



Wednesday, July 20, 2016

Laine Sumner
CH2M HILL Plateau Remediation Company
2420 Stevens Center
Richland, WA 99352

Re: ALS Workorder: 1606551
Project Name: 200W Pump & Treat - Extraction Well Water Sampling
Project Number: F13-002

Dear Ms. Sumner:

Two water samples were received from CH2M HILL Plateau Remediation Company, on 6/30/2016. 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,

A handwritten signature in black ink, appearing to read 'Julie Ellingson', written over a white background.

ALS Environmental
Julie Ellingson
Project Manager

ALS Environmental – Fort Collins 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 Environmental – Fort Collins	
Accreditation Body	License or Certification Number
AIHA	214884
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
Louisiana (LA)	05057
Maryland (MD)	285
Missouri (MO)	175
Nebraska(NE)	NE-OS-24-13
Nevada (NV)	CO000782008A
New York (NY)	12036
North Dakota (ND)	R-057
Oklahoma (OK)	1301
Pennsylvania (PA)	68-03116
Tennessee (TN)	2976
Texas (TX)	T104704241
Utah (UT)	CO01099
Washington (WA)	C1280

ALS Environmental -- FC

Sample Number(s) Cross-Reference Table

OrderNum: 1606551
Client Name: CH2M HILL Plateau Remediation Company
Client Project Name: 200W Pump & Treat - Extraction Well Water Sampling
Client Project Number: F13-002
Client PO Number: BOA 54854

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
B35JV3	1606551-1		WATER	28-Jun-16	12:30
B35K17	1606551-2		WATER	28-Jun-16	12:10

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F13-002-2075	PAGE 1 OF 1
COLLECTOR CHRIS FULTON CHPRC	COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR SUMNER, LC	PRICE CODE C05	DATA TURNAROUND 7 Days / 7 Days
SAMPLING LOCATION 299-E33-344, YE28 Wk 6	PROJECT DESIGNATION 200W Pump & Treat - Extraction Well Water Sampling	FIELD LOGBOOK NO. HNF-N-491-15	SAF NO. F13-002	AIR QUALITY <input type="checkbox"/>	METHOD OF SHIPMENT FEDERAL EXPRESS
ICE CHEST NO. 6005-472	ACTUAL SAMPLE DEPTH N/A	OFFSITE PROPERTY NO. 6780	COA 303111	BILL OF LADING/AIR BILL NO. 7766 2824 9617	
SHIPPED TO ALS Environmental Ft. Collins	1606551				

PRESERVATION	HOLDING TIME	TYPE OF CONTAINER	NO. OF CONTAINER(S)	VOLUME	SAMPLE ANALYSIS
HNO3 to pH <2	6 Months	G/P	1	125mL	SEE ITEM (1) IN SPECIAL INSTRUCTIONS
SPECIAL HANDLING AND/OR STORAGE					

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	RECEIVED BY/STORED IN	DATE/TIME
B35JV3 ①	WATER	JUN 28 2016	1240	Leahy Wash	JUN 28 2016 1246
			1400	FEDEX	
				Q Trumble C	6/30/16 0950

CHAIN OF POSSESSION	SIGN/ PRINT NAMES	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM CHRIS FULTON CHPRC		RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM		RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM		RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM		RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS
TRVL-16-137
(1) 6010_METALS_ICP: COMMON {Calcium, Iron, Magnesium, Potassium, Sodium}; 6010_METALS_ICP: COMMON (Add-on) {Boron}; 6020_METALS_ICPMS: COMMON {Aluminum, Cadmium, Chromium, Cobalt, Copper, Molybdenum, Selenium}; 6020_METALS_ICPMS: COMMON (Add-on) {Arsenic, Manganese, Nickel, Uranium, Zinc};

LABORATORY SECTION RECEIVED BY _____ DATE/TIME _____

FINAL SAMPLE DISPOSITION DISPOSAL METHOD _____ DATE/TIME _____

TRVL NUM = TRVL-16-137
FSR ID = FSR32141
PRINTED ON 5/5/2016
A-6003-618 (REV 2)

