179 Lake Avenue, Rochester, NY 14608 Office (585) 647-2530 Fax (585) 647-3311

PAGE 1 OF 23

CHAIN OF CUSTODY

PARADIGM ENVIRONMENTAL SERVICES, INC.

REPORT TO:		INVOICE TO:		LAB PROJECT ID
CLIENT:	GEI CONSULTANTS	CLIENT:	NATIONAL FUEL GAS	144638
ADDRESS:	1301 TRUMANSBURG ROAD	ADDRESS:		Quotation #:
CITY:	ITHACA STATE: NY ZIP: 14850	CITY: STATE: ZIP:		Email:
PHONE:	607 216 8958	PHONE:		
ATTN:	JAMES EDWARDS	ATTN:	BRAD WALKER	

PROJECT REFERENCE: NATIONAL FUEL GAS MINERAL SPRINGS

Matrix Codes:
AQ - Aqueous Liquid; NQ - Non-Aqueous Liquid; WA - Water; WG - Groundwater; DW - Drinking Water; WW - Wastewater; SO - Soil; SL - Sludge; SD - Solid; PT - Paint; WP - Wipe; CK - Caulk; OL - Oil; AR - Air

REQUESTED ANALYSIS

	DATE COLLECTED	TIME COLLECTED	COMPOSITE	GRAB	SAMPLE IDENTIFIER	MATRIX CODES	NUMBER OF CONTAINERS	Lead	Arsenic	Cadmium	Mercury	TCLP Cr/Ag/Ba	REMARKS	PARADIGM LAB SAMPLE NUMBER
1	10/22	14:30	~~X~~	X	Sb+105 WSO (0-0.2')	SO	1	X	X	X	X	X		
2		14:35	~~X~~	X	Sb+105 WSO (0.2-0.7')		1	X	X	X	X	X		
3		14:40		X	Sb+105 WSO (0.7-1.5')		1	X	X	X	X	X		
4		14:45		X	Sb+105 WSO (0-0.2')		1	X	X	X	X	X		
5		14:50		X	Sb+105 WSO (0.2-1.0')		1	X	X	X	X	X		
6		14:55		X	Sb+105 WSO (1.0-1.5')		1	X	X	X	X	X		
7		15:00		X	Sb+205 WSO (0-0.2')		1	X	X	X	X	X		
8		15:05		X	Sb+205 WSO (0.2-1.0')		1	X	X	X	X	X		
9		15:10		X	Sb+205 WSO (1.0-1.5')		1	X	X	X	X	X		
10		15:15		X	Sb+205 WSO (0-0.2')		1	X	X	X	X	X		

6°C iced 10/23 @ 0904. Custody seals dated & signed. KS 10/23/14

Turnaround Time		Report Supplements			
Availability contingent upon lab approval; additional fees may apply.					
Standard 5 day	☐	Batch QC	☐	Basic EDD	☐
Rush 3 day	☐	Category A	☐	NYSDEC EDD	☒
Rush 2 day	☐	Category B	☒		
Rush 1 day	☒				
Other please indicate:	☐	Other please indicate:	☐	Other EDD please indicate:	☐

PAPER KS 10/23/14

Sampled By	Michael Cummings	10/22	17:09
Relinquished By	Michael Cummings		
Received By		10-22-14	17:45
Received @ Lab By		10/23/14	0921

Total Cost: ☐

P.I.F. ☐

PAGE 2 OF 3

179 Lake Avenue, Rochester, NY 14608 Office (585) 647-2530 Fax (585) 647-3311

CHAIN OF CUSTODY

PARADIGM ENVIRONMENTAL SERVICES, INC.

REPORT TO:	INVOICE TO:	
CLIENT:	CLIENT:	LAB PROJECT ID: 144638
ADDRESS:	ADDRESS:	
CITY: STATE: ZIP: SAME	CITY: STATE: ZIP: SAME	Quotation #:
PHONE:	PHONE:	Email:
ATTN:	ATTN:	

PROJECT REFERENCE

Matrix Codes:
AQ - Aqueous Liquid; NQ - Non-Aqueous Liquid; WA - Water; WG - Groundwater; DW - Drinking Water; WW - Wastewater; SO - Soil; SL - Sludge; SD - Solid; PT - Paint; WP - Wipe; CK - Caulk; OL - Oil; AR - Air

REQUESTED ANALYSIS

	DATE COLLECTED	TIME COLLECTED	COMPOSITE	GRAB	SAMPLE IDENTIFIER	MATRIX CODES	NUMBER OF CONTAINERS	LEAD ARSENIC CADMIUM MERCURY WITH TCLP	REMARKS	PARADIGM LAB SAMPLE NUMBER
1	10/22	15:20 me		X	Sb+20S WSO (0.2-0.5)	SO	1			
2		15:25		X	Sb+20S WSO (0.5-1.3)		1			
3		15:30		X	Sb+30S WSO (0.0-0.2)		1			
4		15:35		X	Sb+30S WSO (0.2-0.5)		1			
5		15:40		X	Sb+30S WSO (0.5-1.4)		1			
6		15:45		X	Sb+35S WSO (0-0.2)		1			
7		15:50		X	Sb+30S WSO (0.2-0.7)		1			
8		15:55		X	Sb+35S WSO (0-0.2')		1			
9		16:00		X	Sb+30S WSO (0.2-1.6)		1			
10	~~10/22~~	~~16:40~~		X	Sb+30S WSO (1.6-2.1)		1			

Sample not taken per JH. ISS 10/23/14

Turnaround Time	Report Supplements	
Availability contingent upon lab approval; additional fees may apply.		
Standard 5 day ☐	Batch QC ☐	Basic EDD ☐
Rush 3 day ☐	Category A ☐	NYSDEC EDD ☐
Rush 2 day ☐	Category B ☒	
Rush 1 day ☒		
Other ☐ please indicate:	Other ☐ per JH ISS 10/23/14 please indicate:	Other EDD ☐ please indicate:

Sampled By: Michael Cummings	Date/Time: 10/22 17:09	Total Cost:
Relinquished By: Michael Cummings	Date/Time: 10/22 L	
Received By:	Date/Time: 10-22-14 17	P.I.F.
Received @ Lab By:	Date/Time: 10/23/14 0921	

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Analytical Report Cover Page

GEI Consultants, Inc.

For Lab Project # 144638
Issued November 7, 2014
This report contains a total of 199 pages

The reported results relate only to the samples as they have been received by the laboratory.

Each page of this document is part of a multipage report. This document may not be reproduced except in its entirety, without the prior consent of Paradigm Environmental Services, Inc.

All soil/sludge samples have been reported on a dry weight basis, unless qualified "reported as received". Other solids are reported as received.

Low level Volatiles blank reports for soil/solid matrix are based on a nominal 5 gram weight. Sample results and reporting limits are based on actual weight, which may be more or less than 5 grams.

The Chain of Custody provides additional information, including compliance with sample condition requirements upon receipt. Sample condition requirements are defined under the 2003 NELAC Standard, sections 5.5.8.3.1 and 5.5.8.3.2.

NYSDOH ELAP does not certify for all parameters. Paradigm Environmental Services or the indicated subcontracted laboratory does hold certification for all analytes where certification is offered by ELAP unless otherwise specified. Aliquots separated for certain tests, such as TCLP, are indicated on the Chain of Custody and final reports with an "A" suffix.

Data qualifiers are used, when necessary, to provide additional information about the data. This information may be communicated as a flag or as text at the bottom of the report. Please refer to the following list of frequently used data flags and their meaning:

"<" = analyzed for but not detected at or above the reporting limit.
"E" = Result has been estimated, calibration limit exceeded.
"Z" = Please refer to included Case Narrative for explanation.
"D" = Sample, Laboratory Control Sample, or Matrix Spike Duplicate results above Relative Percent Difference limit.
"M" = Matrix spike recoveries outside QC limits. Matrix bias indicated.
"B" = Method blank contained trace levels of analyte. Refer to included method blank report.
"J" = Result estimated between the quantitation limit and half the quantitation limit.
"L"= Laboratory Control Sample recovery outside accepted QC limits.
"P"= Concentration differs by more than 40% between primary and secondary analytical columns.
"NC"=Not calculableApplicable to RPD if sample or duplicate result is non-detect or estimated(see primary report for data flags). Applicable to MS if sample is greater or equal to ten times the spike added. Applicable to sample surrogates or MS if sample dilution is 10x or higher.
"*"=Indicates any recoveries outside associated acceptance windows. Surrogate outliers in samples are presumed matrix effects. LCS demonstrates method compliance unless otherwise noted.
"(1)"= Indicates data from primary column used for QC calculation.

LAB PROJECT NARRATIVE: 144638
PROJECT NAME: National Fuel Gas Mineral Springs
SDG: 4638-01
CLIENT: GEI Consultants Inc.

Nineteen soil samples were collected by GEI personnel on 10/22/2014 and received at the Paradigm laboratory on 10/23/2014. Container and holding times were acceptable at time of receipt; the samples were received at 0° Centigrade and were on ice. The samples were submitted with the Chains-of-Custody requesting a site specific list for Metals and Total Cyanide. All analyses were performed using EPA SW-846 methods and holding times.

The items noted in this case narrative address compliance with the referenced methods, NYSDOH ELAP rules, and any project specific data quality requirements. These may be different from the usability criteria referenced in any "Functional Guidelines" or other data review standards used by data validators.

GENERAL NOTES

ALL ANALYSES

The initial and continuing calibration reports are only evaluated for compounds that are on the sample summary report.

Regarding results on QC summary forms versus included raw data, due to calculations made at the instrument where many significant figures may be used, there may be slight discrepancies between the summary report result and that recorded on the raw data. This does not affect data usability.

METALS

ICP-AES interelement and background corrections were applied. Raw data was not generated before application of background corrections.

Holding times were met for all samples.

Site specific QC was not requested on this SDG but was analyzed on sample S6-30SW83 (0.2-1.6ft). All Matrix Spike Recoveries and Sample Duplicate Percent Differences were within QC limits. Any metals with a Spike % Recovery reported as "NC" on the QC summary form indicates that the metal concentrations were ten times greater than the matrix spikes and could not be calculated. Likewise, any metals with a Relative % Difference reported as "NC" on the QC summary form indicates that the metal results were Non-Detect or estimated and could not be calculated. The Laboratory Control Samples recovered within acceptable limits. All LCS % differences were within acceptance limits.

The method blanks were free from contamination within the reportable ranges.

All data for the initial calibrations was within acceptance limits.

All continuing calibrations data was within acceptance limits.

INORGANICS-TOTAL CYANIDE

Holding times were met for all samples.

Site specific QC was not requested on this SDG but was analyzed on sample S6+10SW80 (0-0.2ft). The Matrix Spike Recovery was within QC limits. Any results reported as "NC" on the QC summary form indicates that the concentration was ten times greater than the matrix spike and could not be calculated or that the result was Non-Detect or estimated and could not be calculated. The Laboratory Control Sample recovered within acceptable limits.

The method blank was free from contamination within the reportable ranges.

All data for the initial calibrations was within acceptance limits.

All continuing calibrations data was within acceptance limits.

(signed) _____ (date) 11/10/2014

Bruce Hoogesteger- Technical Director

SDG# : 4638-01
LAB PROJECT #: 144638
CLIENT: GEI
PROJECT NAME National Fuel Gas
Mineral Springs

BATCH COMPLETE: 10/23/2014
DATE: 10/23/2014
DATE DUE: 11/20/2014
PROTOCOL: SW846

LAB.SAMPLE#	FIELD ID	MATRIX	REQUESTED ANALYSIS	DATE SAMPLED	DATE REC'D
144638-01	S6+10S W80 (0-0.2 ft)	Soil	Mets (Pb,As,Cd,Hg),TCN	10/22/2014	10/23/2014
144638-02	S6+10S W80 (0.2-0.7 ft)	Soil	Mets (Pb,As,Cd,Hg),TCN	10/22/2014	10/23/2014
144638-03	S6+10S W80 (0.7-1.5 ft)	Soil	Mets (Pb,As,Cd,Hg),TCN	10/22/2014	10/23/2014
144638-04	S6+10S W90 (0-0.2 ft)	Soil	Mets (Pb,As,Cd,Hg),TCN	10/22/2014	10/23/2014
144638-05	S6+10S W90 (0.2-1.0 ft)	Soil	Mets (Pb,As,Cd,Hg),TCN	10/22/2014	10/23/2014
144638-06	S6+10S W90 (1.0-1.5 ft)	Soil	Mets (Pb,As,Cd,Hg),TCN	10/22/2014	10/23/2014
144638-07	S6+20S W80 (0-0.2 ft)	Soil	Mets (Pb,As,Cd,Hg),TCN	10/22/2014	10/23/2014
144638-08	S6+20S W80 (0.2-1.0 ft)	Soil	Mets (Pb,As,Cd,Hg),TCN	10/22/2014	10/23/2014
144638-09	S6+20S W80 (1.0-1.5 ft)	Soil	Mets (Pb,As,Cd,Hg),TCN	10/22/2014	10/23/2014
144638-10	S6+20S W90 (0-0.2 ft)	Soil	Mets (Pb,As,Cd,Hg),TCN	10/22/2014	10/23/2014
144638-11	S6+20S W90 (0.2-0.8 ft)	Soil	Mets (Pb,As,Cd,Hg),TCN	10/22/2014	10/23/2014
144638-12	S6+20S W90 (0.8-1.3 ft)	Soil	Mets (Pb,As,Cd,Hg),TCN	10/22/2014	10/23/2014
144638-13	S6+30S W80 (0-0.2 ft)	Soil	Mets (Pb,As,Cd,Hg),TCN	10/22/2014	10/23/2014
144638-14	S6+30S W80 (0.2-0.8 ft)	Soil	Mets (Pb,As,Cd,Hg),TCN	10/22/2014	10/23/2014
144638-15	S6+30S W80 (0.8-1.4 ft)	Soil	Mets (Pb,As,Cd,Hg),TCN	10/22/2014	10/23/2014
144638-16	S6+30S W90 (0-0.2 ft)	Soil	Mets (Pb,As,Cd,Hg),TCN	10/22/2014	10/23/2014
144638-17	S6+30S W90 (0.2-0.7 ft)	Soil	Mets (Pb,As,Cd,Hg),TCN	10/22/2014	10/23/2014
144638-18	S6+30S W30 (0-0.2 ft)	Soil	Mets (Pb,As,Cd,Hg),TCN	10/22/2014	10/23/2014
144638-19	S6+30S W83 (0.2-1.6 ft)	Soil	Mets (Pb,As,Cd,Hg),TCN	10/22/2014	10/23/2014

-5-

PARADIGM ENVIRONMENTAL SERVICES, INC.

179 Lake Avenue, Rochester, NY 14608 Office (585) 647-2530 Fax (585) 647-3311

CHAIN OF CUSTODY

PAGE 1 OF 3

REPORT TO:		INVOICE TO:		LAB PROJECT ID
CLIENT:	GEI CONSULTANTS	CLIENT:	NATIONAL FUEL GAS	144638
ADDRESS:	1301 TRUMANSBURG ROAD	ADDRESS:		Quotation #:
CITY:	ITHACA STATE: NY ZIP: 14850	CITY: STATE: ZIP:		
PHONE:	607 216 8458	PHONE:		Email:
ATTN:	JAMES EDWARDS	ATTN:	BRAD WALKER	

PROJECT REFERENCE: NATIONAL FUEL GAS NIAGARA SPRINGS

Matrix Codes:
AQ - Aqueous Liquid; NQ - Non-Aqueous Liquid; WA - Water; WG - Groundwater; DW - Drinking Water; WW - Wastewater; SO - Soil; SL - Sludge; SD - Solid; PT - Paint; WP - Wipe; CK - Caulk; OL - Oil; AR - Air

REQUESTED ANALYSIS

	DATE COLLECTED	TIME COLLECTED	COMPOSITE	GRAB	SAMPLE IDENTIFIER	MATRIX CODES	NUMBER OF CONTAINERS	Lead Arsenic Cadmium Manganese TCLP (Cd, Mn, Pb)	REMARKS	PARADIGM LAB SAMPLE NUMBER
1	10/22	14:30	X	X	Sb+IDS WSD (0-0.2')	SO	1	X X X X X		01
2		14:35	X	X	Sb + IDS WSD (0.2-0.7)		1	X X X X X		02
3		14:40		X	Sb + IDS WSD (0.7-1.5)		1	X X X X X		03
4		14:45		X	Sb + IDS WSD (0-0.2)		1	X X X X X		04
5		14:50		X	Sb + IDS WSD (0.2-1.0)		1	X X X X X		05
6		14:55		X	Sb + IDS WSD (1.0-1.5)		1	X X X X X		06
7		15:00		X	Sb + 20S WSD (0-0.2)		1	X X X X X		07
8		15:05		X	Sb + 20S WSD (0.2-1.0)		1	X X X X X		08
9		15:10		X	Sb + 20S WSD (1.0-1.5)		1	X X X X X		09
10		15:15		X	Sb + 30S WSD (0-0.2')		1	X X X X X		10

6°C iced 10/23 @ 0904. Custody seals dated + signed. ISS 10/23/14

Turnaround Time		Report Supplements		
Availability contingent upon lab approval; additional fees may apply.				
Standard 5 day	☐	Batch QC	☐	Basic EDD ☐
Rush 3 day	☐	Category A	☐	NYSDEC EDD ☒
Rush 2 day	☐	Category B	☒	
Rush 1 day	☒		per SF ISS 10/23/14	
Other please indicate:	☐	Other please indicate:	☐	Other EDD please indicate: ☐

Sampled By	Matthew Cummings	10/22 17:09	Total Cost:
Relinquished By	Matthew Cummings		
Received By		10/22/14 17:43	P.I.F.
Received @ Lab By		10/23/14 0921	

PAGE 2 OF 3

179 Lake Avenue, Rochester, NY 14608 Office (585) 647-2530 Fax (585) 647-3311

CHAIN OF CUSTODY

PARADIGM ENVIRONMENTAL SERVICES, INC.

REPORT TO:	INVOICE TO:	
CLIENT:	CLIENT:	LAB PROJECT ID: 1446638
ADDRESS:	ADDRESS:	
CITY: STATE: ZIP: SAME	CITY: STATE: ZIP: SAME	Quotation #:
PHONE:	PHONE:	Email:
ATTN:	ATTN:	

PROJECT REFERENCE

Matrix Codes:
AQ - Aqueous Liquid; NQ - Non-Aqueous Liquid; WA - Water; WG - Groundwater; DW - Drinking Water; WW - Wastewater; SO - Soil; SL - Sludge; SD - Solid; PT - Paint; WP - Wipe; CK - Caulk; OL - Oil; AR - Air

REQUESTED ANALYSIS

	DATE COLLECTED	TIME COLLECTED	COMPOSITE	GRAB	SAMPLE IDENTIFIER	MATRIX CODES	NUMBER OF CONTAINERS	Lead 11	Arsenic	Cadmium	Mercury	TCLP	REMARKS	PARADIGM LAB SAMPLE NUMBER
1	10/7	15:20 me		X	Sb+20S WA0 (0.2-0.5)	SO	1	X	X	X	X	X		1 1
2		15:25		X	Sb+20S WA0 (0.5-1.3)		1	X	X	X	X	X		1 2
3		15:30		X	Sb+30S WA0 (0.2-0.5)		1	X	X	X	X	X		1 3
4		15:35		X	Sb+30S WA0 (0.2-0.5)		1	X	X	X	X	X		1 4
5		15:40		X	Sb+30S WA0 (0.5-1.4)		1	X	X	X	X	X	per JH 1551 10/23/14	1 5
6		15:45		X	Sb+30S WA0 (0-0.2)		1	X	X	X	X	X		1 6
7		15:50		X	Sb+30S WA0 (0.2-0.7)		1	X	X	X	X	X		1 7
8		15:55		X	Sb+30S WA0 (0-0.2)		1	X	X	X	X	X		1 8
9		16:00		X	Sb+30S WA0 (0.2-1.6)		1	X	X	X	X	X		1 9
10		16:40		X	Sb+30S WA0 (1.6-2.1)		1							

sample not taken per JH. 1551 10/23/14

Turnaround Time		Report Supplements			
Availability contingent upon lab approval; additional fees may apply.					
Standard 5 day	☐	Batch QC	☐	Basic EDD	☐
Rush 3 day	☐	Category A	☐	NYSDEC EDD	☐
Rush 2 day	☐	Category B	☒		
Rush 1 day	☒				
Other please indicate:	☐	Other per JH 1551 10/23/14 please indicate:	☐	Other EDD please indicate:	☐

Sampled By: Michael Cumming	Date/Time: 10/22 17:09	Total Cost:	
Relinquished By: Michael Cumming	Date/Time: 10/22		
Received By:	Date/Time: 10-22-14 17:09	P.I.F.	
Received @ Lab By:	Date/Time: 10/23/14 0921		

PARADIGM ENVIRONMENTAL SERVICES

Chain of Custody Supplement

Client: GFI **Completed by:** Kyle Sherwick

Lab Project ID: 144638 **Date:** 10/23/14

Sample Condition Requirements

Per NELAC/ELAP 210/241/242/243/244

Condition	NELAC compliance with the sample condition requirements upon receipt: Yes	No	N/A
Container Type	X		
Comments			
Transferred to method-compliant container			X
Headspace (<1 mL)			X
Comments			
Preservation			X
Comments			
Chlorine Absent (<0.10 ppm per test strip)			X
Comments			
Holding Time	X		
Comments			
Temperature	X TCN		X
Comments	6° C iced by samples @ 0904. Custody seals dated & signed. KS 10/23/14		
Sufficient Sample Quantity	X		
Comments			

PARADIGM
ENVIRONMENTAL SERVICES, INC.
179 Lake Avenue, Rochester, NY 14608 Office: (585) 647-2530 Fax: (585) 647-3311

Lab Project #: 144638

Client : GEI

of Samples: 19

Internal Chain of Custody

Sign-Out Log for Refrigerator: C

Sample ID	Container Code	Initials	Purpose	Date/Time Out	Date/Time In
-01	G3	RJK/MGV	TCN/moisture	10/23 945	10/23 1137
-02					
-03					
-04					
-05					
-06					
-07					
-08					
-09					
-10					
-11					
-12					
-13					
-14					
-15					
-16					
-17					
-18					
-19					
-09		RJK	TCN	10/23 1400	RJK 10/25 1532
-10					
-11					
-12					
-13					
-14					
-15					
-16					
-17					
-18					
-19					

Percent Moisture Prep Log

% Moisture = (Wet Weight - Dry Weight) / (Wet weight - Pan Weight)

Date	Container Code	Sample #	Pan Weight	Wet Weight	Dry Weight	Wet Weight - Pan Weight	Percent Moisture	Initials
10/23/14	C-3	4638-01	1.28	6.75	5.17	5.47	28.9	JSD
		-02	1.28	7.01	5.54	5.73	25.6	
		-03	1.30	6.34	5.01	5.04	26.4	
		-04	1.29	6.43	5.10	5.14	25.9	
		-05	1.29	7.29	6.41	6.00	14.7	
		-06	1.30	6.41	5.15	5.11	24.6	
		-07	1.30	6.82	5.05	5.52	32.1	
		-08	1.29	7.07	5.66	5.78	24.4	
		-09	1.27	6.51	5.09	5.24	27.1	
		-10	1.30	6.70	5.09	5.40	29.8	
		-11	1.29	6.61	5.33	5.32	24.1	
		-12	1.28	6.60	5.37	5.32	23.1	
		-13	1.27	6.58	5.24	5.31	25.2	
		-14	1.29	6.84	5.68	5.55	20.9	
		-15	1.30	7.20	5.75	5.90	24.6	
		-16	1.27	6.36	4.91	5.09	28.5	
		-17	1.28	6.29	5.04	5.01	25.0	
		-18	1.30	7.06	5.68	5.76	24.0	
		-19	1.29	7.49	6.37	6.20	18.1 > 3.79%D	
	↓	4638-19 Dup	1.28	6.43	5.46	5.15	18.8	↓
	C-2	4646-01	1.29	5.85	2.40	4.56	75.7	JS
	C-3	4659-01	1.29	7.76	7.10	6.47	10.2	
	↓	-02	1.30	6.97	6.10	5.67	15.3	
		-03	1.30	7.50	6.86	6.20	10.3	
		-04	1.30	6.96	5.74	5.66	21.6	
		-05	1.29	6.32	5.73	5.03	11.7	
	↓	-06	1.29	6.54	5.58	5.25	18.3	↓

GENERAL TERMS AND CONDITIONS
LABORATORY SERVICES

These Terms and Conditions embody the whole agreement of the parties in the absence of a signed and executed contract between the Laboratory (LAB) and Client. They shall supersede all previous communications, representations, or agreements, either verbal or written, between the parties. The LAB specifically rejects all additional, inconsistent, or conflicting terms, whether printed or otherwise set forth in any purchase order or other communication from the Client to the LAB. The invalidity or unenforceability in whole or in part of any provision, term, or condition hereof shall not affect in any way the validity or enforceability of the remainder of the Terms and Conditions. No waiver by LAB of any provision, term, or condition hereof or of any breach by or obligation of the Client hereunder shall constitute a waiver of such provision, term, or condition on any other occasion or a waiver of any other breach by or obligation of the Client. This agreement shall be administered and interpreted under the laws of the state which services are procured.

Warranty. Recognizing that the nature of many samples is unknown and that some may contain potentially hazardous components, LAB warrants only that it will perform testing services, obtain findings, and prepare reports in accordance with generally accepted analytical laboratory principles and practices at the time of performance of services. LAB makes no other warranty, express or implied.

Scope and Compensation. LAB agrees to perform the services described in the chain of custody to which these terms and conditions are attached. Unless the parties agree in writing to the contrary, the duties of LAB shall not be construed to exceed the services specifically described. LAB will use LAB default method for all tests unless specified otherwise on the Work Order.
Payment terms are net 30 days from the date of invoice. All overdue payments are subject to an interest charge of one and one-half percent (1-1/2%) per month or a portion thereof. Client shall also be responsible for costs of collection, including payment of reasonable attorney fees if such expense is incurred. The prices, unless stated, do not include any sale, use or other taxes. Such taxes will be added to invoice prices when required.

Prices. Compensation for services performed will be based on the current Lab Analytical Fee Schedule or on quotations agreed to in writing by the parties. Turnaround time based charges are determined from the time of resolution of all work order questions. Testimony, court appearances or data compilation for legal action will be charged separately.

Limitations of Liability. In the event of any error, omission, or other professional negligence, the sole and exclusive responsibility of LAB shall be to re-perform the deficient work at its own expense and LAB shall have no other liability whatsoever. All claims shall be deemed waived unless made in writing and received by LAB within ninety (90) days following completion of services.
LAB shall have no liability, obligation, or responsibility of any kind for losses, costs, expenses, or other damages (including but not limited to any special, direct, incidental or consequential damages) with respect to LAB's services or results.
All results provided by LAB are strictly for the use of its clients and LAB is in no way responsible for the use of such results by clients or third parties. All reports should be considered in their entirety, and LAB is not responsible for the separation, detachment, or other use of any portion of these reports. Client may not assign the lab report without the written consent of the LAB.
Client covenants and agrees, at its/his/her sole expense, to indemnify, protect, defend, and save harmless the LAB from and against any and all damages, losses, liabilities, obligations, penalties, claims, litigation, demands, defenses, judgments, suits, actions, proceedings, costs, disbursements and/or expenses (including, without limitation attorneys' and experts' fees and disbursements) of any kind whatsoever which may at any time be imposed upon, incurred by or asserted or awarded against client relating to, resulting from or arising out of (a) the breach of this agreement by this client, (b) the negligence of the client in handling, delivering or disclosing any hazardous substance, (c) the violation of the Client of any applicable law, (d) non-compliance by the Client with any environmental permit or (e) a material misrepresentation in disclosing the materials to be tested.

Hazard Disclosure. Client represents and warrants that any sample delivered to LAB will be preceded or accompanied by complete written disclosure of the presence of any hazardous substances known or suspected by Client. Client further warrants that any sample containing any hazardous substance that is to be delivered to LAB will be packaged, labeled, transported, and delivered properly and in accordance with applicable laws.

Sample Handling. Prior to LAB's acceptance of any sample (or after any revocation of acceptance), the entire risk of loss or of damage to such sample remains with Client. Samples are accepted when receipt is acknowledged on chain of custody documentation. In no event will LAB have any responsibility for the action or inaction of any carrier shipping or delivering any sample to or from LAB premises.
Client authorizes LAB to proceed with the analysis of samples as received by the laboratory, recognizing that any samples not in compliance with all current DOH-ELAP-NELAP requirements for containers, preservation or holding time will be noted as such on the final report.
Disposal of hazardous waste samples is the responsibility of the Client. If the Client does not wish such samples returned, LAB may add storage and disposal fees to the final invoice. Maximum storage time for samples is 30 days after completion of analysis unless modified by applicable state or federal laws. Client will be required to give the LAB written instructions concerning disposal of these samples.
LAB reserves the absolute right, exercisable at any time, to refuse to receive delivery of, refuse to accept, or revoke acceptance of any sample, which, in the sole judgment of LAB (a) is of unsuitable volume, (b) may be or become unsuitable for or may pose a risk in handling, transport, or processing for any health, safety, environmental or other reason whether or not due to the presence in the sample of any hazardous substance, and whether or not such presence has been disclosed to LAB by Client or (c) if the condition or sample date make the sample unsuitable for analysis.

Legal Responsibility. LAB is solely responsible for performance of this contract, and no affiliated company, director, officer, employee, or agent shall have any legal responsibility hereunder, whether in contract or tort including negligence.

Assignment. LAB may assign its performance obligations under this contract to other parties, as it deems necessary. LAB shall disclose to Client any assignee (subcontractor) by ELAP ID # on the submitted final report.

Force Majeure. LAB shall have no responsibility or liability to the Client for any failure or delay in performance by LAB, which results in whole or in part from any cause or circumstance beyond the reasonable control of LAB. Such causes and circumstances shall include, but not limited to, acts of God, acts or orders of any government authority, strikes or other labor disputes, natural disasters, accidents, wars, civil disturbances, difficulties or delays in transportation, mail or delivery services, inability to obtain sufficient services or supplies from LAB's usual suppliers, or any other cause beyond LAB's reasonable control.

Law. This contract shall be continued under the laws of the State of New York without regard to its conflicts of laws provision.

METALS DATA

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W80 (0-0.2 ft)
Lab Sample ID: 144638-01 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**9.03**	mg/Kg		10/23/2014
Cadmium	**0.851**	mg/Kg		10/23/2014
Lead	**96.2**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050
Preparation Date: 10/23/2014
Data File: 102314b

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W80 (0-0.2 ft)

Lab Sample ID: 144638-01 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.129**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W80 (0.2-0.7 ft)

Lab Sample ID: 144638-02 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**8.22**	mg/Kg		10/23/2014
Cadmium	**0.768**	mg/Kg		10/23/2014
Lead	**102**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W80 (0.2-0.7 ft)

Lab Sample ID: 144638-02 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.129**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W80 (0.7-1.5 ft)
Lab Sample ID: 144638-03 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**6.76**	mg/Kg		10/23/2014
Cadmium	**0.779**	mg/Kg		10/23/2014
Lead	**37.1**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050
Preparation Date: 10/23/2014
Data File: 102314b

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W80 (0.7-1.5 ft)

Lab Sample ID: 144638-03 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.0840**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W90 (0-0.2 ft)
Lab Sample ID: 144638-04 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**6.41**	mg/Kg		10/24/2014
Cadmium	**0.464**	mg/Kg	J	10/23/2014
Lead	**69.0**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050
Preparation Date: 10/23/2014
Data File: 102414a

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W90 (0-0.2 ft)

Lab Sample ID: 144638-04 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.121**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W90 (0.2-1.0 ft)
Lab Sample ID: 144638-05 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**6.72**	mg/Kg		10/23/2014
Cadmium	< 0.611	mg/Kg		10/23/2014
Lead	**84.2**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050
Preparation Date: 10/23/2014
Data File: 102314b

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W90 (0.2-1.0 ft)

Lab Sample ID: 144638-05 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	< 0.0193	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W90 (1.0-1.5 ft)
Lab Sample ID: 144638-06 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**4.14**	mg/Kg		10/24/2014
Cadmium	**0.704**	mg/Kg		10/23/2014
Lead	**23.6**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050
Preparation Date: 10/23/2014
Data File: 102414a

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Report Prepared Friday, October 24, 2014

PARADIGM

ENVIRONMENTAL SERVICES, INC

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W90 (1.0-1.5 ft)

Lab Sample ID: 144638-06 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.0669**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W80 (0-0.2 ft)

Lab Sample ID: 144638-07 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**8.27**	mg/Kg		10/23/2014
Cadmium	**0.632**	mg/Kg	J	10/23/2014
Lead	**57.0**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050
Preparation Date: 10/23/2014
Data File: 102314b

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W80 (0-0.2 ft)

Lab Sample ID: 144638-07 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.107**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W80 (0.2-1.0 ft)

Lab Sample ID: 144638-08 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**8.99**	mg/Kg		10/23/2014
Cadmium	**0.634**	mg/Kg	J	10/23/2014
Lead	**54.5**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W80 (0.2-1.0 ft)

Lab Sample ID: 144638-08 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.0974**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W80 (1.0-1.5 ft)

Lab Sample ID: 144638-09 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**8.36**	mg/Kg		10/23/2014
Cadmium	**0.962**	mg/Kg		10/23/2014
Lead	**68.1**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W80 (1.0-1.5 ft)

Lab Sample ID: 144638-09 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.111**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W90 (0-0.2 ft)

Lab Sample ID: 144638-10 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**6.28**	mg/Kg		10/24/2014
Cadmium	**0.806**	mg/Kg		10/23/2014
Lead	**121**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102414a

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W90 (0-0.2 ft)

Lab Sample ID: 144638-10 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.122**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W90 (0.2-0.8 ft)

Lab Sample ID: 144638-11 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**7.63**	mg/Kg		10/23/2014
Cadmium	**0.902**	mg/Kg		10/23/2014
Lead	**142**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W90 (0.2-0.8 ft)

Lab Sample ID: 144638-11 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.128**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W90 (0.8-1.3 ft)

Lab Sample ID: 144638-12 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**8.83**	mg/Kg		10/23/2014
Cadmium	**1.01**	mg/Kg		10/23/2014
Lead	**81.8**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W90 (0.8-1.3 ft)

Lab Sample ID: 144638-12 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.124**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W80 (0-0.2 ft)

Lab Sample ID: 144638-13 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**10.2**	mg/Kg		10/23/2014
Cadmium	**0.595**	mg/Kg	J	10/23/2014
Lead	**65.2**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W80 (0-0.2 ft)

Lab Sample ID: 144638-13 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.139**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W80 (0.2-0.8 ft)

Lab Sample ID: 144638-14 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**10.2**	mg/Kg		10/23/2014
Cadmium	**0.493**	mg/Kg	J	10/23/2014
Lead	**55.2**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W80 (0.2-0.8 ft)

Lab Sample ID: 144638-14 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.122**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W80 (0.8-1.4 ft)

Lab Sample ID: 144638-15 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**3.92**	mg/Kg		10/24/2014
Cadmium	**0.603**	mg/Kg	J	10/23/2014
Lead	**29.4**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102414a

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier:	S6+30S W80 (0.8-1.4 ft)		
Lab Sample ID:	144638-15	**Date Sampled:**	10/22/2014
Matrix:	Soil	**Date Received:**	10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.0781**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W90 (0-0.2 ft)

Lab Sample ID: 144638-16 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**6.00**	mg/Kg		10/24/2014
Cadmium	**0.613**	mg/Kg	J	10/23/2014
Lead	**72.8**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102414a

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W90 (0-0.2 ft)

Lab Sample ID: 144638-16 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.116**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W90 (0.2-0.7 ft)

Lab Sample ID: 144638-17 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**6.71**	mg/Kg		10/23/2014
Cadmium	**0.872**	mg/Kg		10/23/2014
Lead	**54.8**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W90 (0.2-0.7 ft)

Lab Sample ID: 144638-17 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.0864**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W30 (0-0.2 ft)
Lab Sample ID: 144638-18 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**0.962**	mg/Kg	J	10/24/2014
Cadmium	< 0.609	mg/Kg		10/23/2014
Lead	**52.0**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050
Preparation Date: 10/23/2014
Data File: 102414a

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W30 (0-0.2 ft)

Lab Sample ID: 144638-18 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.118**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W83 (0.2-1.6 ft)

Lab Sample ID: 144638-19 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**1.61**	mg/Kg		10/24/2014
Cadmium	< 0.637	mg/Kg		10/23/2014
Lead	**40.6**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102414a

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W83 (0.2-1.6 ft)
Lab Sample ID: 144638-19 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.115**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC

Method Blank Report

Client:	**GEI Consultants Inc.**
Project Reference:	National Fuel Gas Mineral Springs
Lab Project ID:	144638
SDG #:	4638-01
Matrix:	Soil

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	<0.967	mg/Kg		10/23/2014
Cadmium	<0.484	mg/Kg		10/23/2014
Lead	<0.967	mg/Kg		10/23/2014

Method Reference(s):	EPA 6010C
	EPA 3050
Preparation Date:	10/23/2014
Data File:	102314b
QC Batch ID:	QC141023soil
QC Number:	1

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Method Blank Report

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Lab Project ID: 144638

SDG #: 4638-01

Matrix: Soil

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	<0.0163	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A
QC Batch ID: QC141023HgSoil
QC Number: 1

PARADIGM
ENVIRONMENTAL SERVICES, INC.

QC Report for Laboratory Control Sample and Control Sample Duplicate

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Lab Project ID: 144638

SDG #: 4638-01

Matrix: Soil

Metals

Analyte	LCS Added	LCSD Added	Spike Units	LCS Result	LCSD Result	LCS % Recovery	LCSD % Recovery	% Rec Limits	LCS Outliers	LCSD Outliers	Relative % Difference	RPD Limit	RPD Outliers	Date Analyzed
Arsenic	274	258	mg/Kg	272	255	99.4	98.6	85 - 115			0.763	20		10/23/2014
Cadmium	109	103	mg/Kg	111	104	101	101	85 - 115			0.798	20		10/23/2014
Lead	274	258	mg/Kg	280	263	103	102	85 - 115			0.578	20		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

QC Number: 1

QC Batch ID: QC141023soil

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Report Prepared *Friday, October 24, 2014*

PARADIGM
ENVIRONMENTAL SERVICES, INC.

QC Report for Laboratory Control Sample and Control Sample Duplicate

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Lab Project ID: 144638

SDG #: 4638-01

Matrix: Soil

Mercury

Analyte	LCS Added	LCSD Added	Spike Units	LCS Result	LCSD Result	LCS % Recovery	LCSD % Recovery	% Rec Limits	LCS Outliers	LCSD Outliers	Relative % Difference	RPD Limit	RPD Outliers	Date Analyzed
Mercury	0.190	0.167	mg/Kg	0.186	0.161	97.5	96.4	80 - 120			1.04	20		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A
QC Number: 1
QC Batch ID: QC141023HgSoil

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

QC Report for Sample Spike and Sample Duplicate

SDG #: 4638-01

Client: GEI Consultants Inc.

Lab Project ID: 144638

Project Reference: National Fuel Gas Mineral Springs

Lab Sample ID: 144638-19
Sample Identifier: S6+30S W83 (0.2-1.6 ft)
Matrix: Soil

Date Sampled: 10/22/2014
Date Received: 10/23/2014

Metals

Analyte	Sample Results	Result Units	Spike Added	Spike Result	Spike % Recovery	% Rec Limits	Spike Outliers	Duplicate Result	Relative % Difference	RPD Limit	RPD Outliers	Date Analyzed
Arsenic	**1.61**	mg/Kg	310	280	89.8	75 - 125		1.77	9.44	20		10/24/2014
Cadmium	< 0.637	mg/Kg	124	108	87.2	75 - 125		<0.604	NC	20		10/23/2014
Lead	**40.6**	mg/Kg	310	322	90.8	75 - 125		35.7	12.9	20		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050
Preparation Date: 10/23/2014
102414a
QC Batch ID: QC141023soil

NC = Not Calculable. Applicable to RPD if sample or duplicate result is non-detect or estimated (see primary report for data flags). Applicable to MS if sample is greater or equal to ten times the spike added.

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC

QC Report for Sample Spike and Sample Duplicate

SDG #: 4638-01
Client: GEI Consultants Inc.
Lab Project ID: 144638
Project Reference: National Fuel Gas Mineral Springs

Lab Sample ID: 144638-19
Sample Identifier: S6+30S W83 (0.2-1.6 ft)
Matrix: Soil
Date Sampled: 10/22/2014
Date Received: 10/23/2014

Mercury

Analyte	Sample Results	Result Units	Spike Added	Spike Result	Spike % Recovery	% Rec Limits	Spike Outliers	Duplicate Result	Relative % Difference	RPD Limit	RPD Outliers	Date Analyzed
Mercury	**0.115**	mg/Kg	0.205	0.314	96.6	75 - 125		0.117	1.58	20		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Hg141024A
QC Batch ID: QC141023HgSoil

NC = Not Calculable. Applicable to RPD if sample or duplicate result is non-detect or estimated (see primary report for data flags). Applicable to MS if sample is greater or equal to ten times the spike added.

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Report Prepared Friday, October 24, 2014

Lab Name: Paradigm Environmental Services

Client: GEI Consultants Inc. **Lab Project No.:** 144638

Client Job Site: National Fuel Gas Mineral Springs **Run Nos.:** 102314b-ICP
Hg141024A-Hg

Client Job No.: N/A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Initial Calibration Verification Source:
ICP: Ultra Scientific
Hg: Ultra Scientific

Continuing Calibration Verification Source:
ICP: Ultra Scientific
Hg: Ultra Scientific

Concentration Units: mg/L

	Initial Calibration Verification			Continuing Calibration Verification					
Analyte	True	Found	%R(1)	True	Found	%R(2)	Found	%R(2)	M
Aluminum									ICP
Antimony									ICP
Arsenic	0.500	0.500	100	0.500	0.507	101	0.498	99.6	ICP
Barium									ICP
Beryllium									ICP
Cadmium	0.250	0.266	107	0.250	0.270	108	0.269	108	ICP
Calcium									ICP
Chromium									ICP
Cobalt									ICP
Copper									ICP
Iron									ICP
Lead	0.500	0.507	101	0.500	0.511	102	0.512	102	ICP
Magnesium									ICP
Manganese									ICP
Mercury	0.00200	0.00198	98.8	0.00200	0.00199	99.5	0.00201	100	CV
Nickel									ICP
Potassium									ICP
Selenium									ICP
Silver									ICP
Sodium									ICP
Thallium									ICP
Vanadium									ICP
Zinc									ICP

(1) Control Limits: All Metals 90-110
(2) Control Limits: Mercury 80-120; Other Metals: 90-110

FORM IIA-IN

Lab Name: Paradigm Environmental Services

Client: GEI Consultants Inc. **Lab Project No.:** 144638

Client Job Site: National Fuel Gas Mineral Springs **Run Nos.:** 102314b-ICP
Hg141024A-Hg

Client Job No.: N/A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Initial Calibration Verification Source:
ICP: Ultra Scientific
Hg: Ultra Scientific

Continuing Calibration Verification Source:
ICP: Ultra Scientific
Hg: Ultra Scientific

Concentration Units: mg/L

	Initial Calibration Verification			Continuing Calibration Verification					
Analyte	True	Found	%R(1)	True	Found	%R(2)	Found	%R(2)	M
Aluminum									ICP
Antimony									ICP
Arsenic				0.500	0.500	100.0	0.488	97.7	ICP
Barium									ICP
Beryllium									ICP
Cadmium				0.250	0.269	108	0.267	107	ICP
Calcium									ICP
Chromium									ICP
Cobalt									ICP
Copper									ICP
Iron									ICP
Lead				0.500	0.511	102	0.506	101	ICP
Magnesium									ICP
Manganese									ICP
Mercury				0.00200	0.00201	101			CV
Nickel									ICP
Potassium									ICP
Selenium									ICP
Silver									ICP
Sodium									ICP
Thallium									ICP
Vanadium									ICP
Zinc									ICP

(1) Control Limits: All Metals 90-110
(2) Control Limits: Mercury 80-120; Other Metals: 90-110

FORM IIA-IN

Lab Name: Paradigm Environmental Services

Client: GEI Consultants Inc. **Lab Project No.:** 144638

Client Job Site: National Fuel Gas Mineral Springs **Run No.:** 102414a

Client Job No.: N/A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Initial Calibration Verification Source:
ICP: Ultra Scientific
Hg: Ultra Scientific

Continuing Calibration Verification Source:
ICP: Ultra Scientific
Hg: Ultra Scientific

Concentration Units: mg/L

	Initial Calibration Verification			Continuing Calibration Verification					
Analyte	True	Found	%R(1)	True	Found	%R(2)	Found	%R(2)	M
Aluminum									ICP
Antimony									ICP
Arsenic	0.500	0.488	97.5	0.500	0.504	101	0.493	98.6	ICP
Barium									ICP
Beryllium									ICP
Cadmium									ICP
Calcium									ICP
Chromium									ICP
Cobalt									ICP
Copper									ICP
Iron									ICP
Lead									ICP
Magnesium									ICP
Manganese									ICP
Mercury									CV
Nickel									ICP
Potassium									ICP
Selenium									ICP
Silver									ICP
Sodium									ICP
Thallium									ICP
Vanadium									ICP
Zinc									ICP

(1) Control Limits: All Metals 90-110
(2) Control Limits: Mercury 80-120; Other Metals: 90-110

FORM IIA-IN

Lab Name: Paradigm Environmental Services

Client: GEI Consultants Inc. **Lab Project No.:** 144638

Client Job Site: National Fuel Gas Mineral Springs **Run No.:** 102414a

Client Job No.: N/A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Initial Calibration Verification Source:
ICP: Ultra Scientific
Hg: Ultra Scientific

Continuing Calibration Verification Source:
ICP: Ultra Scientific
Hg: Ultra Scientific

Concentration Units: mg/L

	Initial Calibration Verification			Continuing Calibration Verification					
Analyte	True	Found	%R(1)	True	Found	%R(2)	Found	%R(2)	M
Aluminum									ICP
Antimony									ICP
Arsenic				0.500	0.492	98.4			ICP
Barium									ICP
Beryllium									ICP
Cadmium									ICP
Calcium									ICP
Chromium									ICP
Cobalt									ICP
Copper									ICP
Iron									ICP
Lead									ICP
Magnesium									ICP
Manganese									ICP
Mercury									CV
Nickel									ICP
Potassium									ICP
Selenium									ICP
Silver									ICP
Sodium									ICP
Thallium									ICP
Vanadium									ICP
Zinc									ICP

(1) Control Limits: All Metals 90-110
(2) Control Limits: Mercury 80-120; Other Metals: 90-110

FORM IIA-IN

Lab Name: Paradigm Environmental Services

Client: GEI Consultants Inc. **Lab Project No.:** 144638

Client Job Site: National Fuel Gas Mineral Springs **Lab Sample Nos.:** Blk 10/23 soil-ICP, Blk 10/23 soil-Hg

Client Job No.: N/A **Sample Type:** Soil

BLANKS

Preparation Blank Matrix (soil/water): Soil Run Nos.: 102314b-ICP

Concentration Units (mg/L or mg/kg): mg/kg Hg141024A-Hg

	Initial Calibration Blank		Continuing Calibration Blank						Preparation Blank	
	(mg/L)		(mg/L)						(mg/Kg)	
Analyte		Q	1	Q	2	Q	3	Q		Q
Aluminum										
Antimony										
Arsenic	<0.010		<0.010		<0.010		<0.010		<0.967	
Barium										
Beryllium										
Cadmium	<0.005		<0.005		<0.005		<0.005		<0.484	
Calcium										
Chromium										
Cobalt										
Copper										
Iron										
Lead	<0.010		<0.010		<0.010		<0.010		<0.967	
Magnesium										
Manganese										
Mercury	<0.0002		<0.0002		<0.0002		<0.0002		<0.0163	
Nickel										
Potassium										
Selenium										
Silver										
Sodium										
Thallium										
Vanadium										
Zinc										

* - Outside established quality control acceptance limits.

Lab Name: Paradigm Environmental Services

Client: GEI Consultants Inc. **Lab Project No.:** 144638

Client Job Site: National Fuel Gas Mineral Springs **Lab Sample Nos.:** N/A

Client Job No.: N/A **Sample Type:** Soil

BLANKS

Preparation Blank Matrix (soil/water): Soil Run Nos.: 102314b-ICP
Concentration Units (mg/L or mg/kg): mg/kg

	Initial Calibration Blank		Continuing Calibration Blank						Preparation Blank	
	(mg/L)		(mg/L)						(mg/Kg)	
Analyte		Q	4	Q		Q		Q		Q
Aluminum										
Antimony										
Arsenic			<0.010							
Barium										
Beryllium										
Cadmium			<0.005							
Calcium										
Chromium										
Cobalt										
Copper										
Iron										
Lead			<0.010							
Magnesium										
Manganese										
Mercury										
Nickel										
Potassium										
Selenium										
Silver										
Sodium										
Thallium										
Vanadium										
Zinc										

* - Outside established quality control acceptance limits.

FORM III-IN

Lab Name: Paradigm Environmental Services

Client: GEI Consultants Inc. **Lab Project No.:** 144638

Client Job Site: National Fuel Gas Mineral Springs **Lab Sample Nos.:** N/A

Client Job No.: N/A **Sample Type:** Soil

BLANKS

Preparation Blank Matrix (soil/water): Soil Run Nos.: 102414a
Concentration Units (mg/L or mg/kg): mg/kg

	Initial Calibration Blank		Continuing Calibration Blank						Preparation Blank	
	(mg/L)		(mg/L)						(mg/Kg)	
Analyte		Q	1	Q	2	Q	3	Q		Q
Aluminum										
Antimony										
Arsenic	<0.010		<0.010		<0.010		<0.010			
Barium										
Beryllium										
Cadmium										
Calcium										
Chromium										
Cobalt										
Copper										
Iron										
Lead										
Magnesium										
Manganese										
Mercury										
Nickel										
Potassium										
Selenium										
Silver										
Sodium										
Thallium										
Vanadium										
Zinc										

* - Outside established quality control acceptance limits.

Lab Name: Paradigm Environmental Services

Client: GEI Consultants Inc. **Lab Project No.:** 144638

Client Job Site: National Fuel Gas Mineral Springs **Run Nos.:** 102314b-ICP Hg141024A-Hg

Client Job No.: N/A

ICP-AES INTERFERENCE CHECK SAMPLE

ICP-AES Instrument ID: ICP Perkin Elmer 7300DV
Concentration Units :mg/L

Analyte	True sol AB	Initial Found sol AB	%R	Q	Final Found sol AB	%R	Q
Aluminum	250						
Antimony**	<0.060						
Arsenic	2.50	2.55	102		N/A	N/A	
Barium	0.750						
Beryllium	0.250						
Cadmium	0.750	0.729	97.2		N/A	N/A	
Calcium	250						
Chromium	0.750						
Cobalt	0.750						
Copper	0.750						
Iron	100						
Lead	2.50	2.53	101		N/A	N/A	
Magnesium	250						
Manganese	0.500						
Mercury**	N/A	N/A	N/A		N/A	N/A	
Nickel	0.750						
Potassium	50.0						
Selenium	1.25						
Silver	0.750						
Sodium**	<2.50						
Thallium	2.50						
Vanadium	0.750						
Zinc	0.750						

* - Outside established quality control acceptance limits of 80-120%.

**- Not Spiked.

Lab Name: Paradigm Environmental Services

Client: GEI Consultants Inc. **Lab Project No.:** 144638

Client Job Site: National Fuel Gas Mineral Springs **Run No.:** 102414a

Client Job No.: N/A

ICP-AES INTERFERENCE CHECK SAMPLE

ICP-AES Instrument ID: ICP Perkin Elmer 7300DV
Concentration Units :mg/L

Analyte	True sol AB	Initial Found sol AB	%R	Q	Final Found sol AB	%R	Q
Aluminum	250						
Antimony**	<0.060						
Arsenic	2.50	2.50	100		N/A	N/A	
Barium	0.750						
Beryllium	0.250						
Cadmium	0.750						
Calcium	250						
Chromium	0.750						
Cobalt	0.750						
Copper	0.750						
Iron	100						
Lead	2.50						
Magnesium	250						
Manganese	0.500						
Mercury**	N/A						
Nickel	0.750						
Potassium	50.0						
Selenium	1.25						
Silver	0.750						
Sodium**	<2.50						
Thallium	2.50						
Vanadium	0.750						
Zinc	0.750						

* - Outside established quality control acceptance limits of 80-120%.

**- Not Spiked.

ICP Summary Sheet

	Wavelength	ICP DL Water	ICP DL Soil	MDL Water	MDL Soil	Linear Range	MDL paint	MDL Air	MDL Wipe
		ppm	mg/kg	ppm	mg/kg	ppm	mg/kg	ppm	ppm
Ag	328	0.01	1	0.0012	0.114	10			
Al	308	0.2	20	0.0264	3.58	500			
As	188	0.01	1	0.0031	0.369	5			
Ba	233	0.1	10	0.0029	0.14	40			
Be	313	0.005	0.5	0.0002	0.0119	1			
Ca	317	2.5	250	0.0953	4.98	500			
Cd	226	0.005	0.5	0.0002	0.0119	10			
Co	228	0.05	5	0.0015	0.064	10			
Cr	267	0.01	1	0.0106	0.139	40			
Cu	324	0.025	2.5	0.0011	0.327	10			
Fe	273	0.1	10	0.0138	4.10	500			
K	766	2.5	250	0.1067	5.25	100			
Mg	279	2.5	250	0.0635	2.19	500			
Mn	257	0.015	1.5	0.0037	0.141	10			
Na	589	2.5	250	0.1111	5.62	250			
Ni	231	0.04	4	0.0012	0.158	50			
Pb Axial	220	0.01	1	0.0019	0.230	50	0.68 (1/17)	0.0412	
Pb Radial	220	0.1	10			50	3.86	0.0369	0.0226
Sb	206	0.06	6	0.0077	0.422	12			
Se	196	0.01	1	0.0068	0.714	2.5			
Tl	190	0.025	2.5	0.0028	0.347	10			
V	292	0.025	2.5	0.0008	0.0299	50			
Zn	213	0.06	6	0.0035	0.302	10			
				1/9/2014	1/22/2014	2/18/2014	1/29/2014	1/17/2014	1/21/2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Hg Soil MDL

Instrument: FIMS 100
Run Date: 03/17/2014
Run Name: hg140317A

Blank: <0.2ppb

Spike concentration(ppb):	**0.1**			**Reporting Limit / LOQ (ppb):**		**0.2**	
Spike Conc. (mg/kg):	**0.008**			**Solid Reporting Limit / LOQ (mg/kg)**		**0.016**	
X_1	0.1879	ppb	0.0150 mg/kg		weight		inst. Conc.
X_2	0.1984	ppb	0.0159 mg/kg			0.25	0.1879
X_3	0.2024	ppb	0.0162 mg/kg			0.25	0.1984
X_4	0.2021	ppb	0.0162 mg/kg			0.25	0.2024
X_5	0.1861	ppb	0.0149 mg/kg			0.25	0.2021
X_6	0.194	ppb	0.0155 mg/kg			0.25	0.1861
X_7	0.1916	ppb	0.0153 mg/kg			0.25	0.194
						0.25	0.1916
MDL (LOD) =	**0.0206**	**ppb**	0.00165 mg/kg				

MDL requirements:	**Evaluation:**
Is the MDL less than the reporting limit?	YES(passes)
Is the MDL greater than 1/10 the spike concentration?	YES(passes)
Is the MDL less than the spike concentration?	YES(passes)
with weight	
Is the MDL less than the reporting limit?	YES(passes)
Is the MDL greater than 1/10 the spike concentration?	YES(passes)
Is the MDL less than the spike concentration?	YES(passes)

MDL EVALUATION: **MDL Passes**

spiked at :	0.1	ppm
divide by ten:	0.01	ppm
0.0206	>	0.01

MDL EVALUATION: **MDL Passes**

spiked at :	0.02	ppm
divide by ten:	0.0016	ppm
0.0016	>	0.0016

IEC File Name: 051514

IEC File Last Saved: 5/15/2014 11:15:36 AM
Printed On: 5/15/2014 11:15:39 AM

Results Data Set Name: 051514ar
Method Name: 6010C 4ptLL
Results Library: C:\Users\Public\PerkinElmer\ICP\Data\Results\May2014.mdb

Interfering Analytes

	Analytes	Al 308.215	Ca 317.933	Co 228.616	Cr 267.716	Cu 324.752	Fe 273.955
1	**Ag 328.068**	0.000000	0.000000	0.000000	0.000000	0.000000	-0.333385
2	**Ag 338.289**	0.000000	0.012731	0.000000	-24.586724	0.000000	0.000000
3	**Al 308.215**	**n/a**	0.000000	-15.258033	0.000000	0.000000	0.000000
4	**As 188.979**	0.041839	0.000000	0.000000	0.468569	0.000000	-0.067794
6	**Be 313.107**	0.000000	0.000000	0.000000	-0.174268	0.000000	0.000000
8	**Cd 226.502**	0.006824	0.007347	0.000000	0.000000	0.000000	0.085164
10	**Cr 267.716**	0.000000	0.000000	0.000000	**n/a**	0.000000	-0.016085
11	**Cu 324.752**	0.000000	0.000000	0.000000	0.000000	**n/a**	-0.128367
12	**Fe 273.955**	0.000000	0.000000	0.000000	-1.926669	0.000000	**n/a**
14	**Mg 279.077**	0.000000	0.000000	0.000000	0.000000	0.000000	3.445459
15	**Mn 257.610**	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
18	**Pb**	0.730630	-0.260654	0.000000	0.000000	0.000000	0.000000
19	**Pb 220.353**	0.380999	-0.029473	-2.128347	0.000000	0.000000	-0.068295
20	**Sb 206.836**	-0.199940	0.000000	0.000000	22.238962	0.000000	-0.425076
21	**Se 196.026**	-0.072363	-0.011678	0.000000	-0.304228	0.000000	-0.052268
22	**Tl 190.801**	0.044302	0.000000	9.240423	0.374697	0.000000	-0.076035
23	**V 292.402**	0.000000	0.000000	0.000000	-7.861288	0.000000	0.000000
24	**Y 371.029**	1.985840	1.997382	114.079280	26.580894	103.492331	2.259864
25	**Zn 213.857**	0.000000	0.106054	0.000000	0.000000	0.000000	0.000000

IEC File Last Saved: 5/15/2014 11:15:36 AM
Printed On: 5/15/2014 11:15:39 AM

Results Data Set Name: 051514ar
Method Name: 6010C 4ptLL
Results Library: C:\Users\Public\PerkinElmer\ICP\Data\Results\May2014.mdb

Interfering Analytes

	Analytes	Mg 279.077	Mn 257.610	Ni 231.604	V 292.402
1	**Ag 328.068**	0.000000	0.000000	0.000000	-0.451822
2	**Ag 338.289**	0.000000	0.000000	0.000000	-1.488410
3	**Al 308.215**	0.000000	0.000000	0.000000	10.394551
4	**As 188.979**	0.000000	0.000000	0.000000	0.000000
6	**Be 313.107**	0.000000	0.000000	0.000000	0.000000
8	**Cd 226.502**	0.000000	0.000000	0.116276	0.000000
10	**Cr 267.716**	0.000000	0.000000	0.000000	0.387923
11	**Cu 324.752**	0.000000	0.000000	0.000000	0.000000
12	**Fe 273.955**	0.000000	0.000000	0.000000	15.843706
14	**Mg 279.077**	**n/a**	0.000000	0.000000	0.000000
15	**Mn 257.610**	0.000000	**n/a**	0.000000	-0.218228
18	**Pb**	0.000000	0.000000	0.000000	0.000000
19	**Pb 220.353**	0.000000	0.000000	-0.372237	0.000000
20	**Sb 206.836**	0.000000	0.000000	0.000000	0.000000
21	**Se 196.026**	0.000000	0.879134	0.000000	0.155351
22	**Tl 190.801**	0.000000	-2.006222	0.000000	6.369570
23	**V 292.402**	0.000000	0.000000	0.000000	**n/a**
24	**Y 371.029**	2.086093	115.778141	22.052388	23.094862
25	**Zn 213.857**	0.000000	0.000000	4.924405	0.000000

Linear Ranges

Element TAL, Pb radial
Inst. ICP
Date 2014

Element	Date	Linear Range (ppm)	Element	Date	Linear Range (ppm)
Ag	2/20	10	Ag	8/28	10
Al	2/18	500	Al	9/2	500
As	2/18	5	As	8/28	5
Ba	2/18	40	Ba	8/28	40
Be	2/18	1	Be	8/28	1
Ca	2/20	500	Ca	9/2	500
Cd	2/18	10	Cd	8/28	10
Co	2/18	10	Co	8/28	10
Cr	2/18	40	Cr	8/28	40
Cu	2/18	10	Cu	8/28	10
Fe	2/18	500	Fe	9/2	500
K	2/18	100	K	9/2	100
Mg	2/18	500	Mg	9/2	500
Mn	2/18	10	Mn	8/28	10
Na	2/18	250	Na	9/2	250
Ni	2/18	50	Ni	8/28	50
Pb	2/18	50	Pb	8/28	50
Sb			Sb	8/28	
Se	2/18	2.5	Se	8/28	2.5
Tl	2/18	10	Tl	8/28	10
V	2/18	50	V	8/28	50
Zn	2/18	10	Zn	8/28	10
Pb radial	2/18	50	Pb radial	8/28	50

Comments: Linear ranges which instrument reads 90% - 110% of the true value.
Antimony not reported above Calibration Range

13-IN

ICP ANALYSIS RUN LOG

Lab Name:	Paradigm Environmental	**Lab Project No.:**	144638
Client:	GEI Consultants Inc.	**Method:**	EPA 6010
Client Job Site:	National Fuel Gas Mineral Springs	**Start Date:**	10/23/2014
		End Date:	10/23/2014
Client Job No.:	N/A		
Instrument ID:	ICP PE 7300DV	**Run No.:**	102314b

LAB Sample No.	Date	Time	D/F	Analytes																					
				Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Ni	K	Se	Ag	Na	Tl	V	Zn
Calib Blank 1	10/23/2014	14:25				X			X						X										
Low Level Cal1	10/23/2014	14:29				X			X						X										
Low Level Cal	10/23/2014	14:33				X			X						X										
Mid Level Cal	10/23/2014	14:37				X			X						X										
Pb LL	10/23/2014	14:42													X										
Pb HL	10/23/2014	14:45													X										
High Level Cal	10/23/2014	14:49				X			X						X										
IPC	10/23/2014	14:53																							
ICV	10/23/2014	14:57				X			X						X										
ICB	10/23/2014	15:02				X			X						X										
LLQC	10/23/2014	15:06																							
LLQC Radial Pb	10/23/2014	15:10																							
ICSAB	10/23/2014	15:14				X			X						X										
CCV	10/23/2014	15:19				X			X						X										
CCB	10/23/2014	15:23				X			X						X										
Blk 10/23 soil	10/23/2014	15:27				X			X						X										
lcs	10/23/2014	15:31				X			X						X										
lcs dup	10/23/2014	15:36				X			X						X										
144638-01	10/23/2014	15:40	1			X			X						X										
144638-02	10/23/2014	15:44	1			X			X						X										
144638-03	10/23/2014	15:48	1			X			X						X										
144638-04	10/23/2014	15:53	1						X						X										
144638-05	10/23/2014	15:57	1			X			X						X										
144638-06	10/23/2014	16:01	1						X						X										
144638-07	10/23/2014	16:06	1			X			X						X										
CCV	10/23/2014	16:10				X			X						X										

13-IN

ICP ANALYSIS RUN LOG

Lab Name: Paradigm Environmental
Client: GEI Consultants Inc.
Client Job Site: National Fuel Gas Mineral Springs

Client Job No.: N/A
Instrument ID: ICP PE 7300DV

Lab Project No.: 144638
Method: EPA 6010
Start Date: 10/23/2014
End Date: 10/23/2014

Run No.: 102314b

LAB Sample No.	Date	Time	D/F	Analytes																					
				Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Ni	K	Se	Ag	Na	Tl	V	Zn
CCB	10/23/2014	16:14				X			X						X										
144638-08	10/23/2014	16:18	1			X			X						X										
144638-09	10/23/2014	16:23	1			X			X						X										
144638-10	10/23/2014	16:27	1						X						X										
144638-11	10/23/2014	16:31	1			X			X						X										
144638-12	10/23/2014	16:35	1			X			X						X										
144638-13	10/23/2014	16:40	1			X			X						X										
144638-14	10/23/2014	16:44	1			X			X						X										
144638-15	10/23/2014	16:48	1						X						X										
144638-16	10/23/2014	16:52	1						X						X										
CCV	10/23/2014	16:57				X			X						X										
CCB	10/23/2014	17:01				X			X						X										
144638-17	10/23/2014	17:05	1			X			X						X										
144638-18	10/23/2014	17:09	1						X						X										
144638-19	10/23/2014	17:14	1						X						X										
144638-19 dup	10/23/2014	17:18	1						X						X										
144638-19 spk	10/23/2014	17:22	1						X						X										
CCV	10/23/2014	17:26				X			X						X										
CCB	10/23/2014	17:31				X			X						X										
LLQC	10/23/2014	17:35																							
CCV	10/23/2014	17:39																							
CCB	10/23/2014	17:44																							

13-IN

ICP ANALYSIS RUN LOG

Lab Name: Paradigm Environmental
Client: GEI Consultants Inc.
Client Job Site: National Fuel Gas Mineral Springs

Client Job No.: N/A
Instrument ID: ICP PE 7300DV

Lab Project No.: 144638
Method: EPA 6010
Start Date: 10/24/2014
End Date: 10/24/2014

Run No.: 102414a

LAB Sample No.	Date	Time	D/F	Analytes																					
				Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Ni	K	Se	Ag	Na	Tl	V	Zn
Calib Blank 1	10/24/2014	8:41				X																			
Low Level Cal1	10/24/2014	8:45				X																			
Low Level Cal	10/24/2014	8:49				X																			
Mid Level Cal	10/24/2014	8:53				X																			
Pb LL	10/24/2014	8:58																							
Pb HL	10/24/2014	9:01																							
High Level Cal	10/24/2014	9:05				X																			
IPC	10/24/2014	9:09																							
ICV	10/24/2014	9:13				X																			
ICB	10/24/2014	9:18				X																			
LLQC	10/24/2014	9:22																							
LLQC Radial Pb	10/24/2014	9:26																							
ICSAB	10/24/2014	9:30				X																			
CCV	10/24/2014	9:35				X																			
CCB	10/24/2014	9:39				X																			
Blk 10/23 soil	10/24/2014	9:43																							
lcs	10/24/2014	9:47																							
lcs dup	10/24/2014	9:52																							
144638-04	10/24/2014	9:56	1			X																			
144638-06	10/24/2014	10:00	1			X																			
144638-10	10/24/2014	10:04	1			X																			
144638-15	10/24/2014	10:09	1			X																			
144638-16	10/24/2014	10:13	1			X																			
144638-18	10/24/2014	10:17	1			X																			
CCV	10/24/2014	10:21				X																			
CCB	10/24/2014	10:26				X																			

13-IN

ICP ANALYSIS RUN LOG

Lab Name: Paradigm Environmental
Client: GEI Consultants Inc.
Client Job Site: National Fuel Gas Mineral Springs

Client Job No.: N/A
Instrument ID: ICP PE 7300DV

Lab Project No.: 144638
Method: EPA 6010
Start Date: 10/24/2014
End Date: 10/24/2014

Run No.: 102414a

LAB Sample No.	Date	Time	D/F	Analytes																				
				Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Ni	K	Se	Ag	Na	Tl	V	Zn
144638-19	10/24/2014	10:30	1			X																		
144638-19 dup	10/24/2014	10:34	1			X																		
144638-19 spk	10/24/2014	10:39	1			X																		
CCV	10/24/2014	10:43				X																		
CCB	10/24/2014	10:47				X																		
LLQC	10/24/2014	10:51																						
CCV	10/24/2014	10:59																						
CCB	10/24/2014	11:03																						

13-IN

HG ANALYSIS RUN LOG

Lab Name: Paradigm Environmental
Client: GEI Consultants Inc.
Client Job Site: National Fuel Gas Mineral Springs

Client Job No.: N/A
Instrument ID: PE FIMS-100

Lab Project No.: 144638
Method: EPA 7471
Start Date: 10/24/2014
End Date: 10/24/2014

Run No.: Hg141024A

LAB Sample No.	Date	Time	D/F	Analytes
				Hg
Calib Std 3	10/24/2014	9:20		X
Calib Std 3	10/24/2014	9:22		X
Calib Std 3	10/24/2014	9:24		X
Calibration Blank	10/24/2014	9:26		X
Calib Std 1	10/24/2014	9:30		X
Calib Std 2	10/24/2014	9:33		X
Calib Std 3	10/24/2014	9:37		X
Calib Std 4	10/24/2014	9:40		X
Calib Std 5	10/24/2014	9:44		X
IPC	10/24/2014	9:47		
ICV	10/24/2014	9:50		X
ICB	10/24/2014	9:54		X
blk	10/24/2014	9:57		X
lcs	10/24/2014	10:01		X
lcs dup	10/24/2014	10:04		X
144638-01	10/24/2014	10:08	1	X
144638-02	10/24/2014	10:11	1	X
144638-03	10/24/2014	10:14	1	X
144638-04	10/24/2014	10:18	1	X
144638-05	10/24/2014	10:21	1	X
144638-06	10/24/2014	10:25	1	X
144638-07	10/24/2014	10:28	1	X
CCV	10/24/2014	10:32		X
CCB	10/24/2014	10:35		X
144638-08	10/24/2014	10:39	1	X

13-IN

HG ANALYSIS RUN LOG

Lab Name: Paradigm Environmental
Client: GEI Consultants Inc.
Client Job Site: National Fuel Gas Mineral Springs

Client Job No.: N/A
Instrument ID: PE FIMS-100

Lab Project No.: 144638
Method: EPA 7471
Start Date: 10/24/2014
End Date: 10/24/2014

Run No.: Hg141024A

LAB Sample No.	Date	Time	D/F	Analytes
				Hg
144638-09	10/24/2014	10:42	1	X
144638-10	10/24/2014	10:46	1	X
144638-11	10/24/2014	10:49	1	X
144638-12	10/24/2014	10:52	1	X
144638-13	10/24/2014	10:55	1	X
144638-14	10/24/2014	10:58	1	X
144638-15	10/24/2014	11:02	1	X
144638-16	10/24/2014	11:05	1	X
144638-17	10/24/2014	11:09	1	X
CCV	10/24/2014	11:12		X
CCB	10/24/2014	11:15		X
144638-18	10/24/2014	11:19	1	X
144638-19	10/24/2014	11:22	1	X
144638-19 dup	10/24/2014	11:26	1	X
144638-19 spk	10/24/2014	11:29	1	X
CCV	10/24/2014	11:31		X
CCB	10/24/2014	11:34		X

5

-76-

Page: 1 of 2 ICP Analytical Worksheet

Date: 10-28-14
RDF / SIF: 102314b
Analyst: Amm

4638 ASP Cal B

Sample ID - Wt/Vol	Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn
Calib Blank 1																						
Low Level Cal1																						
Low Level Cal																						
Mid Level Cal																						
High Level Cal																						
IPC	2.00	9.96	2.00	10.0	0.250	50.1	1.000	2.50	2.00	1.25	4.99	50.2	49.9	3.00	50.1	8.01	1.01	11.9	0.998	1.97	2.52	3.94
ICV	98.5	98.5	100	98.4	99.4	98.2	107	94.7	97.5	97.4	96.2	98.1	102	99.0	97.3	99.1	101	101	99.0	97.4	101	102
ICB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
LLQC	0.00947	0.256	0.0103	0.100	0.00476	2.51	0.00539	0.0492	0.0119	0.0256	0.0949	2.60	2.54	0.0149	2.55	0.0428	?0.0143	0.0625	0.00887	0.0183	0.0249	0.0612
LLQC Radial Pb	-0.000421	0.00355	-0.00110	0.000119	-0.0000139	0.000900	-0.000125	0.00241	0.000759	0.000477	0.00162	0.0155	-0.00309	0.000290	0.0154	0.00418	0.103	-0.00156	-0.00316	-0.00266	-0.000170	0.00432
ICSAB	0.779	271	2.55	0.753	0.244	259	0.729	0.698	0.720	0.771	92.8	52.9	259	0.490	0.151	0.727	2.53	-0.0118	1.28	2.37	0.759	0.720
CCV	98.5	98.5	101	98.0	99.6	101	108	94.6	97.7	97.0	97.9	101	102	98.6	101	99.0	102	102	102	97.7	101	104
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
Blk 10/23 soil (50 mL)	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
lcs (50 mL)	0.244	2.58	2.48	2.43	0.492	3.93	1.01	0.987	2.36	2.43	2.42	41.6	8.05	0.970	11.5	5.09	2.56	2.38	2.45	2.37	0.943	2.50
---> %rec	97.6%	103%	99.2%	97.2%	98.4%	98.3%	101%	98.7%	94.4%	97.2%	96.8%	104%	101%	97.0%	95.8%	102%	102%	95.2%	98.0%	94.8%	94.3%	100%
lcs dup (50 mL)	0.243	2.51	2.47	2.41	0.488	3.98	1.01	0.978	2.35	2.43	2.39	41.6	8.00	0.967	11.6	5.09	2.55	2.38	2.43	2.37	0.944	2.55
---> %rec	97.2%	100%	98.8%	96.4%	97.6%	99.5%	101%	97.8%	94.0%	97.2%	95.6%	104%	100%	96.7%	96.7%	102%	102%	95.2%	97.2%	94.8%	94.4%	102%
---> %diff	0.411%	2.75%	0.404%	0.826%	0.816%	1.26%		0.916%	0.425%		1.25%		0.623%	0.310%	0.866%		0.391%		0.820%		0.106%	1.98%
144638-01 (0.52 mL)	<0.962	9290	6.42	84.3	0.632	10700	0.605	6.17	15.4	27.1	15500	1060	5080	328	<240	20.7	68.4	<5.77	1.85	<2.4	17.0	144
144638-02 (0.497 mL)	<1.03	9750	6.12	93.5	0.708	16400	0.572	6.14	15.1	28.6	15800	1170	5380	415	<257	19.9	75.7	<6.16	<1.03	<2.57	17.0	143
144638-03 (0.51 mL)	<0.98	12400	4.97	86.1	0.649	3130	0.573	7.76	18.4	21.5	18100	1340	3650	231	<245	25.8	27.3	<5.88	2.90	<2.45	20.9	109
144638-04 (0.495 mL)	<1.01	6720	E 4.31	64.9	<0.505	14000	J <0.505	<5.05	10.9	21.8	13000	938	6270	298	<253	15.3	51.1	<6.06	<1.01	<2.53	13.8	108
144638-05 (0.48 mL)	<1.04	8180	5.73	77.2	0.948	52100	<0.521	<5.21	9.86	22.0	9650	902	14700	626	<260	10.6	71.8	<6.25	<1.04	<2.6	13.3	116
144638-06 (0.48 mL)	<1.04	13500	E 1.87	99.2	0.694	3170	0.531	8.76	19.0	21.2	16600	1400	3800	273	<260	27.2	17.8	<6.25	2.30	<2.6	21.9	88.0
144638-07 (0.508 mL)	<0.984	8650	5.62	66.2	<0.492	2560	J <0.492	6.59	14.1	22.3	16000	1100	2790	245	<246	20.5	38.7	<5.91	2.82	<2.46	15.4	102
CCV	98.1	98.9	99.6	98.2	99.4	102	108	95.1	97.7	96.9	99.5	101	103	99.2	101	99.4	102	100	98.9	95.9	101	106
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
144638-08 (0.519 mL)	<0.963	10700	6.80	72.0	0.558	2090	J <0.482	8.38	17.0	25.4	20600	1170	3480	335	<241	25.7	41.2	<5.78	4.48	<2.41	18.9	111
144638-09 (0.484 mL)	<1.03	11900	6.10	89.5	0.673	2730	0.701	7.57	19.5	26.3	19600	1220	3460	252	<258	26.8	49.6	<6.2	4.24	<2.58	21.0	145
144638-10 (0.472 mL)	<1.06	8070	E 4.38	68.7	<0.53	4320	0.566	5.98	15.0	26.3	15100	989	3010	255	<265	20.6	84.7	<6.36	2.45	<2.65	15.5	138
144638-11 (0.517 mL)	<0.967	8600	5.79	71.6	0.494	5050	0.685	7.05	16.4	27.1	17100	1000	3750	362	<242	23.2	108	<5.8	1.68	<2.42	16.9	158
144638-12 (0.534 mL)	<0.936	12600	6.79	96.1	0.710	3400	0.777	7.98	19.1	29.4	20800	1310	3500	281	<234	28.1	62.9	<5.62	3.89	<2.34	22.1	160
144638-13 (0.493 mL)	<1.01	7420	7.60	50.3	<0.507	3100	J <0.507	<5.07	15.1	21.3	11800	928	2520	175	<254	16.2	48.8	<6.09	1.81	<2.54	13.3	98.6
144638-14 (0.496 mL)	<1.01	6900	8.05	39.6	<0.504	2790	J <0.504	<5.04	14.6	18.7	9170	764	2190	136	<252	13.8	43.6	<6.05	1.41	<2.52	12.5	79.9
144638-15 (0.516 mL)	<0.969	12700	E 2.90	83.9	0.622	2410	J <0.484	7.56	18.9	19.4	16700	1200	3800	210	<242	25.2	22.2	<5.81	2.36	<2.42	20.5	93.6
144638-16 (0.508 mL)	<0.984	6750	E 4.04	66.1	<0.492	8830	J <0.492	4.94	13.5	22.5	13200	866	5110	199	<246	16.4	52.0	<5.91	<0.984	<2.46	13.5	117
CCV	98.0	97.8	100.0	97.8	99.5	99.5	108	94.9	97.5	97.0	99.8	99.2	103	98.8	97.9	99.0	102	99.8	97.5	94.4	101	108
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
144638-17 (0.525 mL)	<0.952	11700	5.03	85.0	0.656	5720	0.654	7.03	19.6	25.9	18100	1170	4940	213	<238	25.3	41.1	<5.71	2.79	<2.38	20.9	135
144638-18 (0.54 mL)	<0.926	6230	E J 0.926	32.6	<0.463	13100	<0.463	<4.63	9.37	12.8	10500	936	7060	210	<231	8.03	39.5	<5.56	<0.926	<2.31	14.5	85.5
144638-19 (0.479 mL)	<1.04	7410	E 1.43	37.7	<0.522	10300	<0.522	<5.22	9.64	11.5	11000	1030	5430	379	<261	8.57	33.3	<6.26	<1.04	<2.61	16.1	85.4
144638-19 dup (0.505 mL)	<0.99	7320	E 1.07	34.2	<0.495	12000	<0.495	<4.95	9.14	10.6	11000	897	5420	276	<248	7.74	29.2	<5.94	<0.99	<2.48	15.6	74.7
---> %diff	NC	1.22%	↑ 28.8%	9.74%	NC	15.2%	NC	NC	5.32%	8.14%		13.8%	0.184%	31.5%	NC	10.2%	13.1%	NC	NC	NC	3.15%	13.4%
144638-19 spk (0.492 mL)	22.6	8330	226	256	46.1	12100	88.6	90.2	224	242	11500	5360	7040	304	1200	451	264	187	224	209	104	327
---> %rec			88.9				87.9										90.8					
CCV	98.0	99.5	97.7	97.4	99.3	99.8	107	94.3	97.0	96.7	99.9	99.6	102	98.5	98.5	98.5	101	98.7	96.7	92.6	101	108
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
LLQC	0.00806	0.244	↓0.00576	0.0995	0.00487	2.52	0.00529	0.0486	0.0111	0.0238	0.100	2.57	2.54	0.0148	2.53	0.0414	↑ 0.0153	0.0639	↓0.00195	↓0.0157	0.0248	0.0639
CCV	103	99.8	99.7	97.2	98.9	99.8	102	95.9	99.5	101	99.7	100	102	98.1	99.0	101	104	96.9	97.3	93.9	106	109
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
Blk 10/22 soil (50 mL)	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
lcs (50 mL)	0.242	2.46	2.41	2.40	0.488	3.88	1.00	0.974	2.34	2.42	2.35	42.0	7.94	0.962	11.6	5.05	2.50	2.36	2.37	2.31	0.942	2.63

J Pb, As, Cd

Reviewed for only metals needed. This worksheet does not correct for dry weights. Reviewed by:

ICP-MS Analytical Worksheet

Date:
RDF / SIF:
Analyst:

Sample ID - Wt/Vol	Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn
----> %rec	96.8%	98.4%	96.4%	96.0%	97.6%	97.0%	100%	97.4%	93.6%	96.8%	94.0%	105%	99.3%	96.2%	96.7%	101%	100%	94.4%	94.8%	92.4%	94.2%	105%
lcs dup (50 mL)	0.240	2.48	2.40	2.40	0.485	3.88	0.997	0.974	2.35	2.42	2.36	41.9	7.93	0.965	11.6	5.08	2.50	2.36	2.36	2.30	0.943	2.63
----> %rec	96.0%	99.2%	96.0%	96.0%	97.0%	97.0%	99.7%	97.4%	94.0%	96.8%	94.4%	105%	99.1%	96.5%	96.7%	102%	100%	94.4%	94.4%	92.0%	94.3%	105%
----> %diff	0.830%	0.810%	0.416%		0.617%		0.300%		0.426%		0.425%	0.238%	0.126%	0.311%		0.592%			0.423%	0.434%	0.106%	
144594-01 Se As (0.476 mL)	<1.05	2520	2.28	28.7	<0.525	131000	<0.525	<5.25	5.26	8.50	5950	557	66100	444	420	4.37	96.1	<6.3	***<1.05***	***<2.63***	7.75	145
144594-01 1/10 Ca Mg (0.476 mL)	<1.05	2700	***<1.05***	32.5	<0.525	136000	<0.525	<5.25	5.90	11.5	6210	580	69100	459	445	5.02	109	9.94	***<1.05***	***<2.63***	6.93	157
144594-02 Se (0.511 mL)	<0.978	4440	15.3	125	<0.489	38700	<0.489	<4.89	14.9	33.2	13500	837	16900	370	332	10.6	356	<5.87	3.43	<2.45	14.1	455
144594-03 As Se (0.456 mL)	<1.1	5510	2.97	70.1	<0.548	86400	0.887	<5.48	9.13	24.7	10600	1070	37200	435	877	8.85	224	<6.58	<1.1	<2.74	14.4	507
144594-04 Se (0.517 mL)	<0.967	10300	4.60	77.5	0.497	53900	<0.484	7.01	16.9	24.4	19500	2290	11800	405	519	16.5	243	<5.8	1.46	<2.42	21.6	192
144581-01 As Se (0.538 mL)	<0.929	6010	0.959	29.7	<0.465	36000	<0.465	4.88	10.2	9.73	13600	999	8480	405	326	9.65	4.35	<5.58	<0.929	<2.32	17.7	25.5
145777-02 1/100 (0.52 mL)	***<0.962***	8650	52.3	302	0.659	42900	109	115	872	75.2	7190	788	3090	218	604	4.20	89500	60.1	***<0.962***	***<2.4***	***<2.4***	73900
CCV	97.8	99.4	96.4	96.5	97.7	98.5	105	92.6	96.9	96.4	101	99.3	102	98.0	98.1	97.7	99.5	95.1	92.8	89.8	100	↑ 112
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
144572-01 1/10 Ca (0.534 mL)	***<0.936***	10400	***<0.936***	73.8	0.511	60000	<0.468	8.74	17.9	19.3	19100	1820	15800	616	246	26.9	13.1	<5.62	***<0.936***	***<2.34***	21.6	54.8
144572-02 1/10 Ca (0.541 mL)	***<0.924***	5530	<0.924	37.6	<0.462	72500	<0.462	5.19	10.4	13.7	12900	1010	22700	419	297	12.7	8.24	<5.55	***<0.924***	***<2.31***	13.2	34.6
144572-04 As Se (0.477 mL)	<1.05	6040	<1.05	48.8	<0.524	67400	<0.524	5.76	10.7	12.2	12100	1280	19000	420	<262	14.0	6.62	<6.29	<1.05	<2.62	13.3	30.2
144572-04 1/10 Ca (0.477 mL)	***<1.05***	6150	***<1.05***	57.8	<0.524	76400	<0.524	6.79	12.7	13.9	13000	1260	20900	460	<262	16.6	6.99	<6.29	***<1.05***	***<2.62***	13.8	40.8
144572-05 Se (0.46 mL)	<1.09	12000	2.07	76.6	0.548	40000	<0.543	6.82	18.4	16.4	19900	2590	13300	284	318	18.7	7.87	<6.52	<1.09	<2.72	23.7	51.3
144572-06 As (0.499 mL)	<1	11600	2.11	76.2	<0.501	67100	<0.501	6.90	18.0	14.7	17800	2220	15500	367	316	19.4	8.02	<6.01	1.50	<2.51	19.6	45.5
144572-06 1/10 Ca (0.499 mL)	***<1***	12200	***<1***	87.7	0.566	77700	<0.501	8.21	21.6	16.9	19800	2280	17700	417	341	23.8	10.4	7.20	***<1***	***<2.51***	22.3	59.0
144572-07 1/10 Ca (0.469 mL)	***<1.07***	10200	***<1.07***	76.4	<0.533	81100	<0.533	8.09	17.9	18.7	19600	1990	20900	456	267	22.0	16.4	6.98	***<1.07***	***<2.67***	20.9	53.5
144572-08 1/10 Ca (0.513 mL)	***<0.975***	10600	***<0.975***	83.7	0.578	88500	<0.487	7.71	18.6	18.4	18400	2350	16900	368	<244	21.3	16.6	<5.85	***<0.975***	***<2.44***	21.5	60.4
CCV	97.8	99.2	92.9	96.6	98.8	99.3	104	92.9	96.7	96.2	102	99.7	102	98.0	97.9	97.8	97.4	92.9	90.3	↓ 87.1	100	? 114
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
144572-10 1/10 Ca (0.456 mL)	***<1.1***	12500	***<1.1***	99.2	0.624	65500	<0.548	9.93	23.2	18.2	20600	2520	16400	570	394	26.1	12.8	<6.58	***<1.1***	***<2.74***	23.2	59.6
144572-10 dup (0.458 mL)	***<1.09***	13400	***<1.09***	99.3	0.616	65800	<0.546	10.9	23.6	22.1	23900	2630	16600	609	422	27.4	12.6	<6.55	***<1.09***	***<2.73***	26.7	67.3
----> %diff	NC	6.95%	NC	0.101%	1.29%	0.457%	NC	9.31%	1.71%	19.4%	14.8%	4.27%	1.21%	6.62%	6.86%	4.86%	1.57%	NC	NC	NC	14.0%	12.1%
144572-10 spk (0.476 mL)	24.5	14700	238	354	52.3	76700	109	116	272	282	26600	7670	16300	666	1700	541	272	169	228	207	133	347
----> %rec																						
144572-10 Se (0.456 mL)	<1.1	119000	20.0	881	5.16	581000	***<0.548***	82.1	194	172	189000	25000	145000	5110	3830	214	76.7	26.0	8.22	***<2.74***	212	488
144572-10 dup Se (0.458 mL)	<1.09	12400	2.47	86.4	0.560	56700	<0.546	8.77	19.3	19.6	21400	2520	14500	537	391	21.8	8.48	<6.55	<1.09	<2.73	23.5	51.3
----> %diff	NC	162%	156%	164%	161%	164%	NC	161%	164%	159%	159%	163%	164%	162%	163%	163%	160%	NC	NC	NC	160%	162%
CCV	102	99.7	93.7	96.3	98.4	100	99.7	94.5	99.1	101	103	100	102	97.8	98.7	99.4	99.4	94.9	90.2	↓ 88.2	106	↑ 115
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
LLQC	0.00725	0.257	↓0.00678	0.0983	0.00485	2.51	0.00523	0.0474	0.0110	0.0236	0.104	2.60	2.53	0.0149	2.52	0.0414	↑0.0142	0.0643	0.00977	↓0.0129	0.0245	0.0691
CCV	97.7	98.1	92.8	96.5	98.1	101	104	92.6	96.6	96.3	102	101	102	97.8	99.0	97.4	97.1	92.2	89.7	↓ 87.4	100	↑ 115
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
4600-01 1/10 Zn (0.498 mL)	***<1***	2410	2.09	1010	<0.502	14800	4.34	5.07	114	936	35700	413	5300	279	<251	30.1	1840	20.1	<1	***<2.51***	6.88	2100
4600-01 dup 1/10 Zn (0.482 mL)	***<1.04***	1610	4.71	596	<0.519	13600	4.59	6.45	86.0	809	42300	387	2980	308	<259	92.0	1670	20.0	1.90	***<2.59***	5.29	1970
----> %diff	NC	39.8%	77.1%	51.6%	NC	8.45%	5.60%	24.0%	28.0%	14.6%	16.9%	6.50%	56.0%	9.88%	NC	101%	9.69%	0.499%	NC	NC	26.1%	6.39%
4600-01 spk 1/10 Zn (0.473 mL)	23.2	3950	218	710	45.3	8280	104	100	264	1120	22200	4630	1960	288	1270	529	1390	201	210	202	94.1	2030
----> %rec																						
Blk 10/22 w (50 mL)	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
lcs (50 mL)	0.236	2.46	2.25	2.35	0.468	3.88	0.970	0.949	2.31	2.38	2.44	41.4	7.94	0.952	11.5	4.99	2.44	2.20	2.20	2.19	0.940	2.81
----> %rec	94.4%	98.4%	90.0%	94.0%	93.6%	97.0%	97.0%	94.9%	92.4%	95.2%	97.6%	104%	99.3%	95.2%	95.8%	99.8%	97.6%	88.0%	88.0%	87.6%	94.0%	112%
lcs dup (50 mL)	0.239	2.49	2.27	2.38	0.472	3.94	0.980	0.961	2.33	2.40	2.48	42.0	8.00	0.960	11.6	5.04	2.45	2.20	2.20	2.19	0.940	2.82
----> %rec	95.6%	99.6%	90.8%	95.2%	94.4%	98.5%	98.0%	96.1%	93.2%	96.0%	99.2%	105%	100%	96.0%	96.7%	101%	98.0%	88.0%	88.0%	87.6%	94.0%	113%
----> %diff	1.26%	1.21%	0.885%	1.27%	0.851%	1.53%	1.03%	1.26%	0.862%	0.837%	1.63%	1.44%	0.753%	0.837%	0.866%	0.997%	0.409%					0.355%
144601-01 (50 mL)	<0.01	<0.2	<0.01	0.365	<0.005	93.4	<0.005	<0.05	<0.01	0.0504	0.279	62.4	238	<0.015	880	0.0401	0.0128	<0.06	***<0.01***	***<0.025***	<0.025	<0.06
144614-01 (50 mL)	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	1.48	0.168	4.42	<2.5	<2.5	0.0697	266	0.526	<0.01	<0.06	<0.01	<0.025	<0.025	0.157
CCV	102	100	91.9	96.7	98.0	101	100	94.6	99.1	101	105	100	102	98.2	99.7	99.6	99.9	89.8	91.2	↓ 88.9	106	↑ 117
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
LLQC	0.00761	↑0.267	0.00985	0.0988	0.00489	2.50	0.00534	0.0476	0.0114	0.0233	0.118	2.59	2.56	0.0149	2.66	0.0415	↑0.0136	0.0619	↓0.00645	↓0.0109	0.0248	0.0639
CCV	5930	29200	933	472	-947	100000	-1300	-311	1420	4850	8610	171000	1900	853	170000	1140	7780	-1830	-1290	12400	758	13500
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06

Ca, Mg

Pb

Cd ↓

Ca

Cd ↓

Ca

Cr

Reviewed for only metals needed.

This worksheet does not correct for dry weights.

Reviewed by:

Page: 1 of 2 ICP Analytical Worksheet

Date: 10-24-14
RDF / SIF: 102414a
Analyst: Amm

-78-5

4638, 4600 ASP Cat B

Sample ID - Wt/Vol	Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn
Calib Blank 1																						
Low Level Cal1																						
Low Level Cal																						
Mid Level Cal																						
High Level Cal																						
IPC	2.00	9.96	1.99	10.0	0.251	50.3	1.000	2.51	2.00	1.25	4.95	50.0	50.1	3.01	50.1	8.01	0.991	11.8	0.993	1.94	2.52	3.92
ICV	96.5	96.6	97.5	97.8	98.7	97.4	104	92.2	95.0	95.8	94.4	96.5	100	99.0	97.3	96.5	97.6	93.5	99.7	96.8	99.1	98.8
ICB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
LLQC	0.00830	0.278	0.00853	0.100	0.00484	2.56	0.00535	0.0486	0.0112	0.0262	0.0941	2.65	2.55	0.0149	2.61	0.0429	0.0120	0.0566	0.0116	0.0146	0.0253	0.0597
LLQC Radial Pb	-0.00135	-0.0180	0.00312	0.000138	0.0000245	-0.0184	-0.0000816	0.00000966	-0.0000414	0.000118	0.0100	0.0247	-0.00317	-0.0000400	0.0142	-0.0000450	0.100	-0.000539	0.000493	-0.0118	0.000953	0.00520
ICSAB	0.757	270	2.50	0.740	0.242	262	0.713	0.686	0.705	0.758	92.6	53.3	260	0.476	0.0998	0.717	2.46	-0.0102	1.26	2.37	0.745	0.698
CCV	102	97.9	101	97.5	99.0	102	101	95.3	98.8	102	97.6	101	102	98.5	101	100	103	92.6	99.9	99.5	106	102
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
Blk 10/23 soil (50 mL)	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	0.104	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
lcs (50 mL)	0.245	2.54	2.46	2.42	0.491	4.02	1.01	0.980	2.36	2.45	2.42	41.9	8.05	0.975	11.8	5.10	2.49	2.25	2.45	2.42	0.944	2.45
---> %rec	98.0%	102%	98.4%	96.8%	98.2%	101%	101%	98.0%	94.4%	98.0%	96.8%	105%	101%	97.5%	98.3%	102%	99.6%	90.0%	98.0%	96.8%	94.4%	98.0%
lcs dup (50 mL)	0.243	2.48	2.48	2.41	0.486	4.10	1.00	0.972	2.34	2.45	2.38	42.3	7.98	0.972	12.0	5.09	2.52	2.28	2.47	2.46	0.945	2.48
---> %rec	97.2%	99.2%	99.2%	96.4%	97.2%	103%	100%	97.2%	93.6%	98.0%	95.2%	106%	99.8%	97.2%	100%	102%	101%	91.2%	98.8%	98.4%	94.5%	99.2%
---> %diff	0.820%	2.39%	0.810%	0.414%	1.02%	1.97%	0.995%	0.820%	0.851%		1.67%	0.950%	0.873%	0.308%	1.68%	0.196%	1.20%	1.32%	0.813%	1.64%	0.106%	1.22%
144638-04 (0.495 mL)	<1.01	6720	4.75	64.0	<0.505	14500	<0.505	<5.05	10.7	22.2	13200	887	6220	298	<253	15.2	49.6	<6.06	<1.01	<2.53	13.6	105
144638-06 (0.48 mL)	<1.04	13300	3.12	97.1	0.685	3280	<0.521	8.57	18.5	21.6	16700	1250	3760	274	<260	27.0	17.4	<6.25	2.62	<2.6	21.4	85.8
144638-10 (0.472 mL)	<1.06	7800	4.40	67.0	<0.53	4310	<0.53	5.90	14.5	26.7	14700	864	2980	255	<265	20.4	82.6	<6.36	2.16	<2.65	15.1	132
144638-15 (0.516 mL)	<0.969	12700	2.96	83.4	0.612	2470	<0.484	7.57	18.9	19.8	16600	1140	3770	211	<242	25.4	22.0	<5.81	3.25	<2.42	20.5	90.3
144638-16 (0.508 mL)	<0.984	6470	4.29	63.5	<0.492	8890	<0.492	<4.92	13.0	22.4	12800	756	5050	200	<246	16.1	50.4	<5.91	1.46	***<2.46***	13.0	109
144638-18 (0.54 mL)	<0.926	6280	<0.926	32.1	<0.463	13700	<0.463	<4.63	9.39	13.1	10600	923	7030	212	<231	8.14	39.0	<5.56	<0.926	<2.31	14.6	82.0
CCV	96.1	97.6	98.6	97.0	97.0	101	103	91.4	95.1	96.0	97.0	97.2	101	99.4	98.4	96.6	97.8	92.0	95.9	97.6	99.1	99.8
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
144638-19 (0.479 mL)	<1.04	7360	1.32	36.7	<0.522	10600	<0.522	<5.22	9.44	11.7	11000	946	5410	382	<261	8.59	32.4	<6.26	<1.04	<2.61	16.2	80.0
144638-19 dup (0.505 mL)	<0.99	7410	1.44	33.5	<0.495	12600	<0.495	<4.95	9.21	10.8	11100	864	5400	278	<248	7.94	29.5	<5.94	<0.99	<2.48	15.7	72.0
---> %diff	NC	0.677%	8.70%	9.12%	NC	17.2%	NC	NC	2.47%	8.00%	0.905%	9.06%	0.185%	31.5%	NC	7.86%	9.37%	NC	NC	NC	3.13%	10.5%
144638-19 spk (0.492 mL)	22.6	8300	229	255	45.3	12500	88.3	89.2	224	246	11500	5310	7030	307	1230	453	260	176	228	224	105	310
---> %rec																						
CCV	97.8	98.5	98.4	96.9	97.1	104	104	93.0	97.1	97.5	99.9	100	102	99.0	101	98.5	98.2	92.8	97.7	99.4	100	103
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
LLQC	0.00867	0.248	0.00946	0.0993	0.00482	2.60	0.00532	0.0480	0.0113	0.0270	0.118	2.56	2.56	0.0152	2.57	0.0429	0.0112	0.0588	0.00819	0.0156	0.0255	0.0601
CCV	102	100	100	96.7	97.0	105	100	94.4	99.3	102	99.6	102	102	98.7	104	100	101	95.9	97.4	102	106	102
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
Blk 10/22 soil (50 mL)	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
lcs (50 mL)	0.243	2.51	2.44	2.41	0.480	4.02	0.998	0.966	2.35	2.45	2.37	41.6	7.97	0.973	11.8	5.08	2.47	2.22	2.39	2.49	0.948	2.50
---> %rec	97.2%	100%	97.6%	96.4%	96.0%	101%	99.8%	96.6%	94.0%	98.0%	94.8%	104%	99.6%	97.3%	98.3%	102%	98.8%	88.8%	95.6%	99.6%	94.8%	100%
lcs dup (50 mL)	0.243	2.51	2.45	2.40	0.479	4.03	0.993	0.968	2.35	2.45	2.38	41.7	7.95	0.976	11.9	5.09	2.48	2.24	2.40	2.48	0.951	2.49
---> %rec	97.2%	100%	98.0%	96.0%	95.8%	101%	99.3%	96.8%	94.0%	98.0%	95.2%	104%	99.4%	97.6%	99.2%	102%	99.2%	89.6%	96.0%	99.2%	95.1%	99.6%
---> %diff			0.409%	0.416%	0.209%	0.248%	0.502%	0.207%			0.421%	0.240%	0.251%	0.308%	0.844%	0.197%	0.404%	0.897%	0.418%	0.402%	0.316%	0.401%
144594-01 Se As (0.476 mL)	<1.05	2530	2.64	28.7	<0.525	133000	<0.525	<5.25	5.25	8.81	5920	538	66500	450	416	4.40	95.5	<6.3	<1.05	***<2.63***	7.92	135
144594-02 Se (0.511 mL)	<0.978	4520	15.9	126	<0.489	40700	<0.489	<4.89	14.9	33.7	13600	835	17000	374	336	10.7	352	<5.87	3.88	<2.45	14.2	422
144594-03 As Se (0.456 mL)	<1.1	5600	3.16	69.4	<0.548	91600	0.791	<5.48	9.19	24.9	10700	1060	37400	440	902	8.88	222	<6.58	***<1.1***	***<2.74***	14.7	473
144594-04 Se (0.517 mL)	<0.967	10500	4.93	77.8	0.496	56200	<0.484	6.98	17.1	24.8	19500	2280	11900	410	527	16.7	243	<5.8	1.08	<2.42	21.9	174
144581-01 As Se (0.538 mL)	<0.929	6100	<0.929	29.9	<0.465	37800	<0.465	4.91	10.3	9.96	13500	1040	8530	410	346	9.72	4.54	<5.58	<0.929	<2.32	18.0	22.1
CCV	102	100	98.1	96.2	96.4	106	98.5	92.9	98.6	101	103	100.0	102	98.8	101	99.0	99.0	92.7	94.4	99.0	106	104
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
144572-04 As Se (0.477 mL)	<1.05	6220	<1.05	48.9	<0.524	73200	<0.524	5.75	10.9	12.6	12200	1290	19100	425	<262	14.3	6.84	<6.29	<1.05	***<2.62***	13.6	26.3
144572-05 Se (0.46 mL)	<1.09	12300	1.77	76.5	<0.543	42100	<0.543	6.63	18.3	16.7	20100	2580	13300	287	325	18.5	7.49	<6.52	<1.09	<2.72	24.0	46.1
144572-06 As (0.499 mL)	<1	11900	2.75	76.2	<0.501	71000	***<0.501***	6.74	17.9	15.0	17900	2210	15400	371	325	19.2	6.94	<6.01	<1	<2.51	19.8	39.6

Reviewed for only metals needed. This worksheet does not correct for dry weights.

Reviewed by:_____

ICP Analytical Worksheet

Date:_____
RDF / SIF:_____
Analyst:_____

- 79 -

Se 1/5

Zn

RCRA

Pb 1/10

Sample ID - Wt/Vol	Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn
144572-10 Se (0.456 mL)	<1.1	121000	19.5	883	5.09	621000	***<0.548***	80.4	193	176	189000	24600	146000	5190	3870	213	72.9	25.0	10.1	***<2.74***	217	426
144572-10 dup Se (0.458 mL)	<1.09	12900	2.33	86.3	0.550	60300	<0.546	8.60	19.4	20.0	21700	2530	14600	545	405	21.9	8.11	<6.55	<1.09	<2.73	23.8	44.5
---> %diff	NC	161%	157%	164%	161%	165%	NC	161%	163%	159%	159%	163%	164%	162%	162%	163%	160%	NC	NC	NC	160%	162%
CCV	102	102	94.7	95.9	95.9	107	98.2	92.6	99.1	102	103	100	102	98.9	101	99.2	96.2	89.2	91.3	95.9	106	103
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
LLQC	0.00860	0.280	0.0105	0.0978	0.00477	2.64	0.00520	0.0469	0.0115	0.0264	0.106	2.58	2.54	0.0150	2.56	0.0424	0.00776	0.0615	0.00751	0.00753	0.0256	0.0653
CCV	102	102	94.6	95.8	95.8	105	98.5	92.6	99.2	102	103	99.6	101	98.6	100	99.3	96.3	89.2	88.6	94.8	106	103
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
4600-01 1/10 Zn (0.498 mL)	<1	2480	1.54	956	<0.502	15000	4.26	<5.02	111	902	34000	399	5050	268	<251	29.8	1720	10.0	5.22	***<2.51***	7.73	1860
4600-01 dup 1/10 Zn (0.482 mL)	<1.04	1690	8.88	594	<0.519	14600	4.26	6.44	87.2	821	42900	333	2990	312	<259	94.2	1660	27.7	5.54	***<2.59***	6.18	1790
---> %diff	NC	37.9%	141%	46.7%	NC	2.70%		NC	24.0%	9.40%	23.1%	18.0%	51.2%	15.2%	NC	104%	3.55%	93.9%	5.95%	NC	22.3%	3.84%
4600-01 spk 1/10 Zn (0.473 mL)	24.5	3980	226	711	44.5	8790	102	98.1	264	1140	22000	4580	1980	291	1290	530	1350	190	216	220	95.4	1780
---> %rec																						
Blk 10/22 w (50 mL)	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
lcs (50 mL)	0.238	2.51	2.29	2.35	0.460	4.11	0.959	0.940	2.32	2.42	2.44	41.6	7.95	0.963	11.8	5.00	2.39	2.09	2.24	2.36	0.947	2.51
---> %rec	95.2%	100%	91.6%	94.0%	92.0%	103%	95.9%	94.0%	92.8%	96.8%	97.6%	104%	99.4%	96.3%	98.3%	100%	95.6%	83.6%	89.6%	94.4%	94.7%	100%
lcs dup (50 mL)	0.240	2.57	2.31	2.37	0.465	4.19	0.969	0.946	2.34	2.44	2.46	42.3	7.98	0.968	12.0	5.02	2.40	2.10	2.23	2.38	0.947	2.51
---> %rec	96.0%	103%	92.4%	94.8%	93.0%	105%	96.9%	94.6%	93.6%	97.6%	98.4%	106%	99.8%	96.8%	100%	100%	96.0%	84.0%	89.2%	95.2%	94.7%	100%
---> %diff	0.837%	2.36%	0.870%	0.847%	1.08%	1.93%	1.04%	0.636%	0.858%	0.823%	0.816%	1.67%	0.377%	0.518%	1.68%	0.399%	0.418%	0.477%	0.447%	0.844%		
144601-01 (50 mL)	<0.01	<0.2	<0.01	0.362	<0.005	98.1	<0.005	<0.05	<0.01	0.0541	0.281	62.4	238	<0.015	917	0.0412	0.0139	<0.06	***<0.01***	***<0.025***	<0.025	<0.06
CCV	101	102	94.0	95.7	95.6	106	96.9	91.5	97.9	101	103	100.0	102	98.5	103	98.0	97.4	89.3	91.6	95.8	105	102
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
LLQC	0.00842	0.266	0.0121	0.0981	0.00476	2.62	0.00517	0.0469	0.0107	0.0269	0.106	2.56	2.54	0.0149	2.83	0.0421	0.0124	0.0598	0.00855	0.00494	0.0256	0.0623
LLQC Radial Pb	-0.00152	-0.0213	0.00584	0.0000320	0.0000947	-0.0188	0.000117	0.000474	0.0000378	0.000449	0.0121	0.0452	-0.00904	-0.0000366	0.220	0.000661	0.0935	0.00659	0.00865	-0.0158	0.00000699	-0.000634
CCV	97.8	102	92.7	95.7	95.6	105	102	90.7	96.9	97.2	103	99.4	101	98.4	101	97.1	94.2	87.0	90.6	94.2	100	102
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
Blk 10/24 p (50 mL)	<0.01	31.5	***<0.01***	<0.1	<0.005	223	<0.005	<0.05	0.0171	<0.025	3.07	3.20	23.5	0.0372	9.22	<0.04	<0.01	<0.06	***<0.01***	<0.025	0.0484	0.962
lcs (50 mL)	0.000391	26.5	-0.0289	0.0206	0.000611	193	-0.000448	0.0309	0.0146	0.0182	2.56	2.57	20.2	0.0320	8.30	0.00703	1.84	0.0308	-0.0244	0.0177	0.0413	0.809
---> %rec	0.156%	1060%	-1.16%	0.824%	0.122%	4830%	-0.0448%	3.09%	0.584%	0.728%	102%	6.43%	253%	3.20%	69.2%	0.141%	73.6%	1.23%	-0.976%	0.708%	4.13%	32.4%
lcs dup (50 mL)	-0.000261	28.0	-0.0303	0.0215	0.000710	195	-0.000467	0.0349	0.0151	0.0204	2.68	2.60	20.7	0.0327	8.31	0.00767	1.83	0.0297	-0.0266	0.0218	0.0438	0.825
---> %rec	-0.104%	1120%	-1.21%	0.860%	0.142%	4880%	-0.0467%	3.49%	0.604%	0.816%	107%	6.50%	259%	3.27%	69.3%	0.153%	73.2%	1.19%	-1.06%	0.872%	4.38%	33.0%
---> %diff	1000%	5.50%	-4.73%	4.28%	15.0%	1.03%	-4.15%	12.2%	3.37%	11.4%	4.58%	1.16%	2.44%	2.16%	0.120%	8.71%	0.545%	3.64%	-8.63%	20.8%	5.88%	1.96%
144460-01 (0.479 mL)	<1.04	7890	***<1.04***	438	<0.522	68000	<0.522	110	200	6.92	1290	524	7030	48.6	688	<4.18	3190	21.6	***<1.04***	***<2.61***	7.90	1300
144460-02 (0.485 mL)	<1.03	4720	***<1.03***	388	<0.515	95400	<0.515	133	160	6.26	1990	<258	5380	57.1	575	<4.12	4000	20.4	***<1.03***	***<2.58***	7.25	1860
144461-01 (0.498 mL)	<1	1580	***<1***	23.1	<0.502	174000	***<0.502***	36.3	3.10	9.29	1030	624	31100	61.8	804	4.14	954	11.6	***<1***	***<2.51***	7.69	3390
144461-02 (0.521 mL)	1.71	6060	***<0.96***	49.2	<0.48	128000	***<0.48***	45.3	44.0	10.5	1650	2840	15600	90.4	1760	23.7	274	7.80	***<0.96***	***<2.4***	8.69	770
144461-02 dup (0.468 mL)	<1.07	5520	***<1.07***	48.5	<0.534	138000	***<0.534***	41.1	40.7	9.88	1810	3810	16300	96.0	1420	26.2	289	<6.41	***<1.07***	***<2.67***	8.94	1440
---> %diff	NC	9.33%	NC	1.43%	NC	7.52%	NC	9.72%	7.79%	6.08%	9.25%	29.2%	4.39%	6.01%	21.4%	10.0%	5.33%	NC	NC	NC	2.84%	60.6%
144461-02 spk (0.527 mL)	1.18	5320	***<0.949***	29.3	<0.474	132000	<0.474	50.0	16.4	11.4	947	1970	16100	82.7	1460	11.6	533	5.87	***<0.949***	***<2.37***	7.58	591
---> %rec																						
CCV	101	101	93.1	95.7	96.2	106	96.7	91.5	97.6	101	102	99.6	101	98.4	101	97.5	95.9	88.4	89.9	94.0	105	102
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
LLQC	0.00884	0.268	0.0126	0.0980	0.00477	2.69	0.00521	0.0478	0.0108	0.0271	0.107	2.61	2.53	0.0149	2.59	0.0425	0.00988	0.0629	0.00822	0.00880	0.0251	0.0605
LLQC Radial Pb	-0.00144	-0.00373	0.00229	-0.000108	0.0000821	-0.0177	-0.000110	0.000461	0.0000269	0.00127	-0.00259	0.0357	-0.00855	-0.0000337	-0.00496	0.000480	0.0961	0.00569	0.00513	-0.0188	0.000179	0.00106
CCV	102	102	93.2	95.8	96.0	107	97.1	92.3	98.6	101	103	101	101	98.4	102	98.5	96.3	89.3	91.8	93.6	106	102
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06

Reviewed for only metals needed.

This worksheet does not correct for dry weights.

Reviewed by:_____

Date Prepped: 10-23-14

$SnCl_2$ #:

Page: 1of 2

Hg141024A

Date:10/24/2014

Analyst: JG

Sample ID	Initial Sample Wt	Wt Units	Initial Sample Vol	Vol Units	Sample Prep Vol.	Reported Conc (Calib)	Units (Calib)		Reported Conc (Samp)	Units (Samp)	QC Recovery	Special Calculated Value
Calib Std 3		g		mL		[2]	ug/L	OVERRANGE		ug/L		
Calib Std 3		g		mL		[2]	ug/L	OVERRANGE		ug/L		
Calib Std 3		g		mL		[2]	ug/L	OVERRANGE		ug/L		
Calibration Blank		g		mL		[0.00]	ug/L	OVERRANGE		ug/L		
Calib Std 1		g		mL		[0.2]	ug/L	OVERRANGE		ug/L		
Calib Std 2		g		mL		[1]	ug/L	OVERRANGE		ug/L		
Calib Std 3		g		mL		[2]	ug/L	OVERRANGE		ug/L		
Calib Std 4		g		mL		[5]	ug/L	OVERRANGE		ug/L		
Calib Std 5		g		mL		[10]	ug/L	OVERRANGE		ug/L		
IPC		g		mL		1.8650	ug/L		1.8650	ug/L	93.3	
ICV		g		mL		1.9760	ug/L		1.9760	ug/L	98.8	
ICB		g		mL		0.0295	ug/L	<0.2 ppb	0.0295	ug/L		
blk	0.245	g		mL	20	0.0170	ug/L		0.0014	ug/g	<0.0163	
lcs	0.210	g		mL	20	1.9490	ug/L		0.1856	ug/g		
lcs dup	0.239	g		mL	20	1.9290	ug/L		0.1614	ug/g		14.0
144638-01	0.230	g		mL	20	1.0520	ug/L		0.0915	ug/g		
144638-02	0.232	g		mL	20	1.1100	ug/L		0.0957	ug/g		
144638-03	0.221	g		mL	20	0.6830	ug/L		0.0618	ug/g		
144638-04	0.227	g		mL	20	1.0160	ug/L		0.0895	ug/g		
144638-05	0.243	g		mL	20	0.0940	ug/L		0.0077	ug/g	<0.0165	
144638-06	0.230	g		mL	20	0.5804	ug/L		0.0505	ug/g		
144638-07	0.225	g		mL	20	0.8201	ug/L		0.0729	ug/g		
CCV		g		mL		1.9890	ug/L		1.9890	ug/L	99.5	
CCB		g		mL		0.0191	ug/L	<0.2 ppb	0.0191	ug/L		
144638-08	0.231	g		mL	20	0.8501	ug/L		0.0736	ug/g		
144638-09	0.229	g		mL	20	0.9239	ug/L		0.0807	ug/g		
144638-10	0.200	g		mL	20	0.8591	ug/L		0.0859	ug/g		
144638-11	0.224	g		mL	20	1.0850	ug/L		0.0969	ug/g		

This worksheet does not correct for dry weight.

Date Prepped: Hg141024A Date:10/24/2014

$SnCl_2$ #: Analyst:_____

144638-12	0.217	g	mL	20	1.0340 ug/L		0.0953 ug/g	
144638-13	0.240	g	mL	20	1.2450 ug/L		0.1037 ug/g	
144638-14	0.207	g	mL	20	0.9971 ug/L		0.0963 ug/g	
144638-15	0.229	g	mL	20	0.6744 ug/L		0.0589 ug/g	
144638-16	0.202	g	mL	20	0.8341 ug/L		0.0826 ug/g	
144638-17	0.209	g	mL	20	0.6769 ug/L		0.0648 ug/g	
CCV		g	mL		2.0070 ug/L		2.0070 ug/L	100.3
CCB		g	mL		0.0049 ug/L	<0.2 ppb	0.0049 ug/L	
144638-18	0.214	g	mL	20	0.9578 ug/L		0.0895 ug/g	
144638-19	0.223	g	mL	20	1.0540 ug/L		0.0945 ug/g	
144638-19 dup	0.240	g	mL	20	1.1520 ug/L		0.0960 ug/g	1.6
144638-19 spk	0.238	g	mL	20	3.0570 ug/L		0.2569 ug/g	
CCV		g	mL		2.0140 ug/L		2.0140 ug/L	100.7
CCB		g	mL		0.0281 ug/L	<0.2 ppb	0.0281 ug/L	
blk	0.244	g	mL	20	0.0168 ug/L		0.0014 ug/g	<0.0164
lcs	0.204	g	mL	20	2.2910 ug/L		0.2246 ug/g	JC 102414 ~~113.2~~ 114.6
lcs dup	0.235	g	mL	20	2.2640 ug/L		0.1927 ug/g	113.2 15.3
144594-01	0.239	g	mL	20	3.3100 ug/L		0.2770 ug/g	
144594-02	0.248	g	mL	20	6.1980 ug/L		0.4998 ug/g	
144594-03	0.226	g	mL	20	4.4210 ug/L		0.3913 ug/g	
CCV		g	mL		2.0350 ug/L		2.0350 ug/L	101.7
CCB		g	mL		0.0078 ug/L	<0.2 ppb	0.0078 ug/L	
144594-04	0.220	g	mL	20	1.4950 ug/L		0.1359 ug/g	
144581-01	0.230	g	mL	20	0.1140 ug/L		0.0099 ug/g	<0.0174
144581-01 dup	0.203	g	mL	20	0.0967 ug/L		0.0095 ug/g	<0.0197 NC % Diff
144581-01 spk	0.204	g	mL	20	2.3860 ug/L		0.2339 ug/g	113.6
CCV		g	mL		2.0220 ug/L		2.0220 ug/L	101.1
CCB		g	mL		0.0159 ug/L	<0.2 ppb	0.0159 ug/L	

This worksheet does not correct for dry weight.

Analytical Sequence

Method : 6010C 4ptLL

Seq.	Loc.		Sample ID
1	1		Calib Blank 1
2	9		Low Level Cal1
3	2		Low Level Cal
4	3		Mid Level Cal
5	4		Pb LL
6	5		Pb HL
7	6		High Level Cal
8	6	QC	IPC
9	7	QC	ICV
10	1	QC	ICB
11	2	QC	LLQC ↑ Pb
12	4	QC	LLQC Radial Pb ↓Pb
13	8	QC	ICSAB
14	7	QC	CCV
15	1	QC	CCB
16	38		Blk 10/23 soil
17	39		lcs
18	40		lcs dup
19	41		144638-01
20	42		144638-02
21	43		144638-03
22	44		144638-04 rpt As
23	45		144638-05
24	46		144638-06 rpt As
25	47		144638-07
26	7	QC	CCV
27	1	QC	CCB
28	48		144638-08
29	49		144638-09
30	50		144638-10 rpt As
31	51		144638-11
32	52		144638-12
33	53		144638-13
34	54		144638-14
35	55		144638-15 rpt As
36	56		144638-16 ↓
37	7	QC	CCV
38	1	QC	CCB
39	57		144638-17
40	58		144638-18 rpt As
41	59		144638-19
42	60		144638-19 dup
43	61		144638-19 spk
44	7	QC	CCV
45	1	QC	CCB
46	2	QC	LLQC ↓As ↓Se, ↓Tl, ↑ Pb
47	7	QC	CCV
48	1	QC	CCB
49	62		Blk 10/22 soil
50	63		lcs
51	64		lcs dup
52	65		144594-01 Se As
53	66		144594-01 1/10 Ca Mg
54	67		144594-02 Se
55	68		144594-03 As Se
56	69		144594-04 Se

Rpt 46600-01 Zn $\frac{1}{10}$ 0.498

Dup 0.482

Spk 0.473

Analytical Sequence

Method : 6010C 4ptLL

Seq.	Lcc.		Sample ID
57	70		144581-01 As Se
58	71		145777-02 1/100
59	7	QC	CCV ↓Tl, ↑Zn
60	1	QC	CCB
61	72		144572-01 1/10 Ca
62	73		144572-02 1/10 Cs
63	74		144572-04 As Se
64	75		144572-04 1/10 Ca
65	76		144572-05 Se
66	77		144572-06 As
67	78		144572-06 1/10 Ca
68	79		144572-07 1/10 Ca
69	80		144572-08 1/10 Ca
70	7	QC	CCV ↓Tl, ↑Zn
71	1	QC	CCB
72	81		144572-10 1/10 Ca
73	82		144572-10 dup
74	83		144572-10 spk
75	84		144572-10 Se
76	85		144572-10 dup Se
77	7	QC	CCV ↓Tl, ↑Zn
78	1	QC	CCB
79	2	QC	LLQC ↓As, ↑Pb, ↓Tl
80	7	QC	CCV ↓Tl, ↑Zn
81	1	QC	CCB
82	86		4600-01 1/10 Zn RPT
83	87		4600-01 dup 1/10 Zn
84	88		4600-01 spk 1/10 Zn
85	89		Blk 10/22 w
86	90		lcs
87	91		lcs dup
88	92		144601-01
89	93		144614-01
90	7	QC	CCV
91	1	QC	CCB
92	2	QC	LLQC
93	7	QC	CCV
94	1	QC	CCB
95	94		Sample094

Method: 6010C 4ptLL Page 1 Date: 10/23/2014 2:28:01 PM

Analysis Begun

Start Time: 10/23/2014 2:25:14 PM
Logged In Analyst: icp3
Spectrometer: Optima 7300 DV, S/N 077C0122002

Plasma On Time: 10/23/2014 2:17:38 PM
Technique: ICP Continuous
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer\ICP\Data\Sample Information\102314b.sif
Batch ID: 102314b
Results Data Set: 102314b
Results Library: C:\Users\Public\PerkinElmer\ICP\Data\Results\Oct2014.mdb

Amm 10-23-14

Method Loaded
Method Name: 6010C 4ptLL
IEC File: 051514.iec
Method Description: 6010C/200.7 TAL Metals

Method Last Saved: 10/15/2014 2:41:18 PM
MSF File:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Al 308.215	Lin Thru 0	Peak Area	Radial	Y 371.029	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Ba 233.527	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Be 313.107	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Ca 317.933	Lin Thru 0	Peak Area	Radial	Y 371.029	Yes
Cd 226.502	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Cr 267.716	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Fe 273.955	Lin Thru 0	Peak Area	Radial	Y 371.029	Yes
K 766.490	Lin Thru 0	Peak Area	Radial	Y 371.029	Yes
Mg 279.077	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Mn 257.610	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Na 589.592	Lin Thru 0	Peak Area	Radial	Y 371.029	Yes
Ni 231.604	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Se 196.026	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Zn 213.857	Lin Thru 0	Peak Area	Radial	Y 371.029	Yes
Pb	Lin Thru 0	Peak Area	Radial	Y 371.029	Yes
Y 371.029	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Ag 338.289	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes

Sequence No.: 1
Sample ID: Calib Blank 1
Analyst:
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 1
Date Collected: 10/23/2014 2:25:14 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: Calib Blank 1

Analyte	Back Pressure	Flow
All	130.0 kPa	0.55 L/min

Mean Data: Calib Blank 1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	1538632.1	2976.06	0.19%	1.000	mg/L
Ag 328.068†	6902.4	112.27	1.63%	[0.00]	mg/L
Al 308.215†	176.7	6.77	3.83%	[0.00]	mg/L
As 188.979†	14.1	3.95	27.94%	[0.00]	mg/L
Ba 233.527†	427.7	23.44	5.48%	[0.00]	mg/L
Be 313.107†	-2188.9	94.43	4.31%	[0.00]	mg/L
Ca 317.933†	645.1	4.39	0.68%	[0.00]	mg/L
Cd 226.502†	-64.7	6.72	10.38%	[0.00]	mg/L
Co 228.616†	-184.3	14.93	8.10%	[0.00]	mg/L

Cr 267.716†	181.9	17.78	9.77%	[0.00]	mg/L
Cu 324.752†	3385.4	46.79	1.38%	[0.00]	mg/L
Fe 273.955†	-14.8	3.10	21.00%	[0.00]	mg/L
K 766.490†	1594.1	27.08	1.70%	[0.00]	mg/L
Mg 279.077†	2776.5	29.07	1.05%	[0.00]	mg/L
Mn 257.610†	2085.0	18.57	0.89%	[0.00]	mg/L
Na 589.592†	1374.9	20.91	1.52%	[0.00]	mg/L
Ni 231.604†	24.8	6.66	26.84%	[0.00]	mg/L
Pb 220.353†	27.4	7.20	26.28%	[0.00]	mg/L
Sb 206.836†	-206.0	1.90	0.92%	[0.00]	mg/L
Se 196.026†	-19.2	5.37	27.96%	[0.00]	mg/L
Tl 190.801†	86.7	12.25	14.12%	[0.00]	mg/L
V 292.402†	710.3	16.37	2.31%	[0.00]	mg/L
Zn 213.857†	-12.4	2.07	16.70%	[0.00]	mg/L
Pb†	2.4	0.73	31.02%	[0.00]	mg/L
Ag 338.289†	-1782.7	44.02	2.47%	[0.00]	mg/L

Sequence No.: 2 **Autosampler Location: 9**
Sample ID: Low Level Cal1 **Date Collected: 10/23/2014 2:29:25 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 75 **Auto Dilution Factor: 1**

Nebulizer Parameters: Low Level Cal1

Analyte	Back Pressure	Flow
All	131.0 kPa	0.55 L/min

Mean Data: Low Level Cal1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	1510778.1	1127.84	0.07%	0.9819	mg/L
Ag 328.068†	937.1	18.87	2.01%	[0.005]	mg/L
Al 308.215†	51.9	4.37	8.41%	[0.100]	mg/L
As 188.979†	13.6	8.36	61.32%	[0.005]	mg/L
Ba 233.527†	7885.0	37.13	0.47%	[0.050]	mg/L
Be 313.107†	4311.5	10.39	0.24%	[0.0025]	mg/L
Ca 317.933†	5141.7	48.03	0.93%	[1.25]	mg/L
Cd 226.502†	170.1	3.46	2.04%	[0.0025]	mg/L
Co 228.616†	935.2	6.69	0.72%	[0.025]	mg/L
Cr 267.716†	625.6	24.72	3.95%	[0.005]	mg/L
Cu 324.752†	2839.5	111.97	3.94%	[0.0125]	mg/L
Fe 273.955†	31.8	2.91	9.15%	[0.050]	mg/L
K 766.490†	3043.5	105.71	3.47%	[1.25]	mg/L
Mg 279.077†	22856.4	70.62	0.31%	[1.25]	mg/L
Mn 257.610†	6513.8	33.63	0.52%	[0.0075]	mg/L
Na 589.592†	10514.6	111.56	1.06%	[1.25]	mg/L
Ni 231.604†	758.5	13.58	1.79%	[0.020]	mg/L
Pb 220.353†	57.9	20.66	35.68%	[0.005]	mg/L
Sb 206.836†	81.9	17.52	21.39%	[0.030]	mg/L
Se 196.026†	3.4	8.66	255.64%	[0.005]	mg/L
Tl 190.801†	17.0	1.64	9.61%	[0.0125]	mg/L
V 292.402†	1955.9	36.03	1.84%	[0.0125]	mg/L
Zn 213.857†	38.9	1.19	3.05%	[0.030]	mg/L
Ag 338.289†	603.6	95.53	15.83%	[0.005]	mg/L

Sequence No.: 3 **Autosampler Location: 2**
Sample ID: Low Level Cal **Date Collected: 10/23/2014 2:33:39 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 75 **Auto Dilution Factor: 1**

Nebulizer Parameters: Low Level Cal

Analyte	Back Pressure	Flow
All	131.0 kPa	0.55 L/min

Mean Data: Low Level Cal

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	1508331.2	12622.16	0.84%	0.9803	mg/L
Ag 328.068†	1893.5	31.91	1.69%	[0.010]	mg/L
Al 308.215†	138.0	1.17	0.85%	[0.200]	mg/L
As 188.979†	15.9	1.46	9.15%	[0.010]	mg/L
Ba 233.527†	14853.7	21.22	0.14%	[0.100]	mg/L
Be 313.107†	8725.6	59.40	0.68%	[0.005]	mg/L
Ca 317.933†	11197.3	57.21	0.51%	[2.50]	mg/L
Cd 226.502†	345.8	4.35	1.26%	[0.005]	mg/L
Co 228.616†	1941.1	32.63	1.68%	[0.050]	mg/L
Cr 267.716†	1299.9	32.57	2.51%	[0.010]	mg/L
Cu 324.752†	5754.5	143.34	2.49%	[0.025]	mg/L
Fe 273.955†	50.0	3.01	6.02%	[0.100]	mg/L
K 766.490†	6050.9	148.73	2.46%	[2.50]	mg/L
Mg 279.077†	45752.6	13.29	0.03%	[2.50]	mg/L
Mn 257.610†	11988.4	15.02	0.13%	[0.015]	mg/L
Na 589.592†	20376.2	54.72	0.27%	[2.50]	mg/L
Ni 231.604†	1612.2	10.19	0.63%	[0.040]	mg/L
Pb 220.353†	106.2	15.25	14.36%	[0.010]	mg/L
Sb 206.836†	170.2	13.24	7.78%	[0.060]	mg/L
Se 196.026†	16.5	4.04	24.44%	[0.010]	mg/L
Tl 190.801†	41.7	9.30	22.32%	[0.025]	mg/L
V 292.402†	3967.4	78.78	1.99%	[0.025]	mg/L
Zn 213.857†	76.1	3.34	4.39%	[0.060]	mg/L
Ag 338.289†	1006.2	16.57	1.65%	[0.01]	mg/L

Sequence No.: 4
Sample ID: Mid Level Cal
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 3
Date Collected: 10/23/2014 2:37:52 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Nebulizer Parameters: Mid Level Cal

Analyte	Back Pressure	Flow
All	131.0 kPa	0.55 L/min

Mean Data: Mid Level Cal

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	1583296.6	4122.24	0.26%	1.029	mg/L
Ag 328.068†	9488.3	102.33	1.08%	[0.050]	mg/L
Al 308.215†	551.5	10.56	1.92%	[1.00]	mg/L
As 188.979†	97.4	3.24	3.32%	[0.050]	mg/L
Ba 233.527†	74420.1	110.87	0.15%	[0.500]	mg/L
Be 313.107†	44915.6	164.56	0.37%	[0.025]	mg/L
Ca 317.933†	53530.8	936.75	1.75%	[12.5]	mg/L
Cd 226.502†	1725.7	12.84	0.74%	[0.025]	mg/L
Co 228.616†	9827.4	6.54	0.07%	[0.250]	mg/L
Cr 267.716†	5838.4	73.55	1.26%	[0.050]	mg/L
Cu 324.752†	28974.8	74.97	0.26%	[0.125]	mg/L
Fe 273.955†	260.3	3.43	1.32%	[0.500]	mg/L
K 766.490†	29136.2	494.58	1.70%	[12.5]	mg/L
Mg 279.077†	226498.3	151.87	0.07%	[12.5]	mg/L
Mn 257.610†	59288.3	59.89	0.10%	[0.075]	mg/L
Na 589.592†	98369.6	1162.30	1.18%	[12.5]	mg/L
Ni 231.604†	8050.5	1.96	0.02%	[0.200]	mg/L
Pb 220.353†	382.8	9.86	2.58%	[0.050]	mg/L
Sb 206.836†	953.3	10.19	1.07%	[0.300]	mg/L
Se 196.026†	113.4	8.84	7.80%	[0.050]	mg/L
Tl 190.801†	206.3	9.50	4.60%	[0.125]	mg/L
V 292.402†	20121.0	71.17	0.35%	[0.125]	mg/L
Zn 213.857†	365.7	2.20	0.60%	[0.300]	mg/L
Ag 338.289†	5023.5	120.55	2.40%	[0.05]	mg/L

Sequence No.: 5
Sample ID: Pb LL
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 4
Date Collected: 10/23/2014 2:42:06 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Nebulizer Parameters: Pb LL

Analyte	Back Pressure	Flow
All	131.0 kPa	0.55 L/min

Mean Data: Pb LL

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	1464745.8	2394.49	0.16%	0.9520	mg/L
Pb†	-0.0	0.32	>999.9%	[0.100]	mg/L

Standard intensity and concentration values are not in the same order.

Sequence No.: 6
Sample ID: Pb HL
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 5
Date Collected: 10/23/2014 2:45:37 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Nebulizer Parameters: Pb HL

Analyte	Back Pressure	Flow
All	131.0 kPa	0.55 L/min

Mean Data: Pb HL

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	1506765.2	3811.81	0.25%	0.9793	mg/L
Pb†	866.7	2.23	0.26%	[10.0]	mg/L

Standard intensity and concentration values are not in the same order.

Sequence No.: 7
Sample ID: High Level Cal
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 6
Date Collected: 10/23/2014 2:49:07 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Nebulizer Parameters: High Level Cal

Analyte	Back Pressure	Flow
All	131.0 kPa	0.55 L/min

Mean Data: High Level Cal

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	1447467.8	16538.71	1.14%	0.9407	mg/L
Ag 328.068†	400231.7	137.72	0.03%	[2.00]	mg/L
Al 308.215†	5604.5	116.00	2.07%	[10.0]	mg/L
As 188.979†	4059.9	46.75	1.15%	[2.00]	mg/L
Ba 233.527†	1484226.4	3488.29	0.24%	[10.0]	mg/L
Be 313.107†	457457.4	526.45	0.12%	[0.250]	mg/L
Ca 317.933†	225540.7	1685.83	0.75%	[50.0]	mg/L
Cd 226.502†	63492.6	52.78	0.08%	[1.00]	mg/L
Co 228.616†	99216.3	234.89	0.24%	[2.50]	mg/L
Cr 267.716†	227695.8	306.29	0.13%	[2.00]	mg/L
Cu 324.752†	291104.0	387.00	0.13%	[1.25]	mg/L
Fe 273.955†	2735.6	36.31	1.33%	[5.00]	mg/L
K 766.490†	119663.5	851.51	0.71%	[50.0]	mg/L
Mg 279.077†	895671.9	2174.81	0.24%	[50.0]	mg/L

Mn 257.610†	2397376.0	4895.34	0.20%	[3.00]	mg/L
Na 589.592†	404380.6	3188.50	0.79%	[50.0]	mg/L
Ni 231.604†	304204.7	525.55	0.17%	[8.00]	mg/L
Pb 220.353†	7249.3	78.67	1.09%	[1.00]	mg/L
Sb 206.836†	37579.1	115.84	0.31%	[12.0]	mg/L
Se 196.026†	2461.2	26.21	1.06%	[1.00]	mg/L
Tl 190.801†	3509.5	45.74	1.30%	[2.00]	mg/L
V 292.402†	401138.9	23.36	0.01%	[2.50]	mg/L
Zn 213.857†	4733.4	95.56	2.02%	[4.00]	mg/L
Pb†	75.9	1.96	2.59%	[1.00]	mg/L
Standard intensity and concentration values are not in the same order.					
Ag 338.289†	192288.2	8.54	0.00%	[2.00]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	4	Lin Thru 0	0.0	200100	0.00000	0.999999	
Al 308.215	4	Lin Thru 0	0.0	560.4	0.00000	0.999988	
As 188.979	4	Lin Thru 0	0.0	2030	0.00000	0.999999	
Ba 233.527	4	Lin Thru 0	0.0	148400	0.00000	1.000000	
Be 313.107	4	Lin Thru 0	0.0	1829000	0.00000	0.999998	
Ca 317.933	4	Lin Thru 0	0.0	4497	0.00000	0.999927	
Cd 226.502	4	Lin Thru 0	0.0	63500	0.00000	0.999998	
Co 228.616	4	Lin Thru 0	0.0	39680	0.00000	0.999999	
Cr 267.716	4	Lin Thru 0	0.0	113900	0.00000	1.000000	
Cu 324.752	4	Lin Thru 0	0.0	232900	0.00000	1.000000	
Fe 273.955	4	Lin Thru 0	0.0	546.9	0.00000	0.999986	
K 766.490	4	Lin Thru 0	0.0	2390	0.00000	0.999981	
Mg 279.077	4	Lin Thru 0	0.0	17930	0.00000	0.999996	
Mn 257.610	4	Lin Thru 0	0.0	799100	0.00000	1.000000	
Na 589.592	4	Lin Thru 0	0.0	8075	0.00000	0.999979	
Ni 231.604	4	Lin Thru 0	0.0	38030	0.00000	0.999999	
Pb 220.353	4	Lin Thru 0	0.0	7251	0.00000	0.999981	
Sb 206.836	4	Lin Thru 0	0.0	3132	0.00000	1.000000	
Se 196.026	4	Lin Thru 0	0.0	2461	0.00000	0.999980	
Tl 190.801	4	Lin Thru 0	0.0	1754	0.00000	0.999992	
V 292.402	4	Lin Thru 0	0.0	160500	0.00000	1.000000	
Zn 213.857	4	Lin Thru 0	0.0	1184	0.00000	0.999997	
Pb	3	Lin Thru 0	0.0	86.56	0.00000	0.999875	
Ag 338.289	4	Lin Thru 0	0.0	96150	0.00000	0.999999	

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Sequence No.: 8 **Autosampler Location: 6**
Sample ID: IPC **Date Collected: 10/23/2014 2:53:26 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 75 **Auto Dilution Factor: 1**

Nebulizer Parameters: IPC

Analyte	Back Pressure	Flow
All	131.0 kPa	0.55 L/min

Mean Data: IPC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1449732.2	0.9422	mg/L	0.00944				1.00%
Ag 328.068†	399928.2	2.001	mg/L	0.0019	2.001	mg/L	0.0019	0.09%
QC value within limits for Ag 328.068 Recovery = 100.07%								
Al 308.215†	5575.2	9.961	mg/L	0.0006	9.961	mg/L	0.0006	0.01%
QC value within limits for Al 308.215 Recovery = 99.61%								
As 188.979†	4059.9	1.999	mg/L	0.0167	1.999	mg/L	0.0167	0.84%
QC value within limits for As 188.979 Recovery = 99.95%								
Ba 233.527†	1485424.6	10.01	mg/L	0.005	10.01	mg/L	0.005	0.05%
QC value within limits for Ba 233.527 Recovery = 100.08%								
Be 313.107†	457307.4	0.2503	mg/L	0.00049	0.2503	mg/L	0.00049	0.20%
QC value within limits for Be 313.107 Recovery = 100.13%								
Ca 317.933†	225516.0	50.15	mg/L	0.241	50.15	mg/L	0.241	0.48%
QC value within limits for Ca 317.933 Recovery = 100.29%								

Cd 226.502†	63597.8	0.9998 mg/L	0.00112	0.9998 mg/L	0.00112	0.11%
QC value within limits for Cd 226.502 Recovery = 99.98%						
Co 228.616†	99224.3	2.500 mg/L	0.0039	2.500 mg/L	0.0039	0.16%
QC value within limits for Co 228.616 Recovery = 100.02%						
Cr 267.716†	228153.0	2.003 mg/L	0.0020	2.003 mg/L	0.0020	0.10%
QC value within limits for Cr 267.716 Recovery = 100.15%						
Cu 324.752†	290354.2	1.247 mg/L	0.0004	1.247 mg/L	0.0004	0.03%
QC value within limits for Cu 324.752 Recovery = 99.80%						
Fe 273.955†	2745.9	4.986 mg/L	0.0576	4.986 mg/L	0.0576	1.15%
QC value within limits for Fe 273.955 Recovery = 99.71%						
K 766.490†	119974.2	50.20 mg/L	0.273	50.20 mg/L	0.273	0.54%
QC value within limits for K 766.490 Recovery = 100.41%						
Mg 279.077†	895230.9	49.92 mg/L	0.099	49.92 mg/L	0.099	0.20%
QC value within limits for Mg 279.077 Recovery = 99.84%						
Mn 257.610†	2399378.2	3.003 mg/L	0.0008	3.003 mg/L	0.0008	0.03%
QC value within limits for Mn 257.610 Recovery = 100.10%						
Na 589.592†	404196.4	50.05 mg/L	0.364	50.05 mg/L	0.364	0.73%
QC value within limits for Na 589.592 Recovery = 100.11%						
Ni 231.604†	304633.5	8.011 mg/L	0.0123	8.011 mg/L	0.0123	0.15%
QC value within limits for Ni 231.604 Recovery = 100.14%						
Pb 220.353†	7296.9	1.013 mg/L	0.0123	1.013 mg/L	0.0123	1.22%
QC value within limits for Pb 220.353 Recovery = 101.27%						
Sb 206.836†	37500.9	11.93 mg/L	0.012	11.93 mg/L	0.012	0.10%
QC value within limits for Sb 206.836 Recovery = 99.45%						
Se 196.026†	2457.3	0.9978 mg/L	0.00648	0.9978 mg/L	0.00648	0.65%
QC value within limits for Se 196.026 Recovery = 99.78%						
Tl 190.801†	3510.4	1.967 mg/L	0.0270	1.967 mg/L	0.0270	1.37%
QC value within limits for Tl 190.801 Recovery = 98.36%						
V 292.402†	401302.0	2.517 mg/L	0.0016	2.517 mg/L	0.0016	0.06%
QC value within limits for V 292.402 Recovery = 100.67%						
Zn 213.857†	4718.5	3.942 mg/L	0.0317	3.942 mg/L	0.0317	0.80%
QC value within limits for Zn 213.857 Recovery = 98.55%						
Pb†	75.6	0.8797 mg/L	0.00933	0.8797 mg/L	0.00933	1.06%
QC value less than the lower limit for Pb Recovery = 87.97%						
Ag 338.289†	192292.6	2.052 mg/L	0.0002	2.052 mg/L	0.0002	0.01%

QC Failed. Continue with analysis.

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Sequence No.: 9
Sample ID: ICV
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 7
Date Collected: 10/23/2014 2:57:44 PM
Data Type: Original
Initial Sample Vol.:
Sample Prep Vol:
Auto Dilution Factor: 1

Nebulizer Parameters: ICV

Analyte	Back Pressure	Flow
All	131.0 kPa	0.55 L/min

Mean Data: ICV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1450900.7	0.9430	mg/L	0.00126				0.13%
Ag 328.068†	245829.7	1.231	mg/L	0.0020	1.231	mg/L	0.0020	0.16%
QC value within limits for Ag 328.068 Recovery = 98.50%								
Al 308.215†	5516.9	9.854	mg/L	0.0076	9.854	mg/L	0.0076	0.08%
QC value within limits for Al 308.215 Recovery = 98.54%								
As 188.979†	1016.9	0.5004	mg/L	0.00694	0.5004	mg/L	0.00694	1.39%
QC value within limits for As 188.979 Recovery = 100.08%								
Ba 233.527†	1459832.3	9.836	mg/L	0.0090	9.836	mg/L	0.0090	0.09%
QC value within limits for Ba 233.527 Recovery = 98.36%								
Be 313.107†	454221.9	0.2485	mg/L	0.00014	0.2485	mg/L	0.00014	0.06%
QC value within limits for Be 313.107 Recovery = 99.38%								
Ca 317.933†	110401.3	24.55	mg/L	0.206	24.55	mg/L	0.206	0.84%
QC value within limits for Ca 317.933 Recovery = 98.20%								
Cd 226.502†	16968.1	0.2663	mg/L	0.00025	0.2663	mg/L	0.00025	0.09%
QC value within limits for Cd 226.502 Recovery = 106.51%								
Co 228.616†	93968.2	2.368	mg/L	0.0022	2.368	mg/L	0.0022	0.09%
QC value within limits for Co 228.616 Recovery = 94.72%								
Cr 267.716†	111119.0	0.9751	mg/L	0.00103	0.9751	mg/L	0.00103	0.11%

QC value within limits for Cr 267.716 Recovery = 97.51%

Cu 324.752†	283275.1	1.217 mg/L	0.0004	1.217 mg/L	0.0004	0.03%
QC value within limits for Cu 324.752 Recovery = 97.37%						
Fe 273.955†	2651.7	4.811 mg/L	0.0038	4.811 mg/L	0.0038	0.08%
QC value within limits for Fe 273.955 Recovery = 96.22%						
K 766.490†	58603.4	24.52 mg/L	0.147	24.52 mg/L	0.147	0.60%
QC value within limits for K 766.490 Recovery = 98.09%						
Mg 279.077†	457265.0	25.49 mg/L	0.001	25.49 mg/L	0.001	0.00%
QC value within limits for Mg 279.077 Recovery = 101.96%						
Mn 257.610†	1976637.2	2.474 mg/L	0.0014	2.474 mg/L	0.0014	0.06%
QC value within limits for Mn 257.610 Recovery = 98.96%						
Na 589.592†	196344.3	24.31 mg/L	0.158	24.31 mg/L	0.158	0.65%
QC value within limits for Na 589.592 Recovery = 97.26%						
Ni 231.604†	94218.3	2.478 mg/L	0.0020	2.478 mg/L	0.0020	0.08%
QC value within limits for Ni 231.604 Recovery = 99.11%						
Pb 220.353†	3649.5	0.5066 mg/L	0.00399	0.5066 mg/L	0.00399	0.79%
QC value within limits for Pb 220.353 Recovery = 101.32%						
Sb 206.836†	15914.4	5.064 mg/L	0.0056	5.064 mg/L	0.0056	0.11%
QC value within limits for Sb 206.836 Recovery = 101.28%						
Se 196.026†	1220.0	0.4948 mg/L	0.00203	0.4948 mg/L	0.00203	0.41%
QC value within limits for Se 196.026 Recovery = 98.96%						
Tl 190.801†	913.1	0.4871 mg/L	0.00575	0.4871 mg/L	0.00575	1.18%
QC value within limits for Tl 190.801 Recovery = 97.42%						
V 292.402†	403749.2	2.524 mg/L	0.0001	2.524 mg/L	0.0001	0.01%
QC value within limits for V 292.402 Recovery = 100.96%						
Zn 213.857†	3034.8	2.549 mg/L	0.0021	2.549 mg/L	0.0021	0.08%
QC value within limits for Zn 213.857 Recovery = 101.97%						
Pb†	39.1	0.4506 mg/L	0.00641	0.4506 mg/L	0.00641	1.42%
QC value within limits for Pb Recovery = 90.13%						
Ag 338.289†	118542.9	1.260 mg/L	0.0017	1.260 mg/L	0.0017	0.14%

All analyte(s) passed QC.

Sequence No.: 10 **Autosampler Location: 1**
Sample ID: ICB **Date Collected: 10/23/2014 3:02:01 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 75 **Auto Dilution Factor: 1**

Nebulizer Parameters: ICB

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: ICB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1523989.2	0.9905	mg/L	0.00899				0.91%
Ag 328.068†	-105.9	-0.0005	mg/L	0.00022	-0.0005	mg/L	0.00022	42.48%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 308.215†	-12.6	-0.0225	mg/L	0.00508	-0.0225	mg/L	0.00508	22.57%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	-0.9	-0.0005	mg/L	0.00177	-0.0005	mg/L	0.00177	382.53%
QC value within limits for As 188.979 Recovery = Not calculated								
Ba 233.527†	274.3	0.0018	mg/L	0.00009	0.0018	mg/L	0.00009	4.98%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-33.8	-0.0000	mg/L	0.00003	-0.0000	mg/L	0.00003	154.94%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933†	8.8	0.0020	mg/L	0.00434	0.0020	mg/L	0.00434	221.13%
QC value within limits for Ca 317.933 Recovery = Not calculated								
Cd 226.502†	-3.8	-0.0001	mg/L	0.00010	-0.0001	mg/L	0.00010	169.60%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	10.1	0.0003	mg/L	0.00009	0.0003	mg/L	0.00009	34.25%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	9.7	0.0001	mg/L	0.00017	0.0001	mg/L	0.00017	195.69%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 324.752†	203.1	0.0009	mg/L	0.00015	0.0009	mg/L	0.00015	17.31%
QC value within limits for Cu 324.752 Recovery = Not calculated								
Fe 273.955†	2.6	0.0047	mg/L	0.01390	0.0047	mg/L	0.01390	293.44%
QC value within limits for Fe 273.955 Recovery = Not calculated								

K 766.490†	200.2	0.0838 mg/L	0.04205	0.0838 mg/L	0.04205	50.19%
QC value within limits for K 766.490 Recovery = Not calculated						
Mg 279.077†	-13.2	-0.0008 mg/L	0.00017	-0.0008 mg/L	0.00017	22.81%
QC value within limits for Mg 279.077 Recovery = Not calculated						
Mn 257.610†	314.0	0.0004 mg/L	0.00007	0.0004 mg/L	0.00007	16.70%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Na 589.592†	350.5	0.0434 mg/L	0.00696	0.0434 mg/L	0.00696	16.04%
QC value within limits for Na 589.592 Recovery = Not calculated						
Ni 231.604†	0.9	0.0000 mg/L	0.00000	0.0000 mg/L	0.00000	11.60%
QC value within limits for Ni 231.604 Recovery = Not calculated						
Pb 220.353†	11.7	0.0016 mg/L	0.00275	0.0016 mg/L	0.00275	169.49%
QC value within limits for Pb 220.353 Recovery = Not calculated						
Sb 206.836†	18.2	0.0058 mg/L	0.00661	0.0058 mg/L	0.00661	113.65%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	-3.6	-0.0015 mg/L	0.00728	-0.0015 mg/L	0.00728	500.79%
QC value within limits for Se 196.026 Recovery = Not calculated						
Tl 190.801†	8.0	0.0046 mg/L	0.00416	0.0046 mg/L	0.00416	90.68%
QC value within limits for Tl 190.801 Recovery = Not calculated						
V 292.402†	11.7	0.0001 mg/L	0.00046	0.0001 mg/L	0.00046	616.94%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	0.5	0.0004 mg/L	0.00076	0.0004 mg/L	0.00076	177.18%
QC value within limits for Zn 213.857 Recovery = Not calculated						
Pb†	-8.4	-0.0969 mg/L	0.02642	-0.0969 mg/L	0.02642	27.27%
QC value within limits for Pb Recovery = Not calculated						
Ag 338.289†	164.1	0.0017 mg/L	0.00083	0.0017 mg/L	0.00083	48.63%

All analyte(s) passed QC.

Sequence No.: 11 **Autosampler Location: 2**
Sample ID: LLQC **Date Collected: 10/23/2014 3:06:14 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 75 **Auto Dilution Factor: 1**

Nebulizer Parameters: LLQC

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: LLQC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1513744.6	0.9838	mg/L	0.00122				0.12%
Ag 328.068†	1885.7	0.0095	mg/L	0.00027	0.0095	mg/L	0.00027	2.89%
QC value within limits for Ag 328.068 Recovery = 94.66%								
Al 308.215†	143.1	0.2558	mg/L	0.01432	0.2558	mg/L	0.01432	5.60%
QC value within limits for Al 308.215 Recovery = 127.91%								
As 188.979†	21.0	0.0103	mg/L	0.00333	0.0103	mg/L	0.00333	32.15%
QC value within limits for As 188.979 Recovery = 103.48%								
Ba 233.527†	14871.8	0.1002	mg/L	0.00050	0.1002	mg/L	0.00050	0.49%
QC value within limits for Ba 233.527 Recovery = 100.20%								
Be 313.107†	8706.8	0.0048	mg/L	0.00003	0.0048	mg/L	0.00003	0.54%
QC value within limits for Be 313.107 Recovery = 95.23%								
Ca 317.933†	11274.3	2.507	mg/L	0.0420	2.507	mg/L	0.0420	1.68%
QC value within limits for Ca 317.933 Recovery = 100.28%								
Cd 226.502†	344.1	0.0054	mg/L	0.00003	0.0054	mg/L	0.00003	0.60%
QC value within limits for Cd 226.502 Recovery = 107.71%								
Co 228.616†	1952.1	0.0492	mg/L	0.00033	0.0492	mg/L	0.00033	0.68%
QC value within limits for Co 228.616 Recovery = 98.39%								
Cr 267.716†	1350.5	0.0119	mg/L	0.00001	0.0119	mg/L	0.00001	0.07%
QC value within limits for Cr 267.716 Recovery = 118.54%								
Cu 324.752†	5968.0	0.0256	mg/L	0.00001	0.0256	mg/L	0.00001	0.05%
QC value within limits for Cu 324.752 Recovery = 102.56%								
Fe 273.955†	52.1	0.0949	mg/L	0.00856	0.0949	mg/L	0.00856	9.02%
QC value within limits for Fe 273.955 Recovery = 94.92%								
K 766.490†	6206.7	2.597	mg/L	0.0849	2.597	mg/L	0.0849	3.27%
QC value within limits for K 766.490 Recovery = 103.89%								
Mg 279.077†	45472.9	2.536	mg/L	0.0121	2.536	mg/L	0.0121	0.48%
QC value within limits for Mg 279.077 Recovery = 101.45%								
Mn 257.610†	11892.2	0.0149	mg/L	0.00001	0.0149	mg/L	0.00001	0.05%

QC value within limits for Mn 257.610 Recovery = 99.25%

Na 589.592†	20625.0	2.554 mg/L	0.0122	2.554 mg/L	0.0122	0.48%

QC value within limits for Na 589.592 Recovery = 102.17%

Ni 231.604†	1626.7	0.0428 mg/L	0.00025	0.0428 mg/L	0.00025	0.57%

QC value within limits for Ni 231.604 Recovery = 106.94%

Pb 220.353†	102.8	0.0143 mg/L	0.00122	0.0143 mg/L	0.00122	8.52%

QC value greater than the upper limit for Pb 220.353 Recovery = 142.82%

Sb 206.836†	196.2	0.0625 mg/L	0.00168	0.0625 mg/L	0.00168	2.69%

QC value within limits for Sb 206.836 Recovery = 104.12%

Se 196.026†	21.7	0.0089 mg/L	0.00883	0.0089 mg/L	0.00883	99.53%

QC value within limits for Se 196.026 Recovery = 88.73%

Tl 190.801†	33.2	0.0183 mg/L	0.00204	0.0183 mg/L	0.00204	11.14%

QC value within limits for Tl 190.801 Recovery = 73.29%

V 292.402†	3987.6	0.0249 mg/L	0.00051	0.0249 mg/L	0.00051	2.06%

QC value within limits for V 292.402 Recovery = 99.78%

Zn 213.857†	73.0	0.0612 mg/L	0.00102	0.0612 mg/L	0.00102	1.67%

QC value within limits for Zn 213.857 Recovery = 102.02%

Pb†	-6.7	-0.0769 mg/L	0.04771	-0.0769 mg/L	0.04771	62.05%
Ag 338.289†	1255.6	0.0134 mg/L	0.00064	0.0134 mg/L	0.00064	4.79%

QC Failed. Continue with analysis.

