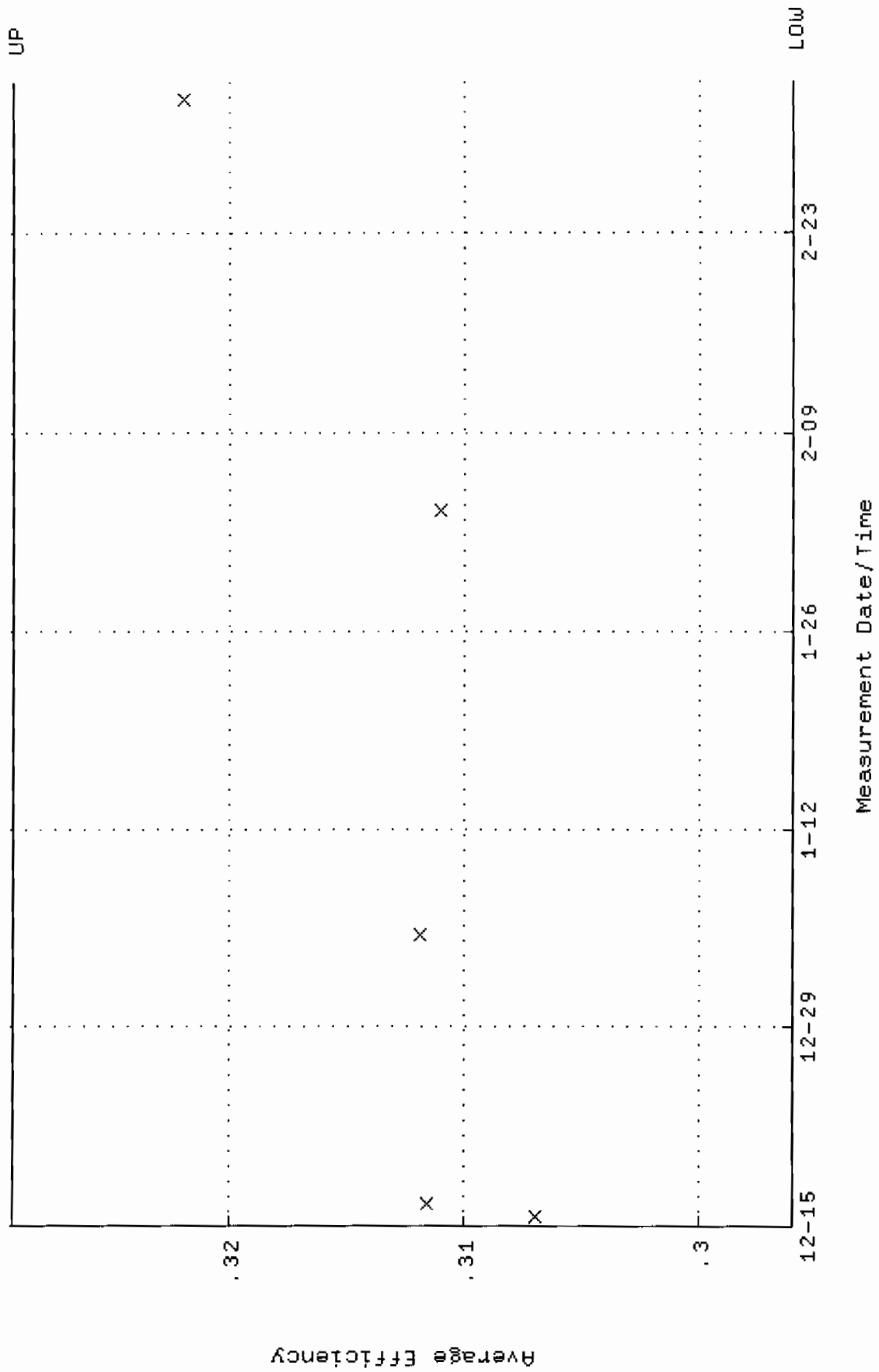
QA filename : DKA100:[ENV_ALPHA.QA.W]W002.QAF;4
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 15-DEC-2009 14:48:34 through 5-MAR-2010 12:00:00
 Lower/Upper Lmts: 84.7927 through 93.2014



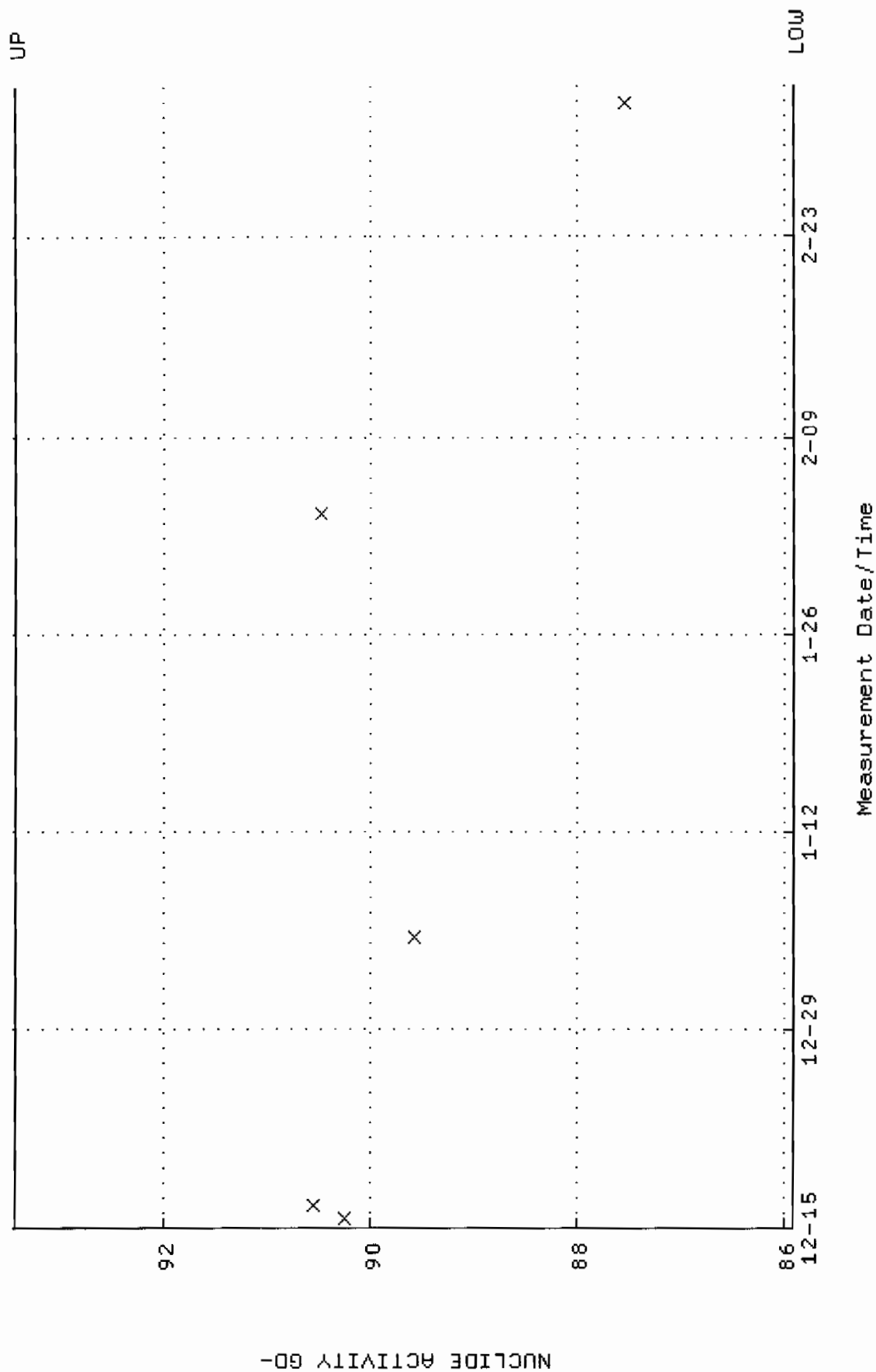
QA filename : DKA100:[ENV_ALPHA.QA.B]B002.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 6-SEP-2009 14:27:00 through 5-MAR-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



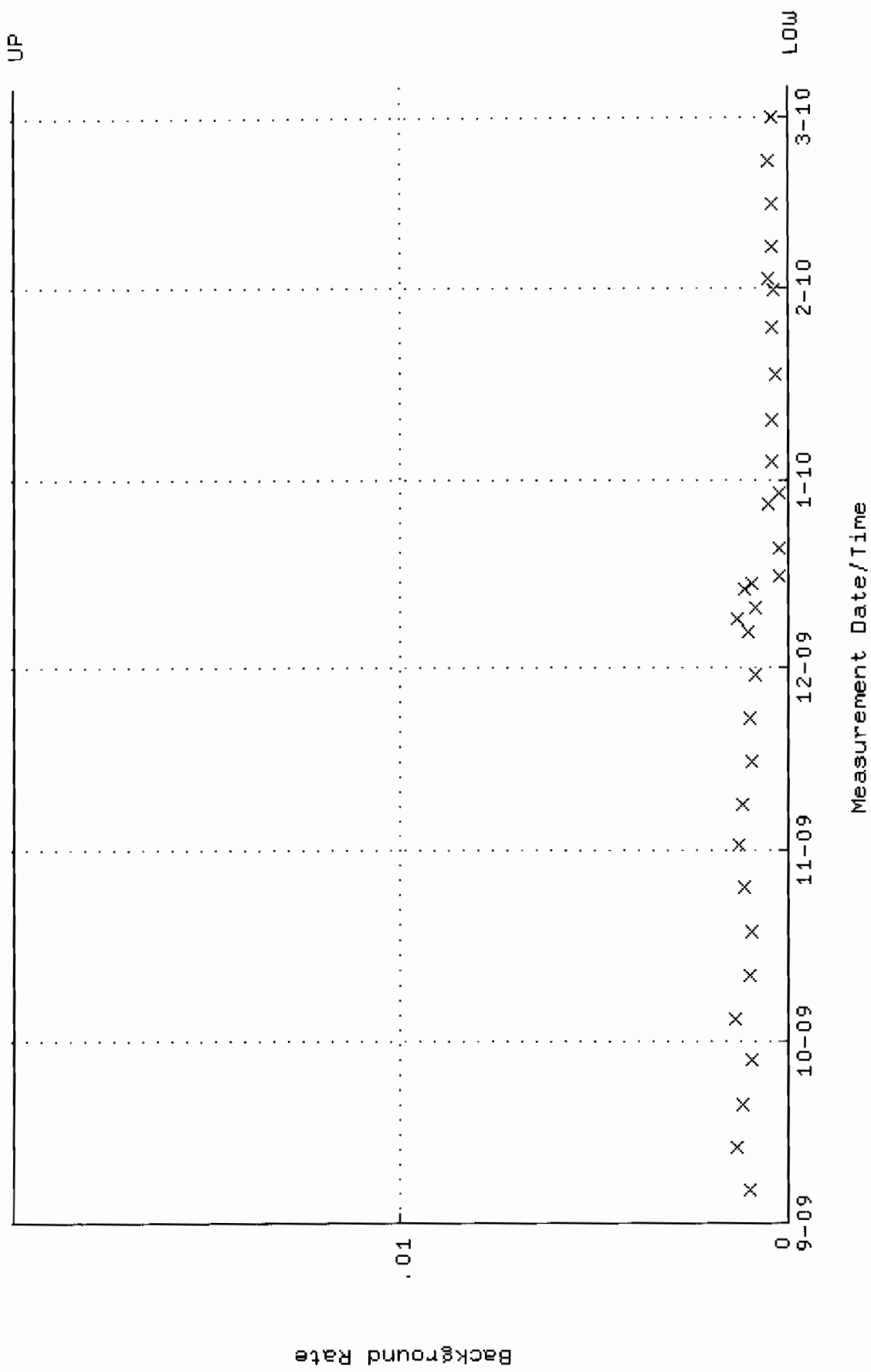
QA filename : DKA100:[ENV_ALPHA,QA,W]W003.QAF;5
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 15-DEC-2009 14:48:34 through 5-MAR-2010 12:00:00
 Lower/Upper Lmts: 0.295986 through 0.329192



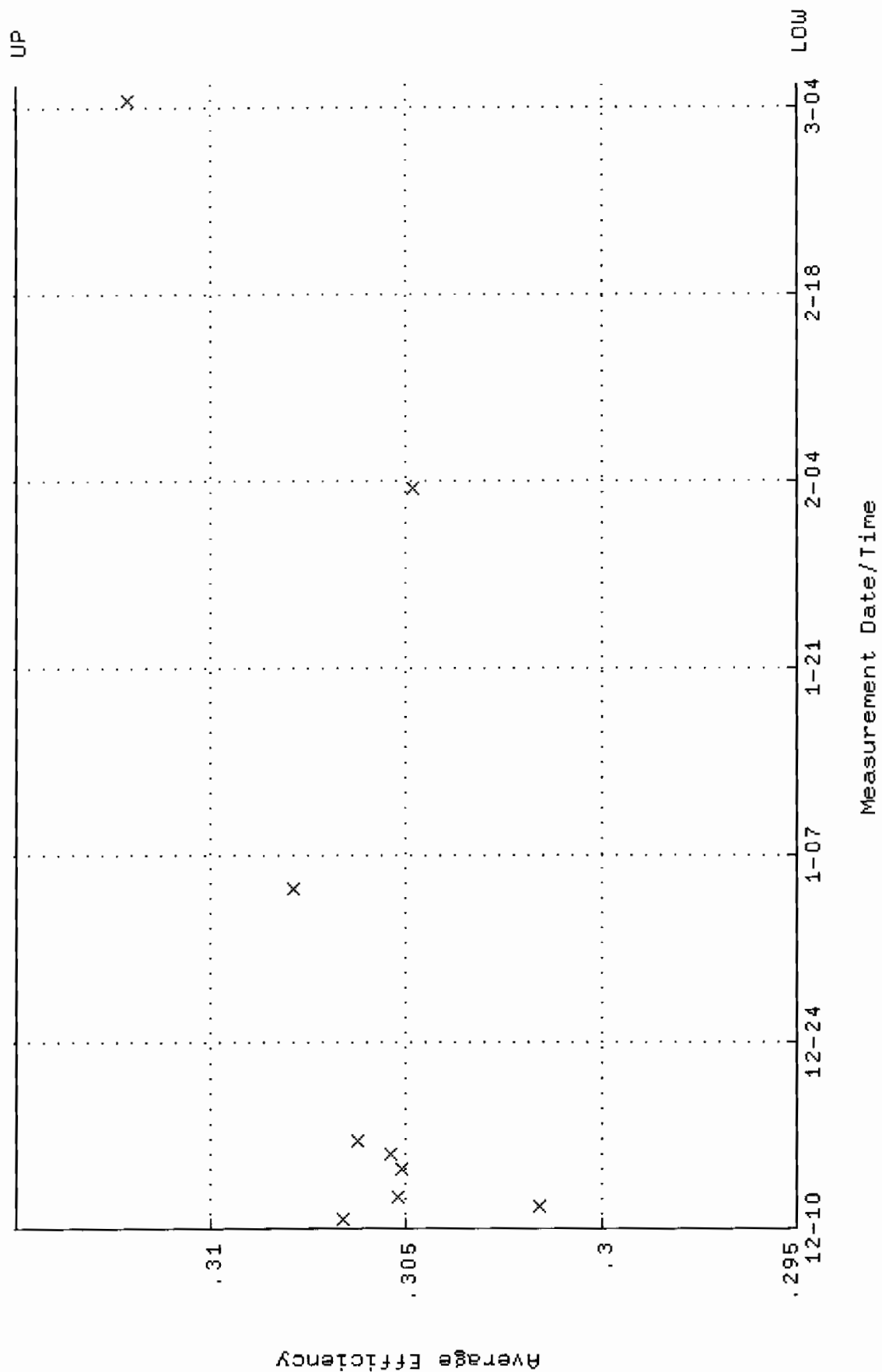
QA filename : DKA100:[ENV_ALPHA.QA.W]W003.QAF;5
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 15-DEC-2009 14:48:34 through 5-MAR-2010 12:00:00
 Lower/Upper Lmts: 85.9157 through 93.4313



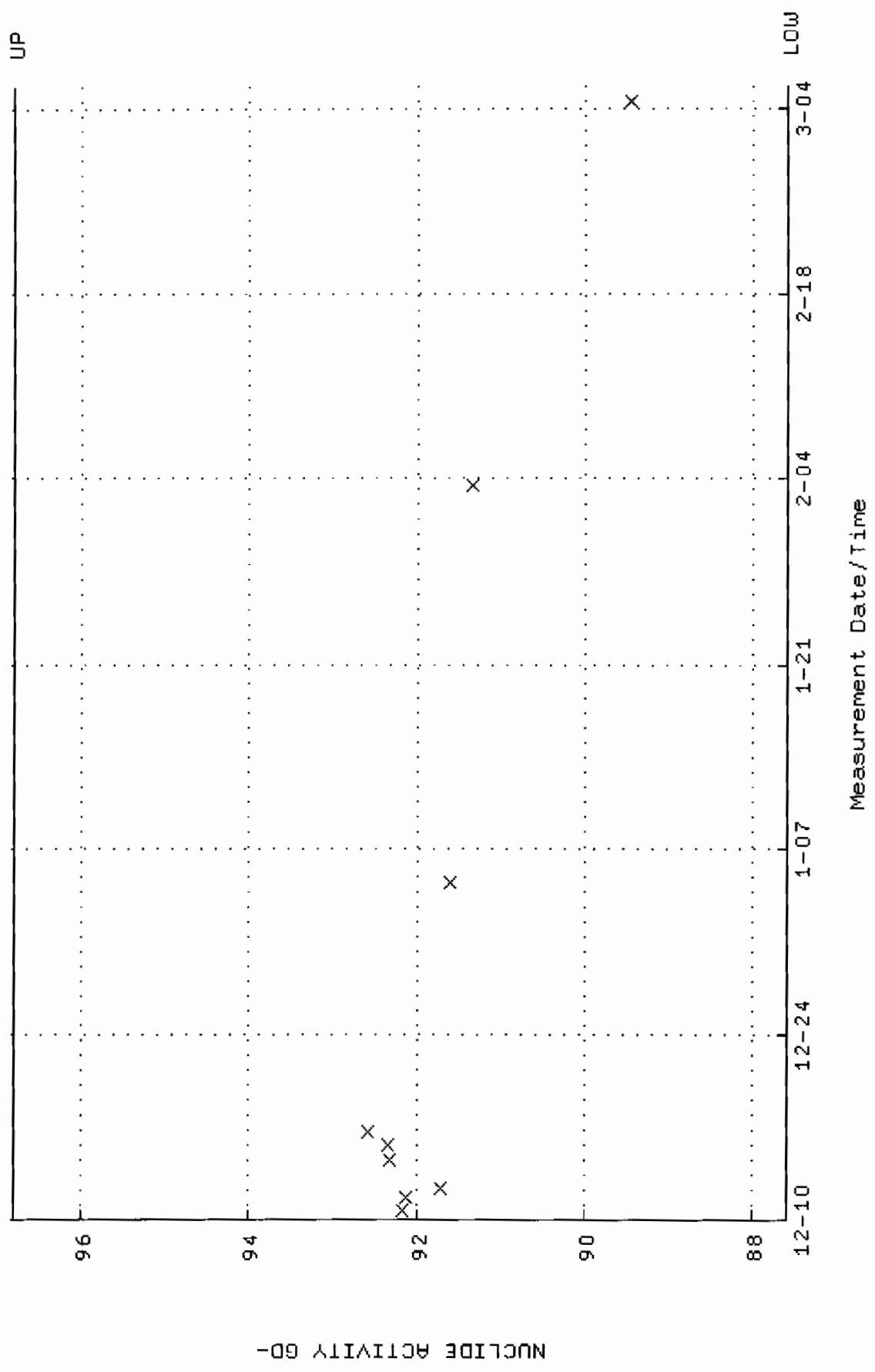
QA filename : DKA100:[ENV-ALPHA.QA.B]B003.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 6-SEP-2009 14:27:00 through 5-MAR-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



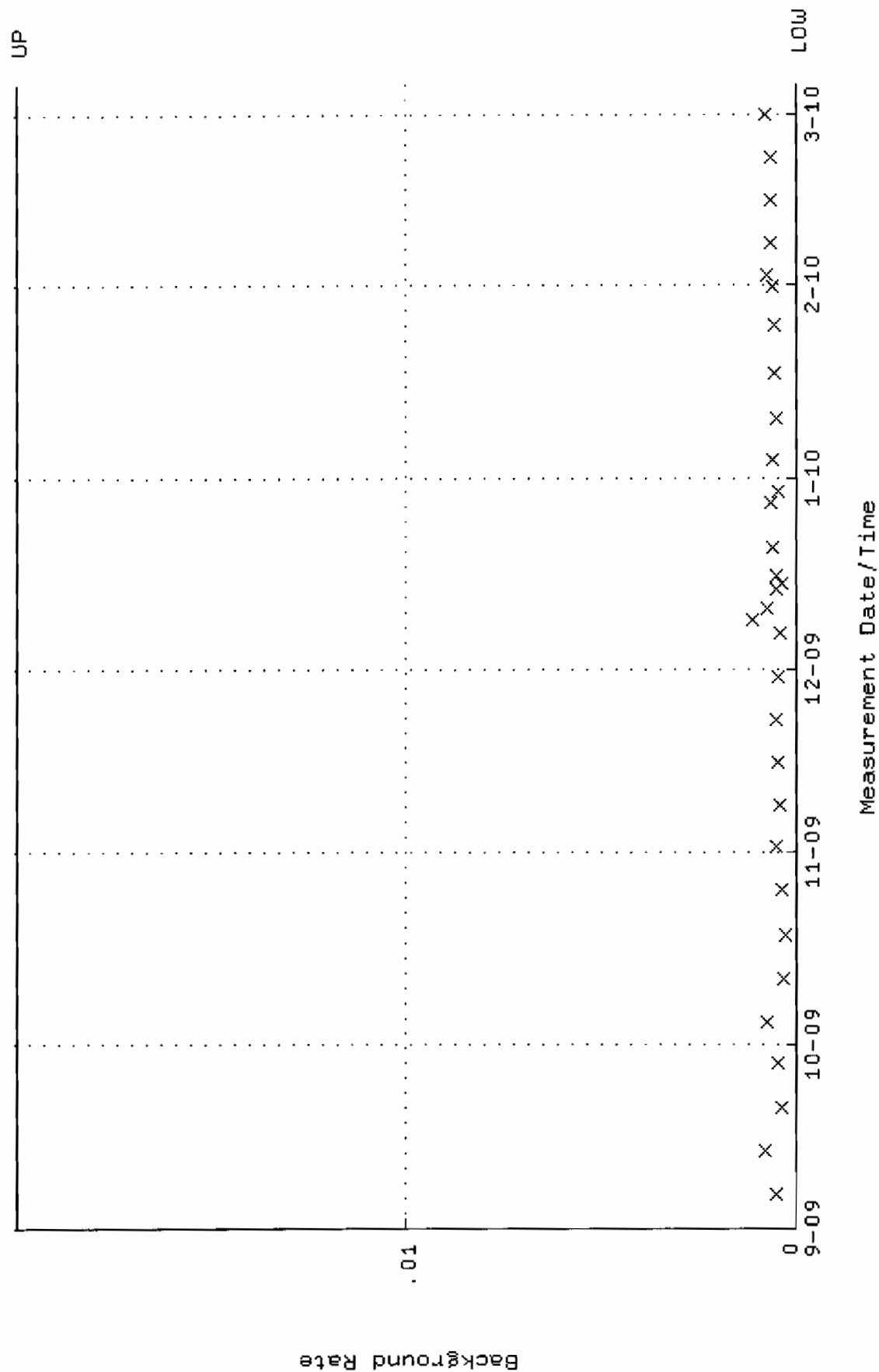
QA filename : DKA100:[ENV-ALPHA.QA.W]W004.QAF;5
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 10-DEC-2009 15:29:34 through 5-MAR-2010 12:00:00
 Lower/Upper Lmts: 0.294995 through 0.314995



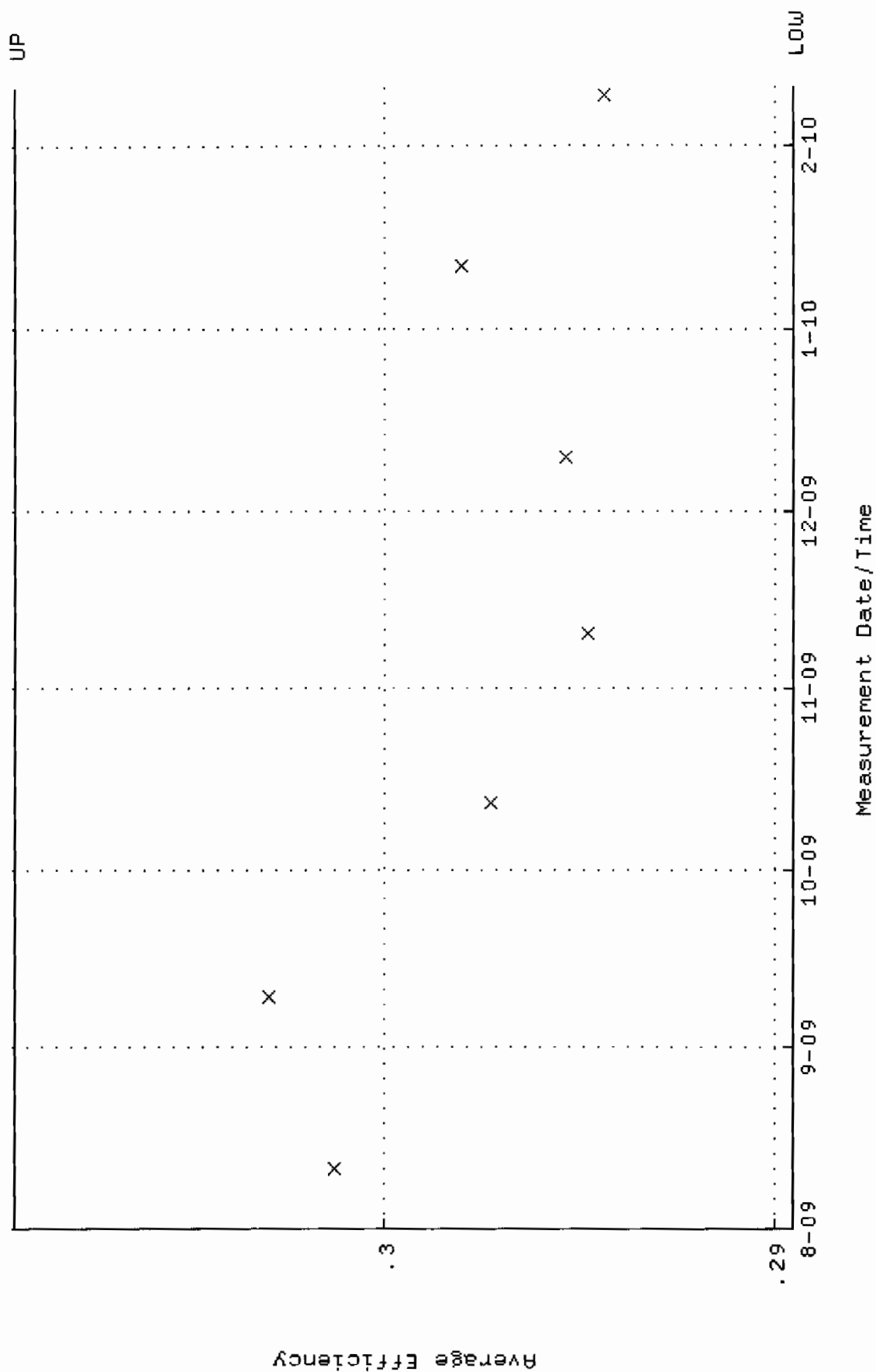
QA filename : DKA100:[ENV_ALPHA.QA.W]W004.QAF;5
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 10-DEC-2009 15:29:34 through 5-MAR-2010 12:00:00
 Lower/Upper Lmts: 87.5863 through 96.8059



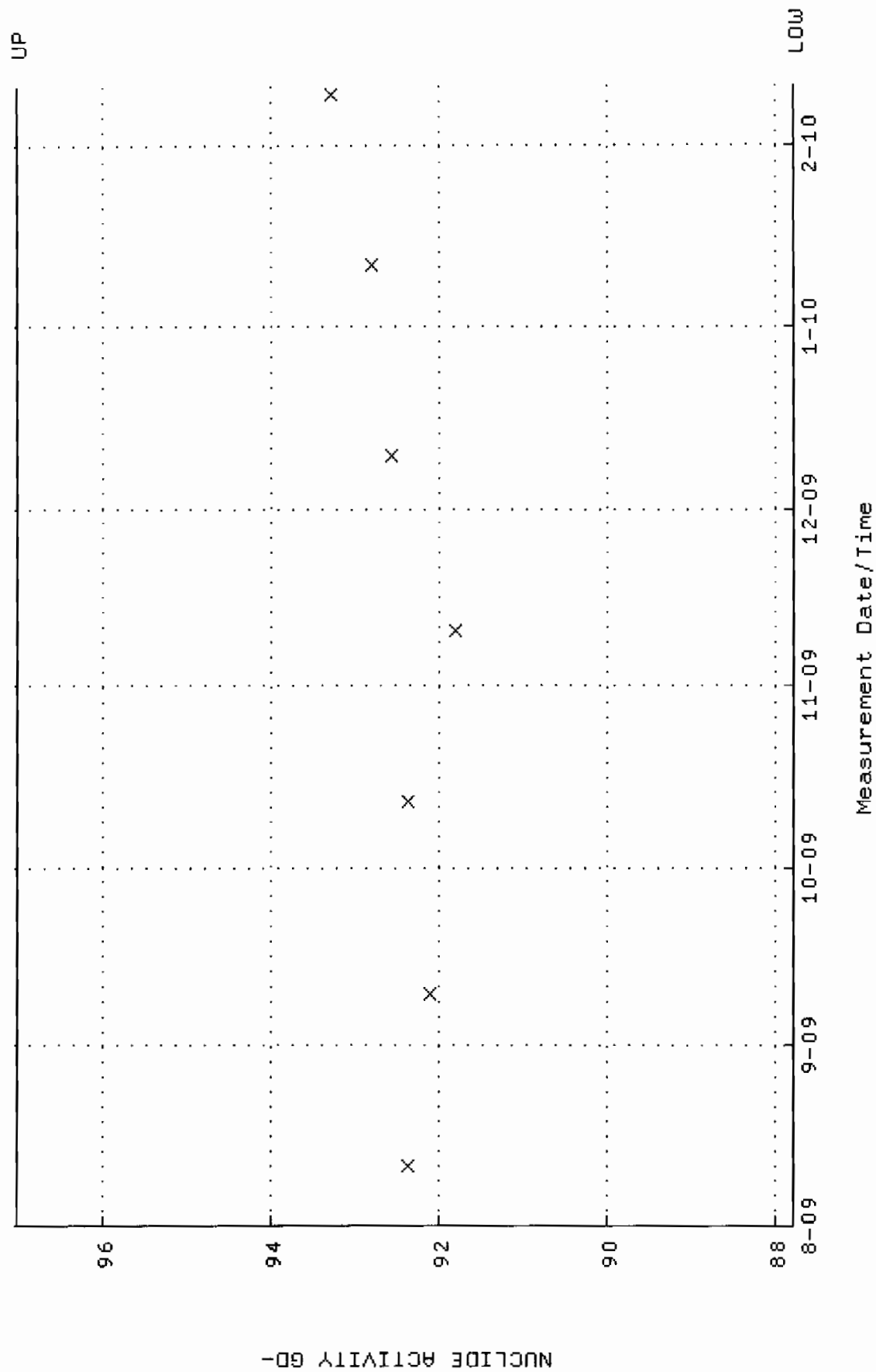
QA filename : DKA100:[ENV_ALPHA.QA.B]B004.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 6-SEP-2009 14:27:00 through 5-MAR-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



