

Tuesday, March 31, 2015

Bob Evans
CH2M HILL Plateau Remediation Company
2420 Stevens Center
Richland, WA 99352

Re: ALS Workorder: 1503231
Project Name: 200W Pump & Treat - FBR Micronutrient Analysis - Water
Project Number: F13-018

Dear Mr. Evans:

Four water samples were received from CH2M HILL Plateau Remediation Company, on 3/12/2015. The samples were scheduled for the following analysis:

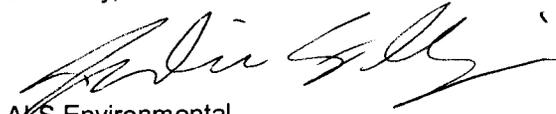
Metals

The results for these analyses are contained in the enclosed reports.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Thank you for your confidence in ALS Environmental. Should you have any questions, please call.

Sincerely,



ALS Environmental
Julie Ellingson
Project Manager

JME/jme
Enclosure(s):

ALS is accredited by the following accreditation bodies for various testing scopes in accordance with requirements of each accreditation body. All testing is performed under the laboratory management system, which is maintained to meet these requirement and regulations. Please contact the laboratory or accreditation body for the current scope testing parameters.

| ALS Laboratory Certifications | |
|-------------------------------|---------------------------------|
| Accreditation Body | License or Certification Number |
| Alaska (AK) | UST-086 |
| Alaska (AK) | CO01099 |
| Arizona (AZ) | AZ0742 |
| California (CA) | 06251CA |
| Colorado (CO) | CO01099 |
| Connecticut (CT) | PH-0232 |
| Florida (FL) | E87914 |
| Idaho (ID) | CO01099 |
| Kansas (KS) | E-10381 |
| Kentucky (KY) | 90137 |
| L-A-B (DoD ELAP/ISO 170250) | L2257 |
| Maryland (MD) | 285 |
| Missouri | 175 |
| Nebraska | NE-OS-24-13 |
| Nevada (NV) | CO000782008A |
| New Jersey (NJ) | CO003 |
| North Dakota (ND) | R-057 |
| Oklahoma | 1301 |
| Pennsylvania (PA) | 68-03116 |
| Tennessee (TN) | 2976 |
| Texas (TX) | T104704241 |
| Utah (UT) | CO01099 |
| Washington | C1280 |

Revised 8/15/2013

ALS Environmental -- FC

Sample Number(s) Cross-Reference Table

OrderNum: 1503231

Client Name: CH2M HILL Plateau Remediation Company

Client Project Name: 200W Pump & Treat - FBR Micronutrient Analysis - Water

Client Project Number: F13-018

Client PO Number: BOA 54854

| Client Sample Number | Lab Sample Number | COC Number | Matrix | Date Collected | Time Collected |
|----------------------|-------------------|------------|--------|----------------|----------------|
| B30K68 | 1503231-1 | | WATER | 10-Mar-15 | 11:00 |
| B30K63 | 1503231-2 | | WATER | 10-Mar-15 | 9:45 |
| B30K58 | 1503231-3 | | WATER | 10-Mar-15 | 9:35 |
| B30K54 | 1503231-4 | | WATER | 10-Mar-15 | 9:00 |

| | | | | |
|---|---|---|---------------------------------------|---|
| CH2M Hill Plateau Remediation Company | | CHAIN OF CUSTODY / SAMPLE ANALYSIS REQUEST | | PAGE 1 OF 1 |
| COLLECTOR <i>D. Floyd</i> | COMPANY CONTACT EVANS, RT | TELEPHONE NO. 373-7924 | PROJECT COORDINATOR EVANS, RT | PRICE CODE 7C |
| SAMPLING LOCATION 289-T, FBR-A Effluent, valve V25-Y40A1 | PROJECT DESIGNATION 200W Pump & Treat - FBR Micronutrient Analysis - Water | FIELD LOGBOOK NO. <i>HNF-N-451-8/12</i> | SAF NO. F13-018 | AIR QUALITY <input type="checkbox"/> |
| ICE CHEST NO. <i>6WS-268</i> | ACTUAL SAMPLE DEPTH (N/A) | COA 303110 | METHOD OF SHIPMENT FEDERAL EXPRESS | DATA TURNAROUND 15 Days / 15 Days |
| SHIPPED TO ALS Environmental Ft. Collins | OFFSITE PROPERTY NO. <i>5474</i> | BILL OF LADING/AIR BILL NO. <i>7731 01001732</i> | ORIGINAL | |

| | | | | | | | |
|--|--|-------------------------------|--------------------------|--------------------------|--------------------------|-----------------|---|
| MATRIX* A=Air DL=Drum L=Liquid S=Solids O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WT=Wipe X=Other | POSSIBLE SAMPLE HAZARDS/ REMARKS *Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR/TATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1. | PRESERVATION HNO3 to pH <2 | HOLDING TIME 6 Months | TYPE OF CONTAINER G/P | NO. OF CONTAINER(S) 1 | VOLUME 500mL | SAMPLE ANALYSIS SEE ITEM (1) IN SPECIAL INSTRUCTIONS |
| SAMPLE NO. B30K58 | MATRIX* WATER | SAMPLE DATE MAR 10 2015 | SAMPLE TIME 0935 | | | | |