Sequence No.: 12 **Autosampler Location: 4**
Sample ID: LLQC Radial Pb **Date Collected: 10/23/2014 3:10:28 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 75 **Auto Dilution Factor: 1**

Nebulizer Parameters: LLQC Radial Pb

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: LLQC Radial Pb

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1533621.3	0.9967	mg/L	0.00789				0.79%
Ag 328.068†	-84.4	-0.0004	mg/L	0.00009	-0.0004	mg/L	0.00009	21.99%
Al 308.215†	2.0	0.0035	mg/L	0.02726	0.0035	mg/L	0.02726	768.66%
As 188.979†	-2.2	-0.0011	mg/L	0.00166	-0.0011	mg/L	0.00166	151.17%
Ba 233.527†	17.7	0.0001	mg/L	0.00018	0.0001	mg/L	0.00018	147.29%
Be 313.107†	-25.6	-0.0000	mg/L	0.00003	-0.0000	mg/L	0.00003	210.55%
Ca 317.933†	4.0	0.0009	mg/L	0.00383	0.0009	mg/L	0.00383	425.27%
Cd 226.502†	-7.9	-0.0001	mg/L	0.00007	-0.0001	mg/L	0.00007	53.85%
Co 228.616†	95.7	0.0024	mg/L	0.00039	0.0024	mg/L	0.00039	16.20%
Cr 267.716†	86.4	0.0008	mg/L	0.00012	0.0008	mg/L	0.00012	15.86%
Cu 324.752†	111.0	0.0005	mg/L	0.00003	0.0005	mg/L	0.00003	6.18%
Fe 273.955†	0.9	0.0016	mg/L	0.00539	0.0016	mg/L	0.00539	333.11%
K 766.490†	37.1	0.0155	mg/L	0.10065	0.0155	mg/L	0.10065	647.59%
Mg 279.077†	-55.2	-0.0031	mg/L	0.00393	-0.0031	mg/L	0.00393	127.37%
Mn 257.610†	231.6	0.0003	mg/L	0.00001	0.0003	mg/L	0.00001	3.79%
Na 589.592†	124.6	0.0154	mg/L	0.01274	0.0154	mg/L	0.01274	82.60%
Ni 231.604†	158.9	0.0042	mg/L	0.00006	0.0042	mg/L	0.00006	1.47%
Pb 220.353†	745.1	0.1028	mg/L	0.00122	0.1028	mg/L	0.00122	1.19%
Sb 206.836†	-4.8	-0.0016	mg/L	0.00013	-0.0016	mg/L	0.00013	8.28%
Se 196.026†	-7.8	-0.0032	mg/L	0.00075	-0.0032	mg/L	0.00075	23.76%
Tl 190.801†	-4.6	-0.0027	mg/L	0.00021	-0.0027	mg/L	0.00021	7.84%
V 292.402†	-28.2	-0.0002	mg/L	0.00014	-0.0002	mg/L	0.00014	84.07%
Zn 213.857†	5.1	0.0043	mg/L	0.00047	0.0043	mg/L	0.00047	10.77%
Pb†	2.0	0.0228	mg/L	0.02563	0.0228	mg/L	0.02563	112.44%

QC value less than the lower limit for Pb Recovery = 22.80%

Ag 338.289†	150.8	0.0016 mg/L	0.00140	0.0016 mg/L	0.00140	88.02%

QC Failed. Continue with analysis.

Sequence No.: 13 **Autosampler Location: 8**
Sample ID: ICSAB **Date Collected: 10/23/2014 3:14:42 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Wash Time: 75 Auto Dilution Factor: 1

Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1385554.6	0.9005	mg/L	0.00076				0.08%
Ag 328.068†	149694.7	0.7794	mg/L	0.00131	0.7794	mg/L	0.00131	0.17%
QC value within limits for Ag 328.068 Recovery = 103.91%								
Al 308.215†	151756.4	270.8	mg/L	1.65	270.8	mg/L	1.65	0.61%
QC value within limits for Al 308.215 Recovery = 108.32%								
As 188.979†	5177.5	2.545	mg/L	0.0006	2.545	mg/L	0.0006	0.02%
QC value within limits for As 188.979 Recovery = 101.81%								
Ba 233.527†	111706.3	0.7526	mg/L	0.00111	0.7526	mg/L	0.00111	0.15%
QC value within limits for Ba 233.527 Recovery = 100.35%								
Be 313.107†	446597.3	0.2442	mg/L	0.00003	0.2442	mg/L	0.00003	0.01%
QC value within limits for Be 313.107 Recovery = 97.70%								
Ca 317.933†	1163641.0	258.8	mg/L	2.19	258.8	mg/L	2.19	0.85%
QC value within limits for Ca 317.933 Recovery = 103.50%								
Cd 226.502†	47019.4	0.7288	mg/L	0.00288	0.7288	mg/L	0.00288	0.39%
QC value within limits for Cd 226.502 Recovery = 97.17%								
Co 228.616†	27682.0	0.6976	mg/L	0.00193	0.6976	mg/L	0.00193	0.28%
QC value within limits for Co 228.616 Recovery = 93.01%								
Cr 267.716†	81785.2	0.7196	mg/L	0.00072	0.7196	mg/L	0.00072	0.10%
QC value within limits for Cr 267.716 Recovery = 95.94%								
Cu 324.752†	176828.2	0.7713	mg/L	0.00362	0.7713	mg/L	0.00362	0.47%
QC value within limits for Cu 324.752 Recovery = 102.83%								
Fe 273.955†	50763.8	92.82	mg/L	0.433	92.82	mg/L	0.433	0.47%
QC value within limits for Fe 273.955 Recovery = 92.82%								
K 766.490†	126309.4	52.86	mg/L	0.314	52.86	mg/L	0.314	0.59%
QC value within limits for K 766.490 Recovery = 105.71%								
Mg 279.077†	4648100.2	259.0	mg/L	0.02	259.0	mg/L	0.02	0.01%
QC value within limits for Mg 279.077 Recovery = 103.59%								
Mn 257.610†	391314.4	0.4898	mg/L	0.00154	0.4898	mg/L	0.00154	0.31%
QC value within limits for Mn 257.610 Recovery = 97.97%								
Na 589.592†	1219.2	0.1510	mg/L	0.00623	0.1510	mg/L	0.00623	4.12%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	27641.6	0.7269	mg/L	0.00099	0.7269	mg/L	0.00099	0.14%
QC value within limits for Ni 231.604 Recovery = 96.92%								
Pb 220.353†	19000.5	2.533	mg/L	0.0018	2.533	mg/L	0.0018	0.07%
QC value within limits for Pb 220.353 Recovery = 101.32%								
Sb 206.836†	-280.1	-0.0118	mg/L	0.00657	-0.0118	mg/L	0.00657	55.56%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	3091.5	1.284	mg/L	0.0088	1.284	mg/L	0.0088	0.69%
QC value within limits for Se 196.026 Recovery = 102.68%								
Tl 190.801†	4189.7	2.373	mg/L	0.0090	2.373	mg/L	0.0090	0.38%
QC value within limits for Tl 190.801 Recovery = 94.91%								
V 292.402†	120803.8	0.7585	mg/L	0.00164	0.7585	mg/L	0.00164	0.22%
QC value within limits for V 292.402 Recovery = 101.14%								
Zn 213.857†	888.7	0.7198	mg/L	0.00377	0.7198	mg/L	0.00377	0.52%
QC value within limits for Zn 213.857 Recovery = 95.98%								
Pb†	209.3	2.288	mg/L	0.0350	2.288	mg/L	0.0350	1.53%
QC value within limits for Pb Recovery = 91.52%								
Ag 338.289†	74721.4	0.7926	mg/L	0.00160	0.7926	mg/L	0.00160	0.20%

All analyte(s) passed QC.

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Sequence No.: 14 Autosampler Location: 7
Sample ID: CCV Date Collected: 10/23/2014 3:19:04 PM
Analyst: Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time: 75 Auto Dilution Factor: 1

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow

All 132.0 kPa 0.55 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1438913.6	0.9352	mg/L	0.00684				0.73%
Ag 328.068†	245827.8	1.231	mg/L	0.0003	1.231	mg/L	0.0003	0.03%
QC value within limits for Ag 328.068 Recovery = 98.50%								
Al 308.215†	5515.4	9.852	mg/L	0.0112	9.852	mg/L	0.0112	0.11%
QC value within limits for Al 308.215 Recovery = 98.52%								
As 188.979†	1029.3	0.5065	mg/L	0.00799	0.5065	mg/L	0.00799	1.58%
QC value within limits for As 188.979 Recovery = 101.31%								
Ba 233.527†	1454475.6	9.799	mg/L	0.0027	9.799	mg/L	0.0027	0.03%
QC value within limits for Ba 233.527 Recovery = 97.99%								
Be 313.107†	455271.2	0.2490	mg/L	0.00020	0.2490	mg/L	0.00020	0.08%
QC value within limits for Be 313.107 Recovery = 99.61%								
Ca 317.933†	113259.4	25.18	mg/L	0.019	25.18	mg/L	0.019	0.08%
QC value within limits for Ca 317.933 Recovery = 100.74%								
Cd 226.502†	17209.0	0.2701	mg/L	0.00184	0.2701	mg/L	0.00184	0.68%
QC value within limits for Cd 226.502 Recovery = 108.03%								
Co 228.616†	93838.5	2.365	mg/L	0.0013	2.365	mg/L	0.0013	0.06%
QC value within limits for Co 228.616 Recovery = 94.59%								
Cr 267.716†	111375.2	0.9774	mg/L	0.00051	0.9774	mg/L	0.00051	0.05%
QC value within limits for Cr 267.716 Recovery = 97.74%								
Cu 324.752†	282167.3	1.212	mg/L	0.0008	1.212	mg/L	0.0008	0.06%
QC value within limits for Cu 324.752 Recovery = 96.99%								
Fe 273.955†	2698.6	4.897	mg/L	0.0089	4.897	mg/L	0.0089	0.18%
QC value within limits for Fe 273.955 Recovery = 97.94%								
K 766.490†	60153.9	25.17	mg/L	0.071	25.17	mg/L	0.071	0.28%
QC value within limits for K 766.490 Recovery = 100.69%								
Mg 279.077†	459346.6	25.61	mg/L	0.043	25.61	mg/L	0.043	0.17%
QC value within limits for Mg 279.077 Recovery = 102.43%								
Mn 257.610†	1970352.8	2.466	mg/L	0.0008	2.466	mg/L	0.0008	0.03%
QC value within limits for Mn 257.610 Recovery = 98.65%								
Na 589.592†	202973.9	25.14	mg/L	0.058	25.14	mg/L	0.058	0.23%
QC value within limits for Na 589.592 Recovery = 100.54%								
Ni 231.604†	94072.4	2.474	mg/L	0.0033	2.474	mg/L	0.0033	0.13%
QC value within limits for Ni 231.604 Recovery = 98.95%								
Pb 220.353†	3684.1	0.5114	mg/L	0.00410	0.5114	mg/L	0.00410	0.80%
QC value within limits for Pb 220.353 Recovery = 102.28%								
Sb 206.836†	16016.6	5.097	mg/L	0.0355	5.097	mg/L	0.0355	0.70%
QC value within limits for Sb 206.836 Recovery = 101.94%								
Se 196.026†	1263.2	0.5124	mg/L	0.00946	0.5124	mg/L	0.00946	1.85%
QC value within limits for Se 196.026 Recovery = 102.47%								
Tl 190.801†	915.6	0.4886	mg/L	0.00243	0.4886	mg/L	0.00243	0.50%
QC value within limits for Tl 190.801 Recovery = 97.72%								
V 292.402†	403777.0	2.524	mg/L	0.0021	2.524	mg/L	0.0021	0.08%
QC value within limits for V 292.402 Recovery = 100.96%								
Zn 213.857†	3084.1	2.591	mg/L	0.0126	2.591	mg/L	0.0126	0.49%
QC value within limits for Zn 213.857 Recovery = 103.64%								
Pb†	39.7	0.4576	mg/L	0.00558	0.4576	mg/L	0.00558	1.22%
QC value within limits for Pb Recovery = 91.53%								
Ag 338.289†	118519.8	1.260	mg/L	0.0012	1.260	mg/L	0.0012	0.09%

All analyte(s) passed QC.

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Sequence No.: 15 **Autosampler Location: 1**
Sample ID: CCB **Date Collected: 10/23/2014 3:23:18 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 75 **Auto Dilution Factor: 1**

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: CCB

	Mean Corrected	Calib.			Sample			

Analyte	Intensity	Conc.	Units	Std.Dev.	Conc.	Units	Std.Dev.	RSD
Y 371.029	1539768.9	1.001	mg/L	0.0016				0.16%
Ag 328.068†	-129.6	-0.0006	mg/L	0.00041	-0.0006	mg/L	0.00041	63.99%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 308.215†	-2.0	-0.0035	mg/L	0.00160	-0.0035	mg/L	0.00160	45.37%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	2.1	0.0010	mg/L	0.00167	0.0010	mg/L	0.00167	163.98%
QC value within limits for As 188.979 Recovery = Not calculated								
Ba 233.527†	198.4	0.0013	mg/L	0.00020	0.0013	mg/L	0.00020	14.98%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-16.4	-0.0000	mg/L	0.00002	-0.0000	mg/L	0.00002	224.13%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933†	9.8	0.0022	mg/L	0.00034	0.0022	mg/L	0.00034	15.46%
QC value within limits for Ca 317.933 Recovery = Not calculated								
Cd 226.502†	6.4	0.0001	mg/L	0.00020	0.0001	mg/L	0.00020	195.52%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	6.0	0.0002	mg/L	0.00015	0.0002	mg/L	0.00015	99.07%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	35.7	0.0003	mg/L	0.00014	0.0003	mg/L	0.00014	44.02%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 324.752†	-26.5	-0.0001	mg/L	0.00027	-0.0001	mg/L	0.00027	241.16%
QC value within limits for Cu 324.752 Recovery = Not calculated								
Fe 273.955†	0.2	0.0003	mg/L	0.01149	0.0003	mg/L	0.01149	>999.9%
QC value within limits for Fe 273.955 Recovery = Not calculated								
K 766.490†	184.1	0.0770	mg/L	0.05216	0.0770	mg/L	0.05216	67.72%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 279.077†	-41.1	-0.0023	mg/L	0.00020	-0.0023	mg/L	0.00020	8.56%
QC value within limits for Mg 279.077 Recovery = Not calculated								
Mn 257.610†	311.4	0.0004	mg/L	0.00001	0.0004	mg/L	0.00001	3.32%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Na 589.592†	341.4	0.0423	mg/L	0.00680	0.0423	mg/L	0.00680	16.07%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	-14.2	-0.0004	mg/L	0.00012	-0.0004	mg/L	0.00012	32.06%
QC value within limits for Ni 231.604 Recovery = Not calculated								
Pb 220.353†	26.1	0.0036	mg/L	0.00330	0.0036	mg/L	0.00330	91.43%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	8.7	0.0028	mg/L	0.00686	0.0028	mg/L	0.00686	248.51%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	13.5	0.0055	mg/L	0.00750	0.0055	mg/L	0.00750	136.38%
QC value within limits for Se 196.026 Recovery = Not calculated								
Tl 190.801†	-4.8	-0.0027	mg/L	0.00250	-0.0027	mg/L	0.00250	91.30%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 292.402†	28.8	0.0002	mg/L	0.00005	0.0002	mg/L	0.00005	25.02%
QC value within limits for V 292.402 Recovery = Not calculated								
Zn 213.857†	4.6	0.0039	mg/L	0.00075	0.0039	mg/L	0.00075	19.45%
QC value within limits for Zn 213.857 Recovery = Not calculated								
Pb†	-4.0	-0.0457	mg/L	0.00020	-0.0457	mg/L	0.00020	0.44%
QC value within limits for Pb Recovery = Not calculated								
Ag 338.289†	285.2	0.0030	mg/L	0.00095	0.0030	mg/L	0.00095	31.85%

All analyte(s) passed QC.

Sequence No.: 16
Sample ID: Blk 10/23 soil
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 38
Date Collected: 10/23/2014 3:27:31 PM
Data Type: Original
Initial Sample Vol: 50 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: Blk 10/23 soil

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: Blk 10/23 soil

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1610647.3	1.047	mg/L	0.0005				0.05%
Ag 328.068†	-227.6	-0.0011	mg/L	0.00030	-0.0011	mg/L	0.00030	26.76%
Al 308.215†	78.4	0.1399	mg/L	0.01717	0.1399	mg/L	0.01717	12.28%
As 188.979†	7.1	0.0035	mg/L	0.00113	0.0035	mg/L	0.00113	32.31%

Ba 233.527†	110.4	0.0007 mg/L	0.00013	0.0007 mg/L	0.00013	17.01%
Be 313.107†	12.6	0.0000 mg/L	0.00002	0.0000 mg/L	0.00002	338.93%
Ca 317.933†	468.2	0.1041 mg/L	0.00030	0.1041 mg/L	0.00030	0.29%
Cd 226.502†	-0.7	-0.0000 mg/L	0.00001	-0.0000 mg/L	0.00001	60.69%
Co 228.616†	15.6	0.0004 mg/L	0.00035	0.0004 mg/L	0.00035	89.58%
Cr 267.716†	204.3	0.0018 mg/L	0.00011	0.0018 mg/L	0.00011	6.07%
Cu 324.752†	66.8	0.0003 mg/L	0.00013	0.0003 mg/L	0.00013	44.08%
Fe 273.955†	51.0	0.0933 mg/L	0.00166	0.0933 mg/L	0.00166	1.78%
K 766.490†	39.7	0.0166 mg/L	0.00500	0.0166 mg/L	0.00500	30.12%
Mg 279.077†	328.1	0.0180 mg/L	0.00026	0.0180 mg/L	0.00026	1.46%
Mn 257.610†	1466.0	0.0018 mg/L	0.00006	0.0018 mg/L	0.00006	3.16%
Na 589.592†	227.7	0.0282 mg/L	0.01410	0.0282 mg/L	0.01410	49.99%
Ni 231.604†	17.8	0.0005 mg/L	0.00013	0.0005 mg/L	0.00013	27.91%
Pb 220.353†	23.5	0.0032 mg/L	0.00077	0.0032 mg/L	0.00077	23.97%
Sb 206.836†	-4.9	-0.0015 mg/L	0.00312	-0.0015 mg/L	0.00312	203.77%
Se 196.026†	-1.8	-0.0007 mg/L	0.00110	-0.0007 mg/L	0.00110	155.09%
Tl 190.801†	-4.7	-0.0027 mg/L	0.00065	-0.0027 mg/L	0.00065	24.23%
V 292.402†	39.4	0.0003 mg/L	0.00091	0.0003 mg/L	0.00091	351.17%
Zn 213.857†	10.0	0.0084 mg/L	0.00136	0.0084 mg/L	0.00136	16.19%
Pb†	-9.2	-0.1058 mg/L	0.02734	-0.1058 mg/L	0.02734	25.84%
Ag 338.289†	114.4	0.0012 mg/L	0.00050	0.0012 mg/L	0.00050	40.58%

Sc

Sequence No.: 17
Sample ID: lcs
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 39
Date Collected: 10/23/2014 3:31:46 PM
Data Type: Original
Initial Sample Vol: 50 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: lcs

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: lcs

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1508886.1	0.9807	mg/L	0.00193				0.20%
Ag 328.068†	48610.6	0.2441	mg/L	0.00143	0.2441	mg/L	0.00143	0.59%
Al 308.215†	1445.4	2.585	mg/L	0.0133	2.585	mg/L	0.0133	0.51%
As 188.979†	5046.1	2.485	mg/L	0.0096	2.485	mg/L	0.0096	0.39%
Ba 233.527†	360229.9	2.427	mg/L	0.0013	2.427	mg/L	0.0013	0.05%
Be 313.107†	899944.2	0.4923	mg/L	0.00052	0.4923	mg/L	0.00052	0.10%
Ca 317.933†	17692.8	3.934	mg/L	0.0427	3.934	mg/L	0.0427	1.08%
Cd 226.502†	64476.6	1.015	mg/L	0.0013	1.015	mg/L	0.0013	0.13%
Co 228.616†	39153.9	0.9867	mg/L	0.00227	0.9867	mg/L	0.00227	0.23%
Cr 267.716†	268512.7	2.358	mg/L	0.0002	2.358	mg/L	0.0002	0.01%
Cu 324.752†	565477.4	2.429	mg/L	0.0001	2.429	mg/L	0.0001	0.01%
Fe 273.955†	1329.0	2.420	mg/L	0.0021	2.420	mg/L	0.0021	0.09%
K 766.490†	99341.8	41.57	mg/L	0.250	41.57	mg/L	0.250	0.60%
Mg 279.077†	144546.3	8.055	mg/L	0.0100	8.055	mg/L	0.0100	0.12%
Mn 257.610†	775307.3	0.9704	mg/L	0.00033	0.9704	mg/L	0.00033	0.03%
Na 589.592†	93186.8	11.54	mg/L	0.068	11.54	mg/L	0.068	0.59%
Ni 231.604†	193537.5	5.089	mg/L	0.0006	5.089	mg/L	0.0006	0.01%
Pb 220.353†	18557.0	2.563	mg/L	0.0106	2.563	mg/L	0.0106	0.41%
Sb 206.836†	7602.4	2.377	mg/L	0.0035	2.377	mg/L	0.0035	0.15%
Se 196.026†	6037.5	2.454	mg/L	0.0054	2.454	mg/L	0.0054	0.22%
Tl 190.801†	4184.6	2.371	mg/L	0.0023	2.371	mg/L	0.0023	0.10%
V 292.402†	148288.6	0.9427	mg/L	0.00029	0.9427	mg/L	0.00029	0.03%
Zn 213.857†	2991.4	2.502	mg/L	0.0246	2.502	mg/L	0.0246	0.98%
Pb†	204.3	2.359	mg/L	0.0283	2.359	mg/L	0.0283	1.20%
Ag 338.289†	19590.9	0.2631	mg/L	0.00183	0.2631	mg/L	0.00183	0.70%

Sequence No.: 18
Sample ID: lcs dup
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 40
Date Collected: 10/23/2014 3:36:02 PM
Data Type: Original
Initial Sample Vol: 50 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: lcs dup

Analyte	Back Pressure	Flow
All	131.0 kPa	0.55 L/min

Mean Data: lcs dup

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1530012.9	0.9944	mg/L	0.00652				0.66%
Ag 328.068†	48290.5	0.2425	mg/L	0.00061	0.2425	mg/L	0.00061	0.25%
Al 308.215†	1401.7	2.506	mg/L	0.0680	2.506	mg/L	0.0680	2.71%
As 188.979†	5007.8	2.466	mg/L	0.0261	2.466	mg/L	0.0261	1.06%
Ba 233.527†	358146.8	2.413	mg/L	0.0011	2.413	mg/L	0.0011	0.05%
Be 313.107†	892317.0	0.4882	mg/L	0.00090	0.4882	mg/L	0.00090	0.19%
Ca 317.933†	17882.3	3.976	mg/L	0.0101	3.976	mg/L	0.0101	0.25%
Cd 226.502†	63964.6	1.007	mg/L	0.0003	1.007	mg/L	0.0003	0.03%
Co 228.616†	38794.1	0.9776	mg/L	0.00148	0.9776	mg/L	0.00148	0.15%
Cr 267.716†	267059.9	2.345	mg/L	0.0007	2.345	mg/L	0.0007	0.03%
Cu 324.752†	565499.1	2.429	mg/L	0.0015	2.429	mg/L	0.0015	0.06%
Fe 273.955†	1313.7	2.392	mg/L	0.0282	2.392	mg/L	0.0282	1.18%
K 766.490†	99452.6	41.62	mg/L	0.108	41.62	mg/L	0.108	0.26%
Mg 279.077†	143621.6	8.003	mg/L	0.0268	8.003	mg/L	0.0268	0.34%
Mn 257.610†	772939.5	0.9674	mg/L	0.00003	0.9674	mg/L	0.00003	0.00%
Na 589.592†	93290.3	11.55	mg/L	0.020	11.55	mg/L	0.020	0.17%
Ni 231.604†	193542.2	5.090	mg/L	0.0030	5.090	mg/L	0.0030	0.06%
Pb 220.353†	18449.9	2.548	mg/L	0.0241	2.548	mg/L	0.0241	0.95%
Sb 206.836†	7617.7	2.382	mg/L	0.0313	2.382	mg/L	0.0313	1.31%
Se 196.026†	5985.0	2.432	mg/L	0.0212	2.432	mg/L	0.0212	0.87%
Tl 190.801†	4184.7	2.372	mg/L	0.0276	2.372	mg/L	0.0276	1.16%
V 292.402†	148546.3	0.9442	mg/L	0.00019	0.9442	mg/L	0.00019	0.02%
Zn 213.857†	3046.4	2.548	mg/L	0.0214	2.548	mg/L	0.0214	0.84%
Pb†	204.9	2.367	mg/L	0.0233	2.367	mg/L	0.0233	0.99%
Ag 338.289†	19368.1	0.2604	mg/L	0.00021	0.2604	mg/L	0.00021	0.08%

Sequence No.: 19
Sample ID: 144638-01
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 41
Date Collected: 10/23/2014 3:40:16 PM
Data Type: Original
Initial Sample Vol: 0.52 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-01

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1667157.5	1.084	mg/L	0.0016				0.15%
Ag 328.068†	-11554.6	-0.0040	mg/L	0.00065	-0.3861	mg/L	0.06216	16.10%
Al 308.215†	54133.9	96.60	mg/L	1.678	9288	mg/L	161.31	1.74%
As 188.979†	121.7	0.0668	mg/L	0.00502	6.420	mg/L	0.4831	7.52%
Ba 233.527†	130085.2	0.8764	mg/L	0.00210	84.27	mg/L	0.202	0.24%
Be 313.107†	11971.4	0.0066	mg/L	0.00002	0.6319	mg/L	0.00230	0.36%
Ca 317.933†	500365.3	111.3	mg/L	0.15	10700	mg/L	14.23	0.13%
Cd 226.502†	1365.1	0.0063	mg/L	0.00001	0.6050	mg/L	0.00097	0.16%
Co 228.616†	2545.5	0.0641	mg/L	0.00002	6.168	mg/L	0.0020	0.03%
Cr 267.716†	17999.4	0.1606	mg/L	0.00088	15.44	mg/L	0.085	0.55%
Cu 324.752†	60838.6	0.2819	mg/L	0.00062	27.11	mg/L	0.060	0.22%
Fe 273.955†	87997.9	160.9	mg/L	0.37	15470	mg/L	35.67	0.23%
K 766.490†	26409.3	11.05	mg/L	0.029	1063	mg/L	2.83	0.27%
Mg 279.077†	956693.1	52.81	mg/L	0.095	5078	mg/L	9.13	0.18%
Mn 257.610†	2724661.4	3.410	mg/L	0.0063	327.8	mg/L	0.60	0.18%
Na 589.592†	5943.2	0.7360	mg/L	0.01326	70.77	mg/L	1.275	1.80%
Ni 231.604†	8177.9	0.2151	mg/L	0.00116	20.68	mg/L	0.112	0.54%
Pb 220.353†	5317.7	0.7111	mg/L	0.00643	68.37	mg/L	0.619	0.90%
Sb 206.836†	-211.0	0.0168	mg/L	0.00230	1.618	mg/L	0.2211	13.67%

Se 196.026†	13.5	0.0192	mg/L	0.00473	1.849	mg/L	0.4547 24.59%
Tl 190.801†	-34.0	-0.0064	mg/L	0.00185	-0.6115	mg/L	0.17807 29.12%
V 292.402†	28097.1	0.1764	mg/L	0.00007	16.96	mg/L	0.007 0.04%
Zn 213.857†	1791.8	1.501	mg/L	0.0070	144.3	mg/L	0.67 0.47%
Pb†	57.4	0.6219	mg/L	0.01955	59.80	mg/L	1.879 3.14%
Ag 338.289†	-113.1	0.0016	mg/L	0.00165	0.1495	mg/L	0.15895 106.31%

Sequence No.: 20
Sample ID: 144638-02
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 42
Date Collected: 10/23/2014 3:44:35 PM
Data Type: Original
Initial Sample Vol: 0.487 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-02

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-02

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1639859.8	1.066	mg/L	0.0086				0.80%
Ag 328.068†	-10762.5	-0.0025	mg/L	0.00107	-0.2572	mg/L	0.10978	42.68%
Al 308.215†	53227.6	94.98	mg/L	1.342	9751	mg/L	137.77	1.41%
As 188.979†	108.0	0.0596	mg/L	0.00078	6.117	mg/L	0.0805	1.32%
Ba 233.527†	135099.7	0.9102	mg/L	0.00025	93.45	mg/L	0.026	0.03%
Be 313.107†	12567.9	0.0069	mg/L	0.00003	0.7079	mg/L	0.00309	0.44%
Ca 317.933†	717410.7	159.5	mg/L	3.59	16380	mg/L	368.10	2.25%
Cd 226.502†	1301.1	0.0056	mg/L	0.00047	0.5717	mg/L	0.04828	8.44%
Co 228.616†	2374.0	0.0598	mg/L	0.00028	6.142	mg/L	0.0292	0.48%
Cr 267.716†	16471.7	0.1471	mg/L	0.00116	15.10	mg/L	0.119	0.79%
Cu 324.752†	60281.4	0.2786	mg/L	0.00137	28.60	mg/L	0.141	0.49%
Fe 273.955†	83988.8	153.6	mg/L	3.23	15770	mg/L	331.66	2.10%
K 766.490†	27262.5	11.41	mg/L	0.346	1171	mg/L	35.53	3.03%
Mg 279.077†	949334.9	52.43	mg/L	0.124	5383	mg/L	12.76	0.24%
Mn 257.610†	3228819.0	4.041	mg/L	0.0074	414.8	mg/L	0.76	0.18%
Na 589.592†	6550.6	0.8112	mg/L	0.02052	83.29	mg/L	2.107	2.53%
Ni 231.604†	7385.2	0.1942	mg/L	0.00081	19.94	mg/L	0.083	0.42%
Pb 220.353†	5496.8	0.7373	mg/L	0.00573	75.70	mg/L	0.588	0.78%
Sb 206.836†	-220.9	0.0105	mg/L	0.00790	1.080	mg/L	0.8112	75.10%
Se 196.026†	-17.2	0.0062	mg/L	0.00138	0.6387	mg/L	0.14125	22.11%
Tl 190.801†	-32.7	-0.0047	mg/L	0.00870	-0.4818	mg/L	0.89316	185.38%
V 292.402†	26427.4	0.1658	mg/L	0.00049	17.03	mg/L	0.050	0.29%
Zn 213.857†	1673.5	1.396	mg/L	0.0180	143.3	mg/L	1.85	1.29%
Pb†	56.4	0.6237	mg/L	0.05193	64.03	mg/L	5.332	8.33%
Ag 338.289†	-134.6	0.0004	mg/L	0.00124	0.0381	mg/L	0.12712	333.63%

Sequence No.: 21
Sample ID: 144638-03
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 43
Date Collected: 10/23/2014 3:48:53 PM
Data Type: Original
Initial Sample Vol: 0.51 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-03

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-03

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1688166.9	1.097	mg/L	0.0077				0.70%
Ag 328.068†	-12863.5	-0.0025	mg/L	0.00184	-0.2419	mg/L	0.18020	74.49%
Al 308.215†	70888.1	126.5	mg/L	2.29	12400	mg/L	224.05	1.81%
As 188.979†	88.4	0.0507	mg/L	0.00601	4.973	mg/L	0.5892	11.85%
Ba 233.527†	130397.0	0.8785	mg/L	0.00045	86.13	mg/L	0.044	0.05%

Be 313.107†	12046.0	0.0066	mg/L	0.00004	0.6487	mg/L	0.00368	0.57%
Ca 317.933†	143592.8	31.93	mg/L	0.581	3130	mg/L	56.95	1.82%
Cd 226.502†	1444.0	0.0058	mg/L	0.00022	0.5733	mg/L	0.02142	3.74%
Co 228.616†	3139.7	0.0791	mg/L	0.00104	7.757	mg/L	0.1018	1.31%
Cr 267.716†	21078.2	0.1880	mg/L	0.00198	18.43	mg/L	0.194	1.05%
Cu 324.752†	45612.4	0.2196	mg/L	0.00064	21.53	mg/L	0.062	0.29%
Fe 273.955†	101237.6	185.1	mg/L	3.34	18150	mg/L	327.30	1.80%
K 766.490†	32679.0	13.67	mg/L	0.282	1341	mg/L	27.64	2.06%
Mg 279.077†	679393.9	37.26	mg/L	0.000	3653	mg/L	0.01	0.00%
Mn 257.610†	1886232.9	2.360	mg/L	0.0001	231.4	mg/L	0.01	0.00%
Na 589.592†	5001.9	0.6194	mg/L	0.03881	60.73	mg/L	3.805	6.27%
Ni 231.604†	10017.3	0.2634	mg/L	0.00307	25.83	mg/L	0.301	1.16%
Pb 220.353†	2268.1	0.2785	mg/L	0.00260	27.30	mg/L	0.255	0.94%
Sb 206.836†	-301.9	0.0035	mg/L	0.00152	0.3408	mg/L	0.14902	43.73%
Se 196.026†	30.6	0.0296	mg/L	0.00832	2.902	mg/L	0.8153	28.09%
Tl 190.801†	5.4	0.0141	mg/L	0.00189	1.384	mg/L	0.1848	13.36%
V 292.402†	34047.0	0.2136	mg/L	0.00029	20.95	mg/L	0.028	0.13%
Zn 213.857†	1323.0	1.113	mg/L	0.0103	109.1	mg/L	1.01	0.93%
Pb†	25.4	0.2094	mg/L	0.01096	20.52	mg/L	1.075	5.24%
Ag 338.289†	-400.1	0.0003	mg/L	0.00113	0.0294	mg/L	0.11101	377.74%

Sequence No.: 22
Sample ID: 144638-04
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 44
Date Collected: 10/23/2014 3:53:08 PM
Data Type: Original
Initial Sample Vol: 0.495 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-04

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-04

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1663855.2	1.081	mg/L	0.0025				0.23%
Ag 328.068†	-9064.4	-0.0024	mg/L	0.00037	-0.2437	mg/L	0.03781	15.52%
Al 308.215†	37294.8	66.55	mg/L	0.731	6722	mg/L	73.88	1.10%
As 188.979†	74.6	0.0426	mg/L	0.00309	4.306	mg/L	0.3120	7.25%
Ba 233.527†	95409.8	0.6428	mg/L	0.00148	64.93	mg/L	0.149	0.23%
Be 313.107†	8709.2	0.0048	mg/L	0.00002	0.4827	mg/L	0.00158	0.33%
Ca 317.933†	621280.6	138.2	mg/L	0.45	13950	mg/L	44.99	0.32%
Cd 226.502†	1005.2	0.0034	mg/L	0.00008	0.3438	mg/L	0.00841	2.45%
Co 228.616†	1975.9	0.0498	mg/L	0.00011	5.030	mg/L	0.0107	0.21%
Cr 267.716†	12011.8	0.1075	mg/L	0.00012	10.86	mg/L	0.012	0.11%
Cu 324.752†	46469.5	0.2160	mg/L	0.00028	21.82	mg/L	0.028	0.13%
Fe 273.955†	70243.5	128.4	mg/L	1.27	12970	mg/L	128.10	0.99%
K 766.490†	22199.2	9.290	mg/L	0.0433	938.3	mg/L	4.37	0.47%
Mg 279.077†	1120255.5	62.05	mg/L	0.042	6268	mg/L	4.25	0.07%
Mn 257.610†	2355706.7	2.948	mg/L	0.0012	297.8	mg/L	0.13	0.04%
Na 589.592†	5064.0	0.6271	mg/L	0.01989	63.34	mg/L	2.009	3.17%
Ni 231.604†	5775.2	0.1519	mg/L	0.00016	15.34	mg/L	0.016	0.10%
Pb 220.353†	3757.8	0.5059	mg/L	0.00179	51.10	mg/L	0.181	0.35%
Sb 206.836†	-179.9	0.0081	mg/L	0.00118	0.8206	mg/L	0.11924	14.53%
Se 196.026†	-32.9	-0.0028	mg/L	0.00499	-0.2831	mg/L	0.50406	178.02%
Tl 190.801†	-30.6	-0.0061	mg/L	0.00066	-0.6112	mg/L	0.06681	10.93%
V 292.402†	21721.2	0.1362	mg/L	0.00071	13.76	mg/L	0.072	0.52%
Zn 213.857†	1277.9	1.064	mg/L	0.0089	107.5	mg/L	0.90	0.84%
Pb†	36.1	0.4048	mg/L	0.01114	40.89	mg/L	1.125	2.75%
Ag 338.289†	-59.7	0.0004	mg/L	0.00101	0.0420	mg/L	0.10153	241.73%

Sequence No.: 23
Sample ID: 144638-05
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 45
Date Collected: 10/23/2014 3:57:26 PM
Data Type: Original
Initial Sample Vol: 0.48 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-05

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-05

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1585183.5	1.030	mg/L	0.0128				1.24%
Ag 328.068†	-6240.9	-0.0002	mg/L	0.00038	-0.0243	mg/L	0.03984	163.92%
Al 308.215†	44031.1	78.57	mg/L	0.143	8184	mg/L	14.86	0.18%
As 188.979†	105.7	0.0550	mg/L	0.00112	5.731	mg/L	0.1164	2.03%
Ba 233.527†	110064.2	0.7416	mg/L	0.00011	77.25	mg/L	0.012	0.02%
Be 313.107†	16617.6	0.0091	mg/L	0.00002	0.9479	mg/L	0.00157	0.17%
Ca 317.933†	2247915.6	499.9	mg/L	4.92	52070	mg/L	512.61	0.98%
Cd 226.502†	871.7	0.0016	mg/L	0.00026	0.1683	mg/L	0.02760	16.40%
Co 228.616†	1378.0	0.0347	mg/L	0.00034	3.617	mg/L	0.0354	0.98%
Cr 267.716†	10616.0	0.0947	mg/L	0.00246	9.863	mg/L	0.2567	2.60%
Cu 324.752†	46513.0	0.2116	mg/L	0.00166	22.05	mg/L	0.173	0.79%
Fe 273.955†	50680.5	92.68	mg/L	0.226	9654	mg/L	23.55	0.24%
K 766.490†	20682.3	8.655	mg/L	0.0060	901.5	mg/L	0.62	0.07%
Mg 279.077†	2539370.8	141.3	mg/L	0.45	14720	mg/L	47.21	0.32%
Mn 257.610†	4804603.0	6.012	mg/L	0.0165	626.3	mg/L	1.71	0.27%
Na 589.592†	14965.4	1.853	mg/L	0.0099	193.0	mg/L	1.04	0.54%
Ni 231.604†	3852.1	0.1013	mg/L	0.00175	10.55	mg/L	0.182	1.73%
Pb 220.353†	5062.0	0.6894	mg/L	0.01805	71.81	mg/L	1.880	2.62%
Sb 206.836†	-149.0	0.0054	mg/L	0.00143	0.5665	mg/L	0.14907	26.31%
Se 196.026†	-48.0	-0.0084	mg/L	0.00323	-0.8747	mg/L	0.33681	38.51%
Tl 190.801†	-49.1	-0.0135	mg/L	0.00705	-1.409	mg/L	0.7347	52.16%
V 292.402†	20293.1	0.1272	mg/L	0.00195	13.25	mg/L	0.203	1.53%
Zn 213.857†	1384.3	1.116	mg/L	0.0148	116.3	mg/L	1.54	1.32%
Pb†	48.5	0.6328	mg/L	0.17404	65.91	mg/L	18.130	27.50%
Ag 338.289†	-83.7	-0.0048	mg/L	0.00088	-0.4951	mg/L	0.09121	18.42%

Sequence No.: 24
Sample ID: 144638-06
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 46
Date Collected: 10/23/2014 4:01:48 PM
Data Type: Original
Initial Sample Vol: 0.48 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-06

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-06

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1701443.3	1.106	mg/L	0.0114				1.03%
Ag 328.068†	-11421.0	-0.0040	mg/L	0.00127	-0.4142	mg/L	0.13182	31.82%
Al 308.215†	72581.1	129.5	mg/L	1.84	13490	mg/L	191.44	1.42%
As 188.979†	25.6	0.0179	mg/L	0.00168	1.865	mg/L	0.1753	9.40%
Ba 233.527†	141309.5	0.9521	mg/L	0.00521	99.17	mg/L	0.542	0.55%
Be 313.107†	12130.4	0.0067	mg/L	0.00004	0.6940	mg/L	0.00366	0.53%
Ca 317.933†	136906.7	30.44	mg/L	0.527	3171	mg/L	54.86	1.73%
Cd 226.502†	1255.4	0.0051	mg/L	0.00017	0.5306	mg/L	0.01749	3.30%
Co 228.616†	3336.4	0.0841	mg/L	0.00079	8.758	mg/L	0.0819	0.93%
Cr 267.716†	20456.0	0.1822	mg/L	0.00171	18.97	mg/L	0.178	0.94%
Cu 324.752†	42652.5	0.2036	mg/L	0.00037	21.20	mg/L	0.038	0.18%
Fe 273.955†	86940.7	159.0	mg/L	2.63	16560	mg/L	273.94	1.65%
K 766.490†	32197.1	13.47	mg/L	0.025	1403	mg/L	2.64	0.19%
Mg 279.077†	664109.7	36.50	mg/L	0.150	3802	mg/L	15.58	0.41%
Mn 257.610†	2097350.9	2.625	mg/L	0.0053	273.4	mg/L	0.55	0.20%
Na 589.592†	4591.4	0.5686	mg/L	0.00260	59.23	mg/L	0.271	0.46%
Ni 231.604†	9912.3	0.2607	mg/L	0.00321	27.15	mg/L	0.334	1.23%
Pb 220.353†	1509.9	0.1709	mg/L	0.00247	17.80	mg/L	0.257	1.44%
Sb 206.836†	-288.1	-0.0025	mg/L	0.00247	-0.2609	mg/L	0.25708	98.54%
Se 196.026†	15.6	0.0221	mg/L	0.01112	2.301	mg/L	1.1579	50.32%

Tl 190.801†	-2.7	0.0079	mg/L	0.00256	0.8206	mg/L	0.26640	32.47%
V 292.402†	33532.8	0.2104	mg/L	0.00025	21.92	mg/L	0.026	0.12%
Zn 213.857†	1005.4	0.8450	mg/L	0.00015	88.02	mg/L	0.016	0.02%
Pb†	14.6	0.0818	mg/L	0.00692	8.521	mg/L	0.7204	8.45%
Ag 338.289†	-240.2	0.0018	mg/L	0.00151	0.1920	mg/L	0.15704	81.80%

Sequence No.: 25 **Autosampler Location: 47**
Sample ID: 144638-07 **Date Collected: 10/23/2014 4:06:05 PM**
Analyst: AMM **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol: 0.508 mL**
Dilution: **Sample Prep Vol: 50 mL**
Wash Time: 75 **Auto Dilution Factor: 1**

Nebulizer Parameters: 144638-07

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-07

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1678912.7	1.091	mg/L	0.0053				0.49%
Ag 328.068†	-11337.0	-0.0023	mg/L	0.00120	-0.2252	mg/L	0.11828	52.53%
Al 308.215†	49223.7	87.83	mg/L	0.283	8645	mg/L	27.83	0.32%
As 188.979†	101.0	0.0571	mg/L	0.00309	5.616	mg/L	0.3042	5.42%
Ba 233.527†	99773.5	0.6722	mg/L	0.00032	66.16	mg/L	0.031	0.05%
Be 313.107†	8383.7	0.0046	mg/L	0.00005	0.4535	mg/L	0.00459	1.01%
Ca 317.933†	116914.3	26.00	mg/L	0.123	2559	mg/L	12.15	0.47%
Cd 226.502†	1209.4	0.0044	mg/L	0.00020	0.4293	mg/L	0.01937	4.51%
Co 228.616†	2656.5	0.0669	mg/L	0.00020	6.589	mg/L	0.0197	0.30%
Cr 267.716†	15970.2	0.1428	mg/L	0.00039	14.06	mg/L	0.039	0.28%
Cu 324.752†	47997.2	0.2270	mg/L	0.00001	22.34	mg/L	0.001	0.00%
Fe 273.955†	89061.9	162.9	mg/L	0.96	16030	mg/L	94.09	0.59%
K 766.490†	26736.7	11.19	mg/L	0.051	1101	mg/L	5.00	0.45%
Mg 279.077†	518026.9	28.34	mg/L	0.042	2789	mg/L	4.17	0.15%
Mn 257.610†	1989168.6	2.489	mg/L	0.0031	245.0	mg/L	0.31	0.13%
Na 589.592†	3511.9	0.4349	mg/L	0.01217	42.81	mg/L	1.197	2.80%
Ni 231.604†	7919.4	0.2083	mg/L	0.00060	20.50	mg/L	0.059	0.29%
Pb 220.353†	3004.8	0.3931	mg/L	0.00899	38.69	mg/L	0.885	2.29%
Sb 206.836†	-232.5	0.0094	mg/L	0.00006	0.9295	mg/L	0.00639	0.69%
Se 196.026†	38.6	0.0287	mg/L	0.00323	2.824	mg/L	0.3174	11.24%
Tl 190.801†	-13.6	0.0041	mg/L	0.00185	0.4028	mg/L	0.18257	45.32%
V 292.402†	24966.7	0.1567	mg/L	0.00066	15.42	mg/L	0.065	0.42%
Zn 213.857†	1228.9	1.035	mg/L	0.0119	101.8	mg/L	1.17	1.15%
Pb†	31.7	0.3087	mg/L	0.01413	30.39	mg/L	1.390	4.58%
Ag 338.289†	-254.8	0.0007	mg/L	0.00007	0.0688	mg/L	0.00682	9.91%

Sequence No.: 26 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 10/23/2014 4:10:20 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 75 **Auto Dilution Factor: 1**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1463140.7	0.9509	mg/L	0.00522				0.55%
Ag 328.068†	244840.4	1.226	mg/L	0.0002	1.226	mg/L	0.0002	0.02%
QC value within limits for Ag 328.068 Recovery = 98.11%								
Al 308.215†	5535.4	9.887	mg/L	0.0156	9.887	mg/L	0.0156	0.16%
QC value within limits for Al 308.215 Recovery = 98.87%								
As 188.979†	1012.3	0.4982	mg/L	0.00031	0.4982	mg/L	0.00031	0.06%

	QC value within limits for As 188.979 Recovery = 99.64%					
Ba 233.527†	1457998.8	9.823 mg/L	0.0151	9.823 mg/L	0.0151	0.15%
	QC value within limits for Ba 233.527 Recovery = 98.23%					
Be 313.107†	454190.7	0.2484 mg/L	0.00005	0.2484 mg/L	0.00005	0.02%
	QC value within limits for Be 313.107 Recovery = 99.37%					
Ca 317.933†	114589.2	25.48 mg/L	0.155	25.48 mg/L	0.155	0.61%
	QC value within limits for Ca 317.933 Recovery = 101.92%					
Cd 226.502†	17169.1	0.2694 mg/L	0.00230	0.2694 mg/L	0.00230	0.85%
	QC value within limits for Cd 226.502 Recovery = 107.77%					
Co 228.616†	94327.9	2.377 mg/L	0.0039	2.377 mg/L	0.0039	0.16%
	QC value within limits for Co 228.616 Recovery = 95.08%					
Cr 267.716†	111320.6	0.9769 mg/L	0.00009	0.9769 mg/L	0.00009	0.01%
	QC value within limits for Cr 267.716 Recovery = 97.69%					
Cu 324.752†	281845.7	1.211 mg/L	0.0005	1.211 mg/L	0.0005	0.04%
	QC value within limits for Cu 324.752 Recovery = 96.88%					
Fe 273.955†	2740.1	4.973 mg/L	0.0277	4.973 mg/L	0.0277	0.56%
	QC value within limits for Fe 273.955 Recovery = 99.45%					
K 766.490†	60443.8	25.29 mg/L	0.029	25.29 mg/L	0.029	0.11%
	QC value within limits for K 766.490 Recovery = 101.17%					
Mg 279.077†	462120.6	25.76 mg/L	0.021	25.76 mg/L	0.021	0.08%
	QC value within limits for Mg 279.077 Recovery = 103.04%					
Mn 257.610†	1981933.8	2.481 mg/L	0.0024	2.481 mg/L	0.0024	0.10%
	QC value within limits for Mn 257.610 Recovery = 99.23%					
Na 589.592†	203641.1	25.22 mg/L	0.063	25.22 mg/L	0.063	0.25%
	QC value within limits for Na 589.592 Recovery = 100.87%					
Ni 231.604†	94511.3	2.485 mg/L	0.0012	2.485 mg/L	0.0012	0.05%
	QC value within limits for Ni 231.604 Recovery = 99.41%					
Pb 220.353†	3685.8	0.5117 mg/L	0.00438	0.5117 mg/L	0.00438	0.86%
	QC value within limits for Pb 220.353 Recovery = 102.33%					
Sb 206.836†	15776.5	5.020 mg/L	0.0354	5.020 mg/L	0.0354	0.71%
	QC value within limits for Sb 206.836 Recovery = 100.40%					
Se 196.026†	1219.6	0.4947 mg/L	0.00354	0.4947 mg/L	0.00354	0.72%
	QC value within limits for Se 196.026 Recovery = 98.93%					
Tl 190.801†	899.8	0.4795 mg/L	0.00372	0.4795 mg/L	0.00372	0.78%
	QC value within limits for Tl 190.801 Recovery = 95.89%					
V 292.402†	403899.3	2.525 mg/L	0.0021	2.525 mg/L	0.0021	0.08%
	QC value within limits for V 292.402 Recovery = 100.99%					
Zn 213.857†	3144.9	2.642 mg/L	0.0088	2.642 mg/L	0.0088	0.33%
	QC value within limits for Zn 213.857 Recovery = 105.69%					
Pb†	42.1	0.4854 mg/L	0.10808	0.4854 mg/L	0.10808	22.27%
	QC value within limits for Pb Recovery = 97.08%					
Ag 338.289†	118297.0	1.258 mg/L	0.0033	1.258 mg/L	0.0033	0.26%

All analyte(s) passed QC.

Sequence No.: 27 **Autosampler Location:** 1
Sample ID: CCB **Date Collected:** 10/23/2014 4:14:33 PM
Analyst: **Data Type:** Original
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 75 **Auto Dilution Factor:** 1

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1558630.0	1.013	mg/L	0.0085				0.84%
Ag 328.068†	-358.0	-0.0018	mg/L	0.00002	-0.0018	mg/L	0.00002	1.27%
	QC value within limits for Ag 328.068 Recovery = Not calculated							
Al 308.215†	19.6	0.0350	mg/L	0.00341	0.0350	mg/L	0.00341	9.74%
	QC value within limits for Al 308.215 Recovery = Not calculated							
As 188.979†	-1.2	-0.0006	mg/L	0.00027	-0.0006	mg/L	0.00027	46.47%
	QC value within limits for As 188.979 Recovery = Not calculated							
Ba 233.527†	265.9	0.0018	mg/L	0.00003	0.0018	mg/L	0.00003	1.62%
	QC value within limits for Ba 233.527 Recovery = Not calculated							
Be 313.107†	119.0	0.0001	mg/L	0.00005	0.0001	mg/L	0.00005	72.54%
	QC value within limits for Be 313.107 Recovery = Not calculated							

Ca 317.933†	9.3	0.0021 mg/L	0.00019	0.0021 mg/L	0.00019	9.00%
QC value within limits for Ca 317.933 Recovery = Not calculated						
Cd 226.502†	-3.9	-0.0001 mg/L	0.00020	-0.0001 mg/L	0.00020	318.54%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	8.8	0.0002 mg/L	0.00005	0.0002 mg/L	0.00005	21.20%
QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	16.3	0.0001 mg/L	0.00011	0.0001 mg/L	0.00011	76.76%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	-11.1	-0.0000 mg/L	0.00091	-0.0000 mg/L	0.00091	>999.9%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 273.955†	8.6	0.0157 mg/L	0.01209	0.0157 mg/L	0.01209	76.98%
QC value within limits for Fe 273.955 Recovery = Not calculated						
K 766.490†	38.5	0.0161 mg/L	0.00071	0.0161 mg/L	0.00071	4.38%
QC value within limits for K 766.490 Recovery = Not calculated						
Mg 279.077†	-102.1	-0.0058 mg/L	0.00198	-0.0058 mg/L	0.00198	34.41%
QC value within limits for Mg 279.077 Recovery = Not calculated						
Mn 257.610†	434.7	0.0005 mg/L	0.00005	0.0005 mg/L	0.00005	8.92%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Na 589.592†	95.7	0.0118 mg/L	0.00162	0.0118 mg/L	0.00162	13.67%
QC value within limits for Na 589.592 Recovery = Not calculated						
Ni 231.604†	-3.5	-0.0001 mg/L	0.00008	-0.0001 mg/L	0.00008	83.32%
QC value within limits for Ni 231.604 Recovery = Not calculated						
Pb 220.353†	46.9	0.0065 mg/L	0.00162	0.0065 mg/L	0.00162	25.17%
QC value within limits for Pb 220.353 Recovery = Not calculated						
Sb 206.836†	16.7	0.0053 mg/L	0.00023	0.0053 mg/L	0.00023	4.35%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	6.2	0.0025 mg/L	0.00036	0.0025 mg/L	0.00036	14.14%
QC value within limits for Se 196.026 Recovery = Not calculated						
Tl 190.801†	-5.5	-0.0031 mg/L	0.00177	-0.0031 mg/L	0.00177	56.79%
QC value within limits for Tl 190.801 Recovery = Not calculated						
V 292.402†	-46.7	-0.0003 mg/L	0.00014	-0.0003 mg/L	0.00014	49.24%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	3.6	0.0031 mg/L	0.00072	0.0031 mg/L	0.00072	23.49%
QC value within limits for Zn 213.857 Recovery = Not calculated						
Pb†	-7.2	-0.0832 mg/L	0.02097	-0.0832 mg/L	0.02097	25.19%
QC value within limits for Pb Recovery = Not calculated						
Ag 338.289†	246.6	0.0026 mg/L	0.00077	0.0026 mg/L	0.00077	30.07%

All analyte(s) passed QC.

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Sequence No.: 28 **Autosampler Location: 48**
Sample ID: 144638-08 **Date Collected: 10/23/2014 4:18:46 PM**
Analyst: AMM **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol: 0.519 mL**
Dilution: **Sample Prep Vol: 50 mL**
Wash Time: 75 **Auto Dilution Factor: 1**

Nebulizer Parameters: 144638-08

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-08

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1708477.3	1.110	mg/L	0.0130				1.17%
Ag 328.068†	-14900.0	-0.0029	mg/L	0.00049	-0.2834	mg/L	0.04728	16.68%
Al 308.215†	62417.3	111.4	mg/L	0.56	10730	mg/L	54.40	0.51%
As 188.979†	123.4	0.0706	mg/L	0.00337	6.800	mg/L	0.3246	4.77%
Ba 233.527†	110954.5	0.7476	mg/L	0.00069	72.02	mg/L	0.066	0.09%
Be 313.107†	10546.7	0.0058	mg/L	0.00003	0.5583	mg/L	0.00260	0.47%
Ca 317.933†	97346.6	21.65	mg/L	0.006	2085	mg/L	0.61	0.03%
Cd 226.502†	1534.9	0.0050	mg/L	0.00018	0.4794	mg/L	0.01717	3.58%
Co 228.616†	3453.4	0.0870	mg/L	0.00138	8.384	mg/L	0.1330	1.59%
Cr 267.716†	19753.5	0.1769	mg/L	0.00250	17.04	mg/L	0.241	1.42%
Cu 324.752†	55112.6	0.2642	mg/L	0.00037	25.45	mg/L	0.035	0.14%
Fe 273.955†	117165.7	214.3	mg/L	0.22	20640	mg/L	21.10	0.10%
K 766.490†	28898.3	12.09	mg/L	0.093	1165	mg/L	8.93	0.77%
Mg 279.077†	660896.7	36.13	mg/L	0.002	3481	mg/L	0.20	0.01%
Mn 257.610†	2776602.3	3.475	mg/L	0.0029	334.7	mg/L	0.28	0.08%
Na 589.592†	3814.8	0.4724	mg/L	0.01061	45.51	mg/L	1.022	2.25%

Ni 231.604†	10132.2	0.2664	mg/L	0.00304	25.67	mg/L	0.292	1.14%
Pb 220.353†	3295.3	0.4276	mg/L	0.00893	41.19	mg/L	0.861	2.09%
Sb 206.836†	-313.2	0.0095	mg/L	0.01050	0.9114	mg/L	1.01146	110.98%
Se 196.026†	73.8	0.0465	mg/L	0.00388	4.478	mg/L	0.3738	8.35%
Tl 190.801†	-3.5	0.0142	mg/L	0.00671	1.369	mg/L	0.6464	47.21%
V 292.402†	31199.0	0.1958	mg/L	0.00010	18.86	mg/L	0.009	0.05%
Zn 213.857†	1370.4	1.154	mg/L	0.0160	111.2	mg/L	1.54	1.39%
Pb†	35.9	0.3394	mg/L	0.01380	32.70	mg/L	1.329	4.07%
Ag 338.289†	-301.4	0.0011	mg/L	0.00135	0.1103	mg/L	0.13000	117.86%

Sequence No.: 29
Sample ID: 144638-09
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 49
Date Collected: 10/23/2014 4:23:02 PM
Data Type: Original
Initial Sample Vol: 0.484 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-09

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-09

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1692354.8	1.100	mg/L	0.0140				1.27%
Ag 328.068†	-13115.6	-0.0023	mg/L	0.00030	-0.2403	mg/L	0.03119	12.98%
Al 308.215†	64795.6	115.6	mg/L	1.61	11940	mg/L	166.08	1.39%
As 188.979†	103.8	0.0590	mg/L	0.00398	6.098	mg/L	0.4107	6.73%
Ba 233.527†	128634.3	0.8667	mg/L	0.00146	89.53	mg/L	0.151	0.17%
Be 313.107†	11853.8	0.0065	mg/L	0.00000	0.6727	mg/L	0.00014	0.02%
Ca 317.933†	118943.6	26.45	mg/L	0.351	2732	mg/L	36.22	1.33%
Cd 226.502†	1519.4	0.0068	mg/L	0.00011	0.7014	mg/L	0.01184	1.69%
Co 228.616†	2907.3	0.0733	mg/L	0.00032	7.569	mg/L	0.0330	0.44%
Cr 267.716†	21146.1	0.1887	mg/L	0.00184	19.49	mg/L	0.190	0.97%
Cu 324.752†	53671.1	0.2548	mg/L	0.00042	26.32	mg/L	0.044	0.17%
Fe 273.955†	103543.3	189.3	mg/L	2.27	19560	mg/L	234.33	1.20%
K 766.490†	28140.3	11.78	mg/L	0.122	1216	mg/L	12.57	1.03%
Mg 279.077†	612302.3	33.50	mg/L	0.001	3461	mg/L	0.06	0.00%
Mn 257.610†	1947308.0	2.437	mg/L	0.0025	251.7	mg/L	0.26	0.10%
Na 589.592†	4053.6	0.5020	mg/L	0.01800	51.86	mg/L	1.859	3.58%
Ni 231.604†	9880.0	0.2598	mg/L	0.00235	26.84	mg/L	0.243	0.90%
Pb 220.353†	3701.4	0.4804	mg/L	0.00349	49.63	mg/L	0.360	0.73%
Sb 206.836†	-300.0	0.0037	mg/L	0.01166	0.3799	mg/L	1.20449	317.10%
Se 196.026†	60.5	0.0410	mg/L	0.00506	4.239	mg/L	0.5223	12.32%
Tl 190.801†	-3.8	0.0100	mg/L	0.00673	1.029	mg/L	0.6947	67.54%
V 292.402†	32446.6	0.2037	mg/L	0.00000	21.04	mg/L	0.000	0.00%
Zn 213.857†	1668.4	1.406	mg/L	0.0302	145.2	mg/L	3.12	2.15%
Pb†	40.8	0.3939	mg/L	0.06814	40.69	mg/L	7.039	17.30%
Ag 338.289†	-142.1	0.0031	mg/L	0.00095	0.3154	mg/L	0.09764	30.96%

Sequence No.: 30
Sample ID: 144638-10
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 50
Date Collected: 10/23/2014 4:27:18 PM
Data Type: Original
Initial Sample Vol: 0.472 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-10

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-10

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1674385.5	1.088	mg/L	0.0039				0.35%
Ag 328.068†	-9946.1	-0.0021	mg/L	0.00045	-0.2177	mg/L	0.04720	21.68%

Al 308.215†	42685.1	76.17	mg/L	0.236	8069	mg/L	25.05	0.31%
As 188.979†	70.9	0.0414	mg/L	0.00042	4.381	mg/L	0.0450	1.03%
Ba 233.527†	96320.6	0.6490	mg/L	0.00022	68.75	mg/L	0.023	0.03%
Be 313.107†	7867.7	0.0043	mg/L	0.00002	0.4581	mg/L	0.00255	0.56%
Ca 317.933†	183451.7	40.79	mg/L	0.133	4321	mg/L	14.09	0.33%
Cd 226.502†	1164.6	0.0053	mg/L	0.00001	0.5661	mg/L	0.00105	0.19%
Co 228.616†	2240.2	0.0565	mg/L	0.00007	5.980	mg/L	0.0069	0.12%
Cr 267.716†	15816.5	0.1412	mg/L	0.00136	14.95	mg/L	0.144	0.96%
Cu 324.752†	53540.1	0.2482	mg/L	0.00060	26.30	mg/L	0.063	0.24%
Fe 273.955†	78049.7	142.7	mg/L	0.51	15120	mg/L	53.53	0.35%
K 766.490†	22320.0	9.340	mg/L	0.0847	989.4	mg/L	8.97	0.91%
Mg 279.077†	518040.0	28.41	mg/L	0.022	3009	mg/L	2.35	0.08%
Mn 257.610†	1922753.4	2.406	mg/L	0.0019	254.9	mg/L	0.20	0.08%
Na 589.592†	3621.4	0.4485	mg/L	0.00900	47.51	mg/L	0.954	2.01%
Ni 231.604†	7396.9	0.1945	mg/L	0.00146	20.61	mg/L	0.154	0.75%
Pb 220.353†	5924.1	0.7992	mg/L	0.00262	84.66	mg/L	0.278	0.33%
Sb 206.836†	-215.5	0.0040	mg/L	0.00291	0.4239	mg/L	0.30867	72.81%
Se 196.026†	29.0	0.0231	mg/L	0.00413	2.452	mg/L	0.4380	17.86%
Tl 190.801†	-17.9	0.0006	mg/L	0.00339	0.0624	mg/L	0.35924	575.39%
V 292.402†	23252.9	0.1460	mg/L	0.00008	15.47	mg/L	0.008	0.05%
Zn 213.857†	1548.7	1.303	mg/L	0.0035	138.1	mg/L	0.37	0.27%
Pb†	70.8	0.7727	mg/L	0.02407	81.86	mg/L	2.550	3.12%
Ag 338.289†	-94.7	0.0021	mg/L	0.00038	0.2254	mg/L	0.03996	17.73%

Sequence No.: 31
Sample ID: 144638-11
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 51
Date Collected: 10/23/2014 4:31:34 PM
Data Type: Original
Initial Sample Vol: 0.517 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-11

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-11

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1674699.9	1.088	mg/L	0.0015				0.14%
Ag 328.068†	-12477.5	-0.0033	mg/L	0.00066	-0.3158	mg/L	0.06426	20.35%
Al 308.215†	49831.7	88.92	mg/L	0.536	8600	mg/L	51.81	0.60%
As 188.979†	104.9	0.0599	mg/L	0.00258	5.790	mg/L	0.2498	4.31%
Ba 233.527†	109844.0	0.7401	mg/L	0.00010	71.57	mg/L	0.009	0.01%
Be 313.107†	9291.2	0.0051	mg/L	0.00001	0.4940	mg/L	0.00128	0.26%
Ca 317.933†	234820.1	52.22	mg/L	0.407	5050	mg/L	39.41	0.78%
Cd 226.502†	1471.4	0.0071	mg/L	0.00002	0.6848	mg/L	0.00150	0.22%
Co 228.616†	2892.8	0.0729	mg/L	0.00027	7.050	mg/L	0.0266	0.38%
Cr 267.716†	19001.5	0.1697	mg/L	0.00111	16.41	mg/L	0.108	0.66%
Cu 324.752†	59897.9	0.2799	mg/L	0.00037	27.07	mg/L	0.035	0.13%
Fe 273.955†	96794.5	177.0	mg/L	1.36	17120	mg/L	131.31	0.77%
K 766.490†	24772.8	10.37	mg/L	0.090	1003	mg/L	8.72	0.87%
Mg 279.077†	706394.4	38.79	mg/L	0.019	3752	mg/L	1.88	0.05%
Mn 257.610†	2987626.2	3.739	mg/L	0.0016	361.6	mg/L	0.15	0.04%
Na 589.592†	4063.2	0.5032	mg/L	0.01097	48.66	mg/L	1.061	2.18%
Ni 231.604†	9137.5	0.2403	mg/L	0.00074	23.24	mg/L	0.072	0.31%
Pb 220.353†	8207.2	1.112	mg/L	0.0055	107.5	mg/L	0.54	0.50%
Sb 206.836†	-269.0	0.0034	mg/L	0.00288	0.3298	mg/L	0.27824	84.36%
Se 196.026†	10.6	0.0173	mg/L	0.00631	1.676	mg/L	0.6105	36.43%
Tl 190.801†	-23.8	0.0016	mg/L	0.00252	0.1582	mg/L	0.24417	154.35%
V 292.402†	27805.6	0.1746	mg/L	0.00021	16.89	mg/L	0.020	0.12%
Zn 213.857†	1942.3	1.634	mg/L	0.0110	158.1	mg/L	1.06	0.67%
Pb†	95.7	1.055	mg/L	0.0423	102.0	mg/L	4.09	4.01%
Ag 338.289†	-295.1	0.0006	mg/L	0.00072	0.0607	mg/L	0.06987	115.09%

Sequence No.: 32
Sample ID: 144638-12
Analyst: AMM
Initial Sample Wt:

Autosampler Location: 52
Date Collected: 10/23/2014 4:35:49 PM
Data Type: Original
Initial Sample Vol: 0.534 mL

Dilution:
Wash Time: 75

Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-12

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-12

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1746580.7	1.135	mg/L	0.0014				0.12%
Ag 328.068†	-15510.2	-0.0033	mg/L	0.00001	-0.3064	mg/L	0.00080	0.26%
Al 308.215†	75597.7	134.9	mg/L	1.46	12630	mg/L	137.06	1.09%
As 188.979†	128.3	0.0725	mg/L	0.00004	6.790	mg/L	0.0036	0.05%
Ba 233.527†	152397.8	1.027	mg/L	0.0007	96.14	mg/L	0.062	0.06%
Be 313.107†	13814.3	0.0076	mg/L	0.00003	0.7103	mg/L	0.00256	0.36%
Ca 317.933†	163518.2	36.36	mg/L	0.519	3405	mg/L	48.55	1.43%
Cd 226.502†	1807.0	0.0083	mg/L	0.00032	0.7770	mg/L	0.03006	3.87%
Co 228.616†	3382.5	0.0852	mg/L	0.00036	7.981	mg/L	0.0337	0.42%
Cr 267.716†	22799.3	0.2037	mg/L	0.00019	19.08	mg/L	0.018	0.09%
Cu 324.752†	66483.1	0.3140	mg/L	0.00035	29.40	mg/L	0.032	0.11%
Fe 273.955†	121597.1	222.4	mg/L	2.93	20820	mg/L	274.45	1.32%
K 766.490†	33410.1	13.98	mg/L	0.256	1309	mg/L	23.94	1.83%
Mg 279.077†	684764.9	37.43	mg/L	0.041	3505	mg/L	3.87	0.11%
Mn 257.610†	2393946.2	2.996	mg/L	0.0003	280.5	mg/L	0.03	0.01%
Na 589.592†	5192.6	0.6430	mg/L	0.02769	60.21	mg/L	2.593	4.31%
Ni 231.604†	11397.6	0.2997	mg/L	0.00129	28.06	mg/L	0.121	0.43%
Pb 220.353†	5126.2	0.6721	mg/L	0.00344	62.93	mg/L	0.322	0.51%
Sb 206.836†	-328.3	0.0122	mg/L	0.00049	1.142	mg/L	0.0459	4.02%
Se 196.026†	55.0	0.0415	mg/L	0.00337	3.890	mg/L	0.3155	8.11%
Tl 190.801†	-15.2	0.0059	mg/L	0.00037	0.5560	mg/L	0.03424	6.16%
V 292.402†	37567.8	0.2357	mg/L	0.00035	22.07	mg/L	0.033	0.15%
Zn 213.857†	2026.4	1.707	mg/L	0.0018	159.8	mg/L	0.17	0.11%
Pb†	56.8	0.5675	mg/L	0.01167	53.13	mg/L	1.092	2.06%
Ag 338.289†	-265.5	0.0020	mg/L	0.00042	0.1918	mg/L	0.03978	20.74%

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Sequence No.: 33
Sample ID: 144638-13
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 53
Date Collected: 10/23/2014 4:40:04 PM
Data Type: Original
Initial Sample Vol: 0.493 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-13

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-13

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1694876.5	1.102	mg/L	0.0015				0.13%
Ag 328.068†	-8590.0	-0.0042	mg/L	0.00065	-0.4245	mg/L	0.06616	15.58%
Al 308.215†	41013.3	73.18	mg/L	0.283	7422	mg/L	28.70	0.39%
As 188.979†	142.4	0.0749	mg/L	0.00219	7.596	mg/L	0.2221	2.92%
Ba 233.527†	73596.4	0.4959	mg/L	0.00146	50.29	mg/L	0.148	0.29%
Be 313.107†	6700.4	0.0037	mg/L	0.00004	0.3740	mg/L	0.00373	1.00%
Ca 317.933†	137627.4	30.60	mg/L	0.028	3104	mg/L	2.89	0.09%
Cd 226.502†	953.4	0.0044	mg/L	0.00001	0.4454	mg/L	0.00097	0.22%
Co 228.616†	1846.6	0.0465	mg/L	0.00013	4.719	mg/L	0.0135	0.29%
Cr 267.716†	16701.4	0.1485	mg/L	0.00000	15.06	mg/L	0.000	0.00%
Cu 324.752†	45428.1	0.2100	mg/L	0.00008	21.30	mg/L	0.008	0.04%
Fe 273.955†	63449.3	116.0	mg/L	0.09	11770	mg/L	8.67	0.07%
K 766.490†	21855.4	9.146	mg/L	0.0652	927.6	mg/L	6.61	0.71%
Mg 279.077†	452244.6	24.83	mg/L	0.008	2518	mg/L	0.84	0.03%
Mn 257.610†	1382223.0	1.730	mg/L	0.0010	175.4	mg/L	0.10	0.06%
Na 589.592†	3496.7	0.4330	mg/L	0.02484	43.92	mg/L	2.519	5.74%
Ni 231.604†	6091.9	0.1602	mg/L	0.00003	16.25	mg/L	0.003	0.02%

Pb 220.353†	3622.7	0.4807 mg/L	0.00312	48.76 mg/L	0.317	0.65%
Sb 206.836†	-169.0	0.0067 mg/L	0.00076	0.6821 mg/L	0.07728	11.33%
Se 196.026†	18.7	0.0178 mg/L	0.00230	1.806 mg/L	0.2329	12.89%
Tl 190.801†	-15.4	-0.0010 mg/L	0.00478	-0.1063 mg/L	0.48519	456.33%
V 292.402†	20881.9	0.1313 mg/L	0.00034	13.32 mg/L	0.034	0.26%
Zn 213.857†	1155.0	0.9718 mg/L	0.00479	98.56 mg/L	0.486	0.49%
Pb†	40.4	0.4212 mg/L	0.01768	42.72 mg/L	1.793	4.20%
Ag 338.289†	-149.4	0.0019 mg/L	0.00043	0.1884 mg/L	0.04320	22.94%

Sequence No.: 34
Sample ID: 144638-14
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 54
Date Collected: 10/23/2014 4:44:18 PM
Data Type: Original
Initial Sample Vol: 0.496 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-14

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-14

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
Y 371.029	1719868.6	1.118	mg/L	0.0052				0.47%
Ag 328.068†	-6919.6	-0.0042	mg/L	0.00024	-0.4239	mg/L	0.02403	5.67%
Al 308.215†	38337.2	68.41	mg/L	1.124	6896	mg/L	113.32	1.64%
As 188.979†	155.5	0.0798	mg/L	0.00226	8.046	mg/L	0.2273	2.83%
Ba 233.527†	58367.0	0.3932	mg/L	0.00005	39.64	mg/L	0.005	0.01%
Be 313.107†	5789.4	0.0032	mg/L	0.00000	0.3215	mg/L	0.00013	0.04%
Ca 317.933†	124322.5	27.64	mg/L	0.447	2787	mg/L	45.08	1.62%
Cd 226.502†	781.1	0.0039	mg/L J	0.00012	0.3903	mg/L	0.01191	3.05%
Co 228.616†	1455.6	0.0367	mg/L	0.00017	3.698	mg/L	0.0168	0.45%
Cr 267.716†	16303.6	0.1446	mg/L	0.00122	14.58	mg/L	0.123	0.85%
Cu 324.752†	40479.2	0.1855	mg/L	0.00101	18.70	mg/L	0.101	0.54%
Fe 273.955†	49730.7	90.94	mg/L	1.728	9167	mg/L	174.16	1.90%
K 766.490†	18119.8	7.582	mg/L	0.1211	764.4	mg/L	12.21	1.60%
Mg 279.077†	394850.2	21.71	mg/L	0.010	2189	mg/L	0.97	0.04%
Mn 257.610†	1077124.9	1.348	mg/L	0.0012	135.9	mg/L	0.12	0.09%
Na 589.592†	2810.2	0.3480	mg/L	0.02180	35.08	mg/L	2.198	6.26%
Ni 231.604†	5191.3	0.1365	mg/L	0.00173	13.76	mg/L	0.174	1.27%
Pb 220.353†	3276.4	0.4330	mg/L	0.00362	43.64	mg/L	0.365	0.84%
Sb 206.836†	-136.6	0.0055	mg/L	0.00340	0.5586	mg/L	0.34284	61.37%
Se 196.026†	12.6	0.0140	mg/L	0.00053	1.409	mg/L	0.0530	3.76%
Tl 190.801†	-15.1	-0.0032	mg/L	0.00068	-0.3216	mg/L	0.06828	21.23%
V 292.402†	19769.6	0.1243	mg/L	0.00072	12.53	mg/L	0.072	0.58%
Zn 213.857†	942.2	0.7924	mg/L	0.00409	79.88	mg/L	0.412	0.52%
Pb†	39.0	0.4075	mg/L	0.01299	41.08	mg/L	1.309	3.19%
Ag 338.289†	-257.6	0.0007	mg/L	0.00027	0.0678	mg/L	0.02680	39.51%

Sequence No.: 35
Sample ID: 144638-15
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 55
Date Collected: 10/23/2014 4:48:33 PM
Data Type: Original
Initial Sample Vol: 0.516 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-15

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-15

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
Y 371.029	1704413.7	1.108	mg/L	0.0044				0.40%
Ag 328.068†	-12367.5	-0.0044	mg/L	0.00001	-0.4279	mg/L	0.00074	0.17%
Al 308.215†	73370.5	130.9	mg/L	0.94	12690	mg/L	91.46	0.72%

As 188.979†	48.3	0.0299	mg/L	0.00273	2.896	mg/L	0.2650	9.15%
Ba 233.527†	128561.2	0.8662	mg/L	0.00024	83.93	mg/L	0.023	0.03%
Be 313.107†	11672.9	0.0064	mg/L	0.00001	0.6215	mg/L	0.00051	0.08%
Ca 317.933†	111783.2	24.86	mg/L	0.131	2409	mg/L	12.69	0.53%
Cd 226.502†	1297.4	0.0047	mg/L J	0.00002	0.4545	mg/L	0.00174	0.38%
Co 228.616†	3094.9	0.0780	mg/L	0.00009	7.557	mg/L	0.0090	0.12%
Cr 267.716†	21883.4	0.1949	mg/L	0.00066	18.89	mg/L	0.064	0.34%
Cu 324.752†	41502.1	0.2003	mg/L	0.00057	19.41	mg/L	0.055	0.28%
Fe 273.955†	93977.0	171.8	mg/L	1.16	16650	mg/L	112.57	0.68%
K 766.490†	29597.1	12.39	mg/L	0.210	1200	mg/L	20.39	1.70%
Mg 279.077†	713999.8	39.24	mg/L	0.047	3802	mg/L	4.59	0.12%
Mn 257.610†	1734516.4	2.171	mg/L	0.0029	210.3	mg/L	0.28	0.13%
Na 589.592†	4139.8	0.5127	mg/L	0.00201	49.68	mg/L	0.195	0.39%
Ni 231.604†	9889.2	0.2601	mg/L	0.00151	25.20	mg/L	0.146	0.58%
Pb 220.353†	1927.1	0.2286	mg/L	0.00011	22.15	mg/L	0.011	0.05%
Sb 206.836†	-274.7	0.0072	mg/L	0.00269	0.6995	mg/L	0.26080	37.28%
Se 196.026†	18.5	0.0244	mg/L	0.00415	2.364	mg/L	0.4025	17.02%
Tl 190.801†	-7.6	0.0052	mg/L	0.00578	0.5010	mg/L	0.55971	111.72%
V 292.402†	33746.5	0.2118	mg/L	0.00025	20.53	mg/L	0.024	0.12%
Zn 213.857†	1147.7	0.9657	mg/L	0.00328	93.58	mg/L	0.318	0.34%
Pb†	19.1	0.1320	mg/L	0.06701	12.80	mg/L	6.493	50.74%
Ag 338.289†	-182.9	0.0028	mg/L	0.00280	0.2733	mg/L	0.27157	99.36%

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Sequence No.: 36
Sample ID: 144638-16
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 56
Date Collected: 10/23/2014 4:52:48 PM
Data Type: Original
Initial Sample Vol: 0.508 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-16

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-16

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1629815.3	1.059	mg/L	0.0073				0.69%
Ag 328.068†	-9591.0	-0.0032	mg/L	0.00040	-0.3160	mg/L	0.03921	12.41%
Al 308.215†	38440.3	68.59	mg/L	0.278	6751	mg/L	27.33	0.40%
As 188.979†	70.9	0.0411	mg/L	0.00236	4.042	mg/L	0.2326	5.75%
Ba 233.527†	99638.0	0.6713	mg/L	0.00018	66.07	mg/L	0.018	0.03%
Be 313.107†	7166.0	0.0039	mg/L	0.00000	0.3878	mg/L	0.00044	0.11%
Ca 317.933†	403273.0	89.67	mg/L	0.862	8826	mg/L	84.87	0.96%
Cd 226.502†	1079.7	0.0045	mg/L J	0.00020	0.4380	mg/L	0.01942	4.43%
Co 228.616†	1992.6	0.0502	mg/L	0.00030	4.942	mg/L	0.0294	0.59%
Cr 267.716†	15327.5	0.1367	mg/L	0.00092	13.46	mg/L	0.091	0.68%
Cu 324.752†	49315.8	0.2290	mg/L	0.00053	22.54	mg/L	0.052	0.23%
Fe 273.955†	73250.7	133.9	mg/L	1.15	13180	mg/L	113.66	0.86%
K 766.490†	21016.1	8.794	mg/L	0.0162	865.6	mg/L	1.59	0.18%
Mg 279.077†	938305.0	51.88	mg/L	0.006	5106	mg/L	0.63	0.01%
Mn 257.610†	1614089.2	2.020	mg/L	0.0003	198.8	mg/L	0.03	0.01%
Na 589.592†	3668.1	0.4542	mg/L	0.01765	44.71	mg/L	1.737	3.88%
Ni 231.604†	6327.7	0.1664	mg/L	0.00150	16.38	mg/L	0.148	0.90%
Pb 220.353†	3937.1	0.5288	mg/L	0.00471	52.05	mg/L	0.463	0.89%
Sb 206.836†	-198.4	0.0043	mg/L	0.01113	0.4235	mg/L	1.09537	258.63%
Se 196.026†	-17.0	0.0043	mg/L	0.00856	0.4281	mg/L	0.84205	196.69%
Tl 190.801†	-30.2	-0.0074	mg/L	0.00097	-0.7294	mg/L	0.09588	13.14%
V 292.402†	21831.7	0.1371	mg/L	0.00009	13.50	mg/L	0.009	0.07%
Zn 213.857†	1420.3	1.190	mg/L	0.0103	117.1	mg/L	1.01	0.87%
Pb†	43.8	0.4789	mg/L	0.01054	47.14	mg/L	1.037	2.20%
Ag 338.289†	-29.8	0.0021	mg/L	0.00053	0.2028	mg/L	0.05246	25.86%

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Sequence No.: 37
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 10/23/2014 4:57:01 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Wash Time: 75 Auto Dilution Factor: 1

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1464103.0	0.9516	mg/L	0.00754				0.79%
Ag 328.068†	244584.5	1.225	mg/L	0.0029	1.225	mg/L	0.0029	0.24%
QC value within limits for Ag 328.068 Recovery = 98.01%								
Al 308.215†	5474.5	9.779	mg/L	0.0076	9.779	mg/L	0.0076	0.08%
QC value within limits for Al 308.215 Recovery = 97.79%								
As 188.979†	1015.6	0.4998	mg/L	0.00005	0.4998	mg/L	0.00005	0.01%
QC value within limits for As 188.979 Recovery = 99.96%								
Ba 233.527†	1451647.9	9.780	mg/L	0.0125	9.780	mg/L	0.0125	0.13%
QC value within limits for Ba 233.527 Recovery = 97.80%								
Be 313.107†	454796.8	0.2488	mg/L	0.00041	0.2488	mg/L	0.00041	0.16%
QC value within limits for Be 313.107 Recovery = 99.51%								
Ca 317.933†	111847.5	24.87	mg/L	0.190	24.87	mg/L	0.190	0.76%
QC value within limits for Ca 317.933 Recovery = 99.48%								
Cd 226.502†	17151.2	0.2691	mg/L	0.00167	0.2691	mg/L	0.00167	0.62%
QC value within limits for Cd 226.502 Recovery = 107.66%								
Co 228.616†	94167.5	2.373	mg/L	0.0012	2.373	mg/L	0.0012	0.05%
QC value within limits for Co 228.616 Recovery = 94.92%								
Cr 267.716†	111098.4	0.9749	mg/L	0.00032	0.9749	mg/L	0.00032	0.03%
QC value within limits for Cr 267.716 Recovery = 97.49%								
Cu 324.752†	282075.7	1.212	mg/L	0.0009	1.212	mg/L	0.0009	0.07%
QC value within limits for Cu 324.752 Recovery = 95.96%								
Fe 273.955†	2749.4	4.990	mg/L	0.0179	4.990	mg/L	0.0179	0.36%
QC value within limits for Fe 273.955 Recovery = 99.80%								
K 766.490†	59251.7	24.79	mg/L	0.089	24.79	mg/L	0.089	0.36%
QC value within limits for K 766.490 Recovery = 99.18%								
Mg 279.077†	461228.6	25.71	mg/L	0.020	25.71	mg/L	0.020	0.08%
QC value within limits for Mg 279.077 Recovery = 102.85%								
Mn 257.610†	1972635.6	2.469	mg/L	0.0032	2.469	mg/L	0.0032	0.13%
QC value within limits for Mn 257.610 Recovery = 98.76%								
Na 589.592†	197724.3	24.49	mg/L	0.087	24.49	mg/L	0.087	0.36%
QC value within limits for Na 589.592 Recovery = 97.94%								
Ni 231.604†	94106.3	2.475	mg/L	0.0011	2.475	mg/L	0.0011	0.04%
QC value within limits for Ni 231.604 Recovery = 98.99%								
Pb 220.353†	3678.3	0.5106	mg/L	0.00062	0.5106	mg/L	0.00062	0.12%
QC value within limits for Pb 220.353 Recovery = 102.12%								
Sb 206.836†	15675.6	4.988	mg/L	0.0327	4.988	mg/L	0.0327	0.66%
QC value within limits for Sb 206.836 Recovery = 99.76%								
Se 196.026†	1201.4	0.4873	mg/L	0.00260	0.4873	mg/L	0.00260	0.53%
QC value within limits for Se 196.026 Recovery = 97.45%								
Tl 190.801†	886.9	0.4722	mg/L	0.00358	0.4722	mg/L	0.00358	0.76%
QC value within limits for Tl 190.801 Recovery = 94.43%								
V 292.402†	402821.7	2.518	mg/L	0.0013	2.518	mg/L	0.0013	0.05%
QC value within limits for V 292.402 Recovery = 100.73%								
Zn 213.857†	3208.2	2.696	mg/L	0.0151	2.696	mg/L	0.0151	0.56%
QC value within limits for Zn 213.857 Recovery = 107.83%								
Pb†	36.7	0.4229	mg/L	0.00897	0.4229	mg/L	0.00897	2.12%
QC value less than the lower limit for Pb Recovery = 84.55%								
Ag 338.289†	118357.7	1.258	mg/L	0.0012	1.258	mg/L	0.0012	0.10%
QC Failed. Continue with analysis.								

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Sequence No.: 38 Autosampler Location: 1
Sample ID: CCB Date Collected: 10/23/2014 5:01:20 PM
Analyst: Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time: 75 Auto Dilution Factor: 1

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow

All 132.0 kPa 0.55 L/min

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1558699.5	1.013	mg/L	0.0053				0.52%
Ag 328.068†	-407.1	-0.0020	mg/L	0.00054	-0.0020	mg/L	0.00054	26.73%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 308.215†	2.6	0.0046	mg/L	0.00075	0.0046	mg/L	0.00075	16.32%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	2.1	0.0010	mg/L	0.00040	0.0010	mg/L	0.00040	39.42%
QC value within limits for As 188.979 Recovery = Not calculated								
Ba 233.527†	222.9	0.0015	mg/L	0.00009	0.0015	mg/L	0.00009	5.85%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	120.0	0.0001	mg/L	0.00003	0.0001	mg/L	0.00003	41.37%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933†	12.7	0.0028	mg/L	0.00194	0.0028	mg/L	0.00194	68.81%
QC value within limits for Ca 317.933 Recovery = Not calculated								
Cd 226.502†	-7.7	-0.0001	mg/L	0.00003	-0.0001	mg/L	0.00003	24.92%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	-6.2	-0.0002	mg/L	0.00006	-0.0002	mg/L	0.00006	40.60%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	5.9	0.0001	mg/L	0.00037	0.0001	mg/L	0.00037	705.69%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 324.752†	-113.7	-0.0005	mg/L	0.00015	-0.0005	mg/L	0.00015	30.77%
QC value within limits for Cu 324.752 Recovery = Not calculated								
Fe 273.955†	5.1	0.0093	mg/L	0.00820	0.0093	mg/L	0.00820	88.01%
QC value within limits for Fe 273.955 Recovery = Not calculated								
K 766.490†	-11.0	-0.0046	mg/L	0.02358	-0.0046	mg/L	0.02358	510.61%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 279.077†	-142.9	-0.0080	mg/L	0.00347	-0.0080	mg/L	0.00347	43.38%
QC value within limits for Mg 279.077 Recovery = Not calculated								
Mn 257.610†	85.3	0.0001	mg/L	0.00004	0.0001	mg/L	0.00004	39.33%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Na 589.592†	19.7	0.0024	mg/L	0.00590	0.0024	mg/L	0.00590	241.71%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	-8.8	-0.0002	mg/L	0.00016	-0.0002	mg/L	0.00016	69.71%
QC value within limits for Ni 231.604 Recovery = Not calculated								
Pb 220.353†	34.6	0.0048	mg/L	0.00282	0.0048	mg/L	0.00282	59.18%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	15.0	0.0048	mg/L	0.00442	0.0048	mg/L	0.00442	92.32%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	-0.5	-0.0002	mg/L	0.00890	-0.0002	mg/L	0.00890	>999.9%
QC value within limits for Se 196.026 Recovery = Not calculated								
Tl 190.801†	-8.1	-0.0046	mg/L	0.00087	-0.0046	mg/L	0.00087	18.66%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 292.402†	-78.0	-0.0005	mg/L	0.00007	-0.0005	mg/L	0.00007	13.61%
QC value within limits for V 292.402 Recovery = Not calculated								
Zn 213.857†	7.6	0.0065	mg/L	0.00043	0.0065	mg/L	0.00043	6.61%
QC value within limits for Zn 213.857 Recovery = Not calculated								
Pb†	-5.8	-0.0666	mg/L	0.03168	-0.0666	mg/L	0.03168	47.56%
QC value within limits for Pb Recovery = Not calculated								
Ag 338.289†	412.3	0.0043	mg/L	0.00211	0.0043	mg/L	0.00211	49.26%

All analyte(s) passed QC.

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Sequence No.: 39
Sample ID: 144638-17
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 57
Date Collected: 10/23/2014 5:05:32 PM
Data Type: Original
Initial Sample Vol: 0.525 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-17

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-17

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD

Method: 6010C 4ptLL Page 28 Date: 10/23/2014 5:14:07 PM

Analyte	Intensity	Conc.	Units	Std.Dev.	Conc.	Units	Std.Dev.	RSD
Y 371.029	1713225.0	1.113	mg/L	0.0020				0.18%
Ag 328.068†	-13833.0	-0.0055	mg/L	0.00117	-0.5249	mg/L	0.11133	21.21%
Al 308.215†	68890.0	122.9	mg/L	1.10	11710	mg/L	104.32	0.89%
As 188.979†	91.6	0.0528	mg/L	0.00218	5.030	mg/L	0.2078	4.13%
Ba 233.527†	132514.1	0.8928	mg/L	0.00002	85.03	mg/L	0.002	0.00%
Be 313.107†	12529.8	0.0069	mg/L	0.00003	0.6556	mg/L	0.00245	0.37%
Ca 317.933†	269902.9	60.02	mg/L	0.547	5716	mg/L	52.06	0.91%
Cd 226.502†	1549.7	0.0069	mg/L	0.00000	0.6542	mg/L	0.00014	0.02%
Co 228.616†	2930.2	0.0738	mg/L	0.00064	7.032	mg/L	0.0610	0.87%
Cr 267.716†	23122.8	0.2061	mg/L	0.00070	19.63	mg/L	0.067	0.34%
Cu 324.752†	57607.0	0.2718	mg/L	0.00071	25.89	mg/L	0.068	0.26%
Fe 273.955†	104187.1	190.5	mg/L	1.56	18140	mg/L	148.78	0.82%
K 766.490†	29471.7	12.33	mg/L	0.128	1175	mg/L	12.23	1.04%
Mg 279.077†	942211.2	51.90	mg/L	0.099	4943	mg/L	9.40	0.19%
Mn 257.610†	1787822.5	2.237	mg/L	0.0040	213.1	mg/L	0.38	0.18%
Na 589.592†	4881.6	0.6045	mg/L	0.00917	57.57	mg/L	0.873	1.52%
Ni 231.604†	10093.0	0.2654	mg/L	0.00072	25.28	mg/L	0.069	0.27%
Pb 220.353†	3358.4	0.4314	mg/L	0.00045	41.08	mg/L	0.043	0.10%
Sb 206.836†	-281.5	0.0112	mg/L	0.00497	1.062	mg/L	0.4737	44.60%
Se 196.026†	28.6	0.0293	mg/L	0.00674	2.786	mg/L	0.6423	23.06%
Tl 190.801†	-23.0	-0.0017	mg/L	0.00234	-0.1648	mg/L	0.22322	135.44%
V 292.402†	34898.8	0.2191	mg/L	0.00087	20.87	mg/L	0.083	0.40%
Zn 213.857†	1685.8	1.417	mg/L	0.0045	134.9	mg/L	0.43	0.32%
Pb†	39.4	0.3812	mg/L	0.00369	36.31	mg/L	0.351	0.97%
Ag 338.289†	-347.2	0.0009	mg/L	0.00011	0.0898	mg/L	0.01068	11.90%

Sequence No.: 40
Sample ID: 144638-18
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 58
Date Collected: 10/23/2014 5:09:47 PM
Data Type: Original
Initial Sample Vol: 0.54 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-18

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-18

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1644603.0	1.069	mg/L	0.0076				0.71%
Ag 328.068†	-8270.7	-0.0034	mg/L	0.00120	-0.3172	mg/L	0.11070	34.90%
Al 308.215†	37688.5	67.25	mg/L	1.243	6227	mg/L	115.06	1.85%
As 188.979†	6.3	0.0079	mg/L J	0.00172	0.7359	mg/L	0.15954	21.68%
Ba 233.527†	52234.1	0.3519	mg/L	0.00008	32.59	mg/L	0.008	0.02%
Be 313.107†	5776.6	0.0032	mg/L	0.00002	0.2940	mg/L	0.00195	0.66%
Ca 317.933†	635626.8	141.3	mg/L	0.92	13090	mg/L	85.21	0.65%
Cd 226.502†	817.7	0.0017	mg/L	0.00028	0.1579	mg/L	0.02615	16.55%
Co 228.616†	1556.4	0.0392	mg/L	0.00076	3.632	mg/L	0.0708	1.95%
Cr 267.716†	11326.3	0.1012	mg/L	0.00073	9.375	mg/L	0.0676	0.72%
Cu 324.752†	28797.5	0.1382	mg/L	0.00009	12.80	mg/L	0.008	0.06%
Fe 273.955†	62060.3	113.5	mg/L	2.54	10510	mg/L	235.58	2.24%
K 766.490†	24161.8	10.11	mg/L	0.132	936.2	mg/L	12.26	1.31%
Mg 279.077†	1373101.6	76.20	mg/L	0.101	7056	mg/L	9.31	0.13%
Mn 257.610†	1813758.2	2.270	mg/L	0.0006	210.2	mg/L	0.05	0.03%
Na 589.592†	6787.9	0.8406	mg/L	0.01822	77.83	mg/L	1.687	2.17%
Ni 231.604†	3299.0	0.0868	mg/L	0.00123	8.033	mg/L	0.1138	1.42%
Pb 220.353†	3190.9	0.4265	mg/L	0.00691	39.49	mg/L	0.639	1.62%
Sb 206.836†	-134.4	0.0165	mg/L	0.00619	1.532	mg/L	0.5733	37.43%
Se 196.026†	-21.4	0.0018	mg/L	0.00040	0.1644	mg/L	0.03736	22.73%
Tl 190.801†	-38.2	-0.0130	mg/L	0.00126	-1.202	mg/L	0.1167	9.70%
V 292.402†	25034.6	0.1568	mg/L	0.00058	14.52	mg/L	0.054	0.37%
Zn 213.857†	1110.6	0.9230	mg/L	0.00628	85.46	mg/L	0.581	0.68%
Pb†	37.4	0.4204	mg/L	0.09228	38.92	mg/L	8.545	21.95%
Ag 338.289†	-415.0	-0.0034	mg/L	0.00166	-0.3183	mg/L	0.15411	48.42%

Sequence No.: 41 Autosampler Location: 59

Sample ID: 144638-19
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Date Collected: 10/23/2014 5:14:07 PM
Data Type: Original
Initial Sample Vol: 0.479 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-19

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-19

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1629298.5	1.059	mg/L	0.0092				0.87%
Ag 328.068†	-7872.2	-0.0042	mg/L	0.00068	-0.4334	mg/L	0.07086	16.35%
Al 308.215†	39781.9	70.99	mg/L	0.500	7410	mg/L	52.15	0.70%
As 188.979†	19.4	0.0137	mg/L	0.00141	1.428	mg/L	0.1470	10.29%
Ba 233.527†	53583.3	0.3610	mg/L	0.00106	37.68	mg/L	0.111	0.29%
Be 313.107†	5740.2	0.0032	mg/L	0.00003	0.3292	mg/L	0.00331	1.00%
Ca 317.933†	442264.2	98.34	mg/L	0.581	10270	mg/L	60.69	0.59%
Cd 226.502†	791.3	0.0023	mg/L	0.00007	0.2374	mg/L	0.00764	3.22%
Co 228.616†	1770.9	0.0446	mg/L	0.00055	4.658	mg/L	0.0574	1.23%
Cr 267.716†	10328.3	0.0924	mg/L	0.00101	9.640	mg/L	0.1052	1.09%
Cu 324.752†	22457.0	0.1100	mg/L	0.00078	11.48	mg/L	0.081	0.71%
Fe 273.955†	57603.6	105.3	mg/L	0.45	11000	mg/L	46.67	0.42%
K 766.490†	23559.0	9.859	mg/L	0.1397	1029	mg/L	14.59	1.42%
Mg 279.077†	939379.9	52.04	mg/L	0.130	5432	mg/L	13.57	0.25%
Mn 257.610†	2901404.4	3.631	mg/L	0.0071	379.0	mg/L	0.74	0.20%
Na 589.592†	7300.1	0.9040	mg/L	0.02748	94.37	mg/L	2.869	3.04%
Ni 231.604†	3122.9	0.0821	mg/L	0.00020	8.572	mg/L	0.0209	0.24%
Pb 220.353†	2433.1	0.3187	mg/L	0.00196	33.27	mg/L	0.205	0.61%
Sb 206.836†	-150.7	0.0088	mg/L	0.00130	0.9220	mg/L	0.13599	14.75%
Se 196.026†	-17.7	0.0014	mg/L	0.00320	0.1473	mg/L	0.33389	226.74%
Tl 190.801†	-19.6	-0.0004	mg/L	0.00330	-0.0449	mg/L	0.34402	765.72%
V 292.402†	24661.1	0.1544	mg/L	0.00140	16.12	mg/L	0.146	0.91%
Zn 213.857†	980.6	0.8177	mg/L	0.01150	85.35	mg/L	1.200	1.41%
Pb†	26.0	0.2740	mg/L	0.02528	28.60	mg/L	2.638	9.23%
Ag 338.289†	-658.9	-0.0056	mg/L	0.00115	-0.5894	mg/L	0.11999	20.36%

Sequence No.: 42
Sample ID: 144638-19 dup
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 60
Date Collected: 10/23/2014 5:18:21 PM
Data Type: Original
Initial Sample Vol: 0.505 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-19 dup

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-19 dup

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1637479.7	1.064	mg/L	0.0074				0.69%
Ag 328.068†	-7993.8	-0.0027	mg/L	0.00127	-0.2710	mg/L	0.12528	46.24%
Al 308.215†	41447.9	73.96	mg/L	1.288	7323	mg/L	127.50	1.74%
As 188.979†	12.9	0.0108	mg/L	0.00073	1.068	mg/L	0.0724	6.78%
Ba 233.527†	51258.5	0.3454	mg/L	0.00268	34.19	mg/L	0.265	0.78%
Be 313.107†	5969.4	0.0033	mg/L	0.00000	0.3246	mg/L	0.00024	0.07%
Ca 317.933†	544155.9	121.0	mg/L	0.04	11980	mg/L	4.32	0.04%
Cd 226.502†	763.4	0.0011	mg/L	0.00024	0.1121	mg/L	0.02349	20.96%
Co 228.616†	1659.6	0.0418	mg/L	0.00039	4.141	mg/L	0.0387	0.93%
Cr 267.716†	10309.5	0.0923	mg/L	0.00079	9.137	mg/L	0.0778	0.85%
Cu 324.752†	21501.4	0.1066	mg/L	0.00070	10.56	mg/L	0.069	0.65%
Fe 273.955†	60919.7	111.4	mg/L	1.90	11030	mg/L	188.31	1.71%
K 766.490†	21655.9	9.062	mg/L	0.0289	897.2	mg/L	2.86	0.32%
Mg 279.077†	989006.8	54.79	mg/L	0.082	5424	mg/L	8.17	0.15%

Mn 257.610†	2226778.7	2.787 mg/L	0.0039	275.9 mg/L	0.39	0.14%
Na 589.592†	8050.4	0.9969 mg/L	0.02193	98.71 mg/L	2.171	2.20%
Ni 231.604†	2972.5	0.0782 mg/L	0.00091	7.740 mg/L	0.0905	1.17%
Pb 220.353†	2263.5	0.2953 mg/L	0.00028	29.24 mg/L	0.027	0.09%
Sb 206.836†	-147.2	0.0131 mg/L	0.00230	1.299 mg/L	0.2278	17.54%
Se 196.026†	-19.8	0.0021 mg/L	0.00315	0.2062 mg/L	0.31197	151.27%
Tl 190.801†	-33.4	-0.0097 mg/L	0.00534	-0.9556 mg/L	0.52913	55.37%
V 292.402†	25204.4	0.1578 mg/L	0.00050	15.62 mg/L	0.049	0.31%
Zn 213.857†	908.2	0.7541 mg/L	0.00006	74.67 mg/L	0.006	0.01%
Pb†	25.7	0.2745 mg/L	0.12022	27.18 mg/L	11.903	43.80%
Ag 338.289†	-601.4	-0.0053 mg/L	0.00085	-0.5282 mg/L	0.08451	16.00%

Sequence No.: 43
Sample ID: 144638-19 spk
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 61
Date Collected: 10/23/2014 5:22:41 PM
Data Type: Original
Initial Sample Vol: 0.492 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-19 spk

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-19 spk

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1608180.9	1.045	mg/L	0.0040				0.38%
Ag 328.068†	36831.4	0.2222	mg/L	0.00019	22.58	mg/L	0.020	0.09%
Al 308.215†	45930.4	81.96	mg/L	0.944	8329	mg/L	95.95	1.15%
As 188.979†	4499.8	2.220	mg/L	0.0216	225.6	mg/L	2.19	0.97%
Ba 233.527†	373872.3	2.519	mg/L	0.0001	256.0	mg/L	0.01	0.00%
Be 313.107†	829394.6	0.4537	mg/L	0.00047	46.11	mg/L	0.047	0.10%
Ca 317.933†	535444.2	119.1	mg/L	2.03	12100	mg/L	206.06	1.70%
Cd 226.502†	56115.2	0.8722	mg/L	0.00095	88.64	mg/L	0.097	0.11%
Co 228.616†	35233.5	0.8879	mg/L	0.00091	90.23	mg/L	0.092	0.10%
Cr 267.716†	250287.6	2.200	mg/L	0.0011	223.6	mg/L	0.11	0.05%
Cu 324.752†	551133.0	2.381	mg/L	0.0024	242.0	mg/L	0.25	0.10%
Fe 273.955†	61813.7	113.0	mg/L	1.91	11490	mg/L	193.82	1.69%
K 766.490†	126113.3	52.77	mg/L	0.665	5363	mg/L	67.55	1.26%
Mg 279.077†	1248827.8	69.27	mg/L	0.016	7040	mg/L	1.65	0.02%
Mn 257.610†	2392423.5	2.994	mg/L	0.0012	304.3	mg/L	0.12	0.04%
Na 589.592†	95720.0	11.85	mg/L	0.120	1205	mg/L	12.16	1.01%
Ni 231.604†	168713.4	4.437	mg/L	0.0030	450.9	mg/L	0.31	0.07%
Pb 220.353†	18944.0	2.596	mg/L	0.0201	263.8	mg/L	2.04	0.77%
Sb 206.836†	5707.3	1.838	mg/L	0.0158	186.8	mg/L	1.61	0.86%
Se 196.026†	5406.0	2.208	mg/L	0.0155	224.4	mg/L	1.58	0.70%
Tl 190.801†	3613.5	2.055	mg/L	0.0204	208.9	mg/L	2.07	0.99%
V 292.402†	161927.9	1.026	mg/L	0.0002	104.3	mg/L	0.02	0.02%
Zn 213.857†	3846.5	3.215	mg/L	0.0080	326.8	mg/L	0.81	0.25%
Pb†	226.1	2.583	mg/L	0.0729	262.5	mg/L	7.41	2.82%
Ag 338.289†	17444.6	0.2355	mg/L	0.00043	23.93	mg/L	0.044	0.18%

Sequence No.: 44
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 7
Date Collected: 10/23/2014 5:26:58 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD

Y 371.029	1457146.5	0.9470 mg/L	0.00615			0.65%
Ag 328.068†	244487.8	1.225 mg/L	0.0014	1.225 mg/L	0.0014	0.11%
QC value within limits for Ag 328.068 Recovery = 97.97%						
Al 308.215†	5568.0	9.945 mg/L	0.1771	9.945 mg/L	0.1771	1.78%
QC value within limits for Al 308.215 Recovery = 99.45%						
As 188.979†	992.6	0.4884 mg/L	0.00045	0.4884 mg/L	0.00045	0.09%
QC value within limits for As 188.979 Recovery = 97.69%						
Ba 233.527†	1445967.4	9.742 mg/L	0.0092	9.742 mg/L	0.0092	0.09%
QC value within limits for Ba 233.527 Recovery = 97.42%						
Be 313.107†	453752.5	0.2482 mg/L	0.00027	0.2482 mg/L	0.00027	0.11%
QC value within limits for Be 313.107 Recovery = 99.28%						
Ca 317.933†	112200.0	24.95 mg/L	0.005	24.95 mg/L	0.005	0.02%
QC value within limits for Ca 317.933 Recovery = 99.80%						
Cd 226.502†	16993.3	0.2667 mg/L	0.00038	0.2667 mg/L	0.00038	0.14%
QC value within limits for Cd 226.502 Recovery = 106.66%						
Co 228.616†	93516.1	2.357 mg/L	0.0055	2.357 mg/L	0.0055	0.23%
QC value within limits for Co 228.616 Recovery = 94.26%						
Cr 267.716†	110580.6	0.9704 mg/L	0.00024	0.9704 mg/L	0.00024	0.03%
QC value within limits for Cr 267.716 Recovery = 97.04%						
Cu 324.752†	281360.6	1.209 mg/L	0.0001	1.209 mg/L	0.0001	0.01%
QC value within limits for Cu 324.752 Recovery = 96.71%						
Fe 273.955†	2751.2	4.993 mg/L	0.0296	4.993 mg/L	0.0296	0.59%
QC value within limits for Fe 273.955 Recovery = 99.86%						
K 766.490†	59479.8	24.89 mg/L	0.063	24.89 mg/L	0.063	0.25%
QC value within limits for K 766.490 Recovery = 99.56%						
Mg 279.077†	458849.1	25.58 mg/L	0.042	25.58 mg/L	0.042	0.16%
QC value within limits for Mg 279.077 Recovery = 102.31%						
Mn 257.610†	1967382.2	2.462 mg/L	0.0010	2.462 mg/L	0.0010	0.04%
QC value within limits for Mn 257.610 Recovery = 98.50%						
Na 589.592†	198867.0	24.63 mg/L	0.037	24.63 mg/L	0.037	0.15%
QC value within limits for Na 589.592 Recovery = 98.51%						
Ni 231.604†	93679.3	2.463 mg/L	0.0032	2.463 mg/L	0.0032	0.13%
QC value within limits for Ni 231.604 Recovery = 98.54%						
Pb 220.353†	3648.1	0.5064 mg/L	0.00078	0.5064 mg/L	0.00078	0.15%
QC value within limits for Pb 220.353 Recovery = 101.27%						
Sb 206.836†	15508.6	4.935 mg/L	0.0313	4.935 mg/L	0.0313	0.63%
QC value within limits for Sb 206.836 Recovery = 98.70%						
Se 196.026†	1192.5	0.4837 mg/L	0.01802	0.4837 mg/L	0.01802	3.73%
QC value within limits for Se 196.026 Recovery = 96.73%						
Tl 190.801†	870.6	0.4630 mg/L	0.00792	0.4630 mg/L	0.00792	1.71%
QC value within limits for Tl 190.801 Recovery = 92.61%						
V 292.402†	402086.7	2.514 mg/L	0.0003	2.514 mg/L	0.0003	0.01%
QC value within limits for V 292.402 Recovery = 100.54%						
Zn 213.857†	3220.6	2.706 mg/L	0.0174	2.706 mg/L	0.0174	0.64%
QC value within limits for Zn 213.857 Recovery = 108.25%						
Pb†	43.5	0.5016 mg/L	0.01947	0.5016 mg/L	0.01947	3.88%
QC value within limits for Pb Recovery = 100.32%						
Ag 338.289†	118065.6	1.255 mg/L	0.0010	1.255 mg/L	0.0010	0.08%

All analyte(s) passed QC.

Sequence No.: 45
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 1
Date Collected: 10/23/2014 5:31:16 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1550164.5	1.007	mg/L	0.0071				0.70%
Ag 328.068†	-543.6	-0.0027	mg/L	0.00049	-0.0027	mg/L	0.00049	17.94%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 308.215†	-8.8	-0.0156	mg/L	0.02388	-0.0156	mg/L	0.02388	152.65%
QC value within limits for Al 308.215 Recovery = Not calculated								

As 188.979†	-3.4	-0.0017 mg/L	0.00390	-0.0017 mg/L	0.00390	231.85%
QC value within limits for As 188.979 Recovery = Not calculated						
Ba 233.527†	225.6	0.0015 mg/L	0.00023	0.0015 mg/L	0.00023	15.10%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	116.8	0.0001 mg/L	0.00002	0.0001 mg/L	0.00002	35.42%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933†	9.0	0.0020 mg/L	0.00308	0.0020 mg/L	0.00308	154.51%
QC value within limits for Ca 317.933 Recovery = Not calculated						
Cd 226.502†	0.6	0.0000 mg/L	0.00011	0.0000 mg/L	0.00011	>999.9%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	13.9	0.0003 mg/L	0.00033	0.0003 mg/L	0.00033	94.64%
QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	8.8	0.0001 mg/L	0.00003	0.0001 mg/L	0.00003	34.25%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	-49.5	-0.0002 mg/L	0.00058	-0.0002 mg/L	0.00058	271.88%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 273.955†	1.9	0.0035 mg/L	0.00539	0.0035 mg/L	0.00539	153.05%
QC value within limits for Fe 273.955 Recovery = Not calculated						
K 766.490†	75.9	0.0318 mg/L	0.02882	0.0318 mg/L	0.02882	90.69%
QC value within limits for K 766.490 Recovery = Not calculated						
Mg 279.077†	-131.3	-0.0073 mg/L	0.00001	-0.0073 mg/L	0.00001	0.13%
QC value within limits for Mg 279.077 Recovery = Not calculated						
Mn 257.610†	108.9	0.0001 mg/L	0.00006	0.0001 mg/L	0.00006	47.07%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Na 589.592†	-23.7	-0.0029 mg/L	0.01106	-0.0029 mg/L	0.01106	377.03%
QC value within limits for Na 589.592 Recovery = Not calculated						
Ni 231.604†	1.9	0.0001 mg/L	0.00019	0.0001 mg/L	0.00019	369.53%
QC value within limits for Ni 231.604 Recovery = Not calculated						
Pb 220.353†	33.2	0.0046 mg/L	0.00143	0.0046 mg/L	0.00143	31.15%
QC value within limits for Pb 220.353 Recovery = Not calculated						
Sb 206.836†	24.3	0.0077 mg/L	0.00208	0.0077 mg/L	0.00208	26.82%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	-0.5	-0.0002 mg/L	0.00980	-0.0002 mg/L	0.00980	>999.9%
QC value within limits for Se 196.026 Recovery = Not calculated						
Tl 190.801†	-12.6	-0.0072 mg/L	0.00235	-0.0072 mg/L	0.00235	32.90%
QC value within limits for Tl 190.801 Recovery = Not calculated						
V 292.402†	-84.2	-0.0005 mg/L	0.00032	-0.0005 mg/L	0.00032	60.74%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	0.8	0.0007 mg/L	0.00262	0.0007 mg/L	0.00262	378.08%
QC value within limits for Zn 213.857 Recovery = Not calculated						
Pb†	-7.5	-0.0871 mg/L	0.01252	-0.0871 mg/L	0.01252	14.38%
QC value within limits for Pb Recovery = Not calculated						
Ag 338.289†	320.5	0.0033 mg/L	0.00072	0.0033 mg/L	0.00072	21.71%

All analyte(s) passed QC.

Sequence No.: 46 **Autosampler Location: 2**
Sample ID: LLQC **Date Collected: 10/23/2014 5:35:28 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 75 **Auto Dilution Factor: 1**

Nebulizer Parameters: LLQC

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: LLQC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1540521.8	1.001	mg/L	0.0149				1.49%
Ag 328.068†	1604.8	0.0081	mg/L	0.00066	0.0081	mg/L	0.00066	8.13%
QC value within limits for Ag 328.068 Recovery = 80.64%								
Al 308.215†	136.7	0.2444	mg/L	0.00578	0.2444	mg/L	0.00578	2.36%
QC value within limits for Al 308.215 Recovery = 122.22%								
As 188.979†	11.7	0.0058	mg/L	0.00190	0.0058	mg/L	0.00190	32.92%
QC value less than the lower limit for As 188.979 Recovery = 57.65%								
Ba 233.527†	14761.0	0.0995	mg/L	0.00042	0.0995	mg/L	0.00042	0.43%
QC value within limits for Ba 233.527 Recovery = 99.45%								
Be 313.107†	8907.0	0.0049	mg/L	0.00003	0.0049	mg/L	0.00003	0.65%

QC value within limits for Be 313.107 Recovery = 97.41%

Ca 317.933†	11326.9	2.519 mg/L	0.0868	2.519 mg/L	0.0868	3.45%
QC value within limits for Ca 317.933 Recovery = 100.75%						
Cd 226.502†	337.9	0.0053 mg/L	0.00001	0.0053 mg/L	0.00001	0.28%
QC value within limits for Cd 226.502 Recovery = 105.75%						
Co 228.616†	1928.2	0.0486 mg/L	0.00073	0.0486 mg/L	0.00073	1.50%
QC value within limits for Co 228.616 Recovery = 97.18%						
Cr 267.716†	1263.5	0.0111 mg/L	0.00026	0.0111 mg/L	0.00026	2.31%
QC value within limits for Cr 267.716 Recovery = 110.90%						
Cu 324.752†	5542.3	0.0238 mg/L	0.00043	0.0238 mg/L	0.00043	1.80%
QC value within limits for Cu 324.752 Recovery = 95.25%						
Fe 273.955†	55.0	0.1002 mg/L	0.01261	0.1002 mg/L	0.01261	12.59%
QC value within limits for Fe 273.955 Recovery = 100.15%						
K 766.490†	6145.6	2.572 mg/L	0.0947	2.572 mg/L	0.0947	3.68%
QC value within limits for K 766.490 Recovery = 102.87%						
Mg 279.077†	45547.7	2.540 mg/L	0.0000	2.540 mg/L	0.0000	0.00%
QC value within limits for Mg 279.077 Recovery = 101.62%						
Mn 257.610†	11827.7	0.0148 mg/L	0.00002	0.0148 mg/L	0.00002	0.11%
QC value within limits for Mn 257.610 Recovery = 98.71%						
Na 589.592†	20464.8	2.534 mg/L	0.0688	2.534 mg/L	0.0688	2.71%
QC value within limits for Na 589.592 Recovery = 101.37%						
Ni 231.604†	1573.3	0.0414 mg/L	0.00034	0.0414 mg/L	0.00034	0.82%
QC value within limits for Ni 231.604 Recovery = 103.43%						
Pb 220.353†	110.0	0.0153 mg/L	0.00173	0.0153 mg/L	0.00173	11.32%
QC value greater than the upper limit for Pb 220.353 Recovery = 152.73%						
Sb 206.836†	200.5	0.0639 mg/L	0.00260	0.0639 mg/L	0.00260	4.08%
QC value within limits for Sb 206.836 Recovery = 106.43%						
Se 196.026†	4.7	0.0020 mg/L	0.00649	0.0020 mg/L	0.00649	332.26%
QC value less than the lower limit for Se 196.026 Recovery = 19.54%						
Tl 190.801†	28.6	0.0157 mg/L	0.00114	0.0157 mg/L	0.00114	7.26%
QC value less than the lower limit for Tl 190.801 Recovery = 62.78%						
V 292.402†	3958.2	0.0248 mg/L	0.00027	0.0248 mg/L	0.00027	1.07%
QC value within limits for V 292.402 Recovery = 99.02%						
Zn 213.857†	76.2	0.0639 mg/L	0.00207	0.0639 mg/L	0.00207	3.24%
QC value within limits for Zn 213.857 Recovery = 106.53%						
Pb†	-0.9	-0.0098 mg/L	0.05224	-0.0098 mg/L	0.05224	531.72%
Ag 338.289†	1174.1	0.0125 mg/L	0.00134	0.0125 mg/L	0.00134	10.75%

QC Failed. Continue with analysis.

==========

Sequence No.: 47 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 10/23/2014 5:39:40 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 75 **Auto Dilution Factor: 1**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1446870.6	0.9404	mg/L	0.00437				0.46%
Ag 328.068†	255816.3	1.281	mg/L	0.0086	1.281	mg/L	0.0086	0.67%
QC value within limits for Ag 328.068 Recovery = 102.50%								
Al 308.215†	5587.6	9.979	mg/L	0.0314	9.979	mg/L	0.0314	0.31%
QC value within limits for Al 308.215 Recovery = 99.79%								
As 188.979†	1013.0	0.4985	mg/L	0.00110	0.4985	mg/L	0.00110	0.22%
QC value within limits for As 188.979 Recovery = 99.70%								
Ba 233.527†	1442310.6	9.718	mg/L	0.0114	9.718	mg/L	0.0114	0.12%
QC value within limits for Ba 233.527 Recovery = 97.18%								
Be 313.107†	452003.1	0.2472	mg/L	0.00005	0.2472	mg/L	0.00005	0.02%
QC value within limits for Be 313.107 Recovery = 98.90%								
Ca 317.933†	112199.2	24.95	mg/L	0.322	24.95	mg/L	0.322	1.29%
QC value within limits for Ca 317.933 Recovery = 99.80%								
Cd 226.502†	16231.9	0.2547	mg/L	0.00197	0.2547	mg/L	0.00197	0.77%
QC value within limits for Cd 226.502 Recovery = 101.87%								
Co 228.616†	95115.9	2.397	mg/L	0.0222	2.397	mg/L	0.0222	0.93%

QC value within limits for Co 228.616 Recovery = 95.88%

Cr 267.716†	113402.8	0.9951 mg/L	0.00796	0.9951 mg/L	0.00796	0.80%

QC value within limits for Cr 267.716 Recovery = 99.51%

Cu 324.752†	294157.0	1.264 mg/L	0.0088	1.264 mg/L	0.0088	0.70%

QC value within limits for Cu 324.752 Recovery = 101.11%

Fe 273.955†	2749.4	4.987 mg/L	0.0102	4.987 mg/L	0.0102	0.21%

QC value within limits for Fe 273.955 Recovery = 99.75%

K 766.490†	59752.5	25.00 mg/L	0.251	25.00 mg/L	0.251	1.00%

QC value within limits for K 766.490 Recovery = 100.02%

Mg 279.077†	456888.1	25.47 mg/L	0.003	25.47 mg/L	0.003	0.01%

QC value within limits for Mg 279.077 Recovery = 101.88%

Mn 257.610†	1960166.7	2.453 mg/L	0.0046	2.453 mg/L	0.0046	0.19%

QC value within limits for Mn 257.610 Recovery = 98.14%

Na 589.592†	199811.8	24.74 mg/L	0.273	24.74 mg/L	0.273	1.10%

QC value within limits for Na 589.592 Recovery = 98.98%

Ni 231.604†	95564.2	2.513 mg/L	0.0281	2.513 mg/L	0.0281	1.12%

QC value within limits for Ni 231.604 Recovery = 100.52%

Pb 220.353†	3735.2	0.5185 mg/L	0.00056	0.5185 mg/L	0.00056	0.11%

QC value within limits for Pb 220.353 Recovery = 103.69%

Sb 206.836†	15223.5	4.843 mg/L	0.0218	4.843 mg/L	0.0218	0.45%

QC value within limits for Sb 206.836 Recovery = 96.86%

Se 196.026†	1199.1	0.4863 mg/L	0.01238	0.4863 mg/L	0.01238	2.55%

QC value within limits for Se 196.026 Recovery = 97.26%

Tl 190.801†	884.3	0.4695 mg/L	0.00608	0.4695 mg/L	0.00608	1.29%

QC value within limits for Tl 190.801 Recovery = 93.90%

V 292.402†	425920.4	2.662 mg/L	0.0273	2.662 mg/L	0.0273	1.03%

QC value within limits for V 292.402 Recovery = 106.49%

Zn 213.857†	3232.3	2.716 mg/L	0.0171	2.716 mg/L	0.0171	0.63%

QC value within limits for Zn 213.857 Recovery = 108.64%

Pb†	41.4	0.4771 mg/L	0.02555	0.4771 mg/L	0.02555	5.35%

QC value within limits for Pb Recovery = 95.41%

Ag 338.289†	121823.7	1.295 mg/L	0.0075	1.295 mg/L	0.0075	0.58%

All analyte(s) passed QC.

Sequence No.: 48
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 1
Date Collected: 10/23/2014 5:44:01 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1549269.0	1.007	mg/L	0.0046				0.46%
Ag 328.068†	-644.1	-0.0032	mg/L	0.00013	-0.0032	mg/L	0.00013	4.09%

QC value within limits for Ag 328.068 Recovery = Not calculated

Al 308.215†	-2.4	-0.0043	mg/L	0.02363	-0.0043	mg/L	0.02363	544.97%

QC value within limits for Al 308.215 Recovery = Not calculated

As 188.979†	4.0	0.0020	mg/L	0.00341	0.0020	mg/L	0.00341	174.14%

QC value within limits for As 188.979 Recovery = Not calculated

Ba 233.527†	197.6	0.0013	mg/L	0.00013	0.0013	mg/L	0.00013	9.78%

QC value within limits for Ba 233.527 Recovery = Not calculated

Be 313.107†	120.2	0.0001	mg/L	0.00002	0.0001	mg/L	0.00002	29.65%

QC value within limits for Be 313.107 Recovery = Not calculated

Ca 317.933†	15.4	0.0034	mg/L	0.00125	0.0034	mg/L	0.00125	36.39%

QC value within limits for Ca 317.933 Recovery = Not calculated

Cd 226.502†	-3.8	-0.0001	mg/L	0.00009	-0.0001	mg/L	0.00009	150.64%

QC value within limits for Cd 226.502 Recovery = Not calculated

Co 228.616†	6.8	0.0002	mg/L	0.00014	0.0002	mg/L	0.00014	82.65%

QC value within limits for Co 228.616 Recovery = Not calculated

Cr 267.716†	32.5	0.0003	mg/L	0.00006	0.0003	mg/L	0.00006	19.58%

QC value within limits for Cr 267.716 Recovery = Not calculated

Cu 324.752†	-197.5	-0.0008	mg/L	0.00049	-0.0008	mg/L	0.00049	58.30%

QC value within limits for Cu 324.752 Recovery = Not calculated

Fe 273.955†	2.4	0.0044	mg/L	0.01750	0.0044	mg/L	0.01750 396.26%
QC value within limits for Fe 273.955 Recovery = Not calculated							
K 766.490†	50.3	0.0210	mg/L	0.03360	0.0210	mg/L	0.03360 159.67%
QC value within limits for K 766.490 Recovery = Not calculated							
Mg 279.077†	-148.6	-0.0083	mg/L	0.00069	-0.0083	mg/L	0.00069 8.29%
QC value within limits for Mg 279.077 Recovery = Not calculated							
Mn 257.610†	87.3	0.0001	mg/L	0.00002	0.0001	mg/L	0.00002 17.19%
QC value within limits for Mn 257.610 Recovery = Not calculated							
Na 589.592†	-24.4	-0.0030	mg/L	0.00215	-0.0030	mg/L	0.00215 71.03%
QC value within limits for Na 589.592 Recovery = Not calculated							
Ni 231.604†	9.7	0.0003	mg/L	0.00002	0.0003	mg/L	0.00002 7.71%
QC value within limits for Ni 231.604 Recovery = Not calculated							
Pb 220.353†	36.6	0.0050	mg/L	0.00030	0.0050	mg/L	0.00030 5.86%
QC value within limits for Pb 220.353 Recovery = Not calculated							
Sb 206.836†	30.8	0.0098	mg/L	0.00446	0.0098	mg/L	0.00446 45.31%
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	9.8	0.0040	mg/L	0.00667	0.0040	mg/L	0.00667 167.05%
QC value within limits for Se 196.026 Recovery = Not calculated							
Tl 190.801†	-8.8	-0.0050	mg/L	0.00042	-0.0050	mg/L	0.00042 8.31%
QC value within limits for Tl 190.801 Recovery = Not calculated							
V 292.402†	-89.2	-0.0006	mg/L	0.00048	-0.0006	mg/L	0.00048 86.19%
QC value within limits for V 292.402 Recovery = Not calculated							
Zn 213.857†	0.9	0.0008	mg/L	0.00172	0.0008	mg/L	0.00172 219.10%
QC value within limits for Zn 213.857 Recovery = Not calculated							
Pb†	-3.9	-0.0454	mg/L	0.06266	-0.0454	mg/L	0.06266 138.10%
QC value within limits for Pb Recovery = Not calculated							
Ag 338.289†	419.1	0.0044	mg/L	0.00065	0.0044	mg/L	0.00065 14.94%

All analyte(s) passed QC.

Sequence No.: 49
Sample ID: Blk 10/22 soil
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 62
Date Collected: 10/23/2014 5:48:13 PM
Data Type: Original
Initial Sample Vol: 50 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: Blk 10/22 soil

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: Blk 10/22 soil

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1631763.7	1.061	mg/L	0.0011				0.11%
Ag 328.068†	-879.3	-0.0044	mg/L	0.00017	-0.0044	mg/L	0.00017	3.84%
Al 308.215†	-13.4	-0.0238	mg/L	0.00188	-0.0238	mg/L	0.00188	7.89%
As 188.979†	-1.6	-0.0008	mg/L	0.00112	-0.0008	mg/L	0.00112	143.01%
Ba 233.527†	-14.4	-0.0001	mg/L	0.00003	-0.0001	mg/L	0.00003	26.56%
Be 313.107†	202.3	0.0001	mg/L	0.00004	0.0001	mg/L	0.00004	36.46%
Ca 317.933†	-177.9	-0.0396	mg/L	0.00177	-0.0396	mg/L	0.00177	4.47%
Cd 226.502†	13.7	0.0002	mg/L	0.00011	0.0002	mg/L	0.00011	50.60%
Co 228.616†	33.7	0.0008	mg/L	0.00001	0.0008	mg/L	0.00001	1.14%
Cr 267.716†	66.4	0.0006	mg/L	0.00000	0.0006	mg/L	0.00000	0.28%
Cu 324.752†	-239.9	-0.0010	mg/L	0.00040	-0.0010	mg/L	0.00040	39.41%
Fe 273.955†	11.4	0.0208	mg/L	0.00212	0.0208	mg/L	0.00212	10.21%
K 766.490†	-56.5	-0.0236	mg/L	0.02622	-0.0236	mg/L	0.02622	110.88%
Mg 279.077†	-256.5	-0.0144	mg/L	0.00166	-0.0144	mg/L	0.00166	11.53%
Mn 257.610†	93.8	0.0001	mg/L	0.00000	0.0001	mg/L	0.00000	1.80%
Na 589.592†	12.7	0.0016	mg/L	0.00670	0.0016	mg/L	0.00670	426.11%
Ni 231.604†	20.1	0.0005	mg/L	0.00019	0.0005	mg/L	0.00019	36.33%
Pb 220.353†	34.3	0.0047	mg/L	0.00486	0.0047	mg/L	0.00486	102.40%
Sb 206.836†	16.4	0.0052	mg/L	0.00227	0.0052	mg/L	0.00227	43.47%
Se 196.026†	-3.5	-0.0014	mg/L	0.00396	-0.0014	mg/L	0.00396	276.08%
Tl 190.801†	-15.4	-0.0088	mg/L	0.00151	-0.0088	mg/L	0.00151	17.21%
V 292.402†	-194.0	-0.0012	mg/L	0.00047	-0.0012	mg/L	0.00047	39.20%
Zn 213.857†	3.7	0.0032	mg/L	0.00280	0.0032	mg/L	0.00280	88.65%
Pb†	-10.4	-0.1201	mg/L	0.00586	-0.1201	mg/L	0.00586	4.88%
Ag 338.289†	204.8	0.0021	mg/L	0.00191	0.0021	mg/L	0.00191	89.17%

Method: 6010C 4ptLL Page 1 Date: 10/24/2014 8:44:07 AM

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Analysis Begun

Start Time: 10/24/2014 8:41:18 AM
Logged In Analyst: icp3
Spectrometer: Optima 7300 DV, S/N 077C0122002

Plasma On Time: 10/24/2014 8:17:18 AM
Technique: ICP Continuous
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer\ICP\Data\Sample Information\102414a.sif
Batch ID: 102414a
Results Data Set: 102414a
Results Library: C:\Users\Public\PerkinElmer\ICP\Data\Results\Oct2014.mdb

10-24-14
Amm

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Method Loaded
Method Name: 6010C 4ptLL
IEC File: 051514.iec
Method Description: 6010C/200.7 TAL Metals

Method Last Saved: 10/15/2014 2:41:18 PM
MSF File:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Al 308.215	Lin Thru 0	Peak Area	Radial	Y 371.029	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Ba 233.527	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Be 313.107	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Ca 317.933	Lin Thru 0	Peak Area	Radial	Y 371.029	Yes
Cd 226.502	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Cr 267.716	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Fe 273.955	Lin Thru 0	Peak Area	Radial	Y 371.029	Yes
K 766.490	Lin Thru 0	Peak Area	Radial	Y 371.029	Yes
Mg 279.077	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Mn 257.610	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Na 589.592	Lin Thru 0	Peak Area	Radial	Y 371.029	Yes
Ni 231.604	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Se 196.026	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Zn 213.857	Lin Thru 0	Peak Area	Radial	Y 371.029	Yes
Pb	Lin Thru 0	Peak Area	Radial	Y 371.029	Yes
Y 371.029	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Ag 338.289	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes

==========

Sequence No.: 1
Sample ID: Calib Blank 1
Analyst:
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 1
Date Collected: 10/24/2014 8:41:19 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: Calib Blank 1

Analyte	Back Pressure	Flow
All	129.0 kPa	0.55 L/min

Mean Data: Calib Blank 1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc.	Units
Y 371.029	1509716.7	12644.45	0.84%	1.0000	mg/L
Ag 328.068†	6424.7	89.14	1.39%	[0.00]	mg/L
Al 308.215†	177.9	11.10	6.24%	[0.00]	mg/L
As 188.979†	7.5	2.22	29.63%	[0.00]	mg/L
Ba 233.527†	380.6	14.44	3.79%	[0.00]	mg/L
Be 313.107†	-2173.9	2.07	0.10%	[0.00]	mg/L
Ca 317.933†	627.5	11.77	1.88%	[0.00]	mg/L
Cd 226.502†	-63.4	8.41	13.26%	[0.00]	mg/L
Co 228.616†	-186.4	6.11	3.28%	[0.00]	mg/L

Cr 267.716†	165.7	5.41	3.27%	[0.00]	mg/L
Cu 324.752†	2777.2	178.78	6.44%	[0.00]	mg/L
Fe 273.955†	-19.9	1.62	8.15%	[0.00]	mg/L
K 766.490†	1602.4	124.07	7.74%	[0.00]	mg/L
Mg 279.077†	2636.0	30.25	1.15%	[0.00]	mg/L
Mn 257.610†	2057.3	26.11	1.27%	[0.00]	mg/L
Na 589.592†	1317.4	45.94	3.49%	[0.00]	mg/L
Ni 231.604†	16.7	8.08	48.49%	[0.00]	mg/L
Pb 220.353†	53.6	11.02	20.56%	[0.00]	mg/L
Sb 206.836†	-189.5	6.13	3.24%	[0.00]	mg/L
Se 196.026†	-24.5	8.88	36.25%	[0.00]	mg/L
Tl 190.801†	85.2	10.56	12.40%	[0.00]	mg/L
V 292.402†	542.8	25.43	4.69%	[0.00]	mg/L
Zn 213.857†	-12.7	0.13	1.01%	[0.00]	mg/L
Pb†	0.1	4.15	>999.9%	[0.00]	mg/L
Ag 338.289†	-1696.7	0.31	0.02%	[0.00]	mg/L

Sequence No.: 2 — **Autosampler Location: 9**
Sample ID: Low Level Cal1 — **Date Collected: 10/24/2014 8:45:31 AM**
Analyst: — **Data Type: Original**
Initial Sample Wt: — **Initial Sample Vol:**
Dilution: — **Sample Prep Vol:**
Wash Time: 75 — **Auto Dilution Factor: 1**

Nebulizer Parameters: Low Level Cal1

Analyte	Back Pressure	Flow
All	129.0 kPa	0.55 L/min

Mean Data: Low Level Cal1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	1491507.7	7798.71	0.52%	0.9879	mg/L
Ag 328.068†	890.7	178.54	20.04%	[0.005]	mg/L
Al 308.215†	44.6	8.38	18.80%	[0.100]	mg/L
As 188.979†	10.6	0.37	3.50%	[0.005]	mg/L
Ba 233.527†	7753.1	44.52	0.57%	[0.050]	mg/L
Be 313.107†	4420.0	71.12	1.61%	[0.0025]	mg/L
Ca 317.933†	5039.3	99.09	1.97%	[1.25]	mg/L
Cd 226.502†	155.0	5.57	3.59%	[0.0025]	mg/L
Co 228.616†	923.1	1.52	0.17%	[0.025]	mg/L
Cr 267.716†	625.6	23.39	3.74%	[0.005]	mg/L
Cu 324.752†	2948.7	20.93	0.71%	[0.0125]	mg/L
Fe 273.955†	30.5	4.04	13.25%	[0.050]	mg/L
K 766.490†	3249.9	59.81	1.84%	[1.25]	mg/L
Mg 279.077†	22444.8	105.44	0.47%	[1.25]	mg/L
Mn 257.610†	6275.9	58.33	0.93%	[0.0075]	mg/L
Na 589.592†	10297.1	199.92	1.94%	[1.25]	mg/L
Ni 231.604†	740.7	26.70	3.60%	[0.020]	mg/L
Pb 220.353†	32.0	0.42	1.32%	[0.005]	mg/L
Sb 206.836†	69.6	13.33	19.15%	[0.030]	mg/L
Se 196.026†	19.5	1.89	9.67%	[0.005]	mg/L
Tl 190.801†	9.6	1.74	18.14%	[0.0125]	mg/L
V 292.402†	2003.5	31.81	1.59%	[0.0125]	mg/L
Zn 213.857†	41.2	0.21	0.50%	[0.030]	mg/L
Ag 338.289†	533.9	50.62	9.48%	[0.005]	mg/L

Sequence No.: 3 — **Autosampler Location: 2**
Sample ID: Low Level Cal — **Date Collected: 10/24/2014 8:49:44 AM**
Analyst: — **Data Type: Original**
Initial Sample Wt: — **Initial Sample Vol:**
Dilution: — **Sample Prep Vol:**
Wash Time: 75 — **Auto Dilution Factor: 1**

Nebulizer Parameters: Low Level Cal

Analyte	Back Pressure	Flow
All	130.0 kPa	0.55 L/min

Mean Data: Low Level Cal

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	1537260.8	95.06	0.01%	1.018	mg/L
Ag 328.068†	1747.2	55.97	3.20%	[0.010]	mg/L
Al 308.215†	125.6	2.82	2.24%	[0.200]	mg/L
As 188.979†	22.6	0.89	3.94%	[0.010]	mg/L
Ba 233.527†	14417.0	33.25	0.23%	[0.100]	mg/L
Be 313.107†	8970.9	29.67	0.33%	[0.005]	mg/L
Ca 317.933†	10886.8	145.53	1.34%	[2.50]	mg/L
Cd 226.502†	321.3	10.61	3.30%	[0.005]	mg/L
Co 228.616†	1879.9	8.17	0.43%	[0.050]	mg/L
Cr 267.716†	1225.0	32.20	2.63%	[0.010]	mg/L
Cu 324.752†	5798.6	148.30	2.56%	[0.025]	mg/L
Fe 273.955†	56.7	1.57	2.78%	[0.100]	mg/L
K 766.490†	5952.3	155.78	2.62%	[2.50]	mg/L
Mg 279.077†	44878.0	72.78	0.16%	[2.50]	mg/L
Mn 257.610†	11354.2	5.55	0.05%	[0.015]	mg/L
Na 589.592†	19512.9	77.29	0.40%	[2.50]	mg/L
Ni 231.604†	1541.8	29.75	1.93%	[0.040]	mg/L
Pb 220.353†	80.6	7.82	9.70%	[0.010]	mg/L
Sb 206.836†	167.2	13.84	8.28%	[0.060]	mg/L
Se 196.026†	24.9	4.44	17.83%	[0.010]	mg/L
Tl 190.801†	21.0	3.11	14.81%	[0.025]	mg/L
V 292.402†	4043.6	68.08	1.68%	[0.025]	mg/L
Zn 213.857†	80.6	0.53	0.65%	[0.060]	mg/L
Ag 338.289†	1060.1	150.31	14.18%	[0.01]	mg/L

Sequence No.: 4 Autosampler Location: 3
Sample ID: Mid Level Cal Date Collected: 10/24/2014 8:53:58 AM
Analyst: Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time: 75 Auto Dilution Factor: 1

Nebulizer Parameters: Mid Level Cal

Analyte	Back Pressure	Flow
All	130.0 kPa	0.55 L/min

Mean Data: Mid Level Cal

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	1628417.6	4140.53	0.25%	1.079	mg/L
Ag 328.068†	9087.6	96.23	1.06%	[0.050]	mg/L
Al 308.215†	539.6	3.44	0.64%	[1.00]	mg/L
As 188.979†	91.6	0.01	0.01%	[0.050]	mg/L
Ba 233.527†	72167.2	76.31	0.11%	[0.500]	mg/L
Be 313.107†	45526.0	28.94	0.06%	[0.025]	mg/L
Ca 317.933†	52217.6	333.13	0.64%	[12.5]	mg/L
Cd 226.502†	1662.9	6.75	0.41%	[0.025]	mg/L
Co 228.616†	9615.4	42.19	0.44%	[0.250]	mg/L
Cr 267.716†	6119.9	78.46	1.28%	[0.050]	mg/L
Cu 324.752†	27863.3	11.19	0.04%	[0.125]	mg/L
Fe 273.955†	271.8	6.51	2.40%	[0.500]	mg/L
K 766.490†	29192.5	111.16	0.38%	[12.5]	mg/L
Mg 279.077†	220726.7	348.95	0.16%	[12.5]	mg/L
Mn 257.610†	56771.4	184.25	0.32%	[0.075]	mg/L
Na 589.592†	95571.3	708.46	0.74%	[12.5]	mg/L
Ni 231.604†	7791.1	59.61	0.77%	[0.200]	mg/L
Pb 220.353†	341.4	14.64	4.29%	[0.050]	mg/L
Sb 206.836†	847.9	5.45	0.64%	[0.300]	mg/L
Se 196.026†	90.9	9.92	10.92%	[0.050]	mg/L
Tl 190.801†	153.9	2.53	1.64%	[0.125]	mg/L
V 292.402†	19667.5	35.41	0.18%	[0.125]	mg/L
Zn 213.857†	395.3	3.75	0.95%	[0.300]	mg/L
Ag 338.289†	4823.8	233.49	4.84%	[0.05]	mg/L

Sequence No.: 5
Sample ID: Pb LL
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 4
Date Collected: 10/24/2014 8:58:12 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Nebulizer Parameters: Pb LL

Analyte	Back Pressure	Flow
All	130.0 kPa	0.55 L/min

Mean Data: Pb LL

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	1451000.4	447.71	0.03%	0.9611	mg/L
Pb†	7.6	1.29	17.03%	[0.100]	mg/L

Sequence No.: 6
Sample ID: Pb HL
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 5
Date Collected: 10/24/2014 9:01:44 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Nebulizer Parameters: Pb HL

Analyte	Back Pressure	Flow
All	131.0 kPa	0.55 L/min

Mean Data: Pb HL

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	1534470.8	10682.59	0.70%	1.016	mg/L
Pb†	994.7	3.06	0.31%	[10.0]	mg/L

Sequence No.: 7
Sample ID: High Level Cal
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 6
Date Collected: 10/24/2014 9:05:15 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Nebulizer Parameters: High Level Cal

Analyte	Back Pressure	Flow
All	131.0 kPa	0.55 L/min

Mean Data: High Level Cal

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	1471068.5	8492.08	0.58%	0.9744	mg/L
Ag 328.068†	391358.1	223.67	0.06%	[2.00]	mg/L
Al 308.215†	5539.4	88.38	1.60%	[10.0]	mg/L
As 188.979†	3600.7	35.15	0.98%	[2.00]	mg/L
Ba 233.527†	1443479.6	2879.14	0.20%	[10.0]	mg/L
Be 313.107†	460644.7	228.73	0.05%	[0.250]	mg/L
Ca 317.933†	218606.1	1641.36	0.75%	[50.0]	mg/L
Cd 226.502†	61181.7	36.57	0.06%	[1.00]	mg/L
Co 228.616†	97031.8	13.46	0.01%	[2.50]	mg/L
Cr 267.716†	219983.0	61.88	0.03%	[2.00]	mg/L
Cu 324.752†	280743.1	233.09	0.08%	[1.25]	mg/L
Fe 273.955†	2861.6	24.44	0.85%	[5.00]	mg/L
K 766.490†	118280.2	816.06	0.69%	[50.0]	mg/L
Mg 279.077†	874297.4	1422.47	0.16%	[50.0]	mg/L
Mn 257.610†	2308907.2	3746.46	0.16%	[3.00]	mg/L
Na 589.592†	384337.0	2559.31	0.67%	[50.0]	mg/L

Ni 231.604†	292496.0	192.09	0.07%	[8.00]	mg/L
Pb 220.353†	6871.0	70.74	1.03%	[1.00]	mg/L
Sb 206.836†	35586.2	315.73	0.89%	[12.0]	mg/L
Se 196.026†	2170.5	17.49	0.81%	[1.00]	mg/L
Tl 190.801†	2840.8	31.02	1.09%	[2.00]	mg/L
V 292.402†	388845.2	272.00	0.07%	[2.50]	mg/L
Zn 213.857†	5237.0	122.67	2.34%	[4.00]	mg/L
Pb†	88.4	4.04	4.57%	[1.00]	mg/L
Ag 338.289†	188082.3	34.03	0.02%	[2.00]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	4	Lin Thru 0	0.0	195700	0.00000	0.999998	
Al 308.215	4	Lin Thru 0	0.0	553.8	0.00000	0.999991	
As 188.979	4	Lin Thru 0	0.0	1800	0.00000	0.999999	
Ba 233.527	4	Lin Thru 0	0.0	144300	0.00000	1.000000	
Be 313.107	4	Lin Thru 0	0.0	1842000	0.00000	0.999999	
Ca 317.933	4	Lin Thru 0	0.0	4360	0.00000	0.999943	
Cd 226.502	4	Lin Thru 0	0.0	61190	0.00000	0.999998	
Co 228.616	4	Lin Thru 0	0.0	38810	0.00000	0.999999	
Cr 267.716	4	Lin Thru 0	0.0	110000	0.00000	0.999996	
Cu 324.752	4	Lin Thru 0	0.0	224600	0.00000	0.999999	
Fe 273.955	4	Lin Thru 0	0.0	572.0	0.00000	0.999987	
K 766.490	4	Lin Thru 0	0.0	2364	0.00000	0.999993	
Mg 279.077	4	Lin Thru 0	0.0	17500	0.00000	0.999996	
Mn 257.610	4	Lin Thru 0	0.0	769600	0.00000	1.000000	
Na 589.592	4	Lin Thru 0	0.0	7685	0.00000	0.999997	
Ni 231.604	4	Lin Thru 0	0.0	36560	0.00000	0.999999	
Pb 220.353	4	Lin Thru 0	0.0	6871	0.00000	0.999998	
Sb 206.836	4	Lin Thru 0	0.0	2965	0.00000	0.999999	
Se 196.026	4	Lin Thru 0	0.0	2170	0.00000	0.999958	
Tl 190.801	4	Lin Thru 0	0.0	1420	0.00000	0.999949	
V 292.402	4	Lin Thru 0	0.0	155500	0.00000	1.000000	
Zn 213.857	4	Lin Thru 0	0.0	1309	0.00000	1.000000	
Pb	3	Lin Thru 0	0.0	99.36	0.00000	0.999936	
Ag 338.289	4	Lin Thru 0	0.0	94040	0.00000	1.000000	

Sequence No.: 8 **Autosampler Location: 6**
Sample ID: IPC **Date Collected: 10/24/2014 9:09:34 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 75 **Auto Dilution Factor: 1**

Nebulizer Parameters: IPC

Analyte	Back Pressure	Flow
All	131.0 kPa	0.55 L/min

Mean Data: IPC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1484809.5	0.9835	mg/L	0.00217				0.22%
Ag 328.068†	391178.1	2.002	mg/L	0.0003	2.002	mg/L	0.0003	0.02%
QC value within limits for Ag 328.068 Recovery = 100.10%								
Al 308.215†	5507.6	9.957	mg/L	0.0250	9.957	mg/L	0.0250	0.25%
QC value within limits for Al 308.215 Recovery = 99.57%								
As 188.979†	3576.4	1.985	mg/L	0.0031	1.985	mg/L	0.0031	0.16%
QC value within limits for As 188.979 Recovery = 99.27%								
Ba 233.527†	1447571.7	10.03	mg/L	0.008	10.03	mg/L	0.008	0.08%
QC value within limits for Ba 233.527 Recovery = 100.28%								
Be 313.107†	461523.4	0.2509	mg/L	0.00004	0.2509	mg/L	0.00004	0.01%
QC value within limits for Be 313.107 Recovery = 100.34%								
Ca 317.933†	219209.5	50.27	mg/L	0.089	50.27	mg/L	0.089	0.18%
QC value within limits for Ca 317.933 Recovery = 100.54%								
Cd 226.502†	61289.8	0.9999	mg/L	0.00119	0.9999	mg/L	0.00119	0.12%
QC value within limits for Cd 226.502 Recovery = 99.99%								
Co 228.616†	97233.9	2.505	mg/L	0.0033	2.505	mg/L	0.0033	0.13%

QC value within limits for Co 228.616 Recovery = 100.22%

Cr 267.716†	220038.6	1.999 mg/L	0.0007	1.999 mg/L	0.0007	0.04%
QC value within limits for Cr 267.716 Recovery = 99.97%						
Cu 324.752†	280983.7	1.252 mg/L	0.0018	1.252 mg/L	0.0018	0.14%
QC value within limits for Cu 324.752 Recovery = 100.14%						
Fe 273.955†	2849.8	4.946 mg/L	0.0466	4.946 mg/L	0.0466	0.94%
QC value within limits for Fe 273.955 Recovery = 98.92%						
K 766.490†	118202.5	50.00 mg/L	0.188	50.00 mg/L	0.188	0.38%
QC value within limits for K 766.490 Recovery = 100.00%						
Mg 279.077†	876626.0	50.08 mg/L	0.002	50.08 mg/L	0.002	0.00%
QC value within limits for Mg 279.077 Recovery = 100.17%						
Mn 257.610†	2315155.7	3.009 mg/L	0.0016	3.009 mg/L	0.0016	0.05%
QC value within limits for Mn 257.610 Recovery = 100.29%						
Na 589.592†	384701.3	50.06 mg/L	0.135	50.06 mg/L	0.135	0.27%
QC value within limits for Na 589.592 Recovery = 100.12%						
Ni 231.604†	292708.7	8.005 mg/L	0.0001	8.005 mg/L	0.0001	0.00%
QC value within limits for Ni 231.604 Recovery = 100.07%						
Pb 220.353†	6765.6	0.9910 mg/L	0.00282	0.9910 mg/L	0.00282	0.28%
QC value within limits for Pb 220.353 Recovery = 99.10%						
Sb 206.836†	35118.8	11.80 mg/L	0.004	11.80 mg/L	0.004	0.03%
QC value within limits for Sb 206.836 Recovery = 98.35%						
Se 196.026†	2156.8	0.9932 mg/L	0.00096	0.9932 mg/L	0.00096	0.10%
QC value within limits for Se 196.026 Recovery = 99.32%						
Tl 190.801†	2806.1	1.943 mg/L	0.0142	1.943 mg/L	0.0142	0.73%
QC value within limits for Tl 190.801 Recovery = 97.15%						
V 292.402†	389139.0	2.518 mg/L	0.0038	2.518 mg/L	0.0038	0.15%
QC value within limits for V 292.402 Recovery = 100.70%						
Zn 213.857†	5195.8	3.924 mg/L	0.0074	3.924 mg/L	0.0074	0.19%
QC value within limits for Zn 213.857 Recovery = 98.09%						
Pb†	84.1	0.8520 mg/L	0.04416	0.8520 mg/L	0.04416	5.18%
QC value less than the lower limit for Pb Recovery = 85.20%						
Ag 338.289†	188462.2	2.056 mg/L	0.0008	2.056 mg/L	0.0008	0.04%

QC Failed. Continue with analysis.

