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: 160-17658-1
TestAmerica Sample Delivery Group: SL2211
Client Project/Site: F16-020

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

Attn: Mr. Scot Fitzgerald

Authorized for release by:
7/1/2016 2:37:50 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: 160-17658-1

Laboratory: TestAmerica St. Louis

Narrative

CASE NARRATIVE

CH2MHill Plateau Remediation Company
P.O. Box 1600
Richland, Washington 99352
July 1, 2016
Attention: Scot Fitzgerald

SDG	: SL2211
Number of Samples	: 3 samples
Sample Matrix	: Soil
Data Deliverable	: Summary
Date SDG Closed	: June 3, 2016

II. Introduction

On June 3, 3 samples were received by TestAmerica - St. Louis for chemical 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: F16-020

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 flagging unless otherwise noted in the case narrative.

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 (June 2014), Boron will be reported for Metals using method 6010. Boron will no longer be reported by method 6020.

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.

Job ID: 160-17658-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)

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.

IV. Definitions

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

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

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

- **B** - For inorganic analyses, the sample result is greater than the MDL but less than the RL.
- **B** - For organic analyses, Method Blank contamination. The Method Blank contains the target analyte at a concentration above the MDL.
- **J** - For organic analyses, the sample is estimated and less than the RL.
- **C** - For inorganic analyses, Method Blank contamination. The Method Blank contains the target analyte at a concentration above the MDL.
- **D** - For all analyses, the sample result was obtained from the analysis of a dilution. For Metals analyses, per standard practice, all solid 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. These dilutions do not necessitate qualification unless otherwise noted in the case narrative.
- **N** - For inorganics and GC analyses, the spike/spike duplicate recoveries are outside QC limits.
- **T** - For GCMS analyses, the spike/spike duplicate recoveries are outside QC limits.
- **O**- For all analyses, the LCS (LCSD) recoveries are outside QC limits.
- **M**- For inorganic analyses, the precision was outside control limits.
- **P -** For organic analyses (PCB/Pests only), the aroclor target analyte has greater than 25% difference for detected concentrations between the two GC columns.

Semivolatiles

Batch: 258151

Surrogates recovered low in the following samples and QC. The samples are outside 2X holding time and will not be re-extracted. The data is reported with this narrative. B35N98 (160-17658-1), B35NB2 (160-17658-2), B35NB0 (160-17658-3) and (MB 160-255257/1-A)

Anions

Batch: 256898

The following sample and its duplicate in Anion batch 160-256898 have an RPD for Chloride and Fluoride that is outside of 20% acceptance criteria: (160-17581-B-1-A) and (160-17581-B-1-B DU). However, RPD is not useful for values near the reporting limit (RL). As the sample and the duplicate are less than 5x the RL and are within the RL from each other, this RPD excursion is deemed insignificant and results are reported with this narrative.

The following samples in Anion batch 160-256898/256899 were diluted to bring the concentrations of target analytes within the calibration range: B35NB2 (160-17658-2) and B35NB0 (160-17658-3). Elevated reporting limits (RLs) are provided. These analytes have been qualified accordingly with a "D" flag in the associated samples.

The following matrix spike (MS) recovery for Nitrite was outside control limits in Anion batch 160-256898: (160-17581-B-1-C MS). Sample matrix interference is suspected, because the associated laboratory control sample (LCS) recovery was within acceptance limits. This

Job ID: 160-17658-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)

analyte has been qualified accordingly with an "N" flag in the associated samples.

ICP Metals

Batch: 258532

Due to the high concentration of calcium and iron, the matrix spike / matrix spike duplicate (MS/MSD) for preparation batch 160-257311 and analytical batch 160-258532 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria. (160-17658-B-1-R MS ^) and (160-17658-B-1-S MSD)

The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 160-257311 and analytical batch 160-258532 were outside control limits for magnesium. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits. (160-17658-B-1-R MS ^) and (160-17658-B-1-S MSD) This analyte has 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: B35N98 (160-17658-1), B35NB2 (160-17658-2), B35NB0 (160-17658-3), (160-17658-B-1-R MS ^), (160-17658-B-1-S MSD) and (160-17658-B-1-Q SD). Elevated reporting limits (RLs) are provided. These analytes have been qualified accordingly with a "D" flag in the associated samples.

The continuing low level check standard (CCVL) recovery associated with batch 160-258532 is outside the upper acceptance criteria for the following analyte(s): Iron. The associated samples contain such a high level of the affected element that a CCVL is unnecessary. (CCVL 160-258532/37)

ICPMS Metals

Batch: 258424

The following samples were diluted due to the nature of the sample matrix. The samples were high in salts, which cause internal standard and QC failures when the samples are run at a lesser dilution: B35N98 (160-17658-1), B35NB2 (160-17658-2), B35NB0 (160-17658-3), (160-17658-B-1-F MS), (160-17658-B-1-G MSD) and (160-17658-B-1-E SD). Elevated reporting limits (RLs) are provided. This analtye has been qualified accordingly with a "D" flag in the associated samples.

Batch: 258529

The following samples were diluted due to the nature of the sample matrix. The samples were high in salts, which cause internal standard and QC failures when the samples are run at a lesser dilution: B35N98 (160-17658-1), B35NB2 (160-17658-2), B35NB0 (160-17658-3), (160-17658-B-1-O MS), (160-17658-B-1-P MSD) and (160-17658-B-1-N SD). Elevated reporting limits (RLs) are provided. These analytes have been qualified accordingly with a "D" flag in the associated samples.

Due to the high concentration of aluminum, the matrix spike / matrix spike duplicate (MS/MSD) for preparation batch 160-257310 and analytical batch 160-258529 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria. (160-17658-B-1-O MS) and (160-17658-B-1-P MSD)

The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 160-257310 and analytical batch 160-258529 were outside control limits for manganese. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits. (160-17658-B-1-O MS) and (160-17658-B-1-P MSD) This analyte has been qualified accordingly with an "N" flag in the associated samples.

Ammonia as N

Batch: 255460

The following matrix spike (MS) recoveries for NH3 preparation batch 160-254531 and analytical batch 160-255460 were outside control limits: (160-17361-D-5-H MS). Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits. This analyte has been qualified accordingly with an "N" flag in the associated samples.

Case Narrative

Job ID: 160-17658-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)

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

DRO
Mercury
Cyanide

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

Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 160-17658-1
SDG Number: SL2211

Login Number: 17658
List Number: 1
Creator: McKinney, Gerrod E

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.	N/A	
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	1.1
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			F16-020-728	PAGE 1 OF 1
COLLECTOR Jen Russell 8L2211	COMPANY CONTACT TODAK, D	TELEPHONE NO. 376-6427	PROJECT COORDINATOR TODAK, D	PRICE CODE 8H	DATA TURNAROUND
SAMPLING LOCATION C8706, Core 25, B324T1	PROJECT DESIGNATION 200-DV-1 Operable Unit Characterization of Waste Sites Phase 3 Sampling		SAF NO. F16-020	AIR QUALITY ☐	30 Days / 30 Days
ICE CHEST NO. NA	FIELD LOGBOOK NO. NA	ACTUAL SAMPLE DEPTH 158.5'-160.5'	COA 302914	METHOD OF SHIPMENT FEDERAL EXPRESS	ORIGINAL
SHIPPED TO TestAmerica St. Louis	OFFSITE PROPERTY NO. NA		BILL OF LADING/AIR BILL NO. 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. NA

SPECIAL HANDLING AND/OR STORAGE

		PRESERVATION	Cool <=6C	Cool <=6C	None	Cool <=6C	Cool <=6C
		HOLDING TIME	14/40 Days	14/40 Days	6 Months	28 Days	28 Days/48 Hours
		TYPE OF CONTAINER	aG	aG	G/P	G/P	G/P
		NO. OF CONTAINER(S)	1	1	1	1	1
		VOLUME	120mL	120mL	~~250mL~~ 500mL JR 5/26/16	60mL	60mL
		SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	WTPH_KEROSENE: COMMON;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	350.1_AMMONIA: COMMON; 9012_CYANIDE: COMMON;	SEE ITEM (3) IN SPECIAL INSTRUCTIONS
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B35N98	SOIL	5/26/16	1615	X	X	X	X X

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Jen Russell Jen Russell	5/26/16 1630	GTL Refridgerator	5/26/16 1630
GTL Refridgerator	6-01-16 / 1500	Antonio Jaimes	6-01-16 / 1500
Antonio Jaimes	6-01-16 / 1545	Jack J. Bock TALK	6-1-16 / 1545
Jack J. Bock TALK	6-2-16 / 1410	C. McKinney Gerrod McKinney	06C316 0820

SPECIAL INSTRUCTIONS
Sample From HEIS #: B324T1 Actual Aliquot Collection Depth: 158.5'-160.5'
(1) 8270_SVOA_GCMS: COMMON {Phenol}; 8270_SVOA_GCMS: COMMON (Add-on) {Tributyl phosphate};
(2) 6020_METALS_ICPMS: COMMON {Aluminum, Antimony, Barium, Cadmium, Chromium, Copper, Lead, Selenium, Silver}; 6020_METALS_ICPMS: COMMON (Add-on) {Arsenic, Manganese, Nickel, Uranium}; 6010_METALS_ICP: COMMON {Calcium, Iron, Magnesium, Potassium, Sodium}; 7471_MERCURY_CV: COMMON (SOLIDS);
(3) 300.0_ANIONS_IC: COMMON; 300.0_ANIONS_IC: COMMON (Add-on) {Phosphate};