2015-03-31
1503231
1503222
3-12-15

5474

7731 01001732

1503231

1503222

3-12-15

5474

| | | | | | |
|---|-------------------------------|---|-------------------------------|---|--|
| CHAIN OF POSSESSION | | SIGN/ PRINT NAMES | | SPECIAL INSTRUCTIONS | |
| RELINQUISHED BY/REMOVED FROM <i>D. Floyd</i> | DATE/TIME MAR 10 2015 1045 | RECEIVED BY/STORED IN SSU-1 | DATE/TIME MAR 10 2015 1045 | Filtering shall be performed by SGRP Field Sampling Services using a (0.45µm) filter while in the field. The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. TRVL-15-035 | |
| RELINQUISHED BY/REMOVED FROM SSU-1 | DATE/TIME MAR 11 2015 0900 | RECEIVED BY/STORED IN M.A. White/CHPRC | DATE/TIME MAR 11 2015 0900 | (L) 6020_METALS_ICPMS: COMMON {Aluminum, Chromium, Cobalt, Copper, Molybdenum, Selenium}; 6020_METALS_ICPMS: COMMON (Add-on) {Arsenic, Manganese, Nickel, Strontium, Zinc}; 6010_METALS_ICP: COMMON {Calcium, Iron, Magnesium}; 6010_METALS_ICP: COMMON (Add-on) {Boron, Phosphorus}; | |
| RELINQUISHED BY/REMOVED FROM <i>M.A. White</i> | DATE/TIME MAR 11 2015 1400 | RECEIVED BY/STORED IN C. Trimble | DATE/TIME 3-12-15 1000 | 035 | |
| RELINQUISHED BY/REMOVED FROM <i>FED EX</i> | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME | 035 | |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME | 035 | |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME | 035 | |
| RECEIVED BY | DATE/TIME | TITLE | DATE/TIME | 035 | |
| DISPOSAL METHOD | DISPOSAL METHOD | DISPOSED BY | DATE/TIME | 035 | |



ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client: CHPRC

Workorder No: 1503231

Project Manager: JE

Initials: CDY Date: 3-12-15

| | | | |
|---|--------------------------------------|--------------------------------------|-------------------------------------|
| 1. Does this project require any special handling in addition to standard ALS procedures? | | YES | <input checked="" type="radio"/> NO |
| 2. Are custody seals on shipping containers intact? | NONE | <input checked="" type="radio"/> YES | NO |
| 3. Are Custody seals on sample containers intact? | NONE | <input checked="" type="radio"/> YES | NO |
| 4. Is there a COC (Chain-of-Custody) present or other representative documents? | | <input checked="" type="radio"/> YES | NO |
| 5. Are the COC and bottle labels complete and legible? | | <input checked="" type="radio"/> YES | NO |
| 6. Is the COC in agreement with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.) | | <input checked="" type="radio"/> YES | NO |
| 7. Were airbills / shipping documents present and/or removable? | DROP OFF! | <input checked="" type="radio"/> YES | NO |
| 8. Are all aqueous samples requiring preservation preserved correctly? (excluding volatiles) | N/A | <input checked="" type="radio"/> YES | NO |
| 9. Are all aqueous non-preserved samples pH 4-9? | <input checked="" type="radio"/> N/A | YES | NO |
| 10. Is there sufficient sample for the requested analyses? | | <input checked="" type="radio"/> YES | NO |
| 11. Were all samples placed in the proper containers for the requested analyses? | | <input checked="" type="radio"/> YES | NO |
| 12. Are all samples within holding times for the requested analyses? | | <input checked="" type="radio"/> YES | NO |
| 13. Were all sample containers received intact? (not broken or leaking, etc.) | | <input checked="" type="radio"/> YES | NO |
| 14. Are all samples requiring no headspace (VOC, GRO, RSK/MEE, Rx CN/S, radon) headspace free? Size of bubble: ___ < green pea ___ > green pea | <input checked="" type="radio"/> N/A | YES | NO |
| 15. Do any water samples contain sediment? Amount of sediment: ___ dusting ___ moderate ___ heavy | Amount N/A | YES | <input checked="" type="radio"/> NO |
| 16. Were the samples shipped on ice? | | YES | <input checked="" type="radio"/> NO |
| 17. Were cooler temperatures measured at 0.1-6.0°C? IR gun used*: #2 #4 | RAD ONLY | YES | <input checked="" type="radio"/> NO |
| Cooler #: <u>1</u> | | | |
| Temperature (°C): <u>Amb</u> | | | |
| No. of custody seals on cooler: <u>2</u> | | | |
| External µR/hr reading: <u>11</u> | | | |
| Background µR/hr reading: <u>12</u> | | | |
| Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? <input checked="" type="radio"/> YES / NO / NA (If no, see Form 008.) | | | |

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16.

If applicable, was the client contacted? YES / NO / NA Contact: _____ Date/Time: _____

Project Manager Signature / Date: [Signature] 3/12/15

Form 201r24.xls (06/04/2012) IR Gun #2: Oakton, SN 29922500201-0066 IR Gun #4: Oakton, SN 2372220101-0002

ALS1503231

March 31, 2015

1503231

~~1503223~~ CAT
3-12-15

From: (509) 528-9426
Lesly Wall
CH2M
6267 Latah St.
6269 Latah St.
Richland, WA 99354

Origin ID: PSCA

FedEx
Express



151215022303UV

Ship Date: 11MAR15
ActWgt: 18.0 LB
CAD: 107066051/NET3610

Delivery Address Bar Code



SHIP TO: (970) 490-1511
Julie Ellingson
ALS Global
225 Commerce Drive

BILL THIRD PARTY

Ref # ptr# 5474
Invoice #
PO #
Dept #

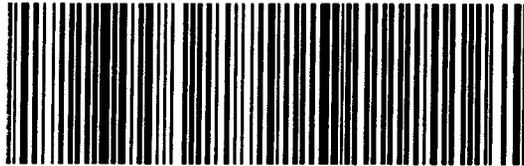
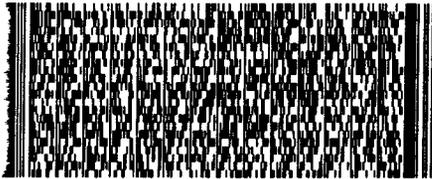
FORT COLLINS, CO 80524

THU - 12 MAR 10:30A
PRIORITY OVERNIGHT

TRK# 7731 0100 1732
0201

DSR
80524
CO-US
DEN

XH FTCA



537J1879AEE4B

11
2



Metals

Case Narrative

CH2M HILL Plateau Remediation Company

200W Pump & Treat – FBR Micronutrient Analysis – Water – F13-018

Work Order Number: 1503231

1. This report consists of 4 water samples.
2. The samples were received intact at ambient temperature by ALS on 03/12/15.
3. The samples were to be analyzed for dissolved metals. The samples had been filtered prior to receipt, and had a pH less than 2 upon receipt.
4. The samples were prepared and analyzed based on SW-846, 3rd Edition procedures.