==========

Sequence No.: 9
Sample ID: ICV
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 7
Date Collected: 10/24/2014 9:13:52 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Nebulizer Parameters: ICV

Analyte	Back Pressure	Flow
All	131.0 kPa	0.55 L/min

Mean Data: ICV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Y 371.029	1469478.1	0.9733 mg/L	0.00302			0.31%
Ag 328.068†	235429.3	1.206 mg/L	0.0010	1.206 mg/L	0.0010	0.08%
QC value within limits for Ag 328.068 Recovery = 96.47%						
Al 308.215†	5344.7	9.660 mg/L	0.0706	9.660 mg/L	0.0706	0.73%
QC value within limits for Al 308.215 Recovery = 96.60%						
As 188.979†	878.8	0.4876 mg/L	0.00144	0.4876 mg/L	0.00144	0.30%
QC value within limits for As 188.979 Recovery = 97.51%						
Ba 233.527†	1412066.4	9.782 mg/L	0.0076	9.782 mg/L	0.0076	0.08%
QC value within limits for Ba 233.527 Recovery = 97.82%						
Be 313.107†	454333.1	0.2468 mg/L	0.00001	0.2468 mg/L	0.00001	0.01%
QC value within limits for Be 313.107 Recovery = 98.71%						
Ca 317.933†	106129.7	24.34 mg/L	0.767	24.34 mg/L	0.767	3.15%
QC value within limits for Ca 317.933 Recovery = 97.36%						
Cd 226.502†	15979.3	0.2602 mg/L	0.00049	0.2602 mg/L	0.00049	0.19%
QC value within limits for Cd 226.502 Recovery = 104.09%						
Co 228.616†	89484.8	2.306 mg/L	0.0047	2.306 mg/L	0.0047	0.21%
QC value within limits for Co 228.616 Recovery = 92.23%						
Cr 267.716†	104573.0	0.9498 mg/L	0.00273	0.9498 mg/L	0.00273	0.29%
QC value within limits for Cr 267.716 Recovery = 94.98%						
Cu 324.752†	268766.9	1.197 mg/L	0.0009	1.197 mg/L	0.0009	0.08%
QC value within limits for Cu 324.752 Recovery = 95.79%						

Fe 273.955†	2722.4	4.722 mg/L	0.0180	4.722 mg/L	0.0180	0.38%
QC value within limits for Fe 273.955 Recovery = 94.44%						
K 766.490†	57015.2	24.12 mg/L	0.498	24.12 mg/L	0.498	2.06%
QC value within limits for K 766.490 Recovery = 96.47%						
Mg 279.077†	438864.0	25.07 mg/L	0.007	25.07 mg/L	0.007	0.03%
QC value within limits for Mg 279.077 Recovery = 100.26%						
Mn 257.610†	1904716.1	2.475 mg/L	0.0012	2.475 mg/L	0.0012	0.05%
QC value within limits for Mn 257.610 Recovery = 99.02%						
Na 589.592†	186891.3	24.32 mg/L	0.523	24.32 mg/L	0.523	2.15%
QC value within limits for Na 589.592 Recovery = 97.28%						
Ni 231.604†	88220.7	2.413 mg/L	0.0007	2.413 mg/L	0.0007	0.03%
QC value within limits for Ni 231.604 Recovery = 96.51%						
Pb 220.353†	3332.3	0.4882 mg/L	0.00358	0.4882 mg/L	0.00358	0.73%
QC value within limits for Pb 220.353 Recovery = 97.63%						
Sb 206.836†	13912.8	4.674 mg/L	0.0258	4.674 mg/L	0.0258	0.55%
QC value within limits for Sb 206.836 Recovery = 93.49%						
Se 196.026†	1083.9	0.4985 mg/L	0.00016	0.4985 mg/L	0.00016	0.03%
QC value within limits for Se 196.026 Recovery = 99.70%						
Tl 190.801†	733.4	0.4841 mg/L	0.00366	0.4841 mg/L	0.00366	0.76%
QC value within limits for Tl 190.801 Recovery = 96.83%						
V 292.402†	384246.5	2.478 mg/L	0.0003	2.478 mg/L	0.0003	0.01%
QC value within limits for V 292.402 Recovery = 99.11%						
Zn 213.857†	3254.2	2.471 mg/L	0.0080	2.471 mg/L	0.0080	0.32%
QC value within limits for Zn 213.857 Recovery = 98.84%						
Pb†	42.8	0.4299 mg/L	0.01472	0.4299 mg/L	0.01472	3.42%
QC value less than the lower limit for Pb Recovery = 85.98%						
Ag 338.289†	112986.4	1.228 mg/L	0.0010	1.228 mg/L	0.0010	0.08%

QC Failed. Continue with analysis.

Sequence No.: 10
Sample ID: ICB
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 1
Date Collected: 10/24/2014 9:18:08 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Nebulizer Parameters: ICB

Analyte	Back Pressure	Flow
All	131.0 kPa	0.55 L/min

Mean Data: ICB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1556920.9	1.031	mg/L	0.0090				0.87%
Ag 328.068†	-270.7	-0.0014	mg/L	0.00065	-0.0014	mg/L	0.00065	47.19%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 308.215†	-12.0	-0.0216	mg/L	0.03356	-0.0216	mg/L	0.03356	155.50%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	3.9	0.0022	mg/L	0.00039	0.0022	mg/L	0.00039	18.03%
QC value within limits for As 188.979 Recovery = Not calculated								
Ba 233.527†	200.8	0.0014	mg/L	0.00006	0.0014	mg/L	0.00006	4.67%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	111.9	0.0001	mg/L	0.00001	0.0001	mg/L	0.00001	11.67%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933†	22.3	0.0051	mg/L	0.00059	0.0051	mg/L	0.00059	11.61%
QC value within limits for Ca 317.933 Recovery = Not calculated								
Cd 226.502†	-6.4	-0.0001	mg/L	0.00004	-0.0001	mg/L	0.00004	35.99%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	6.4	0.0002	mg/L	0.00003	0.0002	mg/L	0.00003	17.10%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	4.1	0.0000	mg/L	0.00027	0.0000	mg/L	0.00027	719.26%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 324.752†	-10.8	-0.0000	mg/L	0.00043	-0.0000	mg/L	0.00043	911.36%
QC value within limits for Cu 324.752 Recovery = Not calculated								
Fe 273.955†	6.2	0.0108	mg/L	0.01093	0.0108	mg/L	0.01093	101.55%
QC value within limits for Fe 273.955 Recovery = Not calculated								
K 766.490†	124.1	0.0525	mg/L	0.02198	0.0525	mg/L	0.02198	41.87%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 279.077†	-112.4	-0.0065	mg/L	0.00279	-0.0065	mg/L	0.00279	43.24%

QC value within limits for Mg 279.077 Recovery = Not calculated

Mn 257.610†	14.3	0.0000 mg/L	0.00000	0.0000 mg/L	0.00000	15.42%

QC value within limits for Mn 257.610 Recovery = Not calculated

Na 589.592†	248.7	0.0324 mg/L	0.00461	0.0324 mg/L	0.00461	14.23%

QC value within limits for Na 589.592 Recovery = Not calculated

Ni 231.604†	17.3	0.0005 mg/L	0.00002	0.0005 mg/L	0.00002	4.71%

QC value within limits for Ni 231.604 Recovery = Not calculated

Pb 220.353†	18.8	0.0028 mg/L	0.00490	0.0028 mg/L	0.00490	178.09%

QC value within limits for Pb 220.353 Recovery = Not calculated

Sb 206.836†	23.7	0.0080 mg/L	0.00514	0.0080 mg/L	0.00514	64.42%

QC value within limits for Sb 206.836 Recovery = Not calculated

Se 196.026†	4.0	0.0018 mg/L	0.00199	0.0018 mg/L	0.00199	108.47%

QC value within limits for Se 196.026 Recovery = Not calculated

Tl 190.801†	-9.9	-0.0070 mg/L	0.00804	-0.0070 mg/L	0.00804	114.90%

QC value within limits for Tl 190.801 Recovery = Not calculated

V 292.402†	16.0	0.0001 mg/L	0.00037	0.0001 mg/L	0.00037	360.34%

QC value within limits for V 292.402 Recovery = Not calculated

Zn 213.857†	0.1	0.0001 mg/L	0.00083	0.0001 mg/L	0.00083	>999.9%

QC value within limits for Zn 213.857 Recovery = Not calculated

Pb†	-2.3	-0.0230 mg/L	0.03501	-0.0230 mg/L	0.03501	152.28%

QC value within limits for Pb Recovery = Not calculated

Ag 338.289†	105.1	0.0011 mg/L	0.00068	0.0011 mg/L	0.00068	60.40%

All analyte(s) passed QC.

Sequence No.: 11 **Autosampler Location: 2**
Sample ID: LLQC **Date Collected: 10/24/2014 9:22:19 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 75 **Auto Dilution Factor: 1**

Nebulizer Parameters: LLQC

Analyte	Back Pressure	Flow
All	131.0 kPa	0.55 L/min

Mean Data: LLQC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1542865.0	1.022	mg/L	0.0134				1.31%
Ag 328.068†	1615.1	0.0083	mg/L	0.00031	0.0083	mg/L	0.00031	3.70%
QC value within limits for Ag 328.068 Recovery = 82.97%								
Al 308.215†	153.8	0.2782	mg/L	0.01181	0.2782	mg/L	0.01181	4.24%
QC value greater than the upper limit for Al 308.215 Recovery = 139.08%								
As 188.979†	15.4	0.0085	mg/L	0.00264	0.0085	mg/L	0.00264	30.91%
QC value within limits for As 188.979 Recovery = 85.32%								
Ba 233.527†	14503.9	0.1005	mg/L	0.00039	0.1005	mg/L	0.00039	0.39%
QC value within limits for Ba 233.527 Recovery = 100.48%								
Be 313.107†	8921.6	0.0048	mg/L	0.00003	0.0048	mg/L	0.00003	0.58%
QC value within limits for Be 313.107 Recovery = 96.89%								
Ca 317.933†	11173.9	2.563	mg/L	0.0145	2.563	mg/L	0.0145	0.56%
QC value within limits for Ca 317.933 Recovery = 102.50%								
Cd 226.502†	329.3	0.0053	mg/L	0.00015	0.0053	mg/L	0.00015	2.81%
QC value within limits for Cd 226.502 Recovery = 106.98%								
Co 228.616†	1885.7	0.0486	mg/L	0.00058	0.0486	mg/L	0.00058	1.18%
QC value within limits for Co 228.616 Recovery = 97.18%								
Cr 267.716†	1237.9	0.0112	mg/L	0.00017	0.0112	mg/L	0.00017	1.54%
QC value within limits for Cr 267.716 Recovery = 112.46%								
Cu 324.752†	5877.9	0.0262	mg/L	0.00051	0.0262	mg/L	0.00051	1.94%
QC value within limits for Cu 324.752 Recovery = 104.74%								
Fe 273.955†	54.0	0.0941	mg/L	0.00364	0.0941	mg/L	0.00364	3.87%
QC value within limits for Fe 273.955 Recovery = 94.05%								
K 766.490†	6264.5	2.650	mg/L	0.0487	2.650	mg/L	0.0487	1.84%
QC value within limits for K 766.490 Recovery = 106.00%								
Mg 279.077†	44637.8	2.551	mg/L	0.0087	2.551	mg/L	0.0087	0.34%
QC value within limits for Mg 279.077 Recovery = 102.03%								
Mn 257.610†	11436.1	0.0149	mg/L	0.00004	0.0149	mg/L	0.00004	0.27%
QC value within limits for Mn 257.610 Recovery = 99.10%								
Na 589.592†	20052.2	2.609	mg/L	0.0148	2.609	mg/L	0.0148	0.57%
QC value within limits for Na 589.592 Recovery = 104.37%								

Ni 231.604†	1569.0	0.0429 mg/L	0.00105	0.0429 mg/L	0.00105	2.45%
QC value within limits for Ni 231.604 Recovery = 107.28%						
Pb 220.353†	82.0	0.0120 mg/L	0.00183	0.0120 mg/L	0.00183	15.19%
QC value within limits for Pb 220.353 Recovery = 120.24%						
Sb 206.836†	168.4	0.0566 mg/L	0.00634	0.0566 mg/L	0.00634	11.19%
QC value within limits for Sb 206.836 Recovery = 94.37%						
Se 196.026†	25.1	0.0116 mg/L	0.00496	0.0116 mg/L	0.00496	42.72%
QC value within limits for Se 196.026 Recovery = 116.07%						
Tl 190.801†	21.6	0.0146 mg/L	0.00093	0.0146 mg/L	0.00093	6.34%
QC value less than the lower limit for Tl 190.801 Recovery = 58.52%						
V 292.402†	3924.2	0.0253 mg/L	0.00072	0.0253 mg/L	0.00072	2.86%
QC value within limits for V 292.402 Recovery = 101.27%						
Zn 213.857†	78.8	0.0597 mg/L	0.00283	0.0597 mg/L	0.00283	4.75%
QC value within limits for Zn 213.857 Recovery = 99.47%						
Pb†	-2.2	-0.0220 mg/L	0.03685	-0.0220 mg/L	0.03685	167.44%
Ag 338.289†	1130.5	0.0123 mg/L	0.00147	0.0123 mg/L	0.00147	11.94%
QC Failed. Continue with analysis.						

Sequence No.: 12 **Autosampler Location: 4**
Sample ID: LLQC Radial Pb **Date Collected: 10/24/2014 9:26:32 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 75 **Auto Dilution Factor: 1**

Nebulizer Parameters: LLQC Radial Pb

Analyte	Back Pressure	Flow
All	131.0 kPa	0.55 L/min

Mean Data: LLQC Radial Pb

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1521771.8	1.008	mg/L	0.0064				0.64%
Ag 328.068†	-264.4	-0.0013	mg/L	0.00020	-0.0013	mg/L	0.00020	14.70%
Al 308.215†	-10.0	-0.0180	mg/L	0.03068	-0.0180	mg/L	0.03068	169.98%
As 188.979†	5.6	0.0031	mg/L	0.00011	0.0031	mg/L	0.00011	3.50%
Ba 233.527†	19.9	0.0001	mg/L	0.00008	0.0001	mg/L	0.00008	56.81%
Be 313.107†	45.2	0.0000	mg/L	0.00002	0.0000	mg/L	0.00002	61.73%
Ca 317.933†	-80.3	-0.0184	mg/L	0.00272	-0.0184	mg/L	0.00272	14.74%
Cd 226.502†	-5.0	-0.0001	mg/L	0.00008	-0.0001	mg/L	0.00008	101.91%
Co 228.616†	0.4	0.0000	mg/L	0.00015	0.0000	mg/L	0.00015	>999.9%
Cr 267.716†	-4.5	-0.0000	mg/L	0.00010	-0.0000	mg/L	0.00010	240.64%
Cu 324.752†	26.2	0.0001	mg/L	0.00008	0.0001	mg/L	0.00008	70.48%
Fe 273.955†	5.7	0.0100	mg/L	0.00377	0.0100	mg/L	0.00377	37.62%
K 766.490†	58.5	0.0247	mg/L	0.00592	0.0247	mg/L	0.00592	23.94%
Mg 279.077†	-54.8	-0.0032	mg/L	0.00138	-0.0032	mg/L	0.00138	43.50%
Mn 257.610†	-30.9	-0.0000	mg/L	0.00006	-0.0000	mg/L	0.00006	160.85%
Na 589.592†	109.2	0.0142	mg/L	0.00366	0.0142	mg/L	0.00366	25.77%
Ni 231.604†	-1.6	-0.0000	mg/L	0.00009	-0.0000	mg/L	0.00009	201.63%
Pb 220.353†	688.5	0.1002	mg/L	0.00237	0.1002	mg/L	0.00237	2.37%
Sb 206.836†	-1.6	-0.0005	mg/L	0.00664	-0.0005	mg/L	0.00664	>999.9%
Se 196.026†	1.1	0.0005	mg/L	0.00587	0.0005	mg/L	0.00587	>999.9%
Tl 190.801†	-16.7	-0.0118	mg/L	0.00402	-0.0118	mg/L	0.00402	34.12%
V 292.402†	148.3	0.0010	mg/L	0.00089	0.0010	mg/L	0.00089	93.62%
Zn 213.857†	6.8	0.0052	mg/L	0.00618	0.0052	mg/L	0.00618	118.76%
Pb†	3.0	0.0301	mg/L	0.04667	0.0301	mg/L	0.04667	154.91%
QC value less than the lower limit for Pb Recovery = 30.13%								
Ag 338.289†	119.5	0.0013	mg/L	0.00054	0.0013	mg/L	0.00054	42.77%
QC Failed. Continue with analysis.								

Sequence No.: 13 **Autosampler Location: 8**
Sample ID: ICSAB **Date Collected: 10/24/2014 9:30:46 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 75 **Auto Dilution Factor: 1**

Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	131.0 kPa	0.55 L/min

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1440019.5	0.9538	mg/L	0.00147				0.15%
Ag 328.068†	142099.7	0.7574	mg/L	0.00109	0.7574	mg/L	0.00109	0.14%
QC value within limits for Ag 328.068 Recovery = 100.99%								
Al 308.215†	149721.4	270.3	mg/L	1.86	270.3	mg/L	1.86	0.69%
QC value within limits for Al 308.215 Recovery = 108.14%								
As 188.979†	4510.8	2.500	mg/L	0.0033	2.500	mg/L	0.0033	0.13%
QC value within limits for As 188.979 Recovery = 100.00%								
Ba 233.527†	106812.8	0.7400	mg/L	0.00008	0.7400	mg/L	0.00008	0.01%
QC value within limits for Ba 233.527 Recovery = 98.66%								
Be 313.107†	446528.4	0.2425	mg/L	0.00007	0.2425	mg/L	0.00007	0.03%
QC value within limits for Be 313.107 Recovery = 97.00%								
Ca 317.933†	1144387.7	262.4	mg/L	0.37	262.4	mg/L	0.37	0.14%
QC value within limits for Ca 317.933 Recovery = 104.98%								
Cd 226.502†	44331.4	0.7128	mg/L	0.00060	0.7128	mg/L	0.00060	0.08%
QC value within limits for Cd 226.502 Recovery = 95.04%								
Co 228.616†	26629.6	0.6862	mg/L	0.00177	0.6862	mg/L	0.00177	0.26%
QC value within limits for Co 228.616 Recovery = 91.49%								
Cr 267.716†	77439.2	0.7052	mg/L	0.00063	0.7052	mg/L	0.00063	0.09%
QC value within limits for Cr 267.716 Recovery = 94.03%								
Cu 324.752†	167607.3	0.7582	mg/L	0.00171	0.7582	mg/L	0.00171	0.23%
QC value within limits for Cu 324.752 Recovery = 101.09%								
Fe 273.955†	52960.5	92.57	mg/L	0.988	92.57	mg/L	0.988	1.07%
QC value within limits for Fe 273.955 Recovery = 92.57%								
K 766.490†	126027.3	53.31	mg/L	0.033	53.31	mg/L	0.033	0.06%
QC value within limits for K 766.490 Recovery = 106.62%								
Mg 279.077†	4555284.4	260.0	mg/L	0.33	260.0	mg/L	0.33	0.13%
QC value within limits for Mg 279.077 Recovery = 104.01%								
Mn 257.610†	366362.5	0.4762	mg/L	0.00046	0.4762	mg/L	0.00046	0.10%
QC value within limits for Mn 257.610 Recovery = 95.24%								
Na 589.592†	766.9	0.0998	mg/L	0.00062	0.0998	mg/L	0.00062	0.62%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	26221.0	0.7171	mg/L	0.00188	0.7171	mg/L	0.00188	0.26%
QC value within limits for Ni 231.604 Recovery = 95.62%								
Pb 220.353†	17518.9	2.462	mg/L	0.0052	2.462	mg/L	0.0052	0.21%
QC value within limits for Pb 220.353 Recovery = 98.50%								
Sb 206.836†	-261.0	-0.0102	mg/L	0.00239	-0.0102	mg/L	0.00239	23.32%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	2684.1	1.264	mg/L	0.0114	1.264	mg/L	0.0114	0.90%
QC value within limits for Se 196.026 Recovery = 101.14%								
Tl 190.801†	3393.0	2.375	mg/L	0.0074	2.375	mg/L	0.0074	0.31%
QC value within limits for Tl 190.801 Recovery = 95.00%								
V 292.402†	115061.9	0.7453	mg/L	0.00079	0.7453	mg/L	0.00079	0.11%
QC value within limits for V 292.402 Recovery = 99.37%								
Zn 213.857†	954.4	0.6976	mg/L	0.00024	0.6976	mg/L	0.00024	0.03%
QC value within limits for Zn 213.857 Recovery = 93.01%								
Pb†	236.1	2.247	mg/L	0.0660	2.247	mg/L	0.0660	2.94%
QC value within limits for Pb Recovery = 89.87%								
Ag 338.289†	72280.4	0.7837	mg/L	0.00179	0.7837	mg/L	0.00179	0.23%

All analyte(s) passed QC.

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Sequence No.: 14
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 7
Date Collected: 10/24/2014 9:35:04 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	131.0 kPa	0.55 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1436009.2	0.9512	mg/L	0.00184				0.19%
Ag 328.068†	249421.5	1.278	mg/L	0.0124	1.278	mg/L	0.0124	0.97%
QC value within limits for Ag 328.068 Recovery = 102.20%								
Al 308.215†	5417.2	9.790	mg/L	0.0401	9.790	mg/L	0.0401	0.41%
QC value within limits for Al 308.215 Recovery = 97.90%								
As 188.979†	908.4	0.5040	mg/L	0.00063	0.5040	mg/L	0.00063	0.13%
QC value within limits for As 188.979 Recovery = 100.80%								
Ba 233.527†	1407376.6	9.750	mg/L	0.0123	9.750	mg/L	0.0123	0.13%
QC value within limits for Ba 233.527 Recovery = 97.50%								
Be 313.107†	455627.7	0.2475	mg/L	0.00004	0.2475	mg/L	0.00004	0.02%
QC value within limits for Be 313.107 Recovery = 98.99%								
Ca 317.933†	111477.1	25.57	mg/L	0.176	25.57	mg/L	0.176	0.69%
QC value within limits for Ca 317.933 Recovery = 102.26%								
Cd 226.502†	15488.5	0.2522	mg/L	0.00407	0.2522	mg/L	0.00407	1.61%
QC value within limits for Cd 226.502 Recovery = 100.87%								
Co 228.616†	92423.7	2.382	mg/L	0.0257	2.382	mg/L	0.0257	1.08%
QC value within limits for Co 228.616 Recovery = 95.26%								
Cr 267.716†	108755.6	0.9877	mg/L	0.01269	0.9877	mg/L	0.01269	1.28%
QC value within limits for Cr 267.716 Recovery = 98.77%								
Cu 324.752†	284852.3	1.269	mg/L	0.0121	1.269	mg/L	0.0121	0.95%
QC value within limits for Cu 324.752 Recovery = 101.52%								
Fe 273.955†	2814.7	4.881	mg/L	0.0184	4.881	mg/L	0.0184	0.38%
QC value within limits for Fe 273.955 Recovery = 97.61%								
K 766.490†	59562.2	25.20	mg/L	0.095	25.20	mg/L	0.095	0.38%
QC value within limits for K 766.490 Recovery = 100.78%								
Mg 279.077†	445163.9	25.42	mg/L	0.011	25.42	mg/L	0.011	0.04%
QC value within limits for Mg 279.077 Recovery = 101.70%								
Mn 257.610†	1895334.5	2.463	mg/L	0.0015	2.463	mg/L	0.0015	0.06%
QC value within limits for Mn 257.610 Recovery = 98.53%								
Na 589.592†	194400.0	25.30	mg/L	0.120	25.30	mg/L	0.120	0.47%
QC value within limits for Na 589.592 Recovery = 101.18%								
Ni 231.604†	91415.2	2.500	mg/L	0.0307	2.500	mg/L	0.0307	1.23%
QC value within limits for Ni 231.604 Recovery = 100.01%								
Pb 220.353†	3512.1	0.5145	mg/L	0.00023	0.5145	mg/L	0.00023	0.04%
QC value within limits for Pb 220.353 Recovery = 102.90%								
Sb 206.836†	13776.5	4.628	mg/L	0.0520	4.628	mg/L	0.0520	1.12%
QC value within limits for Sb 206.836 Recovery = 92.56%								
Se 196.026†	1086.0	0.4995	mg/L	0.00491	0.4995	mg/L	0.00491	0.98%
QC value within limits for Se 196.026 Recovery = 99.90%								
Tl 190.801†	754.6	0.4973	mg/L	0.00442	0.4973	mg/L	0.00442	0.89%
QC value within limits for Tl 190.801 Recovery = 99.45%								
V 292.402†	409919.0	2.643	mg/L	0.0289	2.643	mg/L	0.0289	1.09%
QC value within limits for V 292.402 Recovery = 105.73%								
Zn 213.857†	3352.7	2.546	mg/L	0.0088	2.546	mg/L	0.0088	0.35%
QC value within limits for Zn 213.857 Recovery = 101.83%								
Pb†	44.9	0.4519	mg/L	0.03545	0.4519	mg/L	0.03545	7.85%
QC value within limits for Pb Recovery = 90.38%								
Ag 338.289†	118377.2	1.287	mg/L	0.0110	1.287	mg/L	0.0110	0.85%

All analyte(s) passed QC.

Sequence No.: 15
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 1
Date Collected: 10/24/2014 9:39:26 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow
All	131.0 kPa	0.55 L/min

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1552107.7	1.028	mg/L	0.0046				0.45%
Ag 328.068†	-165.4	-0.0008	mg/L	0.00032	-0.0008	mg/L	0.00032	38.01%

QC value within limits for Ag 328.068 Recovery = Not calculated

Al 308.215†	10.4	0.0187 mg/L	0.00419	0.0187 mg/L	0.00419	22.39%	
QC value within limits for Al 308.215 Recovery = Not calculated							
As 188.979†	6.9	0.0039 mg/L	0.00166	0.0039 mg/L	0.00166	43.01%	1
QC value within limits for As 188.979 Recovery = Not calculated							
Ba 233.527†	195.7	0.0014 mg/L	0.00007	0.0014 mg/L	0.00007	5.20%	
QC value within limits for Ba 233.527 Recovery = Not calculated							
Be 313.107†	50.6	0.0000 mg/L	0.00001	0.0000 mg/L	0.00001	22.28%	
QC value within limits for Be 313.107 Recovery = Not calculated							
Ca 317.933†	40.1	0.0092 mg/L	0.00403	0.0092 mg/L	0.00403	43.79%	
QC value within limits for Ca 317.933 Recovery = Not calculated							
Cd 226.502†	-3.5	-0.0001 mg/L	0.00009	-0.0001 mg/L	0.00009	147.72%	
QC value within limits for Cd 226.502 Recovery = Not calculated							
Co 228.616†	4.4	0.0001 mg/L	0.00014	0.0001 mg/L	0.00014	120.83%	
QC value within limits for Co 228.616 Recovery = Not calculated							
Cr 267.716†	-6.6	-0.0001 mg/L	0.00002	-0.0001 mg/L	0.00002	39.27%	
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu 324.752†	320.9	0.0014 mg/L	0.00038	0.0014 mg/L	0.00038	26.77%	
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe 273.955†	9.4	0.0163 mg/L	0.00818	0.0163 mg/L	0.00818	50.04%	
QC value within limits for Fe 273.955 Recovery = Not calculated							
K 766.490†	134.1	0.0567 mg/L	0.04458	0.0567 mg/L	0.04458	78.56%	
QC value within limits for K 766.490 Recovery = Not calculated							
Mg 279.077†	-74.8	-0.0043 mg/L	0.00162	-0.0043 mg/L	0.00162	37.31%	
QC value within limits for Mg 279.077 Recovery = Not calculated							
Mn 257.610†	118.7	0.0002 mg/L	0.00002	0.0002 mg/L	0.00002	14.36%	
QC value within limits for Mn 257.610 Recovery = Not calculated							
Na 589.592†	-41.8	-0.0054 mg/L	0.00611	-0.0054 mg/L	0.00611	112.21%	
QC value within limits for Na 589.592 Recovery = Not calculated							
Ni 231.604†	14.3	0.0004 mg/L	0.00016	0.0004 mg/L	0.00016	39.83%	
QC value within limits for Ni 231.604 Recovery = Not calculated							
Pb 220.353†	6.7	0.0010 mg/L	0.00237	0.0010 mg/L	0.00237	243.28%	1
QC value within limits for Pb 220.353 Recovery = Not calculated							
Sb 206.836†	16.8	0.0057 mg/L	0.00009	0.0057 mg/L	0.00009	1.64%	
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	7.6	0.0035 mg/L	0.00155	0.0035 mg/L	0.00155	44.15%	
QC value within limits for Se 196.026 Recovery = Not calculated							
Tl 190.801†	-13.4	-0.0094 mg/L	0.00442	-0.0094 mg/L	0.00442	46.85%	
QC value within limits for Tl 190.801 Recovery = Not calculated							
V 292.402†	80.2	0.0005 mg/L	0.00029	0.0005 mg/L	0.00029	56.68%	
QC value within limits for V 292.402 Recovery = Not calculated							
Zn 213.857†	-0.8	-0.0006 mg/L	0.00114	-0.0006 mg/L	0.00114	189.30%	
QC value within limits for Zn 213.857 Recovery = Not calculated							
Pb†	-2.8	-0.0280 mg/L	0.04668	-0.0280 mg/L	0.04668	166.67%	
QC value within limits for Pb Recovery = Not calculated							
Ag 338.289†	168.8	0.0018 mg/L	0.00061	0.0018 mg/L	0.00061	34.22%	

All analyte(s) passed QC.

Sequence No.: 16
Sample ID: Blk 10/23 soil
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 38
Date Collected: 10/24/2014 9:43:37 AM
Data Type: Original
Initial Sample Vol: 50 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: Blk 10/23 soil

Analyte	Back Pressure	Flow
All	131.0 kPa	0.55 L/min

Mean Data: Blk 10/23 soil

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1621862.5	1.074	mg/L	0.0010				0.09%
Ag 328.068†	-464.6	-0.0023	mg/L	0.00067	-0.0023	mg/L	0.00067	28.71%
Al 308.215†	46.9	0.0846	mg/L	0.01320	0.0846	mg/L	0.01320	15.60%
As 188.979†	6.9	0.0038	mg/L	0.00137	0.0038	mg/L	0.00137	35.98%
Ba 233.527†	102.5	0.0007	mg/L	0.00014	0.0007	mg/L	0.00014	19.70%
Be 313.107†	170.8	0.0001	mg/L	0.00001	0.0001	mg/L	0.00001	14.11%
Ca 317.933†	509.0	0.1167	mg/L	0.00145	0.1167	mg/L	0.00145	1.24%

Cd 226.502†	9.8	0.0002 mg/L	0.00000	0.0002 mg/L	0.00000	1.28%
Co 228.616†	21.1	0.0005 mg/L	0.00015	0.0005 mg/L	0.00015	26.73%
Cr 267.716†	153.6	0.0014 mg/L	0.00029	0.0014 mg/L	0.00029	20.40%
Cu 324.752†	277.4	0.0012 mg/L	0.00002	0.0012 mg/L	0.00002	1.70%
Fe 273.955†	59.5	0.1040 mg/L	0.00066	0.1040 mg/L	0.00066	0.63%
K 766.490†	23.6	0.0100 mg/L	0.02644	0.0100 mg/L	0.02644	264.46%
Mg 279.077†	286.1	0.0160 mg/L	0.00081	0.0160 mg/L	0.00081	5.07%
Mn 257.610†	1289.4	0.0017 mg/L	0.00003	0.0017 mg/L	0.00003	1.96%
Na 589.592†	33.3	0.0043 mg/L	0.00398	0.0043 mg/L	0.00398	91.76%
Ni 231.604†	44.2	0.0012 mg/L	0.00033	0.0012 mg/L	0.00033	27.12%
Pb 220.353†	10.8	0.0015 mg/L	0.00070	0.0015 mg/L	0.00070	45.40%
Sb 206.836†	6.1	0.0021 mg/L	0.00375	0.0021 mg/L	0.00375	179.72%
Se 196.026†	1.5	0.0007 mg/L	0.00911	0.0007 mg/L	0.00911	>999.9%
Tl 190.801†	-17.1	-0.0120 mg/L	0.00032	-0.0120 mg/L	0.00032	2.68%
V 292.402†	92.7	0.0006 mg/L	0.00012	0.0006 mg/L	0.00012	20.44%
Zn 213.857†	5.1	0.0039 mg/L	0.00132	0.0039 mg/L	0.00132	33.98%
Pb†	-5.3	-0.0533 mg/L	0.02325	-0.0533 mg/L	0.02325	43.61%
Ag 338.289†	392.3	0.0042 mg/L	0.00050	0.0042 mg/L	0.00050	11.88%

Sequence No.: 17
Sample ID: lcs
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 39
Date Collected: 10/24/2014 9:47:50 AM
Data Type: Original
Initial Sample Vol: 50 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: lcs

Analyte	Back Pressure	Flow
All	131.0 kPa	0.55 L/min

Mean Data: lcs

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1531445.5	1.014	mg/L	0.0058				0.57%
Ag 328.068†	47712.3	0.2451	mg/L	0.00025	0.2451	mg/L	0.00025	0.10%
Al 308.215†	1404.1	2.541	mg/L	0.0315	2.541	mg/L	0.0315	1.24%
As 188.979†	4429.0	2.459	mg/L	0.0152	2.459	mg/L	0.0152	0.62%
Ba 233.527†	349997.3	2.425	mg/L	0.0005	2.425	mg/L	0.0005	0.02%
Be 313.107†	904128.2	0.4912	mg/L	0.00009	0.4912	mg/L	0.00009	0.02%
Ca 317.933†	17550.2	4.025	mg/L	0.0088	4.025	mg/L	0.0088	0.22%
Cd 226.502†	61732.1	1.008	mg/L	0.0007	1.008	mg/L	0.0007	0.07%
Co 228.616†	38026.1	0.9798	mg/L	0.00251	0.9798	mg/L	0.00251	0.26%
Cr 267.716†	259278.4	2.357	mg/L	0.0002	2.357	mg/L	0.0002	0.01%
Cu 324.752†	550500.5	2.452	mg/L	0.0008	2.452	mg/L	0.0008	0.03%
Fe 273.955†	1392.2	2.424	mg/L	0.0143	2.424	mg/L	0.0143	0.59%
K 766.490†	99037.4	41.89	mg/L	0.150	41.89	mg/L	0.150	0.36%
Mg 279.077†	141036.9	8.052	mg/L	0.0051	8.052	mg/L	0.0051	0.06%
Mn 257.610†	749969.6	0.9747	mg/L	0.00001	0.9747	mg/L	0.00001	0.00%
Na 589.592†	90811.3	11.82	mg/L	0.010	11.82	mg/L	0.010	0.08%
Ni 231.604†	186294.5	5.095	mg/L	0.0061	5.095	mg/L	0.0061	0.12%
Pb 220.353†	17082.3	2.489	mg/L	0.0144	2.489	mg/L	0.0144	0.58%
Sb 206.836†	6827.4	2.251	mg/L	0.0097	2.251	mg/L	0.0097	0.43%
Se 196.026†	5314.6	2.450	mg/L	0.0012	2.450	mg/L	0.0012	0.05%
Tl 190.801†	3459.3	2.423	mg/L	0.0052	2.423	mg/L	0.0052	0.21%
V 292.402†	143904.2	0.9437	mg/L	0.00035	0.9437	mg/L	0.00035	0.04%
Zn 213.857†	3245.3	2.453	mg/L	0.0088	2.453	mg/L	0.0088	0.36%
Pb†	228.7	2.301	mg/L	0.0354	2.301	mg/L	0.0354	1.54%
Ag 338.289†	19547.4	0.2671	mg/L	0.00009	0.2671	mg/L	0.00009	0.03%

Sequence No.: 18
Sample ID: lcs dup
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 40
Date Collected: 10/24/2014 9:52:04 AM
Data Type: Original
Initial Sample Vol: 50 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: lcs dup

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: lcs dup

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1541853.4	1.021	mg/L	0.0075				0.74%
Ag 328.068†	47407.0	0.2435	mg/L	0.00032	0.2435	mg/L	0.00032	0.13%
Al 308.215†	1372.2	2.483	mg/L	0.0387	2.483	mg/L	0.0387	1.56%
As 188.979†	4469.5	2.481	mg/L	0.0003	2.481	mg/L	0.0003	0.01%
Ba 233.527†	347505.6	2.407	mg/L	0.0072	2.407	mg/L	0.0072	0.30%
Be 313.107†	894548.6	0.4860	mg/L	0.00073	0.4860	mg/L	0.00073	0.15%
Ca 317.933†	17898.1	4.105	mg/L	0.0501	4.105	mg/L	0.0501	1.22%
Cd 226.502†	61389.3	1.002	mg/L	0.0013	1.002	mg/L	0.0013	0.13%
Co 228.616†	37718.4	0.9719	mg/L	0.00243	0.9719	mg/L	0.00243	0.25%
Cr 267.716†	257781.1	2.343	mg/L	0.0009	2.343	mg/L	0.0009	0.04%
Cu 324.752†	550470.3	2.451	mg/L	0.0000	2.451	mg/L	0.0000	0.00%
Fe 273.955†	1370.1	2.385	mg/L	0.0386	2.385	mg/L	0.0386	1.62%
K 766.490†	100087.9	42.34	mg/L	0.561	42.34	mg/L	0.561	1.32%
Mg 279.077†	139847.6	7.984	mg/L	0.0241	7.984	mg/L	0.0241	0.30%
Mn 257.610†	747757.9	0.9718	mg/L	0.00096	0.9718	mg/L	0.00096	0.10%
Na 589.592†	91875.7	11.96	mg/L	0.154	11.96	mg/L	0.154	1.29%
Ni 231.604†	186044.0	5.088	mg/L	0.0057	5.088	mg/L	0.0057	0.11%
Pb 220.353†	17311.8	2.523	mg/L	0.0079	2.523	mg/L	0.0079	0.31%
Sb 206.836†	6912.1	2.280	mg/L	0.0143	2.280	mg/L	0.0143	0.63%
Se 196.026†	5354.2	2.468	mg/L	0.0089	2.468	mg/L	0.0089	0.36%
Tl 190.801†	3510.0	2.459	mg/L	0.0148	2.459	mg/L	0.0148	0.60%
V 292.402†	144146.7	0.9452	mg/L	0.00046	0.9452	mg/L	0.00046	0.05%
Zn 213.857†	3276.1	2.477	mg/L	0.0207	2.477	mg/L	0.0207	0.84%
Pb†	233.6	2.350	mg/L	0.0067	2.350	mg/L	0.0067	0.28%
Ag 338.289†	19381.0	0.2650	mg/L	0.00100	0.2650	mg/L	0.00100	0.38%

Sequence No.: 19
Sample ID: 144638-04
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 44
Date Collected: 10/24/2014 9:56:18 AM
Data Type: Original
Initial Sample Vol: 0.495 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-04

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-04

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1672373.9	1.108	mg/L	0.0017				0.16%
Ag 328.068†	-9192.4	-0.0033	mg/L	0.00025	-0.3328	mg/L	0.02481	7.46%
Al 308.215†	36842.9	66.52	mg/L	0.701	6720	mg/L	70.78	1.05%
As 188.979†	73.8	0.0470	mg/L	0.00178	4.751	mg/L	0.1800	3.79%
Ba 233.527†	91431.4	0.6334	mg/L	0.00214	63.98	mg/L	0.216	0.34%
Be 313.107†	8686.2	0.0047	mg/L	0.00006	0.4781	mg/L	0.00577	1.21%
Ca 317.933†	624185.1	143.1	mg/L	1.49	14460	mg/L	150.55	1.04%
Cd 226.502†	930.2	0.0025	mg/L	0.00014	0.2561	mg/L	0.01405	5.49%
Co 228.616†	1928.2	0.0497	mg/L	0.00006	5.019	mg/L	0.0065	0.13%
Cr 267.716†	11374.1	0.1055	mg/L	0.00013	10.65	mg/L	0.013	0.12%
Cu 324.752†	45649.8	0.2201	mg/L	0.00037	22.23	mg/L	0.037	0.17%
Fe 273.955†	74852.5	130.9	mg/L	1.77	13220	mg/L	179.18	1.36%
K 766.490†	20755.5	8.780	mg/L	0.1078	886.8	mg/L	10.89	1.23%
Mg 279.077†	1085774.5	61.60	mg/L	0.006	6222	mg/L	0.61	0.01%
Mn 257.610†	2273908.4	2.955	mg/L	0.0005	298.4	mg/L	0.05	0.02%
Na 589.592†	4626.6	0.6020	mg/L	0.01293	60.81	mg/L	1.306	2.15%
Ni 231.604†	5514.3	0.1508	mg/L	0.00038	15.23	mg/L	0.038	0.25%
Pb 220.353†	3457.6	0.4912	mg/L	0.00164	49.61	mg/L	0.165	0.33%
Sb 206.836†	-138.6	0.0199	mg/L	0.00510	2.008	mg/L	0.5150	25.64%
Se 196.026†	-11.0	0.0057	mg/L	0.00701	0.5734	mg/L	0.70771	123.43%
Tl 190.801†	-45.2	-0.0203	mg/L	0.00295	-2.046	mg/L	0.2978	14.56%
V 292.402†	20832.8	0.1347	mg/L	0.00007	13.61	mg/L	0.007	0.05%

Zn 213.857†	1378.5	1.037	mg/L	0.0051	104.7	mg/L	0.51	0.49%
Pb†	48.4	0.4754	mg/L	0.02275	48.02	mg/L	2.298	4.78%
Ag 338.289†	0.8	0.0009	mg/L	0.00042	0.0937	mg/L	0.04247	45.33%

Sequence No.: 20
Sample ID: 144638-06
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 46
Date Collected: 10/24/2014 10:00:37 AM
Data Type: Original
Initial Sample Vol: 0.48 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-06

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-06

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1701116.0	1.127	mg/L	0.0146				1.30%
Ag 328.068†	-11678.5	-0.0062	mg/L	0.00071	-0.6467	mg/L	0.07346	11.36%
Al 308.215†	70707.5	127.7	mg/L	2.68	13300	mg/L	279.52	2.10%
As 188.979†	44.2	0.0300	mg/L	0.00048	3.122	mg/L	0.0503	1.61%
Ba 233.527†	134487.7	0.9317	mg/L	0.00268	97.05	mg/L	0.279	0.29%
Be 313.107†	12062.4	0.0066	mg/L	0.00003	0.6852	mg/L	0.00278	0.41%
Ca 317.933†	137283.0	31.48	mg/L	0.661	3280	mg/L	68.89	2.10%
Cd 226.502†	1153.7	0.0041	mg/L	0.00001	0.4257	mg/L	0.00150	0.35%
Co 228.616†	3191.8	0.0822	mg/L	0.00170	8.567	mg/L	0.1768	2.06%
Cr 267.716†	19217.9	0.1772	mg/L	0.00308	18.46	mg/L	0.321	1.74%
Cu 324.752†	41907.6	0.2072	mg/L	0.00020	21.58	mg/L	0.021	0.10%
Fe 273.955†	91599.1	160.1	mg/L	3.42	16680	mg/L	355.84	2.13%
K 766.490†	28365.8	12.00	mg/L	0.301	1250	mg/L	31.32	2.51%
Mg 279.077†	641949.6	36.14	mg/L	0.148	3764	mg/L	15.44	0.41%
Mn 257.610†	2026124.6	2.633	mg/L	0.0054	274.2	mg/L	0.56	0.21%
Na 589.592†	3309.6	0.4307	mg/L	0.02658	44.86	mg/L	2.769	6.17%
Ni 231.604†	9482.3	0.2593	mg/L	0.00525	27.01	mg/L	0.547	2.02%
Pb 220.353†	1399.9	0.1672	mg/L	0.00431	17.42	mg/L	0.449	2.58%
Sb 206.836†	-239.7	0.0089	mg/L	0.00336	0.9250	mg/L	0.34979	37.82%
Se 196.026†	20.5	0.0251	mg/L	0.00506	2.616	mg/L	0.5269	20.14%
Tl 190.801†	-6.1	0.0054	mg/L	0.00225	0.5624	mg/L	0.23460	41.71%
V 292.402†	31731.1	0.2054	mg/L	0.00024	21.39	mg/L	0.025	0.12%
Zn 213.857†	1084.9	0.8240	mg/L	0.00869	85.83	mg/L	0.905	1.05%
Pb†	20.5	0.1216	mg/L	0.01711	12.67	mg/L	1.783	14.07%
Ag 338.289†	-116.4	0.0030	mg/L	0.00132	0.3084	mg/L	0.13760	44.61%

Sequence No.: 21
Sample ID: 144638-10
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 50
Date Collected: 10/24/2014 10:04:52 AM
Data Type: Original
Initial Sample Vol: 0.472 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-10

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-10

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1679743.1	1.113	mg/L	0.0074				0.67%
Ag 328.068†	-10064.0	-0.0050	mg/L	0.00088	-0.5258	mg/L	0.09295	17.68%
Al 308.215†	40789.5	73.65	mg/L	1.257	7802	mg/L	133.12	1.71%
As 188.979†	63.5	0.0416	mg/L	0.00031	4.403	mg/L	0.0328	0.74%
Ba 233.527†	91325.8	0.6327	mg/L	0.00064	67.02	mg/L	0.067	0.10%
Be 313.107†	7766.6	0.0042	mg/L	0.00001	0.4491	mg/L	0.00089	0.20%
Ca 317.933†	177316.9	40.66	mg/L	0.875	4308	mg/L	92.64	2.15%
Cd 226.502†	1071.0	0.0048	mg/L	0.00006	0.5112	mg/L	0.00678	1.33%

Co 228.616†	2160.6	0.0557	mg/L	0.00026	5.898	mg/L	0.0279	0.47%
Cr 267.716†	14803.0	0.1368	mg/L	0.00090	14.49	mg/L	0.095	0.66%
Cu 324.752†	52604.9	0.2521	mg/L	0.00095	26.71	mg/L	0.100	0.38%
Fe 273.955†	79624.4	139.2	mg/L	3.19	14740	mg/L	337.95	2.29%
K 766.490†	19290.1	8.160	mg/L	0.1700	864.4	mg/L	18.01	2.08%
Mg 279.077†	500346.3	28.12	mg/L	0.066	2978	mg/L	7.04	0.24%
Mn 257.610†	1855733.1	2.411	mg/L	0.0045	255.4	mg/L	0.48	0.19%
Na 589.592†	2724.0	0.3545	mg/L	0.00340	37.55	mg/L	0.360	0.96%
Ni 231.604†	7044.5	0.1927	mg/L	0.00206	20.41	mg/L	0.218	1.07%
Pb 220.353†	5473.5	0.7794	mg/L	0.00642	82.57	mg/L	0.680	0.82%
Sb 206.836†	-187.0	0.0079	mg/L	0.00033	0.8321	mg/L	0.03492	4.20%
Se 196.026†	20.4	0.0204	mg/L	0.00411	2.158	mg/L	0.4352	20.16%
Tl 190.801†	-22.6	-0.0052	mg/L	0.00265	-0.5506	mg/L	0.28100	51.04%
V 292.402†	22077.0	0.1430	mg/L	0.00005	15.15	mg/L	0.005	0.04%
Zn 213.857†	1641.6	1.249	mg/L	0.0090	132.3	mg/L	0.95	0.72%
Pb†	74.4	0.7052	mg/L	0.08541	74.71	mg/L	9.048	12.11%
Ag 338.289†	-116.5	0.0018	mg/L	0.00148	0.1868	mg/L	0.15713	84.12%

Sequence No.: 22
Sample ID: 144638-15
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 55
Date Collected: 10/24/2014 10:09:06 AM
Data Type: Original
Initial Sample Vol: 0.516 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-15

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-15

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1683574.7	1.115	mg/L	0.0044				0.40%
Ag 328.068†	-12099.4	-0.0047	mg/L	0.00007	-0.4521	mg/L	0.00668	1.48%
Al 308.215†	72657.3	131.2	mg/L	0.77	12710	mg/L	74.45	0.59%
As 188.979†	44.1	0.0305	mg/L	0.00260	2.957	mg/L	0.2519	8.52%
Ba 233.527†	124176.6	0.8603	mg/L	0.00303	83.36	mg/L	0.293	0.35%
Be 313.107†	11569.3	0.0063	mg/L	0.00002	0.6117	mg/L	0.00213	0.35%
Ca 317.933†	111337.4	25.53	mg/L	0.130	2474	mg/L	12.63	0.51%
Cd 226.502†	1207.2	0.0040	mg/L	0.00004	0.3911	mg/L	0.00341	0.87%
Co 228.616†	3033.1	0.0782	mg/L	0.00083	7.573	mg/L	0.0801	1.06%
Cr 267.716†	21137.5	0.1948	mg/L	0.00168	18.88	mg/L	0.163	0.86%
Cu 324.752†	40848.0	0.2039	mg/L	0.00048	19.75	mg/L	0.047	0.24%
Fe 273.955†	97932.0	171.2	mg/L	0.72	16590	mg/L	70.08	0.42%
K 766.490†	27762.2	11.74	mg/L	0.072	1138	mg/L	6.99	0.61%
Mg 279.077†	691330.1	38.92	mg/L	0.031	3771	mg/L	3.05	0.08%
Mn 257.610†	1679010.2	2.182	mg/L	0.0000	211.4	mg/L	0.00	0.00%
Na 589.592†	3607.2	0.4694	mg/L	0.00565	45.48	mg/L	0.548	1.20%
Ni 231.604†	9589.7	0.2623	mg/L	0.00252	25.41	mg/L	0.244	0.96%
Pb 220.353†	1813.8	0.2267	mg/L	0.00365	21.97	mg/L	0.354	1.61%
Sb 206.836†	-280.9	0.0000	mg/L	0.00198	0.0019	mg/L	0.19222	>999.9%
Se 196.026†	36.2	0.0335	mg/L	0.00252	3.248	mg/L	0.2442	7.52%
Tl 190.801†	-18.2	-0.0034	mg/L	0.00885	-0.3257	mg/L	0.85735	263.20%
V 292.402†	32690.9	0.2117	mg/L	0.00043	20.51	mg/L	0.041	0.20%
Zn 213.857†	1225.7	0.9322	mg/L	0.00654	90.33	mg/L	0.634	0.70%
Pb†	25.0	0.1623	mg/L	0.02227	15.73	mg/L	2.158	13.72%
Ag 338.289†	-309.0	0.0014	mg/L	0.00220	0.1383	mg/L	0.21356	154.46%

Sequence No.: 23
Sample ID: 144638-16
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 56
Date Collected: 10/24/2014 10:13:21 AM
Data Type: Original
Initial Sample Vol: 0.508 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-16

Analyte	Back Pressure	Flow

All	132.0 kPa	0.55 L/min

Mean Data: 144638-16

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1670254.0	1.106	mg/L	0.0006				0.05%
Ag 328.068†	-9358.4	-0.0043	mg/L	0.00075	-0.4242	mg/L	0.07336	17.30%
Al 308.215†	36428.3	65.78	mg/L	0.173	6474	mg/L	16.98	0.26%
As 188.979†	67.6	0.0436	mg/L	0.00221	4.291	mg/L	0.2174	5.07%
Ba 233.527†	93104.5	0.6450	mg/L	0.00084	63.48	mg/L	0.082	0.13%
Be 313.107†	6769.1	0.0037	mg/L	0.00002	0.3639	mg/L	0.00230	0.63%
Ca 317.933†	393905.0	90.34	mg/L	0.005	8891	mg/L	0.44	0.00%
Cd 226.502†	975.9	0.0037	mg/L	0.00002	0.3658	mg/L	0.00245	0.67%
Co 228.616†	1886.2	0.0486	mg/L	0.00046	4.784	mg/L	0.0457	0.95%
Cr 267.716†	14347.2	0.1325	mg/L	0.00011	13.04	mg/L	0.011	0.08%
Cu 324.752†	47445.8	0.2280	mg/L	0.00026	22.44	mg/L	0.026	0.11%
Fe 273.955†	74568.5	130.4	mg/L	0.06	12830	mg/L	5.68	0.04%
K 766.490†	18168.1	7.685	mg/L	0.0527	756.4	mg/L	5.18	0.69%
Mg 279.077†	906205.8	51.34	mg/L	0.003	5053	mg/L	0.27	0.01%
Mn 257.610†	1566894.4	2.036	mg/L	0.0005	200.4	mg/L	0.05	0.02%
Na 589.592†	2809.5	0.3656	mg/L	0.01936	35.98	mg/L	1.906	5.30%
Ni 231.604†	5998.6	0.1641	mg/L	0.00078	16.15	mg/L	0.077	0.47%
Pb 220.353†	3613.4	0.5126	mg/L	0.00001	50.45	mg/L	0.001	0.00%
Sb 206.836†	-162.2	0.0110	mg/L	0.00020	1.078	mg/L	0.0200	1.86%
Se 196.026†	8.7	0.0149	mg/L	0.00460	1.462	mg/L	0.4524	30.94%
Tl 190.801†	-52.9	-0.0275	mg/L	0.00152	-2.706	mg/L	0.1498	5.54%
V 292.402†	20431.2	0.1324	mg/L	0.00045	13.03	mg/L	0.044	0.34%
Zn 213.857†	1463.7	1.108	mg/L	0.0065	109.0	mg/L	0.64	0.58%
Pb†	52.2	0.5006	mg/L	0.00019	49.27	mg/L	0.018	0.04%
Ag 338.289†	-43.6	0.0018	mg/L	0.00007	0.1761	mg/L	0.00648	3.68%

Sequence No.: 24
Sample ID: 144638-18
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 58
Date Collected: 10/24/2014 10:17:35 AM
Data Type: Original
Initial Sample Vol: 0.54 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-18

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-18

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1628568.8	1.079	mg/L	0.0014				0.13%
Ag 328.068†	-7988.2	-0.0027	mg/L	0.00036	-0.2476	mg/L	0.03373	13.62%
Al 308.215†	37544.4	67.79	mg/L	0.088	6277	mg/L	8.12	0.13%
As 188.979†	5.4	0.0079	mg/L J	0.00853	0.7288	mg/L	0.78955	108.34%
Ba 233.527†	49989.8	0.3463	mg/L	0.00033	32.07	mg/L	0.031	0.10%
Be 313.107†	5628.3	0.0031	mg/L	0.00001	0.2845	mg/L	0.00094	0.33%
Ca 317.933†	647104.7	148.4	mg/L	0.94	13740	mg/L	87.42	0.64%
Cd 226.502†	764.9	0.0012	mg/L	0.00015	0.1121	mg/L	0.01420	12.67%
Co 228.616†	1524.0	0.0393	mg/L	0.00015	3.636	mg/L	0.0136	0.37%
Cr 267.716†	10961.4	0.1014	mg/L	0.00011	9.391	mg/L	0.0101	0.11%
Cu 324.752†	28575.8	0.1419	mg/L	0.00003	13.14	mg/L	0.003	0.02%
Fe 273.955†	65339.5	114.2	mg/L	0.06	10580	mg/L	5.92	0.06%
K 766.490†	23565.7	9.969	mg/L	0.0587	923.0	mg/L	5.43	0.59%
Mg 279.077†	1335816.2	75.95	mg/L	0.112	7032	mg/L	10.40	0.15%
Mn 257.610†	1759886.7	2.287	mg/L	0.0021	211.7	mg/L	0.19	0.09%
Na 589.592†	6140.2	0.7990	mg/L	0.03323	73.98	mg/L	3.077	4.16%
Ni 231.604†	3216.0	0.0880	mg/L	0.00023	8.144	mg/L	0.0214	0.26%
Pb 220.353†	2988.4	0.4214	mg/L	0.00169	39.02	mg/L	0.156	0.40%
Sb 206.836†	-133.7	0.0148	mg/L	0.00533	1.372	mg/L	0.4938	36.01%
Se 196.026†	-25.0	-0.0009	mg/L	0.00509	-0.0845	mg/L	0.47170	558.03%
Tl 190.801†	-44.6	-0.0225	mg/L	0.00443	-2.085	mg/L	0.4098	19.65%
V 292.402†	24479.6	0.1582	mg/L	0.00042	14.64	mg/L	0.039	0.27%
Zn 213.857†	1180.0	0.8851	mg/L	0.00332	81.95	mg/L	0.307	0.37%

Pb†	37.3	0.3645 mg/L	0.01348	33.75 mg/L	1.248	3.70%
Ag 338.289†	-541.6	-0.0050 mg/L	0.00144	-0.4596 mg/L	0.13303	28.94%

Sequence No.: 25
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 7
Date Collected: 10/24/2014 10:21:54 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1483124.5	0.9824	mg/L	0.00258				0.26%
Ag 328.068†	234499.4	1.201	mg/L	0.0016	1.201	mg/L	0.0016	0.13%
QC value within limits for Ag 328.068 Recovery = 96.10%								
Al 308.215†	5402.0	9.763	mg/L	0.0455	9.763	mg/L	0.0455	0.47%
QC value within limits for Al 308.215 Recovery = 97.63%								
As 188.979†	889.0	0.4932	mg/L	0.00494	0.4932	mg/L	0.00494	1.00%
QC value within limits for As 188.979 Recovery = 98.65%								
Ba 233.527†	1400788.5	9.704	mg/L	0.0002	9.704	mg/L	0.0002	0.00%
QC value within limits for Ba 233.527 Recovery = 97.04%								
Be 313.107†	446399.7	0.2425	mg/L	0.00012	0.2425	mg/L	0.00012	0.05%
QC value within limits for Be 313.107 Recovery = 96.99%								
Ca 317.933†	109698.2	25.16	mg/L	0.027	25.16	mg/L	0.027	0.11%
QC value within limits for Ca 317.933 Recovery = 100.63%								
Cd 226.502†	15848.8	0.2581	mg/L	0.00144	0.2581	mg/L	0.00144	0.56%
QC value within limits for Cd 226.502 Recovery = 103.23%								
Co 228.616†	88716.5	2.286	mg/L	0.0009	2.286	mg/L	0.0009	0.04%
QC value within limits for Co 228.616 Recovery = 91.44%								
Cr 267.716†	104704.5	0.9510	mg/L	0.00070	0.9510	mg/L	0.00070	0.07%
QC value within limits for Cr 267.716 Recovery = 95.10%								
Cu 324.752†	269399.1	1.200	mg/L	0.0007	1.200	mg/L	0.0007	0.06%
QC value within limits for Cu 324.752 Recovery = 96.01%								
Fe 273.955†	2795.5	4.850	mg/L	0.0319	4.850	mg/L	0.0319	0.66%
QC value within limits for Fe 273.955 Recovery = 96.99%								
K 766.490†	57433.3	24.29	mg/L	0.034	24.29	mg/L	0.034	0.14%
QC value within limits for K 766.490 Recovery = 97.18%								
Mg 279.077†	440138.2	25.14	mg/L	0.036	25.14	mg/L	0.036	0.14%
QC value within limits for Mg 279.077 Recovery = 100.55%								
Mn 257.610†	1911480.7	2.484	mg/L	0.0015	2.484	mg/L	0.0015	0.06%
QC value within limits for Mn 257.610 Recovery = 99.37%								
Na 589.592†	189081.4	24.60	mg/L	0.017	24.60	mg/L	0.017	0.07%
QC value within limits for Na 589.592 Recovery = 98.42%								
Ni 231.604†	88280.5	2.414	mg/L	0.0073	2.414	mg/L	0.0073	0.30%
QC value within limits for Ni 231.604 Recovery = 96.58%								
Pb 220.353†	3338.5	0.4890	mg/L	0.00197	0.4890	mg/L	0.00197	0.40%
QC value within limits for Pb 220.353 Recovery = 97.80%								
Sb 206.836†	13690.8	4.600	mg/L	0.0258	4.600	mg/L	0.0258	0.56%
QC value within limits for Sb 206.836 Recovery = 91.99%								
Se 196.026†	1042.3	0.4794	mg/L	0.00185	0.4794	mg/L	0.00185	0.39%
QC value within limits for Se 196.026 Recovery = 95.87%								
Tl 190.801†	738.4	0.4879	mg/L	0.01192	0.4879	mg/L	0.01192	2.44%
QC value within limits for Tl 190.801 Recovery = 97.57%								
V 292.402†	384327.4	2.478	mg/L	0.0004	2.478	mg/L	0.0004	0.02%
QC value within limits for V 292.402 Recovery = 99.13%								
Zn 213.857†	3287.1	2.496	mg/L	0.0121	2.496	mg/L	0.0121	0.48%
QC value within limits for Zn 213.857 Recovery = 99.84%								
Pb†	42.7	0.4288	mg/L	0.00194	0.4288	mg/L	0.00194	0.45%
QC value less than the lower limit for Pb Recovery = 85.75%								
Ag 338.289†	112731.9	1.225	mg/L	0.0007	1.225	mg/L	0.0007	0.05%

QC Failed. Continue with analysis.

Sequence No.: 26

Autosampler Location: 1

Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 75

Date Collected: 10/24/2014 10:26:11 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1565808.4	1.037	mg/L	0.0144				1.39%
Ag 328.068†	-120.5	-0.0006	mg/L	0.00049	-0.0006	mg/L	0.00049	80.28%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 308.215†	4.0	0.0072	mg/L	0.02052	0.0072	mg/L	0.02052	284.34%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	6.4	0.0036	mg/L	0.00140	0.0036	mg/L	0.00140	38.98%
QC value within limits for As 188.979 Recovery = Not calculated								
Ba 233.527†	228.8	0.0016	mg/L	0.00018	0.0016	mg/L	0.00018	11.48%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	146.8	0.0001	mg/L	0.00001	0.0001	mg/L	0.00001	14.16%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933†	26.4	0.0061	mg/L	0.00079	0.0061	mg/L	0.00079	13.01%
QC value within limits for Ca 317.933 Recovery = Not calculated								
Cd 226.502†	-2.3	-0.0000	mg/L	0.00001	-0.0000	mg/L	0.00001	19.22%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	15.4	0.0004	mg/L	0.00012	0.0004	mg/L	0.00012	29.53%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	1.7	0.0000	mg/L	0.00008	0.0000	mg/L	0.00008	535.86%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 324.752†	225.4	0.0010	mg/L	0.00033	0.0010	mg/L	0.00033	32.80%
QC value within limits for Cu 324.752 Recovery = Not calculated								
Fe 273.955†	9.7	0.0169	mg/L	0.00494	0.0169	mg/L	0.00494	29.21%
QC value within limits for Fe 273.955 Recovery = Not calculated								
K 766.490†	-83.2	-0.0352	mg/L	0.05288	-0.0352	mg/L	0.05288	150.28%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 279.077†	-120.6	-0.0069	mg/L	0.00289	-0.0069	mg/L	0.00289	41.54%
QC value within limits for Mg 279.077 Recovery = Not calculated								
Mn 257.610†	169.0	0.0002	mg/L	0.00002	0.0002	mg/L	0.00002	7.01%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Na 589.592†	-71.4	-0.0093	mg/L	0.01362	-0.0093	mg/L	0.01362	146.52%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	22.3	0.0006	mg/L	0.00027	0.0006	mg/L	0.00027	44.09%
QC value within limits for Ni 231.604 Recovery = Not calculated								
Pb 220.353†	1.0	0.0002	mg/L	0.00134	0.0002	mg/L	0.00134	881.08%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	6.1	0.0021	mg/L	0.00327	0.0021	mg/L	0.00327	158.45%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	0.2	0.0001	mg/L	0.00206	0.0001	mg/L	0.00206	>999.9%
QC value within limits for Se 196.026 Recovery = Not calculated								
Tl 190.801†	-9.3	-0.0066	mg/L	0.00378	-0.0066	mg/L	0.00378	57.66%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 292.402†	79.9	0.0005	mg/L	0.00034	0.0005	mg/L	0.00034	66.00%
QC value within limits for V 292.402 Recovery = Not calculated								
Zn 213.857†	-0.3	-0.0003	mg/L	0.00229	-0.0003	mg/L	0.00229	876.37%
QC value within limits for Zn 213.857 Recovery = Not calculated								
Pb†	-8.4	-0.0842	mg/L	0.03726	-0.0842	mg/L	0.03726	44.26%
QC value within limits for Pb Recovery = Not calculated								
Ag 338.289†	104.9	0.0011	mg/L	0.00178	0.0011	mg/L	0.00178	159.06%

All analyte(s) passed QC.

Sequence No.: 27
Sample ID: 144638-19
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 59
Date Collected: 10/24/2014 10:30:24 AM
Data Type: Original
Initial Sample Vol: 0.479 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-19

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-19

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1639722.3	1.086	mg/L	0.0015				0.14%
Ag 328.068†	-7609.5	-0.0038	mg/L	0.00003	-0.3935	mg/L	0.00347	0.88%
Al 308.215†	39033.0	70.48	mg/L	0.156	7357	mg/L	16.32	0.22%
As 188.979†	15.3	0.0126	mg/L	0.00366	1.317	mg/L	0.3818	28.99%
Ba 233.527†	50793.4	0.3519	mg/L	0.00004	36.73	mg/L	0.004	0.01%
Be 313.107†	5726.8	0.0031	mg/L	0.00001	0.3261	mg/L	0.00094	0.29%
Ca 317.933†	441465.5	101.2	mg/L	0.09	10570	mg/L	9.42	0.09%
Cd 226.502†	729.8	0.0017	mg/L	0.00008	0.1816	mg/L	0.00834	4.59%
Co 228.616†	1678.0	0.0432	mg/L	0.00050	4.513	mg/L	0.0522	1.16%
Cr 267.716†	9764.8	0.0904	mg/L	0.00042	9.437	mg/L	0.0436	0.46%
Cu 324.752†	22244.2	0.1125	mg/L	0.00077	11.75	mg/L	0.081	0.69%
Fe 273.955†	60140.8	105.1	mg/L	0.07	10970	mg/L	7.38	0.07%
K 766.490†	21428.4	9.064	mg/L	0.0297	946.2	mg/L	3.10	0.33%
Mg 279.077†	913596.3	51.85	mg/L	0.007	5412	mg/L	0.74	0.01%
Mn 257.610†	2815246.8	3.658	mg/L	0.0043	381.8	mg/L	0.45	0.12%
Na 589.592†	6363.0	0.8280	mg/L	0.00903	86.43	mg/L	0.942	1.09%
Ni 231.604†	3008.3	0.0823	mg/L	0.00009	8.588	mg/L	0.0097	0.11%
Pb 220.353†	2248.8	0.3107	mg/L	0.00013	32.43	mg/L	0.013	0.04%
Sb 206.836†	-128.9	0.0133	mg/L	0.00017	1.392	mg/L	0.0173	1.24%
Se 196.026†	-6.3	0.0057	mg/L	0.00506	0.5930	mg/L	0.52785	89.02%
Tl 190.801†	-34.9	-0.0138	mg/L	0.00694	-1.439	mg/L	0.7243	50.34%
V 292.402†	23965.3	0.1548	mg/L	0.00014	16.16	mg/L	0.014	0.09%
Zn 213.857†	1017.6	0.7661	mg/L	0.00419	79.97	mg/L	0.438	0.55%
Pb†	28.7	0.2636	mg/L	0.02890	27.51	mg/L	3.016	10.96%
Ag 338.289†	-655.6	-0.0058	mg/L	0.00000	-0.6104	mg/L	0.00027	0.04%

Sequence No.: 28
Sample ID: 144638-19 dup
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 60
Date Collected: 10/24/2014 10:34:40 AM
Data Type: Original
Initial Sample Vol: 0.505 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-19 dup

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-19 dup

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1613801.3	1.069	mg/L	0.0002				0.02%
Ag 328.068†	-7539.8	-0.0010	mg/L	0.00051	-0.0995	mg/L	0.05033	50.59%
Al 308.215†	41427.0	74.80	mg/L	0.557	7406	mg/L	55.20	0.75%
As 188.979†	18.3	0.0146	mg/L	0.00335	1.445	mg/L	0.3314	22.94%
Ba 233.527†	48791.5	0.3380	mg/L	0.00179	33.47	mg/L	0.178	0.53%
Be 313.107†	5922.8	0.0032	mg/L	0.00001	0.3199	mg/L	0.00069	0.22%
Ca 317.933†	554605.9	127.2	mg/L	1.63	12590	mg/L	161.66	1.28%
Cd 226.502†	720.1	0.0007	mg/L	0.00016	0.0738	mg/L	0.01544	20.92%
Co 228.616†	1628.2	0.0420	mg/L	0.00017	4.154	mg/L	0.0167	0.40%
Cr 267.716†	10038.9	0.0930	mg/L	0.00002	9.209	mg/L	0.0021	0.02%
Cu 324.752†	21367.4	0.1096	mg/L	0.00031	10.85	mg/L	0.031	0.28%
Fe 273.955†	64270.4	112.4	mg/L	1.26	11120	mg/L	124.82	1.12%
K 766.490†	20621.3	8.723	mg/L	0.0370	863.7	mg/L	3.66	0.42%
Mg 279.077†	961412.7	54.56	mg/L	0.021	5402	mg/L	2.11	0.04%
Mn 257.610†	2163605.0	2.811	mg/L	0.0038	278.3	mg/L	0.38	0.14%
Na 589.592†	7373.8	0.9595	mg/L	0.00460	95.00	mg/L	0.455	0.48%
Ni 231.604†	2932.2	0.0802	mg/L	0.00059	7.940	mg/L	0.0588	0.74%
Pb 220.353†	2162.0	0.2977	mg/L	0.00000	29.48	mg/L	0.000	0.00%
Sb 206.836†	-152.6	0.0092	mg/L	0.00153	0.9145	mg/L	0.15170	16.59%

Se 196.026†	-17.8	0.0021	mg/L	0.00782	0.2060	mg/L	0.77386 375.62%
Tl 190.801†	-38.4	-0.0176	mg/L	0.00363	-1.746	mg/L	0.3590 20.56%
V 292.402†	24580.2	0.1587	mg/L	0.00072	15.72	mg/L	0.071 0.45%
Zn 213.857†	970.0	0.7269	mg/L	0.00234	71.98	mg/L	0.232 0.32%
Pb†	26.9	0.2490	mg/L	0.06355	24.65	mg/L	6.292 25.52%
Ag 338.289†	-679.6	-0.0064	mg/L	0.00241	-0.6303	mg/L	0.23845 37.83%

Sequence No.: 29
Sample ID: 144638-19 spk
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 61
Date Collected: 10/24/2014 10:39:00 AM
Data Type: Original
Initial Sample Vol: 0.492 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-19 spk

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-19 spk

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1616493.4	1.071	mg/L	0.0038				0.36%
Ag 328.068†	36102.1	0.2226	mg/L	0.00070	22.62	mg/L	0.071	0.31%
Al 308.215†	45236.5	81.68	mg/L	0.117	8301	mg/L	11.91	0.14%
As 188.979†	4058.0	2.257	mg/L	0.0157	229.4	mg/L	1.60	0.70%
Ba 233.527†	362136.2	2.509	mg/L	0.0007	255.0	mg/L	0.07	0.03%
Be 313.107†	821342.0	0.4462	mg/L	0.00033	45.35	mg/L	0.034	0.07%
Ca 317.933†	536424.3	123.0	mg/L	0.48	12500	mg/L	48.84	0.39%
Cd 226.502†	53849.6	0.8685	mg/L	0.00005	88.26	mg/L	0.005	0.01%
Co 228.616†	34065.8	0.8778	mg/L	0.00157	89.21	mg/L	0.160	0.18%
Cr 267.716†	242557.2	2.206	mg/L	0.0005	224.2	mg/L	0.05	0.02%
Cu 324.752†	539289.0	2.416	mg/L	0.0021	245.5	mg/L	0.21	0.09%
Fe 273.955†	64629.0	113.0	mg/L	0.53	11480	mg/L	53.99	0.47%
K 766.490†	123503.4	52.24	mg/L	0.116	5309	mg/L	11.83	0.22%
Mg 279.077†	1217813.7	69.21	mg/L	0.060	7034	mg/L	6.09	0.09%
Mn 257.610†	2324664.8	3.021	mg/L	0.0008	307.0	mg/L	0.08	0.03%
Na 589.592†	92726.9	12.07	mg/L	0.028	1226	mg/L	2.82	0.23%
Ni 231.604†	162956.2	4.457	mg/L	0.0026	452.9	mg/L	0.26	0.06%
Pb 220.353†	17657.5	2.554	mg/L	0.0099	259.5	mg/L	1.00	0.39%
Sb 206.836†	5083.5	1.730	mg/L	0.0060	175.8	mg/L	0.61	0.35%
Se 196.026†	4841.5	2.243	mg/L	0.0015	227.9	mg/L	0.15	0.07%
Tl 190.801†	3139.5	2.207	mg/L	0.0038	224.3	mg/L	0.39	0.17%
V 292.402†	157835.7	1.032	mg/L	0.0005	104.9	mg/L	0.05	0.05%
Zn 213.857†	4036.2	3.048	mg/L	0.0308	309.7	mg/L	3.13	1.01%
Pb†	242.4	2.412	mg/L	0.0459	245.1	mg/L	4.67	1.91%
Ag 338.289†	16988.9	0.2348	mg/L	0.00021	23.86	mg/L	0.022	0.09%

Sequence No.: 30
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 7
Date Collected: 10/24/2014 10:43:16 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1448987.5	0.9598	mg/L	0.00193				0.20%
Ag 328.068†	238653.5	1.222	mg/L	0.0008	1.222	mg/L	0.0008	0.07%
QC value within limits for Ag 328.068 Recovery = 97.80%								
Al 308.215†	5450.3	9.851	mg/L	0.1222	9.851	mg/L	0.1222	1.24%
QC value within limits for Al 308.215 Recovery = 98.51%								

As 188.979†	886.8	0.4920 mg/L	0.00289	0.4920 mg/L	0.00289	0.59%
QC value within limits for As 188.979 Recovery = 98.41%						
Ba 233.527†	1398183.8	9.686 mg/L	0.0112	9.686 mg/L	0.0112	0.12%
QC value within limits for Ba 233.527 Recovery = 96.86%						
Be 313.107†	446832.6	0.2427 mg/L	0.00039	0.2427 mg/L	0.00039	0.16%
QC value within limits for Be 313.107 Recovery = 97.08%						
Ca 317.933†	113396.5	26.01 mg/L	0.027	26.01 mg/L	0.027	0.11%
QC value within limits for Ca 317.933 Recovery = 104.02%						
Cd 226.502†	16024.3	0.2609 mg/L	0.00287	0.2609 mg/L	0.00287	1.10%
QC value within limits for Cd 226.502 Recovery = 104.37%						
Co 228.616†	90226.3	2.325 mg/L	0.0022	2.325 mg/L	0.0022	0.09%
QC value within limits for Co 228.616 Recovery = 93.00%						
Cr 267.716†	106858.3	0.9706 mg/L	0.00215	0.9706 mg/L	0.00215	0.22%
QC value within limits for Cr 267.716 Recovery = 97.06%						
Cu 324.752†	273654.9	1.219 mg/L	0.0009	1.219 mg/L	0.0009	0.07%
QC value within limits for Cu 324.752 Recovery = 97.53%						
Fe 273.955†	2880.2	4.997 mg/L	0.0010	4.997 mg/L	0.0010	0.02%
QC value within limits for Fe 273.955 Recovery = 99.94%						
K 766.490†	59139.9	25.02 mg/L	0.106	25.02 mg/L	0.106	0.42%
QC value within limits for K 766.490 Recovery = 100.07%						
Mg 279.077†	446580.6	25.51 mg/L	0.016	25.51 mg/L	0.016	0.06%
QC value within limits for Mg 279.077 Recovery = 102.02%						
Mn 257.610†	1903511.5	2.474 mg/L	0.0026	2.474 mg/L	0.0026	0.11%
QC value within limits for Mn 257.610 Recovery = 98.95%						
Na 589.592†	194672.7	25.33 mg/L	0.029	25.33 mg/L	0.029	0.12%
QC value within limits for Na 589.592 Recovery = 101.33%						
Ni 231.604†	90017.0	2.462 mg/L	0.0002	2.462 mg/L	0.0002	0.01%
QC value within limits for Ni 231.604 Recovery = 98.48%						
Pb 220.353†	3350.5	0.4908 mg/L	0.00728	0.4908 mg/L	0.00728	1.48%
QC value within limits for Pb 220.353 Recovery = 98.17%						
Sb 206.836†	13810.6	4.640 mg/L	0.0352	4.640 mg/L	0.0352	0.76%
QC value within limits for Sb 206.836 Recovery = 92.79%						
Se 196.026†	1062.3	0.4886 mg/L	0.00215	0.4886 mg/L	0.00215	0.44%
QC value within limits for Se 196.026 Recovery = 97.73%						
Tl 190.801†	752.4	0.4971 mg/L	0.00708	0.4971 mg/L	0.00708	1.42%
QC value within limits for Tl 190.801 Recovery = 99.42%						
V 292.402†	389534.8	2.512 mg/L	0.0012	2.512 mg/L	0.0012	0.05%
QC value within limits for V 292.402 Recovery = 100.48%						
Zn 213.857†	3380.5	2.567 mg/L	0.0062	2.567 mg/L	0.0062	0.24%
QC value within limits for Zn 213.857 Recovery = 102.68%						
Pb†	46.6	0.4690 mg/L	0.08527	0.4690 mg/L	0.08527	18.18%
QC value within limits for Pb Recovery = 93.81%						
Ag 338.289†	115244.6	1.253 mg/L	0.0024	1.253 mg/L	0.0024	0.19%

All analyte(s) passed QC.

Sequence No.: 31 **Autosampler Location: 1**
Sample ID: CCB **Date Collected: 10/24/2014 10:47:35 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 75 **Auto Dilution Factor: 1**

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1560800.5	1.034	mg/L	0.0085				0.83%
Ag 328.068†	-160.7	-0.0008	mg/L	0.00009	-0.0008	mg/L	0.00009	11.26%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 308.215†	-6.3	-0.0114	mg/L	0.01407	-0.0114	mg/L	0.01407	123.47%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	3.4	0.0019	mg/L	0.00558	0.0019	mg/L	0.00558	294.31%
QC value within limits for As 188.979 Recovery = Not calculated								
Ba 233.527†	217.0	0.0015	mg/L	0.00010	0.0015	mg/L	0.00010	6.68%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	130.4	0.0001	mg/L	0.00006	0.0001	mg/L	0.00006	90.44%

QC value within limits for Be 313.107 Recovery = Not calculated

Ca 317.933†	20.2	0.0046 mg/L	0.00008	0.0046 mg/L	0.00008	1.64%

QC value within limits for Ca 317.933 Recovery = Not calculated

Cd 226.502†	5.1	0.0001 mg/L	0.00005	0.0001 mg/L	0.00005	59.53%

QC value within limits for Cd 226.502 Recovery = Not calculated

Co 228.616†	13.1	0.0003 mg/L	0.00027	0.0003 mg/L	0.00027	81.05%

QC value within limits for Co 228.616 Recovery = Not calculated

Cr 267.716†	7.6	0.0001 mg/L	0.00010	0.0001 mg/L	0.00010	137.69%

QC value within limits for Cr 267.716 Recovery = Not calculated

Cu 324.752†	102.2	0.0005 mg/L	0.00086	0.0005 mg/L	0.00086	187.91%

QC value within limits for Cu 324.752 Recovery = Not calculated

Fe 273.955†	4.1	0.0071 mg/L	0.01012	0.0071 mg/L	0.01012	142.85%

QC value within limits for Fe 273.955 Recovery = Not calculated

K 766.490†	10.4	0.0044 mg/L	0.03526	0.0044 mg/L	0.03526	804.90%

QC value within limits for K 766.490 Recovery = Not calculated

Mg 279.077†	-83.1	-0.0048 mg/L	0.00260	-0.0048 mg/L	0.00260	54.45%

QC value within limits for Mg 279.077 Recovery = Not calculated

Mn 257.610†	174.9	0.0002 mg/L	0.00000	0.0002 mg/L	0.00000	1.37%

QC value within limits for Mn 257.610 Recovery = Not calculated

Na 589.592†	-31.8	-0.0041 mg/L	0.00704	-0.0041 mg/L	0.00704	170.13%

QC value within limits for Na 589.592 Recovery = Not calculated

Ni 231.604†	28.4	0.0008 mg/L	0.00010	0.0008 mg/L	0.00010	12.25%

QC value within limits for Ni 231.604 Recovery = Not calculated

Pb 220.353†	6.5	0.0010 mg/L	0.00134	0.0010 mg/L	0.00134	140.78%

QC value within limits for Pb 220.353 Recovery = Not calculated

Sb 206.836†	26.8	0.0090 mg/L	0.00022	0.0090 mg/L	0.00022	2.49%

QC value within limits for Sb 206.836 Recovery = Not calculated

Se 196.026†	14.0	0.0064 mg/L	0.00215	0.0064 mg/L	0.00215	33.33%

QC value within limits for Se 196.026 Recovery = Not calculated

Tl 190.801†	-9.7	-0.0068 mg/L	0.00122	-0.0068 mg/L	0.00122	17.88%

QC value within limits for Tl 190.801 Recovery = Not calculated

V 292.402†	90.8	0.0006 mg/L	0.00024	0.0006 mg/L	0.00024	40.43%

QC value within limits for V 292.402 Recovery = Not calculated

Zn 213.857†	0.7	0.0005 mg/L	0.00138	0.0005 mg/L	0.00138	251.30%

QC value within limits for Zn 213.857 Recovery = Not calculated

Pb†	2.1	0.0214 mg/L	0.04122	0.0214 mg/L	0.04122	192.21%

QC value within limits for Pb Recovery = Not calculated

Ag 338.289†	129.1	0.0014 mg/L	0.00072	0.0014 mg/L	0.00072	52.60%

All analyte(s) passed QC.

Sequence No.: 32 **Autosampler Location: 2**
Sample ID: LLQC **Date Collected: 10/24/2014 10:51:47 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 75 **Auto Dilution Factor: 1**

repeat Sample set ↑ RSD

Nebulizer Parameters: LLQC

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: LLQC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
Y 371.029	1554411.9	1.030	mg/L	0.0026				0.25%
Ag 328.068†	1922.2	0.0099	mg/L	0.00140	0.0099	mg/L	0.00140	14.18%

QC value within limits for Ag 328.068 Recovery = 98.74%

Al 308.215†	155.6	0.2814 mg/L	0.03743	0.2814 mg/L	0.03743	13.30%

QC value greater than the upper limit for Al 308.215 Recovery = 140.71%

As 188.979†	25.0	0.0139 mg/L	0.00078	0.0139 mg/L	0.00078	5.61%

QC value greater than the upper limit for As 188.979 Recovery = 138.86%

Ba 233.527†	14373.3	0.0996 mg/L	0.00031	0.0996 mg/L	0.00031	0.31%

QC value within limits for Ba 233.527 Recovery = 99.57%

Be 313.107†	8801.5	0.0048 mg/L	0.00002	0.0048 mg/L	0.00002	0.49%

QC value within limits for Be 313.107 Recovery = 95.59%

Ca 317.933†	11434.9	2.622 mg/L	0.0395	2.622 mg/L	0.0395	1.51%

QC value within limits for Ca 317.933 Recovery = 104.90%

Cd 226.502†	328.1	0.0053 mg/L	0.00027	0.0053 mg/L	0.00027	4.98%

QC value within limits for Cd 226.502 Recovery = 106.54%

Co 228.616†	1870.8	0.0482 mg/L	0.00052	0.0482 mg/L	0.00052	1.08%
QC value within limits for Co 228.616 Recovery = 96.41%						
Cr 267.716†	1222.6	0.0111 mg/L	0.00045	0.0111 mg/L	0.00045	4.04%
QC value within limits for Cr 267.716 Recovery = 111.07%						
Cu 324.752†	6012.9	0.0268 mg/L	0.00002	0.0268 mg/L	0.00002	0.08%
QC value within limits for Cu 324.752 Recovery = 107.16%						
Fe 273.955†	66.5	0.1158 mg/L	0.00292	0.1158 mg/L	0.00292	2.52%
QC value within limits for Fe 273.955 Recovery = 115.81%						
K 766.490†	6056.4	2.562 mg/L	0.0275	2.562 mg/L	0.0275	1.07%
QC value within limits for K 766.490 Recovery = 102.48%						
Mg 279.077†	44678.7	2.553 mg/L	0.0062	2.553 mg/L	0.0062	0.24%
QC value within limits for Mg 279.077 Recovery = 102.12%						
Mn 257.610†	11620.7	0.0151 mg/L	0.00002	0.0151 mg/L	0.00002	0.13%
QC value within limits for Mn 257.610 Recovery = 100.70%						
Na 589.592†	19892.1	2.588 mg/L	0.0270	2.588 mg/L	0.0270	1.04%
QC value within limits for Na 589.592 Recovery = 103.54%						
Ni 231.604†	1549.6	0.0424 mg/L	0.00006	0.0424 mg/L	0.00006	0.14%
QC value within limits for Ni 231.604 Recovery = 105.95%						
Pb 220.353†	70.0	0.0103 mg/L	0.00149	0.0103 mg/L	0.00149	14.46%
QC value within limits for Pb 220.353 Recovery = 102.87%						
Sb 206.836†	169.2	0.0569 mg/L	0.00020	0.0569 mg/L	0.00020	0.36%
QC value within limits for Sb 206.836 Recovery = 94.84%						
Se 196.026†	18.6	0.0086 mg/L	0.00715	0.0086 mg/L	0.00715	82.92%
QC value within limits for Se 196.026 Recovery = 86.20%						
Tl 190.801†	19.7	0.0133 mg/L	0.00505	0.0133 mg/L	0.00505	38.10%
QC value less than the lower limit for Tl 190.801 Recovery = 53.03%						
V 292.402†	3960.9	0.0256 mg/L	0.00003	0.0256 mg/L	0.00003	0.13%
QC value within limits for V 292.402 Recovery = 102.21%						
Zn 213.857†	79.3	0.0601 mg/L	0.00042	0.0601 mg/L	0.00042	0.70%
QC value within limits for Zn 213.857 Recovery = 100.12%						
Pb†	-1.1	-0.0102 mg/L	0.03649	-0.0102 mg/L	0.03649	356.88%
Ag 338.289†	1229.2	0.0133 mg/L	0.00013	0.0133 mg/L	0.00013	0.96%

QC Failed. Continue with analysis.
User canceled analysis.

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Analysis Begun

Start Time: 10/24/2014 10:55:10 AM **Plasma On Time: 10/24/2014 8:17:18 AM**
Logged In Analyst: icp3 **Technique: ICP Continuous**
Spectrometer: Optima 7300 DV, S/N 077C0122002 **Autosampler: S10**

Sample Information File: C:\Users\Public\PerkinElmer\ICP\Data\Sample Information\102414a.sif
Batch ID: 102414a
Results Data Set: 102414a
Results Library: C:\Users\Public\PerkinElmer\ICP\Data\Results\Oct2014.mdb

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Sequence No.: 32 **Autosampler Location: 2**
Sample ID: LLQC **Date Collected: 10/24/2014 10:55:11 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 75 **Auto Dilution Factor: 1**

Nebulizer Parameters: LLQC

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: LLQC

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Y 371.029	1554050.0	1.029 mg/L	0.0017			0.16%
Ag 328.068†	1685.5	0.0087 mg/L	0.00011	0.0087 mg/L	0.00011	1.29%
QC value within limits for Ag 328.068 Recovery = 86.65%						
Al 308.215†	136.9	0.2476 mg/L	0.00155	0.2476 mg/L	0.00155	0.62%
QC value within limits for Al 308.215 Recovery = 123.79%						
As 188.979†	17.1	0.0095 mg/L	0.00229	0.0095 mg/L	0.00229	24.16%
QC value within limits for As 188.979 Recovery = 94.64%						
Ba 233.527†	14337.1	0.0993 mg/L	0.00009	0.0993 mg/L	0.00009	0.09%

QC value within limits for Ba 233.527 Recovery = 99.32%

Be 313.107†	8871.5	0.0048 mg/L	0.00002	0.0048 mg/L	0.00002	0.36%
QC value within limits for Be 313.107 Recovery = 96.35%						
Ca 317.933†	11347.6	2.602 mg/L	0.0037	2.602 mg/L	0.0037	0.14%
QC value within limits for Ca 317.933 Recovery = 104.10%						
Cd 226.502†	327.7	0.0053 mg/L	0.00008	0.0053 mg/L	0.00008	1.57%
QC value within limits for Cd 226.502 Recovery = 106.41%						
Co 228.616†	1862.6	0.0480 mg/L	0.00032	0.0480 mg/L	0.00032	0.66%
QC value within limits for Co 228.616 Recovery = 95.99%						
Cr 267.716†	1245.6	0.0113 mg/L	0.00003	0.0113 mg/L	0.00003	0.30%
QC value within limits for Cr 267.716 Recovery = 113.16%						
Cu 324.752†	6067.4	0.0270 mg/L	0.00112	0.0270 mg/L	0.00112	4.14%
QC value within limits for Cu 324.752 Recovery = 108.13%						
Fe 273.955†	67.8	0.1182 mg/L	0.00108	0.1182 mg/L	0.00108	0.92%
QC value within limits for Fe 273.955 Recovery = 118.21%						
K 766.490†	6063.4	2.565 mg/L	0.0196	2.565 mg/L	0.0196	0.76%
QC value within limits for K 766.490 Recovery = 102.60%						
Mg 279.077†	44758.4	2.558 mg/L	0.0078	2.558 mg/L	0.0078	0.30%
QC value within limits for Mg 279.077 Recovery = 102.30%						
Mn 257.610†	11677.5	0.0152 mg/L	0.00009	0.0152 mg/L	0.00009	0.57%
QC value within limits for Mn 257.610 Recovery = 101.19%						
Na 589.592†	19776.7	2.573 mg/L	0.0126	2.573 mg/L	0.0126	0.49%
QC value within limits for Na 589.592 Recovery = 102.94%						
Ni 231.604†	1567.3	0.0429 mg/L	0.00048	0.0429 mg/L	0.00048	1.12%
QC value within limits for Ni 231.604 Recovery = 107.16%						
Pb 220.353†	76.5	0.0112 mg/L	0.00263	0.0112 mg/L	0.00263	23.39%
QC value within limits for Pb 220.353 Recovery = 112.48%						
Sb 206.836†	174.9	0.0588 mg/L	0.00333	0.0588 mg/L	0.00333	5.65%
QC value within limits for Sb 206.836 Recovery = 98.07%						
Se 196.026†	17.7	0.0082 mg/L	0.00521	0.0082 mg/L	0.00521	63.55%
QC value within limits for Se 196.026 Recovery = 81.95%						
Tl 190.801†	22.9	0.0156 mg/L	0.00115	0.0156 mg/L	0.00115	7.37%
QC value less than the lower limit for Tl 190.801 Recovery = 62.33%						
V 292.402†	3953.4	0.0255 mg/L	0.00119	0.0255 mg/L	0.00119	4.66%
QC value within limits for V 292.402 Recovery = 102.02%						
Zn 213.857†	79.3	0.0601 mg/L	0.00094	0.0601 mg/L	0.00094	1.56%
QC value within limits for Zn 213.857 Recovery = 100.16%						
Pb†	-2.1	-0.0206 mg/L	0.02383	-0.0206 mg/L	0.02383	115.53%
Ag 338.289†	1146.9	0.0125 mg/L	0.00020	0.0125 mg/L	0.00020	1.64%

QC Failed. Continue with analysis.

Sequence No.: 33 **Autosampler Location:** 7
Sample ID: CCV **Date Collected:** 10/24/2014 10:59:24 AM
Analyst: **Data Type:** Original
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 75 **Auto Dilution Factor:** 1

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Y 371.029	1443620.4	0.9562 mg/L	0.00373			0.39%
Ag 328.068†	249630.2	1.279 mg/L	0.0047	1.279 mg/L	0.0047	0.37%
QC value within limits for Ag 328.068 Recovery = 102.29%						
Al 308.215†	5541.3	10.01 mg/L	0.174	10.01 mg/L	0.174	1.74%
QC value within limits for Al 308.215 Recovery = 100.14%						
As 188.979†	901.3	0.5001 mg/L	0.00075	0.5001 mg/L	0.00075	0.15%
QC value within limits for As 188.979 Recovery = 100.01%						
Ba 233.527†	1395743.5	9.669 mg/L	0.0030	9.669 mg/L	0.0030	0.03%
QC value within limits for Ba 233.527 Recovery = 96.69%						
Be 313.107†	446263.6	0.2424 mg/L	0.00011	0.2424 mg/L	0.00011	0.04%
QC value within limits for Be 313.107 Recovery = 96.96%						
Ca 317.933†	114626.3	26.29 mg/L	0.351	26.29 mg/L	0.351	1.34%
QC value within limits for Ca 317.933 Recovery = 105.15%						
Cd 226.502†	15405.8	0.2508 mg/L	0.00066	0.2508 mg/L	0.00066	0.26%

	QC value within limits for Cd 226.502 Recovery = 100.32%					
Co 228.616†	91624.3	2.361 mg/L	0.0012	2.361 mg/L	0.0012	0.05%
	QC value within limits for Co 228.616 Recovery = 94.44%					
Cr 267.716†	109350.3	0.9931 mg/L	0.00208	0.9931 mg/L	0.00208	0.21%
	QC value within limits for Cr 267.716 Recovery = 99.31%					
Cu 324.752†	285434.6	1.272 mg/L	0.0026	1.272 mg/L	0.0026	0.20%
	QC value within limits for Cu 324.752 Recovery = 101.73%					
Fe 273.955†	2871.8	4.980 mg/L	0.0222	4.980 mg/L	0.0222	0.45%
	QC value within limits for Fe 273.955 Recovery = 99.60%					
K 766.490†	60178.2	25.46 mg/L	0.223	25.46 mg/L	0.223	0.88%
	QC value within limits for K 766.490 Recovery = 101.82%					
Mg 279.077†	445676.1	25.45 mg/L	0.011	25.45 mg/L	0.011	0.04%
	QC value within limits for Mg 279.077 Recovery = 101.81%					
Mn 257.610†	1898442.4	2.467 mg/L	0.0003	2.467 mg/L	0.0003	0.01%
	QC value within limits for Mn 257.610 Recovery = 98.69%					
Na 589.592†	199061.7	25.90 mg/L	0.218	25.90 mg/L	0.218	0.84%
	QC value within limits for Na 589.592 Recovery = 103.61%					
Ni 231.604†	91759.3	2.510 mg/L	0.0102	2.510 mg/L	0.0102	0.41%
	QC value within limits for Ni 231.604 Recovery = 100.38%					
Pb 220.353†	3440.8	0.5040 mg/L	0.00072	0.5040 mg/L	0.00072	0.14%
	QC value within limits for Pb 220.353 Recovery = 100.81%					
Sb 206.836†	14279.9	4.797 mg/L	0.0190	4.797 mg/L	0.0190	0.40%
	QC value within limits for Sb 206.836 Recovery = 95.95%					
Se 196.026†	1059.1	0.4872 mg/L	0.00177	0.4872 mg/L	0.00177	0.36%
	QC value within limits for Se 196.026 Recovery = 97.43%					
Tl 190.801†	769.5	0.5079 mg/L	0.00115	0.5079 mg/L	0.00115	0.23%
	QC value within limits for Tl 190.801 Recovery = 101.58%					
V 292.402†	411910.5	2.656 mg/L	0.0041	2.656 mg/L	0.0041	0.16%
	QC value within limits for V 292.402 Recovery = 106.24%					
Zn 213.857†	3360.7	2.552 mg/L	0.0002	2.552 mg/L	0.0002	0.01%
	QC value within limits for Zn 213.857 Recovery = 102.07%					
Pb†	41.7	0.4191 mg/L	0.03081	0.4191 mg/L	0.03081	7.35%
	QC value less than the lower limit for Pb Recovery = 83.83%					
Ag 338.289†	118529.0	1.288 mg/L	0.0034	1.288 mg/L	0.0034	0.27%

QC Failed. Continue with analysis.
User canceled analysis.

Run Stopped to adjust
Sample Info File. Recalled
Calibration and restarted
run at CCB.

Amm
10-24-14

Analysis Begun

Start Time: 10/24/2014 11:02:49 AM
Logged In Analyst: icp3
Spectrometer: Optima 7300 DV, S/N 077C0122002
Plasma On Time: 10/24/2014 8:17:18 AM
Technique: ICP Continuous
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer\ICP\Data\Sample Information\102414a.sif
Batch ID: 102414a
Results Data Set: 102414a
Results Library: C:\Users\Public\PerkinElmer\ICP\Data\Results\Oct2014.mdb

Sequence No.: 1
Sample ID: IPC
Analyst:
Initial Sample Wt:
Dilution:
Wash Time:
Autosampler Location: 6
Date Collected: 10/24/2014 11:02:50 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

User canceled analysis.

Analysis Begun

Start Time: 10/24/2014 11:03:05 AM
Logged In Analyst: icp3
Spectrometer: Optima 7300 DV, S/N 077C0122002
Plasma On Time: 10/24/2014 8:17:18 AM
Technique: ICP Continuous
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer\ICP\Data\Sample Information\102414a.sif
Batch ID: 102414a
Results Data Set: 102414a
Results Library: C:\Users\Public\PerkinElmer\ICP\Data\Results\Oct2014.mdb

Sequence No.: 27
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:
Wash Time:
Autosampler Location: 1
Date Collected: 10/24/2014 11:03:06 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1537541.2	1.018	mg/L	0.0059				0.58%
Ag 328.068†	-69.9	-0.0004	mg/L	0.00169	-0.0004	mg/L	0.00169	473.84%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 308.215†	13.4	0.0242	mg/L	0.02318	0.0242	mg/L	0.02318	95.94%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	8.6	0.0048	mg/L	0.00237	0.0048	mg/L	0.00237	49.76%
QC value within limits for As 188.979 Recovery = Not calculated								
Ba 233.527†	306.6	0.0021	mg/L	0.00038	0.0021	mg/L	0.00038	17.98%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	158.1	0.0001	mg/L	0.00005	0.0001	mg/L	0.00005	53.23%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933†	34.4	0.0079	mg/L	0.00148	0.0079	mg/L	0.00148	18.77%
QC value within limits for Ca 317.933 Recovery = Not calculated								
Cd 226.502†	7.6	0.0001	mg/L	0.00004	0.0001	mg/L	0.00004	31.82%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	8.9	0.0002	mg/L	0.00006	0.0002	mg/L	0.00006	26.35%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	9.0	0.0001	mg/L	0.00032	0.0001	mg/L	0.00032	395.49%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 324.752†	233.9	0.0010	mg/L	0.00021	0.0010	mg/L	0.00021	19.93%
QC value within limits for Cu 324.752 Recovery = Not calculated								

Fe 273.955†	1.4	0.0024 mg/L	0.01156	0.0024 mg/L	0.01156	477.21%	
QC value within limits for Fe 273.955 Recovery = Not calculated							
K 766.490†	31.0	0.0131 mg/L	0.02222	0.0131 mg/L	0.02222	169.57%	
QC value within limits for K 766.490 Recovery = Not calculated							
Mg 279.077†	-90.5	-0.0052 mg/L	0.00235	-0.0052 mg/L	0.00235	45.38%	
QC value within limits for Mg 279.077 Recovery = Not calculated							
Mn 257.610†	205.3	0.0003 mg/L	0.00005	0.0003 mg/L	0.00005	17.31%	
QC value within limits for Mn 257.610 Recovery = Not calculated							
Na 589.592†	37.2	0.0048 mg/L	0.00190	0.0048 mg/L	0.00190	39.13%	
QC value within limits for Na 589.592 Recovery = Not calculated							
Ni 231.604†	16.5	0.0005 mg/L	0.00026	0.0005 mg/L	0.00026	57.59%	
QC value within limits for Ni 231.604 Recovery = Not calculated							
Pb 220.353†	12.2	0.0018 mg/L	0.00081	0.0018 mg/L	0.00081	45.98%	
QC value within limits for Pb 220.353 Recovery = Not calculated							
Sb 206.836†	24.6	0.0083 mg/L	0.00482	0.0083 mg/L	0.00482	57.91%	
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	9.2	0.0042 mg/L	0.00156	0.0042 mg/L	0.00156	36.88%	
QC value within limits for Se 196.026 Recovery = Not calculated							
Tl 190.801†	-16.3	-0.0115 mg/L	0.00232	-0.0115 mg/L	0.00232	20.22%	
QC value within limits for Tl 190.801 Recovery = Not calculated							
V 292.402†	-12.7	-0.0001 mg/L	0.00045	-0.0001 mg/L	0.00045	559.13%	
QC value within limits for V 292.402 Recovery = Not calculated							
Zn 213.857†	1.2	0.0009 mg/L	0.00345	0.0009 mg/L	0.00345	379.70%	
QC value within limits for Zn 213.857 Recovery = Not calculated							
Pb†	-1.7	-0.0174 mg/L	0.04694	-0.0174 mg/L	0.04694	269.60%	
QC value within limits for Pb Recovery = Not calculated							
Ag 338.289†	267.5	0.0028 mg/L	0.00037	0.0028 mg/L	0.00037	13.14%	

All analyte(s) passed QC.

Sequence No.: 28 **Autosampler Location: 62**
Sample ID: Blk 10/22 soil **Date Collected: 10/24/2014 11:07:18 AM**
Analyst: AMM **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol: 50 mL**
Dilution: **Sample Prep Vol: 50 mL**
Wash Time: 75 **Auto Dilution Factor: 1**

Nebulizer Parameters: Blk 10/22 soil

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: Blk 10/22 soil

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1615526.9	1.070	mg/L	0.0133				1.24%
Ag 328.068†	-372.3	-0.0019	mg/L	0.00063	-0.0019	mg/L	0.00063	33.46%
Al 308.215†	-19.7	-0.0355	mg/L	0.00163	-0.0355	mg/L	0.00163	4.60%
As 188.979†	7.7	0.0043	mg/L	0.00384	0.0043	mg/L	0.00384	89.71%
Ba 233.527†	16.8	0.0001	mg/L	0.00008	0.0001	mg/L	0.00008	69.53%
Be 313.107†	166.5	0.0001	mg/L	0.00001	0.0001	mg/L	0.00001	12.33%
Ca 317.933†	-154.9	-0.0355	mg/L	0.00332	-0.0355	mg/L	0.00332	9.36%
Cd 226.502†	2.4	0.0000	mg/L	0.00005	0.0000	mg/L	0.00005	136.43%
Co 228.616†	19.3	0.0005	mg/L	0.00012	0.0005	mg/L	0.00012	23.83%
Cr 267.716†	55.0	0.0005	mg/L	0.00017	0.0005	mg/L	0.00017	34.34%
Cu 324.752†	75.3	0.0003	mg/L	0.00047	0.0003	mg/L	0.00047	140.24%
Fe 273.955†	11.3	0.0198	mg/L	0.01349	0.0198	mg/L	0.01349	68.23%
K 766.490†	-43.2	-0.0183	mg/L	0.01185	-0.0183	mg/L	0.01185	64.91%
Mg 279.077†	-148.3	-0.0085	mg/L	0.00217	-0.0085	mg/L	0.00217	25.36%
Mn 257.610†	251.3	0.0003	mg/L	0.00008	0.0003	mg/L	0.00008	23.54%
Na 589.592†	55.0	0.0072	mg/L	0.00259	0.0072	mg/L	0.00259	36.19%
Ni 231.604†	38.8	0.0011	mg/L	0.00010	0.0011	mg/L	0.00010	9.32%
Pb 220.353†	6.3	0.0009	mg/L	0.00150	0.0009	mg/L	0.00150	161.03%
Sb 206.836†	23.6	0.0080	mg/L	0.00388	0.0080	mg/L	0.00388	48.76%
Se 196.026†	17.6	0.0081	mg/L	0.00411	0.0081	mg/L	0.00411	50.81%
Tl 190.801†	-17.7	-0.0125	mg/L	0.00487	-0.0125	mg/L	0.00487	38.92%
V 292.402†	27.3	0.0002	mg/L	0.00052	0.0002	mg/L	0.00052	291.67%
Zn 213.857†	2.8	0.0021	mg/L	0.00078	0.0021	mg/L	0.00078	36.31%
Pb†	0.9	0.0094	mg/L	0.03473	0.0094	mg/L	0.03473	369.46%
Ag 338.289†	174.0	0.0019	mg/L	0.00049	0.0019	mg/L	0.00049	26.04%

Analysis Begun

Logged In Analyst: fims
Technique: AA FIMS-MHS
Spectrometer Model: FIMS-100, S/N B050-9550
Autosampler Model: AS-90

Sample Information File: C:\data-AA\fims\Sample Information\Hg141024A.sif
Batch ID:
Results Data Set: Hg141024A
Results Library: C:\data-AA\fims\Results\Results.mdb

Method Loaded
Method Name: Mercury5-30
Method Last Saved: 10/13/2014 1:09:01 PM
Method Description:

Sequence No.: 52
Autosampler Location:
Sample ID: Calib Std 3
Date Collected: 10/24/2014 9:20:42 AM
Analyst:
Data Type: Original
Initial Sample Wt:
Initial Sample Vol:
Dilution:
Sample Prep Vol:

Replicate Data: Calib Std 3

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[2]	0.0989	0.0989	0.0159	09:21:40	Yes
2		[2]	0.0975	0.0975	0.0162	09:22:19	Yes
Mean:		[2]	0.0982				
SD:		0	0.0010				
%RSD:		0	1.01				

Standard number 3 applied. [2]
Correlation Coef.: 1.000000 Slope: 0.04908 Intercept: 0.00000
The required calibration blank has not been analyzed.

Sequence No.: 53
Autosampler Location:
Sample ID: Calib Std 3
Date Collected: 10/24/2014 9:22:43 AM
Analyst:
Data Type: Original
Initial Sample Wt:
Initial Sample Vol:
Dilution:
Sample Prep Vol:

Replicate Data: Calib Std 3

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[2]	0.1238	0.1238	0.0200	09:23:41	Yes
2		[2]	0.1206	0.1206	0.0199	09:24:20	Yes
Mean:		[2]	0.1222				
SD:		0	0.0022				
%RSD:		0	1.83				

Standard number 3 applied. [2]
Correlation Coef.: 1.000000 Slope: 0.06110 Intercept: 0.00000
The required calibration blank has not been analyzed.

Sequence No.: 54
Autosampler Location:
Sample ID: Calib Std 3
Date Collected: 10/24/2014 9:24:46 AM
Analyst:
Data Type: Original
Initial Sample Wt:
Initial Sample Vol:
Dilution:
Sample Prep Vol:

Replicate Data: Calib Std 3

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[2]	0.1360	0.1360	0.0223	09:25:44	Yes
2		[2]	0.1350	0.1350	0.0223	09:26:22	Yes

Mean:	[2]	0.1355
SD:	0	0.0007
%RSD:	0	0.52

Standard number 3 applied. [2]
Correlation Coef.: 1.000000 Slope: 0.06777 Intercept: 0.00000
The required calibration blank has not been analyzed.

Analysis Begun

Logged In Analyst: fims
Technique: AA FIMS-MHS
Spectrometer Model: FIMS-100, S/N B050-9550
Autosampler Model: AS-90

Sample Information File: C:\data-AA\fims\Sample Information\Hg141024A.sif
Batch ID:
Results Data Set: Hg141024A
Results Library: C:\data-AA\fims\Results\Results.mdb

Sequence No.: 1
Autosampler Location: 1
Sample ID: Calibration Blank
Date Collected: 10/24/2014 9:26:54 AM
Analyst:
Data Type: Original
Initial Sample Wt:
Initial Sample Vol:
Dilution:
Sample Prep Vol:

Replicate Data: Calibration Blank

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.00]	0.0016	0.0016	0.0003	09:27:57	Yes
2		[0.00]	0.0010	0.0010	0.0003	09:28:35	Yes
Mean:		[0.00]	0.0013				
SD:		0.00	0.0004				
%RSD:		0.00	28.93				

Auto-zero performed.

Sequence No.: 2
Autosampler Location: 2
Sample ID: Calib Std 1
Date Collected: 10/24/2014 9:30:17 AM
Analyst:
Data Type: Original
Initial Sample Wt:
Initial Sample Vol:
Dilution:
Sample Prep Vol:

Replicate Data: Calib Std 1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.2]	0.0122	0.0135	0.0023	09:31:21	Yes
2		[0.2]	0.0126	0.0139	0.0024	09:31:59	Yes
Mean:		[0.2]	0.0124				
SD:		0.0	0.0003				
%RSD:		0.0	2.46				

Standard number 1 applied. [0.2]
Correlation Coef.: 1.000000 Slope: 0.06198 Intercept: 0.00000

Sequence No.: 3
Autosampler Location: 3
Sample ID: Calib Std 2
Date Collected: 10/24/2014 9:33:41 AM
Analyst:
Data Type: Original
Initial Sample Wt:
Initial Sample Vol:
Dilution:
Sample Prep Vol:

Replicate Data: Calib Std 2

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[1]	0.0606	0.0619	0.0103	09:34:46	Yes
2		[1]	0.0599	0.0611	0.0103	09:35:24	Yes
Mean:		[1]	0.0602				
SD:		0	0.0005				
%RSD:		0	0.90				

Standard number 2 applied. [1]
Correlation Coef.: 0.999982 Slope: 0.06012 Intercept: 0.00017

Sequence No.: 4
Autosampler Location: 4

Method: Mercury5-30 Page 2 Date: 10/24/2014 9:45:46 AM

Sample ID: Calib Std 3
Analyst:
Initial Sample Wt:
Dilution:

Date Collected: 10/24/2014 9:37:07 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: Calib Std 3

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[2]	0.1141	0.1154	0.0189	09:38:12	Yes
2		[2]	0.1137	0.1150	0.0190	09:38:50	Yes
Mean:		[2]	0.1139				
SD:		0	0.0003				
%RSD:		0	0.25				

Standard number 3 applied. [2]
Correlation Coef.: 0.999548 Slope: 0.05697 Intercept: 0.00106

Sequence No.: 5
Sample ID: Calib Std 4
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 5
Date Collected: 10/24/2014 9:40:34 AM
Data Type: [redacted]
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: Calib Std 4

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[5]	0.3156	0.3169	0.0516	09:41:39	Yes
2		[5]	0.3160	0.3173	0.0516	09:42:17	Yes
Mean:		[5]	0.3158				
SD:		0	0.0003				
%RSD:		0	0.09				

Standard number 4 applied. [5]
Correlation Coef.: 0.999133 Slope: 0.06303 Intercept: -0.00290

Sequence No.: 6
Sample ID: Calib Std 5
Analyst:
Initial Sample Wt:

Autosampler Location: 6
Date Collected: 10/24/2014 9:44:01 AM
Data Type: Original
Initial Sample Vol:

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
Calibration Blank	0.0000	0	0.0141	0.00	28.9
Calib Std 1	0.0124	0.2	0.2160	0.00	2.5
Calib Std 2	0.0602	1.0	0.9954	0.00	0.9
Calib Std 3	0.1139	2.0	1.8691	0.00	0.2
Calib Std 4	0.3158	5.0	5.1582	0.00	0.1
Calib Std 5	0.6099	10.0	9.9472	0.00	0.1

Correlation Coef.: 0.999697 Slope: 0.06140 Intercept: -0.00087

Sequence No.: 7 **Autosampler Location: 4**
Sample ID: IPC **Date Collected: 10/24/2014 9:47:29 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: IPC

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	1.877	1.877	0.1144	0.1157	0.0190	09:48:34	Yes
2	1.853	1.853	0.1129	0.1142	0.0190	09:49:12	Yes
Mean:	1.865	1.865	0.1137				
SD:	0.0169	0.0169	0.0010				
%RSD:	0.9064	0.9064	0.91				

QC value less than the lower limit for Hg 253.7 Recovery = 93.27%
QC Failed. Continue with analysis.

Sequence No.: 8 **Autosampler Location: 7**
Sample ID: ICV **Date Collected: 10/24/2014 9:50:55 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: ICV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	1.989	1.989	0.1212	0.1225	0.0200	09:52:01	Yes
2	1.964	1.964	0.1197	0.1210	0.0200	09:52:39	Yes
Mean:	1.976	1.976	0.1205				
SD:	0.0171	0.0171	0.0010				
%RSD:	0.8634	0.8634	0.87				

QC value within limits for Hg 253.7 Recovery = 98.82%
All analyte(s) passed QC.

Sequence No.: 9 **Autosampler Location: 8**
Sample ID: ICB **Date Collected: 10/24/2014 9:54:24 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: ICB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0310	0.0310	0.0010	0.0023	0.0004	09:55:30	Yes
2	0.0280	0.0280	0.0009	0.0021	0.0003	09:56:09	Yes
Mean:	0.0295	0.0295	0.0009				
SD:	0.0021	0.0021	0.0001				
%RSD:	7.240	7.240	13.88				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 10
Sample ID: blk
Analyst: Jennifer G
Initial Sample Wt: 0.245 g
Dilution:

Autosampler Location: 9
Date Collected: 10/24/2014 9:57:54 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 20 mL

Replicate Data: blk

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0021	0.0255	0.0007	0.0020	0.0003	09:58:57	Yes
2	0.0007	0.0084	-0.0004	0.0009	0.0002	09:59:35	Yes
Mean:	0.0014	0.0170	0.0002				
SD:	0.0010	0.0121	0.0007				
%RSD:	71.52	71.52	427.54				

Sequence No.: 11
Sample ID: lcs
Analyst: Jennifer G
Initial Sample Wt: 0.21 g
Dilution:

Autosampler Location: 10
Date Collected: 10/24/2014 10:01:17 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 20 mL

Replicate Data: lcs

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.1861	1.954	0.1191	0.1204	0.0198	10:02:20	Yes
2	0.1851	1.944	0.1185	0.1198	0.0199	10:02:58	Yes
Mean:	0.1856	1.949	0.1188				
SD:	0.0007	0.0073	0.0005				
%RSD:	0.3765	0.3765	0.38				

Sequence No.: 12
Sample ID: lcs dup
Analyst: Jennifer G
Initial Sample Wt: 0.239 g
Dilution:

Autosampler Location: 11
Date Collected: 10/24/2014 10:04:41 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 20 mL

Replicate Data: lcs dup

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.1615	1.930	0.1176	0.1189	0.0195	10:05:44	Yes
2	0.1613	1.928	0.1175	0.1188	0.0195	10:06:23	Yes

Duplicate Check: lcs dup

Analyte			Expected Conc.	Measured Conc.	Std. Dev.	Units	Difference (%)
Hg 253.7			0.1856	0.1614	0.000	ug/g	14.0
Mean:	0.1614	1.929	0.1176				
SD:	0.0001	0.0015	0.0001				
%RSD:	0.0779	0.0779	0.08				

Sequence No.: 13
Sample ID: 144638-01
Analyst: Jennifer G
Initial Sample Wt: 0.23 g
Dilution:

Autosampler Location: 12
Date Collected: 10/24/2014 10:08:05 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 20 mL

Replicate Data: 144638-01

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0921	1.059	0.0641	0.0654	0.0105	10:09:09	Yes
2	0.0909	1.045	0.0633	0.0646	0.0106	10:09:47	Yes

Mean:	0.0915	1.052	0.0637
SD:	0.0008	0.0097	0.0006
%RSD:	0.9224	0.9224	0.93

Sequence No.: 14
Sample ID: 144638-02
Analyst: Jennifer G
Initial Sample Wt: 0.232 g
Dilution:

Autosampler Location: 13
Date Collected: 10/24/2014 10:11:30 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 20 mL

Replicate Data: 144638-02

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0961	1.114	0.0675	0.0688	0.0113	10:12:35	Yes
2	0.0953	1.105	0.0670	0.0683	0.0113	10:13:13	Yes
Mean:	0.0957	1.110	0.0673				
SD:	0.0006	0.0065	0.0004				
%RSD:	0.5829	0.5829	0.59				

Sequence No.: 15
Sample ID: 144638-03
Analyst: Jennifer G
Initial Sample Wt: 0.221 g
Dilution:

Autosampler Location: 14
Date Collected: 10/24/2014 10:14:56 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 20 mL

Replicate Data: 144638-03

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0621	0.6863	0.0413	0.0426	0.0068	10:16:01	Yes
2	0.0615	0.6796	0.0409	0.0421	0.0069	10:16:39	Yes
Mean:	0.0618	0.6830	0.0411				
SD:	0.0004	0.0047	0.0003				
%RSD:	0.6941	0.6941	0.71				

Sequence No.: 16
Sample ID: 144638-04
Analyst: Jennifer G
Initial Sample Wt: 0.227 g
Dilution:

Autosampler Location: 15
Date Collected: 10/24/2014 10:18:22 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 20 mL

Replicate Data: 144638-04

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0890	1.010	0.0611	0.0624	0.0104	10:19:27	Yes
2	0.0900	1.022	0.0619	0.0632	0.0105	10:20:06	Yes
Mean:	0.0895	1.016	0.0615				
SD:	0.0008	0.0086	0.0005				
%RSD:	0.8417	0.8417	0.85				

Sequence No.: 17
Sample ID: 144638-05
Analyst: Jennifer G
Initial Sample Wt: 0.243 g
Dilution:

Autosampler Location: 16
Date Collected: 10/24/2014 10:21:49 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 20 mL

Replicate Data: 144638-05

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0092	0.1123	0.0060	0.0073	0.0011	10:22:55	Yes
2	0.0062	0.0756	0.0038	0.0051	0.0011	10:23:33	Yes
Mean:	0.0077	0.0940	0.0049				
SD:	0.0021	0.0260	0.0016				

%RSD:	27.63	27.63	32.51

Sequence No.: 18 **Autosampler Location: 17**
Sample ID: 144638-06 **Date Collected: 10/24/2014 10:25:18 AM**
Analyst: Jennifer G **Data Type: Original**
Initial Sample Wt: 0.23 g **Initial Sample Vol:**
Dilution: **Sample Prep Vol: 20 mL**

Replicate Data: 144638-06

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0507	0.5835	0.0350	0.0362	0.0060	10:26:24	Yes
2	0.0502	0.5773	0.0346	0.0359	0.0061	10:27:02	Yes
Mean:	0.0505	0.5804	0.0348				
SD:	0.0004	0.0044	0.0003				
%RSD:	0.7608	0.7608	0.78				

Sequence No.: 19 **Autosampler Location: 18**
Sample ID: 144638-07 **Date Collected: 10/24/2014 10:28:46 AM**
Analyst: Jennifer G **Data Type: Original**
Initial Sample Wt: 0.225 g **Initial Sample Vol:**
Dilution: **Sample Prep Vol: 20 mL**

Replicate Data: 144638-07

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0715	0.8045	0.0485	0.0498	0.0083	10:29:52	Yes
2	0.0743	0.8357	0.0504	0.0517	0.0085	10:30:31	Yes
Mean:	0.0729	0.8201	0.0495				
SD:	0.0020	0.0221	0.0014				
%RSD:	2.696	2.696	2.74				

Sequence No.: 20 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 10/24/2014 10:32:16 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	1.999	1.999	0.1219	0.1231	0.0206	10:33:22	Yes
2	1.979	1.979	0.1207	0.1219	0.0207	10:34:00	Yes
Mean:	1.989	1.989	0.1213				
SD:	0.0138	0.0138	0.0008				
%RSD:	0.6922	0.6922	0.70				

QC value within limits for Hg 253.7 Recovery = 99.46%
All analyte(s) passed QC.

Sequence No.: 21 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 10/24/2014 10:35:44 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0126	0.0126	-0.0001	0.0012	0.0003	10:36:51	Yes
2	0.0256	0.0256	0.0007	0.0020	0.0003	10:37:29	Yes
Mean:	0.0191	0.0191	0.0003				
SD:	0.0092	0.0092	0.0006				

%RSD: 47.97 47.97 183.38
QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 22
Sample ID: 144638-08
Analyst: Jennifer G
Initial Sample Wt: 0.231 g
Dilution:

Autosampler Location: 19
Date Collected: 10/24/2014 10:39:15 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 20 mL

Replicate Data: 144638-08

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0743	0.8579	0.0518	0.0531	0.0088	10:40:17	Yes
2	0.0729	0.8423	0.0508	0.0521	0.0088	10:40:55	Yes
Mean:	0.0736	0.8501	0.0513				
SD:	0.0010	0.0111	0.0007				
%RSD:	1.302	1.302	1.32				

Sequence No.: 23
Sample ID: 144638-09
Analyst: Jennifer G
Initial Sample Wt: 0.229 g
Dilution:

Autosampler Location: 20
Date Collected: 10/24/2014 10:42:36 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 20 mL

Replicate Data: 144638-09

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0799	0.9150	0.0553	0.0566	0.0097	10:43:40	Yes
2	0.0815	0.9329	0.0564	0.0577	0.0098	10:44:19	Yes
Mean:	0.0807	0.9239	0.0559				
SD:	0.0011	0.0126	0.0008				
%RSD:	1.368	1.368	1.39				

Sequence No.: 24
Sample ID: 144638-10
Analyst: Jennifer G
Initial Sample Wt: 0.2 g
Dilution:

Autosampler Location: 21
Date Collected: 10/24/2014 10:46:00 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 20 mL

Replicate Data: 144638-10

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0866	0.8664	0.0523	0.0536	0.0088	10:47:03	Yes
2	0.0852	0.8518	0.0514	0.0527	0.0088	10:47:42	Yes
Mean:	0.0859	0.8591	0.0519				
SD:	0.0010	0.0103	0.0006				
%RSD:	1.202	1.202	1.22				

Sequence No.: 25
Sample ID: 144638-11
Analyst: Jennifer G
Initial Sample Wt: 0.224 g
Dilution:

Autosampler Location: 22
Date Collected: 10/24/2014 10:49:23 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 20 mL

Replicate Data: 144638-11

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0966	1.082	0.0656	0.0668	0.0112	10:50:25	Yes
2	0.0971	1.088	0.0659	0.0672	0.0113	10:50:59	Yes
Mean:	0.0969	1.085	0.0657				
SD:	0.0004	0.0044	0.0003				

%RSD:	0.4034	0.4034	0.41

Sequence No.: 26 **Autosampler Location: 23**
Sample ID: 144638-12 **Date Collected: 10/24/2014 10:52:28 AM**
Analyst: Jennifer G **Data Type: Original**
Initial Sample Wt: 0.217 g **Initial Sample Vol:**
Dilution: **Sample Prep Vol: 20 mL**

Replicate Data: 144638-12

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0949	1.030	0.0623	0.0636	0.0108	10:53:24	Yes
2	0.0957	1.038	0.0629	0.0641	0.0108	10:53:58	Yes
Mean:	0.0953	1.034	0.0626				
SD:	0.0005	0.0059	0.0004				
%RSD:	0.5752	0.5752	0.58				

Sequence No.: 27 **Autosampler Location: 24**
Sample ID: 144638-13 **Date Collected: 10/24/2014 10:55:33 AM**
Analyst: Jennifer G **Data Type: Original**
Initial Sample Wt: 0.24 g **Initial Sample Vol:**
Dilution: **Sample Prep Vol: 20 mL**

Replicate Data: 144638-13

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.1037	1.244	0.0755	0.0768	0.0129	10:56:35	Yes
2	0.1037	1.245	0.0756	0.0768	0.0128	10:57:12	Yes
Mean:	0.1037	1.245	0.0755				
SD:	0.0000	0.0004	0.0000				
%RSD:	0.0352	0.0352	0.04				

Sequence No.: 28 **Autosampler Location: 25**
Sample ID: 144638-14 **Date Collected: 10/24/2014 10:58:50 AM**
Analyst: Jennifer G **Data Type: Original**
Initial Sample Wt: 0.207 g **Initial Sample Vol:**
Dilution: **Sample Prep Vol: 20 mL**

Replicate Data: 144638-14

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0923	0.9550	0.0578	0.0591	0.0100	10:59:53	Yes
2	0.1004	1.039	0.0629	0.0642	0.0104	11:00:31	Yes
Mean:	0.0963	0.9971	0.0604				
SD:	0.0058	0.0596	0.0037				
%RSD:	5.973	5.973	6.06				

Sequence No.: 29 **Autosampler Location: 26**
Sample ID: 144638-15 **Date Collected: 10/24/2014 11:02:13 AM**
Analyst: Jennifer G **Data Type: Original**
Initial Sample Wt: 0.229 g **Initial Sample Vol:**
Dilution: **Sample Prep Vol: 20 mL**

Replicate Data: 144638-15

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0573	0.6563	0.0394	0.0407	0.0069	11:03:17	Yes
2	0.0605	0.6925	0.0416	0.0429	0.0070	11:03:55	Yes
Mean:	0.0589	0.6744	0.0405				
SD:	0.0022	0.0256	0.0016				
%RSD:	3.795	3.795	3.88				

Sequence No.: 30
Sample ID: 144638-16
Analyst: Jennifer G
Initial Sample Wt: 0.202 g
Dilution:

Autosampler Location: 27
Date Collected: 10/24/2014 11:05:38 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 20 mL

Replicate Data: 144638-16

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0826	0.8347	0.0504	0.0517	0.0085	11:06:44	Yes
2	0.0825	0.8335	0.0503	0.0516	0.0086	11:07:21	Yes
Mean:	0.0826	0.8341	0.0503				
SD:	0.0001	0.0009	0.0001				
%RSD:	0.1024	0.1024	0.10				

Sequence No.: 31
Sample ID: 144638-17
Analyst: Jennifer G
Initial Sample Wt: 0.209 g
Dilution:

Autosampler Location: 29
Date Collected: 10/24/2014 11:09:05 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 20 mL

Replicate Data: 144638-17

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0584	0.6107	0.0366	0.0379	0.0070	11:10:06	Yes
2	0.0711	0.7432	0.0448	0.0460	0.0076	11:10:44	Yes
Mean:	0.0648	0.6769	0.0407				
SD:	0.0090	0.0937	0.0058				
%RSD:	13.84	13.84	14.13				

Sequence No.: 32
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 10/24/2014 11:12:25 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.009	2.009	0.1225	0.1238	0.0208	11:13:30	Yes
2	2.005	2.005	0.1222	0.1235	0.0209	11:14:08	Yes
Mean:	2.007	2.007	0.1223				
SD:	0.0033	0.0033	0.0002				
%RSD:	0.1655	0.1655	0.17				

QC value within limits for Hg 253.7 Recovery = 100.34%
All analyte(s) passed QC.

Sequence No.: 33
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 10/24/2014 11:15:51 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0030	-0.0030	-0.0010	0.0002	0.0003	11:16:57	Yes
2	0.0128	0.0128	-0.0001	0.0012	0.0002	11:17:35	Yes
Mean:	0.0049	0.0049	-0.0006				
SD:	0.0112	0.0112	0.0007				
%RSD:	226.5	226.5	121.54				

QC value within limits for Hg 253.7 Recovery = Not calculated

All analyte(s) passed QC.

Sequence No.: 34 **Autosampler Location: 30**
Sample ID: 144638-18 **Date Collected: 10/24/2014 11:19:20 AM**
Analyst: Jennifer G **Data Type: Original**
Initial Sample Wt: 0.214 g **Initial Sample Vol:**
Dilution: **Sample Prep Vol: 20 mL**

Replicate Data: 144638-18

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0896	0.9584	0.0580	0.0593	0.0100	11:20:22	Yes
2	0.0895	0.9571	0.0579	0.0592	0.0100	11:21:00	Yes
Mean:	0.0895	0.9578	0.0579				
SD:	0.0001	0.0009	0.0001				
%RSD:	0.0922	0.0922	0.09				

Sequence No.: 35 **Autosampler Location: 31**
Sample ID: 144638-19 **Date Collected: 10/24/2014 11:22:41 AM**
Analyst: Jennifer G **Data Type: Original**
Initial Sample Wt: 0.223 g **Initial Sample Vol:**
Dilution: **Sample Prep Vol: 20 mL**

Replicate Data: 144638-19

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0944	1.053	0.0638	0.0651	0.0110	11:23:43	Yes
2	0.0946	1.055	0.0639	0.0652	0.0111	11:24:21	Yes
Mean:	0.0945	1.054	0.0638				
SD:	0.0001	0.0013	0.0001				
%RSD:	0.1238	0.1238	0.13				

Sequence No.: 36 **Autosampler Location: 32**
Sample ID: 144638-19 dup **Date Collected: 10/24/2014 11:26:03 AM**
Analyst: Jennifer G **Data Type: Original**
Initial Sample Wt: 0.24 g **Initial Sample Vol:**
Dilution: **Sample Prep Vol: 20 mL**

Replicate Data: 144638-19 dup

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0956	1.148	0.0696	0.0709	0.0120	11:27:06	Yes
2	0.0964	1.157	0.0702	0.0715	0.0121	11:27:44	Yes

Duplicate Check: 144638-19 dup

Analyte			Expected Conc.	Measured Conc.	Std. Dev.	Units	Difference (%)
Hg 253.7			0.0945	0.0960	0.001	ug/g	1.6
Mean:	0.0960	1.152	0.0699				
SD:	0.0006	0.0069	0.0004				
%RSD:	0.5995	0.5995	0.61				

Sequence No.: 37 **Autosampler Location: 33**
Sample ID: 144638-19 spk **Date Collected: 10/24/2014 11:29:26 AM**
Analyst: Jennifer G **Data Type: Original**
Initial Sample Wt: 0.238 g **Initial Sample Vol:**
Dilution: **Sample Prep Vol: 20 mL**

Replicate Data: 144638-19 spk

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored

1	0.2577	3.066	0.1874	0.1887	0.0316	11:30:29	Yes
2	0.2562	3.048	0.1863	0.1876	0.0317	11:31:07	Yes
Mean:	0.2569	3.057	0.1868				
SD:	0.0011	0.0126	0.0008				
%RSD:	0.4132	0.4132	0.42				

User canceled analysis.

==========

Analysis Begun

Logged In Analyst: fims **Technique: AA FIMS-MHS**
Spectrometer Model: FIMS-100, S/N B050-9550 **Autosampler Model: AS-90**

Sample Information File: C:\data-AA\fims\Sample Information\Hg141024A.sif
Batch ID:
Results Data Set: Hg141024A
Results Library: C:\data-AA\fims\Results\Results.mdb

==========

Sequence No.: 32 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 10/24/2014 11:31:24 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.023	2.023	0.1233	0.1246	0.0211	11:32:29	Yes
2	2.006	2.006	0.1223	0.1236	0.0213	11:33:07	Yes
Mean:	2.014	2.014	0.1228				
SD:	0.0122	0.0122	0.0008				
%RSD:	0.6075	0.6075	0.61				

QC value within limits for Hg 253.7 Recovery = 100.72%
All analyte(s) passed QC.

==========

Sequence No.: 33 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 10/24/2014 11:34:51 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0356	0.0356	0.0013	0.0026	0.0004	11:35:56	Yes
2	0.0207	0.0207	0.0004	0.0017	0.0003	11:36:35	Yes
Mean:	0.0281	0.0281	0.0009				
SD:	0.0105	0.0105	0.0006				
%RSD:	37.41	37.41	75.14				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.
User canceled analysis.

==========

Analysis Begun

Logged In Analyst: fims **Technique: AA FIMS-MHS**
Spectrometer Model: FIMS-100, S/N B050-9550 **Autosampler Model: AS-90**

Sample Information File: C:\data-AA\fims\Sample Information\Hg141024A.sif
Batch ID:
Results Data Set: Hg141024A
Results Library: C:\data-AA\fims\Results\Results.mdb

==========

Sequence No.: 38 **Autosampler Location: 34**

Sample ID: blk
Analyst: Jennifer G
Initial Sample Wt: 0.244 g
Dilution:

Date Collected: 10/24/2014 11:37:56 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 20 mL

Replicate Data: blk

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0009	0.0106	-0.0002	0.0011	0.0002	11:39:00	Yes
2	0.0019	0.0230	0.0005	0.0018	0.0003	11:39:38	Yes
Mean:	0.0014	0.0168	0.0002				
SD:	0.0007	0.0088	0.0005				
%RSD:	52.34	52.34	329.37				

Sequence No.: 39
Sample ID: lcs
Analyst: Jennifer G
Initial Sample Wt: 0.204 g
Dilution:

Autosampler Location: 35
Date Collected: 10/24/2014 11:41:21 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 20 mL

Replicate Data: lcs

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.2260	2.305	0.1406	0.1419	0.0241	11:42:25	Yes
2	0.2233	2.278	0.1390	0.1403	0.0242	11:43:03	Yes
Mean:	0.2246	2.291	0.1398				
SD:	0.0019	0.0191	0.0012				
%RSD:	0.8338	0.8338	0.84				

Sequence No.: 40
Sample ID: lcs dup
Analyst: Jennifer G
Initial Sample Wt: 0.235 g
Dilution:

Autosampler Location: 36
Date Collected: 10/24/2014 11:44:46 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 20 mL

Replicate Data: lcs dup

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.1936	2.275	0.1388	0.1401	0.0240	11:45:50	Yes
2	0.1918	2.253	0.1375	0.1388	0.0240	11:46:28	Yes

Duplicate Check: lcs dup

Analyte			Expected Conc.	Measured Conc.	Std. Dev.	Units	Difference (%)
Hg 253.7			0.2246	0.1927	0.001	ug/g	15.3
Mean:	0.1927	2.264	0.1381				
SD:	0.0013	0.0156	0.0010				
%RSD:	0.6907	0.6907	0.70				

Sequence No.: 41
Sample ID: 144594-01
Analyst: Jennifer G
Initial Sample Wt: 0.239 g
Dilution:

Autosampler Location: 37
Date Collected: 10/24/2014 11:48:12 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 20 mL

Replicate Data: 144594-01

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.2768	3.308	0.2022	0.2035	0.0346	11:49:14	Yes
2	0.2772	3.313	0.2025	0.2038	0.0349	11:49:52	Yes
Mean:	0.2770	3.310	0.2024				
SD:	0.0003	0.0035	0.0002				

%RSD: 0.1063 0.1063 0.11

Sequence No.: 42 **Autosampler Location: 38**
Sample ID: 144594-02 **Date Collected: 10/24/2014 11:51:32 AM**
Analyst: Jennifer G **Data Type: Original**
Initial Sample Wt: 0.248 g **Initial Sample Vol:**
Dilution: **Sample Prep Vol: 20 mL**

Replicate Data: 144594-02

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.4971	6.165	0.3776	0.3789	0.0646	11:52:34	Yes
2	0.5025	6.231	0.3817	0.3830	0.0655	11:53:12	Yes
Mean:	0.4998	6.198	0.3797				
SD:	0.0038	0.0472	0.0029				
%RSD:	0.7615	0.7615	0.76				

Sequence No.: 43 **Autosampler Location: 39**
Sample ID: 144594-03 **Date Collected: 10/24/2014 11:54:52 AM**
Analyst: Jennifer G **Data Type: Original**
Initial Sample Wt: 0.226 g **Initial Sample Vol:**
Dilution: **Sample Prep Vol: 20 mL**

Replicate Data: 144594-03

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.3933	4.445	0.2720	0.2733	0.0462	11:55:55	Yes
2	0.3892	4.398	0.2691	0.2704	0.0465	11:56:33	Yes
Mean:	0.3913	4.421	0.2706				
SD:	0.0029	0.0332	0.0020				
%RSD:	0.7514	0.7514	0.75				

Sequence No.: 44 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 10/24/2014 11:58:14 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.037	2.037	0.1242	0.1255	0.0214	11:59:19	Yes
2	2.033	2.033	0.1239	0.1252	0.0214	11:59:57	Yes
Mean:	2.035	2.035	0.1240				
SD:	0.0028	0.0028	0.0002				
%RSD:	0.1387	0.1387	0.14				

QC value within limits for Hg 253.7 Recovery = 101.73%
All analyte(s) passed QC.

Sequence No.: 45 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 10/24/2014 12:01:41 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0063	0.0063	-0.0005	0.0008	0.0002	12:02:46	Yes
2	0.0093	0.0093	-0.0003	0.0010	0.0003	12:03:24	Yes
Mean:	0.0078	0.0078	-0.0004				
SD:	0.0021	0.0021	0.0001				

%RSD: 27.14 27.14 33.70
QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 46
Sample ID: 144594-04
Analyst: Jennifer G
Initial Sample Wt: 0.22 g
Dilution:

Autosampler Location: 40
Date Collected: 10/24/2014 12:05:09 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 20 mL

Replicate Data: 144594-04

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.1358	1.494	0.0909	0.0921	0.0156	12:06:12	Yes
2	0.1359	1.495	0.0909	0.0922	0.0156	12:06:50	Yes
Mean:	0.1359	1.495	0.0909				
SD:	0.0001	0.0008	0.0000				
%RSD:	0.0539	0.0539	0.05				

Sequence No.: 47
Sample ID: 144581-01
Analyst: Jennifer G
Initial Sample Wt: 0.23 g
Dilution:

Autosampler Location: 41
Date Collected: 10/24/2014 12:08:31 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 20 mL

Replicate Data: 144581-01

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0104	0.1195	0.0065	0.0078	0.0012	12:09:34	Yes
2	0.0094	0.1085	0.0058	0.0071	0.0012	12:10:12	Yes
Mean:	0.0099	0.1140	0.0061				
SD:	0.0007	0.0078	0.0005				
%RSD:	6.814	6.814	7.78				

Sequence No.: 48
Sample ID: 144581-01 dup
Analyst: Jennifer G
Initial Sample Wt: 0.203 g
Dilution:

Autosampler Location: 42
Date Collected: 10/24/2014 12:11:54 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 20 mL

Replicate Data: 144581-01 dup

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0091	0.0926	0.0048	0.0061	0.0011	12:12:58	Yes
2	0.0099	0.1008	0.0053	0.0066	0.0011	12:13:35	Yes

Duplicate Check: 144581-01 dup

Analyte			Expected Conc.	Measured Conc.	Std. Dev.	Units	Difference (%)
Hg 253.7			0.0099	0.0095	0.001	ug/g	4.0
Mean:	0.0095	0.0967	0.0051				
SD:	0.0006	0.0058	0.0004				
%RSD:	5.971	5.971	6.99				

Sequence No.: 49
Sample ID: 144581-01 spk
Analyst: Jennifer G
Initial Sample Wt: 0.204 g
Dilution:

Autosampler Location: 43
Date Collected: 10/24/2014 12:15:17 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 20 mL

Replicate Data: 144581-01 spk

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.2345	2.392	0.1460	0.1473	0.0251	12:16:21	Yes
2	0.2334	2.380	0.1453	0.1466	0.0251	12:17:00	Yes
Mean:	0.2339	2.386	0.1456				
SD:	0.0008	0.0079	0.0005				
%RSD:	0.3306	0.3306	0.33				

Sequence No.: 50 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 10/24/2014 12:18:42 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.027	2.027	0.1236	0.1249	0.0212	12:19:47	Yes
2	2.018	2.018	0.1230	0.1243	0.0212	12:20:25	Yes
Mean:	2.022	2.022	0.1233				
SD:	0.0067	0.0067	0.0004				
%RSD:	0.3313	0.3313	0.33				

QC value within limits for Hg 253.7 Recovery = 101.11%
All analyte(s) passed QC.

Sequence No.: 51 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 10/24/2014 12:22:09 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0184	0.0184	0.0003	0.0015	0.0003	12:23:15	Yes
2	0.0135	0.0135	-0.0000	0.0012	0.0002	12:23:53	Yes
Mean:	0.0159	0.0159	0.0001				
SD:	0.0035	0.0035	0.0002				
%RSD:	21.72	21.72	190.22				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

HCl lot #: 0171051
HNO3 Lot #: C470895
H2O2 lot#: C4B0750

Spike #1 Lot #: 090613
Spike #2 Lot #: ↓ 500 mL
Spike #3 Lot #:
Spike #4 Lot #: 031414 @ 200 mL
Temp: 95

METALS PREP - non-aqueous

DATE: 10-23-14
INITIALS: JG
Page 1 of 1
PrepBatch PB141023Soil
QC Batch: QC141023Soil

Lab Sample #	Sample Type	Metals	Initial Amount (g)	Final Volume (ml)	Comments	% M	CC
Blk	Soil	JMet1	0.517	50			
LCS			0.457				
LCSDup			0.484				
463838-01			0.580		Pb, Cd, As	28.9	G3
-02			0.487			25.6	
-03			0.510			26.4	
-04			0.495			25.9	
-05			0.480			14.7	
-06			0.480			24.6	
-07			0.508			32.1	
-08			0.519			24.4	
-09			0.484			27.1	
-10			0.472			29.8	
-11			0.517			24.1	
-12			0.534			23.1	
-13			0.493			25.2	
-14			0.496			20.9	
-15			0.516			24.6	
-16			0.508			28.5	
-17			0.525			25.0	
-18			0.540			24.0	
-19			0.479			18.1	
-19dup			0.505			↓	
-19spk			0.492				

Initial Amount="1" for wipes, air filters
Digestion Method:EPA SW-846 3050 (soil,wipe,paint)
NIOSH 7082 (Air Filters)

PREPSOLLIMS

KMnO4 Ref#: 3471 HNO3 lot#: C470895 Waters: —
K2S2O8 Ref#: 3467 H2SO4 lot#: C340e519 Temp1: — Temp2: —
Hydroxy. Ref #: 3499 TCLP Fluid#: — Soils: start 1300 end 1330
Temp1: 93 Temp2: 93

METALS PREP - mercury

DATE: 10-23-14 CAL STD: Hg141023cal1

INITIALS: JG CCV STD: Hg141023ccv2

Lab Sample #	Sample Type	Method	Initial Volume/Weight	Comments	% M	CC
DblBlk		7471B				
0.0002						
0.0010						
0.0020						
0.0050						
0.0100						
ICV						
ICB						
Blk	Soil		0.245			
LCS			0.210			
LCSDup			0.239			
463850-01			0.230		28.9	G3
-02			0.232		25.6	
-03			0.221		26.4	
-04			0.227		25.9	
-05			0.243		14.7	
-06			0.230		24.6	
-07			0.225		32.1	
-08			0.231		24.4	
-09			0.229		27.1	
-10			0.206		29.8	
-11			0.224		24.1	
-12			0.217		23.1	
-13			0.240		25.2	
-14			0.207		20.9	
-15			0.229		24.6	
-16			0.202		28.5	
-17			0.209		25.0	
-18			0.214		24.0	
-19			0.223		18.1	

Digestion Method:EPA SW-846 7470A (water), 7471B (Soil)

PrepBatch: 88Hg141023HgSoil Page: 1 of 2

QC Batch: QCHg141023HgSoil

KMnO4 Ref#:________ HNO3 lot#:________ Waters:________
K2S2O8 Ref#:________ H2SO4 lot#:________ Temp1:____ Temp2:____
Hydroxy. Ref #:________ TCLP Fluid#________ Soils:________
Temp1:____ Temp2:____

METALS PREP - mercury

DATE:________ CAL STD:________

INITIALS:________ CCV STD:________

Lab Sample #	Sample Type	Method	Initial Volume/Weight	Comments	% M	CC
-19dup	Soil	7471B	0.240		18.1	G3
-19spk	↓		0.238		↓	↓
ccv						
ccb						
ccv						

Digestion Method:EPA SW-846 7470A (water), 7471B (Soil)

PrepBatch:________ Page: 2 of 2

QC Batch:________

WETCHEM DATA

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W80 (0-0.2 ft)
Lab Sample ID: 144638-01 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.636**	mg/Kg		10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W80 (0.2-0.7 ft)

Lab Sample ID: 144638-02 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.418**	mg/Kg	J	10/24/2014

Method Reference(s): EPA 9014

Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W80 (0.7-1.5 ft)

Lab Sample ID: 144638-03 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	< 0.649	mg/Kg		10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W90 (0-0.2 ft)

Lab Sample ID: 144638-04 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.452**	mg/Kg	J	10/24/2014

Method Reference(s): EPA 9014

Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W90 (0.2-1.0 ft)
Lab Sample ID: 144638-05 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.749**	mg/Kg		10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W90 (1.0-1.5 ft)
Lab Sample ID: 144638-06 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	< 0.649	mg/Kg		10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W80 (0-0.2 ft)

Lab Sample ID: 144638-07 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.384**	mg/Kg	J	10/24/2014

Method Reference(s): EPA 9014

Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W80 (0.2-1.0 ft)

Lab Sample ID: 144638-08 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	< 0.633	mg/Kg		10/24/2014

Method Reference(s): EPA 9014

Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W80 (1.0-1.5 ft)

Lab Sample ID: 144638-09 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	< 0.602	mg/Kg		10/24/2014

Method Reference(s): EPA 9014

Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W90 (0-0.2 ft)

Lab Sample ID: 144638-10 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.343**	mg/Kg	J	10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W90 (0.2-0.8 ft)

Lab Sample ID: 144638-11 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.311**	mg/Kg	J	10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W90 (0.8-1.3 ft)

Lab Sample ID: 144638-12 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.338**	mg/Kg	J	10/24/2014

Method Reference(s): EPA 9014

Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W80 (0-0.2 ft)

Lab Sample ID: 144638-13 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	< 0.651	mg/Kg		10/24/2014

Method Reference(s): EPA 9014

Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W80 (0.2-0.8 ft)

Lab Sample ID: 144638-14 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.342**	mg/Kg	J	10/24/2014

Method Reference(s): EPA 9014

Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W80 (0.8-1.4 ft)
Lab Sample ID: 144638-15 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	< 0.616	mg/Kg		10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W90 (0-0.2 ft)
Lab Sample ID: 144638-16 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.342**	mg/Kg	J	10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W90 (0.2-0.7 ft)

Lab Sample ID: 144638-17 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	< 0.639	mg/Kg		10/24/2014

Method Reference(s): EPA 9014

Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W30 (0-0.2 ft)

Lab Sample ID: 144638-18 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	< 0.566	mg/Kg		10/24/2014

Method Reference(s): EPA 9014

Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W83 (0.2-1.6 ft)
Lab Sample ID: 144638-19 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	< 0.428	mg/Kg		10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Method Blank Report

Client: GEI Consultants Inc.
Project Reference: National Fuel Gas Mineral Springs
Lab Project ID: 144638
SDG #: 4638-01
Matrix: Soil

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	<0.472	mg/Kg		10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014
QC Batch ID: QC141023stcn
QC Number: 1

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

QC Report for Laboratory Control Sample

Client: **GEI Consultants Inc.**
Project Reference: National Fuel Gas Mineral Springs
Lab Project ID: 144638
SDG #: 4638-01
Matrix: Soil

Total Cyanide

Analyte	Spike Added	Spike Units	LCS Result	LCS % Recovery	% Rec Limits	LCS Outliers	Date Analyzed
Cyanide, Total	9.28	mg/Kg	9.09	98.0	85 - 115		10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014
QC Number: 1
QC Batch ID: QC141023stcn

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

QC Report for Sample Spike and Sample Duplicate

SDG #: 4638-01
Client: GEI Consultants Inc. **Lab Project ID:** 144638
Project Reference: National Fuel Gas Mineral Springs

Lab Sample ID: 144638-01 **Date Sampled:** 10/22/2014
Sample Identifier: S6+10S W80 (0-0.2 ft) **Date Received:** 10/23/2014
Matrix: Soil

Total Cyanide

Analyte	Sample Results	Result Units	Spike Added	Spike Result	Spike % Recovery	% Rec Limits	Spike Outliers	Duplicate Result	Relative % Difference	RPD Limit	RPD Outliers	Date Analyzed
Cyanide, Total	**0.636**	mg/Kg	9.48	9.29	91.3	80 - 120		<0.601	NC	20		10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014
QC Batch ID: QC141023stcn

NC = Not Calculable. Applicable to RPD if sample or duplicate result is non-detect or estimated (see primary report for data flags). Applicable to MS if sample is greater or equal to ten times the spike added.

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Report Prepared Friday, October 24, 2014

Lab Name: Paradigm Environmental Services

Client: GEI Consultants Inc. **Lab Project No.:** 144638

Client Job Site: National Fuel Gas Mineral Springs **Run IDs.:** 140925B-ICV
141024A-CCVs

Client Job No.: N/A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Initial Calibration Source: Alfa Aeser
Continuing Calibration Source: Sigma-Aldrich

Concentration Units: mg/L

	Initial Calibration Verification			Continuing Calibration Verification					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	M
TCN	0.200	0.204	102	0.200	0.208	104	0.198	98.8	SW9014

(1) Control Limits: 90-110%

FORM IIA-IN

Lab Name: Paradigm Environmental Services

Client: GEI Consultants Inc. **Lab Project No.:** 144638

Client Job Site: National Fuel Gas Mineral Springs **Run ID.:** 141024A-CCVs

Client Job No.: N/A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Initial Calibration Source: Alfa Aeser
Continuing Calibration Source: Sigma-Aldrich

Concentration Units: mg/L

	Initial Calibration Verification			Continuing Calibration Verification					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	M
TCN				0.200	0.198	99.0	0.200	99.8	SW9014

(1) Control Limits: 90-110%

FORM IIA-IN

Lab Name: Paradigm Environmental Services

Client: GEI Consultants Inc. **Lab Project No.:** 144638

Client Job Site: National Fuel Gas Mineral Springs **Lab Sample No.:** Soil Blk 10/23

Client Job No.: N/A **Sample Type:** Soil

BLANKS

Preparation Blank Matrix (soil/water): Soil Run No.: 140925B-ICB
Concentration Units (mg/L or mg/kg): mg/kg 141024A-CCBs

	Initial Calibration Blank		Continuing Calibration Blank						Preparation Blank		Method
	(mg/L)		(mg/L)						(mg/Kg)		
Analyte		Q	1	Q	2	Q	3	Q		Q	
TCN	<0.01		<0.01		<0.01		<0.01		<0.472		SW9014

* - Outside established quality control acceptance limits.

FORM III-IN

Lab Name: Paradigm Environmental Services

Client: GEI Consultants Inc. **Lab Project No.:** 144638

Client Job Site: National Fuel Gas Mineral Springs **Lab Sample No.:** Soil Blk 10/23

Client Job No.: N/A **Sample Type:** Soil

BLANKS

Preparation Blank Matrix (soil/water): Soil Run No.: 141024A-CCBs
Concentration Units (mg/L or mg/kg): mg/kg

	Initial Calibration Blank		Continuing Calibration Blank						Preparation Blank		Method
	(mg/L)		(mg/L)						(mg/Kg)		
Analyte		Q	4	Q		Q		Q		Q	
TCN			<0.01								SW9014

* - Outside established quality control acceptance limits.

FORM III-IN

Laboratory Name: Paradigm Environmental Lab Cert. #10958 Page 1 of 1

Analyst Signature _____ Date: 6/18/2014

Matrix: Soil Units: mg/Kg

Initial Demonstration of Capability- SW846 Method 9014

Parameter	LOQ mg/Kg	True value mg/Kg	Results mg/Kg 1	Results mg/Kg 2	Results mg/Kg 3	Results mg/Kg 4	Average mg/Kg	EPA Acceptance criteria %	SD mg/Kg	EPA SD max limit mg/Kg
Cyanide, Total	0.5000	0.2500	0.2994	0.2994	0.2062	0.2994	0.2761	n/a	0.0466	n/a

Date: 6/18/14
Units: mg/Kg
Spike Level: 0.2500 mg/Kg

data file: 140618B

Compound	LOQ	MDL1	MDL2	MDL3	MDL4	MDL5	MDL6	MDL7	STD DEV	MDL
Cyanide, Total	0.5000	0.2994	0.2994	0.2062	0.2994	0.2217	0.2683	0.2683	0.0385	0.1209

140925B

TEST SETUP
Orion AquaMate 8000 UV-Vis v1.005 2W2R319204

Standard Curve	3:59pm 25Sep14
Test Name	140925_9014[Saved]
Date Standards Measured	25Sep14
Wavelength	578.0nm
Ref. Wavelength Correction	Off
Curve Fit	Linear
Number of Standards	7
Units	ppb
Sample Positioner	1-Cell Platform
ID# (0=OFF)	1
Low/High Limits	-9999/9999
Statistics	On
Auto Print	On
Auto Save Data	On
Data File Name	140925B

Std #	Conc. ppb	Abs 578.0nm
1	0.000	0.000
2	10.00	0.031
3	20.00	0.063
4	50.00	0.156
5	100.0	0.314
6	200.0	0.638
7	500.0	1.670

Curve Fit	Linear
Slope	0.00334
Intercept	-0.00947
Std Dev	0.013
Corr Coeff	1.000

ID#	Abs 578.0nm	Result ppb
1	0.671	203.8
2	0.001	3.135

# Samples	2
Average	103.5
Std Dev	141.9

141024A

TEST SETUP
Orion AquaMate 8000 UV-Vis v1.005 2W2R319204

Standard Curve	11:42am 24Oct14
Test Name	140925_9014[Saved]
Date Standards Measured	25Sep14
Wavelength	578.0nm
Ref. Wavelength Correction	Off
Curve Fit	Linear
Number of Standards	7
Units	ppb
Sample Positioner	1-Cell Platform
ID# (0=OFF)	1
Low/High Limits	-9999/9999
Statistics	On
Auto Print	On
Auto Save Data	On
Data File Name	141024A

Std #	Conc. ppb	Abs 578.0nm
1	0.000	0.000
2	10.00	0.031
3	20.00	0.063
4	50.00	0.156
5	100.0	0.314
6	200.0	0.638
7	500.0	1.670

Curve Fit	Linear
Slope	0.00334
Intercept	-0.00947
Std Dev	0.013
Corr Coeff	1.000

ID#	Sample ID	Abs 578.0nm	Result ppb
1	CCV	0.686	208.3
2	CCB	0.000	2.836
3	MB	0.001	3.135
4	LCS	0.645	196.0
5	144638-01	0.026	10.62
6	144638-01 DUP	0.016	7.628
7	144638-01 SPK	0.645	196.0
8	144638-02	0.014	7.029
9	144638-03	0.005	4.333
10	144638-04	0.017	7.927
11	144638-05	0.037	13.92
12	144638-06	0.003	3.734
13	CCV	0.650	197.5
14	CCB	0.001	3.135
15	144638-07	0.009	5.531
16	144638-08	0.005	4.333
17	144638-09	0.007	4.932
18	144638-10	0.009	5.531
19	144638-11	0.008	5.232
20	144638-12	0.008	5.232
21	144638-13	0.007	4.932
22	144638-14	0.010	5.831
23	144638-15	0.002	3.435

141024A

24	144638-16	0.011	6.130
25	CCV	0.652	198.1
26	CCB	0.002	3.435
27	144638-17	0.006	4.633
28	144638-18	0.005	4.333
29	144638-19	0.006	4.633
30	144635-01	0.003	3.734
31	144638-01 CB	0.001	3.135
32	144638-01 CB RPT	0.004	4.034
33	CCV	0.657	199.6
34	CCB	0.000	2.836

# Samples	34
Average	39.46
Std Dev	75.13

Distillation Date 10/23/14 Sulfamic Acid Lot # 3514
Analyst (distillation) RR MgCl2 Lot # 3485
Time at Temp 1140/1600 1:1 H2SO4 Lot # 3498
Block Temp 101°C/101°C 0.25N NaOH Lot # (distillation) 3509
10ppm Std Lot # 3515

Analysis Date RR 10/24/14 Prydine Lot # 24095000
Time 900 1M Sodium Phosphate Lot # 3248
Analyst (analysis) RR Choramine-T Lot # 3504
Curve Date 9/25/14 10 ppm ref Lot # 3521
0.25N NaOH Lot # (analysis) 3509

Prep Batch PB141023Stcn
QC Batch QC141023Stcn

Final WET CN mg/Kg= ((F*H)/I)* Dilution

Final DRY CN mg/Kg= ((F*H)/(I*((100-%M/100)))* Dilution

CYANIDE Distillation and Analysis of Soils- EPA 9010/9014 page 1 of 2

Lab Sample #	Sample Matrix	Distillation Initial Amount (g) (I)	Distillation Final Volume (mL) (H)	Comments/ Spk'd amount	CC	ID# on Spec	Initial amount (mL) (J)	Final Volume (mL) (G)	Concentration (mg/L) on spec (F)	% M	Dilution for LIMS (G/J)	Concentration (mg/Kg) Final	
ICV/CCV	NA	NA	NA	NA	NA	1	10	20	0.2083				~~98%~~ ✓ 104.2%
ICB/CCB	NA	NA	NA	NA	NA	2	10	20	0.002836				✓
MB	Soil	1.0598	25		—	3	10	20	0.003135		2	0.1479	✓
LCS		1.0781	25	1.0mL Lab 10ppm	—	4	10	20	0.1960		2	9.0901	98.0% ✓
144638-01		1.1737	25		G3	5	10	20	0.01062	28.9	2	0.63363	
-01 DUP		1.1699	25		G3	6	10	20	0.007628	28.9	2	0.4585 J	%Diff 32.5%
~~LCSSPK~~		1.4836	25	1.0mL Lab 10ppm	G3	7	10	20	0.1960	28.9	2	9.2905	91.3% ✓
144638-02		1.1302	25		G3	8	10	20	0.007029	25.6	2	0.4180 J	
-03		1.0468	25		G3	9	10	20	0.004333	26.4	2	0.2812	<0.649
-04		1.1832	25		G3	10	10	20	0.007927	25.9	2	0.4521 J	
CB needed -05		1.0900	25		G3	11	10	20	0.01392	14.7	2	0.7486	
-06		1.0214	25		G3	12	10	20	0.003734	24.6	2	0.2424	<0.649
CCV	NA	NA	NA	NA	NA	13	10	20	0.1975				98.8% ✓
CCB	NA	NA	NA	NA	NA	14	10	20	0.003135		~~2~~ RR 10/24/14		✓ Solid with
144638-07	Soil	1.0592	25		G3	15	10	20	0.005531	32.1	2	~~0.3957~~ J	0.3845
-08		1.0451	25		G3	16	10	20	0.004333	24.4	2	0.2742	<0.633
-09		1.1400	25		G3	17	10	20	0.004932	27.1	2	0.2967	<0.602
-10		1.1500	25		G3	18	10	20	0.005531	29.8	2	0.3426 J	
-11		1.1088	25		G3	19	10	20	0.005232	24.1	2	0.3108 J	
-12		1.0058	25		G3	20	10	20	0.005232	23.1	2	0.3382 J	
-13		1.0261	25		G3	21	10	20	0.004932	25.2	2	0.3213	<0.651
-14		1.0784	25		G3	22	10	20	0.005831	20.9	2 RR 10/24/14	~~0.3204~~ 0.3418 J	
-15		1.0757	25		G3	23	10	20	0.003435	24.6	2	~~0.2866~~ 0.2118	<0.616
-16		1.2544	25		G3	24	10	20	0.006130	28.5	2	~~0.3823~~ 0.3417 J	
CCV	NA	NA	NA	NA	NA	25	10	20	0.1981				99.1% ✓
CCB	NA	NA	NA	NA	NA	26	10	20	0.003435				✓

*This symbol next to a sample # indicates a positive result for sulfide with the lead acetate strip and therefore the sample was treated with Lead Carbonate before distillation.

