

Tuesday, March 02, 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: 10-2203
Per Agreement Number: 126310011
Project Cost Code: MR3A05529E00


Please analyse the enclosed samples
according to the schedule indicated:

SHIP DATE: 3/2/2010
TURNAROUND/REPORT DUE: 4/1/2010
TURNAROUND REQ'D: 30 Days

RAD SCREENING: Not Required
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:



PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:6020	1	RE36-10-7534	W	2/24/2010	
	SW-846:6850	1	RE36-10-7534	W	2/24/2010	
	SW-846:7470A	1	RE36-10-7534	W	2/24/2010	
	SW-846:9012A	1	RE36-10-7534	W	2/24/2010	

Thursday, March 04, 2010

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-2203C

LOS ALAMOS

REQUEST NUMBER: 10-2203

NATIONAL LABORATORY

ATTN: Valerie Davis

TURNAROUND/REPORT DUE: 4/1/2010

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
RE36-10-7534	1	POLY	METALS+U-GEL	Nitric Acid	W
RE36-10-7534	1	POLY	SW-846:6850	Ice	W
RE36-10-7534	1	POLY	TCN	Sodium Hydroxide	W

Relinquished By:

Date

Time

Received By:

Date

Time

 3/2/10 3:00

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Received for DISPOSAL By: Date

Time

Remarks:

Printed Name

Signature

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2485

EVENT NAME: 4th Qtr. FY09 - AOC 36-008 - Threemile Canyon

SAMPLE ID: RE36-10-7534

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		02/24/2010	MEDIA:	NA		OK	
TIME COLLECTED (HH:MM)		2 PM 12:22	SUB-MEDIA:	OTHER			
PRS ID:	36-008	OK	SAMPLE TECH CODE:	DC			
LOCATION ID:	UNK	36-610616	FIELD QC TYPE:	FR			
LOCATION TYPE:	GENERIC	OK	FIELD PREP:	UF			
TOP DEPTH:	0		SAMPLE USAGE:	QC			
BOTTOM DEPTH:	0		SCREEN/PORT DESC:				
FIELD MATRIX:	W		EXCAVATED: YES/NO/NA	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	METALS+U-GEL	1 LITER POLY	Nitric Acid	Y	
1		NO3NO2	250 ML POLY	Sulfuric Acid (Hydrogen Sulfate)	N	
1	normal	SW-846:6850	250 ML POLY	Ice	Y	
1	normal	TCN	500 ML POLY	Sodium Hydroxide	Y	

SAMPLE DESC: QC Sample of RE36-10-7488

SAMPLE COMMENTS: NA

LOCATION DESC: 8-47

FIELD SCREENING/MEASUREMENT RESULTS:


NA

COLLECTED BY (PRINT)

R. Sounders


REVIEWED BY (PRINT) J. MARIN

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) JON MARIN	2/25/10	(Printed Name)	2/25/10
(Signature) Jon R. Marin	UC	(Signature)	7150
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name)	07504m	(Printed Name)	
(Signature)		(Signature)	


DATA VALIDATION COVER SHEET	
5121-1 Data Validation Cover Sheet	Records Use only 

Section I.							
REQUEST NUMBER: <u>10-2203</u>		VALIDATION DATE: <u>04/22/10</u>		LAB CODE: <u>GEL</u>			
CONTRACT LABORATORY NAME: <u>GEL Laboratories LLC</u>							
VALIDATOR: <u>David Schwent</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 checked="" type="checkbox"/> LCMSMS PERCHLORATES				
<input type="checkbox"/> TPH-DRO	<input type="checkbox"/> METALS	<input type="checkbox"/> PCB CONGENERS	<input type="checkbox"/> ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS				
<input type="checkbox"/> GENERAL CHEMISTRY	<input type="checkbox"/> RADIOCHEMISTRY	<input type="checkbox"/> LCMSMS HIGH EXPLOSIVES					
<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 LCS %R of perchlorate was > the laboratory UAL. The associated sample result was an ND and, thus, was not qualified.							
2. It should be noted that the MS/MSD analyses were performed on a LANL sample from another RN and that the raw data for the parent sample was not included in the data package. No sample data were qualified as a result.							
Reviewed by: Allison Felix Level: 1 Date: 4/23/10							


VALIDATOR'S SIGNATURE: <u>David Schwant</u>		DATE: <u>04/22/10</u>
Form 5121-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project	

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 type="checkbox"/>	<input checked="" type="checkbox"/>	1. The Internal Standard (IS) relative retention time has shifted by more than 0.98 to 1.02 seconds.	R, PERC0	J, PERC0
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2. Required IS retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PERC0b	R, PERC0b
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3. The IS are count is <25% of the expected value.	UJ, PERC1a	J, PERC1a
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	4. The IS area count is <70% but >25% of the average of that obtained from the calibration standards.	UJ, PERC1b	J, PERC1b
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	5. The IS area count is >130% of the average of that obtained from the calibration standards.	UJ, PERC1c	J, PERC1c
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	6. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PERC1d	R, PERC1d
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7. The sample result is $\leq 5X$ the concentration of the related analyte in the method blank.	U, PERC4	N/A
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was $>5X$.	N/A	J+, PERC4a
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	9. The sample result is $\leq 5X$ the concentration of the related analyte in the trip blank, rinsate blank, and/or equipment blank.	U, PERC4d	N/A
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PERC4e	R, PERC4e
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	11. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, PERC7	J, PERC7
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	12. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.99.	UJ, R, PERC7a	J, PERC7a

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

Yes No N/A				Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	13. The ICV and/or CCV were recovered outside the method limits.	UJ, R, PERC7c	J, PERC7c
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	14. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, R, PERC7d	J, PERC7d
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	15. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, PERC7f	R, PERC7f
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	16. The affected analyte is considered not detected because ion abundance ratios did not meet specifications.	N/A	R, PERC8
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	17. The ion ratio documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	N/A	R, PERC8a
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	18. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ PERC9	J-, PERC9
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	19. The holding time was > 2 times the applicable holding time requirement.	R, PERC9a	J-, PERC9a
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	20. The LCS percent recovery was <10%. Follow the external laboratory limits.	R, PERC12	J-, PERC12
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	21. The LCS percent recovery was < the Lower Acceptance Limit but >10%. Follow the external laboratory limits.	UJ, PERC12a	J-, PERC12a
<input checked="" type="checkbox"/>	<input 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: WATER
 Extraction Batch ID: 262135
 Extraction Type: Filter/DAI
 Client Sample No. RE36-10-7534
 Date Received: 03-MAR-10
 GEL Job No (SDG): 10-2203
 GEL Sample ID: 248523001
 Date Filtered: 08-MAR-10
 Injection Volume (uL): 20

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0


% Solids:

CAS No.	Analyte [^]	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.05	.2	0.050	ug/L	U	1	17-MAR-10 05:50	per0316104a
	Perchlorate Isotope Ratio						1	17-MAR-10 05:50	per0316104a
14797-73-0	Perchlorate-101	.05	.2	0.050	ug/L	U	1	17-MAR-10 05:50	per0316104a
	Perchlorate-O(18)			0.468	ug/L		1	17-MAR-10 05:50	per0316104a


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


*Concentration =

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


DATA VALIDATION COVER SHEET	
5118-1 <div style="text-align: center; margin-top: 20px;">Data Validation Cover Sheet</div>	<div style="text-align: center; border-bottom: 1px solid black; margin-bottom: 10px;">Records Use only</div> <div style="text-align: center;">  Los Alamos <small>NATIONAL LABORATORY</small> <small>EST 1947</small> </div>

Section I.							
REQUEST NUMBER: <u>10-2203</u>		VALIDATION DATE: <u>04/22/10</u>		LAB CODE: <u>GEL</u>			
CONTRACT LABORATORY NAME: <u>GEL Laboratories LLC</u>							
VALIDATOR: <u>David Schwent</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 checked="" type="checkbox"/> METALS	<input type="checkbox"/> PCB CONGENERS	<input type="checkbox"/> ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS				
<input type="checkbox"/> GENERAL CHEMISTRY	<input type="checkbox"/> RADIOCHEMISTRY	<input type="checkbox"/> LCMSMS HIGH EXPLOSIVES					
<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 ICB and/or CCBs, K and Tl were detected. The associated K sample result was a detect $\leq 5X$ the greatest calibration blank concentration and, thus, was qualified UJ4b. The associated Tl sample result was an ND and, thus, was not qualified. 2. It should be noted that the matrix QC analyses were performed on LANL samples from other RNs and that the raw data for the parent samples were not included in the data package. No sample data were qualified as a result.							
Reviewed by: Allison Felix Level: 1 Date: 4/23/10							


DATA VALIDATION COVER SHEET	
5118-1	Records Use only
Data Validation Cover Sheet	 Los Alamos NATIONAL LABORATORY EST. 1943
VALIDATOR'S SIGNATURE: <u>David Schwartz</u>	DATE: <u>04/22/10</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				Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, I9	J-, I9
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2. The holding time was >2 times the applicable holding time requirement.	R, I9a	J-, I9a
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3. The instrument performance sample did not pass method acceptance criteria.	R, I16	R, I16
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	4. The mass calibration is not within 0.1 amu or %RSD is >5% for any isotope (Be, Mg, Co, In, Pb).	UJ, I16a	J, I16a
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	5. Samples were analyzed outside specific method tune time criteria.	N/A	J, I16b
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	6. The required instrument performance sample information is missing. Contact the SMO or external laboratory for information.	R, I16c	R, I16c
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, I7	J, I7
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, I7a	J, I7a
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9. The initial Calibration Verification (ICV) and/or Continuing Calibration Verification (CCV) were recovered outside the method-specific limits.	UJ, I7c	J, I7c
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, I7d	J, I7d
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	11. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, I7f	R, I7f
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	12. Metals interference check sample percent recover value is <50%.	R, I2	J-, I2

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

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

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

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

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

Yes No N/A (Check One)				Assign Qualifier Listed Below If Criterion = Yes	
				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: 10-2203

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 248523001

BASIS: As Received

DATE COLLECTED 24-FEB-10

CLIENT ID: RE36-10-7534

LEVEL: Low

DATE RECEIVED 03-MAR-10

MATRIX: WATER


%SOLIDS: 0

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	200	ug/L	U	68	200	200	1	P	HSC	03/30/10 17:54	033010B-1	962580
7440-36-0	Antimony	3	ug/L	U	1	3	3	1	MS	PRB	04/13/10 09:40	100412-7	962585
7440-38-2	Arsenic	30	ug/L	U	5	30	30	1	P	HSC	03/30/10 17:54	033010B-1	962580
7440-39-3	Barium	5	ug/L	U	1	5	5	1	P	HSC	03/30/10 17:54	033010B-1	962580
7440-41-7	Beryllium	0.50	ug/L	U	0.1	0.5	0.5	1	MS	PRB	04/12/10 21:53	100412-2	962585
7440-43-9	Cadmium	1	ug/L	U	0.11	1	1	1	MS	PRB	04/12/10 21:53	100412-2	962585
7440-70-2	Calcium	200	ug/L	U	50	200	200	1	P	HSC	03/30/10 17:54	033010B-1	962580
7440-47-3	Chromium	5	ug/L	U	1	5	5	1	P	HSC	03/30/10 17:54	033010B-1	962580
7440-48-4	Cobalt	5	ug/L	U	1	5	5	1	P	HSC	03/30/10 17:54	033010B-1	962580
7440-50-8	Copper	10	ug/L	U	3	10	10	1	P	HSC	03/30/10 17:54	033010B-1	962580
7439-89-6	Iron	60.5	ug/L	J	30	100	100	1	P	HSC	03/30/10 17:54	033010B-1	962580
7439-92-1	Lead	2	ug/L	U	0.5	2	2	1	MS	PRB	04/12/10 21:53	100412-2	962585
7439-95-4	Magnesium	300	ug/L	U	85	300	300	1	P	HSC	03/30/10 17:54	033010B-1	962580
7439-96-5	Manganese	5	ug/L	U	1	5	5	1	MS	PRB	04/12/10 21:53	100412-2	962585
7439-97-6	Mercury	0.20	ug/L	U	0.066	0.2	0.2	1	AV	JXL	03/13/10 08:16	031310W1-8	964196
7440-02-0	Nickel	5	ug/L	U	1.5	5	5	1	P	HSC	03/30/10 17:54	033010B-1	962580
7440-09-7	Potassium U,14b	223	ug/L		50	150	150	1	P	HSC	03/30/10 17:54	033010B-1	962580
7782-49-2	Selenium	30	ug/L	U	5	30	30	1	P	HSC	03/30/10 17:54	033010B-1	962580
7440-22-4	Silver	5	ug/L	U	1	5	5	1	P	HSC	03/30/10 17:54	033010B-1	962580
7440-23-5	Sodium	150	ug/L	J	100	300	300	1	P	HSC	03/30/10 17:54	033010B-1	962580
7440-28-0	Thallium	1	ug/L	U	0.3	1	1	1	MS	PRB	04/12/10 21:53	100412-2	962585
7440-61-1	Uranium	0.20	ug/L	U	0.05	0.2	0.2	1	MS	PRB	04/12/10 21:53	100412-2	962585
7440-62-2	Vanadium	5	ug/L	U	1	5	5	1	P	HSC	03/30/10 17:54	033010B-1	962580
7440-66-6	Zinc	10	ug/L	U	3.3	10	10	1	P	HSC	03/30/10 17:54	033010B-1	962580


Prep Information:


Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
962580	962579	SW846 3005A	50	mL	50	mL	03/15/10	BCD1
962585	962584	SW846 3005A	50	mL	50	mL	03/15/10	BCD1
964196	964195	SW846 7470A Prep	20	mL	20	mL	03/12/10	TXB3

DJS
04/22/10


DATA VALIDATION COVER SHEET	
5120-1 Data Validation Cover Sheet	Records Use only 

Section I.							
REQUEST NUMBER: <u>10-2203</u>		VALIDATION DATE: <u>04/22/10</u>		LAB CODE: <u>GEL</u>			
CONTRACT LABORATORY NAME: <u>GEL Laboratories LLC</u>							
VALIDATOR: <u>David Schwent</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 PESTICIDES/POLYCHLORINATED BIPHENYLS				
<input checked="" type="checkbox"/> GENERAL CHEMISTRY	<input type="checkbox"/> RADIOCHEMISTRY	<input type="checkbox"/> LCMSMS HIGH EXPLOSIVES					
<input type="checkbox"/> OTHER (DESCRIBE): <u>Total CN only</u>							
Section II. Completeness Check							
YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. CHAIN-OF-CUSTODY FORM(S)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6. RAW/BSS DATA
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2. CASE NARRATIVE	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7. QUALITY CONTROL FORMS
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3. SAMPLE RESULT FORMS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	8. QUANTITATION REPORTS
<input 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 analyses were performed on a LANL sample from another RN. No sample data were qualified as a result.							
Reviewed by: Allison Felix Level: 1 Date: 4/23/10							


DATA VALIDATION COVER SHEET	
5120-1 Data Validation Cover Sheet	Records Use only  Los Alamos NATIONAL LABORATORY EST. 1944
VALIDATOR'S SIGNATURE: <u>David Schwartz</u> DATE: <u>04/22/10</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 General Chemistry Analytical Data Validation Checklist	Records Use only 

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

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

Yes No N/A (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 24, 2010

Client SDG: 10-2203

Client Sample ID: RE36-10-7534
Sample ID: 248523001
Matrix: W
Collect Date: 24-FEB-10 12:00
Receive Date: 03-MAR-10
Collector: Client

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Flow Injection Analysis											
<i>SW9012A Cyanide, Total "As Received"</i>											
Cyanide, Total	U	ND	1.66	5.00	ug/L	1	AXC2	03/10/10	1107	963300	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	03/10/10	0948	963299

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

Thursday, March 04, 2010

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-2203C

LOS ALAMOS

REQUEST NUMBER: 10-2203

NATIONAL LABORATORY

ATTN: Valerie Davis

TURNAROUND/REPORT DUE: 4/1/2010

General Engineering Laboratories, Inc., Charleston, SC.

TURNAROUND REQ'D: 30

2040 Savage Rd

Charleston, SC 29407

LAB REQUEST COMMENTS:

248523

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
RE36-10-7534	1	POLY	METALS+U-GEL	Nitric Acid	W
RE36-10-7534	1	POLY	SW-846:6850	Ice	W
RE36-10-7534	1	POLY	TCN	Sodium Hydroxide	W

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

Tuesday, March 02, 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: 10-2203
Per Agreement Number: 126310011
Project Cost Code: MR3A05529E00

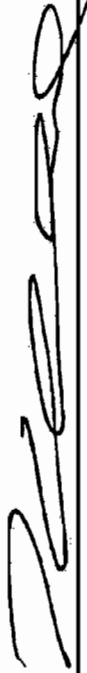
Please analyse the enclosed samples
according to the schedule indicated:

SHIP DATE: 3/2/2010
TURNAROUND/REPORT DUE: 4/1/2010
TURNAROUND REQ'D: 30 Days

RAD SCREENING: Not Required
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:



PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:6020	1	RE36-10-7534	W	2/24/2010	
	SW-846:6850	1	RE36-10-7534	W	2/24/2010	
	SW-846:7470A	1	RE36-10-7534	W	2/24/2010	
	SW-846:9012A	1	RE36-10-7534	W	2/24/2010	

Final Page of REQUEST NUMBER 10-2203



March 09, 2010

www.gel.com

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

Re: LANL ER Project
Work Order: 248523
SDG: 10-2203

Dear Ms. Valdez:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on March 03, 2010, and analyzed for General Chemistry, Metals and Perchlorates by LCMSMS. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

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

Sincerely,

Valerie Davis
Project Manager

Purchase Order: 72733-001-09
Chain of Custody: 10-2203
Enclosures

Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Work Order #: 248523
SDG: 10-2203

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Case Narrative

**Case Narrative for
Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Workorder #: 248523
SDG # : 10-2203**

March 09, 2010

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt The sample arrived at GEL Laboratories LLC, Charleston, South Carolina on March 03, 2010 for analysis. The sample was prepared/analyzed within the required holding time. Shipping container temperature was checked, documented, and within specifications. The samples were screened according to GEL Standard Operating Procedure. The sample was delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. The TCN container was received at a pH of 2. An aliquot was taken from the perchlorate container and preserved appropriately. There are no additional comments concerning sample receipt. Shipping container temperature was within specification (0 - 6C).

Sample Identification The laboratory received the following sample:

<u>Laboratory ID</u>	<u>Client ID</u>
248523001	RE36-10-7534

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: General Chemistry, Metals and Perchlorates by LCMSMS.

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 09 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

Thursday, March 04, 2010

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-2203C

LOS ALAMOS

REQUEST NUMBER: 10-2203

NATIONAL LABORATORY

ATTN: Valerie Davis

TURNAROUND/REPORT DUE: 4/1/2010

General Engineering Laboratories, Inc., Charleston, SC.

TURNAROUND REQ'D: 30

2040 Savage Rd

Charleston, SC 29407

LAB REQUEST COMMENTS:

248523

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
RE36-10-7534	1	POLY	METALS+U-GEL	Nitric Acid	W
RE36-10-7534	1	POLY	SW-846:6850	Ice	W
RE36-10-7534	1	POLY	TCN	Sodium Hydroxide	W

Relinquished By:

Date

Time



3/2/10

3:00

Printed Name

Signature

Received By:

Date

Time

Greg Tyler



3/3/10

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

Tuesday, March 02, 2010

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

Please analyse the enclosed samples
according to the schedule indicated:

SHIP DATE: 3/2/2010

TURNAROUND/REPORT DUE: 4/1/2010

TURNAROUND REQ'D: 30 Days

RAD SCREENING: Not Required

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:



These Samples are on:

LANL Request Number: 10-2203

Per Agreement Number: 126310011

Project Cost Code: MR3A05529E00

PRIORITY	METHOD CODE	CNTR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:6020	1	RE36-10-7534	W	2/24/2010	
	SW-846:6850	1	RE36-10-7534	W	2/24/2010	
	SW-846:7470A	1	RE36-10-7534	W	2/24/2010	
	SW-846:9012A	1	RE36-10-7534	W	2/24/2010	



SAMPLE RECEIPT & REVIEW FORM

Client: LANL		SDG/ARCOC/Work Order: 10-2203	
Received By: Greg Tyler		Date Received: 3/3/10	
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 1-5 14,15,17
3	Chain of custody documents included with shipment?	X			
4	Sample containers intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other (describe)
5	Samples requiring chemical preservation at proper pH?			X	Sample ID's, containers affected and observed pH: RE36-10-7534 TCN, PH = 2 If Preservation added, Lot#:
6	VOA vials free of headspace (defined as < 6mm bubble)?		X		Sample ID's and containers affected:
7	Are Encore containers present?			X	(If yes, immediately deliver to Volatiles laboratory)
8	Samples received within holding time?	X			Id's and tests affected:
9	Sample ID's on COC match ID's on bottles?	X			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?		X		Sample ID's affected: 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 3083 1C 7209 7850 3061 2C 7209 7850 3028 17C
 7209 7850 3040 1C 7209 7850 3072 3C
 7209 7850 3094 1C 7209 7850 3120 4C
 7209 7850 3109 2C 7209 7850 3110 5C
 7209 7850 3039 2C 7209 7850 3153 5C
 7209 7850 3050 2C 7209 7850 3006 14C
 7209 7850 3142 2C 7209 7850 2992 14C
 7209 7850 3131 2C 7209 7850 3071 15C

Subject: Sample Receipt for 3/3/10

From: Dionne Francis <Dionne.Francis@gel.com>

Date: Thu, 04 Mar 2010 11:32:48 -0500

To: "Keith R. Greene" <kgreene@lanl.gov>, Joylene Valdez <joylenev@lanl.gov>, Valerie Davis <vds@gel.com>

Keith,

RN 10-2212: the lab did not receive the AM241+ISOPU+ISOU container for sample RE11-10-1735.

RN 10-2211: the lab did not receive the Metals or CN+ANIONS+ClO4 container for sample RE11-10-1735.

RN 10-2210: the lab did not receive the 8270C+NMED Exp or 8260B containers for sample RE11-10-1735.

RN 10-2203: the CN container for sample RE36-10-7534 was rec'd with a pH of 2.

RN 10-2225: the Gross A/B and Ra226+228 containers were preserved prior to analysis.

The lab rec'd a number of containers without a COCs.

Thanks,
Dionne

--

Dionne Francis
Project Manager Assistant
GEL Laboratories, LLC
2040 Savage Road
Charleston, SC (USA) 29407
Direct: 843.769.7376 Ext. 4432
Main: 843.556.8171
Fax: 843.766.1178
E-mail: daf@gel.com
Web: www.gel.com

Let the Bible fill the memory, rule the heart, and guide the feet.

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

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 02MAR10
ACTWGT: 49.0 LB MAN
CAD: 0014176/CAFE2450

BILL SENDER

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

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 02MAR10
ACTWGT: 47.8 LB MAN
CAD: 0014176/CAFE2450

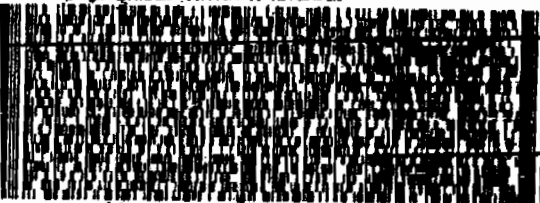
BILL SENDER

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 556-8171
REF: 6B010AMR3A0532VA00

LOS ALAMOS NATL LAB
TA00 BLDG 1237 DPU 03



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VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 556-8171
REF: 6B010AMR3A0532VA00

LOS ALAMOS NATL LAB
TA00 BLDG 1237 DPU 03



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2 of 2
WED - 03MAR A1
PRIORITY OVERNIGHT
TRK# 7209 7850 3083
ISRN 7209 7850 3072 0201

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1 of 3
WED - 03MAR A1
PRIORITY OVERNIGHT
TRK# 7209 7850 3040
ISRN 7209 7850 3040 0201

XX CHSA

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SC-US
CHS



LOS ALAMOS NATL LAB
TA00 BLDG 1237 DPU 03

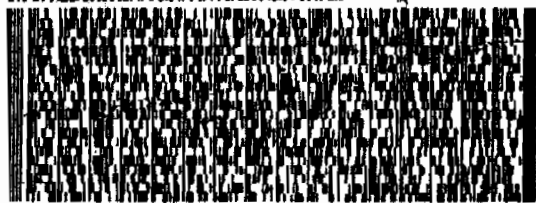
LOS ALAMOS, NM 87545
UNITED STATES US

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 556-8171
REF: 6B010AMR3A05529E00

LOS ALAMOS NATL LAB
TA00 BLDG 1237 DPU 03



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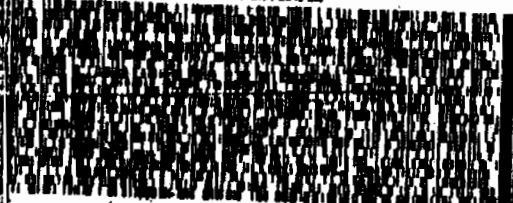
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UNITED STATES US

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 556-8171
REF: 6B010AMR3A05529E00

LOS ALAMOS NATL LAB
TA00 BLDG 1237 DPU 03



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ISRN 7209 7850 3094 0201

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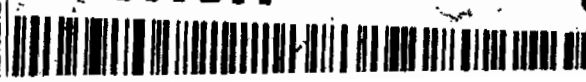
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2 of 3
WED - 03MAR A1
PRIORITY OVERNIGHT
TRK# 7209 7850 3109
ISRN 7209 7850 3094 0201

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SC-US
CHS



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

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 02MAR10
ACTWGT: 52.0 LB MAN
CAD: 0014176/CAFE2450

BILL SENDER

LOS ALAMOS NATL LAB
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

ACTWGT: 49.0 LB MAN
CAD: 0014176/CAFE2450

BILL SENDER

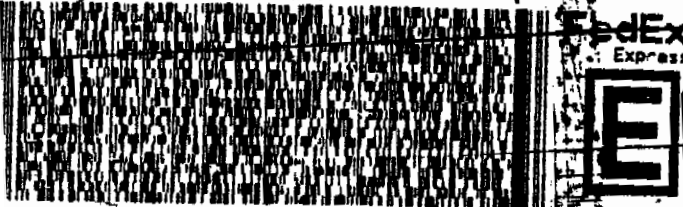
TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 556-8171

REF: 6B010AMR3A0532VA00

WED - 03MAR A1
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3 of 3
MPS# 7209 7850 3039
Matr# 7209 7850 3017 0201

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JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

VALERIE DAVIS
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(843) 556-8171

REF: 6B010AMR3A05529E00



3 of 3
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Matr# 7209 7850 3120 0201

XX CHSA

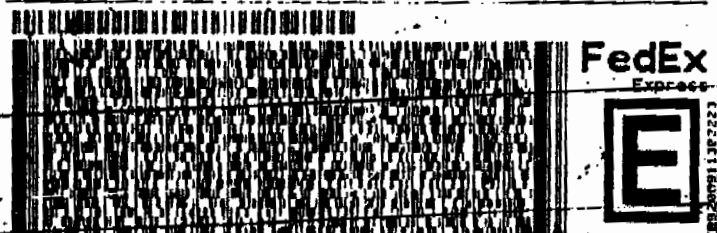


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GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407

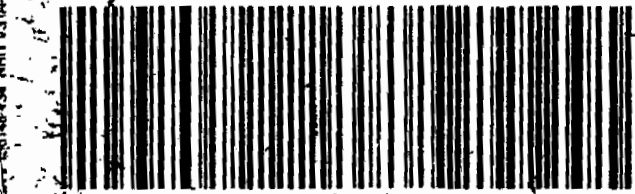
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REF: 6B010AMR3A0532VA00



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Matr# 7209 7850 3040 0201

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LOS ALAMOS NATL LAB
TA00 BLDG 1237 DPU 03

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REF: 6B010AMR3A05529E00



2 of 3
MPS# 7209 7850 3131
Matr# 7209 7850 3120 0201

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

SHIP DATE: 02MAR10
ACTWGT: 49.0 LB MAN
CAD: 0014176/CAFE2

LOS ALAMOS, NM 87545
UNITED STATES US

BILL SENDER

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

SHIP DATE: 02MAR10
ACTWGT: 49.0 LB MAN
CAD: 0014176/CAFE2450

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2040 SAVAGE RD

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(843) 556-8171

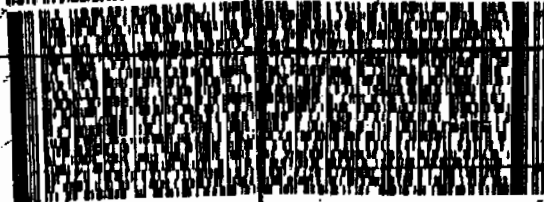
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2040 SAVAGE RD

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REF: 6B010AMR3A0532VA00



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

SHIP DATE: 02MAR10
ACTWGT: 29.0 LB MAN
CAD: 0014176/CAFE2450

LOS ALAMOS, NM 87545
UNITED STATES US

BILL SENDER

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

SHIP DATE: 02MAR10
ACTWGT: 48.0 LB MAN
CAD: 0014176/CAFE2450

LOS ALAMOS, NM 87545
UNITED STATES US

BILL SENDER

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GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 556-8171

REF: 6B010AMR3A05529E00

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GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 556-8171

REF: 6B010AMR3A05529E00

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TRK# 7209 7850 3120
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Matr# 7209 7850 3094 0201

WED - 03MAR A1
PRIORITY OVERNIGHT

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ORIGIN ID: SAFA (505) 565-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TAGG BLDG 1237 DPU 83

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 02MAR10
ACTWGT: 21 0-18 MON
LAD: 00141762CAFE2450

BILL SENDER

TO **VALERIE DAVIS**

**GENERAL ENGINEERING LAB
2040 SAVAGE RD**

CHARLESTON SC 29407

(843) 556-8171

REF: 68010AMR3A0532VA00

POSTAGE WILL BE PAID BY ADDRESSEE



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2 of 3
ZIPST 7209 7850 3028
Matr-N 7209 7850 3017 0201

WED 03MAR A1
PRIORITY OVERNIGHT

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Data Review Qualifier Flag Definition Sheet

Data Review Qualifier Definitions

Qualifier Explanation

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

LC/MS/MS PERCHLORATE ANALYSIS

**Perchlorate by LC/MSMS
Los Alamos National Laboratory (LANL)
SDG 10-2203**

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: 962136

Prep Batch Number: 962135

Sample Analysis

Sample ID	Client ID
248523001	RE36-10-7534
1202063761	Interference Check Sample (ICS)
1202063757	Method Blank (MB)
1202063758	Laboratory Control Sample (LCS)
1202063759	248407001(RE11-10-1721) Matrix Spike (MS)
1202063760	248407001(RE11-10-1721) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on an "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-067 REV# 6.

Calibration Information

Initial Calibration

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

CCV Requirements

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

CCB Requirements

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

10-2203-PERLCMS

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 recovered Perchlorate at 164% and Perchlorate-101 at 166%. The acceptance range is 85-115%. The high recovery may be the result of a spiking error at the preparation step, but note that the recoveries for the ICS and matrix spikes were all acceptable for the batch. Since the detections observed in the associated samples were less than the MDL, samples do not need to be re-extracted. The data is unaffected and is reported. Please see data exception report 805539.

QC Sample Designation

Client sample 248407001 (RE11-10-1721) from SDG 10-2188 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 report 805539 was generated for this SDG.

The LCS recovered Perchlorate at 164% and Perchlorate-101 at 166%. The acceptance range is 85-115%. The high recovery may be the result of a spiking error at the preparation step, but note that the recoveries for the ICS and matrix spikes were all acceptable for the batch. Since the detections observed in the associated samples were less than the MDL, samples do not need to be re-extracted. The data is unaffected and is reported.

Manual Integrations

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

Method Comments

The sample in this SDG was 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: Heather M. Mace Date: 03/26/10

SAMPLE DATA SUMMARY

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: WATER

Extraction Batch ID: 962135

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.

RE36-10-7534

Date Received: 03-MAR-10

GEL Job No (SDG): 10-2203

GEL Sample ID: 248523001

Date Filtered: 08-MAR-10

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte [^]	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.05	.2	0.050	ug/L	U	1	17-MAR-10 05:50	per0316104a
	Perchlorate Isotope Ratio						1	17-MAR-10 05:50	per0316104a
14797-73-0	Perchlorate-101	.05	.2	0.050	ug/L	U	1	17-MAR-10 05:50	per0316104a
	Perchlorate-O(18)			0.468	ug/L		1	17-MAR-10 05:50	per0316104a

[^] 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

QUALITY CONTROL SUMMARY

Perchlorate Laboratory Control Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 10-2203

Extract Batch Code: 962135

Date Filtered: 08-MAR-10

Matrix: WATER

Sample ID: 1202063758

Analyte [^]	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	0.200	.329	ug/L	164	*	85 - 115
Perchlorate Isotope Ratio		2.98				-
Perchlorate-101	0.200	.331	ug/L	166	*	85 - 115
Perchlorate-O(18)		.465	ug/L			-

[^] 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): 10-2203

Extract Batch Code: 962135

Date Filtered: 08-MAR-10

Matrix: WATER

Sample ID: 1202063761

Analyte [^]	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	0.200	.212	ug/L	106		70 - 130
Perchlorate Isotope Ratio		3.13				
Perchlorate-101	0.200	.203	ug/L	102		70 - 130
Perchlorate-O(18)		.505	ug/L			

[^] 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.

Dataset: C:\MassLynx\Perchlorate.PRO\per031610a.qld

Last Altered: Wednesday, March 17, 2010 9:01:09 AM Eastern Standard Time
Printed: Wednesday, March 17, 2010 9:41:10 AM Eastern Standard Time

Name: per0316090a

Date: 17-Mar-2010

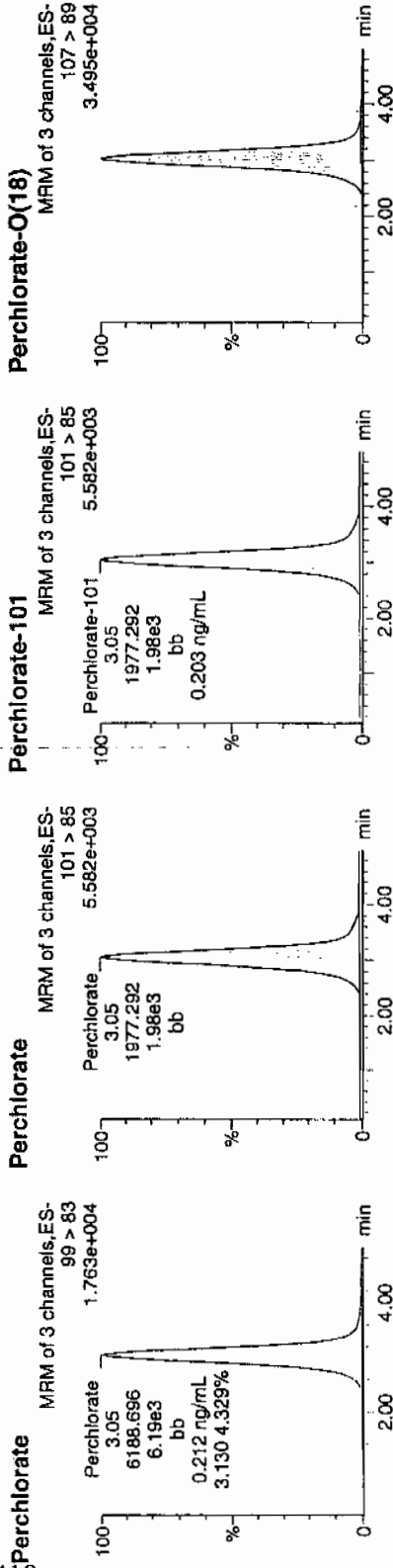
Time: 03:57:10

ID: 1202063761

Vial: 2:5,C

623
03-17-10

162134 | 1722 | 11



ID	Name	Trace	RT	Area	Response	Flags	Mod. Time	Mod. Date	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202063761	Perchlorate	99 > 83	3.05	6188.696	6188.696	bb			0.2119	105.93	5.93	34.417	3.13
1202063761	Perchlorate-101	101 > 85	3.05	1977.292	1977.292	bb			0.2034	101.68	1.68	395.237	
1202063761	Perchlorate-O(18)	107 > 89	3.04	12059.898	12059.898	bb			0.5047	100.94	0.94	4365.4...	

6188.696
1977.292
12059.898

Perchlorate Spike/Spike Duplicate Summary

Lab Name: General Engineering Laboratories

Lab Code: GEL

Extract Batch Code: 962135

GEL Job No (SDG): 10-2203

Date Extracted: 08-MAR-10

GEL MS/PS ID: 1202063759

Client ID: RE11-10-1721

GEL MSD/PSD ID: 1202063760

QC Type: MS

Compound [^]	Spike Added	Sample Conc	Units	MS Conc	MS Rec	#	MSD Conc	MSD Rec	#	RPD	#	RPD Limit	Recovery Limit
Perchlorate	0.200	0.00108	ug/L	0.198	98.5		.197	97.9		.596		30	75 - 125
Perchlorate Isotope Ratio	0	0.00		3.12			2.86			0			-
Perchlorate-101	0.200	0.00	ug/L	0.190	95.2		.207	103		8.19		30	75 - 125
Perchlorate-O(18)	0	0.454	ug/L	0.462			.455			1.64			-

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

Comments:

Perchlorate Initial Calibration Blank

Lab Name: General Engineering Laboratories GEL Job No.(SDG): 10-2203

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	16-MAR-10	per0316001a	IPB001
Perchlorate-101	0.00	0	NA	16-MAR-10	per0316001a	IPB001
Perchlorate	0.00	0	NA	16-MAR-10	per0316002a	IPB001
Perchlorate-101	0.00	0	NA	16-MAR-10	per0316002a	IPB001

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

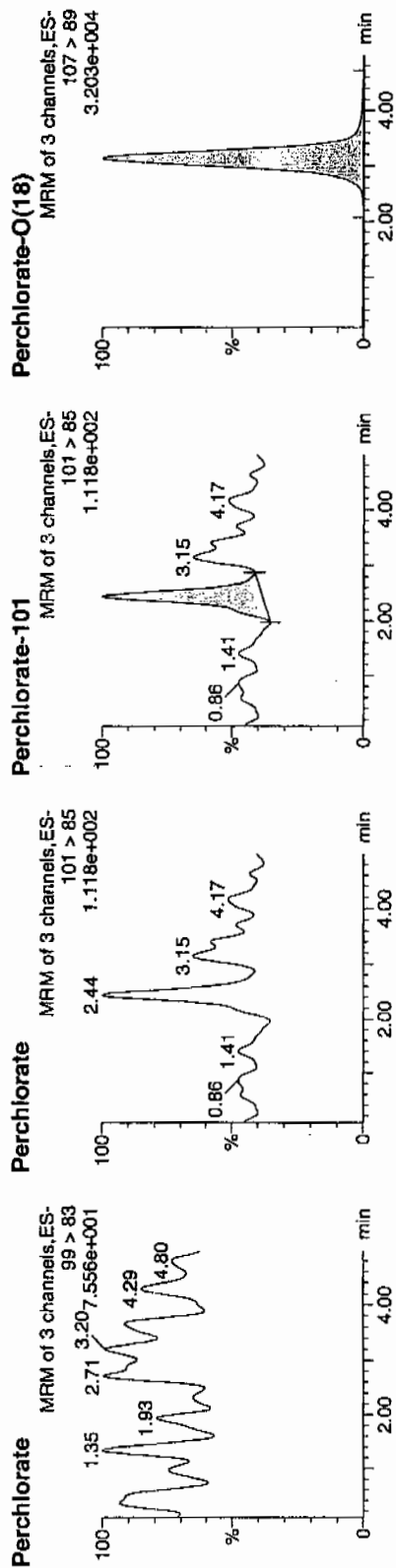
Dataset: C:\MassLynx\Perchlorate.PRO\per031610a.qld

Last Altered: Wednesday, March 17, 2010 9:01:09 AM Eastern Standard Time
Printed: Wednesday, March 17, 2010 9:41:10 AM Eastern Standard Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per031610a.mdb 17 Mar 2010 09:00:50
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per031610a.cdb 17 Mar 2010 09:01:07

Name: per0316001a
Date: 16-Mar-2010
Time: 16:00:32
ID: IPB001
Vial: 1:1,A

03-17-10



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	2.44	20.167	20.167	bb			0.0021	98.89	-1.11	25.880	
IPB001	Perchlorate-O(18)	107 > 89	3.14	11814.019	11814.019	bb			0.4944			1410.2...	

3/16/10

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

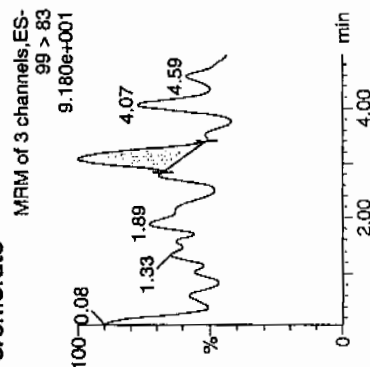
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Last Altered: Wednesday, March 17, 2010 9:01:09 AM Eastern Standard Time
Printed: Wednesday, March 17, 2010 9:41:10 AM Eastern Standard Time

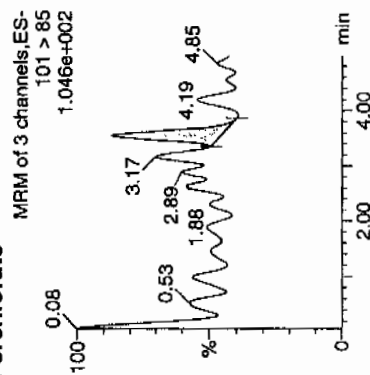
Name: per0316002a
Date: 16-Mar-2010
Time: 16:08:34
ID: IPB001
Vial: 1:1,A

03-17-10

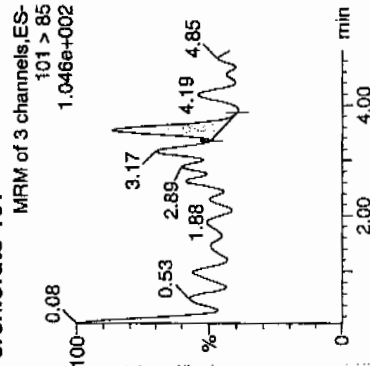
Perchlorate



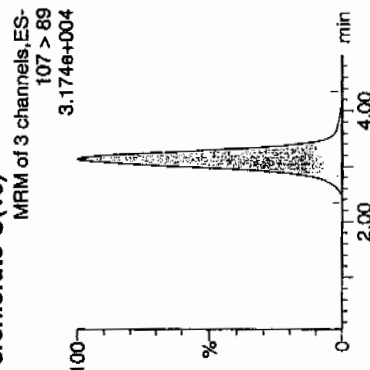
Perchlorate



Perchlorate-101



Perchlorate-O(18)



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB001	Perchlorate	99 > 83	3.07	11.152	11.152	bb			0.0004			4.095	1.32
IPB001	Perchlorate-101	101 > 85	3.56	8.474	8.474	bb			0.0009			17.995	
IPB001	Perchlorate-O(18)	107 > 89	3.14	11719.820	11719.820	bb			0.4905	98.10	-1.90	1197.1...	

0.004
20.0560
107
3/18/10

Perchlorate Continuing Calibration Blank

Lab Name: General Engineering Laboratories GEL Job No.(SDG): 10-2203

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	16-MAR-10	per0316008a	IPB002
Perchlorate-101	0.00	0	NA	16-MAR-10	per0316008a	IPB002
Perchlorate	0.00	0	NA	16-MAR-10	per0316010a	IPB003
Perchlorate-101	0.00	0	NA	16-MAR-10	per0316010a	IPB003
Perchlorate	0.00	0	NA	16-MAR-10	per0316015a	IPB004
Perchlorate-101	0.00	0	NA	16-MAR-10	per0316015a	IPB004
Perchlorate	0.00	0	NA	16-MAR-10	per0316023a	IPB005
Perchlorate-101	0.00	0	NA	16-MAR-10	per0316023a	IPB005
Perchlorate	0.00	0	NA	16-MAR-10	per0316027a	IPB006
Perchlorate-101	0.00	0	NA	16-MAR-10	per0316027a	IPB006
Perchlorate	0.00	0	NA	16-MAR-10	per0316036a	IPB007
Perchlorate-101	0.00	0	NA	16-MAR-10	per0316036a	IPB007
Perchlorate	0.00	0	NA	16-MAR-10	per0316049a	IPB008

Perchlorate Continuing Calibration Blank

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GEL Job No.(SDG): 10-2203

Lab Name: General Engineering Laboratories

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate-101	0.00	0	NA	16-MAR-10	per0316049a	IPB008
Perchlorate	0.00	0	NA	16-MAR-10	per0316060a	IPB009
Perchlorate-101	0.00	0	NA	16-MAR-10	per0316060a	IPB009
Perchlorate	0.00	0	NA	17-MAR-10	per0316073a	IPB010
Perchlorate-101	0.00	0	NA	17-MAR-10	per0316073a	IPB010
Perchlorate	0.00	0	NA	17-MAR-10	per0316086a	IPB011
Perchlorate-101	0.00	0	NA	17-MAR-10	per0316086a	IPB011
Perchlorate	0.00	0	NA	17-MAR-10	per0316099a	IPB012
Perchlorate-101	0.00	0	NA	17-MAR-10	per0316099a	IPB012
Perchlorate	0.00	0	NA	17-MAR-10	per0316112a	IPB013
Perchlorate-101	0.00	0	NA	17-MAR-10	per0316112a	IPB013

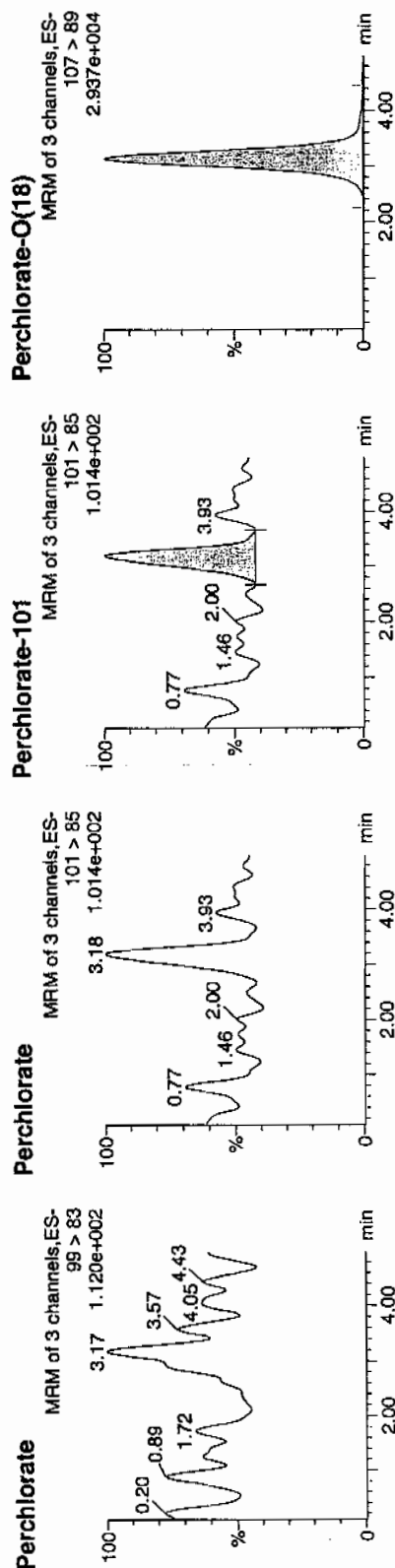
Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per031610a.qld

Last Altered: Wednesday, March 17, 2010 9:01:09 AM Eastern Standard Time
Printed: Wednesday, March 17, 2010 9:41:10 AM Eastern Standard Time

Name: per0316008a
Date: 16-Mar-2010
Time: 16:56:40
ID: IPB002
Vial: 1:1.A

03-17-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB002	Perchlorate	99 > 83	3.18	21.675	21.675	bb			0.0022	90.84	-9.16	2345.6...	0.00
IPB002	Perchlorate-101	101 > 85	3.14	10852.298	10852.298	bb			0.4542			8.964	
IPB002	Perchlorate-O(18)	107 > 89											

107
3/16/10

Quantify Sample Report MassLynx 4.0 SP4

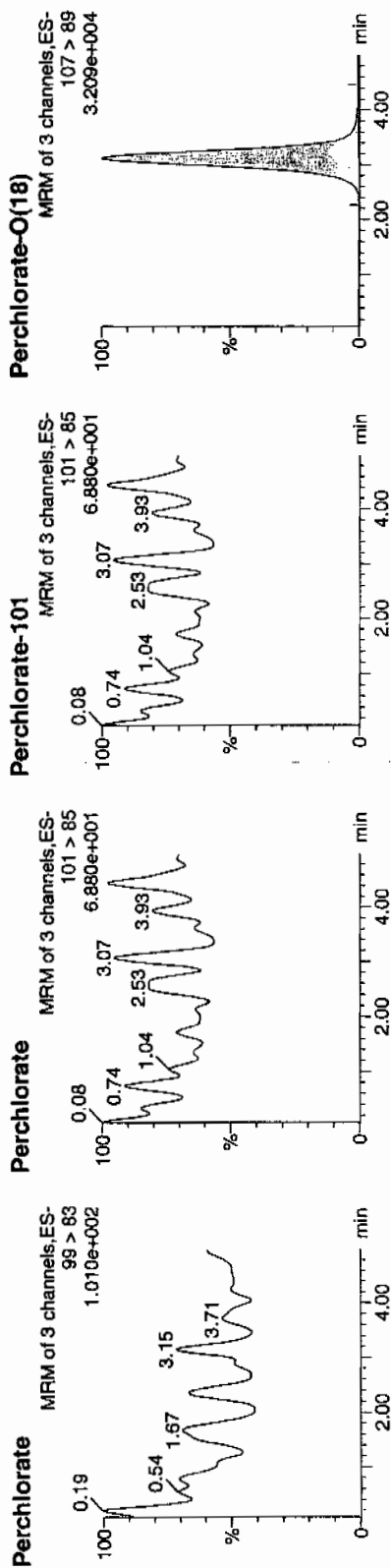
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per031610a.qld

Last Altered: Wednesday, March 17, 2010 9:01:09 AM Eastern Standard Time
 Printed: Wednesday, March 17, 2010 9:41:10 AM Eastern Standard Time

Name: per0316010a
 Date: 16-Mar-2010
 Time: 17:12:44
 ID: IPB003
 Vial: 1:1,A

03-17-10



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	3.12	11719.064	11719.064	bb			0.4905	98.09	-1.91	360.980	

107
3/18/10

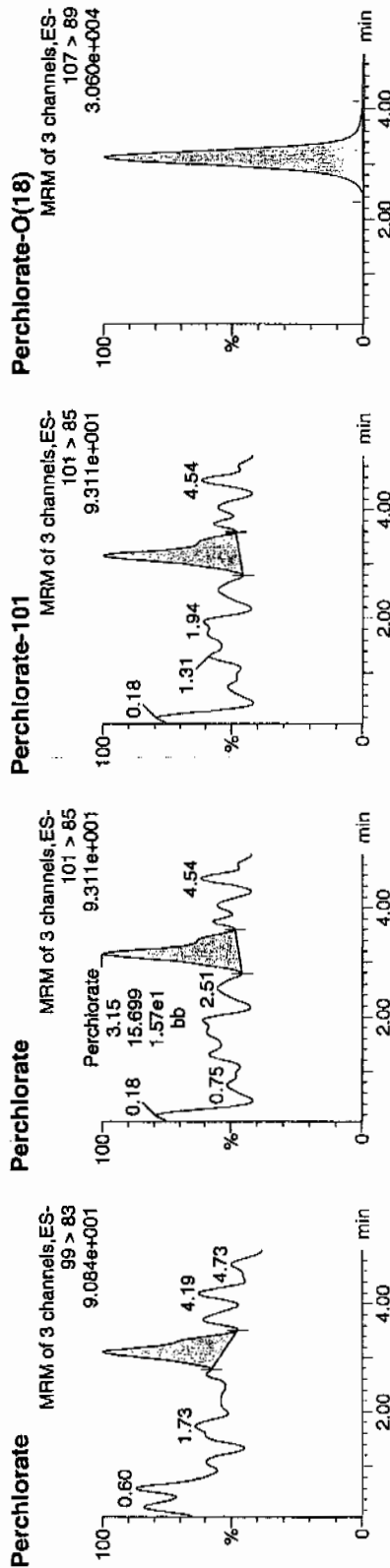
Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per031610a.qld

Last Altered: Wednesday, March 17, 2010 9:01:09 AM Eastern Standard Time
Printed: Wednesday, March 17, 2010 9:41:10 AM Eastern Standard Time

Name: per0316015a
Date: 16-Mar-2010
Time: 17:52:55
ID: IPB004
Vial: 1:1,A

25-17-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB004	Perchlorate	99 > 83	3.10	14.013	14.013	bb			0.0005			14.637	0.89
IPB004	Perchlorate-101	101 > 85	3.15	15.699	15.699	bb			0.0016			11.849	
IPB004	Perchlorate-O(18)	107 > 89	3.11	10917.076	10917.076	bb			0.4569	91.38	-8.62	4536.1...	

2594
20.0500
3/18/10

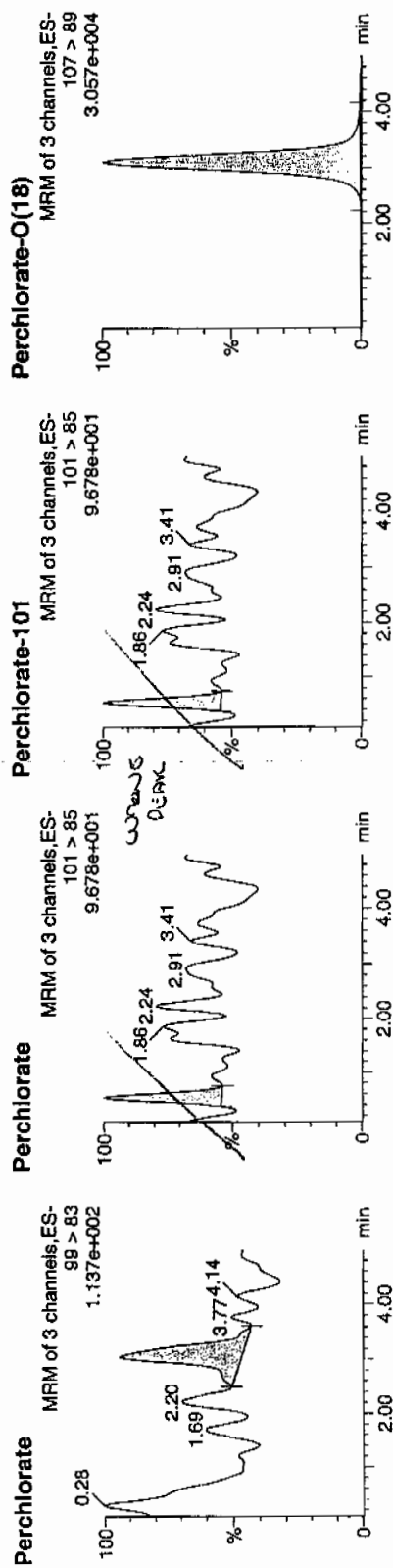
Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per031610a.qld

Last Altered: Wednesday, March 17, 2010 9:01:09 AM Eastern Standard Time
Printed: Wednesday, March 17, 2010 9:41:10 AM Eastern Standard Time

Name: per0316023a
Date: 16-Mar-2010
Time: 18:57:12
ID: IPB005
Vial: 1:1,A

03-17-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB005	Perchlorate	99 > 83	3.05	20.337	20.337	bb			0.0007	4.0	0.0500	38.968	2.53
IPB005	Perchlorate-101	101 > 85	0.53	8.036	8.036	bb			0.0008			12.160	
IPB005	Perchlorate-O(18)	107 > 89	3.10	10865.716	10865.716	bb			0.4547	90.95	-9.05	902.999	

μA7
3/18/10

Quantify Sample Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charliers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per031610a.qld

Last Altered: Wednesday, March 17, 2010 9:01:09 AM Eastern Standard Time
 Printed: Wednesday, March 17, 2010 9:41:10 AM Eastern Standard Time

Name: per0316027a

Date: 16-Mar-2010

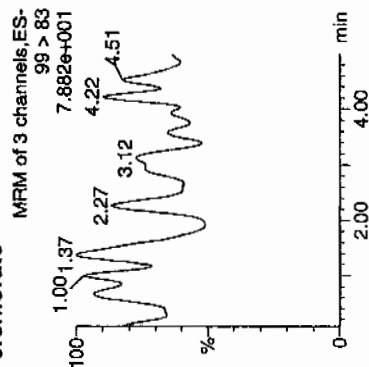
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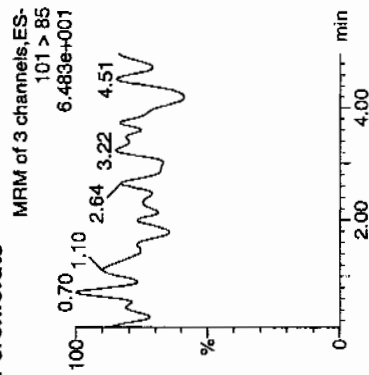
Vial: 1:1,A

03-17-10

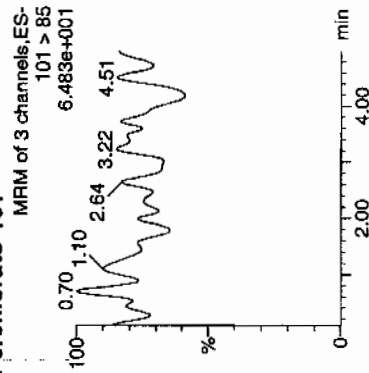
Perchlorate



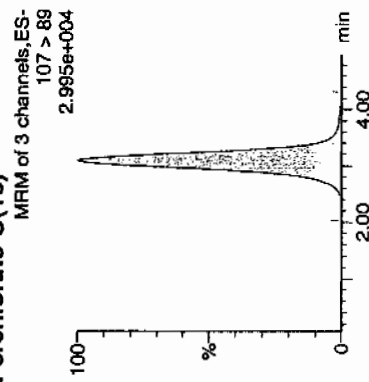
Perchlorate



Perchlorate-101



Perchlorate-O(18)



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion.Ratio
IPB006	Perchlorate	99 > 83											0.00
IPB006	Perchlorate-101	101 > 85											
IPB006	Perchlorate-O(18)	107 > 89	3.09	10701.523	10701.523	bb			0.4479	89.57	-10.43	2319.4...	

not
3/16/10

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

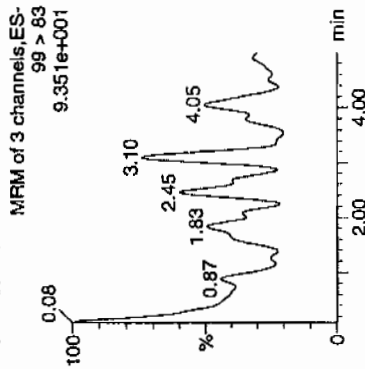
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Last Altered: Wednesday, March 17, 2010 9:01:09 AM Eastern Standard Time
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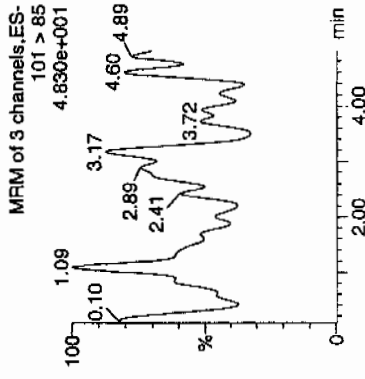
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Date: 16-Mar-2010
Time: 20:41:46
ID: IPB007
Vial: 1:1,A

03-17-10

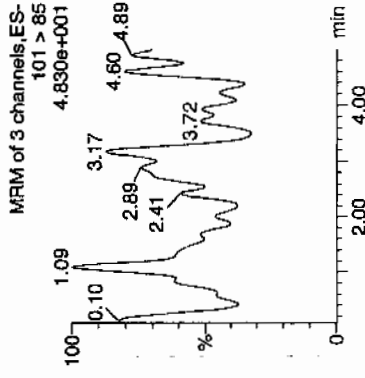
Perchlorate



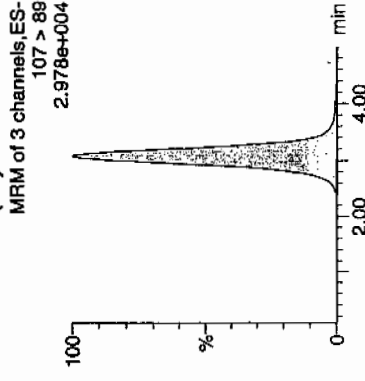
Perchlorate



Perchlorate-101



Perchlorate-O(18)



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB007	Perchlorate	99 > 83											0.00
IPB007	Perchlorate-101	101 > 85											
IPB007	Perchlorate-O(18)	107 > 89	3.09	10877.410	10877.410	bb			0.4552	91.05	-8.95	933.419	

447
3/18/10

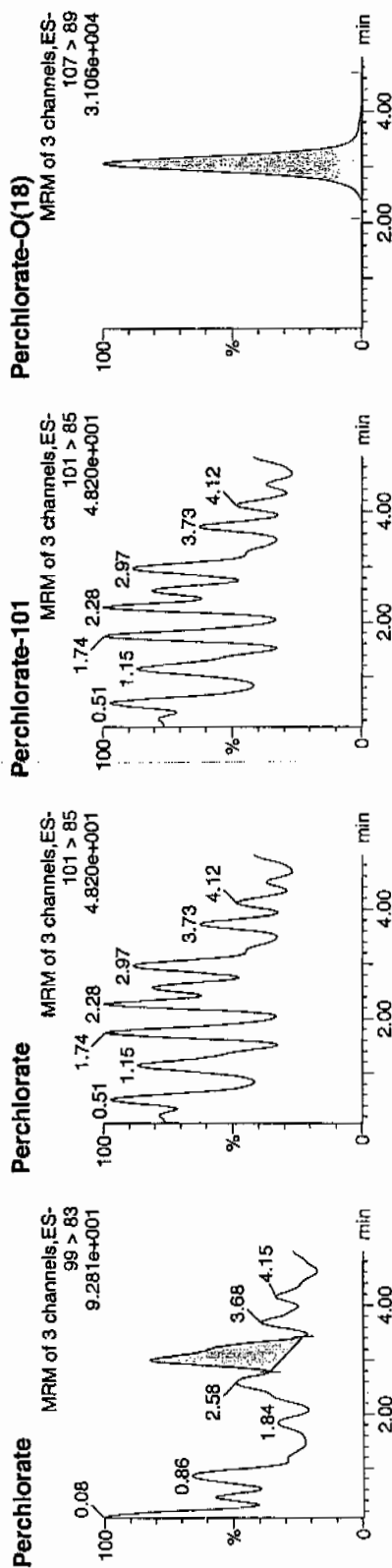
Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per031610a.qld

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Printed: Wednesday, March 17, 2010 9:41:10 AM Eastern Standard Time

Name: per0316049a
Date: 16-Mar-2010
Time: 22:26:24
ID: IPB008
Vial: 1:1,A

03-17-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion:Ratio
IPB008	Perchlorate	99 > 83	3.01	16.420	16.420	bb			0.0006	7.784		0.00	
IPB008	Perchlorate-101	101 > 85											
IPB008	Perchlorate-O(18)	107 > 89	3.06	11192.282	11192.282	bb			0.4684	93.68	-6.32	3454.6...	

μm7
3/18/10

Quantify Sample Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per031610a.qld

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Printed: Wednesday, March 17, 2010 9:41:10 AM Eastern Standard Time

Name: per0316060a

Date: 16-Mar-2010

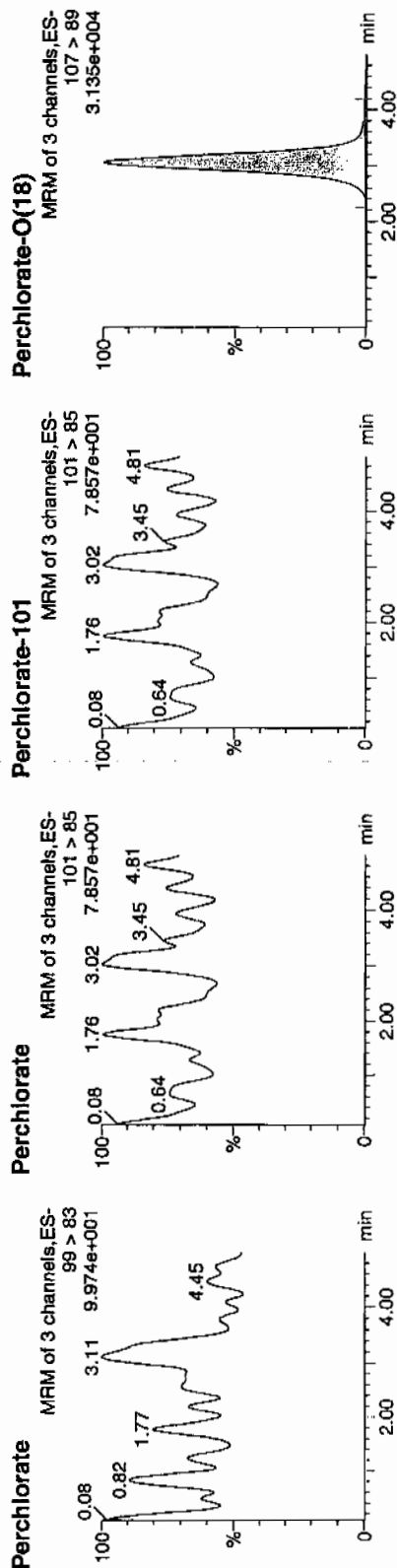
Time: 23:55:02

ID: IPB009

Vial: 1:1,A

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03-17-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB009	Perchlorate	99 > 83											0.00
IPB009	Perchlorate-101	101 > 85											
IPB009	Perchlorate-O(18)	107 > 89	3.05	11205.789	11205.789	bb			0.4690	93.79	-6.21	3795.6...	

4477
3/18/10

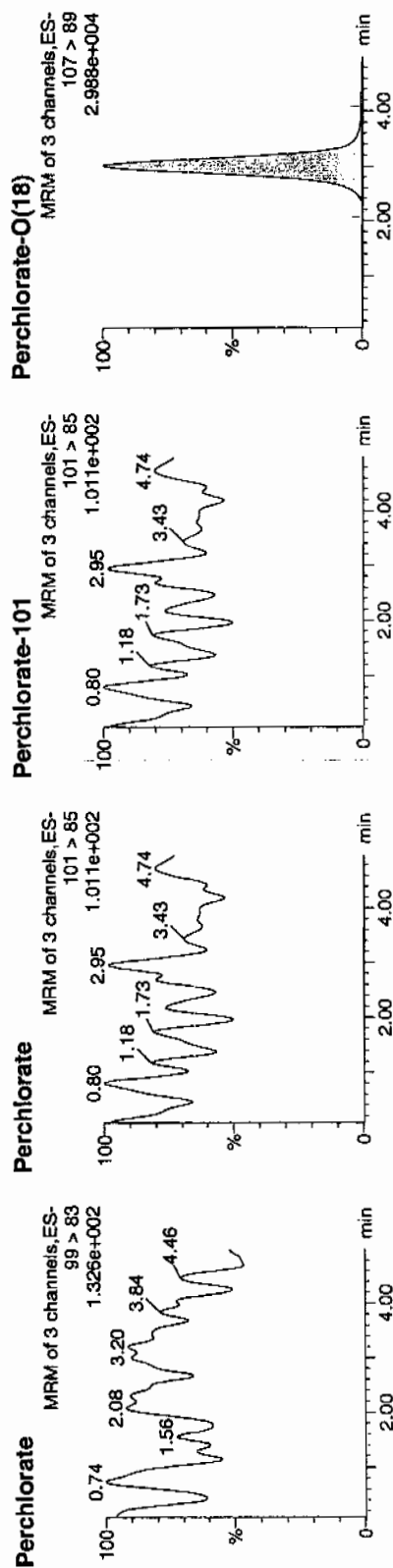
Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per031610a.qld

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Printed: Wednesday, March 17, 2010 9:41:10 AM Eastern Standard Time

Name: per0316073a
Date: 17-Mar-2010
Time: 01:39:53
ID: IPB010
Vial: 1:1,A

03-17-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB010	Perchlorate	99 > 83											0.00
IPB010	Perchlorate-101	101 > 85											
IPB010	Perchlorate-O(18)	107 > 89	3.01	10866.314	10866.314	bb			0.4548	90.95	-9.05	794.125	

μm7
3/17/10

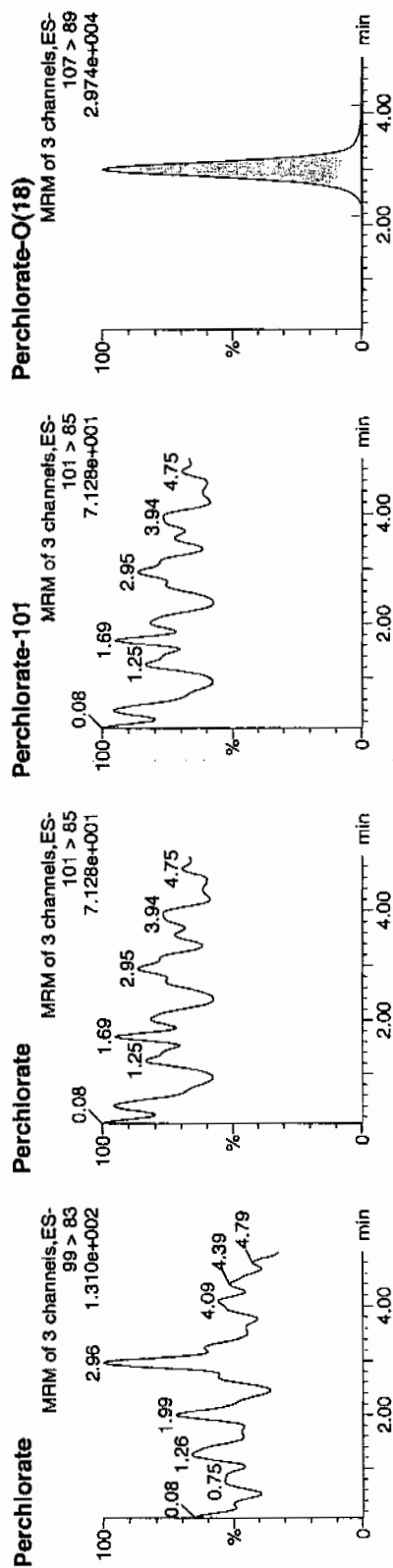
Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per031610a.qld

Last Altered: Wednesday, March 17, 2010 9:01:09 AM Eastern Standard Time
Printed: Wednesday, March 17, 2010 9:41:10 AM Eastern Standard Time

Name: per0316086a
Date: 17-Mar-2010
Time: 03:24:46
ID: IPB011
Vial: 1:1,A

03-17-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB011	Perchlorate	99 > 83											0.00
IPB011	Perchlorate-101	101 > 85	3.00	10489.233	10489.233	bb			0.4390	87.80	-12.20	1245.2...	
IPB011	Perchlorate-O(18)	107 > 89											

107
3/8/10

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

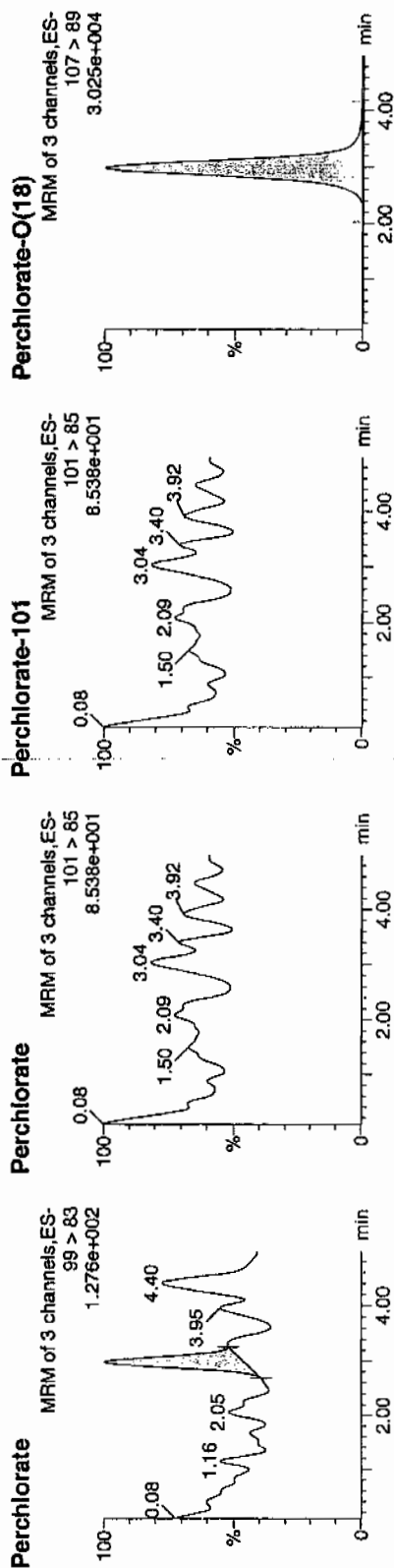
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Printed: Wednesday, March 17, 2010 9:41:10 AM Eastern Standard Time

Name: per0316099a
Date: 17-Mar-2010
Time: 05:09:51
ID: IPB012
Vial: 1:1,A

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03-17-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB012	Perchlorate	99 > 83	2.99	16.577	16.577	bb			0.0006			18.954	0.00
IPB012	Perchlorate-101	101 > 85											
IPB012	Perchlorate-O(18)	107 > 89	2.99	10736.125	10736.125	bb			0.4493	89.86	-10.14	3921.4...	

1477
3/18/10

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

Dataset: C:\MassLynx\Perchlorate.PRO\per031610a.qld

Last Altered: Wednesday, March 17, 2010 9:01:09 AM Eastern Standard Time
Printed: Wednesday, March 17, 2010 9:41:10 AM Eastern Standard Time

Name: per0316112a

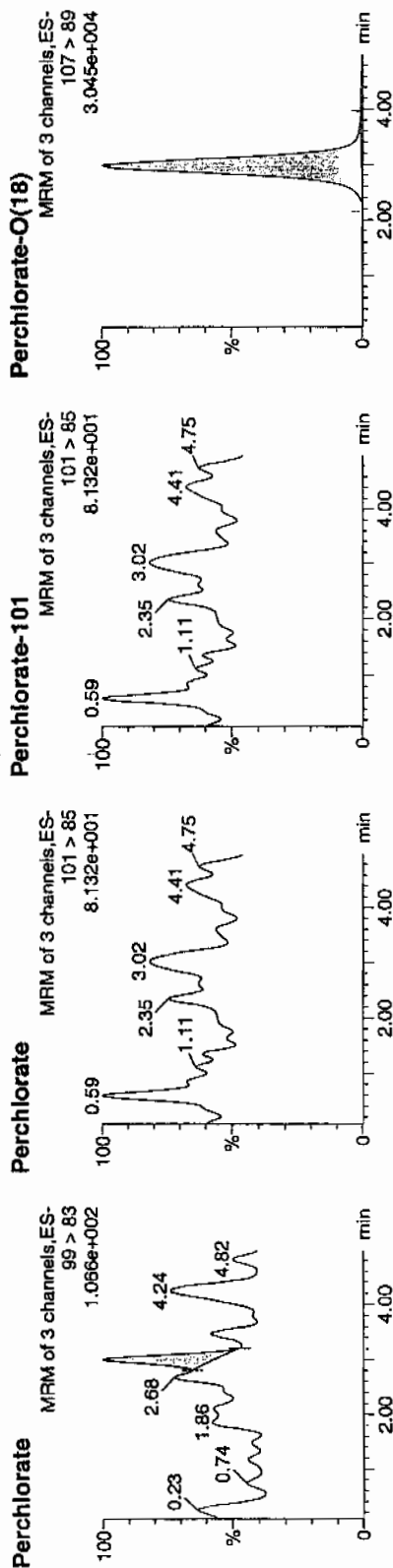
Date: 17-Mar-2010

Time: 06:55:47

ID: IPB013

Vial: 1:1,A

03-17-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB013	Perchlorate	99 > 83	3.00	8,798	8,798	bb			0.0003			14,108	0.00
IPB013	Perchlorate-101	101 > 85											
IPB013	Perchlorate-O(18)	107 > 89	2.97	10634.489	10634.489	bb			0.4451	89.01	-10.99	1459.7...	

1457
3/18/10

Nairb.ref

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

Updated 20 April '95

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

QUATRO ULTIMA: nairb_01_08_08.cal

Calibration Report - MS1 Static

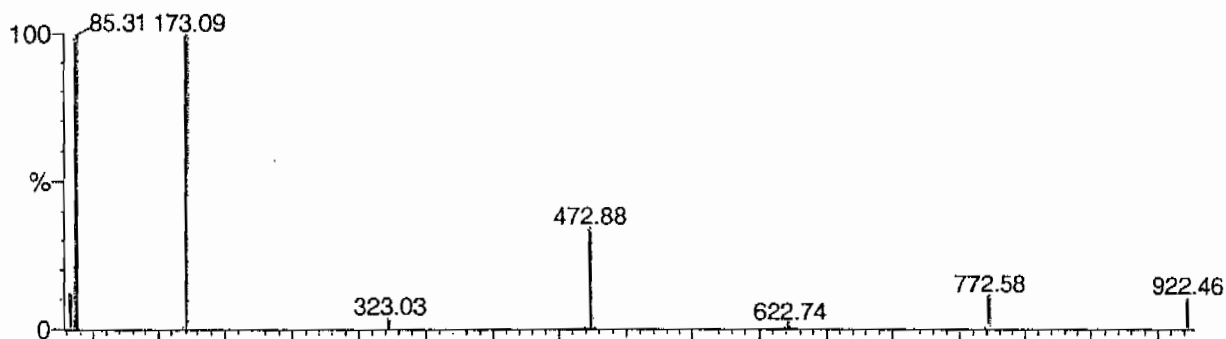
Page 1 of 1

Printed: Tue Jan 08 12:19:12 2008

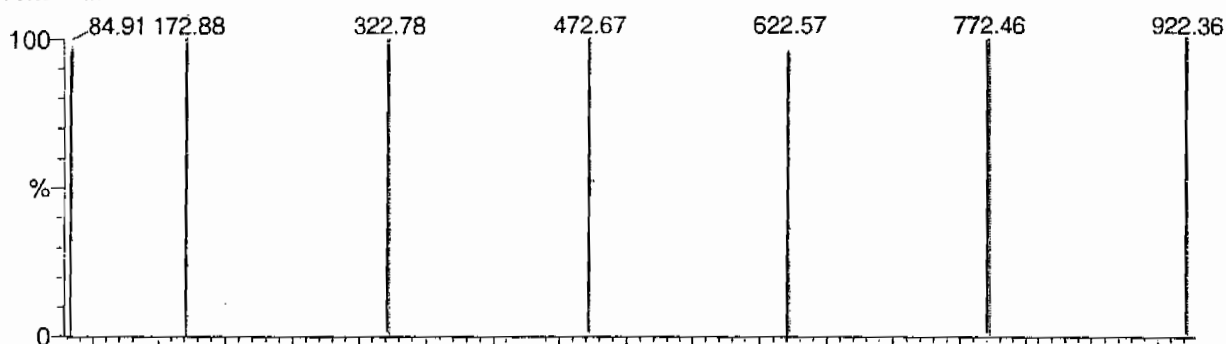
POINTS HIGHLIGHTED BY CURV 01-09-08

Data file: STATMS1 - Uncalibrated

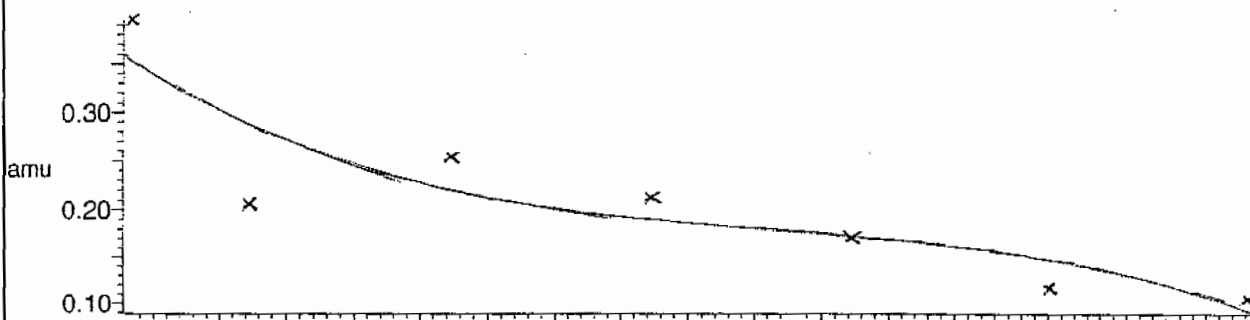
7 matches of 7 tested references



Reference file: Nairb

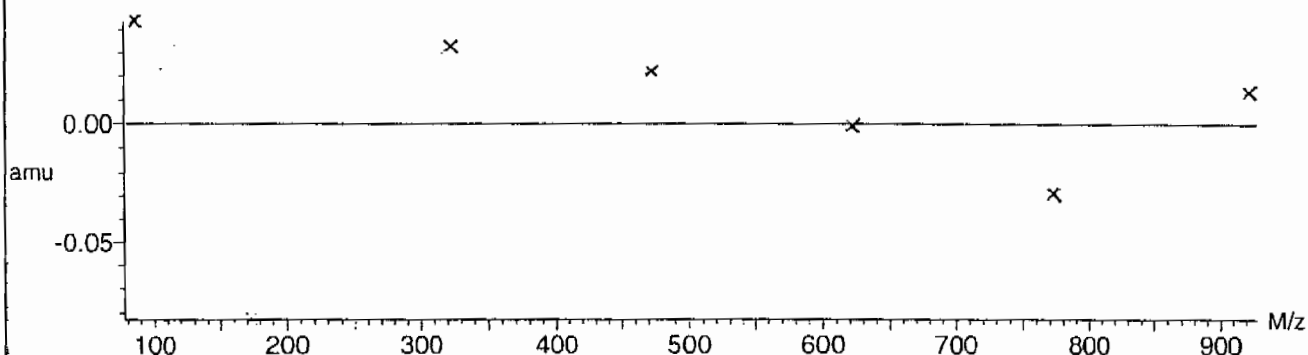


Mass difference (Raw - Ref mass)



Residuals

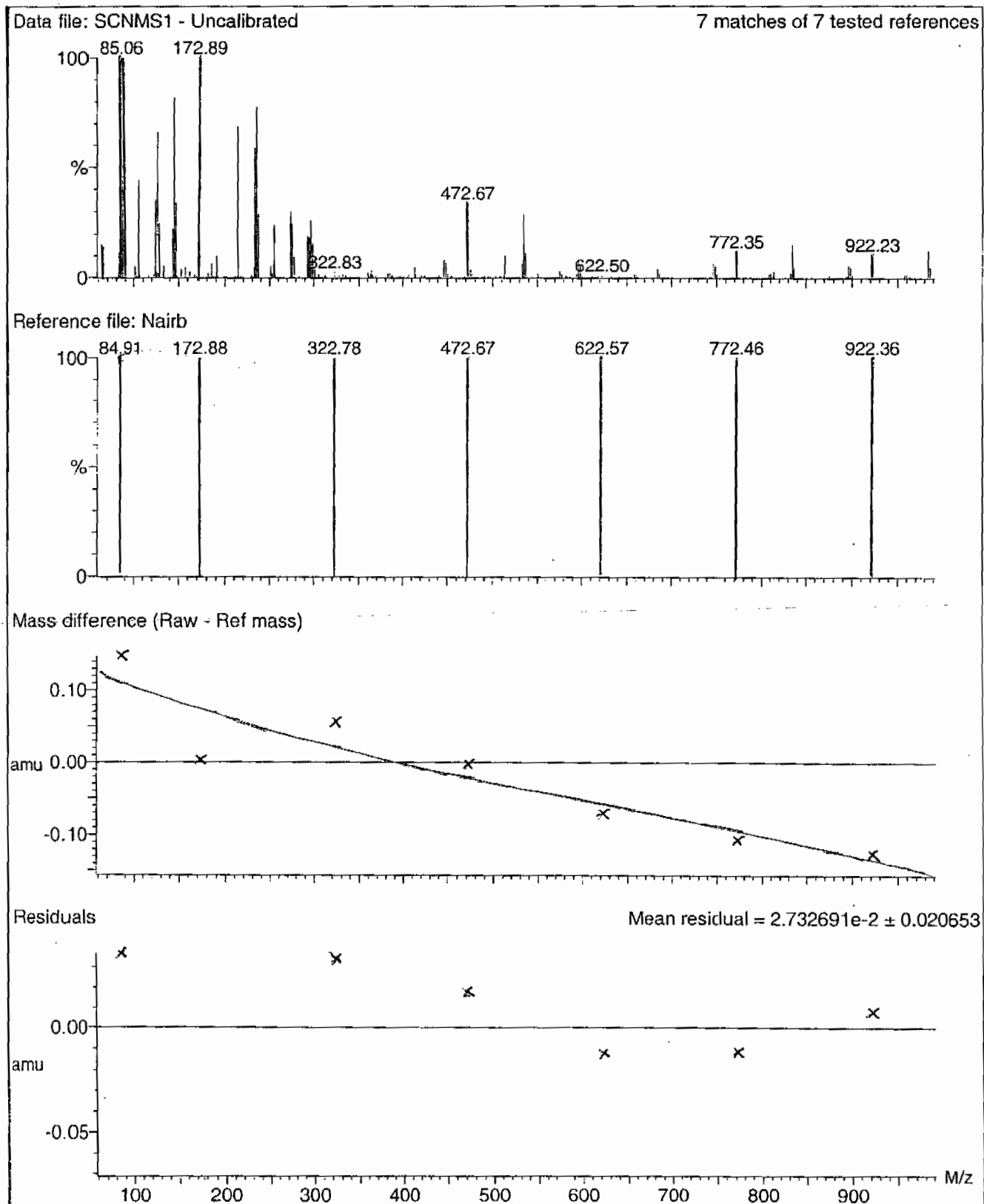
Mean residual = $3.212012 \times 10^{-2} \pm 0.024108$



Calibration Report - MS1 Scanning

Page 1 of 1

Printed: Tue Jan 08 12:20:09 2008



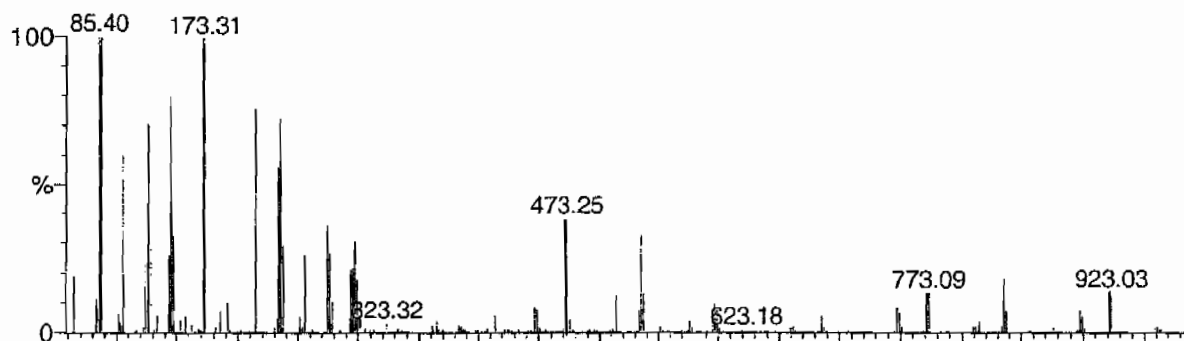
Calibration Report - MS1 Scan Speed Compensation

Page 1 of 1

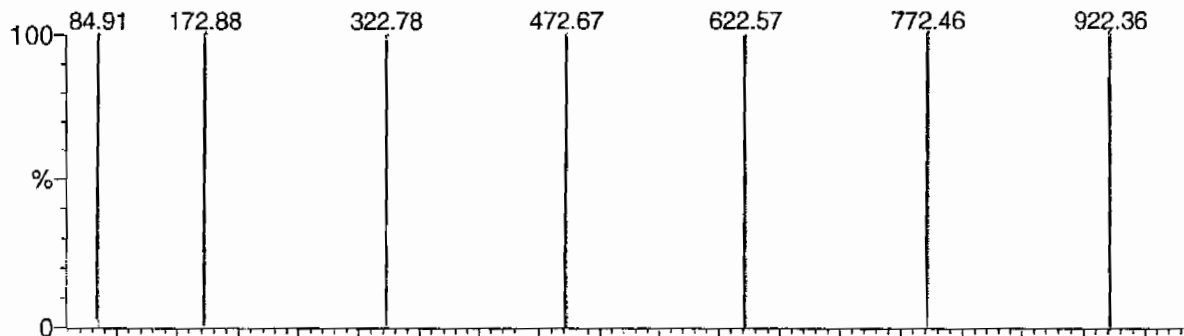
Printed: Tue Jan 08 12:21:04 2008

Data file: FASTMS1 - Uncalibrated

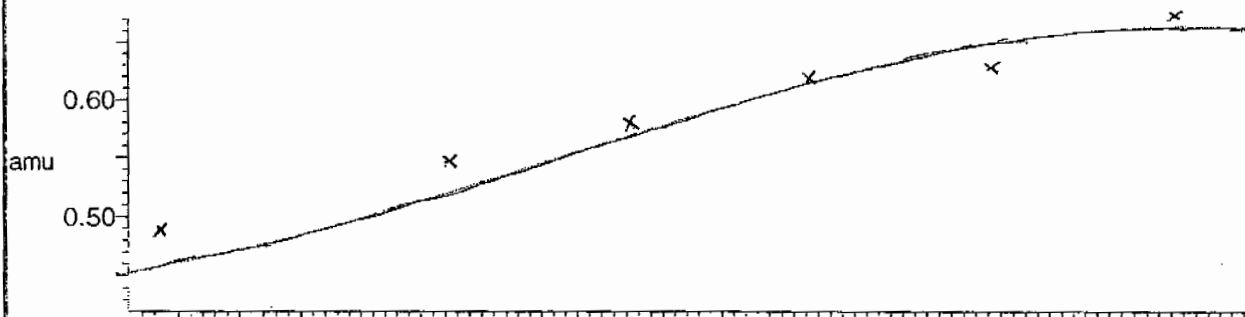
7 matches of 7 tested references



Reference file: Nairb

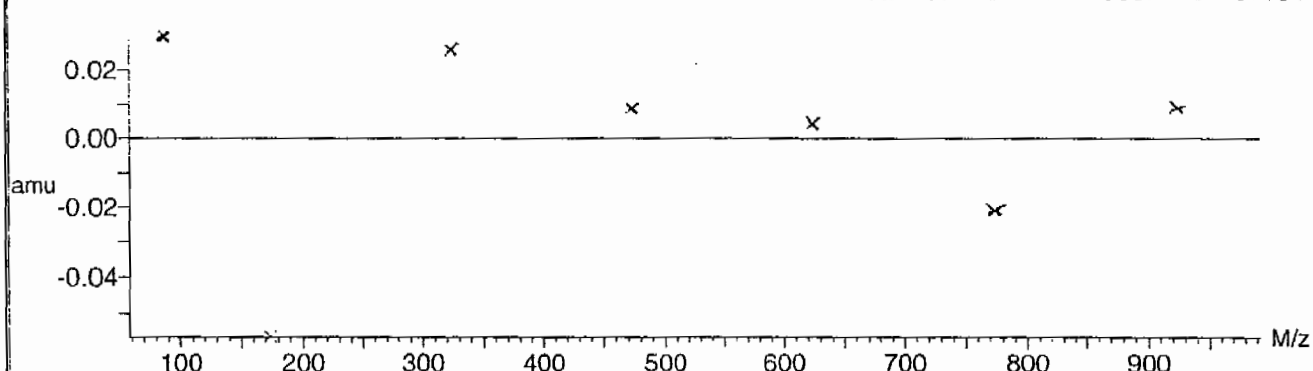


Mass difference (Raw - Ref mass)



Residuals

Mean residual = $2.224580 \times 10^{-2} \pm 0.016544$



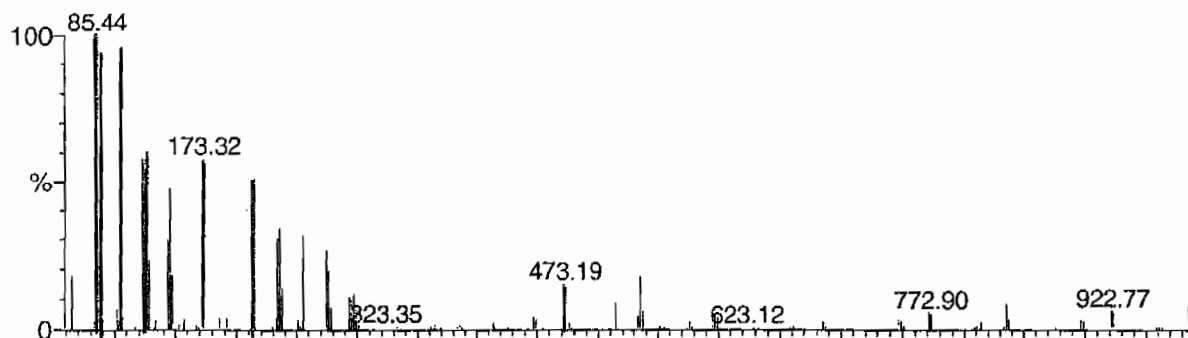
Calibration Report - MS2 Scan Speed Compensation

Page 1 of 1

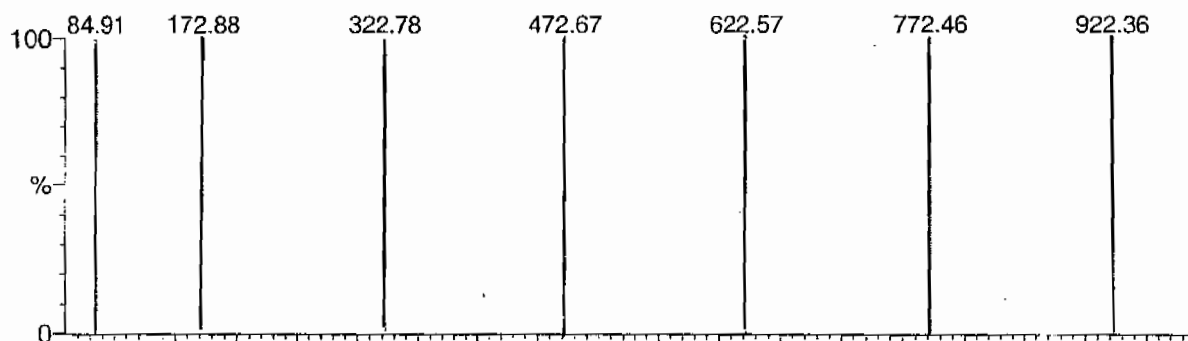
Printed: Tue Jan 08 12:23:51 2008

Data file: FASTMS2 - Uncalibrated

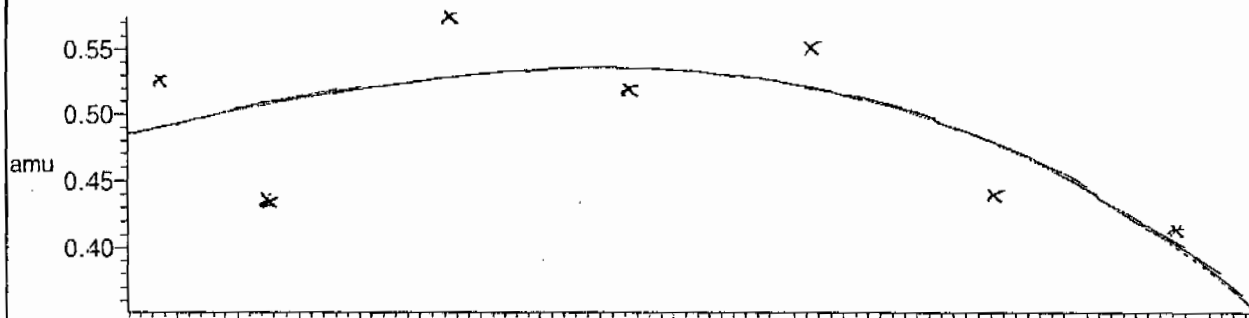
7 matches of 7 tested references



Reference file: Nairb

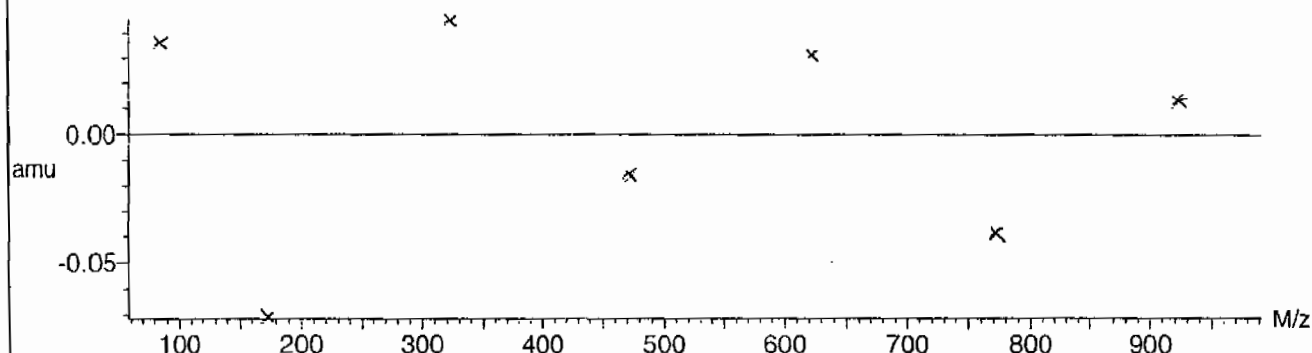


Mass difference (Raw - Ref mass)



Residuals

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



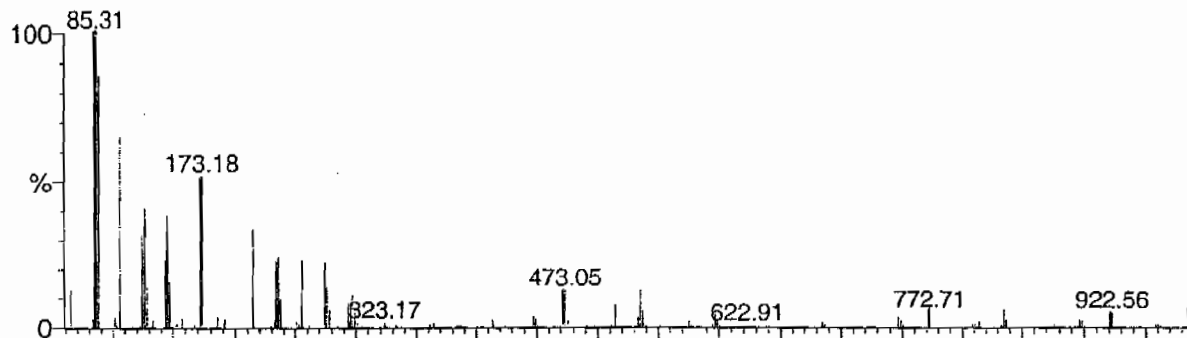
Calibration Report - MS2 Scanning

Page 1 of 1

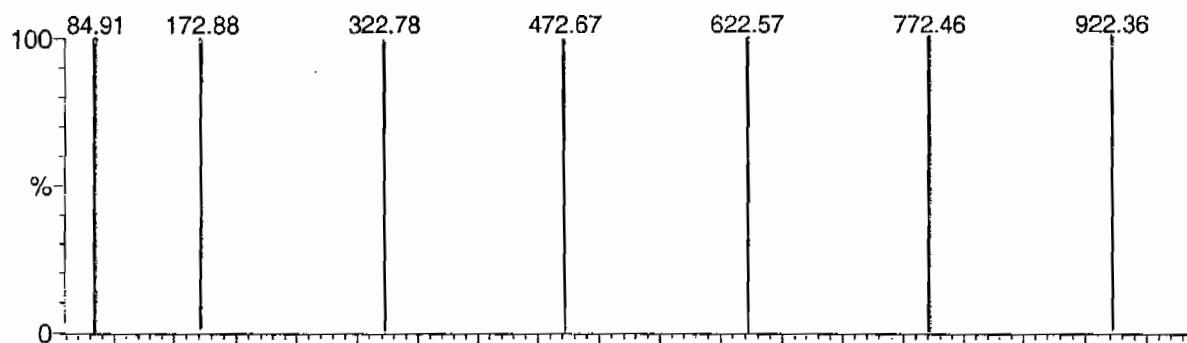
Printed: Tue Jan 08 12:22:56 2008

Data file: SCNMS2 - Uncalibrated

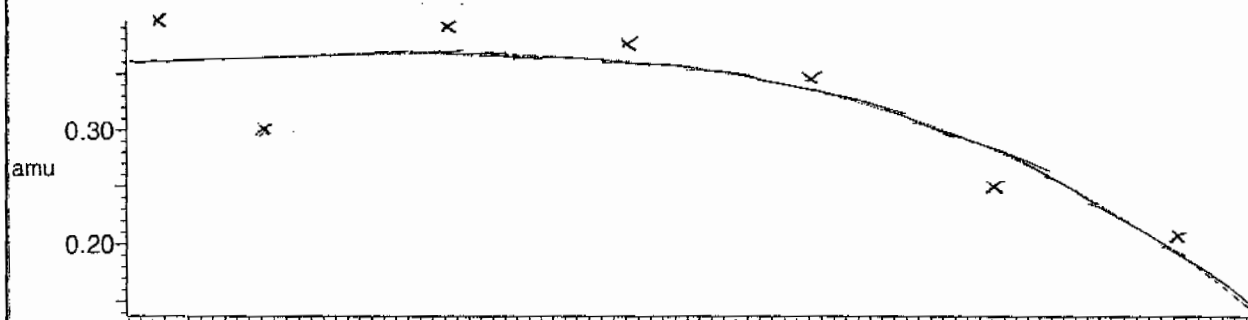
7 matches of 7 tested references



Reference file: Nairb

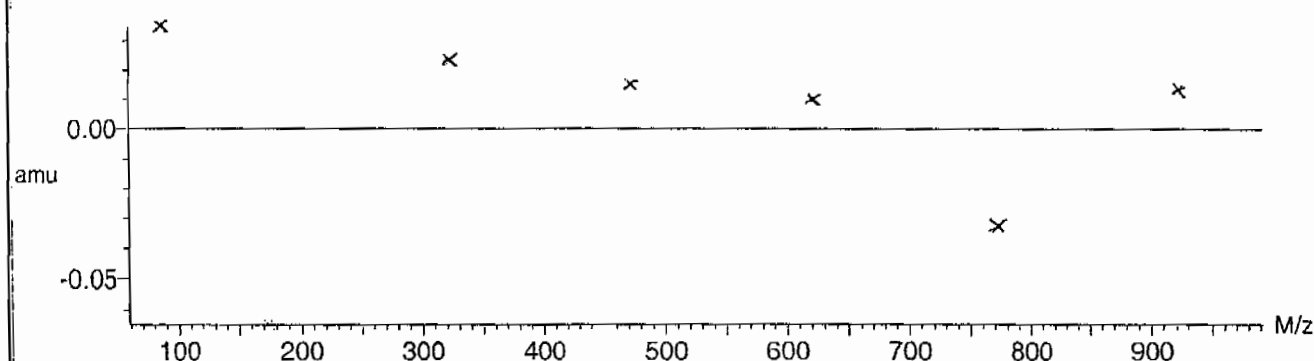


Mass difference (Raw - Ref mass)



Residuals

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



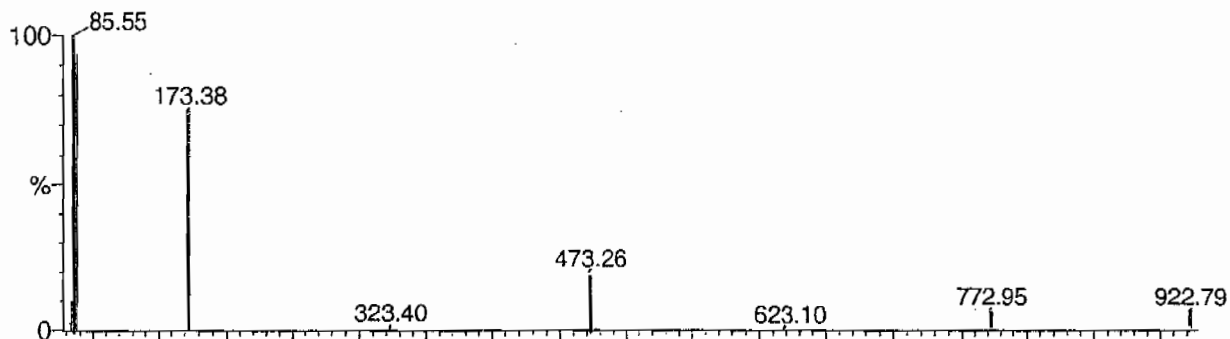
Calibration Report - MS2 Static

Page 1 of 1

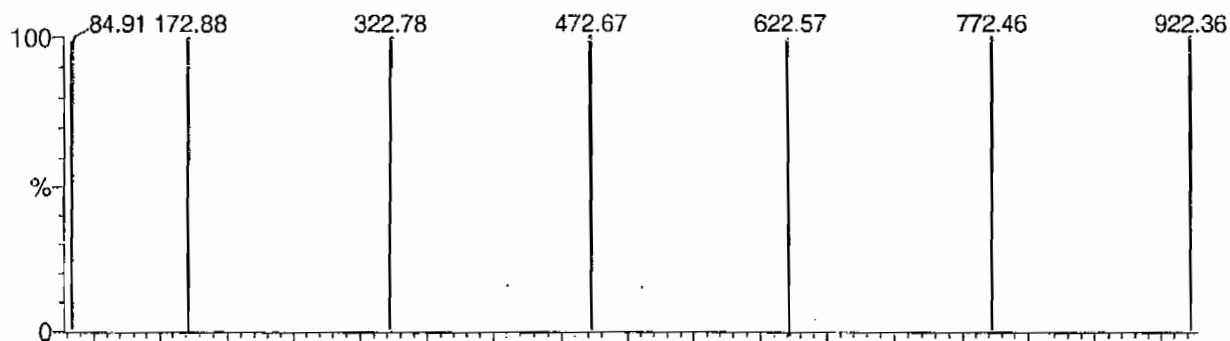
Printed: Tue Jan 08 12:21:59 2008

Data file: STATMS2 - Uncalibrated

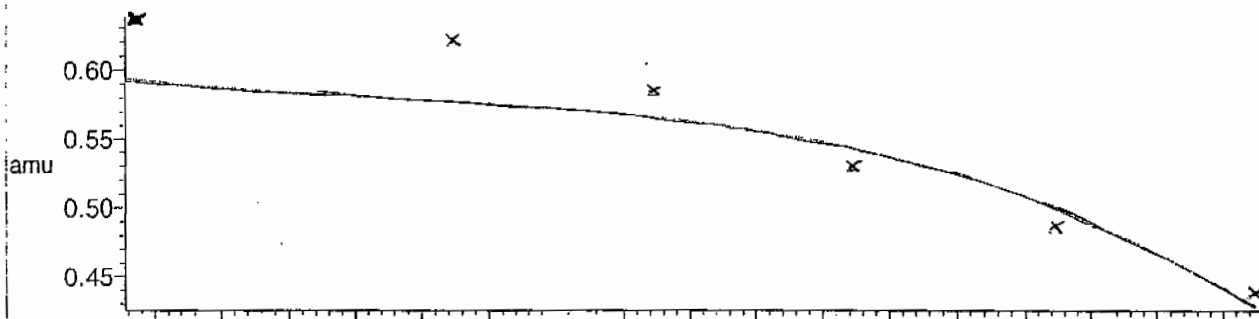
7 matches of 7 tested references



Reference file: Nairb

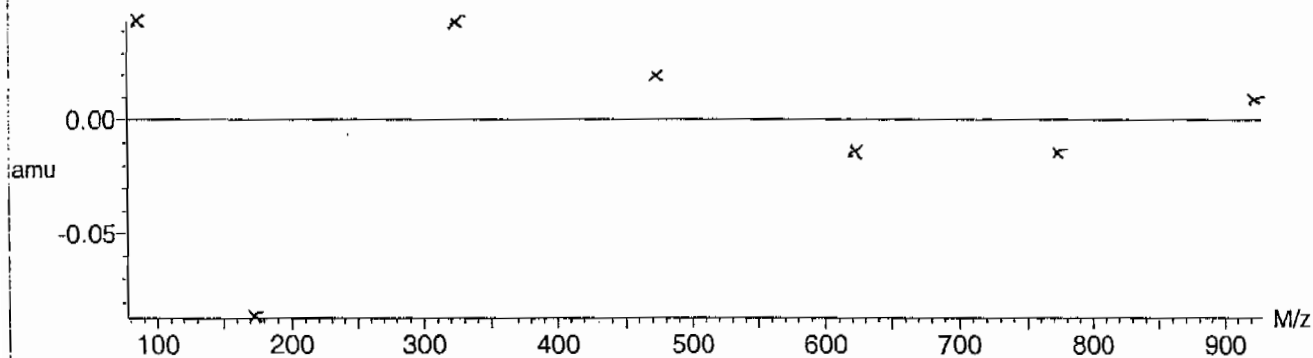


Mass difference (Raw - Ref mass)



Residuals

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



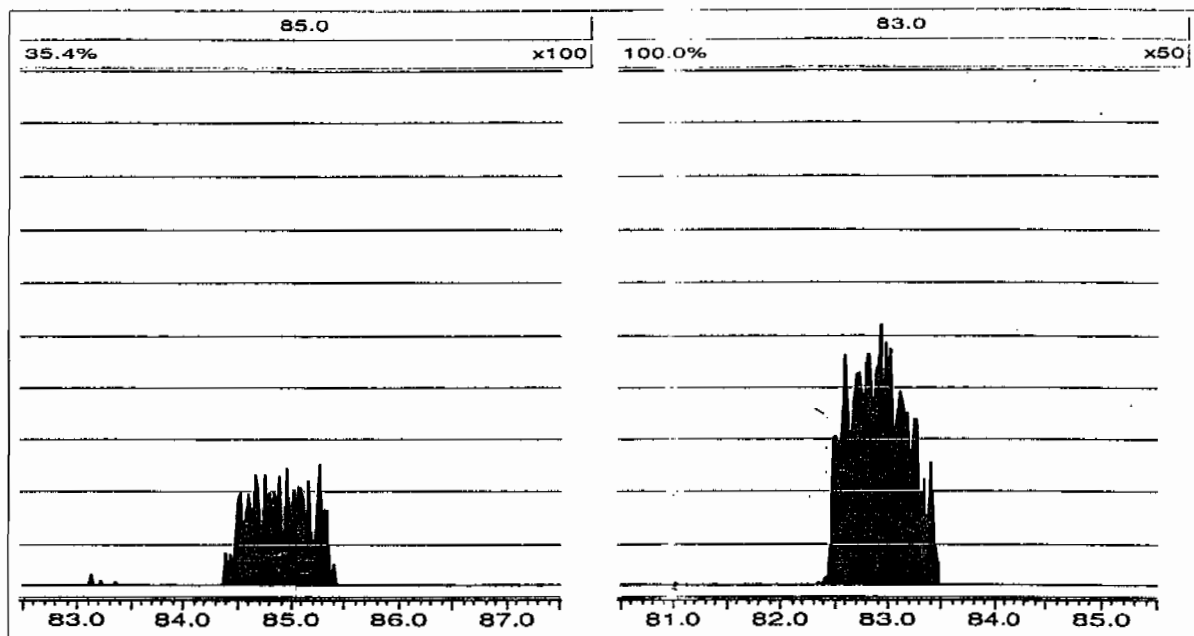
Tune Parameters

MassLynx 4.0 SP4

Page 1 of 1

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

Printed: Tuesday, March 16, 2010 14:13:45 Eastern Standard Time



Perchlorate RT And Area Summary

Lab Name: General Engineering Laboratories GEL Job No.(SDG): 10-2203

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
MidLevel Standard Area	per0316006a	16-MAR-10	11562.3				0.98-1.02
Lower Area Limit			5781.15				
Upper Area Limit			23124.6				
1202063757	per0316088a	17-MAR-10 03:40	11417.9	3			
1202063758	per0316089a	17-MAR-10 03:49	11116.2	3	3.01077	1.004	
1202063761	per0316090a	17-MAR-10 03:57	12059.9	3.04	3.048	1.003	
248523001	per0316104a	17-MAR-10 05:50	11189.1	2.99	3.02322	1.011	

SAMPLE DATA

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC
 Lab Code: GEL
 Instrument: LCMSMS
 Method: SW846 6850 Modified
 Matrix: WATER
 Extraction Batch ID: 262135
 Extraction Type: Filter/DAI
 Sample Volume/Weight: 10.0 mL
 Concentrated Extract Volume: 10.0
 Client Sample No. RE36-10-7534
 Date Received: 03-MAR-10
 GEL Job No (SDG): 10-2203
 GEL Sample ID: 248523001
 Date Filtered: 08-MAR-10
 Injection Volume (uL): 20
 % Solids:

CAS No.	Analyte [^]	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.05	.2	0.050	ug/L	U	1	17-MAR-10 05:50	per0316104a
	Perchlorate Isotope Ratio						1	17-MAR-10 05:50	per0316104a
14797-73-0	Perchlorate-101	.05	.2	0.050	ug/L	U	1	17-MAR-10 05:50	per0316104a
	Perchlorate-O(18)			0.468	ug/L		1	17-MAR-10 05:50	per0316104a

[^] 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\P perchlorate.PRO\per031610a.qld

Last Altered: Wednesday, March 17, 2010 9:01:09 AM Eastern Standard Time
Printed: Wednesday, March 17, 2010 9:41:10 AM Eastern Standard Time

Name: per0316104a

Date: 17-Mar-2010

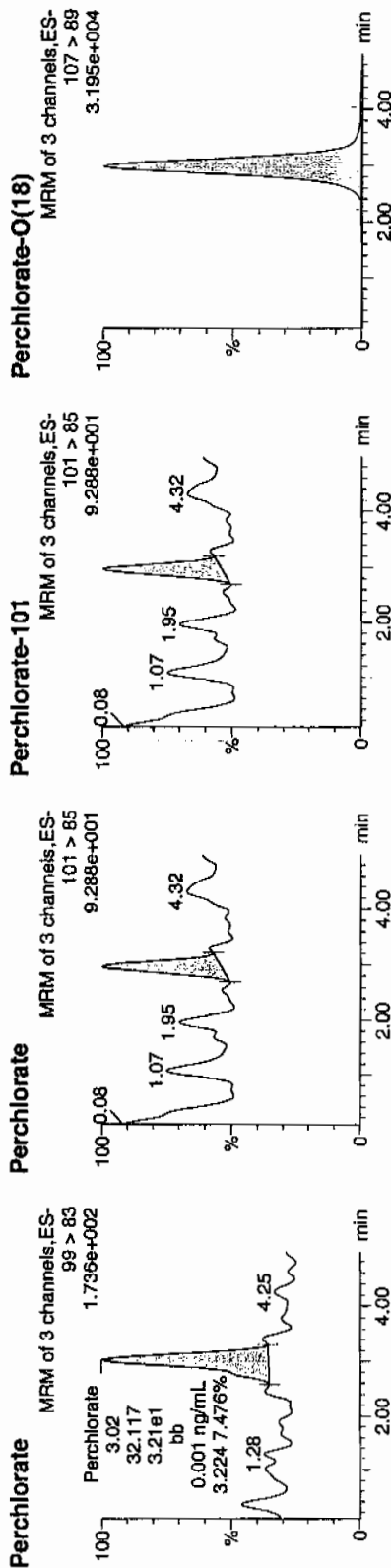
Time: 05:50:15

ID: 248523001

Trial: 2:7, B

03-17-10

162136 | 122 | 11



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
248523001	Perchlorate	99 > 83	3.02	32.117	32.117	bb			0.0011			22.377	3.22
248523001	Perchlorate-101	101 > 85	2.96	9.961	9.961	bb			0.0010			48.084	
248523001	Perchlorate-O(18)	107 > 89	2.99	11189.102	11189.102	bb			0.4683	93.65	-6.35	4334.9...	