For analysis by Trace ICP and ICP-MS, the samples were digested following method 3005A and the current revision of SOP 806.

5. Analysis by Trace ICP followed method 6010B and the current revision of SOP 834.

Analysis by ICP-MS followed method 6020A and the current revision of SOP 827.

6. All standards and solutions are NIST traceable and were used within their recommended shelf life.
7. The samples were prepared and analyzed within the established hold times.

All in house quality control procedures were followed, as described below.

8. General quality control procedures.
 - A preparation (method) blank and laboratory control sample were digested and analyzed with the samples in this digestion batch.
 - The preparation (method) blank associated with this digestion batch was below the reporting limit for the requested analytes. Sample results have been compared to the blank results.



- All laboratory control sample criteria were met.
- All initial and continuing calibration blanks were below the reporting limit for the requested analytes.
- All initial and continuing calibration verifications were within the acceptance criteria for the requested analytes.
- The interference check samples and high standard readbacks associated with Method 6010B were within acceptance criteria.
- The interference check samples associated with Method 6020A were analyzed.

9. Matrix specific quality control procedures.

Sample 1503231-1 was designated as the quality control sample for each analysis.

Similarity of matrix and therefore relevance of the QC results should not be automatically inferred for any sample other than the native sample selected for QC.

- A matrix spike and matrix spike duplicate were digested and analyzed with each batch. All acceptance criteria for accuracy were met.
- A sample duplicate and matrix spike duplicate were digested and analyzed with each batch. All acceptance criteria for precision were met.
- A serial dilution was analyzed with each ICP batch. All acceptance criteria were met.

10. It is a standard practice that samples for ICP-MS are analyzed at a dilution. The 10X factor can be considered an artifact of the prep and does not indicate a secondary dilution and is therefore not flagged as a dilution.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.



Jill Latelle
Inorganics Primary Data Reviewer

3/25/15
Date



Audie Ellinger
Inorganics Final Data Reviewer

3/30/15
Date



Inorganic Data Reporting Qualifiers

The following qualifiers are used as needed by the laboratory when reporting results of inorganic analyses.

- Result qualifier -- A "B" is entered if the reported value was obtained from a reading that was less than the Reporting Limit but greater than or equal to the Method Detection Limit (MDL). If the analyte was analyzed for but not detected a "U" is entered. For samples, negative values are reported as non-detects ("U" flagged). For blanks, if the absolute value of the negative value is above the MDL and below the reporting limit, then the result is "B" flagged.
- QC qualifier -- Specified entries and their meanings are as follows:
 - E - The reported value is estimated because of the presence of interference. An explanatory note may be included in the narrative.
 - M - Duplicate injection precision was not met.
 - N - Spiked sample recovery not within control limits. A post spike is analyzed for all ICP analyses when the matrix spike and or spike duplicate fail and the native sample concentration is less than four times the spike added concentration.
 - Z - Spiked recovery not within control limits. An explanatory note may be included in the narrative.
 - * - Duplicate analysis (relative percent difference) not within control limits.
 - S - SAR value is estimated as one or more analytes used in the calculation were not detected above the detection limit.
 - C - The analyte was detected in both the sample and the associated QC blank, and the sample concentration was $\leq 5X$ the blank concentration.
 - D - Analyte was reported at a secondary dilution factor, typically $DF > 1$ (i.e., the primary preparation required dilution to either bring the analyte within the calibration range or to minimize interference). Required for organics/wetchem if the sample was diluted.

Dissolved ICP Metals**Method SW6010B****Sample Results**

Lab Name: ALS Environmental -- FC

Work Order Number: 1503231

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: 200W Pump & Treat - FBR Micronutrient Analysis - Water F13-0

| | |
|-----------|-----------|
| Field ID: | B30K68 |
| Lab ID: | 1503231-1 |

Sample Matrix: WATER

Prep Batch: IP150319-2

Analyst: Steve Workman

% Moisture: N/A

QCBatchID: IP150319-2-6

Sample Aliquot: 50 ml

Date Collected: 10-Mar-15

Run ID: IT150323-1A3

Final Volume: 50 ml

Date Extracted: 19-Mar-15

Cleanup: NONE

Result Units: UG/L

Date Analyzed: 23-Mar-15

Basis: As Received

Clean DF: 1

Analysis ReqCode: 6010:Add on B,P

Prep Method: SW3005 Rev A

File Name: 150323A.

| CASNO | Target Analyte | Dilution Factor | Result | RptLimit/ LOQ/LOD | MDL/DL | Result Qualifier | EPA Qualifier |
|-----------|----------------|-----------------|--------|----------------------|--------|------------------|---------------|
| 7440-42-8 | BORON | 1 | 49 | 30 | 6.8 | | |
| 7440-70-2 | CALCIUM | 1 | 61000 | 1000 | 18 | | |
| 7439-89-6 | IRON | 1 | 16 | 50 | 16 | U | |
| 7439-95-4 | MAGNESIUM | 1 | 21000 | 750 | 22 | | |
| 7723-14-0 | PHOSPHORUS | 1 | 1200 | 50 | 14 | | |

Data Package ID: *IT1503231-1*

Dissolved ICP Metals**Method SW6010B****Sample Results**

Lab Name: ALS Environmental -- FC

Work Order Number: 1503231

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: 200W Pump & Treat - FBR Micronutrient Analysis - Water F13-0

| | |
|-----------|-----------|
| Field ID: | B30K63 |
| Lab ID: | 1503231-2 |

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 10-Mar-15

Date Extracted: 19-Mar-15

Date Analyzed: 23-Mar-15

Prep Method: SW3005 Rev A

Prep Batch: IP150319-2

QCBatchID: IP150319-2-6

Run ID: IT150323-1A3

Cleanup: NONE

Basis: As Received

File Name: 150323A.