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F13-002-2130	PAGE 1 OF 1
COLLECTOR	CHRIS FULTON CHPRC	COMPANY CONTACT	SUMNER, LC	TELEPHONE NO.	376-3922
SAMPLING LOCATION	299-E33-350, YE29 Wk 6	PROJECT DESIGNATION	200W Pump & Treat - Extraction Well Water Sampling		
ICE CHEST NO.	605-472	FIELD LOGBOOK NO.	HNF-N-491-15	ACTUAL SAMPLE DEPTH	N/A
SHIPPED TO	ALS Environmental Ft. Collins	OFFSITE PROPERTY NO.	6780	COA	303111
MATRIX*	A=Air DL=Drum L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	PRESERVATION	HNO3 to pH <2	COA	303111
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. N/A	HOLDING TIME	6 Months	SAF NO.	F13-002
SPECIAL HANDLING AND/OR STORAGE		TYPE OF CONTAINER	G/P	PROJECT COORDINATOR	SUMNER, LC
		NO. OF CONTAINER(S)	1	METHOD OF SHIPMENT	FEDERAL EXPRESS
		VOLUME	125ml	PRICE CODE	C05
		SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	AIR QUALITY	<input type="checkbox"/>
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	BILL OF LADING/AIR BILL NO.	7766 2824967
B35K17	WATER	JUN 28 2016	1210		

RELINQUISHED BY/REMOVED FROM	DATE/TIME	SIGN/ PRINT NAMES	RECEIVED BY/STORED IN	DATE/TIME	SPECIAL INSTRUCTIONS
CHRIS FULTON CHPRC	JUN 28 2016 1246	Leah West CHPRC	Leah West CHPRC	JUN 28 2016 1246	TRVL-16-137 (1) 6010_METALS_ICP: COMMON {Calcium, Iron, Magnesium, Potassium, Sodium}; 6010_METALS_ICP: COMMON (Add-on) {Boron}; 6020_METALS_ICPMS: COMMON {Aluminum, Cadmium, Chromium, Cobalt, Copper, Molybdenum, Selenium}; 6020_METALS_ICPMS: COMMON (Add-on) {Arsenic, Manganese, Nickel, Uranium, Zinc};
Leah West CHPRC	JUN 28 2016 1400	FEDEX	FEDEX	JUN 28 2016 0835	
Leah West CHPRC	JUN 28 2016 1400	CHRIS FULTON	CHRIS FULTON	JUN 28 2016 0835	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME
PRINTED ON 5/5/2016	FSR ID = FSR32148	TRVL NUM = TRVL-16-137	A-6003-618 (REV 2)



ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client: CHPRC
Project Manager: JE

Workorder No: 1606551
Initials: CDY Date: 6-30-16

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?	N/A	<input checked="" type="radio"/> 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 Amount of sediment: ___ dusting ___ moderate ___ heavy	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>10</u>			
Background µR/hr reading: <u>10</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] 7-1-16

ORIGIN ID: PSCA (509) 528-9426
LESLY WALL
DENVER
6270 LATAH ST.
RICHLAND WA 99354
UNITED STATES US

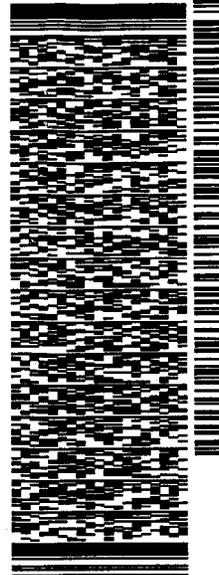
SHIP DATE: 28 JUN 16
ACTWGT: 10.00 LB
CAD: 10706605 INET 3730
BILL THIRD PARTY

1606551

TO JULIE ELLINGSON
ALS GLOBAL
225 COMMERCE DRIVE

FORT COLLINS CO 80524
(970) 490-1511 REF: PTR# 6780
NV DEPT:

10-2
540J173CDB/727F



Print

TRK# 7766 2824 9617
0201

WED - 29 JUN 10:30A
PRIORITY OVERNIGHT
DSR

XH FTCA

80524
DEN
CO-US



After printing this label:

1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com. FedEx will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is \$1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our Service Guide. Written claims must be filed within strict time limits, see current FedEx Service Guide.



Metals Case Narrative

CH2M HILL Plateau Remediation Company

200W Pump & Treat – Extraction Well Water Sampling – F13-002

Work Order Number: 1606551

1. This report consists of 2 water samples.
2. The samples were received intact at ambient temperature by ALS on 06/30/16.
3. The samples 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, laboratory control sample, and laboratory control sample duplicate were digested and analyzed with the samples in each digestion batch.
 - The preparation (method) blank associated with each digestion batch was below the reporting limit for the requested analytes. Aluminum has results above the MDL. 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.