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

PRINTED ON 5/19/2016 FSR ID = FSR32331 TRVL NUM = TRVL-16-150 A-6003-618 (REV 2)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F16-020-732	PAGE 1 OF 1
COLLECTOR: Antonio Jaimes 82221	COMPANY CONTACT: TODAK, D	TELEPHONE NO.: 376-6427	PROJECT COORDINATOR: TODAK, D	PRICE CODE: 8H	DATA TURNAROUND: 30 Days / 30 Days
SAMPLING LOCATION: C8706, Optional Core 2, B324T9	PROJECT DESIGNATION: 200-DV-1 Operable Unit Characterization of Waste Sites Phase 3 Sampling		SAF NO.: F16-020	AIR QUALITY: ☐	
ICE CHEST NO.: NA	FIELD LOGBOOK NO.: NA	ACTUAL SAMPLE DEPTH: 198.3 - 201.3 ft	COA: 302914	METHOD OF SHIPMENT: FEDERAL EXPRESS	ORIGINAL
SHIPPED TO: TestAmerica St. Louis	OFFSITE PROPERTY NO.: NA		BILL OF LADING/AIR BILL NO.: 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. NA

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	Cool <=6C	Cool <=6C	None	Cool <=6C	Cool <=6C
HOLDING TIME	14/40 Days	14/40 Days	6 Months	28 Days	28 Days/48 Hours
TYPE OF CONTAINER	aG	aG	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1 JR 6/1/16	1	1
VOLUME	120mL	120mL	~~250mL~~ 500mL	60mL	60mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	WTPH_KEROSENE: COMMON;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	350.1_AMMONIA: COMMON; 9012_CYANIDE: COMMON;	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME					
B35NB2	SOIL	6/1/16	1310	X	X	X	X	X

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Antonio Jaimes	6-01-16 /1545	Bock J Bock TALR	6-1-16 / 1545
Bock J. Bock TALR	6-2-16 / 1410	C McK Gerrod McKinney	060316 0920

SPECIAL INSTRUCTIONS
Sample From HEIS #: B324T9 Actual Aliquot Collection Depth: 198.3 - 201.3 ft
(1) 8270_SVOA_GCMS: COMMON {Phenol}; 8270_SVOA_GCMS: COMMON (Add-on) {Tributyl phosphate};
(2) 6020_METALS_ICPMS: COMMON {Aluminum, Antimony, Barium, Cadmium, Chromium, Copper, Lead, Selenium, Silver}; 6020_METALS_ICPMS: COMMON (Add-on) {Arsenic, Manganese, Nickel, Uranium}; 6010_METALS_ICP: COMMON {Calcium, Iron, Magnesium, Potassium, Sodium}; 7471_MERCURY_CV: COMMON (SOLIDS);
(3) 300.0_ANIONS_IC: COMMON; 300.0_ANIONS_IC: COMMON (Add-on) {Phosphate};

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

PRINTED ON 5/19/2016 FSR ID = FSR32333 TRVL NUM = TRVL-16-150 A-6003-618 (REV 2)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F16-020-730	PAGE 1 OF 1
COLLECTOR 822211 Antonio Jaimes	COMPANY CONTACT TODAK, D	TELEPHONE NO. 376-6427	PROJECT COORDINATOR TODAK, D	PRICE CODE 8H AIR QUALITY ☐	DATA TURNAROUND 30 Days / 30 Days
SAMPLING LOCATION C8706, Core 30, B324T6	PROJECT DESIGNATION 200-DV-1 Operable Unit Characterization of Waste Sites Phase 3 Sampling		SAF NO. F16-020		
ICE CHEST NO. N/A	FIELD LOGBOOK NO. N/A	ACTUAL SAMPLE DEPTH 183.3- 185.3 ft	COA	METHOD OF SHIPMENT FEDERAL EXPRESS	ORIGINAL
SHIPPED TO TestAmerica St. Louis	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. 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. NA

SPECIAL HANDLING AND/OR STORAGE
N/A

PRESERVATION	Cool <=6C	Cool <=6C	None	Cool <=6C	Cool <=6C
HOLDING TIME	14/40 Days	14/40 Days	6 Months	28 Days	28 Days/48 Hours
TYPE OF CONTAINER	aG	aG	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	1	1
VOLUME	120mL	120mL	~~250mL~~ 500mL 6-01-16 AJ	60mL	60mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	WTPH_KEROSENE: COMMON;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	350.1_AMMONIA: COMMON; 9012_CYANIDE: COMMON;	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B35NB0	SOIL	6-01-16	1130

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM Antonio Jaimes	DATE/TIME 6-01-16 / 1545	RECEIVED BY/STORED IN Bock Bock	DATE/TIME 6-1-16 / 1545
RELINQUISHED BY/REMOVED FROM Bock J. Bock TALR	DATE/TIME 6-2-16 / 1410	RECEIVED BY/STORED IN CMcG GERRID McKINNEY	DATE/TIME 060316 0920
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
Sample From HEIS #: B324T6 Actual Aliquot Collection Depth: 183.3-185.3 ft
(1) 8270_SVOA_GCMS: COMMON {Phenol}; 8270_SVOA_GCMS: COMMON (Add-on) {Tributyl phosphate};
(2) 6020_METALS_ICPMS: COMMON {Aluminum, Antimony, Barium, Cadmium, Chromium, Copper, Lead, Selenium, Silver}; 6020_METALS_ICPMS: COMMON (Add-on) {Arsenic, Manganese, Nickel, Uranium}; 6010_METALS_ICP: COMMON {Calcium, Iron, Magnesium, Potassium, Sodium}; 7471_MERCURY_CV: COMMON (SOLIDS);
(3) 300.0_ANIONS_IC: COMMON; 300.0_ANIONS_IC: COMMON (Add-on) {Phosphate};

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

PRINTED ON 5/19/2016 FSR ID = FSR32332 TRVL NUM = TRVL-16-150 A-6003-618 (REV 2)

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776433329298

Ship date		Actual delivery
Thu 6/02/2016		**Fri 6/03/2016 9:19 am**
RICHLAND, WA US	**Delivered** *Signed for by: J.CLARKE*	EARTH CITY, MO US

Travel History

Date/Time	Activity	Location
- 6/03/2016 - Friday		
9:19 am	Delivered	EARTH CITY, MO
7:21 am	On FedEx vehicle for delivery	EARTH CITY, MO
7:15 am	At local FedEx facility	EARTH CITY, MO
5:21 am	At destination sort facility	BERKELEY, MO
4:39 am	Departed FedEx location	MEMPHIS, TN
12:49 am	Arrived at FedEx location	MEMPHIS, TN
- 6/02/2016 - Thursday		
5:04 pm	Left FedEx origin facility	PASCO, WA
4:25 pm	Shipment information sent to FedEx	
3:22 pm	Picked up	PASCO, WA

Shipment Facts

Tracking number	776433329298	**Service**	FedEx Standard Overnight
Weight	24 lbs / 10.89 kgs	**Dimensions**	17x12x16 in
Delivered To	Shipping/Receiving	**Total pieces**	1
Total shipment weight	24 lbs / 10.89 kgs	**Terms**	Recipient
Shipper reference	CH2MHILL	**Packaging**	Your Packaging
Special handling section	Deliver Weekday, Additional Handling Surcharge		

FedEx. Search or tracking number | Subm

Customer Focus
New Customer Center
Small Business Center
Service Guide
Customer Support

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FedEx SameDay
FedEx Home Delivery
FedEx TechConnect
Healthcare Solutions
Online Retail Solutions
Packaging Services
Ancillary Clearance Services

Other Resources
FedEx Compatible
Developer Resource Center
FedEx Ship Manager Software
FedEx Mobile

Companies
FedEx Express
FedEx Ground
FedEx Office
FedEx Freight
FedEx Custom Critical
FedEx Trade Networks
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Definitions/Glossary

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-020

TestAmerica Job ID: 160-17658-1
SDG: SL2211

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
U	Analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
M	Sample duplicate precision not met.
B	Estimated result. Result is less than the RL, but greater than MDL
U	Analyzed for but not detected.
N	MS, MSD: Spike recovery is outside acceptance limits.
D	The reported value is from a dilution.