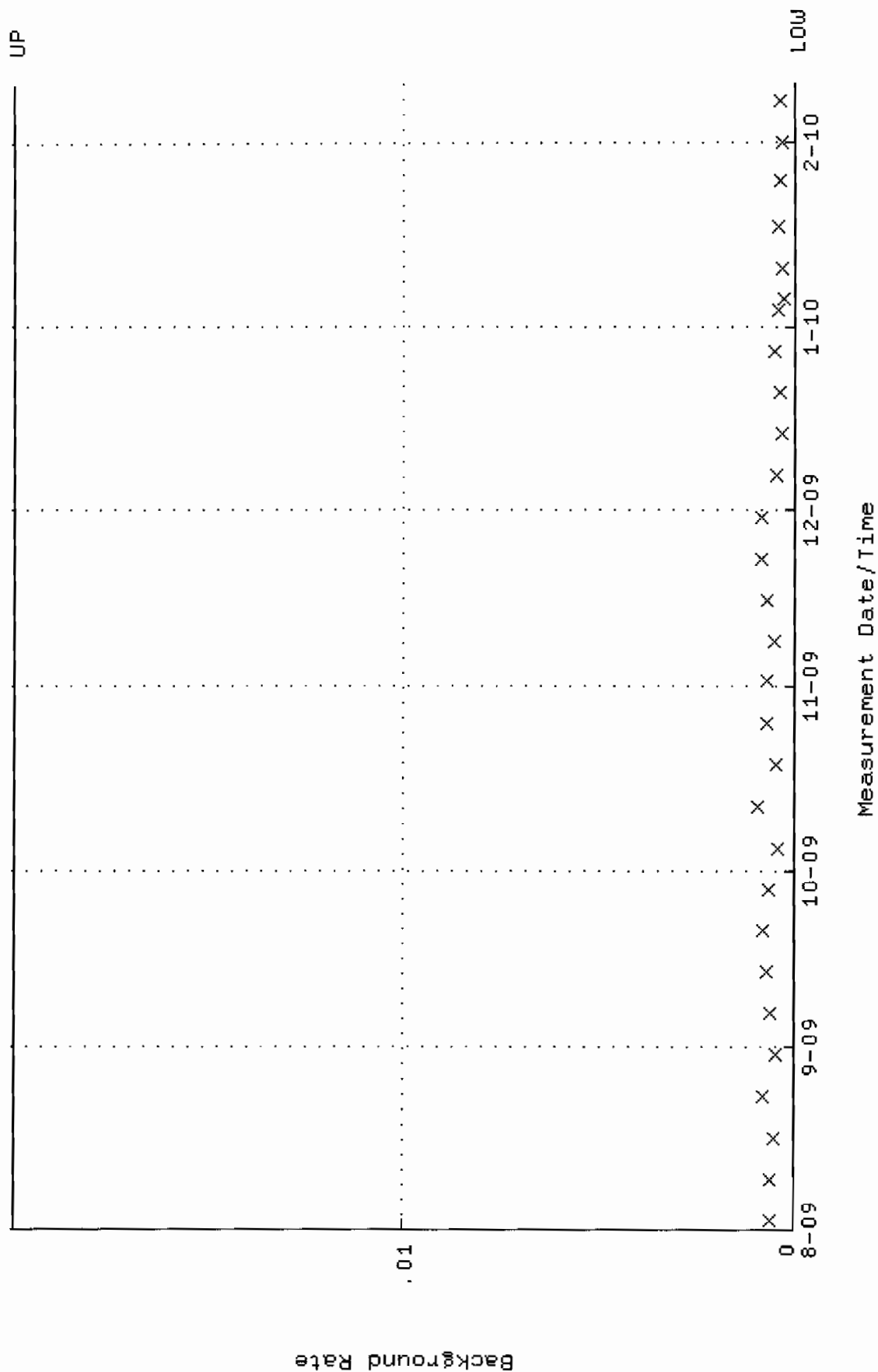
QA filename : DKA100:[ENV_ALPHA.QA.W]W086.QAF;4
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 11-AUG-2009 07:20:14 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.289508 through 0.309508



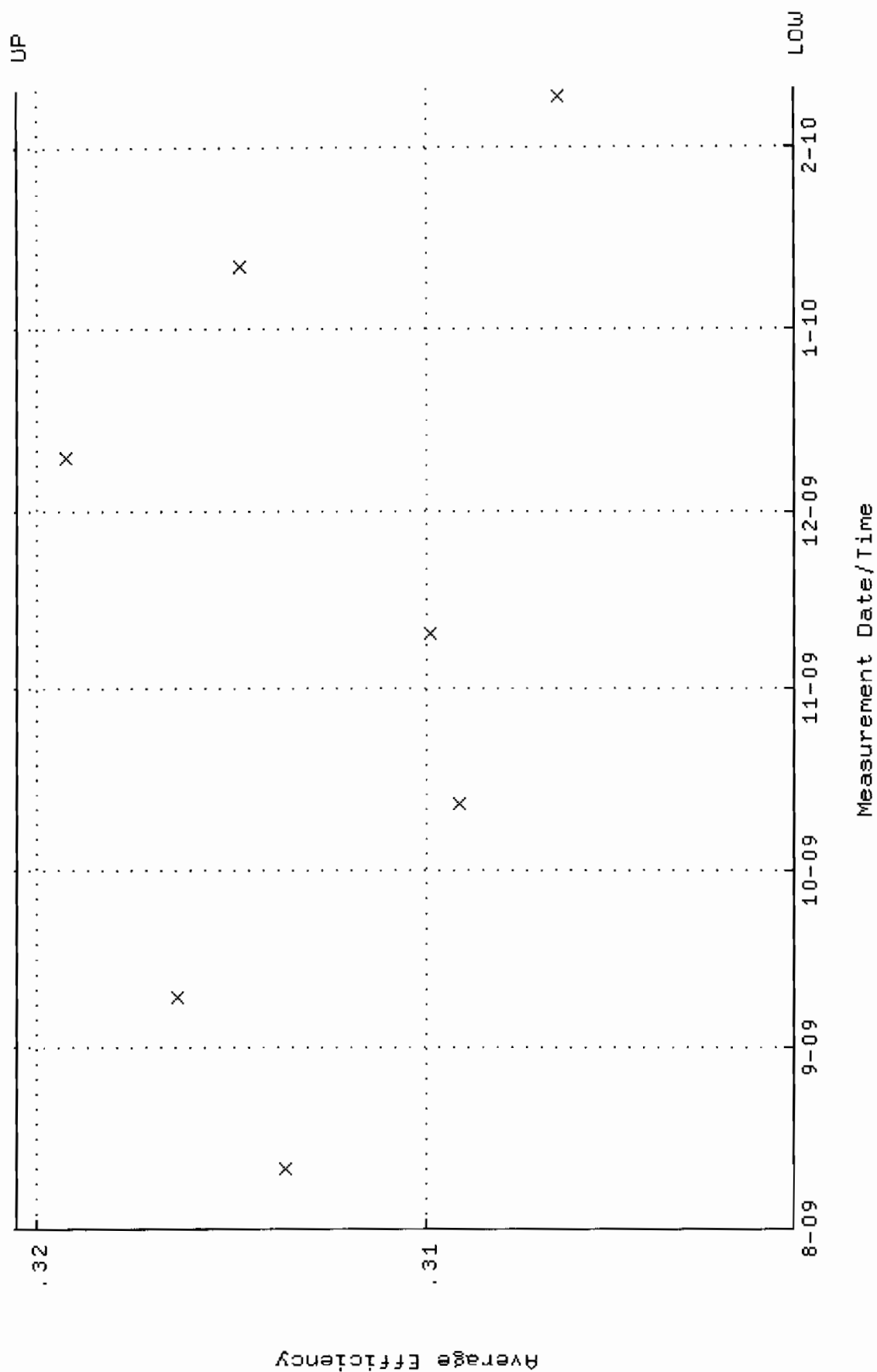
QA filename : DKA100:[ENV_ALPHA.QA.W]W086.QAF;4
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 11-AUG-2009 07:20:14 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 87.7898 through 97.0308



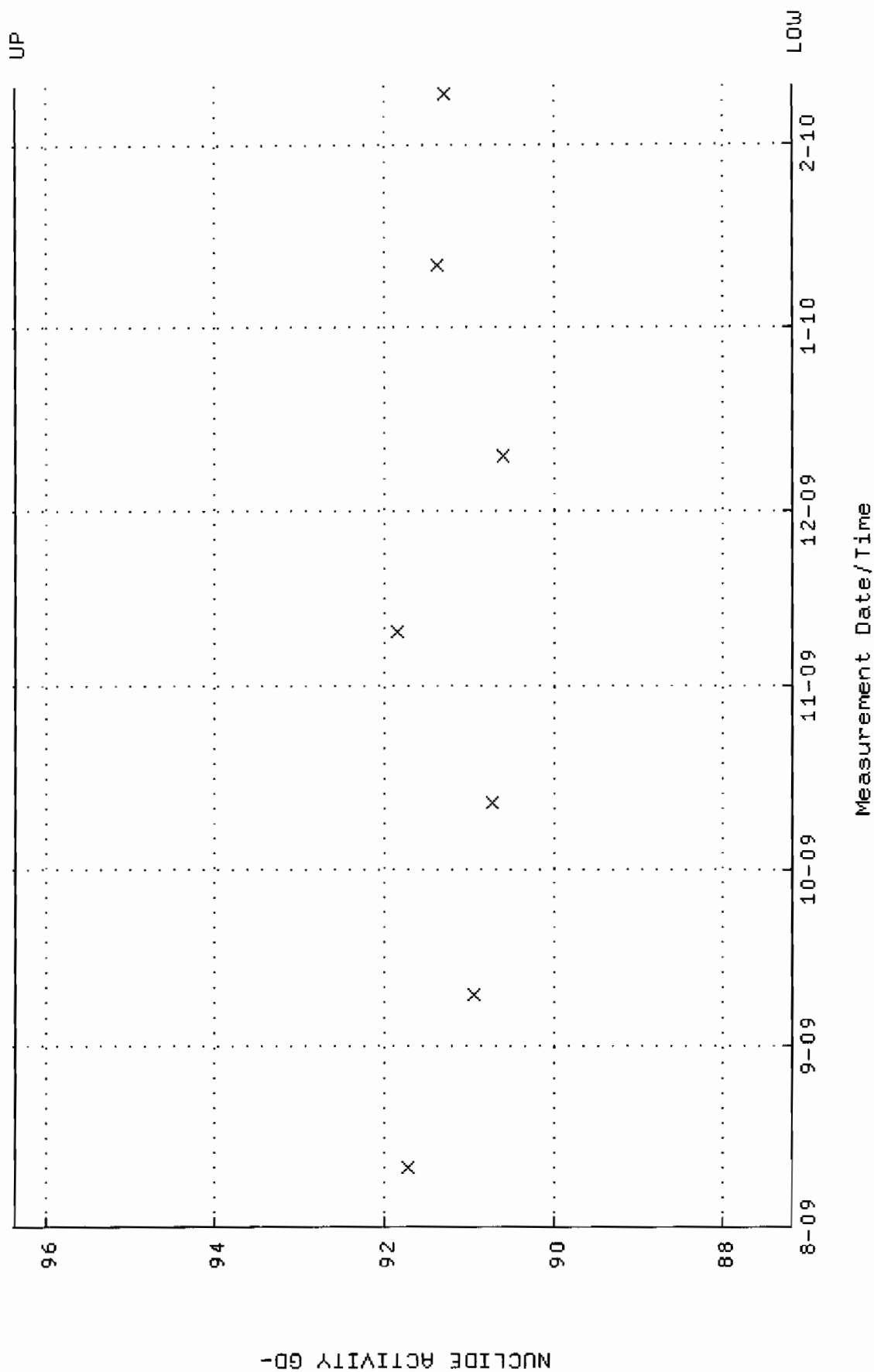
QA filename : DKA100:[ENV_ALPHA.QA.B]B086.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:38:41 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



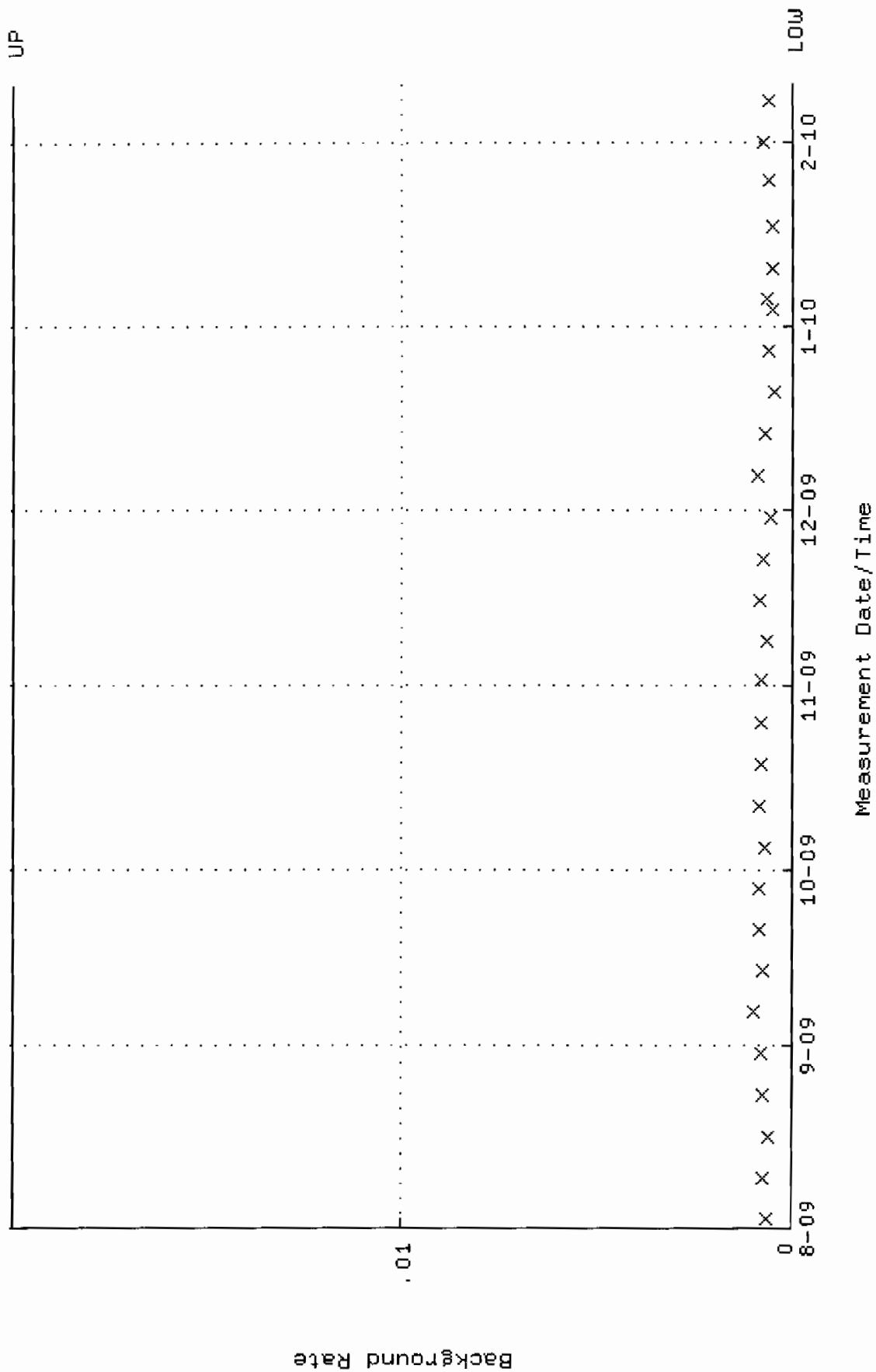
QA filename : DKA100:[ENV_ALPHA.QA.W]W087.QAF;4
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 11-AUG-2009 07:20:14 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.300530 through 0.320530



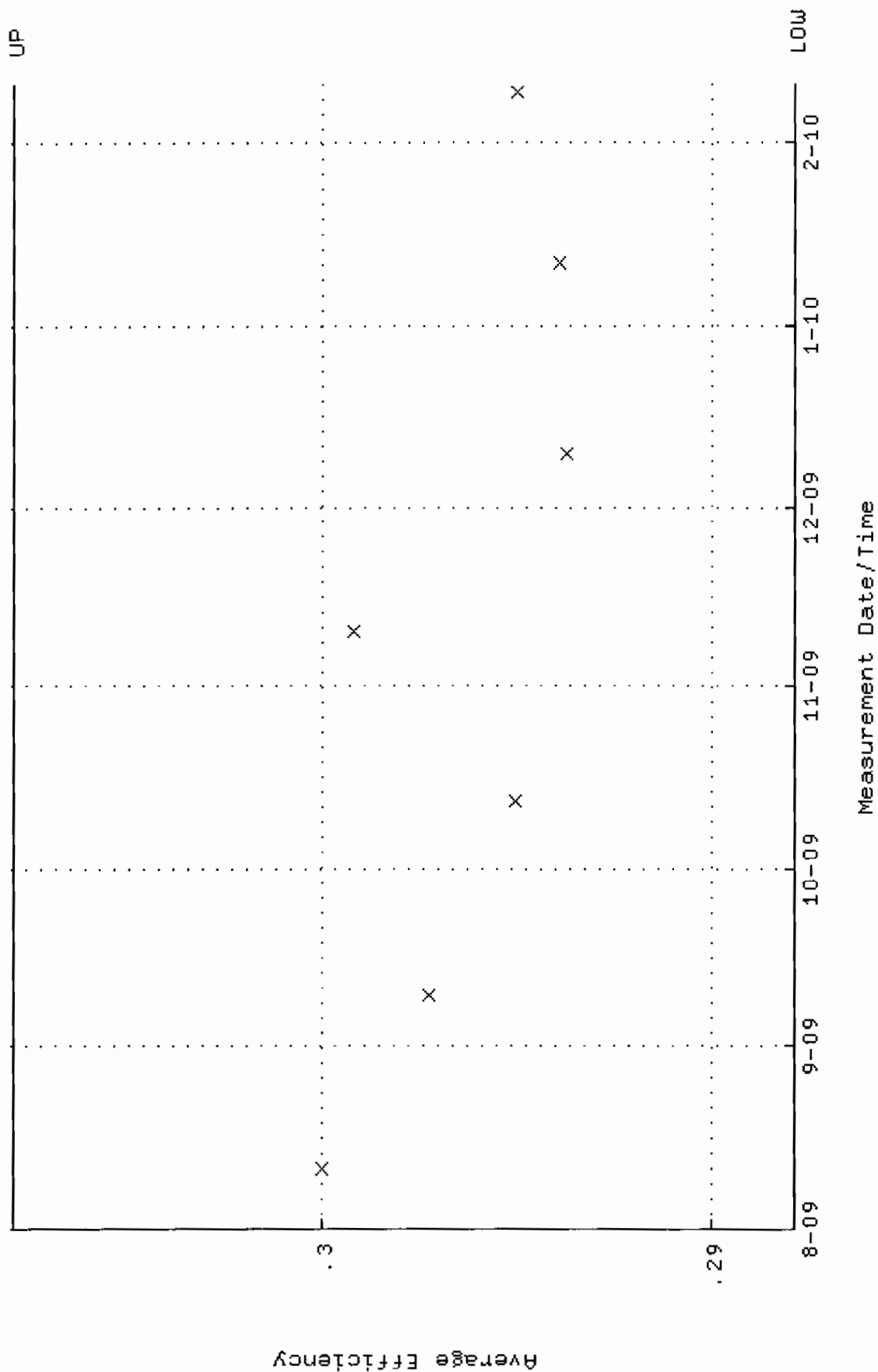
QA filename : DKA100:[ENV_ALPHA.QA.W]W087.QAF;4
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 11-AUG-2009 07:20:14 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 87.1845 through 96.3619



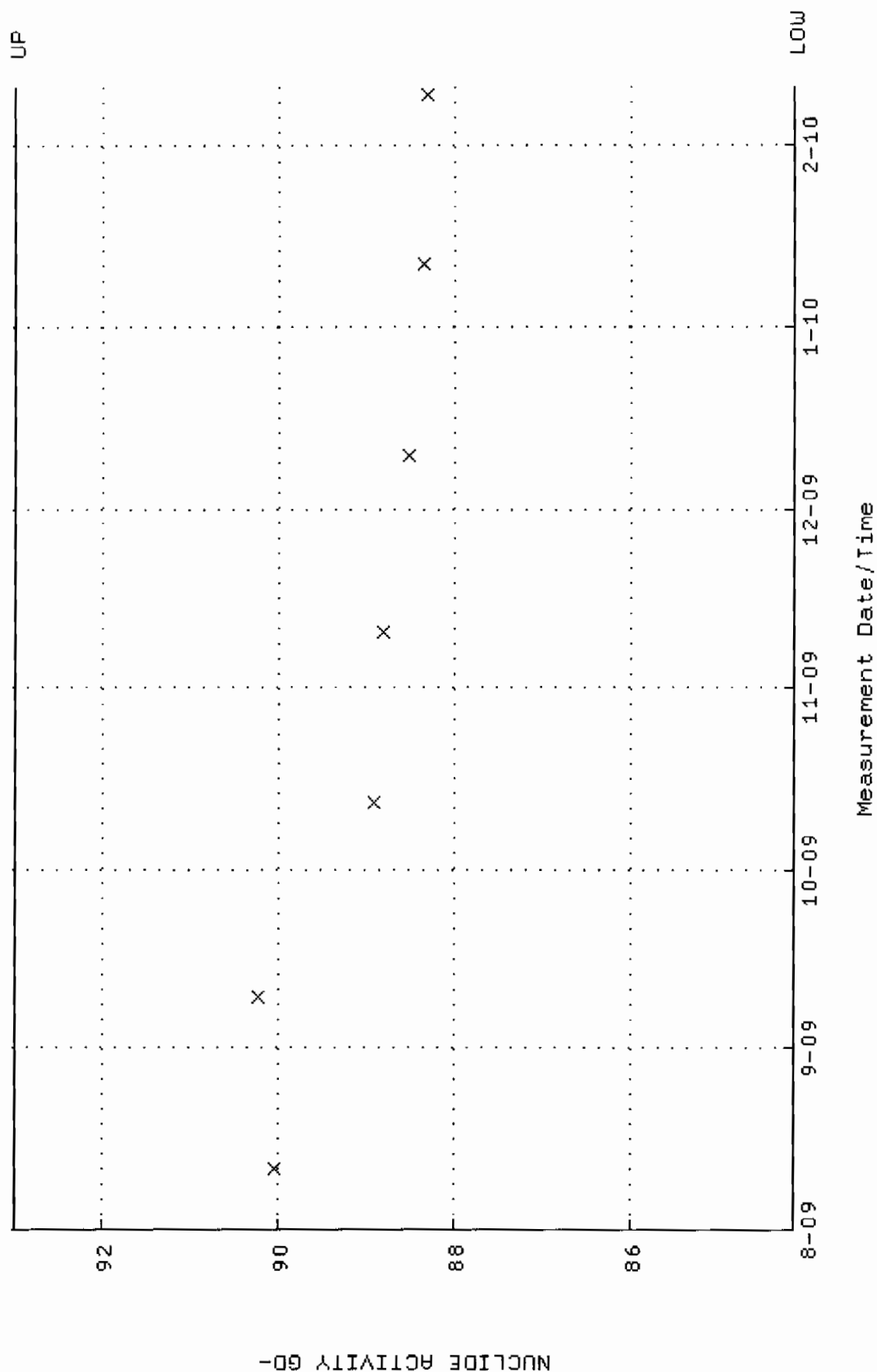
QA filename : DKA100:[ENV_ALPHA.QA.B]B087.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:38:41 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



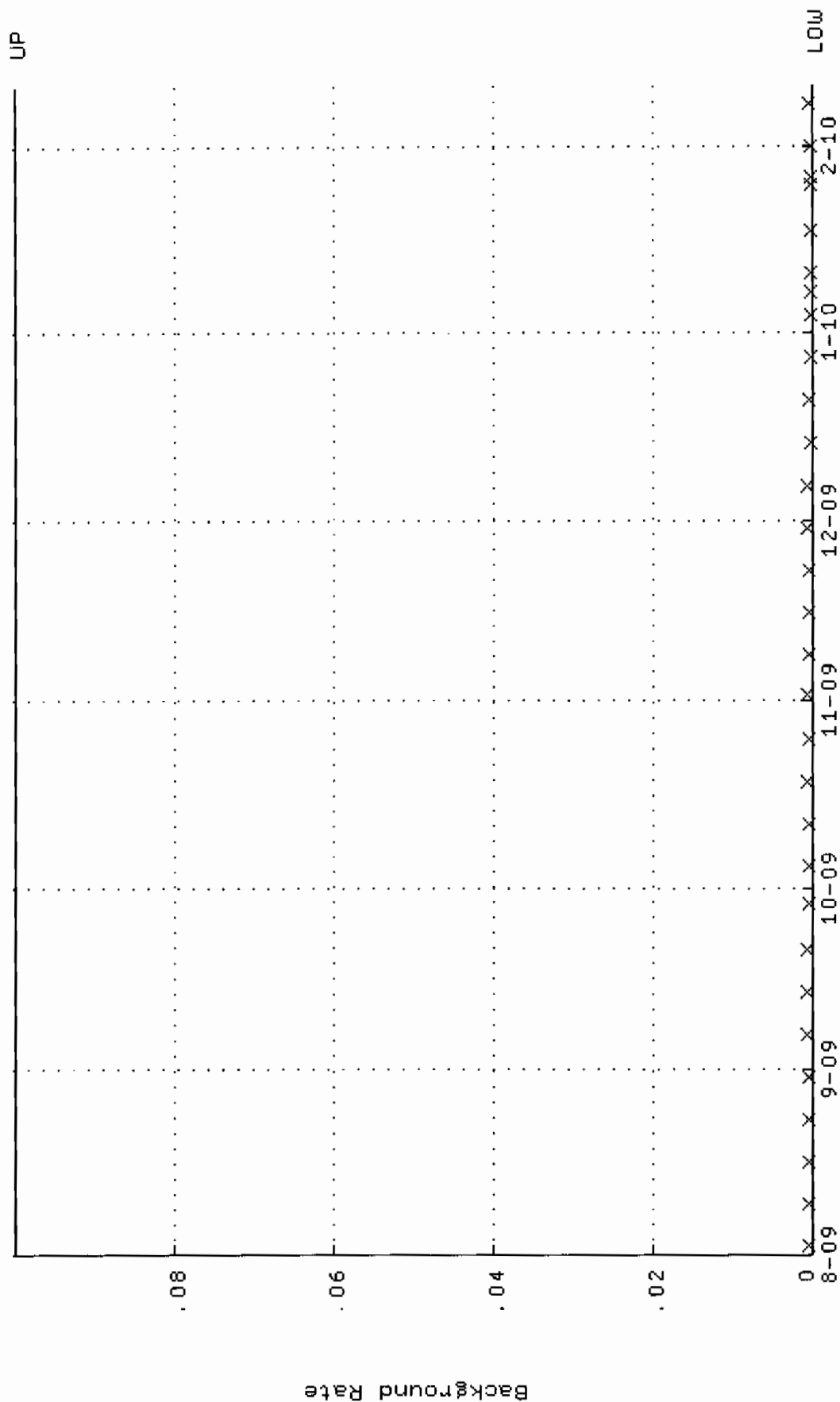
QA filename : DKA100:[ENV_ALPHA.QA.W]W089.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 11-AUG-2009 07:20:15 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.287888 through 0.307888



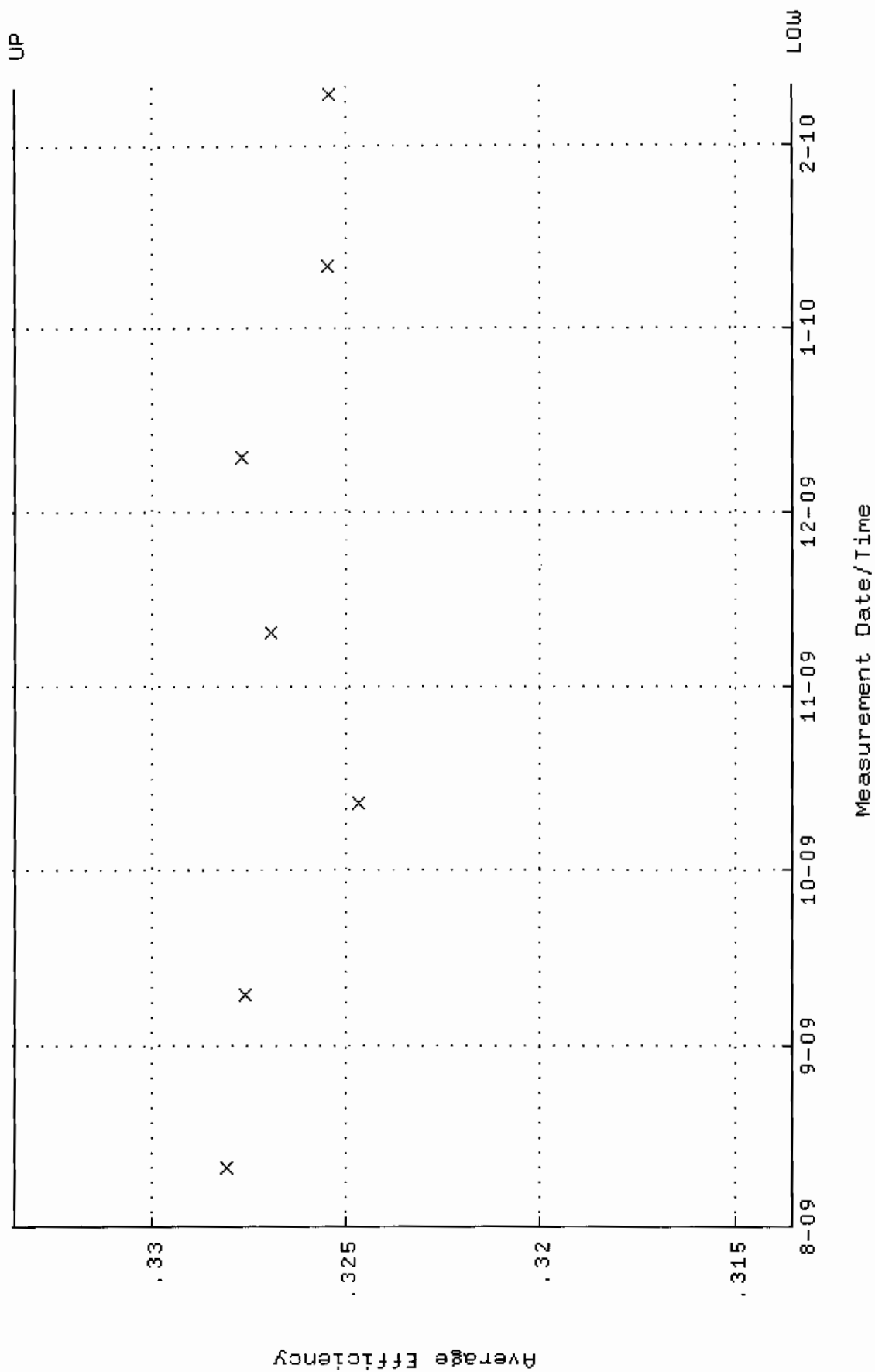
QA filename : DKA100:[ENV_ALPHA.QA.W]W089.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 11-AUG-2009 07:20:15 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 84.1413 through 92.9983