Due to limited sample volume, a laboratory control sample duplicate (LCSD) was performed in place of matrix QC for each analysis.

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. Both samples required a further dilution to bring uranium into the analytical range of the ICP-MS.

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 Laelle
Inorganics Primary Data Reviewer

7/13/16
Date



April E. Ellis
Inorganics Final Data Reviewer

7/20/16
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 $\leq 20X$ 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.

July 20, 2016
ALS1606551

Total Recoverable ICP Metals

Method SW6010B

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1606551

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: 200W Pump & Treat - Extraction Well Water Sampling F13-002

Field ID:	B35JV3
Lab ID:	1606551-1

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 28-Jun-16
Date Extracted: 11-Jul-16
Date Analyzed: 12-Jul-16
Prep Method: SW3005 Rev A

Prep Batch: IP160711-5
QCBatchID: IP160711-5-1
Run ID: IP160712-1A2
Cleanup: NONE
Basis: As Received
File Name:

Analyst: Nathan A. Quatier
Sample Aliquot: 50 ml
Final Volume: 50 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	RptLimit/ LOQ/LOD	MDL/DL	Result Qualifier	EPA Qualifier
7440-42-8	BORON	1	59	30	11		
7440-70-2	CALCIUM	1	180000	1000	51		
7439-89-6	IRON	1	60	50	16		
7439-95-4	MAGNESIUM	1	69000	750	58		
7440-09-7	POTASSIUM	1	13000	1000	86		
7440-23-5	SODIUM	1	270000	500	61		

Data Package ID: *ip1606551-1*

Total Recoverable ICP Metals

Method SW6010B

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1606551

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: 200W Pump & Treat - Extraction Well Water Sampling F13-002

Field ID:	B35K17
Lab ID:	1606551-2

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 28-Jun-16
Date Extracted: 11-Jul-16
Date Analyzed: 12-Jul-16
Prep Method: SW3005 Rev A

Prep Batch: IP160711-5
QCBatchID: IP160711-5-1
Run ID: IP160712-1A2
Cleanup: NONE
Basis: As Received
File Name:

Analyst: Nathan A. Quatier
Sample Aliquot: 50 ml
Final Volume: 50 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	RptLimit/ LOQ/LOD	MDL/DL	Result Qualifier	EPA Qualifier
7440-42-8	BORON	1	57	30	11		
7440-70-2	CALCIUM	1	200000	1000	51		
7439-89-6	IRON	1	130	50	16		
7439-95-4	MAGNESIUM	1	84000	750	58		
7440-09-7	POTASSIUM	1	14000	1000	86		
7440-23-5	SODIUM	1	360000	500	61		

Data Package ID: *ip1606551-1*

Total Recoverable ICPMS Metals

Method SW6020A

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1606551

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: 200W Pump & Treat - Extraction Well Water Sampling F13-002

Field ID:	B35JV3
Lab ID:	1606551-1

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 28-Jun-16

Date Extracted: 02-Jul-16

Date Analyzed: 11-Jul-16

Prep Method: SW3005 Rev A

Prep Batch: IP160702-1

QCBatchID: IP160702-1-3

Run ID: IM160711-11A6

Cleanup: NONE

Basis: As Received

File Name: 071SMPL_

Analyst: Brent A. Stanfield

Sample Aliquot: 50 ml

Final Volume: 50 ml

Result Units: UG/L

Clean DF: 1

Analysis ReqCode: 6020_METALS_I

CASNO	Target Analyte	Dilution Factor	Result	RptLimit/ LOQ/LOD	MDL/DL	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	10	14	100	14	U	
7440-38-2	ARSENIC	10	4.7	2	0.18		
7440-43-9	CADMIUM	10	0.099	2	0.099	U	
7440-47-3	CHROMIUM	10	41	10	1.1		
7440-48-4	COBALT	10	0.24	5	0.07	B	
7440-50-8	COPPER	10	1.1	8	1.1	U	
7439-96-5	MANGANESE	10	3.4	5	0.3	B	
7439-98-7	MOLYBDENUM	10	29	2	0.41		
7440-02-0	NICKEL	10	4.2	20	4.2	U	
7782-49-2	SELENIUM	10	15	10	0.66		
7440-61-1	URANIUM	1000	77000	10	2.7	D	
7440-66-6	ZINC	10	16	100	9.1	B	

Data Package ID: im1606551-1

Total Recoverable ICPMS Metals

Method SW6020A

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1606551

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: 200W Pump & Treat - Extraction Well Water Sampling F13-002

