SEPTEMBER 19, 2013

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
Tel: (314)298-8566

TestAmerica Job ID: 160-3405-1
TestAmerica Sample Delivery Group: SL1392
Client Project/Site: S,W,I,A ,X SAFS- GROUNDWATER

For:
CH2M Hill Plateau Remediation Company
PO BOX 1600, MS H8-41
Richland, Washington 99352

Attn: General Mailbox

Authorized for release by:
9/19/2013 6:45:19 PM

Jayna Awalt, Project Manager I
jayna.awalt@testamericainc.com

LINKS

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 160-3405-1

Laboratory: TestAmerica St. Louis

Narrative

CASE NARRATIVE

CH2MHill Plateau Remediation Company
P.O. Box 1600
MS B3-60
Richland, Washington 99352
September 19, 2013
Attention: Scot Fitzgerald

SDG	: SL1392
Number of Samples	: 10 samples
Sample Matrix	: Water
Data Deliverable	: Summary
Date SDG Closed	: August 19, 2013

II. Introduction

Between August 16 and August 19, 10 water samples were received by TestAmerica - St. Louis for chemical analysis. The samples were received within temperature criteria. See the COC and CUR forms for documentation of any variations on receipt conditions and temperature. Upon receipt, the samples were given laboratory Ids to correspond with specific client Ids. Please refer to the Sample Summary sheets attached to this case narrative. This report is incomplete without the narrative.

The following SAFs are associated with this SDG: X13-029

III. Analytical Results/ Methodology

The analytical results for this report are presented by analytical test. Each set of data includes sample identification information, analytical results and the appropriate detection limits. All results are based upon samples as they were received, i.e. wet weight, unless otherwise noted on the data sheets. See the attached Methods Summary Form for the methods used in this SDG.

MS/MSD/Dup analysis was done per the client requirements. Analytical batches that did not contain matrix QC were analyzed with a LCS/LCS duplicate.

Deviation from Request: None

IV. Definitions

QCBLK- Quality Control Blank, Method Blank
QCLCS- Quality Control Laboratory Control Sample, Blank Spike
DUP- Laboratory Duplicate
MS- Matrix Spike
MSD- Matrix Spike Duplicate

The term "Detection Limit" used in the analytical data report refers to either the lab's standard reporting limits or contractually required reporting limits, whichever is applicable.

The following data qualifiers may be applicable to the results in this report, as appropriate.

- **B** - For inorganic analyses, the sample result is greater than the MDL but less than the RL.
- **B** - For organic analyses, Method Blank contamination. The Method Blank contains the target analyte at a concentration above the

Job ID: 160-3405-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)

MDL.

- **J** - For organic analyses, the sample is estimated and less than the RL.
- **C** - For inorganic analyses, Method Blank contamination. The Method Blank contains the target analyte at a concentration above the MDL.
- **D** - For all analyses, the sample result was obtained from the analysis of a dilution.
- **N** - For inorganics and GC analyses, the spike/spike duplicate recoveries are outside QC limits.
- **T** - For GCMS analyses, the spike/spike duplicate recoveries are outside QC limits.
- **O**- For all analyses, the LCS (LCSD) recoveries are outside QC limits.
- **M**- For inorganic analyses, the precision was outside control limits.
- **P** - For organic analyses (PCB/Pests only), the aroclor target analyte has greater than 25% difference for detected concentrations between the two GC columns.

Volatiles

Analytical Batch: 69974

Acetone was detected in method blank MB 160-69974/2 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged “J”. If the associated sample reported a result above the MDL and/or RL, the result has been flagged “B”.

The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 69974 were outside control limits for 2-Butanone and Chloroform. The associated laboratory control sample (LCS) recovery met acceptance criteria thus the data has been reported. These analytes have been qualified accordingly with a "T" flag in the associated samples.

Due to the high concentration of Carbon Tetrachloride the matrix spike / matrix spike duplicate (MS/MSD) for batch 69974 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

The following sample(s) were analyzed at reduced volume due to high concentrations of target analytes: B2PMF5 (160-3417-1), B2PMF6 (160-3417-2), B2PMF7 (160-3417-3). The calculation was done using an initial volume adjustment rather than a dilution factor. The reporting limits have been elevated by the appropriate factor.

ICP Metals

Analytical Batch: 72462

Zinc was detected in method blank MB 160-70015/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged “B”. The sample concentrations were greater than 5x that found in the Method Blank; therefore, no qualification was necessary.

The following samples were diluted to bring the concentration of the target analytes calcium within the calibration range. Calcium also interferes with strontium: (160-3417-1 MS), (160-3417-1 MSD), (160-3417-1 SD), B2PMF5 (160-3417-1), B2PMF6 (160-3417-2), B2PMF7 (160-3417-3). Elevated reporting limits (RLs) are provided. These analytes have been qualified accordingly with a “D” flag in the associated samples.

ICPMS Metals

Analytical Batch: 70543

Tin was detected in method blank MB 160-70016/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged “B”. If the associated sample reported a result above the MDL and/or RL, the result has been flagged “C”.

Job ID: 160-3405-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)

The matrix spike duplicate (MS/MSD) recovery for boron was outside control limits. The RPD was within acceptable limits, indicating possible matrix interference. The associated laboratory control sample (LCS) recovery met acceptance criteria. This analyte has been qualified accordingly with an "N" flag in the associated samples.

Due to LDR failures, the LDR has been lowered for beryllium (1000ppb). The LCS and MS/MSD were above the LDR, but were within acceptable limits.

Ion Chromatography

Analytical Batch: 68949

The following samples were received 4 days after sampling, and thus were out of 48 hour holding time for Nitrite and Nitrate in IC batch 68949. Samples were outside of 2x hold time: B2PMF5 (160-3417-1), B2PMF6 (160-3417-2), B2PMF7 (160-3417-3). Per SDR13-249, samples were analyzed outside 2x hold and reported with this narrative.

The following samples were diluted to bring the concentrations of Fluoride, Chloride, and Nitrate within the calibration range in IC batch 68949: B2PMF5 (160-3417-1), B2PMF6 (160-3417-2), B2PMF7 (160-3417-3). Elevated reporting limits (RLs) are provided. These analytes have been qualified accordingly with a "D" flag in the associated samples.

Total Cyanide

Analytical Batch: 68882

The method blank for batch 68882 contained CN above the reporting limit (RL). The associated sample(s) contained detects for this analyte at concentrations greater than 10X the value found in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed. B2PMF5 (160-3417-1), B2PMF6 (160-3417-2), B2PMF7 (160-3417-3)

There were no observations or nonconformances for the following methods:

TOX
TOC
Carbon-14

I certify that this Summary Package is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. The Laboratory Manager or a designee, as verified by the signature on the cover page has authorized release of the data contained in this hard copy data package.

Reviewed and approved:

Jayna Awalt
St. Louis Project Manager

Job ID: 160-3405-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)

SAMPLE ISSUE RESOLUTION

SIR NUM	SDR13-249
REV NUM	0
DATE INITIATED	9/17/2013

SAMPLE EVENT INFORMATION

SAF NUM(S)	X13-029
OPERABLE UNIT(S)	NONE
PROJECT(S)	SURV13
SAMPLE EVENT TITLE(S)	SURV13
LABORATORY	TestAmerica St. Louis

SAMPLING INFORMATION

NUMBER OF SAMPLES	3
SAMPLE NUMBERS	B2PMF5, B2PMF6, B2PMF7
SAMPLE MATRIX	WATER
COLLECTION DATE	8/15/2013 - 8/15/2013
SDG NUM	SL1392

ISSUE BACKGROUND

CLASS	Field Sampling Issue
TYPE	Analysis Hold Time Exceeded
DESCRIPTION	The listed samples were received 4 days after sampling occurred. The samples were analyzed for nitrate/nitrite outside 2x holding time. The samples were properly preserved on ice at sample receipt.

DISPOSITION

DESCRIPTION	PROPOSED DISPOSITION: Report the data as is and note in the case narrative that the samples were received and analyzed outside of 2x holding time for nitrate/nitrite.
JUSTIFICATION	ACCEPTED DISPOSITION: Accept proposed resolution.

Submitted by:	Jayna Awalt / TASL	Date:	9/17/13
Accepted by:	Karen Waters-Husted / CHPRC	Date:	9/17/13

A-6003-640 (03/30)

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CH2MHill Plateau Remediation Company SL1392	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X13-029-064 Page 1 of 1

Collector	L.D. Wall CHPRC	Contact/Requester	WATERS-HUSTED, K	Telephone No.	376-4650
SAF No.	X13-029	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071ES20
Project Title	Groundwater Background Sampling event	Logbook No.	HNF-N-506 55/92	Ice Chest No.	GWS-156
Shipped To (Lab)	TestAmerica St. Louis	Method of Shipment	Commercial Carrier	Bill of Lading/Air Bill No.	7964 7298 6874
Protocol	SURV	Priority: 30 Days	PRIORITY	Offsite Property No.	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.

SPECIAL INSTRUCTIONS **Hold Time**

Site Wide Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 401647.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2PMH2	N	W	8/15/13	1000	2x1-L G/P	C14_LSC: COMMON	6 Months	None
B2PMH2	N	W	↓	↓	1x20-mL P	Activity Scan	6 Months	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
L.D. Wall CHPRC	L.D. Wall		AUG 15 2013 1400	FEDEX			
FedEx				Jill Clarke	Jill Clarke		8.16.13 0915

Matrix *

S	= Soil	DS	= Drum Solids		
SE	= Sediment	DL	= Drum Liquids		
SO	= Solid	T	= Tissue		
SL	= Sludge	WI	= Wipe		
W	= Water	L	= Liquid		
O	= Oil	V	= Vegetation		
A	= Air	X	= Other		

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

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A-6004-842 (REV 2)

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CH2MHill Plateau Remediation Company 8L1392	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X13-029-066 Page 1 of 1

Collector	L.D. Wall CHPRC	Contact/Requester	WATERS-HUSTED, K	Telephone No.	376-4650
SAF No.	X13-029	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071ES20
Project Title	Groundwater Background Sampling event	Logbook No.	HNF-N-506 55/92	Ice Chest No.	GWS-156
Shipped To (Lab)	TestAmerica St. Louis	Method of Shipment	Commercial Carrier	Bill of Lading/Air Bill No.	7964 7298 6844
Protocol	SURV	Priority:	30 Days PRIORITY	Offsite Property No.	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.

SPECIAL INSTRUCTIONS **Hold Time**

Site Wide Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 401647.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2PMH4	N	W	8/15/13	1000	2x1-L G/P	C14_LSC: COMMON	6 Months	None
B2PMH4	N	W	↓	↓	1x20-mL P	Activity Scan	6 Months	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
L.D. Wall CHPRC	L.D. Wall	L.D. Wall	AUG 15 2013 1400	FEDEX			
FedEx				Jill Clarke		Jill Clarke	8-16-13 0915

Matrix *

S	= Soil	DS	= Drum Solids		
SE	= Sediment	DL	= Drum Liquids		
SO	= Solid	T	= Tissue		
SL	= Sludge	WI	= Wipe		
W	= Water	L	= Liquid		
O	= Oil	V	= Vegetation		
A	= Air	X	= Other		

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

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CH2MHill Plateau Remediation Company 824392	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X13-029-065 Page 1 of 1

Collector	L.D. Wall CHPRC	Contact/Requester	WATERS-HUSTED, K	Telephone No.	376-4650
SAF No.	X13-029	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071ES20
Project Title	Groundwater Background Sampling event	Logbook No.	HNF-N-506 55/92	Ice Chest No.	GW5-156
Shipped To (Lab)	TestAmerica St. Louis	Method of Shipment	Commercial Carrier	Bill of Lading/Air Bill No.	7964 7299 6894
Protocol	SURV	Priority:	30 Days PRIORITY	Offsite Property No.	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.

SPECIAL INSTRUCTIONS **Hold Time**

Site Wide Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 401647.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2PMH3	N	W	8/15/13	1000	2x1-L G/P	C14_LSC: COMMON	6 Months	None
B2PMH3	N	W	↓	↓	1x20-mL P	Activity Scan	6 Months	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
L.D. Wall CHPRC	L.D. Wall	L.D. Wall	AUG 15 2013 1400	FEDEX			
Fed Ex				Jill Clarke	Jill Clarke		8-16-13 0915

Matrix *

S	= Soil	DS	= Drum Solids
SE	= Sediment	DL	= Drum Liquids
SO	= Solid	T	= Tissue
SL	= Sludge	WI	= Wipe
W	= Water	L	= Liquid
O	= Oil	V	= Vegetation
A	= Air	X	= Other

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

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CH2MHill Plateau Remediation Company 84392	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X13-029-063 Page 1 of 1

Collector	L.D. Wall CHPRC	Contact/Requester	WATERS-HUSTED, K	Telephone No.	376-4650
SAF No.	X13-029	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071ES20
Project Title	Groundwater Background Sampling event	Logbook No.	HNF-N-506 55/92	Ice Chest No.	GWS-156
Shipped To (Lab)	TestAmerica St. Louis	Method of Shipment	Commercial Carrier	Bill of Lading/Air Bill No.	7964 7298 6876
Protocol	SURV	Priority:	30 Days PRIORITY	Offsite Property No.	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.

SPECIAL INSTRUCTIONS **Hold Time**

Site Wide Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 401647.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2PMF8	N	W	8/15/13	1000	1x1-L aGs*	9020_TOX: COMMON	28 Days	H2SO4 to pH <2/Cool~4C
B2PMF8	N	W			1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2/Cool~4C
B2PMF8	N	W			1x20-mL P	Activity Scan	6 Months	None
B2PMF9	N	W			1x1-L aGs*	9020_TOX: COMMON	28 Days	H2SO4 to pH <2/Cool~4C
B2PMF9	N	W			1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2/Cool~4C
B2PMH1	N	W			1x1-L aGs*	9020_TOX: COMMON	28 Days	H2SO4 to pH <2/Cool~4C
B2PMH1	N	W			1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2/Cool~4C
B2PMH0	N	W			1x1-L aGs*	9020_TOX: COMMON	28 Days	H2SO4 to pH <2/Cool~4C
B2PMH0	N	W			1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2/Cool~4C

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
L.D. Wall CHPRC L.D. Wall	AUG 15 2013 1400	FEDEX	
Fed Ex		Jill Clark J. Clark	8-16-13 0915

Matrix *

S = Soil		DS = Drum Solids	
SE = Sediment		DL = Drum Liquids	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wipe	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

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FedEx.

