



April 21, 2015

ALS1504170

Ft. Collins, Colorado

LIMS Version: 6.759

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Tuesday, April 21, 2015

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

Re: ALS Workorder: 1504170
Project Name: 200W Pump & Treat - Treatment Plant Water Sampling
Project Number: F15-005

Dear Mr. Evans:

One water sample was received from CH2M HILL Plateau Remediation Company, on 4/7/2015. The sample was 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):

ADDRESS 225 Commerce Drive, Fort Collins, Colorado, USA 80524 | PHONE +1 970 490 1511 | FAX +1 970 490 1522

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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: 1504170

Client Name: CH2M HILL Plateau Remediation Company

Client Project Name: 200W Pump & Treat - Treatment Plant Water Sampling

Client Project Number: F15-005

Client PO Number: BOA 54854

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
B310X2	1504170-1		WATER	06-Apr-15	9:50

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F15-005-141	PAGE 1 OF 1
COLLECTOR	D.L. Floyd/CHPRC	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE
SAMPLING LOCATION	289-TA, Pre-Resin Tanks, Valve V05-Y20 -- DUP	EVANS, RT	373-7924	EVANS, RT	7H
ICE CHEST NO.	6005-103	PROJECT DESIGNATION	ACTUAL SAMPLE DEPTH	SAF NO.	AIR QUALITY
SHIPPED TO	ALS Environmental Ft. Collins	200W Pump & Treat - Treatment Plant Water Sampling	N/A	F15-005	<input type="checkbox"/>
MATRIX*	<p>POSSIBLE SAMPLE HAZARDS/ REMARKS</p> <p>*Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/TATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.</p>	FIELD LOGBOOK NO.	COA	METHOD OF SHIPMENT	TURNAROUND
A=Air		491-9/25	303700	FEDERAL EXPRESS	30 Days / 30 Days
DL=Drum		OFFSITE PROPERTY NO.	5545		ORIGINAL
Liquids					
DS=Drum					
Solids					
L=Liquid					
O=Oil					
S=Soil					
SE=Sediment					
T=Tissue					
V=Vegetation					
W=Water					
WI=Wipe					
X=Other					

NO. OF CONTAINER(S)	VOLUME	SAMPLE DATE	SAMPLE TIME
1	500ml	APR 06 2015	0950

PRESERVATION	HOLDING TIME	TYPE OF CONTAINER
HNO3 to pH <2	6 Months	G/P

SPECIAL HANDLING AND/OR STORAGE
N/A

①
COT
4-5-15

1504170
4-8-15

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. TRVL-15-057	
<i>DL Floyd</i>	APR 06 2015 1100	<i>L.D. Wall</i>	APR 06 2015 1100	(1) 6020_METALS_ICPMS: COMMON {Aluminum, Chromium, Cobalt, Copper, Molybdenum, Selenium}; 6020_METALS_ICPMS: COMMON (Add-on) {Manganese, Nickel, Uranium, Zinc}; 6010_METALS_ICP: COMMON {Calcium, Iron, Magnesium, Potassium, Sodium}; 6010_METALS_ICP: COMMON (Add-on) {Boron};	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
<i>CHPRC</i>	APR 06 2015 1400	<i>FEDEX</i>			
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
<i>FED EX</i>		<i>CTrim 512</i>	4-7-15 0935		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
LABORATORY SECTION	RECEIVED BY	TITLE		DATE/TIME	
		TRVL-15-057			
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME	

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ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client: CHPRC

Workorder No: 1504170

Project Manager: JF

Initials: CDJ Date: 4-8-15

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?		<input checked="" type="radio"/> YES	NO
17. Were cooler temperatures measured at 0.1-6.0°C? IR gun used*: <input checked="" type="radio"/> #2 #4	RAD ONLY	<input checked="" type="radio"/> YES	NO
Cooler #: <u>1</u>			
Temperature (°C): <u>4.2</u>			
No. of custody seals on cooler: <u>2</u>			
External µR/hr reading: <u>11</u>			
Background µR/hr reading: <u>11</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.)			