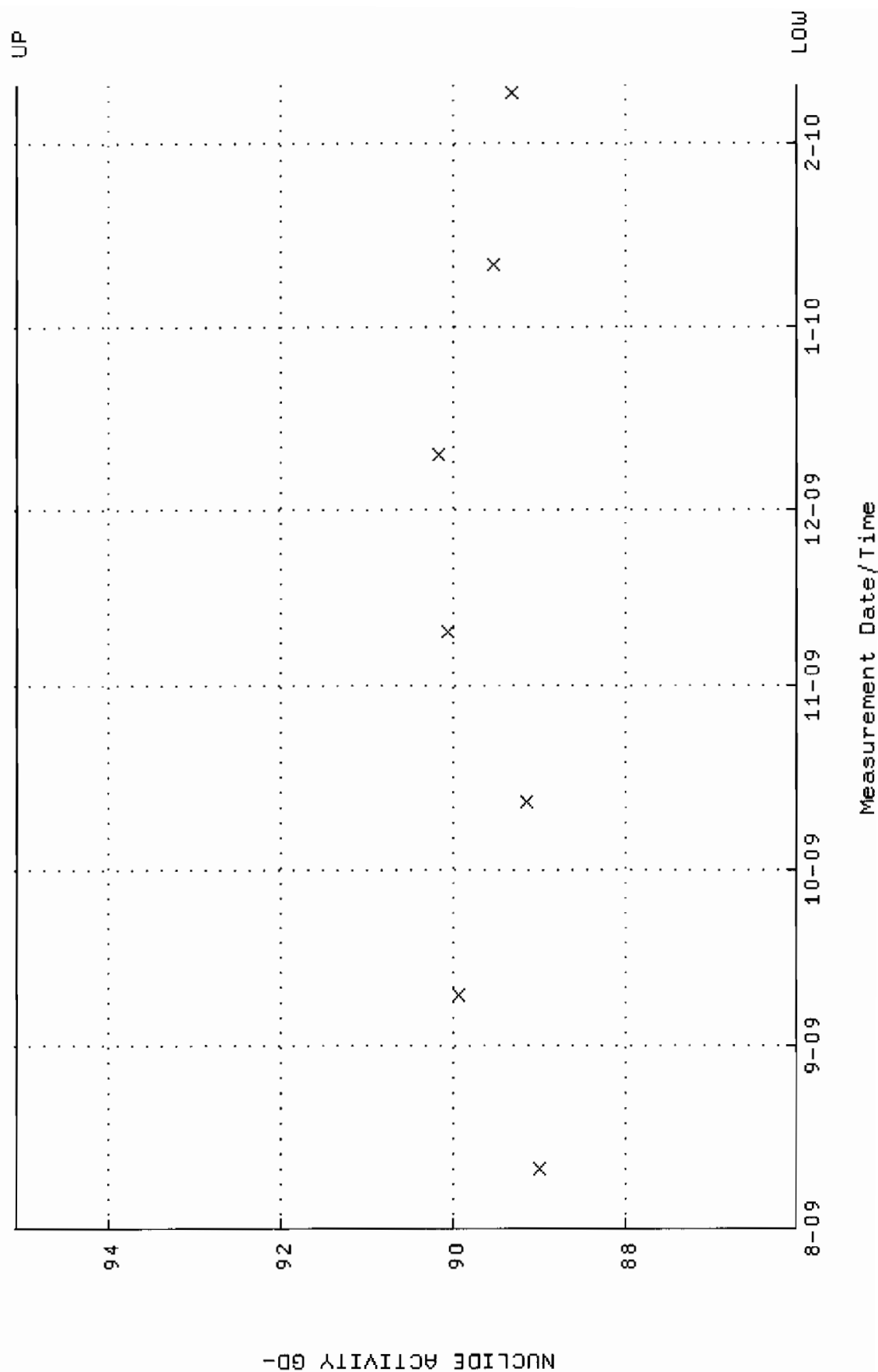
QA filename : DKA100:[ENV_ALPHA.QA.B]B089.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:38:42 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



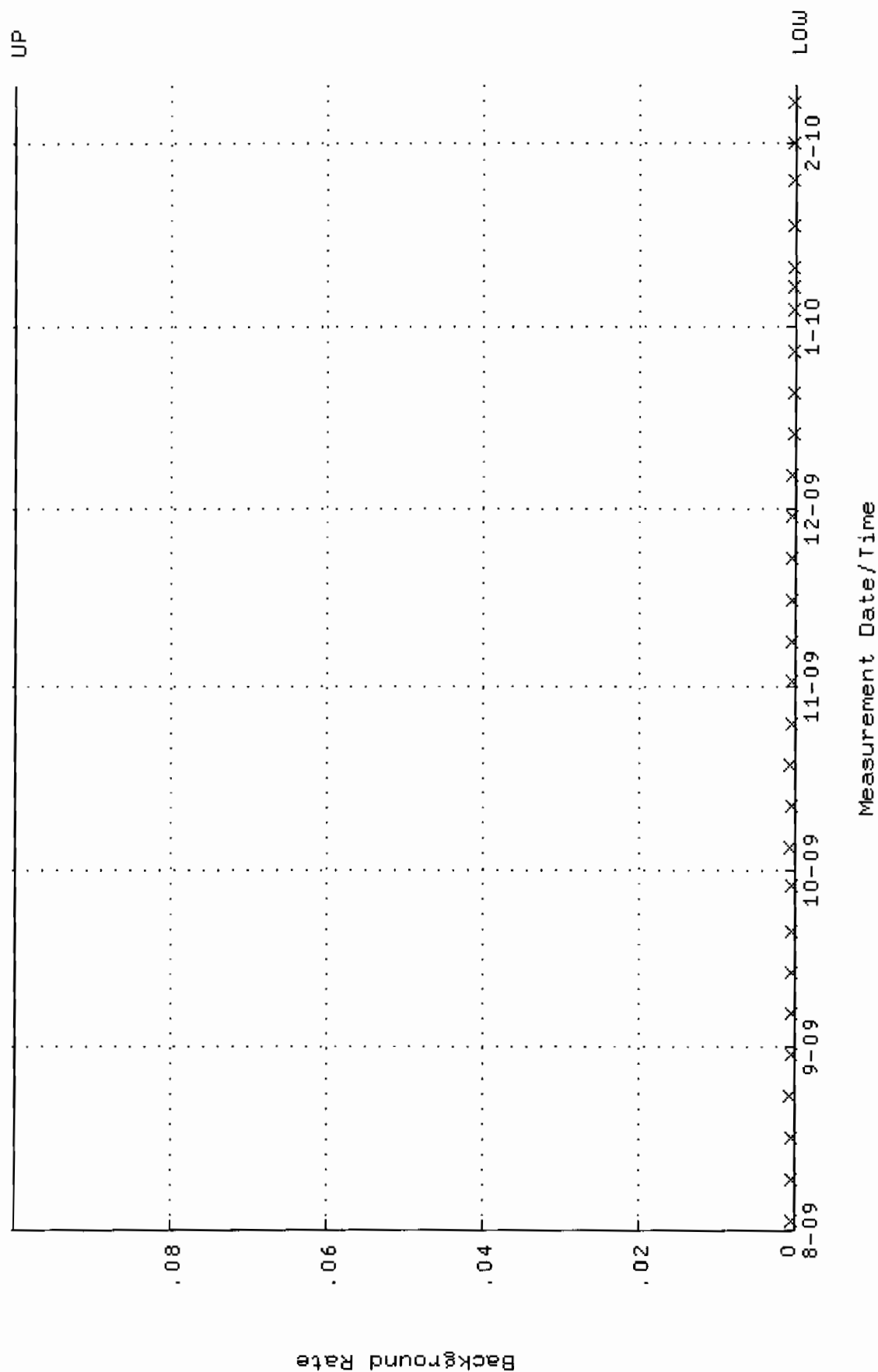
QA filename : DKA100:[ENV_ALPHA.QA.W]W090.QAF;3
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 11-AUG-2009 07:20:15 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.313529 through 0.333529



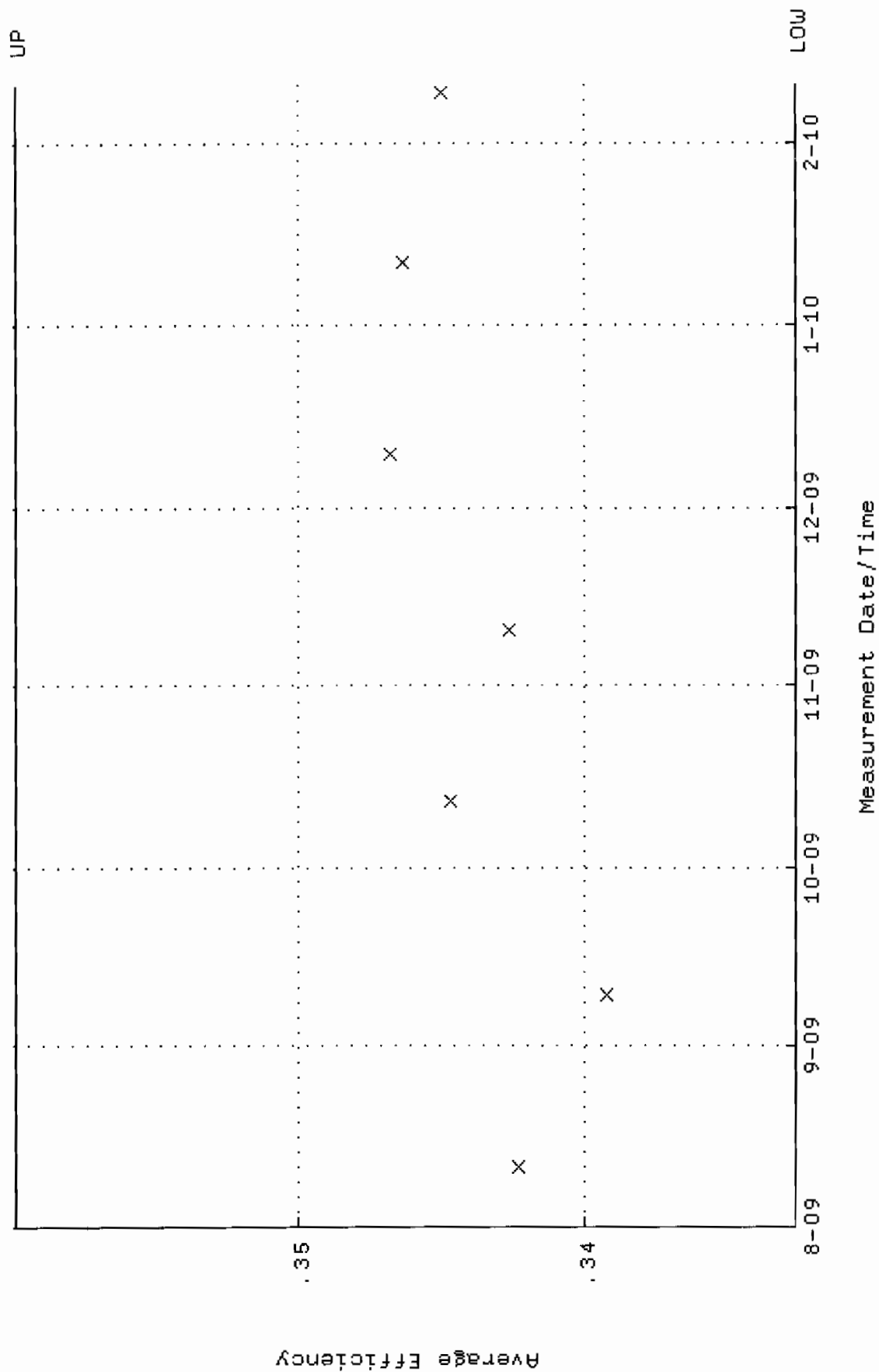
QA filename : DKA100:[ENV_ALPHA.QA.W]W090.QAF;3
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 11-AUG-2009 07:20:15 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 86.0139 through 95.0680



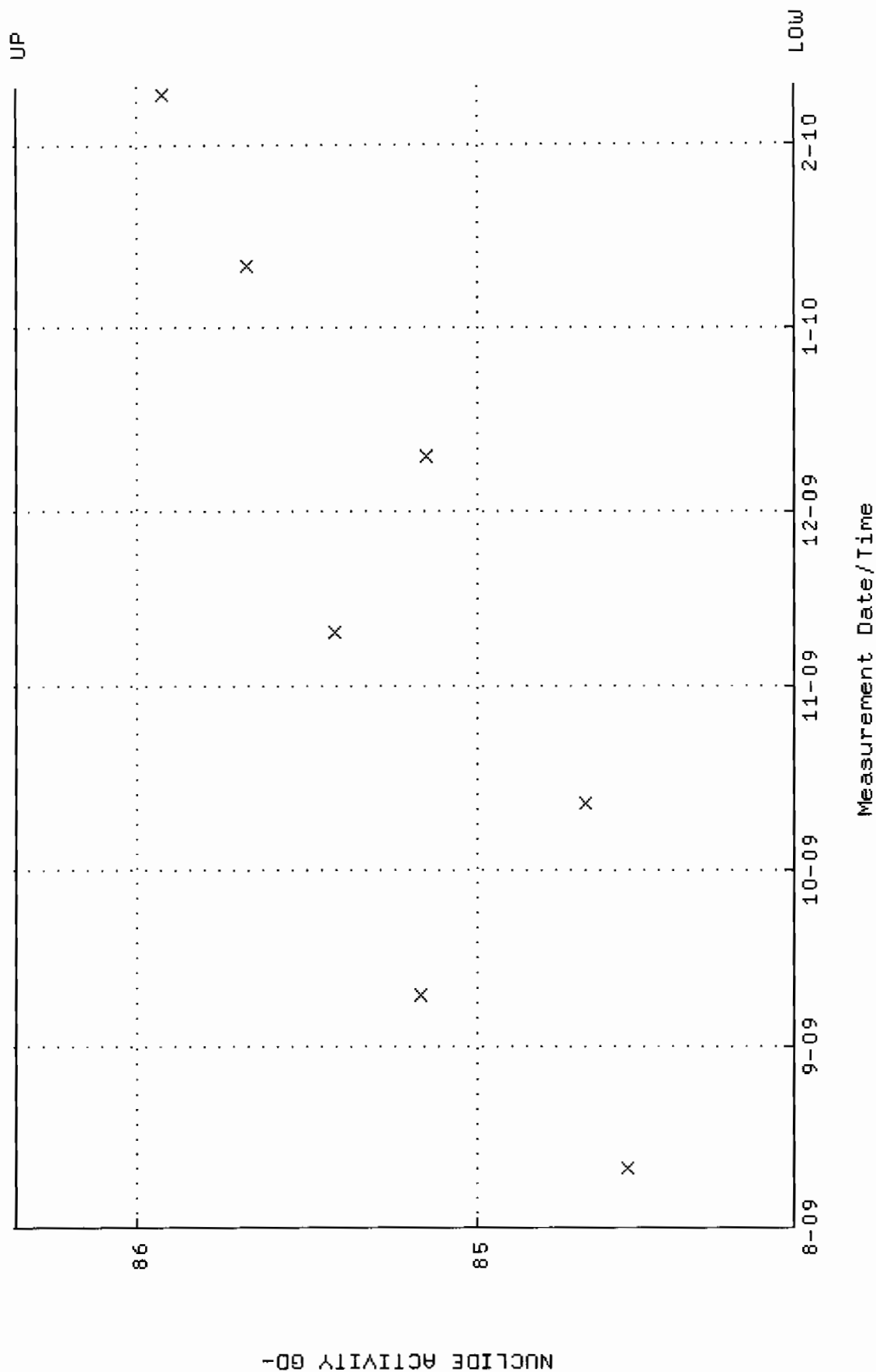
QA filename : DKA100:[ENV_ALPHA.QA.B]B090.QAF;2
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:38:42 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



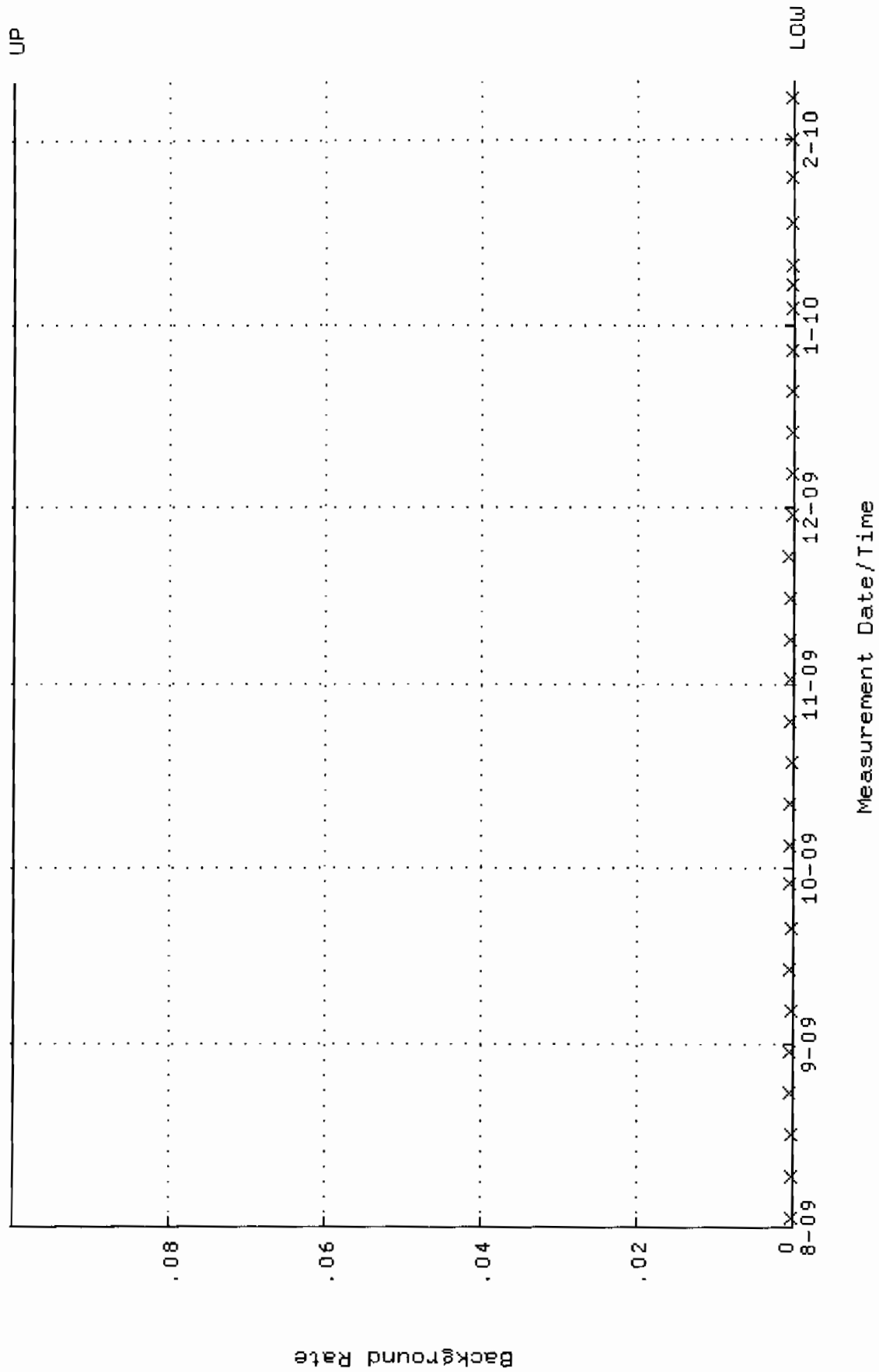
QA filename : DKA100:[ENV_ALPHA.QA.W]W091.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 11-AUG-2009 07:20:15 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.332648 through 0.359902



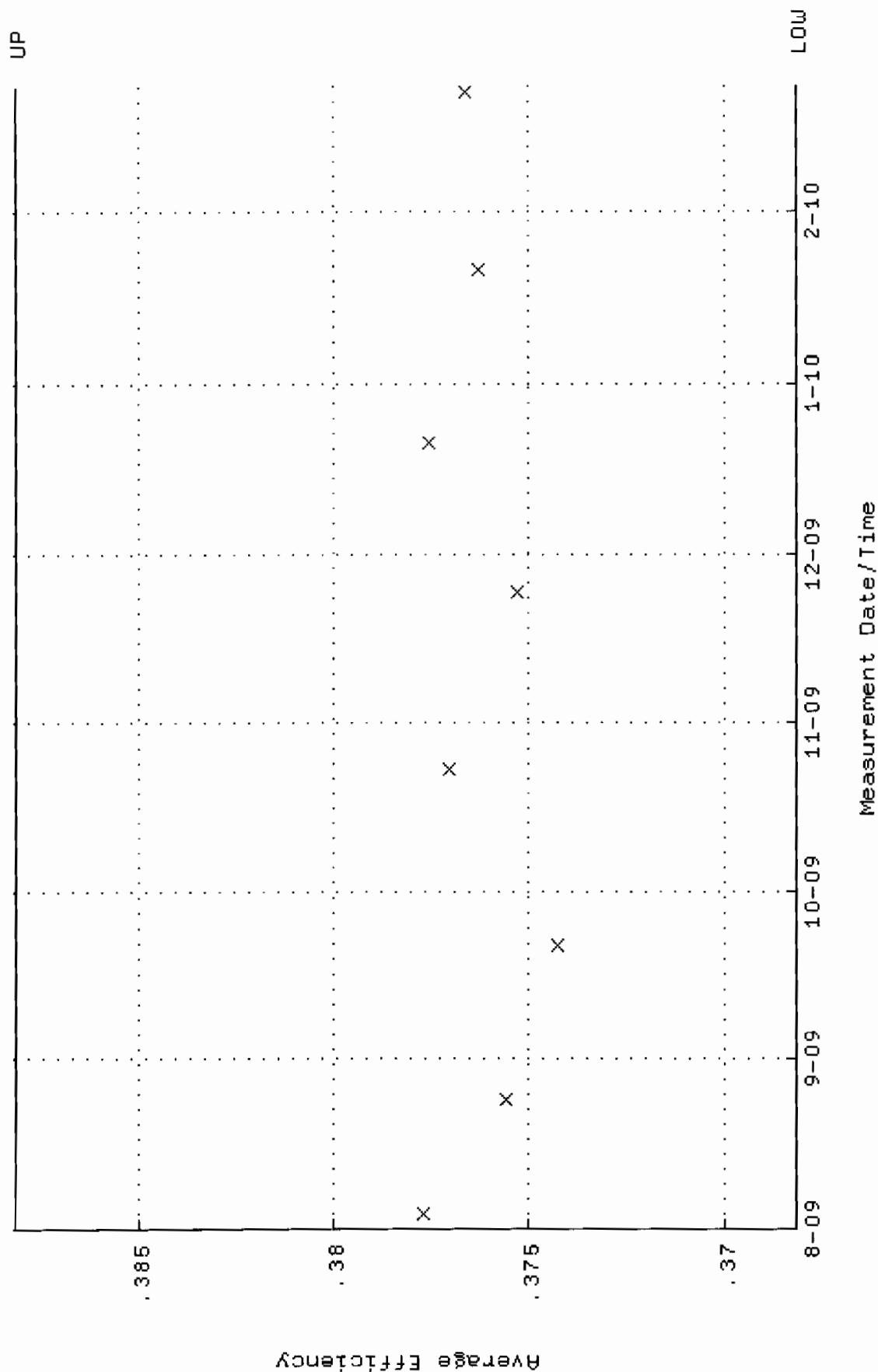
QA filename : DKA100:[ENV_ALPHA.QA.W]W091.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 11-AUG-2009 07:20:15 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 84.0764 through 86.3518



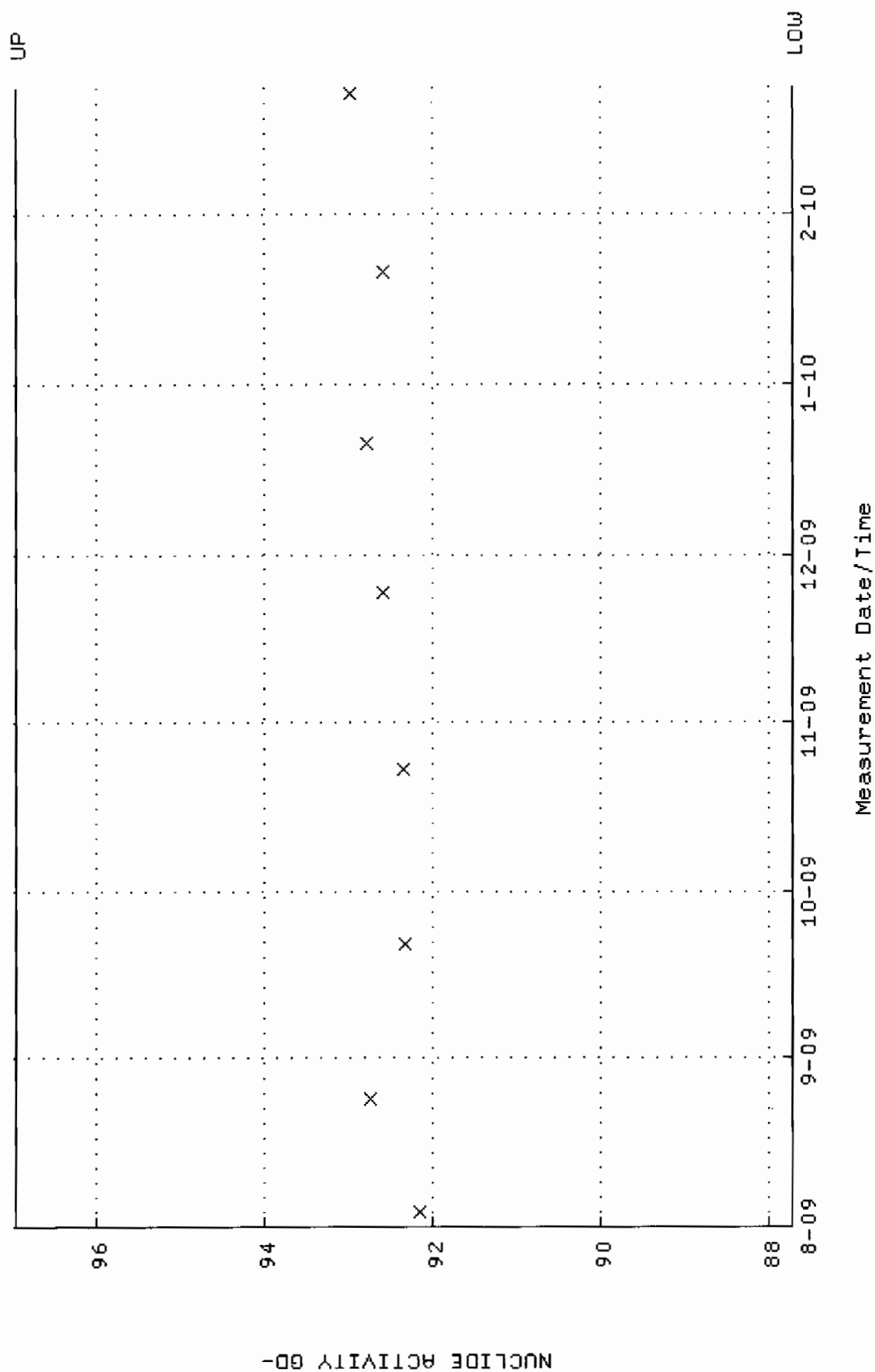
QA filename : DKA100:[ENV_ALPHA.QA.B]B091.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:38:42 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



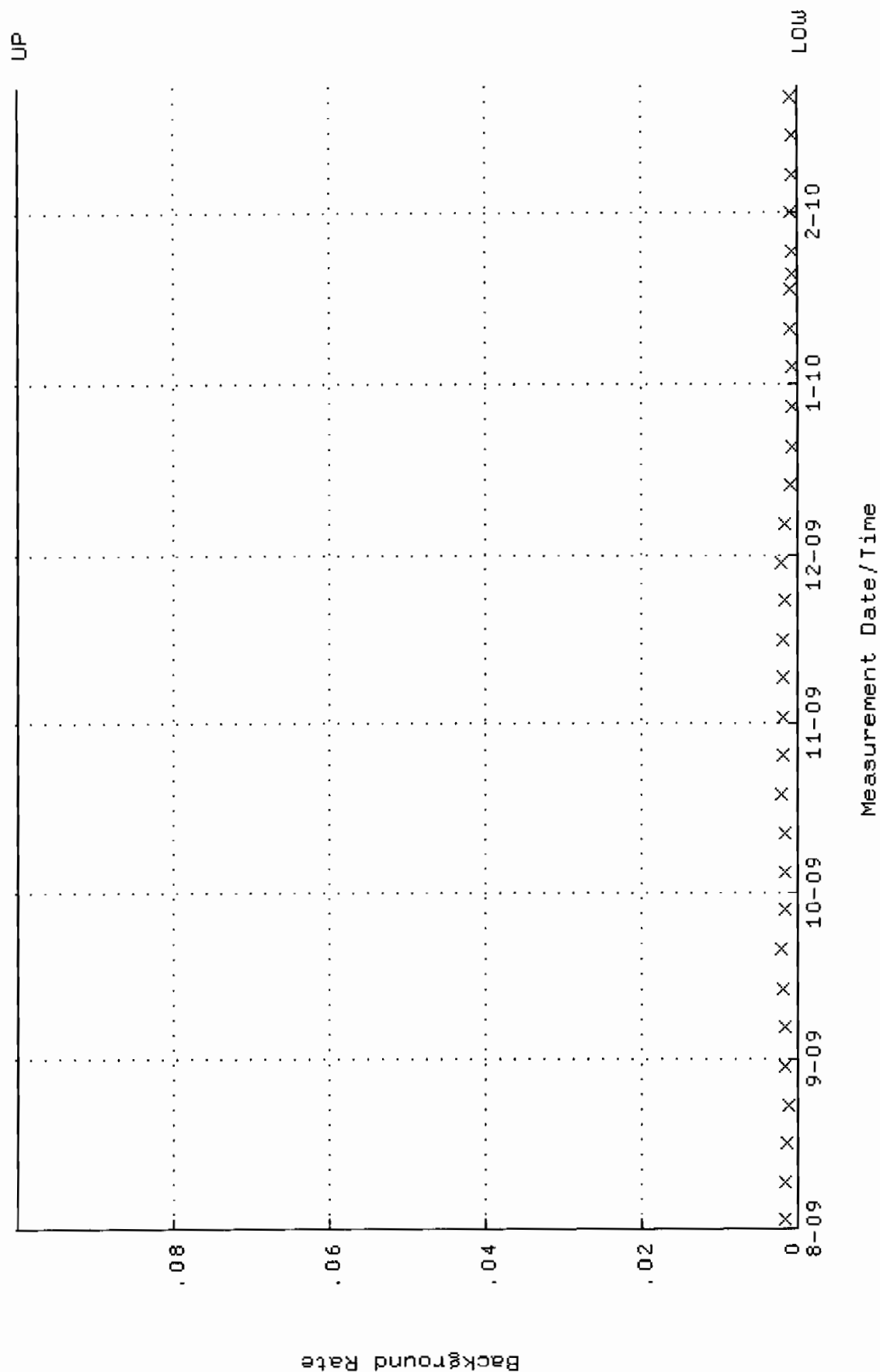
QA filename : DKA100:[ENV-ALPHA.QA.W]W169.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 3-AUG-2009 15:03:40 through 23-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.368144 through 0.388144