796472986874

Ship (P/U) date :
Thur 8/15/2013 4:16 pm
RICHLAND, WA US

Delivered
Signed for by: B.DANIELS

Actual delivery :
Fri 8/16/2013 9:12 am
EARTH CITY, MO US

Let us tell you when your shipment arrives. Sign up for delivery notifications

Travel History

Date/Time	Activity	Location
- 8/16/2013 - Friday		
9:12 am	Delivered	EARTH CITY, MO
6:11 am	On FedEx vehicle for delivery	EARTH CITY, MO
6:07 am	At local FedEx facility	EARTH CITY, MO
5:05 am	At destination sort facility	BERKELEY, MO
4:22 am	Departed FedEx location	MEMPHIS, TN
12:37 am	Arrived at FedEx location	MEMPHIS, TN
- 8/15/2013 - Thursday		
5:30 pm	Left FedEx origin facility	PASCO, WA
4:16 pm	Picked up	PASCO, WA
1:22 pm	Shipment information sent to FedEx	

Local Scan Time

Shipment Facts

Tracking number	796472986874	Service	FedEx Priority Overnight
Weight	81 lbs	Delivered To	Shipping/Receiving
Total pieces	1	Total shipment weight	81 lbs / 36.7 kgs
Shipper reference	GWS-156	Packaging	Your Packaging
Special handling section	Deliver Weekday		

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CH2MHill Plateau Remediation Company 821392	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X13-029-060
		Page 1 of 1

Collector	L.D. Wall CHPRC	Contact/Requester	WATERS-HUSTED, K	Telephone No.	376-4650
SAF No.	X13-029	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071ES20
Project Title	Groundwater Background Sampling event	Logbook No.	HNF-N-506 55192	Ice Chest No.	GWS-315
Shipped To (Lab)	TestAmerica St. Louis	Method of Shipment	Commercial Carrier	Bill of Lading/Air Bill No.	7964 7301 9526
Protocol	SURV	Priority: 30 Days	PRIORITY	Offsite Property No.	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

Site Wide Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 401647.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2PMF5	N	W	8/15/13	1000	1x1-L aGs*	9020_TOX: COMMON ✓	28 Days	H2SO4 to pH <2/Cool~4C
B2PMF5	N	W	↓	↓	1x500-mL G/P	6010_METALS_ICP: COMMON; ✓ 6020_METALS_ICPMS: LIST-3 (17); ✓ 6020_METALS_ICPMS: Uranium (1) ✓	6 Months	HNO3 to pH <2
B2PMF5	N	W	↓	↓	1x500-mL P	300.0_ANIONS_IC: COMMON ✓	48 Hours	Cool~4C
B2PMF5	N	W	↓	↓	1x250-mL G/P	9012_CYANIDE: COMMON ✓	14 Days	NaOH to pH >=12/Cool~4C
B2PMF5	N	W	↓	↓	1x20-mL P	Activity Scan	6 Months	None
B2PMF5	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: COMMON ✓	14 Days	HCl or H2SO4 to pH <2/Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
L.D. Wall CHPRC	L.D. Wall		AUG 15 2013 1400	FEDEX			
FedEx				Brian Darin			8/19/13 0930

Matrix *

S	= Soil		DS	= Drum Solids	
SE	= Sediment		DL	= Drum Liquids	
SO	= Solid		T	= Tissue	
SL	= Sludge		WI	= Wipe	
W	= Water		L	= Liquid	
O	= Oil		V	= Vegetation	
A	= Air		X	= Other	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

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CH2MHill Plateau Remediation Company 821392	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X13-029-061
		Page 1 of 1

Collector	L.D. Wall CHPRC	Contact/Requester	WATERS-HUSTED, K	Telephone No.	376-4650
SAF No.	X13-029	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071ES20
Project Title	Groundwater Background Sampling event	Logbook No.	HNF-N-506 55/92	Ice Chest No.	GWS-315
Shipped To (Lab)	TestAmerica St. Louis	Method of Shipment	Commercial Carrier	Bill of Lading/Air Bill No.	7964 7301 9526
Protocol	SURV	Priority: 30 Days	PRIORITY	Offsite Property No.	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.

SPECIAL INSTRUCTIONS **Hold Time**

Site Wide Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 401647.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2PMF6	N	W	8/15/13	1000	1x1-L aGs*	9020_TOX: COMMON	28 Days	H2SO4 to pH <2/Cool~4C
B2PMF6	N	W	↓	↓	1x500-mL G/P	6010_METALS_ICP: COMMON; 6020_METALS_ICPMS: LIST-3 (17); 6020_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2
B2PMF6	N	W	↓	↓	1x500-mL P	300.0_ANIONS_IC: COMMON	48 Hours	Cool~4C
B2PMF6	N	W	↓	↓	1x250-mL G/P	9012_CYANIDE: COMMON	14 Days	NaOH to pH >=12/Cool~4C
B2PMF6	N	W	↓	↓	1x20-mL P	Activity Scan	6 Months	None
B2PMF6	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: COMMON	14 Days	HCl or H2SO4 to pH <2/Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
L.D. Wall CHPRC	L.D. Wall		AUG 15 2013 1400	FEDEX			
FedEx				Brian Davis			8/19/13 0930

Matrix *

S	= Soil	DS	= Drum Solids		
SE	= Sediment	DL	= Drum Liquids		
SO	= Solid	T	= Tissue		
SL	= Sludge	WI	= Wipe		
W	= Water	L	= Liquid		
O	= Oil	V	= Vegetation		
A	= Air	X	= Other		

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

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SEPTEMBER 19, 2013

CH2MHill Plateau Remediation Company 8L1392	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X13-029-062 Page 1 of 1

Collector	L.D. Wall CHPRC	Contact/Requester	WATERS-HUSTED, K	Telephone No.	376-4650
SAF No.	X13-029	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071ES20
Project Title	Groundwater Background Sampling event	Logbook No.	HNF-N-506 55/92	Ice Chest No.	GWS-315
Shipped To (Lab)	TestAmerica St. Louis	Method of Shipment	Commercial Carrier	Bill of Lading/Air Bill No.	7964 7301 9529
Protocol	SURV	Priority:	30 Days PRIORITY	Offsite Property No.	~~7964 7301~~ 8/15/13 NA

POSSIBLE SAMPLE HAZARDS/REMARKS

Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.

SPECIAL INSTRUCTIONS **Hold Time**

Site Wide Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 401647.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2PMF7	N	W	8/15/13	1000	1x1-L aGs*	9020_TOX: COMMON	28 Days	H2SO4 to pH <2/Cool~4C
B2PMF7	N	W	↓	↓	1x500-mL G/P	6010_METALS_ICP: COMMON; 6020_METALS_ICPMS: LIST-3 (17); 6020_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2
B2PMF7	N	W	↓	↓	1x500-mL P	300.0_ANIONS_IC: COMMON	48 Hours	Cool~4C
B2PMF7	N	W	↓	↓	1x250-mL G/P	9012_CYANIDE: COMMON	14 Days	NaOH to pH >=12/Cool~4C
B2PMF7	N	W	↓	↓	1x20-mL P	Activity Scan	6 Months	None
B2PMF7	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: COMMON	14 Days	HCl or H2SO4 to pH <2/Cool~4C

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
L.D. Wall CHPRC L.D. Wall	AUG 15 2013 1400	FEDEX	
FedEx		Brian Daniel	8/19/13 0930

Matrix *

S = Soil		DS = Drum Solids	
SE = Sediment		DL = Drum Liquids	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wipe	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

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FedEx.

796473019526

Ship (P/U) date :
Thur 8/15/2013 4:16 pm
RICHLAND, WA US

Delivered
Signed for by: R.CASTELLO

Actual delivery :
Mon 8/19/2013 9:23 am
EARTH CITY, MO US

Travel History

Date/Time	Activity	Location
- 8/19/2013 - Monday		
9:23 am	Delivered	EARTH CITY, MO
6:07 am	On FedEx vehicle for delivery	EARTH CITY, MO
6:02 am	At local FedEx facility	EARTH CITY, MO
- 8/16/2013 - Friday		
10:13 pm	At destination sort facility	BERKELEY, MO
4:30 pm	Departed FedEx location	MEMPHIS, TN
3:35 pm	In transit	MEMPHIS, TN
5:00 am	Shipment exception FedEx holding package	MEMPHIS, TN
12:37 am	Arrived at FedEx location	MEMPHIS, TN
- 8/15/2013 - Thursday		
5:30 pm	Left FedEx origin facility	PASCO, WA
4:16 pm	Picked up	PASCO, WA
1:21 pm	Shipment information sent to FedEx	

Local Scan Time

Shipment Facts

Tracking number	796473019526	**Service**	FedEx Priority Overnight
Weight	72 lbs	**Dimensions**	28x16x16 in.
Delivered To	Shipping/Receiving	**Total pieces**	1
Total shipment weight	72 lbs / 32.7 kgs	**Shipper reference**	GWS-315
Packaging	Your Packaging	**Special handling section**	Deliver Weekday, Additional Handling Surcharge

Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 160-3405-1
SDG Number: SL1392

Login Number: 3405
List Number: 1
Creator: Clarke, Jill C

List Source: TestAmerica St. Louis

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 160-3405-1
SDG Number: SL1392

Login Number: 3417
List Number: 1
Creator: Daniels, Brian J

List Source: TestAmerica St. Louis

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	False	Samples out of hold for Nitrate/Nitrite. SIR submitted.
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Analyzed for but not detected.
T	MS, MSD: Recovery exceeds upper or lower control limits.
B	Analyte was found in the associated method blank as well as in the sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
E	Result exceeded calibration range.

Metals

Qualifier	Qualifier Description
U	Analyzed for but not detected.
B	Estimated result. Result is less than the RL, but greater than MDL
N	Recovery exceeds upper or lower control limits
C	The analyte was detected in both the sample and the assoicated QC blank, and the sample concentration was </= 5X the blank concentration.
D	The reported value is from a dilution.

General Chemistry

Qualifier	Qualifier Description
D	Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples.
U	Analyzed for but not detected.

Rad

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Method Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: S,W,I,A ,X SAFS- GROUNDWATER

TestAmerica Job ID: 160-3405-1
SDG: SL1392

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds (GC/MS)	SW846	TAL SL
6010C	Metals (ICP)	SW846	TAL SL
6020A	Metals (ICP/MS)	SW846	TAL SL
300.0	Anions, Ion Chromatography	MCAWW	TAL SL
9012B	Cyanide, Total andor Amenable	SW846	TAL SL
9020B	Organic Halides, Total (TOX)	SW846	TAL SL
9060	Organic Carbon, Total (TOC)	SW846	TAL SL
C-01-1	Carbon-14 (EERF C-01-1)	EERF	TAL SL

Protocol References:

EERF = EERF

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: S,W,I,A ,X SAFS- GROUNDWATER

TestAmerica Job ID: 160-3405-1
SDG: SL1392

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-3405-1	B2PMH2	Water	08/15/13 10:00	08/16/13 09:15
160-3405-2	B2PMH4	Water	08/15/13 10:00	08/16/13 09:15
160-3405-3	B2PMH3	Water	08/15/13 10:00	08/16/13 09:15
160-3405-4	B2PMF8	Water	08/15/13 10:00	08/16/13 09:15
160-3405-5	B2PMF9	Water	08/15/13 10:00	08/16/13 09:15
160-3405-6	B2PMH1	Water	08/15/13 10:00	08/16/13 09:15
160-3405-7	B2PMH0	Water	08/15/13 10:00	08/16/13 09:15
160-3417-1	B2PMF5	Water	08/15/13 10:00	08/19/13 09:30
160-3417-2	B2PMF6	Water	08/15/13 10:00	08/19/13 09:30
160-3417-3	B2PMF7	Water	08/15/13 10:00	08/19/13 09:30

Detection Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: S,W,I,A ,X SAFS- GROUNDWATER

TestAmerica Job ID: 160-3405-1
SDG: SL1392

Client Sample ID: B2PMH2 — Lab Sample ID: 160-3405-1

No Detections.

Client Sample ID: B2PMH4 — Lab Sample ID: 160-3405-2

No Detections.

Client Sample ID: B2PMH3 — Lab Sample ID: 160-3405-3

No Detections.