Analyst: Steve Workman

Sample Aliquot: 50 ml

Final Volume: 50 ml

Result Units: UG/L

Clean DF: 1

Analysis ReqCode: 6010:Add on B,P

| CASNO | Target Analyte | Dilution Factor | Result | RptLimit/ LOQ/LOD | MDL/DL | Result Qualifier | EPA Qualifier |
|-----------|----------------|-----------------|--------|----------------------|--------|------------------|---------------|
| 7440-42-8 | BORON | 1 | 47 | 30 | 6.8 | | |
| 7440-70-2 | CALCIUM | 1 | 60000 | 1000 | 18 | | |
| 7439-89-6 | IRON | 1 | 78 | 50 | 16 | | |
| 7439-95-4 | MAGNESIUM | 1 | 21000 | 750 | 22 | | |
| 7723-14-0 | PHOSPHORUS | 1 | 480 | 50 | 14 | | |

Data Package ID: *IT1503231-1*

Dissolved ICP Metals**Method SW6010B****Sample Results**

Lab Name: ALS Environmental -- FC

Work Order Number: 1503231

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: 200W Pump & Treat - FBR Micronutrient Analysis - Water F13-0

| | |
|-----------|-----------|
| Field ID: | B30K58 |
| Lab ID: | 1503231-3 |

Sample Matrix: WATER

Prep Batch: IP150319-2

Analyst: Steve Workman

% Moisture: N/A

QCBatchID: IP150319-2-6

Sample Aliquot: 50 ml

Date Collected: 10-Mar-15

Run ID: IT150323-1A3

Final Volume: 50 ml

Date Extracted: 19-Mar-15

Cleanup: NONE

Result Units: UG/L

Date Analyzed: 23-Mar-15

Basis: As Received

Clean DF: 1

Analysis ReqCode: 6010:Add on B,P

Prep Method: SW3005 Rev A

File Name: 150323A.

| CASNO | Target Analyte | Dilution Factor | Result | RptLimit/ LOQ/LOD | MDL/DL | Result Qualifier | EPA Qualifier |
|-----------|----------------|-----------------|--------|----------------------|--------|------------------|---------------|
| 7440-42-8 | BORON | 1 | 48 | 30 | 6.8 | | |
| 7440-70-2 | CALCIUM | 1 | 59000 | 1000 | 18 | | |
| 7439-89-6 | IRON | 1 | 120 | 50 | 16 | | |
| 7439-95-4 | MAGNESIUM | 1 | 21000 | 750 | 22 | | |
| 7723-14-0 | PHOSPHORUS | 1 | 380 | 50 | 14 | | |

Data Package ID: *IT1503231-1*

Dissolved ICP Metals**Method SW6010B****Sample Results**

Lab Name: ALS Environmental -- FC

Work Order Number: 1503231

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: 200W Pump & Treat - FBR Micronutrient Analysis - Water F13-0

| | |
|-----------|-----------|
| Field ID: | B30K54 |
| Lab ID: | 1503231-4 |

Sample Matrix: WATER

Prep Batch: IP150319-2

Analyst: Steve Workman

% Moisture: N/A

QCBatchID: IP150319-2-6

Sample Aliquot: 50 ml

Date Collected: 10-Mar-15

Run ID: IT150323-1A3

Final Volume: 50 ml

Date Extracted: 19-Mar-15

Cleanup: NONE

Result Units: UG/L

Date Analyzed: 23-Mar-15

Basis: As Received

Clean DF: 1

Analysis ReqCode: 6010:Add on B,P

Prep Method: SW3005 Rev A

File Name: 150323A.

| CASNO | Target Analyte | Dilution Factor | Result | RptLimit/ LOQ/LOD | MDL/DL | Result Qualifier | EPA Qualifier |
|-----------|----------------|-----------------|--------|----------------------|--------|------------------|---------------|
| 7440-42-8 | BORON | 1 | 27 | 30 | 6.8 | B | |
| 7440-70-2 | CALCIUM | 1 | 60000 | 1000 | 18 | | |
| 7439-89-6 | IRON | 1 | 16 | 50 | 16 | U | |
| 7439-95-4 | MAGNESIUM | 1 | 21000 | 750 | 22 | | |
| 7723-14-0 | PHOSPHORUS | 1 | 14 | 50 | 14 | U | |

