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: 160-11408-1
TestAmerica Sample Delivery Group: SL1793
Client Project/Site: K14-001A

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

Attn: General Mailbox

*Authorized for release by:*
*4/30/2015 1:35:38 PM*

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



*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.*

# Table of Contents

## Job ID: 160-11408-1

**Laboratory: TestAmerica St. Louis**

**Narrative**

### CASE NARRATIVE

CH2MHill Plateau Remediation Company
P.O. Box 1600
Richland, Washington 99352
April 30, 2015
Attention: Scot Fitzgerald

| | |
|---|---|
| SDG | : SL1793 |
| Number of Samples | : 2 samples |
| Sample Matrix | : Water |
| Data Deliverable | : Summary |
| Date SDG Closed | : April 18, 2015 |

II. Introduction

On April 18, 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: K14-001A

Samples were sent from GEL for TOC analysis.

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 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.

IV. Definitions

QCBLK- Quality Control Blank, Method Blank

## Job ID: 160-11408-1 (Continued)

### Laboratory: TestAmerica St. Louis (Continued)

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.

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

**TOC**

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: 160-11408-1
SDG Number: SL1793

**Login Number: 11408**
**List Number: 1**
**Creator: Clarke, Jill C**

**List Source: TestAmerica St. Louis**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 1.8 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time. | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

| CH2MHill Plateau Remediation Company 84793 | CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST | | | K14-001-007A | PAGE 1 OF 1 |
|---|---|---|---|---|---|
| **COLLECTOR** JR Lowery | **COMPANY CONTACT** TODAK, D | **TELEPHONE NO.** 376-6427 | **PROJECT COORDINATOR** TODAK, D | **PRICE CODE** 7H | **DATA TURNAROUND** |
| **SAMPLING LOCATION** TRENCH 31 LEACHATE, MARCH 2015 | **PROJECT DESIGNATION** Mixed Waste Disposal Facility F039 Leachate Sampling (Trenches 31 & 34) | | **SAF NO.** K14-001 | **AIR QUALITY** ☐ | 30 Days / 30 Days |
| **ICE CHEST NO.** GLOS-335 | **FIELD LOGBOOK NO.** N/A | **ACTUAL SAMPLE DEPTH** N/A | **COA** 300049 | **METHOD OF SHIPMENT** FEDERAL EXPRESS | ORIGINAL |
| **SHIPPED TO** ~~GEL Laboratories, LLC~~ cas 04/11e/15 TA St. Louis | **OFFSITE PROPERTY NO.** SEE PTR 5516 JW 3/26/15 | | | **BILL OF LADING/AIR BILL NO.** SEE PTR JW 3/26/15 7732 1983 5461 | |

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

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

**SPECIAL HANDLING AND/OR STORAGE**
N/A

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **PRESERVATION** | HNO3 to pH <2 | HCl or H2SO4 to pH <2/Cool | Cool <=6C | HNO3 to pH <2 | HNO3 to pH <2 | | | | |
| **HOLDING TIME** | 28 Days | 28 Days | 7 Days | 6 Months | 6 Months | | | | |
| **TYPE OF CONTAINER** | G | aG | G/P | G/P | G | | | | |
| **NO. OF CONTAINER(S)** | 1 | 1 | 2 | 1 | 0 | | | | |
| **VOLUME** | 500mL | 250mL | 1L | 500mL | 0mL | | | | |
| **SAMPLE ANALYSIS** | 7470_MERCURY_CV: COMMON (AQUEOUS); | 9060_TOC: COMMON; | SEE ITEM (1) IN SPECIAL INSTRUCTIONS | Gross alpha/gross beta; | SEE ITEM (2) IN SPECIAL INSTRUCTIONS | | | | |
| **SAMPLE NO.** | **MATRIX*** | **SAMPLE DATE** | **SAMPLE TIME** | | | | | | |
| B30T80 | WATER | 3/25/15 | 1245 | ✓ | ✓ | ✓ | ✓ | 3-25-15 | |

