

4/25/2016

TestAmerica

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

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

TestAmerica Job ID: 160-16744-1

TestAmerica Sample Delivery Group: SL2158
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:
4/25/2016 3:10:29 PM

Jayna Awalt, Project Manager II
(314)298-8566
jayna.awalt@testamericainc.com

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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.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

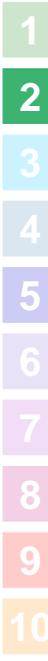


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Case Narrative

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

TestAmerica Job ID: 160-16744-1
SDG: SL2158

Job ID: 160-16744-1

Laboratory: TestAmerica St. Louis

Narrative

CASE NARRATIVE

CH2MHill Plateau Remediation Company
P.O. Box 1600
Richland, Washington 99352
April 25, 2016
Attention: Scot Fitzgerald

| | |
|-------------------|------------------|
| SDG | : SL2158 |
| Number of Samples | : 2 samples |
| Sample Matrix | : Soil |
| Data Deliverable | : Summary |
| Date SDG Closed | : March 31, 2016 |

II. Introduction

On March 31, 2 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.

Case Narrative

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

TestAmerica Job ID: 160-16744-1
SDG: SL2158

Job ID: 160-16744-1 (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.

Anions

Batch: 244998

The following samples in Anion batch 160-244998 were diluted to bring the concentrations of target analytes within the calibration range: B34T35 (160-16744-2). 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) recovered outside control limits for Nitrite (85%) in Anion batch 160-244998: (160-16744-C-1-C 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.

The following samples in Anion batch 160-244998 were analyzed with an initial calibration verification (ICV) that recovered above the upper control limit of 110% for Nitrite, at 111% recovery: B34T33 (160-16744-1) and B34T35 (160-16744-2). However, these samples all have Nitrite results below the reporting limit (RL), and thus were not significantly affected by the potential high bias for Nitrite found in the ICV.

The following samples in Anion batch 160-244998 are linked to a sample/sample duplicate that have an RPD of 23% for Nitrate: B34T33 (160-16744-1), B34T35 (160-16744-2) and (160-16744-C-1-B DU). 23% is acceptable RPD for soil samples, as the RPD limit is 30% for soils. However, method 300 was incorrectly set up to show a 20% RPD limit for soils in the LIMS. This RPD limit for soils is being corrected by the QA department.

ICPMS Metals

Case Narrative

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

TestAmerica Job ID: 160-16744-1
SDG: SL2158

Job ID: 160-16744-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)**Batch: 245043**

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: B34T33 (160-16744-1), B34T35 (160-16744-2), (160-16744-B-1-C MS), (160-16744-B-1-D MSD) and (160-16744-B-1-B 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 160-244407 and analytical batch 160-245043 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria. (160-16744-B-1-C MS) and (160-16744-B-1-D MSD)

Batch: 246904

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: B34T33 (160-16744-1), B34T35 (160-16744-2), (160-16694-A-1-B), (160-16694-A-1-C MS), (160-16694-A-1-D MSD) and (160-16694-A-1-B SD). Elevated reporting limits (RLs) are provided. 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:

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: 160-16744-1

SDG Number: SL2158

Login Number: 16744

List Source: TestAmerica St. Louis

List Number: 1

Creator: Clarke, Jill C

| Question | Answer | Comment |
|--|--------|---------|
| Radioactivity wasn't checked or is \leq 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 | 1.3° |
| 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 $<6\text{mm}$ (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

| | | | | | |
|---|--------|--|--------------------------------------|---------------------------------|---|
| CH2M Hill Plateau Remediation Company | | CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST | | F16-020-084 | PAGE 1 OF 1 |
| COLLECTOR SJM Sexton | SL2158 | COMPANY CONTACT TODAK, D | TELEPHONE NO. 376-6427 | PROJECT COORDINATOR TODAK, D | PRICE CODE 8H |
| SAMPLING LOCATION C9550, Core 27, B34103 | | PROJECT DESIGNATION 200-DV-1 Operable Unit Characterization of Waste Sites Phase 3 Sampling | | SAF NO. F16-020 | AIR QUALITY <input type="checkbox"/> |
| ICE CHEST NO. | N/A | FIELD LOGBOOK NO. | ACTUAL SAMPLE DEPTH 175.5 - 176.5 | COA 302914 | METHOD OF SHIPMENT FEDERAL EXPRESS |
| SHIPPED TO TestAmerica St. Louis | | OFFSITE PROPERTY NO. N/A | | BILL OF LADING/AIR BILL NO. | |

| MATRIX* | POSSIBLE SAMPLE HAZARDS/ REMARKS | PRESERVATION | COOL <=6C | NONE | COOL <=6C |
|---|--|---------------------|--------------------------------------|--------------------------------------|-----------------------|
| 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 | *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 | HOLDING TIME | 28 Days/48 Hours | 6 Months | 14 Days |
| | | TYPE OF CONTAINER | G/P | G/P | G/P |
| | | NO. OF CONTAINER(S) | 1 | 1 | 1 |
| | | VOLUME | 60mL | 60mL | 60mL |
| | | SAMPLE ANALYSIS | SEE ITEM (1) IN SPECIAL INSTRUCTIONS | SEE ITEM (2) IN SPECIAL INSTRUCTIONS | 9012_CYANIDE: COMMON; |

| SAMPLE NO. | MATRIX* | SAMPLE DATE | SAMPLE TIME |
|------------|---------|-------------|-------------|
| B34T33 | SOIL | 3/29/16 | 1314 |

| CHAIN OF POSSESSION | SIGN / PRINT NAMES | RECEIVED BY/STORER IN | DATE/TIME |
|--|--------------------|-----------------------|--------------|
| RELINQUISHED BY/REMOVED FROM SJM Sexton | | BOCK, TARL | 3-29-16 1625 |
| RELINQUISHED BY/REMOVED FROM BOCK, TARL | | JILL CLARKE | 3-29-16 0818 |
| RELINQUISHED BY/REMOVED FROM FEDEX | | | |
| RELINQUISHED BY/REMOVED FROM | | | |
| LABORATORY SECTION | RECEIVED BY | TITLE | DATE/TIME |
| FINAL SAMPLE DISPOSITION | DISPOSAL METHOD | | DATE/TIME |