Data Package ID: *IT1503231-1*

Dissolved ICPMS Metals**Method SW6020A****Sample Results**

Lab Name: ALS Environmental -- FC

Work Order Number: 1503231

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: 200W Pump & Treat - FBR Micronutrient Analysis - Water F13-0

| | |
|-----------|-----------|
| Field ID: | B30K68 |
| Lab ID: | 1503231-1 |

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 10-Mar-15

Date Extracted: 19-Mar-15

Date Analyzed: 20-Mar-15

Prep Method: SW3005 Rev A

Prep Batch: IP150319-2

QCBatchID: IP150319-2-2

Run ID: IM150320-11A2

Cleanup: NONE

Basis: As Received

File Name: 056SMPL_

Analyst: Brent A. Stanfield

Sample Aliquot: 50 ml

Final Volume: 50 ml

Result Units: UG/L

Clean DF: 1

Analysis ReqCode: 6020:Common

| CASNO | Target Analyte | Dilution Factor | Result | RptLimit/ LOQ/LOD | MDL/DL | Result Qualifier | EPA Qualifier |
|-----------|----------------|-----------------|--------|----------------------|--------|------------------|---------------|
| 7429-90-5 | ALUMINUM | 10 | 26 | 50 | 19 | B | |
| 7440-38-2 | ARSENIC | 10 | 0.36 | 2 | 0.36 | U | |
| 7440-47-3 | CHROMIUM | 10 | 1.8 | 10 | 0.74 | B | |
| 7440-48-4 | COBALT | 10 | 3.2 | 1 | 0.21 | | |
| 7440-50-8 | COPPER | 10 | 10 | 8 | 2 | | |
| 7439-96-5 | MANGANESE | 10 | 11 | 5 | 0.74 | | |
| 7439-98-7 | MOLYBDENUM | 10 | 34 | 1 | 0.44 | | |
| 7440-02-0 | NICKEL | 10 | 9.2 | 5 | 2.3 | C | |
| 7782-49-2 | SELENIUM | 10 | 2.6 | 1 | 0.42 | | |
| 7440-24-6 | STRONTIUM | 10 | 230 | 1 | 0.38 | | |
| 7440-66-6 | ZINC | 10 | 7.1 | 20 | 7.1 | U | |

Data Package ID: IM1503231-1

Dissolved ICPMS Metals**Method SW6020A****Sample Results**

Lab Name: ALS Environmental -- FC

Work Order Number: 1503231

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: 200W Pump & Treat - FBR Micronutrient Analysis - Water F13-0

| | |
|-----------|-----------|
| Field ID: | B30K63 |
| Lab ID: | 1503231-2 |

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 10-Mar-15

Date Extracted: 19-Mar-15

Date Analyzed: 20-Mar-15

Prep Method: SW3005 Rev A

Prep Batch: IP150319-2

QCBatchID: IP150319-2-2

Run ID: IM150320-11A2

Cleanup: NONE

Basis: As Received

File Name: 061SMPL_

Analyst: Brent A. Stanfield

Sample Aliquot: 50 ml

Final Volume: 50 ml

Result Units: UG/L

Clean DF: 1

Analysis ReqCode: 6020:Common

| CASNO | Target Analyte | Dilution Factor | Result | RptLimit/ LOQ/LOD | MDL/DL | Result Qualifier | EPA Qualifier |
|-----------|----------------|-----------------|--------|----------------------|--------|------------------|---------------|
| 7429-90-5 | ALUMINUM | 10 | 22 | 50 | 19 | B | |
| 7440-38-2 | ARSENIC | 10 | 1.4 | 2 | 0.36 | B | |
| 7440-47-3 | CHROMIUM | 10 | 3.2 | 10 | 0.74 | B | |
| 7440-48-4 | COBALT | 10 | 20 | 1 | 0.21 | | |
| 7440-50-8 | COPPER | 10 | 2.6 | 8 | 2 | B | |
| 7439-96-5 | MANGANESE | 10 | 93 | 5 | 0.74 | | |
| 7439-98-7 | MOLYBDENUM | 10 | 32 | 1 | 0.44 | | |
| 7440-02-0 | NICKEL | 10 | 12 | 5 | 2.3 | C | |
| 7782-49-2 | SELENIUM | 10 | 2.9 | 1 | 0.42 | | |
| 7440-24-6 | STRONTIUM | 10 | 230 | 1 | 0.38 | | |
| 7440-66-6 | ZINC | 10 | 24 | 20 | 7.1 | | |

Data Package ID: IM1503231-1

Dissolved ICPMS Metals**Method SW6020A****Sample Results**

Lab Name: ALS Environmental -- FC

Work Order Number: 1503231

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: 200W Pump & Treat - FBR Micronutrient Analysis - Water F13-0

| | |
|-----------|-----------|
| Field ID: | B30K58 |
| Lab ID: | 1503231-3 |

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 10-Mar-15

Date Extracted: 19-Mar-15

Date Analyzed: 20-Mar-15

Prep Method: SW3005 Rev A

Prep Batch: IP150319-2

QCBatchID: IP150319-2-2

Run ID: IM150320-11A2

Cleanup: NONE

Basis: As Received

File Name: 062SMPL_

Analyst: Brent A. Stanfield

Sample Aliquot: 50 ml

Final Volume: 50 ml

Result Units: UG/L

Clean DF: 1

Analysis ReqCode: 6020:Common

| CASNO | Target Analyte | Dilution Factor | Result | RptLimit/ LOQ/LOD | MDL/DL | Result Qualifier | EPA Qualifier |
|-----------|----------------|-----------------|--------|----------------------|--------|------------------|---------------|
| 7429-90-5 | ALUMINUM | 10 | 24 | 50 | 19 | B | |
| 7440-38-2 | ARSENIC | 10 | 1.6 | 2 | 0.36 | B | |
| 7440-47-3 | CHROMIUM | 10 | 4.4 | 10 | 0.74 | B | |
| 7440-48-4 | COBALT | 10 | 21 | 1 | 0.21 | | |
| 7440-50-8 | COPPER | 10 | 3.2 | 8 | 2 | B | |
| 7439-96-5 | MANGANESE | 10 | 93 | 5 | 0.74 | | |
| 7439-98-7 | MOLYBDENUM | 10 | 33 | 1 | 0.44 | | |
| 7440-02-0 | NICKEL | 10 | 11 | 5 | 2.3 | C | |
| 7782-49-2 | SELENIUM | 10 | 1.6 | 1 | 0.42 | | |
| 7440-24-6 | STRONTIUM | 10 | 230 | 1 | 0.38 | | |
| 7440-66-6 | ZINC | 10 | 22 | 20 | 7.1 | | |