Client Sample ID: B2PMF8 — Lab Sample ID: 160-3405-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Halogens, Total Organic	49.0		5.0	1.8	ug/L	1		9020B	Total/NA
Total Organic Carbon	2.8		1.0	0.27	mg/L	1		9060	Total/NA

Client Sample ID: B2PMF9 — Lab Sample ID: 160-3405-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Halogens, Total Organic	45.0		5.0	1.8	ug/L	1		9020B	Total/NA
Total Organic Carbon	3.1		1.0	0.27	mg/L	1		9060	Total/NA

Client Sample ID: B2PMH1 — Lab Sample ID: 160-3405-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Halogens, Total Organic	47.0		5.0	1.8	ug/L	1		9020B	Total/NA
Total Organic Carbon	3.3		1.0	0.27	mg/L	1		9060	Total/NA

Client Sample ID: B2PMH0 — Lab Sample ID: 160-3405-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Halogens, Total Organic	46.0		5.0	1.8	ug/L	1		9020B	Total/NA
Total Organic Carbon	3.1		1.0	0.27	mg/L	1		9060	Total/NA

Client Sample ID: B2PMF5 — Lab Sample ID: 160-3417-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	1.4	J B	2.0	0.34	ug/L	1		8260C	Total/NA
Carbon disulfide	0.11	J	1.0	0.050	ug/L	1		8260C	Total/NA
Chloroform	39	T	1.0	0.10	ug/L	1		8260C	Total/NA
Methylene Chloride	1.3		1.0	0.27	ug/L	1		8260C	Total/NA
Tetrachloroethene	17		1.0	0.18	ug/L	1		8260C	Total/NA
Trichloroethene	39		1.0	0.25	ug/L	1		8260C	Total/NA
Carbon tetrachloride - DL	240		10	1.3	ug/L	1		8260C	Total/NA
Lead	2.8	B	10.0	1.5	ug/L	1		6010C	Total/NA
Boron	14.3	B	100	10.8	ug/L	1		6010C	Total/NA
Barium	89.8		50.0	4.0	ug/L	1		6010C	Total/NA
Calcium	84400	D	10000	1060	ug/L	10		6010C	Total/NA
Cobalt	28.1	B	50.0	4.0	ug/L	1		6010C	Total/NA
Chromium	33.2		10.0	3.1	ug/L	1		6010C	Total/NA
Copper	23.4	B	25.0	4.6	ug/L	1		6010C	Total/NA
Iron	62.8	B	100	28.2	ug/L	1		6010C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: B2PMF5 (Continued) — Lab Sample ID: 160-3417-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Potassium	12700		5000	1650	ug/L	1		6010C	Total/NA
Lithium	12.0	B	50.0	9.6	ug/L	1		6010C	Total/NA
Magnesium	21000		1000	132	ug/L	1		6010C	Total/NA
Manganese	29.4		15.0	3.3	ug/L	1		6010C	Total/NA
Sodium	46600		1000	324	ug/L	1		6010C	Total/NA
Nickel	32.8	B	40.0	13.3	ug/L	1		6010C	Total/NA
Silicon	27700		400	40.0	ug/L	1		6010C	Total/NA
Strontium	234	D	50.0	5.4	ug/L	10		6010C	Total/NA
Vanadium	15.7	B	50.0	4.1	ug/L	1		6010C	Total/NA
Zinc	353		20.0	5.2	ug/L	1		6010C	Total/NA
Uranium	112		1.0	0.23	ug/L	1		6020A	Total/NA
Arsenic	2.0	B	10.0	1.2	ug/L	1		6020A	Total/NA
Boron	36.7	B N	50.0	10.0	ug/L	1		6020A	Total/NA
Barium	85.3		2.0	0.22	ug/L	1		6020A	Total/NA
Cobalt	24.1		2.0	0.22	ug/L	1		6020A	Total/NA
Chromium	26.6		10.0	3.3	ug/L	1		6020A	Total/NA
Copper	24.0		1.0	0.45	ug/L	1		6020A	Total/NA
Iron	98.9		50.0	20.4	ug/L	1		6020A	Total/NA
Magnesium	19600		50.0	5.6	ug/L	1		6020A	Total/NA
Manganese	27.3		2.0	0.25	ug/L	1		6020A	Total/NA
Molybdenum	2.2	B	5.0	1.0	ug/L	1		6020A	Total/NA
Lead	0.58	B	3.0	0.17	ug/L	1		6020A	Total/NA
Selenium	2.1	B	5.0	1.6	ug/L	1		6020A	Total/NA
Tin	3.3	C	2.0	1.0	ug/L	1		6020A	Total/NA
Thallium	0.63	B	2.0	0.55	ug/L	1		6020A	Total/NA
Nitrite as N	0.031		0.020	0.0030	mg/L	1		300.0	Total/NA
Sulfate	13.6		0.50	0.050	mg/L	1		300.0	Total/NA
Cyanide, Total	309		5.0	1.5	ug/L	1		9012B	Total/NA
Halogens, Total Organic	39.3		5.0	1.8	ug/L	1		9020B	Total/NA
Nitrate as N - DL	2.6	D	0.20	0.040	mg/L	10		300.0	Total/NA
Fluoride - DL	5.1	D	1.0	0.10	mg/L	10		300.0	Total/NA
Chloride - DL	33.4	D	2.0	0.20	mg/L	10		300.0	Total/NA

Client Sample ID: B2PMF6 — Lab Sample ID: 160-3417-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	1.0	J B	2.0	0.34	ug/L	1		8260C	Total/NA
Carbon disulfide	0.11	J	1.0	0.050	ug/L	1		8260C	Total/NA
Chloroform	35	T	1.0	0.10	ug/L	1		8260C	Total/NA
Methylene Chloride	1.6		1.0	0.27	ug/L	1		8260C	Total/NA
Tetrachloroethene	14		1.0	0.18	ug/L	1		8260C	Total/NA
Trichloroethene	33		1.0	0.25	ug/L	1		8260C	Total/NA
Carbon tetrachloride - DL	220		10	1.3	ug/L	1		8260C	Total/NA
Lead	2.9	B	10.0	1.5	ug/L	1		6010C	Total/NA
Boron	11.3	B	100	10.8	ug/L	1		6010C	Total/NA
Barium	88.3		50.0	4.0	ug/L	1		6010C	Total/NA
Calcium	82900	D	10000	1060	ug/L	10		6010C	Total/NA
Cobalt	27.4	B	50.0	4.0	ug/L	1		6010C	Total/NA
Chromium	30.7		10.0	3.1	ug/L	1		6010C	Total/NA
Copper	22.8	B	25.0	4.6	ug/L	1		6010C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: B2PMF6 (Continued) — Lab Sample ID: 160-3417-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	29.9	B	100	28.2	ug/L	1		6010C	Total/NA
Potassium	12500		5000	1650	ug/L	1		6010C	Total/NA
Lithium	12.9	B	50.0	9.6	ug/L	1		6010C	Total/NA
Magnesium	20500		1000	132	ug/L	1		6010C	Total/NA
Manganese	27.8		15.0	3.3	ug/L	1		6010C	Total/NA
Sodium	46100		1000	324	ug/L	1		6010C	Total/NA
Nickel	32.4	B	40.0	13.3	ug/L	1		6010C	Total/NA
Silicon	27000		400	40.0	ug/L	1		6010C	Total/NA
Strontium	230	D	50.0	5.4	ug/L	10		6010C	Total/NA
Uranium	58.8	B	500	23.5	ug/L	1		6010C	Total/NA
Vanadium	17.2	B	50.0	4.1	ug/L	1		6010C	Total/NA
Zinc	348		20.0	5.2	ug/L	1		6010C	Total/NA
Uranium	105		1.0	0.23	ug/L	1		6020A	Total/NA
Arsenic	2.0	B	10.0	1.2	ug/L	1		6020A	Total/NA
Boron	46.8	B N	50.0	10.0	ug/L	1		6020A	Total/NA
Barium	85.4		2.0	0.22	ug/L	1		6020A	Total/NA
Cobalt	24.1		2.0	0.22	ug/L	1		6020A	Total/NA
Chromium	27.2		10.0	3.3	ug/L	1		6020A	Total/NA
Copper	25.2		1.0	0.45	ug/L	1		6020A	Total/NA
Iron	70.1		50.0	20.4	ug/L	1		6020A	Total/NA
Magnesium	19800		50.0	5.6	ug/L	1		6020A	Total/NA
Manganese	27.1		2.0	0.25	ug/L	1		6020A	Total/NA
Molybdenum	2.2	B	5.0	1.0	ug/L	1		6020A	Total/NA
Lead	0.55	B	3.0	0.17	ug/L	1		6020A	Total/NA
Selenium	3.4	B	5.0	1.6	ug/L	1		6020A	Total/NA
Tin	4.6	C	2.0	1.0	ug/L	1		6020A	Total/NA
Thallium	0.88	B	2.0	0.55	ug/L	1		6020A	Total/NA
Nitrite as N	0.031		0.020	0.0030	mg/L	1		300.0	Total/NA
Sulfate	13.8		0.50	0.050	mg/L	1		300.0	Total/NA
Cyanide, Total	315		5.0	1.5	ug/L	1		9012B	Total/NA
Halogens, Total Organic	37.7		5.0	1.8	ug/L	1		9020B	Total/NA
Nitrate as N - DL	2.6	D	0.20	0.040	mg/L	10		300.0	Total/NA
Fluoride - DL	5.2	D	1.0	0.10	mg/L	10		300.0	Total/NA
Chloride - DL	33.6	D	2.0	0.20	mg/L	10		300.0	Total/NA

Client Sample ID: B2PMF7 — Lab Sample ID: 160-3417-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	1.2	J B	2.0	0.34	ug/L	1		8260C	Total/NA
Carbon disulfide	0.13	J	1.0	0.050	ug/L	1		8260C	Total/NA
Chloroform	37	T	1.0	0.10	ug/L	1		8260C	Total/NA
Methylene Chloride	1.7		1.0	0.27	ug/L	1		8260C	Total/NA
Tetrachloroethene	15		1.0	0.18	ug/L	1		8260C	Total/NA
Trichloroethene	36		1.0	0.25	ug/L	1		8260C	Total/NA
Carbon tetrachloride - DL	200		10	1.3	ug/L	1		8260C	Total/NA
Lead	3.1	B	10.0	1.5	ug/L	1		6010C	Total/NA
Boron	10.9	B	100	10.8	ug/L	1		6010C	Total/NA
Barium	90.9		50.0	4.0	ug/L	1		6010C	Total/NA
Calcium	86600	D	10000	1060	ug/L	10		6010C	Total/NA
Cobalt	27.7	B	50.0	4.0	ug/L	1		6010C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: B2PMF7 (Continued)

Lab Sample ID: 160-3417-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	32.6		10.0	3.1	ug/L	1		6010C	Total/NA
Copper	23.2	B	25.0	4.6	ug/L	1		6010C	Total/NA
Iron	142		100	28.2	ug/L	1		6010C	Total/NA
Potassium	12800		5000	1650	ug/L	1		6010C	Total/NA
Lithium	12.1	B	50.0	9.6	ug/L	1		6010C	Total/NA
Magnesium	21000		1000	132	ug/L	1		6010C	Total/NA
Manganese	29.3		15.0	3.3	ug/L	1		6010C	Total/NA
Sodium	47400		1000	324	ug/L	1		6010C	Total/NA
Nickel	33.0	B	40.0	13.3	ug/L	1		6010C	Total/NA
Silicon	27700		400	40.0	ug/L	1		6010C	Total/NA
Strontium	234	D	50.0	5.4	ug/L	10		6010C	Total/NA
Uranium	57.0	B	500	23.5	ug/L	1		6010C	Total/NA
Vanadium	13.8	B	50.0	4.1	ug/L	1		6010C	Total/NA
Zinc	364		20.0	5.2	ug/L	1		6010C	Total/NA
Uranium	121		1.0	0.23	ug/L	1		6020A	Total/NA
Arsenic	1.4	B	10.0	1.2	ug/L	1		6020A	Total/NA
Boron	33.7	B N	50.0	10.0	ug/L	1		6020A	Total/NA
Barium	88.2		2.0	0.22	ug/L	1		6020A	Total/NA
Cobalt	24.3		2.0	0.22	ug/L	1		6020A	Total/NA
Chromium	27.4		10.0	3.3	ug/L	1		6020A	Total/NA
Copper	24.9		1.0	0.45	ug/L	1		6020A	Total/NA
Iron	175		50.0	20.4	ug/L	1		6020A	Total/NA
Magnesium	20200		50.0	5.6	ug/L	1		6020A	Total/NA
Manganese	29.0		2.0	0.25	ug/L	1		6020A	Total/NA
Molybdenum	1.7	B	5.0	1.0	ug/L	1		6020A	Total/NA
Lead	0.57	B	3.0	0.17	ug/L	1		6020A	Total/NA
Tin	2.8	C	2.0	1.0	ug/L	1		6020A	Total/NA
Nitrite as N	0.030		0.020	0.0030	mg/L	1		300.0	Total/NA
Sulfate	13.9		0.50	0.050	mg/L	1		300.0	Total/NA
Cyanide, Total	318		5.0	1.5	ug/L	1		9012B	Total/NA
Halogens, Total Organic	38.3		5.0	1.8	ug/L	1		9020B	Total/NA
Nitrate as N - DL	2.6	D	0.20	0.040	mg/L	10		300.0	Total/NA
Fluoride - DL	5.2	D	1.0	0.10	mg/L	10		300.0	Total/NA
Chloride - DL	33.9	D	2.0	0.20	mg/L	10		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Method: 8260C - Volatile Organic Compounds (GC/MS)

Client Sample ID: B2PMF5 — **Lab Sample ID: 160-3417-1**
Date Collected: 08/15/13 10:00 — **Matrix: Water**
Date Received: 08/19/13 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.070	U	1.0	0.070	ug/L			08/28/13 11:40	1
1,1,2-Trichloroethane	0.15	U	1.0	0.15	ug/L			08/28/13 11:40	1
1,1-Dichloroethane	0.070	U	1.0	0.070	ug/L			08/28/13 11:40	1
1,1-Dichloroethene	0.080	U	1.0	0.080	ug/L			08/28/13 11:40	1
1,2-Dichloroethane	0.10	U	1.0	0.10	ug/L			08/28/13 11:40	1
2-Butanone (MEK)	0.52	U T	5.0	0.52	ug/L			08/28/13 11:40	1
4-Methyl-2-pentanone (MIBK)	0.12	U	5.0	0.12	ug/L			08/28/13 11:40	1
Acetone	**1.4**	**J B**	2.0	0.34	ug/L			08/28/13 11:40	1
Benzene	0.060	U	1.0	0.060	ug/L			08/28/13 11:40	1
Carbon disulfide	**0.11**	**J**	1.0	0.050	ug/L			08/28/13 11:40	1
Chlorobenzene	0.15	U	1.0	0.15	ug/L			08/28/13 11:40	1
Chloroform	**39**	**T**	1.0	0.10	ug/L			08/28/13 11:40	1
Ethylbenzene	0.090	U	1.0	0.090	ug/L			08/28/13 11:40	1
Methylene Chloride	**1.3**		1.0	0.27	ug/L			08/28/13 11:40	1
Tetrachloroethene	**17**		1.0	0.18	ug/L			08/28/13 11:40	1
Toluene	0.070	U	1.0	0.070	ug/L			08/28/13 11:40	1
Trichloroethene	**39**		1.0	0.25	ug/L			08/28/13 11:40	1
Vinyl chloride	0.080	U	2.0	0.080	ug/L			08/28/13 11:40	1
Xylenes, Total	0.20	U	3.0	0.20	ug/L			08/28/13 11:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*79 - 125*		*08/28/13 11:40*	*1*
4-Bromofluorobenzene (Surr)	*99*		*84 - 118*		*08/28/13 11:40*	*1*
Dibromofluoromethane (Surr)	*98*		*85 - 120*		*08/28/13 11:40*	*1*
Toluene-d8 (Surr)	*97*		*85 - 121*		*08/28/13 11:40*	*1*