SPECIAL INSTRUCTIONS
 Sample From HEIS #: B34103 Actual Aliquot Collection
 Depth: 175.5 - 176.5 ft
 (1) 300.0_ANIONS_IC: COMMON; 300.0_ANIONS_IC: COMMON (Add-on) {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};





FedEx® Tracking

775999164663

| | |
|------------------------------------|---|
| Ship date: Wed 3/30/2016 | Actual delivery: Thu 3/31/2016 8:45 am |
| RICHLAND, WA US | Delivered <i>Signed for by: J.CLARK</i> |
| | EARTH CITY, MO US |

Travel History

| Date/Time | Activity | Location |
|------------------------------|------------------------------------|----------------|
| 3/31/2016 - Thursday | | |
| 8:45 am | Delivered | EARTH CITY, MO |
| 8:01 am | On FedEx vehicle for delivery | EARTH CITY, MO |
| 7:55 am | At local FedEx facility | EARTH CITY, MO |
| 6:36 am | At destination sort facility | BERKELEY, MO |
| 5:51 am | Departed FedEx location | MEMPHIS, TN |
| 1:07 am | Arrived at FedEx location | MEMPHIS, TN |
| 3/30/2016 - Wednesday | | |
| 5:04 pm | Left FedEx origin facility | PASCO, WA |
| 3:42 pm | Shipment information sent to FedEx | |
| 3:20 pm | Picked up | PASCO, WA |

Shipment Facts

| | | | |
|------------------------|--------------------|---------------------------------|--|
| Tracking number | 775999164663 | Service | FedEx Priority Overnight |
| Weight | 73 lbs / 33.11 kgs | Delivered To | Shipping/Receiving |
| Total pieces | 1 | Total shipment weight | 73 lbs / 33.11 kgs |
| Terms | Recipient | Shipper reference | GWS-481 |
| Packaging | Your Packaging | Special handling section | Deliver Weekday, Additional Handling Surcharge |



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| | |
|------------------------------------|---|
| Ship date: Wed 3/30/2016 | Actual delivery: Thu 3/31/2016 8:45 am |
| RICHLAND, WA US | Delivered <i>Signed for by: J CLARK</i> |
| | EARTH CITY, MO US |

Travel History

| Date/Time | Activity | Location |
|-------------------------|------------------------------------|----------------|
| - 3/31/2016 - Thursday | | |
| 8:45 am | Delivered | EARTH CITY, MO |
| 7:36 am | On FedEx vehicle for delivery | EARTH CITY, MO |
| 7:30 am | At local FedEx facility | EARTH CITY, MO |
| 6:36 am | At destination sort facility | BERKELEY, MO |
| 5:51 am | Departed FedEx location | MEMPHIS, TN |
| 1:07 am | Arrived at FedEx location | MEMPHIS, TN |
| - 3/30/2016 - Wednesday | | |
| 5:04 pm | Left FedEx origin facility | PASCO, WA |
| 3:39 pm | Shipment information sent to FedEx | |
| 3:20 pm | Picked up | PASCO, WA |

Shipment Facts

| | | | |
|------------------------|--------------------|---------------------------------|--|
| Tracking number | 775999072419 | Service | FedEx Priority Overnight |
| Weight | 75 lbs / 34.02 kgs | Delivered To | Shipping/Receiving |
| Total pieces | 1 | Total shipment weight | 75 lbs / 34.02 kgs |
| Terms | Recipient | Shipper reference | GWS-504 |
| Packaging | Your Packaging | Special handling section | Deliver Weekday, Additional Handling Surcharge |



| | | | |
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| | |
|------------------------------------|--|
| Ship date: Wed 3/30/2016 | Actual delivery: Thu 3/31/2016 8:45 am |
| RICHLAND, WA US | Delivered <i>Signed for by: J. CLARK</i> |
| | EARTH CITY, MO US |

Travel History

| Date/Time | Activity | Location |
|-------------------------|------------------------------------|----------------|
| - 3/31/2016 - Thursday | | |
| 8:45 am | Delivered | EARTH CITY, MO |
| 8:05 am | On FedEx vehicle for delivery | EARTH CITY, MO |
| 7:58 am | At local FedEx facility | EARTH CITY, MO |
| 6:36 am | At destination sort facility | BERKELEY, MO |
| 5:51 am | Departed FedEx location | MEMPHIS, TN |
| 1:07 am | Arrived at FedEx location | MEMPHIS, TN |
| - 3/30/2016 - Wednesday | | |
| 5:04 pm | Left FedEx origin facility | PASCO, WA |
| 4:45 pm | Shipment information sent to FedEx | |
| 3:20 pm | Picked up | PASCO, WA |

Shipment Facts

| | | | |
|---------------------------------|--|---------------------|--------------------------|
| Tracking number | 776000288122 | Service | FedEx Priority Overnight |
| Weight | 8 lbs / 3.63 kgs | Dimensions | 12x9x11 in. |
| Delivered To | Shipping/Receiving | Total pieces | 1 |
| Total shipment weight | 8 lbs / 3.63 kgs | Terms | Recipient |
| Shipper reference | CH2MHILL | Packaging | Your Packaging |
| Special handling section | Deliver Weekday, Additional Handling Surcharge | | |