Data Package ID: IM1503231-1

Dissolved ICPMS Metals**Method SW6020A****Sample Results**

Lab Name: ALS Environmental -- FC

Work Order Number: 1503231

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: 200W Pump & Treat - FBR Micronutrient Analysis - Water F13-0

| | |
|-----------|-----------|
| Field ID: | B30K54 |
| Lab ID: | 1503231-4 |

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 10-Mar-15

Date Extracted: 19-Mar-15

Date Analyzed: 20-Mar-15

Prep Method: SW3005 Rev A

Prep Batch: IP150319-2

QCBatchID: IP150319-2-2

Run ID: IM150320-11A2

Cleanup: NONE

Basis: As Received

File Name: 066SMPL_

Analyst: Brent A. Stanfield

Sample Aliquot: 50 ml

Final Volume: 50 ml

Result Units: UG/L

Clean DF: 1

Analysis ReqCode: 6020:Common

| CASNO | Target Analyte | Dilution Factor | Result | RptLimit/ LOQ/LOD | MDL/DL | Result Qualifier | EPA Qualifier |
|-----------|----------------|-----------------|--------|----------------------|--------|------------------|---------------|
| 7429-90-5 | ALUMINUM | 10 | 19 | 50 | 19 | U | |
| 7440-38-2 | ARSENIC | 10 | 3.1 | 2 | 0.36 | | |
| 7440-47-3 | CHROMIUM | 10 | 22 | 10 | 0.74 | | |
| 7440-48-4 | COBALT | 10 | 0.21 | 1 | 0.21 | U | |
| 7440-50-8 | COPPER | 10 | 2 | 8 | 2 | U | |
| 7439-96-5 | MANGANESE | 10 | 0.74 | 5 | 0.74 | U | |
| 7439-98-7 | MOLYBDENUM | 10 | 3.6 | 1 | 0.44 | | |
| 7440-02-0 | NICKEL | 10 | 3 | 5 | 2.3 | B,C | |
| 7782-49-2 | SELENIUM | 10 | 21 | 1 | 0.42 | | |
| 7440-24-6 | STRONTIUM | 10 | 230 | 1 | 0.38 | | |
| 7440-66-6 | ZINC | 10 | 7.1 | 20 | 7.1 | U | |

Data Package ID: IM1503231-1

ALS1503231
ICP Metals

March 31, 2015

Method SW6010B
Method Blank

Lab Name: ALS Environmental -- FC

Work Order Number: 1503231

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: 200W Pump & Treat - FBR Micronutrient Analysis - Water F13-0

Lab ID: FP150319-2MB

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 19-Mar-15

Date Analyzed: 23-Mar-15

Prep Batch: IP150319-2

QCBatchID: IP150319-2-6

Run ID: IT150323-1A3

Cleanup: NONE

Basis: N/A

File Name: 150323A.

Sample Aliquot: 50 ml

Final Volume: 50 ml

Result Units: UG/L

Clean DF: 1

| CASNO | Target Analyte | DF | Result | RptLimit/ LOQ/LOD | MDL/DL | Result Qualifier | EPA Qualifier |
|-----------|----------------|----|--------|----------------------|--------|---------------------|------------------|
| 7440-42-8 | BORON | 1 | -12 | 30 | 6.8 | B | |
| 7440-70-2 | CALCIUM | 1 | 18 | 1000 | 18 | U | |
| 7439-89-6 | IRON | 1 | 16 | 50 | 16 | U | |
| 7439-95-4 | MAGNESIUM | 1 | 22 | 750 | 22 | U | |
| 7723-14-0 | PHOSPHORUS | 1 | 14 | 50 | 14 | U | |

Data Package ID: IT1503231-1

Date Printed: Tuesday, March 24, 2015

ALS Environmental -- FC

Page 1 of 1

LIMS Version: 6.754

ICP Metals**Method SW6010B****Laboratory Control Sample**

Lab Name: ALS Environmental -- FC

Work Order Number: 1503231

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: 200W Pump & Treat - FBR Micronutrient Analysis - Water F13-0

Lab ID: FP150319-2LCS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 03/19/2015

Date Analyzed: 03/23/2015

Prep Method: SW3005A

Prep Batch: IP150319-2

QCBatchID: IP150319-2-6

Run ID: IT150323-1A3

Cleanup: NONE

Basis: N/A

File Name: 150323A.

Sample Aliquot: 50 ml

Final Volume: 50 ml

Result Units: UG/L

Clean DF: 1

| CASNO | Target Analyte | Spike Added | LCS Result | Reporting Limit | Result Qualifier | LCS % Rec. | Control Limits |
|-----------|----------------|-------------|------------|-----------------|------------------|------------|----------------|
| 7440-42-8 | BORON | 1000 | 1050 | 30 | | 105 | 80 - 120% |
| 7440-70-2 | CALCIUM | 40000 | 41100 | 1000 | | 103 | 80 - 120% |
| 7439-89-6 | IRON | 1000 | 1040 | 50 | | 104 | 80 - 120% |
| 7439-95-4 | MAGNESIUM | 40000 | 41500 | 750 | | 104 | 80 - 120% |
| 7723-14-0 | PHOSPHORUS | 10000 | 10300 | 50 | | 103 | 80 - 120% |

Data Package ID: *IT1503231-1*

ICP Metals

Method SW6010B

Matrix Spike And Matrix Spike Duplicate

Lab Name: ALS Environmental -- FC

Work Order Number: 1503231

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: 200W Pump & Treat - FBR Micronutrient Analysis - Water F

Field ID: B30K68

LabID: 1503231-1MS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 10-Mar-15