cas 04/11e/15 cas 04/11e/15 cas 04/11e/15 cas 04/11e/15

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| **CHAIN OF POSSESSION** | **SIGN/ PRINT NAMES** | **SPECIAL INSTRUCTIONS** |
|---|---|---|
| JR Lowery 3/15/15 1315 | | **Packaging and shipping samples charge to 300049JDBA. TRVL-15-055 (1) 160.1_TDS: COMMON; 160.2_TSS: COMMON; 9040_pH (AQUEOUS): COMMON; (2) 6020_METALS_ICPMS: COMMON {Aluminum, Antimony, Beryllium, Cadmium, Chromium, Cobalt, Copper, Lead, Selenium, Silver}; 6020_METALS_ICPMS: COMMON (Add-on) {Arsenic, Manganese, Nickel, Thallium, Uranium, Zinc}; 6010_METALS_ICP: COMMON {Calcium, Iron, Magnesium, Potassium, Sodium, Vanadium}; 6010_METALS_ICP: COMMON (Add-on) {Silicon}; |
| RELINQUISHED BY/REMOVED FROM: JR Lowery — DATE/TIME: 3/25/15 1315 | RECEIVED BY/STORED IN: F.M. Hall/CH2PRC — DATE/TIME: MAR 25 2015 1315 | |
| RELINQUISHED BY/REMOVED FROM: F.M. Hall/CH2PRC — DATE/TIME: MAR 25 2015 1410 | RECEIVED BY/STORED IN: SSU-1 — DATE/TIME: MAR 25 2015 1410 | |
| RELINQUISHED BY/REMOVED FROM: SSU-1 — DATE/TIME: MAR 26 2015 0730 | RECEIVED BY/STORED IN: L.D. Wall CH2PRC — DATE/TIME: MAR 26 2015 0730 | |
| RELINQUISHED BY/REMOVED FROM: L.D. Wall CH2PRC — DATE/TIME: MAR 26 2015 1400 | RECEIVED BY/STORED IN: FEDEX — DATE/TIME: | |
| RELINQUISHED BY/REMOVED FROM: Fedex — DATE/TIME: | RECEIVED BY/STORED IN: Chelsea Seagle/Chelsea Seagle 03/30/15 0830 — DATE/TIME: | |
| RELINQUISHED BY/REMOVED FROM: Chelsea Seagle/Chelsea Seagle 04/17/15 1400 Fed Ex — DATE/TIME: | RECEIVED BY/STORED IN: Fedex — DATE/TIME: | |
| | RECEIVED BY/STORED IN: Jill Clark J. Clark 4.18.15 0845 — DATE/TIME: | |

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

PRINTED ON 3/19/2015

A-6003-618 (REV 2)

| CH2MHill Plateau Remediation Company 217793 | CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST | | | K14-001-008A | PAGE 1 OF 1 |
|---|---|---|---|---|---|
| **COLLECTOR** JR Lowery | **COMPANY CONTACT** TODAK, D | **TELEPHONE NO.** 376-6427 | **PROJECT COORDINATOR** TODAK, D | **PRICE CODE** 7H | **DATA TURNAROUND** |
| **SAMPLING LOCATION** TRENCH 34 LEACHATE, MARCH 2015 | **PROJECT DESIGNATION** Mixed Waste Disposal Facility F039 Leachate Sampling (Trenches 31 & 34) | | **SAF NO.** K14-001 | **AIR QUALITY** ☐ | 30 Days / 30 Days |
| **ICE CHEST NO.** 6605-335 | **FIELD LOGBOOK NO.** N/A | **ACTUAL SAMPLE DEPTH** N/A | **COA** 300049 | **METHOD OF SHIPMENT** FEDERAL EXPRESS | **ORIGINAL** |
| **SHIPPED TO** ~~GEL Laboratories, LLC~~ TA St. Louis cag 04/16/15 cag 04/16/15 | **OFFSITE PROPERTY NO.** SEE PTR 5516 cw: 3/26/15 | | | **BILL OF LADING/AIR BILL NO.** SEE PTR xw: 3/26/15 7732198354461 | |

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

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

**SPECIAL HANDLING AND/OR STORAGE**
N/A

| PRESERVATION | HNO3 to pH <2 | HCl or H2SO4 to pH <2/Cool | Cool <=6C | HNO3 to pH <2 | HNO3 to pH <2 |
|---|---|---|---|---|---|
| HOLDING TIME | 28 Days | 28 Days | 7 Days | 6 Months | 6 Months |
| TYPE OF CONTAINER | G | aG | G/P | G/P | G |
| NO. OF CONTAINER(S) | 1 | 1 | 2 | 1 | 0 |
| VOLUME | 500mL | 250mL | 1L | 500mL | 0mL |
| SAMPLE ANALYSIS | 7470_MERCURY_CV: COMMON (AQUEOUS); | 9060_TOC: COMMON; | SEE ITEM (1) IN SPECIAL INSTRUCTIONS | Gross alpha/gross beta; | SEE ITEM (2) IN SPECIAL INSTRUCTIONS |