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Definitions/Glossary

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

TestAmerica Job ID: 160-16744-1
SDG: SL2158

Qualifiers

HPLC/IC

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

Metals

| Qualifier | Qualifier Description |
|-----------|--|
| D | The reported value is from a dilution. |
| B | Estimated result. Result is less than the RL, but greater than MDL |
| U | Analyzed for but not detected. |

General Chemistry

| Qualifier | Qualifier Description |
|-----------|--|
| 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. |
|----------------|---|
| α | 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: 160-16744-1
SDG: SL2158

| Method | Method Description | Protocol | Laboratory |
|----------|--------------------------------|----------|------------|
| 300.0 | Anions, Ion Chromatography | MCAWW | TAL SL |
| 6020A | Metals (ICP/MS) | SW846 | TAL SL |
| 9012B | Cyanide, Total and/or 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:

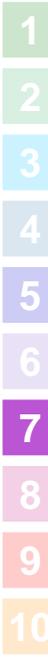
TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

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

TestAmerica Job ID: 160-16744-1
SDG: SL2158

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---------------|------------------|--------|----------------|----------------|
| 160-16744-1 | B34T33 | Soil | 03/29/16 13:14 | 03/31/16 09:10 |
| 160-16744-2 | B34T35 | Soil | 03/29/16 14:49 | 03/31/16 09:10 |



Client Sample Results

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

TestAmerica Job ID: 160-16744-1
SDG: SL2158

Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: B34T33
Date Collected: 03/29/16 13:14
Date Received: 03/31/16 09:10

Lab Sample ID: 160-16744-1
Matrix: Soil
Percent Solids: 95.8

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|--------------|--------|-----------|------|-------|-------|---|----------------|----------------|---------|
| Fluoride | 0.16 | B | 1.0 | 0.15 | mg/Kg | ☼ | 04/08/16 16:30 | 04/08/16 19:48 | 1 |
| Nitrate as N | 1.8 | | 0.21 | 0.057 | mg/Kg | ☼ | 04/08/16 16:30 | 04/08/16 19:48 | 1 |
| Nitrite as N | 0.057 | U N | 0.21 | 0.057 | mg/Kg | ☼ | 04/08/16 16:30 | 04/08/16 19:48 | 1 |
| Sulfate | 57 | | 5.2 | 0.52 | mg/Kg | ☼ | 04/08/16 16:30 | 04/08/16 19:48 | 1 |
| Chloride | 1.9 | B | 2.1 | 0.21 | mg/Kg | ☼ | 04/08/16 16:30 | 04/08/16 19:48 | 1 |
| Phosphate | 0.59 | U | 5.2 | 0.59 | mg/Kg | ☼ | 04/08/16 16:30 | 04/08/16 19:48 | 1 |

Client Sample ID: B34T35
Date Collected: 03/29/16 14:49
Date Received: 03/31/16 09:10

Lab Sample ID: 160-16744-2
Matrix: Soil
Percent Solids: 92.2

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|--------------|--------|-----------|------|-------|-------|---|----------------|----------------|---------|
| Fluoride | 0.47 | B | 1.1 | 0.16 | mg/Kg | ☼ | 04/08/16 16:30 | 04/08/16 21:09 | 1 |
| Nitrite as N | 0.092 | B N | 0.22 | 0.059 | mg/Kg | ☼ | 04/08/16 16:30 | 04/08/16 21:09 | 1 |
| Chloride | 8.2 | | 2.2 | 0.22 | mg/Kg | ☼ | 04/08/16 16:30 | 04/08/16 21:09 | 1 |
| Phosphate | 0.61 | U | 5.4 | 0.61 | mg/Kg | ☼ | 04/08/16 16:30 | 04/08/16 21:09 | 1 |

Method: 300.0 - Anions, Ion Chromatography - DL

Client Sample ID: B34T35
Date Collected: 03/29/16 14:49
Date Received: 03/31/16 09:10

Lab Sample ID: 160-16744-2
Matrix: Soil
Percent Solids: 92.2

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|--------------|--------|-----------|-----|-----|-------|---|----------------|----------------|---------|
| Nitrate as N | 140 | D | 4.3 | 1.2 | mg/Kg | ☼ | 04/08/16 16:30 | 04/08/16 21:22 | 20 |
| Sulfate | 450 | D | 110 | 11 | mg/Kg | ☼ | 04/08/16 16:30 | 04/08/16 21:22 | 20 |

Method: 6020A - Metals (ICP/MS)

Client Sample ID: B34T33
Date Collected: 03/29/16 13:14
Date Received: 03/31/16 09:10