Date Extracted: 19-Mar-15

Date Analyzed: 23-Mar-15

Prep Method: SW3005 Rev A

Prep Batch: IP150319-2

QCBatchID: IP150319-2-6

Run ID: IT150323-1A3

Cleanup: NONE

Basis: As Received

Sample Aliquot: 50 ml

Final Volume: 50 ml

Result Units: UG/L

File Name: 150323A.

| CASNO | Target Analyte | Sample Result | Samp Qual | MS Result | MS Qual | Reporting Limit | Spike Added | MS % Rec. | Control Limits |
|-----------|----------------|---------------|-----------|-----------|---------|-----------------|-------------|-----------|----------------|
| 7440-42-8 | BORON | 49 | | 1080 | | 30 | 1000 | 103 | 80 - 120% |
| 7440-70-2 | CALCIUM | 61000 | | 96500 | | 1000 | 40000 | 89 | 80 - 120% |
| 7439-89-6 | IRON | 16 | U | 895 | | 50 | 1000 | 89 | 80 - 120% |
| 7439-95-4 | MAGNESIUM | 21000 | | 60300 | | 750 | 40000 | 98 | 80 - 120% |
| 7723-14-0 | PHOSPHORUS | 1200 | | 11000 | | 50 | 10000 | 99 | 80 - 120% |

Field ID: B30K68

LabID: 1503231-1MSD

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 10-Mar-15

Date Extracted: 19-Mar-15

Date Analyzed: 23-Mar-15

Prep Method: SW3005 Rev A

Prep Batch: IP150319-2

QCBatchID: IP150319-2-6

Run ID: IT150323-1A3

Cleanup: NONE

Basis: As Received

Sample Aliquot: 50 ml

Final Volume: 50 ml

Result Units: UG/L

File Name: 150323A.

| CASNO | Target Analyte | MSD Result | MSD Qual | Spike Added | MSD % Rec. | Reporting Limit | RPD Limit | RPD |
|-----------|----------------|------------|----------|-------------|------------|-----------------|-----------|-----|
| 7440-42-8 | BORON | 1080 | | 1000 | 103 | 30 | 20 | 0 |
| 7440-70-2 | CALCIUM | 97300 | | 40000 | 91 | 1000 | 20 | 1 |
| 7439-89-6 | IRON | 888 | | 1000 | 89 | 50 | 20 | 1 |
| 7439-95-4 | MAGNESIUM | 60500 | | 40000 | 98 | 750 | 20 | 0 |
| 7723-14-0 | PHOSPHORUS | 11000 | | 10000 | 99 | 50 | 20 | 0 |

Data Package ID: IT1503231-1

ICPMS Metals**Method SW6020A****Method Blank****Lab Name:** ALS Environmental -- FC**Work Order Number:** 1503231**Client Name:** CH2M HILL Plateau Remediation Company**ClientProject ID:** 200W Pump & Treat - FBR Micronutrient Analysis - Water F13-0**Lab ID:** FP150319-2MB**Sample Matrix:** WATER**% Moisture:** N/A**Date Collected:** N/A**Date Extracted:** 19-Mar-15**Date Analyzed:** 20-Mar-15**Prep Batch:** IP150319-2**QCBatchID:** IP150319-2-2**Run ID:** IM150320-11A2**Cleanup:** NONE**Basis:** N/A**File Name:** 054SMPL_**Sample Aliquot:** 50 ml**Final Volume:** 50 ml**Result Units:** UG/L**Clean DF:** 1

| CASNO | Target Analyte | DF | Result | RptLimit/ LOQ/LOD | MDL/DL | Result Qualifier | EPA Qualifier |
|-----------|----------------|----|--------|----------------------|--------|---------------------|------------------|
| 7429-90-5 | ALUMINUM | 10 | 19 | 50 | 19 | U | |
| 7440-38-2 | ARSENIC | 10 | 0.36 | 2 | 0.36 | U | |
| 7440-47-3 | CHROMIUM | 10 | 0.74 | 10 | 0.74 | U | |
| 7440-48-4 | COBALT | 10 | 0.21 | 1 | 0.21 | U | |
| 7440-50-8 | COPPER | 10 | 2 | 8 | 2 | U | |
| 7439-96-5 | MANGANESE | 10 | 0.74 | 5 | 0.74 | U | |
| 7439-98-7 | MOLYBDENUM | 10 | 0.53 | 1 | 0.44 | B | |
| 7440-02-0 | NICKEL | 10 | 3.3 | 5 | 2.3 | B | |
| 7782-49-2 | SELENIUM | 10 | 0.42 | 1 | 0.42 | U | |
| 7440-24-6 | STRONTIUM | 10 | 0.38 | 1 | 0.38 | U | |
| 7440-66-6 | ZINC | 10 | 7.1 | 20 | 7.1 | U | |

Data Package ID: IM1503231-1

ALS1503231
ICPMS Metals

March 31, 2015

Method SW6020A
Laboratory Control Sample

Lab Name: ALS Environmental -- FC

Work Order Number: 1503231

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: 200W Pump & Treat - FBR Micronutrient Analysis - Water F13-0

Lab ID: FM150319-2LCS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 03/19/2015