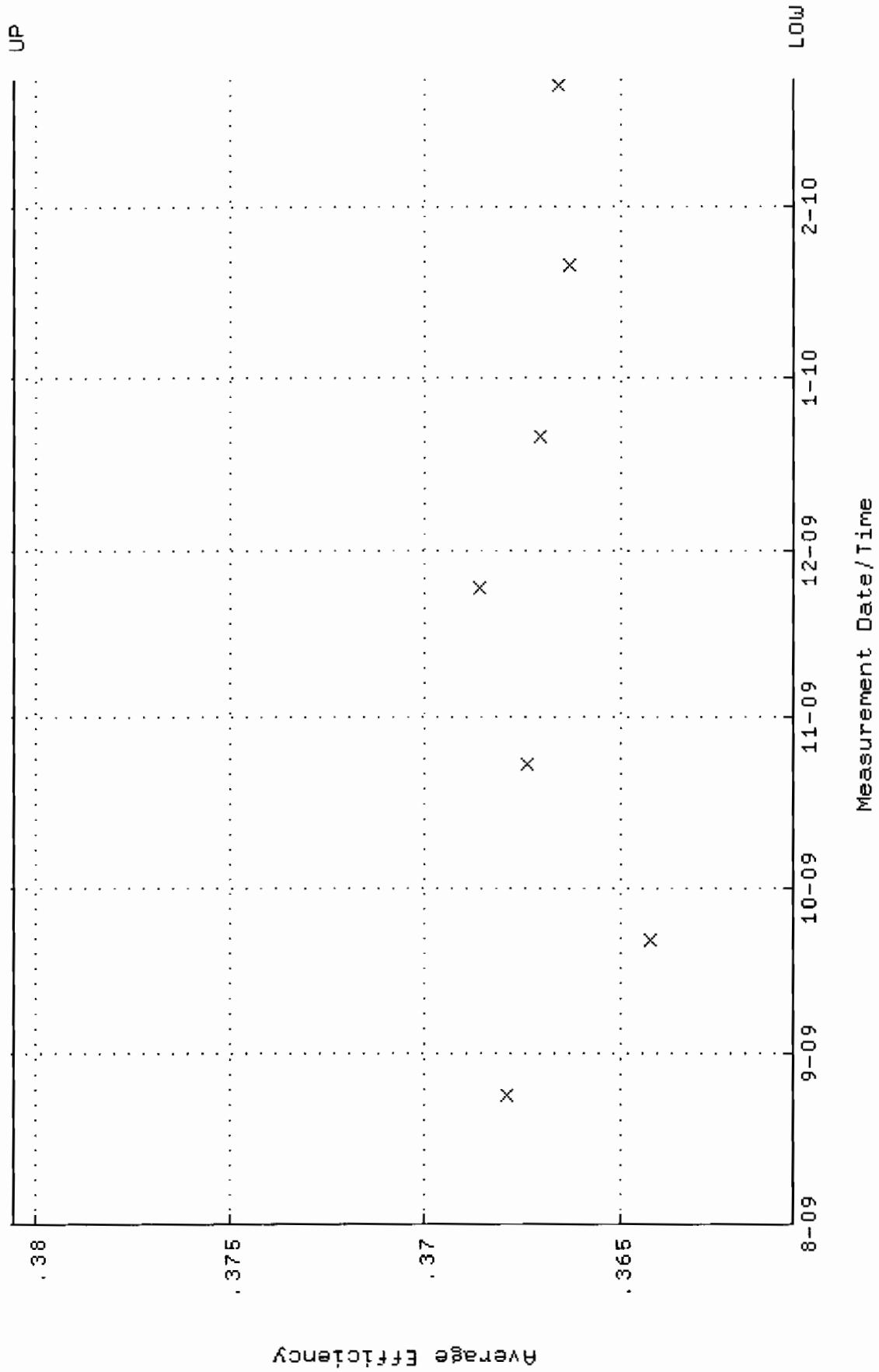
QA filename : DKA100:[ENV_ALPHA.QA.W]W169.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 3-AUG-2009 15:03:40 through 23-FEB-2010 12:00:00
 Lower/Upper Lmts: 87.7141 through 96.9471



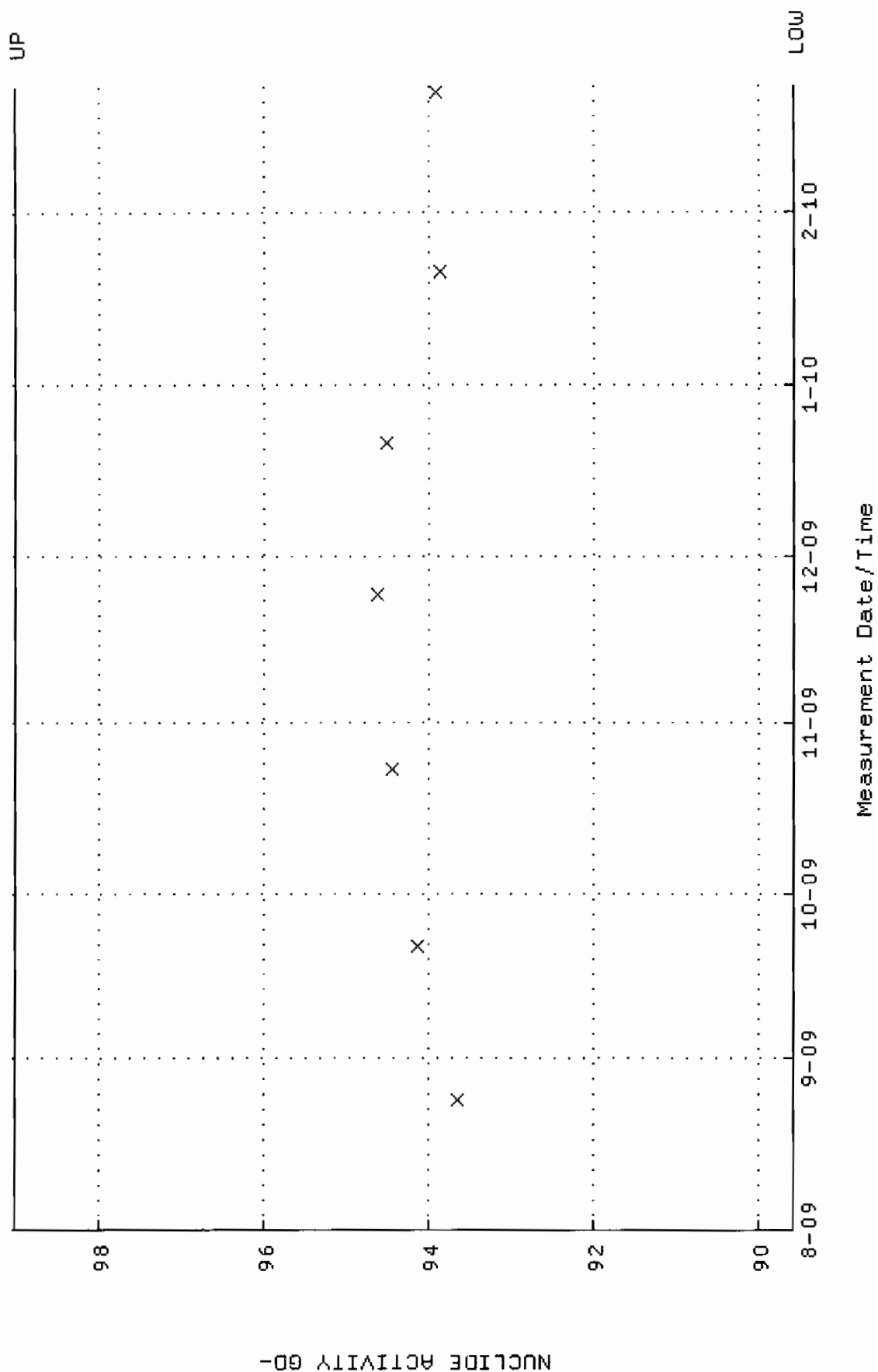
QA filename : DKA100:[ENV_ALPHA.QA.B]B169.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:22:11 through 23-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



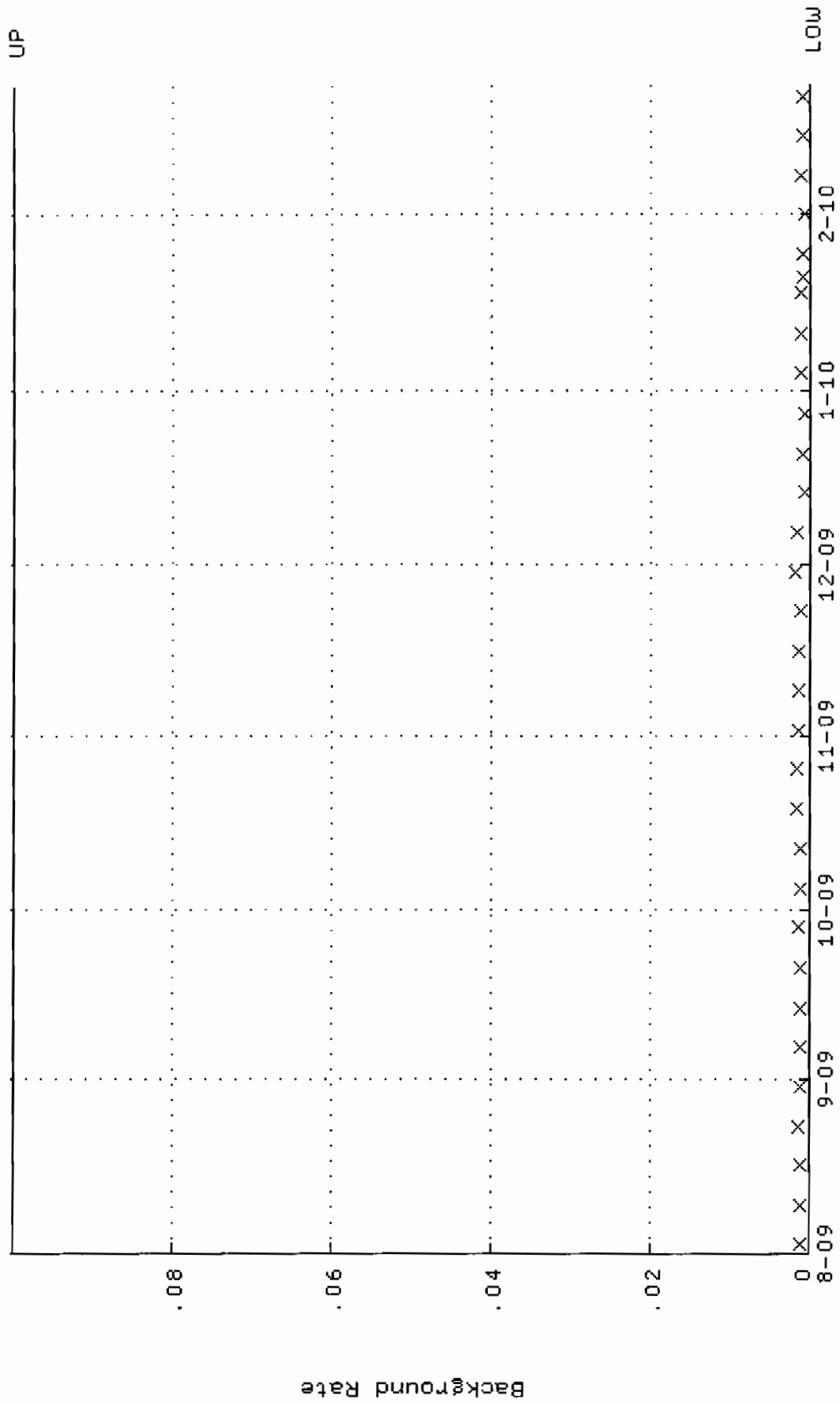
QA filename : DKA100:[ENV_ALPHA.QA.W]W170.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 24-AUG-2009 08:40:43 through 23-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.360563 through 0.380563



QA filename : DKA100:[ENV_ALPHA.QA.W]w170.QAF;1
 Parameter Name : NLACTIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 24-AUG-2009 08:40:43 through 23-FEB-2010 12:00:00
 Lower/Upper Lmts: 89.5841 through 99.0139



QA filename : DKA100:[ENV_ALPHA.QA.B]B170.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:22:16 through 23-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000

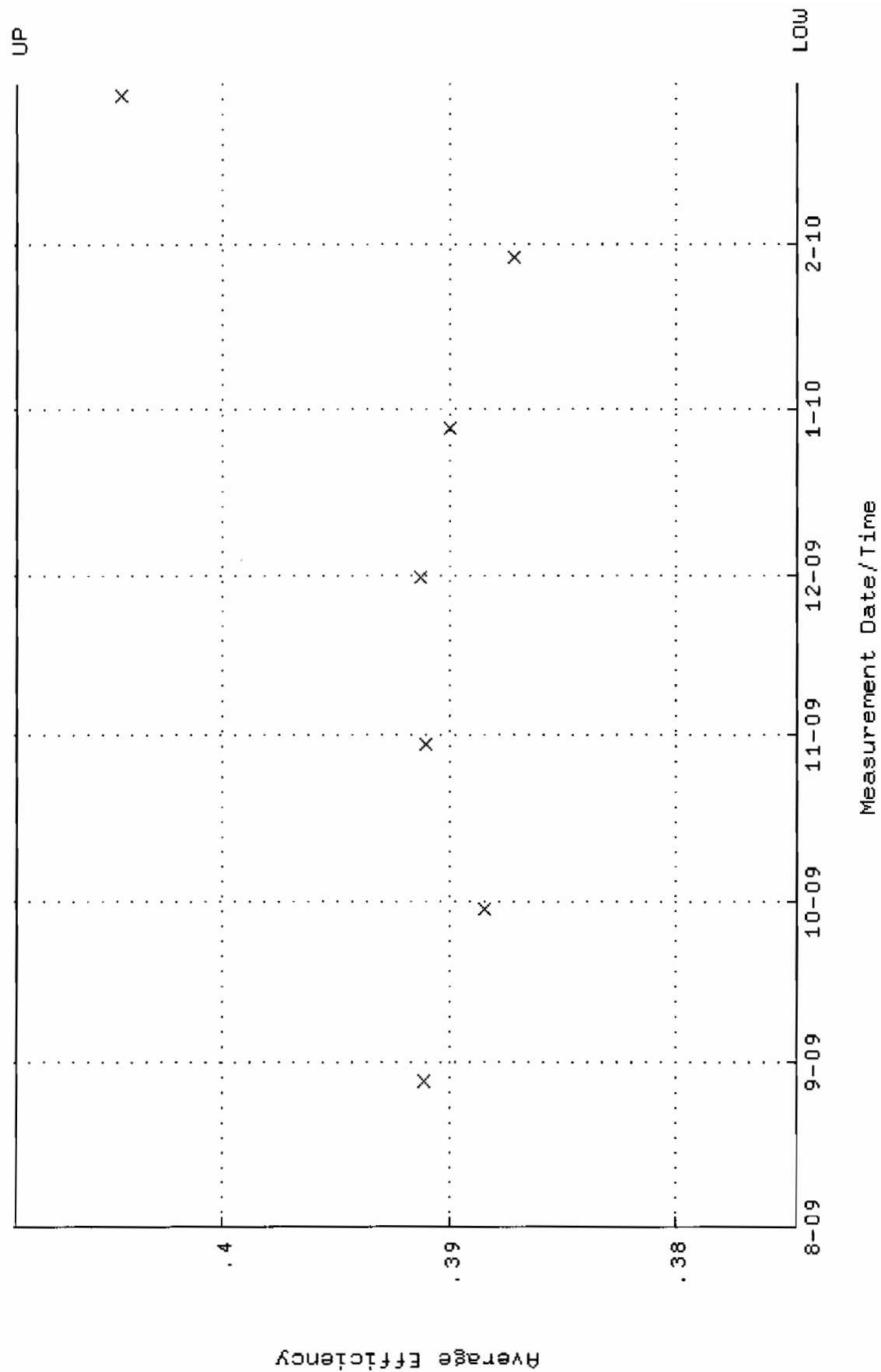


QA filename : DKA100:[ENV_ALPHA.QA.W]W251.QAF;1

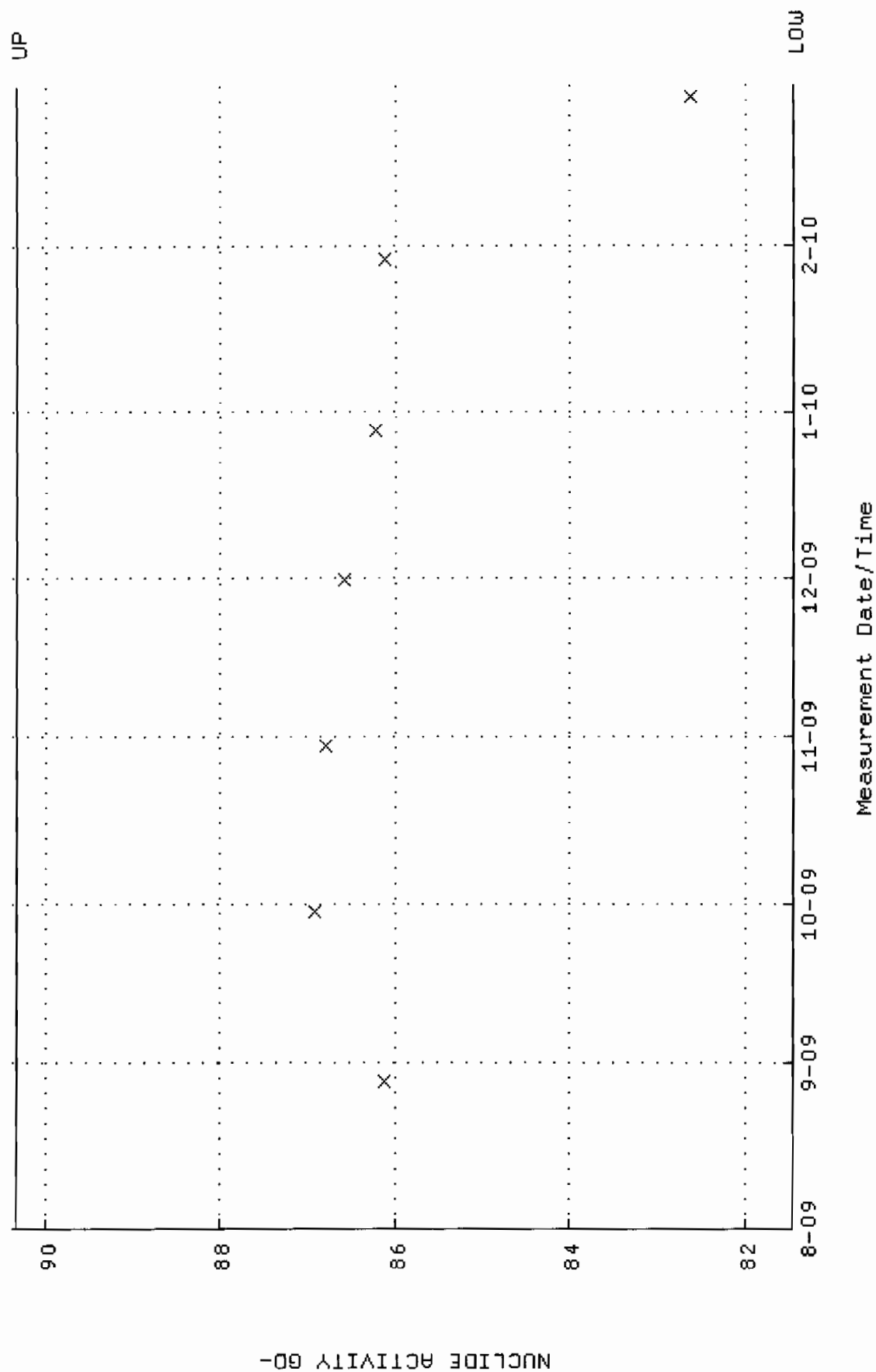
Parameter Name : AVRGEFF (Average Efficiency)

Start/End Dates : 28-AUG-2009 07:10:12 through 2-MAR-2010 12:00:00

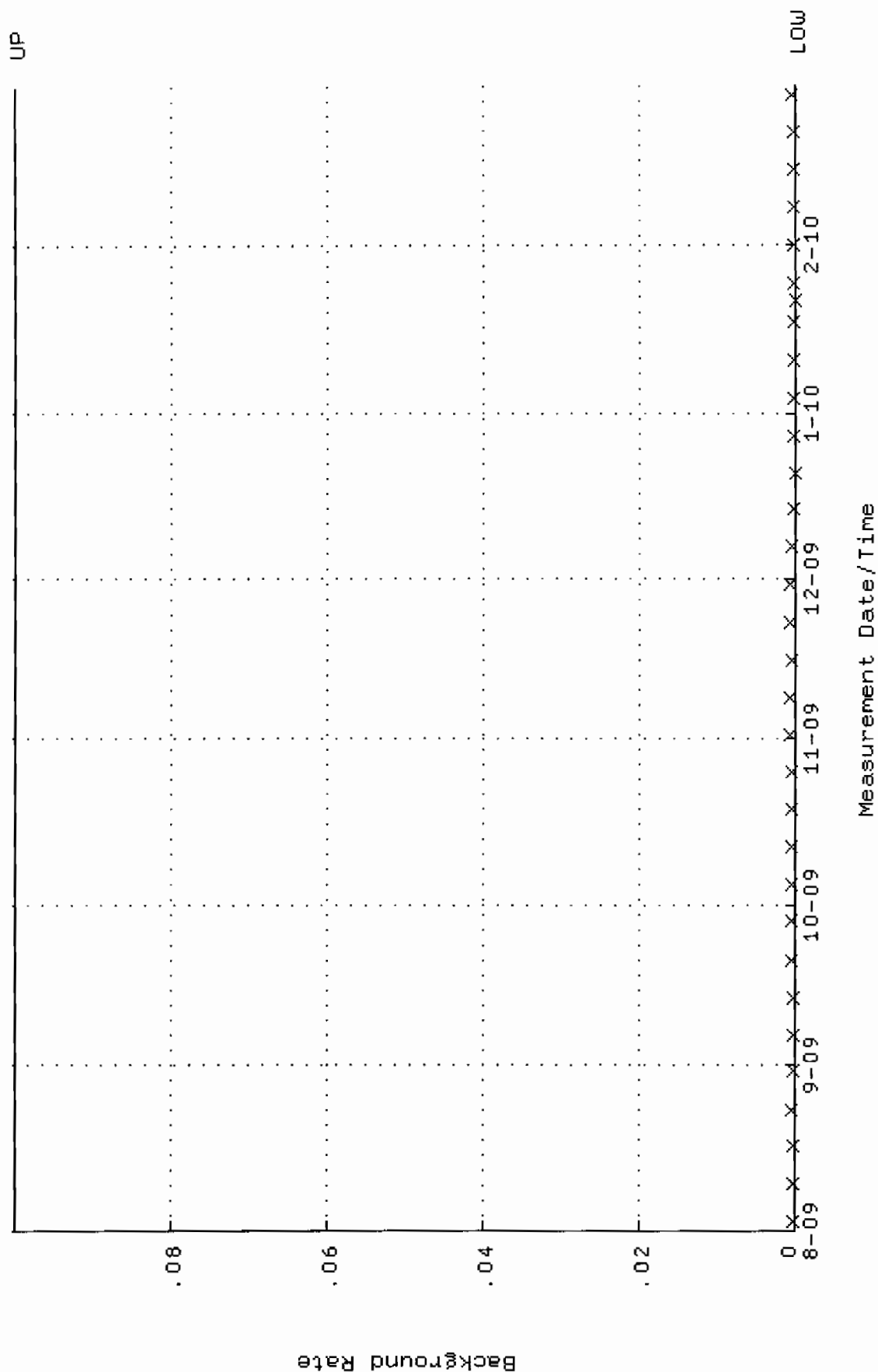
Lower/Upper Lmts: 0.374659 through 0.409089



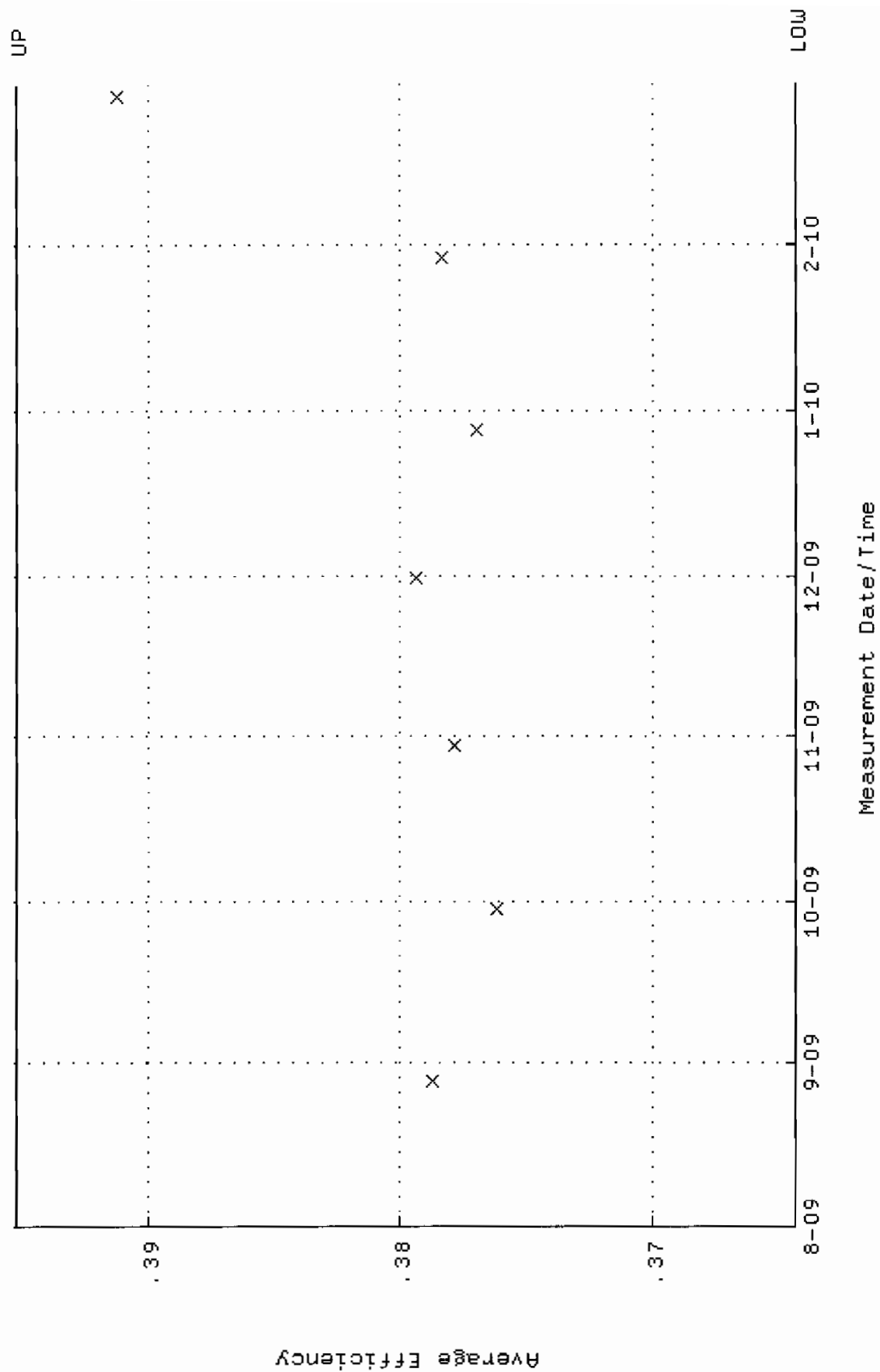
QA filename : DKA100:[ENV_ALPHA.QA.W]W251.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 28-AUG-2009 07:10:12 through 2-MAR-2010 12:00:00
 Lower/Upper Lmts: 81.4582 through 90.3490



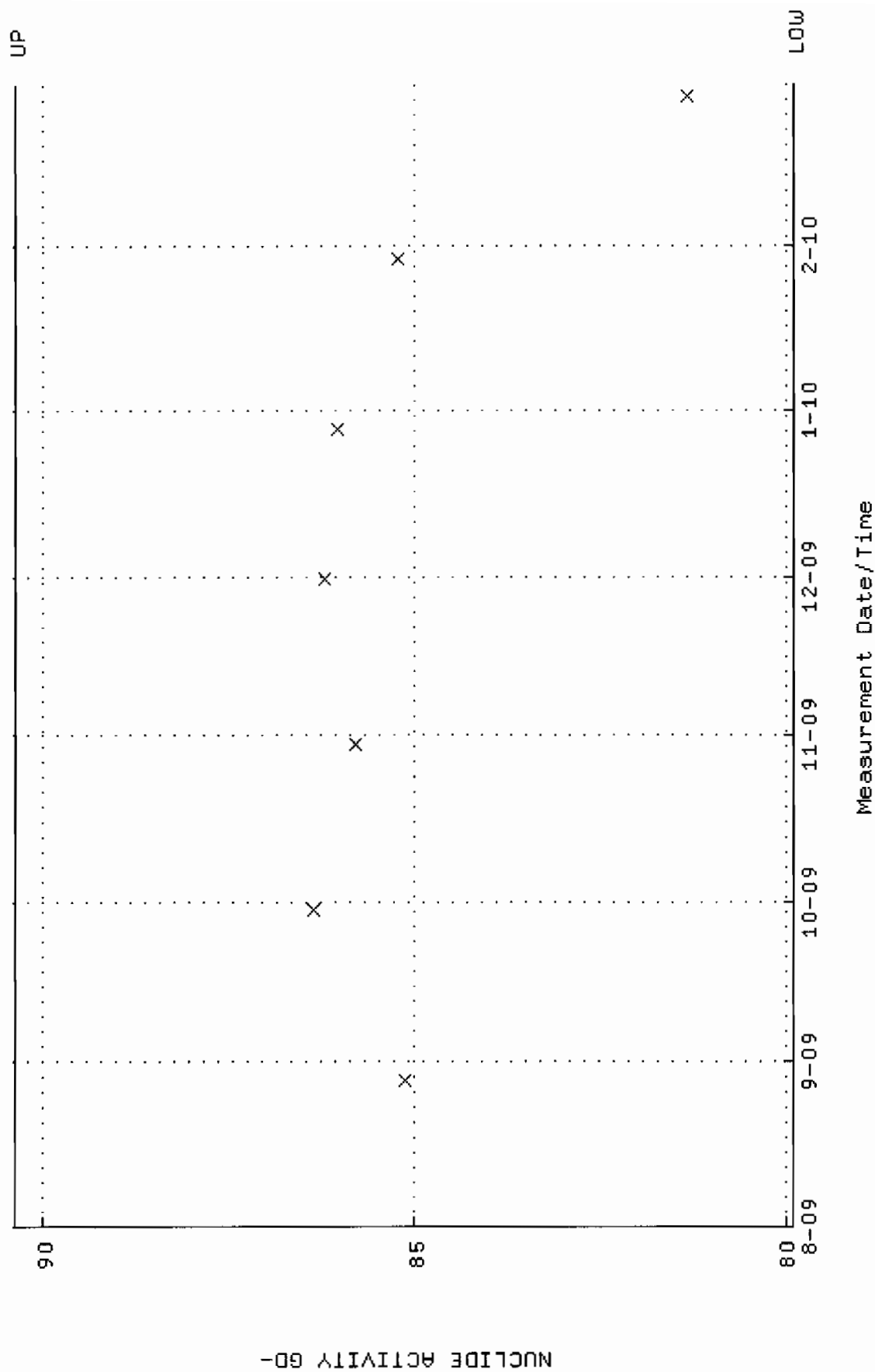
QA filename : DKA100:[ENV_ALPHA.QA.B]B251.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:28:13 through 2-MAR-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