Lab Sample ID: 160-16744-1
Matrix: Soil
Percent Solids: 95.8

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------|--------|-----------|------|-------|-------|---|----------------|----------------|---------|
| Aluminum | 8080 | D | 25.8 | 8.6 | mg/Kg | ☼ | 04/06/16 08:49 | 04/08/16 16:56 | 10 |
| Antimony | 0.30 | U | 2.3 | 0.30 | mg/Kg | ☼ | 04/12/16 09:00 | 04/19/16 18:51 | 10 |
| Arsenic | 5.6 | D | 5.2 | 1.3 | mg/Kg | ☼ | 04/06/16 08:49 | 04/08/16 16:56 | 10 |
| Barium | 76.8 | D | 10.3 | 0.48 | mg/Kg | ☼ | 04/06/16 08:49 | 04/08/16 16:56 | 10 |
| Cadmium | 0.17 | B D | 0.26 | 0.082 | mg/Kg | ☼ | 04/06/16 08:49 | 04/08/16 16:56 | 10 |
| Chromium | 11.6 | D | 5.2 | 2.3 | mg/Kg | ☼ | 04/06/16 08:49 | 04/08/16 16:56 | 10 |
| Copper | 10.6 | D | 5.2 | 0.52 | mg/Kg | ☼ | 04/06/16 08:49 | 04/08/16 16:56 | 10 |
| Lead | 4.2 | D | 1.5 | 0.52 | mg/Kg | ☼ | 04/06/16 08:49 | 04/08/16 16:56 | 10 |
| Manganese | 358 | D | 2.6 | 0.40 | mg/Kg | ☼ | 04/06/16 08:49 | 04/08/16 16:56 | 10 |
| Nickel | 12.3 | D | 2.6 | 0.55 | mg/Kg | ☼ | 04/06/16 08:49 | 04/08/16 16:56 | 10 |
| Selenium | 0.88 | B D | 2.6 | 0.81 | mg/Kg | ☼ | 04/06/16 08:49 | 04/08/16 16:56 | 10 |
| Silver | 0.19 | B D | 1.0 | 0.12 | mg/Kg | ☼ | 04/06/16 08:49 | 04/08/16 16:56 | 10 |
| Uranium | 0.50 | B D | 0.52 | 0.10 | mg/Kg | ☼ | 04/06/16 08:49 | 04/08/16 16:56 | 10 |

Client Sample ID: B34T35
Date Collected: 03/29/16 14:49
Date Received: 03/31/16 09:10

Lab Sample ID: 160-16744-2
Matrix: Soil
Percent Solids: 92.2

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------|--------|-----------|------|-----|-------|---|----------------|----------------|---------|
| Aluminum | 10300 | D | 24.2 | 8.1 | mg/Kg | ☼ | 04/06/16 08:49 | 04/08/16 17:22 | 10 |

TestAmerica St. Louis

Client Sample Results

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

TestAmerica Job ID: 160-16744-1
SDG: SL2158

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

Client Sample ID: B34T35
Date Collected: 03/29/16 14:49
Date Received: 03/31/16 09:10

Lab Sample ID: 160-16744-2
Matrix: Soil
Percent Solids: 92.2

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------|--------|-----------|------|-------|-------|---|----------------|----------------|---------|
| Antimony | 0.31 | B D | 2.3 | 0.30 | mg/Kg | ☼ | 04/12/16 09:00 | 04/19/16 18:56 | 10 |
| Arsenic | 6.0 | D | 4.8 | 1.3 | mg/Kg | ☼ | 04/06/16 08:49 | 04/08/16 17:22 | 10 |
| Barium | 72.4 | D | 9.7 | 0.46 | mg/Kg | ☼ | 04/06/16 08:49 | 04/08/16 17:22 | 10 |
| Cadmium | 0.14 | B D | 0.24 | 0.077 | mg/Kg | ☼ | 04/06/16 08:49 | 04/08/16 17:22 | 10 |
| Chromium | 16.7 | D | 4.8 | 2.2 | mg/Kg | ☼ | 04/06/16 08:49 | 04/08/16 17:22 | 10 |
| Copper | 22.7 | D | 4.8 | 0.49 | mg/Kg | ☼ | 04/06/16 08:49 | 04/08/16 17:22 | 10 |
| Lead | 6.1 | D | 1.5 | 0.48 | mg/Kg | ☼ | 04/06/16 08:49 | 04/08/16 17:22 | 10 |
| Manganese | 497 | D | 2.4 | 0.37 | mg/Kg | ☼ | 04/06/16 08:49 | 04/08/16 17:22 | 10 |
| Nickel | 19.5 | D | 2.4 | 0.52 | mg/Kg | ☼ | 04/06/16 08:49 | 04/08/16 17:22 | 10 |
| Selenium | 1.3 | B D | 2.4 | 0.77 | mg/Kg | ☼ | 04/06/16 08:49 | 04/08/16 17:22 | 10 |
| Silver | 0.17 | B D | 0.97 | 0.12 | mg/Kg | ☼ | 04/06/16 08:49 | 04/08/16 17:22 | 10 |
| Uranium | 0.68 | D | 0.48 | 0.096 | mg/Kg | ☼ | 04/06/16 08:49 | 04/08/16 17:22 | 10 |

General Chemistry

Client Sample ID: B34T33
Date Collected: 03/29/16 13:14
Date Received: 03/31/16 09:10

Lab Sample ID: 160-16744-1
Matrix: Soil
Percent Solids: 95.8

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------|--------|-----------|------|------|-------|---|----------------|----------------|---------|
| Cyanide, Total | 0.12 | U | 0.52 | 0.12 | mg/Kg | ☼ | 04/04/16 15:10 | 04/04/16 21:52 | 1 |

Client Sample ID: B34T35
Date Collected: 03/29/16 14:49
Date Received: 03/31/16 09:10

Lab Sample ID: 160-16744-2
Matrix: Soil
Percent Solids: 92.2

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------|--------|-----------|------|------|-------|---|----------------|----------------|---------|
| Cyanide, Total | 0.26 | B | 0.54 | 0.12 | mg/Kg | ☼ | 04/04/16 15:10 | 04/04/16 21:55 | 1 |

QC Sample Results

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

TestAmerica Job ID: 160-16744-1
SDG: SL2158

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 160-244997/1-A
Matrix: Solid
Analysis Batch: 244998

