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: 160-24858-1
TestAmerica Sample Delivery Group: SL2697
Client Project/Site: F17-009

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

Attn: Mr. Scot Fitzgerald

Authorized for release by:
11/6/2017 3:08:21 PM

Jayna Awalt, Project Manager II
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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: 160-24858-1

Laboratory: TestAmerica St. Louis

Narrative

CASE NARRATIVE

CH2MHill Plateau Remediation Company
P.O. Box 1600
Richland, Washington 99352
November 6, 2017
Attention: Scot Fitzgerald

SDG	: SL2697
Number of Samples	: 7 samples / 3 water extractions
Sample Matrix	: Soil
Data Deliverable	: Summary
Date SDG Closed	: October 7, 2017

II. Introduction

On October 5 and 7, 7 samples were received by TestAmerica - St. Louis for analysis. The samples were received within temperature criteria. See the COC and receipt checklists for documentation of any variations on receipt conditions and temperature. Upon receipt, 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: F17-009

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 an LCS/LCS duplicate.

Note: For Metals analyses, per standard practice, all 6020 water and soil samples are initially prepared at 2x dilution. This standard dilution does not affect reporting limits as MDL studies are also prepared in the same manner. These dilutions do not necessitate a narrative note; however, they are flagged “D” due to a limitation in the LIMS.

For solid matrices, all Metals analyses (including Hg) use a Standard Reference Material for the Laboratory Control Sample (LCS). Certificate for this source material may be obtained from TASL.

For Anion analysis, samples have been started at a 2x dilution per CHPRC direction. The samples are flagged accordingly with a “D” flag if sample concentration is above the MDL/RL. Non-conformance will be included in the below section only if dilution is greater than 2x.

For WTPH methods, the lab utilizes method 8015B. Per CHPRC direction, the method name in the electronic data has been modified to read WTPH in the place of 8015B.

Per CHPRC direction, due to the short hold times for Nitrate, Nitrite and Phosphate by IC (48 hours) as well as pH analysis (24 hours), a SIR request is not needed when samples are run outside 1x hold but within 2x hold. A narrative comment will be included below if a sample is run outside the lab-specified hold time for waters.

For extractable and volatile organic analyses, several analytes are considered poor performers and will not meet CHPRC QC limits. Per CHPRC direction, the lab’s statistical limits have been reported. Excursions outside these statistical limits will include a non-conformance in the sections below.

Job ID: 160-24858-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)

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/radiochemistry analyses, the sample result is greater than the MDL/MDC but less than the RL.
- **B** - For organic analyses, Method Blank contamination. The Method Blank contains the target analyte above the MDL/RL and Method Blank is greater than 5% of the sample concentration.
- **B** - For inorganics and radiochemistry, Method Blank reported above the MDC/MDL.
- **J** - For organic analyses, the sample is estimated and less than the RL. If on Method Blank, indicates Method Blank contamination.
- **C** - For inorganic analyses, Method Blank contamination. The Method Blank contains the target analyte at a concentration above the MDL/RL and Method Blank concentration is greater than 5% of the sample concentration.
- **D** - For all analyses, the sample result was obtained from the analysis of a dilution. For ICPMS Metals analyses, per standard practice, all samples are initially prepared at a 2x dilution. This standard dilution does not affect reporting limits as MDL studies are also prepared in the same manner and will not be narrated below. Only dilutions above 2x will be narrated and considered a true dilution for these samples.
- **N** - For inorganics, rad 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.
- **P -** For organic analyses (PCB/Pests only), the aroclor target analyte has greater than 25% difference for detected concentrations between the two GC columns.
- **X-** Organics and Anions IC - Sample concentration over calibration and/or surrogate recovery outside QC limits.
- **X-** Inorganics - The analyte present in the original sample is > 4x the spike concentration.
- **X-** Radiochemistry - Carrier or Tracer recovery is outside limits.
- **Z-** Sample was prepped or analyzed beyond the specified sample holding time.
- **y -** RPD is outside established limits.

Water Extraction

As per client request, the following soil samples are to be analyzed as water extractions necessitating a DI-prep to be performed. Samples were prepped at 1:1 ratio in 1L poly containers. Samples were then shaken by hand to break up any large soil clumps before placing on a shaker table for 15 minutes. Samples were then allowed to settle before decanting the supernatant into a new 500 mL poly container. After preparation, samples were made available to the lab for analysis. B3DCM6 (160-24918-2), B3DCK1 (160-24918-4) and B3DCL6 (160-24918-6)

ICP Metals

Batch: 333418

The low level check standard (CRI) recovery is outside the acceptance criteria for Aluminum. The bracketing continuing low level check standard (CCVL) were within acceptable criteria and samples do not require re-analysis. (CRI 160-333418/7)

The native sample, matrix spike, and matrix spike duplicate (MS/MSD) associated with preparation batch 160-332557 and analytical batch 160-333418 were performed at the same dilution. Due to the additional level of analyte present in the spiked samples, the concentration of Silicon in the MS/MSD was above the instrument calibration range. The data have been reported and qualified. (160-24918-A-4-B MS ^) and (160-24918-A-4-C MSD)

Job ID: 160-24858-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)

Due to the high concentration of Silicon, the matrix spike / matrix spike duplicate (MS/MSD) for preparation batch 160-332557 and analytical batch 160-333418 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria. (160-24918-A-4-B MS ^) and (160-24918-A-4-C MSD)

The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 160-332557 and analytical batch 160-333418 were outside control limits for Aluminum and Potassium. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits. (160-24918-A-4-B MS ^) and (160-24918-A-4-C MSD) These analytes have been qualified accordingly with an "N" flag in the associated samples.

The following samples were diluted to bring the concentration of target analytes within the calibration range: B3DCM6 (160-24918-2), B3DCK1 (160-24918-4), B3DCL6 (160-24918-6), (160-24918-A-4-B MS ^), (160-24918-A-4-C MSD) and (160-24918-A-4-A SD ^). Elevated reporting limits (RLs) are provided. These analytes were qualified accordingly with a "D" flag in the associated samples.

ICPMS Metals

Batch: 333474

Due to the high concentration of Aluminum, the matrix spike / matrix spike duplicate (MS/MSD) for preparation batch 160-332794 and analytical batch 160-333474 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria. (160-24858-A-1-C MS) and (160-24858-A-1-D MSD)

The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 160-332794 and analytical batch 160-333474 were outside control limits for Manganese. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits. (160-24858-A-1-C MS) and (160-24858-A-1-D MSD) This analyte has been qualified accordingly with a "D" flag in the associated samples.

The low level check (CCVL) was outside upper QC limits for Aluminum. The concentration of this analytes in the sample was at such a high level as to make the CCVL unnecessary. (CCVL 160-333474/38)

The following samples were diluted to bring the concentration of target analytes within the calibration range: B3F944 (160-24858-1), B3DCM6 (160-24918-1), B3DCK1 (160-24918-3), B3DCL6 (160-24918-5), B3DCM1 (160-24918-7), B3DCL1 (160-24918-8), B3DCK6 (160-24918-9), (160-24858-A-1-C MS), (160-24858-A-1-D MSD) and (160-24858-A-1-B SD). Elevated reporting limits (RLs) are provided. These analytes have been qualified accordingly with a "D" flag in the associated samples.

Batch: 335200

The following samples were diluted due to the abundance of non-target analytes. Samples are high in salts which can cause instrument and QC failures when ran at a lesser dilution: B3F944 (160-24858-1), B3DCK1 (160-24918-3), B3DCL6 (160-24918-5), B3DCM1 (160-24918-7), B3DCL1 (160-24918-8), B3DCK6 (160-24918-9), (160-24858-A-1-F MS), (160-24858-A-1-G MSD) and (160-24858-A-1-E SD). Elevated reporting limits (RLs) are provided. This analyte has been qualified accordingly with a "D" flag in the associated samples.

Ammonia as N

Batch: 334436

Ammonia as N was detected in method blank MB 160-333438/1-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 and MB is greater than 5% the sample concentration, the result has been flagged “C”.

Conductivity

Batch: 332833

Conductivity was detected in method blank MB 160-332833/2 at a level that was above the method detection limit but below the reporting

Job ID: 160-24858-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)

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 and MB is greater than 5% the sample concentration, the result has been flagged “C”.

TOC

Batch: 332567

The following sample and its duplicate (DU) in TOC soil batch 160-332567 had a %RPD outside the upper control limit of 30% (36%): B3DCM6 (160-24918-1) and (160-24918-A-1-E DU) However, RPD is not as applicable to values near the reporting limit (RL). As the sample and DU are less than 5x the RL and within the value of the RL from each other, the results are reported with this narrative.

Batch: 332203

The following samples in TOC batch 160-332203 were analyzed at dilution, based on suspected high concentrations of the target analyte: B3DCM6 (160-24918-2), B3DCK1 (160-24918-4) and B3DCL6 (160-24918-6) All reported results are above the adjusted reporting limit (RL) at dilution. This analyte has been qualified accordingly with a "D" flag in the associated samples.

TIC

Batch: 332508

The following samples in TIC batch 160-332508 were analyzed at dilution, based on suspected high concentrations of the target analyte: B3DCM6 (160-24918-2) and B3DCK1 (160-24918-4). All reported results are above the adjusted reporting limit (RL) at the initial dilution. This analyte has been qualified accordingly with a "D" flag in the associated samples.

Batch: 335167

The following samples in TIC batch 160-335167 were analyzed at dilution to minimize potential matrix interference from the leachate matrix: B3DCL6 (160-24918-6). The reported TIC results are above the adjusted reporting limit (RL) at dilution. This analyte has been qualified accordingly with a "D" flag in the associated samples.

There were no observations or non-conformances associated with the following methods:

Mercury
Total Cyanide
pH

We certify that this data package is in compliance with the SOW, both technically and for completeness, including a full description of, explanation of, and corrective actions for, any and all deviations, from either the analyses requested or the case narrative requested. Release of the data contained in this hard copy data package has been authorized by the Laboratory Analytical Manager or designee and the laboratory’s client services representative as verified by their signature on this report.

Reviewed and approved:

Jayna Awalt
St. Louis Project Manager

Job ID: 160-24858-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)

Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 160-24918-1
SDG Number: SL2697

Login Number: 24918
List Number: 1
Creator: Taylor, Kristene N

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	0.9
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 (excluding tests with immediate HTs)	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	

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F17-009-846	PAGE 1 OF 2

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 8H	DATA TURNAROUND
P. Brice SL2697	FITZGERALD, SL	373-7495	FITZGERALD, SL	AIR QUALITY ☐	30 Days / 30 Days
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**		
C9513, Core 41, B39XC8	200-DV-1 Operable Unit Characterization of Waste Sites Sampling - Soil 20		F17-009		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH**	**COA**	**METHOD OF SHIPMENT**	
N/A	N/A	231.4-234.4	302632	FEDERAL EXPRESS	ORIGINAL
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
TestAmerica St. Louis	N/A				

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

POSSIBLE SAMPLE HAZARDS/ REMARKS
*Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.

SPECIAL HANDLING AND/OR STORAGE
NA

PRESERVATION	Cool <=6C	Cool <=6C	Cool <=6C	None	Cool <=6C	None	Cool <=6C	Cool <=6C
HOLDING TIME	28 Days	28 Days	28 Days	6 Months	28 Days	ASAP	28 Days	28 Days
TYPE OF CONTAINER	G/P	G/P	aG	P	G/P	G/P	aG	aG
NO. OF CONTAINER(S)	1	1	1	1	1	1	1	1
VOLUME	250mL	60mL	120mL	60mL	250mL	60mL	120mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	350.1_AMMONIA: COMMON; 9012_CYANIDE: COMMON;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS	9060_TIC_WE: COMMON ; {Total Inorganic Carbon};	9060_TOC_WE: COMMON ; {Total organic carbon};

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME								
B3DCM6	SOIL	10-6-17	1330	X	X	X	X	X	X	X	X

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Patrick Brice PBS	10/06/17 1330	FedEx	10.6.17
RELINQUISHED BY/REMOVED FROM FEDEX	DATE/TIME	RECEIVED BY/STORED IN Kristene Taylor	DATE/TIME 10/7/17 0850
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

PRINTED ON 9/13/2017 FSR ID = FSR50698 TRVL NUM = TRVL-17-228 A-6003-618 (REV 2)

NOVEMBER 6, 2017 REV.0

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F17-009-846	PAGE 2 OF 2
COLLECTOR P. Brice SL2697	COMPANY CONTACT FITZGERALD, SL	TELEPHONE NO. 373-7495	PROJECT COORDINATOR FITZGERALD, SL	PRICE CODE 8H AIR QUALITY ☐	DATA TURNAROUND 30 Days / 30 Days
SAMPLING LOCATION C9513, Core 41, B39XC8	PROJECT DESIGNATION 200-DV-1 Operable Unit Characterization of Waste Sites Sampling - Soil 20		SAF NO. F17-009		
ICE CHEST NO. N/A	FIELD LOGBOOK NO. N/A	ACTUAL SAMPLE DEPTH 231.4-234.4	COA 302632	METHOD OF SHIPMENT FEDERAL EXPRESS	ORIGINAL
SHIPPED TO TestAmerica St. Louis	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO.		