Distillation Date 10/23/14 Sulfamic Acid Lot # 3514
Analyst (distillation) RR MgCl2 Lot # 3485
Time at Temp 1140/1600 1:1 H2SO4 Lot # 3498
Block Temp 101°C/101°C 0.25N NaOH Lot # (distillation) 3509
10ppm Std Lot # 3515

Analysis Date 10/24/14 Prydine Lot # 2409500
Time 900 1M Sodium Phosphate Lot # 3248
Analyst (analysis) RR Choramine-T Lot # 3504
Curve Date 9/25/14 10 ppm ref Lot # 3521
0.25N NaOH Lot # (analysis) 3509

Prep Batch PB141023stcn
QC Batch QC141023stcn

Final WET CN mg/Kg= ((F*H)/I)* Dilution

Final DRY CN mg/Kg= ((F*H)/(I*((100-%M/100)))* Dilution

CYANIDE Distillation and Analysis of Soils- EPA 9010/9014 page 2 of 2

Lab Sample #	Sample Matrix	Distillation Initial Amount (g) (I)	Distillation Final Volume (mL) (H)	Comments/ Spk'd amount	CC	ID# on Spec	Initial amount (mL) (J)	Final Volume (mL) (G)	Concentration (mg/L) on spec (F)	% M	Dilution for LIMS (G/J)	Concentration (mg/Kg) Final	
~~ICV/CCV~~	~~NA~~	~~NA~~	~~NA~~	~~NA~~	~~NA~~								RR 10/24/14
~~ICB/CCB~~	~~NA~~	~~NA~~	~~NA~~	~~NA~~	~~NA~~								
144638-17	soil	1.0429	25		G3	27	10	20	0.004653	25.0	2	~~0.23271~~ 0.2962	<0.639
-18		1.1616	25		G3	28	10	20	0.004333	24.0	2	~~0.2711~~ 0.2454	<0.366
-19		1.4268	25		G3	29	10	20	0.004633	18.1	2	~~0.2748~~ 0.1982	<0.428
144635-01	soil	1.0262	25		G3	30	10	20	0.003734	8.87	2	~~0.19600~~ 0.1996	
made incorrectly 144638-05 cb	color blank	1.0900	25	—	G3	31	10	20	0.003135	14.7	2		
~~CCV~~	—	—	—	—	—	~~32~~	~~10~~	~~20~~					
~~CCB~~	—	—	—	—	—	~~33~~	~~10~~	~~20~~					
rpt 144638-05CB	color blank	1.0900	25	—	G3	32	5	10	0.004034	14.7	2	0.21169	→ report sample w/o color blank <Reporting limit.
CCV	—	—	—	—	—	33	10	20	0.1996			99.8% ✓	
CCB	—	—	—	—	—	34	10	20	0.002836			✓	
CCV	NA	NA	NA	NA	NA								
CCB	NA	NA	NA	NA	NA								
CCV	NA	NA	NA	NA	NA								
CCB	NA	NA	NA	NA	NA								

RR 10/24/14

*This symbol next to a sample # indicates a positive result for sulfide with the lead acetate strip and therefore the sample was treated with Lead Carbonate before distillation.

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Analytical Report Cover Page

GEI Consultants, Inc.

For Lab Project # 144638
Issued November 7, 2014
This report contains a total of 199 pages

The reported results relate only to the samples as they have been received by the laboratory.

Each page of this document is part of a multipage report. This document may not be reproduced except in its entirety, without the prior consent of Paradigm Environmental Services, Inc.

All soil/sludge samples have been reported on a dry weight basis, unless qualified "reported as received". Other solids are reported as received.

Low level Volatiles blank reports for soil/solid matrix are based on a nominal 5 gram weight. Sample results and reporting limits are based on actual weight, which may be more or less than 5 grams.

The Chain of Custody provides additional information, including compliance with sample condition requirements upon receipt. Sample condition requirements are defined under the 2003 NELAC Standard, sections 5.5.8.3.1 and 5.5.8.3.2.

NYSDOH ELAP does not certify for all parameters. Paradigm Environmental Services or the indicated subcontracted laboratory does hold certification for all analytes where certification is offered by ELAP unless otherwise specified. Aliquots separated for certain tests, such as TCLP, are indicated on the Chain of Custody and final reports with an "A" suffix.

Data qualifiers are used, when necessary, to provide additional information about the data. This information may be communicated as a flag or as text at the bottom of the report. Please refer to the following list of frequently used data flags and their meaning:

"<" = analyzed for but not detected at or above the reporting limit.
"E" = Result has been estimated, calibration limit exceeded.
"Z" = Please refer to included Case Narrative for explanation.
"D" = Sample, Laboratory Control Sample, or Matrix Spike Duplicate results above Relative Percent Difference limit.
"M" = Matrix spike recoveries outside QC limits. Matrix bias indicated.
"B" = Method blank contained trace levels of analyte. Refer to included method blank report.
"J" = Result estimated between the quantitation limit and half the quantitation limit.
"L"= Laboratory Control Sample recovery outside accepted QC limits.
"P"= Concentration differs by more than 40% between primary and secondary analytical columns.
"NC"=Not calculableApplicable to RPD if sample or duplicate result is non-detect or estimated(see primary report for data flags). Applicable to MS if sample is greater or equal to ten times the spike added. Applicable to sample surrogates or MS if sample dilution is 10x or higher.
"*"=Indicates any recoveries outside associated acceptance windows. Surrogate outliers in samples are presumed matrix effects. LCS demonstrates method compliance unless otherwise noted.
"(1)"= Indicates data from primary column used for QC calculation.

LAB PROJECT NARRATIVE: 144638
PROJECT NAME: National Fuel Gas Mineral Springs
SDG: 4638-01
CLIENT: GEI Consultants Inc.

Nineteen soil samples were collected by GEI personnel on 10/22/2014 and received at the Paradigm laboratory on 10/23/2014. Container and holding times were acceptable at time of receipt; the samples were received at 0° Centigrade and were on ice. The samples were submitted with the Chains-of-Custody requesting a site specific list for Metals and Total Cyanide. All analyses were performed using EPA SW-846 methods and holding times.

The items noted in this case narrative address compliance with the referenced methods, NYSDOH ELAP rules, and any project specific data quality requirements. These may be different from the usability criteria referenced in any "Functional Guidelines" or other data review standards used by data validators.

GENERAL NOTES

ALL ANALYSES

The initial and continuing calibration reports are only evaluated for compounds that are on the sample summary report.

Regarding results on QC summary forms versus included raw data, due to calculations made at the instrument where many significant figures may be used, there may be slight discrepancies between the summary report result and that recorded on the raw data. This does not affect data usability.

METALS

ICP-AES interelement and background corrections were applied. Raw data was not generated before application of background corrections.

Holding times were met for all samples.

Site specific QC was not requested on this SDG but was analyzed on sample S6-30SW83 (0.2-1.6ft). All Matrix Spike Recoveries and Sample Duplicate Percent Differences were within QC limits. Any metals with a Spike % Recovery reported as "NC" on the QC summary form indicates that the metal concentrations were ten times greater than the matrix spikes and could not be calculated. Likewise, any metals with a Relative % Difference reported as "NC" on the QC summary form indicates that the metal results were Non-Detect or estimated and could not be calculated. The Laboratory Control Samples recovered within acceptable limits. All LCS % differences were within acceptance limits.

The method blanks were free from contamination within the reportable ranges.

All data for the initial calibrations was within acceptance limits.

All continuing calibrations data was within acceptance limits.

INORGANICS-TOTAL CYANIDE

Holding times were met for all samples.

Site specific QC was not requested on this SDG but was analyzed on sample S6+10SW80 (0-0.2ft). The Matrix Spike Recovery was within QC limits. Any results reported as "NC" on the QC summary form indicates that the concentration was ten times greater than the matrix spike and could not be calculated or that the result was Non-Detect or estimated and could not be calculated. The Laboratory Control Sample recovered within acceptable limits.

The method blank was free from contamination within the reportable ranges.

All data for the initial calibrations was within acceptance limits.

All continuing calibrations data was within acceptance limits.

(signed) _____ (date) 11/10/2014

Bruce Hoogesteger- Technical Director

SDG# : 4638-01
LAB PROJECT #: 144638
CLIENT: GEI
PROJECT NAME National Fuel Gas
Mineral Springs

BATCH COMPLETE: 10/23/2014
DATE: 10/23/2014
DATE DUE: 11/20/2014
PROTOCOL: SW846

LAB.SAMPLE#	FIELD ID	MATRIX	REQUESTED ANALYSIS	DATE SAMPLED	DATE REC'D
144638-01	S6+10S W80 (0-0.2 ft)	Soil	Mets (Pb,As,Cd,Hg),TCN	10/22/2014	10/23/2014
144638-02	S6+10S W80 (0.2-0.7 ft)	Soil	Mets (Pb,As,Cd,Hg),TCN	10/22/2014	10/23/2014
144638-03	S6+10S W80 (0.7-1.5 ft)	Soil	Mets (Pb,As,Cd,Hg),TCN	10/22/2014	10/23/2014
144638-04	S6+10S W90 (0-0.2 ft)	Soil	Mets (Pb,As,Cd,Hg),TCN	10/22/2014	10/23/2014
144638-05	S6+10S W90 (0.2-1.0 ft)	Soil	Mets (Pb,As,Cd,Hg),TCN	10/22/2014	10/23/2014
144638-06	S6+10S W90 (1.0-1.5 ft)	Soil	Mets (Pb,As,Cd,Hg),TCN	10/22/2014	10/23/2014
144638-07	S6+20S W80 (0-0.2 ft)	Soil	Mets (Pb,As,Cd,Hg),TCN	10/22/2014	10/23/2014
144638-08	S6+20S W80 (0.2-1.0 ft)	Soil	Mets (Pb,As,Cd,Hg),TCN	10/22/2014	10/23/2014
144638-09	S6+20S W80 (1.0-1.5 ft)	Soil	Mets (Pb,As,Cd,Hg),TCN	10/22/2014	10/23/2014
144638-10	S6+20S W90 (0-0.2 ft)	Soil	Mets (Pb,As,Cd,Hg),TCN	10/22/2014	10/23/2014
144638-11	S6+20S W90 (0.2-0.8 ft)	Soil	Mets (Pb,As,Cd,Hg),TCN	10/22/2014	10/23/2014
144638-12	S6+20S W90 (0.8-1.3 ft)	Soil	Mets (Pb,As,Cd,Hg),TCN	10/22/2014	10/23/2014
144638-13	S6+30S W80 (0-0.2 ft)	Soil	Mets (Pb,As,Cd,Hg),TCN	10/22/2014	10/23/2014
144638-14	S6+30S W80 (0.2-0.8 ft)	Soil	Mets (Pb,As,Cd,Hg),TCN	10/22/2014	10/23/2014
144638-15	S6+30S W80 (0.8-1.4 ft)	Soil	Mets (Pb,As,Cd,Hg),TCN	10/22/2014	10/23/2014
144638-16	S6+30S W90 (0-0.2 ft)	Soil	Mets (Pb,As,Cd,Hg),TCN	10/22/2014	10/23/2014
144638-17	S6+30S W90 (0.2-0.7 ft)	Soil	Mets (Pb,As,Cd,Hg),TCN	10/22/2014	10/23/2014
144638-18	S6+30S W30 (0-0.2 ft)	Soil	Mets (Pb,As,Cd,Hg),TCN	10/22/2014	10/23/2014
144638-19	S6+30S W83 (0.2-1.6 ft)	Soil	Mets (Pb,As,Cd,Hg),TCN	10/22/2014	10/23/2014

-5-

PARADIGM ENVIRONMENTAL SERVICES, INC.

179 Lake Avenue, Rochester, NY 14608 Office (585) 647-2530 Fax (585) 647-3311

CHAIN OF CUSTODY

PAGE 1 OF 3

REPORT TO:		INVOICE TO:		LAB PROJECT ID
CLIENT:	GEI CONSULTANTS	CLIENT:	NATIONAL FUEL GAS	144638
ADDRESS:	1301 TRUMANSBURG ROAD	ADDRESS:		Quotation #:
CITY:	ITHACA STATE: NY ZIP: 14850	CITY: STATE: ZIP:		
PHONE:	607 216 8458	PHONE:		Email:
ATTN:	JAMES EDWARDS	ATTN:	BRAD WALKER	

PROJECT REFERENCE: NATIONAL FUEL GAS NIAGARA SPRINGS

Matrix Codes:
AQ - Aqueous Liquid; NQ - Non-Aqueous Liquid; WA - Water; WG - Groundwater; DW - Drinking Water; WW - Wastewater; SO - Soil; SL - Sludge; SD - Solid; PT - Paint; WP - Wipe; CK - Caulk; OL - Oil; AR - Air

REQUESTED ANALYSIS

	DATE COLLECTED	TIME COLLECTED	COMPOSITE	GRAB	SAMPLE IDENTIFIER	MATRIX CODES	NUMBER OF CONTAINERS	Lead Arsenic Cadmium Manganese TCLP (Cd, Mn, Pb)	REMARKS	PARADIGM LAB SAMPLE NUMBER
1	10/22	14:30	X	X	Sb+IDS WSD (0-0.2')	SO	1	X X X X X		01
2		14:35	X	X	Sb + IDS WSD (0.2-0.7)		1	X X X X X		02
3		14:40		X	Sb + IDS WSD (0.7-1.5)		1	X X X X X		03
4		14:45		X	Sb + IDS WSD (0-0.2)		1	X X X X X		04
5		14:50		X	Sb + IDS WSD (0.2-1.0)		1	X X X X X		05
6		14:55		X	Sb + IDS WSD (1.0-1.5)		1	X X X X X		06
7		15:00		X	Sb + 20S WSD (0-0.2)		1	X X X X X		07
8		15:05		X	Sb + 20S WSD (0.2-1.0)		1	X X X X X		08
9		15:10		X	Sb + 20S WSD (1.0-1.5)		1	X X X X X		09
10		15:15		X	Sb + 30S WSD (0-0.2')		1	X X X X X		10

6°C iced 10/23 @ 0904. Custody seals dated + signed. ISS 10/23/14

Turnaround Time		Report Supplements		
Availability contingent upon lab approval; additional fees may apply.				
Standard 5 day	☐	Batch QC	☐	Basic EDD ☐
Rush 3 day	☐	Category A	☐	NYSDEC EDD ☒
Rush 2 day	☐	Category B	☒	
Rush 1 day	☒		per SF ISS 10/23/14	
Other please indicate:	☐	Other please indicate:	☐	Other EDD please indicate: ☐

Sampled By	Matthew Cummings	10/22 17:09	Total Cost:
Relinquished By	Matthew Cummings		
Received By		10/22/14 17:43	P.I.F.
Received @ Lab By		10/23/14 0921	

PAGE 2 OF 3

179 Lake Avenue, Rochester, NY 14608 Office (585) 647-2530 Fax (585) 647-3311

CHAIN OF CUSTODY

PARADIGM ENVIRONMENTAL SERVICES, INC.

REPORT TO:	INVOICE TO:	
CLIENT:	CLIENT:	LAB PROJECT ID: 1446638
ADDRESS:	ADDRESS:	
CITY: STATE: ZIP: SAME	CITY: STATE: ZIP: SAME	Quotation #:
PHONE:	PHONE:	Email:
ATTN:	ATTN:	

PROJECT REFERENCE

Matrix Codes:
AQ - Aqueous Liquid; NQ - Non-Aqueous Liquid; WA - Water; WG - Groundwater; DW - Drinking Water; WW - Wastewater; SO - Soil; SL - Sludge; SD - Solid; PT - Paint; WP - Wipe; CK - Caulk; OL - Oil; AR - Air

REQUESTED ANALYSIS

	DATE COLLECTED	TIME COLLECTED	COMPOSITE	GRAB	SAMPLE IDENTIFIER	MATRIX CODES	NUMBER OF CONTAINERS	Lead 11	Arsenic	Cadmium	Mercury	TCLP	REMARKS	PARADIGM LAB SAMPLE NUMBER
1	10/7	15:20 me		X	Sb+20S WA0 (0.2-0.5)	SO	1	X	X	X	X	X		1 1
2		15:25		X	Sb+20S WA0 (0.5-1.3)		1	X	X	X	X	X		1 2
3		15:30		X	Sb+30S WA0 (0.2-0.5)		1	X	X	X	X	X		1 3
4		15:35		X	Sb+30S WA0 (0.2-0.5)		1	X	X	X	X	X		1 4
5		15:40		X	Sb+30S WA0 (0.5-1.4)		1	X	X	X	X	X	per JH 1551 10/23/14	1 5
6		15:45		X	Sb+30S WA0 (0-0.2)		1	X	X	X	X	X		1 6
7		15:50		X	Sb+30S WA0 (0.2-0.7)		1	X	X	X	X	X		1 7
8		15:55		X	Sb+30S WA0 (0-0.2)		1	X	X	X	X	X		1 8
9		16:00		X	Sb+30S WA0 (0.2-1.6)		1	X	X	X	X	X		1 9
10		16:40		X	Sb+30S WA0 (1.6-2.1)		1							

sample not taken per JH. 1551 10/23/14

Turnaround Time		Report Supplements			
Availability contingent upon lab approval; additional fees may apply.					
Standard 5 day	☐	Batch QC	☐	Basic EDD	☐
Rush 3 day	☐	Category A	☐	NYSDEC EDD	☐
Rush 2 day	☐	Category B	☒		
Rush 1 day	☒				
Other please indicate:	☐	Other per JH 1551 10/23/14 please indicate:	☐	Other EDD please indicate:	☐

Sampled By: Michael Cumming	Date/Time: 10/22 17:09	Total Cost:	
Relinquished By: Michael Cumming	Date/Time: 10/22		
Received By:	Date/Time: 10-22-14 17:09	P.I.F.	
Received @ Lab By:	Date/Time: 10/23/14 0921		

PARADIGM ENVIRONMENTAL SERVICES

Chain of Custody Supplement

Client: GFI **Completed by:** Kyle Sherwick

Lab Project ID: 144638 **Date:** 10/23/14

Sample Condition Requirements

Per NELAC/ELAP 210/241/242/243/244

Condition	NELAC compliance with the sample condition requirements upon receipt: Yes	No	N/A
Container Type	X		
Comments			
Transferred to method-compliant container			X
Headspace (<1 mL)			X
Comments			
Preservation			X
Comments			
Chlorine Absent (<0.10 ppm per test strip)			X
Comments			
Holding Time	X		
Comments			
Temperature	X TCN		X
Comments	6° C iced by samples @ 0904. Custody seals dated & signed. KS 10/23/14		
Sufficient Sample Quantity	X		
Comments			

PARADIGM
ENVIRONMENTAL SERVICES, INC.
179 Lake Avenue, Rochester, NY 14608 Office: (585) 647-2530 Fax: (585) 647-3311

Lab Project #: 144638

Client : GEI

of Samples: 19

Internal Chain of Custody

Sign-Out Log for Refrigerator: C

Sample ID	Container Code	Initials	Purpose	Date/Time Out	Date/Time In
-01	G3	RJK/MGV	TCN/moisture	10/23 945	10/23 1137
-02					
-03					
-04					
-05					
-06					
-07					
-08					
-09					
-10					
-11					
-12					
-13					
-14					
-15					
-16					
-17					
-18					
-19					
-09		RJK	TCN	10/23 1400	RJK 10/25 1532
-10					
-11					
-12					
-13					
-14					
-15					
-16					
-17					
-18					
-19					

Percent Moisture Prep Log

% Moisture = (Wet Weight - Dry Weight) / (Wet weight - Pan Weight)

Date	Container Code	Sample #	Pan Weight	Wet Weight	Dry Weight	Wet Weight - Pan Weight	Percent Moisture	Initials
10/23/14	C-3	4638-01	1.28	6.75	5.17	5.47	28.9	JSD
		-02	1.28	7.01	5.54	5.73	25.6	
		-03	1.30	6.34	5.01	5.04	26.4	
		-04	1.29	6.43	5.10	5.14	25.9	
		-05	1.29	7.29	6.41	6.00	14.7	
		-06	1.30	6.41	5.15	5.11	24.6	
		-07	1.30	6.82	5.05	5.52	32.1	
		-08	1.29	7.07	5.66	5.78	24.4	
		-09	1.27	6.51	5.09	5.24	27.1	
		-10	1.30	6.70	5.09	5.40	29.8	
		-11	1.29	6.61	5.33	5.32	24.1	
		-12	1.28	6.60	5.37	5.32	23.1	
		-13	1.27	6.58	5.24	5.31	25.2	
		-14	1.29	6.84	5.68	5.55	20.9	
		-15	1.30	7.20	5.75	5.90	24.6	
		-16	1.27	6.36	4.91	5.09	28.5	
		-17	1.28	6.29	5.04	5.01	25.0	
		-18	1.30	7.06	5.68	5.76	24.0	
		-19	1.29	7.49	6.37	6.20	18.1 > 3.79%D	
	↓	4638-19 Dup	1.28	6.43	5.46	5.15	18.8	↓
	C-2	4646-01	1.29	5.85	2.40	4.56	75.7	JS
	C-3	4659-01	1.29	7.76	7.10	6.47	10.2	
	↓	-02	1.30	6.97	6.10	5.67	15.3	
		-03	1.30	7.50	6.86	6.20	10.3	
		-04	1.30	6.96	5.74	5.66	21.6	
		-05	1.29	6.32	5.73	5.03	11.7	
	↓	-06	1.29	6.54	5.58	5.25	18.3	↓

GENERAL TERMS AND CONDITIONS
LABORATORY SERVICES

These Terms and Conditions embody the whole agreement of the parties in the absence of a signed and executed contract between the Laboratory (LAB) and Client. They shall supersede all previous communications, representations, or agreements, either verbal or written, between the parties. The LAB specifically rejects all additional, inconsistent, or conflicting terms, whether printed or otherwise set forth in any purchase order or other communication from the Client to the LAB. The invalidity or unenforceability in whole or in part of any provision, term, or condition hereof shall not affect in any way the validity or enforceability of the remainder of the Terms and Conditions. No waiver by LAB of any provision, term, or condition hereof or of any breach by or obligation of the Client hereunder shall constitute a waiver of such provision, term, or condition on any other occasion or a waiver of any other breach by or obligation of the Client. This agreement shall be administered and interpreted under the laws of the state which services are procured.

Warranty. Recognizing that the nature of many samples is unknown and that some may contain potentially hazardous components, LAB warrants only that it will perform testing services, obtain findings, and prepare reports in accordance with generally accepted analytical laboratory principles and practices at the time of performance of services. LAB makes no other warranty, express or implied.

Scope and Compensation. LAB agrees to perform the services described in the chain of custody to which these terms and conditions are attached. Unless the parties agree in writing to the contrary, the duties of LAB shall not be construed to exceed the services specifically described. LAB will use LAB default method for all tests unless specified otherwise on the Work Order.
Payment terms are net 30 days from the date of invoice. All overdue payments are subject to an interest charge of one and one-half percent (1-1/2%) per month or a portion thereof. Client shall also be responsible for costs of collection, including payment of reasonable attorney fees if such expense is incurred. The prices, unless stated, do not include any sale, use or other taxes. Such taxes will be added to invoice prices when required.

Prices. Compensation for services performed will be based on the current Lab Analytical Fee Schedule or on quotations agreed to in writing by the parties. Turnaround time based charges are determined from the time of resolution of all work order questions. Testimony, court appearances or data compilation for legal action will be charged separately.

Limitations of Liability. In the event of any error, omission, or other professional negligence, the sole and exclusive responsibility of LAB shall be to re-perform the deficient work at its own expense and LAB shall have no other liability whatsoever. All claims shall be deemed waived unless made in writing and received by LAB within ninety (90) days following completion of services.
LAB shall have no liability, obligation, or responsibility of any kind for losses, costs, expenses, or other damages (including but not limited to any special, direct, incidental or consequential damages) with respect to LAB's services or results.
All results provided by LAB are strictly for the use of its clients and LAB is in no way responsible for the use of such results by clients or third parties. All reports should be considered in their entirety, and LAB is not responsible for the separation, detachment, or other use of any portion of these reports. Client may not assign the lab report without the written consent of the LAB.
Client covenants and agrees, at its/his/her sole expense, to indemnify, protect, defend, and save harmless the LAB from and against any and all damages, losses, liabilities, obligations, penalties, claims, litigation, demands, defenses, judgments, suits, actions, proceedings, costs, disbursements and/or expenses (including, without limitation attorneys' and experts' fees and disbursements) of any kind whatsoever which may at any time be imposed upon, incurred by or asserted or awarded against client relating to, resulting from or arising out of (a) the breach of this agreement by this client, (b) the negligence of the client in handling, delivering or disclosing any hazardous substance, (c) the violation of the Client of any applicable law, (d) non-compliance by the Client with any environmental permit or (e) a material misrepresentation in disclosing the materials to be tested.

Hazard Disclosure. Client represents and warrants that any sample delivered to LAB will be preceded or accompanied by complete written disclosure of the presence of any hazardous substances known or suspected by Client. Client further warrants that any sample containing any hazardous substance that is to be delivered to LAB will be packaged, labeled, transported, and delivered properly and in accordance with applicable laws.

Sample Handling. Prior to LAB's acceptance of any sample (or after any revocation of acceptance), the entire risk of loss or of damage to such sample remains with Client. Samples are accepted when receipt is acknowledged on chain of custody documentation. In no event will LAB have any responsibility for the action or inaction of any carrier shipping or delivering any sample to or from LAB premises.
Client authorizes LAB to proceed with the analysis of samples as received by the laboratory, recognizing that any samples not in compliance with all current DOH-ELAP-NELAP requirements for containers, preservation or holding time will be noted as such on the final report.
Disposal of hazardous waste samples is the responsibility of the Client. If the Client does not wish such samples returned, LAB may add storage and disposal fees to the final invoice. Maximum storage time for samples is 30 days after completion of analysis unless modified by applicable state or federal laws. Client will be required to give the LAB written instructions concerning disposal of these samples.
LAB reserves the absolute right, exercisable at any time, to refuse to receive delivery of, refuse to accept, or revoke acceptance of any sample, which, in the sole judgment of LAB (a) is of unsuitable volume, (b) may be or become unsuitable for or may pose a risk in handling, transport, or processing for any health, safety, environmental or other reason whether or not due to the presence in the sample of any hazardous substance, and whether or not such presence has been disclosed to LAB by Client or (c) if the condition or sample date make the sample unsuitable for analysis.

Legal Responsibility. LAB is solely responsible for performance of this contract, and no affiliated company, director, officer, employee, or agent shall have any legal responsibility hereunder, whether in contract or tort including negligence.

Assignment. LAB may assign its performance obligations under this contract to other parties, as it deems necessary. LAB shall disclose to Client any assignee (subcontractor) by ELAP ID # on the submitted final report.

Force Majeure. LAB shall have no responsibility or liability to the Client for any failure or delay in performance by LAB, which results in whole or in part from any cause or circumstance beyond the reasonable control of LAB. Such causes and circumstances shall include, but not limited to, acts of God, acts or orders of any government authority, strikes or other labor disputes, natural disasters, accidents, wars, civil disturbances, difficulties or delays in transportation, mail or delivery services, inability to obtain sufficient services or supplies from LAB's usual suppliers, or any other cause beyond LAB's reasonable control.

Law. This contract shall be continued under the laws of the State of New York without regard to its conflicts of laws provision.

METALS DATA

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W80 (0-0.2 ft)
Lab Sample ID: 144638-01 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**9.03**	mg/Kg		10/23/2014
Cadmium	**0.851**	mg/Kg		10/23/2014
Lead	**96.2**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050
Preparation Date: 10/23/2014
Data File: 102314b

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W80 (0-0.2 ft)

Lab Sample ID: 144638-01 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.129**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W80 (0.2-0.7 ft)

Lab Sample ID: 144638-02 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**8.22**	mg/Kg		10/23/2014
Cadmium	**0.768**	mg/Kg		10/23/2014
Lead	**102**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W80 (0.2-0.7 ft)

Lab Sample ID: 144638-02 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.129**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W80 (0.7-1.5 ft)
Lab Sample ID: 144638-03 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**6.76**	mg/Kg		10/23/2014
Cadmium	**0.779**	mg/Kg		10/23/2014
Lead	**37.1**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050
Preparation Date: 10/23/2014
Data File: 102314b

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W80 (0.7-1.5 ft)

Lab Sample ID: 144638-03 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.0840**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W90 (0-0.2 ft)
Lab Sample ID: 144638-04 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**6.41**	mg/Kg		10/24/2014
Cadmium	**0.464**	mg/Kg	J	10/23/2014
Lead	**69.0**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050
Preparation Date: 10/23/2014
Data File: 102414a

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W90 (0-0.2 ft)

Lab Sample ID: 144638-04 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.121**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W90 (0.2-1.0 ft)
Lab Sample ID: 144638-05 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**6.72**	mg/Kg		10/23/2014
Cadmium	< 0.611	mg/Kg		10/23/2014
Lead	**84.2**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050
Preparation Date: 10/23/2014
Data File: 102314b

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W90 (0.2-1.0 ft)

Lab Sample ID: 144638-05 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	< 0.0193	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W90 (1.0-1.5 ft)
Lab Sample ID: 144638-06 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**4.14**	mg/Kg		10/24/2014
Cadmium	**0.704**	mg/Kg		10/23/2014
Lead	**23.6**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050
Preparation Date: 10/23/2014
Data File: 102414a

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Report Prepared Friday, October 24, 2014

PARADIGM

ENVIRONMENTAL SERVICES, INC

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W90 (1.0-1.5 ft)

Lab Sample ID: 144638-06 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.0669**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W80 (0-0.2 ft)

Lab Sample ID: 144638-07 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**8.27**	mg/Kg		10/23/2014
Cadmium	**0.632**	mg/Kg	J	10/23/2014
Lead	**57.0**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050
Preparation Date: 10/23/2014
Data File: 102314b

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W80 (0-0.2 ft)

Lab Sample ID: 144638-07 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.107**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W80 (0.2-1.0 ft)

Lab Sample ID: 144638-08 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**8.99**	mg/Kg		10/23/2014
Cadmium	**0.634**	mg/Kg	J	10/23/2014
Lead	**54.5**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W80 (0.2-1.0 ft)

Lab Sample ID: 144638-08 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.0974**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W80 (1.0-1.5 ft)

Lab Sample ID: 144638-09 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**8.36**	mg/Kg		10/23/2014
Cadmium	**0.962**	mg/Kg		10/23/2014
Lead	**68.1**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W80 (1.0-1.5 ft)

Lab Sample ID: 144638-09 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.111**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W90 (0-0.2 ft)

Lab Sample ID: 144638-10 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**6.28**	mg/Kg		10/24/2014
Cadmium	**0.806**	mg/Kg		10/23/2014
Lead	**121**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102414a

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W90 (0-0.2 ft)

Lab Sample ID: 144638-10 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.122**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W90 (0.2-0.8 ft)

Lab Sample ID: 144638-11 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**7.63**	mg/Kg		10/23/2014
Cadmium	**0.902**	mg/Kg		10/23/2014
Lead	**142**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W90 (0.2-0.8 ft)

Lab Sample ID: 144638-11 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.128**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W90 (0.8-1.3 ft)

Lab Sample ID: 144638-12 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**8.83**	mg/Kg		10/23/2014
Cadmium	**1.01**	mg/Kg		10/23/2014
Lead	**81.8**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W90 (0.8-1.3 ft)

Lab Sample ID: 144638-12 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.124**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W80 (0-0.2 ft)

Lab Sample ID: 144638-13 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**10.2**	mg/Kg		10/23/2014
Cadmium	**0.595**	mg/Kg	J	10/23/2014
Lead	**65.2**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W80 (0-0.2 ft)

Lab Sample ID: 144638-13 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.139**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W80 (0.2-0.8 ft)

Lab Sample ID: 144638-14 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**10.2**	mg/Kg		10/23/2014
Cadmium	**0.493**	mg/Kg	J	10/23/2014
Lead	**55.2**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W80 (0.2-0.8 ft)

Lab Sample ID: 144638-14 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.122**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W80 (0.8-1.4 ft)

Lab Sample ID: 144638-15 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**3.92**	mg/Kg		10/24/2014
Cadmium	**0.603**	mg/Kg	J	10/23/2014
Lead	**29.4**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102414a

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier:	S6+30S W80 (0.8-1.4 ft)		
Lab Sample ID:	144638-15	**Date Sampled:**	10/22/2014
Matrix:	Soil	**Date Received:**	10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.0781**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W90 (0-0.2 ft)

Lab Sample ID: 144638-16 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**6.00**	mg/Kg		10/24/2014
Cadmium	**0.613**	mg/Kg	J	10/23/2014
Lead	**72.8**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102414a

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W90 (0-0.2 ft)

Lab Sample ID: 144638-16 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.116**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W90 (0.2-0.7 ft)

Lab Sample ID: 144638-17 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**6.71**	mg/Kg		10/23/2014
Cadmium	**0.872**	mg/Kg		10/23/2014
Lead	**54.8**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W90 (0.2-0.7 ft)

Lab Sample ID: 144638-17 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.0864**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W30 (0-0.2 ft)
Lab Sample ID: 144638-18 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**0.962**	mg/Kg	J	10/24/2014
Cadmium	< 0.609	mg/Kg		10/23/2014
Lead	**52.0**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050
Preparation Date: 10/23/2014
Data File: 102414a

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W30 (0-0.2 ft)

Lab Sample ID: 144638-18 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.118**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W83 (0.2-1.6 ft)

Lab Sample ID: 144638-19 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**1.61**	mg/Kg		10/24/2014
Cadmium	< 0.637	mg/Kg		10/23/2014
Lead	**40.6**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102414a

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W83 (0.2-1.6 ft)
Lab Sample ID: 144638-19 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.115**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC

Method Blank Report

Client:	**GEI Consultants Inc.**
Project Reference:	National Fuel Gas Mineral Springs
Lab Project ID:	144638
SDG #:	4638-01
Matrix:	Soil

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	<0.967	mg/Kg		10/23/2014
Cadmium	<0.484	mg/Kg		10/23/2014
Lead	<0.967	mg/Kg		10/23/2014

Method Reference(s):	EPA 6010C
	EPA 3050
Preparation Date:	10/23/2014
Data File:	102314b
QC Batch ID:	QC141023soil
QC Number:	1

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Method Blank Report

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Lab Project ID: 144638

SDG #: 4638-01

Matrix: Soil

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	<0.0163	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A
QC Batch ID: QC141023HgSoil
QC Number: 1

PARADIGM
ENVIRONMENTAL SERVICES, INC.

QC Report for Laboratory Control Sample and Control Sample Duplicate

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Lab Project ID: 144638

SDG #: 4638-01

Matrix: Soil

Metals

Analyte	LCS Added	LCSD Added	Spike Units	LCS Result	LCSD Result	LCS % Recovery	LCSD % Recovery	% Rec Limits	LCS Outliers	LCSD Outliers	Relative % Difference	RPD Limit	RPD Outliers	Date Analyzed
Arsenic	274	258	mg/Kg	272	255	99.4	98.6	85 - 115			0.763	20		10/23/2014
Cadmium	109	103	mg/Kg	111	104	101	101	85 - 115			0.798	20		10/23/2014
Lead	274	258	mg/Kg	280	263	103	102	85 - 115			0.578	20		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

QC Number: 1

QC Batch ID: QC141023soil

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Report Prepared *Friday, October 24, 2014*

PARADIGM
ENVIRONMENTAL SERVICES, INC.

QC Report for Laboratory Control Sample and Control Sample Duplicate

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Lab Project ID: 144638

SDG #: 4638-01

Matrix: Soil

Mercury

Analyte	LCS Added	LCSD Added	Spike Units	LCS Result	LCSD Result	LCS % Recovery	LCSD % Recovery	% Rec Limits	LCS Outliers	LCSD Outliers	Relative % Difference	RPD Limit	RPD Outliers	Date Analyzed
Mercury	0.190	0.167	mg/Kg	0.186	0.161	97.5	96.4	80 - 120			1.04	20		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A
QC Number: 1
QC Batch ID: QC141023HgSoil

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

QC Report for Sample Spike and Sample Duplicate

SDG #: 4638-01

Client: GEI Consultants Inc.

Lab Project ID: 144638

Project Reference: National Fuel Gas Mineral Springs

Lab Sample ID: 144638-19
Sample Identifier: S6+30S W83 (0.2-1.6 ft)
Matrix: Soil

Date Sampled: 10/22/2014
Date Received: 10/23/2014

Metals

Analyte	Sample Results	Result Units	Spike Added	Spike Result	Spike % Recovery	% Rec Limits	Spike Outliers	Duplicate Result	Relative % Difference	RPD Limit	RPD Outliers	Date Analyzed
Arsenic	**1.61**	mg/Kg	310	280	89.8	75 - 125		1.77	9.44	20		10/24/2014
Cadmium	< 0.637	mg/Kg	124	108	87.2	75 - 125		<0.604	NC	20		10/23/2014
Lead	**40.6**	mg/Kg	310	322	90.8	75 - 125		35.7	12.9	20		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050
Preparation Date: 10/23/2014
102414a
QC Batch ID: QC141023soil

NC = Not Calculable. Applicable to RPD if sample or duplicate result is non-detect or estimated (see primary report for data flags). Applicable to MS if sample is greater or equal to ten times the spike added.

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC

QC Report for Sample Spike and Sample Duplicate

SDG #: 4638-01
Client: GEI Consultants Inc.
Lab Project ID: 144638
Project Reference: National Fuel Gas Mineral Springs

Lab Sample ID: 144638-19
Sample Identifier: S6+30S W83 (0.2-1.6 ft)
Matrix: Soil
Date Sampled: 10/22/2014
Date Received: 10/23/2014

Mercury

Analyte	Sample Results	Result Units	Spike Added	Spike Result	Spike % Recovery	% Rec Limits	Spike Outliers	Duplicate Result	Relative % Difference	RPD Limit	RPD Outliers	Date Analyzed
Mercury	**0.115**	mg/Kg	0.205	0.314	96.6	75 - 125		0.117	1.58	20		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Hg141024A
QC Batch ID: QC141023HgSoil

NC = Not Calculable. Applicable to RPD if sample or duplicate result is non-detect or estimated (see primary report for data flags). Applicable to MS if sample is greater or equal to ten times the spike added.

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Report Prepared Friday, October 24, 2014

Lab Name: Paradigm Environmental Services

Client: GEI Consultants Inc. **Lab Project No.:** 144638

Client Job Site: National Fuel Gas Mineral Springs **Run Nos.:** 102314b-ICP
Hg141024A-Hg

Client Job No.: N/A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Initial Calibration Verification Source:
ICP: Ultra Scientific
Hg: Ultra Scientific

Continuing Calibration Verification Source:
ICP: Ultra Scientific
Hg: Ultra Scientific

Concentration Units: mg/L

	Initial Calibration Verification			Continuing Calibration Verification					
Analyte	True	Found	%R(1)	True	Found	%R(2)	Found	%R(2)	M
Aluminum									ICP
Antimony									ICP
Arsenic	0.500	0.500	100	0.500	0.507	101	0.498	99.6	ICP
Barium									ICP
Beryllium									ICP
Cadmium	0.250	0.266	107	0.250	0.270	108	0.269	108	ICP
Calcium									ICP
Chromium									ICP
Cobalt									ICP
Copper									ICP
Iron									ICP
Lead	0.500	0.507	101	0.500	0.511	102	0.512	102	ICP
Magnesium									ICP
Manganese									ICP
Mercury	0.00200	0.00198	98.8	0.00200	0.00199	99.5	0.00201	100	CV
Nickel									ICP
Potassium									ICP
Selenium									ICP
Silver									ICP
Sodium									ICP
Thallium									ICP
Vanadium									ICP
Zinc									ICP

(1) Control Limits: All Metals 90-110
(2) Control Limits: Mercury 80-120; Other Metals: 90-110

FORM IIA-IN

Lab Name: Paradigm Environmental Services

Client: GEI Consultants Inc. **Lab Project No.:** 144638

Client Job Site: National Fuel Gas Mineral Springs **Run Nos.:** 102314b-ICP
Hg141024A-Hg

Client Job No.: N/A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Initial Calibration Verification Source:
ICP: Ultra Scientific
Hg: Ultra Scientific

Continuing Calibration Verification Source:
ICP: Ultra Scientific
Hg: Ultra Scientific

Concentration Units: mg/L

	Initial Calibration Verification			Continuing Calibration Verification					
Analyte	True	Found	%R(1)	True	Found	%R(2)	Found	%R(2)	M
Aluminum									ICP
Antimony									ICP
Arsenic				0.500	0.500	100.0	0.488	97.7	ICP
Barium									ICP
Beryllium									ICP
Cadmium				0.250	0.269	108	0.267	107	ICP
Calcium									ICP
Chromium									ICP
Cobalt									ICP
Copper									ICP
Iron									ICP
Lead				0.500	0.511	102	0.506	101	ICP
Magnesium									ICP
Manganese									ICP
Mercury				0.00200	0.00201	101			CV
Nickel									ICP
Potassium									ICP
Selenium									ICP
Silver									ICP
Sodium									ICP
Thallium									ICP
Vanadium									ICP
Zinc									ICP

(1) Control Limits: All Metals 90-110
(2) Control Limits: Mercury 80-120; Other Metals: 90-110

FORM IIA-IN

Lab Name: Paradigm Environmental Services

Client: GEI Consultants Inc. **Lab Project No.:** 144638

Client Job Site: National Fuel Gas Mineral Springs **Run No.:** 102414a

Client Job No.: N/A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Initial Calibration Verification Source:
ICP: Ultra Scientific
Hg: Ultra Scientific

Continuing Calibration Verification Source:
ICP: Ultra Scientific
Hg: Ultra Scientific

Concentration Units: mg/L

	Initial Calibration Verification			Continuing Calibration Verification					
Analyte	True	Found	%R(1)	True	Found	%R(2)	Found	%R(2)	M
Aluminum									ICP
Antimony									ICP
Arsenic	0.500	0.488	97.5	0.500	0.504	101	0.493	98.6	ICP
Barium									ICP
Beryllium									ICP
Cadmium									ICP
Calcium									ICP
Chromium									ICP
Cobalt									ICP
Copper									ICP
Iron									ICP
Lead									ICP
Magnesium									ICP
Manganese									ICP
Mercury									CV
Nickel									ICP
Potassium									ICP
Selenium									ICP
Silver									ICP
Sodium									ICP
Thallium									ICP
Vanadium									ICP
Zinc									ICP

(1) Control Limits: All Metals 90-110
(2) Control Limits: Mercury 80-120; Other Metals: 90-110

FORM IIA-IN

Lab Name: Paradigm Environmental Services

Client: GEI Consultants Inc. **Lab Project No.:** 144638

Client Job Site: National Fuel Gas Mineral Springs **Run No.:** 102414a

Client Job No.: N/A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Initial Calibration Verification Source:
ICP: Ultra Scientific
Hg: Ultra Scientific

Continuing Calibration Verification Source:
ICP: Ultra Scientific
Hg: Ultra Scientific

Concentration Units: mg/L

	Initial Calibration Verification			Continuing Calibration Verification					
Analyte	True	Found	%R(1)	True	Found	%R(2)	Found	%R(2)	M
Aluminum									ICP
Antimony									ICP
Arsenic				0.500	0.492	98.4			ICP
Barium									ICP
Beryllium									ICP
Cadmium									ICP
Calcium									ICP
Chromium									ICP
Cobalt									ICP
Copper									ICP
Iron									ICP
Lead									ICP
Magnesium									ICP
Manganese									ICP
Mercury									CV
Nickel									ICP
Potassium									ICP
Selenium									ICP
Silver									ICP
Sodium									ICP
Thallium									ICP
Vanadium									ICP
Zinc									ICP

(1) Control Limits: All Metals 90-110
(2) Control Limits: Mercury 80-120; Other Metals: 90-110

FORM IIA-IN

Lab Name: Paradigm Environmental Services

Client: GEI Consultants Inc. **Lab Project No.:** 144638

Client Job Site: National Fuel Gas Mineral Springs **Lab Sample Nos.:** Blk 10/23 soil-ICP, Blk 10/23 soil-Hg

Client Job No.: N/A **Sample Type:** Soil

BLANKS

Preparation Blank Matrix (soil/water): Soil Run Nos.: 102314b-ICP

Concentration Units (mg/L or mg/kg): mg/kg Hg141024A-Hg

	Initial Calibration Blank		Continuing Calibration Blank						Preparation Blank	
	(mg/L)		(mg/L)						(mg/Kg)	
Analyte		Q	1	Q	2	Q	3	Q		Q
Aluminum										
Antimony										
Arsenic	<0.010		<0.010		<0.010		<0.010		<0.967	
Barium										
Beryllium										
Cadmium	<0.005		<0.005		<0.005		<0.005		<0.484	
Calcium										
Chromium										
Cobalt										
Copper										
Iron										
Lead	<0.010		<0.010		<0.010		<0.010		<0.967	
Magnesium										
Manganese										
Mercury	<0.0002		<0.0002		<0.0002		<0.0002		<0.0163	
Nickel										
Potassium										
Selenium										
Silver										
Sodium										
Thallium										
Vanadium										
Zinc										

* - Outside established quality control acceptance limits.

Lab Name: Paradigm Environmental Services

Client: GEI Consultants Inc. **Lab Project No.:** 144638

Client Job Site: National Fuel Gas Mineral Springs **Lab Sample Nos.:** N/A

Client Job No.: N/A **Sample Type:** Soil

BLANKS

Preparation Blank Matrix (soil/water): Soil Run Nos.: 102314b-ICP
Concentration Units (mg/L or mg/kg): mg/kg

	Initial Calibration Blank		Continuing Calibration Blank						Preparation Blank	
	(mg/L)		(mg/L)						(mg/Kg)	
Analyte		Q	4	Q		Q		Q		Q
Aluminum										
Antimony										
Arsenic			<0.010							
Barium										
Beryllium										
Cadmium			<0.005							
Calcium										
Chromium										
Cobalt										
Copper										
Iron										
Lead			<0.010							
Magnesium										
Manganese										
Mercury										
Nickel										
Potassium										
Selenium										
Silver										
Sodium										
Thallium										
Vanadium										
Zinc										

* - Outside established quality control acceptance limits.

FORM III-IN

Lab Name: Paradigm Environmental Services

Client: GEI Consultants Inc. **Lab Project No.:** 144638

Client Job Site: National Fuel Gas Mineral Springs **Lab Sample Nos.:** N/A

Client Job No.: N/A **Sample Type:** Soil

BLANKS

Preparation Blank Matrix (soil/water): Soil Run Nos.: 102414a
Concentration Units (mg/L or mg/kg): mg/kg

	Initial Calibration Blank		Continuing Calibration Blank						Preparation Blank	
	(mg/L)		(mg/L)						(mg/Kg)	
Analyte		Q	1	Q	2	Q	3	Q		Q
Aluminum										
Antimony										
Arsenic	<0.010		<0.010		<0.010		<0.010			
Barium										
Beryllium										
Cadmium										
Calcium										
Chromium										
Cobalt										
Copper										
Iron										
Lead										
Magnesium										
Manganese										
Mercury										
Nickel										
Potassium										
Selenium										
Silver										
Sodium										
Thallium										
Vanadium										
Zinc										

* - Outside established quality control acceptance limits.

Lab Name: Paradigm Environmental Services

Client: GEI Consultants Inc. **Lab Project No.:** 144638

Client Job Site: National Fuel Gas Mineral Springs **Run Nos.:** 102314b-ICP Hg141024A-Hg

Client Job No.: N/A

ICP-AES INTERFERENCE CHECK SAMPLE

ICP-AES Instrument ID: ICP Perkin Elmer 7300DV
Concentration Units :mg/L

Analyte	True sol AB	Initial Found sol AB	%R	Q	Final Found sol AB	%R	Q
Aluminum	250						
Antimony**	<0.060						
Arsenic	2.50	2.55	102		N/A	N/A	
Barium	0.750						
Beryllium	0.250						
Cadmium	0.750	0.729	97.2		N/A	N/A	
Calcium	250						
Chromium	0.750						
Cobalt	0.750						
Copper	0.750						
Iron	100						
Lead	2.50	2.53	101		N/A	N/A	
Magnesium	250						
Manganese	0.500						
Mercury**	N/A	N/A	N/A		N/A	N/A	
Nickel	0.750						
Potassium	50.0						
Selenium	1.25						
Silver	0.750						
Sodium**	<2.50						
Thallium	2.50						
Vanadium	0.750						
Zinc	0.750						

* - Outside established quality control acceptance limits of 80-120%.

**- Not Spiked.

Lab Name: Paradigm Environmental Services

Client: GEI Consultants Inc. **Lab Project No.:** 144638

Client Job Site: National Fuel Gas Mineral Springs **Run No.:** 102414a

Client Job No.: N/A

ICP-AES INTERFERENCE CHECK SAMPLE

ICP-AES Instrument ID: ICP Perkin Elmer 7300DV
Concentration Units :mg/L

Analyte	True sol AB	Initial Found sol AB	%R	Q	Final Found sol AB	%R	Q
Aluminum	250						
Antimony**	<0.060						
Arsenic	2.50	2.50	100		N/A	N/A	
Barium	0.750						
Beryllium	0.250						
Cadmium	0.750						
Calcium	250						
Chromium	0.750						
Cobalt	0.750						
Copper	0.750						
Iron	100						
Lead	2.50						
Magnesium	250						
Manganese	0.500						
Mercury**	N/A						
Nickel	0.750						
Potassium	50.0						
Selenium	1.25						
Silver	0.750						
Sodium**	<2.50						
Thallium	2.50						
Vanadium	0.750						
Zinc	0.750						

* - Outside established quality control acceptance limits of 80-120%.

**- Not Spiked.

ICP Summary Sheet

	Wavelength	ICP DL Water	ICP DL Soil	MDL Water	MDL Soil	Linear Range	MDL paint	MDL Air	MDL Wipe
		ppm	mg/kg	ppm	mg/kg	ppm	mg/kg	ppm	ppm
Ag	328	0.01	1	0.0012	0.114	10			
Al	308	0.2	20	0.0264	3.58	500			
As	188	0.01	1	0.0031	0.369	5			
Ba	233	0.1	10	0.0029	0.14	40			
Be	313	0.005	0.5	0.0002	0.0119	1			
Ca	317	2.5	250	0.0953	4.98	500			
Cd	226	0.005	0.5	0.0002	0.0119	10			
Co	228	0.05	5	0.0015	0.064	10			
Cr	267	0.01	1	0.0106	0.139	40			
Cu	324	0.025	2.5	0.0011	0.327	10			
Fe	273	0.1	10	0.0138	4.10	500			
K	766	2.5	250	0.1067	5.25	100			
Mg	279	2.5	250	0.0635	2.19	500			
Mn	257	0.015	1.5	0.0037	0.141	10			
Na	589	2.5	250	0.1111	5.62	250			
Ni	231	0.04	4	0.0012	0.158	50			
Pb Axial	220	0.01	1	0.0019	0.230	50	0.68 (1/17)	0.0412	
Pb Radial	220	0.1	10			50	3.86	0.0369	0.0226
Sb	206	0.06	6	0.0077	0.422	12			
Se	196	0.01	1	0.0068	0.714	2.5			
Tl	190	0.025	2.5	0.0028	0.347	10			
V	292	0.025	2.5	0.0008	0.0299	50			
Zn	213	0.06	6	0.0035	0.302	10			
				1/9/2014	1/22/2014	2/18/2014	1/29/2014	1/17/2014	1/21/2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Hg Soil MDL

Instrument: FIMS 100
Run Date: 03/17/2014
Run Name: hg140317A

Blank: <0.2ppb

Spike concentration(ppb):	**0.1**			**Reporting Limit / LOQ (ppb):**		**0.2**	
Spike Conc. (mg/kg):	**0.008**			**Solid Reporting Limit / LOQ (mg/kg)**		**0.016**	
X_1	0.1879	ppb	0.0150 mg/kg		weight		inst. Conc.
X_2	0.1984	ppb	0.0159 mg/kg			0.25	0.1879
X_3	0.2024	ppb	0.0162 mg/kg			0.25	0.1984
X_4	0.2021	ppb	0.0162 mg/kg			0.25	0.2024
X_5	0.1861	ppb	0.0149 mg/kg			0.25	0.2021
X_6	0.194	ppb	0.0155 mg/kg			0.25	0.1861
X_7	0.1916	ppb	0.0153 mg/kg			0.25	0.194
						0.25	0.1916
MDL (LOD) =	**0.0206**	**ppb**	0.00165 mg/kg				

MDL requirements:	**Evaluation:**
Is the MDL less than the reporting limit?	YES(passes)
Is the MDL greater than 1/10 the spike concentration?	YES(passes)
Is the MDL less than the spike concentration?	YES(passes)
with weight	
Is the MDL less than the reporting limit?	YES(passes)
Is the MDL greater than 1/10 the spike concentration?	YES(passes)
Is the MDL less than the spike concentration?	YES(passes)

MDL EVALUATION: **MDL Passes**

spiked at :	0.1	ppm
divide by ten:	0.01	ppm
0.0206	>	0.01

MDL EVALUATION: **MDL Passes**

spiked at :	0.02	ppm
divide by ten:	0.0016	ppm
0.0016	>	0.0016

IEC File Name: 051514

IEC File Last Saved: 5/15/2014 11:15:36 AM
Printed On: 5/15/2014 11:15:39 AM

Results Data Set Name: 051514ar
Method Name: 6010C 4ptLL
Results Library: C:\Users\Public\PerkinElmer\ICP\Data\Results\May2014.mdb

Interfering Analytes

	Analytes	Al 308.215	Ca 317.933	Co 228.616	Cr 267.716	Cu 324.752	Fe 273.955
1	**Ag 328.068**	0.000000	0.000000	0.000000	0.000000	0.000000	-0.333385
2	**Ag 338.289**	0.000000	0.012731	0.000000	-24.586724	0.000000	0.000000
3	**Al 308.215**	**n/a**	0.000000	-15.258033	0.000000	0.000000	0.000000
4	**As 188.979**	0.041839	0.000000	0.000000	0.468569	0.000000	-0.067794
6	**Be 313.107**	0.000000	0.000000	0.000000	-0.174268	0.000000	0.000000
8	**Cd 226.502**	0.006824	0.007347	0.000000	0.000000	0.000000	0.085164
10	**Cr 267.716**	0.000000	0.000000	0.000000	**n/a**	0.000000	-0.016085
11	**Cu 324.752**	0.000000	0.000000	0.000000	0.000000	**n/a**	-0.128367
12	**Fe 273.955**	0.000000	0.000000	0.000000	-1.926669	0.000000	**n/a**
14	**Mg 279.077**	0.000000	0.000000	0.000000	0.000000	0.000000	3.445459
15	**Mn 257.610**	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
18	**Pb**	0.730630	-0.260654	0.000000	0.000000	0.000000	0.000000
19	**Pb 220.353**	0.380999	-0.029473	-2.128347	0.000000	0.000000	-0.068295
20	**Sb 206.836**	-0.199940	0.000000	0.000000	22.238962	0.000000	-0.425076
21	**Se 196.026**	-0.072363	-0.011678	0.000000	-0.304228	0.000000	-0.052268
22	**Tl 190.801**	0.044302	0.000000	9.240423	0.374697	0.000000	-0.076035
23	**V 292.402**	0.000000	0.000000	0.000000	-7.861288	0.000000	0.000000
24	**Y 371.029**	1.985840	1.997382	114.079280	26.580894	103.492331	2.259864
25	**Zn 213.857**	0.000000	0.106054	0.000000	0.000000	0.000000	0.000000

IEC File Last Saved: 5/15/2014 11:15:36 AM
Printed On: 5/15/2014 11:15:39 AM

Results Data Set Name: 051514ar
Method Name: 6010C 4ptLL
Results Library: C:\Users\Public\PerkinElmer\ICP\Data\Results\May2014.mdb

Interfering Analytes

	Analytes	Mg 279.077	Mn 257.610	Ni 231.604	V 292.402
1	**Ag 328.068**	0.000000	0.000000	0.000000	-0.451822
2	**Ag 338.289**	0.000000	0.000000	0.000000	-1.488410
3	**Al 308.215**	0.000000	0.000000	0.000000	10.394551
4	**As 188.979**	0.000000	0.000000	0.000000	0.000000
6	**Be 313.107**	0.000000	0.000000	0.000000	0.000000
8	**Cd 226.502**	0.000000	0.000000	0.116276	0.000000
10	**Cr 267.716**	0.000000	0.000000	0.000000	0.387923
11	**Cu 324.752**	0.000000	0.000000	0.000000	0.000000
12	**Fe 273.955**	0.000000	0.000000	0.000000	15.843706
14	**Mg 279.077**	**n/a**	0.000000	0.000000	0.000000
15	**Mn 257.610**	0.000000	**n/a**	0.000000	-0.218228
18	**Pb**	0.000000	0.000000	0.000000	0.000000
19	**Pb 220.353**	0.000000	0.000000	-0.372237	0.000000
20	**Sb 206.836**	0.000000	0.000000	0.000000	0.000000
21	**Se 196.026**	0.000000	0.879134	0.000000	0.155351
22	**Tl 190.801**	0.000000	-2.006222	0.000000	6.369570
23	**V 292.402**	0.000000	0.000000	0.000000	**n/a**
24	**Y 371.029**	2.086093	115.778141	22.052388	23.094862
25	**Zn 213.857**	0.000000	0.000000	4.924405	0.000000

Linear Ranges

Element TAL, Pb radial
Inst. ICP
Date 2014

Element	Date	Linear Range (ppm)	Element	Date	Linear Range (ppm)
Ag	2/20	10	Ag	8/28	10
Al	2/18	500	Al	9/2	500
As	2/18	5	As	8/28	5
Ba	2/18	40	Ba	8/28	40
Be	2/18	1	Be	8/28	1
Ca	2/20	500	Ca	9/2	500
Cd	2/18	10	Cd	8/28	10
Co	2/18	10	Co	8/28	10
Cr	2/18	40	Cr	8/28	40
Cu	2/18	10	Cu	8/28	10
Fe	2/18	500	Fe	9/2	500
K	2/18	100	K	9/2	100
Mg	2/18	500	Mg	9/2	500
Mn	2/18	10	Mn	8/28	10
Na	2/18	250	Na	9/2	250
Ni	2/18	50	Ni	8/28	50
Pb	2/18	50	Pb	8/28	50
Sb			Sb	8/28	
Se	2/18	2.5	Se	8/28	2.5
Tl	2/18	10	Tl	8/28	10
V	2/18	50	V	8/28	50
Zn	2/18	10	Zn	8/28	10
Pb radial	2/18	50	Pb radial	8/28	50

Comments: Linear ranges which instrument reads 90% - 110% of the true value.
Antimony not reported above Calibration Range

13-IN

ICP ANALYSIS RUN LOG

Lab Name:	Paradigm Environmental	**Lab Project No.:**	144638
Client:	GEI Consultants Inc.	**Method:**	EPA 6010
Client Job Site:	National Fuel Gas Mineral Springs	**Start Date:**	10/23/2014
		End Date:	10/23/2014
Client Job No.:	N/A		
Instrument ID:	ICP PE 7300DV	**Run No.:**	102314b

LAB Sample No.	Date	Time	D/F	Analytes																					
				Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Ni	K	Se	Ag	Na	Tl	V	Zn
Calib Blank 1	10/23/2014	14:25				X			X						X										
Low Level Cal1	10/23/2014	14:29				X			X						X										
Low Level Cal	10/23/2014	14:33				X			X						X										
Mid Level Cal	10/23/2014	14:37				X			X						X										
Pb LL	10/23/2014	14:42													X										
Pb HL	10/23/2014	14:45													X										
High Level Cal	10/23/2014	14:49				X			X						X										
IPC	10/23/2014	14:53																							
ICV	10/23/2014	14:57				X			X						X										
ICB	10/23/2014	15:02				X			X						X										
LLQC	10/23/2014	15:06																							
LLQC Radial Pb	10/23/2014	15:10																							
ICSAB	10/23/2014	15:14				X			X						X										
CCV	10/23/2014	15:19				X			X						X										
CCB	10/23/2014	15:23				X			X						X										
Blk 10/23 soil	10/23/2014	15:27				X			X						X										
lcs	10/23/2014	15:31				X			X						X										
lcs dup	10/23/2014	15:36				X			X						X										
144638-01	10/23/2014	15:40	1			X			X						X										
144638-02	10/23/2014	15:44	1			X			X						X										
144638-03	10/23/2014	15:48	1			X			X						X										
144638-04	10/23/2014	15:53	1						X						X										
144638-05	10/23/2014	15:57	1			X			X						X										
144638-06	10/23/2014	16:01	1						X						X										
144638-07	10/23/2014	16:06	1			X			X						X										
CCV	10/23/2014	16:10				X			X						X										

13-IN

ICP ANALYSIS RUN LOG

Lab Name: Paradigm Environmental
Client: GEI Consultants Inc.
Client Job Site: National Fuel Gas Mineral Springs

Client Job No.: N/A
Instrument ID: ICP PE 7300DV

Lab Project No.: 144638
Method: EPA 6010
Start Date: 10/23/2014
End Date: 10/23/2014

Run No.: 102314b

LAB Sample No.	Date	Time	D/F	Analytes																					
				Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Ni	K	Se	Ag	Na	Tl	V	Zn
CCB	10/23/2014	16:14				X			X						X										
144638-08	10/23/2014	16:18	1			X			X						X										
144638-09	10/23/2014	16:23	1			X			X						X										
144638-10	10/23/2014	16:27	1						X						X										
144638-11	10/23/2014	16:31	1			X			X						X										
144638-12	10/23/2014	16:35	1			X			X						X										
144638-13	10/23/2014	16:40	1			X			X						X										
144638-14	10/23/2014	16:44	1			X			X						X										
144638-15	10/23/2014	16:48	1						X						X										
144638-16	10/23/2014	16:52	1						X						X										
CCV	10/23/2014	16:57				X			X						X										
CCB	10/23/2014	17:01				X			X						X										
144638-17	10/23/2014	17:05	1			X			X						X										
144638-18	10/23/2014	17:09	1						X						X										
144638-19	10/23/2014	17:14	1						X						X										
144638-19 dup	10/23/2014	17:18	1						X						X										
144638-19 spk	10/23/2014	17:22	1						X						X										
CCV	10/23/2014	17:26				X			X						X										
CCB	10/23/2014	17:31				X			X						X										
LLQC	10/23/2014	17:35																							
CCV	10/23/2014	17:39																							
CCB	10/23/2014	17:44																							

13-IN

ICP ANALYSIS RUN LOG

Lab Name: Paradigm Environmental
Client: GEI Consultants Inc.
Client Job Site: National Fuel Gas Mineral Springs

Client Job No.: N/A
Instrument ID: ICP PE 7300DV

Lab Project No.: 144638
Method: EPA 6010
Start Date: 10/24/2014
End Date: 10/24/2014

Run No.: 102414a

LAB Sample No.	Date	Time	D/F	Analytes																					
				Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Ni	K	Se	Ag	Na	Tl	V	Zn
Calib Blank 1	10/24/2014	8:41				X																			
Low Level Cal1	10/24/2014	8:45				X																			
Low Level Cal	10/24/2014	8:49				X																			
Mid Level Cal	10/24/2014	8:53				X																			
Pb LL	10/24/2014	8:58																							
Pb HL	10/24/2014	9:01																							
High Level Cal	10/24/2014	9:05				X																			
IPC	10/24/2014	9:09																							
ICV	10/24/2014	9:13				X																			
ICB	10/24/2014	9:18				X																			
LLQC	10/24/2014	9:22																							
LLQC Radial Pb	10/24/2014	9:26																							
ICSAB	10/24/2014	9:30				X																			
CCV	10/24/2014	9:35				X																			
CCB	10/24/2014	9:39				X																			
Blk 10/23 soil	10/24/2014	9:43																							
lcs	10/24/2014	9:47																							
lcs dup	10/24/2014	9:52																							
144638-04	10/24/2014	9:56	1			X																			
144638-06	10/24/2014	10:00	1			X																			
144638-10	10/24/2014	10:04	1			X																			
144638-15	10/24/2014	10:09	1			X																			
144638-16	10/24/2014	10:13	1			X																			
144638-18	10/24/2014	10:17	1			X																			
CCV	10/24/2014	10:21				X																			
CCB	10/24/2014	10:26				X																			

13-IN

ICP ANALYSIS RUN LOG

Lab Name: Paradigm Environmental
Client: GEI Consultants Inc.
Client Job Site: National Fuel Gas Mineral Springs

Client Job No.: N/A
Instrument ID: ICP PE 7300DV

Lab Project No.: 144638
Method: EPA 6010
Start Date: 10/24/2014
End Date: 10/24/2014

Run No.: 102414a

LAB Sample No.	Date	Time	D/F	Analytes																				
				Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Ni	K	Se	Ag	Na	Tl	V	Zn
144638-19	10/24/2014	10:30	1			X																		
144638-19 dup	10/24/2014	10:34	1			X																		
144638-19 spk	10/24/2014	10:39	1			X																		
CCV	10/24/2014	10:43				X																		
CCB	10/24/2014	10:47				X																		
LLQC	10/24/2014	10:51																						
CCV	10/24/2014	10:59																						
CCB	10/24/2014	11:03																						

13-IN

HG ANALYSIS RUN LOG

Lab Name: Paradigm Environmental
Client: GEI Consultants Inc.
Client Job Site: National Fuel Gas Mineral Springs

Client Job No.: N/A
Instrument ID: PE FIMS-100

Lab Project No.: 144638
Method: EPA 7471
Start Date: 10/24/2014
End Date: 10/24/2014

Run No.: Hg141024A

LAB Sample No.	Date	Time	D/F	Analytes
				Hg
Calib Std 3	10/24/2014	9:20		X
Calib Std 3	10/24/2014	9:22		X
Calib Std 3	10/24/2014	9:24		X
Calibration Blank	10/24/2014	9:26		X
Calib Std 1	10/24/2014	9:30		X
Calib Std 2	10/24/2014	9:33		X
Calib Std 3	10/24/2014	9:37		X
Calib Std 4	10/24/2014	9:40		X
Calib Std 5	10/24/2014	9:44		X
IPC	10/24/2014	9:47		
ICV	10/24/2014	9:50		X
ICB	10/24/2014	9:54		X
blk	10/24/2014	9:57		X
lcs	10/24/2014	10:01		X
lcs dup	10/24/2014	10:04		X
144638-01	10/24/2014	10:08	1	X
144638-02	10/24/2014	10:11	1	X
144638-03	10/24/2014	10:14	1	X
144638-04	10/24/2014	10:18	1	X
144638-05	10/24/2014	10:21	1	X
144638-06	10/24/2014	10:25	1	X
144638-07	10/24/2014	10:28	1	X
CCV	10/24/2014	10:32		X
CCB	10/24/2014	10:35		X
144638-08	10/24/2014	10:39	1	X

13-IN

HG ANALYSIS RUN LOG

Lab Name: Paradigm Environmental
Client: GEI Consultants Inc.
Client Job Site: National Fuel Gas Mineral Springs

Client Job No.: N/A
Instrument ID: PE FIMS-100

Lab Project No.: 144638
Method: EPA 7471
Start Date: 10/24/2014
End Date: 10/24/2014

Run No.: Hg141024A

LAB Sample No.	Date	Time	D/F	Analytes
				Hg
144638-09	10/24/2014	10:42	1	X
144638-10	10/24/2014	10:46	1	X
144638-11	10/24/2014	10:49	1	X
144638-12	10/24/2014	10:52	1	X
144638-13	10/24/2014	10:55	1	X
144638-14	10/24/2014	10:58	1	X
144638-15	10/24/2014	11:02	1	X
144638-16	10/24/2014	11:05	1	X
144638-17	10/24/2014	11:09	1	X
CCV	10/24/2014	11:12		X
CCB	10/24/2014	11:15		X
144638-18	10/24/2014	11:19	1	X
144638-19	10/24/2014	11:22	1	X
144638-19 dup	10/24/2014	11:26	1	X
144638-19 spk	10/24/2014	11:29	1	X
CCV	10/24/2014	11:31		X
CCB	10/24/2014	11:34		X

5

-76-

Page: 1 of 2 ICP Analytical Worksheet

Date: 10-28-14
RDF / SIF: 102314b
Analyst: Amm

4638 ASP Cal B

Sample ID - Wt/Vol	Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn
Calib Blank 1																						
Low Level Cal1																						
Low Level Cal																						
Mid Level Cal																						
High Level Cal																						
IPC	2.00	9.96	2.00	10.0	0.250	50.1	1.000	2.50	2.00	1.25	4.99	50.2	49.9	3.00	50.1	8.01	1.01	11.9	0.998	1.97	2.52	3.94
ICV	98.5	98.5	100	98.4	99.4	98.2	107	94.7	97.5	97.4	96.2	98.1	102	99.0	97.3	99.1	101	101	99.0	97.4	101	102
ICB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
LLQC	0.00947	0.256	0.0103	0.100	0.00476	2.51	0.00539	0.0492	0.0119	0.0256	0.0949	2.60	2.54	0.0149	2.55	0.0428	?0.0143	0.0625	0.00887	0.0183	0.0249	0.0612
LLQC Radial Pb	-0.000421	0.00355	-0.00110	0.000119	-0.0000139	0.000900	-0.000125	0.00241	0.000759	0.000477	0.00162	0.0155	-0.00309	0.000290	0.0154	0.00418	0.103	-0.00156	-0.00316	-0.00266	-0.000170	0.00432
ICSAB	0.779	271	2.55	0.753	0.244	259	0.729	0.698	0.720	0.771	92.8	52.9	259	0.490	0.151	0.727	2.53	-0.0118	1.28	2.37	0.759	0.720
CCV	98.5	98.5	101	98.0	99.6	101	108	94.6	97.7	97.0	97.9	101	102	98.6	101	99.0	102	102	102	97.7	101	104
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
Blk 10/23 soil (50 mL)	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
lcs (50 mL)	0.244	2.58	2.48	2.43	0.492	3.93	1.01	0.987	2.36	2.43	2.42	41.6	8.05	0.970	11.5	5.09	2.56	2.38	2.45	2.37	0.943	2.50
---> %rec	97.6%	103%	99.2%	97.2%	98.4%	98.3%	101%	98.7%	94.4%	97.2%	96.8%	104%	101%	97.0%	95.8%	102%	102%	95.2%	98.0%	94.8%	94.3%	100%
lcs dup (50 mL)	0.243	2.51	2.47	2.41	0.488	3.98	1.01	0.978	2.35	2.43	2.39	41.6	8.00	0.967	11.6	5.09	2.55	2.38	2.43	2.37	0.944	2.55
---> %rec	97.2%	100%	98.8%	96.4%	97.6%	99.5%	101%	97.8%	94.0%	97.2%	95.6%	104%	100%	96.7%	96.7%	102%	102%	95.2%	97.2%	94.8%	94.4%	102%
---> %diff	0.411%	2.75%	0.404%	0.826%	0.816%	1.26%		0.916%	0.425%		1.25%		0.623%	0.310%	0.866%		0.391%		0.820%		0.106%	1.98%
144638-01 (0.52 mL)	<0.962	9290	6.42	84.3	0.632	10700	0.605	6.17	15.4	27.1	15500	1060	5080	328	<240	20.7	68.4	<5.77	1.85	<2.4	17.0	144
144638-02 (0.497 mL)	<1.03	9750	6.12	93.5	0.708	16400	0.572	6.14	15.1	28.6	15800	1170	5380	415	<257	19.9	75.7	<6.16	<1.03	<2.57	17.0	143
144638-03 (0.51 mL)	<0.98	12400	4.97	86.1	0.649	3130	0.573	7.76	18.4	21.5	18100	1340	3650	231	<245	25.8	27.3	<5.88	2.90	<2.45	20.9	109
144638-04 (0.495 mL)	<1.01	6720	E 4.31	64.9	<0.505	14000	J <0.505	<5.05	10.9	21.8	13000	938	6270	298	<253	15.3	51.1	<6.06	<1.01	<2.53	13.8	108
144638-05 (0.48 mL)	<1.04	8180	5.73	77.2	0.948	52100	<0.521	<5.21	9.86	22.0	9650	902	14700	626	<260	10.6	71.8	<6.25	<1.04	<2.6	13.3	116
144638-06 (0.48 mL)	<1.04	13500	E 1.87	99.2	0.694	3170	0.531	8.76	19.0	21.2	16600	1400	3800	273	<260	27.2	17.8	<6.25	2.30	<2.6	21.9	88.0
144638-07 (0.508 mL)	<0.984	8650	5.62	66.2	<0.492	2560	J <0.492	6.59	14.1	22.3	16000	1100	2790	245	<246	20.5	38.7	<5.91	2.82	<2.46	15.4	102
CCV	98.1	98.9	99.6	98.2	99.4	102	108	95.1	97.7	96.9	99.5	101	103	99.2	101	99.4	102	100	98.9	95.9	101	106
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
144638-08 (0.519 mL)	<0.963	10700	6.80	72.0	0.558	2090	J <0.482	8.38	17.0	25.4	20600	1170	3480	335	<241	25.7	41.2	<5.78	4.48	<2.41	18.9	111
144638-09 (0.484 mL)	<1.03	11900	6.10	89.5	0.673	2730	0.701	7.57	19.5	26.3	19600	1220	3460	252	<258	26.8	49.6	<6.2	4.24	<2.58	21.0	145
144638-10 (0.472 mL)	<1.06	8070	E 4.38	68.7	<0.53	4320	0.566	5.98	15.0	26.3	15100	989	3010	255	<265	20.6	84.7	<6.36	2.45	<2.65	15.5	138
144638-11 (0.517 mL)	<0.967	8600	5.79	71.6	0.494	5050	0.685	7.05	16.4	27.1	17100	1000	3750	362	<242	23.2	108	<5.8	1.68	<2.42	16.9	158
144638-12 (0.534 mL)	<0.936	12600	6.79	96.1	0.710	3400	0.777	7.98	19.1	29.4	20800	1310	3500	281	<234	28.1	62.9	<5.62	3.89	<2.34	22.1	160
144638-13 (0.493 mL)	<1.01	7420	7.60	50.3	<0.507	3100	J <0.507	<5.07	15.1	21.3	11800	928	2520	175	<254	16.2	48.8	<6.09	1.81	<2.54	13.3	98.6
144638-14 (0.496 mL)	<1.01	6900	8.05	39.6	<0.504	2790	J <0.504	<5.04	14.6	18.7	9170	764	2190	136	<252	13.8	43.6	<6.05	1.41	<2.52	12.5	79.9
144638-15 (0.516 mL)	<0.969	12700	E 2.90	83.9	0.622	2410	J <0.484	7.56	18.9	19.4	16700	1200	3800	210	<242	25.2	22.2	<5.81	2.36	<2.42	20.5	93.6
144638-16 (0.508 mL)	<0.984	6750	E 4.04	66.1	<0.492	8830	J <0.492	4.94	13.5	22.5	13200	866	5110	199	<246	16.4	52.0	<5.91	<0.984	<2.46	13.5	117
CCV	98.0	97.8	100.0	97.8	99.5	99.5	108	94.9	97.5	97.0	99.8	99.2	103	98.8	97.9	99.0	102	99.8	97.5	94.4	101	108
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
144638-17 (0.525 mL)	<0.952	11700	5.03	85.0	0.656	5720	0.654	7.03	19.6	25.9	18100	1170	4940	213	<238	25.3	41.1	<5.71	2.79	<2.38	20.9	135
144638-18 (0.54 mL)	<0.926	6230	E J 0.926	32.6	<0.463	13100	<0.463	<4.63	9.37	12.8	10500	936	7060	210	<231	8.03	39.5	<5.56	<0.926	<2.31	14.5	85.5
144638-19 (0.479 mL)	<1.04	7410	E 1.43	37.7	<0.522	10300	<0.522	<5.22	9.64	11.5	11000	1030	5430	379	<261	8.57	33.3	<6.26	<1.04	<2.61	16.1	85.4
144638-19 dup (0.505 mL)	<0.99	7320	E 1.07	34.2	<0.495	12000	<0.495	<4.95	9.14	10.6	11000	897	5420	276	<248	7.74	29.2	<5.94	<0.99	<2.48	15.6	74.7
---> %diff	NC	1.22%	↑ 28.8%	9.74%	NC	15.2%	NC	NC	5.32%	8.14%		13.8%	0.184%	31.5%	NC	10.2%	13.1%	NC	NC	NC	3.15%	13.4%
144638-19 spk (0.492 mL)	22.6	8330	226	256	46.1	12100	88.6	90.2	224	242	11500	5360	7040	304	1200	451	264	187	224	209	104	327
---> %rec			88.9				87.9										90.8					
CCV	98.0	99.5	97.7	97.4	99.3	99.8	107	94.3	97.0	96.7	99.9	99.6	102	98.5	98.5	98.5	101	98.7	96.7	92.6	101	108
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
LLQC	0.00806	0.244	↓0.00576	0.0995	0.00487	2.52	0.00529	0.0486	0.0111	0.0238	0.100	2.57	2.54	0.0148	2.53	0.0414	↑ 0.0153	0.0639	↓0.00195	↓0.0157	0.0248	0.0639
CCV	103	99.8	99.7	97.2	98.9	99.8	102	95.9	99.5	101	99.7	100	102	98.1	99.0	101	104	96.9	97.3	93.9	106	109
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
Blk 10/22 soil (50 mL)	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
lcs (50 mL)	0.242	2.46	2.41	2.40	0.488	3.88	1.00	0.974	2.34	2.42	2.35	42.0	7.94	0.962	11.6	5.05	2.50	2.36	2.37	2.31	0.942	2.63

J Pb, As, Cd

Reviewed for only metals needed. This worksheet does not correct for dry weights. Reviewed by:

ICP-MS Analytical Worksheet

Date:
RDF / SIF:
Analyst:

Sample ID - Wt/Vol	Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn
----> %rec	96.8%	98.4%	96.4%	96.0%	97.6%	97.0%	100%	97.4%	93.6%	96.8%	94.0%	105%	99.3%	96.2%	96.7%	101%	100%	94.4%	94.8%	92.4%	94.2%	105%
lcs dup (50 mL)	0.240	2.48	2.40	2.40	0.485	3.88	0.997	0.974	2.35	2.42	2.36	41.9	7.93	0.965	11.6	5.08	2.50	2.36	2.36	2.30	0.943	2.63
----> %rec	96.0%	99.2%	96.0%	96.0%	97.0%	97.0%	99.7%	97.4%	94.0%	96.8%	94.4%	105%	99.1%	96.5%	96.7%	102%	100%	94.4%	94.4%	92.0%	94.3%	105%
----> %diff	0.830%	0.810%	0.416%		0.617%		0.300%		0.426%		0.425%	0.238%	0.126%	0.311%		0.592%			0.423%	0.434%	0.106%	
144594-01 Se As (0.476 mL)	<1.05	2520	2.28	28.7	<0.525	131000	<0.525	<5.25	5.26	8.50	5950	557	66100	444	420	4.37	96.1	<6.3	***<1.05***	***<2.63***	7.75	145
144594-01 1/10 Ca Mg (0.476 mL)	<1.05	2700	***<1.05***	32.5	<0.525	136000	<0.525	<5.25	5.90	11.5	6210	580	69100	459	445	5.02	109	9.94	***<1.05***	***<2.63***	6.93	157
144594-02 Se (0.511 mL)	<0.978	4440	15.3	125	<0.489	38700	<0.489	<4.89	14.9	33.2	13500	837	16900	370	332	10.6	356	<5.87	3.43	<2.45	14.1	455
144594-03 As Se (0.456 mL)	<1.1	5510	2.97	70.1	<0.548	86400	0.887	<5.48	9.13	24.7	10600	1070	37200	435	877	8.85	224	<6.58	<1.1	<2.74	14.4	507
144594-04 Se (0.517 mL)	<0.967	10300	4.60	77.5	0.497	53900	<0.484	7.01	16.9	24.4	19500	2290	11800	405	519	16.5	243	<5.8	1.46	<2.42	21.6	192
144581-01 As Se (0.538 mL)	<0.929	6010	0.959	29.7	<0.465	36000	<0.465	4.88	10.2	9.73	13600	999	8480	405	326	9.65	4.35	<5.58	<0.929	<2.32	17.7	25.5
145777-02 1/100 (0.52 mL)	***<0.962***	8650	52.3	302	0.659	42900	109	115	872	75.2	7190	788	3090	218	604	4.20	89500	60.1	***<0.962***	***<2.4***	***<2.4***	73900
CCV	97.8	99.4	96.4	96.5	97.7	98.5	105	92.6	96.9	96.4	101	99.3	102	98.0	98.1	97.7	99.5	95.1	92.8	89.8	100	↑ 112
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
144572-01 1/10 Ca (0.534 mL)	***<0.936***	10400	***<0.936***	73.8	0.511	60000	<0.468	8.74	17.9	19.3	19100	1820	15800	616	246	26.9	13.1	<5.62	***<0.936***	***<2.34***	21.6	54.8
144572-02 1/10 Ca (0.541 mL)	***<0.924***	5530	<0.924	37.6	<0.462	72500	<0.462	5.19	10.4	13.7	12900	1010	22700	419	297	12.7	8.24	<5.55	***<0.924***	***<2.31***	13.2	34.6
144572-04 As Se (0.477 mL)	<1.05	6040	<1.05	48.8	<0.524	67400	<0.524	5.76	10.7	12.2	12100	1280	19000	420	<262	14.0	6.62	<6.29	<1.05	<2.62	13.3	30.2
144572-04 1/10 Ca (0.477 mL)	***<1.05***	6150	***<1.05***	57.8	<0.524	76400	<0.524	6.79	12.7	13.9	13000	1260	20900	460	<262	16.6	6.99	<6.29	***<1.05***	***<2.62***	13.8	40.8
144572-05 Se (0.46 mL)	<1.09	12000	2.07	76.6	0.548	40000	<0.543	6.82	18.4	16.4	19900	2590	13300	284	318	18.7	7.87	<6.52	<1.09	<2.72	23.7	51.3
144572-06 As (0.499 mL)	<1	11600	2.11	76.2	<0.501	67100	<0.501	6.90	18.0	14.7	17800	2220	15500	367	316	19.4	8.02	<6.01	1.50	<2.51	19.6	45.5
144572-06 1/10 Ca (0.499 mL)	***<1***	12200	***<1***	87.7	0.566	77700	<0.501	8.21	21.6	16.9	19800	2280	17700	417	341	23.8	10.4	7.20	***<1***	***<2.51***	22.3	59.0
144572-07 1/10 Ca (0.469 mL)	***<1.07***	10200	***<1.07***	76.4	<0.533	81100	<0.533	8.09	17.9	18.7	19600	1990	20900	456	267	22.0	16.4	6.98	***<1.07***	***<2.67***	20.9	53.5
144572-08 1/10 Ca (0.513 mL)	***<0.975***	10600	***<0.975***	83.7	0.578	88500	<0.487	7.71	18.6	18.4	18400	2350	16900	368	<244	21.3	16.6	<5.85	***<0.975***	***<2.44***	21.5	60.4
CCV	97.8	99.2	92.9	96.6	98.8	99.3	104	92.9	96.7	96.2	102	99.7	102	98.0	97.9	97.8	97.4	92.9	90.3	↓ 87.1	100	? 114
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
144572-10 1/10 Ca (0.456 mL)	***<1.1***	12500	***<1.1***	99.2	0.624	65500	<0.548	9.93	23.2	18.2	20600	2520	16400	570	394	26.1	12.8	<6.58	***<1.1***	***<2.74***	23.2	59.6
144572-10 dup (0.458 mL)	***<1.09***	13400	***<1.09***	99.3	0.616	65800	<0.546	10.9	23.6	22.1	23900	2630	16600	609	422	27.4	12.6	<6.55	***<1.09***	***<2.73***	26.7	67.3
----> %diff	NC	6.95%	NC	0.101%	1.29%	0.457%	NC	9.31%	1.71%	19.4%	14.8%	4.27%	1.21%	6.62%	6.86%	4.86%	1.57%	NC	NC	NC	14.0%	12.1%
144572-10 spk (0.476 mL)	24.5	14700	238	354	52.3	76700	109	116	272	282	26600	7670	16300	666	1700	541	272	169	228	207	133	347
----> %rec																						
144572-10 Se (0.456 mL)	<1.1	119000	20.0	881	5.16	581000	***<0.548***	82.1	194	172	189000	25000	145000	5110	3830	214	76.7	26.0	8.22	***<2.74***	212	488
144572-10 dup Se (0.458 mL)	<1.09	12400	2.47	86.4	0.560	56700	<0.546	8.77	19.3	19.6	21400	2520	14500	537	391	21.8	8.48	<6.55	<1.09	<2.73	23.5	51.3
----> %diff	NC	162%	156%	164%	161%	164%	NC	161%	164%	159%	159%	163%	164%	162%	163%	163%	160%	NC	NC	NC	160%	162%
CCV	102	99.7	93.7	96.3	98.4	100	99.7	94.5	99.1	101	103	100	102	97.8	98.7	99.4	99.4	94.9	90.2	↓ 88.2	106	↑ 115
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
LLQC	0.00725	0.257	↓0.00678	0.0983	0.00485	2.51	0.00523	0.0474	0.0110	0.0236	0.104	2.60	2.53	0.0149	2.52	0.0414	↑0.0142	0.0643	0.00977	↓0.0129	0.0245	0.0691
CCV	97.7	98.1	92.8	96.5	98.1	101	104	92.6	96.6	96.3	102	101	102	97.8	99.0	97.4	97.1	92.2	89.7	↓ 87.4	100	↑ 115
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
4600-01 1/10 Zn (0.498 mL)	***<1***	2410	2.09	1010	<0.502	14800	4.34	5.07	114	936	35700	413	5300	279	<251	30.1	1840	20.1	<1	***<2.51***	6.88	2100
4600-01 dup 1/10 Zn (0.482 mL)	***<1.04***	1610	4.71	596	<0.519	13600	4.59	6.45	86.0	809	42300	387	2980	308	<259	92.0	1670	20.0	1.90	***<2.59***	5.29	1970
----> %diff	NC	39.8%	77.1%	51.6%	NC	8.45%	5.60%	24.0%	28.0%	14.6%	16.9%	6.50%	56.0%	9.88%	NC	101%	9.69%	0.499%	NC	NC	26.1%	6.39%
4600-01 spk 1/10 Zn (0.473 mL)	23.2	3950	218	710	45.3	8280	104	100	264	1120	22200	4630	1960	288	1270	529	1390	201	210	202	94.1	2030
----> %rec																						
Blk 10/22 w (50 mL)	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
lcs (50 mL)	0.236	2.46	2.25	2.35	0.468	3.88	0.970	0.949	2.31	2.38	2.44	41.4	7.94	0.952	11.5	4.99	2.44	2.20	2.20	2.19	0.940	2.81
----> %rec	94.4%	98.4%	90.0%	94.0%	93.6%	97.0%	97.0%	94.9%	92.4%	95.2%	97.6%	104%	99.3%	95.2%	95.8%	99.8%	97.6%	88.0%	88.0%	87.6%	94.0%	112%
lcs dup (50 mL)	0.239	2.49	2.27	2.38	0.472	3.94	0.980	0.961	2.33	2.40	2.48	42.0	8.00	0.960	11.6	5.04	2.45	2.20	2.20	2.19	0.940	2.82
----> %rec	95.6%	99.6%	90.8%	95.2%	94.4%	98.5%	98.0%	96.1%	93.2%	96.0%	99.2%	105%	100%	96.0%	96.7%	101%	98.0%	88.0%	88.0%	87.6%	94.0%	113%
----> %diff	1.26%	1.21%	0.885%	1.27%	0.851%	1.53%	1.03%	1.26%	0.862%	0.837%	1.63%	1.44%	0.753%	0.837%	0.866%	0.997%	0.409%					0.355%
144601-01 (50 mL)	<0.01	<0.2	<0.01	0.365	<0.005	93.4	<0.005	<0.05	<0.01	0.0504	0.279	62.4	238	<0.015	880	0.0401	0.0128	<0.06	***<0.01***	***<0.025***	<0.025	<0.06
144614-01 (50 mL)	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	1.48	0.168	4.42	<2.5	<2.5	0.0697	266	0.526	<0.01	<0.06	<0.01	<0.025	<0.025	0.157
CCV	102	100	91.9	96.7	98.0	101	100	94.6	99.1	101	105	100	102	98.2	99.7	99.6	99.9	89.8	91.2	↓ 88.9	106	↑ 117
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
LLQC	0.00761	↑0.267	0.00985	0.0988	0.00489	2.50	0.00534	0.0476	0.0114	0.0233	0.118	2.59	2.56	0.0149	2.66	0.0415	↑0.0136	0.0619	↓0.00645	↓0.0109	0.0248	0.0639
CCV	5930	29200	933	472	-947	100000	-1300	-311	1420	4850	8610	171000	1900	853	170000	1140	7780	-1830	-1290	12400	758	13500
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06

Ca, Mg

Pb

Cd ↓

Ca

Cd ↓

Ca

Cr

Reviewed for only metals needed.

This worksheet does not correct for dry weights.

Reviewed by:

Page: 1 of 2 ICP Analytical Worksheet

Date: 10-24-14
RDF / SIF: 102414a
Analyst: Amm

-78-5

4638, 4600 ASP Cat B

Sample ID - Wt/Vol	Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn
Calib Blank 1																						
Low Level Cal1																						
Low Level Cal																						
Mid Level Cal																						
High Level Cal																						
IPC	2.00	9.96	1.99	10.0	0.251	50.3	1.000	2.51	2.00	1.25	4.95	50.0	50.1	3.01	50.1	8.01	0.991	11.8	0.993	1.94	2.52	3.92
ICV	96.5	96.6	97.5	97.8	98.7	97.4	104	92.2	95.0	95.8	94.4	96.5	100	99.0	97.3	96.5	97.6	93.5	99.7	96.8	99.1	98.8
ICB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
LLQC	0.00830	0.278	0.00853	0.100	0.00484	2.56	0.00535	0.0486	0.0112	0.0262	0.0941	2.65	2.55	0.0149	2.61	0.0429	0.0120	0.0566	0.0116	0.0146	0.0253	0.0597
LLQC Radial Pb	-0.00135	-0.0180	0.00312	0.000138	0.0000245	-0.0184	-0.0000816	0.00000966	-0.0000414	0.000118	0.0100	0.0247	-0.00317	-0.0000400	0.0142	-0.0000450	0.100	-0.000539	0.000493	-0.0118	0.000953	0.00520
ICSAB	0.757	270	2.50	0.740	0.242	262	0.713	0.686	0.705	0.758	92.6	53.3	260	0.476	0.0998	0.717	2.46	-0.0102	1.26	2.37	0.745	0.698
CCV	102	97.9	101	97.5	99.0	102	101	95.3	98.8	102	97.6	101	102	98.5	101	100	103	92.6	99.9	99.5	106	102
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
Blk 10/23 soil (50 mL)	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	0.104	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
lcs (50 mL)	0.245	2.54	2.46	2.42	0.491	4.02	1.01	0.980	2.36	2.45	2.42	41.9	8.05	0.975	11.8	5.10	2.49	2.25	2.45	2.42	0.944	2.45
---> %rec	98.0%	102%	98.4%	96.8%	98.2%	101%	101%	98.0%	94.4%	98.0%	96.8%	105%	101%	97.5%	98.3%	102%	99.6%	90.0%	98.0%	96.8%	94.4%	98.0%
lcs dup (50 mL)	0.243	2.48	2.48	2.41	0.486	4.10	1.00	0.972	2.34	2.45	2.38	42.3	7.98	0.972	12.0	5.09	2.52	2.28	2.47	2.46	0.945	2.48
---> %rec	97.2%	99.2%	99.2%	96.4%	97.2%	103%	100%	97.2%	93.6%	98.0%	95.2%	106%	99.8%	97.2%	100%	102%	101%	91.2%	98.8%	98.4%	94.5%	99.2%
---> %diff	0.820%	2.39%	0.810%	0.414%	1.02%	1.97%	0.995%	0.820%	0.851%		1.67%	0.950%	0.873%	0.308%	1.68%	0.196%	1.20%	1.32%	0.813%	1.64%	0.106%	1.22%
144638-04 (0.495 mL)	<1.01	6720	4.75	64.0	<0.505	14500	<0.505	<5.05	10.7	22.2	13200	887	6220	298	<253	15.2	49.6	<6.06	<1.01	<2.53	13.6	105
144638-06 (0.48 mL)	<1.04	13300	3.12	97.1	0.685	3280	<0.521	8.57	18.5	21.6	16700	1250	3760	274	<260	27.0	17.4	<6.25	2.62	<2.6	21.4	85.8
144638-10 (0.472 mL)	<1.06	7800	4.40	67.0	<0.53	4310	<0.53	5.90	14.5	26.7	14700	864	2980	255	<265	20.4	82.6	<6.36	2.16	<2.65	15.1	132
144638-15 (0.516 mL)	<0.969	12700	2.96	83.4	0.612	2470	<0.484	7.57	18.9	19.8	16600	1140	3770	211	<242	25.4	22.0	<5.81	3.25	<2.42	20.5	90.3
144638-16 (0.508 mL)	<0.984	6470	4.29	63.5	<0.492	8890	<0.492	<4.92	13.0	22.4	12800	756	5050	200	<246	16.1	50.4	<5.91	1.46	***<2.46***	13.0	109
144638-18 (0.54 mL)	<0.926	6280	<0.926	32.1	<0.463	13700	<0.463	<4.63	9.39	13.1	10600	923	7030	212	<231	8.14	39.0	<5.56	<0.926	<2.31	14.6	82.0
CCV	96.1	97.6	98.6	97.0	97.0	101	103	91.4	95.1	96.0	97.0	97.2	101	99.4	98.4	96.6	97.8	92.0	95.9	97.6	99.1	99.8
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
144638-19 (0.479 mL)	<1.04	7360	1.32	36.7	<0.522	10600	<0.522	<5.22	9.44	11.7	11000	946	5410	382	<261	8.59	32.4	<6.26	<1.04	<2.61	16.2	80.0
144638-19 dup (0.505 mL)	<0.99	7410	1.44	33.5	<0.495	12600	<0.495	<4.95	9.21	10.8	11100	864	5400	278	<248	7.94	29.5	<5.94	<0.99	<2.48	15.7	72.0
---> %diff	NC	0.677%	8.70%	9.12%	NC	17.2%	NC	NC	2.47%	8.00%	0.905%	9.06%	0.185%	31.5%	NC	7.86%	9.37%	NC	NC	NC	3.13%	10.5%
144638-19 spk (0.492 mL)	22.6	8300	229	255	45.3	12500	88.3	89.2	224	246	11500	5310	7030	307	1230	453	260	176	228	224	105	310
---> %rec																						
CCV	97.8	98.5	98.4	96.9	97.1	104	104	93.0	97.1	97.5	99.9	100	102	99.0	101	98.5	98.2	92.8	97.7	99.4	100	103
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
LLQC	0.00867	0.248	0.00946	0.0993	0.00482	2.60	0.00532	0.0480	0.0113	0.0270	0.118	2.56	2.56	0.0152	2.57	0.0429	0.0112	0.0588	0.00819	0.0156	0.0255	0.0601
CCV	102	100	100	96.7	97.0	105	100	94.4	99.3	102	99.6	102	102	98.7	104	100	101	95.9	97.4	102	106	102
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
Blk 10/22 soil (50 mL)	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
lcs (50 mL)	0.243	2.51	2.44	2.41	0.480	4.02	0.998	0.966	2.35	2.45	2.37	41.6	7.97	0.973	11.8	5.08	2.47	2.22	2.39	2.49	0.948	2.50
---> %rec	97.2%	100%	97.6%	96.4%	96.0%	101%	99.8%	96.6%	94.0%	98.0%	94.8%	104%	99.6%	97.3%	98.3%	102%	98.8%	88.8%	95.6%	99.6%	94.8%	100%
lcs dup (50 mL)	0.243	2.51	2.45	2.40	0.479	4.03	0.993	0.968	2.35	2.45	2.38	41.7	7.95	0.976	11.9	5.09	2.48	2.24	2.40	2.48	0.951	2.49
---> %rec	97.2%	100%	98.0%	96.0%	95.8%	101%	99.3%	96.8%	94.0%	98.0%	95.2%	104%	99.4%	97.6%	99.2%	102%	99.2%	89.6%	96.0%	99.2%	95.1%	99.6%
---> %diff			0.409%	0.416%	0.209%	0.248%	0.502%	0.207%			0.421%	0.240%	0.251%	0.308%	0.844%	0.197%	0.404%	0.897%	0.418%	0.402%	0.316%	0.401%
144594-01 Se As (0.476 mL)	<1.05	2530	2.64	28.7	<0.525	133000	<0.525	<5.25	5.25	8.81	5920	538	66500	450	416	4.40	95.5	<6.3	<1.05	***<2.63***	7.92	135
144594-02 Se (0.511 mL)	<0.978	4520	15.9	126	<0.489	40700	<0.489	<4.89	14.9	33.7	13600	835	17000	374	336	10.7	352	<5.87	3.88	<2.45	14.2	422
144594-03 As Se (0.456 mL)	<1.1	5600	3.16	69.4	<0.548	91600	0.791	<5.48	9.19	24.9	10700	1060	37400	440	902	8.88	222	<6.58	***<1.1***	***<2.74***	14.7	473
144594-04 Se (0.517 mL)	<0.967	10500	4.93	77.8	0.496	56200	<0.484	6.98	17.1	24.8	19500	2280	11900	410	527	16.7	243	<5.8	1.08	<2.42	21.9	174
144581-01 As Se (0.538 mL)	<0.929	6100	<0.929	29.9	<0.465	37800	<0.465	4.91	10.3	9.96	13500	1040	8530	410	346	9.72	4.54	<5.58	<0.929	<2.32	18.0	22.1
CCV	102	100	98.1	96.2	96.4	106	98.5	92.9	98.6	101	103	100.0	102	98.8	101	99.0	99.0	92.7	94.4	99.0	106	104
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
144572-04 As Se (0.477 mL)	<1.05	6220	<1.05	48.9	<0.524	73200	<0.524	5.75	10.9	12.6	12200	1290	19100	425	<262	14.3	6.84	<6.29	<1.05	***<2.62***	13.6	26.3
144572-05 Se (0.46 mL)	<1.09	12300	1.77	76.5	<0.543	42100	<0.543	6.63	18.3	16.7	20100	2580	13300	287	325	18.5	7.49	<6.52	<1.09	<2.72	24.0	46.1
144572-06 As (0.499 mL)	<1	11900	2.75	76.2	<0.501	71000	***<0.501***	6.74	17.9	15.0	17900	2210	15400	371	325	19.2	6.94	<6.01	<1	<2.51	19.8	39.6

Reviewed for only metals needed. This worksheet does not correct for dry weights.

Reviewed by:_____

ICP Analytical Worksheet

Date:_____
RDF / SIF:_____
Analyst:_____

- 79 -

Se 1/5

Zn

RCRA

Pb 1/10

Sample ID - Wt/Vol	Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn
144572-10 Se (0.456 mL)	<1.1	121000	19.5	883	5.09	621000	***<0.548***	80.4	193	176	189000	24600	146000	5190	3870	213	72.9	25.0	10.1	***<2.74***	217	426
144572-10 dup Se (0.458 mL)	<1.09	12900	2.33	86.3	0.550	60300	<0.546	8.60	19.4	20.0	21700	2530	14600	545	405	21.9	8.11	<6.55	<1.09	<2.73	23.8	44.5
---> %diff	NC	161%	157%	164%	161%	165%	NC	161%	163%	159%	159%	163%	164%	162%	162%	163%	160%	NC	NC	NC	160%	162%
CCV	102	102	94.7	95.9	95.9	107	98.2	92.6	99.1	102	103	100	102	98.9	101	99.2	96.2	89.2	91.3	95.9	106	103
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
LLQC	0.00860	0.280	0.0105	0.0978	0.00477	2.64	0.00520	0.0469	0.0115	0.0264	0.106	2.58	2.54	0.0150	2.56	0.0424	0.00776	0.0615	0.00751	0.00753	0.0256	0.0653
CCV	102	102	94.6	95.8	95.8	105	98.5	92.6	99.2	102	103	99.6	101	98.6	100	99.3	96.3	89.2	88.6	94.8	106	103
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
4600-01 1/10 Zn (0.498 mL)	<1	2480	1.54	956	<0.502	15000	4.26	<5.02	111	902	34000	399	5050	268	<251	29.8	1720	10.0	5.22	***<2.51***	7.73	1860
4600-01 dup 1/10 Zn (0.482 mL)	<1.04	1690	8.88	594	<0.519	14600	4.26	6.44	87.2	821	42900	333	2990	312	<259	94.2	1660	27.7	5.54	***<2.59***	6.18	1790
---> %diff	NC	37.9%	141%	46.7%	NC	2.70%		NC	24.0%	9.40%	23.1%	18.0%	51.2%	15.2%	NC	104%	3.55%	93.9%	5.95%	NC	22.3%	3.84%
4600-01 spk 1/10 Zn (0.473 mL)	24.5	3980	226	711	44.5	8790	102	98.1	264	1140	22000	4580	1980	291	1290	530	1350	190	216	220	95.4	1780
---> %rec																						
Blk 10/22 w (50 mL)	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
lcs (50 mL)	0.238	2.51	2.29	2.35	0.460	4.11	0.959	0.940	2.32	2.42	2.44	41.6	7.95	0.963	11.8	5.00	2.39	2.09	2.24	2.36	0.947	2.51
---> %rec	95.2%	100%	91.6%	94.0%	92.0%	103%	95.9%	94.0%	92.8%	96.8%	97.6%	104%	99.4%	96.3%	98.3%	100%	95.6%	83.6%	89.6%	94.4%	94.7%	100%
lcs dup (50 mL)	0.240	2.57	2.31	2.37	0.465	4.19	0.969	0.946	2.34	2.44	2.46	42.3	7.98	0.968	12.0	5.02	2.40	2.10	2.23	2.38	0.947	2.51
---> %rec	96.0%	103%	92.4%	94.8%	93.0%	105%	96.9%	94.6%	93.6%	97.6%	98.4%	106%	99.8%	96.8%	100%	100%	96.0%	84.0%	89.2%	95.2%	94.7%	100%
---> %diff	0.837%	2.36%	0.870%	0.847%	1.08%	1.93%	1.04%	0.636%	0.858%	0.823%	0.816%	1.67%	0.377%	0.518%	1.68%	0.399%	0.418%	0.477%	0.447%	0.844%		
144601-01 (50 mL)	<0.01	<0.2	<0.01	0.362	<0.005	98.1	<0.005	<0.05	<0.01	0.0541	0.281	62.4	238	<0.015	917	0.0412	0.0139	<0.06	***<0.01***	***<0.025***	<0.025	<0.06
CCV	101	102	94.0	95.7	95.6	106	96.9	91.5	97.9	101	103	100.0	102	98.5	103	98.0	97.4	89.3	91.6	95.8	105	102
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
LLQC	0.00842	0.266	0.0121	0.0981	0.00476	2.62	0.00517	0.0469	0.0107	0.0269	0.106	2.56	2.54	0.0149	2.83	0.0421	0.0124	0.0598	0.00855	0.00494	0.0256	0.0623
LLQC Radial Pb	-0.00152	-0.0213	0.00584	0.0000320	0.0000947	-0.0188	0.000117	0.000474	0.0000378	0.000449	0.0121	0.0452	-0.00904	-0.0000366	0.220	0.000661	0.0935	0.00659	0.00865	-0.0158	0.00000699	-0.000634
CCV	97.8	102	92.7	95.7	95.6	105	102	90.7	96.9	97.2	103	99.4	101	98.4	101	97.1	94.2	87.0	90.6	94.2	100	102
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
Blk 10/24 p (50 mL)	<0.01	31.5	***<0.01***	<0.1	<0.005	223	<0.005	<0.05	0.0171	<0.025	3.07	3.20	23.5	0.0372	9.22	<0.04	<0.01	<0.06	***<0.01***	<0.025	0.0484	0.962
lcs (50 mL)	0.000391	26.5	-0.0289	0.0206	0.000611	193	-0.000448	0.0309	0.0146	0.0182	2.56	2.57	20.2	0.0320	8.30	0.00703	1.84	0.0308	-0.0244	0.0177	0.0413	0.809
---> %rec	0.156%	1060%	-1.16%	0.824%	0.122%	4830%	-0.0448%	3.09%	0.584%	0.728%	102%	6.43%	253%	3.20%	69.2%	0.141%	73.6%	1.23%	-0.976%	0.708%	4.13%	32.4%
lcs dup (50 mL)	-0.000261	28.0	-0.0303	0.0215	0.000710	195	-0.000467	0.0349	0.0151	0.0204	2.68	2.60	20.7	0.0327	8.31	0.00767	1.83	0.0297	-0.0266	0.0218	0.0438	0.825
---> %rec	-0.104%	1120%	-1.21%	0.860%	0.142%	4880%	-0.0467%	3.49%	0.604%	0.816%	107%	6.50%	259%	3.27%	69.3%	0.153%	73.2%	1.19%	-1.06%	0.872%	4.38%	33.0%
---> %diff	1000%	5.50%	-4.73%	4.28%	15.0%	1.03%	-4.15%	12.2%	3.37%	11.4%	4.58%	1.16%	2.44%	2.16%	0.120%	8.71%	0.545%	3.64%	-8.63%	20.8%	5.88%	1.96%
144460-01 (0.479 mL)	<1.04	7890	***<1.04***	438	<0.522	68000	<0.522	110	200	6.92	1290	524	7030	48.6	688	<4.18	3190	21.6	***<1.04***	***<2.61***	7.90	1300
144460-02 (0.485 mL)	<1.03	4720	***<1.03***	388	<0.515	95400	<0.515	133	160	6.26	1990	<258	5380	57.1	575	<4.12	4000	20.4	***<1.03***	***<2.58***	7.25	1860
144461-01 (0.498 mL)	<1	1580	***<1***	23.1	<0.502	174000	***<0.502***	36.3	3.10	9.29	1030	624	31100	61.8	804	4.14	954	11.6	***<1***	***<2.51***	7.69	3390
144461-02 (0.521 mL)	1.71	6060	***<0.96***	49.2	<0.48	128000	***<0.48***	45.3	44.0	10.5	1650	2840	15600	90.4	1760	23.7	274	7.80	***<0.96***	***<2.4***	8.69	770
144461-02 dup (0.468 mL)	<1.07	5520	***<1.07***	48.5	<0.534	138000	***<0.534***	41.1	40.7	9.88	1810	3810	16300	96.0	1420	26.2	289	<6.41	***<1.07***	***<2.67***	8.94	1440
---> %diff	NC	9.33%	NC	1.43%	NC	7.52%	NC	9.72%	7.79%	6.08%	9.25%	29.2%	4.39%	6.01%	21.4%	10.0%	5.33%	NC	NC	NC	2.84%	60.6%
144461-02 spk (0.527 mL)	1.18	5320	***<0.949***	29.3	<0.474	132000	<0.474	50.0	16.4	11.4	947	1970	16100	82.7	1460	11.6	533	5.87	***<0.949***	***<2.37***	7.58	591
---> %rec																						
CCV	101	101	93.1	95.7	96.2	106	96.7	91.5	97.6	101	102	99.6	101	98.4	101	97.5	95.9	88.4	89.9	94.0	105	102
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
LLQC	0.00884	0.268	0.0126	0.0980	0.00477	2.69	0.00521	0.0478	0.0108	0.0271	0.107	2.61	2.53	0.0149	2.59	0.0425	0.00988	0.0629	0.00822	0.00880	0.0251	0.0605
LLQC Radial Pb	-0.00144	-0.00373	0.00229	-0.000108	0.0000821	-0.0177	-0.000110	0.000461	0.0000269	0.00127	-0.00259	0.0357	-0.00855	-0.0000337	-0.00496	0.000480	0.0961	0.00569	0.00513	-0.0188	0.000179	0.00106
CCV	102	102	93.2	95.8	96.0	107	97.1	92.3	98.6	101	103	101	101	98.4	102	98.5	96.3	89.3	91.8	93.6	106	102
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06

Reviewed for only metals needed.

This worksheet does not correct for dry weights.

Reviewed by:_____

Date Prepped: 10-23-14

$SnCl_2$ #:

Page: 1of 2

Hg141024A

Date:10/24/2014

Analyst: JG

Sample ID	Initial Sample Wt	Wt Units	Initial Sample Vol	Vol Units	Sample Prep Vol.	Reported Conc (Calib)	Units (Calib)		Reported Conc (Samp)	Units (Samp)	QC Recovery	Special Calculated Value
Calib Std 3		g		mL		[2]	ug/L	OVERRANGE		ug/L		
Calib Std 3		g		mL		[2]	ug/L	OVERRANGE		ug/L		
Calib Std 3		g		mL		[2]	ug/L	OVERRANGE		ug/L		
Calibration Blank		g		mL		[0.00]	ug/L	OVERRANGE		ug/L		
Calib Std 1		g		mL		[0.2]	ug/L	OVERRANGE		ug/L		
Calib Std 2		g		mL		[1]	ug/L	OVERRANGE		ug/L		
Calib Std 3		g		mL		[2]	ug/L	OVERRANGE		ug/L		
Calib Std 4		g		mL		[5]	ug/L	OVERRANGE		ug/L		
Calib Std 5		g		mL		[10]	ug/L	OVERRANGE		ug/L		
IPC		g		mL		1.8650	ug/L		1.8650	ug/L	93.3	
ICV		g		mL		1.9760	ug/L		1.9760	ug/L	98.8	
ICB		g		mL		0.0295	ug/L	<0.2 ppb	0.0295	ug/L		
blk	0.245	g		mL	20	0.0170	ug/L		0.0014	ug/g	<0.0163	
lcs	0.210	g		mL	20	1.9490	ug/L		0.1856	ug/g		
lcs dup	0.239	g		mL	20	1.9290	ug/L		0.1614	ug/g		14.0
144638-01	0.230	g		mL	20	1.0520	ug/L		0.0915	ug/g		
144638-02	0.232	g		mL	20	1.1100	ug/L		0.0957	ug/g		
144638-03	0.221	g		mL	20	0.6830	ug/L		0.0618	ug/g		
144638-04	0.227	g		mL	20	1.0160	ug/L		0.0895	ug/g		
144638-05	0.243	g		mL	20	0.0940	ug/L		0.0077	ug/g	<0.0165	
144638-06	0.230	g		mL	20	0.5804	ug/L		0.0505	ug/g		
144638-07	0.225	g		mL	20	0.8201	ug/L		0.0729	ug/g		
CCV		g		mL		1.9890	ug/L		1.9890	ug/L	99.5	
CCB		g		mL		0.0191	ug/L	<0.2 ppb	0.0191	ug/L		
144638-08	0.231	g		mL	20	0.8501	ug/L		0.0736	ug/g		
144638-09	0.229	g		mL	20	0.9239	ug/L		0.0807	ug/g		
144638-10	0.200	g		mL	20	0.8591	ug/L		0.0859	ug/g		
144638-11	0.224	g		mL	20	1.0850	ug/L		0.0969	ug/g		

This worksheet does not correct for dry weight.

Date Prepped: Hg141024A Date:10/24/2014

$SnCl_2$ #: Analyst:_____

144638-12	0.217	g	mL	20	1.0340 ug/L		0.0953 ug/g	
144638-13	0.240	g	mL	20	1.2450 ug/L		0.1037 ug/g	
144638-14	0.207	g	mL	20	0.9971 ug/L		0.0963 ug/g	
144638-15	0.229	g	mL	20	0.6744 ug/L		0.0589 ug/g	
144638-16	0.202	g	mL	20	0.8341 ug/L		0.0826 ug/g	
144638-17	0.209	g	mL	20	0.6769 ug/L		0.0648 ug/g	
CCV		g	mL		2.0070 ug/L		2.0070 ug/L	100.3
CCB		g	mL		0.0049 ug/L	<0.2 ppb	0.0049 ug/L	
144638-18	0.214	g	mL	20	0.9578 ug/L		0.0895 ug/g	
144638-19	0.223	g	mL	20	1.0540 ug/L		0.0945 ug/g	
144638-19 dup	0.240	g	mL	20	1.1520 ug/L		0.0960 ug/g	1.6
144638-19 spk	0.238	g	mL	20	3.0570 ug/L		0.2569 ug/g	
CCV		g	mL		2.0140 ug/L		2.0140 ug/L	100.7
CCB		g	mL		0.0281 ug/L	<0.2 ppb	0.0281 ug/L	
blk	0.244	g	mL	20	0.0168 ug/L		0.0014 ug/g	<0.0164
lcs	0.204	g	mL	20	2.2910 ug/L		0.2246 ug/g	JC 102414 ~~113.2~~ 114.6
lcs dup	0.235	g	mL	20	2.2640 ug/L		0.1927 ug/g	113.2 15.3
144594-01	0.239	g	mL	20	3.3100 ug/L		0.2770 ug/g	
144594-02	0.248	g	mL	20	6.1980 ug/L		0.4998 ug/g	
144594-03	0.226	g	mL	20	4.4210 ug/L		0.3913 ug/g	
CCV		g	mL		2.0350 ug/L		2.0350 ug/L	101.7
CCB		g	mL		0.0078 ug/L	<0.2 ppb	0.0078 ug/L	
144594-04	0.220	g	mL	20	1.4950 ug/L		0.1359 ug/g	
144581-01	0.230	g	mL	20	0.1140 ug/L		0.0099 ug/g	<0.0174
144581-01 dup	0.203	g	mL	20	0.0967 ug/L		0.0095 ug/g	<0.0197 NC % Diff
144581-01 spk	0.204	g	mL	20	2.3860 ug/L		0.2339 ug/g	113.6
CCV		g	mL		2.0220 ug/L		2.0220 ug/L	101.1
CCB		g	mL		0.0159 ug/L	<0.2 ppb	0.0159 ug/L	

This worksheet does not correct for dry weight.

Analytical Sequence

Method : 6010C 4ptLL

Seq.	Loc.		Sample ID
1	1		Calib Blank 1
2	9		Low Level Cal1
3	2		Low Level Cal
4	3		Mid Level Cal
5	4		Pb LL
6	5		Pb HL
7	6		High Level Cal
8	6	QC	IPC
9	7	QC	ICV
10	1	QC	ICB
11	2	QC	LLQC ↑ Pb
12	4	QC	LLQC Radial Pb ↓Pb
13	8	QC	ICSAB
14	7	QC	CCV
15	1	QC	CCB
16	38		Blk 10/23 soil
17	39		lcs
18	40		lcs dup
19	41		144638-01
20	42		144638-02
21	43		144638-03
22	44		144638-04 rpt As
23	45		144638-05
24	46		144638-06 rpt As
25	47		144638-07
26	7	QC	CCV
27	1	QC	CCB
28	48		144638-08
29	49		144638-09
30	50		144638-10 rpt As
31	51		144638-11
32	52		144638-12
33	53		144638-13
34	54		144638-14
35	55		144638-15 rpt As
36	56		144638-16 ↓
37	7	QC	CCV
38	1	QC	CCB
39	57		144638-17
40	58		144638-18 rpt As
41	59		144638-19
42	60		144638-19 dup
43	61		144638-19 spk
44	7	QC	CCV
45	1	QC	CCB
46	2	QC	LLQC ↓As ↓Se, ↓Tl, ↑ Pb
47	7	QC	CCV
48	1	QC	CCB
49	62		Blk 10/22 soil
50	63		lcs
51	64		lcs dup
52	65		144594-01 Se As
53	66		144594-01 1/10 Ca Mg
54	67		144594-02 Se
55	68		144594-03 As Se
56	69		144594-04 Se

Rpt 46600-01 Zn $\frac{1}{10}$ 0.498

Dup 0.482

Spk 0.473

Analytical Sequence

Method : 6010C 4ptLL

Seq.	Lcc.		Sample ID
57	70		144581-01 As Se
58	71		145777-02 1/100
59	7	QC	CCV ↓Tl, ↑Zn
60	1	QC	CCB
61	72		144572-01 1/10 Ca
62	73		144572-02 1/10 Cs
63	74		144572-04 As Se
64	75		144572-04 1/10 Ca
65	76		144572-05 Se
66	77		144572-06 As
67	78		144572-06 1/10 Ca
68	79		144572-07 1/10 Ca
69	80		144572-08 1/10 Ca
70	7	QC	CCV ↓Tl, ↑Zn
71	1	QC	CCB
72	81		144572-10 1/10 Ca
73	82		144572-10 dup
74	83		144572-10 spk
75	84		144572-10 Se
76	85		144572-10 dup Se
77	7	QC	CCV ↓Tl, ↑Zn
78	1	QC	CCB
79	2	QC	LLQC ↓As, ↑Pb, ↓Tl
80	7	QC	CCV ↓Tl, ↑Zn
81	1	QC	CCB
82	86		4600-01 1/10 Zn RPT
83	87		4600-01 dup 1/10 Zn
84	88		4600-01 spk 1/10 Zn
85	89		Blk 10/22 w
86	90		lcs
87	91		lcs dup
88	92		144601-01
89	93		144614-01
90	7	QC	CCV
91	1	QC	CCB
92	2	QC	LLQC
93	7	QC	CCV
94	1	QC	CCB
95	94		Sample094

Method: 6010C 4ptLL Page 1 Date: 10/23/2014 2:28:01 PM

Analysis Begun

Start Time: 10/23/2014 2:25:14 PM
Logged In Analyst: icp3
Spectrometer: Optima 7300 DV, S/N 077C0122002

Plasma On Time: 10/23/2014 2:17:38 PM
Technique: ICP Continuous
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer\ICP\Data\Sample Information\102314b.sif
Batch ID: 102314b
Results Data Set: 102314b
Results Library: C:\Users\Public\PerkinElmer\ICP\Data\Results\Oct2014.mdb

Amm 10-23-14

Method Loaded
Method Name: 6010C 4ptLL
IEC File: 051514.iec
Method Description: 6010C/200.7 TAL Metals

Method Last Saved: 10/15/2014 2:41:18 PM
MSF File:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Al 308.215	Lin Thru 0	Peak Area	Radial	Y 371.029	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Ba 233.527	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Be 313.107	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Ca 317.933	Lin Thru 0	Peak Area	Radial	Y 371.029	Yes
Cd 226.502	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Cr 267.716	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Fe 273.955	Lin Thru 0	Peak Area	Radial	Y 371.029	Yes
K 766.490	Lin Thru 0	Peak Area	Radial	Y 371.029	Yes
Mg 279.077	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Mn 257.610	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Na 589.592	Lin Thru 0	Peak Area	Radial	Y 371.029	Yes
Ni 231.604	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Se 196.026	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Zn 213.857	Lin Thru 0	Peak Area	Radial	Y 371.029	Yes
Pb	Lin Thru 0	Peak Area	Radial	Y 371.029	Yes
Y 371.029	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Ag 338.289	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes

Sequence No.: 1
Sample ID: Calib Blank 1
Analyst:
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 1
Date Collected: 10/23/2014 2:25:14 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: Calib Blank 1

Analyte	Back Pressure	Flow
All	130.0 kPa	0.55 L/min

Mean Data: Calib Blank 1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	1538632.1	2976.06	0.19%	1.000	mg/L
Ag 328.068†	6902.4	112.27	1.63%	[0.00]	mg/L
Al 308.215†	176.7	6.77	3.83%	[0.00]	mg/L
As 188.979†	14.1	3.95	27.94%	[0.00]	mg/L
Ba 233.527†	427.7	23.44	5.48%	[0.00]	mg/L
Be 313.107†	-2188.9	94.43	4.31%	[0.00]	mg/L
Ca 317.933†	645.1	4.39	0.68%	[0.00]	mg/L
Cd 226.502†	-64.7	6.72	10.38%	[0.00]	mg/L
Co 228.616†	-184.3	14.93	8.10%	[0.00]	mg/L

Cr 267.716†	181.9	17.78	9.77%	[0.00]	mg/L
Cu 324.752†	3385.4	46.79	1.38%	[0.00]	mg/L
Fe 273.955†	-14.8	3.10	21.00%	[0.00]	mg/L
K 766.490†	1594.1	27.08	1.70%	[0.00]	mg/L
Mg 279.077†	2776.5	29.07	1.05%	[0.00]	mg/L
Mn 257.610†	2085.0	18.57	0.89%	[0.00]	mg/L
Na 589.592†	1374.9	20.91	1.52%	[0.00]	mg/L
Ni 231.604†	24.8	6.66	26.84%	[0.00]	mg/L
Pb 220.353†	27.4	7.20	26.28%	[0.00]	mg/L
Sb 206.836†	-206.0	1.90	0.92%	[0.00]	mg/L
Se 196.026†	-19.2	5.37	27.96%	[0.00]	mg/L
Tl 190.801†	86.7	12.25	14.12%	[0.00]	mg/L
V 292.402†	710.3	16.37	2.31%	[0.00]	mg/L
Zn 213.857†	-12.4	2.07	16.70%	[0.00]	mg/L
Pb†	2.4	0.73	31.02%	[0.00]	mg/L
Ag 338.289†	-1782.7	44.02	2.47%	[0.00]	mg/L

Sequence No.: 2 **Autosampler Location: 9**
Sample ID: Low Level Cal1 **Date Collected: 10/23/2014 2:29:25 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 75 **Auto Dilution Factor: 1**

Nebulizer Parameters: Low Level Cal1

Analyte	Back Pressure	Flow
All	131.0 kPa	0.55 L/min

Mean Data: Low Level Cal1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	1510778.1	1127.84	0.07%	0.9819	mg/L
Ag 328.068†	937.1	18.87	2.01%	[0.005]	mg/L
Al 308.215†	51.9	4.37	8.41%	[0.100]	mg/L
As 188.979†	13.6	8.36	61.32%	[0.005]	mg/L
Ba 233.527†	7885.0	37.13	0.47%	[0.050]	mg/L
Be 313.107†	4311.5	10.39	0.24%	[0.0025]	mg/L
Ca 317.933†	5141.7	48.03	0.93%	[1.25]	mg/L
Cd 226.502†	170.1	3.46	2.04%	[0.0025]	mg/L
Co 228.616†	935.2	6.69	0.72%	[0.025]	mg/L
Cr 267.716†	625.6	24.72	3.95%	[0.005]	mg/L
Cu 324.752†	2839.5	111.97	3.94%	[0.0125]	mg/L
Fe 273.955†	31.8	2.91	9.15%	[0.050]	mg/L
K 766.490†	3043.5	105.71	3.47%	[1.25]	mg/L
Mg 279.077†	22856.4	70.62	0.31%	[1.25]	mg/L
Mn 257.610†	6513.8	33.63	0.52%	[0.0075]	mg/L
Na 589.592†	10514.6	111.56	1.06%	[1.25]	mg/L
Ni 231.604†	758.5	13.58	1.79%	[0.020]	mg/L
Pb 220.353†	57.9	20.66	35.68%	[0.005]	mg/L
Sb 206.836†	81.9	17.52	21.39%	[0.030]	mg/L
Se 196.026†	3.4	8.66	255.64%	[0.005]	mg/L
Tl 190.801†	17.0	1.64	9.61%	[0.0125]	mg/L
V 292.402†	1955.9	36.03	1.84%	[0.0125]	mg/L
Zn 213.857†	38.9	1.19	3.05%	[0.030]	mg/L
Ag 338.289†	603.6	95.53	15.83%	[0.005]	mg/L

Sequence No.: 3 **Autosampler Location: 2**
Sample ID: Low Level Cal **Date Collected: 10/23/2014 2:33:39 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 75 **Auto Dilution Factor: 1**

Nebulizer Parameters: Low Level Cal

Analyte	Back Pressure	Flow
All	131.0 kPa	0.55 L/min

Mean Data: Low Level Cal

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	1508331.2	12622.16	0.84%	0.9803	mg/L
Ag 328.068†	1893.5	31.91	1.69%	[0.010]	mg/L
Al 308.215†	138.0	1.17	0.85%	[0.200]	mg/L
As 188.979†	15.9	1.46	9.15%	[0.010]	mg/L
Ba 233.527†	14853.7	21.22	0.14%	[0.100]	mg/L
Be 313.107†	8725.6	59.40	0.68%	[0.005]	mg/L
Ca 317.933†	11197.3	57.21	0.51%	[2.50]	mg/L
Cd 226.502†	345.8	4.35	1.26%	[0.005]	mg/L
Co 228.616†	1941.1	32.63	1.68%	[0.050]	mg/L
Cr 267.716†	1299.9	32.57	2.51%	[0.010]	mg/L
Cu 324.752†	5754.5	143.34	2.49%	[0.025]	mg/L
Fe 273.955†	50.0	3.01	6.02%	[0.100]	mg/L
K 766.490†	6050.9	148.73	2.46%	[2.50]	mg/L
Mg 279.077†	45752.6	13.29	0.03%	[2.50]	mg/L
Mn 257.610†	11988.4	15.02	0.13%	[0.015]	mg/L
Na 589.592†	20376.2	54.72	0.27%	[2.50]	mg/L
Ni 231.604†	1612.2	10.19	0.63%	[0.040]	mg/L
Pb 220.353†	106.2	15.25	14.36%	[0.010]	mg/L
Sb 206.836†	170.2	13.24	7.78%	[0.060]	mg/L
Se 196.026†	16.5	4.04	24.44%	[0.010]	mg/L
Tl 190.801†	41.7	9.30	22.32%	[0.025]	mg/L
V 292.402†	3967.4	78.78	1.99%	[0.025]	mg/L
Zn 213.857†	76.1	3.34	4.39%	[0.060]	mg/L
Ag 338.289†	1006.2	16.57	1.65%	[0.01]	mg/L

Sequence No.: 4
Sample ID: Mid Level Cal
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 3
Date Collected: 10/23/2014 2:37:52 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Nebulizer Parameters: Mid Level Cal

Analyte	Back Pressure	Flow
All	131.0 kPa	0.55 L/min

Mean Data: Mid Level Cal

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	1583296.6	4122.24	0.26%	1.029	mg/L
Ag 328.068†	9488.3	102.33	1.08%	[0.050]	mg/L
Al 308.215†	551.5	10.56	1.92%	[1.00]	mg/L
As 188.979†	97.4	3.24	3.32%	[0.050]	mg/L
Ba 233.527†	74420.1	110.87	0.15%	[0.500]	mg/L
Be 313.107†	44915.6	164.56	0.37%	[0.025]	mg/L
Ca 317.933†	53530.8	936.75	1.75%	[12.5]	mg/L
Cd 226.502†	1725.7	12.84	0.74%	[0.025]	mg/L
Co 228.616†	9827.4	6.54	0.07%	[0.250]	mg/L
Cr 267.716†	5838.4	73.55	1.26%	[0.050]	mg/L
Cu 324.752†	28974.8	74.97	0.26%	[0.125]	mg/L
Fe 273.955†	260.3	3.43	1.32%	[0.500]	mg/L
K 766.490†	29136.2	494.58	1.70%	[12.5]	mg/L
Mg 279.077†	226498.3	151.87	0.07%	[12.5]	mg/L
Mn 257.610†	59288.3	59.89	0.10%	[0.075]	mg/L
Na 589.592†	98369.6	1162.30	1.18%	[12.5]	mg/L
Ni 231.604†	8050.5	1.96	0.02%	[0.200]	mg/L
Pb 220.353†	382.8	9.86	2.58%	[0.050]	mg/L
Sb 206.836†	953.3	10.19	1.07%	[0.300]	mg/L
Se 196.026†	113.4	8.84	7.80%	[0.050]	mg/L
Tl 190.801†	206.3	9.50	4.60%	[0.125]	mg/L
V 292.402†	20121.0	71.17	0.35%	[0.125]	mg/L
Zn 213.857†	365.7	2.20	0.60%	[0.300]	mg/L
Ag 338.289†	5023.5	120.55	2.40%	[0.05]	mg/L

Sequence No.: 5
Sample ID: Pb LL
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 4
Date Collected: 10/23/2014 2:42:06 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Nebulizer Parameters: Pb LL

Analyte	Back Pressure	Flow
All	131.0 kPa	0.55 L/min

Mean Data: Pb LL

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	1464745.8	2394.49	0.16%	0.9520	mg/L
Pb†	-0.0	0.32	>999.9%	[0.100]	mg/L

Standard intensity and concentration values are not in the same order.

Sequence No.: 6
Sample ID: Pb HL
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 5
Date Collected: 10/23/2014 2:45:37 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Nebulizer Parameters: Pb HL

Analyte	Back Pressure	Flow
All	131.0 kPa	0.55 L/min

Mean Data: Pb HL

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	1506765.2	3811.81	0.25%	0.9793	mg/L
Pb†	866.7	2.23	0.26%	[10.0]	mg/L

Standard intensity and concentration values are not in the same order.

Sequence No.: 7
Sample ID: High Level Cal
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 6
Date Collected: 10/23/2014 2:49:07 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Nebulizer Parameters: High Level Cal

Analyte	Back Pressure	Flow
All	131.0 kPa	0.55 L/min

Mean Data: High Level Cal

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	1447467.8	16538.71	1.14%	0.9407	mg/L
Ag 328.068†	400231.7	137.72	0.03%	[2.00]	mg/L
Al 308.215†	5604.5	116.00	2.07%	[10.0]	mg/L
As 188.979†	4059.9	46.75	1.15%	[2.00]	mg/L
Ba 233.527†	1484226.4	3488.29	0.24%	[10.0]	mg/L
Be 313.107†	457457.4	526.45	0.12%	[0.250]	mg/L
Ca 317.933†	225540.7	1685.83	0.75%	[50.0]	mg/L
Cd 226.502†	63492.6	52.78	0.08%	[1.00]	mg/L
Co 228.616†	99216.3	234.89	0.24%	[2.50]	mg/L
Cr 267.716†	227695.8	306.29	0.13%	[2.00]	mg/L
Cu 324.752†	291104.0	387.00	0.13%	[1.25]	mg/L
Fe 273.955†	2735.6	36.31	1.33%	[5.00]	mg/L
K 766.490†	119663.5	851.51	0.71%	[50.0]	mg/L
Mg 279.077†	895671.9	2174.81	0.24%	[50.0]	mg/L

Mn 257.610†	2397376.0	4895.34	0.20%	[3.00]	mg/L
Na 589.592†	404380.6	3188.50	0.79%	[50.0]	mg/L
Ni 231.604†	304204.7	525.55	0.17%	[8.00]	mg/L
Pb 220.353†	7249.3	78.67	1.09%	[1.00]	mg/L
Sb 206.836†	37579.1	115.84	0.31%	[12.0]	mg/L
Se 196.026†	2461.2	26.21	1.06%	[1.00]	mg/L
Tl 190.801†	3509.5	45.74	1.30%	[2.00]	mg/L
V 292.402†	401138.9	23.36	0.01%	[2.50]	mg/L
Zn 213.857†	4733.4	95.56	2.02%	[4.00]	mg/L
Pb†	75.9	1.96	2.59%	[1.00]	mg/L
Standard intensity and concentration values are not in the same order.					
Ag 338.289†	192288.2	8.54	0.00%	[2.00]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	4	Lin Thru 0	0.0	200100	0.00000	0.999999	
Al 308.215	4	Lin Thru 0	0.0	560.4	0.00000	0.999988	
As 188.979	4	Lin Thru 0	0.0	2030	0.00000	0.999999	
Ba 233.527	4	Lin Thru 0	0.0	148400	0.00000	1.000000	
Be 313.107	4	Lin Thru 0	0.0	1829000	0.00000	0.999998	
Ca 317.933	4	Lin Thru 0	0.0	4497	0.00000	0.999927	
Cd 226.502	4	Lin Thru 0	0.0	63500	0.00000	0.999998	
Co 228.616	4	Lin Thru 0	0.0	39680	0.00000	0.999999	
Cr 267.716	4	Lin Thru 0	0.0	113900	0.00000	1.000000	
Cu 324.752	4	Lin Thru 0	0.0	232900	0.00000	1.000000	
Fe 273.955	4	Lin Thru 0	0.0	546.9	0.00000	0.999986	
K 766.490	4	Lin Thru 0	0.0	2390	0.00000	0.999981	
Mg 279.077	4	Lin Thru 0	0.0	17930	0.00000	0.999996	
Mn 257.610	4	Lin Thru 0	0.0	799100	0.00000	1.000000	
Na 589.592	4	Lin Thru 0	0.0	8075	0.00000	0.999979	
Ni 231.604	4	Lin Thru 0	0.0	38030	0.00000	0.999999	
Pb 220.353	4	Lin Thru 0	0.0	7251	0.00000	0.999981	
Sb 206.836	4	Lin Thru 0	0.0	3132	0.00000	1.000000	
Se 196.026	4	Lin Thru 0	0.0	2461	0.00000	0.999980	
Tl 190.801	4	Lin Thru 0	0.0	1754	0.00000	0.999992	
V 292.402	4	Lin Thru 0	0.0	160500	0.00000	1.000000	
Zn 213.857	4	Lin Thru 0	0.0	1184	0.00000	0.999997	
Pb	3	Lin Thru 0	0.0	86.56	0.00000	0.999875	
Ag 338.289	4	Lin Thru 0	0.0	96150	0.00000	0.999999	

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Sequence No.: 8 **Autosampler Location: 6**
Sample ID: IPC **Date Collected: 10/23/2014 2:53:26 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 75 **Auto Dilution Factor: 1**

Nebulizer Parameters: IPC

Analyte	Back Pressure	Flow
All	131.0 kPa	0.55 L/min

Mean Data: IPC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1449732.2	0.9422	mg/L	0.00944				1.00%
Ag 328.068†	399928.2	2.001	mg/L	0.0019	2.001	mg/L	0.0019	0.09%
QC value within limits for Ag 328.068 Recovery = 100.07%								
Al 308.215†	5575.2	9.961	mg/L	0.0006	9.961	mg/L	0.0006	0.01%
QC value within limits for Al 308.215 Recovery = 99.61%								
As 188.979†	4059.9	1.999	mg/L	0.0167	1.999	mg/L	0.0167	0.84%
QC value within limits for As 188.979 Recovery = 99.95%								
Ba 233.527†	1485424.6	10.01	mg/L	0.005	10.01	mg/L	0.005	0.05%
QC value within limits for Ba 233.527 Recovery = 100.08%								
Be 313.107†	457307.4	0.2503	mg/L	0.00049	0.2503	mg/L	0.00049	0.20%
QC value within limits for Be 313.107 Recovery = 100.13%								
Ca 317.933†	225516.0	50.15	mg/L	0.241	50.15	mg/L	0.241	0.48%
QC value within limits for Ca 317.933 Recovery = 100.29%								

Cd 226.502†	63597.8	0.9998 mg/L	0.00112	0.9998 mg/L	0.00112	0.11%
QC value within limits for Cd 226.502 Recovery = 99.98%						
Co 228.616†	99224.3	2.500 mg/L	0.0039	2.500 mg/L	0.0039	0.16%
QC value within limits for Co 228.616 Recovery = 100.02%						
Cr 267.716†	228153.0	2.003 mg/L	0.0020	2.003 mg/L	0.0020	0.10%
QC value within limits for Cr 267.716 Recovery = 100.15%						
Cu 324.752†	290354.2	1.247 mg/L	0.0004	1.247 mg/L	0.0004	0.03%
QC value within limits for Cu 324.752 Recovery = 99.80%						
Fe 273.955†	2745.9	4.986 mg/L	0.0576	4.986 mg/L	0.0576	1.15%
QC value within limits for Fe 273.955 Recovery = 99.71%						
K 766.490†	119974.2	50.20 mg/L	0.273	50.20 mg/L	0.273	0.54%
QC value within limits for K 766.490 Recovery = 100.41%						
Mg 279.077†	895230.9	49.92 mg/L	0.099	49.92 mg/L	0.099	0.20%
QC value within limits for Mg 279.077 Recovery = 99.84%						
Mn 257.610†	2399378.2	3.003 mg/L	0.0008	3.003 mg/L	0.0008	0.03%
QC value within limits for Mn 257.610 Recovery = 100.10%						
Na 589.592†	404196.4	50.05 mg/L	0.364	50.05 mg/L	0.364	0.73%
QC value within limits for Na 589.592 Recovery = 100.11%						
Ni 231.604†	304633.5	8.011 mg/L	0.0123	8.011 mg/L	0.0123	0.15%
QC value within limits for Ni 231.604 Recovery = 100.14%						
Pb 220.353†	7296.9	1.013 mg/L	0.0123	1.013 mg/L	0.0123	1.22%
QC value within limits for Pb 220.353 Recovery = 101.27%						
Sb 206.836†	37500.9	11.93 mg/L	0.012	11.93 mg/L	0.012	0.10%
QC value within limits for Sb 206.836 Recovery = 99.45%						
Se 196.026†	2457.3	0.9978 mg/L	0.00648	0.9978 mg/L	0.00648	0.65%
QC value within limits for Se 196.026 Recovery = 99.78%						
Tl 190.801†	3510.4	1.967 mg/L	0.0270	1.967 mg/L	0.0270	1.37%
QC value within limits for Tl 190.801 Recovery = 98.36%						
V 292.402†	401302.0	2.517 mg/L	0.0016	2.517 mg/L	0.0016	0.06%
QC value within limits for V 292.402 Recovery = 100.67%						
Zn 213.857†	4718.5	3.942 mg/L	0.0317	3.942 mg/L	0.0317	0.80%
QC value within limits for Zn 213.857 Recovery = 98.55%						
Pb†	75.6	0.8797 mg/L	0.00933	0.8797 mg/L	0.00933	1.06%
QC value less than the lower limit for Pb Recovery = 87.97%						
Ag 338.289†	192292.6	2.052 mg/L	0.0002	2.052 mg/L	0.0002	0.01%

QC Failed. Continue with analysis.

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Sequence No.: 9
Sample ID: ICV
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 7
Date Collected: 10/23/2014 2:57:44 PM
Data Type: Original
Initial Sample Vol.:
Sample Prep Vol:
Auto Dilution Factor: 1

Nebulizer Parameters: ICV

Analyte	Back Pressure	Flow
All	131.0 kPa	0.55 L/min

Mean Data: ICV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1450900.7	0.9430	mg/L	0.00126				0.13%
Ag 328.068†	245829.7	1.231	mg/L	0.0020	1.231	mg/L	0.0020	0.16%
QC value within limits for Ag 328.068 Recovery = 98.50%								
Al 308.215†	5516.9	9.854	mg/L	0.0076	9.854	mg/L	0.0076	0.08%
QC value within limits for Al 308.215 Recovery = 98.54%								
As 188.979†	1016.9	0.5004	mg/L	0.00694	0.5004	mg/L	0.00694	1.39%
QC value within limits for As 188.979 Recovery = 100.08%								
Ba 233.527†	1459832.3	9.836	mg/L	0.0090	9.836	mg/L	0.0090	0.09%
QC value within limits for Ba 233.527 Recovery = 98.36%								
Be 313.107†	454221.9	0.2485	mg/L	0.00014	0.2485	mg/L	0.00014	0.06%
QC value within limits for Be 313.107 Recovery = 99.38%								
Ca 317.933†	110401.3	24.55	mg/L	0.206	24.55	mg/L	0.206	0.84%
QC value within limits for Ca 317.933 Recovery = 98.20%								
Cd 226.502†	16968.1	0.2663	mg/L	0.00025	0.2663	mg/L	0.00025	0.09%
QC value within limits for Cd 226.502 Recovery = 106.51%								
Co 228.616†	93968.2	2.368	mg/L	0.0022	2.368	mg/L	0.0022	0.09%
QC value within limits for Co 228.616 Recovery = 94.72%								
Cr 267.716†	111119.0	0.9751	mg/L	0.00103	0.9751	mg/L	0.00103	0.11%

QC value within limits for Cr 267.716 Recovery = 97.51%

Cu 324.752†	283275.1	1.217 mg/L	0.0004	1.217 mg/L	0.0004	0.03%
QC value within limits for Cu 324.752 Recovery = 97.37%						
Fe 273.955†	2651.7	4.811 mg/L	0.0038	4.811 mg/L	0.0038	0.08%
QC value within limits for Fe 273.955 Recovery = 96.22%						
K 766.490†	58603.4	24.52 mg/L	0.147	24.52 mg/L	0.147	0.60%
QC value within limits for K 766.490 Recovery = 98.09%						
Mg 279.077†	457265.0	25.49 mg/L	0.001	25.49 mg/L	0.001	0.00%
QC value within limits for Mg 279.077 Recovery = 101.96%						
Mn 257.610†	1976637.2	2.474 mg/L	0.0014	2.474 mg/L	0.0014	0.06%
QC value within limits for Mn 257.610 Recovery = 98.96%						
Na 589.592†	196344.3	24.31 mg/L	0.158	24.31 mg/L	0.158	0.65%
QC value within limits for Na 589.592 Recovery = 97.26%						
Ni 231.604†	94218.3	2.478 mg/L	0.0020	2.478 mg/L	0.0020	0.08%
QC value within limits for Ni 231.604 Recovery = 99.11%						
Pb 220.353†	3649.5	0.5066 mg/L	0.00399	0.5066 mg/L	0.00399	0.79%
QC value within limits for Pb 220.353 Recovery = 101.32%						
Sb 206.836†	15914.4	5.064 mg/L	0.0056	5.064 mg/L	0.0056	0.11%
QC value within limits for Sb 206.836 Recovery = 101.28%						
Se 196.026†	1220.0	0.4948 mg/L	0.00203	0.4948 mg/L	0.00203	0.41%
QC value within limits for Se 196.026 Recovery = 98.96%						
Tl 190.801†	913.1	0.4871 mg/L	0.00575	0.4871 mg/L	0.00575	1.18%
QC value within limits for Tl 190.801 Recovery = 97.42%						
V 292.402†	403749.2	2.524 mg/L	0.0001	2.524 mg/L	0.0001	0.01%
QC value within limits for V 292.402 Recovery = 100.96%						
Zn 213.857†	3034.8	2.549 mg/L	0.0021	2.549 mg/L	0.0021	0.08%
QC value within limits for Zn 213.857 Recovery = 101.97%						
Pb†	39.1	0.4506 mg/L	0.00641	0.4506 mg/L	0.00641	1.42%
QC value within limits for Pb Recovery = 90.13%						
Ag 338.289†	118542.9	1.260 mg/L	0.0017	1.260 mg/L	0.0017	0.14%

All analyte(s) passed QC.

Sequence No.: 10 **Autosampler Location: 1**
Sample ID: ICB **Date Collected: 10/23/2014 3:02:01 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 75 **Auto Dilution Factor: 1**

Nebulizer Parameters: ICB

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: ICB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1523989.2	0.9905	mg/L	0.00899				0.91%
Ag 328.068†	-105.9	-0.0005	mg/L	0.00022	-0.0005	mg/L	0.00022	42.48%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 308.215†	-12.6	-0.0225	mg/L	0.00508	-0.0225	mg/L	0.00508	22.57%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	-0.9	-0.0005	mg/L	0.00177	-0.0005	mg/L	0.00177	382.53%
QC value within limits for As 188.979 Recovery = Not calculated								
Ba 233.527†	274.3	0.0018	mg/L	0.00009	0.0018	mg/L	0.00009	4.98%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-33.8	-0.0000	mg/L	0.00003	-0.0000	mg/L	0.00003	154.94%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933†	8.8	0.0020	mg/L	0.00434	0.0020	mg/L	0.00434	221.13%
QC value within limits for Ca 317.933 Recovery = Not calculated								
Cd 226.502†	-3.8	-0.0001	mg/L	0.00010	-0.0001	mg/L	0.00010	169.60%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	10.1	0.0003	mg/L	0.00009	0.0003	mg/L	0.00009	34.25%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	9.7	0.0001	mg/L	0.00017	0.0001	mg/L	0.00017	195.69%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 324.752†	203.1	0.0009	mg/L	0.00015	0.0009	mg/L	0.00015	17.31%
QC value within limits for Cu 324.752 Recovery = Not calculated								
Fe 273.955†	2.6	0.0047	mg/L	0.01390	0.0047	mg/L	0.01390	293.44%
QC value within limits for Fe 273.955 Recovery = Not calculated								

K 766.490†	200.2	0.0838 mg/L	0.04205	0.0838 mg/L	0.04205	50.19%
QC value within limits for K 766.490 Recovery = Not calculated						
Mg 279.077†	-13.2	-0.0008 mg/L	0.00017	-0.0008 mg/L	0.00017	22.81%
QC value within limits for Mg 279.077 Recovery = Not calculated						
Mn 257.610†	314.0	0.0004 mg/L	0.00007	0.0004 mg/L	0.00007	16.70%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Na 589.592†	350.5	0.0434 mg/L	0.00696	0.0434 mg/L	0.00696	16.04%
QC value within limits for Na 589.592 Recovery = Not calculated						
Ni 231.604†	0.9	0.0000 mg/L	0.00000	0.0000 mg/L	0.00000	11.60%
QC value within limits for Ni 231.604 Recovery = Not calculated						
Pb 220.353†	11.7	0.0016 mg/L	0.00275	0.0016 mg/L	0.00275	169.49%
QC value within limits for Pb 220.353 Recovery = Not calculated						
Sb 206.836†	18.2	0.0058 mg/L	0.00661	0.0058 mg/L	0.00661	113.65%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	-3.6	-0.0015 mg/L	0.00728	-0.0015 mg/L	0.00728	500.79%
QC value within limits for Se 196.026 Recovery = Not calculated						
Tl 190.801†	8.0	0.0046 mg/L	0.00416	0.0046 mg/L	0.00416	90.68%
QC value within limits for Tl 190.801 Recovery = Not calculated						
V 292.402†	11.7	0.0001 mg/L	0.00046	0.0001 mg/L	0.00046	616.94%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	0.5	0.0004 mg/L	0.00076	0.0004 mg/L	0.00076	177.18%
QC value within limits for Zn 213.857 Recovery = Not calculated						
Pb†	-8.4	-0.0969 mg/L	0.02642	-0.0969 mg/L	0.02642	27.27%
QC value within limits for Pb Recovery = Not calculated						
Ag 338.289†	164.1	0.0017 mg/L	0.00083	0.0017 mg/L	0.00083	48.63%

All analyte(s) passed QC.