3/18/10

STANDARDS DATA

Perchlorate Initial Calibration

GEL Job No.(SDG): 10-2203

Lab Name: General Engineering Laboratories

Lab Code: GEL

Instrument ID: LCMSMS Date Analyzed: 16-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

Parname Perchlorate

Coefficient of Determination:

Calibration Curve: 29209.88

Response Type: External Standard

Curve Type: RF

Perchlorate Initial Calibration

GEL Job No.(SDG): 10-2203

Lab Name: General Engineering Laboratories

Lab Code: GEL

Instrument ID: LCMSMS Date Analyzed: 16-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: 9722.924

Response Type: External Standard

Curve Type: RF

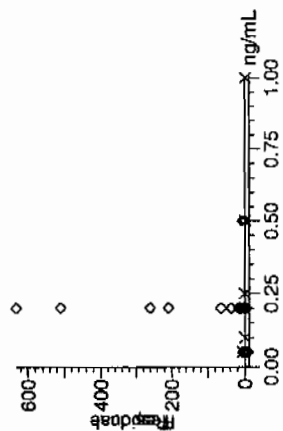
Quantify Calibration Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per031610a.qld

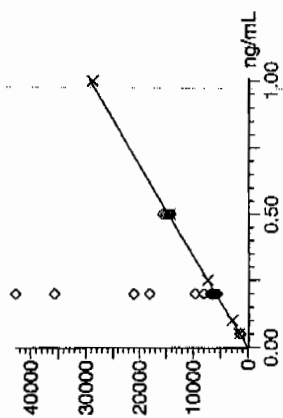
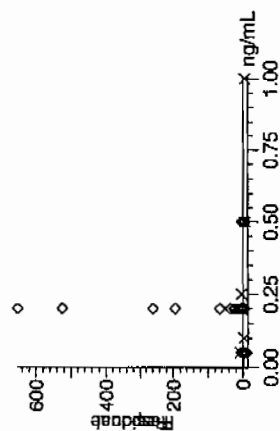
Last Altered: Wednesday, March 17, 2010 9:01:09 AM Eastern Standard Time
Printed: Wednesday, March 17, 2010 9:41:10 AM Eastern Standard Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per031610a.mdb 17 Mar 2010 09:00:50
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per031610a.cdb 17 Mar 2010 09:01:07

Compound name: Perchlorate
Response Factor: 29209.9
RRF SD: 864.153, % Relative SD: 2.95843
Response type: External Std, Area
Curve type: RF



Compound name: Perchlorate-101
Response Factor: 9722.93
RRF SD: 575.815, % Relative SD: 5.92224
Response type: External Std, Area
Curve type: RF



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

03-17-10

3/18/10

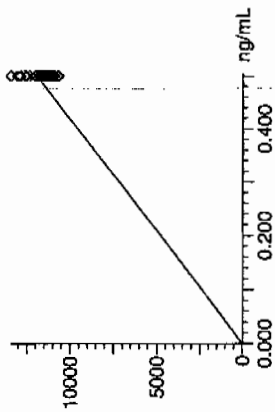
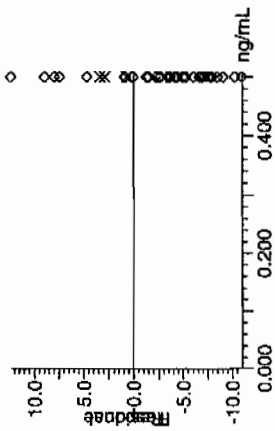
Quantify Calibration Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per031610a.qld

Last Altered: Wednesday, March 17, 2010 9:01:09 AM Eastern Standard Time
Printed: Wednesday, March 17, 2010 9:41:10 AM Eastern Standard Time

Compound name: Perchlorate-O(18)
Response Factor: 23894.4
RF SD: 799.2, % Relative SD: 3.34471
Response type: External Std, Area
Curve type: RF



03-17-10

Form 3

Perchlorate Initial Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-2203

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.52	103.03	16-MAR-10 17:04	per0316009a
Perchlorate Isotope Ratio		2.95		16-MAR-10 17:04	per0316009a
Perchlorate-101	.5	.52	104.81	16-MAR-10 17:04	per0316009a

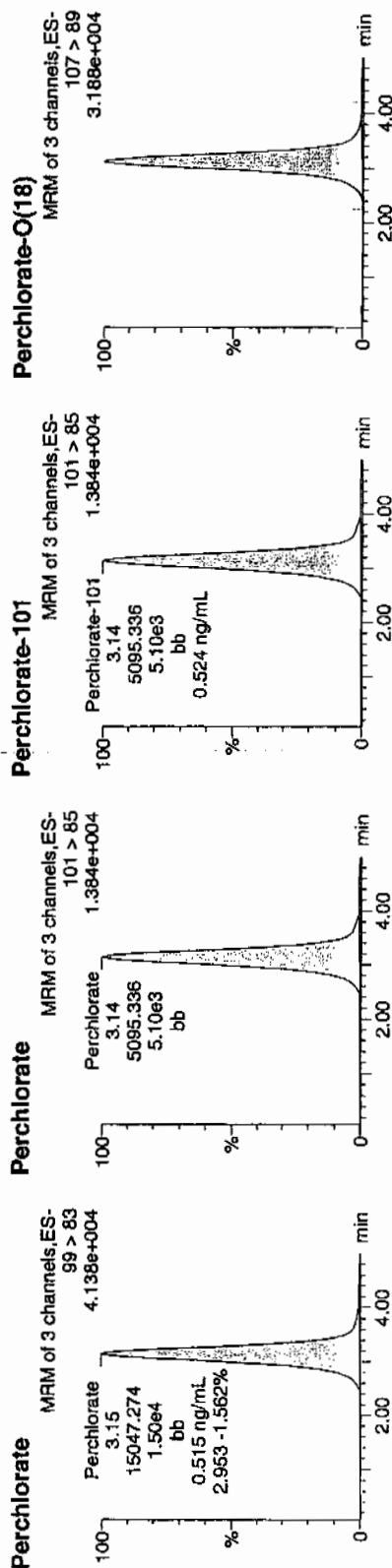
Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charfers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per031610a.qid

Last Altered: Wednesday, March 17, 2010 9:01:09 AM Eastern Standard Time
Printed: Wednesday, March 17, 2010 9:41:10 AM Eastern Standard Time

Pa Name: per0316009a
ce Date: 16-Mar-2010
Time: 17:04:42
QID: WCL100309-06ICV
4-Vial: 1:2A

Pure
600
03-17-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100309-06ICV	Perchlorate	99 > 83	3.15	15047.274	15047.274	bb			0.5151	103.03	3.03	765.774	2.95
WCL100309-06ICV	Perchlorate-101	101 > 85	3.14	5095.336	5095.336	bb			0.5241	104.81	4.81	6062.4...	
WCL100309-06ICV	Perchlorate-O(18)	107 > 89	3.12	11358.490	11358.490	bb			0.4754	95.07	-4.93	1508.7...	

$$\frac{15047.274}{29209.9} = 0.5151$$

100%
3/19/10

Perchlorate Continuing Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-2203

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.49	97.88	16-MAR-10 18:49	per0316022a
Perchlorate Isotope Ratio		3.15		16-MAR-10 18:49	per0316022a
Perchlorate-101	.5	.47	93.5	16-MAR-10 18:49	per0316022a
Perchlorate	.5	.49	97.54	16-MAR-10 20:33	per0316035a
Perchlorate Isotope Ratio		3.03		16-MAR-10 20:33	per0316035a
Perchlorate-101	.5	.48	96.86	16-MAR-10 20:33	per0316035a
Perchlorate	.5	.52	103.41	16-MAR-10 22:18	per0316048a
Perchlorate Isotope Ratio		3.07		16-MAR-10 22:18	per0316048a
Perchlorate-101	.5	.51	101.33	16-MAR-10 22:18	per0316048a
Perchlorate	.5	.54	107.21	16-MAR-10 23:47	per0316059a
Perchlorate Isotope Ratio		3.14		16-MAR-10 23:47	per0316059a
Perchlorate-101	.5	.51	102.51	16-MAR-10 23:47	per0316059a
Perchlorate	.5	.5	99.22	17-MAR-10 01:31	per0316072a

Perchlorate Continuing Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-2203

Lab Code: GEL

Reporting Units: ug/L

Perchlorate Isotope Ratio		3.01		17-MAR-10 01:31	per0316072a
Perchlorate-101	.5	.5	99.19	17-MAR-10 01:31	per0316072a
Perchlorate	.5	.49	97.46	17-MAR-10 03:16	per0316085a
Perchlorate Isotope Ratio		2.95		17-MAR-10 03:16	per0316085a
Perchlorate-101	.5	.5	99.35	17-MAR-10 03:16	per0316085a
Perchlorate	.5	.5	99.24	17-MAR-10 05:01	per0316098a
Perchlorate Isotope Ratio		3.19		17-MAR-10 05:01	per0316098a
Perchlorate-101	.5	.47	93.57	17-MAR-10 05:01	per0316098a
Perchlorate	.5	.49	97.9	17-MAR-10 06:47	per0316111a
Perchlorate Isotope Ratio		3.04		17-MAR-10 06:47	per0316111a
Perchlorate-101	.5	.48	96.75	17-MAR-10 06:47	per0316111a

Quantify Sample Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per031610a.qld

Last Altered: Wednesday, March 17, 2010 9:01:09 AM Eastern Standard Time
 Printed: Wednesday, March 17, 2010 9:41:10 AM Eastern Standard Time

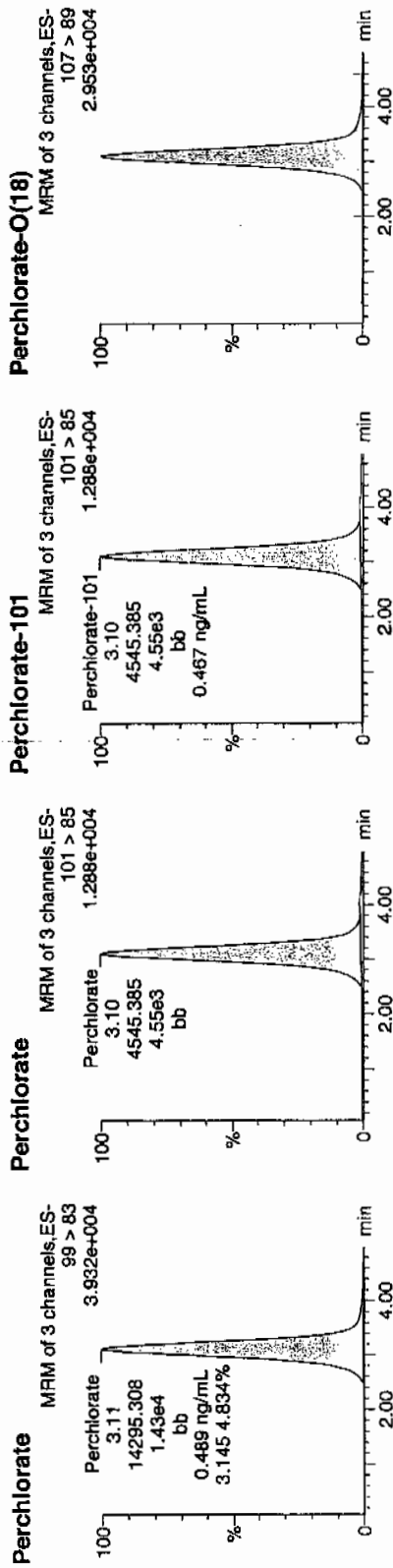
Per Name: per0316022a

Date: 16-Mar-2010

Time: 18:49:10

ID: WCL100309-06CCV

Trial: 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	3.11	14295.308	14295.308	bb			0.4894	97.88	-2.12	15740....	3.15
WCL100309-06CCV	Perchlorate-101	101 > 85	3.10	4545.385	4545.385	bb			0.4675	93.50	-6.50	503.156	
WCL100309-06CCV	Perchlorate-O(18)	107 > 89	3.10	10724.596	10724.596	bb			0.4488	89.77	-10.23	985.181	

Handwritten notes: 14295, 3/18/10

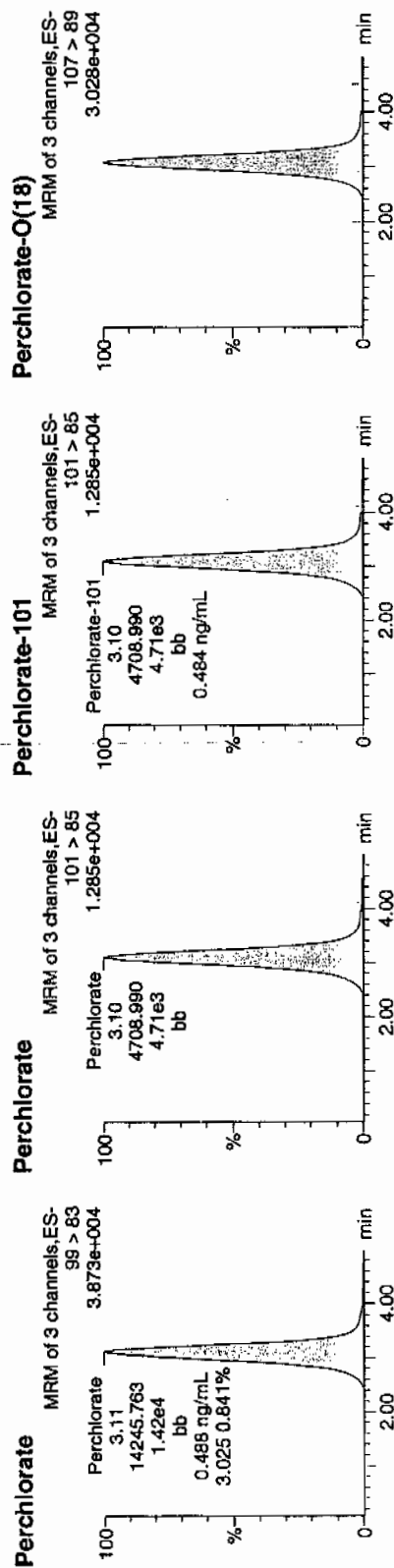
Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per031610a.qld

Last Altered: Wednesday, March 17, 2010 9:01:09 AM Eastern Standard Time
Printed: Wednesday, March 17, 2010 9:41:10 AM Eastern Standard Time

Name: per0316035a
Date: 16-Mar-2010
Time: 20:33:44
ID: WCL100309-06CCV
Vial: 1:2,A

Perchlorate
03.13.10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100309-06CCV	Perchlorate	99 > 83	3.11	14245.763	14245.763	bb			0.4877	97.54	-2.46	532.304	3.03
WCL100309-06CCV	Perchlorate-101	101 > 85	3.10	4708.990	4708.990	bb			0.4843	96.86	-3.14	2992.1...	
WCL100309-06CCV	Perchlorate-O(18)	107 > 89	3.09	11023.469	11023.469	bb			0.4613	92.27	-7.73	1891.5...	

WCL
3/12/10

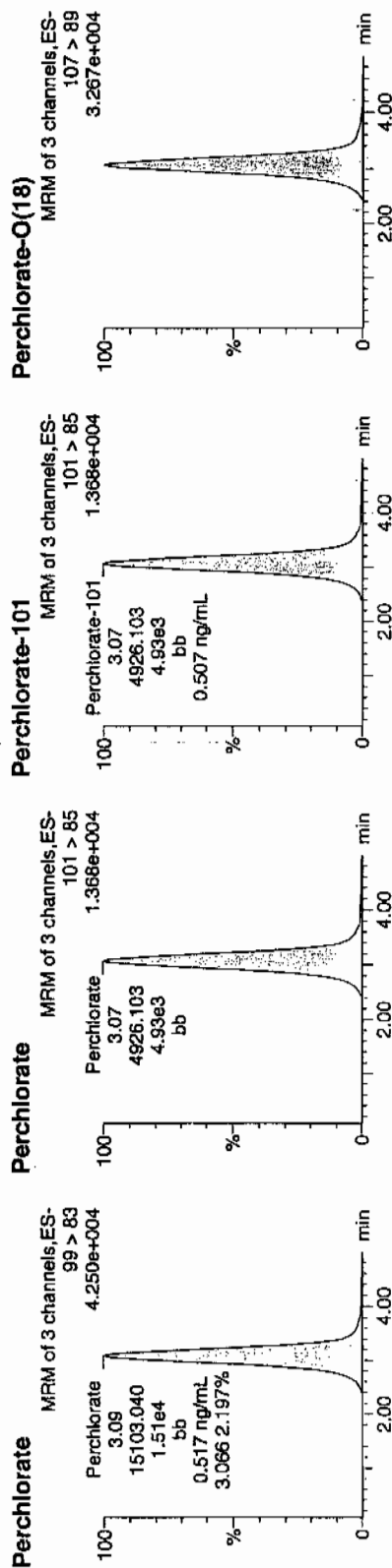
Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per031610a.qld

Last Altered: Wednesday, March 17, 2010 9:01:09 AM Eastern Standard Time
Printed: Wednesday, March 17, 2010 9:41:10 AM Eastern Standard Time

Name: per0316048a
Date: 16-Mar-2010
Time: 22:18:22
ID: WCL100309-06CCV
Vial: 1:2,A

*Per
GWS
03-17-10*



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100309-06CCV	Perchlorate	99 > 83	3.09	15103.040	15103.040	bb			0.5171	103.41	3.41	3240.2...	3.07
WCL100309-06CCV	Perchlorate-101	101 > 85	3.07	4926.103	4926.103	bb			0.5066	101.33	1.33	257.517	
WCL100309-06CCV	Perchlorate-O(18)	107 > 89	3.06	11624.273	11624.273	bb			0.4865	97.30	-2.70	2205.1...	

*Not
3/18/10*

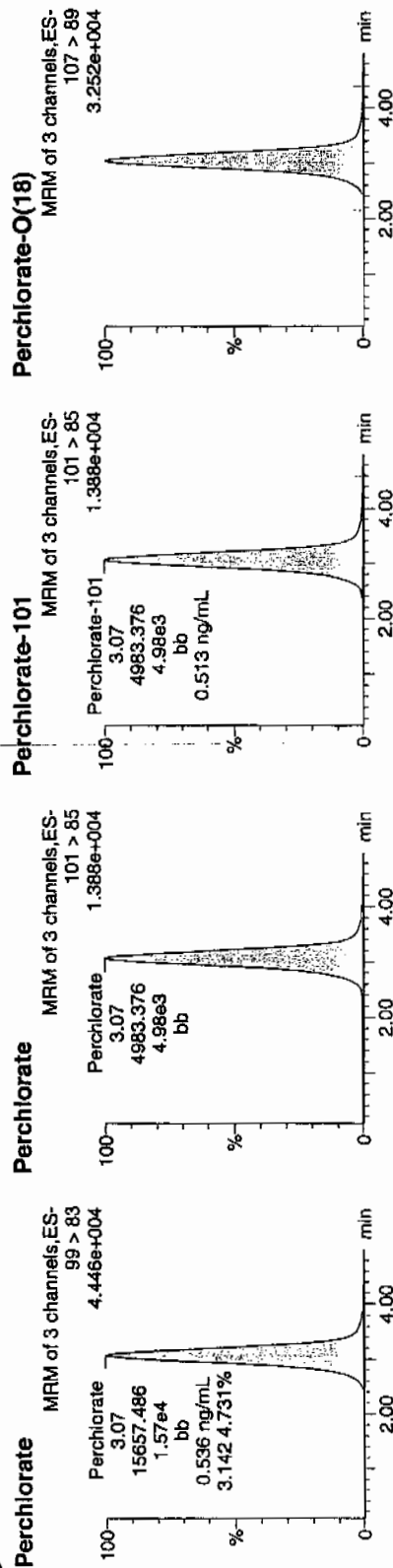
Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per031610a.qld

Last Altered: Wednesday, March 17, 2010 9:01:09 AM Eastern Standard Time
Printed: Wednesday, March 17, 2010 9:41:10 AM Eastern Standard Time

Sample Name: per0316059a
Date: 16-Mar-2010
Time: 23:47:00
ID: WCL100309-06CCV
Vial: 1:2,A

333
333
17-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100309-06CCV	Perchlorate	99 > 83	3.07	15657.486	15657.486	bb			0.5360	107.21	7.21	3252.8...	3.14
WCL100309-06CCV	Perchlorate-101	101 > 85	3.07	4983.376	4983.376	bb			0.5125	102.51	2.51	3152.8...	
WCL100309-06CCV	Perchlorate-O(18)	107 > 89	3.05	11688.516	11688.516	bb			0.4892	97.83	-2.17	3018.0...	

3/15/10

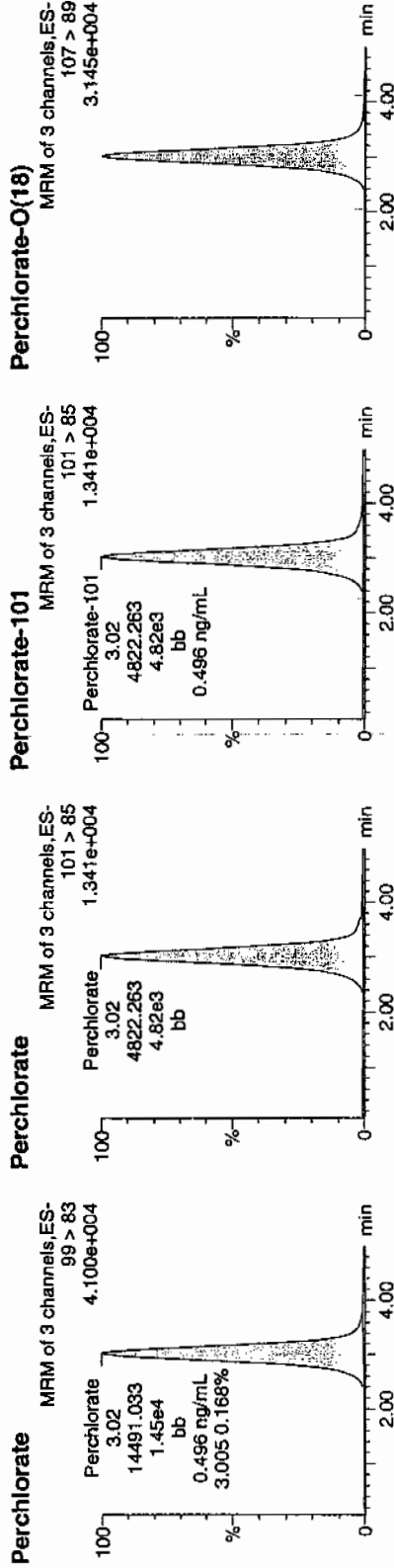
Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charfers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per031610a.qld

Last Altered: Wednesday, March 17, 2010 9:01:09 AM Eastern Standard Time
Printed: Wednesday, March 17, 2010 9:41:10 AM Eastern Standard Time

Name: per0316072a
Date: 17-Mar-2010
Time: 01:31:35
ID: WCL100309-06CCV
Vial: 1:2,A

Pure
03-17-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	TSN	Ion Ratio
WCL100309-06CCV	Perchlorate	99 > 83	3.02	14491.033	14491.033	bb			0.4961	99.22	-0.78	2217.4...	3.01
WCL100309-06CCV	Perchlorate-101	101 > 85	3.02	4822.263	4822.263	bb			0.4960	99.19	-0.81	897.727	
WCL100309-06CCV	Perchlorate-O(18)	107 > 89	3.01	11153.669	11153.669	bb			0.4668	93.36	-6.64	707.033	

14491
3/18/10

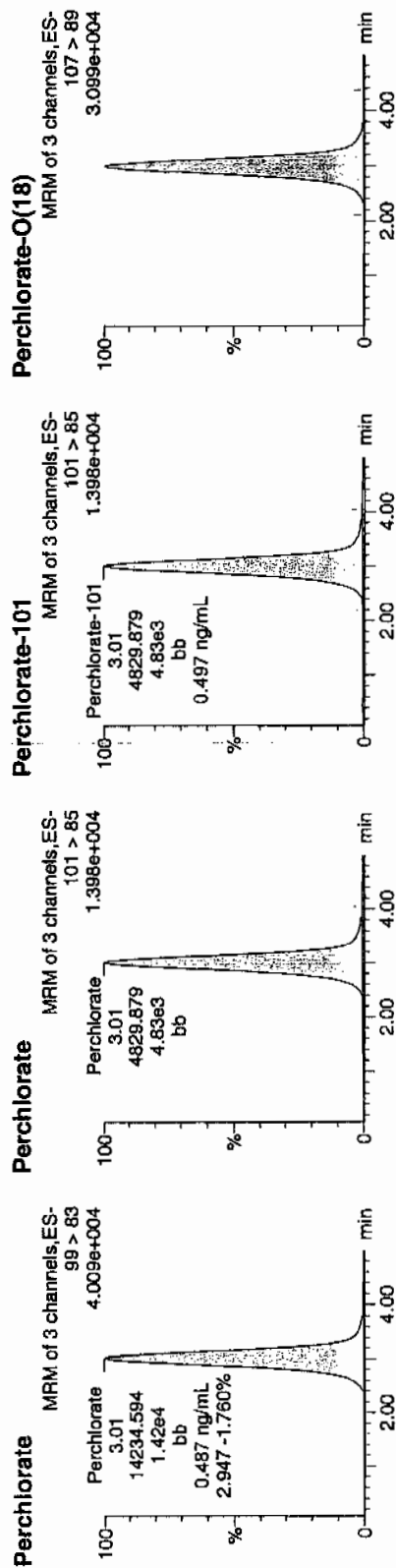
Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per031610a.qld

Last Altered: Wednesday, March 17, 2010 9:01:09 AM Eastern Standard Time
Printed: Wednesday, March 17, 2010 9:41:10 AM Eastern Standard Time

Sample Name: per0316085a
Date: 17-Mar-2010
Time: 03:16:29
ID: WCL100309-06CCV
Vial: 1:2,A

*Per03
03-17-10*



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100309-06CCV	Perchlorate	99 > 83	3.01	14234.594	14234.594	bb			0.4873	97.46	-2.54	1070.3...	2.95
WCL100309-06CCV	Perchlorate-101	101 > 85	3.01	4829.879	4829.879	bb			0.4968	99.35	-0.65	3350.8...	
WCL100309-06CCV	Perchlorate-O(18)	107 > 89	3.00	11000.735	11000.735	bb			0.4604	92.08	-7.92	3039.7...	

3/18/10

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

Dataset: C:\MassLynx\Perchlorate.PRO\per031610a.qld

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Printed: Wednesday, March 17, 2010 9:41:10 AM Eastern Standard Time

Sample Name: per0316098a

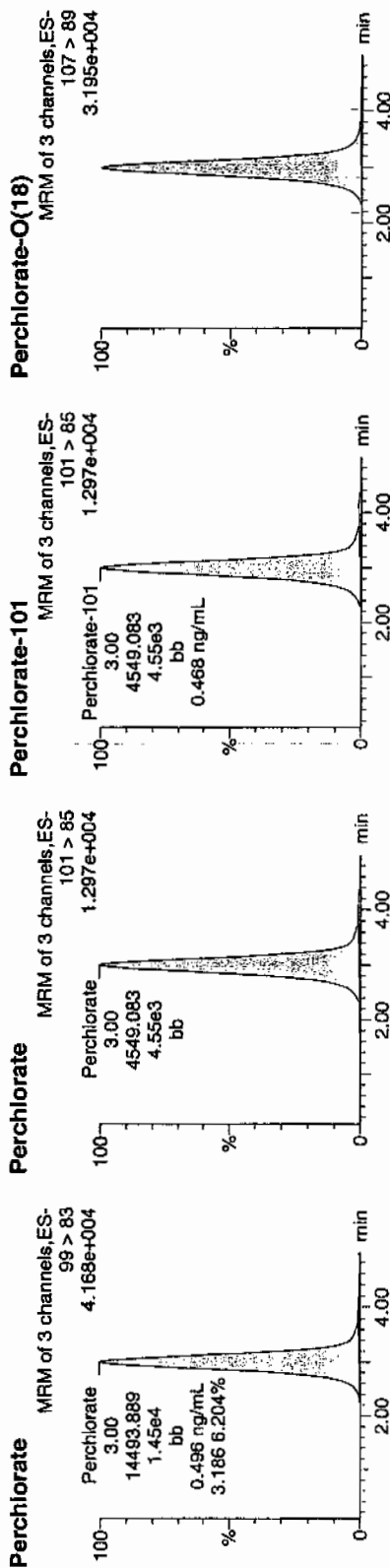
Date: 17-Mar-2010

Time: 05:01:34

ID: WCL100309-06CCV

Vial: 1:2,A

Per
and
03-17-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100309-06CCV	Perchlorate	99 > 83	3.00	14493.889	14493.889	bb			0.4962	99.24	-0.76	1776.4...	3.19
WCL100309-06CCV	Perchlorate-101	101 > 85	3.00	4549.083	4549.083	bb			0.4679	93.57	-6.43	751.536	
WCL100309-06CCV	Perchlorate-O(18)	107 > 89	2.99	11228.830	11228.830	bb			0.4699	93.99	-6.01	1405.5...	

14493
3/18/10

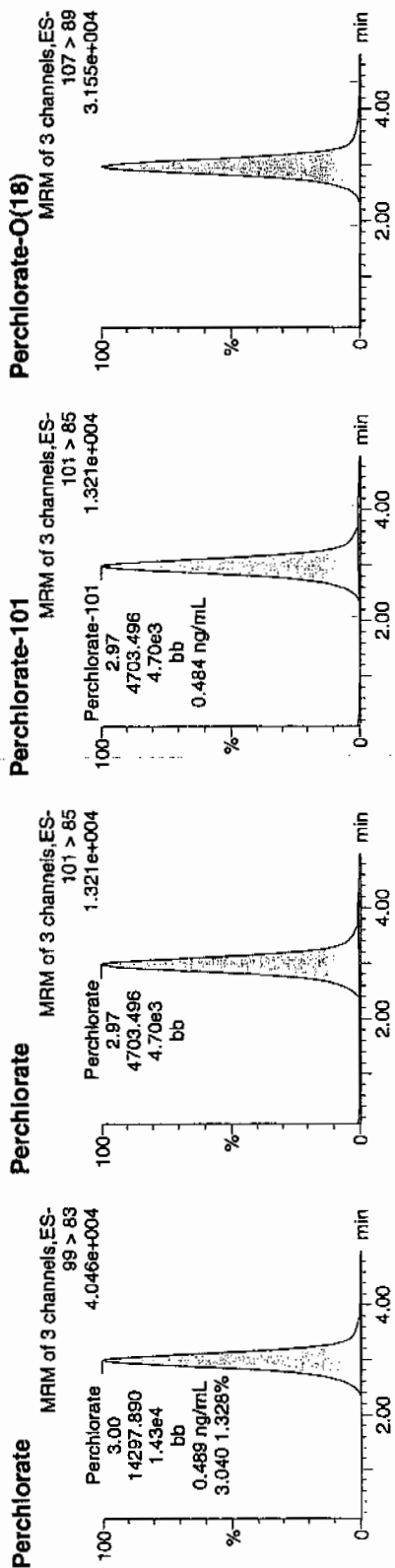
Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per031610a.qld

Last Altered: Wednesday, March 17, 2010 9:01:09 AM Eastern Standard Time
Printed: Wednesday, March 17, 2010 9:41:10 AM Eastern Standard Time

Name: per0316111a
Date: 17-Mar-2010
Time: 06:47:30
ID: WCL100309-06CCV
Vial: 1:2,A

Run
03-17-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100309-06CCV	Perchlorate	99 > 83	3.00	14297.890	14297.890	bb			0.4895	97.90	-2.10	4374.1...	3.04
WCL100309-06CCV	Perchlorate-101	101 > 85	2.97	4703.496	4703.496	bb			0.4838	96.75	-3.25	1768.6...	
WCL100309-06CCV	Perchlorate-O(18)	107 > 89	2.97	11321.011	11321.011	bb			0.4738	94.76	-5.24	4026.8...	

4/17
3/18/10

Perchlorate MDL Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-2203

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.05	.05	98.61	16-MAR-10 17:20	per0316011a
Perchlorate Isotope Ratio		2.87		16-MAR-10 17:20	per0316011a
Perchlorate-101	.05	.05	103.28	16-MAR-10 17:20	per0316011a
Perchlorate	.05	.05	93.33	16-MAR-10 19:05	per0316024a
Perchlorate Isotope Ratio		2.62		16-MAR-10 19:05	per0316024a
Perchlorate-101	.05	.05	106.93	16-MAR-10 19:05	per0316024a
Perchlorate	.05	.05	95.82	16-MAR-10 20:49	per0316037a
Perchlorate Isotope Ratio		2.91		16-MAR-10 20:49	per0316037a
Perchlorate-101	.05	.05	98.91	16-MAR-10 20:49	per0316037a
Perchlorate	.05	.05	94.44	16-MAR-10 22:34	per0316050a
Perchlorate Isotope Ratio		2.96		16-MAR-10 22:34	per0316050a

Perchlorate MDL Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-2203

Lab Code: GEL

Reporting Units: ug/L

Perchlorate-101	.05	.05	95.81	16-MAR-10 22:34	per0316050a
Perchlorate	.05	.05	106.19	17-MAR-10 00:03	per0316061a
Perchlorate Isotope Ratio		3.06		17-MAR-10 00:03	per0316061a
Perchlorate-101	.05	.05	104.38	17-MAR-10 00:03	per0316061a
Perchlorate	.05	.05	102.48	17-MAR-10 01:47	per0316074a
Perchlorate Isotope Ratio		3.21		17-MAR-10 01:47	per0316074a
Perchlorate-101	.05	.05	96.05	17-MAR-10 01:47	per0316074a
Perchlorate	.05	.05	96.19	17-MAR-10 03:32	per0316087a
Perchlorate Isotope Ratio		3.26		17-MAR-10 03:32	per0316087a
Perchlorate-101	.05	.04	88.55	17-MAR-10 03:32	per0316087a
Perchlorate	.05	.04	89.36	17-MAR-10 05:17	per0316100a

Perchlorate MDL Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-2203

Lab Code: GEL

Reporting Units: ug/L

Perchlorate Isotope Ratio		2.89		17-MAR-10 05:17	per0316100a
Perchlorate-101	.05	.05	92.99	17-MAR-10 05:17	per0316100a
Perchlorate	.05	.05	100.47	17-MAR-10 07:03	per0316113a
Perchlorate Isotope Ratio		2.92		17-MAR-10 07:03	per0316113a
Perchlorate-101	.05	.05	103.48	17-MAR-10 07:03	per0316113a

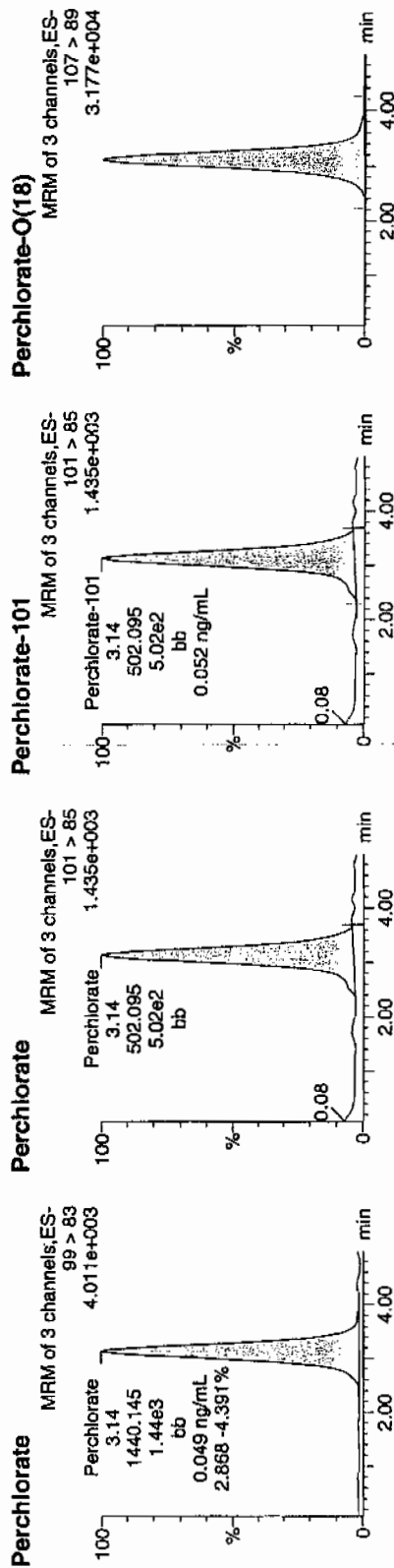
Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charliers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per031610a.qid

Last Altered: Wednesday, March 17, 2010 9:01:09 AM Eastern Standard Time
Printed: Wednesday, March 17, 2010 9:41:10 AM Eastern Standard Time

Sample Name: per0316011a
Date: 16-Mar-2010
Time: 17:20:47
ID: WCL100309-07CRI
Vial: 1:2,B

Per0316011a



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100309-07CRI	Perchlorate	99 > 83	3.14	1440.145	1440.145	bb			0.0493	96.61	-1.39	486.148	2.87
WCL100309-07CRI	Perchlorate-101	101 > 85	3.14	502.095	502.095	bb			0.0516	103.28	3.28	106.460	
WCL100309-07CRI	Perchlorate-O(18)	107 > 89	3.11	11655.735	11655.735	bb			0.4878	97.56	-2.44	2271.4...	

$$\frac{1440.145}{29209.2} = 0.0493$$

not 3/10/10

Quantify Sample Report MassLynx 4.0 SP4

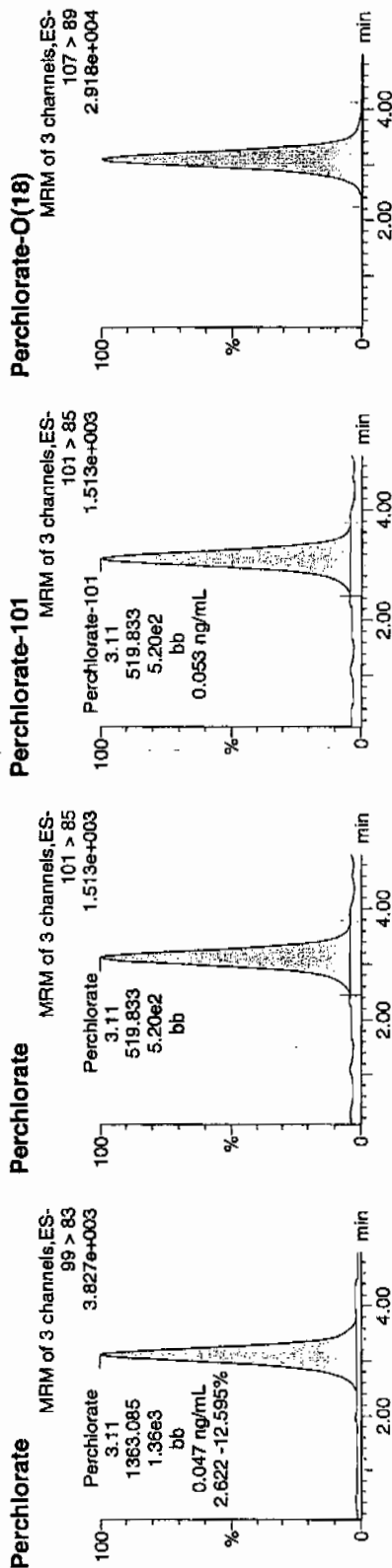
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per031610a.qld

Last Altered: Wednesday, March 17, 2010 9:01:09 AM Eastern Standard Time
 Printed: Wednesday, March 17, 2010 9:41:10 AM Eastern Standard Time

Page 7
 Sample Name: per0316024a
 Date: 16-Mar-2010
 Time: 19:05:15
 ID: WCL100309-07CRI
 Vial: 1:2,B

per
 03-17-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100309-07CRI	Perchlorate	99 > 83	3.11	1363.085	1363.085	bb			-0.0467	93.33	-6.67	332.530	2.62
WCL100309-07CRI	Perchlorate-101	101 > 85	3.11	519.833	519.833	bb			0.0535	106.93	6.93	214.332	
WCL100309-07CRI	Perchlorate-O(18)	107 > 89	3.10	10637.331	10637.331	bb			0.4452	89.04	-10.96	2115.3...	

left
 3/18/10

Quantify Sample Report MassLynx 4.0 SP4

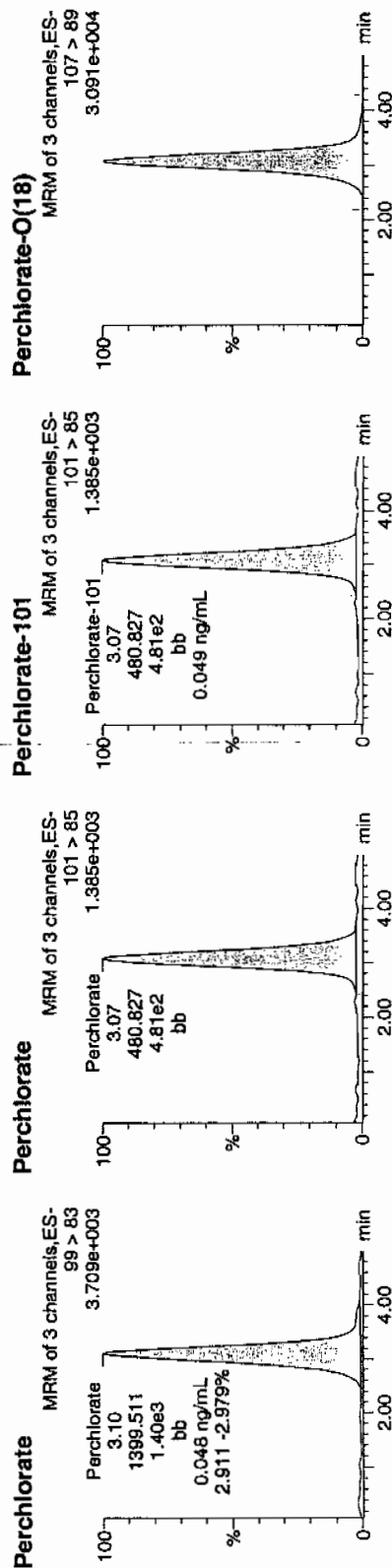
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per031610a.qld

Last Altered: Wednesday, March 17, 2010 9:01:09 AM Eastern Standard Time
 Printed: Wednesday, March 17, 2010 9:41:10 AM Eastern Standard Time

Sample Name: per0316037a
 Date: 16-Mar-2010
 Time: 20:49:48
 ID: WCL100309-07CRI
 Vial: 1:2,B

per0316037a
03-17-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100309-07CRI	Perchlorate	99 > 83	3.10	1399.511	1399.511	bb			0.0479	95.82	-4.18	130.048	2.91
WCL100309-07CRI	Perchlorate-101	101 > 85	3.07	480.827	480.827	bb			0.0495	98.91	-1.09	127.669	
WCL100309-07CRI	Perchlorate-O(18)	107 > 89	3.07	11129.948	11129.948	bb			0.4658	93.16	-6.84	1249.9...	

per0316037a
3/18/10

Quantify Sample Report MassLynx 4.0 SP4

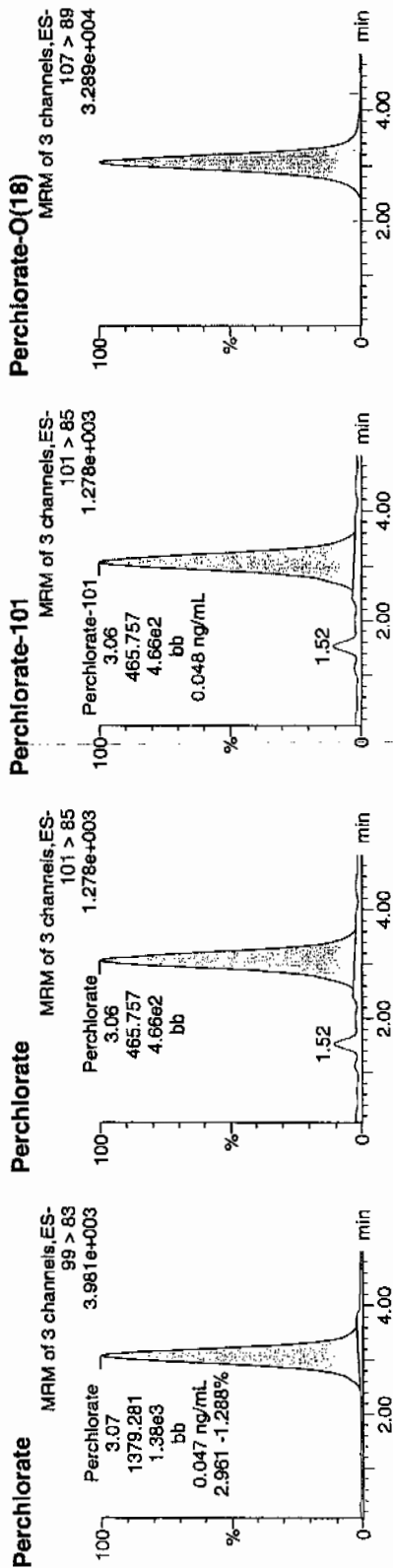
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per031610a.qld

Last Altered: Wednesday, March 17, 2010 9:01:09 AM Eastern Standard Time
 Printed: Wednesday, March 17, 2010 9:41:10 AM Eastern Standard Time

Sample Name: per0316050a
 Date: 16-Mar-2010
 Time: 22:34:27
 ID: WCL100309-07CRI
 Vial: 1:2,B

Pure
 03-17-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100309-07CRI	Perchlorate	99 > 83	3.07	1379.281	1379.281	bb			0.0472	94.44	-5.56	338.835	2.96
WCL100309-07CRI	Perchlorate-101	101 > 85	3.06	465.757	465.757	bb			0.0479	95.81	-4.19	84.114	
WCL100309-07CRI	Perchlorate-O(18)	107 > 89	3.06	11766.454	11766.454	bb			0.4924	98.49	-1.51	940.442	

put
 3/18/10

Quantify Sample Report MassLynx 4.0 SP4

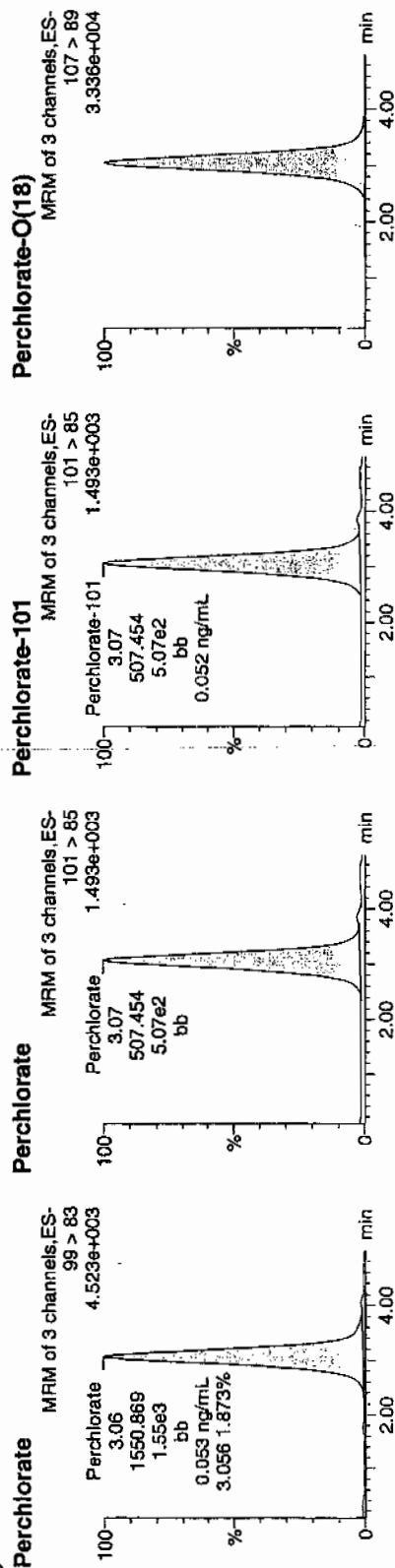
The GEL Group, LLC Analyst: Charliers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per031610a.qld

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 Printed: Wednesday, March 17, 2010 9:41:10 AM Eastern Standard Time

Sample Name: per0316061a
 Date: 17-Mar-2010
 Time: 00:03:05
 ID: WCL100309-07CRI
 Vial: 1:2,B

Perchlorate
 03.17.10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100309-07CRI	Perchlorate	99 > 83	3.06	1550.869	1550.869	bb			0.0531	106.19	6.19	242.285	3.06
WCL100309-07CRI	Perchlorate-101	101 > 85	3.07	507.454	507.454	bb			0.0522	104.38	4.38	54.514	
WCL100309-07CRI	Perchlorate-O(18)	107 > 89	3.05	11953.760	11953.760	bb			0.5003	100.05	0.05	738.699	

not
 3/15/10

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

Dataset: C:\MassLynx\Perchlorate.PRO\per031610a.qld

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Printed: Wednesday, March 17, 2010 9:41:10 AM Eastern Standard Time

Sample Name: per0316074a

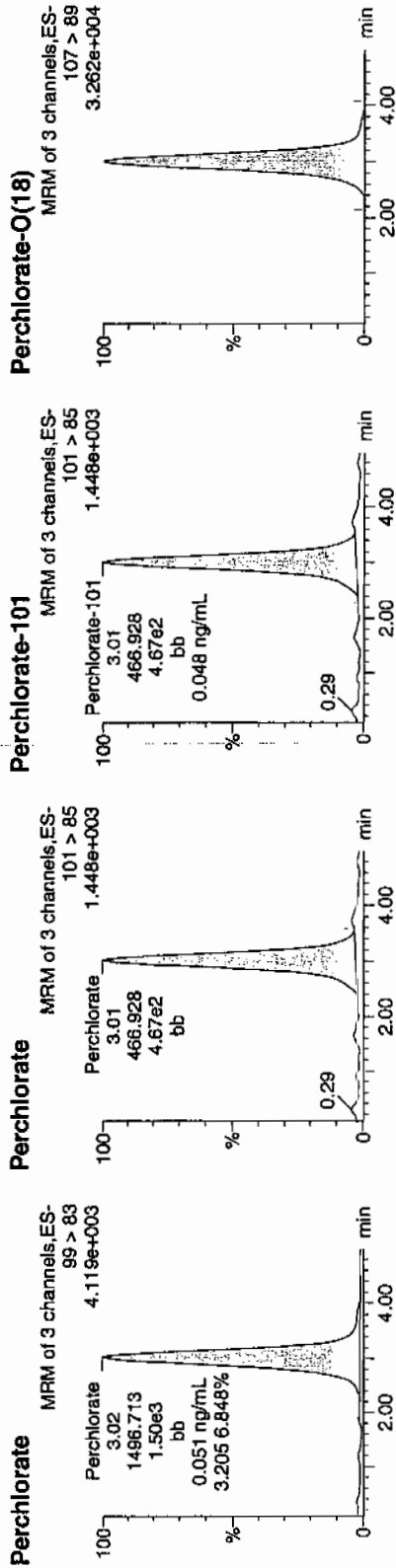
Date: 17-Mar-2010

Time: 01:47:55

ID: WCL100309-07CRI

Vial: 1:2,B

per
03-17-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100309-07CRI	Perchlorate	99 > 83	3.02	1496.713	1496.713	bb			0.0512	102.48	2.48	601.276	3.21
WCL100309-07CRI	Perchlorate-101	101 > 85	3.01	466.928	466.928	bb			0.0480	96.05	-3.95	134.539	
WCL100309-07CRI	Perchlorate-O(18)	107 > 89	3.01	11511.645	11511.645	bb			0.4818	96.35	-3.65	2957.1...	

3/18/10

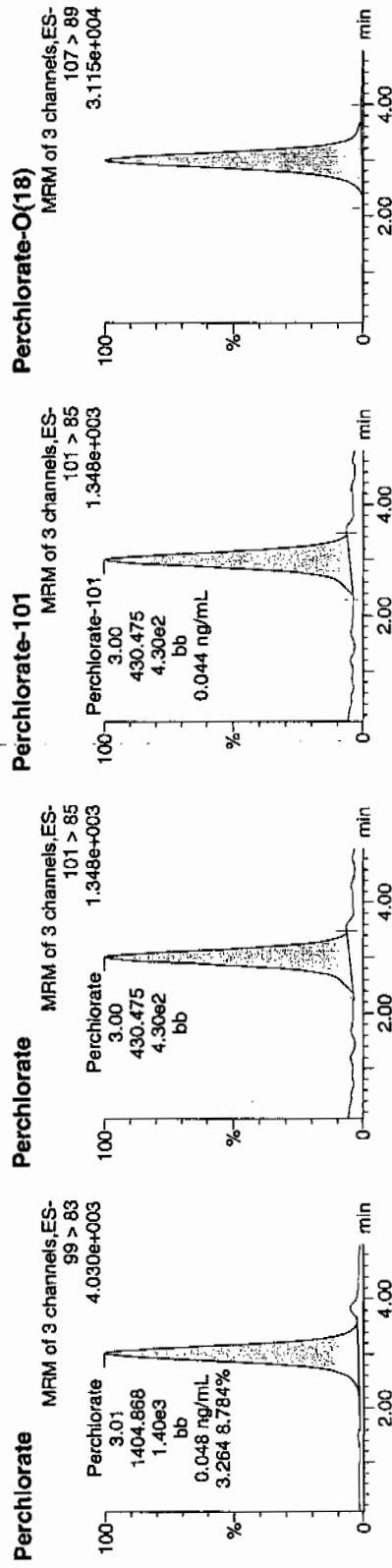
Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per031610a.qld

Last Altered: Wednesday, March 17, 2010 9:01:09 AM Eastern Standard Time
Printed: Wednesday, March 17, 2010 9:41:10 AM Eastern Standard Time

Sample Name: per0316087a
Date: 17-Mar-2010
Time: 03:32:49
ID: WCL100309-07CRI
Vial: 1:2,B

Per031610



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100309-07CRI	Perchlorate	99 > 83	3.01	1404.868	1404.868	bb			0.0481	96.19	-3.81	960.501	3.26
WCL100309-07CRI	Perchlorate-101	101 > 85	3.00	430.475	430.475	bb			0.0443	88.55	-11.45	188.319	
WCL100309-07CRI	Perchlorate-O(18)	107 > 89	3.00	10936.855	10936.855	bb			0.4577	91.54	-8.46	1135.0...	

3/17/10

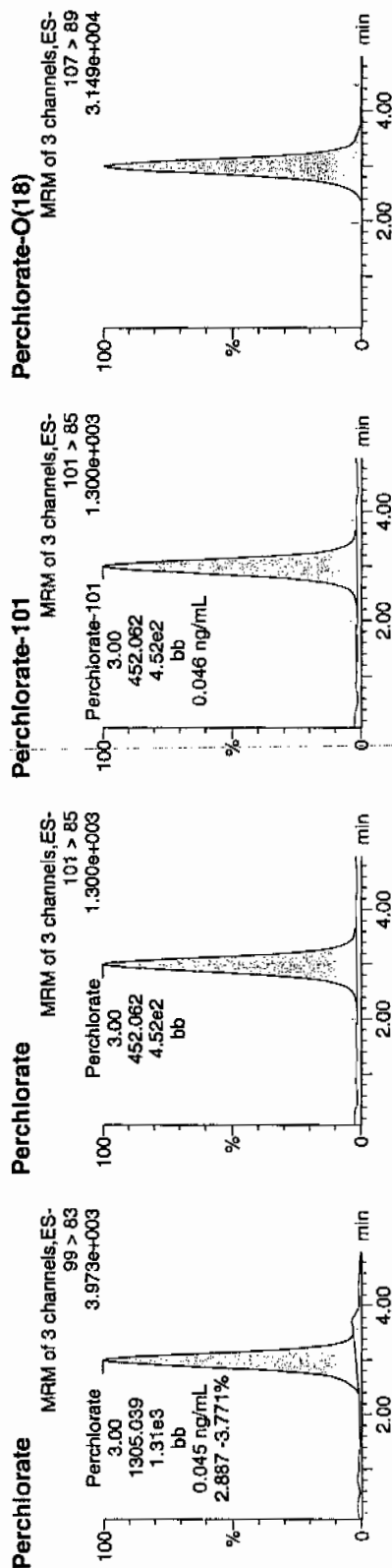
Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per031610a.qld

Last Altered: Wednesday, March 17, 2010 9:01:09 AM Eastern Standard Time
Printed: Wednesday, March 17, 2010 9:41:10 AM Eastern Standard Time

Page 100
Sample Name: per0316100a
Date: 17-Mar-2010
Time: 05:17:53
ID: WCL100309-07CRI
Vial: 1:2,B

Per
and
3/17/10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100309-07CRI	Perchlorate	99 > 83	3.00	1305.039	1305.039	bb			0.0447	89.36	-10.64	331.453	2.89
WCL100309-07CRI	Perchlorate-101	101 > 85	3.00	452.062	452.062	bb			0.0465	92.99	-7.01	190.837	
WCL100309-07CRI	Perchlorate-O(18)	107 > 89	2.99	11128.553	11128.553	bb			0.4657	93.15	-6.85	6365.0...	

and
3/18/10

Quantify Sample Report MassLynx 4.0 SP4

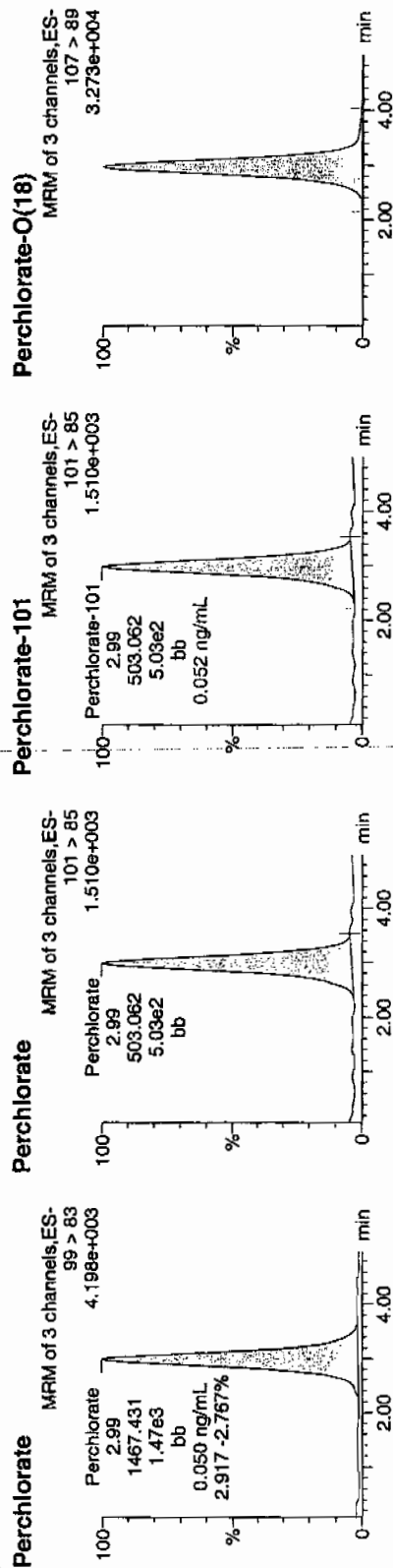
The GEL Group, LLC Analyst: Charliers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per031610a.qld

Last Altered: Wednesday, March 17, 2010 9:01:09 AM Eastern Standard Time
 Printed: Wednesday, March 17, 2010 9:41:10 AM Eastern Standard Time

Page Name: per0316113a
 Date: 17-Mar-2010
 Time: 07:03:49
 ID: WCL100309-07CRI
 Vial: 1:2,B

Pure
 33-17-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100309-07CRI	Perchlorate	99 > 83	2.99	1467.431	1467.431	bb			0.0502	100.47	0.47	231.108	2.92
WCL100309-07CRI	Perchlorate-101	101 > 85	2.99	503.062	503.062	bb			0.0517	103.48	3.48	236.042	
WCL100309-07CRI	Perchlorate-O(18)	107 > 89	2.97	11421.953	11421.953	bb			0.4780	95.60	-4.40	5243.2...	

Plot
 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: WATER

Extraction Batch ID: 962135

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.

MB

Date Received: 08-MAR-10

GEL Job No (SDG): 10-2203

GEL Sample ID: 1202063757

Date Filtered: 08-MAR-10

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.05	.2	0.050	ug/L	U	1	17-MAR-10 03:40	per0316088a
	Perchlorate Isotope Ratio						1	17-MAR-10 03:40	per0316088a
14797-73-0	Perchlorate-101	.05	.2	0.050	ug/L	U	1	17-MAR-10 03:40	per0316088a
	Perchlorate-O(18)			0.478	ug/L		1	17-MAR-10 03:40	per0316088a

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

*Concentration =

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

Quantify Sample Report MassLynx 4.0 SP4

Page 88 of 126

The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per031610a.qld

Last Altered: Wednesday, March 17, 2010 9:01:09 AM Eastern Standard Time
Printed: Wednesday, March 17, 2010 9:41:10 AM Eastern Standard Time

Sample Name: per0316088a

Date: 17-Mar-2010

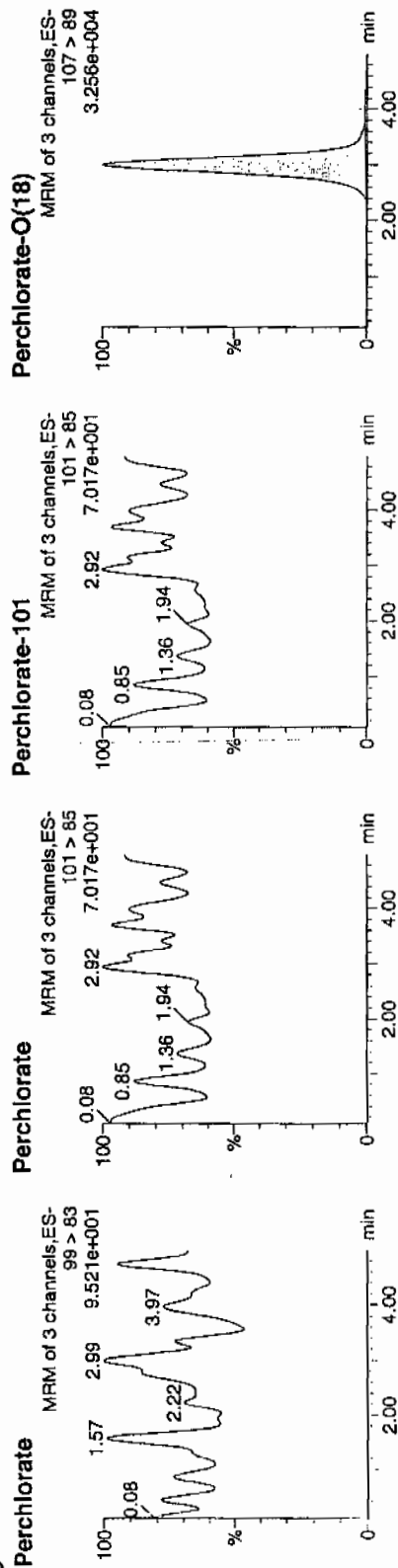
Time: 03:40:53

ID: 1202063757

Vial: 2:5,A

30-1710

1522-9162136 | L222 | MB | 11



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202063757	Perchlorate	99 > 83											0.00
1202063757	Perchlorate-101	101 > 85											
1202063757	Perchlorate-O(18)	107 > 89	3.00	11417.856	11417.856	bb			0.4778	95.57	-4.43	1583.4...	

1477
3/13/10

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: WATER

Extraction Batch ID: 962135

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.

LCS

Date Received: 08-MAR-10

GEL Job No (SDG): 10-2203

GEL Sample ID: 1202063758

Date Filtered: 08-MAR-10

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte [^]	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.05	.2	0.329	ug/L		1	17-MAR-10 03:49	per0316089a
	Perchlorate Isotope Ratio			2.98			1	17-MAR-10 03:49	per0316089a
14797-73-0	Perchlorate-101	.05	.2	0.331	ug/L		1	17-MAR-10 03:49	per0316089a
	Perchlorate-O(18)			0.465	ug/L		1	17-MAR-10 03:49	per0316089a

[^] 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\per031610a.qld

Last Altered: Wednesday, March 17, 2010 9:01:09 AM Eastern Standard Time
Printed: Wednesday, March 17, 2010 9:41:10 AM Eastern Standard Time

Sample Name: per0316089a

Date: 17-Mar-2010

Time: 03:49:07

ID: 1202063758

Val: 2:5,B

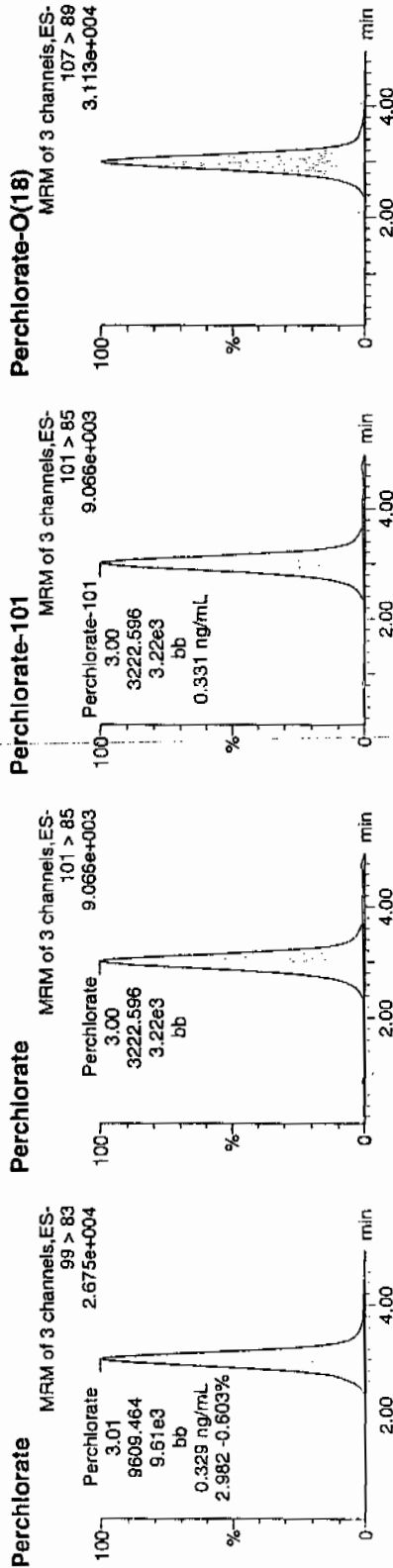
NEED DEL: HIGH LGS BUT ONLY

SMALL HETS IN SAMPLES

< MCL

03-17-10

LOW | 962136 | BTO | LGS | 11



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202063758	Perchlorate	99 > 83	3.01	9609.464	9609.464	bb			0.3290	164.49	64.49	600.875	2.98
1202063758	Perchlorate-101	101 > 85	3.00	3222.596	3222.596	bb			0.3314	165.72	65.72	674.917	
1202063758	Perchlorate-O(18)	107 > 89	3.00	11116.203	11116.203	bb			0.4652	93.04	-6.96	4993.7...	

$$\frac{9609.464}{3222.596} = 0.3290$$

WTF
3/18/10

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: 962135 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	Initial Volume (mL)	Final Volume (mL)	Prepped Factor (mL/mL)
1202063757 MB	08-MAR-2010 14:28:00	10	10	1
1202063758 LCS	08-MAR-2010 14:28:00	10	10	1
248375001	08-MAR-2010 14:28:00	10	10	1
248375002	08-MAR-2010 14:28:00	10	10	1
248407001	08-MAR-2010 14:28:00	10	10	1
1202063759 MS (248407001)	08-MAR-2010 14:28:00	10	10	1
1202063760 MSD (248407001)	08-MAR-2010 14:28:00	10	10	1
248419001	08-MAR-2010 14:28:00	10	10	1
248419002	08-MAR-2010 14:28:00	10	10	1
248516001	08-MAR-2010 14:28:00	10	10	1
248516002	08-MAR-2010 14:28:00	10	10	1
248518001	08-MAR-2010 14:28:00	10	10	1
248523001	08-MAR-2010 14:28:00	10	10	1
248533001	08-MAR-2010 14:28:00	10	10	1
248535001	08-MAR-2010 14:28:00	10	10	1
248535002	08-MAR-2010 14:28:00	10	10	1
248551001	08-MAR-2010 14:28:00	10	10	1
248551002	08-MAR-2010 14:28:00	10	10	1
248649001	08-MAR-2010 14:28:00	10	10	1
248649002	08-MAR-2010 14:28:00	10	10	1
248685001	08-MAR-2010 14:28:00	10	10	1
248685002	08-MAR-2010 14:28:00	10	10	1
1202063761 LCS	08-MAR-2010 14:28:00	10	10	1

Type	Sample Id	Description	Serial Number	Spike Amt	Units	Comments
LC	1202063761	10 ug/L ICV/CV Second Source	UCL100226-01.1	2	mL	Desalting cartridges used: 100217-1-H & 100224-1-Ba
LC	1202063758	10 ug/L ICV/CV Second Source	UCL100226-01.1	2	mL	
MS	1202063759	10 ug/L ICV/CV Second Source	UCL100226-01.1	2	mL	
MSD	1202063760	10 ug/L ICV/CV Second Source	UCL100226-01.1	2	mL	
BLIND	ALL	500 ppm Carbonate, Bicarbonate, Chloride, Sulfate	1262643	10	mL	
BLIND	ALL	0.25% HPLC Grade Water	1271949	10	mL	

GEL ORGANIC RUN LOG

INSTRUMENT ID: LCMSMS#2

Date: 03/16/10

Extr. Injection Volume: 20uL

Sequence Number: per031610a

Initial Calibration Date: 03/16/10

Method: EPA 6850-Modified

Int. Std.: UCL100210-01

Mobile Phase Lot#: 1278668, 1271949

Standard-Samp Reagent Lot#: 1271949

Reviewed BY: WJT

Date: 3/18/10

SOP: GL-OA-E-067 Rev.6

Alt Check Std. ID: WCL100309-06

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC_Flag
per0316001a	IPB001	CWW	3/16/2010 16:00			1		USE	B
per0316002a	IPB001	CWW	3/16/2010 16:08			1		USE	B
per0316003a	WCLICAL-01	CWW	3/16/2010 16:16			1		USE	I
per0316004a	WCLICAL-02	CWW	3/16/2010 16:24			1		USE	I
per0316005a	WCLICAL-03	CWW	3/16/2010 16:32			1		USE	I
per0316006a	WCLICAL-04	CWW	3/16/2010 16:40			1		USE	I
per0316007a	WCLICAL-05	CWW	3/16/2010 16:48			1		USE	I
per0316008a	IPB002	CWW	3/16/2010 16:56			1		USE	B
per0316009a	WCLICV	CWW	3/16/2010 17:04			1		USE	C
per0316010a	IPB003	CWW	3/16/2010 17:12			1		USE	B
per0316011a	WCLCRI	CWW	3/16/2010 17:20			1		USE	C
per0316012a	248633001	CWW	3/16/2010 17:28	962119	LPTP10-S1	5000	PTQA	USE	S
per0316013a	1202063730	CWW	3/16/2010 17:36	962119	LPTP10-S2	5000	PTQA	USE	S
per0316014a	248065008	CWW	3/16/2010 17:44	958968	10-2086	1		USE	S
per0316015a	IPB004	CWW	3/16/2010 17:52			1		USE	B
per0316016a	1202054236	CWW	3/16/2010 18:00	957953	10-1976-1	1	LANL	USE	S
per0316017a	1202054237	CWW	3/16/2010 18:09	957953	10-1976-1	1	LANL	USE	S
per0316018a	1202054240	CWW	3/16/2010 18:17	957953	10-1976-1	1	LANL	USE	S
per0316019a	247781001	CWW	3/16/2010 18:25	957953	10-1976-1	1	LANL	USE	S
per0316020a	1202054238	CWW	3/16/2010 18:33	957953	10-1976-1	1	LANL	USE	S
per0316021a	1202054239	CWW	3/16/2010 18:41	957953	10-1976-1	1	LANL	USE	S
per0316022a	WCLCCV	CWW	3/16/2010 18:49			1		USE	C
per0316023a	IPB005	CWW	3/16/2010 18:57			1		USE	B
per0316024a	WCLCRI	CWW	3/16/2010 19:05			1		USE	C
per0316025a	247781002	CWW	3/16/2010 19:13	957953	10-1976-1	1	LANL	USE	S
per0316026a	247781003	CWW	3/16/2010 19:21	957953	10-1976-1	1	LANL	USE	S
per0316027a	IPB006	CWW	3/16/2010 19:29			1		USE	B
per0316028a	1202063732	CWW	3/16/2010 19:37	962121	10-2256	1	LANL	USE	S
per0316029a	1202063733	CWW	3/16/2010 19:45	962121	10-2256	1	LANL	USE	S

per0316030a	1202063736	CWW	3/16/2010 19:53	962121	10-2256	1	LANL	USE	S
per0316031a	248666001	CWW	3/16/2010 20:01	962121	10-2256	1	LANL	USE	S
per0316032a	1202063734	CWW	3/16/2010 20:09	962121	10-2256	1	LANL	USE	S
per0316033a	1202063735	CWW	3/16/2010 20:17	962121	10-2256	1	LANL	USE	S
per0316034a	248666002	CWW	3/16/2010 20:25	962121	10-2256	1	LANL	USE	S
per0316035a	WCLCCV	CWW	3/16/2010 20:33			1		USE	C
per0316036a	IPB007	CWW	3/16/2010 20:41			1		USE	B
per0316037a	WCLCRI	CWW	3/16/2010 20:49			1		USE	C
per0316038a	248666003	CWW	3/16/2010 20:57	962121	10-2256	1	LANL	USE	S
per0316039a	248666004	CWW	3/16/2010 21:05	962121	10-2256	1	LANL	USE	S
per0316040a	248666005	CWW	3/16/2010 21:13	962121	10-2256	1	LANL	USE	S
per0316041a	248666006	CWW	3/16/2010 21:22	962121	10-2256	1	LANL	USE	S
per0316042a	248666007	CWW	3/16/2010 21:30	962121	10-2256	1	LANL	USE	S
per0316043a	248666008	CWW	3/16/2010 21:38	962121	10-2256	1	LANL	USE	S
per0316044a	248666009	CWW	3/16/2010 21:46	962121	10-2256	1	LANL	USE	S
per0316045a	248666010	CWW	3/16/2010 21:54	962121	10-2256	1	LANL	USE	S
per0316046a	248666011	CWW	3/16/2010 22:02	962121	10-2256	1	LANL	USE	S
per0316047a	248666012	CWW	3/16/2010 22:10	962121	10-2256	1	LANL	USE	S
per0316048a	WCLCCV	CWW	3/16/2010 22:18			1		USE	C
per0316049a	IPB008	CWW	3/16/2010 22:26			1		USE	B
per0316050a	WCLCRI	CWW	3/16/2010 22:34			1		USE	C
per0316051a	248666013	CWW	3/16/2010 22:42	962121	10-2256	1	LANL	USE	S
per0316052a	248666014	CWW	3/16/2010 22:50	962121	10-2256	1	LANL	USE	S
per0316053a	248666015	CWW	3/16/2010 22:58	962121	10-2256	1	LANL	USE	S
per0316054a	248666016	CWW	3/16/2010 23:06	962121	10-2256	1	LANL	USE	S
per0316055a	248666017	CWW	3/16/2010 23:14	962121	10-2256	1	LANL	USE	S
per0316056a	248666018	CWW	3/16/2010 23:22	962121	10-2256	1	LANL	USE	S
per0316057a	248666019	CWW	3/16/2010 23:30	962121	10-2256	1	LANL	USE	S
per0316058a	248666020	CWW	3/16/2010 23:38	962121	10-2256	1	LANL	USE	S
per0316059a	WCLCCV	CWW	3/16/2010 23:47			1		USE	C
per0316060a	IPB009	CWW	3/16/2010 23:55			1		USE	B
per0316061a	WCLCRI	CWW	3/17/2010 0:03			1		USE	C
per0316062a	1202063737	CWW	3/17/2010 0:11	962124	VARIOUS	1	LANL	USE	S
per0316063a	1202063738	CWW	3/17/2010 0:19	962124	VARIOUS	1	LANL	USE	S
per0316064a	1202063741	CWW	3/17/2010 0:27	962124	VARIOUS	1	LANL	USE	S
per0316065a	248250001	CWW	3/17/2010 0:35	962124	10-2141	1	LANL	USE	S
per0316066a	248250002	CWW	3/17/2010 0:43	962124	10-2141	1	LANL	USE	S
								DUSE-DL	

per0316067a	1202063739	CWW	3/17/2010 0:51	962124	10-2141	1	LANL	DUSE-DL	S
per0316068a	1202063740	CWW	3/17/2010 0:59	962124	10-2141	1	LANL	DUSE-DL	S
per0316069a	248250003	CWW	3/17/2010 1:07	962124	10-2141	1	LANL	DUSE-DL	S
per0316070a	248250004	CWW	3/17/2010 1:15	962124	10-2141	1	LANL	DUSE-DL	S
per0316071a	248386003	CWW	3/17/2010 1:23	962124	10-2164	1	LANL	DUSE-RA	S
per0316072a	WCLCCV	CWW	3/17/2010 1:31			1		USE	C
per0316073a	IPB010	CWW	3/17/2010 1:39			1		USE	B
per0316074a	WCLCRI	CWW	3/17/2010 1:47			1		USE	C
per0316075a	248386004	CWW	3/17/2010 1:55	962124	10-2164	1	LANL	USE	S
per0316076a	248549001	CWW	3/17/2010 2:04	962124	10-2214	1	LANL	USE	S
per0316077a	248549002	CWW	3/17/2010 2:12	962124	10-2214	1	LANL	USE	S
per0316078a	248549003	CWW	3/17/2010 2:20	962124	10-2214	1	LANL	USE	S
per0316079a	248549004	CWW	3/17/2010 2:28	962124	10-2214	1	LANL	USE	S
per0316080a	248549005	CWW	3/17/2010 2:36	962124	10-2214	1	LANL	USE	S
per0316081a	248549006	CWW	3/17/2010 2:44	962124	10-2214	1	LANL	USE	S
per0316082a	248682001	CWW	3/17/2010 2:52	962124	10-2259	1	LANL	USE	S
per0316083a	248682002	CWW	3/17/2010 3:00	962124	10-2259	1	LANL	USE	S
per0316084a	248682003	CWW	3/17/2010 3:08	962124	10-2259	1	LANL	USE	S
per0316085a	WCLCCV	CWW	3/17/2010 3:16			1		USE	C
per0316086a	IPB011	CWW	3/17/2010 3:24			1		USE	B
per0316087a	WCLCRI	CWW	3/17/2010 3:32			1		USE	C
per0316088a	1202063757	CWW	3/17/2010 3:40	962136	VARIOUS	1	LANL	USE	S
per0316089a	1202063758	CWW	3/17/2010 3:49	962136	VARIOUS	1	LANL	USE	S
per0316090a	1202063761	CWW	3/17/2010 3:57	962136	VARIOUS	1	LANL	USE	S
per0316091a	248375001	CWW	3/17/2010 4:05	962136	10-2155-1	1	LANL	USE	S
per0316092a	248375002	CWW	3/17/2010 4:13	962136	10-2155-1	1	LANL	USE	S
per0316093a	248407001	CWW	3/17/2010 4:21	962136	10-2188	1	LANL	USE	S
per0316094a	1202063759	CWW	3/17/2010 4:29	962136	10-2188	1	LANL	USE	S
per0316095a	1202063760	CWW	3/17/2010 4:37	962136	10-2188	1	LANL	USE	S
per0316096a	248419001	CWW	3/17/2010 4:45	962136	10-2191-1	1	LANL	USE	S
per0316097a	248419002	CWW	3/17/2010 4:53	962136	10-2191-1	1	LANL	USE	S
per0316098a	WCLCCV	CWW	3/17/2010 5:01			1		USE	C
per0316099a	IPB012	CWW	3/17/2010 5:09			1		USE	B
per0316100a	WCLCRI	CWW	3/17/2010 5:17			1		USE	C
per0316101a	248516001	CWW	3/17/2010 5:25	962136	10-2197-1	1	LANL	USE	S
per0316102a	248516002	CWW	3/17/2010 5:34	962136	10-2197-1	1	LANL	USE	S
per0316103a	248518001	CWW	3/17/2010 5:42	962136	10-2198-1	1	LANL	USE	S

per0316104a	248523001	CWW	3/17/2010 5:50	962136	10-2203	1	LANL	USE	S
per0316105a	248533001	CWW	3/17/2010 5:58	962136	10-2211-1	1	LANL	USE	S
per0316106a	248535001	CWW	3/17/2010 6:07	962136	10-2208-1	1	LANL	USE	S
per0316107a	248535002	CWW	3/17/2010 6:15	962136	10-2208-1	1	LANL	USE	S
per0316108a	248551001	CWW	3/17/2010 6:23	962136	10-2214-1	1	LANL	USE	S
per0316109a	248551002	CWW	3/17/2010 6:31	962136	10-2214-1	1	LANL	USE	S
per0316110a	248638001	CWW	3/17/2010 6:39	962136	10-2234-1	1	LANL	USE	S
per0316111a	WCLCCV	CWW	3/17/2010 6:47			1		USE	C
per0316112a	IPB013	CWW	3/17/2010 6:55			1		USE	B
per0316113a	WCLCRI	CWW	3/17/2010 7:03			1		USE	C
per0316114a	248649001	CWW	3/17/2010 7:11	962136	10-2240-1	1	LANL	USE	S
per0316115a	248649002	CWW	3/17/2010 7:20	962136	10-2240-1	1	LANL	USE	S
per0316116a	248685001	CWW	3/17/2010 7:28	962136	10-2259-1	1	LANL	USE	S
per0316117a	248685002	CWW	3/17/2010 7:36	962136	10-2259-1	1	LANL	USE	S
per0316118a	248250002	CWW	3/17/2010 7:44	962124	10-2141	2	LANL	USE	S
per0316119a	1202063739	CWW	3/17/2010 7:52	962124	10-2141	2	LANL	USE	S
per0316120a	1202063740	CWW	3/17/2010 8:00	962124	10-2141	2	LANL	USE	S
per0316121a	248250003	CWW	3/17/2010 8:08	962124	10-2141	100	LANL	USE	S
per0316122a	248250004	CWW	3/17/2010 8:16	962124	10-2141	50	LANL	USE	S
per0316123a	248386003	CWW	3/17/2010 8:24	962124	10-2141	1	LANL	USE	S
per0316124a	WCLCCV	CWW	3/17/2010 8:32			1		USE	C
per0316125a	IPB014	CWW	3/17/2010 8:40			1		USE	B
per0316126a	WCLCRI	CWW	3/17/2010 8:48			1		USE	C

Dataset: C:\MassLynx\Perchlorate.PRO\per031610a.qld

Last Altered: Wednesday, March 17, 2010 9:01:09 AM Eastern Standard Time
Printed: Wednesday, March 17, 2010 9:41:10 AM Eastern Standard Time

Name: per0316094a

Date: 17-Mar-2010

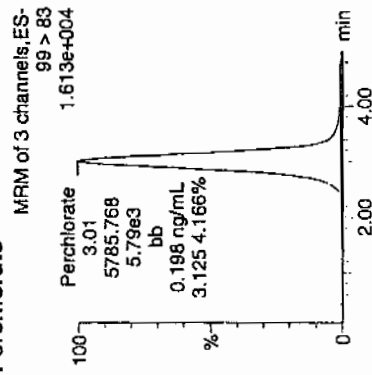
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ID: 1202063759

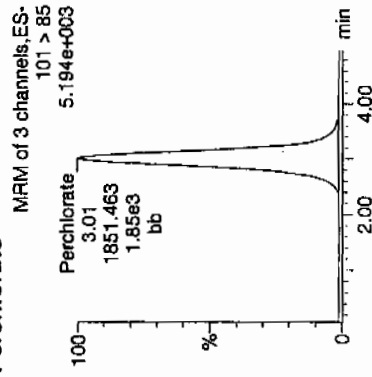
Vial: 2:6,A

63
03-17-10
1202063759 | 1202063759 | 1202063759

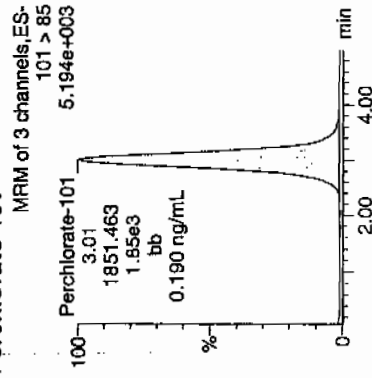
Perchlorate



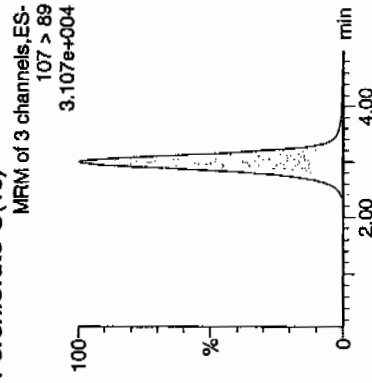
Perchlorate



Perchlorate-101



Perchlorate-O(18)



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202063759	Perchlorate	99 > 83	3.01	5785.768	5785.768	bb			0.1981	99.04	-0.96	551.000	3.12
1202063759	Perchlorate-101	101 > 85	3.01	1851.463	1851.463	bb			0.1904	95.21	-4.79	926.372	
1202063759	Perchlorate-O(18)	107 > 89	3.00	11049.848	11049.848	bb			0.4624	92.49	-7.51	2110.9...	

5785.768
29209.9
= 0.1981

3/18/10

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

Dataset: C:\MassLynx\Perchlorate.PRO\per031610a.qld

Last Altered: Wednesday, March 17, 2010 9:01:09 AM Eastern Standard Time
Printed: Wednesday, March 17, 2010 9:41:10 AM Eastern Standard Time

Name: per0316095a

Date: 17-Mar-2010

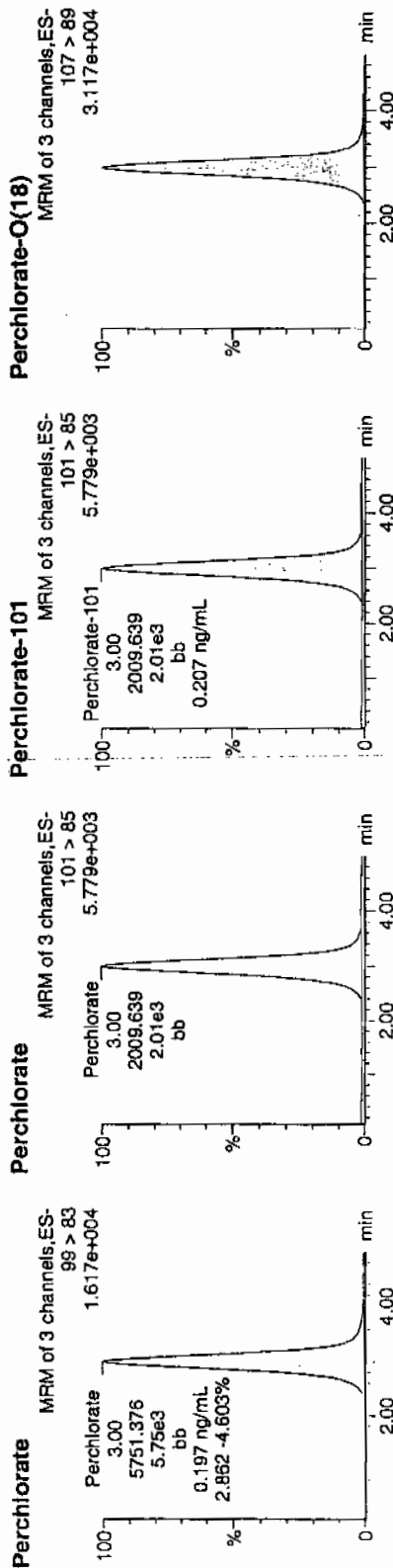
Time: 04:37:24

ID: 1202063760

Vial: 2:6,B

03-12-10

1202063760 | 1202063760 | 1202063760



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202063760	Perchlorate	99 > 83	3.00	5751.376	5751.376	bb			0.1969	98.45	-1.55	125.154	2.86
1202063760	Perchlorate-101	101 > 85	3.00	2009.639	2009.639	bb			0.2067	103.35	3.35	743.184	
1202063760	Perchlorate-O(18)	107 > 89	2.99	10870.262	10870.262	bb			0.4549	90.99	-9.01	3201.8...	

5751.376
2009.639
= 2.8619

3/18/10

GEL Laboratories LLC
Form GEL-DER

DER Report No.: 805539
Revision No.: 1

DATA EXCEPTION REPORT			
Mo.Day Yr. 17-MAR-10	Division: Industrial	Quality Criteria: Specifications	Type: Process
Instrument Type: LC-MS/MS	Test / Method: SW846 6850 Modified	Matrix Type: Liquid	Client Code: LANL
Batch ID: 962136	Sample Numbers: See Below		
Potentially affected work order(s)(SDG): 248375(10-2155-1),248407(10-2188),248419(10-2191-1),248516(10-2197-1),248518(10-2198-1),248523(10-2203),248533(10-2211-1),248535(10-2208-1),248551(10-2214-1),248638(10-2234-1),248649(10-2240-1),248685(10-2259-1) Application Issues: Failed Recovery for LCS/LCSD			
Specification and Requirements Exception Description:		DER Disposition:	
1. High recoveries were observed for Perchlorate and Perchlorate-101 in 1202063758 (LCS). The recoveries were 164% and 166%, respectively. The acceptance range is 85-115%.		1. The high recovery may be the result of a spiking error at the preparation step. Note the recoveries for the LCS and matrix spikes were all acceptable. Since the detections observed in the associated samples were less than the MDL, samples do not need to be re-extracted. Data will be reported.	

Originator's Name:
Charles Wilson

17-MAR-10

Data Validator/Group Leader:

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.

Metals Analysis

Case Narrative

**Metals Fractional Narrative
Los Alamos National Laboratory (LANL)
SDG 10-2203**

Sample Analysis

Sample ID	Client ID
248523001	RE36-10-7534
1202065055	Method Blank (MB) ICP
1202065056	Laboratory Control Sample (LCS)
1202065059	248550001(RE32-10-11362L) Serial Dilution (SD)
1202065057	248550001(RE32-10-11362D) Sample Duplicate (DUP)
1202065058	248550001(RE32-10-11362S) Matrix Spike (MS)
1202065070	Method Blank (MB) ICP-MS
1202065071	Laboratory Control Sample (LCS)
1202065074	248550001(RE32-10-11362L) Serial Dilution (SD)
1202065072	248550001(RE32-10-11362D) Sample Duplicate (DUP)
1202065073	248550001(RE32-10-11362S) Matrix Spike (MS)
1202068540	Method Blank (MB) CVAA
1202068541	Laboratory Control Sample (LCS)
1202068544	248551001(RE46-10-11978L) Serial Dilution (SD)
1202068542	248551001(RE46-10-11978D) Sample Duplicate (DUP)
1202068543	248551001(RE46-10-11978S) Matrix Spike (MS)

The samples in this SDG were analyzed on an "as received" basis.

Method/Analysis Information

Analytical Batch: 962580, 962585 and 964196

Prep Batch : 962579, 962584 and 964195

Standard Operating Procedures: GL-MA-E-013 REV# 20, GL-MA-E-006 REV# 9, GL-MA-E-014 REV# 21 and GL-MA-E-010 REV# 23

Analytical Method: SW846 3005/6010B, SW846 3005/6020 and SW846 7470A

Prep Method : SW846 3005A and SW846 7470A 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 7300 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 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 exception of uranium, which recovered outside of the advisory limits of 70-130%.

ICSA/ICSAB Statement

All interference check samples (ICSA and ICSAB) associated with this SDG met the established acceptance criteria.

Continuing Calibration Blank (CCB) Requirements

All continuing calibration blanks (CCB) bracketing this batch met the established acceptance criteria.

Continuing Calibration Verification (CCV) Requirements

All continuing calibration verifications (CCV) bracketing this SDG met the acceptance criteria.

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

The MBs analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery

The LCS spike recoveries met the acceptance limits.

Quality Control (QC) Sample Statement

The following samples were selected as the quality control (QC) samples for this SDG: 248550001 (RE32-10-11362) and 248551001 (RE46-10-11978).

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. All applicable elements met the acceptance criteria.

Duplicate Relative Percent Difference (RPD) Statement

The 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 RL, a control of +/-RL is used to evaluate the DUP results. All applicable analytes met these requirements.

Serial Dilution % Difference Statement

The serial dilution is used to assess matrix suppression or enhancement. Raw element concentrations that are 25X the IDL/MDL for CVAA, 50X the IDL/MDL for ICP, and 100X the IDL/MDL for ICP-MS analyses are applicable for serial dilution assessment. All applicable analytes met the acceptance criteria of less than 10% difference (%D).

Technical Information**Holding Time Specifications**

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

Sample Dilutions

Dilutions are performed to minimize matrix interferences resulting from elevated mineral element concentrations present in solid samples and/or to bring over range target analyte concentrations into the linear calibration range of the instrument. The samples in this SDG did not require dilutions.

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 (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.

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: 4/15/10

Sample Data Summary

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 10-2203

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 248523001

BASIS: As Received

DATE COLLECTED 24-FEB-10

CLIENT ID: RE36-10-7534

LEVEL: Low

DATE RECEIVED 03-MAR-10

MATRIX: WATER

%SOLIDS: 0

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	200	ug/L	U	68	200	200	1	P	HSC	03/30/10 17:54	033010B-1	962580
7440-36-0	Antimony	3	ug/L	U	1	3	3	1	MS	PRB	04/13/10 09:40	100412-7	962585
7440-38-2	Arsenic	30	ug/L	U	5	30	30	1	P	HSC	03/30/10 17:54	033010B-1	962580
7440-39-3	Barium	5	ug/L	U	1	5	5	1	P	HSC	03/30/10 17:54	033010B-1	962580
7440-41-7	Beryllium	0.50	ug/L	U	0.1	0.5	0.5	1	MS	PRB	04/12/10 21:53	100412-2	962585
7440-43-9	Cadmium	1	ug/L	U	0.11	1	1	1	MS	PRB	04/12/10 21:53	100412-2	962585
7440-70-2	Calcium	200	ug/L	U	50	200	200	1	P	HSC	03/30/10 17:54	033010B-1	962580
7440-47-3	Chromium	5	ug/L	U	1	5	5	1	P	HSC	03/30/10 17:54	033010B-1	962580
7440-48-4	Cobalt	5	ug/L	U	1	5	5	1	P	HSC	03/30/10 17:54	033010B-1	962580
7440-50-8	Copper	10	ug/L	U	3	10	10	1	P	HSC	03/30/10 17:54	033010B-1	962580
7439-89-6	Iron	60.5	ug/L	J	30	100	100	1	P	HSC	03/30/10 17:54	033010B-1	962580
7439-92-1	Lead	2	ug/L	U	0.5	2	2	1	MS	PRB	04/12/10 21:53	100412-2	962585
7439-95-4	Magnesium	300	ug/L	U	85	300	300	1	P	HSC	03/30/10 17:54	033010B-1	962580
7439-96-5	Manganese	5	ug/L	U	1	5	5	1	MS	PRB	04/12/10 21:53	100412-2	962585
7439-97-6	Mercury	0.20	ug/L	U	0.066	0.2	0.2	1	AV	JXL1	03/13/10 08:16	031310W1-8	964196
7440-02-0	Nickel	5	ug/L	U	1.5	5	5	1	P	HSC	03/30/10 17:54	033010B-1	962580
7440-09-7	Potassium	223	ug/L		50	150	150	1	P	HSC	03/30/10 17:54	033010B-1	962580
7782-49-2	Selenium	30	ug/L	U	5	30	30	1	P	HSC	03/30/10 17:54	033010B-1	962580
7440-22-4	Silver	5	ug/L	U	1	5	5	1	P	HSC	03/30/10 17:54	033010B-1	962580
7440-23-5	Sodium	150	ug/L	J	100	300	300	1	P	HSC	03/30/10 17:54	033010B-1	962580
7440-28-0	Thallium	1	ug/L	U	0.3	1	1	1	MS	PRB	04/12/10 21:53	100412-2	962585
7440-61-1	Uranium	0.20	ug/L	U	0.05	0.2	0.2	1	MS	PRB	04/12/10 21:53	100412-2	962585
7440-62-2	Vanadium	5	ug/L	U	1	5	5	1	P	HSC	03/30/10 17:54	033010B-1	962580
7440-66-6	Zinc	10	ug/L	U	3.3	10	10	1	P	HSC	03/30/10 17:54	033010B-1	962580

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt/vol.	Units	Final wt/vol.	Units	Date	Analyst
962580	962579	SW846 3005A	50	mL	50	mL	03/15/10	BCD1
962585	962584	SW846 3005A	50	mL	50	mL	03/15/10	BCD1
964196	964195	SW846 7470A Prep	20	mL	20	mL	03/12/10	TXB3

Quality Control Summary

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 10-2203

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS5,OPTIMA4

<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	5.1	ug/L	5	ug/L	101.9	90.0 – 110.0	AV	13-MAR-10 07:19	031310W1-8
	Aluminum	5280	ug/L	5000	ug/L	105.7	90.0 – 110.0	P	30-MAR-10 15:16	033010B-1
	Arsenic	489	ug/L	500	ug/L	97.8	90.0 – 110.0	P	30-MAR-10 15:16	033010B-1
	Barium	520	ug/L	500	ug/L	104	90.0 – 110.0	P	30-MAR-10 15:16	033010B-1
	Calcium	5160	ug/L	5000	ug/L	103.2	90.0 – 110.0	P	30-MAR-10 15:16	033010B-1
	Chromium	499	ug/L	500	ug/L	99.8	90.0 – 110.0	P	30-MAR-10 15:16	033010B-1
	Cobalt	521	ug/L	500	ug/L	104.3	90.0 – 110.0	P	30-MAR-10 15:16	033010B-1
	Copper	523	ug/L	500	ug/L	104.6	90.0 – 110.0	P	30-MAR-10 15:16	033010B-1
	Iron	5180	ug/L	5000	ug/L	103.5	90.0 – 110.0	P	30-MAR-10 15:16	033010B-1
	Magnesium	5450	ug/L	5000	ug/L	109	90.0 – 110.0	P	30-MAR-10 15:16	033010B-1
	Nickel	515	ug/L	500	ug/L	102.9	90.0 – 110.0	P	30-MAR-10 15:16	033010B-1
	Potassium	2600	ug/L	2500	ug/L	104.1	90.0 – 110.0	P	30-MAR-10 15:16	033010B-1
	Selenium	2560	ug/L	2500	ug/L	102.4	90.0 – 110.0	P	30-MAR-10 15:16	033010B-1
	Silver	267	ug/L	250	ug/L	106.8	90.0 – 110.0	P	30-MAR-10 15:16	033010B-1
	Sodium	2600	ug/L	2500	ug/L	104	90.0 – 110.0	P	30-MAR-10 15:16	033010B-1
	Vanadium	524	ug/L	500	ug/L	104.8	90.0 – 110.0	P	30-MAR-10 15:16	033010B-1
	Zinc	519	ug/L	500	ug/L	103.8	90.0 – 110.0	P	30-MAR-10 15:16	033010B-1
	Beryllium	54.7	ug/L	50	ug/L	109.4	90.0 – 110.0	MS	12-APR-10 20:58	100412-2
	Cadmium	53.7	ug/L	50	ug/L	107.4	90.0 – 110.0	MS	12-APR-10 20:58	100412-2
	Lead	54.9	ug/L	50	ug/L	109.8	90.0 – 110.0	MS	12-APR-10 20:58	100412-2
	Manganese	55.2	ug/L	50	ug/L	110.4	90.0 – 110.0	MS	12-APR-10 20:58	100412-2
	Thallium	53.4	ug/L	50	ug/L	106.8	90.0 – 110.0	MS	12-APR-10 20:58	100412-2
	Uranium	54.5	ug/L	50	ug/L	109	90.0 – 110.0	MS	12-APR-10 20:58	100412-2
	Antimony	54.7	ug/L	50	ug/L	109.3	90.0 – 110.0	MS	13-APR-10 09:12	100412-7
CCV01										
	Mercury	5.04	ug/L	5	ug/L	100.8	80.0 – 120.0	AV	13-MAR-10 07:24	031310W1-8
	Aluminum	5060	ug/L	5000	ug/L	101.1	90.0 – 110.0	P	30-MAR-10 15:38	033010B-1
	Arsenic	510	ug/L	500	ug/L	101.9	90.0 – 110.0	P	30-MAR-10 15:38	033010B-1
	Barium	505	ug/L	500	ug/L	101.1	90.0 – 110.0	P	30-MAR-10 15:38	033010B-1
	Calcium	5070	ug/L	5000	ug/L	101.5	90.0 – 110.0	P	30-MAR-10 15:38	033010B-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 10-2203

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3.ICPMS5.OPTIMA4

<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>
	Chromium	503	ug/L	500	ug/L	100.7	90.0 – 110.0	P	30-MAR-10 15:38	033010B-1
	Cobalt	509	ug/L	500	ug/L	101.7	90.0 – 110.0	P	30-MAR-10 15:38	033010B-1
	Copper	504	ug/L	500	ug/L	100.8	90.0 – 110.0	P	30-MAR-10 15:38	033010B-1
	Iron	5040	ug/L	5000	ug/L	100.8	90.0 – 110.0	P	30-MAR-10 15:38	033010B-1
	Magnesium	5180	ug/L	5000	ug/L	103.5	90.0 – 110.0	P	30-MAR-10 15:38	033010B-1
	Nickel	508	ug/L	500	ug/L	101.6	90.0 – 110.0	P	30-MAR-10 15:38	033010B-1
	Potassium	5130	ug/L	5000	ug/L	102.6	90.0 – 110.0	P	30-MAR-10 15:38	033010B-1
	Selenium	506	ug/L	500	ug/L	101.2	90.0 – 110.0	P	30-MAR-10 15:38	033010B-1
	Silver	506	ug/L	500	ug/L	101.3	90.0 – 110.0	P	30-MAR-10 15:38	033010B-1
	Sodium	10100	ug/L	10000	ug/L	100.9	90.0 – 110.0	P	30-MAR-10 15:38	033010B-1
	Vanadium	508	ug/L	500	ug/L	101.6	90.0 – 110.0	P	30-MAR-10 15:38	033010B-1
	Zinc	504	ug/L	500	ug/L	100.9	90.0 – 110.0	P	30-MAR-10 15:38	033010B-1
	Beryllium	52.2	ug/L	50	ug/L	104.3	90.0 – 110.0	MS	12-APR-10 21:21	100412-2
	Cadmium	51.2	ug/L	50	ug/L	102.3	90.0 – 110.0	MS	12-APR-10 21:21	100412-2
	Lead	51.4	ug/L	50	ug/L	102.7	90.0 – 110.0	MS	12-APR-10 21:21	100412-2
	Manganese	53.1	ug/L	50	ug/L	106.3	90.0 – 110.0	MS	12-APR-10 21:21	100412-2
	Thallium	49.8	ug/L	50	ug/L	99.5	90.0 – 110.0	MS	12-APR-10 21:21	100412-2
	Uranium	50.9	ug/L	50	ug/L	101.8	90.0 – 110.0	MS	12-APR-10 21:21	100412-2
	Antimony	53	ug/L	50	ug/L	105.9	90.0 – 110.0	MS	13-APR-10 09:24	100412-7
CCV02	Mercury	4.97	ug/L	5	ug/L	99.4	80.0 – 120.0	AV	13-MAR-10 07:47	031310W1-8
	Aluminum	5110	ug/L	5000	ug/L	102.2	90.0 – 110.0	P	30-MAR-10 15:54	033010B-1
	Arsenic	512	ug/L	500	ug/L	102.5	90.0 – 110.0	P	30-MAR-10 15:54	033010B-1
	Barium	507	ug/L	500	ug/L	101.4	90.0 – 110.0	P	30-MAR-10 15:54	033010B-1
	Calcium	5150	ug/L	5000	ug/L	103.1	90.0 – 110.0	P	30-MAR-10 15:54	033010B-1
	Chromium	506	ug/L	500	ug/L	101.1	90.0 – 110.0	P	30-MAR-10 15:54	033010B-1
	Cobalt	512	ug/L	500	ug/L	102.4	90.0 – 110.0	P	30-MAR-10 15:54	033010B-1
	Copper	506	ug/L	500	ug/L	101.2	90.0 – 110.0	P	30-MAR-10 15:54	033010B-1
	Iron	5120	ug/L	5000	ug/L	102.4	90.0 – 110.0	P	30-MAR-10 15:54	033010B-1
	Magnesium	5250	ug/L	5000	ug/L	105.1	90.0 – 110.0	P	30-MAR-10 15:54	033010B-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 10-2203

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS5,OPTIMA4

<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>
	Nickel	510	ug/L	500	ug/L	102.1	90.0 – 110.0	P	30-MAR-10 15:54	033010B-1
	Potassium	5160	ug/L	5000	ug/L	103.2	90.0 – 110.0	P	30-MAR-10 15:54	033010B-1
	Selenium	513	ug/L	500	ug/L	102.6	90.0 – 110.0	P	30-MAR-10 15:54	033010B-1
	Silver	509	ug/L	500	ug/L	101.8	90.0 – 110.0	P	30-MAR-10 15:54	033010B-1
	Sodium	10200	ug/L	10000	ug/L	101.5	90.0 – 110.0	P	30-MAR-10 15:54	033010B-1
	Vanadium	510	ug/L	500	ug/L	102	90.0 – 110.0	P	30-MAR-10 15:54	033010B-1
	Zinc	507	ug/L	500	ug/L	101.3	90.0 – 110.0	P	30-MAR-10 15:54	033010B-1
	Beryllium	49.5	ug/L	50	ug/L	99	90.0 – 110.0	MS	12-APR-10 21:58	100412-2
	Cadmium	51.1	ug/L	50	ug/L	102.1	90.0 – 110.0	MS	12-APR-10 21:58	100412-2
	Lead	50.9	ug/L	50	ug/L	101.8	90.0 – 110.0	MS	12-APR-10 21:58	100412-2
	Manganese	51.1	ug/L	50	ug/L	102.1	90.0 – 110.0	MS	12-APR-10 21:58	100412-2
	Thallium	47.4	ug/L	50	ug/L	94.9	90.0 – 110.0	MS	12-APR-10 21:58	100412-2
	Uranium	50.2	ug/L	50	ug/L	100.4	90.0 – 110.0	MS	12-APR-10 21:58	100412-2
	Antimony	53.1	ug/L	50	ug/L	106.2	90.0 – 110.0	MS	13-APR-10 09:42	100412-7
CCV03										
	Mercury	5.01	ug/L	5	ug/L	100.2	80.0 – 120.0	AV	13-MAR-10 08:11	031310W1-8
	Aluminum	5160	ug/L	5000	ug/L	103.1	90.0 – 110.0	P	30-MAR-10 16:14	033010B-1
	Arsenic	504	ug/L	500	ug/L	100.8	90.0 – 110.0	P	30-MAR-10 16:14	033010B-1
	Barium	507	ug/L	500	ug/L	101.4	90.0 – 110.0	P	30-MAR-10 16:14	033010B-1
	Calcium	5100	ug/L	5000	ug/L	102	90.0 – 110.0	P	30-MAR-10 16:14	033010B-1
	Chromium	505	ug/L	500	ug/L	101.1	90.0 – 110.0	P	30-MAR-10 16:14	033010B-1
	Cobalt	510	ug/L	500	ug/L	101.9	90.0 – 110.0	P	30-MAR-10 16:14	033010B-1
	Copper	507	ug/L	500	ug/L	101.4	90.0 – 110.0	P	30-MAR-10 16:14	033010B-1
	Iron	5080	ug/L	5000	ug/L	101.5	90.0 – 110.0	P	30-MAR-10 16:14	033010B-1
	Magnesium	5180	ug/L	5000	ug/L	103.6	90.0 – 110.0	P	30-MAR-10 16:14	033010B-1
	Nickel	508	ug/L	500	ug/L	101.6	90.0 – 110.0	P	30-MAR-10 16:14	033010B-1
	Potassium	5160	ug/L	5000	ug/L	103.2	90.0 – 110.0	P	30-MAR-10 16:14	033010B-1
	Selenium	508	ug/L	500	ug/L	101.6	90.0 – 110.0	P	30-MAR-10 16:14	033010B-1
	Silver	510	ug/L	500	ug/L	102	90.0 – 110.0	P	30-MAR-10 16:14	033010B-1
	Sodium	10100	ug/L	10000	ug/L	101.2	90.0 – 110.0	P	30-MAR-10 16:14	033010B-1

METALS

-2a-

Initial and Continuing Calibration Verification

SDG No: 10-2203

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS5,OPTIMA4

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Vanadium	511	ug/L	500	ug/L	102.2	90.0 – 110.0	P	30-MAR-10 16:14	033010B-1
	Zinc	503	ug/L	500	ug/L	100.6	90.0 – 110.0	P	30-MAR-10 16:14	033010B-1
	Beryllium	50.5	ug/L	50	ug/L	101	90.0 – 110.0	MS	12-APR-10 22:30	100412-2
	Cadmium	51.2	ug/L	50	ug/L	102.3	90.0 – 110.0	MS	12-APR-10 22:30	100412-2
	Lead	51.8	ug/L	50	ug/L	103.6	90.0 – 110.0	MS	12-APR-10 22:30	100412-2
	Manganese	51.4	ug/L	50	ug/L	102.8	90.0 – 110.0	MS	12-APR-10 22:30	100412-2
	Thallium	48.4	ug/L	50	ug/L	96.8	90.0 – 110.0	MS	12-APR-10 22:30	100412-2
	Uranium	51.1	ug/L	50	ug/L	102.2	90.0 – 110.0	MS	12-APR-10 22:30	100412-2
	Antimony	54	ug/L	50	ug/L	107.9	90.0 – 110.0	MS	13-APR-10 09:58	100412-7
CCV04										
	Mercury	5.14	ug/L	5	ug/L	102.8	80.0 – 120.0	AV	13-MAR-10 08:34	031310W1-8
	Aluminum	5110	ug/L	5000	ug/L	102.3	90.0 – 110.0	P	30-MAR-10 16:33	033010B-1
	Arsenic	509	ug/L	500	ug/L	101.9	90.0 – 110.0	P	30-MAR-10 16:33	033010B-1
	Barium	504	ug/L	500	ug/L	100.8	90.0 – 110.0	P	30-MAR-10 16:33	033010B-1
	Calcium	5080	ug/L	5000	ug/L	101.6	90.0 – 110.0	P	30-MAR-10 16:33	033010B-1
	Chromium	502	ug/L	500	ug/L	100.4	90.0 – 110.0	P	30-MAR-10 16:33	033010B-1
	Cobalt	506	ug/L	500	ug/L	101.3	90.0 – 110.0	P	30-MAR-10 16:33	033010B-1
	Copper	503	ug/L	500	ug/L	100.6	90.0 – 110.0	P	30-MAR-10 16:33	033010B-1
	Iron	5050	ug/L	5000	ug/L	101.1	90.0 – 110.0	P	30-MAR-10 16:33	033010B-1
	Magnesium	5160	ug/L	5000	ug/L	103.1	90.0 – 110.0	P	30-MAR-10 16:33	033010B-1
	Nickel	505	ug/L	500	ug/L	101	90.0 – 110.0	P	30-MAR-10 16:33	033010B-1
	Potassium	5160	ug/L	5000	ug/L	103.2	90.0 – 110.0	P	30-MAR-10 16:33	033010B-1
	Selenium	509	ug/L	500	ug/L	101.8	90.0 – 110.0	P	30-MAR-10 16:33	033010B-1
	Silver	507	ug/L	500	ug/L	101.3	90.0 – 110.0	P	30-MAR-10 16:33	033010B-1
	Sodium	10100	ug/L	10000	ug/L	101	90.0 – 110.0	P	30-MAR-10 16:33	033010B-1
	Vanadium	507	ug/L	500	ug/L	101.4	90.0 – 110.0	P	30-MAR-10 16:33	033010B-1
	Zinc	500	ug/L	500	ug/L	100.1	90.0 – 110.0	P	30-MAR-10 16:33	033010B-1
CCV05										
	Aluminum	5110	ug/L	5000	ug/L	102.2	90.0 – 110.0	P	30-MAR-10 16:57	033010B-1
	Arsenic	512	ug/L	500	ug/L	102.5	90.0 – 110.0	P	30-MAR-10 16:57	033010B-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 10-2203

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS5,OPTIMA4

<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>
	Barium	504	ug/L	500	ug/L	100.8	90.0 – 110.0	P	30-MAR-10 16:57	033010B-1
	Calcium	5090	ug/L	5000	ug/L	101.9	90.0 – 110.0	P	30-MAR-10 16:57	033010B-1
	Chromium	502	ug/L	500	ug/L	100.4	90.0 – 110.0	P	30-MAR-10 16:57	033010B-1
	Cobalt	507	ug/L	500	ug/L	101.4	90.0 – 110.0	P	30-MAR-10 16:57	033010B-1
	Copper	503	ug/L	500	ug/L	100.5	90.0 – 110.0	P	30-MAR-10 16:57	033010B-1
	Iron	5060	ug/L	5000	ug/L	101.3	90.0 – 110.0	P	30-MAR-10 16:57	033010B-1
	Magnesium	5210	ug/L	5000	ug/L	104.1	90.0 – 110.0	P	30-MAR-10 16:57	033010B-1
	Nickel	506	ug/L	500	ug/L	101.2	90.0 – 110.0	P	30-MAR-10 16:57	033010B-1
	Potassium	5080	ug/L	5000	ug/L	101.5	90.0 – 110.0	P	30-MAR-10 16:57	033010B-1
	Selenium	516	ug/L	500	ug/L	103.2	90.0 – 110.0	P	30-MAR-10 16:57	033010B-1
	Silver	506	ug/L	500	ug/L	101.3	90.0 – 110.0	P	30-MAR-10 16:57	033010B-1
	Sodium	10100	ug/L	10000	ug/L	100.9	90.0 – 110.0	P	30-MAR-10 16:57	033010B-1
	Vanadium	507	ug/L	500	ug/L	101.3	90.0 – 110.0	P	30-MAR-10 16:57	033010B-1
	Zinc	501	ug/L	500	ug/L	100.3	90.0 – 110.0	P	30-MAR-10 16:57	033010B-1
CCV06	Aluminum	5120	ug/L	5000	ug/L	102.3	90.0 – 110.0	P	30-MAR-10 17:18	033010B-1
	Arsenic	512	ug/L	500	ug/L	102.5	90.0 – 110.0	P	30-MAR-10 17:18	033010B-1
	Barium	505	ug/L	500	ug/L	101	90.0 – 110.0	P	30-MAR-10 17:18	033010B-1
	Calcium	5100	ug/L	5000	ug/L	102	90.0 – 110.0	P	30-MAR-10 17:18	033010B-1
	Chromium	503	ug/L	500	ug/L	100.7	90.0 – 110.0	P	30-MAR-10 17:18	033010B-1
	Cobalt	509	ug/L	500	ug/L	101.8	90.0 – 110.0	P	30-MAR-10 17:18	033010B-1
	Copper	505	ug/L	500	ug/L	101	90.0 – 110.0	P	30-MAR-10 17:18	033010B-1
	Iron	5060	ug/L	5000	ug/L	101.3	90.0 – 110.0	P	30-MAR-10 17:18	033010B-1
	Magnesium	5190	ug/L	5000	ug/L	103.8	90.0 – 110.0	P	30-MAR-10 17:18	033010B-1
	Nickel	508	ug/L	500	ug/L	101.6	90.0 – 110.0	P	30-MAR-10 17:18	033010B-1
	Potassium	5090	ug/L	5000	ug/L	101.8	90.0 – 110.0	P	30-MAR-10 17:18	033010B-1
	Selenium	512	ug/L	500	ug/L	102.4	90.0 – 110.0	P	30-MAR-10 17:18	033010B-1
	Silver	508	ug/L	500	ug/L	101.6	90.0 – 110.0	P	30-MAR-10 17:18	033010B-1
	Sodium	10100	ug/L	10000	ug/L	100.6	90.0 – 110.0	P	30-MAR-10 17:18	033010B-1
	Vanadium	510	ug/L	500	ug/L	101.9	90.0 – 110.0	P	30-MAR-10 17:18	033010B-1

METALS

-2a-

Initial and Continuing Calibration Verification

SDG No: 10-2203

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS5,OPTIMA4

<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>
CCV07	Zinc	503	ug/L	500	ug/L	100.7	90.0 – 110.0	P	30-MAR-10 17:18	033010B-1
	Aluminum	5090	ug/L	5000	ug/L	101.8	90.0 – 110.0	P	30-MAR-10 17:40	033010B-1
	Arsenic	513	ug/L	500	ug/L	102.7	90.0 – 110.0	P	30-MAR-10 17:40	033010B-1
	Barium	505	ug/L	500	ug/L	101.1	90.0 – 110.0	P	30-MAR-10 17:40	033010B-1
	Calcium	5110	ug/L	5000	ug/L	102.3	90.0 – 110.0	P	30-MAR-10 17:40	033010B-1
	Chromium	504	ug/L	500	ug/L	100.8	90.0 – 110.0	P	30-MAR-10 17:40	033010B-1
	Cobalt	509	ug/L	500	ug/L	101.8	90.0 – 110.0	P	30-MAR-10 17:40	033010B-1
	Copper	505	ug/L	500	ug/L	101	90.0 – 110.0	P	30-MAR-10 17:40	033010B-1
	Iron	5070	ug/L	5000	ug/L	101.5	90.0 – 110.0	P	30-MAR-10 17:40	033010B-1
	Magnesium	5220	ug/L	5000	ug/L	104.4	90.0 – 110.0	P	30-MAR-10 17:40	033010B-1
	Nickel	508	ug/L	500	ug/L	101.6	90.0 – 110.0	P	30-MAR-10 17:40	033010B-1
	Potassium	5130	ug/L	5000	ug/L	102.6	90.0 – 110.0	P	30-MAR-10 17:40	033010B-1
	Selenium	513	ug/L	500	ug/L	102.6	90.0 – 110.0	P	30-MAR-10 17:40	033010B-1
	Silver	508	ug/L	500	ug/L	101.7	90.0 – 110.0	P	30-MAR-10 17:40	033010B-1
	Sodium	10100	ug/L	10000	ug/L	100.5	90.0 – 110.0	P	30-MAR-10 17:40	033010B-1
	Vanadium	508	ug/L	500	ug/L	101.7	90.0 – 110.0	P	30-MAR-10 17:40	033010B-1
	Zinc	505	ug/L	500	ug/L	100.9	90.0 – 110.0	P	30-MAR-10 17:40	033010B-1
CCV08	Aluminum	5110	ug/L	5000	ug/L	102.2	90.0 – 110.0	P	30-MAR-10 18:00	033010B-1
	Arsenic	506	ug/L	500	ug/L	101.2	90.0 – 110.0	P	30-MAR-10 18:00	033010B-1
	Barium	503	ug/L	500	ug/L	100.6	90.0 – 110.0	P	30-MAR-10 18:00	033010B-1
	Calcium	5090	ug/L	5000	ug/L	101.8	90.0 – 110.0	P	30-MAR-10 18:00	033010B-1
	Chromium	501	ug/L	500	ug/L	100.1	90.0 – 110.0	P	30-MAR-10 18:00	033010B-1
	Cobalt	506	ug/L	500	ug/L	101.2	90.0 – 110.0	P	30-MAR-10 18:00	033010B-1
	Copper	502	ug/L	500	ug/L	100.4	90.0 – 110.0	P	30-MAR-10 18:00	033010B-1
	Iron	5060	ug/L	5000	ug/L	101.2	90.0 – 110.0	P	30-MAR-10 18:00	033010B-1
	Magnesium	5160	ug/L	5000	ug/L	103.3	90.0 – 110.0	P	30-MAR-10 18:00	033010B-1
	Nickel	505	ug/L	500	ug/L	101	90.0 – 110.0	P	30-MAR-10 18:00	033010B-1
	Potassium	5110	ug/L	5000	ug/L	102.2	90.0 – 110.0	P	30-MAR-10 18:00	033010B-1

METALS

-2a-

Initial and Continuing Calibration Verification

SDG No: 10-2203

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS5,OPTIMA4

<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>
	Selenium	510	ug/L	500	ug/L	102	90.0 - 110.0	P	30-MAR-10 18:00	033010B-1
	Silver	506	ug/L	500	ug/L	101.2	90.0 - 110.0	P	30-MAR-10 18:00	033010B-1
	Sodium	10100	ug/L	10000	ug/L	100.7	90.0 - 110.0	P	30-MAR-10 18:00	033010B-1
	Vanadium	506	ug/L	500	ug/L	101.2	90.0 - 110.0	P	30-MAR-10 18:00	033010B-1
	Zinc	500	ug/L	500	ug/L	100	90.0 - 110.0	P	30-MAR-10 18:00	033010B-1