Field ID:	B35K17
Lab ID:	1606551-2

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 28-Jun-16

Date Extracted: 02-Jul-16

Date Analyzed: 11-Jul-16

Prep Method: SW3005 Rev A

Prep Batch: IP160702-1

QCBatchID: IP160702-1-3

Run ID: IM160711-11A6

Cleanup: NONE

Basis: As Received

File Name: 072SMPL_

Analyst: Brent A. Stanfield

Sample Aliquot: 50 ml

Final Volume: 50 ml

Result Units: UG/L

Clean DF: 1

Analysis ReqCode: 6020_METALS_I

CASNO	Target Analyte	Dilution Factor	Result	RptLimit/ LOQ/LOD	MDL/DL	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	10	63	100	14	BC	
7440-38-2	ARSENIC	10	12	2	0.18		
7440-43-9	CADMIUM	10	0.099	2	0.099	U	
7440-47-3	CHROMIUM	10	79	10	1.1		
7440-48-4	COBALT	10	0.2	5	0.07	B	
7440-50-8	COPPER	10	1.1	8	1.1	U	
7439-96-5	MANGANESE	10	12	5	0.3		
7439-98-7	MOLYBDENUM	10	24	2	0.41		
7440-02-0	NICKEL	10	4.2	20	4.2	U	
7782-49-2	SELENIUM	10	11	10	0.66		
7440-61-1	URANIUM	1000	75000	10	2.7	D	
7440-66-6	ZINC	10	9.8	100	9.1	B	

Data Package ID: im1606551-1

July 20, 2016

ALS1606551

ICP Metals

Method SW6010B

Method Blank

Lab Name: ALS Environmental -- FC

Work Order Number: 1606551

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: 200W Pump & Treat - Extraction Well Water Sampling F13-002

Lab ID: IP160711-5MB

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 11-Jul-16

Date Analyzed: 12-Jul-16

Prep Batch: IP160711-5

QCBatchID: IP160711-5-1

Run ID: IP160712-1A2

Cleanup: NONE

Basis: N/A

File Name:

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	11	30	11	U	
7440-70-2	CALCIUM	1	51	1000	51	U	
7439-89-6	IRON	1	16	50	16	U	
7439-95-4	MAGNESIUM	1	58	750	58	U	
7440-09-7	POTASSIUM	1	86	1000	86	U	
7440-23-5	SODIUM	1	61	500	61	U	

Data Package ID: ip1606551-1

July 20, 2016

ALS1606551

ICP Metals

Method SW6010B

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Environmental -- FC

Work Order Number: 1606551

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: 200W Pump & Treat - Extraction Well Water Sampling F13-002

Lab ID: IP160711-5LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 07/11/2016
Date Analyzed: 07/12/2016
Prep Method: SW3005A

Prep Batch: IP160711-5
QCBatchID: IP160711-5-1
Run ID: IP160712-1A2
Cleanup: NONE
Basis: N/A
File Name:

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	998	30		100	80 - 120%
7440-70-2	CALCIUM	40000	40100	1000		100	80 - 120%
7439-89-6	IRON	1000	1000	50		100	80 - 120%
7439-95-4	MAGNESIUM	40000	40300	750		101	80 - 120%
7440-09-7	POTASSIUM	40000	40200	1000		101	80 - 120%
7440-23-5	SODIUM	40000	40300	500		101	80 - 120%

Lab ID: IP160711-5LCS D

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 07/11/2016
Date Analyzed: 07/12/2016
Prep Method: SW3005A

Prep Batch: IP160711-5
QCBatchID: IP160711-5-1
Run ID: IP160712-1A2
Cleanup: NONE
Basis: N/A
File Name:

Sample Aliquot: 50 ml
Final Volume: 50 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Spike Added	LCSD Result	Reporting Limit	Result Qualifier	LCSD % Rec.	RPD Limit	RPD
7440-42-8	BORON	1000	995	30		99	20	0
7440-70-2	CALCIUM	40000	40200	1000		100	20	0
7439-89-6	IRON	1000	1010	50		101	20	0
7439-95-4	MAGNESIUM	40000	40500	750		101	20	1
7440-09-7	POTASSIUM	40000	40000	1000		100	20	1
7440-23-5	SODIUM	40000	40100	500		100	20	0