SPECIAL INSTRUCTIONS

TRVL-17-228
(1) 7471_MERCURY_CV: COMMON (SOLIDS); 6020_METALS_ICPMS: COMMON {Aluminum, Barium, Cadmium, Chromium, Copper, Lead, Selenium}; 6020_METALS_ICPMS: COMMON (Add-on) {Antimony, Arsenic, Manganese, Nickel, Silver, Uranium};
(2) 9060_TIC: COMMON {Total Inorganic Carbon}; 9060_TOC: COMMON {Total organic carbon};
(3) 6010_METALS_ICP_WE: COMMON {Aluminum, Barium, Calcium, Chromium, Iron, Magnesium, Manganese, Potassium, Silicon, Sodium};
(4) 9050_CONDUCTIVITY_WE: COMMON {Specific Conductance};
(5) 9045_pH (Non-Aqueous)_WE: COMMON {pH Measurement};

PRINTED ON 9/13/2017 FSR ID = FSR50698 TRVL NUM = TRVL-17-228 A-6003-618 (REV 2)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F17-009-821	PAGE 1 OF 2

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 8H	DATA TURNAROUND
P. Brice SL2697	FITZGERALD, SL	373-7495	FITZGERALD, SL	AIR QUALITY ☐	30 Days / 30 Days
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**		
C9513, Core 21, B39X41	200-DV-1 Operable Unit Characterization of Waste Sites Sampling - Soil 20		F17-009		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH**	**COA**	**METHOD OF SHIPMENT**	
NA	NA	131.5-133.5'	302632	FEDERAL EXPRESS	ORIGINAL
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
TestAmerica St. Louis	NA		NA		

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

POSSIBLE SAMPLE HAZARDS/ REMARKS
*Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.

SPECIAL HANDLING AND/OR STORAGE
NA

PRESERVATION	Cool <=6C	Cool <=6C	Cool <=6C	None	Cool <=6C	None	Cool <=6C	Cool <=6C
HOLDING TIME	28 Days	28 Days	28 Days	6 Months	28 Days	ASAP	28 Days	28 Days
TYPE OF CONTAINER	G/P	G/P	aG	P	G/P	G/P	aG	aG
NO. OF CONTAINER(S)	1	1	1	1	1	1	1	1
VOLUME	250mL	60mL	120mL	60mL	250mL	60mL	120mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	350.1_AMMONIA: COMMON; 9012_CYANIDE: COMMON;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS	9060_TIC_WE: COMMON {Total Inorganic Carbon};	9060_TOC_WE: COMMON {Total organic carbon};

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME								
B3DCK1	SOIL	9/29/17	1000	X	X	X	X	X	X	X	X

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
Patrick Brice PBS	09/29/2017 1300	PBS Refrigerator	9/29/17 1300	
PBS Refrigerator	10.6.17/1435	T.Clark PBS	10.6.17/1435	
T.Clark PBS	10.6.17/1435	Fedex	10.6.17	
FED EX		Kristene Taylor	10/7/17 0850	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

PRINTED ON 9/13/2017 FSR ID = FSR50691 TRVL NUM = TRVL-17-228 A-6003-618 (REV 2)

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CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F17-009-821	PAGE 2 OF 2
COLLECTOR P. Brice SL2697	COMPANY CONTACT FITZGERALD, SL	TELEPHONE NO. 373-7495	PROJECT COORDINATOR FITZGERALD, SL	PRICE CODE 8H AIR QUALITY ☐	DATA TURNAROUND 30 Days / 30 Days
SAMPLING LOCATION C9513, Core 21, B39X41	PROJECT DESIGNATION 200-DV-1 Operable Unit Characterization of Waste Sites Sampling - Soil 20		SAF NO. F17-009		
ICE CHEST NO. NA	FIELD LOGBOOK NO. NA	ACTUAL SAMPLE DEPTH 131.5-133.5'	COA 302632	METHOD OF SHIPMENT FEDERAL EXPRESS	ORIGINAL
SHIPPED TO TestAmerica St. Louis	OFFSITE PROPERTY NO. NA		BILL OF LADING/AIR BILL NO. NA		

SPECIAL INSTRUCTIONS

TRVL-17-228
(1) 7471_MERCURY_CV: COMMON (SOLIDS); 6020_METALS_ICPMS: COMMON {Aluminum, Barium, Cadmium, Chromium, Copper, Lead, Selenium}; 6020_METALS_ICPMS: COMMON (Add-on) {Antimony, Arsenic, Manganese, Nickel, Silver, Uranium};
(2) 9060_TIC: COMMON {Total Inorganic Carbon}; 9060_TOC: COMMON {Total organic carbon};
(3) 6010_METALS_ICP_WE: COMMON {Aluminum, Barium, Calcium, Chromium, Iron, Magnesium, Manganese, Potassium, Silicon, Sodium};
(4) 9050_CONDUCTIVITY_WE: COMMON {Specific Conductance};
(5) 9045_pH (Non-Aqueous)_WE: COMMON {pH Measurement};

PRINTED ON 9/13/2017 FSR ID = FSR50691 TRVL NUM = TRVL-17-228 A-6003-618 (REV 2)

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CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F17-009-836	PAGE 1 OF 2
COLLECTOR: P. Brice SL2697	COMPANY CONTACT: FITZGERALD, SL	TELEPHONE NO.: 373-7495	PROJECT COORDINATOR: FITZGERALD, SL	PRICE CODE: 8H	DATA TURNAROUND: 30 Days / 30 Days
SAMPLING LOCATION: C9513, Core 33 A AND B, B39X85 AND B39X87	PROJECT DESIGNATION: 200-DV-1 Operable Unit Characterization of Waste Sites Sampling - Soil 20		SAF NO.: F17-009	AIR QUALITY: ☐	
ICE CHEST NO.: NA	FIELD LOGBOOK NO.: NA	ACTUAL SAMPLE DEPTH: 190.9-192.5 193.4-194.7	COA: 302632	METHOD OF SHIPMENT: FEDERAL EXPRESS	ORIGINAL
SHIPPED TO: TestAmerica St. Louis	OFFSITE PROPERTY NO.: NA		BILL OF LADING/AIR BILL NO.		

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

POSSIBLE SAMPLE HAZARDS/ REMARKS
*Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.

SPECIAL HANDLING AND/OR STORAGE
NA

PRESERVATION	Cool <=6C	Cool <=6C	Cool <=6C	None	Cool <=6C	None	Cool <=6C	Cool <=6C
HOLDING TIME	28 Days	28 Days	28 Days	6 Months	28 Days	ASAP	28 Days	28 Days
TYPE OF CONTAINER	G/P	G/P	aG	P	G/P	G/P	aG	aG
NO. OF CONTAINER(S)	1	1	1	1	1	1	1	1
VOLUME	250mL	60mL	120mL	60mL	250mL	60mL	120mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	350.1_AMMONIA: COMMON; 9012_CYANIDE: COMMON;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS	9060_TIC_WE: COMMON {Total Inorganic Carbon};	9060_TOC_WE: COMMON {Total organic carbon};

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME								
B3DCL6	SOIL	10.6.17	0900	X	X	X	X	X	X	X	X

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM: Patrick Brice PBS	DATE/TIME: 10/06/17 0900	RECEIVED BY/STORED IN: Fedex	DATE/TIME: 10.6.17	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM: FEDEX	DATE/TIME:	RECEIVED BY/STORED IN: Kristene Taylor	DATE/TIME: 10/7/17 0850	
RELINQUISHED BY/REMOVED FROM	DATE/TIME:	RECEIVED BY/STORED IN	DATE/TIME:	
RELINQUISHED BY/REMOVED FROM	DATE/TIME:	RECEIVED BY/STORED IN	DATE/TIME:	
RELINQUISHED BY/REMOVED FROM	DATE/TIME:	RECEIVED BY/STORED IN	DATE/TIME:	
RELINQUISHED BY/REMOVED FROM	DATE/TIME:	RECEIVED BY/STORED IN	DATE/TIME:	
RELINQUISHED BY/REMOVED FROM	DATE/TIME:	RECEIVED BY/STORED IN	DATE/TIME:	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME	
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME	

PRINTED ON 9/13/2017 FSR ID = FSR50696 TRVL NUM = TRVL-17-228 A-6003-618 (REV 2)

NOVEMBER 6, 2017 REV.0

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F17-009-836	PAGE 2 OF 2
COLLECTOR P. Brice SL2697	COMPANY CONTACT FITZGERALD, SL	TELEPHONE NO. 373-7495	PROJECT COORDINATOR FITZGERALD, SL	PRICE CODE 8H AIR QUALITY ☐	DATA TURNAROUND 30 Days / 30 Days
SAMPLING LOCATION C9513, Core 33 A AND B, B39X85 AND B39X87	PROJECT DESIGNATION 200-DV-1 Operable Unit Characterization of Waste Sites Sampling - Soil 20		SAF NO. F17-009		
ICE CHEST NO. NA	FIELD LOGBOOK NO. NA	ACTUAL SAMPLE DEPTH 190.9-192.5, 193.4-194.7	COA 302632	METHOD OF SHIPMENT FEDERAL EXPRESS	ORIGINAL
SHIPPED TO TestAmerica St. Louis	OFFSITE PROPERTY NO. NA		BILL OF LADING/AIR BILL NO.		

SPECIAL INSTRUCTIONS

TRVL-17-228
(1) 7471_MERCURY_CV: COMMON (SOLIDS); 6020_METALS_ICPMS: COMMON {Aluminum, Barium, Cadmium, Chromium, Copper, Lead, Selenium}; 6020_METALS_ICPMS: COMMON (Add-on) {Antimony, Arsenic, Manganese, Nickel, Silver, Uranium};
(2) 9060_TIC: COMMON {Total Inorganic Carbon}; 9060_TOC: COMMON {Total organic carbon};
(3) 6010_METALS_ICP_WE: COMMON {Aluminum, Barium, Calcium, Chromium, Iron, Magnesium, Manganese, Potassium, Silicon, Sodium};
(4) 9050_CONDUCTIVITY_WE: COMMON {Specific Conductance};
(5) 9045_pH (Non-Aqueous)_WE: COMMON {pH Measurement};

PRINTED ON 9/13/2017 FSR ID = FSR50696 TRVL NUM = TRVL-17-228 A-6003-618 (REV 2)

NOVEMBER 6, 2017 REV.0

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F17-009-841	PAGE 1 OF 1
COLLECTOR P. Brice SL2697	COMPANY CONTACT FITZGERALD, SL	TELEPHONE NO. 373-7495	PROJECT COORDINATOR FITZGERALD, SL	PRICE CODE 8H AIR QUALITY ☐	DATA TURNAROUND 30 Days / 30 Days
SAMPLING LOCATION C9513, Core 40, B39XC6	PROJECT DESIGNATION 200-DV-1 Operable Unit Characterization of Waste Sites Sampling - Soil 20		SAF NO. F17-009		
ICE CHEST NO. N/A	FIELD LOGBOOK NO. N/A	ACTUAL SAMPLE DEPTH 225-227	COA 302632	METHOD OF SHIPMENT FEDERAL EXPRESS	ORIGINAL
SHIPPED TO TestAmerica St. Louis	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO.		

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

POSSIBLE SAMPLE HAZARDS/ REMARKS
*Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.

SPECIAL HANDLING AND/OR STORAGE
NA

PRESERVATION	Cool <=6C	Cool <=6C
HOLDING TIME	28 Days	28 Days
TYPE OF CONTAINER	G/P	G/P
NO. OF CONTAINER(S)	1	1
VOLUME	250mL	60mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	350.1_AMMONIA: COMMON; 9012_CYANIDE: COMMON;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B3DCM1	SOIL	10-6-17	1040	X	X

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Patrick Brice	10/06/17 1040	Fedex	10.6.17
RELINQUISHED BY/REMOVED FROM FED EX	DATE/TIME	RECEIVED BY/STORED IN Kristene Taylor	DATE/TIME 10/7/17 0850
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS
TRVL-17-228
(1) 7471_MERCURY_CV: COMMON (SOLIDS); 6020_METALS_ICPMS: COMMON {Aluminum, Barium, Cadmium, Chromium, Copper, Lead, Selenium}; 6020_METALS_ICPMS: COMMON (Add-on) {Antimony, Arsenic, Manganese, Nickel, Silver, Uranium};

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

PRINTED ON 9/13/2017 FSR ID = FSR50697 TRVL NUM = TRVL-17-228 A-6003-618 (REV 2)

NOVEMBER 6, 2017 REV.0

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F17-009-831	PAGE 1 OF 1
COLLECTOR P. Brice SL2697	COMPANY CONTACT FITZGERALD, SL	TELEPHONE NO. 373-7495	PROJECT COORDINATOR FITZGERALD, SL	PRICE CODE 8H AIR QUALITY ☐	DATA TURNAROUND 30 Days / 30 Days
SAMPLING LOCATION C9513, Core 29 A AND B, B39X74 AND B39X76	PROJECT DESIGNATION 200-DV-1 Operable Unit Characterization of Waste Sites Sampling - Soil 20		SAF NO. F17-009		
ICE CHEST NO. N/A	FIELD LOGBOOK NO. N/A	ACTUAL SAMPLE DEPTH 171-172, 173.6-175	COA 302632	METHOD OF SHIPMENT FEDERAL EXPRESS	ORIGINAL
SHIPPED TO TestAmerica St. Louis	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO.		