Metals

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

General Chemistry

Qualifier	Qualifier Description
N	MS, MSD: Spike recovery is outside acceptance limits.
U	Analyzed for but not detected.
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, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Method Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-020

TestAmerica Job ID: 160-17658-1
SDG: SL2211

Method	Method Description	Protocol	Laboratory
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SL
8015B	Diesel Range Organics (DRO) (GC)	SW846	TAL SL
300.0	Anions, Ion Chromatography	MCAWW	TAL SL
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
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: F16-020

TestAmerica Job ID: 160-17658-1
SDG: SL2211

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-17658-1	B35N98	Soil	05/26/16 16:15	06/03/16 09:20
160-17658-2	B35NB2	Soil	06/01/16 13:10	06/03/16 09:20
160-17658-3	B35NB0	Soil	06/01/16 11:30	06/03/16 09:20

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-020

TestAmerica Job ID: 160-17658-1
SDG: SL2211

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: B35N98 — **Lab Sample ID: 160-17658-1**
Date Collected: 05/26/16 16:15 — **Matrix: Soil**
Date Received: 06/03/16 09:20 — **Percent Solids: 97.2**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	34	U	340	34	ug/Kg	☼	06/07/16 16:16	06/27/16 20:08	1
Tributyl phosphate	47	U	340	47	ug/Kg	☼	06/07/16 16:16	06/27/16 20:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*35*		*47 - 125*	*06/07/16 16:16*	*06/27/16 20:08*	*1*
2-Fluorobiphenyl (Surr)	*72*		*59 - 110*	*06/07/16 16:16*	*06/27/16 20:08*	*1*
2-Fluorophenol (Surr)	*76*		*54 - 102*	*06/07/16 16:16*	*06/27/16 20:08*	*1*
Nitrobenzene-d5 (Surr)	*74*		*44 - 120*	*06/07/16 16:16*	*06/27/16 20:08*	*1*
Phenol-d5 (Surr)	*76*		*51 - 104*	*06/07/16 16:16*	*06/27/16 20:08*	*1*
Terphenyl-d14 (Surr)	*75*		*59 - 98*	*06/07/16 16:16*	*06/27/16 20:08*	*1*

Client Sample ID: B35NB2 — **Lab Sample ID: 160-17658-2**
Date Collected: 06/01/16 13:10 — **Matrix: Soil**
Date Received: 06/03/16 09:20 — **Percent Solids: 97.1**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	**56**	**J**	340	34	ug/Kg	☼	06/07/16 16:16	06/27/16 20:42	1
Tributyl phosphate	47	U	340	47	ug/Kg	☼	06/07/16 16:16	06/27/16 20:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*32*		*47 - 125*	*06/07/16 16:16*	*06/27/16 20:42*	*1*
2-Fluorobiphenyl (Surr)	*53*		*59 - 110*	*06/07/16 16:16*	*06/27/16 20:42*	*1*
2-Fluorophenol (Surr)	*52*		*54 - 102*	*06/07/16 16:16*	*06/27/16 20:42*	*1*
Nitrobenzene-d5 (Surr)	*50*		*44 - 120*	*06/07/16 16:16*	*06/27/16 20:42*	*1*
Phenol-d5 (Surr)	*55*		*51 - 104*	*06/07/16 16:16*	*06/27/16 20:42*	*1*
Terphenyl-d14 (Surr)	*58*		*59 - 98*	*06/07/16 16:16*	*06/27/16 20:42*	*1*

Client Sample ID: B35NB0 — **Lab Sample ID: 160-17658-3**
Date Collected: 06/01/16 11:30 — **Matrix: Soil**
Date Received: 06/03/16 09:20 — **Percent Solids: 97.5**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	**70**	**J**	340	34	ug/Kg	☼	06/07/16 16:16	06/27/16 21:16	1
Tributyl phosphate	47	U	340	47	ug/Kg	☼	06/07/16 16:16	06/27/16 21:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*29*		*47 - 125*	*06/07/16 16:16*	*06/27/16 21:16*	*1*
2-Fluorobiphenyl (Surr)	*69*		*59 - 110*	*06/07/16 16:16*	*06/27/16 21:16*	*1*
2-Fluorophenol (Surr)	*70*		*54 - 102*	*06/07/16 16:16*	*06/27/16 21:16*	*1*
Nitrobenzene-d5 (Surr)	*69*		*44 - 120*	*06/07/16 16:16*	*06/27/16 21:16*	*1*
Phenol-d5 (Surr)	*72*		*51 - 104*	*06/07/16 16:16*	*06/27/16 21:16*	*1*
Terphenyl-d14 (Surr)	*73*		*59 - 98*	*06/07/16 16:16*	*06/27/16 21:16*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Client Sample ID: B35N98 — **Lab Sample ID: 160-17658-1**
Date Collected: 05/26/16 16:15 — **Matrix: Soil**
Date Received: 06/03/16 09:20 — **Percent Solids: 97.2**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Kerosene (C9-C16)	0.34	U	25	0.34	mg/Kg	☼	06/07/16 16:36	06/24/16 21:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*79*		*49 - 133*	*06/07/16 16:36*	*06/24/16 21:53*	*1*

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-020

TestAmerica Job ID: 160-17658-1
SDG: SL2211

Client Sample ID: B35NB2 — **Lab Sample ID: 160-17658-2**
Date Collected: 06/01/16 13:10 — **Matrix: Soil**
Date Received: 06/03/16 09:20 — **Percent Solids: 97.1**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Kerosene (C9-C16)	0.34	U	26	0.34	mg/Kg	☼	06/07/16 16:36	06/24/16 22:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*88*		*49 - 133*	*06/07/16 16:36*	*06/24/16 22:20*	*1*

Client Sample ID: B35NB0 — **Lab Sample ID: 160-17658-3**
Date Collected: 06/01/16 11:30 — **Matrix: Soil**
Date Received: 06/03/16 09:20 — **Percent Solids: 97.5**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Kerosene (C9-C16)	0.34	U	26	0.34	mg/Kg	☼	06/07/16 16:36	06/24/16 23:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*87*		*49 - 133*	*06/07/16 16:36*	*06/24/16 23:40*	*1*

Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: B35N98 — **Lab Sample ID: 160-17658-1**
Date Collected: 05/26/16 16:15 — **Matrix: Soil**
Date Received: 06/03/16 09:20 — **Percent Solids: 97.2**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**0.15**	**B**	1.0	0.15	mg/Kg	☼	06/17/16 12:50	06/17/16 20:55	1
Nitrate	**2.4**		0.21	0.056	mg/Kg	☼	06/17/16 12:50	06/17/16 20:55	1
Nitrite	0.057	U N	0.21	0.057	mg/Kg	☼	06/17/16 12:50	06/17/16 20:55	1
Sulfate	**5.3**		5.1	0.51	mg/Kg	☼	06/17/16 12:50	06/17/16 20:55	1
Chloride	**22**		2.1	0.21	mg/Kg	☼	06/17/16 12:50	06/17/16 20:55	1
Phosphate	0.58	U	5.1	0.58	mg/Kg	☼	06/17/16 12:50	06/17/16 20:55	1

Client Sample ID: B35NB2 — **Lab Sample ID: 160-17658-2**
Date Collected: 06/01/16 13:10 — **Matrix: Soil**
Date Received: 06/03/16 09:20 — **Percent Solids: 97.1**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**0.33**	**B**	1.0	0.15	mg/Kg	☼	06/17/16 12:50	06/17/16 21:37	1
Nitrite	0.057	U N	0.21	0.057	mg/Kg	☼	06/17/16 12:50	06/17/16 21:37	1
Sulfate	**44**		5.1	0.51	mg/Kg	☼	06/17/16 12:50	06/17/16 21:37	1
Chloride	**3.8**		2.1	0.21	mg/Kg	☼	06/17/16 12:50	06/17/16 21:37	1
Phosphate	0.58	U	5.1	0.58	mg/Kg	☼	06/17/16 12:50	06/17/16 21:37	1

Client Sample ID: B35NB0 — **Lab Sample ID: 160-17658-3**
Date Collected: 06/01/16 11:30 — **Matrix: Soil**
Date Received: 06/03/16 09:20 — **Percent Solids: 97.5**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**0.19**	**B**	1.0	0.15	mg/Kg	☼	06/17/16 12:50	06/17/16 22:46	1
Nitrite	0.056	U N	0.20	0.056	mg/Kg	☼	06/17/16 12:50	06/17/16 22:46	1
Sulfate	**27**		5.1	0.51	mg/Kg	☼	06/17/16 12:50	06/17/16 22:46	1
Chloride	**0.80**	**B**	2.0	0.20	mg/Kg	☼	06/17/16 12:50	06/17/16 22:46	1
Phosphate	0.58	U	5.1	0.58	mg/Kg	☼	06/17/16 12:50	06/17/16 22:46	1

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-020

TestAmerica Job ID: 160-17658-1
SDG: SL2211

Method: 300.0 - Anions, Ion Chromatography - DL

Client Sample ID: B35NB2 — **Lab Sample ID: 160-17658-2**
Date Collected: 06/01/16 13:10 — **Matrix: Soil**
Date Received: 06/03/16 09:20 — **Percent Solids: 97.1**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate	84	D	4.1	1.1	mg/Kg	☼	06/17/16 12:50	06/17/16 21:51	20

Client Sample ID: B35NB0 — **Lab Sample ID: 160-17658-3**
Date Collected: 06/01/16 11:30 — **Matrix: Soil**
Date Received: 06/03/16 09:20 — **Percent Solids: 97.5**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate	12	D	4.1	1.1	mg/Kg	☼	06/17/16 12:50	06/17/16 23:00	20

Method: 6010C - Metals (ICP)