Sequence No.: 11 **Autosampler Location: 2**
Sample ID: LLQC **Date Collected: 10/23/2014 3:06:14 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 75 **Auto Dilution Factor: 1**

Nebulizer Parameters: LLQC

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: LLQC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1513744.6	0.9838	mg/L	0.00122				0.12%
Ag 328.068†	1885.7	0.0095	mg/L	0.00027	0.0095	mg/L	0.00027	2.89%
QC value within limits for Ag 328.068 Recovery = 94.66%								
Al 308.215†	143.1	0.2558	mg/L	0.01432	0.2558	mg/L	0.01432	5.60%
QC value within limits for Al 308.215 Recovery = 127.91%								
As 188.979†	21.0	0.0103	mg/L	0.00333	0.0103	mg/L	0.00333	32.15%
QC value within limits for As 188.979 Recovery = 103.48%								
Ba 233.527†	14871.8	0.1002	mg/L	0.00050	0.1002	mg/L	0.00050	0.49%
QC value within limits for Ba 233.527 Recovery = 100.20%								
Be 313.107†	8706.8	0.0048	mg/L	0.00003	0.0048	mg/L	0.00003	0.54%
QC value within limits for Be 313.107 Recovery = 95.23%								
Ca 317.933†	11274.3	2.507	mg/L	0.0420	2.507	mg/L	0.0420	1.68%
QC value within limits for Ca 317.933 Recovery = 100.28%								
Cd 226.502†	344.1	0.0054	mg/L	0.00003	0.0054	mg/L	0.00003	0.60%
QC value within limits for Cd 226.502 Recovery = 107.71%								
Co 228.616†	1952.1	0.0492	mg/L	0.00033	0.0492	mg/L	0.00033	0.68%
QC value within limits for Co 228.616 Recovery = 98.39%								
Cr 267.716†	1350.5	0.0119	mg/L	0.00001	0.0119	mg/L	0.00001	0.07%
QC value within limits for Cr 267.716 Recovery = 118.54%								
Cu 324.752†	5968.0	0.0256	mg/L	0.00001	0.0256	mg/L	0.00001	0.05%
QC value within limits for Cu 324.752 Recovery = 102.56%								
Fe 273.955†	52.1	0.0949	mg/L	0.00856	0.0949	mg/L	0.00856	9.02%
QC value within limits for Fe 273.955 Recovery = 94.92%								
K 766.490†	6206.7	2.597	mg/L	0.0849	2.597	mg/L	0.0849	3.27%
QC value within limits for K 766.490 Recovery = 103.89%								
Mg 279.077†	45472.9	2.536	mg/L	0.0121	2.536	mg/L	0.0121	0.48%
QC value within limits for Mg 279.077 Recovery = 101.45%								
Mn 257.610†	11892.2	0.0149	mg/L	0.00001	0.0149	mg/L	0.00001	0.05%

QC value within limits for Mn 257.610 Recovery = 99.25%

Na 589.592†	20625.0	2.554 mg/L	0.0122	2.554 mg/L	0.0122	0.48%

QC value within limits for Na 589.592 Recovery = 102.17%

Ni 231.604†	1626.7	0.0428 mg/L	0.00025	0.0428 mg/L	0.00025	0.57%

QC value within limits for Ni 231.604 Recovery = 106.94%

Pb 220.353†	102.8	0.0143 mg/L	0.00122	0.0143 mg/L	0.00122	8.52%

QC value greater than the upper limit for Pb 220.353 Recovery = 142.82%

Sb 206.836†	196.2	0.0625 mg/L	0.00168	0.0625 mg/L	0.00168	2.69%

QC value within limits for Sb 206.836 Recovery = 104.12%

Se 196.026†	21.7	0.0089 mg/L	0.00883	0.0089 mg/L	0.00883	99.53%

QC value within limits for Se 196.026 Recovery = 88.73%

Tl 190.801†	33.2	0.0183 mg/L	0.00204	0.0183 mg/L	0.00204	11.14%

QC value within limits for Tl 190.801 Recovery = 73.29%

V 292.402†	3987.6	0.0249 mg/L	0.00051	0.0249 mg/L	0.00051	2.06%

QC value within limits for V 292.402 Recovery = 99.78%

Zn 213.857†	73.0	0.0612 mg/L	0.00102	0.0612 mg/L	0.00102	1.67%

QC value within limits for Zn 213.857 Recovery = 102.02%

Pb†	-6.7	-0.0769 mg/L	0.04771	-0.0769 mg/L	0.04771	62.05%
Ag 338.289†	1255.6	0.0134 mg/L	0.00064	0.0134 mg/L	0.00064	4.79%

QC Failed. Continue with analysis.

Sequence No.: 12 **Autosampler Location: 4**
Sample ID: LLQC Radial Pb **Date Collected: 10/23/2014 3:10:28 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 75 **Auto Dilution Factor: 1**

Nebulizer Parameters: LLQC Radial Pb

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: LLQC Radial Pb

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1533621.3	0.9967	mg/L	0.00789				0.79%
Ag 328.068†	-84.4	-0.0004	mg/L	0.00009	-0.0004	mg/L	0.00009	21.99%
Al 308.215†	2.0	0.0035	mg/L	0.02726	0.0035	mg/L	0.02726	768.66%
As 188.979†	-2.2	-0.0011	mg/L	0.00166	-0.0011	mg/L	0.00166	151.17%
Ba 233.527†	17.7	0.0001	mg/L	0.00018	0.0001	mg/L	0.00018	147.29%
Be 313.107†	-25.6	-0.0000	mg/L	0.00003	-0.0000	mg/L	0.00003	210.55%
Ca 317.933†	4.0	0.0009	mg/L	0.00383	0.0009	mg/L	0.00383	425.27%
Cd 226.502†	-7.9	-0.0001	mg/L	0.00007	-0.0001	mg/L	0.00007	53.85%
Co 228.616†	95.7	0.0024	mg/L	0.00039	0.0024	mg/L	0.00039	16.20%
Cr 267.716†	86.4	0.0008	mg/L	0.00012	0.0008	mg/L	0.00012	15.86%
Cu 324.752†	111.0	0.0005	mg/L	0.00003	0.0005	mg/L	0.00003	6.18%
Fe 273.955†	0.9	0.0016	mg/L	0.00539	0.0016	mg/L	0.00539	333.11%
K 766.490†	37.1	0.0155	mg/L	0.10065	0.0155	mg/L	0.10065	647.59%
Mg 279.077†	-55.2	-0.0031	mg/L	0.00393	-0.0031	mg/L	0.00393	127.37%
Mn 257.610†	231.6	0.0003	mg/L	0.00001	0.0003	mg/L	0.00001	3.79%
Na 589.592†	124.6	0.0154	mg/L	0.01274	0.0154	mg/L	0.01274	82.60%
Ni 231.604†	158.9	0.0042	mg/L	0.00006	0.0042	mg/L	0.00006	1.47%
Pb 220.353†	745.1	0.1028	mg/L	0.00122	0.1028	mg/L	0.00122	1.19%
Sb 206.836†	-4.8	-0.0016	mg/L	0.00013	-0.0016	mg/L	0.00013	8.28%
Se 196.026†	-7.8	-0.0032	mg/L	0.00075	-0.0032	mg/L	0.00075	23.76%
Tl 190.801†	-4.6	-0.0027	mg/L	0.00021	-0.0027	mg/L	0.00021	7.84%
V 292.402†	-28.2	-0.0002	mg/L	0.00014	-0.0002	mg/L	0.00014	84.07%
Zn 213.857†	5.1	0.0043	mg/L	0.00047	0.0043	mg/L	0.00047	10.77%
Pb†	2.0	0.0228	mg/L	0.02563	0.0228	mg/L	0.02563	112.44%

QC value less than the lower limit for Pb Recovery = 22.80%

Ag 338.289†	150.8	0.0016 mg/L	0.00140	0.0016 mg/L	0.00140	88.02%

QC Failed. Continue with analysis.

Sequence No.: 13 **Autosampler Location: 8**
Sample ID: ICSAB **Date Collected: 10/23/2014 3:14:42 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Wash Time: 75 Auto Dilution Factor: 1

Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1385554.6	0.9005	mg/L	0.00076				0.08%
Ag 328.068†	149694.7	0.7794	mg/L	0.00131	0.7794	mg/L	0.00131	0.17%
QC value within limits for Ag 328.068 Recovery = 103.91%								
Al 308.215†	151756.4	270.8	mg/L	1.65	270.8	mg/L	1.65	0.61%
QC value within limits for Al 308.215 Recovery = 108.32%								
As 188.979†	5177.5	2.545	mg/L	0.0006	2.545	mg/L	0.0006	0.02%
QC value within limits for As 188.979 Recovery = 101.81%								
Ba 233.527†	111706.3	0.7526	mg/L	0.00111	0.7526	mg/L	0.00111	0.15%
QC value within limits for Ba 233.527 Recovery = 100.35%								
Be 313.107†	446597.3	0.2442	mg/L	0.00003	0.2442	mg/L	0.00003	0.01%
QC value within limits for Be 313.107 Recovery = 97.70%								
Ca 317.933†	1163641.0	258.8	mg/L	2.19	258.8	mg/L	2.19	0.85%
QC value within limits for Ca 317.933 Recovery = 103.50%								
Cd 226.502†	47019.4	0.7288	mg/L	0.00288	0.7288	mg/L	0.00288	0.39%
QC value within limits for Cd 226.502 Recovery = 97.17%								
Co 228.616†	27682.0	0.6976	mg/L	0.00193	0.6976	mg/L	0.00193	0.28%
QC value within limits for Co 228.616 Recovery = 93.01%								
Cr 267.716†	81785.2	0.7196	mg/L	0.00072	0.7196	mg/L	0.00072	0.10%
QC value within limits for Cr 267.716 Recovery = 95.94%								
Cu 324.752†	176828.2	0.7713	mg/L	0.00362	0.7713	mg/L	0.00362	0.47%
QC value within limits for Cu 324.752 Recovery = 102.83%								
Fe 273.955†	50763.8	92.82	mg/L	0.433	92.82	mg/L	0.433	0.47%
QC value within limits for Fe 273.955 Recovery = 92.82%								
K 766.490†	126309.4	52.86	mg/L	0.314	52.86	mg/L	0.314	0.59%
QC value within limits for K 766.490 Recovery = 105.71%								
Mg 279.077†	4648100.2	259.0	mg/L	0.02	259.0	mg/L	0.02	0.01%
QC value within limits for Mg 279.077 Recovery = 103.59%								
Mn 257.610†	391314.4	0.4898	mg/L	0.00154	0.4898	mg/L	0.00154	0.31%
QC value within limits for Mn 257.610 Recovery = 97.97%								
Na 589.592†	1219.2	0.1510	mg/L	0.00623	0.1510	mg/L	0.00623	4.12%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	27641.6	0.7269	mg/L	0.00099	0.7269	mg/L	0.00099	0.14%
QC value within limits for Ni 231.604 Recovery = 96.92%								
Pb 220.353†	19000.5	2.533	mg/L	0.0018	2.533	mg/L	0.0018	0.07%
QC value within limits for Pb 220.353 Recovery = 101.32%								
Sb 206.836†	-280.1	-0.0118	mg/L	0.00657	-0.0118	mg/L	0.00657	55.56%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	3091.5	1.284	mg/L	0.0088	1.284	mg/L	0.0088	0.69%
QC value within limits for Se 196.026 Recovery = 102.68%								
Tl 190.801†	4189.7	2.373	mg/L	0.0090	2.373	mg/L	0.0090	0.38%
QC value within limits for Tl 190.801 Recovery = 94.91%								
V 292.402†	120803.8	0.7585	mg/L	0.00164	0.7585	mg/L	0.00164	0.22%
QC value within limits for V 292.402 Recovery = 101.14%								
Zn 213.857†	888.7	0.7198	mg/L	0.00377	0.7198	mg/L	0.00377	0.52%
QC value within limits for Zn 213.857 Recovery = 95.98%								
Pb†	209.3	2.288	mg/L	0.0350	2.288	mg/L	0.0350	1.53%
QC value within limits for Pb Recovery = 91.52%								
Ag 338.289†	74721.4	0.7926	mg/L	0.00160	0.7926	mg/L	0.00160	0.20%

All analyte(s) passed QC.

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Sequence No.: 14 Autosampler Location: 7
Sample ID: CCV Date Collected: 10/23/2014 3:19:04 PM
Analyst: Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time: 75 Auto Dilution Factor: 1

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow

All 132.0 kPa 0.55 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1438913.6	0.9352	mg/L	0.00684				0.73%
Ag 328.068†	245827.8	1.231	mg/L	0.0003	1.231	mg/L	0.0003	0.03%
QC value within limits for Ag 328.068 Recovery = 98.50%								
Al 308.215†	5515.4	9.852	mg/L	0.0112	9.852	mg/L	0.0112	0.11%
QC value within limits for Al 308.215 Recovery = 98.52%								
As 188.979†	1029.3	0.5065	mg/L	0.00799	0.5065	mg/L	0.00799	1.58%
QC value within limits for As 188.979 Recovery = 101.31%								
Ba 233.527†	1454475.6	9.799	mg/L	0.0027	9.799	mg/L	0.0027	0.03%
QC value within limits for Ba 233.527 Recovery = 97.99%								
Be 313.107†	455271.2	0.2490	mg/L	0.00020	0.2490	mg/L	0.00020	0.08%
QC value within limits for Be 313.107 Recovery = 99.61%								
Ca 317.933†	113259.4	25.18	mg/L	0.019	25.18	mg/L	0.019	0.08%
QC value within limits for Ca 317.933 Recovery = 100.74%								
Cd 226.502†	17209.0	0.2701	mg/L	0.00184	0.2701	mg/L	0.00184	0.68%
QC value within limits for Cd 226.502 Recovery = 108.03%								
Co 228.616†	93838.5	2.365	mg/L	0.0013	2.365	mg/L	0.0013	0.06%
QC value within limits for Co 228.616 Recovery = 94.59%								
Cr 267.716†	111375.2	0.9774	mg/L	0.00051	0.9774	mg/L	0.00051	0.05%
QC value within limits for Cr 267.716 Recovery = 97.74%								
Cu 324.752†	282167.3	1.212	mg/L	0.0008	1.212	mg/L	0.0008	0.06%
QC value within limits for Cu 324.752 Recovery = 96.99%								
Fe 273.955†	2698.6	4.897	mg/L	0.0089	4.897	mg/L	0.0089	0.18%
QC value within limits for Fe 273.955 Recovery = 97.94%								
K 766.490†	60153.9	25.17	mg/L	0.071	25.17	mg/L	0.071	0.28%
QC value within limits for K 766.490 Recovery = 100.69%								
Mg 279.077†	459346.6	25.61	mg/L	0.043	25.61	mg/L	0.043	0.17%
QC value within limits for Mg 279.077 Recovery = 102.43%								
Mn 257.610†	1970352.8	2.466	mg/L	0.0008	2.466	mg/L	0.0008	0.03%
QC value within limits for Mn 257.610 Recovery = 98.65%								
Na 589.592†	202973.9	25.14	mg/L	0.058	25.14	mg/L	0.058	0.23%
QC value within limits for Na 589.592 Recovery = 100.54%								
Ni 231.604†	94072.4	2.474	mg/L	0.0033	2.474	mg/L	0.0033	0.13%
QC value within limits for Ni 231.604 Recovery = 98.95%								
Pb 220.353†	3684.1	0.5114	mg/L	0.00410	0.5114	mg/L	0.00410	0.80%
QC value within limits for Pb 220.353 Recovery = 102.28%								
Sb 206.836†	16016.6	5.097	mg/L	0.0355	5.097	mg/L	0.0355	0.70%
QC value within limits for Sb 206.836 Recovery = 101.94%								
Se 196.026†	1263.2	0.5124	mg/L	0.00946	0.5124	mg/L	0.00946	1.85%
QC value within limits for Se 196.026 Recovery = 102.47%								
Tl 190.801†	915.6	0.4886	mg/L	0.00243	0.4886	mg/L	0.00243	0.50%
QC value within limits for Tl 190.801 Recovery = 97.72%								
V 292.402†	403777.0	2.524	mg/L	0.0021	2.524	mg/L	0.0021	0.08%
QC value within limits for V 292.402 Recovery = 100.96%								
Zn 213.857†	3084.1	2.591	mg/L	0.0126	2.591	mg/L	0.0126	0.49%
QC value within limits for Zn 213.857 Recovery = 103.64%								
Pb†	39.7	0.4576	mg/L	0.00558	0.4576	mg/L	0.00558	1.22%
QC value within limits for Pb Recovery = 91.53%								
Ag 338.289†	118519.8	1.260	mg/L	0.0012	1.260	mg/L	0.0012	0.09%

All analyte(s) passed QC.

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Sequence No.: 15 **Autosampler Location: 1**
Sample ID: CCB **Date Collected: 10/23/2014 3:23:18 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 75 **Auto Dilution Factor: 1**

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: CCB

	Mean Corrected	Calib.			Sample			

Analyte	Intensity	Conc.	Units	Std.Dev.	Conc.	Units	Std.Dev.	RSD
Y 371.029	1539768.9	1.001	mg/L	0.0016				0.16%
Ag 328.068†	-129.6	-0.0006	mg/L	0.00041	-0.0006	mg/L	0.00041	63.99%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 308.215†	-2.0	-0.0035	mg/L	0.00160	-0.0035	mg/L	0.00160	45.37%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	2.1	0.0010	mg/L	0.00167	0.0010	mg/L	0.00167	163.98%
QC value within limits for As 188.979 Recovery = Not calculated								
Ba 233.527†	198.4	0.0013	mg/L	0.00020	0.0013	mg/L	0.00020	14.98%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-16.4	-0.0000	mg/L	0.00002	-0.0000	mg/L	0.00002	224.13%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933†	9.8	0.0022	mg/L	0.00034	0.0022	mg/L	0.00034	15.46%
QC value within limits for Ca 317.933 Recovery = Not calculated								
Cd 226.502†	6.4	0.0001	mg/L	0.00020	0.0001	mg/L	0.00020	195.52%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	6.0	0.0002	mg/L	0.00015	0.0002	mg/L	0.00015	99.07%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	35.7	0.0003	mg/L	0.00014	0.0003	mg/L	0.00014	44.02%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 324.752†	-26.5	-0.0001	mg/L	0.00027	-0.0001	mg/L	0.00027	241.16%
QC value within limits for Cu 324.752 Recovery = Not calculated								
Fe 273.955†	0.2	0.0003	mg/L	0.01149	0.0003	mg/L	0.01149	>999.9%
QC value within limits for Fe 273.955 Recovery = Not calculated								
K 766.490†	184.1	0.0770	mg/L	0.05216	0.0770	mg/L	0.05216	67.72%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 279.077†	-41.1	-0.0023	mg/L	0.00020	-0.0023	mg/L	0.00020	8.56%
QC value within limits for Mg 279.077 Recovery = Not calculated								
Mn 257.610†	311.4	0.0004	mg/L	0.00001	0.0004	mg/L	0.00001	3.32%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Na 589.592†	341.4	0.0423	mg/L	0.00680	0.0423	mg/L	0.00680	16.07%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	-14.2	-0.0004	mg/L	0.00012	-0.0004	mg/L	0.00012	32.06%
QC value within limits for Ni 231.604 Recovery = Not calculated								
Pb 220.353†	26.1	0.0036	mg/L	0.00330	0.0036	mg/L	0.00330	91.43%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	8.7	0.0028	mg/L	0.00686	0.0028	mg/L	0.00686	248.51%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	13.5	0.0055	mg/L	0.00750	0.0055	mg/L	0.00750	136.38%
QC value within limits for Se 196.026 Recovery = Not calculated								
Tl 190.801†	-4.8	-0.0027	mg/L	0.00250	-0.0027	mg/L	0.00250	91.30%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 292.402†	28.8	0.0002	mg/L	0.00005	0.0002	mg/L	0.00005	25.02%
QC value within limits for V 292.402 Recovery = Not calculated								
Zn 213.857†	4.6	0.0039	mg/L	0.00075	0.0039	mg/L	0.00075	19.45%
QC value within limits for Zn 213.857 Recovery = Not calculated								
Pb†	-4.0	-0.0457	mg/L	0.00020	-0.0457	mg/L	0.00020	0.44%
QC value within limits for Pb Recovery = Not calculated								
Ag 338.289†	285.2	0.0030	mg/L	0.00095	0.0030	mg/L	0.00095	31.85%

All analyte(s) passed QC.

Sequence No.: 16
Sample ID: Blk 10/23 soil
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 38
Date Collected: 10/23/2014 3:27:31 PM
Data Type: Original
Initial Sample Vol: 50 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: Blk 10/23 soil

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: Blk 10/23 soil

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1610647.3	1.047	mg/L	0.0005				0.05%
Ag 328.068†	-227.6	-0.0011	mg/L	0.00030	-0.0011	mg/L	0.00030	26.76%
Al 308.215†	78.4	0.1399	mg/L	0.01717	0.1399	mg/L	0.01717	12.28%
As 188.979†	7.1	0.0035	mg/L	0.00113	0.0035	mg/L	0.00113	32.31%

Ba 233.527†	110.4	0.0007 mg/L	0.00013	0.0007 mg/L	0.00013	17.01%
Be 313.107†	12.6	0.0000 mg/L	0.00002	0.0000 mg/L	0.00002	338.93%
Ca 317.933†	468.2	0.1041 mg/L	0.00030	0.1041 mg/L	0.00030	0.29%
Cd 226.502†	-0.7	-0.0000 mg/L	0.00001	-0.0000 mg/L	0.00001	60.69%
Co 228.616†	15.6	0.0004 mg/L	0.00035	0.0004 mg/L	0.00035	89.58%
Cr 267.716†	204.3	0.0018 mg/L	0.00011	0.0018 mg/L	0.00011	6.07%
Cu 324.752†	66.8	0.0003 mg/L	0.00013	0.0003 mg/L	0.00013	44.08%
Fe 273.955†	51.0	0.0933 mg/L	0.00166	0.0933 mg/L	0.00166	1.78%
K 766.490†	39.7	0.0166 mg/L	0.00500	0.0166 mg/L	0.00500	30.12%
Mg 279.077†	328.1	0.0180 mg/L	0.00026	0.0180 mg/L	0.00026	1.46%
Mn 257.610†	1466.0	0.0018 mg/L	0.00006	0.0018 mg/L	0.00006	3.16%
Na 589.592†	227.7	0.0282 mg/L	0.01410	0.0282 mg/L	0.01410	49.99%
Ni 231.604†	17.8	0.0005 mg/L	0.00013	0.0005 mg/L	0.00013	27.91%
Pb 220.353†	23.5	0.0032 mg/L	0.00077	0.0032 mg/L	0.00077	23.97%
Sb 206.836†	-4.9	-0.0015 mg/L	0.00312	-0.0015 mg/L	0.00312	203.77%
Se 196.026†	-1.8	-0.0007 mg/L	0.00110	-0.0007 mg/L	0.00110	155.09%
Tl 190.801†	-4.7	-0.0027 mg/L	0.00065	-0.0027 mg/L	0.00065	24.23%
V 292.402†	39.4	0.0003 mg/L	0.00091	0.0003 mg/L	0.00091	351.17%
Zn 213.857†	10.0	0.0084 mg/L	0.00136	0.0084 mg/L	0.00136	16.19%
Pb†	-9.2	-0.1058 mg/L	0.02734	-0.1058 mg/L	0.02734	25.84%
Ag 338.289†	114.4	0.0012 mg/L	0.00050	0.0012 mg/L	0.00050	40.58%

Sc

Sequence No.: 17
Sample ID: lcs
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 39
Date Collected: 10/23/2014 3:31:46 PM
Data Type: Original
Initial Sample Vol: 50 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: lcs

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: lcs

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1508886.1	0.9807	mg/L	0.00193				0.20%
Ag 328.068†	48610.6	0.2441	mg/L	0.00143	0.2441	mg/L	0.00143	0.59%
Al 308.215†	1445.4	2.585	mg/L	0.0133	2.585	mg/L	0.0133	0.51%
As 188.979†	5046.1	2.485	mg/L	0.0096	2.485	mg/L	0.0096	0.39%
Ba 233.527†	360229.9	2.427	mg/L	0.0013	2.427	mg/L	0.0013	0.05%
Be 313.107†	899944.2	0.4923	mg/L	0.00052	0.4923	mg/L	0.00052	0.10%
Ca 317.933†	17692.8	3.934	mg/L	0.0427	3.934	mg/L	0.0427	1.08%
Cd 226.502†	64476.6	1.015	mg/L	0.0013	1.015	mg/L	0.0013	0.13%
Co 228.616†	39153.9	0.9867	mg/L	0.00227	0.9867	mg/L	0.00227	0.23%
Cr 267.716†	268512.7	2.358	mg/L	0.0002	2.358	mg/L	0.0002	0.01%
Cu 324.752†	565477.4	2.429	mg/L	0.0001	2.429	mg/L	0.0001	0.01%
Fe 273.955†	1329.0	2.420	mg/L	0.0021	2.420	mg/L	0.0021	0.09%
K 766.490†	99341.8	41.57	mg/L	0.250	41.57	mg/L	0.250	0.60%
Mg 279.077†	144546.3	8.055	mg/L	0.0100	8.055	mg/L	0.0100	0.12%
Mn 257.610†	775307.3	0.9704	mg/L	0.00033	0.9704	mg/L	0.00033	0.03%
Na 589.592†	93186.8	11.54	mg/L	0.068	11.54	mg/L	0.068	0.59%
Ni 231.604†	193537.5	5.089	mg/L	0.0006	5.089	mg/L	0.0006	0.01%
Pb 220.353†	18557.0	2.563	mg/L	0.0106	2.563	mg/L	0.0106	0.41%
Sb 206.836†	7602.4	2.377	mg/L	0.0035	2.377	mg/L	0.0035	0.15%
Se 196.026†	6037.5	2.454	mg/L	0.0054	2.454	mg/L	0.0054	0.22%
Tl 190.801†	4184.6	2.371	mg/L	0.0023	2.371	mg/L	0.0023	0.10%
V 292.402†	148288.6	0.9427	mg/L	0.00029	0.9427	mg/L	0.00029	0.03%
Zn 213.857†	2991.4	2.502	mg/L	0.0246	2.502	mg/L	0.0246	0.98%
Pb†	204.3	2.359	mg/L	0.0283	2.359	mg/L	0.0283	1.20%
Ag 338.289†	19590.9	0.2631	mg/L	0.00183	0.2631	mg/L	0.00183	0.70%

Sequence No.: 18
Sample ID: lcs dup
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 40
Date Collected: 10/23/2014 3:36:02 PM
Data Type: Original
Initial Sample Vol: 50 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: lcs dup

Analyte	Back Pressure	Flow
All	131.0 kPa	0.55 L/min

Mean Data: lcs dup

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1530012.9	0.9944	mg/L	0.00652				0.66%
Ag 328.068†	48290.5	0.2425	mg/L	0.00061	0.2425	mg/L	0.00061	0.25%
Al 308.215†	1401.7	2.506	mg/L	0.0680	2.506	mg/L	0.0680	2.71%
As 188.979†	5007.8	2.466	mg/L	0.0261	2.466	mg/L	0.0261	1.06%
Ba 233.527†	358146.8	2.413	mg/L	0.0011	2.413	mg/L	0.0011	0.05%
Be 313.107†	892317.0	0.4882	mg/L	0.00090	0.4882	mg/L	0.00090	0.19%
Ca 317.933†	17882.3	3.976	mg/L	0.0101	3.976	mg/L	0.0101	0.25%
Cd 226.502†	63964.6	1.007	mg/L	0.0003	1.007	mg/L	0.0003	0.03%
Co 228.616†	38794.1	0.9776	mg/L	0.00148	0.9776	mg/L	0.00148	0.15%
Cr 267.716†	267059.9	2.345	mg/L	0.0007	2.345	mg/L	0.0007	0.03%
Cu 324.752†	565499.1	2.429	mg/L	0.0015	2.429	mg/L	0.0015	0.06%
Fe 273.955†	1313.7	2.392	mg/L	0.0282	2.392	mg/L	0.0282	1.18%
K 766.490†	99452.6	41.62	mg/L	0.108	41.62	mg/L	0.108	0.26%
Mg 279.077†	143621.6	8.003	mg/L	0.0268	8.003	mg/L	0.0268	0.34%
Mn 257.610†	772939.5	0.9674	mg/L	0.00003	0.9674	mg/L	0.00003	0.00%
Na 589.592†	93290.3	11.55	mg/L	0.020	11.55	mg/L	0.020	0.17%
Ni 231.604†	193542.2	5.090	mg/L	0.0030	5.090	mg/L	0.0030	0.06%
Pb 220.353†	18449.9	2.548	mg/L	0.0241	2.548	mg/L	0.0241	0.95%
Sb 206.836†	7617.7	2.382	mg/L	0.0313	2.382	mg/L	0.0313	1.31%
Se 196.026†	5985.0	2.432	mg/L	0.0212	2.432	mg/L	0.0212	0.87%
Tl 190.801†	4184.7	2.372	mg/L	0.0276	2.372	mg/L	0.0276	1.16%
V 292.402†	148546.3	0.9442	mg/L	0.00019	0.9442	mg/L	0.00019	0.02%
Zn 213.857†	3046.4	2.548	mg/L	0.0214	2.548	mg/L	0.0214	0.84%
Pb†	204.9	2.367	mg/L	0.0233	2.367	mg/L	0.0233	0.99%
Ag 338.289†	19368.1	0.2604	mg/L	0.00021	0.2604	mg/L	0.00021	0.08%

Sequence No.: 19
Sample ID: 144638-01
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 41
Date Collected: 10/23/2014 3:40:16 PM
Data Type: Original
Initial Sample Vol: 0.52 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-01

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1667157.5	1.084	mg/L	0.0016				0.15%
Ag 328.068†	-11554.6	-0.0040	mg/L	0.00065	-0.3861	mg/L	0.06216	16.10%
Al 308.215†	54133.9	96.60	mg/L	1.678	9288	mg/L	161.31	1.74%
As 188.979†	121.7	0.0668	mg/L	0.00502	6.420	mg/L	0.4831	7.52%
Ba 233.527†	130085.2	0.8764	mg/L	0.00210	84.27	mg/L	0.202	0.24%
Be 313.107†	11971.4	0.0066	mg/L	0.00002	0.6319	mg/L	0.00230	0.36%
Ca 317.933†	500365.3	111.3	mg/L	0.15	10700	mg/L	14.23	0.13%
Cd 226.502†	1365.1	0.0063	mg/L	0.00001	0.6050	mg/L	0.00097	0.16%
Co 228.616†	2545.5	0.0641	mg/L	0.00002	6.168	mg/L	0.0020	0.03%
Cr 267.716†	17999.4	0.1606	mg/L	0.00088	15.44	mg/L	0.085	0.55%
Cu 324.752†	60838.6	0.2819	mg/L	0.00062	27.11	mg/L	0.060	0.22%
Fe 273.955†	87997.9	160.9	mg/L	0.37	15470	mg/L	35.67	0.23%
K 766.490†	26409.3	11.05	mg/L	0.029	1063	mg/L	2.83	0.27%
Mg 279.077†	956693.1	52.81	mg/L	0.095	5078	mg/L	9.13	0.18%
Mn 257.610†	2724661.4	3.410	mg/L	0.0063	327.8	mg/L	0.60	0.18%
Na 589.592†	5943.2	0.7360	mg/L	0.01326	70.77	mg/L	1.275	1.80%
Ni 231.604†	8177.9	0.2151	mg/L	0.00116	20.68	mg/L	0.112	0.54%
Pb 220.353†	5317.7	0.7111	mg/L	0.00643	68.37	mg/L	0.619	0.90%
Sb 206.836†	-211.0	0.0168	mg/L	0.00230	1.618	mg/L	0.2211	13.67%

Se 196.026†	13.5	0.0192	mg/L	0.00473	1.849	mg/L	0.4547 24.59%
Tl 190.801†	-34.0	-0.0064	mg/L	0.00185	-0.6115	mg/L	0.17807 29.12%
V 292.402†	28097.1	0.1764	mg/L	0.00007	16.96	mg/L	0.007 0.04%
Zn 213.857†	1791.8	1.501	mg/L	0.0070	144.3	mg/L	0.67 0.47%
Pb†	57.4	0.6219	mg/L	0.01955	59.80	mg/L	1.879 3.14%
Ag 338.289†	-113.1	0.0016	mg/L	0.00165	0.1495	mg/L	0.15895 106.31%

Sequence No.: 20
Sample ID: 144638-02
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 42
Date Collected: 10/23/2014 3:44:35 PM
Data Type: Original
Initial Sample Vol: 0.487 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-02

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-02

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1639859.8	1.066	mg/L	0.0086				0.80%
Ag 328.068†	-10762.5	-0.0025	mg/L	0.00107	-0.2572	mg/L	0.10978	42.68%
Al 308.215†	53227.6	94.98	mg/L	1.342	9751	mg/L	137.77	1.41%
As 188.979†	108.0	0.0596	mg/L	0.00078	6.117	mg/L	0.0805	1.32%
Ba 233.527†	135099.7	0.9102	mg/L	0.00025	93.45	mg/L	0.026	0.03%
Be 313.107†	12567.9	0.0069	mg/L	0.00003	0.7079	mg/L	0.00309	0.44%
Ca 317.933†	717410.7	159.5	mg/L	3.59	16380	mg/L	368.10	2.25%
Cd 226.502†	1301.1	0.0056	mg/L	0.00047	0.5717	mg/L	0.04828	8.44%
Co 228.616†	2374.0	0.0598	mg/L	0.00028	6.142	mg/L	0.0292	0.48%
Cr 267.716†	16471.7	0.1471	mg/L	0.00116	15.10	mg/L	0.119	0.79%
Cu 324.752†	60281.4	0.2786	mg/L	0.00137	28.60	mg/L	0.141	0.49%
Fe 273.955†	83988.8	153.6	mg/L	3.23	15770	mg/L	331.66	2.10%
K 766.490†	27262.5	11.41	mg/L	0.346	1171	mg/L	35.53	3.03%
Mg 279.077†	949334.9	52.43	mg/L	0.124	5383	mg/L	12.76	0.24%
Mn 257.610†	3228819.0	4.041	mg/L	0.0074	414.8	mg/L	0.76	0.18%
Na 589.592†	6550.6	0.8112	mg/L	0.02052	83.29	mg/L	2.107	2.53%
Ni 231.604†	7385.2	0.1942	mg/L	0.00081	19.94	mg/L	0.083	0.42%
Pb 220.353†	5496.8	0.7373	mg/L	0.00573	75.70	mg/L	0.588	0.78%
Sb 206.836†	-220.9	0.0105	mg/L	0.00790	1.080	mg/L	0.8112	75.10%
Se 196.026†	-17.2	0.0062	mg/L	0.00138	0.6387	mg/L	0.14125	22.11%
Tl 190.801†	-32.7	-0.0047	mg/L	0.00870	-0.4818	mg/L	0.89316	185.38%
V 292.402†	26427.4	0.1658	mg/L	0.00049	17.03	mg/L	0.050	0.29%
Zn 213.857†	1673.5	1.396	mg/L	0.0180	143.3	mg/L	1.85	1.29%
Pb†	56.4	0.6237	mg/L	0.05193	64.03	mg/L	5.332	8.33%
Ag 338.289†	-134.6	0.0004	mg/L	0.00124	0.0381	mg/L	0.12712	333.63%

Sequence No.: 21
Sample ID: 144638-03
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 43
Date Collected: 10/23/2014 3:48:53 PM
Data Type: Original
Initial Sample Vol: 0.51 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-03

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-03

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1688166.9	1.097	mg/L	0.0077				0.70%
Ag 328.068†	-12863.5	-0.0025	mg/L	0.00184	-0.2419	mg/L	0.18020	74.49%
Al 308.215†	70888.1	126.5	mg/L	2.29	12400	mg/L	224.05	1.81%
As 188.979†	88.4	0.0507	mg/L	0.00601	4.973	mg/L	0.5892	11.85%
Ba 233.527†	130397.0	0.8785	mg/L	0.00045	86.13	mg/L	0.044	0.05%

Be 313.107†	12046.0	0.0066	mg/L	0.00004	0.6487	mg/L	0.00368	0.57%
Ca 317.933†	143592.8	31.93	mg/L	0.581	3130	mg/L	56.95	1.82%
Cd 226.502†	1444.0	0.0058	mg/L	0.00022	0.5733	mg/L	0.02142	3.74%
Co 228.616†	3139.7	0.0791	mg/L	0.00104	7.757	mg/L	0.1018	1.31%
Cr 267.716†	21078.2	0.1880	mg/L	0.00198	18.43	mg/L	0.194	1.05%
Cu 324.752†	45612.4	0.2196	mg/L	0.00064	21.53	mg/L	0.062	0.29%
Fe 273.955†	101237.6	185.1	mg/L	3.34	18150	mg/L	327.30	1.80%
K 766.490†	32679.0	13.67	mg/L	0.282	1341	mg/L	27.64	2.06%
Mg 279.077†	679393.9	37.26	mg/L	0.000	3653	mg/L	0.01	0.00%
Mn 257.610†	1886232.9	2.360	mg/L	0.0001	231.4	mg/L	0.01	0.00%
Na 589.592†	5001.9	0.6194	mg/L	0.03881	60.73	mg/L	3.805	6.27%
Ni 231.604†	10017.3	0.2634	mg/L	0.00307	25.83	mg/L	0.301	1.16%
Pb 220.353†	2268.1	0.2785	mg/L	0.00260	27.30	mg/L	0.255	0.94%
Sb 206.836†	-301.9	0.0035	mg/L	0.00152	0.3408	mg/L	0.14902	43.73%
Se 196.026†	30.6	0.0296	mg/L	0.00832	2.902	mg/L	0.8153	28.09%
Tl 190.801†	5.4	0.0141	mg/L	0.00189	1.384	mg/L	0.1848	13.36%
V 292.402†	34047.0	0.2136	mg/L	0.00029	20.95	mg/L	0.028	0.13%
Zn 213.857†	1323.0	1.113	mg/L	0.0103	109.1	mg/L	1.01	0.93%
Pb†	25.4	0.2094	mg/L	0.01096	20.52	mg/L	1.075	5.24%
Ag 338.289†	-400.1	0.0003	mg/L	0.00113	0.0294	mg/L	0.11101	377.74%

Sequence No.: 22
Sample ID: 144638-04
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 44
Date Collected: 10/23/2014 3:53:08 PM
Data Type: Original
Initial Sample Vol: 0.495 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-04

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-04

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1663855.2	1.081	mg/L	0.0025				0.23%
Ag 328.068†	-9064.4	-0.0024	mg/L	0.00037	-0.2437	mg/L	0.03781	15.52%
Al 308.215†	37294.8	66.55	mg/L	0.731	6722	mg/L	73.88	1.10%
As 188.979†	74.6	0.0426	mg/L	0.00309	4.306	mg/L	0.3120	7.25%
Ba 233.527†	95409.8	0.6428	mg/L	0.00148	64.93	mg/L	0.149	0.23%
Be 313.107†	8709.2	0.0048	mg/L	0.00002	0.4827	mg/L	0.00158	0.33%
Ca 317.933†	621280.6	138.2	mg/L	0.45	13950	mg/L	44.99	0.32%
Cd 226.502†	1005.2	0.0034	mg/L	0.00008	0.3438	mg/L	0.00841	2.45%
Co 228.616†	1975.9	0.0498	mg/L	0.00011	5.030	mg/L	0.0107	0.21%
Cr 267.716†	12011.8	0.1075	mg/L	0.00012	10.86	mg/L	0.012	0.11%
Cu 324.752†	46469.5	0.2160	mg/L	0.00028	21.82	mg/L	0.028	0.13%
Fe 273.955†	70243.5	128.4	mg/L	1.27	12970	mg/L	128.10	0.99%
K 766.490†	22199.2	9.290	mg/L	0.0433	938.3	mg/L	4.37	0.47%
Mg 279.077†	1120255.5	62.05	mg/L	0.042	6268	mg/L	4.25	0.07%
Mn 257.610†	2355706.7	2.948	mg/L	0.0012	297.8	mg/L	0.13	0.04%
Na 589.592†	5064.0	0.6271	mg/L	0.01989	63.34	mg/L	2.009	3.17%
Ni 231.604†	5775.2	0.1519	mg/L	0.00016	15.34	mg/L	0.016	0.10%
Pb 220.353†	3757.8	0.5059	mg/L	0.00179	51.10	mg/L	0.181	0.35%
Sb 206.836†	-179.9	0.0081	mg/L	0.00118	0.8206	mg/L	0.11924	14.53%
Se 196.026†	-32.9	-0.0028	mg/L	0.00499	-0.2831	mg/L	0.50406	178.02%
Tl 190.801†	-30.6	-0.0061	mg/L	0.00066	-0.6112	mg/L	0.06681	10.93%
V 292.402†	21721.2	0.1362	mg/L	0.00071	13.76	mg/L	0.072	0.52%
Zn 213.857†	1277.9	1.064	mg/L	0.0089	107.5	mg/L	0.90	0.84%
Pb†	36.1	0.4048	mg/L	0.01114	40.89	mg/L	1.125	2.75%
Ag 338.289†	-59.7	0.0004	mg/L	0.00101	0.0420	mg/L	0.10153	241.73%

Sequence No.: 23
Sample ID: 144638-05
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 45
Date Collected: 10/23/2014 3:57:26 PM
Data Type: Original
Initial Sample Vol: 0.48 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-05

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-05

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1585183.5	1.030	mg/L	0.0128				1.24%
Ag 328.068†	-6240.9	-0.0002	mg/L	0.00038	-0.0243	mg/L	0.03984	163.92%
Al 308.215†	44031.1	78.57	mg/L	0.143	8184	mg/L	14.86	0.18%
As 188.979†	105.7	0.0550	mg/L	0.00112	5.731	mg/L	0.1164	2.03%
Ba 233.527†	110064.2	0.7416	mg/L	0.00011	77.25	mg/L	0.012	0.02%
Be 313.107†	16617.6	0.0091	mg/L	0.00002	0.9479	mg/L	0.00157	0.17%
Ca 317.933†	2247915.6	499.9	mg/L	4.92	52070	mg/L	512.61	0.98%
Cd 226.502†	871.7	0.0016	mg/L	0.00026	0.1683	mg/L	0.02760	16.40%
Co 228.616†	1378.0	0.0347	mg/L	0.00034	3.617	mg/L	0.0354	0.98%
Cr 267.716†	10616.0	0.0947	mg/L	0.00246	9.863	mg/L	0.2567	2.60%
Cu 324.752†	46513.0	0.2116	mg/L	0.00166	22.05	mg/L	0.173	0.79%
Fe 273.955†	50680.5	92.68	mg/L	0.226	9654	mg/L	23.55	0.24%
K 766.490†	20682.3	8.655	mg/L	0.0060	901.5	mg/L	0.62	0.07%
Mg 279.077†	2539370.8	141.3	mg/L	0.45	14720	mg/L	47.21	0.32%
Mn 257.610†	4804603.0	6.012	mg/L	0.0165	626.3	mg/L	1.71	0.27%
Na 589.592†	14965.4	1.853	mg/L	0.0099	193.0	mg/L	1.04	0.54%
Ni 231.604†	3852.1	0.1013	mg/L	0.00175	10.55	mg/L	0.182	1.73%
Pb 220.353†	5062.0	0.6894	mg/L	0.01805	71.81	mg/L	1.880	2.62%
Sb 206.836†	-149.0	0.0054	mg/L	0.00143	0.5665	mg/L	0.14907	26.31%
Se 196.026†	-48.0	-0.0084	mg/L	0.00323	-0.8747	mg/L	0.33681	38.51%
Tl 190.801†	-49.1	-0.0135	mg/L	0.00705	-1.409	mg/L	0.7347	52.16%
V 292.402†	20293.1	0.1272	mg/L	0.00195	13.25	mg/L	0.203	1.53%
Zn 213.857†	1384.3	1.116	mg/L	0.0148	116.3	mg/L	1.54	1.32%
Pb†	48.5	0.6328	mg/L	0.17404	65.91	mg/L	18.130	27.50%
Ag 338.289†	-83.7	-0.0048	mg/L	0.00088	-0.4951	mg/L	0.09121	18.42%

Sequence No.: 24
Sample ID: 144638-06
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 46
Date Collected: 10/23/2014 4:01:48 PM
Data Type: Original
Initial Sample Vol: 0.48 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-06

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-06

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1701443.3	1.106	mg/L	0.0114				1.03%
Ag 328.068†	-11421.0	-0.0040	mg/L	0.00127	-0.4142	mg/L	0.13182	31.82%
Al 308.215†	72581.1	129.5	mg/L	1.84	13490	mg/L	191.44	1.42%
As 188.979†	25.6	0.0179	mg/L	0.00168	1.865	mg/L	0.1753	9.40%
Ba 233.527†	141309.5	0.9521	mg/L	0.00521	99.17	mg/L	0.542	0.55%
Be 313.107†	12130.4	0.0067	mg/L	0.00004	0.6940	mg/L	0.00366	0.53%
Ca 317.933†	136906.7	30.44	mg/L	0.527	3171	mg/L	54.86	1.73%
Cd 226.502†	1255.4	0.0051	mg/L	0.00017	0.5306	mg/L	0.01749	3.30%
Co 228.616†	3336.4	0.0841	mg/L	0.00079	8.758	mg/L	0.0819	0.93%
Cr 267.716†	20456.0	0.1822	mg/L	0.00171	18.97	mg/L	0.178	0.94%
Cu 324.752†	42652.5	0.2036	mg/L	0.00037	21.20	mg/L	0.038	0.18%
Fe 273.955†	86940.7	159.0	mg/L	2.63	16560	mg/L	273.94	1.65%
K 766.490†	32197.1	13.47	mg/L	0.025	1403	mg/L	2.64	0.19%
Mg 279.077†	664109.7	36.50	mg/L	0.150	3802	mg/L	15.58	0.41%
Mn 257.610†	2097350.9	2.625	mg/L	0.0053	273.4	mg/L	0.55	0.20%
Na 589.592†	4591.4	0.5686	mg/L	0.00260	59.23	mg/L	0.271	0.46%
Ni 231.604†	9912.3	0.2607	mg/L	0.00321	27.15	mg/L	0.334	1.23%
Pb 220.353†	1509.9	0.1709	mg/L	0.00247	17.80	mg/L	0.257	1.44%
Sb 206.836†	-288.1	-0.0025	mg/L	0.00247	-0.2609	mg/L	0.25708	98.54%
Se 196.026†	15.6	0.0221	mg/L	0.01112	2.301	mg/L	1.1579	50.32%

Tl 190.801†	-2.7	0.0079	mg/L	0.00256	0.8206	mg/L	0.26640	32.47%
V 292.402†	33532.8	0.2104	mg/L	0.00025	21.92	mg/L	0.026	0.12%
Zn 213.857†	1005.4	0.8450	mg/L	0.00015	88.02	mg/L	0.016	0.02%
Pb†	14.6	0.0818	mg/L	0.00692	8.521	mg/L	0.7204	8.45%
Ag 338.289†	-240.2	0.0018	mg/L	0.00151	0.1920	mg/L	0.15704	81.80%

Sequence No.: 25 **Autosampler Location: 47**
Sample ID: 144638-07 **Date Collected: 10/23/2014 4:06:05 PM**
Analyst: AMM **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol: 0.508 mL**
Dilution: **Sample Prep Vol: 50 mL**
Wash Time: 75 **Auto Dilution Factor: 1**

Nebulizer Parameters: 144638-07

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-07

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1678912.7	1.091	mg/L	0.0053				0.49%
Ag 328.068†	-11337.0	-0.0023	mg/L	0.00120	-0.2252	mg/L	0.11828	52.53%
Al 308.215†	49223.7	87.83	mg/L	0.283	8645	mg/L	27.83	0.32%
As 188.979†	101.0	0.0571	mg/L	0.00309	5.616	mg/L	0.3042	5.42%
Ba 233.527†	99773.5	0.6722	mg/L	0.00032	66.16	mg/L	0.031	0.05%
Be 313.107†	8383.7	0.0046	mg/L	0.00005	0.4535	mg/L	0.00459	1.01%
Ca 317.933†	116914.3	26.00	mg/L	0.123	2559	mg/L	12.15	0.47%
Cd 226.502†	1209.4	0.0044	mg/L	0.00020	0.4293	mg/L	0.01937	4.51%
Co 228.616†	2656.5	0.0669	mg/L	0.00020	6.589	mg/L	0.0197	0.30%
Cr 267.716†	15970.2	0.1428	mg/L	0.00039	14.06	mg/L	0.039	0.28%
Cu 324.752†	47997.2	0.2270	mg/L	0.00001	22.34	mg/L	0.001	0.00%
Fe 273.955†	89061.9	162.9	mg/L	0.96	16030	mg/L	94.09	0.59%
K 766.490†	26736.7	11.19	mg/L	0.051	1101	mg/L	5.00	0.45%
Mg 279.077†	518026.9	28.34	mg/L	0.042	2789	mg/L	4.17	0.15%
Mn 257.610†	1989168.6	2.489	mg/L	0.0031	245.0	mg/L	0.31	0.13%
Na 589.592†	3511.9	0.4349	mg/L	0.01217	42.81	mg/L	1.197	2.80%
Ni 231.604†	7919.4	0.2083	mg/L	0.00060	20.50	mg/L	0.059	0.29%
Pb 220.353†	3004.8	0.3931	mg/L	0.00899	38.69	mg/L	0.885	2.29%
Sb 206.836†	-232.5	0.0094	mg/L	0.00006	0.9295	mg/L	0.00639	0.69%
Se 196.026†	38.6	0.0287	mg/L	0.00323	2.824	mg/L	0.3174	11.24%
Tl 190.801†	-13.6	0.0041	mg/L	0.00185	0.4028	mg/L	0.18257	45.32%
V 292.402†	24966.7	0.1567	mg/L	0.00066	15.42	mg/L	0.065	0.42%
Zn 213.857†	1228.9	1.035	mg/L	0.0119	101.8	mg/L	1.17	1.15%
Pb†	31.7	0.3087	mg/L	0.01413	30.39	mg/L	1.390	4.58%
Ag 338.289†	-254.8	0.0007	mg/L	0.00007	0.0688	mg/L	0.00682	9.91%

Sequence No.: 26 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 10/23/2014 4:10:20 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 75 **Auto Dilution Factor: 1**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1463140.7	0.9509	mg/L	0.00522				0.55%
Ag 328.068†	244840.4	1.226	mg/L	0.0002	1.226	mg/L	0.0002	0.02%
QC value within limits for Ag 328.068 Recovery = 98.11%								
Al 308.215†	5535.4	9.887	mg/L	0.0156	9.887	mg/L	0.0156	0.16%
QC value within limits for Al 308.215 Recovery = 98.87%								
As 188.979†	1012.3	0.4982	mg/L	0.00031	0.4982	mg/L	0.00031	0.06%

	QC value within limits for As 188.979 Recovery = 99.64%					
Ba 233.527†	1457998.8	9.823 mg/L	0.0151	9.823 mg/L	0.0151	0.15%
	QC value within limits for Ba 233.527 Recovery = 98.23%					
Be 313.107†	454190.7	0.2484 mg/L	0.00005	0.2484 mg/L	0.00005	0.02%
	QC value within limits for Be 313.107 Recovery = 99.37%					
Ca 317.933†	114589.2	25.48 mg/L	0.155	25.48 mg/L	0.155	0.61%
	QC value within limits for Ca 317.933 Recovery = 101.92%					
Cd 226.502†	17169.1	0.2694 mg/L	0.00230	0.2694 mg/L	0.00230	0.85%
	QC value within limits for Cd 226.502 Recovery = 107.77%					
Co 228.616†	94327.9	2.377 mg/L	0.0039	2.377 mg/L	0.0039	0.16%
	QC value within limits for Co 228.616 Recovery = 95.08%					
Cr 267.716†	111320.6	0.9769 mg/L	0.00009	0.9769 mg/L	0.00009	0.01%
	QC value within limits for Cr 267.716 Recovery = 97.69%					
Cu 324.752†	281845.7	1.211 mg/L	0.0005	1.211 mg/L	0.0005	0.04%
	QC value within limits for Cu 324.752 Recovery = 96.88%					
Fe 273.955†	2740.1	4.973 mg/L	0.0277	4.973 mg/L	0.0277	0.56%
	QC value within limits for Fe 273.955 Recovery = 99.45%					
K 766.490†	60443.8	25.29 mg/L	0.029	25.29 mg/L	0.029	0.11%
	QC value within limits for K 766.490 Recovery = 101.17%					
Mg 279.077†	462120.6	25.76 mg/L	0.021	25.76 mg/L	0.021	0.08%
	QC value within limits for Mg 279.077 Recovery = 103.04%					
Mn 257.610†	1981933.8	2.481 mg/L	0.0024	2.481 mg/L	0.0024	0.10%
	QC value within limits for Mn 257.610 Recovery = 99.23%					
Na 589.592†	203641.1	25.22 mg/L	0.063	25.22 mg/L	0.063	0.25%
	QC value within limits for Na 589.592 Recovery = 100.87%					
Ni 231.604†	94511.3	2.485 mg/L	0.0012	2.485 mg/L	0.0012	0.05%
	QC value within limits for Ni 231.604 Recovery = 99.41%					
Pb 220.353†	3685.8	0.5117 mg/L	0.00438	0.5117 mg/L	0.00438	0.86%
	QC value within limits for Pb 220.353 Recovery = 102.33%					
Sb 206.836†	15776.5	5.020 mg/L	0.0354	5.020 mg/L	0.0354	0.71%
	QC value within limits for Sb 206.836 Recovery = 100.40%					
Se 196.026†	1219.6	0.4947 mg/L	0.00354	0.4947 mg/L	0.00354	0.72%
	QC value within limits for Se 196.026 Recovery = 98.93%					
Tl 190.801†	899.8	0.4795 mg/L	0.00372	0.4795 mg/L	0.00372	0.78%
	QC value within limits for Tl 190.801 Recovery = 95.89%					
V 292.402†	403899.3	2.525 mg/L	0.0021	2.525 mg/L	0.0021	0.08%
	QC value within limits for V 292.402 Recovery = 100.99%					
Zn 213.857†	3144.9	2.642 mg/L	0.0088	2.642 mg/L	0.0088	0.33%
	QC value within limits for Zn 213.857 Recovery = 105.69%					
Pb†	42.1	0.4854 mg/L	0.10808	0.4854 mg/L	0.10808	22.27%
	QC value within limits for Pb Recovery = 97.08%					
Ag 338.289†	118297.0	1.258 mg/L	0.0033	1.258 mg/L	0.0033	0.26%

All analyte(s) passed QC.

Sequence No.: 27 **Autosampler Location:** 1
Sample ID: CCB **Date Collected:** 10/23/2014 4:14:33 PM
Analyst: **Data Type:** Original
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 75 **Auto Dilution Factor:** 1

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1558630.0	1.013	mg/L	0.0085				0.84%
Ag 328.068†	-358.0	-0.0018	mg/L	0.00002	-0.0018	mg/L	0.00002	1.27%
	QC value within limits for Ag 328.068 Recovery = Not calculated							
Al 308.215†	19.6	0.0350	mg/L	0.00341	0.0350	mg/L	0.00341	9.74%
	QC value within limits for Al 308.215 Recovery = Not calculated							
As 188.979†	-1.2	-0.0006	mg/L	0.00027	-0.0006	mg/L	0.00027	46.47%
	QC value within limits for As 188.979 Recovery = Not calculated							
Ba 233.527†	265.9	0.0018	mg/L	0.00003	0.0018	mg/L	0.00003	1.62%
	QC value within limits for Ba 233.527 Recovery = Not calculated							
Be 313.107†	119.0	0.0001	mg/L	0.00005	0.0001	mg/L	0.00005	72.54%
	QC value within limits for Be 313.107 Recovery = Not calculated							

Ca 317.933†	9.3	0.0021 mg/L	0.00019	0.0021 mg/L	0.00019	9.00%
QC value within limits for Ca 317.933 Recovery = Not calculated						
Cd 226.502†	-3.9	-0.0001 mg/L	0.00020	-0.0001 mg/L	0.00020	318.54%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	8.8	0.0002 mg/L	0.00005	0.0002 mg/L	0.00005	21.20%
QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	16.3	0.0001 mg/L	0.00011	0.0001 mg/L	0.00011	76.76%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	-11.1	-0.0000 mg/L	0.00091	-0.0000 mg/L	0.00091	>999.9%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 273.955†	8.6	0.0157 mg/L	0.01209	0.0157 mg/L	0.01209	76.98%
QC value within limits for Fe 273.955 Recovery = Not calculated						
K 766.490†	38.5	0.0161 mg/L	0.00071	0.0161 mg/L	0.00071	4.38%
QC value within limits for K 766.490 Recovery = Not calculated						
Mg 279.077†	-102.1	-0.0058 mg/L	0.00198	-0.0058 mg/L	0.00198	34.41%
QC value within limits for Mg 279.077 Recovery = Not calculated						
Mn 257.610†	434.7	0.0005 mg/L	0.00005	0.0005 mg/L	0.00005	8.92%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Na 589.592†	95.7	0.0118 mg/L	0.00162	0.0118 mg/L	0.00162	13.67%
QC value within limits for Na 589.592 Recovery = Not calculated						
Ni 231.604†	-3.5	-0.0001 mg/L	0.00008	-0.0001 mg/L	0.00008	83.32%
QC value within limits for Ni 231.604 Recovery = Not calculated						
Pb 220.353†	46.9	0.0065 mg/L	0.00162	0.0065 mg/L	0.00162	25.17%
QC value within limits for Pb 220.353 Recovery = Not calculated						
Sb 206.836†	16.7	0.0053 mg/L	0.00023	0.0053 mg/L	0.00023	4.35%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	6.2	0.0025 mg/L	0.00036	0.0025 mg/L	0.00036	14.14%
QC value within limits for Se 196.026 Recovery = Not calculated						
Tl 190.801†	-5.5	-0.0031 mg/L	0.00177	-0.0031 mg/L	0.00177	56.79%
QC value within limits for Tl 190.801 Recovery = Not calculated						
V 292.402†	-46.7	-0.0003 mg/L	0.00014	-0.0003 mg/L	0.00014	49.24%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	3.6	0.0031 mg/L	0.00072	0.0031 mg/L	0.00072	23.49%
QC value within limits for Zn 213.857 Recovery = Not calculated						
Pb†	-7.2	-0.0832 mg/L	0.02097	-0.0832 mg/L	0.02097	25.19%
QC value within limits for Pb Recovery = Not calculated						
Ag 338.289†	246.6	0.0026 mg/L	0.00077	0.0026 mg/L	0.00077	30.07%

All analyte(s) passed QC.

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Sequence No.: 28 **Autosampler Location: 48**
Sample ID: 144638-08 **Date Collected: 10/23/2014 4:18:46 PM**
Analyst: AMM **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol: 0.519 mL**
Dilution: **Sample Prep Vol: 50 mL**
Wash Time: 75 **Auto Dilution Factor: 1**

Nebulizer Parameters: 144638-08

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-08

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1708477.3	1.110	mg/L	0.0130				1.17%
Ag 328.068†	-14900.0	-0.0029	mg/L	0.00049	-0.2834	mg/L	0.04728	16.68%
Al 308.215†	62417.3	111.4	mg/L	0.56	10730	mg/L	54.40	0.51%
As 188.979†	123.4	0.0706	mg/L	0.00337	6.800	mg/L	0.3246	4.77%
Ba 233.527†	110954.5	0.7476	mg/L	0.00069	72.02	mg/L	0.066	0.09%
Be 313.107†	10546.7	0.0058	mg/L	0.00003	0.5583	mg/L	0.00260	0.47%
Ca 317.933†	97346.6	21.65	mg/L	0.006	2085	mg/L	0.61	0.03%
Cd 226.502†	1534.9	0.0050	mg/L	0.00018	0.4794	mg/L	0.01717	3.58%
Co 228.616†	3453.4	0.0870	mg/L	0.00138	8.384	mg/L	0.1330	1.59%
Cr 267.716†	19753.5	0.1769	mg/L	0.00250	17.04	mg/L	0.241	1.42%
Cu 324.752†	55112.6	0.2642	mg/L	0.00037	25.45	mg/L	0.035	0.14%
Fe 273.955†	117165.7	214.3	mg/L	0.22	20640	mg/L	21.10	0.10%
K 766.490†	28898.3	12.09	mg/L	0.093	1165	mg/L	8.93	0.77%
Mg 279.077†	660896.7	36.13	mg/L	0.002	3481	mg/L	0.20	0.01%
Mn 257.610†	2776602.3	3.475	mg/L	0.0029	334.7	mg/L	0.28	0.08%
Na 589.592†	3814.8	0.4724	mg/L	0.01061	45.51	mg/L	1.022	2.25%

Ni 231.604†	10132.2	0.2664	mg/L	0.00304	25.67	mg/L	0.292	1.14%
Pb 220.353†	3295.3	0.4276	mg/L	0.00893	41.19	mg/L	0.861	2.09%
Sb 206.836†	-313.2	0.0095	mg/L	0.01050	0.9114	mg/L	1.01146	110.98%
Se 196.026†	73.8	0.0465	mg/L	0.00388	4.478	mg/L	0.3738	8.35%
Tl 190.801†	-3.5	0.0142	mg/L	0.00671	1.369	mg/L	0.6464	47.21%
V 292.402†	31199.0	0.1958	mg/L	0.00010	18.86	mg/L	0.009	0.05%
Zn 213.857†	1370.4	1.154	mg/L	0.0160	111.2	mg/L	1.54	1.39%
Pb†	35.9	0.3394	mg/L	0.01380	32.70	mg/L	1.329	4.07%
Ag 338.289†	-301.4	0.0011	mg/L	0.00135	0.1103	mg/L	0.13000	117.86%

Sequence No.: 29
Sample ID: 144638-09
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 49
Date Collected: 10/23/2014 4:23:02 PM
Data Type: Original
Initial Sample Vol: 0.484 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-09

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-09

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1692354.8	1.100	mg/L	0.0140				1.27%
Ag 328.068†	-13115.6	-0.0023	mg/L	0.00030	-0.2403	mg/L	0.03119	12.98%
Al 308.215†	64795.6	115.6	mg/L	1.61	11940	mg/L	166.08	1.39%
As 188.979†	103.8	0.0590	mg/L	0.00398	6.098	mg/L	0.4107	6.73%
Ba 233.527†	128634.3	0.8667	mg/L	0.00146	89.53	mg/L	0.151	0.17%
Be 313.107†	11853.8	0.0065	mg/L	0.00000	0.6727	mg/L	0.00014	0.02%
Ca 317.933†	118943.6	26.45	mg/L	0.351	2732	mg/L	36.22	1.33%
Cd 226.502†	1519.4	0.0068	mg/L	0.00011	0.7014	mg/L	0.01184	1.69%
Co 228.616†	2907.3	0.0733	mg/L	0.00032	7.569	mg/L	0.0330	0.44%
Cr 267.716†	21146.1	0.1887	mg/L	0.00184	19.49	mg/L	0.190	0.97%
Cu 324.752†	53671.1	0.2548	mg/L	0.00042	26.32	mg/L	0.044	0.17%
Fe 273.955†	103543.3	189.3	mg/L	2.27	19560	mg/L	234.33	1.20%
K 766.490†	28140.3	11.78	mg/L	0.122	1216	mg/L	12.57	1.03%
Mg 279.077†	612302.3	33.50	mg/L	0.001	3461	mg/L	0.06	0.00%
Mn 257.610†	1947308.0	2.437	mg/L	0.0025	251.7	mg/L	0.26	0.10%
Na 589.592†	4053.6	0.5020	mg/L	0.01800	51.86	mg/L	1.859	3.58%
Ni 231.604†	9880.0	0.2598	mg/L	0.00235	26.84	mg/L	0.243	0.90%
Pb 220.353†	3701.4	0.4804	mg/L	0.00349	49.63	mg/L	0.360	0.73%
Sb 206.836†	-300.0	0.0037	mg/L	0.01166	0.3799	mg/L	1.20449	317.10%
Se 196.026†	60.5	0.0410	mg/L	0.00506	4.239	mg/L	0.5223	12.32%
Tl 190.801†	-3.8	0.0100	mg/L	0.00673	1.029	mg/L	0.6947	67.54%
V 292.402†	32446.6	0.2037	mg/L	0.00000	21.04	mg/L	0.000	0.00%
Zn 213.857†	1668.4	1.406	mg/L	0.0302	145.2	mg/L	3.12	2.15%
Pb†	40.8	0.3939	mg/L	0.06814	40.69	mg/L	7.039	17.30%
Ag 338.289†	-142.1	0.0031	mg/L	0.00095	0.3154	mg/L	0.09764	30.96%

Sequence No.: 30
Sample ID: 144638-10
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 50
Date Collected: 10/23/2014 4:27:18 PM
Data Type: Original
Initial Sample Vol: 0.472 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-10

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-10

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1674385.5	1.088	mg/L	0.0039				0.35%
Ag 328.068†	-9946.1	-0.0021	mg/L	0.00045	-0.2177	mg/L	0.04720	21.68%

Al 308.215†	42685.1	76.17	mg/L	0.236	8069	mg/L	25.05	0.31%
As 188.979†	70.9	0.0414	mg/L	0.00042	4.381	mg/L	0.0450	1.03%
Ba 233.527†	96320.6	0.6490	mg/L	0.00022	68.75	mg/L	0.023	0.03%
Be 313.107†	7867.7	0.0043	mg/L	0.00002	0.4581	mg/L	0.00255	0.56%
Ca 317.933†	183451.7	40.79	mg/L	0.133	4321	mg/L	14.09	0.33%
Cd 226.502†	1164.6	0.0053	mg/L	0.00001	0.5661	mg/L	0.00105	0.19%
Co 228.616†	2240.2	0.0565	mg/L	0.00007	5.980	mg/L	0.0069	0.12%
Cr 267.716†	15816.5	0.1412	mg/L	0.00136	14.95	mg/L	0.144	0.96%
Cu 324.752†	53540.1	0.2482	mg/L	0.00060	26.30	mg/L	0.063	0.24%
Fe 273.955†	78049.7	142.7	mg/L	0.51	15120	mg/L	53.53	0.35%
K 766.490†	22320.0	9.340	mg/L	0.0847	989.4	mg/L	8.97	0.91%
Mg 279.077†	518040.0	28.41	mg/L	0.022	3009	mg/L	2.35	0.08%
Mn 257.610†	1922753.4	2.406	mg/L	0.0019	254.9	mg/L	0.20	0.08%
Na 589.592†	3621.4	0.4485	mg/L	0.00900	47.51	mg/L	0.954	2.01%
Ni 231.604†	7396.9	0.1945	mg/L	0.00146	20.61	mg/L	0.154	0.75%
Pb 220.353†	5924.1	0.7992	mg/L	0.00262	84.66	mg/L	0.278	0.33%
Sb 206.836†	-215.5	0.0040	mg/L	0.00291	0.4239	mg/L	0.30867	72.81%
Se 196.026†	29.0	0.0231	mg/L	0.00413	2.452	mg/L	0.4380	17.86%
Tl 190.801†	-17.9	0.0006	mg/L	0.00339	0.0624	mg/L	0.35924	575.39%
V 292.402†	23252.9	0.1460	mg/L	0.00008	15.47	mg/L	0.008	0.05%
Zn 213.857†	1548.7	1.303	mg/L	0.0035	138.1	mg/L	0.37	0.27%
Pb†	70.8	0.7727	mg/L	0.02407	81.86	mg/L	2.550	3.12%
Ag 338.289†	-94.7	0.0021	mg/L	0.00038	0.2254	mg/L	0.03996	17.73%

Sequence No.: 31
Sample ID: 144638-11
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 51
Date Collected: 10/23/2014 4:31:34 PM
Data Type: Original
Initial Sample Vol: 0.517 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-11

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-11

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1674699.9	1.088	mg/L	0.0015				0.14%
Ag 328.068†	-12477.5	-0.0033	mg/L	0.00066	-0.3158	mg/L	0.06426	20.35%
Al 308.215†	49831.7	88.92	mg/L	0.536	8600	mg/L	51.81	0.60%
As 188.979†	104.9	0.0599	mg/L	0.00258	5.790	mg/L	0.2498	4.31%
Ba 233.527†	109844.0	0.7401	mg/L	0.00010	71.57	mg/L	0.009	0.01%
Be 313.107†	9291.2	0.0051	mg/L	0.00001	0.4940	mg/L	0.00128	0.26%
Ca 317.933†	234820.1	52.22	mg/L	0.407	5050	mg/L	39.41	0.78%
Cd 226.502†	1471.4	0.0071	mg/L	0.00002	0.6848	mg/L	0.00150	0.22%
Co 228.616†	2892.8	0.0729	mg/L	0.00027	7.050	mg/L	0.0266	0.38%
Cr 267.716†	19001.5	0.1697	mg/L	0.00111	16.41	mg/L	0.108	0.66%
Cu 324.752†	59897.9	0.2799	mg/L	0.00037	27.07	mg/L	0.035	0.13%
Fe 273.955†	96794.5	177.0	mg/L	1.36	17120	mg/L	131.31	0.77%
K 766.490†	24772.8	10.37	mg/L	0.090	1003	mg/L	8.72	0.87%
Mg 279.077†	706394.4	38.79	mg/L	0.019	3752	mg/L	1.88	0.05%
Mn 257.610†	2987626.2	3.739	mg/L	0.0016	361.6	mg/L	0.15	0.04%
Na 589.592†	4063.2	0.5032	mg/L	0.01097	48.66	mg/L	1.061	2.18%
Ni 231.604†	9137.5	0.2403	mg/L	0.00074	23.24	mg/L	0.072	0.31%
Pb 220.353†	8207.2	1.112	mg/L	0.0055	107.5	mg/L	0.54	0.50%
Sb 206.836†	-269.0	0.0034	mg/L	0.00288	0.3298	mg/L	0.27824	84.36%
Se 196.026†	10.6	0.0173	mg/L	0.00631	1.676	mg/L	0.6105	36.43%
Tl 190.801†	-23.8	0.0016	mg/L	0.00252	0.1582	mg/L	0.24417	154.35%
V 292.402†	27805.6	0.1746	mg/L	0.00021	16.89	mg/L	0.020	0.12%
Zn 213.857†	1942.3	1.634	mg/L	0.0110	158.1	mg/L	1.06	0.67%
Pb†	95.7	1.055	mg/L	0.0423	102.0	mg/L	4.09	4.01%
Ag 338.289†	-295.1	0.0006	mg/L	0.00072	0.0607	mg/L	0.06987	115.09%

Sequence No.: 32
Sample ID: 144638-12
Analyst: AMM
Initial Sample Wt:

Autosampler Location: 52
Date Collected: 10/23/2014 4:35:49 PM
Data Type: Original
Initial Sample Vol: 0.534 mL

Dilution:
Wash Time: 75

Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-12

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-12

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1746580.7	1.135	mg/L	0.0014				0.12%
Ag 328.068†	-15510.2	-0.0033	mg/L	0.00001	-0.3064	mg/L	0.00080	0.26%
Al 308.215†	75597.7	134.9	mg/L	1.46	12630	mg/L	137.06	1.09%
As 188.979†	128.3	0.0725	mg/L	0.00004	6.790	mg/L	0.0036	0.05%
Ba 233.527†	152397.8	1.027	mg/L	0.0007	96.14	mg/L	0.062	0.06%
Be 313.107†	13814.3	0.0076	mg/L	0.00003	0.7103	mg/L	0.00256	0.36%
Ca 317.933†	163518.2	36.36	mg/L	0.519	3405	mg/L	48.55	1.43%
Cd 226.502†	1807.0	0.0083	mg/L	0.00032	0.7770	mg/L	0.03006	3.87%
Co 228.616†	3382.5	0.0852	mg/L	0.00036	7.981	mg/L	0.0337	0.42%
Cr 267.716†	22799.3	0.2037	mg/L	0.00019	19.08	mg/L	0.018	0.09%
Cu 324.752†	66483.1	0.3140	mg/L	0.00035	29.40	mg/L	0.032	0.11%
Fe 273.955†	121597.1	222.4	mg/L	2.93	20820	mg/L	274.45	1.32%
K 766.490†	33410.1	13.98	mg/L	0.256	1309	mg/L	23.94	1.83%
Mg 279.077†	684764.9	37.43	mg/L	0.041	3505	mg/L	3.87	0.11%
Mn 257.610†	2393946.2	2.996	mg/L	0.0003	280.5	mg/L	0.03	0.01%
Na 589.592†	5192.6	0.6430	mg/L	0.02769	60.21	mg/L	2.593	4.31%
Ni 231.604†	11397.6	0.2997	mg/L	0.00129	28.06	mg/L	0.121	0.43%
Pb 220.353†	5126.2	0.6721	mg/L	0.00344	62.93	mg/L	0.322	0.51%
Sb 206.836†	-328.3	0.0122	mg/L	0.00049	1.142	mg/L	0.0459	4.02%
Se 196.026†	55.0	0.0415	mg/L	0.00337	3.890	mg/L	0.3155	8.11%
Tl 190.801†	-15.2	0.0059	mg/L	0.00037	0.5560	mg/L	0.03424	6.16%
V 292.402†	37567.8	0.2357	mg/L	0.00035	22.07	mg/L	0.033	0.15%
Zn 213.857†	2026.4	1.707	mg/L	0.0018	159.8	mg/L	0.17	0.11%
Pb†	56.8	0.5675	mg/L	0.01167	53.13	mg/L	1.092	2.06%
Ag 338.289†	-265.5	0.0020	mg/L	0.00042	0.1918	mg/L	0.03978	20.74%

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Sequence No.: 33
Sample ID: 144638-13
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 53
Date Collected: 10/23/2014 4:40:04 PM
Data Type: Original
Initial Sample Vol: 0.493 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-13

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-13

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1694876.5	1.102	mg/L	0.0015				0.13%
Ag 328.068†	-8590.0	-0.0042	mg/L	0.00065	-0.4245	mg/L	0.06616	15.58%
Al 308.215†	41013.3	73.18	mg/L	0.283	7422	mg/L	28.70	0.39%
As 188.979†	142.4	0.0749	mg/L	0.00219	7.596	mg/L	0.2221	2.92%
Ba 233.527†	73596.4	0.4959	mg/L	0.00146	50.29	mg/L	0.148	0.29%
Be 313.107†	6700.4	0.0037	mg/L	0.00004	0.3740	mg/L	0.00373	1.00%
Ca 317.933†	137627.4	30.60	mg/L	0.028	3104	mg/L	2.89	0.09%
Cd 226.502†	953.4	0.0044	mg/L	0.00001	0.4454	mg/L	0.00097	0.22%
Co 228.616†	1846.6	0.0465	mg/L	0.00013	4.719	mg/L	0.0135	0.29%
Cr 267.716†	16701.4	0.1485	mg/L	0.00000	15.06	mg/L	0.000	0.00%
Cu 324.752†	45428.1	0.2100	mg/L	0.00008	21.30	mg/L	0.008	0.04%
Fe 273.955†	63449.3	116.0	mg/L	0.09	11770	mg/L	8.67	0.07%
K 766.490†	21855.4	9.146	mg/L	0.0652	927.6	mg/L	6.61	0.71%
Mg 279.077†	452244.6	24.83	mg/L	0.008	2518	mg/L	0.84	0.03%
Mn 257.610†	1382223.0	1.730	mg/L	0.0010	175.4	mg/L	0.10	0.06%
Na 589.592†	3496.7	0.4330	mg/L	0.02484	43.92	mg/L	2.519	5.74%
Ni 231.604†	6091.9	0.1602	mg/L	0.00003	16.25	mg/L	0.003	0.02%

Pb 220.353†	3622.7	0.4807 mg/L	0.00312	48.76 mg/L	0.317	0.65%
Sb 206.836†	-169.0	0.0067 mg/L	0.00076	0.6821 mg/L	0.07728	11.33%
Se 196.026†	18.7	0.0178 mg/L	0.00230	1.806 mg/L	0.2329	12.89%
Tl 190.801†	-15.4	-0.0010 mg/L	0.00478	-0.1063 mg/L	0.48519	456.33%
V 292.402†	20881.9	0.1313 mg/L	0.00034	13.32 mg/L	0.034	0.26%
Zn 213.857†	1155.0	0.9718 mg/L	0.00479	98.56 mg/L	0.486	0.49%
Pb†	40.4	0.4212 mg/L	0.01768	42.72 mg/L	1.793	4.20%
Ag 338.289†	-149.4	0.0019 mg/L	0.00043	0.1884 mg/L	0.04320	22.94%

Sequence No.: 34
Sample ID: 144638-14
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 54
Date Collected: 10/23/2014 4:44:18 PM
Data Type: Original
Initial Sample Vol: 0.496 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-14

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-14

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
Y 371.029	1719868.6	1.118	mg/L	0.0052				0.47%
Ag 328.068†	-6919.6	-0.0042	mg/L	0.00024	-0.4239	mg/L	0.02403	5.67%
Al 308.215†	38337.2	68.41	mg/L	1.124	6896	mg/L	113.32	1.64%
As 188.979†	155.5	0.0798	mg/L	0.00226	8.046	mg/L	0.2273	2.83%
Ba 233.527†	58367.0	0.3932	mg/L	0.00005	39.64	mg/L	0.005	0.01%
Be 313.107†	5789.4	0.0032	mg/L	0.00000	0.3215	mg/L	0.00013	0.04%
Ca 317.933†	124322.5	27.64	mg/L	0.447	2787	mg/L	45.08	1.62%
Cd 226.502†	781.1	0.0039	mg/L J	0.00012	0.3903	mg/L	0.01191	3.05%
Co 228.616†	1455.6	0.0367	mg/L	0.00017	3.698	mg/L	0.0168	0.45%
Cr 267.716†	16303.6	0.1446	mg/L	0.00122	14.58	mg/L	0.123	0.85%
Cu 324.752†	40479.2	0.1855	mg/L	0.00101	18.70	mg/L	0.101	0.54%
Fe 273.955†	49730.7	90.94	mg/L	1.728	9167	mg/L	174.16	1.90%
K 766.490†	18119.8	7.582	mg/L	0.1211	764.4	mg/L	12.21	1.60%
Mg 279.077†	394850.2	21.71	mg/L	0.010	2189	mg/L	0.97	0.04%
Mn 257.610†	1077124.9	1.348	mg/L	0.0012	135.9	mg/L	0.12	0.09%
Na 589.592†	2810.2	0.3480	mg/L	0.02180	35.08	mg/L	2.198	6.26%
Ni 231.604†	5191.3	0.1365	mg/L	0.00173	13.76	mg/L	0.174	1.27%
Pb 220.353†	3276.4	0.4330	mg/L	0.00362	43.64	mg/L	0.365	0.84%
Sb 206.836†	-136.6	0.0055	mg/L	0.00340	0.5586	mg/L	0.34284	61.37%
Se 196.026†	12.6	0.0140	mg/L	0.00053	1.409	mg/L	0.0530	3.76%
Tl 190.801†	-15.1	-0.0032	mg/L	0.00068	-0.3216	mg/L	0.06828	21.23%
V 292.402†	19769.6	0.1243	mg/L	0.00072	12.53	mg/L	0.072	0.58%
Zn 213.857†	942.2	0.7924	mg/L	0.00409	79.88	mg/L	0.412	0.52%
Pb†	39.0	0.4075	mg/L	0.01299	41.08	mg/L	1.309	3.19%
Ag 338.289†	-257.6	0.0007	mg/L	0.00027	0.0678	mg/L	0.02680	39.51%

Sequence No.: 35
Sample ID: 144638-15
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 55
Date Collected: 10/23/2014 4:48:33 PM
Data Type: Original
Initial Sample Vol: 0.516 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-15

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-15

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
Y 371.029	1704413.7	1.108	mg/L	0.0044				0.40%
Ag 328.068†	-12367.5	-0.0044	mg/L	0.00001	-0.4279	mg/L	0.00074	0.17%
Al 308.215†	73370.5	130.9	mg/L	0.94	12690	mg/L	91.46	0.72%

As 188.979†	48.3	0.0299	mg/L	0.00273	2.896	mg/L	0.2650	9.15%
Ba 233.527†	128561.2	0.8662	mg/L	0.00024	83.93	mg/L	0.023	0.03%
Be 313.107†	11672.9	0.0064	mg/L	0.00001	0.6215	mg/L	0.00051	0.08%
Ca 317.933†	111783.2	24.86	mg/L	0.131	2409	mg/L	12.69	0.53%
Cd 226.502†	1297.4	0.0047	mg/L J	0.00002	0.4545	mg/L	0.00174	0.38%
Co 228.616†	3094.9	0.0780	mg/L	0.00009	7.557	mg/L	0.0090	0.12%
Cr 267.716†	21883.4	0.1949	mg/L	0.00066	18.89	mg/L	0.064	0.34%
Cu 324.752†	41502.1	0.2003	mg/L	0.00057	19.41	mg/L	0.055	0.28%
Fe 273.955†	93977.0	171.8	mg/L	1.16	16650	mg/L	112.57	0.68%
K 766.490†	29597.1	12.39	mg/L	0.210	1200	mg/L	20.39	1.70%
Mg 279.077†	713999.8	39.24	mg/L	0.047	3802	mg/L	4.59	0.12%
Mn 257.610†	1734516.4	2.171	mg/L	0.0029	210.3	mg/L	0.28	0.13%
Na 589.592†	4139.8	0.5127	mg/L	0.00201	49.68	mg/L	0.195	0.39%
Ni 231.604†	9889.2	0.2601	mg/L	0.00151	25.20	mg/L	0.146	0.58%
Pb 220.353†	1927.1	0.2286	mg/L	0.00011	22.15	mg/L	0.011	0.05%
Sb 206.836†	-274.7	0.0072	mg/L	0.00269	0.6995	mg/L	0.26080	37.28%
Se 196.026†	18.5	0.0244	mg/L	0.00415	2.364	mg/L	0.4025	17.02%
Tl 190.801†	-7.6	0.0052	mg/L	0.00578	0.5010	mg/L	0.55971	111.72%
V 292.402†	33746.5	0.2118	mg/L	0.00025	20.53	mg/L	0.024	0.12%
Zn 213.857†	1147.7	0.9657	mg/L	0.00328	93.58	mg/L	0.318	0.34%
Pb†	19.1	0.1320	mg/L	0.06701	12.80	mg/L	6.493	50.74%
Ag 338.289†	-182.9	0.0028	mg/L	0.00280	0.2733	mg/L	0.27157	99.36%

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Sequence No.: 36
Sample ID: 144638-16
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 56
Date Collected: 10/23/2014 4:52:48 PM
Data Type: Original
Initial Sample Vol: 0.508 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-16

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-16

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1629815.3	1.059	mg/L	0.0073				0.69%
Ag 328.068†	-9591.0	-0.0032	mg/L	0.00040	-0.3160	mg/L	0.03921	12.41%
Al 308.215†	38440.3	68.59	mg/L	0.278	6751	mg/L	27.33	0.40%
As 188.979†	70.9	0.0411	mg/L	0.00236	4.042	mg/L	0.2326	5.75%
Ba 233.527†	99638.0	0.6713	mg/L	0.00018	66.07	mg/L	0.018	0.03%
Be 313.107†	7166.0	0.0039	mg/L	0.00000	0.3878	mg/L	0.00044	0.11%
Ca 317.933†	403273.0	89.67	mg/L	0.862	8826	mg/L	84.87	0.96%
Cd 226.502†	1079.7	0.0045	mg/L J	0.00020	0.4380	mg/L	0.01942	4.43%
Co 228.616†	1992.6	0.0502	mg/L	0.00030	4.942	mg/L	0.0294	0.59%
Cr 267.716†	15327.5	0.1367	mg/L	0.00092	13.46	mg/L	0.091	0.68%
Cu 324.752†	49315.8	0.2290	mg/L	0.00053	22.54	mg/L	0.052	0.23%
Fe 273.955†	73250.7	133.9	mg/L	1.15	13180	mg/L	113.66	0.86%
K 766.490†	21016.1	8.794	mg/L	0.0162	865.6	mg/L	1.59	0.18%
Mg 279.077†	938305.0	51.88	mg/L	0.006	5106	mg/L	0.63	0.01%
Mn 257.610†	1614089.2	2.020	mg/L	0.0003	198.8	mg/L	0.03	0.01%
Na 589.592†	3668.1	0.4542	mg/L	0.01765	44.71	mg/L	1.737	3.88%
Ni 231.604†	6327.7	0.1664	mg/L	0.00150	16.38	mg/L	0.148	0.90%
Pb 220.353†	3937.1	0.5288	mg/L	0.00471	52.05	mg/L	0.463	0.89%
Sb 206.836†	-198.4	0.0043	mg/L	0.01113	0.4235	mg/L	1.09537	258.63%
Se 196.026†	-17.0	0.0043	mg/L	0.00856	0.4281	mg/L	0.84205	196.69%
Tl 190.801†	-30.2	-0.0074	mg/L	0.00097	-0.7294	mg/L	0.09588	13.14%
V 292.402†	21831.7	0.1371	mg/L	0.00009	13.50	mg/L	0.009	0.07%
Zn 213.857†	1420.3	1.190	mg/L	0.0103	117.1	mg/L	1.01	0.87%
Pb†	43.8	0.4789	mg/L	0.01054	47.14	mg/L	1.037	2.20%
Ag 338.289†	-29.8	0.0021	mg/L	0.00053	0.2028	mg/L	0.05246	25.86%

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Sequence No.: 37
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 10/23/2014 4:57:01 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Wash Time: 75 Auto Dilution Factor: 1

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1464103.0	0.9516	mg/L	0.00754				0.79%
Ag 328.068†	244584.5	1.225	mg/L	0.0029	1.225	mg/L	0.0029	0.24%
QC value within limits for Ag 328.068 Recovery = 98.01%								
Al 308.215†	5474.5	9.779	mg/L	0.0076	9.779	mg/L	0.0076	0.08%
QC value within limits for Al 308.215 Recovery = 97.79%								
As 188.979†	1015.6	0.4998	mg/L	0.00005	0.4998	mg/L	0.00005	0.01%
QC value within limits for As 188.979 Recovery = 99.96%								
Ba 233.527†	1451647.9	9.780	mg/L	0.0125	9.780	mg/L	0.0125	0.13%
QC value within limits for Ba 233.527 Recovery = 97.80%								
Be 313.107†	454796.8	0.2488	mg/L	0.00041	0.2488	mg/L	0.00041	0.16%
QC value within limits for Be 313.107 Recovery = 99.51%								
Ca 317.933†	111847.5	24.87	mg/L	0.190	24.87	mg/L	0.190	0.76%
QC value within limits for Ca 317.933 Recovery = 99.48%								
Cd 226.502†	17151.2	0.2691	mg/L	0.00167	0.2691	mg/L	0.00167	0.62%
QC value within limits for Cd 226.502 Recovery = 107.66%								
Co 228.616†	94167.5	2.373	mg/L	0.0012	2.373	mg/L	0.0012	0.05%
QC value within limits for Co 228.616 Recovery = 94.92%								
Cr 267.716†	111098.4	0.9749	mg/L	0.00032	0.9749	mg/L	0.00032	0.03%
QC value within limits for Cr 267.716 Recovery = 97.49%								
Cu 324.752†	282075.7	1.212	mg/L	0.0009	1.212	mg/L	0.0009	0.07%
QC value within limits for Cu 324.752 Recovery = 95.96%								
Fe 273.955†	2749.4	4.990	mg/L	0.0179	4.990	mg/L	0.0179	0.36%
QC value within limits for Fe 273.955 Recovery = 99.80%								
K 766.490†	59251.7	24.79	mg/L	0.089	24.79	mg/L	0.089	0.36%
QC value within limits for K 766.490 Recovery = 99.18%								
Mg 279.077†	461228.6	25.71	mg/L	0.020	25.71	mg/L	0.020	0.08%
QC value within limits for Mg 279.077 Recovery = 102.85%								
Mn 257.610†	1972635.6	2.469	mg/L	0.0032	2.469	mg/L	0.0032	0.13%
QC value within limits for Mn 257.610 Recovery = 98.76%								
Na 589.592†	197724.3	24.49	mg/L	0.087	24.49	mg/L	0.087	0.36%
QC value within limits for Na 589.592 Recovery = 97.94%								
Ni 231.604†	94106.3	2.475	mg/L	0.0011	2.475	mg/L	0.0011	0.04%
QC value within limits for Ni 231.604 Recovery = 98.99%								
Pb 220.353†	3678.3	0.5106	mg/L	0.00062	0.5106	mg/L	0.00062	0.12%
QC value within limits for Pb 220.353 Recovery = 102.12%								
Sb 206.836†	15675.6	4.988	mg/L	0.0327	4.988	mg/L	0.0327	0.66%
QC value within limits for Sb 206.836 Recovery = 99.76%								
Se 196.026†	1201.4	0.4873	mg/L	0.00260	0.4873	mg/L	0.00260	0.53%
QC value within limits for Se 196.026 Recovery = 97.45%								
Tl 190.801†	886.9	0.4722	mg/L	0.00358	0.4722	mg/L	0.00358	0.76%
QC value within limits for Tl 190.801 Recovery = 94.43%								
V 292.402†	402821.7	2.518	mg/L	0.0013	2.518	mg/L	0.0013	0.05%
QC value within limits for V 292.402 Recovery = 100.73%								
Zn 213.857†	3208.2	2.696	mg/L	0.0151	2.696	mg/L	0.0151	0.56%
QC value within limits for Zn 213.857 Recovery = 107.83%								
Pb†	36.7	0.4229	mg/L	0.00897	0.4229	mg/L	0.00897	2.12%
QC value less than the lower limit for Pb Recovery = 84.55%								
Ag 338.289†	118357.7	1.258	mg/L	0.0012	1.258	mg/L	0.0012	0.10%
QC Failed. Continue with analysis.								

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Sequence No.: 38 Autosampler Location: 1
Sample ID: CCB Date Collected: 10/23/2014 5:01:20 PM
Analyst: Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time: 75 Auto Dilution Factor: 1

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow

All 132.0 kPa 0.55 L/min

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1558699.5	1.013	mg/L	0.0053				0.52%
Ag 328.068†	-407.1	-0.0020	mg/L	0.00054	-0.0020	mg/L	0.00054	26.73%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 308.215†	2.6	0.0046	mg/L	0.00075	0.0046	mg/L	0.00075	16.32%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	2.1	0.0010	mg/L	0.00040	0.0010	mg/L	0.00040	39.42%
QC value within limits for As 188.979 Recovery = Not calculated								
Ba 233.527†	222.9	0.0015	mg/L	0.00009	0.0015	mg/L	0.00009	5.85%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	120.0	0.0001	mg/L	0.00003	0.0001	mg/L	0.00003	41.37%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933†	12.7	0.0028	mg/L	0.00194	0.0028	mg/L	0.00194	68.81%
QC value within limits for Ca 317.933 Recovery = Not calculated								
Cd 226.502†	-7.7	-0.0001	mg/L	0.00003	-0.0001	mg/L	0.00003	24.92%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	-6.2	-0.0002	mg/L	0.00006	-0.0002	mg/L	0.00006	40.60%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	5.9	0.0001	mg/L	0.00037	0.0001	mg/L	0.00037	705.69%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 324.752†	-113.7	-0.0005	mg/L	0.00015	-0.0005	mg/L	0.00015	30.77%
QC value within limits for Cu 324.752 Recovery = Not calculated								
Fe 273.955†	5.1	0.0093	mg/L	0.00820	0.0093	mg/L	0.00820	88.01%
QC value within limits for Fe 273.955 Recovery = Not calculated								
K 766.490†	-11.0	-0.0046	mg/L	0.02358	-0.0046	mg/L	0.02358	510.61%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 279.077†	-142.9	-0.0080	mg/L	0.00347	-0.0080	mg/L	0.00347	43.38%
QC value within limits for Mg 279.077 Recovery = Not calculated								
Mn 257.610†	85.3	0.0001	mg/L	0.00004	0.0001	mg/L	0.00004	39.33%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Na 589.592†	19.7	0.0024	mg/L	0.00590	0.0024	mg/L	0.00590	241.71%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	-8.8	-0.0002	mg/L	0.00016	-0.0002	mg/L	0.00016	69.71%
QC value within limits for Ni 231.604 Recovery = Not calculated								
Pb 220.353†	34.6	0.0048	mg/L	0.00282	0.0048	mg/L	0.00282	59.18%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	15.0	0.0048	mg/L	0.00442	0.0048	mg/L	0.00442	92.32%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	-0.5	-0.0002	mg/L	0.00890	-0.0002	mg/L	0.00890	>999.9%
QC value within limits for Se 196.026 Recovery = Not calculated								
Tl 190.801†	-8.1	-0.0046	mg/L	0.00087	-0.0046	mg/L	0.00087	18.66%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 292.402†	-78.0	-0.0005	mg/L	0.00007	-0.0005	mg/L	0.00007	13.61%
QC value within limits for V 292.402 Recovery = Not calculated								
Zn 213.857†	7.6	0.0065	mg/L	0.00043	0.0065	mg/L	0.00043	6.61%
QC value within limits for Zn 213.857 Recovery = Not calculated								
Pb†	-5.8	-0.0666	mg/L	0.03168	-0.0666	mg/L	0.03168	47.56%
QC value within limits for Pb Recovery = Not calculated								
Ag 338.289†	412.3	0.0043	mg/L	0.00211	0.0043	mg/L	0.00211	49.26%

All analyte(s) passed QC.

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Sequence No.: 39
Sample ID: 144638-17
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 57
Date Collected: 10/23/2014 5:05:32 PM
Data Type: Original
Initial Sample Vol: 0.525 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-17

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-17

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD

Method: 6010C 4ptLL Page 28 Date: 10/23/2014 5:14:07 PM

Analyte	Intensity	Conc.	Units	Std.Dev.	Conc.	Units	Std.Dev.	RSD
Y 371.029	1713225.0	1.113	mg/L	0.0020				0.18%
Ag 328.068†	-13833.0	-0.0055	mg/L	0.00117	-0.5249	mg/L	0.11133	21.21%
Al 308.215†	68890.0	122.9	mg/L	1.10	11710	mg/L	104.32	0.89%
As 188.979†	91.6	0.0528	mg/L	0.00218	5.030	mg/L	0.2078	4.13%
Ba 233.527†	132514.1	0.8928	mg/L	0.00002	85.03	mg/L	0.002	0.00%
Be 313.107†	12529.8	0.0069	mg/L	0.00003	0.6556	mg/L	0.00245	0.37%
Ca 317.933†	269902.9	60.02	mg/L	0.547	5716	mg/L	52.06	0.91%
Cd 226.502†	1549.7	0.0069	mg/L	0.00000	0.6542	mg/L	0.00014	0.02%
Co 228.616†	2930.2	0.0738	mg/L	0.00064	7.032	mg/L	0.0610	0.87%
Cr 267.716†	23122.8	0.2061	mg/L	0.00070	19.63	mg/L	0.067	0.34%
Cu 324.752†	57607.0	0.2718	mg/L	0.00071	25.89	mg/L	0.068	0.26%
Fe 273.955†	104187.1	190.5	mg/L	1.56	18140	mg/L	148.78	0.82%
K 766.490†	29471.7	12.33	mg/L	0.128	1175	mg/L	12.23	1.04%
Mg 279.077†	942211.2	51.90	mg/L	0.099	4943	mg/L	9.40	0.19%
Mn 257.610†	1787822.5	2.237	mg/L	0.0040	213.1	mg/L	0.38	0.18%
Na 589.592†	4881.6	0.6045	mg/L	0.00917	57.57	mg/L	0.873	1.52%
Ni 231.604†	10093.0	0.2654	mg/L	0.00072	25.28	mg/L	0.069	0.27%
Pb 220.353†	3358.4	0.4314	mg/L	0.00045	41.08	mg/L	0.043	0.10%
Sb 206.836†	-281.5	0.0112	mg/L	0.00497	1.062	mg/L	0.4737	44.60%
Se 196.026†	28.6	0.0293	mg/L	0.00674	2.786	mg/L	0.6423	23.06%
Tl 190.801†	-23.0	-0.0017	mg/L	0.00234	-0.1648	mg/L	0.22322	135.44%
V 292.402†	34898.8	0.2191	mg/L	0.00087	20.87	mg/L	0.083	0.40%
Zn 213.857†	1685.8	1.417	mg/L	0.0045	134.9	mg/L	0.43	0.32%
Pb†	39.4	0.3812	mg/L	0.00369	36.31	mg/L	0.351	0.97%
Ag 338.289†	-347.2	0.0009	mg/L	0.00011	0.0898	mg/L	0.01068	11.90%

Sequence No.: 40
Sample ID: 144638-18
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 58
Date Collected: 10/23/2014 5:09:47 PM
Data Type: Original
Initial Sample Vol: 0.54 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-18

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-18

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1644603.0	1.069	mg/L	0.0076				0.71%
Ag 328.068†	-8270.7	-0.0034	mg/L	0.00120	-0.3172	mg/L	0.11070	34.90%
Al 308.215†	37688.5	67.25	mg/L	1.243	6227	mg/L	115.06	1.85%
As 188.979†	6.3	0.0079	mg/L J	0.00172	0.7359	mg/L	0.15954	21.68%
Ba 233.527†	52234.1	0.3519	mg/L	0.00008	32.59	mg/L	0.008	0.02%
Be 313.107†	5776.6	0.0032	mg/L	0.00002	0.2940	mg/L	0.00195	0.66%
Ca 317.933†	635626.8	141.3	mg/L	0.92	13090	mg/L	85.21	0.65%
Cd 226.502†	817.7	0.0017	mg/L	0.00028	0.1579	mg/L	0.02615	16.55%
Co 228.616†	1556.4	0.0392	mg/L	0.00076	3.632	mg/L	0.0708	1.95%
Cr 267.716†	11326.3	0.1012	mg/L	0.00073	9.375	mg/L	0.0676	0.72%
Cu 324.752†	28797.5	0.1382	mg/L	0.00009	12.80	mg/L	0.008	0.06%
Fe 273.955†	62060.3	113.5	mg/L	2.54	10510	mg/L	235.58	2.24%
K 766.490†	24161.8	10.11	mg/L	0.132	936.2	mg/L	12.26	1.31%
Mg 279.077†	1373101.6	76.20	mg/L	0.101	7056	mg/L	9.31	0.13%
Mn 257.610†	1813758.2	2.270	mg/L	0.0006	210.2	mg/L	0.05	0.03%
Na 589.592†	6787.9	0.8406	mg/L	0.01822	77.83	mg/L	1.687	2.17%
Ni 231.604†	3299.0	0.0868	mg/L	0.00123	8.033	mg/L	0.1138	1.42%
Pb 220.353†	3190.9	0.4265	mg/L	0.00691	39.49	mg/L	0.639	1.62%
Sb 206.836†	-134.4	0.0165	mg/L	0.00619	1.532	mg/L	0.5733	37.43%
Se 196.026†	-21.4	0.0018	mg/L	0.00040	0.1644	mg/L	0.03736	22.73%
Tl 190.801†	-38.2	-0.0130	mg/L	0.00126	-1.202	mg/L	0.1167	9.70%
V 292.402†	25034.6	0.1568	mg/L	0.00058	14.52	mg/L	0.054	0.37%
Zn 213.857†	1110.6	0.9230	mg/L	0.00628	85.46	mg/L	0.581	0.68%
Pb†	37.4	0.4204	mg/L	0.09228	38.92	mg/L	8.545	21.95%
Ag 338.289†	-415.0	-0.0034	mg/L	0.00166	-0.3183	mg/L	0.15411	48.42%

Sequence No.: 41 Autosampler Location: 59

Sample ID: 144638-19
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Date Collected: 10/23/2014 5:14:07 PM
Data Type: Original
Initial Sample Vol: 0.479 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-19

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-19

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1629298.5	1.059	mg/L	0.0092				0.87%
Ag 328.068†	-7872.2	-0.0042	mg/L	0.00068	-0.4334	mg/L	0.07086	16.35%
Al 308.215†	39781.9	70.99	mg/L	0.500	7410	mg/L	52.15	0.70%
As 188.979†	19.4	0.0137	mg/L	0.00141	1.428	mg/L	0.1470	10.29%
Ba 233.527†	53583.3	0.3610	mg/L	0.00106	37.68	mg/L	0.111	0.29%
Be 313.107†	5740.2	0.0032	mg/L	0.00003	0.3292	mg/L	0.00331	1.00%
Ca 317.933†	442264.2	98.34	mg/L	0.581	10270	mg/L	60.69	0.59%
Cd 226.502†	791.3	0.0023	mg/L	0.00007	0.2374	mg/L	0.00764	3.22%
Co 228.616†	1770.9	0.0446	mg/L	0.00055	4.658	mg/L	0.0574	1.23%
Cr 267.716†	10328.3	0.0924	mg/L	0.00101	9.640	mg/L	0.1052	1.09%
Cu 324.752†	22457.0	0.1100	mg/L	0.00078	11.48	mg/L	0.081	0.71%
Fe 273.955†	57603.6	105.3	mg/L	0.45	11000	mg/L	46.67	0.42%
K 766.490†	23559.0	9.859	mg/L	0.1397	1029	mg/L	14.59	1.42%
Mg 279.077†	939379.9	52.04	mg/L	0.130	5432	mg/L	13.57	0.25%
Mn 257.610†	2901404.4	3.631	mg/L	0.0071	379.0	mg/L	0.74	0.20%
Na 589.592†	7300.1	0.9040	mg/L	0.02748	94.37	mg/L	2.869	3.04%
Ni 231.604†	3122.9	0.0821	mg/L	0.00020	8.572	mg/L	0.0209	0.24%
Pb 220.353†	2433.1	0.3187	mg/L	0.00196	33.27	mg/L	0.205	0.61%
Sb 206.836†	-150.7	0.0088	mg/L	0.00130	0.9220	mg/L	0.13599	14.75%
Se 196.026†	-17.7	0.0014	mg/L	0.00320	0.1473	mg/L	0.33389	226.74%
Tl 190.801†	-19.6	-0.0004	mg/L	0.00330	-0.0449	mg/L	0.34402	765.72%
V 292.402†	24661.1	0.1544	mg/L	0.00140	16.12	mg/L	0.146	0.91%
Zn 213.857†	980.6	0.8177	mg/L	0.01150	85.35	mg/L	1.200	1.41%
Pb†	26.0	0.2740	mg/L	0.02528	28.60	mg/L	2.638	9.23%
Ag 338.289†	-658.9	-0.0056	mg/L	0.00115	-0.5894	mg/L	0.11999	20.36%

Sequence No.: 42
Sample ID: 144638-19 dup
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 60
Date Collected: 10/23/2014 5:18:21 PM
Data Type: Original
Initial Sample Vol: 0.505 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-19 dup

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-19 dup

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1637479.7	1.064	mg/L	0.0074				0.69%
Ag 328.068†	-7993.8	-0.0027	mg/L	0.00127	-0.2710	mg/L	0.12528	46.24%
Al 308.215†	41447.9	73.96	mg/L	1.288	7323	mg/L	127.50	1.74%
As 188.979†	12.9	0.0108	mg/L	0.00073	1.068	mg/L	0.0724	6.78%
Ba 233.527†	51258.5	0.3454	mg/L	0.00268	34.19	mg/L	0.265	0.78%
Be 313.107†	5969.4	0.0033	mg/L	0.00000	0.3246	mg/L	0.00024	0.07%
Ca 317.933†	544155.9	121.0	mg/L	0.04	11980	mg/L	4.32	0.04%
Cd 226.502†	763.4	0.0011	mg/L	0.00024	0.1121	mg/L	0.02349	20.96%
Co 228.616†	1659.6	0.0418	mg/L	0.00039	4.141	mg/L	0.0387	0.93%
Cr 267.716†	10309.5	0.0923	mg/L	0.00079	9.137	mg/L	0.0778	0.85%
Cu 324.752†	21501.4	0.1066	mg/L	0.00070	10.56	mg/L	0.069	0.65%
Fe 273.955†	60919.7	111.4	mg/L	1.90	11030	mg/L	188.31	1.71%
K 766.490†	21655.9	9.062	mg/L	0.0289	897.2	mg/L	2.86	0.32%
Mg 279.077†	989006.8	54.79	mg/L	0.082	5424	mg/L	8.17	0.15%

Mn 257.610†	2226778.7	2.787 mg/L	0.0039	275.9 mg/L	0.39	0.14%
Na 589.592†	8050.4	0.9969 mg/L	0.02193	98.71 mg/L	2.171	2.20%
Ni 231.604†	2972.5	0.0782 mg/L	0.00091	7.740 mg/L	0.0905	1.17%
Pb 220.353†	2263.5	0.2953 mg/L	0.00028	29.24 mg/L	0.027	0.09%
Sb 206.836†	-147.2	0.0131 mg/L	0.00230	1.299 mg/L	0.2278	17.54%
Se 196.026†	-19.8	0.0021 mg/L	0.00315	0.2062 mg/L	0.31197	151.27%
Tl 190.801†	-33.4	-0.0097 mg/L	0.00534	-0.9556 mg/L	0.52913	55.37%
V 292.402†	25204.4	0.1578 mg/L	0.00050	15.62 mg/L	0.049	0.31%
Zn 213.857†	908.2	0.7541 mg/L	0.00006	74.67 mg/L	0.006	0.01%
Pb†	25.7	0.2745 mg/L	0.12022	27.18 mg/L	11.903	43.80%
Ag 338.289†	-601.4	-0.0053 mg/L	0.00085	-0.5282 mg/L	0.08451	16.00%

Sequence No.: 43
Sample ID: 144638-19 spk
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 61
Date Collected: 10/23/2014 5:22:41 PM
Data Type: Original
Initial Sample Vol: 0.492 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-19 spk

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-19 spk

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1608180.9	1.045	mg/L	0.0040				0.38%
Ag 328.068†	36831.4	0.2222	mg/L	0.00019	22.58	mg/L	0.020	0.09%
Al 308.215†	45930.4	81.96	mg/L	0.944	8329	mg/L	95.95	1.15%
As 188.979†	4499.8	2.220	mg/L	0.0216	225.6	mg/L	2.19	0.97%
Ba 233.527†	373872.3	2.519	mg/L	0.0001	256.0	mg/L	0.01	0.00%
Be 313.107†	829394.6	0.4537	mg/L	0.00047	46.11	mg/L	0.047	0.10%
Ca 317.933†	535444.2	119.1	mg/L	2.03	12100	mg/L	206.06	1.70%
Cd 226.502†	56115.2	0.8722	mg/L	0.00095	88.64	mg/L	0.097	0.11%
Co 228.616†	35233.5	0.8879	mg/L	0.00091	90.23	mg/L	0.092	0.10%
Cr 267.716†	250287.6	2.200	mg/L	0.0011	223.6	mg/L	0.11	0.05%
Cu 324.752†	551133.0	2.381	mg/L	0.0024	242.0	mg/L	0.25	0.10%
Fe 273.955†	61813.7	113.0	mg/L	1.91	11490	mg/L	193.82	1.69%
K 766.490†	126113.3	52.77	mg/L	0.665	5363	mg/L	67.55	1.26%
Mg 279.077†	1248827.8	69.27	mg/L	0.016	7040	mg/L	1.65	0.02%
Mn 257.610†	2392423.5	2.994	mg/L	0.0012	304.3	mg/L	0.12	0.04%
Na 589.592†	95720.0	11.85	mg/L	0.120	1205	mg/L	12.16	1.01%
Ni 231.604†	168713.4	4.437	mg/L	0.0030	450.9	mg/L	0.31	0.07%
Pb 220.353†	18944.0	2.596	mg/L	0.0201	263.8	mg/L	2.04	0.77%
Sb 206.836†	5707.3	1.838	mg/L	0.0158	186.8	mg/L	1.61	0.86%
Se 196.026†	5406.0	2.208	mg/L	0.0155	224.4	mg/L	1.58	0.70%
Tl 190.801†	3613.5	2.055	mg/L	0.0204	208.9	mg/L	2.07	0.99%
V 292.402†	161927.9	1.026	mg/L	0.0002	104.3	mg/L	0.02	0.02%
Zn 213.857†	3846.5	3.215	mg/L	0.0080	326.8	mg/L	0.81	0.25%
Pb†	226.1	2.583	mg/L	0.0729	262.5	mg/L	7.41	2.82%
Ag 338.289†	17444.6	0.2355	mg/L	0.00043	23.93	mg/L	0.044	0.18%

Sequence No.: 44
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 7
Date Collected: 10/23/2014 5:26:58 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD

Y 371.029	1457146.5	0.9470 mg/L	0.00615			0.65%
Ag 328.068†	244487.8	1.225 mg/L	0.0014	1.225 mg/L	0.0014	0.11%
QC value within limits for Ag 328.068 Recovery = 97.97%						
Al 308.215†	5568.0	9.945 mg/L	0.1771	9.945 mg/L	0.1771	1.78%
QC value within limits for Al 308.215 Recovery = 99.45%						
As 188.979†	992.6	0.4884 mg/L	0.00045	0.4884 mg/L	0.00045	0.09%
QC value within limits for As 188.979 Recovery = 97.69%						
Ba 233.527†	1445967.4	9.742 mg/L	0.0092	9.742 mg/L	0.0092	0.09%
QC value within limits for Ba 233.527 Recovery = 97.42%						
Be 313.107†	453752.5	0.2482 mg/L	0.00027	0.2482 mg/L	0.00027	0.11%
QC value within limits for Be 313.107 Recovery = 99.28%						
Ca 317.933†	112200.0	24.95 mg/L	0.005	24.95 mg/L	0.005	0.02%
QC value within limits for Ca 317.933 Recovery = 99.80%						
Cd 226.502†	16993.3	0.2667 mg/L	0.00038	0.2667 mg/L	0.00038	0.14%
QC value within limits for Cd 226.502 Recovery = 106.66%						
Co 228.616†	93516.1	2.357 mg/L	0.0055	2.357 mg/L	0.0055	0.23%
QC value within limits for Co 228.616 Recovery = 94.26%						
Cr 267.716†	110580.6	0.9704 mg/L	0.00024	0.9704 mg/L	0.00024	0.03%
QC value within limits for Cr 267.716 Recovery = 97.04%						
Cu 324.752†	281360.6	1.209 mg/L	0.0001	1.209 mg/L	0.0001	0.01%
QC value within limits for Cu 324.752 Recovery = 96.71%						
Fe 273.955†	2751.2	4.993 mg/L	0.0296	4.993 mg/L	0.0296	0.59%
QC value within limits for Fe 273.955 Recovery = 99.86%						
K 766.490†	59479.8	24.89 mg/L	0.063	24.89 mg/L	0.063	0.25%
QC value within limits for K 766.490 Recovery = 99.56%						
Mg 279.077†	458849.1	25.58 mg/L	0.042	25.58 mg/L	0.042	0.16%
QC value within limits for Mg 279.077 Recovery = 102.31%						
Mn 257.610†	1967382.2	2.462 mg/L	0.0010	2.462 mg/L	0.0010	0.04%
QC value within limits for Mn 257.610 Recovery = 98.50%						
Na 589.592†	198867.0	24.63 mg/L	0.037	24.63 mg/L	0.037	0.15%
QC value within limits for Na 589.592 Recovery = 98.51%						
Ni 231.604†	93679.3	2.463 mg/L	0.0032	2.463 mg/L	0.0032	0.13%
QC value within limits for Ni 231.604 Recovery = 98.54%						
Pb 220.353†	3648.1	0.5064 mg/L	0.00078	0.5064 mg/L	0.00078	0.15%
QC value within limits for Pb 220.353 Recovery = 101.27%						
Sb 206.836†	15508.6	4.935 mg/L	0.0313	4.935 mg/L	0.0313	0.63%
QC value within limits for Sb 206.836 Recovery = 98.70%						
Se 196.026†	1192.5	0.4837 mg/L	0.01802	0.4837 mg/L	0.01802	3.73%
QC value within limits for Se 196.026 Recovery = 96.73%						
Tl 190.801†	870.6	0.4630 mg/L	0.00792	0.4630 mg/L	0.00792	1.71%
QC value within limits for Tl 190.801 Recovery = 92.61%						
V 292.402†	402086.7	2.514 mg/L	0.0003	2.514 mg/L	0.0003	0.01%
QC value within limits for V 292.402 Recovery = 100.54%						
Zn 213.857†	3220.6	2.706 mg/L	0.0174	2.706 mg/L	0.0174	0.64%
QC value within limits for Zn 213.857 Recovery = 108.25%						
Pb†	43.5	0.5016 mg/L	0.01947	0.5016 mg/L	0.01947	3.88%
QC value within limits for Pb Recovery = 100.32%						
Ag 338.289†	118065.6	1.255 mg/L	0.0010	1.255 mg/L	0.0010	0.08%

All analyte(s) passed QC.

Sequence No.: 45
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 1
Date Collected: 10/23/2014 5:31:16 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1550164.5	1.007	mg/L	0.0071				0.70%
Ag 328.068†	-543.6	-0.0027	mg/L	0.00049	-0.0027	mg/L	0.00049	17.94%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 308.215†	-8.8	-0.0156	mg/L	0.02388	-0.0156	mg/L	0.02388	152.65%
QC value within limits for Al 308.215 Recovery = Not calculated								

As 188.979†	-3.4	-0.0017 mg/L	0.00390	-0.0017 mg/L	0.00390	231.85%
QC value within limits for As 188.979 Recovery = Not calculated						
Ba 233.527†	225.6	0.0015 mg/L	0.00023	0.0015 mg/L	0.00023	15.10%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	116.8	0.0001 mg/L	0.00002	0.0001 mg/L	0.00002	35.42%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933†	9.0	0.0020 mg/L	0.00308	0.0020 mg/L	0.00308	154.51%
QC value within limits for Ca 317.933 Recovery = Not calculated						
Cd 226.502†	0.6	0.0000 mg/L	0.00011	0.0000 mg/L	0.00011	>999.9%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	13.9	0.0003 mg/L	0.00033	0.0003 mg/L	0.00033	94.64%
QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	8.8	0.0001 mg/L	0.00003	0.0001 mg/L	0.00003	34.25%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	-49.5	-0.0002 mg/L	0.00058	-0.0002 mg/L	0.00058	271.88%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 273.955†	1.9	0.0035 mg/L	0.00539	0.0035 mg/L	0.00539	153.05%
QC value within limits for Fe 273.955 Recovery = Not calculated						
K 766.490†	75.9	0.0318 mg/L	0.02882	0.0318 mg/L	0.02882	90.69%
QC value within limits for K 766.490 Recovery = Not calculated						
Mg 279.077†	-131.3	-0.0073 mg/L	0.00001	-0.0073 mg/L	0.00001	0.13%
QC value within limits for Mg 279.077 Recovery = Not calculated						
Mn 257.610†	108.9	0.0001 mg/L	0.00006	0.0001 mg/L	0.00006	47.07%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Na 589.592†	-23.7	-0.0029 mg/L	0.01106	-0.0029 mg/L	0.01106	377.03%
QC value within limits for Na 589.592 Recovery = Not calculated						
Ni 231.604†	1.9	0.0001 mg/L	0.00019	0.0001 mg/L	0.00019	369.53%
QC value within limits for Ni 231.604 Recovery = Not calculated						
Pb 220.353†	33.2	0.0046 mg/L	0.00143	0.0046 mg/L	0.00143	31.15%
QC value within limits for Pb 220.353 Recovery = Not calculated						
Sb 206.836†	24.3	0.0077 mg/L	0.00208	0.0077 mg/L	0.00208	26.82%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	-0.5	-0.0002 mg/L	0.00980	-0.0002 mg/L	0.00980	>999.9%
QC value within limits for Se 196.026 Recovery = Not calculated						
Tl 190.801†	-12.6	-0.0072 mg/L	0.00235	-0.0072 mg/L	0.00235	32.90%
QC value within limits for Tl 190.801 Recovery = Not calculated						
V 292.402†	-84.2	-0.0005 mg/L	0.00032	-0.0005 mg/L	0.00032	60.74%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	0.8	0.0007 mg/L	0.00262	0.0007 mg/L	0.00262	378.08%
QC value within limits for Zn 213.857 Recovery = Not calculated						
Pb†	-7.5	-0.0871 mg/L	0.01252	-0.0871 mg/L	0.01252	14.38%
QC value within limits for Pb Recovery = Not calculated						
Ag 338.289†	320.5	0.0033 mg/L	0.00072	0.0033 mg/L	0.00072	21.71%

All analyte(s) passed QC.

Sequence No.: 46 **Autosampler Location: 2**
Sample ID: LLQC **Date Collected: 10/23/2014 5:35:28 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 75 **Auto Dilution Factor: 1**

Nebulizer Parameters: LLQC

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: LLQC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1540521.8	1.001	mg/L	0.0149				1.49%
Ag 328.068†	1604.8	0.0081	mg/L	0.00066	0.0081	mg/L	0.00066	8.13%
QC value within limits for Ag 328.068 Recovery = 80.64%								
Al 308.215†	136.7	0.2444	mg/L	0.00578	0.2444	mg/L	0.00578	2.36%
QC value within limits for Al 308.215 Recovery = 122.22%								
As 188.979†	11.7	0.0058	mg/L	0.00190	0.0058	mg/L	0.00190	32.92%
QC value less than the lower limit for As 188.979 Recovery = 57.65%								
Ba 233.527†	14761.0	0.0995	mg/L	0.00042	0.0995	mg/L	0.00042	0.43%
QC value within limits for Ba 233.527 Recovery = 99.45%								
Be 313.107†	8907.0	0.0049	mg/L	0.00003	0.0049	mg/L	0.00003	0.65%

QC value within limits for Be 313.107 Recovery = 97.41%

Ca 317.933†	11326.9	2.519 mg/L	0.0868	2.519 mg/L	0.0868	3.45%
QC value within limits for Ca 317.933 Recovery = 100.75%						
Cd 226.502†	337.9	0.0053 mg/L	0.00001	0.0053 mg/L	0.00001	0.28%
QC value within limits for Cd 226.502 Recovery = 105.75%						
Co 228.616†	1928.2	0.0486 mg/L	0.00073	0.0486 mg/L	0.00073	1.50%
QC value within limits for Co 228.616 Recovery = 97.18%						
Cr 267.716†	1263.5	0.0111 mg/L	0.00026	0.0111 mg/L	0.00026	2.31%
QC value within limits for Cr 267.716 Recovery = 110.90%						
Cu 324.752†	5542.3	0.0238 mg/L	0.00043	0.0238 mg/L	0.00043	1.80%
QC value within limits for Cu 324.752 Recovery = 95.25%						
Fe 273.955†	55.0	0.1002 mg/L	0.01261	0.1002 mg/L	0.01261	12.59%
QC value within limits for Fe 273.955 Recovery = 100.15%						
K 766.490†	6145.6	2.572 mg/L	0.0947	2.572 mg/L	0.0947	3.68%
QC value within limits for K 766.490 Recovery = 102.87%						
Mg 279.077†	45547.7	2.540 mg/L	0.0000	2.540 mg/L	0.0000	0.00%
QC value within limits for Mg 279.077 Recovery = 101.62%						
Mn 257.610†	11827.7	0.0148 mg/L	0.00002	0.0148 mg/L	0.00002	0.11%
QC value within limits for Mn 257.610 Recovery = 98.71%						
Na 589.592†	20464.8	2.534 mg/L	0.0688	2.534 mg/L	0.0688	2.71%
QC value within limits for Na 589.592 Recovery = 101.37%						
Ni 231.604†	1573.3	0.0414 mg/L	0.00034	0.0414 mg/L	0.00034	0.82%
QC value within limits for Ni 231.604 Recovery = 103.43%						
Pb 220.353†	110.0	0.0153 mg/L	0.00173	0.0153 mg/L	0.00173	11.32%
QC value greater than the upper limit for Pb 220.353 Recovery = 152.73%						
Sb 206.836†	200.5	0.0639 mg/L	0.00260	0.0639 mg/L	0.00260	4.08%
QC value within limits for Sb 206.836 Recovery = 106.43%						
Se 196.026†	4.7	0.0020 mg/L	0.00649	0.0020 mg/L	0.00649	332.26%
QC value less than the lower limit for Se 196.026 Recovery = 19.54%						
Tl 190.801†	28.6	0.0157 mg/L	0.00114	0.0157 mg/L	0.00114	7.26%
QC value less than the lower limit for Tl 190.801 Recovery = 62.78%						
V 292.402†	3958.2	0.0248 mg/L	0.00027	0.0248 mg/L	0.00027	1.07%
QC value within limits for V 292.402 Recovery = 99.02%						
Zn 213.857†	76.2	0.0639 mg/L	0.00207	0.0639 mg/L	0.00207	3.24%
QC value within limits for Zn 213.857 Recovery = 106.53%						
Pb†	-0.9	-0.0098 mg/L	0.05224	-0.0098 mg/L	0.05224	531.72%
Ag 338.289†	1174.1	0.0125 mg/L	0.00134	0.0125 mg/L	0.00134	10.75%

QC Failed. Continue with analysis.

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Sequence No.: 47 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 10/23/2014 5:39:40 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 75 **Auto Dilution Factor: 1**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1446870.6	0.9404	mg/L	0.00437				0.46%
Ag 328.068†	255816.3	1.281	mg/L	0.0086	1.281	mg/L	0.0086	0.67%
QC value within limits for Ag 328.068 Recovery = 102.50%								
Al 308.215†	5587.6	9.979	mg/L	0.0314	9.979	mg/L	0.0314	0.31%
QC value within limits for Al 308.215 Recovery = 99.79%								
As 188.979†	1013.0	0.4985	mg/L	0.00110	0.4985	mg/L	0.00110	0.22%
QC value within limits for As 188.979 Recovery = 99.70%								
Ba 233.527†	1442310.6	9.718	mg/L	0.0114	9.718	mg/L	0.0114	0.12%
QC value within limits for Ba 233.527 Recovery = 97.18%								
Be 313.107†	452003.1	0.2472	mg/L	0.00005	0.2472	mg/L	0.00005	0.02%
QC value within limits for Be 313.107 Recovery = 98.90%								
Ca 317.933†	112199.2	24.95	mg/L	0.322	24.95	mg/L	0.322	1.29%
QC value within limits for Ca 317.933 Recovery = 99.80%								
Cd 226.502†	16231.9	0.2547	mg/L	0.00197	0.2547	mg/L	0.00197	0.77%
QC value within limits for Cd 226.502 Recovery = 101.87%								
Co 228.616†	95115.9	2.397	mg/L	0.0222	2.397	mg/L	0.0222	0.93%

QC value within limits for Co 228.616 Recovery = 95.88%

Cr 267.716†	113402.8	0.9951 mg/L	0.00796	0.9951 mg/L	0.00796	0.80%

QC value within limits for Cr 267.716 Recovery = 99.51%

Cu 324.752†	294157.0	1.264 mg/L	0.0088	1.264 mg/L	0.0088	0.70%

QC value within limits for Cu 324.752 Recovery = 101.11%

Fe 273.955†	2749.4	4.987 mg/L	0.0102	4.987 mg/L	0.0102	0.21%

QC value within limits for Fe 273.955 Recovery = 99.75%

K 766.490†	59752.5	25.00 mg/L	0.251	25.00 mg/L	0.251	1.00%

QC value within limits for K 766.490 Recovery = 100.02%

Mg 279.077†	456888.1	25.47 mg/L	0.003	25.47 mg/L	0.003	0.01%

QC value within limits for Mg 279.077 Recovery = 101.88%

Mn 257.610†	1960166.7	2.453 mg/L	0.0046	2.453 mg/L	0.0046	0.19%

QC value within limits for Mn 257.610 Recovery = 98.14%

Na 589.592†	199811.8	24.74 mg/L	0.273	24.74 mg/L	0.273	1.10%

QC value within limits for Na 589.592 Recovery = 98.98%

Ni 231.604†	95564.2	2.513 mg/L	0.0281	2.513 mg/L	0.0281	1.12%

QC value within limits for Ni 231.604 Recovery = 100.52%

Pb 220.353†	3735.2	0.5185 mg/L	0.00056	0.5185 mg/L	0.00056	0.11%

QC value within limits for Pb 220.353 Recovery = 103.69%

Sb 206.836†	15223.5	4.843 mg/L	0.0218	4.843 mg/L	0.0218	0.45%

QC value within limits for Sb 206.836 Recovery = 96.86%

Se 196.026†	1199.1	0.4863 mg/L	0.01238	0.4863 mg/L	0.01238	2.55%

QC value within limits for Se 196.026 Recovery = 97.26%

Tl 190.801†	884.3	0.4695 mg/L	0.00608	0.4695 mg/L	0.00608	1.29%

QC value within limits for Tl 190.801 Recovery = 93.90%

V 292.402†	425920.4	2.662 mg/L	0.0273	2.662 mg/L	0.0273	1.03%

QC value within limits for V 292.402 Recovery = 106.49%

Zn 213.857†	3232.3	2.716 mg/L	0.0171	2.716 mg/L	0.0171	0.63%

QC value within limits for Zn 213.857 Recovery = 108.64%

Pb†	41.4	0.4771 mg/L	0.02555	0.4771 mg/L	0.02555	5.35%

QC value within limits for Pb Recovery = 95.41%

Ag 338.289†	121823.7	1.295 mg/L	0.0075	1.295 mg/L	0.0075	0.58%

All analyte(s) passed QC.

Sequence No.: 48
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 1
Date Collected: 10/23/2014 5:44:01 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1549269.0	1.007	mg/L	0.0046				0.46%
Ag 328.068†	-644.1	-0.0032	mg/L	0.00013	-0.0032	mg/L	0.00013	4.09%

QC value within limits for Ag 328.068 Recovery = Not calculated

Al 308.215†	-2.4	-0.0043	mg/L	0.02363	-0.0043	mg/L	0.02363	544.97%

QC value within limits for Al 308.215 Recovery = Not calculated

As 188.979†	4.0	0.0020	mg/L	0.00341	0.0020	mg/L	0.00341	174.14%

QC value within limits for As 188.979 Recovery = Not calculated

Ba 233.527†	197.6	0.0013	mg/L	0.00013	0.0013	mg/L	0.00013	9.78%

QC value within limits for Ba 233.527 Recovery = Not calculated

Be 313.107†	120.2	0.0001	mg/L	0.00002	0.0001	mg/L	0.00002	29.65%

QC value within limits for Be 313.107 Recovery = Not calculated

Ca 317.933†	15.4	0.0034	mg/L	0.00125	0.0034	mg/L	0.00125	36.39%

QC value within limits for Ca 317.933 Recovery = Not calculated

Cd 226.502†	-3.8	-0.0001	mg/L	0.00009	-0.0001	mg/L	0.00009	150.64%

QC value within limits for Cd 226.502 Recovery = Not calculated

Co 228.616†	6.8	0.0002	mg/L	0.00014	0.0002	mg/L	0.00014	82.65%

QC value within limits for Co 228.616 Recovery = Not calculated

Cr 267.716†	32.5	0.0003	mg/L	0.00006	0.0003	mg/L	0.00006	19.58%

QC value within limits for Cr 267.716 Recovery = Not calculated

Cu 324.752†	-197.5	-0.0008	mg/L	0.00049	-0.0008	mg/L	0.00049	58.30%

QC value within limits for Cu 324.752 Recovery = Not calculated

Fe 273.955†	2.4	0.0044	mg/L	0.01750	0.0044	mg/L	0.01750 396.26%
QC value within limits for Fe 273.955 Recovery = Not calculated							
K 766.490†	50.3	0.0210	mg/L	0.03360	0.0210	mg/L	0.03360 159.67%
QC value within limits for K 766.490 Recovery = Not calculated							
Mg 279.077†	-148.6	-0.0083	mg/L	0.00069	-0.0083	mg/L	0.00069 8.29%
QC value within limits for Mg 279.077 Recovery = Not calculated							
Mn 257.610†	87.3	0.0001	mg/L	0.00002	0.0001	mg/L	0.00002 17.19%
QC value within limits for Mn 257.610 Recovery = Not calculated							
Na 589.592†	-24.4	-0.0030	mg/L	0.00215	-0.0030	mg/L	0.00215 71.03%
QC value within limits for Na 589.592 Recovery = Not calculated							
Ni 231.604†	9.7	0.0003	mg/L	0.00002	0.0003	mg/L	0.00002 7.71%
QC value within limits for Ni 231.604 Recovery = Not calculated							
Pb 220.353†	36.6	0.0050	mg/L	0.00030	0.0050	mg/L	0.00030 5.86%
QC value within limits for Pb 220.353 Recovery = Not calculated							
Sb 206.836†	30.8	0.0098	mg/L	0.00446	0.0098	mg/L	0.00446 45.31%
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	9.8	0.0040	mg/L	0.00667	0.0040	mg/L	0.00667 167.05%
QC value within limits for Se 196.026 Recovery = Not calculated							
Tl 190.801†	-8.8	-0.0050	mg/L	0.00042	-0.0050	mg/L	0.00042 8.31%
QC value within limits for Tl 190.801 Recovery = Not calculated							
V 292.402†	-89.2	-0.0006	mg/L	0.00048	-0.0006	mg/L	0.00048 86.19%
QC value within limits for V 292.402 Recovery = Not calculated							
Zn 213.857†	0.9	0.0008	mg/L	0.00172	0.0008	mg/L	0.00172 219.10%
QC value within limits for Zn 213.857 Recovery = Not calculated							
Pb†	-3.9	-0.0454	mg/L	0.06266	-0.0454	mg/L	0.06266 138.10%
QC value within limits for Pb Recovery = Not calculated							
Ag 338.289†	419.1	0.0044	mg/L	0.00065	0.0044	mg/L	0.00065 14.94%

All analyte(s) passed QC.

Sequence No.: 49
Sample ID: Blk 10/22 soil
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 62
Date Collected: 10/23/2014 5:48:13 PM
Data Type: Original
Initial Sample Vol: 50 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: Blk 10/22 soil

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: Blk 10/22 soil

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1631763.7	1.061	mg/L	0.0011				0.11%
Ag 328.068†	-879.3	-0.0044	mg/L	0.00017	-0.0044	mg/L	0.00017	3.84%
Al 308.215†	-13.4	-0.0238	mg/L	0.00188	-0.0238	mg/L	0.00188	7.89%
As 188.979†	-1.6	-0.0008	mg/L	0.00112	-0.0008	mg/L	0.00112	143.01%
Ba 233.527†	-14.4	-0.0001	mg/L	0.00003	-0.0001	mg/L	0.00003	26.56%
Be 313.107†	202.3	0.0001	mg/L	0.00004	0.0001	mg/L	0.00004	36.46%
Ca 317.933†	-177.9	-0.0396	mg/L	0.00177	-0.0396	mg/L	0.00177	4.47%
Cd 226.502†	13.7	0.0002	mg/L	0.00011	0.0002	mg/L	0.00011	50.60%
Co 228.616†	33.7	0.0008	mg/L	0.00001	0.0008	mg/L	0.00001	1.14%
Cr 267.716†	66.4	0.0006	mg/L	0.00000	0.0006	mg/L	0.00000	0.28%
Cu 324.752†	-239.9	-0.0010	mg/L	0.00040	-0.0010	mg/L	0.00040	39.41%
Fe 273.955†	11.4	0.0208	mg/L	0.00212	0.0208	mg/L	0.00212	10.21%
K 766.490†	-56.5	-0.0236	mg/L	0.02622	-0.0236	mg/L	0.02622	110.88%
Mg 279.077†	-256.5	-0.0144	mg/L	0.00166	-0.0144	mg/L	0.00166	11.53%
Mn 257.610†	93.8	0.0001	mg/L	0.00000	0.0001	mg/L	0.00000	1.80%
Na 589.592†	12.7	0.0016	mg/L	0.00670	0.0016	mg/L	0.00670	426.11%
Ni 231.604†	20.1	0.0005	mg/L	0.00019	0.0005	mg/L	0.00019	36.33%
Pb 220.353†	34.3	0.0047	mg/L	0.00486	0.0047	mg/L	0.00486	102.40%
Sb 206.836†	16.4	0.0052	mg/L	0.00227	0.0052	mg/L	0.00227	43.47%
Se 196.026†	-3.5	-0.0014	mg/L	0.00396	-0.0014	mg/L	0.00396	276.08%
Tl 190.801†	-15.4	-0.0088	mg/L	0.00151	-0.0088	mg/L	0.00151	17.21%
V 292.402†	-194.0	-0.0012	mg/L	0.00047	-0.0012	mg/L	0.00047	39.20%
Zn 213.857†	3.7	0.0032	mg/L	0.00280	0.0032	mg/L	0.00280	88.65%
Pb†	-10.4	-0.1201	mg/L	0.00586	-0.1201	mg/L	0.00586	4.88%
Ag 338.289†	204.8	0.0021	mg/L	0.00191	0.0021	mg/L	0.00191	89.17%

Method: 6010C 4ptLL Page 1 Date: 10/24/2014 8:44:07 AM

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Analysis Begun

Start Time: 10/24/2014 8:41:18 AM
Logged In Analyst: icp3
Spectrometer: Optima 7300 DV, S/N 077C0122002

Plasma On Time: 10/24/2014 8:17:18 AM
Technique: ICP Continuous
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer\ICP\Data\Sample Information\102414a.sif
Batch ID: 102414a
Results Data Set: 102414a
Results Library: C:\Users\Public\PerkinElmer\ICP\Data\Results\Oct2014.mdb

10-24-14
Amm

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Method Loaded
Method Name: 6010C 4ptLL
IEC File: 051514.iec
Method Description: 6010C/200.7 TAL Metals

Method Last Saved: 10/15/2014 2:41:18 PM
MSF File:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Al 308.215	Lin Thru 0	Peak Area	Radial	Y 371.029	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Ba 233.527	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Be 313.107	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Ca 317.933	Lin Thru 0	Peak Area	Radial	Y 371.029	Yes
Cd 226.502	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Cr 267.716	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Fe 273.955	Lin Thru 0	Peak Area	Radial	Y 371.029	Yes
K 766.490	Lin Thru 0	Peak Area	Radial	Y 371.029	Yes
Mg 279.077	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Mn 257.610	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Na 589.592	Lin Thru 0	Peak Area	Radial	Y 371.029	Yes
Ni 231.604	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Se 196.026	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Zn 213.857	Lin Thru 0	Peak Area	Radial	Y 371.029	Yes
Pb	Lin Thru 0	Peak Area	Radial	Y 371.029	Yes
Y 371.029	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Ag 338.289	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes

==========

Sequence No.: 1
Sample ID: Calib Blank 1
Analyst:
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 1
Date Collected: 10/24/2014 8:41:19 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: Calib Blank 1

Analyte	Back Pressure	Flow
All	129.0 kPa	0.55 L/min

Mean Data: Calib Blank 1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc.	Units
Y 371.029	1509716.7	12644.45	0.84%	1.0000	mg/L
Ag 328.068†	6424.7	89.14	1.39%	[0.00]	mg/L
Al 308.215†	177.9	11.10	6.24%	[0.00]	mg/L
As 188.979†	7.5	2.22	29.63%	[0.00]	mg/L
Ba 233.527†	380.6	14.44	3.79%	[0.00]	mg/L
Be 313.107†	-2173.9	2.07	0.10%	[0.00]	mg/L
Ca 317.933†	627.5	11.77	1.88%	[0.00]	mg/L
Cd 226.502†	-63.4	8.41	13.26%	[0.00]	mg/L
Co 228.616†	-186.4	6.11	3.28%	[0.00]	mg/L

Cr 267.716†	165.7	5.41	3.27%	[0.00]	mg/L
Cu 324.752†	2777.2	178.78	6.44%	[0.00]	mg/L
Fe 273.955†	-19.9	1.62	8.15%	[0.00]	mg/L
K 766.490†	1602.4	124.07	7.74%	[0.00]	mg/L
Mg 279.077†	2636.0	30.25	1.15%	[0.00]	mg/L
Mn 257.610†	2057.3	26.11	1.27%	[0.00]	mg/L
Na 589.592†	1317.4	45.94	3.49%	[0.00]	mg/L
Ni 231.604†	16.7	8.08	48.49%	[0.00]	mg/L
Pb 220.353†	53.6	11.02	20.56%	[0.00]	mg/L
Sb 206.836†	-189.5	6.13	3.24%	[0.00]	mg/L
Se 196.026†	-24.5	8.88	36.25%	[0.00]	mg/L
Tl 190.801†	85.2	10.56	12.40%	[0.00]	mg/L
V 292.402†	542.8	25.43	4.69%	[0.00]	mg/L
Zn 213.857†	-12.7	0.13	1.01%	[0.00]	mg/L
Pb†	0.1	4.15	>999.9%	[0.00]	mg/L
Ag 338.289†	-1696.7	0.31	0.02%	[0.00]	mg/L

Sequence No.: 2 — **Autosampler Location: 9**
Sample ID: Low Level Cal1 — **Date Collected: 10/24/2014 8:45:31 AM**
Analyst: — **Data Type: Original**
Initial Sample Wt: — **Initial Sample Vol:**
Dilution: — **Sample Prep Vol:**
Wash Time: 75 — **Auto Dilution Factor: 1**

Nebulizer Parameters: Low Level Cal1

Analyte	Back Pressure	Flow
All	129.0 kPa	0.55 L/min

Mean Data: Low Level Cal1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	1491507.7	7798.71	0.52%	0.9879	mg/L
Ag 328.068†	890.7	178.54	20.04%	[0.005]	mg/L
Al 308.215†	44.6	8.38	18.80%	[0.100]	mg/L
As 188.979†	10.6	0.37	3.50%	[0.005]	mg/L
Ba 233.527†	7753.1	44.52	0.57%	[0.050]	mg/L
Be 313.107†	4420.0	71.12	1.61%	[0.0025]	mg/L
Ca 317.933†	5039.3	99.09	1.97%	[1.25]	mg/L
Cd 226.502†	155.0	5.57	3.59%	[0.0025]	mg/L
Co 228.616†	923.1	1.52	0.17%	[0.025]	mg/L
Cr 267.716†	625.6	23.39	3.74%	[0.005]	mg/L
Cu 324.752†	2948.7	20.93	0.71%	[0.0125]	mg/L
Fe 273.955†	30.5	4.04	13.25%	[0.050]	mg/L
K 766.490†	3249.9	59.81	1.84%	[1.25]	mg/L
Mg 279.077†	22444.8	105.44	0.47%	[1.25]	mg/L
Mn 257.610†	6275.9	58.33	0.93%	[0.0075]	mg/L
Na 589.592†	10297.1	199.92	1.94%	[1.25]	mg/L
Ni 231.604†	740.7	26.70	3.60%	[0.020]	mg/L
Pb 220.353†	32.0	0.42	1.32%	[0.005]	mg/L
Sb 206.836†	69.6	13.33	19.15%	[0.030]	mg/L
Se 196.026†	19.5	1.89	9.67%	[0.005]	mg/L
Tl 190.801†	9.6	1.74	18.14%	[0.0125]	mg/L
V 292.402†	2003.5	31.81	1.59%	[0.0125]	mg/L
Zn 213.857†	41.2	0.21	0.50%	[0.030]	mg/L
Ag 338.289†	533.9	50.62	9.48%	[0.005]	mg/L

Sequence No.: 3 — **Autosampler Location: 2**
Sample ID: Low Level Cal — **Date Collected: 10/24/2014 8:49:44 AM**
Analyst: — **Data Type: Original**
Initial Sample Wt: — **Initial Sample Vol:**
Dilution: — **Sample Prep Vol:**
Wash Time: 75 — **Auto Dilution Factor: 1**

Nebulizer Parameters: Low Level Cal

Analyte	Back Pressure	Flow
All	130.0 kPa	0.55 L/min

Mean Data: Low Level Cal

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	1537260.8	95.06	0.01%	1.018	mg/L
Ag 328.068†	1747.2	55.97	3.20%	[0.010]	mg/L
Al 308.215†	125.6	2.82	2.24%	[0.200]	mg/L
As 188.979†	22.6	0.89	3.94%	[0.010]	mg/L
Ba 233.527†	14417.0	33.25	0.23%	[0.100]	mg/L
Be 313.107†	8970.9	29.67	0.33%	[0.005]	mg/L
Ca 317.933†	10886.8	145.53	1.34%	[2.50]	mg/L
Cd 226.502†	321.3	10.61	3.30%	[0.005]	mg/L
Co 228.616†	1879.9	8.17	0.43%	[0.050]	mg/L
Cr 267.716†	1225.0	32.20	2.63%	[0.010]	mg/L
Cu 324.752†	5798.6	148.30	2.56%	[0.025]	mg/L
Fe 273.955†	56.7	1.57	2.78%	[0.100]	mg/L
K 766.490†	5952.3	155.78	2.62%	[2.50]	mg/L
Mg 279.077†	44878.0	72.78	0.16%	[2.50]	mg/L
Mn 257.610†	11354.2	5.55	0.05%	[0.015]	mg/L
Na 589.592†	19512.9	77.29	0.40%	[2.50]	mg/L
Ni 231.604†	1541.8	29.75	1.93%	[0.040]	mg/L
Pb 220.353†	80.6	7.82	9.70%	[0.010]	mg/L
Sb 206.836†	167.2	13.84	8.28%	[0.060]	mg/L
Se 196.026†	24.9	4.44	17.83%	[0.010]	mg/L
Tl 190.801†	21.0	3.11	14.81%	[0.025]	mg/L
V 292.402†	4043.6	68.08	1.68%	[0.025]	mg/L
Zn 213.857†	80.6	0.53	0.65%	[0.060]	mg/L
Ag 338.289†	1060.1	150.31	14.18%	[0.01]	mg/L

Sequence No.: 4 Autosampler Location: 3
Sample ID: Mid Level Cal Date Collected: 10/24/2014 8:53:58 AM
Analyst: Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time: 75 Auto Dilution Factor: 1

Nebulizer Parameters: Mid Level Cal

Analyte	Back Pressure	Flow
All	130.0 kPa	0.55 L/min

Mean Data: Mid Level Cal

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	1628417.6	4140.53	0.25%	1.079	mg/L
Ag 328.068†	9087.6	96.23	1.06%	[0.050]	mg/L
Al 308.215†	539.6	3.44	0.64%	[1.00]	mg/L
As 188.979†	91.6	0.01	0.01%	[0.050]	mg/L
Ba 233.527†	72167.2	76.31	0.11%	[0.500]	mg/L
Be 313.107†	45526.0	28.94	0.06%	[0.025]	mg/L
Ca 317.933†	52217.6	333.13	0.64%	[12.5]	mg/L
Cd 226.502†	1662.9	6.75	0.41%	[0.025]	mg/L
Co 228.616†	9615.4	42.19	0.44%	[0.250]	mg/L
Cr 267.716†	6119.9	78.46	1.28%	[0.050]	mg/L
Cu 324.752†	27863.3	11.19	0.04%	[0.125]	mg/L
Fe 273.955†	271.8	6.51	2.40%	[0.500]	mg/L
K 766.490†	29192.5	111.16	0.38%	[12.5]	mg/L
Mg 279.077†	220726.7	348.95	0.16%	[12.5]	mg/L
Mn 257.610†	56771.4	184.25	0.32%	[0.075]	mg/L
Na 589.592†	95571.3	708.46	0.74%	[12.5]	mg/L
Ni 231.604†	7791.1	59.61	0.77%	[0.200]	mg/L
Pb 220.353†	341.4	14.64	4.29%	[0.050]	mg/L
Sb 206.836†	847.9	5.45	0.64%	[0.300]	mg/L
Se 196.026†	90.9	9.92	10.92%	[0.050]	mg/L
Tl 190.801†	153.9	2.53	1.64%	[0.125]	mg/L
V 292.402†	19667.5	35.41	0.18%	[0.125]	mg/L
Zn 213.857†	395.3	3.75	0.95%	[0.300]	mg/L
Ag 338.289†	4823.8	233.49	4.84%	[0.05]	mg/L

Sequence No.: 5
Sample ID: Pb LL
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 4
Date Collected: 10/24/2014 8:58:12 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Nebulizer Parameters: Pb LL

Analyte	Back Pressure	Flow
All	130.0 kPa	0.55 L/min

Mean Data: Pb LL

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	1451000.4	447.71	0.03%	0.9611	mg/L
Pb†	7.6	1.29	17.03%	[0.100]	mg/L

Sequence No.: 6
Sample ID: Pb HL
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 5
Date Collected: 10/24/2014 9:01:44 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Nebulizer Parameters: Pb HL

Analyte	Back Pressure	Flow
All	131.0 kPa	0.55 L/min

Mean Data: Pb HL

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	1534470.8	10682.59	0.70%	1.016	mg/L
Pb†	994.7	3.06	0.31%	[10.0]	mg/L

Sequence No.: 7
Sample ID: High Level Cal
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 6
Date Collected: 10/24/2014 9:05:15 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Nebulizer Parameters: High Level Cal

Analyte	Back Pressure	Flow
All	131.0 kPa	0.55 L/min

Mean Data: High Level Cal

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	1471068.5	8492.08	0.58%	0.9744	mg/L
Ag 328.068†	391358.1	223.67	0.06%	[2.00]	mg/L
Al 308.215†	5539.4	88.38	1.60%	[10.0]	mg/L
As 188.979†	3600.7	35.15	0.98%	[2.00]	mg/L
Ba 233.527†	1443479.6	2879.14	0.20%	[10.0]	mg/L
Be 313.107†	460644.7	228.73	0.05%	[0.250]	mg/L
Ca 317.933†	218606.1	1641.36	0.75%	[50.0]	mg/L
Cd 226.502†	61181.7	36.57	0.06%	[1.00]	mg/L
Co 228.616†	97031.8	13.46	0.01%	[2.50]	mg/L
Cr 267.716†	219983.0	61.88	0.03%	[2.00]	mg/L
Cu 324.752†	280743.1	233.09	0.08%	[1.25]	mg/L
Fe 273.955†	2861.6	24.44	0.85%	[5.00]	mg/L
K 766.490†	118280.2	816.06	0.69%	[50.0]	mg/L
Mg 279.077†	874297.4	1422.47	0.16%	[50.0]	mg/L
Mn 257.610†	2308907.2	3746.46	0.16%	[3.00]	mg/L
Na 589.592†	384337.0	2559.31	0.67%	[50.0]	mg/L

Ni 231.604†	292496.0	192.09	0.07%	[8.00]	mg/L
Pb 220.353†	6871.0	70.74	1.03%	[1.00]	mg/L
Sb 206.836†	35586.2	315.73	0.89%	[12.0]	mg/L
Se 196.026†	2170.5	17.49	0.81%	[1.00]	mg/L
Tl 190.801†	2840.8	31.02	1.09%	[2.00]	mg/L
V 292.402†	388845.2	272.00	0.07%	[2.50]	mg/L
Zn 213.857†	5237.0	122.67	2.34%	[4.00]	mg/L
Pb†	88.4	4.04	4.57%	[1.00]	mg/L
Ag 338.289†	188082.3	34.03	0.02%	[2.00]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	4	Lin Thru 0	0.0	195700	0.00000	0.999998	
Al 308.215	4	Lin Thru 0	0.0	553.8	0.00000	0.999991	
As 188.979	4	Lin Thru 0	0.0	1800	0.00000	0.999999	
Ba 233.527	4	Lin Thru 0	0.0	144300	0.00000	1.000000	
Be 313.107	4	Lin Thru 0	0.0	1842000	0.00000	0.999999	
Ca 317.933	4	Lin Thru 0	0.0	4360	0.00000	0.999943	
Cd 226.502	4	Lin Thru 0	0.0	61190	0.00000	0.999998	
Co 228.616	4	Lin Thru 0	0.0	38810	0.00000	0.999999	
Cr 267.716	4	Lin Thru 0	0.0	110000	0.00000	0.999996	
Cu 324.752	4	Lin Thru 0	0.0	224600	0.00000	0.999999	
Fe 273.955	4	Lin Thru 0	0.0	572.0	0.00000	0.999987	
K 766.490	4	Lin Thru 0	0.0	2364	0.00000	0.999993	
Mg 279.077	4	Lin Thru 0	0.0	17500	0.00000	0.999996	
Mn 257.610	4	Lin Thru 0	0.0	769600	0.00000	1.000000	
Na 589.592	4	Lin Thru 0	0.0	7685	0.00000	0.999997	
Ni 231.604	4	Lin Thru 0	0.0	36560	0.00000	0.999999	
Pb 220.353	4	Lin Thru 0	0.0	6871	0.00000	0.999998	
Sb 206.836	4	Lin Thru 0	0.0	2965	0.00000	0.999999	
Se 196.026	4	Lin Thru 0	0.0	2170	0.00000	0.999958	
Tl 190.801	4	Lin Thru 0	0.0	1420	0.00000	0.999949	
V 292.402	4	Lin Thru 0	0.0	155500	0.00000	1.000000	
Zn 213.857	4	Lin Thru 0	0.0	1309	0.00000	1.000000	
Pb	3	Lin Thru 0	0.0	99.36	0.00000	0.999936	
Ag 338.289	4	Lin Thru 0	0.0	94040	0.00000	1.000000	

Sequence No.: 8 **Autosampler Location: 6**
Sample ID: IPC **Date Collected: 10/24/2014 9:09:34 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 75 **Auto Dilution Factor: 1**

Nebulizer Parameters: IPC

Analyte	Back Pressure	Flow
All	131.0 kPa	0.55 L/min

Mean Data: IPC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1484809.5	0.9835	mg/L	0.00217				0.22%
Ag 328.068†	391178.1	2.002	mg/L	0.0003	2.002	mg/L	0.0003	0.02%
QC value within limits for Ag 328.068 Recovery = 100.10%								
Al 308.215†	5507.6	9.957	mg/L	0.0250	9.957	mg/L	0.0250	0.25%
QC value within limits for Al 308.215 Recovery = 99.57%								
As 188.979†	3576.4	1.985	mg/L	0.0031	1.985	mg/L	0.0031	0.16%
QC value within limits for As 188.979 Recovery = 99.27%								
Ba 233.527†	1447571.7	10.03	mg/L	0.008	10.03	mg/L	0.008	0.08%
QC value within limits for Ba 233.527 Recovery = 100.28%								
Be 313.107†	461523.4	0.2509	mg/L	0.00004	0.2509	mg/L	0.00004	0.01%
QC value within limits for Be 313.107 Recovery = 100.34%								
Ca 317.933†	219209.5	50.27	mg/L	0.089	50.27	mg/L	0.089	0.18%
QC value within limits for Ca 317.933 Recovery = 100.54%								
Cd 226.502†	61289.8	0.9999	mg/L	0.00119	0.9999	mg/L	0.00119	0.12%
QC value within limits for Cd 226.502 Recovery = 99.99%								
Co 228.616†	97233.9	2.505	mg/L	0.0033	2.505	mg/L	0.0033	0.13%

QC value within limits for Co 228.616 Recovery = 100.22%

Cr 267.716†	220038.6	1.999 mg/L	0.0007	1.999 mg/L	0.0007	0.04%
QC value within limits for Cr 267.716 Recovery = 99.97%						
Cu 324.752†	280983.7	1.252 mg/L	0.0018	1.252 mg/L	0.0018	0.14%
QC value within limits for Cu 324.752 Recovery = 100.14%						
Fe 273.955†	2849.8	4.946 mg/L	0.0466	4.946 mg/L	0.0466	0.94%
QC value within limits for Fe 273.955 Recovery = 98.92%						
K 766.490†	118202.5	50.00 mg/L	0.188	50.00 mg/L	0.188	0.38%
QC value within limits for K 766.490 Recovery = 100.00%						
Mg 279.077†	876626.0	50.08 mg/L	0.002	50.08 mg/L	0.002	0.00%
QC value within limits for Mg 279.077 Recovery = 100.17%						
Mn 257.610†	2315155.7	3.009 mg/L	0.0016	3.009 mg/L	0.0016	0.05%
QC value within limits for Mn 257.610 Recovery = 100.29%						
Na 589.592†	384701.3	50.06 mg/L	0.135	50.06 mg/L	0.135	0.27%
QC value within limits for Na 589.592 Recovery = 100.12%						
Ni 231.604†	292708.7	8.005 mg/L	0.0001	8.005 mg/L	0.0001	0.00%
QC value within limits for Ni 231.604 Recovery = 100.07%						
Pb 220.353†	6765.6	0.9910 mg/L	0.00282	0.9910 mg/L	0.00282	0.28%
QC value within limits for Pb 220.353 Recovery = 99.10%						
Sb 206.836†	35118.8	11.80 mg/L	0.004	11.80 mg/L	0.004	0.03%
QC value within limits for Sb 206.836 Recovery = 98.35%						
Se 196.026†	2156.8	0.9932 mg/L	0.00096	0.9932 mg/L	0.00096	0.10%
QC value within limits for Se 196.026 Recovery = 99.32%						
Tl 190.801†	2806.1	1.943 mg/L	0.0142	1.943 mg/L	0.0142	0.73%
QC value within limits for Tl 190.801 Recovery = 97.15%						
V 292.402†	389139.0	2.518 mg/L	0.0038	2.518 mg/L	0.0038	0.15%
QC value within limits for V 292.402 Recovery = 100.70%						
Zn 213.857†	5195.8	3.924 mg/L	0.0074	3.924 mg/L	0.0074	0.19%
QC value within limits for Zn 213.857 Recovery = 98.09%						
Pb†	84.1	0.8520 mg/L	0.04416	0.8520 mg/L	0.04416	5.18%
QC value less than the lower limit for Pb Recovery = 85.20%						
Ag 338.289†	188462.2	2.056 mg/L	0.0008	2.056 mg/L	0.0008	0.04%

QC Failed. Continue with analysis.