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

POSSIBLE SAMPLE HAZARDS/ REMARKS
*Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.

SPECIAL HANDLING AND/OR STORAGE
NA

PRESERVATION	Cool <=6C	Cool <=6C
HOLDING TIME	28 Days	28 Days
TYPE OF CONTAINER	G/P	G/P
NO. OF CONTAINER(S)	1	1
VOLUME	250mL	60mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	350.1_AMMONIA: COMMON; 9012_CYANIDE: COMMON;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B3DCL1	SOIL	10.5.17	1310		

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM Patrick Brice PBS	DATE/TIME 10/05/17 1310	RECEIVED BY/STORED IN GTL Sample Refrigerator	DATE/TIME 10/05/17 1310
RELINQUISHED BY/REMOVED FROM GTL Sample Refrigerator	DATE/TIME 10.6.17/1435	RECEIVED BY/STORED IN T.Clark PBS	DATE/TIME 10.6.17/1435
RELINQUISHED BY/REMOVED FROM T.Clark PBS	DATE/TIME 10.6.17	RECEIVED BY/STORED IN Fedex	DATE/TIME 10.6.17
RELINQUISHED BY/REMOVED FROM FEDEX	DATE/TIME	RECEIVED BY/STORED IN Kristene Taylor	DATE/TIME 10/7/17 0850
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS
TRVL-17-228
(1) 7471_MERCURY_CV: COMMON (SOLIDS); 6020_METALS_ICPMS: COMMON {Aluminum, Barium, Cadmium, Chromium, Copper, Lead, Selenium}; 6020_METALS_ICPMS: COMMON (Add-on) {Antimony, Arsenic, Manganese, Nickel, Silver, Uranium};

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

PRINTED ON 9/13/2017 FSR ID = FSR50695 TRVL NUM = TRVL-17-228 A-6003-618 (REV 2)

NOVEMBER 6, 2017 REV.0

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F17-009-826	PAGE 1 OF 1
COLLECTOR P. Brice SL2697	COMPANY CONTACT FITZGERALD, SL	TELEPHONE NO. 373-7495	PROJECT COORDINATOR FITZGERALD, SL	PRICE CODE 8H AIR QUALITY ☐	DATA TURNAROUND 30 Days / 30 Days
SAMPLING LOCATION C9513, Core 24, B39X50	PROJECT DESIGNATION 200-DV-1 Operable Unit Characterization of Waste Sites Sampling - Soil 20		SAF NO. F17-009		
ICE CHEST NO. N/A	FIELD LOGBOOK NO. N/A	ACTUAL SAMPLE DEPTH 146.1-148.8	COA 302632	METHOD OF SHIPMENT FEDERAL EXPRESS	ORIGINAL
SHIPPED TO TestAmerica St. Louis	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO.		

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

POSSIBLE SAMPLE HAZARDS/ REMARKS
*Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.

SPECIAL HANDLING AND/OR STORAGE
NA

PRESERVATION	Cool <=6C	Cool <=6C
HOLDING TIME	28 Days	28 Days
TYPE OF CONTAINER	G/P	G/P
NO. OF CONTAINER(S)	1	1
VOLUME	250mL	60mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	350.1_AMMONIA: COMMON; 9012_CYANIDE: COMMON;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B3DCK6	SOIL	10/5/17	1015	X	X

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM Patrick Brice PBS	DATE/TIME 10/05/17 1015	RECEIVED BY/STORED IN GTL Sample Refrigerator	DATE/TIME 10/05/17 1015
RELINQUISHED BY/REMOVED FROM GTL Sample Refrigerator	DATE/TIME 10-6-17/1435	RECEIVED BY/STORED IN T. Clark PBS	DATE/TIME 10-6-17/1435
RELINQUISHED BY/REMOVED FROM T. Clark PBS	DATE/TIME 10-6-17	RECEIVED BY/STORED IN Fedex	DATE/TIME
RELINQUISHED BY/REMOVED FROM FED EX	DATE/TIME	RECEIVED BY/STORED IN Kristene Taylor	DATE/TIME 10/7/17 0850
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS
TRVL-17-228
(1) 7471_MERCURY_CV: COMMON (SOLIDS); 6020_METALS_ICPMS: COMMON {Aluminum, Barium, Cadmium, Chromium, Copper, Lead, Selenium}; 6020_METALS_ICPMS: COMMON (Add-on) {Antimony, Arsenic, Manganese, Nickel, Silver, Uranium};

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

PRINTED ON 9/13/2017 FSR ID = FSR50694 TRVL NUM = TRVL-17-228 A-6003-618 (REV 2)

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770442266116

Ship date:
Fri 10/06/2017

RICHLAND, WA US

Delivered
Signed for by: J.CLARK

Actual delivery:
Sat 10/07/2017 8:38 am

EARTH CITY, MO US

Travel History

Date/Time	Activity	Location
- 10/07/2017 - Saturday		
8:38 am	Delivered	EARTH CITY, MO
8:14 am	On FedEx vehicle for delivery	EARTH CITY, MO
7:39 am	At local FedEx facility	EARTH CITY, MO
5:06 am	At destination sort facility	BERKELEY, MO
4:21 am	Departed FedEx location	MEMPHIS, TN
12:42 am	Arrived at FedEx location	MEMPHIS, TN
- 10/06/2017 - Friday		
4:57 pm	Left FedEx origin facility	PASCO, WA
4:02 pm	Shipment information sent to FedEx	
3:18 pm	Picked up	PASCO, WA

Shipment Facts

Tracking number	770442266116	**Service**	FedEx Priority Overnight
Weight	31 lbs / 14.06 kgs	**Delivered To**	Shipping/Receiving
Total pieces	1	**Total shipment weight**	31 lbs / 14.06 kgs
Terms	Recipient	**Shipper reference**	GWS-656
Packaging	Your Packaging	**Special handling section**	For Saturday Delivery, Additional Handling Surcharge
Standard transit	10/07/2017 by 12:00 pm		

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787992824874

Ship date:
Fri 10/06/2017

RICHLAND, WA US

Delivered
Signed for by: J.CLARK

Actual delivery:
Sat 10/07/2017 8:38 am

EARTH CITY, MO US

Travel History

Date/Time	Activity	Location
10/07/2017 - Saturday		
8:38 am	Delivered	EARTH CITY, MO
8:14 am	On FedEx vehicle for delivery	EARTH CITY, MO
7:38 am	At local FedEx facility	EARTH CITY, MO
5:06 am	At destination sort facility	BERKELEY, MO
4:21 am	Departed FedEx location	MEMPHIS, TN
12:42 am	Arrived at FedEx location	MEMPHIS, TN
10/06/2017 - Friday		
5:30 pm	Shipment information sent to FedEx	
4:57 pm	Left FedEx origin facility	PASCO, WA
3:28 pm	Picked up	PASCO, WA

Shipment Facts

Tracking number	787992824874	**Service**	FedEx Priority Overnight
Weight	47 lbs / 21.32 kgs	**Dimensions**	24x13x14 in.
Delivered To	Shipping/Receiving	**Total pieces**	1
Total shipment weight	47 lbs / 21.32 kgs	**Terms**	Third Party
Packaging	Your Packaging	**Special handling section**	For Saturday Delivery, Additional Handling Surcharge
Standard transit	10/07/2017 by 12:00 pm		

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770438865731

Ship date:		Actual delivery:
Fri 10/06/2017		**Sat 10/07/2017 8:38 am**
RICHLAND, WA US	**Delivered** *Signed for by: J.CLARK*	EARTH CITY, MO US

Travel History

Date/Time	Activity	Location
- 10/07/2017 - Saturday		
8:38 am	Delivered	EARTH CITY, MO
8:14 am	On FedEx vehicle for delivery	EARTH CITY, MO
7:35 am	At local FedEx facility	EARTH CITY, MO
5:06 am	At destination sort facility	BERKELEY, MO
4:21 am	Departed FedEx location	MEMPHIS, TN
12:42 am	Arrived at FedEx location	MEMPHIS, TN
- 10/06/2017 - Friday		
4:57 pm	Left FedEx origin facility	PASCO, WA
3:18 pm	Picked up	PASCO, WA
12:47 pm	Shipment information sent to FedEx	

Shipment Facts

Tracking number	770438865731	**Service**	FedEx Priority Overnight
Weight	82 lbs / 37.19 kgs	**Delivered To**	Shipping/Receiving
Total pieces	1	**Total shipment weight**	82 lbs / 37.19 kgs
Terms	Recipient	**Shipper reference**	GWS-363
Packaging	Your Packaging	**Special handling section**	For Saturday Delivery, Additional Handling Surcharge
Standard transit	10/07/2017 by 12:00 pm		

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Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 160-24858-1
SDG Number: SL2697

Login Number: 24858
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	1.7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	False	COC not relinquished to FedEx
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 (excluding tests with immediate HTs)	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	

CH2MHill Plateau Remediation Company SL2L97	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F17-009-851	PAGE 1 OF 1
COLLECTOR Danielle Saunders (PNNL)	COMPANY CONTACT FITZGERALD, SL	TELEPHONE NO. 373-7495	PROJECT COORDINATOR FITZGERALD, SL	PRICE CODE 8H	DATA TURNAROUND
SAMPLING LOCATION C9513, Core 17-18, SEE NOTE	PROJECT DESIGNATION 200-DV-1 Operable Unit Characterization of Waste Sites Sampling - Soil 20		SAF NO. F17-009	AIR QUALITY ☐	30 Days / 30 Days
ICE CHEST NO. NA	FIELD LOGBOOK NO.	ACTUAL SAMPLE DEPTH 115.6 - 116.6	COA 302632	METHOD OF SHIPMENT FEDERAL EXPRESS	ORIGINAL
SHIPPED TO TestAmerica St. Louis	OFFSITE PROPERTY NO. NA		BILL OF LADING/AIR BILL NO. FedEx	BNOO# 7313	

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

POSSIBLE SAMPLE HAZARDS/ REMARKS
*Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.

SPECIAL HANDLING AND/OR STORAGE
N/A

PRESERVATION	Cool <=6C	Cool <=6C
HOLDING TIME	28 Days	28 Days
TYPE OF CONTAINER	G/P	G/P
NO. OF CONTAINER(S)	1	1
VOLUME	250mL	60mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	350.1_AMMONIA: COMMON; ✓ 9012_CYANIDE: COMMON; ✓

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B3F944	SOIL	10/03/17	15:00	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM Danielle Saunders/Danielle Saunders PNNL	DATE/TIME 10/03/17 15:00	RECEIVED BY/STORED IN PNNL 331/173A Refrigerator	DATE/TIME 10/03/17 1500
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM Fed Ex	DATE/TIME	RECEIVED BY/STORED IN Jill Clark Jill Clark	DATE/TIME 10-5-17 0910
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS
NOTE: PLEASE DOCUMENT ACTUAL CORE AND HEIS # SUBSAMPLE (1) 7471_MERCURY_CV: COMMON (SOLIDS); 6020_METALS_ICPMS: COMMON {Aluminum, Barium, Cadmium, Chromium, Copper, Lead, Selenium}; 6020_METALS_ICPMS: COMMON (Add-on) {Antimony, Arsenic, Manganese, Nickel, Silver, Uranium};

Sample obtained from B39X10, core 1B-E

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

PRINTED ON 9/19/2017 FSR ID = FSR51197 TRVL NUM = TRVL-17-232 A-6003-618 (REV 2)

IMPORTANT!
The impact of Hurricanes Maria, Irma, and Harvey continue to cause hazardous conditions. Learn More

FedEx® Tracking

665977867480

Ship date:
Wed 10/04/2017

RICHLAND, WA US

Delivered
Signed for by: J.CLARKE

Actual delivery:
Thu 10/05/2017 8:58 am

EARTH CITY, MO US

Travel History

Date/Time	Activity	Location
- 10/05/2017 - Thursday		
8:58 am	Delivered	EARTH CITY, MO
6:36 am	On FedEx vehicle for delivery	EARTH CITY, MO
6:29 am	At local FedEx facility	EARTH CITY, MO
4:54 am	At destination sort facility	BERKELEY, MO
4:07 am	Departed FedEx location	MEMPHIS, TN
12:18 am	Arrived at FedEx location	MEMPHIS, TN
- 10/04/2017 - Wednesday		
4:55 pm	Left FedEx origin facility	PASCO, WA
4:47 pm	Shipment information sent to FedEx	
3:24 pm	Picked up	PASCO, WA