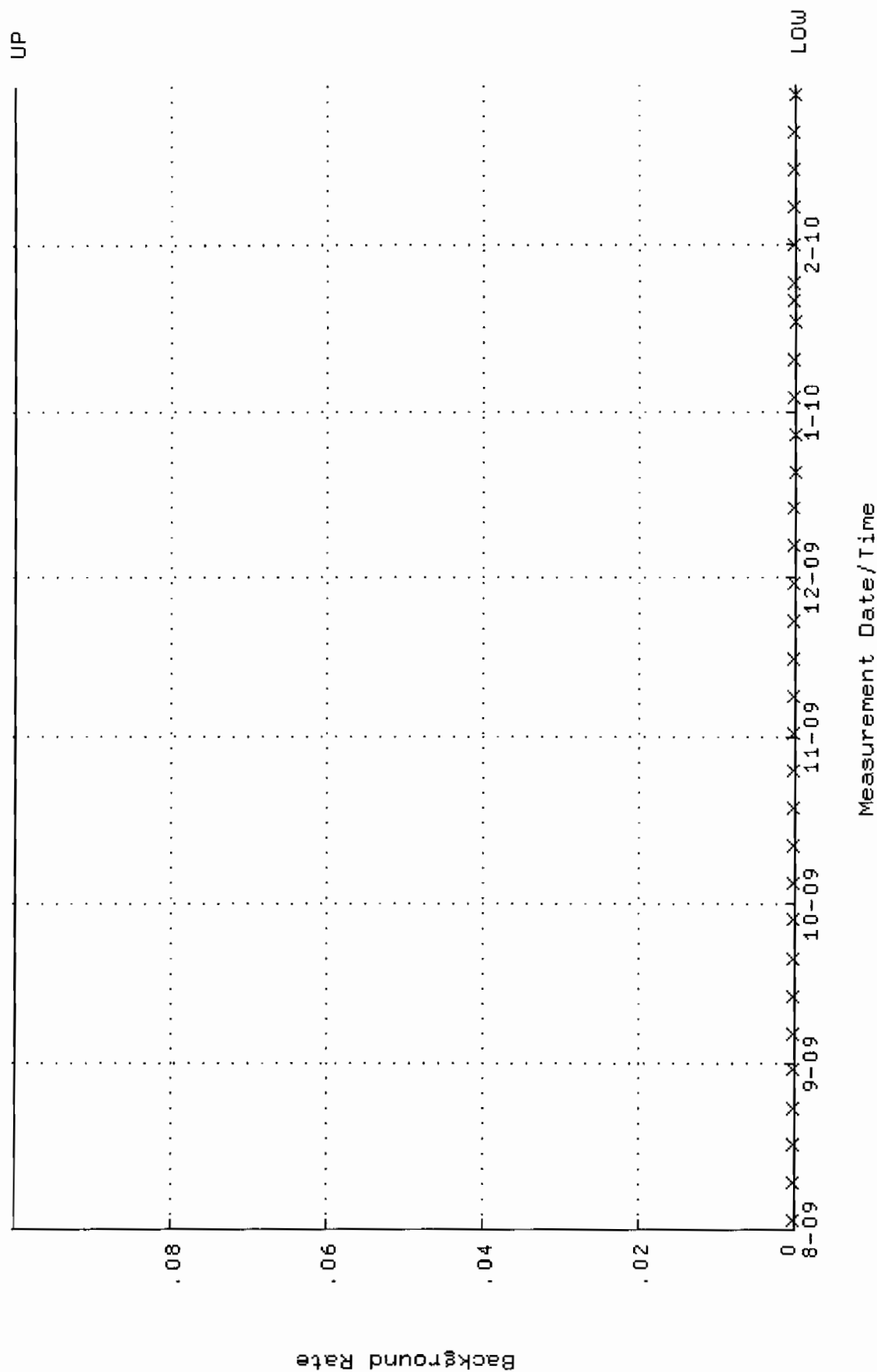
QA filename : DKA100:[ENV_ALPHA.QA.W]U252.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 28-AUG-2009 07:10:17 through 2-MAR-2010 12:00:00
 Lower/Upper Lmts: 0.364281 through 0.395267



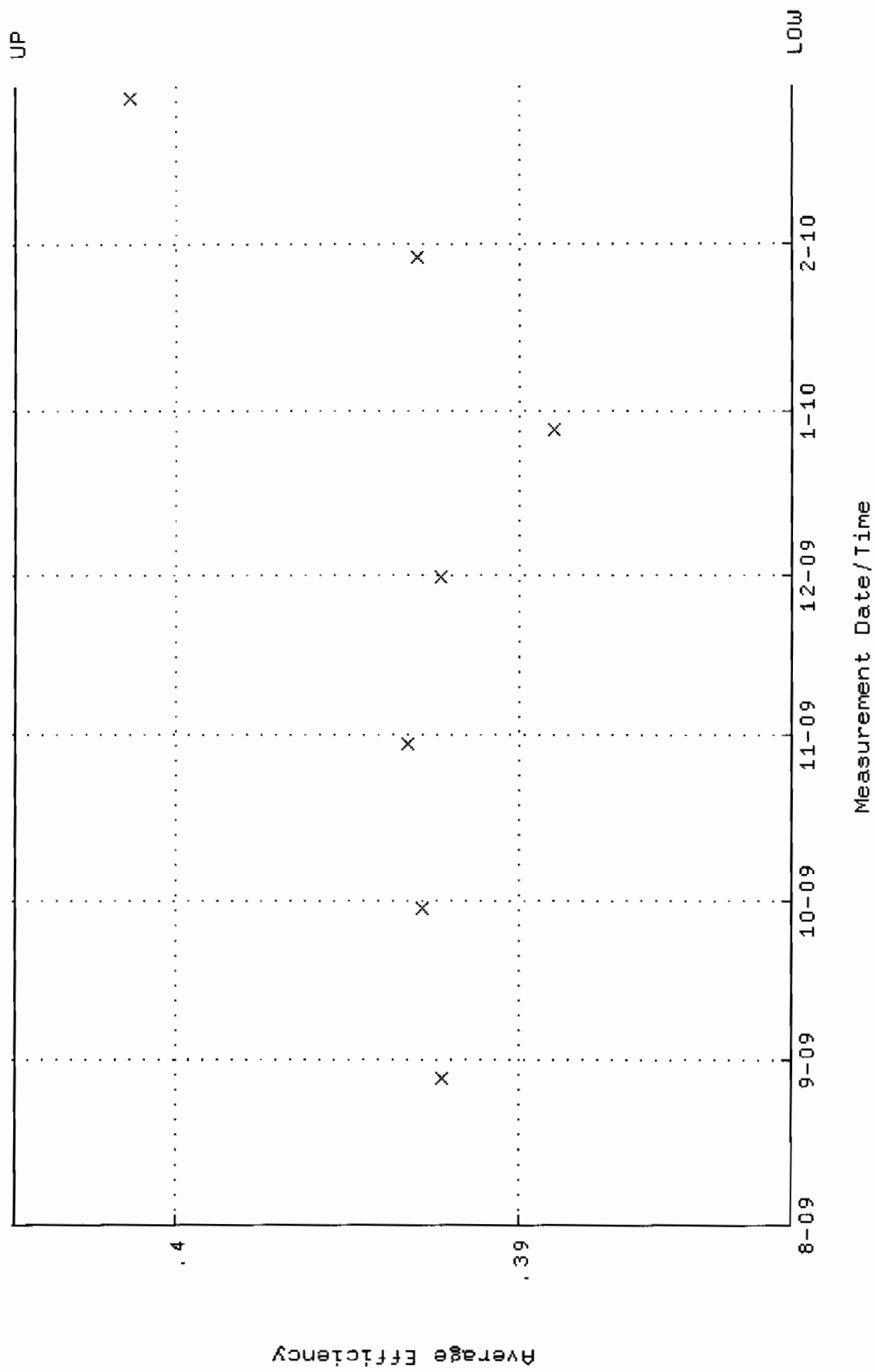
QA filename : DKA100:[ENV-ALPHA.QA.W]W252.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 28-AUG-2009 07:10:17 through 2-MAR-2010 12:00:00
 Lower/Upper Lmts: 79.9099 through 90.3785



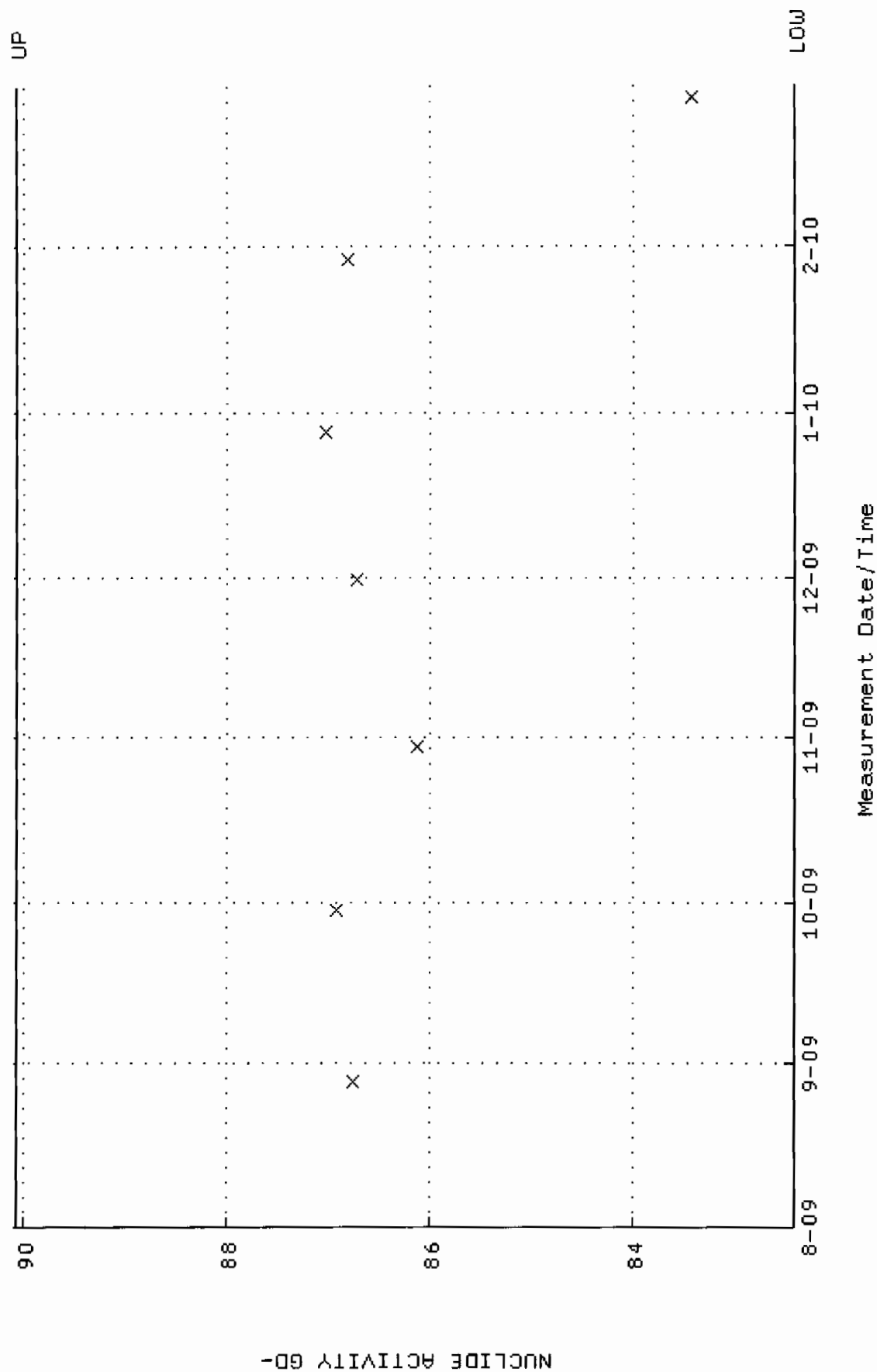
QA filename : DKA100:[ENV_ALPHA.QA.B]B252.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:28:18 through 2-MAR-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



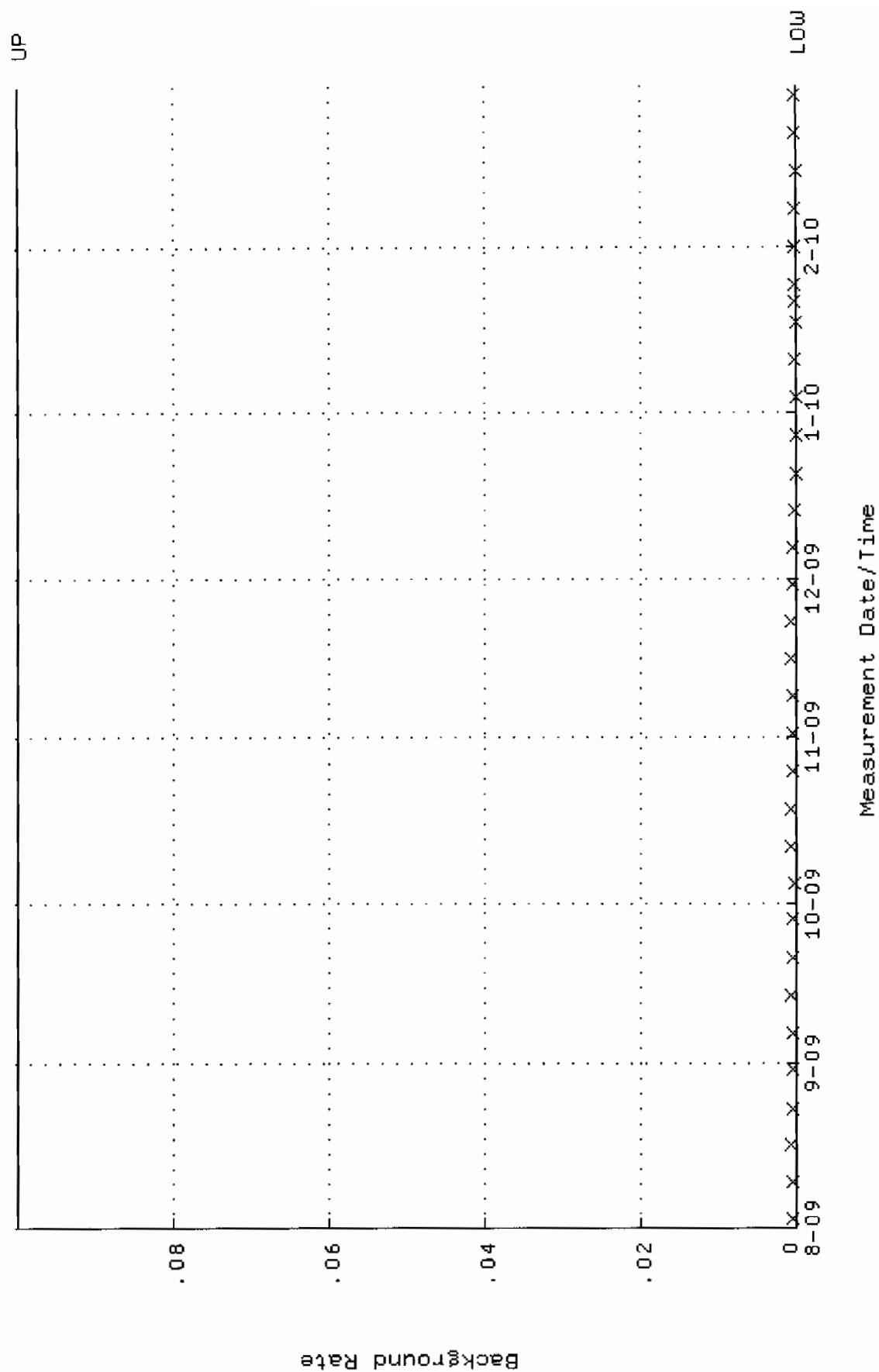
QA filename : DKA100:[ENV_ALPHA.QA.W]W254.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 28-AUG-2009 07:10:27 through 2-MAR-2010 12:00:00
 Lower/Upper Lmts: 0.382064 through 0.404708



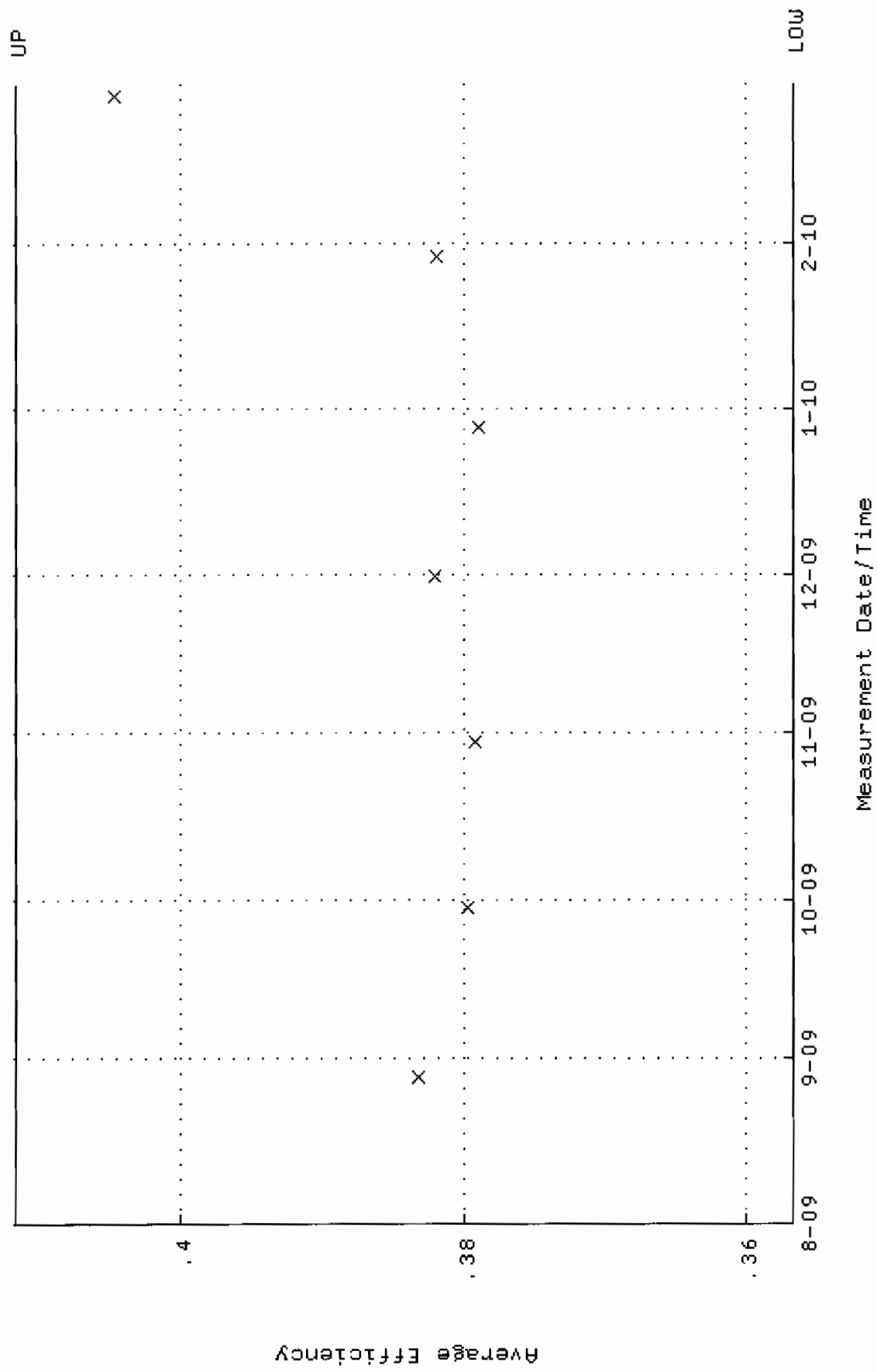
QA filename : DKA100:[ENV_ALPHA.QA.W]W254.QAF;1
 Parameter Name : NLAOTVY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 28-AUG-2009 07:10:27 through 2-MAR-2010 12:00:00
 Lower/Upper Lmts: 82.4132 through 90.0734



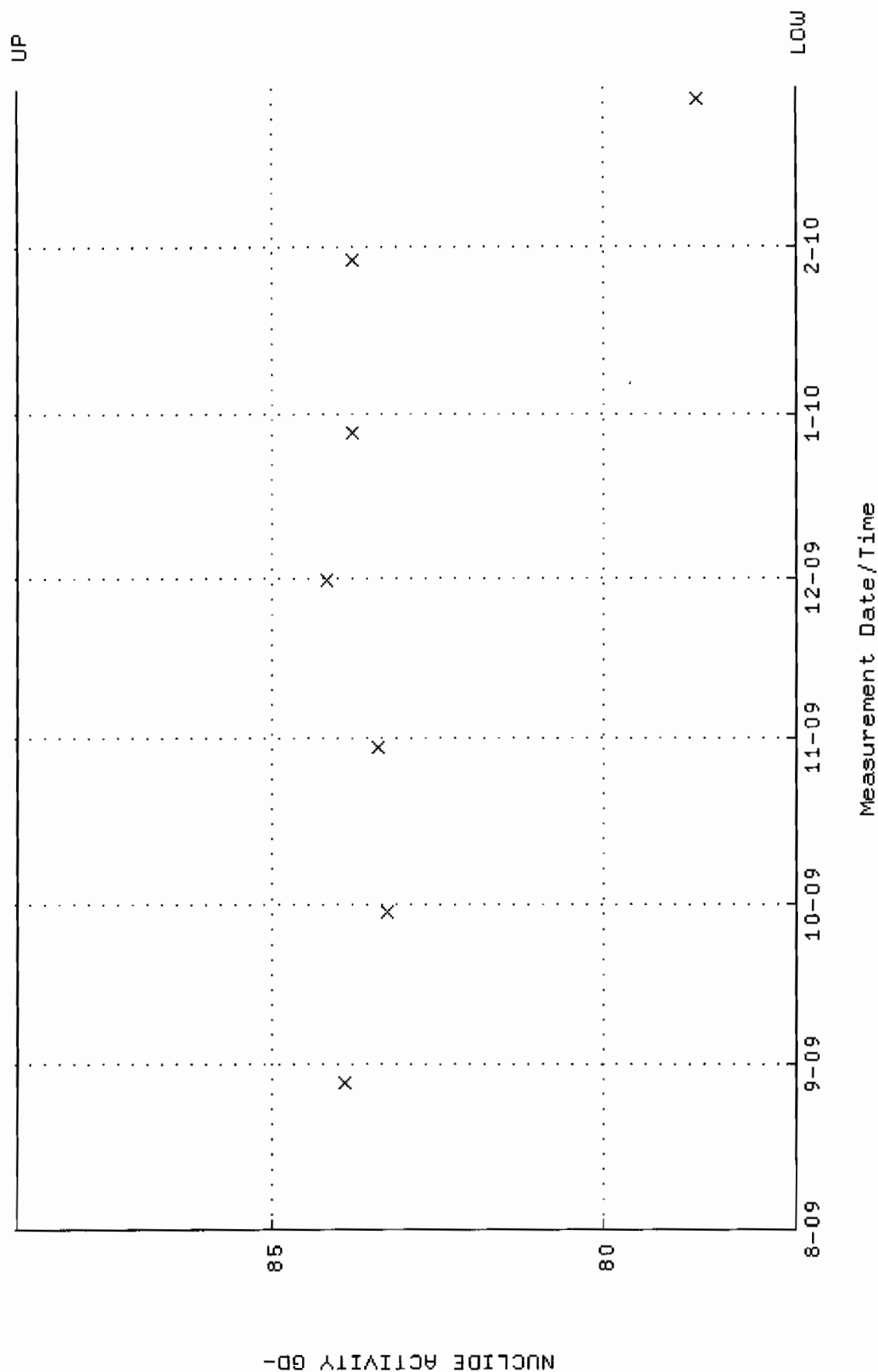
QA filename : DKA100:[ENV_ALPHA.QA.B]B254.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:28:28 through 2-MAR-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



QA filename : DKA100:[ENV_ALPHA.QA.W]W255.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 28-AUG-2009 07:10:32 through 2-MAR-2010 12:00:00
 Lower/Upper Lmts: 0.356627 through 0.411721



QA filename : DKA100:[ENV_ALPHA.QA.W]W255.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 28-AUG-2009 07:10:32 through 2-MAR-2010 12:00:00
 Lower/Upper Lmts: 77.0853 through 88.8385

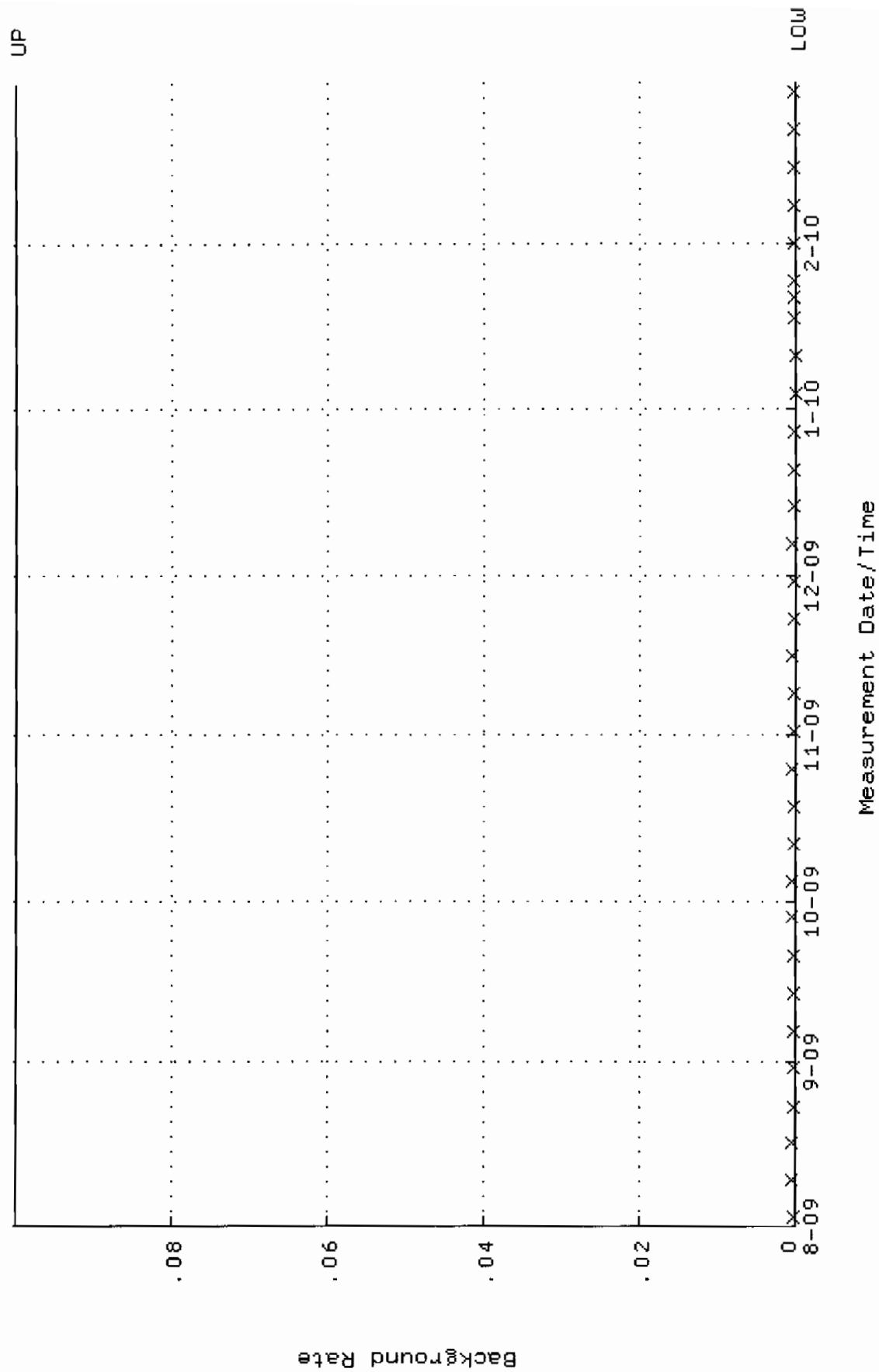


QA filename : DKA100:[ENV_ALPHA.QA.B]B255.QAF;1

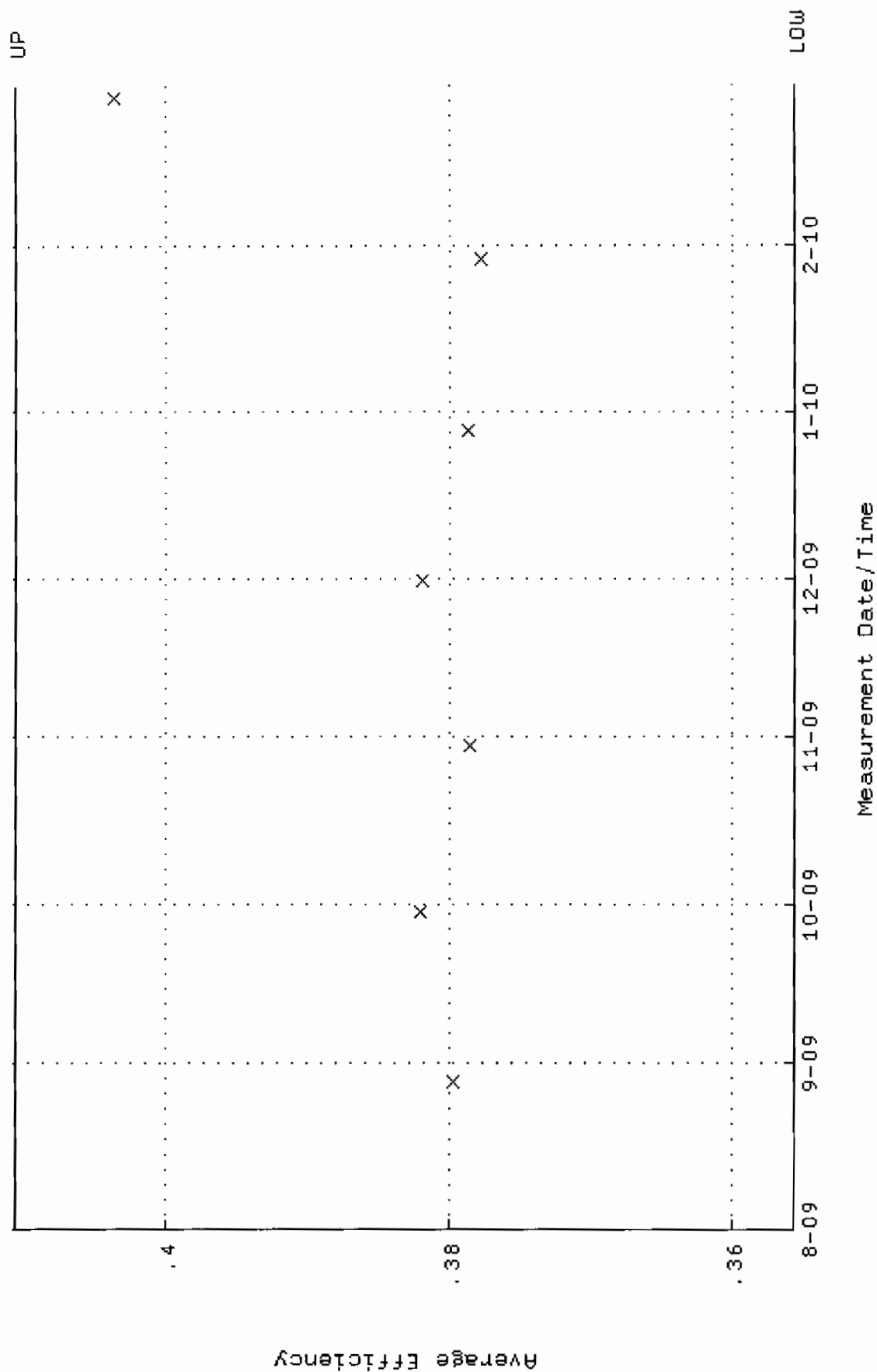
Parameter Name : BACKRATE (Background Rate)

Start/End Dates : 2-AUG-2009 17:28:32 through 2-MAR-2010 12:00:00

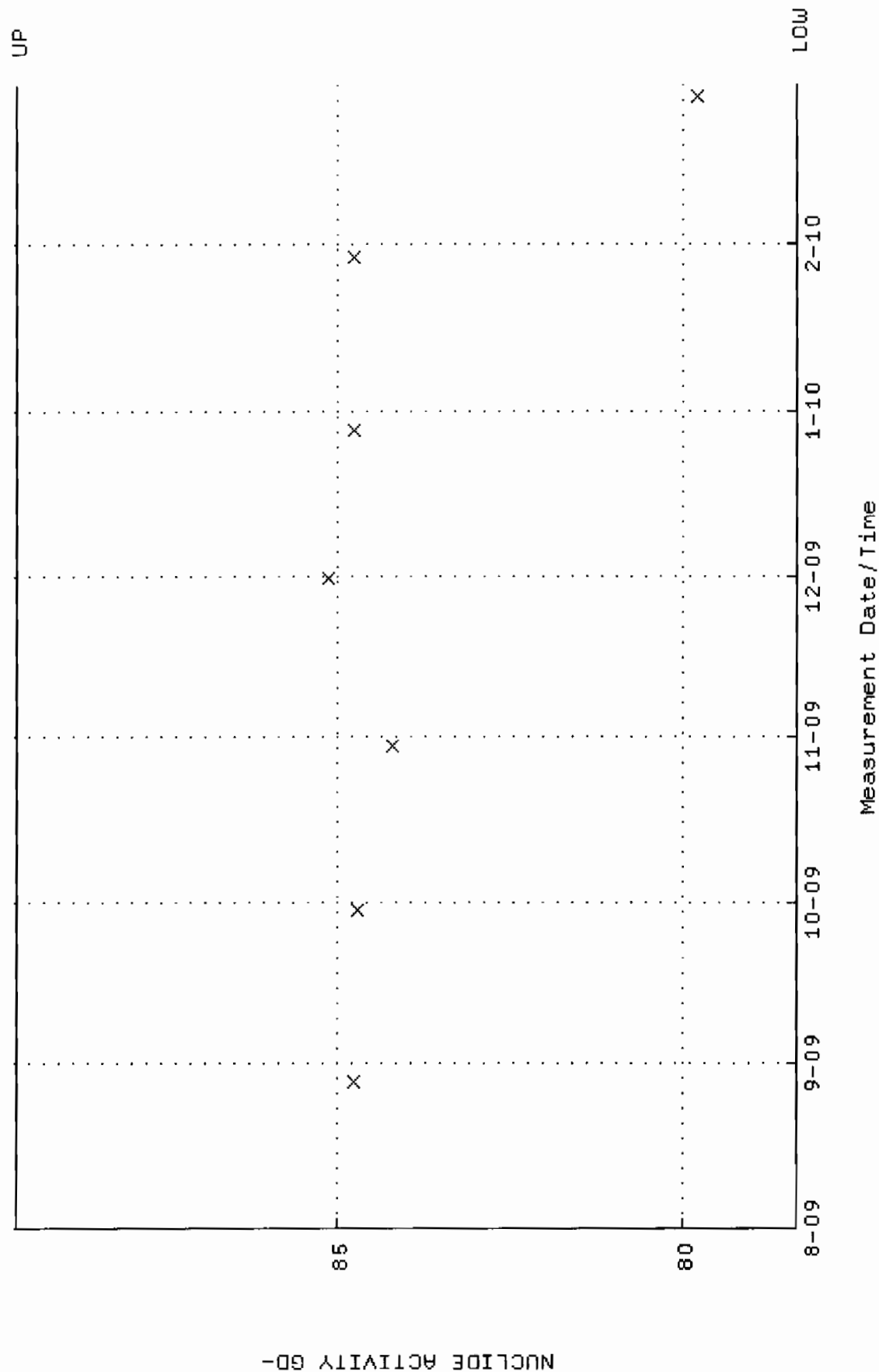
Lower/Upper Lmts: 0.000000E+00 through 0.100000