==========

Sequence No.: 9
Sample ID: ICV
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 7
Date Collected: 10/24/2014 9:13:52 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Nebulizer Parameters: ICV

Analyte	Back Pressure	Flow
All	131.0 kPa	0.55 L/min

Mean Data: ICV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Y 371.029	1469478.1	0.9733 mg/L	0.00302			0.31%
Ag 328.068†	235429.3	1.206 mg/L	0.0010	1.206 mg/L	0.0010	0.08%
QC value within limits for Ag 328.068 Recovery = 96.47%						
Al 308.215†	5344.7	9.660 mg/L	0.0706	9.660 mg/L	0.0706	0.73%
QC value within limits for Al 308.215 Recovery = 96.60%						
As 188.979†	878.8	0.4876 mg/L	0.00144	0.4876 mg/L	0.00144	0.30%
QC value within limits for As 188.979 Recovery = 97.51%						
Ba 233.527†	1412066.4	9.782 mg/L	0.0076	9.782 mg/L	0.0076	0.08%
QC value within limits for Ba 233.527 Recovery = 97.82%						
Be 313.107†	454333.1	0.2468 mg/L	0.00001	0.2468 mg/L	0.00001	0.01%
QC value within limits for Be 313.107 Recovery = 98.71%						
Ca 317.933†	106129.7	24.34 mg/L	0.767	24.34 mg/L	0.767	3.15%
QC value within limits for Ca 317.933 Recovery = 97.36%						
Cd 226.502†	15979.3	0.2602 mg/L	0.00049	0.2602 mg/L	0.00049	0.19%
QC value within limits for Cd 226.502 Recovery = 104.09%						
Co 228.616†	89484.8	2.306 mg/L	0.0047	2.306 mg/L	0.0047	0.21%
QC value within limits for Co 228.616 Recovery = 92.23%						
Cr 267.716†	104573.0	0.9498 mg/L	0.00273	0.9498 mg/L	0.00273	0.29%
QC value within limits for Cr 267.716 Recovery = 94.98%						
Cu 324.752†	268766.9	1.197 mg/L	0.0009	1.197 mg/L	0.0009	0.08%
QC value within limits for Cu 324.752 Recovery = 95.79%						

Fe 273.955†	2722.4	4.722 mg/L	0.0180	4.722 mg/L	0.0180	0.38%
QC value within limits for Fe 273.955 Recovery = 94.44%						
K 766.490†	57015.2	24.12 mg/L	0.498	24.12 mg/L	0.498	2.06%
QC value within limits for K 766.490 Recovery = 96.47%						
Mg 279.077†	438864.0	25.07 mg/L	0.007	25.07 mg/L	0.007	0.03%
QC value within limits for Mg 279.077 Recovery = 100.26%						
Mn 257.610†	1904716.1	2.475 mg/L	0.0012	2.475 mg/L	0.0012	0.05%
QC value within limits for Mn 257.610 Recovery = 99.02%						
Na 589.592†	186891.3	24.32 mg/L	0.523	24.32 mg/L	0.523	2.15%
QC value within limits for Na 589.592 Recovery = 97.28%						
Ni 231.604†	88220.7	2.413 mg/L	0.0007	2.413 mg/L	0.0007	0.03%
QC value within limits for Ni 231.604 Recovery = 96.51%						
Pb 220.353†	3332.3	0.4882 mg/L	0.00358	0.4882 mg/L	0.00358	0.73%
QC value within limits for Pb 220.353 Recovery = 97.63%						
Sb 206.836†	13912.8	4.674 mg/L	0.0258	4.674 mg/L	0.0258	0.55%
QC value within limits for Sb 206.836 Recovery = 93.49%						
Se 196.026†	1083.9	0.4985 mg/L	0.00016	0.4985 mg/L	0.00016	0.03%
QC value within limits for Se 196.026 Recovery = 99.70%						
Tl 190.801†	733.4	0.4841 mg/L	0.00366	0.4841 mg/L	0.00366	0.76%
QC value within limits for Tl 190.801 Recovery = 96.83%						
V 292.402†	384246.5	2.478 mg/L	0.0003	2.478 mg/L	0.0003	0.01%
QC value within limits for V 292.402 Recovery = 99.11%						
Zn 213.857†	3254.2	2.471 mg/L	0.0080	2.471 mg/L	0.0080	0.32%
QC value within limits for Zn 213.857 Recovery = 98.84%						
Pb†	42.8	0.4299 mg/L	0.01472	0.4299 mg/L	0.01472	3.42%
QC value less than the lower limit for Pb Recovery = 85.98%						
Ag 338.289†	112986.4	1.228 mg/L	0.0010	1.228 mg/L	0.0010	0.08%

QC Failed. Continue with analysis.

Sequence No.: 10
Sample ID: ICB
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 1
Date Collected: 10/24/2014 9:18:08 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Nebulizer Parameters: ICB

Analyte	Back Pressure	Flow
All	131.0 kPa	0.55 L/min

Mean Data: ICB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1556920.9	1.031	mg/L	0.0090				0.87%
Ag 328.068†	-270.7	-0.0014	mg/L	0.00065	-0.0014	mg/L	0.00065	47.19%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 308.215†	-12.0	-0.0216	mg/L	0.03356	-0.0216	mg/L	0.03356	155.50%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	3.9	0.0022	mg/L	0.00039	0.0022	mg/L	0.00039	18.03%
QC value within limits for As 188.979 Recovery = Not calculated								
Ba 233.527†	200.8	0.0014	mg/L	0.00006	0.0014	mg/L	0.00006	4.67%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	111.9	0.0001	mg/L	0.00001	0.0001	mg/L	0.00001	11.67%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933†	22.3	0.0051	mg/L	0.00059	0.0051	mg/L	0.00059	11.61%
QC value within limits for Ca 317.933 Recovery = Not calculated								
Cd 226.502†	-6.4	-0.0001	mg/L	0.00004	-0.0001	mg/L	0.00004	35.99%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	6.4	0.0002	mg/L	0.00003	0.0002	mg/L	0.00003	17.10%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	4.1	0.0000	mg/L	0.00027	0.0000	mg/L	0.00027	719.26%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 324.752†	-10.8	-0.0000	mg/L	0.00043	-0.0000	mg/L	0.00043	911.36%
QC value within limits for Cu 324.752 Recovery = Not calculated								
Fe 273.955†	6.2	0.0108	mg/L	0.01093	0.0108	mg/L	0.01093	101.55%
QC value within limits for Fe 273.955 Recovery = Not calculated								
K 766.490†	124.1	0.0525	mg/L	0.02198	0.0525	mg/L	0.02198	41.87%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 279.077†	-112.4	-0.0065	mg/L	0.00279	-0.0065	mg/L	0.00279	43.24%

QC value within limits for Mg 279.077 Recovery = Not calculated

Mn 257.610†	14.3	0.0000 mg/L	0.00000	0.0000 mg/L	0.00000	15.42%

QC value within limits for Mn 257.610 Recovery = Not calculated

Na 589.592†	248.7	0.0324 mg/L	0.00461	0.0324 mg/L	0.00461	14.23%

QC value within limits for Na 589.592 Recovery = Not calculated

Ni 231.604†	17.3	0.0005 mg/L	0.00002	0.0005 mg/L	0.00002	4.71%

QC value within limits for Ni 231.604 Recovery = Not calculated

Pb 220.353†	18.8	0.0028 mg/L	0.00490	0.0028 mg/L	0.00490	178.09%

QC value within limits for Pb 220.353 Recovery = Not calculated

Sb 206.836†	23.7	0.0080 mg/L	0.00514	0.0080 mg/L	0.00514	64.42%

QC value within limits for Sb 206.836 Recovery = Not calculated

Se 196.026†	4.0	0.0018 mg/L	0.00199	0.0018 mg/L	0.00199	108.47%

QC value within limits for Se 196.026 Recovery = Not calculated

Tl 190.801†	-9.9	-0.0070 mg/L	0.00804	-0.0070 mg/L	0.00804	114.90%

QC value within limits for Tl 190.801 Recovery = Not calculated

V 292.402†	16.0	0.0001 mg/L	0.00037	0.0001 mg/L	0.00037	360.34%

QC value within limits for V 292.402 Recovery = Not calculated

Zn 213.857†	0.1	0.0001 mg/L	0.00083	0.0001 mg/L	0.00083	>999.9%

QC value within limits for Zn 213.857 Recovery = Not calculated

Pb†	-2.3	-0.0230 mg/L	0.03501	-0.0230 mg/L	0.03501	152.28%

QC value within limits for Pb Recovery = Not calculated

Ag 338.289†	105.1	0.0011 mg/L	0.00068	0.0011 mg/L	0.00068	60.40%

All analyte(s) passed QC.

Sequence No.: 11 **Autosampler Location: 2**
Sample ID: LLQC **Date Collected: 10/24/2014 9:22:19 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 75 **Auto Dilution Factor: 1**

Nebulizer Parameters: LLQC

Analyte	Back Pressure	Flow
All	131.0 kPa	0.55 L/min

Mean Data: LLQC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1542865.0	1.022	mg/L	0.0134				1.31%
Ag 328.068†	1615.1	0.0083	mg/L	0.00031	0.0083	mg/L	0.00031	3.70%
QC value within limits for Ag 328.068 Recovery = 82.97%								
Al 308.215†	153.8	0.2782	mg/L	0.01181	0.2782	mg/L	0.01181	4.24%
QC value greater than the upper limit for Al 308.215 Recovery = 139.08%								
As 188.979†	15.4	0.0085	mg/L	0.00264	0.0085	mg/L	0.00264	30.91%
QC value within limits for As 188.979 Recovery = 85.32%								
Ba 233.527†	14503.9	0.1005	mg/L	0.00039	0.1005	mg/L	0.00039	0.39%
QC value within limits for Ba 233.527 Recovery = 100.48%								
Be 313.107†	8921.6	0.0048	mg/L	0.00003	0.0048	mg/L	0.00003	0.58%
QC value within limits for Be 313.107 Recovery = 96.89%								
Ca 317.933†	11173.9	2.563	mg/L	0.0145	2.563	mg/L	0.0145	0.56%
QC value within limits for Ca 317.933 Recovery = 102.50%								
Cd 226.502†	329.3	0.0053	mg/L	0.00015	0.0053	mg/L	0.00015	2.81%
QC value within limits for Cd 226.502 Recovery = 106.98%								
Co 228.616†	1885.7	0.0486	mg/L	0.00058	0.0486	mg/L	0.00058	1.18%
QC value within limits for Co 228.616 Recovery = 97.18%								
Cr 267.716†	1237.9	0.0112	mg/L	0.00017	0.0112	mg/L	0.00017	1.54%
QC value within limits for Cr 267.716 Recovery = 112.46%								
Cu 324.752†	5877.9	0.0262	mg/L	0.00051	0.0262	mg/L	0.00051	1.94%
QC value within limits for Cu 324.752 Recovery = 104.74%								
Fe 273.955†	54.0	0.0941	mg/L	0.00364	0.0941	mg/L	0.00364	3.87%
QC value within limits for Fe 273.955 Recovery = 94.05%								
K 766.490†	6264.5	2.650	mg/L	0.0487	2.650	mg/L	0.0487	1.84%
QC value within limits for K 766.490 Recovery = 106.00%								
Mg 279.077†	44637.8	2.551	mg/L	0.0087	2.551	mg/L	0.0087	0.34%
QC value within limits for Mg 279.077 Recovery = 102.03%								
Mn 257.610†	11436.1	0.0149	mg/L	0.00004	0.0149	mg/L	0.00004	0.27%
QC value within limits for Mn 257.610 Recovery = 99.10%								
Na 589.592†	20052.2	2.609	mg/L	0.0148	2.609	mg/L	0.0148	0.57%
QC value within limits for Na 589.592 Recovery = 104.37%								

Ni 231.604†	1569.0	0.0429 mg/L	0.00105	0.0429 mg/L	0.00105	2.45%
QC value within limits for Ni 231.604 Recovery = 107.28%						
Pb 220.353†	82.0	0.0120 mg/L	0.00183	0.0120 mg/L	0.00183	15.19%
QC value within limits for Pb 220.353 Recovery = 120.24%						
Sb 206.836†	168.4	0.0566 mg/L	0.00634	0.0566 mg/L	0.00634	11.19%
QC value within limits for Sb 206.836 Recovery = 94.37%						
Se 196.026†	25.1	0.0116 mg/L	0.00496	0.0116 mg/L	0.00496	42.72%
QC value within limits for Se 196.026 Recovery = 116.07%						
Tl 190.801†	21.6	0.0146 mg/L	0.00093	0.0146 mg/L	0.00093	6.34%
QC value less than the lower limit for Tl 190.801 Recovery = 58.52%						
V 292.402†	3924.2	0.0253 mg/L	0.00072	0.0253 mg/L	0.00072	2.86%
QC value within limits for V 292.402 Recovery = 101.27%						
Zn 213.857†	78.8	0.0597 mg/L	0.00283	0.0597 mg/L	0.00283	4.75%
QC value within limits for Zn 213.857 Recovery = 99.47%						
Pb†	-2.2	-0.0220 mg/L	0.03685	-0.0220 mg/L	0.03685	167.44%
Ag 338.289†	1130.5	0.0123 mg/L	0.00147	0.0123 mg/L	0.00147	11.94%
QC Failed. Continue with analysis.						

Sequence No.: 12 **Autosampler Location: 4**
Sample ID: LLQC Radial Pb **Date Collected: 10/24/2014 9:26:32 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 75 **Auto Dilution Factor: 1**

Nebulizer Parameters: LLQC Radial Pb

Analyte	Back Pressure	Flow
All	131.0 kPa	0.55 L/min

Mean Data: LLQC Radial Pb

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1521771.8	1.008	mg/L	0.0064				0.64%
Ag 328.068†	-264.4	-0.0013	mg/L	0.00020	-0.0013	mg/L	0.00020	14.70%
Al 308.215†	-10.0	-0.0180	mg/L	0.03068	-0.0180	mg/L	0.03068	169.98%
As 188.979†	5.6	0.0031	mg/L	0.00011	0.0031	mg/L	0.00011	3.50%
Ba 233.527†	19.9	0.0001	mg/L	0.00008	0.0001	mg/L	0.00008	56.81%
Be 313.107†	45.2	0.0000	mg/L	0.00002	0.0000	mg/L	0.00002	61.73%
Ca 317.933†	-80.3	-0.0184	mg/L	0.00272	-0.0184	mg/L	0.00272	14.74%
Cd 226.502†	-5.0	-0.0001	mg/L	0.00008	-0.0001	mg/L	0.00008	101.91%
Co 228.616†	0.4	0.0000	mg/L	0.00015	0.0000	mg/L	0.00015	>999.9%
Cr 267.716†	-4.5	-0.0000	mg/L	0.00010	-0.0000	mg/L	0.00010	240.64%
Cu 324.752†	26.2	0.0001	mg/L	0.00008	0.0001	mg/L	0.00008	70.48%
Fe 273.955†	5.7	0.0100	mg/L	0.00377	0.0100	mg/L	0.00377	37.62%
K 766.490†	58.5	0.0247	mg/L	0.00592	0.0247	mg/L	0.00592	23.94%
Mg 279.077†	-54.8	-0.0032	mg/L	0.00138	-0.0032	mg/L	0.00138	43.50%
Mn 257.610†	-30.9	-0.0000	mg/L	0.00006	-0.0000	mg/L	0.00006	160.85%
Na 589.592†	109.2	0.0142	mg/L	0.00366	0.0142	mg/L	0.00366	25.77%
Ni 231.604†	-1.6	-0.0000	mg/L	0.00009	-0.0000	mg/L	0.00009	201.63%
Pb 220.353†	688.5	0.1002	mg/L	0.00237	0.1002	mg/L	0.00237	2.37%
Sb 206.836†	-1.6	-0.0005	mg/L	0.00664	-0.0005	mg/L	0.00664	>999.9%
Se 196.026†	1.1	0.0005	mg/L	0.00587	0.0005	mg/L	0.00587	>999.9%
Tl 190.801†	-16.7	-0.0118	mg/L	0.00402	-0.0118	mg/L	0.00402	34.12%
V 292.402†	148.3	0.0010	mg/L	0.00089	0.0010	mg/L	0.00089	93.62%
Zn 213.857†	6.8	0.0052	mg/L	0.00618	0.0052	mg/L	0.00618	118.76%
Pb†	3.0	0.0301	mg/L	0.04667	0.0301	mg/L	0.04667	154.91%
QC value less than the lower limit for Pb Recovery = 30.13%								
Ag 338.289†	119.5	0.0013	mg/L	0.00054	0.0013	mg/L	0.00054	42.77%
QC Failed. Continue with analysis.								

Sequence No.: 13 **Autosampler Location: 8**
Sample ID: ICSAB **Date Collected: 10/24/2014 9:30:46 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 75 **Auto Dilution Factor: 1**

Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	131.0 kPa	0.55 L/min

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1440019.5	0.9538	mg/L	0.00147				0.15%
Ag 328.068†	142099.7	0.7574	mg/L	0.00109	0.7574	mg/L	0.00109	0.14%
QC value within limits for Ag 328.068 Recovery = 100.99%								
Al 308.215†	149721.4	270.3	mg/L	1.86	270.3	mg/L	1.86	0.69%
QC value within limits for Al 308.215 Recovery = 108.14%								
As 188.979†	4510.8	2.500	mg/L	0.0033	2.500	mg/L	0.0033	0.13%
QC value within limits for As 188.979 Recovery = 100.00%								
Ba 233.527†	106812.8	0.7400	mg/L	0.00008	0.7400	mg/L	0.00008	0.01%
QC value within limits for Ba 233.527 Recovery = 98.66%								
Be 313.107†	446528.4	0.2425	mg/L	0.00007	0.2425	mg/L	0.00007	0.03%
QC value within limits for Be 313.107 Recovery = 97.00%								
Ca 317.933†	1144387.7	262.4	mg/L	0.37	262.4	mg/L	0.37	0.14%
QC value within limits for Ca 317.933 Recovery = 104.98%								
Cd 226.502†	44331.4	0.7128	mg/L	0.00060	0.7128	mg/L	0.00060	0.08%
QC value within limits for Cd 226.502 Recovery = 95.04%								
Co 228.616†	26629.6	0.6862	mg/L	0.00177	0.6862	mg/L	0.00177	0.26%
QC value within limits for Co 228.616 Recovery = 91.49%								
Cr 267.716†	77439.2	0.7052	mg/L	0.00063	0.7052	mg/L	0.00063	0.09%
QC value within limits for Cr 267.716 Recovery = 94.03%								
Cu 324.752†	167607.3	0.7582	mg/L	0.00171	0.7582	mg/L	0.00171	0.23%
QC value within limits for Cu 324.752 Recovery = 101.09%								
Fe 273.955†	52960.5	92.57	mg/L	0.988	92.57	mg/L	0.988	1.07%
QC value within limits for Fe 273.955 Recovery = 92.57%								
K 766.490†	126027.3	53.31	mg/L	0.033	53.31	mg/L	0.033	0.06%
QC value within limits for K 766.490 Recovery = 106.62%								
Mg 279.077†	4555284.4	260.0	mg/L	0.33	260.0	mg/L	0.33	0.13%
QC value within limits for Mg 279.077 Recovery = 104.01%								
Mn 257.610†	366362.5	0.4762	mg/L	0.00046	0.4762	mg/L	0.00046	0.10%
QC value within limits for Mn 257.610 Recovery = 95.24%								
Na 589.592†	766.9	0.0998	mg/L	0.00062	0.0998	mg/L	0.00062	0.62%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	26221.0	0.7171	mg/L	0.00188	0.7171	mg/L	0.00188	0.26%
QC value within limits for Ni 231.604 Recovery = 95.62%								
Pb 220.353†	17518.9	2.462	mg/L	0.0052	2.462	mg/L	0.0052	0.21%
QC value within limits for Pb 220.353 Recovery = 98.50%								
Sb 206.836†	-261.0	-0.0102	mg/L	0.00239	-0.0102	mg/L	0.00239	23.32%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	2684.1	1.264	mg/L	0.0114	1.264	mg/L	0.0114	0.90%
QC value within limits for Se 196.026 Recovery = 101.14%								
Tl 190.801†	3393.0	2.375	mg/L	0.0074	2.375	mg/L	0.0074	0.31%
QC value within limits for Tl 190.801 Recovery = 95.00%								
V 292.402†	115061.9	0.7453	mg/L	0.00079	0.7453	mg/L	0.00079	0.11%
QC value within limits for V 292.402 Recovery = 99.37%								
Zn 213.857†	954.4	0.6976	mg/L	0.00024	0.6976	mg/L	0.00024	0.03%
QC value within limits for Zn 213.857 Recovery = 93.01%								
Pb†	236.1	2.247	mg/L	0.0660	2.247	mg/L	0.0660	2.94%
QC value within limits for Pb Recovery = 89.87%								
Ag 338.289†	72280.4	0.7837	mg/L	0.00179	0.7837	mg/L	0.00179	0.23%

All analyte(s) passed QC.

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Sequence No.: 14
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 7
Date Collected: 10/24/2014 9:35:04 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	131.0 kPa	0.55 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1436009.2	0.9512	mg/L	0.00184				0.19%
Ag 328.068†	249421.5	1.278	mg/L	0.0124	1.278	mg/L	0.0124	0.97%
QC value within limits for Ag 328.068 Recovery = 102.20%								
Al 308.215†	5417.2	9.790	mg/L	0.0401	9.790	mg/L	0.0401	0.41%
QC value within limits for Al 308.215 Recovery = 97.90%								
As 188.979†	908.4	0.5040	mg/L	0.00063	0.5040	mg/L	0.00063	0.13%
QC value within limits for As 188.979 Recovery = 100.80%								
Ba 233.527†	1407376.6	9.750	mg/L	0.0123	9.750	mg/L	0.0123	0.13%
QC value within limits for Ba 233.527 Recovery = 97.50%								
Be 313.107†	455627.7	0.2475	mg/L	0.00004	0.2475	mg/L	0.00004	0.02%
QC value within limits for Be 313.107 Recovery = 98.99%								
Ca 317.933†	111477.1	25.57	mg/L	0.176	25.57	mg/L	0.176	0.69%
QC value within limits for Ca 317.933 Recovery = 102.26%								
Cd 226.502†	15488.5	0.2522	mg/L	0.00407	0.2522	mg/L	0.00407	1.61%
QC value within limits for Cd 226.502 Recovery = 100.87%								
Co 228.616†	92423.7	2.382	mg/L	0.0257	2.382	mg/L	0.0257	1.08%
QC value within limits for Co 228.616 Recovery = 95.26%								
Cr 267.716†	108755.6	0.9877	mg/L	0.01269	0.9877	mg/L	0.01269	1.28%
QC value within limits for Cr 267.716 Recovery = 98.77%								
Cu 324.752†	284852.3	1.269	mg/L	0.0121	1.269	mg/L	0.0121	0.95%
QC value within limits for Cu 324.752 Recovery = 101.52%								
Fe 273.955†	2814.7	4.881	mg/L	0.0184	4.881	mg/L	0.0184	0.38%
QC value within limits for Fe 273.955 Recovery = 97.61%								
K 766.490†	59562.2	25.20	mg/L	0.095	25.20	mg/L	0.095	0.38%
QC value within limits for K 766.490 Recovery = 100.78%								
Mg 279.077†	445163.9	25.42	mg/L	0.011	25.42	mg/L	0.011	0.04%
QC value within limits for Mg 279.077 Recovery = 101.70%								
Mn 257.610†	1895334.5	2.463	mg/L	0.0015	2.463	mg/L	0.0015	0.06%
QC value within limits for Mn 257.610 Recovery = 98.53%								
Na 589.592†	194400.0	25.30	mg/L	0.120	25.30	mg/L	0.120	0.47%
QC value within limits for Na 589.592 Recovery = 101.18%								
Ni 231.604†	91415.2	2.500	mg/L	0.0307	2.500	mg/L	0.0307	1.23%
QC value within limits for Ni 231.604 Recovery = 100.01%								
Pb 220.353†	3512.1	0.5145	mg/L	0.00023	0.5145	mg/L	0.00023	0.04%
QC value within limits for Pb 220.353 Recovery = 102.90%								
Sb 206.836†	13776.5	4.628	mg/L	0.0520	4.628	mg/L	0.0520	1.12%
QC value within limits for Sb 206.836 Recovery = 92.56%								
Se 196.026†	1086.0	0.4995	mg/L	0.00491	0.4995	mg/L	0.00491	0.98%
QC value within limits for Se 196.026 Recovery = 99.90%								
Tl 190.801†	754.6	0.4973	mg/L	0.00442	0.4973	mg/L	0.00442	0.89%
QC value within limits for Tl 190.801 Recovery = 99.45%								
V 292.402†	409919.0	2.643	mg/L	0.0289	2.643	mg/L	0.0289	1.09%
QC value within limits for V 292.402 Recovery = 105.73%								
Zn 213.857†	3352.7	2.546	mg/L	0.0088	2.546	mg/L	0.0088	0.35%
QC value within limits for Zn 213.857 Recovery = 101.83%								
Pb†	44.9	0.4519	mg/L	0.03545	0.4519	mg/L	0.03545	7.85%
QC value within limits for Pb Recovery = 90.38%								
Ag 338.289†	118377.2	1.287	mg/L	0.0110	1.287	mg/L	0.0110	0.85%

All analyte(s) passed QC.

Sequence No.: 15
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 1
Date Collected: 10/24/2014 9:39:26 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow
All	131.0 kPa	0.55 L/min

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1552107.7	1.028	mg/L	0.0046				0.45%
Ag 328.068†	-165.4	-0.0008	mg/L	0.00032	-0.0008	mg/L	0.00032	38.01%

QC value within limits for Ag 328.068 Recovery = Not calculated

Al 308.215†	10.4	0.0187 mg/L	0.00419	0.0187 mg/L	0.00419	22.39%	
QC value within limits for Al 308.215 Recovery = Not calculated							
As 188.979†	6.9	0.0039 mg/L	0.00166	0.0039 mg/L	0.00166	43.01%	1
QC value within limits for As 188.979 Recovery = Not calculated							
Ba 233.527†	195.7	0.0014 mg/L	0.00007	0.0014 mg/L	0.00007	5.20%	
QC value within limits for Ba 233.527 Recovery = Not calculated							
Be 313.107†	50.6	0.0000 mg/L	0.00001	0.0000 mg/L	0.00001	22.28%	
QC value within limits for Be 313.107 Recovery = Not calculated							
Ca 317.933†	40.1	0.0092 mg/L	0.00403	0.0092 mg/L	0.00403	43.79%	
QC value within limits for Ca 317.933 Recovery = Not calculated							
Cd 226.502†	-3.5	-0.0001 mg/L	0.00009	-0.0001 mg/L	0.00009	147.72%	
QC value within limits for Cd 226.502 Recovery = Not calculated							
Co 228.616†	4.4	0.0001 mg/L	0.00014	0.0001 mg/L	0.00014	120.83%	
QC value within limits for Co 228.616 Recovery = Not calculated							
Cr 267.716†	-6.6	-0.0001 mg/L	0.00002	-0.0001 mg/L	0.00002	39.27%	
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu 324.752†	320.9	0.0014 mg/L	0.00038	0.0014 mg/L	0.00038	26.77%	
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe 273.955†	9.4	0.0163 mg/L	0.00818	0.0163 mg/L	0.00818	50.04%	
QC value within limits for Fe 273.955 Recovery = Not calculated							
K 766.490†	134.1	0.0567 mg/L	0.04458	0.0567 mg/L	0.04458	78.56%	
QC value within limits for K 766.490 Recovery = Not calculated							
Mg 279.077†	-74.8	-0.0043 mg/L	0.00162	-0.0043 mg/L	0.00162	37.31%	
QC value within limits for Mg 279.077 Recovery = Not calculated							
Mn 257.610†	118.7	0.0002 mg/L	0.00002	0.0002 mg/L	0.00002	14.36%	
QC value within limits for Mn 257.610 Recovery = Not calculated							
Na 589.592†	-41.8	-0.0054 mg/L	0.00611	-0.0054 mg/L	0.00611	112.21%	
QC value within limits for Na 589.592 Recovery = Not calculated							
Ni 231.604†	14.3	0.0004 mg/L	0.00016	0.0004 mg/L	0.00016	39.83%	
QC value within limits for Ni 231.604 Recovery = Not calculated							
Pb 220.353†	6.7	0.0010 mg/L	0.00237	0.0010 mg/L	0.00237	243.28%	1
QC value within limits for Pb 220.353 Recovery = Not calculated							
Sb 206.836†	16.8	0.0057 mg/L	0.00009	0.0057 mg/L	0.00009	1.64%	
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	7.6	0.0035 mg/L	0.00155	0.0035 mg/L	0.00155	44.15%	
QC value within limits for Se 196.026 Recovery = Not calculated							
Tl 190.801†	-13.4	-0.0094 mg/L	0.00442	-0.0094 mg/L	0.00442	46.85%	
QC value within limits for Tl 190.801 Recovery = Not calculated							
V 292.402†	80.2	0.0005 mg/L	0.00029	0.0005 mg/L	0.00029	56.68%	
QC value within limits for V 292.402 Recovery = Not calculated							
Zn 213.857†	-0.8	-0.0006 mg/L	0.00114	-0.0006 mg/L	0.00114	189.30%	
QC value within limits for Zn 213.857 Recovery = Not calculated							
Pb†	-2.8	-0.0280 mg/L	0.04668	-0.0280 mg/L	0.04668	166.67%	
QC value within limits for Pb Recovery = Not calculated							
Ag 338.289†	168.8	0.0018 mg/L	0.00061	0.0018 mg/L	0.00061	34.22%	

All analyte(s) passed QC.

Sequence No.: 16
Sample ID: Blk 10/23 soil
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 38
Date Collected: 10/24/2014 9:43:37 AM
Data Type: Original
Initial Sample Vol: 50 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: Blk 10/23 soil

Analyte	Back Pressure	Flow
All	131.0 kPa	0.55 L/min

Mean Data: Blk 10/23 soil

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1621862.5	1.074	mg/L	0.0010				0.09%
Ag 328.068†	-464.6	-0.0023	mg/L	0.00067	-0.0023	mg/L	0.00067	28.71%
Al 308.215†	46.9	0.0846	mg/L	0.01320	0.0846	mg/L	0.01320	15.60%
As 188.979†	6.9	0.0038	mg/L	0.00137	0.0038	mg/L	0.00137	35.98%
Ba 233.527†	102.5	0.0007	mg/L	0.00014	0.0007	mg/L	0.00014	19.70%
Be 313.107†	170.8	0.0001	mg/L	0.00001	0.0001	mg/L	0.00001	14.11%
Ca 317.933†	509.0	0.1167	mg/L	0.00145	0.1167	mg/L	0.00145	1.24%

Cd 226.502†	9.8	0.0002 mg/L	0.00000	0.0002 mg/L	0.00000	1.28%
Co 228.616†	21.1	0.0005 mg/L	0.00015	0.0005 mg/L	0.00015	26.73%
Cr 267.716†	153.6	0.0014 mg/L	0.00029	0.0014 mg/L	0.00029	20.40%
Cu 324.752†	277.4	0.0012 mg/L	0.00002	0.0012 mg/L	0.00002	1.70%
Fe 273.955†	59.5	0.1040 mg/L	0.00066	0.1040 mg/L	0.00066	0.63%
K 766.490†	23.6	0.0100 mg/L	0.02644	0.0100 mg/L	0.02644	264.46%
Mg 279.077†	286.1	0.0160 mg/L	0.00081	0.0160 mg/L	0.00081	5.07%
Mn 257.610†	1289.4	0.0017 mg/L	0.00003	0.0017 mg/L	0.00003	1.96%
Na 589.592†	33.3	0.0043 mg/L	0.00398	0.0043 mg/L	0.00398	91.76%
Ni 231.604†	44.2	0.0012 mg/L	0.00033	0.0012 mg/L	0.00033	27.12%
Pb 220.353†	10.8	0.0015 mg/L	0.00070	0.0015 mg/L	0.00070	45.40%
Sb 206.836†	6.1	0.0021 mg/L	0.00375	0.0021 mg/L	0.00375	179.72%
Se 196.026†	1.5	0.0007 mg/L	0.00911	0.0007 mg/L	0.00911	>999.9%
Tl 190.801†	-17.1	-0.0120 mg/L	0.00032	-0.0120 mg/L	0.00032	2.68%
V 292.402†	92.7	0.0006 mg/L	0.00012	0.0006 mg/L	0.00012	20.44%
Zn 213.857†	5.1	0.0039 mg/L	0.00132	0.0039 mg/L	0.00132	33.98%
Pb†	-5.3	-0.0533 mg/L	0.02325	-0.0533 mg/L	0.02325	43.61%
Ag 338.289†	392.3	0.0042 mg/L	0.00050	0.0042 mg/L	0.00050	11.88%

Sequence No.: 17
Sample ID: lcs
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 39
Date Collected: 10/24/2014 9:47:50 AM
Data Type: Original
Initial Sample Vol: 50 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: lcs

Analyte	Back Pressure	Flow
All	131.0 kPa	0.55 L/min

Mean Data: lcs

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1531445.5	1.014	mg/L	0.0058				0.57%
Ag 328.068†	47712.3	0.2451	mg/L	0.00025	0.2451	mg/L	0.00025	0.10%
Al 308.215†	1404.1	2.541	mg/L	0.0315	2.541	mg/L	0.0315	1.24%
As 188.979†	4429.0	2.459	mg/L	0.0152	2.459	mg/L	0.0152	0.62%
Ba 233.527†	349997.3	2.425	mg/L	0.0005	2.425	mg/L	0.0005	0.02%
Be 313.107†	904128.2	0.4912	mg/L	0.00009	0.4912	mg/L	0.00009	0.02%
Ca 317.933†	17550.2	4.025	mg/L	0.0088	4.025	mg/L	0.0088	0.22%
Cd 226.502†	61732.1	1.008	mg/L	0.0007	1.008	mg/L	0.0007	0.07%
Co 228.616†	38026.1	0.9798	mg/L	0.00251	0.9798	mg/L	0.00251	0.26%
Cr 267.716†	259278.4	2.357	mg/L	0.0002	2.357	mg/L	0.0002	0.01%
Cu 324.752†	550500.5	2.452	mg/L	0.0008	2.452	mg/L	0.0008	0.03%
Fe 273.955†	1392.2	2.424	mg/L	0.0143	2.424	mg/L	0.0143	0.59%
K 766.490†	99037.4	41.89	mg/L	0.150	41.89	mg/L	0.150	0.36%
Mg 279.077†	141036.9	8.052	mg/L	0.0051	8.052	mg/L	0.0051	0.06%
Mn 257.610†	749969.6	0.9747	mg/L	0.00001	0.9747	mg/L	0.00001	0.00%
Na 589.592†	90811.3	11.82	mg/L	0.010	11.82	mg/L	0.010	0.08%
Ni 231.604†	186294.5	5.095	mg/L	0.0061	5.095	mg/L	0.0061	0.12%
Pb 220.353†	17082.3	2.489	mg/L	0.0144	2.489	mg/L	0.0144	0.58%
Sb 206.836†	6827.4	2.251	mg/L	0.0097	2.251	mg/L	0.0097	0.43%
Se 196.026†	5314.6	2.450	mg/L	0.0012	2.450	mg/L	0.0012	0.05%
Tl 190.801†	3459.3	2.423	mg/L	0.0052	2.423	mg/L	0.0052	0.21%
V 292.402†	143904.2	0.9437	mg/L	0.00035	0.9437	mg/L	0.00035	0.04%
Zn 213.857†	3245.3	2.453	mg/L	0.0088	2.453	mg/L	0.0088	0.36%
Pb†	228.7	2.301	mg/L	0.0354	2.301	mg/L	0.0354	1.54%
Ag 338.289†	19547.4	0.2671	mg/L	0.00009	0.2671	mg/L	0.00009	0.03%

Sequence No.: 18
Sample ID: lcs dup
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 40
Date Collected: 10/24/2014 9:52:04 AM
Data Type: Original
Initial Sample Vol: 50 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: lcs dup

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: lcs dup

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1541853.4	1.021	mg/L	0.0075				0.74%
Ag 328.068†	47407.0	0.2435	mg/L	0.00032	0.2435	mg/L	0.00032	0.13%
Al 308.215†	1372.2	2.483	mg/L	0.0387	2.483	mg/L	0.0387	1.56%
As 188.979†	4469.5	2.481	mg/L	0.0003	2.481	mg/L	0.0003	0.01%
Ba 233.527†	347505.6	2.407	mg/L	0.0072	2.407	mg/L	0.0072	0.30%
Be 313.107†	894548.6	0.4860	mg/L	0.00073	0.4860	mg/L	0.00073	0.15%
Ca 317.933†	17898.1	4.105	mg/L	0.0501	4.105	mg/L	0.0501	1.22%
Cd 226.502†	61389.3	1.002	mg/L	0.0013	1.002	mg/L	0.0013	0.13%
Co 228.616†	37718.4	0.9719	mg/L	0.00243	0.9719	mg/L	0.00243	0.25%
Cr 267.716†	257781.1	2.343	mg/L	0.0009	2.343	mg/L	0.0009	0.04%
Cu 324.752†	550470.3	2.451	mg/L	0.0000	2.451	mg/L	0.0000	0.00%
Fe 273.955†	1370.1	2.385	mg/L	0.0386	2.385	mg/L	0.0386	1.62%
K 766.490†	100087.9	42.34	mg/L	0.561	42.34	mg/L	0.561	1.32%
Mg 279.077†	139847.6	7.984	mg/L	0.0241	7.984	mg/L	0.0241	0.30%
Mn 257.610†	747757.9	0.9718	mg/L	0.00096	0.9718	mg/L	0.00096	0.10%
Na 589.592†	91875.7	11.96	mg/L	0.154	11.96	mg/L	0.154	1.29%
Ni 231.604†	186044.0	5.088	mg/L	0.0057	5.088	mg/L	0.0057	0.11%
Pb 220.353†	17311.8	2.523	mg/L	0.0079	2.523	mg/L	0.0079	0.31%
Sb 206.836†	6912.1	2.280	mg/L	0.0143	2.280	mg/L	0.0143	0.63%
Se 196.026†	5354.2	2.468	mg/L	0.0089	2.468	mg/L	0.0089	0.36%
Tl 190.801†	3510.0	2.459	mg/L	0.0148	2.459	mg/L	0.0148	0.60%
V 292.402†	144146.7	0.9452	mg/L	0.00046	0.9452	mg/L	0.00046	0.05%
Zn 213.857†	3276.1	2.477	mg/L	0.0207	2.477	mg/L	0.0207	0.84%
Pb†	233.6	2.350	mg/L	0.0067	2.350	mg/L	0.0067	0.28%
Ag 338.289†	19381.0	0.2650	mg/L	0.00100	0.2650	mg/L	0.00100	0.38%

Sequence No.: 19
Sample ID: 144638-04
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 44
Date Collected: 10/24/2014 9:56:18 AM
Data Type: Original
Initial Sample Vol: 0.495 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-04

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-04

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1672373.9	1.108	mg/L	0.0017				0.16%
Ag 328.068†	-9192.4	-0.0033	mg/L	0.00025	-0.3328	mg/L	0.02481	7.46%
Al 308.215†	36842.9	66.52	mg/L	0.701	6720	mg/L	70.78	1.05%
As 188.979†	73.8	0.0470	mg/L	0.00178	4.751	mg/L	0.1800	3.79%
Ba 233.527†	91431.4	0.6334	mg/L	0.00214	63.98	mg/L	0.216	0.34%
Be 313.107†	8686.2	0.0047	mg/L	0.00006	0.4781	mg/L	0.00577	1.21%
Ca 317.933†	624185.1	143.1	mg/L	1.49	14460	mg/L	150.55	1.04%
Cd 226.502†	930.2	0.0025	mg/L	0.00014	0.2561	mg/L	0.01405	5.49%
Co 228.616†	1928.2	0.0497	mg/L	0.00006	5.019	mg/L	0.0065	0.13%
Cr 267.716†	11374.1	0.1055	mg/L	0.00013	10.65	mg/L	0.013	0.12%
Cu 324.752†	45649.8	0.2201	mg/L	0.00037	22.23	mg/L	0.037	0.17%
Fe 273.955†	74852.5	130.9	mg/L	1.77	13220	mg/L	179.18	1.36%
K 766.490†	20755.5	8.780	mg/L	0.1078	886.8	mg/L	10.89	1.23%
Mg 279.077†	1085774.5	61.60	mg/L	0.006	6222	mg/L	0.61	0.01%
Mn 257.610†	2273908.4	2.955	mg/L	0.0005	298.4	mg/L	0.05	0.02%
Na 589.592†	4626.6	0.6020	mg/L	0.01293	60.81	mg/L	1.306	2.15%
Ni 231.604†	5514.3	0.1508	mg/L	0.00038	15.23	mg/L	0.038	0.25%
Pb 220.353†	3457.6	0.4912	mg/L	0.00164	49.61	mg/L	0.165	0.33%
Sb 206.836†	-138.6	0.0199	mg/L	0.00510	2.008	mg/L	0.5150	25.64%
Se 196.026†	-11.0	0.0057	mg/L	0.00701	0.5734	mg/L	0.70771	123.43%
Tl 190.801†	-45.2	-0.0203	mg/L	0.00295	-2.046	mg/L	0.2978	14.56%
V 292.402†	20832.8	0.1347	mg/L	0.00007	13.61	mg/L	0.007	0.05%

Zn 213.857†	1378.5	1.037	mg/L	0.0051	104.7	mg/L	0.51	0.49%
Pb†	48.4	0.4754	mg/L	0.02275	48.02	mg/L	2.298	4.78%
Ag 338.289†	0.8	0.0009	mg/L	0.00042	0.0937	mg/L	0.04247	45.33%

Sequence No.: 20
Sample ID: 144638-06
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 46
Date Collected: 10/24/2014 10:00:37 AM
Data Type: Original
Initial Sample Vol: 0.48 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-06

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-06

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1701116.0	1.127	mg/L	0.0146				1.30%
Ag 328.068†	-11678.5	-0.0062	mg/L	0.00071	-0.6467	mg/L	0.07346	11.36%
Al 308.215†	70707.5	127.7	mg/L	2.68	13300	mg/L	279.52	2.10%
As 188.979†	44.2	0.0300	mg/L	0.00048	3.122	mg/L	0.0503	1.61%
Ba 233.527†	134487.7	0.9317	mg/L	0.00268	97.05	mg/L	0.279	0.29%
Be 313.107†	12062.4	0.0066	mg/L	0.00003	0.6852	mg/L	0.00278	0.41%
Ca 317.933†	137283.0	31.48	mg/L	0.661	3280	mg/L	68.89	2.10%
Cd 226.502†	1153.7	0.0041	mg/L	0.00001	0.4257	mg/L	0.00150	0.35%
Co 228.616†	3191.8	0.0822	mg/L	0.00170	8.567	mg/L	0.1768	2.06%
Cr 267.716†	19217.9	0.1772	mg/L	0.00308	18.46	mg/L	0.321	1.74%
Cu 324.752†	41907.6	0.2072	mg/L	0.00020	21.58	mg/L	0.021	0.10%
Fe 273.955†	91599.1	160.1	mg/L	3.42	16680	mg/L	355.84	2.13%
K 766.490†	28365.8	12.00	mg/L	0.301	1250	mg/L	31.32	2.51%
Mg 279.077†	641949.6	36.14	mg/L	0.148	3764	mg/L	15.44	0.41%
Mn 257.610†	2026124.6	2.633	mg/L	0.0054	274.2	mg/L	0.56	0.21%
Na 589.592†	3309.6	0.4307	mg/L	0.02658	44.86	mg/L	2.769	6.17%
Ni 231.604†	9482.3	0.2593	mg/L	0.00525	27.01	mg/L	0.547	2.02%
Pb 220.353†	1399.9	0.1672	mg/L	0.00431	17.42	mg/L	0.449	2.58%
Sb 206.836†	-239.7	0.0089	mg/L	0.00336	0.9250	mg/L	0.34979	37.82%
Se 196.026†	20.5	0.0251	mg/L	0.00506	2.616	mg/L	0.5269	20.14%
Tl 190.801†	-6.1	0.0054	mg/L	0.00225	0.5624	mg/L	0.23460	41.71%
V 292.402†	31731.1	0.2054	mg/L	0.00024	21.39	mg/L	0.025	0.12%
Zn 213.857†	1084.9	0.8240	mg/L	0.00869	85.83	mg/L	0.905	1.05%
Pb†	20.5	0.1216	mg/L	0.01711	12.67	mg/L	1.783	14.07%
Ag 338.289†	-116.4	0.0030	mg/L	0.00132	0.3084	mg/L	0.13760	44.61%

Sequence No.: 21
Sample ID: 144638-10
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 50
Date Collected: 10/24/2014 10:04:52 AM
Data Type: Original
Initial Sample Vol: 0.472 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-10

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-10

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1679743.1	1.113	mg/L	0.0074				0.67%
Ag 328.068†	-10064.0	-0.0050	mg/L	0.00088	-0.5258	mg/L	0.09295	17.68%
Al 308.215†	40789.5	73.65	mg/L	1.257	7802	mg/L	133.12	1.71%
As 188.979†	63.5	0.0416	mg/L	0.00031	4.403	mg/L	0.0328	0.74%
Ba 233.527†	91325.8	0.6327	mg/L	0.00064	67.02	mg/L	0.067	0.10%
Be 313.107†	7766.6	0.0042	mg/L	0.00001	0.4491	mg/L	0.00089	0.20%
Ca 317.933†	177316.9	40.66	mg/L	0.875	4308	mg/L	92.64	2.15%
Cd 226.502†	1071.0	0.0048	mg/L	0.00006	0.5112	mg/L	0.00678	1.33%

Co 228.616†	2160.6	0.0557	mg/L	0.00026	5.898	mg/L	0.0279	0.47%
Cr 267.716†	14803.0	0.1368	mg/L	0.00090	14.49	mg/L	0.095	0.66%
Cu 324.752†	52604.9	0.2521	mg/L	0.00095	26.71	mg/L	0.100	0.38%
Fe 273.955†	79624.4	139.2	mg/L	3.19	14740	mg/L	337.95	2.29%
K 766.490†	19290.1	8.160	mg/L	0.1700	864.4	mg/L	18.01	2.08%
Mg 279.077†	500346.3	28.12	mg/L	0.066	2978	mg/L	7.04	0.24%
Mn 257.610†	1855733.1	2.411	mg/L	0.0045	255.4	mg/L	0.48	0.19%
Na 589.592†	2724.0	0.3545	mg/L	0.00340	37.55	mg/L	0.360	0.96%
Ni 231.604†	7044.5	0.1927	mg/L	0.00206	20.41	mg/L	0.218	1.07%
Pb 220.353†	5473.5	0.7794	mg/L	0.00642	82.57	mg/L	0.680	0.82%
Sb 206.836†	-187.0	0.0079	mg/L	0.00033	0.8321	mg/L	0.03492	4.20%
Se 196.026†	20.4	0.0204	mg/L	0.00411	2.158	mg/L	0.4352	20.16%
Tl 190.801†	-22.6	-0.0052	mg/L	0.00265	-0.5506	mg/L	0.28100	51.04%
V 292.402†	22077.0	0.1430	mg/L	0.00005	15.15	mg/L	0.005	0.04%
Zn 213.857†	1641.6	1.249	mg/L	0.0090	132.3	mg/L	0.95	0.72%
Pb†	74.4	0.7052	mg/L	0.08541	74.71	mg/L	9.048	12.11%
Ag 338.289†	-116.5	0.0018	mg/L	0.00148	0.1868	mg/L	0.15713	84.12%

Sequence No.: 22
Sample ID: 144638-15
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 55
Date Collected: 10/24/2014 10:09:06 AM
Data Type: Original
Initial Sample Vol: 0.516 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-15

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-15

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1683574.7	1.115	mg/L	0.0044				0.40%
Ag 328.068†	-12099.4	-0.0047	mg/L	0.00007	-0.4521	mg/L	0.00668	1.48%
Al 308.215†	72657.3	131.2	mg/L	0.77	12710	mg/L	74.45	0.59%
As 188.979†	44.1	0.0305	mg/L	0.00260	2.957	mg/L	0.2519	8.52%
Ba 233.527†	124176.6	0.8603	mg/L	0.00303	83.36	mg/L	0.293	0.35%
Be 313.107†	11569.3	0.0063	mg/L	0.00002	0.6117	mg/L	0.00213	0.35%
Ca 317.933†	111337.4	25.53	mg/L	0.130	2474	mg/L	12.63	0.51%
Cd 226.502†	1207.2	0.0040	mg/L	0.00004	0.3911	mg/L	0.00341	0.87%
Co 228.616†	3033.1	0.0782	mg/L	0.00083	7.573	mg/L	0.0801	1.06%
Cr 267.716†	21137.5	0.1948	mg/L	0.00168	18.88	mg/L	0.163	0.86%
Cu 324.752†	40848.0	0.2039	mg/L	0.00048	19.75	mg/L	0.047	0.24%
Fe 273.955†	97932.0	171.2	mg/L	0.72	16590	mg/L	70.08	0.42%
K 766.490†	27762.2	11.74	mg/L	0.072	1138	mg/L	6.99	0.61%
Mg 279.077†	691330.1	38.92	mg/L	0.031	3771	mg/L	3.05	0.08%
Mn 257.610†	1679010.2	2.182	mg/L	0.0000	211.4	mg/L	0.00	0.00%
Na 589.592†	3607.2	0.4694	mg/L	0.00565	45.48	mg/L	0.548	1.20%
Ni 231.604†	9589.7	0.2623	mg/L	0.00252	25.41	mg/L	0.244	0.96%
Pb 220.353†	1813.8	0.2267	mg/L	0.00365	21.97	mg/L	0.354	1.61%
Sb 206.836†	-280.9	0.0000	mg/L	0.00198	0.0019	mg/L	0.19222	>999.9%
Se 196.026†	36.2	0.0335	mg/L	0.00252	3.248	mg/L	0.2442	7.52%
Tl 190.801†	-18.2	-0.0034	mg/L	0.00885	-0.3257	mg/L	0.85735	263.20%
V 292.402†	32690.9	0.2117	mg/L	0.00043	20.51	mg/L	0.041	0.20%
Zn 213.857†	1225.7	0.9322	mg/L	0.00654	90.33	mg/L	0.634	0.70%
Pb†	25.0	0.1623	mg/L	0.02227	15.73	mg/L	2.158	13.72%
Ag 338.289†	-309.0	0.0014	mg/L	0.00220	0.1383	mg/L	0.21356	154.46%

Sequence No.: 23
Sample ID: 144638-16
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 56
Date Collected: 10/24/2014 10:13:21 AM
Data Type: Original
Initial Sample Vol: 0.508 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-16

Analyte	Back Pressure	Flow

All	132.0 kPa	0.55 L/min

Mean Data: 144638-16

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1670254.0	1.106	mg/L	0.0006				0.05%
Ag 328.068†	-9358.4	-0.0043	mg/L	0.00075	-0.4242	mg/L	0.07336	17.30%
Al 308.215†	36428.3	65.78	mg/L	0.173	6474	mg/L	16.98	0.26%
As 188.979†	67.6	0.0436	mg/L	0.00221	4.291	mg/L	0.2174	5.07%
Ba 233.527†	93104.5	0.6450	mg/L	0.00084	63.48	mg/L	0.082	0.13%
Be 313.107†	6769.1	0.0037	mg/L	0.00002	0.3639	mg/L	0.00230	0.63%
Ca 317.933†	393905.0	90.34	mg/L	0.005	8891	mg/L	0.44	0.00%
Cd 226.502†	975.9	0.0037	mg/L	0.00002	0.3658	mg/L	0.00245	0.67%
Co 228.616†	1886.2	0.0486	mg/L	0.00046	4.784	mg/L	0.0457	0.95%
Cr 267.716†	14347.2	0.1325	mg/L	0.00011	13.04	mg/L	0.011	0.08%
Cu 324.752†	47445.8	0.2280	mg/L	0.00026	22.44	mg/L	0.026	0.11%
Fe 273.955†	74568.5	130.4	mg/L	0.06	12830	mg/L	5.68	0.04%
K 766.490†	18168.1	7.685	mg/L	0.0527	756.4	mg/L	5.18	0.69%
Mg 279.077†	906205.8	51.34	mg/L	0.003	5053	mg/L	0.27	0.01%
Mn 257.610†	1566894.4	2.036	mg/L	0.0005	200.4	mg/L	0.05	0.02%
Na 589.592†	2809.5	0.3656	mg/L	0.01936	35.98	mg/L	1.906	5.30%
Ni 231.604†	5998.6	0.1641	mg/L	0.00078	16.15	mg/L	0.077	0.47%
Pb 220.353†	3613.4	0.5126	mg/L	0.00001	50.45	mg/L	0.001	0.00%
Sb 206.836†	-162.2	0.0110	mg/L	0.00020	1.078	mg/L	0.0200	1.86%
Se 196.026†	8.7	0.0149	mg/L	0.00460	1.462	mg/L	0.4524	30.94%
Tl 190.801†	-52.9	-0.0275	mg/L	0.00152	-2.706	mg/L	0.1498	5.54%
V 292.402†	20431.2	0.1324	mg/L	0.00045	13.03	mg/L	0.044	0.34%
Zn 213.857†	1463.7	1.108	mg/L	0.0065	109.0	mg/L	0.64	0.58%
Pb†	52.2	0.5006	mg/L	0.00019	49.27	mg/L	0.018	0.04%
Ag 338.289†	-43.6	0.0018	mg/L	0.00007	0.1761	mg/L	0.00648	3.68%

Sequence No.: 24
Sample ID: 144638-18
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 58
Date Collected: 10/24/2014 10:17:35 AM
Data Type: Original
Initial Sample Vol: 0.54 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-18

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-18

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1628568.8	1.079	mg/L	0.0014				0.13%
Ag 328.068†	-7988.2	-0.0027	mg/L	0.00036	-0.2476	mg/L	0.03373	13.62%
Al 308.215†	37544.4	67.79	mg/L	0.088	6277	mg/L	8.12	0.13%
As 188.979†	5.4	0.0079	mg/L J	0.00853	0.7288	mg/L	0.78955	108.34%
Ba 233.527†	49989.8	0.3463	mg/L	0.00033	32.07	mg/L	0.031	0.10%
Be 313.107†	5628.3	0.0031	mg/L	0.00001	0.2845	mg/L	0.00094	0.33%
Ca 317.933†	647104.7	148.4	mg/L	0.94	13740	mg/L	87.42	0.64%
Cd 226.502†	764.9	0.0012	mg/L	0.00015	0.1121	mg/L	0.01420	12.67%
Co 228.616†	1524.0	0.0393	mg/L	0.00015	3.636	mg/L	0.0136	0.37%
Cr 267.716†	10961.4	0.1014	mg/L	0.00011	9.391	mg/L	0.0101	0.11%
Cu 324.752†	28575.8	0.1419	mg/L	0.00003	13.14	mg/L	0.003	0.02%
Fe 273.955†	65339.5	114.2	mg/L	0.06	10580	mg/L	5.92	0.06%
K 766.490†	23565.7	9.969	mg/L	0.0587	923.0	mg/L	5.43	0.59%
Mg 279.077†	1335816.2	75.95	mg/L	0.112	7032	mg/L	10.40	0.15%
Mn 257.610†	1759886.7	2.287	mg/L	0.0021	211.7	mg/L	0.19	0.09%
Na 589.592†	6140.2	0.7990	mg/L	0.03323	73.98	mg/L	3.077	4.16%
Ni 231.604†	3216.0	0.0880	mg/L	0.00023	8.144	mg/L	0.0214	0.26%
Pb 220.353†	2988.4	0.4214	mg/L	0.00169	39.02	mg/L	0.156	0.40%
Sb 206.836†	-133.7	0.0148	mg/L	0.00533	1.372	mg/L	0.4938	36.01%
Se 196.026†	-25.0	-0.0009	mg/L	0.00509	-0.0845	mg/L	0.47170	558.03%
Tl 190.801†	-44.6	-0.0225	mg/L	0.00443	-2.085	mg/L	0.4098	19.65%
V 292.402†	24479.6	0.1582	mg/L	0.00042	14.64	mg/L	0.039	0.27%
Zn 213.857†	1180.0	0.8851	mg/L	0.00332	81.95	mg/L	0.307	0.37%

Pb†	37.3	0.3645 mg/L	0.01348	33.75 mg/L	1.248	3.70%
Ag 338.289†	-541.6	-0.0050 mg/L	0.00144	-0.4596 mg/L	0.13303	28.94%

Sequence No.: 25
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 7
Date Collected: 10/24/2014 10:21:54 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1483124.5	0.9824	mg/L	0.00258				0.26%
Ag 328.068†	234499.4	1.201	mg/L	0.0016	1.201	mg/L	0.0016	0.13%
QC value within limits for Ag 328.068 Recovery = 96.10%								
Al 308.215†	5402.0	9.763	mg/L	0.0455	9.763	mg/L	0.0455	0.47%
QC value within limits for Al 308.215 Recovery = 97.63%								
As 188.979†	889.0	0.4932	mg/L	0.00494	0.4932	mg/L	0.00494	1.00%
QC value within limits for As 188.979 Recovery = 98.65%								
Ba 233.527†	1400788.5	9.704	mg/L	0.0002	9.704	mg/L	0.0002	0.00%
QC value within limits for Ba 233.527 Recovery = 97.04%								
Be 313.107†	446399.7	0.2425	mg/L	0.00012	0.2425	mg/L	0.00012	0.05%
QC value within limits for Be 313.107 Recovery = 96.99%								
Ca 317.933†	109698.2	25.16	mg/L	0.027	25.16	mg/L	0.027	0.11%
QC value within limits for Ca 317.933 Recovery = 100.63%								
Cd 226.502†	15848.8	0.2581	mg/L	0.00144	0.2581	mg/L	0.00144	0.56%
QC value within limits for Cd 226.502 Recovery = 103.23%								
Co 228.616†	88716.5	2.286	mg/L	0.0009	2.286	mg/L	0.0009	0.04%
QC value within limits for Co 228.616 Recovery = 91.44%								
Cr 267.716†	104704.5	0.9510	mg/L	0.00070	0.9510	mg/L	0.00070	0.07%
QC value within limits for Cr 267.716 Recovery = 95.10%								
Cu 324.752†	269399.1	1.200	mg/L	0.0007	1.200	mg/L	0.0007	0.06%
QC value within limits for Cu 324.752 Recovery = 96.01%								
Fe 273.955†	2795.5	4.850	mg/L	0.0319	4.850	mg/L	0.0319	0.66%
QC value within limits for Fe 273.955 Recovery = 96.99%								
K 766.490†	57433.3	24.29	mg/L	0.034	24.29	mg/L	0.034	0.14%
QC value within limits for K 766.490 Recovery = 97.18%								
Mg 279.077†	440138.2	25.14	mg/L	0.036	25.14	mg/L	0.036	0.14%
QC value within limits for Mg 279.077 Recovery = 100.55%								
Mn 257.610†	1911480.7	2.484	mg/L	0.0015	2.484	mg/L	0.0015	0.06%
QC value within limits for Mn 257.610 Recovery = 99.37%								
Na 589.592†	189081.4	24.60	mg/L	0.017	24.60	mg/L	0.017	0.07%
QC value within limits for Na 589.592 Recovery = 98.42%								
Ni 231.604†	88280.5	2.414	mg/L	0.0073	2.414	mg/L	0.0073	0.30%
QC value within limits for Ni 231.604 Recovery = 96.58%								
Pb 220.353†	3338.5	0.4890	mg/L	0.00197	0.4890	mg/L	0.00197	0.40%
QC value within limits for Pb 220.353 Recovery = 97.80%								
Sb 206.836†	13690.8	4.600	mg/L	0.0258	4.600	mg/L	0.0258	0.56%
QC value within limits for Sb 206.836 Recovery = 91.99%								
Se 196.026†	1042.3	0.4794	mg/L	0.00185	0.4794	mg/L	0.00185	0.39%
QC value within limits for Se 196.026 Recovery = 95.87%								
Tl 190.801†	738.4	0.4879	mg/L	0.01192	0.4879	mg/L	0.01192	2.44%
QC value within limits for Tl 190.801 Recovery = 97.57%								
V 292.402†	384327.4	2.478	mg/L	0.0004	2.478	mg/L	0.0004	0.02%
QC value within limits for V 292.402 Recovery = 99.13%								
Zn 213.857†	3287.1	2.496	mg/L	0.0121	2.496	mg/L	0.0121	0.48%
QC value within limits for Zn 213.857 Recovery = 99.84%								
Pb†	42.7	0.4288	mg/L	0.00194	0.4288	mg/L	0.00194	0.45%
QC value less than the lower limit for Pb Recovery = 85.75%								
Ag 338.289†	112731.9	1.225	mg/L	0.0007	1.225	mg/L	0.0007	0.05%

QC Failed. Continue with analysis.

Sequence No.: 26

Autosampler Location: 1

Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 75

Date Collected: 10/24/2014 10:26:11 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1565808.4	1.037	mg/L	0.0144				1.39%
Ag 328.068†	-120.5	-0.0006	mg/L	0.00049	-0.0006	mg/L	0.00049	80.28%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 308.215†	4.0	0.0072	mg/L	0.02052	0.0072	mg/L	0.02052	284.34%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	6.4	0.0036	mg/L	0.00140	0.0036	mg/L	0.00140	38.98%
QC value within limits for As 188.979 Recovery = Not calculated								
Ba 233.527†	228.8	0.0016	mg/L	0.00018	0.0016	mg/L	0.00018	11.48%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	146.8	0.0001	mg/L	0.00001	0.0001	mg/L	0.00001	14.16%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933†	26.4	0.0061	mg/L	0.00079	0.0061	mg/L	0.00079	13.01%
QC value within limits for Ca 317.933 Recovery = Not calculated								
Cd 226.502†	-2.3	-0.0000	mg/L	0.00001	-0.0000	mg/L	0.00001	19.22%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	15.4	0.0004	mg/L	0.00012	0.0004	mg/L	0.00012	29.53%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	1.7	0.0000	mg/L	0.00008	0.0000	mg/L	0.00008	535.86%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 324.752†	225.4	0.0010	mg/L	0.00033	0.0010	mg/L	0.00033	32.80%
QC value within limits for Cu 324.752 Recovery = Not calculated								
Fe 273.955†	9.7	0.0169	mg/L	0.00494	0.0169	mg/L	0.00494	29.21%
QC value within limits for Fe 273.955 Recovery = Not calculated								
K 766.490†	-83.2	-0.0352	mg/L	0.05288	-0.0352	mg/L	0.05288	150.28%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 279.077†	-120.6	-0.0069	mg/L	0.00289	-0.0069	mg/L	0.00289	41.54%
QC value within limits for Mg 279.077 Recovery = Not calculated								
Mn 257.610†	169.0	0.0002	mg/L	0.00002	0.0002	mg/L	0.00002	7.01%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Na 589.592†	-71.4	-0.0093	mg/L	0.01362	-0.0093	mg/L	0.01362	146.52%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	22.3	0.0006	mg/L	0.00027	0.0006	mg/L	0.00027	44.09%
QC value within limits for Ni 231.604 Recovery = Not calculated								
Pb 220.353†	1.0	0.0002	mg/L	0.00134	0.0002	mg/L	0.00134	881.08%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	6.1	0.0021	mg/L	0.00327	0.0021	mg/L	0.00327	158.45%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	0.2	0.0001	mg/L	0.00206	0.0001	mg/L	0.00206	>999.9%
QC value within limits for Se 196.026 Recovery = Not calculated								
Tl 190.801†	-9.3	-0.0066	mg/L	0.00378	-0.0066	mg/L	0.00378	57.66%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 292.402†	79.9	0.0005	mg/L	0.00034	0.0005	mg/L	0.00034	66.00%
QC value within limits for V 292.402 Recovery = Not calculated								
Zn 213.857†	-0.3	-0.0003	mg/L	0.00229	-0.0003	mg/L	0.00229	876.37%
QC value within limits for Zn 213.857 Recovery = Not calculated								
Pb†	-8.4	-0.0842	mg/L	0.03726	-0.0842	mg/L	0.03726	44.26%
QC value within limits for Pb Recovery = Not calculated								
Ag 338.289†	104.9	0.0011	mg/L	0.00178	0.0011	mg/L	0.00178	159.06%

All analyte(s) passed QC.

Sequence No.: 27
Sample ID: 144638-19
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 59
Date Collected: 10/24/2014 10:30:24 AM
Data Type: Original
Initial Sample Vol: 0.479 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-19

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-19

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1639722.3	1.086	mg/L	0.0015				0.14%
Ag 328.068†	-7609.5	-0.0038	mg/L	0.00003	-0.3935	mg/L	0.00347	0.88%
Al 308.215†	39033.0	70.48	mg/L	0.156	7357	mg/L	16.32	0.22%
As 188.979†	15.3	0.0126	mg/L	0.00366	1.317	mg/L	0.3818	28.99%
Ba 233.527†	50793.4	0.3519	mg/L	0.00004	36.73	mg/L	0.004	0.01%
Be 313.107†	5726.8	0.0031	mg/L	0.00001	0.3261	mg/L	0.00094	0.29%
Ca 317.933†	441465.5	101.2	mg/L	0.09	10570	mg/L	9.42	0.09%
Cd 226.502†	729.8	0.0017	mg/L	0.00008	0.1816	mg/L	0.00834	4.59%
Co 228.616†	1678.0	0.0432	mg/L	0.00050	4.513	mg/L	0.0522	1.16%
Cr 267.716†	9764.8	0.0904	mg/L	0.00042	9.437	mg/L	0.0436	0.46%
Cu 324.752†	22244.2	0.1125	mg/L	0.00077	11.75	mg/L	0.081	0.69%
Fe 273.955†	60140.8	105.1	mg/L	0.07	10970	mg/L	7.38	0.07%
K 766.490†	21428.4	9.064	mg/L	0.0297	946.2	mg/L	3.10	0.33%
Mg 279.077†	913596.3	51.85	mg/L	0.007	5412	mg/L	0.74	0.01%
Mn 257.610†	2815246.8	3.658	mg/L	0.0043	381.8	mg/L	0.45	0.12%
Na 589.592†	6363.0	0.8280	mg/L	0.00903	86.43	mg/L	0.942	1.09%
Ni 231.604†	3008.3	0.0823	mg/L	0.00009	8.588	mg/L	0.0097	0.11%
Pb 220.353†	2248.8	0.3107	mg/L	0.00013	32.43	mg/L	0.013	0.04%
Sb 206.836†	-128.9	0.0133	mg/L	0.00017	1.392	mg/L	0.0173	1.24%
Se 196.026†	-6.3	0.0057	mg/L	0.00506	0.5930	mg/L	0.52785	89.02%
Tl 190.801†	-34.9	-0.0138	mg/L	0.00694	-1.439	mg/L	0.7243	50.34%
V 292.402†	23965.3	0.1548	mg/L	0.00014	16.16	mg/L	0.014	0.09%
Zn 213.857†	1017.6	0.7661	mg/L	0.00419	79.97	mg/L	0.438	0.55%
Pb†	28.7	0.2636	mg/L	0.02890	27.51	mg/L	3.016	10.96%
Ag 338.289†	-655.6	-0.0058	mg/L	0.00000	-0.6104	mg/L	0.00027	0.04%

Sequence No.: 28
Sample ID: 144638-19 dup
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 60
Date Collected: 10/24/2014 10:34:40 AM
Data Type: Original
Initial Sample Vol: 0.505 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-19 dup

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-19 dup

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1613801.3	1.069	mg/L	0.0002				0.02%
Ag 328.068†	-7539.8	-0.0010	mg/L	0.00051	-0.0995	mg/L	0.05033	50.59%
Al 308.215†	41427.0	74.80	mg/L	0.557	7406	mg/L	55.20	0.75%
As 188.979†	18.3	0.0146	mg/L	0.00335	1.445	mg/L	0.3314	22.94%
Ba 233.527†	48791.5	0.3380	mg/L	0.00179	33.47	mg/L	0.178	0.53%
Be 313.107†	5922.8	0.0032	mg/L	0.00001	0.3199	mg/L	0.00069	0.22%
Ca 317.933†	554605.9	127.2	mg/L	1.63	12590	mg/L	161.66	1.28%
Cd 226.502†	720.1	0.0007	mg/L	0.00016	0.0738	mg/L	0.01544	20.92%
Co 228.616†	1628.2	0.0420	mg/L	0.00017	4.154	mg/L	0.0167	0.40%
Cr 267.716†	10038.9	0.0930	mg/L	0.00002	9.209	mg/L	0.0021	0.02%
Cu 324.752†	21367.4	0.1096	mg/L	0.00031	10.85	mg/L	0.031	0.28%
Fe 273.955†	64270.4	112.4	mg/L	1.26	11120	mg/L	124.82	1.12%
K 766.490†	20621.3	8.723	mg/L	0.0370	863.7	mg/L	3.66	0.42%
Mg 279.077†	961412.7	54.56	mg/L	0.021	5402	mg/L	2.11	0.04%
Mn 257.610†	2163605.0	2.811	mg/L	0.0038	278.3	mg/L	0.38	0.14%
Na 589.592†	7373.8	0.9595	mg/L	0.00460	95.00	mg/L	0.455	0.48%
Ni 231.604†	2932.2	0.0802	mg/L	0.00059	7.940	mg/L	0.0588	0.74%
Pb 220.353†	2162.0	0.2977	mg/L	0.00000	29.48	mg/L	0.000	0.00%
Sb 206.836†	-152.6	0.0092	mg/L	0.00153	0.9145	mg/L	0.15170	16.59%

Se 196.026†	-17.8	0.0021	mg/L	0.00782	0.2060	mg/L	0.77386 375.62%
Tl 190.801†	-38.4	-0.0176	mg/L	0.00363	-1.746	mg/L	0.3590 20.56%
V 292.402†	24580.2	0.1587	mg/L	0.00072	15.72	mg/L	0.071 0.45%
Zn 213.857†	970.0	0.7269	mg/L	0.00234	71.98	mg/L	0.232 0.32%
Pb†	26.9	0.2490	mg/L	0.06355	24.65	mg/L	6.292 25.52%
Ag 338.289†	-679.6	-0.0064	mg/L	0.00241	-0.6303	mg/L	0.23845 37.83%

Sequence No.: 29
Sample ID: 144638-19 spk
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 61
Date Collected: 10/24/2014 10:39:00 AM
Data Type: Original
Initial Sample Vol: 0.492 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144638-19 spk

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: 144638-19 spk

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1616493.4	1.071	mg/L	0.0038				0.36%
Ag 328.068†	36102.1	0.2226	mg/L	0.00070	22.62	mg/L	0.071	0.31%
Al 308.215†	45236.5	81.68	mg/L	0.117	8301	mg/L	11.91	0.14%
As 188.979†	4058.0	2.257	mg/L	0.0157	229.4	mg/L	1.60	0.70%
Ba 233.527†	362136.2	2.509	mg/L	0.0007	255.0	mg/L	0.07	0.03%
Be 313.107†	821342.0	0.4462	mg/L	0.00033	45.35	mg/L	0.034	0.07%
Ca 317.933†	536424.3	123.0	mg/L	0.48	12500	mg/L	48.84	0.39%
Cd 226.502†	53849.6	0.8685	mg/L	0.00005	88.26	mg/L	0.005	0.01%
Co 228.616†	34065.8	0.8778	mg/L	0.00157	89.21	mg/L	0.160	0.18%
Cr 267.716†	242557.2	2.206	mg/L	0.0005	224.2	mg/L	0.05	0.02%
Cu 324.752†	539289.0	2.416	mg/L	0.0021	245.5	mg/L	0.21	0.09%
Fe 273.955†	64629.0	113.0	mg/L	0.53	11480	mg/L	53.99	0.47%
K 766.490†	123503.4	52.24	mg/L	0.116	5309	mg/L	11.83	0.22%
Mg 279.077†	1217813.7	69.21	mg/L	0.060	7034	mg/L	6.09	0.09%
Mn 257.610†	2324664.8	3.021	mg/L	0.0008	307.0	mg/L	0.08	0.03%
Na 589.592†	92726.9	12.07	mg/L	0.028	1226	mg/L	2.82	0.23%
Ni 231.604†	162956.2	4.457	mg/L	0.0026	452.9	mg/L	0.26	0.06%
Pb 220.353†	17657.5	2.554	mg/L	0.0099	259.5	mg/L	1.00	0.39%
Sb 206.836†	5083.5	1.730	mg/L	0.0060	175.8	mg/L	0.61	0.35%
Se 196.026†	4841.5	2.243	mg/L	0.0015	227.9	mg/L	0.15	0.07%
Tl 190.801†	3139.5	2.207	mg/L	0.0038	224.3	mg/L	0.39	0.17%
V 292.402†	157835.7	1.032	mg/L	0.0005	104.9	mg/L	0.05	0.05%
Zn 213.857†	4036.2	3.048	mg/L	0.0308	309.7	mg/L	3.13	1.01%
Pb†	242.4	2.412	mg/L	0.0459	245.1	mg/L	4.67	1.91%
Ag 338.289†	16988.9	0.2348	mg/L	0.00021	23.86	mg/L	0.022	0.09%

Sequence No.: 30
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 7
Date Collected: 10/24/2014 10:43:16 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1448987.5	0.9598	mg/L	0.00193				0.20%
Ag 328.068†	238653.5	1.222	mg/L	0.0008	1.222	mg/L	0.0008	0.07%
QC value within limits for Ag 328.068 Recovery = 97.80%								
Al 308.215†	5450.3	9.851	mg/L	0.1222	9.851	mg/L	0.1222	1.24%
QC value within limits for Al 308.215 Recovery = 98.51%								

As 188.979†	886.8	0.4920 mg/L	0.00289	0.4920 mg/L	0.00289	0.59%
QC value within limits for As 188.979 Recovery = 98.41%						
Ba 233.527†	1398183.8	9.686 mg/L	0.0112	9.686 mg/L	0.0112	0.12%
QC value within limits for Ba 233.527 Recovery = 96.86%						
Be 313.107†	446832.6	0.2427 mg/L	0.00039	0.2427 mg/L	0.00039	0.16%
QC value within limits for Be 313.107 Recovery = 97.08%						
Ca 317.933†	113396.5	26.01 mg/L	0.027	26.01 mg/L	0.027	0.11%
QC value within limits for Ca 317.933 Recovery = 104.02%						
Cd 226.502†	16024.3	0.2609 mg/L	0.00287	0.2609 mg/L	0.00287	1.10%
QC value within limits for Cd 226.502 Recovery = 104.37%						
Co 228.616†	90226.3	2.325 mg/L	0.0022	2.325 mg/L	0.0022	0.09%
QC value within limits for Co 228.616 Recovery = 93.00%						
Cr 267.716†	106858.3	0.9706 mg/L	0.00215	0.9706 mg/L	0.00215	0.22%
QC value within limits for Cr 267.716 Recovery = 97.06%						
Cu 324.752†	273654.9	1.219 mg/L	0.0009	1.219 mg/L	0.0009	0.07%
QC value within limits for Cu 324.752 Recovery = 97.53%						
Fe 273.955†	2880.2	4.997 mg/L	0.0010	4.997 mg/L	0.0010	0.02%
QC value within limits for Fe 273.955 Recovery = 99.94%						
K 766.490†	59139.9	25.02 mg/L	0.106	25.02 mg/L	0.106	0.42%
QC value within limits for K 766.490 Recovery = 100.07%						
Mg 279.077†	446580.6	25.51 mg/L	0.016	25.51 mg/L	0.016	0.06%
QC value within limits for Mg 279.077 Recovery = 102.02%						
Mn 257.610†	1903511.5	2.474 mg/L	0.0026	2.474 mg/L	0.0026	0.11%
QC value within limits for Mn 257.610 Recovery = 98.95%						
Na 589.592†	194672.7	25.33 mg/L	0.029	25.33 mg/L	0.029	0.12%
QC value within limits for Na 589.592 Recovery = 101.33%						
Ni 231.604†	90017.0	2.462 mg/L	0.0002	2.462 mg/L	0.0002	0.01%
QC value within limits for Ni 231.604 Recovery = 98.48%						
Pb 220.353†	3350.5	0.4908 mg/L	0.00728	0.4908 mg/L	0.00728	1.48%
QC value within limits for Pb 220.353 Recovery = 98.17%						
Sb 206.836†	13810.6	4.640 mg/L	0.0352	4.640 mg/L	0.0352	0.76%
QC value within limits for Sb 206.836 Recovery = 92.79%						
Se 196.026†	1062.3	0.4886 mg/L	0.00215	0.4886 mg/L	0.00215	0.44%
QC value within limits for Se 196.026 Recovery = 97.73%						
Tl 190.801†	752.4	0.4971 mg/L	0.00708	0.4971 mg/L	0.00708	1.42%
QC value within limits for Tl 190.801 Recovery = 99.42%						
V 292.402†	389534.8	2.512 mg/L	0.0012	2.512 mg/L	0.0012	0.05%
QC value within limits for V 292.402 Recovery = 100.48%						
Zn 213.857†	3380.5	2.567 mg/L	0.0062	2.567 mg/L	0.0062	0.24%
QC value within limits for Zn 213.857 Recovery = 102.68%						
Pb†	46.6	0.4690 mg/L	0.08527	0.4690 mg/L	0.08527	18.18%
QC value within limits for Pb Recovery = 93.81%						
Ag 338.289†	115244.6	1.253 mg/L	0.0024	1.253 mg/L	0.0024	0.19%

All analyte(s) passed QC.

Sequence No.: 31 **Autosampler Location: 1**
Sample ID: CCB **Date Collected: 10/24/2014 10:47:35 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 75 **Auto Dilution Factor: 1**

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1560800.5	1.034	mg/L	0.0085				0.83%
Ag 328.068†	-160.7	-0.0008	mg/L	0.00009	-0.0008	mg/L	0.00009	11.26%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 308.215†	-6.3	-0.0114	mg/L	0.01407	-0.0114	mg/L	0.01407	123.47%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	3.4	0.0019	mg/L	0.00558	0.0019	mg/L	0.00558	294.31%
QC value within limits for As 188.979 Recovery = Not calculated								
Ba 233.527†	217.0	0.0015	mg/L	0.00010	0.0015	mg/L	0.00010	6.68%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	130.4	0.0001	mg/L	0.00006	0.0001	mg/L	0.00006	90.44%

QC value within limits for Be 313.107 Recovery = Not calculated

Ca 317.933†	20.2	0.0046 mg/L	0.00008	0.0046 mg/L	0.00008	1.64%

QC value within limits for Ca 317.933 Recovery = Not calculated

Cd 226.502†	5.1	0.0001 mg/L	0.00005	0.0001 mg/L	0.00005	59.53%

QC value within limits for Cd 226.502 Recovery = Not calculated

Co 228.616†	13.1	0.0003 mg/L	0.00027	0.0003 mg/L	0.00027	81.05%

QC value within limits for Co 228.616 Recovery = Not calculated

Cr 267.716†	7.6	0.0001 mg/L	0.00010	0.0001 mg/L	0.00010	137.69%

QC value within limits for Cr 267.716 Recovery = Not calculated

Cu 324.752†	102.2	0.0005 mg/L	0.00086	0.0005 mg/L	0.00086	187.91%

QC value within limits for Cu 324.752 Recovery = Not calculated

Fe 273.955†	4.1	0.0071 mg/L	0.01012	0.0071 mg/L	0.01012	142.85%

QC value within limits for Fe 273.955 Recovery = Not calculated

K 766.490†	10.4	0.0044 mg/L	0.03526	0.0044 mg/L	0.03526	804.90%

QC value within limits for K 766.490 Recovery = Not calculated

Mg 279.077†	-83.1	-0.0048 mg/L	0.00260	-0.0048 mg/L	0.00260	54.45%

QC value within limits for Mg 279.077 Recovery = Not calculated

Mn 257.610†	174.9	0.0002 mg/L	0.00000	0.0002 mg/L	0.00000	1.37%

QC value within limits for Mn 257.610 Recovery = Not calculated

Na 589.592†	-31.8	-0.0041 mg/L	0.00704	-0.0041 mg/L	0.00704	170.13%

QC value within limits for Na 589.592 Recovery = Not calculated

Ni 231.604†	28.4	0.0008 mg/L	0.00010	0.0008 mg/L	0.00010	12.25%

QC value within limits for Ni 231.604 Recovery = Not calculated

Pb 220.353†	6.5	0.0010 mg/L	0.00134	0.0010 mg/L	0.00134	140.78%

QC value within limits for Pb 220.353 Recovery = Not calculated

Sb 206.836†	26.8	0.0090 mg/L	0.00022	0.0090 mg/L	0.00022	2.49%

QC value within limits for Sb 206.836 Recovery = Not calculated

Se 196.026†	14.0	0.0064 mg/L	0.00215	0.0064 mg/L	0.00215	33.33%

QC value within limits for Se 196.026 Recovery = Not calculated

Tl 190.801†	-9.7	-0.0068 mg/L	0.00122	-0.0068 mg/L	0.00122	17.88%

QC value within limits for Tl 190.801 Recovery = Not calculated

V 292.402†	90.8	0.0006 mg/L	0.00024	0.0006 mg/L	0.00024	40.43%

QC value within limits for V 292.402 Recovery = Not calculated

Zn 213.857†	0.7	0.0005 mg/L	0.00138	0.0005 mg/L	0.00138	251.30%

QC value within limits for Zn 213.857 Recovery = Not calculated

Pb†	2.1	0.0214 mg/L	0.04122	0.0214 mg/L	0.04122	192.21%

QC value within limits for Pb Recovery = Not calculated

Ag 338.289†	129.1	0.0014 mg/L	0.00072	0.0014 mg/L	0.00072	52.60%

All analyte(s) passed QC.

Sequence No.: 32 **Autosampler Location: 2**
Sample ID: LLQC **Date Collected: 10/24/2014 10:51:47 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 75 **Auto Dilution Factor: 1**

repeat Sample set ↑ RSD

Nebulizer Parameters: LLQC

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: LLQC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
Y 371.029	1554411.9	1.030	mg/L	0.0026				0.25%
Ag 328.068†	1922.2	0.0099	mg/L	0.00140	0.0099	mg/L	0.00140	14.18%

QC value within limits for Ag 328.068 Recovery = 98.74%

Al 308.215†	155.6	0.2814 mg/L	0.03743	0.2814 mg/L	0.03743	13.30%

QC value greater than the upper limit for Al 308.215 Recovery = 140.71%

As 188.979†	25.0	0.0139 mg/L	0.00078	0.0139 mg/L	0.00078	5.61%

QC value greater than the upper limit for As 188.979 Recovery = 138.86%

Ba 233.527†	14373.3	0.0996 mg/L	0.00031	0.0996 mg/L	0.00031	0.31%

QC value within limits for Ba 233.527 Recovery = 99.57%

Be 313.107†	8801.5	0.0048 mg/L	0.00002	0.0048 mg/L	0.00002	0.49%

QC value within limits for Be 313.107 Recovery = 95.59%

Ca 317.933†	11434.9	2.622 mg/L	0.0395	2.622 mg/L	0.0395	1.51%

QC value within limits for Ca 317.933 Recovery = 104.90%

Cd 226.502†	328.1	0.0053 mg/L	0.00027	0.0053 mg/L	0.00027	4.98%

QC value within limits for Cd 226.502 Recovery = 106.54%

Co 228.616†	1870.8	0.0482 mg/L	0.00052	0.0482 mg/L	0.00052	1.08%
QC value within limits for Co 228.616 Recovery = 96.41%						
Cr 267.716†	1222.6	0.0111 mg/L	0.00045	0.0111 mg/L	0.00045	4.04%
QC value within limits for Cr 267.716 Recovery = 111.07%						
Cu 324.752†	6012.9	0.0268 mg/L	0.00002	0.0268 mg/L	0.00002	0.08%
QC value within limits for Cu 324.752 Recovery = 107.16%						
Fe 273.955†	66.5	0.1158 mg/L	0.00292	0.1158 mg/L	0.00292	2.52%
QC value within limits for Fe 273.955 Recovery = 115.81%						
K 766.490†	6056.4	2.562 mg/L	0.0275	2.562 mg/L	0.0275	1.07%
QC value within limits for K 766.490 Recovery = 102.48%						
Mg 279.077†	44678.7	2.553 mg/L	0.0062	2.553 mg/L	0.0062	0.24%
QC value within limits for Mg 279.077 Recovery = 102.12%						
Mn 257.610†	11620.7	0.0151 mg/L	0.00002	0.0151 mg/L	0.00002	0.13%
QC value within limits for Mn 257.610 Recovery = 100.70%						
Na 589.592†	19892.1	2.588 mg/L	0.0270	2.588 mg/L	0.0270	1.04%
QC value within limits for Na 589.592 Recovery = 103.54%						
Ni 231.604†	1549.6	0.0424 mg/L	0.00006	0.0424 mg/L	0.00006	0.14%
QC value within limits for Ni 231.604 Recovery = 105.95%						
Pb 220.353†	70.0	0.0103 mg/L	0.00149	0.0103 mg/L	0.00149	14.46%
QC value within limits for Pb 220.353 Recovery = 102.87%						
Sb 206.836†	169.2	0.0569 mg/L	0.00020	0.0569 mg/L	0.00020	0.36%
QC value within limits for Sb 206.836 Recovery = 94.84%						
Se 196.026†	18.6	0.0086 mg/L	0.00715	0.0086 mg/L	0.00715	82.92%
QC value within limits for Se 196.026 Recovery = 86.20%						
Tl 190.801†	19.7	0.0133 mg/L	0.00505	0.0133 mg/L	0.00505	38.10%
QC value less than the lower limit for Tl 190.801 Recovery = 53.03%						
V 292.402†	3960.9	0.0256 mg/L	0.00003	0.0256 mg/L	0.00003	0.13%
QC value within limits for V 292.402 Recovery = 102.21%						
Zn 213.857†	79.3	0.0601 mg/L	0.00042	0.0601 mg/L	0.00042	0.70%
QC value within limits for Zn 213.857 Recovery = 100.12%						
Pb†	-1.1	-0.0102 mg/L	0.03649	-0.0102 mg/L	0.03649	356.88%
Ag 338.289†	1229.2	0.0133 mg/L	0.00013	0.0133 mg/L	0.00013	0.96%

QC Failed. Continue with analysis.
User canceled analysis.

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Analysis Begun

Start Time: 10/24/2014 10:55:10 AM **Plasma On Time: 10/24/2014 8:17:18 AM**
Logged In Analyst: icp3 **Technique: ICP Continuous**
Spectrometer: Optima 7300 DV, S/N 077C0122002 **Autosampler: S10**

Sample Information File: C:\Users\Public\PerkinElmer\ICP\Data\Sample Information\102414a.sif
Batch ID: 102414a
Results Data Set: 102414a
Results Library: C:\Users\Public\PerkinElmer\ICP\Data\Results\Oct2014.mdb

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Sequence No.: 32 **Autosampler Location: 2**
Sample ID: LLQC **Date Collected: 10/24/2014 10:55:11 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 75 **Auto Dilution Factor: 1**

Nebulizer Parameters: LLQC

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: LLQC

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Y 371.029	1554050.0	1.029 mg/L	0.0017			0.16%
Ag 328.068†	1685.5	0.0087 mg/L	0.00011	0.0087 mg/L	0.00011	1.29%
QC value within limits for Ag 328.068 Recovery = 86.65%						
Al 308.215†	136.9	0.2476 mg/L	0.00155	0.2476 mg/L	0.00155	0.62%
QC value within limits for Al 308.215 Recovery = 123.79%						
As 188.979†	17.1	0.0095 mg/L	0.00229	0.0095 mg/L	0.00229	24.16%
QC value within limits for As 188.979 Recovery = 94.64%						
Ba 233.527†	14337.1	0.0993 mg/L	0.00009	0.0993 mg/L	0.00009	0.09%

QC value within limits for Ba 233.527 Recovery = 99.32%

Be 313.107†	8871.5	0.0048 mg/L	0.00002	0.0048 mg/L	0.00002	0.36%
QC value within limits for Be 313.107 Recovery = 96.35%						
Ca 317.933†	11347.6	2.602 mg/L	0.0037	2.602 mg/L	0.0037	0.14%
QC value within limits for Ca 317.933 Recovery = 104.10%						
Cd 226.502†	327.7	0.0053 mg/L	0.00008	0.0053 mg/L	0.00008	1.57%
QC value within limits for Cd 226.502 Recovery = 106.41%						
Co 228.616†	1862.6	0.0480 mg/L	0.00032	0.0480 mg/L	0.00032	0.66%
QC value within limits for Co 228.616 Recovery = 95.99%						
Cr 267.716†	1245.6	0.0113 mg/L	0.00003	0.0113 mg/L	0.00003	0.30%
QC value within limits for Cr 267.716 Recovery = 113.16%						
Cu 324.752†	6067.4	0.0270 mg/L	0.00112	0.0270 mg/L	0.00112	4.14%
QC value within limits for Cu 324.752 Recovery = 108.13%						
Fe 273.955†	67.8	0.1182 mg/L	0.00108	0.1182 mg/L	0.00108	0.92%
QC value within limits for Fe 273.955 Recovery = 118.21%						
K 766.490†	6063.4	2.565 mg/L	0.0196	2.565 mg/L	0.0196	0.76%
QC value within limits for K 766.490 Recovery = 102.60%						
Mg 279.077†	44758.4	2.558 mg/L	0.0078	2.558 mg/L	0.0078	0.30%
QC value within limits for Mg 279.077 Recovery = 102.30%						
Mn 257.610†	11677.5	0.0152 mg/L	0.00009	0.0152 mg/L	0.00009	0.57%
QC value within limits for Mn 257.610 Recovery = 101.19%						
Na 589.592†	19776.7	2.573 mg/L	0.0126	2.573 mg/L	0.0126	0.49%
QC value within limits for Na 589.592 Recovery = 102.94%						
Ni 231.604†	1567.3	0.0429 mg/L	0.00048	0.0429 mg/L	0.00048	1.12%
QC value within limits for Ni 231.604 Recovery = 107.16%						
Pb 220.353†	76.5	0.0112 mg/L	0.00263	0.0112 mg/L	0.00263	23.39%
QC value within limits for Pb 220.353 Recovery = 112.48%						
Sb 206.836†	174.9	0.0588 mg/L	0.00333	0.0588 mg/L	0.00333	5.65%
QC value within limits for Sb 206.836 Recovery = 98.07%						
Se 196.026†	17.7	0.0082 mg/L	0.00521	0.0082 mg/L	0.00521	63.55%
QC value within limits for Se 196.026 Recovery = 81.95%						
Tl 190.801†	22.9	0.0156 mg/L	0.00115	0.0156 mg/L	0.00115	7.37%
QC value less than the lower limit for Tl 190.801 Recovery = 62.33%						
V 292.402†	3953.4	0.0255 mg/L	0.00119	0.0255 mg/L	0.00119	4.66%
QC value within limits for V 292.402 Recovery = 102.02%						
Zn 213.857†	79.3	0.0601 mg/L	0.00094	0.0601 mg/L	0.00094	1.56%
QC value within limits for Zn 213.857 Recovery = 100.16%						
Pb†	-2.1	-0.0206 mg/L	0.02383	-0.0206 mg/L	0.02383	115.53%
Ag 338.289†	1146.9	0.0125 mg/L	0.00020	0.0125 mg/L	0.00020	1.64%

QC Failed. Continue with analysis.

Sequence No.: 33 **Autosampler Location:** 7
Sample ID: CCV **Date Collected:** 10/24/2014 10:59:24 AM
Analyst: **Data Type:** Original
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 75 **Auto Dilution Factor:** 1

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Y 371.029	1443620.4	0.9562 mg/L	0.00373			0.39%
Ag 328.068†	249630.2	1.279 mg/L	0.0047	1.279 mg/L	0.0047	0.37%
QC value within limits for Ag 328.068 Recovery = 102.29%						
Al 308.215†	5541.3	10.01 mg/L	0.174	10.01 mg/L	0.174	1.74%
QC value within limits for Al 308.215 Recovery = 100.14%						
As 188.979†	901.3	0.5001 mg/L	0.00075	0.5001 mg/L	0.00075	0.15%
QC value within limits for As 188.979 Recovery = 100.01%						
Ba 233.527†	1395743.5	9.669 mg/L	0.0030	9.669 mg/L	0.0030	0.03%
QC value within limits for Ba 233.527 Recovery = 96.69%						
Be 313.107†	446263.6	0.2424 mg/L	0.00011	0.2424 mg/L	0.00011	0.04%
QC value within limits for Be 313.107 Recovery = 96.96%						
Ca 317.933†	114626.3	26.29 mg/L	0.351	26.29 mg/L	0.351	1.34%
QC value within limits for Ca 317.933 Recovery = 105.15%						
Cd 226.502†	15405.8	0.2508 mg/L	0.00066	0.2508 mg/L	0.00066	0.26%

	QC value within limits for Cd 226.502 Recovery = 100.32%					
Co 228.616†	91624.3	2.361 mg/L	0.0012	2.361 mg/L	0.0012	0.05%
	QC value within limits for Co 228.616 Recovery = 94.44%					
Cr 267.716†	109350.3	0.9931 mg/L	0.00208	0.9931 mg/L	0.00208	0.21%
	QC value within limits for Cr 267.716 Recovery = 99.31%					
Cu 324.752†	285434.6	1.272 mg/L	0.0026	1.272 mg/L	0.0026	0.20%
	QC value within limits for Cu 324.752 Recovery = 101.73%					
Fe 273.955†	2871.8	4.980 mg/L	0.0222	4.980 mg/L	0.0222	0.45%
	QC value within limits for Fe 273.955 Recovery = 99.60%					
K 766.490†	60178.2	25.46 mg/L	0.223	25.46 mg/L	0.223	0.88%
	QC value within limits for K 766.490 Recovery = 101.82%					
Mg 279.077†	445676.1	25.45 mg/L	0.011	25.45 mg/L	0.011	0.04%
	QC value within limits for Mg 279.077 Recovery = 101.81%					
Mn 257.610†	1898442.4	2.467 mg/L	0.0003	2.467 mg/L	0.0003	0.01%
	QC value within limits for Mn 257.610 Recovery = 98.69%					
Na 589.592†	199061.7	25.90 mg/L	0.218	25.90 mg/L	0.218	0.84%
	QC value within limits for Na 589.592 Recovery = 103.61%					
Ni 231.604†	91759.3	2.510 mg/L	0.0102	2.510 mg/L	0.0102	0.41%
	QC value within limits for Ni 231.604 Recovery = 100.38%					
Pb 220.353†	3440.8	0.5040 mg/L	0.00072	0.5040 mg/L	0.00072	0.14%
	QC value within limits for Pb 220.353 Recovery = 100.81%					
Sb 206.836†	14279.9	4.797 mg/L	0.0190	4.797 mg/L	0.0190	0.40%
	QC value within limits for Sb 206.836 Recovery = 95.95%					
Se 196.026†	1059.1	0.4872 mg/L	0.00177	0.4872 mg/L	0.00177	0.36%
	QC value within limits for Se 196.026 Recovery = 97.43%					
Tl 190.801†	769.5	0.5079 mg/L	0.00115	0.5079 mg/L	0.00115	0.23%
	QC value within limits for Tl 190.801 Recovery = 101.58%					
V 292.402†	411910.5	2.656 mg/L	0.0041	2.656 mg/L	0.0041	0.16%
	QC value within limits for V 292.402 Recovery = 106.24%					
Zn 213.857†	3360.7	2.552 mg/L	0.0002	2.552 mg/L	0.0002	0.01%
	QC value within limits for Zn 213.857 Recovery = 102.07%					
Pb†	41.7	0.4191 mg/L	0.03081	0.4191 mg/L	0.03081	7.35%
	QC value less than the lower limit for Pb Recovery = 83.83%					
Ag 338.289†	118529.0	1.288 mg/L	0.0034	1.288 mg/L	0.0034	0.27%

QC Failed. Continue with analysis.
User canceled analysis.

Run Stopped to adjust
Sample Info File. Recalled
Calibration and restarted
run at CCB.

Amm
10-24-14

Analysis Begun

Start Time: 10/24/2014 11:02:49 AM
Logged In Analyst: icp3
Spectrometer: Optima 7300 DV, S/N 077C0122002
Plasma On Time: 10/24/2014 8:17:18 AM
Technique: ICP Continuous
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer\ICP\Data\Sample Information\102414a.sif
Batch ID: 102414a
Results Data Set: 102414a
Results Library: C:\Users\Public\PerkinElmer\ICP\Data\Results\Oct2014.mdb

Sequence No.: 1
Sample ID: IPC
Analyst:
Initial Sample Wt:
Dilution:
Wash Time:
Autosampler Location: 6
Date Collected: 10/24/2014 11:02:50 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

User canceled analysis.

Analysis Begun

Start Time: 10/24/2014 11:03:05 AM
Logged In Analyst: icp3
Spectrometer: Optima 7300 DV, S/N 077C0122002
Plasma On Time: 10/24/2014 8:17:18 AM
Technique: ICP Continuous
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer\ICP\Data\Sample Information\102414a.sif
Batch ID: 102414a
Results Data Set: 102414a
Results Library: C:\Users\Public\PerkinElmer\ICP\Data\Results\Oct2014.mdb

Sequence No.: 27
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:
Wash Time:
Autosampler Location: 1
Date Collected: 10/24/2014 11:03:06 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1537541.2	1.018	mg/L	0.0059				0.58%
Ag 328.068†	-69.9	-0.0004	mg/L	0.00169	-0.0004	mg/L	0.00169	473.84%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 308.215†	13.4	0.0242	mg/L	0.02318	0.0242	mg/L	0.02318	95.94%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	8.6	0.0048	mg/L	0.00237	0.0048	mg/L	0.00237	49.76%
QC value within limits for As 188.979 Recovery = Not calculated								
Ba 233.527†	306.6	0.0021	mg/L	0.00038	0.0021	mg/L	0.00038	17.98%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	158.1	0.0001	mg/L	0.00005	0.0001	mg/L	0.00005	53.23%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933†	34.4	0.0079	mg/L	0.00148	0.0079	mg/L	0.00148	18.77%
QC value within limits for Ca 317.933 Recovery = Not calculated								
Cd 226.502†	7.6	0.0001	mg/L	0.00004	0.0001	mg/L	0.00004	31.82%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	8.9	0.0002	mg/L	0.00006	0.0002	mg/L	0.00006	26.35%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	9.0	0.0001	mg/L	0.00032	0.0001	mg/L	0.00032	395.49%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 324.752†	233.9	0.0010	mg/L	0.00021	0.0010	mg/L	0.00021	19.93%
QC value within limits for Cu 324.752 Recovery = Not calculated								

Fe 273.955†	1.4	0.0024 mg/L	0.01156	0.0024 mg/L	0.01156	477.21%	
QC value within limits for Fe 273.955 Recovery = Not calculated							
K 766.490†	31.0	0.0131 mg/L	0.02222	0.0131 mg/L	0.02222	169.57%	
QC value within limits for K 766.490 Recovery = Not calculated							
Mg 279.077†	-90.5	-0.0052 mg/L	0.00235	-0.0052 mg/L	0.00235	45.38%	
QC value within limits for Mg 279.077 Recovery = Not calculated							
Mn 257.610†	205.3	0.0003 mg/L	0.00005	0.0003 mg/L	0.00005	17.31%	
QC value within limits for Mn 257.610 Recovery = Not calculated							
Na 589.592†	37.2	0.0048 mg/L	0.00190	0.0048 mg/L	0.00190	39.13%	
QC value within limits for Na 589.592 Recovery = Not calculated							
Ni 231.604†	16.5	0.0005 mg/L	0.00026	0.0005 mg/L	0.00026	57.59%	
QC value within limits for Ni 231.604 Recovery = Not calculated							
Pb 220.353†	12.2	0.0018 mg/L	0.00081	0.0018 mg/L	0.00081	45.98%	
QC value within limits for Pb 220.353 Recovery = Not calculated							
Sb 206.836†	24.6	0.0083 mg/L	0.00482	0.0083 mg/L	0.00482	57.91%	
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	9.2	0.0042 mg/L	0.00156	0.0042 mg/L	0.00156	36.88%	
QC value within limits for Se 196.026 Recovery = Not calculated							
Tl 190.801†	-16.3	-0.0115 mg/L	0.00232	-0.0115 mg/L	0.00232	20.22%	
QC value within limits for Tl 190.801 Recovery = Not calculated							
V 292.402†	-12.7	-0.0001 mg/L	0.00045	-0.0001 mg/L	0.00045	559.13%	
QC value within limits for V 292.402 Recovery = Not calculated							
Zn 213.857†	1.2	0.0009 mg/L	0.00345	0.0009 mg/L	0.00345	379.70%	
QC value within limits for Zn 213.857 Recovery = Not calculated							
Pb†	-1.7	-0.0174 mg/L	0.04694	-0.0174 mg/L	0.04694	269.60%	
QC value within limits for Pb Recovery = Not calculated							
Ag 338.289†	267.5	0.0028 mg/L	0.00037	0.0028 mg/L	0.00037	13.14%	

All analyte(s) passed QC.

Sequence No.: 28 **Autosampler Location: 62**
Sample ID: Blk 10/22 soil **Date Collected: 10/24/2014 11:07:18 AM**
Analyst: AMM **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol: 50 mL**
Dilution: **Sample Prep Vol: 50 mL**
Wash Time: 75 **Auto Dilution Factor: 1**

Nebulizer Parameters: Blk 10/22 soil

Analyte	Back Pressure	Flow
All	132.0 kPa	0.55 L/min

Mean Data: Blk 10/22 soil

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1615526.9	1.070	mg/L	0.0133				1.24%
Ag 328.068†	-372.3	-0.0019	mg/L	0.00063	-0.0019	mg/L	0.00063	33.46%
Al 308.215†	-19.7	-0.0355	mg/L	0.00163	-0.0355	mg/L	0.00163	4.60%
As 188.979†	7.7	0.0043	mg/L	0.00384	0.0043	mg/L	0.00384	89.71%
Ba 233.527†	16.8	0.0001	mg/L	0.00008	0.0001	mg/L	0.00008	69.53%
Be 313.107†	166.5	0.0001	mg/L	0.00001	0.0001	mg/L	0.00001	12.33%
Ca 317.933†	-154.9	-0.0355	mg/L	0.00332	-0.0355	mg/L	0.00332	9.36%
Cd 226.502†	2.4	0.0000	mg/L	0.00005	0.0000	mg/L	0.00005	136.43%
Co 228.616†	19.3	0.0005	mg/L	0.00012	0.0005	mg/L	0.00012	23.83%
Cr 267.716†	55.0	0.0005	mg/L	0.00017	0.0005	mg/L	0.00017	34.34%
Cu 324.752†	75.3	0.0003	mg/L	0.00047	0.0003	mg/L	0.00047	140.24%
Fe 273.955†	11.3	0.0198	mg/L	0.01349	0.0198	mg/L	0.01349	68.23%
K 766.490†	-43.2	-0.0183	mg/L	0.01185	-0.0183	mg/L	0.01185	64.91%
Mg 279.077†	-148.3	-0.0085	mg/L	0.00217	-0.0085	mg/L	0.00217	25.36%
Mn 257.610†	251.3	0.0003	mg/L	0.00008	0.0003	mg/L	0.00008	23.54%
Na 589.592†	55.0	0.0072	mg/L	0.00259	0.0072	mg/L	0.00259	36.19%
Ni 231.604†	38.8	0.0011	mg/L	0.00010	0.0011	mg/L	0.00010	9.32%
Pb 220.353†	6.3	0.0009	mg/L	0.00150	0.0009	mg/L	0.00150	161.03%
Sb 206.836†	23.6	0.0080	mg/L	0.00388	0.0080	mg/L	0.00388	48.76%
Se 196.026†	17.6	0.0081	mg/L	0.00411	0.0081	mg/L	0.00411	50.81%
Tl 190.801†	-17.7	-0.0125	mg/L	0.00487	-0.0125	mg/L	0.00487	38.92%
V 292.402†	27.3	0.0002	mg/L	0.00052	0.0002	mg/L	0.00052	291.67%
Zn 213.857†	2.8	0.0021	mg/L	0.00078	0.0021	mg/L	0.00078	36.31%
Pb†	0.9	0.0094	mg/L	0.03473	0.0094	mg/L	0.03473	369.46%
Ag 338.289†	174.0	0.0019	mg/L	0.00049	0.0019	mg/L	0.00049	26.04%

Analysis Begun

Logged In Analyst: fims
Technique: AA FIMS-MHS
Spectrometer Model: FIMS-100, S/N B050-9550
Autosampler Model: AS-90

Sample Information File: C:\data-AA\fims\Sample Information\Hg141024A.sif
Batch ID:
Results Data Set: Hg141024A
Results Library: C:\data-AA\fims\Results\Results.mdb

Method Loaded
Method Name: Mercury5-30
Method Last Saved: 10/13/2014 1:09:01 PM
Method Description:

Sequence No.: 52
Autosampler Location:
Sample ID: Calib Std 3
Date Collected: 10/24/2014 9:20:42 AM
Analyst:
Data Type: Original
Initial Sample Wt:
Initial Sample Vol:
Dilution:
Sample Prep Vol:

Replicate Data: Calib Std 3

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[2]	0.0989	0.0989	0.0159	09:21:40	Yes
2		[2]	0.0975	0.0975	0.0162	09:22:19	Yes
Mean:		[2]	0.0982				
SD:		0	0.0010				
%RSD:		0	1.01				

Standard number 3 applied. [2]
Correlation Coef.: 1.000000 Slope: 0.04908 Intercept: 0.00000
The required calibration blank has not been analyzed.

Sequence No.: 53
Autosampler Location:
Sample ID: Calib Std 3
Date Collected: 10/24/2014 9:22:43 AM
Analyst:
Data Type: Original
Initial Sample Wt:
Initial Sample Vol:
Dilution:
Sample Prep Vol:

Replicate Data: Calib Std 3

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[2]	0.1238	0.1238	0.0200	09:23:41	Yes
2		[2]	0.1206	0.1206	0.0199	09:24:20	Yes
Mean:		[2]	0.1222				
SD:		0	0.0022				
%RSD:		0	1.83				

Standard number 3 applied. [2]
Correlation Coef.: 1.000000 Slope: 0.06110 Intercept: 0.00000
The required calibration blank has not been analyzed.

Sequence No.: 54
Autosampler Location:
Sample ID: Calib Std 3
Date Collected: 10/24/2014 9:24:46 AM
Analyst:
Data Type: Original
Initial Sample Wt:
Initial Sample Vol:
Dilution:
Sample Prep Vol:

Replicate Data: Calib Std 3

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[2]	0.1360	0.1360	0.0223	09:25:44	Yes
2		[2]	0.1350	0.1350	0.0223	09:26:22	Yes

Mean:	[2]	0.1355
SD:	0	0.0007
%RSD:	0	0.52

Standard number 3 applied. [2]
Correlation Coef.: 1.000000 Slope: 0.06777 Intercept: 0.00000
The required calibration blank has not been analyzed.

Analysis Begun

Logged In Analyst: fims
Technique: AA FIMS-MHS
Spectrometer Model: FIMS-100, S/N B050-9550
Autosampler Model: AS-90

Sample Information File: C:\data-AA\fims\Sample Information\Hg141024A.sif
Batch ID:
Results Data Set: Hg141024A
Results Library: C:\data-AA\fims\Results\Results.mdb

Sequence No.: 1
Autosampler Location: 1
Sample ID: Calibration Blank
Date Collected: 10/24/2014 9:26:54 AM
Analyst:
Data Type: Original
Initial Sample Wt:
Initial Sample Vol:
Dilution:
Sample Prep Vol:

Replicate Data: Calibration Blank

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.00]	0.0016	0.0016	0.0003	09:27:57	Yes
2		[0.00]	0.0010	0.0010	0.0003	09:28:35	Yes
Mean:		[0.00]	0.0013				
SD:		0.00	0.0004				
%RSD:		0.00	28.93				

Auto-zero performed.

Sequence No.: 2
Autosampler Location: 2
Sample ID: Calib Std 1
Date Collected: 10/24/2014 9:30:17 AM
Analyst:
Data Type: Original
Initial Sample Wt:
Initial Sample Vol:
Dilution:
Sample Prep Vol:

Replicate Data: Calib Std 1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.2]	0.0122	0.0135	0.0023	09:31:21	Yes
2		[0.2]	0.0126	0.0139	0.0024	09:31:59	Yes
Mean:		[0.2]	0.0124				
SD:		0.0	0.0003				
%RSD:		0.0	2.46				

Standard number 1 applied. [0.2]
Correlation Coef.: 1.000000 Slope: 0.06198 Intercept: 0.00000

Sequence No.: 3
Autosampler Location: 3
Sample ID: Calib Std 2
Date Collected: 10/24/2014 9:33:41 AM
Analyst:
Data Type: Original
Initial Sample Wt:
Initial Sample Vol:
Dilution:
Sample Prep Vol:

Replicate Data: Calib Std 2

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[1]	0.0606	0.0619	0.0103	09:34:46	Yes
2		[1]	0.0599	0.0611	0.0103	09:35:24	Yes
Mean:		[1]	0.0602				
SD:		0	0.0005				
%RSD:		0	0.90				

Standard number 2 applied. [1]
Correlation Coef.: 0.999982 Slope: 0.06012 Intercept: 0.00017

Sequence No.: 4
Autosampler Location: 4

Method: Mercury5-30 Page 2 Date: 10/24/2014 9:45:46 AM

Sample ID: Calib Std 3
Analyst:
Initial Sample Wt:
Dilution:

Date Collected: 10/24/2014 9:37:07 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: Calib Std 3

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[2]	0.1141	0.1154	0.0189	09:38:12	Yes
2		[2]	0.1137	0.1150	0.0190	09:38:50	Yes
Mean:		[2]	0.1139				
SD:		0	0.0003				
%RSD:		0	0.25				

Standard number 3 applied. [2]
Correlation Coef.: 0.999548 Slope: 0.05697 Intercept: 0.00106

Sequence No.: 5
Sample ID: Calib Std 4
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 5
Date Collected: 10/24/2014 9:40:34 AM
Data Type: [redacted]
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: Calib Std 4

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[5]	0.3156	0.3169	0.0516	09:41:39	Yes
2		[5]	0.3160	0.3173	0.0516	09:42:17	Yes
Mean:		[5]	0.3158				
SD:		0	0.0003				
%RSD:		0	0.09				

Standard number 4 applied. [5]
Correlation Coef.: 0.999133 Slope: 0.06303 Intercept: -0.00290

Sequence No.: 6
Sample ID: Calib Std 5
Analyst:
Initial Sample Wt:

Autosampler Location: 6
Date Collected: 10/24/2014 9:44:01 AM
Data Type: Original
Initial Sample Vol:

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
Calibration Blank	0.0000	0	0.0141	0.00	28.9
Calib Std 1	0.0124	0.2	0.2160	0.00	2.5
Calib Std 2	0.0602	1.0	0.9954	0.00	0.9
Calib Std 3	0.1139	2.0	1.8691	0.00	0.2
Calib Std 4	0.3158	5.0	5.1582	0.00	0.1
Calib Std 5	0.6099	10.0	9.9472	0.00	0.1

Correlation Coef.: 0.999697 Slope: 0.06140 Intercept: -0.00087

Sequence No.: 7 **Autosampler Location: 4**
Sample ID: IPC **Date Collected: 10/24/2014 9:47:29 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: IPC

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	1.877	1.877	0.1144	0.1157	0.0190	09:48:34	Yes
2	1.853	1.853	0.1129	0.1142	0.0190	09:49:12	Yes
Mean:	1.865	1.865	0.1137				
SD:	0.0169	0.0169	0.0010				
%RSD:	0.9064	0.9064	0.91				

QC value less than the lower limit for Hg 253.7 Recovery = 93.27%
QC Failed. Continue with analysis.

Sequence No.: 8 **Autosampler Location: 7**
Sample ID: ICV **Date Collected: 10/24/2014 9:50:55 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: ICV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	1.989	1.989	0.1212	0.1225	0.0200	09:52:01	Yes
2	1.964	1.964	0.1197	0.1210	0.0200	09:52:39	Yes
Mean:	1.976	1.976	0.1205				
SD:	0.0171	0.0171	0.0010				
%RSD:	0.8634	0.8634	0.87				

QC value within limits for Hg 253.7 Recovery = 98.82%
All analyte(s) passed QC.

Sequence No.: 9 **Autosampler Location: 8**
Sample ID: ICB **Date Collected: 10/24/2014 9:54:24 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: ICB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0310	0.0310	0.0010	0.0023	0.0004	09:55:30	Yes
2	0.0280	0.0280	0.0009	0.0021	0.0003	09:56:09	Yes
Mean:	0.0295	0.0295	0.0009				
SD:	0.0021	0.0021	0.0001				
%RSD:	7.240	7.240	13.88				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 10
Sample ID: blk
Analyst: Jennifer G
Initial Sample Wt: 0.245 g
Dilution:

Autosampler Location: 9
Date Collected: 10/24/2014 9:57:54 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 20 mL

Replicate Data: blk

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0021	0.0255	0.0007	0.0020	0.0003	09:58:57	Yes
2	0.0007	0.0084	-0.0004	0.0009	0.0002	09:59:35	Yes
Mean:	0.0014	0.0170	0.0002				
SD:	0.0010	0.0121	0.0007				
%RSD:	71.52	71.52	427.54				

Sequence No.: 11
Sample ID: lcs
Analyst: Jennifer G
Initial Sample Wt: 0.21 g
Dilution:

Autosampler Location: 10
Date Collected: 10/24/2014 10:01:17 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 20 mL

Replicate Data: lcs

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.1861	1.954	0.1191	0.1204	0.0198	10:02:20	Yes
2	0.1851	1.944	0.1185	0.1198	0.0199	10:02:58	Yes
Mean:	0.1856	1.949	0.1188				
SD:	0.0007	0.0073	0.0005				
%RSD:	0.3765	0.3765	0.38				

Sequence No.: 12
Sample ID: lcs dup
Analyst: Jennifer G
Initial Sample Wt: 0.239 g
Dilution:

Autosampler Location: 11
Date Collected: 10/24/2014 10:04:41 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 20 mL

Replicate Data: lcs dup

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.1615	1.930	0.1176	0.1189	0.0195	10:05:44	Yes
2	0.1613	1.928	0.1175	0.1188	0.0195	10:06:23	Yes

Duplicate Check: lcs dup

Analyte			Expected Conc.	Measured Conc.	Std. Dev.	Units	Difference (%)
Hg 253.7			0.1856	0.1614	0.000	ug/g	14.0
Mean:	0.1614	1.929	0.1176				
SD:	0.0001	0.0015	0.0001				
%RSD:	0.0779	0.0779	0.08				

Sequence No.: 13
Sample ID: 144638-01
Analyst: Jennifer G
Initial Sample Wt: 0.23 g
Dilution:

Autosampler Location: 12
Date Collected: 10/24/2014 10:08:05 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 20 mL

Replicate Data: 144638-01

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0921	1.059	0.0641	0.0654	0.0105	10:09:09	Yes
2	0.0909	1.045	0.0633	0.0646	0.0106	10:09:47	Yes

Mean:	0.0915	1.052	0.0637
SD:	0.0008	0.0097	0.0006
%RSD:	0.9224	0.9224	0.93

Sequence No.: 14
Sample ID: 144638-02
Analyst: Jennifer G
Initial Sample Wt: 0.232 g
Dilution:

Autosampler Location: 13
Date Collected: 10/24/2014 10:11:30 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 20 mL

Replicate Data: 144638-02

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0961	1.114	0.0675	0.0688	0.0113	10:12:35	Yes
2	0.0953	1.105	0.0670	0.0683	0.0113	10:13:13	Yes
Mean:	0.0957	1.110	0.0673				
SD:	0.0006	0.0065	0.0004				
%RSD:	0.5829	0.5829	0.59				

Sequence No.: 15
Sample ID: 144638-03
Analyst: Jennifer G
Initial Sample Wt: 0.221 g
Dilution:

Autosampler Location: 14
Date Collected: 10/24/2014 10:14:56 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 20 mL

Replicate Data: 144638-03

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0621	0.6863	0.0413	0.0426	0.0068	10:16:01	Yes
2	0.0615	0.6796	0.0409	0.0421	0.0069	10:16:39	Yes
Mean:	0.0618	0.6830	0.0411				
SD:	0.0004	0.0047	0.0003				
%RSD:	0.6941	0.6941	0.71				

Sequence No.: 16
Sample ID: 144638-04
Analyst: Jennifer G
Initial Sample Wt: 0.227 g
Dilution:

Autosampler Location: 15
Date Collected: 10/24/2014 10:18:22 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 20 mL

Replicate Data: 144638-04

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0890	1.010	0.0611	0.0624	0.0104	10:19:27	Yes
2	0.0900	1.022	0.0619	0.0632	0.0105	10:20:06	Yes
Mean:	0.0895	1.016	0.0615				
SD:	0.0008	0.0086	0.0005				
%RSD:	0.8417	0.8417	0.85				

Sequence No.: 17
Sample ID: 144638-05
Analyst: Jennifer G
Initial Sample Wt: 0.243 g
Dilution:

Autosampler Location: 16
Date Collected: 10/24/2014 10:21:49 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 20 mL

Replicate Data: 144638-05

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0092	0.1123	0.0060	0.0073	0.0011	10:22:55	Yes
2	0.0062	0.0756	0.0038	0.0051	0.0011	10:23:33	Yes
Mean:	0.0077	0.0940	0.0049				
SD:	0.0021	0.0260	0.0016				

%RSD:	27.63	27.63	32.51

Sequence No.: 18 **Autosampler Location: 17**
Sample ID: 144638-06 **Date Collected: 10/24/2014 10:25:18 AM**
Analyst: Jennifer G **Data Type: Original**
Initial Sample Wt: 0.23 g **Initial Sample Vol:**
Dilution: **Sample Prep Vol: 20 mL**

Replicate Data: 144638-06

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0507	0.5835	0.0350	0.0362	0.0060	10:26:24	Yes
2	0.0502	0.5773	0.0346	0.0359	0.0061	10:27:02	Yes
Mean:	0.0505	0.5804	0.0348				
SD:	0.0004	0.0044	0.0003				
%RSD:	0.7608	0.7608	0.78				

Sequence No.: 19 **Autosampler Location: 18**
Sample ID: 144638-07 **Date Collected: 10/24/2014 10:28:46 AM**
Analyst: Jennifer G **Data Type: Original**
Initial Sample Wt: 0.225 g **Initial Sample Vol:**
Dilution: **Sample Prep Vol: 20 mL**

Replicate Data: 144638-07

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0715	0.8045	0.0485	0.0498	0.0083	10:29:52	Yes
2	0.0743	0.8357	0.0504	0.0517	0.0085	10:30:31	Yes
Mean:	0.0729	0.8201	0.0495				
SD:	0.0020	0.0221	0.0014				
%RSD:	2.696	2.696	2.74				

Sequence No.: 20 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 10/24/2014 10:32:16 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	1.999	1.999	0.1219	0.1231	0.0206	10:33:22	Yes
2	1.979	1.979	0.1207	0.1219	0.0207	10:34:00	Yes
Mean:	1.989	1.989	0.1213				
SD:	0.0138	0.0138	0.0008				
%RSD:	0.6922	0.6922	0.70				

QC value within limits for Hg 253.7 Recovery = 99.46%
All analyte(s) passed QC.

Sequence No.: 21 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 10/24/2014 10:35:44 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0126	0.0126	-0.0001	0.0012	0.0003	10:36:51	Yes
2	0.0256	0.0256	0.0007	0.0020	0.0003	10:37:29	Yes
Mean:	0.0191	0.0191	0.0003				
SD:	0.0092	0.0092	0.0006				

%RSD: 47.97 47.97 183.38
QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 22
Sample ID: 144638-08
Analyst: Jennifer G
Initial Sample Wt: 0.231 g
Dilution:

Autosampler Location: 19
Date Collected: 10/24/2014 10:39:15 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 20 mL

Replicate Data: 144638-08

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0743	0.8579	0.0518	0.0531	0.0088	10:40:17	Yes
2	0.0729	0.8423	0.0508	0.0521	0.0088	10:40:55	Yes
Mean:	0.0736	0.8501	0.0513				
SD:	0.0010	0.0111	0.0007				
%RSD:	1.302	1.302	1.32				

Sequence No.: 23
Sample ID: 144638-09
Analyst: Jennifer G
Initial Sample Wt: 0.229 g
Dilution:

Autosampler Location: 20
Date Collected: 10/24/2014 10:42:36 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 20 mL

Replicate Data: 144638-09

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0799	0.9150	0.0553	0.0566	0.0097	10:43:40	Yes
2	0.0815	0.9329	0.0564	0.0577	0.0098	10:44:19	Yes
Mean:	0.0807	0.9239	0.0559				
SD:	0.0011	0.0126	0.0008				
%RSD:	1.368	1.368	1.39				

Sequence No.: 24
Sample ID: 144638-10
Analyst: Jennifer G
Initial Sample Wt: 0.2 g
Dilution:

Autosampler Location: 21
Date Collected: 10/24/2014 10:46:00 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 20 mL

Replicate Data: 144638-10

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0866	0.8664	0.0523	0.0536	0.0088	10:47:03	Yes
2	0.0852	0.8518	0.0514	0.0527	0.0088	10:47:42	Yes
Mean:	0.0859	0.8591	0.0519				
SD:	0.0010	0.0103	0.0006				
%RSD:	1.202	1.202	1.22				

Sequence No.: 25
Sample ID: 144638-11
Analyst: Jennifer G
Initial Sample Wt: 0.224 g
Dilution:

Autosampler Location: 22
Date Collected: 10/24/2014 10:49:23 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 20 mL

Replicate Data: 144638-11

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0966	1.082	0.0656	0.0668	0.0112	10:50:25	Yes
2	0.0971	1.088	0.0659	0.0672	0.0113	10:50:59	Yes
Mean:	0.0969	1.085	0.0657				
SD:	0.0004	0.0044	0.0003				

%RSD:	0.4034	0.4034	0.41

Sequence No.: 26 **Autosampler Location: 23**
Sample ID: 144638-12 **Date Collected: 10/24/2014 10:52:28 AM**
Analyst: Jennifer G **Data Type: Original**
Initial Sample Wt: 0.217 g **Initial Sample Vol:**
Dilution: **Sample Prep Vol: 20 mL**

Replicate Data: 144638-12

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0949	1.030	0.0623	0.0636	0.0108	10:53:24	Yes
2	0.0957	1.038	0.0629	0.0641	0.0108	10:53:58	Yes
Mean:	0.0953	1.034	0.0626				
SD:	0.0005	0.0059	0.0004				
%RSD:	0.5752	0.5752	0.58				

Sequence No.: 27 **Autosampler Location: 24**
Sample ID: 144638-13 **Date Collected: 10/24/2014 10:55:33 AM**
Analyst: Jennifer G **Data Type: Original**
Initial Sample Wt: 0.24 g **Initial Sample Vol:**
Dilution: **Sample Prep Vol: 20 mL**

Replicate Data: 144638-13

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.1037	1.244	0.0755	0.0768	0.0129	10:56:35	Yes
2	0.1037	1.245	0.0756	0.0768	0.0128	10:57:12	Yes
Mean:	0.1037	1.245	0.0755				
SD:	0.0000	0.0004	0.0000				
%RSD:	0.0352	0.0352	0.04				

Sequence No.: 28 **Autosampler Location: 25**
Sample ID: 144638-14 **Date Collected: 10/24/2014 10:58:50 AM**
Analyst: Jennifer G **Data Type: Original**
Initial Sample Wt: 0.207 g **Initial Sample Vol:**
Dilution: **Sample Prep Vol: 20 mL**

Replicate Data: 144638-14

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0923	0.9550	0.0578	0.0591	0.0100	10:59:53	Yes
2	0.1004	1.039	0.0629	0.0642	0.0104	11:00:31	Yes
Mean:	0.0963	0.9971	0.0604				
SD:	0.0058	0.0596	0.0037				
%RSD:	5.973	5.973	6.06				

Sequence No.: 29 **Autosampler Location: 26**
Sample ID: 144638-15 **Date Collected: 10/24/2014 11:02:13 AM**
Analyst: Jennifer G **Data Type: Original**
Initial Sample Wt: 0.229 g **Initial Sample Vol:**
Dilution: **Sample Prep Vol: 20 mL**

Replicate Data: 144638-15

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0573	0.6563	0.0394	0.0407	0.0069	11:03:17	Yes
2	0.0605	0.6925	0.0416	0.0429	0.0070	11:03:55	Yes
Mean:	0.0589	0.6744	0.0405				
SD:	0.0022	0.0256	0.0016				
%RSD:	3.795	3.795	3.88				

Sequence No.: 30
Sample ID: 144638-16
Analyst: Jennifer G
Initial Sample Wt: 0.202 g
Dilution:

Autosampler Location: 27
Date Collected: 10/24/2014 11:05:38 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 20 mL

Replicate Data: 144638-16

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0826	0.8347	0.0504	0.0517	0.0085	11:06:44	Yes
2	0.0825	0.8335	0.0503	0.0516	0.0086	11:07:21	Yes
Mean:	0.0826	0.8341	0.0503				
SD:	0.0001	0.0009	0.0001				
%RSD:	0.1024	0.1024	0.10				

Sequence No.: 31
Sample ID: 144638-17
Analyst: Jennifer G
Initial Sample Wt: 0.209 g
Dilution:

Autosampler Location: 29
Date Collected: 10/24/2014 11:09:05 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 20 mL

Replicate Data: 144638-17

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0584	0.6107	0.0366	0.0379	0.0070	11:10:06	Yes
2	0.0711	0.7432	0.0448	0.0460	0.0076	11:10:44	Yes
Mean:	0.0648	0.6769	0.0407				
SD:	0.0090	0.0937	0.0058				
%RSD:	13.84	13.84	14.13				

Sequence No.: 32
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 10/24/2014 11:12:25 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.009	2.009	0.1225	0.1238	0.0208	11:13:30	Yes
2	2.005	2.005	0.1222	0.1235	0.0209	11:14:08	Yes
Mean:	2.007	2.007	0.1223				
SD:	0.0033	0.0033	0.0002				
%RSD:	0.1655	0.1655	0.17				

QC value within limits for Hg 253.7 Recovery = 100.34%
All analyte(s) passed QC.

Sequence No.: 33
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 10/24/2014 11:15:51 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0030	-0.0030	-0.0010	0.0002	0.0003	11:16:57	Yes
2	0.0128	0.0128	-0.0001	0.0012	0.0002	11:17:35	Yes
Mean:	0.0049	0.0049	-0.0006				
SD:	0.0112	0.0112	0.0007				
%RSD:	226.5	226.5	121.54				

QC value within limits for Hg 253.7 Recovery = Not calculated

All analyte(s) passed QC.

Sequence No.: 34 **Autosampler Location: 30**
Sample ID: 144638-18 **Date Collected: 10/24/2014 11:19:20 AM**
Analyst: Jennifer G **Data Type: Original**
Initial Sample Wt: 0.214 g **Initial Sample Vol:**
Dilution: **Sample Prep Vol: 20 mL**

Replicate Data: 144638-18

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0896	0.9584	0.0580	0.0593	0.0100	11:20:22	Yes
2	0.0895	0.9571	0.0579	0.0592	0.0100	11:21:00	Yes
Mean:	0.0895	0.9578	0.0579				
SD:	0.0001	0.0009	0.0001				
%RSD:	0.0922	0.0922	0.09				

Sequence No.: 35 **Autosampler Location: 31**
Sample ID: 144638-19 **Date Collected: 10/24/2014 11:22:41 AM**
Analyst: Jennifer G **Data Type: Original**
Initial Sample Wt: 0.223 g **Initial Sample Vol:**
Dilution: **Sample Prep Vol: 20 mL**

Replicate Data: 144638-19

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0944	1.053	0.0638	0.0651	0.0110	11:23:43	Yes
2	0.0946	1.055	0.0639	0.0652	0.0111	11:24:21	Yes
Mean:	0.0945	1.054	0.0638				
SD:	0.0001	0.0013	0.0001				
%RSD:	0.1238	0.1238	0.13				

Sequence No.: 36 **Autosampler Location: 32**
Sample ID: 144638-19 dup **Date Collected: 10/24/2014 11:26:03 AM**
Analyst: Jennifer G **Data Type: Original**
Initial Sample Wt: 0.24 g **Initial Sample Vol:**
Dilution: **Sample Prep Vol: 20 mL**

Replicate Data: 144638-19 dup

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0956	1.148	0.0696	0.0709	0.0120	11:27:06	Yes
2	0.0964	1.157	0.0702	0.0715	0.0121	11:27:44	Yes

Duplicate Check: 144638-19 dup

Analyte			Expected Conc.	Measured Conc.	Std. Dev.	Units	Difference (%)
Hg 253.7			0.0945	0.0960	0.001	ug/g	1.6
Mean:	0.0960	1.152	0.0699				
SD:	0.0006	0.0069	0.0004				
%RSD:	0.5995	0.5995	0.61				

Sequence No.: 37 **Autosampler Location: 33**
Sample ID: 144638-19 spk **Date Collected: 10/24/2014 11:29:26 AM**
Analyst: Jennifer G **Data Type: Original**
Initial Sample Wt: 0.238 g **Initial Sample Vol:**
Dilution: **Sample Prep Vol: 20 mL**

Replicate Data: 144638-19 spk

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored

1	0.2577	3.066	0.1874	0.1887	0.0316	11:30:29	Yes
2	0.2562	3.048	0.1863	0.1876	0.0317	11:31:07	Yes
Mean:	0.2569	3.057	0.1868				
SD:	0.0011	0.0126	0.0008				
%RSD:	0.4132	0.4132	0.42				

User canceled analysis.

==========

Analysis Begun

Logged In Analyst: fims **Technique: AA FIMS-MHS**
Spectrometer Model: FIMS-100, S/N B050-9550 **Autosampler Model: AS-90**

Sample Information File: C:\data-AA\fims\Sample Information\Hg141024A.sif
Batch ID:
Results Data Set: Hg141024A
Results Library: C:\data-AA\fims\Results\Results.mdb

==========

Sequence No.: 32 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 10/24/2014 11:31:24 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.023	2.023	0.1233	0.1246	0.0211	11:32:29	Yes
2	2.006	2.006	0.1223	0.1236	0.0213	11:33:07	Yes
Mean:	2.014	2.014	0.1228				
SD:	0.0122	0.0122	0.0008				
%RSD:	0.6075	0.6075	0.61				

QC value within limits for Hg 253.7 Recovery = 100.72%
All analyte(s) passed QC.

==========

Sequence No.: 33 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 10/24/2014 11:34:51 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0356	0.0356	0.0013	0.0026	0.0004	11:35:56	Yes
2	0.0207	0.0207	0.0004	0.0017	0.0003	11:36:35	Yes
Mean:	0.0281	0.0281	0.0009				
SD:	0.0105	0.0105	0.0006				
%RSD:	37.41	37.41	75.14				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.
User canceled analysis.

==========

Analysis Begun

Logged In Analyst: fims **Technique: AA FIMS-MHS**
Spectrometer Model: FIMS-100, S/N B050-9550 **Autosampler Model: AS-90**

Sample Information File: C:\data-AA\fims\Sample Information\Hg141024A.sif
Batch ID:
Results Data Set: Hg141024A
Results Library: C:\data-AA\fims\Results\Results.mdb

==========

Sequence No.: 38 **Autosampler Location: 34**

Sample ID: blk
Analyst: Jennifer G
Initial Sample Wt: 0.244 g
Dilution:

Date Collected: 10/24/2014 11:37:56 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 20 mL

Replicate Data: blk

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0009	0.0106	-0.0002	0.0011	0.0002	11:39:00	Yes
2	0.0019	0.0230	0.0005	0.0018	0.0003	11:39:38	Yes
Mean:	0.0014	0.0168	0.0002				
SD:	0.0007	0.0088	0.0005				
%RSD:	52.34	52.34	329.37				

Sequence No.: 39
Sample ID: lcs
Analyst: Jennifer G
Initial Sample Wt: 0.204 g
Dilution:

Autosampler Location: 35
Date Collected: 10/24/2014 11:41:21 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 20 mL

Replicate Data: lcs

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.2260	2.305	0.1406	0.1419	0.0241	11:42:25	Yes
2	0.2233	2.278	0.1390	0.1403	0.0242	11:43:03	Yes
Mean:	0.2246	2.291	0.1398				
SD:	0.0019	0.0191	0.0012				
%RSD:	0.8338	0.8338	0.84				

Sequence No.: 40
Sample ID: lcs dup
Analyst: Jennifer G
Initial Sample Wt: 0.235 g
Dilution:

Autosampler Location: 36
Date Collected: 10/24/2014 11:44:46 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 20 mL

Replicate Data: lcs dup

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.1936	2.275	0.1388	0.1401	0.0240	11:45:50	Yes
2	0.1918	2.253	0.1375	0.1388	0.0240	11:46:28	Yes

Duplicate Check: lcs dup

Analyte			Expected Conc.	Measured Conc.	Std. Dev.	Units	Difference (%)
Hg 253.7			0.2246	0.1927	0.001	ug/g	15.3
Mean:	0.1927	2.264	0.1381				
SD:	0.0013	0.0156	0.0010				
%RSD:	0.6907	0.6907	0.70				

Sequence No.: 41
Sample ID: 144594-01
Analyst: Jennifer G
Initial Sample Wt: 0.239 g
Dilution:

Autosampler Location: 37
Date Collected: 10/24/2014 11:48:12 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 20 mL

Replicate Data: 144594-01

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.2768	3.308	0.2022	0.2035	0.0346	11:49:14	Yes
2	0.2772	3.313	0.2025	0.2038	0.0349	11:49:52	Yes
Mean:	0.2770	3.310	0.2024				
SD:	0.0003	0.0035	0.0002				

%RSD: 0.1063 0.1063 0.11

Sequence No.: 42 **Autosampler Location: 38**
Sample ID: 144594-02 **Date Collected: 10/24/2014 11:51:32 AM**
Analyst: Jennifer G **Data Type: Original**
Initial Sample Wt: 0.248 g **Initial Sample Vol:**
Dilution: **Sample Prep Vol: 20 mL**

Replicate Data: 144594-02

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.4971	6.165	0.3776	0.3789	0.0646	11:52:34	Yes
2	0.5025	6.231	0.3817	0.3830	0.0655	11:53:12	Yes
Mean:	0.4998	6.198	0.3797				
SD:	0.0038	0.0472	0.0029				
%RSD:	0.7615	0.7615	0.76				

Sequence No.: 43 **Autosampler Location: 39**
Sample ID: 144594-03 **Date Collected: 10/24/2014 11:54:52 AM**
Analyst: Jennifer G **Data Type: Original**
Initial Sample Wt: 0.226 g **Initial Sample Vol:**
Dilution: **Sample Prep Vol: 20 mL**

Replicate Data: 144594-03

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.3933	4.445	0.2720	0.2733	0.0462	11:55:55	Yes
2	0.3892	4.398	0.2691	0.2704	0.0465	11:56:33	Yes
Mean:	0.3913	4.421	0.2706				
SD:	0.0029	0.0332	0.0020				
%RSD:	0.7514	0.7514	0.75				

Sequence No.: 44 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 10/24/2014 11:58:14 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.037	2.037	0.1242	0.1255	0.0214	11:59:19	Yes
2	2.033	2.033	0.1239	0.1252	0.0214	11:59:57	Yes
Mean:	2.035	2.035	0.1240				
SD:	0.0028	0.0028	0.0002				
%RSD:	0.1387	0.1387	0.14				

QC value within limits for Hg 253.7 Recovery = 101.73%
All analyte(s) passed QC.

Sequence No.: 45 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 10/24/2014 12:01:41 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0063	0.0063	-0.0005	0.0008	0.0002	12:02:46	Yes
2	0.0093	0.0093	-0.0003	0.0010	0.0003	12:03:24	Yes
Mean:	0.0078	0.0078	-0.0004				
SD:	0.0021	0.0021	0.0001				

%RSD: 27.14 27.14 33.70
QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 46
Sample ID: 144594-04
Analyst: Jennifer G
Initial Sample Wt: 0.22 g
Dilution:

Autosampler Location: 40
Date Collected: 10/24/2014 12:05:09 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 20 mL

Replicate Data: 144594-04

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.1358	1.494	0.0909	0.0921	0.0156	12:06:12	Yes
2	0.1359	1.495	0.0909	0.0922	0.0156	12:06:50	Yes
Mean:	0.1359	1.495	0.0909				
SD:	0.0001	0.0008	0.0000				
%RSD:	0.0539	0.0539	0.05				

Sequence No.: 47
Sample ID: 144581-01
Analyst: Jennifer G
Initial Sample Wt: 0.23 g
Dilution:

Autosampler Location: 41
Date Collected: 10/24/2014 12:08:31 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 20 mL

Replicate Data: 144581-01

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0104	0.1195	0.0065	0.0078	0.0012	12:09:34	Yes
2	0.0094	0.1085	0.0058	0.0071	0.0012	12:10:12	Yes
Mean:	0.0099	0.1140	0.0061				
SD:	0.0007	0.0078	0.0005				
%RSD:	6.814	6.814	7.78				

Sequence No.: 48
Sample ID: 144581-01 dup
Analyst: Jennifer G
Initial Sample Wt: 0.203 g
Dilution:

Autosampler Location: 42
Date Collected: 10/24/2014 12:11:54 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 20 mL

Replicate Data: 144581-01 dup

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0091	0.0926	0.0048	0.0061	0.0011	12:12:58	Yes
2	0.0099	0.1008	0.0053	0.0066	0.0011	12:13:35	Yes

Duplicate Check: 144581-01 dup

Analyte			Expected Conc.	Measured Conc.	Std. Dev.	Units	Difference (%)
Hg 253.7			0.0099	0.0095	0.001	ug/g	4.0
Mean:	0.0095	0.0967	0.0051				
SD:	0.0006	0.0058	0.0004				
%RSD:	5.971	5.971	6.99				

Sequence No.: 49
Sample ID: 144581-01 spk
Analyst: Jennifer G
Initial Sample Wt: 0.204 g
Dilution:

Autosampler Location: 43
Date Collected: 10/24/2014 12:15:17 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 20 mL

Replicate Data: 144581-01 spk

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.2345	2.392	0.1460	0.1473	0.0251	12:16:21	Yes
2	0.2334	2.380	0.1453	0.1466	0.0251	12:17:00	Yes
Mean:	0.2339	2.386	0.1456				
SD:	0.0008	0.0079	0.0005				
%RSD:	0.3306	0.3306	0.33				

Sequence No.: 50 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 10/24/2014 12:18:42 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.027	2.027	0.1236	0.1249	0.0212	12:19:47	Yes
2	2.018	2.018	0.1230	0.1243	0.0212	12:20:25	Yes
Mean:	2.022	2.022	0.1233				
SD:	0.0067	0.0067	0.0004				
%RSD:	0.3313	0.3313	0.33				

QC value within limits for Hg 253.7 Recovery = 101.11%
All analyte(s) passed QC.

Sequence No.: 51 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 10/24/2014 12:22:09 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0184	0.0184	0.0003	0.0015	0.0003	12:23:15	Yes
2	0.0135	0.0135	-0.0000	0.0012	0.0002	12:23:53	Yes
Mean:	0.0159	0.0159	0.0001				
SD:	0.0035	0.0035	0.0002				
%RSD:	21.72	21.72	190.22				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

HCl lot #: 0171051
HNO3 Lot #: C470895
H2O2 lot#: C4B0750

Spike #1 Lot #: 090613
Spike #2 Lot #: ↓ 500 mL
Spike #3 Lot #:
Spike #4 Lot #: 031414 @ 200 mL
Temp: 95

METALS PREP - non-aqueous

DATE: 10-23-14
INITIALS: JG
Page 1 of 1
PrepBatch PB141023Soil
QC Batch: QC141023Soil

Lab Sample #	Sample Type	Metals	Initial Amount (g)	Final Volume (ml)	Comments	% M	CC
Blk	Soil	JMet1	0.517	50			
LCS			0.457				
LCSDup			0.484				
463838-01			0.580		Pb, Cd, As	28.9	G3
-02			0.487			25.6	
-03			0.510			26.4	
-04			0.495			25.9	
-05			0.480			14.7	
-06			0.480			24.6	
-07			0.508			32.1	
-08			0.519			24.4	
-09			0.484			27.1	
-10			0.472			29.8	
-11			0.517			24.1	
-12			0.534			23.1	
-13			0.493			25.2	
-14			0.496			20.9	
-15			0.516			24.6	
-16			0.508			28.5	
-17			0.525			25.0	
-18			0.540			24.0	
-19			0.479			18.1	
-19dup			0.505			↓	
-19spk			0.492				

Initial Amount="1" for wipes, air filters
Digestion Method:EPA SW-846 3050 (soil,wipe,paint)
NIOSH 7082 (Air Filters)

PREPSOLLIMS

KMnO4 Ref#: 3471 HNO3 lot#: C470895 Waters: —
K2S2O8 Ref#: 3467 H2SO4 lot#: C340e519 Temp1: — Temp2: —
Hydroxy. Ref #: 3499 TCLP Fluid#: — Soils: start 1300 end 1330
Temp1: 93 Temp2: 93

METALS PREP - mercury

DATE: 10-23-14 CAL STD: Hg141023cal1

INITIALS: JG CCV STD: Hg141023ccv2

Lab Sample #	Sample Type	Method	Initial Volume/Weight	Comments	% M	CC
DblBlk		7471B				
0.0002						
0.0010						
0.0020						
0.0050						
0.0100						
ICV						
ICB						
Blk	Soil		0.245			
LCS			0.210			
LCSDup			0.239			
463850-01			0.230		28.9	G3
-02			0.232		25.6	
-03			0.221		26.4	
-04			0.227		25.9	
-05			0.243		14.7	
-06			0.230		24.6	
-07			0.225		32.1	
-08			0.231		24.4	
-09			0.229		27.1	
-10			0.206		29.8	
-11			0.224		24.1	
-12			0.217		23.1	
-13			0.240		25.2	
-14			0.207		20.9	
-15			0.229		24.6	
-16			0.202		28.5	
-17			0.209		25.0	
-18			0.214		24.0	
-19			0.223		18.1	

Digestion Method:EPA SW-846 7470A (water), 7471B (Soil)

PrepBatch: 88Hg141023HgSoil Page: 1 of 2

QC Batch: QCHg141023HgSoil

KMnO4 Ref#:________ HNO3 lot#:________ Waters:________

K2S2O8 Ref#:________ H2SO4 lot#:________ Temp1:______Temp2:________

Hydroxy. Ref #:________ TCLP Fluid#________ Soils:________

Temp1:______Temp2:________

METALS PREP - mercury

DATE:________ CAL STD:________

INITIALS:________ CCV STD:________

Lab Sample #	Sample Type	Method	Initial Volume/Weight	Comments	% M	CC
-19dup	Soil	7471B	0.240		18.1	63
-19SDK	↓		0.238		↓	6
ccv						
ccb						
ccv						

Digestion Method:EPA SW-846 7470A (water), 7471B (Soil)

PrepBatch:________ Page: 2 of 2

QC Batch:________

WETCHEM DATA

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W80 (0-0.2 ft)
Lab Sample ID: 144638-01 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.636**	mg/Kg		10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W80 (0.2-0.7 ft)

Lab Sample ID: 144638-02 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.418**	mg/Kg	J	10/24/2014

Method Reference(s): EPA 9014

Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W80 (0.7-1.5 ft)

Lab Sample ID: 144638-03 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	< 0.649	mg/Kg		10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W90 (0-0.2 ft)

Lab Sample ID: 144638-04 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.452**	mg/Kg	J	10/24/2014

Method Reference(s): EPA 9014

Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W90 (0.2-1.0 ft)
Lab Sample ID: 144638-05 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.749**	mg/Kg		10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W90 (1.0-1.5 ft)
Lab Sample ID: 144638-06 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	< 0.649	mg/Kg		10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W80 (0-0.2 ft)

Lab Sample ID: 144638-07 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.384**	mg/Kg	J	10/24/2014

Method Reference(s): EPA 9014

Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W80 (0.2-1.0 ft)

Lab Sample ID: 144638-08 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	< 0.633	mg/Kg		10/24/2014

Method Reference(s): EPA 9014

Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W80 (1.0-1.5 ft)

Lab Sample ID: 144638-09 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	< 0.602	mg/Kg		10/24/2014

Method Reference(s): EPA 9014

Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W90 (0-0.2 ft)

Lab Sample ID: 144638-10 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.343**	mg/Kg	J	10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W90 (0.2-0.8 ft)

Lab Sample ID: 144638-11 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.311**	mg/Kg	J	10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W90 (0.8-1.3 ft)

Lab Sample ID: 144638-12 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.338**	mg/Kg	J	10/24/2014

Method Reference(s): EPA 9014

Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W80 (0-0.2 ft)

Lab Sample ID: 144638-13 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	< 0.651	mg/Kg		10/24/2014

Method Reference(s): EPA 9014

Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W80 (0.2-0.8 ft)

Lab Sample ID: 144638-14 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.342**	mg/Kg	J	10/24/2014

Method Reference(s): EPA 9014

Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W80 (0.8-1.4 ft)
Lab Sample ID: 144638-15 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	< 0.616	mg/Kg		10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W90 (0-0.2 ft)
Lab Sample ID: 144638-16 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.342**	mg/Kg	J	10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W90 (0.2-0.7 ft)

Lab Sample ID: 144638-17 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	< 0.639	mg/Kg		10/24/2014

Method Reference(s): EPA 9014

Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W30 (0-0.2 ft)

Lab Sample ID: 144638-18 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	< 0.566	mg/Kg		10/24/2014

Method Reference(s): EPA 9014

Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM

Lab Project ID: 144638

Client: GEI Consultants Inc.

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W83 (0.2-1.6 ft)
Lab Sample ID: 144638-19 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	< 0.428	mg/Kg		10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Method Blank Report

Client: GEI Consultants Inc.
Project Reference: National Fuel Gas Mineral Springs
Lab Project ID: 144638
SDG #: 4638-01
Matrix: Soil

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	<0.472	mg/Kg		10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014
QC Batch ID: QC141023stcn
QC Number: 1

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

QC Report for Laboratory Control Sample

Client: **GEI Consultants Inc.**
Project Reference: National Fuel Gas Mineral Springs
Lab Project ID: 144638
SDG #: 4638-01
Matrix: Soil

Total Cyanide

Analyte	Spike Added	Spike Units	LCS Result	LCS % Recovery	% Rec Limits	LCS Outliers	Date Analyzed
Cyanide, Total	9.28	mg/Kg	9.09	98.0	85 - 115		10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014
QC Number: 1
QC Batch ID: QC141023stcn

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

QC Report for Sample Spike and Sample Duplicate

SDG #: 4638-01
Client: GEI Consultants Inc. **Lab Project ID:** 144638
Project Reference: National Fuel Gas Mineral Springs

Lab Sample ID: 144638-01 **Date Sampled:** 10/22/2014
Sample Identifier: S6+10S W80 (0-0.2 ft) **Date Received:** 10/23/2014
Matrix: Soil

Total Cyanide

Analyte	Sample Results	Result Units	Spike Added	Spike Result	Spike % Recovery	% Rec Limits	Spike Outliers	Duplicate Result	Relative % Difference	RPD Limit	RPD Outliers	Date Analyzed
Cyanide, Total	**0.636**	mg/Kg	9.48	9.29	91.3	80 - 120		<0.601	NC	20		10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014
QC Batch ID: QC141023stcn

NC = Not Calculable. Applicable to RPD if sample or duplicate result is non-detect or estimated (see primary report for data flags). Applicable to MS if sample is greater or equal to ten times the spike added.

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Report Prepared Friday, October 24, 2014

Lab Name: Paradigm Environmental Services

Client: GEI Consultants Inc. **Lab Project No.:** 144638

Client Job Site: National Fuel Gas Mineral Springs **Run IDs.:** 140925B-ICV
141024A-CCVs

Client Job No.: N/A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Initial Calibration Source: Alfa Aeser
Continuing Calibration Source: Sigma-Aldrich

Concentration Units: mg/L

	Initial Calibration Verification			Continuing Calibration Verification					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	M
TCN	0.200	0.204	102	0.200	0.208	104	0.198	98.8	SW9014

(1) Control Limits: 90-110%

FORM IIA-IN

Lab Name: Paradigm Environmental Services

Client: GEI Consultants Inc. **Lab Project No.:** 144638

Client Job Site: National Fuel Gas Mineral Springs **Run ID.:** 141024A-CCVs

Client Job No.: N/A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Initial Calibration Source: Alfa Aeser
Continuing Calibration Source: Sigma-Aldrich

Concentration Units: mg/L

	Initial Calibration Verification			Continuing Calibration Verification					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	M
TCN				0.200	0.198	99.0	0.200	99.8	SW9014

(1) Control Limits: 90-110%

FORM IIA-IN

Lab Name: Paradigm Environmental Services

Client: GEI Consultants Inc. **Lab Project No.:** 144638

Client Job Site: National Fuel Gas Mineral Springs **Lab Sample No.:** Soil Blk 10/23

Client Job No.: N/A **Sample Type:** Soil

BLANKS

Preparation Blank Matrix (soil/water): Soil Run No.: 140925B-ICB
Concentration Units (mg/L or mg/kg): mg/kg 141024A-CCBs

	Initial Calibration Blank		Continuing Calibration Blank						Preparation Blank		Method
	(mg/L)		(mg/L)						(mg/Kg)		
Analyte		Q	1	Q	2	Q	3	Q		Q	
TCN	<0.01		<0.01		<0.01		<0.01		<0.472		SW9014

* - Outside established quality control acceptance limits.

FORM III-IN

Lab Name: Paradigm Environmental Services

Client: GEI Consultants Inc. **Lab Project No.:** 144638

Client Job Site: National Fuel Gas Mineral Springs **Lab Sample No.:** Soil Blk 10/23

Client Job No.: N/A **Sample Type:** Soil

BLANKS

Preparation Blank Matrix (soil/water): Soil Run No.: 141024A-CCBs
Concentration Units (mg/L or mg/kg): mg/kg

	Initial Calibration Blank		Continuing Calibration Blank						Preparation Blank		Method
	(mg/L)		(mg/L)						(mg/Kg)		
Analyte		Q	4	Q		Q		Q		Q	
TCN			<0.01								SW9014

* - Outside established quality control acceptance limits.