Shipment Facts

Tracking number	665977867480	**Service**	FedEx Priority Overnight
Weight	6 lbs / 2.72 kgs	**Dimensions**	14x14x15 in.
Delivered To	Shipping/Receiving	**Total pieces**	1
Total shipment weight	6 lbs / 2.72 kgs	**Terms**	Shipper
Purchase order number	D17010049	**Department number**	DANIELL WHARTON
Shipper reference	N81276	**Packaging**	Your Packaging
Special handling section	Deliver Weekday	**Standard transit**	10/05/2017 by 10:30 am

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Qualifiers

Metals

Qualifier	Qualifier Description
U	Analyzed for but not detected.
D	The reported value is from a dilution.
B	Estimated result. Result is less than the RL, but greater than MDL
N	Recovery exceeds upper or lower control limits
X	See case narrative notes for explanation of the 'X' flag

General Chemistry

Qualifier	Qualifier Description
U	Analyzed for but not detected.
C	The analyte was detected in both the sample and the associated QC blank, and the sample concentration was </= 5X the blank concentration.
y	Duplicate analysis not within control limits.
D	The reported value is from a dilution.
B	Estimated result. Result is less than the RL, but greater than MDL

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
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
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 (Radiochemistry)
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: F17-009

TestAmerica Job ID: 160-24858-1
SDG: SL2697

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL SL
6020A	Metals (ICP/MS)	SW846	TAL SL
7471B	Mercury (CVAA)	SW846	TAL SL
350.1	Nitrogen, Ammonia	MCAWW	TAL SL
9012B	Cyanide, Total andor Amenable	SW846	TAL SL
9040C	pH	SW846	TAL SL
9050A	Specific Conductance	SW846	TAL SL
9060	Total Inorganic Carbon	SW846	TAL SL
9060	Organic Carbon, Total (TOC)	SW846	TAL SL
9060	Carbon, Total and Total Inorganic	SW846	TAL SL
Moisture	Percent Moisture	EPA	TAL SL

Protocol References:

EPA = US Environmental Protection Agency

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: F17-009

TestAmerica Job ID: 160-24858-1
SDG: SL2697

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-24858-1	B3F944	Soil	10/03/17 15:00	10/05/17 09:10
160-24918-1	B3DCM6	Soil	10/06/17 13:30	10/07/17 08:50
160-24918-2	B3DCM6	Water	10/06/17 13:30	10/07/17 08:50
160-24918-3	B3DCK1	Soil	09/29/17 10:00	10/07/17 08:50
160-24918-4	B3DCK1	Water	09/29/17 10:00	10/07/17 08:50
160-24918-5	B3DCL6	Soil	10/06/17 09:00	10/07/17 08:50
160-24918-6	B3DCL6	Water	10/06/17 09:00	10/07/17 08:50
160-24918-7	B3DCM1	Soil	10/06/17 10:40	10/07/17 08:50
160-24918-8	B3DCL1	Soil	10/05/17 13:10	10/07/17 08:50
160-24918-9	B3DCK6	Soil	10/05/17 10:15	10/07/17 08:50

Client: CH2M Hill Plateau Remediation Company
Project/Site: F17-009

TestAmerica Job ID: 160-24858-1
SDG: SL2697

Method: 6010C - Metals (ICP)

Client Sample ID: B3DCM6 — **Lab Sample ID: 160-24918-2**
Date Collected: 10/06/17 13:30 — **Matrix: Water**
Date Received: 10/07/17 08:50

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	254000	D N	20000	5000	ug/L		10/18/17 16:39	10/23/17 12:11	20
Barium	2760	B D	5000	1500	ug/L		10/18/17 16:39	10/23/17 12:11	20
Calcium	86500	B D	100000	30000	ug/L		10/18/17 16:39	10/23/17 12:11	20
Chromium	300	U D	1000	300	ug/L		10/18/17 16:39	10/23/17 12:11	20
Iron	523000	D	10000	3000	ug/L		10/18/17 16:39	10/23/17 12:11	20
Magnesium	122000	D	100000	30000	ug/L		10/18/17 16:39	10/23/17 12:11	20
Manganese	10200	D	1500	400	ug/L		10/18/17 16:39	10/23/17 12:11	20
Potassium	150000	U D N	500000	150000	ug/L		10/18/17 16:39	10/23/17 12:11	20
Silicon	614000	D	40000	12500	ug/L		10/18/17 16:39	10/23/17 12:11	20
Sodium	40700	B D	100000	30000	ug/L		10/18/17 16:39	10/23/17 12:11	20

Client Sample ID: B3DCK1 — **Lab Sample ID: 160-24918-4**
Date Collected: 09/29/17 10:00 — **Matrix: Water**
Date Received: 10/07/17 08:50

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	17700	D N	1000	250	ug/L		10/18/17 16:39	10/23/17 12:16	5
Barium	231	B D	250	75.0	ug/L		10/18/17 16:39	10/23/17 12:16	5
Calcium	17200	D	5000	1500	ug/L		10/18/17 16:39	10/23/17 12:16	5
Chromium	633	D	50.0	15.0	ug/L		10/18/17 16:39	10/23/17 12:16	5
Iron	21600	D	500	150	ug/L		10/18/17 16:39	10/23/17 12:16	5
Magnesium	3760	B D	5000	1500	ug/L		10/18/17 16:39	10/23/17 12:16	5
Manganese	460	D	75.0	20.0	ug/L		10/18/17 16:39	10/23/17 12:16	5
Potassium	7500	U D N	25000	7500	ug/L		10/18/17 16:39	10/23/17 12:16	5
Silicon	45100	D	2000	625	ug/L		10/18/17 16:39	10/23/17 12:16	5
Sodium	55100	D	5000	1500	ug/L		10/18/17 16:39	10/23/17 12:16	5

Client Sample ID: B3DCL6 — **Lab Sample ID: 160-24918-6**
Date Collected: 10/06/17 09:00 — **Matrix: Water**
Date Received: 10/07/17 08:50

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	66600	D N	5000	1250	ug/L		10/18/17 16:39	10/23/17 12:35	5
Barium	1070	B D	1250	375	ug/L		10/18/17 16:39	10/23/17 12:35	5
Calcium	25400	D	25000	7500	ug/L		10/18/17 16:39	10/23/17 12:35	5
Chromium	813	D	250	75.0	ug/L		10/18/17 16:39	10/23/17 12:35	5
Iron	140000	D	2500	750	ug/L		10/18/17 16:39	10/23/17 12:35	5
Magnesium	28700	D	25000	7500	ug/L		10/18/17 16:39	10/23/17 12:35	5
Manganese	14200	D	375	100	ug/L		10/18/17 16:39	10/23/17 12:35	5
Potassium	37500	U D N	125000	37500	ug/L		10/18/17 16:39	10/23/17 12:35	5
Silicon	236000	D	10000	3130	ug/L		10/18/17 16:39	10/23/17 12:35	5
Sodium	11700	B D	25000	7500	ug/L		10/18/17 16:39	10/23/17 12:35	5

Method: 6020A - Metals (ICP/MS)

Client Sample ID: B3F944 — **Lab Sample ID: 160-24858-1**
Date Collected: 10/03/17 15:00 — **Matrix: Soil**
Date Received: 10/05/17 09:10 — **Percent Solids: 96.8**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	7130	D	12.5	5.0	mg/Kg	☼	10/19/17 13:47	10/24/17 00:14	5
Antimony	0.50	U D	1.3	0.50	mg/Kg	☼	10/19/17 13:49	10/31/17 20:47	5
Arsenic	4.9	D	2.5	1.0	mg/Kg	☼	10/19/17 13:47	10/24/17 00:14	5

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

Client Sample ID: B3F944 — **Lab Sample ID: 160-24858-1**
Date Collected: 10/03/17 15:00 — **Matrix: Soil**
Date Received: 10/05/17 09:10 — **Percent Solids: 96.8**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	80.6	D	5.0	1.2	mg/Kg	☼	10/19/17 13:47	10/24/17 00:14	5
Cadmium	0.089	B D	0.12	0.060	mg/Kg	☼	10/19/17 13:47	10/24/17 00:14	5
Chromium	39.9	D	2.5	1.1	mg/Kg	☼	10/19/17 13:47	10/24/17 00:14	5
Copper	13.4	D	2.5	1.0	mg/Kg	☼	10/19/17 13:47	10/24/17 00:14	5
Lead	6.0	D	0.75	0.31	mg/Kg	☼	10/19/17 13:47	10/24/17 00:14	5
Manganese	349	D N	1.2	0.50	mg/Kg	☼	10/19/17 13:47	10/24/17 00:14	5
Nickel	12.6	D	1.2	0.50	mg/Kg	☼	10/19/17 13:47	10/24/17 00:14	5
Selenium	0.80	U D	1.2	0.80	mg/Kg	☼	10/19/17 13:47	10/24/17 00:14	5
Silver	0.19	U D	0.50	0.19	mg/Kg	☼	10/19/17 13:47	10/24/17 00:14	5
Uranium	7.0	D	0.25	0.10	mg/Kg	☼	10/19/17 13:47	10/24/17 00:14	5

Client Sample ID: B3DCM6 — **Lab Sample ID: 160-24918-1**
Date Collected: 10/06/17 13:30 — **Matrix: Soil**
Date Received: 10/07/17 08:50 — **Percent Solids: 97.4**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	7990	D	12.2	4.9	mg/Kg	☼	10/19/17 13:47	10/24/17 00:41	5
Antimony	0.19	U D	0.48	0.19	mg/Kg	☼	10/19/17 13:49	10/31/17 21:13	2
Arsenic	0.98	U D	2.4	0.98	mg/Kg	☼	10/19/17 13:47	10/24/17 00:41	5
Barium	107	D	4.9	1.2	mg/Kg	☼	10/19/17 13:47	10/24/17 00:41	5
Cadmium	0.059	U D	0.12	0.059	mg/Kg	☼	10/19/17 13:47	10/24/17 00:41	5
Chromium	17.5	D	2.4	1.1	mg/Kg	☼	10/19/17 13:47	10/24/17 00:41	5
Copper	17.7	D	2.4	0.98	mg/Kg	☼	10/19/17 13:47	10/24/17 00:41	5
Lead	3.4	D	0.73	0.31	mg/Kg	☼	10/19/17 13:47	10/24/17 00:41	5
Manganese	496	D N	1.2	0.49	mg/Kg	☼	10/19/17 13:47	10/24/17 00:41	5
Nickel	23.9	D	1.2	0.49	mg/Kg	☼	10/19/17 13:47	10/24/17 00:41	5
Selenium	0.78	U D	1.2	0.78	mg/Kg	☼	10/19/17 13:47	10/24/17 00:41	5
Silver	0.18	U D	0.49	0.18	mg/Kg	☼	10/19/17 13:47	10/24/17 00:41	5
Uranium	0.33	D	0.24	0.098	mg/Kg	☼	10/19/17 13:47	10/24/17 00:41	5

Client Sample ID: B3DCK1 — **Lab Sample ID: 160-24918-3**
Date Collected: 09/29/17 10:00 — **Matrix: Soil**
Date Received: 10/07/17 08:50 — **Percent Solids: 93.4**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	13100	D	11.7	4.7	mg/Kg	☼	10/19/17 13:47	10/24/17 00:48	5
Antimony	0.50	U D	1.2	0.50	mg/Kg	☼	10/19/17 13:49	10/31/17 21:20	5
Arsenic	9.3	D	2.3	0.94	mg/Kg	☼	10/19/17 13:47	10/24/17 00:48	5
Barium	130	D	4.7	1.2	mg/Kg	☼	10/19/17 13:47	10/24/17 00:48	5
Cadmium	0.18	D	0.12	0.056	mg/Kg	☼	10/19/17 13:47	10/24/17 00:48	5
Chromium	61.8	D	2.3	1.1	mg/Kg	☼	10/19/17 13:47	10/24/17 00:48	5
Copper	25.4	D	2.3	0.94	mg/Kg	☼	10/19/17 13:47	10/24/17 00:48	5
Lead	11.6	D	0.70	0.29	mg/Kg	☼	10/19/17 13:47	10/24/17 00:48	5
Manganese	427	D N	1.2	0.47	mg/Kg	☼	10/19/17 13:47	10/24/17 00:48	5
Nickel	25.3	D	1.2	0.47	mg/Kg	☼	10/19/17 13:47	10/24/17 00:48	5
Selenium	1.3	D	1.2	0.75	mg/Kg	☼	10/19/17 13:47	10/24/17 00:48	5
Silver	0.18	U D	0.47	0.18	mg/Kg	☼	10/19/17 13:47	10/24/17 00:48	5
Uranium	36.8	D	0.23	0.094	mg/Kg	☼	10/19/17 13:47	10/24/17 00:48	5

Method: 6020A - Metals (ICP/MS)