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 244997

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|--------------|-----------|--------------|------|-------|-------|---|----------------|----------------|---------|
| Fluoride | 0.14 | U | 1.0 | 0.14 | mg/Kg | | 04/08/16 16:30 | 04/08/16 19:22 | 1 |
| Nitrate as N | 0.055 | U | 0.20 | 0.055 | mg/Kg | | 04/08/16 16:30 | 04/08/16 19:22 | 1 |
| Nitrite as N | 0.055 | U | 0.20 | 0.055 | mg/Kg | | 04/08/16 16:30 | 04/08/16 19:22 | 1 |
| Sulfate | 0.50 | U | 5.0 | 0.50 | mg/Kg | | 04/08/16 16:30 | 04/08/16 19:22 | 1 |
| Chloride | 0.20 | U | 2.0 | 0.20 | mg/Kg | | 04/08/16 16:30 | 04/08/16 19:22 | 1 |
| Phosphate | 0.56 | U | 5.0 | 0.56 | mg/Kg | | 04/08/16 16:30 | 04/08/16 19:22 | 1 |

Lab Sample ID: LCS 160-244997/2-A
Matrix: Solid
Analysis Batch: 244998

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 244997

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | Limits |
|--------------|-------------|------------|---------------|-------|---|------|----------|
| Fluoride | 9.97 | 9.97 | | mg/Kg | | 100 | 90 - 110 |
| Nitrate as N | 3.99 | 4.05 | | mg/Kg | | 102 | 90 - 110 |
| Nitrite as N | 1.60 | 1.47 | | mg/Kg | | 92 | 90 - 110 |
| Sulfate | 79.8 | 78.9 | | mg/Kg | | 99 | 90 - 110 |
| Chloride | 19.9 | 19.9 | | mg/Kg | | 100 | 90 - 110 |
| Phosphate | 79.8 | 77.7 | | mg/Kg | | 97 | 90 - 110 |

Lab Sample ID: 160-16744-1 MS
Matrix: Soil
Analysis Batch: 244998

Client Sample ID: B34T33
Prep Type: Total/NA
Prep Batch: 244997

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | Limits |
|--------------|---------------|------------------|-------------|-----------|--------------|-------|---|------|----------|
| Fluoride | 0.16 | B | 20.8 | 20.9 | | mg/Kg | ☼ | 100 | 90 - 110 |
| Nitrate as N | 1.8 | | 4.16 | 6.00 | | mg/Kg | ☼ | 101 | 90 - 110 |
| Nitrite as N | 0.057 | U N | 1.04 | 0.883 | N | mg/Kg | ☼ | 85 | 90 - 110 |
| Sulfate | 57 | | 41.6 | 97.8 | | mg/Kg | ☼ | 99 | 90 - 110 |
| Chloride | 1.9 | B | 20.8 | 21.9 | | mg/Kg | ☼ | 96 | 90 - 110 |
| Phosphate | 0.59 | U | 41.6 | 40.1 | | mg/Kg | ☼ | 96 | 90 - 110 |

Lab Sample ID: 160-16744-1 DU
Matrix: Soil
Analysis Batch: 244998

Client Sample ID: B34T33
Prep Type: Total/NA
Prep Batch: 244997

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|--------------|---------------|------------------|-----------|--------------|-------|---|-----|-----------|
| Fluoride | 0.16 | B | 0.15 | U | mg/Kg | ☼ | NC | 20 |
| Nitrate as N | 1.8 | | 2.28 | | mg/Kg | ☼ | 23 | 20 |
| Nitrite as N | 0.057 | U N | 0.057 | U | mg/Kg | ☼ | NC | 20 |
| Sulfate | 57 | | 65.3 | | mg/Kg | ☼ | 14 | 20 |
| Chloride | 1.9 | B | 2.02 | B | mg/Kg | ☼ | 6 | 20 |
| Phosphate | 0.59 | U | 0.59 | U | mg/Kg | ☼ | NC | 20 |

QC Sample Results

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

TestAmerica Job ID: 160-16744-1
SDG: SL2158

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 160-242926/1-A
Matrix: Solid
Analysis Batch: 246904

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 242926

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------|-----------|--------------|------|-------|-------|---|----------------|----------------|---------|
| Antimony | 0.055 | U | 0.42 | 0.055 | mg/Kg | | 04/12/16 09:00 | 04/19/16 17:54 | 2 |

Lab Sample ID: LCSSRM 160-242926/2-A
Matrix: Solid
Analysis Batch: 246904

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 242926

| Analyte | Spike Added | LCSSRM Result | LCSSRM Qualifier | Unit | D | %Rec | Limits |
|----------|-------------|---------------|------------------|-------|---|-------|--------------|
| Antimony | 88.8 | 152.7 | | mg/Kg | | 171.9 | 22.0 - 259.0 |

Lab Sample ID: 160-16694-A-1-C MS
Matrix: Solid
Analysis Batch: 246904

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 242926

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | Limits |
|----------|---------------|------------------|-------------|-----------|--------------|-------|---|------|----------|
| Antimony | 0.28 | U | 44.2 | 42.81 | D | mg/Kg | ☼ | 97 | 75 - 125 |

Lab Sample ID: 160-16694-A-1-D MSD
Matrix: Solid
Analysis Batch: 246904

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 242926

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | Limits | RPD | Limit |
|----------|---------------|------------------|-------------|------------|---------------|-------|---|------|----------|-----|-------|
| Antimony | 0.28 | U | 44.6 | 43.35 | D | mg/Kg | ☼ | 97 | 75 - 125 | 1 | 30 |