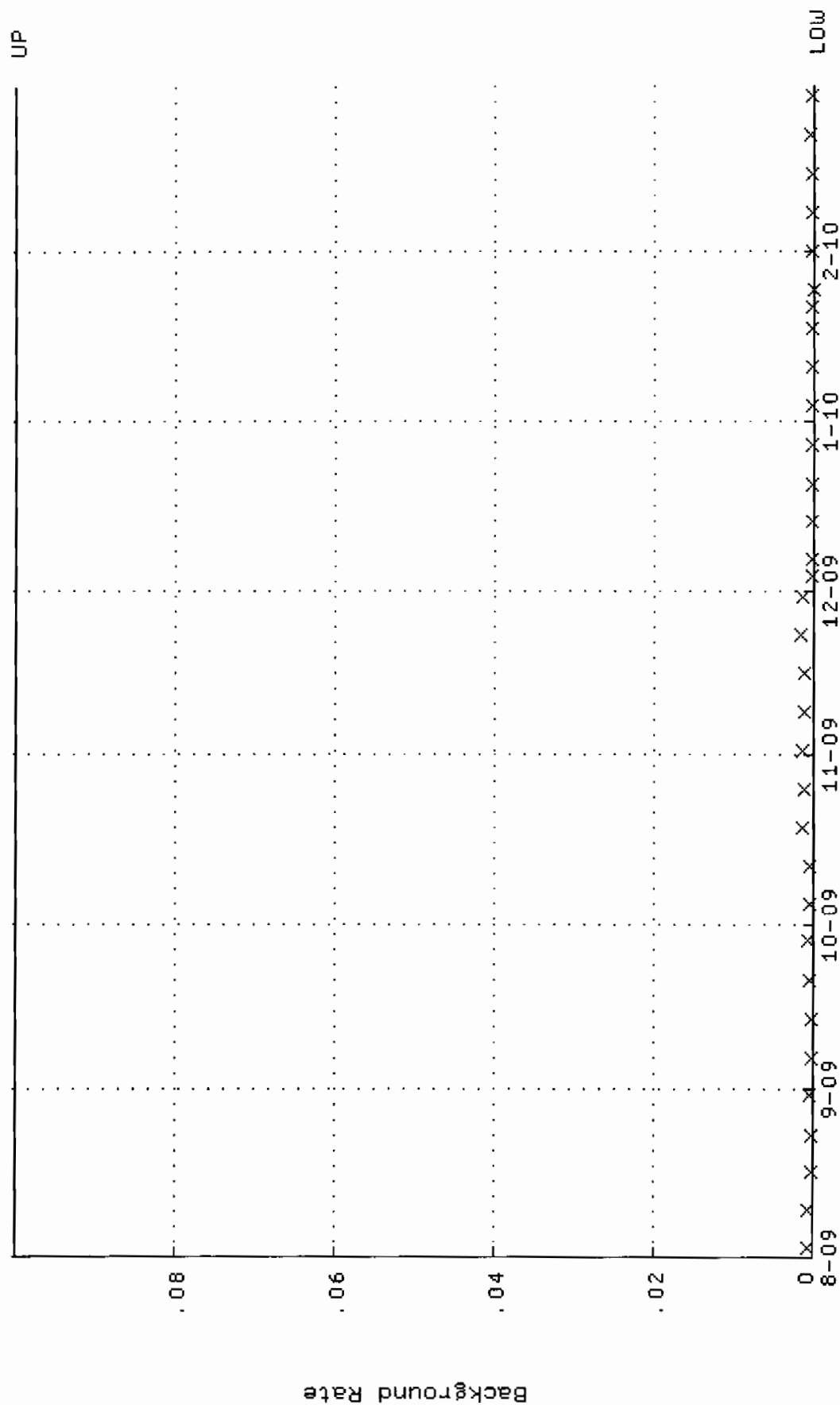
QA filename : DKA100:[ENV_ALPHA.QA.W]w256.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 28-AUG-2009 07:10:37 through 2-MAR-2010 12:00:00
 Lower/Upper Lmts: 0.355610 through 0.410626



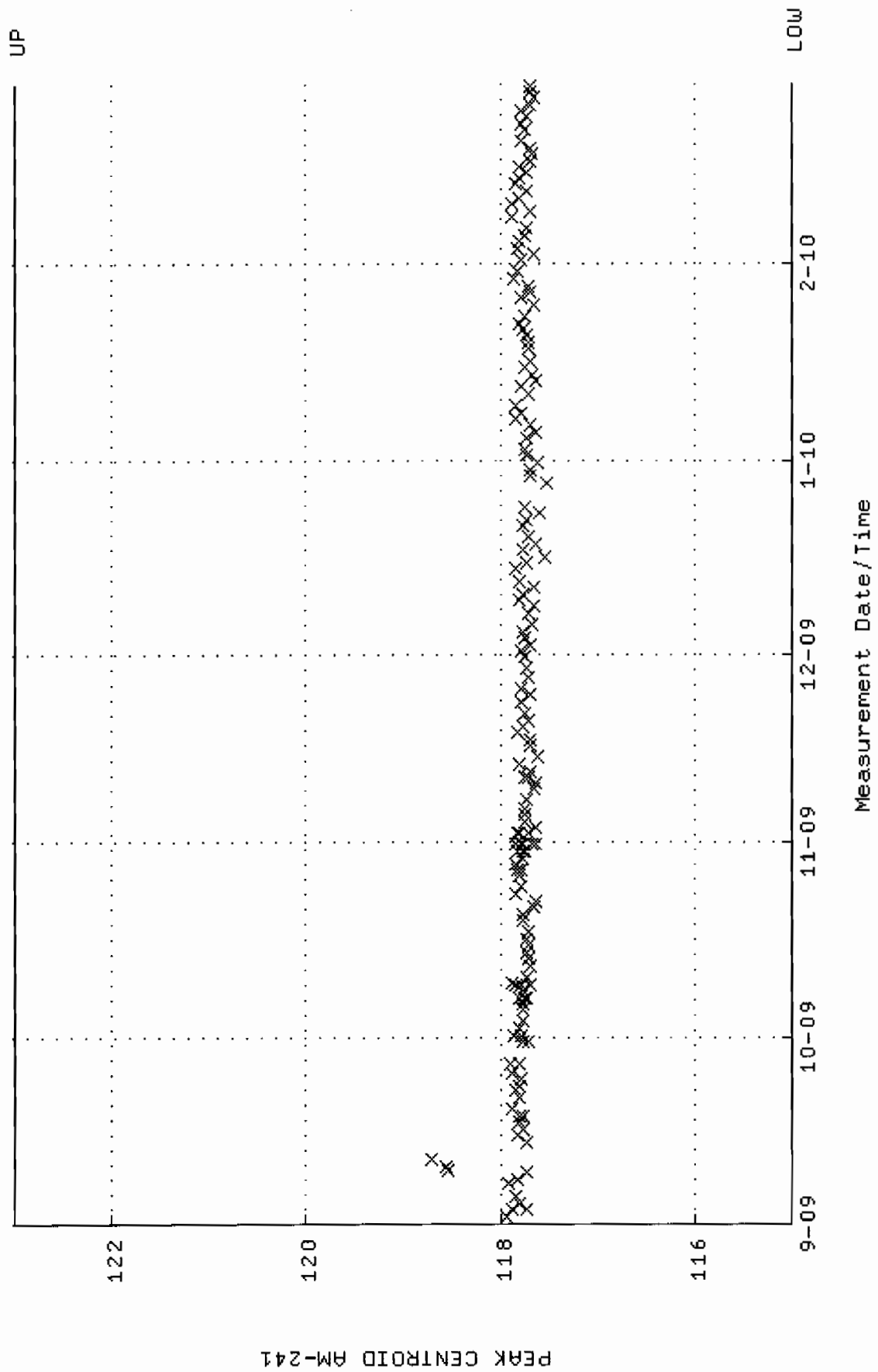
QA filename : DKA100:[ENV_ALPHA.QA.W]w256.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 28-AUG-2009 07:10:37 through 2-MAR-2010 12:00:00
 Lower/Upper Lmts: 78.3575 through 89.6335



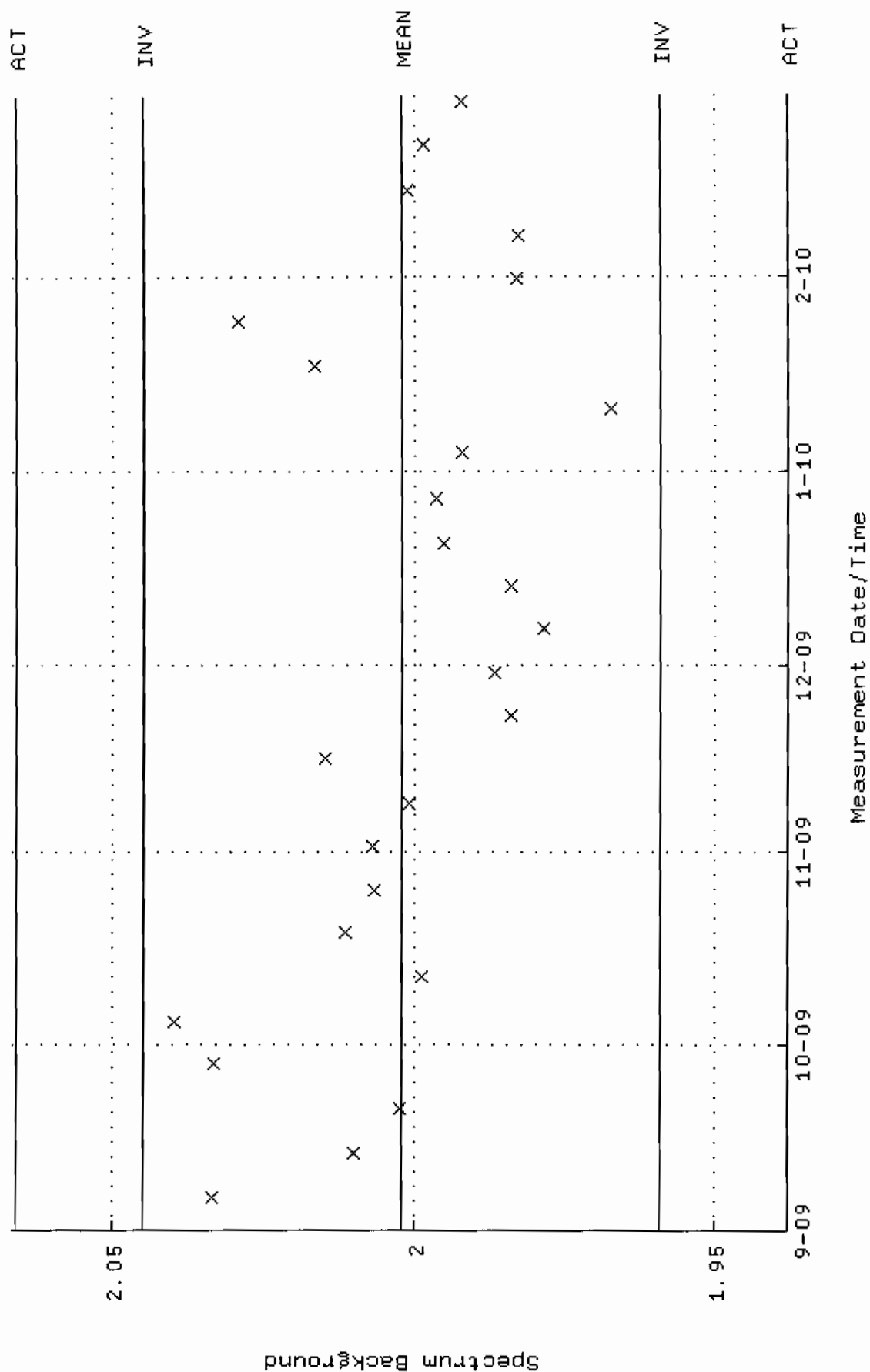
QA filename : DKA100:[ENV_ALPHA.QA.B]B256.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:28:37 through 2-MAR-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



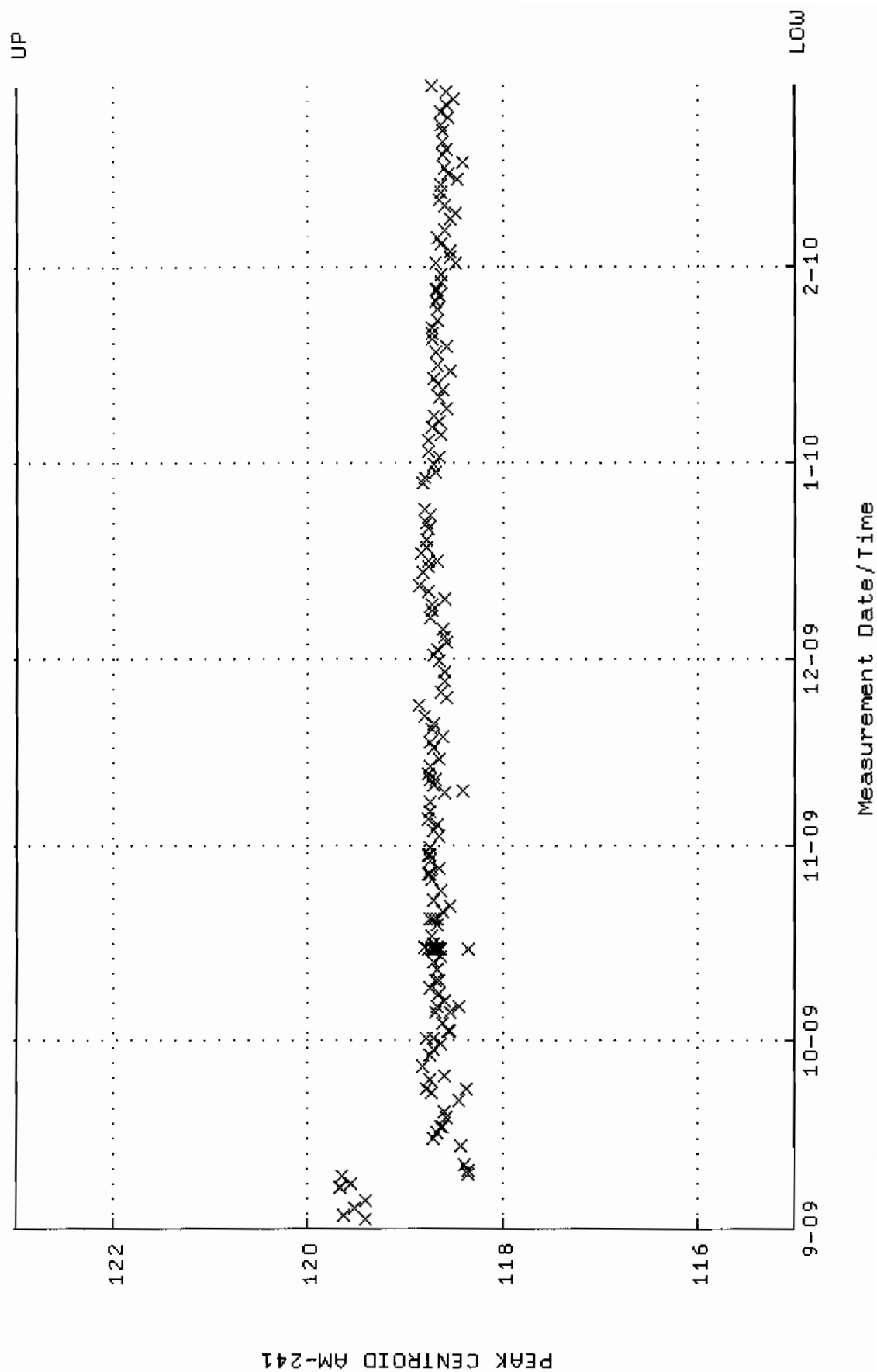
QA filename : DKA100:[CANNBERRA.GAMMA.SCUSR.QA]QCC_GAM02_CAN.QAF;1
 Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
 Start/End Dates : 2-SEP-2009 04:40:02 through 1-MAR-2010 12:00:00
 Lower/Upper Lmts: 115.000 through 123.000



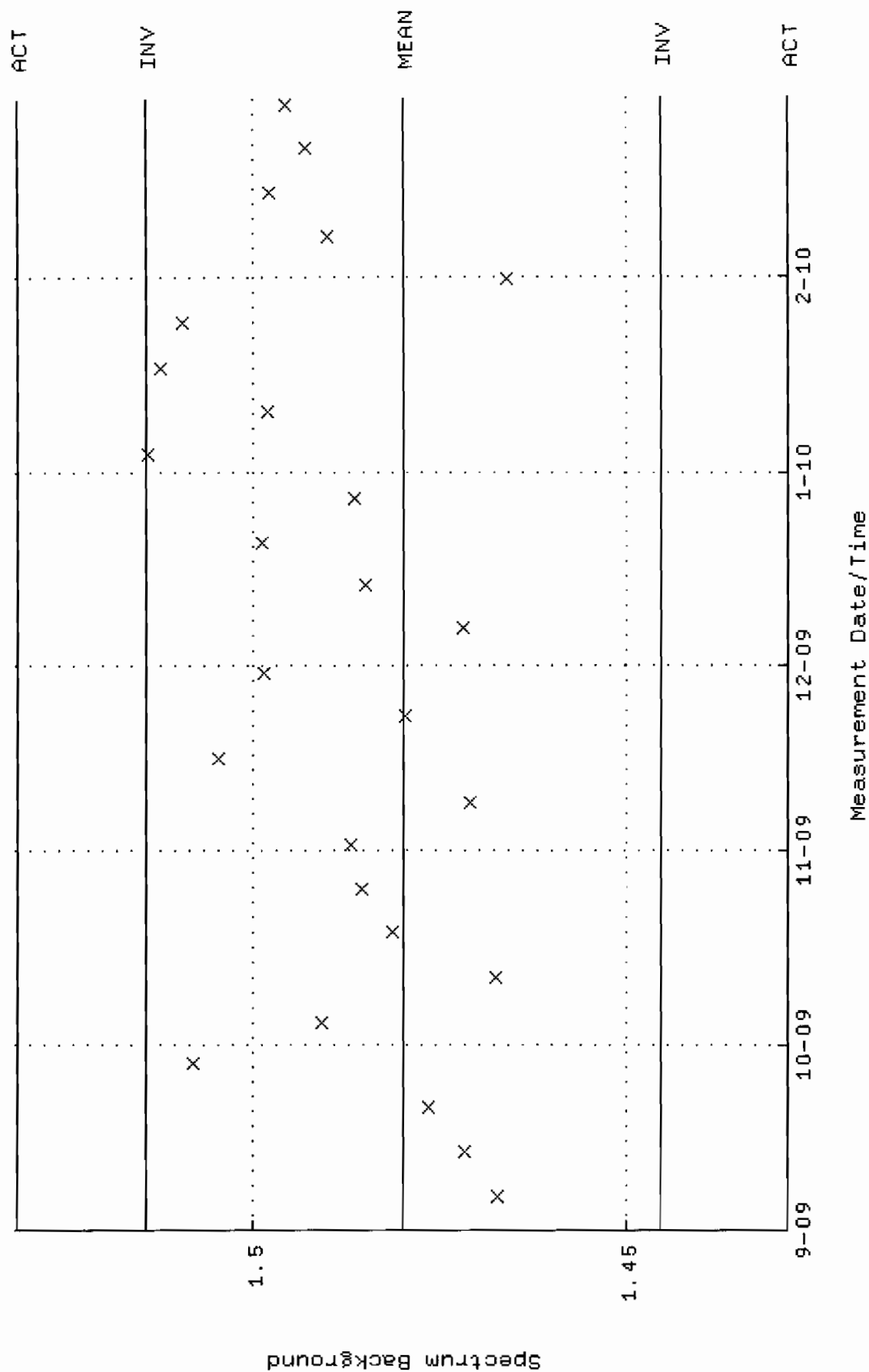
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM02.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 6-SEP-2009 11:37:17 through 1-MAR-2010 12:00:00
 Mean +- Std Dev : 2.00226 +- 2.139827E-02 (1.07 %)



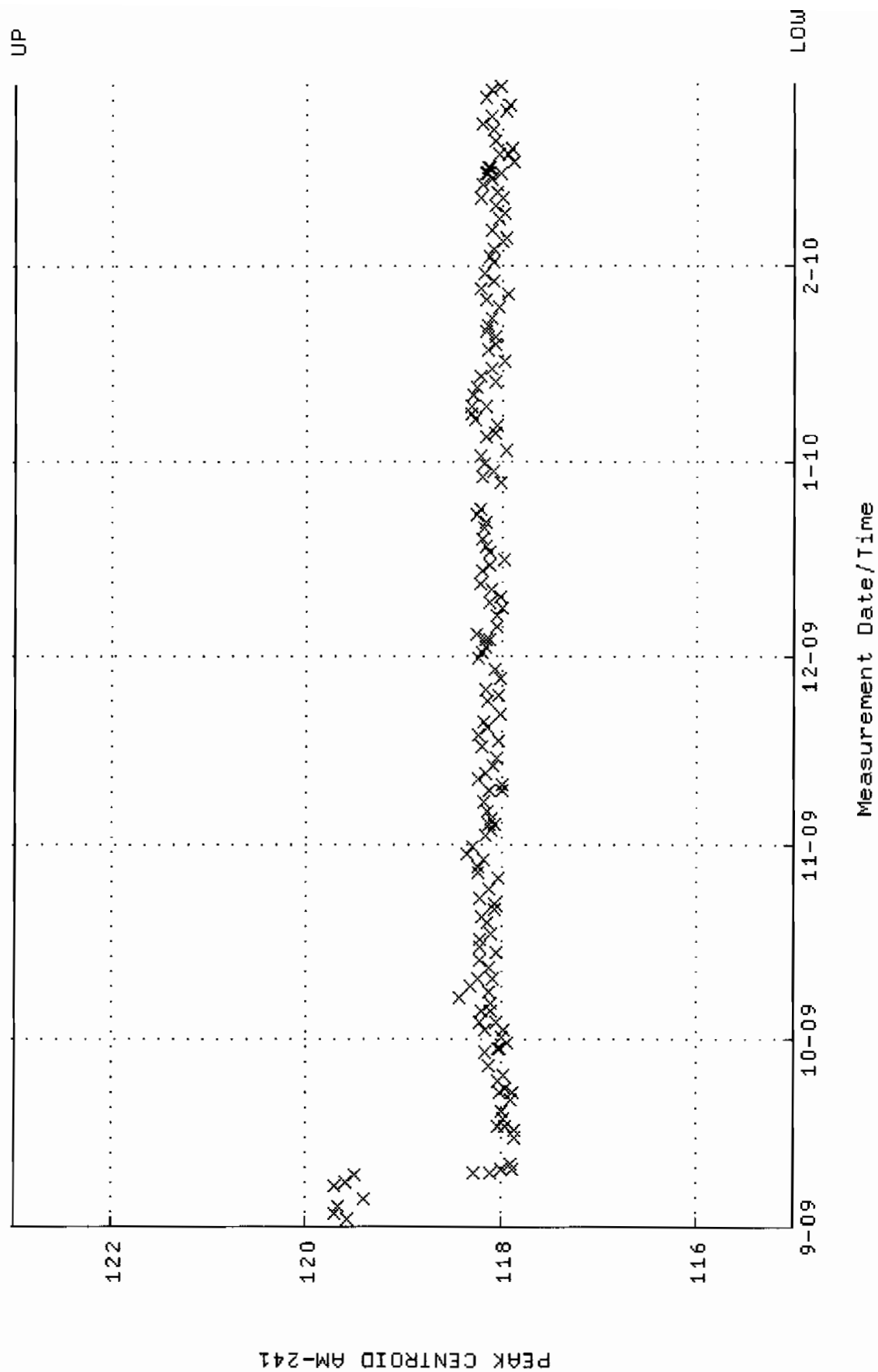
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM10_500MLMB.QAF;1
 Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
 Start/End Dates : 2-SEP-2009 10:11:44 through 1-MAR-2010 12:00:00
 Lower/Upper Lmts: 115.000 through 123.000



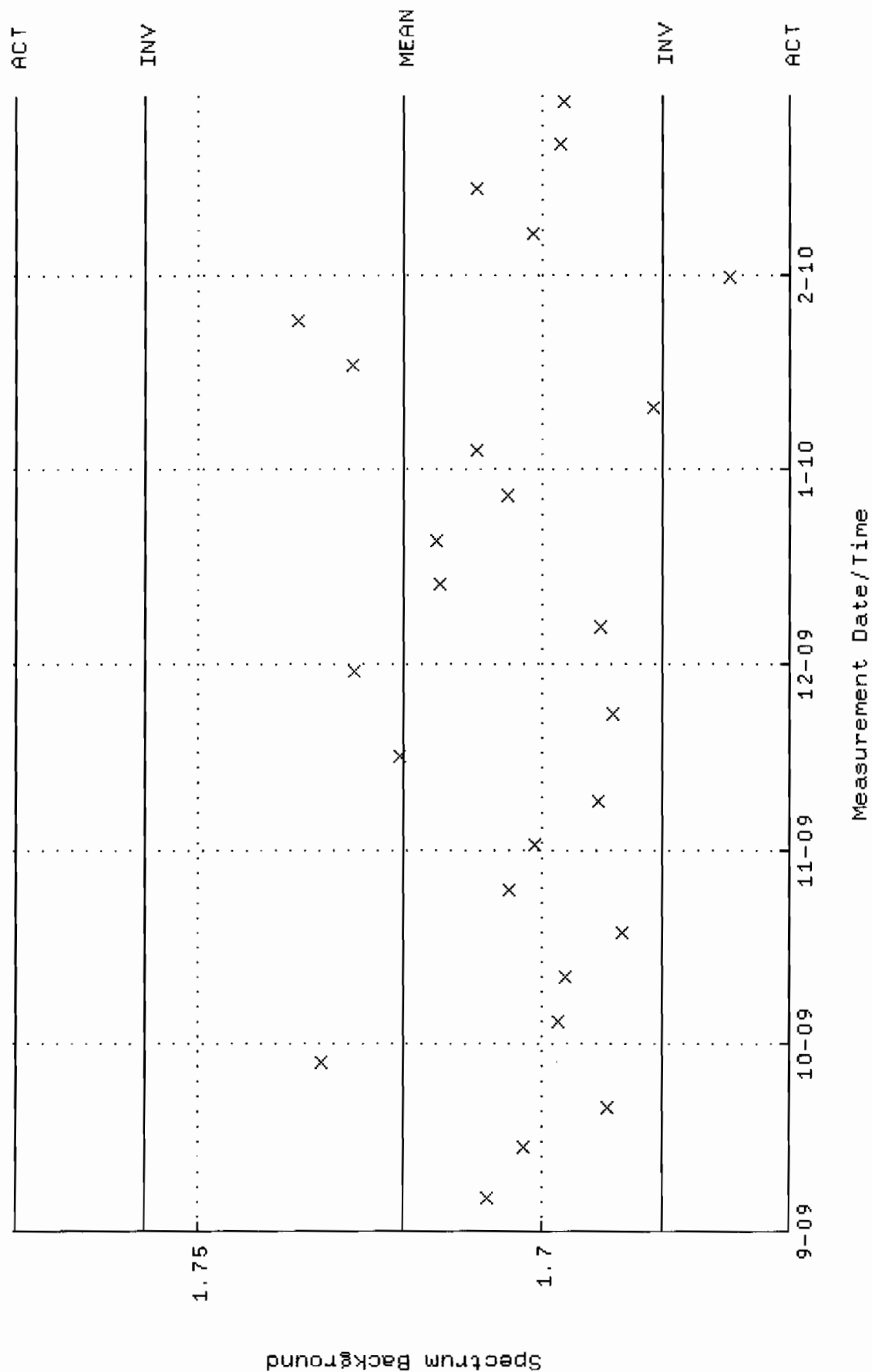
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC-GAM10.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 6-SEP-2009 11:41:20 through 1-MAR-2010 12:00:00
 Mean +- Std Dev : 1.48000 +- 1.723892E-02 (1.16 %)



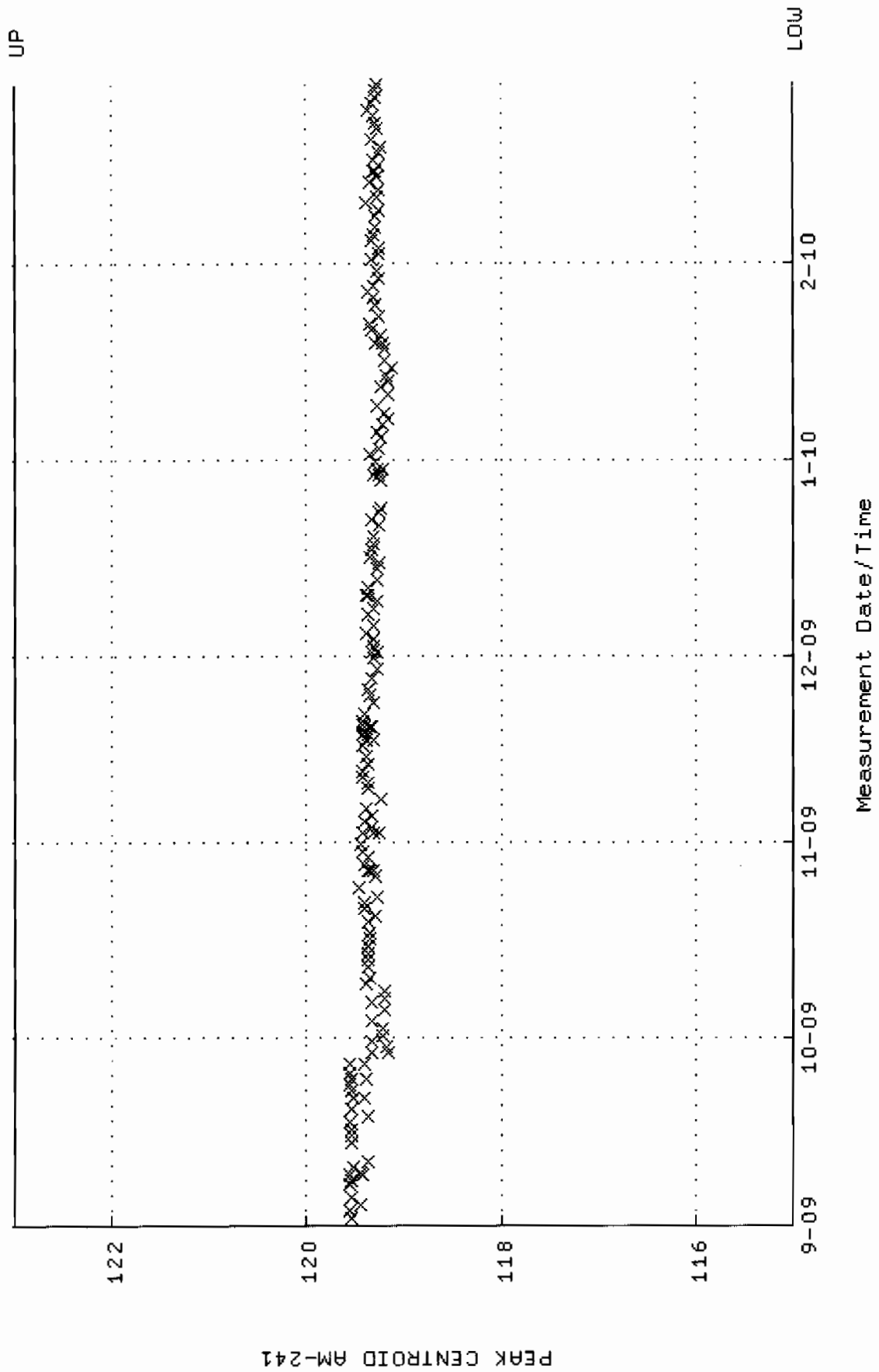
QA filename : OKA100:[CANNBERRA.GAMMA.SCUSR.QA]QCC_GAM15_CAN.QAF;1
 Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
 Start/End Dates : 2-SEP-2009 06:32:23 through 1-MAR-2010 12:00:00
 Lower/Upper Lmts: 115.000 through 123.000