METALS
-2b-
CRDL Standard for AA & ICP

SDG No: 10-2203

Contract: LANL01004

Lab Code: GEL

AA CRDL Standard Source: SPEX

ICP CRDL Standard Source Solutions Plus

Instrument ID: HG3.ICPMS5.OPTIMA4

<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	.199	ug/L	.2	ug/L	99.5	70.0 – 130.0	AV	13-MAR-10 07:23	031310W1-8
	Lead	2.45	ug/L	2	ug/L	122.5	70.0 – 130.0	MS	12-APR-10 21:07	100412-2
	Manganese	6.44	ug/L	5	ug/L	128.9	70.0 – 130.0	MS	12-APR-10 21:07	100412-2
	Beryllium	.557	ug/L	.5	ug/L	111.4	70.0 – 130.0	MS	12-APR-10 21:07	100412-2
	Uranium	.266	ug/L	.2	ug/L	133	70.0 – 130.0	MS	12-APR-10 21:07	100412-2
	Cadmium	1.23	ug/L	1	ug/L	123.2	70.0 – 130.0	MS	12-APR-10 21:07	100412-2
	Thallium	1.26	ug/L	1	ug/L	125.6	70.0 – 130.0	MS	12-APR-10 21:07	100412-2
	Antimony	3.06	ug/L	3	ug/L	101.9	70.0 – 130.0	MS	13-APR-10 09:17	100412-7
PQL01										
	Aluminum	218	ug/L	200	ug/L	108.8	70.0 – 130.0	P	30-MAR-10 15:21	033010B-1
	Iron	103	ug/L	100	ug/L	102.5	70.0 – 130.0	P	30-MAR-10 15:21	033010B-1
	Magnesium	315	ug/L	300	ug/L	104.9	70.0 – 130.0	P	30-MAR-10 15:21	033010B-1
	Nickel	5.18	ug/L	5	ug/L	103.6	70.0 – 130.0	P	30-MAR-10 15:21	033010B-1
	Potassium	189	ug/L	150	ug/L	126.2	70.0 – 130.0	P	30-MAR-10 15:21	033010B-1
	Silver	6.06	ug/L	5	ug/L	121.1	70.0 – 130.0	P	30-MAR-10 15:21	033010B-1
	Sodium	294	ug/L	300	ug/L	98.1	70.0 – 130.0	P	30-MAR-10 15:21	033010B-1
	Arsenic	31.6	ug/L	30	ug/L	105.3	70.0 – 130.0	P	30-MAR-10 15:21	033010B-1
	Barium	5.22	ug/L	5	ug/L	104.5	70.0 – 130.0	P	30-MAR-10 15:21	033010B-1
	Chromium	4.93	ug/L	5	ug/L	98.6	70.0 – 130.0	P	30-MAR-10 15:21	033010B-1
	Cobalt	5.18	ug/L	5	ug/L	103.7	70.0 – 130.0	P	30-MAR-10 15:21	033010B-1
	Copper	10.4	ug/L	10	ug/L	104.4	70.0 – 130.0	P	30-MAR-10 15:21	033010B-1
	Vanadium	5.56	ug/L	5	ug/L	111.3	70.0 – 130.0	P	30-MAR-10 15:21	033010B-1
	Zinc	10.2	ug/L	10	ug/L	101.8	70.0 – 130.0	P	30-MAR-10 15:21	033010B-1
	Calcium	201	ug/L	200	ug/L	100.8	70.0 – 130.0	P	30-MAR-10 15:21	033010B-1
	Selenium	31.9	ug/L	30	ug/L	106.3	70.0 – 130.0	P	30-MAR-10 15:21	033010B-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 10-2203

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	0.066	+/-2	U	0.066	0.2	LIQ	AV	13-MAR-10 07:21	031310W1-8
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	30-MAR-10 15:18	033010B-1
	Arsenic	5.0	+/-30	U	5.0	30.0	LIQ	P	30-MAR-10 15:18	033010B-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-MAR-10 15:18	033010B-1
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	30-MAR-10 15:18	033010B-1
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-MAR-10 15:18	033010B-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	30-MAR-10 15:18	033010B-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	30-MAR-10 15:18	033010B-1
	Iron	30.0	+/-100	U	30.0	100	LIQ	P	30-MAR-10 15:18	033010B-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	30-MAR-10 15:18	033010B-1
	Nickel	1.5	+/-5	U	1.5	5.0	LIQ	P	30-MAR-10 15:18	033010B-1
	Potassium	57.06	+/-150	J	50.0	150	LIQ	P	30-MAR-10 15:18	033010B-1
	Selenium	5.0	+/-30	U	5.0	30.0	LIQ	P	30-MAR-10 15:18	033010B-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	30-MAR-10 15:18	033010B-1
	Sodium	100	+/-300	U	100	300	LIQ	P	30-MAR-10 15:18	033010B-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-MAR-10 15:18	033010B-1
	Zinc	3.3	+/-10	U	3.3	10.0	LIQ	P	30-MAR-10 15:18	033010B-1
	Beryllium	0.1	+/-5	U	0.1	0.5	LIQ	MS	12-APR-10 21:03	100412-2
	Cadmium	0.11	+/-1	U	0.11	1.0	LIQ	MS	12-APR-10 21:03	100412-2
	Lead	0.5	+/-2	U	0.5	2.0	LIQ	MS	12-APR-10 21:03	100412-2
	Manganese	1.0	+/-5	U	1.0	5.0	LIQ	MS	12-APR-10 21:03	100412-2
	Thallium	0.3	+/-1	U	0.3	1.0	LIQ	MS	12-APR-10 21:03	100412-2
	Uranium	0.05	+/-2	U	0.05	0.2	LIQ	MS	12-APR-10 21:03	100412-2
	Antimony	1.0	+/-3	U	1.0	3.0	LIQ	MS	13-APR-10 09:15	100412-7
CCB01	Mercury	0.066	+/-2	U	0.066	0.2	LIQ	AV	13-MAR-10 07:26	031310W1-8
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	30-MAR-10 15:40	033010B-1
	Arsenic	5.0	+/-30	U	5.0	30.0	LIQ	P	30-MAR-10 15:40	033010B-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-MAR-10 15:40	033010B-1
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	30-MAR-10 15:40	033010B-1
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-MAR-10 15:40	033010B-1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 10-2203

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	30-MAR-10 15:40	033010B-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	30-MAR-10 15:40	033010B-1
	Iron	30.0	+/-100	U	30.0	100	LIQ	P	30-MAR-10 15:40	033010B-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	30-MAR-10 15:40	033010B-1
	Nickel	1.5	+/-5	U	1.5	5.0	LIQ	P	30-MAR-10 15:40	033010B-1
	Potassium	103.4	+/-150	J	50.0	150	LIQ	P	30-MAR-10 15:40	033010B-1
	Selenium	5.0	+/-30	U	5.0	30.0	LIQ	P	30-MAR-10 15:40	033010B-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	30-MAR-10 15:40	033010B-1
	Sodium	100	+/-300	U	100	300	LIQ	P	30-MAR-10 15:40	033010B-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-MAR-10 15:40	033010B-1
	Zinc	3.3	+/-10	U	3.3	10.0	LIQ	P	30-MAR-10 15:40	033010B-1
	Beryllium	0.1	+/-5	U	0.1	0.5	LIQ	MS	12-APR-10 21:26	100412-2
	Cadmium	0.11	+/-1	U	0.11	1.0	LIQ	MS	12-APR-10 21:26	100412-2
	Lead	0.5	+/-2	U	0.5	2.0	LIQ	MS	12-APR-10 21:26	100412-2
	Manganese	1.0	+/-5	U	1.0	5.0	LIQ	MS	12-APR-10 21:26	100412-2
	Thallium	0.31	+/-1	J	0.3	1.0	LIQ	MS	12-APR-10 21:26	100412-2
	Uranium	0.05	+/-2	U	0.05	0.2	LIQ	MS	12-APR-10 21:26	100412-2
	Antimony	1.0	+/-3	U	1.0	3.0	LIQ	MS	13-APR-10 09:26	100412-7
CCB02	Mercury	0.066	+/-2	U	0.066	0.2	LIQ	AV	13-MAR-10 07:49	031310W1-8
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	30-MAR-10 15:56	033010B-1
	Arsenic	5.0	+/-30	U	5.0	30.0	LIQ	P	30-MAR-10 15:56	033010B-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-MAR-10 15:56	033010B-1
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	30-MAR-10 15:56	033010B-1
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-MAR-10 15:56	033010B-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	30-MAR-10 15:56	033010B-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	30-MAR-10 15:56	033010B-1
	Iron	30.0	+/-100	U	30.0	100	LIQ	P	30-MAR-10 15:56	033010B-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	30-MAR-10 15:56	033010B-1
	Nickel	1.5	+/-5	U	1.5	5.0	LIQ	P	30-MAR-10 15:56	033010B-1
	Potassium	68.02	+/-150	J	50.0	150	LIQ	P	30-MAR-10 15:56	033010B-1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 10-2203

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>
	Selenium	5.0	+/-30	U	5.0	30.0	LIQ	P	30-MAR-10 15:56	033010B-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	30-MAR-10 15:56	033010B-1
	Sodium	100	+/-300	U	100	300	LIQ	P	30-MAR-10 15:56	033010B-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-MAR-10 15:56	033010B-1
	Zinc	3.3	+/-10	U	3.3	10.0	LIQ	P	30-MAR-10 15:56	033010B-1
	Beryllium	0.1	+/-5	U	0.1	0.5	LIQ	MS	12-APR-10 22:02	100412-2
	Cadmium	0.11	+/-1	U	0.11	1.0	LIQ	MS	12-APR-10 22:02	100412-2
	Lead	0.5	+/-2	U	0.5	2.0	LIQ	MS	12-APR-10 22:02	100412-2
	Manganese	1.0	+/-5	U	1.0	5.0	LIQ	MS	12-APR-10 22:02	100412-2
	Thallium	0.634	+/-1	J	0.3	1.0	LIQ	MS	12-APR-10 22:02	100412-2
	Uranium	0.05	+/-2	U	0.05	0.2	LIQ	MS	12-APR-10 22:02	100412-2
	Antimony	1.0	+/-3	U	1.0	3.0	LIQ	MS	13-APR-10 09:45	100412-7
CCB03	Mercury	0.066	+/-2	U	0.066	0.2	LIQ	AV	13-MAR-10 08:12	031310W1-8
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	30-MAR-10 16:16	033010B-1
	Arsenic	5.0	+/-30	U	5.0	30.0	LIQ	P	30-MAR-10 16:16	033010B-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-MAR-10 16:16	033010B-1
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	30-MAR-10 16:16	033010B-1
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-MAR-10 16:16	033010B-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	30-MAR-10 16:16	033010B-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	30-MAR-10 16:16	033010B-1
	Iron	30.0	+/-100	U	30.0	100	LIQ	P	30-MAR-10 16:16	033010B-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	30-MAR-10 16:16	033010B-1
	Nickel	1.5	+/-5	U	1.5	5.0	LIQ	P	30-MAR-10 16:16	033010B-1
	Potassium	96.01	+/-150	J	50.0	150	LIQ	P	30-MAR-10 16:16	033010B-1
	Selenium	5.0	+/-30	U	5.0	30.0	LIQ	P	30-MAR-10 16:16	033010B-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	30-MAR-10 16:16	033010B-1
	Sodium	100	+/-300	U	100	300	LIQ	P	30-MAR-10 16:16	033010B-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-MAR-10 16:16	033010B-1
	Zinc	3.3	+/-10	U	3.3	10.0	LIQ	P	30-MAR-10 16:16	033010B-1
	Beryllium	0.1	+/-5	U	0.1	0.5	LIQ	MS	12-APR-10 22:35	100412-2

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 10-2203

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
	Cadmium	0.11	+/-1	U	0.11	1.0	LIQ	MS	12-APR-10 22:35	100412-2
	Lead	0.5	+/-2	U	0.5	2.0	LIQ	MS	12-APR-10 22:35	100412-2
	Manganese	1.0	+/-5	U	1.0	5.0	LIQ	MS	12-APR-10 22:35	100412-2
	Thallium	0.837	+/-1	J	0.3	1.0	LIQ	MS	12-APR-10 22:35	100412-2
	Uranium	0.05	+/-2	U	0.05	0.2	LIQ	MS	12-APR-10 22:35	100412-2
	Antimony	1.0	+/-3	U	1.0	3.0	LIQ	MS	13-APR-10 10:01	100412-7
CCB04	Mercury	0.066	+/-2	U	0.066	0.2	LIQ	AV	13-MAR-10 08:36	031310W1-8
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	30-MAR-10 16:35	033010B-1
	Arsenic	5.0	+/-30	U	5.0	30.0	LIQ	P	30-MAR-10 16:35	033010B-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-MAR-10 16:35	033010B-1
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	30-MAR-10 16:35	033010B-1
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-MAR-10 16:35	033010B-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	30-MAR-10 16:35	033010B-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	30-MAR-10 16:35	033010B-1
	Iron	30.0	+/-100	U	30.0	100	LIQ	P	30-MAR-10 16:35	033010B-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	30-MAR-10 16:35	033010B-1
	Nickel	1.5	+/-5	U	1.5	5.0	LIQ	P	30-MAR-10 16:35	033010B-1
	Potassium	67.52	+/-150	J	50.0	150	LIQ	P	30-MAR-10 16:35	033010B-1
	Selenium	5.0	+/-30	U	5.0	30.0	LIQ	P	30-MAR-10 16:35	033010B-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	30-MAR-10 16:35	033010B-1
	Sodium	100	+/-300	U	100	300	LIQ	P	30-MAR-10 16:35	033010B-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-MAR-10 16:35	033010B-1
	Zinc	3.3	+/-10	U	3.3	10.0	LIQ	P	30-MAR-10 16:35	033010B-1
CCB05	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	30-MAR-10 16:59	033010B-1
	Arsenic	5.0	+/-30	U	5.0	30.0	LIQ	P	30-MAR-10 16:59	033010B-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-MAR-10 16:59	033010B-1
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	30-MAR-10 16:59	033010B-1
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-MAR-10 16:59	033010B-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	30-MAR-10 16:59	033010B-1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 10-2203

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>
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	30-MAR-10 16:59	033010B-1
	Iron	30.0	+/-100	U	30.0	100	LIQ	P	30-MAR-10 16:59	033010B-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	30-MAR-10 16:59	033010B-1
	Nickel	1.5	+/-5	U	1.5	5.0	LIQ	P	30-MAR-10 16:59	033010B-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	30-MAR-10 16:59	033010B-1
	Selenium	5.0	+/-30	U	5.0	30.0	LIQ	P	30-MAR-10 16:59	033010B-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	30-MAR-10 16:59	033010B-1
	Sodium	100	+/-300	U	100	300	LIQ	P	30-MAR-10 16:59	033010B-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-MAR-10 16:59	033010B-1
	Zinc	3.3	+/-10	U	3.3	10.0	LIQ	P	30-MAR-10 16:59	033010B-1
CCB06	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	30-MAR-10 17:21	033010B-1
	Arsenic	5.0	+/-30	U	5.0	30.0	LIQ	P	30-MAR-10 17:21	033010B-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-MAR-10 17:21	033010B-1
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	30-MAR-10 17:21	033010B-1
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-MAR-10 17:21	033010B-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	30-MAR-10 17:21	033010B-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	30-MAR-10 17:21	033010B-1
	Iron	30.0	+/-100	U	30.0	100	LIQ	P	30-MAR-10 17:21	033010B-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	30-MAR-10 17:21	033010B-1
	Nickel	1.5	+/-5	U	1.5	5.0	LIQ	P	30-MAR-10 17:21	033010B-1
	Potassium	64.34	+/-150	J	50.0	150	LIQ	P	30-MAR-10 17:21	033010B-1
	Selenium	5.0	+/-30	U	5.0	30.0	LIQ	P	30-MAR-10 17:21	033010B-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	30-MAR-10 17:21	033010B-1
	Sodium	100	+/-300	U	100	300	LIQ	P	30-MAR-10 17:21	033010B-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-MAR-10 17:21	033010B-1
	Zinc	3.3	+/-10	U	3.3	10.0	LIQ	P	30-MAR-10 17:21	033010B-1
CCB07	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	30-MAR-10 17:42	033010B-1
	Arsenic	5.0	+/-30	U	5.0	30.0	LIQ	P	30-MAR-10 17:42	033010B-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-MAR-10 17:42	033010B-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 10-2203

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	30-MAR-10 17:42	033010B-1
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-MAR-10 17:42	033010B-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	30-MAR-10 17:42	033010B-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	30-MAR-10 17:42	033010B-1
	Iron	30.0	+/-100	U	30.0	100	LIQ	P	30-MAR-10 17:42	033010B-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	30-MAR-10 17:42	033010B-1
	Nickel	1.5	+/-5	U	1.5	5.0	LIQ	P	30-MAR-10 17:42	033010B-1
	Potassium	52.7	+/-150	J	50.0	150	LIQ	P	30-MAR-10 17:42	033010B-1
	Selenium	5.0	+/-30	U	5.0	30.0	LIQ	P	30-MAR-10 17:42	033010B-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	30-MAR-10 17:42	033010B-1
	Sodium	100	+/-300	U	100	300	LIQ	P	30-MAR-10 17:42	033010B-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-MAR-10 17:42	033010B-1
	Zinc	3.3	+/-10	U	3.3	10.0	LIQ	P	30-MAR-10 17:42	033010B-1
CCB08	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	30-MAR-10 18:02	033010B-1
	Arsenic	5.0	+/-30	U	5.0	30.0	LIQ	P	30-MAR-10 18:02	033010B-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-MAR-10 18:02	033010B-1
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	30-MAR-10 18:02	033010B-1
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-MAR-10 18:02	033010B-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	30-MAR-10 18:02	033010B-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	30-MAR-10 18:02	033010B-1
	Iron	30.0	+/-100	U	30.0	100	LIQ	P	30-MAR-10 18:02	033010B-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	30-MAR-10 18:02	033010B-1
	Nickel	1.5	+/-5	U	1.5	5.0	LIQ	P	30-MAR-10 18:02	033010B-1
	Potassium	51.03	+/-150	J	50.0	150	LIQ	P	30-MAR-10 18:02	033010B-1
	Selenium	5.0	+/-30	U	5.0	30.0	LIQ	P	30-MAR-10 18:02	033010B-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	30-MAR-10 18:02	033010B-1
	Sodium	100	+/-300	U	100	300	LIQ	P	30-MAR-10 18:02	033010B-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-MAR-10 18:02	033010B-1
	Zinc	3.3	+/-10	U	3.3	10.0	LIQ	P	30-MAR-10 18:02	033010B-1

METALS
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PREPARATION BLANK SUMMARY

SDG NO. 10-2203
Contract: LANL01004
Matrix: WATER

<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>
1202065055	Arsenic	5	ug/L	+/-30	U	P	5	30
	Barium	1	ug/L	+/-5	U	P	1	5
	Calcium	50	ug/L	+/-200	U	P	50	200
	Chromium	1	ug/L	+/-5	U	P	1	5
	Cobalt	1	ug/L	+/-5	U	P	1	5
	Copper	3	ug/L	+/-10	U	P	3	10
	Iron	30	ug/L	+/-100	U	P	30	100
	Magnesium	85	ug/L	+/-300	U	P	85	300
	Nickel	1.5	ug/L	+/-5	U	P	1.5	5
	Aluminum	68	ug/L	+/-200	U	P	68	200
	Potassium	50	ug/L	+/-150	U	P	50	150
	Selenium	5	ug/L	+/-30	U	P	5	30
	Silver	1	ug/L	+/-5	U	P	1	5
	Sodium	100	ug/L	+/-300	U	P	100	300
	Vanadium	1	ug/L	+/-5	U	P	1	5
	Zinc	3.3	ug/L	+/-10	U	P	3.3	10
1202065070	Antimony	1	ug/L	+/-3	U	MS	1	3
	Beryllium	0.1	ug/L	+/-0.5	U	MS	0.1	0.5
	Cadmium	0.11	ug/L	+/-1	U	MS	0.11	1
	Lead	0.5	ug/L	+/-2	U	MS	0.5	2
	Manganese	1	ug/L	+/-5	U	MS	1	5
	Thallium	0.3	ug/L	+/-1	U	MS	0.3	1
	Uranium	0.05	ug/L	+/-0.2	U	MS	0.05	0.2
1202068540	Mercury	0.066	ug/L	+/-0.2	U	AV	0.066	0.2

METALS
-4-
Interference Check Sample

SDG No: 10-2203

Contract: LANL01004

Lab Code: GEL

ICS: O2Si

Instrument: OPTIMA4

<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	102	80.0 – 120.0	30-MAR-10 15:23	033010B-1
	Arsenic	10.9	ug/L					30-MAR-10 15:23	033010B-1
	Barium	0.369	ug/L					30-MAR-10 15:23	033010B-1
	Calcium	489000	ug/L	500000	ug/L	97.7	80.0 – 120.0	30-MAR-10 15:23	033010B-1
	Chromium	1.08	ug/L					30-MAR-10 15:23	033010B-1
	Cobalt	-6.45	ug/L					30-MAR-10 15:23	033010B-1
	Copper	3.23	ug/L					30-MAR-10 15:23	033010B-1
	Iron	193000	ug/L	200000	ug/L	96.6	80.0 – 120.0	30-MAR-10 15:23	033010B-1
	Magnesium	491000	ug/L	500000	ug/L	98.1	80.0 – 120.0	30-MAR-10 15:23	033010B-1
	Nickel	3.44	ug/L					30-MAR-10 15:23	033010B-1
	Potassium	-113.0	ug/L					30-MAR-10 15:23	033010B-1
	Selenium	-10.3	ug/L					30-MAR-10 15:23	033010B-1
	Silver	0.19	ug/L					30-MAR-10 15:23	033010B-1
	Sodium	52.7	ug/L					30-MAR-10 15:23	033010B-1
	Vanadium	2.75	ug/L					30-MAR-10 15:23	033010B-1
	Zinc	8.7	ug/L					30-MAR-10 15:23	033010B-1
ICSAB01									
	Aluminum	511000	ug/L	500000	ug/L	102	80.0 – 120.0	30-MAR-10 15:25	033010B-1
	Arsenic	531	ug/L	500	ug/L	106	80.0 – 120.0	30-MAR-10 15:25	033010B-1
	Barium	505	ug/L	500	ug/L	101	80.0 – 120.0	30-MAR-10 15:25	033010B-1
	Calcium	487000	ug/L	500000	ug/L	97.4	80.0 – 120.0	30-MAR-10 15:25	033010B-1
	Chromium	493	ug/L	500	ug/L	98.6	80.0 – 120.0	30-MAR-10 15:25	033010B-1
	Cobalt	451	ug/L	500	ug/L	90.2	80.0 – 120.0	30-MAR-10 15:25	033010B-1
	Copper	547	ug/L	500	ug/L	109	80.0 – 120.0	30-MAR-10 15:25	033010B-1
	Iron	193000	ug/L	200000	ug/L	96.4	80.0 – 120.0	30-MAR-10 15:25	033010B-1
	Magnesium	494000	ug/L	500000	ug/L	98.8	80.0 – 120.0	30-MAR-10 15:25	033010B-1
	Nickel	463	ug/L	500	ug/L	92.5	80.0 – 120.0	30-MAR-10 15:25	033010B-1
	Potassium	5610	ug/L	5000	ug/L	112	80.0 – 120.0	30-MAR-10 15:25	033010B-1
	Selenium	2470	ug/L	2500	ug/L	98.8	80.0 – 120.0	30-MAR-10 15:25	033010B-1

METALS
-4-
Interference Check Sample

SDG No: 10-2203

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>
	Silver	271	ug/L	250	ug/L	108	80.0 – 120.0	30-MAR-10 15:25	033010B-1
	Sodium	5450	ug/L	5000	ug/L	109	80.0 – 120.0	30-MAR-10 15:25	033010B-1
	Vanadium	523	ug/L	500	ug/L	105	80.0 – 120.0	30-MAR-10 15:25	033010B-1
	Zinc	499	ug/L	500	ug/L	99.7	80.0 – 120.0	30-MAR-10 15:25	033010B-1

METALS
-4-
Interference Check Sample

SDG No: 10-2203

Contract: LANL01004

Lab Code: GEL

ICS: O2Si

Instrument: ICPMS5

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
ICSA01									
	Beryllium	0.104	ug/L					12-APR-10 21:12	100412-2
	Cadmium	0.361	ug/L					12-APR-10 21:12	100412-2
	Lead	0.207	ug/L					12-APR-10 21:12	100412-2
	Manganese	5.93	ug/L					12-APR-10 21:12	100412-2
	Thallium	-0.022	ug/L					12-APR-10 21:12	100412-2
	Uranium	-0.021	ug/L					12-APR-10 21:12	100412-2
ICSAB01									
	Beryllium	21.9	ug/L	20	ug/L	110	80.0 - 120.0	12-APR-10 21:16	100412-2
	Cadmium	20.7	ug/L	20.44	ug/L	101	80.0 - 120.0	12-APR-10 21:16	100412-2
	Lead	20.7	ug/L	20.19	ug/L	102	80.0 - 120.0	12-APR-10 21:16	100412-2
	Manganese	26.8	ug/L	25.8	ug/L	104	80.0 - 120.0	12-APR-10 21:16	100412-2
	Thallium	19.7	ug/L	20	ug/L	98.5	80.0 - 120.0	12-APR-10 21:16	100412-2
	Uranium	22.0	ug/L	20	ug/L	110	80.0 - 120.0	12-APR-10 21:16	100412-2

METALS
-4-
Interference Check Sample

SDG No: 10-2203**Contract:** LANL01004**Lab Code:** GEL**ICS:** O2Si**Instrument:** ICPMS5

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (% R)</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
ICSA01	Antimony	0.135	ug/L					13-APR-10 09:19	100412-7
ICSAB01	Antimony	20.3	ug/L	20	ug/L	101	80.0 - 120.0	13-APR-10 09:21	100412-7

METALS

-5a-

Matrix Spike Summary

SDG NO. 10-2203

Client ID RE32-10-11362S

Contract: LANL01004

Level: Low

Matrix: WATER

% Solids:

Sample ID: 248550001

Spike ID: 1202065058

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/L	75-125	5210		68	U	5000	104		P
Arsenic	ug/L	75-125	518		5	U	500	103		P
Barium	ug/L	75-125	516		1	U	500	103		P
Calcium	ug/L	75-125	5240		50	U	5000	104		P
Chromium	ug/L	75-125	504		1	U	500	101		P
Cobalt	ug/L	75-125	506		1	U	500	101		P
Copper	ug/L	75-125	512		3	U	500	102		P
Iron	ug/L	75-125	5140		30	U	5000	103		P
Magnesium	ug/L	75-125	5330		85	U	5000	106		P
Nickel	ug/L	75-125	512		1.5	U	500	102		P
Potassium	ug/L	75-125	5570		452		5000	102		P
Selenium	ug/L	75-125	501		5	U	500	99.5		P
Silver	ug/L	75-125	501		1	U	500	100		P
Sodium	ug/L	75-125	5390		265	J	5000	103		P
Vanadium	ug/L	75-125	512		1	U	500	102		P
Zinc	ug/L	75-125	495		3.3	U	500	98.6		P

METALS

-5a-

Matrix Spike Summary

SDG NO. 10-2203

Client ID RE32-10-11362S

Contract: LANL01004

Level: Low

Matrix: WATER

% Solids:

Sample ID: 248550001

Spike ID: 1202065073

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Manganese	ug/L	75-125	53.2		1	U	50	105		MS
Thallium	ug/L	75-125	84.3		0.3	U	100	84.2		MS
Uranium	ug/L	75-125	49.5		0.05	U	50	99		MS
Antimony	ug/L	75-125	206		1	U	200	103		MS
Beryllium	ug/L	75-125	57.7		0.1	U	50	115		MS
Cadmium	ug/L	75-125	10.9		0.11	U	10	109		MS
Lead	ug/L	75-125	41		0.5	U	40	102		MS

METALS

-5a-

Matrix Spike Summary

SDG NO. 10-2203

Client ID RE46-10-11978S

Contract: LANL01004

Level: Low

Matrix: WATER

% Solids:

Sample ID: 248551001

Spike ID: 1202068543

<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/L	75-125	2.09		0.066	U	2	104		AV

Metals
-6-
Duplicate Sample Summary

SDG No.: 10-2203

Contract: LANL01004

Lab Code: GEL

Matrix: LIQUID

Level: Low

Client ID: RE32-10-11362D

Sample ID: 248550001

Duplicate ID: 1202065057

Percent Solids for Dup: N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/L		68 U		68 U				P
Arsenic	ug/L		5 U		5 U				P
Barium	ug/L		1 U		1 U				P
Calcium	ug/L		50 U		50 U				P
Chromium	ug/L		1 U		1 U				P
Cobalt	ug/L		1 U		1 U				P
Copper	ug/L		3 U		3 U				P
Iron	ug/L		30 U		30 U				P
Magnesium	ug/L		85 U		85 U				P
Nickel	ug/L		1.5 U		1.5 U				P
Potassium	ug/L	+/-150	452		442		2.21		P
Selenium	ug/L		5 U		5 U				P
Silver	ug/L		1 U		1 U				P
Sodium	ug/L	+/-300	265 J		257 J		2.85		P
Vanadium	ug/L		1 U		1 U				P
Zinc	ug/L		3.3 U		3.3 U				P

Metals

-6-

Duplicate Sample Summary

SDG No.: 10-2203

Contract: LANL01004

Lab Code: GEL

Matrix: LIQUID

Level: Low

Client ID: RE32-10-11362D

Sample ID: 248550001

Duplicate ID: 1202065072

Percent Solids for Dup: N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Antimony	ug/L		1 U		1 U				MS
Beryllium	ug/L		0.1 U		0.1 U				MS
Cadmium	ug/L		0.11 U		0.11 U				MS
Lead	ug/L		0.5 U		0.5 U				MS
Manganese	ug/L		1 U		1 U				MS
Thallium	ug/L		0.3 U		0.3 U				MS
Uranium	ug/L		0.05 U		0.05 U				MS

Metals

—6—

Duplicate Sample Summary

SDG No.: 10-2203

Contract: LANL01004

Lab Code: GEL

Matrix: LIQUID

Level: Low

Client ID: RE46-10-11978D

Sample ID: 248551001

Duplicate ID: 1202068542

Percent Solids for Dup: N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/L		0.066 U		0.066 U				AV

METALS

-7-

Laboratory Control Sample Summary

SDG NO. 10-2203

Contract: LANL01004

Aqueous LCS Source: OS2I

Solid LCS Source:

<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>
1202065056	Aluminum	ug/L	5000	5170		103	80-120	P
	Arsenic	ug/L	500	515		103	80-120	P
	Barium	ug/L	500	516		103	80-120	P
	Calcium	ug/L	5000	5170		103	80-120	P
	Chromium	ug/L	500	505		101	80-120	P
	Cobalt	ug/L	500	506		101	80-120	P
	Copper	ug/L	500	511		102	80-120	P
	Iron	ug/L	5000	5090		102	80-120	P
	Magnesium	ug/L	5000	5290		106	80-120	P
	Nickel	ug/L	500	513		103	80-120	P
	Potassium	ug/L	5000	5170		103	80-120	P
	Selenium	ug/L	500	496		99.2	80-120	P
	Silver	ug/L	500	498		99.6	80-120	P
	Sodium	ug/L	5000	5140		103	80-120	P
	Vanadium	ug/L	500	512		102	80-120	P
	Zinc	ug/L	500	497		99.4	80-120	P

METALS

-7-

Laboratory Control Sample Summary

SDG NO. 10-2203

Contract: LANL01004

Aqueous LCS Source: O2si

Solid LCS Source:

<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>
1202065071	Beryllium	ug/L	50	55.1		110	80-120	MS
	Cadmium	ug/L	50	52.7		105	80-120	MS
	Lead	ug/L	50	50.9		102	80-120	MS
	Manganese	ug/L	50	56.6		113	80-120	MS
	Thallium	ug/L	50	44.7		89.5	80-120	MS
	Uranium	ug/L	50	49.4		98.7	80-120	MS
	Antimony	ug/L	50	54.4		109	80-120	MS

METALS

-7-

Laboratory Control Sample Summary

SDG NO. 10-2203

Contract: LANL01004

Aqueous LCS Source:GEL

Solid LCS Source:

<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>
1202068541	Mercury	ug/L	2	2.29		115	80-120	AV

METALS

-9-

Serial Dilution Sample Summary

SDG NO. 10-2203 Client ID RE32-10-11362L

Contract: LANL01004

Matrix: LIQUID Level: Low

Sample ID: 248550001 Serial Dilution ID: 1202065059

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Aluminum	68	U	340	U				P
Arsenic	5	U	25	U				P
Barium	1	U	5	U				P
Calcium	50	U	250	U				P
Chromium	1	U	5	U				P
Cobalt	1	U	5	U				P
Copper	3	U	15	U				P
Iron	30	U	150	U				P
Magnesium	85	U	425	U				P
Nickel	1.5	U	7.5	U				P
Potassium	452		615	J	36.1			P
Selenium	5	U	25	U				P
Silver	1	U	5	U				P
Sodium	265	J	500	U	100			P
Vanadium	1	U	5	U				P
Zinc	3.3	U	16.5	U				P

METALS

-9-

Serial Dilution Sample Summary

SDG NO. 10-2203 Client ID RE32-10-11362L

Contract: LANL01004

Matrix: LIQUID Level: Low

Sample ID: 248550001 Serial Dilution ID: 1202065074

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Antimony	1	U	5	U				MS
Beryllium	.1	U	.5	U				MS
Cadmium	.11	U	.55	U				MS
Lead	.5	U	2.5	U				MS
Manganese	1	U	5	U				MS
Thallium	.3	U	8.85					MS
Uranium	.05	U	.25	U				MS

METALS

-9-

Serial Dilution Sample Summary

SDG NO. 10-2203

Client ID RE46-10-11978L

Contract: LANL01004

Matrix: LIQUID

Level: Low

Sample ID: 248551001

Serial Dilution ID: 1202068544

Analyte	<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	.066	U	.33	U				AV

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 10-2203

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	962579						
1202065055	MB for batch 962579	MB	W	15-MAR-10	50mL	50mL	
1202065056	LCS for batch 962579	LCS	W	15-MAR-10	50mL	50mL	
1202065058	RE32-10-11362S	MS	W	15-MAR-10	50mL	50mL	
1202065057	RE32-10-11362D	DUP	W	15-MAR-10	50mL	50mL	
248523001	RE36-10-7534	SAMPLE	W	15-MAR-10	50mL	50mL	

SW846

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 10-2203

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	962584						
1202065070	MB for batch 962584	MB	W	15-MAR-10	50mL	50mL	
1202065071	LCS for batch 962584	LCS	W	15-MAR-10	50mL	50mL	
1202065073	RE32-10-11362S	MS	W	15-MAR-10	50mL	50mL	
1202065072	RE32-10-11362D	DUP	W	15-MAR-10	50mL	50mL	
248523001	RE36-10-7534	SAMPLE	W	15-MAR-10	50mL	50mL	

SW846

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 10-2203

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	964195						
1202068540	MB for batch 964195	MB	W	12-MAR-10	20mL	20mL	
1202068541	LCS for batch 964195	LCS	W	12-MAR-10	20mL	20mL	
1202068543	RE46-10-11978S	MS	W	12-MAR-10	20mL	20mL	
1202068542	RE46-10-11978D	DUP	W	12-MAR-10	20mL	20mL	
248523001	RE36-10-7534	SAMPLE	W	12-MAR-10	20mL	20mL	

SW846

Metals
-14-
Analysis Run Log

Contract: LANL01004

Lab Code: GEL

Inst Name: ICPMS5

Start Date: 12-APR-10

End Date: 13-APR-10

Client Sdg: 10-2203

Method MS

Data File: 100412-2

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
S0.0	1	20:44:00					X	X						X		X							X	X		
S10	1	20:49:00					X	X						X		X							X	X		
S100	1	20:53:00					X	X						X		X							X	X		
ICV01	1	20:58:00					X	X						X		X							X	X		
ICB01	1	21:03:00					X	X						X		X							X	X		
CRDL01	1	21:07:00					X	X						X		X							X	X		
ICSA01	1	21:12:00					X	X						X		X							X	X		
ICSAB01	1	21:16:00					X	X						X		X							X	X		
CCV01	1	21:21:00					X	X						X		X							X	X		
CCB01	1	21:26:00					X	X						X		X							X	X		
1202065070	1	21:30:00					X	X						X		X							X	X		
1202065071	1	21:35:00					X	X						X		X							X	X		
ZZZZZZ	1	21:39:00																								
ZZZZZZ	1	21:44:00																								
ZZZZZZ	1	21:49:00																								
248523001	1	21:53:00					X	X						X		X							X	X		
CCV02	1	21:58:00					X	X						X		X							X	X		
CCB02	1	22:02:00					X	X						X		X							X	X		
ZZZZZZ	1	22:07:00																								
1202065072	1	22:12:00					X	X						X		X							X	X		
1202065073	1	22:16:00					X	X						X		X							X	X		
1202065074	5	22:21:00					X	X						X		X							X	X		
ZZZZZZ	1	22:25:00																								
CCV03	1	22:30:00					X	X						X		X							X	X		
CCB03	1	22:35:00					X	X						X		X							X	X		

Metals
-14-
Analysis Run Log

Contract: LANL01004

Lab Code: GEL

Inst Name: ICPMS5

Start Date: 12-APR-10

End Date: 13-APR-10

Client Sdg: 10-2203

Method: MS

Data File: 100412-7

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
S0.0	1	09:05:00		X																						
S10	1	09:08:00		X																						
S100	1	09:10:00		X																						
ICV01	1	09:12:00		X																						
ICB01	1	09:15:00		X																						
CRDL01	1	09:17:00		X																						
ICSA01	1	09:19:00		X																						
ICSAB01	1	09:21:00		X																						
CCV01	1	09:24:00		X																						
CCB01	1	09:26:00		X																						
1202065070	1	09:28:00		X																						
1202065071	1	09:31:00		X																						
ZZZZZZ	1	09:33:00																								
ZZZZZZ	1	09:35:00																								
ZZZZZZ	1	09:38:00																								
248523001	1	09:40:00		X																						
CCV02	1	09:42:00		X																						
CCB02	1	09:45:00		X																						
ZZZZZZ	1	09:47:00																								
1202065072	1	09:49:00		X																						
1202065073	1	09:52:00		X																						
1202065074	5	09:54:00		X																						
ZZZZZZ	1	09:56:00																								
CCV03	1	09:58:00		X																						
CCB03	1	10:01:00		X																						

Metals
-14-
Analysis Run Log

Contract: LANL01004

Lab Code: GEL

Inst Name: HG3

Start Date: 13-MAR-10

End Date: 13-MAR-10

Client Sdg: 10-2203

Method: AV

Data File: 031310W1-8

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
S0.0	1	07:07:00															X									
S0.2	1	07:09:00															X									
S0.5	1	07:11:00															X									
S2.0	1	07:13:00															X									
S5.0	1	07:15:00															X									
S10.0	1	07:17:00															X									
ICV01	1	07:19:00															X									
ICB01	1	07:21:00															X									
CRDL01	1	07:23:00															X									
CCV01	1	07:24:00															X									
CCB01	1	07:26:00															X									
ZZZZZ	1	07:28:00																								
ZZZZZ	1	07:30:00																								
ZZZZZ	1	07:32:00																								
ZZZZZ	1	07:34:00																								
ZZZZZ	1	07:36:00																								
ZZZZZ	100	07:38:00																								
ZZZZZ	100	07:40:00																								
ZZZZZ	100	07:42:00																								
ZZZZZ	500	07:44:00																								
ZZZZZ	100	07:46:00																								
CCV02	1	07:47:00															X									
CCB02	1	07:49:00															X									
ZZZZZ	1	07:51:00																								
ZZZZZ	1	07:53:00																								
ZZZZZ	1	07:55:00																								
1202068540	1	07:57:00															X									
1202068541	1	07:59:00															X									
ZZZZZ	1	08:01:00																								
ZZZZZ	1	08:03:00																								
ZZZZZ	1	08:05:00																								
ZZZZZ	1	08:07:00																								
ZZZZZ	1	08:09:00																								
CCV03	1	08:11:00															X									
CCB03	1	08:12:00															X									
ZZZZZ	1	08:14:00																								
248523001	1	08:16:00															X									
ZZZZZ	1	08:18:00																								
ZZZZZ	1	08:20:00																								
ZZZZZ	1	08:22:00																								

Samp No.	D/F	Run Time
ZZZZZZ	1	08:24:00
I202068542	1	08:26:00
I202068543	1	08:28:00
I202068544	5	08:30:00
ZZZZZZ	1	08:32:00
CCV04	1	08:34:00
CCB04	1	08:36:00

Metals
-14-
Analysis Run Log

Contract: LANL01004

Lab Code: GEL

Inst Name: OPTIMA4

Start Date: 30-MAR-10

End Date: 30-MAR-10

Client Sdg: 10-2203

Method P

Data File: 033010B-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	15:06:00	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
S0.1	1	15:09:00			X	X				X	X	X						X	X	X	X				X	X
S0.5	1	15:11:00	X		X	X			X	X	X	X			X			X	X	X	X				X	X
SCAL	1	15:13:00	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
S10	1	15:15:00	X						X				X		X							X				
ICV01	1	15:16:00	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
ICB01	1	15:18:00	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
PQL01	1	15:21:00	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
ICSA01	1	15:23:00	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
ICSAB01	1	15:25:00	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
LR01	1	15:27:00	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
LR02	1	15:29:00	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
ZZZZZZ	1	15:30:00																								
ZZZZZZ	1	15:32:00																								
CCV01	1	15:38:00	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
CCB01	1	15:40:00	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
ZZZZZZ	5	15:43:00																								
ZZZZZZ	10	15:45:00																								
ZZZZZZ	10	15:47:00																								
ZZZZZZ	10	15:49:00																								
ZZZZZZ	10	15:51:00																								
CCV02	1	15:54:00	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
CCB02	1	15:56:00	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
ZZZZZZ	1	15:59:00																								
ZZZZZZ	1	16:02:00																								
ZZZZZZ	1	16:03:00																								
ZZZZZZ	1	16:05:00																								
ZZZZZZ	1	16:07:00																								
ZZZZZZ	1	16:09:00																								
ZZZZZZ	5	16:10:00																								
ZZZZZZ	1	16:12:00																								
CCV03	1	16:14:00	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
CCB03	1	16:16:00	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
ZZZZZZ	1	16:19:00																								
ZZZZZZ	1	16:22:00																								
ZZZZZZ	1	16:24:00																								
ZZZZZZ	1	16:26:00																								
ZZZZZZ	1	16:28:00																								
ZZZZZZ	1	16:29:00																								
ZZZZZZ	5	16:30:00																								

Metals
-14-
Analysis Run Log

Samp No.	D/F	Run Time																							
CCV04	1	16:33:00	X		X	X			X	X	X	X	X		X		X	X	X	X			X	X	
CCB04	1	16:35:00	X		X	X			X	X	X	X	X		X		X	X	X	X	X			X	X
CCV05	1	16:57:00	X		X	X			X	X	X	X	X		X		X	X	X	X	X			X	X
CCB05	1	16:59:00	X		X	X			X	X	X	X	X		X		X	X	X	X	X			X	X
ZZZZZZ	1	17:02:00																							
ZZZZZZ	1	17:05:00																							
ZZZZZZ	1	17:07:00																							
ZZZZZZ	1	17:10:00																							
ZZZZZZ	1	17:13:00																							
ZZZZZZ	5	17:15:00																							
CCV06	1	17:18:00	X		X	X			X	X	X	X	X		X		X	X	X	X	X			X	X
CCB06	1	17:21:00	X		X	X			X	X	X	X	X		X		X	X	X	X	X			X	X
1202065055	1	17:23:00	X		X	X			X	X	X	X	X		X		X	X	X	X	X			X	X
1202065056	1	17:27:00	X		X	X			X	X	X	X	X		X		X	X	X	X	X			X	X
ZZZZZZ	1	17:29:00																							
1202065057	1	17:32:00	X		X	X			X	X	X	X	X		X		X	X	X	X	X			X	X
1202065058	1	17:35:00	X		X	X			X	X	X	X	X		X		X	X	X	X	X			X	X
1202065059	5	17:37:00	X		X	X			X	X	X	X	X		X		X	X	X	X	X			X	X
CCV07	1	17:40:00	X		X	X			X	X	X	X	X		X		X	X	X	X	X			X	X
CCB07	1	17:42:00	X		X	X			X	X	X	X	X		X		X	X	X	X	X			X	X
ZZZZZZ	1	17:45:00																							
ZZZZZZ	1	17:48:00																							
ZZZZZZ	1	17:51:00																							
248523001	1	17:54:00	X		X	X			X	X	X	X	X		X		X	X	X	X	X			X	X
ZZZZZZ	1	17:57:00																							
CCV08	1	18:00:00	X		X	X			X	X	X	X	X		X		X	X	X	X	X			X	X
CCB08	1	18:02:00	X		X	X			X	X	X	X	X		X		X	X	X	X	X			X	X

Standards

METALS
-10-
Instrument Detection Limits

SDG NO. 10-2203

Contract: LANL01004

Lab Code: GEL

MDL Effective Date: 01-JUL-09

ICP/MS	<u>Analyte</u>	<u>Wavelength</u> <u>(nm)</u>	<u>MDL</u>	<u>RDL</u>
			<u>ug/L</u>	<u>ug/L</u>
LIQUID	Aluminum		15.0	30
	Antimony		1.0	3
	Arsenic		1.6	5
	Barium		0.6	2
	Beryllium		0.1	.5
	Cadmium		0.11	1
	Calcium		65.0	200
	Chromium		2.0	10
	Cobalt		0.1	1
	Copper		0.33	1
	Iron		33.0	100
	Lead		0.5	2
	Magnesium		5.2	15
	Manganese		1.0	5
	Nickel		0.5	2
	Potassium		80.0	300
	Selenium		1.0	5
	Silver		0.2	1
	Sodium		80.0	250
	Thallium		0.3	1
	Uranium		0.05	.2
	Vanadium		3.0	10
	Zinc		3.0	10

METALS
-10-
Instrument Detection Limits

SDG NO. 10-2203

Contract: LANL01004

Lab Code: GEL

MDL Effective Date: 01-JUL-09

	<u>Analyte</u>	<u>Wavelength</u> <u>(nm)</u>	<u>MDL</u> <u>ug/L</u>	<u>RDL</u> <u>ug/L</u>
MERCURY				
LIQUID	Mercury		0.066	.2

METALS
-10-
Instrument Detection Limits

SDG NO. 10-2203

Contract: LANL01004

Lab Code: GEL

MDL Effective Date: 01-JUL-09

ICP	<u>Analyte</u>	<u>Wavelength (nm)</u>	<u>MDL</u>	<u>RDL</u>
			<u>ug/L</u>	<u>ug/L</u>
LIQUID	Aluminum	396.153	68.0	200
	Antimony	206.836	3.0	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	50.0	200
	Chromium	267.716	1.0	5
	Cobalt	228.616	1.0	5
	Copper	324.752	3.0	10
	Iron	238.204	30.0	100
	Lead	220.353	3.3	10
	Magnesium	279.077	85.0	300
	Manganese	257.61	2.0	10
	Nickel	231.604	1.5	5
	Potassium	766.49	50.0	150
	Selenium	196.026	5.0	30
	Silver	328.068	1.0	5
	Sodium	589.592	100	300
	Thallium	190.801	5.0	20
	Uranium	409.014	10.0	50
	Vanadium	292.402	1.0	5
	Zinc	213.857	3.3	10

METALS
-11-
Interelement Correction Factors

Lab Code: GEL

GEL Job No: 10-2203

Contract: LANL01004

Instrument: OPTIMA4

Effective Dates: 22-MAR-10

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Aluminum	Antimony	Arsenic	Barium	Beryllium
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00676	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	-0.98369	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	-0.06206	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
Phosphorous	214.914	-0.22134	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.22220	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Sodium	589.592	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	-0.01674	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL

GEL Job No: 10-2203

Contract: LANL01004

Instrument: OPTIMA4

Effective Dates: 22-MAR-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	14.9992	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	-9.49960	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	3.47778	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	-0.18390	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	-0.60088	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.04741	0.32747
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
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	10.9289
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	-0.07359	0.00000	0.00000
Sodium	589.592	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	5.02864	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.33675	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	1.18768	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	-4.30004	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.03286	0.12442	0.79397

METALS
-11-
Interelement Correction Factors

Lab Code: GELGEL Job No: **10-2203**

Contract: LANL01004

Instrument: OPTIMA4

Effective Dates: **22-MAR-10**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Lead	Magnesium	Manganese	Molybdenum	Phosphorous
Aluminum	396.153	0.00000	0.00000	0.00000	46.4438	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	-14.0269	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	-2.84596	0.00000
Barium	233.527	0.00000	0.00000	0.00000	-0.32136	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	0.01216	0.24903	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	-0.02702	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	-2.77286	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	-24.4630	0.00000
Manganese	257.61	0.00000	0.03966	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	-0.01826	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	10.3832	0.00000
Potassium	766.49	0.00000	0.07568	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	13.3443	0.00000
Silver	328.068	0.00000	0.00000	0.28019	-0.03095	0.00000
Sodium	589.592	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	-8.43314	0.00000
Thallium	190.801	0.00000	0.00000	-2.58065	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.08144	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	-6.48399	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	-10.3466	0.00000
Zinc	213.857	0.00000	0.00000	0.06887	-0.04597	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GELGEL Job No: **10-2203**

Contract: LANL01004

Instrument: OPTIMA4

Effective Dates: **22-MAR-10**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Potassium	Selenium	Silicon	Silver	Sodium
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
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
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.16274
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Sodium	589.592	0.88937	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: 10-2203

Contract: LANL01004

Instrument: OPTIMA4

Effective Dates: 22-MAR-10

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Strontium	Sulfur	Thallium	Tin	Titanium
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	-1.82716	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
Lead	220.353	0.00000	0.00000	0.00000	0.00000	-1.32991
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
Phosphorous	214.914	0.00000	0.00000	0.00000	-8.61809	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
Silicon	251.611	0.00000	0.00000	0.00000	6.59640	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Sodium	589.592	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	-10.0432
Tin	189.927	0.00000	0.00000	0.00000	0.00000	-3.37234
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	0.92753
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	-0.56798

METALS
-11-
Interelement Correction Factors

Lab Code: GEL

GEL Job No: 10-2203

Contract: LANL01004

Instrument: OPTIMA4

Effective Dates: 22-MAR-10

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Uranium	Vanadium	Zinc
Aluminum	396.153	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	-1.62578	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000
Barium	233.527	0.00000	-0.63442	0.00000
Beryllium	313.107	-0.30229	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000
Chromium	267.716	0.78601	-0.47146	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000
Copper	324.752	-0.82619	0.00000	0.00000
Lead	220.353	0.74521	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	-0.33953	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.00000
Selenium	196.026	-0.96499	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000
Silver	328.068	-1.22996	-11.9401	0.00000
Sodium	589.592	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	-7.37871	0.00000
Tin	189.927	0.00000	0.00000	0.00000
Titanium	334.94	0.40930	0.00000	0.00000
Uranium	409.014	0.00000	-57.5852	0.00000
Vanadium	292.402	-0.67226	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000

METALS
-12-
Linear Ranges

SDG NO. 10-2203

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
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
Potassium	1	50000	ug/L	01-FEB-10

METALS
-12-
Linear Ranges

SDG NO. 10-2203

Contract: LANL01004

Lab Code: GEL

Instrument ID OPTIMA4

<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

Raw Data

Spec: Communications time out error.

This message may have resulted when the spectrometer starts up from standby (sleep) mode.

If that is the case, Click on OK and ignore this message.

Otherwise... Check the following:

- » Make sure the spectrometer is powered on.
- » Make sure the cable is connected between the spectrometer and the computer.

Correct the problem and then press the Reconnect button on the Spectrometer page of the Diagnostics window.

[0104]

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Analysis Begun

Start Time: 3/30/2010 15:06:00

Plasma On Time: 3/29/2010 18:07:58

Logged In Analyst: optima4

Technique: ICP Continuous

Spectrometer Model: Optima 7300 DV, S/N 077C0022701 Autosampler Model: AS-93plus

Sample Information File: C:\pe\optima4\Sample Information\033010.sif

Batch ID:

Results Data Set: 033010B

Results Library: C:\pe\optima4\Results\Results.mdb

Sequence No.: 1

Autosampler Location: 8

Sample ID: S0

Date Collected: 3/30/2010 15:06:02

Analyst:

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Replicate Data: S0

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc RADIAL	146497.9	146497.9	99.1	%	15:06:32
1	Al 396.153Radial†	-101.0	-101.9	[0.00]	µg/L	15:06:52
1	Ca 317.933Radial†	670.1	676.2	[0.00]	µg/L	15:06:52
1	Fe 238.204 Radial†	133.7	134.9	[0.00]	µg/L	15:06:52
1	K 766.490 Radial†	1222.4	1233.5	[0.00]	µg/L	15:06:32
1	Mg 279.077 IEC†	174.9	176.5	[0.00]	µg/L	15:06:52
1	Na 589.592 Radial†	1269.7	1281.2	[0.00]	µg/L	15:06:32
1	Sr 421.552†	-245.3	-247.6	[0.00]	µg/L	15:06:32
1	Sc 361.383	1750148.6	1750148.6	99.719	%	15:07:54
1	Y 371.029	1060907.2	1060907.2	99.705	%	15:07:54
1	Ag 328.068†	3317.5	3326.9	[0.00]	µg/L	15:07:56
1	As 188.979†	-16.5	-16.5	[0.00]	µg/L	15:08:16
1	B 249.677†	3233.9	3243.0	[0.00]	µg/L	15:08:16
1	Ba 233.527†	-160.6	-161.1	[0.00]	µg/L	15:08:16
1	Be 313.107†	-773.6	-775.8	[0.00]	µg/L	15:07:56
1	Cd 226.502†	-119.9	-120.3	[0.00]	µg/L	15:08:16
1	Co 228.616†	-167.4	-167.9	[0.00]	µg/L	15:08:16
1	Cr 267.716†	181.0	181.5	[0.00]	µg/L	15:08:16
1	Cu 324.752†	2790.1	2798.0	[0.00]	µg/L	15:07:56
1	Mn 257.610†	176.6	177.1	[0.00]	µg/L	15:08:16
1	Mo 202.031†	-36.7	-36.8	[0.00]	µg/L	15:08:16
1	Ni 231.604†	-71.2	-71.4	[0.00]	µg/L	15:08:16
1	P 214.914†	0.0	0.0	[0.00]	µg/L	15:08:16
1	Pb 220.353†	115.5	115.9	[0.00]	µg/L	15:08:16
1	S 181.975 Axial†	85.9	86.1	[0.00]	µg/L	15:08:16
1	Sb 206.836†	81.3	81.5	[0.00]	µg/L	15:08:16
1	Se 196.026†	3.3	3.3	[0.00]	µg/L	15:08:16
1	SiO2†	1748.5	1753.4	[0.00]	µg/L	15:08:16
1	Si 251.611†	853.8	856.2	[0.00]	µg/L	15:07:56
1	Sn 189.927†	-7.6	-7.7	[0.00]	µg/L	15:08:16
1	Ti 334.940†	867.0	869.5	[0.00]	µg/L	15:07:56
1	Tl 190.801†	-111.8	-112.1	[0.00]	µg/L	15:08:16
1	U 409.014†	-248.2	-248.9	[0.00]	µg/L	15:07:56
1	V 292.402†	416.2	417.4	[0.00]	µg/L	15:07:56
1	Zn 213.857†	524.3	525.8	[0.00]	µg/L	15:08:16
2	Sc RADIAL	147907.3	147907.3	100	%	15:06:55
2	Al 396.153Radial†	-34.8	-34.7	[0.00]	µg/L	15:07:15
2	Ca 317.933Radial†	694.0	693.6	[0.00]	µg/L	15:07:15
2	Fe 238.204 Radial†	148.0	147.9	[0.00]	µg/L	15:07:15
2	K 766.490 Radial†	1396.5	1395.7	[0.00]	µg/L	15:06:55
2	Mg 279.077 IEC†	152.8	152.7	[0.00]	µg/L	15:07:15
2	Na 589.592 Radial†	1149.0	1148.4	[0.00]	µg/L	15:06:55
2	Sr 421.552†	-193.4	-193.3	[0.00]	µg/L	15:06:55
2	Sc 361.383	1758204.8	1758204.8	100.18	%	15:08:19
2	Y 371.029	1066082.1	1066082.1	100.19	%	15:08:19
2	Ag 328.068†	3417.1	3411.0	[0.00]	µg/L	15:08:21
2	As 188.979†	-15.0	-15.0	[0.00]	µg/L	15:08:41

2	B 249.677†	3227.6	3221.9	[0.00]	µg/L	15:08:41
2	Ba 233.527†	-147.6	-147.4	[0.00]	µg/L	15:08:41
2	Be 313.107†	-698.8	-697.5	[0.00]	µg/L	15:08:21
2	Cd 226.502†	-114.7	-114.5	[0.00]	µg/L	15:08:41
2	Co 228.616†	-169.7	-169.4	[0.00]	µg/L	15:08:41
2	Cr 267.716†	163.9	163.6	[0.00]	µg/L	15:08:41
2	Cu 324.752†	2765.8	2760.9	[0.00]	µg/L	15:08:21
2	Mn 257.610†	183.5	183.2	[0.00]	µg/L	15:08:41
2	Mo 202.031†	-33.7	-33.6	[0.00]	µg/L	15:08:41
2	Ni 231.604†	-86.0	-85.8	[0.00]	µg/L	15:08:41
2	P 214.914†	8.3	8.3	[0.00]	µg/L	15:08:41
2	Pb 220.353†	81.9	81.8	[0.00]	µg/L	15:08:41
2	S 181.975 Axial†	81.0	80.8	[0.00]	µg/L	15:08:41
2	Sb 206.836†	78.6	78.4	[0.00]	µg/L	15:08:41
2	Se 196.026†	28.8	28.8	[0.00]	µg/L	15:08:41
2	SiO2†	1754.9	1751.8	[0.00]	µg/L	15:08:41
2	Si 251.611†	1018.7	1016.9	[0.00]	µg/L	15:08:21
2	Sn 189.927†	0.3	0.3	[0.00]	µg/L	15:08:41
2	Ti 334.940†	994.7	992.9	[0.00]	µg/L	15:08:21
2	Tl 190.801†	-109.6	-109.4	[0.00]	µg/L	15:08:41
2	U 409.014†	-263.3	-262.8	[0.00]	µg/L	15:08:21
2	V 292.402†	284.4	283.9	[0.00]	µg/L	15:08:21
2	Zn 213.857†	528.6	527.6	[0.00]	µg/L	15:08:41
3	Sc RADIAL	149084.2	149084.2	101	%	15:07:17
3	Al 396.153Radial†	-52.4	-52.0	[0.00]	µg/L	15:07:37
3	Ca 317.933Radial†	730.3	724.2	[0.00]	µg/L	15:07:37
3	Fe 238.204 Radial†	140.4	139.2	[0.00]	µg/L	15:07:37
3	K 766.490 Radial†	1320.3	1309.2	[0.00]	µg/L	15:07:17
3	Mg 279.077 IEC†	178.6	177.1	[0.00]	µg/L	15:07:37
3	Na 589.592 Radial†	1200.4	1190.3	[0.00]	µg/L	15:07:17
3	Sr 421.552†	-226.0	-224.1	[0.00]	µg/L	15:07:17
3	Sc 361.383	1756878.6	1756878.6	100.10	%	15:08:43
3	Y 371.029	1065144.1	1065144.1	100.10	%	15:08:43
3	Ag 328.068†	3607.1	3603.4	[0.00]	µg/L	15:08:45
3	As 188.979†	-21.6	-21.6	[0.00]	µg/L	15:09:05
3	B 249.677†	3229.5	3226.2	[0.00]	µg/L	15:09:05
3	Ba 233.527†	-178.2	-178.0	[0.00]	µg/L	15:09:05
3	Be 313.107†	-884.3	-883.4	[0.00]	µg/L	15:08:45
3	Cd 226.502†	-95.4	-95.3	[0.00]	µg/L	15:09:05
3	Co 228.616†	-180.2	-180.0	[0.00]	µg/L	15:09:05
3	Cr 267.716†	190.8	190.6	[0.00]	µg/L	15:09:05
3	Cu 324.752†	2810.8	2808.0	[0.00]	µg/L	15:08:45
3	Mn 257.610†	166.6	166.4	[0.00]	µg/L	15:09:05
3	Mo 202.031†	-33.9	-33.9	[0.00]	µg/L	15:09:05
3	Ni 231.604†	-76.5	-76.4	[0.00]	µg/L	15:09:05
3	P 214.914†	6.7	6.7	[0.00]	µg/L	15:09:05
3	Pb 220.353†	93.4	93.3	[0.00]	µg/L	15:09:05
3	S 181.975 Axial†	96.2	96.1	[0.00]	µg/L	15:09:05
3	Sb 206.836†	74.4	74.3	[0.00]	µg/L	15:09:05
3	Se 196.026†	8.6	8.6	[0.00]	µg/L	15:09:05
3	SiO2†	1756.0	1754.2	[0.00]	µg/L	15:09:05
3	Si 251.611†	973.9	972.9	[0.00]	µg/L	15:08:45
3	Sn 189.927†	-0.2	-0.2	[0.00]	µg/L	15:09:05
3	Ti 334.940†	795.2	794.4	[0.00]	µg/L	15:08:45
3	Tl 190.801†	-129.9	-129.8	[0.00]	µg/L	15:09:05
3	U 409.014†	-340.0	-339.6	[0.00]	µg/L	15:08:45
3	V 292.402†	228.5	228.3	[0.00]	µg/L	15:08:45
3	Zn 213.857†	520.8	520.3	[0.00]	µg/L	15:09:05

Mean Data: S0

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc. Units
Sc 361.383	1755077.4	4319.59	0.25%	100.00 %
Sc RADIAL	147829.8	1294.89	0.88%	100 %
Y 371.029	1064044.5	2757.13	0.26%	100.00 %
Ag 328.068†	3447.1	141.77	4.11%	[0.00] µg/L
Al 396.153Radial†	-62.9	34.89	55.49%	[0.00] µg/L
As 188.979†	-17.7	3.44	19.45%	[0.00] µg/L
B 249.677†	3230.3	11.14	0.34%	[0.00] µg/L
Ba 233.527†	-162.2	15.33	9.46%	[0.00] µg/L

Be 313.107†	-785.6	93.33	11.88%	[0.00]	µg/L
Ca 317.933 Radial†	698.0	24.30	3.48%	[0.00]	µg/L
Cd 226.502†	-110.0	13.07	11.88%	[0.00]	µg/L
Co 228.616†	-172.4	6.63	3.84%	[0.00]	µg/L
Cr 267.716†	178.6	13.74	7.69%	[0.00]	µg/L
Cu 324.752†	2788.9	24.81	0.89%	[0.00]	µg/L
Fe 238.204 Radial†	140.7	6.62	4.70%	[0.00]	µg/L
K 766.490 Radial†	1312.8	81.17	6.18%	[0.00]	µg/L
Mg 279.077 IEC†	168.8	13.89	8.23%	[0.00]	µg/L
Mn 257.610†	175.6	8.49	4.84%	[0.00]	µg/L
Mo 202.031†	-34.8	1.78	5.12%	[0.00]	µg/L
Na 589.592 Radial†	1206.6	67.93	5.63%	[0.00]	µg/L
Ni 231.604†	-77.9	7.31	9.39%	[0.00]	µg/L
P 214.914†	5.0	4.37	87.51%	[0.00]	µg/L
Pb 220.353†	97.0	17.35	17.90%	[0.00]	µg/L
S 181.975 Axial†	87.7	7.77	8.86%	[0.00]	µg/L
Sb 206.836†	78.1	3.61	4.63%	[0.00]	µg/L
Se 196.026†	13.6	13.43	99.02%	[0.00]	µg/L
SiO2†	1753.1	1.20	0.07%	[0.00]	µg/L
Si 251.611†	948.7	83.02	8.75%	[0.00]	µg/L
Sn 189.927†	-2.5	4.43	174.28%	[0.00]	µg/L
Sr 421.552†	-221.7	27.19	12.27%	[0.00]	µg/L
Ti 334.940†	885.6	100.24	11.32%	[0.00]	µg/L
Tl 190.801†	-117.1	11.10	9.48%	[0.00]	µg/L
U 409.014†	-283.8	48.88	17.23%	[0.00]	µg/L
V 292.402†	309.8	97.21	31.37%	[0.00]	µg/L
Zn 213.857†	524.6	3.82	0.73%	[0.00]	µg/L

Sequence No.: 2

Sample ID: S0.1

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 2

Date Collected: 3/30/2010 15:09:13

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	151106.4	151106.4	102 %		15:09:44
1	K 766.490 Radial†	3818.5	2422.9	[1000] µg/L		15:09:44
1	Sr 421.552†	45253.2	44493.6	[100] µg/L		15:09:44
1	Sc 361.383	1738037.7	1738037.7	99.029 %		15:09:52
1	Y 371.029	1049397.7	1049397.7	98.623 %		15:09:52
1	Ag 328.068†	28574.4	25407.5	[100] µg/L		15:09:54
1	As 188.979†	268.3	288.6	[100] µg/L		15:10:14
1	B 249.677†	9207.2	6067.1	[100] µg/L		15:09:54
1	Ba 233.527†	22852.5	23238.7	[100] µg/L		15:09:54
1	Be 313.107†	323892.5	327853.5	[100] µg/L		15:09:52
1	Cd 226.502†	14574.7	14827.6	[100] µg/L		15:09:54
1	Co 228.616†	7300.6	7544.6	[100] µg/L		15:10:14
1	Cr 267.716†	11891.0	11829.0	[100] µg/L		15:09:54
1	Cu 324.752†	26223.3	23691.5	[100] µg/L		15:09:54
1	Mn 257.610†	76566.4	77141.5	[100] µg/L		15:09:54
1	Mo 202.031†	3085.6	3150.6	[100] µg/L		15:10:14
1	Ni 231.604†	8046.1	8202.9	[100] µg/L		15:09:54
1	P 214.914†	2079.3	2094.7	[500] µg/L		15:10:14
1	Pb 220.353†	1741.7	1661.8	[100] µg/L		15:10:14
1	S 181.975 Axial†	326.5	242.0	[200] µg/L		15:10:14
1	Sb 206.836†	832.0	762.0	[100] µg/L		15:10:14
1	Se 196.026†	250.1	238.9	[100] µg/L		15:10:14
1	SiO2†	11525.9	9885.8	[1069.5] µg/L		15:09:54
1	Si 251.611†	31162.9	30519.8	[500] µg/L		15:09:54
1	Sn 189.927†	1432.7	1449.3	[100] µg/L		15:10:14
1	Ti 334.940†	99104.5	99190.5	[100] µg/L		15:09:54
1	Tl 190.801†	632.9	756.2	[100] µg/L		15:10:14
1	U 409.014†	1279.0	1575.3	[100] µg/L		15:09:54
1	V 292.402†	18747.4	18621.3	[100] µg/L		15:09:54
1	Zn 213.857†	16580.0	16218.0	[100] µg/L		15:09:54
2	Sc RADIAL	151100.7	151100.7	102 %		15:09:46
2	K 766.490 Radial†	3799.4	2404.3	[1000] µg/L		15:09:46
2	Sr 421.552†	45444.4	44682.4	[100] µg/L		15:09:46
2	Sc 361.383	1757465.9	1757465.9	100.14 %		15:10:16
2	Y 371.029	1061598.8	1061598.8	99.770 %		15:10:16
2	Ag 328.068†	28565.6	25079.7	[100] µg/L		15:10:18
2	As 188.979†	278.0	295.3	[100] µg/L		15:10:38
2	B 249.677†	9241.9	5999.0	[100] µg/L		15:10:18
2	Ba 233.527†	23009.2	23140.1	[100] µg/L		15:10:18
2	Be 313.107†	327346.9	327687.6	[100] µg/L		15:10:16
2	Cd 226.502†	14590.2	14680.4	[100] µg/L		15:10:18
2	Co 228.616†	7268.8	7431.4	[100] µg/L		15:10:38
2	Cr 267.716†	12079.9	11884.9	[100] µg/L		15:10:18
2	Cu 324.752†	26500.5	23675.6	[100] µg/L		15:10:18
2	Mn 257.610†	77037.2	76756.9	[100] µg/L		15:10:18
2	Mo 202.031†	3083.7	3114.3	[100] µg/L		15:10:38
2	Ni 231.604†	8112.2	8179.1	[100] µg/L		15:10:18
2	P 214.914†	2063.1	2055.3	[500] µg/L		15:10:38
2	Pb 220.353†	1736.3	1637.0	[100] µg/L		15:10:38
2	S 181.975 Axial†	322.2	234.0	[200] µg/L		15:10:38
2	Sb 206.836†	843.3	764.1	[100] µg/L		15:10:38
2	Se 196.026†	260.0	246.1	[100] µg/L		15:10:38
2	SiO2†	11608.3	9839.4	[1069.5] µg/L		15:10:18
2	Si 251.611†	31441.9	30450.5	[500] µg/L		15:10:18
2	Sn 189.927†	1435.4	1436.0	[100] µg/L		15:10:38
2	Ti 334.940†	99940.5	98919.1	[100] µg/L		15:10:18
2	Tl 190.801†	638.1	754.3	[100] µg/L		15:10:38
2	U 409.014†	1394.8	1676.7	[100] µg/L		15:10:18
2	V 292.402†	18757.2	18421.9	[100] µg/L		15:10:18

2	Zn 213.857†	16630.2	16083.1	[100] µg/L	15:10:18
3	Sc RADIAL	150595.1	150595.1	102 %	15:09:48
3	K 766.490 Radial†	3957.0	2571.5	[1000] µg/L	15:09:48
3	Sr 421.552†	45519.0	44904.8	[100] µg/L	15:09:48
3	Sc 361.383	1739244.5	1739244.5	99.098 %	15:10:40
3	Y 371.029	1050569.8	1050569.8	98.734 %	15:10:40
3	Ag 328.068†	28423.4	25235.1	[100] µg/L	15:10:42
3	As 188.979†	270.5	290.7	[100] µg/L	15:11:02
3	B 249.677†	9031.4	5883.3	[100] µg/L	15:10:42
3	Ba 233.527†	22814.2	23184.1	[100] µg/L	15:10:42
3	Be 313.107†	324651.0	328391.9	[100] µg/L	15:10:40
3	Cd 226.502†	14381.3	14622.3	[100] µg/L	15:10:42
3	Co 228.616†	7305.3	7544.2	[100] µg/L	15:11:02
3	Cr 267.716†	11842.0	11771.3	[100] µg/L	15:10:42
3	Cu 324.752†	26162.4	23611.6	[100] µg/L	15:10:42
3	Mn 257.610†	76240.8	76759.2	[100] µg/L	15:10:42
3	Mo 202.031†	3086.5	3149.4	[100] µg/L	15:11:02
3	Ni 231.604†	7930.5	8080.6	[100] µg/L	15:10:42
3	P 214.914†	2052.5	2066.2	[500] µg/L	15:11:02
3	Pb 220.353†	1737.1	1655.9	[100] µg/L	15:11:02
3	S 181.975 Axial†	322.8	238.0	[200] µg/L	15:11:02
3	Sb 206.836†	838.9	768.4	[100] µg/L	15:11:02
3	Se 196.026†	267.2	256.1	[100] µg/L	15:11:02
3	SiO2†	11482.8	9834.2	[1069.5] µg/L	15:10:42
3	Si 251.611†	31025.8	30359.6	[500] µg/L	15:10:42
3	Sn 189.927†	1439.4	1455.1	[100] µg/L	15:11:02
3	Ti 334.940†	98234.7	98243.4	[100] µg/L	15:10:42
3	Tl 190.801†	640.7	763.7	[100] µg/L	15:11:02
3	U 409.014†	1354.3	1650.4	[100] µg/L	15:10:42
3	V 292.402†	18608.8	18468.4	[100] µg/L	15:10:42
3	Zn 213.857†	16438.9	16064.0	[100] µg/L	15:10:42

Mean Data: S0.1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc. Units
Sc 361.383	1744916.0	10885.22	0.62%	99.421 %
Sc RADIAL	150934.1	293.54	0.19%	102 %
Y 371.029	1053855.4	6731.54	0.64%	99.042 %
Ag 328.068†	25240.8	163.97	0.65%	[100] µg/L
As 188.979†	291.5	3.43	1.18%	[100] µg/L
B 249.677†	5983.1	92.92	1.55%	[100] µg/L
Ba 233.527†	23187.6	49.38	0.21%	[100] µg/L
Be 313.107†	327977.7	368.24	0.11%	[100] µg/L
Cd 226.502†	14710.1	105.82	0.72%	[100] µg/L
Co 228.616†	7506.8	65.26	0.87%	[100] µg/L
Cr 267.716†	11828.4	56.81	0.48%	[100] µg/L
Cu 324.752†	23659.5	42.28	0.18%	[100] µg/L
K 766.490 Radial†	2466.2	91.66	3.72%	[1000] µg/L
Mn 257.610†	76885.9	221.36	0.29%	[100] µg/L
Mo 202.031†	3138.1	20.62	0.66%	[100] µg/L
Ni 231.604†	8154.2	64.85	0.80%	[100] µg/L
P 214.914†	2072.0	20.35	0.98%	[500] µg/L
Pb 220.353†	1651.6	12.97	0.79%	[100] µg/L
S 181.975 Axial†	238.0	4.01	1.69%	[200] µg/L
Sb 206.836†	764.9	3.26	0.43%	[100] µg/L
Se 196.026†	247.0	8.60	3.48%	[100] µg/L
SiO2†	9853.1	28.41	0.29%	[1069.5] µg/L
Si 251.611†	30443.3	80.34	0.26%	[500] µg/L
Sn 189.927†	1446.8	9.79	0.68%	[100] µg/L
Sr 421.552†	44693.6	205.85	0.46%	[100] µg/L
Ti 334.940†	98784.3	487.73	0.49%	[100] µg/L
Tl 190.801†	758.0	4.95	0.65%	[100] µg/L
U 409.014†	1634.1	52.62	3.22%	[100] µg/L
V 292.402†	18503.9	104.35	0.56%	[100] µg/L
Zn 213.857†	16121.7	83.92	0.52%	[100] µg/L

Sequence No.: 3

Sample ID: S0.5

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 3

Date Collected: 3/30/2010 15:11:10

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: S0.5

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Analysis Time
1	Sc RADIAL	153789.5	153789.5	104 %	15:11:41
1	Al 396.153Radial†	24481.1	23595.3	[5000] µg/L	15:11:41
1	Ca 317.933Radial†	85129.1	81132.2	[5000] µg/L	15:11:41
1	K 766.490 Radial†	13676.3	11833.5	[5000] µg/L	15:11:41
1	Mg 279.077 IEC†	12814.2	12148.8	[5000] µg/L	15:11:41
1	Sr 421.552†	211787.7	203802.1	[500] µg/L	15:11:39
1	Sc 361.383	1735951.4	1735951.4	98.910 %	15:11:54
1	Y 371.029	1040161.6	1040161.6	97.755 %	15:11:54
1	Ag 328.068†	126606.2	124554.0	[500] µg/L	15:11:54
1	As 188.979†	1397.2	1430.3	[500] µg/L	15:12:14
1	B 249.677†	33216.3	30351.9	[500] µg/L	15:11:54
1	Ba 233.527†	113577.9	114991.4	[500] µg/L	15:11:54
1	Be 313.107†	1647596.1	1666534.1	[500] µg/L	15:11:54
1	Cd 226.502†	72100.2	73004.6	[500] µg/L	15:11:54
1	Co 228.616†	36584.4	37159.9	[500] µg/L	15:11:54
1	Cr 267.716†	58901.1	59371.5	[500] µg/L	15:11:54
1	Cu 324.752†	119610.4	118139.2	[500] µg/L	15:11:54
1	Mn 257.610†	371672.1	375591.5	[500] µg/L	15:11:54
1	Mo 202.031†	15467.6	15672.8	[500] µg/L	15:12:14
1	Ni 231.604†	39521.0	40034.3	[500] µg/L	15:11:54
1	P 214.914†	10340.4	10449.3	[2500] µg/L	15:12:14
1	Pb 220.353†	8226.2	8219.8	[500] µg/L	15:12:14
1	S 181.975 Axial†	1292.3	1218.9	[1000] µg/L	15:12:14
1	Sb 206.836†	3846.6	3810.9	[500] µg/L	15:12:14
1	Se 196.026†	1241.8	1241.9	[500] µg/L	15:12:14
1	SiO2†	50998.0	49806.7	[5347.5] µg/L	15:11:54
1	Si 251.611†	153709.5	154454.4	[2500] µg/L	15:11:54
1	Sn 189.927†	7149.3	7230.6	[500] µg/L	15:12:14
1	Ti 334.940†	494470.5	499032.8	[500] µg/L	15:11:54
1	Tl 190.801†	3575.0	3731.4	[500] µg/L	15:12:14
1	U 409.014†	7148.3	7510.8	[500] µg/L	15:11:54
1	V 292.402†	92825.6	93538.5	[500] µg/L	15:11:54
1	Zn 213.857†	80524.0	80886.6	[500] µg/L	15:11:54
2	Sc RADIAL	152865.2	152865.2	103 %	15:11:45
2	Al 396.153Radial†	24989.3	24229.1	[5000] µg/L	15:11:45
2	Ca 317.933Radial†	86974.4	83411.5	[5000] µg/L	15:11:45
2	K 766.490 Radial†	13984.7	12211.3	[5000] µg/L	15:11:45
2	Mg 279.077 IEC†	12966.9	12370.9	[5000] µg/L	15:11:45
2	Sr 421.552†	222524.3	215416.0	[500] µg/L	15:11:43
2	Sc 361.383	1734190.5	1734190.5	98.810 %	15:12:17
2	Y 371.029	1038691.4	1038691.4	97.617 %	15:12:17
2	Ag 328.068†	126509.4	124586.0	[500] µg/L	15:12:17
2	As 188.979†	1391.7	1426.2	[500] µg/L	15:12:37
2	B 249.677†	33048.7	30216.4	[500] µg/L	15:12:17
2	Ba 233.527†	113148.6	114673.5	[500] µg/L	15:12:17
2	Be 313.107†	1642503.0	1663071.1	[500] µg/L	15:12:17
2	Cd 226.502†	71973.8	72950.7	[500] µg/L	15:12:17
2	Co 228.616†	36618.8	37232.2	[500] µg/L	15:12:17
2	Cr 267.716†	58524.7	59051.0	[500] µg/L	15:12:17
2	Cu 324.752†	119301.7	117949.6	[500] µg/L	15:12:17
2	Mn 257.610†	370432.5	374718.5	[500] µg/L	15:12:17
2	Mo 202.031†	15519.2	15740.9	[500] µg/L	15:12:37
2	Ni 231.604†	39230.4	39780.8	[500] µg/L	15:12:17
2	P 214.914†	10372.7	10492.7	[2500] µg/L	15:12:37
2	Pb 220.353†	8220.3	8222.3	[500] µg/L	15:12:37
2	S 181.975 Axial†	1292.2	1220.1	[1000] µg/L	15:12:37
2	Sb 206.836†	3819.7	3787.6	[500] µg/L	15:12:37
2	Se 196.026†	1255.4	1257.0	[500] µg/L	15:12:37
2	SiO2†	51109.7	49972.2	[5347.5] µg/L	15:12:17

2	Si 251.611†	153212.5	154109.2	[2500]	µg/L	15:12:17
2	Sn 189.927†	7129.5	7217.9	[500]	µg/L	15:12:37
2	Ti 334.940†	493094.1	498147.4	[500]	µg/L	15:12:17
2	Tl 190.801†	3556.4	3716.3	[500]	µg/L	15:12:37
2	U 409.014†	6944.1	7311.5	[500]	µg/L	15:12:17
2	V 292.402†	92554.7	93359.6	[500]	µg/L	15:12:17
2	Zn 213.857†	80255.8	80697.8	[500]	µg/L	15:12:17
3	Sc RADIAL	149863.4	149863.4	101	%	15:11:49
3	Al 396.153Radial†	24669.1	24397.3	[5000]	µg/L	15:11:49
3	Ca 317.933Radial†	85030.9	83179.1	[5000]	µg/L	15:11:49
3	K 766.490 Radial†	13600.3	12103.0	[5000]	µg/L	15:11:49
3	Mg 279.077 IEC†	12711.9	12370.7	[5000]	µg/L	15:11:49
3	Sr 421.552†	221546.3	218761.8	[500]	µg/L	15:11:47
3	Sc 361.383	1723472.7	1723472.7	98.199	%	15:12:40
3	Y 371.029	1032864.9	1032864.9	97.070	%	15:12:40
3	Ag 328.068†	125972.8	124835.8	[500]	µg/L	15:12:40
3	As 188.979†	1399.9	1443.2	[500]	µg/L	15:13:00
3	B 249.677†	33059.7	30435.6	[500]	µg/L	15:12:40
3	Ba 233.527†	112125.9	114344.2	[500]	µg/L	15:12:40
3	Be 313.107†	1630400.6	1661084.1	[500]	µg/L	15:12:40
3	Cd 226.502†	71306.5	72724.1	[500]	µg/L	15:12:40
3	Co 228.616†	36272.9	37110.5	[500]	µg/L	15:12:40
3	Cr 267.716†	58285.2	59175.5	[500]	µg/L	15:12:40
3	Cu 324.752†	118561.9	117947.1	[500]	µg/L	15:12:40
3	Mn 257.610†	367562.2	374126.9	[500]	µg/L	15:12:40
3	Mo 202.031†	15553.6	15873.5	[500]	µg/L	15:13:00
3	Ni 231.604†	38922.1	39713.7	[500]	µg/L	15:12:40
3	P 214.914†	10377.3	10562.6	[2500]	µg/L	15:13:00
3	Pb 220.353†	8241.3	8295.5	[500]	µg/L	15:13:00
3	S 181.975 Axial†	1295.0	1231.1	[1000]	µg/L	15:13:00
3	Sb 206.836†	3839.0	3831.3	[500]	µg/L	15:13:00
3	Se 196.026†	1246.3	1255.5	[500]	µg/L	15:13:00
3	SiO2†	50697.4	49873.9	[5347.5]	µg/L	15:12:40
3	Si 251.611†	152190.0	154032.2	[2500]	µg/L	15:12:40
3	Sn 189.927†	7135.8	7269.2	[500]	µg/L	15:13:00
3	Ti 334.940†	489890.4	497988.3	[500]	µg/L	15:12:40
3	Tl 190.801†	3591.9	3774.8	[500]	µg/L	15:13:00
3	U 409.014†	7340.9	7759.3	[500]	µg/L	15:12:40
3	V 292.402†	91865.1	93239.8	[500]	µg/L	15:12:40
3	Zn 213.857†	79572.2	80506.8	[500]	µg/L	15:12:40

Mean Data: S0.5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc. Units
Sc 361.383	1731204.9	6753.87	0.39%	98.640 %
Sc RADIAL	152172.7	2052.66	1.35%	103 %
Y 371.029	1037239.3	3858.99	0.37%	97.481 %
Ag 328.068†	124658.6	154.27	0.12%	[500] µg/L
Al 396.153Radial†	24073.9	422.90	1.76%	[5000] µg/L
As 188.979†	1433.2	8.90	0.62%	[500] µg/L
B 249.677†	30334.6	110.59	0.36%	[500] µg/L
Ba 233.527†	114669.7	323.62	0.28%	[500] µg/L
Be 313.107†	1663563.1	2758.14	0.17%	[500] µg/L
Ca 317.933Radial†	82574.3	1254.28	1.52%	[5000] µg/L
Cd 226.502†	72893.1	148.83	0.20%	[500] µg/L
Co 228.616†	37167.5	61.23	0.16%	[500] µg/L
Cr 267.716†	59199.3	161.54	0.27%	[500] µg/L
Cu 324.752†	118012.0	110.23	0.09%	[500] µg/L
K 766.490 Radial†	12049.3	194.52	1.61%	[5000] µg/L
Mg 279.077 IEC†	12296.8	128.17	1.04%	[5000] µg/L
Mn 257.610†	374812.3	736.78	0.20%	[500] µg/L
Mo 202.031†	15762.4	102.07	0.65%	[500] µg/L
Ni 231.604†	39842.9	169.11	0.42%	[500] µg/L
P 214.914†	10501.5	57.19	0.54%	[2500] µg/L
Pb 220.353†	8245.9	42.98	0.52%	[500] µg/L
S 181.975 Axial†	1223.3	6.71	0.55%	[1000] µg/L
Sb 206.836†	3809.9	21.86	0.57%	[500] µg/L
Se 196.026†	1251.5	8.34	0.67%	[500] µg/L
SiO2†	49884.3	83.19	0.17%	[5347.5] µg/L
Si 251.611†	154198.6	224.84	0.15%	[2500] µg/L

Sn 189.927†	7239.2	26.70	0.37%	[500] µg/L
Sr 421.552†	212660.0	7851.46	3.69%	[500] µg/L
Ti 334.940†	498389.5	562.78	0.11%	[500] µg/L
Tl 190.801†	3740.9	30.37	0.81%	[500] µg/L
U 409.014†	7527.2	224.34	2.98%	[500] µg/L
V 292.402†	93379.3	150.30	0.16%	[500] µg/L
Zn 213.857†	80697.1	189.88	0.24%	[500] µg/L

Sequence No.: 4

Sample ID: SCAL

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 4

Date Collected: 3/30/2010 15:13:09

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	151479.9	151479.9	102 %		15:13:40
1	Al 396.153Radial†	50248.0	49100.2	[10000] µg/L		15:13:40
1	Ca 317.933Radial†	172576.6	167720.3	[10000] µg/L		15:13:40
1	Fe 238.204 Radial†	152851.3	149027.6	[10000] µg/L		15:13:40
1	K 766.490 Radial†	26338.9	24391.4	[10000] µg/L		15:13:40
1	Mg 279.077 IEC†	25844.4	25052.9	[10000] µg/L		15:13:40
1	Na 589.592 Radial†	68427.5	65572.1	[10000] µg/L		15:13:40
1	Sr 421.552†	443569.3	433102.8	[1000] µg/L		15:13:38
1	Sc 361.383	1755665.6	1755665.6	100.03 %		15:13:53
1	Y 371.029	1044873.8	1044873.8	98.198 %		15:13:53
1	Ag 328.068†	252438.6	248906.9	[1000] µg/L		15:13:55
1	As 188.979†	2841.7	2858.5	[1000] µg/L		15:14:15
1	B 249.677†	63707.1	60455.4	[1000] µg/L		15:13:55
1	Ba 233.527†	226640.1	226726.3	[1000] µg/L		15:13:55
1	Be 313.107†	3325212.5	3324883.9	[1000] µg/L		15:13:53
1	Cd 226.502†	143542.8	143604.7	[1000] µg/L		15:13:55
1	Co 228.616†	72617.2	72765.3	[1000] µg/L		15:13:55
1	Cr 267.716†	117324.3	117106.4	[1000] µg/L		15:13:55
1	Cu 324.752†	237494.2	234625.7	[1000] µg/L		15:13:55
1	Mn 257.610†	738395.3	737972.3	[1000] µg/L		15:13:55
1	Mo 202.031†	31197.3	31221.6	[1000] µg/L		15:14:15
1	Ni 231.604†	78391.2	78442.8	[1000] µg/L		15:13:55
1	P 214.914†	20837.0	20825.0	[5000] µg/L		15:14:15
1	Pb 220.353†	16272.4	16170.0	[1000] µg/L		15:14:15
1	S 181.975 Axial†	2513.2	2424.7	[2000] µg/L		15:14:15
1	Sb 206.836†	7651.2	7570.5	[1000] µg/L		15:14:15
1	Se 196.026†	2493.0	2478.6	[1000] µg/L		15:14:15
1	SiO2†	100259.4	98472.6	[10695] µg/L		15:13:55
1	Si 251.611†	305887.8	304836.7	[5000] µg/L		15:13:55
1	Sn 189.927†	14332.6	14330.3	[1000] µg/L		15:14:15
1	Ti 334.940†	997065.9	995846.2	[1000] µg/L		15:13:53
1	Tl 190.801†	7268.8	7383.5	[1000] µg/L		15:14:15
1	U 409.014†	15767.1	16045.6	[1000] µg/L		15:13:55
1	V 292.402†	186730.1	186357.7	[1000] µg/L		15:13:55
1	Zn 213.857†	159431.2	158853.3	[1000] µg/L		15:13:55
2	Sc RADIAL	151260.0	151260.0	102 %		15:13:44
2	Al 396.153Radial†	50210.8	49135.1	[10000] µg/L		15:13:44
2	Ca 317.933Radial†	171845.0	167250.0	[10000] µg/L		15:13:44
2	Fe 238.204 Radial†	152123.6	148533.1	[10000] µg/L		15:13:44
2	K 766.490 Radial†	26188.8	24282.1	[10000] µg/L		15:13:44
2	Mg 279.077 IEC†	25703.0	24951.3	[10000] µg/L		15:13:44
2	Na 589.592 Radial†	67914.1	65167.3	[10000] µg/L		15:13:44
2	Sr 421.552†	445909.8	436019.5	[1000] µg/L		15:13:42
2	Sc 361.383	1749606.7	1749606.7	99.688 %		15:14:18
2	Y 371.029	1042280.4	1042280.4	97.955 %		15:14:18
2	Ag 328.068†	254491.0	251839.7	[1000] µg/L		15:14:20
2	As 188.979†	2842.0	2868.6	[1000] µg/L		15:14:40
2	B 249.677†	64704.3	61676.3	[1000] µg/L		15:14:20
2	Ba 233.527†	228264.2	229140.1	[1000] µg/L		15:14:20
2	Be 313.107†	3335523.1	3346738.2	[1000] µg/L		15:14:18
2	Cd 226.502†	144794.1	145356.9	[1000] µg/L		15:14:20
2	Co 228.616†	73330.2	73732.0	[1000] µg/L		15:14:20
2	Cr 267.716†	118422.9	118614.6	[1000] µg/L		15:14:20
2	Cu 324.752†	239130.0	237088.8	[1000] µg/L		15:14:20
2	Mn 257.610†	744297.2	746448.9	[1000] µg/L		15:14:20
2	Mo 202.031†	31343.1	31475.9	[1000] µg/L		15:14:40
2	Ni 231.604†	78921.8	79246.4	[1000] µg/L		15:14:20
2	P 214.914†	20931.4	20991.9	[5000] µg/L		15:14:40
2	Pb 220.353†	16369.7	16323.9	[1000] µg/L		15:14:40

2	S 181.975 Axial†	2522.0	2442.1	[2000]	µg/L	15:14:40
2	Sb 206.836†	7703.7	7649.7	[1000]	µg/L	15:14:40
2	Se 196.026†	2507.4	2501.6	[1000]	µg/L	15:14:40
2	SiO2†	101466.2	100030.3	[10695]	µg/L	15:14:20
2	Si 251.611†	308702.3	308718.9	[5000]	µg/L	15:14:20
2	Sn 189.927†	14433.4	14481.1	[1000]	µg/L	15:14:40
2	Ti 334.940†	998815.3	1001052.9	[1000]	µg/L	15:14:18
2	Tl 190.801†	7296.7	7436.6	[1000]	µg/L	15:14:40
2	U 409.014†	15818.7	16151.9	[1000]	µg/L	15:14:20
2	V 292.402†	188107.1	188385.4	[1000]	µg/L	15:14:20
2	Zn 213.857†	161016.2	160995.1	[1000]	µg/L	15:14:20
3	Sc RADIAL	151014.0	151014.0	102	%	15:13:48
3	Al 396.153Radial†	50198.3	49202.7	[10000]	µg/L	15:13:48
3	Ca 317.933Radial†	171941.8	167618.5	[10000]	µg/L	15:13:48
3	Fe 238.204 Radial†	152128.1	148779.8	[10000]	µg/L	15:13:48
3	K 766.490 Radial†	26223.9	24358.2	[10000]	µg/L	15:13:48
3	Mg 279.077 IEC†	25716.3	25005.2	[10000]	µg/L	15:13:48
3	Na 589.592 Radial†	67843.5	65206.4	[10000]	µg/L	15:13:48
3	Sr 421.552†	446265.2	437077.4	[1000]	µg/L	15:13:46
3	Sc 361.383	1732533.9	1732533.9	98.716	%	15:14:42
3	Y 371.029	1032118.8	1032118.8	97.000	%	15:14:42
3	Ag 328.068†	255803.1	255684.5	[1000]	µg/L	15:14:45
3	As 188.979†	2815.4	2869.7	[1000]	µg/L	15:15:05
3	B 249.677†	64798.9	62411.8	[1000]	µg/L	15:14:45
3	Ba 233.527†	230158.6	233315.5	[1000]	µg/L	15:14:45
3	Be 313.107†	3286563.4	3330113.2	[1000]	µg/L	15:14:42
3	Cd 226.502†	145823.0	147830.4	[1000]	µg/L	15:14:45
3	Co 228.616†	73882.3	75016.1	[1000]	µg/L	15:14:45
3	Cr 267.716†	119164.2	120536.2	[1000]	µg/L	15:14:45
3	Cu 324.752†	240884.9	241230.3	[1000]	µg/L	15:14:45
3	Mn 257.610†	748765.6	758332.8	[1000]	µg/L	15:14:45
3	Mo 202.031†	31112.5	31552.1	[1000]	µg/L	15:15:05
3	Ni 231.604†	79518.6	80631.2	[1000]	µg/L	15:14:45
3	P 214.914†	20780.9	21046.3	[5000]	µg/L	15:15:05
3	Pb 220.353†	16271.0	16385.8	[1000]	µg/L	15:15:05
3	S 181.975 Axial†	2504.4	2449.3	[2000]	µg/L	15:15:05
3	Sb 206.836†	7642.3	7663.6	[1000]	µg/L	15:15:05
3	Se 196.026†	2492.7	2511.6	[1000]	µg/L	15:15:05
3	SiO2†	102016.4	101590.7	[10695]	µg/L	15:14:45
3	Si 251.611†	310581.1	313673.7	[5000]	µg/L	15:14:45
3	Sn 189.927†	14306.7	14495.4	[1000]	µg/L	15:15:05
3	Ti 334.940†	986990.6	998947.6	[1000]	µg/L	15:14:42
3	Tl 190.801†	7254.3	7465.7	[1000]	µg/L	15:15:05
3	U 409.014†	15880.8	16371.2	[1000]	µg/L	15:14:45
3	V 292.402†	189443.3	191598.5	[1000]	µg/L	15:14:45
3	Zn 213.857†	162084.4	163668.8	[1000]	µg/L	15:14:45

Mean Data: SCAL

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc. Units
Sc 361.383	1745935.4	11994.92	0.69%	99.479 %
Sc RADIAL	151251.3	233.07	0.15%	102 %
Y 371.029	1039757.6	6741.31	0.65%	97.717 %
Ag 328.068†	252143.7	3399.00	1.35%	[1000] µg/L
Al 396.153Radial†	49146.0	52.14	0.11%	[10000] µg/L
As 188.979†	2865.6	6.19	0.22%	[1000] µg/L
B 249.677†	61514.5	988.13	1.61%	[1000] µg/L
Ba 233.527†	229727.3	3333.66	1.45%	[1000] µg/L
Be 313.107†	3333911.8	11411.59	0.34%	[1000] µg/L
Ca 317.933Radial†	167529.6	247.39	0.15%	[10000] µg/L
Cd 226.502†	145597.3	2123.07	1.46%	[1000] µg/L
Co 228.616†	73837.8	1129.09	1.53%	[1000] µg/L
Cr 267.716†	118752.4	1719.04	1.45%	[1000] µg/L
Cu 324.752†	237648.3	3337.68	1.40%	[1000] µg/L
Fe 238.204 Radial†	148780.2	247.21	0.17%	[10000] µg/L
K 766.490 Radial†	24343.9	56.06	0.23%	[10000] µg/L
Mg 279.077 IEC†	25003.1	50.81	0.20%	[10000] µg/L
Mn 257.610†	747584.7	10227.64	1.37%	[1000] µg/L
Mo 202.031†	31416.5	173.06	0.55%	[1000] µg/L
Na 589.592 Radial†	65315.3	223.25	0.34%	[10000] µg/L

Ni 231.604†	79440.2	1106.98	1.39%	[1000]	µg/L
P 214.914†	20954.4	115.28	0.55%	[5000]	µg/L
Pb 220.353†	16293.2	111.12	0.68%	[1000]	µg/L
S 181.975 Axial†	2438.7	12.65	0.52%	[2000]	µg/L
Sb 206.836†	7628.0	50.21	0.66%	[1000]	µg/L
Se 196.026†	2497.3	16.89	0.68%	[1000]	µg/L
SiO2†	100031.2	1559.01	1.56%	[10695]	µg/L
Si 251.611†	309076.4	4429.34	1.43%	[5000]	µg/L
Sn 189.927†	14435.6	91.46	0.63%	[1000]	µg/L
Sr 421.552†	435399.9	2058.45	0.47%	[1000]	µg/L
Ti 334.940†	998615.5	2619.17	0.26%	[1000]	µg/L
Tl 190.801†	7428.6	41.70	0.56%	[1000]	µg/L
U 409.014†	16189.6	166.03	1.03%	[1000]	µg/L
V 292.402†	188780.5	2642.62	1.40%	[1000]	µg/L
Zn 213.857†	161172.4	2412.67	1.50%	[1000]	µg/L

Sequence No.: 5

Sample ID: S10

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 5

Date Collected: 3/30/2010 15:15:12

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: S10

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Analysis Time
1	Sc RADIAL	147370.9	147370.9	99.7 %	15:15:41
1	Al 396.153Radial†	240906.1	241719.3	[50000] µg/L	15:15:41
1	Ca 317.933Radial†	827273.1	829151.6	[50000] µg/L	15:15:41
1	Fe 238.204 Radial†	295786.6	296567.1	[20000] µg/L	15:15:41
1	Mg 279.077 IEC†	121547.2	121756.9	[50000] µg/L	15:15:41
1	Na 589.592 Radial†	132367.2	131572.8	[20000] µg/L	15:15:41
1	Sc 361.383	1684238.1	1684238.1	95.964 %	15:16:04
1	Y 371.029	1003912.2	1003912.2	94.349 %	15:16:04
2	Sc RADIAL	146863.2	146863.2	99.3 %	15:15:43
2	Al 396.153Radial†	241723.2	243377.1	[50000] µg/L	15:15:43
2	Ca 317.933Radial†	829762.2	834525.6	[50000] µg/L	15:15:43
2	Fe 238.204 Radial†	296606.6	298418.2	[20000] µg/L	15:15:43
2	Mg 279.077 IEC†	121675.8	122307.8	[50000] µg/L	15:15:43
2	Na 589.592 Radial†	132905.7	132573.9	[20000] µg/L	15:15:43
2	Sc 361.383	1671225.1	1671225.1	95.222 %	15:16:06
2	Y 371.029	995871.7	995871.7	93.593 %	15:16:06
3	Sc RADIAL	146034.8	146034.8	98.8 %	15:15:45
3	Al 396.153Radial†	239485.6	242492.1	[50000] µg/L	15:15:45
3	Ca 317.933Radial†	819348.2	828721.4	[50000] µg/L	15:15:45
3	Fe 238.204 Radial†	292983.7	296444.2	[20000] µg/L	15:15:45
3	Mg 279.077 IEC†	119881.9	121186.7	[50000] µg/L	15:15:45
3	Na 589.592 Radial†	131389.7	131798.1	[20000] µg/L	15:15:45
3	Sc 361.383	1683479.0	1683479.0	95.921 %	15:16:09
3	Y 371.029	1003957.3	1003957.3	94.353 %	15:16:09

Mean Data: S10

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc. Units
Sc 361.383	1679647.4	7303.80	0.43%	95.702 %
Sc RADIAL	146756.3	674.41	0.46%	99.3 %
Y 371.029	1001247.1	4655.29	0.46%	94.098 %
Al 396.153Radial†	242529.5	829.53	0.34%	[50000] µg/L
Ca 317.933Radial†	830799.6	3234.04	0.39%	[50000] µg/L
Fe 238.204 Radial†	297143.2	1105.88	0.37%	[20000] µg/L
Mg 279.077 IEC†	121750.5	560.60	0.46%	[50000] µg/L
Na 589.592 Radial†	131981.6	525.16	0.40%	[20000] µg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	3	Lin Thru 0	0.0	251.6	0.00000	0.999990	
Al 396.153Radial	3	Lin Thru 0	0.0	4.853	0.00000	0.999997	
As 188.979	3	Lin Thru 0	0.0	2.866	0.00000	0.999999	
B 249.677	3	Lin Thru 0	0.0	61.33	0.00000	0.999983	
Ba 233.527	3	Lin Thru 0	0.0	229.7	0.00000	0.999999	
Be 313.107	3	Lin Thru 0	0.0	3332	0.00000	0.999999	
Ca 317.933Radial	3	Lin Thru 0	0.0	16.62	0.00000	0.999999	
Cd 226.502	3	Lin Thru 0	0.0	145.6	0.00000	0.999999	
Co 228.616	3	Lin Thru 0	0.0	73.95	0.00000	0.999995	
Cr 267.716	3	Lin Thru 0	0.0	118.7	0.00000	0.999999	
Cu 324.752	3	Lin Thru 0	0.0	237.3	0.00000	0.999996	
Fe 238.204 Radia	2	Lin Thru 0	0.0	14.86	0.00000	1.000000	
K 766.490 Radial	3	Lin Thru 0	0.0	2.430	0.00000	0.999991	
Mg 279.077 IEC	3	Lin Thru 0	0.0	2.438	0.00000	0.999986	
Mn 257.610	3	Lin Thru 0	0.0	748.2	0.00000	0.999996	
Mo 202.031	3	Lin Thru 0	0.0	31.44	0.00000	0.999999	
Na 589.592 Radia	2	Lin Thru 0	0.0	6.586	0.00000	0.999992	

Ni 231.604	3	Lin Thru 0	0.0	79.51	0.00000	0.999997
P 214.914	3	Lin Thru 0	0.0	4.192	0.00000	0.999999
Pb 220.353	3	Lin Thru 0	0.0	16.33	0.00000	0.999988
S 181.975 Axial	3	Lin Thru 0	0.0	1.220	0.00000	0.999997
Sb 206.836	3	Lin Thru 0	0.0	7.627	0.00000	1.000000
Se 196.026	3	Lin Thru 0	0.0	2.498	0.00000	0.999999
SiO2	3	Lin Thru 0	0.0	9.347	0.00000	0.999999
Si 251.611	3	Lin Thru 0	0.0	61.78	0.00000	0.999999
Sn 189.927	3	Lin Thru 0	0.0	14.44	0.00000	0.999999
Sr 421.552	3	Lin Thru 0	0.0	433.5	0.00000	0.999953
Ti 334.940	3	Lin Thru 0	0.0	998.2	0.00000	0.999999
Tl 190.801	3	Lin Thru 0	0.0	7.440	0.00000	0.999995
U 409.014	3	Lin Thru 0	0.0	15.97	0.00000	0.999597
V 292.402	3	Lin Thru 0	0.0	188.3	0.00000	0.999990
Zn 213.857	3	Lin Thru 0	0.0	161.2	0.00000	1.000000

Sequence No.: 6

Sample ID: ICV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 9

Date Collected: 3/30/2010 15:16:17

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	149158.9	149158.9	101 %		15:16:49
1	Al 396.153Radial†	25831.6	25664.3	5263.3 µg/L	5263.3 ppb	15:16:49
1	Ca 317.933Radial†	87376.8	85900.3	5168.4 µg/L	5168.4 ppb	15:16:49
1	Fe 238.204 Radial†	77792.8	76958.9	5178.5 µg/L	5178.5 ppb	15:16:49
1	K 766.490 Radial†	7770.6	6388.5	2626.3 µg/L	2626.3 ppb	15:16:49
1	Mg 279.077 IEC†	13533.9	13244.5	5442.1 µg/L	5442.1 ppb	15:16:49
1	Na 589.592 Radial†	18509.1	17137.5	2599.9 µg/L	2599.9 ppb	15:16:49
1	Sr 421.552†	239535.7	237623.0	548.12 µg/L	548.12 ppb	15:16:47
1	Sc 361.383	1733695.8	1733695.8	98.782 %		15:17:16
1	Y 371.029	1040751.9	1040751.9	97.811 %		15:17:16
1	Ag 328.068†	68135.2	65528.4	266.96 µg/L	266.96 ppb	15:17:16
1	As 188.979†	1329.3	1363.4	483.14 µg/L	483.14 ppb	15:17:36
1	B 249.677†	34869.6	32069.3	521.06 µg/L	521.06 ppb	15:17:16
1	Ba 233.527†	117588.5	119200.9	519.45 µg/L	519.45 ppb	15:17:16
1	Be 313.107†	875829.6	887416.8	266.46 µg/L	266.46 ppb	15:17:16
1	Cd 226.502†	73213.2	74226.2	509.34 µg/L	509.34 ppb	15:17:16
1	Co 228.616†	37882.5	38522.2	521.28 µg/L	521.28 ppb	15:17:16
1	Cr 267.716†	58712.5	59258.0	499.17 µg/L	499.17 ppb	15:17:16
1	Cu 324.752†	124786.7	123536.7	522.16 µg/L	522.16 ppb	15:17:16
1	Mn 257.610†	389862.8	394495.4	527.06 µg/L	527.06 ppb	15:17:16
1	Mo 202.031†	16938.7	17182.4	547.03 µg/L	547.03 ppb	15:17:36
1	Ni 231.604†	40201.0	40774.7	512.85 µg/L	512.85 ppb	15:17:16
1	P 214.914†	10575.5	10701.0	2543.4 µg/L	2543.4 ppb	15:17:36
1	Pb 220.353†	8363.7	8369.8	514.21 µg/L	514.21 ppb	15:17:36
1	S 181.975 Axial†	3115.2	3066.0	2517.9 µg/L	2517.9 ppb	15:17:36
1	Sb 206.836†	3912.6	3882.7	511.03 µg/L	511.03 ppb	15:17:36
1	Se 196.026†	6300.9	6365.0	2550 µg/L	2550 ppb	15:17:36
1	SiO2†	99885.1	99363.8	10607 µg/L	10607 ppb	15:17:16
1	Si 251.611†	304452.4	307258.6	4962.5 µg/L	4962.5 ppb	15:17:16
1	Sn 189.927†	7790.2	7888.8	547.86 µg/L	547.86 ppb	15:17:36
1	Ti 334.940†	499727.2	505004.7	505.26 µg/L	505.26 ppb	15:17:16
1	Tl 190.801†	3892.3	4057.4	552.96 µg/L	552.96 ppb	15:17:36
1	U 409.014†	7143.0	7514.9	502.35 µg/L	502.35 ppb	15:17:16
1	V 292.402†	96557.1	97438.1	524.43 µg/L	524.43 ppb	15:17:16
1	Zn 213.857†	83773.2	84281.8	518.68 µg/L	518.68 ppb	15:17:16
2	Sc RADIAL	150464.5	150464.5	102 %		15:16:53
2	Al 396.153Radial†	26338.4	25940.0	5320.0 µg/L	5320.0 ppb	15:16:53
2	Ca 317.933Radial†	88167.1	85925.3	5169.9 µg/L	5169.9 ppb	15:16:53
2	Fe 238.204 Radial†	78818.8	77298.0	5201.3 µg/L	5201.3 ppb	15:16:53
2	K 766.490 Radial†	7643.7	6197.1	2547.5 µg/L	2547.5 ppb	15:16:53
2	Mg 279.077 IEC†	13736.8	13327.5	5476.1 µg/L	5476.1 ppb	15:16:53
2	Na 589.592 Radial†	18678.7	17145.0	2601.2 µg/L	2601.2 ppb	15:16:53
2	Sr 421.552†	239844.1	235866.0	544.07 µg/L	544.07 ppb	15:16:51
2	Sc 361.383	1726627.6	1726627.6	98.379 %		15:17:39
2	Y 371.029	1036918.0	1036918.0	97.451 %		15:17:39
2	Ag 328.068†	67812.3	65482.6	266.77 µg/L	266.77 ppb	15:17:39
2	As 188.979†	1343.8	1383.7	490.23 µg/L	490.23 ppb	15:17:59
2	B 249.677†	34859.4	32203.4	523.24 µg/L	523.24 ppb	15:17:39
2	Ba 233.527†	117491.5	119589.6	521.15 µg/L	521.15 ppb	15:17:39
2	Be 313.107†	873409.7	888586.5	266.81 µg/L	266.81 ppb	15:17:39
2	Cd 226.502†	73073.6	74387.6	510.44 µg/L	510.44 ppb	15:17:39
2	Co 228.616†	37714.1	38508.0	521.09 µg/L	521.09 ppb	15:17:39
2	Cr 267.716†	58529.2	59315.0	499.66 µg/L	499.66 ppb	15:17:39
2	Cu 324.752†	124562.2	123825.7	523.38 µg/L	523.38 ppb	15:17:39
2	Mn 257.610†	389247.0	395485.0	528.38 µg/L	528.38 ppb	15:17:39
2	Mo 202.031†	16924.2	17237.8	548.80 µg/L	548.80 ppb	15:17:59
2	Ni 231.604†	40215.9	40956.5	515.14 µg/L	515.14 ppb	15:17:39
2	P 214.914†	10595.6	10765.2	2558.7 µg/L	2558.7 ppb	15:17:59
2	Pb 220.353†	8379.7	8420.8	517.34 µg/L	517.34 ppb	15:17:59

2	S 181.975 Axial†	3127.7	3091.5	2538.8 µg/L	2538.8 ppb	15:17:59
2	Sb 206.836†	3893.4	3879.5	510.62 µg/L	510.62 ppb	15:17:59
2	Se 196.026†	6305.0	6395.3	2560 µg/L	2560 ppb	15:17:59
2	SiO2†	99950.6	99844.4	10658 µg/L	10658 ppb	15:17:39
2	Si 251.611†	303842.4	307900.2	4972.8 µg/L	4972.8 ppb	15:17:39
2	Sn 189.927†	7799.1	7930.2	550.73 µg/L	550.73 ppb	15:17:59
2	Ti 334.940†	499097.0	506435.1	506.70 µg/L	506.70 ppb	15:17:39
2	Tl 190.801†	3884.6	4065.7	554.09 µg/L	554.09 ppb	15:17:59
2	U 409.014†	7044.9	7444.7	497.98 µg/L	497.98 ppb	15:17:39
2	V 292.402†	96220.1	97495.7	524.75 µg/L	524.75 ppb	15:17:39
2	Zn 213.857†	83633.8	84487.3	519.94 µg/L	519.94 ppb	15:17:39
3	Sc RADIAL	148694.2	148694.2	101 %		15:16:57
3	Al 396.153Radial†	25757.3	25670.4	5264.3 µg/L	5264.3 ppb	15:16:57
3	Ca 317.933Radial†	86641.6	85440.0	5140.7 µg/L	5140.7 ppb	15:16:57
3	Fe 238.204 Radial†	77077.3	76488.6	5146.8 µg/L	5146.8 ppb	15:16:57
3	K 766.490 Radial†	7760.1	6402.2	2631.9 µg/L	2631.9 ppb	15:16:57
3	Mg 279.077 IEC†	13465.4	13218.4	5431.5 µg/L	5431.5 ppb	15:16:57
3	Na 589.592 Radial†	18458.7	17144.8	2601.0 µg/L	2601.0 ppb	15:16:57
3	Sr 421.552†	238015.5	236853.6	546.35 µg/L	546.35 ppb	15:16:55
3	Sc 361.383	1717483.0	1717483.0	97.858 %		15:18:02
3	Y 371.029	1031891.3	1031891.3	96.978 %		15:18:02
3	Ag 328.068†	67510.7	65541.4	267.02 µg/L	267.02 ppb	15:18:02
3	As 188.979†	1346.0	1393.2	493.54 µg/L	493.54 ppb	15:18:22
3	B 249.677†	34582.2	32108.8	521.70 µg/L	521.70 ppb	15:18:02
3	Ba 233.527†	116478.8	119190.5	519.41 µg/L	519.41 ppb	15:18:02
3	Be 313.107†	866925.4	886687.4	266.25 µg/L	266.25 ppb	15:18:02
3	Cd 226.502†	72305.6	73998.3	507.78 µg/L	507.78 ppb	15:18:02
3	Co 228.616†	37543.9	38538.1	521.50 µg/L	521.50 ppb	15:18:02
3	Cr 267.716†	58047.4	59139.5	498.16 µg/L	498.16 ppb	15:18:02
3	Cu 324.752†	123812.4	123733.6	522.99 µg/L	522.99 ppb	15:18:02
3	Mn 257.610†	386013.5	394287.5	526.78 µg/L	526.78 ppb	15:18:02
3	Mo 202.031†	16915.6	17320.6	551.43 µg/L	551.43 ppb	15:18:22
3	Ni 231.604†	40039.0	40993.3	515.60 µg/L	515.60 ppb	15:18:02
3	P 214.914†	10618.3	10845.7	2578.0 µg/L	2578.0 ppb	15:18:22
3	Pb 220.353†	8376.9	8463.3	519.94 µg/L	519.94 ppb	15:18:22
3	S 181.975 Axial†	3127.7	3108.5	2552.8 µg/L	2552.8 ppb	15:18:22
3	Sb 206.836†	3899.6	3906.9	514.27 µg/L	514.27 ppb	15:18:22
3	Se 196.026†	6296.1	6420.3	2570 µg/L	2570 ppb	15:18:22
3	SiO2†	99144.2	99561.3	10628 µg/L	10628 ppb	15:18:02
3	Si 251.611†	301303.2	306949.8	4957.4 µg/L	4957.4 ppb	15:18:02
3	Sn 189.927†	7767.3	7939.9	551.39 µg/L	551.39 ppb	15:18:22
3	Ti 334.940†	494745.0	504689.0	504.94 µg/L	504.94 ppb	15:18:02
3	Tl 190.801†	3887.5	4089.7	557.29 µg/L	557.29 ppb	15:18:22
3	U 409.014†	7321.2	7765.3	517.97 µg/L	517.97 ppb	15:18:02
3	V 292.402†	95435.5	97214.7	523.30 µg/L	523.30 ppb	15:18:02
3	Zn 213.857†	82911.3	84201.6	518.17 µg/L	518.17 ppb	15:18:02

Mean Data: ICV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1725935.5	98.340 %	0.4631			0.47%
Sc RADIAL	149439.2	101 %	0.6			0.61%
Y 371.029	1036520.4	97.413 %	0.4176			0.43%
Ag 328.068†	65517.5	266.92 µg/L	0.126	266.92 ppb	0.126	0.05%
QC value within limits for Ag 328.068 Recovery = 106.77%						
Al 396.153Radial†	25758.3	5282.6 µg/L	32.46	5282.6 ppb	32.46	0.61%
QC value within limits for Al 396.153Radial Recovery = 105.65%						
As 188.979†	1380.1	488.97 µg/L	5.311	488.97 ppb	5.311	1.09%
QC value within limits for As 188.979 Recovery = 97.79%						
B 249.677†	32127.2	522.00 µg/L	1.124	522.00 ppb	1.124	0.22%
QC value within limits for B 249.677 Recovery = 104.40%						
Ba 233.527†	119327.0	520.00 µg/L	0.990	520.00 ppb	0.990	0.19%
QC value within limits for Ba 233.527 Recovery = 104.00%						
Be 313.107†	887563.5	266.51 µg/L	0.285	266.51 ppb	0.285	0.11%
QC value within limits for Be 313.107 Recovery = 106.60%						
Ca 317.933Radial†	85755.2	5159.7 µg/L	16.44	5159.7 ppb	16.44	0.32%
QC value within limits for Ca 317.933Radial Recovery = 103.19%						
Cd 226.502†	74204.1	509.18 µg/L	1.340	509.18 ppb	1.340	0.26%
QC value within limits for Cd 226.502 Recovery = 101.84%						
Co 228.616†	38522.7	521.29 µg/L	0.204	521.29 ppb	0.204	0.04%

QC value within limits for Co 228.616 Recovery = 104.26%							
Cr 267.716†	59237.5	499.00 µg/L	0.764	499.00 ppb	0.764	0.15%	
QC value within limits for Cr 267.716 Recovery = 99.80%							
Cu 324.752†	123698.7	522.84 µg/L	0.623	522.84 ppb	0.623	0.12%	
QC value within limits for Cu 324.752 Recovery = 104.57%							
Fe 238.204 Radial†	76915.2	5175.5 µg/L	27.35	5175.5 ppb	27.35	0.53%	
QC value within limits for Fe 238.204 Radial Recovery = 103.51%							
K 766.490 Radial†	6329.3	2601.9 µg/L	47.21	2601.9 ppb	47.21	1.81%	
QC value within limits for K 766.490 Radial Recovery = 104.08%							
Mg 279.077 IEC†	13263.4	5449.9 µg/L	23.33	5449.9 ppb	23.33	0.43%	
QC value within limits for Mg 279.077 IEC Recovery = 109.00%							
Mn 257.610†	394756.0	527.41 µg/L	0.854	527.41 ppb	0.854	0.16%	
QC value within limits for Mn 257.610 Recovery = 105.48%							
Mo 202.031†	17246.9	549.09 µg/L	2.212	549.09 ppb	2.212	0.40%	
QC value within limits for Mo 202.031 Recovery = 109.82%							
Na 589.592 Radial†	17142.4	2600.7 µg/L	0.67	2600.7 ppb	0.67	0.03%	
QC value within limits for Na 589.592 Radial Recovery = 104.03%							
Ni 231.604†	40908.1	514.53 µg/L	1.472	514.53 ppb	1.472	0.29%	
QC value within limits for Ni 231.604 Recovery = 102.91%							
P 214.914†	10770.6	2560.0 µg/L	17.30	2560.0 ppb	17.30	0.68%	
QC value within limits for P 214.914 Recovery = 102.40%							
Pb 220.353†	8418.0	517.16 µg/L	2.867	517.16 ppb	2.867	0.55%	
QC value within limits for Pb 220.353 Recovery = 103.43%							
S 181.975 Axial†	3088.6	2536.5 µg/L	17.56	2536.5 ppb	17.56	0.69%	
QC value within limits for S 181.975 Axial Recovery = 101.46%							
Sb 206.836†	3889.7	511.97 µg/L	2.001	511.97 ppb	2.001	0.39%	
QC value within limits for Sb 206.836 Recovery = 102.39%							
Se 196.026†	6393.5	2560 µg/L	11.1	2560 ppb	11.1	0.43%	
QC value within limits for Se 196.026 Recovery = 102.46%							
SiO2†	99589.8	10631 µg/L	25.8	10631 ppb	25.8	0.24%	
QC value within limits for SiO2 Recovery = 99.40%							
Si 251.611†	307369.5	4964.2 µg/L	7.86	4964.2 ppb	7.86	0.16%	
QC value within limits for Si 251.611 Recovery = 99.28%							
Sn 189.927†	7919.6	549.99 µg/L	1.879	549.99 ppb	1.879	0.34%	
QC value within limits for Sn 189.927 Recovery = 110.00%							
Sr 421.552†	236780.8	546.18 µg/L	2.032	546.18 ppb	2.032	0.37%	
QC value within limits for Sr 421.552 Recovery = 109.24%							
Ti 334.940†	505376.2	505.63 µg/L	0.934	505.63 ppb	0.934	0.18%	
QC value within limits for Ti 334.940 Recovery = 101.13%							
Tl 190.801†	4070.9	554.78 µg/L	2.246	554.78 ppb	2.246	0.40%	
QC value greater than the upper limit for Tl 190.801 Recovery = 110.96%							
U 409.014†	7575.0	506.10 µg/L	10.510	506.10 ppb	10.510	2.08%	
QC value within limits for U 409.014 Recovery = 101.22%							
V 292.402†	97382.8	524.16 µg/L	0.762	524.16 ppb	0.762	0.15%	
QC value within limits for V 292.402 Recovery = 104.83%							
Zn 213.857†	84323.6	518.93 µg/L	0.911	518.93 ppb	0.911	0.18%	
QC value within limits for Zn 213.857 Recovery = 103.79%							
QC Failed. Continue with analysis.							