Client Sample ID: B35N98 — **Lab Sample ID: 160-17658-1**
Date Collected: 05/26/16 16:15 — **Matrix: Soil**
Date Received: 06/03/16 09:20 — **Percent Solids: 97.2**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	8500	D	492	148	mg/Kg	☼	06/22/16 12:48	06/28/16 12:56	2
Iron	13200	D	19.7	4.9	mg/Kg	☼	06/22/16 12:48	06/28/16 12:56	2
Magnesium	3910	D N	197	49.2	mg/Kg	☼	06/22/16 12:48	06/28/16 12:56	2
Potassium	971	B D	984	295	mg/Kg	☼	06/22/16 12:48	06/28/16 12:56	2
Sodium	289	D	197	49.2	mg/Kg	☼	06/22/16 12:48	06/28/16 12:56	2

Client Sample ID: B35NB2 — **Lab Sample ID: 160-17658-2**
Date Collected: 06/01/16 13:10 — **Matrix: Soil**
Date Received: 06/03/16 09:20 — **Percent Solids: 97.1**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	5560	D	494	148	mg/Kg	☼	06/22/16 12:48	06/28/16 13:27	2
Iron	14200	D	19.8	4.9	mg/Kg	☼	06/22/16 12:48	06/28/16 13:27	2
Magnesium	3810	N D	198	49.4	mg/Kg	☼	06/22/16 12:48	06/28/16 13:27	2
Potassium	1030	D	989	297	mg/Kg	☼	06/22/16 12:48	06/28/16 13:27	2
Sodium	344	D	198	49.4	mg/Kg	☼	06/22/16 12:48	06/28/16 13:27	2

Client Sample ID: B35NB0 — **Lab Sample ID: 160-17658-3**
Date Collected: 06/01/16 11:30 — **Matrix: Soil**
Date Received: 06/03/16 09:20 — **Percent Solids: 97.5**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	7640	D	491	147	mg/Kg	☼	06/22/16 12:48	06/28/16 13:31	2
Iron	13300	D	19.6	4.9	mg/Kg	☼	06/22/16 12:48	06/28/16 13:31	2
Magnesium	3850	N D	196	49.1	mg/Kg	☼	06/22/16 12:48	06/28/16 13:31	2
Potassium	904	B D	981	294	mg/Kg	☼	06/22/16 12:48	06/28/16 13:31	2
Sodium	220	D	196	49.1	mg/Kg	☼	06/22/16 12:48	06/28/16 13:31	2

Method: 6020A - Metals (ICP/MS)

Client Sample ID: B35N98 — **Lab Sample ID: 160-17658-1**
Date Collected: 05/26/16 16:15 — **Matrix: Soil**
Date Received: 06/03/16 09:20 — **Percent Solids: 97.2**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	6250	D	24.6	8.2	mg/Kg	☼	06/22/16 10:00	06/28/16 17:35	10
Antimony	0.30	U	2.3	0.30	mg/Kg	☼	06/27/16 11:30	06/28/16 18:21	10
Arsenic	2.3	B D	4.9	1.3	mg/Kg	☼	06/22/16 10:00	06/28/16 17:35	10
Barium	61.4	D	9.8	0.46	mg/Kg	☼	06/22/16 10:00	06/28/16 17:35	10
Cadmium	0.079	U	0.25	0.079	mg/Kg	☼	06/22/16 10:00	06/28/16 17:35	10

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-020

TestAmerica Job ID: 160-17658-1
SDG: SL2211

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

Client Sample ID: B35N98 — **Lab Sample ID: 160-17658-1**
Date Collected: 05/26/16 16:15 — **Matrix: Soil**
Date Received: 06/03/16 09:20 — **Percent Solids: 97.2**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	9.3	D	4.9	2.2	mg/Kg	☼	06/22/16 10:00	06/28/16 17:35	10
Copper	10.7	D	4.9	0.50	mg/Kg	☼	06/22/16 10:00	06/28/16 17:35	10
Lead	2.9	D	1.5	0.49	mg/Kg	☼	06/22/16 10:00	06/28/16 17:35	10
Manganese	245	D N	2.5	0.38	mg/Kg	☼	06/22/16 10:00	06/28/16 17:35	10
Nickel	10.6	D	2.5	0.53	mg/Kg	☼	06/22/16 10:00	06/28/16 17:35	10
Selenium	1.4	B D	2.5	0.78	mg/Kg	☼	06/22/16 10:00	06/28/16 17:35	10
Silver	0.14	B D	0.98	0.12	mg/Kg	☼	06/22/16 10:00	06/28/16 17:35	10
Uranium	0.46	B D	0.49	0.098	mg/Kg	☼	06/22/16 10:00	06/28/16 17:35	10

Client Sample ID: B35NB2 — **Lab Sample ID: 160-17658-2**
Date Collected: 06/01/16 13:10 — **Matrix: Soil**
Date Received: 06/03/16 09:20 — **Percent Solids: 97.1**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	8850	D	24.7	8.3	mg/Kg	☼	06/22/16 10:00	06/28/16 18:22	10
Antimony	0.30	U	2.3	0.30	mg/Kg	☼	06/27/16 11:30	06/28/16 18:39	10
Arsenic	3.4	B D	4.9	1.3	mg/Kg	☼	06/22/16 10:00	06/28/16 18:22	10
Barium	127	D	9.9	0.46	mg/Kg	☼	06/22/16 10:00	06/28/16 18:22	10
Cadmium	0.085	B D	0.25	0.079	mg/Kg	☼	06/22/16 10:00	06/28/16 18:22	10
Chromium	12.7	D	4.9	2.2	mg/Kg	☼	06/22/16 10:00	06/28/16 18:22	10
Copper	18.5	D	4.9	0.50	mg/Kg	☼	06/22/16 10:00	06/28/16 18:22	10
Lead	4.6	D	1.5	0.49	mg/Kg	☼	06/22/16 10:00	06/28/16 18:22	10
Manganese	440	D N	2.5	0.38	mg/Kg	☼	06/22/16 10:00	06/28/16 18:22	10
Nickel	13.9	D	2.5	0.53	mg/Kg	☼	06/22/16 10:00	06/28/16 18:22	10
Selenium	1.9	B D	2.5	0.78	mg/Kg	☼	06/22/16 10:00	06/28/16 18:22	10
Silver	0.15	B D	0.99	0.12	mg/Kg	☼	06/22/16 10:00	06/28/16 18:22	10
Uranium	0.65	D	0.49	0.098	mg/Kg	☼	06/22/16 10:00	06/28/16 18:22	10

Client Sample ID: B35NB0 — **Lab Sample ID: 160-17658-3**
Date Collected: 06/01/16 11:30 — **Matrix: Soil**
Date Received: 06/03/16 09:20 — **Percent Solids: 97.5**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	7000	D	24.5	8.2	mg/Kg	☼	06/22/16 10:00	06/28/16 18:29	10
Antimony	0.32	U	2.4	0.32	mg/Kg	☼	06/27/16 11:30	06/28/16 18:57	10
Arsenic	3.2	B D	4.9	1.3	mg/Kg	☼	06/22/16 10:00	06/28/16 18:29	10
Barium	83.6	D	9.8	0.46	mg/Kg	☼	06/22/16 10:00	06/28/16 18:29	10
Cadmium	0.080	B D	0.25	0.079	mg/Kg	☼	06/22/16 10:00	06/28/16 18:29	10
Chromium	16.2	D	4.9	2.2	mg/Kg	☼	06/22/16 10:00	06/28/16 18:29	10
Copper	12.9	D	4.9	0.50	mg/Kg	☼	06/22/16 10:00	06/28/16 18:29	10
Lead	3.7	D	1.5	0.49	mg/Kg	☼	06/22/16 10:00	06/28/16 18:29	10
Manganese	488	D N	2.5	0.38	mg/Kg	☼	06/22/16 10:00	06/28/16 18:29	10
Nickel	16.5	D	2.5	0.53	mg/Kg	☼	06/22/16 10:00	06/28/16 18:29	10
Selenium	1.5	B D	2.5	0.78	mg/Kg	☼	06/22/16 10:00	06/28/16 18:29	10
Silver	0.12	U	0.98	0.12	mg/Kg	☼	06/22/16 10:00	06/28/16 18:29	10
Uranium	0.47	B D	0.49	0.098	mg/Kg	☼	06/22/16 10:00	06/28/16 18:29	10

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-020

TestAmerica Job ID: 160-17658-1
SDG: SL2211

Method: 7471B - Mercury (CVAA)

Client Sample ID: B35N98 — **Lab Sample ID: 160-17658-1**
Date Collected: 05/26/16 16:15 — **Matrix: Soil**
Date Received: 06/03/16 09:20 — **Percent Solids: 97.2**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.017**	**B**	0.030	0.010	mg/Kg	☼	06/15/16 10:38	06/15/16 20:49	1

Client Sample ID: B35NB2 — **Lab Sample ID: 160-17658-2**
Date Collected: 06/01/16 13:10 — **Matrix: Soil**
Date Received: 06/03/16 09:20 — **Percent Solids: 97.1**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.011**	**B**	0.033	0.011	mg/Kg	☼	06/20/16 11:37	06/23/16 07:16	1

Client Sample ID: B35NB0 — **Lab Sample ID: 160-17658-3**
Date Collected: 06/01/16 11:30 — **Matrix: Soil**
Date Received: 06/03/16 09:20 — **Percent Solids: 97.5**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.011	U	0.032	0.011	mg/Kg	☼	06/20/16 11:37	06/23/16 07:24	1