| SAMPLE NO. | MATRIX* | SAMPLE DATE | SAMPLE TIME | | | | | |
|---|---|---|---|---|---|---|---|---|
| B30T81 | WATER | 3/25/2015 | 1030 | ✓ | ✓ | ✓ | ✓ | ~~XXXX~~ 3-25-15 |

cag 04/16/15 cag 04/16/15 cag 04/16/15 cag 04/16/15

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| CHAIN OF POSSESSION | SIGN/ PRINT NAMES | |
|---|---|---|
| JR Lowery 3/25/15 1315 | | |
| RELINQUISHED BY/REMOVED FROM: JR Lowery — DATE/TIME: 3/25/15 1315 | RECEIVED BY/STORED IN: F.M. Hall/CH2PRC — DATE/TIME: MAR 25 2015 1315 | |
| RELINQUISHED BY/REMOVED FROM: F.M. Hall/CH2PRC — DATE/TIME: MAR 25 2015 1340 | RECEIVED BY/STORED IN: SSU-1 — DATE/TIME: MAR 25 2015 1340 | |
| RELINQUISHED BY/REMOVED FROM: SSU-1 — DATE/TIME: MAR 26 2015 0730 | RECEIVED BY/STORED IN: L.D. Wall CH2PRC — DATE/TIME: MAR 26 2015 0730 | |
| RELINQUISHED BY/REMOVED FROM: L.D. Wall CH2PRC — DATE/TIME: MAR 26 2015 1400 | RECEIVED BY/STORED IN: FEDEX — DATE/TIME: | |
| RELINQUISHED BY/REMOVED FROM: Fedex — DATE/TIME: | RECEIVED BY/STORED IN: Chelsea Seagle/Chelsea Seagle 03/30/15 0830 — DATE/TIME: | |
| RELINQUISHED BY/REMOVED FROM: Chelsea Seagle/Chelsea Seagle 04/17/15 1400 — DATE/TIME: | RECEIVED BY/STORED IN: Fedex — DATE/TIME: | |
| RELINQUISHED BY/REMOVED FROM: Fed Ex — DATE/TIME: | RECEIVED BY/STORED IN: Jill Clark Jill Clark 4.18.15 0845 — DATE/TIME: | |

**SPECIAL INSTRUCTIONS**
**Packaging and shipping samples charge to 300049JDBA. TRVL-15-055
(1) 160.1_TDS: COMMON; 160.2_TSS: COMMON; 9040_pH (AQUEOUS): COMMON;
(2) 6020_METALS_ICPMS: COMMON {Aluminum, Antimony, Beryllium, Cadmium, Chromium, Cobalt, Copper, Lead, Selenium, Silver}; 6020_METALS_ICPMS: COMMON (Add-on) {Arsenic, Manganese, Nickel, Thallium, Uranium, Zinc}; 6010_METALS_ICP: COMMON {Calcium, Iron, Magnesium, Potassium, Sodium, Vanadium}; 6010_METALS_ICP: COMMON (Add-on) {Silicon};

TRVL-15-055

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

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A-6003-618 (REV 2)

~~Relinquished by~~ ~~Received by:~~ cag 04/17/15
~~Fedex~~ ~~Chelsea Seagle/Chelsea Seagle~~ 04/17/15

# FedEx ® Tracking

## 633621118990

Ship (P/U) date :
**Fri 4/17/2015 5:15 pm**

CHARLESTON, SC US

**Delivered**

*Signed for by: J.CLARK*

Actual delivery :
**Sat 4/18/2015 8:37 am**

EARTH CITY, MO US

## Travel History

| Date/Time | Activity | Location |
|---|---|---|
| - 4/18/2015 - Saturday | | |
| 8:37 am | Delivered | EARTH CITY, MO |
| 8:25 am | On FedEx vehicle for delivery | EARTH CITY, MO |
| 7:40 am | At local FedEx facility | EARTH CITY, MO |
| 5:28 am | At destination sort facility | BERKELEY, MO |
| 4:40 am | Departed FedEx location | MEMPHIS, TN |
| - 4/17/2015 - Friday | | |
| 11:33 pm | Arrived at FedEx location | MEMPHIS, TN |
| 8:18 pm | Left FedEx origin facility | CHARLESTON, SC |
| 5:15 pm | Picked up | CHARLESTON, SC |
| 4:24 pm | Shipment information sent to FedEx | |