Sequence No.: 7

Sample ID: ICB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 10

Date Collected: 3/30/2010 15:18:31

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	153206.5	153206.5	104 %		15:19:00
1	Al 396.153Radial†	-69.1	-3.8	-0.7740 µg/L	-0.7740 ppb	15:19:20
1	Ca 317.933Radial†	556.4	-161.1	-9.6939 µg/L	-9.6939 ppb	15:19:20
1	Fe 238.204 Radial†	151.0	5.0	0.3342 µg/L	0.3342 ppb	15:19:20
1	K 766.490 Radial†	1545.6	178.5	73.465 µg/L	73.465 ppb	15:19:00
1	Mg 279.077 IEC†	183.7	8.5	3.4678 µg/L	3.4678 ppb	15:19:20
1	Na 589.592 Radial†	1438.4	181.3	27.462 µg/L	27.462 ppb	15:19:00
1	Sr 421.552†	-358.4	-124.2	-0.2864 µg/L	-0.2864 ppb	15:19:00
1	Sc 361.383	1778800.0	1778800.0	101.35 %		15:20:22
1	Y 371.029	1078865.1	1078865.1	101.39 %		15:20:22
1	Ag 328.068†	3508.3	14.4	0.0586 µg/L	0.0586 ppb	15:20:24
1	As 188.979†	-17.8	0.1	0.0419 µg/L	0.0419 ppb	15:20:44
1	B 249.677†	3246.0	-27.6	-0.4511 µg/L	-0.4511 ppb	15:20:44
1	Ba 233.527†	-161.5	2.8	0.0123 µg/L	0.0123 ppb	15:20:44
1	Be 313.107†	-690.5	104.3	0.0315 µg/L	0.0315 ppb	15:20:24
1	Cd 226.502†	-93.8	17.5	0.1201 µg/L	0.1201 ppb	15:20:44
1	Co 228.616†	-157.8	16.7	0.2258 µg/L	0.2258 ppb	15:20:44
1	Cr 267.716†	167.7	-13.1	-0.1107 µg/L	-0.1107 ppb	15:20:44
1	Cu 324.752†	2840.6	13.8	0.0589 µg/L	0.0589 ppb	15:20:24
1	Mn 257.610†	177.2	-0.8	-0.0012 µg/L	-0.0012 ppb	15:20:44
1	Mo 202.031†	-35.1	0.1	0.0047 µg/L	0.0047 ppb	15:20:44
1	Ni 231.604†	-78.0	1.0	0.0124 µg/L	0.0124 ppb	15:20:44
1	P 214.914†	12.7	7.5	1.7929 µg/L	1.7929 ppb	15:20:44
1	Pb 220.353†	60.9	-36.9	-2.2599 µg/L	-2.2599 ppb	15:20:44
1	S 181.975 Axial†	88.2	-0.7	-0.5610 µg/L	-0.5610 ppb	15:20:44
1	Sb 206.836†	85.2	6.0	0.7853 µg/L	0.7853 ppb	15:20:44
1	Se 196.026†	10.8	-2.9	-1.16 µg/L	-1.16 ppb	15:20:44
1	SiO2†	1722.8	-53.3	-5.7163 µg/L	-5.7163 ppb	15:20:44
1	Si 251.611†	826.6	-133.1	-2.1594 µg/L	-2.1594 ppb	15:20:24
1	Sn 189.927†	10.2	12.7	0.8755 µg/L	0.8755 ppb	15:20:44
1	Ti 334.940†	723.6	-171.6	-0.1727 µg/L	-0.1727 ppb	15:20:24
1	Tl 190.801†	-106.8	11.7	1.5760 µg/L	1.5760 ppb	15:20:44
1	U 409.014†	-277.6	9.9	0.6216 µg/L	0.6216 ppb	15:20:24
1	V 292.402†	320.4	6.3	0.0333 µg/L	0.0333 ppb	15:20:24
1	Zn 213.857†	499.5	-31.7	-0.1969 µg/L	-0.1969 ppb	15:20:44
2	Sc RADIAL	150721.0	150721.0	102 %		15:19:22
2	Al 396.153Radial†	-48.2	15.6	3.2216 µg/L	3.2216 ppb	15:19:42
2	Ca 317.933Radial†	575.9	-133.2	-8.0115 µg/L	-8.0115 ppb	15:19:42
2	Fe 238.204 Radial†	145.3	1.8	0.1215 µg/L	0.1215 ppb	15:19:42
2	K 766.490 Radial†	1483.0	141.7	58.321 µg/L	58.321 ppb	15:19:22
2	Mg 279.077 IEC†	163.5	-8.4	-3.4473 µg/L	-3.4473 ppb	15:19:42
2	Na 589.592 Radial†	1391.5	158.1	23.961 µg/L	23.961 ppb	15:19:22
2	Sr 421.552†	-206.6	19.0	0.0439 µg/L	0.0439 ppb	15:19:22
2	Sc 361.383	1728906.2	1728906.2	98.509 %		15:20:46
2	Y 371.029	1049241.8	1049241.8	98.609 %		15:20:46
2	Ag 328.068†	3539.7	146.2	0.5945 µg/L	0.5945 ppb	15:20:48
2	As 188.979†	-19.5	-2.1	-0.7336 µg/L	-0.7336 ppb	15:21:09
2	B 249.677†	3272.0	91.1	1.4866 µg/L	1.4866 ppb	15:21:09
2	Ba 233.527†	-163.6	-3.9	-0.0168 µg/L	-0.0168 ppb	15:21:09
2	Be 313.107†	-841.3	-68.5	-0.0184 µg/L	-0.0184 ppb	15:20:48
2	Cd 226.502†	-103.2	5.3	0.0364 µg/L	0.0364 ppb	15:21:09
2	Co 228.616†	-181.8	-12.1	-0.1642 µg/L	-0.1642 ppb	15:21:09
2	Cr 267.716†	152.0	-24.2	-0.2095 µg/L	-0.2095 ppb	15:21:09
2	Cu 324.752†	2859.0	113.3	0.4833 µg/L	0.4833 ppb	15:20:48
2	Mn 257.610†	143.9	-29.5	-0.0393 µg/L	-0.0393 ppb	15:21:09
2	Mo 202.031†	-37.4	-3.3	-0.1034 µg/L	-0.1034 ppb	15:21:09
2	Ni 231.604†	-63.8	13.1	0.1646 µg/L	0.1646 ppb	15:21:09
2	P 214.914†	23.6	18.9	4.5148 µg/L	4.5148 ppb	15:21:09
2	Pb 220.353†	114.5	19.3	1.1760 µg/L	1.1760 ppb	15:21:09

2	S 181.975 Axial†	90.2	3.8	3.1293 µg/L	3.1293 ppb	15:21:09
2	Sb 206.836†	78.1	1.2	0.1567 µg/L	0.1567 ppb	15:21:09
2	Se 196.026†	19.1	5.8	2.34 µg/L	2.34 ppb	15:21:09
2	SiO2†	1747.5	20.9	2.2278 µg/L	2.2278 ppb	15:21:09
2	Si 251.611†	794.7	-141.9	-2.2988 µg/L	-2.2988 ppb	15:20:48
2	Sn 189.927†	3.9	6.5	0.4511 µg/L	0.4511 ppb	15:21:09
2	Ti 334.940†	935.4	64.0	0.0614 µg/L	0.0614 ppb	15:20:48
2	Tl 190.801†	-90.0	25.7	3.4630 µg/L	3.4630 ppb	15:21:09
2	U 409.014†	-168.9	112.3	7.0568 µg/L	7.0568 ppb	15:20:48
2	V 292.402†	376.2	72.1	0.3855 µg/L	0.3855 ppb	15:20:48
2	Zn 213.857†	512.2	-4.7	-0.0302 µg/L	-0.0302 ppb	15:21:09
3	Sc RADIAL	152025.6	152025.6	103 %		15:19:44
3	Al 396.153Radial†	-48.0	16.2	3.3357 µg/L	3.3357 ppb	15:20:04
3	Ca 317.933Radial†	564.3	-149.3	-8.9821 µg/L	-8.9821 ppb	15:20:04
3	Fe 238.204 Radial†	130.3	-14.0	-0.9447 µg/L	-0.9447 ppb	15:20:04
3	K 766.490 Radial†	1448.5	95.7	39.384 µg/L	39.384 ppb	15:19:44
3	Mg 279.077 IEC†	171.7	-1.8	-0.7289 µg/L	-0.7289 ppb	15:20:04
3	Na 589.592 Radial†	1555.7	306.1	46.445 µg/L	46.445 ppb	15:19:44
3	Sr 421.552†	-343.8	-112.6	-0.2598 µg/L	-0.2598 ppb	15:19:44
3	Sc 361.383	1742344.9	1742344.9	99.275 %		15:21:11
3	Y 371.029	1057263.7	1057263.7	99.363 %		15:21:11
3	Ag 328.068†	3422.8	0.7	0.0063 µg/L	0.0063 ppb	15:21:13
3	As 188.979†	-7.6	10.0	3.4870 µg/L	3.4870 ppb	15:21:33
3	B 249.677†	3234.7	28.0	0.4564 µg/L	0.4564 ppb	15:21:33
3	Ba 233.527†	-159.6	1.4	0.0057 µg/L	0.0057 ppb	15:21:33
3	Be 313.107†	-681.8	98.8	0.0318 µg/L	0.0318 ppb	15:21:13
3	Cd 226.502†	-79.8	29.6	0.2034 µg/L	0.2034 ppb	15:21:33
3	Co 228.616†	-174.0	-2.8	-0.0378 µg/L	-0.0378 ppb	15:21:33
3	Cr 267.716†	147.7	-29.7	-0.2566 µg/L	-0.2566 ppb	15:21:33
3	Cu 324.752†	2965.4	198.1	0.8405 µg/L	0.8405 ppb	15:21:13
3	Mn 257.610†	154.7	-19.8	-0.0264 µg/L	-0.0264 ppb	15:21:33
3	Mo 202.031†	-28.3	6.3	0.1999 µg/L	0.1999 ppb	15:21:33
3	Ni 231.604†	-70.4	6.9	0.0872 µg/L	0.0872 ppb	15:21:33
3	P 214.914†	20.5	15.7	3.7359 µg/L	3.7359 ppb	15:21:33
3	Pb 220.353†	105.1	8.9	0.5395 µg/L	0.5395 ppb	15:21:33
3	S 181.975 Axial†	78.6	-8.5	-6.9957 µg/L	-6.9957 ppb	15:21:33
3	Sb 206.836†	83.3	5.8	0.7689 µg/L	0.7689 ppb	15:21:33
3	Se 196.026†	22.9	9.5	3.79 µg/L	3.79 ppb	15:21:33
3	SiO2†	1714.3	-26.3	-2.8302 µg/L	-2.8302 ppb	15:21:33
3	Si 251.611†	912.8	-29.2	-0.4782 µg/L	-0.4782 ppb	15:21:13
3	Sn 189.927†	4.9	7.5	0.5192 µg/L	0.5192 ppb	15:21:33
3	Ti 334.940†	727.2	-153.0	-0.1564 µg/L	-0.1564 ppb	15:21:13
3	Tl 190.801†	-113.2	3.0	0.4038 µg/L	0.4038 ppb	15:21:33
3	U 409.014†	-166.2	116.3	7.2590 µg/L	7.2590 ppb	15:21:13
3	V 292.402†	217.4	-90.9	-0.4764 µg/L	-0.4764 ppb	15:21:13
3	Zn 213.857†	498.8	-22.1	-0.1381 µg/L	-0.1381 ppb	15:21:33

Mean Data: ICB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1750017.0	99.712 %	1.4710			1.48%
Sc RADIAL	151984.4	103 %	0.8			0.82%
Y 371.029	1061790.2	99.788 %	1.4399			1.44%
Ag 328.068†	53.8	0.2198 µg/L	0.32552	0.2198 ppb	0.32552	148.11%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	9.4	1.9278 µg/L	2.34050	1.9278 ppb	2.34050	121.41%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	2.7	0.9318 µg/L	2.24662	0.9318 ppb	2.24662	241.11%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	30.5	0.4973 µg/L	0.96947	0.4973 ppb	0.96947	194.95%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	0.1	0.0004 µg/L	0.01528	0.0004 ppb	0.01528	>999.9%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	44.9	0.0150 µg/L	0.02892	0.0150 ppb	0.02892	193.16%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	-147.9	-8.8958 µg/L	0.84451	-8.8958 ppb	0.84451	9.49%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	17.5	0.1200 µg/L	0.08355	0.1200 ppb	0.08355	69.64%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	0.6	0.0079 µg/L	0.19896	0.0079 ppb	0.19896	>999.9%

QC value within limits for Co 228.616 Recovery = Not calculated							
Cr 267.716†	-22.4	-0.1923 µg/L	0.07446	-0.1923 ppb	0.07446	38.72%	
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu 324.752†	108.4	0.4609 µg/L	0.39130	0.4609 ppb	0.39130	84.90%	
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe 238.204 Radial†	-2.4	-0.1630 µg/L	0.68528	-0.1630 ppb	0.68528	420.53%	
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K 766.490 Radial†	138.6	57.056 µg/L	17.0760	57.056 ppb	17.0760	29.93%	
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg 279.077 IEC†	-0.6	-0.2362 µg/L	3.48380	-0.2362 ppb	3.48380	>999.9%	
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn 257.610†	-16.7	-0.0223 µg/L	0.01938	-0.0223 ppb	0.01938	86.94%	
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo 202.031†	1.1	0.0337 µg/L	0.15371	0.0337 ppb	0.15371	455.98%	
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na 589.592 Radial†	215.2	32.622 µg/L	12.0980	32.622 ppb	12.0980	37.09%	
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni 231.604†	7.0	0.0880 µg/L	0.07611	0.0880 ppb	0.07611	86.44%	
QC value within limits for Ni 231.604 Recovery = Not calculated							
P 214.914†	14.0	3.3479 µg/L	1.40183	3.3479 ppb	1.40183	41.87%	
QC value within limits for P 214.914 Recovery = Not calculated							
Pb 220.353†	-2.9	-0.1815 µg/L	1.82791	-0.1815 ppb	1.82791	>999.9%	
QC value within limits for Pb 220.353 Recovery = Not calculated							
S 181.975 Axial†	-1.8	-1.4758 µg/L	5.12412	-1.4758 ppb	5.12412	347.21%	
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb 206.836†	4.3	0.5703 µg/L	0.35827	0.5703 ppb	0.35827	62.82%	
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	4.1	1.66 µg/L	2.544	1.66 ppb	2.544	153.28%	
QC value within limits for Se 196.026 Recovery = Not calculated							
SiO2†	-19.6	-2.1063 µg/L	4.02123	-2.1063 ppb	4.02123	190.92%	
QC value within limits for SiO2 Recovery = Not calculated							
Si 251.611†	-101.4	-1.6455 µg/L	1.01329	-1.6455 ppb	1.01329	61.58%	
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn 189.927†	8.9	0.6153 µg/L	0.22794	0.6153 ppb	0.22794	37.05%	
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr 421.552†	-72.6	-0.1674 µg/L	0.18347	-0.1674 ppb	0.18347	109.58%	
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti 334.940†	-86.9	-0.0892 µg/L	0.13068	-0.0892 ppb	0.13068	146.45%	
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl 190.801†	13.5	1.8143 µg/L	1.54345	1.8143 ppb	1.54345	85.07%	
QC value within limits for Tl 190.801 Recovery = Not calculated							
U 409.014†	79.5	4.9791 µg/L	3.77508	4.9791 ppb	3.77508	75.82%	
QC value within limits for U 409.014 Recovery = Not calculated							
V 292.402†	-4.2	-0.0192 µg/L	0.43332	-0.0192 ppb	0.43332	>999.9%	
QC value within limits for V 292.402 Recovery = Not calculated							
Zn 213.857†	-19.5	-0.1217 µg/L	0.08455	-0.1217 ppb	0.08455	69.46%	
QC value within limits for Zn 213.857 Recovery = Not calculated							

All analyte(s) passed QC.

Sequence No.: 8

Sample ID: PQL

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 101

Date Collected: 3/30/2010 15:21:41

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	151538.9	151538.9	103 %		15:22:11
1	Al 396.153Radial†	1003.2	1041.6	214.21 µg/L	214.21 ppb	15:22:13
1	Ca 317.933Radial†	4094.6	3296.4	198.34 µg/L	198.34 ppb	15:22:13
1	Fe 238.204 Radial†	1655.5	1474.3	99.205 µg/L	99.205 ppb	15:22:13
1	K 766.490 Radial†	1863.9	505.5	207.89 µg/L	207.89 ppb	15:22:11
1	Mg 279.077 IEC†	958.9	766.6	314.63 µg/L	314.63 ppb	15:22:13
1	Na 589.592 Radial†	3105.5	1822.9	276.62 µg/L	276.62 ppb	15:22:13
1	Sr 421.552†	2223.1	2390.3	5.5126 µg/L	5.5126 ppb	15:22:13
1	Sc 361.383	1725451.3	1725451.3	98.312 %		15:22:25
1	Y 371.029	1045817.3	1045817.3	98.287 %		15:22:25
1	Ag 328.068†	4999.9	1638.6	6.6213 µg/L	6.6213 ppb	15:22:27
1	As 188.979†	69.8	88.7	31.042 µg/L	31.042 ppb	15:22:47
1	B 249.677†	6177.2	3052.9	49.758 µg/L	49.758 ppb	15:22:27
1	Ba 233.527†	1015.0	1194.5	5.2065 µg/L	5.2065 ppb	15:22:47
1	Be 313.107†	15418.6	16468.9	4.9544 µg/L	4.9544 ppb	15:22:27
1	Cd 226.502†	613.7	734.2	5.0333 µg/L	5.0333 ppb	15:22:47
1	Co 228.616†	186.0	361.7	4.8917 µg/L	4.8917 ppb	15:22:47
1	Cr 267.716†	742.4	576.6	4.8271 µg/L	4.8271 ppb	15:22:47
1	Cu 324.752†	5231.2	2532.1	10.728 µg/L	10.728 ppb	15:22:27
1	Mn 257.610†	7935.2	7895.9	10.541 µg/L	10.541 ppb	15:22:27
1	Mo 202.031†	249.7	288.8	9.1970 µg/L	9.1970 ppb	15:22:47
1	Ni 231.604†	321.7	405.1	5.0950 µg/L	5.0950 ppb	15:22:47
1	P 214.914†	631.6	637.5	151.90 µg/L	151.90 ppb	15:22:47
1	Pb 220.353†	247.1	154.4	9.4588 µg/L	9.4588 ppb	15:22:47
1	S 181.975 Axial†	205.3	121.2	99.392 µg/L	99.392 ppb	15:22:47
1	Sb 206.836†	157.6	82.2	10.863 µg/L	10.863 ppb	15:22:47
1	Se 196.026†	84.0	71.8	28.8 µg/L	28.8 ppb	15:22:47
1	SiO2†	3795.8	2107.8	225.10 µg/L	225.10 ppb	15:22:27
1	Si 251.611†	7081.1	6254.0	101.04 µg/L	101.04 ppb	15:22:27
1	Sn 189.927†	137.7	142.6	9.8879 µg/L	9.8879 ppb	15:22:47
1	Ti 334.940†	5809.9	5024.1	4.9951 µg/L	4.9951 ppb	15:22:27
1	Tl 190.801†	48.7	166.6	22.483 µg/L	22.483 ppb	15:22:47
1	U 409.014†	339.2	628.8	39.760 µg/L	39.760 ppb	15:22:27
1	V 292.402†	1353.2	1066.6	5.7900 µg/L	5.7900 ppb	15:22:27
1	Zn 213.857†	2145.8	1658.1	10.236 µg/L	10.236 ppb	15:22:47
2	Sc RADIAL	148899.4	148899.4	101 %		15:22:15
2	Al 396.153Radial†	1029.3	1084.8	223.07 µg/L	223.07 ppb	15:22:17
2	Ca 317.933Radial†	4074.2	3347.0	201.38 µg/L	201.38 ppb	15:22:17
2	Fe 238.204 Radial†	1672.9	1520.1	102.29 µg/L	102.29 ppb	15:22:17
2	K 766.490 Radial†	1737.9	412.6	169.65 µg/L	169.65 ppb	15:22:15
2	Mg 279.077 IEC†	908.9	733.6	301.09 µg/L	301.09 ppb	15:22:17
2	Na 589.592 Radial†	3196.8	1967.2	298.57 µg/L	298.57 ppb	15:22:17
2	Sr 421.552†	2249.0	2454.5	5.6605 µg/L	5.6605 ppb	15:22:17
2	Sc 361.383	1717434.8	1717434.8	97.855 %		15:22:49
2	Y 371.029	1041401.9	1041401.9	97.872 %		15:22:49
2	Ag 328.068†	4641.9	1296.6	5.2704 µg/L	5.2704 ppb	15:22:51
2	As 188.979†	74.8	94.2	32.949 µg/L	32.949 ppb	15:23:11
2	B 249.677†	6109.5	3013.0	49.107 µg/L	49.107 ppb	15:22:51
2	Ba 233.527†	1038.4	1223.3	5.3319 µg/L	5.3319 ppb	15:23:11
2	Be 313.107†	15483.7	16608.6	4.9987 µg/L	4.9987 ppb	15:22:51
2	Cd 226.502†	609.6	733.0	5.0245 µg/L	5.0245 ppb	15:23:11
2	Co 228.616†	220.5	397.7	5.3796 µg/L	5.3796 ppb	15:23:11
2	Cr 267.716†	746.1	583.9	4.8822 µg/L	4.8822 ppb	15:23:11
2	Cu 324.752†	5004.9	2325.7	9.8653 µg/L	9.8653 ppb	15:22:51
2	Mn 257.610†	7953.3	7952.0	10.617 µg/L	10.617 ppb	15:22:51
2	Mo 202.031†	280.4	321.3	10.233 µg/L	10.233 ppb	15:23:11
2	Ni 231.604†	327.6	412.6	5.1901 µg/L	5.1901 ppb	15:23:11
2	P 214.914†	627.8	636.5	151.69 µg/L	151.69 ppb	15:23:11
2	Pb 220.353†	232.0	140.1	8.5854 µg/L	8.5854 ppb	15:23:11

2	S 181.975 Axial†	215.9	132.9	109.04 µg/L	109.04 ppb	15:23:11
2	Sb 206.836†	152.4	77.7	10.282 µg/L	10.282 ppb	15:23:11
2	Se 196.026†	92.7	81.2	32.6 µg/L	32.6 ppb	15:23:11
2	SiO2†	3796.8	2126.8	227.10 µg/L	227.10 ppb	15:22:51
2	Si 251.611†	7000.4	6205.2	100.23 µg/L	100.23 ppb	15:22:51
2	Sn 189.927†	143.5	149.1	10.342 µg/L	10.342 ppb	15:23:11
2	Ti 334.940†	5589.1	4826.0	4.7945 µg/L	4.7945 ppb	15:22:51
2	Tl 190.801†	51.0	169.2	22.830 µg/L	22.830 ppb	15:23:11
2	U 409.014†	463.4	757.3	47.801 µg/L	47.801 ppb	15:22:51
2	V 292.402†	1329.4	1048.7	5.7113 µg/L	5.7113 ppb	15:22:51
2	Zn 213.857†	2132.0	1654.1	10.211 µg/L	10.211 ppb	15:23:11
3	Sc RADIAL	147081.9	147081.9	99.5 %		15:22:19
3	Al 396.153Radial†	978.9	1046.8	215.27 µg/L	215.27 ppb	15:22:21
3	Ca 317.933Radial†	4080.3	3403.1	204.76 µg/L	204.76 ppb	15:22:21
3	Fe 238.204 Radial†	1709.0	1577.0	106.12 µg/L	106.12 ppb	15:22:21
3	K 766.490 Radial†	1766.2	462.3	190.12 µg/L	190.12 ppb	15:22:19
3	Mg 279.077 IEC†	964.2	800.3	328.44 µg/L	328.44 ppb	15:22:21
3	Na 589.592 Radial†	3215.9	2025.6	307.42 µg/L	307.42 ppb	15:22:21
3	Sr 421.552†	2210.3	2443.2	5.6344 µg/L	5.6344 ppb	15:22:21
3	Sc 361.383	1716395.9	1716395.9	97.796 %		15:23:13
3	Y 371.029	1041833.4	1041833.4	97.913 %		15:23:13
3	Ag 328.068†	4888.2	1551.3	6.2744 µg/L	6.2744 ppb	15:23:15
3	As 188.979†	68.7	88.0	30.793 µg/L	30.793 ppb	15:23:35
3	B 249.677†	6241.4	3151.7	51.368 µg/L	51.368 ppb	15:23:15
3	Ba 233.527†	993.3	1177.8	5.1332 µg/L	5.1332 ppb	15:23:35
3	Be 313.107†	15462.3	16596.3	4.9945 µg/L	4.9945 ppb	15:23:15
3	Cd 226.502†	611.3	735.1	5.0386 µg/L	5.0386 ppb	15:23:35
3	Co 228.616†	213.2	390.4	5.2802 µg/L	5.2802 ppb	15:23:35
3	Cr 267.716†	767.8	606.5	5.0744 µg/L	5.0744 ppb	15:23:35
3	Cu 324.752†	5204.8	2533.2	10.739 µg/L	10.739 ppb	15:23:15
3	Mn 257.610†	7893.3	7895.6	10.540 µg/L	10.540 ppb	15:23:15
3	Mo 202.031†	255.2	295.7	9.4171 µg/L	9.4171 ppb	15:23:35
3	Ni 231.604†	332.4	417.8	5.2544 µg/L	5.2544 ppb	15:23:35
3	P 214.914†	626.6	635.7	151.47 µg/L	151.47 ppb	15:23:35
3	Pb 220.353†	252.3	161.1	9.8653 µg/L	9.8653 ppb	15:23:35
3	S 181.975 Axial†	209.7	126.7	103.93 µg/L	103.93 ppb	15:23:35
3	Sb 206.836†	150.6	75.9	10.029 µg/L	10.029 ppb	15:23:35
3	Se 196.026†	96.6	85.2	34.2 µg/L	34.2 ppb	15:23:35
3	SiO2†	3748.3	2079.7	222.08 µg/L	222.08 ppb	15:23:15
3	Si 251.611†	6933.3	6140.9	99.207 µg/L	99.207 ppb	15:23:15
3	Sn 189.927†	138.0	143.7	9.9640 µg/L	9.9640 ppb	15:23:35
3	Ti 334.940†	5690.8	4933.4	4.9007 µg/L	4.9007 ppb	15:23:15
3	Tl 190.801†	46.5	164.6	22.211 µg/L	22.211 ppb	15:23:35
3	U 409.014†	434.0	727.6	45.909 µg/L	45.909 ppb	15:23:15
3	V 292.402†	1234.9	952.9	5.1933 µg/L	5.1933 ppb	15:23:15
3	Zn 213.857†	2110.8	1633.8	10.083 µg/L	10.083 ppb	15:23:35

Mean Data: PQL

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1719760.6	97.988 %	0.2824			0.29%
Sc RADIAL	149173.4	101 %	1.5			1.50%
Y 371.029	1043017.5	98.024 %	0.2288			0.23%
Ag 328.068†	1495.5	6.0554 µg/L	0.70156	6.0554 ppb	0.70156	11.59%
QC value within limits for Ag 328.068 Recovery = 121.11%						
Al 396.153Radial†	1057.7	217.52 µg/L	4.840	217.52 ppb	4.840	2.22%
QC value within limits for Al 396.153Radial Recovery = 108.76%						
As 188.979†	90.3	31.595 µg/L	1.1796	31.595 ppb	1.1796	3.73%
QC value within limits for As 188.979 Recovery = 105.32%						
B 249.677†	3072.5	50.078 µg/L	1.1640	50.078 ppb	1.1640	2.32%
QC value within limits for B 249.677 Recovery = 100.16%						
Ba 233.527†	1198.6	5.2239 µg/L	0.10050	5.2239 ppb	0.10050	1.92%
QC value within limits for Ba 233.527 Recovery = 104.48%						
Be 313.107†	16558.0	4.9825 µg/L	0.02447	4.9825 ppb	0.02447	0.49%
QC value within limits for Be 313.107 Recovery = 99.65%						
Ca 317.933Radial†	3348.8	201.49 µg/L	3.210	201.49 ppb	3.210	1.59%
QC value within limits for Ca 317.933Radial Recovery = 100.75%						
Cd 226.502†	734.1	5.0321 µg/L	0.00712	5.0321 ppb	0.00712	0.14%
QC value within limits for Cd 226.502 Recovery = 100.64%						
Co 228.616†	383.3	5.1838 µg/L	0.25781	5.1838 ppb	0.25781	4.97%

QC value within limits for Co 228.616	Recovery = 103.68%			
Cr 267.716†	589.0	4.9279 µg/L	0.12984	2.63%
QC value within limits for Cr 267.716	Recovery = 98.56%			
Cu 324.752†	2463.6	10.444 µg/L	0.5014	4.80%
QC value within limits for Cu 324.752	Recovery = 104.44%			
Fe 238.204 Radial†	1523.8	102.54 µg/L	3.462	3.38%
QC value within limits for Fe 238.204 Radial	Recovery = 102.54%			
K 766.490 Radial†	460.2	189.22 µg/L	19.137	10.11%
QC value within limits for K 766.490 Radial	Recovery = 126.15%			
Mg 279.077 IEC†	766.8	314.72 µg/L	13.677	4.35%
QC value within limits for Mg 279.077 IEC	Recovery = 104.91%			
Mn 257.610†	7914.5	10.566 µg/L	0.0439	0.42%
QC value within limits for Mn 257.610	Recovery = 105.66%			
Mo 202.031†	301.9	9.6156 µg/L	0.54552	5.67%
QC value within limits for Mo 202.031	Recovery = 96.16%			
Na 589.592 Radial†	1938.6	294.20 µg/L	15.859	5.39%
QC value within limits for Na 589.592 Radial	Recovery = 98.07%			
Ni 231.604†	411.8	5.1799 µg/L	0.08020	1.55%
QC value within limits for Ni 231.604	Recovery = 103.60%			
P 214.914†	636.6	151.69 µg/L	0.216	0.14%
QC value within limits for P 214.914	Recovery = 101.13%			
Pb 220.353†	151.8	9.3032 µg/L	0.65396	7.03%
QC value within limits for Pb 220.353	Recovery = 93.03%			
S 181.975 Axial†	126.9	104.12 µg/L	4.828	4.64%
QC value within limits for S 181.975 Axial	Recovery = 104.12%			
Sb 206.836†	78.6	10.391 µg/L	0.4280	4.12%
QC value within limits for Sb 206.836	Recovery = 103.91%			
Se 196.026†	79.4	31.9 µg/L	2.75	8.64%
QC value within limits for Se 196.026	Recovery = 106.24%			
SiO2†	2104.8	224.76 µg/L	2.527	1.12%
QC value within limits for SiO2	Recovery = 105.52%			
Si 251.611†	6200.0	100.16 µg/L	0.919	0.92%
QC value within limits for Si 251.611	Recovery = 100.16%			
Sn 189.927†	145.1	10.065 µg/L	0.2432	2.42%
QC value within limits for Sn 189.927	Recovery = 100.65%			
Sr 421.552†	2429.3	5.6025 µg/L	0.07899	1.41%
QC value within limits for Sr 421.552	Recovery = 112.05%			
Ti 334.940†	4927.8	4.8968 µg/L	0.10034	2.05%
QC value within limits for Ti 334.940	Recovery = 97.94%			
Tl 190.801†	166.8	22.508 µg/L	0.3103	1.38%
QC value within limits for Tl 190.801	Recovery = 112.54%			
U 409.014†	704.5	44.490 µg/L	4.2038	9.45%
QC value within limits for U 409.014	Recovery = 88.98%			
V 292.402†	1022.7	5.5648 µg/L	0.32420	5.83%
QC value within limits for V 292.402	Recovery = 111.30%			
Zn 213.857†	1648.7	10.177 µg/L	0.0818	0.80%
QC value within limits for Zn 213.857	Recovery = 101.77%			

All analyte(s) passed QC.

Sequence No.: 9

Sample ID: ICSA

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 103

Date Collected: 3/30/2010 15:23:44

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	135491.3	135491.3	91.7 %		15:24:17
1	Al 396.153Radial†	2286947.2	2495271.1	514200 µg/L	514200 ppb	15:24:15
1	Ca 317.933Radial†	7501113.1	8183504.6	492380 µg/L	492380 ppb	15:24:15
1	Fe 238.204 Radial†	2650457.5	2891680.9	194580 µg/L	194580 ppb	15:24:15
1	K 766.490 Radial†	1541.2	368.7	-93.473 µg/L	-93.473 ppb	15:24:17
1	Mg 279.077 IEC†	1105922.5	1206464.7	494750 µg/L	494750 ppb	15:24:15
1	Na 589.592 Radial†	1485.9	414.6	62.815 µg/L	62.815 ppb	15:24:17
1	Sr 421.552†	1315.2	1656.6	-0.0324 µg/L	-0.0324 ppb	15:24:17
1	Sc 361.383	1550377.8	1550377.8	88.337 %		15:24:30
1	Y 371.029	923448.2	923448.2	86.787 %		15:24:30
1	Ag 328.068†	5848.7	3173.8	-0.9573 µg/L	-0.9573 ppb	15:24:30
1	As 188.979†	-95.4	-90.4	12.078 µg/L	12.078 ppb	15:24:50
1	B 249.677†	3031.8	201.7	3.2757 µg/L	3.2757 ppb	15:24:30
1	Ba 233.527†	439.1	659.2	0.3855 µg/L	0.3855 ppb	15:24:50
1	Be 313.107†	-852.7	-179.7	-0.0514 µg/L	-0.0514 ppb	15:24:30
1	Cd 226.502†	2265.2	2674.3	-2.0990 µg/L	-2.0990 ppb	15:24:50
1	Co 228.616†	89.3	273.6	-6.4479 µg/L	-6.4479 ppb	15:24:50
1	Cr 267.716†	184.7	30.5	0.9733 µg/L	0.9733 ppb	15:24:50
1	Cu 324.752†	-5458.4	-8968.0	3.9288 µg/L	3.9288 ppb	15:24:30
1	Mn 257.610†	15118.7	16939.3	2.5037 µg/L	2.5037 ppb	15:24:30
1	Mo 202.031†	-527.3	-562.2	-1.1409 µg/L	-1.1409 ppb	15:24:50
1	Ni 231.604†	156.5	255.0	3.2074 µg/L	3.2074 ppb	15:24:50
1	P 214.914†	186.0	205.6	31.164 µg/L	31.164 ppb	15:24:50
1	Pb 220.353†	-313.6	-451.9	-2.0684 µg/L	-2.0684 ppb	15:24:50
1	S 181.975 Axial†	145.2	76.7	62.685 µg/L	62.685 ppb	15:24:50
1	Sb 206.836†	119.3	56.9	1.3356 µg/L	1.3356 ppb	15:24:50
1	Se 196.026†	-140.9	-173.0	-1.74 µg/L	-1.74 ppb	15:24:50
1	SiO2†	1610.5	70.0	7.9672 µg/L	7.9672 ppb	15:24:50
1	Si 251.611†	429.3	-462.7	-7.2638 µg/L	-7.2638 ppb	15:24:50
1	Sn 189.927†	24.6	30.4	2.1790 µg/L	2.1790 ppb	15:24:50
1	Ti 334.940†	20051.3	21813.1	-5.6222 µg/L	-5.6222 ppb	15:24:30
1	Tl 190.801†	-176.0	-82.2	-10.613 µg/L	-10.613 ppb	15:24:50
1	U 409.014†	-134.3	131.7	-13.380 µg/L	-13.380 ppb	15:24:30
1	V 292.402†	4112.7	4345.8	2.3469 µg/L	2.3469 ppb	15:24:50
1	Zn 213.857†	4024.9	4031.8	8.3012 µg/L	8.3012 ppb	15:24:50
2	Sc RADIAL	134398.4	134398.4	90.9 %		15:24:22
2	Al 396.153Radial†	2251126.8	2476161.2	510270 µg/L	510270 ppb	15:24:20
2	Ca 317.933Radial†	7350398.9	8084279.8	486410 µg/L	486410 ppb	15:24:20
2	Fe 238.204 Radial†	2597180.3	2856594.8	192220 µg/L	192220 ppb	15:24:20
2	K 766.490 Radial†	1495.4	332.0	-106.03 µg/L	-106.03 ppb	15:24:22
2	Mg 279.077 IEC†	1081861.3	1189810.8	487920 µg/L	487920 ppb	15:24:20
2	Na 589.592 Radial†	1353.7	282.4	42.754 µg/L	42.754 ppb	15:24:22
2	Sr 421.552†	1363.4	1721.3	0.1636 µg/L	0.1636 ppb	15:24:22
2	Sc 361.383	1529302.7	1529302.7	87.136 %		15:24:53
2	Y 371.029	911641.3	911641.3	85.677 %		15:24:53
2	Ag 328.068†	6201.8	3670.3	1.1894 µg/L	1.1894 ppb	15:24:53
2	As 188.979†	-96.9	-93.6	10.426 µg/L	10.426 ppb	15:25:13
2	B 249.677†	3140.4	373.6	6.0801 µg/L	6.0801 ppb	15:24:53
2	Ba 233.527†	440.1	667.2	0.4501 µg/L	0.4501 ppb	15:25:13
2	Be 313.107†	-1112.6	-491.3	-0.1442 µg/L	-0.1442 ppb	15:24:53
2	Cd 226.502†	2279.3	2725.8	-1.4965 µg/L	-1.4965 ppb	15:25:13
2	Co 228.616†	67.3	249.7	-6.6477 µg/L	-6.6477 ppb	15:25:13
2	Cr 267.716†	204.6	56.2	1.1890 µg/L	1.1890 ppb	15:25:13
2	Cu 324.752†	-5392.7	-8977.8	3.3610 µg/L	3.3610 ppb	15:24:53
2	Mn 257.610†	15342.3	17431.7	3.4390 µg/L	3.4390 ppb	15:24:53
2	Mo 202.031†	-551.7	-598.4	-2.5108 µg/L	-2.5108 ppb	15:25:13
2	Ni 231.604†	154.5	255.2	3.2101 µg/L	3.2101 ppb	15:25:13
2	P 214.914†	160.5	179.1	25.620 µg/L	25.620 ppb	15:25:13
2	Pb 220.353†	-375.1	-527.4	-6.8630 µg/L	-6.8630 ppb	15:25:13

2	S 181.975 Axial†	153.7	88.7	72.553 µg/L	72.553 ppb	15:25:13
2	Sb 206.836†	118.2	57.5	1.4515 µg/L	1.4515 ppb	15:25:13
2	Se 196.026†	-176.7	-216.4	-19.9 µg/L	-19.9 ppb	15:25:13
2	SiO2†	1570.0	48.6	5.6934 µg/L	5.6934 ppb	15:25:13
2	Si 251.611†	436.0	-448.3	-7.0262 µg/L	-7.0262 ppb	15:25:13
2	Sn 189.927†	42.7	51.6	3.6464 µg/L	3.6464 ppb	15:25:13
2	Ti 334.940†	20530.0	22675.4	-4.3587 µg/L	-4.3587 ppb	15:24:53
2	Tl 190.801†	-173.6	-82.2	-10.599 µg/L	-10.599 ppb	15:25:13
2	U 409.014†	-99.0	170.2	-10.670 µg/L	-10.670 ppb	15:24:53
2	V 292.402†	4093.4	4387.9	2.8090 µg/L	2.8090 ppb	15:25:13
2	Zn 213.857†	4029.0	4099.2	8.9615 µg/L	8.9615 ppb	15:25:13
3	Sc RADIAL	135723.7	135723.7	91.8 %		15:24:26
3	Al 396.153Radial†	2273186.3	2476011.1	510240 µg/L	510240 ppb	15:24:24
3	Ca 317.933Radial†	7430044.5	8092086.0	486880 µg/L	486880 ppb	15:24:24
3	Fe 238.204 Radial†	2629467.1	2863867.6	192710 µg/L	192710 ppb	15:24:24
3	K 766.490 Radial†	1436.9	252.3	-139.06 µg/L	-139.06 ppb	15:24:26
3	Mg 279.077 IEC†	1095585.1	1193139.5	489280 µg/L	489280 ppb	15:24:24
3	Na 589.592 Radial†	1426.6	347.2	52.627 µg/L	52.627 ppb	15:24:26
3	Sr 421.552†	1369.3	1713.1	0.1409 µg/L	0.1409 ppb	15:24:26
3	Sc 361.383	1526692.0	1526692.0	86.987 %		15:25:16
3	Y 371.029	910201.6	910201.6	85.542 %		15:25:16
3	Ag 328.068†	6006.6	3458.1	0.3388 µg/L	0.3388 ppb	15:25:16
3	As 188.979†	-97.6	-94.5	10.205 µg/L	10.205 ppb	15:25:36
3	B 249.677†	3058.7	285.9	4.6488 µg/L	4.6488 ppb	15:25:16
3	Ba 233.527†	404.6	627.3	0.2707 µg/L	0.2707 ppb	15:25:36
3	Be 313.107†	-1039.4	-409.4	-0.1186 µg/L	-0.1186 ppb	15:25:16
3	Cd 226.502†	2276.1	2726.6	-1.5425 µg/L	-1.5425 ppb	15:25:36
3	Co 228.616†	93.3	279.7	-6.2669 µg/L	-6.2669 ppb	15:25:36
3	Cr 267.716†	191.5	41.6	1.0636 µg/L	1.0636 ppb	15:25:36
3	Cu 324.752†	-5604.7	-9232.1	2.4007 µg/L	2.4007 ppb	15:25:16
3	Mn 257.610†	15289.1	17400.7	3.3421 µg/L	3.3421 ppb	15:25:16
3	Mo 202.031†	-523.8	-567.4	-1.4815 µg/L	-1.4815 ppb	15:25:36
3	Ni 231.604†	202.7	310.9	3.9104 µg/L	3.9104 ppb	15:25:36
3	P 214.914†	185.5	208.2	32.197 µg/L	32.197 ppb	15:25:36
3	Pb 220.353†	-350.8	-500.2	-5.2143 µg/L	-5.2143 ppb	15:25:36
3	S 181.975 Axial†	149.8	84.5	69.091 µg/L	69.091 ppb	15:25:36
3	Sb 206.836†	125.1	65.7	2.5329 µg/L	2.5329 ppb	15:25:36
3	Se 196.026†	-153.6	-190.1	-9.22 µg/L	-9.22 ppb	15:25:36
3	SiO2†	1630.8	121.7	13.502 µg/L	13.502 ppb	15:25:36
3	Si 251.611†	470.7	-407.5	-6.3676 µg/L	-6.3676 ppb	15:25:36
3	Sn 189.927†	20.5	26.1	1.8853 µg/L	1.8853 ppb	15:25:36
3	Ti 334.940†	20741.8	22959.1	-4.1747 µg/L	-4.1747 ppb	15:25:16
3	Tl 190.801†	-132.1	-34.8	-4.2279 µg/L	-4.2279 ppb	15:25:36
3	U 409.014†	-51.7	224.3	-7.3537 µg/L	-7.3537 ppb	15:25:16
3	V 292.402†	4139.6	4449.0	3.0936 µg/L	3.0936 ppb	15:25:36
3	Zn 213.857†	4013.6	4089.5	8.8407 µg/L	8.8407 ppb	15:25:36

Mean Data: ICSCA

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1535457.5	87.487 %	0.7400			0.85%
Sc RADIAL	135204.5	91.5 %	0.48			0.52%
Y 371.029	915097.0	86.002 %	0.6831			0.79%
Ag 328.068†	3434.1	0.1903 µg/L	1.08102	0.1903 ppb	1.08102	567.98%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	2482481.1	511570 µg/L	2282.6	511570 ppb	2282.6	0.45%
QC value within limits for Al 396.153Radial Recovery = 102.31%						
As 188.979†	-92.8	10.903 µg/L	1.0235	10.903 ppb	1.0235	9.39%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	287.1	4.6682 µg/L	1.40228	4.6682 ppb	1.40228	30.04%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	651.2	0.3687 µg/L	0.09087	0.3687 ppb	0.09087	24.65%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	-360.1	-0.1047 µg/L	0.04792	-0.1047 ppb	0.04792	45.74%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	8119956.8	488560 µg/L	3319.6	488560 ppb	3319.6	0.68%
QC value within limits for Ca 317.933Radial Recovery = 97.71%						
Cd 226.502†	2708.9	-1.7127 µg/L	0.33534	-1.7127 ppb	0.33534	19.58%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	267.6	-6.4542 µg/L	0.19046	-6.4542 ppb	0.19046	2.95%

QC value within limits for Co 228.616 Recovery = Not calculated							
Cr	267.716†	42.8	1.0753 µg/L	0.10833	1.0753 ppb	0.10833	10.07%
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu	324.752†	-9059.3	3.2302 µg/L	0.77242	3.2302 ppb	0.77242	23.91%
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe	238.204 Radial†	2870714.4	193170 µg/L	1246.1	193170 ppb	1246.1	0.65%
QC value within limits for Fe 238.204 Radial Recovery = 96.58%							
K	766.490 Radial†	317.7	-112.85 µg/L	23.545	-112.85 ppb	23.545	20.86%
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg	279.077 IEC†	1196471.7	490650 µg/L	3614.1	490650 ppb	3614.1	0.74%
QC value within limits for Mg 279.077 IEC Recovery = 98.13%							
Mn	257.610†	17257.2	3.0950 µg/L	0.51432	3.0950 ppb	0.51432	16.62%
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo	202.031†	-576.0	-1.7111 µg/L	0.71323	-1.7111 ppb	0.71323	41.68%
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na	589.592 Radial†	348.0	52.732 µg/L	10.0310	52.732 ppb	10.0310	19.02%
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni	231.604†	273.7	3.4426 µg/L	0.40513	3.4426 ppb	0.40513	11.77%
QC value within limits for Ni 231.604 Recovery = Not calculated							
P	214.914†	197.6	29.660 µg/L	3.5371	29.660 ppb	3.5371	11.93%
QC value within limits for P 214.914 Recovery = Not calculated							
Pb	220.353†	-493.2	-4.7152 µg/L	2.43592	-4.7152 ppb	2.43592	51.66%
QC value within limits for Pb 220.353 Recovery = Not calculated							
S	181.975 Axial†	83.3	68.110 µg/L	5.0065	68.110 ppb	5.0065	7.35%
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb	206.836†	60.1	1.7733 µg/L	0.66034	1.7733 ppb	0.66034	37.24%
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se	196.026†	-193.2	-10.3 µg/L	9.13	-10.3 ppb	9.13	88.75%
QC value within limits for Se 196.026 Recovery = Not calculated							
SiO2†		80.1	9.0540 µg/L	4.01594	9.0540 ppb	4.01594	44.36%
QC value within limits for SiO2 Recovery = Not calculated							
Si	251.611†	-439.5	-6.8859 µg/L	0.46433	-6.8859 ppb	0.46433	6.74%
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn	189.927†	36.0	2.5702 µg/L	0.94345	2.5702 ppb	0.94345	36.71%
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr	421.552†	1697.0	0.0907 µg/L	0.10724	0.0907 ppb	0.10724	118.24%
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti	334.940†	22482.5	-4.7185 µg/L	0.78801	-4.7185 ppb	0.78801	16.70%
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl	190.801†	-66.4	-8.4799 µg/L	3.68229	-8.4799 ppb	3.68229	43.42%
QC value within limits for Tl 190.801 Recovery = Not calculated							
U	409.014†	175.4	-10.468 µg/L	3.0181	-10.468 ppb	3.0181	28.83%
QC value within limits for U 409.014 Recovery = Not calculated							
V	292.402†	4394.2	2.7499 µg/L	0.37684	2.7499 ppb	0.37684	13.70%
QC value within limits for V 292.402 Recovery = Not calculated							
Zn	213.857†	4073.5	8.7011 µg/L	0.35156	8.7011 ppb	0.35156	4.04%
QC value within limits for Zn 213.857 Recovery = Not calculated							

All analyte(s) passed QC.

Sequence No.: 10

Sample ID: ICSAB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 104

Date Collected: 3/30/2010 15:25:44

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	128969.8	128969.8	87.2 %		15:26:16
1	Al 396.153Radial†	2268643.5	2600464.8	535860 µg/L	535860 ppb	15:26:14
1	Ca 317.933Radial†	7418203.8	8502317.5	511560 µg/L	511560 ppb	15:26:14
1	Fe 238.204 Radial†	2626582.9	3010544.4	202580 µg/L	202580 ppb	15:26:14
1	K 766.490 Radial†	13932.0	14656.5	5776.6 µg/L	5776.6 ppb	15:26:16
1	Mg 279.077 IEC†	1076571.1	1233836.2	505980 µg/L	505980 ppb	15:26:16
1	Na 589.592 Radial†	33219.3	36870.5	5593.3 µg/L	5593.3 ppb	15:26:16
1	Sr 421.552†	207277.5	237810.7	544.59 µg/L	544.59 ppb	15:26:16
1	Sc 361.383	1516196.2	1516196.2	86.389 %		15:26:44
1	Y 371.029	903728.7	903728.7	84.933 %		15:26:44
1	Ag 328.068†	63350.6	69884.6	270.36 µg/L	270.36 ppb	15:26:44
1	As 188.979†	1221.1	1431.2	550.90 µg/L	550.90 ppb	15:26:46
1	B 249.677†	30854.5	32485.4	528.04 µg/L	528.04 ppb	15:26:44
1	Ba 233.527†	100374.9	116351.4	504.51 µg/L	504.51 ppb	15:26:44
1	Be 313.107†	710674.5	823428.9	247.28 µg/L	247.28 ppb	15:26:44
1	Cd 226.502†	62827.3	72836.0	479.01 µg/L	479.01 ppb	15:26:44
1	Co 228.616†	29526.2	34350.5	454.56 µg/L	454.56 ppb	15:26:46
1	Cr 267.716†	51013.6	58872.4	496.64 µg/L	496.64 ppb	15:26:46
1	Cu 324.752†	105945.5	119848.6	548.90 µg/L	548.90 ppb	15:26:44
1	Mn 257.610†	328467.2	380042.5	487.37 µg/L	487.37 ppb	15:26:44
1	Mo 202.031†	13247.4	15369.3	506.32 µg/L	506.32 ppb	15:26:46
1	Ni 231.604†	32031.3	37155.8	467.34 µg/L	467.34 ppb	15:26:46
1	P 214.914†	9671.9	11190.7	2643.8 µg/L	2643.8 ppb	15:26:46
1	Pb 220.353†	6483.0	7407.4	481.68 µg/L	481.68 ppb	15:26:46
1	S 181.975 Axial†	3019.3	3407.3	2797.2 µg/L	2797.2 ppb	15:26:46
1	Sb 206.836†	3474.0	3943.3	512.08 µg/L	512.08 ppb	15:26:46
1	Se 196.026†	5295.0	6115.7	2520 µg/L	2520 ppb	15:26:46
1	SiO2†	92064.6	104816.5	11193 µg/L	11193 ppb	15:26:44
1	Si 251.611†	280816.9	324111.7	5236.4 µg/L	5236.4 ppb	15:26:44
1	Sn 189.927†	6181.1	7157.5	497.35 µg/L	497.35 ppb	15:26:46
1	Ti 334.940†	466691.3	539334.3	512.06 µg/L	512.06 ppb	15:26:44
1	Tl 190.801†	2873.7	3443.5	471.18 µg/L	471.18 ppb	15:26:46
1	U 409.014†	7010.7	8399.0	535.66 µg/L	535.66 ppb	15:26:44
1	V 292.402†	87819.1	101345.4	523.74 µg/L	523.74 ppb	15:26:44
1	Zn 213.857†	72585.4	83496.9	497.27 µg/L	497.27 ppb	15:26:44
2	Sc RADIAL	138750.1	138750.1	93.9 %		15:26:21
2	Al 396.153Radial†	2248527.6	2395732.2	493670 µg/L	493670 ppb	15:26:19
2	Ca 317.933Radial†	7355600.1	7836246.5	471490 µg/L	471490 ppb	15:26:19
2	Fe 238.204 Radial†	2604562.2	2774861.9	186720 µg/L	186720 ppb	15:26:19
2	K 766.490 Radial†	14271.2	13892.3	5480.7 µg/L	5480.7 ppb	15:26:21
2	Mg 279.077 IEC†	1111258.4	1183809.4	485470 µg/L	485470 ppb	15:26:21
2	Na 589.592 Radial†	34192.5	35223.4	5343.5 µg/L	5343.5 ppb	15:26:21
2	Sr 421.552†	211492.1	225553.7	516.63 µg/L	516.63 ppb	15:26:21
2	Sc 361.383	1518506.0	1518506.0	86.521 %		15:26:49
2	Y 371.029	904980.6	904980.6	85.051 %		15:26:49
2	Ag 328.068†	63288.3	69701.0	270.75 µg/L	270.75 ppb	15:26:49
2	As 188.979†	1123.1	1315.7	507.01 µg/L	507.01 ppb	15:26:51
2	B 249.677†	31121.0	32739.1	532.19 µg/L	532.19 ppb	15:26:49
2	Ba 233.527†	100793.3	116658.3	506.05 µg/L	506.05 ppb	15:26:49
2	Be 313.107†	712144.3	823876.4	247.41 µg/L	247.41 ppb	15:26:49
2	Cd 226.502†	63049.4	72982.0	481.68 µg/L	481.68 ppb	15:26:49
2	Co 228.616†	29214.5	33938.3	449.81 µg/L	449.81 ppb	15:26:51
2	Cr 267.716†	50659.7	58373.5	492.13 µg/L	492.13 ppb	15:26:51
2	Cu 324.752†	106123.6	119867.9	546.12 µg/L	546.12 ppb	15:26:49
2	Mn 257.610†	329580.6	380751.0	489.17 µg/L	489.17 ppb	15:26:49
2	Mo 202.031†	13269.6	15371.7	505.39 µg/L	505.39 ppb	15:26:51
2	Ni 231.604†	31669.3	36681.0	461.36 µg/L	461.36 ppb	15:26:51
2	P 214.914†	9695.4	11200.9	2647.7 µg/L	2647.7 ppb	15:26:51
2	Pb 220.353†	6408.2	7309.6	473.58 µg/L	473.58 ppb	15:26:51

2	S 181.975 Axial†	3032.1	3416.8	2805.0 µg/L	2805.0 ppb	15:26:51
2	Sb 206.836†	3497.1	3963.8	515.32 µg/L	515.32 ppb	15:26:51
2	Se 196.026†	5153.5	5942.8	2440 µg/L	2440 ppb	15:26:51
2	SiO2†	92148.0	104750.8	11186 µg/L	11186 ppb	15:26:49
2	Si 251.611†	282053.1	325046.0	5251.5 µg/L	5251.5 ppb	15:26:49
2	Sn 189.927†	6186.0	7152.3	496.98 µg/L	496.98 ppb	15:26:51
2	Ti 334.940†	465598.1	537249.0	510.59 µg/L	510.59 ppb	15:26:49
2	Tl 190.801†	2897.1	3465.6	474.15 µg/L	474.15 ppb	15:26:51
2	U 409.014†	7068.1	8453.0	540.87 µg/L	540.87 ppb	15:26:49
2	V 292.402†	87740.2	101099.6	524.10 µg/L	524.10 ppb	15:26:49
2	Zn 213.857†	72899.1	83731.7	500.12 µg/L	500.12 ppb	15:26:49
3	Sc RADIAL	136915.4	136915.4	92.6 %		15:26:25
3	Al 396.153Radial†	2257454.6	2437473.9	502270 µg/L	502270 ppb	15:26:23
3	Ca 317.933Radial†	7359855.8	7945860.1	478080 µg/L	478080 ppb	15:26:23
3	Fe 238.204 Radial†	2604669.3	2812163.8	189230 µg/L	189230 ppb	15:26:23
3	K 766.490 Radial†	14264.5	14088.8	5558.0 µg/L	5558.0 ppb	15:26:25
3	Mg 279.077 IEC†	1106854.3	1194920.1	490030 µg/L	490030 ppb	15:26:25
3	Na 589.592 Radial†	34167.4	35684.5	5413.4 µg/L	5413.4 ppb	15:26:25
3	Sr 421.552†	210799.8	227825.7	521.82 µg/L	521.82 ppb	15:26:25
3	Sc 361.383	1532637.0	1532637.0	87.326 %		15:26:54
3	Y 371.029	912980.1	912980.1	85.803 %		15:26:54
3	Ag 328.068†	63997.3	69838.5	271.10 µg/L	271.10 ppb	15:26:54
3	As 188.979†	1202.6	1394.9	535.14 µg/L	535.14 ppb	15:26:56
3	B 249.677†	30994.7	32262.8	524.43 µg/L	524.43 ppb	15:26:54
3	Ba 233.527†	101425.8	116308.4	504.49 µg/L	504.49 ppb	15:26:54
3	Be 313.107†	717134.4	822001.9	246.85 µg/L	246.85 ppb	15:26:54
3	Cd 226.502†	63386.1	72695.7	479.45 µg/L	479.45 ppb	15:26:54
3	Co 228.616†	29425.6	33868.8	448.74 µg/L	448.74 ppb	15:26:56
3	Cr 267.716†	50967.1	58185.7	490.58 µg/L	490.58 ppb	15:26:56
3	Cu 324.752†	106853.0	119572.3	545.36 µg/L	545.36 ppb	15:26:54
3	Mn 257.610†	331501.6	379438.8	487.23 µg/L	487.23 ppb	15:26:54
3	Mo 202.031†	13182.9	15131.0	497.92 µg/L	497.92 ppb	15:26:56
3	Ni 231.604†	31816.9	36512.6	459.25 µg/L	459.25 ppb	15:26:56
3	P 214.914†	9750.3	11160.5	2638.3 µg/L	2638.3 ppb	15:26:56
3	Pb 220.353†	6296.3	7113.2	461.99 µg/L	461.99 ppb	15:26:56
3	S 181.975 Axial†	3014.7	3364.5	2762.1 µg/L	2762.1 ppb	15:26:56
3	Sb 206.836†	3428.2	3847.7	499.92 µg/L	499.92 ppb	15:26:56
3	Se 196.026†	5199.2	5940.2	2440 µg/L	2440 ppb	15:26:56
3	SiO2†	93000.5	104745.0	11185 µg/L	11185 ppb	15:26:54
3	Si 251.611†	283786.9	324025.9	5235.1 µg/L	5235.1 ppb	15:26:54
3	Sn 189.927†	6228.6	7135.1	495.78 µg/L	495.78 ppb	15:26:56
3	Ti 334.940†	468402.8	535499.2	508.64 µg/L	508.64 ppb	15:26:54
3	Tl 190.801†	2875.8	3410.2	466.69 µg/L	466.69 ppb	15:26:56
3	U 409.014†	7143.9	8464.4	541.20 µg/L	541.20 ppb	15:26:54
3	V 292.402†	88322.9	100831.9	522.33 µg/L	522.33 ppb	15:26:54
3	Zn 213.857†	73408.9	83538.6	498.75 µg/L	498.75 ppb	15:26:54

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1522446.4	86.745 %	0.5071			0.58%
Sc RADIAL	134878.4	91.2 %	3.52			3.85%
Y 371.029	907229.8	85.262 %	0.4717			0.55%
Ag 328.068†	69808.1	270.74 µg/L	0.366	270.74 ppb	0.366	0.14%
QC value within limits for Ag 328.068 Recovery = 108.29%						
Al 396.153Radial†	2477890.3	510600 µg/L	22293.7	510600 ppb	22293.7	4.37%
QC value within limits for Al 396.153Radial Recovery = 102.12%						
As 188.979†	1380.6	531.02 µg/L	22.233	531.02 ppb	22.233	4.19%
QC value within limits for As 188.979 Recovery = 106.20%						
B 249.677†	32495.8	528.22 µg/L	3.885	528.22 ppb	3.885	0.74%
QC value within limits for B 249.677 Recovery = 105.64%						
Ba 233.527†	116439.4	505.02 µg/L	0.894	505.02 ppb	0.894	0.18%
QC value within limits for Ba 233.527 Recovery = 101.00%						
Be 313.107†	823102.4	247.18 µg/L	0.294	247.18 ppb	0.294	0.12%
QC value within limits for Be 313.107 Recovery = 98.87%						
Ca 317.933Radial†	8094808.1	487050 µg/L	21488.5	487050 ppb	21488.5	4.41%
QC value within limits for Ca 317.933Radial Recovery = 97.41%						
Cd 226.502†	72837.9	480.04 µg/L	1.431	480.04 ppb	1.431	0.30%
QC value within limits for Cd 226.502 Recovery = 96.01%						
Co 228.616†	34052.5	451.03 µg/L	3.097	451.03 ppb	3.097	0.69%

QC value within limits for Co 228.616 Recovery = 90.21%							
Cr 267.716†	58477.2	493.12 µg/L	3.147	493.12 ppb	3.147	0.64%	
QC value within limits for Cr 267.716 Recovery = 98.62%							
Cu 324.752†	119762.9	546.80 µg/L	1.864	546.80 ppb	1.864	0.34%	
QC value within limits for Cu 324.752 Recovery = 109.36%							
Fe 238.204 Radial†	2865856.7	192840 µg/L	8524.4	192840 ppb	8524.4	4.42%	
QC value within limits for Fe 238.204 Radial Recovery = 96.42%							
K 766.490 Radial†	14212.5	5605.1 µg/L	153.49	5605.1 ppb	153.49	2.74%	
QC value within limits for K 766.490 Radial Recovery = 112.10%							
Mg 279.077 IEC†	1204188.6	493830 µg/L	10769.0	493830 ppb	10769.0	2.18%	
QC value within limits for Mg 279.077 IEC Recovery = 98.77%							
Mn 257.610†	380077.4	487.92 µg/L	1.083	487.92 ppb	1.083	0.22%	
QC value within limits for Mn 257.610 Recovery = 97.58%							
Mo 202.031†	15290.7	503.21 µg/L	4.607	503.21 ppb	4.607	0.92%	
QC value within limits for Mo 202.031 Recovery = 100.64%							
Na 589.592 Radial†	35926.2	5450.1 µg/L	128.88	5450.1 ppb	128.88	2.36%	
QC value within limits for Na 589.592 Radial Recovery = 109.00%							
Ni 231.604†	36783.1	462.65 µg/L	4.196	462.65 ppb	4.196	0.91%	
QC value within limits for Ni 231.604 Recovery = 92.53%							
P 214.914†	11184.0	2643.3 µg/L	4.70	2643.3 ppb	4.70	0.18%	
QC value within limits for P 214.914 Recovery = 105.73%							
Pb 220.353†	7276.7	472.42 µg/L	9.899	472.42 ppb	9.899	2.10%	
QC value within limits for Pb 220.353 Recovery = 94.48%							
S 181.975 Axial†	3396.2	2788.1 µg/L	22.86	2788.1 ppb	22.86	0.82%	
QC value within limits for S 181.975 Axial Recovery = 111.52%							
Sb 206.836†	3918.3	509.11 µg/L	8.121	509.11 ppb	8.121	1.60%	
QC value within limits for Sb 206.836 Recovery = 101.82%							
Se 196.026†	5999.6	2470 µg/L	43.2	2470 ppb	43.2	1.75%	
QC value within limits for Se 196.026 Recovery = 98.76%							
SiO2†	104770.8	11188 µg/L	4.2	11188 ppb	4.2	0.04%	
QC value within limits for SiO2 Recovery = 104.61%							
Si 251.611†	324394.5	5241.0 µg/L	9.12	5241.0 ppb	9.12	0.17%	
QC value within limits for Si 251.611 Recovery = 104.82%							
Sn 189.927†	7148.3	496.70 µg/L	0.817	496.70 ppb	0.817	0.16%	
QC value within limits for Sn 189.927 Recovery = 99.34%							
Sr 421.552†	230396.7	527.68 µg/L	14.874	527.68 ppb	14.874	2.82%	
QC value within limits for Sr 421.552 Recovery = 105.54%							
Ti 334.940†	537360.8	510.43 µg/L	1.713	510.43 ppb	1.713	0.34%	
QC value within limits for Ti 334.940 Recovery = 102.09%							
Tl 190.801†	3439.8	470.67 µg/L	3.758	470.67 ppb	3.758	0.80%	
QC value within limits for Tl 190.801 Recovery = 94.13%							
U 409.014†	8438.8	539.25 µg/L	3.108	539.25 ppb	3.108	0.58%	
QC value within limits for U 409.014 Recovery = 107.85%							
V 292.402†	101092.3	523.39 µg/L	0.936	523.39 ppb	0.936	0.18%	
QC value within limits for V 292.402 Recovery = 104.68%							
Zn 213.857†	83589.1	498.71 µg/L	1.427	498.71 ppb	1.427	0.29%	
QC value within limits for Zn 213.857 Recovery = 99.74%							

All analyte(s) passed QC.

Sequence No.: 11
 Sample ID: LR1
 Analyst:
 Initial Sample Wt:
 Dilution:

Autosampler Location: 105
 Date Collected: 3/30/2010 15:27:03
 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	136437.1	136437.1	92.3 %		15:27:35
1	Al 396.153Radial†	2201698.9	2385608.2	491610 µg/L	491610 ppb	15:27:33
1	Ca 317.933Radial†	7214807.5	7816561.1	470300 µg/L	470300 ppb	15:27:33
1	Fe 238.204 Radial†	6118140.6	6628877.5	446050 µg/L	446050 ppb	15:27:33
1	K 766.490 Radial†	1829.8	669.7	-38.783 µg/L	-38.783 ppb	15:27:35
1	Mg 279.077 IEC†	1054744.4	1142649.0	468350 µg/L	468350 ppb	15:27:33
1	Na 589.592 Radial†	3004311.9	3253971.6	494110 µg/L	494110 ppb	15:27:33
1	Sr 421.552†	4865.0	5492.9	8.9901 µg/L	8.9901 ppb	15:27:35
1	Sc 361.383	1479324.6	1479324.6	84.288 %		15:27:49
1	Y 371.029	877883.5	877883.5	82.504 %		15:27:49
1	Ag 328.068†	2175.4	-866.2	2.3746 µg/L	2.3746 ppb	15:27:49
1	As 188.979†	-230.5	-255.8	10.757 µg/L	10.757 ppb	15:28:09
1	B 249.677†	4044.4	1567.9	25.520 µg/L	25.520 ppb	15:27:49
1	Ba 233.527†	614.2	890.8	-1.8194 µg/L	-1.8194 ppb	15:28:09
1	Be 313.107†	-14328.5	-16213.8	0.0899 µg/L	0.0899 ppb	15:27:49
1	Cd 226.502†	5667.7	6834.2	0.0189 µg/L	0.0189 ppb	15:27:49
1	Co 228.616†	648.7	942.0	-10.524 µg/L	-10.524 ppb	15:28:09
1	Cr 267.716†	423.8	324.2	-0.4000 µg/L	-0.4000 ppb	15:28:09
1	Cu 324.752†	-15616.5	-21316.4	1.3548 µg/L	1.3548 ppb	15:27:49
1	Mn 257.610†	16797.3	19752.8	6.6460 µg/L	6.6460 ppb	15:27:49
1	Mo 202.031†	-897.8	-1030.4	-6.5604 µg/L	-6.5604 ppb	15:27:49
1	Ni 231.604†	211.2	328.5	4.1319 µg/L	4.1319 ppb	15:28:09
1	P 214.914†	924.8	1092.2	67.436 µg/L	67.436 ppb	15:28:09
1	Pb 220.353†	-15.3	-115.1	-3.2134 µg/L	-3.2134 ppb	15:28:09
1	S 181.975 Axial†	174.3	119.1	97.381 µg/L	97.381 ppb	15:28:09
1	Sb 206.836†	113.6	56.7	-1.8998 µg/L	-1.8998 ppb	15:28:09
1	Se 196.026†	-352.5	-431.8	-2.26 µg/L	-2.26 ppb	15:28:09
1	SiO2†	1807.3	391.1	42.666 µg/L	42.666 ppb	15:28:09
1	Si 251.611†	-1781.3	-3062.0	-49.173 µg/L	-49.173 ppb	15:27:49
1	Sn 189.927†	87.2	106.0	7.4350 µg/L	7.4350 ppb	15:28:09
1	Ti 334.940†	24073.9	27675.7	-4.9000 µg/L	-4.9000 ppb	15:27:49
1	Tl 190.801†	-177.4	-93.4	-11.930 µg/L	-11.930 ppb	15:28:09
1	U 409.014†	220380.3	261743.9	16316 µg/L	16316 ppb	15:27:49
1	V 292.402†	7565.3	8665.6	9.6187 µg/L	9.6187 ppb	15:27:49
1	Zn 213.857†	7862.1	8803.1	11.198 µg/L	11.198 ppb	15:28:09
2	Sc RADIAL	133662.6	133662.6	90.4 %		15:27:40
2	Al 396.153Radial†	2208386.1	2442521.6	503340 µg/L	503340 ppb	15:27:38
2	Ca 317.933Radial†	7235360.6	8001557.4	481430 µg/L	481430 ppb	15:27:38
2	Fe 238.204 Radial†	6131145.7	6780861.1	456280 µg/L	456280 ppb	15:27:38
2	K 766.490 Radial†	1926.9	818.3	14.893 µg/L	14.893 ppb	15:27:40
2	Mg 279.077 IEC†	1057709.3	1169649.9	479420 µg/L	479420 ppb	15:27:38
2	Na 589.592 Radial†	3012824.9	3330955.4	505800 µg/L	505800 ppb	15:27:38
2	Sr 421.552†	4780.7	5509.1	8.9403 µg/L	8.9403 ppb	15:27:40
2	Sc 361.383	1491945.8	1491945.8	85.007 %		15:28:12
2	Y 371.029	884642.3	884642.3	83.140 %		15:28:12
2	Ag 328.068†	2189.1	-871.9	1.9264 µg/L	1.9264 ppb	15:28:12
2	As 188.979†	-239.5	-264.0	10.187 µg/L	10.187 ppb	15:28:32
2	B 249.677†	4005.3	1481.3	24.110 µg/L	24.110 ppb	15:28:12
2	Ba 233.527†	580.5	845.0	-2.1494 µg/L	-2.1494 ppb	15:28:32
2	Be 313.107†	-14594.1	-16382.5	0.0185 µg/L	0.0185 ppb	15:28:12
2	Cd 226.502†	5774.9	6903.5	-0.5813 µg/L	-0.5813 ppb	15:28:12
2	Co 228.616†	624.1	906.6	-11.537 µg/L	-11.537 ppb	15:28:32
2	Cr 267.716†	416.0	310.8	-0.2391 µg/L	-0.2391 ppb	15:28:32
2	Cu 324.752†	-15844.3	-21427.7	2.6175 µg/L	2.6175 ppb	15:28:12
2	Mn 257.610†	16681.9	19448.5	5.7732 µg/L	5.7732 ppb	15:28:12
2	Mo 202.031†	-885.2	-1006.6	-5.1979 µg/L	-5.1979 ppb	15:28:12
2	Ni 231.604†	194.7	306.9	3.8599 µg/L	3.8599 ppb	15:28:32
2	P 214.914†	903.2	1057.5	54.786 µg/L	54.786 ppb	15:28:32
2	Pb 220.353†	-9.7	-108.4	-2.3505 µg/L	-2.3505 ppb	15:28:32

2	S 181.975 Axial†	162.6	103.6	84.638 µg/L	84.638 ppb	15:28:32
2	Sb 206.836†	103.8	44.0	-3.7528 µg/L	-3.7528 ppb	15:28:32
2	Se 196.026†	-363.4	-441.0	-2.47 µg/L	-2.47 ppb	15:28:32
2	SiO2†	1787.0	349.0	38.154 µg/L	38.154 ppb	15:28:32
2	Si 251.611†	-1775.4	-3037.1	-48.774 µg/L	-48.774 ppb	15:28:12
2	Sn 189.927†	75.0	90.8	6.3853 µg/L	6.3853 ppb	15:28:32
2	Ti 334.940†	25851.7	29525.6	-3.6306 µg/L	-3.6306 ppb	15:28:12
2	Tl 190.801†	-199.4	-117.5	-15.139 µg/L	-15.139 ppb	15:28:32
2	U 409.014†	221329.4	260648.6	16245 µg/L	16245 ppb	15:28:12
2	V 292.402†	7749.2	8806.1	9.2452 µg/L	9.2452 ppb	15:28:12
2	Zn 213.857†	7893.7	8761.3	9.9501 µg/L	9.9501 ppb	15:28:32
3	Sc RADIAL	132134.1	132134.1	89.4 %		15:27:44
3	Al 396.153Radial†	2215858.4	2479134.6	510880 µg/L	510880 ppb	15:27:42
3	Ca 317.933Radial†	7272268.0	8135414.9	489490 µg/L	489490 ppb	15:27:42
3	Fe 238.204 Radial†	6164754.1	6896900.9	464080 µg/L	464080 ppb	15:27:42
3	K 766.490 Radial†	1800.0	701.0	-38.551 µg/L	-38.551 ppb	15:27:44
3	Mg 279.077 IEC†	1064515.1	1190796.0	488090 µg/L	488090 ppb	15:27:42
3	Na 589.592 Radial†	3025200.4	3383345.7	513750 µg/L	513750 ppb	15:27:42
3	Sr 421.552†	4781.2	5570.8	9.0197 µg/L	9.0197 ppb	15:27:44
3	Sc 361.383	1476102.9	1476102.9	84.105 %		15:28:34
3	Y 371.029	876472.2	876472.2	82.372 %		15:28:34
3	Ag 328.068†	1850.6	-1246.7	0.2207 µg/L	0.2207 ppb	15:28:34
3	As 188.979†	-230.9	-256.9	14.443 µg/L	14.443 ppb	15:28:55
3	B 249.677†	3692.4	1159.9	18.868 µg/L	18.868 ppb	15:28:34
3	Ba 233.527†	608.5	885.6	-2.0717 µg/L	-2.0717 ppb	15:28:55
3	Be 313.107†	-14186.1	-16081.6	0.1172 µg/L	0.1172 ppb	15:28:34
3	Cd 226.502†	5641.6	6817.9	-1.9905 µg/L	-1.9905 ppb	15:28:34
3	Co 228.616†	619.3	908.7	-11.915 µg/L	-11.915 ppb	15:28:55
3	Cr 267.716†	455.9	363.5	0.3478 µg/L	0.3478 ppb	15:28:55
3	Cu 324.752†	-15453.9	-21163.5	5.1254 µg/L	5.1254 ppb	15:28:34
3	Mn 257.610†	16497.8	19440.3	5.3978 µg/L	5.3978 ppb	15:28:34
3	Mo 202.031†	-841.4	-965.6	-3.4268 µg/L	-3.4268 ppb	15:28:34
3	Ni 231.604†	143.2	248.2	3.1217 µg/L	3.1217 ppb	15:28:55
3	P 214.914†	894.1	1058.1	51.284 µg/L	51.284 ppb	15:28:55
3	Pb 220.353†	-28.9	-131.3	-3.5614 µg/L	-3.5614 ppb	15:28:55
3	S 181.975 Axial†	161.0	103.7	84.779 µg/L	84.779 ppb	15:28:55
3	Sb 206.836†	120.2	64.8	-1.1601 µg/L	-1.1601 ppb	15:28:55
3	Se 196.026†	-381.7	-467.4	-10.3 µg/L	-10.3 ppb	15:28:55
3	SiO2†	1817.9	408.3	44.447 µg/L	44.447 ppb	15:28:55
3	Si 251.611†	-1958.8	-3277.6	-52.691 µg/L	-52.691 ppb	15:28:34
3	Sn 189.927†	86.5	105.4	7.3929 µg/L	7.3929 ppb	15:28:55
3	Ti 334.940†	24067.1	27730.1	-5.9375 µg/L	-5.9375 ppb	15:28:34
3	Tl 190.801†	-187.6	-105.9	-13.606 µg/L	-13.606 ppb	15:28:55
3	U 409.014†	219352.6	261092.7	16272 µg/L	16272 ppb	15:28:34
3	V 292.402†	7743.9	8897.6	8.9429 µg/L	8.9429 ppb	15:28:34
3	Zn 213.857†	7836.5	8793.0	9.3727 µg/L	9.3727 ppb	15:28:55

Mean Data: LR1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1482457.8	84.467 %	0.4771			0.56%
Sc RADIAL	134077.9	90.7 %	1.48			1.63%
Y 371.029	879666.0	82.672 %	0.4104			0.50%
Ag 328.068†	-995.0	1.5072 µg/L	1.13650	1.5072 ppb	1.13650	75.40%
Al 396.153Radial†	2435754.8	501940 µg/L	9711.9	501940 ppb	9711.9	1.93%
QC value within limits for Al 396.153Radial Recovery = 100.39%						
As 188.979†	-258.9	11.796 µg/L	2.3107	11.796 ppb	2.3107	19.59%
B 249.677†	1403.1	22.833 µg/L	3.5049	22.833 ppb	3.5049	15.35%
Ba 233.527†	873.8	-2.0135 µg/L	0.17249	-2.0135 ppb	0.17249	8.57%
Be 313.107†	-16226.0	0.0752 µg/L	0.05096	0.0752 ppb	0.05096	67.76%
Ca 317.933Radial†	7984511.1	480410 µg/L	9633.4	480410 ppb	9633.4	2.01%
QC value within limits for Ca 317.933Radial Recovery = 96.08%						
Cd 226.502†	6851.9	-0.8510 µg/L	1.03148	-0.8510 ppb	1.03148	121.21%
Co 228.616†	919.1	-11.326 µg/L	0.7193	-11.326 ppb	0.7193	6.35%
Cr 267.716†	332.8	-0.0971 µg/L	0.39360	-0.0971 ppb	0.39360	405.29%
Cu 324.752†	-21302.5	3.0326 µg/L	1.91926	3.0326 ppb	1.91926	63.29%
Fe 238.204 Radial†	6768879.8	455470 µg/L	9044.5	455470 ppb	9044.5	1.99%
QC value within limits for Fe 238.204 Radial Recovery = 91.09%						
K 766.490 Radial†	729.7	-20.814 µg/L	30.9231	-20.814 ppb	30.9231	148.57%
Mg 279.077 IEC†	1167698.3	478620 µg/L	9892.0	478620 ppb	9892.0	2.07%

QC value within limits for Mg 279.077 IEC Recovery = 95.72%

Mn 257.610†	19547.2	5.9390 µg/L	0.64043	5.9390 ppb	0.64043	10.78%
Mo 202.031†	-1000.9	-5.0617 µg/L	1.57123	-5.0617 ppb	1.57123	31.04%
Na 589.592 Radial†	3322757.6	504550 µg/L	9881.5	504550 ppb	9881.5	1.96%

QC value within limits for Na 589.592 Radial Recovery = 100.91%

Ni 231.604†	294.5	3.7045 µg/L	0.52272	3.7045 ppb	0.52272	14.11%
P 214.914†	1069.3	57.835 µg/L	8.4971	57.835 ppb	8.4971	14.69%
Pb 220.353†	-118.3	-3.0417 µg/L	0.62343	-3.0417 ppb	0.62343	20.50%
S 181.975 Axial†	108.8	88.932 µg/L	7.3171	88.932 ppb	7.3171	8.23%
Sb 206.836†	55.2	-2.2709 µg/L	1.33559	-2.2709 ppb	1.33559	58.81%
Se 196.026†	-446.7	-5.01 µg/L	4.588	-5.01 ppb	4.588	91.56%
SiO2†	382.8	41.756 µg/L	3.2436	41.756 ppb	3.2436	7.77%
Si 251.611†	-3125.6	-50.213 µg/L	2.1553	-50.213 ppb	2.1553	4.29%
Sn 189.927†	100.8	7.0710 µg/L	0.59428	7.0710 ppb	0.59428	8.40%
Sr 421.552†	5524.3	8.9834 µg/L	0.04013	8.9834 ppb	0.04013	0.45%
Ti 334.940†	28310.5	-4.8227 µg/L	1.15537	-4.8227 ppb	1.15537	23.96%
Tl 190.801†	-105.6	-13.558 µg/L	1.6047	-13.558 ppb	1.6047	11.84%
U 409.014†	261161.7	16278 µg/L	35.6	16278 ppb	35.6	0.22%

QC value within limits for U 409.014 Recovery = 108.52%

V 292.402†	8789.8	9.2689 µg/L	0.33852	9.2689 ppb	0.33852	3.65%
Zn 213.857†	8785.8	10.174 µg/L	0.9330	10.174 ppb	0.9330	9.17%

All analyte(s) passed QC.

Sequence No.: 12

Sample ID: LR2

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 108

Date Collected: 3/30/2010 15:29:03

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: LR2

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	144237.0	144237.0	97.6 %		15:29:37
1	Al 396.153Radial†	2225.8	2344.2	31.470 µg/L	31.470 ppb	15:29:39
1	Ca 317.933Radial†	1195.6	527.4	31.732 µg/L	31.732 ppb	15:29:39
1	Fe 238.204 Radial†	-828.0	-989.3	-66.568 µg/L	-66.568 ppb	15:29:39
1	K 766.490 Radial†	705257.6	721512.5	296950 µg/L	296950 ppb	15:29:37
1	Mg 279.077 IEC†	-489.5	-670.5	-37.134 µg/L	-37.134 ppb	15:29:39
1	Na 589.592 Radial†	5220.5	4143.9	365.14 µg/L	365.14 ppb	15:29:39
1	Sr 421.552†	4186503.5	4291009.0	9898.7 µg/L	9898.7 ppb	15:29:35
1	Sc 361.383	1663697.1	1663697.1	94.793 %		15:30:01
1	Y 371.029	981892.5	981892.5	92.279 %		15:30:01
1	Ag 328.068†	-23773.7	-28526.5	5.2873 µg/L	5.2873 ppb	15:30:03
1	As 188.979†	27146.9	28655.7	10253 µg/L	10253 ppb	15:30:03
1	B 249.677†	294226.0	307156.3	4975.3 µg/L	4975.3 ppb	15:30:01
1	Ba 233.527†	3027478.9	3193928.4	13916 µg/L	13916 ppb	15:30:01
1	Be 313.107†	8944351.3	9436414.6	2831.8 µg/L	2831.8 ppb	15:29:57
1	Cd 226.502†	1332439.6	1405735.3	9656.4 µg/L	9656.4 ppb	15:30:01
1	Co 228.616†	659087.3	695460.8	9423.0 µg/L	9423.0 ppb	15:30:01
1	Cr 267.716†	2697213.0	2845181.7	23977 µg/L	23977 ppb	15:30:01
1	Cu 324.752†	4547393.6	4794374.9	20208 µg/L	20208 ppb	15:30:01
1	Mn 257.610†	6649756.4	7014825.5	9376.1 µg/L	9376.1 ppb	15:30:01
1	Mo 202.031†	289733.3	305681.9	9726.8 µg/L	9726.8 ppb	15:30:03
1	Ni 231.604†	734586.5	775012.3	9747.9 µg/L	9747.9 ppb	15:30:01
1	P 214.914†	60333.5	63642.4	14943 µg/L	14943 ppb	15:30:03
1	Pb 220.353†	364788.7	384728.2	23587 µg/L	23587 ppb	15:30:03
1	S 181.975 Axial†	59471.6	62650.4	51439 µg/L	51439 ppb	15:30:03
1	Sb 206.836†	72079.2	75960.2	9771.1 µg/L	9771.1 ppb	15:30:03
1	Se 196.026†	22882.5	24125.7	9660 µg/L	9660 ppb	15:30:03
1	SiO2†	894874.0	942272.7	100390 µg/L	100390 ppb	15:30:01
1	Si 251.611†	2754729.3	2905086.9	46828 µg/L	46828 ppb	15:30:01
1	Sn 189.927†	134561.0	141954.4	9861.0 µg/L	9861.0 ppb	15:30:03
1	Ti 334.940†	9355396.9	9868366.1	9878.7 µg/L	9878.7 ppb	15:29:57
1	Tl 190.801†	66599.1	70374.2	9608.7 µg/L	9608.7 ppb	15:30:03
1	U 409.014†	-8124.9	-8287.4	91.396 µg/L	91.396 ppb	15:30:03
1	V 292.402†	1792814.5	1890976.9	10234 µg/L	10234 ppb	15:30:01
1	Zn 213.857†	2209060.9	2329871.3	14375 µg/L	14375 ppb	15:30:01
2	Sc RADIAL	143986.9	143986.9	97.4 %		15:29:43
2	Al 396.153Radial†	2195.1	2316.5	19.993 µg/L	19.993 ppb	15:29:45
2	Ca 317.933Radial†	1141.8	474.3	28.538 µg/L	28.538 ppb	15:29:45
2	Fe 238.204 Radial†	-802.9	-965.1	-64.938 µg/L	-64.938 ppb	15:29:45
2	K 766.490 Radial†	707310.9	724875.9	298330 µg/L	298330 ppb	15:29:43
2	Mg 279.077 IEC†	-481.5	-663.1	-31.044 µg/L	-31.044 ppb	15:29:45
2	Na 589.592 Radial†	5011.9	3939.1	332.81 µg/L	332.81 ppb	15:29:45
2	Sr 421.552†	4170441.9	4281970.6	9877.9 µg/L	9877.9 ppb	15:29:41
2	Sc 361.383	1652411.6	1652411.6	94.150 %		15:30:11
2	Y 371.029	975307.9	975307.9	91.660 %		15:30:11
2	Ag 328.068†	-23549.1	-28459.3	5.3021 µg/L	5.3021 ppb	15:30:13
2	As 188.979†	27298.6	29012.4	10378 µg/L	10378 ppb	15:30:13
2	B 249.677†	291433.3	306310.0	4961.5 µg/L	4961.5 ppb	15:30:11
2	Ba 233.527†	2999547.4	3186074.1	13882 µg/L	13882 ppb	15:30:11
2	Be 313.107†	9002117.0	9562212.2	2869.5 µg/L	2869.5 ppb	15:30:07
2	Cd 226.502†	1319189.5	1401262.0	9625.7 µg/L	9625.7 ppb	15:30:11
2	Co 228.616†	653056.4	693803.8	9400.6 µg/L	9400.6 ppb	15:30:11
2	Cr 267.716†	2673331.9	2839249.8	23927 µg/L	23927 ppb	15:30:11
2	Cu 324.752†	4508860.7	4786211.3	20173 µg/L	20173 ppb	15:30:11
2	Mn 257.610†	6592131.1	7001530.5	9358.4 µg/L	9358.4 ppb	15:30:11
2	Mo 202.031†	291456.6	309599.8	9851.4 µg/L	9851.4 ppb	15:30:13
2	Ni 231.604†	727344.3	772612.7	9717.7 µg/L	9717.7 ppb	15:30:11
2	P 214.914†	60767.2	64537.7	15157 µg/L	15157 ppb	15:30:13
2	Pb 220.353†	367598.0	390340.2	23931 µg/L	23931 ppb	15:30:13

2	S 181.975 Axial†	60050.6	63693.9	52295 µg/L	52295 ppb	15:30:13
2	Sb 206.836†	72605.5	77038.4	9915.2 µg/L	9915.2 ppb	15:30:13
2	Se 196.026†	23187.2	24614.2	9850 µg/L	9850 ppb	15:30:13
2	SiO2†	886511.8	939838.4	100120 µg/L	100120 ppb	15:30:11
2	Si 251.611†	2730380.4	2899072.8	46728 µg/L	46728 ppb	15:30:11
2	Sn 189.927†	135964.5	144414.7	10032 µg/L	10032 ppb	15:30:13
2	Ti 334.940†	9415705.5	9999826.1	10010 µg/L	10010 ppb	15:30:07
2	Tl 190.801†	67195.6	71487.6	9759.6 µg/L	9759.6 ppb	15:30:13
2	U 409.014†	-7767.0	-7965.8	110.12 µg/L	110.12 ppb	15:30:13
2	V 292.402†	1776456.8	1886519.8	10211 µg/L	10211 ppb	15:30:11
2	Zn 213.857†	2189903.3	2325439.4	14348 µg/L	14348 ppb	15:30:11
3	Sc RADIAL	144822.6	144822.6	98.0 %		15:29:50
3	Al 396.153Radial†	2092.1	2198.4	-0.8903 µg/L	-0.8903 ppb	15:29:52
3	Ca 317.933Radial†	1203.7	530.7	31.929 µg/L	31.929 ppb	15:29:52
3	Fe 238.204 Radial†	-857.2	-1015.7	-68.345 µg/L	-68.345 ppb	15:29:52
3	K 766.490 Radial†	711651.3	725116.0	298430 µg/L	298430 ppb	15:29:50
3	Mg 279.077 IEC†	-463.8	-642.2	-24.276 µg/L	-24.276 ppb	15:29:52
3	Na 589.592 Radial†	4742.0	3633.8	286.38 µg/L	286.38 ppb	15:29:52
3	Sr 421.552†	4172633.3	4259499.7	9826.0 µg/L	9826.0 ppb	15:29:48
3	Sc 361.383	1657044.9	1657044.9	94.414 %		15:30:20
3	Y 371.029	978361.9	978361.9	91.947 %		15:30:20
3	Ag 328.068†	-23261.7	-28085.0	6.8804 µg/L	6.8804 ppb	15:30:22
3	As 188.979†	26976.3	28590.0	10231 µg/L	10231 ppb	15:30:22
3	B 249.677†	292997.5	307101.2	4974.4 µg/L	4974.4 ppb	15:30:20
3	Ba 233.527†	3012217.2	3190585.1	13902 µg/L	13902 ppb	15:30:20
3	Be 313.107†	8910545.1	9438487.5	2832.4 µg/L	2832.4 ppb	15:30:17
3	Cd 226.502†	1326786.2	1405390.3	9654.0 µg/L	9654.0 ppb	15:30:20
3	Co 228.616†	655684.4	694647.7	9412.0 µg/L	9412.0 ppb	15:30:20
3	Cr 267.716†	2685859.8	2844579.4	23972 µg/L	23972 ppb	15:30:20
3	Cu 324.752†	4522887.5	4787677.1	20179 µg/L	20179 ppb	15:30:20
3	Mn 257.610†	6615553.1	7006760.3	9365.4 µg/L	9365.4 ppb	15:30:20
3	Mo 202.031†	290065.6	307260.9	9777.0 µg/L	9777.0 ppb	15:30:22
3	Ni 231.604†	731039.6	774366.6	9739.8 µg/L	9739.8 ppb	15:30:20
3	P 214.914†	60515.4	64090.6	15051 µg/L	15051 ppb	15:30:22
3	Pb 220.353†	365639.3	387174.0	23737 µg/L	23737 ppb	15:30:22
3	S 181.975 Axial†	59594.5	63032.5	51752 µg/L	51752 ppb	15:30:22
3	Sb 206.836†	72374.1	76577.8	9853.0 µg/L	9853.0 ppb	15:30:22
3	Se 196.026†	23069.3	24420.5	9770 µg/L	9770 ppb	15:30:22
3	SiO2†	891398.7	942381.5	100400 µg/L	100400 ppb	15:30:20
3	Si 251.611†	2745197.8	2906657.8	46852 µg/L	46852 ppb	15:30:20
3	Sn 189.927†	135116.5	143112.7	9941.3 µg/L	9941.3 ppb	15:30:22
3	Ti 334.940†	9334301.8	9885642.8	9896.0 µg/L	9896.0 ppb	15:30:17
3	Tl 190.801†	66740.2	70805.7	9666.8 µg/L	9666.8 ppb	15:30:22
3	U 409.014†	-8268.5	-8473.9	78.920 µg/L	78.920 ppb	15:30:22
3	V 292.402†	1783384.1	1888581.0	10222 µg/L	10222 ppb	15:30:20
3	Zn 213.857†	2199491.6	2329091.1	14370 µg/L	14370 ppb	15:30:20

Mean Data: LR2

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1657717.9	94.453 %	0.3232			0.34%
Sc RADIAL	144348.8	97.6 %	0.29			0.30%
Y 371.029	978520.8	91.962 %	0.3097			0.34%
Ag 328.068†	-28357.0	5.8233 µg/L	0.91551	5.8233 ppb	0.91551	15.72%
Al 396.153Radial†	2286.4	16.858 µg/L	16.4064	16.858 ppb	16.4064	97.32%
As 188.979†	28752.7	10287 µg/L	79.2	10287 ppb	79.2	0.77%
QC value within limits for As 188.979 Recovery = 102.87%						
B 249.677†	306855.8	4970.4 µg/L	7.69	4970.4 ppb	7.69	0.15%
QC value within limits for B 249.677 Recovery = 99.41%						
Ba 233.527†	3190195.9	13900 µg/L	17.1	13900 ppb	17.1	0.12%
QC value within limits for Ba 233.527 Recovery = 92.67%						
Be 313.107†	9479038.1	2844.6 µg/L	21.62	2844.6 ppb	21.62	0.76%
QC value within limits for Be 313.107 Recovery = 94.82%						
Ca 317.933Radial†	510.8	30.733 µg/L	1.9038	30.733 ppb	1.9038	6.19%
Cd 226.502†	1404129.2	9645.4 µg/L	17.10	9645.4 ppb	17.10	0.18%
QC value within limits for Cd 226.502 Recovery = 96.45%						
Co 228.616†	694637.5	9411.9 µg/L	11.23	9411.9 ppb	11.23	0.12%
QC value within limits for Co 228.616 Recovery = 94.12%						
Cr 267.716†	2843003.6	23958 µg/L	27.5	23958 ppb	27.5	0.11%
QC value within limits for Cr 267.716 Recovery = 95.83%						

Cu 324.752†	4789421.1	20187 µg/L	18.3	20187 ppb	18.3	0.09%
QC value within limits for Cu 324.752 Recovery = 100.93%						
Fe 238.204 Radial†	-990.0	-66.617 µg/L	1.7042	-66.617 ppb	1.7042	2.56%
K 766.490 Radial†	723834.8	297900 µg/L	829.2	297900 ppb	829.2	0.28%
QC value within limits for K 766.490 Radial Recovery = 99.30%						
Mg 279.077 IEC†	-658.6	-30.818 µg/L	6.4320	-30.818 ppb	6.4320	20.87%
Mn 257.610†	7007705.4	9366.6 µg/L	8.95	9366.6 ppb	8.95	0.10%
QC value within limits for Mn 257.610 Recovery = 93.67%						
Mo 202.031†	307514.2	9785.1 µg/L	62.70	9785.1 ppb	62.70	0.64%
QC value within limits for Mo 202.031 Recovery = 97.85%						
Na 589.592 Radial†	3905.6	328.11 µg/L	39.594	328.11 ppb	39.594	12.07%
Ni 231.604†	773997.2	9735.1 µg/L	15.62	9735.1 ppb	15.62	0.16%
QC value within limits for Ni 231.604 Recovery = 97.35%						
P 214.914†	64090.2	15051 µg/L	107.1	15051 ppb	107.1	0.71%
QC value within limits for P 214.914 Recovery = 100.34%						
Pb 220.353†	387414.1	23751 µg/L	172.5	23751 ppb	172.5	0.73%
QC value within limits for Pb 220.353 Recovery = 95.01%						
S 181.975 Axial†	63125.6	51829 µg/L	433.3	51829 ppb	433.3	0.84%
QC value within limits for S 181.975 Axial Recovery = 103.66%						
Sb 206.836†	76525.5	9846.4 µg/L	72.30	9846.4 ppb	72.30	0.73%
QC value within limits for Sb 206.836 Recovery = 98.46%						
Se 196.026†	24386.8	9760 µg/L	98.5	9760 ppb	98.5	1.01%
QC value within limits for Se 196.026 Recovery = 97.61%						
SiO2†	941497.5	100300 µg/L	156.5	100300 ppb	156.5	0.16%
QC value within limits for SiO2 Recovery = 93.74%						
Si 251.611†	2903605.8	46802 µg/L	65.9	46802 ppb	65.9	0.14%
QC value within limits for Si 251.611 Recovery = 93.60%						
Sn 189.927†	143160.6	9944.7 µg/L	85.44	9944.7 ppb	85.44	0.86%
QC value within limits for Sn 189.927 Recovery = 99.45%						
Sr 421.552†	4277493.1	9867.5 µg/L	37.43	9867.5 ppb	37.43	0.38%
QC value within limits for Sr 421.552 Recovery = 98.68%						
Ti 334.940†	9917945.0	9928.3 µg/L	71.57	9928.3 ppb	71.57	0.72%
QC value within limits for Ti 334.940 Recovery = 99.28%						
Tl 190.801†	70889.2	9678.4 µg/L	76.09	9678.4 ppb	76.09	0.79%
QC value within limits for Tl 190.801 Recovery = 96.78%						
U 409.014†	-8242.4	93.479 µg/L	15.7042	93.479 ppb	15.7042	16.80%
V 292.402†	1888692.6	10222 µg/L	11.4	10222 ppb	11.4	0.11%
QC value within limits for V 292.402 Recovery = 102.22%						
Zn 213.857†	2328133.9	14364 µg/L	14.5	14364 ppb	14.5	0.10%
QC value within limits for Zn 213.857 Recovery = 95.76%						
All analyte(s) passed QC.						

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Analysis Begun

Start Time: 3/30/2010 15:38:03

Plasma On Time: 3/29/2010 18:07:58

Logged In Analyst: optima4

Technique: ICP Continuous

Spectrometer Model: Optima 7300 DV, S/N 077C0022701Autosampler Model: AS-93plus

Sample Information File: C:\pe\optima4\Sample Information\033010.sif

Batch ID:

Results Data Set: 033010B

Results Library: C:\pe\optima4\Results\Results.mdb
=====

Method Loaded

Method Name: Gen Eng fast_new Si

Method Last Saved: 3/30/2010 14:42:21

IEC File: 031810.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	No
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	Yes
Ni 231.604	Lin Thru 0	Peak Area	Axial	Sc 361.383	No
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
SiO2	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

Sequence No.: 1

Autosampler Location: 7

Sample ID: CCV

Date Collected: 3/30/2010 15:38:05

Analyst:

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib.	Sample Conc. Units	Analysis Time
1	Sc RADIAL	151504.5	151504.5	102 %			15:38:38
1	Al 396.153Radial†	25127.4	24580.8	5041.9 µg/L		5041.9 ppb	15:38:38
1	Ca 317.933Radial†	86568.9	83771.3	5040.3 µg/L		5040.3 ppb	15:38:38
1	Fe 238.204 Radial†	76327.0	74335.0	5001.9 µg/L		5001.9 ppb	15:38:38

1	K 766.490 Radial†	14132.9	12477.3	5131.1 µg/L	5131.1 ppb	15:38:38
1	Mg 279.077 IEC†	12891.5	12410.0	5098.9 µg/L	5098.9 ppb	15:38:38
1	Na 589.592 Radial†	69008.8	66128.4	10037 µg/L	10037 ppb	15:38:38
1	Sr 421.552†	226574.4	221300.6	510.47 µg/L	510.47 ppb	15:38:36
1	Sc 361.383	1759627.0	1759627.0	100.26 %		15:39:05
1	Y 371.029	1053204.5	1053204.5	98.981 %		15:39:05
1	Ag 328.068†	128951.6	125171.1	503.81 µg/L	503.81 ppb	15:39:05
1	As 188.979†	1422.1	1436.1	508.39 µg/L	508.39 ppb	15:39:25
1	B 249.677†	33989.6	30671.4	498.32 µg/L	498.32 ppb	15:39:05
1	Ba 233.527†	115707.9	115570.8	503.62 µg/L	503.62 ppb	15:39:05
1	Be 313.107†	1680446.8	1676887.5	503.39 µg/L	503.39 ppb	15:39:05
1	Cd 226.502†	73648.0	73567.6	504.83 µg/L	504.83 ppb	15:39:05
1	Co 228.616†	37203.9	37280.2	504.48 µg/L	504.48 ppb	15:39:05
1	Cr 267.716†	59799.2	59466.0	500.92 µg/L	500.92 ppb	15:39:05
1	Cu 324.752†	121918.4	118814.3	502.21 µg/L	502.21 ppb	15:39:05
1	Mn 257.610†	378583.6	377429.2	504.26 µg/L	504.26 ppb	15:39:05
1	Mo 202.031†	15912.6	15906.2	506.42 µg/L	506.42 ppb	15:39:25
1	Ni 231.604†	40265.5	40239.2	506.12 µg/L	506.12 ppb	15:39:05
1	P 214.914†	10703.2	10670.6	2536.6 µg/L	2536.6 ppb	15:39:25
1	Pb 220.353†	8477.2	8358.3	513.39 µg/L	513.39 ppb	15:39:25
1	S 181.975 Axial†	1327.5	1236.3	1017.7 µg/L	1017.7 ppb	15:39:25
1	Sb 206.836†	3955.7	3867.4	508.32 µg/L	508.32 ppb	15:39:25
1	Se 196.026†	1278.1	1261.2	507 µg/L	507 ppb	15:39:25
1	SiO2†	52159.9	50271.9	5356.6 µg/L	5356.6 ppb	15:39:05
1	Si 251.611†	156911.9	155557.5	2507.8 µg/L	2507.8 ppb	15:39:05
1	Sn 189.927†	7362.3	7345.9	510.26 µg/L	510.26 ppb	15:39:25
1	Ti 334.940†	504167.2	501978.0	502.26 µg/L	502.26 ppb	15:39:05
1	Tl 190.801†	3668.6	3776.2	515.02 µg/L	515.02 ppb	15:39:25
1	U 409.014†	7195.7	7460.8	497.79 µg/L	497.79 ppb	15:39:05
1	V 292.402†	94524.8	93970.6	505.63 µg/L	505.63 ppb	15:39:05
1	Zn 213.857†	82270.9	81533.6	501.71 µg/L	501.71 ppb	15:39:05
2	Sc RADIAL	151631.1	151631.1	103 %		15:38:42
2	Al 396.153Radial†	25213.3	24644.1	5055.0 µg/L	5055.0 ppb	15:38:42
2	Ca 317.933Radial†	87483.6	84592.5	5089.7 µg/L	5089.7 ppb	15:38:42
2	Fe 238.204 Radial†	77201.5	75125.4	5055.1 µg/L	5055.1 ppb	15:38:42
2	K 766.490 Radial†	14019.2	12355.0	5080.7 µg/L	5080.7 ppb	15:38:42
2	Mg 279.077 IEC†	13203.3	12703.5	5219.2 µg/L	5219.2 ppb	15:38:42
2	Na 589.592 Radial†	69553.7	66603.4	10109 µg/L	10109 ppb	15:38:42
2	Sr 421.552†	226352.0	220899.3	509.54 µg/L	509.54 ppb	15:38:40
2	Sc 361.383	1767397.7	1767397.7	100.70 %		15:39:28
2	Y 371.029	1058646.7	1058646.7	99.493 %		15:39:28
2	Ag 328.068†	130859.4	126500.1	509.15 µg/L	509.15 ppb	15:39:28
2	As 188.979†	1436.5	1444.1	511.22 µg/L	511.22 ppb	15:39:48
2	B 249.677†	34379.8	30909.8	502.19 µg/L	502.19 ppb	15:39:28
2	Ba 233.527†	116901.8	116249.1	506.58 µg/L	506.58 ppb	15:39:28
2	Be 313.107†	1699340.4	1688280.0	506.81 µg/L	506.81 ppb	15:39:28
2	Cd 226.502†	74684.6	74274.0	509.68 µg/L	509.68 ppb	15:39:28
2	Co 228.616†	37834.3	37743.0	510.74 µg/L	510.74 ppb	15:39:28
2	Cr 267.716†	60466.1	59866.0	504.29 µg/L	504.29 ppb	15:39:28
2	Cu 324.752†	122933.7	119287.8	504.23 µg/L	504.23 ppb	15:39:28
2	Mn 257.610†	382584.1	379741.6	507.35 µg/L	507.35 ppb	15:39:28
2	Mo 202.031†	15964.7	15888.1	505.85 µg/L	505.85 ppb	15:39:48
2	Ni 231.604†	40711.4	40505.5	509.47 µg/L	509.47 ppb	15:39:28
2	P 214.914†	10678.1	10598.7	2519.4 µg/L	2519.4 ppb	15:39:48
2	Pb 220.353†	8471.7	8315.7	510.77 µg/L	510.77 ppb	15:39:48
2	S 181.975 Axial†	1340.2	1243.1	1023.3 µg/L	1023.3 ppb	15:39:48
2	Sb 206.836†	3947.9	3842.3	504.98 µg/L	504.98 ppb	15:39:48
2	Se 196.026†	1275.0	1252.5	504 µg/L	504 ppb	15:39:48
2	SiO2†	52564.4	50444.8	5375.1 µg/L	5375.1 ppb	15:39:28
2	Si 251.611†	158508.2	156454.6	2522.3 µg/L	2522.3 ppb	15:39:28
2	Sn 189.927†	7380.4	7331.5	509.27 µg/L	509.27 ppb	15:39:48
2	Ti 334.940†	508780.8	504348.6	504.62 µg/L	504.62 ppb	15:39:28
2	Tl 190.801†	3664.4	3755.9	512.33 µg/L	512.33 ppb	15:39:48
2	U 409.014†	7366.9	7599.3	506.72 µg/L	506.72 ppb	15:39:28
2	V 292.402†	95762.2	94784.8	509.95 µg/L	509.95 ppb	15:39:28
2	Zn 213.857†	83402.5	82296.5	506.42 µg/L	506.42 ppb	15:39:28
3	Sc RADIAL	151391.2	151391.2	102 %		15:38:46
3	Al 396.153Radial†	25270.0	24738.4	5074.3 µg/L	5074.3 ppb	15:38:46
3	Ca 317.933Radial†	87371.5	84618.2	5091.3 µg/L	5091.3 ppb	15:38:46
3	Fe 238.204 Radial†	77219.5	75262.3	5064.3 µg/L	5064.3 ppb	15:38:46
3	K 766.490 Radial†	14248.8	12600.8	5181.9 µg/L	5181.9 ppb	15:38:46

3	Mg 279.077 IEC†	13166.9	12688.3	5213.0 µg/L	5213.0 ppb	15:38:46
3	Na 589.592 Radial†	69635.2	66790.4	10137 µg/L	10137 ppb	15:38:46
3	Sr 421.552†	229157.3	223988.2	516.67 µg/L	516.67 ppb	15:38:44
3	Sc 361.383	1755860.8	1755860.8	100.04 %		15:39:51
3	Y 371.029	1051150.6	1051150.6	98.788 %		15:39:51
3	Ag 328.068†	129337.0	125832.2	506.50 µg/L	506.50 ppb	15:39:51
3	As 188.979†	1421.3	1438.3	509.21 µg/L	509.21 ppb	15:40:11
3	B 249.677†	34212.5	30966.9	503.12 µg/L	503.12 ppb	15:39:51
3	Ba 233.527†	115940.4	116050.8	505.72 µg/L	505.72 ppb	15:39:51
3	Be 313.107†	1687416.9	1687449.6	506.56 µg/L	506.56 ppb	15:39:51
3	Cd 226.502†	73921.5	73998.5	507.78 µg/L	507.78 ppb	15:39:51
3	Co 228.616†	37565.8	37721.5	510.45 µg/L	510.45 ppb	15:39:51
3	Cr 267.716†	60098.6	59893.2	504.51 µg/L	504.51 ppb	15:39:51
3	Cu 324.752†	122263.6	119420.1	504.79 µg/L	504.79 ppb	15:39:51
3	Mn 257.610†	379537.3	379192.3	506.61 µg/L	506.61 ppb	15:39:51
3	Mo 202.031†	15914.9	15942.5	507.58 µg/L	507.58 ppb	15:40:11
3	Ni 231.604†	40391.8	40451.7	508.79 µg/L	508.79 ppb	15:39:51
3	P 214.914†	10679.2	10669.4	2536.2 µg/L	2536.2 ppb	15:40:11
3	Pb 220.353†	8465.8	8365.1	513.80 µg/L	513.80 ppb	15:40:11
3	S 181.975 Axial†	1323.1	1234.8	1016.5 µg/L	1016.5 ppb	15:40:11
3	Sb 206.836†	3956.0	3876.1	509.43 µg/L	509.43 ppb	15:40:11
3	Se 196.026†	1279.2	1265.1	509 µg/L	509 ppb	15:40:11
3	SiO2†	52368.9	50592.4	5390.8 µg/L	5390.8 ppb	15:39:51
3	Si 251.611†	157439.7	156420.8	2521.7 µg/L	2521.7 ppb	15:39:51
3	Sn 189.927†	7339.1	7338.4	509.75 µg/L	509.75 ppb	15:40:11
3	Ti 334.940†	505640.1	504528.9	504.80 µg/L	504.80 ppb	15:39:51
3	Tl 190.801†	3657.4	3772.9	514.61 µg/L	514.61 ppb	15:40:11
3	U 409.014†	7450.5	7730.9	514.89 µg/L	514.89 ppb	15:39:51
3	V 292.402†	94903.2	94551.0	508.74 µg/L	508.74 ppb	15:39:51
3	Zn 213.857†	82565.8	82004.4	504.61 µg/L	504.61 ppb	15:39:51

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1760961.8	100.34 %	0.335			0.33%
Sc RADIAL	151508.9	102 %	0.1			0.08%
Y 371.029	1054333.9	99.087 %	0.3640			0.37%
Ag 328.068†	125834.5	506.49 µg/L	2.671	506.49 ppb	2.671	0.53%
QC value within limits for Ag 328.068 Recovery = 101.30%						
Al 396.153Radial†	24654.5	5057.1 µg/L	16.32	5057.1 ppb	16.32	0.32%
QC value within limits for Al 396.153Radial Recovery = 101.14%						
As 188.979†	1439.5	509.60 µg/L	1.458	509.60 ppb	1.458	0.29%
QC value within limits for As 188.979 Recovery = 101.92%						
B 249.677†	30849.4	501.21 µg/L	2.544	501.21 ppb	2.544	0.51%
QC value within limits for B 249.677 Recovery = 100.24%						
Ba 233.527†	115956.9	505.31 µg/L	1.519	505.31 ppb	1.519	0.30%
QC value within limits for Ba 233.527 Recovery = 101.06%						
Be 313.107†	1684205.7	505.59 µg/L	1.908	505.59 ppb	1.908	0.38%
QC value within limits for Be 313.107 Recovery = 101.12%						
Ca 317.933Radial†	84327.3	5073.8 µg/L	28.98	5073.8 ppb	28.98	0.57%
QC value within limits for Ca 317.933Radial Recovery = 101.48%						
Cd 226.502†	73946.7	507.43 µg/L	2.442	507.43 ppb	2.442	0.48%
QC value within limits for Cd 226.502 Recovery = 101.49%						
Co 228.616†	37581.5	508.55 µg/L	3.533	508.55 ppb	3.533	0.69%
QC value within limits for Co 228.616 Recovery = 101.71%						
Cr 267.716†	59741.7	503.24 µg/L	2.010	503.24 ppb	2.010	0.40%
QC value within limits for Cr 267.716 Recovery = 100.65%						
Cu 324.752†	119174.0	503.74 µg/L	1.358	503.74 ppb	1.358	0.27%
QC value within limits for Cu 324.752 Recovery = 100.75%						
Fe 238.204 Radial†	74907.6	5040.4 µg/L	33.68	5040.4 ppb	33.68	0.67%
QC value within limits for Fe 238.204 Radial Recovery = 100.81%						
K 766.490 Radial†	12477.7	5131.2 µg/L	50.59	5131.2 ppb	50.59	0.99%
QC value within limits for K 766.490 Radial Recovery = 102.62%						
Mg 279.077 IEC†	12600.6	5177.1 µg/L	67.76	5177.1 ppb	67.76	1.31%
QC value within limits for Mg 279.077 IEC Recovery = 103.54%						
Mn 257.610†	378787.7	506.08 µg/L	1.612	506.08 ppb	1.612	0.32%
QC value within limits for Mn 257.610 Recovery = 101.22%						
Mo 202.031†	15912.3	506.62 µg/L	0.882	506.62 ppb	0.882	0.17%
QC value within limits for Mo 202.031 Recovery = 101.32%						
Na 589.592 Radial†	66507.4	10094 µg/L	51.8	10094 ppb	51.8	0.51%

QC value within limits for Na 589.592 Radial Recovery = 100.94%

Ni 231.604†	40398.8	508.13 µg/L	1.771	508.13 ppb	1.771	0.35%
QC value within limits for Ni 231.604 Recovery = 101.63%						
P 214.914†	10646.2	2530.7 µg/L	9.83	2530.7 ppb	9.83	0.39%
QC value within limits for P 214.914 Recovery = 101.23%						
Pb 220.353†	8346.3	512.65 µg/L	1.641	512.65 ppb	1.641	0.32%
QC value within limits for Pb 220.353 Recovery = 102.53%						
S 181.975 Axial†	1238.1	1019.2 µg/L	3.61	1019.2 ppb	3.61	0.35%
QC value within limits for S 181.975 Axial Recovery = 101.92%						
Sb 206.836†	3861.9	507.58 µg/L	2.318	507.58 ppb	2.318	0.46%
QC value within limits for Sb 206.836 Recovery = 101.52%						
Se 196.026†	1259.6	506 µg/L	2.6	506 ppb	2.6	0.51%
QC value within limits for Se 196.026 Recovery = 101.28%						
SiO2†	50436.4	5374.2 µg/L	17.15	5374.2 ppb	17.15	0.32%
QC value within limits for SiO2 Recovery = 100.50%						
Si 251.611†	156144.3	2517.3 µg/L	8.23	2517.3 ppb	8.23	0.33%
QC value within limits for Si 251.611 Recovery = 100.69%						
Sn 189.927†	7338.6	509.76 µg/L	0.493	509.76 ppb	0.493	0.10%
QC value within limits for Sn 189.927 Recovery = 101.95%						
Sr 421.552†	222062.7	512.23 µg/L	3.874	512.23 ppb	3.874	0.76%
QC value within limits for Sr 421.552 Recovery = 102.45%						
Ti 334.940†	503618.5	503.89 µg/L	1.418	503.89 ppb	1.418	0.28%
QC value within limits for Ti 334.940 Recovery = 100.78%						
Tl 190.801†	3768.3	513.99 µg/L	1.448	513.99 ppb	1.448	0.28%
QC value within limits for Tl 190.801 Recovery = 102.80%						
U 409.014†	7597.0	506.47 µg/L	8.551	506.47 ppb	8.551	1.69%
QC value within limits for U 409.014 Recovery = 101.29%						
V 292.402†	94435.5	508.11 µg/L	2.233	508.11 ppb	2.233	0.44%
QC value within limits for V 292.402 Recovery = 101.62%						
Zn 213.857†	81944.8	504.24 µg/L	2.372	504.24 ppb	2.372	0.47%
QC value within limits for Zn 213.857 Recovery = 100.85%						

All analyte(s) passed QC.