Date Analyzed: 03/20/2015

Prep Method: SW3005A

Prep Batch: IP150319-2

QCBatchID: IP150319-2-2

Run ID: IM150320-11A2

Cleanup: NONE

Basis: N/A

File Name: 055SMPL_

Sample Aliquot: 50 ml

Final Volume: 50 ml

Result Units: UG/L

Clean DF: 1

| CASNO | Target Analyte | Spike Added | LCS Result | Reporting Limit | Result Qualifier | LCS % Rec. | Control Limits |
|-----------|----------------|-------------|------------|-----------------|------------------|------------|----------------|
| 7429-90-5 | ALUMINUM | 5000 | 4920 | 50 | | 98 | 80 - 120% |
| 7440-38-2 | ARSENIC | 100 | 109 | 2 | | 109 | 80 - 120% |
| 7440-47-3 | CHROMIUM | 500 | 486 | 10 | | 97 | 80 - 120% |
| 7440-48-4 | COBALT | 100 | 101 | 1 | | 101 | 80 - 120% |
| 7440-50-8 | COPPER | 1000 | 1010 | 8 | | 101 | 80 - 120% |
| 7439-96-5 | MANGANESE | 100 | 101 | 5 | | 101 | 80 - 120% |
| 7439-98-7 | MOLYBDENUM | 100 | 98.2 | 1 | | 98 | 80 - 120% |
| 7440-02-0 | NICKEL | 500 | 501 | 5 | | 100 | 80 - 120% |
| 7782-49-2 | SELENIUM | 100 | 103 | 1 | | 103 | 80 - 120% |
| 7440-24-6 | STRONTIUM | 100 | 101 | 1 | | 101 | 80 - 120% |
| 7440-66-6 | ZINC | 2000 | 2030 | 20 | | 102 | 80 - 120% |

Data Package ID: IM1503231-1

ICPMS Metals

Method SW6020A

Matrix Spike And Matrix Spike Duplicate

Lab Name: ALS Environmental -- FC

Work Order Number: 1503231

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: 200W Pump & Treat - FBR Micronutrient Analysis - Water F

Field ID: B30K68

LabID: 1503231-1MS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 10-Mar-15

Date Extracted: 19-Mar-15

Date Analyzed: 20-Mar-15

Prep Method: SW3005 Rev A

Prep Batch: IP150319-2

QCBatchID: IP150319-2-2

Run ID: IM150320-11A2

Cleanup: NONE

Basis: As Received

Sample Aliquot: 50 ml

Final Volume: 50 ml

Result Units: UG/L

File Name: 059SMPL_

| CASNO | Target Analyte | Sample Result | Samp Qual | MS Result | MS Qual | Reporting Limit | Spike Added | MS % Rec. | Control Limits |
|-----------|----------------|---------------|-----------|-----------|---------|-----------------|-------------|-----------|----------------|
| 7429-90-5 | ALUMINUM | 26 | B | 4790 | | 50 | 5000 | 95 | 75 - 125% |
| 7440-38-2 | ARSENIC | 0.36 | U | 109 | | 2 | 100 | 109 | 75 - 125% |
| 7440-47-3 | CHROMIUM | 1.8 | B | 483 | | 10 | 500 | 96 | 75 - 125% |
| 7440-48-4 | COBALT | 3.2 | | 102 | | 1 | 100 | 99 | 75 - 125% |
| 7440-50-8 | COPPER | 10 | | 994 | | 8 | 1000 | 98 | 75 - 125% |
| 7439-96-5 | MANGANESE | 11 | | 111 | | 5 | 100 | 100 | 75 - 125% |
| 7439-98-7 | MOLYBDENUM | 34 | | 132 | | 1 | 100 | 98 | 75 - 125% |
| 7440-02-0 | NICKEL | 9.2 | C | 496 | | 5 | 500 | 97 | 75 - 125% |
| 7782-49-2 | SELENIUM | 2.6 | | 103 | | 1 | 100 | 101 | 75 - 125% |
| 7440-24-6 | STRONTIUM | 230 | | 320 | | 1 | 100 | 88 | 75 - 125% |
| 7440-66-6 | ZINC | 7.1 | U | 1970 | | 20 | 2000 | 99 | 75 - 125% |

Data Package ID: *IM1503231-1*

ICPMS Metals

Method SW6020A

Matrix Spike And Matrix Spike Duplicate

Lab Name: ALS Environmental -- FC

Work Order Number: 1503231

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: 200W Pump & Treat - FBR Micronutrient Analysis - Water F

| |
|---------------------|
| Field ID: B30K68 |
| LabID: 1503231-1MSD |

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 10-Mar-15

Date Extracted: 19-Mar-15

Date Analyzed: 20-Mar-15

Prep Method: SW3005 Rev A

Prep Batch: IP150319-2

QCBatchID: IP150319-2-2

Run ID: IM150320-11A2

Cleanup: NONE

Basis: As Received

Sample Aliquot: 50 ml

Final Volume: 50 ml

Result Units: UG/L

File Name: 060SMPL_

| CASNO | Target Analyte | MSD Result | MSD Qual | Spike Added | MSD % Rec. | Reporting Limit | RPD Limit | RPD |
|-----------|----------------|------------|----------|-------------|------------|-----------------|-----------|-----|
| 7429-90-5 | ALUMINUM | 4710 | | 5000 | 94 | 50 | 20 | 2 |
| 7440-38-2 | ARSENIC | 110 | | 100 | 110 | 2 | 20 | 1 |
| 7440-47-3 | CHROMIUM | 482 | | 500 | 96 | 10 | 20 | 0 |
| 7440-48-4 | COBALT | 102 | | 100 | 99 | 1 | 20 | 0 |
| 7440-50-8 | COPPER | 998 | | 1000 | 99 | 8 | 20 | 0 |
| 7439-96-5 | MANGANESE | 114 | | 100 | 103 | 5 | 20 | 2 |
| 7439-98-7 | MOLYBDENUM | 131 | | 100 | 97 | 1 | 20 | 1 |
| 7440-02-0 | NICKEL | 506 | | 500 | 99 | 5 | 20 | 2 |
| 7782-49-2 | SELENIUM | 106 | | 100 | 103 | 1 | 20 | 3 |
| 7440-24-6 | STRONTIUM | 318 | | 100 | 86 | 1 | 20 | 1 |
| 7440-66-6 | ZINC | 1980 | | 2000 | 99 | 20 | 20 | 0 |

Data Package ID: IM1503231-1