Client Sample ID: B3DCL6 — **Lab Sample ID: 160-24918-5**
Date Collected: 10/06/17 09:00 — **Matrix: Soil**
Date Received: 10/07/17 08:50 — **Percent Solids: 97.1**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	6460	D	12.7	5.1	mg/Kg	☼	10/19/17 13:47	10/24/17 00:54	5
Antimony	0.49	U D	1.2	0.49	mg/Kg	☼	10/19/17 13:49	10/31/17 21:26	5
Arsenic	2.5	D	2.5	1.0	mg/Kg	☼	10/19/17 13:47	10/24/17 00:54	5
Barium	50.3	D	5.1	1.3	mg/Kg	☼	10/19/17 13:47	10/24/17 00:54	5
Cadmium	0.079	B D	0.13	0.061	mg/Kg	☼	10/19/17 13:47	10/24/17 00:54	5
Chromium	17.6	D	2.5	1.1	mg/Kg	☼	10/19/17 13:47	10/24/17 00:54	5
Copper	12.7	D	2.5	1.0	mg/Kg	☼	10/19/17 13:47	10/24/17 00:54	5
Lead	4.4	D	0.76	0.32	mg/Kg	☼	10/19/17 13:47	10/24/17 00:54	5
Manganese	425	D N	1.3	0.51	mg/Kg	☼	10/19/17 13:47	10/24/17 00:54	5
Nickel	17.5	D	1.3	0.51	mg/Kg	☼	10/19/17 13:47	10/24/17 00:54	5
Selenium	0.81	U D	1.3	0.81	mg/Kg	☼	10/19/17 13:47	10/24/17 00:54	5
Silver	0.19	U D	0.51	0.19	mg/Kg	☼	10/19/17 13:47	10/24/17 00:54	5
Uranium	0.38	D	0.25	0.10	mg/Kg	☼	10/19/17 13:47	10/24/17 00:54	5

Client Sample ID: B3DCM1 — **Lab Sample ID: 160-24918-7**
Date Collected: 10/06/17 10:40 — **Matrix: Soil**
Date Received: 10/07/17 08:50 — **Percent Solids: 97.9**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	4690	D	11.3	4.5	mg/Kg	☼	10/19/17 13:47	10/24/17 01:21	5
Antimony	0.44	U D	1.1	0.44	mg/Kg	☼	10/19/17 13:49	10/31/17 21:53	5
Arsenic	1.6	B D	2.3	0.91	mg/Kg	☼	10/19/17 13:47	10/24/17 01:21	5
Barium	28.3	D	4.5	1.1	mg/Kg	☼	10/19/17 13:47	10/24/17 01:21	5
Cadmium	0.054	U D	0.11	0.054	mg/Kg	☼	10/19/17 13:47	10/24/17 01:21	5
Chromium	10.4	D	2.3	1.0	mg/Kg	☼	10/19/17 13:47	10/24/17 01:21	5
Copper	11.5	D	2.3	0.91	mg/Kg	☼	10/19/17 13:47	10/24/17 01:21	5
Lead	3.0	D	0.68	0.28	mg/Kg	☼	10/19/17 13:47	10/24/17 01:21	5
Manganese	222	D N	1.1	0.45	mg/Kg	☼	10/19/17 13:47	10/24/17 01:21	5
Nickel	12.7	D	1.1	0.45	mg/Kg	☼	10/19/17 13:47	10/24/17 01:21	5
Selenium	0.73	U D	1.1	0.73	mg/Kg	☼	10/19/17 13:47	10/24/17 01:21	5
Silver	0.17	U D	0.45	0.17	mg/Kg	☼	10/19/17 13:47	10/24/17 01:21	5
Uranium	0.26	D	0.23	0.091	mg/Kg	☼	10/19/17 13:47	10/24/17 01:21	5

Client Sample ID: B3DCL1 — **Lab Sample ID: 160-24918-8**
Date Collected: 10/05/17 13:10 — **Matrix: Soil**
Date Received: 10/07/17 08:50 — **Percent Solids: 88.7**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	12200	D	12.9	5.2	mg/Kg	☼	10/19/17 13:47	10/24/17 01:28	5
Antimony	0.50	U D	1.2	0.50	mg/Kg	☼	10/19/17 13:49	10/31/17 22:00	5
Arsenic	7.2	D	2.6	1.0	mg/Kg	☼	10/19/17 13:47	10/24/17 01:28	5
Barium	118	D	5.2	1.3	mg/Kg	☼	10/19/17 13:47	10/24/17 01:28	5
Cadmium	0.13	D	0.13	0.062	mg/Kg	☼	10/19/17 13:47	10/24/17 01:28	5
Chromium	53.4	D	2.6	1.2	mg/Kg	☼	10/19/17 13:47	10/24/17 01:28	5
Copper	24.4	D	2.6	1.0	mg/Kg	☼	10/19/17 13:47	10/24/17 01:28	5
Lead	9.8	D	0.78	0.32	mg/Kg	☼	10/19/17 13:47	10/24/17 01:28	5
Manganese	710	D N	1.3	0.52	mg/Kg	☼	10/19/17 13:47	10/24/17 01:28	5
Nickel	24.4	D	1.3	0.52	mg/Kg	☼	10/19/17 13:47	10/24/17 01:28	5
Selenium	1.4	D	1.3	0.83	mg/Kg	☼	10/19/17 13:47	10/24/17 01:28	5
Silver	0.19	U D	0.52	0.19	mg/Kg	☼	10/19/17 13:47	10/24/17 01:28	5
Uranium	0.83	D	0.26	0.10	mg/Kg	☼	10/19/17 13:47	10/24/17 01:28	5

Method: 6020A - Metals (ICP/MS)

Client Sample ID: B3DCK6 — **Lab Sample ID: 160-24918-9**
Date Collected: 10/05/17 10:15 — **Matrix: Soil**
Date Received: 10/07/17 08:50 — **Percent Solids: 85.2**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	13900	D	13.8	5.5	mg/Kg	☼	10/19/17 13:48	10/24/17 01:34	5
Antimony	0.55	U D	1.4	0.55	mg/Kg	☼	10/19/17 13:49	10/31/17 22:07	5
Arsenic	7.1	D	2.8	1.1	mg/Kg	☼	10/19/17 13:48	10/24/17 01:34	5
Barium	153	D	5.5	1.4	mg/Kg	☼	10/19/17 13:48	10/24/17 01:34	5
Cadmium	0.16	D	0.14	0.066	mg/Kg	☼	10/19/17 13:48	10/24/17 01:34	5
Chromium	84.7	D	2.8	1.2	mg/Kg	☼	10/19/17 13:48	10/24/17 01:34	5
Copper	28.5	D	2.8	1.1	mg/Kg	☼	10/19/17 13:48	10/24/17 01:34	5
Lead	14.3	D	0.83	0.34	mg/Kg	☼	10/19/17 13:48	10/24/17 01:34	5
Manganese	555	D N	1.4	0.55	mg/Kg	☼	10/19/17 13:48	10/24/17 01:34	5
Nickel	26.8	D	1.4	0.55	mg/Kg	☼	10/19/17 13:48	10/24/17 01:34	5
Selenium	1.8	D	1.4	0.88	mg/Kg	☼	10/19/17 13:48	10/24/17 01:34	5
Silver	0.21	U D	0.55	0.21	mg/Kg	☼	10/19/17 13:48	10/24/17 01:34	5
Uranium	1.1	D	0.28	0.11	mg/Kg	☼	10/19/17 13:48	10/24/17 01:34	5

Method: 7471B - Mercury (CVAA)

Client Sample ID: B3F944 — **Lab Sample ID: 160-24858-1**
Date Collected: 10/03/17 15:00 — **Matrix: Soil**
Date Received: 10/05/17 09:10 — **Percent Solids: 96.8**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.011	U	0.033	0.011	mg/Kg	☼	10/09/17 12:21	10/10/17 15:04	1

Client Sample ID: B3DCM6 — **Lab Sample ID: 160-24918-1**
Date Collected: 10/06/17 13:30 — **Matrix: Soil**
Date Received: 10/07/17 08:50 — **Percent Solids: 97.4**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.010	U	0.030	0.010	mg/Kg	☼	10/30/17 08:25	10/30/17 15:12	1

Client Sample ID: B3DCK1 — **Lab Sample ID: 160-24918-3**
Date Collected: 09/29/17 10:00 — **Matrix: Soil**
Date Received: 10/07/17 08:50 — **Percent Solids: 93.4**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.011	U	0.034	0.011	mg/Kg	☼	10/18/17 08:08	10/18/17 14:49	1

Client Sample ID: B3DCL6 — **Lab Sample ID: 160-24918-5**
Date Collected: 10/06/17 09:00 — **Matrix: Soil**
Date Received: 10/07/17 08:50 — **Percent Solids: 97.1**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.010	U	0.031	0.010	mg/Kg	☼	10/18/17 08:08	10/18/17 14:58	1

Client Sample ID: B3DCM1 — **Lab Sample ID: 160-24918-7**
Date Collected: 10/06/17 10:40 — **Matrix: Soil**
Date Received: 10/07/17 08:50 — **Percent Solids: 97.9**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.010	U	0.031	0.010	mg/Kg	☼	10/10/17 07:47	10/10/17 15:06	1

Client Sample ID: B3DCL1 — **Lab Sample ID: 160-24918-8**
Date Collected: 10/05/17 13:10 — **Matrix: Soil**
Date Received: 10/07/17 08:50 — **Percent Solids: 88.7**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.012	U	0.035	0.012	mg/Kg	☼	10/10/17 07:47	10/10/17 15:08	1

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: F17-009

TestAmerica Job ID: 160-24858-1
SDG: SL2697

Client Sample ID: B3DCK6 — **Lab Sample ID: 160-24918-9**
Date Collected: 10/05/17 10:15 — **Matrix: Soil**
Date Received: 10/07/17 08:50 — **Percent Solids: 85.2**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.012	B	0.034	0.011	mg/Kg	☼	10/10/17 07:47	10/10/17 15:10	1

General Chemistry

Client Sample ID: B3F944 — **Lab Sample ID: 160-24858-1**
Date Collected: 10/03/17 15:00 — **Matrix: Soil**
Date Received: 10/05/17 09:10 — **Percent Solids: 96.8**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	1.0	C	0.52	0.23	mg/Kg	☼	10/24/17 11:55	10/27/17 14:00	1
Cyanide, Total	0.12	U	0.51	0.12	mg/Kg	☼	10/13/17 12:55	10/13/17 17:14	1

Client Sample ID: B3DCM6 — **Lab Sample ID: 160-24918-1**
Date Collected: 10/06/17 13:30 — **Matrix: Soil**
Date Received: 10/07/17 08:50 — **Percent Solids: 97.4**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	0.90	C	0.51	0.23	mg/Kg	☼	10/24/17 11:55	10/27/17 14:07	1
Cyanide, Total	0.11	U	0.51	0.11	mg/Kg	☼	10/13/17 12:55	10/13/17 17:24	1
Total Organic Carbon	285	y	100	33.4	mg/Kg		10/16/17 16:55	10/18/17 16:56	1
Total Inorganic Carbon	33.4	U	100	33.4	mg/Kg			10/18/17 15:24	1

Client Sample ID: B3DCM6 — **Lab Sample ID: 160-24918-2**
Date Collected: 10/06/17 13:30 — **Matrix: Water**
Date Received: 10/07/17 08:50

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.80		0.100	0.100	SU			10/11/17 01:52	1
Specific Conductance	59.0		1.00	0.0970	uS/cm			10/19/17 20:50	1

Client Sample ID: B3DCK1 — **Lab Sample ID: 160-24918-3**
Date Collected: 09/29/17 10:00 — **Matrix: Soil**
Date Received: 10/07/17 08:50 — **Percent Solids: 93.4**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	1.4	C	0.53	0.24	mg/Kg	☼	10/24/17 11:55	10/27/17 14:10	1
Cyanide, Total	0.12	U	0.53	0.12	mg/Kg	☼	10/13/17 12:55	10/13/17 17:27	1
Total Organic Carbon	33.4	U	100	33.4	mg/Kg		10/16/17 16:55	10/18/17 17:15	1
Total Inorganic Carbon	3080		100	33.4	mg/Kg			10/18/17 15:24	1

Client Sample ID: B3DCK1 — **Lab Sample ID: 160-24918-4**
Date Collected: 09/29/17 10:00 — **Matrix: Water**
Date Received: 10/07/17 08:50

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.79		0.100	0.100	SU			10/11/17 01:55	1
Specific Conductance	276		1.00	0.0970	uS/cm			10/19/17 20:52	1

Client Sample ID: B3DCL6 — **Lab Sample ID: 160-24918-5**
Date Collected: 10/06/17 09:00 — **Matrix: Soil**
Date Received: 10/07/17 08:50 — **Percent Solids: 97.1**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	0.91	C	0.51	0.23	mg/Kg	☼	10/24/17 11:55	10/27/17 14:12	1
Cyanide, Total	0.11	U	0.51	0.11	mg/Kg	☼	10/13/17 12:55	10/13/17 17:31	1
Total Organic Carbon	33.4	U	100	33.4	mg/Kg		10/16/17 16:55	10/18/17 17:22	1
Total Inorganic Carbon	46.0	B	100	33.4	mg/Kg			10/18/17 15:24	1

General Chemistry

Client Sample ID: B3DCL6 — **Lab Sample ID: 160-24918-6**
Date Collected: 10/06/17 09:00 — **Matrix: Water**
Date Received: 10/07/17 08:50