Sequence No.: 2

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 3/30/2010 15:40:19

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	152271.6	152271.6	103 %		15:40:49
1	Al 396.153Radial†	-38.2	25.8	5.3134 µg/L	5.3134 ppb	15:41:09
1	Ca 317.933Radial†	593.7	-121.6	-7.3179 µg/L	-7.3179 ppb	15:41:09
1	Fe 238.204 Radial†	146.8	1.9	0.1250 µg/L	0.1250 ppb	15:41:09
1	K 766.490 Radial†	1582.5	223.6	91.992 µg/L	91.992 ppb	15:40:49
1	Mg 279.077 IEC†	171.9	-1.9	-0.7624 µg/L	-0.7624 ppb	15:41:09
1	Na 589.592 Radial†	1948.7	685.2	103.97 µg/L	103.97 ppb	15:40:49
1	Sr 421.552†	-262.3	-33.0	-0.0760 µg/L	-0.0760 ppb	15:40:49
1	Sc 361.383	1761746.1	1761746.1	100.38 %		15:42:11
1	Y 371.029	1068118.8	1068118.8	100.38 %		15:42:11
1	Ag 328.068†	3245.5	-213.9	-0.8439 µg/L	-0.8439 ppb	15:42:13
1	As 188.979†	-13.3	4.5	1.5509 µg/L	1.5509 ppb	15:42:33
1	B 249.677†	3249.5	6.9	0.1116 µg/L	0.1116 ppb	15:42:33
1	Ba 233.527†	-156.2	6.5	0.0280 µg/L	0.0280 ppb	15:42:33
1	Be 313.107†	-658.9	129.2	0.0424 µg/L	0.0424 ppb	15:42:13
1	Cd 226.502†	-73.5	36.8	0.2528 µg/L	0.2528 ppb	15:42:33
1	Co 228.616†	-169.4	3.7	0.0497 µg/L	0.0497 ppb	15:42:33
1	Cr 267.716†	146.3	-32.8	-0.2859 µg/L	-0.2859 ppb	15:42:33
1	Cu 324.752†	2940.0	139.9	0.5993 µg/L	0.5993 ppb	15:42:13
1	Mn 257.610†	146.6	-29.6	-0.0395 µg/L	-0.0395 ppb	15:42:33
1	Mo 202.031†	-31.7	3.2	0.1017 µg/L	0.1017 ppb	15:42:33
1	Ni 231.604†	-80.5	-2.3	-0.0290 µg/L	-0.0290 ppb	15:42:33
1	P 214.914†	10.9	5.9	1.4022 µg/L	1.4022 ppb	15:42:33
1	Pb 220.353†	91.1	-6.2	-0.3899 µg/L	-0.3899 ppb	15:42:33
1	S 181.975 Axial†	91.1	3.1	2.5246 µg/L	2.5246 ppb	15:42:33
1	Sb 206.836†	82.7	4.4	0.5766 µg/L	0.5766 ppb	15:42:33
1	Se 196.026†	16.5	2.9	1.16 µg/L	1.16 ppb	15:42:33
1	SiO2†	1686.5	-73.0	-7.8262 µg/L	-7.8262 ppb	15:42:33
1	Si 251.611†	796.3	-155.3	-2.5203 µg/L	-2.5203 ppb	15:42:33
1	Sn 189.927†	8.2	10.7	0.7386 µg/L	0.7386 ppb	15:42:33
1	Ti 334.940†	880.2	-8.7	-0.0137 µg/L	-0.0137 ppb	15:42:13
1	Tl 190.801†	-115.7	1.9	0.2434 µg/L	0.2434 ppb	15:42:33
1	U 409.014†	-94.2	189.9	11.851 µg/L	11.851 ppb	15:42:13
1	V 292.402†	174.7	-135.8	-0.7133 µg/L	-0.7133 ppb	15:42:13
1	Zn 213.857†	549.9	23.3	0.1441 µg/L	0.1441 ppb	15:42:33
2	Sc RADIAL	150618.8	150618.8	102 %		15:41:11
2	Al 396.153Radial†	-53.4	10.5	2.1418 µg/L	2.1418 ppb	15:41:31
2	Ca 317.933Radial†	581.3	-127.4	-7.6675 µg/L	-7.6675 ppb	15:41:31
2	Fe 238.204 Radial†	171.2	27.3	1.8369 µg/L	1.8369 ppb	15:41:31
2	K 766.490 Radial†	1606.1	263.5	108.45 µg/L	108.45 ppb	15:41:11
2	Mg 279.077 IEC†	179.0	6.9	2.8302 µg/L	2.8302 ppb	15:41:31
2	Na 589.592 Radial†	1952.8	710.0	107.71 µg/L	107.71 ppb	15:41:11
2	Sr 421.552†	-168.0	56.8	0.1310 µg/L	0.1310 ppb	15:41:11
2	Sc 361.383	1744841.8	1744841.8	99.417 %		15:42:35
2	Y 371.029	1059308.4	1059308.4	99.555 %		15:42:35
2	Ag 328.068†	3616.7	190.8	0.7580 µg/L	0.7580 ppb	15:42:37
2	As 188.979†	-24.5	-7.0	-2.4263 µg/L	-2.4263 ppb	15:42:57
2	B 249.677†	3270.5	59.3	0.9680 µg/L	0.9680 ppb	15:42:57
2	Ba 233.527†	-154.1	7.2	0.0313 µg/L	0.0313 ppb	15:42:57
2	Be 313.107†	-485.0	297.7	0.0894 µg/L	0.0894 ppb	15:42:37
2	Cd 226.502†	-103.0	6.4	0.0440 µg/L	0.0440 ppb	15:42:57
2	Co 228.616†	-197.0	-25.7	-0.3482 µg/L	-0.3482 ppb	15:42:57
2	Cr 267.716†	149.9	-27.8	-0.2344 µg/L	-0.2344 ppb	15:42:57
2	Cu 324.752†	2688.9	-84.2	-0.3548 µg/L	-0.3548 ppb	15:42:37
2	Mn 257.610†	185.8	11.3	0.0150 µg/L	0.0150 ppb	15:42:57
2	Mo 202.031†	-25.5	9.1	0.2905 µg/L	0.2905 ppb	15:42:57
2	Ni 231.604†	-56.6	20.9	0.2635 µg/L	0.2635 ppb	15:42:57
2	P 214.914†	13.3	8.4	2.0004 µg/L	2.0004 ppb	15:42:57
2	Pb 220.353†	110.4	14.1	0.8625 µg/L	0.8625 ppb	15:42:57

2	S 181.975 Axial†	98.4	11.2	9.2093 µg/L	9.2093 ppb	15:42:57
2	Sb 206.836†	81.8	4.2	0.5540 µg/L	0.5540 ppb	15:42:57
2	Se 196.026†	12.4	-1.1	-0.426 µg/L	-0.426 ppb	15:42:57
2	SiO2†	1708.7	-34.4	-3.6920 µg/L	-3.6920 ppb	15:42:57
2	Si 251.611†	793.5	-150.5	-2.4395 µg/L	-2.4395 ppb	15:42:57
2	Sn 189.927†	-3.9	-1.4	-0.0980 µg/L	-0.0980 ppb	15:42:57
2	Ti 334.940†	736.5	-144.8	-0.1454 µg/L	-0.1454 ppb	15:42:37
2	Tl 190.801†	-120.7	-4.3	-0.5836 µg/L	-0.5836 ppb	15:42:57
2	U 409.014†	-281.2	0.9	0.0544 µg/L	0.0544 ppb	15:42:37
2	V 292.402†	298.4	-9.7	-0.0495 µg/L	-0.0495 ppb	15:42:37
2	Zn 213.857†	548.3	27.0	0.1659 µg/L	0.1659 ppb	15:42:57
3	Sc RADIAL	150276.3	150276.3	102 %		15:41:33
3	Al 396.153Radial†	-42.9	20.6	4.2398 µg/L	4.2398 ppb	15:41:53
3	Ca 317.933Radial†	575.7	-131.7	-7.9223 µg/L	-7.9223 ppb	15:41:53
3	Fe 238.204 Radial†	159.4	16.1	1.0819 µg/L	1.0819 ppb	15:41:53
3	K 766.490 Radial†	1605.7	266.8	109.77 µg/L	109.77 ppb	15:41:33
3	Mg 279.077 IEC†	158.6	-12.8	-5.2449 µg/L	-5.2449 ppb	15:41:53
3	Na 589.592 Radial†	1794.4	558.5	84.715 µg/L	84.715 ppb	15:41:33
3	Sr 421.552†	-256.8	-31.0	-0.0714 µg/L	-0.0714 ppb	15:41:33
3	Sc 361.383	1748415.8	1748415.8	99.620 %		15:42:59
3	Y 371.029	1061132.7	1061132.7	99.726 %		15:42:59
3	Ag 328.068†	3479.1	45.3	0.1721 µg/L	0.1721 ppb	15:43:01
3	As 188.979†	-15.1	2.5	0.8709 µg/L	0.8709 ppb	15:43:21
3	B 249.677†	3242.7	24.7	0.4031 µg/L	0.4031 ppb	15:43:21
3	Ba 233.527†	-211.2	-49.8	-0.2173 µg/L	-0.2173 ppb	15:43:21
3	Be 313.107†	-621.8	161.4	0.0478 µg/L	0.0478 ppb	15:43:01
3	Cd 226.502†	-106.4	3.2	0.0217 µg/L	0.0217 ppb	15:43:21
3	Co 228.616†	-168.4	3.4	0.0451 µg/L	0.0451 ppb	15:43:21
3	Cr 267.716†	182.8	4.9	0.0428 µg/L	0.0428 ppb	15:43:21
3	Cu 324.752†	2822.4	44.2	0.1848 µg/L	0.1848 ppb	15:43:01
3	Mn 257.610†	163.1	-11.8	-0.0156 µg/L	-0.0156 ppb	15:43:21
3	Mo 202.031†	-27.1	7.5	0.2393 µg/L	0.2393 ppb	15:43:21
3	Ni 231.604†	-73.8	3.8	0.0482 µg/L	0.0482 ppb	15:43:21
3	P 214.914†	21.6	16.6	3.9756 µg/L	3.9756 ppb	15:43:21
3	Pb 220.353†	107.7	11.1	0.6820 µg/L	0.6820 ppb	15:43:21
3	S 181.975 Axial†	89.1	1.7	1.3920 µg/L	1.3920 ppb	15:43:21
3	Sb 206.836†	74.7	-3.1	-0.3965 µg/L	-0.3965 ppb	15:43:21
3	Se 196.026†	12.9	-0.6	-0.241 µg/L	-0.241 ppb	15:43:21
3	SiO2†	1708.0	-38.6	-4.1618 µg/L	-4.1618 ppb	15:43:21
3	Si 251.611†	777.3	-168.4	-2.7378 µg/L	-2.7378 ppb	15:43:21
3	Sn 189.927†	17.4	20.0	1.3815 µg/L	1.3815 ppb	15:43:21
3	Ti 334.940†	767.6	-115.0	-0.1142 µg/L	-0.1142 ppb	15:43:01
3	Tl 190.801†	-132.3	-15.7	-2.1132 µg/L	-2.1132 ppb	15:43:21
3	U 409.014†	-314.3	-31.8	-2.0187 µg/L	-2.0187 ppb	15:43:01
3	V 292.402†	220.4	-88.6	-0.4693 µg/L	-0.4693 ppb	15:43:01
3	Zn 213.857†	528.4	5.8	0.0357 µg/L	0.0357 ppb	15:43:21

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1751667.9	99.806 %	0.5076			0.51%
Sc RADIAL	151055.6	102 %	0.7			0.71%
Y 371.029	1062853.3	99.888 %	0.4370			0.44%
Ag 328.068†	7.4	0.0288 µg/L	0.81049	0.0288 ppb	0.81049	>999.9%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	19.0	3.8983 µg/L	1.61314	3.8983 ppb	1.61314	41.38%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	-0.0	-0.0015 µg/L	2.12733	-0.0015 ppb	2.12733	>999.9%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	30.3	0.4942 µg/L	0.43544	0.4942 ppb	0.43544	88.10%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	-12.0	-0.0527 µg/L	0.14255	-0.0527 ppb	0.14255	270.66%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	196.1	0.0599 µg/L	0.02571	0.0599 ppb	0.02571	42.95%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	-126.9	-7.6359 µg/L	0.30344	-7.6359 ppb	0.30344	3.97%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	15.5	0.1061 µg/L	0.12749	0.1061 ppb	0.12749	120.11%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-6.2	-0.0845 µg/L	0.22840	-0.0845 ppb	0.22840	270.40%

QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	-18.6	-0.1592 µg/L	0.17679	-0.1592 ppb	0.17679	111.07%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	33.3	0.1431 µg/L	0.47842	0.1431 ppb	0.47842	334.35%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	15.1	1.0146 µg/L	0.85793	1.0146 ppb	0.85793	84.56%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated						
K 766.490 Radial†	251.3	103.40 µg/L	9.906	103.40 ppb	9.906	9.58%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	-2.6	-1.0590 µg/L	4.04567	-1.0590 ppb	4.04567	382.01%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated						
Mn 257.610†	-10.0	-0.0134 µg/L	0.02732	-0.0134 ppb	0.02732	204.49%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	6.6	0.2105 µg/L	0.09765	0.2105 ppb	0.09765	46.40%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	651.2	98.798 µg/L	12.3396	98.798 ppb	12.3396	12.49%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	7.5	0.0942 µg/L	0.15155	0.0942 ppb	0.15155	160.83%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	10.3	2.4594 µg/L	1.34672	2.4594 ppb	1.34672	54.76%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	6.3	0.3849 µg/L	0.67701	0.3849 ppb	0.67701	175.89%
QC value within limits for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	5.3	4.3753 µg/L	4.22448	4.3753 ppb	4.22448	96.55%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	1.8	0.2447 µg/L	0.55538	0.2447 ppb	0.55538	226.96%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	0.4	0.163 µg/L	0.8651	0.163 ppb	0.8651	529.21%
QC value within limits for Se 196.026 Recovery = Not calculated						
SiO2†	-48.7	-5.2267 µg/L	2.26347	-5.2267 ppb	2.26347	43.31%
QC value within limits for SiO2 Recovery = Not calculated						
Si 251.611†	-158.1	-2.5658 µg/L	0.15427	-2.5658 ppb	0.15427	6.01%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	9.7	0.6740 µg/L	0.74189	0.6740 ppb	0.74189	110.07%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	-2.4	-0.0055 µg/L	0.11824	-0.0055 ppb	0.11824	>999.9%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	-89.5	-0.0911 µg/L	0.06887	-0.0911 ppb	0.06887	75.59%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	-6.1	-0.8178 µg/L	1.19565	-0.8178 ppb	1.19565	146.20%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 409.014†	53.0	3.2957 µg/L	7.48152	3.2957 ppb	7.48152	227.01%
QC value within limits for U 409.014 Recovery = Not calculated						
V 292.402†	-78.1	-0.4107 µg/L	0.33575	-0.4107 ppb	0.33575	81.75%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	18.7	0.1152 µg/L	0.06972	0.1152 ppb	0.06972	60.49%
QC value within limits for Zn 213.857 Recovery = Not calculated						

All analyte(s) passed QC.

Sequence No.: 8

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 3/30/2010 15:54:07

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	152898.0	152898.0	103 %		15:54:41
1	Al 396.153Radial†	25494.9	24712.6	5069.0 µg/L	5069.0 ppb	15:54:41
1	Ca 317.933Radial†	88550.4	84917.2	5109.3 µg/L	5109.3 ppb	15:54:41
1	Fe 238.204 Radial†	78113.2	75383.3	5072.4 µg/L	5072.4 ppb	15:54:41
1	K 766.490 Radial†	14245.1	12460.1	5124.0 µg/L	5124.0 ppb	15:54:41
1	Mg 279.077 IEC†	13260.3	12651.9	5198.1 µg/L	5198.1 ppb	15:54:41
1	Na 589.592 Radial†	69947.5	66422.3	10081 µg/L	10081 ppb	15:54:41
1	Sr 421.552†	225954.2	218686.1	504.44 µg/L	504.44 ppb	15:54:39
1	Sc 361.383	1766476.2	1766476.2	100.65 %		15:54:53
1	Y 371.029	1056827.3	1056827.3	99.322 %		15:54:53
1	Ag 328.068†	130821.0	126529.7	509.27 µg/L	509.27 ppb	15:54:53
1	As 188.979†	1449.4	1457.7	516.01 µg/L	516.01 ppb	15:55:14
1	B 249.677†	34337.2	30885.3	501.79 µg/L	501.79 ppb	15:54:53
1	Ba 233.527†	116922.3	116330.0	506.93 µg/L	506.93 ppb	15:54:53
1	Be 313.107†	1701022.2	1690831.4	507.58 µg/L	507.58 ppb	15:54:53
1	Cd 226.502†	74763.6	74391.2	510.48 µg/L	510.48 ppb	15:54:53
1	Co 228.616†	37890.8	37818.7	511.76 µg/L	511.76 ppb	15:54:53
1	Cr 267.716†	60801.9	60231.0	507.36 µg/L	507.36 ppb	15:54:53
1	Cu 324.752†	123064.6	119481.6	505.05 µg/L	505.05 ppb	15:54:53
1	Mn 257.610†	383529.0	380878.5	508.87 µg/L	508.87 ppb	15:54:53
1	Mo 202.031†	16006.9	15938.4	507.45 µg/L	507.45 ppb	15:55:14
1	Ni 231.604†	40839.2	40653.6	511.33 µg/L	511.33 ppb	15:54:53
1	P 214.914†	10798.6	10723.9	2549.2 µg/L	2549.2 ppb	15:55:14
1	Pb 220.353†	8511.4	8359.5	513.46 µg/L	513.46 ppb	15:55:14
1	S 181.975 Axial†	1341.1	1244.7	1024.6 µg/L	1024.6 ppb	15:55:14
1	Sb 206.836†	3967.2	3863.5	507.74 µg/L	507.74 ppb	15:55:14
1	Se 196.026†	1297.6	1275.7	513 µg/L	513 ppb	15:55:14
1	SiO2†	53075.1	50979.5	5432.2 µg/L	5432.2 ppb	15:54:53
1	Si 251.611†	159406.2	157429.0	2538.1 µg/L	2538.1 ppb	15:54:53
1	Sn 189.927†	7400.1	7354.9	510.89 µg/L	510.89 ppb	15:55:14
1	Ti 334.940†	509982.0	505805.6	506.08 µg/L	506.08 ppb	15:54:53
1	Tl 190.801†	3697.9	3791.1	517.08 µg/L	517.08 ppb	15:55:14
1	U 409.014†	7385.3	7621.4	508.08 µg/L	508.08 ppb	15:54:53
1	V 292.402†	95602.3	94675.5	509.40 µg/L	509.40 ppb	15:54:53
1	Zn 213.857†	83405.4	82342.7	506.69 µg/L	506.69 ppb	15:54:53
2	Sc RADIAL	153813.3	153813.3	104 %		15:54:45
2	Al 396.153Radial†	25906.1	24961.2	5120.3 µg/L	5120.3 ppb	15:54:45
2	Ca 317.933Radial†	90324.6	86113.0	5181.2 µg/L	5181.2 ppb	15:54:45
2	Fe 238.204 Radial†	79894.0	76645.4	5157.4 µg/L	5157.4 ppb	15:54:45
2	K 766.490 Radial†	14489.5	12613.1	5186.9 µg/L	5186.9 ppb	15:54:45
2	Mg 279.077 IEC†	13565.2	12868.7	5286.9 µg/L	5286.9 ppb	15:54:45
2	Na 589.592 Radial†	71256.6	67278.0	10211 µg/L	10211 ppb	15:54:45
2	Sr 421.552†	230368.6	221628.8	511.22 µg/L	511.22 ppb	15:54:43
2	Sc 361.383	1761903.1	1761903.1	100.39 %		15:55:17
2	Y 371.029	1054491.7	1054491.7	99.102 %		15:55:17
2	Ag 328.068†	130499.2	126546.5	509.34 µg/L	509.34 ppb	15:55:17
2	As 188.979†	1426.1	1438.2	509.18 µg/L	509.18 ppb	15:55:37
2	B 249.677†	34599.7	31235.3	507.49 µg/L	507.49 ppb	15:55:17
2	Ba 233.527†	116559.6	116270.2	506.67 µg/L	506.67 ppb	15:55:17
2	Be 313.107†	1696997.8	1691209.1	507.69 µg/L	507.69 ppb	15:55:17
2	Cd 226.502†	74443.4	74265.1	509.60 µg/L	509.60 ppb	15:55:17
2	Co 228.616†	37855.1	37880.8	512.60 µg/L	512.60 ppb	15:55:17
2	Cr 267.716†	60290.1	59878.0	504.39 µg/L	504.39 ppb	15:55:17
2	Cu 324.752†	122978.4	119713.0	506.04 µg/L	506.04 ppb	15:55:17
2	Mn 257.610†	382160.3	380504.2	508.37 µg/L	508.37 ppb	15:55:17
2	Mo 202.031†	15939.1	15912.1	506.62 µg/L	506.62 ppb	15:55:37
2	Ni 231.604†	40586.6	40507.2	509.49 µg/L	509.49 ppb	15:55:17
2	P 214.914†	10736.5	10689.9	2541.1 µg/L	2541.1 ppb	15:55:37
2	Pb 220.353†	8464.9	8335.1	511.96 µg/L	511.96 ppb	15:55:37

2	S 181.975 Axial†	1327.2	1234.3	1016.1 µg/L	1016.1 ppb	15:55:37
2	Sb 206.836†	3978.2	3884.7	510.55 µg/L	510.55 ppb	15:55:37
2	Se 196.026†	1299.1	1280.5	515 µg/L	515 ppb	15:55:37
2	SiO2†	52598.8	50641.9	5396.2 µg/L	5396.2 ppb	15:55:17
2	Si 251.611†	158393.7	156831.4	2528.4 µg/L	2528.4 ppb	15:55:17
2	Sn 189.927†	7363.2	7337.2	509.67 µg/L	509.67 ppb	15:55:37
2	Ti 334.940†	508335.3	505480.4	505.75 µg/L	505.75 ppb	15:55:17
2	Tl 190.801†	3693.7	3796.5	517.79 µg/L	517.79 ppb	15:55:37
2	U 409.014†	7366.6	7621.9	508.14 µg/L	508.14 ppb	15:55:17
2	V 292.402†	95533.2	94853.3	510.32 µg/L	510.32 ppb	15:55:17
2	Zn 213.857†	83149.2	82302.5	506.44 µg/L	506.44 ppb	15:55:17
3	Sc RADIAL	153503.9	153503.9	104 %		15:54:49
3	Al 396.153Radial†	25953.2	25056.8	5139.8 µg/L	5139.8 ppb	15:54:49
3	Ca 317.933Radial†	89994.6	85970.1	5172.6 µg/L	5172.6 ppb	15:54:49
3	Fe 238.204 Radial†	79338.5	76265.2	5131.8 µg/L	5131.8 ppb	15:54:49
3	K 766.490 Radial†	14412.9	12567.4	5168.1 µg/L	5168.1 ppb	15:54:49
3	Mg 279.077 IEC†	13512.1	12843.9	5276.9 µg/L	5276.9 ppb	15:54:49
3	Na 589.592 Radial†	70773.4	66950.7	10162 µg/L	10162 ppb	15:54:49
3	Sr 421.552†	228639.3	220409.6	508.41 µg/L	508.41 ppb	15:54:47
3	Sc 361.383	1744601.8	1744601.8	99.403 %		15:55:40
3	Y 371.029	1045173.0	1045173.0	98.226 %		15:55:40
3	Ag 328.068†	129131.8	126460.1	509.00 µg/L	509.00 ppb	15:55:40
3	As 188.979†	1420.2	1446.5	512.07 µg/L	512.07 ppb	15:56:00
3	B 249.677†	33934.1	30907.5	502.15 µg/L	502.15 ppb	15:55:40
3	Ba 233.527†	115526.7	116382.5	507.16 µg/L	507.16 ppb	15:55:40
3	Be 313.107†	1678703.4	1689568.9	507.20 µg/L	507.20 ppb	15:55:40
3	Cd 226.502†	73616.8	74168.8	508.94 µg/L	508.94 ppb	15:55:40
3	Co 228.616†	37455.8	37853.1	512.22 µg/L	512.22 ppb	15:55:40
3	Cr 267.716†	59770.6	59950.9	505.00 µg/L	505.00 ppb	15:55:40
3	Cu 324.752†	121792.5	119734.9	506.13 µg/L	506.13 ppb	15:55:40
3	Mn 257.610†	378385.7	380482.1	508.34 µg/L	508.34 ppb	15:55:40
3	Mo 202.031†	15905.8	16036.1	510.56 µg/L	510.56 ppb	15:56:00
3	Ni 231.604†	40232.3	40551.8	510.05 µg/L	510.05 ppb	15:55:40
3	P 214.914†	10667.1	10726.2	2549.7 µg/L	2549.7 ppb	15:56:00
3	Pb 220.353†	8410.1	8363.6	513.72 µg/L	513.72 ppb	15:56:00
3	S 181.975 Axial†	1333.4	1253.7	1032.0 µg/L	1032.0 ppb	15:56:00
3	Sb 206.836†	3953.6	3899.3	512.51 µg/L	512.51 ppb	15:56:00
3	Se 196.026†	1280.3	1274.4	512 µg/L	512 ppb	15:56:00
3	SiO2†	52227.3	50787.7	5411.6 µg/L	5411.6 ppb	15:55:40
3	Si 251.611†	156966.4	156960.3	2530.4 µg/L	2530.4 ppb	15:55:40
3	Sn 189.927†	7357.1	7403.9	514.29 µg/L	514.29 ppb	15:56:00
3	Ti 334.940†	503753.2	505892.4	506.16 µg/L	506.16 ppb	15:55:40
3	Tl 190.801†	3662.1	3801.2	518.43 µg/L	518.43 ppb	15:56:00
3	U 409.014†	7305.2	7632.8	508.81 µg/L	508.81 ppb	15:55:40
3	V 292.402†	94531.3	94789.1	510.02 µg/L	510.02 ppb	15:55:40
3	Zn 213.857†	82414.1	82384.4	506.95 µg/L	506.95 ppb	15:55:40

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1757660.4	100.15 %	0.657			0.66%
Sc RADIAL	153405.1	104 %	0.3			0.30%
Y 371.029	1052164.0	98.883 %	0.5795			0.59%
Ag 328.068†	126512.1	509.20 µg/L	0.182	509.20 ppb	0.182	0.04%
QC value within limits for Ag 328.068 Recovery = 101.84%						
Al 396.153Radial†	24910.2	5109.7 µg/L	36.55	5109.7 ppb	36.55	0.72%
QC value within limits for Al 396.153Radial Recovery = 102.19%						
As 188.979†	1447.5	512.42 µg/L	3.425	512.42 ppb	3.425	0.67%
QC value within limits for As 188.979 Recovery = 102.48%						
B 249.677†	31009.4	503.81 µg/L	3.194	503.81 ppb	3.194	0.63%
QC value within limits for B 249.677 Recovery = 100.76%						
Ba 233.527†	116327.6	506.92 µg/L	0.245	506.92 ppb	0.245	0.05%
QC value within limits for Ba 233.527 Recovery = 101.38%						
Be 313.107†	1690536.5	507.49 µg/L	0.258	507.49 ppb	0.258	0.05%
QC value within limits for Be 313.107 Recovery = 101.50%						
Ca 317.933Radial†	85666.7	5154.4 µg/L	39.29	5154.4 ppb	39.29	0.76%
QC value within limits for Ca 317.933Radial Recovery = 103.09%						
Cd 226.502†	74275.0	509.68 µg/L	0.769	509.68 ppb	0.769	0.15%
QC value within limits for Cd 226.502 Recovery = 101.94%						
Co 228.616†	37850.9	512.19 µg/L	0.418	512.19 ppb	0.418	0.08%

QC value within limits for Co 228.616 Recovery = 102.44%							
Cr	267.716†	60020.0	505.58 µg/L	1.569	505.58 ppb	1.569	0.31%
QC value within limits for Cr 267.716 Recovery = 101.12%							
Cu	324.752†	119643.1	505.74 µg/L	0.599	505.74 ppb	0.599	0.12%
QC value within limits for Cu 324.752 Recovery = 101.15%							
Fe	238.204 Radial†	76097.9	5120.5 µg/L	43.57	5120.5 ppb	43.57	0.85%
QC value within limits for Fe 238.204 Radial Recovery = 102.41%							
K	766.490 Radial†	12546.8	5159.6 µg/L	32.29	5159.6 ppb	32.29	0.63%
QC value within limits for K 766.490 Radial Recovery = 103.19%							
Mg	279.077 IEC†	12788.2	5254.0 µg/L	48.64	5254.0 ppb	48.64	0.93%
QC value within limits for Mg 279.077 IEC Recovery = 105.08%							
Mn	257.610†	380621.6	508.52 µg/L	0.300	508.52 ppb	0.300	0.06%
QC value within limits for Mn 257.610 Recovery = 101.70%							
Mo	202.031†	15962.2	508.21 µg/L	2.079	508.21 ppb	2.079	0.41%
QC value within limits for Mo 202.031 Recovery = 101.64%							
Na	589.592 Radial†	66883.7	10152 µg/L	65.5	10152 ppb	65.5	0.65%
QC value within limits for Na 589.592 Radial Recovery = 101.52%							
Ni	231.604†	40570.9	510.29 µg/L	0.944	510.29 ppb	0.944	0.18%
QC value within limits for Ni 231.604 Recovery = 102.06%							
P	214.914†	10713.3	2546.7 µg/L	4.86	2546.7 ppb	4.86	0.19%
QC value within limits for P 214.914 Recovery = 101.87%							
Pb	220.353†	8352.7	513.05 µg/L	0.948	513.05 ppb	0.948	0.18%
QC value within limits for Pb 220.353 Recovery = 102.61%							
S	181.975 Axial†	1244.2	1024.2 µg/L	7.94	1024.2 ppb	7.94	0.78%
QC value within limits for S 181.975 Axial Recovery = 102.42%							
Sb	206.836†	3882.5	510.27 µg/L	2.400	510.27 ppb	2.400	0.47%
QC value within limits for Sb 206.836 Recovery = 102.05%							
Se	196.026†	1276.9	513 µg/L	1.3	513 ppb	1.3	0.25%
QC value within limits for Se 196.026 Recovery = 102.67%							
SiO2†		50803.0	5413.3 µg/L	18.10	5413.3 ppb	18.10	0.33%
QC value within limits for SiO2 Recovery = 101.23%							
Si	251.611†	157073.6	2532.3 µg/L	5.09	2532.3 ppb	5.09	0.20%
QC value within limits for Si 251.611 Recovery = 101.29%							
Sn	189.927†	7365.3	511.62 µg/L	2.390	511.62 ppb	2.390	0.47%
QC value within limits for Sn 189.927 Recovery = 102.32%							
Sr	421.552†	220241.5	508.02 µg/L	3.410	508.02 ppb	3.410	0.67%
QC value within limits for Sr 421.552 Recovery = 101.60%							
Ti	334.940†	505726.1	506.00 µg/L	0.218	506.00 ppb	0.218	0.04%
QC value within limits for Ti 334.940 Recovery = 101.20%							
Tl	190.801†	3796.3	517.77 µg/L	0.678	517.77 ppb	0.678	0.13%
QC value within limits for Tl 190.801 Recovery = 103.55%							
U	409.014†	7625.4	508.34 µg/L	0.406	508.34 ppb	0.406	0.08%
QC value within limits for U 409.014 Recovery = 101.67%							
V	292.402†	94772.6	509.91 µg/L	0.466	509.91 ppb	0.466	0.09%
QC value within limits for V 292.402 Recovery = 101.98%							
Zn	213.857†	82343.2	506.69 µg/L	0.254	506.69 ppb	0.254	0.05%
QC value within limits for Zn 213.857 Recovery = 101.34%							

All analyte(s) passed QC.

Sequence No.: 9

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 3/30/2010 15:56:07

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	151439.2	151439.2	102 %		15:56:36
1	Al 396.153Radial†	-72.0	-7.4	-1.5426 µg/L	-1.5426 ppb	15:56:56
1	Ca 317.933Radial†	616.3	-96.4	-5.7988 µg/L	-5.7988 ppb	15:56:56
1	Fe 238.204 Radial†	169.0	24.3	1.6349 µg/L	1.6349 ppb	15:56:56
1	K 766.490 Radial†	1445.7	98.4	40.501 µg/L	40.501 ppb	15:56:36
1	Mg 279.077 IEC†	154.2	-18.3	-7.4960 µg/L	-7.4960 ppb	15:56:56
1	Na 589.592 Radial†	1619.2	374.0	56.749 µg/L	56.749 ppb	15:56:36
1	Sr 421.552†	-165.2	60.4	0.1393 µg/L	0.1393 ppb	15:56:36
1	Sc 361.383	1780635.7	1780635.7	101.46 %		15:57:44
1	Y 371.029	1078953.6	1078953.6	101.40 %		15:57:44
1	Ag 328.068†	3244.7	-249.0	-0.9690 µg/L	-0.9690 ppb	15:57:46
1	As 188.979†	-21.9	-3.9	-1.3519 µg/L	-1.3519 ppb	15:58:06
1	B 249.677†	3281.0	3.6	0.0578 µg/L	0.0578 ppb	15:58:06
1	Ba 233.527†	-154.7	9.6	0.0424 µg/L	0.0424 ppb	15:58:06
1	Be 313.107†	-762.3	34.2	0.0139 µg/L	0.0139 ppb	15:57:46
1	Cd 226.502†	-101.4	10.1	0.0691 µg/L	0.0691 ppb	15:58:06
1	Co 228.616†	-173.3	1.6	0.0220 µg/L	0.0220 ppb	15:58:06
1	Cr 267.716†	179.0	-2.1	-0.0268 µg/L	-0.0268 ppb	15:58:06
1	Cu 324.752†	2941.0	109.8	0.4727 µg/L	0.4727 ppb	15:57:46
1	Mn 257.610†	182.1	3.9	0.0055 µg/L	0.0055 ppb	15:58:06
1	Mo 202.031†	-29.1	6.1	0.1930 µg/L	0.1930 ppb	15:58:06
1	Ni 231.604†	-53.4	25.3	0.3179 µg/L	0.3179 ppb	15:58:06
1	P 214.914†	-6.7	-11.6	-2.7718 µg/L	-2.7718 ppb	15:58:06
1	Pb 220.353†	74.0	-24.0	-1.4785 µg/L	-1.4785 ppb	15:58:06
1	S 181.975 Axial†	91.2	2.2	1.8313 µg/L	1.8313 ppb	15:58:06
1	Sb 206.836†	88.4	9.1	1.1933 µg/L	1.1933 ppb	15:58:06
1	Se 196.026†	5.5	-8.2	-3.26 µg/L	-3.26 ppb	15:58:06
1	SiO2†	1722.5	-55.4	-5.9330 µg/L	-5.9330 ppb	15:58:06
1	Si 251.611†	814.0	-146.4	-2.3730 µg/L	-2.3730 ppb	15:57:46
1	Sn 189.927†	0.5	3.0	0.2076 µg/L	0.2076 ppb	15:58:06
1	Ti 334.940†	800.0	-97.0	-0.1016 µg/L	-0.1016 ppb	15:57:46
1	Tl 190.801†	-108.0	10.6	1.4336 µg/L	1.4336 ppb	15:58:06
1	U 409.014†	-95.3	189.8	11.916 µg/L	11.916 ppb	15:57:46
1	V 292.402†	409.5	93.8	0.5079 µg/L	0.5079 ppb	15:57:46
1	Zn 213.857†	545.2	12.8	0.0767 µg/L	0.0767 ppb	15:58:06
2	Sc RADIAL	151193.9	151193.9	102 %		15:56:58
2	Al 396.153Radial†	-43.5	20.3	4.1777 µg/L	4.1777 ppb	15:57:18
2	Ca 317.933Radial†	606.3	-105.1	-6.3262 µg/L	-6.3262 ppb	15:57:18
2	Fe 238.204 Radial†	149.4	5.4	0.3634 µg/L	0.3634 ppb	15:57:18
2	K 766.490 Radial†	1567.7	220.0	90.539 µg/L	90.539 ppb	15:56:58
2	Mg 279.077 IEC†	165.7	-6.8	-2.7730 µg/L	-2.7730 ppb	15:57:18
2	Na 589.592 Radial†	1434.7	196.2	29.707 µg/L	29.707 ppb	15:56:58
2	Sr 421.552†	-144.2	80.6	0.1860 µg/L	0.1860 ppb	15:56:58
2	Sc 361.383	1788543.9	1788543.9	101.91 %		15:58:08
2	Y 371.029	1084926.2	1084926.2	101.96 %		15:58:08
2	Ag 328.068†	3467.9	-44.1	-0.1775 µg/L	-0.1775 ppb	15:58:10
2	As 188.979†	-14.5	3.4	1.1993 µg/L	1.1993 ppb	15:58:31
2	B 249.677†	3282.6	-9.2	-0.1495 µg/L	-0.1495 ppb	15:58:31
2	Ba 233.527†	-160.2	5.0	0.0214 µg/L	0.0214 ppb	15:58:31
2	Be 313.107†	-876.6	-74.6	-0.0216 µg/L	-0.0216 ppb	15:58:10
2	Cd 226.502†	-88.5	23.2	0.1594 µg/L	0.1594 ppb	15:58:31
2	Co 228.616†	-168.8	6.8	0.0915 µg/L	0.0915 ppb	15:58:31
2	Cr 267.716†	172.5	-9.3	-0.0809 µg/L	-0.0809 ppb	15:58:31
2	Cu 324.752†	2798.2	-43.1	-0.1793 µg/L	-0.1793 ppb	15:58:10
2	Mn 257.610†	188.0	8.9	0.0120 µg/L	0.0120 ppb	15:58:31
2	Mo 202.031†	-30.5	4.8	0.1539 µg/L	0.1539 ppb	15:58:31
2	Ni 231.604†	-56.6	22.4	0.2813 µg/L	0.2813 ppb	15:58:31
2	P 214.914†	16.7	11.4	2.7279 µg/L	2.7279 ppb	15:58:31
2	Pb 220.353†	87.8	-10.8	-0.6657 µg/L	-0.6657 ppb	15:58:31

2	S 181.975 Axial†	84.4	-4.9	-3.9753 µg/L	-3.9753 ppb	15:58:31
2	Sb 206.836†	83.3	3.7	0.4863 µg/L	0.4863 ppb	15:58:31
2	Se 196.026†	10.9	-2.8	-1.14 µg/L	-1.14 ppb	15:58:31
2	SiO2†	1694.0	-90.8	-9.7342 µg/L	-9.7342 ppb	15:58:31
2	Si 251.611†	679.6	-281.8	-4.5682 µg/L	-4.5682 ppb	15:58:10
2	Sn 189.927†	8.5	10.8	0.7504 µg/L	0.7504 ppb	15:58:31
2	Ti 334.940†	780.2	-120.0	-0.1212 µg/L	-0.1212 ppb	15:58:10
2	Tl 190.801†	-120.1	-0.8	-0.1139 µg/L	-0.1139 ppb	15:58:31
2	U 409.014†	-244.9	43.5	2.6943 µg/L	2.6943 ppb	15:58:10
2	V 292.402†	222.5	-91.5	-0.4827 µg/L	-0.4827 ppb	15:58:10
2	Zn 213.857†	522.6	-11.7	-0.0744 µg/L	-0.0744 ppb	15:58:31
3	Sc RADIAL	154076.6	154076.6	104 %		15:57:20
3	Al 396.153Radial†	-54.3	10.8	2.1942 µg/L	2.1942 ppb	15:57:40
3	Ca 317.933Radial†	596.1	-126.0	-7.5815 µg/L	-7.5815 ppb	15:57:40
3	Fe 238.204 Radial†	155.3	8.3	0.5568 µg/L	0.5568 ppb	15:57:40
3	K 766.490 Radial†	1553.2	177.5	73.025 µg/L	73.025 ppb	15:57:20
3	Mg 279.077 IEC†	169.5	-6.1	-2.5093 µg/L	-2.5093 ppb	15:57:40
3	Na 589.592 Radial†	1594.2	322.9	48.967 µg/L	48.967 ppb	15:57:20
3	Sr 421.552†	-178.8	50.1	0.1157 µg/L	0.1157 ppb	15:57:20
3	Sc 361.383	1782784.5	1782784.5	101.58 %		15:58:33
3	Y 371.029	1079758.6	1079758.6	101.48 %		15:58:33
3	Ag 328.068†	3519.5	17.7	0.0810 µg/L	0.0810 ppb	15:58:35
3	As 188.979†	-20.0	-2.0	-0.7016 µg/L	-0.7016 ppb	15:58:55
3	B 249.677†	3260.4	-20.6	-0.3346 µg/L	-0.3346 ppb	15:58:55
3	Ba 233.527†	-168.8	-4.1	-0.0174 µg/L	-0.0174 ppb	15:58:55
3	Be 313.107†	-744.6	52.6	0.0175 µg/L	0.0175 ppb	15:58:35
3	Cd 226.502†	-119.6	-7.7	-0.0530 µg/L	-0.0530 ppb	15:58:55
3	Co 228.616†	-192.4	-17.0	-0.2302 µg/L	-0.2302 ppb	15:58:55
3	Cr 267.716†	193.8	12.2	0.0986 µg/L	0.0986 ppb	15:58:55
3	Cu 324.752†	2820.2	-12.5	-0.0483 µg/L	-0.0483 ppb	15:58:35
3	Mn 257.610†	192.7	14.1	0.0190 µg/L	0.0190 ppb	15:58:55
3	Mo 202.031†	-18.1	16.9	0.5389 µg/L	0.5389 ppb	15:58:55
3	Ni 231.604†	-65.1	13.9	0.1742 µg/L	0.1742 ppb	15:58:55
3	P 214.914†	28.6	23.1	5.5155 µg/L	5.5155 ppb	15:58:55
3	Pb 220.353†	86.4	-11.9	-0.7331 µg/L	-0.7331 ppb	15:58:55
3	S 181.975 Axial†	100.3	11.1	9.0775 µg/L	9.0775 ppb	15:58:55
3	Sb 206.836†	82.3	2.9	0.3909 µg/L	0.3909 ppb	15:58:55
3	Se 196.026†	27.7	13.7	5.49 µg/L	5.49 ppb	15:58:55
3	SiO2†	1706.2	-73.4	-7.8720 µg/L	-7.8720 ppb	15:58:55
3	Si 251.611†	625.5	-332.9	-5.3961 µg/L	-5.3961 ppb	15:58:35
3	Sn 189.927†	-0.2	2.4	0.1627 µg/L	0.1627 ppb	15:58:55
3	Ti 334.940†	859.2	-39.7	-0.0422 µg/L	-0.0422 ppb	15:58:35
3	Tl 190.801†	-110.1	8.7	1.1743 µg/L	1.1743 ppb	15:58:55
3	U 409.014†	-196.3	90.5	5.6852 µg/L	5.6852 ppb	15:58:35
3	V 292.402†	371.6	56.0	0.3070 µg/L	0.3070 ppb	15:58:35
3	Zn 213.857†	538.8	5.9	0.0355 µg/L	0.0355 ppb	15:58:55

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1783988.0	101.65 %	0.233			0.23%
Sc RADIAL	152236.5	103 %	1.1			1.05%
Y 371.029	1081212.8	101.61 %	0.305			0.30%
Ag 328.068†	-91.8	-0.3551 µg/L	0.54711	-0.3551 ppb	0.54711	154.05%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	7.9	1.6098 µg/L	2.90460	1.6098 ppb	2.90460	180.44%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	-0.8	-0.2847 µg/L	1.32573	-0.2847 ppb	1.32573	465.63%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	-8.7	-0.1421 µg/L	0.19630	-0.1421 ppb	0.19630	138.15%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	3.5	0.0155 µg/L	0.03030	0.0155 ppb	0.03030	196.03%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	4.1	0.0033 µg/L	0.02159	0.0033 ppb	0.02159	661.63%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	-109.2	-6.5688 µg/L	0.91577	-6.5688 ppb	0.91577	13.94%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	8.5	0.0585 µg/L	0.10659	0.0585 ppb	0.10659	182.23%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-2.9	-0.0389 µg/L	0.16924	-0.0389 ppb	0.16924	435.19%

Cr	267.716†	0.3	-0.0031 µg/L	0.09209	-0.0031 ppb	0.09209	>999.9%
QC value within limits for Co 228.616 Recovery = Not calculated							
Cu	324.752†	18.1	0.0817 µg/L	0.34488	0.0817 ppb	0.34488	421.99%
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe	238.204 Radial†	12.7	0.8517 µg/L	0.68511	0.8517 ppb	0.68511	80.44%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K	766.490 Radial†	165.3	68.022 µg/L	25.3917	68.022 ppb	25.3917	37.33%
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg	279.077 IEC†	-10.4	-4.2595 µg/L	2.80607	-4.2595 ppb	2.80607	65.88%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn	257.610†	9.0	0.0122 µg/L	0.00674	0.0122 ppb	0.00674	55.45%
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo	202.031†	9.3	0.2953 µg/L	0.21192	0.2953 ppb	0.21192	71.77%
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na	589.592 Radial†	297.7	45.141 µg/L	13.9213	45.141 ppb	13.9213	30.84%
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni	231.604†	20.5	0.2578 µg/L	0.07467	0.2578 ppb	0.07467	28.96%
QC value within limits for Ni 231.604 Recovery = Not calculated							
P	214.914†	7.7	1.8239 µg/L	4.21694	1.8239 ppb	4.21694	231.21%
QC value within limits for P 214.914 Recovery = Not calculated							
Pb	220.353†	-15.6	-0.9591 µg/L	0.45107	-0.9591 ppb	0.45107	47.03%
QC value within limits for Pb 220.353 Recovery = Not calculated							
S	181.975 Axial†	2.8	2.3112 µg/L	6.53963	2.3112 ppb	6.53963	282.96%
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb	206.836†	5.2	0.6902 µg/L	0.43831	0.6902 ppb	0.43831	63.51%
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se	196.026†	0.9	0.365 µg/L	4.5653	0.365 ppb	4.5653	>999.9%
QC value within limits for Se 196.026 Recovery = Not calculated							
SiO2†		-73.2	-7.8464 µg/L	1.90075	-7.8464 ppb	1.90075	24.22%
QC value within limits for SiO2 Recovery = Not calculated							
Si	251.611†	-253.7	-4.1124 µg/L	1.56225	-4.1124 ppb	1.56225	37.99%
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn	189.927†	5.4	0.3736 µg/L	0.32709	0.3736 ppb	0.32709	87.56%
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr	421.552†	63.7	0.1470 µg/L	0.03582	0.1470 ppb	0.03582	24.37%
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti	334.940†	-85.6	-0.0883 µg/L	0.04118	-0.0883 ppb	0.04118	46.62%
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl	190.801†	6.2	0.8313 µg/L	0.82883	0.8313 ppb	0.82883	99.70%
QC value within limits for Tl 190.801 Recovery = Not calculated							
U	409.014†	107.9	6.7652 µg/L	4.70490	6.7652 ppb	4.70490	69.55%
QC value within limits for U 409.014 Recovery = Not calculated							
V	292.402†	19.4	0.1107 µg/L	0.52363	0.1107 ppb	0.52363	472.88%
QC value within limits for V 292.402 Recovery = Not calculated							
Zn	213.857†	2.3	0.0126 µg/L	0.07813	0.0126 ppb	0.07813	619.86%
QC value within limits for Zn 213.857 Recovery = Not calculated							

All analyte(s) passed QC.

Sequence No.: 9

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 3/30/2010 16:14:43

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	149150.0	149150.0	101 %		16:15:17
1	Al 396.153Radial†	25269.6	25108.8	5150.9 µg/L	5150.9 ppb	16:15:17
1	Ca 317.933Radial†	86235.0	84773.7	5100.6 µg/L	5100.6 ppb	16:15:17
1	Fe 238.204 Radial†	76185.8	75370.7	5071.6 µg/L	5071.6 ppb	16:15:17
1	K 766.490 Radial†	14043.6	12606.4	5184.2 µg/L	5184.2 ppb	16:15:17
1	Mg 279.077 IEC†	12863.8	12581.1	5168.9 µg/L	5168.9 ppb	16:15:17
1	Na 589.592 Radial†	68590.1	66776.4	10135 µg/L	10135 ppb	16:15:17
1	Sr 421.552†	226232.4	224451.5	517.74 µg/L	517.74 ppb	16:15:15
1	Sc 361.383	1743830.1	1743830.1	99.359 %		16:15:30
1	Y 371.029	1045853.2	1045853.2	98.290 %		16:15:30
1	Ag 328.068†	129026.3	126411.4	508.82 µg/L	508.82 ppb	16:15:30
1	As 188.979†	1380.4	1407.0	498.27 µg/L	498.27 ppb	16:15:50
1	B 249.677†	33705.9	30692.9	498.66 µg/L	498.66 ppb	16:15:30
1	Ba 233.527†	115037.9	115942.0	505.24 µg/L	505.24 ppb	16:15:30
1	Be 313.107†	1673671.2	1685251.5	505.91 µg/L	505.91 ppb	16:15:30
1	Cd 226.502†	72899.8	73480.1	504.22 µg/L	504.22 ppb	16:15:30
1	Co 228.616†	37152.7	37564.8	508.33 µg/L	508.33 ppb	16:15:30
1	Cr 267.716†	59737.2	59944.0	504.93 µg/L	504.93 ppb	16:15:30
1	Cu 324.752†	121910.0	119907.4	506.85 µg/L	506.85 ppb	16:15:30
1	Mn 257.610†	377168.2	379425.3	506.93 µg/L	506.93 ppb	16:15:30
1	Mo 202.031†	15653.7	15789.4	502.71 µg/L	502.71 ppb	16:15:50
1	Ni 231.604†	39991.2	40327.0	507.22 µg/L	507.22 ppb	16:15:30
1	P 214.914†	10343.3	10405.0	2473.1 µg/L	2473.1 ppb	16:15:50
1	Pb 220.353†	8250.5	8206.7	504.09 µg/L	504.09 ppb	16:15:50
1	S 181.975 Axial†	1280.3	1200.9	988.62 µg/L	988.62 ppb	16:15:50
1	Sb 206.836†	3859.6	3806.5	500.20 µg/L	500.20 ppb	16:15:50
1	Se 196.026†	1249.2	1243.7	500 µg/L	500 ppb	16:15:50
1	SiO2†	51956.5	50538.4	5385.4 µg/L	5385.4 ppb	16:15:30
1	Si 251.611†	156244.0	156303.0	2520.0 µg/L	2520.0 ppb	16:15:30
1	Sn 189.927†	7115.0	7163.4	497.64 µg/L	497.64 ppb	16:15:50
1	Ti 334.940†	504315.4	506682.5	506.96 µg/L	506.96 ppb	16:15:30
1	Tl 190.801†	3596.9	3737.2	509.85 µg/L	509.85 ppb	16:15:50
1	U 409.014†	7486.7	7818.7	520.48 µg/L	520.48 ppb	16:15:30
1	V 292.402†	94549.0	94848.9	510.27 µg/L	510.27 ppb	16:15:30
1	Zn 213.857†	81765.0	81767.8	503.15 µg/L	503.15 ppb	16:15:30
2	Sc RADIAL	149765.3	149765.3	101 %		16:15:21
2	Al 396.153Radial†	25441.5	25175.6	5164.4 µg/L	5164.4 ppb	16:15:21
2	Ca 317.933Radial†	86840.7	85020.4	5115.5 µg/L	5115.5 ppb	16:15:21
2	Fe 238.204 Radial†	76775.6	75642.7	5089.9 µg/L	5089.9 ppb	16:15:21
2	K 766.490 Radial†	14122.8	12627.5	5192.8 µg/L	5192.8 ppb	16:15:21
2	Mg 279.077 IEC†	13015.9	12678.9	5209.2 µg/L	5209.2 ppb	16:15:21
2	Na 589.592 Radial†	68934.4	66836.9	10144 µg/L	10144 ppb	16:15:21
2	Sr 421.552†	225922.3	223224.2	514.90 µg/L	514.90 ppb	16:15:19
2	Sc 361.383	1730132.7	1730132.7	98.579 %		16:15:53
2	Y 371.029	1036374.9	1036374.9	97.400 %		16:15:53
2	Ag 328.068†	128093.5	126493.2	509.15 µg/L	509.15 ppb	16:15:53
2	As 188.979†	1394.4	1432.2	507.08 µg/L	507.08 ppb	16:16:13
2	B 249.677†	33578.7	30832.5	500.93 µg/L	500.93 ppb	16:15:53
2	Ba 233.527†	114507.8	116320.9	506.89 µg/L	506.89 ppb	16:15:53
2	Be 313.107†	1660528.3	1685255.0	505.90 µg/L	505.90 ppb	16:15:53
2	Cd 226.502†	72288.3	73440.5	503.95 µg/L	503.95 ppb	16:15:53
2	Co 228.616†	36888.2	37592.4	508.70 µg/L	508.70 ppb	16:15:53
2	Cr 267.716†	59261.1	59936.9	504.88 µg/L	504.88 ppb	16:15:53
2	Cu 324.752†	120688.4	119639.5	505.72 µg/L	505.72 ppb	16:15:53
2	Mn 257.610†	374567.3	379792.1	507.42 µg/L	507.42 ppb	16:15:53
2	Mo 202.031†	15682.3	15943.1	507.60 µg/L	507.60 ppb	16:16:13
2	Ni 231.604†	39635.9	40285.2	506.70 µg/L	506.70 ppb	16:15:53
2	P 214.914†	10438.2	10583.7	2515.7 µg/L	2515.7 ppb	16:16:13
2	Pb 220.353†	8260.4	8282.6	508.75 µg/L	508.75 ppb	16:16:13

2	S 181.975 Axial†	1292.4	1223.3	1007.1 µg/L	1007.1 ppb	16:16:13
2	Sb 206.836†	3885.2	3863.2	507.73 µg/L	507.73 ppb	16:16:13
2	Se 196.026†	1263.8	1268.5	510 µg/L	510 ppb	16:16:13
2	SiO2†	51585.6	50576.2	5389.2 µg/L	5389.2 ppb	16:15:53
2	Si 251.611†	155023.4	156309.8	2520.0 µg/L	2520.0 ppb	16:15:53
2	Sn 189.927†	7177.9	7284.0	505.99 µg/L	505.99 ppb	16:16:13
2	Ti 334.940†	500412.6	506741.9	507.01 µg/L	507.01 ppb	16:15:53
2	Tl 190.801†	3606.0	3775.0	514.95 µg/L	514.95 ppb	16:16:13
2	U 409.014†	7358.1	7747.9	516.08 µg/L	516.08 ppb	16:15:53
2	V 292.402†	93924.9	94969.3	510.96 µg/L	510.96 ppb	16:15:53
2	Zn 213.857†	80946.3	81588.8	502.04 µg/L	502.04 ppb	16:15:53
3	Sc RADIAL	149946.8	149946.8	101 %		16:15:25
3	Al 396.153Radial†	25414.1	25118.2	5152.4 µg/L	5152.4 ppb	16:15:25
3	Ca 317.933Radial†	86403.6	84485.8	5083.3 µg/L	5083.3 ppb	16:15:25
3	Fe 238.204 Radial†	76499.4	75278.7	5065.4 µg/L	5065.4 ppb	16:15:25
3	K 766.490 Radial†	13924.5	12415.1	5105.4 µg/L	5105.4 ppb	16:15:25
3	Mg 279.077 IEC†	12917.9	12566.7	5163.3 µg/L	5163.3 ppb	16:15:25
3	Na 589.592 Radial†	68643.3	66467.5	10088 µg/L	10088 ppb	16:15:25
3	Sr 421.552†	226189.9	223218.1	514.89 µg/L	514.89 ppb	16:15:23
3	Sc 361.383	1725431.7	1725431.7	98.311 %		16:16:16
3	Y 371.029	1034770.8	1034770.8	97.249 %		16:16:16
3	Ag 328.068†	128336.4	127094.3	511.56 µg/L	511.56 ppb	16:16:16
3	As 188.979†	1389.6	1431.2	506.75 µg/L	506.75 ppb	16:16:36
3	B 249.677†	33509.2	30854.7	501.29 µg/L	501.29 ppb	16:16:16
3	Ba 233.527†	114602.5	116733.7	508.69 µg/L	508.69 ppb	16:16:16
3	Be 313.107†	1661309.7	1690639.2	507.52 µg/L	507.52 ppb	16:16:16
3	Cd 226.502†	72576.2	73933.2	507.33 µg/L	507.33 ppb	16:16:16
3	Co 228.616†	37001.5	37809.7	511.64 µg/L	511.64 ppb	16:16:16
3	Cr 267.716†	59258.1	60097.7	506.23 µg/L	506.23 ppb	16:16:16
3	Cu 324.752†	120857.8	120145.4	507.86 µg/L	507.86 ppb	16:16:16
3	Mn 257.610†	375185.0	381455.7	509.64 µg/L	509.64 ppb	16:16:16
3	Mo 202.031†	15775.7	16081.5	512.00 µg/L	512.00 ppb	16:16:36
3	Ni 231.604†	39815.9	40577.9	510.38 µg/L	510.38 ppb	16:16:16
3	P 214.914†	10530.8	10706.7	2545.1 µg/L	2545.1 ppb	16:16:36
3	Pb 220.353†	8329.8	8376.0	514.48 µg/L	514.48 ppb	16:16:36
3	S 181.975 Axial†	1303.5	1238.2	1019.3 µg/L	1019.3 ppb	16:16:36
3	Sb 206.836†	3907.5	3896.6	512.17 µg/L	512.17 ppb	16:16:36
3	Se 196.026†	1269.8	1278.0	514 µg/L	514 ppb	16:16:36
3	SiO2†	51617.4	50751.2	5407.7 µg/L	5407.7 ppb	16:16:16
3	Si 251.611†	155063.4	156779.0	2527.5 µg/L	2527.5 ppb	16:16:16
3	Sn 189.927†	7252.3	7379.4	512.60 µg/L	512.60 ppb	16:16:36
3	Ti 334.940†	500784.6	508503.3	508.78 µg/L	508.78 ppb	16:16:16
3	Tl 190.801†	3630.7	3810.1	519.68 µg/L	519.68 ppb	16:16:36
3	U 409.014†	7461.6	7873.5	524.02 µg/L	524.02 ppb	16:16:16
3	V 292.402†	93864.9	95167.9	512.07 µg/L	512.07 ppb	16:16:16
3	Zn 213.857†	81102.7	81971.6	504.39 µg/L	504.39 ppb	16:16:16

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1733131.5	98.750 %	0.5446			0.55%
Sc RADIAL	149620.7	101 %	0.3			0.28%
Y 371.029	1038999.7	97.646 %	0.5629			0.58%
Ag 328.068†	126666.3	509.84 µg/L	1.496	509.84 ppb	1.496	0.29%
QC value within limits for Ag 328.068 Recovery = 101.97%						
Al 396.153Radial†	25134.2	5155.9 µg/L	7.42	5155.9 ppb	7.42	0.14%
QC value within limits for Al 396.153Radial Recovery = 103.12%						
As 188.979†	1423.5	504.03 µg/L	4.990	504.03 ppb	4.990	0.99%
QC value within limits for As 188.979 Recovery = 100.81%						
B 249.677†	30793.4	500.29 µg/L	1.425	500.29 ppb	1.425	0.28%
QC value within limits for B 249.677 Recovery = 100.06%						
Ba 233.527†	116332.2	506.94 µg/L	1.726	506.94 ppb	1.726	0.34%
QC value within limits for Ba 233.527 Recovery = 101.39%						
Be 313.107†	1687048.6	506.44 µg/L	0.934	506.44 ppb	0.934	0.18%
QC value within limits for Be 313.107 Recovery = 101.29%						
Ca 317.933Radial†	84760.0	5099.8 µg/L	16.10	5099.8 ppb	16.10	0.32%
QC value within limits for Ca 317.933Radial Recovery = 102.00%						
Cd 226.502†	73617.9	505.17 µg/L	1.882	505.17 ppb	1.882	0.37%
QC value within limits for Cd 226.502 Recovery = 101.03%						
Co 228.616†	37655.6	509.56 µg/L	1.816	509.56 ppb	1.816	0.36%

QC value within limits for Co 228.616 Recovery = 101.91%							
Cr 267.716†	59992.9	505.35 µg/L	0.763	505.35 ppb	0.763	0.15%	
QC value within limits for Cr 267.716 Recovery = 101.07%							
Cu 324.752†	119897.4	506.81 µg/L	1.068	506.81 ppb	1.068	0.21%	
QC value within limits for Cu 324.752 Recovery = 101.36%							
Fe 238.204 Radial†	75430.7	5075.6 µg/L	12.74	5075.6 ppb	12.74	0.25%	
QC value within limits for Fe 238.204 Radial Recovery = 101.51%							
K 766.490 Radial†	12549.7	5160.8 µg/L	48.15	5160.8 ppb	48.15	0.93%	
QC value within limits for K 766.490 Radial Recovery = 103.22%							
Mg 279.077 IEC†	12608.9	5180.5 µg/L	25.01	5180.5 ppb	25.01	0.48%	
QC value within limits for Mg 279.077 IEC Recovery = 103.61%							
Mn 257.610†	380224.4	508.00 µg/L	1.447	508.00 ppb	1.447	0.28%	
QC value within limits for Mn 257.610 Recovery = 101.60%							
Mo 202.031†	15938.0	507.44 µg/L	4.647	507.44 ppb	4.647	0.92%	
QC value within limits for Mo 202.031 Recovery = 101.49%							
Na 589.592 Radial†	66693.6	10123 µg/L	30.0	10123 ppb	30.0	0.30%	
QC value within limits for Na 589.592 Radial Recovery = 101.23%							
Ni 231.604†	40396.7	508.10 µg/L	1.991	508.10 ppb	1.991	0.39%	
QC value within limits for Ni 231.604 Recovery = 101.62%							
P 214.914†	10565.1	2511.3 µg/L	36.21	2511.3 ppb	36.21	1.44%	
QC value within limits for P 214.914 Recovery = 100.45%							
Pb 220.353†	8288.4	509.11 µg/L	5.203	509.11 ppb	5.203	1.02%	
QC value within limits for Pb 220.353 Recovery = 101.82%							
S 181.975 Axial†	1220.8	1005.0 µg/L	15.45	1005.0 ppb	15.45	1.54%	
QC value within limits for S 181.975 Axial Recovery = 100.50%							
Sb 206.836†	3855.4	506.70 µg/L	6.046	506.70 ppb	6.046	1.19%	
QC value within limits for Sb 206.836 Recovery = 101.34%							
Se 196.026†	1263.4	508 µg/L	7.1	508 ppb	7.1	1.40%	
QC value within limits for Se 196.026 Recovery = 101.59%							
SiO2†	50621.9	5394.1 µg/L	11.92	5394.1 ppb	11.92	0.22%	
QC value within limits for SiO2 Recovery = 100.87%							
Si 251.611†	156464.0	2522.5 µg/L	4.32	2522.5 ppb	4.32	0.17%	
QC value within limits for Si 251.611 Recovery = 100.90%							
Sn 189.927†	7275.6	505.41 µg/L	7.497	505.41 ppb	7.497	1.48%	
QC value within limits for Sn 189.927 Recovery = 101.08%							
Sr 421.552†	223631.3	515.84 µg/L	1.639	515.84 ppb	1.639	0.32%	
QC value within limits for Sr 421.552 Recovery = 103.17%							
Ti 334.940†	507309.2	507.58 µg/L	1.036	507.58 ppb	1.036	0.20%	
QC value within limits for Ti 334.940 Recovery = 101.52%							
Tl 190.801†	3774.1	514.82 µg/L	4.916	514.82 ppb	4.916	0.95%	
QC value within limits for Tl 190.801 Recovery = 102.96%							
U 409.014†	7813.4	520.19 µg/L	3.979	520.19 ppb	3.979	0.76%	
QC value within limits for U 409.014 Recovery = 104.04%							
V 292.402†	94995.4	511.10 µg/L	0.907	511.10 ppb	0.907	0.18%	
QC value within limits for V 292.402 Recovery = 102.22%							
Zn 213.857†	81776.1	503.20 µg/L	1.177	503.20 ppb	1.177	0.23%	
QC value within limits for Zn 213.857 Recovery = 100.64%							
All analyte(s) passed QC.							

Sequence No.: 10

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 3/30/2010 16:16:44

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	152510.8	152510.8	103 %		16:17:13
1	Al 396.153Radial†	-68.3	-3.3	-0.6778 µg/L	-0.6778 ppb	16:17:33
1	Ca 317.933Radial†	643.7	-74.0	-4.4537 µg/L	-4.4537 ppb	16:17:33
1	Fe 238.204 Radial†	170.7	24.8	1.6683 µg/L	1.6683 ppb	16:17:33
1	K 766.490 Radial†	1615.7	253.3	104.22 µg/L	104.22 ppb	16:17:13
1	Mg 279.077 IEC†	181.7	7.3	3.0013 µg/L	3.0013 ppb	16:17:33
1	Na 589.592 Radial†	1660.0	402.4	61.015 µg/L	61.015 ppb	16:17:13
1	Sr 421.552†	-303.7	-72.7	-0.1677 µg/L	-0.1677 ppb	16:17:13
1	Sc 361.383	1759072.3	1759072.3	100.23 %		16:18:35
1	Y 371.029	1067700.7	1067700.7	100.34 %		16:18:35
1	Ag 328.068†	3299.8	-154.8	-0.6092 µg/L	-0.6092 ppb	16:18:37
1	As 188.979†	-9.7	8.0	2.7973 µg/L	2.7973 ppb	16:18:57
1	B 249.677†	3239.6	1.9	0.0316 µg/L	0.0316 ppb	16:18:57
1	Ba 233.527†	-126.7	35.8	0.1559 µg/L	0.1559 ppb	16:18:57
1	Be 313.107†	-608.6	178.4	0.0540 µg/L	0.0540 ppb	16:18:37
1	Cd 226.502†	-84.9	25.3	0.1738 µg/L	0.1738 ppb	16:18:57
1	Co 228.616†	-181.9	-9.1	-0.1227 µg/L	-0.1227 ppb	16:18:57
1	Cr 267.716†	197.4	18.4	0.1538 µg/L	0.1538 ppb	16:18:57
1	Cu 324.752†	2726.7	-68.4	-0.2868 µg/L	-0.2868 ppb	16:18:37
1	Mn 257.610†	182.0	6.0	0.0078 µg/L	0.0078 ppb	16:18:57
1	Mo 202.031†	-34.1	0.7	0.0222 µg/L	0.0222 ppb	16:18:57
1	Ni 231.604†	-52.6	25.4	0.3196 µg/L	0.3196 ppb	16:18:57
1	P 214.914†	19.6	14.5	3.4755 µg/L	3.4755 ppb	16:18:57
1	Pb 220.353†	72.0	-25.1	-1.5369 µg/L	-1.5369 ppb	16:18:57
1	S 181.975 Axial†	79.9	-7.9	-6.5165 µg/L	-6.5165 ppb	16:18:57
1	Sb 206.836†	94.4	16.1	2.1104 µg/L	2.1104 ppb	16:18:57
1	Se 196.026†	15.5	1.9	0.753 µg/L	0.753 ppb	16:18:57
1	SiO2†	1694.7	-62.3	-6.6745 µg/L	-6.6745 ppb	16:18:57
1	Si 251.611†	776.4	-174.1	-2.8231 µg/L	-2.8231 ppb	16:18:57
1	Sn 189.927†	9.6	12.1	0.8404 µg/L	0.8404 ppb	16:18:57
1	Ti 334.940†	742.0	-145.3	-0.1466 µg/L	-0.1466 ppb	16:18:37
1	Tl 190.801†	-106.0	11.3	1.5216 µg/L	1.5216 ppb	16:18:57
1	U 409.014†	-258.8	25.5	1.6179 µg/L	1.6179 ppb	16:18:37
1	V 292.402†	373.2	62.5	0.3338 µg/L	0.3338 ppb	16:18:37
1	Zn 213.857†	535.1	9.3	0.0558 µg/L	0.0558 ppb	16:18:57
2	Sc RADIAL	151582.4	151582.4	103 %		16:17:35
2	Al 396.153Radial†	-55.1	9.1	1.8727 µg/L	1.8727 ppb	16:17:55
2	Ca 317.933Radial†	630.1	-83.4	-5.0209 µg/L	-5.0209 ppb	16:17:55
2	Fe 238.204 Radial†	171.5	26.6	1.7868 µg/L	1.7868 ppb	16:17:55
2	K 766.490 Radial†	1635.4	282.1	116.08 µg/L	116.08 ppb	16:17:35
2	Mg 279.077 IEC†	165.2	-7.7	-3.1386 µg/L	-3.1386 ppb	16:17:55
2	Na 589.592 Radial†	1719.4	470.2	71.292 µg/L	71.292 ppb	16:17:35
2	Sr 421.552†	-209.5	17.3	0.0401 µg/L	0.0401 ppb	16:17:35
2	Sc 361.383	1753832.5	1753832.5	99.929 %		16:18:59
2	Y 371.029	1063469.2	1063469.2	99.946 %		16:18:59
2	Ag 328.068†	3412.7	-31.9	-0.1532 µg/L	-0.1532 ppb	16:19:02
2	As 188.979†	-15.2	2.5	0.8643 µg/L	0.8643 ppb	16:19:22
2	B 249.677†	3187.6	-40.5	-0.6608 µg/L	-0.6608 ppb	16:19:22
2	Ba 233.527†	-166.9	-4.9	-0.0217 µg/L	-0.0217 ppb	16:19:22
2	Be 313.107†	-546.6	238.6	0.0668 µg/L	0.0668 ppb	16:19:02
2	Cd 226.502†	-96.9	13.0	0.0892 µg/L	0.0892 ppb	16:19:22
2	Co 228.616†	-157.9	14.5	0.1955 µg/L	0.1955 ppb	16:19:22
2	Cr 267.716†	176.0	-2.5	-0.0085 µg/L	-0.0085 ppb	16:19:22
2	Cu 324.752†	2780.5	-6.4	-0.0400 µg/L	-0.0400 ppb	16:19:02
2	Mn 257.610†	169.9	-5.6	-0.0073 µg/L	-0.0073 ppb	16:19:22
2	Mo 202.031†	-32.0	2.8	0.0877 µg/L	0.0877 ppb	16:19:22
2	Ni 231.604†	-73.4	4.5	0.0561 µg/L	0.0561 ppb	16:19:22
2	P 214.914†	-19.7	-24.7	-5.8854 µg/L	-5.8854 ppb	16:19:22
2	Pb 220.353†	88.9	-8.0	-0.4789 µg/L	-0.4789 ppb	16:19:22

2	S 181.975 Axial†	82.2	-5.4	-4.4658 µg/L	-4.4658 ppb	16:19:22
2	Sb 206.836†	74.7	-3.3	-0.4337 µg/L	-0.4337 ppb	16:19:22
2	Se 196.026†	28.8	15.3	6.10 µg/L	6.10 ppb	16:19:22
2	SiO2†	1697.3	-54.7	-5.8600 µg/L	-5.8600 ppb	16:19:22
2	Si 251.611†	778.3	-169.8	-2.7541 µg/L	-2.7541 ppb	16:19:22
2	Sn 189.927†	8.2	10.7	0.7420 µg/L	0.7420 ppb	16:19:22
2	Ti 334.940†	832.1	-52.8	-0.0463 µg/L	-0.0463 ppb	16:19:02
2	Tl 190.801†	-117.4	-0.4	-0.0659 µg/L	-0.0659 ppb	16:19:22
2	U 409.014†	-537.9	-254.5	-15.974 µg/L	-15.974 ppb	16:19:02
2	V 292.402†	201.3	-108.4	-0.5855 µg/L	-0.5855 ppb	16:19:02
2	Zn 213.857†	517.9	-6.3	-0.0395 µg/L	-0.0395 ppb	16:19:22
3	Sc RADIAL	150090.6	150090.6	102 %		16:17:57
3	Al 396.153Radial†	-27.8	35.5	7.2924 µg/L	7.2924 ppb	16:18:17
3	Ca 317.933Radial†	602.3	-104.7	-6.3004 µg/L	-6.3004 ppb	16:18:17
3	Fe 238.204 Radial†	165.7	22.5	1.5162 µg/L	1.5162 ppb	16:18:17
3	K 766.490 Radial†	1500.0	164.6	67.743 µg/L	67.743 ppb	16:17:57
3	Mg 279.077 IEC†	180.4	8.9	3.6518 µg/L	3.6518 ppb	16:18:17
3	Na 589.592 Radial†	1423.7	195.7	29.652 µg/L	29.652 ppb	16:17:57
3	Sr 421.552†	-280.9	-55.0	-0.1268 µg/L	-0.1268 ppb	16:17:57
3	Sc 361.383	1757181.1	1757181.1	100.12 %		16:19:24
3	Y 371.029	1066334.2	1066334.2	100.22 %		16:19:24
3	Ag 328.068†	3335.3	-115.8	-0.4663 µg/L	-0.4663 ppb	16:19:26
3	As 188.979†	-22.6	-4.9	-1.6980 µg/L	-1.6980 ppb	16:19:46
3	B 249.677†	3210.1	-24.1	-0.3941 µg/L	-0.3941 ppb	16:19:46
3	Ba 233.527†	-133.3	29.1	0.1267 µg/L	0.1267 ppb	16:19:46
3	Be 313.107†	-716.2	70.2	0.0188 µg/L	0.0188 ppb	16:19:26
3	Cd 226.502†	-95.4	14.7	0.1010 µg/L	0.1010 ppb	16:19:46
3	Co 228.616†	-145.4	27.2	0.3675 µg/L	0.3675 ppb	16:19:46
3	Cr 267.716†	174.6	-4.2	-0.0294 µg/L	-0.0294 ppb	16:19:46
3	Cu 324.752†	2840.0	47.7	0.1953 µg/L	0.1953 ppb	16:19:26
3	Mn 257.610†	201.4	25.5	0.0340 µg/L	0.0340 ppb	16:19:46
3	Mo 202.031†	-24.7	10.1	0.3221 µg/L	0.3221 ppb	16:19:46
3	Ni 231.604†	-54.3	23.6	0.2973 µg/L	0.2973 ppb	16:19:46
3	P 214.914†	-12.8	-17.8	-4.2554 µg/L	-4.2554 ppb	16:19:46
3	Pb 220.353†	63.7	-33.3	-2.0332 µg/L	-2.0332 ppb	16:19:46
3	S 181.975 Axial†	86.2	-1.6	-1.2766 µg/L	-1.2766 ppb	16:19:46
3	Sb 206.836†	86.5	8.3	1.0959 µg/L	1.0959 ppb	16:19:46
3	Se 196.026†	16.3	2.7	1.07 µg/L	1.07 ppb	16:19:46
3	SiO2†	1672.5	-82.6	-8.8396 µg/L	-8.8396 ppb	16:19:46
3	Si 251.611†	786.6	-163.0	-2.6400 µg/L	-2.6400 ppb	16:19:46
3	Sn 189.927†	-9.1	-6.5	-0.4517 µg/L	-0.4517 ppb	16:19:46
3	Ti 334.940†	893.3	6.7	0.0093 µg/L	0.0093 ppb	16:19:26
3	Tl 190.801†	-122.2	-5.0	-0.6666 µg/L	-0.6666 ppb	16:19:46
3	U 409.014†	-403.6	-119.4	-7.4646 µg/L	-7.4646 ppb	16:19:26
3	V 292.402†	355.2	44.9	0.2363 µg/L	0.2363 ppb	16:19:26
3	Zn 213.857†	535.3	10.1	0.0605 µg/L	0.0605 ppb	16:19:46

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1756695.3	100.09 %	0.151			0.15%
Sc RADIAL	151394.6	102 %	0.8			0.81%
Y 371.029	1065834.7	100.17 %	0.203			0.20%
Ag 328.068†	-100.8	-0.4096 µg/L	0.23321	-0.4096 ppb	0.23321	56.94%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	13.8	2.8291 µg/L	4.07026	2.8291 ppb	4.07026	143.87%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	1.9	0.6545 µg/L	2.25498	0.6545 ppb	2.25498	344.51%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	-20.9	-0.3411 µg/L	0.34923	-0.3411 ppb	0.34923	102.38%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	20.0	0.0870 µg/L	0.09526	0.0870 ppb	0.09526	109.53%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	162.4	0.0465 µg/L	0.02485	0.0465 ppb	0.02485	53.38%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	-87.4	-5.2583 µg/L	0.94599	-5.2583 ppb	0.94599	17.99%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	17.7	0.1213 µg/L	0.04585	0.1213 ppb	0.04585	37.79%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	10.9	0.1468 µg/L	0.24872	0.1468 ppb	0.24872	169.48%

Cr	267.716†	3.9	0.0386 µg/L	0.10032	0.0386 ppb	0.10032	259.61%
QC value within limits for Co 228.616 Recovery = Not calculated							
Cu	324.752†	-9.1	-0.0438 µg/L	0.24105	-0.0438 ppb	0.24105	550.17%
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe	238.204 Radial†	24.6	1.6571 µg/L	0.13567	1.6571 ppb	0.13567	8.19%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K	766.490 Radial†	233.3	96.014 µg/L	25.1904	96.014 ppb	25.1904	26.24%
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg	279.077 IEC†	2.9	1.1715 µg/L	3.74683	1.1715 ppb	3.74683	319.83%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn	257.610†	8.6	0.0115 µg/L	0.02091	0.0115 ppb	0.02091	181.76%
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo	202.031†	4.5	0.1440 µg/L	0.15766	0.1440 ppb	0.15766	109.48%
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na	589.592 Radial†	356.1	53.987 µg/L	21.6918	53.987 ppb	21.6918	40.18%
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni	231.604†	17.8	0.2244 µg/L	0.14611	0.2244 ppb	0.14611	65.12%
QC value within limits for Ni 231.604 Recovery = Not calculated							
P	214.914†	-9.3	-2.2218 µg/L	5.00083	-2.2218 ppb	5.00083	225.08%
QC value within limits for P 214.914 Recovery = Not calculated							
Pb	220.353†	-22.1	-1.3497 µg/L	0.79388	-1.3497 ppb	0.79388	58.82%
QC value within limits for Pb 220.353 Recovery = Not calculated							
S	181.975 Axial†	-5.0	-4.0863 µg/L	2.64049	-4.0863 ppb	2.64049	64.62%
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb	206.836†	7.0	0.9242 µg/L	1.28071	0.9242 ppb	1.28071	138.58%
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se	196.026†	6.6	2.64 µg/L	3.002	2.64 ppb	3.002	113.67%
QC value within limits for Se 196.026 Recovery = Not calculated							
SiO2†		-66.5	-7.1247 µg/L	1.53996	-7.1247 ppb	1.53996	21.61%
QC value within limits for SiO2 Recovery = Not calculated							
Si	251.611†	-168.9	-2.7391 µg/L	0.09245	-2.7391 ppb	0.09245	3.38%
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn	189.927†	5.4	0.3769 µg/L	0.71929	0.3769 ppb	0.71929	190.85%
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr	421.552†	-36.8	-0.0848 µg/L	0.11006	-0.0848 ppb	0.11006	129.76%
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti	334.940†	-63.8	-0.0612 µg/L	0.07902	-0.0612 ppb	0.07902	129.09%
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl	190.801†	2.0	0.2630 µg/L	1.13061	0.2630 ppb	1.13061	429.84%
QC value within limits for Tl 190.801 Recovery = Not calculated							
U	409.014†	-116.1	-7.2736 µg/L	8.79754	-7.2736 ppb	8.79754	120.95%
QC value within limits for U 409.014 Recovery = Not calculated							
V	292.402†	-0.3	-0.0051 µg/L	0.50496	-0.0051 ppb	0.50496	>999.9%
QC value within limits for V 292.402 Recovery = Not calculated							
Zn	213.857†	4.4	0.0256 µg/L	0.05641	0.0256 ppb	0.05641	220.56%
QC value within limits for Zn 213.857 Recovery = Not calculated							

All analyte(s) passed QC.

Sequence No.: 18

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 3/30/2010 16:33:11

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	151139.0	151139.0	102 %		16:33:44
1	Al 396.153Radial†	25196.3	24707.6	5068.1 µg/L	5068.1 ppb	16:33:44
1	Ca 317.933Radial†	86402.3	83812.5	5042.8 µg/L	5042.8 ppb	16:33:44
1	Fe 238.204 Radial†	76395.7	74582.4	5018.6 µg/L	5018.6 ppb	16:33:44
1	K 766.490 Radial†	14135.0	12512.7	5145.6 µg/L	5145.6 ppb	16:33:44
1	Mg 279.077 IEC†	12839.4	12389.5	5090.4 µg/L	5090.4 ppb	16:33:44
1	Na 589.592 Radial†	68823.9	66110.4	10034 µg/L	10034 ppb	16:33:44
1	Sr 421.552†	226964.0	222216.3	512.58 µg/L	512.58 ppb	16:33:42
1	Sc 361.383	1738736.4	1738736.4	99.069 %		16:34:12
1	Y 371.029	1041662.6	1041662.6	97.897 %		16:34:12
1	Ag 328.068†	127423.7	125174.2	503.84 µg/L	503.84 ppb	16:34:12
1	As 188.979†	1389.7	1420.5	502.92 µg/L	502.92 ppb	16:34:32
1	B 249.677†	33453.0	30537.1	496.13 µg/L	496.13 ppb	16:34:12
1	Ba 233.527†	113987.1	115220.6	502.10 µg/L	502.10 ppb	16:34:12
1	Be 313.107†	1653159.2	1669481.5	501.17 µg/L	501.17 ppb	16:34:12
1	Cd 226.502†	72224.6	73013.4	501.02 µg/L	501.02 ppb	16:34:12
1	Co 228.616†	36766.5	37284.5	504.53 µg/L	504.53 ppb	16:34:12
1	Cr 267.716†	59072.0	59448.6	500.77 µg/L	500.77 ppb	16:34:12
1	Cu 324.752†	120311.3	118653.0	501.54 µg/L	501.54 ppb	16:34:12
1	Mn 257.610†	373179.3	376510.9	503.04 µg/L	503.04 ppb	16:34:12
1	Mo 202.031†	15677.5	15859.6	504.94 µg/L	504.94 ppb	16:34:32
1	Ni 231.604†	39543.7	39993.2	503.02 µg/L	503.02 ppb	16:34:12
1	P 214.914†	10442.2	10535.4	2504.3 µg/L	2504.3 ppb	16:34:32
1	Pb 220.353†	8280.1	8260.9	507.41 µg/L	507.41 ppb	16:34:32
1	S 181.975 Axial†	1296.7	1221.2	1005.3 µg/L	1005.3 ppb	16:34:32
1	Sb 206.836†	3864.6	3822.8	502.45 µg/L	502.45 ppb	16:34:32
1	Se 196.026†	1254.0	1252.2	503 µg/L	503 ppb	16:34:32
1	SiO2†	51275.4	50004.2	5328.1 µg/L	5328.1 ppb	16:34:12
1	Si 251.611†	154864.0	155370.8	2504.8 µg/L	2504.8 ppb	16:34:12
1	Sn 189.927†	7172.7	7242.6	503.11 µg/L	503.11 ppb	16:34:32
1	Ti 334.940†	498220.5	502017.3	502.29 µg/L	502.29 ppb	16:34:12
1	Tl 190.801†	3613.1	3764.1	513.40 µg/L	513.40 ppb	16:34:32
1	U 409.014†	7323.5	7676.1	511.26 µg/L	511.26 ppb	16:34:12
1	V 292.402†	93382.5	93950.3	505.51 µg/L	505.51 ppb	16:34:12
1	Zn 213.857†	80909.7	81145.6	499.32 µg/L	499.32 ppb	16:34:12
2	Sc RADIAL	148387.4	148387.4	100 %		16:33:48
2	Al 396.153Radial†	25003.7	24972.6	5122.4 µg/L	5122.4 ppb	16:33:48
2	Ca 317.933Radial†	85779.0	84758.7	5099.7 µg/L	5099.7 ppb	16:33:48
2	Fe 238.204 Radial†	75791.8	75366.3	5071.3 µg/L	5071.3 ppb	16:33:48
2	K 766.490 Radial†	14052.4	12686.8	5217.2 µg/L	5217.2 ppb	16:33:48
2	Mg 279.077 IEC†	12862.3	12645.2	5195.4 µg/L	5195.4 ppb	16:33:48
2	Na 589.592 Radial†	68425.7	66962.0	10163 µg/L	10163 ppb	16:33:48
2	Sr 421.552†	225755.6	225128.9	519.30 µg/L	519.30 ppb	16:33:46
2	Sc 361.383	1732689.3	1732689.3	98.724 %		16:34:35
2	Y 371.029	1037776.0	1037776.0	97.531 %		16:34:35
2	Ag 328.068†	127823.1	126027.7	507.26 µg/L	507.26 ppb	16:34:35
2	As 188.979†	1426.9	1463.0	517.81 µg/L	517.81 ppb	16:34:55
2	B 249.677†	33275.5	30475.1	495.12 µg/L	495.12 ppb	16:34:35
2	Ba 233.527†	113937.6	115572.0	503.63 µg/L	503.63 ppb	16:34:35
2	Be 313.107†	1651670.0	1673796.8	502.47 µg/L	502.47 ppb	16:34:35
2	Cd 226.502†	71981.5	73021.6	501.07 µg/L	501.07 ppb	16:34:35
2	Co 228.616†	36746.8	37394.0	506.02 µg/L	506.02 ppb	16:34:35
2	Cr 267.716†	59002.6	59586.4	501.92 µg/L	501.92 ppb	16:34:35
2	Cu 324.752†	120225.8	118990.3	502.99 µg/L	502.99 ppb	16:34:35
2	Mn 257.610†	372559.0	377197.3	503.95 µg/L	503.95 ppb	16:34:35
2	Mo 202.031†	15857.3	16096.9	512.49 µg/L	512.49 ppb	16:34:55
2	Ni 231.604†	39495.0	40083.2	504.16 µg/L	504.16 ppb	16:34:35
2	P 214.914†	10624.2	10756.4	2557.0 µg/L	2557.0 ppb	16:34:55
2	Pb 220.353†	8415.5	8427.3	517.61 µg/L	517.61 ppb	16:34:55

2	S 181.975 Axial†	1322.3	1251.7	1030.4 µg/L	1030.4 ppb	16:34:55
2	Sb 206.836†	3941.4	3914.2	514.54 µg/L	514.54 ppb	16:34:55
2	Se 196.026†	1272.2	1275.1	513 µg/L	513 ppb	16:34:55
2	SiO2†	51298.9	50208.6	5349.6 µg/L	5349.6 ppb	16:34:35
2	Si 251.611†	154113.0	155155.6	2501.2 µg/L	2501.2 ppb	16:34:35
2	Sn 189.927†	7288.6	7385.3	512.99 µg/L	512.99 ppb	16:34:55
2	Ti 334.940†	497492.0	503034.5	503.30 µg/L	503.30 ppb	16:34:35
2	Tl 190.801†	3651.1	3815.4	520.30 µg/L	520.30 ppb	16:34:55
2	U 409.014†	7472.3	7852.6	522.37 µg/L	522.37 ppb	16:34:35
2	V 292.402†	93254.4	94149.5	506.65 µg/L	506.65 ppb	16:34:35
2	Zn 213.857†	80620.4	81137.6	499.26 µg/L	499.26 ppb	16:34:35
3	Sc RADIAL	149756.5	149756.5	101 %		16:33:53
3	Al 396.153Radial†	25384.2	25120.5	5153.1 µg/L	5153.1 ppb	16:33:53
3	Ca 317.933Radial†	86609.2	84797.0	5102.0 µg/L	5102.0 ppb	16:33:53
3	Fe 238.204 Radial†	76492.1	75367.4	5071.4 µg/L	5071.4 ppb	16:33:53
3	K 766.490 Radial†	13940.1	12448.0	5118.9 µg/L	5118.9 ppb	16:33:53
3	Mg 279.077 IEC†	12945.8	12610.5	5181.1 µg/L	5181.1 ppb	16:33:53
3	Na 589.592 Radial†	68594.3	66505.2	10094 µg/L	10094 ppb	16:33:53
3	Sr 421.552†	224007.7	221347.5	510.58 µg/L	510.58 ppb	16:33:51
3	Sc 361.383	1751130.8	1751130.8	99.775 %		16:34:58
3	Y 371.029	1048597.3	1048597.3	98.548 %		16:34:58
3	Ag 328.068†	129529.0	126373.9	508.64 µg/L	508.64 ppb	16:34:58
3	As 188.979†	1411.3	1432.2	507.05 µg/L	507.05 ppb	16:35:18
3	B 249.677†	33887.0	30733.0	499.31 µg/L	499.31 ppb	16:34:58
3	Ba 233.527†	115619.9	116042.6	505.68 µg/L	505.68 ppb	16:34:58
3	Be 313.107†	1676617.7	1681181.9	504.68 µg/L	504.68 ppb	16:34:58
3	Cd 226.502†	73368.7	73644.1	505.35 µg/L	505.35 ppb	16:34:58
3	Co 228.616†	37328.7	37585.3	508.60 µg/L	508.60 ppb	16:34:58
3	Cr 267.716†	59733.8	59689.9	502.80 µg/L	502.80 ppb	16:34:58
3	Cu 324.752†	121792.3	119277.8	504.19 µg/L	504.19 ppb	16:34:58
3	Mn 257.610†	378088.5	378765.0	506.04 µg/L	506.04 ppb	16:34:58
3	Mo 202.031†	15858.6	15929.1	507.15 µg/L	507.15 ppb	16:35:18
3	Ni 231.604†	40204.0	40372.5	507.79 µg/L	507.79 ppb	16:34:58
3	P 214.914†	10611.8	10630.7	2527.0 µg/L	2527.0 ppb	16:35:18
3	Pb 220.353†	8416.7	8338.7	512.19 µg/L	512.19 ppb	16:35:18
3	S 181.975 Axial†	1321.9	1237.1	1018.4 µg/L	1018.4 ppb	16:35:18
3	Sb 206.836†	3931.6	3862.4	507.66 µg/L	507.66 ppb	16:35:18
3	Se 196.026†	1279.4	1268.7	510 µg/L	510 ppb	16:35:18
3	SiO2†	52016.0	50380.1	5368.1 µg/L	5368.1 ppb	16:34:58
3	Si 251.611†	156602.6	156006.9	2515.0 µg/L	2515.0 ppb	16:34:58
3	Sn 189.927†	7321.0	7340.0	509.86 µg/L	509.86 ppb	16:35:18
3	Ti 334.940†	504195.1	504445.9	504.72 µg/L	504.72 ppb	16:34:58
3	Tl 190.801†	3645.8	3771.1	514.37 µg/L	514.37 ppb	16:35:18
3	U 409.014†	7418.7	7719.2	514.12 µg/L	514.12 ppb	16:34:58
3	V 292.402†	94555.7	94459.0	508.23 µg/L	508.23 ppb	16:34:58
3	Zn 213.857†	81983.3	81643.6	502.38 µg/L	502.38 ppb	16:34:58

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1740852.2	99.189 %	0.5356			0.54%
Sc RADIAL	149761.0	101 %	0.9			0.92%
Y 371.029	1042678.6	97.992 %	0.5152			0.53%
Ag 328.068†	125858.6	506.58 µg/L	2.472	506.58 ppb	2.472	0.49%
QC value within limits for Ag 328.068 Recovery = 101.32%						
Al 396.153Radial†	24933.6	5114.5 µg/L	43.04	5114.5 ppb	43.04	0.84%
QC value within limits for Al 396.153Radial Recovery = 102.29%						
As 188.979†	1438.6	509.26 µg/L	7.683	509.26 ppb	7.683	1.51%
QC value within limits for As 188.979 Recovery = 101.85%						
B 249.677†	30581.7	496.85 µg/L	2.189	496.85 ppb	2.189	0.44%
QC value within limits for B 249.677 Recovery = 99.37%						
Ba 233.527†	115611.7	503.80 µg/L	1.797	503.80 ppb	1.797	0.36%
QC value within limits for Ba 233.527 Recovery = 100.76%						
Be 313.107†	1674820.1	502.77 µg/L	1.776	502.77 ppb	1.776	0.35%
QC value within limits for Be 313.107 Recovery = 100.55%						
Ca 317.933Radial†	84456.1	5081.5 µg/L	33.55	5081.5 ppb	33.55	0.66%
QC value within limits for Ca 317.933Radial Recovery = 101.63%						
Cd 226.502†	73226.4	502.48 µg/L	2.483	502.48 ppb	2.483	0.49%
QC value within limits for Cd 226.502 Recovery = 100.50%						
Co 228.616†	37421.3	506.38 µg/L	2.060	506.38 ppb	2.060	0.41%

QC value within limits for Co 228.616 Recovery = 101.28%						
Cr 267.716†	59575.0	501.83 µg/L	1.019	501.83 ppb	1.019	0.20%
QC value within limits for Cr 267.716 Recovery = 100.37%						
Cu 324.752†	118973.7	502.91 µg/L	1.326	502.91 ppb	1.326	0.26%
QC value within limits for Cu 324.752 Recovery = 100.58%						
Fe 238.204 Radial†	75105.4	5053.7 µg/L	30.48	5053.7 ppb	30.48	0.60%
QC value within limits for Fe 238.204 Radial Recovery = 101.07%						
K 766.490 Radial†	12549.1	5160.6 µg/L	50.82	5160.6 ppb	50.82	0.98%
QC value within limits for K 766.490 Radial Recovery = 103.21%						
Mg 279.077 IEC†	12548.4	5155.7 µg/L	56.94	5155.7 ppb	56.94	1.10%
QC value within limits for Mg 279.077 IEC Recovery = 103.11%						
Mn 257.610†	377491.1	504.34 µg/L	1.543	504.34 ppb	1.543	0.31%
QC value within limits for Mn 257.610 Recovery = 100.87%						
Mo 202.031†	15961.9	508.19 µg/L	3.883	508.19 ppb	3.883	0.76%
QC value within limits for Mo 202.031 Recovery = 101.64%						
Na 589.592 Radial†	66525.8	10097 µg/L	64.7	10097 ppb	64.7	0.64%
QC value within limits for Na 589.592 Radial Recovery = 100.97%						
Ni 231.604†	40149.6	504.99 µg/L	2.493	504.99 ppb	2.493	0.49%
QC value within limits for Ni 231.604 Recovery = 101.00%						
P 214.914†	10640.8	2529.4 µg/L	26.43	2529.4 ppb	26.43	1.05%
QC value within limits for P 214.914 Recovery = 101.18%						
Pb 220.353†	8342.3	512.41 µg/L	5.103	512.41 ppb	5.103	1.00%
QC value within limits for Pb 220.353 Recovery = 102.48%						
S 181.975 Axial†	1236.7	1018.0 µg/L	12.54	1018.0 ppb	12.54	1.23%
QC value within limits for S 181.975 Axial Recovery = 101.80%						
Sb 206.836†	3866.5	508.21 µg/L	6.063	508.21 ppb	6.063	1.19%
QC value within limits for Sb 206.836 Recovery = 101.64%						
Se 196.026†	1265.3	509 µg/L	4.7	509 ppb	4.7	0.93%
QC value within limits for Se 196.026 Recovery = 101.75%						
SiO2†	50197.6	5348.6 µg/L	20.05	5348.6 ppb	20.05	0.37%
QC value within limits for SiO2 Recovery = 100.02%						
Si 251.611†	155511.1	2507.0 µg/L	7.19	2507.0 ppb	7.19	0.29%
QC value within limits for Si 251.611 Recovery = 100.28%						
Sn 189.927†	7322.7	508.66 µg/L	5.051	508.66 ppb	5.051	0.99%
QC value within limits for Sn 189.927 Recovery = 101.73%						
Sr 421.552†	222897.6	514.15 µg/L	4.569	514.15 ppb	4.569	0.89%
QC value within limits for Sr 421.552 Recovery = 102.83%						
Ti 334.940†	503165.9	503.44 µg/L	1.219	503.44 ppb	1.219	0.24%
QC value within limits for Ti 334.940 Recovery = 100.69%						
Tl 190.801†	3783.5	516.02 µg/L	3.736	516.02 ppb	3.736	0.72%
QC value within limits for Tl 190.801 Recovery = 103.20%						
U 409.014†	7749.3	515.92 µg/L	5.770	515.92 ppb	5.770	1.12%
QC value within limits for U 409.014 Recovery = 103.18%						
V 292.402†	94186.3	506.80 µg/L	1.369	506.80 ppb	1.369	0.27%
QC value within limits for V 292.402 Recovery = 101.36%						
Zn 213.857†	81308.9	500.32 µg/L	1.780	500.32 ppb	1.780	0.36%
QC value within limits for Zn 213.857 Recovery = 100.06%						
All analyte(s) passed QC.						

Sequence No.: 19

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 3/30/2010 16:35:27

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	151878.1	151878.1	103 %		16:35:56
1	Al 396.153Radial†	-27.3	36.3	7.4811 µg/L	7.4811 ppb	16:36:16
1	Ca 317.933Radial†	686.6	-29.7	-1.7857 µg/L	-1.7857 ppb	16:36:16
1	Fe 238.204 Radial†	172.4	27.1	1.8263 µg/L	1.8263 ppb	16:36:16
1	K 766.490 Radial†	1493.5	140.9	57.964 µg/L	57.964 ppb	16:35:56
1	Mg 279.077 IEC†	188.2	14.4	5.9196 µg/L	5.9196 ppb	16:36:16
1	Na 589.592 Radial†	1596.6	347.4	52.696 µg/L	52.696 ppb	16:35:56
1	Sr 421.552†	-187.5	39.2	0.0904 µg/L	0.0904 ppb	16:35:56
1	Sc 361.383	1775966.4	1775966.4	101.19 %		16:37:18
1	Y 371.029	1075816.3	1075816.3	101.11 %		16:37:18
1	Ag 328.068†	3637.8	148.0	0.5819 µg/L	0.5819 ppb	16:37:20
1	As 188.979†	-2.5	15.2	5.2981 µg/L	5.2981 ppb	16:37:40
1	B 249.677†	3304.0	34.8	0.5663 µg/L	0.5663 ppb	16:37:40
1	Ba 233.527†	-170.2	-6.0	-0.0264 µg/L	-0.0264 ppb	16:37:40
1	Be 313.107†	-529.3	262.5	0.0783 µg/L	0.0783 ppb	16:37:20
1	Cd 226.502†	-78.1	32.8	0.2250 µg/L	0.2250 ppb	16:37:40
1	Co 228.616†	-156.5	17.7	0.2396 µg/L	0.2396 ppb	16:37:40
1	Cr 267.716†	134.1	-46.0	-0.3871 µg/L	-0.3871 ppb	16:37:40
1	Cu 324.752†	2726.1	-94.9	-0.4005 µg/L	-0.4005 ppb	16:37:20
1	Mn 257.610†	181.0	3.3	0.0042 µg/L	0.0042 ppb	16:37:40
1	Mo 202.031†	-31.8	3.4	0.1071 µg/L	0.1071 ppb	16:37:40
1	Ni 231.604†	-78.8	0.0	0.0002 µg/L	0.0002 ppb	16:37:40
1	P 214.914†	11.7	6.6	1.5795 µg/L	1.5795 ppb	16:37:40
1	Pb 220.353†	104.7	6.5	0.4021 µg/L	0.4021 ppb	16:37:40
1	S 181.975 Axial†	97.8	9.0	7.3534 µg/L	7.3534 ppb	16:37:40
1	Sb 206.836†	78.3	-0.7	-0.0809 µg/L	-0.0809 ppb	16:37:40
1	Se 196.026†	26.0	12.1	4.86 µg/L	4.86 ppb	16:37:40
1	SiO2†	1712.3	-61.0	-6.5292 µg/L	-6.5292 ppb	16:37:40
1	Si 251.611†	932.1	-27.5	-0.4477 µg/L	-0.4477 ppb	16:37:20
1	Sn 189.927†	-1.2	1.4	0.0971 µg/L	0.0971 ppb	16:37:40
1	Ti 334.940†	836.6	-58.8	-0.0587 µg/L	-0.0587 ppb	16:37:20
1	Tl 190.801†	-101.3	17.0	2.2738 µg/L	2.2738 ppb	16:37:40
1	U 409.014†	-310.8	-23.4	-1.4888 µg/L	-1.4888 ppb	16:37:20
1	V 292.402†	243.1	-69.6	-0.3711 µg/L	-0.3711 ppb	16:37:20
1	Zn 213.857†	533.2	2.3	0.0148 µg/L	0.0148 ppb	16:37:40
2	Sc RADIAL	150766.1	150766.1	102 %		16:36:18
2	Al 396.153Radial†	-29.1	34.4	7.0870 µg/L	7.0870 ppb	16:36:38
2	Ca 317.933Radial†	682.2	-29.1	-1.7514 µg/L	-1.7514 ppb	16:36:38
2	Fe 238.204 Radial†	166.3	22.4	1.5048 µg/L	1.5048 ppb	16:36:38
2	K 766.490 Radial†	1525.1	182.6	75.152 µg/L	75.152 ppb	16:36:18
2	Mg 279.077 IEC†	179.6	7.3	2.9938 µg/L	2.9938 ppb	16:36:38
2	Na 589.592 Radial†	1371.5	138.2	20.914 µg/L	20.914 ppb	16:36:18
2	Sr 421.552†	-190.0	35.3	0.0815 µg/L	0.0815 ppb	16:36:18
2	Sc 361.383	1781472.1	1781472.1	101.50 %		16:37:42
2	Y 371.029	1078812.6	1078812.6	101.39 %		16:37:42
2	Ag 328.068†	3322.4	-173.9	-0.6936 µg/L	-0.6936 ppb	16:37:44
2	As 188.979†	-9.9	7.9	2.7584 µg/L	2.7584 ppb	16:38:05
2	B 249.677†	3225.9	-52.2	-0.8523 µg/L	-0.8523 ppb	16:38:05
2	Ba 233.527†	-165.6	-1.0	-0.0040 µg/L	-0.0040 ppb	16:38:05
2	Be 313.107†	-662.6	132.8	0.0378 µg/L	0.0378 ppb	16:37:44
2	Cd 226.502†	-107.6	4.0	0.0272 µg/L	0.0272 ppb	16:38:05
2	Co 228.616†	-153.4	21.3	0.2875 µg/L	0.2875 ppb	16:38:05
2	Cr 267.716†	167.4	-13.7	-0.1095 µg/L	-0.1095 ppb	16:38:05
2	Cu 324.752†	2776.0	-54.1	-0.2330 µg/L	-0.2330 ppb	16:37:44
2	Mn 257.610†	220.5	41.7	0.0556 µg/L	0.0556 ppb	16:38:05
2	Mo 202.031†	-36.8	-1.5	-0.0478 µg/L	-0.0478 ppb	16:38:05
2	Ni 231.604†	-80.5	-1.4	-0.0180 µg/L	-0.0180 ppb	16:38:05
2	P 214.914†	12.5	7.3	1.7603 µg/L	1.7603 ppb	16:38:05
2	Pb 220.353†	90.3	-8.0	-0.4821 µg/L	-0.4821 ppb	16:38:05

2	S 181.975 Axial†	91.8	2.7	2.2316 µg/L	2.2316 ppb	16:38:05
2	Sb 206.836†	83.6	4.3	0.5702 µg/L	0.5702 ppb	16:38:05
2	Se 196.026†	1.8	-11.8	-4.75 µg/L	-4.75 ppb	16:38:05
2	SiO2†	1691.8	-86.4	-9.2496 µg/L	-9.2496 ppb	16:38:05
2	Si 251.611†	787.2	-173.1	-2.8052 µg/L	-2.8052 ppb	16:37:44
2	Sn 189.927†	7.4	9.9	0.6835 µg/L	0.6835 ppb	16:38:05
2	Ti 334.940†	827.4	-70.5	-0.0680 µg/L	-0.0680 ppb	16:37:44
2	Tl 190.801†	-117.6	1.3	0.1723 µg/L	0.1723 ppb	16:38:05
2	U 409.014†	-399.5	-109.8	-6.8488 µg/L	-6.8488 ppb	16:37:44
2	V 292.402†	412.9	96.9	0.5089 µg/L	0.5089 ppb	16:37:44
2	Zn 213.857†	530.6	-1.8	-0.0109 µg/L	-0.0109 ppb	16:38:05
3	Sc RADIAL	151659.3	151659.3	103 %		16:36:40
3	Al 396.153Radial†	-28.3	35.3	7.2531 µg/L	7.2531 ppb	16:37:00
3	Ca 317.933Radial†	646.0	-68.3	-4.1086 µg/L	-4.1086 ppb	16:37:00
3	Fe 238.204 Radial†	199.0	53.3	3.5851 µg/L	3.5851 ppb	16:37:00
3	K 766.490 Radial†	1519.9	168.8	69.446 µg/L	69.446 ppb	16:36:40
3	Mg 279.077 IEC†	179.2	5.9	2.4278 µg/L	2.4278 ppb	16:37:00
3	Na 589.592 Radial†	1454.5	211.2	32.007 µg/L	32.007 ppb	16:36:40
3	Sr 421.552†	-167.3	58.5	0.1351 µg/L	0.1351 ppb	16:36:40
3	Sc 361.383	1777415.3	1777415.3	101.27 %		16:38:07
3	Y 371.029	1077075.4	1077075.4	101.22 %		16:38:07
3	Ag 328.068†	3547.2	55.6	0.2339 µg/L	0.2339 ppb	16:38:09
3	As 188.979†	-14.0	3.8	1.3299 µg/L	1.3299 ppb	16:38:29
3	B 249.677†	3244.0	-27.1	-0.4430 µg/L	-0.4430 ppb	16:38:29
3	Ba 233.527†	-186.1	-21.6	-0.0937 µg/L	-0.0937 ppb	16:38:29
3	Be 313.107†	-746.5	48.4	0.0159 µg/L	0.0159 ppb	16:38:09
3	Cd 226.502†	-82.7	28.3	0.1941 µg/L	0.1941 ppb	16:38:29
3	Co 228.616†	-162.0	12.5	0.1686 µg/L	0.1686 ppb	16:38:29
3	Cr 267.716†	143.6	-36.8	-0.3130 µg/L	-0.3130 ppb	16:38:29
3	Cu 324.752†	2855.6	30.7	0.1338 µg/L	0.1338 ppb	16:38:09
3	Mn 257.610†	204.7	26.6	0.0354 µg/L	0.0354 ppb	16:38:29
3	Mo 202.031†	-21.9	13.1	0.4182 µg/L	0.4182 ppb	16:38:29
3	Ni 231.604†	-69.6	9.2	0.1151 µg/L	0.1151 ppb	16:38:29
3	P 214.914†	1.4	-3.6	-0.8646 µg/L	-0.8646 ppb	16:38:29
3	Pb 220.353†	84.4	-13.6	-0.8367 µg/L	-0.8367 ppb	16:38:29
3	S 181.975 Axial†	90.3	1.5	1.2325 µg/L	1.2325 ppb	16:38:29
3	Sb 206.836†	80.7	1.6	0.2186 µg/L	0.2186 ppb	16:38:29
3	Se 196.026†	8.3	-5.3	-2.13 µg/L	-2.13 ppb	16:38:29
3	SiO2†	1696.0	-78.5	-8.4316 µg/L	-8.4316 ppb	16:38:29
3	Si 251.611†	738.0	-219.9	-3.5748 µg/L	-3.5748 ppb	16:38:09
3	Sn 189.927†	18.0	20.3	1.4069 µg/L	1.4069 ppb	16:38:29
3	Ti 334.940†	846.9	-49.3	-0.0514 µg/L	-0.0514 ppb	16:38:09
3	Tl 190.801†	-120.1	-1.5	-0.1973 µg/L	-0.1973 ppb	16:38:29
3	U 409.014†	-216.0	70.5	4.4517 µg/L	4.4517 ppb	16:38:09
3	V 292.402†	433.2	117.9	0.6318 µg/L	0.6318 ppb	16:38:09
3	Zn 213.857†	526.7	-4.5	-0.0291 µg/L	-0.0291 ppb	16:38:29

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1778284.6	101.32 %	0.163			0.16%
Sc RADIAL	151434.5	102 %	0.4			0.39%
Y 371.029	1077234.8	101.24 %	0.141			0.14%
Ag 328.068†	9.9	0.0407 µg/L	0.65930	0.0407 ppb	0.65930	>999.9%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	35.3	7.2737 µg/L	0.19788	7.2737 ppb	0.19788	2.72%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	9.0	3.1288 µg/L	2.00985	3.1288 ppb	2.00985	64.24%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	-14.9	-0.2430 µg/L	0.73013	-0.2430 ppb	0.73013	300.47%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	-9.5	-0.0414 µg/L	0.04672	-0.0414 ppb	0.04672	112.91%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	147.9	0.0440 µg/L	0.03169	0.0440 ppb	0.03169	72.04%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	-42.4	-2.5486 µg/L	1.35112	-2.5486 ppb	1.35112	53.02%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	21.7	0.1488 µg/L	0.10645	0.1488 ppb	0.10645	71.55%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	17.2	0.2319 µg/L	0.05984	0.2319 ppb	0.05984	25.81%

QC value within limits for Co 228.616 Recovery = Not calculated							
Cr	267.716†	-32.2	-0.2698 µg/L	0.14373	-0.2698 ppb	0.14373	53.27%
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu	324.752†	-39.4	-0.1666 µg/L	0.27327	-0.1666 ppb	0.27327	164.06%
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe	238.204 Radial†	34.3	2.3054 µg/L	1.11984	2.3054 ppb	1.11984	48.57%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K	766.490 Radial†	164.1	67.521 µg/L	8.7540	67.521 ppb	8.7540	12.96%
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg	279.077 IEC†	9.2	3.7804 µg/L	1.87409	3.7804 ppb	1.87409	49.57%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn	257.610†	23.9	0.0317 µg/L	0.02590	0.0317 ppb	0.02590	81.64%
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo	202.031†	5.0	0.1592 µg/L	0.23731	0.1592 ppb	0.23731	149.11%
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na	589.592 Radial†	232.2	35.206 µg/L	16.1307	35.206 ppb	16.1307	45.82%
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni	231.604†	2.6	0.0324 µg/L	0.07220	0.0324 ppb	0.07220	222.64%
QC value within limits for Ni 231.604 Recovery = Not calculated							
P	214.914†	3.4	0.8250 µg/L	1.46608	0.8250 ppb	1.46608	177.70%
QC value within limits for P 214.914 Recovery = Not calculated							
Pb	220.353†	-5.0	-0.3056 µg/L	0.63802	-0.3056 ppb	0.63802	208.80%
QC value within limits for Pb 220.353 Recovery = Not calculated							
S	181.975 Axial†	4.4	3.6058 µg/L	3.28371	3.6058 ppb	3.28371	91.07%
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb	206.836†	1.7	0.2360 µg/L	0.32585	0.2360 ppb	0.32585	138.10%
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se	196.026†	-1.7	-0.675 µg/L	4.9659	-0.675 ppb	4.9659	736.21%
QC value within limits for Se 196.026 Recovery = Not calculated							
SiO2†		-75.3	-8.0701 µg/L	1.39574	-8.0701 ppb	1.39574	17.30%
QC value within limits for SiO2 Recovery = Not calculated							
Si	251.611†	-140.2	-2.2759 µg/L	1.62935	-2.2759 ppb	1.62935	71.59%
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn	189.927†	10.5	0.7292 µg/L	0.65610	0.7292 ppb	0.65610	89.98%
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr	421.552†	44.3	0.1023 µg/L	0.02870	0.1023 ppb	0.02870	28.05%
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti	334.940†	-59.5	-0.0594 µg/L	0.00835	-0.0594 ppb	0.00835	14.06%
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl	190.801†	5.6	0.7496 µg/L	1.33288	0.7496 ppb	1.33288	177.82%
QC value within limits for Tl 190.801 Recovery = Not calculated							
U	409.014†	-20.9	-1.2953 µg/L	5.65273	-1.2953 ppb	5.65273	436.40%
QC value within limits for U 409.014 Recovery = Not calculated							
V	292.402†	48.4	0.2565 µg/L	0.54704	0.2565 ppb	0.54704	213.25%
QC value within limits for V 292.402 Recovery = Not calculated							
Zn	213.857†	-1.3	-0.0084 µg/L	0.02204	-0.0084 ppb	0.02204	262.12%
QC value within limits for Zn 213.857 Recovery = Not calculated							

All analyte(s) passed QC.

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Analysis Begun

Start Time: 3/30/2010 16:57:39

Plasma On Time: 3/29/2010 18:07:58

Logged In Analyst: optima4

Technique: ICP Continuous

Spectrometer Model: Optima 7300 DV, S/N 077C0022701 Autosampler Model: AS-93plus

Sample Information File: C:\pe\optima4\Sample Information\033010.sif

Batch ID:

Results Data Set: 033010B

Results Library: C:\pe\optima4\Results\Results.mdb

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Sequence No.: 1

Autosampler Location: 7

Sample ID: CCV

Date Collected: 3/30/2010 16:57:41

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	149199.2	149199.2	101 %		16:58:14
1	Al 396.153Radial†	25133.4	24965.6	5121.0 µg/L	5121.0 ppb	16:58:14
1	Ca 317.933Radial†	86291.1	84801.1	5102.3 µg/L	5102.3 ppb	16:58:14
1	Fe 238.204 Radial†	76166.0	75326.2	5068.6 µg/L	5068.6 ppb	16:58:14
1	K 766.490 Radial†	13784.3	12344.9	5076.5 µg/L	5076.5 ppb	16:58:14
1	Mg 279.077 IEC†	13036.4	12747.9	5237.5 µg/L	5237.5 ppb	16:58:14
1	Na 589.592 Radial†	68524.1	66688.5	10122 µg/L	10122 ppb	16:58:14
1	Sr 421.552†	222273.3	220454.9	508.52 µg/L	508.52 ppb	16:58:12
1	Sc 361.383	1729437.6	1729437.6	98.539 %		16:58:26
1	Y 371.029	1036324.1	1036324.1	97.395 %		16:58:26
1	Ag 328.068†	127198.8	125637.5	505.71 µg/L	505.71 ppb	16:58:26
1	As 188.979†	1397.3	1435.7	508.27 µg/L	508.27 ppb	16:58:46
1	B 249.677†	33342.8	30606.8	497.26 µg/L	497.26 ppb	16:58:26
1	Ba 233.527†	113491.6	115336.4	502.60 µg/L	502.60 ppb	16:58:26
1	Be 313.107†	1652988.4	1678280.3	503.82 µg/L	503.82 ppb	16:58:26
1	Cd 226.502†	72383.9	73567.0	504.82 µg/L	504.82 ppb	16:58:26
1	Co 228.616†	36695.5	37411.9	506.26 µg/L	506.26 ppb	16:58:26
1	Cr 267.716†	58963.9	59659.5	502.53 µg/L	502.53 ppb	16:58:26
1	Cu 324.752†	119751.4	118737.8	501.93 µg/L	501.93 ppb	16:58:26
1	Mn 257.610†	372127.1	377468.5	504.31 µg/L	504.31 ppb	16:58:26
1	Mo 202.031†	15742.5	16010.6	509.75 µg/L	509.75 ppb	16:58:46
1	Ni 231.604†	39503.2	40166.7	505.21 µg/L	505.21 ppb	16:58:26
1	P 214.914†	10540.5	10691.7	2541.6 µg/L	2541.6 ppb	16:58:46
1	Pb 220.353†	8315.2	8341.5	512.35 µg/L	512.35 ppb	16:58:46
1	S 181.975 Axial†	1305.5	1237.2	1018.5 µg/L	1018.5 ppb	16:58:46
1	Sb 206.836†	3903.1	3882.9	510.37 µg/L	510.37 ppb	16:58:46
1	Se 196.026†	1270.8	1276.1	513 µg/L	513 ppb	16:58:46
1	SiO2†	51353.9	50362.1	5366.1 µg/L	5366.1 ppb	16:58:26
1	Si 251.611†	154170.2	155507.2	2506.9 µg/L	2506.9 ppb	16:58:26
1	Sn 189.927†	7252.0	7362.1	511.38 µg/L	511.38 ppb	16:58:46
1	Ti 334.940†	496039.9	502508.3	502.77 µg/L	502.77 ppb	16:58:26
1	Tl 190.801†	3625.2	3796.0	517.69 µg/L	517.69 ppb	16:58:46
1	U 409.014†	7556.6	7952.4	528.59 µg/L	528.59 ppb	16:58:26
1	V 292.402†	92970.0	94038.4	506.04 µg/L	506.04 ppb	16:58:26
1	Zn 213.857†	80596.8	81267.1	500.06 µg/L	500.06 ppb	16:58:26
2	Sc RADIAL	148989.5	148989.5	101 %		16:58:18
2	Al 396.153Radial†	25062.8	24930.6	5113.9 µg/L	5113.9 ppb	16:58:18
2	Ca 317.933Radial†	86125.4	84757.0	5099.6 µg/L	5099.6 ppb	16:58:18
2	Fe 238.204 Radial†	76239.8	75505.7	5080.7 µg/L	5080.7 ppb	16:58:18
2	K 766.490 Radial†	13841.1	12420.6	5107.7 µg/L	5107.7 ppb	16:58:18
2	Mg 279.077 IEC†	12962.5	12692.8	5214.9 µg/L	5214.9 ppb	16:58:18
2	Na 589.592 Radial†	68179.9	66442.6	10085 µg/L	10085 ppb	16:58:18
2	Sr 421.552†	224560.5	223034.3	514.47 µg/L	514.47 ppb	16:58:16
2	Sc 361.383	1722198.8	1722198.8	98.127 %		16:58:50
2	Y 371.029	1031025.1	1031025.1	96.897 %		16:58:50
2	Ag 328.068†	126600.1	125570.0	505.41 µg/L	505.41 ppb	16:58:50
2	As 188.979†	1403.2	1447.6	512.43 µg/L	512.43 ppb	16:59:10

2	B 249.677†	33328.8	30734.7	499.34 µg/L	499.34 ppb	16:58:50
2	Ba 233.527†	113413.5	115740.8	504.36 µg/L	504.36 ppb	16:58:50
2	Be 313.107†	1647320.5	1679555.1	504.19 µg/L	504.19 ppb	16:58:50
2	Cd 226.502†	72125.6	73612.6	505.13 µg/L	505.13 ppb	16:58:50
2	Co 228.616†	36642.3	37514.2	507.64 µg/L	507.64 ppb	16:58:50
2	Cr 267.716†	58539.2	59478.2	501.02 µg/L	501.02 ppb	16:58:50
2	Cu 324.752†	119171.5	118657.7	501.57 µg/L	501.57 ppb	16:58:50
2	Mn 257.610†	370900.9	377806.2	504.76 µg/L	504.76 ppb	16:58:50
2	Mo 202.031†	15642.4	15975.8	508.64 µg/L	508.64 ppb	16:59:10
2	Ni 231.604†	39353.6	40182.8	505.41 µg/L	505.41 ppb	16:58:50
2	P 214.914†	10458.6	10653.2	2532.4 µg/L	2532.4 ppb	16:59:10
2	Pb 220.353†	8291.2	8352.5	513.04 µg/L	513.04 ppb	16:59:10
2	S 181.975 Axial†	1304.5	1241.7	1022.1 µg/L	1022.1 ppb	16:59:10
2	Sb 206.836†	3865.5	3861.2	507.54 µg/L	507.54 ppb	16:59:10
2	Se 196.026†	1274.2	1284.9	517 µg/L	517 ppb	16:59:10
2	SiO2†	51206.2	50430.6	5373.5 µg/L	5373.5 ppb	16:58:50
2	Si 251.611†	154157.0	156151.3	2517.4 µg/L	2517.4 ppb	16:58:50
2	Sn 189.927†	7197.1	7337.0	509.65 µg/L	509.65 ppb	16:59:10
2	Ti 334.940†	494104.3	502651.7	502.92 µg/L	502.92 ppb	16:58:50
2	Tl 190.801†	3603.4	3789.3	516.79 µg/L	516.79 ppb	16:59:10
2	U 409.014†	7104.1	7523.4	501.74 µg/L	501.74 ppb	16:58:50
2	V 292.402†	92620.1	94078.5	506.21 µg/L	506.21 ppb	16:58:50
2	Zn 213.857†	80704.2	81720.3	502.87 µg/L	502.87 ppb	16:58:50
3	Sc RADIAL	150443.3	150443.3	102 %		16:58:22
3	Al 396.153Radial†	25179.7	24805.1	5087.6 µg/L	5087.6 ppb	16:58:22
3	Ca 317.933Radial†	86584.9	84382.8	5077.1 µg/L	5077.1 ppb	16:58:22
3	Fe 238.204 Radial†	76433.0	74964.6	5044.3 µg/L	5044.3 ppb	16:58:22
3	K 766.490 Radial†	13825.6	12272.6	5046.8 µg/L	5046.8 ppb	16:58:22
3	Mg 279.077 IEC†	12960.3	12566.4	5163.3 µg/L	5163.3 ppb	16:58:22
3	Na 589.592 Radial†	68734.3	66333.7	10068 µg/L	10068 ppb	16:58:22
3	Sr 421.552†	224638.4	220957.7	509.68 µg/L	509.68 ppb	16:58:20
3	Sc 361.383	1703789.7	1703789.7	97.078 %		16:59:13
3	Y 371.029	1020310.6	1020310.6	95.890 %		16:59:13
3	Ag 328.068†	125841.1	126182.1	507.85 µg/L	507.85 ppb	16:59:13
3	As 188.979†	1399.0	1458.8	516.35 µg/L	516.35 ppb	16:59:33
3	B 249.677†	32938.4	30699.6	498.77 µg/L	498.77 ppb	16:59:13
3	Ba 233.527†	112303.0	115845.7	504.83 µg/L	504.83 ppb	16:59:13
3	Be 313.107†	1628078.9	1677873.0	503.68 µg/L	503.68 ppb	16:59:13
3	Cd 226.502†	71318.3	73575.2	504.88 µg/L	504.88 ppb	16:59:13
3	Co 228.616†	36250.4	37514.0	507.64 µg/L	507.64 ppb	16:59:13
3	Cr 267.716†	58103.9	59674.4	502.68 µg/L	502.68 ppb	16:59:13
3	Cu 324.752†	118475.5	119252.9	504.07 µg/L	504.07 ppb	16:59:13
3	Mn 257.610†	367522.6	378410.2	505.57 µg/L	505.57 ppb	16:59:13
3	Mo 202.031†	15766.0	16275.3	518.16 µg/L	518.16 ppb	16:59:33
3	Ni 231.604†	39046.2	40299.5	506.88 µg/L	506.88 ppb	16:59:13
3	P 214.914†	10539.3	10851.5	2579.6 µg/L	2579.6 ppb	16:59:33
3	Pb 220.353†	8372.9	8528.0	523.81 µg/L	523.81 ppb	16:59:33
3	S 181.975 Axial†	1311.9	1263.7	1040.2 µg/L	1040.2 ppb	16:59:33
3	Sb 206.836†	3881.3	3920.0	515.38 µg/L	515.38 ppb	16:59:33
3	Se 196.026†	1263.3	1287.7	518 µg/L	518 ppb	16:59:33
3	SiO2†	50416.9	50181.4	5346.4 µg/L	5346.4 ppb	16:59:13
3	Si 251.611†	151913.4	155537.7	2507.2 µg/L	2507.2 ppb	16:59:13
3	Sn 189.927†	7245.0	7465.6	518.55 µg/L	518.55 ppb	16:59:33
3	Ti 334.940†	489941.5	503804.1	504.08 µg/L	504.08 ppb	16:59:13
3	Tl 190.801†	3643.4	3870.2	527.67 µg/L	527.67 ppb	16:59:33
3	U 409.014†	6984.8	7478.9	499.01 µg/L	499.01 ppb	16:59:13
3	V 292.402†	91797.2	94250.7	507.24 µg/L	507.24 ppb	16:59:13
3	Zn 213.857†	79534.1	81403.7	500.90 µg/L	500.90 ppb	16:59:13

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1718475.4	97.915 %	0.7534			0.77%
Sc RADIAL	149544.0	101 %	0.5			0.53%
Y 371.029	1029219.9	96.727 %	0.7667			0.79%
Ag 328.068†	125796.5	506.32 µg/L	1.332	506.32 ppb	1.332	0.26%
QC value within limits for Ag 328.068 Recovery = 101.26%						
Al 396.153Radial†	24900.4	5107.5 µg/L	17.62	5107.5 ppb	17.62	0.34%
QC value within limits for Al 396.153Radial Recovery = 102.15%						
As 188.979†	1447.4	512.35 µg/L	4.040	512.35 ppb	4.040	0.79%

QC value within limits for As 188.979 Recovery = 102.47%							
B 249.677†	30680.4	498.46 µg/L	1.075	498.46 ppb	1.075	0.22%	
QC value within limits for B 249.677 Recovery = 99.69%							
Ba 233.527†	115641.0	503.93 µg/L	1.172	503.93 ppb	1.172	0.23%	
QC value within limits for Ba 233.527 Recovery = 100.79%							
Be 313.107†	1678569.5	503.90 µg/L	0.262	503.90 ppb	0.262	0.05%	
QC value within limits for Be 313.107 Recovery = 100.78%							
Ca 317.933Radial†	84647.0	5093.0 µg/L	13.83	5093.0 ppb	13.83	0.27%	
QC value within limits for Ca 317.933Radial Recovery = 101.86%							
Cd 226.502†	73584.9	504.94 µg/L	0.166	504.94 ppb	0.166	0.03%	
QC value within limits for Cd 226.502 Recovery = 100.99%							
Co 228.616†	37480.1	507.18 µg/L	0.799	507.18 ppb	0.799	0.16%	
QC value within limits for Co 228.616 Recovery = 101.44%							
Cr 267.716†	59604.0	502.08 µg/L	0.915	502.08 ppb	0.915	0.18%	
QC value within limits for Cr 267.716 Recovery = 100.42%							
Cu 324.752†	118882.8	502.52 µg/L	1.352	502.52 ppb	1.352	0.27%	
QC value within limits for Cu 324.752 Recovery = 100.50%							
Fe 238.204 Radial†	75265.5	5064.5 µg/L	18.55	5064.5 ppb	18.55	0.37%	
QC value within limits for Fe 238.204 Radial Recovery = 101.29%							
K 766.490 Radial†	12346.1	5077.0 µg/L	30.44	5077.0 ppb	30.44	0.60%	
QC value within limits for K 766.490 Radial Recovery = 101.54%							
Mg 279.077 IEC†	12669.1	5205.2 µg/L	38.04	5205.2 ppb	38.04	0.73%	
QC value within limits for Mg 279.077 IEC Recovery = 104.10%							
Mn 257.610†	377895.0	504.88 µg/L	0.639	504.88 ppb	0.639	0.13%	
QC value within limits for Mn 257.610 Recovery = 100.98%							
Mo 202.031†	16087.2	512.18 µg/L	5.210	512.18 ppb	5.210	1.02%	
QC value within limits for Mo 202.031 Recovery = 102.44%							
Na 589.592 Radial†	66488.3	10092 µg/L	27.6	10092 ppb	27.6	0.27%	
QC value within limits for Na 589.592 Radial Recovery = 100.92%							
Ni 231.604†	40216.3	505.83 µg/L	0.911	505.83 ppb	0.911	0.18%	
QC value within limits for Ni 231.604 Recovery = 101.17%							
P 214.914†	10732.2	2551.2 µg/L	25.06	2551.2 ppb	25.06	0.98%	
QC value within limits for P 214.914 Recovery = 102.05%							
Pb 220.353†	8407.3	516.40 µg/L	6.426	516.40 ppb	6.426	1.24%	
QC value within limits for Pb 220.353 Recovery = 103.28%							
S 181.975 Axial†	1247.5	1026.9 µg/L	11.66	1026.9 ppb	11.66	1.14%	
QC value within limits for S 181.975 Axial Recovery = 102.69%							
Sb 206.836†	3888.0	511.10 µg/L	3.970	511.10 ppb	3.970	0.78%	
QC value within limits for Sb 206.836 Recovery = 102.22%							
Se 196.026†	1282.9	516 µg/L	2.4	516 ppb	2.4	0.47%	
QC value within limits for Se 196.026 Recovery = 103.15%							
SiO2†	50324.7	5362.0 µg/L	13.99	5362.0 ppb	13.99	0.26%	
QC value within limits for SiO2 Recovery = 100.27%							
Si 251.611†	155732.1	2510.5 µg/L	5.94	2510.5 ppb	5.94	0.24%	
QC value within limits for Si 251.611 Recovery = 100.42%							
Sn 189.927†	7388.2	513.19 µg/L	4.721	513.19 ppb	4.721	0.92%	
QC value within limits for Sn 189.927 Recovery = 102.64%							
Sr 421.552†	221482.3	510.89 µg/L	3.154	510.89 ppb	3.154	0.62%	
QC value within limits for Sr 421.552 Recovery = 102.18%							
Ti 334.940†	502988.1	503.26 µg/L	0.719	503.26 ppb	0.719	0.14%	
QC value within limits for Ti 334.940 Recovery = 100.65%							
Tl 190.801†	3818.5	520.72 µg/L	6.041	520.72 ppb	6.041	1.16%	
QC value within limits for Tl 190.801 Recovery = 104.14%							
U 409.014†	7651.6	509.78 µg/L	16.349	509.78 ppb	16.349	3.21%	
QC value within limits for U 409.014 Recovery = 101.96%							
V 292.402†	94122.5	506.50 µg/L	0.646	506.50 ppb	0.646	0.13%	
QC value within limits for V 292.402 Recovery = 101.30%							
Zn 213.857†	81463.7	501.27 µg/L	1.442	501.27 ppb	1.442	0.29%	
QC value within limits for Zn 213.857 Recovery = 100.25%							
All analyte(s) passed QC.							