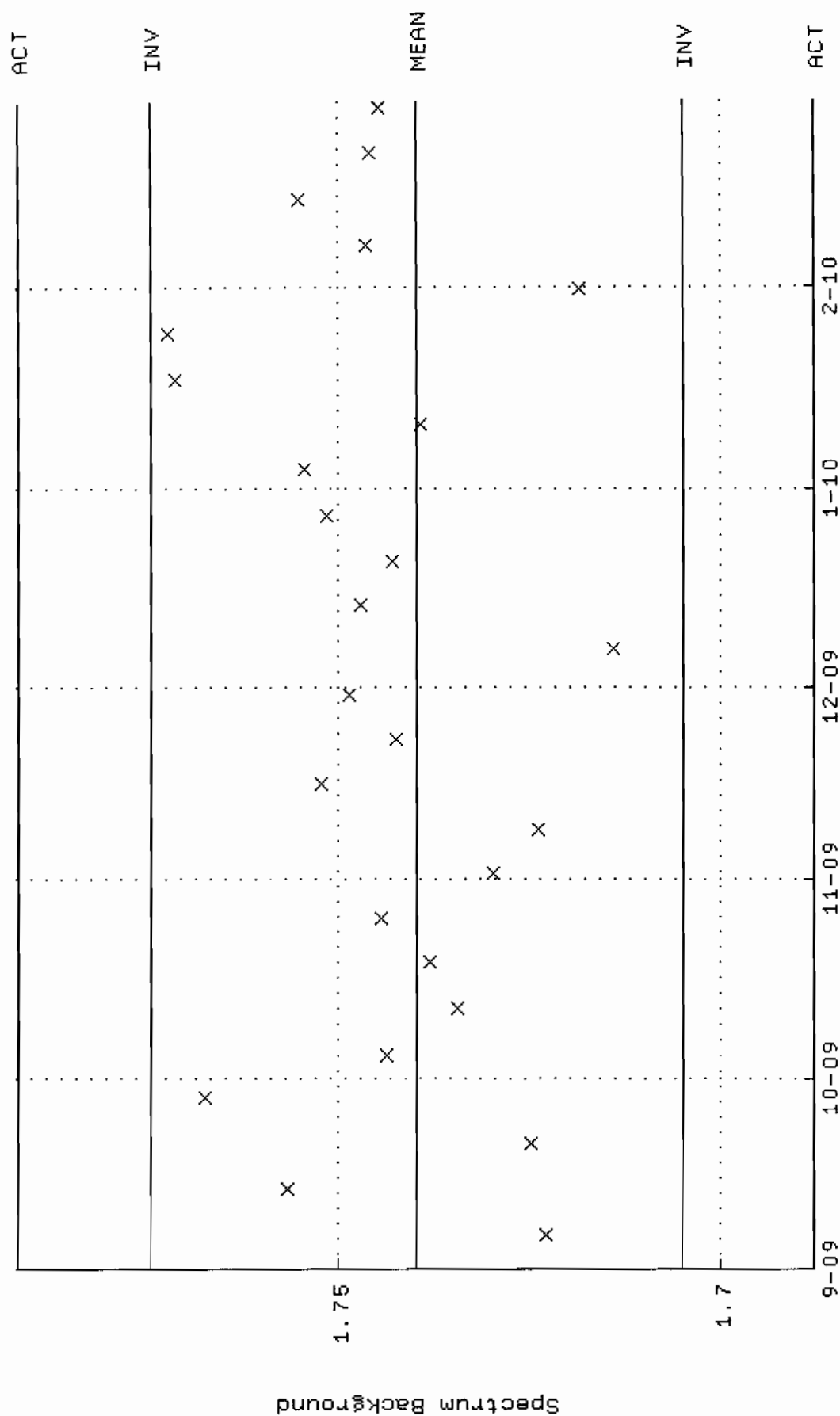
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM15.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 6-SEP-2009 11:43:44 through 1-MAR-2010 12:00:00
 Mean +- Std Dev : 1.72024 +- 1.875820E-02 (1.09 %)



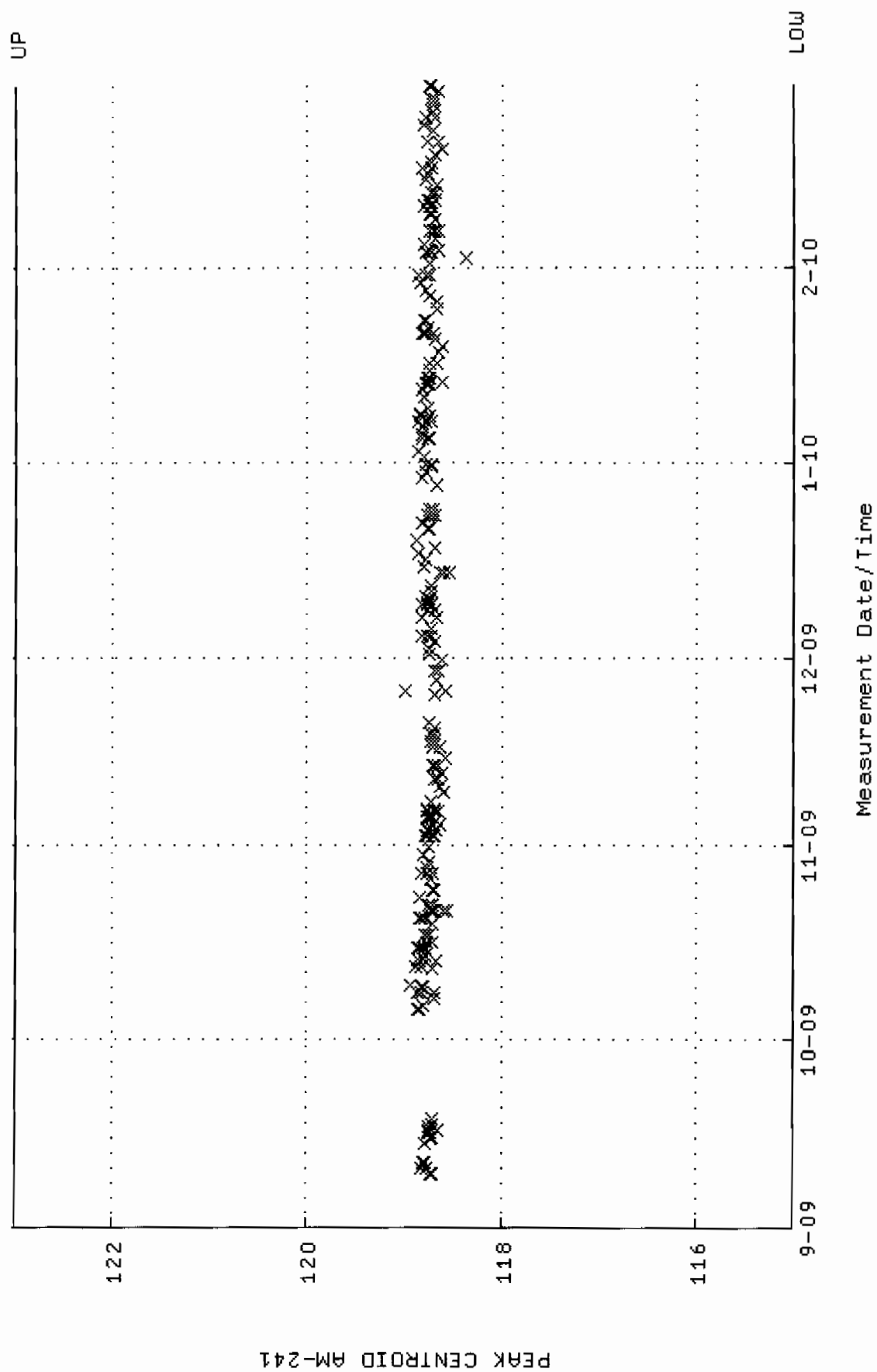
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM16_CAN.QAF;1
 Parameter Name : PSCENTRO-241 (PEAK CENTROID AM-241)
 Start/End Dates : 2-SEP-2009 04:53:02 through 1-MAR-2010 12:00:00
 Lower/Upper Lmts: 115.000 through 123.000



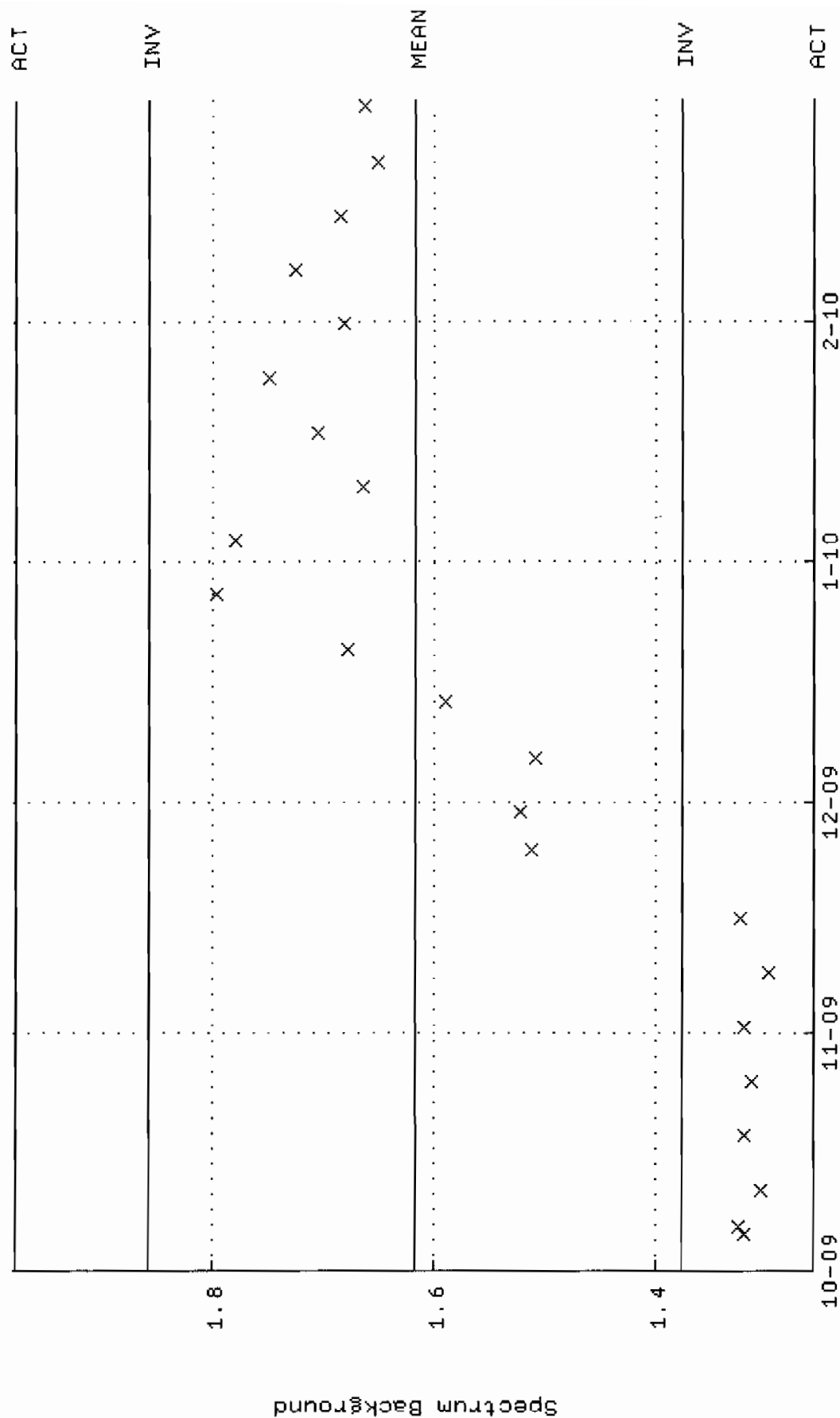
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC-GAM16.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 6-SEP-2009 11:44:09 through 1-MAR-2010 12:00:00
 Mean +- Std Dev : 1.73980 +- 1.729897E-02 (0.99 %)



QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM23_CAN.QAF;1
 Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
 Start/End Dates : 9-SEP-2009 16:19:12 through 1-MAR-2010 12:00:00
 Lower/Upper Lmts: 115.000 through 123.000



QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM23.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 5-OCT-2009 15:13:53 through 1-MAR-2010 12:00:00
 Mean +- Std Dev : 1.61827 +- 0.119991 (7.41 %)



STANDARDS DATA

0134



CALIBRATION
No. 0146

Description Radionuclide: TRITIUM (HYDROGEN-3) Product code: TRY-64
Chemical form: water Batch: 111

Measurement Reference time: 1200 GMT on 1 March 1996
Radioactive concentration of tritium: 488.0 kilobecquerels per gram of water
which is equivalent to: 13.19 microcuries per gram of water
or: 2.93×10^7 disintegrations per minute per gram of water

Method of Measurement

This reference material was calibrated by direct comparison with a standard of tritium-labelled water obtained from the National Institute of Standards and Technology, USA.

Accuracy The OVERALL UNCERTAINTY of the result quoted above is estimated to be less than $\pm 2.5\%$

This estimate of uncertainty was calculated in accordance with the recommendations of the International Commission on Radiation Units and Measurements (ICRU Report 12). The limits of uncertainty were taken as the arithmetic sum of the uncertainty due to random variations, calculated at the 99.7% confidence level, and the estimated systematic uncertainties.

Purity No radioactive impurities were detected. (Impurities with total activity greater than 0.001% of the activity of the tritium would have been detected).

Physical Data Half-life of tritium: 12.43 ± 0.11 years
Maximum beta energy of tritium: 18.6 keV

Remarks: The S.I. unit of radioactivity is the becquerel.

1 becquerel (Bq) = 1 nuclear transformation per second, therefore
1 curie (Ci) = 3.7×10^{10} becquerels exactly.

Useful conversion factors are:

1 microcurie (μCi) = 3.7×10^4 Bq = 37 kilobecquerels (kBq)
1 kilobecquerel (kBq) = 27.027 nanocuries (nCi)

This product meets the quality assurance requirements of NRC Regulatory Guide 4.15 for achieving implicit NIST (NBS) traceability as defined in NCRP58 (1985).

**Approved
signatory**

W. F. Case
Page 1510 of 1545
W.F. Case

Standard Traceability Log Rad

Source Material Info	
Parent Code:	0134
Prepared By:	Angela Johnson
Carrier Conc:	DI WATER
Reference Date:	03/01/1996
Ampoule Mass (g):	5 g
Uncertainty:	+/- 2.5 %
LogBook No:	RC S 023 061

A Solution Material Info	
Isotope:	Tritium
Prepared By:	Angela Johnson
Prep Date:	02/21/2001
Verification Date:	09/10/2008
Expiration Date:	03/27/2010
Primary Code:	0134-A
Dilution(mL):	100 mL
Mass of Parent(g):	3.3659 g
Density(g/mL):	1.0004
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

$(\text{Mass of parent(g)}) * (\text{Parm Activity (kBq/g)}) * (\text{conversion dpm to kBq}) / (\text{Dilution Vol}) = \text{Parent Activity (dpm/mL)}$
$(\text{Mass of parent(g)}) * (\text{Parm Activity (kBq/g)}) * (\text{conversion dpm to kBq}) / \text{Density (g/mL)} / (\text{Dilution Vol}) = \text{Parent Activity (dpm/g)}$
$(3.3659 \text{ g}) * (488 \text{ kBq/g}) * (60000 \text{ dpm/kBq}) / (100 \text{ mL}) = 985535.5200 \text{ dpm/mL}$
$(3.3659 \text{ g}) * (488 \text{ kBq/g}) * (60000 \text{ dpm/kBq}) / (1.0004 \text{ g/mL}) / (100 \text{ mL}) = 985180.3116 \text{ dpm/g}$

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
07/20/2004	Amanda Fehr	5.86	1000	0134-H	5773.1566 dpm/mL	07/25/2006	07/25/2007
12/20/2005	Amanda Fehr	5.5451	1000	0134-I	5462.92 dpm/mL	12/20/2006	12/20/2007
07/11/2007	Daniel Roy	5.5863	1000	0134-J	5503.5128 dpm/ml	07/29/2008	07/29/2009
03/25/2009	Mary Aders	5.4917	1000	0134-K	5410.3147 dpm/ml	03/27/2009	03/27/2010

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for H-3 Standard 0134-K

M. Aders	Isotope	Detector CPM	BKG CPM	NET CPM	Detector Eff Mass. Used (mL)	Standard Source DPM/mL
4/9/2009	0134-K N1	1097.2000	54.0000	1043.2000	0.380548	2741.3098
	0134-K N2	1073.2000	54.0000	1019.2000	0.380548	2678.242955
	0134-K N3	1085.2000	54.0000	1031.2000	0.380548	2709.776428
Mean Value (Counting) =	2709.776428		104.954429	Pass		
Stdev =	31.53347278		0.01163693	Rule 3 (Pass/Fail)		Average = 2709.776428

Certificate Value = 2581.86 dpm/mL
 Lower Limit = 2646.709482 dpm/mL
 Upper Limit = 2772.843373 dpm/mL
 Rule 1 Pass/Fail Fail
 Two sigma = 63.06694556 dpm/mL
 10 % of Mean = 270.9776428 dpm/mL
 Rule 2 (Pass/Fail) Pass

*exception taken due to full recovery of standard

Verification Rules

- Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
- Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
- Rule 3 = The determined mean value shall be within 10% of the certificate value.

The analyst prepared three standard verification sources for H-3 source 0134-K by transferring 0.1 mL portions of the standard into glass liquid scintillation vials. Ten mL of Ecoscint Ultra liquid scintillation cocktail was added to each vial and the vials were shaken to mix. A Blank vial was prepared in a similar fashion using 1 mL of DI water and 10 mL of Ecoscint Ultra liquid scintillation cocktail. The standard verification vials and Background source were dark adapted for two hours and counted on Silver for H-3 source standard verification. The H-3 efficiency calibration which was used for verification calculations was performed on 4/9/09 using 0020-A (H-3). Calibration data is recorded in this logbook under H-3 0020. Each verification source calculation was performed as follows:

$$\text{Source dpm/g} = (A - B)/(C)(D)$$

where:

- A = Ver. source cpm,
- B = BKG cpm,
- C = System efficiency, (cpm/dpm), and
- D = mass used for standard verification.

Reference RAD SOP M-001

Handwritten signature: Amanda J. Dehn 4/9/09

1032

CERTIFICATE OF CALIBRATION

Standard Radionuclide Source

74047-278

5 mL Liquid in Flame Sealed Vial

This standard radionuclide source was prepared using aliquots measured gravimetrically from master radionuclide solution sources. The Am-241 was calibrated by 4 pi alpha liquid scintillation counting. All other radionuclides were calibrated using a germanium gamma spectrometer system. Calibration and purity were checked using a germanium gamma spectrometer system. At the time of calibration no interfering gamma-ray emitting impurities were detected. The gamma-ray emission rates for the most intense gamma-ray lines are given. Analytics maintains traceability to the National Institute of Standards and Technology through a Measurements Assurance Program as described in USNRC Regulatory Guide 4.15, Rev. 1, February, 1979.

Calibration date: October 1, 2006 12:00 EST

ISOTOPE	GAMMA-RAY ENERGY	HALF-LIFE		GAMMA-RAYS PER SECOND	TOTAL UNCERTAINTY %
Am-241	59.5	432	y	3339	3.0
Cd-109	88	462.6	d	4815	3.3
Co-57	122	271.79	d	2409	3.0
Ce-139	166	137.6	d	3408	2.8
Hg-203	279	46.61	d	7522	2.7
Sn-113	392	115.1	d	4728	2.6
Cs-137	662	30.07	y	2973	3.0
Y-88	898	106.6	d	11600	2.6
Co-60	1173	5.2714	y	5780	2.7
Co-60	1332	5.2714	y	5783	2.6
Y-88	1836	106.6	d	12260	2.6

5.31725 grams 4M HCl solution.
P O NUMBER 2734RD, Item 1

SOURCE PREPARED BY:

M. Dimitrova
M. Dimitrova, Radiochemist

Q A APPROVED:

Wm. M. J. 11-28-06

This standard will expire one year after the calibration date.

rec'd 11/30/06
RC-S-045-073-0

1380 Seaboard Industrial Blvd.
 Atlanta, Georgia 30318

Tel 404-352-8677

Fax 404-352-2837

www.analytiscinc.com

ANALYSIS OF UNCERTAINTY FOR MIXED GAMMA STANDARDS BATCH 127

CALIBRATION DATE: October 1, 2006 12:00 EST

Isotope	Energy (keV)	Calibration Method ¹	Statistics ²	Calibration ²	Peak Fitting ²	Geometry ²	Impurities ²	Weighing	Combined Standard Uncertainty	Relative Expanded Uncertainty (k=2)
Cd-109	88	HPGe	0.16	1.1	0.88	0.8	0	0.2	1.64	3.3
Co-57	122	HPGe	0.23	1.1	0.71	0.7	0	0.2	1.52	3.0
Ce-139	166	HPGe	0.17	1.0	0.58	0.7	0	0.2	1.38	2.8
Hg-203	279	HPGe	0.11	1.1	0.34	0.7	0	0.2	1.37	2.7
Sn-113	392	HPGe	0.21	1.0	0.35	0.7	0	0.2	1.30	2.6
Cs-137	662	HPGe	0.36	1.1	0.60	0.7	0	0.2	1.49	3.0
Y-88	898	HPGe	0.19	1.0	0.33	0.7	0	0.2	1.29	2.6
Co-60	1173	HPGe	0.31	.97	0.45	0.7	0	0.2	1.33	2.7
Co-60	1332	HPGe	0.33	.93	0.48	0.7	0	0.2	1.32	2.6
Y-88	1836	HPGe	0.24	1.0	0.35	0.7	0	0.2	1.31	2.6

Optional Additional Isotopes

Pb-210	46.5	4π LS	0.33	1.1	0	0.9	0.30	0.2	1.50	3.0
Am-241	59.5	4π LS	0.33	1.1	0	0.9	0.30	0.2	1.50	3.0
Sr-85	514	IC	0.30	1.1	0	0.7	0.17	0.2	1.36	2.7
Cs-134	605	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Cs-134	796	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Mn-54	835	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Zn-65	1116	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7

Calibration Methods:

4π LS (4 pi Liquid Scintillation Counting)

HPGe (High Purity Germanium Gamma Ray Spectrometer)

IC (Gamma Ray Ionization Chamber)

²As Percent (%) from counting data

No interfering gamma emitting impurities were detected during calibration. Depending on the resolution and energy dispersion (keV/channel) of the measuring system, the following spectral conflicts may occur: (1) between the 88 keV gamma-ray and the X-rays emitted in the decay of Hg-203, (2) between the 1333 keV gamma-ray and the 1325 keV single escape peak from the 1836 keV gamma-ray.

Standard Traceability Log Rad

Source Material Info	
Parent Code:	1032
Prepared By:	Daniel Roy
Carrier Conc:	4 M HCL
Reference Date:	10/01/2006
Ampoule Mass (g):	5.31725 g
Uncertainty:	+/- 2.81 %
LogBook No:	RC-S-045-073

A Solution Material Info	
Isotope:	Mixed Gamma
Prepared By:	Daniel Roy
Prep Date:	11/30/2006
Verification Date:	12/02/2009
Expiration Date:	12/02/2010
Primary Code:	1032-A
Dilution(mL):	100 mL
Mass of Parent(g):	5.2579 g
Density(g/mL):	1.0611
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

$(\text{Mass of parent(g)}) * (\text{Parm Activity (dpm)}) * (\text{conversion dpm to dpm}) / (\text{Ampoule Mass(g)} * (\text{Dilution Vol})) = \text{Parent Activity (dpm/mL)}$
$(\text{Mass of parent(g)}) * (\text{Parm Activity (dpm)}) * (\text{conversion dpm to dpm}) / \text{Density} / (\text{Ampoule Mass (g)} * (\text{Dilution Vol})) = \text{Parent Activity (dpm/g)}$
$(5.2579 \text{ g}) * (218817 \text{ dpm}) * (1 \text{ dpm/dpm}) / (5.31725 \text{ g} * 100 \text{ mL}) = 2163.7461 \text{ dpm/mL}$
$(5.2579 \text{ g}) * (218817 \text{ dpm}) * (1 \text{ dpm/dpm}) / (1.0611 \text{ g/mL}) / (5.31725 \text{ g} * 100 \text{ mL}) = 2039.2400 \text{ dpm/g}$

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
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GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Mixed Gamma Standard 1032-A

M. Stamps
12/2/2009

Am-241

Isotope	Result	pCi/L - Ver-Int-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 = 248.5666667
Rule 2 (Pass/Fail) Pass

pCi/L
pCi/L
pCi/L

M. Stamps
12/2/09
independent
12/2/09

Verification Rules

- Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
- Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
- Rule 3 = The determined mean value shall be within 5% of the certificate value.

Verification for Mixed Gamma Standard 1032-A

M. Stamps
12/2/2009

Cs-137

Isotope	Result	pCi/L - Ver. Tab. 1
Mixed Gamma N1	854.2	pCi/L - Ver. Tab. 3
Mixed Gamma N2	907.6	pCi/L - Ver. Tab. 2
Mixed Gamma N3	898.9	

Mean Value (Counting) = 886.90
 Stdev = 28.651
 Rule 3 (Pass/Fail) Pass

Certificate Value = 933.44144
 Lower Limit = 829.597644
 Upper Limit = 944.202356
 Rule 1 (Pass/Fail) Pass
 Two sigma = 57.30235597
 10 % of Mean = 88.69000000
 Rule 2 (Pass/Fail) Pass

pCi/L
 pCi/L
 pCi/L

12/2/09
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.

Verification for Mixed Gamma Standard 1032-A

M. Stamps
12/2/2009

Co-60 (1332.5)

Isotope	Result	pCi/L - Ver-Isa-5
Mixed Gamma N1	1572	pCi/L - Ver-Isa-2
Mixed Gamma N2	1495	pCi/L - Ver-Isa-3
Mixed Gamma N3	1501	

Mean Value (Counting) =
Stdev =

1522.67
42.829
98.50
Rule 3 (Pass/Fail)

Certificate Value =
Lower Limit =
Upper Limit =
Rule 1 (Pass/Fail)
Two sigma =
10 % of Mean =
Rule 2 (Pass/Fail)

1545.8378
1437.008431
1608.324902
Pass
85.65823564
152.26666667
Pass

M. Stamps issued 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 4/11/2000 *lett c held 12/1/04*

angela d. johnson 12/3/04

TRM

Invoice:

5 boxes of TRM-1
 10 " " TRM-2 and 3
 5 " each of NRM-1 & 2 & 3 & 6
 7 " baghouse dirt

Use 1/4 gm x 10 samples WITH Together
 for TRM-2

Table 7. Recommended Concentrations of Tailings Reference Materials (pCi/g)

	TRM-1	TRM-2	TRM-3	TRM-4
U-238	99 ± 6	6.0 ± 4.0	19.6 ± 1.4	44.9 ± 1.6
U-234	105 ± 6	6.2 ± 4.0	19.6 ± 1.9	44.6 ± 1.2
Th-230	471 ± 11	24.5 ± 0.6	58.5 ± 2.1	44.0 ± 1.6
Ra-226	489 ± 17	25.4 ± 0.9	60.3 ± 2.3	42.9 ± 1.2
Pb-210	425 ± 14	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 & Stadel 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

9911627-01-20

SF 2001-COC (10-97)

Supersedes (5-97) Issue

Internal Lab
Batch No.

SARWR No. N/A

ANALYSIS REQUEST AND CHAIN OF CUSTODY

Press F1 for instructions for each field.

AR/COC- 602945

Page 1 of 1

Dept. No./Mail Stop: 7132 / 1042 Project/Task Manager: PAM PUISSANT Project Name: Record Center Code: N/A Logbook Ref. No.: N/A Service Order No.:		Date Samples Shipped: 11-16-98 SMO USE: Carrier/Vehicle No: 706794 Lab Contact: EDIE KENT Lab Destination: G.E.L. SMO Contact/Phone: Doug Salmi / 844-3110 Send Report to SMO: Suzi Jensen/844-3184		Contract No.: AJ-2480A Case No.: 10204 13 SMO Authorization: [Signature] Bill to: Sandia National Laboratories Supplier Services, Dept. P.O. Box 5800 MS 0154	
Location Building N/A Sample No. - Fraction		Tech Area VI Room N/A ER Sample ID or Sample Location Detail		Reference LOV (available at SMO)	
050484 - 001 050486 - 001 050486 - 001		PEM-1 TRM-2 NRM-2 N3412		Container Type Volume P 1L G 1L G 1L	
		Date/Time Collected 11/15/98 1100 11/15/98 1100 11/15/98 1100		Sample Matrix S S S	
		Rep. Site ID N/A N/A N/A		Preservative 4C 4C 4C	
		ER Site ID N/A N/A N/A		Sample Collection Method G G G	
		Sample ID N/A N/A N/A		Parameter & Method Requested See Special Instructions Below	
		RMMA <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Ref. No.		Special Instructions/QC Requirements EDD <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Raw data package <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No These "samples" are not characterized and materials being sent to GEL are being left back in storage. Please list as separate report.	
Sample Disposal <input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Disposal by lab		Turnaround Time <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush Required Report Date		Abnormal Conditions on Receipt Lab Use	
Sample Team Members Douglas E. Perry [Signature]		Name Douglas E. Perry [Signature]		Lab Sample ID	
1. Relinquished by [Signature] Date 11-16-98 Time 0900		Init Company/Organization/Phone Weston / 7577 / 845-0867		Date	
1. Received by [Signature] Date		4. Relinquished by		Date	
2. Relinquished by		4. Received by		Date	
2. Received by		5. Relinquished by		Date	
3. Relinquished by		5. Received by		Date	
3. Received by		6. Relinquished by		Date	
		6. Received by		Date	

Original To Accompany Samples, Laboratory Copy (White) 1st Copy To Accompany Samples, Return to SMO (Blue) 2nd Copy SMO Suspense Copy (Yellow) 3rd Copy Field Copy (Pink)

CERTIFICATE OF CALIBRATION

ALPHA STANDARD SOLUTION

Radionuclide	Am-243	Customer:	GENERAL ENGINEERING LABS
Half Life:	7380 \pm 40 years	P.O.No.:	9290-RAD
Catalog No.:	7243	Reference Date:	January 1 1994 12:00 PST.
Source No.:	445-96-2	Contained Radioactivity:	(Am-243) 101.2 μ Ci
		Contained Radioactivity:	(Am-243) 3750 kBq

Description of Solution

a. Mass of solution:	5.3739 g (in a 5 ml Flame Sealed Ampoule)
b. Chemical form:	Am(NO ₃) ₃ in 2N HNO ₃
c. Carrier content:	None added
d. Density:	1.0651 g/ml @ 20°C.