Lab Sample ID: MB 160-244407/1-A
Matrix: Solid
Analysis Batch: 245043

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 244407

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------|-----------|--------------|-------|-------|-------|---|----------------|----------------|---------|
| Aluminum | 1.5 | U | 4.4 | 1.5 | mg/Kg | | 04/06/16 08:49 | 04/08/16 16:36 | 2 |
| Arsenic | 0.23 | U | 0.88 | 0.23 | mg/Kg | | 04/06/16 08:49 | 04/08/16 16:36 | 2 |
| Barium | 0.083 | U | 1.8 | 0.083 | mg/Kg | | 04/06/16 08:49 | 04/08/16 16:36 | 2 |
| Cadmium | 0.014 | U | 0.044 | 0.014 | mg/Kg | | 04/06/16 08:49 | 04/08/16 16:36 | 2 |
| Chromium | 0.40 | U | 0.88 | 0.40 | mg/Kg | | 04/06/16 08:49 | 04/08/16 16:36 | 2 |
| Copper | 0.089 | U | 0.88 | 0.089 | mg/Kg | | 04/06/16 08:49 | 04/08/16 16:36 | 2 |
| Lead | 0.088 | U | 0.26 | 0.088 | mg/Kg | | 04/06/16 08:49 | 04/08/16 16:36 | 2 |
| Manganese | 0.068 | U | 0.44 | 0.068 | mg/Kg | | 04/06/16 08:49 | 04/08/16 16:36 | 2 |
| Nickel | 0.094 | U | 0.44 | 0.094 | mg/Kg | | 04/06/16 08:49 | 04/08/16 16:36 | 2 |
| Selenium | 0.14 | U | 0.44 | 0.14 | mg/Kg | | 04/06/16 08:49 | 04/08/16 16:36 | 2 |
| Silver | 0.021 | U | 0.18 | 0.021 | mg/Kg | | 04/06/16 08:49 | 04/08/16 16:36 | 2 |
| Uranium | 0.018 | U | 0.088 | 0.018 | mg/Kg | | 04/06/16 08:49 | 04/08/16 16:36 | 2 |

Lab Sample ID: LCS 160-244407/2-A
Matrix: Solid
Analysis Batch: 245043

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 244407

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | Limits |
|---------|-------------|------------|---------------|-------|---|------|----------|
| Uranium | 96.8 | 101.1 | | mg/Kg | | 104 | 80 - 120 |

QC Sample Results

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

TestAmerica Job ID: 160-16744-1
SDG: SL2158

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

Lab Sample ID: LCSSRM 160-244407/3-A
Matrix: Solid
Analysis Batch: 245043

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 244407

| Analyte | Spike Added | LCSSRM Result | LCSSRM Qualifier | Unit | D | %Rec | Limits |
|-----------|-------------|---------------|------------------|-------|---|-------|--------------|
| Aluminum | 7460 | 7215 | | mg/Kg | | 96.7 | 37.3 - 162.2 |
| Arsenic | 139 | 152.9 | | mg/Kg | | 110.0 | 70.4 - 140.3 |
| Barium | 203 | 221.3 | | mg/Kg | | 109.0 | 73.4 - 127.1 |
| Cadmium | 96.0 | 98.13 | | mg/Kg | | 102.2 | 73.2 - 127.1 |
| Chromium | 136 | 144.9 | | mg/Kg | | 106.5 | 69.9 - 129.4 |
| Copper | 168 | 188.6 | | mg/Kg | | 112.3 | 75.6 - 125.0 |
| Lead | 133 | 142.5 | | mg/Kg | | 107.1 | 72.9 - 127.8 |
| Manganese | 297 | 329.6 | | mg/Kg | | 111.0 | 74.4 - 125.6 |
| Nickel | 123 | 135.8 | | mg/Kg | | 110.4 | 73.1 - 128.5 |
| Selenium | 177 | 200.7 | | mg/Kg | | 113.4 | 67.8 - 131.6 |
| Silver | 40.2 | 42.72 | | mg/Kg | | 106.3 | 66.2 - 134.1 |

Lab Sample ID: 160-16744-1 MS
Matrix: Soil
Analysis Batch: 245043

Client Sample ID: B34T33
Prep Type: Total/NA
Prep Batch: 244407

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | Limits |
|-----------|---------------|------------------|-------------|-----------|--------------|-------|---|------|----------|
| Aluminum | 8080 | D | 923 | 11260 | D | mg/Kg | ☼ | 345 | 75 - 125 |
| Arsenic | 5.6 | D | 92.3 | 104.7 | D | mg/Kg | ☼ | 107 | 75 - 125 |
| Barium | 76.8 | D | 92.3 | 157.8 | D | mg/Kg | ☼ | 88 | 75 - 125 |
| Cadmium | 0.17 | B D | 92.2 | 94.75 | D | mg/Kg | ☼ | 103 | 75 - 125 |
| Chromium | 11.6 | D | 92.3 | 114.4 | D | mg/Kg | ☼ | 111 | 75 - 125 |
| Copper | 10.6 | D | 92.3 | 113.2 | D | mg/Kg | ☼ | 111 | 75 - 125 |
| Lead | 4.2 | D | 92.3 | 99.72 | D | mg/Kg | ☼ | 104 | 75 - 125 |
| Manganese | 358 | D | 92.3 | 471.6 | D | mg/Kg | ☼ | 123 | 75 - 125 |
| Nickel | 12.3 | D | 92.3 | 116.7 | D | mg/Kg | ☼ | 113 | 75 - 125 |
| Selenium | 0.88 | B D | 46.1 | 48.49 | D | mg/Kg | ☼ | 103 | 75 - 125 |
| Silver | 0.19 | B D | 18.4 | 19.02 | D | mg/Kg | ☼ | 102 | 75 - 125 |
| Uranium | 0.50 | B D | 92.3 | 98.92 | D | mg/Kg | ☼ | 107 | 75 - 125 |