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.99		0.100	0.100	SU			10/11/17 01:59	1
Specific Conductance	74.8		1.00	0.0970	uS/cm			10/19/17 20:54	1

Client Sample ID: B3DCM1 — **Lab Sample ID: 160-24918-7**
Date Collected: 10/06/17 10:40 — **Matrix: Soil**
Date Received: 10/07/17 08:50 — **Percent Solids: 97.9**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	0.44	B C	0.51	0.23	mg/Kg	☼	10/24/17 11:55	10/27/17 14:14	1
Cyanide, Total	0.11	U	0.51	0.11	mg/Kg	☼	10/13/17 12:55	10/13/17 17:34	1

Client Sample ID: B3DCL1 — **Lab Sample ID: 160-24918-8**
Date Collected: 10/05/17 13:10 — **Matrix: Soil**
Date Received: 10/07/17 08:50 — **Percent Solids: 88.7**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	0.42	B C	0.56	0.25	mg/Kg	☼	10/24/17 11:55	10/27/17 14:17	1
Cyanide, Total	0.13	U	0.56	0.13	mg/Kg	☼	10/13/17 12:55	10/13/17 17:44	1

Client Sample ID: B3DCK6 — **Lab Sample ID: 160-24918-9**
Date Collected: 10/05/17 10:15 — **Matrix: Soil**
Date Received: 10/07/17 08:50 — **Percent Solids: 85.2**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	1.6	C	0.58	0.26	mg/Kg	☼	10/24/17 11:55	10/27/17 14:24	1
Cyanide, Total	0.13	U	0.59	0.13	mg/Kg	☼	10/13/17 12:55	10/13/17 17:48	1

General Chemistry - DL

Client Sample ID: B3DCM6 — **Lab Sample ID: 160-24918-2**
Date Collected: 10/06/17 13:30 — **Matrix: Water**
Date Received: 10/07/17 08:50

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Inorganic Carbon	5.1	D	5.0	2.5	mg/L			10/17/17 17:28	5
Total Organic Carbon	12.8	D	10.0	5.0	mg/L			10/17/17 04:55	10

Client Sample ID: B3DCK1 — **Lab Sample ID: 160-24918-4**
Date Collected: 09/29/17 10:00 — **Matrix: Water**
Date Received: 10/07/17 08:50

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Inorganic Carbon	16.3	D	2.0	1.0	mg/L			10/17/17 17:43	2
Total Organic Carbon	101	D	10.0	5.0	mg/L			10/17/17 05:06	10

Client Sample ID: B3DCL6 — **Lab Sample ID: 160-24918-6**
Date Collected: 10/06/17 09:00 — **Matrix: Water**
Date Received: 10/07/17 08:50

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Inorganic Carbon	2.7	D	2.0	1.0	mg/L			10/31/17 16:05	2
Total Organic Carbon	16.3	D	10.0	5.0	mg/L			10/17/17 05:17	10

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: F17-009

TestAmerica Job ID: 160-24858-1
SDG: SL2697

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 160-332557/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 333418 — **Prep Batch: 332557**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	50.0	U	200	50.0	ug/L		10/18/17 16:39	10/23/17 11:58	1
Barium	15.0	U	50.0	15.0	ug/L		10/18/17 16:39	10/23/17 11:58	1
Calcium	300	U	1000	300	ug/L		10/18/17 16:39	10/23/17 11:58	1
Chromium	3.0	U	10.0	3.0	ug/L		10/18/17 16:39	10/23/17 11:58	1
Iron	30.0	U	100	30.0	ug/L		10/18/17 16:39	10/23/17 11:58	1
Magnesium	300	U	1000	300	ug/L		10/18/17 16:39	10/23/17 11:58	1
Manganese	4.0	U	15.0	4.0	ug/L		10/18/17 16:39	10/23/17 11:58	1
Potassium	1500	U	5000	1500	ug/L		10/18/17 16:39	10/23/17 11:58	1
Silicon	125	U	400	125	ug/L		10/18/17 16:39	10/23/17 11:58	1
Sodium	300	U	1000	300	ug/L		10/18/17 16:39	10/23/17 11:58	1

Lab Sample ID: LCS 160-332557/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 333418 — **Prep Batch: 332557**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	10000	9739		ug/L		97	80 - 120
Barium	1000	990.5		ug/L		99	80 - 120
Calcium	10000	10300		ug/L		103	80 - 120
Chromium	1000	1015		ug/L		102	80 - 120
Iron	10000	9900		ug/L		99	80 - 120
Magnesium	10000	9596		ug/L		96	80 - 120
Manganese	1000	971.9		ug/L		97	80 - 120
Potassium	10000	9875		ug/L		99	80 - 120
Silicon	5000	4542		ug/L		91	80 - 120
Sodium	10000	9983		ug/L		100	80 - 120

Lab Sample ID: 160-24918-4 MS — **Client Sample ID: B3DCK1**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 333418 — **Prep Batch: 332557**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	17700	D N	10000	31030	D N	ug/L		134	75 - 125
Barium	231	B D	1000	1217	D	ug/L		99	75 - 125
Calcium	17200	D	10000	26910	D	ug/L		97	75 - 125
Chromium	633	D	1000	1619	D	ug/L		99	75 - 125
Iron	21600	D	10000	31260	D	ug/L		97	75 - 125
Magnesium	3760	B D	10000	13290	D	ug/L		95	75 - 125
Manganese	460	D	1000	1420	D	ug/L		96	75 - 125
Potassium	7500	U D N	10000	15800	B D N	ug/L		158	75 - 125
Silicon	45100	D	5000	56800	D X	ug/L		234	75 - 125
Sodium	55100	D	10000	64450	D X	ug/L		94	75 - 125

Lab Sample ID: 160-24918-4 MSD — **Client Sample ID: B3DCK1**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 333418 — **Prep Batch: 332557**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	17700	D N	10000	30670	D N	ug/L		130	75 - 125	1	20

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

Lab Sample ID: 160-24918-4 MSD — **Client Sample ID: B3DCK1**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 333418 — **Prep Batch: 332557**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Barium	231	B D	1000	1219	D	ug/L		99	75 - 125	0	20
Calcium	17200	D	10000	27000	D	ug/L		98	75 - 125	0	20
Chromium	633	D	1000	1627	D	ug/L		99	75 - 125	0	20
Iron	21600	D	10000	31040	D	ug/L		94	75 - 125	1	20
Magnesium	3760	B D	10000	13400	D	ug/L		96	75 - 125	1	20
Manganese	460	D	1000	1420	D	ug/L		96	75 - 125	0	20
Potassium	7500	U D N	10000	15970	B D N	ug/L		160	75 - 125	1	20
Silicon	45100	D	5000	56350	D X	ug/L		225	75 - 125	1	20
Sodium	55100	D	10000	65250	D X	ug/L		102	75 - 125	1	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 160-332794/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 333474 — **Prep Batch: 332794**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	1.7	U D	4.3	1.7	mg/Kg		10/19/17 13:47	10/23/17 23:54	2
Arsenic	0.35	U D	0.87	0.35	mg/Kg		10/19/17 13:47	10/23/17 23:54	2
Barium	0.43	U D	1.7	0.43	mg/Kg		10/19/17 13:47	10/23/17 23:54	2
Cadmium	0.021	U D	0.043	0.021	mg/Kg		10/19/17 13:47	10/23/17 23:54	2
Chromium	0.39	U D	0.87	0.39	mg/Kg		10/19/17 13:47	10/23/17 23:54	2
Copper	0.35	U D	0.87	0.35	mg/Kg		10/19/17 13:47	10/23/17 23:54	2
Lead	0.11	U D	0.26	0.11	mg/Kg		10/19/17 13:47	10/23/17 23:54	2
Manganese	0.17	U D	0.43	0.17	mg/Kg		10/19/17 13:47	10/23/17 23:54	2
Nickel	0.17	U D	0.43	0.17	mg/Kg		10/19/17 13:47	10/23/17 23:54	2
Selenium	0.28	U D	0.43	0.28	mg/Kg		10/19/17 13:47	10/23/17 23:54	2
Silver	0.065	U D	0.17	0.065	mg/Kg		10/19/17 13:47	10/23/17 23:54	2
Uranium	0.035	U D	0.087	0.035	mg/Kg		10/19/17 13:47	10/23/17 23:54	2

Lab Sample ID: LCS 160-332794/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 333474 — **Prep Batch: 332794**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Uranium	84.9	84.29	D	mg/Kg		99	80 - 120

Lab Sample ID: LCSSRM 160-332794/3-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 333474 — **Prep Batch: 332794**

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	8080	6482	D	mg/Kg		80.2	39.6 - 160.9
Arsenic	145	152.7	D	mg/Kg		105.3	70.3 - 136.6
Barium	209	208.9	D	mg/Kg		100	73.7 - 126.8
Cadmium	87.6	89.80	D	mg/Kg		102.5	73.3 - 126.7

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

Lab Sample ID: LCSSRM 160-332794/3-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 333474 — **Prep Batch: 332794**

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium	143	144.5	D	mg/Kg		101.0	69.9 - 129.4
Copper	173	189.1	D	mg/Kg		109.3	75.1 - 124.3
Lead	146	153.2	D	mg/Kg		104.9	73.3 - 126.7
Manganese	309	328.0	D	mg/Kg		106.2	74.8 - 125.2
Nickel	129	141.5	D	mg/Kg		109.7	73.0 - 127.1
Selenium	178	183.9	D	mg/Kg		103.3	68.0 - 131.5
Silver	31.3	31.61	D	mg/Kg		101.0	65.2 - 134.5

Lab Sample ID: 160-24858-1 MS — **Client Sample ID: B3F944**
Matrix: Soil — **Prep Type: Total/NA**
Analysis Batch: 333474 — **Prep Batch: 332794**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	7130	D	945	9932	D X	mg/Kg	☼	297	75 - 125
Arsenic	4.9	D	94.5	101.9	D	mg/Kg	☼	103	75 - 125
Barium	80.6	D	94.5	192.7	D	mg/Kg	☼	119	75 - 125
Cadmium	0.089	B D	94.4	95.94	D	mg/Kg	☼	102	75 - 125
Chromium	39.9	D	94.5	133.1	D	mg/Kg	☼	99	75 - 125
Copper	13.4	D	94.5	114.9	D	mg/Kg	☼	107	75 - 125
Lead	6.0	D	94.5	100.4	D	mg/Kg	☼	100	75 - 125
Manganese	349	D N	94.5	499.2	D N	mg/Kg	☼	159	75 - 125
Nickel	12.6	D	94.5	110.3	D	mg/Kg	☼	103	75 - 125
Selenium	0.80	U D	47.2	47.28	D	mg/Kg	☼	100	75 - 125
Silver	0.19	U D	18.9	19.30	D	mg/Kg	☼	102	75 - 125
Uranium	7.0	D	94.5	102.8	D	mg/Kg	☼	101	75 - 125

Lab Sample ID: 160-24858-1 MSD — **Client Sample ID: B3F944**
Matrix: Soil — **Prep Type: Total/NA**
Analysis Batch: 333474 — **Prep Batch: 332794**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	7130	D	962	9762	D X	mg/Kg	☼	274	75 - 125	2	30
Arsenic	4.9	D	96.2	105.2	D	mg/Kg	☼	104	75 - 125	3	30
Barium	80.6	D	96.2	183.5	D	mg/Kg	☼	107	75 - 125	5	30
Cadmium	0.089	B D	96.1	95.63	D	mg/Kg	☼	99	75 - 125	0	30
Chromium	39.9	D	96.2	133.6	D	mg/Kg	☼	97	75 - 125	0	30
Copper	13.4	D	96.2	116.3	D	mg/Kg	☼	107	75 - 125	1	30
Lead	6.0	D	96.2	100.2	D	mg/Kg	☼	98	75 - 125	0	30
Manganese	349	D N	96.2	488.8	D N	mg/Kg	☼	145	75 - 125	2	30
Nickel	12.6	D	96.2	112.1	D	mg/Kg	☼	103	75 - 125	2	30
Selenium	0.80	U D	48.1	48.89	D	mg/Kg	☼	102	75 - 125	3	30
Silver	0.19	U D	19.2	19.20	D	mg/Kg	☼	100	75 - 125	0	30
Uranium	7.0	D	96.2	103.1	D	mg/Kg	☼	100	75 - 125	0	30

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

Lab Sample ID: MB 160-332795/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 335200 — **Prep Batch: 332795**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.18	U D	0.44	0.18	mg/Kg		10/19/17 13:49	10/31/17 20:33	2

Lab Sample ID: LCS 160-332795/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 335200 — **Prep Batch: 332795**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	45.9	42.61	D	mg/Kg		93	21 - 251

Lab Sample ID: 160-24858-1 MS — **Client Sample ID: B3F944**
Matrix: Soil — **Prep Type: Total/NA**
Analysis Batch: 335200 — **Prep Batch: 332795**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.50	U D	50.0	47.40	D	mg/Kg	☼	95	75 - 125