General Chemistry

Client Sample ID: B35N98 — **Lab Sample ID: 160-17658-1**
Date Collected: 05/26/16 16:15 — **Matrix: Soil**
Date Received: 06/03/16 09:20 — **Percent Solids: 97.2**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.38**	**B N**	0.51	0.23	mg/Kg	☼	06/06/16 18:45	06/07/16 19:56	1
Cyanide, Total	0.11	U	0.51	0.11	mg/Kg	☼	06/08/16 16:30	06/08/16 20:33	1

Client Sample ID: B35NB2 — **Lab Sample ID: 160-17658-2**
Date Collected: 06/01/16 13:10 — **Matrix: Soil**
Date Received: 06/03/16 09:20 — **Percent Solids: 97.1**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**1.3**	**N**	0.51	0.23	mg/Kg	☼	06/06/16 18:45	06/07/16 20:03	1
Cyanide, Total	**0.18**	**B**	0.52	0.12	mg/Kg	☼	06/08/16 16:30	06/08/16 20:36	1

Client Sample ID: B35NB0 — **Lab Sample ID: 160-17658-3**
Date Collected: 06/01/16 11:30 — **Matrix: Soil**
Date Received: 06/03/16 09:20 — **Percent Solids: 97.5**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.36**	**B N**	0.51	0.23	mg/Kg	☼	06/06/16 18:45	06/07/16 20:05	1
Cyanide, Total	0.11	U	0.51	0.11	mg/Kg	☼	06/08/16 16:30	06/08/16 20:40	1

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-020

TestAmerica Job ID: 160-17658-1
SDG: SL2211

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 160-255257/1-A
Matrix: Solid
Analysis Batch: 258151

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 255257

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	33	U	330	33	ug/Kg		06/07/16 16:16	06/27/16 14:32	1
Tributyl phosphate	46	U	330	46	ug/Kg		06/07/16 16:16	06/27/16 14:32	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*46*		*47 - 125*	*06/07/16 16:16*	*06/27/16 14:32*	*1*
2-Fluorobiphenyl (Surr)	*79*		*59 - 110*	*06/07/16 16:16*	*06/27/16 14:32*	*1*
2-Fluorophenol (Surr)	*81*		*54 - 102*	*06/07/16 16:16*	*06/27/16 14:32*	*1*
Nitrobenzene-d5 (Surr)	*83*		*44 - 120*	*06/07/16 16:16*	*06/27/16 14:32*	*1*
Phenol-d5 (Surr)	*82*		*51 - 104*	*06/07/16 16:16*	*06/27/16 14:32*	*1*
Terphenyl-d14 (Surr)	*79*		*59 - 98*	*06/07/16 16:16*	*06/27/16 14:32*	*1*

Lab Sample ID: LCS 160-255257/2-A
Matrix: Solid
Analysis Batch: 258151

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 255257

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Phenol			3330	2580		ug/Kg		77	50 - 96		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*77*		*47 - 125*
2-Fluorobiphenyl (Surr)	*74*		*59 - 110*
2-Fluorophenol (Surr)	*80*		*54 - 102*
Nitrobenzene-d5 (Surr)	*79*		*44 - 120*
Phenol-d5 (Surr)	*80*		*51 - 104*
Terphenyl-d14 (Surr)	*76*		*59 - 98*

Lab Sample ID: 160-17581-A-1-B MS
Matrix: Solid
Analysis Batch: 258151

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 255257

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Phenol	34	U	3400	2310		ug/Kg	☼	68	41 - 100		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*68*		*47 - 125*
2-Fluorobiphenyl (Surr)	*66*		*59 - 110*
2-Fluorophenol (Surr)	*71*		*54 - 102*
Nitrobenzene-d5 (Surr)	*71*		*44 - 120*
Phenol-d5 (Surr)	*72*		*51 - 104*
Terphenyl-d14 (Surr)	*75*		*59 - 98*

Lab Sample ID: 160-17581-A-1-C MSD
Matrix: Solid
Analysis Batch: 258151

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 255257

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Phenol	34	U	3410	2410		ug/Kg	☼	71	41 - 100	4	30

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-020

TestAmerica Job ID: 160-17658-1
SDG: SL2211

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 160-17581-A-1-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 258151 — **Prep Batch: 255257**

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*72*		*47 - 125*
2-Fluorobiphenyl (Surr)	*67*		*59 - 110*
2-Fluorophenol (Surr)	*72*		*54 - 102*
Nitrobenzene-d5 (Surr)	*72*		*44 - 120*
Phenol-d5 (Surr)	*73*		*51 - 104*
Terphenyl-d14 (Surr)	*70*		*59 - 98*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 160-255262/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 257937 — **Prep Batch: 255262**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Kerosene (C9-C16)	0.33	U	25	0.33	mg/Kg		06/07/16 16:36	06/24/16 18:19	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*84*		*49 - 133*	*06/07/16 16:36*	*06/24/16 18:19*	*1*

Lab Sample ID: LCS 160-255262/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 257937 — **Prep Batch: 255262**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]	83.3	65.4		mg/Kg		78	57 - 105

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*85*		*49 - 133*

Lab Sample ID: 160-17581-A-2-C MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 257937 — **Prep Batch: 255262**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]	0.34	U	84.8	65.6		mg/Kg	☼	77	34 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
o-Terphenyl	*83*		*49 - 133*

Lab Sample ID: 160-17581-A-2-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 257937 — **Prep Batch: 255262**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	0.34	U	85.2	64.2		mg/Kg	☼	75	34 - 150	2	30

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-020

TestAmerica Job ID: 160-17658-1
SDG: SL2211

Surrogate	MSD %Recovery	MSD Qualifier	Limits
o-Terphenyl	83		49 - 133

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 160-255886/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 256898 — **Prep Batch: 255886**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.14	U	1.0	0.14	mg/Kg		06/17/16 12:50	06/17/16 15:21	1
Nitrate	0.055	U	0.20	0.055	mg/Kg		06/17/16 12:50	06/17/16 15:21	1
Nitrite	0.055	U	0.20	0.055	mg/Kg		06/17/16 12:50	06/17/16 15:21	1
Sulfate	0.50	U	5.0	0.50	mg/Kg		06/17/16 12:50	06/17/16 15:21	1
Chloride	0.20	U	2.0	0.20	mg/Kg		06/17/16 12:50	06/17/16 15:21	1
Phosphate	0.56	U	5.0	0.56	mg/Kg		06/17/16 12:50	06/17/16 15:21	1

Lab Sample ID: LCS 160-255886/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 256898 — **Prep Batch: 255886**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	9.98	9.88		mg/Kg		99	90 - 110
Nitrate	3.99	3.95		mg/Kg		99	90 - 110
Nitrite	1.60	1.56		mg/Kg		98	90 - 110
Sulfate	79.8	76.2		mg/Kg		95	90 - 110
Chloride	20.0	19.1		mg/Kg		96	90 - 110
Phosphate	79.8	76.7		mg/Kg		96	90 - 110

Lab Sample ID: 160-17581-B-1-C MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 256898 — **Prep Batch: 255886**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.21	B M	20.5	20.7		mg/Kg	☼	100	90 - 110
Nitrate	4.2		4.10	8.15		mg/Kg	☼	96	90 - 110
Nitrite	0.056	U N	1.02	0.744	N	mg/Kg	☼	73	90 - 110
Sulfate	5.5		41.0	44.0		mg/Kg	☼	94	90 - 110
Chloride	3.8	M	20.5	23.4		mg/Kg	☼	96	90 - 110
Phosphate	0.58	U	41.0	39.5		mg/Kg	☼	97	90 - 110

Lab Sample ID: 160-17581-B-1-B DU — **Client Sample ID: Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 256898 — **Prep Batch: 255886**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	0.21	B M	0.153	B M	mg/Kg	☼	29	20
Nitrate	4.2		4.37		mg/Kg	☼	4	20
Nitrite	0.056	U N	0.056	U	mg/Kg	☼	NC	20
Sulfate	5.5		5.81		mg/Kg	☼	6	20
Chloride	3.8	M	5.31	M	mg/Kg	☼	34	20
Phosphate	0.58	U	0.58	U	mg/Kg	☼	NC	20

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-020

TestAmerica Job ID: 160-17658-1
SDG: SL2211

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 160-257311/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 258532 — **Prep Batch: 257311**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	67.3	U	224	67.3	mg/Kg		06/22/16 12:48	06/28/16 12:43	1
Iron	2.2	U	9.0	2.2	mg/Kg		06/22/16 12:48	06/28/16 12:43	1
Magnesium	22.4	U	89.8	22.4	mg/Kg		06/22/16 12:48	06/28/16 12:43	1
Potassium	135	U	449	135	mg/Kg		06/22/16 12:48	06/28/16 12:43	1
Sodium	22.4	U	89.8	22.4	mg/Kg		06/22/16 12:48	06/28/16 12:43	1

Lab Sample ID: LCSSRM 160-257311/3-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 258532 — **Prep Batch: 257311**