Sequence No.: 2

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 3/30/2010 16:59:41

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	149825.5	149825.5	101 %			17:00:10
1	Al 396.153Radial†	-41.4	22.0	4.5262 µg/L		4.5262 ppb	17:00:30
1	Ca 317.933Radial†	670.9	-36.0	-2.1668 µg/L		-2.1668 ppb	17:00:30
1	Fe 238.204 Radial†	145.6	2.9	0.1962 µg/L		0.1962 ppb	17:00:30
1	K 766.490 Radial†	1426.9	95.1	39.120 µg/L		39.120 ppb	17:00:10
1	Mg 279.077 IEC†	176.4	5.2	2.1463 µg/L		2.1463 ppb	17:00:30
1	Na 589.592 Radial†	1352.8	128.1	19.422 µg/L		19.422 ppb	17:00:10
1	Sr 421.552†	-227.6	-3.0	-0.0068 µg/L		-0.0068 ppb	17:00:10
1	Sc 361.383	1764835.2	1764835.2	100.56 %			17:01:32
1	Y 371.029	1069900.1	1069900.1	100.55 %			17:01:32
1	Ag 328.068†	3768.3	300.4	1.1888 µg/L		1.1888 ppb	17:01:34
1	As 188.979†	-11.1	6.7	2.3224 µg/L		2.3224 ppb	17:01:54
1	B 249.677†	3263.2	14.8	0.2419 µg/L		0.2419 ppb	17:01:54
1	Ba 233.527†	-157.4	5.6	0.0243 µg/L		0.0243 ppb	17:01:54
1	Be 313.107†	-752.2	37.6	0.0106 µg/L		0.0106 ppb	17:01:34
1	Cd 226.502†	-106.0	4.6	0.0315 µg/L		0.0315 ppb	17:01:54
1	Co 228.616†	-180.5	-7.1	-0.0954 µg/L		-0.0954 ppb	17:01:54
1	Cr 267.716†	189.3	9.7	0.0836 µg/L		0.0836 ppb	17:01:54
1	Cu 324.752†	2837.6	32.9	0.1369 µg/L		0.1369 ppb	17:01:34
1	Mn 257.610†	168.5	-8.0	-0.0108 µg/L		-0.0108 ppb	17:01:54
1	Mo 202.031†	-27.2	7.7	0.2445 µg/L		0.2445 ppb	17:01:54
1	Ni 231.604†	-71.9	6.4	0.0807 µg/L		0.0807 ppb	17:01:54
1	P 214.914†	26.2	21.1	5.0333 µg/L		5.0333 ppb	17:01:54
1	Pb 220.353†	90.4	-7.1	-0.4327 µg/L		-0.4327 ppb	17:01:54
1	S 181.975 Axial†	89.0	0.8	0.6968 µg/L		0.6968 ppb	17:01:54
1	Sb 206.836†	80.1	1.6	0.2148 µg/L		0.2148 ppb	17:01:54
1	Se 196.026†	12.1	-1.5	-0.605 µg/L		-0.605 ppb	17:01:54
1	SiO2†	1691.2	-71.3	-7.6443 µg/L		-7.6443 ppb	17:01:54
1	Si 251.611†	802.7	-150.3	-2.4405 µg/L		-2.4405 ppb	17:01:54
1	Sn 189.927†	5.6	8.1	0.5622 µg/L		0.5622 ppb	17:01:54
1	Ti 334.940†	648.3	-240.9	-0.2406 µg/L		-0.2406 ppb	17:01:34
1	Tl 190.801†	-113.4	4.3	0.5811 µg/L		0.5811 ppb	17:01:54
1	U 409.014†	-322.0	-36.5	-2.2948 µg/L		-2.2948 ppb	17:01:34
1	V 292.402†	274.6	-36.7	-0.1933 µg/L		-0.1933 ppb	17:01:34
1	Zn 213.857†	538.9	11.3	0.0695 µg/L		0.0695 ppb	17:01:54
2	Sc RADIAL	154358.9	154358.9	104 %			17:00:32
2	Al 396.153Radial†	-68.9	-3.1	-0.6411 µg/L		-0.6411 ppb	17:00:52
2	Ca 317.933Radial†	649.5	-75.9	-4.5693 µg/L		-4.5693 ppb	17:00:52
2	Fe 238.204 Radial†	162.3	14.7	0.9910 µg/L		0.9910 ppb	17:00:52
2	K 766.490 Radial†	1496.9	120.8	49.716 µg/L		49.716 ppb	17:00:32
2	Mg 279.077 IEC†	172.4	-3.7	-1.5219 µg/L		-1.5219 ppb	17:00:52
2	Na 589.592 Radial†	1529.5	258.2	39.157 µg/L		39.157 ppb	17:00:32
2	Sr 421.552†	-214.6	16.2	0.0373 µg/L		0.0373 ppb	17:00:32
2	Sc 361.383	1766136.3	1766136.3	100.63 %			17:01:56
2	Y 371.029	1069430.1	1069430.1	100.51 %			17:01:56
2	Ag 328.068†	3213.8	-253.4	-1.0074 µg/L		-1.0074 ppb	17:01:58
2	As 188.979†	-17.3	0.5	0.1849 µg/L		0.1849 ppb	17:02:19
2	B 249.677†	3210.2	-40.2	-0.6565 µg/L		-0.6565 ppb	17:02:19
2	Ba 233.527†	-146.3	16.8	0.0730 µg/L		0.0730 ppb	17:02:19
2	Be 313.107†	-621.4	168.1	0.0500 µg/L		0.0500 ppb	17:01:58
2	Cd 226.502†	-122.3	-11.5	-0.0790 µg/L		-0.0790 ppb	17:02:19
2	Co 228.616†	-167.3	6.2	0.0841 µg/L		0.0841 ppb	17:02:19
2	Cr 267.716†	156.6	-22.9	-0.1919 µg/L		-0.1919 ppb	17:02:19
2	Cu 324.752†	2744.8	-61.3	-0.2595 µg/L		-0.2595 ppb	17:01:58
2	Mn 257.610†	188.7	11.9	0.0160 µg/L		0.0160 ppb	17:02:19
2	Mo 202.031†	-39.1	-4.1	-0.1293 µg/L		-0.1293 ppb	17:02:19
2	Ni 231.604†	-60.6	17.7	0.2227 µg/L		0.2227 ppb	17:02:19
2	P 214.914†	0.6	-4.4	-1.0487 µg/L		-1.0487 ppb	17:02:19
2	Pb 220.353†	74.0	-23.4	-1.4319 µg/L		-1.4319 ppb	17:02:19

2	S 181.975 Axial†	92.2	3.9	3.2288 µg/L	3.2288 ppb	17:02:19
2	Sb 206.836†	77.6	-0.9	-0.1180 µg/L	-0.1180 ppb	17:02:19
2	Se 196.026†	1.0	-12.5	-5.02 µg/L	-5.02 ppb	17:02:19
2	SiO2†	1685.5	-78.2	-8.3720 µg/L	-8.3720 ppb	17:02:19
2	Si 251.611†	746.6	-206.7	-3.3496 µg/L	-3.3496 ppb	17:02:19
2	Sn 189.927†	10.3	12.7	0.8809 µg/L	0.8809 ppb	17:02:19
2	Ti 334.940†	719.8	-170.3	-0.1700 µg/L	-0.1700 ppb	17:01:58
2	Tl 190.801†	-109.7	8.1	1.0864 µg/L	1.0864 ppb	17:02:19
2	U 409.014†	-308.2	-22.5	-1.4032 µg/L	-1.4032 ppb	17:01:58
2	V 292.402†	337.0	25.0	0.1297 µg/L	0.1297 ppb	17:01:58
2	Zn 213.857†	520.1	-7.7	-0.0490 µg/L	-0.0490 ppb	17:02:19
3	Sc RADIAL	151821.2	151821.2	103 %		17:00:54
3	Al 396.153Radial†	-35.8	28.1	5.7660 µg/L	5.7660 ppb	17:01:14
3	Ca 317.933Radial†	649.0	-66.1	-3.9762 µg/L	-3.9762 ppb	17:01:14
3	Fe 238.204 Radial†	152.9	8.2	0.5536 µg/L	0.5536 ppb	17:01:14
3	K 766.490 Radial†	1341.6	-6.4	-2.6589 µg/L	-2.6589 ppb	17:00:54
3	Mg 279.077 IEC†	176.0	2.6	1.0683 µg/L	1.0683 ppb	17:01:14
3	Na 589.592 Radial†	1495.8	249.9	37.942 µg/L	37.942 ppb	17:00:54
3	Sr 421.552†	-325.5	-95.3	-0.2198 µg/L	-0.2198 ppb	17:00:54
3	Sc 361.383	1779477.4	1779477.4	101.39 %		17:02:21
3	Y 371.029	1078016.4	1078016.4	101.31 %		17:02:21
3	Ag 328.068†	3389.2	-104.4	-0.4278 µg/L	-0.4278 ppb	17:02:23
3	As 188.979†	-17.2	0.7	0.2529 µg/L	0.2529 ppb	17:02:43
3	B 249.677†	3239.4	-35.4	-0.5764 µg/L	-0.5764 ppb	17:02:43
3	Ba 233.527†	-167.6	-3.1	-0.0137 µg/L	-0.0137 ppb	17:02:43
3	Be 313.107†	-756.0	40.0	0.0096 µg/L	0.0096 ppb	17:02:23
3	Cd 226.502†	-100.9	10.5	0.0724 µg/L	0.0724 ppb	17:02:43
3	Co 228.616†	-186.2	-11.2	-0.1522 µg/L	-0.1522 ppb	17:02:43
3	Cr 267.716†	173.8	-7.2	-0.0544 µg/L	-0.0544 ppb	17:02:43
3	Cu 324.752†	2874.1	45.7	0.1860 µg/L	0.1860 ppb	17:02:23
3	Mn 257.610†	174.4	-3.5	-0.0048 µg/L	-0.0048 ppb	17:02:43
3	Mo 202.031†	-24.1	11.0	0.3501 µg/L	0.3501 ppb	17:02:43
3	Ni 231.604†	-59.8	18.9	0.2376 µg/L	0.2376 ppb	17:02:43
3	P 214.914†	11.8	6.6	1.5759 µg/L	1.5759 ppb	17:02:43
3	Pb 220.353†	73.9	-24.0	-1.4651 µg/L	-1.4651 ppb	17:02:43
3	S 181.975 Axial†	95.0	6.0	4.8862 µg/L	4.8862 ppb	17:02:43
3	Sb 206.836†	84.7	5.4	0.7191 µg/L	0.7191 ppb	17:02:43
3	Se 196.026†	13.3	-0.4	-0.175 µg/L	-0.175 ppb	17:02:43
3	SiO2†	1699.4	-77.0	-8.2473 µg/L	-8.2473 ppb	17:02:43
3	Si 251.611†	782.0	-177.4	-2.8742 µg/L	-2.8742 ppb	17:02:43
3	Sn 189.927†	-6.6	-4.0	-0.2753 µg/L	-0.2753 ppb	17:02:43
3	Ti 334.940†	871.2	-26.3	-0.0232 µg/L	-0.0232 ppb	17:02:23
3	Tl 190.801†	-113.4	5.2	0.6959 µg/L	0.6959 ppb	17:02:43
3	U 409.014†	-417.5	-128.0	-8.0312 µg/L	-8.0312 ppb	17:02:23
3	V 292.402†	265.4	-48.1	-0.2572 µg/L	-0.2572 ppb	17:02:23
3	Zn 213.857†	508.3	-23.2	-0.1456 µg/L	-0.1456 ppb	17:02:43

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1770149.6	100.86 %	0.462			0.46%
Sc RADIAL	152001.9	103 %	1.5			1.49%
Y 371.029	1072448.9	100.79 %	0.454			0.45%
Ag 328.068†	-19.2	-0.0821 µg/L	1.13817	-0.0821 ppb	1.13817	>999.9%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	15.6	3.2170 µg/L	3.39828	3.2170 ppb	3.39828	105.63%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	2.6	0.9201 µg/L	1.21495	0.9201 ppb	1.21495	132.05%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	-20.3	-0.3303 µg/L	0.49719	-0.3303 ppb	0.49719	150.52%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	6.4	0.0278 µg/L	0.04348	0.0278 ppb	0.04348	156.19%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	81.9	0.0234 µg/L	0.02306	0.0234 ppb	0.02306	98.58%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	-59.3	-3.5708 µg/L	1.25151	-3.5708 ppb	1.25151	35.05%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	1.2	0.0083 µg/L	0.07832	0.0083 ppb	0.07832	948.51%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-4.0	-0.0545 µg/L	0.12330	-0.0545 ppb	0.12330	226.30%

QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	-6.8	-0.0542 µg/L	0.13777	-0.0542 ppb	0.13777	254.07%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	5.8	0.0212 µg/L	0.24425	0.0212 ppb	0.24425	>999.9%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	8.6	0.5803 µg/L	0.39803	0.5803 ppb	0.39803	68.60%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated						
K 766.490 Radial†	69.8	28.726 µg/L	27.6913	28.726 ppb	27.6913	96.40%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	1.4	0.5642 µg/L	1.88533	0.5642 ppb	1.88533	334.16%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated						
Mn 257.610†	0.1	0.0001 µg/L	0.01404	0.0001 ppb	0.01404	>999.9%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	4.9	0.1551 µg/L	0.25191	0.1551 ppb	0.25191	162.41%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	212.0	32.174 µg/L	11.0603	32.174 ppb	11.0603	34.38%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	14.3	0.1804 µg/L	0.08661	0.1804 ppb	0.08661	48.02%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	7.8	1.8535 µg/L	3.05049	1.8535 ppb	3.05049	164.58%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	-18.2	-1.1099 µg/L	0.58669	-1.1099 ppb	0.58669	52.86%
QC value within limits for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	3.6	2.9373 µg/L	2.10985	2.9373 ppb	2.10985	71.83%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	2.0	0.2720 µg/L	0.42149	0.2720 ppb	0.42149	154.97%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	-4.8	-1.93 µg/L	2.683	-1.93 ppb	2.683	138.72%
QC value within limits for Se 196.026 Recovery = Not calculated						
SiO2†	-75.5	-8.0878 µg/L	0.38919	-8.0878 ppb	0.38919	4.81%
QC value within limits for SiO2 Recovery = Not calculated						
Si 251.611†	-178.1	-2.8881 µg/L	0.45468	-2.8881 ppb	0.45468	15.74%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	5.6	0.3892 µg/L	0.59721	0.3892 ppb	0.59721	153.43%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	-27.4	-0.0631 µg/L	0.13749	-0.0631 ppb	0.13749	217.84%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	-145.8	-0.1446 µg/L	0.11091	-0.1446 ppb	0.11091	76.69%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	5.9	0.7878 µg/L	0.26491	0.7878 ppb	0.26491	33.63%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 409.014†	-62.3	-3.9097 µg/L	3.59701	-3.9097 ppb	3.59701	92.00%
QC value within limits for U 409.014 Recovery = Not calculated						
V 292.402†	-19.9	-0.1069 µg/L	0.20744	-0.1069 ppb	0.20744	194.00%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	-6.5	-0.0417 µg/L	0.10773	-0.0417 ppb	0.10773	258.22%
QC value within limits for Zn 213.857 Recovery = Not calculated						

All analyte(s) passed QC.

Sequence No.: 9

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 3/30/2010 17:18:48

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	150447.1	150447.1	102 %		17:19:22
1	Al 396.153Radial†	25401.2	25022.2	5132.7 µg/L	5132.7 ppb	17:19:22
1	Ca 317.933Radial†	86818.2	84609.9	5090.8 µg/L	5090.8 ppb	17:19:22
1	Fe 238.204 Radial†	76699.6	75224.6	5061.8 µg/L	5061.8 ppb	17:19:22
1	K 766.490 Radial†	13929.7	12374.5	5088.7 µg/L	5088.7 ppb	17:19:22
1	Mg 279.077 IEC†	12998.2	12603.3	5178.2 µg/L	5178.2 ppb	17:19:22
1	Na 589.592 Radial†	68511.6	66113.1	10035 µg/L	10035 ppb	17:19:22
1	Sr 421.552†	228277.5	224527.9	517.91 µg/L	517.91 ppb	17:19:20
1	Sc 361.383	1756736.2	1756736.2	100.09 %		17:19:49
1	Y 371.029	1051471.7	1051471.7	98.818 %		17:19:49
1	Ag 328.068†	129586.2	126016.7	507.22 µg/L	507.22 ppb	17:19:49
1	As 188.979†	1431.2	1447.5	512.40 µg/L	512.40 ppb	17:20:09
1	B 249.677†	34020.5	30758.0	499.72 µg/L	499.72 ppb	17:19:49
1	Ba 233.527†	115660.0	115713.0	504.25 µg/L	504.25 ppb	17:19:49
1	Be 313.107†	1683097.6	1682293.9	505.01 µg/L	505.01 ppb	17:19:49
1	Cd 226.502†	73552.2	73592.8	505.00 µg/L	505.00 ppb	17:19:49
1	Co 228.616†	37413.9	37551.0	508.14 µg/L	508.14 ppb	17:19:49
1	Cr 267.716†	59943.1	59707.9	502.95 µg/L	502.95 ppb	17:19:49
1	Cu 324.752†	122063.0	119158.8	503.68 µg/L	503.68 ppb	17:19:49
1	Mn 257.610†	378802.5	378269.2	505.38 µg/L	505.38 ppb	17:19:49
1	Mo 202.031†	16008.3	16027.9	510.30 µg/L	510.30 ppb	17:20:09
1	Ni 231.604†	40299.1	40338.9	507.37 µg/L	507.37 ppb	17:19:49
1	P 214.914†	10741.1	10725.9	2549.7 µg/L	2549.7 ppb	17:20:09
1	Pb 220.353†	8473.7	8368.8	514.04 µg/L	514.04 ppb	17:20:09
1	S 181.975 Axial†	1329.1	1240.2	1020.9 µg/L	1020.9 ppb	17:20:09
1	Sb 206.836†	3973.9	3892.0	511.59 µg/L	511.59 ppb	17:20:09
1	Se 196.026†	1283.6	1268.8	510 µg/L	510 ppb	17:20:09
1	SiO2†	52268.2	50465.7	5377.2 µg/L	5377.2 ppb	17:19:49
1	Si 251.611†	156995.9	155899.0	2513.2 µg/L	2513.2 ppb	17:19:49
1	Sn 189.927†	7392.9	7388.5	513.21 µg/L	513.21 ppb	17:20:09
1	Ti 334.940†	505007.8	503645.4	503.92 µg/L	503.92 ppb	17:19:49
1	Tl 190.801†	3682.4	3796.0	517.71 µg/L	517.71 ppb	17:20:09
1	U 409.014†	7336.0	7612.8	507.49 µg/L	507.49 ppb	17:19:49
1	V 292.402†	94964.3	94564.8	508.83 µg/L	508.83 ppb	17:19:49
1	Zn 213.857†	82267.7	81665.5	502.52 µg/L	502.52 ppb	17:19:49
2	Sc RADIAL	153172.3	153172.3	104 %		17:19:26
2	Al 396.153Radial†	25695.3	24862.0	5099.7 µg/L	5099.7 ppb	17:19:26
2	Ca 317.933Radial†	88610.7	84822.1	5103.5 µg/L	5103.5 ppb	17:19:26
2	Fe 238.204 Radial†	78237.5	75368.0	5071.4 µg/L	5071.4 ppb	17:19:26
2	K 766.490 Radial†	14116.8	12311.6	5062.8 µg/L	5062.8 ppb	17:19:26
2	Mg 279.077 IEC†	13282.0	12649.9	5197.3 µg/L	5197.3 ppb	17:19:26
2	Na 589.592 Radial†	70025.6	66376.5	10075 µg/L	10075 ppb	17:19:26
2	Sr 421.552†	229523.7	221739.8	511.48 µg/L	511.48 ppb	17:19:24
2	Sc 361.383	1762706.8	1762706.8	100.43 %		17:20:12
2	Y 371.029	1055600.2	1055600.2	99.206 %		17:20:12
2	Ag 328.068†	130291.0	126280.0	508.30 µg/L	508.30 ppb	17:20:12
2	As 188.979†	1437.7	1449.1	512.97 µg/L	512.97 ppb	17:20:32
2	B 249.677†	34155.5	30777.4	500.03 µg/L	500.03 ppb	17:20:12
2	Ba 233.527†	116399.1	116057.5	505.75 µg/L	505.75 ppb	17:20:12
2	Be 313.107†	1693458.0	1686913.9	506.40 µg/L	506.40 ppb	17:20:12
2	Cd 226.502†	74111.5	73900.8	507.11 µg/L	507.11 ppb	17:20:12
2	Co 228.616†	37664.8	37674.2	509.81 µg/L	509.81 ppb	17:20:12
2	Cr 267.716†	60247.9	59808.5	503.80 µg/L	503.80 ppb	17:20:12
2	Cu 324.752†	122964.9	119643.7	505.74 µg/L	505.74 ppb	17:20:12
2	Mn 257.610†	381536.3	379709.3	507.31 µg/L	507.31 ppb	17:20:12
2	Mo 202.031†	16061.8	16027.0	510.27 µg/L	510.27 ppb	17:20:32
2	Ni 231.604†	40512.3	40414.9	508.33 µg/L	508.33 ppb	17:20:12
2	P 214.914†	10769.9	10718.3	2547.9 µg/L	2547.9 ppb	17:20:32
2	Pb 220.353†	8523.3	8389.5	515.30 µg/L	515.30 ppb	17:20:32

2	S 181.975 Axial†	1334.7	1241.2	1021.8 µg/L	1021.8 ppb	17:20:32
2	Sb 206.836†	3976.6	3881.3	510.17 µg/L	510.17 ppb	17:20:32
2	Se 196.026†	1295.2	1276.0	513 µg/L	513 ppb	17:20:32
2	SiO2†	52513.8	50533.4	5384.4 µg/L	5384.4 ppb	17:20:12
2	Si 251.611†	158194.5	156561.2	2524.0 µg/L	2524.0 ppb	17:20:12
2	Sn 189.927†	7405.6	7376.1	512.37 µg/L	512.37 ppb	17:20:32
2	Ti 334.940†	509340.5	506250.4	506.52 µg/L	506.52 ppb	17:20:12
2	Tl 190.801†	3689.5	3790.6	517.02 µg/L	517.02 ppb	17:20:32
2	U 409.014†	7505.9	7757.1	516.63 µg/L	516.63 ppb	17:20:12
2	V 292.402†	95608.6	94885.0	510.53 µg/L	510.53 ppb	17:20:12
2	Zn 213.857†	82875.7	81992.4	504.54 µg/L	504.54 ppb	17:20:12
3	Sc RADIAL	152045.9	152045.9	103 %		17:19:30
3	Al 396.153Radial†	25587.5	24940.8	5115.9 µg/L	5115.9 ppb	17:19:30
3	Ca 317.933Radial†	87880.1	84745.3	5098.9 µg/L	5098.9 ppb	17:19:30
3	Fe 238.204 Radial†	77397.9	75111.0	5054.1 µg/L	5054.1 ppb	17:19:30
3	K 766.490 Radial†	14139.5	12434.6	5113.4 µg/L	5113.4 ppb	17:19:30
3	Mg 279.077 IEC†	13163.6	12629.8	5189.1 µg/L	5189.1 ppb	17:19:30
3	Na 589.592 Radial†	69543.6	66408.6	10079 µg/L	10079 ppb	17:19:30
3	Sr 421.552†	226721.6	220656.4	508.98 µg/L	508.98 ppb	17:19:28
3	Sc 361.383	1744223.5	1744223.5	99.382 %		17:20:35
3	Y 371.029	1044447.8	1044447.8	98.158 %		17:20:35
3	Ag 328.068†	128861.6	126216.4	508.02 µg/L	508.02 ppb	17:20:35
3	As 188.979†	1418.6	1445.1	511.56 µg/L	511.56 ppb	17:20:55
3	B 249.677†	34051.2	31032.7	504.20 µg/L	504.20 ppb	17:20:35
3	Ba 233.527†	114922.7	115799.9	504.62 µg/L	504.62 ppb	17:20:35
3	Be 313.107†	1672379.2	1683571.6	505.40 µg/L	505.40 ppb	17:20:35
3	Cd 226.502†	73206.3	73771.8	506.23 µg/L	506.23 ppb	17:20:35
3	Co 228.616†	37218.9	37622.9	509.11 µg/L	509.11 ppb	17:20:35
3	Cr 267.716†	59519.2	59711.0	502.98 µg/L	502.98 ppb	17:20:35
3	Cu 324.752†	121680.7	119649.0	505.75 µg/L	505.75 ppb	17:20:35
3	Mn 257.610†	376948.2	379118.2	506.52 µg/L	506.52 ppb	17:20:35
3	Mo 202.031†	15874.2	16007.7	509.65 µg/L	509.65 ppb	17:20:55
3	Ni 231.604†	40030.7	40357.7	507.61 µg/L	507.61 ppb	17:20:35
3	P 214.914†	10643.0	10704.2	2544.5 µg/L	2544.5 ppb	17:20:55
3	Pb 220.353†	8430.7	8386.1	515.10 µg/L	515.10 ppb	17:20:55
3	S 181.975 Axial†	1321.8	1242.3	1022.7 µg/L	1022.7 ppb	17:20:55
3	Sb 206.836†	3916.5	3862.8	507.74 µg/L	507.74 ppb	17:20:55
3	Se 196.026†	1283.9	1278.3	514 µg/L	514 ppb	17:20:55
3	SiO2†	51951.5	50521.6	5383.2 µg/L	5383.2 ppb	17:20:35
3	Si 251.611†	156290.5	156314.4	2520.0 µg/L	2520.0 ppb	17:20:35
3	Sn 189.927†	7333.8	7381.9	512.77 µg/L	512.77 ppb	17:20:55
3	Ti 334.940†	502776.2	505019.3	505.29 µg/L	505.29 ppb	17:20:35
3	Tl 190.801†	3676.0	3816.0	520.41 µg/L	520.41 ppb	17:20:55
3	U 409.014†	7327.7	7657.0	510.29 µg/L	510.29 ppb	17:20:35
3	V 292.402†	94376.7	94654.2	509.30 µg/L	509.30 ppb	17:20:35
3	Zn 213.857†	81702.2	81686.1	502.64 µg/L	502.64 ppb	17:20:35

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1754555.5	99.970 %	0.5374			0.54%
Sc RADIAL	151888.5	103 %	0.9			0.90%
Y 371.029	1050506.6	98.728 %	0.5299			0.54%
Ag 328.068†	126171.0	507.85 µg/L	0.560	507.85 ppb	0.560	0.11%
QC value within limits for Ag 328.068 Recovery = 101.57%						
Al 396.153Radial†	24941.7	5116.1 µg/L	16.51	5116.1 ppb	16.51	0.32%
QC value within limits for Al 396.153Radial Recovery = 102.32%						
As 188.979†	1447.2	512.31 µg/L	0.710	512.31 ppb	0.710	0.14%
QC value within limits for As 188.979 Recovery = 102.46%						
B 249.677†	30856.0	501.32 µg/L	2.500	501.32 ppb	2.500	0.50%
QC value within limits for B 249.677 Recovery = 100.26%						
Ba 233.527†	115856.8	504.87 µg/L	0.781	504.87 ppb	0.781	0.15%
QC value within limits for Ba 233.527 Recovery = 100.97%						
Be 313.107†	1684259.8	505.60 µg/L	0.717	505.60 ppb	0.717	0.14%
QC value within limits for Be 313.107 Recovery = 101.12%						
Ca 317.933Radial†	84725.8	5097.7 µg/L	6.46	5097.7 ppb	6.46	0.13%
QC value within limits for Ca 317.933Radial Recovery = 101.95%						
Cd 226.502†	73755.1	506.11 µg/L	1.062	506.11 ppb	1.062	0.21%
QC value within limits for Cd 226.502 Recovery = 101.22%						
Co 228.616†	37616.0	509.02 µg/L	0.837	509.02 ppb	0.837	0.16%

QC value within limits for Co 228.616 Recovery = 101.80%							
Cr 267.716†	59742.5	503.24 µg/L	0.479	503.24 ppb	0.479	0.10%	
QC value within limits for Cr 267.716 Recovery = 100.65%							
Cu 324.752†	119483.8	505.06 µg/L	1.190	505.06 ppb	1.190	0.24%	
QC value within limits for Cu 324.752 Recovery = 101.01%							
Fe 238.204 Radial†	75234.5	5062.4 µg/L	8.67	5062.4 ppb	8.67	0.17%	
QC value within limits for Fe 238.204 Radial Recovery = 101.25%							
K 766.490 Radial†	12373.6	5088.3 µg/L	25.32	5088.3 ppb	25.32	0.50%	
QC value within limits for K 766.490 Radial Recovery = 101.77%							
Mg 279.077 IEC†	12627.7	5188.2 µg/L	9.58	5188.2 ppb	9.58	0.18%	
QC value within limits for Mg 279.077 IEC Recovery = 103.76%							
Mn 257.610†	379032.3	506.40 µg/L	0.967	506.40 ppb	0.967	0.19%	
QC value within limits for Mn 257.610 Recovery = 101.28%							
Mo 202.031†	16020.9	510.07 µg/L	0.363	510.07 ppb	0.363	0.07%	
QC value within limits for Mo 202.031 Recovery = 102.01%							
Na 589.592 Radial†	66299.4	10063 µg/L	24.6	10063 ppb	24.6	0.24%	
QC value within limits for Na 589.592 Radial Recovery = 100.63%							
Ni 231.604†	40370.5	507.77 µg/L	0.497	507.77 ppb	0.497	0.10%	
QC value within limits for Ni 231.604 Recovery = 101.55%							
P 214.914†	10716.1	2547.4 µg/L	2.63	2547.4 ppb	2.63	0.10%	
QC value within limits for P 214.914 Recovery = 101.89%							
Pb 220.353†	8381.5	514.81 µg/L	0.677	514.81 ppb	0.677	0.13%	
QC value within limits for Pb 220.353 Recovery = 102.96%							
S 181.975 Axial†	1241.2	1021.8 µg/L	0.88	1021.8 ppb	0.88	0.09%	
QC value within limits for S 181.975 Axial Recovery = 102.18%							
Sb 206.836†	3878.7	509.83 µg/L	1.944	509.83 ppb	1.944	0.38%	
QC value within limits for Sb 206.836 Recovery = 101.97%							
Se 196.026†	1274.4	512 µg/L	2.0	512 ppb	2.0	0.39%	
QC value within limits for Se 196.026 Recovery = 102.47%							
SiO2†	50506.9	5381.6 µg/L	3.88	5381.6 ppb	3.88	0.07%	
QC value within limits for SiO2 Recovery = 100.64%							
Si 251.611†	156258.2	2519.1 µg/L	5.42	2519.1 ppb	5.42	0.22%	
QC value within limits for Si 251.611 Recovery = 100.76%							
Sn 189.927†	7382.2	512.78 µg/L	0.424	512.78 ppb	0.424	0.08%	
QC value within limits for Sn 189.927 Recovery = 102.56%							
Sr 421.552†	222308.0	512.79 µg/L	4.608	512.79 ppb	4.608	0.90%	
QC value within limits for Sr 421.552 Recovery = 102.56%							
Ti 334.940†	504971.7	505.24 µg/L	1.303	505.24 ppb	1.303	0.26%	
QC value within limits for Ti 334.940 Recovery = 101.05%							
Tl 190.801†	3800.8	518.38 µg/L	1.791	518.38 ppb	1.791	0.35%	
QC value within limits for Tl 190.801 Recovery = 103.68%							
U 409.014†	7675.7	511.47 µg/L	4.685	511.47 ppb	4.685	0.92%	
QC value within limits for U 409.014 Recovery = 102.29%							
V 292.402†	94701.3	509.55 µg/L	0.881	509.55 ppb	0.881	0.17%	
QC value within limits for V 292.402 Recovery = 101.91%							
Zn 213.857†	81781.3	503.23 µg/L	1.132	503.23 ppb	1.132	0.22%	
QC value within limits for Zn 213.857 Recovery = 100.65%							
All analyte(s) passed QC.							

Sequence No.: 10

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 3/30/2010 17:21:02

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	151612.6	151612.6	103 %		17:21:31
1	Al 396.153Radial†	-56.0	8.2	1.6789 µg/L	1.6789 ppb	17:21:51
1	Ca 317.933Radial†	667.4	-47.3	-2.8438 µg/L	-2.8438 ppb	17:21:51
1	Fe 238.204 Radial†	163.6	18.8	1.2660 µg/L	1.2660 ppb	17:21:51
1	K 766.490 Radial†	1549.7	198.2	81.562 µg/L	81.562 ppb	17:21:31
1	Mg 279.077 IEC†	197.6	23.9	9.8035 µg/L	9.8035 ppb	17:21:51
1	Na 589.592 Radial†	1504.5	260.3	39.459 µg/L	39.459 ppb	17:21:31
1	Sr 421.552†	-197.6	29.0	0.0669 µg/L	0.0669 ppb	17:21:31
1	Sc 361.383	1786652.6	1786652.6	101.80 %		17:22:39
1	Y 371.029	1082214.6	1082214.6	101.71 %		17:22:39
1	Ag 328.068†	3829.2	314.5	1.2474 µg/L	1.2474 ppb	17:22:41
1	As 188.979†	-12.2	5.7	1.9850 µg/L	1.9850 ppb	17:23:01
1	B 249.677†	3259.7	-28.3	-0.4609 µg/L	-0.4609 ppb	17:23:01
1	Ba 233.527†	-146.1	18.7	0.0814 µg/L	0.0814 ppb	17:23:01
1	Be 313.107†	-808.0	-8.2	-0.0030 µg/L	-0.0030 ppb	17:22:41
1	Cd 226.502†	-124.0	-11.8	-0.0807 µg/L	-0.0807 ppb	17:23:01
1	Co 228.616†	-172.8	2.7	0.0368 µg/L	0.0368 ppb	17:23:01
1	Cr 267.716†	168.4	-13.2	-0.1097 µg/L	-0.1097 ppb	17:23:01
1	Cu 324.752†	2861.6	22.1	0.0918 µg/L	0.0918 ppb	17:22:41
1	Mn 257.610†	203.5	24.3	0.0321 µg/L	0.0321 ppb	17:23:01
1	Mo 202.031†	-21.0	14.2	0.4512 µg/L	0.4512 ppb	17:23:01
1	Ni 231.604†	-43.7	35.0	0.4399 µg/L	0.4399 ppb	17:23:01
1	P 214.914†	16.6	11.3	2.6998 µg/L	2.6998 ppb	17:23:01
1	Pb 220.353†	85.6	-12.9	-0.7865 µg/L	-0.7865 ppb	17:23:01
1	S 181.975 Axial†	90.7	1.4	1.1791 µg/L	1.1791 ppb	17:23:01
1	Sb 206.836†	92.8	13.1	1.7284 µg/L	1.7284 ppb	17:23:01
1	Se 196.026†	20.3	6.4	2.54 µg/L	2.54 ppb	17:23:01
1	SiO2†	1716.5	-67.0	-7.1932 µg/L	-7.1932 ppb	17:23:01
1	Si 251.611†	786.3	-176.3	-2.8660 µg/L	-2.8660 ppb	17:23:01
1	Sn 189.927†	12.2	14.5	1.0060 µg/L	1.0060 ppb	17:23:01
1	Ti 334.940†	822.6	-77.5	-0.0777 µg/L	-0.0777 ppb	17:22:41
1	Tl 190.801†	-99.1	19.8	2.6569 µg/L	2.6569 ppb	17:23:01
1	U 409.014†	-320.3	-30.9	-1.9385 µg/L	-1.9385 ppb	17:22:41
1	V 292.402†	311.2	-4.2	-0.0194 µg/L	-0.0194 ppb	17:22:41
1	Zn 213.857†	539.4	5.3	0.0299 µg/L	0.0299 ppb	17:23:01
2	Sc RADIAL	151711.2	151711.2	103 %		17:21:53
2	Al 396.153Radial†	-61.3	3.2	0.6395 µg/L	0.6395 ppb	17:22:13
2	Ca 317.933Radial†	632.0	-82.1	-4.9402 µg/L	-4.9402 ppb	17:22:13
2	Fe 238.204 Radial†	152.2	7.6	0.5125 µg/L	0.5125 ppb	17:22:13
2	K 766.490 Radial†	1537.5	185.4	76.289 µg/L	76.289 ppb	17:21:53
2	Mg 279.077 IEC†	173.8	0.6	0.2447 µg/L	0.2447 ppb	17:22:13
2	Na 589.592 Radial†	1416.7	173.8	26.320 µg/L	26.320 ppb	17:21:53
2	Sr 421.552†	-295.9	-66.7	-0.1537 µg/L	-0.1537 ppb	17:21:53
2	Sc 361.383	1800964.8	1800964.8	102.61 %		17:23:03
2	Y 371.029	1089468.5	1089468.5	102.39 %		17:23:03
2	Ag 328.068†	3309.5	-221.9	-0.8860 µg/L	-0.8860 ppb	17:23:05
2	As 188.979†	-17.3	0.8	0.2871 µg/L	0.2871 ppb	17:23:26
2	B 249.677†	3208.8	-103.3	-1.6830 µg/L	-1.6830 ppb	17:23:26
2	Ba 233.527†	-167.1	-0.7	-0.0027 µg/L	-0.0027 ppb	17:23:26
2	Be 313.107†	-614.2	187.0	0.0548 µg/L	0.0548 ppb	17:23:05
2	Cd 226.502†	-73.2	38.7	0.2657 µg/L	0.2657 ppb	17:23:26
2	Co 228.616†	-188.1	-10.8	-0.1466 µg/L	-0.1466 ppb	17:23:26
2	Cr 267.716†	158.3	-24.3	-0.2015 µg/L	-0.2015 ppb	17:23:26
2	Cu 324.752†	2677.3	-179.9	-0.7614 µg/L	-0.7614 ppb	17:23:05
2	Mn 257.610†	177.7	-2.4	-0.0032 µg/L	-0.0032 ppb	17:23:26
2	Mo 202.031†	-24.4	11.0	0.3508 µg/L	0.3508 ppb	17:23:26
2	Ni 231.604†	-78.6	1.3	0.0163 µg/L	0.0163 ppb	17:23:26
2	P 214.914†	5.6	0.5	0.1210 µg/L	0.1210 ppb	17:23:26
2	Pb 220.353†	99.5	0.0	0.0062 µg/L	0.0062 ppb	17:23:26

2	S 181.975 Axial†	88.6	-1.3	-1.0766 µg/L	-1.0766 ppb	17:23:26
2	Sb 206.836†	81.5	1.3	0.1826 µg/L	0.1826 ppb	17:23:26
2	Se 196.026†	-3.8	-17.2	-6.90 µg/L	-6.90 ppb	17:23:26
2	SiO2†	1740.4	-57.1	-6.1143 µg/L	-6.1143 ppb	17:23:26
2	Si 251.611†	757.6	-210.4	-3.4098 µg/L	-3.4098 ppb	17:23:26
2	Sn 189.927†	-2.7	-0.1	-0.0082 µg/L	-0.0082 ppb	17:23:26
2	Ti 334.940†	623.6	-277.8	-0.2767 µg/L	-0.2767 ppb	17:23:05
2	Tl 190.801†	-113.2	6.7	0.9019 µg/L	0.9019 ppb	17:23:26
2	U 409.014†	-361.4	-68.4	-4.2789 µg/L	-4.2789 ppb	17:23:05
2	V 292.402†	336.0	17.6	0.0936 µg/L	0.0936 ppb	17:23:05
2	Zn 213.857†	519.1	-18.7	-0.1155 µg/L	-0.1155 ppb	17:23:26
3	Sc RADIAL	149965.0	149965.0	101 %		17:22:15
3	Al 396.153Radial†	-31.6	31.7	6.5334 µg/L	6.5334 ppb	17:22:35
3	Ca 317.933Radial†	652.8	-54.4	-3.2756 µg/L	-3.2756 ppb	17:22:35
3	Fe 238.204 Radial†	143.2	0.5	0.0329 µg/L	0.0329 ppb	17:22:35
3	K 766.490 Radial†	1418.5	85.5	35.164 µg/L	35.164 ppb	17:22:15
3	Mg 279.077 IEC†	153.3	-17.6	-7.2349 µg/L	-7.2349 ppb	17:22:35
3	Na 589.592 Radial†	1488.2	260.4	39.503 µg/L	39.503 ppb	17:22:15
3	Sr 421.552†	-208.2	16.4	0.0379 µg/L	0.0379 ppb	17:22:15
3	Sc 361.383	1752421.7	1752421.7	99.849 %		17:23:28
3	Y 371.029	1062426.9	1062426.9	99.848 %		17:23:28
3	Ag 328.068†	3395.4	-46.5	-0.1971 µg/L	-0.1971 ppb	17:23:30
3	As 188.979†	-14.9	2.7	0.9525 µg/L	0.9525 ppb	17:23:50
3	B 249.677†	3249.0	23.6	0.3844 µg/L	0.3844 ppb	17:23:50
3	Ba 233.527†	-163.8	-1.9	-0.0085 µg/L	-0.0085 ppb	17:23:50
3	Be 313.107†	-691.4	93.2	0.0254 µg/L	0.0254 ppb	17:23:30
3	Cd 226.502†	-84.5	25.4	0.1744 µg/L	0.1744 ppb	17:23:50
3	Co 228.616†	-169.0	3.2	0.0435 µg/L	0.0435 ppb	17:23:50
3	Cr 267.716†	148.8	-29.5	-0.2422 µg/L	-0.2422 ppb	17:23:50
3	Cu 324.752†	2779.8	-4.9	-0.0279 µg/L	-0.0279 ppb	17:23:30
3	Mn 257.610†	176.4	1.1	0.0018 µg/L	0.0018 ppb	17:23:50
3	Mo 202.031†	-30.5	4.2	0.1327 µg/L	0.1327 ppb	17:23:50
3	Ni 231.604†	-69.8	8.0	0.1010 µg/L	0.1010 ppb	17:23:50
3	P 214.914†	30.9	26.0	6.1996 µg/L	6.1996 ppb	17:23:50
3	Pb 220.353†	101.9	5.1	0.3202 µg/L	0.3202 ppb	17:23:50
3	S 181.975 Axial†	94.9	7.3	6.0180 µg/L	6.0180 ppb	17:23:50
3	Sb 206.836†	85.1	7.1	0.9397 µg/L	0.9397 ppb	17:23:50
3	Se 196.026†	15.4	1.8	0.725 µg/L	0.725 ppb	17:23:50
3	SiO2†	1680.4	-70.2	-7.5145 µg/L	-7.5145 ppb	17:23:50
3	Si 251.611†	760.4	-187.1	-3.0316 µg/L	-3.0316 ppb	17:23:50
3	Sn 189.927†	-0.2	2.4	0.1634 µg/L	0.1634 ppb	17:23:50
3	Ti 334.940†	528.0	-356.8	-0.3534 µg/L	-0.3534 ppb	17:23:30
3	Tl 190.801†	-100.9	16.0	2.1437 µg/L	2.1437 ppb	17:23:50
3	U 409.014†	-418.3	-135.2	-8.4743 µg/L	-8.4743 ppb	17:23:30
3	V 292.402†	281.8	-27.6	-0.1515 µg/L	-0.1515 ppb	17:23:30
3	Zn 213.857†	523.6	-0.2	-0.0020 µg/L	-0.0020 ppb	17:23:50

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1780013.1	101.42 %	1.421			1.40%
Sc RADIAL	151096.3	102 %	0.7			0.65%
Y 371.029	1078036.7	101.32 %	1.315			1.30%
Ag 328.068†	15.3	0.0548 µg/L	1.08877	0.0548 ppb	1.08877	>999.9%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	14.4	2.9506 µg/L	3.14602	2.9506 ppb	3.14602	106.62%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	3.1	1.0749 µg/L	0.85558	1.0749 ppb	0.85558	79.60%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	-36.0	-0.5865 µg/L	1.03942	-0.5865 ppb	1.03942	177.22%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	5.4	0.0234 µg/L	0.05028	0.0234 ppb	0.05028	214.84%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	90.7	0.0257 µg/L	0.02894	0.0257 ppb	0.02894	112.47%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	-61.3	-3.6865 µg/L	1.10699	-3.6865 ppb	1.10699	30.03%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	17.4	0.1198 µg/L	0.17957	0.1198 ppb	0.17957	149.88%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-1.6	-0.0221 µg/L	0.10788	-0.0221 ppb	0.10788	488.25%

QC value within limits for Co 228.616 Recovery = Not calculated							
Cr 267.716†	-22.3	-0.1845 µg/L	0.06787	-0.1845 ppb	0.06787	36.80%	
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu 324.752†	-54.2	-0.2325 µg/L	0.46196	-0.2325 ppb	0.46196	198.68%	
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe 238.204 Radial†	9.0	0.6038 µg/L	0.62161	0.6038 ppb	0.62161	102.94%	
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K 766.490 Radial†	156.3	64.338 µg/L	25.4031	64.338 ppb	25.4031	39.48%	
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg 279.077 IEC†	2.3	0.9378 µg/L	8.54036	0.9378 ppb	8.54036	910.72%	
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn 257.610†	7.7	0.0102 µg/L	0.01910	0.0102 ppb	0.01910	186.81%	
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo 202.031†	9.8	0.3116 µg/L	0.16283	0.3116 ppb	0.16283	52.26%	
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na 589.592 Radial†	231.5	35.094 µg/L	7.5987	35.094 ppb	7.5987	21.65%	
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni 231.604†	14.8	0.1857 µg/L	0.22414	0.1857 ppb	0.22414	120.67%	
QC value within limits for Ni 231.604 Recovery = Not calculated							
P 214.914†	12.6	3.0068 µg/L	3.05088	3.0068 ppb	3.05088	101.47%	
QC value within limits for P 214.914 Recovery = Not calculated							
Pb 220.353†	-2.6	-0.1534 µg/L	0.57034	-0.1534 ppb	0.57034	371.90%	
QC value within limits for Pb 220.353 Recovery = Not calculated							
S 181.975 Axial†	2.5	2.0402 µg/L	3.62485	2.0402 ppb	3.62485	177.67%	
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb 206.836†	7.2	0.9502 µg/L	0.77295	0.9502 ppb	0.77295	81.34%	
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	-3.0	-1.21 µg/L	5.010	-1.21 ppb	5.010	413.51%	
QC value within limits for Se 196.026 Recovery = Not calculated							
SiO2†	-64.7	-6.9407 µg/L	0.73346	-6.9407 ppb	0.73346	10.57%	
QC value within limits for SiO2 Recovery = Not calculated							
Si 251.611†	-191.3	-3.1025 µg/L	0.27874	-3.1025 ppb	0.27874	8.98%	
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn 189.927†	5.6	0.3871 µg/L	0.54288	0.3871 ppb	0.54288	140.26%	
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr 421.552†	-7.1	-0.0163 µg/L	0.11990	-0.0163 ppb	0.11990	735.65%	
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti 334.940†	-237.4	-0.2359 µg/L	0.14230	-0.2359 ppb	0.14230	60.32%	
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl 190.801†	14.2	1.9008 µg/L	0.90235	1.9008 ppb	0.90235	47.47%	
QC value within limits for Tl 190.801 Recovery = Not calculated							
U 409.014†	-78.2	-4.8972 µg/L	3.31148	-4.8972 ppb	3.31148	67.62%	
QC value within limits for U 409.014 Recovery = Not calculated							
V 292.402†	-4.7	-0.0257 µg/L	0.12269	-0.0257 ppb	0.12269	476.71%	
QC value within limits for V 292.402 Recovery = Not calculated							
Zn 213.857†	-4.5	-0.0292 µg/L	0.07644	-0.0292 ppb	0.07644	261.65%	
QC value within limits for Zn 213.857 Recovery = Not calculated							

All analyte(s) passed QC.

Sequence No.: 11

Sample ID: 1202065055|962580|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 143

Date Collected: 3/30/2010 17:23:57

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 1202065055|962580|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	150370.1	150370.1	102 %		17:24:29
1	Al 396.153Radial†	-26.5	36.9	7.6001 µg/L	7.6001 ppb	17:24:49
1	Ca 317.933Radial†	747.6	37.0	2.2239 µg/L	2.2239 ppb	17:24:49
1	Fe 238.204 Radial†	181.4	37.7	2.5338 µg/L	2.5338 ppb	17:24:49
1	K 766.490 Radial†	1375.3	39.2	16.134 µg/L	16.134 ppb	17:24:29
1	Mg 279.077 IEC†	190.9	18.9	7.7450 µg/L	7.7450 ppb	17:24:49
1	Na 589.592 Radial†	1471.0	239.5	36.351 µg/L	36.351 ppb	17:24:29
1	Sr 421.552†	-132.4	91.5	0.2110 µg/L	0.2110 ppb	17:24:29
1	Sc 361.383	1789169.7	1789169.7	101.94 %		17:25:51
1	Y 371.029	1079375.9	1079375.9	101.44 %		17:25:51
1	Ag 328.068†	3466.4	-46.8	-0.1951 µg/L	-0.1951 ppb	17:25:53
1	As 188.979†	-14.4	3.6	1.2425 µg/L	1.2425 ppb	17:26:13
1	B 249.677†	3268.2	-24.4	-0.3981 µg/L	-0.3981 ppb	17:26:13
1	Ba 233.527†	-153.6	11.5	0.0501 µg/L	0.0501 ppb	17:26:13
1	Be 313.107†	-844.0	-42.3	-0.0163 µg/L	-0.0163 ppb	17:25:53
1	Cd 226.502†	-88.6	23.1	0.1586 µg/L	0.1586 ppb	17:26:13
1	Co 228.616†	-183.2	-7.3	-0.0988 µg/L	-0.0988 ppb	17:26:13
1	Cr 267.716†	170.6	-11.2	-0.0848 µg/L	-0.0848 ppb	17:26:13
1	Cu 324.752†	2762.8	-78.8	-0.3413 µg/L	-0.3413 ppb	17:25:53
1	Mn 257.610†	303.9	122.5	0.1635 µg/L	0.1635 ppb	17:26:13
1	Mo 202.031†	-38.3	-2.8	-0.0876 µg/L	-0.0876 ppb	17:26:13
1	Ni 231.604†	-62.6	16.4	0.2068 µg/L	0.2068 ppb	17:26:13
1	P 214.914†	25.4	19.9	4.7588 µg/L	4.7588 ppb	17:26:13
1	Pb 220.353†	68.5	-29.7	-1.8115 µg/L	-1.8115 ppb	17:26:13
1	S 181.975 Axial†	100.1	10.5	8.6187 µg/L	8.6187 ppb	17:26:13
1	Sb 206.836†	95.0	15.1	1.9792 µg/L	1.9792 ppb	17:26:13
1	Se 196.026†	9.7	-4.0	-1.62 µg/L	-1.62 ppb	17:26:13
1	SiO2†	1963.1	172.6	18.464 µg/L	18.464 ppb	17:26:13
1	Si 251.611†	1487.9	510.9	8.2684 µg/L	8.2684 ppb	17:25:53
1	Sn 189.927†	0.9	3.4	0.2354 µg/L	0.2354 ppb	17:26:13
1	Ti 334.940†	889.4	-13.1	-0.0088 µg/L	-0.0088 ppb	17:25:53
1	Tl 190.801†	-111.1	8.1	1.0888 µg/L	1.0888 ppb	17:26:13
1	U 409.014†	-483.2	-190.2	-11.888 µg/L	-11.888 ppb	17:25:53
1	V 292.402†	405.1	87.6	0.4553 µg/L	0.4553 ppb	17:25:53
1	Zn 213.857†	625.6	89.1	0.5517 µg/L	0.5517 ppb	17:26:13
2	Sc RADIAL	154693.2	154693.2	105 %		17:24:51
2	Al 396.153Radial†	-65.6	0.2	0.0422 µg/L	0.0422 ppb	17:25:11
2	Ca 317.933Radial†	706.6	-22.7	-1.3676 µg/L	-1.3676 ppb	17:25:11
2	Fe 238.204 Radial†	168.4	20.2	1.3615 µg/L	1.3615 ppb	17:25:11
2	K 766.490 Radial†	1294.9	-75.3	-31.009 µg/L	-31.009 ppb	17:24:51
2	Mg 279.077 IEC†	175.1	-1.4	-0.5888 µg/L	-0.5888 ppb	17:25:11
2	Na 589.592 Radial†	1547.1	271.9	41.307 µg/L	41.307 ppb	17:24:51
2	Sr 421.552†	-241.4	-9.1	-0.0209 µg/L	-0.0209 ppb	17:24:51
2	Sc 361.383	1787521.1	1787521.1	101.85 %		17:26:15
2	Y 371.029	1078920.1	1078920.1	101.40 %		17:26:15
2	Ag 328.068†	3462.8	-47.2	-0.1893 µg/L	-0.1893 ppb	17:26:17
2	As 188.979†	-15.2	2.7	0.9488 µg/L	0.9488 ppb	17:26:37
2	B 249.677†	3241.5	-47.7	-0.7767 µg/L	-0.7767 ppb	17:26:37
2	Ba 233.527†	-173.7	-8.4	-0.0369 µg/L	-0.0369 ppb	17:26:37
2	Be 313.107†	-881.5	-79.9	-0.0238 µg/L	-0.0238 ppb	17:26:17
2	Cd 226.502†	-115.6	-3.5	-0.0239 µg/L	-0.0239 ppb	17:26:37
2	Co 228.616†	-181.4	-5.6	-0.0764 µg/L	-0.0764 ppb	17:26:37
2	Cr 267.716†	162.7	-18.8	-0.1590 µg/L	-0.1590 ppb	17:26:37
2	Cu 324.752†	2880.8	39.5	0.1673 µg/L	0.1673 ppb	17:26:17
2	Mn 257.610†	295.1	114.1	0.1526 µg/L	0.1526 ppb	17:26:37
2	Mo 202.031†	-32.2	3.1	0.0989 µg/L	0.0989 ppb	17:26:37
2	Ni 231.604†	-63.1	15.9	0.1999 µg/L	0.1999 ppb	17:26:37
2	P 214.914†	24.5	19.1	4.5506 µg/L	4.5506 ppb	17:26:37
2	Pb 220.353†	90.5	-8.1	-0.4962 µg/L	-0.4962 ppb	17:26:37

2	S 181.975 Axial†	99.9	10.4	8.5253 µg/L	8.5253 ppb	17:26:37
2	Sb 206.836†	78.2	-1.3	-0.1636 µg/L	-0.1636 ppb	17:26:37
2	Se 196.026†	3.2	-10.4	-4.18 µg/L	-4.18 ppb	17:26:37
2	SiO2†	1944.7	156.3	16.709 µg/L	16.709 ppb	17:26:37
2	Si 251.611†	1554.7	577.9	9.3498 µg/L	9.3498 ppb	17:26:17
2	Sn 189.927†	2.9	5.4	0.3714 µg/L	0.3714 ppb	17:26:37
2	Ti 334.940†	806.4	-93.8	-0.0942 µg/L	-0.0942 ppb	17:26:17
2	Tl 190.801†	-113.0	6.2	0.8284 µg/L	0.8284 ppb	17:26:37
2	U 409.014†	-277.0	11.8	0.7281 µg/L	0.7281 ppb	17:26:17
2	V 292.402†	271.8	-42.9	-0.2272 µg/L	-0.2272 ppb	17:26:17
2	Zn 213.857†	615.1	79.3	0.4905 µg/L	0.4905 ppb	17:26:37
3	Sc RADIAL	152248.5	152248.5	103 %		17:25:13
3	Al 396.153Radial†	-33.8	30.1	6.1829 µg/L	6.1829 ppb	17:25:33
3	Ca 317.933Radial†	712.3	-6.3	-0.3804 µg/L	-0.3804 ppb	17:25:33
3	Fe 238.204 Radial†	170.7	25.0	1.6843 µg/L	1.6843 ppb	17:25:33
3	K 766.490 Radial†	1486.9	131.0	53.898 µg/L	53.898 ppb	17:25:13
3	Mg 279.077 IEC†	163.1	-10.5	-4.2876 µg/L	-4.2876 ppb	17:25:33
3	Na 589.592 Radial†	1431.3	183.2	27.767 µg/L	27.767 ppb	17:25:13
3	Sr 421.552†	-197.5	29.9	0.0690 µg/L	0.0690 ppb	17:25:13
3	Sc 361.383	1798411.2	1798411.2	102.47 %		17:26:39
3	Y 371.029	1084882.4	1084882.4	101.96 %		17:26:39
3	Ag 328.068†	3244.0	-281.3	-1.1115 µg/L	-1.1115 ppb	17:26:42
3	As 188.979†	-20.1	-1.9	-0.6735 µg/L	-0.6735 ppb	17:27:02
3	B 249.677†	3241.4	-67.1	-1.0927 µg/L	-1.0927 ppb	17:27:02
3	Ba 233.527†	-164.7	1.4	0.0063 µg/L	0.0063 ppb	17:27:02
3	Be 313.107†	-632.4	168.4	0.0511 µg/L	0.0511 ppb	17:26:42
3	Cd 226.502†	-102.8	9.7	0.0662 µg/L	0.0662 ppb	17:27:02
3	Co 228.616†	-191.1	-14.1	-0.1904 µg/L	-0.1904 ppb	17:27:02
3	Cr 267.716†	168.6	-14.0	-0.1193 µg/L	-0.1193 ppb	17:27:02
3	Cu 324.752†	2872.8	14.7	0.0634 µg/L	0.0634 ppb	17:26:42
3	Mn 257.610†	273.3	91.1	0.1219 µg/L	0.1219 ppb	17:27:02
3	Mo 202.031†	-27.1	8.3	0.2638 µg/L	0.2638 ppb	17:27:02
3	Ni 231.604†	-66.9	12.6	0.1585 µg/L	0.1585 ppb	17:27:02
3	P 214.914†	23.2	17.6	4.2055 µg/L	4.2055 ppb	17:27:02
3	Pb 220.353†	88.4	-10.7	-0.6539 µg/L	-0.6539 ppb	17:27:02
3	S 181.975 Axial†	90.0	0.2	0.1289 µg/L	0.1289 ppb	17:27:02
3	Sb 206.836†	81.0	1.0	0.1356 µg/L	0.1356 ppb	17:27:02
3	Se 196.026†	7.1	-6.6	-2.65 µg/L	-2.65 ppb	17:27:02
3	SiO2†	1967.1	166.5	17.797 µg/L	17.797 ppb	17:27:02
3	Si 251.611†	1595.7	608.6	9.8420 µg/L	9.8420 ppb	17:26:42
3	Sn 189.927†	9.6	11.9	0.8217 µg/L	0.8217 ppb	17:27:02
3	Ti 334.940†	1030.3	119.9	0.1198 µg/L	0.1198 ppb	17:26:42
3	Tl 190.801†	-126.0	-5.8	-0.7806 µg/L	-0.7806 ppb	17:27:02
3	U 409.014†	-260.2	29.8	1.8904 µg/L	1.8904 ppb	17:26:42
3	V 292.402†	387.1	68.0	0.3641 µg/L	0.3641 ppb	17:26:42
3	Zn 213.857†	642.2	102.2	0.6326 µg/L	0.6326 ppb	17:27:02

Mean Data: 1202065055|962580|1

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1791700.7	102.09 %		0.334			0.33%
Sc RADIAL	152437.2	103 %		1.5			1.42%
Y 371.029	1081059.4	101.60 %		0.312			0.31%
Ag 328.068†	-125.1	-0.4986 µg/L		0.53080	-0.4986 ppb	0.53080	106.45%
Al 396.153Radial†	22.4	4.6084 µg/L		4.01744	4.6084 ppb	4.01744	87.18%
As 188.979†	1.5	0.5060 µg/L		1.03191	0.5060 ppb	1.03191	203.95%
B 249.677†	-46.4	-0.7559 µg/L		0.34777	-0.7559 ppb	0.34777	46.01%
Ba 233.527†	1.5	0.0065 µg/L		0.04348	0.0065 ppb	0.04348	668.79%
Be 313.107†	15.4	0.0037 µg/L		0.04123	0.0037 ppb	0.04123	>999.9%
Ca 317.933Radial†	2.6	0.1586 µg/L		1.85546	0.1586 ppb	1.85546	>999.9%
Cd 226.502†	9.8	0.0670 µg/L		0.09125	0.0670 ppb	0.09125	136.27%
Co 228.616†	-9.0	-0.1219 µg/L		0.06038	-0.1219 ppb	0.06038	49.55%
Cr 267.716†	-14.7	-0.1210 µg/L		0.03711	-0.1210 ppb	0.03711	30.66%
Cu 324.752†	-8.2	-0.0369 µg/L		0.26875	-0.0369 ppb	0.26875	728.86%
Fe 238.204 Radial†	27.6	1.8599 µg/L		0.60557	1.8599 ppb	0.60557	32.56%
K 766.490 Radial†	31.6	13.008 µg/L		42.5402	13.008 ppb	42.5402	327.04%
Mg 279.077 IEC†	2.3	0.9562 µg/L		6.16329	0.9562 ppb	6.16329	644.55%
Mn 257.610†	109.3	0.1460 µg/L		0.02153	0.1460 ppb	0.02153	14.75%
Mo 202.031†	2.9	0.0917 µg/L		0.17585	0.0917 ppb	0.17585	191.76%
Na 589.592 Radial†	231.5	35.142 µg/L		6.8506	35.142 ppb	6.8506	19.49%

Ni 231.604†	15.0	0.1884 µg/L	0.02613	0.1884 ppb	0.02613	13.87%
P 214.914†	18.9	4.5050 µg/L	0.27943	4.5050 ppb	0.27943	6.20%
Pb 220.353†	-16.2	-0.9872 µg/L	0.71818	-0.9872 ppb	0.71818	72.75%
S 181.975 Axial†	7.0	5.7577 µg/L	4.87483	5.7577 ppb	4.87483	84.67%
Sb 206.836†	4.9	0.6504 µg/L	1.16044	0.6504 ppb	1.16044	178.42%
Se 196.026†	-7.0	-2.82 µg/L	1.288	-2.82 ppb	1.288	45.72%
SiO2†	165.1	17.657 µg/L	0.8862	17.657 ppb	0.8862	5.02%
Si 251.611†	565.8	9.1534 µg/L	0.80500	9.1534 ppb	0.80500	8.79%
Sn 189.927†	6.9	0.4762 µg/L	0.30688	0.4762 ppb	0.30688	64.45%
Sr 421.552†	37.4	0.0864 µg/L	0.11693	0.0864 ppb	0.11693	135.39%
Ti 334.940†	4.3	0.0056 µg/L	0.10772	0.0056 ppb	0.10772	>999.9%
Tl 190.801†	2.8	0.3789 µg/L	1.01257	0.3789 ppb	1.01257	267.26%
U 409.014†	-49.5	-3.0898 µg/L	7.64147	-3.0898 ppb	7.64147	247.32%
V 292.402†	37.5	0.1974 µg/L	0.37053	0.1974 ppb	0.37053	187.69%
Zn 213.857†	90.2	0.5583 µg/L	0.07129	0.5583 ppb	0.07129	12.77%

Sequence No.: 12

Sample ID: 1202065056|962580|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 144

Date Collected: 3/30/2010 17:27:09

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 1202065056|962580|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	152492.7	152492.7	103 %		17:27:41
1	Al 396.153Radial†	25958.7	25227.9	5175.7 µg/L	5175.7 ppb	17:27:41
1	Ca 317.933Radial†	89451.6	86018.4	5175.5 µg/L	5175.5 ppb	17:27:41
1	Fe 238.204 Radial†	78319.8	75784.3	5099.4 µg/L	5099.4 ppb	17:27:41
1	K 766.490 Radial†	14436.7	12682.4	5216.2 µg/L	5216.2 ppb	17:27:41
1	Mg 279.077 IEC†	13513.4	12931.4	5312.4 µg/L	5312.4 ppb	17:27:41
1	Na 589.592 Radial†	36052.1	33743.0	5119.1 µg/L	5119.1 ppb	17:27:41
1	Sr 421.552†	230373.9	223551.3	515.66 µg/L	515.66 ppb	17:27:39
1	Sc 361.383	1799897.1	1799897.1	102.55 %		17:28:08
1	Y 371.029	1076262.5	1076262.5	101.15 %		17:28:08
1	Ag 328.068†	130657.7	123957.1	499.12 µg/L	499.12 ppb	17:28:08
1	As 188.979†	1457.3	1438.7	509.33 µg/L	509.33 ppb	17:28:28
1	B 249.677†	35003.2	30901.2	502.06 µg/L	502.06 ppb	17:28:08
1	Ba 233.527†	121321.0	118462.1	516.21 µg/L	516.21 ppb	17:28:08
1	Be 313.107†	1741849.8	1699261.1	510.11 µg/L	510.11 ppb	17:28:08
1	Cd 226.502†	75780.7	74003.7	507.82 µg/L	507.82 ppb	17:28:08
1	Co 228.616†	38302.2	37520.8	507.74 µg/L	507.74 ppb	17:28:08
1	Cr 267.716†	61793.3	60076.0	506.04 µg/L	506.04 ppb	17:28:08
1	Cu 324.752†	127129.6	121175.0	512.20 µg/L	512.20 ppb	17:28:08
1	Mn 257.610†	390573.3	380672.0	508.59 µg/L	508.59 ppb	17:28:08
1	Mo 202.031†	15963.6	15600.9	496.72 µg/L	496.72 ppb	17:28:28
1	Ni 231.604†	41842.2	40878.2	514.15 µg/L	514.15 ppb	17:28:08
1	P 214.914†	2227.2	2166.7	508.11 µg/L	508.11 ppb	17:28:28
1	Pb 220.353†	8589.0	8278.2	508.44 µg/L	508.44 ppb	17:28:28
1	S 181.975 Axial†	6428.6	6180.8	5070.8 µg/L	5070.8 ppb	17:28:28
1	Sb 206.836†	3999.1	3821.4	502.08 µg/L	502.08 ppb	17:28:28
1	Se 196.026†	1266.7	1221.6	491 µg/L	491 ppb	17:28:28
1	SiO2†	104216.9	99868.6	10663 µg/L	10663 ppb	17:28:08
1	Si 251.611†	317896.5	309031.8	4992.1 µg/L	4992.1 ppb	17:28:08
1	Sn 189.927†	7461.7	7278.4	505.60 µg/L	505.60 ppb	17:28:28
1	Ti 334.940†	518483.9	504687.4	504.94 µg/L	504.94 ppb	17:28:08
1	Tl 190.801†	3731.7	3755.8	512.37 µg/L	512.37 ppb	17:28:28
1	U 409.014†	7849.9	7938.2	528.18 µg/L	528.18 ppb	17:28:08
1	V 292.402†	98311.1	95553.2	513.96 µg/L	513.96 ppb	17:28:08
1	Zn 213.857†	83554.9	80949.7	498.02 µg/L	498.02 ppb	17:28:08
2	Sc RADIAL	152401.9	152401.9	103 %		17:27:45
2	Al 396.153Radial†	25799.1	25088.0	5146.5 µg/L	5146.5 ppb	17:27:45
2	Ca 317.933Radial†	89177.9	85804.6	5162.7 µg/L	5162.7 ppb	17:27:45
2	Fe 238.204 Radial†	77937.7	75458.9	5077.5 µg/L	5077.5 ppb	17:27:45
2	K 766.490 Radial†	14239.3	12499.3	5140.9 µg/L	5140.9 ppb	17:27:45
2	Mg 279.077 IEC†	13421.3	12849.9	5279.3 µg/L	5279.3 ppb	17:27:45
2	Na 589.592 Radial†	36333.1	34036.4	5163.8 µg/L	5163.8 ppb	17:27:45
2	Sr 421.552†	231747.7	225016.8	519.04 µg/L	519.04 ppb	17:27:43
2	Sc 361.383	1778801.4	1778801.4	101.35 %		17:28:31
2	Y 371.029	1064216.7	1064216.7	100.02 %		17:28:31
2	Ag 328.068†	128927.1	123760.5	498.30 µg/L	498.30 ppb	17:28:31
2	As 188.979†	1462.1	1460.3	516.89 µg/L	516.89 ppb	17:28:51
2	B 249.677†	34650.0	30957.5	502.98 µg/L	502.98 ppb	17:28:31
2	Ba 233.527†	119812.2	118376.4	515.84 µg/L	515.84 ppb	17:28:31
2	Be 313.107†	1715324.1	1693232.2	508.30 µg/L	508.30 ppb	17:28:31
2	Cd 226.502†	74641.2	73755.7	506.12 µg/L	506.12 ppb	17:28:31
2	Co 228.616†	37713.8	37383.3	505.88 µg/L	505.88 ppb	17:28:31
2	Cr 267.716†	60954.8	59963.3	505.10 µg/L	505.10 ppb	17:28:31
2	Cu 324.752†	125223.8	120764.7	510.46 µg/L	510.46 ppb	17:28:31
2	Mn 257.610†	384953.6	379643.9	507.22 µg/L	507.22 ppb	17:28:31
2	Mo 202.031†	16058.7	15879.3	505.57 µg/L	505.57 ppb	17:28:51
2	Ni 231.604†	41289.2	40816.4	513.38 µg/L	513.38 ppb	17:28:31
2	P 214.914†	2236.9	2202.0	516.56 µg/L	516.56 ppb	17:28:51
2	Pb 220.353†	8634.4	8422.3	517.29 µg/L	517.29 ppb	17:28:51

2	S 181.975 Axial†	6472.3	6298.3	5167.2 µg/L	5167.2 ppb	17:28:51
2	Sb 206.836†	4010.1	3878.5	509.73 µg/L	509.73 ppb	17:28:51
2	Se 196.026†	1281.1	1250.4	503 µg/L	503 ppb	17:28:51
2	SiO2†	102728.8	99605.5	10634 µg/L	10634 ppb	17:28:31
2	Si 251.611†	313381.5	308253.3	4979.3 µg/L	4979.3 ppb	17:28:31
2	Sn 189.927†	7519.7	7422.0	515.53 µg/L	515.53 ppb	17:28:51
2	Ti 334.940†	511003.0	503302.1	503.56 µg/L	503.56 ppb	17:28:31
2	Tl 190.801†	3757.8	3824.7	521.61 µg/L	521.61 ppb	17:28:51
2	U 409.014†	7621.9	7804.0	519.63 µg/L	519.63 ppb	17:28:31
2	V 292.402†	96700.1	95100.5	511.64 µg/L	511.64 ppb	17:28:31
2	Zn 213.857†	82179.1	80558.5	495.60 µg/L	495.60 ppb	17:28:31
3	Sc RADIAL	153475.3	153475.3	104 %		17:27:49
3	Al 396.153Radial†	26195.9	25295.2	5189.3 µg/L	5189.3 ppb	17:27:49
3	Ca 317.933Radial†	89933.6	85927.5	5170.0 µg/L	5170.0 ppb	17:27:49
3	Fe 238.204 Radial†	78845.5	75804.5	5100.8 µg/L	5100.8 ppb	17:27:49
3	K 766.490 Radial†	14394.9	12552.5	5162.8 µg/L	5162.8 ppb	17:27:49
3	Mg 279.077 IEC†	13483.3	12818.6	5266.3 µg/L	5266.3 ppb	17:27:49
3	Na 589.592 Radial†	36479.7	33931.2	5147.8 µg/L	5147.8 ppb	17:27:49
3	Sr 421.552†	233674.2	225300.3	519.69 µg/L	519.69 ppb	17:27:47
3	Sc 361.383	1787411.7	1787411.7	101.84 %		17:28:54
3	Y 371.029	1068271.6	1068271.6	100.40 %		17:28:54
3	Ag 328.068†	129184.5	123400.4	496.88 µg/L	496.88 ppb	17:28:54
3	As 188.979†	1477.9	1468.8	519.84 µg/L	519.84 ppb	17:29:14
3	B 249.677†	34594.6	30738.4	499.42 µg/L	499.42 ppb	17:28:54
3	Ba 233.527†	120425.0	118408.7	515.98 µg/L	515.98 ppb	17:28:54
3	Be 313.107†	1721702.1	1691342.0	507.74 µg/L	507.74 ppb	17:28:54
3	Cd 226.502†	74968.4	73722.3	505.88 µg/L	505.88 ppb	17:28:54
3	Co 228.616†	37706.2	37196.6	503.36 µg/L	503.36 ppb	17:28:54
3	Cr 267.716†	61176.3	59891.0	504.48 µg/L	504.48 ppb	17:28:54
3	Cu 324.752†	125890.8	120824.5	510.73 µg/L	510.73 ppb	17:28:54
3	Mn 257.610†	386313.8	379149.8	506.56 µg/L	506.56 ppb	17:28:54
3	Mo 202.031†	16051.3	15795.6	502.91 µg/L	502.91 ppb	17:29:14
3	Ni 231.604†	41298.3	40629.1	511.02 µg/L	511.02 ppb	17:28:54
3	P 214.914†	2204.9	2160.0	506.53 µg/L	506.53 ppb	17:29:14
3	Pb 220.353†	8648.2	8394.7	515.59 µg/L	515.59 ppb	17:29:14
3	S 181.975 Axial†	6496.6	6291.4	5161.5 µg/L	5161.5 ppb	17:29:14
3	Sb 206.836†	4022.2	3871.3	508.75 µg/L	508.75 ppb	17:29:14
3	Se 196.026†	1268.7	1232.2	495 µg/L	495 ppb	17:29:14
3	SiO2†	103208.0	99587.8	10633 µg/L	10633 ppb	17:28:54
3	Si 251.611†	314525.4	307887.0	4973.5 µg/L	4973.5 ppb	17:28:54
3	Sn 189.927†	7505.5	7372.3	512.09 µg/L	512.09 ppb	17:29:14
3	Ti 334.940†	512871.0	502707.5	502.96 µg/L	502.96 ppb	17:28:54
3	Tl 190.801†	3767.7	3816.6	520.52 µg/L	520.52 ppb	17:29:14
3	U 409.014†	7892.8	8033.8	534.01 µg/L	534.01 ppb	17:28:54
3	V 292.402†	97125.4	95058.5	511.39 µg/L	511.39 ppb	17:28:54
3	Zn 213.857†	82846.5	80823.3	497.26 µg/L	497.26 ppb	17:28:54

Mean Data: 1202065056|962580|1

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1788703.4	101.92 %		0.604			0.59%
Sc RADIAL	152790.0	103 %		0.4			0.39%
Y 371.029	1069583.6	100.52 %		0.576			0.57%
Ag 328.068†	123706.0	498.10 µg/L		1.131	498.10 ppb	1.131	0.23%
Al 396.153Radial†	25203.7	5170.5 µg/L		21.88	5170.5 ppb	21.88	0.42%
As 188.979†	1455.9	515.35 µg/L		5.420	515.35 ppb	5.420	1.05%
B 249.677†	30865.7	501.49 µg/L		1.849	501.49 ppb	1.849	0.37%
Ba 233.527†	118415.7	516.01 µg/L		0.188	516.01 ppb	0.188	0.04%
Be 313.107†	1694611.8	508.72 µg/L		1.241	508.72 ppb	1.241	0.24%
Ca 317.933Radial†	85916.8	5169.4 µg/L		6.46	5169.4 ppb	6.46	0.12%
Cd 226.502†	73827.2	506.60 µg/L		1.056	506.60 ppb	1.056	0.21%
Co 228.616†	37366.9	505.66 µg/L		2.201	505.66 ppb	2.201	0.44%
Cr 267.716†	59976.8	505.21 µg/L		0.787	505.21 ppb	0.787	0.16%
Cu 324.752†	120921.4	511.13 µg/L		0.938	511.13 ppb	0.938	0.18%
Fe 238.204 Radial†	75682.6	5092.6 µg/L		13.05	5092.6 ppb	13.05	0.26%
K 766.490 Radial†	12578.1	5173.3 µg/L		38.77	5173.3 ppb	38.77	0.75%
Mg 279.077 IEC†	12866.6	5286.0 µg/L		23.79	5286.0 ppb	23.79	0.45%
Mn 257.610†	379821.9	507.45 µg/L		1.037	507.45 ppb	1.037	0.20%
Mo 202.031†	15758.6	501.73 µg/L		4.544	501.73 ppb	4.544	0.91%
Na 589.592 Radial†	33903.6	5143.6 µg/L		22.61	5143.6 ppb	22.61	0.44%

Ni 231.604†	40774.6	512.85 µg/L	1.632	512.85 ppb	1.632	0.32%
P 214.914†	2176.3	510.40 µg/L	5.392	510.40 ppb	5.392	1.06%
Pb 220.353†	8365.1	513.77 µg/L	4.696	513.77 ppb	4.696	0.91%
S 181.975 Axial†	6256.8	5133.2 µg/L	54.07	5133.2 ppb	54.07	1.05%
Sb 206.836†	3857.1	506.85 µg/L	4.159	506.85 ppb	4.159	0.82%
Se 196.026†	1234.7	496 µg/L	5.8	496 ppb	5.8	1.17%
SiO2†	99687.3	10643 µg/L	17.0	10643 ppb	17.0	0.16%
Si 251.611†	308390.7	4981.6 µg/L	9.54	4981.6 ppb	9.54	0.19%
Sn 189.927†	7357.5	511.07 µg/L	5.044	511.07 ppb	5.044	0.99%
Sr 421.552†	224622.8	518.13 µg/L	2.166	518.13 ppb	2.166	0.42%
Ti 334.940†	503565.7	503.82 µg/L	1.016	503.82 ppb	1.016	0.20%
Tl 190.801†	3799.1	518.17 µg/L	5.047	518.17 ppb	5.047	0.97%
U 409.014†	7925.3	527.27 µg/L	7.229	527.27 ppb	7.229	1.37%
V 292.402†	95237.4	512.33 µg/L	1.414	512.33 ppb	1.414	0.28%
Zn 213.857†	80777.2	496.96 µg/L	1.236	496.96 ppb	1.236	0.25%

Sequence No.: 14

Sample ID: 1202065057|962580|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 146

Date Collected: 3/30/2010 17:32:20

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 1202065057|962580|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	157020.9	157020.9	106 %		17:32:50
1	Al 396.153Radial†	-37.2	27.9	5.7633 µg/L	5.7633 ppb	17:33:10
1	Ca 317.933Radial†	1340.1	563.6	33.913 µg/L	33.913 ppb	17:33:10
1	Fe 238.204 Radial†	243.0	88.1	5.9285 µg/L	5.9285 ppb	17:33:10
1	K 766.490 Radial†	2566.9	1103.8	454.25 µg/L	454.25 ppb	17:32:50
1	Mg 279.077 IEC†	192.3	12.3	5.0273 µg/L	5.0273 ppb	17:33:10
1	Na 589.592 Radial†	3123.0	1733.6	262.83 µg/L	262.83 ppb	17:32:50
1	Sr 421.552†	-116.9	111.6	0.2571 µg/L	0.2571 ppb	17:32:50
1	Sc 361.383	1809583.9	1809583.9	103.11 %		17:33:58
1	Y 371.029	1089975.5	1089975.5	102.44 %		17:33:58
1	Ag 328.068†	3350.4	-197.6	-0.7895 µg/L	-0.7895 ppb	17:34:00
1	As 188.979†	-16.3	1.9	0.6503 µg/L	0.6503 ppb	17:34:20
1	B 249.677†	4673.0	1301.9	21.226 µg/L	21.226 ppb	17:34:00
1	Ba 233.527†	-111.0	54.5	0.2370 µg/L	0.2370 ppb	17:34:20
1	Be 313.107†	-826.9	-16.4	-0.0052 µg/L	-0.0052 ppb	17:34:00
1	Cd 226.502†	-110.8	2.6	0.0171 µg/L	0.0171 ppb	17:34:20
1	Co 228.616†	-169.8	7.7	0.1041 µg/L	0.1041 ppb	17:34:20
1	Cr 267.716†	191.8	7.5	0.0636 µg/L	0.0636 ppb	17:34:20
1	Cu 324.752†	3186.0	301.0	1.2687 µg/L	1.2687 ppb	17:34:00
1	Mn 257.610†	711.9	514.9	0.6880 µg/L	0.6880 ppb	17:34:20
1	Mo 202.031†	-46.4	-10.3	-0.3259 µg/L	-0.3259 ppb	17:34:20
1	Ni 231.604†	-52.4	27.1	0.3410 µg/L	0.3410 ppb	17:34:20
1	P 214.914†	20.6	15.0	3.5650 µg/L	3.5650 ppb	17:34:20
1	Pb 220.353†	89.4	-10.2	-0.6277 µg/L	-0.6277 ppb	17:34:20
1	S 181.975 Axial†	135.7	43.9	35.988 µg/L	35.988 ppb	17:34:20
1	Sb 206.836†	67.5	-12.6	-1.6517 µg/L	-1.6517 ppb	17:34:20
1	Se 196.026†	17.1	3.0	1.20 µg/L	1.20 ppb	17:34:20
1	SiO2†	34746.8	31947.1	3417.9 µg/L	3417.9 ppb	17:34:00
1	Si 251.611†	102848.5	98801.9	1599.2 µg/L	1599.2 ppb	17:34:00
1	Sn 189.927†	10.7	12.9	0.8942 µg/L	0.8942 ppb	17:34:20
1	Ti 334.940†	959.7	45.2	0.0461 µg/L	0.0461 ppb	17:34:00
1	Tl 190.801†	-114.6	6.0	0.8033 µg/L	0.8033 ppb	17:34:20
1	U 409.014†	-309.4	-16.3	-1.0273 µg/L	-1.0273 ppb	17:34:00
1	V 292.402†	291.8	-26.8	-0.1468 µg/L	-0.1468 ppb	17:34:00
1	Zn 213.857†	766.8	219.1	1.3550 µg/L	1.3550 ppb	17:34:20
2	Sc RADIAL	155922.2	155922.2	105 %		17:33:12
2	Al 396.153Radial†	-20.7	43.3	8.9173 µg/L	8.9173 ppb	17:33:32
2	Ca 317.933Radial†	1372.3	603.1	36.284 µg/L	36.284 ppb	17:33:32
2	Fe 238.204 Radial†	255.4	101.4	6.8247 µg/L	6.8247 ppb	17:33:32
2	K 766.490 Radial†	2603.7	1155.7	475.60 µg/L	475.60 ppb	17:33:12
2	Mg 279.077 IEC†	214.4	34.5	14.159 µg/L	14.159 ppb	17:33:32
2	Na 589.592 Radial†	3040.1	1675.7	254.03 µg/L	254.03 ppb	17:33:12
2	Sr 421.552†	-58.1	166.5	0.3839 µg/L	0.3839 ppb	17:33:12
2	Sc 361.383	1814240.2	1814240.2	103.37 %		17:34:22
2	Y 371.029	1093172.0	1093172.0	102.74 %		17:34:22
2	Ag 328.068†	3595.6	31.2	0.1124 µg/L	0.1124 ppb	17:34:24
2	As 188.979†	-15.9	2.3	0.8136 µg/L	0.8136 ppb	17:34:45
2	B 249.677†	4440.7	1065.6	17.373 µg/L	17.373 ppb	17:34:24
2	Ba 233.527†	-131.6	34.8	0.1515 µg/L	0.1515 ppb	17:34:45
2	Be 313.107†	-729.8	79.6	0.0215 µg/L	0.0215 ppb	17:34:24
2	Cd 226.502†	-101.7	11.7	0.0795 µg/L	0.0795 ppb	17:34:45
2	Co 228.616†	-165.1	12.8	0.1723 µg/L	0.1723 ppb	17:34:45
2	Cr 267.716†	196.9	11.9	0.1065 µg/L	0.1065 ppb	17:34:45
2	Cu 324.752†	3085.1	195.6	0.8189 µg/L	0.8189 ppb	17:34:24
2	Mn 257.610†	661.7	464.5	0.6203 µg/L	0.6203 ppb	17:34:45
2	Mo 202.031†	-35.6	0.3	0.0115 µg/L	0.0115 ppb	17:34:45
2	Ni 231.604†	-57.8	22.0	0.2768 µg/L	0.2768 ppb	17:34:45
2	P 214.914†	3.9	-1.2	-0.2895 µg/L	-0.2895 ppb	17:34:45
2	Pb 220.353†	115.3	14.6	0.8990 µg/L	0.8990 ppb	17:34:45

2	S 181.975 Axial†	145.2	52.8	43.252 µg/L	43.252 ppb	17:34:45
2	Sb 206.836†	93.9	12.8	1.6733 µg/L	1.6733 ppb	17:34:45
2	Se 196.026†	17.6	3.5	1.38 µg/L	1.38 ppb	17:34:45
2	SiO2†	34626.1	31743.8	3396.1 µg/L	3396.1 ppb	17:34:24
2	Si 251.611†	102523.8	98231.8	1590.0 µg/L	1590.0 ppb	17:34:24
2	Sn 189.927†	11.4	13.6	0.9435 µg/L	0.9435 ppb	17:34:45
2	Ti 334.940†	1245.9	319.6	0.3233 µg/L	0.3233 ppb	17:34:24
2	Tl 190.801†	-127.9	-6.6	-0.8889 µg/L	-0.8889 ppb	17:34:45
2	U 409.014†	-426.6	-129.0	-8.0774 µg/L	-8.0774 ppb	17:34:24
2	V 292.402†	307.7	-12.2	-0.0705 µg/L	-0.0705 ppb	17:34:24
2	Zn 213.857†	754.5	205.3	1.2702 µg/L	1.2702 ppb	17:34:45
3	Sc RADIAL	155838.3	155838.3	105 %		17:33:34
3	Al 396.153Radial†	-31.5	33.0	6.7894 µg/L	6.7894 ppb	17:33:54
3	Ca 317.933Radial†	1353.1	585.6	35.234 µg/L	35.234 ppb	17:33:54
3	Fe 238.204 Radial†	246.6	93.2	6.2725 µg/L	6.2725 ppb	17:33:54
3	K 766.490 Radial†	2396.7	960.7	395.33 µg/L	395.33 ppb	17:33:34
3	Mg 279.077 IEC†	221.1	41.0	16.809 µg/L	16.809 ppb	17:33:54
3	Na 589.592 Radial†	3045.3	1682.2	255.08 µg/L	255.08 ppb	17:33:34
3	Sr 421.552†	-146.3	82.8	0.1908 µg/L	0.1908 ppb	17:33:34
3	Sc 361.383	1887679.6	1887679.6	107.56 %		17:34:47
3	Y 371.029	1135263.7	1135263.7	106.69 %		17:34:47
3	Ag 328.068†	3889.6	169.3	0.6573 µg/L	0.6573 ppb	17:34:49
3	As 188.979†	-7.9	10.4	3.6108 µg/L	3.6108 ppb	17:35:09
3	B 249.677†	4619.4	1064.6	17.357 µg/L	17.357 ppb	17:34:49
3	Ba 233.527†	-126.7	44.4	0.1931 µg/L	0.1931 ppb	17:35:09
3	Be 313.107†	-704.2	130.8	0.0362 µg/L	0.0362 ppb	17:34:49
3	Cd 226.502†	-96.5	20.3	0.1388 µg/L	0.1388 ppb	17:35:09
3	Co 228.616†	-183.6	1.7	0.0226 µg/L	0.0226 ppb	17:35:09
3	Cr 267.716†	158.7	-31.0	-0.2533 µg/L	-0.2533 ppb	17:35:09
3	Cu 324.752†	3312.8	291.1	1.2198 µg/L	1.2198 ppb	17:34:49
3	Mn 257.610†	655.9	434.2	0.5797 µg/L	0.5797 ppb	17:35:09
3	Mo 202.031†	-32.6	4.5	0.1433 µg/L	0.1433 ppb	17:35:09
3	Ni 231.604†	-59.2	22.9	0.2879 µg/L	0.2879 ppb	17:35:09
3	P 214.914†	23.5	16.8	4.0064 µg/L	4.0064 ppb	17:35:09
3	Pb 220.353†	118.2	12.9	0.8001 µg/L	0.8001 ppb	17:35:09
3	S 181.975 Axial†	139.6	42.1	34.545 µg/L	34.545 ppb	17:35:09
3	Sb 206.836†	76.5	-6.9	-0.9037 µg/L	-0.9037 ppb	17:35:09
3	Se 196.026†	6.4	-7.6	-3.05 µg/L	-3.05 ppb	17:35:09
3	SiO2†	34626.6	30441.0	3256.7 µg/L	3256.7 ppb	17:34:49
3	Si 251.611†	102049.9	93932.6	1520.4 µg/L	1520.4 ppb	17:34:49
3	Sn 189.927†	9.2	11.1	0.7651 µg/L	0.7651 ppb	17:35:09
3	Ti 334.940†	973.1	19.1	0.0229 µg/L	0.0229 ppb	17:34:49
3	Tl 190.801†	-114.1	11.0	1.4816 µg/L	1.4816 ppb	17:35:09
3	U 409.014†	-478.7	-161.3	-10.108 µg/L	-10.108 ppb	17:34:49
3	V 292.402†	300.5	-30.4	-0.1687 µg/L	-0.1687 ppb	17:34:49
3	Zn 213.857†	785.3	205.6	1.2715 µg/L	1.2715 ppb	17:35:09

Mean Data: 1202065057|962580|1

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1837167.9	104.68 %		2.496			2.38%
Sc RADIAL	156260.5	106 %		0.4			0.42%
Y 371.029	1106137.1	103.96 %		2.375			2.28%
Ag 328.068†	1.0	-0.0066 µg/L		0.73072	-0.0066 ppb	0.73072	>999.9%
Al 396.153Radial†	34.7	7.1567 µg/L		1.60873	7.1567 ppb	1.60873	22.48%
As 188.979†	4.8	1.6916 µg/L		1.66412	1.6916 ppb	1.66412	98.38%
B 249.677†	1144.0	18.652 µg/L		2.2294	18.652 ppb	2.2294	11.95%
Ba 233.527†	44.6	0.1939 µg/L		0.04272	0.1939 ppb	0.04272	22.03%
Be 313.107†	64.7	0.0175 µg/L		0.02100	0.0175 ppb	0.02100	120.17%
Ca 317.933Radial†	584.1	35.144 µg/L		1.1881	35.144 ppb	1.1881	3.38%
Cd 226.502†	11.5	0.0785 µg/L		0.06088	0.0785 ppb	0.06088	77.60%
Co 228.616†	7.4	0.0997 µg/L		0.07492	0.0997 ppb	0.07492	75.17%
Cr 267.716†	-3.9	-0.0277 µg/L		0.19649	-0.0277 ppb	0.19649	708.93%
Cu 324.752†	262.6	1.1025 µg/L		0.24681	1.1025 ppb	0.24681	22.39%
Fe 238.204 Radial†	94.2	6.3419 µg/L		0.45212	6.3419 ppb	0.45212	7.13%
K 766.490 Radial†	1073.4	441.73 µg/L		41.573	441.73 ppb	41.573	9.41%
Mg 279.077 IEC†	29.3	11.999 µg/L		6.1811	11.999 ppb	6.1811	51.52%
Mn 257.610†	471.2	0.6293 µg/L		0.05470	0.6293 ppb	0.05470	8.69%
Mo 202.031†	-1.8	-0.0571 µg/L		0.24200	-0.0571 ppb	0.24200	424.16%
Na 589.592 Radial†	1697.2	257.32 µg/L		4.809	257.32 ppb	4.809	1.87%

Ni 231.604†	24.0	0.3019 µg/L	0.03431	0.3019 ppb	0.03431	11.36%
P 214.914†	10.2	2.4273 µg/L	2.36311	2.4273 ppb	2.36311	97.36%
Pb 220.353†	5.8	0.3571 µg/L	0.85430	0.3571 ppb	0.85430	239.22%
S 181.975 Axial†	46.3	37.928 µg/L	4.6665	37.928 ppb	4.6665	12.30%
Sb 206.836†	-2.2	-0.2941 µg/L	1.74434	-0.2941 ppb	1.74434	593.21%
Se 196.026†	-0.4	-0.155 µg/L	2.5103	-0.155 ppb	2.5103	>999.9%
SiO2†	31377.3	3356.9 µg/L	87.43	3356.9 ppb	87.43	2.60%
Si 251.611†	96988.8	1569.9 µg/L	43.09	1569.9 ppb	43.09	2.74%
Sn 189.927†	12.5	0.8676 µg/L	0.09212	0.8676 ppb	0.09212	10.62%
Sr 421.552†	120.3	0.2773 µg/L	0.09811	0.2773 ppb	0.09811	35.39%
Ti 334.940†	128.0	0.1308 µg/L	0.16712	0.1308 ppb	0.16712	127.77%
Tl 190.801†	3.5	0.4653 µg/L	1.22086	0.4653 ppb	1.22086	262.37%
U 409.014†	-102.2	-6.4044 µg/L	4.76609	-6.4044 ppb	4.76609	74.42%
V 292.402†	-23.1	-0.1287 µg/L	0.05158	-0.1287 ppb	0.05158	40.09%
Zn 213.857†	210.0	1.2989 µg/L	0.04859	1.2989 ppb	0.04859	3.74%

Sequence No.: 15

Sample ID: 1202065058|962580|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 147

Date Collected: 3/30/2010 17:35:16

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 1202065058|962580|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	153516.2	153516.2	104 %		17:35:48
1	Al 396.153Radial†	26350.2	25437.0	5218.4 µg/L	5218.4 ppb	17:35:48
1	Ca 317.933Radial†	91436.7	87351.8	5255.7 µg/L	5255.7 ppb	17:35:48
1	Fe 238.204 Radial†	79920.4	76819.3	5169.1 µg/L	5169.1 ppb	17:35:48
1	K 766.490 Radial†	15385.8	13503.1	5553.9 µg/L	5553.9 ppb	17:35:48
1	Mg 279.077 IEC†	13651.7	12977.3	5331.4 µg/L	5331.4 ppb	17:35:48
1	Na 589.592 Radial†	38292.0	35667.0	5411.0 µg/L	5411.0 ppb	17:35:48
1	Sr 421.552†	234562.9	226096.1	521.53 µg/L	521.53 ppb	17:35:46
1	Sc 361.383	1778676.9	1778676.9	101.34 %		17:36:01
1	Y 371.029	1062140.6	1062140.6	99.821 %		17:36:01
1	Ag 328.068†	129764.8	124596.0	501.66 µg/L	501.66 ppb	17:36:01
1	As 188.979†	1461.3	1459.6	516.65 µg/L	516.65 ppb	17:36:21
1	B 249.677†	35854.1	32148.0	522.39 µg/L	522.39 ppb	17:36:01
1	Ba 233.527†	120198.0	118765.3	517.54 µg/L	517.54 ppb	17:36:01
1	Be 313.107†	1719600.8	1697570.6	509.60 µg/L	509.60 ppb	17:36:01
1	Cd 226.502†	75106.8	74220.3	509.30 µg/L	509.30 ppb	17:36:01
1	Co 228.616†	37857.2	37527.3	507.83 µg/L	507.83 ppb	17:36:01
1	Cr 267.716†	61020.1	60031.9	505.67 µg/L	505.67 ppb	17:36:01
1	Cu 324.752†	125899.3	121440.0	513.33 µg/L	513.33 ppb	17:36:01
1	Mn 257.610†	386743.5	381436.6	509.61 µg/L	509.61 ppb	17:36:01
1	Mo 202.031†	16018.7	15840.9	504.36 µg/L	504.36 ppb	17:36:21
1	Ni 231.604†	41402.0	40930.5	514.81 µg/L	514.81 ppb	17:36:01
1	P 214.914†	2238.6	2203.9	516.94 µg/L	516.94 ppb	17:36:21
1	Pb 220.353†	8688.8	8476.6	520.60 µg/L	520.60 ppb	17:36:21
1	S 181.975 Axial†	6531.4	6357.0	5215.3 µg/L	5215.3 ppb	17:36:21
1	Sb 206.836†	3988.9	3857.9	507.00 µg/L	507.00 ppb	17:36:21
1	Se 196.026†	1274.3	1243.8	500 µg/L	500 ppb	17:36:21
1	SiO2†	137215.6	133641.9	14276 µg/L	14276 ppb	17:36:01
1	Si 251.611†	419497.1	412982.6	6674.5 µg/L	6674.5 ppb	17:36:01
1	Sn 189.927†	7527.5	7430.2	516.10 µg/L	516.10 ppb	17:36:21
1	Ti 334.940†	511634.6	503960.6	504.22 µg/L	504.22 ppb	17:36:01
1	Tl 190.801†	3725.5	3793.1	517.38 µg/L	517.38 ppb	17:36:21
1	U 409.014†	7777.1	7957.7	529.40 µg/L	529.40 ppb	17:36:01
1	V 292.402†	97136.7	95538.1	513.95 µg/L	513.95 ppb	17:36:01
1	Zn 213.857†	82449.4	80830.9	497.27 µg/L	497.27 ppb	17:36:01
2	Sc RADIAL	152917.0	152917.0	103 %		17:35:52
2	Al 396.153Radial†	26209.1	25400.0	5210.7 µg/L	5210.7 ppb	17:35:52
2	Ca 317.933Radial†	90688.1	86973.1	5233.0 µg/L	5233.0 ppb	17:35:52
2	Fe 238.204 Radial†	79051.1	76280.5	5132.8 µg/L	5132.8 ppb	17:35:52
2	K 766.490 Radial†	15447.1	13620.4	5602.2 µg/L	5602.2 ppb	17:35:52
2	Mg 279.077 IEC†	13540.8	12921.6	5308.6 µg/L	5308.6 ppb	17:35:52
2	Na 589.592 Radial†	37835.2	35369.9	5365.8 µg/L	5365.8 ppb	17:35:52
2	Sr 421.552†	233056.9	225525.3	520.21 µg/L	520.21 ppb	17:35:50
2	Sc 361.383	1779908.4	1779908.4	101.41 %		17:36:24
2	Y 371.029	1063631.4	1063631.4	99.961 %		17:36:24
2	Ag 328.068†	129328.1	124076.8	499.55 µg/L	499.55 ppb	17:36:24
2	As 188.979†	1476.9	1474.0	521.65 µg/L	521.65 ppb	17:36:44
2	B 249.677†	35773.3	32043.9	520.70 µg/L	520.70 ppb	17:36:24
2	Ba 233.527†	119555.3	118049.6	514.42 µg/L	514.42 ppb	17:36:24
2	Be 313.107†	1712838.3	1689728.5	507.25 µg/L	507.25 ppb	17:36:24
2	Cd 226.502†	74690.6	73758.6	506.13 µg/L	506.13 ppb	17:36:24
2	Co 228.616†	37595.4	37243.3	503.98 µg/L	503.98 ppb	17:36:24
2	Cr 267.716†	60786.8	59760.2	503.39 µg/L	503.39 ppb	17:36:24
2	Cu 324.752†	125678.3	121136.1	512.04 µg/L	512.04 ppb	17:36:24
2	Mn 257.610†	384471.6	378932.3	506.26 µg/L	506.26 ppb	17:36:24
2	Mo 202.031†	16096.0	15906.2	506.43 µg/L	506.43 ppb	17:36:44
2	Ni 231.604†	41008.6	40514.4	509.58 µg/L	509.58 ppb	17:36:24
2	P 214.914†	2272.4	2235.7	524.54 µg/L	524.54 ppb	17:36:44
2	Pb 220.353†	8718.3	8499.7	522.03 µg/L	522.03 ppb	17:36:44

2	S 181.975 Axial†	6569.6	6390.2	5242.6 µg/L	5242.6 ppb	17:36:44
2	Sb 206.836†	4012.1	3878.0	509.70 µg/L	509.70 ppb	17:36:44
2	Se 196.026†	1280.8	1249.4	502 µg/L	502 ppb	17:36:44
2	SiO2†	136484.0	132826.8	14189 µg/L	14189 ppb	17:36:24
2	Si 251.611†	417272.6	410502.7	6634.3 µg/L	6634.3 ppb	17:36:24
2	Sn 189.927†	7554.1	7451.2	517.55 µg/L	517.55 ppb	17:36:44
2	Ti 334.940†	509469.0	501476.0	501.73 µg/L	501.73 ppb	17:36:24
2	Tl 190.801†	3756.1	3820.8	521.06 µg/L	521.06 ppb	17:36:44
2	U 409.014†	7640.5	7817.7	520.47 µg/L	520.47 ppb	17:36:24
2	V 292.402†	96718.5	95059.3	511.42 µg/L	511.42 ppb	17:36:24
2	Zn 213.857†	81766.8	80101.5	492.79 µg/L	492.79 ppb	17:36:24
3	Sc RADIAL	152377.3	152377.3	103 %		17:35:56
3	Al 396.153Radial†	25998.3	25285.3	5187.2 µg/L	5187.2 ppb	17:35:56
3	Ca 317.933Radial†	90311.7	86918.5	5229.7 µg/L	5229.7 ppb	17:35:56
3	Fe 238.204 Radial†	78686.6	76197.7	5127.2 µg/L	5127.2 ppb	17:35:56
3	K 766.490 Radial†	15267.7	13499.2	5552.3 µg/L	5552.3 ppb	17:35:56
3	Mg 279.077 IEC†	13587.9	13013.6	5346.3 µg/L	5346.3 ppb	17:35:56
3	Na 589.592 Radial†	37904.9	35567.0	5395.8 µg/L	5395.8 ppb	17:35:56
3	Sr 421.552†	234755.3	227971.0	525.85 µg/L	525.85 ppb	17:35:54
3	Sc 361.383	1777007.4	1777007.4	101.25 %		17:36:47
3	Y 371.029	1062476.3	1062476.3	99.853 %		17:36:47
3	Ag 328.068†	129343.0	124299.7	500.45 µg/L	500.45 ppb	17:36:47
3	As 188.979†	1454.3	1454.0	514.68 µg/L	514.68 ppb	17:37:07
3	B 249.677†	35820.2	32147.8	522.39 µg/L	522.39 ppb	17:36:47
3	Ba 233.527†	119752.4	118436.7	516.10 µg/L	516.10 ppb	17:36:47
3	Be 313.107†	1712243.0	1691897.8	507.90 µg/L	507.90 ppb	17:36:47
3	Cd 226.502†	74610.3	73799.6	506.41 µg/L	506.41 ppb	17:36:47
3	Co 228.616†	37720.3	37427.2	506.47 µg/L	506.47 ppb	17:36:47
3	Cr 267.716†	60761.6	59833.2	503.99 µg/L	503.99 ppb	17:36:47
3	Cu 324.752†	125294.5	120959.3	511.30 µg/L	511.30 ppb	17:36:47
3	Mn 257.610†	384118.8	379202.8	506.62 µg/L	506.62 ppb	17:36:47
3	Mo 202.031†	15989.9	15827.3	503.92 µg/L	503.92 ppb	17:37:07
3	Ni 231.604†	41165.5	40735.3	512.36 µg/L	512.36 ppb	17:36:47
3	P 214.914†	2216.9	2184.5	512.37 µg/L	512.37 ppb	17:37:07
3	Pb 220.353†	8652.5	8448.7	518.89 µg/L	518.89 ppb	17:37:07
3	S 181.975 Axial†	6521.8	6353.6	5212.5 µg/L	5212.5 ppb	17:37:07
3	Sb 206.836†	3987.8	3860.5	507.35 µg/L	507.35 ppb	17:37:07
3	Se 196.026†	1277.2	1247.9	502 µg/L	502 ppb	17:37:07
3	SiO2†	136690.2	133250.2	14234 µg/L	14234 ppb	17:36:47
3	Si 251.611†	417360.3	411261.0	6646.6 µg/L	6646.6 ppb	17:36:47
3	Sn 189.927†	7528.3	7437.9	516.63 µg/L	516.63 ppb	17:37:07
3	Ti 334.940†	509320.5	502149.4	502.40 µg/L	502.40 ppb	17:36:47
3	Tl 190.801†	3736.3	3807.3	519.25 µg/L	519.25 ppb	17:37:07
3	U 409.014†	7803.4	7990.9	531.29 µg/L	531.29 ppb	17:36:47
3	V 292.402†	96469.2	94968.8	510.92 µg/L	510.92 ppb	17:36:47
3	Zn 213.857†	82184.1	80645.3	496.14 µg/L	496.14 ppb	17:36:47

Mean Data: 1202065058|962580|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1778530.9	101.34 %	0.083			0.08%
Sc RADIAL	152936.8	103 %	0.4			0.37%
Y 371.029	1062749.5	99.878 %	0.0735			0.07%
Ag 328.068†	124324.2	500.55 µg/L	1.056	500.55 ppb	1.056	0.21%
Al 396.153Radial†	25374.1	5205.5 µg/L	16.28	5205.5 ppb	16.28	0.31%
As 188.979†	1462.5	517.66 µg/L	3.595	517.66 ppb	3.595	0.69%
B 249.677†	32113.2	521.83 µg/L	0.972	521.83 ppb	0.972	0.19%
Ba 233.527†	118417.2	516.02 µg/L	1.560	516.02 ppb	1.560	0.30%
Be 313.107†	1693065.7	508.25 µg/L	1.216	508.25 ppb	1.216	0.24%
Ca 317.933Radial†	87081.1	5239.5 µg/L	14.20	5239.5 ppb	14.20	0.27%
Cd 226.502†	73926.2	507.28 µg/L	1.753	507.28 ppb	1.753	0.35%
Co 228.616†	37399.3	506.09 µg/L	1.949	506.09 ppb	1.949	0.39%
Cr 267.716†	59875.1	504.35 µg/L	1.183	504.35 ppb	1.183	0.23%
Cu 324.752†	121178.4	512.22 µg/L	1.028	512.22 ppb	1.028	0.20%
Fe 238.204 Radial†	76432.5	5143.0 µg/L	22.71	5143.0 ppb	22.71	0.44%
K 766.490 Radial†	13540.9	5569.5 µg/L	28.35	5569.5 ppb	28.35	0.51%
Mg 279.077 IEC†	12970.8	5328.8 µg/L	18.98	5328.8 ppb	18.98	0.36%
Mn 257.610†	379857.2	507.50 µg/L	1.837	507.50 ppb	1.837	0.36%
Mo 202.031†	15858.1	504.90 µg/L	1.340	504.90 ppb	1.340	0.27%
Na 589.592 Radial†	35534.6	5390.9 µg/L	22.98	5390.9 ppb	22.98	0.43%

Ni 231.604†	40726.8	512.25 µg/L	2.619	512.25 ppb	2.619	0.51%
P 214.914†	2208.0	517.95 µg/L	6.148	517.95 ppb	6.148	1.19%
Pb 220.353†	8475.0	520.51 µg/L	1.569	520.51 ppb	1.569	0.30%
S 181.975 Axial†	6367.0	5223.5 µg/L	16.61	5223.5 ppb	16.61	0.32%
Sb 206.836†	3865.5	508.02 µg/L	1.471	508.02 ppb	1.471	0.29%
Se 196.026†	1247.0	501 µg/L	1.2	501 ppb	1.2	0.23%
SiO2†	133239.6	14233 µg/L	43.7	14233 ppb	43.7	0.31%
Si 251.611†	411582.1	6651.8 µg/L	20.58	6651.8 ppb	20.58	0.31%
Sn 189.927†	7439.8	516.76 µg/L	0.734	516.76 ppb	0.734	0.14%
Sr 421.552†	226530.8	522.53 µg/L	2.952	522.53 ppb	2.952	0.56%
Ti 334.940†	502528.7	502.78 µg/L	1.285	502.78 ppb	1.285	0.26%
Tl 190.801†	3807.1	519.23 µg/L	1.841	519.23 ppb	1.841	0.35%
U 409.014†	7922.1	527.05 µg/L	5.779	527.05 ppb	5.779	1.10%
V 292.402†	95188.7	512.10 µg/L	1.623	512.10 ppb	1.623	0.32%
Zn 213.857†	80525.9	495.40 µg/L	2.333	495.40 ppb	2.333	0.47%

Sequence No.: 16

Sample ID: 1202065059|962580|5

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 148

Date Collected: 3/30/2010 17:37:16

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 1202065059|962580|5

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	156127.6	156127.6	106 %		17:37:46
1	Al 396.153Radial†	-28.8	35.6	7.3386 µg/L	7.3386 ppb	17:38:06
1	Ca 317.933Radial†	837.8	95.3	5.7316 µg/L	5.7316 ppb	17:38:06
1	Fe 238.204 Radial†	187.4	36.7	2.4702 µg/L	2.4702 ppb	17:38:06
1	K 766.490 Radial†	1768.6	361.8	148.87 µg/L	148.87 ppb	17:37:46
1	Mg 279.077 IEC†	155.0	-22.0	-9.0339 µg/L	-9.0339 ppb	17:38:06
1	Na 589.592 Radial†	1731.5	432.9	65.600 µg/L	65.600 ppb	17:37:46
1	Sr 421.552†	-64.8	160.3	0.3696 µg/L	0.3696 ppb	17:37:46
1	Sc 361.383	1789748.9	1789748.9	101.98 %		17:38:54
1	Y 371.029	1081946.5	1081946.5	101.68 %		17:38:54
1	Ag 328.068†	3646.0	128.3	0.5023 µg/L	0.5023 ppb	17:38:56
1	As 188.979†	-15.3	2.6	0.9259 µg/L	0.9259 ppb	17:39:16
1	B 249.677†	3534.2	235.4	3.8373 µg/L	3.8373 ppb	17:39:16
1	Ba 233.527†	-151.0	14.0	0.0612 µg/L	0.0612 ppb	17:39:16
1	Be 313.107†	-851.4	-49.3	-0.0177 µg/L	-0.0177 ppb	17:38:56
1	Cd 226.502†	-103.0	9.0	0.0616 µg/L	0.0616 ppb	17:39:16
1	Co 228.616†	-174.4	1.4	0.0187 µg/L	0.0187 ppb	17:39:16
1	Cr 267.716†	200.6	18.1	0.1606 µg/L	0.1606 ppb	17:39:16
1	Cu 324.752†	2946.8	100.8	0.4169 µg/L	0.4169 ppb	17:38:56
1	Mn 257.610†	299.3	117.9	0.1580 µg/L	0.1580 ppb	17:39:16
1	Mo 202.031†	-40.1	-4.5	-0.1439 µg/L	-0.1439 ppb	17:39:16
1	Ni 231.604†	-70.0	9.3	0.1168 µg/L	0.1168 ppb	17:39:16
1	P 214.914†	27.6	22.1	5.2733 µg/L	5.2733 ppb	17:39:16
1	Pb 220.353†	77.2	-21.2	-1.2919 µg/L	-1.2919 ppb	17:39:16
1	S 181.975 Axial†	94.9	5.4	4.3873 µg/L	4.3873 ppb	17:39:16
1	Sb 206.836†	93.7	13.8	1.8040 µg/L	1.8040 ppb	17:39:16
1	Se 196.026†	5.8	-7.9	-3.17 µg/L	-3.17 ppb	17:39:16
1	SiO2†	8299.6	6385.6	683.16 µg/L	683.16 ppb	17:38:56
1	Si 251.611†	21131.8	19773.8	320.06 µg/L	320.06 ppb	17:38:56
1	Sn 189.927†	8.0	10.4	0.7180 µg/L	0.7180 ppb	17:39:16
1	Ti 334.940†	841.1	-60.8	-0.0562 µg/L	-0.0562 ppb	17:38:56
1	Tl 190.801†	-108.0	11.2	1.5045 µg/L	1.5045 ppb	17:39:16
1	U 409.014†	-444.9	-152.5	-9.5293 µg/L	-9.5293 ppb	17:38:56
1	V 292.402†	387.2	69.9	0.3634 µg/L	0.3634 ppb	17:38:56
1	Zn 213.857†	620.1	83.5	0.5165 µg/L	0.5165 ppb	17:39:16
2	Sc RADIAL	153789.2	153789.2	104 %		17:38:08
2	Al 396.153Radial†	-45.4	19.2	3.9791 µg/L	3.9791 ppb	17:38:28
2	Ca 317.933Radial†	804.8	75.6	4.5488 µg/L	4.5488 ppb	17:38:28
2	Fe 238.204 Radial†	169.8	22.6	1.5184 µg/L	1.5184 ppb	17:38:28
2	K 766.490 Radial†	1731.7	351.8	144.79 µg/L	144.79 ppb	17:38:08
2	Mg 279.077 IEC†	191.4	15.2	6.2390 µg/L	6.2390 ppb	17:38:28
2	Na 589.592 Radial†	1600.0	331.4	50.195 µg/L	50.195 ppb	17:38:08
2	Sr 421.552†	-214.2	15.7	0.0362 µg/L	0.0362 ppb	17:38:08
2	Sc 361.383	1781746.6	1781746.6	101.52 %		17:39:18
2	Y 371.029	1076300.1	1076300.1	101.15 %		17:39:18
2	Ag 328.068†	3230.3	-265.2	-1.0551 µg/L	-1.0551 ppb	17:39:20
2	As 188.979†	-23.0	-4.9	-1.7248 µg/L	-1.7248 ppb	17:39:40
2	B 249.677†	3454.0	172.0	2.8048 µg/L	2.8048 ppb	17:39:40
2	Ba 233.527†	-166.5	-1.9	-0.0083 µg/L	-0.0083 ppb	17:39:40
2	Be 313.107†	-817.7	-19.8	-0.0059 µg/L	-0.0059 ppb	17:39:20
2	Cd 226.502†	-123.8	-11.9	-0.0820 µg/L	-0.0820 ppb	17:39:40
2	Co 228.616†	-197.6	-22.2	-0.3000 µg/L	-0.3000 ppb	17:39:40
2	Cr 267.716†	171.3	-9.8	-0.0829 µg/L	-0.0829 ppb	17:39:40
2	Cu 324.752†	2911.9	79.4	0.3350 µg/L	0.3350 ppb	17:39:20
2	Mn 257.610†	305.8	125.7	0.1677 µg/L	0.1677 ppb	17:39:40
2	Mo 202.031†	-44.7	-9.2	-0.2940 µg/L	-0.2940 ppb	17:39:40
2	Ni 231.604†	-89.5	-10.2	-0.1288 µg/L	-0.1288 ppb	17:39:40
2	P 214.914†	8.7	3.6	0.8445 µg/L	0.8445 ppb	17:39:40
2	Pb 220.353†	91.6	-6.7	-0.4124 µg/L	-0.4124 ppb	17:39:40