Lab Sample ID: 160-16744-1 MSD
Matrix: Soil
Analysis Batch: 245043

Client Sample ID: B34T33
Prep Type: Total/NA
Prep Batch: 244407

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | Limits | RPD | Limit |
|----------|---------------|------------------|-------------|------------|---------------|-------|---|------|----------|-----|-------|
| Aluminum | 8080 | D | 1020 | 11070 | D | mg/Kg | ☼ | 294 | 75 - 125 | 2 | 30 |
| Arsenic | 5.6 | D | 102 | 113.5 | D | mg/Kg | ☼ | 106 | 75 - 125 | 8 | 30 |
| Barium | 76.8 | D | 102 | 170.2 | D | mg/Kg | ☼ | 92 | 75 - 125 | 8 | 30 |
| Cadmium | 0.17 | B D | 102 | 105.7 | D | mg/Kg | ☼ | 104 | 75 - 125 | 11 | 30 |
| Chromium | 11.6 | D | 102 | 120.3 | D | mg/Kg | ☼ | 107 | 75 - 125 | 5 | 30 |

TestAmerica St. Louis

QC Sample Results

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

TestAmerica Job ID: 160-16744-1
SDG: SL2158

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

Lab Sample ID: 160-16744-1 MSD
Matrix: Soil
Analysis Batch: 245043

Client Sample ID: B34T33
Prep Type: Total/NA
Prep Batch: 244407

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | Limits | RPD | Limit |
|-----------|---------------|------------------|-------------|------------|---------------|-------|---|------|----------|-----|-------|
| Copper | 10.6 | D | 102 | 123.9 | D | mg/Kg | ☼ | 111 | 75 - 125 | 9 | 30 |
| Lead | 4.2 | D | 102 | 110.2 | D | mg/Kg | ☼ | 104 | 75 - 125 | 10 | 30 |
| Manganese | 358 | D | 102 | 465.0 | D | mg/Kg | ☼ | 105 | 75 - 125 | 1 | 30 |
| Nickel | 12.3 | D | 102 | 126.2 | D | mg/Kg | ☼ | 112 | 75 - 125 | 8 | 30 |
| Selenium | 0.88 | B D | 50.8 | 54.12 | D | mg/Kg | ☼ | 105 | 75 - 125 | 11 | 30 |
| Silver | 0.19 | B D | 20.3 | 21.04 | D | mg/Kg | ☼ | 103 | 75 - 125 | 10 | 30 |
| Uranium | 0.50 | B D | 102 | 110.6 | D | mg/Kg | ☼ | 108 | 75 - 125 | 11 | 30 |

Method: 9012B - Cyanide, Total and/or Amenable

Lab Sample ID: MB 160-244068/14-A
Matrix: Solid
Analysis Batch: 244140

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 244068

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------|-----------|--------------|------|------|-------|---|----------------|----------------|---------|
| Cyanide, Total | 0.11 | U | 0.50 | 0.11 | mg/Kg | | 04/04/16 15:10 | 04/04/16 21:08 | 1 |

Lab Sample ID: HLCS 160-244068/16-A
Matrix: Solid
Analysis Batch: 244140

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 244068

| Analyte | Spike Added | HLCS Result | HLCS Qualifier | Unit | D | %Rec | Limits |
|----------------|-------------|-------------|----------------|-------|---|------|----------|
| Cyanide, Total | 4.80 | 4.65 | | mg/Kg | | 97 | 85 - 115 |

Lab Sample ID: LCS 160-244068/15-A
Matrix: Solid
Analysis Batch: 244140

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 244068

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | Limits |
|----------------|-------------|------------|---------------|-------|---|------|----------|
| Cyanide, Total | 2.40 | 2.21 | | mg/Kg | | 92 | 85 - 115 |

Lab Sample ID: 160-16655-A-2-I MS
Matrix: Solid
Analysis Batch: 244140

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 244068

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | Limits |
|----------------|---------------|------------------|-------------|-----------|--------------|-------|---|------|----------|
| Cyanide, Total | 0.12 | U | 2.47 | 2.30 | | mg/Kg | ☼ | 93 | 60 - 130 |

Lab Sample ID: 160-16655-A-2-H DU
Matrix: Solid
Analysis Batch: 244140

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 244068

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

QC Association Summary

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

TestAmerica Job ID: 160-16744-1
 SDG: SL2158

HPLC/IC

Prep Batch: 244997

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------------|------------|
| 160-16744-1 | B34T33 | Total/NA | Soil | DILeach_Prep | |
| 160-16744-1 DU | B34T33 | Total/NA | Soil | DILeach_Prep | |
| 160-16744-1 MS | B34T33 | Total/NA | Soil | DILeach_Prep | |
| 160-16744-2 | B34T35 | Total/NA | Soil | DILeach_Prep | |
| 160-16744-2 - DL | B34T35 | Total/NA | Soil | DILeach_Prep | |
| LCS 160-244997/2-A | Lab Control Sample | Total/NA | Solid | DILeach_Prep | |
| MB 160-244997/1-A | Method Blank | Total/NA | Solid | DILeach_Prep | |

Analysis Batch: 244998

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| 160-16744-1 | B34T33 | Total/NA | Soil | 300.0 | 244997 |
| 160-16744-1 DU | B34T33 | Total/NA | Soil | 300.0 | 244997 |
| 160-16744-1 MS | B34T33 | Total/NA | Soil | 300.0 | 244997 |
| 160-16744-2 | B34T35 | Total/NA | Soil | 300.0 | 244997 |
| 160-16744-2 - DL | B34T35 | Total/NA | Soil | 300.0 | 244997 |
| LCS 160-244997/2-A | Lab Control Sample | Total/NA | Solid | 300.0 | 244997 |
| MB 160-244997/1-A | Method Blank | Total/NA | Solid | 300.0 | 244997 |