Radioimpurities

None detected

Radioactive Daughters

Np-239 (beta active) in equilibrium

Radionuclide Concentration

(Am-243) 18.84 μ Ci/g

Method of Calibration

Weighted aliquots of the solution were assayed using gamma spectrometry for Np-239:

Energy peak(s) intergrated under:	228, 278	keV.
Branching ratio(s) used:	0.108, 0.1420	gamma rays per decay.

Uncertainty of Measurement

a. Systematic uncertainty in instrument calibration:	$\pm 3.0\%$
b. Random uncertainty in assay:	$\pm 0.4\%$
c. Random uncertainty in weighing(s):	$\pm 0.0\%$
d. Total uncertainty at the 99% confidence level:	$\pm 3.0\%$

NIST Traceability

This calibration is implicitly traceable to the National Institute of Standards and Technology.

Leak Test(s)

See reverse side for Leak Test(s) applied to this source.

Notes

1. Nuclear data were taken from "Table of Radioactive Isotopes", edited by Virginia S. Shirley, 1986.
2. IPL participates in an NIST measurement assurance program to establish and maintain implicit traceability for a number of nuclides, based on the blind assay (and later NIST certification) of Standard Reference Materials (As in NRC Regulatory Guide 4.15).



ISOTOPE PRODUCTS LABORATORIES
1800 North Keystone Street
Burbank, California 91504
(818) 843 - 7000

Anna H. Khan
QUALITY CONTROL

Jan 3, 1994
Date Signed

THE LEAK TEST(S) INDICATED BY THE CHECKED BOX(ES) WAS(WERE) APPLIED TO
DETERMINE THE INTEGRITY OF THE SOURCE DESCRIBED ON THE FRONT SIDE



1. STANDARD WIPE TEST

The source is wiped over its entire surface with a moistened filter paper disk. After drying, the disk is checked for activity using a windowless proportional counter or end-window G.M. tube. Activity levels exceeding 0.001 μCi beta-gamma or 0.0001 μCi alpha are cause for rejection of the source.



2. SOAK TEST

The source is immersed in distilled water and maintained at $50 \pm 10^\circ \text{C}$ for a minimum of four hours. After removal of the source, the liquid is a) checked for activity using a liquid scintillation counter, or b) evaporated in a planchet and the residue is checked for activity using a windowless proportional counter or end-window G.M. tube. Activity levels exceeding 0.001 μCi beta-gamma or 0.0001 μCi alpha are cause for rejection of the source.



3. SOAK TEST -- BERYLLIUM WINDOW

The source is immersed in distilled water and maintained at $50 \pm 10^\circ \text{C}$ for 20 minutes. The entire surface of the source is then wiped with a moistened cotton swab or filter paper disk. After drying, the swab or disk is checked for activity using a windowless proportional counter or end-window G.M. tube. Activity levels exceeding 0.001 μCi beta-gamma or 0.0001 μCi alpha are cause for rejection of the source.



4. GAS SOURCE TEST (Radioactive Gas)

The source is placed in a vacuum desiccator and maintained at a pressure of less than 1 mm Hg for not less than 12 hours. The activity is checked by introducing air into the desiccator and monitoring the air with an end-window G.M. tube. Activity levels exceeding 1000 cpm are cause for rejection of the source.



5. OTHER LEAK TEST

The ampoule is kept in an inverted position on a filter paper disk for a minimum of 16 hours. The filter paper disk is then checked for activity using a windowless proportional counter or end-window G.M. tube. Activity levels exceeding 0.001 μCi beta-gamma or 0.0001 μCi alpha are cause for rejection of the source.



6. LEAK TEST NOT APPLICABLE

The active area of this source is uncovered or is protected by a very thin coating. Although the deposit is adherent, it is not designed or certified to pass a standard leak test. The inactive portions of the source have been checked using the standard wipe test. Levels of removable activity did not exceed 0.001 μCi beta-gamma or 0.0001 μCi alpha at the time of shipment.

Standard Traceability Log Rad

Source Material Info	
Parent Code:	445-96-2
Prepared By:	Genie Bost
Carrier Conc:	2M HNO3
Reference Date:	01/01/1994
Ampoule Mass (g):	5.3739 g
Uncertainty:	+/- 3 %
LogBook No:	RC S 005 032

A Solution Material Info	
Isotope:	Americium-243
Prepared By:	Angela Johnson
Prep Date:	01/05/1994
Verification Date:	05/11/2009
Expiration Date:	05/11/2010
Primary Code:	445-96-2-A
Dilution(mL):	100 mL
Mass of Parent(g):	5.3419 g
Density(g/mL):	1.0785
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

$(\text{Mass of parent(g)}) * (\text{Parm Activity (uCi/g)}) * (\text{conversion dpm to uCi}) / (\text{Dilution Vol}) = \text{Parent Activity (dpm/mL)}$

$(\text{Mass of parent(g)}) * (\text{Parm Activity (uCi/g)}) * (\text{conversion dpm to uCi}) / \text{Density (g/mL)} / (\text{Dilution Vol}) = \text{Parent Activity (dpm/g)}$

$(5.3419 \text{ g}) * (18.84 \text{ uCi/g}) * (2220000 \text{ dpm/uCi}) / (100 \text{ mL}) = 2234238.9912 \text{ dpm/mL}$

$(5.3419 \text{ g}) * (18.84 \text{ uCi/g}) * (2220000 \text{ dpm/uCi}) / (1.0785 \text{ g/mL}) / (100 \text{ mL}) = 2071617.0528 \text{ dpm/g}$

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
01/05/1994	Genie Bost	.0058	100	445-96-2-B	120.1 dpm/ml	01/05/1995	01/05/1996
09/10/2004	Amanda Fehr	.0325	1000	445-96-2-BB	67.328 dpm/mL	09/10/2005	09/10/2006
01/05/1994	Genie Bost	.0025	100	445-96-2-C	51.77 dpm/ml	01/05/1995	01/05/1996
05/27/2005	Brenda Burke	.000246	100	445-96-2-CC	5.10613 dpm/mL	05/31/2005	05/31/2006
03/25/1994	Genie Bost	.0064	100	445-96-2-D	132.53 dpm/ml	01/05/1995	01/05/1996
08/16/2005	Brenda Burke	.001224	500	445-96-2-DD	5.07144 dpm/mL	08/18/2007	08/18/2008
08/04/1994	Genie Bost	.0094	100	445-96-2-E	194.65 dpm/ml	01/05/1995	01/05/1996
10/13/2005	Brenda Burke	.0017	500	445-96-2-EE	7.0435 dpm/mL	11/15/2005	11/15/2006
08/04/1994	Genie Bost	.0046	100	445-96-2-F	95.25 dpm/ml	01/05/1995	01/05/1996
10/14/2005	Mary Aders	.0141	500	445-96-2-FF	58.4196 dpm/mL	10/14/2005	10/14/2006
09/01/1994	Genie Bost	.0031	100	445-96-2-G	64.19 dpm/ml	01/05/1995	01/05/1996
05/10/2006	Mary Aders	2.0753	1000	445-96-2-GG	4299.227 dpm/mL	09/30/2008	09/30/2009
10/17/1994	Genie Bost	.0969	100	445-96-2-H	2006.52 dpm/ml	01/05/1995	01/05/1996
06/07/2006	Mary Aders	.0365	1000	445-96-2-HH	75.614 dpm/mL	06/19/2006	06/19/2007
02/06/1995	Genie Bost	.0043	100	445-96-2-I	89.04 dpm/ml	01/05/1995	01/05/1996
05/11/2006	Brenda Burke	.000009739	100	445-96-2-II	.201761 dpm/mL	07/26/2006	07/26/2007
07/20/1995	Theresa Austin	.0041	100	445-96-2-J	84.9 dpm/ml	01/05/1995	01/05/1996
05/01/2007	Daniel Roy	.0352	1000	445-96-2-JJ	72.9209 dpm/ml	04/30/2008	04/30/2009
08/10/1995	Garret Ray	.0952	100	445-96-2-K	1971.32 dpm/ml	01/05/1995	01/05/1996
06/12/2007	Julie Strock	.01038	250	445-96-2-KK	22.1496 dpm/mL	05/28/2008	05/28/2009

09/11/1995	Theresa Austin	1.0525	100	445-96-2-L	21794.23 dpm/ml	01/05/1995	01/05/1996
09/11/1995	Theresa Austin	.5107	100	445-96-2-L-1	111.3 dpm/ml	01/05/1995	01/05/1996
04/28/1998	Richard Kinney	.1264	100	445-96-2-M	2617.4 dpm/ml	04/28/1998	04/28/1999
11/01/2007	Eric Williamson	.001274	500	445-96-2-MM	5.27945 dpm/mL	04/06/2008	04/06/2010
10/12/1998	Gregory Smith	.1348	100	445-96-2-N	2791.32 dpm/mL	01/05/1995	01/05/1996
01/25/1999	Gregory Smith	1.9382	100	445-96-2-N-1	50.16 dpm/ml	01/05/1995	01/05/1996
04/19/2008	Daniel Roy	.0424	1000	445-96-2-NN	87.8366 dpm/ml	04/16/2009	04/16/2010
04/21/1999	Greg Smith	.1645	100	445-96-2-O	3406.32 dpm/mL	04/21/1999	04/21/2000
07/27/1999	Gregory Smith	1.567	100	445-96-2-O-2	50.56 dpm/ml	05/13/1999	05/13/2000
10/12/1999	Richard Kinney	1.5589	100	445-96-2-O-3	50.31 dpm/mL	05/13/1999	05/13/2000
04/21/1999	Greg Smith	1.5309	100	445-96-2-O-1	49.4 dpm/mL	04/21/1999	04/21/2000
11/10/1999	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 5/15/2009	Isotope	Value	Uncertainty
	445-96-2-SS #1	1.360	0.1690
	445-96-2-SS #2	1.370	0.1690
	445-96-2-SS #3	1.290	0.1590
Mean Value (Counting) =	1.340	101.99	Pass
Stdev =	0.043588989	Rule 3 (Pass/Fail)	
Target =	1.314		
Lower Limit =	1.252822021		
Upper Limit =	1.427177979		
Rule 1 Pass/Fail	Pass		
Two sigma =	0.087177979		
10 % of Mean =	0.134		
Rule 2 (Pass/Fail)	Pass		

The analyst prepared three standard verification sources for standard **445-96-2-SS** using 0.1 mL for each source. Each standard was combined with 0.1 mL of **Cm-244** standard **0533-O** and 50 micrograms of neodymium carrier in a disposable centrifuge tube. Each standard was diluted with 4 mL of 2 M HCl and 6 mL of DI Water. Two mL of 48% HF was added to precipitate Nd (and Americium) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for Am-243 were calculated by comparison to Am-241 certified values.

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements

Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.

Rule 3 = The determined mean value shall be within 5% of the certificate value.

Mary G. Aders 5/15/09
Rahab 07509



NATIONAL PHYSICAL LABORATORY

Teddington Middlesex UK TW11 0LW Telephone +44 20 8977 3222

Certificate of Calibration



0478

PLUTONIUM-236 SOLUTION R37-02

This certificate is issued in accordance with the laboratory accreditation requirements of the United Kingdom Accreditation Service. It provides traceability of measurement to recognised national standards, and to units of measurement realised at the National Physical Laboratory or other recognised national standards laboratories. This certificate may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.

FOR: GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29407
USA

FOR THE ATTENTION OF: Mr Tim Winters

NPL PRODUCT CODE: R37-02

IDENTIFICATION: A09881

DESCRIPTION: An aqueous solution of ^{236}Pu also containing 2 mol dm^{-3} of nitric acid. The solution is contained in a flame sealed ampoule of type Q and nominal volume 5 ml (squat) as defined in BS 795:1983.

DATE(S) OF CALIBRATION: 26 June 2009 to 1 July 2009

INTENDED USE: Calibration of instruments for response to ^{236}Pu

STORAGE: The material may be stored at room temperature in a suitably sealed container. Flame-sealed glass ampoules are recommended for long-term storage. Regulatory conditions may apply to the manner in which this material is stored.

MEASUREMENTS

The samples were prepared by gravimetric dilution of a ^{236}Pu solution, which had been previously standardised using liquid scintillation counting. The accuracy of the dilution factor was checked using liquid scintillation counting.

Reference: 2009100356

Page 1 of 3

Date of Issue: 4 November 2009

Signed:

(Authorised Signatory)

Checked by:

Name: Dr Arvic Harms

for Managing Director

Page 1582 of 1545

RESULTS

Principal radionuclide:	^{236}Pu
Reference time:	2009-07-01 12:00 UTC
Activity concentration of principal radionuclide:	170.8 Bq g^{-1}
Expanded uncertainty:	$\pm 0.6 \text{ Bq g}^{-1} (\pm 0.36 \%)$
Contaminants present:	$^{226}\text{Ra}, ^{232}\text{U}, ^{228}\text{Th}, ^{237}\text{Np}$
Activity concentration of ^{226}Ra :	11.0 mBq g^{-1}
Expanded uncertainty:	$\pm 4.0 \text{ mBq g}^{-1} (\pm 36 \%)$
Activity concentration of ^{232}U :	0.67 Bq g^{-1}
Expanded uncertainty:	$\pm 0.12 \text{ Bq g}^{-1} (\pm 18 \%)$
Activity concentration of ^{228}Th :	11.38 mBq g^{-1}
Expanded uncertainty:	$\pm 0.46 \text{ mBq g}^{-1} (\pm 4 \%)$
Activity concentration of ^{237}Np :	5.00 mBq g^{-1}
Expanded uncertainty:	$\pm 0.34 \text{ mBq g}^{-1} (\pm 8 \%)$
Sample Mass:	$4.97 \text{ g} \pm 0.02 \text{ g}$

UNCERTAINTIES

The reported uncertainties are based on standard uncertainties multiplied by a coverage factor $k=2$, providing a level of confidence of approximately 95 %. The uncertainty evaluations have been carried out in accordance with UKAS requirements.

NOTES

- [1]. The reported reference time is stated consistent with the format given in ISO 8601:2004. UTC is the abbreviation for Universal Time, Coordinated. The date is stated in the format YYYY-MM-DD such that 2008-09-01 represents 1 September 2008.
- [2]. The recommended half life of ^{236}Pu is 1044 (6) days and is taken from the evaluations published in *Nuclear Data Sheets*.
- [3]. The recommended half life of ^{226}Ra is $5.844 (50) \times 10^5$ days and is taken from the evaluations of the *Decay Data Evaluation Project*, see for example www.nucleide.org/DDEP.htm.
- [4]. The recommended half life of ^{232}U is 25800 (800) days and is taken from the evaluations of the *Decay Data Evaluation Project*, see for example www.nucleide.org/DDEP.htm.
- [5]. The recommended half life of ^{237}Np is $7.83 (6) \times 10^8$ days and is taken from the evaluations of the *Decay Data Evaluation Project*, see for example www.nucleide.org/DDEP.htm.
- [6]. The recommended half life of ^{228}Th is 698.60 (46) days and is taken from the evaluations of the *Decay Data Evaluation Project*, see for example www.nucleide.org/DDEP.htm.

UNCERTAINTIES

The reported uncertainties are based on standard uncertainties multiplied by a coverage factor $k=2$, providing a level of confidence of approximately 95 %. The uncertainty evaluations have been carried out in accordance with UKAS requirements.

Standard Traceability Log Rad

Source Material Info	
Parent Code:	1430
Prepared By:	Ashley Drochter
Carrier Conc:	2 M HNO3
Reference Date:	07/01/2009
Ampoule Mass (g):	4.97 g
Uncertainty:	+/- .36 %
LogBook No:	RC-S-051-149

A Solution Material Info	
Isotope:	Plutonium-236
Prepared By:	Ashley Drochter
Prep Date:	01/27/2010
Verification Date:	01/27/2010
Expiration Date:	01/27/2011
Primary Code:	1430-A
Dilution(mL):	100 mL
Mass of Parent(g):	4.8051 g
Density(g/mL):	1.0610
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

$(\text{Mass of parent(g)}) * (\text{Parm Activity (Bq/g)}) * (\text{conversion dpm to Bq}) / (\text{Dilution Vol}) = \text{Parent Activity (dpm/mL)}$

$(\text{Mass of parent(g)}) * (\text{Parm Activity (Bq/g)}) * (\text{conversion dpm to Bq}) / \text{Density (g/mL)} / (\text{Dilution Vol}) = \text{Parent Activity (dpm/g)}$

$(4.8051 \text{ g}) * (170.8 \text{ Bq/g}) * (60 \text{ dpm/Bq}) / (100 \text{ mL}) = 492.4266 \text{ dpm/mL}$

$(4.8051 \text{ g}) * (170.8 \text{ Bq/g}) * (60 \text{ dpm/Bq}) / (1.0610 \text{ g/mL}) / (100 \text{ mL}) = 464.1156 \text{ dpm/g}$

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
01/27/2010	Bethany Fiem	33.0429	200	1430-B	76.6786262 dpm/mL	01/27/2010	01/27/2011
03/01/2010	Ashley Drochter	15.2331	200	1430-C	35.3496 dpm/mL	03/01/2010	03/01/2011

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Plutonium-236 Standard 1430-B

	Isotope	Value	Uncertainty
A. Drochter 1/29/2010	1430-B	3.080	0.4720
	1430-B	3.000	0.4660
	1430-B	2.960	0.4740
Mean Value (Counting) =	3.013	100.4268	% of Known Value
Stdev =	0.061101009		
Target =	3.00		
Lower Limit =	2.891131315		
Upper Limit =	3.135535352		
Rule 1 Pass/Fail	Pass	Pass	Pass
Two sigma =	0.122202019		
10 % of Mean =	0.301333333		
Rule 2 (Pass/Fail)	Pass		

The analyst prepared three standard verification sources for standard 1430-B using 0.1 mL for each source. Each standard was combined with 0.1 mL of Pu 239 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. After approximately ten minutes, 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-236 were calculated by comparison to Pu-239 certified values.

Signature 1/28/10
2/1/10



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	
Parent Code:	1283
Prepared By:	Daniel Roy
Carrier Conc:	1M HNO3
Reference Date:	12/09/2008
Ampoule Mass (g):	5.20453 g
Uncertainty:	+/- 5 %
LogBook No:	RC-S-051-002

A Solution Material Info	
Isotope:	Uranium-232
Prepared By:	Daniel Roy
Prep Date:	12/16/2008
Verification Date:	12/30/2008
Expiration Date:	12/30/2009
Primary Code:	1283-A
Dilution(mL):	100 mL
Mass of Parent(g):	5.0245 g
Density(g/mL):	1.0285
Balance ID:	

Calculations Converting parent activity to dpm/mL|dpm/g

$(\text{Mass of parent(g)}) * (\text{Parm Activity (Bq)}) * (\text{conversion dpm to Bq}) / (\text{Ampoule Mass(g)} * (\text{Dilution Vol})) = \text{Parent Activity (dpm/mL)}$
$(\text{Mass of parent(g)}) * (\text{Parm Activity (Bq)}) * (\text{conversion dpm to Bq}) / \text{Density} / (\text{Ampoule Mass (g)} * (\text{Dilution Vol})) = \text{Parent Activity (dpm/g)}$
$(5.0245 \text{ g}) * (3754 \text{ Bq}) * (60 \text{ dpm/Bq}) / (5.20453 \text{ g} * 100 \text{ mL}) = 2174.4872 \text{ dpm/mL}$
$(5.0245 \text{ g}) * (3754 \text{ Bq}) * (60 \text{ dpm/Bq}) / (1.0285 \text{ g/mL}) / (5.20453 \text{ g} * 100 \text{ mL}) = 2114.1700 \text{ dpm/g}$

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
12/16/2008	Daniel Roy	25.1813	1000	1283-B	53.2375 dpm/ml	12/16/2008	12/16/2009
12/30/2008	Tina Schoneman	2.05	250	1283-C	17.336 dpm/mL	12/02/2009	12/02/2010
12/30/2008	Tina Schoneman	.49	250	1283-D	4.1438 dpm/mL	01/09/2009	01/09/2010
01/14/2009	Mary Aders	25.0528	1000	1283-E	52.9659 dpm/ml	01/15/2009	01/15/2010
12/02/2009	Julie Strock	2.076	250	1283-F	17.5561 dpm/mL	01/09/2009	12/30/2009
12/02/2009	Julie Strock	.517	250	1283-G	4.3721 dpm/mL	01/08/2010	12/02/2010
12/09/2009	Ashley Drochter	21.56	1000	1283-H	45.58 dpm/mL	12/09/2009	12/09/2010

Verification for Uranium-232 Standard 1283-H

Analyst: A. Drochter
Date: 12/10/09

Serial #	Value	Uncertainty
1283-H N1	2.020	0.238
1283-H N2	2.000	0.234
1283-H N3	2.060	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: ALPHA SPECTROMETER

Batch ID: 957123

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
247782001	SAMPLE	JXH2	1233	03-MAR-10 20:38	DONE		
247782002	SAMPLE	JXH2	1234	03-MAR-10 20:38	DONE		
247782003	SAMPLE	JXH2	1237	03-MAR-10 20:38	DONE		
247782004	SAMPLE	JXH2	1238	03-MAR-10 20:38	DUSE		
247782005	SAMPLE	JXH2	1239	03-MAR-10 20:38	DONE		
247782006	SAMPLE	JXH2	1240	03-MAR-10 20:38	DONE		
247782007	SAMPLE	JXH2	1241	03-MAR-10 20:38	DONE		
247782008	SAMPLE	JXH2	1242	03-MAR-10 20:39	DONE		
247782009	SAMPLE	JXH2	1243	03-MAR-10 20:39	DONE		
247782010	SAMPLE	JXH2	1244	03-MAR-10 20:39	DONE		
247782011	SAMPLE	JXH2	1245	03-MAR-10 20:39	DONE		
247782012	SAMPLE	JXH2	1246	03-MAR-10 20:39	DONE		
247782013	SAMPLE	JXH2	1247	03-MAR-10 20:39	DONE		
247782014	SAMPLE	JXH2	1248	03-MAR-10 20:39	DONE		
247782015	SAMPLE	JXH2	1249	03-MAR-10 20:39	DONE		
247784002	SAMPLE	JXH2	1250	03-MAR-10 20:39	DONE		
247790002	SAMPLE	JXH2	1251	03-MAR-10 20:39	DONE		
247790003	SAMPLE	JXH2	1252	03-MAR-10 20:39	DONE		
247855002	SAMPLE	JXH2	1253	03-MAR-10 20:39	DONE		
1202052216	MB	JXH2	1254	03-MAR-10 20:39	DONE		
1202052217	DUP	JXH2	1255	03-MAR-10 20:39	DONE		
1202052218	LCS	JXH2	1256	03-MAR-10 20:39	DONE		
247782004	SAMPLE	JXH2	1084	04-MAR-10 19:02	DONE		

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER

Batch ID: 957124

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
247782001	SAMPLE	JXH2	1048	01-MAR-10 18:21	DUSE		
247782002	SAMPLE	JXH2	1065	01-MAR-10 18:21	DONE		
247782003	SAMPLE	JXH2	1066	01-MAR-10 18:21	DUSE		
247782004	SAMPLE	JXH2	1067	01-MAR-10 18:21	DONE		
247782005	SAMPLE	JXH2	1068	01-MAR-10 18:21	DUSE		
247782006	SAMPLE	JXH2	1069	01-MAR-10 18:21	DONE		
247782007	SAMPLE	JXH2	1070	01-MAR-10 18:21	DUSE		
247782008	SAMPLE	JXH2	1071	01-MAR-10 18:21	DONE		
247782009	SAMPLE	JXH2	1072	01-MAR-10 18:21	DONE		
247782010	SAMPLE	JXH2	1073	01-MAR-10 18:21	DUSE		
247782011	SAMPLE	JXH2	1074	01-MAR-10 18:21	DONE		
247782012	SAMPLE	JXH2	1075	01-MAR-10 18:21	DUSE		
247782013	SAMPLE	JXH2	1076	01-MAR-10 18:21	DONE		
247782014	SAMPLE	JXH2	1083	01-MAR-10 18:21	DUSE		
247782015	SAMPLE	JXH2	1084	01-MAR-10 18:21	DONE		
247784002	SAMPLE	JXH2	1085	01-MAR-10 18:21	DONE		
247790002	SAMPLE	JXH2	1086	01-MAR-10 18:21	DONE		
247790003	SAMPLE	JXH2	1087	01-MAR-10 18:21	DONE		
247855002	SAMPLE	JXH2	1088	01-MAR-10 18:21	DONE		
1202052219	MB	JXH2	1089	01-MAR-10 18:21	DONE		
1202052220	DUP	JXH2	1090	01-MAR-10 18:21	DONE		
1202052221	LCS	JXH2	1091	01-MAR-10 18:21	DONE		
247782001	SAMPLE	JXH2	1040	03-MAR-10 07:24	DONE		
247782003	SAMPLE	JXH2	1044	03-MAR-10 07:24	DONE		
247782005	SAMPLE	JXH2	1045	03-MAR-10 07:24	DONE		
247782007	SAMPLE	JXH2	1046	03-MAR-10 07:24	DONE		
247782012	SAMPLE	JXH2	1048	03-MAR-10 07:24	DONE		
247782014	SAMPLE	JXH2	1065	03-MAR-10 07:24	DONE		
247782010	SAMPLE	JXH2	1077	04-MAR-10 19:54	DONE		

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER

Batch ID: 957125

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
247855002	SAMPLE	JXH2	1001	03-MAR-10 09:36	DONE		
1202052222	MB	JXH2	1002	03-MAR-10 09:36	DONE		
1202052223	DUP	JXH2	1003	03-MAR-10 09:36	DONE		
1202052224	LCS	JXH2	1004	03-MAR-10 09:36	DONE		
247782001	SAMPLE	JXH2	1113	03-MAR-10 19:47	DONE		
247782002	SAMPLE	JXH2	1114	03-MAR-10 19:47	DONE		
247782003	SAMPLE	JXH2	1115	03-MAR-10 19:47	DONE		
247782004	SAMPLE	JXH2	1118	03-MAR-10 19:47	DONE		
247782005	SAMPLE	JXH2	1119	03-MAR-10 19:47	DONE		
247782006	SAMPLE	JXH2	1120	03-MAR-10 19:47	DONE		
247782007	SAMPLE	JXH2	1121	03-MAR-10 19:48	DONE		
247782008	SAMPLE	JXH2	1122	03-MAR-10 19:48	DONE		
247782009	SAMPLE	JXH2	1123	03-MAR-10 19:48	DONE		
247782010	SAMPLE	JXH2	1124	03-MAR-10 19:48	DONE		
247782011	SAMPLE	JXH2	1125	03-MAR-10 19:48	DONE		
247782012	SAMPLE	JXH2	1126	03-MAR-10 19:48	DONE		
247782013	SAMPLE	JXH2	1127	03-MAR-10 19:48	DONE		
247782014	SAMPLE	JXH2	1128	03-MAR-10 19:48	DONE		
247782015	SAMPLE	JXH2	1167	04-MAR-10 09:05	DONE		
247784002	SAMPLE	JXH2	1168	04-MAR-10 09:05	DONE		
247790002	SAMPLE	JXH2	1169	04-MAR-10 09:05	DONE		
247790003	SAMPLE	JXH2	1170	04-MAR-10 09:06	DONE		

Instrument Run Log

Instrument Type: GAMMA SPECTROMETER

Batch ID: 957136

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
247784002	SAMPLE	MXR1	GAM02	05-MAR-10 10:25	DONE	CAN	29-OCT-09 00:00
247790002	SAMPLE	MXR1	GAM16	05-MAR-10 10:26	DONE	CAN	16-NOV-09 00:00
247790003	SAMPLE	MXR1	GAM23	05-MAR-10 10:26	DONE	CAN	02-JUN-09 00:00
247797001	SAMPLE	MXR1	GAM05	05-MAR-10 10:27	DONE	CAN	11-JUN-09 00:00
247797002	SAMPLE	MXR1	GAM07	05-MAR-10 10:28	DONE	CAN	20-JUL-09 00:00
247797003	SAMPLE	MXR1	GAM11	05-MAR-10 10:29	DONE	CAN	18-NOV-09 00:00
247797004	SAMPLE	MXR1	GAM04	05-MAR-10 10:29	DONE	CAN	05-MAY-09 00:00
247797005	SAMPLE	MXR1	GAM06	05-MAR-10 10:30	DONE	CAN	16-FEB-10 00:00
247809001	SAMPLE	MXR1	GAM15	05-MAR-10 10:31	DONE	CAN	03-FEB-10 00:00
247809002	SAMPLE	MXR1	GAM22	05-MAR-10 10:32	DONE	CAN	02-DEC-09 00:00
247809003	SAMPLE	MXR1	GAM01	05-MAR-10 10:33	DONE	CAN	12-JAN-10 00:00
247809004	SAMPLE	MXR1	GAM19	05-MAR-10 10:34	DONE	CAN	12-MAR-09 00:00
247809005	SAMPLE	MXR1	GAM14	05-MAR-10 10:35	DONE	CAN	06-MAR-09 00:00
247809006	SAMPLE	MXR1	GAM17	05-MAR-10 10:35	DONE	CAN	06-JAN-10 00:00
247809008	SAMPLE	MXR1	GAM18	05-MAR-10 10:36	DONE	CAN	23-APR-09 00:00
247809009	SAMPLE	MXR1	GAM21	05-MAR-10 10:37	DONE	CAN	28-JUL-09 00:00
247809012	SAMPLE	MXR1	GAM20	05-MAR-10 10:38	DONE	CAN	26-AUG-09 00:00
1202052272	MB	MXR1	GAM10	05-MAR-10 10:54	DONE	CAN	16-MAR-09 00:00
1202052273	DUP	MXR1	GAM02	05-MAR-10 13:05	DONE	CAN	29-OCT-09 00:00
1202052274	LCS	MXR1	GAM02	08-MAR-10 09:46	DONE	CAN	29-OCT-09 00:00

Instrument Run Log

Instrument Type: LSC

Batch ID: 960231

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
247774001	SAMPLE	KXK2	LSCBROWN	10-MAR-10 06:08	DONE		
247774002	SAMPLE	KXK2	LSCBROWN	10-MAR-10 06:17	DONE		
247774004	SAMPLE	KXK2	LSCBROWN	10-MAR-10 06:34	DONE		
247774005	SAMPLE	KXK2	LSCBROWN	10-MAR-10 08:10	DONE		
247774006	SAMPLE	KXK2	LSCBROWN	10-MAR-10 08:24	DONE		
247774007	SAMPLE	KXK2	LSCBROWN	10-MAR-10 08:33	DONE		
247774008	SAMPLE	KXK2	LSCBROWN	10-MAR-10 08:40	DONE		
247774009	SAMPLE	KXK2	LSCBROWN	10-MAR-10 08:42	DONE		
247774010	SAMPLE	KXK2	LSCBROWN	10-MAR-10 08:46	DONE		
247774011	SAMPLE	KXK2	LSCBROWN	10-MAR-10 08:55	DONE		
247790002	SAMPLE	KXK2	LSCBROWN	10-MAR-10 09:05	DONE		
247790003	SAMPLE	KXK2	LSCBROWN	10-MAR-10 09:17	DONE		
248137001	SAMPLE	KXK2	LSCBROWN	10-MAR-10 10:55	DONE		
248137002	SAMPLE	KXK2	LSCBROWN	10-MAR-10 12:34	DONE		
248137003	SAMPLE	KXK2	LSCBROWN	10-MAR-10 14:12	DONE		
248137004	SAMPLE	KXK2	LSCBROWN	10-MAR-10 15:50	DONE		
1202059613	MB	KXK2	LSCBROWN	10-MAR-10 17:28	DONE		
1202059614	DUP	KXK2	LSCBROWN	10-MAR-10 19:06	DONE		
1202059615	LCS	KXK2	LSCBROWN	10-MAR-10 20:44	DONE		