Lab Sample ID: 160-24858-1 MSD — **Client Sample ID: B3F944**
Matrix: Soil — **Prep Type: Total/NA**
Analysis Batch: 335200 — **Prep Batch: 332795**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	0.50	U D	49.6	47.99	D	mg/Kg	☼	97	75 - 125	1	30

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 160-330121/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 331251 — **Prep Batch: 330121**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.010	U	0.031	0.010	mg/Kg		10/03/17 11:45	10/10/17 14:32	1

Lab Sample ID: LCSSRM 160-330121/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 331251 — **Prep Batch: 330121**

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	12.3	9.61	D	mg/Kg		78.1	51.4 - 148.8

Lab Sample ID: 160-24669-A-1-D MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 331251 — **Prep Batch: 330121**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.034		0.823	0.855		mg/Kg	☼	100	80 - 120

Method: 7471B - Mercury (CVAA) (Continued)

Lab Sample ID: 160-24669-A-1-E MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 331251 — **Prep Batch: 330121**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.034		0.807	0.841		mg/Kg	☼	100	80 - 120	2	30

Lab Sample ID: MB 160-332298/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 332584 — **Prep Batch: 332298**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.011	U	0.032	0.011	mg/Kg		10/18/17 08:08	10/18/17 14:41	1

Lab Sample ID: LCSSRM 160-332298/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 332584 — **Prep Batch: 332298**

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	12.3	9.91	D	mg/Kg		80.6	51.4 - 148.8

Lab Sample ID: 160-24918-3 MS — **Client Sample ID: B3DCK1**
Matrix: Soil — **Prep Type: Total/NA**
Analysis Batch: 332584 — **Prep Batch: 332298**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.011	U	0.839	0.738		mg/Kg	☼	88	80 - 120

Lab Sample ID: 160-24918-3 MSD — **Client Sample ID: B3DCK1**
Matrix: Soil — **Prep Type: Total/NA**
Analysis Batch: 332584 — **Prep Batch: 332298**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.011	U	0.829	0.766		mg/Kg	☼	92	80 - 120	4	30

Lab Sample ID: MB 160-334712/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 335023 — **Prep Batch: 334712**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0098	U	0.029	0.0098	mg/Kg		10/30/17 08:25	10/30/17 15:08	1

Lab Sample ID: LCSSRM 160-334712/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 335023 — **Prep Batch: 334712**

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	12.3	10.05	D	mg/Kg		81.7	51.4 - 148.8

Method: 7471B - Mercury (CVAA) (Continued)

Lab Sample ID: 160-24918-1 MS — **Client Sample ID: B3DCM6**
Matrix: Soil — **Prep Type: Total/NA**
Analysis Batch: 335023 — **Prep Batch: 334712**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.010	U	0.740	0.732		mg/Kg	☼	99	80 - 120

Lab Sample ID: 160-24918-1 MSD — **Client Sample ID: B3DCM6**
Matrix: Soil — **Prep Type: Total/NA**
Analysis Batch: 335023 — **Prep Batch: 334712**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.010	U	0.815	0.788		mg/Kg	☼	97	80 - 120	7	30

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 160-333438/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 334436 — **Prep Batch: 333438**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	0.281	B	0.50	0.22	mg/Kg		10/24/17 11:55	10/27/17 13:56	1

Lab Sample ID: LCS 160-333438/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 334436 — **Prep Batch: 333438**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	5.00	4.85		mg/Kg		97	90 - 110

Lab Sample ID: 160-24858-1 MS — **Client Sample ID: B3F944**
Matrix: Soil — **Prep Type: Total/NA**
Analysis Batch: 334436 — **Prep Batch: 333438**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	1.0	C	5.15	6.29		mg/Kg	☼	102	90 - 110

Lab Sample ID: 160-24858-1 DU — **Client Sample ID: B3F944**
Matrix: Soil — **Prep Type: Total/NA**
Analysis Batch: 334436 — **Prep Batch: 333438**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Ammonia (as N)	1.0	C	0.972	C	mg/Kg	☼	7	30

Method: 9012B - Cyanide, Total andor Amenable

Lab Sample ID: MB 160-331779/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 332091 — **Prep Batch: 331779**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.11	U	0.50	0.11	mg/Kg		10/13/17 12:55	10/13/17 17:03	1

Method: 9012B - Cyanide, Total andor Amenable (Continued)

Lab Sample ID: HLCS 160-331779/3-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 332091 — **Prep Batch: 331779**

Analyte	Spike Added	HLCS Result	HLCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	4.80	4.67		mg/Kg		97	85 - 115

Lab Sample ID: LCS 160-331779/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 332091 — **Prep Batch: 331779**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	2.40	2.31		mg/Kg		96	85 - 115

Lab Sample ID: 160-24858-1 MS — **Client Sample ID: B3F944**
Matrix: Soil — **Prep Type: Total/NA**
Analysis Batch: 332091 — **Prep Batch: 331779**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.12	U	2.47	2.33		mg/Kg	☼	95	60 - 130

Lab Sample ID: 160-24858-1 DU — **Client Sample ID: B3F944**
Matrix: Soil — **Prep Type: Total/NA**
Analysis Batch: 332091 — **Prep Batch: 331779**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Cyanide, Total	0.12	U	0.12	U	mg/Kg	☼	NC	30

Method: 9040C - pH

Lab Sample ID: LCS 160-331248/6 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 331248

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH	7.00	6.970		SU		100	99.0 - 101.0

Lab Sample ID: 160-24669-A-5 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 331248

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	9.84		9.840		SU		0	5

Method: 9050A - Specific Conductance

Lab Sample ID: MB 160-332833/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 332833

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	0.370	B	1.00	0.0970	uS/cm			10/19/17 20:40	1

Method: 9050A - Specific Conductance (Continued)

Lab Sample ID: LCS 160-332833/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 332833

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Specific Conductance	500	501.0		uS/cm		100	85 - 115

Lab Sample ID: 160-24669-A-5 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 332833

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Specific Conductance	756		1410	2110		uS/cm		96	75 - 125

Lab Sample ID: 160-24669-A-5 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 332833

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Specific Conductance	756		757.0		uS/cm		0.1	20

Method: 9060 - Organic Carbon, Total (TOC)

Lab Sample ID: MB 160-332158/19-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 332567 — **Prep Batch: 332158**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	33.4	U	100	33.4	mg/Kg		10/18/17 12:55	10/18/17 16:43	1

Lab Sample ID: LCS 160-332158/20-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 332567 — **Prep Batch: 332158**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	6030	5315		mg/Kg		88	49 - 117

Lab Sample ID: 160-24918-1 MS — **Client Sample ID: B3DCM6**
Matrix: Soil — **Prep Type: Total/NA**
Analysis Batch: 332567 — **Prep Batch: 332158**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	285	y	1000	1271		mg/Kg		99	50 - 150

Lab Sample ID: 160-24918-1 DU — **Client Sample ID: B3DCM6**
Matrix: Soil — **Prep Type: Total/NA**
Analysis Batch: 332567 — **Prep Batch: 332158**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Organic Carbon	285	y	197.2	y	mg/Kg		36	30

Method: 9060 - Organic Carbon, Total (TOC) (Continued)

Lab Sample ID: MB 160-332203/26 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 332203

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	0.50	U	1.0	0.50	mg/L			10/16/17 23:47	1

Lab Sample ID: LCS 160-332203/27 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 332203

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	10.0	9.55		mg/L		95	90 - 110

Lab Sample ID: 160-24963-B-8 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 332203

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	0.50	U	5.00	4.91		mg/L		98	76 - 120

Lab Sample ID: 160-24963-B-8 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 332203

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Organic Carbon	0.50	U	0.50	U	mg/L		NC	20

Method: 9060 - Carbon, Total and Total Inorganic

Lab Sample ID: MB 160-332508/4 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 332508

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Inorganic Carbon	0.50	U	1.0	0.50	mg/L			10/17/17 16:42	1

Lab Sample ID: LCS 160-332508/5 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 332508

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Inorganic Carbon	10.0	10.06		mg/L		100	85 - 129

Lab Sample ID: MB 160-335167/4 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 335167

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Inorganic Carbon	0.50	U	1.0	0.50	mg/L			10/31/17 15:33	1

Method: 9060 - Carbon, Total and Total Inorganic (Continued)

Lab Sample ID: LCS 160-335167/5 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 335167

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Inorganic Carbon	10.0	9.79		mg/L		98	85 - 129

Method: 9060 - Carbon, Total and Total Inorganic - DL

Lab Sample ID: 160-24918-4 MS — **Client Sample ID: B3DCK1**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 332508

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Inorganic Carbon - DL	16.3	D	10.0	26.30	D	mg/L		100	76 - 120

Lab Sample ID: 160-24918-4 DU — **Client Sample ID: B3DCK1**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 332508

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Inorganic Carbon - DL	16.3	D	16.09	D	mg/L		1	20

Lab Sample ID: 160-24918-6 MS — **Client Sample ID: B3DCL6**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 335167

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Inorganic Carbon - DL	2.7	D	10.0	11.70	D	mg/L		90	76 - 120

Lab Sample ID: 160-24918-6 DU — **Client Sample ID: B3DCL6**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 335167

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Inorganic Carbon - DL	2.7	D	2.67	D	mg/L		2	20

QC Association Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: F17-009

TestAmerica Job ID: 160-24858-1
SDG: SL2697

Metals

Prep Batch: 330121

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-24858-1	B3F944	Total/NA	Soil	7471B	
160-24918-7	B3DCM1	Total/NA	Soil	7471B	
160-24918-8	B3DCL1	Total/NA	Soil	7471B	
160-24918-9	B3DCK6	Total/NA	Soil	7471B	
MB 160-330121/1-A	Method Blank	Total/NA	Solid	7471B	
LCSSRM 160-330121/2-A	Lab Control Sample	Total/NA	Solid	7471B	
160-24669-A-1-D MS	Matrix Spike	Total/NA	Solid	7471B	
160-24669-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	7471B	

Analysis Batch: 331251

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-24858-1	B3F944	Total/NA	Soil	7471B	330121
160-24918-7	B3DCM1	Total/NA	Soil	7471B	330121
160-24918-8	B3DCL1	Total/NA	Soil	7471B	330121
160-24918-9	B3DCK6	Total/NA	Soil	7471B	330121
MB 160-330121/1-A	Method Blank	Total/NA	Solid	7471B	330121
LCSSRM 160-330121/2-A	Lab Control Sample	Total/NA	Solid	7471B	330121
160-24669-A-1-D MS	Matrix Spike	Total/NA	Solid	7471B	330121
160-24669-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	7471B	330121

Prep Batch: 332298

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-24918-3	B3DCK1	Total/NA	Soil	7471B	
160-24918-5	B3DCL6	Total/NA	Soil	7471B	
MB 160-332298/1-A	Method Blank	Total/NA	Solid	7471B	
LCSSRM 160-332298/2-A	Lab Control Sample	Total/NA	Solid	7471B	
160-24918-3 MS	B3DCK1	Total/NA	Soil	7471B	
160-24918-3 MSD	B3DCK1	Total/NA	Soil	7471B	

Prep Batch: 332557

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-24918-2	B3DCM6	Total/NA	Water	3010A	
160-24918-4	B3DCK1	Total/NA	Water	3010A	
160-24918-6	B3DCL6	Total/NA	Water	3010A	
MB 160-332557/1-A	Method Blank	Total/NA	Water	3010A	
LCS 160-332557/2-A	Lab Control Sample	Total/NA	Water	3010A	
160-24918-4 MS	B3DCK1	Total/NA	Water	3010A	
160-24918-4 MSD	B3DCK1	Total/NA	Water	3010A	

Analysis Batch: 332584

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-24918-3	B3DCK1	Total/NA	Soil	7471B	332298
160-24918-5	B3DCL6	Total/NA	Soil	7471B	332298
MB 160-332298/1-A	Method Blank	Total/NA	Solid	7471B	332298
LCSSRM 160-332298/2-A	Lab Control Sample	Total/NA	Solid	7471B	332298
160-24918-3 MS	B3DCK1	Total/NA	Soil	7471B	332298
160-24918-3 MSD	B3DCK1	Total/NA	Soil	7471B	332298

Prep Batch: 332794

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-24858-1	B3F944	Total/NA	Soil	3050B	

Metals (Continued)

Prep Batch: 332794 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-24918-1	B3DCM6	Total/NA	Soil	3050B	
160-24918-3	B3DCK1	Total/NA	Soil	3050B	
160-24918-5	B3DCL6	Total/NA	Soil	3050B	
160-24918-7	B3DCM1	Total/NA	Soil	3050B	
160-24918-8	B3DCL1	Total/NA	Soil	3050B	
160-24918-9	B3DCK6	Total/NA	Soil	3050B	
MB 160-332794/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 160-332794/2-A	Lab Control Sample	Total/NA	Solid	3050B	
LCSSRM 160-332794/3-A	Lab Control Sample	Total/NA	Solid	3050B	
160-24858-1 MS	B3F944	Total/NA	Soil	3050B	
160-24858-1 MSD	B3F944	Total/NA	Soil	3050B	