Client Sample ID: B2PMF6 — **Lab Sample ID: 160-3417-2**
Date Collected: 08/15/13 10:00 — **Matrix: Water**
Date Received: 08/19/13 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.070	U	1.0	0.070	ug/L			08/28/13 11:16	1
1,1,2-Trichloroethane	0.15	U	1.0	0.15	ug/L			08/28/13 11:16	1
1,1-Dichloroethane	0.070	U	1.0	0.070	ug/L			08/28/13 11:16	1
1,1-Dichloroethene	0.080	U	1.0	0.080	ug/L			08/28/13 11:16	1
1,2-Dichloroethane	0.10	U	1.0	0.10	ug/L			08/28/13 11:16	1
2-Butanone (MEK)	0.52	U T	5.0	0.52	ug/L			08/28/13 11:16	1
4-Methyl-2-pentanone (MIBK)	0.12	U	5.0	0.12	ug/L			08/28/13 11:16	1
Acetone	**1.0**	**J B**	2.0	0.34	ug/L			08/28/13 11:16	1
Benzene	0.060	U	1.0	0.060	ug/L			08/28/13 11:16	1
Carbon disulfide	**0.11**	**J**	1.0	0.050	ug/L			08/28/13 11:16	1
Chlorobenzene	0.15	U	1.0	0.15	ug/L			08/28/13 11:16	1
Chloroform	**35**	**T**	1.0	0.10	ug/L			08/28/13 11:16	1
Ethylbenzene	0.090	U	1.0	0.090	ug/L			08/28/13 11:16	1
Methylene Chloride	**1.6**		1.0	0.27	ug/L			08/28/13 11:16	1
Tetrachloroethene	**14**		1.0	0.18	ug/L			08/28/13 11:16	1
Toluene	0.070	U	1.0	0.070	ug/L			08/28/13 11:16	1
Trichloroethene	**33**		1.0	0.25	ug/L			08/28/13 11:16	1
Vinyl chloride	0.080	U	2.0	0.080	ug/L			08/28/13 11:16	1
Xylenes, Total	0.20	U	3.0	0.20	ug/L			08/28/13 11:16	1

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		79 - 125		08/28/13 11:16	1
4-Bromofluorobenzene (Surr)	96		84 - 118		08/28/13 11:16	1
Dibromofluoromethane (Surr)	97		85 - 120		08/28/13 11:16	1
Toluene-d8 (Surr)	91		85 - 121		08/28/13 11:16	1

Client Sample ID: B2PMF7 — **Lab Sample ID: 160-3417-3**
Date Collected: 08/15/13 10:00 — **Matrix: Water**
Date Received: 08/19/13 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.070	U	1.0	0.070	ug/L			08/28/13 10:53	1
1,1,2-Trichloroethane	0.15	U	1.0	0.15	ug/L			08/28/13 10:53	1
1,1-Dichloroethane	0.070	U	1.0	0.070	ug/L			08/28/13 10:53	1
1,1-Dichloroethene	0.080	U	1.0	0.080	ug/L			08/28/13 10:53	1
1,2-Dichloroethane	0.10	U	1.0	0.10	ug/L			08/28/13 10:53	1
2-Butanone (MEK)	0.52	U T	5.0	0.52	ug/L			08/28/13 10:53	1
4-Methyl-2-pentanone (MIBK)	0.12	U	5.0	0.12	ug/L			08/28/13 10:53	1
Acetone	**1.2**	**J B**	2.0	0.34	ug/L			08/28/13 10:53	1
Benzene	0.060	U	1.0	0.060	ug/L			08/28/13 10:53	1
Carbon disulfide	**0.13**	**J**	1.0	0.050	ug/L			08/28/13 10:53	1
Chlorobenzene	0.15	U	1.0	0.15	ug/L			08/28/13 10:53	1
Chloroform	**37**	**T**	1.0	0.10	ug/L			08/28/13 10:53	1
Ethylbenzene	0.090	U	1.0	0.090	ug/L			08/28/13 10:53	1
Methylene Chloride	**1.7**		1.0	0.27	ug/L			08/28/13 10:53	1
Tetrachloroethene	**15**		1.0	0.18	ug/L			08/28/13 10:53	1
Toluene	0.070	U	1.0	0.070	ug/L			08/28/13 10:53	1
Trichloroethene	**36**		1.0	0.25	ug/L			08/28/13 10:53	1
Vinyl chloride	0.080	U	2.0	0.080	ug/L			08/28/13 10:53	1
Xylenes, Total	0.20	U	3.0	0.20	ug/L			08/28/13 10:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		79 - 125		08/28/13 10:53	1
4-Bromofluorobenzene (Surr)	97		84 - 118		08/28/13 10:53	1
Dibromofluoromethane (Surr)	94		85 - 120		08/28/13 10:53	1
Toluene-d8 (Surr)	90		85 - 121		08/28/13 10:53	1

Method: 8260C - Volatile Organic Compounds (GC/MS) - DL

Client Sample ID: B2PMF5 — **Lab Sample ID: 160-3417-1**
Date Collected: 08/15/13 10:00 — **Matrix: Water**
Date Received: 08/19/13 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	**240**		10	1.3	ug/L			08/28/13 09:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		79 - 125		08/28/13 09:27	1
4-Bromofluorobenzene (Surr)	100		84 - 118		08/28/13 09:27	1
Dibromofluoromethane (Surr)	97		85 - 120		08/28/13 09:27	1
Toluene-d8 (Surr)	94		85 - 121		08/28/13 09:27	1

Method: 8260C - Volatile Organic Compounds (GC/MS) - DL

Client Sample ID: B2PMF6 — **Lab Sample ID: 160-3417-2**
Date Collected: 08/15/13 10:00 — **Matrix: Water**
Date Received: 08/19/13 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	220		10	1.3	ug/L			08/28/13 09:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*79 - 125*		*08/28/13 09:50*	*1*
4-Bromofluorobenzene (Surr)	*101*		*84 - 118*		*08/28/13 09:50*	*1*
Dibromofluoromethane (Surr)	*101*		*85 - 120*		*08/28/13 09:50*	*1*
Toluene-d8 (Surr)	*96*		*85 - 121*		*08/28/13 09:50*	*1*

Client Sample ID: B2PMF7 — **Lab Sample ID: 160-3417-3**
Date Collected: 08/15/13 10:00 — **Matrix: Water**
Date Received: 08/19/13 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	200		10	1.3	ug/L			08/28/13 10:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*79 - 125*		*08/28/13 10:14*	*1*
4-Bromofluorobenzene (Surr)	*97*		*84 - 118*		*08/28/13 10:14*	*1*
Dibromofluoromethane (Surr)	*99*		*85 - 120*		*08/28/13 10:14*	*1*
Toluene-d8 (Surr)	*95*		*85 - 121*		*08/28/13 10:14*	*1*

Method: 6010C - Metals (ICP)

Client Sample ID: B2PMF5 — **Lab Sample ID: 160-3417-1**
Date Collected: 08/15/13 10:00 — **Matrix: Water**
Date Received: 08/19/13 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	2.8	B	10.0	1.5	ug/L		08/30/13 14:34	09/12/13 17:03	1
Silver	6.0	U	10.0	6.0	ug/L		08/30/13 14:34	09/12/13 17:03	1
Arsenic	2.0	U	10.0	2.0	ug/L		08/30/13 14:34	09/12/13 17:03	1
Boron	14.3	B	100	10.8	ug/L		08/30/13 14:34	09/12/13 17:03	1
Barium	89.8		50.0	4.0	ug/L		08/30/13 14:34	09/12/13 17:03	1
Beryllium	0.61	U	5.0	0.61	ug/L		08/30/13 14:34	09/12/13 17:03	1
Calcium	84400	D	10000	1060	ug/L		08/30/13 14:34	09/12/13 18:11	10
Cadmium	0.91	U	5.0	0.91	ug/L		08/30/13 14:34	09/12/13 17:03	1
Cobalt	28.1	B	50.0	4.0	ug/L		08/30/13 14:34	09/12/13 17:03	1
Chromium	33.2		10.0	3.1	ug/L		08/30/13 14:34	09/12/13 17:03	1
Copper	23.4	B	25.0	4.6	ug/L		08/30/13 14:34	09/12/13 17:03	1
Iron	62.8	B	100	28.2	ug/L		08/30/13 14:34	09/12/13 17:03	1
Potassium	12700		5000	1650	ug/L		08/30/13 14:34	09/12/13 17:03	1
Lithium	12.0	B	50.0	9.6	ug/L		08/30/13 14:34	09/12/13 17:03	1
Magnesium	21000		1000	132	ug/L		08/30/13 14:34	09/12/13 17:03	1
Manganese	29.4		15.0	3.3	ug/L		08/30/13 14:34	09/12/13 17:03	1
Molybdenum	5.0	U	40.0	5.0	ug/L		08/30/13 14:34	09/12/13 17:03	1
Sodium	46600		1000	324	ug/L		08/30/13 14:34	09/12/13 17:03	1
Nickel	32.8	B	40.0	13.3	ug/L		08/30/13 14:34	09/12/13 17:03	1
Antimony	4.0	U	10.0	4.0	ug/L		08/30/13 14:34	09/12/13 17:03	1
Selenium	2.7	U	15.0	2.7	ug/L		08/30/13 14:34	09/12/13 17:03	1
Silicon	27700		400	40.0	ug/L		08/30/13 14:34	09/12/13 17:03	1
Strontium	234	D	50.0	5.4	ug/L		08/30/13 14:34	09/12/13 18:11	10
Uranium	23.5	U	500	23.5	ug/L		08/30/13 14:34	09/12/13 17:03	1

Method: 6010C - Metals (ICP) (Continued)

Client Sample ID: B2PMF5 — **Lab Sample ID: 160-3417-1**
Date Collected: 08/15/13 10:00 — **Matrix: Water**
Date Received: 08/19/13 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vanadium	15.7	B	50.0	4.1	ug/L		08/30/13 14:34	09/12/13 17:03	1
Zinc	353		20.0	5.2	ug/L		08/30/13 14:34	09/12/13 17:03	1
Bismuth	105	U	200	105	ug/L		08/30/13 14:34	09/12/13 17:03	1

Client Sample ID: B2PMF6 — **Lab Sample ID: 160-3417-2**
Date Collected: 08/15/13 10:00 — **Matrix: Water**
Date Received: 08/19/13 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	2.9	B	10.0	1.5	ug/L		08/30/13 14:34	09/12/13 17:25	1
Silver	6.0	U	10.0	6.0	ug/L		08/30/13 14:34	09/12/13 17:25	1
Arsenic	2.0	U	10.0	2.0	ug/L		08/30/13 14:34	09/12/13 17:25	1
Boron	11.3	B	100	10.8	ug/L		08/30/13 14:34	09/12/13 17:25	1
Barium	88.3		50.0	4.0	ug/L		08/30/13 14:34	09/12/13 17:25	1
Beryllium	0.61	U	5.0	0.61	ug/L		08/30/13 14:34	09/12/13 17:25	1
Calcium	82900	D	10000	1060	ug/L		08/30/13 14:34	09/12/13 18:26	10
Cadmium	0.91	U	5.0	0.91	ug/L		08/30/13 14:34	09/12/13 17:25	1
Cobalt	27.4	B	50.0	4.0	ug/L		08/30/13 14:34	09/12/13 17:25	1
Chromium	30.7		10.0	3.1	ug/L		08/30/13 14:34	09/12/13 17:25	1
Copper	22.8	B	25.0	4.6	ug/L		08/30/13 14:34	09/12/13 17:25	1
Iron	29.9	B	100	28.2	ug/L		08/30/13 14:34	09/12/13 17:25	1
Potassium	12500		5000	1650	ug/L		08/30/13 14:34	09/12/13 17:25	1
Lithium	12.9	B	50.0	9.6	ug/L		08/30/13 14:34	09/12/13 17:25	1
Magnesium	20500		1000	132	ug/L		08/30/13 14:34	09/12/13 17:25	1
Manganese	27.8		15.0	3.3	ug/L		08/30/13 14:34	09/12/13 17:25	1
Molybdenum	5.0	U	40.0	5.0	ug/L		08/30/13 14:34	09/12/13 17:25	1
Sodium	46100		1000	324	ug/L		08/30/13 14:34	09/12/13 17:25	1
Nickel	32.4	B	40.0	13.3	ug/L		08/30/13 14:34	09/12/13 17:25	1
Antimony	4.0	U	10.0	4.0	ug/L		08/30/13 14:34	09/12/13 17:25	1
Selenium	2.7	U	15.0	2.7	ug/L		08/30/13 14:34	09/12/13 17:25	1
Silicon	27000		400	40.0	ug/L		08/30/13 14:34	09/12/13 17:25	1
Strontium	230	D	50.0	5.4	ug/L		08/30/13 14:34	09/12/13 18:26	10
Uranium	58.8	B	500	23.5	ug/L		08/30/13 14:34	09/12/13 17:25	1
Vanadium	17.2	B	50.0	4.1	ug/L		08/30/13 14:34	09/12/13 17:25	1
Zinc	348		20.0	5.2	ug/L		08/30/13 14:34	09/12/13 17:25	1
Bismuth	105	U	200	105	ug/L		08/30/13 14:34	09/12/13 17:25	1