2	S 181.975 Axial†	101.5	12.3	10.056 µg/L	10.056 ppb	17:39:40
2	Sb 206.836†	79.4	0.1	0.0096 µg/L	0.0096 ppb	17:39:40
2	Se 196.026†	17.2	3.4	1.36 µg/L	1.36 ppb	17:39:40
2	SiO2†	8319.1	6441.5	689.15 µg/L	689.15 ppb	17:39:20
2	Si 251.611†	21484.5	20214.3	327.20 µg/L	327.20 ppb	17:39:20
2	Sn 189.927†	-5.8	-3.1	-0.2184 µg/L	-0.2184 ppb	17:39:40
2	Ti 334.940†	716.4	-179.9	-0.1807 µg/L	-0.1807 ppb	17:39:20
2	Tl 190.801†	-116.4	2.4	0.3197 µg/L	0.3197 ppb	17:39:40
2	U 409.014†	-283.2	4.8	0.2952 µg/L	0.2952 ppb	17:39:20
2	V 292.402†	292.5	-21.7	-0.1184 µg/L	-0.1184 ppb	17:39:20
2	Zn 213.857†	627.7	93.8	0.5821 µg/L	0.5821 ppb	17:39:40
3	Sc RADIAL	156318.4	156318.4	106 %		17:38:30
3	Al 396.153Radial†	-68.9	-2.2	-0.4695 µg/L	-0.4695 ppb	17:38:50
3	Ca 317.933Radial†	827.5	84.6	5.0884 µg/L	5.0884 ppb	17:38:50
3	Fe 238.204 Radial†	183.4	32.7	2.2011 µg/L	2.2011 ppb	17:38:50
3	K 766.490 Radial†	1585.1	186.2	76.627 µg/L	76.627 ppb	17:38:30
3	Mg 279.077 IEC†	177.3	-1.1	-0.4699 µg/L	-0.4699 ppb	17:38:50
3	Na 589.592 Radial†	1692.9	394.4	59.818 µg/L	59.818 ppb	17:38:30
3	Sr 421.552†	-205.2	27.6	0.0637 µg/L	0.0637 ppb	17:38:30
3	Sc 361.383	1792098.6	1792098.6	102.11 %		17:39:42
3	Y 371.029	1081624.7	1081624.7	101.65 %		17:39:42
3	Ag 328.068†	3357.4	-159.0	-0.6346 µg/L	-0.6346 ppb	17:39:44
3	As 188.979†	-18.9	-0.8	-0.2902 µg/L	-0.2902 ppb	17:40:05
3	B 249.677†	3500.3	197.6	3.2224 µg/L	3.2224 ppb	17:40:05
3	Ba 233.527†	-131.8	33.0	0.1436 µg/L	0.1436 ppb	17:40:05
3	Be 313.107†	-630.2	168.4	0.0514 µg/L	0.0514 ppb	17:39:44
3	Cd 226.502†	-118.3	-5.8	-0.0400 µg/L	-0.0400 ppb	17:40:05
3	Co 228.616†	-174.4	1.6	0.0222 µg/L	0.0222 ppb	17:40:05
3	Cr 267.716†	174.2	-8.0	-0.0696 µg/L	-0.0696 ppb	17:40:05
3	Cu 324.752†	2931.6	82.1	0.3488 µg/L	0.3488 ppb	17:39:44
3	Mn 257.610†	297.3	115.6	0.1545 µg/L	0.1545 ppb	17:40:05
3	Mo 202.031†	-30.7	4.7	0.1482 µg/L	0.1482 ppb	17:40:05
3	Ni 231.604†	-69.4	9.9	0.1243 µg/L	0.1243 ppb	17:40:05
3	P 214.914†	22.4	17.0	4.0458 µg/L	4.0458 ppb	17:40:05
3	Pb 220.353†	98.7	-0.3	-0.0201 µg/L	-0.0201 ppb	17:40:05
3	S 181.975 Axial†	101.1	11.3	9.2880 µg/L	9.2880 ppb	17:40:05
3	Sb 206.836†	74.6	-5.0	-0.6517 µg/L	-0.6517 ppb	17:40:05
3	Se 196.026†	12.6	-1.2	-0.483 µg/L	-0.483 ppb	17:40:05
3	SiO2†	8270.5	6346.5	678.97 µg/L	678.97 ppb	17:39:44
3	Si 251.611†	21048.6	19665.1	318.30 µg/L	318.30 ppb	17:39:44
3	Sn 189.927†	9.5	11.9	0.8226 µg/L	0.8226 ppb	17:40:05
3	Ti 334.940†	982.7	76.8	0.0760 µg/L	0.0760 ppb	17:39:44
3	Tl 190.801†	-105.2	14.1	1.8921 µg/L	1.8921 ppb	17:40:05
3	U 409.014†	-241.6	47.2	2.9280 µg/L	2.9280 ppb	17:39:44
3	V 292.402†	221.0	-93.5	-0.4932 µg/L	-0.4932 ppb	17:39:44
3	Zn 213.857†	634.1	96.4	0.5966 µg/L	0.5966 ppb	17:40:05

Mean Data: 1202065059|962580|5

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Conc. Units	Std.Dev.	RSD
Sc 361.383	1787864.7	101.87 %		0.309			0.30%
Sc RADIAL	155411.7	105 %		1.0			0.91%
Y 371.029	1079957.1	101.50 %		0.298			0.29%
Ag 328.068†	-98.6	-0.3958 µg/L		0.80571	-0.3958 ppb	0.80571	203.56%
Al 396.153Radial†	17.5	3.6160 µg/L		3.91671	3.6160 ppb	3.91671	108.32%
As 188.979†	-1.0	-0.3630 µg/L		1.32684	-0.3630 ppb	1.32684	365.52%
B 249.677†	201.7	3.2882 µg/L		0.51938	3.2882 ppb	0.51938	15.80%
Ba 233.527†	15.1	0.0655 µg/L		0.07604	0.0655 ppb	0.07604	116.11%
Be 313.107†	33.1	0.0093 µg/L		0.03697	0.0093 ppb	0.03697	397.74%
Ca 317.933Radial†	85.1	5.1229 µg/L		0.59215	5.1229 ppb	0.59215	11.56%
Cd 226.502†	-2.9	-0.0201 µg/L		0.07384	-0.0201 ppb	0.07384	366.99%
Co 228.616†	-6.4	-0.0864 µg/L		0.18504	-0.0864 ppb	0.18504	214.25%
Cr 267.716†	0.1	0.0027 µg/L		0.13693	0.0027 ppb	0.13693	>999.9%
Cu 324.752†	87.4	0.3669 µg/L		0.04388	0.3669 ppb	0.04388	11.96%
Fe 238.204 Radial†	30.7	2.0632 µg/L		0.49064	2.0632 ppb	0.49064	23.78%
K 766.490 Radial†	299.9	123.43 µg/L		40.583	123.43 ppb	40.583	32.88%
Mg 279.077 IEC†	-2.6	-1.0883 µg/L		7.65519	-1.0883 ppb	7.65519	703.42%
Mn 257.610†	119.7	0.1601 µg/L		0.00687	0.1601 ppb	0.00687	4.29%
Mo 202.031†	-3.0	-0.0966 µg/L		0.22487	-0.0966 ppb	0.22487	232.78%
Na 589.592 Radial†	386.2	58.538 µg/L		7.7815	58.538 ppb	7.7815	13.29%

Ni 231.604†	3.0	0.0374 µg/L	0.14399	0.0374 ppb	0.14399	384.75%
P 214.914†	14.2	3.3879 µg/L	2.28654	3.3879 ppb	2.28654	67.49%
Pb 220.353†	-9.4	-0.5748 µg/L	0.65124	-0.5748 ppb	0.65124	113.30%
S 181.975 Axial†	9.7	7.9105 µg/L	3.07528	7.9105 ppb	3.07528	38.88%
Sb 206.836†	3.0	0.3873 µg/L	1.27064	0.3873 ppb	1.27064	328.08%
Se 196.026†	-1.9	-0.764 µg/L	2.2791	-0.764 ppb	2.2791	298.21%
SiO2†	6391.2	683.76 µg/L	5.120	683.76 ppb	5.120	0.75%
Si 251.611†	19884.4	321.85 µg/L	4.713	321.85 ppb	4.713	1.46%
Sn 189.927†	6.4	0.4407 µg/L	0.57322	0.4407 ppb	0.57322	130.06%
Sr 421.552†	67.9	0.1565 µg/L	0.18507	0.1565 ppb	0.18507	118.24%
Ti 334.940†	-54.6	-0.0536 µg/L	0.12833	-0.0536 ppb	0.12833	239.31%
Tl 190.801†	9.2	1.2387 µg/L	0.81920	1.2387 ppb	0.81920	66.13%
U 409.014†	-33.5	-2.1020 µg/L	6.56551	-2.1020 ppb	6.56551	312.34%
V 292.402†	-15.1	-0.0827 µg/L	0.42944	-0.0827 ppb	0.42944	518.98%
Zn 213.857†	91.2	0.5651 µg/L	0.04270	0.5651 ppb	0.04270	7.56%

Sequence No.: 17

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 3/30/2010 17:40:12

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	154418.8	154418.8	104 %		17:40:45
1	Al 396.153Radial†	25881.5	24840.1	5095.1 µg/L	5095.1 ppb	17:40:45
1	Ca 317.933Radial†	89405.0	84892.2	5107.8 µg/L	5107.8 ppb	17:40:45
1	Fe 238.204 Radial†	78825.0	75320.8	5068.2 µg/L	5068.2 ppb	17:40:45
1	K 766.490 Radial†	14351.2	12426.0	5109.9 µg/L	5109.9 ppb	17:40:45
1	Mg 279.077 IEC†	13472.2	12728.5	5229.6 µg/L	5229.6 ppb	17:40:45
1	Na 589.592 Radial†	70371.6	66162.3	10042 µg/L	10042 ppb	17:40:45
1	Sr 421.552†	231921.2	222246.9	512.65 µg/L	512.65 ppb	17:40:43
1	Sc 361.383	1770216.3	1770216.3	100.86 %		17:41:12
1	Y 371.029	1058374.3	1058374.3	99.467 %		17:41:12
1	Ag 328.068†	130653.5	126089.1	507.50 µg/L	507.50 ppb	17:41:12
1	As 188.979†	1448.8	1454.1	514.70 µg/L	514.70 ppb	17:41:32
1	B 249.677†	34436.8	30912.0	502.23 µg/L	502.23 ppb	17:41:12
1	Ba 233.527†	116767.3	115930.9	505.19 µg/L	505.19 ppb	17:41:12
1	Be 313.107†	1699194.9	1685448.9	505.96 µg/L	505.96 ppb	17:41:12
1	Cd 226.502†	74344.1	73818.3	506.54 µg/L	506.54 ppb	17:41:12
1	Co 228.616†	37776.5	37625.9	509.15 µg/L	509.15 ppb	17:41:12
1	Cr 267.716†	60453.2	59757.6	503.37 µg/L	503.37 ppb	17:41:12
1	Cu 324.752†	123125.1	119283.2	504.21 µg/L	504.21 ppb	17:41:12
1	Mn 257.610†	382389.5	378943.7	506.28 µg/L	506.28 ppb	17:41:12
1	Mo 202.031†	16142.5	16039.2	510.65 µg/L	510.65 ppb	17:41:32
1	Ni 231.604†	40624.4	40354.8	507.57 µg/L	507.57 ppb	17:41:12
1	P 214.914†	10878.0	10780.0	2562.6 µg/L	2562.6 ppb	17:41:32
1	Pb 220.353†	8582.5	8412.1	516.69 µg/L	516.69 ppb	17:41:32
1	S 181.975 Axial†	1354.9	1255.6	1033.6 µg/L	1033.6 ppb	17:41:32
1	Sb 206.836†	4013.1	3900.7	512.73 µg/L	512.73 ppb	17:41:32
1	Se 196.026†	1310.6	1285.8	517 µg/L	517 ppb	17:41:32
1	SiO2†	52722.5	50518.5	5382.8 µg/L	5382.8 ppb	17:41:12
1	Si 251.611†	158212.1	155910.4	2513.4 µg/L	2513.4 ppb	17:41:12
1	Sn 189.927†	7470.8	7409.5	514.67 µg/L	514.67 ppb	17:41:32
1	Ti 334.940†	509168.7	503928.7	504.20 µg/L	504.20 ppb	17:41:12
1	Tl 190.801†	3749.6	3834.6	522.90 µg/L	522.90 ppb	17:41:32
1	U 409.014†	7397.7	7618.2	507.79 µg/L	507.79 ppb	17:41:12
1	V 292.402†	95558.2	94431.1	508.12 µg/L	508.12 ppb	17:41:12
1	Zn 213.857†	83202.9	81966.8	504.38 µg/L	504.38 ppb	17:41:12
2	Sc RADIAL	152256.9	152256.9	103 %		17:40:49
2	Al 396.153Radial†	25420.4	24744.1	5075.6 µg/L	5075.6 ppb	17:40:49
2	Ca 317.933Radial†	88042.4	84784.4	5101.3 µg/L	5101.3 ppb	17:40:49
2	Fe 238.204 Radial†	77781.8	75379.5	5072.2 µg/L	5072.2 ppb	17:40:49
2	K 766.490 Radial†	14172.4	12447.5	5118.8 µg/L	5118.8 ppb	17:40:49
2	Mg 279.077 IEC†	13260.1	12705.8	5220.1 µg/L	5220.1 ppb	17:40:49
2	Na 589.592 Radial†	69446.9	66221.0	10051 µg/L	10051 ppb	17:40:49
2	Sr 421.552†	231973.3	225450.1	520.04 µg/L	520.04 ppb	17:40:47
2	Sc 361.383	1750687.1	1750687.1	99.750 %		17:41:35
2	Y 371.029	1047187.7	1047187.7	98.416 %		17:41:35
2	Ag 328.068†	129307.7	126184.9	507.89 µg/L	507.89 ppb	17:41:35
2	As 188.979†	1415.4	1436.6	508.61 µg/L	508.61 ppb	17:41:55
2	B 249.677†	34174.1	31029.5	504.14 µg/L	504.14 ppb	17:41:35
2	Ba 233.527†	115618.6	116070.7	505.80 µg/L	505.80 ppb	17:41:35
2	Be 313.107†	1681827.2	1686830.4	506.38 µg/L	506.38 ppb	17:41:35
2	Cd 226.502†	73697.6	73992.4	507.74 µg/L	507.74 ppb	17:41:35
2	Co 228.616†	37362.3	37628.4	509.19 µg/L	509.19 ppb	17:41:35
2	Cr 267.716†	59945.8	59917.6	504.72 µg/L	504.72 ppb	17:41:35
2	Cu 324.752†	122121.4	119638.7	505.71 µg/L	505.71 ppb	17:41:35
2	Mn 257.610†	378960.5	379735.3	507.34 µg/L	507.34 ppb	17:41:35
2	Mo 202.031†	15799.0	15873.4	505.38 µg/L	505.38 ppb	17:41:55
2	Ni 231.604†	40245.2	40424.0	508.44 µg/L	508.44 ppb	17:41:35
2	P 214.914†	10594.8	10616.3	2523.6 µg/L	2523.6 ppb	17:41:55
2	Pb 220.353†	8346.4	8270.4	507.99 µg/L	507.99 ppb	17:41:55

2	S 181.975 Axial†	1315.0	1230.6	1013.0 µg/L	1013.0 ppb	17:41:55
2	Sb 206.836†	3926.2	3857.9	507.01 µg/L	507.01 ppb	17:41:55
2	Se 196.026†	1283.5	1273.1	512 µg/L	512 ppb	17:41:55
2	SiO2†	52198.4	50576.1	5389.2 µg/L	5389.2 ppb	17:41:35
2	Si 251.611†	157052.2	156497.4	2523.0 µg/L	2523.0 ppb	17:41:35
2	Sn 189.927†	7295.4	7316.3	508.22 µg/L	508.22 ppb	17:41:55
2	Ti 334.940†	504666.0	505046.0	505.31 µg/L	505.31 ppb	17:41:35
2	Tl 190.801†	3638.3	3764.5	513.49 µg/L	513.49 ppb	17:41:55
2	U 409.014†	7417.4	7719.8	514.19 µg/L	514.19 ppb	17:41:35
2	V 292.402†	94605.0	94532.4	508.61 µg/L	508.61 ppb	17:41:35
2	Zn 213.857†	82370.8	82052.8	504.91 µg/L	504.91 ppb	17:41:35
3	Sc RADIAL	152947.1	152947.1	103 %		17:40:53
3	Al 396.153Radial†	25668.1	24872.2	5101.8 µg/L	5101.8 ppb	17:40:53
3	Ca 317.933Radial†	88921.9	85248.8	5129.2 µg/L	5129.2 ppb	17:40:53
3	Fe 238.204 Radial†	78236.0	75477.7	5078.8 µg/L	5078.8 ppb	17:40:53
3	K 766.490 Radial†	14358.7	12565.5	5167.3 µg/L	5167.3 ppb	17:40:53
3	Mg 279.077 IEC†	13303.1	12689.2	5213.4 µg/L	5213.4 ppb	17:40:53
3	Na 589.592 Radial†	69816.7	66274.2	10059 µg/L	10059 ppb	17:40:53
3	Sr 421.552†	230012.7	222538.7	513.32 µg/L	513.32 ppb	17:40:51
3	Sc 361.383	1730890.4	1730890.4	98.622 %		17:41:58
3	Y 371.029	1036634.2	1036634.2	97.424 %		17:41:58
3	Ag 328.068†	128218.1	126562.7	509.38 µg/L	509.38 ppb	17:41:58
3	As 188.979†	1421.5	1459.1	516.45 µg/L	516.45 ppb	17:42:18
3	B 249.677†	33515.7	30753.7	499.65 µg/L	499.65 ppb	17:41:58
3	Ba 233.527†	114235.8	115994.3	505.47 µg/L	505.47 ppb	17:41:58
3	Be 313.107†	1658067.5	1682022.5	504.93 µg/L	504.93 ppb	17:41:58
3	Cd 226.502†	72585.2	73709.5	505.80 µg/L	505.80 ppb	17:41:58
3	Co 228.616†	36920.9	37609.3	508.93 µg/L	508.93 ppb	17:41:58
3	Cr 267.716†	59212.3	59861.1	504.25 µg/L	504.25 ppb	17:41:58
3	Cu 324.752†	120482.8	119377.5	504.61 µg/L	504.61 ppb	17:41:58
3	Mn 257.610†	374104.2	379156.2	506.57 µg/L	506.57 ppb	17:41:58
3	Mo 202.031†	15772.0	16027.1	510.27 µg/L	510.27 ppb	17:42:18
3	Ni 231.604†	39690.0	40322.5	507.17 µg/L	507.17 ppb	17:41:58
3	P 214.914†	10538.2	10680.4	2538.8 µg/L	2538.8 ppb	17:42:18
3	Pb 220.353†	8367.4	8387.4	515.18 µg/L	515.18 ppb	17:42:18
3	S 181.975 Axial†	1314.1	1244.8	1024.7 µg/L	1024.7 ppb	17:42:18
3	Sb 206.836†	3901.7	3878.2	509.75 µg/L	509.75 ppb	17:42:18
3	Se 196.026†	1266.3	1270.4	511 µg/L	511 ppb	17:42:18
3	SiO2†	51351.6	50316.0	5361.2 µg/L	5361.2 ppb	17:41:58
3	Si 251.611†	154950.0	156166.6	2517.6 µg/L	2517.6 ppb	17:41:58
3	Sn 189.927†	7269.1	7373.3	512.16 µg/L	512.16 ppb	17:42:18
3	Ti 334.940†	498628.4	504710.5	504.98 µg/L	504.98 ppb	17:41:58
3	Tl 190.801†	3639.4	3807.3	519.24 µg/L	519.24 ppb	17:42:18
3	U 409.014†	7213.7	7598.2	506.56 µg/L	506.56 ppb	17:41:58
3	V 292.402†	93505.2	94502.0	508.50 µg/L	508.50 ppb	17:41:58
3	Zn 213.857†	81375.0	81987.6	504.51 µg/L	504.51 ppb	17:41:58

Mean Data: CCV

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1750597.9	99.745 %		1.1204			1.12%
Sc RADIAL	153207.6	104 %		0.7			0.72%
Y 371.029	1047398.7	98.436 %		1.0217			1.04%
Ag 328.068†	126278.9	508.26 µg/L		0.994	508.26 ppb	0.994	0.20%
QC value within limits for Ag 328.068 Recovery = 101.65%							
Al 396.153Radial†	24818.8	5090.8 µg/L		13.60	5090.8 ppb	13.60	0.27%
QC value within limits for Al 396.153Radial Recovery = 101.82%							
As 188.979†	1449.9	513.25 µg/L		4.114	513.25 ppb	4.114	0.80%
QC value within limits for As 188.979 Recovery = 102.65%							
B 249.677†	30898.4	502.01 µg/L		2.256	502.01 ppb	2.256	0.45%
QC value within limits for B 249.677 Recovery = 100.40%							
Ba 233.527†	115998.6	505.49 µg/L		0.304	505.49 ppb	0.304	0.06%
QC value within limits for Ba 233.527 Recovery = 101.10%							
Be 313.107†	1684767.3	505.76 µg/L		0.744	505.76 ppb	0.744	0.15%
QC value within limits for Be 313.107 Recovery = 101.15%							
Ca 317.933Radial†	84975.2	5112.7 µg/L		14.62	5112.7 ppb	14.62	0.29%
QC value within limits for Ca 317.933Radial Recovery = 102.25%							
Cd 226.502†	73840.1	506.69 µg/L		0.980	506.69 ppb	0.980	0.19%
QC value within limits for Cd 226.502 Recovery = 101.34%							
Co 228.616†	37621.2	509.09 µg/L		0.141	509.09 ppb	0.141	0.03%

QC value within limits for Co 228.616 Recovery = 101.82%							
Cr 267.716†	59845.4	504.11 µg/L	0.682	504.11 ppb	0.682	0.14%	
QC value within limits for Cr 267.716 Recovery = 100.82%							
Cu 324.752†	119433.1	504.84 µg/L	0.779	504.84 ppb	0.779	0.15%	
QC value within limits for Cu 324.752 Recovery = 100.97%							
Fe 238.204 Radial†	75392.7	5073.1 µg/L	5.33	5073.1 ppb	5.33	0.11%	
QC value within limits for Fe 238.204 Radial Recovery = 101.46%							
K 766.490 Radial†	12479.7	5132.0 µg/L	30.90	5132.0 ppb	30.90	0.60%	
QC value within limits for K 766.490 Radial Recovery = 102.64%							
Mg 279.077 IEC†	12707.8	5221.1 µg/L	8.12	5221.1 ppb	8.12	0.16%	
QC value within limits for Mg 279.077 IEC Recovery = 104.42%							
Mn 257.610†	379278.4	506.73 µg/L	0.548	506.73 ppb	0.548	0.11%	
QC value within limits for Mn 257.610 Recovery = 101.35%							
Mo 202.031†	15979.9	508.77 µg/L	2.941	508.77 ppb	2.941	0.58%	
QC value within limits for Mo 202.031 Recovery = 101.75%							
Na 589.592 Radial†	66219.2	10051 µg/L	8.5	10051 ppb	8.5	0.08%	
QC value within limits for Na 589.592 Radial Recovery = 100.51%							
Ni 231.604†	40367.1	507.73 µg/L	0.652	507.73 ppb	0.652	0.13%	
QC value within limits for Ni 231.604 Recovery = 101.55%							
P 214.914†	10692.3	2541.7 µg/L	19.68	2541.7 ppb	19.68	0.77%	
QC value within limits for P 214.914 Recovery = 101.67%							
Pb 220.353†	8356.6	513.29 µg/L	4.647	513.29 ppb	4.647	0.91%	
QC value within limits for Pb 220.353 Recovery = 102.66%							
S 181.975 Axial†	1243.7	1023.8 µg/L	10.32	1023.8 ppb	10.32	1.01%	
QC value within limits for S 181.975 Axial Recovery = 102.38%							
Sb 206.836†	3879.0	509.83 µg/L	2.858	509.83 ppb	2.858	0.56%	
QC value within limits for Sb 206.836 Recovery = 101.97%							
Se 196.026†	1276.5	513 µg/L	3.3	513 ppb	3.3	0.64%	
QC value within limits for Se 196.026 Recovery = 102.63%							
SiO2†	50470.2	5377.7 µg/L	14.69	5377.7 ppb	14.69	0.27%	
QC value within limits for SiO2 Recovery = 100.56%							
Si 251.611†	156191.5	2518.0 µg/L	4.82	2518.0 ppb	4.82	0.19%	
QC value within limits for Si 251.611 Recovery = 100.72%							
Sn 189.927†	7366.3	511.68 µg/L	3.252	511.68 ppb	3.252	0.64%	
QC value within limits for Sn 189.927 Recovery = 102.34%							
Sr 421.552†	223411.9	515.34 µg/L	4.086	515.34 ppb	4.086	0.79%	
QC value within limits for Sr 421.552 Recovery = 103.07%							
Ti 334.940†	504561.7	504.83 µg/L	0.574	504.83 ppb	0.574	0.11%	
QC value within limits for Ti 334.940 Recovery = 100.97%							
Tl 190.801†	3802.2	518.55 µg/L	4.742	518.55 ppb	4.742	0.91%	
QC value within limits for Tl 190.801 Recovery = 103.71%							
U 409.014†	7645.4	509.51 µg/L	4.094	509.51 ppb	4.094	0.80%	
QC value within limits for U 409.014 Recovery = 101.90%							
V 292.402†	94488.5	508.41 µg/L	0.257	508.41 ppb	0.257	0.05%	
QC value within limits for V 292.402 Recovery = 101.68%							
Zn 213.857†	82002.4	504.60 µg/L	0.274	504.60 ppb	0.274	0.05%	
QC value within limits for Zn 213.857 Recovery = 100.92%							

All analyte(s) passed QC.

Sequence No.: 18

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 3/30/2010 17:42:27

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	149223.8	149223.8	101 %		17:42:56
1	Al 396.153Radial†	-56.0	7.4	1.5345 µg/L	1.5345 ppb	17:43:16
1	Ca 317.933Radial†	662.0	-42.2	-2.5368 µg/L	-2.5368 ppb	17:43:16
1	Fe 238.204 Radial†	154.9	12.8	0.8607 µg/L	0.8607 ppb	17:43:16
1	K 766.490 Radial†	1607.1	279.3	114.93 µg/L	114.93 ppb	17:42:56
1	Mg 279.077 IEC†	184.4	13.9	5.6942 µg/L	5.6942 ppb	17:43:16
1	Na 589.592 Radial†	1613.7	392.0	59.428 µg/L	59.428 ppb	17:42:56
1	Sr 421.552†	-96.8	125.8	0.2902 µg/L	0.2902 ppb	17:42:56
1	Sc 361.383	1740851.3	1740851.3	99.189 %		17:44:04
1	Y 371.029	1055585.6	1055585.6	99.205 %		17:44:04
1	Ag 328.068†	3751.0	334.6	1.3196 µg/L	1.3196 ppb	17:44:06
1	As 188.979†	-17.7	-0.1	-0.0475 µg/L	-0.0475 ppb	17:44:26
1	B 249.677†	3297.4	94.0	1.5332 µg/L	1.5332 ppb	17:44:26
1	Ba 233.527†	-135.0	26.1	0.1138 µg/L	0.1138 ppb	17:44:26
1	Be 313.107†	-465.5	316.3	0.0913 µg/L	0.0913 ppb	17:44:06
1	Cd 226.502†	-102.2	7.0	0.0477 µg/L	0.0477 ppb	17:44:26
1	Co 228.616†	-169.2	1.9	0.0256 µg/L	0.0256 ppb	17:44:26
1	Cr 267.716†	161.7	-15.5	-0.1210 µg/L	-0.1210 ppb	17:44:26
1	Cu 324.752†	2892.8	127.5	0.5274 µg/L	0.5274 ppb	17:44:06
1	Mn 257.610†	188.2	14.2	0.0187 µg/L	0.0187 ppb	17:44:26
1	Mo 202.031†	-34.7	-0.2	-0.0073 µg/L	-0.0073 ppb	17:44:26
1	Ni 231.604†	-81.0	-3.7	-0.0471 µg/L	-0.0471 ppb	17:44:26
1	P 214.914†	16.6	11.8	2.8139 µg/L	2.8139 ppb	17:44:26
1	Pb 220.353†	73.7	-22.7	-1.3818 µg/L	-1.3818 ppb	17:44:26
1	S 181.975 Axial†	92.6	5.7	4.6757 µg/L	4.6757 ppb	17:44:26
1	Sb 206.836†	88.1	10.7	1.4077 µg/L	1.4077 ppb	17:44:26
1	Se 196.026†	26.9	13.5	5.40 µg/L	5.40 ppb	17:44:26
1	SiO2†	1702.4	-36.8	-3.9566 µg/L	-3.9566 ppb	17:44:26
1	Si 251.611†	805.5	-136.5	-2.2166 µg/L	-2.2166 ppb	17:44:26
1	Sn 189.927†	12.1	14.8	1.0220 µg/L	1.0220 ppb	17:44:26
1	Ti 334.940†	782.8	-96.4	-0.0921 µg/L	-0.0921 ppb	17:44:06
1	Tl 190.801†	-109.4	6.8	0.9176 µg/L	0.9176 ppb	17:44:26
1	U 409.014†	-471.7	-191.8	-11.993 µg/L	-11.993 ppb	17:44:06
1	V 292.402†	376.2	69.5	0.3602 µg/L	0.3602 ppb	17:44:06
1	Zn 213.857†	507.0	-13.4	-0.0835 µg/L	-0.0835 ppb	17:44:26
2	Sc RADIAL	151236.2	151236.2	102 %		17:43:18
2	Al 396.153Radial†	-21.0	42.4	8.7168 µg/L	8.7168 ppb	17:43:38
2	Ca 317.933Radial†	653.0	-59.6	-3.5888 µg/L	-3.5888 ppb	17:43:38
2	Fe 238.204 Radial†	152.7	8.6	0.5778 µg/L	0.5778 ppb	17:43:38
2	K 766.490 Radial†	1413.4	68.8	28.307 µg/L	28.307 ppb	17:43:18
2	Mg 279.077 IEC†	159.0	-13.3	-5.4565 µg/L	-5.4565 ppb	17:43:38
2	Na 589.592 Radial†	1467.8	228.1	34.616 µg/L	34.616 ppb	17:43:18
2	Sr 421.552†	-229.5	-2.7	-0.0061 µg/L	-0.0061 ppb	17:43:18
2	Sc 361.383	1789733.9	1789733.9	101.97 %		17:44:28
2	Y 371.029	1083381.9	1083381.9	101.82 %		17:44:28
2	Ag 328.068†	3704.7	185.9	0.7594 µg/L	0.7594 ppb	17:44:30
2	As 188.979†	-20.5	-2.5	-0.8602 µg/L	-0.8602 ppb	17:44:51
2	B 249.677†	3265.6	-27.9	-0.4549 µg/L	-0.4549 ppb	17:44:51
2	Ba 233.527†	-147.6	17.4	0.0763 µg/L	0.0763 ppb	17:44:51
2	Be 313.107†	-589.1	207.9	0.0663 µg/L	0.0663 ppb	17:44:30
2	Cd 226.502†	-88.1	23.7	0.1626 µg/L	0.1626 ppb	17:44:51
2	Co 228.616†	-190.6	-14.5	-0.1957 µg/L	-0.1957 ppb	17:44:51
2	Cr 267.716†	149.7	-31.7	-0.2772 µg/L	-0.2772 ppb	17:44:51
2	Cu 324.752†	2754.5	-87.8	-0.3595 µg/L	-0.3595 ppb	17:44:30
2	Mn 257.610†	189.1	9.9	0.0134 µg/L	0.0134 ppb	17:44:51
2	Mo 202.031†	-22.2	13.0	0.4125 µg/L	0.4125 ppb	17:44:51
2	Ni 231.604†	-63.7	15.4	0.1938 µg/L	0.1938 ppb	17:44:51
2	P 214.914†	14.2	9.0	2.1371 µg/L	2.1371 ppb	17:44:51
2	Pb 220.353†	93.1	-5.6	-0.3521 µg/L	-0.3521 ppb	17:44:51

2	S 181.975 Axial†	103.3	13.6	11.162 µg/L	11.162 ppb	17:44:51
2	Sb 206.836†	65.2	-14.2	-1.8489 µg/L	-1.8489 ppb	17:44:51
2	Se 196.026†	14.8	1.0	0.409 µg/L	0.409 ppb	17:44:51
2	SiO2†	1667.3	-118.1	-12.646 µg/L	-12.646 ppb	17:44:51
2	Si 251.611†	773.3	-190.4	-3.0841 µg/L	-3.0841 ppb	17:44:51
2	Sn 189.927†	-8.6	-5.9	-0.4098 µg/L	-0.4098 ppb	17:44:51
2	Ti 334.940†	770.5	-130.0	-0.1350 µg/L	-0.1350 ppb	17:44:30
2	Tl 190.801†	-116.4	2.9	0.3948 µg/L	0.3948 ppb	17:44:51
2	U 409.014†	-81.5	203.9	12.791 µg/L	12.791 ppb	17:44:30
2	V 292.402†	391.1	73.7	0.4028 µg/L	0.4028 ppb	17:44:30
2	Zn 213.857†	509.1	-25.3	-0.1579 µg/L	-0.1579 ppb	17:44:51
3	Sc RADIAL	153128.4	153128.4	104 %		17:43:40
3	Al 396.153Radial†	-66.6	-1.4	-0.2868 µg/L	-0.2868 ppb	17:44:00
3	Ca 317.933Radial†	663.9	-57.1	-3.4340 µg/L	-3.4340 ppb	17:44:00
3	Fe 238.204 Radial†	162.3	15.9	1.0724 µg/L	1.0724 ppb	17:44:00
3	K 766.490 Radial†	1397.3	36.1	14.869 µg/L	14.869 ppb	17:43:40
3	Mg 279.077 IEC†	188.4	13.1	5.3774 µg/L	5.3774 ppb	17:44:00
3	Na 589.592 Radial†	1362.5	108.7	16.495 µg/L	16.495 ppb	17:43:40
3	Sr 421.552†	-427.6	-191.1	-0.4409 µg/L	-0.4409 ppb	17:43:40
3	Sc 361.383	1735204.4	1735204.4	98.868 %		17:44:53
3	Y 371.029	1051337.1	1051337.1	98.806 %		17:44:53
3	Ag 328.068†	3394.5	-13.7	-0.0762 µg/L	-0.0762 ppb	17:44:55
3	As 188.979†	-6.8	10.8	3.7567 µg/L	3.7567 ppb	17:45:15
3	B 249.677†	3250.6	57.4	0.9360 µg/L	0.9360 ppb	17:45:15
3	Ba 233.527†	-155.9	4.5	0.0193 µg/L	0.0193 ppb	17:45:15
3	Be 313.107†	-860.6	-84.9	-0.0295 µg/L	-0.0295 ppb	17:44:55
3	Cd 226.502†	-85.7	23.3	0.1600 µg/L	0.1600 ppb	17:45:15
3	Co 228.616†	-156.5	14.1	0.1911 µg/L	0.1911 ppb	17:45:15
3	Cr 267.716†	170.5	-6.1	-0.0410 µg/L	-0.0410 ppb	17:45:15
3	Cu 324.752†	2758.1	0.7	-0.0075 µg/L	-0.0075 ppb	17:44:55
3	Mn 257.610†	168.3	-5.4	-0.0074 µg/L	-0.0074 ppb	17:45:15
3	Mo 202.031†	-34.1	0.3	0.0091 µg/L	0.0091 ppb	17:45:15
3	Ni 231.604†	-62.8	14.3	0.1804 µg/L	0.1804 ppb	17:45:15
3	P 214.914†	9.9	5.0	1.2075 µg/L	1.2075 ppb	17:45:15
3	Pb 220.353†	88.3	-7.7	-0.4611 µg/L	-0.4611 ppb	17:45:15
3	S 181.975 Axial†	91.9	5.3	4.3277 µg/L	4.3277 ppb	17:45:15
3	Sb 206.836†	76.8	-0.4	-0.0552 µg/L	-0.0552 ppb	17:45:15
3	Se 196.026†	9.6	-3.8	-1.55 µg/L	-1.55 ppb	17:45:15
3	SiO2†	1679.3	-54.6	-5.8537 µg/L	-5.8537 ppb	17:45:15
3	Si 251.611†	744.3	-195.8	-3.1739 µg/L	-3.1739 ppb	17:45:15
3	Sn 189.927†	6.5	9.2	0.6338 µg/L	0.6338 ppb	17:45:15
3	Ti 334.940†	819.1	-57.1	-0.0523 µg/L	-0.0523 ppb	17:44:55
3	Tl 190.801†	-108.9	6.9	0.9222 µg/L	0.9222 ppb	17:45:15
3	U 409.014†	-490.6	-212.5	-13.335 µg/L	-13.335 ppb	17:44:55
3	V 292.402†	223.9	-83.4	-0.4518 µg/L	-0.4518 ppb	17:44:55
3	Zn 213.857†	524.3	5.7	0.0343 µg/L	0.0343 ppb	17:45:15

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1755263.2	100.01 %	1.709			1.71%
Sc RADIAL	151196.1	102 %	1.3			1.29%
Y 371.029	1063434.8	99.943 %	1.6357			1.64%
Ag 328.068†	168.9	0.6676 µg/L	0.70241	0.6676 ppb	0.70241	105.22%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	16.1	3.3215 µg/L	4.76035	3.3215 ppb	4.76035	143.32%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	2.7	0.9497 µg/L	2.46469	0.9497 ppb	2.46469	259.52%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	41.2	0.6714 µg/L	1.02013	0.6714 ppb	1.02013	151.93%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	16.0	0.0698 µg/L	0.04762	0.0698 ppb	0.04762	68.22%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	146.5	0.0427 µg/L	0.06375	0.0427 ppb	0.06375	149.33%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	-53.0	-3.1865 µg/L	0.56796	-3.1865 ppb	0.56796	17.82%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	18.0	0.1234 µg/L	0.06561	0.1234 ppb	0.06561	53.17%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	0.5	0.0070 µg/L	0.19406	0.0070 ppb	0.19406	>999.9%

QC value within limits for Co 228.616 Recovery = Not calculated							
Cr 267.716†	-17.8	-0.1464 µg/L	0.12014	-0.1464 ppb	0.12014	82.06%	
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu 324.752†	13.5	0.0535 µg/L	0.44662	0.0535 ppb	0.44662	835.30%	
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe 238.204 Radial†	12.4	0.8369 µg/L	0.24815	0.8369 ppb	0.24815	29.65%	
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K 766.490 Radial†	128.1	52.703 µg/L	54.3096	52.703 ppb	54.3096	103.05%	
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg 279.077 IEC†	4.6	1.8717 µg/L	6.34837	1.8717 ppb	6.34837	339.17%	
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn 257.610†	6.2	0.0082 µg/L	0.01382	0.0082 ppb	0.01382	167.68%	
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo 202.031†	4.3	0.1381 µg/L	0.23777	0.1381 ppb	0.23777	172.20%	
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na 589.592 Radial†	243.0	36.846 µg/L	21.5535	36.846 ppb	21.5535	58.50%	
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni 231.604†	8.7	0.1090 µg/L	0.13543	0.1090 ppb	0.13543	124.19%	
QC value within limits for Ni 231.604 Recovery = Not calculated							
P 214.914†	8.6	2.0528 µg/L	0.80647	2.0528 ppb	0.80647	39.29%	
QC value within limits for P 214.914 Recovery = Not calculated							
Pb 220.353†	-12.0	-0.7317 µg/L	0.56567	-0.7317 ppb	0.56567	77.31%	
QC value within limits for Pb 220.353 Recovery = Not calculated							
S 181.975 Axial†	8.2	6.7217 µg/L	3.84909	6.7217 ppb	3.84909	57.26%	
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb 206.836†	-1.3	-0.1655 µg/L	1.63108	-0.1655 ppb	1.63108	985.78%	
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	3.6	1.42 µg/L	3.583	1.42 ppb	3.583	252.41%	
QC value within limits for Se 196.026 Recovery = Not calculated							
SiO2†	-69.9	-7.4854 µg/L	4.56863	-7.4854 ppb	4.56863	61.03%	
QC value within limits for SiO2 Recovery = Not calculated							
Si 251.611†	-174.2	-2.8248 µg/L	0.52869	-2.8248 ppb	0.52869	18.72%	
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn 189.927†	6.0	0.4153 µg/L	0.74044	0.4153 ppb	0.74044	178.28%	
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr 421.552†	-22.7	-0.0523 µg/L	0.36773	-0.0523 ppb	0.36773	703.35%	
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti 334.940†	-94.5	-0.0932 µg/L	0.04138	-0.0932 ppb	0.04138	44.41%	
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl 190.801†	5.5	0.7449 µg/L	0.30318	0.7449 ppb	0.30318	40.70%	
QC value within limits for Tl 190.801 Recovery = Not calculated							
U 409.014†	-66.8	-4.1790 µg/L	14.71171	-4.1790 ppb	14.71171	352.04%	
QC value within limits for U 409.014 Recovery = Not calculated							
V 292.402†	19.9	0.1037 µg/L	0.48160	0.1037 ppb	0.48160	464.37%	
QC value within limits for V 292.402 Recovery = Not calculated							
Zn 213.857†	-11.0	-0.0690 µg/L	0.09694	-0.0690 ppb	0.09694	140.45%	
QC value within limits for Zn 213.857 Recovery = Not calculated							

All analyte(s) passed QC.

Sequence No.: 22

Sample ID: 248523001|962580|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 152

Date Collected: 3/30/2010 17:54:55

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 248523001|962580|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	150835.4	150835.4	102 %		17:55:25
1	Al 396.153Radial†	64.4	126.0	25.962 µg/L	25.962 ppb	17:55:27
1	Ca 317.933Radial†	1089.8	370.1	22.270 µg/L	22.270 ppb	17:55:27
1	Fe 238.204 Radial†	1048.3	886.7	59.668 µg/L	59.668 ppb	17:55:27
1	K 766.490 Radial†	2003.8	651.1	267.91 µg/L	267.91 ppb	17:55:25
1	Mg 279.077 IEC†	233.1	59.7	24.442 µg/L	24.442 ppb	17:55:27
1	Na 589.592 Radial†	2200.4	949.9	144.01 µg/L	144.01 ppb	17:55:27
1	Sr 421.552†	75.4	295.6	0.6816 µg/L	0.6816 ppb	17:55:27
1	Sc 361.383	1750102.7	1750102.7	99.717 %		17:55:53
1	Y 371.029	1055641.0	1055641.0	99.210 %		17:55:53
1	Ag 328.068†	3194.4	-243.6	-0.9792 µg/L	-0.9792 ppb	17:55:55
1	As 188.979†	-21.0	-3.4	-1.1600 µg/L	-1.1600 ppb	17:56:15
1	B 249.677†	4670.8	1453.7	23.702 µg/L	23.702 ppb	17:55:55
1	Ba 233.527†	-102.6	59.2	0.2570 µg/L	0.2570 ppb	17:56:15
1	Be 313.107†	-751.1	32.4	0.0078 µg/L	0.0078 ppb	17:55:55
1	Cd 226.502†	-112.7	-3.0	-0.0266 µg/L	-0.0266 ppb	17:56:15
1	Co 228.616†	-164.8	7.1	0.0936 µg/L	0.0936 ppb	17:56:15
1	Cr 267.716†	177.8	-0.3	0.0040 µg/L	0.0040 ppb	17:56:15
1	Cu 324.752†	3083.1	302.9	1.2805 µg/L	1.2805 ppb	17:55:55
1	Mn 257.610†	590.8	416.9	0.5561 µg/L	0.5561 ppb	17:56:15
1	Mo 202.031†	-38.9	-4.3	-0.1330 µg/L	-0.1330 ppb	17:56:15
1	Ni 231.604†	26.4	104.4	1.3129 µg/L	1.3129 ppb	17:56:15
1	P 214.914†	24.7	19.8	4.6754 µg/L	4.6754 ppb	17:56:15
1	Pb 220.353†	105.7	9.0	0.5574 µg/L	0.5574 ppb	17:56:15
1	S 181.975 Axial†	97.9	10.4	8.5535 µg/L	8.5535 ppb	17:56:15
1	Sb 206.836†	70.2	-7.6	-1.0043 µg/L	-1.0043 ppb	17:56:15
1	Se 196.026†	17.2	3.7	1.49 µg/L	1.49 ppb	17:56:15
1	SiO2†	29608.9	27939.9	2989.1 µg/L	2989.1 ppb	17:55:55
1	Si 251.611†	86905.2	86203.6	1395.3 µg/L	1395.3 ppb	17:55:55
1	Sn 189.927†	8.1	10.7	0.7384 µg/L	0.7384 ppb	17:56:15
1	Ti 334.940†	1024.1	141.4	0.1428 µg/L	0.1428 ppb	17:55:55
1	Tl 190.801†	-108.4	8.3	1.1210 µg/L	1.1210 ppb	17:56:15
1	U 409.014†	-382.5	-99.9	-6.2741 µg/L	-6.2741 ppb	17:55:55
1	V 292.402†	274.5	-34.6	-0.1956 µg/L	-0.1956 ppb	17:55:55
1	Zn 213.857†	692.8	170.2	1.0403 µg/L	1.0403 ppb	17:56:15
2	Sc RADIAL	151167.1	151167.1	102 %		17:55:29
2	Al 396.153Radial†	-106.7	-41.5	-8.5423 µg/L	-8.5423 ppb	17:55:31
2	Ca 317.933Radial†	910.7	192.6	11.587 µg/L	11.587 ppb	17:55:31
2	Fe 238.204 Radial†	1053.5	889.5	59.853 µg/L	59.853 ppb	17:55:31
2	K 766.490 Radial†	1827.2	474.1	195.09 µg/L	195.09 ppb	17:55:29
2	Mg 279.077 IEC†	137.8	-34.0	-13.996 µg/L	-13.996 ppb	17:55:31
2	Na 589.592 Radial†	2269.5	1012.7	153.61 µg/L	153.61 ppb	17:55:31
2	Sr 421.552†	-87.2	136.3	0.3144 µg/L	0.3144 ppb	17:55:31
2	Sc 361.383	1777915.4	1777915.4	101.30 %		17:56:17
2	Y 371.029	1072580.6	1072580.6	100.80 %		17:56:17
2	Ag 328.068†	3690.1	195.6	0.7733 µg/L	0.7733 ppb	17:56:19
2	As 188.979†	-15.7	2.2	0.7812 µg/L	0.7812 ppb	17:56:40
2	B 249.677†	4714.3	1423.4	23.207 µg/L	23.207 ppb	17:56:19
2	Ba 233.527†	-85.2	78.1	0.3392 µg/L	0.3392 ppb	17:56:40
2	Be 313.107†	-868.6	-71.9	-0.0225 µg/L	-0.0225 ppb	17:56:19
2	Cd 226.502†	-113.2	-1.8	-0.0178 µg/L	-0.0178 ppb	17:56:40
2	Co 228.616†	-167.8	6.8	0.0895 µg/L	0.0895 ppb	17:56:40
2	Cr 267.716†	179.3	-1.6	-0.0090 µg/L	-0.0090 ppb	17:56:40
2	Cu 324.752†	3324.1	492.5	2.0811 µg/L	2.0811 ppb	17:56:19
2	Mn 257.610†	604.7	421.3	0.5636 µg/L	0.5636 ppb	17:56:40
2	Mo 202.031†	-37.8	-2.6	-0.0794 µg/L	-0.0794 ppb	17:56:40
2	Ni 231.604†	10.3	88.1	1.1078 µg/L	1.1078 ppb	17:56:40
2	P 214.914†	35.1	29.6	6.9996 µg/L	6.9996 ppb	17:56:40
2	Pb 220.353†	53.7	-43.9	-2.6915 µg/L	-2.6915 ppb	17:56:40

2	S 181.975 Axial†	116.3	27.1	22.232 µg/L	22.232 ppb	17:56:40
2	Sb 206.836†	85.6	6.4	0.8398 µg/L	0.8398 ppb	17:56:40
2	Se 196.026†	17.6	3.8	1.55 µg/L	1.55 ppb	17:56:40
2	SiO2†	30053.2	27914.0	2986.4 µg/L	2986.4 ppb	17:56:19
2	Si 251.611†	88419.5	86335.1	1397.4 µg/L	1397.4 ppb	17:56:19
2	Sn 189.927†	1.8	4.3	0.2980 µg/L	0.2980 ppb	17:56:40
2	Ti 334.940†	926.5	29.0	0.0317 µg/L	0.0317 ppb	17:56:19
2	Tl 190.801†	-110.6	7.9	1.0683 µg/L	1.0683 ppb	17:56:40
2	U 409.014†	-337.5	-49.4	-3.0987 µg/L	-3.0987 ppb	17:56:19
2	V 292.402†	323.8	9.8	0.0429 µg/L	0.0429 ppb	17:56:19
2	Zn 213.857†	691.7	158.2	0.9659 µg/L	0.9659 ppb	17:56:40
3	Sc RADIAL	149831.2	149831.2	101 %		17:55:33
3	Al 396.153Radial†	-94.7	-30.6	-6.3354 µg/L	-6.3354 ppb	17:55:35
3	Ca 317.933Radial†	996.9	285.6	17.185 µg/L	17.185 ppb	17:55:35
3	Fe 238.204 Radial†	1075.1	920.0	61.905 µg/L	61.905 ppb	17:55:35
3	K 766.490 Radial†	1841.5	504.1	207.44 µg/L	207.44 ppb	17:55:33
3	Mg 279.077 IEC†	197.8	26.4	10.793 µg/L	10.793 ppb	17:55:35
3	Na 589.592 Radial†	2250.0	1013.4	153.69 µg/L	153.69 ppb	17:55:35
3	Sr 421.552†	4.9	226.5	0.5223 µg/L	0.5223 ppb	17:55:35
3	Sc 361.383	1778158.5	1778158.5	101.32 %		17:56:42
3	Y 371.029	1071743.3	1071743.3	100.72 %		17:56:42
3	Ag 328.068†	3536.0	43.0	0.1730 µg/L	0.1730 ppb	17:56:44
3	As 188.979†	-19.3	-1.3	-0.4471 µg/L	-0.4471 ppb	17:57:04
3	B 249.677†	4712.8	1421.3	23.174 µg/L	23.174 ppb	17:56:44
3	Ba 233.527†	-114.3	49.3	0.2139 µg/L	0.2139 ppb	17:57:04
3	Be 313.107†	-829.0	-32.7	-0.0073 µg/L	-0.0073 ppb	17:56:44
3	Cd 226.502†	-112.9	-1.4	-0.0158 µg/L	-0.0158 ppb	17:57:04
3	Co 228.616†	-182.0	-7.2	-0.1004 µg/L	-0.1004 ppb	17:57:04
3	Cr 267.716†	194.6	13.6	0.1094 µg/L	0.1094 ppb	17:57:04
3	Cu 324.752†	3225.7	394.9	1.6801 µg/L	1.6801 ppb	17:56:44
3	Mn 257.610†	572.9	389.9	0.5205 µg/L	0.5205 ppb	17:57:04
3	Mo 202.031†	-15.5	19.5	0.6221 µg/L	0.6221 ppb	17:57:04
3	Ni 231.604†	10.1	87.8	1.1049 µg/L	1.1049 ppb	17:57:04
3	P 214.914†	-6.2	-11.1	-2.7140 µg/L	-2.7140 ppb	17:57:04
3	Pb 220.353†	84.5	-13.5	-0.8357 µg/L	-0.8357 ppb	17:57:04
3	S 181.975 Axial†	109.2	20.1	16.465 µg/L	16.465 ppb	17:57:04
3	Sb 206.836†	85.4	6.2	0.8219 µg/L	0.8219 ppb	17:57:04
3	Se 196.026†	20.7	6.9	2.78 µg/L	2.78 ppb	17:57:04
3	SiO2†	29775.6	27635.9	2956.6 µg/L	2956.6 ppb	17:56:44
3	Si 251.611†	87651.4	85565.0	1385.0 µg/L	1385.0 ppb	17:56:44
3	Sn 189.927†	-5.7	-3.1	-0.2158 µg/L	-0.2158 ppb	17:57:04
3	Ti 334.940†	1163.4	262.8	0.2594 µg/L	0.2594 ppb	17:56:44
3	Tl 190.801†	-121.5	-2.9	-0.3878 µg/L	-0.3878 ppb	17:57:04
3	U 409.014†	-155.7	130.1	8.1049 µg/L	8.1049 ppb	17:56:44
3	V 292.402†	200.6	-111.9	-0.5884 µg/L	-0.5884 ppb	17:56:44
3	Zn 213.857†	666.1	132.9	0.8091 µg/L	0.8091 ppb	17:57:04

Mean Data: 248523001|962580|1

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1768725.5	100.78 %	%	0.919			0.91%
Sc RADIAL	150611.2	102 %	%	0.5			0.46%
Y 371.029	1066655.0	100.25 %	%	0.897			0.90%
Ag 328.068†	-1.7	-0.0110 µg/L	µg/L	0.89059	-0.0110 ppb	0.89059	>999.9%
Al 396.153Radial†	18.0	3.6949 µg/L	µg/L	19.31579	3.6949 ppb	19.31579	522.77%
As 188.979†	-0.8	-0.2753 µg/L	µg/L	0.98194	-0.2753 ppb	0.98194	356.72%
B 249.677†	1432.8	23.361 µg/L	µg/L	0.2956	23.361 ppb	0.2956	1.27%
Ba 233.527†	62.2	0.2700 µg/L	µg/L	0.06366	0.2700 ppb	0.06366	23.58%
Be 313.107†	-24.1	-0.0073 µg/L	µg/L	0.01516	-0.0073 ppb	0.01516	206.59%
Ca 317.933Radial†	282.8	17.014 µg/L	µg/L	5.3434	17.014 ppb	5.3434	31.41%
Cd 226.502†	-2.1	-0.0201 µg/L	µg/L	0.00572	-0.0201 ppb	0.00572	28.51%
Co 228.616†	2.3	0.0276 µg/L	µg/L	0.11084	0.0276 ppb	0.11084	401.88%
Cr 267.716†	3.9	0.0348 µg/L	µg/L	0.06493	0.0348 ppb	0.06493	186.55%
Cu 324.752†	396.8	1.6806 µg/L	µg/L	0.40029	1.6806 ppb	0.40029	23.82%
Fe 238.204 Radial†	898.7	60.476 µg/L	µg/L	1.2418	60.476 ppb	1.2418	2.05%
K 766.490 Radial†	543.1	223.48 µg/L	µg/L	38.971	223.48 ppb	38.971	17.44%
Mg 279.077 IEC†	17.4	7.0799 µg/L	µg/L	19.48607	7.0799 ppb	19.48607	275.23%
Mn 257.610†	409.4	0.5467 µg/L	µg/L	0.02299	0.5467 ppb	0.02299	4.20%
Mo 202.031†	4.2	0.1366 µg/L	µg/L	0.42131	0.1366 ppb	0.42131	308.45%
Na 589.592 Radial†	992.0	150.43 µg/L	µg/L	5.567	150.43 ppb	5.567	3.70%

Ni 231.604†	93.4	1.1752 µg/L	0.11927	1.1752 ppb	0.11927	10.15%
P 214.914†	12.8	2.9870 µg/L	5.07214	2.9870 ppb	5.07214	169.81%
Pb 220.353†	-16.1	-0.9899 µg/L	1.62990	-0.9899 ppb	1.62990	164.65%
S 181.975 Axial†	19.2	15.750 µg/L	6.8674	15.750 ppb	6.8674	43.60%
Sb 206.836†	1.7	0.2191 µg/L	1.05957	0.2191 ppb	1.05957	483.52%
Se 196.026†	4.8	1.94 µg/L	0.726	1.94 ppb	0.726	37.45%
SiO2†	27830.0	2977.4 µg/L	18.04	2977.4 ppb	18.04	0.61%
Si 251.611†	86034.6	1392.6 µg/L	6.67	1392.6 ppb	6.67	0.48%
Sn 189.927†	3.9	0.2735 µg/L	0.47757	0.2735 ppb	0.47757	174.59%
Sr 421.552†	219.5	0.5061 µg/L	0.18415	0.5061 ppb	0.18415	36.38%
Ti 334.940†	144.4	0.1447 µg/L	0.11385	0.1447 ppb	0.11385	78.70%
Tl 190.801†	4.5	0.6005 µg/L	0.85626	0.6005 ppb	0.85626	142.59%
U 409.014†	-6.4	-0.4226 µg/L	7.55381	-0.4226 ppb	7.55381	>999.9%
V 292.402†	-45.5	-0.2471 µg/L	0.31881	-0.2471 ppb	0.31881	129.04%
Zn 213.857†	153.8	0.9384 µg/L	0.11803	0.9384 ppb	0.11803	12.58%

Sequence No.: 24

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 3/30/2010 18:00:22

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	149963.6	149963.6	101 %		18:00:56
1	Al 396.153Radial†	25208.6	24912.8	5110.3 µg/L	5110.3 ppb	18:00:56
1	Ca 317.933Radial†	86326.3	84400.0	5078.1 µg/L	5078.1 ppb	18:00:56
1	Fe 238.204 Radial†	76400.5	75172.7	5058.3 µg/L	5058.3 ppb	18:00:56
1	K 766.490 Radial†	13741.6	12233.3	5030.6 µg/L	5030.6 ppb	18:00:56
1	Mg 279.077 IEC†	12974.7	12621.3	5185.5 µg/L	5185.5 ppb	18:00:56
1	Na 589.592 Radial†	68473.2	66292.3	10062 µg/L	10062 ppb	18:00:56
1	Sr 421.552†	223153.6	220200.1	507.93 µg/L	507.93 ppb	18:00:54
1	Sc 361.383	1727309.1	1727309.1	98.418 %		18:01:08
1	Y 371.029	1034162.5	1034162.5	97.192 %		18:01:08
1	Ag 328.068†	127504.0	126106.7	507.56 µg/L	507.56 ppb	18:01:08
1	As 188.979†	1389.4	1429.4	506.06 µg/L	506.06 ppb	18:01:29
1	B 249.677†	33211.6	30515.2	495.77 µg/L	495.77 ppb	18:01:08
1	Ba 233.527†	113569.1	115556.9	503.56 µg/L	503.56 ppb	18:01:08
1	Be 313.107†	1649297.9	1676597.6	503.31 µg/L	503.31 ppb	18:01:08
1	Cd 226.502†	71908.8	73174.8	502.13 µg/L	502.13 ppb	18:01:08
1	Co 228.616†	36707.5	37470.0	507.04 µg/L	507.04 ppb	18:01:08
1	Cr 267.716†	58723.3	59488.8	501.11 µg/L	501.11 ppb	18:01:08
1	Cu 324.752†	119828.4	118965.8	502.87 µg/L	502.87 ppb	18:01:08
1	Mn 257.610†	371619.2	377417.8	504.24 µg/L	504.24 ppb	18:01:08
1	Mo 202.031†	15635.4	15921.5	506.91 µg/L	506.91 ppb	18:01:29
1	Ni 231.604†	39521.0	40234.3	506.06 µg/L	506.06 ppb	18:01:08
1	P 214.914†	10443.9	10606.8	2521.3 µg/L	2521.3 ppb	18:01:29
1	Pb 220.353†	8236.3	8271.7	508.08 µg/L	508.08 ppb	18:01:29
1	S 181.975 Axial†	1305.1	1238.3	1019.4 µg/L	1019.4 ppb	18:01:29
1	Sb 206.836†	3867.4	3851.5	506.23 µg/L	506.23 ppb	18:01:29
1	Se 196.026†	1260.5	1267.2	509 µg/L	509 ppb	18:01:29
1	SiO2†	51213.3	50283.5	5357.8 µg/L	5357.8 ppb	18:01:08
1	Si 251.611†	154028.3	155555.8	2507.8 µg/L	2507.8 ppb	18:01:08
1	Sn 189.927†	7184.1	7302.2	507.24 µg/L	507.24 ppb	18:01:29
1	Ti 334.940†	495803.0	502887.9	503.16 µg/L	503.16 ppb	18:01:08
1	Tl 190.801†	3592.4	3767.2	513.82 µg/L	513.82 ppb	18:01:29
1	U 409.014†	7260.0	7660.4	510.36 µg/L	510.36 ppb	18:01:08
1	V 292.402†	93039.1	94225.0	506.98 µg/L	506.98 ppb	18:01:08
1	Zn 213.857†	80748.7	81522.2	501.64 µg/L	501.64 ppb	18:01:08
2	Sc RADIAL	150679.1	150679.1	102 %		18:01:00
2	Al 396.153Radial†	25393.4	24976.1	5123.3 µg/L	5123.3 ppb	18:01:00
2	Ca 317.933Radial†	87448.3	85096.7	5120.1 µg/L	5120.1 ppb	18:01:00
2	Fe 238.204 Radial†	77162.3	75562.5	5084.5 µg/L	5084.5 ppb	18:01:00
2	K 766.490 Radial†	14059.0	12480.3	5132.3 µg/L	5132.3 ppb	18:01:00
2	Mg 279.077 IEC†	13106.1	12689.5	5213.5 µg/L	5213.5 ppb	18:01:00
2	Na 589.592 Radial†	69122.9	66609.2	10110 µg/L	10110 ppb	18:01:00
2	Sr 421.552†	224776.0	220747.3	509.19 µg/L	509.19 ppb	18:00:58
2	Sc 361.383	1719911.6	1719911.6	97.996 %		18:01:32
2	Y 371.029	1029896.4	1029896.4	96.791 %		18:01:32
2	Ag 328.068†	126855.3	126002.0	507.13 µg/L	507.13 ppb	18:01:32
2	As 188.979†	1392.6	1438.8	509.32 µg/L	509.32 ppb	18:01:52
2	B 249.677†	33255.8	30705.4	498.87 µg/L	498.87 ppb	18:01:32
2	Ba 233.527†	112718.1	115184.9	501.94 µg/L	501.94 ppb	18:01:32
2	Be 313.107†	1638841.3	1673135.1	502.27 µg/L	502.27 ppb	18:01:32
2	Cd 226.502†	71582.0	73155.7	501.99 µg/L	501.99 ppb	18:01:32
2	Co 228.616†	36493.4	37412.0	506.26 µg/L	506.26 ppb	18:01:32
2	Cr 267.716†	58378.6	59393.7	500.31 µg/L	500.31 ppb	18:01:32
2	Cu 324.752†	118925.8	118568.4	501.20 µg/L	501.20 ppb	18:01:32
2	Mn 257.610†	369553.2	376933.6	503.60 µg/L	503.60 ppb	18:01:32
2	Mo 202.031†	15590.5	15944.0	507.63 µg/L	507.63 ppb	18:01:52
2	Ni 231.604†	39259.9	40140.5	504.88 µg/L	504.88 ppb	18:01:32
2	P 214.914†	10376.2	10583.3	2515.7 µg/L	2515.7 ppb	18:01:52
2	Pb 220.353†	8224.0	8295.2	509.52 µg/L	509.52 ppb	18:01:52

2	S 181.975 Axial†	1280.5	1219.0	1003.5 µg/L	1003.5 ppb	18:01:52
2	Sb 206.836†	3875.7	3876.8	509.58 µg/L	509.58 ppb	18:01:52
2	Se 196.026†	1257.5	1269.6	510 µg/L	510 ppb	18:01:52
2	SiO2†	50739.1	50023.4	5330.0 µg/L	5330.0 ppb	18:01:32
2	Si 251.611†	152955.9	155134.6	2500.9 µg/L	2500.9 ppb	18:01:32
2	Sn 189.927†	7173.1	7322.3	508.62 µg/L	508.62 ppb	18:01:52
2	Ti 334.940†	492455.2	501638.5	501.91 µg/L	501.91 ppb	18:01:32
2	Tl 190.801†	3592.4	3782.9	515.92 µg/L	515.92 ppb	18:01:52
2	U 409.014†	7198.4	7629.3	508.35 µg/L	508.35 ppb	18:01:32
2	V 292.402†	92465.3	94046.0	506.03 µg/L	506.03 ppb	18:01:32
2	Zn 213.857†	80075.4	81188.1	499.57 µg/L	499.57 ppb	18:01:32
3	Sc RADIAL	150459.0	150459.0	102 %		18:01:04
3	Al 396.153Radial†	25239.2	24861.0	5099.8 µg/L	5099.8 ppb	18:01:04
3	Ca 317.933Radial†	86610.0	84398.5	5078.1 µg/L	5078.1 ppb	18:01:04
3	Fe 238.204 Radial†	76232.2	74759.3	5030.5 µg/L	5030.5 ppb	18:01:04
3	K 766.490 Radial†	14112.6	12553.2	5162.3 µg/L	5162.3 ppb	18:01:04
3	Mg 279.077 IEC†	12790.6	12398.3	5094.0 µg/L	5094.0 ppb	18:01:04
3	Na 589.592 Radial†	68460.4	66057.5	10026 µg/L	10026 ppb	18:01:04
3	Sr 421.552†	225258.6	221544.0	511.03 µg/L	511.03 ppb	18:01:02
3	Sc 361.383	1747302.6	1747302.6	99.557 %		18:01:55
3	Y 371.029	1046057.1	1046057.1	98.310 %		18:01:55
3	Ag 328.068†	127799.7	124921.3	502.82 µg/L	502.82 ppb	18:01:55
3	As 188.979†	1396.1	1420.0	502.76 µg/L	502.76 ppb	18:02:15
3	B 249.677†	33651.3	30570.7	496.68 µg/L	496.68 ppb	18:01:55
3	Ba 233.527†	114681.4	115353.8	502.68 µg/L	502.68 ppb	18:01:55
3	Be 313.107†	1666731.4	1674933.2	502.81 µg/L	502.81 ppb	18:01:55
3	Cd 226.502†	72567.6	73000.5	500.93 µg/L	500.93 ppb	18:01:55
3	Co 228.616†	36961.9	37298.8	504.73 µg/L	504.73 ppb	18:01:55
3	Cr 267.716†	59318.7	59404.1	500.39 µg/L	500.39 ppb	18:01:55
3	Cu 324.752†	120890.6	118639.6	501.49 µg/L	501.49 ppb	18:01:55
3	Mn 257.610†	374818.4	376310.6	502.77 µg/L	502.77 ppb	18:01:55
3	Mo 202.031†	15682.2	15786.7	502.62 µg/L	502.62 ppb	18:02:15
3	Ni 231.604†	39775.3	40030.2	503.49 µg/L	503.49 ppb	18:01:55
3	P 214.914†	10469.8	10511.4	2498.6 µg/L	2498.6 ppb	18:02:15
3	Pb 220.353†	8305.7	8245.7	506.48 µg/L	506.48 ppb	18:02:15
3	S 181.975 Axial†	1304.1	1222.2	1006.1 µg/L	1006.1 ppb	18:02:15
3	Sb 206.836†	3884.1	3823.3	502.48 µg/L	502.48 ppb	18:02:15
3	Se 196.026†	1277.7	1269.8	511 µg/L	511 ppb	18:02:15
3	SiO2†	51665.7	50142.4	5342.9 µg/L	5342.9 ppb	18:01:55
3	Si 251.611†	155152.4	154894.1	2497.1 µg/L	2497.1 ppb	18:01:55
3	Sn 189.927†	7193.0	7227.5	502.07 µg/L	502.07 ppb	18:02:15
3	Ti 334.940†	500401.0	501742.0	502.02 µg/L	502.02 ppb	18:01:55
3	Tl 190.801†	3619.4	3752.6	511.84 µg/L	511.84 ppb	18:02:15
3	U 409.014†	7325.0	7641.3	509.04 µg/L	509.04 ppb	18:01:55
3	V 292.402†	93720.4	93827.6	504.83 µg/L	504.83 ppb	18:01:55
3	Zn 213.857†	81318.5	81155.7	499.38 µg/L	499.38 ppb	18:01:55

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1731507.8	98.657 %	0.8074			0.82%
Sc RADIAL	150367.2	102 %	0.2			0.24%
Y 371.029	1036705.4	97.431 %	0.7871			0.81%
Ag 328.068†	125676.6	505.84 µg/L	2.620	505.84 ppb	2.620	0.52%
QC value within limits for Ag 328.068 Recovery = 101.17%						
Al 396.153Radial†	24916.6	5111.1 µg/L	11.77	5111.1 ppb	11.77	0.23%
QC value within limits for Al 396.153Radial Recovery = 102.22%						
As 188.979†	1429.4	506.05 µg/L	3.279	506.05 ppb	3.279	0.65%
QC value within limits for As 188.979 Recovery = 101.21%						
B 249.677†	30597.1	497.11 µg/L	1.595	497.11 ppb	1.595	0.32%
QC value within limits for B 249.677 Recovery = 99.42%						
Ba 233.527†	115365.2	502.73 µg/L	0.812	502.73 ppb	0.812	0.16%
QC value within limits for Ba 233.527 Recovery = 100.55%						
Be 313.107†	1674888.6	502.79 µg/L	0.520	502.79 ppb	0.520	0.10%
QC value within limits for Be 313.107 Recovery = 100.56%						
Ca 317.933Radial†	84631.7	5092.1 µg/L	24.23	5092.1 ppb	24.23	0.48%
QC value within limits for Ca 317.933Radial Recovery = 101.84%						
Cd 226.502†	73110.3	501.68 µg/L	0.654	501.68 ppb	0.654	0.13%
QC value within limits for Cd 226.502 Recovery = 100.34%						
Co 228.616†	37393.6	506.01 µg/L	1.177	506.01 ppb	1.177	0.23%

QC value within limits for Co 228.616 Recovery = 101.20%							
Cr 267.716†	59428.9	500.60 µg/L	0.439	500.60 ppb	0.439	0.09%	
QC value within limits for Cr 267.716 Recovery = 100.12%							
Cu 324.752†	118724.6	501.85 µg/L	0.894	501.85 ppb	0.894	0.18%	
QC value within limits for Cu 324.752 Recovery = 100.37%							
Fe 238.204 Radial†	75164.8	5057.7 µg/L	27.03	5057.7 ppb	27.03	0.53%	
QC value within limits for Fe 238.204 Radial Recovery = 101.15%							
K 766.490 Radial†	12422.3	5108.4 µg/L	69.01	5108.4 ppb	69.01	1.35%	
QC value within limits for K 766.490 Radial Recovery = 102.17%							
Mg 279.077 IEC†	12569.7	5164.3 µg/L	62.53	5164.3 ppb	62.53	1.21%	
QC value within limits for Mg 279.077 IEC Recovery = 103.29%							
Mn 257.610†	376887.3	503.54 µg/L	0.740	503.54 ppb	0.740	0.15%	
QC value within limits for Mn 257.610 Recovery = 100.71%							
Mo 202.031†	15884.1	505.72 µg/L	2.708	505.72 ppb	2.708	0.54%	
QC value within limits for Mo 202.031 Recovery = 101.14%							
Na 589.592 Radial†	66319.7	10066 µg/L	42.1	10066 ppb	42.1	0.42%	
QC value within limits for Na 589.592 Radial Recovery = 100.66%							
Ni 231.604†	40135.0	504.81 µg/L	1.285	504.81 ppb	1.285	0.25%	
QC value within limits for Ni 231.604 Recovery = 100.96%							
P 214.914†	10567.2	2511.9 µg/L	11.84	2511.9 ppb	11.84	0.47%	
QC value within limits for P 214.914 Recovery = 100.47%							
Pb 220.353†	8270.9	508.03 µg/L	1.522	508.03 ppb	1.522	0.30%	
QC value within limits for Pb 220.353 Recovery = 101.61%							
S 181.975 Axial†	1226.5	1009.7 µg/L	8.51	1009.7 ppb	8.51	0.84%	
QC value within limits for S 181.975 Axial Recovery = 100.97%							
Sb 206.836†	3850.5	506.10 µg/L	3.554	506.10 ppb	3.554	0.70%	
QC value within limits for Sb 206.836 Recovery = 101.22%							
Se 196.026†	1268.9	510 µg/L	0.6	510 ppb	0.6	0.12%	
QC value within limits for Se 196.026 Recovery = 102.03%							
SiO2†	50149.7	5343.6 µg/L	13.94	5343.6 ppb	13.94	0.26%	
QC value within limits for SiO2 Recovery = 99.93%							
Si 251.611†	155194.9	2501.9 µg/L	5.38	2501.9 ppb	5.38	0.22%	
QC value within limits for Si 251.611 Recovery = 100.08%							
Sn 189.927†	7284.0	505.98 µg/L	3.457	505.98 ppb	3.457	0.68%	
QC value within limits for Sn 189.927 Recovery = 101.20%							
Sr 421.552†	220830.5	509.38 µg/L	1.559	509.38 ppb	1.559	0.31%	
QC value within limits for Sr 421.552 Recovery = 101.88%							
Ti 334.940†	502089.5	502.36 µg/L	0.693	502.36 ppb	0.693	0.14%	
QC value within limits for Ti 334.940 Recovery = 100.47%							
Tl 190.801†	3767.6	513.86 µg/L	2.039	513.86 ppb	2.039	0.40%	
QC value within limits for Tl 190.801 Recovery = 102.77%							
U 409.014†	7643.7	509.25 µg/L	1.021	509.25 ppb	1.021	0.20%	
QC value within limits for U 409.014 Recovery = 101.85%							
V 292.402†	94032.9	505.95 µg/L	1.080	505.95 ppb	1.080	0.21%	
QC value within limits for V 292.402 Recovery = 101.19%							
Zn 213.857†	81288.7	500.20 µg/L	1.251	500.20 ppb	1.251	0.25%	
QC value within limits for Zn 213.857 Recovery = 100.04%							

All analyte(s) passed QC.

Sequence No.: 25

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 3/30/2010 18:02:23

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	151780.3	151780.3	103 %		18:02:52
1	Al 396.153Radial†	-40.0	24.0	4.9524 µg/L	4.9524 ppb	18:03:12
1	Ca 317.933Radial†	686.4	-29.4	-1.7696 µg/L	-1.7696 ppb	18:03:12
1	Fe 238.204 Radial†	138.6	-5.7	-0.3811 µg/L	-0.3811 ppb	18:03:12
1	K 766.490 Radial†	1436.1	85.9	35.363 µg/L	35.363 ppb	18:02:52
1	Mg 279.077 IEC†	184.5	10.9	4.4785 µg/L	4.4785 ppb	18:03:12
1	Na 589.592 Radial†	1347.1	105.4	15.979 µg/L	15.979 ppb	18:02:52
1	Sr 421.552†	-270.8	-42.1	-0.0972 µg/L	-0.0972 ppb	18:02:52
1	Sc 361.383	1751686.4	1751686.4	99.807 %		18:04:00
1	Y 371.029	1062037.8	1062037.8	99.811 %		18:04:00
1	Ag 328.068†	3543.8	103.6	0.4081 µg/L	0.4081 ppb	18:04:02
1	As 188.979†	-6.7	11.0	3.8356 µg/L	3.8356 ppb	18:04:22
1	B 249.677†	3203.3	-20.8	-0.3392 µg/L	-0.3392 ppb	18:04:22
1	Ba 233.527†	-132.2	29.7	0.1288 µg/L	0.1288 ppb	18:04:22
1	Be 313.107†	-392.0	392.8	0.1180 µg/L	0.1180 ppb	18:04:02
1	Cd 226.502†	-121.9	-12.1	-0.0830 µg/L	-0.0830 ppb	18:04:22
1	Co 228.616†	-168.7	3.4	0.0467 µg/L	0.0467 ppb	18:04:22
1	Cr 267.716†	150.1	-28.2	-0.2379 µg/L	-0.2379 ppb	18:04:22
1	Cu 324.752†	2898.1	114.8	0.4843 µg/L	0.4843 ppb	18:04:02
1	Mn 257.610†	183.2	8.0	0.0105 µg/L	0.0105 ppb	18:04:22
1	Mo 202.031†	-44.8	-10.1	-0.3221 µg/L	-0.3221 ppb	18:04:22
1	Ni 231.604†	-60.8	17.0	0.2132 µg/L	0.2132 ppb	18:04:22
1	P 214.914†	30.0	25.0	5.9711 µg/L	5.9711 ppb	18:04:22
1	Pb 220.353†	97.6	0.8	0.0491 µg/L	0.0491 ppb	18:04:22
1	S 181.975 Axial†	102.8	15.3	12.573 µg/L	12.573 ppb	18:04:22
1	Sb 206.836†	69.7	-8.2	-1.0769 µg/L	-1.0769 ppb	18:04:22
1	Se 196.026†	1.0	-12.6	-5.04 µg/L	-5.04 ppb	18:04:22
1	SiO2†	1676.0	-73.9	-7.9004 µg/L	-7.9004 ppb	18:04:22
1	Si 251.611†	923.1	-23.8	-0.3831 µg/L	-0.3831 ppb	18:04:02
1	Sn 189.927†	3.9	6.5	0.4467 µg/L	0.4467 ppb	18:04:22
1	Ti 334.940†	772.4	-111.7	-0.1124 µg/L	-0.1124 ppb	18:04:02
1	Tl 190.801†	-112.4	4.5	0.5986 µg/L	0.5986 ppb	18:04:22
1	U 409.014†	-275.1	8.2	0.4912 µg/L	0.4912 ppb	18:04:02
1	V 292.402†	243.1	-66.3	-0.3559 µg/L	-0.3559 ppb	18:04:02
1	Zn 213.857†	522.7	-0.8	-0.0070 µg/L	-0.0070 ppb	18:04:22
2	Sc RADIAL	150352.0	150352.0	102 %		18:03:14
2	Al 396.153Radial†	-78.4	-14.2	-2.9660 µg/L	-2.9660 ppb	18:03:34
2	Ca 317.933Radial†	672.3	-37.0	-2.2240 µg/L	-2.2240 ppb	18:03:34
2	Fe 238.204 Radial†	139.7	-3.3	-0.2234 µg/L	-0.2234 ppb	18:03:34
2	K 766.490 Radial†	1509.0	170.9	70.320 µg/L	70.320 ppb	18:03:14
2	Mg 279.077 IEC†	164.0	-7.5	-3.0724 µg/L	-3.0724 ppb	18:03:34
2	Na 589.592 Radial†	1365.9	136.4	20.649 µg/L	20.649 ppb	18:03:14
2	Sr 421.552†	-117.2	106.4	0.2454 µg/L	0.2454 ppb	18:03:14
2	Sc 361.383	1757278.8	1757278.8	100.13 %		18:04:24
2	Y 371.029	1064446.3	1064446.3	100.04 %		18:04:24
2	Ag 328.068†	3368.6	-82.7	-0.3398 µg/L	-0.3398 ppb	18:04:26
2	As 188.979†	-14.3	3.4	1.1966 µg/L	1.1966 ppb	18:04:47
2	B 249.677†	3190.2	-44.1	-0.7190 µg/L	-0.7190 ppb	18:04:47
2	Ba 233.527†	-159.9	2.4	0.0111 µg/L	0.0111 ppb	18:04:47
2	Be 313.107†	-887.5	-100.8	-0.0345 µg/L	-0.0345 ppb	18:04:26
2	Cd 226.502†	-82.6	27.6	0.1892 µg/L	0.1892 ppb	18:04:47
2	Co 228.616†	-168.5	4.1	0.0555 µg/L	0.0555 ppb	18:04:47
2	Cr 267.716†	132.4	-46.4	-0.3795 µg/L	-0.3795 ppb	18:04:47
2	Cu 324.752†	2643.9	-148.3	-0.6367 µg/L	-0.6367 ppb	18:04:26
2	Mn 257.610†	145.3	-30.4	-0.0405 µg/L	-0.0405 ppb	18:04:47
2	Mo 202.031†	-13.5	21.3	0.6781 µg/L	0.6781 ppb	18:04:47
2	Ni 231.604†	-77.1	0.9	0.0111 µg/L	0.0111 ppb	18:04:47
2	P 214.914†	12.5	7.5	1.7862 µg/L	1.7862 ppb	18:04:47
2	Pb 220.353†	85.7	-11.4	-0.6841 µg/L	-0.6841 ppb	18:04:47

2	S 181.975 Axial†	89.0	1.2	1.0157 µg/L	1.0157 ppb	18:04:47
2	Sb 206.836†	71.9	-6.3	-0.8105 µg/L	-0.8105 ppb	18:04:47
2	Se 196.026†	20.3	6.7	2.68 µg/L	2.68 ppb	18:04:47
2	SiO2†	1697.0	-58.3	-6.2667 µg/L	-6.2667 ppb	18:04:47
2	Si 251.611†	933.3	-16.5	-0.2813 µg/L	-0.2813 ppb	18:04:26
2	Sn 189.927†	8.4	10.9	0.7577 µg/L	0.7577 ppb	18:04:47
2	Ti 334.940†	879.7	-7.0	-0.0010 µg/L	-0.0010 ppb	18:04:26
2	Tl 190.801†	-114.8	2.4	0.3234 µg/L	0.3234 ppb	18:04:47
2	U 409.014†	-507.2	-222.8	-13.924 µg/L	-13.924 ppb	18:04:26
2	V 292.402†	406.8	96.4	0.5080 µg/L	0.5080 ppb	18:04:26
2	Zn 213.857†	527.3	2.1	0.0134 µg/L	0.0134 ppb	18:04:47
3	Sc RADIAL	152318.3	152318.3	103 %		18:03:36
3	Al 396.153Radial†	-73.0	-8.0	-1.6470 µg/L	-1.6470 ppb	18:03:56
3	Ca 317.933Radial†	695.1	-23.4	-1.4076 µg/L	-1.4076 ppb	18:03:56
3	Fe 238.204 Radial†	147.7	2.7	0.1805 µg/L	0.1805 ppb	18:03:56
3	K 766.490 Radial†	1471.4	115.2	47.414 µg/L	47.414 ppb	18:03:36
3	Mg 279.077 IEC†	138.4	-34.5	-14.137 µg/L	-14.137 ppb	18:03:56
3	Na 589.592 Radial†	1413.1	164.8	24.982 µg/L	24.982 ppb	18:03:36
3	Sr 421.552†	-177.7	49.2	0.1135 µg/L	0.1135 ppb	18:03:36
3	Sc 361.383	1761711.7	1761711.7	100.38 %		18:04:49
3	Y 371.029	1067001.7	1067001.7	100.28 %		18:04:49
3	Ag 328.068†	3547.8	87.4	0.3472 µg/L	0.3472 ppb	18:04:51
3	As 188.979†	-20.0	-2.2	-0.7857 µg/L	-0.7857 ppb	18:05:11
3	B 249.677†	3230.5	-12.0	-0.1957 µg/L	-0.1957 ppb	18:05:11
3	Ba 233.527†	-162.5	0.3	0.0006 µg/L	0.0006 ppb	18:05:11
3	Be 313.107†	-908.1	-119.1	-0.0335 µg/L	-0.0335 ppb	18:04:51
3	Cd 226.502†	-93.1	17.3	0.1188 µg/L	0.1188 ppb	18:05:11
3	Co 228.616†	-181.8	-8.7	-0.1171 µg/L	-0.1171 ppb	18:05:11
3	Cr 267.716†	129.9	-49.1	-0.4200 µg/L	-0.4200 ppb	18:05:11
3	Cu 324.752†	2666.8	-132.2	-0.5513 µg/L	-0.5513 ppb	18:04:51
3	Mn 257.610†	186.9	10.6	0.0148 µg/L	0.0148 ppb	18:05:11
3	Mo 202.031†	-35.8	-0.9	-0.0304 µg/L	-0.0304 ppb	18:05:11
3	Ni 231.604†	-74.5	3.7	0.0466 µg/L	0.0466 ppb	18:05:11
3	P 214.914†	5.9	0.9	0.2218 µg/L	0.2218 ppb	18:05:11
3	Pb 220.353†	74.9	-22.4	-1.3753 µg/L	-1.3753 ppb	18:05:11
3	S 181.975 Axial†	84.5	-3.5	-2.8453 µg/L	-2.8453 ppb	18:05:11
3	Sb 206.836†	72.9	-5.4	-0.7086 µg/L	-0.7086 ppb	18:05:11
3	Se 196.026†	13.4	-0.2	-0.085 µg/L	-0.085 ppb	18:05:11
3	SiO2†	1672.5	-86.9	-9.3016 µg/L	-9.3016 ppb	18:05:11
3	Si 251.611†	708.7	-242.6	-3.9283 µg/L	-3.9283 ppb	18:04:51
3	Sn 189.927†	1.8	4.4	0.3022 µg/L	0.3022 ppb	18:05:11
3	Ti 334.940†	729.1	-159.2	-0.1613 µg/L	-0.1613 ppb	18:04:51
3	Tl 190.801†	-107.3	10.2	1.3632 µg/L	1.3632 ppb	18:05:11
3	U 409.014†	-165.7	118.7	7.3880 µg/L	7.3880 ppb	18:04:51
3	V 292.402†	163.6	-146.8	-0.7764 µg/L	-0.7764 ppb	18:04:51
3	Zn 213.857†	510.6	-15.9	-0.0986 µg/L	-0.0986 ppb	18:05:11

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1756892.3	100.10 %	0.286			0.29%
Sc RADIAL	151483.5	102 %	0.87			0.67%
Y 371.029	1064495.3	100.04 %	0.233			0.23%
Ag 328.068†	36.1	0.1385 µg/L	0.41530	0.1385 ppb	0.41530	299.88%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	0.6	0.1131 µg/L	4.24252	0.1131 ppb	4.24252	>999.9%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	4.1	1.4155 µg/L	2.31844	1.4155 ppb	2.31844	163.79%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	-25.6	-0.4180 µg/L	0.27043	-0.4180 ppb	0.27043	64.70%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	10.8	0.0468 µg/L	0.07118	0.0468 ppb	0.07118	151.98%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	57.6	0.0167 µg/L	0.08778	0.0167 ppb	0.08778	525.94%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	-29.9	-1.8004 µg/L	0.40907	-1.8004 ppb	0.40907	22.72%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	10.9	0.0750 µg/L	0.14131	0.0750 ppb	0.14131	188.36%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-0.4	-0.0050 µg/L	0.09722	-0.0050 ppb	0.09722	>999.9%

QC value within limits for Co 228.616 Recovery = Not calculated							
Cr 267.716†	-41.2	-0.3458 µg/L	0.09558	-0.3458 ppb	0.09558	27.64%	
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu 324.752†	-55.2	-0.2346 µg/L	0.62400	-0.2346 ppb	0.62400	266.01%	
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe 238.204 Radial†	-2.1	-0.1413 µg/L	0.28967	-0.1413 ppb	0.28967	204.94%	
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K 766.490 Radial†	124.0	51.032 µg/L	17.7573	51.032 ppb	17.7573	34.80%	
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg 279.077 IEC†	-10.4	-4.2437 µg/L	9.36298	-4.2437 ppb	9.36298	220.63%	
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn 257.610†	-3.9	-0.0051 µg/L	0.03077	-0.0051 ppb	0.03077	603.93%	
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo 202.031†	3.4	0.1085 µg/L	0.51436	0.1085 ppb	0.51436	474.00%	
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na 589.592 Radial†	135.5	20.537 µg/L	4.5028	20.537 ppb	4.5028	21.93%	
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni 231.604†	7.2	0.0903 µg/L	0.10791	0.0903 ppb	0.10791	119.51%	
QC value within limits for Ni 231.604 Recovery = Not calculated							
P 214.914†	11.1	2.6597 µg/L	2.97253	2.6597 ppb	2.97253	111.76%	
QC value within limits for P 214.914 Recovery = Not calculated							
Pb 220.353†	-11.0	-0.6701 µg/L	0.71232	-0.6701 ppb	0.71232	106.30%	
QC value within limits for Pb 220.353 Recovery = Not calculated							
S 181.975 Axial†	4.4	3.5812 µg/L	8.02299	3.5812 ppb	8.02299	224.03%	
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb 206.836†	-6.7	-0.8653 µg/L	0.19019	-0.8653 ppb	0.19019	21.98%	
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	-2.0	-0.816 µg/L	3.9132	-0.816 ppb	3.9132	479.71%	
QC value within limits for Se 196.026 Recovery = Not calculated							
SiO2†	-73.0	-7.8229 µg/L	1.51896	-7.8229 ppb	1.51896	19.42%	
QC value within limits for SiO2 Recovery = Not calculated							
Si 251.611†	-94.3	-1.5309 µg/L	2.07685	-1.5309 ppb	2.07685	135.66%	
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn 189.927†	7.3	0.5022 µg/L	0.23278	0.5022 ppb	0.23278	46.36%	
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr 421.552†	37.8	0.0872 µg/L	0.17279	0.0872 ppb	0.17279	198.10%	
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti 334.940†	-92.6	-0.0916 µg/L	0.08215	-0.0916 ppb	0.08215	89.72%	
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl 190.801†	5.7	0.7617 µg/L	0.53874	0.7617 ppb	0.53874	70.73%	
QC value within limits for Tl 190.801 Recovery = Not calculated							
U 409.014†	-32.0	-2.0149 µg/L	10.87474	-2.0149 ppb	10.87474	539.72%	
QC value within limits for U 409.014 Recovery = Not calculated							
V 292.402†	-38.9	-0.2081 µg/L	0.65482	-0.2081 ppb	0.65482	314.64%	
QC value within limits for V 292.402 Recovery = Not calculated							
Zn 213.857†	-4.9	-0.0308 µg/L	0.05967	-0.0308 ppb	0.05967	194.02%	
QC value within limits for Zn 213.857 Recovery = Not calculated							

All analyte(s) passed QC.

ICPMS #5 Daily Performance Report

Sample ID: Sample

Sample Date/Time: Monday, April 12, 2010 12:06:55

Sample Description:

Method File: c:\elandata\Method\Daily2.mth

Dataset File: c:\elandata\Dataset\default\Sample.1047

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	1600.7	1600.690	66.606	4.2
Mg	24.0	42537.5	42537.482	1284.267	3.0
Co	58.9	65006.2	65006.172	391.198	0.6
Rh	102.9	127267.0	127267.002	942.029	0.7
In	114.9	184150.5	184150.534	1137.512	0.6
Pb	208.0	214713.3	214713.337	559.415	0.3
[> Ba	137.9	172158.1	172158.058	849.562	0.5
[Ba++	69.0	1998.4	0.012	0.000	1.4
[> Ce	139.9	211469.3	211469.349	1635.986	0.8
[CeO	155.9	4156.7	0.020	0.001	2.7
Bkgd	220.0	20.6	20.600	2.559	12.4

Current Optimization File Data

Current Value	Description
0.86	Nebulizer Gas Flow
6.75	Lens Voltage
1450.00	ICP RF Power
-1812.50	Analog Stage Voltage
1300.00	Pulse Stage Voltage
200.00	Discriminator Threshold
-6.00	AC Rod Offset

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	21	7.0	3575.4
Co	59	21	8.3	64290.0
In	115	21	9.8	174307.3

ICPMS #5 Instrument Tuning Report

File Name: 100412.tun
File Path: C:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width
He	3.0	3.0	601	2072	0.537
Be	9.0	9.0	2052	2088	0.534
Mg	24.0	24.0	5693	2100	0.514
Mg	25.0	25.0	5933	2100	0.500
Mg	26.0	26.0	6180	2100	0.514
Co	58.9	58.9	14187	2125	0.535
Rh	102.9	102.9	24877	2180	0.538
In	114.9	114.9	27793	2200	0.533
Ce	139.9	139.9	33875	2220	0.545
Pb	206.0	206.0	49948	2305	0.528
Pb	207.0	207.0	50171	2240	0.592
Pb	208.0	208.0	50451	2280	0.646
U	238.1	238.0	57726	2295	0.643

ICPMS#5 - Summary Report

Sample ID: Blank

Sample Date/Time: Monday, April 12, 2010 20:44:46

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\Vanl liquid.mth

Dataset File: C:\elandata\Dataset\100412\Blank.186

Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	ug/L		20	
[>	Sc	45	ug/L		705429	
|	Cr	52	ug/L		-2548	
|	Cr	53	ug/L		77403	
|	Mn	55	ug/L		1114	
[	Ni	60	ug/L		94	
[>	Ge	74	ug/L		294519	
|	As	75	ug/L		-189	
|	Se	77	ug/L		5245	
|	Se	82	ug/L		-4	
[	Kr	83	ug/L		91	
[	Mo	98	ug/L		145	
|	Ag	107	ug/L		79	
|	Cd	111	ug/L		34	
|	Cd	114	ug/L		92	
[>	In	115	ug/L		208784	
|	Sb	121	ug/L		250	
[	Sb	123	ug/L		179	
[>	Lu	175	ug/L		404929	
|	Tl	205	ug/L		2514	
|	Pb	208	ug/L		3982	
[U	238	ug/L		978	

Sample ID: Blank

Report Date/Time: Monday, April 12, 2010 20:46:25

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	
Sc	45Linear Thru Zero	
Cr	52Simple Linear	
Cr	53Simple Linear	
Mn	55Simple Linear	
Ni	60Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	
Kr	83Linear Thru Zero	
Mo	98Simple Linear	
Ag	107Simple Linear	
Cd	111Simple Linear	
Cd	114Simple Linear	
In	115Simple Linear	
Sb	121Simple Linear	
Sb	123Simple Linear	
Lu	175Linear Thru Zero	
Tl	205Simple Linear	
Pb	208Linear Thru Zero	
U	238Simple Linear	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9					
|>	Sc	45					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Ni	60					
|>	Ge	74					
|	As	75					
|	Se	77					
|	Se	82					
|	Kr	83					
|	Mo	98					
|	Ag	107					
|	Cd	111					
|	Cd	114					
|>	In	115					
|	Sb	121					
|	Sb	123					
|>	Lu	175					
|	Tl	205					
|	Pb	208					
|	U	238					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: Standard 1

Sample Date/Time: Monday, April 12, 2010 20:49:22

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\lanl liquid.mth

Dataset File: C:\elandata\Dataset\100412\Standard 1.187

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	10.000	ug/L	8.153	1732	0.002
> Sc	45		ug/L		694815	694815.017
| Cr	52	10.000	ug/L	1.414	32965	0.051
| Cr	53		ug/L		80214	0.006
| Mn	55	10.000	ug/L	1.174	65261	0.092
| Ni	60	10.000	ug/L	0.292	10416	0.015
> Ge	74		ug/L		295023	295023.232
| As	75	10.000	ug/L	7.199	7502	0.026
| Se	77		ug/L		5837	0.002
| Se	82	10.000	ug/L	3.319	757	0.003
| Kr	83		ug/L		96	0.000
| Mo	98	10.000	ug/L	3.879	23961	0.114
| Ag	107	10.000	ug/L	2.683	42687	0.205
| Cd	111	10.000	ug/L	4.258	11093	0.053
| Cd	114		ug/L		27038	0.129
> In	115		ug/L		208288	208287.819
| Sb	121	10.000	ug/L	5.533	40437	0.193
| Sb	123		ug/L		30890	0.148
> Lu	175		ug/L		402374	402374.125
| Tl	205	10.000	ug/L	2.497	172831	0.423
| Pb	208	10.000	ug/L	2.947	312191	0.766
U	238	10.000	ug/L	1.620	398203	0.987

Sample ID: Standard 1

Report Date/Time: Monday, April 12, 2010 20:50:58

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9					
|>	Sc	45					
|	Cr	52					
|	Cr	53					
|	Mn	55					
[	Ni	60					
|>	Ge	74					
|	As	75					
|	Se	77					
|	Se	82					
[	Kr	83					
[	Mo	98					
|	Ag	107					
|	Cd	111					
|	Cd	114					
|>	In	115					
|	Sb	121					
[	Sb	123					
|>	Lu	175					
|	Tl	205					
|	Pb	208					
[	U	238					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: Standard 2

Sample Date/Time: Monday, April 12, 2010 20:53:56

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\lanl liquid.mth

Dataset File: C:\elandata\Dataset\100412\Standard 2.188

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	99.928	ug/L	6.898	16259	0.023
[>	Sc	45		ug/L		706785	706784.999
|	Cr	52	99.908	ug/L	1.870	327619	0.467
|	Cr	53		ug/L		111297	0.048
|	Mn	55	99.934	ug/L	2.026	612892	0.866
[	Ni	60	99.913	ug/L	0.952	96650	0.137
[>	Ge	74		ug/L		297962	297961.750
|	As	75	99.939	ug/L	1.511	72961	0.246
|	Se	77		ug/L		10430	0.017
|	Se	82	99.958	ug/L	0.645	7369	0.025
[	Kr	83		ug/L		98	0.000
[	Mo	98	99.958	ug/L	2.162	233524	1.097
|	Ag	107	99.908	ug/L	2.187	398475	1.873
|	Cd	111	99.946	ug/L	1.743	107242	0.504
|	Cd	114		ug/L		259599	1.220
[>	In	115		ug/L		212737	212737.489
|	Sb	121	99.985	ug/L	0.330	404708	1.901
[	Sb	123		ug/L		315964	1.484
[>	Lu	175		ug/L		411077	411076.654
|	Tl	205	99.862	ug/L	0.637	1530781	3.717
|	Pb	208	99.890	ug/L	2.081	2839482	6.899
[U	238	99.887	ug/L	0.690	3644318	8.863

Sample ID: Standard 2

Report Date/Time: Monday, April 12, 2010 20:55:32

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9					
|>	Sc	45					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Ni	60					
[>	Ge	74					
|	As	75					
|	Se	77					
|	Se	82					
|	Kr	83					
[	Mo	98					
|	Ag	107					
|	Cd	111					
|	Cd	114					
|>	In	115					
|	Sb	121					
|	Sb	123					
[>	Lu	175					
|	Tl	205					
|	Pb	208					
|	U	238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 1

Sample Date/Time: Monday, April 12, 2010 20:58:30

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\Vanl liquid.mth

Dataset File: C:\elandata\Dataset\100412\QC Std 1.189

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[Be	9	54.712	ug/L	5.668	8430	0.013
> Sc	45		ug/L		668308	668308.235
[Cr	52	54.750	ug/L	1.995	168689	0.256
[Cr	53		ug/L		93882	0.031
[Mn	55	55.200	ug/L	1.845	320618	0.478
[Ni	60	55.687	ug/L	1.232	50979	0.076
> Ge	74		ug/L		283707	283706.686
[As	75	54.121	ug/L	2.161	37542	0.133
[Se	77		ug/L		7920	0.010
[Se	82	53.458	ug/L	0.981	3750	0.013
[Kr	83		ug/L		89	0.000
[Mo	98	52.422	ug/L	2.001	116414	0.575
[Ag	107	54.749	ug/L	1.124	207501	1.026
[Cd	111	53.675	ug/L	1.854	54727	0.271
[Cd	114		ug/L		133355	0.659
> In	115		ug/L		202091	202090.616
[Sb	121	56.806	ug/L	1.230	218517	1.080
[Sb	123		ug/L		170390	0.842
> Lu	175		ug/L		390269	390268.613
[Tl	205	53.409	ug/L	0.456	778346	1.988
[Pb	208	54.897	ug/L	1.087	1483359	3.791
[U	238	54.507	ug/L	1.103	1888463	4.837

Sample ID: QC Std 1

Report Date/Time: Monday, April 12, 2010 21:00:07

Page 1

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9	109.425				
>	Sc	45		94.7			
|	Cr	52	109.500				
|	Cr	53					
|	Mn	55	110.399				
[	Ni	60	111.375				
>	Ge	74		96.3			
|	As	75	108.242				
|	Se	77					
|	Se	82	106.915				
[	Kr	83					
|	Mo	98	104.845				
|	Ag	107	109.499				
|	Cd	111	107.349				
|	Cd	114					
>	In	115		96.8			
|	Sb	121	113.611				
[	Sb	123					
>	Lu	175		96.4			
|	Tl	205	106.818				
|	Pb	208	109.794				
[	U	238	109.015				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 1	Mn	55	ICV is out of limits (+/- 10%)
QC Std 1	Ni	60	ICV is out of limits (+/- 10%)
QC Std 1	Sb	121	ICV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 2

Sample Date/Time: Monday, April 12, 2010 21:03:07

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\lanl liquid.mth

Dataset File: C:\elandata\Dataset\100412\QC Std 2.190

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	-0.007	ug/L	339.958	17	-0.000
>	Sc	45		ug/L		649508	649507.974
|	Cr	52	-0.044	ug/L	94.958	-2481	-0.000
|	Cr	53		ug/L		75087	0.006
|	Mn	55	0.011	ug/L	91.630	1085	0.000
|	Ni	60	0.013	ug/L	32.741	98	0.000
>	Ge	74		ug/L		276880	276879.994
|	As	75	-0.422	ug/L	175.409	-459	-0.001
|	Se	77		ug/L		5109	0.001
|	Se	82	0.036	ug/L	184.433	-1	0.000
|	Kr	83		ug/L		89	0.000
[	Mo	98	0.040	ug/L	27.515	224	0.000
|	Ag	107	0.007	ug/L	34.109	101	0.000
|	Cd	111	0.007	ug/L	97.637	39	0.000
|	Cd	114		ug/L		96	0.000
>	In	115		ug/L		196027	196027.244
|	Sb	121	0.316	ug/L	11.623	1410	0.006
|	Sb	123		ug/L		1081	0.005
>	Lu	175		ug/L		385067	385067.137
|	Tl	205	0.253	ug/L	18.343	6011	0.009
|	Pb	208	0.005	ug/L	108.340	3917	0.000
	U	238	0.000	ug/L	243.996	943	0.000

Sample ID: QC Std 2

Report Date/Time: Monday, April 12, 2010 21:04:45

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel.	% Difference
[	Be	9						
[>	Sc	45			92.1			
|	Cr	52						
|	Cr	53						
|	Mn	55						
[	Ni	60						
[>	Ge	74			94.0			
|	As	75						
|	Se	77						
|	Se	82						
[	Kr	83						
[	Mo	98						
|	Ag	107						
|	Cd	111						
|	Cd	114						
[>	In	115			93.9			
|	Sb	121						
[	Sb	123						
[>	Lu	175			95.1			
|	Tl	205						
|	Pb	208						
[	U	238						

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 3

Sample Date/Time: Monday, April 12, 2010 21:07:43

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\Vanl liquid.mth

Dataset File: C:\elandata\Dataset\100412\QC Std 3.191

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	0.557	ug/L	12.529	107	0.000
> Sc	45		ug/L		681571	681570.769
| Cr	52	12.143	ug/L	0.809	36242	0.057
| Cr	53		ug/L		79793	0.007
| Mn	55	6.444	ug/L	0.514	39126	0.056
[Ni	60	2.469	ug/L	0.389	2392	0.003
> Ge	74		ug/L		290814	290813.924
| As	75	6.103	ug/L	3.061	4175	0.015
| Se	77		ug/L		5387	0.001
| Se	82	6.052	ug/L	6.088	432	0.001
[Kr	83		ug/L		84	-0.000
| Mo	98	0.568	ug/L	2.990	1448	0.006
| Ag	107	1.109	ug/L	1.672	4424	0.021
| Cd	111	1.232	ug/L	5.594	1331	0.006
| Cd	114		ug/L		3128	0.015
> In	115		ug/L		208973	208973.355
| Sb	121	3.218	ug/L	1.812	13037	0.061
[Sb	123		ug/L		10147	0.048
> Lu	175		ug/L		406464	406463.772
| Tl	205	1.256	ug/L	2.141	21523	0.047
| Pb	208	2.450	ug/L	1.713	72746	0.169
[U	238	0.266	ug/L	2.301	10556	0.024

Sample ID: QC Std 3

Report Date/Time: Monday, April 12, 2010 21:09:20

Page 1

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9	111.420				
|>	Sc	45		96.6			
|	Cr	52	121.431				
|	Cr	53					
|	Mn	55	128.877				
|	Ni	60	123.463				
|>	Ge	74		98.7			
|	As	75	122.063				
|	Se	77					
|	Se	82	121.033				
|	Kr	83					
|	Mo	98	113.611				
|	Ag	107	110.939				
|	Cd	111	123.207				
|	Cd	114					
|>	In	115		100.1			
|	Sb	121	107.260				
|	Sb	123					
|>	Lu	175		100.4			
|	Tl	205	125.611				
|	Pb	208	122.478				
|	U	238	132.768				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 3	U	238	CRDL is out of limits

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 4

Sample Date/Time: Monday, April 12, 2010 21:12:18

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\lanl liquid.mth

Dataset File: C:\elandata\Dataset\100412\QC Std 4.192

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	0.104	ug/L	64.022	33	0.000
> Sc	45		ug/L		636166	636165.522
Cr	52	2.633	ug/L	0.465	5535	0.012
Cr	53		ug/L		52133	-0.028
Mn	55	5.934	ug/L	1.479	33709	0.051
Ni	60	2.970	ug/L	2.551	2668	0.004
> Ge	74		ug/L		265413	265412.837
As	75	-0.653	ug/L	113.064	-597	-0.002
Se	77		ug/L		4547	-0.001
Se	82	-1.043	ug/L	9.140	-72	-0.000
Kr	83		ug/L		186	0.000
Mo	98	2039.427	ug/L	0.461	4209339	22.386
Ag	107	0.094	ug/L	2.369	401	0.002
Cd	111	0.361	ug/L	37.854	373	0.002
Cd	114		ug/L		5182	0.027
> In	115		ug/L		188031	188030.783
Sb	121	0.181	ug/L	12.881	873	0.003
Sb	123		ug/L		682	0.003
> Lu	175		ug/L		372361	372361.410
Tl	205	-0.022	ug/L	15.304	2014	-0.001
Pb	208	0.207	ug/L	2.259	8994	0.014
U	238	-0.021	ug/L	3.124	197	-0.002

Sample ID: QC Std 4

Report Date/Time: Monday, April 12, 2010 21:13:55

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel.	% Difference
[	Be	9						
|>	Sc	45			90.2			
|	Cr	52	79.785					
|	Cr	53						
|	Mn	55	102.316					
|	Ni	60	89.724					
|>	Ge	74			90.1			
|	As	75						
|	Se	77						
|	Se	82						
|	Kr	83						
|	Mo	98	101.971					
|	Ag	107						
|	Cd	111	81.201					
|	Cd	114						
|>	In	115			90.1			
|	Sb	121						
|	Sb	123						
|>	Lu	175			92.0			
|	Ti	205						
|	Pb	208	109.695					
|	U	238						

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 5

Sample Date/Time: Monday, April 12, 2010 21:16:54

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\Vanl liquid.mth

Dataset File: C:\elandata\Dataset\100412\QC Std 5.193

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	21.927	ug/L	5.051	3231	0.005
> Sc	45		ug/L		637046	637045.954
Cr	52	23.563	ug/L	1.354	67893	0.110
Cr	53		ug/L		58799	-0.017
Mn	55	26.783	ug/L	1.470	148810	0.232
Ni	60	22.655	ug/L	2.249	19818	0.031
> Ge	74		ug/L		264758	264758.443
As	75	20.807	ug/L	1.560	13366	0.051
Se	77		ug/L		5409	0.003
Se	82	20.735	ug/L	7.320	1356	0.005
Kr	83		ug/L		176	0.000
Mo	98	2100.768	ug/L	1.176	4344762	23.059
Ag	107	20.492	ug/L	0.834	72449	0.384
Cd	111	20.661	ug/L	3.514	19659	0.104
Cd	114		ug/L		51205	0.271
> In	115		ug/L		188424	188423.617
Sb	121	21.291	ug/L	0.283	76509	0.405
Sb	123		ug/L		60275	0.319
> Lu	175		ug/L		379817	379817.122
Tl	205	19.698	ug/L	1.414	280840	0.733
Pb	208	20.668	ug/L	2.066	545695	1.427
U	238	22.025	ug/L	1.021	743082	1.954

Sample ID: QC Std 5

Report Date/Time: Monday, April 12, 2010 21:18:31

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9	109.634				
|>	Sc	45		90.3			
|	Cr	52	101.128				
|	Cr	53					
|	Mn	55	103.810				
|	Ni	60	97.189				
[>	Ge	74		89.9			
|	As	75	104.035				
|	Se	77					
|	Se	82	103.673				
|	Kr	83					
[	Mo	98	105.038				
|	Ag	107	102.458				
|	Cd	111	101.059				
|	Cd	114					
|>	In	115		90.2			
|	Sb	121	106.457				
|	Sb	123					
[>	Lu	175		93.8			
|	Tl	205	98.492				
|	Pb	208	102.371				
|	U	238	110.125				

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Monday, April 12, 2010 21:21:30

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\lanl liquid.mth

Dataset File: C:\elandata\Dataset\100412\QC Std 6.194

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	52.149	ug/L	4.511	8272	0.012
[>	Sc	45		ug/L		688105	688104.512
|	Cr	52	51.330	ug/L	0.900	162689	0.240
|	Cr	53		ug/L		88276	0.019
|	Mn	55	53.134	ug/L	0.285	317830	0.460
|	Ni	60	52.986	ug/L	0.472	49948	0.072
[>	Ge	74		ug/L		291486	291485.597
|	As	75	51.338	ug/L	1.318	36577	0.126
|	Se	77		ug/L		7004	0.006
|	Se	82	53.092	ug/L	1.572	3827	0.013
|	Kr	83		ug/L		72	-0.000
[	Mo	98	50.046	ug/L	0.585	114419	0.549
|	Ag	107	52.707	ug/L	1.779	205626	0.988
|	Cd	111	51.167	ug/L	0.266	53709	0.258
|	Cd	114		ug/L		129464	0.622
[>	In	115		ug/L		208024	208023.718
|	Sb	121	53.412	ug/L	1.004	211524	1.016
|	Sb	123		ug/L		165902	0.797
[>	Lu	175		ug/L		411661	411660.873
|	Tl	205	49.752	ug/L	1.883	765008	1.852
|	Pb	208	51.369	ug/L	0.617	1464472	3.548
	U	238	50.901	ug/L	0.453	1860211	4.517

Sample ID: QC Std 6

Report Date/Time: Monday, April 12, 2010 21:23:08

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9	104.298				
|>	Sc	45		97.5			
|	Cr	52	102.660				
|	Cr	53					
|	Mn	55	106.267				
|	Ni	60	105.973				
[>	Ge	74		99.0			
|	As	75	102.677				
|	Se	77					
|	Se	82	106.184				
|	Kr	83					
[	Mo	98	100.093				
|	Ag	107	105.414				
|	Cd	111	102.333				
|	Cd	114					
|>	In	115		99.6			
|	Sb	121	106.824				
|	Sb	123					
[>	Lu	175		101.7			
|	Tl	205	99.503				
|	Pb	208	102.738				
|	U	238	101.801				

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Monday, April 12, 2010 21:26:08

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\lanl liquid.mth

Dataset File: C:\elandata\Dataset\100412\QC Std 7.195

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	-0.007	ug/L	514.486	18	-0.000
>	Sc	45		ug/L		687926	687925.617
|	Cr	52	-0.253	ug/L	12.482	-3299	-0.001
|	Cr	53		ug/L		69923	-0.008
|	Mn	55	-0.021	ug/L	74.271	961	-0.000
|	Ni	60	0.014	ug/L	133.882	104	0.000
>	Ge	74		ug/L		288384	288384.397
!	As	75	-0.165	ug/L	302.560	-301	-0.000
|	Se	77		ug/L		4432	-0.002
|	Se	82	0.244	ug/L	27.628	14	0.000
|	Kr	83		ug/L		75	-0.000
[	Mo	98	0.116	ug/L	10.190	408	0.001
|	Ag	107	0.009	ug/L	76.098	113	0.000
|	Cd	111	0.008	ug/L	93.816	42	0.000
|	Cd	114		ug/L		88	-0.000
>	In	115		ug/L		207226	207225.786
|	Sb	121	0.068	ug/L	5.687	517	0.001
|	Sb	123		ug/L		391	0.001
>	Lu	175		ug/L		406530	406529.678
|	Tl	205	0.310	ug/L	12.162	7217	0.012
|	Pb	208	-0.010	ug/L	43.643	3718	-0.001
	U	238	0.000	ug/L	433.752	997	0.000

Sample ID: QC Std 7

Report Date/Time: Monday, April 12, 2010 21:27:46

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9					
|>	Sc	45		97.5			
|	Cr	52					
|	Cr	53					
|	Mn	55					
[	Ni	60					
|>	Ge	74		97.9			
|	As	75					
|	Se	77					
|	Se	82					
[	Kr	83					
[	Mo	98					
|	Ag	107					
|	Cd	111					
|	Cd	114					
|>	In	115		99.3			
|	Sb	121					
[	Sb	123					
|>	Lu	175		100.4			
|	Tl	205					
|	Pb	208					
[	U	238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202065070

Sample Date/Time: Monday, April 12, 2010 21:30:45

Sample Type:

Sample Description: LANL 6020 MB

Number of Replicates: 3

Batch ID: 962585|1|prb

Method File: c:\elandata\Method\lanl liquid.mth

Dataset File: C:\elandata\Dataset\100412\1202065070.196

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[Be	9	-0.007	ug/L	376.308	18	-0.000
[> Sc	45		ug/L		661187	661187.137
[Cr	52	-0.780	ug/L	15.259	-4801	-0.004
[Cr	53		ug/L		138730	0.100
[Mn	55	0.067	ug/L	11.814	1426	0.001
[Ni	60	0.018	ug/L	34.682	104	0.000
[> Ge	74		ug/L		287086	287085.966
[As	75	-0.800	ug/L	66.340	-747	-0.002
[Se	77		ug/L		11972	0.024
[Se	82	0.062	ug/L	186.834	1	0.000
[Kr	83		ug/L		82	-0.000
[Mo	98	0.009	ug/L	21.958	161	0.000
[Ag	107	-0.004	ug/L	73.157	59	-0.000
[Cd	111	-0.010	ug/L	152.549	23	-0.000
[Cd	114		ug/L		45	-0.000
[> In	115		ug/L		203095	203094.735
[Sb	121	0.049	ug/L	15.907	432	0.001
[Sb	123		ug/L		357	0.001
[> Lu	175		ug/L		396363	396362.812
[Tl	205	0.031	ug/L	14.016	2913	0.001
[Pb	208	-0.047	ug/L	8.222	2619	-0.003
[U	238	-0.026	ug/L	0.315	48	-0.002

Sample ID: 1202065070

Report Date/Time: Monday, April 12, 2010 21:32:22

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[Be	9					
|> Sc	45		93.7			
| Cr	52					
| Cr	53					
| Mn	55					
[Ni	60					
|> Ge	74		97.5			
| As	75					
| Se	77					
| Se	82					
[Kr	83					
[Mo	98					
| Ag	107					
| Cd	111					
| Cd	114					
|> In	115		97.3			
| Sb	121					
[Sb	123					
|> Lu	175		97.9			
| Tl	205					
| Pb	208					
[U	238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202065071

Sample Date/Time: Monday, April 12, 2010 21:35:20

Sample Type:

Sample Description: LANL 6020 LCS

Number of Replicates: 3

Batch ID: 962585|1|prb

Method File: c:\elandata\Method\Vanl liquid.mth

Dataset File: C:\elandata\Dataset\100412\1202065071.197

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	55.050	ug/L	2.804	8455	0.013
> Sc	45		ug/L		666080	666080.455
| Cr	52	59.028	ug/L	1.105	181443	0.276
| Cr	53		ug/L		164730	0.138
| Mn	55	56.592	ug/L	3.558	327496	0.490
| Ni	60	53.173	ug/L	1.839	48511	0.073
> Ge	74		ug/L		289839	289838.781
| As	75	50.653	ug/L	1.304	35884	0.124
| Se	77		ug/L		14904	0.034
| Se	82	51.619	ug/L	1.614	3700	0.013
| Kr	83		ug/L		85	-0.000
> Mo	98	50.794	ug/L	2.269	111663	0.558
| Ag	107	53.383	ug/L	1.447	200274	1.001
| Cd	111	52.740	ug/L	2.113	53233	0.266
| Cd	114		ug/L		128208	0.640
> In	115		ug/L		200076	200075.852
| Sb	121	56.326	ug/L	2.317	214477	1.071
| Sb	123		ug/L		169104	0.844
> Lu	175		ug/L		396634	396633.795
| Tl	205	44.736	ug/L	2.360	663055	1.665
| Pb	208	50.949	ug/L	0.888	1399488	3.519
| U	238	49.355	ug/L	1.307	1738005	4.379

Sample ID: 1202065071

Report Date/Time: Monday, April 12, 2010 21:36:57

Page 1

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9					
|>	Sc	45		94.4			
|	Cr	52					
|	Cr	53					
|	Mn	55					
[	Ni	60					
|>	Ge	74		98.4			
|	As	75					
|	Se	77					
|	Se	82					
[	Kr	83					
|	Mo	98					
|	Ag	107					
|	Cd	111					
|	Cd	114					
|>	In	115		95.8			
|	Sb	121					
[	Sb	123					
|>	Lu	175		98.0			
|	Tl	205					
|	Pb	208					
[	U	238					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 248523001

Sample Date/Time: Monday, April 12, 2010 21:53:44

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 962585|1|prb

Method File: c:\elandata\Method\lanl liquid.mth

Dataset File: C:\elandata\Dataset\100412\248523001.201

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	0.001	ug/L	1371.933	19	0.000
> Sc	45		ug/L		662509	662508.809
| Cr	52	-0.322	ug/L	5.115	-3392	-0.002
| Cr	53		ug/L		147857	0.113
| Mn	55	0.229	ug/L	7.212	2360	0.002
| Ni	60	0.042	ug/L	49.722	126	0.000
> Ge	74		ug/L		285637	285636.939
| As	75	-1.113	ug/L	68.681	-965	-0.003
| Se	77		ug/L		12433	0.026
| Se	82	0.108	ug/L	76.972	4	0.000
| Kr	83		ug/L		79	-0.000
| Mo	98	-0.026	ug/L	11.676	84	-0.000
| Ag	107	0.006	ug/L	56.166	98	0.000
| Cd	111	-0.003	ug/L	226.858	30	-0.000
| Cd	114		ug/L		64	-0.000
> In	115		ug/L		201927	201927.266
| Sb	121	-0.020	ug/L	9.807	163	-0.000
| Sb	123		ug/L		135	-0.000
> Lu	175		ug/L		390724	390723.740
| Tl	205	-0.017	ug/L	35.559	2173	-0.001
| Pb	208	-0.016	ug/L	15.042	3407	-0.001
U	238	-0.024	ug/L	1.196	118	-0.002

Sample ID: 248523001

Report Date/Time: Monday, April 12, 2010 21:55:21

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[	Be	9					
| >	Sc	45		93.9			
|	Cr	52					
|	Cr	53					
|	Mn	55					
[	Ni	60					
| >	Ge	74		97.0			
|	As	75					
|	Se	77					
|	Se	82					
[	Kr	83					
|	Mo	98					
|	Ag	107					
|	Cd	111					
|	Cd	114					
| >	In	115		96.7			
|	Sb	121					
[	Sb	123					
| >	Lu	175		96.5			
|	Tl	205					
|	Pb	208					
[	U	238					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 8