Prep Batch: 332795

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-24858-1	B3F944	Total/NA	Soil	3050B-Sb	
160-24918-1	B3DCM6	Total/NA	Soil	3050B-Sb	
160-24918-3	B3DCK1	Total/NA	Soil	3050B-Sb	
160-24918-5	B3DCL6	Total/NA	Soil	3050B-Sb	
160-24918-7	B3DCM1	Total/NA	Soil	3050B-Sb	
160-24918-8	B3DCL1	Total/NA	Soil	3050B-Sb	
160-24918-9	B3DCK6	Total/NA	Soil	3050B-Sb	
MB 160-332795/1-A	Method Blank	Total/NA	Solid	3050B-Sb	
LCS 160-332795/2-A	Lab Control Sample	Total/NA	Solid	3050B-Sb	
160-24858-1 MS	B3F944	Total/NA	Soil	3050B-Sb	
160-24858-1 MSD	B3F944	Total/NA	Soil	3050B-Sb	

Analysis Batch: 333418

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-24918-2	B3DCM6	Total/NA	Water	6010C	332557
160-24918-4	B3DCK1	Total/NA	Water	6010C	332557
160-24918-6	B3DCL6	Total/NA	Water	6010C	332557
MB 160-332557/1-A	Method Blank	Total/NA	Water	6010C	332557
LCS 160-332557/2-A	Lab Control Sample	Total/NA	Water	6010C	332557
160-24918-4 MS	B3DCK1	Total/NA	Water	6010C	332557
160-24918-4 MSD	B3DCK1	Total/NA	Water	6010C	332557

Analysis Batch: 333474

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-24858-1	B3F944	Total/NA	Soil	6020A	332794
160-24918-1	B3DCM6	Total/NA	Soil	6020A	332794
160-24918-3	B3DCK1	Total/NA	Soil	6020A	332794
160-24918-5	B3DCL6	Total/NA	Soil	6020A	332794
160-24918-7	B3DCM1	Total/NA	Soil	6020A	332794
160-24918-8	B3DCL1	Total/NA	Soil	6020A	332794
160-24918-9	B3DCK6	Total/NA	Soil	6020A	332794
MB 160-332794/1-A	Method Blank	Total/NA	Solid	6020A	332794
LCS 160-332794/2-A	Lab Control Sample	Total/NA	Solid	6020A	332794
LCSSRM 160-332794/3-A	Lab Control Sample	Total/NA	Solid	6020A	332794
160-24858-1 MS	B3F944	Total/NA	Soil	6020A	332794
160-24858-1 MSD	B3F944	Total/NA	Soil	6020A	332794

QC Association Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: F17-009

TestAmerica Job ID: 160-24858-1
SDG: SL2697

Metals (Continued)

Prep Batch: 334712

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-24918-1	B3DCM6	Total/NA	Soil	7471B	
MB 160-334712/1-A	Method Blank	Total/NA	Solid	7471B	
LCSSRM 160-334712/2-A	Lab Control Sample	Total/NA	Solid	7471B	
160-24918-1 MS	B3DCM6	Total/NA	Soil	7471B	
160-24918-1 MSD	B3DCM6	Total/NA	Soil	7471B	

Analysis Batch: 335023

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-24918-1	B3DCM6	Total/NA	Soil	7471B	334712
MB 160-334712/1-A	Method Blank	Total/NA	Solid	7471B	334712
LCSSRM 160-334712/2-A	Lab Control Sample	Total/NA	Solid	7471B	334712
160-24918-1 MS	B3DCM6	Total/NA	Soil	7471B	334712
160-24918-1 MSD	B3DCM6	Total/NA	Soil	7471B	334712

Analysis Batch: 335200

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-24858-1	B3F944	Total/NA	Soil	6020A	332795
160-24918-1	B3DCM6	Total/NA	Soil	6020A	332795
160-24918-3	B3DCK1	Total/NA	Soil	6020A	332795
160-24918-5	B3DCL6	Total/NA	Soil	6020A	332795
160-24918-7	B3DCM1	Total/NA	Soil	6020A	332795
160-24918-8	B3DCL1	Total/NA	Soil	6020A	332795
160-24918-9	B3DCK6	Total/NA	Soil	6020A	332795
MB 160-332795/1-A	Method Blank	Total/NA	Solid	6020A	332795
LCS 160-332795/2-A	Lab Control Sample	Total/NA	Solid	6020A	332795
160-24858-1 MS	B3F944	Total/NA	Soil	6020A	332795
160-24858-1 MSD	B3F944	Total/NA	Soil	6020A	332795

General Chemistry

Analysis Batch: 330573

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-24858-1	B3F944	Total/NA	Soil	Moisture	
160-24821-A-17 DU	Duplicate	Total/NA	Solid	Moisture	

Analysis Batch: 331247

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-24918-1	B3DCM6	Total/NA	Soil	Moisture	
160-24918-3	B3DCK1	Total/NA	Soil	Moisture	
160-24918-5	B3DCL6	Total/NA	Soil	Moisture	
160-24918-7	B3DCM1	Total/NA	Soil	Moisture	
160-24918-8	B3DCL1	Total/NA	Soil	Moisture	
160-24918-9	B3DCK6	Total/NA	Soil	Moisture	
160-24918-9 DU	B3DCK6	Total/NA	Soil	Moisture	

Analysis Batch: 331248

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-24918-2	B3DCM6	Total/NA	Water	9040C	
160-24918-4	B3DCK1	Total/NA	Water	9040C	
160-24918-6	B3DCL6	Total/NA	Water	9040C	

QC Association Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: F17-009

TestAmerica Job ID: 160-24858-1
SDG: SL2697

General Chemistry (Continued)

Analysis Batch: 331248 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 160-331248/6	Lab Control Sample	Total/NA	Water	9040C	
160-24669-A-5 DU	Duplicate	Total/NA	Water	9040C	

Prep Batch: 331779

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-24858-1	B3F944	Total/NA	Soil	9010C	
160-24918-1	B3DCM6	Total/NA	Soil	9010C	
160-24918-3	B3DCK1	Total/NA	Soil	9010C	
160-24918-5	B3DCL6	Total/NA	Soil	9010C	
160-24918-7	B3DCM1	Total/NA	Soil	9010C	
160-24918-8	B3DCL1	Total/NA	Soil	9010C	
160-24918-9	B3DCK6	Total/NA	Soil	9010C	
MB 160-331779/1-A	Method Blank	Total/NA	Solid	9010C	
HLCS 160-331779/3-A	Lab Control Sample	Total/NA	Solid	9010C	
LCS 160-331779/2-A	Lab Control Sample	Total/NA	Solid	9010C	
160-24858-1 MS	B3F944	Total/NA	Soil	9010C	
160-24858-1 DU	B3F944	Total/NA	Soil	9010C	

Analysis Batch: 332091

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-24858-1	B3F944	Total/NA	Soil	9012B	331779
160-24918-1	B3DCM6	Total/NA	Soil	9012B	331779
160-24918-3	B3DCK1	Total/NA	Soil	9012B	331779
160-24918-5	B3DCL6	Total/NA	Soil	9012B	331779
160-24918-7	B3DCM1	Total/NA	Soil	9012B	331779
160-24918-8	B3DCL1	Total/NA	Soil	9012B	331779
160-24918-9	B3DCK6	Total/NA	Soil	9012B	331779
MB 160-331779/1-A	Method Blank	Total/NA	Solid	9012B	331779
HLCS 160-331779/3-A	Lab Control Sample	Total/NA	Solid	9012B	331779
LCS 160-331779/2-A	Lab Control Sample	Total/NA	Solid	9012B	331779
160-24858-1 MS	B3F944	Total/NA	Soil	9012B	331779
160-24858-1 DU	B3F944	Total/NA	Soil	9012B	331779

Prep Batch: 332158

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-24918-1	B3DCM6	Total/NA	Soil	None	
160-24918-3	B3DCK1	Total/NA	Soil	None	
160-24918-5	B3DCL6	Total/NA	Soil	None	
MB 160-332158/19-A	Method Blank	Total/NA	Solid	None	
LCS 160-332158/20-A	Lab Control Sample	Total/NA	Solid	None	
160-24918-1 MS	B3DCM6	Total/NA	Soil	None	
160-24918-1 DU	B3DCM6	Total/NA	Soil	None	

Analysis Batch: 332203

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-24918-2 - DL	B3DCM6	Total/NA	Water	9060	
160-24918-4 - DL	B3DCK1	Total/NA	Water	9060	
160-24918-6 - DL	B3DCL6	Total/NA	Water	9060	
MB 160-332203/26	Method Blank	Total/NA	Water	9060	
LCS 160-332203/27	Lab Control Sample	Total/NA	Water	9060	
160-24963-B-8 MS	Matrix Spike	Total/NA	Water	9060	

General Chemistry (Continued)

Analysis Batch: 332203 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-24963-B-8 DU	Duplicate	Total/NA	Water	9060	

Analysis Batch: 332508

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-24918-2 - DL	B3DCM6	Total/NA	Water	9060	
160-24918-4 - DL	B3DCK1	Total/NA	Water	9060	
MB 160-332508/4	Method Blank	Total/NA	Water	9060	
LCS 160-332508/5	Lab Control Sample	Total/NA	Water	9060	
160-24918-4 MS - DL	B3DCK1	Total/NA	Water	9060	
160-24918-4 DU - DL	B3DCK1	Total/NA	Water	9060	

Analysis Batch: 332567

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-24918-1	B3DCM6	Total/NA	Soil	9060	332158
160-24918-3	B3DCK1	Total/NA	Soil	9060	332158
160-24918-5	B3DCL6	Total/NA	Soil	9060	332158
MB 160-332158/19-A	Method Blank	Total/NA	Solid	9060	332158
LCS 160-332158/20-A	Lab Control Sample	Total/NA	Solid	9060	332158
160-24918-1 MS	B3DCM6	Total/NA	Soil	9060	332158
160-24918-1 DU	B3DCM6	Total/NA	Soil	9060	332158

Analysis Batch: 332833

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-24918-2	B3DCM6	Total/NA	Water	9050A	
160-24918-4	B3DCK1	Total/NA	Water	9050A	
160-24918-6	B3DCL6	Total/NA	Water	9050A	
MB 160-332833/2	Method Blank	Total/NA	Water	9050A	
LCS 160-332833/3	Lab Control Sample	Total/NA	Water	9050A	
160-24669-A-5 MS	Matrix Spike	Total/NA	Water	9050A	
160-24669-A-5 DU	Duplicate	Total/NA	Water	9050A	

Analysis Batch: 332963

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-24918-1	B3DCM6	Total/NA	Soil	9060	
160-24918-3	B3DCK1	Total/NA	Soil	9060	
160-24918-5	B3DCL6	Total/NA	Soil	9060	

Prep Batch: 333438

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-24858-1	B3F944	Total/NA	Soil	DILeach_Prep	
160-24918-1	B3DCM6	Total/NA	Soil	DILeach_Prep	
160-24918-3	B3DCK1	Total/NA	Soil	DILeach_Prep	
160-24918-5	B3DCL6	Total/NA	Soil	DILeach_Prep	
160-24918-7	B3DCM1	Total/NA	Soil	DILeach_Prep	
160-24918-8	B3DCL1	Total/NA	Soil	DILeach_Prep	
160-24918-9	B3DCK6	Total/NA	Soil	DILeach_Prep	
MB 160-333438/1-A	Method Blank	Total/NA	Solid	DILeach_Prep	
LCS 160-333438/2-A	Lab Control Sample	Total/NA	Solid	DILeach_Prep	
160-24858-1 MS	B3F944	Total/NA	Soil	DILeach_Prep	
160-24858-1 DU	B3F944	Total/NA	Soil	DILeach_Prep	

QC Association Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: F17-009

TestAmerica Job ID: 160-24858-1
SDG: SL2697

General Chemistry (Continued)

Analysis Batch: 334436

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-24858-1	B3F944	Total/NA	Soil	350.1	333438
160-24918-1	B3DCM6	Total/NA	Soil	350.1	333438
160-24918-3	B3DCK1	Total/NA	Soil	350.1	333438
160-24918-5	B3DCL6	Total/NA	Soil	350.1	333438
160-24918-7	B3DCM1	Total/NA	Soil	350.1	333438
160-24918-8	B3DCL1	Total/NA	Soil	350.1	333438
160-24918-9	B3DCK6	Total/NA	Soil	350.1	333438
MB 160-333438/1-A	Method Blank	Total/NA	Solid	350.1	333438
LCS 160-333438/2-A	Lab Control Sample	Total/NA	Solid	350.1	333438
160-24858-1 MS	B3F944	Total/NA	Soil	350.1	333438
160-24858-1 DU	B3F944	Total/NA	Soil	350.1	333438

Analysis Batch: 335167

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-24918-6 - DL	B3DCL6	Total/NA	Water	9060	
MB 160-335167/4	Method Blank	Total/NA	Water	9060	
LCS 160-335167/5	Lab Control Sample	Total/NA	Water	9060	
160-24918-6 MS - DL	B3DCL6	Total/NA	Water	9060	
160-24918-6 DU - DL	B3DCL6	Total/NA	Water	9060	