Client Sample ID: B2PMF7 — **Lab Sample ID: 160-3417-3**
Date Collected: 08/15/13 10:00 — **Matrix: Water**
Date Received: 08/19/13 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	3.1	B	10.0	1.5	ug/L		08/30/13 14:34	09/12/13 17:29	1
Silver	6.0	U	10.0	6.0	ug/L		08/30/13 14:34	09/12/13 17:29	1
Arsenic	2.0	U	10.0	2.0	ug/L		08/30/13 14:34	09/12/13 17:29	1
Boron	10.9	B	100	10.8	ug/L		08/30/13 14:34	09/12/13 17:29	1
Barium	90.9		50.0	4.0	ug/L		08/30/13 14:34	09/12/13 17:29	1
Beryllium	0.61	U	5.0	0.61	ug/L		08/30/13 14:34	09/12/13 17:29	1
Calcium	86600	D	10000	1060	ug/L		08/30/13 14:34	09/12/13 18:30	10
Cadmium	0.91	U	5.0	0.91	ug/L		08/30/13 14:34	09/12/13 17:29	1
Cobalt	27.7	B	50.0	4.0	ug/L		08/30/13 14:34	09/12/13 17:29	1
Chromium	32.6		10.0	3.1	ug/L		08/30/13 14:34	09/12/13 17:29	1

Method: 6010C - Metals (ICP) (Continued)

Client Sample ID: B2PMF7 — **Lab Sample ID: 160-3417-3**
Date Collected: 08/15/13 10:00 — **Matrix: Water**
Date Received: 08/19/13 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	23.2	B	25.0	4.6	ug/L		08/30/13 14:34	09/12/13 17:29	1
Iron	142		100	28.2	ug/L		08/30/13 14:34	09/12/13 17:29	1
Potassium	12800		5000	1650	ug/L		08/30/13 14:34	09/12/13 17:29	1
Lithium	12.1	B	50.0	9.6	ug/L		08/30/13 14:34	09/12/13 17:29	1
Magnesium	21000		1000	132	ug/L		08/30/13 14:34	09/12/13 17:29	1
Manganese	29.3		15.0	3.3	ug/L		08/30/13 14:34	09/12/13 17:29	1
Molybdenum	5.0	U	40.0	5.0	ug/L		08/30/13 14:34	09/12/13 17:29	1
Sodium	47400		1000	324	ug/L		08/30/13 14:34	09/12/13 17:29	1
Nickel	33.0	B	40.0	13.3	ug/L		08/30/13 14:34	09/12/13 17:29	1
Antimony	4.0	U	10.0	4.0	ug/L		08/30/13 14:34	09/12/13 17:29	1
Selenium	2.7	U	15.0	2.7	ug/L		08/30/13 14:34	09/12/13 17:29	1
Silicon	27700		400	40.0	ug/L		08/30/13 14:34	09/12/13 17:29	1
Strontium	234	D	50.0	5.4	ug/L		08/30/13 14:34	09/12/13 18:30	10
Uranium	57.0	B	500	23.5	ug/L		08/30/13 14:34	09/12/13 17:29	1
Vanadium	13.8	B	50.0	4.1	ug/L		08/30/13 14:34	09/12/13 17:29	1
Zinc	364		20.0	5.2	ug/L		08/30/13 14:34	09/12/13 17:29	1
Bismuth	105	U	200	105	ug/L		08/30/13 14:34	09/12/13 17:29	1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: B2PMF5 — **Lab Sample ID: 160-3417-1**
Date Collected: 08/15/13 10:00 — **Matrix: Water**
Date Received: 08/19/13 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.77	U	2.0	0.77	ug/L		08/30/13 14:37	09/04/13 01:36	1
Uranium	112		1.0	0.23	ug/L		08/30/13 14:37	09/04/13 01:36	1
Aluminum	12.9	U	30.0	12.9	ug/L		08/30/13 14:37	09/04/13 01:36	1
Arsenic	2.0	B	10.0	1.2	ug/L		08/30/13 14:37	09/04/13 01:36	1
Boron	36.7	B N	50.0	10.0	ug/L		08/30/13 14:37	09/04/13 01:36	1
Barium	85.3		2.0	0.22	ug/L		08/30/13 14:37	09/04/13 01:36	1
Beryllium	0.35	U	0.50	0.35	ug/L		08/30/13 14:37	09/04/13 01:36	1
Cadmium	0.10	U	0.50	0.10	ug/L		08/30/13 14:37	09/04/13 01:36	1
Cobalt	24.1		2.0	0.22	ug/L		08/30/13 14:37	09/04/13 01:36	1
Chromium	26.6		10.0	3.3	ug/L		08/30/13 14:37	09/04/13 01:36	1
Copper	24.0		1.0	0.45	ug/L		08/30/13 14:37	09/04/13 01:36	1
Iron	98.9		50.0	20.4	ug/L		08/30/13 14:37	09/04/13 01:36	1
Magnesium	19600		50.0	5.6	ug/L		08/30/13 14:37	09/04/13 01:36	1
Manganese	27.3		2.0	0.25	ug/L		08/30/13 14:37	09/04/13 01:36	1
Molybdenum	2.2	B	5.0	1.0	ug/L		08/30/13 14:37	09/04/13 01:36	1
Lead	0.58	B	3.0	0.17	ug/L		08/30/13 14:37	09/04/13 01:36	1
Antimony	1.7	U	5.0	1.7	ug/L		08/30/13 14:37	09/04/13 01:36	1
Selenium	2.1	B	5.0	1.6	ug/L		08/30/13 14:37	09/04/13 01:36	1
Tin	3.3	C	2.0	1.0	ug/L		08/30/13 14:37	09/04/13 01:36	1
Thallium	0.63	B	2.0	0.55	ug/L		08/30/13 14:37	09/04/13 01:36	1

Client Sample ID: B2PMF6 — **Lab Sample ID: 160-3417-2**
Date Collected: 08/15/13 10:00 — **Matrix: Water**
Date Received: 08/19/13 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.77	U	2.0	0.77	ug/L		08/30/13 14:37	09/04/13 02:03	1

Method: 6020A - Metals (ICP/MS) (Continued)

Client Sample ID: B2PMF6 — **Lab Sample ID: 160-3417-2**
Date Collected: 08/15/13 10:00 — **Matrix: Water**
Date Received: 08/19/13 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	**105**		1.0	0.23	ug/L		08/30/13 14:37	09/04/13 02:03	1
Aluminum	12.9	U	30.0	12.9	ug/L		08/30/13 14:37	09/04/13 02:03	1
Arsenic	**2.0**	**B**	10.0	1.2	ug/L		08/30/13 14:37	09/04/13 02:03	1
Boron	**46.8**	**B N**	50.0	10.0	ug/L		08/30/13 14:37	09/04/13 02:03	1
Barium	**85.4**		2.0	0.22	ug/L		08/30/13 14:37	09/04/13 02:03	1
Beryllium	0.35	U	0.50	0.35	ug/L		08/30/13 14:37	09/04/13 02:03	1
Cadmium	0.10	U	0.50	0.10	ug/L		08/30/13 14:37	09/04/13 02:03	1
Cobalt	**24.1**		2.0	0.22	ug/L		08/30/13 14:37	09/04/13 02:03	1
Chromium	**27.2**		10.0	3.3	ug/L		08/30/13 14:37	09/04/13 02:03	1
Copper	**25.2**		1.0	0.45	ug/L		08/30/13 14:37	09/04/13 02:03	1
Iron	**70.1**		50.0	20.4	ug/L		08/30/13 14:37	09/04/13 02:03	1
Magnesium	**19800**		50.0	5.6	ug/L		08/30/13 14:37	09/04/13 02:03	1
Manganese	**27.1**		2.0	0.25	ug/L		08/30/13 14:37	09/04/13 02:03	1
Molybdenum	**2.2**	**B**	5.0	1.0	ug/L		08/30/13 14:37	09/04/13 02:03	1
Lead	**0.55**	**B**	3.0	0.17	ug/L		08/30/13 14:37	09/04/13 02:03	1
Antimony	1.7	U	5.0	1.7	ug/L		08/30/13 14:37	09/04/13 02:03	1
Selenium	**3.4**	**B**	5.0	1.6	ug/L		08/30/13 14:37	09/04/13 02:03	1
Tin	**4.6**	**C**	2.0	1.0	ug/L		08/30/13 14:37	09/04/13 02:03	1
Thallium	**0.88**	**B**	2.0	0.55	ug/L		08/30/13 14:37	09/04/13 02:03	1

Client Sample ID: B2PMF7 — **Lab Sample ID: 160-3417-3**
Date Collected: 08/15/13 10:00 — **Matrix: Water**
Date Received: 08/19/13 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.77	U	2.0	0.77	ug/L		08/30/13 14:37	09/04/13 02:10	1
Uranium	**121**		1.0	0.23	ug/L		08/30/13 14:37	09/04/13 02:10	1
Aluminum	12.9	U	30.0	12.9	ug/L		08/30/13 14:37	09/04/13 02:10	1
Arsenic	**1.4**	**B**	10.0	1.2	ug/L		08/30/13 14:37	09/04/13 02:10	1
Boron	**33.7**	**B N**	50.0	10.0	ug/L		08/30/13 14:37	09/04/13 02:10	1
Barium	**88.2**		2.0	0.22	ug/L		08/30/13 14:37	09/04/13 02:10	1
Beryllium	0.35	U	0.50	0.35	ug/L		08/30/13 14:37	09/04/13 02:10	1
Cadmium	0.10	U	0.50	0.10	ug/L		08/30/13 14:37	09/04/13 02:10	1
Cobalt	**24.3**		2.0	0.22	ug/L		08/30/13 14:37	09/04/13 02:10	1
Chromium	**27.4**		10.0	3.3	ug/L		08/30/13 14:37	09/04/13 02:10	1
Copper	**24.9**		1.0	0.45	ug/L		08/30/13 14:37	09/04/13 02:10	1
Iron	**175**		50.0	20.4	ug/L		08/30/13 14:37	09/04/13 02:10	1
Magnesium	**20200**		50.0	5.6	ug/L		08/30/13 14:37	09/04/13 02:10	1
Manganese	**29.0**		2.0	0.25	ug/L		08/30/13 14:37	09/04/13 02:10	1
Molybdenum	**1.7**	**B**	5.0	1.0	ug/L		08/30/13 14:37	09/04/13 02:10	1
Lead	**0.57**	**B**	3.0	0.17	ug/L		08/30/13 14:37	09/04/13 02:10	1
Antimony	1.7	U	5.0	1.7	ug/L		08/30/13 14:37	09/04/13 02:10	1
Selenium	1.6	U	5.0	1.6	ug/L		08/30/13 14:37	09/04/13 02:10	1
Tin	**2.8**	**C**	2.0	1.0	ug/L		08/30/13 14:37	09/04/13 02:10	1
Thallium	0.55	U	2.0	0.55	ug/L		08/30/13 14:37	09/04/13 02:10	1

General Chemistry

Client Sample ID: B2PMF8 — **Lab Sample ID: 160-3405-4**
Date Collected: 08/15/13 10:00 — **Matrix: Water**
Date Received: 08/16/13 09:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Halogens, Total Organic	49.0		5.0	1.8	ug/L		09/12/13 10:23	09/12/13 13:57	1
Total Organic Carbon	2.8		1.0	0.27	mg/L			09/11/13 18:37	1

Client Sample ID: B2PMF9 — **Lab Sample ID: 160-3405-5**
Date Collected: 08/15/13 10:00 — **Matrix: Water**
Date Received: 08/16/13 09:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Halogens, Total Organic	45.0		5.0	1.8	ug/L		09/12/13 10:23	09/12/13 16:32	1
Total Organic Carbon	3.1		1.0	0.27	mg/L			09/11/13 19:11	1

Client Sample ID: B2PMH1 — **Lab Sample ID: 160-3405-6**
Date Collected: 08/15/13 10:00 — **Matrix: Water**
Date Received: 08/16/13 09:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Halogens, Total Organic	47.0		5.0	1.8	ug/L		09/12/13 10:23	09/12/13 17:03	1
Total Organic Carbon	3.3		1.0	0.27	mg/L			09/11/13 19:23	1

Client Sample ID: B2PMH0 — **Lab Sample ID: 160-3405-7**
Date Collected: 08/15/13 10:00 — **Matrix: Water**
Date Received: 08/16/13 09:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Halogens, Total Organic	46.0		5.0	1.8	ug/L		09/12/13 10:23	09/12/13 17:41	1
Total Organic Carbon	3.1		1.0	0.27	mg/L			09/11/13 19:34	1

Client Sample ID: B2PMF5 — **Lab Sample ID: 160-3417-1**
Date Collected: 08/15/13 10:00 — **Matrix: Water**
Date Received: 08/19/13 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite as N	0.031		0.020	0.0030	mg/L			08/19/13 20:56	1
Sulfate	13.6		0.50	0.050	mg/L			08/19/13 20:56	1
Cyanide, Total	309		5.0	1.5	ug/L		08/23/13 15:30	08/26/13 17:51	1
Halogens, Total Organic	39.3		5.0	1.8	ug/L		09/12/13 10:23	09/12/13 18:18	1

Client Sample ID: B2PMF6 — **Lab Sample ID: 160-3417-2**
Date Collected: 08/15/13 10:00 — **Matrix: Water**
Date Received: 08/19/13 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite as N	0.031		0.020	0.0030	mg/L			08/20/13 01:10	1
Sulfate	13.8		0.50	0.050	mg/L			08/20/13 01:10	1
Cyanide, Total	315		5.0	1.5	ug/L		08/23/13 15:30	08/26/13 18:01	1
Halogens, Total Organic	37.7		5.0	1.8	ug/L		09/12/13 10:23	09/12/13 18:55	1

Client Sample ID: B2PMF7 — **Lab Sample ID: 160-3417-3**
Date Collected: 08/15/13 10:00 — **Matrix: Water**
Date Received: 08/19/13 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite as N	0.030		0.020	0.0030	mg/L			08/20/13 04:00	1
Sulfate	13.9		0.50	0.050	mg/L			08/20/13 04:00	1
Cyanide, Total	318		5.0	1.5	ug/L		08/23/13 15:30	08/26/13 18:04	1
Halogens, Total Organic	38.3		5.0	1.8	ug/L		09/12/13 10:23	09/12/13 19:49	1

General Chemistry - DL

Client Sample ID: B2PMF5 — **Lab Sample ID: 160-3417-1**
Date Collected: 08/15/13 10:00 — **Matrix: Water**
Date Received: 08/19/13 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	2.6	D	0.20	0.040	mg/L			08/19/13 21:38	10
Fluoride	5.1	D	1.0	0.10	mg/L			08/19/13 21:38	10
Chloride	33.4	D	2.0	0.20	mg/L			08/19/13 21:38	10