FORM III-IN

Laboratory Name: Paradigm Environmental Lab Cert. #10958 Page 1 of 1

Analyst Signature _____ Date: 6/18/2014

Matrix: Soil Units: mg/Kg

Initial Demonstration of Capability- SW846 Method 9014

Parameter	LOQ mg/Kg	True value mg/Kg	Results mg/Kg 1	Results mg/Kg 2	Results mg/Kg 3	Results mg/Kg 4	Average mg/Kg	EPA Acceptance criteria %	SD mg/Kg	EPA SD max limit mg/Kg
Cyanide, Total	0.5000	0.2500	0.2994	0.2994	0.2062	0.2994	0.2761	n/a	0.0466	n/a

Date: 6/18/14
Units: mg/Kg
Spike Level: 0.2500 mg/Kg

data file: 140618B

Compound	LOQ	MDL1	MDL2	MDL3	MDL4	MDL5	MDL6	MDL7	STD DEV	MDL
Cyanide, Total	0.5000	0.2994	0.2994	0.2062	0.2994	0.2217	0.2683	0.2683	0.0385	0.1209

140925B

TEST SETUP
Orion AquaMate 8000 UV-Vis v1.005 2W2R319204

Standard Curve	3:59pm 25Sep14
Test Name	140925_9014[Saved]
Date Standards Measured	25Sep14
Wavelength	578.0nm
Ref. Wavelength Correction	Off
Curve Fit	Linear
Number of Standards	7
Units	ppb
Sample Positioner	1-Cell Platform
ID# (0=OFF)	1
Low/High Limits	-9999/9999
Statistics	On
Auto Print	On
Auto Save Data	On
Data File Name	140925B

Std #	Conc. ppb	Abs 578.0nm
1	0.000	0.000
2	10.00	0.031
3	20.00	0.063
4	50.00	0.156
5	100.0	0.314
6	200.0	0.638
7	500.0	1.670

Curve Fit	Linear
Slope	0.00334
Intercept	-0.00947
Std Dev	0.013
Corr Coeff	1.000

ID#	Abs 578.0nm	Result ppb
1	0.671	203.8
2	0.001	3.135

# Samples	2
Average	103.5
Std Dev	141.9

141024A

TEST SETUP
Orion AquaMate 8000 UV-Vis v1.005 2W2R319204

Standard Curve	11:42am 24Oct14
Test Name	140925_9014[Saved]
Date Standards Measured	25Sep14
Wavelength	578.0nm
Ref. Wavelength Correction	Off
Curve Fit	Linear
Number of Standards	7
Units	ppb
Sample Positioner	1-Cell Platform
ID# (0=OFF)	1
Low/High Limits	-9999/9999
Statistics	On
Auto Print	On
Auto Save Data	On
Data File Name	141024A

Std #	Conc. ppb	Abs 578.0nm
1	0.000	0.000
2	10.00	0.031
3	20.00	0.063
4	50.00	0.156
5	100.0	0.314
6	200.0	0.638
7	500.0	1.670

Curve Fit	Linear
Slope	0.00334
Intercept	-0.00947
Std Dev	0.013
Corr Coeff	1.000

ID#	Sample ID	Abs 578.0nm	Result ppb
1	CCV	0.686	208.3
2	CCB	0.000	2.836
3	MB	0.001	3.135
4	LCS	0.645	196.0
5	144638-01	0.026	10.62
6	144638-01 DUP	0.016	7.628
7	144638-01 SPK	0.645	196.0
8	144638-02	0.014	7.029
9	144638-03	0.005	4.333
10	144638-04	0.017	7.927
11	144638-05	0.037	13.92
12	144638-06	0.003	3.734
13	CCV	0.650	197.5
14	CCB	0.001	3.135
15	144638-07	0.009	5.531
16	144638-08	0.005	4.333
17	144638-09	0.007	4.932
18	144638-10	0.009	5.531
19	144638-11	0.008	5.232
20	144638-12	0.008	5.232
21	144638-13	0.007	4.932
22	144638-14	0.010	5.831
23	144638-15	0.002	3.435

141024A

24	144638-16	0.011	6.130
25	CCV	0.652	198.1
26	CCB	0.002	3.435
27	144638-17	0.006	4.633
28	144638-18	0.005	4.333
29	144638-19	0.006	4.633
30	144635-01	0.003	3.734
31	144638-01 CB	0.001	3.135
32	144638-01 CB RPT	0.004	4.034
33	CCV	0.657	199.6
34	CCB	0.000	2.836

# Samples	34
Average	39.46
Std Dev	75.13

Distillation Date 10/23/14 Sulfamic Acid Lot # 3514
Analyst (distillation) RR MgCl2 Lot # 3485
Time at Temp 1140/1600 1:1 H2SO4 Lot # 3498
Block Temp 101°C/101°C 0.25N NaOH Lot # (distillation) 3509
10ppm Std Lot # 3515

Analysis Date RR 10/24/14 Prydine Lot # 24095000
Time 900 1M Sodium Phosphate Lot # 3248
Analyst (analysis) RR Choramine-T Lot # 3504
Curve Date 9/25/14 10 ppm ref Lot # 3521
0.25N NaOH Lot # (analysis) 3509

Prep Batch PB141023Stcn
QC Batch QC141023Stcn

Final WET CN mg/Kg= ((F*H)/I)* Dilution

Final DRY CN mg/Kg= ((F*H)/(I*((100-%M/100)))* Dilution

CYANIDE Distillation and Analysis of Soils- EPA 9010/9014 page 1 of 2

Lab Sample #	Sample Matrix	Distillation Initial Amount (g) (I)	Distillation Final Volume (mL) (H)	Comments/ Spk'd amount	CC	ID# on Spec	Initial amount (mL) (J)	Final Volume (mL) (G)	Concentration (mg/L) on spec (F)	% M	Dilution for LIMS (G/J)	Concentration (mg/Kg) Final	
ICV/CCV	NA	NA	NA	NA	NA	1	10	20	0.2083				~~98%~~ ✓ 104.2%
ICB/CCB	NA	NA	NA	NA	NA	2	10	20	0.002836				✓
MB	Soil	1.0598	25		—	3	10	20	0.003135		2	0.1479	✓
LCS		1.0781	25	1.0mL Lab 10ppm	—	4	10	20	0.1960		2	9.0901	98.0% ✓
144638-01		1.1737	25		G3	5	10	20	0.01062	28.9	2	0.63363	
-01 DUP		1.1699	25		G3	6	10	20	0.007628	28.9	2	0.4585 J	%Diff 32.5%
~~LCSSPK~~		1.4836	25	1.0mL Lab 10ppm	G3	7	10	20	0.1960	28.9	2	9.2905	91.3% ✓
144638-02		1.1302	25		G3	8	10	20	0.007029	25.6	2	0.4180 J	
-03		1.0468	25		G3	9	10	20	0.004333	26.4	2	0.2812	<0.649
-04		1.1832	25		G3	10	10	20	0.007927	25.9	2	0.4521 J	
CB needed -05		1.0900	25		G3	11	10	20	0.01392	14.7	2	0.7486	
-06		1.0214	25		G3	12	10	20	0.003734	24.6	2	0.2424	<0.649
CCV	NA	NA	NA	NA	NA	13	10	20	0.1975				98.8% ✓
CCB	NA	NA	NA	NA	NA	14	10	20	0.003135		~~2~~ RR 10/24/14		✓ Solid with
144638-07	Soil	1.0592	25		G3	15	10	20	0.005531	32.1	2	~~0.3957~~ J	0.3845
-08		1.0451	25		G3	16	10	20	0.004333	24.4	2	0.2742	<0.633
-09		1.1400	25		G3	17	10	20	0.004932	27.1	2	0.2967	<0.602
-10		1.1500	25		G3	18	10	20	0.005531	29.8	2	0.3426 J	
-11		1.1088	25		G3	19	10	20	0.005232	24.1	2	0.3108 J	
-12		1.0058	25		G3	20	10	20	0.005232	23.1	2	0.3382 J	
-13		1.0261	25		G3	21	10	20	0.004932	25.2	2	0.3213	<0.651
-14		1.0784	25		G3	22	10	20	0.005831	20.9	2 RR 10/24/14	~~0.3204~~ 0.3418 J	
-15		1.0757	25		G3	23	10	20	0.003435	24.6	2	~~0.2866~~ 0.2118	<0.616
-16		1.2544	25		G3	24	10	20	0.006130	28.5	2	~~0.3823~~ 0.3417 J	
CCV	NA	NA	NA	NA	NA	25	10	20	0.1981				99.1% ✓
CCB	NA	NA	NA	NA	NA	26	10	20	0.003435				✓

*This symbol next to a sample # indicates a positive result for sulfide with the lead acetate strip and therefore the sample was treated with Lead Carbonate before distillation.

Distillation Date 10/23/14 Sulfamic Acid Lot # 3514
Analyst (distillation) RR MgCl2 Lot # 3485
Time at Temp 1140/1600 1:1 H2SO4 Lot # 3498
Block Temp 101°C/101°C 0.25N NaOH Lot # (distillation) 3509
10ppm Std Lot # 3515

Analysis Date 10/24/14 Prydine Lot # 2409500
Time 900 1M Sodium Phosphate Lot # 3248
Analyst (analysis) RR Choramine-T Lot # 3504
Curve Date 9/25/14 10 ppm ref Lot # 3521
0.25N NaOH Lot # (analysis) 3509

Prep Batch PB141023stcn
QC Batch QC141023stcn

Final WET CN mg/Kg= ((F*H)/I)* Dilution

Final DRY CN mg/Kg= ((F*H)/(I*((100-%M/100)))* Dilution

CYANIDE Distillation and Analysis of Soils- EPA 9010/9014 page 2 of 2

Lab Sample #	Sample Matrix	Distillation Initial Amount (g) (I)	Distillation Final Volume (mL) (H)	Comments/ Spk'd amount	CC	ID# on Spec	Initial amount (mL) (J)	Final Volume (mL) (G)	Concentration (mg/L) on spec (F)	% M	Dilution for LIMS (G/J)	Concentration (mg/Kg) Final	
~~ICV/CCV~~	~~NA~~	~~NA~~	~~NA~~	~~NA~~	~~NA~~								RR 10/24/14
~~ICB/CCB~~	~~NA~~	~~NA~~	~~NA~~	~~NA~~	~~NA~~								
144638-17	soil	1.0429	25		G3	27	10	20	0.004653	25.0	2	~~0.23271~~ 0.2962	<0.639
-18		1.1616	25		G3	28	10	20	0.004333	24.0	2	~~0.2711~~ 0.2454	<0.366
-19		1.4268	25		G3	29	10	20	0.004633	18.1	2	~~0.2748~~ 0.1982	<0.428
144635-01	soil	1.0262	25		G3	30	10	20	0.003734	8.87	2	~~0.19600~~ 0.1996	
made incorrectly 144638-05 cb	color blank	1.0900	25	—	G3	31	10	20	0.003135	14.7	2		
~~CCV~~	—	—	—	—	—	~~32~~	~~10~~	~~20~~					
~~CCB~~	—	—	—	—	—	~~33~~	~~10~~	~~20~~					
rpt 144638-05CB	color blank	1.0900	25	—	G3	32	5	10	0.004034	14.7	2	0.21169	→ report sample w/o color blank <Reporting limit.
CCV	—	—	—	—	—	33	10	20	0.1996			99.8% ✓	
CCB	—	—	—	—	—	34	10	20	0.002836			✓	
CCV	NA	NA	NA	NA	NA								
CCB	NA	NA	NA	NA	NA								
CCV	NA	NA	NA	NA	NA								
CCB	NA	NA	NA	NA	NA								

RR 10/24/14

*This symbol next to a sample # indicates a positive result for sulfide with the lead acetate strip and therefore the sample was treated with Lead Carbonate before distillation.

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Analytical Report Cover Page

GEI Consultants, Inc.

For Lab Project # 144706
Issued November 19, 2014
This report contains a total of 80 pages

This report includes all reissued reports to correct the client IDs. The results have not changed.

The reported results relate only to the samples as they have been received by the laboratory.

Each page of this document is part of a multipage report. This document may not be reproduced except in its entirety, without the prior consent of Paradigm Environmental Services, Inc.

All soil/sludge samples have been reported on a dry weight basis, unless qualified "reported as received". Other solids are reported as received.

Low level Volatiles blank reports for soil/solid matrix are based on a nominal 5 gram weight. Sample results and reporting limits are based on actual weight, which may be more or less than 5 grams.

The Chain of Custody provides additional information, including compliance with sample condition requirements upon receipt. Sample condition requirements are defined under the 2003 NELAC Standard, sections 5.5.8.3.1 and 5.5.8.3.2.

NYSDOH ELAP does not certify for all parameters. Paradigm Environmental Services or the indicated subcontracted laboratory does hold certification for all analytes where certification is offered by ELAP unless otherwise specified. Aliquots separated for certain tests, such as TCLP, are indicated on the Chain of Custody and final reports with an "A" suffix.

Data qualifiers are used, when necessary, to provide additional information about the data. This information may be communicated as a flag or as text at the bottom of the report. Please refer to the following list of frequently used data flags and their meaning:

"<" = analyzed for but not detected at or above the reporting limit.
"E" = Result has been estimated, calibration limit exceeded.
"Z" = Please refer to included Case Narrative for explanation.
"D" = Sample, Laboratory Control Sample, or Matrix Spike Duplicate results above Relative Percent Difference limit.
"M" = Matrix spike recoveries outside QC limits. Matrix bias indicated.
"B" = Method blank contained trace levels of analyte. Refer to included method blank report.
"J" = Result estimated between the quantitation limit and half the quantitation limit.
"L"= Laboratory Control Sample recovery outside accepted QC limits.
"P"= Concentration differs by more than 40% between primary and secondary analytical columns.
"NC"=Not calculableApplicable to RPD if sample or duplicate result is non-detect or estimated(see primary report for data flags). Applicable to MS if sample is greater or equal to ten times the spike added. Applicable to sample surrogates or MS if sample dilution is 10x or higher.
"*"=Indicates any recoveries outside associated acceptance windows. Surrogate outliers in samples are presumed matrix effects. LCS demonstrates method compliance unless otherwise noted.
"(1)"= Indicates data from primary column used for QC calculation.

LAB PROJECT NARRATIVE: 144706
PROJECT NAME: NFG Mineral Springs
SDG: 4706-01
CLIENT: GEI Consultants Inc.

Three soil samples were collected by GEI personnel on 10/28/2014 and received at the Paradigm laboratory on 10/29/2014. Container and holding times were acceptable at time of receipt; the samples were received at 9° Centigrade and were on ice. The client okayed the outlier receipt temperature as noted on the Chain of Custody. The samples were submitted with the Chains-of-Custody requesting a site specific list for Metals and Total Cyanide. All analyses were performed using EPA SW-846 methods and holding times.

The items noted in this case narrative address compliance with the referenced methods, NYSDOH ELAP rules, and any project specific data quality requirements. These may be different from the usability criteria referenced in any "Functional Guidelines" or other data review standards used by data validators.

GENERAL NOTES

ALL ANALYSES

The initial and continuing calibration reports are only evaluated for compounds that are on the sample summary report.

Regarding results on QC summary forms versus included raw data, due to calculations made at the instrument where many significant figures may be used, there may be slight discrepancies between the summary report result and that recorded on the raw data. This does not affect data usability.

METALS

ICP-AES interelement and background corrections were applied. Raw data was not generated before application of background corrections.

Holding times were met for all samples.

Site specific QC was not requested on this SDG but was analyzed on sample S6 & 10N W80 (0-2"). All Matrix Spike Recoveries and Sample Duplicate Percent Differences were within QC limits. The Laboratory Control Samples recovered within acceptable limits. All LCS % differences were within acceptance limits.

The method blanks were free from contamination within the reportable ranges.

All data for the initial calibrations was within acceptance limits.

All continuing calibrations data was within acceptance limits.

INORGANICS-TOTAL CYANIDE

Holding times were met for all samples.

Site specific QC was not requested on this SDG. The Laboratory Control Sample recovered within acceptable limits.

The method blank was free from contamination within the reportable ranges.

All data for the initial calibrations was within acceptance limits.

All continuing calibrations data was within acceptance limits.

(signed)_____ (date) 11/12/2019

Bruce Hoogesteger- Technical Director

SDG# : 4706-01
LAB PROJECT #: 144706
CLIENT: GEI
PROJECT NAME: NFG-Mineral Springs

BATCH COMPLETE: 10/29/2014
DATE: 11/14/2014
DATE DUE: 11/26/2014
PROTOCOL: SW846

LAB.SAMPLE#	FIELD ID	MATRIX	REQUESTED ANALYSIS	DATE SAMPLED	DATE REC'D
144706-01	S6 & 20N W80 (0-2 ft)	Soil	Mets (Pb,As,Cd,Hg),TCN	10/28/2014	10/29/2014
144706-02	S6 & 20N W70 (0-2 in)	Soil	Mets (Pb,As,Cd,Hg),TCN	10/28/2014	10/29/2014
144706-03	S6 & 10N W80 (0-2 ft)	Soil	Mets (Pb,As,Cd,Hg),TCN	10/28/2014	10/29/2014

-5-

179 Lake Avenue, Rochester, NY 14608 Office (585) 647-2530 Fax (585) 647-3311

PARADIGM ENVIRONMENTAL SERVICES, INC.

CHAIN OF CUSTODY

REPORT TO:		INVOICE TO:		LAB PROJECT ID
CLIENT:	GEI CONSULTANTS - James Edwards	CLIENT:	National Fuel Gas	1441706
ADDRESS:	1301 Trumansburg Road	ADDRESS:		Quotation #:
CITY:	Ithaca STATE: NY ZIP: 14850	CITY:	STATE: ZIP:	Email:
PHONE:	607 216 8958	PHONE:		
ATTN:		ATTN:	BRAD WALKER	

PROJECT REFERENCE

NFG Mineral Springs

Matrix Codes:

AQ - Aqueous Liquid	WA - Water	DW - Drinking Water	SO - Soil	SD - Solid	WP - Wipe	OL - Oil
NQ - Non-Aqueous Liquid	WG - Groundwater	WW - Wastewater	SL - Sludge	PT - Paint	CK - Caulk	AR - Air

REQUESTED ANALYSIS

	DATE COLLECTED	TIME COLLECTED	COMPOSITE	GRAB	SAMPLE IDENTIFIER	MATRIX CODES	NUMBER OF CONTAINERS	Lead	Mercury	Cadmium	Arsenic	Cyanide	REMARKS	PARADIGM LAB SAMPLE NUMBER
1	10/28	1450		X	S6+20N W80 (0-2")	SO		X	X	X	X	X	RUSH 1 DAY	01
2		1500		X	S6+20N W70 (0-2")	SO		X	X	X	X	X		02
3		1455		X	S6+10N W80 (0-2")	SO		X	X	X	X	X		03
4														
5														
6														
7														
8					ok to proceed on test out of temp. per Brad Walker KS 10/29/14								9°C iced by samples. 10/29 @ 0905 (custody seal dated + signed KS 10/29/14)	
9														
10														

Turnaround Time		Report Supplements			
Availability contingent upon lab approval; additional fees may apply.					
Standard 5 day	☐	Batch QC	☐	Basic EDD	☐
Rush 3 day	☐	Category A	☐	NYSDEC EDD	☒
Rush 2 day	☐	Category B	☒ per history KS 10/29/14		
Rush 1 day	☒				
Other please indicate:	☐	Other please indicate:	☐	Other EDD please indicate:	☐

Sampled By	10/28/14	1500
Relinquished By	10/28/14	1600
Received By	10/28/14	1600
Received @ Lab By	10/29/14	0909

Total Cost:

P.I.F.

Chain of Custody Supplement

Client: GEI Consultants **Completed by:** Kyle Swenick

Lab Project ID: 144706 **Date:** 10/29/14

Sample Condition Requirements

Per NELAC/ELAP 210/241/242/243/244

Condition	*NELAC compliance with the sample condition requirements upon receipt* Yes	No	N/A
Container Type	X		
Comments			
Transferred to method-compliant container			X
Headspace (<1 mL)			X
Comments			
Preservation			X
Comments			
Chlorine Absent (<0.10 ppm per test strip)			X
Comments			
Holding Time	X		
Comments			
Temperature		X TCN	X
Comments	9° C iced by samples @ 0905. custody seal dated + signed. KS 10/29/14		
Sufficient Sample Quantity	X		
Comments			

PARADIGM
ENVIRONMENTAL SERVICES, INC.
179 Lake Avenue, Rochester, NY 14608. Office: (585) 647-2530 Fax: (585) 647-3311

Lab Project #: 14470G

Client : GEI

of Samples: 3

Internal Chain of Custody

Sign-Out Log for Refrigerator: C

Sample ID	Container Code	Initials	Purpose	Date/Time Out	Date/Time In
4706-01	G3	JG	JMTAL JMHg	10-29-14 935	10/29/14 1030
-02	↓	↓	%M, TCN	↓	↓
-03			↓		

Percent Moisture Prep Log

% Moisture = (Wet Weight - Dry Weight) / (Wet weight - Pan Weight)

Date	Container Code	Sample #	Pan Weight	Wet Weight	Dry Weight	Wet Weight - Pan Weight	Percent Moisture	Initials
10-27-14	G2	4672-01	1.29	12.72	11.5	11.41	10.5	Amm/JG
		-02	1.29	15.4	13.9	14.11	10.6	
		-03	1.28	17.6	16.1	16.32	9.19	
		-04	1.29	12.6	10.4	11.31	19.5	
		-05	1.29	13.1	10.8	11.81	19.5	
		-06	1.29	11.3	9.49	10.01	18.1	
		-07	1.29	11.9	10.0	10.61	17.9	
		-08	1.30	11.0	8.65	9.70	24.2	
	-1	4682-01	1.29	13.7	10.6	12.41	25.0	
	P5-1	4639-01	1.29	18.1	16.3	16.81	10.7	
		dup	1.29	16.8	15.5	15.51	8.38	
	G2-1	4690-01	1.29	12.0	10.2	10.71	16.8	
	G3	4690-02	1.29	18.7	16.6	17.41	12.1	
10-28-14	G2	4697-01	1.30	10.6	9.80	9.30	8.60	JG
		-02	1.29	10.8	9.29	9.51	15.9	
		-03	1.29	11.3	9.66	10.0	16.4	
		-04	1.29	12.1	10.7	10.8	13.0	
		-05	1.29	10.8	9.52	9.51	13.5	
	G2	4699-01	1.28	10.9	9.56	9.62	13.9	
		-02	1.29	10.5	9.86	9.21	6.95	
		-03	1.30	14.1	12.5	12.8	12.5	
	G3	4704-01	1.28	6.62	5.95	5.34	12.5	Amm/JG
	G3	4671-05A	1.29	8.56	5.72	7.27	39.1	
	G2	4683-01A	1.29	11.06	9.64	9.77	14.5	
10/29/14	G3	4706-01	1.29	7.62	5.43	6.33	34.6	EK/Amm
		-01 DUP	1.29	7.95	5.69	6.66	33.9 (2% DIFF)	
		-02	1.29	9.63	6.89	8.34	32.9	
		-03	1.30	9.74	7.19	8.44	30.2	
	G3	4718-01	1.29	11.0		9.71		Amm
		-02	1.28	12.8		11.52		
		-03	1.28	7.98		6.70		
		-04	1.29	9.27		7.98		
		4719 -01	1.30	14.9		13.6		
		4730-01	1.29	12.3		11.0		
	G2	4721-01	1.29	16.0		14.7		
	G3	4722-01	1.28	11.0		9.72		
		-02	1.29	9.36		8.07		
		-03	1.29	11.6		10.3		
		-04	1.29	11.6		10.3		
		-05	1.29	11.3		10.0		

GENERAL TERMS AND CONDITIONS
LABORATORY SERVICES

These Terms and Conditions embody the whole agreement of the parties in the absence of a signed and executed contract between the Laboratory (LAB) and Client. They shall supersede all previous communications, representations, or agreements, either verbal or written, between the parties. The LAB specifically rejects all additional, inconsistent, or conflicting terms, whether printed or otherwise set forth in any purchase order or other communication from the Client to the LAB. The invalidity or unenforceability in whole or in part of any provision, term, or condition hereof shall not affect in any way the validity or enforceability of the remainder of the Terms and Conditions. No waiver by LAB of any provision, term, or condition hereof or of any breach by or obligation of the Client hereunder shall constitute a waiver of such provision, term, or condition on any other occasion or a waiver of any other breach by or obligation of the Client. This agreement shall be administered and interpreted under the laws of the state which services are procured.

Warranty. Recognizing that the nature of many samples is unknown and that some may contain potentially hazardous components, LAB warrants only that it will perform testing services, obtain findings, and prepare reports in accordance with generally accepted analytical laboratory principles and practices at the time of performance of services. LAB makes no other warranty, express or implied.

Scope and Compensation. LAB agrees to perform the services described in the chain of custody to which these terms and conditions are attached. Unless the parties agree in writing to the contrary, the duties of LAB shall not be construed to exceed the services specifically described. LAB will use LAB default method for all tests unless specified otherwise on the Work Order.
Payment terms are net 30 days from the date of invoice. All overdue payments are subject to an interest charge of one and one-half percent (1-1/2%) per month or a portion thereof. Client shall also be responsible for costs of collection, including payment of reasonable attorney fees if such expense is incurred. The prices, unless stated, do not include any sale, use or other taxes. Such taxes will be added to invoice prices when required.

Prices. Compensation for services performed will be based on the current Lab Analytical Fee Schedule or on quotations agreed to in writing by the parties. Turnaround time based charges are determined from the time of resolution of all work order questions. Testimony, court appearances or data compilation for legal action will be charged separately.

Limitations of Liability. In the event of any error, omission, or other professional negligence, the sole and exclusive responsibility of LAB shall be to re-perform the deficient work at its own expense and LAB shall have no other liability whatsoever. All claims shall be deemed waived unless made in writing and received by LAB within ninety (90) days following completion of services.
LAB shall have no liability, obligation, or responsibility of any kind for losses, costs, expenses, or other damages (including but not limited to any special, direct, incidental or consequential damages) with respect to LAB's services or results.
All results provided by LAB are strictly for the use of its clients and LAB is in no way responsible for the use of such results by clients or third parties. All reports should be considered in their entirety, and LAB is not responsible for the separation, detachment, or other use of any portion of these reports. Client may not assign the lab report without the written consent of the LAB.
Client covenants and agrees, at its/his/her sole expense, to indemnify, protect, defend, and save harmless the LAB from and against any and all damages, losses, liabilities, obligations, penalties, claims, litigation, demands, defenses, judgments, suits, actions, proceedings, costs, disbursements and/or expenses (including, without limitation attorneys' and experts' fees and disbursements) of any kind whatsoever which may at any time be imposed upon, incurred by or asserted or awarded against client relating to, resulting from or arising out of (a) the breach of this agreement by this client, (b) the negligence of the client in handling, delivering or disclosing any hazardous substance, (c) the violation of the Client of any applicable law, (d) non-compliance by the Client with any environmental permit or (e) a material misrepresentation in disclosing the materials to be tested.

Hazard Disclosure. Client represents and warrants that any sample delivered to LAB will be preceded or accompanied by complete written disclosure of the presence of any hazardous substances known or suspected by Client. Client further warrants that any sample containing any hazardous substance that is to be delivered to LAB will be packaged, labeled, transported, and delivered properly and in accordance with applicable laws.

Sample Handling. Prior to LAB's acceptance of any sample (or after any revocation of acceptance), the entire risk of loss or of damage to such sample remains with Client. Samples are accepted when receipt is acknowledged on chain of custody documentation. In no event will LAB have any responsibility for the action or inaction of any carrier shipping or delivering any sample to or from LAB premises.
Client authorizes LAB to proceed with the analysis of samples as received by the laboratory, recognizing that any samples not in compliance with all current DOH-ELAP-NELAP requirements for containers, preservation or holding time will be noted as such on the final report.
Disposal of hazardous waste samples is the responsibility of the Client. If the Client does not wish such samples returned, LAB may add storage and disposal fees to the final invoice. Maximum storage time for samples is 30 days after completion of analysis unless modified by applicable state or federal laws. Client will be required to give the LAB written instructions concerning disposal of these samples.
LAB reserves the absolute right, exercisable at any time, to refuse to receive delivery of, refuse to accept, or revoke acceptance of any sample, which, in the sole judgment of LAB (a) is of unsuitable volume, (b) may be or become unsuitable for or may pose a risk in handling, transport, or processing for any health, safety, environmental or other reason whether or not due to the presence in the sample of any hazardous substance, and whether or not such presence has been disclosed to LAB by Client or (c) if the condition or sample date make the sample unsuitable for analysis.

Legal Responsibility. LAB is solely responsible for performance of this contract, and no affiliated company, director, officer, employee, or agent shall have any legal responsibility hereunder, whether in contract or tort including negligence.

Assignment. LAB may assign its performance obligations under this contract to other parties, as it deems necessary. LAB shall disclose to Client any assignee (subcontractor) by ELAP ID # on the submitted final report.

Force Majeure. LAB shall have no responsibility or liability to the Client for any failure or delay in performance by LAB, which results in whole or in part from any cause or circumstance beyond the reasonable control of LAB. Such causes and circumstances shall include, but not limited to, acts of God, acts or orders of any government authority, strikes or other labor disputes, natural disasters, accidents, wars, civil disturbances, difficulties or delays in transportation, mail or delivery services, inability to obtain sufficient services or supplies from LAB's usual suppliers, or any other cause beyond LAB's reasonable control.

Law. This contract shall be continued under the laws of the State of New York without regard to its conflicts of laws provision.

METALS DATA

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144706

Client: GEI Consultants Inc.

Project Reference: NFG Mineral Springs

Sample Identifier: S6 & 20N W80 (0-2")
Lab Sample ID: 144706-01 **Date Sampled:** 10/28/2014
Matrix: Soil **Date Received:** 10/29/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**8.27**	mg/Kg		10/29/2014
Cadmium	**1.26**	mg/Kg		10/29/2014
Lead	**121**	mg/Kg		10/29/2014

Method Reference(s): EPA 6010C
EPA 3050
Preparation Date: 10/30/2014
Data File: 102914b

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

Report Prepared Wednesday, November 19, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 144706

Client: GEI Consultants Inc.

Project Reference: NFG Mineral Springs

Sample Identifier: S6 & 20N W80 (0-2")
Lab Sample ID: 144706-01 **Date Sampled:** 10/28/2014
Matrix: Soil **Date Received:** 10/29/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.148**	mg/Kg		10/30/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/30/2014
Data File: QC141029A

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Report Prepared Wednesday, November 19, 2014

PARADIGM

Lab Project ID: 144706

Client: GEI Consultants Inc.

Project Reference: NFG Mineral Springs

Sample Identifier:	S6 & 20N W70 (0-2")		
Lab Sample ID:	144706-02	**Date Sampled:**	10/28/2014
Matrix:	Soil	**Date Received:**	10/29/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**9.32**	mg/Kg		10/29/2014
Cadmium	**1.18**	mg/Kg		10/29/2014
Lead	**168**	mg/Kg		10/29/2014

Method Reference(s): EPA 6010C
EPA 3050
Preparation Date: 10/30/2014
Data File: 102914b

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Report Prepared Wednesday, November 19, 2014

PARADIGM

Lab Project ID: 144706

Client: GEI Consultants Inc.

Project Reference: NFG Mineral Springs

Sample Identifier:	S6 & 20N W70 (0-2")		
Lab Sample ID:	144706-02	**Date Sampled:**	10/28/2014
Matrix:	Soil	**Date Received:**	10/29/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.231**	mg/Kg		10/30/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/30/2014
Data File: QC141029A

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Report Prepared Wednesday, November 19, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 144706

Client: GEI Consultants Inc.

Project Reference: NFG Mineral Springs

Sample Identifier: S6 & 10N W80 (0-2")
Lab Sample ID: 144706-03 **Date Sampled:** 10/28/2014
Matrix: Soil **Date Received:** 10/29/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**7.41**	mg/Kg		10/29/2014
Cadmium	**0.916**	mg/Kg		10/29/2014
Lead	**102**	mg/Kg		10/29/2014

Method Reference(s): EPA 6010C
EPA 3050
Preparation Date: 10/30/2014
Data File: 102914b

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Report Prepared Wednesday, November 19, 2014

PARADIGM

Lab Project ID: 144706

Client: GEI Consultants Inc.

Project Reference: NFG Mineral Springs

Sample Identifier: S6 & 10N W80 (0-2")
Lab Sample ID: 144706-03 **Date Sampled:** 10/28/2014
Matrix: Soil **Date Received:** 10/29/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.138**	mg/Kg		10/30/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/30/2014
Data File: QC141029A

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Report Prepared Wednesday, November 19, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Method Blank Report

Client:	**GEI Consultants Inc.**
Project Reference:	NFG Mineral Springs
Lab Project ID:	144706
SDG #:	4706-01
Matrix:	Soil

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	<0.949	mg/Kg		10/29/2014
Cadmium	<0.474	mg/Kg		10/29/2014
Lead	<0.949	mg/Kg		10/29/2014

Method Reference(s):	EPA 6010C
	EPA 3050
Preparation Date:	10/30/2014
Data File:	102914b
QC Batch ID:	QC141029soil
QC Number:	1

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Report Prepared Thursday, October 30, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Method Blank Report

Client:	**GEI Consultants Inc.**
Project Reference:	NFG Mineral Springs
Lab Project ID:	144706
SDG #:	4706-01
Matrix:	Soil

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	<0.0172	mg/Kg		10/30/2014

Method Reference(s):	EPA 7471B
Preparation Date:	10/30/2014
Data File:	QC141029A
QC Batch ID:	QC141029HgSoil
QC Number:	1

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Report Prepared Thursday, October 30, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC

QC Report for Laboratory Control Sample and Control Sample Duplicate

Client: GEI Consultants Inc.
Project Reference: NFG Mineral Springs
Lab Project ID: 144706
SDG #: 4706-01
Matrix: Soil

Metals

Analyte	LCS Added	LCSD Added	Spike Units	LCS Result	LCSD Result	LCS % Recovery	LCSD % Recovery	% Rec Limits	LCS Outliers	LCSD Outliers	Relative % Difference	RPD Limit	RPD Outliers	Date Analyzed
Arsenic	268	276	mg/Kg	265	272	99.2	98.6	85 - 115			0.563	20		10/29/2014
Cadmium	107	110	mg/Kg	109	112	102	101	85 - 115			0.898	20		10/29/2014
Lead	268	276	mg/Kg	275	283	103	102	85 - 115			0.326	20		10/29/2014

Method Reference(s): EPA 6010C
EPA 3050
Preparation Date: 10/30/2014
Data File: 102914b
QC Number: 1
QC Batch ID: QC141029soil

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Report Prepared Thursday, October 30, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

QC Report for Laboratory Control Sample and Control Sample Duplicate

Client: GEI Consultants Inc.
Project Reference: NFG Mineral Springs
Lab Project ID: 144706
SDG #: 4706-01
Matrix: Soil

Mercury

Analyte	LCS Added	LCSD Added	Spike Units	LCS Result	LCSD Result	LCS % Recovery	LCSD % Recovery	% Rec Limits	LCS Outliers	LCSD Outliers	Relative % Difference	RPD Limit	RPD Outliers	Date Analyzed
Mercury	0.172	0.175	mg/Kg	0.176	0.188	102	108	80 - 120			5.03	20		10/30/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/30/2014
Data File: QC141029A
QC Number: 1
QC Batch ID: QC141029HgSoil

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Report Prepared Thursday, October 30, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC

QC Report for Sample Spike and Sample Duplicate

SDG #: 4706-01
Client: GEI Consultants Inc.
Lab Project ID: 144706
Project Reference: NFG Mineral Springs

Lab Sample ID: 144706-03
Sample Identifier: S6 & 10N W80 (0-2 ft)
Matrix: Soil
Date Sampled: 10/28/2014
Date Received: 10/29/2014

Metals

Analyte	Sample Results	Result Units	Spike Added	Spike Result	Spike % Recovery	% Rec Limits	Spike Outliers	Duplicate Result	Relative % Difference	RPD Limit	RPD Outliers	Date Analyzed
Arsenic	**7.41**	mg/Kg	337	312	90.6	75 - 125		7.65	3.20	20		10/29/2014
Cadmium	**0.916**	mg/Kg	135	121	89.0	75 - 125		0.978	6.56	20		10/29/2014
Lead	**102**	mg/Kg	337	410	91.3	75 - 125		106	3.38	20		10/29/2014

Method Reference(s): EPA 6010C
EPA 3050
Preparation Date: 10/30/2014
102914b
QC Batch ID: QC141029soil

NC = Not Calculable. Applicable to RPD if sample or duplicate result is non-detect or estimated (see primary report for data flags). Applicable to MS if sample is greater or equal to ten times the spike added.

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Report Prepared Thursday, October 30, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

QC Report for Sample Spike and Sample Duplicate

SDG #: 4706-01

Client: GEI Consultants Inc.

Lab Project ID: 144706

Project Reference: NFG Mineral Springs

Lab Sample ID: 144706-03
Sample Identifier: S6 & 10N W80 (0-2 ft)
Matrix: Soil

Date Sampled: 10/28/2014
Date Received: 10/29/2014

Mercury

Analyte	Sample Results	Result Units	Spike Added	Spike Result	Spike % Recovery	% Rec Limits	Spike Outliers	Duplicate Result	Relative % Difference	RPD Limit	RPD Outliers	Date Analyzed
Mercury	**0.138**	mg/Kg	0.249	0.381	97.5	75 - 125		0.120	14.1	20		10/30/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/30/2014
QC141029A
QC Batch ID: QC141029HgSoil

NC = Not Calculable. Applicable to RPD if sample or duplicate result is non-detect or estimated (see primary report for data flags). Applicable to MS if sample is greater or equal to ten times the spike added.

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

Report Prepared Thursday, October 30, 2014

Lab Name: Paradigm Environmental Services

Client: GEI Consultants Inc. **Lab Project No.:** 144706

Client Job Site: NFG Mineral Springs **Run Nos.:** 102914b-ICP
Hg141030A-Hg

Client Job No.: N/A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Initial Calibration Verification Source:
ICP: Ultra Scientific
Hg: Ultra Scientific

Continuing Calibration Verification Source:
ICP: Ultra Scientific
Hg: Ultra Scientific

Concentration Units: mg/L

	Initial Calibration Verification			Continuing Calibration Verification					
Analyte	True	Found	%R(1)	True	Found	%R(2)	Found	%R(2)	M
Aluminum									ICP
Antimony									ICP
Arsenic	0.500	0.499	99.7	0.500	0.496	99.3	0.500	100	ICP
Barium									ICP
Beryllium									ICP
Cadmium	0.250	0.268	107	0.250	0.269	107	0.271	108	ICP
Calcium									ICP
Chromium									ICP
Cobalt									ICP
Copper									ICP
Iron									ICP
Lead	0.500	0.507	101	0.500	0.508	102	0.514	103	ICP
Magnesium									ICP
Manganese									ICP
Mercury	0.00200	0.00204	102	0.00200	0.00207	104			CV
Nickel									ICP
Potassium									ICP
Selenium									ICP
Silver									ICP
Sodium									ICP
Thallium									ICP
Vanadium									ICP
Zinc									ICP

(1) Control Limits: All Metals 90-110
(2) Control Limits: Mercury 80-120; Other Metals: 90-110

FORM IIA-IN

Lab Name: Paradigm Environmental Services

Client: GEI Consultants Inc. **Lab Project No.:** 144706

Client Job Site: NFG Mineral Springs **Lab Sample Nos.:** Blk 10/29 soil-ICI
Blk 10/29 soil-Hg

Client Job No.: N/A **Sample Type:** Soil

BLANKS

Preparation Blank Matrix (soil/water): Soil Run Nos.: 102914b-ICP
Concentration Units (mg/L or mg/kg): mg/kg Hg141030A-Hg

	Initial Calibration Blank		Continuing Calibration Blank						Preparation Blank	
	(mg/L)		(mg/L)						(mg/Kg)	
Analyte		Q	1	Q	2	Q	3	Q		Q
Aluminum										
Antimony										
Arsenic	<0.010		<0.010		<0.010				<0.949	
Barium										
Beryllium										
Cadmium	<0.005		<0.005		<0.005				<0.474	
Calcium										
Chromium										
Cobalt										
Copper										
Iron										
Lead	<0.010		<0.010		<0.010				<0.949	
Magnesium										
Manganese										
Mercury	<0.0002		<0.0002						<0.0172	
Nickel										
Potassium										
Selenium										
Silver										
Sodium										
Thallium										
Vanadium										
Zinc										

* - Outside established quality control acceptance limits.

Lab Name: Paradigm Environmental Services

Client: GEI Consultants Inc. **Lab Project No.:** 144706

Client Job Site: NFG Mineral Springs **Run Nos.:** 102914b-ICP
Hg141030A-Hg

Client Job No.: N/A

ICP-AES INTERFERENCE CHECK SAMPLE

ICP-AES Instrument ID: ICP Perkin Elmer 7300DV
Concentration Units :mg/L

Analyte	True sol AB	Initial Found sol AB	%R	Q	Final Found sol AB	%R	Q
Aluminum							
Antimony**							
Arsenic	2.50	2.53	101		N/A	N/A	
Barium							
Beryllium							
Cadmium	0.750	0.728	97.1		N/A	N/A	
Calcium							
Chromium							
Cobalt							
Copper							
Iron							
Lead	2.50	2.50	100		N/A	N/A	
Magnesium							
Manganese							
Mercury**	N/A	N/A	N/A		N/A	N/A	
Nickel							
Potassium							
Selenium							
Silver							
Sodium**							
Thallium							
Vanadium							
Zinc							

* - Outside established quality control acceptance limits of 80-120%.

**- Not Spiked.

ICP Summary Sheet

	Wavelength	ICP DL Water	ICP DL Soil	MDL Water	MDL Soil	Linear Range	MDL paint	MDL Air	MDL Wipe
		ppm	mg/kg	ppm	mg/kg	ppm	mg/kg	ppm	ppm
Ag	328	0.01	1	0.0012	0.114	10			
Al	308	0.2	20	0.0264	3.58	500			
As	188	0.01	1	0.0031	0.369	5			
Ba	233	0.1	10	0.0029	0.14	40			
Be	313	0.005	0.5	0.0002	0.0119	1			
Ca	317	2.5	250	0.0953	4.98	500			
Cd	226	0.005	0.5	0.0002	0.0119	10			
Co	228	0.05	5	0.0015	0.064	10			
Cr	267	0.01	1	0.0106	0.139	40			
Cu	324	0.025	2.5	0.0011	0.327	10			
Fe	273	0.1	10	0.0138	4.10	500			
K	766	2.5	250	0.1067	5.25	100			
Mg	279	2.5	250	0.0635	2.19	500			
Mn	257	0.015	1.5	0.0037	0.141	10			
Na	589	2.5	250	0.1111	5.62	250			
Ni	231	0.04	4	0.0012	0.158	50			
Pb Axial	220	0.01	1	0.0019	0.230	50	0.68 (1/17)	0.0412	
Pb Radial	220	0.1	10			50	3.86	0.0369	0.0226
Sb	206	0.06	6	0.0077	0.422	12			
Se	196	0.01	1	0.0068	0.714	2.5			
Tl	190	0.025	2.5	0.0028	0.347	10			
V	292	0.025	2.5	0.0008	0.0299	50			
Zn	213	0.06	6	0.0035	0.302	10			
				1/9/2014	1/22/2014	2/18/2014	1/29/2014	1/17/2014	1/21/2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Hg Soil MDL

Instrument: FIMS 100
Run Date: 03/17/2014
Run Name: hg140317A

Blank: <0.2ppb

Spike concentration(ppb):	**0.1**		**Reporting Limit / LOQ (ppb):**			**0.2**	
Spike Conc. (mg/kg):	**0.008**		**Solid Reporting Limit / LOQ (mg/kg)**			**0.016**	
X_1	0.1879	ppb	0.0150	mg/kg	weight		inst. Conc.
X_2	0.1984	ppb	0.0159	mg/kg		0.25	0.1879
X_3	0.2024	ppb	0.0162	mg/kg		0.25	0.1984
X_4	0.2021	ppb	0.0162	mg/kg		0.25	0.2024
X_5	0.1861	ppb	0.0149	mg/kg		0.25	0.2021
X_6	0.194	ppb	0.0155	mg/kg		0.25	0.1861
X_7	0.1916	ppb	0.0153	mg/kg		0.25	0.194
						0.25	0.1916
MDL (LOD) =	**0.0206**	**ppb**	0.00165	mg/kg			

MDL requirements:	**Evaluation:**
Is the MDL less than the reporting limit?	YES(passes)
Is the MDL greater than 1/10 the spike concentration?	YES(passes)
Is the MDL less than the spike concentration?	YES(passes)
with weight	
Is the MDL less than the reporting limit?	YES(passes)
Is the MDL greater than 1/10 the spike concentration?	YES(passes)
Is the MDL less than the spike concentration?	YES(passes)

MDL EVALUATION: **MDL Passes**

spiked at :	0.1	ppm
divide by ten:	0.01	ppm
0.0206	>	0.01

MDL EVALUATION: **MDL Passes**

spiked at :	0.02	ppm
divide by ten:	0.0016	ppm
0.0016	>	0.0016

IEC File Last Saved: 5/15/2014 11:15:36 AM
Printed On: 5/15/2014 11:15:39 AM

Results Data Set Name: 051514ar
Method Name: 6010C 4ptLL
Results Library: C:\Users\Public\PerkinElmer\ICP\Data\Results\May2014.mdb

Interfering Analytes

	Analytes	Al 308.215	Ca 317.933	Co 228.616	Cr 267.716	Cu 324.752	Fe 273.955
1	**Ag 328.068**	0.000000	0.000000	0.000000	0.000000	0.000000	-0.333385
2	**Ag 338.289**	0.000000	0.012731	0.000000	-24.586724	0.000000	0.000000
3	**Al 308.215**	**n/a**	0.000000	-15.258033	0.000000	0.000000	0.000000
4	**As 188.979**	0.041839	0.000000	0.000000	0.468569	0.000000	-0.067794
6	**Be 313.107**	0.000000	0.000000	0.000000	-0.174268	0.000000	0.000000
8	**Cd 226.502**	0.006824	0.007347	0.000000	0.000000	0.000000	0.085164
10	**Cr 267.716**	0.000000	0.000000	0.000000	**n/a**	0.000000	-0.016085
11	**Cu 324.752**	0.000000	0.000000	0.000000	0.000000	**n/a**	-0.128367
12	**Fe 273.955**	0.000000	0.000000	0.000000	-1.926669	0.000000	**n/a**
14	**Mg 279.077**	0.000000	0.000000	0.000000	0.000000	0.000000	3.445459
15	**Mn 257.610**	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
18	**Pb**	0.730630	-0.260654	0.000000	0.000000	0.000000	0.000000
19	**Pb 220.353**	0.380999	-0.029473	-2.128347	0.000000	0.000000	-0.068295
20	**Sb 206.836**	-0.199940	0.000000	0.000000	22.238962	0.000000	-0.425076
21	**Se 196.026**	-0.072363	-0.011678	0.000000	-0.304228	0.000000	-0.052268
22	**Tl 190.801**	0.044302	0.000000	9.240423	0.374697	0.000000	-0.076035
23	**V 292.402**	0.000000	0.000000	0.000000	-7.861288	0.000000	0.000000
24	**Y 371.029**	1.985840	1.997382	114.079280	26.580894	103.492331	2.259864
25	**Zn 213.857**	0.000000	0.106054	0.000000	0.000000	0.000000	0.000000

IEC File Last Saved: 5/15/2014 11:15:36 AM
Printed On: 5/15/2014 11:15:39 AM

Results Data Set Name: 051514ar
Method Name: 6010C 4ptLL
Results Library: C:\Users\Public\PerkinElmer\ICP\Data\Results\May2014.mdb

Interfering Analytes

	Analytes	Mg 279.077	Mn 257.610	Ni 231.604	V 292.402
1	**Ag 328.068**	0.000000	0.000000	0.000000	-0.451822
2	**Ag 338.289**	0.000000	0.000000	0.000000	-1.488410
3	**Al 308.215**	0.000000	0.000000	0.000000	10.394551
4	**As 188.979**	0.000000	0.000000	0.000000	0.000000
6	**Be 313.107**	0.000000	0.000000	0.000000	0.000000
8	**Cd 226.502**	0.000000	0.000000	0.116276	0.000000
10	**Cr 267.716**	0.000000	0.000000	0.000000	0.387923
11	**Cu 324.752**	0.000000	0.000000	0.000000	0.000000
12	**Fe 273.955**	0.000000	0.000000	0.000000	15.843706
14	**Mg 279.077**	**n/a**	0.000000	0.000000	0.000000
15	**Mn 257.610**	0.000000	**n/a**	0.000000	-0.218228
18	**Pb**	0.000000	0.000000	0.000000	0.000000
19	**Pb 220.353**	0.000000	0.000000	-0.372237	0.000000
20	**Sb 206.836**	0.000000	0.000000	0.000000	0.000000
21	**Se 196.026**	0.000000	0.879134	0.000000	0.155351
22	**Tl 190.801**	0.000000	-2.006222	0.000000	6.369570
23	**V 292.402**	0.000000	0.000000	0.000000	**n/a**
24	**Y 371.029**	2.086093	115.778141	22.052388	23.094862
25	**Zn 213.857**	0.000000	0.000000	4.924405	0.000000

Linear Ranges

Element TAL, Pb radial
Inst. ICP
Date 2014

Element	Date	Linear Range (ppm)	Element	Date	Linear Range (ppm)
Ag	2/20	10	Ag	8/28	10
Al	2/18	500	Al	9/2	500
As	2/18	5	As	8/28	5
Ba	2/18	40	Ba	8/28	40
Be	2/18	1	Be	8/28	1
Ca	2/20	500	Ca	9/2	500
Cd	2/18	10	Cd	8/28	10
Co	2/18	10	Co	8/28	10
Cr	2/18	40	Cr	8/28	40
Cu	2/18	10	Cu	8/28	10
Fe	2/18	500	Fe	9/2	500
K	2/18	100	K	9/2	100
Mg	2/18	500	Mg	9/2	500
Mn	2/18	10	Mn	8/28	10
Na	2/18	250	Na	9/2	250
Ni	2/18	50	Ni	8/28	50
Pb	2/18	50	Pb	8/28	50
Sb			Sb	8/28	
Se	2/18	2.5	Se	8/28	2.5
Tl	2/18	10	Tl	8/28	10
V	2/18	50	V	8/28	50
Zn	2/18	10	Zn	8/28	10
Pb radial	2/18	50	Pb radial	8/28	50

Comments: Linear ranges which instrument reads 90% - 110% of the true value.
Antimony not reported above Calibration Range

13-IN

ICP ANALYSIS RUN LOG

Lab Name: Paradigm Environmental
Client: GEI Consultants Inc.
Client Job Site: NFG Mineral Springs

Client Job No.: N/A
Instrument ID: ICP PE 7300DV

Lab Project No.: 144706
Method: EPA 6010
Start Date: 10/29/2014
End Date: 10/29/2014

Run No.: 102914b

LAB Sample No.	Date	Time	D/F	Analytes																					
				Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Ni	K	Se	Ag	Na	Tl	V	Zn
Calib Blank 1	10/29/2014	14:07				X			X						X										
Low Level Cal1	10/29/2014	14:11				X			X						X										
Low Level Cal	10/29/2014	14:15				X			X						X										
Mid Level Cal	10/29/2014	14:19				X			X						X										
Pb LL	10/29/2014	14:24													X										
Pb HL	10/29/2014	14:27													X										
High Level Cal	10/29/2014	14:31				X			X						X										
IPC	10/29/2014	14:35																							
ICV	10/29/2014	14:39				X			X						X										
ICB	10/29/2014	14:44				X			X						X										
LLQC	10/29/2014	14:48																							
LLQC Radial Pb	10/29/2014	14:52																							
ICSAB	10/29/2014	14:56				X			X						X										
CCV	10/29/2014	15:01				X			X						X										
CCB	10/29/2014	15:05				X			X						X										
Blk 10/29 soil	10/29/2014	15:09				X			X						X										
lcs	10/29/2014	15:13				X			X						X										
lcs dup	10/29/2014	15:18				X			X						X										
144706-01	10/29/2014	15:22	1			X			X						X										
144706-02	10/29/2014	15:26	1			X			X						X										
144706-03	10/29/2014	15:30	1			X			X						X										
144706-03 dup	10/29/2014	15:35	1			X			X						X										
144706-03 spk	10/29/2014	15:39	1			X			X						X										
CCV	10/29/2014	15:43				X			X						X										
CCB	10/29/2014	15:47				X			X						X										
LLQC	10/29/2014	15:51																							
CCV	10/29/2014	15:55																							
CCB	10/29/2014	16:00																							

13-IN

HG ANALYSIS RUN LOG

Lab Name: Paradigm Environmental
Client: GEI Consultants Inc.
Client Job Site: NFG Mineral Springs

Client Job No.: N/A
Instrument ID: PE FIMS-100

Lab Project No.: 144706
Method: EPA 7471
Start Date: 10/30/2014
End Date: 10/30/2014

Run No.: Hg141030A

LAB Sample No.	Date	Time	D/F	Analytes
				Hg
Calibration Blank	10/30/2014	9:59		X
Calib Std 1	10/30/2014	10:02		X
Calib Std 2	10/30/2014	10:06		X
Calib Std 3	10/30/2014	10:09		X
Calib Std 4	10/30/2014	10:12		X
Calib Std 5	10/30/2014	10:16		X
IPC	10/30/2014	10:19		
ICV	10/30/2014	10:23		X
ICB	10/30/2014	10:26		X
blk	10/30/2014	10:30		X
lcs	10/30/2014	10:33		X
lcs dup	10/30/2014	10:36		X
144673-01	10/30/2014	10:40		
144706-01	10/30/2014	10:43	1	X
144706-02	10/30/2014	10:47	1	X
144706-03	10/30/2014	10:50	1	X
144706-03 dup	10/30/2014	10:53	1	X
144706-03 spk	10/30/2014	10:57	1	X
CCV	10/30/2014	11:00		X
CCB	10/30/2014	11:04		X

Page: 1 of 2

ICP Analytical Worksheet

Date: 10-29-14
RDF / SIF: 102914b
Analyst: Amos

4700

Sample ID - Wt/Vol	Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn
Calib Blank 1																						
Low Level Cal1																						
Low Level Cal																						
Mid Level Cal																						
High Level Cal																						
IPC	2.00	9.78	1.97	10.0	0.251	49.8	1.00	2.51	2.00	1.25	4.94	49.9	50.1	3.01	50.1	8.02	0.995	12.0	0.987	1.94	2.52	3.86
ICV	97.5	98.0	99.7	98.9	99.0	99.0	107	95.9	97.0	95.5	96.3	97.3	101	98.3	97.7	98.8	101	102	99.6	98.5	102	100
ICB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
LLQC	0.00898	0.196	0.00963	0.101	0.00494	2.36	0.00545	0.0491	0.0112	0.0264	0.0837	2.48	2.54	0.0151	2.46	0.0431	0.00890	0.0625	0.0108	0.0224	0.0248	0.0589
LLQC Radial Pb	-0.00161	-0.0448	-0.000794	-0.0000561	0.0000804	0.000376	0.0000230	0.000441	-0.0000338	0.00000682	0.00478	-0.00737	-0.00814	-0.0000579	-0.0327	-0.000508	0.102	0.00329	0.00259	-0.00302	-0.000231	0.000572
ICSAB	0.777	271	2.53	0.764	0.244	256	0.728	0.708	0.718	0.765	93.1	52.2	256	0.491	0.106	0.725	2.50	-0.0142	1.27	2.37	0.770	0.713
CCV	97.7	97.4	99.3	98.6	98.9	99.5	107	95.6	96.9	95.3	96.9	97.7	101	98.0	98.1	98.6	102	102	99.9	98.4	102	101
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
Blk 10/29 soil (50 mL)	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
lcs (50 mL)	0.244	2.43	2.48	2.47	0.493	3.91	1.02	1.01	2.37	2.41	2.34	40.9	8.07	0.973	11.5	5.15	2.57	2.45	2.46	2.44	0.965	2.47
---> %rec	97.6%	97.2%	99.2%	98.8%	98.6%	97.8%	102%	101%	94.8%	96.4%	93.6%	102%	101%	97.3%	95.8%	103%	103%	98.0%	98.4%	97.6%	96.5%	98.8%
lcs dup (50 mL)	0.242	2.40	2.47	2.45	0.490	3.83	1.01	0.996	2.35	2.40	2.29	40.5	7.99	0.966	11.4	5.11	2.56	2.44	2.45	2.43	0.962	2.45
---> %rec	96.8%	96.0%	98.8%	98.0%	98.0%	95.8%	101%	99.6%	94.0%	96.0%	91.6%	101%	99.9%	96.6%	95.0%	102%	102%	97.6%	98.0%	97.2%	96.2%	98.0%
---> %diff	0.823%	1.24%	0.404%	0.813%	0.610%	2.07%	0.985%	1.40%	0.847%	0.416%	2.16%	0.983%	0.996%	0.722%	0.873%	0.780%	0.390%	0.409%	0.407%	0.411%	0.311%	0.813%
144706-01 (0.474 mL)	<1.05	11000	5.41	97.1	0.604	2440	0.825	6.81	19.1	28.7	17500	1350	3020	234	<264	24.2	79.2	<6.33	3.70	<2.64	20.1	165
144706-02 (0.518 mL)	<0.965	10300	6.25	91.5	0.580	5060	0.790	6.79	18.7	35.0	17900	1300	3620	269	<241	23.3	112	<5.79	3.11	<2.41	20.1	180
144706-03 (0.541 mL)	<0.924	9070	5.17	78.9	0.528	3860	0.639	6.53	16.5	31.9	15700	1090	3370	256	<231	22.1	71.4	<5.55	2.96	<2.31	17.2	323
144706-03 dup (0.488 mL)	<1.02	9910	5.34	83.8	0.589	4690	0.683	6.85	17.2	33.5	16400	1280	3780	273	<256	22.8	73.8	<6.15	2.45	<2.56	18.7	358
---> %diff	NC	8.85%	3.24%	6.02%	10.9%	19.4%	6.66%	4.78%	4.15%	4.89%	4.36%	16.0%	11.5%	6.43%	NC	3.12%	3.31%	NC	18.9%	NC	8.36%	10.3%
144706-03 spk (0.532 mL)	22.1	11900	218	296	42.5	4360	84.3	95.3	218	247	17400	4950	4330	359	998	449	286	152	217	205	103	577
---> %rec			90.6				89.0										91.3					
CCV	97.5	97.5	100.0	98.8	98.4	99.8	108	96.1	97.3	95.4	97.8	97.3	102	98.5	97.9	99.3	103	103	101	100.0	102	102
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
LLQC	0.00894	0.192	0.00743	0.101	0.00495	2.38	0.00537	0.0503	0.0112	0.0266	0.104	2.53	2.56	0.0148	2.44	0.0432	0.0128	0.0575	0.00895	0.0259	0.0252	0.0585
CCV	97.4	98.1	100	98.9	98.2	99.6	108	96.0	97.3	95.1	96.7	97.1	102	98.4	97.7	99.2	103	102	99.6	99.8	102	101
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
4652-01 Al (50 mL)	<0.01	0.279	<0.01	<0.1	<0.005	45.8	<0.005	<0.05	<0.01	0.163	1.17	5.63	10.6	0.0527	41.0	<0.04	0.0195	<0.06	<0.01	<0.025	<0.025	0.109
4668-01 Se (0.478 mL)	<1.05	<20.9	<1.05	198	<0.523	330	6.64	<5.23	24.7	5.31	128	<262	<262	15.4	<262	8.05	3.56	<6.28	2.41	3.70	<2.62	223
Blk 10/28 soil (50 mL)	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
lcs (50 mL)	0.243	2.48	2.50	2.47	0.490	3.91	1.02	1.00	2.37	2.41	2.36	41.0	8.06	0.973	11.6	5.15	2.59	2.48	2.50	2.47	0.964	2.50
---> %rec	97.2%	99.2%	100%	98.8%	98.0%	97.8%	102%	100%	94.8%	96.4%	94.4%	103%	101%	97.3%	96.7%	103%	104%	99.2%	100%	98.8%	96.4%	100%
lcs dup (50 mL)	0.240	2.41	2.44	2.44	0.484	3.85	1.01	0.992	2.34	2.38	2.29	40.3	7.97	0.964	11.3	5.11	2.54	2.44	2.44	2.43	0.955	2.44
---> %rec	96.0%	96.4%	97.6%	97.6%	96.8%	96.3%	101%	99.2%	93.6%	95.2%	91.6%	101%	99.6%	96.4%	94.2%	102%	102%	97.6%	97.6%	97.2%	95.5%	97.6%
---> %diff	1.24%	2.86%	2.43%	1.22%	1.23%	1.55%	0.985%	0.803%	1.27%	1.25%	3.01%	1.72%	1.12%	0.929%	2.62%	0.780%	1.95%	1.63%	2.43%	1.63%	0.938%	2.43%
144672-01 (0.492 mL)	<1.02	5930	3.33	47.3	<0.508	413	<0.508	5.75	6.30	6.53	9140	583	1420	96.8	<254	10.5	7.06	<6.1	2.35	<2.54	7.01	31.9
144672-02 (0.49 mL)	<1.02	6610	3.38	68.7	<0.51	547	<0.51	6.79	7.23	6.53	14900	862	1770	141	<255	13.9	7.45	<6.12	3.62	<2.55	9.34	41.4
144672-03 (0.544 mL)	<0.919	5450	6.45	153	<0.46	539	<0.46	6.46	6.59	8.36	15800	734	1270	1170	<230	16.1	9.82	<5.51	2.50	2.80	7.58	36.7
144672-04 (0.537 mL)	<0.931	6000	1.77	71.7	<0.466	582	<0.466	4.70	6.72	4.64	7700	597	1320	127	<233	9.94	6.34	<5.59	1.70	<2.33	7.11	31.0
144672-05 (0.51 mL)	<0.98	6510	5.60	49.7	<0.49	272	<0.49	5.58	7.05	6.42	12300	573	1340	217	<245	11.9	14.3	<5.88	2.54	<2.45	7.85	42.4
CCV	97.3	95.8	97.9	98.8	98.0	97.9	107	96.1	97.2	95.1	96.5	95.7	102	98.6	96.4	99.4	101	101	98.4	98.4	102	101
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
144672-06 (0.49 mL)	<1.02	6060	3.59	53.0	<0.51	<255	<0.51	<5.1	6.71	5.36	11100	610	1380	145	<255	9.26	6.62	<6.12	2.37	<2.55	7.48	28.3
144672-07 (0.467 mL)	<1.07	10200	3.87	119	<0.535	759	<0.535	6.88	12.2	8.93	13900	884	2130	467	<268	12.8	9.42	<6.42	2.67	<2.68	13.1	45.3
144672-08 (0.493 mL)	<1.01	14500	13.2	99.7	0.856	2010	<0.507	13.3	18.2	16.4	27900	2550	4950	398	<254	27.2	12.1	<6.09	5.26	<2.54	19.4	63.2
144673-01 (0.458 mL)	<1.09	4430	4.95	26.6	0.652	777	<0.546	<5.46	16.7	41.3	1870	1270	15900	23.7	12900	28.2	5.07	<6.55	<1.09	<2.73	12.9	2080
144673-01 dup (0.484 mL)	<1.03	4730	4.55	30.8	0.697	840	<0.517	<5.17	15.5	41.3	2010	1350	15100	24.2	12400	25.8	5.32	<6.2	<1.03	<2.58	13.7	2040
---> %diff	NC	6.55%	8.42%	14.6%	6.67%	7.79%	NC	NC	7.45%		7.22%	6.11%	5.16%	2.09%	3.95%	8.89%	4.81%	NC	NC	NC	6.02%	1.94%
144673-01 spk (0.51 mL)	23.3	5240	252	273	48.6	1580	92.3	96.3	242	272	2350	5310	16100	123	14100	494	239	70.4	250	141	106	2360

s, Cd, Pb

Al Se

TAL

RCRA

Reviewed for only metals needed.

This worksheet does not correct for dry weights.

Reviewed by:

Page: 2 of 2 ICP Analytical Worksheet

Date:
RDF / SIF:
Analyst:

Sample ID - Wt/Vol	Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn
---> %rec	95.1		101	101			94.1		92.0								95.5		102			
144671-02A (0.5 mL)	<1	<20	<1	<10	<0.5	<250	<0.5	<5	<1	<2.5	31.2	<250	<250	<1.5	<250	<4	46.5	<6	<1	<2.5	<2.5	10.3
CCV	97.4	96.6	98.8	98.4	97.6	98.8	108	95.9	97.2	95.3	96.0	97.1	102	98.2	98.2	99.0	102	102	100	101	102	101
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
LLQC	0.00870	0.192	0.0101	0.101	0.00485	2.39	0.00557	0.0505	0.0111	0.0261	0.105	2.48	2.56	0.0147	2.48	0.0433	0.0111	0.0584	0.0108	0.0265	0.0249	0.0661
CCV	97.3	97.8	99.9	98.7	97.4	97.0	108	95.9	97.5	95.0	96.4	95.2	102	98.4	96.0	99.4	101	102	99.6	100	102	102
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	<0.01	<0.06	<0.01	<0.025	<0.025	<0.06
46869-01 Se (0.516 mL)	106	6650	***<0.969***	41.9	1.00	33600	***<0.484***	7.53	63.0	110000	108000	<242	1430	3190	13500	2330	5990	***<5.81***	49.5	***<2.42***	***<2.42***	348
144681-01 (0.524 mL)	<0.954	83.6	<0.954	<9.54	<0.477	<239	<0.477	<4.77	1.02	<2.39	<9.54	<239	<239	30.4	<239	<3.82	<0.954	<5.73	<0.954	<2.39	<2.39	<5.73
144681-02 (0.528 mL)	<0.947	247	<0.947	<9.47	<0.473	<237	<0.473	<4.73	<0.947	<2.37	13.8	<237	<237	37.7	<237	<3.79	<0.947	<5.68	<0.947	<2.37	<2.37	7.92
144681-03 1/10 (0.505 mL)	5.18	<19.8	89.8	<9.9	<0.495	<248	29.2	<4.95	<0.99	37600	18.0	<248	<248	<1.49	<248	<3.96	134000	6380	6.33	22.5	***<2.48***	36.6
144681-03 1/100 (0.505 mL)	***<0.99***	***<19.8***	65.2	<9.9	1.48	1200	29.8	<4.95	3.28	39000	106	***<248***	<248	1.67	***<248***	<3.96	134000	6730	31.6	25.4	***<2.48***	107
144681-04 (0.471 mL)	<1.06	61.3	<1.06	<10.6	<0.531	<265	<0.531	<5.31	22.0	<2.65	<10.6	<265	<265	28.5	<265	<4.25	4.86	<6.37	<1.06	<2.65	<2.65	<6.37
CCV	97.3	96.4	99.8	98.2	96.8	97.5	107	95.5	97.0	95.3	95.8	95.6	102	98.1	96.9	99.0	107	102	99.0	101	102	101
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	↑ 0.0267	<0.06	<0.01	<0.025	<0.025	<0.06
LLQC	0.00931	0.189	0.00853	0.101	0.00484	2.35	0.00545	0.0498	0.0113	0.0272	0.103	2.48	2.55	0.0148	2.46	0.0432	↑ 0.0295	0.0598	0.0151	0.0252	0.0253	0.0640
CCV	97.4	97.2	98.8	98.2	96.1	99.5	107	94.9	97.4	95.1	96.5	98.0	101	98.1	99.9	99.0	104	102	99.0	102	102	102
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	↑ 0.0165	<0.06	<0.01	<0.025	<0.025	<0.06
144657-02 (0.113 mL)	3490	54500	24.2	2870	65.1	124000	1020	176	414	73700	15900	5750	3670	996	27200	1760	18500	2470	<4.42	<11.1	24.7	25200
144657-03 (0.129 mL)	3150	23300	57.1	1510	20.7	74800	3000	84.4	250	59300	13600	13100	2910	443	127000	1050	19300	768	14.4	16.7	10.0	22000
144657-04 (0.102 mL)	486	78800	<4.9	1850	42.9	78300	43.9	184	1400	39000	30700	<1230	2260	1070	2930	3940	4590	864	<4.9	<12.3	26.1	6480
144657-05 (0.127 mL)	2890	66700	19.0	3070	87.4	105000	189	168	570	47700	22900	3830	3850	1180	20500	2640	6240	1550	***<3.94***	<9.84	25.3	13400
144657-06 (0.13 mL)	2980	52200	40.3	3560	117	114000	1230	174	364	65700	16100	4640	4080	1190	17000	1880	26400	2750	***<3.85***	11.4	24.3	31400
144657-07 (0.104 mL)	2700	2300	22.4	1600	3.89	7750	4890	25.2	438	22500	13100	22000	<1200	127	194000	1010	26000	207	6.60	69.9	<12	42300
144657-08 (0.125 mL)	1910	15300	25.0	1260	27.1	34700	4260	32.3	367	27700	6760	15700	1640	441	153000	907	39700	791	8.26	47.8	<10	52200
144657-09 (0.117 mL)	2560	39300	23.8	1300	46.8	142000	1170	60.8	226	33100	8950	3270	4560	1160	12900	797	56800	1470	***<4.27***	37.8	<10.7	62400
CCV	97.2	98.0	99.2	98.9	96.2	100	108	95.5	97.8	96.2	96.9	97.1	102	98.8	98.3	99.9	↑ 115	102	99.9	102	102	105
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	0.0518	<0.06	<0.01	<0.025	<0.025	<0.06
LLQC	0.00911	0.204	0.00725	0.101	0.00483	2.37	0.00553	0.0492	0.0110	0.0315	0.0974	2.47	2.57	0.0148	2.47	0.0434	↑ 0.0514	0.0604	↑ 0.0161	0.0251	0.0253	0.0761
CCV	97.3	96.0	99.0	98.5	96.4	97.8	107	95.0	97.5	95.3	96.4	95.8	102	98.3	97.2	99.5	107	101	100	100	102	102
CCB	<0.01	<0.2	<0.01	<0.1	<0.005	<2.5	<0.005	<0.05	<0.01	<0.025	<0.1	<2.5	<2.5	<0.015	<2.5	<0.04	↑ 0.0325	<0.06	<0.01	<0.025	<0.025	<0.06

Reviewed for only metals needed. dry weight

This worksheet does not correct for dry weights.

Reviewed by:

Date Prepped:
$SnCl_2$ #: 3537
Page: 1 of 1

Hg141030A

Date: 10/30/2014
Analyst: JG

Sample ID	Initial Sample Wt	Wt Units	Initial Sample Vol	Vol Units	Sample Prep Vol.	Reported Conc (Calib)	Units (Calib)		Reported Conc (Samp)	Units (Samp)	QC Recovery	Special Calculated Value
Calibration Blank		g		mL		[0.00]	ug/L	OVERRANGE		ug/L		
Calib Std 1		g		mL		[0.2]	ug/L	OVERRANGE		ug/L		
Calib Std 2		g		mL		[1]	ug/L	OVERRANGE		ug/L		
Calib Std 3		g		mL		[2]	ug/L	OVERRANGE		ug/L		
Calib Std 4		g		mL		[5]	ug/L	OVERRANGE		ug/L		
Calib Std 5		g		mL		[10]	ug/L	OVERRANGE		ug/L		
IPC		g		mL		2.0280	ug/L		2.0280	ug/L	101.4	
ICV		g		mL		2.0350	ug/L		2.0350	ug/L	101.8	
ICB		g		mL		-0.0116	ug/L	<0.2 ppb	-0.0116	ug/L		
blk	0.232	g		mL	20	-0.0377	ug/L		-0.0032	ug/g	<0.0172	
lcs	0.233	g		mL	20	2.0480	ug/L		0.1758	ug/g	102.4	
lcs dup	0.229	g		mL	20	2.1530	ug/L		0.1881	ug/g	107.7	6.8
144673-01	0.222	g		mL	20	0.0140	ug/L		0.0013	ug/g	<0.0180	
144706-01	0.202	g		mL	20	0.9798	ug/L		0.0970	ug/g		
144706-02	0.211	g		mL	20	1.6370	ug/L		0.1552	ug/g		
144706-03	0.222	g		mL	20	1.0700	ug/L		0.0964	ug/g		
144706-03 dup	0.220	g		mL	20	0.9212	ug/L		0.0837	ug/g		14.1
144706-03 spk	0.230	g		mL	20	3.0590	ug/L		0.2660	ug/g	97.5	
CCV		g		mL		2.0740	ug/L		2.0740	ug/L	103.7	
CCB		g		mL		-0.0219	ug/L	<0.2 ppb	-0.0219	ug/L		

This worksheet does not correct for dry weight.

Analytical Sequence

Method : 6010C 4ptLL

Seq.	Loc.		Sample ID
1	1		Calib Blank 1
2	9		Low Level Cal1
3	2		Low Level Cal
4	3		Mid Level Cal
5	4		Pb LL
6	5		Pb HL
7	6		High Level Cal
8	6	QC	IPC
9	7	QC	ICV
10	1	QC	ICB
11	2	QC	LLQC
12	4	QC	LLQC Radial Pb
13	8	QC	ICSAB
14	7	QC	CCV
15	1	QC	CCB
16	38		Blk 10/29 soil
17	39		lcs
18	40		lcs dup
19	41		144706-01
20	42		144706-02
21	43		144706-03
22	44		144706-03 dup
23	45		144706-03 spk
24	7	QC	CCV
25	1	QC	CCB
26	2	QC	LLQC
27	7	QC	CCV
28	1	QC	CCB
29	46		4652-01 Al
30	47		4668-01 Se
31	48		Blk 10/28 soil
32	49		lcs
33	50		lcs dup
34	51		144672-01
35	52		144672-02
36	53		144672-03 rpt Se (↑ RSD)
37	54		144672-04 ↓
38	55		144672-05
39	7	QC	CCV
40	1	QC	CCB
41	56		144672-06
42	57		144672-07 rpt Se (↑ RSD)
43	58		144672-08
44	59		144673-01
45	60		144673-01 dup
46	61		144673-01 spk
47	62		144671-02A
48	7	QC	CCV
49	1	QC	CCB
50	2	QC	LLQC
51	7	QC	CCV
52	1	QC	CCB
53	63		46[illegible]69-01 Se 1/100
54	64		144681-01
55	65		144681-02
56	66		144681-03 1/10

Analytical Sequence

Method : 6010C 4ptLL

Seq.	Loc.	Sample ID
57	67	144681-03 1/100
58	68	144681-04
59	7	CCV
60	1	CCB ↑Pb
61	2	LLQC ↑Pb, ↑Se
62	7	CCV
63	1	CCB ↑Pb
64	69	144657-02
65	70	144657-03 ↑P↑
66	71	144657-04
67	72	144657-05
68	73	144657-06
69	74	144657-07 ↑P↑ (↑RSD)
70	75	144657-08 ↑P↑
71	76	144657-09
72	7	CCV
73	1	CCB
74	2	LLQC ↑Pb, ↑Se
75	7	CCV
76	1	CCB
77	77	Sample077

Method: 6010C 4ptLL Page 1 Date: 10/29/2014 2:10:06 PM

Analysis Begun

Start Time: 10/29/2014 2:07:16 PM
Logged In Analyst: icp3
Spectrometer: Optima 7300 DV, S/N 077C0122002
Plasma On Time: 10/29/2014 8:35:21 AM
Technique: ICP Continuous
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer\ICP\Data\Sample Information\102914b.sif
Batch ID: 102914b
Results Data Set: 102914b
Results Library: C:\Users\Public\PerkinElmer\ICP\Data\Results\Oct2014.mdb

Amm
10-29-14

Method Loaded
Method Name: 6010C 4ptLL
IEC File: 051514.iec
Method Description: 6010C/200.7 TAL Metals
Method Last Saved: 10/15/2014 2:41:18 PM
MSF File:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Al 308.215	Lin Thru 0	Peak Area	Radial	Y 371.029	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Ba 233.527	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Be 313.107	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Ca 317.933	Lin Thru 0	Peak Area	Radial	Y 371.029	Yes
Cd 226.502	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Cr 267.716	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Fe 273.955	Lin Thru 0	Peak Area	Radial	Y 371.029	Yes
K 766.490	Lin Thru 0	Peak Area	Radial	Y 371.029	Yes
Mg 279.077	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Mn 257.610	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Na 589.592	Lin Thru 0	Peak Area	Radial	Y 371.029	Yes
Ni 231.604	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Se 196.026	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes
Zn 213.857	Lin Thru 0	Peak Area	Radial	Y 371.029	Yes
Pb	Lin Thru 0	Peak Area	Radial	Y 371.029	Yes
Y 371.029	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Ag 338.289	Lin Thru 0	Peak Area	Axial	Y 371.029	Yes

Sequence No.: 1
Sample ID: Calib Blank 1
Analyst:
Initial Sample Wt:
Dilution:
Wash Time:
Autosampler Location: 1
Date Collected: 10/29/2014 2:07:17 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: Calib Blank 1

Analyte	Back Pressure	Flow
All	133.0 kPa	0.55 L/min

Mean Data: Calib Blank 1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	1540434.6	6515.75	0.42%	1.000	mg/L
Ag 328.068†	6721.2	31.85	0.47%	[0.00]	mg/L
Al 308.215†	201.5	14.93	7.41%	[0.00]	mg/L
As 188.979†	7.7	10.55	136.49%	[0.00]	mg/L
Ba 233.527†	344.7	5.14	1.49%	[0.00]	mg/L
Be 313.107†	-1905.1	10.59	0.56%	[0.00]	mg/L
Ca 317.933†	544.0	0.38	0.07%	[0.00]	mg/L
Cd 226.502†	-72.4	7.84	10.82%	[0.00]	mg/L
Co 228.616†	-224.0	17.19	7.67%	[0.00]	mg/L

Cr 267.716†	98.3	43.39	44.13%	[0.00]	mg/L
Cu 324.752†	2857.0	32.09	1.12%	[0.00]	mg/L
Fe 273.955†	-21.3	2.69	12.63%	[0.00]	mg/L
K 766.490†	1635.9	80.90	4.95%	[0.00]	mg/L
Mg 279.077†	2410.1	35.40	1.47%	[0.00]	mg/L
Mn 257.610†	1993.8	13.73	0.69%	[0.00]	mg/L
Na 589.592†	1741.2	57.23	3.29%	[0.00]	mg/L
Ni 231.604†	90.4	7.91	8.75%	[0.00]	mg/L
Pb 220.353†	26.7	16.53	61.94%	[0.00]	mg/L
Sb 206.836†	-212.9	1.83	0.86%	[0.00]	mg/L
Se 196.026†	-31.4	7.34	23.38%	[0.00]	mg/L
Tl 190.801†	68.1	1.92	2.82%	[0.00]	mg/L
V 292.402†	719.3	0.47	0.07%	[0.00]	mg/L
Zn 213.857†	-11.1	3.39	30.50%	[0.00]	mg/L
Pb†	-3.8	3.35	89.02%	[0.00]	mg/L
Ag 338.289†	-1597.6	175.16	10.96%	[0.00]	mg/L

Sequence No.: 2
Sample ID: Low Level Cal1
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 9
Date Collected: 10/29/2014 2:11:30 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Nebulizer Parameters: Low Level Cal1

Analyte	Back Pressure	Flow
All	133.0 kPa	0.55 L/min

Mean Data: Low Level Cal1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	1607104.7	17462.35	1.09%	1.043	mg/L
Ag 328.068†	882.6	27.89	3.16%	[0.005]	mg/L
Al 308.215†	33.7	8.78	26.05%	[0.100]	mg/L
As 188.979†	2.2	3.32	148.91%	[0.005]	mg/L
Ba 233.527†	8094.1	102.75	1.27%	[0.050]	mg/L
Be 313.107†	4471.8	23.82	0.53%	[0.0025]	mg/L
Ca 317.933†	5431.1	195.75	3.60%	[1.25]	mg/L
Cd 226.502†	187.9	0.69	0.37%	[0.0025]	mg/L
Co 228.616†	988.5	6.03	0.61%	[0.025]	mg/L
Cr 267.716†	618.4	6.14	0.99%	[0.005]	mg/L
Cu 324.752†	2826.3	69.98	2.48%	[0.0125]	mg/L
Fe 273.955†	29.4	2.31	7.85%	[0.050]	mg/L
K 766.490†	2893.0	133.33	4.61%	[1.25]	mg/L
Mg 279.077†	22496.7	1.70	0.01%	[1.25]	mg/L
Mn 257.610†	6432.8	94.30	1.47%	[0.0075]	mg/L
Na 589.592†	9978.6	199.01	1.99%	[1.25]	mg/L
Ni 231.604†	830.2	19.10	2.30%	[0.020]	mg/L
Pb 220.353†	28.5	18.88	66.32%	[0.005]	mg/L
Sb 206.836†	88.0	1.34	1.52%	[0.030]	mg/L
Se 196.026†	9.1	4.27	46.86%	[0.005]	mg/L
Tl 190.801†	21.7	2.42	11.11%	[0.0125]	mg/L
V 292.402†	2025.7	25.99	1.28%	[0.0125]	mg/L
Zn 213.857†	33.1	0.71	2.14%	[0.030]	mg/L
Ag 338.289†	606.9	248.22	40.90%	[0.005]	mg/L

Sequence No.: 3
Sample ID: Low Level Cal
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 2
Date Collected: 10/29/2014 2:15:43 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Nebulizer Parameters: Low Level Cal

Analyte	Back Pressure	Flow
All	133.0 kPa	0.55 L/min

Mean Data: Low Level Cal

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	1593581.5	12061.88	0.76%	1.035	mg/L
Ag 328.068†	1906.6	60.41	3.17%	[0.010]	mg/L
Al 308.215†	96.0	3.34	3.47%	[0.200]	mg/L
As 188.979†	13.2	1.56	11.78%	[0.010]	mg/L
Ba 233.527†	15093.5	32.20	0.21%	[0.100]	mg/L
Be 313.107†	8850.6	38.01	0.43%	[0.005]	mg/L
Ca 317.933†	10935.9	133.02	1.22%	[2.50]	mg/L
Cd 226.502†	358.5	17.03	4.75%	[0.005]	mg/L
Co 228.616†	1969.4	17.46	0.89%	[0.050]	mg/L
Cr 267.716†	1235.2	13.67	1.11%	[0.010]	mg/L
Cu 324.752†	6200.9	6.62	0.11%	[0.025]	mg/L
Fe 273.955†	55.2	3.08	5.57%	[0.100]	mg/L
K 766.490†	5770.3	132.74	2.30%	[2.50]	mg/L
Mg 279.077†	44795.9	252.22	0.56%	[2.50]	mg/L
Mn 257.610†	11665.9	78.83	0.68%	[0.015]	mg/L
Na 589.592†	19228.8	149.79	0.78%	[2.50]	mg/L
Ni 231.604†	1722.2	9.45	0.55%	[0.040]	mg/L
Pb 220.353†	86.4	30.36	35.13%	[0.010]	mg/L
Sb 206.836†	179.4	4.29	2.39%	[0.060]	mg/L
Se 196.026†	20.5	12.12	59.19%	[0.010]	mg/L
Tl 190.801†	39.8	8.46	21.25%	[0.025]	mg/L
V 292.402†	3974.5	10.31	0.26%	[0.025]	mg/L
Zn 213.857†	70.9	0.44	0.62%	[0.060]	mg/L
Ag 338.289†	957.1	38.94	4.07%	[0.01]	mg/L

Sequence No.: 4
Sample ID: Mid Level Cal
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 3
Date Collected: 10/29/2014 2:19:55 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Nebulizer Parameters: Mid Level Cal

Analyte	Back Pressure	Flow
All	133.0 kPa	0.55 L/min

Mean Data: Mid Level Cal

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	1707573.5	29465.24	1.73%	1.109	mg/L
Ag 328.068†	9550.0	18.28	0.19%	[0.050]	mg/L
Al 308.215†	530.1	6.02	1.14%	[1.00]	mg/L
As 188.979†	87.4	2.59	2.97%	[0.050]	mg/L
Ba 233.527†	73899.2	312.48	0.42%	[0.500]	mg/L
Be 313.107†	44072.8	125.23	0.28%	[0.025]	mg/L
Ca 317.933†	53641.5	885.23	1.65%	[12.5]	mg/L
Cd 226.502†	1874.4	29.49	1.57%	[0.025]	mg/L
Co 228.616†	10370.8	166.32	1.60%	[0.250]	mg/L
Cr 267.716†	5632.9	52.31	0.93%	[0.050]	mg/L
Cu 324.752†	27591.2	97.46	0.35%	[0.125]	mg/L
Fe 273.955†	265.8	6.77	2.55%	[0.500]	mg/L
K 766.490†	28106.6	397.09	1.41%	[12.5]	mg/L
Mg 279.077†	221508.6	1328.67	0.60%	[12.5]	mg/L
Mn 257.610†	56316.6	7.45	0.01%	[0.075]	mg/L
Na 589.592†	97795.3	1725.71	1.76%	[12.5]	mg/L
Ni 231.604†	8517.9	130.54	1.53%	[0.200]	mg/L
Pb 220.353†	389.3	1.49	0.38%	[0.050]	mg/L
Sb 206.836†	961.4	10.82	1.13%	[0.300]	mg/L
Se 196.026†	136.2	16.96	12.45%	[0.050]	mg/L
Tl 190.801†	207.5	2.58	1.24%	[0.125]	mg/L
V 292.402†	20029.3	13.33	0.07%	[0.125]	mg/L
Zn 213.857†	354.3	4.50	1.27%	[0.300]	mg/L
Ag 338.289†	4895.0	23.96	0.49%	[0.05]	mg/L

Sequence No.: 5
Sample ID: Pb LL
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 4
Date Collected: 10/29/2014 2:24:09 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Nebulizer Parameters: Pb LL

Analyte	Back Pressure	Flow
All	133.0 kPa	0.55 L/min

Mean Data: Pb LL

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	1587922.3	2639.18	0.17%	1.031	mg/L
Pb†	9.7	2.13	21.93%	[0.100]	mg/L

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Sequence No.: 6
Sample ID: Pb HL
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 5
Date Collected: 10/29/2014 2:27:40 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Nebulizer Parameters: Pb HL

Analyte	Back Pressure	Flow
All	133.0 kPa	0.55 L/min

Mean Data: Pb HL

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	1696613.9	1814.95	0.11%	1.101	mg/L
Pb†	875.4	3.79	0.43%	[10.0]	mg/L

==========

Sequence No.: 7
Sample ID: High Level Cal
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 6
Date Collected: 10/29/2014 2:31:13 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Nebulizer Parameters: High Level Cal

Analyte	Back Pressure	Flow
All	133.0 kPa	0.55 L/min

Mean Data: High Level Cal

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	1496743.6	10625.50	0.71%	0.9716	mg/L
Ag 328.068†	399641.1	46.82	0.01%	[2.00]	mg/L
Al 308.215†	5665.1	28.13	0.50%	[10.0]	mg/L
As 188.979†	3846.0	10.66	0.28%	[2.00]	mg/L
Ba 233.527†	1492929.2	2234.96	0.15%	[10.0]	mg/L
Be 313.107†	453298.8	148.09	0.03%	[0.250]	mg/L
Ca 317.933†	232870.2	1471.58	0.63%	[50.0]	mg/L
Cd 226.502†	66720.0	75.57	0.11%	[1.00]	mg/L
Co 228.616†	100059.3	182.65	0.18%	[2.50]	mg/L
Cr 267.716†	226836.2	35.73	0.02%	[2.00]	mg/L
Cu 324.752†	289754.0	78.00	0.03%	[1.25]	mg/L
Fe 273.955†	2825.5	3.90	0.14%	[5.00]	mg/L
K 766.490†	117342.0	774.87	0.66%	[50.0]	mg/L
Mg 279.077†	883112.6	2084.95	0.24%	[50.0]	mg/L
Mn 257.610†	2359529.0	3182.48	0.13%	[3.00]	mg/L
Na 589.592†	384820.9	2062.15	0.54%	[50.0]	mg/L

Ni 231.604†	317676.0	705.00	0.22%	[8.00] mg/L
Pb 220.353†	7743.8	63.93	0.83%	[1.00] mg/L
Sb 206.836†	37082.5	27.40	0.07%	[12.0] mg/L
Se 196.026†	2384.3	7.68	0.32%	[1.00] mg/L
Tl 190.801†	3502.7	36.19	1.03%	[2.00] mg/L
V 292.402†	399092.2	230.75	0.06%	[2.50] mg/L
Zn 213.857†	4564.4	63.03	1.38%	[4.00] mg/L
Pb†	81.7	0.71	0.87%	[1.00] mg/L
Ag 338.289†	191051.7	227.76	0.12%	[2.00] mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	4	Lin Thru 0	0.0	199800	0.00000	0.999999	
Al 308.215	4	Lin Thru 0	0.0	566.1	0.00000	0.999967	
As 188.979	4	Lin Thru 0	0.0	1923	0.00000	0.999994	
Ba 233.527	4	Lin Thru 0	0.0	149300	0.00000	1.000000	
Be 313.107	4	Lin Thru 0	0.0	1813000	0.00000	0.999996	
Ca 317.933	4	Lin Thru 0	0.0	4635	0.00000	0.999823	
Cd 226.502	4	Lin Thru 0	0.0	66730	0.00000	0.999995	
Co 228.616	4	Lin Thru 0	0.0	40040	0.00000	0.999993	
Cr 267.716	4	Lin Thru 0	0.0	113400	0.00000	1.000000	
Cu 324.752	4	Lin Thru 0	0.0	231700	0.00000	0.999988	
Fe 273.955	4	Lin Thru 0	0.0	564.8	0.00000	0.999982	
K 766.490	4	Lin Thru 0	0.0	2341	0.00000	0.999951	
Mg 279.077	4	Lin Thru 0	0.0	17670	0.00000	0.999999	
Mn 257.610	4	Lin Thru 0	0.0	786500	0.00000	0.999999	
Na 589.592	4	Lin Thru 0	0.0	7704	0.00000	0.999992	
Ni 231.604	4	Lin Thru 0	0.0	39710	0.00000	0.999998	
Pb 220.353	4	Lin Thru 0	0.0	7744	0.00000	0.999998	
Sb 206.836	4	Lin Thru 0	0.0	3090	0.00000	1.000000	
Se 196.026	4	Lin Thru 0	0.0	2385	0.00000	0.999973	
Tl 190.801	4	Lin Thru 0	0.0	1751	0.00000	0.999994	
V 292.402	4	Lin Thru 0	0.0	159600	0.00000	1.000000	
Zn 213.857	4	Lin Thru 0	0.0	1141	0.00000	0.999996	
Pb	3	Lin Thru 0	0.0	87.48	0.00000	0.999978	
Ag 338.289	4	Lin Thru 0	0.0	95530	0.00000	1.000000	

Sequence No.: 8 **Autosampler Location: 6**
Sample ID: IPC **Date Collected: 10/29/2014 2:35:31 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 75 **Auto Dilution Factor: 1**

Nebulizer Parameters: IPC

Analyte	Back Pressure	Flow
All	133.0 kPa	0.55 L/min

Mean Data: IPC

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Y 371.029	1512047.8	0.9816 mg/L	0.00128			0.13%
Ag 328.068†	399311.5	2.001 mg/L	0.0013	2.001 mg/L	0.0013	0.07%
QC value within limits for Ag 328.068 Recovery = 100.06%						
Al 308.215†	5529.9	9.781 mg/L	0.0490	9.781 mg/L	0.0490	0.50%
QC value within limits for Al 308.215 Recovery = 97.81%						
As 188.979†	3795.8	1.973 mg/L	0.0036	1.973 mg/L	0.0036	0.18%
QC value within limits for As 188.979 Recovery = 98.65%						
Ba 233.527†	1496468.0	10.02 mg/L	0.001	10.02 mg/L	0.001	0.01%
QC value within limits for Ba 233.527 Recovery = 100.24%						
Be 313.107†	453622.9	0.2506 mg/L	0.00023	0.2506 mg/L	0.00023	0.09%
QC value within limits for Be 313.107 Recovery = 100.24%						
Ca 317.933†	230787.8	49.79 mg/L	0.172	49.79 mg/L	0.172	0.35%
QC value within limits for Ca 317.933 Recovery = 99.58%						
Cd 226.502†	66893.2	1.001 mg/L	0.0009	1.001 mg/L	0.0009	0.09%
QC value within limits for Cd 226.502 Recovery = 100.07%						
Co 228.616†	100326.0	2.506 mg/L	0.0052	2.506 mg/L	0.0052	0.21%

QC value within limits for Co 228.616 Recovery = 100.23%

Cr 267.716†	227364.1	2.004 mg/L	0.0028	2.004 mg/L	0.0028	0.14%
QC value within limits for Cr 267.716 Recovery = 100.19%						
Cu 324.752†	289905.3	1.252 mg/L	0.0011	1.252 mg/L	0.0011	0.08%
QC value within limits for Cu 324.752 Recovery = 100.15%						
Fe 273.955†	2812.4	4.944 mg/L	0.0149	4.944 mg/L	0.0149	0.30%
QC value within limits for Fe 273.955 Recovery = 98.88%						
K 766.490†	116762.5	49.88 mg/L	0.202	49.88 mg/L	0.202	0.40%
QC value within limits for K 766.490 Recovery = 99.76%						
Mg 279.077†	884829.2	50.07 mg/L	0.000	50.07 mg/L	0.000	0.00%
QC value within limits for Mg 279.077 Recovery = 100.14%						
Mn 257.610†	2364330.7	3.007 mg/L	0.0008	3.007 mg/L	0.0008	0.03%
QC value within limits for Mn 257.610 Recovery = 100.22%						
Na 589.592†	386268.6	50.14 mg/L	0.173	50.14 mg/L	0.173	0.35%
QC value within limits for Na 589.592 Recovery = 100.28%						
Ni 231.604†	318329.7	8.016 mg/L	0.0136	8.016 mg/L	0.0136	0.17%
QC value within limits for Ni 231.604 Recovery = 100.20%						
Pb 220.353†	7655.0	0.9949 mg/L	0.00457	0.9949 mg/L	0.00457	0.46%
QC value within limits for Pb 220.353 Recovery = 99.49%						
Sb 206.836†	37066.8	11.95 mg/L	0.031	11.95 mg/L	0.031	0.26%
QC value within limits for Sb 206.836 Recovery = 99.62%						
Se 196.026†	2355.0	0.9865 mg/L	0.00453	0.9865 mg/L	0.00453	0.46%
QC value within limits for Se 196.026 Recovery = 98.65%						
Tl 190.801†	3464.7	1.945 mg/L	0.0199	1.945 mg/L	0.0199	1.02%
QC value within limits for Tl 190.801 Recovery = 97.24%						
V 292.402†	399239.8	2.517 mg/L	0.0023	2.517 mg/L	0.0023	0.09%
QC value within limits for V 292.402 Recovery = 100.67%						
Zn 213.857†	4458.9	3.862 mg/L	0.0172	3.862 mg/L	0.0172	0.45%
QC value within limits for Zn 213.857 Recovery = 96.55%						
Pb†	82.9	0.9536 mg/L	0.00782	0.9536 mg/L	0.00782	0.82%
QC value within limits for Pb Recovery = 95.36%						
Ag 338.289†	190838.3	2.050 mg/L	0.0015	2.050 mg/L	0.0015	0.07%

All analyte(s) passed QC.

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Sequence No.: 9 **Autosampler Location: 7**
Sample ID: ICV **Date Collected: 10/29/2014 2:39:49 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 75 **Auto Dilution Factor: 1**

Nebulizer Parameters: ICV

Analyte	Back Pressure	Flow
All	133.0 kPa	0.55 L/min

Mean Data: ICV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1538982.6	0.9991	mg/L	0.00604				0.60%
Ag 328.068†	243029.6	1.219	mg/L	0.0010	1.219	mg/L	0.0010	0.08%
QC value within limits for Ag 328.068 Recovery = 97.52%								
Al 308.215†	5542.5	9.801	mg/L	0.0360	9.801	mg/L	0.0360	0.37%
QC value within limits for Al 308.215 Recovery = 98.01%								
As 188.979†	959.8	0.4986	mg/L	0.00707	0.4986	mg/L	0.00707	1.42%
QC value within limits for As 188.979 Recovery = 99.73%								
Ba 233.527†	1476276.3	9.889	mg/L	0.0037	9.889	mg/L	0.0037	0.04%
QC value within limits for Ba 233.527 Recovery = 98.89%								
Be 313.107†	448389.7	0.2475	mg/L	0.00015	0.2475	mg/L	0.00015	0.06%
QC value within limits for Be 313.107 Recovery = 99.01%								
Ca 317.933†	114760.4	24.76	mg/L	0.135	24.76	mg/L	0.135	0.55%
QC value within limits for Ca 317.933 Recovery = 99.04%								
Cd 226.502†	17972.8	0.2684	mg/L	0.00251	0.2684	mg/L	0.00251	0.93%
QC value within limits for Cd 226.502 Recovery = 107.36%								
Co 228.616†	95955.8	2.397	mg/L	0.0053	2.397	mg/L	0.0053	0.22%
QC value within limits for Co 228.616 Recovery = 95.87%								
Cr 267.716†	110170.0	0.9705	mg/L	0.00067	0.9705	mg/L	0.00067	0.07%
QC value within limits for Cr 267.716 Recovery = 97.05%								
Cu 324.752†	276373.0	1.193	mg/L	0.0003	1.193	mg/L	0.0003	0.03%
QC value within limits for Cu 324.752 Recovery = 95.47%								

Fe 273.955†	2740.1	4.813 mg/L	0.0446	4.813 mg/L	0.0446	0.93%
QC value within limits for Fe 273.955 Recovery = 96.27%						
K 766.490†	56923.7	24.32 mg/L	0.203	24.32 mg/L	0.203	0.84%
QC value within limits for K 766.490 Recovery = 97.27%						
Mg 279.077†	447220.6	25.30 mg/L	0.018	25.30 mg/L	0.018	0.07%
QC value within limits for Mg 279.077 Recovery = 101.19%						
Mn 257.610†	1932246.8	2.457 mg/L	0.0016	2.457 mg/L	0.0016	0.07%
QC value within limits for Mn 257.610 Recovery = 98.29%						
Na 589.592†	188213.4	24.43 mg/L	0.155	24.43 mg/L	0.155	0.63%
QC value within limits for Na 589.592 Recovery = 97.72%						
Ni 231.604†	98106.6	2.470 mg/L	0.0041	2.470 mg/L	0.0041	0.17%
QC value within limits for Ni 231.604 Recovery = 98.82%						
Pb 220.353†	3901.2	0.5071 mg/L	0.00565	0.5071 mg/L	0.00565	1.11%
QC value within limits for Pb 220.353 Recovery = 101.42%						
Sb 206.836†	15792.0	5.093 mg/L	0.0377	5.093 mg/L	0.0377	0.74%
QC value within limits for Sb 206.836 Recovery = 101.85%						
Se 196.026†	1190.0	0.4979 mg/L	0.00204	0.4979 mg/L	0.00204	0.41%
QC value within limits for Se 196.026 Recovery = 99.59%						
Tl 190.801†	921.4	0.4924 mg/L	0.00185	0.4924 mg/L	0.00185	0.38%
QC value within limits for Tl 190.801 Recovery = 98.48%						
V 292.402†	404487.0	2.541 mg/L	0.0006	2.541 mg/L	0.0006	0.02%
QC value within limits for V 292.402 Recovery = 101.66%						
Zn 213.857†	2875.2	2.504 mg/L	0.0161	2.504 mg/L	0.0161	0.64%
QC value within limits for Zn 213.857 Recovery = 100.18%						
Pb†	41.6	0.4753 mg/L	0.06373	0.4753 mg/L	0.06373	13.41%
QC value within limits for Pb Recovery = 95.06%						
Ag 338.289†	116372.3	1.246 mg/L	0.0017	1.246 mg/L	0.0017	0.14%

All analyte(s) passed QC.

Sequence No.: 10 **Autosampler Location: 1**
Sample ID: ICB **Date Collected: 10/29/2014 2:44:06 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 75 **Auto Dilution Factor: 1**

Nebulizer Parameters: ICB

Analyte	Back Pressure	Flow
All	133.0 kPa	0.55 L/min

Mean Data: ICB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1572325.5	1.021	mg/L	0.0034				0.33%
Ag 328.068†	128.8	0.0006	mg/L	0.00148	0.0006	mg/L	0.00148	229.32%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 308.215†	1.7	0.0030	mg/L	0.01620	0.0030	mg/L	0.01620	544.74%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	4.9	0.0026	mg/L	0.00245	0.0026	mg/L	0.00245	95.31%
QC value within limits for As 188.979 Recovery = Not calculated								
Ba 233.527†	54.6	0.0004	mg/L	0.00008	0.0004	mg/L	0.00008	22.09%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	46.0	0.0000	mg/L	0.00009	0.0000	mg/L	0.00009	339.00%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933†	14.0	0.0030	mg/L	0.00052	0.0030	mg/L	0.00052	17.24%
QC value within limits for Ca 317.933 Recovery = Not calculated								
Cd 226.502†	5.8	0.0001	mg/L	0.00005	0.0001	mg/L	0.00005	60.97%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	10.1	0.0003	mg/L	0.00032	0.0003	mg/L	0.00032	127.16%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	-16.7	-0.0001	mg/L	0.00002	-0.0001	mg/L	0.00002	10.90%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 324.752†	62.0	0.0003	mg/L	0.00036	0.0003	mg/L	0.00036	134.25%
QC value within limits for Cu 324.752 Recovery = Not calculated								
Fe 273.955†	0.6	0.0011	mg/L	0.00536	0.0011	mg/L	0.00536	468.25%
QC value within limits for Fe 273.955 Recovery = Not calculated								
K 766.490†	115.7	0.0494	mg/L	0.03491	0.0494	mg/L	0.03491	70.62%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 279.077†	11.0	0.0006	mg/L	0.00007	0.0006	mg/L	0.00007	12.04%

QC value within limits for Mg 279.077 Recovery = Not calculated

Mn 257.610†	311.4	0.0004 mg/L	0.00001	0.0004 mg/L	0.00001	2.73%

QC value within limits for Mn 257.610 Recovery = Not calculated

Na 589.592†	-188.7	-0.0245 mg/L	0.00091	-0.0245 mg/L	0.00091	3.73%

QC value within limits for Na 589.592 Recovery = Not calculated

Ni 231.604†	-10.3	-0.0003 mg/L	0.00025	-0.0003 mg/L	0.00025	94.87%

QC value within limits for Ni 231.604 Recovery = Not calculated

Pb 220.353†	3.7	0.0005 mg/L	0.00063	0.0005 mg/L	0.00063	133.82%

QC value within limits for Pb 220.353 Recovery = Not calculated

Sb 206.836†	-3.5	-0.0011 mg/L	0.00340	-0.0011 mg/L	0.00340	299.49%

QC value within limits for Sb 206.836 Recovery = Not calculated

Se 196.026†	14.3	0.0060 mg/L	0.00252	0.0060 mg/L	0.00252	42.08%

QC value within limits for Se 196.026 Recovery = Not calculated

Tl 190.801†	-0.4	-0.0003 mg/L	0.00135	-0.0003 mg/L	0.00135	532.30%

QC value within limits for Tl 190.801 Recovery = Not calculated

V 292.402†	-67.8	-0.0004 mg/L	0.00074	-0.0004 mg/L	0.00074	172.52%

QC value within limits for V 292.402 Recovery = Not calculated

Zn 213.857†	3.4	0.0030 mg/L	0.00062	0.0030 mg/L	0.00062	20.63%

QC value within limits for Zn 213.857 Recovery = Not calculated

Pb†	6.8	0.0773 mg/L	0.05477	0.0773 mg/L	0.05477	70.88%

QC value within limits for Pb Recovery = Not calculated

Ag 338.289†	-100.9	-0.0011 mg/L	0.00007	-0.0011 mg/L	0.00007	6.73%

All analyte(s) passed QC.

Sequence No.: 11
Sample ID: LLQC
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 2
Date Collected: 10/29/2014 2:48:19 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Nebulizer Parameters: LLQC

Analyte	Back Pressure	Flow
All	134.0 kPa	0.55 L/min

Mean Data: LLQC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1607351.7	1.043	mg/L	0.0023				0.22%
Ag 328.068†	1787.0	0.0090	mg/L	0.00010	0.0090	mg/L	0.00010	1.11%

QC value within limits for Ag 328.068 Recovery = 89.83%

Al 308.215†	110.8	0.1962	mg/L	0.00906	0.1962	mg/L	0.00906	4.62%

QC value within limits for Al 308.215 Recovery = 98.10%

As 188.979†	18.5	0.0096	mg/L	0.00431	0.0096	mg/L	0.00431	44.73%

QC value within limits for As 188.979 Recovery = 96.27%

Ba 233.527†	15131.8	0.1014	mg/L	0.00014	0.1014	mg/L	0.00014	0.13%

QC value within limits for Ba 233.527 Recovery = 101.36%

Be 313.107†	8943.1	0.0049	mg/L	0.00002	0.0049	mg/L	0.00002	0.37%

QC value within limits for Be 313.107 Recovery = 98.71%

Ca 317.933†	10921.0	2.356	mg/L	0.0092	2.356	mg/L	0.0092	0.39%

QC value within limits for Ca 317.933 Recovery = 94.25%

Cd 226.502†	366.0	0.0055	mg/L	0.00016	0.0055	mg/L	0.00016	2.89%

QC value within limits for Cd 226.502 Recovery = 109.08%

Co 228.616†	1967.6	0.0491	mg/L	0.00031	0.0491	mg/L	0.00031	0.63%

QC value within limits for Co 228.616 Recovery = 98.29%

Cr 267.716†	1272.3	0.0112	mg/L	0.00018	0.0112	mg/L	0.00018	1.60%

QC value within limits for Cr 267.716 Recovery = 112.09%

Cu 324.752†	6125.8	0.0264	mg/L	0.00037	0.0264	mg/L	0.00037	1.41%

QC value within limits for Cu 324.752 Recovery = 105.80%

Fe 273.955†	47.5	0.0837	mg/L	0.00511	0.0837	mg/L	0.00511	6.10%

QC value within limits for Fe 273.955 Recovery = 83.67%

K 766.490†	5817.0	2.485	mg/L	0.0027	2.485	mg/L	0.0027	0.11%

QC value within limits for K 766.490 Recovery = 99.40%

Mg 279.077†	44870.6	2.540	mg/L	0.0122	2.540	mg/L	0.0122	0.48%

QC value within limits for Mg 279.077 Recovery = 101.58%

Mn 257.610†	11887.3	0.0151	mg/L	0.00001	0.0151	mg/L	0.00001	0.04%

QC value within limits for Mn 257.610 Recovery = 100.80%

Na 589.592†	18985.2	2.464	mg/L	0.0209	2.464	mg/L	0.0209	0.85%

QC value within limits for Na 589.592 Recovery = 98.57%

Ni 231.604†	1713.0	0.0431 mg/L	0.00046	0.0431 mg/L	0.00046	1.06%
QC value within limits for Ni 231.604 Recovery = 107.84%						
Pb 220.353†	68.0	0.0089 mg/L	0.00447	0.0089 mg/L	0.00447	50.18%
QC value within limits for Pb 220.353 Recovery = 89.02%						
Sb 206.836†	193.6	0.0625 mg/L	0.00474	0.0625 mg/L	0.00474	7.59%
QC value within limits for Sb 206.836 Recovery = 104.13%						
Se 196.026†	25.7	0.0108 mg/L	0.00549	0.0108 mg/L	0.00549	50.83%
QC value within limits for Se 196.026 Recovery = 108.04%						
Tl 190.801†	40.3	0.0224 mg/L	0.00207	0.0224 mg/L	0.00207	9.23%
QC value within limits for Tl 190.801 Recovery = 89.64%						
V 292.402†	3938.6	0.0248 mg/L	0.00017	0.0248 mg/L	0.00017	0.69%
QC value within limits for V 292.402 Recovery = 99.04%						
Zn 213.857†	67.8	0.0589 mg/L	0.00148	0.0589 mg/L	0.00148	2.52%
QC value within limits for Zn 213.857 Recovery = 98.22%						
Pb†	0.0	0.0008 mg/L	0.03373	0.0008 mg/L	0.03373	>999.9%
Ag 338.289†	1000.7	0.0108 mg/L	0.00243	0.0108 mg/L	0.00243	22.57%

All analyte(s) passed QC.

Sequence No.: 12
Sample ID: LLQC Radial Pb
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 4
Date Collected: 10/29/2014 2:52:31 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Nebulizer Parameters: LLQC Radial Pb

Analyte	Back Pressure	Flow
All	133.0 kPa	0.55 L/min

Mean Data: LLQC Radial Pb

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1653988.9	1.074	mg/L	0.0009				0.09%
Ag 328.068†	-322.9	-0.0016	mg/L	0.00025	-0.0016	mg/L	0.00025	15.66%
Al 308.215†	-25.4	-0.0448	mg/L	0.01436	-0.0448	mg/L	0.01436	32.07%
As 188.979†	-1.5	-0.0008	mg/L	0.00418	-0.0008	mg/L	0.00418	526.10%
Ba 233.527†	-8.4	-0.0001	mg/L	0.00006	-0.0001	mg/L	0.00006	107.20%
Be 313.107†	145.8	0.0001	mg/L	0.00002	0.0001	mg/L	0.00002	25.24%
Ca 317.933†	1.7	0.0004	mg/L	0.00204	0.0004	mg/L	0.00204	543.02%
Cd 226.502†	1.5	0.0000	mg/L	0.00015	0.0000	mg/L	0.00015	644.36%
Co 228.616†	17.6	0.0004	mg/L	0.00001	0.0004	mg/L	0.00001	1.82%
Cr 267.716†	-3.9	-0.0000	mg/L	0.00012	-0.0000	mg/L	0.00012	353.08%
Cu 324.752†	1.4	0.0000	mg/L	0.00034	0.0000	mg/L	0.00034	>999.9%
Fe 273.955†	2.7	0.0048	mg/L	0.00956	0.0048	mg/L	0.00956	199.72%
K 766.490†	-17.2	-0.0074	mg/L	0.05859	-0.0074	mg/L	0.05859	795.14%
Mg 279.077†	-143.5	-0.0081	mg/L	0.00045	-0.0081	mg/L	0.00045	5.56%
Mn 257.610†	-45.5	-0.0001	mg/L	0.00001	-0.0001	mg/L	0.00001	16.24%
Na 589.592†	-251.9	-0.0327	mg/L	0.00968	-0.0327	mg/L	0.00968	29.60%
Ni 231.604†	-20.2	-0.0005	mg/L	0.00024	-0.0005	mg/L	0.00024	46.67%
Pb 220.353†	789.0	0.1019	mg/L	0.00096	0.1019	mg/L	0.00096	0.94%
Sb 206.836†	10.2	0.0033	mg/L	0.00165	0.0033	mg/L	0.00165	50.15%
Se 196.026†	6.2	0.0026	mg/L	0.00594	0.0026	mg/L	0.00594	229.00%
Tl 190.801†	-5.3	-0.0030	mg/L	0.00128	-0.0030	mg/L	0.00128	42.43%
V 292.402†	-36.8	-0.0002	mg/L	0.00083	-0.0002	mg/L	0.00083	360.40%
Zn 213.857†	0.7	0.0006	mg/L	0.00049	0.0006	mg/L	0.00049	85.49%
Pb†	6.9	0.0789	mg/L	0.00603	0.0789	mg/L	0.00603	7.64%
QC value within limits for Pb Recovery = 78.91%								
Ag 338.289†	69.7	0.0007	mg/L	0.00205	0.0007	mg/L	0.00205	281.94%

All analyte(s) passed QC.

Sequence No.: 13
Sample ID: ICSAB
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 8
Date Collected: 10/29/2014 2:56:46 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	133.0 kPa	0.55 L/min

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1486009.6	0.9647	mg/L	0.00346				0.36%
Ag 328.068†	148959.5	0.7769	mg/L	0.00183	0.7769	mg/L	0.00183	0.24%
QC value within limits for Ag 328.068 Recovery = 103.59%								
Al 308.215†	153439.3	271.1	mg/L	0.73	271.1	mg/L	0.73	0.27%
QC value within limits for Al 308.215 Recovery = 108.42%								
As 188.979†	4872.0	2.528	mg/L	0.0091	2.528	mg/L	0.0091	0.36%
QC value within limits for As 188.979 Recovery = 101.13%								
Ba 233.527†	114024.0	0.7638	mg/L	0.00018	0.7638	mg/L	0.00018	0.02%
QC value within limits for Ba 233.527 Recovery = 101.84%								
Be 313.107†	442554.4	0.2443	mg/L	0.00033	0.2443	mg/L	0.00033	0.13%
QC value within limits for Be 313.107 Recovery = 97.71%								
Ca 317.933†	1184429.2	255.5	mg/L	2.26	255.5	mg/L	2.26	0.88%
QC value within limits for Ca 317.933 Recovery = 102.21%								
Cd 226.502†	49377.6	0.7283	mg/L	0.00187	0.7283	mg/L	0.00187	0.26%
QC value within limits for Cd 226.502 Recovery = 97.10%								
Co 228.616†	28336.3	0.7077	mg/L	0.00066	0.7077	mg/L	0.00066	0.09%
QC value within limits for Co 228.616 Recovery = 94.36%								
Cr 267.716†	81325.0	0.7182	mg/L	0.00115	0.7182	mg/L	0.00115	0.16%
QC value within limits for Cr 267.716 Recovery = 95.77%								
Cu 324.752†	174363.7	0.7645	mg/L	0.00031	0.7645	mg/L	0.00031	0.04%
QC value within limits for Cu 324.752 Recovery = 101.93%								
Fe 273.955†	52611.9	93.15	mg/L	0.510	93.15	mg/L	0.510	0.55%
QC value within limits for Fe 273.955 Recovery = 93.15%								
K 766.490†	122273.8	52.23	mg/L	0.338	52.23	mg/L	0.338	0.65%
QC value within limits for K 766.490 Recovery = 104.46%								
Mg 279.077†	4535907.1	256.4	mg/L	0.37	256.4	mg/L	0.37	0.15%
QC value within limits for Mg 279.077 Recovery = 102.57%								
Mn 257.610†	385978.3	0.4909	mg/L	0.00038	0.4909	mg/L	0.00038	0.08%
QC value within limits for Mn 257.610 Recovery = 98.19%								
Na 589.592†	820.2	0.1065	mg/L	0.02430	0.1065	mg/L	0.02430	22.83%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	28806.2	0.7254	mg/L	0.00054	0.7254	mg/L	0.00054	0.07%
QC value within limits for Ni 231.604 Recovery = 96.72%								
Pb 220.353†	20038.0	2.500	mg/L	0.0006	2.500	mg/L	0.0006	0.02%
QC value within limits for Pb 220.353 Recovery = 100.00%								
Sb 206.836†	-284.4	-0.0142	mg/L	0.00364	-0.0142	mg/L	0.00364	25.69%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	2974.3	1.274	mg/L	0.0121	1.274	mg/L	0.0121	0.95%
QC value within limits for Se 196.026 Recovery = 101.93%								
Tl 190.801†	4179.8	2.371	mg/L	0.0039	2.371	mg/L	0.0039	0.16%
QC value within limits for Tl 190.801 Recovery = 94.86%								
V 292.402†	121958.1	0.7696	mg/L	0.00090	0.7696	mg/L	0.00090	0.12%
QC value within limits for V 292.402 Recovery = 102.61%								
Zn 213.857†	848.6	0.7128	mg/L	0.00638	0.7128	mg/L	0.00638	0.90%
QC value within limits for Zn 213.857 Recovery = 95.05%								
Pb†	220.8	2.392	mg/L	0.0495	2.392	mg/L	0.0495	2.07%
QC value within limits for Pb Recovery = 95.69%								
Ag 338.289†	74272.8	0.7930	mg/L	0.00156	0.7930	mg/L	0.00156	0.20%

All analyte(s) passed QC.

Sequence No.: 14
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 7
Date Collected: 10/29/2014 3:01:10 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	133.0 kPa	0.55 L/min

Method: 6010C 4ptLL Page 11 Date: 10/29/2014 3:08:17 PM

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1539788.0	0.9996	mg/L	0.00625				0.63%
Ag 328.068†	243438.6	1.221	mg/L	0.0002	1.221	mg/L	0.0002	0.01%
QC value within limits for Ag 328.068 Recovery = 97.69%								
Al 308.215†	5510.6	9.745	mg/L	0.0961	9.745	mg/L	0.0961	0.99%
QC value within limits for Al 308.215 Recovery = 97.45%								
As 188.979†	955.5	0.4964	mg/L	0.00521	0.4964	mg/L	0.00521	1.05%
QC value within limits for As 188.979 Recovery = 99.28%								
Ba 233.527†	1471522.5	9.857	mg/L	0.0078	9.857	mg/L	0.0078	0.08%
QC value within limits for Ba 233.527 Recovery = 98.57%								
Be 313.107†	447720.1	0.2472	mg/L	0.00044	0.2472	mg/L	0.00044	0.18%
QC value within limits for Be 313.107 Recovery = 98.87%								
Ca 317.933†	115336.9	24.88	mg/L	0.236	24.88	mg/L	0.236	0.95%
QC value within limits for Ca 317.933 Recovery = 99.53%								
Cd 226.502†	17983.4	0.2686	mg/L	0.00179	0.2686	mg/L	0.00179	0.67%
QC value within limits for Cd 226.502 Recovery = 107.42%								
Co 228.616†	95682.4	2.390	mg/L	0.0004	2.390	mg/L	0.0004	0.02%
QC value within limits for Co 228.616 Recovery = 95.59%								
Cr 267.716†	110012.0	0.9691	mg/L	0.00025	0.9691	mg/L	0.00025	0.03%
QC value within limits for Cr 267.716 Recovery = 96.91%								
Cu 324.752†	275843.6	1.191	mg/L	0.0014	1.191	mg/L	0.0014	0.12%
QC value within limits for Cu 324.752 Recovery = 95.29%								
Fe 273.955†	2757.2	4.844	mg/L	0.0113	4.844	mg/L	0.0113	0.23%
QC value within limits for Fe 273.955 Recovery = 96.88%								
K 766.490†	57156.0	24.42	mg/L	0.261	24.42	mg/L	0.261	1.07%
QC value within limits for K 766.490 Recovery = 97.66%								
Mg 279.077†	447802.4	25.33	mg/L	0.050	25.33	mg/L	0.050	0.20%
QC value within limits for Mg 279.077 Recovery = 101.32%								
Mn 257.610†	1926837.1	2.450	mg/L	0.0004	2.450	mg/L	0.0004	0.02%
QC value within limits for Mn 257.610 Recovery = 98.02%								
Na 589.592†	188900.9	24.52	mg/L	0.239	24.52	mg/L	0.239	0.97%
QC value within limits for Na 589.592 Recovery = 98.08%								
Ni 231.604†	97858.2	2.464	mg/L	0.0034	2.464	mg/L	0.0034	0.14%
QC value within limits for Ni 231.604 Recovery = 98.57%								
Pb 220.353†	3905.3	0.5077	mg/L	0.00629	0.5077	mg/L	0.00629	1.24%
QC value within limits for Pb 220.353 Recovery = 101.53%								
Sb 206.836†	15817.9	5.101	mg/L	0.0502	5.101	mg/L	0.0502	0.98%
QC value within limits for Sb 206.836 Recovery = 102.02%								
Se 196.026†	1193.9	0.4996	mg/L	0.00387	0.4996	mg/L	0.00387	0.77%
QC value within limits for Se 196.026 Recovery = 99.91%								
Tl 190.801†	920.6	0.4920	mg/L	0.00300	0.4920	mg/L	0.00300	0.61%
QC value within limits for Tl 190.801 Recovery = 98.40%								
V 292.402†	404329.5	2.540	mg/L	0.0006	2.540	mg/L	0.0006	0.02%
QC value within limits for V 292.402 Recovery = 101.62%								
Zn 213.857†	2885.9	2.514	mg/L	0.0043	2.514	mg/L	0.0043	0.17%
QC value within limits for Zn 213.857 Recovery = 100.55%								
Pb†	42.7	0.4877	mg/L	0.04315	0.4877	mg/L	0.04315	8.85%
QC value within limits for Pb Recovery = 97.54%								
Ag 338.289†	116534.1	1.247	mg/L	0.0006	1.247	mg/L	0.0006	0.04%

All analyte(s) passed QC.

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Sequence No.: 15 Autosampler Location: 1
Sample ID: CCB Date Collected: 10/29/2014 3:05:28 PM
Analyst: Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time: 75 Auto Dilution Factor: 1

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow
All	133.0 kPa	0.55 L/min

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1578588.9	1.025	mg/L	0.0054				0.52%
Ag 328.068†	-22.4	-0.0001	mg/L	0.00005	-0.0001	mg/L	0.00005	45.68%

QC value within limits for Ag 328.068 Recovery = Not calculated

Al 308.215†	8.5	0.0149	mg/L	0.00434	0.0149	mg/L	0.00434 29.06%
QC value within limits for Al 308.215 Recovery = Not calculated							
As 188.979†	1.3	0.0007	mg/L	0.00099	0.0007	mg/L	0.00099 145.64%
QC value within limits for As 188.979 Recovery = Not calculated							
Ba 233.527†	58.2	0.0004	mg/L	0.00010	0.0004	mg/L	0.00010 24.62%
QC value within limits for Ba 233.527 Recovery = Not calculated							
Be 313.107†	101.1	0.0001	mg/L	0.00000	0.0001	mg/L	0.00000 7.84%
QC value within limits for Be 313.107 Recovery = Not calculated							
Ca 317.933†	14.0	0.0030	mg/L	0.00290	0.0030	mg/L	0.00290 96.11%
QC value within limits for Ca 317.933 Recovery = Not calculated							
Cd 226.502†	10.2	0.0002	mg/L	0.00011	0.0002	mg/L	0.00011 74.73%
QC value within limits for Cd 226.502 Recovery = Not calculated							
Co 228.616†	2.2	0.0001	mg/L	0.00031	0.0001	mg/L	0.00031 558.51%
QC value within limits for Co 228.616 Recovery = Not calculated							
Cr 267.716†	10.7	0.0001	mg/L	0.00035	0.0001	mg/L	0.00035 369.48%
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu 324.752†	13.8	0.0001	mg/L	0.00002	0.0001	mg/L	0.00002 38.95%
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe 273.955†	6.8	0.0121	mg/L	0.00925	0.0121	mg/L	0.00925 76.33%
QC value within limits for Fe 273.955 Recovery = Not calculated							
K 766.490†	-0.8	-0.0003	mg/L	0.01823	-0.0003	mg/L	0.01823 >999.9%
QC value within limits for K 766.490 Recovery = Not calculated							
Mg 279.077†	70.5	0.0039	mg/L	0.00176	0.0039	mg/L	0.00176 44.61%
QC value within limits for Mg 279.077 Recovery = Not calculated							
Mn 257.610†	138.9	0.0002	mg/L	0.00005	0.0002	mg/L	0.00005 26.01%
QC value within limits for Mn 257.610 Recovery = Not calculated							
Na 589.592†	-227.8	-0.0296	mg/L	0.00585	-0.0296	mg/L	0.00585 19.78%
QC value within limits for Na 589.592 Recovery = Not calculated							
Ni 231.604†	-6.5	-0.0002	mg/L	0.00009	-0.0002	mg/L	0.00009 57.91%
QC value within limits for Ni 231.604 Recovery = Not calculated							
Pb 220.353†	2.9	0.0004	mg/L	0.00346	0.0004	mg/L	0.00346 926.86%
QC value within limits for Pb 220.353 Recovery = Not calculated							
Sb 206.836†	-4.0	-0.0013	mg/L	0.00138	-0.0013	mg/L	0.00138 107.13%
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	12.3	0.0052	mg/L	0.00086	0.0052	mg/L	0.00086 16.67%
QC value within limits for Se 196.026 Recovery = Not calculated							
Tl 190.801†	-1.8	-0.0010	mg/L	0.00314	-0.0010	mg/L	0.00314 310.65%
QC value within limits for Tl 190.801 Recovery = Not calculated							
V 292.402†	-17.3	-0.0001	mg/L	0.00053	-0.0001	mg/L	0.00053 494.01%
QC value within limits for V 292.402 Recovery = Not calculated							
Zn 213.857†	-1.4	-0.0012	mg/L	0.00230	-0.0012	mg/L	0.00230 185.04%
QC value within limits for Zn 213.857 Recovery = Not calculated							
Pb†	-1.7	-0.0200	mg/L	0.04229	-0.0200	mg/L	0.04229 211.46%
QC value within limits for Pb Recovery = Not calculated							
Ag 338.289†	120.1	0.0013	mg/L	0.00123	0.0013	mg/L	0.00123 97.74%

All analyte(s) passed QC.

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Sequence No.: 16
Sample ID: Blk 10/29 soil
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 38
Date Collected: 10/29/2014 3:09:41 PM
Data Type: Original
Initial Sample Vol: 50 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: Blk 10/29 soil

Analyte	Back Pressure	Flow
All	133.0 kPa	0.55 L/min

Mean Data: Blk 10/29 soil

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1691132.4	1.098	mg/L	0.0037				0.33%
Ag 328.068†	-256.8	-0.0013	mg/L	0.00105	-0.0013	mg/L	0.00105	81.99%
Al 308.215†	-19.4	-0.0342	mg/L	0.00834	-0.0342	mg/L	0.00834	24.40%
As 188.979†	-3.0	-0.0015	mg/L	0.00051	-0.0015	mg/L	0.00051	33.31%
Ba 233.527†	24.1	0.0002	mg/L	0.00015	0.0002	mg/L	0.00015	91.34%
Be 313.107†	214.7	0.0001	mg/L	0.00002	0.0001	mg/L	0.00002	16.22%
Ca 317.933†	-124.4	-0.0268	mg/L	0.00071	-0.0268	mg/L	0.00071	2.63%

Cd 226.502†	14.1	0.0002 mg/L	0.00014	0.0002 mg/L	0.00014	66.90%
Co 228.616†	5.7	0.0001 mg/L	0.00024	0.0001 mg/L	0.00024	168.48%
Cr 267.716†	49.9	0.0004 mg/L	0.00014	0.0004 mg/L	0.00014	32.65%
Cu 324.752†	-29.2	-0.0001 mg/L	0.00004	-0.0001 mg/L	0.00004	35.38%
Fe 273.955†	13.5	0.0239 mg/L	0.00879	0.0239 mg/L	0.00879	36.85%
K 766.490†	1.6	0.0007 mg/L	0.00014	0.0007 mg/L	0.00014	20.38%
Mg 279.077†	-106.1	-0.0061 mg/L	0.00141	-0.0061 mg/L	0.00141	23.21%
Mn 257.610†	-42.6	-0.0001 mg/L	0.00000	-0.0001 mg/L	0.00000	8.38%
Na 589.592†	-196.2	-0.0255 mg/L	0.00305	-0.0255 mg/L	0.00305	11.96%
Ni 231.604†	-27.2	-0.0007 mg/L	0.00060	-0.0007 mg/L	0.00060	87.84%
Pb 220.353†	4.7	0.0006 mg/L	0.00182	0.0006 mg/L	0.00182	293.30%
Sb 206.836†	16.8	0.0054 mg/L	0.00205	0.0054 mg/L	0.00205	37.79%
Se 196.026†	9.7	0.0041 mg/L	0.00328	0.0041 mg/L	0.00328	80.22%
Tl 190.801†	-1.6	-0.0009 mg/L	0.00127	-0.0009 mg/L	0.00127	144.04%
V 292.402†	-68.4	-0.0004 mg/L	0.00020	-0.0004 mg/L	0.00020	47.23%
Zn 213.857†	3.4	0.0030 mg/L	0.00026	0.0030 mg/L	0.00026	8.69%
Pb†	-1.6	-0.0181 mg/L	0.00488	-0.0181 mg/L	0.00488	26.94%
Ag 338.289†	23.6	0.0003 mg/L	0.00135	0.0003 mg/L	0.00135	524.35%

Sequence No.: 17
Sample ID: lcs
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 39
Date Collected: 10/29/2014 3:13:55 PM
Data Type: Original
Initial Sample Vol: 50 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: lcs

Analyte	Back Pressure	Flow
All	133.0 kPa	0.55 L/min

Mean Data: lcs

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1603826.1	1.041	mg/L	0.0085				0.81%
Ag 328.068†	48487.3	0.2439	mg/L	0.00015	0.2439	mg/L	0.00015	0.06%
Al 308.215†	1371.0	2.427	mg/L	0.0380	2.427	mg/L	0.0380	1.57%
As 188.979†	4770.0	2.480	mg/L	0.0414	2.480	mg/L	0.0414	1.67%
Ba 233.527†	368499.1	2.468	mg/L	0.0021	2.468	mg/L	0.0021	0.09%
Be 313.107†	893727.1	0.4935	mg/L	0.00049	0.4935	mg/L	0.00049	0.10%
Ca 317.933†	18117.8	3.909	mg/L	0.0053	3.909	mg/L	0.0053	0.14%
Cd 226.502†	68143.8	1.020	mg/L	0.0004	1.020	mg/L	0.0004	0.04%
Co 228.616†	40248.0	1.005	mg/L	0.0017	1.005	mg/L	0.0017	0.17%
Cr 267.716†	268928.6	2.371	mg/L	0.0009	2.371	mg/L	0.0009	0.04%
Cu 324.752†	559477.5	2.415	mg/L	0.0022	2.415	mg/L	0.0022	0.09%
Fe 273.955†	1327.3	2.340	mg/L	0.0166	2.340	mg/L	0.0166	0.71%
K 766.490†	95747.5	40.90	mg/L	0.236	40.90	mg/L	0.236	0.58%
Mg 279.077†	142725.9	8.071	mg/L	0.0091	8.071	mg/L	0.0091	0.11%
Mn 257.610†	765012.3	0.9729	mg/L	0.00077	0.9729	mg/L	0.00077	0.08%
Na 589.592†	88903.6	11.54	mg/L	0.066	11.54	mg/L	0.066	0.57%
Ni 231.604†	204472.0	5.149	mg/L	0.0027	5.149	mg/L	0.0027	0.05%
Pb 220.353†	19881.8	2.571	mg/L	0.0293	2.571	mg/L	0.0293	1.14%
Sb 206.836†	7742.2	2.454	mg/L	0.0213	2.454	mg/L	0.0213	0.87%
Se 196.026†	5864.6	2.459	mg/L	0.0350	2.459	mg/L	0.0350	1.42%
Tl 190.801†	4299.0	2.441	mg/L	0.0288	2.441	mg/L	0.0288	1.18%
V 292.402†	151126.3	0.9653	mg/L	0.00109	0.9653	mg/L	0.00109	0.11%
Zn 213.857†	2848.4	2.470	mg/L	0.0269	2.470	mg/L	0.0269	1.09%
Pb†	209.3	2.391	mg/L	0.0328	2.391	mg/L	0.0328	1.37%
Ag 338.289†	19510.4	0.2639	mg/L	0.00119	0.2639	mg/L	0.00119	0.45%

Sequence No.: 18
Sample ID: lcs dup
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 40
Date Collected: 10/29/2014 3:18:11 PM
Data Type: Original
Initial Sample Vol: 50 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: lcs dup

Analyte	Back Pressure	Flow
All	133.0 kPa	0.55 L/min

Mean Data: lcs dup

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1597962.0	1.037	mg/L	0.0070				0.67%
Ag 328.068†	48173.2	0.2423	mg/L	0.00045	0.2423	mg/L	0.00045	0.19%
Al 308.215†	1357.1	2.403	mg/L	0.0059	2.403	mg/L	0.0059	0.25%
As 188.979†	4743.2	2.466	mg/L	0.0245	2.466	mg/L	0.0245	0.99%
Ba 233.527†	365633.4	2.449	mg/L	0.0002	2.449	mg/L	0.0002	0.01%
Be 313.107†	887319.0	0.4899	mg/L	0.00009	0.4899	mg/L	0.00009	0.02%
Ca 317.933†	17774.4	3.835	mg/L	0.0206	3.835	mg/L	0.0206	0.54%
Cd 226.502†	67534.6	1.011	mg/L	0.0004	1.011	mg/L	0.0004	0.04%
Co 228.616†	39875.6	0.9959	mg/L	0.00170	0.9959	mg/L	0.00170	0.17%
Cr 267.716†	266576.9	2.350	mg/L	0.0013	2.350	mg/L	0.0013	0.05%
Cu 324.752†	556362.3	2.402	mg/L	0.0033	2.402	mg/L	0.0033	0.14%
Fe 273.955†	1298.2	2.288	mg/L	0.0281	2.288	mg/L	0.0281	1.23%
K 766.490†	94745.9	40.47	mg/L	0.332	40.47	mg/L	0.332	0.82%
Mg 279.077†	141306.9	7.991	mg/L	0.0066	7.991	mg/L	0.0066	0.08%
Mn 257.610†	759626.3	0.9661	mg/L	0.00015	0.9661	mg/L	0.00015	0.02%
Na 589.592†	87752.5	11.39	mg/L	0.096	11.39	mg/L	0.096	0.85%
Ni 231.604†	202894.8	5.109	mg/L	0.0048	5.109	mg/L	0.0048	0.09%
Pb 220.353†	19817.2	2.562	mg/L	0.0288	2.562	mg/L	0.0288	1.12%
Sb 206.836†	7703.6	2.442	mg/L	0.0294	2.442	mg/L	0.0294	1.20%
Se 196.026†	5853.2	2.454	mg/L	0.0207	2.454	mg/L	0.0207	0.84%
Tl 190.801†	4282.6	2.432	mg/L	0.0270	2.432	mg/L	0.0270	1.11%
V 292.402†	150649.2	0.9622	mg/L	0.00093	0.9622	mg/L	0.00093	0.10%
Zn 213.857†	2829.5	2.454	mg/L	0.0230	2.454	mg/L	0.0230	0.94%
Pb†	209.6	2.396	mg/L	0.0098	2.396	mg/L	0.0098	0.41%
Ag 338.289†	19298.4	0.2612	mg/L	0.00071	0.2612	mg/L	0.00071	0.27%

Sequence No.: 19
Sample ID: 144706-01
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 41
Date Collected: 10/29/2014 3:22:26 PM
Data Type: Original
Initial Sample Vol: 0.474 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144706-01

Analyte	Back Pressure	Flow
All	133.0 kPa	0.55 L/min

Mean Data: 144706-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1770816.3	1.150	mg/L	0.0038				0.33%
Ag 328.068†	-11881.7	-0.0041	mg/L	0.00194	-0.4274	mg/L	0.20506	47.98%
Al 308.215†	58857.3	104.0	mg/L	0.57	10970	mg/L	59.90	0.55%
As 188.979†	85.5	0.0513	mg/L	0.00767	5.411	mg/L	0.8090	14.95%
Ba 233.527†	137404.8	0.9204	mg/L	0.00149	97.09	mg/L	0.157	0.16%
Be 313.107†	10317.6	0.0057	mg/L	0.00001	0.6037	mg/L	0.00114	0.19%
Ca 317.933†	107362.9	23.16	mg/L	0.225	2443	mg/L	23.68	0.97%
Cd 226.502†	1525.1	0.0078	mg/L	0.00010	0.8246	mg/L	0.01104	1.34%
Co 228.616†	2585.5	0.0646	mg/L	0.00038	6.812	mg/L	0.0405	0.60%
Cr 267.716†	20259.5	0.1812	mg/L	0.00127	19.12	mg/L	0.134	0.70%
Cu 324.752†	58126.8	0.2722	mg/L	0.00026	28.71	mg/L	0.027	0.10%
Fe 273.955†	93725.0	166.0	mg/L	1.03	17510	mg/L	108.60	0.62%
K 766.490†	30018.0	12.82	mg/L	0.008	1353	mg/L	0.87	0.06%
Mg 279.077†	515230.8	28.59	mg/L	0.004	3016	mg/L	0.38	0.01%
Mn 257.610†	1741883.6	2.215	mg/L	0.0026	233.6	mg/L	0.28	0.12%
Na 589.592†	2831.9	0.3676	mg/L	0.00673	38.77	mg/L	0.710	1.83%
Ni 231.604†	9094.8	0.2290	mg/L	0.00202	24.16	mg/L	0.213	0.88%
Pb 220.353†	6025.2	0.7507	mg/L	0.00749	79.19	mg/L	0.790	1.00%
Sb 206.836†	-264.7	0.0017	mg/L	0.00572	0.1805	mg/L	0.60294	334.13%
Se 196.026†	49.0	0.0351	mg/L	0.00346	3.701	mg/L	0.3655	9.87%
Tl 190.801†	6.4	0.0142	mg/L	0.00349	1.501	mg/L	0.3677	24.50%
V 292.402†	30145.9	0.1902	mg/L	0.00015	20.07	mg/L	0.015	0.08%

Zn 213.857†	1793.2	1.568	mg/L	0.0033	165.4	mg/L	0.35	0.21%
Pb†	66.5	0.6901	mg/L	0.00493	72.80	mg/L	0.520	0.71%
Ag 338.289†	-383.7	0.0004	mg/L	0.00010	0.0381	mg/L	0.01052	27.59%

Sequence No.: 20
Sample ID: 144706-02
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 42
Date Collected: 10/29/2014 3:26:42 PM
Data Type: Original
Initial Sample Vol: 0.518 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144706-02

Analyte	Back Pressure	Flow
All	133.0 kPa	0.55 L/min

Mean Data: 144706-02

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1743033.4	1.132	mg/L	0.0031				0.27%
Ag 328.068†	-13347.6	-0.0050	mg/L	0.00037	-0.4822	mg/L	0.03595	7.46%
Al 308.215†	60131.0	106.2	mg/L	0.20	10250	mg/L	19.17	0.19%
As 188.979†	109.1	0.0648	mg/L	0.00036	6.251	mg/L	0.0352	0.56%
Ba 233.527†	141549.8	0.9482	mg/L	0.00051	91.52	mg/L	0.049	0.05%
Be 313.107†	10838.3	0.0060	mg/L	0.00001	0.5803	mg/L	0.00133	0.23%
Ca 317.933†	243125.3	52.45	mg/L	0.010	5063	mg/L	0.93	0.02%
Cd 226.502†	1674.2	0.0082	mg/L	0.00023	0.7903	mg/L	0.02260	2.86%
Co 228.616†	2815.3	0.0703	mg/L	0.00013	6.787	mg/L	0.0127	0.19%
Cr 267.716†	21588.6	0.1932	mg/L	0.00147	18.65	mg/L	0.142	0.76%
Cu 324.752†	78400.2	0.3621	mg/L	0.00047	34.95	mg/L	0.045	0.13%
Fe 273.955†	104541.2	185.1	mg/L	0.01	17870	mg/L	0.55	0.00%
K 766.490†	31627.7	13.51	mg/L	0.027	1304	mg/L	2.64	0.20%
Mg 279.077†	673614.8	37.49	mg/L	0.037	3619	mg/L	3.56	0.10%
Mn 257.610†	2193869.6	2.789	mg/L	0.0036	269.3	mg/L	0.35	0.13%
Na 589.592†	3723.1	0.4833	mg/L	0.01968	46.65	mg/L	1.900	4.07%
Ni 231.604†	9598.2	0.2417	mg/L	0.00125	23.33	mg/L	0.121	0.52%
Pb 220.353†	9225.6	1.165	mg/L	0.0077	112.5	mg/L	0.74	0.66%
Sb 206.836†	-307.0	-0.0037	mg/L	0.00478	-0.3543	mg/L	0.46131	130.20%
Se 196.026†	39.8	0.0322	mg/L	0.00504	3.112	mg/L	0.4866	15.64%
Tl 190.801†	-13.6	0.0051	mg/L	0.00206	0.4955	mg/L	0.19860	40.08%
V 292.402†	33003.4	0.2082	mg/L	0.00030	20.10	mg/L	0.029	0.14%
Zn 213.857†	2134.3	1.863	mg/L	0.0149	179.9	mg/L	1.44	0.80%
Pb†	98.5	1.062	mg/L	0.0594	102.5	mg/L	5.74	5.60%
Ag 338.289†	-520.8	-0.0011	mg/L	0.00029	-0.1093	mg/L	0.02751	25.18%

Sequence No.: 21
Sample ID: 144706-03
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 43
Date Collected: 10/29/2014 3:30:57 PM
Data Type: Original
Initial Sample Vol: 0.541 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144706-03

Analyte	Back Pressure	Flow
All	133.0 kPa	0.55 L/min

Mean Data: 144706-03

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1765864.2	1.146	mg/L	0.0083				0.72%
Ag 328.068†	-12649.7	-0.0067	mg/L	0.00109	-0.6178	mg/L	0.10058	16.28%
Al 308.215†	55528.0	98.09	mg/L	1.738	9066	mg/L	160.59	1.77%
As 188.979†	93.6	0.0560	mg/L	0.00665	5.172	mg/L	0.6147	11.89%
Ba 233.527†	127469.5	0.8538	mg/L	0.00286	78.91	mg/L	0.264	0.33%
Be 313.107†	10296.2	0.0057	mg/L	0.00000	0.5278	mg/L	0.00041	0.08%
Ca 317.933†	193828.8	41.82	mg/L	0.858	3865	mg/L	79.34	2.05%
Cd 226.502†	1492.3	0.0069	mg/L	0.00008	0.6394	mg/L	0.00777	1.22%

Co 228.616†	2828.9	0.0707 mg/L	0.00089	6.530 mg/L	0.0822	1.26%
Cr 267.716†	19917.2	0.1783 mg/L	0.00144	16.48 mg/L	0.133	0.81%
Cu 324.752†	74843.6	0.3448 mg/L	0.00102	31.87 mg/L	0.094	0.30%
Fe 273.955†	95779.1	169.6 mg/L	3.44	15670 mg/L	317.57	2.03%
K 766.490†	27730.9	11.85 mg/L	0.271	1095 mg/L	25.05	2.29%
Mg 279.077†	654402.6	36.46 mg/L	0.083	3369 mg/L	7.69	0.23%
Mn 257.610†	2176238.5	2.767 mg/L	0.0031	255.7 mg/L	0.28	0.11%
Na 589.592†	3203.0	0.4158 mg/L	0.00698	38.42 mg/L	0.645	1.68%
Ni 231.604†	9509.4	0.2395 mg/L	0.00312	22.13 mg/L	0.288	1.30%
Pb 220.353†	6168.5	0.7722 mg/L	0.00199	71.37 mg/L	0.184	0.26%
Sb 206.836†	-304.1	-0.0106 mg/L	0.00058	-0.9814 mg/L	0.05380	5.48%
Se 196.026†	43.0	0.0321 mg/L	0.00081	2.964 mg/L	0.0744	2.51%
Tl 190.801†	-8.3	0.0075 mg/L	0.00355	0.6923 mg/L	0.32789	47.37%
V 292.402†	29507.2	0.1862 mg/L	0.00022	17.21 mg/L	0.021	0.12%
Zn 213.857†	3997.8	3.497 mg/L	0.0847	323.2 mg/L	7.83	2.42%
Pb†	67.0	0.7056 mg/L	0.02884	65.22 mg/L	2.666	4.09%
Ag 338.289†	-412.7	-0.0003 mg/L	0.00133	-0.0240 mg/L	0.12319	512.88%

Sequence No.: 22
Sample ID: 144706-03 dup
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 44
Date Collected: 10/29/2014 3:35:12 PM
Data Type: Original
Initial Sample Vol: 0.488 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144706-03 dup

Analyte	Back Pressure	Flow
All	133.0 kPa	0.55 L/min

Mean Data: 144706-03 dup

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1755843.1	1.140	mg/L	0.0164				1.44%
Ag 328.068†	-11812.1	-0.0055	mg/L	0.00078	-0.5648	mg/L	0.08010	14.18%
Al 308.215†	54726.2	96.67	mg/L	1.612	9905	mg/L	165.14	1.67%
As 188.979†	87.2	0.0521	mg/L	0.00120	5.341	mg/L	0.1234	2.31%
Ba 233.527†	122171.7	0.8184	mg/L	0.00059	83.85	mg/L	0.060	0.07%
Be 313.107†	10376.4	0.0058	mg/L	0.00004	0.5895	mg/L	0.00365	0.62%
Ca 317.933†	212345.8	45.81	mg/L	0.825	4694	mg/L	84.57	1.80%
Cd 226.502†	1425.1	0.0067	mg/L	0.00008	0.6827	mg/L	0.00819	1.20%
Co 228.616†	2677.4	0.0669	mg/L	0.00102	6.852	mg/L	0.1048	1.53%
Cr 267.716†	18773.2	0.1680	mg/L	0.00249	17.22	mg/L	0.255	1.48%
Cu 324.752†	70937.2	0.3268	mg/L	0.00087	33.48	mg/L	0.089	0.27%
Fe 273.955†	90665.9	160.5	mg/L	2.93	16450	mg/L	300.09	1.82%
K 766.490†	29280.9	12.51	mg/L	0.277	1282	mg/L	28.42	2.22%
Mg 279.077†	661103.9	36.87	mg/L	0.086	3777	mg/L	8.86	0.23%
Mn 257.610†	2093402.7	2.662	mg/L	0.0004	272.7	mg/L	0.04	0.02%
Na 589.592†	3452.6	0.4482	mg/L	0.00995	45.92	mg/L	1.019	2.22%
Ni 231.604†	8834.1	0.2225	mg/L	0.00340	22.79	mg/L	0.348	1.53%
Pb 220.353†	5767.8	0.7205	mg/L	0.01355	73.82	mg/L	1.388	1.88%
Sb 206.836†	-280.7	-0.0069	mg/L	0.00103	-0.7109	mg/L	0.10566	14.86%
Se 196.026†	24.7	0.0239	mg/L	0.00917	2.453	mg/L	0.9398	38.31%
Tl 190.801†	-14.3	0.0033	mg/L	0.00605	0.3355	mg/L	0.61943	184.63%
V 292.402†	28883.6	0.1822	mg/L	0.00047	18.67	mg/L	0.048	0.26%
Zn 213.857†	3991.0	3.491	mg/L	0.0715	357.7	mg/L	7.32	2.05%
Pb†	63.5	0.6670	mg/L	0.05829	68.34	mg/L	5.973	8.74%
Ag 338.289†	-351.9	0.0001	mg/L	0.00077	0.0073	mg/L	0.07936	>999.9%

Sequence No.: 23
Sample ID: 144706-03 spk
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 45
Date Collected: 10/29/2014 3:39:26 PM
Data Type: Original
Initial Sample Vol: 0.532 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 144706-03 spk

Analyte	Back Pressure	Flow

All 133.0 kPa 0.55 L/min

Mean Data: 144706-03 spk

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1741862.8	1.131	mg/L	0.0061				0.54%
Ag 328.068†	34556.7	0.2353	mg/L	0.00164	22.11	mg/L	0.154	0.70%
Al 308.215†	71508.1	126.3	mg/L	1.72	11870	mg/L	161.41	1.36%
As 188.979†	4447.1	2.319	mg/L	0.0136	217.9	mg/L	1.28	0.59%
Ba 233.527†	470575.6	3.152	mg/L	0.0041	296.2	mg/L	0.38	0.13%
Be 313.107†	819917.7	0.4527	mg/L	0.00070	42.55	mg/L	0.065	0.15%
Ca 317.933†	214865.4	46.36	mg/L	0.733	4357	mg/L	68.86	1.58%
Cd 226.502†	61035.5	0.8972	mg/L	0.00210	84.32	mg/L	0.197	0.23%
Co 228.616†	40593.0	1.014	mg/L	0.0101	95.29	mg/L	0.951	1.00%
Cr 267.716†	262512.8	2.317	mg/L	0.0167	217.8	mg/L	1.57	0.72%
Cu 324.752†	602890.3	2.626	mg/L	0.0020	246.8	mg/L	0.19	0.08%
Fe 273.955†	104725.4	185.4	mg/L	2.72	17430	mg/L	256.04	1.47%
K 766.490†	123245.6	52.65	mg/L	0.588	4948	mg/L	55.30	1.12%
Mg 279.077†	824650.2	46.04	mg/L	0.068	4327	mg/L	6.41	0.15%
Mn 257.610†	3003688.9	3.819	mg/L	0.0016	359.0	mg/L	0.15	0.04%
Na 589.592†	81810.5	10.62	mg/L	0.121	998.0	mg/L	11.33	1.14%
Ni 231.604†	189604.7	4.775	mg/L	0.0037	448.7	mg/L	0.35	0.08%
Pb 220.353†	23799.4	3.043	mg/L	0.0143	286.0	mg/L	1.34	0.47%
Sb 206.836†	4845.8	1.621	mg/L	0.0288	152.3	mg/L	2.71	1.78%
Se 196.026†	5471.6	2.311	mg/L	0.0171	217.2	mg/L	1.61	0.74%
Tl 190.801†	3821.3	2.181	mg/L	0.0019	205.0	mg/L	0.18	0.09%
V 292.402†	172168.1	1.097	mg/L	0.0004	103.1	mg/L	0.03	0.03%
Zn 213.857†	7039.5	6.139	mg/L	0.0881	577.0	mg/L	8.28	1.43%
Pb†	257.2	2.860	mg/L	0.0634	268.8	mg/L	5.96	2.22%
Ag 338.289†	18241.6	0.2489	mg/L	0.00100	23.39	mg/L	0.094	0.40%

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Sequence No.: 24
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 7
Date Collected: 10/29/2014 3:43:04 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	133.0 kPa	0.55 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1547154.8	1.004	mg/L	0.0087				0.87%
Ag 328.068†	243056.9	1.219	mg/L	0.0016	1.219	mg/L	0.0016	0.13%
QC value within limits for Ag 328.068 Recovery = 97.54%								
Al 308.215†	5514.1	9.751	mg/L	0.0237	9.751	mg/L	0.0237	0.24%
QC value within limits for Al 308.215 Recovery = 97.51%								
As 188.979†	962.4	0.5000	mg/L	0.00948	0.5000	mg/L	0.00948	1.90%
QC value within limits for As 188.979 Recovery = 99.99%								
Ba 233.527†	1474442.3	9.876	mg/L	0.0027	9.876	mg/L	0.0027	0.03%
QC value within limits for Ba 233.527 Recovery = 98.76%								
Be 313.107†	445435.9	0.2459	mg/L	0.00021	0.2459	mg/L	0.00021	0.08%
QC value within limits for Be 313.107 Recovery = 98.36%								
Ca 317.933†	115602.3	24.94	mg/L	0.092	24.94	mg/L	0.092	0.37%
QC value within limits for Ca 317.933 Recovery = 99.76%								
Cd 226.502†	18133.6	0.2708	mg/L	0.00187	0.2708	mg/L	0.00187	0.69%
QC value within limits for Cd 226.502 Recovery = 108.32%								
Co 228.616†	96161.2	2.402	mg/L	0.0002	2.402	mg/L	0.0002	0.01%
QC value within limits for Co 228.616 Recovery = 96.07%								
Cr 267.716†	110411.5	0.9726	mg/L	0.00098	0.9726	mg/L	0.00098	0.10%
QC value within limits for Cr 267.716 Recovery = 97.26%								
Cu 324.752†	276064.7	1.192	mg/L	0.0004	1.192	mg/L	0.0004	0.04%
QC value within limits for Cu 324.752 Recovery = 95.37%								
Fe 273.955†	2784.2	4.891	mg/L	0.0135	4.891	mg/L	0.0135	0.28%
QC value within limits for Fe 273.955 Recovery = 97.83%								

K 766.490†	56947.7	24.33 mg/L	0.179	24.33 mg/L	0.179	0.73%
QC value within limits for K 766.490 Recovery = 97.31%						
Mg 279.077†	450275.6	25.47 mg/L	0.051	25.47 mg/L	0.051	0.20%
QC value within limits for Mg 279.077 Recovery = 101.88%						
Mn 257.610†	1935470.1	2.461 mg/L	0.0013	2.461 mg/L	0.0013	0.05%
QC value within limits for Mn 257.610 Recovery = 98.46%						
Na 589.592†	188474.6	24.46 mg/L	0.170	24.46 mg/L	0.170	0.69%
QC value within limits for Na 589.592 Recovery = 97.86%						
Ni 231.604†	98590.1	2.483 mg/L	0.0057	2.483 mg/L	0.0057	0.23%
QC value within limits for Ni 231.604 Recovery = 99.31%						
Pb 220.353†	3950.5	0.5135 mg/L	0.00578	0.5135 mg/L	0.00578	1.12%
QC value within limits for Pb 220.353 Recovery = 102.71%						
Sb 206.836†	15911.8	5.131 mg/L	0.0460	5.131 mg/L	0.0460	0.90%
QC value within limits for Sb 206.836 Recovery = 102.63%						
Se 196.026†	1205.4	0.5044 mg/L	0.00242	0.5044 mg/L	0.00242	0.48%
QC value within limits for Se 196.026 Recovery = 100.88%						
Tl 190.801†	934.6	0.4999 mg/L	0.00340	0.4999 mg/L	0.00340	0.68%
QC value within limits for Tl 190.801 Recovery = 99.98%						
V 292.402†	404858.0	2.544 mg/L	0.0000	2.544 mg/L	0.0000	0.00%
QC value within limits for V 292.402 Recovery = 101.75%						
Zn 213.857†	2914.7	2.539 mg/L	0.0194	2.539 mg/L	0.0194	0.76%
QC value within limits for Zn 213.857 Recovery = 101.56%						
Pb†	36.5	0.4166 mg/L	0.00886	0.4166 mg/L	0.00886	2.13%
QC value less than the lower limit for Pb Recovery = 83.32%						
Ag 338.289†	116368.6	1.246 mg/L	0.0003	1.246 mg/L	0.0003	0.03%

QC Failed. Continue with analysis.