Sample Date/Time: Monday, April 12, 2010 21:58:20

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\lanl liquid.mth

Dataset File: C:\elandata\Dataset\100412\QC Std 8.202

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[Be	9	49.482	ug/L	6.432	8102	0.011
[> Sc	45		ug/L		709877	709877.262
[Cr	52	50.101	ug/L	3.077	163717	0.234
[Cr	53		ug/L		99696	0.031
[Mn	55	51.068	ug/L	1.393	315156	0.442
[Ni	60	51.219	ug/L	2.028	49807	0.070
[> Ge	74		ug/L		295884	295884.153
[As	75	52.158	ug/L	2.632	37719	0.128
[Se	77		ug/L		7700	0.008
[Se	82	50.143	ug/L	2.363	3668	0.012
[Kr	83		ug/L		96	0.000
[Mo	98	49.620	ug/L	2.255	114435	0.545
[Ag	107	52.065	ug/L	0.649	204892	0.976
[Cd	111	51.067	ug/L	0.412	54075	0.258
[Cd	114		ug/L		127723	0.608
[> In	115		ug/L		209848	209847.870
[Sb	121	53.914	ug/L	0.380	215389	1.025
[Sb	123		ug/L		167084	0.795
[> Lu	175		ug/L		417215	417215.356
[Tl	205	47.440	ug/L	3.775	739144	1.766
[Pb	208	50.901	ug/L	1.911	1470538	3.515
[U	238	50.199	ug/L	0.625	1859467	4.454

Sample ID: QC Std 8

Report Date/Time: Monday, April 12, 2010 21:59:57

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9	98.963				
|>	Sc	45		100.6			
|	Cr	52	100.202				
|	Cr	53					
|	Mn	55	102.135				
[	Ni	60	102.437				
|>	Ge	74		100.5			
|	As	75	104.315				
|	Se	77					
|	Se	82	100.286				
[	Kr	83					
[	Mo	98	99.241				
|	Ag	107	104.129				
|	Cd	111	102.135				
|	Cd	114					
|>	In	115		100.5			
|	Sb	121	107.829				
[	Sb	123					
|>	Lu	175		103.0			
|	Tl	205	94.879				
|	Pb	208	101.802				
[	U	238	100.398				

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 9

Sample Date/Time: Monday, April 12, 2010 22:02:57

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\Nanl liquid.mth

Dataset File: C:\elandata\Dataset\100412\QC Std 9.203

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[Be	9	-0.024	ug/L	8.592	15	-0.000
[> Sc	45		ug/L		674516	674515.833
[Cr	52	-0.295	ug/L	34.329	-3365	-0.001
[Cr	53		ug/L		75084	0.002
[Mn	55	-0.012	ug/L	114.014	994	-0.000
[Ni	60	0.014	ug/L	81.723	102	0.000
[> Ge	74		ug/L		283410	283409.895
[As	75	-0.041	ug/L	416.218	-211	-0.000
[Se	77		ug/L		4684	-0.001
[Se	82	0.267	ug/L	26.843	15	0.000
[Kr	83		ug/L		68	-0.000
[Mo	98	0.021	ug/L	33.403	187	0.000
[Ag	107	0.005	ug/L	46.044	95	0.000
[Cd	111	0.004	ug/L	485.211	37	0.000
[Cd	114		ug/L		90	0.000
[> In	115		ug/L		201238	201237.579
[Sb	121	0.058	ug/L	30.324	461	0.001
[Sb	123		ug/L		350	0.001
[> Lu	175		ug/L		390292	390291.566
[Ti	205	0.634	ug/L	11.737	11615	0.024
[Pb	208	0.006	ug/L	125.309	3989	0.000
[U	238	0.002	ug/L	60.018	1024	0.000

Sample ID: QC Std 9

Report Date/Time: Monday, April 12, 2010 22:04:36

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9					
[>	Sc	45			95.6		
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Ni	60					
[>	Ge	74			96.2		
|	As	75					
|	Se	77					
|	Se	82					
|	Kr	83					
[	Mo	98					
|	Ag	107					
|	Cd	111					
|	Cd	114					
[>	In	115			96.4		
|	Sb	121					
|	Sb	123					
[>	Lu	175			96.4		
|	Tl	205					
|	Pb	208					
|	U	238					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202065072

Sample Date/Time: Monday, April 12, 2010 22:12:10

Sample Type:

Sample Description: LANL 6020 DUP

Number of Replicates: 3

Batch ID: 962585|1|prb

Method File: c:\elandata\Method\lanl liquid.mth

Dataset File: C:\elandata\Dataset\100412\1202065072.205

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	0.019	ug/L	76.106	21	0.000
> Sc	45		ug/L		651349	651348.699
Cr	52	-0.246	ug/L	60.444	-3095	-0.001
Cr	53		ug/L		148847	0.119
Mn	55	0.709	ug/L	3.307	5030	0.006
Ni	60	0.078	ug/L	25.135	156	0.000
> Ge	74		ug/L		284452	284451.523
As	75	-0.362	ug/L	145.968	-436	-0.001
Se	77		ug/L		12424	0.026
Se	82	0.284	ug/L	88.940	16	0.000
Kr	83		ug/L		73	-0.000
Mo	98	-0.020	ug/L	25.951	94	-0.000
Ag	107	-0.001	ug/L	356.709	71	-0.000
Cd	111	0.042	ug/L	47.503	74	0.000
Cd	114		ug/L		164	0.000
> In	115		ug/L		196743	196743.043
Sb	121	-0.008	ug/L	19.363	206	-0.000
Sb	123		ug/L		166	-0.000
> Lu	175		ug/L		378812	378811.928
Tl	205	0.039	ug/L	20.821	2898	0.001
Pb	208	0.032	ug/L	3.042	4554	0.002
U	238	-0.022	ug/L	2.060	188	-0.002

Sample ID: 1202065072

Report Date/Time: Monday, April 12, 2010 22:13:47

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[	Be	9					
[>	Sc	45			92.3		
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Ni	60					
[>	Ge	74			96.6		
|	As	75					
|	Se	77					
|	Se	82					
|	Kr	83					
[	Mo	98					
|	Ag	107					
|	Cd	111					
|	Cd	114					
[>	In	115			94.2		
|	Sb	121					
|	Sb	123					
[>	Lu	175			93.6		
|	Tl	205					
|	Pb	208					
|	U	238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202065073

Sample Date/Time: Monday, April 12, 2010 22:16:46

Sample Type:

Sample Description: LANL 6020 MS

Number of Replicates: 3

Batch ID: 962585|1|prb

Method File: c:\elandata\Method\Vanl liquid.mth

Dataset File: C:\elandata\Dataset\100412\1202065073.206

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	57.737	ug/L	3.887	8780	0.013
>	Sc	45		ug/L		659587	659586.622
|	Cr	52	52.022	ug/L	1.358	158097	0.243
|	Cr	53		ug/L		166944	0.143
|	Mn	55	53.222	ug/L	3.421	305071	0.461
[	Ni	60	52.829	ug/L	3.369	47722	0.072
>	Ge	74		ug/L		282376	282375.990
|	As	75	80.500	ug/L	3.017	55658	0.198
|	Se	77		ug/L		13615	0.030
|	Se	82	21.475	ug/L	3.223	1498	0.005
[	Kr	83		ug/L		90	0.000
[	Mo	98	50.503	ug/L	2.256	109910	0.554
|	Ag	107	53.299	ug/L	1.277	197951	0.999
|	Cd	111	10.906	ug/L	3.451	10920	0.055
|	Cd	114		ug/L		25141	0.127
>	In	115		ug/L		198077	198077.287
|	Sb	121	221.080	ug/L	3.186	832545	4.204
[	Sb	123		ug/L		656236	3.313
>	Lu	175		ug/L		390342	390342.341
|	Tl	205	84.253	ug/L	2.954	1227180	3.136
|	Pb	208	40.990	ug/L	1.995	1108583	2.831
[U	238	49.521	ug/L	1.967	1715802	4.394

Sample ID: 1202065073

Report Date/Time: Monday, April 12, 2010 22:18:23

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[	Be	9					
[>	Sc	45		93.5			
|	Cr	52					
|	Cr	53					
|	Mn	55					
[	Ni	60					
[>	Ge	74		95.9			
|	As	75					
|	Se	77					
|	Se	82					
[	Kr	83					
[	Mo	98					
|	Ag	107					
|	Cd	111					
|	Cd	114					
[>	In	115		94.9			
|	Sb	121					
[	Sb	123					
[>	Lu	175		96.4			
|	Tl	205					
|	Pb	208					
[	U	238					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202065074

Sample Date/Time: Monday, April 12, 2010 22:21:22

Sample Type:

Sample Description: LANL 6020 SDILT

Number of Replicates: 3

Batch ID: 962585|5|prb

Method File: c:\elandata\Method\lanl liquid.mth

Dataset File: C:\elandata\Dataset\100412\1202065074.207

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	-0.018	ug/L	140.526	16	-0.000
>	Sc	45		ug/L		676558	676557.734
|	Cr	52	-0.280	ug/L	18.992	-3329	-0.001
|	Cr	53		ug/L		99082	0.037
|	Mn	55	0.140	ug/L	10.763	1891	0.001
[	Ni	60	0.033	ug/L	52.940	120	0.000
>	Ge	74		ug/L		285073	285072.881
|	As	75	-0.397	ug/L	102.312	-459	-0.001
|	Se	77		ug/L		7140	0.007
|	Se	82	0.023	ug/L	332.977	-2	0.000
[	Kr	83		ug/L		82	-0.000
[	Mo	98	-0.013	ug/L	33.730	114	-0.000
|	Ag	107	-0.004	ug/L	24.156	61	-0.000
|	Cd	111	0.008	ug/L	68.731	42	0.000
|	Cd	114		ug/L		105	0.000
>	In	115		ug/L		205359	205359.495
|	Sb	121	-0.013	ug/L	25.900	194	-0.000
[	Sb	123		ug/L		150	-0.000
>	Lu	175		ug/L		395924	395924.129
|	Tl	205	1.772	ug/L	8.934	28583	0.066
|	Pb	208	0.019	ug/L	11.437	4402	0.001
[U	238	-0.024	ug/L	1.341	111	-0.002

Sample ID: 1202065074

Report Date/Time: Monday, April 12, 2010 22:22:59

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9					
[>	Sc	45			95.9		
|	Cr	52					
|	Cr	53					
|	Mn	55					
[	Ni	60					
[>	Ge	74			96.8		
|	As	75					
|	Se	77					
|	Se	82					
[	Kr	83					
[	Mo	98					
|	Ag	107					
|	Cd	111					
|	Cd	114					
[>	In	115			98.4		
|	Sb	121					
[	Sb	123					
[>	Lu	175			97.8		
|	Tl	205					
|	Pb	208					
[	U	238					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Monday, April 12, 2010 22:30:34

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\Vanl liquid.mth

Dataset File: C:\elandata\Dataset\100412\QC Std 6.209

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	50.504	ug/L	8.396	8090	0.012
> Sc	45		ug/L		695468	695468.280
| Cr	52	50.338	ug/L	1.650	161184	0.235
| Cr	53		ug/L		99761	0.034
| Mn	55	51.417	ug/L	1.920	310829	0.445
| Ni	60	51.595	ug/L	1.840	49152	0.071
> Ge	74		ug/L		291628	291628.170
| As	75	52.079	ug/L	3.178	37121	0.128
| Se	77		ug/L		7821	0.009
| Se	82	51.792	ug/L	0.373	3735	0.013
| Kr	83		ug/L		91	0.000
| Mo	98	49.844	ug/L	4.504	112257	0.547
| Ag	107	52.537	ug/L	3.492	201933	0.985
| Cd	111	51.158	ug/L	2.823	52911	0.258
| Cd	114		ug/L		126378	0.616
> In	115		ug/L		205053	205052.717
| Sb	121	54.023	ug/L	2.929	210798	1.027
| Sb	123		ug/L		164243	0.800
> Lu	175		ug/L		405006	405005.980
| Tl	205	48.384	ug/L	2.757	731878	1.801
| Pb	208	51.803	ug/L	1.296	1452921	3.578
| U	238	51.111	ug/L	0.713	1837754	4.535

Sample ID: QC Std 6

Report Date/Time: Monday, April 12, 2010 22:32:12

Page 1

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9	101.007				
|>	Sc	45		98.6			
|	Cr	52	100.676				
|	Cr	53					
|	Mn	55	102.834				
|	Ni	60	103.189				
|>	Ge	74		99.0			
|	As	75	104.158				
|	Se	77					
|	Se	82	103.585				
|	Kr	83					
|	Mo	98	99.688				
|	Ag	107	105.073				
|	Cd	111	102.317				
|	Cd	114					
|>	In	115		98.2			
|	Sb	121	108.045				
|	Sb	123					
|>	Lu	175		100.0			
|	Tl	205	96.767				
|	Pb	208	103.605				
|	U	238	102.221				

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Monday, April 12, 2010 22:35:12

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\anl liquid.mth

Dataset File: C:\elandata\Dataset\100412\QC Std 7.210

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	-0.004	ug/L	484.355	19	-0.000
>	Sc	45		ug/L		691133	691133.199
|	Cr	52	-0.218	ug/L	30.855	-3201	-0.001
|	Cr	53		ug/L		77096	0.002
|	Mn	55	-0.013	ug/L	58.958	1012	-0.000
|	Ni	60	0.002	ug/L	552.221	93	0.000
>	Ge	74		ug/L		290483	290483.251
|	As	75	0.152	ug/L	78.782	-78	0.000
|	Se	77		ug/L		4876	-0.001
|	Se	82	0.149	ug/L	5.777	7	0.000
|	Kr	83		ug/L		81	-0.000
|	Mo	98	0.023	ug/L	25.199	194	0.000
|	Ag	107	0.001	ug/L	245.012	82	0.000
|	Cd	111	0.006	ug/L	141.114	40	0.000
|	Cd	114		ug/L		74	-0.000
>	In	115		ug/L		204855	204854.693
|	Sb	121	0.051	ug/L	4.327	445	0.001
|	Sb	123		ug/L		348	0.001
>	Lu	175		ug/L		401978	401977.721
|	Tl	205	0.837	ug/L	7.703	15016	0.031
|	Pb	208	-0.002	ug/L	68.117	3903	-0.000
	U	238	-0.002	ug/L	79.555	915	-0.000

Sample ID: QC Std 7

Report Date/Time: Monday, April 12, 2010 22:36:50

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Df	Duplicate Rel. % Difference
[	Be	9					
[>	Sc	45		98.0			
[	Cr	52					
[	Cr	53					
[	Mn	55					
[	Ni	60					
[>	Ge	74		98.6			
[	As	75					
[	Se	77					
[	Se	82					
[	Kr	83					
[	Mo	98					
[	Ag	107					
[	Cd	111					
[	Cd	114					
[>	In	115		98.1			
[	Sb	121					
[	Sb	123					
[>	Lu	175		99.3			
[	Tl	205					
[	Pb	208					
[	U	238					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: Blank
Sample Date/Time: Tuesday, April 13, 2010 09:05:51
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\sb only.mth
Dataset File: C:\elandata\Dataset\100412\Blank.395

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
> In	115		ug/L		180813	
| Sb	121		ug/L		604	
| Sb	123		ug/L		492	

Calibration

Analyte	MassCurve Type	Correlation Coefficient
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	
Sb	123Linear Thru Zero	

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel.	% Difference
> In	115						
| Sb	121						
Sb	123						

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: Standard 1

Sample Date/Time: Tuesday, April 13, 2010 09:08:09

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\sb only.mth

Dataset File: C:\elandata\Dataset\100412\Standard 1.396

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	In	115		ug/L		180147	180146.549
|	Sb	121	10.000	ug/L	12.601	34350	0.188
|	Sb	123		ug/L		26835	0.147

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel.	% Difference
>	In	115						
|	Sb	121						
	Sb	123						

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: Standard 2

Sample Date/Time: Tuesday, April 13, 2010 09:10:26

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\sb only.mth

Dataset File: C:\elandata\Dataset\100412\Standard 2.397

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	In	115		ug/L		169523	169522.817
|	Sb	121	100.108	ug/L	16.205	355676	2.114
|	Sb	123		ug/L		278723	1.654

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	In	115					
|	Sb	121					
	Sb	123					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 1

Sample Date/Time: Tuesday, April 13, 2010 09:12:43

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\sb only.mth

Dataset File: C:\elandata\Dataset\100412\QC Std 1.398

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	In	115		ug/L		178568	178568.397
|	Sb	121	54.670	ug/L	9.863	205955	1.155
|	Sb	123		ug/L		159945	0.897

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	In	115		98.8			
|	Sb	121	109.340				
|	Sb	123					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 1

Report Date/Time: Tuesday, April 13, 2010 09:13:02

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ICPMS#5 - Summary Report

Sample ID: QC Std 2

Sample Date/Time: Tuesday, April 13, 2010 09:15:02

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\sb only.mth

Dataset File: C:\elandata\Dataset\100412\QC Std 2.399

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	In	115		ug/L		179902	179902.488
|	Sb	121	0.244	ug/L	27.593	1511	0.005
|	Sb	123		ug/L		1125	0.004

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution %	Duplicate Rel. % Difference
[>	In	115		99.5			
|	Sb	121					
	Sb	123					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 3

Sample Date/Time: Tuesday, April 13, 2010 09:17:21

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\sb only.mth

Dataset File: C:\elandata\Dataset\100412\QC Std 3.400

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	In	115		ug/L		180295	180294.627
|	Sb	121	3.058	ug/L	14.329	12195	0.065
|	Sb	123		ug/L		9479	0.050

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel.	% Difference
[>	In	115		99.7				
|	Sb	121	101.941					
|	Sb	123						

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 4

Sample Date/Time: Tuesday, April 13, 2010 09:19:39

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\sb only.mth

Dataset File: C:\elandata\Dataset\100412\QC Std 4.401

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	In	115		ug/L		173646	173645.971
|	Sb	121	0.135	ug/L	26.709	1071	0.003
L	Sb	123		ug/L		877	0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[>	In	115		96.0			
|	Sb	121					
L	Sb	123					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 5

Sample Date/Time: Tuesday, April 13, 2010 09:21:57

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\sb only.mth

Dataset File: C:\elandata\Dataset\100412\QC Std 5.402

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
In	115		ug/L		173487	173486.695
Sb	121	20.282	ug/L	11.925	74516	0.428
Sb	123		ug/L		59081	0.340

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
In	115		95.9			
Sb	121	101.411				
Sb	123					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Tuesday, April 13, 2010 09:24:16

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\sb only.mth

Dataset File: C:\elandata\Dataset\100412\QC Std 6.403

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	In	115		ug/L		187796	187796.250
|	Sb	121	52.957	ug/L	13.740	209165	1.118
|	Sb	123		ug/L		160343	0.856

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel.	% Difference
[>	In	115		103.9				
|	Sb	121	105.913					
|	Sb	123						

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Tuesday, April 13, 2010 09:26:36

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\sb only.mth

Dataset File: C:\elandata\Dataset\100412\QC Std 7.404

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	In	115		ug/L		189372	189371.518
|	Sb	121	-0.036	ug/L	32.430	488	-0.001
|	Sb	123		ug/L		383	-0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[>	In	115		104.7			
|	Sb	121					
	Sb	123					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202065070

Sample Date/Time: Tuesday, April 13, 2010 09:28:55

Sample Type:

Sample Description: LANL 6020 MB

Number of Replicates: 3

Batch ID: 962585|1|prb

Method File: c:\elandata\Method\sb only.mth

Dataset File: C:\elandata\Dataset\100412\1202065070.405

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	In	115		ug/L		181341	181341.308
|	Sb	121	-0.043	ug/L	23.482	439	-0.001
|	Sb	123		ug/L		358	-0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	In	115		100.3			
|	Sb	121					
|	Sb	123					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202065071

Sample Date/Time: Tuesday, April 13, 2010 09:31:13

Sample Type:

Sample Description: LANL 6020 LCS

Number of Replicates: 3

Batch ID: 962585|1|prb

Method File: c:\elandata\Method\sb only.mth

Dataset File: C:\elandata\Dataset\100412\1202065071.406

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	In	115		ug/L		181306	181305.703
|	Sb	121	54.443	ug/L	14.033	207758	1.150
L	Sb	123		ug/L		164234	0.907

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[>	In	115		100.3			
|	Sb	121					
L	Sb	123					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 248523001

Sample Date/Time: Tuesday, April 13, 2010 09:40:27

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 9625851|prb

Method File: c:\elandata\Method\sb only.mth

Dataset File: C:\elandata\Dataset\100412\248523001.410

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	In	115		ug/L		186146	186146.245
|	Sb	121	-0.116	ug/L	4.407	164	-0.002
L	Sb	123		ug/L		126	-0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[>	In	115		102.9			
|	Sb	121					
L	Sb	123					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 8

Sample Date/Time: Tuesday, April 13, 2010 09:42:46

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\sb only.mth

Dataset File: C:\elandata\Dataset\100412\QC Std 8.411

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	In	115		ug/L		189845	189845.163
|	Sb	121	53.116	ug/L	14.120	212149	1.122
|	Sb	123		ug/L		163405	0.863

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel.	% Difference
[>	In	115		105.0				
|	Sb	121	106.232					
|	Sb	123						

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 9

Sample Date/Time: Tuesday, April 13, 2010 09:45:06

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\sb only.mth

Dataset File: C:\elandata\Dataset\100412\QC Std 9.412

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	In	115		ug/L		193118	193118.426
|	Sb	121	-0.060	ug/L	19.842	398	-0.001
|	Sb	123		ug/L		283	-0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[>	In	115		106.8			
|	Sb	121					
|	Sb	123					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202065072

Sample Date/Time: Tuesday, April 13, 2010 09:49:44

Sample Type:

Sample Description: LANL 6020 DUP

Number of Replicates: 3

Batch ID: 962585|1|prb

Method File: c:\elandata\Method\sb only.mth

Dataset File: C:\elandata\Dataset\100412\1202065072.414

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	In	115		ug/L		184390	184389.771
|	Sb	121	-0.117	ug/L	3.074	158	-0.002
|	Sb	123		ug/L		130	-0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
>	In	115		102.0			
|	Sb	121					
|	Sb	123					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

Sample ID: 1202065072

Report Date/Time: Tuesday, April 13, 2010 09:50:04

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ICPMS#5 - Summary Report

Sample ID: 1202065073

Sample Date/Time: Tuesday, April 13, 2010 09:52:02

Sample Type:

Sample Description: LANL 6020 MS

Number of Replicates: 3

Batch ID: 962585|1|prb

Method File: c:\elandata\Method\sb only.mth

Dataset File: C:\elandata\Dataset\100412\1202065073.415

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	In	115		ug/L		177073	177073.127
|	Sb	121	206.392	ug/L	16.259	765685	4.359
|	Sb	123		ug/L		612857	3.483

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[>	In	115		97.9			
|	Sb	121					
|	Sb	123					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202065074

Sample Date/Time: Tuesday, April 13, 2010 09:54:20

Sample Type:

Sample Description: LANL 6020 SDILT

Number of Replicates: 3

Batch ID: 962585|5|prb

Method File: c:\elandata\Method\sb only.mth

Dataset File: C:\elandata\Dataset\100412\1202065074.416

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	In	115		ug/L		186632	186632.365
|	Sb	121	-0.063	ug/L	19.475	371	-0.001
L	Sb	123		ug/L		293	-0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	In	115		103.2			
|	Sb	121					
L	Sb	123					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
------------------	---------	------	-----------------------

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Tuesday, April 13, 2010 09:58:58

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\sb only.mth

Dataset File: C:\elandata\Dataset\100412\QC Std 6.418

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	In	115		ug/L		186004	186004.311
|	Sb	121	53.969	ug/L	8.312	212055	1.140
|	Sb	123		ug/L		165022	0.887

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[>	In	115		102.9			
|	Sb	121	107.938				
|	Sb	123					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Tuesday, April 13, 2010 10:01:18

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\sb only.mth

Dataset File: C:\elandata\Dataset\100412\QC Std 7.419

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	In	115		ug/L		201693	201692.772
|	Sb	121	-0.072	ug/L	19.248	366	-0.002
|	Sb	123		ug/L		294	-0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
>	In	115		111.5			
|	Sb	121					
|	Sb	123					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
------------------	---------	------	-----------------------

QC Action

QC Action Line: No QC out of limits detected

=====
Analysis Begun

Logged In Analyst: Administrator

Technique: AA FIMS-MHS

Spectrometer Model: FIMS-100, S/N B050-9550

Autosampler Model: S10

Sample Information File: C:\data-AA\Administrator\Sample Information\031310W1.SIF

Batch ID:

Results Data Set: 031310W1

Results Library: C:\data-AA\Administrator\Results\Results.mdb
=====

Method Loaded

Method Name: WATER

Method Last Saved: 2/8/2010 13:04:57

Method Description: 7470A, 245.2, ILM04 ANALYST JXL
=====

Sequence No.: 1

Autosampler Location: 1

Sample ID: Calib Blank

Date Collected: 3/13/2010 07:06:01

Analyst:

Data Type: Original
=====

Replicate Data: Calib Blank

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.00]	0.0003	0.0001	0.0003	07:07:03	Yes
2		[0.00]	0.0003	0.0003	0.0003	07:07:38	Yes
Mean:		[0.00]	0.0003				
SD:		0.00	0.0000				
%RSD:		0.00	3.76				

Auto-zero performed.
=====

Sequence No.: 2

Autosampler Location: 2

Sample ID: S0.2

Date Collected: 3/13/2010 07:07:57

Analyst:

Data Type: Original
=====

Replicate Data: S0.2

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.2]	0.0024	0.0110	0.0026	07:08:57	Yes
2		[0.2]	0.0023	0.0104	0.0025	07:09:32	Yes
Mean:		[0.2]	0.0023				
SD:		0.0	0.0001				
%RSD:		0.0	3.43				

Standard number 1 applied. [0.2]

Correlation Coef.: 1.000000 Slope: 0.01159 Intercept: 0.00000
=====

Sequence No.: 3

Autosampler Location: 3

Sample ID: S0.5

Date Collected: 3/13/2010 07:09:51

Analyst:

Data Type: Original
=====

Replicate Data: S0.5

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.5]	0.0056	0.0261	0.0059	07:10:52	Yes
2		[0.5]	0.0056	0.0259	0.0059	07:11:27	Yes
Mean:		[0.5]	0.0056				
SD:		0.0	0.0000				
%RSD:		0.0	0.01				

Standard number 2 applied. [0.5]

Correlation Coef.: 0.999927 Slope: 0.01128 Intercept: 0.00002
=====

Sequence No.: 4

Autosampler Location: 4

Sample ID: S2.0

Date Collected: 3/13/2010 07:11:46

Analyst:

Data Type: Original
=====

Replicate Data: S2.0

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[2.0]	0.0231	0.1060	0.0233	07:12:48	Yes
2		[2.0]	0.0232	0.1057	0.0235	07:13:23	Yes
Mean:		[2.0]	0.0231				
SD:		0.0	0.0001				
%RSD:		0.0	0.38				

Standard number 3 applied. [2.0]
Correlation Coef.: 0.999978 Slope: 0.01158 Intercept: -0.00004

Sequence No.: 5

Sample ID: S5.0

Analyst:

Autosampler Location: 5

Date Collected: 3/13/2010 07:13:43

Data Type: Original

Replicate Data: S5.0

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[5.0]	0.0576	0.2651	0.0579	07:14:44	Yes
2		[5.0]	0.0576	0.2650	0.0578	07:15:19	Yes
Mean:		[5.0]	0.0576				
SD:		0.0	0.0000				
%RSD:		0.0	0.08				

Standard number 4 applied. [5.0]
Correlation Coef.: 0.999995 Slope: 0.01153 Intercept: -0.00001

Sequence No.: 6

Sample ID: S10.0

Analyst:

Autosampler Location: 6

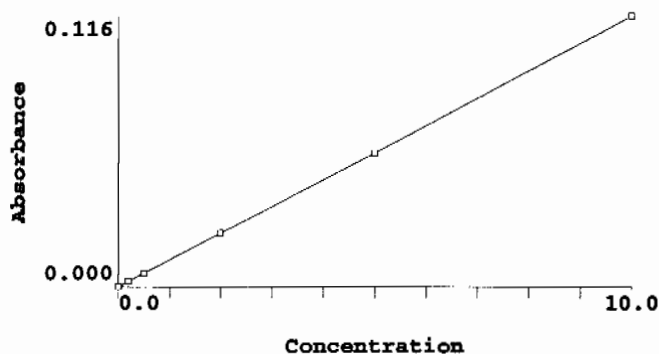
Date Collected: 3/13/2010 07:15:39

Data Type: Original

Replicate Data: S10.0

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[10.0]	0.1155	0.5378	0.1158	07:16:40	Yes
2		[10.0]	0.1157	0.5387	0.1159	07:17:14	Yes
Mean:		[10.0]	0.1156				
SD:		0.0	0.0001				
%RSD:		0.0	0.08				

Standard number 5 applied. [10.0]
Correlation Coef.: 0.999998 Slope: 0.01156 Intercept: -0.00005

-----
Calibration data for Hg 253.7

Equation: Linear, Calculated Intercept

ID	Mean Signal (Abs)	Entered Conc. ug/L	Calculated Conc. ug/L	Standard Deviation	%RSD
Calib Blank	0.0000	0	0.004	0.00	3.8
S0.2	0.0023	0.2	0.205	0.00	3.4
S0.5	0.0056	0.5	0.493	0.00	0.0
S2.0	0.0231	2.0	2.006	0.00	0.4

S5.0	0.0576	5.0	4.987	0.00	0.1
S10.0	0.1156	10.0	10.006	0.00	0.1

Correlation Coef.: 0.999998 Slope: 0.01156 Intercept: -0.00005

Sequence No.: 7

Sample ID: ICV

Analyst:

Autosampler Location: 9

Date Collected: 3/13/2010 07:17:33

Data Type: Original

Replicate Data: ICV

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.116	5.116	0.0591	0.2724	0.0593	07:18:34	Yes
2	5.078	5.078	0.0586	0.2706	0.0589	07:19:10	Yes
Mean:	5.097	5.097	0.0589				
SD:	0.027	0.027	0.0003				
%RSD:	0.521	0.521	0.52				

QC value within limits for Hg 253.7 Recovery = 101.94%
All analyte(s) passed QC.

Sequence No.: 8

Sample ID: ICB

Analyst:

Autosampler Location: 10

Date Collected: 3/13/2010 07:19:29

Data Type: Original

Replicate Data: ICB

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.003	-0.003	-0.0001	-0.0006	0.0002	07:20:31	Yes
2	0.000	0.000	-0.0000	-0.0005	0.0002	07:21:06	Yes
Mean:	-0.001	-0.001	-0.0001				
SD:	0.002	0.002	0.0000				
%RSD:	159.4	159.4	42.51				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 9

Sample ID: CRDL

Analyst:

Autosampler Location: 11

Date Collected: 3/13/2010 07:21:25

Data Type: Original

Replicate Data: CRDL

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.198	0.198	0.0022	0.0107	0.0025	07:22:27	Yes
2	0.199	0.199	0.0023	0.0108	0.0025	07:23:02	Yes
Mean:	0.199	0.199	0.0022				
SD:	0.001	0.001	0.0000				
%RSD:	0.293	0.293	0.30				

QC value within limits for Hg 253.7 Recovery = 99.29%
All analyte(s) passed QC.

Sequence No.: 10

Sample ID: CCV

Analyst:

Autosampler Location: 7

Date Collected: 3/13/2010 07:23:22

Data Type: Original

Replicate Data: CCV

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.047	5.047	0.0583	0.2704	0.0586	07:24:22	Yes
2	5.032	5.032	0.0581	0.2689	0.0584	07:24:57	Yes
Mean:	5.039	5.039	0.0582				
SD:	0.011	0.011	0.0001				
%RSD:	0.215	0.215	0.21				

QC value within limits for Hg 253.7 Recovery = 100.79%
All analyte(s) passed QC.

Sequence No.: 11
Sample ID: CCB
Analyst:

Autosampler Location: 8
Date Collected: 3/13/2010 07:25:16
Data Type: Original

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.001	-0.001	-0.0001	-0.0004	0.0002	07:26:17	Yes
2	0.006	0.006	0.0000	0.0001	0.0003	07:26:51	Yes
Mean:	0.002	0.002	-0.0000				
SD:	0.005	0.005	0.0001				
%RSD:	230.2	230.2	281.11				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 12
Sample ID: 1202056683|959019|1
Analyst: JXL

Autosampler Location: 12
Date Collected: 3/13/2010 07:27:11
Data Type: Original

Replicate Data: 1202056683|959019|1

Repl #	SampleConc ug/L	StndConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.001	0.001	-0.0000	-0.0003	0.0002	07:28:12	Yes
2	0.003	0.003	-0.0000	0.0001	0.0003	07:28:47	Yes
Mean:	0.002	0.002	-0.0000				
SD:	0.001	0.001	0.0000				
%RSD:	54.12	54.12	61.22				

Sequence No.: 13
Sample ID: 247669001|959019|1
Analyst: JXL

Autosampler Location: 13
Date Collected: 3/13/2010 07:29:07
Data Type: Original

Replicate Data: 247669001|959019|1

Repl #	SampleConc ug/L	StndConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.285	0.285	0.0033	0.0150	0.0035	07:30:09	Yes
2	0.291	0.291	0.0033	0.0151	0.0036	07:30:44	Yes
Mean:	0.288	0.288	0.0033				
SD:	0.004	0.004	0.0000				
%RSD:	1.257	1.257	1.28				

Sequence No.: 14
Sample ID: 247669002|959019|1
Analyst: JXL

Autosampler Location: 14
Date Collected: 3/13/2010 07:31:04
Data Type: Original

Replicate Data: 247669002|959019|1

Repl #	SampleConc ug/L	StndConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.429	0.429	0.0049	0.0230	0.0052	07:32:05	Yes
2	0.426	0.426	0.0049	0.0229	0.0051	07:32:40	Yes
Mean:	0.427	0.427	0.0049				
SD:	0.002	0.002	0.0000				
%RSD:	0.463	0.463	0.47				

Sequence No.: 15
Sample ID: 1202069597|964675|1
Analyst: JXL

Autosampler Location: 15
Date Collected: 3/13/2010 07:32:59
Data Type: Original

Replicate Data: 1202069597|964675|1

Repl	SampleConc	StndConc	BlkCorr	Peak	Peak	Time	Peak
------	------------	----------	---------	------	------	------	------

Replicate Data: 1202069601|964675|500

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.002	0.002	-0.0000	0.0005	0.0002	07:43:33	Yes
2	0.003	0.003	-0.0000	0.0008	0.0003	07:44:08	Yes
Mean:	0.002	0.002	-0.0000				
SD:	0.000	0.000	0.0000				
%RSD:	20.17	20.17	29.29				

Sequence No.: 21

Autosampler Location: 21

Sample ID: 249148002|964675|100

Date Collected: 3/13/2010 07:44:27

Analyst: JXL

Data Type: Original

Replicate Data: 249148002|964675|100

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.004	0.004	-0.0000	0.0010	0.0003	07:45:29	Yes
2	0.009	0.009	0.0001	0.0013	0.0003	07:46:04	Yes
Mean:	0.006	0.006	0.0000				
SD:	0.003	0.003	0.0000				
%RSD:	51.00	51.00	144.96				

Sequence No.: 22

Autosampler Location: 7

Sample ID: CCV

Date Collected: 3/13/2010 07:46:23

Analyst:

Data Type: Original

Replicate Data: CCV

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	4.999	4.999	0.0577	0.2686	0.0580	07:47:24	Yes
2	4.942	4.942	0.0571	0.2675	0.0573	07:47:59	Yes
Mean:	4.971	4.971	0.0574				
SD:	0.040	0.040	0.0005				
%RSD:	0.811	0.811	0.81				

QC value within limits for Hg 253.7 Recovery = 99.42%

All analyte(s) passed QC.

Sequence No.: 23

Autosampler Location: 8

Sample ID: CCB

Date Collected: 3/13/2010 07:48:18

Analyst:

Data Type: Original

Replicate Data: CCB

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.014	0.014	0.0001	0.0024	0.0004	07:49:18	Yes
2	0.017	0.017	0.0001	0.0032	0.0004	07:49:53	Yes
Mean:	0.016	0.016	0.0001				
SD:	0.002	0.002	0.0000				
%RSD:	12.14	12.14	16.46				

QC value within limits for Hg 253.7 Recovery = Not calculated

All analyte(s) passed QC.

Sequence No.: 24

Autosampler Location: 22

Sample ID: 1202056673|959008|1

Date Collected: 3/13/2010 07:50:12

Analyst: JXL

Data Type: Original

Replicate Data: 1202056673|959008|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.012	0.012	0.0001	0.0018	0.0004	07:51:14	Yes
2	0.012	0.012	0.0001	0.0018	0.0004	07:51:49	Yes

Mean: 0.012 0.012 0.0001
SD: 0.000 0.000 0.0000
%RSD: 2.244 2.244 3.42

Sequence No.: 25

Sample ID: 247635001|959008|1

Analyst: JXL

Autosampler Location: 23

Date Collected: 3/13/2010 07:52:08

Data Type: Original

Replicate Data: 247635001|959008|1

Repl	SampleConc	StndConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.323	0.323	0.0037	0.0190	0.0040	07:53:10	Yes
2	0.324	0.324	0.0037	0.0191	0.0040	07:53:45	Yes
Mean:	0.324	0.324	0.0037				
SD:	0.001	0.001	0.0000				
%RSD:	0.162	0.162	0.16				

Sequence No.: 26

Sample ID: 247635002|959008|1

Analyst: JXL

Autosampler Location: 24

Date Collected: 3/13/2010 07:54:05

Data Type: Original

Replicate Data: 247635002|959008|1

Repl	SampleConc	StndConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.477	0.477	0.0055	0.0270	0.0057	07:55:06	Yes
2	0.473	0.473	0.0054	0.0260	0.0057	07:55:41	Yes
Mean:	0.475	0.475	0.0054				
SD:	0.003	0.003	0.0000				
%RSD:	0.602	0.602	0.61				

Sequence No.: 27

Sample ID: 1202068540|964196|1

Analyst: JXL

Autosampler Location: 25

Date Collected: 3/13/2010 07:56:01

Data Type: Original

Replicate Data: 1202068540|964196|1

Repl	SampleConc	StndConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.009	0.009	0.0001	0.0013	0.0003	07:57:03	Yes
2	0.010	0.010	0.0001	0.0015	0.0003	07:57:38	Yes
Mean:	0.009	0.009	0.0001				
SD:	0.001	0.001	0.0000				
%RSD:	7.909	7.909	14.20				

Sequence No.: 28

Sample ID: 1202068541|964196|1

Analyst: JXL

Autosampler Location: 26

Date Collected: 3/13/2010 07:57:58

Data Type: Original

Replicate Data: 1202068541|964196|1

Repl	SampleConc	StndConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	2.302	2.302	0.0266	0.1234	0.0268	07:58:59	Yes
2	2.287	2.287	0.0264	0.1221	0.0266	07:59:34	Yes
Mean:	2.294	2.294	0.0265				
SD:	0.011	0.011	0.0001				
%RSD:	0.465	0.465	0.47				

Sequence No.: 29

Sample ID: 248380001|964196|1

Analyst: JXL

Autosampler Location: 27

Date Collected: 3/13/2010 07:59:53

Data Type: Original

Replicate Data: 248380001|964196|1

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.013	0.013	0.0001	0.0020	0.0004	08:00:54	Yes
2	0.021	0.021	0.0002	0.0033	0.0005	08:01:28	Yes
Mean:	0.017	0.017	0.0001				
SD:	0.006	0.006	0.0001				
%RSD:	33.77	33.77	44.57				

Sequence No.: 30

Sample ID: 248390001|964196|1

Analyst: JXL

Autosampler Location: 28

Date Collected: 3/13/2010 08:01:48

Data Type: Original

Replicate Data: 248390001|964196|1

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.013	0.013	0.0001	0.0022	0.0004	08:02:48	Yes
2	0.016	0.016	0.0001	0.0021	0.0004	08:03:23	Yes
Mean:	0.014	0.014	0.0001				
SD:	0.002	0.002	0.0000				
%RSD:	13.65	13.65	19.08				

Sequence No.: 31

Sample ID: 248402001|964196|1

Analyst: JXL

Autosampler Location: 29

Date Collected: 3/13/2010 08:03:42

Data Type: Original

Replicate Data: 248402001|964196|1

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.013	0.013	0.0001	0.0028	0.0004	08:04:43	Yes
2	0.020	0.020	0.0002	0.0038	0.0004	08:05:18	Yes
Mean:	0.016	0.016	0.0001				
SD:	0.005	0.005	0.0001				
%RSD:	30.84	30.84	41.23				

Sequence No.: 32

Sample ID: 248516001|964196|1

Analyst: JXL

Autosampler Location: 30

Date Collected: 3/13/2010 08:05:37

Data Type: Original

Replicate Data: 248516001|964196|1

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.010	0.010	0.0001	0.0020	0.0003	08:06:38	Yes
2	0.004	0.004	-0.0000	0.0012	0.0003	08:07:12	Yes
Mean:	0.007	0.007	0.0000				
SD:	0.005	0.005	0.0001				
%RSD:	67.34	67.34	164.84				

Sequence No.: 33

Sample ID: 248516002|964196|1

Analyst: JXL

Autosampler Location: 31

Date Collected: 3/13/2010 08:07:32

Data Type: Original

Replicate Data: 248516002|964196|1

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.005	0.005	0.0000	0.0014	0.0003	08:08:33	Yes
2	0.008	0.008	0.0000	0.0016	0.0003	08:09:07	Yes
Mean:	0.006	0.006	0.0000				
SD:	0.002	0.002	0.0000				
%RSD:	26.39	26.39	73.83				

Sequence No.: 34

Sample ID: CCV

Autosampler Location: 7

Date Collected: 3/13/2010 08:09:27

Analyst:

Data Type: Original

Replicate Data: CCV

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	5.004	5.004	0.0578	0.2733	0.0581	08:10:27	Yes
2	5.016	5.016	0.0579	0.2728	0.0582	08:11:02	Yes
Mean:	5.010	5.010	0.0579				
SD:	0.008	0.008	0.0001				
%RSD:	0.163	0.163	0.16				

QC value within limits for Hg 253.7 Recovery = 100.20%
All analyte(s) passed QC.

=====

Sequence No.: 35

Autosampler Location: 8

Sample ID: CCB

Date Collected: 3/13/2010 08:11:21

Analyst:

Data Type: Original

Replicate Data: CCB

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.009	0.009	0.0001	0.0014	0.0003	08:12:22	Yes
2	0.009	0.009	0.0001	0.0015	0.0003	08:12:57	Yes
Mean:	0.009	0.009	0.0001				
SD:	0.000	0.000	0.0000				
%RSD:	3.974	3.974	7.44				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====

Sequence No.: 36

Autosampler Location: 32

Sample ID: 248518001|964196|1

Date Collected: 3/13/2010 08:13:16

Analyst: JXL

Data Type: Original

Replicate Data: 248518001|964196|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.006	0.006	0.0000	0.0016	0.0003	08:14:17	Yes
2	0.008	0.008	0.0000	0.0019	0.0003	08:14:52	Yes
Mean:	0.007	0.007	0.0000				
SD:	0.001	0.001	0.0000				
%RSD:	19.79	19.79	45.55				

=====

Sequence No.: 37

Autosampler Location: 33

Sample ID: 248523001|964196|1

Date Collected: 3/13/2010 08:15:12

Analyst: JXL

Data Type: Original

Replicate Data: 248523001|964196|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.006	0.006	0.0000	0.0016	0.0003	08:16:13	Yes
2	0.005	0.005	0.0000	0.0015	0.0003	08:16:48	Yes
Mean:	0.006	0.006	0.0000				
SD:	0.001	0.001	0.0000				
%RSD:	9.345	9.345	32.53				

=====

Sequence No.: 38

Autosampler Location: 34

Sample ID: 248533001|964196|1

Date Collected: 3/13/2010 08:17:07

Analyst: JXL

Data Type: Original

Replicate Data: 248533001|964196|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.007	0.007	0.0000	0.0017	0.0003	08:18:09	Yes

2	0.010	0.010	0.0001	0.0021	0.0003	08:18:43	Yes
Mean:	0.009	0.009	0.0001				
SD:	0.002	0.002	0.0000				
%RSD:	22.64	22.64	43.29				

Sequence No.: 39

Sample ID: 248535001|964196|1

Analyst: JXL

Autosampler Location: 35

Date Collected: 3/13/2010 08:19:03

Data Type: Original

Replicate Data: 248535001|964196|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.008	0.008	0.0000	0.0018	0.0003	08:20:05	Yes
2	0.005	0.005	0.0000	0.0015	0.0003	08:20:40	Yes
Mean:	0.007	0.007	0.0000				
SD:	0.002	0.002	0.0000				
%RSD:	23.87	23.87	64.80				

Sequence No.: 40

Sample ID: 248535002|964196|1

Analyst: JXL

Autosampler Location: 36

Date Collected: 3/13/2010 08:21:00

Data Type: Original

Replicate Data: 248535002|964196|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.005	0.005	0.0000	0.0014	0.0003	08:22:02	Yes
2	0.007	0.007	0.0000	0.0015	0.0003	08:22:37	Yes
Mean:	0.006	0.006	0.0000				
SD:	0.002	0.002	0.0000				
%RSD:	25.70	25.70	78.23				

Sequence No.: 41

Sample ID: 248551001|964196|1

Analyst: JXL

Autosampler Location: 37

Date Collected: 3/13/2010 08:22:57

Data Type: Original

Replicate Data: 248551001|964196|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.006	0.006	0.0000	0.0015	0.0003	08:23:59	Yes
2	0.006	0.006	0.0000	0.0014	0.0003	08:24:33	Yes
Mean:	0.006	0.006	0.0000				
SD:	0.000	0.000	0.0000				
%RSD:	4.498	4.498	14.45				

Sequence No.: 42

Sample ID: 1202068542|964196|1

Analyst: JXL

Autosampler Location: 38

Date Collected: 3/13/2010 08:24:54

Data Type: Original

Replicate Data: 1202068542|964196|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.006	0.006	0.0000	0.0015	0.0003	08:25:55	Yes
2	0.008	0.008	0.0000	0.0016	0.0003	08:26:30	Yes
Mean:	0.007	0.007	0.0000				
SD:	0.002	0.002	0.0000				
%RSD:	22.94	22.94	59.43				

Sequence No.: 43

Sample ID: 1202068543|964196|1

Analyst: JXL

Autosampler Location: 39

Date Collected: 3/13/2010 08:26:49

Data Type: Original

Replicate Data: 1202068543|964196|1

Repl #	SampleConc ug/L	StdndConc ug/L	BlndCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.086	2.086	0.0241	0.1153	0.0243	08:27:50	Yes
2	2.102	2.102	0.0242	0.1155	0.0245	08:28:25	Yes
Mean:	2.094	2.094	0.0242				
SD:	0.011	0.011	0.0001				
%RSD:	0.523	0.523	0.52				

Sequence No.: 44

Autosampler Location: 40

Sample ID: 1202068544|964196|5

Date Collected: 3/13/2010 08:28:45

Analyst: JXL

Data Type: Original

Replicate Data: 1202068544|964196|5

Repl #	SampleConc ug/L	StdndConc ug/L	BlndCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.010	0.010	0.0001	0.0016	0.0003	08:29:45	Yes
2	0.007	0.007	0.0000	0.0016	0.0003	08:30:20	Yes
Mean:	0.008	0.008	0.0000				
SD:	0.002	0.002	0.0000				
%RSD:	22.97	22.97	46.36				

Sequence No.: 45

Autosampler Location: 41

Sample ID: 248551002|964196|1

Date Collected: 3/13/2010 08:30:40

Analyst: JXL

Data Type: Original

Replicate Data: 248551002|964196|1

Repl #	SampleConc ug/L	StdndConc ug/L	BlndCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.005	0.005	0.0000	0.0012	0.0003	08:31:41	Yes
2	0.005	0.005	0.0000	0.0013	0.0003	08:32:15	Yes
Mean:	0.005	0.005	0.0000				
SD:	0.000	0.000	0.0000				
%RSD:	5.023	5.023	38.58				

Sequence No.: 46

Autosampler Location: 7

Sample ID: CCV

Date Collected: 3/13/2010 08:32:35

Analyst:

Data Type: Original

Replicate Data: CCV

Repl #	SampleConc ug/L	StdndConc ug/L	BlndCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.139	5.139	0.0594	0.2801	0.0596	08:33:35	Yes
2	5.137	5.137	0.0593	0.2796	0.0596	08:34:10	Yes
Mean:	5.138	5.138	0.0593				
SD:	0.002	0.002	0.0000				
%RSD:	0.030	0.030	0.03				

QC value within limits for Hg 253.7 Recovery = 102.76%

All analyte(s) passed QC.

Sequence No.: 47

Autosampler Location: 8

Sample ID: CCB

Date Collected: 3/13/2010 08:34:29

Analyst:

Data Type: Original

Replicate Data: CCB

Repl #	SampleConc ug/L	StdndConc ug/L	BlndCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.009	0.009	0.0001	0.0014	0.0003	08:35:30	Yes
2	0.007	0.007	0.0000	0.0013	0.0003	08:36:05	Yes
Mean:	0.008	0.008	0.0000				
SD:	0.002	0.002	0.0000				
%RSD:	25.04	25.04	51.72				

QC value within limits for Hg 253.7 Recovery = Not calculated

Miscellaneous

Prep Logbook

Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer

Batch ID: 964195.0
Analyst: Tara Griffin
Method: SW846 7470A Prep
Lab SOP: GL-MA-E-010 REV# 23
Instrument: No analytical instrument

Verified by:

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1202068541	Mercury working intermediate standard for LCS/MS	WHG100312-13	2	mL
MS	1202068543	Mercury working intermediate standard for LCS/MS	WHG100312-13	2	mL

Sample ID	Run Date	Matrix	Initial Volume (mL)	Final Volume (mL)	Prep Factor (mL/mL)	pH Check
1202068540 MB	12-MAR-2010 15:10:00	Water	20	20	1	<2
1202068541 LCS	12-MAR-2010 15:10:00	Water	20	20	1	<2
248380001	12-MAR-2010 15:10:00	Water	20	20	1	<2
248390001	12-MAR-2010 15:10:00	Water	20	20	1	<2
248402001	12-MAR-2010 15:10:00	Water	20	20	1	<2
248516001	12-MAR-2010 15:10:00	Water	20	20	1	<2
248516002	12-MAR-2010 15:10:00	Water	20	20	1	<2
248518001	12-MAR-2010 15:10:00	Water	20	20	1	<2
248523001	12-MAR-2010 15:10:00	Water	20	20	1	<2
248533001	12-MAR-2010 15:10:00	Water	20	20	1	<2
248535001	12-MAR-2010 15:10:00	Water	20	20	1	<2
248535002	12-MAR-2010 15:10:00	Water	20	20	1	<2
248551001	12-MAR-2010 15:10:00	Water	20	20	1	<2
1202068542 DUP (248551001)	12-MAR-2010 15:10:00	Water	20	20	1	<2
1202068543 MS (248551001)	12-MAR-2010 15:10:00	Water	20	20	1	<2
1202068544 SDILT (248551001)	12-MAR-2010 15:10:00	Water	20	20	1	<2
248551002	12-MAR-2010 15:10:00	Water	20	20	1	<2

Comments:
 Digestion Start Date: 12-MAR-10 15:10
 Digestion End Date: 12-MAR-10 17:10

Reagent/Solvent Lot ID	Description	Amount
1176183	Sulfuric Acid, Concentrated	1 mL
1255532-C	Hg reducing agent	1 mL
1274391-1	NITRIC ACID	.5 mL
1276435-C	5% Potassium Persulfate	1.5 mL
1277238-C	5% KMnO4 solution	3 mL
WHG100312-01a	Mercury Working 1st Source CAL 0.2/CRA	20 uL
WHG100312-02	Mercury Working 1st Source CAL 0.5	50 uL
WHG100312-03	Mercury Working 1st Source CAL 2.0	200 uL

Analytical Logbook version 1 11-04-2002

GEL Laboratories LLC

Prep Logbook

Acid Digestion of Total Recoverable or Dissolved Metals in Surface and Groundwater Samples for Analysis by ICP or ICP-MS

Batch ID: 962579.0

Analyst: Bryan Davis

Method: SW846 3005A

Lab SOP: GL-MA-E-006 REV# 9

Instrument: Metals Manual Instrument

Verified by:

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1202065056	Metals Spike Mix I	U11268741-01	.25	mL
LCS	1202065056	Metals Spike Mix II	U11268744-06	.25	mL
MS	1202065058	Metals Spike Mix I	U11268741-01	.25	mL
MS	1202065058	Metals Spike Mix II	U11268744-06	.25	mL

Sample ID	Run Date	Matrix	Initial Volume (mL)	Final Volume (mL)	Prep Factor (mL/mL)	pH Check
1202065055 MB	15-MAR-2010 09:30:00	Water	50	50	1	<2
1202065056 LCS	15-MAR-2010 09:30:00	Water	50	50	1	<2
248516001	15-MAR-2010 09:30:00	Water	50	50	1	<2
248516002	15-MAR-2010 09:30:00	Water	50	50	1	<2
248518001	15-MAR-2010 09:30:00	Water	50	50	1	<2
248523001	15-MAR-2010 09:30:00	Water	50	50	1	<2
248550001	15-MAR-2010 09:30:00	Water	50	50	1	<2
1202065057 DUP (248550001)	15-MAR-2010 09:30:00	Water	50	50	1	<2
1202065058 MS (248550001)	15-MAR-2010 09:30:00	Water	50	50	1	<2
1202065059 SDILT (248550001)	15-MAR-2010 09:30:00	Water	50	50	1	<2
248557001	15-MAR-2010 09:30:00	Water	50	50	1	<2

Reagent/Solvent Lot ID	Description	Amount	Comments:
1282564	HYDROCHLORIC ACID	2.5 mL	
1282566	Nitric Acid CONC.	1 mL	

Prep Logbook

Acid Digestion of Total Recoverable or Dissolved Metals in Surface and Groundwater Samples for Analysis by ICP or ICP-MS

Batch ID: 962584.0
Analyst: Bryan Davis
Method: SW846 3005A
Lab SOP: GL-MA-E-006 REV# 9
Instrument: Metals Manual Instrument

Verified by:

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1202065071	ICP-MS SPIKE FOR ALL CLIENTS EXCEPT DOE CLIENTS (Solution A).	U11268746-A	.5	mL
LCS	1202065071	MS SPIKE FOR ALL CLIENTS EXCEPT DOE CLIENTS (Solution B).	U11268749-B	.5	mL
MS	1202065073	ICP-MS DOE Liquid Spike Solution A	U11268752-A	.5	mL
MS	1202065073	ICP-MS DOE Liquid Spike Solution B	U11268755-B	.5	mL

Sample ID	Run Date	Matrix	Initial Volume (mL)	Final Volume (mL)	Prep Factor (mL/mL)	pH Check
1202065070 MB	15-MAR-2010 09:30:00	Water	50	50	1	<2
1202065071 LCS	15-MAR-2010 09:30:00	Water	50	50	1	<2
248516001	15-MAR-2010 09:30:00	Water	50	50	1	<2
248516002	15-MAR-2010 09:30:00	Water	50	50	1	<2
248518001	15-MAR-2010 09:30:00	Water	50	50	1	<2
248523001	15-MAR-2010 09:30:00	Water	50	50	1	<2
248550001	15-MAR-2010 09:30:00	Water	50	50	1	<2
1202065072 DUP (248550001)	15-MAR-2010 09:30:00	Water	50	50	1	<2
1202065073 MS (248550001)	15-MAR-2010 09:30:00	Water	50	50	1	<2
1202065074 SDILT (248550001)	15-MAR-2010 09:30:00	Water	50	50	1	<2
248557001	15-MAR-2010 09:30:00	Water	50	50	1	<2

Reagent/Solvent Lot ID	Description	Amount	Comments:
1282564	HYDROCHLORIC ACID	2.5 mL	
1282566	Nitric Acid CONC.	1 mL	

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: 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

Standard Logbook

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		

Serial ID: UI090701-09 **Opened:** 01-JUL-09 **Amount :** 250 mL
Name: ICP-MS CRDL Master #1 **Received:** 01-JUL-09 **Catalog Number :** 160044-09-02
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016477
Employee: Paul Boyd **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: O2SI
Description: ICPMS CRDL Master Soln #1
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	15 mg/L	Arsenic	5 mg/L
Barium	2 mg/L	Beryllium	.5 mg/L
Boron	15 mg/L	Cadmium	1 mg/L
Calcium	100 mg/L	Chromium	3 mg/L
Cobalt	1 mg/L	Copper	1 mg/L
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: O2SI
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

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Zirconium	2 mg/L		

Serial ID: UI090701-40 **Opened:** 01-JUL-09 **Amount :** 500 mL
Name: TRACE ICP Stock PQL St **Received:** 30-JUN-09 **Catalog Number :** 160543-01-03
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016475
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3+TrHF
Supplier: 02si
Description: TRACE ICP Stock PQL Standard
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	100 mg/L	Antimony	5 mg/L
Arsenic	15 mg/L	Barium	2.5 mg/L
Beryllium	2.5 mg/L	Boron	25 mg/L
Cadmium	2.5 mg/L	Calcium	100 mg/L
Chromium	2.5 mg/L	Cobalt	2.5 mg/L
Copper	5 mg/L	Iron	50 mg/L
Lead	5 mg/L	Magnesium	150 mg/L
Manganese	5 mg/L	Molybdenum	5 mg/L
Nickel	2.5 mg/L	Phosphorous	75 mg/L
Potassium	75 mg/L	Selenium	15 mg/L
Silicon	50 mg/L	Silver	2.5 mg/L
Sodium	150 mg/L	Strontium	2.5 mg/L
Sulfur	50 mg/L	Thallium	10 mg/L
Tin	5 mg/L	Titanium	2.5 mg/L
Uranium	25 mg/L	Vanadium	2.5 mg/L
Zinc	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

Standard Logbook

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
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

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Potassium	2000 mg/L	Selenium	200 mg/L
Sodium	2000 mg/L	Strontium	200 mg/L
Thallium	200 mg/L	Uranium	200 mg/L
Vanadium	200 mg/L	Zinc	200 mg/L

Serial ID: UI091102-41 **Opened:** 16-NOV-09 **Amount :** 500 mL
Name: TRACE CALSTD#1B SOUF **Received:** 02-NOV-09 **Catalog Number :** HP2270-2-500
Type: Source Material **Expires:** 31-OCT-10 **Lot Number :** 0930216
Employee: Helen Camello **Solvent :** HNO3
Supplier: Environmental Express
Description: Trace Calibration Standard #1B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	200 mg/L	Molybdenum	200 mg/L
Silver	200 mg/L	Sulfur	400 mg/L
Tin	200 mg/L	Titanium	200 mg/L

Serial ID: UI091102-42 **Opened:** 17-NOV-09 **Amount :** 200 mL
Name: SILICON **Received:** 02-NOV-09 **Catalog Number :** HP100050-4F
Type: Source Material **Expires:** 17-NOV-10 **Lot Number :** 0921924
Employee: Helen Camello **Solvent :** H2O/tr HF
Supplier: ENVIRONMENTAL EXPRESS
Description: SILICON 1000mg/L H2O/tr HF
Comments: None

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID: 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

Standard Logbook

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		

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

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Zirconium	20 mg/L		

Serial ID: UI100318-11 **Opened:** 18-MAR-10 **Amount :** 1000 mL
Name: ICP-MS ICSA Master A **Received:** 18-MAR-10 **Catalog Number :** 160013-01-01L
Type: Source Material **Expires:** 18-MAR-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: UI100325-40 **Opened:** 25-MAR-10 **Amount :** 500 mL
Name: ICP HIGH RANGE STD-A **Received:** 25-MAR-10 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 25-MAR-11 **Lot Number :** 1019348
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: UI100325-41 **Opened:** 25-MAR-10 **Amount :** 500 mL
Name: ICP HIGH RANGE STD B **Received:** 25-MAR-10 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 25-MAR-11 **Lot Number :** 1019348
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: 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 **Expires:** 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: UI1268741-01 **Opened:** 11-FEB-10 **Lot Number :** 1018514
Name: METALSPIKE-1 **Received:** 11-FEB-10
Type: Source Material **Expires:** 11-FEB-11
Employee: Bryan Davis
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: UI1268744-06 **Opened:** 11-FEB-10 **Lot Number :** 1018515
Name: METALSPIKE-2 **Received:** 11-FEB-10
Type: Source Material **Expires:** 11-FEB-11
Employee: Bryan Davis
Supplier: OS2I
Description: Metals Spike Mix II
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 ug/mL	Chromium	100 ug/mL
Copper	100 ug/mL	Manganese	100 ug/mL
Molybdenum	100 ug/mL	Nickel	100 ug/mL
Selenium	100 ug/mL	Silica	2141 ug/mL
Silicon	1000 ug/mL	Sulfur	1000 ug/mL
Thallium	100 ug/mL	Tin	100 ug/mL
Titanium	100 ug/mL	Uranium	100 ug/mL
Uranium-235	.72 ug/mL	Uranium-238	99.28 ug/mL
Vanadium	100 ug/mL	Zinc	100 ug/mL

Serial ID: UI1268746-A **Opened:** 11-FEB-10 **Catalog Number :** 160067-05
Name: ICP-MS ALL OTHER SPIKE **Received:** 11-FEB-10 **Lot Number :** 1018516
Type: Source Material **Expires:** 11-FEB-11
Employee: Bryan Davis
Supplier: O2si
Description: ICP-MS SPIKE FOR ALL CLIENTS EXCEPT DOE CLIENTS (Solution A).
Comments: None

Analyte	Concentration	Analyte	Concentration
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Standard Logbook

Analyte	Concentration	Analyte	Concentration
Aluminum	200 mg/L	Arsenic	5 mg/L
Barium	5 mg/L	Beryllium	5 mg/L
Bismuth	5 mg/L	Boron	10 mg/L
Cadmium	5 mg/L	Calcium	200 mg/L
Cesium	5 mg/L	Chromium	5 mg/L
Cobalt	5 mg/L	Copper	5 mg/L
Iron	200 mg/L	Lead	5 mg/L
Lithium	5 mg/L	Magnesium	200 mg/L
Manganese	5 mg/L	Nickel	5 mg/L
Phosphorous	200 mg/L	Potassium	200 mg/L
Selenium	5 mg/L	Sodium	200 mg/L
Strontium	5 mg/L	Thallium	5 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

Serial ID: UI1268749-B **Opened:** 11-FEB-10 **Catalog Number :** 160067-05
Name: ICP-MS ALL OTHER SPIKE **Received:** 11-FEB-10 **Lot Number :** 1018516
Type: Source Material **Expires:** 11-FEB-11
Employee: Bryan Davis
Supplier: O2si
Description: MS SPIKE FOR ALL CLIENTS EXCEPT DOE CLIENTS (Solution B).
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	5 mg/L	Molybdenum	5 mg/L
Silver	5 mg/L	Tin	5 mg/L
Titanium	5 mg/L	Zirconium	5 mg/L

Serial ID: UI1268752-A **Opened:** 11-FEB-10 **Catalog Number :** 160067-02
Name: ICP-MS DOE Liquid SPIKE **Received:** 11-FEB-10 **Lot Number :** 1017434
Type: Source Material **Expires:** 11-FEB-11
Employee: Bryan Davis **Verified:** 21-NOV-08
Supplier: O2Si
Description: ICP-MS DOE liquid Spike Solution A
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	4 mg/L
Lithium	5 mg/L	Magnesium	200 mg/L

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Manganese	5 mg/L	Nickel	5 mg/L
Phosphorus, Total as P	200 mg/L	Potassium	200 mg/L
Selenium	2 mg/L	Silicon	200 mg/L
Sodium	200 mg/L	Strontium	5 mg/L
Thallium	10 mg/L	Thorium	5 mg/L
Total Uranium	5 mg/L	Uranium	5 mg/L
Uranium-235	.0364 mg/L	Uranium-238	4.96 mg/L
Vanadium	5 mg/L	Zinc	5 mg/L

Serial ID: UI1268755-B **Opened:** 11-FEB-10 **Catalog Number :** 160067-02
Name: ICP-MS DOE Liquid SPIKE **Received:** 11-FEB-10 **Lot Number :** 1017434
Type: Source Material **Expires:** 11-FEB-11
Employee: Bryan Davis **Verified:** 21-NOV-08
Supplier: O2Si
Description: ICP-MS DOE Liquid Spike Solution B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	5 mg/L
Silver	5 mg/L	Tin	5 mg/L
Titanium	5 mg/L	Zirconium	5 mg/L

Serial ID: UMS100226-01 **Opened:** 26-FEB-10 **Amount :** 250 mL
Name: ICPMSCalSPIKEB **Received:** 26-FEB-10 **Catalog Number :** ZGEL-100-250
Type: Source Material **Expires:** 26-FEB-11 **Lot Number :** 21-104JB
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution B
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	10 mg/L	Barium	10 mg/L
Beryllium	10 mg/L	Boron	20 mg/L
Cadmium	10 mg/L	Chromium	10 mg/L
Cobalt	10 mg/L	Copper	10 mg/L
Lead	10 mg/L	Lithium	10 mg/L
Manganese	10 mg/L	Nickel	10 mg/L
Selenium	10 mg/L	Silver	10 mg/L
Strontium	10 mg/L	Thallium	10 mg/L
Thorium	10 mg/L	Uranium	10 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Standard Logbook

Serial ID: UMS100226-02 **Opened:** 26-FEB-10 **Catalog Number :** ZGEL-102-250
Name: ICPMSCalSPIKEA **Received:** 26-FEB-10 **Lot Number :** 21-103JB
Type: Source Material **Expires:** 26-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
Iron	1000 mg/L	Magnesium	1000 mg/L
Phosphorous	1000 mg/L	Potassium	1000 mg/L
Sodium	1000 mg/L		

Serial ID: UMS100226-03 **Opened:** 26-FEB-10 **Amount :** 250 ml
Name: ICPMSCalSPIKEC **Received:** 26-FEB-10 **Catalog Number :** ZGEL-101-250
Type: Source Material **Expires:** 26-FEB-11 **Lot Number :** 21-102JB
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: IHG100312-01 **Opened:** 12-MAR-10 **Instrument Id :** Mercury
Name: MHGINTER1 **Received:** 12-MAR-10 **Pipet Id :** Minou1
Type: Intermediate **Expires:** 13-MAR-10 **Solvent :** 1mL HNO3 + Type1 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: IHG100312-02 **Opened:** 12-MAR-10 **Pipet Id :** Minou1
Name: MHGINTER2 **Received:** 12-MAR-10 **Solvent :** 2% HNO3-1274391
Type: Intermediate **Expires:** 13-MAR-10
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Intermediate 2nd Source 200 ug/L
Comments: None

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG1167641-02	Mercury	999.7 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WHG100312-01a **Opened:** 12-MAR-10 **Pipet Id :** Hg1289245
Name: MHGWORKCAL0.2CRA **Received:** 12-MAR-10 **Solvent :** 2% HNO3-1274391
Type: Working **Expires:** 19-MAR-10
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working 1st Source CAL 0.2/CRA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG100312-01	Mercury	200 ug/L	20 uL	20 mL	.2 ug/L

Serial ID: WHG100312-02 **Opened:** 12-MAR-10 **Pipet Id :** Hg1289245
Name: MHGWORKCAL0.5 **Received:** 12-MAR-10 **Solvent :** 2% HNO3-1274391
Type: Working **Expires:** 19-MAR-10
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working 1st Source CAL 0.5
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG100312-01	Mercury	200 ug/L	50 uL	20 mL	.5 ug/L

Serial ID: WHG100312-03 **Opened:** 12-MAR-10 **Pipet Id :** Hg1289245
Name: MHGWORKCAL2.0 **Received:** 12-MAR-10 **Solvent :** 2% HNO3-1274391
Type: Working **Expires:** 19-MAR-10
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL 2.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG100312-01	Mercury	200 ug/L	200 uL	20 mL	2 ug/L

Serial ID: WHG100312-04 **Opened:** 12-MAR-10 **Pipet Id :** Hg1289245
Name: MHGWORKCAL5.0CCV **Received:** 12-MAR-10 **Solvent :** 2% HNO3-1274391
Type: Working **Expires:** 19-MAR-10
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL 5.0/CCV
Comments: None

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG100312-01	Mercury	200 ug/L	500 uL	20 mL	5 ug/L

Serial ID: WHG100312-05 **Opened:** 12-MAR-10 **Pipet Id :** Hg1289245
Name: MHGWORKCAL10.0 **Received:** 12-MAR-10 **Solvent :** 2% HNO3-1274391
Type: Working **Expires:** 19-MAR-10
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL 10.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG100312-01	Mercury	200 ug/L	1 mL	20 mL	10 ug/L

Serial ID: WHG100312-06 **Opened:** 12-MAR-10 **Pipet Id :** Hg1289245
Name: MHGWORK5.0ICV **Received:** 12-MAR-10 **Solvent :** 2% HNO3-1274391
Type: Working **Expires:** 19-MAR-10
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working 2nd Source 5.0/ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG100312-02	Mercury	200 ug/L	500 uL	20 mL	5 ug/L

Serial ID: WHG100312-13 **Opened:** 12-MAR-10 **Pipet Id :** Hg1289245
Name: MHGLIQLCSMSSPIKE **Received:** 12-MAR-10 **Solvent :** 2% HNO3-1274391
Type: Working **Expires:** 19-MAR-10
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury working intermediate standard for LCS/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: WI100330-42 **Opened:** 30-MAR-10 **Balance Id :** 216
Name: TRACE ICP 0.1 PPM STD. **Received:** 02-NOV-09 **Pipet Id :** 3581809
Type: Working **Expires:** 31-MAR-10 **Solvent :** 3%HCL and 1%HNO3 -1293083
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP 0.1 PPM CALIBRATION STD.
Comments: None

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WI100330-44	Aluminum	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100330-44	Antimony	1000 ug/L	10 mL	100 mL	100 ug/L
WI100330-44	Arsenic	1000 ug/L	10 mL	100 mL	100 ug/L
WI100330-44	Barium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100330-44	Beryllium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100330-44	Boron	1000 ug/L	10 mL	100 mL	100 ug/L
WI100330-44	Cadmium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100330-44	Calcium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100330-44	Chromium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100330-44	Cobalt	1000 ug/L	10 mL	100 mL	100 ug/L
WI100330-44	Copper	1000 ug/L	10 mL	100 mL	100 ug/L
WI100330-44	Iron	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100330-44	Lead	1000 ug/L	10 mL	100 mL	100 ug/L
WI100330-44	Magnesium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100330-44	Manganese	1000 ug/L	10 mL	100 mL	100 ug/L
WI100330-44	Molybdenum	1000 ug/L	10 mL	100 mL	100 ug/L
WI100330-44	Nickel	1000 ug/L	10 mL	100 mL	100 ug/L
WI100330-44	Phosphorous	5000 ug/L	10 mL	100 mL	500 ug/L
WI100330-44	Potassium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100330-44	Selenium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100330-44	Silica	10698 ug/L	10 mL	100 mL	1069 ug/L
WI100330-44	Silicon	5000 ug/L	10 mL	100 mL	500 ug/L
WI100330-44	Silver	1000 ug/L	10 mL	100 mL	100 ug/L
WI100330-44	Sodium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100330-44	Strontium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100330-44	Sulfur	2000 ug/L	10 mL	100 mL	200 ug/L
WI100330-44	Thallium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100330-44	Tin	1000 ug/L	10 mL	100 mL	100 ug/L
WI100330-44	Titanium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100330-44	Uranium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100330-44	Vanadium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100330-44	Zinc	1000 ug/L	10 mL	100 mL	100 ug/L

Serial ID: WI100330-43 **Opened:** 30-MAR-10 **Balance Id :** 216
Name: TRACE ICP 0.5/CCV STD. **Received:** 02-NOV-09 **Pipet Id :** 3581809
Type: Working **Expires:** 31-MAR-10 **Solvent :** 3%HCL and 1%HNO3 -1293083
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

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091102-40	Aluminum	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Arsenic	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Barium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Beryllium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Boron	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Cadmium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Calcium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Chromium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Cobalt	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Copper	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Iron	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Lead	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Magnesium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Manganese	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Nickel	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Phosphorous	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI091102-40	Potassium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Selenium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Sodium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Strontium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Thallium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Uranium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Vanadium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Zinc	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Antimony	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Molybdenum	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Silver	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Sulfur	400 mg/L	2.5 mL	1000 mL	1000 UG/L
UI091102-41	Tin	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Titanium	200 mg/L	2.5 mL	1000 mL	500 UG/L

Serial ID: WI100330-44 **Opened:** 30-MAR-10 **Balance Id :** 216
Name: TRACE ICP SCAL 1.0 **Received:** 02-NOV-09 **Pipet Id :** 3581809
Type: Working **Expires:** 31-MAR-10 **Solvent :** 3%HCL and 1 %HNO3-1293083
Employee: Helen Camello
Supplier: o2si
Description: Trace ICP Calibration Standard 1.0ppm
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091015-42	Silica	2139 mg/L	2.5 mL	500 mL	10698 ug/L
UI091015-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI091102-40	Aluminum	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Arsenic	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Barium	200 mg/L	2.5 mL	500 mL	1000 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Alliquot	Final Vol.	Final Conc.
UI091102-40	Beryllium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Boron	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Cadmium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Calcium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Chromium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Cobalt	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Copper	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Iron	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Lead	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Magnesium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Manganese	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Nickel	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Phosphorous	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI091102-40	Potassium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Selenium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Sodium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Strontium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Thallium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Uranium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Vanadium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Zinc	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-41	Antimony	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-41	Molybdenum	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-41	Silver	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-41	Sulfur	400 mg/L	2.5 mL	500 mL	2000 ug/L
UI091102-41	Tin	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-41	Titanium	200 mg/L	2.5 mL	500 mL	1000 ug/L

Serial ID: WI100330-45 **Opened:** 30-MAR-10 **Balance Id :** 216
Name: TRACE ICP S-10 STD **Received:** 22-APR-09 **Pipet Id :** 3581809
Type: Working **Expres:** 31-MAR-10 **Solvent :** 3%HCL and 1%HNO3 -1293083
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP S-10 CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Alliquot	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

Standard Logbook

Serial ID: WI100330-46 **Opened:** 30-MAR-10 **Balance Id :** 216
Name: ICP TRACE ICV **Received:** 25-SEP-09 **Pipet Id :** 3581809
Type: Working **Expires:** 31-MAR-10 **Solvent :** 3%HCL AND 1%HNO3-1293083
Employee: Helen Camello
Supplier: GEL
Description: Initial Calibration Verification ICP Trace Metals
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090925-40	Aluminum	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090925-40	Arsenic	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Barium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Boron	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Cadmium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Calcium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090925-40	Chromium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Cobalt	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Copper	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Iron	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090925-40	Lead	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Phosphorous	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-40	Potassium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-40	Selenium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-40	Sodium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-40	Strontium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Antimony	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Beryllium	50 mg/L	2.5 mL	500 mL	250 ug/L
UI090925-41	Magnesium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090925-41	Manganese	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Molybdenum	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Nickel	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Silver	50 mg/L	2.5 mL	500 mL	250 ug/L
UI090925-41	Sulfur	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-41	Thallium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Tin	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Titanium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Uranium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Vanadium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Zinc	100 mg/L	2.5 mL	500 mL	500 ug/L
UI091102-42	Silica	2139 mg/L	2.5 mL	500 mL	10695 ug/L
UI091102-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L

Standard Logbook

Serial ID: WI100330-47 **Opened:** 30-MAR-10 **Balance Id :** 216
Name: PQL Working Standard **Received:** 30-JUN-09 **Pipet Id :** 3581809
Type: Working **Expires:** 31-MAR-10 **Solvent :** 3%HCL &1%HNO3-1293083
Employee: Helen Camello
Supplier: 02si
Description: PQL Working Standard
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-40	Aluminum	100 mg/L	2 mL	1000 mL	200 ug/L
UI090701-40	Antimony	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Arsenic	15 mg/L	2 mL	1000 mL	15 ug/L
UI090701-40	Barium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Beryllium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Boron	25 mg/L	2 mL	1000 mL	50 ug/L
UI090701-40	Cadmium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Calcium	100 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Chromium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Cobalt	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Copper	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Iron	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Lead	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Magnesium	150 mg/L	2 mL	1000 mL	300 ug/L
UI090701-40	Manganese	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Molybdenum	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Nickel	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Phosphorous	75 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Potassium	75 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Selenium	15 mg/L	2 mL	1000 mL	15 ug/L
UI090701-40	Silicon	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Silver	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Sodium	150 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Strontium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Sulfur	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Thallium	10 mg/L	2 mL	1000 mL	20 ug/L
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: WMS100412-04 **Opened:** 12-APR-10 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 12-APR-10 **Balance Id :** 4025216
Type: Working **Expires:** 13-APR-10 **Pipet Id :** 3541598
Employee: Paul Boyd **Solvent :** 2%HNO3/1%HCL-1300209
Supplier: GEL

Standard Logbook

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
UMS100226-01	Arsenic	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Barium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Beryllium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Boron	20 mg/L	.5 mL	50 mL	200 ug/l
UMS100226-01	Cadmium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Chromium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Cobalt	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Copper	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Lead	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Lithium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Manganese	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Nickel	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Selenium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Silver	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Strontium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Thallium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Thorium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Uranium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Vanadium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Zinc	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-02	Aluminum	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100226-02	Calcium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100226-02	Iron	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100226-02	Magnesium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100226-02	Phosphorous	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100226-02	Potassium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100226-02	Sodium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100226-03	Antimony	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-03	Molybdenum	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-03	Tin	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-03	Titanium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-03	Zirconium	10 mg/L	.5 mL	50 mL	100 ug/l

Serial ID: WMS100412-04A

Opened: 12-APR-10

Balance Id : 4025216

Name: ICPMS Cal Standard 10

Received: 12-APR-10

Pipet Id : 3541598

Type: Working

Expires: 13-APR-10

Solvent : 2%HNO3/1%HCl - 1300209

Employee: Paul Boyd

Supplier: GEL

Description: ICPMS Calibration Standard (10 ppb)

Comments: None

Standard Logbook

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
WMS100412-04	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100412-04	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS100412-04	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS100412-04	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100412-04	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100412-04	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS100412-04	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100412-04	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100412-04	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100412-04	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS100412-04	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS100412-04	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100412-04	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS100412-04	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100412-04	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100412-04	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS100412-04	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS100412-04	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS100412-04	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100412-04	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100412-04	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100412-04	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS100412-04	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100412-04	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100412-04	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100412-04	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100412-04	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS100412-04	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100412-04	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS100412-04	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100412-04	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100412-04	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS100412-04	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

Serial ID: WMS100412-05 **Opened:** 12-APR-10 **Balance Id :** 40245216
Name: ICPMS ICV **Received:** 12-APR-10 **Pipet Id :** 3541598
Type: Working **Expires:** 13-APR-10 **Solvent :** 2%HNO3/1%HCl - 1300209
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Allquot	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

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
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
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: WMS100412-06 **Opened:** 12-APR-10 **Balance Id :** 40245216
Name: ICPMS CRDL **Received:** 12-APR-10 **Pipet Id :** 3820544
Type: Working **Expires:** 13-APR-10 **Solvent :** 2%HNO3/1%HCl - 1300209
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

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Calcium	100 mg/L	.05 mL	50 mL	100 ug/L
UI090701-09	Chromium	3 mg/L	.05 mL	50 mL	3 ug/L
UI090701-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Iron	25 mg/L	.05 mL	50 mL	25 ug/L
UI090701-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI090701-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L
UI090701-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI090701-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI090701-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

Serial ID: WMS100412-07 **Opened:** 12-APR-10 **Balance Id :** 40245216
Name: ICPMS ICSA **Received:** 12-APR-10 **Lot Number :** 1010773
Type: Working **Expres:** 13-APR-10 **Pipet Id :** 3541598
Employee: Paul Boyd **Solvent :** 2%HNO3/1%HCl - 1300209
Supplier: GEL
Description: ICPMS ICSA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100318-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI100318-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100318-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS100412-08 **Opened:** 12-APR-10 **Balance Id :** 40245216
Name: ICPMS ICSAB **Received:** 12-APR-10 **Pipet Id :** 1758088
Type: Working **Expires:** 13-APR-10 **Solvent :** 2%HNO3/1%HCl - 1300209
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICSAB
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100318-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI100318-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI100318-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L
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

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
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

Serial ID: 1156689-A **Opened:** 20-JUL-09 **Lot Number :** 41226920
Name: B-KMnO4(VWR)-MER **Received:** 20-JUL-09
Type: Reagent/Solvent **Expires:** 20-JUL-10
Employee: Tara Griffin **Verified:** 07-AUG-07
Supplier: VWR
Description: Potassium Permanganate
Comments: None

Serial ID: 1176183 **Opened:** 24-AUG-09 **Lot Number :** H20001
Name: B-H2SO4-MER **Received:** 24-AUG-09
Type: Reagent/Solvent **Expires:** 24-AUG-10
Employee: Tara Griffin
Supplier: Mallinckrodt
Description: Sulfuric Acid, Concentrated
Comments: None

Serial ID: 1215906 **Opened:** 06-NOV-09 **Lot Number :** H44465
Name: B-K2S2O8S-MER **Received:** 06-NOV-09
Type: Reagent/Solvent **Expires:** 06-NOV-10
Employee: Tara Griffin
Supplier: J.T BAKER
Description: Potassium Persulfate Concentrate.
Comments: None

Serial ID: 1228372-A **Opened:** 12-NOV-09 **Lot Number :** 49215936
Name: B-NH2OH.HCl-MER **Received:** 12-NOV-09
Type: Reagent/Solvent **Expires:** 12-NOV-10
Employee: Tara Griffin
Supplier: Fisher Scientific
Description: Hydroxylamine Hydrochloride
Comments: None

Standard Logbook

Serial ID: 1255532-C **Opened:** 15-JAN-10 **Balance Id :** BAL-002
Name: B-NaCl.NH2OH.HCl-MER **Received:** 15-JAN-10
Type: Reagent/Solvent **Expires:** 15-JUL-10
Employee: Tara Griffin
Supplier: GEL
Description: Hg reducing agent
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1228372-A	B-NH2OH.HCl-MER	N/A	120 g	1000 mL	N/A

Serial ID: 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

Serial ID: 1276435-C **Opened:** 28-FEB-10 **Balance Id :** BAL-002
Name: B-K2S2O8-MER **Received:** 28-FEB-10
Type: Reagent/Solvent **Expires:** 28-AUG-10
Employee: Tara Griffin
Supplier: GEL
Description: 5% Potassium Persulfate
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1215906	B-K2S2O8S-MER	N/A	50 g	1000 mL	N/A

Serial ID: 1277238-C **Opened:** 01-MAR-10 **Balance Id :** BAL-002
Name: B-KMnO4-MER **Received:** 01-MAR-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%

Standard Logbook

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: 1282564 Opened: 09-MAR-10 Lot Number : J02039
Name: I-HCL Received: 09-MAR-10 Preservative_Id : 5 none
Type: Reagent/Solvent Expires: 09-MAR-11
Employee: Anthony Green
Supplier: J.T. BAKER
Description: HYDROCHLORIC ACID
Comments: None

Serial ID: 1282566 Opened: 09-MAR-10 Lot Number : J 04043 L
Name: I-HNO3 Received: 09-MAR-10
Type: Reagent/Solvent Expires: 09-MAR-11
Employee: Anthony Green
Supplier: BAKER
Description: Nitric Acid CONC.
Comments: None

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: 1293083 Opened: 29-MAR-10 Amount : 20 L
Name: B-ICP-RINSE SOLN Received: 29-MAR-10 Lot Number : H04040+G34050
Type: Reagent/Solvent Expires: 04-APR-10 Solvent : 3%HCL+1%HNO3
Employee: Helen Camello
Supplier: GEL
Description: 3%HCL+1%HNO3 RINSE SOLN.
Comments: None

Standard Logbook

Serial ID: 1300209 Opened: 12-APR-10 Solvent : Type I Water
Name: B-2%HNO3/1%HCl-ICPMS Received: 12-APR-10
Type: Reagent/Solvent Expires: 19-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 10-2203**

Method/Analysis Information

Product: Cyanide, Total

Analytical Batch: 963300 **Method:** SW9012A Cyanide and Total

Prep Batch : 963299 **Method:** SSW846 9010B Prep

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 9012A:

Sample ID	Client ID
248523001	RE36-10-7534
1202066540	Method Blank (MB)
1202066541	Laboratory Control Sample (LCS)
1202066542	248792001(RE16-10-3808) Sample Duplicate (DUP)
1202066543	248792001(RE16-10-3808) Matrix Spike (MS)
1202066544	248792001(RE16-10-3808) Matrix Spike Duplicate (MSD)

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-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 sample was selected for QC analysis: 248792001 (RE16-10-3808).

Matrix Spike (MS)/Post Spike (PS) Recovery Statement

The MS/PS recovery for this sample set was within the required acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement

The MSD recovery for this sample set was within the required acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement

The RPD between the spike and spike duplicate met the acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement

The values for the sample and duplicate are less than the Practical Quantitation Limit (PQL); therefore, the RPD is not applicable. 1202066542 (RE16-10-3808).

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 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.

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: Nick DeLore Date: 3.27.10

Sample Data Summary

GEL LABORATORIES LLC

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

Certificate of Analysis Report for

LANL010 Los Alamos National Laboratory (72733-001-09)

Client SDG: 10-2203 GEL Work Order: 248523

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

Nick Wade Emore 3-27-10

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 111

Los Alamos, New Mexico 87545

Contact: Ms. Joylene Valdez

Project: LANL ER Project

Report Date: March 24, 2010

Client SDG: 10-2203

Client Sample ID: RE36-10-7534
Sample ID: 248523001
Matrix: W
Collect Date: 24-FEB-10 12:00
Receive Date: 03-MAR-10
Collector: Client

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Flow Injection Analysis											
<i>SW9012A Cyanide, Total "As Received"</i>											
Cyanide, Total	U	ND	1.66	5.00	ug/L	1	AXC2	03/10/10	1107	963300	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	03/10/10	0948	963299

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

Quality Control Summary

GEL LABORATORIES LLC

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

QC Summary

Report Date: March 24, 2010

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

Contact: Ms. Joylene Valdez

Workorder: 248523

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Flow Injection Analysis											
Batch	963300										
QC1202066542	248792001	DUP									
Cyanide, Total		U	ND	U	ND	ug/L	N/A		AXC2	03/10/10	11:09
QC1202066541	LCS										
Cyanide, Total	50.0				48.9	ug/L	97.8	(90%-110%)		03/10/10	11:04
QC1202066540	MB										
Cyanide, Total			U		5.00	ug/L				03/10/10	11:03
QC1202066543	248792001	MS									
Cyanide, Total	100	U	ND		102	ug/L		102	(60%-144%)	03/10/10	11:10
QC1202066544	248792001	MSD									
Cyanide, Total	100	U	ND		103	ug/L	0.976	103	(0%-20%)	03/10/10	11:11

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.

C Analyte has been confirmed by GC/MS analysis

D Results are reported from a diluted aliquot of the sample

E General Chemistry--Concentration of the target analyte exceeds the instrument calibration range

E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria

E Organics--Concentration of the target analyte exceeds the instrument calibration range

F Estimated Value

H Analytical holding time was exceeded

J Value is estimated

M 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.

GEL LABORATORIES LLC

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QC Summary

Workorder: 248523

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier										
Y	QC Samples were not spiked with this compound										
Z	Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.										
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.										
d	5-day BOD--The 2:1 depletion requirement was not met for this sample										
h	Preparation or preservation holding time was exceeded										

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

Cyanide, Total

Prep Logbook

Cyanide Sample Distillation

Batch ID:	963299.0	Verified by:				
Analyst:	Alan Stanley	Type	Sample Id	Description	Serial Number	Spike Amount Spike Units
Method:	SW846 9010C Distillation	LCS	1202066541	Secondary source standard for CN and phenol. Used to spike LCS, MS, ICV	URF1269274-02	.0125 mL
Lab SOP:	GL-GC-E-067 REV# 13	MS	1202066543	Secondary source standard for CN and phenol. Used to spike LCS, MS, ICV	URF1269274-02	.025 mL
Instrument:	Sartorius Balance B-001	MSD	1202066544	Secondary source standard for CN and phenol. Used to spike LCS, MS, ICV	URF1269274-02	.025 mL

Sample ID	Run Date	Matrix	Initial Volume (mL)	Final Volume (mL)	Prep Factor (mL/mL)	pH Check
1202066540 MB	10-MAR-2010 09:48:00	Water	25	25	1	>12
1202066541 LCS	10-MAR-2010 09:48:00	Water	25	25	1	>12
248455001	10-MAR-2010 09:48:00	Ground Water	25	25	1	>12
248455002	10-MAR-2010 09:48:00	Ground Water	25	25	1	>12
248455003	10-MAR-2010 09:48:00	Ground Water	25	25	1	>12
248523001	10-MAR-2010 09:48:00	Water	25	25	1	>12
248792001	10-MAR-2010 09:48:00	Water	25	25	1	>12
1202066542 DUP (248792001)	10-MAR-2010 09:48:00	Water	25	25	1	>12
1202066543 MS (248792001)	10-MAR-2010 09:48:00	Water	25	25	1	>12
1202066544 MSD (248792001)	10-MAR-2010 09:48:00	Water	25	25	1	>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	
WCN100309-07	150 ppb CN Distilled ICV Standard	.0375 mL	

This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
200 ppb		1	axc2	3/10/2010 10:50:55	OM_3-10-2010_10-49-24
150 ppb		1	axc2	3/10/2010 10:51:47	OM_3-10-2010_10-49-24
100 ppb		1	axc2	3/10/2010 10:52:40	OM_3-10-2010_10-49-24
50 ppb		1	axc2	3/10/2010 10:53:32	OM_3-10-2010_10-49-24
10 ppb		1	axc2	3/10/2010 10:54:26	OM_3-10-2010_10-49-24
CRDL 5.0 ppb		1	axc2	3/10/2010 10:55:20	OM_3-10-2010_10-49-24
ICAL-00		1	axc2	3/10/2010 10:56:14	OM_3-10-2010_10-49-24
ICV		1	axc2	3/10/2010 10:58:04	OM_3-10-2010_10-49-24
ICB		1	axc2	3/10/2010 10:59:54	OM_3-10-2010_10-49-24
CRDL		1	axc2	3/10/2010 11:01:43	OM_3-10-2010_10-49-24
1202066540	963300	1	axc2	3/10/2010 11:03:32	OM_3-10-2010_10-49-24
1202066541	963300	1	axc2	3/10/2010 11:04:26	OM_3-10-2010_10-49-24
248455001	963300	1	axc2	3/10/2010 11:05:19	OM_3-10-2010_10-49-24
248455002	963300	1	axc2	3/10/2010 11:06:12	OM_3-10-2010_10-49-24
248455003	963300	1	axc2	3/10/2010 11:07:05	OM_3-10-2010_10-49-24
248523001	963300	1	axc2	3/10/2010 11:07:58	OM_3-10-2010_10-49-24
248792001	963300	1	axc2	3/10/2010 11:08:51	OM_3-10-2010_10-49-24
1202066542	963300	1	axc2	3/10/2010 11:09:43	OM_3-10-2010_10-49-24
1202066543	963300	1	axc2	3/10/2010 11:10:36	OM_3-10-2010_10-49-24
1202066544	963300	1	axc2	3/10/2010 11:11:28	OM_3-10-2010_10-49-24
CCV		1	axc2	3/10/2010 11:12:20	OM_3-10-2010_10-49-24
CCB		1	axc2	3/10/2010 11:14:10	OM_3-10-2010_10-49-24
1202057145	959212	1	axc2	3/10/2010 11:15:58	OM_3-10-2010_10-49-24
1202057152	959212	25	axc2	3/10/2010 11:16:50	OM_3-10-2010_10-49-24
248159003	959212	1	axc2	3/10/2010 11:17:42	OM_3-10-2010_10-49-24
1202057146	959212	1	axc2	3/10/2010 11:18:34	OM_3-10-2010_10-49-24
1202057148	959212	1	axc2	3/10/2010 11:19:25	OM_3-10-2010_10-49-24
1202057150	959212	1	axc2	3/10/2010 11:20:19	OM_3-10-2010_10-49-24
248159004	959212	1	axc2	3/10/2010 11:21:13	OM_3-10-2010_10-49-24
1202057147	959212	1	axc2	3/10/2010 11:22:06	OM_3-10-2010_10-49-24
1202057149	959212	1	axc2	3/10/2010 11:23:00	OM_3-10-2010_10-49-24
1202057151	959212	1	axc2	3/10/2010 11:23:53	OM_3-10-2010_10-49-24
CCV		1	axc2	3/10/2010 11:24:45	OM_3-10-2010_10-49-24
CCB		1	axc2	3/10/2010 11:26:35	OM_3-10-2010_10-49-24
248159005	959212	1	axc2	3/10/2010 11:28:24	OM_3-10-2010_10-49-24
248159006	959212	1	axc2	3/10/2010 11:29:17	OM_3-10-2010_10-49-24
248163001	959212	1	axc2	3/10/2010 11:30:10	OM_3-10-2010_10-49-24
248163002	959212	1	axc2	3/10/2010 11:31:02	OM_3-10-2010_10-49-24
248163003	959212	1	axc2	3/10/2010 11:31:55	OM_3-10-2010_10-49-24
248163004	959212	1	axc2	3/10/2010 11:32:48	OM_3-10-2010_10-49-24
248163005	959212	1	axc2	3/10/2010 11:33:40	OM_3-10-2010_10-49-24
248163006	959212	1	axc2	3/10/2010 11:34:32	OM_3-10-2010_10-49-24
248163007	959212	1	axc2	3/10/2010 11:35:24	OM_3-10-2010_10-49-24
248163008	959212	1	axc2	3/10/2010 11:36:15	OM_3-10-2010_10-49-24
CCV		1	axc2	3/10/2010 11:37:08	OM_3-10-2010_10-49-24
CCB		1	axc2	3/10/2010 11:38:58	OM_3-10-2010_10-49-24
248163009	959212	1	axc2	3/10/2010 11:40:49	OM_3-10-2010_10-49-24
248163010	959212	1	axc2	3/10/2010 11:41:42	OM_3-10-2010_10-49-24
248163011	959212	1	axc2	3/10/2010 11:42:36	OM_3-10-2010_10-49-24
248163012	959212	1	axc2	3/10/2010 11:43:29	OM_3-10-2010_10-49-24
248163013	959212	1	axc2	3/10/2010 11:44:22	OM_3-10-2010_10-49-24
248163014	959212	1	axc2	3/10/2010 11:45:16	OM_3-10-2010_10-49-24
248241001	959212	1	axc2	3/10/2010 11:46:08	OM_3-10-2010_10-49-24
248241002	959212	1	axc2	3/10/2010 11:47:02	OM_3-10-2010_10-49-24
1202061941	961284	1	axc2	3/10/2010 11:47:54	OM_3-10-2010_10-49-24
1202061948	961284	25	axc2	3/10/2010 11:48:47	OM_3-10-2010_10-49-24
CCV		1	axc2	3/10/2010 11:49:39	OM_3-10-2010_10-49-24
CCB		1	axc2	3/10/2010 11:51:29	OM_3-10-2010_10-49-24

247914001	961284	1	axc2	3/10/2010	11:53:18	OM_3-10-2010_10-49-24
247923001	961284	1	axc2	3/10/2010	11:54:10	OM_3-10-2010_10-49-24
247927001	961284	1	axc2	3/10/2010	11:55:02	OM_3-10-2010_10-49-24
247930001	961284	1	axc2	3/10/2010	11:55:55	OM_3-10-2010_10-49-24
247933001	961284	1	axc2	3/10/2010	11:56:46	OM_3-10-2010_10-49-24
247939001	961284	1	axc2	3/10/2010	11:57:41	OM_3-10-2010_10-49-24
247941001	961284	1	axc2	3/10/2010	11:58:34	OM_3-10-2010_10-49-24
247943001	961284	1	axc2	3/10/2010	11:59:28	OM_3-10-2010_10-49-24
247945001	961284	1	axc2	3/10/2010	12:00:22	OM_3-10-2010_10-49-24
248515001	961284	1	axc2	3/10/2010	12:01:15	OM_3-10-2010_10-49-24
CCV		1	axc2	3/10/2010	12:02:08	OM_3-10-2010_10-49-24
CCB		1	axc2	3/10/2010	12:03:58	OM_3-10-2010_10-49-24
1202061942	961284	1	axc2	3/10/2010	12:05:48	OM_3-10-2010_10-49-24
1202061944	961284	1	axc2	3/10/2010	12:06:40	OM_3-10-2010_10-49-24
1202061946	961284	1	axc2	3/10/2010	12:07:33	OM_3-10-2010_10-49-24
248515002	961284	1	axc2	3/10/2010	12:08:26	OM_3-10-2010_10-49-24
1202061943	961284	1	axc2	3/10/2010	12:09:19	OM_3-10-2010_10-49-24
1202061945	961284	1	axc2	3/10/2010	12:10:11	OM_3-10-2010_10-49-24
1202061947	961284	1	axc2	3/10/2010	12:11:04	OM_3-10-2010_10-49-24
248515003	961284	1	axc2	3/10/2010	12:11:56	OM_3-10-2010_10-49-24
248526001	961284	1	axc2	3/10/2010	12:12:49	OM_3-10-2010_10-49-24
248560001	961284	1	axc2	3/10/2010	12:13:41	OM_3-10-2010_10-49-24
CCV		1	axc2	3/10/2010	12:14:33	OM_3-10-2010_10-49-24
CCB		1	axc2	3/10/2010	12:16:23	OM_3-10-2010_10-49-24
248560002	961284	1	axc2	3/10/2010	12:18:13	OM_3-10-2010_10-49-24
248560003	961284	1	axc2	3/10/2010	12:19:08	OM_3-10-2010_10-49-24
248560004	961284	1	axc2	3/10/2010	12:20:02	OM_3-10-2010_10-49-24
248560005	961284	1	axc2	3/10/2010	12:20:55	OM_3-10-2010_10-49-24
248560006	961284	1	axc2	3/10/2010	12:21:49	OM_3-10-2010_10-49-24
248560007	961284	1	axc2	3/10/2010	12:22:42	OM_3-10-2010_10-49-24
1202061965	961291	1	axc2	3/10/2010	12:23:36	OM_3-10-2010_10-49-24
1202061967	961291	1	axc2	3/10/2010	12:24:29	OM_3-10-2010_10-49-24
247914001	961291	1	axc2	3/10/2010	12:25:23	OM_3-10-2010_10-49-24
247923001	961291	1	axc2	3/10/2010	12:26:15	OM_3-10-2010_10-49-24
CCV		1	axc2	3/10/2010	12:27:07	OM_3-10-2010_10-49-24
CCB		1	axc2	3/10/2010	12:28:57	OM_3-10-2010_10-49-24
247927001	961291	1	axc2	3/10/2010	12:30:46	OM_3-10-2010_10-49-24
247930001	961291	1	axc2	3/10/2010	12:31:39	OM_3-10-2010_10-49-24
247933001	961291	1	axc2	3/10/2010	12:32:31	OM_3-10-2010_10-49-24
247939001	961291	1	axc2	3/10/2010	12:33:24	OM_3-10-2010_10-49-24
1202061966	961291	1	axc2	3/10/2010	12:34:16	OM_3-10-2010_10-49-24
247941001	961291	1	axc2	3/10/2010	12:35:10	OM_3-10-2010_10-49-24
247943001	961291	1	axc2	3/10/2010	12:36:04	OM_3-10-2010_10-49-24
247945001	961291	1	axc2	3/10/2010	12:36:58	OM_3-10-2010_10-49-24
247927001*	961291	10	axc2	3/10/2010	12:39:51	OM_3-10-2010_10-49-24
	961291	1	axc2	3/10/2010	12:40:44	OM_3-10-2010_10-49-24
CCV		1	axc2	3/10/2010	12:41:37	OM_3-10-2010_10-49-24
CCB		1	axc2	3/10/2010	12:43:27	OM_3-10-2010_10-49-24
247927001	961291	2	axc2	3/10/2010	12:45:16	OM_3-10-2010_10-49-24
CCV		1	axc2	3/10/2010	12:46:09	OM_3-10-2010_10-49-24
CCB		1	axc2	3/10/2010	12:47:59	OM_3-10-2010_10-49-24

Original Run Filename: OM_3-10-2010_10-49-24.OMN created 3/10/2010 10:49:24
 Original Run Author's Signature: [axc2]
 Current Run Filename: OM_3-10-2010_10-49-24.OMN last modified 3/10/2010 12:49:04
 Current Run Author's Signature: [axc2]
 Description: GL-GC-E-095 EPA 335.1, 335.3, 335.4, 9012A, CLP335.2-M
 Liquid LCS nominal 50 ug/L

Sample	Rep.	Cup No.	Channel 1 TCYANIDE		Detection Time	ADF	MDF	Description
			Conc. (ug/L)	Area (Vs)				
WCN100310-01	1	S1	200	11.1	3/10/2010@10:50:55			200 ppb
WCN100310-02	1	S2	150	8.08	3/10/2010@10:51:47			150 ppb
WCN100310-03	1	S3	100	5.35	3/10/2010@10:52:40			100 ppb
WCN100310-04	1	S4	50.0	2.95	3/10/2010@10:53:32			50 ppb
WCN100310-05	1	S5	10.0	0.687	3/10/2010@10:54:26			10 ppb
WCN100310-06	1	S6	5.00	0.407	3/10/2010@10:55:20			CRDL 5.0 ppb
WCN100310-08	1	S7	0.00	0.0471	3/10/2010@10:56:14			0.0 ppb
DQM Test: Minimum Correlation Coefficient								
Result:			0.99958 > 0.99500					
Message			Pass					
Action			Continue					
WCN100310-07	1	S8	146	8.03	3/10/2010@10:58:04			ICV
Known Conc:			150					
DQM Test: > + Percent Relative Difference								
Result:			-2.4 < 10.0					
Message			ICV Passed					
Action			Continue					
DQM Test: < - Percent Relative Difference								
Result:			-2.4 < 10.0					
Message			ICV Passed					
Action			Continue					
Calibration:			Table/Fig. 1					
WCN100310-08	1	S7	-0.144	0.0944	3/10/2010@10:59:54			ICB/CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			-0.144 < 5.01					
Message			ICB/CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			-0.144 > -5.01					
Message			ICB/CCB Passed					
Action			Continue					
WCN100310-06	1	S6	6.05	0.429	3/10/2010@11:01:43			CRDL
Known Conc:			5.00					
DQM Test: > + Concentration Limit								
Result:			6.05 < 7.50					
Message			CRDL Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			6.05 > 2.50					
Message			Pass					
Action			None					
1202066540|963300|MB	1	1	-0.804	0.0587	3/10/2010@11:03:32			
1202066541||LCS	1	2	48.9	2.75	3/10/2010@11:04:26			
248455001	1	3	-0.811	0.0583	3/10/2010@11:05:19			
248455002	1	4	-0.508	0.0747	3/10/2010@11:06:12			
248455003	1	5	0.519	0.130	3/10/2010@11:07:05			
248523001	1	6	-1.98	-0.00475	3/10/2010@11:07:58			
248792001	1	7	-1.30	0.0317	3/10/2010@11:08:51			
1202066542||DUP	1	8	-1.63	0.0140	3/10/2010@11:09:43			
1202066543||MS	1	9	102	5.61	3/10/2010@11:10:36			
1202066544||MSD	1	10	103	5.67	3/10/2010@11:11:28			
WCN100310-03	1	S3	101	5.56	3/10/2010@11:12:20			CCV
Known Conc:			100					
DQM Test: > + Percent Relative Difference								
Result:			0.8 < 10.0					

Message			CCV Passed					
Action			Continue					
Result:			DQM Test: < - Percent Relative Difference					
Message			0.8 < 10.0					
Message			CCV Passed					
Action			Continue					
WCN100310-08	1	S7	-1.88	3.30e-4	3/10/2010@11:14:10			CCB
Known Conc:			0.00					
Result:			DQM Test: > + Concentration Limit					
Message			-1.88 < 5.00					
Message			CCB Passed					
Action			Continue					
Result:			DQM Test: < - Concentration Limit					
Message			-1.88 > -5.00					
Message			CCB Passed					
Action			Continue					
1202057145|959212|MB	1	11	-1.54	0.0188	3/10/2010@11:15:58			
1202057152|LCS	1	12	24.9	1.45	3/10/2010@11:16:50		25.00	
248159003	1	13	-0.859	0.0557	3/10/2010@11:17:42			
1202057146|DUP	1	14	-0.0820	0.0977	3/10/2010@11:18:34			
1202057148|MS	1	15	93.7	5.17	3/10/2010@11:19:25			
1202057150|MSD	1	16	88.3	4.88	3/10/2010@11:20:19			
248159004	1	17	1.45	0.181	3/10/2010@11:21:13			
1202057147|DUP	1	18	1.28	0.171	3/10/2010@11:22:06			
1202057149|MS	1	19	77.1	4.28	3/10/2010@11:23:00			
1202057151|MSD	1	20	85.3	4.72	3/10/2010@11:23:53			
WCN100310-03	1	S3	101	5.56	3/10/2010@11:24:45			CCV
Known Conc:			100					
Result:			DQM Test: > + Percent Relative Difference					
Message			0.9 < 10.0					
Message			CCV Passed					
Action			Continue					
Result:			DQM Test: < - Percent Relative Difference					
Message			0.9 < 10.0					
Message			CCV Passed					
Action			Continue					
WCN100310-08	1	S7	-1.09	0.0433	3/10/2010@11:26:35			CCB
Known Conc:			0.00					
Result:			DQM Test: > + Concentration Limit					
Message			-1.09 < 5.00					
Message			CCB Passed					
Action			Continue					
Result:			DQM Test: < - Concentration Limit					
Message			-1.09 > -5.00					
Message			CCB Passed					
Action			Continue					
248159005	1	21	0.0956	0.107	3/10/2010@11:28:24			
248159006	1	22	-0.492	0.0755	3/10/2010@11:29:17			
248163001	1	23	-1.05	0.0453	3/10/2010@11:30:10			
248163002	1	24	-1.26	0.0340	3/10/2010@11:31:02			
248163003	1	25	-0.725	0.0630	3/10/2010@11:31:55			
248163004	1	26	-1.30	0.0320	3/10/2010@11:32:48			
248163005	1	27	-0.971	0.0496	3/10/2010@11:33:40			
248163006	1	28	-0.534	0.0733	3/10/2010@11:34:32			
248163007	1	29	-0.822	0.0577	3/10/2010@11:35:24			
248163008	1	30	-1.89	-3.60e-4	3/10/2010@11:36:15			
WCN100310-03	1	S3	99.6	5.49	3/10/2010@11:37:08			CCV
Known Conc:			100					
Result:			DQM Test: > + Percent Relative Difference					
Message			-0.4 < 10.0					
Message			CCV Passed					
Action			Continue					
Result:			DQM Test: < - Percent Relative Difference					
Message			-0.4 < 10.0					
Message			CCV Passed					
Action			Continue					
WCN100310-08	1	S7	-0.973	0.0495	3/10/2010@11:38:58			CCB
Known Conc:			0.00					

DQM Test: > + Concentration Limit									
Result:		-0.973 < 5.00							
Message		CCB Passed							
Action		Continue							
DQM Test: < - Concentration Limit									
Result:		-0.973 > -5.00							
Message		CCB Passed							
Action		Continue							
248163009	1	31	-1.13	0.0408	3/10/2010@11:40:49				
248163010	1	32	-1.06	0.0447	3/10/2010@11:41:42				
248163011	1	33	-0.202	0.0912	3/10/2010@11:42:36				
248163012	1	34	-0.820	0.0578	3/10/2010@11:43:29				
248163013	1	35	-0.101	0.0967	3/10/2010@11:44:22				
248163014	1	36	-1.03	0.0465	3/10/2010@11:45:16				
248241001	1	37	6.98	0.480	3/10/2010@11:46:08				
248241002	1	38	4.24	0.332	3/10/2010@11:47:02				
1202061941|961284|MB	1	39	-1.88	1.84e-4	3/10/2010@11:47:54				
1202061948|LCS	1	40	30.0	1.73	3/10/2010@11:48:47	25.00			
WCN100310-03	1	S3	101	5.59	3/10/2010@11:49:39				CCV
Known Conc:			100						
DQM Test: > + Percent Relative Difference									
Result:		1.4 < 10.0							
Message		CCV Passed							
Action		Continue							
DQM Test: < - Percent Relative Difference									
Result:		1.4 < 10.0							
Message		CCV Passed							
Action		Continue							
WCN100310-08	1	S7	-2.16	-0.0149	3/10/2010@11:51:29				CCB
Known Conc:			0.00						
DQM Test: > + Concentration Limit									
Result:		-2.16 < 5.00							
Message		CCB Passed							
Action		Continue							
DQM Test: < - Concentration Limit									
Result:		-2.16 > -5.00							
Message		CCB Passed							
Action		Continue							
247914001	1	41	-0.276	0.0873	3/10/2010@11:53:18				
247923001	1	42	25.1	1.46	3/10/2010@11:54:10				
247927001	1	43	140	7.65	3/10/2010@11:55:02				
247930001	1	44	81.5	4.51	3/10/2010@11:55:55				
247933001	1	45	25.7	1.49	3/10/2010@11:56:46				
247939001	1	46	22.4	1.32	3/10/2010@11:57:41				
247941001	1	47	36.9	2.10	3/10/2010@11:58:34				
247943001	1	48	55.1	3.08	3/10/2010@11:59:28				
247945001	1	49	2.04	0.213	3/10/2010@12:00:22				
248515001	1	50	-0.256	0.0883	3/10/2010@12:01:15				
WCN100310-03	1	S3	101	5.55	3/10/2010@12:02:08				CCV
Known Conc:			100						
DQM Test: > + Percent Relative Difference									
Result:		0.7 < 10.0							
Message		CCV Passed							
Action		Continue							
DQM Test: < - Percent Relative Difference									
Result:		0.7 < 10.0							
Message		CCV Passed							
Action		Continue							
WCN100310-08	1	S7	-1.39	0.0269	3/10/2010@12:03:58				CCB
Known Conc:			0.00						
DQM Test: > + Concentration Limit									
Result:		-1.39 < 5.00							
Message		CCB Passed							
Action		Continue							
DQM Test: < - Concentration Limit									
Result:		-1.39 > -5.00							
Message		CCB Passed							
Action		Continue							

1202061942	DUP	1	51	-0.751	0.0615	3/10/2010@12:05:48		
1202061944	MS	1	52	73.9	4.10	3/10/2010@12:06:40		
1202061946	MSD	1	53	86.2	4.76	3/10/2010@12:07:33		
248515002		1	54	10.0	0.646	3/10/2010@12:08:26		
1202061943	DUP	1	55	3.99	0.318	3/10/2010@12:09:19		
1202061945	MS	1	56	55.5	3.11	3/10/2010@12:10:11		
1202061947	MSD	1	57	70.4	3.91	3/10/2010@12:11:04		
248515003		1	58	1.39	0.177	3/10/2010@12:11:56		
248526001		1	59	0.704	0.140	3/10/2010@12:12:49		
248560001		1	60	-0.799	0.0590	3/10/2010@12:13:41		
WCN100310-03		1	S3	100	5.53	3/10/2010@12:14:33		CCV
Known Conc:				100				
DQM Test: > + Percent Relative Difference								
Result:				0.2 < 10.0				
Message				CCV Passed				
Action				Continue				
DQM Test: < - Percent Relative Difference								
Result:				0.2 < 10.0				
Message				CCV Passed				
Action				Continue				
WCN100310-08		1	S7	-1.48	0.0223	3/10/2010@12:16:23		CCB
Known Conc:				0.00				
DQM Test: > + Concentration Limit								
Result:				-1.48 < 5.00				
Message				CCB Passed				
Action				Continue				
DQM Test: < - Concentration Limit								
Result:				-1.48 > -5.00				
Message				CCB Passed				
Action				Continue				
248560002		1	61	-1.89	0.00	3/10/2010@12:18:13		
248560003		1	62	-0.0166	0.101	3/10/2010@12:19:08		
248560004		1	63	0.426	0.125	3/10/2010@12:20:02		
248560005		1	64	-0.706	0.0640	3/10/2010@12:20:55		
248560006		1	65	-0.316	0.0851	3/10/2010@12:21:49		
248560007		1	66	-1.15	0.0398	3/10/2010@12:22:42		
1202061965	961291|MB	1	67	-1.97	-0.00435	3/10/2010@12:23:36		
1202061967	LCS	1	68	-0.934	0.0516	3/10/2010@12:24:29		
247914001		1	69	5.31	0.389	3/10/2010@12:25:23		
247923001		1	70	30.3	1.74	3/10/2010@12:26:15		
WCN100310-03		1	S3	102	5.61	3/10/2010@12:27:07		CCV
Known Conc:				100				
DQM Test: > + Percent Relative Difference								
Result:				1.8 < 10.0				
Message				CCV Passed				
Action				Continue				
DQM Test: < - Percent Relative Difference								
Result:				1.8 < 10.0				
Message				CCV Passed				
Action				Continue				
WCN100310-08		1	S7	-1.89	-2.03e-4	3/10/2010@12:28:57		CCB
Known Conc:				0.00				
DQM Test: > + Concentration Limit								
Result:				-1.89 < 5.00				
Message				CCB Passed				
Action				Continue				
DQM Test: < - Concentration Limit								
Result:				-1.89 > -5.00				
Message				CCB Passed				
Action				Continue				
247927001		1	71	225	12.3	3/10/2010@12:30:46		
247930001		1	72	92.5	5.11	3/10/2010@12:31:39		
247933001		1	73	66.3	3.69	3/10/2010@12:32:31		
247939001		1	74	74.5	4.13	3/10/2010@12:33:24		
1202061966	DUP	1	75	60.7	3.39	3/10/2010@12:34:16		
247941001		1	76	42.1	2.38	3/10/2010@12:35:10		
247943001		1	77	80.7	4.47	3/10/2010@12:36:04		
247945001		1	78	0.195	0.113	3/10/2010@12:36:58		

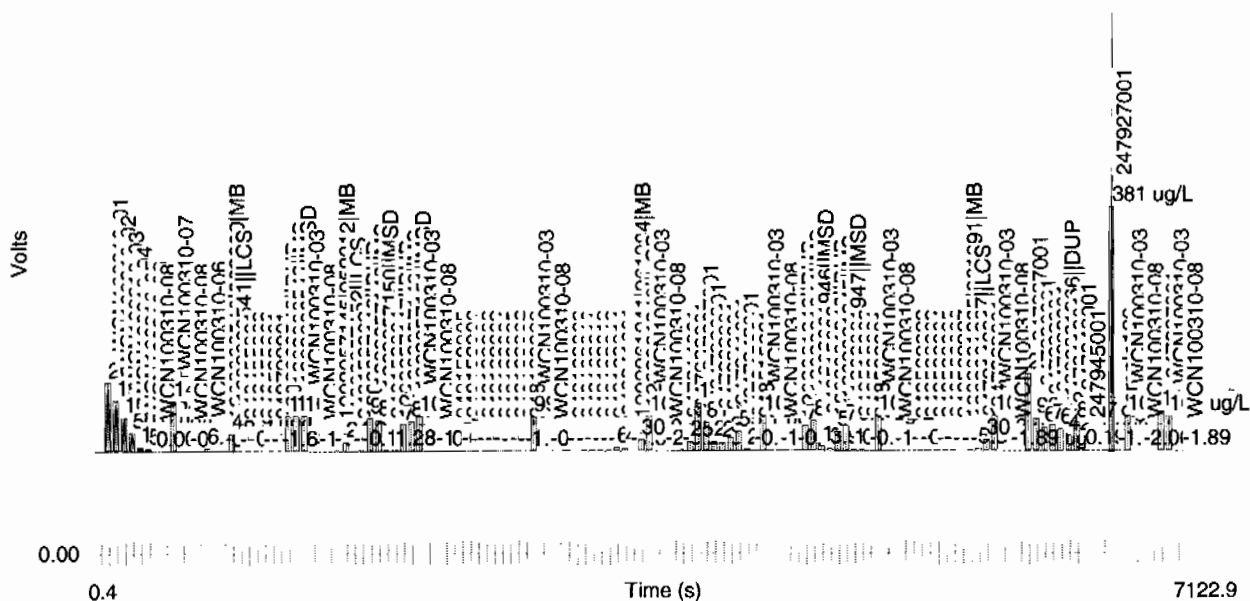
247927001	1	71	381	20.7	3/10/2010@12:39:51	10.00	
Sample106	1	1	-1.79	0.00544	3/10/2010@12:40:44		
WCN100310-03	1	S3	100	5.51	3/10/2010@12:41:37		CCV
Known Conc:			100				
DQM Test: > + Percent Relative Difference							
Result:			0.0 < 10.0				
Message			CCV Passed				
Action			Continue				
DQM Test: < - Percent Relative Difference							
Result:			0.0 < 10.0				
Message			CCV Passed				
Action			Continue				
WCN100310-08	1	S7	-2.00	-0.00603	3/10/2010@12:43:27		CCB
Known Conc:			0.00				
DQM Test: > + Concentration Limit							
Result:			-2.00 < 5.00				
Message			CCB Passed				
Action			Continue				
DQM Test: < - Concentration Limit							
Result:			-2.00 > -5.00				
Message			CCB Passed				
Action			Continue				
247927001	1	71	114	6.29	3/10/2010@12:45:16	2.00	
WCN100310-03	1	S3	101	5.58	3/10/2010@12:46:09		CCV
Known Conc:			100				
DQM Test: > + Percent Relative Difference							
Result:			1.3 < 10.0				
Message			CCV Passed				
Action			Continue				
DQM Test: < - Percent Relative Difference							
Result:			1.3 < 10.0				
Message			CCV Passed				
Action			Continue				
WCN100310-08	1	S7	-1.89	1.71e-4	3/10/2010@12:47:59		CCB
Known Conc:			0.00				
DQM Test: > + Concentration Limit							
Result:			-1.89 < 5.00				
Message			CCB Passed				
Action			Continue				
DQM Test: < - Concentration Limit							
Result:			-1.89 > -5.00				
Message			CCB Passed				
Action			Continue				

Analyte Properties Table for OM_3-10-2010_10-49-24.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

6.32



	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	11.1	0.707	-1.3	3/10/2010	10:51:58
2	150	1	8.08	0.519	1.6	3/10/2010	10:52:50
3	100	1	5.35	0.347	3.0	3/10/2010	10:53:42
4	50.0	1	2.95	0.188	-5.0	3/10/2010	10:54:35
5	10.0	1	0.687	0.0433	-6.4	3/10/2010	10:55:28
6	5.00	1	0.407	0.0241	-8.2	3/10/2010	10:56:22
7	0.00	1	0.0471	0.00103		3/10/2010	10:57:16

Figure 1: TCYANIDE