Client Sample ID: B2PMF6 — **Lab Sample ID: 160-3417-2**
Date Collected: 08/15/13 10:00 — **Matrix: Water**
Date Received: 08/19/13 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	2.6	D	0.20	0.040	mg/L			08/20/13 01:53	10
Fluoride	5.2	D	1.0	0.10	mg/L			08/20/13 01:53	10
Chloride	33.6	D	2.0	0.20	mg/L			08/20/13 01:53	10

Client Sample ID: B2PMF7 — **Lab Sample ID: 160-3417-3**
Date Collected: 08/15/13 10:00 — **Matrix: Water**
Date Received: 08/19/13 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	2.6	D	0.20	0.040	mg/L			08/20/13 04:42	10
Fluoride	5.2	D	1.0	0.10	mg/L			08/20/13 04:42	10
Chloride	33.9	D	2.0	0.20	mg/L			08/20/13 04:42	10

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Client Sample ID: B2PMH2 — **Lab Sample ID: 160-3405-1**
Date Collected: 08/15/13 10:00 — **Matrix: Water**
Date Received: 08/16/13 09:15

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	740		21.2	82.6	20.0	13.4	pCi/L	08/30/13 08:43	08/30/13 21:45	1

Client Sample ID: B2PMH4 — **Lab Sample ID: 160-3405-2**
Date Collected: 08/15/13 10:00 — **Matrix: Water**
Date Received: 08/16/13 09:15

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	788		21.7	87.8	20.0	13.4	pCi/L	08/30/13 08:43	08/30/13 22:53	1

Client Sample ID: B2PMH3 — **Lab Sample ID: 160-3405-3**
Date Collected: 08/15/13 10:00 — **Matrix: Water**
Date Received: 08/16/13 09:15

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	752		21.2	83.9	20.0	13.4	pCi/L	08/30/13 08:43	08/31/13 01:09	1

Method: 8260C - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 160-69974/2
Matrix: Water
Analysis Batch: 69974

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.070	U	1.0	0.070	ug/L			08/28/13 09:02	1
1,1,2-Trichloroethane	0.15	U	1.0	0.15	ug/L			08/28/13 09:02	1
1,1-Dichloroethane	0.070	U	1.0	0.070	ug/L			08/28/13 09:02	1
1,1-Dichloroethene	0.080	U	1.0	0.080	ug/L			08/28/13 09:02	1
1,2-Dichloroethane	0.10	U	1.0	0.10	ug/L			08/28/13 09:02	1
2-Butanone (MEK)	0.52	U	5.0	0.52	ug/L			08/28/13 09:02	1
4-Methyl-2-pentanone (MIBK)	0.12	U	5.0	0.12	ug/L			08/28/13 09:02	1
Acetone	0.697	J	2.0	0.34	ug/L			08/28/13 09:02	1
Benzene	0.060	U	1.0	0.060	ug/L			08/28/13 09:02	1
Carbon disulfide	0.050	U	1.0	0.050	ug/L			08/28/13 09:02	1
Carbon tetrachloride	0.13	U	1.0	0.13	ug/L			08/28/13 09:02	1
Chlorobenzene	0.15	U	1.0	0.15	ug/L			08/28/13 09:02	1
Chloroform	0.10	U	1.0	0.10	ug/L			08/28/13 09:02	1
Ethylbenzene	0.090	U	1.0	0.090	ug/L			08/28/13 09:02	1
Methylene Chloride	0.27	U	1.0	0.27	ug/L			08/28/13 09:02	1
Tetrachloroethene	0.18	U	1.0	0.18	ug/L			08/28/13 09:02	1
Toluene	0.070	U	1.0	0.070	ug/L			08/28/13 09:02	1
Trichloroethene	0.25	U	1.0	0.25	ug/L			08/28/13 09:02	1
Vinyl chloride	0.080	U	2.0	0.080	ug/L			08/28/13 09:02	1
Xylenes, Total	0.20	U	3.0	0.20	ug/L			08/28/13 09:02	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*79 - 125*		*08/28/13 09:02*	*1*
4-Bromofluorobenzene (Surr)	*101*		*84 - 118*		*08/28/13 09:02*	*1*
Dibromofluoromethane (Surr)	*98*		*85 - 120*		*08/28/13 09:02*	*1*
Toluene-d8 (Surr)	*98*		*85 - 121*		*08/28/13 09:02*	*1*

Lab Sample ID: LCS 160-69974/4
Matrix: Water
Analysis Batch: 69974

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	10.0	10.5		ug/L		105	85 - 116
1,1,2-Trichloroethane	10.0	10.2		ug/L		102	81 - 115
1,1-Dichloroethane	10.0	10.2		ug/L		102	85 - 115
1,1-Dichloroethene	10.0	9.88		ug/L		99	83 - 118
1,2-Dichloroethane	10.0	10.5		ug/L		105	80 - 115
2-Butanone (MEK)	10.0	10.7		ug/L		107	67 - 127
4-Methyl-2-pentanone (MIBK)	10.0	8.88		ug/L		89	69 - 126
Acetone	10.0	10.6		ug/L		106	44 - 140
Benzene	10.0	10.1		ug/L		101	85 - 115
Carbon disulfide	10.0	10.3		ug/L		103	79 - 131
Carbon tetrachloride	10.0	10.6		ug/L		106	85 - 121
Chlorobenzene	10.0	10.0		ug/L		100	84 - 115
Chloroform	10.0	10.2		ug/L		102	85 - 115
Ethylbenzene	10.0	9.68		ug/L		97	85 - 116
Methylene Chloride	10.0	10.1		ug/L		101	81 - 115
Tetrachloroethene	10.0	10.4		ug/L		104	85 - 120

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 160-69974/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 69974

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Toluene	10.0	10.3		ug/L		103	85 - 120
Trichloroethene	10.0	9.98		ug/L		100	85 - 115
Vinyl chloride	10.0	10.3		ug/L		103	65 - 136
Xylenes, Total	20.0	20.6		ug/L		103	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*103*		*79 - 125*
4-Bromofluorobenzene (Surr)	*108*		*84 - 118*
Dibromofluoromethane (Surr)	*103*		*85 - 120*
Toluene-d8 (Surr)	*101*		*85 - 121*

Lab Sample ID: 160-3417-3 MS — **Client Sample ID: B2PMF7**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 69974

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	0.070	U	10.0	10.6		ug/L		106	85 - 116
1,1,2-Trichloroethane	0.15	U	10.0	11.1		ug/L		111	79 - 119
1,1-Dichloroethane	0.070	U	10.0	10.3		ug/L		103	85 - 115
1,1-Dichloroethene	0.080	U	10.0	10.0		ug/L		100	80 - 119
1,2-Dichloroethane	0.10	U	10.0	11.3		ug/L		113	81 - 117
2-Butanone (MEK)	0.52	U T	10.0	14.3	T	ug/L		143	64 - 135
4-Methyl-2-pentanone (MIBK)	0.12	U	10.0	10.1		ug/L		101	70 - 127
Acetone	1.2	J B	10.0	11.0		ug/L		98	27 - 150
Benzene	0.060	U	10.0	10.2		ug/L		102	85 - 115
Carbon disulfide	0.13	J	10.0	10.1		ug/L		100	76 - 134
Chlorobenzene	0.15	U	10.0	10.1		ug/L		101	83 - 115
Chloroform	37	T	10.0	45.5	E	ug/L		88	85 - 115
Ethylbenzene	0.090	U	10.0	9.60		ug/L		96	87 - 116
Methylene Chloride	1.7		10.0	10.3		ug/L		86	80 - 115
Tetrachloroethene	15		10.0	24.5		ug/L		91	85 - 115
Toluene	0.070	U	10.0	10.3		ug/L		103	85 - 119
Trichloroethene	36		10.0	45.0	E	ug/L		94	80 - 117
Vinyl chloride	0.080	U	10.0	9.64		ug/L		96	65 - 136
Xylenes, Total	0.20	U	20.0	20.5		ug/L		103	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*113*		*79 - 125*
4-Bromofluorobenzene (Surr)	*108*		*84 - 118*
Dibromofluoromethane (Surr)	*104*		*85 - 120*
Toluene-d8 (Surr)	*101*		*85 - 121*

Lab Sample ID: 160-3417-3 MSD — **Client Sample ID: B2PMF7**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 69974

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	0.070	U	10.0	10.3		ug/L		103	85 - 116	3	20

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 160-3417-3 MSD
Matrix: Water
Analysis Batch: 69974

Client Sample ID: B2PMF7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,2-Trichloroethane	0.15	U	10.0	11.3		ug/L		113	79 - 119	2	20
1,1-Dichloroethane	0.070	U	10.0	9.96		ug/L		100	85 - 115	3	20
1,1-Dichloroethene	0.080	U	10.0	9.90		ug/L		99	80 - 119	1	20
1,2-Dichloroethane	0.10	U	10.0	11.3		ug/L		113	81 - 117	1	20
2-Butanone (MEK)	0.52	U T	10.0	14.8	T	ug/L		148	64 - 135	3	20
4-Methyl-2-pentanone (MIBK)	0.12	U	10.0	11.0		ug/L		110	70 - 127	8	20
Acetone	1.2	J B	10.0	12.0		ug/L		108	27 - 150	9	20
Benzene	0.060	U	10.0	10.2		ug/L		102	85 - 115	1	20
Carbon disulfide	0.13	J	10.0	10.1		ug/L		99	76 - 134	1	20
Chlorobenzene	0.15	U	10.0	10.1		ug/L		101	83 - 115	1	20
Chloroform	37	T	10.0	44.6	E T	ug/L		79	85 - 115	2	20
Ethylbenzene	0.090	U	10.0	9.47		ug/L		95	87 - 116	1	20
Methylene Chloride	1.7		10.0	10.6		ug/L		89	80 - 115	3	20
Tetrachloroethene	15		10.0	24.9		ug/L		95	85 - 115	1	20
Toluene	0.070	U	10.0	10.2		ug/L		102	85 - 119	2	20
Trichloroethene	36		10.0	44.5	E	ug/L		90	80 - 117	1	20
Vinyl chloride	0.080	U	10.0	9.72		ug/L		97	65 - 136	1	20
Xylenes, Total	0.20	U	20.0	20.4		ug/L		102	70 - 130	0	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*113*		*79 - 125*
4-Bromofluorobenzene (Surr)	*112*		*84 - 118*
Dibromofluoromethane (Surr)	*105*		*85 - 120*
Toluene-d8 (Surr)	*103*		*85 - 121*

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 160-70015/1-A
Matrix: Water
Analysis Batch: 72462

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 70015

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	1.5	U	10.0	1.5	ug/L		08/30/13 14:34	09/12/13 16:48	1
Silver	6.0	U	10.0	6.0	ug/L		08/30/13 14:34	09/12/13 16:48	1
Arsenic	2.0	U	10.0	2.0	ug/L		08/30/13 14:34	09/12/13 16:48	1
Boron	10.8	U	100	10.8	ug/L		08/30/13 14:34	09/12/13 16:48	1
Barium	4.0	U	50.0	4.0	ug/L		08/30/13 14:34	09/12/13 16:48	1
Beryllium	0.61	U	5.0	0.61	ug/L		08/30/13 14:34	09/12/13 16:48	1
Calcium	106	U	1000	106	ug/L		08/30/13 14:34	09/12/13 16:48	1
Cadmium	0.91	U	5.0	0.91	ug/L		08/30/13 14:34	09/12/13 16:48	1
Cobalt	4.0	U	50.0	4.0	ug/L		08/30/13 14:34	09/12/13 16:48	1
Chromium	3.1	U	10.0	3.1	ug/L		08/30/13 14:34	09/12/13 16:48	1
Copper	4.6	U	25.0	4.6	ug/L		08/30/13 14:34	09/12/13 16:48	1
Iron	28.2	U	100	28.2	ug/L		08/30/13 14:34	09/12/13 16:48	1
Potassium	1650	U	5000	1650	ug/L		08/30/13 14:34	09/12/13 16:48	1
Lithium	9.6	U	50.0	9.6	ug/L		08/30/13 14:34	09/12/13 16:48	1
Magnesium	132	U	1000	132	ug/L		08/30/13 14:34	09/12/13 16:48	1
Manganese	3.3	U	15.0	3.3	ug/L		08/30/13 14:34	09/12/13 16:48	1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: MB 160-70015/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 72462 — **Prep Batch: 70015**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	5.0	U	40.0	5.0	ug/L		08/30/13 14:34	09/12/13 16:48	1
Sodium	324	U	1000	324	ug/L		08/30/13 14:34	09/12/13 16:48	1
Nickel	13.3	U	40.0	13.3	ug/L		08/30/13 14:34	09/12/13 16:48	1
Antimony	4.0	U	10.0	4.0	ug/L		08/30/13 14:34	09/12/13 16:48	1
Selenium	2.7	U	15.0	2.7	ug/L		08/30/13 14:34	09/12/13 16:48	1
Silicon	40.0	U	400	40.0	ug/L		08/30/13 14:34	09/12/13 16:48	1
Strontium	0.54	U	5.0	0.54	ug/L		08/30/13 14:34	09/12/13 16:48	1
Uranium	23.5	U	500	23.5	ug/L		08/30/13 14:34	09/12/13 16:48	1
Vanadium	4.1	U	50.0	4.1	ug/L		08/30/13 14:34	09/12/13 16:48	1
Zinc	5.30	B	20.0	5.2	ug/L		08/30/13 14:34	09/12/13 16:48	1
Bismuth	105	U	200	105	ug/L		08/30/13 14:34	09/12/13 16:48	1