Analysis Batch: 244999

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| 160-16744-1 | B34T33 | Total/NA | Soil | 300.0 | 244997 |
| 160-16744-1 DU | B34T33 | Total/NA | Soil | 300.0 | 244997 |
| 160-16744-1 MS | B34T33 | Total/NA | Soil | 300.0 | 244997 |
| 160-16744-2 | B34T35 | Total/NA | Soil | 300.0 | 244997 |
| 160-16744-2 - DL | B34T35 | Total/NA | Soil | 300.0 | 244997 |
| LCS 160-244997/2-A | Lab Control Sample | Total/NA | Solid | 300.0 | 244997 |
| MB 160-244997/1-A | Method Blank | Total/NA | Solid | 300.0 | 244997 |

Metals

Prep Batch: 242926

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|-----------------------|------------------------|-----------|--------|--------|------------|
| 160-16694-A-1-C MS | Matrix Spike | Total/NA | Solid | 3050B | |
| 160-16694-A-1-D MSD | Matrix Spike Duplicate | Total/NA | Solid | 3050B | |
| 160-16744-1 | B34T33 | Total/NA | Soil | 3050B | |
| 160-16744-2 | B34T35 | Total/NA | Soil | 3050B | |
| LCSSRM 160-242926/2-A | Lab Control Sample | Total/NA | Solid | 3050B | |
| MB 160-242926/1-A | Method Blank | Total/NA | Solid | 3050B | |

Prep Batch: 244407

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|-----------------------|--------------------|-----------|--------|--------|------------|
| 160-16744-1 | B34T33 | Total/NA | Soil | 3050B | |
| 160-16744-1 MS | B34T33 | Total/NA | Soil | 3050B | |
| 160-16744-1 MSD | B34T33 | Total/NA | Soil | 3050B | |
| 160-16744-2 | B34T35 | Total/NA | Soil | 3050B | |
| LCS 160-244407/2-A | Lab Control Sample | Total/NA | Solid | 3050B | |
| LCSSRM 160-244407/3-A | Lab Control Sample | Total/NA | Solid | 3050B | |
| MB 160-244407/1-A | Method Blank | Total/NA | Solid | 3050B | |

TestAmerica St. Louis

QC Association Summary

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

TestAmerica Job ID: 160-16744-1
 SDG: SL2158

Metals (Continued)

Analysis Batch: 245043

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|-----------------------|--------------------|-----------|--------|--------|------------|
| 160-16744-1 | B34T33 | Total/NA | Soil | 6020A | 244407 |
| 160-16744-1 MS | B34T33 | Total/NA | Soil | 6020A | 244407 |
| 160-16744-1 MSD | B34T33 | Total/NA | Soil | 6020A | 244407 |
| 160-16744-2 | B34T35 | Total/NA | Soil | 6020A | 244407 |
| LCS 160-244407/2-A | Lab Control Sample | Total/NA | Solid | 6020A | 244407 |
| LCSSRM 160-244407/3-A | Lab Control Sample | Total/NA | Solid | 6020A | 244407 |
| MB 160-244407/1-A | Method Blank | Total/NA | Solid | 6020A | 244407 |

Analysis Batch: 246904

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|-----------------------|------------------------|-----------|--------|--------|------------|
| 160-16694-A-1-C MS | Matrix Spike | Total/NA | Solid | 6020A | 242926 |
| 160-16694-A-1-D MSD | Matrix Spike Duplicate | Total/NA | Solid | 6020A | 242926 |
| 160-16744-1 | B34T33 | Total/NA | Soil | 6020A | 242926 |
| 160-16744-2 | B34T35 | Total/NA | Soil | 6020A | 242926 |
| LCSSRM 160-242926/2-A | Lab Control Sample | Total/NA | Solid | 6020A | 242926 |
| MB 160-242926/1-A | Method Blank | Total/NA | Solid | 6020A | 242926 |

General Chemistry

Analysis Batch: 243095

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|----------------|------------------|-----------|--------|----------|------------|
| 160-16744-1 | B34T33 | Total/NA | Soil | Moisture | |
| 160-16744-2 | B34T35 | Total/NA | Soil | Moisture | |
| 160-16744-2 DU | B34T35 | Total/NA | Soil | Moisture | |

Prep Batch: 244068

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|----------------------|--------------------|-----------|--------|--------|------------|
| 160-16655-A-2-H DU | Duplicate | Total/NA | Solid | 9010C | |
| 160-16655-A-2-I MS | Matrix Spike | Total/NA | Solid | 9010C | |
| 160-16744-1 | B34T33 | Total/NA | Soil | 9010C | |
| 160-16744-2 | B34T35 | Total/NA | Soil | 9010C | |
| HLCS 160-244068/16-A | Lab Control Sample | Total/NA | Solid | 9010C | |
| LCS 160-244068/15-A | Lab Control Sample | Total/NA | Solid | 9010C | |
| MB 160-244068/14-A | Method Blank | Total/NA | Solid | 9010C | |

Analysis Batch: 244140

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|----------------------|--------------------|-----------|--------|--------|------------|
| 160-16655-A-2-H DU | Duplicate | Total/NA | Solid | 9012B | 244068 |
| 160-16655-A-2-I MS | Matrix Spike | Total/NA | Solid | 9012B | 244068 |
| 160-16744-1 | B34T33 | Total/NA | Soil | 9012B | 244068 |
| 160-16744-2 | B34T35 | Total/NA | Soil | 9012B | 244068 |
| HLCS 160-244068/16-A | Lab Control Sample | Total/NA | Solid | 9012B | 244068 |
| LCS 160-244068/15-A | Lab Control Sample | Total/NA | Solid | 9012B | 244068 |
| MB 160-244068/14-A | Method Blank | Total/NA | Solid | 9012B | 244068 |