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	5630	5235	D	mg/Kg		93.0	73.4 - 126.5
Iron	14600	10680	D	mg/Kg		73.2	36.3 - 164.4
Magnesium	2960	2534	D	mg/Kg		85.6	65.9 - 134.5
Potassium	2910	2491	D	mg/Kg		85.6	62.5 - 137.8
Sodium	545	493.0	D	mg/Kg		90.5	52.3 - 147.5

Lab Sample ID: 160-17658-1 MS — **Client Sample ID: B35N98**
Matrix: Soil — **Prep Type: Total/NA**
Analysis Batch: 258532 — **Prep Batch: 257311**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	8500	D	987	6671	D	mg/Kg	☼	-185	75 - 125
Iron	13200	D	987	15690	D	mg/Kg	☼	252	75 - 125
Magnesium	3910	D N	987	4630	D N	mg/Kg	☼	73	75 - 125
Potassium	971	B D	987	1778	D	mg/Kg	☼	82	75 - 125
Sodium	289	D	987	1264	D	mg/Kg	☼	99	75 - 125

Lab Sample ID: 160-17658-1 MSD — **Client Sample ID: B35N98**
Matrix: Soil — **Prep Type: Total/NA**
Analysis Batch: 258532 — **Prep Batch: 257311**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Calcium	8500	D	1010	6520	D	mg/Kg	☼	-196	75 - 125	2	30
Iron	13200	D	1010	14670	D	mg/Kg	☼	146	75 - 125	7	30
Magnesium	3910	D N	1010	4392	D N	mg/Kg	☼	48	75 - 125	5	30
Potassium	971	B D	1010	1841	D	mg/Kg	☼	86	75 - 125	3	30
Sodium	289	D	1010	1284	D	mg/Kg	☼	99	75 - 125	2	30

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-020

TestAmerica Job ID: 160-17658-1
SDG: SL2211

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 160-257308/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 258424 — **Prep Batch: 257308**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.057	U	0.44	0.057	mg/Kg		06/27/16 11:30	06/28/16 18:12	2

Lab Sample ID: LCSSRM 160-257308/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 258424 — **Prep Batch: 257308**

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	107	205.1		mg/Kg		191.7	21.8 - 255.1

Lab Sample ID: 160-17658-1 MS — **Client Sample ID: B35N98**
Matrix: Soil — **Prep Type: Total/NA**
Analysis Batch: 258424 — **Prep Batch: 257308**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.30	U	50.6	48.22	D	mg/Kg	☼	95	75 - 125

Lab Sample ID: 160-17658-1 MSD — **Client Sample ID: B35N98**
Matrix: Soil — **Prep Type: Total/NA**
Analysis Batch: 258424 — **Prep Batch: 257308**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	0.30	U	44.8	42.19	D	mg/Kg	☼	94	75 - 125	13	30

Lab Sample ID: MB 160-257310/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 258529 — **Prep Batch: 257310**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	1.5	U	4.5	1.5	mg/Kg		06/22/16 10:00	06/28/16 17:15	2
Arsenic	0.23	U	0.90	0.23	mg/Kg		06/22/16 10:00	06/28/16 17:15	2
Barium	0.084	U	1.8	0.084	mg/Kg		06/22/16 10:00	06/28/16 17:15	2
Cadmium	0.014	U	0.045	0.014	mg/Kg		06/22/16 10:00	06/28/16 17:15	2
Chromium	0.40	U	0.90	0.40	mg/Kg		06/22/16 10:00	06/28/16 17:15	2
Copper	0.091	U	0.90	0.091	mg/Kg		06/22/16 10:00	06/28/16 17:15	2
Lead	0.090	U	0.27	0.090	mg/Kg		06/22/16 10:00	06/28/16 17:15	2
Manganese	0.069	U	0.45	0.069	mg/Kg		06/22/16 10:00	06/28/16 17:15	2
Nickel	0.096	U	0.45	0.096	mg/Kg		06/22/16 10:00	06/28/16 17:15	2
Selenium	0.14	U	0.45	0.14	mg/Kg		06/22/16 10:00	06/28/16 17:15	2
Silver	0.022	U	0.18	0.022	mg/Kg		06/22/16 10:00	06/28/16 17:15	2
Uranium	0.018	U	0.090	0.018	mg/Kg		06/22/16 10:00	06/28/16 17:15	2

Lab Sample ID: LCS 160-257310/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 258529 — **Prep Batch: 257310**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Uranium	92.8	87.49		mg/Kg		94	80 - 120

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-020

TestAmerica Job ID: 160-17658-1
SDG: SL2211

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

Lab Sample ID: LCSSRM 160-257310/3-A
Matrix: Solid
Analysis Batch: 258529

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 257310

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	7580	6427		mg/Kg		84.8	37.7 - 162.3
Arsenic	114	121.3		mg/Kg		106.4	70.0 - 141.2
Barium	181	196.2		mg/Kg		108.4	72.9 - 127.1
Cadmium	93.2	97.37		mg/Kg		104.5	73.3 - 126.6
Chromium	109	106.7		mg/Kg		97.9	69.5 - 130.3
Copper	122	129.8		mg/Kg		106.4	74.7 - 124.6
Lead	102	104.8		mg/Kg		102.8	70.8 - 128.4
Manganese	407	449.4		mg/Kg		110.4	76.2 - 123.8
Nickel	79.7	85.96		mg/Kg		107.9	71.5 - 128.0
Selenium	186	203.5		mg/Kg		109.4	68.3 - 131.7
Silver	41.8	44.23		mg/Kg		105.8	66.3 - 134.0

Lab Sample ID: 160-17658-1 MS
Matrix: Soil
Analysis Batch: 258529

Client Sample ID: B35N98
Prep Type: Total/NA
Prep Batch: 257310

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	6250	D	987	8040	D	mg/Kg	☼	181	75 - 125
Arsenic	2.3	B D	98.7	103.4	D	mg/Kg	☼	102	75 - 125
Barium	61.4	D	98.7	181.5	D	mg/Kg	☼	122	75 - 125
Cadmium	0.079	U	98.7	99.93	D	mg/Kg	☼	101	75 - 125
Chromium	9.3	D	98.7	106.5	D	mg/Kg	☼	98	75 - 125
Copper	10.7	D	98.7	115.9	D	mg/Kg	☼	107	75 - 125
Lead	2.9	D	98.7	102.5	D	mg/Kg	☼	101	75 - 125
Manganese	245	D N	98.7	377.8	D N	mg/Kg	☼	135	75 - 125
Nickel	10.6	D	98.7	110.2	D	mg/Kg	☼	101	75 - 125
Selenium	1.4	B D	49.4	48.76	D	mg/Kg	☼	96	75 - 125
Silver	0.14	B D	19.7	20.13	D	mg/Kg	☼	101	75 - 125
Uranium	0.46	B D	98.7	95.22	D	mg/Kg	☼	96	75 - 125

Lab Sample ID: 160-17658-1 MSD
Matrix: Soil
Analysis Batch: 258529

Client Sample ID: B35N98
Prep Type: Total/NA
Prep Batch: 257310

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	6250	D	1010	8045	D	mg/Kg	☼	178	75 - 125	0	30
Arsenic	2.3	B D	101	105.4	D	mg/Kg	☼	102	75 - 125	2	30
Barium	61.4	D	101	173.8	D	mg/Kg	☼	112	75 - 125	4	30
Cadmium	0.079	U	101	102.5	D	mg/Kg	☼	102	75 - 125	3	30
Chromium	9.3	D	101	106.4	D	mg/Kg	☼	96	75 - 125	0	30

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-020

TestAmerica Job ID: 160-17658-1
SDG: SL2211

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

Lab Sample ID: 160-17658-1 MSD — **Client Sample ID: B35N98**
Matrix: Soil — **Prep Type: Total/NA**
Analysis Batch: 258529 — **Prep Batch: 257310**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Copper	10.7	D	101	117.8	D	mg/Kg	☼	106	75 - 125	2	30
Lead	2.9	D	101	105.7	D	mg/Kg	☼	102	75 - 125	3	30
Manganese	245	D N	101	395.2	D N	mg/Kg	☼	150	75 - 125	4	30
Nickel	10.6	D	101	111.9	D	mg/Kg	☼	101	75 - 125	1	30
Selenium	1.4	B D	50.3	50.49	D	mg/Kg	☼	97	75 - 125	3	30
Silver	0.14	B D	20.1	20.69	D	mg/Kg	☼	102	75 - 125	3	30
Uranium	0.46	B D	101	97.77	D	mg/Kg	☼	97	75 - 125	3	30

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 160-256489/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 256795 — **Prep Batch: 256489**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.010	U	0.031	0.010	mg/Kg		06/15/16 10:38	06/15/16 20:25	1

Lab Sample ID: LCSSRM 160-256489/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 256795 — **Prep Batch: 256489**

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	9.36	7.07		mg/Kg		75.5	51.3 - 148.5

Lab Sample ID: 160-17581-B-1-E MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 256795 — **Prep Batch: 256489**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.025	B	0.837	0.827		mg/Kg	☼	96	80 - 120

Lab Sample ID: 160-17581-B-1-F MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 256795 — **Prep Batch: 256489**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.025	B	0.830	0.783		mg/Kg	☼	91	80 - 120	6	30