Lab Sample ID: LCS 160-70015/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 72462 — **Prep Batch: 70015**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	1000	1068		ug/L		107	80 - 120
Silver	100	88.40		ug/L		88	80 - 120
Arsenic	1000	996.1		ug/L		100	80 - 120
Boron	1000	1009		ug/L		101	80 - 120
Barium	1000	1057		ug/L		106	80 - 120
Beryllium	1000	1028		ug/L		103	80 - 120
Calcium	10000	10390		ug/L		104	80 - 120
Cadmium	1000	1029		ug/L		103	80 - 120
Cobalt	1000	1072		ug/L		107	80 - 120
Chromium	1000	1042		ug/L		104	80 - 120
Copper	1000	1046		ug/L		105	80 - 120
Iron	10000	10020		ug/L		100	80 - 120
Potassium	10000	10400		ug/L		104	80 - 120
Lithium	1000	1070		ug/L		107	80 - 120
Magnesium	10000	9746		ug/L		97	80 - 120
Manganese	1000	1012		ug/L		101	80 - 120
Molybdenum	1000	1058		ug/L		106	80 - 120
Sodium	10000	10640		ug/L		106	80 - 120
Nickel	1000	1063		ug/L		106	80 - 120
Antimony	500	519.1		ug/L		104	80 - 120
Selenium	1000	1031		ug/L		103	80 - 120
Silicon	5000	5233		ug/L		105	80 - 120
Strontium	1000	1056		ug/L		106	80 - 120
Uranium	1000	1060		ug/L		106	80 - 120
Vanadium	1000	997.1		ug/L		100	80 - 120
Zinc	1000	1032		ug/L		103	80 - 120
Bismuth	1000	1067		ug/L		107	80 - 120

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 160-3417-1 MS — **Client Sample ID: B2PMF5**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 72462 — **Prep Batch: 70015**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	2.8	B	1000	1036		ug/L		103	75 - 125
Silver	6.0	U	100	87.80		ug/L		88	75 - 125
Arsenic	2.0	U	1000	1010		ug/L		101	75 - 125
Boron	14.3	B	1000	1034		ug/L		102	75 - 125
Barium	89.8		1000	1140		ug/L		105	75 - 125
Beryllium	0.61	U	1000	1040		ug/L		104	75 - 125
Cadmium	0.91	U	1000	1035		ug/L		104	75 - 125
Cobalt	28.1	B	1000	1067		ug/L		104	75 - 125
Chromium	33.2		1000	1065		ug/L		103	75 - 125
Copper	23.4	B	1000	1069		ug/L		105	75 - 125
Iron	62.8	B	10000	10150		ug/L		101	75 - 125
Potassium	12700		10000	22820		ug/L		102	75 - 125
Lithium	12.0	B	1000	1054		ug/L		104	75 - 125
Magnesium	21000		10000	30830		ug/L		99	75 - 125
Manganese	29.4		1000	1042		ug/L		101	75 - 125
Molybdenum	5.0	U	1000	1063		ug/L		106	75 - 125
Sodium	46600		10000	56470		ug/L		99	75 - 125
Nickel	32.8	B	1000	1065		ug/L		103	75 - 125
Antimony	4.0	U	500	524.2		ug/L		105	75 - 125
Selenium	2.7	U	1000	1031		ug/L		103	75 - 125
Silicon	27700		5000	32730		ug/L		101	75 - 125
Uranium	23.5	U	1000	1114		ug/L		111	75 - 125
Vanadium	15.7	B	1000	1022		ug/L		101	75 - 125
Zinc	353		1000	1394		ug/L		104	75 - 125
Bismuth	105	U	1000	1042		ug/L		104	75 - 125

Lab Sample ID: 160-3417-1 MS — **Client Sample ID: B2PMF5**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 72462 — **Prep Batch: 70015**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	84400	D	10000	95140	D	ug/L		108	75 - 125
Strontium	234	D	1000	1288	D	ug/L		105	75 - 125

Lab Sample ID: 160-3417-1 MSD — **Client Sample ID: B2PMF5**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 72462 — **Prep Batch: 70015**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	2.8	B	1000	1043		ug/L		104	75 - 125	1	20
Silver	6.0	U	100	87.40		ug/L		87	75 - 125	0	20
Arsenic	2.0	U	1000	1016		ug/L		102	75 - 125	1	20
Boron	14.3	B	1000	1027		ug/L		101	75 - 125	1	20
Barium	89.8		1000	1149		ug/L		106	75 - 125	1	20
Beryllium	0.61	U	1000	1047		ug/L		105	75 - 125	1	20
Cadmium	0.91	U	1000	1038		ug/L		104	75 - 125	0	20
Cobalt	28.1	B	1000	1071		ug/L		104	75 - 125	0	20
Chromium	33.2		1000	1075		ug/L		104	75 - 125	1	20

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 160-3417-1 MSD — **Client Sample ID: B2PMF5**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 72462 — **Prep Batch: 70015**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Copper	23.4	B	1000	1055		ug/L		103	75 - 125	1	20
Iron	62.8	B	10000	10290		ug/L		102	75 - 125	1	20
Potassium	12700		10000	23090		ug/L		104	75 - 125	1	20
Lithium	12.0	B	1000	1060		ug/L		105	75 - 125	1	20
Magnesium	21000		10000	30790		ug/L		98	75 - 125	0	20
Manganese	29.4		1000	1045		ug/L		102	75 - 125	0	20
Molybdenum	5.0	U	1000	1070		ug/L		107	75 - 125	1	20
Sodium	46600		10000	57210		ug/L		107	75 - 125	1	20
Nickel	32.8	B	1000	1070		ug/L		104	75 - 125	0	20
Antimony	4.0	U	500	524.9		ug/L		105	75 - 125	0	20
Selenium	2.7	U	1000	1038		ug/L		104	75 - 125	1	20
Silicon	27700		5000	32650		ug/L		100	75 - 125	0	20
Uranium	23.5	U	1000	1154		ug/L		115	75 - 125	4	20
Vanadium	15.7	B	1000	1021		ug/L		101	75 - 125	0	20
Zinc	353		1000	1391		ug/L		104	75 - 125	0	20
Bismuth	105	U	1000	1047		ug/L		105	75 - 125	0	20

Lab Sample ID: 160-3417-1 MSD — **Client Sample ID: B2PMF5**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 72462 — **Prep Batch: 70015**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Calcium	84400	D	10000	93460	D	ug/L		91	75 - 125	2	20
Strontium	234	D	1000	1286	D	ug/L		105	75 - 125	0	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 160-70016/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 70543 — **Prep Batch: 70016**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.77	U	2.0	0.77	ug/L		08/30/13 14:37	09/04/13 01:23	1
Uranium	0.23	U	1.0	0.23	ug/L		08/30/13 14:37	09/04/13 01:23	1
Aluminum	12.9	U	30.0	12.9	ug/L		08/30/13 14:37	09/04/13 01:23	1
Arsenic	1.2	U	10.0	1.2	ug/L		08/30/13 14:37	09/04/13 01:23	1
Boron	10.0	U	50.0	10.0	ug/L		08/30/13 14:37	09/04/13 01:23	1
Barium	0.22	U	2.0	0.22	ug/L		08/30/13 14:37	09/04/13 01:23	1
Beryllium	0.35	U	0.50	0.35	ug/L		08/30/13 14:37	09/04/13 01:23	1
Cadmium	0.10	U	0.50	0.10	ug/L		08/30/13 14:37	09/04/13 01:23	1
Cobalt	0.22	U	2.0	0.22	ug/L		08/30/13 14:37	09/04/13 01:23	1
Chromium	3.3	U	10.0	3.3	ug/L		08/30/13 14:37	09/04/13 01:23	1
Copper	0.45	U	1.0	0.45	ug/L		08/30/13 14:37	09/04/13 01:23	1
Iron	20.4	U	50.0	20.4	ug/L		08/30/13 14:37	09/04/13 01:23	1
Magnesium	5.6	U	50.0	5.6	ug/L		08/30/13 14:37	09/04/13 01:23	1
Manganese	0.25	U	2.0	0.25	ug/L		08/30/13 14:37	09/04/13 01:23	1
Molybdenum	1.0	U	5.0	1.0	ug/L		08/30/13 14:37	09/04/13 01:23	1
Lead	0.17	U	3.0	0.17	ug/L		08/30/13 14:37	09/04/13 01:23	1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 160-70016/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 70543 — **Prep Batch: 70016**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	1.7	U	5.0	1.7	ug/L		08/30/13 14:37	09/04/13 01:23	1
Selenium	1.6	U	5.0	1.6	ug/L		08/30/13 14:37	09/04/13 01:23	1
Tin	1.02	B	2.0	1.0	ug/L		08/30/13 14:37	09/04/13 01:23	1
Thallium	0.55	U	2.0	0.55	ug/L		08/30/13 14:37	09/04/13 01:23	1

Lab Sample ID: LCS 160-70016/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 70543 — **Prep Batch: 70016**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	100	96.12		ug/L		96	80 - 120
Uranium	1000	971.6		ug/L		97	80 - 120
Aluminum	10000	9460		ug/L		95	80 - 120
Arsenic	1000	944.8		ug/L		94	80 - 120
Boron	1000	1112		ug/L		111	80 - 120
Barium	1000	1003		ug/L		100	80 - 120
Beryllium	1000	1113		ug/L		111	80 - 120
Cadmium	1000	979.7		ug/L		98	80 - 120
Cobalt	1000	959.8		ug/L		96	80 - 120
Chromium	1000	1003		ug/L		100	80 - 120
Copper	1000	947.2		ug/L		95	80 - 120
Iron	10000	9417		ug/L		94	80 - 120
Magnesium	10000	9918		ug/L		99	80 - 120
Manganese	1000	972.5		ug/L		97	80 - 120
Molybdenum	1000	981.9		ug/L		98	80 - 120
Lead	1000	997.3		ug/L		100	80 - 120
Antimony	500	492.3		ug/L		98	80 - 120
Selenium	1000	938.7		ug/L		94	80 - 120
Tin	1000	972.5		ug/L		97	80 - 120
Thallium	200	202.5		ug/L		101	80 - 120

Lab Sample ID: 160-3417-1 MS — **Client Sample ID: B2PMF5**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 70543 — **Prep Batch: 70016**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	0.77	U	100	92.92		ug/L		93	80 - 120
Uranium	112		1000	1087		ug/L		98	80 - 120
Aluminum	12.9	U	10000	9255		ug/L		93	80 - 120
Arsenic	2.0	B	1000	951.5		ug/L		95	80 - 120
Boron	36.7	B N	1000	1142		ug/L		111	80 - 120
Barium	85.3		1000	1091		ug/L		101	80 - 120
Beryllium	0.35	U	1000	1059		ug/L		106	80 - 120
Cadmium	0.10	U	1000	956.0		ug/L		96	80 - 120
Cobalt	24.1		1000	951.1		ug/L		93	80 - 120
Chromium	26.6		1000	993.6		ug/L		97	80 - 120
Copper	24.0		1000	930.4		ug/L		91	80 - 120
Iron	98.9		10000	9390		ug/L		93	80 - 120
Magnesium	19600		10000	28260		ug/L		87	80 - 120

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: 160-3417-1 MS — **Client Sample ID: B2PMF5**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 70543 — **Prep Batch: 70016**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Manganese	27.3		1000	992.2		ug/L		96	80 - 120
Molybdenum	2.2	B	1000	958.9		ug/L		96	80 - 120
Lead	0.58	B	1000	997.1		ug/L		100	80 - 120
Antimony	1.7	U	500	491.8		ug/L		98	80 - 120
Selenium	2.1	B	1000	929.8		ug/L		93	80 - 120
Tin	3.3	C	1000	970.1		ug/L		97	80 - 120
Thallium	0.63	B	200	201.8		ug/L		101	80 - 120

Lab Sample ID: 160-3417-1 MSD — **Client Sample ID: B2PMF5**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 70543 — **Prep Batch: 70016**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Silver	0.77	U	100	95.69		ug/L		96	80 - 120	3	20
Uranium	112		1000	1110		ug/L		100	80 - 120	2	20
Aluminum	12.9	U	10000	9520		ug/L		95	80 - 120	3	20
Arsenic	2.0	B	1000	970.9		ug/L		97	80 - 120	2	20
Boron	36.7	B N	1000	1279	N	ug/L		124	80 - 120	11	20
Barium	85.3		1000	1117		ug/L		103	80 - 120	2	20
Beryllium	0.35	U	1000	1122		ug/L		112	80 - 120	6	20
Cadmium	0.10	U	1000	982.9		ug/L		98	80 - 120	3	20
Cobalt	24.1		1000	971.4		ug/L		95	80 - 120	2	20
Chromium	26.6		1000	1012		ug/L		99	80 - 120	2	20
Copper	24.0		1000	951.1		ug/L		93	80 - 120	2	20
Iron	98.9		10000	9643		ug/L		95	80 - 120	3	20
Magnesium	19600		10000	28870		ug/L		93	80 - 120	2	20
Manganese	27.3		1000	1016		ug/L		99	80 - 120	2	20
Molybdenum	2.2	B	1000	980.6		ug/L		98	80 - 120	2	20
Lead	0.58	B	1000	1011		ug/L		101	80 - 120	1	20
Antimony	1.7	U	500	503.8		ug/L		101	80 - 120	2	20
Selenium	2.1	B	1000	941.8		ug/L		94	80 - 120	1	20
Tin	3.3	C	1000	1006		ug/L		100	80 - 120	4	20
Thallium	0.63	B	200	205.7		ug/L		103	80 - 120	2	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 160-68949/9 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 68949

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.0040	U	0.020	0.0040	mg/L			08/19/13 19:31	1
Nitrite as N	0.0030	U	0.020	0.0030	mg/L			08/19/13 19:31	1
Fluoride	0.010	U	0.10	0.010	mg/L			08/19/13 19:31	1
Chloride	0.020	U	0.20	0.020	mg/L			08/19/13 19:31	1
Sulfate	0.050	U	0.50	0.050	mg/L			08/19/13 19:31	1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 160-68949/10 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 68949

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	0.400	0.394		mg/L		99	90 - 110
Nitrite as N	0.160	0.160		mg/L		100	90 - 110
Fluoride	1.00	0.966		mg/L		97	90 - 110
Chloride	2.00	1.91		mg/L		96	90 - 110
Sulfate	8.00	7.81		mg/L		98	90 - 110

Lab Sample ID: 160-3417-1 MS — **Client Sample ID: B2PMF5**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 68949

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite as N	0.031		0.100	0.130		mg/L		99	90 - 110
Sulfate	13.6		4.00	17.70		mg/L		102	90 - 110