Sequence No.: 25
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 1
Date Collected: 10/29/2014 3:47:22 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow
All	133.0 kPa	0.55 L/min

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1586084.7	1.030	mg/L	0.0045				0.44%
Ag 328.068†	-40.1	-0.0002	mg/L	0.00013	-0.0002	mg/L	0.00013	66.00%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 308.215†	-0.9	-0.0015	mg/L	0.02208	-0.0015	mg/L	0.02208	>999.9%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	-5.4	-0.0028	mg/L	0.00501	-0.0028	mg/L	0.00501	177.88%
QC value within limits for As 188.979 Recovery = Not calculated								
Ba 233.527†	85.8	0.0006	mg/L	0.00013	0.0006	mg/L	0.00013	22.36%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	74.1	0.0000	mg/L	0.00002	0.0000	mg/L	0.00002	60.07%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933†	20.1	0.0043	mg/L	0.00107	0.0043	mg/L	0.00107	24.62%
QC value within limits for Ca 317.933 Recovery = Not calculated								
Cd 226.502†	-0.4	-0.0000	mg/L	0.00005	-0.0000	mg/L	0.00005	662.93%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	-3.5	-0.0001	mg/L	0.00022	-0.0001	mg/L	0.00022	255.24%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	33.3	0.0003	mg/L	0.00003	0.0003	mg/L	0.00003	8.73%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 324.752†	10.6	0.0000	mg/L	0.00032	0.0000	mg/L	0.00032	683.26%
QC value within limits for Cu 324.752 Recovery = Not calculated								
Fe 273.955†	6.0	0.0106	mg/L	0.00116	0.0106	mg/L	0.00116	10.94%
QC value within limits for Fe 273.955 Recovery = Not calculated								
K 766.490†	69.6	0.0297	mg/L	0.01006	0.0297	mg/L	0.01006	33.84%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 279.077†	29.9	0.0017	mg/L	0.00085	0.0017	mg/L	0.00085	51.48%
QC value within limits for Mg 279.077 Recovery = Not calculated								
Mn 257.610†	44.1	0.0001	mg/L	0.00004	0.0001	mg/L	0.00004	79.84%

QC value within limits for Mn 257.610 Recovery = Not calculated

Na 589.592†	-340.6	-0.0442 mg/L	0.00934	-0.0442 mg/L	0.00934	21.13%

QC value within limits for Na 589.592 Recovery = Not calculated

Ni 231.604†	-4.6	-0.0001 mg/L	0.00024	-0.0001 mg/L	0.00024	204.65%

QC value within limits for Ni 231.604 Recovery = Not calculated

Pb 220.353†	15.7	0.0020 mg/L	0.00051	0.0020 mg/L	0.00051	25.05%

QC value within limits for Pb 220.353 Recovery = Not calculated

Sb 206.836†	-4.1	-0.0013 mg/L	0.00296	-0.0013 mg/L	0.00296	224.62%

QC value within limits for Sb 206.836 Recovery = Not calculated

Se 196.026†	10.7	0.0045 mg/L	0.00082	0.0045 mg/L	0.00082	18.24%

QC value within limits for Se 196.026 Recovery = Not calculated

Tl 190.801†	1.1	0.0006 mg/L	0.00011	0.0006 mg/L	0.00011	18.19%

QC value within limits for Tl 190.801 Recovery = Not calculated

V 292.402†	60.9	0.0004 mg/L	0.00025	0.0004 mg/L	0.00025	65.50%

QC value within limits for V 292.402 Recovery = Not calculated

Zn 213.857†	0.8	0.0007 mg/L	0.00077	0.0007 mg/L	0.00077	114.91%

QC value within limits for Zn 213.857 Recovery = Not calculated

Pb†	-0.2	-0.0017 mg/L	0.00123	-0.0017 mg/L	0.00123	70.99%

QC value within limits for Pb Recovery = Not calculated

Ag 338.289†	-23.0	-0.0002 mg/L	0.00167	-0.0002 mg/L	0.00167	718.35%

All analyte(s) passed QC.

Sequence No.: 26
Sample ID: LLQC
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 2
Date Collected: 10/29/2014 3:51:35 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Nebulizer Parameters: LLQC

Analyte	Back Pressure	Flow
All	133.0 kPa	0.55 L/min

Mean Data: LLQC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1609231.3	1.045	mg/L	0.0030				0.28%
Ag 328.068†	1776.8	0.0089	mg/L	0.00029	0.0089	mg/L	0.00029	3.20%
QC value within limits for Ag 328.068 Recovery = 89.39%								
Al 308.215†	108.5	0.1921	mg/L	0.00905	0.1921	mg/L	0.00905	4.71%
QC value within limits for Al 308.215 Recovery = 96.05%								
As 188.979†	14.3	0.0074	mg/L	0.00025	0.0074	mg/L	0.00025	3.41%
QC value within limits for As 188.979 Recovery = 74.30%								
Ba 233.527†	15122.7	0.1013	mg/L	0.00034	0.1013	mg/L	0.00034	0.34%
QC value within limits for Ba 233.527 Recovery = 101.30%								
Be 313.107†	8965.5	0.0049	mg/L	0.00002	0.0049	mg/L	0.00002	0.36%
QC value within limits for Be 313.107 Recovery = 98.96%								
Ca 317.933†	11047.6	2.383	mg/L	0.0107	2.383	mg/L	0.0107	0.45%
QC value within limits for Ca 317.933 Recovery = 95.34%								
Cd 226.502†	360.4	0.0054	mg/L	0.00005	0.0054	mg/L	0.00005	1.02%
QC value within limits for Cd 226.502 Recovery = 107.38%								
Co 228.616†	2014.4	0.0503	mg/L	0.00032	0.0503	mg/L	0.00032	0.63%
QC value within limits for Co 228.616 Recovery = 100.62%								
Cr 267.716†	1267.6	0.0112	mg/L	0.00010	0.0112	mg/L	0.00010	0.91%
QC value within limits for Cr 267.716 Recovery = 111.68%								
Cu 324.752†	6150.3	0.0266	mg/L	0.00087	0.0266	mg/L	0.00087	3.29%
QC value within limits for Cu 324.752 Recovery = 106.23%								
Fe 273.955†	59.1	0.1043	mg/L	0.00666	0.1043	mg/L	0.00666	6.38%
QC value within limits for Fe 273.955 Recovery = 104.32%								
K 766.490†	5915.5	2.527	mg/L	0.0123	2.527	mg/L	0.0123	0.49%
QC value within limits for K 766.490 Recovery = 101.08%								
Mg 279.077†	45165.2	2.556	mg/L	0.0136	2.556	mg/L	0.0136	0.53%
QC value within limits for Mg 279.077 Recovery = 102.25%								
Mn 257.610†	11600.7	0.0148	mg/L	0.00005	0.0148	mg/L	0.00005	0.35%
QC value within limits for Mn 257.610 Recovery = 98.37%								
Na 589.592†	18827.2	2.444	mg/L	0.0173	2.444	mg/L	0.0173	0.71%
QC value within limits for Na 589.592 Recovery = 97.75%								
Ni 231.604†	1714.4	0.0432	mg/L	0.00032	0.0432	mg/L	0.00032	0.74%
QC value within limits for Ni 231.604 Recovery = 107.93%								

Pb 220.353†	97.9	0.0128 mg/L	0.00161	0.0128 mg/L	0.00161	12.58%
QC value within limits for Pb 220.353 Recovery = 127.75%						
Sb 206.836†	178.1	0.0575 mg/L	0.00288	0.0575 mg/L	0.00288	5.01%
QC value within limits for Sb 206.836 Recovery = 95.78%						
Se 196.026†	21.3	0.0090 mg/L	0.00123	0.0090 mg/L	0.00123	13.76%
QC value within limits for Se 196.026 Recovery = 89.52%						
Tl 190.801†	46.4	0.0259 mg/L	0.00420	0.0259 mg/L	0.00420	16.21%
QC value within limits for Tl 190.801 Recovery = 103.57%						
V 292.402†	4004.7	0.0252 mg/L	0.00057	0.0252 mg/L	0.00057	2.25%
QC value within limits for V 292.402 Recovery = 100.70%						
Zn 213.857†	67.2	0.0585 mg/L	0.00115	0.0585 mg/L	0.00115	1.97%
QC value within limits for Zn 213.857 Recovery = 97.42%						
Pb†	2.6	0.0304 mg/L	0.02558	0.0304 mg/L	0.02558	84.12%
Ag 338.289†	904.5	0.0098 mg/L	0.00148	0.0098 mg/L	0.00148	15.14%
All analyte(s) passed QC.						

Sequence No.: 27
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 7
Date Collected: 10/29/2014 3:55:47 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	133.0 kPa	0.55 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1553524.7	1.008	mg/L	0.0053				0.53%
Ag 328.068†	242794.7	1.218	mg/L	0.0016	1.218	mg/L	0.0016	0.13%
QC value within limits for Ag 328.068 Recovery = 97.43%								
Al 308.215†	5545.6	9.807	mg/L	0.0890	9.807	mg/L	0.0890	0.91%
QC value within limits for Al 308.215 Recovery = 98.07%								
As 188.979†	965.2	0.5014	mg/L	0.00528	0.5014	mg/L	0.00528	1.05%
QC value within limits for As 188.979 Recovery = 100.29%								
Ba 233.527†	1476248.2	9.888	mg/L	0.0122	9.888	mg/L	0.0122	0.12%
QC value within limits for Ba 233.527 Recovery = 98.88%								
Be 313.107†	444799.5	0.2456	mg/L	0.00008	0.2456	mg/L	0.00008	0.03%
QC value within limits for Be 313.107 Recovery = 98.22%								
Ca 317.933†	115379.4	24.89	mg/L	0.090	24.89	mg/L	0.090	0.36%
QC value within limits for Ca 317.933 Recovery = 99.57%								
Cd 226.502†	18043.1	0.2695	mg/L	0.00114	0.2695	mg/L	0.00114	0.42%
QC value within limits for Cd 226.502 Recovery = 107.78%								
Co 228.616†	96060.4	2.399	mg/L	0.0022	2.399	mg/L	0.0022	0.09%
QC value within limits for Co 228.616 Recovery = 95.97%								
Cr 267.716†	110466.8	0.9731	mg/L	0.00056	0.9731	mg/L	0.00056	0.06%
QC value within limits for Cr 267.716 Recovery = 97.31%								
Cu 324.752†	275404.1	1.189	mg/L	0.0020	1.189	mg/L	0.0020	0.17%
QC value within limits for Cu 324.752 Recovery = 95.14%								
Fe 273.955†	2750.9	4.833	mg/L	0.0426	4.833	mg/L	0.0426	0.88%
QC value within limits for Fe 273.955 Recovery = 96.65%								
K 766.490†	56855.1	24.29	mg/L	0.096	24.29	mg/L	0.096	0.39%
QC value within limits for K 766.490 Recovery = 97.15%								
Mg 279.077†	449932.4	25.45	mg/L	0.033	25.45	mg/L	0.033	0.13%
QC value within limits for Mg 279.077 Recovery = 101.81%								
Mn 257.610†	1934709.2	2.460	mg/L	0.0015	2.460	mg/L	0.0015	0.06%
QC value within limits for Mn 257.610 Recovery = 98.42%								
Na 589.592†	188218.6	24.43	mg/L	0.100	24.43	mg/L	0.100	0.41%
QC value within limits for Na 589.592 Recovery = 97.72%								
Ni 231.604†	98498.3	2.480	mg/L	0.0036	2.480	mg/L	0.0036	0.15%
QC value within limits for Ni 231.604 Recovery = 99.21%								
Pb 220.353†	3945.7	0.5129	mg/L	0.00036	0.5129	mg/L	0.00036	0.07%
QC value within limits for Pb 220.353 Recovery = 102.58%								
Sb 206.836†	15875.0	5.119	mg/L	0.0243	5.119	mg/L	0.0243	0.48%
QC value within limits for Sb 206.836 Recovery = 102.39%								
Se 196.026†	1190.4	0.4981	mg/L	0.00161	0.4981	mg/L	0.00161	0.32%
QC value within limits for Se 196.026 Recovery = 99.62%								

Tl 190.801†	933.2	0.4991 mg/L	0.00466	0.4991 mg/L	0.00466	0.93%
QC value within limits for Tl 190.801 Recovery = 99.82%						
V 292.402†	404872.7	2.544 mg/L	0.0007	2.544 mg/L	0.0007	0.03%
QC value within limits for V 292.402 Recovery = 101.75%						
Zn 213.857†	2890.6	2.518 mg/L	0.0138	2.518 mg/L	0.0138	0.55%
QC value within limits for Zn 213.857 Recovery = 100.71%						
Pb†	45.0	0.5139 mg/L	0.00076	0.5139 mg/L	0.00076	0.15%
QC value within limits for Pb Recovery = 102.77%						
Ag 338.289†	116629.7	1.248 mg/L	0.0023	1.248 mg/L	0.0023	0.18%

All analyte(s) passed QC.

Sequence No.: 28 **Autosampler Location:** 1
Sample ID: CCB **Date Collected:** 10/29/2014 4:00:05 PM
Analyst: **Data Type:** Original
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 75 **Auto Dilution Factor:** 1

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow
All	133.0 kPa	0.55 L/min

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1583787.0	1.028	mg/L	0.0154				1.50%
Ag 328.068†	59.5	0.0003	mg/L	0.00114	0.0003	mg/L	0.00114	379.82%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 308.215†	-6.3	-0.0112	mg/L	0.00253	-0.0112	mg/L	0.00253	22.60%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	0.9	0.0005	mg/L	0.00273	0.0005	mg/L	0.00273	601.00%
QC value within limits for As 188.979 Recovery = Not calculated								
Ba 233.527†	76.2	0.0005	mg/L	0.00003	0.0005	mg/L	0.00003	6.47%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	173.1	0.0001	mg/L	0.00001	0.0001	mg/L	0.00001	10.58%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933†	1.5	0.0003	mg/L	0.00781	0.0003	mg/L	0.00781	>999.9%
QC value within limits for Ca 317.933 Recovery = Not calculated								
Cd 226.502†	8.2	0.0001	mg/L	0.00013	0.0001	mg/L	0.00013	106.89%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	0.2	0.0000	mg/L	0.00030	0.0000	mg/L	0.00030	>999.9%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	16.9	0.0001	mg/L	0.00014	0.0001	mg/L	0.00014	93.81%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 324.752†	-92.9	-0.0004	mg/L	0.00035	-0.0004	mg/L	0.00035	86.42%
QC value within limits for Cu 324.752 Recovery = Not calculated								
Fe 273.955†	3.8	0.0068	mg/L	0.00165	0.0068	mg/L	0.00165	24.27%
QC value within limits for Fe 273.955 Recovery = Not calculated								
K 766.490†	26.1	0.0112	mg/L	0.03104	0.0112	mg/L	0.03104	278.32%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 279.077†	11.7	0.0006	mg/L	0.00069	0.0006	mg/L	0.00069	108.36%
QC value within limits for Mg 279.077 Recovery = Not calculated								
Mn 257.610†	56.7	0.0001	mg/L	0.00004	0.0001	mg/L	0.00004	60.41%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Na 589.592†	-373.1	-0.0484	mg/L	0.00471	-0.0484	mg/L	0.00471	9.72%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	-1.0	-0.0000	mg/L	0.00010	-0.0000	mg/L	0.00010	393.98%
QC value within limits for Ni 231.604 Recovery = Not calculated								
Pb 220.353†	-13.2	-0.0017	mg/L	0.00034	-0.0017	mg/L	0.00034	19.94%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	-4.1	-0.0013	mg/L	0.00641	-0.0013	mg/L	0.00641	487.28%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	17.6	0.0074	mg/L	0.00249	0.0074	mg/L	0.00249	33.82%
QC value within limits for Se 196.026 Recovery = Not calculated								
Tl 190.801†	8.2	0.0047	mg/L	0.00205	0.0047	mg/L	0.00205	43.49%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 292.402†	-74.7	-0.0005	mg/L	0.00046	-0.0005	mg/L	0.00046	99.14%
QC value within limits for V 292.402 Recovery = Not calculated								
Zn 213.857†	-0.2	-0.0002	mg/L	0.00416	-0.0002	mg/L	0.00416	>999.9%

QC value within limits for Zn 213.857 Recovery = Not calculated

Pb†	-3.7	-0.0425	mg/L	0.01607	-0.0425	mg/L	0.01607 37.78%

QC value within limits for Pb Recovery = Not calculated

Ag 338.289†	106.1	0.0011	mg/L	0.00146	0.0011	mg/L	0.00146 131.14%

All analyte(s) passed QC.

Sequence No.: 29
Sample ID: 4652-01 Al
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 46
Date Collected: 10/29/2014 4:04:18 PM
Data Type: Original
Initial Sample Vol: 50 mL
Sample Prep Vol: 25 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 4652-01 Al

Analyte	Back Pressure	Flow
All	133.0 kPa	0.55 L/min

Mean Data: 4652-01 Al

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1615591.2	1.049	mg/L	0.0113				1.08%
Ag 328.068†	-20.6	0.0007	mg/L	0.00033	0.0003	mg/L	0.00016	47.83%
Al 308.215†	316.2	0.5584	mg/L	0.00806	0.2792	mg/L	0.00403	1.44%
As 188.979†	-13.3	-0.0068	mg/L	0.00057	-0.0034	mg/L	0.00029	8.38%
Ba 233.527†	11371.7	0.0762	mg/L	0.00066	0.0381	mg/L	0.00033	0.86%
Be 313.107†	128.1	0.0001	mg/L	0.00002	0.0000	mg/L	0.00001	33.44%
Ca 317.933†	424457.4	91.57	mg/L	0.521	45.79	mg/L	0.260	0.57%
Cd 226.502†	50.2	-0.0001	mg/L	0.00000	-0.0001	mg/L	0.00000	1.50%
Co 228.616†	92.1	0.0023	mg/L	0.00047	0.0012	mg/L	0.00023	20.35%
Cr 267.716†	1220.3	0.0108	mg/L	0.00027	0.0054	mg/L	0.00013	2.49%
Cu 324.752†	75587.1	0.3265	mg/L	0.00035	0.1633	mg/L	0.00018	0.11%
Fe 273.955†	1321.6	2.340	mg/L	0.0162	1.170	mg/L	0.0081	0.69%
K 766.490†	26353.0	11.26	mg/L	0.091	5.629	mg/L	0.0454	0.81%
Mg 279.077†	376155.7	21.28	mg/L	0.075	10.64	mg/L	0.037	0.35%
Mn 257.610†	82915.9	0.1054	mg/L	0.00000	0.0527	mg/L	0.00000	0.00%
Na 589.592†	632371.6	82.08	mg/L	0.539	41.04	mg/L	0.269	0.66%
Ni 231.604†	678.5	0.0171	mg/L	0.00041	0.0085	mg/L	0.00020	2.38%
Pb 220.353†	282.0	0.0391	mg/L	0.00048	0.0195	mg/L	0.00024	1.22%
Sb 206.836†	-3.1	-0.0001	mg/L	0.00254	-0.0001	mg/L	0.00127	>999.9%
Se 196.026†	-43.7	-0.0172	mg/L	0.00633	-0.0086	mg/L	0.00316	36.81%
Tl 190.801†	-38.9	-0.0220	mg/L	0.00095	-0.0110	mg/L	0.00047	4.30%
V 292.402†	2597.8	0.0164	mg/L	0.00060	0.0082	mg/L	0.00030	3.66%
Zn 213.857†	260.8	0.2187	mg/L	0.00271	0.1094	mg/L	0.00135	1.24%
Pb†	4.7	0.0777	mg/L	0.04359	0.0389	mg/L	0.02180	56.08%
Ag 338.289†	144.4	0.0006	mg/L	0.00054	0.0003	mg/L	0.00027	85.35%

Sequence No.: 30
Sample ID: 4668-01 Se
Analyst: AMM
Initial Sample Wt:
Dilution:
Wash Time: 75

Autosampler Location: 47
Date Collected: 10/29/2014 4:08:33 PM
Data Type: Original
Initial Sample Vol: 0.478 mL
Sample Prep Vol: 50 mL
Auto Dilution Factor: 1

Nebulizer Parameters: 4668-01 Se

Analyte	Back Pressure	Flow
All	133.0 kPa	0.55 L/min

Mean Data: 4668-01 Se

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1708547.0	1.109	mg/L	0.0133				1.20%
Ag 328.068†	-35.0	0.0002	mg/L	0.00056	0.0243	mg/L	0.05877	242.02%
Al 308.215†	10.8	0.0192	mg/L	0.02756	2.006	mg/L	2.8827	143.71%
As 188.979†	-6.0	-0.0031	mg/L	0.00448	-0.3282	mg/L	0.46833	142.69%
Ba 233.527†	282634.9	1.893	mg/L	0.0017	198.0	mg/L	0.17	0.09%
Be 313.107†	-1443.2	-0.0008	mg/L	0.00001	-0.0790	mg/L	0.00063	0.80%

Analysis Begun

Logged In Analyst: fims
Technique: AA FIMS-MHS
Spectrometer Model: FIMS-100, S/N B050-9550
Autosampler Model: AS-90

Sample Information File: C:\data-AA\fims\Sample Information\Hg140908A.sif
Batch ID:
Results Data Set: Hg140908A
Results Library: C:\data-AA\fims\Results\Results.mdb

Method Loaded
Method Name: Mercury5-30
Method Last Saved: 10/13/2014 1:09:01 PM
Method Description:

Sequence No.: 1
Autosampler Location:
Sample ID: Calib Std 3
Date Collected: 10/30/2014 9:56:23 AM
Analyst:
Data Type: Original
Initial Sample Wt:
Initial Sample Vol:
Dilution:
Sample Prep Vol:

Replicate Data: Calib Std 3

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[2]	0.1132	0.1132	0.0188	09:57:21	Yes
2		[2]	0.1099	0.1099	0.0183	09:57:59	Yes
Mean:		[2]	0.1116				
SD:		0	0.0024				
%RSD:		0	2.11				

Standard number 3 applied. [2]
Correlation Coef.: 1.000000 Slope: 0.05579 Intercept: 0.00000
The required calibration blank has not been analyzed.

Method: Mercury5-30 Page 1 Date: 10/30/2014 10:09:29 AM

Analysis Begun

Logged In Analyst: fims
Technique: AA FIMS-MHS
Spectrometer Model: FIMS-100, S/N B050-9550
Autosampler Model: AS-90

Sample Information File: C:\data-AA\fims\Sample Information\Hg141030A.sif
Batch ID:
Results Data Set: Hg141030A
Results Library: C:\data-AA\fims\Results\Results.mdb

Sequence No.: 1
Autosampler Location: 1
Sample ID: Calibration Blank
Date Collected: 10/30/2014 9:59:19 AM
Analyst:
Data Type: Original
Initial Sample Wt:
Initial Sample Vol:
Dilution:
Sample Prep Vol:

Replicate Data: Calibration Blank

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.00]	0.0002	0.0002	0.0004	10:00:22	Yes
2		[0.00]	0.0011	0.0011	0.0005	10:01:00	Yes
Mean:		[0.00]	0.0007				
SD:		0.00	0.0006				
%RSD:		0.00	91.05				

Auto-zero performed.

Sequence No.: 2
Autosampler Location: 2
Sample ID: Calib Std 1
Date Collected: 10/30/2014 10:02:41 AM
Analyst:
Data Type: Original
Initial Sample Wt:
Initial Sample Vol:
Dilution:
Sample Prep Vol:

Replicate Data: Calib Std 1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.2]	0.0109	0.0116	0.0021	10:03:45	Yes
2		[0.2]	0.0095	0.0102	0.0020	10:04:23	Yes
Mean:		[0.2]	0.0102				
SD:		0.0	0.0010				
%RSD:		0.0	9.51				

Standard number 1 applied. [0.2]
Correlation Coef.: 1.000000 Slope: 0.05113 Intercept: 0.00000

Sequence No.: 3
Autosampler Location: 3
Sample ID: Calib Std 2
Date Collected: 10/30/2014 10:06:05 AM
Analyst:
Data Type: Original
Initial Sample Wt:
Initial Sample Vol:
Dilution:
Sample Prep Vol:

Replicate Data: Calib Std 2

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[1]	0.0553	0.0560	0.0092	10:07:08	Yes
2		[1]	0.0508	0.0514	0.0089	10:07:46	Yes
Mean:		[1]	0.0531				
SD:		0	0.0032				
%RSD:		0	6.03				

Standard number 2 applied. [1]
Correlation Coef.: 0.999972 Slope: 0.05319 Intercept: -0.00018

Sequence No.: 4
Autosampler Location: 4

Method: Mercury5-30 Page 2 Date: 10/30/2014 10:18:04 AM

Sample ID: Calib Std 3 Date Collected: 10/30/2014 10:09:29 AM
Analyst: Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: Calib Std 3

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[2]	0.1105	0.1111	0.0186	10:10:33	Yes
2		[2]	0.1062	0.1069	0.0179	10:11:11	Yes
Mean:		[2]	0.1083				
SD:		0	0.0030				
%RSD:		0	2.75				

Standard number 3 applied. [2]
Correlation Coef.: 0.999940 Slope: 0.05423 Intercept: -0.00048

Sequence No.: 5 Autosampler Location: 5
Sample ID: Calib Std 4 Date Collected: 10/30/2014 10:12:54 AM
Analyst: Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: Calib Std 4

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[5]	0.2671	0.2677	0.0438	10:13:58	Yes
2		[5]	0.2697	0.2704	0.0453	10:14:36	Yes
Mean:		[5]	0.2684				
SD:		0	0.0019				
%RSD:		0	0.69				

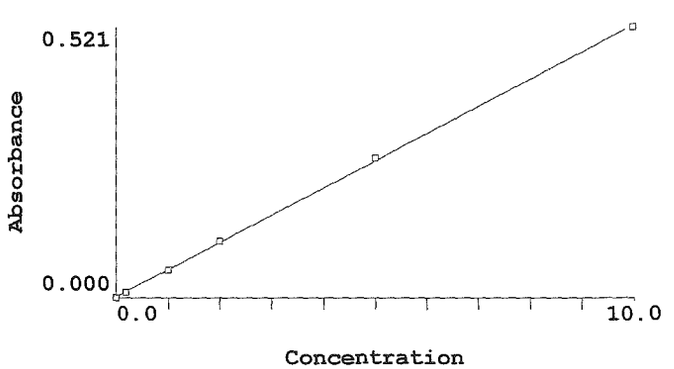
Standard number 4 applied. [5]
Correlation Coef.: 0.999985 Slope: 0.05377 Intercept: -0.00018

Sequence No.: 6 Autosampler Location: 6
Sample ID: Calib Std 5 Date Collected: 10/30/2014 10:16:19 AM
Analyst: Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: Calib Std 5

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[10]	0.5190	0.5196	0.0843	10:17:24	Yes
2		[10]	0.5229	0.5235	0.0848	10:18:02	Yes
Mean:		[10]	0.5209				
SD:		0	0.0028				
%RSD:		0	0.53				

Standard number 5 applied. [10]
Correlation Coef.: 0.999872 Slope: 0.05223 Intercept: 0.00174



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
Calibration Blank	0.0000	0	-0.0334	0.00	91.1
Calib Std 1	0.0102	0.2	0.1624	0.00	9.5
Calib Std 2	0.0531	1.0	0.9825	0.00	6.0
Calib Std 3	0.1083	2.0	2.0412	0.00	2.8
Calib Std 4	0.2684	5.0	5.1059	0.00	0.7
Calib Std 5	0.5209	10.0	9.9413	0.00	0.5

Correlation Coef.: 0.999872 Slope: 0.05223 Intercept: 0.00174

Sequence No.: 7 **Autosampler Location: 4**
Sample ID: IPC **Date Collected: 10/30/2014 10:19:46 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: IPC

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.024	2.024	0.1074	0.1081	0.0180	10:20:50	Yes
2	2.033	2.033	0.1079	0.1086	0.0182	10:21:28	Yes
Mean:	2.028	2.028	0.1077				
SD:	0.0064	0.0064	0.0003				
%RSD:	0.3176	0.3176	0.31				

QC value within limits for Hg 253.7 Recovery = 101.42%
All analyte(s) passed QC.

Sequence No.: 8 **Autosampler Location: 7**
Sample ID: ICV **Date Collected: 10/30/2014 10:23:11 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: ICV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.040	2.040	0.1083	0.1089	0.0182	10:24:17	Yes
2	2.031	2.031	0.1078	0.1085	0.0183	10:24:55	Yes
Mean:	2.035	2.035	0.1080				
SD:	0.0058	0.0058	0.0003				
%RSD:	0.2851	0.2851	0.28				

QC value within limits for Hg 253.7 Recovery = 101.77%
All analyte(s) passed QC.

Sequence No.: 9 **Autosampler Location: 8**
Sample ID: ICB **Date Collected: 10/30/2014 10:26:39 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: ICB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0278	-0.0278	0.0003	0.0009	0.0003	10:27:45	Yes
2	0.0046	0.0046	0.0020	0.0026	0.0004	10:28:23	Yes
Mean:	-0.0116	-0.0116	0.0011				
SD:	0.0229	0.0229	0.0012				
%RSD:	197.0	197.0	105.54				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 10
Sample ID: blk
Analyst: Jennifer G
Initial Sample Wt: 0.232 g
Dilution:

Autosampler Location: 9
Date Collected: 10/30/2014 10:30:08 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 20 mL

Replicate Data: blk

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0034	-0.0392	-0.0003	0.0003	0.0003	10:31:10	Yes
2	-0.0031	-0.0361	-0.0001	0.0005	0.0004	10:31:48	Yes
Mean:	-0.0032	-0.0377	-0.0002				
SD:	0.0002	0.0022	0.0001				
%RSD:	5.884	5.884	51.52				

Sequence No.: 11
Sample ID: lcs
Analyst: Jennifer G
Initial Sample Wt: 0.233 g
Dilution:

Autosampler Location: 10
Date Collected: 10/30/2014 10:33:29 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 20 mL

Replicate Data: lcs

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.1760	2.051	0.1088	0.1095	0.0180	10:34:31	Yes
2	0.1755	2.044	0.1085	0.1092	0.0185	10:35:09	Yes
Mean:	0.1758	2.048	0.1087				
SD:	0.0004	0.0045	0.0002				
%RSD:	0.2214	0.2214	0.22				

Sequence No.: 12
Sample ID: lcs dup
Analyst: Jennifer G
Initial Sample Wt: 0.229 g
Dilution:

Autosampler Location: 11
Date Collected: 10/30/2014 10:36:51 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 20 mL

Replicate Data: lcs dup

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.1914	2.192	0.1162	0.1169	0.0190	10:37:54	Yes
2	0.1847	2.115	0.1122	0.1128	0.0191	10:38:32	Yes

Duplicate Check: lcs dup

Analyte			Expected Conc.	Measured Conc.	Std. Dev.	Units	Difference (%)
Hg 253.7			0.1758	0.1881	0.005	ug/g	6.8
Mean:	0.1881	2.153	0.1142				
SD:	0.0048	0.0548	0.0029				
%RSD:	2.543	2.543	2.50				

Sequence No.: 13
Sample ID: 144673-01
Analyst: Jennifer G
Initial Sample Wt: 0.222 g
Dilution:

Autosampler Location: 12
Date Collected: 10/30/2014 10:40:13 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 20 mL

Replicate Data: 144673-01

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0022	0.0248	0.0030	0.0037	0.0005	10:41:17	Yes
2	0.0003	0.0033	0.0019	0.0026	0.0004	10:41:55	Yes

Mean:	0.0013	0.0140	0.0025
SD:	0.0014	0.0152	0.0008
%RSD:	108.6	108.6	32.17

Sequence No.: 14 **Autosampler Location: 13**
Sample ID: 144706-01 **Date Collected: 10/30/2014 10:43:37 AM**
Analyst: Jennifer G **Data Type: Original**
Initial Sample Wt: 0.202 g **Initial Sample Vol:**
Dilution: **Sample Prep Vol: 20 mL**

Replicate Data: 144706-01

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0937	0.9463	0.0512	0.0518	0.0091	10:44:40	Yes
2	0.1003	1.013	0.0547	0.0553	0.0093	10:45:18	Yes
Mean:	0.0970	0.9798	0.0529				
SD:	0.0047	0.0473	0.0025				
%RSD:	4.832	4.832	4.67				

Sequence No.: 15 **Autosampler Location: 14**
Sample ID: 144706-02 **Date Collected: 10/30/2014 10:47:01 AM**
Analyst: Jennifer G **Data Type: Original**
Initial Sample Wt: 0.211 g **Initial Sample Vol:**
Dilution: **Sample Prep Vol: 20 mL**

Replicate Data: 144706-02

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.1580	1.666	0.0888	0.0894	0.0149	10:48:05	Yes
2	0.1524	1.607	0.0857	0.0863	0.0149	10:48:43	Yes
Mean:	0.1552	1.637	0.0872				
SD:	0.0039	0.0416	0.0022				
%RSD:	2.544	2.544	2.49				

Sequence No.: 16 **Autosampler Location: 15**
Sample ID: 144706-03 **Date Collected: 10/30/2014 10:50:26 AM**
Analyst: Jennifer G **Data Type: Original**
Initial Sample Wt: 0.222 g **Initial Sample Vol:**
Dilution: **Sample Prep Vol: 20 mL**

Replicate Data: 144706-03

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0978	1.086	0.0585	0.0591	0.0099	10:51:31	Yes
2	0.0950	1.054	0.0568	0.0575	0.0098	10:52:09	Yes
Mean:	0.0964	1.070	0.0576				
SD:	0.0020	0.0222	0.0012				
%RSD:	2.075	2.075	2.01				

Sequence No.: 17 **Autosampler Location: 16**
Sample ID: 144706-03 dup **Date Collected: 10/30/2014 10:53:52 AM**
Analyst: Jennifer G **Data Type: Original**
Initial Sample Wt: 0.22 g **Initial Sample Vol:**
Dilution: **Sample Prep Vol: 20 mL**

Replicate Data: 144706-03 dup

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0833	0.9166	0.0496	0.0503	0.0084	10:54:57	Yes
2	0.0842	0.9259	0.0501	0.0507	0.0085	10:55:35	Yes

Duplicate Check: 144706-03 dup

Analyte			Expected Conc.	Measured Conc.	Std. Dev.	Units	Difference (%)
Hg 253.7			0.0964	0.0837	0.001	ug/g	14.1
Mean:	0.0837	0.9212	0.0499				
SD:	0.0006	0.0066	0.0003				
%RSD:	0.7134	0.7134	0.69				

Sequence No.: 18 **Autosampler Location: 17**
Sample ID: 144706-03 spk **Date Collected: 10/30/2014 10:57:19 AM**
Analyst: Jennifer G **Data Type: Original**
Initial Sample Wt: 0.23 g **Initial Sample Vol:**
Dilution: **Sample Prep Vol: 20 mL**

Replicate Data: 144706-03 spk

Repl #	SampleConc ug/g	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.2652	3.050	0.1610	0.1617	0.0271	10:58:24	Yes
2	0.2668	3.069	0.1620	0.1627	0.0273	10:59:02	Yes
Mean:	0.2660	3.059	0.1615				
SD:	0.0011	0.0131	0.0007				
%RSD:	0.4288	0.4288	0.42				

Sequence No.: 19 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 10/30/2014 11:00:46 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.138	2.138	0.1134	0.1140	0.0190	11:01:52	Yes
2	2.009	2.009	0.1067	0.1073	0.0183	11:02:30	Yes
Mean:	2.074	2.074	0.1100				
SD:	0.0909	0.0909	0.0047				
%RSD:	4.382	4.382	4.31				

QC value within limits for Hg 253.7 Recovery = 103.68%
All analyte(s) passed QC.

Sequence No.: 20 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 10/30/2014 11:04:14 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0150	-0.0150	0.0010	0.0016	0.0004	11:05:20	Yes
2	-0.0287	-0.0287	0.0002	0.0009	0.0004	11:05:58	Yes
Mean:	-0.0219	-0.0219	0.0006				
SD:	0.0097	0.0097	0.0005				
%RSD:	44.21	44.21	84.29				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

HCl lot #: C471251
HNO3 Lot #: C470895
H2O2 lot#: C467350

Spike #1 Lot #: 190613
Spike #2 Lot #: ↓) 500mL
Spike #3 Lot #:
Spike #4 Lot #: 031414 @ 200mL
Temp: 92

METALS PREP - non-aqueous

DATE: 10-29-14
INITIALS: TG
Page 1 of 1
PrepBatch: PB1410295oil
QC Batch: QC1410295oil

Lab Sample #	Sample Type	Metals	Initial Amount (g)	Final Volume (ml)	Comments	% M	CC
BLK	Soil		0.527	50			
LCS	↓		0.467	↓			
LCS DUP			0.453				
4706-01		JM#1	0.474		Pb, Cd, As	34.6	G3
-02		↓	0.518		↓	32.9	↓
-03			0.541			30.2	
-03 dup			0.488			↓	
↓ SPK	↓	↓	0.532	↓	↓		↓

Initial Amount="1" for wipes, air filters
Digestion Method:EPA SW-846 3050 (soil,wipe,paint)
NIOSH 7082 (Air Filters)

PREPSOLLIMS

KMnO4 Ref#: 3526 HNO3 lot#: C470395 Waters: —
K2S2O8 Ref#: 3407 H2SO4 lot#: c366819 Temp1: — Temp2: >
Hydroxy. Ref #: 3499 TCLP Fluid#: — Soils: start 1020 end 1050
Temp1: 93 Temp2: 93

METALS PREP - mercury

DATE: 10-29-14 CAL STD: Hg141029cal1

INITIALS: JG CCV STD: Hg141029ccv2

Lab Sample #	Sample Type	Method	Initial Volume/Weight	Comments	% M	CC
cal Blk		7471B				
0.0002						
0.0010						
0.0020						
0.0050						
0.0100						
ICV						
ICB						
Blk			0.232			
LCS			0.233			
LCSDUP			0.229			
4673-01	Solid		0.222			G2
4700-01	Soil		0.202	JMHg	34.6	G3
-02			0.211		32.9	
-03	↓		0.222	↓	30.2	↓
-03dup			0.220		↓	
-03spk			0.230			
CCV						

Digestion Method: EPA SW-846 7470A (water), 7471B (Soil)

PrepBatch: PB141029HgSoil Page: 1 of 1

QC Batch: QC141029HgSoil

WETCHEM DATA

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144706

Client: GEI Consultants Inc.

Project Reference: NFG Mineral Springs

Sample Identifier:	S6 & 20N W80 (0-2")		
Lab Sample ID:	144706-01	**Date Sampled:**	10/28/2014
Matrix:	Soil	**Date Received:**	10/29/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.387**	mg/Kg	J	10/29/2014

Method Reference(s): EPA 9014
Preparation Date: 10/29/2014

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Report Prepared Wednesday, November 19, 2014

PARADIGM

Lab Project ID: 144706

Client: GEI Consultants Inc.

Project Reference: NFG Mineral Springs

Sample Identifier: S6 & 20N W70 (0-2")
Lab Sample ID: 144706-02 **Date Sampled:** 10/28/2014
Matrix: Soil **Date Received:** 10/29/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.726**	mg/Kg		10/29/2014

Method Reference(s): EPA 9014
Preparation Date: 10/29/2014

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Report Prepared Wednesday, November 19, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144706

Client: GEI Consultants Inc.

Project Reference: NFG Mineral Springs

Sample Identifier: S6 & 10N W80 (0-2")
Lab Sample ID: 144706-03 **Date Sampled:** 10/28/2014
Matrix: Soil **Date Received:** 10/29/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.371**	mg/Kg	J	10/29/2014

Method Reference(s): EPA 9014
Preparation Date: 10/29/2014

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Report Prepared Wednesday, November 19, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC

Method Blank Report

Client: GEI Consultants Inc.
Project Reference: NFG Mineral Springs
Lab Project ID: 144706
SDG #: 4706-01
Matrix: Soil

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	<0.388	mg/Kg		10/29/2014

Method Reference(s): EPA 9014
Preparation Date: 10/29/2014
QC Batch ID: QC141029stcn
QC Number: 1

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Report Prepared Thursday, October 30, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

QC Report for Laboratory Control Sample

Client: **GEI Consultants Inc.**
Project Reference: NFG Mineral Springs
Lab Project ID: 144706
SDG #: 4706-01
Matrix: Soil

Total Cyanide

Analyte	Spike Added	Spike Units	LCS Result	LCS % Recovery	% Rec Limits	LCS Outliers	Date Analyzed
Cyanide, Total	9.30	mg/Kg	9.17	98.6	85 - 115		10/29/2014

Method Reference(s): EPA 9014
Preparation Date: 10/29/2014
QC Number: 1
QC Batch ID: QC141029stcn

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Report Prepared *Thursday, October 30, 2014*

Lab Name: Paradigm Environmental Services

Client: GEI Consultants, Inc. **Lab Project No.:** 144706

Client Job Site: NFG Mineral Springs **Run IDs.:** 140925B-ICV
121019A-CCV

Client Job No.: N/A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Initial Calibration Source: Alfa Aeser
Continuing Calibration Source: Sigma-Aldrich

Concentration Units: mg/L

	Initial Calibration Verification			Continuing Calibration Verification					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	M
TCN	0.200	0.204	102	0.200	0.199	99.4	0.199	99.5	SW9014

(1) Control Limits: 90-110%

FORM IIA-IN

Lab Name: Paradigm Environmental Services

Client: GEI Consultants, Inc. **Lab Project No.:** 144706

Client Job Site: NFG Mineral Springs **Lab Sample No.:** Blk 10/29 soil

Client Job No.: N/A **Sample Type:** Soil

BLANKS

Preparation Blank Matrix (soil/water): Soil Run Nos.: 140925B-ICV
Concentration Units (mg/L or mg/kg): mg/kg 121019A-CCV

	Initial Calibration Blank		Continuing Calibration Blank						Preparation Blank		Method
	(mg/L)		(mg/L)						(mg/Kg)		
Analyte		Q	1	Q	2	Q	3	Q		Q	
TCN	<0.01		<0.01		<0.01				<0.388		SW9014

* - Outside established quality control acceptance limits.

FORM III-IN

Laboratory Name: Paradigm Environmental Lab Cert. #10958 Page 1 of 1

Analyst Signature [signature] Date: 6/18/2014

Matrix: Soil Units: mg/Kg

Initial Demonstration of Capability- SW846 Method 9014

Parameter	LOQ mg/Kg	True value mg/Kg	Results mg/Kg 1	Results mg/Kg 2	Results mg/Kg 3	Results mg/Kg 4	Average mg/Kg	EPA Acceptance criteria %	SD mg/Kg	EPA SD max limit mg/Kg
Cyanide, Total	0.5000	0.2500	0.2994	0.2994	0.2062	0.2994	0.2761	n/a	0.0466	n/a

Date: 6/18/14
Units: mg/Kg
Spike Level: 0.2500 mg/Kg

data file: 140618B

Compound	LOQ	MDL1	MDL2	MDL3	MDL4	MDL5	MDL6	MDL7	STD DEV	MDL
Cyanide, Total	0.5000	0.2994	0.2994	0.2062	0.2994	0.2217	0.2683	0.2683	0.0385	0.1209

140925B

TEST SETUP
Orion AquaMate 8000 UV-Vis v1.005 2W2R319204

Standard Curve	3:59pm 25Sep14
Test Name	140925_9014[Saved]
Date Standards Measured	25Sep14
Wavelength	578.0nm
Ref. Wavelength Correction	Off
Curve Fit	Linear
Number of Standards	7
Units	ppb
Sample Positioner	1-Cell Platform
ID# (0=OFF)	1
Low/High Limits	-9999/9999
Statistics	On
Auto Print	On
Auto Save Data	On
Data File Name	140925B

Std #	Conc. ppb	Abs 578.0nm
1	0.000	0.000
2	10.00	0.031
3	20.00	0.063
4	50.00	0.156
5	100.0	0.314
6	200.0	0.638
7	500.0	1.670

Curve Fit	Linear
Slope	0.00334
Intercept	-0.00947
Std Dev	0.013
Corr Coeff	1.000

ID#	Abs 578.0nm	Result ppb
1	0.671	203.8
2	0.001	3.135

# Samples	2
Average	103.5
Std Dev	141.9

141029A

TEST SETUP
Orion AquaMate 8000 UV-Vis v1.005 2W2R319204

Standard Curve	3:20pm 29Oct14
Test Name	140925_9014[Saved]
Date Standards Measured	25Sep14
Wavelength	578.0nm
Ref. Wavelength Correction	Off
Curve Fit	Linear
Number of Standards	7
Units	ppb
Sample Positioner	1-Cell Platform
ID# (0=OFF)	1
Low/High Limits	-9999/9999
Statistics	On
Auto Print	On
Auto Save Data	On
Data File Name	141029A

Std #	Conc. ppb	Abs 578.0nm
1	0.000	0.000
2	10.00	0.031
3	20.00	0.063
4	50.00	0.156
5	100.0	0.314
6	200.0	0.638
7	500.0	1.670

Curve Fit	Linear
Slope	0.00334
Intercept	-0.00947
Std Dev	0.013
Corr Coeff	1.000

ID#	Sample ID	Abs 578.0nm	Result ppb
1	CCV	0.654	198.7
2	CCB	0.001	3.135
3	MB	0.001	3.135
4	LCS	0.649	197.2
5	144706-01	0.014	7.029
6	144706-01 DUP	0.015	7.328
7	144706-01 SPK	0.644	195.7
8	144706-02	0.026	10.62
9	144706-03	0.014	7.029
10	CCV	0.655	199.0
11	CCB	0.003	3.734

# Samples	11
Average	75.69
Std Dev	96.72

Distillation Date 10/29/14 Sulfamic Acid Lot # 3514
Analyst (distillation) RR MgCl2 Lot # 3517
Time at Temp ~~101°C~~ 1045 1:1 H2SO4 Lot # 3530
Block Temp 1045 101°C 0.25N NaOH Lot # (distillation) 3531
RR 10/29/14 10ppm Std Lot # 3532

Prep Batch PB141029stcn
QC Batch QC141029stcn

Analysis Date 10/29/14 Prydine Lot # 2409500
Time 1440 1M Sodium Phosphate Lot # 3248
Analyst (analysis) RR Choramine-T Lot # 3529
Curve Date 9/25/14 10 ppm ref Lot # 3534
0.25N NaOH Lot # (analysis) 3531

Final WET CN mg/Kg= ((F*H)/I)* Dilution

Final DRY CN mg/Kg= ((F*H)/(I*((100-%M/100)))* Dilution

CYANIDE Distillation and Analysis of Soils- EPA 9010/9014 page 1 of 1

Lab Sample #	Sample Matrix	Distillation Initial Amount (g) (I)	Distillation Final Volume (mL) (H)	Comments/ Spk'd amount	CC	ID# on Spec	Initial amount (mL) (J)	Final Volume (mL) (G)	Concentration (mg/L) on spec (F)	% M	Dilution for LIMS (G/J)	Concentration (mg/Kg) Final	
ICV/~~CCV~~	NA	NA	NA	NA	NA	1	10	20	0.1987				99.4% ✓
ICB/~~CCB~~	NA	~~NA~~	NA	NA	NA	2	10	20	0.003135				✓
MB	Soil	1.2881	25		—	3	10	20	0.003135	—	2	0.1217	
LCS		1.0755	25	1.0mL of 10ppm	—	4	10	20	0.1972	—	2	9.1678	98.6% ✓
144706-01		1.3883	25		G3	5	10	20	0.057029	34.6	2	0.3871 J	
-01DUP		1.6455	25		G3	6	10	20	0.007328	34.6	2	0.3405 J	12.8% ✓
-01SPK		1.0687	25	1.0mL of 10ppm	G3	7	10	20	0.1957	34.6	2	14.000	95.1% ✓
-02		1.0904	25		G3	8	10	20	0.010062	32.9	2	0.7257	
-03	RR 10/29/14	~~1.36~~ 1.3579	25		G3	9	10	20	0.007029	30.2	2	0.3708 J	
CCV	—	—	—	—	—	10	10	20	0.1990				99.5% ✓
CCB	—	—	—	—	—	11	10	20	0.003734				✓
CCV	NA	NA	NA	NA	NA								
CCB	NA	NA	NA	NA	NA								
CCV	NA	NA	NA	NA	NA								
CCB	NA	NA	NA	NA	NA								

*This symbol next to a sample # indicates a positive result for sulfide with the lead acetate strip and therefore the sample was treated with Lead Carbonate before distillation.

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W80 (0-0.2 ft)

Lab Sample ID: 144638-01 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**9.03**	mg/Kg		10/23/2014
Cadmium	**0.851**	mg/Kg		10/23/2014
Lead	**96.2**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

Partial

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W80 (0.2-0.7 ft)

Lab Sample ID: 144638-02 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**8.22**	mg/Kg		10/23/2014
Cadmium	**0.768**	mg/Kg		10/23/2014
Lead	**102**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

Partial

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W80 (0.7-1.5 ft)

Lab Sample ID: 144638-03 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**6.76**	mg/Kg		10/23/2014
Cadmium	**0.779**	mg/Kg		10/23/2014
Lead	**37.1**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

Partial

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W90 (0-0.2 ft)

Lab Sample ID: 144638-04 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**5.81**	mg/Kg	E	10/23/2014
Cadmium	**0.464**	mg/Kg	J	10/23/2014
Lead	**69.0**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

Partial

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W90 (0.2-1.0 ft)

Lab Sample ID: 144638-05 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**6.72**	mg/Kg		10/23/2014
Cadmium	< 0.611	mg/Kg		10/23/2014
Lead	**84.2**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

Partial

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W90 (1.0-1.5 ft)

Lab Sample ID: 144638-06 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**2.47**	mg/Kg	E	10/23/2014
Cadmium	**0.704**	mg/Kg		10/23/2014
Lead	**23.6**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

Partial

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W80 (0-0.2 ft)

Lab Sample ID: 144638-07 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**8.27**	mg/Kg		10/23/2014
Cadmium	**0.632**	mg/Kg	J	10/23/2014
Lead	**57.0**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

Partial

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W80 (0.2-1.0 ft)

Lab Sample ID: 144638-08 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**8.99**	mg/Kg		10/23/2014
Cadmium	**0.634**	mg/Kg	J	10/23/2014
Lead	**54.5**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

Partial

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W80 (1.0-1.5 ft)

Lab Sample ID: 144638-09 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**8.36**	mg/Kg		10/23/2014
Cadmium	**0.962**	mg/Kg		10/23/2014
Lead	**68.1**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

Partial

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W90 (0-0.2 ft)

Lab Sample ID: 144638-10 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**6.24**	mg/Kg	E	10/23/2014
Cadmium	**0.806**	mg/Kg		10/23/2014
Lead	**121**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

Partial

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W90 (0.2-0.8 ft)

Lab Sample ID: 144638-11 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**7.63**	mg/Kg		10/23/2014
Cadmium	**0.902**	mg/Kg		10/23/2014
Lead	**142**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

Partial

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W90 (0.8-1.3 ft)

Lab Sample ID: 144638-12 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**8.83**	mg/Kg		10/23/2014
Cadmium	**1.01**	mg/Kg		10/23/2014
Lead	**81.8**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

Partial

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W80 (0-0.2 ft)

Lab Sample ID: 144638-13 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**10.2**	mg/Kg		10/23/2014
Cadmium	**0.595**	mg/Kg	J	10/23/2014
Lead	**65.2**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

Partial

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W80 (0.2-0.8 ft)

Lab Sample ID: 144638-14 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**10.2**	mg/Kg		10/23/2014
Cadmium	**0.493**	mg/Kg	J	10/23/2014
Lead	**55.2**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

Partial

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W80 (0.8-1.4 ft)

Lab Sample ID: 144638-15 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**3.84**	mg/Kg	E	10/23/2014
Cadmium	**0.603**	mg/Kg	J	10/23/2014
Lead	**29.4**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

Partial

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W90 (0-0.2 ft)

Lab Sample ID: 144638-16 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**5.65**	mg/Kg	E	10/23/2014
Cadmium	**0.613**	mg/Kg	J	10/23/2014
Lead	**72.8**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

Partial

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W90 (0.2-0.7 ft)

Lab Sample ID: 144638-17 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**6.71**	mg/Kg		10/23/2014
Cadmium	**0.872**	mg/Kg		10/23/2014
Lead	**54.8**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

Partial

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W30 (0-0.2 ft)

Lab Sample ID: 144638-18 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**0.968**	mg/Kg	JE	10/23/2014
Cadmium	< 0.609	mg/Kg		10/23/2014
Lead	**52.0**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

Partial

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W83 (0.2-1.6 ft)

Lab Sample ID: 144638-19 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**1.74**	mg/Kg	E	10/23/2014
Cadmium	< 0.637	mg/Kg		10/23/2014
Lead	**40.6**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Analytical Report Appendix

The reported results relate only to the samples as they have been received by the laboratory.

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All soil/sludge samples have been reported on a dry weight basis, unless qualified "reported as received". Other solids are reported as received.

Low level Volatiles blank reports for soil/solid matrix are based on a nominal 5 gram weight. Sample results and reporting limits are based on actual weight, which may be more or less than 5 grams.

The Chain of Custody provides additional information, including compliance with sample condition requirements upon receipt. Sample condition requirements are defined under the 2003 NELAC Standard, sections 5.5.8.3.1 and 5.5.8.3.2.

NYSDOH ELAP does not certify for all parameters. Paradigm Environmental Services or the indicated subcontracted laboratory does hold certification for all analytes where certification is offered by ELAP unless otherwise specified. Aliquots separated for certain tests, such as TCLP, are indicated on the Chain of Custody and final reports with an "A" suffix.

Data qualifiers are used, when necessary, to provide additional information about the data. This information may be communicated as a flag or as text at the bottom of the report. Please refer to the following list of analyte-specific, frequently used data flags and their meaning:

"<" = Analyzed for but not detected at or above the quantitation limit.
"E" = Result has been estimated, calibration limit exceeded.
"Z" = See case narrative.
"D" = Sample, Laboratory Control Sample, or Matrix Spike Duplicate results above Relative Percent Difference limit.
"M" = Matrix spike recoveries outside QC limits. Matrix bias indicated.
"B" = Method blank contained trace levels of analyte. Refer to included method blank report.
"J" = Result estimated between the quantitation limit and half the quantitation limit.
"L" = Laboratory Control Sample recovery outside accepted QC limits.
"P" = Concentration differs by more than 40% between the primary and secondary analytical columns.
"NC" = Not calculable. Applicable to RPD if sample or duplicate result is non-detect or estimated (see primary report for data flags). Applicable to MS if sample is greater or equal to ten times the spike added. Applicable to sample surrogates or MS if sample dilution is 10x or higher.
"" = Indicates any recoveries outside associated acceptance windows.*
"(1)" = Indicates data from primary column used for QC calculation.

179 Lake Avenue, Rochester, NY 14608 Office (585) 647-2530 Fax (585) 647-3311

PAGE 1 OF 3

CHAIN OF CUSTODY

PARADIGM ENVIRONMENTAL SERVICES, INC.

REPORT TO:		INVOICE TO:		LAB PROJECT ID
CLIENT:	GEI CONSULTANTS	CLIENT:	NATIONAL FUEL GAS	144638
ADDRESS:	1301 TRUMANSBURG ROAD	ADDRESS:		Quotation #:
CITY:	ITHACA STATE: NY ZIP: 14850	CITY:	STATE: ZIP:	Email:
PHONE:	607 216 8958	PHONE:		
ATTN:	JAMES EDWARDS	ATTN:	BRAD WALKER	

PROJECT REFERENCE

NATIONAL FUEL GAS
MINERAL SPRINGS

Matrix Codes:
AQ - Aqueous Liquid; NQ - Non-Aqueous Liquid; WA - Water; WG - Groundwater; DW - Drinking Water; WW - Wastewater; SO - Soil; SL - Sludge; SD - Solid; PT - Paint; WP - Wipe; CK - Caulk; OL - Oil; AR - Air

REQUESTED ANALYSIS

	DATE COLLECTED	TIME COLLECTED	COMPOSITE	GRAB	SAMPLE IDENTIFIER	MATRIX CODES	NUMBER OF CONTAINERS	TCL VOCs	TCL SVOCs	TAL Metals	TOTAL CYANIDE	REMARKS	PARADIGM LAB SAMPLE NUMBER
1	10/22	14:30	~~X~~	X	Sb+IDS WSD (0-0.2')	SO	1	X	X	X	X		01
2		14:35	~~X~~	X	Sb + IDS WSD (0.2-0.7)		1	X	X	X	X		02
3		14:40		X	Sb + IDS WSD (0.7-1.5)		1	X	X	X	X		03
4		14:45		X	Sb + IDS WSD (0-0.2)		1	X	X	X	X		04
5		14:50		X	Sb + IDS WSD (0.2-1.0)		1	X	X	X	X		05
6		14:55		X	Sb + IDS WSD (1.0-1.5)		1	X	X	X	X		06
7		15:00		X	Sb + 20S WSD (0-0.2)		1	X	X	X	X		07
8		15:05		X	Sb + 20S WSD (0.2-1.0)		1	X	X	X	X		08
9		15:10		X	Sb + 20S WSD (1.0-1.5)		1	X	X	X	X		09
10		15:15		X	Sb + 20S WSD (0-0.2')		1	X	X	X	X		10

6°C iced 10/23 @ 0904. Custody seals dated & signed. KSS 10/23/14

Turnaround Time		Report Supplements			
Availability contingent upon lab approval; additional fees may apply.					
Standard 5 day	☐	Batch QC	☐	Basic EDD	☐
Rush 3 day	☐	Category A	☐	NYSDEC EDD	☒
Rush 2 day	☐	Category B	☒		
Rush 1 day	☒				
Other please indicate:	☐	Other please indicate:	☐	Other EDD please indicate:	☐

PASS 10/23/14 KSS

Sampled By	Michael Cummings	10/22 17:09	Date/Time
Relinquished By	Michael Cummings		Date/Time
Received By		10-23-14 1103	Date/Time
Received @ Lab By		10/23/14 0921	Date/Time

Total Cost:

P.I.F.

PAGE 2 OF 3

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CHAIN OF CUSTODY

PARADIGM ENVIRONMENTAL SERVICES, INC.

REPORT TO:	INVOICE TO:	LAB PROJECT ID
CLIENT:	CLIENT:	144638
ADDRESS:	ADDRESS:	Quotation #:
CITY: STATE: ZIP: SAME	CITY: STATE: ZIP: SAME	Email:
PHONE:	PHONE:	
ATTN:	ATTN:	

PROJECT REFERENCE

Matrix Codes:
AQ - Aqueous Liquid; NQ - Non-Aqueous Liquid; WA - Water; WG - Groundwater; DW - Drinking Water; WW - Wastewater; SO - Soil; SL - Sludge; SD - Solid; PT - Paint; WP - Wipe; CK - Caulk; OL - Oil; AR - Air

REQUESTED ANALYSIS

	DATE COLLECTED	TIME COLLECTED	COMPOSITE	GRAB	SAMPLE IDENTIFIER	MATRIX CODES	NUMBER OF CONTAINERS	LEAD	ARSENIC	CADMIUM	MERCURY	TOTAL CN	REMARKS	PARADIGM LAB SAMPLE NUMBER
1	10/22	15:20 mw2		X	SB+20S WG0 (0.2-0.4)	SO	1	X	X	X	X	X		11
2		15:25		X	SB+20S WG0 (0.5-1.3)		1	X	X	X	X	X		12
3		15:30		X	SB+30S WG0 (0.2-0.5)		1	X	X	X	X	X		13
4		15:35		X	SB+30S WG0 (0.2-0.4)		1	X	X	X	X	X		14
5		15:40		X	SB+30S WG0 (0.5-1.4)		1	X	X	X	X	X	per JH 15S 10/23/14	15
6		15:45		X	SB+30S WG0 (0-0.2)		1	X	X	X	X	X		16
7		15:50		X	SB+30S WG0 (0.2-0.7)		1	X	X	X	X	X		17
8		15:55		X	SB+30S WG0 (0-0.2)		1	X	X	X	X	X		18
9		16:00		X	SB+30S WG0 (0.2-1.6)		1	X	X	X	X	X		19
10		~~16:40~~		X	SB+30S WG0 (1.6-2.0)		1						sample not taken per JH. 15S 10/23/14	

Turnaround Time		Report Supplements			
Availability contingent upon lab approval; additional fees may apply.					
Standard 5 day	☐	Batch QC	☐	Basic EDD	☐
Rush 3 day	☐	Category A	☐	NYSDEC EDD	☐
Rush 2 day	☐	Category B	☒		
Rush 1 day	☒				
Other please indicate:	☐	Other per JH 15S 10/23/14 please indicate:	☐	Other EDD please indicate:	☐

Sampled By: Matthew Cummings	Date/Time: 10/22 17:09	Total Cost:	
Relinquished By: Matthew Cummings	Date/Time: 10/22		
Received By:	Date/Time: 10-22-14 17:??	P.I.F.	
Received @ Lab By:	Date/Time: 10/23/14 0921		

Chain of Custody Supplement

Client: GFI **Completed by:** KyleSwanick

Lab Project ID: 144638 **Date:** 10/23/14

Sample Condition Requirements

Per NELAC/ELAP 210/241/242/243/244

Condition	NELAC compliance with the sample condition requirements upon receipt: Yes	No	N/A
Container Type	X		
Comments			
Transferred to method-compliant container			X
Headspace (<1 mL)			X
Comments			
Preservation			X
Comments			
Chlorine Absent (<0.10 ppm per test strip)			X
Comments			
Holding Time	X		
Comments			
Temperature	X TCN		X
Comments	6° C iced by samples @ 0904. Custody seals dated & signed. KS 10/23/14		
Sufficient Sample Quantity	X		
Comments			

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W80 (0-0.2 ft)

Lab Sample ID: 144638-01 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**9.03**	mg/Kg		10/23/2014
Cadmium	**0.851**	mg/Kg		10/23/2014
Lead	**96.2**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

Partial

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W80 (0.2-0.7 ft)

Lab Sample ID: 144638-02 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**8.22**	mg/Kg		10/23/2014
Cadmium	**0.768**	mg/Kg		10/23/2014
Lead	**102**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W80 (0.7-1.5 ft)

Lab Sample ID: 144638-03 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**6.76**	mg/Kg		10/23/2014
Cadmium	**0.779**	mg/Kg		10/23/2014
Lead	**37.1**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W90 (0-0.2 ft)

Lab Sample ID: 144638-04 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**5.81**	mg/Kg	E	10/23/2014
Cadmium	**0.464**	mg/Kg	J	10/23/2014
Lead	**69.0**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W90 (0.2-1.0 ft)

Lab Sample ID: 144638-05 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**6.72**	mg/Kg		10/23/2014
Cadmium	< 0.611	mg/Kg		10/23/2014
Lead	**84.2**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

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PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W90 (1.0-1.5 ft)

Lab Sample ID: 144638-06 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**2.47**	mg/Kg	E	10/23/2014
Cadmium	**0.704**	mg/Kg		10/23/2014
Lead	**23.6**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

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PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W80 (0-0.2 ft)

Lab Sample ID: 144638-07 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**8.27**	mg/Kg		10/23/2014
Cadmium	**0.632**	mg/Kg	J	10/23/2014
Lead	**57.0**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

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PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W80 (0.2-1.0 ft)

Lab Sample ID: 144638-08 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**8.99**	mg/Kg		10/23/2014
Cadmium	**0.634**	mg/Kg	J	10/23/2014
Lead	**54.5**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

Partial

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W80 (1.0-1.5 ft)

Lab Sample ID: 144638-09 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**8.36**	mg/Kg		10/23/2014
Cadmium	**0.962**	mg/Kg		10/23/2014
Lead	**68.1**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

Partial

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W90 (0-0.2 ft)

Lab Sample ID: 144638-10 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**6.24**	mg/Kg	E	10/23/2014
Cadmium	**0.806**	mg/Kg		10/23/2014
Lead	**121**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

Partial

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W90 (0.2-0.8 ft)

Lab Sample ID: 144638-11 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**7.63**	mg/Kg		10/23/2014
Cadmium	**0.902**	mg/Kg		10/23/2014
Lead	**142**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

Partial

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W90 (0.8-1.3 ft)

Lab Sample ID: 144638-12 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**8.83**	mg/Kg		10/23/2014
Cadmium	**1.01**	mg/Kg		10/23/2014
Lead	**81.8**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

Partial

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W80 (0-0.2 ft)

Lab Sample ID: 144638-13 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**10.2**	mg/Kg		10/23/2014
Cadmium	**0.595**	mg/Kg	J	10/23/2014
Lead	**65.2**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

Partial

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W80 (0.2-0.8 ft)

Lab Sample ID: 144638-14 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**10.2**	mg/Kg		10/23/2014
Cadmium	**0.493**	mg/Kg	J	10/23/2014
Lead	**55.2**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

Partial

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W80 (0.8-1.4 ft)

Lab Sample ID: 144638-15 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**3.84**	mg/Kg	E	10/23/2014
Cadmium	**0.603**	mg/Kg	J	10/23/2014
Lead	**29.4**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

Partial

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W90 (0-0.2 ft)

Lab Sample ID: 144638-16 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**5.65**	mg/Kg	E	10/23/2014
Cadmium	**0.613**	mg/Kg	J	10/23/2014
Lead	**72.8**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

Partial

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W90 (0.2-0.7 ft)

Lab Sample ID: 144638-17 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**6.71**	mg/Kg		10/23/2014
Cadmium	**0.872**	mg/Kg		10/23/2014
Lead	**54.8**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

Partial

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W30 (0-0.2 ft)

Lab Sample ID: 144638-18 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**0.968**	mg/Kg	JE	10/23/2014
Cadmium	< 0.609	mg/Kg		10/23/2014
Lead	**52.0**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Partial

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W83 (0.2-1.6 ft)

Lab Sample ID: 144638-19 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**1.74**	mg/Kg	E	10/23/2014
Cadmium	< 0.637	mg/Kg		10/23/2014
Lead	**40.6**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

Partial

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Analytical Report Appendix

The reported results relate only to the samples as they have been received by the laboratory.

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All soil/sludge samples have been reported on a dry weight basis, unless qualified "reported as received". Other solids are reported as received.

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Data qualifiers are used, when necessary, to provide additional information about the data. This information may be communicated as a flag or as text at the bottom of the report. Please refer to the following list of analyte-specific, frequently used data flags and their meaning:

"<" = Analyzed for but not detected at or above the quantitation limit.
"E" = Result has been estimated, calibration limit exceeded.
"Z" = See case narrative.
"D" = Sample, Laboratory Control Sample, or Matrix Spike Duplicate results above Relative Percent Difference limit.
"M" = Matrix spike recoveries outside QC limits. Matrix bias indicated.
"B" = Method blank contained trace levels of analyte. Refer to included method blank report.
"J" = Result estimated between the quantitation limit and half the quantitation limit.
"L" = Laboratory Control Sample recovery outside accepted QC limits.
"P" = Concentration differs by more than 40% between the primary and secondary analytical columns.
"NC" = Not calculable. Applicable to RPD if sample or duplicate result is non-detect or estimated (see primary report for data flags). Applicable to MS if sample is greater or equal to ten times the spike added. Applicable to sample surrogates or MS if sample dilution is 10x or higher.
"" = Indicates any recoveries outside associated acceptance windows.*
"(1)" = Indicates data from primary column used for QC calculation.

179 Lake Avenue, Rochester, NY 14608 Office (585) 647-2530 Fax (585) 647-3311

PAGE 1 OF 3

CHAIN OF CUSTODY

PARADIGM ENVIRONMENTAL SERVICES, INC.

REPORT TO:		INVOICE TO:		LAB PROJECT ID
CLIENT:	GEI CONSULTANTS	CLIENT:	NATIONAL FUEL GAS	144638
ADDRESS:	1301 TRUMANSBURG ROAD	ADDRESS:		Quotation #:
CITY:	ITHACA STATE: NY ZIP: 14850	CITY:	STATE: ZIP:	Email:
PHONE:	607 216 8958	PHONE:		
ATTN:	JAMES EDWARDS	ATTN:	BRAD WALKER	

PROJECT REFERENCE

NATIONAL FUEL GAS
MINERAL SPRINGS

Matrix Codes:
AQ - Aqueous Liquid; NQ - Non-Aqueous Liquid; WA - Water; WG - Groundwater; DW - Drinking Water; WW - Wastewater; SO - Soil; SL - Sludge; SD - Solid; PT - Paint; WP - Wipe; CK - Caulk; OL - Oil; AR - Air

REQUESTED ANALYSIS

	DATE COLLECTED	TIME COLLECTED	COMPOSITE	GRAB	SAMPLE IDENTIFIER	MATRIX CODES	NUMBER OF CONTAINERS	TCL VOCs	TCL SVOCs	TAL Metals	TOTAL CYANIDE	REMARKS	PARADIGM LAB SAMPLE NUMBER
1	10/22	14:30	~~X~~	X	Sb+IDS WSD (0-0.2')	SO	1	X	X	X	X		01
2		14:35	~~X~~	X	Sb + IDS WSD (0.2-0.7)		1	X	X	X	X		02
3		14:40		X	Sb + IDS WSD (0.7-1.5)		1	X	X	X	X		03
4		14:45		X	Sb + IDS WSD (0-0.2)		1	X	X	X	X		04
5		14:50		X	Sb + IDS WSD (0.2-1.0)		1	X	X	X	X		05
6		14:55		X	Sb + IDS WSD (1.0-1.5)		1	X	X	X	X		06
7		15:00		X	Sb + 20S WSD (0-0.2)		1	X	X	X	X		07
8		15:05		X	Sb + 20S WSD (0.2-1.0)		1	X	X	X	X		08
9		15:10		X	Sb + 20S WSD (1.0-1.5)		1	X	X	X	X		09
10		15:15		X	Sb + 20S WSD (0-0.2')		1	X	X	X	X		10

6°C iced 10/23 @ 0904. Custody seals dated & signed. KSS 10/23/14

Turnaround Time		Report Supplements			
Availability contingent upon lab approval; additional fees may apply.					
Standard 5 day	☐	Batch QC	☐	Basic EDD	☐
Rush 3 day	☐	Category A	☐	NYSDEC EDD	☒
Rush 2 day	☐	Category B	☒		
Rush 1 day	☒				
Other please indicate:	☐	Other please indicate:	☐	Other EDD please indicate:	☐

PASS 10/23/14 KSS

Sampled By	Michael Cummings	10/22 17:09	Date/Time
Relinquished By	Michael Cummings		Date/Time
Received By		10-23-14 1103	Date/Time
Received @ Lab By		10/23/14 0921	Date/Time

Total Cost:

P.I.F.

PAGE 2 OF 3

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CHAIN OF CUSTODY

PARADIGM ENVIRONMENTAL SERVICES, INC.

REPORT TO:	INVOICE TO:	LAB PROJECT ID
CLIENT:	CLIENT:	144638
ADDRESS:	ADDRESS:	Quotation #:
CITY: STATE: ZIP: SAME	CITY: STATE: ZIP: SAME	Email:
PHONE:	PHONE:	
ATTN:	ATTN:	

PROJECT REFERENCE

Matrix Codes:
AQ - Aqueous Liquid; NQ - Non-Aqueous Liquid; WA - Water; WG - Groundwater; DW - Drinking Water; WW - Wastewater; SO - Soil; SL - Sludge; SD - Solid; PT - Paint; WP - Wipe; CK - Caulk; OL - Oil; AR - Air

REQUESTED ANALYSIS

	DATE COLLECTED	TIME COLLECTED	COMPOSITE	GRAB	SAMPLE IDENTIFIER	MATRIX CODES	NUMBER OF CONTAINERS	LEAD	ARSENIC	CADMIUM	MERCURY	TOTAL CN	REMARKS	PARADIGM LAB SAMPLE NUMBER
1	10/22	15:20 mw2		X	SB+20S WG0 (0.2-0.4)	SO	1	X	X	X	X	X		11
2		15:25		X	SB+20S WG0 (0.5-1.3)		1	X	X	X	X	X		12
3		15:30		X	SB+30S WG0 (0.2-0.5)		1	X	X	X	X	X		13
4		15:35		X	SB+30S WG0 (0.2-0.4)		1	X	X	X	X	X		14
5		15:40		X	SB+30S WG0 (0.5-1.4)		1	X	X	X	X	X	per JH 15S 10/23/14	15
6		15:45		X	SB+30S WG0 (0-0.2)		1	X	X	X	X	X		16
7		15:50		X	SB+30S WG0 (0.2-0.7)		1	X	X	X	X	X		17
8		15:55		X	SB+30S WG0 (0-0.2)		1	X	X	X	X	X		18
9		16:00		X	SB+30S WG0 (0.2-1.6)		1	X	X	X	X	X		19
10		~~16:40~~		X	SB+30S WG0 (1.6-2.0)		1						sample not taken per JH. 15S 10/23/14	

Turnaround Time		Report Supplements			
Availability contingent upon lab approval; additional fees may apply.					
Standard 5 day	☐	Batch QC	☐	Basic EDD	☐
Rush 3 day	☐	Category A	☐	NYSDEC EDD	☐
Rush 2 day	☐	Category B	☒		
Rush 1 day	☒				
Other please indicate:	☐	Other per JH 15S 10/23/14 please indicate:	☐	Other EDD please indicate:	☐

Sampled By: Matthew Cummings	Date/Time: 10/22 17:09	Total Cost:	
Relinquished By: Matthew Cummings	Date/Time: 10/22		
Received By:	Date/Time: 10-22-14 17:??	P.I.F.	
Received @ Lab By:	Date/Time: 10/23/14 0921		

Chain of Custody Supplement

Client: GFI **Completed by:** KyleSwanick

Lab Project ID: 144638 **Date:** 10/23/14

Sample Condition Requirements

Per NELAC/ELAP 210/241/242/243/244

Condition	NELAC compliance with the sample condition requirements upon receipt: Yes	No	N/A
Container Type	X		
Comments			
Transferred to method-compliant container			X
Headspace (<1 mL)			X
Comments			
Preservation			X
Comments			
Chlorine Absent (<0.10 ppm per test strip)			X
Comments			
Holding Time	X		
Comments			
Temperature	X TCN		X
Comments	6° C iced by samples @ 0904. Custody seals dated & signed. KS 10/23/14		
Sufficient Sample Quantity	X		
Comments			

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144706

Client: **GEI Consultants Inc.**

Project Reference: NFG Mineral Springs

Sample Identifier:	S6 & 20N W80 (0-2")		
Lab Sample ID:	144706-01	**Date Sampled:**	10/28/2014
Matrix:	Soil	**Date Received:**	10/29/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**8.27**	mg/Kg		10/29/2014
Cadmium	**1.26**	mg/Kg		10/29/2014
Lead	**121**	mg/Kg		10/29/2014

Method Reference(s): EPA 6010C
EPA 3050
Preparation Date: 10/30/2014
Data File: 102914b

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Report Prepared Wednesday, November 19, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144706

Client: **GEI Consultants Inc.**

Project Reference: NFG Mineral Springs

Sample Identifier:	S6 & 20N W80 (0-2")		
Lab Sample ID:	144706-01	**Date Sampled:**	10/28/2014
Matrix:	Soil	**Date Received:**	10/29/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.148**	mg/Kg		10/30/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/30/2014
Data File: QC141029A

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144706

Client: **GEI Consultants Inc.**

Project Reference: NFG Mineral Springs

Sample Identifier:	S6 & 20N W80 (0-2")		
Lab Sample ID:	144706-01	**Date Sampled:**	10/28/2014
Matrix:	Soil	**Date Received:**	10/29/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.387**	mg/Kg	J	10/29/2014

Method Reference(s): EPA 9014
Preparation Date: 10/29/2014

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PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144706

Client: **GEI Consultants Inc.**

Project Reference: NFG Mineral Springs

Sample Identifier:	S6 & 20N W70 (0-2")		
Lab Sample ID:	144706-02	**Date Sampled:**	10/28/2014
Matrix:	Soil	**Date Received:**	10/29/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**9.32**	mg/Kg		10/29/2014
Cadmium	**1.18**	mg/Kg		10/29/2014
Lead	**168**	mg/Kg		10/29/2014

Method Reference(s): EPA 6010C
EPA 3050
Preparation Date: 10/30/2014
Data File: 102914b

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144706

Client: **GEI Consultants Inc.**

Project Reference: NFG Mineral Springs

Sample Identifier:	S6 & 20N W70 (0-2")		
Lab Sample ID:	144706-02	**Date Sampled:**	10/28/2014
Matrix:	Soil	**Date Received:**	10/29/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.231**	mg/Kg		10/30/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/30/2014
Data File: QC141029A

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144706

Client: **GEI Consultants Inc.**

Project Reference: NFG Mineral Springs

Sample Identifier:	S6 & 20N W70 (0-2")		
Lab Sample ID:	144706-02	**Date Sampled:**	10/28/2014
Matrix:	Soil	**Date Received:**	10/29/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.726**	mg/Kg		10/29/2014

Method Reference(s): EPA 9014
Preparation Date: 10/29/2014

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PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144706

Client: **GEI Consultants Inc.**

Project Reference: NFG Mineral Springs

Sample Identifier:	S6 & 10N W80 (0-2")		
Lab Sample ID:	144706-03	**Date Sampled:**	10/28/2014
Matrix:	Soil	**Date Received:**	10/29/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**7.41**	mg/Kg		10/29/2014
Cadmium	**0.916**	mg/Kg		10/29/2014
Lead	**102**	mg/Kg		10/29/2014

Method Reference(s): EPA 6010C
EPA 3050
Preparation Date: 10/30/2014
Data File: 102914b

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Lab Project ID: 144706

Client: **GEI Consultants Inc.**

Project Reference: NFG Mineral Springs

Sample Identifier:	S6 & 10N W80 (0-2")		
Lab Sample ID:	144706-03	**Date Sampled:**	10/28/2014
Matrix:	Soil	**Date Received:**	10/29/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.138**	mg/Kg		10/30/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/30/2014
Data File: QC141029A

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Report Prepared Wednesday, November 19, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144706

Client: **GEI Consultants Inc.**

Project Reference: NFG Mineral Springs

Sample Identifier:	S6 & 10N W80 (0-2")		
Lab Sample ID:	144706-03	**Date Sampled:**	10/28/2014
Matrix:	Soil	**Date Received:**	10/29/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.371**	mg/Kg	J	10/29/2014

Method Reference(s): EPA 9014
Preparation Date: 10/29/2014

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

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"M" = Matrix spike recoveries outside QC limits. Matrix bias indicated.
"B" = Method blank contained trace levels of analyte. Refer to included method blank report.
"J" = Result estimated between the quantitation limit and half the quantitation limit.
"L" = Laboratory Control Sample recovery outside accepted QC limits.
"P" = Concentration differs by more than 40% between the primary and secondary analytical columns.
"NC" = Not calculable. Applicable to RPD if sample or duplicate result is non-detect or estimated (see primary report for data flags). Applicable to MS if sample is greater or equal to ten times the spike added. Applicable to sample surrogates or MS if sample dilution is 10x or higher.
"" = Indicates any recoveries outside associated acceptance windows. Surrogate outliers in samples are presumed matrix effects. LCS demonstrates method compliance unless otherwise noted.*
"(1)" = Indicates data from primary column used for QC calculation.

GENERAL TERMS AND CONDITIONS
LABORATORY SERVICES

These Terms and Conditions embody the whole agreement of the parties in the absence of a signed and executed contract between the Laboratory (LAB) and Client. They shall supersede all previous communications, representations, or agreements, either verbal or written, between the parties. The LAB specifically rejects all additional, inconsistent, or conflicting terms, whether printed or otherwise set forth in any purchase order or other communication from the Client to the LAB. The invalidity or unenforceability in whole or in part of any provision, term, or condition hereof shall not affect in any way the validity or enforceability of the remainder of the Terms and Conditions. No waiver by LAB of any provision, term, or condition hereof or of any breach by or obligation of the Client hereunder shall constitute a waiver of such provision, term, or condition on any other occasion or a waiver of any other breach by or obligation of the Client. This agreement shall be administered and interpreted under the laws of the state which services are procured.

Warranty. Recognizing that the nature of many samples is unknown and that some may contain potentially hazardous components, LAB warrants only that it will perform testing services, obtain findings, and prepare reports in accordance with generally accepted analytical laboratory principles and practices at the time of performance of services. LAB makes no other warranty, express or implied.

Scope and Compensation. LAB agrees to perform the services described in the chain of custody to which these terms and conditions are attached. Unless the parties agree in writing to the contrary, the duties of LAB shall not be construed to exceed the services specifically described. LAB will use LAB default method for all tests unless specified otherwise on the Work Order.
Payment terms are net 30 days from the date of invoice. All overdue payments are subject to an interest charge of one and one-half percent (1-1/2%) per month or a portion thereof. Client shall also be responsible for costs of collection, including payment of reasonable attorney fees if such expense is incurred. The prices, unless stated, do not include any sale, use or other taxes. Such taxes will be added to invoice prices when required.

Prices. Compensation for services performed will be based on the current Lab Analytical Fee Schedule or on quotations agreed to in writing by the parties. Turnaround time based charges are determined from the time of resolution of all work order questions. Testimony, court appearances or data compilation for legal action will be charged separately.

Limitations of Liability. In the event of any error, omission, or other professional negligence, the sole and exclusive responsibility of LAB shall be to re-perform the deficient work at its own expense and LAB shall have no other liability whatsoever. All claims shall be deemed waived unless made in writing and received by LAB within ninety (90) days following completion of services.
LAB shall have no liability, obligation, or responsibility of any kind for losses, costs, expenses, or other damages (including but not limited to any special, direct, incidental or consequential damages) with respect to LAB's services or results.
All results provided by LAB are strictly for the use of its clients and LAB is in no way responsible for the use of such results by clients or third parties. All reports should be considered in their entirety, and LAB is not responsible for the separation, detachment, or other use of any portion of these reports. Client may not assign the lab report without the written consent of the LAB.
Client covenants and agrees, at its/his/her sole expense, to indemnify, protect, defend, and save harmless the LAB from and against any and all damages, losses, liabilities, obligations, penalties, claims, litigation, demands, defenses, judgments, suits, actions, proceedings, costs, disbursements and/or expenses (including, without limitation attorneys' and experts' fees and disbursements) of any kind whatsoever which may at any time be imposed upon, incurred by or asserted or awarded against client relating to, resulting from or arising out of (a) the breach of this agreement by this client, (b) the negligence of the client in handling, delivering or disclosing any hazardous substance, (c) the violation of the Client of any applicable law, (d) non-compliance by the Client with any environmental permit or (e) a material misrepresentation in disclosing the materials to be tested.

Hazard Disclosure. Client represents and warrants that any sample delivered to LAB will be preceded or accompanied by complete written disclosure of the presence of any hazardous substances known or suspected by Client. Client further warrants that any sample containing any hazardous substance that is to be delivered to LAB will be packaged, labeled, transported, and delivered properly and in accordance with applicable laws.

Sample Handling. Prior to LAB's acceptance of any sample (or after any revocation of acceptance), the entire risk of loss or of damage to such sample remains with Client. Samples are accepted when receipt is acknowledged on chain of custody documentation. In no event will LAB have any responsibility for the action or inaction of any carrier shipping or delivering any sample to or from LAB premises.
Client authorizes LAB to proceed with the analysis of samples as received by the laboratory, recognizing that any samples not in compliance with all current DOH-ELAP-NELAP requirements for containers, preservation or holding time will be noted as such on the final report.
Disposal of hazardous waste samples is the responsibility of the Client. If the Client does not wish such samples returned, LAB may add storage and disposal fees to the final invoice. Maximum storage time for samples is 30 days after completion of analysis unless modified by applicable state or federal laws. Client will be required to give the LAB written instructions concerning disposal of these samples.
LAB reserves the absolute right, exercisable at any time, to refuse to receive delivery of, refuse to accept, or revoke acceptance of any sample, which, in the sole judgment of LAB (a) is of unsuitable volume, (b) may be or become unsuitable for or may pose a risk in handling, transport, or processing for any health, safety, environmental or other reason whether or not due to the presence in the sample of any hazardous substance, and whether or not such presence has been disclosed to LAB by Client or (c) if the condition or sample date make the sample unsuitable for analysis.

Legal Responsibility. LAB is solely responsible for performance of this contract, and no affiliated company, director, officer, employee, or agent shall have any legal responsibility hereunder, whether in contract or tort including negligence.

Assignment. LAB may assign its performance obligations under this contract to other parties, as it deems necessary. LAB shall disclose to Client any assignee (subcontractor) by ELAP ID # on the submitted final report.

Force Majeure. LAB shall have no responsibility or liability to the Client for any failure or delay in performance by LAB, which results in whole or in part from any cause or circumstance beyond the reasonable control of LAB. Such causes and circumstances shall include, but not limited to, acts of God, acts or orders of any government authority, strikes or other labor disputes, natural disasters, accidents, wars, civil disturbances, difficulties or delays in transportation, mail or delivery services, inability to obtain sufficient services or supplies from LAB's usual suppliers, or any other cause beyond LAB's reasonable control.

Law. This contract shall be continued under the laws of the State of New York without regard to its conflicts of laws provision.

179 Lake Avenue, Rochester, NY 14608 Office (585) 647-2530 Fax (585) 647-3311

CHAIN OF CUSTODY

PARADIGM ENVIRONMENTAL SERVICES, INC.

REPORT TO:		INVOICE TO:		LAB PROJECT ID
CLIENT:	GEI CONSULTANTS - Jamie Edwards	CLIENT:	National Fuel Gas	144706
ADDRESS:	1301 Trumansburg Rd	ADDRESS:		Quotation #:
CITY:	Ithaca	STATE: NY	ZIP: 14850	CITY: STATE: ZIP:
PHONE:	607 216 5958	PHONE:		Email:
ATTN:		ATTN:	BRAD WALKER	

PROJECT REFERENCE

NFG Minerva Springs

Matrix Codes:
AQ - Aqueous Liquid; NQ - Non-Aqueous Liquid; WA - Water; WG - Groundwater; DW - Drinking Water; WW - Wastewater; SO - Soil; SL - Sludge; SD - Solid; PT - Paint; WP - Wipe; CK - Caulk; OL - Oil; AR - Air

REQUESTED ANALYSIS

	DATE COLLECTED	TIME COLLECTED	COMPOSITE	GRAB	SAMPLE IDENTIFIER	MATRIX CODES	NUMBER OF CONTAINERS	Lead	Mercury	Cadmium	Arsenic	Cyanide	REMARKS	PARADIGM LAB SAMPLE NUMBER
1	10/28	1450		X	S6+20N W&O (0-2")	SO		X	X	X	X	X	RUSH 1 DAY	01
2		1500		X	S6+20N W70 (0-2")	SO		X	X	X	X	X		02
3		1455		X	S6+10N W&O (0-2")	SO		X	X	X	X	X		03
4														
5														
6														
7														
8					ok to proceed on test out of temp. per Brad Walker KS 10/29/14								9°C iced by samples. 10/29 @ 0905	
9														
10													Custody seal dated + signed KS 10/29/14	

Turnaround Time		Report Supplements			
Availability contingent upon lab approval; additional fees may apply.					
Standard 5 day	☐	Batch QC	☐	Basic EDD	☐
Rush 3 day	☐	Category A	☐	NYSDEC EDD	☒
Rush 2 day	☐	Category B	☒ per history KS 10/29/14		
Rush 1 day	☒				
Other please indicate:	☐	Other please indicate:	☐	Other EDD please indicate:	☐

Sampled By		10/28/14	1500
Relinquished By		10/28/14	1600
Received By		10/28/14	1600
Received @ Lab By		10/29/14	0909

Total Cost:

P.I.F.

1 of 2

179 Lake Avenue, Rochester, NY 14608 Office (585) 647-2530 Fax (585) 647-3311

CHAIN OF CUSTODY

PARADIGM ENVIRONMENTAL SERVICES, INC.

REPORT TO:		INVOICE TO:		LAB PROJECT ID
CLIENT:	GEI CONSULTANTS - James Edwards	CLIENT:	Nathan Fuel Gas	1441706
ADDRESS:	301 Trumansburg Road	ADDRESS:		Quotation #:
CITY:	Ithaca STATE: NY ZIP: 14850	CITY: STATE: ZIP:		Email:
PHONE:	607 216 8958	PHONE:		
ATTN:		ATTN:	BRAD WALKER	

PROJECT REFERENCE: NFG Mineral Springs

Matrix Codes:
AQ - Aqueous Liquid; NQ - Non-Aqueous Liquid; WA - Water; WG - Groundwater; DW - Drinking Water; WW - Wastewater; SO - Soil; SL - Sludge; SD - Solid; PT - Paint; WP - Wipe; CK - Caulk; OL - Oil; AR - Air

REQUESTED ANALYSIS

	DATE COLLECTED	TIME COLLECTED	COMPOSITE	GRAB	SAMPLE IDENTIFIER	MATRIX CODES	NUMBER OF CONTAINERS	Lead	Mercury	Cadmium	Arsenic	Cyanide	REMARKS	PARADIGM LAB SAMPLE NUMBER
1	10/28	1450		X	S6+20N WSO (0-2")	SO		X	X	X	X	X	RUSH 1 DAY	C 1
2		1500		X	S6+20N WTO (0-2")	SO		X	X	X	X	X		C 2
3		1455		X	S6+10N WSO (0-2")	SO		X	X	X	X	X		C 3
4														
5														
6														
7														
8														
9														
10														

ok to proceed on test out of temp. per Brad Walker KS 10/29/14

9°C iced by samples. 10/29 @ 0905 Custody seal dated/signed KS 10/29/14

Turnaround Time	Report Supplements		
Availability contingent upon lab approval; additional fees may apply.			
Standard 5 day ☐	Batch QC ☐	Basic EDD ☐	
Rush 3 day ☐	Category A ☐	NYSDEC EDD ☒	
Rush 2 day ☐	Category B ☒	per history KS 10/29/14	
Rush 1 day ☒			
Other ☐ please indicate:	Other ☐ please indicate:	Other EDD ☐ please indicate:	

Sampled By	10/28/14	1500	Total Cost:
Relinquished By	10/28/14	1600	
Received By	10/28/14	1600	P.I.F.
Received @ Lab By	10/29/14	0909	

Date/Time

2 of 2

Chain of Custody Supplement

Client: GEI Consultants **Completed by:** Kyle Swanick

Lab Project ID: 14706 **Date:** 10/29/14

Sample Condition Requirements

Per NELAC/ELAP 210/241/242/243/244

Condition	NELAC compliance with the sample condition requirements upon receipt Yes	No	N/A
Container Type	X		
Comments			
Transferred to method-compliant container			X
Headspace (<1 mL)			X
Comments			
Preservation			X
Comments			
Chlorine Absent (<0.10 ppm per test strip)			X
Comments			
Holding Time	X		
Comments			
Temperature		X TCN	X
Comments	9° C, iced by samples @ 0905. custody seal dated + signed. KS 10/29/14		
Sufficient Sample Quantity	X		
Comments			

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W80 (0-0.2 ft)

Lab Sample ID: 144638-01 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**9.03**	mg/Kg		10/23/2014
Cadmium	**0.851**	mg/Kg		10/23/2014
Lead	**96.2**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W80 (0-0.2 ft)
Lab Sample ID: 144638-01 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.129**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W80 (0-0.2 ft)

Lab Sample ID: 144638-01 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.636**	mg/Kg		10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W80 (0.2-0.7 ft)

Lab Sample ID: 144638-02 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**8.22**	mg/Kg		10/23/2014
Cadmium	**0.768**	mg/Kg		10/23/2014
Lead	**102**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W80 (0.2-0.7 ft)

Lab Sample ID: 144638-02 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.129**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W80 (0.2-0.7 ft)

Lab Sample ID: 144638-02 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.418**	mg/Kg	J	10/24/2014

Method Reference(s): EPA 9014

Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W80 (0.7-1.5 ft)

Lab Sample ID: 144638-03 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**6.76**	mg/Kg		10/23/2014
Cadmium	**0.779**	mg/Kg		10/23/2014
Lead	**37.1**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W80 (0.7-1.5 ft)
Lab Sample ID: 144638-03 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.0840**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W80 (0.7-1.5 ft)

Lab Sample ID: 144638-03 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	< 0.649	mg/Kg		10/24/2014

Method Reference(s): EPA 9014

Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W90 (0-0.2 ft)

Lab Sample ID: 144638-04 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**6.41**	mg/Kg		10/24/2014
Cadmium	**0.464**	mg/Kg	J	10/23/2014
Lead	**69.0**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102414a

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W90 (0-0.2 ft)
Lab Sample ID: 144638-04 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.121**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W90 (0-0.2 ft)
Lab Sample ID: 144638-04 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.452**	mg/Kg	J	10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W90 (0.2-1.0 ft)

Lab Sample ID: 144638-05 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**6.72**	mg/Kg		10/23/2014
Cadmium	< 0.611	mg/Kg		10/23/2014
Lead	**84.2**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W90 (0.2-1.0 ft)
Lab Sample ID: 144638-05 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	< 0.0193	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W90 (0.2-1.0 ft)
Lab Sample ID: 144638-05 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.749**	mg/Kg		10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W90 (1.0-1.5 ft)

Lab Sample ID: 144638-06 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**4.14**	mg/Kg		10/24/2014
Cadmium	**0.704**	mg/Kg		10/23/2014
Lead	**23.6**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102414a

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W90 (1.0-1.5 ft)
Lab Sample ID: 144638-06 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.0669**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W90 (1.0-1.5 ft)
Lab Sample ID: 144638-06 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	< 0.649	mg/Kg		10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W80 (0-0.2 ft)

Lab Sample ID: 144638-07 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**8.27**	mg/Kg		10/23/2014
Cadmium	**0.632**	mg/Kg	J	10/23/2014
Lead	**57.0**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W80 (0-0.2 ft)
Lab Sample ID: 144638-07 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.107**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W80 (0-0.2 ft)
Lab Sample ID: 144638-07 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.384**	mg/Kg	J	10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W80 (0.2-1.0 ft)

Lab Sample ID: 144638-08 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**8.99**	mg/Kg		10/23/2014
Cadmium	**0.634**	mg/Kg	J	10/23/2014
Lead	**54.5**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W80 (0.2-1.0 ft)

Lab Sample ID: 144638-08 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.0974**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W80 (0.2-1.0 ft)

Lab Sample ID: 144638-08 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	< 0.633	mg/Kg		10/24/2014

Method Reference(s): EPA 9014

Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W80 (1.0-1.5 ft)

Lab Sample ID: 144638-09 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**8.36**	mg/Kg		10/23/2014
Cadmium	**0.962**	mg/Kg		10/23/2014
Lead	**68.1**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W80 (1.0-1.5 ft)
Lab Sample ID: 144638-09 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.111**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W80 (1.0-1.5 ft)

Lab Sample ID: 144638-09 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	< 0.602	mg/Kg		10/24/2014

Method Reference(s): EPA 9014

Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W90 (0-0.2 ft)
Lab Sample ID: 144638-10 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**6.28**	mg/Kg		10/24/2014
Cadmium	**0.806**	mg/Kg		10/23/2014
Lead	**121**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050
Preparation Date: 10/23/2014
Data File: 102414a

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W90 (0-0.2 ft)
Lab Sample ID: 144638-10 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.122**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W90 (0-0.2 ft)
Lab Sample ID: 144638-10 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.343**	mg/Kg	J	10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W90 (0.2-0.8 ft)
Lab Sample ID: 144638-11 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**7.63**	mg/Kg		10/23/2014
Cadmium	**0.902**	mg/Kg		10/23/2014
Lead	**142**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050
Preparation Date: 10/23/2014
Data File: 102314b

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W90 (0.2-0.8 ft)
Lab Sample ID: 144638-11 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.128**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W90 (0.2-0.8 ft)

Lab Sample ID: 144638-11 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.311**	mg/Kg	J	10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W90 (0.8-1.3 ft)

Lab Sample ID: 144638-12 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**8.83**	mg/Kg		10/23/2014
Cadmium	**1.01**	mg/Kg		10/23/2014
Lead	**81.8**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W90 (0.8-1.3 ft)
Lab Sample ID: 144638-12 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.124**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W90 (0.8-1.3 ft)
Lab Sample ID: 144638-12 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.338**	mg/Kg	J	10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W80 (0-0.2 ft)

Lab Sample ID: 144638-13 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**10.2**	mg/Kg		10/23/2014
Cadmium	**0.595**	mg/Kg	J	10/23/2014
Lead	**65.2**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W80 (0-0.2 ft)
Lab Sample ID: 144638-13 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.139**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W80 (0-0.2 ft)

Lab Sample ID: 144638-13 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	< 0.651	mg/Kg		10/24/2014

Method Reference(s): EPA 9014

Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W80 (0.2-0.8 ft)

Lab Sample ID: 144638-14 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**10.2**	mg/Kg		10/23/2014
Cadmium	**0.493**	mg/Kg	J	10/23/2014
Lead	**55.2**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W80 (0.2-0.8 ft)
Lab Sample ID: 144638-14 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.122**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W80 (0.2-0.8 ft)

Lab Sample ID: 144638-14 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.342**	mg/Kg	J	10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W80 (0.8-1.4 ft)

Lab Sample ID: 144638-15 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**3.92**	mg/Kg		10/24/2014
Cadmium	**0.603**	mg/Kg	J	10/23/2014
Lead	**29.4**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102414a

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W80 (0.8-1.4 ft)
Lab Sample ID: 144638-15 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.0781**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W80 (0.8-1.4 ft)

Lab Sample ID: 144638-15 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	< 0.616	mg/Kg		10/24/2014

Method Reference(s): EPA 9014

Preparation Date: 10/23/2014

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W90 (0-0.2 ft)

Lab Sample ID: 144638-16 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**6.00**	mg/Kg		10/24/2014
Cadmium	**0.613**	mg/Kg	J	10/23/2014
Lead	**72.8**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102414a

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W90 (0-0.2 ft)
Lab Sample ID: 144638-16 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.116**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W90 (0-0.2 ft)
Lab Sample ID: 144638-16 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.342**	mg/Kg	J	10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W90 (0.2-0.7 ft)
Lab Sample ID: 144638-17 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**6.71**	mg/Kg		10/23/2014
Cadmium	**0.872**	mg/Kg		10/23/2014
Lead	**54.8**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050
Preparation Date: 10/23/2014
Data File: 102314b

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W90 (0.2-0.7 ft)
Lab Sample ID: 144638-17 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.0864**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W90 (0.2-0.7 ft)

Lab Sample ID: 144638-17 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	< 0.639	mg/Kg		10/24/2014

Method Reference(s): EPA 9014

Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W30 (0-0.2 ft)
Lab Sample ID: 144638-18 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**0.962**	mg/Kg	J	10/24/2014
Cadmium	< 0.609	mg/Kg		10/23/2014
Lead	**52.0**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050
Preparation Date: 10/23/2014
Data File: 102414a

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W30 (0-0.2 ft)
Lab Sample ID: 144638-18 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.118**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W30 (0-0.2 ft)
Lab Sample ID: 144638-18 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	< 0.566	mg/Kg		10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W83 (0.2-1.6 ft)

Lab Sample ID: 144638-19 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**1.61**	mg/Kg		10/24/2014
Cadmium	< 0.637	mg/Kg		10/23/2014
Lead	**40.6**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102414a

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W83 (0.2-1.6 ft)
Lab Sample ID: 144638-19 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.115**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W83 (0.2-1.6 ft)

Lab Sample ID: 144638-19 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	< 0.428	mg/Kg		10/24/2014

Method Reference(s): EPA 9014

Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Analytical Report Appendix

The reported results relate only to the samples as they have been received by the laboratory.

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All soil/sludge samples have been reported on a dry weight basis, unless qualified "reported as received". Other solids are reported as received.

Low level Volatiles blank reports for soil/solid matrix are based on a nominal 5 gram weight. Sample results and reporting limits are based on actual weight, which may be more or less than 5 grams.

The Chain of Custody provides additional information, including compliance with sample condition requirements upon receipt. Sample condition requirements are defined under the 2003 NELAC Standard, sections 5.5.8.3.1 and 5.5.8.3.2.

NYSDOH ELAP does not certify for all parameters. Paradigm Environmental Services or the indicated subcontracted laboratory does hold certification for all analytes where certification is offered by ELAP unless otherwise specified. Aliquots separated for certain tests, such as TCLP, are indicated on the Chain of Custody and final reports with an "A" suffix.

Data qualifiers are used, when necessary, to provide additional information about the data. This information may be communicated as a flag or as text at the bottom of the report. Please refer to the following list of analyte-specific, frequently used data flags and their meaning:

"<" = Analyzed for but not detected at or above the quantitation limit.
"E" = Result has been estimated, calibration limit exceeded.
"Z" = See case narrative.
"D" = Sample, Laboratory Control Sample, or Matrix Spike Duplicate results above Relative Percent Difference limit.
"M" = Matrix spike recoveries outside QC limits. Matrix bias indicated.
"B" = Method blank contained trace levels of analyte. Refer to included method blank report.
"J" = Result estimated between the quantitation limit and half the quantitation limit.
"L" = Laboratory Control Sample recovery outside accepted QC limits.
"P" = Concentration differs by more than 40% between the primary and secondary analytical columns.
"NC" = Not calculable. Applicable to RPD if sample or duplicate result is non-detect or estimated (see primary report for data flags). Applicable to MS if sample is greater or equal to ten times the spike added. Applicable to sample surrogates or MS if sample dilution is 10x or higher.
"" = Indicates any recoveries outside associated acceptance windows.*
"(1)" = Indicates data from primary column used for QC calculation.

179 Lake Avenue, Rochester, NY 14608 Office (585) 647-2530 Fax (585) 647-3311

PAGE 1 OF 23

CHAIN OF CUSTODY

PARADIGM ENVIRONMENTAL SERVICES, INC.

REPORT TO:		INVOICE TO:		LAB PROJECT ID
CLIENT:	GEI CONSULTANTS	CLIENT:	NATIONAL FUEL GAS	144638
ADDRESS:	1301 TRUMANSBURG ROAD	ADDRESS:		Quotation #:
CITY:	ITHACA STATE: NY ZIP: 14850	CITY: STATE: ZIP:		Email:
PHONE:	607 216 8938	PHONE:		
ATTN:	JAMES EDWARDS	ATTN:	BRAD WALKER	

PROJECT REFERENCE: NATIONAL FUEL GAS MIWEBA SPRINGS

Matrix Codes:
AQ - Aqueous Liquid; NQ - Non-Aqueous Liquid; WA - Water; WG - Groundwater; DW - Drinking Water; WW - Wastewater; SO - Soil; SL - Sludge; SD - Solid; PT - Paint; WP - Wipe; CK - Caulk; OL - Oil; AR - Air

REQUESTED ANALYSIS

	DATE COLLECTED	TIME COLLECTED	COMPOSITE	GRAB	SAMPLE IDENTIFIER	MATRIX CODES	NUMBER OF CONTAINERS	Lead	Arsenic	Cadmium	Mercury	TOTAL CHROMIUM	REMARKS	PARADIGM LAB SAMPLE NUMBER
1	10/22	14:30	~~X~~	X	Sb+TOS WSD (0-0.2')	SO	1	X	X	X	X	X		01
2		14:35	~~X~~	X	Sb + TOS WSD (0.2-0.7)		1	X	X	X	X	X		02
3		14:40		X	Sb + TOS WSD (0.7-1.5)		1	X	X	X	X	X		03
4		14:45		X	Sb + TOS WSD (0-0.2)		1	X	X	X	X	X		04
5		14:50		X	Sb + TOS WSD (0.2-1.0)		1	X	X	X	X	X		05
6		14:55		X	Sb + TOS WSD (1.0-1.5')		1	X	X	X	X	X		06
7		15:00		X	Sb + 20S WSD (0-0.2)		1	X	X	X	X	X		07
8		15:05		X	Sb + 20S WSD (0.2-1.0)		1	X	X	X	X	X		08
9		15:10		X	Sb + 20S WSD (1.0-1.5')		1	X	X	X	X	X		09
10		15:15		X	Sb + 20S WSD (0-0.2')		1	X	X	X	X	X		10

6°C iced 10/23 @ 0904. Custody seals dated & signed. ISS 10/23/14

Turnaround Time		Report Supplements			
Availability contingent upon lab approval; additional fees may apply.					
Standard 5 day	☐	Batch QC	☐	Basic EDD	☐
Rush 3 day	☐	Category A	☐	NYSDEC EDD	☒
Rush 2 day	☐	Category B	☒		
Rush 1 day	☒				
Other please indicate:	☐	Other please indicate:	☐ PDF SE ISS 10/23/14	Other EDD please indicate:	☐

Sampled By: Michael Cummings	Date/Time: 10/22 17:09	Total Cost:
Relinquished By: Michael Cummings	Date/Time:	
Received By:	Date/Time: 10/23/14 0921	P.I.F.
Received @ Lab By:	Date/Time: 10/23/14 0921	

PAGE 2 OF 3

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CHAIN OF CUSTODY

PARADIGM ENVIRONMENTAL SERVICES, INC.

REPORT TO:	INVOICE TO:	LAB PROJECT ID
CLIENT:	CLIENT:	144638
ADDRESS:	ADDRESS:	Quotation #:
CITY: STATE: ZIP:	CITY: STATE: ZIP:	Email:
PHONE:	PHONE:	
ATTN:	ATTN:	

SAME SAME

PROJECT REFERENCE

Matrix Codes:
AQ - Aqueous Liquid; NQ - Non-Aqueous Liquid; WA - Water; WG - Groundwater; DW - Drinking Water; WW - Wastewater; SO - Soil; SL - Sludge; SD - Solid; PT - Paint; WP - Wipe; CK - Caulk; OL - Oil; AR - Air

REQUESTED ANALYSIS

	DATE COLLECTED	TIME COLLECTED	COMPOSITE	GRAB	SAMPLE IDENTIFIER	MATRIX CODES	NUMBER OF CONTAINERS	Lead	Arsenic	Cadmium	Antimony	TOTAL CN	REMARKS	PARADIGM LAB SAMPLE NUMBER
1	10/22	15:20		X	Sb+20S WG0 (0.2-0.5)	SO	1	X	X	X	X	X		11
2		15:25		X	Sb+20S WA0 (0.5-1.3)		1	X	X	X	X			12
3		15:30		X	Sb+30S WG0 (0.2-0.2)		1	X	X	X	X			13
4		15:35		X	Sb+30S WG0 (0.2-0.5)		1	X	X	X	X	X		14
5		15:40		X	Sb+30S WA0 (0.5-1.4)		1	X	X	X	X	X	per JH 1451 10/23/14	15
6		15:45		X	Sb+30S WA0 (0-0.2)		1	X	X	X	X	X		16
7		15:50		X	Sb+30S WG0 (0.2-0.7)		1	X	X	X	X	X		17
8		15:55		X	Sb+30S WG0 (0-0.2')		1	X	X	X	X	X		18
9		16:00		X	Sb+30S WG0 (0.2-1.6)		1	X	X	X	X	X		19
10	~~10/22~~	~~16:10~~		X	~~Sb+30S WG0 (1.6-2.0)~~		1							

sample not taken per JH. 1451 10/23/14

Turnaround Time		Report Supplements			
Availability contingent upon lab approval; additional fees may apply.					
Standard 5 day	☐	Batch QC	☐	Basic EDD	☐
Rush 3 day	☐	Category A	☐	NYSDEC EDD	☐
Rush 2 day	☐	Category B	☒		
Rush 1 day	☒		per JH 1451 10/23/14		
Other please indicate:	☐	Other please indicate:	☐	Other EDD please indicate:	☐

Sampled By: Michael Cumming	Date/Time: 10/22 17:09	Total Cost:
Relinquished By: Michael Cumming	Date/Time: 10/22 2	
Received By:	Date/Time: 5-22-10 17	P.I.F.
Received @ Lab By:	Date/Time: 10/23/14 0921	

PARADIGM ENVIRONMENTAL SERVICES, INC.

Chain of Custody Supplement

Client: GFI **Completed by:** Kyle Sherick

Lab Project ID: 144638 **Date:** 10/23/14

Sample Condition Requirements

Per NELAC/ELAP 210/241/242/243/244

Condition	NELAC compliance with the sample condition requirements upon receipt: Yes	No	N/A
Container Type	X		
Comments			
Transferred to method-compliant container			X
Headspace (<1 mL)			X
Comments			
Preservation			X
Comments			
Chlorine Absent (<0.10 ppm per test strip)			X
Comments			
Holding Time	X		
Comments			
Temperature	X TCN		X
Comments	6° C iced by samples @ 0904. Custody seals dated + signed. KS 10/23/14		
Sufficient Sample Quantity	X		
Comments			

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W80 (0-0.2 ft)

Lab Sample ID: 144638-01 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**9.03**	mg/Kg		10/23/2014
Cadmium	**0.851**	mg/Kg		10/23/2014
Lead	**96.2**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W80 (0-0.2 ft)
Lab Sample ID: 144638-01 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.129**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W80 (0-0.2 ft)

Lab Sample ID: 144638-01 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.636**	mg/Kg		10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W80 (0.2-0.7 ft)

Lab Sample ID: 144638-02 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**8.22**	mg/Kg		10/23/2014
Cadmium	**0.768**	mg/Kg		10/23/2014
Lead	**102**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W80 (0.2-0.7 ft)

Lab Sample ID: 144638-02 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.129**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W80 (0.2-0.7 ft)

Lab Sample ID: 144638-02 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.418**	mg/Kg	J	10/24/2014

Method Reference(s): EPA 9014

Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W80 (0.7-1.5 ft)

Lab Sample ID: 144638-03 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**6.76**	mg/Kg		10/23/2014
Cadmium	**0.779**	mg/Kg		10/23/2014
Lead	**37.1**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W80 (0.7-1.5 ft)
Lab Sample ID: 144638-03 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.0840**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W80 (0.7-1.5 ft)

Lab Sample ID: 144638-03 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	< 0.649	mg/Kg		10/24/2014

Method Reference(s): EPA 9014

Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W90 (0-0.2 ft)

Lab Sample ID: 144638-04 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**6.41**	mg/Kg		10/24/2014
Cadmium	**0.464**	mg/Kg	J	10/23/2014
Lead	**69.0**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102414a

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W90 (0-0.2 ft)
Lab Sample ID: 144638-04 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.121**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W90 (0-0.2 ft)
Lab Sample ID: 144638-04 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.452**	mg/Kg	J	10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W90 (0.2-1.0 ft)

Lab Sample ID: 144638-05 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**6.72**	mg/Kg		10/23/2014
Cadmium	< 0.611	mg/Kg		10/23/2014
Lead	**84.2**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W90 (0.2-1.0 ft)
Lab Sample ID: 144638-05 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	< 0.0193	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W90 (0.2-1.0 ft)
Lab Sample ID: 144638-05 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.749**	mg/Kg		10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W90 (1.0-1.5 ft)

Lab Sample ID: 144638-06 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**4.14**	mg/Kg		10/24/2014
Cadmium	**0.704**	mg/Kg		10/23/2014
Lead	**23.6**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102414a

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W90 (1.0-1.5 ft)
Lab Sample ID: 144638-06 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.0669**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W90 (1.0-1.5 ft)
Lab Sample ID: 144638-06 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	< 0.649	mg/Kg		10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W80 (0-0.2 ft)

Lab Sample ID: 144638-07 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**8.27**	mg/Kg		10/23/2014
Cadmium	**0.632**	mg/Kg	J	10/23/2014
Lead	**57.0**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W80 (0-0.2 ft)
Lab Sample ID: 144638-07 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.107**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W80 (0-0.2 ft)
Lab Sample ID: 144638-07 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.384**	mg/Kg	J	10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W80 (0.2-1.0 ft)

Lab Sample ID: 144638-08 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**8.99**	mg/Kg		10/23/2014
Cadmium	**0.634**	mg/Kg	J	10/23/2014
Lead	**54.5**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W80 (0.2-1.0 ft)

Lab Sample ID: 144638-08 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.0974**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W80 (0.2-1.0 ft)

Lab Sample ID: 144638-08 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	< 0.633	mg/Kg		10/24/2014

Method Reference(s): EPA 9014

Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W80 (1.0-1.5 ft)

Lab Sample ID: 144638-09 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**8.36**	mg/Kg		10/23/2014
Cadmium	**0.962**	mg/Kg		10/23/2014
Lead	**68.1**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W80 (1.0-1.5 ft)
Lab Sample ID: 144638-09 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.111**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W80 (1.0-1.5 ft)

Lab Sample ID: 144638-09 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	< 0.602	mg/Kg		10/24/2014

Method Reference(s): EPA 9014

Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W90 (0-0.2 ft)
Lab Sample ID: 144638-10 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**6.28**	mg/Kg		10/24/2014
Cadmium	**0.806**	mg/Kg		10/23/2014
Lead	**121**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050
Preparation Date: 10/23/2014
Data File: 102414a

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W90 (0-0.2 ft)
Lab Sample ID: 144638-10 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.122**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W90 (0-0.2 ft)
Lab Sample ID: 144638-10 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.343**	mg/Kg	J	10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W90 (0.2-0.8 ft)
Lab Sample ID: 144638-11 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**7.63**	mg/Kg		10/23/2014
Cadmium	**0.902**	mg/Kg		10/23/2014
Lead	**142**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050
Preparation Date: 10/23/2014
Data File: 102314b

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W90 (0.2-0.8 ft)
Lab Sample ID: 144638-11 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.128**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W90 (0.2-0.8 ft)

Lab Sample ID: 144638-11 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.311**	mg/Kg	J	10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W90 (0.8-1.3 ft)

Lab Sample ID: 144638-12 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**8.83**	mg/Kg		10/23/2014
Cadmium	**1.01**	mg/Kg		10/23/2014
Lead	**81.8**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W90 (0.8-1.3 ft)
Lab Sample ID: 144638-12 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.124**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W90 (0.8-1.3 ft)
Lab Sample ID: 144638-12 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.338**	mg/Kg	J	10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W80 (0-0.2 ft)

Lab Sample ID: 144638-13 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**10.2**	mg/Kg		10/23/2014
Cadmium	**0.595**	mg/Kg	J	10/23/2014
Lead	**65.2**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W80 (0-0.2 ft)
Lab Sample ID: 144638-13 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.139**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W80 (0-0.2 ft)

Lab Sample ID: 144638-13 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	< 0.651	mg/Kg		10/24/2014

Method Reference(s): EPA 9014

Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W80 (0.2-0.8 ft)

Lab Sample ID: 144638-14 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**10.2**	mg/Kg		10/23/2014
Cadmium	**0.493**	mg/Kg	J	10/23/2014
Lead	**55.2**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W80 (0.2-0.8 ft)
Lab Sample ID: 144638-14 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.122**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W80 (0.2-0.8 ft)

Lab Sample ID: 144638-14 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.342**	mg/Kg	J	10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W80 (0.8-1.4 ft)

Lab Sample ID: 144638-15 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**3.92**	mg/Kg		10/24/2014
Cadmium	**0.603**	mg/Kg	J	10/23/2014
Lead	**29.4**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102414a

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W80 (0.8-1.4 ft)
Lab Sample ID: 144638-15 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.0781**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W80 (0.8-1.4 ft)

Lab Sample ID: 144638-15 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	< 0.616	mg/Kg		10/24/2014

Method Reference(s): EPA 9014

Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W90 (0-0.2 ft)

Lab Sample ID: 144638-16 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**6.00**	mg/Kg		10/24/2014
Cadmium	**0.613**	mg/Kg	J	10/23/2014
Lead	**72.8**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102414a

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W90 (0-0.2 ft)
Lab Sample ID: 144638-16 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.116**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W90 (0-0.2 ft)
Lab Sample ID: 144638-16 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.342**	mg/Kg	J	10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W90 (0.2-0.7 ft)
Lab Sample ID: 144638-17 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**6.71**	mg/Kg		10/23/2014
Cadmium	**0.872**	mg/Kg		10/23/2014
Lead	**54.8**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050
Preparation Date: 10/23/2014
Data File: 102314b

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W90 (0.2-0.7 ft)
Lab Sample ID: 144638-17 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.0864**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W90 (0.2-0.7 ft)

Lab Sample ID: 144638-17 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	< 0.639	mg/Kg		10/24/2014

Method Reference(s): EPA 9014

Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W30 (0-0.2 ft)
Lab Sample ID: 144638-18 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**0.962**	mg/Kg	J	10/24/2014
Cadmium	< 0.609	mg/Kg		10/23/2014
Lead	**52.0**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050
Preparation Date: 10/23/2014
Data File: 102414a

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W30 (0-0.2 ft)
Lab Sample ID: 144638-18 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.118**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W30 (0-0.2 ft)
Lab Sample ID: 144638-18 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	< 0.566	mg/Kg		10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W83 (0.2-1.6 ft)

Lab Sample ID: 144638-19 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**1.61**	mg/Kg		10/24/2014
Cadmium	< 0.637	mg/Kg		10/23/2014
Lead	**40.6**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102414a

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W83 (0.2-1.6 ft)
Lab Sample ID: 144638-19 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.115**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W83 (0.2-1.6 ft)

Lab Sample ID: 144638-19 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	< 0.428	mg/Kg		10/24/2014

Method Reference(s): EPA 9014

Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Analytical Report Appendix

The reported results relate only to the samples as they have been received by the laboratory.

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All soil/sludge samples have been reported on a dry weight basis, unless qualified "reported as received". Other solids are reported as received.

Low level Volatiles blank reports for soil/solid matrix are based on a nominal 5 gram weight. Sample results and reporting limits are based on actual weight, which may be more or less than 5 grams.

The Chain of Custody provides additional information, including compliance with sample condition requirements upon receipt. Sample condition requirements are defined under the 2003 NELAC Standard, sections 5.5.8.3.1 and 5.5.8.3.2.

NYSDOH ELAP does not certify for all parameters. Paradigm Environmental Services or the indicated subcontracted laboratory does hold certification for all analytes where certification is offered by ELAP unless otherwise specified. Aliquots separated for certain tests, such as TCLP, are indicated on the Chain of Custody and final reports with an "A" suffix.

Data qualifiers are used, when necessary, to provide additional information about the data. This information may be communicated as a flag or as text at the bottom of the report. Please refer to the following list of analyte-specific, frequently used data flags and their meaning:

"<" = Analyzed for but not detected at or above the quantitation limit.
"E" = Result has been estimated, calibration limit exceeded.
"Z" = See case narrative.
"D" = Sample, Laboratory Control Sample, or Matrix Spike Duplicate results above Relative Percent Difference limit.
"M" = Matrix spike recoveries outside QC limits. Matrix bias indicated.
"B" = Method blank contained trace levels of analyte. Refer to included method blank report.
"J" = Result estimated between the quantitation limit and half the quantitation limit.
"L" = Laboratory Control Sample recovery outside accepted QC limits.
"P" = Concentration differs by more than 40% between the primary and secondary analytical columns.
"NC" = Not calculable. Applicable to RPD if sample or duplicate result is non-detect or estimated (see primary report for data flags). Applicable to MS if sample is greater or equal to ten times the spike added. Applicable to sample surrogates or MS if sample dilution is 10x or higher.
"" = Indicates any recoveries outside associated acceptance windows.*
"(1)" = Indicates data from primary column used for QC calculation.

179 Lake Avenue, Rochester, NY 14608 Office (585) 647-2530 Fax (585) 647-3311

PAGE 1 OF 23

CHAIN OF CUSTODY

PARADIGM ENVIRONMENTAL SERVICES, INC.

REPORT TO:		INVOICE TO:		LAB PROJECT ID
CLIENT:	GEI CONSULTANTS	CLIENT:	NATIONAL FUEL GAS	144638
ADDRESS:	1301 TRUMANSBURG ROAD	ADDRESS:		Quotation #:
CITY:	ITHACA STATE: NY ZIP: 14850	CITY: STATE: ZIP:		Email:
PHONE:	607 216 8938	PHONE:		
ATTN:	JAMES EDWARDS	ATTN:	BRAD WALKER	

PROJECT REFERENCE: NATIONAL FUEL GAS MIWEBA SPRINGS

Matrix Codes:
AQ - Aqueous Liquid; NQ - Non-Aqueous Liquid; WA - Water; WG - Groundwater; DW - Drinking Water; WW - Wastewater; SO - Soil; SL - Sludge; SD - Solid; PT - Paint; WP - Wipe; CK - Caulk; OL - Oil; AR - Air

REQUESTED ANALYSIS

	DATE COLLECTED	TIME COLLECTED	COMPOSITE	GRAB	SAMPLE IDENTIFIER	MATRIX CODES	NUMBER OF CONTAINERS	Lead	Arsenic	Cadmium	Mercury	TOTAL CHROMIUM	REMARKS	PARADIGM LAB SAMPLE NUMBER
1	10/22	14:30	~~X~~	X	Sb+TOS WSD (0-0.2')	SO	1	X	X	X	X	X		01
2		14:35	~~X~~	X	Sb + TOS WSD (0.2-0.7)		1	X	X	X	X	X		02
3		14:40		X	Sb + TOS WSD (0.7-1.5)		1	X	X	X	X	X		03
4		14:45		X	Sb + TOS WSD (0-0.2)		1	X	X	X	X	X		04
5		14:50		X	Sb + TOS WSD (0.2-1.0)		1	X	X	X	X	X		05
6		14:55		X	Sb + TOS WSD (1.0-1.5')		1	X	X	X	X	X		06
7		15:00		X	Sb + 20S WSD (0-0.2)		1	X	X	X	X	X		07
8		15:05		X	Sb + 20S WSD (0.2-1.0)		1	X	X	X	X	X		08
9		15:10		X	Sb + 20S WSD (1.0-1.5')		1	X	X	X	X	X		09
10		15:15		X	Sb + 20S WSD (0-0.2')		1	X	X	X	X	X		10

6°C iced 10/23 @ 0904. Custody seals dated & signed. ISS 10/23/14

Turnaround Time		Report Supplements			
Availability contingent upon lab approval; additional fees may apply.					
Standard 5 day	☐	Batch QC	☐	Basic EDD	☐
Rush 3 day	☐	Category A	☐	NYSDEC EDD	☒
Rush 2 day	☐	Category B	☒		
Rush 1 day	☒				
Other please indicate:	☐	Other please indicate:	☐ PDF SE ISS 10/23/14	Other EDD please indicate:	☐

Sampled By: Michael Cummings	Date/Time: 10/22 17:09	Total Cost:
Relinquished By: Michael Cummings	Date/Time:	
Received By:	Date/Time: 10/23/14 0921	P.I.F.
Received @ Lab By:	Date/Time: 10/23/14 0921	

PAGE 2 OF 3

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CHAIN OF CUSTODY

PARADIGM ENVIRONMENTAL SERVICES, INC.

REPORT TO:	INVOICE TO:	LAB PROJECT ID
CLIENT:	CLIENT:	144638
ADDRESS:	ADDRESS:	Quotation #:
CITY: STATE: ZIP:	CITY: STATE: ZIP:	Email:
PHONE:	PHONE:	
ATTN:	ATTN:	

SAME SAME

PROJECT REFERENCE

Matrix Codes:
AQ - Aqueous Liquid; NQ - Non-Aqueous Liquid; WA - Water; WG - Groundwater; DW - Drinking Water; WW - Wastewater; SO - Soil; SL - Sludge; SD - Solid; PT - Paint; WP - Wipe; CK - Caulk; OL - Oil; AR - Air

REQUESTED ANALYSIS

	DATE COLLECTED	TIME COLLECTED	COMPOSITE	GRAB	SAMPLE IDENTIFIER	MATRIX CODES	NUMBER OF CONTAINERS	Lead	Arsenic	Cadmium	Antimony	TOTAL CN	REMARKS	PARADIGM LAB SAMPLE NUMBER
1	10/22	15:20		X	Sb+20S WG0 (0.2-0.5)	SO	1	X	X	X	X	X		11
2		15:25		X	Sb+20S WA0 (0.5-1.3)		1	X	X	X	X			12
3		15:30		X	Sb+30S WG0 (0.2-0.2)		1	X	X	X	X			13
4		15:35		X	Sb+30S WG0 (0.2-0.5)		1	X	X	X	X	X		14
5		15:40		X	Sb+30S WA0 (0.5-1.4)		1	X	X	X	X	X	per JH 1451 10/23/14	15
6		15:45		X	Sb+30S WA0 (0-0.2)		1	X	X	X	X	X		16
7		15:50		X	Sb+30S WG0 (0.2-0.7)		1	X	X	X	X	X		17
8		15:55		X	Sb+30S WG0 (0-0.2')		1	X	X	X	X	X		18
9		16:00		X	Sb+30S WG0 (0.2-1.6)		1	X	X	X	X	X		19
10	~~10/22~~	~~16:10~~		X	~~Sb+30S WG0 (1.6-2.0)~~		1							

sample not taken per JH. 1451 10/23/14

Turnaround Time		Report Supplements			
Availability contingent upon lab approval; additional fees may apply.					
Standard 5 day	☐	Batch QC	☐	Basic EDD	☐
Rush 3 day	☐	Category A	☐	NYSDEC EDD	☐
Rush 2 day	☐	Category B	☒		
Rush 1 day	☒		per JH 1451 10/23/14		
Other please indicate:	☐	Other please indicate:	☐	Other EDD please indicate:	☐

Sampled By: Michael Cumming	Date/Time: 10/22 17:09	Total Cost:
Relinquished By: Michael Cumming	Date/Time: 10/22 2	
Received By:	Date/Time: 5-22-10 17	P.I.F.
Received @ Lab By:	Date/Time: 10/23/14 0921	

PARADIGM ENVIRONMENTAL SERVICES, INC.

Chain of Custody Supplement

Client: GFI **Completed by:** Kyle Sherick

Lab Project ID: 144638 **Date:** 10/23/14

Sample Condition Requirements

Per NELAC/ELAP 210/241/242/243/244

Condition	NELAC compliance with the sample condition requirements upon receipt: Yes	No	N/A
Container Type	X		
Comments			
Transferred to method-compliant container			X
Headspace (<1 mL)			X
Comments			
Preservation			X
Comments			
Chlorine Absent (<0.10 ppm per test strip)			X
Comments			
Holding Time	X		
Comments			
Temperature	X TCN		X
Comments	6° C iced by samples @ 0904. Custody seals dated + signed. KS 10/23/14		
Sufficient Sample Quantity	X		
Comments			

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W80 (0-0.2 ft)

Lab Sample ID: 144638-01 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**9.03**	mg/Kg		10/23/2014
Cadmium	**0.851**	mg/Kg		10/23/2014
Lead	**96.2**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W80 (0-0.2 ft)
Lab Sample ID: 144638-01 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.129**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W80 (0-0.2 ft)

Lab Sample ID: 144638-01 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.636**	mg/Kg		10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W80 (0.2-0.7 ft)

Lab Sample ID: 144638-02 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**8.22**	mg/Kg		10/23/2014
Cadmium	**0.768**	mg/Kg		10/23/2014
Lead	**102**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W80 (0.2-0.7 ft)

Lab Sample ID: 144638-02 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.129**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W80 (0.2-0.7 ft)

Lab Sample ID: 144638-02 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.418**	mg/Kg	J	10/24/2014

Method Reference(s): EPA 9014

Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W80 (0.7-1.5 ft)

Lab Sample ID: 144638-03 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**6.76**	mg/Kg		10/23/2014
Cadmium	**0.779**	mg/Kg		10/23/2014
Lead	**37.1**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W80 (0.7-1.5 ft)
Lab Sample ID: 144638-03 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.0840**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W80 (0.7-1.5 ft)

Lab Sample ID: 144638-03 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	< 0.649	mg/Kg		10/24/2014

Method Reference(s): EPA 9014

Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W90 (0-0.2 ft)

Lab Sample ID: 144638-04 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**6.41**	mg/Kg		10/24/2014
Cadmium	**0.464**	mg/Kg	J	10/23/2014
Lead	**69.0**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102414a

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W90 (0-0.2 ft)
Lab Sample ID: 144638-04 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.121**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W90 (0-0.2 ft)
Lab Sample ID: 144638-04 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.452**	mg/Kg	J	10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W90 (0.2-1.0 ft)

Lab Sample ID: 144638-05 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**6.72**	mg/Kg		10/23/2014
Cadmium	< 0.611	mg/Kg		10/23/2014
Lead	**84.2**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W90 (0.2-1.0 ft)
Lab Sample ID: 144638-05 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	< 0.0193	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W90 (0.2-1.0 ft)
Lab Sample ID: 144638-05 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.749**	mg/Kg		10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W90 (1.0-1.5 ft)

Lab Sample ID: 144638-06 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**4.14**	mg/Kg		10/24/2014
Cadmium	**0.704**	mg/Kg		10/23/2014
Lead	**23.6**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102414a

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W90 (1.0-1.5 ft)
Lab Sample ID: 144638-06 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.0669**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+10S W90 (1.0-1.5 ft)
Lab Sample ID: 144638-06 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	< 0.649	mg/Kg		10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W80 (0-0.2 ft)

Lab Sample ID: 144638-07 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**8.27**	mg/Kg		10/23/2014
Cadmium	**0.632**	mg/Kg	J	10/23/2014
Lead	**57.0**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W80 (0-0.2 ft)
Lab Sample ID: 144638-07 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.107**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W80 (0-0.2 ft)
Lab Sample ID: 144638-07 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.384**	mg/Kg	J	10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W80 (0.2-1.0 ft)

Lab Sample ID: 144638-08 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**8.99**	mg/Kg		10/23/2014
Cadmium	**0.634**	mg/Kg	J	10/23/2014
Lead	**54.5**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W80 (0.2-1.0 ft)

Lab Sample ID: 144638-08 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.0974**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W80 (0.2-1.0 ft)

Lab Sample ID: 144638-08 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	< 0.633	mg/Kg		10/24/2014

Method Reference(s): EPA 9014

Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W80 (1.0-1.5 ft)

Lab Sample ID: 144638-09 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**8.36**	mg/Kg		10/23/2014
Cadmium	**0.962**	mg/Kg		10/23/2014
Lead	**68.1**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W80 (1.0-1.5 ft)
Lab Sample ID: 144638-09 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.111**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W80 (1.0-1.5 ft)

Lab Sample ID: 144638-09 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	< 0.602	mg/Kg		10/24/2014

Method Reference(s): EPA 9014

Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W90 (0-0.2 ft)
Lab Sample ID: 144638-10 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**6.28**	mg/Kg		10/24/2014
Cadmium	**0.806**	mg/Kg		10/23/2014
Lead	**121**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050
Preparation Date: 10/23/2014
Data File: 102414a

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W90 (0-0.2 ft)
Lab Sample ID: 144638-10 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.122**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W90 (0-0.2 ft)
Lab Sample ID: 144638-10 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.343**	mg/Kg	J	10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W90 (0.2-0.8 ft)
Lab Sample ID: 144638-11 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**7.63**	mg/Kg		10/23/2014
Cadmium	**0.902**	mg/Kg		10/23/2014
Lead	**142**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050
Preparation Date: 10/23/2014
Data File: 102314b

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W90 (0.2-0.8 ft)
Lab Sample ID: 144638-11 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.128**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W90 (0.2-0.8 ft)

Lab Sample ID: 144638-11 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.311**	mg/Kg	J	10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W90 (0.8-1.3 ft)

Lab Sample ID: 144638-12 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**8.83**	mg/Kg		10/23/2014
Cadmium	**1.01**	mg/Kg		10/23/2014
Lead	**81.8**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W90 (0.8-1.3 ft)
Lab Sample ID: 144638-12 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.124**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+20S W90 (0.8-1.3 ft)
Lab Sample ID: 144638-12 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.338**	mg/Kg	J	10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W80 (0-0.2 ft)

Lab Sample ID: 144638-13 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**10.2**	mg/Kg		10/23/2014
Cadmium	**0.595**	mg/Kg	J	10/23/2014
Lead	**65.2**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W80 (0-0.2 ft)
Lab Sample ID: 144638-13 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.139**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W80 (0-0.2 ft)

Lab Sample ID: 144638-13 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	< 0.651	mg/Kg		10/24/2014

Method Reference(s): EPA 9014

Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W80 (0.2-0.8 ft)

Lab Sample ID: 144638-14 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**10.2**	mg/Kg		10/23/2014
Cadmium	**0.493**	mg/Kg	J	10/23/2014
Lead	**55.2**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102314b

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W80 (0.2-0.8 ft)
Lab Sample ID: 144638-14 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.122**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W80 (0.2-0.8 ft)

Lab Sample ID: 144638-14 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.342**	mg/Kg	J	10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W80 (0.8-1.4 ft)

Lab Sample ID: 144638-15 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**3.92**	mg/Kg		10/24/2014
Cadmium	**0.603**	mg/Kg	J	10/23/2014
Lead	**29.4**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102414a

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W80 (0.8-1.4 ft)
Lab Sample ID: 144638-15 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.0781**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W80 (0.8-1.4 ft)

Lab Sample ID: 144638-15 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	< 0.616	mg/Kg		10/24/2014

Method Reference(s): EPA 9014

Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W90 (0-0.2 ft)

Lab Sample ID: 144638-16 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**6.00**	mg/Kg		10/24/2014
Cadmium	**0.613**	mg/Kg	J	10/23/2014
Lead	**72.8**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102414a

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W90 (0-0.2 ft)
Lab Sample ID: 144638-16 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.116**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W90 (0-0.2 ft)
Lab Sample ID: 144638-16 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.342**	mg/Kg	J	10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W90 (0.2-0.7 ft)
Lab Sample ID: 144638-17 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**6.71**	mg/Kg		10/23/2014
Cadmium	**0.872**	mg/Kg		10/23/2014
Lead	**54.8**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050
Preparation Date: 10/23/2014
Data File: 102314b

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W90 (0.2-0.7 ft)
Lab Sample ID: 144638-17 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.0864**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W90 (0.2-0.7 ft)

Lab Sample ID: 144638-17 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	< 0.639	mg/Kg		10/24/2014

Method Reference(s): EPA 9014

Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W30 (0-0.2 ft)
Lab Sample ID: 144638-18 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**0.962**	mg/Kg	J	10/24/2014
Cadmium	< 0.609	mg/Kg		10/23/2014
Lead	**52.0**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050
Preparation Date: 10/23/2014
Data File: 102414a

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W30 (0-0.2 ft)
Lab Sample ID: 144638-18 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.118**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W30 (0-0.2 ft)
Lab Sample ID: 144638-18 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	< 0.566	mg/Kg		10/24/2014

Method Reference(s): EPA 9014
Preparation Date: 10/23/2014

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W83 (0.2-1.6 ft)

Lab Sample ID: 144638-19 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**1.61**	mg/Kg		10/24/2014
Cadmium	< 0.637	mg/Kg		10/23/2014
Lead	**40.6**	mg/Kg		10/23/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/23/2014

Data File: 102414a

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W83 (0.2-1.6 ft)
Lab Sample ID: 144638-19 **Date Sampled:** 10/22/2014
Matrix: Soil **Date Received:** 10/23/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.115**	mg/Kg		10/24/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/23/2014
Data File: Hg141024A

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144638

Client: **GEI Consultants Inc.**

Project Reference: National Fuel Gas Mineral Springs

Sample Identifier: S6+30S W83 (0.2-1.6 ft)

Lab Sample ID: 144638-19 **Date Sampled:** 10/22/2014

Matrix: Soil **Date Received:** 10/23/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	< 0.428	mg/Kg		10/24/2014

Method Reference(s): EPA 9014

Preparation Date: 10/23/2014

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Report Prepared Friday, October 24, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Analytical Report Appendix

The reported results relate only to the samples as they have been received by the laboratory.

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All soil/sludge samples have been reported on a dry weight basis, unless qualified "reported as received". Other solids are reported as received.

Low level Volatiles blank reports for soil/solid matrix are based on a nominal 5 gram weight. Sample results and reporting limits are based on actual weight, which may be more or less than 5 grams.

The Chain of Custody provides additional information, including compliance with sample condition requirements upon receipt. Sample condition requirements are defined under the 2003 NELAC Standard, sections 5.5.8.3.1 and 5.5.8.3.2.

NYSDOH ELAP does not certify for all parameters. Paradigm Environmental Services or the indicated subcontracted laboratory does hold certification for all analytes where certification is offered by ELAP unless otherwise specified. Aliquots separated for certain tests, such as TCLP, are indicated on the Chain of Custody and final reports with an "A" suffix.

Data qualifiers are used, when necessary, to provide additional information about the data. This information may be communicated as a flag or as text at the bottom of the report. Please refer to the following list of analyte-specific, frequently used data flags and their meaning:

"<" = Analyzed for but not detected at or above the quantitation limit.
"E" = Result has been estimated, calibration limit exceeded.
"Z" = See case narrative.
"D" = Sample, Laboratory Control Sample, or Matrix Spike Duplicate results above Relative Percent Difference limit.
"M" = Matrix spike recoveries outside QC limits. Matrix bias indicated.
"B" = Method blank contained trace levels of analyte. Refer to included method blank report.
"J" = Result estimated between the quantitation limit and half the quantitation limit.
"L" = Laboratory Control Sample recovery outside accepted QC limits.
"P" = Concentration differs by more than 40% between the primary and secondary analytical columns.
"NC" = Not calculable. Applicable to RPD if sample or duplicate result is non-detect or estimated (see primary report for data flags). Applicable to MS if sample is greater or equal to ten times the spike added. Applicable to sample surrogates or MS if sample dilution is 10x or higher.
"" = Indicates any recoveries outside associated acceptance windows.*
"(1)" = Indicates data from primary column used for QC calculation.

179 Lake Avenue, Rochester, NY 14608 Office (585) 647-2530 Fax (585) 647-3311

PAGE 1 OF 2 3

CHAIN OF CUSTODY

PARADIGM ENVIRONMENTAL SERVICES, INC.

REPORT TO:		INVOICE TO:		LAB PROJECT ID
CLIENT:	GEI CONSULTANTS	CLIENT:	NATIONAL FUEL GAS	144638
ADDRESS:	1301 TRUMANSBURG ROAD	ADDRESS:		Quotation #:
CITY:	ITHACA STATE: NY ZIP: 14850	CITY:	STATE: ZIP:	Email:
PHONE:	607 216 8938	PHONE:		
ATTN:	JAMES EDWARDS	ATTN:	BRAD WALKER	

PROJECT REFERENCE

NATIONAL FUEL GAS
MIWERN SPRINGS

Matrix Codes:
AQ - Aqueous Liquid; NQ - Non-Aqueous Liquid; WA - Water; WG - Groundwater; DW - Drinking Water; WW - Wastewater; SO - Soil; SL - Sludge; SD - Solid; PT - Paint; WP - Wipe; CK - Caulk; OL - Oil; AR - Air

REQUESTED ANALYSIS

	DATE COLLECTED	TIME COLLECTED	COMPOSITE	GRAB	SAMPLE IDENTIFIER	MATRIX CODES	NUMBER OF CONTAINERS	Lead	Arsenic	Cadmium	Mercury	TOTAL CHROMIUM					REMARKS	PARADIGM LAB SAMPLE NUMBER
1	10/22	14:30	~~X~~ None	X	Sb+10S WSD (0-0.2')	SO	1	X	X	X	X	X						01
2		14:35	~~X~~ None	X	Sb + 10S WSD (0.2-0.7)		1	X	X	X	X	X						02
3		14:40		X	Sb + 10S WSD (0.7-1.5)		1	X	X	X	X	X						03
4		14:45		X	Sb + 10S WSD (0-0.2)		1	X	X	X	X	X						04
5		14:50		X	Sb + 10S WSD (0.2-1.0)		1	X	X	X	X	X						05
6		14:55		X	Sb + 10S WSD (1.0-1.5')		1	X	X	X	X	X						06
7		15:00		X	Sb + 20S WSD (0-0.2)		1	X	X	X	X	X						07
8		15:05		X	Sb + 20S WSD (0.2-1.0)		1	X	X	X	X	X						08
9		15:10		X	Sb + 20S WSD (1.0-1.5')		1	X	X	X	X	X						09
10		15:15		X	Sb + 30S WSD (0-0.2')		1	X	X	X	X	X						10

Turnaround Time		Report Supplements			
Availability contingent upon lab approval; additional fees may apply.					
Standard 5 day	☐	Batch QC	☐	Basic EDD	☐
Rush 3 day	☐	Category A	☐	NYSDEC EDD	☒
Rush 2 day	☐	Category B	☒		
Rush 1 day	☒				
Other please indicate:	☐	Other please indicate:	☐	Other EDD please indicate:	☐

PDF SE
iss to lab 10/23/14

6°C iced 10/23 @ 0904. Custody seals dated & signed. iss to lab 10/23/14

Sampled By: Michael Cummings	Date/Time: 10/22 17:09	Total Cost:
Relinquished By: Michael Cummings	Date/Time:	
Received By:	Date/Time: 10/23/14 0921	P.I.F.
Received @ Lab By:	Date/Time: 10/23/14 0921	

PAGE 2 OF 3

179 Lake Avenue, Rochester, NY 14608 Office (585) 647-2530 Fax (585) 647-3311

CHAIN OF CUSTODY

PARADIGM ENVIRONMENTAL SERVICES, INC.

REPORT TO:	INVOICE TO:	LAB PROJECT ID
CLIENT:	CLIENT:	144638
ADDRESS:	ADDRESS:	Quotation #:
CITY: STATE: ZIP:	CITY: STATE: ZIP:	Email:
PHONE:	PHONE:	
ATTN:	ATTN:	

SAME SAME

PROJECT REFERENCE

Matrix Codes:
AQ - Aqueous Liquid; NQ - Non-Aqueous Liquid; WA - Water; WG - Groundwater; DW - Drinking Water; WW - Wastewater; SO - Soil; SL - Sludge; SD - Solid; PT - Paint; WP - Wipe; CK - Caulk; OL - Oil; AR - Air

REQUESTED ANALYSIS

	DATE COLLECTED	TIME COLLECTED	COMPOSITE	GRAB	SAMPLE IDENTIFIER	MATRIX CODES	NUMBER OF CONTAINERS	Lead	Arsenic	Cadmium	Antimony	TOTAL CN	REMARKS	PARADIGM LAB SAMPLE NUMBER
1	10/22	15:20		X	Sb+20S WG0 (0.2-0.5)	SO	1	X	X	X	X	X		11
2		15:25		X	Sb+20S WA0 (0.5-1.3)		1	X	X	X	X			12
3		15:30		X	Sb+30S WG0 (0.2-0.2)		1	X	X	X	X			13
4		15:35		X	Sb+30S WG0 (0.2-0.5)		1	X	X	X	X	X		14
5		15:40		X	Sb+30S WA0 (0.5-1.4)		1	X	X	X	X	X	per JH 1451 10/23/14	15
6		15:45		X	Sb+30S WA0 (0-0.2)		1	X	X	X	X	X		16
7		15:50		X	Sb+30S WG0 (0.2-0.7)		1	X	X	X	X	X		17
8		15:55		X	Sb+30S WG0 (0-0.2')		1	X	X	X	X	X		18
9		16:00		X	Sb+30S WG0 (0.2-1.6)		1	X	X	X	X	X		19
10	~~10/22~~	~~16:10~~		X	~~Sb+30S WG0 (1.6-2.0)~~		1							

sample not taken per JH. 1451 10/23/14

Turnaround Time		Report Supplements			
Availability contingent upon lab approval; additional fees may apply.					
Standard 5 day	☐	Batch QC	☐	Basic EDD	☐
Rush 3 day	☐	Category A	☐	NYSDEC EDD	☐
Rush 2 day	☐	Category B	☒		
Rush 1 day	☒		per JH 1451 10/23/14		
Other please indicate:	☐	Other please indicate:	☐	Other EDD please indicate:	☐

Sampled By: Michael Cumming	Date/Time: 10/22 17:09	Total Cost:
Relinquished By: Michael Cumming	Date/Time: 10/22 2	
Received By:	Date/Time: 5-22-10 17	P.I.F.
Received @ Lab By:	Date/Time: 10/23/14 0921	

PARADIGM ENVIRONMENTAL SERVICES, INC.

Chain of Custody Supplement

Client: GFI **Completed by:** Kyle Sherick

Lab Project ID: 144638 **Date:** 10/23/14

Sample Condition Requirements

Per NELAC/ELAP 210/241/242/243/244

Condition	NELAC compliance with the sample condition requirements upon receipt: Yes	No	N/A
Container Type	X		
Comments			
Transferred to method-compliant container			X
Headspace (<1 mL)			X
Comments			
Preservation			X
Comments			
Chlorine Absent (<0.10 ppm per test strip)			X
Comments			
Holding Time	X		
Comments			
Temperature	X TCN		X
Comments	6° C iced by samples @ 0904. Custody seals dated + signed. KS 10/23/14		
Sufficient Sample Quantity	X		
Comments			

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144706

Client: **GEI Consultants Inc.**

Project Reference: NFG Mineral Springs

Sample Identifier: S6 & 20N W80 (0-2 in)

Lab Sample ID: 144706-01 **Date Sampled:** 10/28/2014

Matrix: Soil **Date Received:** 10/29/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**8.27**	mg/Kg		10/29/2014
Cadmium	**1.26**	mg/Kg		10/29/2014
Lead	**121**	mg/Kg		10/29/2014

Method Reference(s): EPA 6010C
EPA 3050

Preparation Date: 10/30/2014

Data File: 102914b

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144706

Client: **GEI Consultants Inc.**

Project Reference: NFG Mineral Springs

Sample Identifier: S6 & 20N W80 (0-2 ft)

Lab Sample ID: 144706-01 **Date Sampled:** 10/28/2014

Matrix: Soil **Date Received:** 10/29/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.148**	mg/Kg		10/30/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/30/2014
Data File: QC141029A

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144706

Client: **GEI Consultants Inc.**

Project Reference: NFG Mineral Springs

Sample Identifier: S6 & 20N W80 (0-2 ft)

Lab Sample ID: 144706-01 **Date Sampled:** 10/28/2014

Matrix: Soil **Date Received:** 10/29/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.387**	mg/Kg	J	10/29/2014

Method Reference(s): EPA 9014

Preparation Date: 10/29/2014

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Report Prepared Thursday, October 30, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144706

Client: **GEI Consultants Inc.**

Project Reference: NFG Mineral Springs

Sample Identifier: S6 & 20N W70 (0-2 ft)
Lab Sample ID: 144706-02 **Date Sampled:** 10/28/2014
Matrix: Soil **Date Received:** 10/29/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**9.32**	mg/Kg		10/29/2014
Cadmium	**1.18**	mg/Kg		10/29/2014
Lead	**168**	mg/Kg		10/29/2014

Method Reference(s): EPA 6010C
EPA 3050
Preparation Date: 10/30/2014
Data File: 102914b

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144706

Client: **GEI Consultants Inc.**

Project Reference: NFG Mineral Springs

Sample Identifier: S6 & 20N W70 (0-2 ft)
Lab Sample ID: 144706-02 **Date Sampled:** 10/28/2014
Matrix: Soil **Date Received:** 10/29/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.231**	mg/Kg		10/30/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/30/2014
Data File: QC141029A

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144706

Client: **GEI Consultants Inc.**

Project Reference: NFG Mineral Springs

Sample Identifier: S6 & 20N W70 (0-2 ft)

Lab Sample ID: 144706-02 **Date Sampled:** 10/28/2014

Matrix: Soil **Date Received:** 10/29/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.726**	mg/Kg		10/29/2014

Method Reference(s): EPA 9014

Preparation Date: 10/29/2014

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Report Prepared Thursday, October 30, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144706

Client: **GEI Consultants Inc.**

Project Reference: NFG Mineral Springs

Sample Identifier: S6 & 10N W80 (0-2 ft)
Lab Sample ID: 144706-03 **Date Sampled:** 10/28/2014
Matrix: Soil **Date Received:** 10/29/2014

Metals

Analyte	Result	Units	Qualifier	Date Analyzed
Arsenic	**7.41**	mg/Kg		10/29/2014
Cadmium	**0.916**	mg/Kg		10/29/2014
Lead	**102**	mg/Kg		10/29/2014

Method Reference(s): EPA 6010C
EPA 3050
Preparation Date: 10/30/2014
Data File: 102914b

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Report Prepared Thursday, October 30, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144706

Client: **GEI Consultants Inc.**

Project Reference: NFG Mineral Springs

Sample Identifier: S6 & 10N W80 (0-2 ft)

Lab Sample ID: 144706-03 **Date Sampled:** 10/28/2014

Matrix: Soil **Date Received:** 10/29/2014

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.138**	mg/Kg		10/30/2014

Method Reference(s): EPA 7471B
Preparation Date: 10/30/2014
Data File: QC141029A

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 144706

Client: **GEI Consultants Inc.**

Project Reference: NFG Mineral Springs

Sample Identifier: S6 & 10N W80 (0-2 ft)

Lab Sample ID: 144706-03 **Date Sampled:** 10/28/2014

Matrix: Soil **Date Received:** 10/29/2014

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.371**	mg/Kg	J	10/29/2014

Method Reference(s): EPA 9014

Preparation Date: 10/29/2014

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

Report Prepared Thursday, October 30, 2014

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Analytical Report Appendix

The reported results relate only to the samples as they have been received by the laboratory.

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All soil/sludge samples have been reported on a dry weight basis, unless qualified "reported as received". Other solids are reported as received.

Low level Volatiles blank reports for soil/solid matrix are based on a nominal 5 gram weight. Sample results and reporting limits are based on actual weight, which may be more or less than 5 grams.

The Chain of Custody provides additional information, including compliance with sample condition requirements upon receipt. Sample condition requirements are defined under the 2003 NELAC Standard, sections 5.5.8.3.1 and 5.5.8.3.2.

NYSDOH ELAP does not certify for all parameters. Paradigm Environmental Services or the indicated subcontracted laboratory does hold certification for all analytes where certification is offered by ELAP unless otherwise specified. Aliquots separated for certain tests, such as TCLP, are indicated on the Chain of Custody and final reports with an "A" suffix.

Data qualifiers are used, when necessary, to provide additional information about the data. This information may be communicated as a flag or as text at the bottom of the report. Please refer to the following list of analyte-specific, frequently used data flags and their meaning:

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"E" = Result has been estimated, calibration limit exceeded.
"Z" = See case narrative.
"D" = Sample, Laboratory Control Sample, or Matrix Spike Duplicate results above Relative Percent Difference limit.
"M" = Matrix spike recoveries outside QC limits. Matrix bias indicated.
"B" = Method blank contained trace levels of analyte. Refer to included method blank report.
"J" = Result estimated between the quantitation limit and half the quantitation limit.
"L" = Laboratory Control Sample recovery outside accepted QC limits.
"P" = Concentration differs by more than 40% between the primary and secondary analytical columns.
"NC" = Not calculable. Applicable to RPD if sample or duplicate result is non-detect or estimated (see primary report for data flags). Applicable to MS if sample is greater or equal to ten times the spike added. Applicable to sample surrogates or MS if sample dilution is 10x or higher.
"" = Indicates any recoveries outside associated acceptance windows. Surrogate outliers in samples are presumed matrix effects. LCS demonstrates method compliance unless otherwise noted.*
"(1)" = Indicates data from primary column used for QC calculation.

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CHAIN OF CUSTODY

PARADIGM ENVIRONMENTAL SERVICES, INC.

REPORT TO:		INVOICE TO:		LAB PROJECT ID
CLIENT:	GEI CONSULTANTS - James Edwards	CLIENT:	National Fuel Gas	1441706
ADDRESS:	1301 Trumansburg Road	ADDRESS:		Quotation #:
CITY:	Ithaca STATE: NY ZIP: 14850	CITY: STATE: ZIP:		Email:
PHONE:	607 26 5958	PHONE:		
ATTN:		ATTN:	Brad Walker	

PROJECT REFERENCE

NFG Mineral Springs

Matrix Codes:
AQ - Aqueous Liquid; NQ - Non-Aqueous Liquid; WA - Water; WG - Groundwater; DW - Drinking Water; WW - Wastewater; SO - Soil; SL - Sludge; SD - Solid; PT - Paint; WP - Wipe; CK - Caulk; OL - Oil; AR - Air

REQUESTED ANALYSIS

	DATE COLLECTED	TIME COLLECTED	COMPOSITE	GRAB	SAMPLE IDENTIFIER	MATRIX CODES	NUMBER OF CONTAINERS	Lead	Mercury	Cadmium	Arsenic	Cyanide	REMARKS	PARADIGM LAB SAMPLE NUMBER
1	10/28	1450		X	S6+20N WSO (0-2")	SO		X	X	X	X	X	RUSH 1 DAY	01
2		1500		X	S6+20N WTO (0-2")	SO		X	X	X	X	X		02
3		1455		X	S6+10N WSO (0-2")	SO		X	X	X	X	X		03
4														
5														
6														
7													9°C iced by samples.	
8					ok to proceed on test out of temp. per Brad Walker KS 10/29/14								10/29 @ 0905	
9													(custody seal dated + signed KS 10/29/14	
10														

Turnaround Time		Report Supplements			
Availability contingent upon lab approval; additional fees may apply.					
Standard 5 day	☐	Batch QC	☐	Basic EDD	☐
Rush 3 day	☐	Category A	☐	NYSDEC EDD	☒
Rush 2 day	☐	Category B	☒ per history KS 10/29/14		
Rush 1 day	☒				
Other please indicate:	☐	Other please indicate:	☐	Other EDD please indicate:	☐

Sampled By		10/28/14	1500
Relinquished By		10/28/14	1600
Received By		10/28/14	1600
Received @ Lab By		10/29/14	0909

Total Cost:

P.I.F.

2 of 2

Chain of Custody Supplement

Client: GEI Consultants **Completed by:** Kyle Swavick

Lab Project ID: 144706 **Date:** 10/29/14

Sample Condition Requirements

Per NELAC/ELAP 210/241/242/243/244

Condition	NELAC compliance with the sample condition requirements upon receipt: Yes	No	N/A
Container Type	X		
Comments			
Transferred to method-compliant container			X
Headspace (<1 mL)			X
Comments			
Preservation			X
Comments			
Chlorine Absent (<0.10 ppm per test strip)			X
Comments			
Holding Time	X		
Comments			
Temperature		X TCN	X
Comments	9° C, iced by samples @ 0905. custody seal dated + signed. KS 10/29/14		
Sufficient Sample Quantity	X		
Comments			