Lab Sample ID: MB 160-257103/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 257702 — **Prep Batch: 257103**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0099	U	0.030	0.0099	mg/Kg		06/20/16 11:37	06/23/16 07:12	1

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-020

TestAmerica Job ID: 160-17658-1
SDG: SL2211

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

Lab Sample ID: LCSSRM 160-257103/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 257702 — **Prep Batch: 257103**

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	9.36	8.31		mg/Kg		88.8	51.3 - 148.5

Lab Sample ID: 160-17658-2 MS — **Client Sample ID: B35NB2**
Matrix: Soil — **Prep Type: Total/NA**
Analysis Batch: 257702 — **Prep Batch: 257103**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.011	B	0.789	0.849		mg/Kg	☼	106	80 - 120

Lab Sample ID: 160-17658-2 MSD — **Client Sample ID: B35NB2**
Matrix: Soil — **Prep Type: Total/NA**
Analysis Batch: 257702 — **Prep Batch: 257103**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.011	B	0.805	0.881		mg/Kg	☼	108	80 - 120	4	30

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 160-254531/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 255460 — **Prep Batch: 254531**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	0.22	U	0.50	0.22	mg/Kg		06/06/16 18:45	06/07/16 19:34	1

Lab Sample ID: LCS 160-254531/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 255460 — **Prep Batch: 254531**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	5.00	4.89		mg/Kg		98	90 - 110

Lab Sample ID: 160-17361-D-5-H MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 255460 — **Prep Batch: 254531**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	0.57	N	5.20	6.66	N	mg/Kg	☼	117	90 - 110

Lab Sample ID: 160-17361-D-5-G DU — **Client Sample ID: Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 255460 — **Prep Batch: 254531**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Ammonia (as N)	0.57	N	0.523		mg/Kg	☼	8	30

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-020

TestAmerica Job ID: 160-17658-1
SDG: SL2211

Method: 9012B - Cyanide, Total andor Amenable

Lab Sample ID: MB 160-255476/27-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 255842 — **Prep Batch: 255476**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.11	U	0.50	0.11	mg/Kg		06/08/16 16:30	06/08/16 19:28	1

Lab Sample ID: HLCS 160-255476/29-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 255842 — **Prep Batch: 255476**

Analyte	Spike Added	HLCS Result	HLCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	4.80	4.57		mg/Kg		95	85 - 115

Lab Sample ID: LCS 160-255476/28-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 255842 — **Prep Batch: 255476**

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: 160-17581-A-1-G MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 255842 — **Prep Batch: 255476**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.11	U	2.45	2.33		mg/Kg	☼	95	60 - 130

Lab Sample ID: 160-17581-A-1-F DU — **Client Sample ID: Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 255842 — **Prep Batch: 255476**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Cyanide, Total	0.11	U	0.11	U	mg/Kg	☼	NC	30

QC Association Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-020

TestAmerica Job ID: 160-17658-1
SDG: SL2211

GC/MS Semi VOA

Prep Batch: 255257

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-17581-A-1-B MS	Matrix Spike	Total/NA	Solid	3550C	
160-17581-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	3550C	
160-17658-1	B35N98	Total/NA	Soil	3550C	
160-17658-2	B35NB2	Total/NA	Soil	3550C	
160-17658-3	B35NB0	Total/NA	Soil	3550C	
LCS 160-255257/2-A	Lab Control Sample	Total/NA	Solid	3550C	
MB 160-255257/1-A	Method Blank	Total/NA	Solid	3550C	

Analysis Batch: 258151

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-17581-A-1-B MS	Matrix Spike	Total/NA	Solid	8270D	255257
160-17581-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8270D	255257
160-17658-1	B35N98	Total/NA	Soil	8270D	255257
160-17658-2	B35NB2	Total/NA	Soil	8270D	255257
160-17658-3	B35NB0	Total/NA	Soil	8270D	255257
LCS 160-255257/2-A	Lab Control Sample	Total/NA	Solid	8270D	255257
MB 160-255257/1-A	Method Blank	Total/NA	Solid	8270D	255257

GC Semi VOA

Prep Batch: 255262

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-17581-A-2-C MS	Matrix Spike	Total/NA	Solid	3550C	
160-17581-A-2-D MSD	Matrix Spike Duplicate	Total/NA	Solid	3550C	
160-17658-1	B35N98	Total/NA	Soil	3550C	
160-17658-2	B35NB2	Total/NA	Soil	3550C	
160-17658-3	B35NB0	Total/NA	Soil	3550C	
LCS 160-255262/2-A	Lab Control Sample	Total/NA	Solid	3550C	
MB 160-255262/1-A	Method Blank	Total/NA	Solid	3550C	

Analysis Batch: 257937

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-17581-A-2-C MS	Matrix Spike	Total/NA	Solid	8015B	255262
160-17581-A-2-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B	255262
160-17658-1	B35N98	Total/NA	Soil	8015B	255262
160-17658-2	B35NB2	Total/NA	Soil	8015B	255262
160-17658-3	B35NB0	Total/NA	Soil	8015B	255262
LCS 160-255262/2-A	Lab Control Sample	Total/NA	Solid	8015B	255262
MB 160-255262/1-A	Method Blank	Total/NA	Solid	8015B	255262

HPLC/IC

Prep Batch: 255886

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-17581-B-1-B DU	Duplicate	Total/NA	Solid	DILeach_Prep	
160-17581-B-1-C MS	Matrix Spike	Total/NA	Solid	DILeach_Prep	
160-17658-1	B35N98	Total/NA	Soil	DILeach_Prep	
160-17658-2	B35NB2	Total/NA	Soil	DILeach_Prep	
160-17658-2 - DL	B35NB2	Total/NA	Soil	DILeach_Prep	
160-17658-3	B35NB0	Total/NA	Soil	DILeach_Prep	

QC Association Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-020

TestAmerica Job ID: 160-17658-1
SDG: SL2211

HPLC/IC (Continued)

Prep Batch: 255886 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-17658-3 - DL	B35NB0	Total/NA	Soil	DILeach_Prep	
LCS 160-255886/2-A	Lab Control Sample	Total/NA	Solid	DILeach_Prep	
MB 160-255886/1-A	Method Blank	Total/NA	Solid	DILeach_Prep	

Analysis Batch: 256898

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-17581-B-1-B DU	Duplicate	Total/NA	Solid	300.0	255886
160-17581-B-1-C MS	Matrix Spike	Total/NA	Solid	300.0	255886
160-17658-1	B35N98	Total/NA	Soil	300.0	255886
160-17658-2	B35NB2	Total/NA	Soil	300.0	255886
160-17658-3	B35NB0	Total/NA	Soil	300.0	255886
LCS 160-255886/2-A	Lab Control Sample	Total/NA	Solid	300.0	255886
MB 160-255886/1-A	Method Blank	Total/NA	Solid	300.0	255886

Analysis Batch: 256899

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-17581-B-1-B DU	Duplicate	Total/NA	Solid	300.0	255886
160-17581-B-1-C MS	Matrix Spike	Total/NA	Solid	300.0	255886
160-17658-1	B35N98	Total/NA	Soil	300.0	255886
160-17658-2	B35NB2	Total/NA	Soil	300.0	255886
160-17658-2 - DL	B35NB2	Total/NA	Soil	300.0	255886
160-17658-3	B35NB0	Total/NA	Soil	300.0	255886
160-17658-3 - DL	B35NB0	Total/NA	Soil	300.0	255886
LCS 160-255886/2-A	Lab Control Sample	Total/NA	Solid	300.0	255886
MB 160-255886/1-A	Method Blank	Total/NA	Solid	300.0	255886

Metals

Prep Batch: 256489

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-17581-B-1-E MS	Matrix Spike	Total/NA	Solid	7471B	
160-17581-B-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	7471B	
160-17658-1	B35N98	Total/NA	Soil	7471B	
LCSSRM 160-256489/2-A	Lab Control Sample	Total/NA	Solid	7471B	
MB 160-256489/1-A	Method Blank	Total/NA	Solid	7471B	

Analysis Batch: 256795

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-17581-B-1-E MS	Matrix Spike	Total/NA	Solid	7471B	256489
160-17581-B-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	7471B	256489
160-17658-1	B35N98	Total/NA	Soil	7471B	256489
LCSSRM 160-256489/2-A	Lab Control Sample	Total/NA	Solid	7471B	256489
MB 160-256489/1-A	Method Blank	Total/NA	Solid	7471B	256489

Prep Batch: 257103

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-17658-2	B35NB2	Total/NA	Soil	7471B	
160-17658-2 MS	B35NB2	Total/NA	Soil	7471B	
160-17658-2 MSD	B35NB2	Total/NA	Soil	7471B	
160-17658-3	B35NB0	Total/NA	Soil	7471B	

QC Association Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-020

TestAmerica Job ID: 160-17658-1
SDG: SL2211

Metals (Continued)

Prep Batch: 257103 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSSRM 160-257103/2-A	Lab Control Sample	Total/NA	Solid	7471B	
MB 160-257103/1-A	Method Blank	Total/NA	Solid	7471B	