Lab Sample ID: 160-3417-1 DU — **Client Sample ID: B2PMF5**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 68949

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Nitrite as N	0.031		0.0311		mg/L		1	20
Sulfate	13.6		13.66		mg/L		0.3	20

Method: 300.0 - Anions, Ion Chromatography - DL

Lab Sample ID: 160-3417-1 MS — **Client Sample ID: B2PMF5**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 68949

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N - DL	2.6	D	4.00	6.56		mg/L		99	90 - 110
Fluoride - DL	5.1	D	20.0	26.02		mg/L		105	90 - 110
Chloride - DL	33.4	D	20.0	54.01		mg/L		103	90 - 110

Lab Sample ID: 160-3417-1 DU — **Client Sample ID: B2PMF5**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 68949

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Nitrate as N - DL	2.6	D	2.54		mg/L		2	20
Fluoride - DL	5.1	D	5.13		mg/L		0.4	20
Chloride - DL	33.4	D	32.99		mg/L		1	20

Method: 9012B - Cyanide, Total andor Amenable

Lab Sample ID: MB 160-68481/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 68882 — **Prep Batch: 68481**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	7.34		5.0	1.5	ug/L		08/23/13 15:30	08/26/13 17:41	1

Lab Sample ID: HLCS 160-68481/3-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 68882 — **Prep Batch: 68481**

Analyte	Spike Added	HLCS Result	HLCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	400	393.4		ug/L		98	85 - 115

Lab Sample ID: LCS 160-68481/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 68882 — **Prep Batch: 68481**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	200	202.2		ug/L		101	85 - 115

Lab Sample ID: 160-3417-1 MS — **Client Sample ID: B2PMF5**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 68882 — **Prep Batch: 68481**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	309		200	512.9		ug/L		102	66 - 120

Lab Sample ID: 160-3417-1 DU — **Client Sample ID: B2PMF5**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 68882 — **Prep Batch: 68481**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Cyanide, Total	309		316.6		ug/L		2	20

Method: 9020B - Organic Halides, Total (TOX)

Lab Sample ID: MB 160-72303/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 72571 — **Prep Batch: 72303**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Halogens, Total Organic	1.8	U	5.0	1.8	ug/L		09/12/13 10:23	09/12/13 12:47	1

Lab Sample ID: LCS 160-72303/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 72571 — **Prep Batch: 72303**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Halogens, Total Organic	100	96.74		ug/L		97	90 - 116

Method: 9020B - Organic Halides, Total (TOX) (Continued)

Lab Sample ID: 160-3405-4 MS — **Client Sample ID: B2PMF8**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 72571 — **Prep Batch: 72303**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Halogens, Total Organic	49.0		100	144.8		ug/L		96	85 - 117

Lab Sample ID: 160-3405-4 DU — **Client Sample ID: B2PMF8**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 72571 — **Prep Batch: 72303**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Halogens, Total Organic	49.0		45.97		ug/L		6	20

Method: 9060 - Organic Carbon, Total (TOC)

Lab Sample ID: MB 160-72332/4 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 72332

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	0.27	U	1.0	0.27	mg/L			09/11/13 18:07	1

Lab Sample ID: LCS 160-72332/5 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 72332

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	10.0	9.79		mg/L		98	90 - 110

Lab Sample ID: 160-3405-4 MS — **Client Sample ID: B2PMF8**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 72332

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	2.8		5.00	7.72		mg/L		99	76 - 120

Lab Sample ID: 160-3405-4 MSD — **Client Sample ID: B2PMF8**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 72332

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon	2.8		5.00	7.68		mg/L		99	76 - 120	0	20

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Lab Sample ID: MB 160-69848/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 70538 — **Prep Batch: 69848**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-10.15	U	7.46	7.54	20.0	13.2	pCi/L	08/30/13 08:43	08/30/13 19:29	1

Method: C-01-1 - Carbon-14 (EERF C-01-1) (Continued)

Lab Sample ID: LCS 160-69848/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 70538 — **Prep Batch: 69848**

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Carbon-14			1130	860.0		95.5	20.0	13.1	pCi/L	76	38 - 112		

Lab Sample ID: 160-3405-2 MS — **Client Sample ID: B2PMH4**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 70538 — **Prep Batch: 69848**

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Carbon-14	788		1130	1934		211	20.0	13.4	pCi/L	102	37 - 121		

Lab Sample ID: 160-3405-3 DU — **Client Sample ID: B2PMH3**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 70538 — **Prep Batch: 69848**

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Carbon-14	752			727.9		81.3	20.0	13.2	pCi/L			0.14	1

GC/MS VOA

Analysis Batch: 69974

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-3417-1 - DL	B2PMF5	Total/NA	Water	8260C	
160-3417-1	B2PMF5	Total/NA	Water	8260C	
160-3417-2 - DL	B2PMF6	Total/NA	Water	8260C	
160-3417-2	B2PMF6	Total/NA	Water	8260C	
160-3417-3 - DL	B2PMF7	Total/NA	Water	8260C	
160-3417-3	B2PMF7	Total/NA	Water	8260C	
160-3417-3 MS	B2PMF7	Total/NA	Water	8260C	
160-3417-3 MSD	B2PMF7	Total/NA	Water	8260C	
LCS 160-69974/4	Lab Control Sample	Total/NA	Water	8260C	
MB 160-69974/2	Method Blank	Total/NA	Water	8260C	

Metals

Prep Batch: 70015

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-3417-1	B2PMF5	Total/NA	Water	3010A	
160-3417-1 MS	B2PMF5	Total/NA	Water	3010A	
160-3417-1 MSD	B2PMF5	Total/NA	Water	3010A	
160-3417-2	B2PMF6	Total/NA	Water	3010A	
160-3417-3	B2PMF7	Total/NA	Water	3010A	
LCS 160-70015/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 160-70015/1-A	Method Blank	Total/NA	Water	3010A	

Prep Batch: 70016

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-3417-1	B2PMF5	Total/NA	Water	3010A	
160-3417-1 MS	B2PMF5	Total/NA	Water	3010A	
160-3417-1 MSD	B2PMF5	Total/NA	Water	3010A	
160-3417-2	B2PMF6	Total/NA	Water	3010A	
160-3417-3	B2PMF7	Total/NA	Water	3010A	
LCS 160-70016/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 160-70016/1-A	Method Blank	Total/NA	Water	3010A	

Analysis Batch: 70543

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-3417-1	B2PMF5	Total/NA	Water	6020A	70016
160-3417-1 MS	B2PMF5	Total/NA	Water	6020A	70016
160-3417-1 MSD	B2PMF5	Total/NA	Water	6020A	70016
160-3417-2	B2PMF6	Total/NA	Water	6020A	70016
160-3417-3	B2PMF7	Total/NA	Water	6020A	70016
LCS 160-70016/2-A	Lab Control Sample	Total/NA	Water	6020A	70016
MB 160-70016/1-A	Method Blank	Total/NA	Water	6020A	70016

Analysis Batch: 72462

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-3417-1	B2PMF5	Total/NA	Water	6010C	70015
160-3417-1	B2PMF5	Total/NA	Water	6010C	70015
160-3417-1 MS	B2PMF5	Total/NA	Water	6010C	70015
160-3417-1 MS	B2PMF5	Total/NA	Water	6010C	70015
160-3417-1 MSD	B2PMF5	Total/NA	Water	6010C	70015

Metals (Continued)

Analysis Batch: 72462 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-3417-1 MSD	B2PMF5	Total/NA	Water	6010C	70015
160-3417-2	B2PMF6	Total/NA	Water	6010C	70015
160-3417-2	B2PMF6	Total/NA	Water	6010C	70015
160-3417-3	B2PMF7	Total/NA	Water	6010C	70015
160-3417-3	B2PMF7	Total/NA	Water	6010C	70015
LCS 160-70015/2-A	Lab Control Sample	Total/NA	Water	6010C	70015
MB 160-70015/1-A	Method Blank	Total/NA	Water	6010C	70015

General Chemistry

Prep Batch: 68481

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-3417-1	B2PMF5	Total/NA	Water	9010C	
160-3417-1 DU	B2PMF5	Total/NA	Water	9010C	
160-3417-1 MS	B2PMF5	Total/NA	Water	9010C	
160-3417-2	B2PMF6	Total/NA	Water	9010C	
160-3417-3	B2PMF7	Total/NA	Water	9010C	
HLCS 160-68481/3-A	Lab Control Sample	Total/NA	Water	9010C	
LCS 160-68481/2-A	Lab Control Sample	Total/NA	Water	9010C	
MB 160-68481/1-A	Method Blank	Total/NA	Water	9010C	

Analysis Batch: 68882

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-3417-1	B2PMF5	Total/NA	Water	9012B	68481
160-3417-1 DU	B2PMF5	Total/NA	Water	9012B	68481
160-3417-1 MS	B2PMF5	Total/NA	Water	9012B	68481
160-3417-2	B2PMF6	Total/NA	Water	9012B	68481
160-3417-3	B2PMF7	Total/NA	Water	9012B	68481
HLCS 160-68481/3-A	Lab Control Sample	Total/NA	Water	9012B	68481
LCS 160-68481/2-A	Lab Control Sample	Total/NA	Water	9012B	68481
MB 160-68481/1-A	Method Blank	Total/NA	Water	9012B	68481

Analysis Batch: 68949

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-3417-1	B2PMF5	Total/NA	Water	300.0	
160-3417-1 - DL	B2PMF5	Total/NA	Water	300.0	
160-3417-1 DU	B2PMF5	Total/NA	Water	300.0	
160-3417-1 DU - DL	B2PMF5	Total/NA	Water	300.0	
160-3417-1 MS	B2PMF5	Total/NA	Water	300.0	
160-3417-1 MS - DL	B2PMF5	Total/NA	Water	300.0	
160-3417-2	B2PMF6	Total/NA	Water	300.0	
160-3417-2 - DL	B2PMF6	Total/NA	Water	300.0	
160-3417-3	B2PMF7	Total/NA	Water	300.0	
160-3417-3 - DL	B2PMF7	Total/NA	Water	300.0	
LCS 160-68949/10	Lab Control Sample	Total/NA	Water	300.0	
MB 160-68949/9	Method Blank	Total/NA	Water	300.0	

Prep Batch: 72303

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-3405-4	B2PMF8	Total/NA	Water	Carbon Trap	

General Chemistry (Continued)

Prep Batch: 72303 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-3405-4 DU	B2PMF8	Total/NA	Water	Carbon Trap	
160-3405-4 MS	B2PMF8	Total/NA	Water	Carbon Trap	
160-3405-5	B2PMF9	Total/NA	Water	Carbon Trap	
160-3405-6	B2PMH1	Total/NA	Water	Carbon Trap	
160-3405-7	B2PMH0	Total/NA	Water	Carbon Trap	
160-3417-1	B2PMF5	Total/NA	Water	Carbon Trap	
160-3417-2	B2PMF6	Total/NA	Water	Carbon Trap	
160-3417-3	B2PMF7	Total/NA	Water	Carbon Trap	
LCS 160-72303/2-A	Lab Control Sample	Total/NA	Water	Carbon Trap	
MB 160-72303/1-A	Method Blank	Total/NA	Water	Carbon Trap	

Analysis Batch: 72332

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-3405-4	B2PMF8	Total/NA	Water	9060	
160-3405-4 MS	B2PMF8	Total/NA	Water	9060	
160-3405-4 MSD	B2PMF8	Total/NA	Water	9060	
160-3405-5	B2PMF9	Total/NA	Water	9060	
160-3405-6	B2PMH1	Total/NA	Water	9060	
160-3405-7	B2PMH0	Total/NA	Water	9060	
LCS 160-72332/5	Lab Control Sample	Total/NA	Water	9060	
MB 160-72332/4	Method Blank	Total/NA	Water	9060	

Analysis Batch: 72571

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-3405-4	B2PMF8	Total/NA	Water	9020B	72303
160-3405-4 DU	B2PMF8	Total/NA	Water	9020B	72303
160-3405-4 MS	B2PMF8	Total/NA	Water	9020B	72303
160-3405-5	B2PMF9	Total/NA	Water	9020B	72303
160-3405-6	B2PMH1	Total/NA	Water	9020B	72303
160-3405-7	B2PMH0	Total/NA	Water	9020B	72303
160-3417-1	B2PMF5	Total/NA	Water	9020B	72303
160-3417-2	B2PMF6	Total/NA	Water	9020B	72303
160-3417-3	B2PMF7	Total/NA	Water	9020B	72303
LCS 160-72303/2-A	Lab Control Sample	Total/NA	Water	9020B	72303
MB 160-72303/1-A	Method Blank	Total/NA	Water	9020B	72303

Rad

Prep Batch: 69848

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-3405-1	B2PMH2	Total/NA	Water	LSC_Dist_Susp	
160-3405-2	B2PMH4	Total/NA	Water	LSC_Dist_Susp	
160-3405-2 MS	B2PMH4	Total/NA	Water	LSC_Dist_Susp	
160-3405-3	B2PMH3	Total/NA	Water	LSC_Dist_Susp	
160-3405-3 DU	B2PMH3	Total/NA	Water	LSC_Dist_Susp	
LCS 160-69848/2-A	Lab Control Sample	Total/NA	Water	LSC_Dist_Susp	
MB 160-69848/1-A	Method Blank	Total/NA	Water	LSC_Dist_Susp	

Surrogate Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: S,W,I,A ,X SAFS- GROUNDWATER

TestAmerica Job ID: 160-3405-1
SDG: SL1392

Method: 8260C - Volatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		12DCE	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(79-125)	(84-118)	(85-120)	(85-121)
160-3417-1	B2PMF5	101	99	98	97
160-3417-1 - DL	B2PMF5	97	100	97	94
160-3417-2 - DL	B2PMF6	102	101	101	96
160-3417-2	B2PMF6	102	96	97	91
160-3417-3 - DL	B2PMF7	100	97	99	95
160-3417-3	B2PMF7	101	97	94	90
160-3417-3 MS	B2PMF7	113	108	104	101
160-3417-3 MSD	B2PMF7	113	112	105	103
LCS 160-69974/4	Lab Control Sample	103	108	103	101
MB 160-69974/2	Method Blank	107	101	98	98

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)