Data Package ID: ip1606551-1

July 20, 2016

ALS1606551

ICPMS Metals

Method SW6020A

Method Blank

Lab Name: ALS Environmental -- FC

Work Order Number: 1606551

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: 200W Pump & Treat - Extraction Well Water Sampling F13-002

Lab ID: IP160702-1MB

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 02-Jul-16

Date Analyzed: 11-Jul-16

Prep Batch: IP160702-1

QCBatchID: IP160702-1-3

Run ID: IM160711-11A6

Cleanup: NONE

Basis: N/A

File Name: 037SMPL_

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	88	100	14	B	
7440-38-2	ARSENIC	10	0.18	2	0.18	U	
7440-43-9	CADMIUM	10	0.099	2	0.099	U	
7440-47-3	CHROMIUM	10	1.1	10	1.1	U	
7440-48-4	COBALT	10	0.07	5	0.07	U	
7440-50-8	COPPER	10	1.1	8	1.1	U	
7439-96-5	MANGANESE	10	0.3	5	0.3	U	
7439-98-7	MOLYBDENUM	10	0.41	2	0.41	U	
7440-02-0	NICKEL	10	4.2	20	4.2	U	
7782-49-2	SELENIUM	10	0.66	10	0.66	U	
7440-61-1	URANIUM	10	0.027	0.1	0.027	U	
7440-66-6	ZINC	10	9.1	100	9.1	U	

Data Package ID: im1606551-1

July 20, 2016

ALS1606551

ICPMS Metals

Method SW6020A

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Environmental -- FC

Work Order Number: 1606551

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: 200W Pump & Treat - Extraction Well Water Sampling F13-002

Lab ID: IM160702-1LCS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 07/02/2016

Date Analyzed: 07/11/2016

Prep Method: SW3005A

Prep Batch: IP160702-1

QCBatchID: IP160702-1-3

Run ID: IM160711-11A6

Cleanup: NONE

Basis: N/A

File Name: 038SMPL_

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	4830	100		97	80 - 120%
7440-38-2	ARSENIC	100	107	2		107	80 - 120%
7440-43-9	CADMIUM	30	30.1	2		100	80 - 120%
7440-47-3	CHROMIUM	500	508	10		102	80 - 120%
7440-48-4	COBALT	100	102	5		102	80 - 120%
7440-50-8	COPPER	1000	1080	8		108	80 - 120%
7439-96-5	MANGANESE	100	110	5		110	80 - 120%
7439-98-7	MOLYBDENUM	100	104	2		104	80 - 120%
7440-02-0	NICKEL	500	539	20		108	80 - 120%
7782-49-2	SELENIUM	100	107	10		107	80 - 120%
7440-61-1	URANIUM	10	10.1	0.1		101	80 - 120%
7440-66-6	ZINC	2000	2070	100		104	80 - 120%

Data Package ID: im1606551-1

July 20, 2016

ALS1606551

ICPMS Metals

Method SW6020A

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Environmental -- FC

Work Order Number: 1606551

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: 200W Pump & Treat - Extraction Well Water Sampling F13-002

Lab ID: IM160702-1LCSD

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 07/02/2016

Date Analyzed: 07/11/2016

Prep Method: SW3005A

Prep Batch: IP160702-1

QCBatchID: IP160702-1-3

Run ID: IM160711-11A6

Cleanup: NONE

Basis: N/A

File Name: 039SMPL_

Sample Aliquot: 50 ml

Final Volume: 50 ml

Result Units: UG/L

Clean DF: 1

CASNO	Target Analyte	Spike Added	LCSD Result	Reporting Limit	Result Qualifier	LCSD % Rec.	RPD Limit	RPD
7429-90-5	ALUMINUM	5000	4820	100		96	20	0
7440-38-2	ARSENIC	100	110	2		110	20	2
7440-43-9	CADMIUM	30	31.4	2		105	20	4
7440-47-3	CHROMIUM	500	508	10		102	20	0
7440-48-4	COBALT	100	102	5		102	20	1
7440-50-8	COPPER	1000	1080	8		108	20	0
7439-96-5	MANGANESE	100	111	5		111	20	1
7439-98-7	MOLYBDENUM	100	106	2		106	20	2
7440-02-0	NICKEL	500	549	20		110	20	2
7782-49-2	SELENIUM	100	105	10		105	20	2
7440-61-1	URANIUM	10	10.2	0.1		101	20	1
7440-66-6	ZINC	2000	2060	100		103	20	1

Data Package ID: im1606551-1