Prep Batch: 257308

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-17658-1	B35N98	Total/NA	Soil	3050B	
160-17658-1 MS	B35N98	Total/NA	Soil	3050B	
160-17658-1 MSD	B35N98	Total/NA	Soil	3050B	
160-17658-2	B35NB2	Total/NA	Soil	3050B	
160-17658-3	B35NB0	Total/NA	Soil	3050B	
LCSSRM 160-257308/2-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 160-257308/1-A	Method Blank	Total/NA	Solid	3050B	

Prep Batch: 257310

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-17658-1	B35N98	Total/NA	Soil	3050B	
160-17658-1 MS	B35N98	Total/NA	Soil	3050B	
160-17658-1 MSD	B35N98	Total/NA	Soil	3050B	
160-17658-2	B35NB2	Total/NA	Soil	3050B	
160-17658-3	B35NB0	Total/NA	Soil	3050B	
LCS 160-257310/2-A	Lab Control Sample	Total/NA	Solid	3050B	
LCSSRM 160-257310/3-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 160-257310/1-A	Method Blank	Total/NA	Solid	3050B	

Prep Batch: 257311

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-17658-1	B35N98	Total/NA	Soil	3050B	
160-17658-1 MS	B35N98	Total/NA	Soil	3050B	
160-17658-1 MSD	B35N98	Total/NA	Soil	3050B	
160-17658-2	B35NB2	Total/NA	Soil	3050B	
160-17658-3	B35NB0	Total/NA	Soil	3050B	
LCSSRM 160-257311/3-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 160-257311/1-A	Method Blank	Total/NA	Solid	3050B	

Analysis Batch: 257702

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-17658-2	B35NB2	Total/NA	Soil	7471B	257103
160-17658-2 MS	B35NB2	Total/NA	Soil	7471B	257103
160-17658-2 MSD	B35NB2	Total/NA	Soil	7471B	257103
160-17658-3	B35NB0	Total/NA	Soil	7471B	257103
LCSSRM 160-257103/2-A	Lab Control Sample	Total/NA	Solid	7471B	257103
MB 160-257103/1-A	Method Blank	Total/NA	Solid	7471B	257103

Analysis Batch: 258424

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-17658-1	B35N98	Total/NA	Soil	6020A	257308
160-17658-1 MS	B35N98	Total/NA	Soil	6020A	257308
160-17658-1 MSD	B35N98	Total/NA	Soil	6020A	257308
160-17658-2	B35NB2	Total/NA	Soil	6020A	257308
160-17658-3	B35NB0	Total/NA	Soil	6020A	257308
LCSSRM 160-257308/2-A	Lab Control Sample	Total/NA	Solid	6020A	257308

QC Association Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-020

TestAmerica Job ID: 160-17658-1
SDG: SL2211

Metals (Continued)

Analysis Batch: 258424 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 160-257308/1-A	Method Blank	Total/NA	Solid	6020A	257308

Analysis Batch: 258529

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-17658-1	B35N98	Total/NA	Soil	6020A	257310
160-17658-1 MS	B35N98	Total/NA	Soil	6020A	257310
160-17658-1 MSD	B35N98	Total/NA	Soil	6020A	257310
160-17658-2	B35NB2	Total/NA	Soil	6020A	257310
160-17658-3	B35NB0	Total/NA	Soil	6020A	257310
LCS 160-257310/2-A	Lab Control Sample	Total/NA	Solid	6020A	257310
LCSSRM 160-257310/3-A	Lab Control Sample	Total/NA	Solid	6020A	257310
MB 160-257310/1-A	Method Blank	Total/NA	Solid	6020A	257310

Analysis Batch: 258532

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-17658-1	B35N98	Total/NA	Soil	6010C	257311
160-17658-1 MS	B35N98	Total/NA	Soil	6010C	257311
160-17658-1 MSD	B35N98	Total/NA	Soil	6010C	257311
160-17658-2	B35NB2	Total/NA	Soil	6010C	257311
160-17658-3	B35NB0	Total/NA	Soil	6010C	257311
LCSSRM 160-257311/3-A	Lab Control Sample	Total/NA	Solid	6010C	257311
MB 160-257311/1-A	Method Blank	Total/NA	Solid	6010C	257311

General Chemistry

Prep Batch: 254531

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-17361-D-5-G DU	Duplicate	Total/NA	Solid	DILeach_Prep	
160-17361-D-5-H MS	Matrix Spike	Total/NA	Solid	DILeach_Prep	
160-17658-1	B35N98	Total/NA	Soil	DILeach_Prep	
160-17658-2	B35NB2	Total/NA	Soil	DILeach_Prep	
160-17658-3	B35NB0	Total/NA	Soil	DILeach_Prep	
LCS 160-254531/2-A	Lab Control Sample	Total/NA	Solid	DILeach_Prep	
MB 160-254531/1-A	Method Blank	Total/NA	Solid	DILeach_Prep	

Analysis Batch: 254983

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-17658-1	B35N98	Total/NA	Soil	Moisture	
160-17658-2	B35NB2	Total/NA	Soil	Moisture	
160-17658-3	B35NB0	Total/NA	Soil	Moisture	
160-17673-C-1 DU	Duplicate	Total/NA	Solid	Moisture	

Analysis Batch: 255460

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-17361-D-5-G DU	Duplicate	Total/NA	Solid	350.1	254531
160-17361-D-5-H MS	Matrix Spike	Total/NA	Solid	350.1	254531
160-17658-1	B35N98	Total/NA	Soil	350.1	254531
160-17658-2	B35NB2	Total/NA	Soil	350.1	254531
160-17658-3	B35NB0	Total/NA	Soil	350.1	254531
LCS 160-254531/2-A	Lab Control Sample	Total/NA	Solid	350.1	254531

QC Association Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-020

TestAmerica Job ID: 160-17658-1
SDG: SL2211

General Chemistry (Continued)

Analysis Batch: 255460 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 160-254531/1-A	Method Blank	Total/NA	Solid	350.1	254531

Prep Batch: 255476

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-17581-A-1-F DU	Duplicate	Total/NA	Solid	9010C	
160-17581-A-1-G MS	Matrix Spike	Total/NA	Solid	9010C	
160-17658-1	B35N98	Total/NA	Soil	9010C	
160-17658-2	B35NB2	Total/NA	Soil	9010C	
160-17658-3	B35NB0	Total/NA	Soil	9010C	
HLCS 160-255476/29-A	Lab Control Sample	Total/NA	Solid	9010C	
LCS 160-255476/28-A	Lab Control Sample	Total/NA	Solid	9010C	
MB 160-255476/27-A	Method Blank	Total/NA	Solid	9010C	

Analysis Batch: 255842

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-17581-A-1-F DU	Duplicate	Total/NA	Solid	9012B	255476
160-17581-A-1-G MS	Matrix Spike	Total/NA	Solid	9012B	255476
160-17658-1	B35N98	Total/NA	Soil	9012B	255476
160-17658-2	B35NB2	Total/NA	Soil	9012B	255476
160-17658-3	B35NB0	Total/NA	Soil	9012B	255476
HLCS 160-255476/29-A	Lab Control Sample	Total/NA	Solid	9012B	255476
LCS 160-255476/28-A	Lab Control Sample	Total/NA	Solid	9012B	255476
MB 160-255476/27-A	Method Blank	Total/NA	Solid	9012B	255476

Surrogate Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-020

TestAmerica Job ID: 160-17658-1
SDG: SL2211

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

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

		Percent Surrogate Recovery (Acceptance Limits)					
		TBP	FBP	2FP	NBZ	PHL	TPH
Lab Sample ID	Client Sample ID	(47-125)	(59-110)	(54-102)	(44-120)	(51-104)	(59-98)
160-17658-1	B35N98	35	72	76	74	76	75
160-17658-2	B35NB2	32	53	52	50	55	58
160-17658-3	B35NB0	29	69	70	69	72	73

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPH = Terphenyl-d14 (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

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

		Percent Surrogate Recovery (Acceptance Limits)					
		TBP	FBP	2FP	NBZ	PHL	TPH
Lab Sample ID	Client Sample ID	(47-125)	(59-110)	(54-102)	(44-120)	(51-104)	(59-98)
160-17581-A-1-B MS	Matrix Spike	68	66	71	71	72	75
160-17581-A-1-C MSD	Matrix Spike Duplicate	72	67	72	72	73	70
LCS 160-255257/2-A	Lab Control Sample	77	74	80	79	80	76
MB 160-255257/1-A	Method Blank	46	79	81	83	82	79

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPH = Terphenyl-d14 (Surr)

Method: 8015B - Diesel Range Organics (DRO) (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)
		OTPH1
Lab Sample ID	Client Sample ID	(49-133)
160-17658-1	B35N98	79
160-17658-2	B35NB2	88
160-17658-3	B35NB0	87

Surrogate Legend

OTPH = o-Terphenyl

Surrogate Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-020

TestAmerica Job ID: 160-17658-1
SDG: SL2211

Method: 8015B - Diesel Range Organics (DRO) (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	**Client Sample ID**	**OTPH1 (49-133)**							
160-17581-A-2-C MS	Matrix Spike	83							
160-17581-A-2-D MSD	Matrix Spike Duplicate	83							
LCS 160-255262/2-A	Lab Control Sample	85							
MB 160-255262/1-A	Method Blank	84							

Surrogate Legend

OTPH = o-Terphenyl