## Shipment Facts

| | |
|---|---|
| Tracking number | 633621118990 |
| Weight | 30 lbs / 13.61 kgs |
| Delivered To | Receptionist/Front Desk |
| Total shipment weight | 30 lbs / 13.61 kgs |
| Packaging | Your Packaging |
| Service | FedEx Priority Overnight |
| Dimensions | 1x1x1 in. |
| Total pieces | 1 |
| Shipper reference | G-CHEM 20100 |
| Special handling section | For Saturday Delivery |

Client: CH2M Hill Plateau Remediation Company
Project/Site: K14-001A

TestAmerica Job ID: 160-11408-1
SDG: SL1793

## Qualifiers

### General Chemistry

| Qualifier | Qualifier Description |
|---|---|
| U | Analyzed for but not detected. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| 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: K14-001A

TestAmerica Job ID: 160-11408-1
SDG: SL1793

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 9060 | Organic Carbon, Total (TOC) | SW846 | TAL SL |

**Protocol References:**

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: K14-001A

TestAmerica Job ID: 160-11408-1
SDG: SL1793

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 160-11408-1 | B30T80 | Water | 03/25/15 12:45 | 04/18/15 08:45 |
| 160-11408-2 | B30T81 | Water | 03/25/15 10:30 | 04/18/15 08:45 |

Client: CH2M Hill Plateau Remediation Company
Project/Site: K14-001A

TestAmerica Job ID: 160-11408-1
SDG: SL1793

## General Chemistry

**Client Sample ID: B30T80**
**Date Collected: 03/25/15 12:45**
**Date Received: 04/18/15 08:45**

**Lab Sample ID: 160-11408-1**
**Matrix: Water**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Organic Carbon | 3.4 | | 1.0 | 0.35 | mg/L | | | 04/20/15 23:52 | 1 |

**Client Sample ID: B30T81**
**Date Collected: 03/25/15 10:30**
**Date Received: 04/18/15 08:45**

**Lab Sample ID: 160-11408-2**
**Matrix: Water**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Organic Carbon | 2.8 | | 1.0 | 0.35 | mg/L | | | 04/21/15 00:08 | 1 |

Client: CH2M Hill Plateau Remediation Company
Project/Site: K14-001A

TestAmerica Job ID: 160-11408-1
SDG: SL1793

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

**Lab Sample ID: MB 160-187145/4**
**Matrix: Water**
**Analysis Batch: 187145**

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

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Organic Carbon | 0.35 | U | 1.0 | 0.35 | mg/L | | | 04/20/15 19:34 | 1 |

**Lab Sample ID: LCS 160-187145/5**
**Matrix: Water**
**Analysis Batch: 187145**

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

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Organic Carbon | | | 10.0 | 10.15 | | mg/L | | 101 | 90 - 110 | | |

**Lab Sample ID: 160-11407-A-1 MS**
**Matrix: Water**
**Analysis Batch: 187145**

**Client Sample ID: Matrix Spike**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Organic Carbon | 0.35 | U | 5.00 | 5.37 | | mg/L | | 107 | 76 - 120 | | |

**Lab Sample ID: 160-11407-A-1 DU**
**Matrix: Water**
**Analysis Batch: 187145**

**Client Sample ID: Duplicate**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | | DU Result | DU Qualifier | Unit | D | | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Organic Carbon | 0.35 | U | | 0.35 | U | mg/L | | | | NC | 20 |

# QC Association Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: K14-001A

TestAmerica Job ID: 160-11408-1
SDG: SL1793

## General Chemistry

### Analysis Batch: 187145

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 160-11407-A-1 DU | Duplicate | Total/NA | Water | 9060 | |
| 160-11407-A-1 MS | Matrix Spike | Total/NA | Water | 9060 | |
| 160-11408-1 | B30T80 | Total/NA | Water | 9060 | |
| 160-11408-2 | B30T81 | Total/NA | Water | 9060 | |
| LCS 160-187145/5 | Lab Control Sample | Total/NA | Water | 9060 | |
| MB 160-187145/4 | Method Blank | Total/NA | Water | 9060 | |