DOT Survey/
Acceptance
Information

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: JF 4/8/15

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ALS1504170

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

Origin ID: PSCA



Ship Date: 06APR15
ActWgt: 47.0 LB
CAD: 107066051/NET3610

1504128

Handwritten markings: "11" and "2" with a slash

Delivery Address Bar Code



SHIP TO: (970) 490-1511

BILL THIRD PARTY

Julie Ellingson
ALS Global
225 Commerce Drive

FORT COLLINS, CO 80524

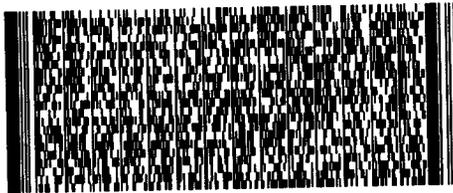
Ref # ptr# 5545
Invoice #
PO #
Dept #

4.2°

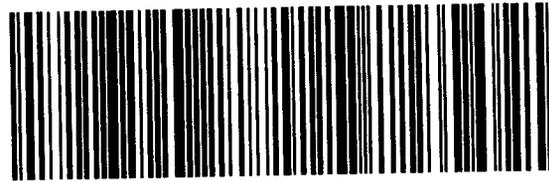
TUE - 07 APR 10:30A
PRIORITY OVERNIGHT

TRK# 7733 0261 4796
0201

DSR
80524
CO-US
DEN



XH FTCA



537.026FCS/EE4B

After printing this label:

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Metals

Case Narrative

CH2M HILL Plateau Remediation Company

200W Pump & Treat – Treatment Plant Water Sampling -- F15-005

Work Order Number: 1504170

1. This report consists of 1 water sample.
2. The sample was received cool and intact by ALS on 04/08/15.
3. The sample had a pH less than 2 upon receipt.
4. The sample was prepared and analyzed based on SW-846, 3rd Edition procedures.

For analysis by Trace ICP and ICP-MS, the sample was 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 sample was 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 sample in this digestion batch.
 - The preparation (method) blank associated with this digestion batch was below the reporting limit for the requested analytes. Boron, calcium, magnesium, sodium, and zinc have 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.

Sample 1504170-1 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.

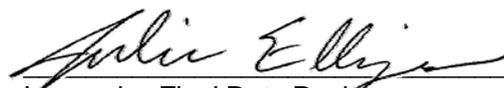
- A matrix spike and matrix spike duplicate were digested and analyzed with each batch. All acceptance criteria for accuracy were met.
 - A sample duplicate and matrix spike duplicate were digested and analyzed with each batch. All acceptance criteria for precision were met.
 - A serial dilution was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

4/21/15
Date



April Elliza
Inorganics Final Data Reviewer

4/21/15
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.

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Total Recoverable ICP Metals

Method SW6010B

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1504170

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: 200W Pump & Treat - Treatment Plant Water Sampling F15-005

Field ID:	B310X2
Lab ID:	1504170-1

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 06-Apr-15

Date Extracted: 10-Apr-15

Date Analyzed: 10-Apr-15

Prep Method: SW3005 Rev A

Prep Batch: IP150410-1

QCBatchID: IP150410-1-6

Run ID: IT150410-1A4

Cleanup: NONE

Basis: As Received

File Name: 150410A.

Analyst: Steve Workman

Sample Aliquot: 50 ml

Final Volume: 50 ml

Result Units: UG/L

Clean DF: 1

Analysis ReqCode: 6010:Add on B

CASNO	Target Analyte	Dilution Factor	Result	RptLimit/ LOQ/LOD	MDL/DL	Result Qualifier	EPA Qualifier
7440-42-8	BORON	1	7.4	30	6.8	B	
7440-70-2	CALCIUM	1	66000	1000	18		
7439-89-6	IRON	1	21	50	16	B	
7439-95-4	MAGNESIUM	1	22000	750	22		
7440-09-7	POTASSIUM	1	5800	1000	190		
7440-23-5	SODIUM	1	30000	500	49		

Data Package ID: IT1504170-1

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Total Recoverable ICPMS Metals

Method SW6020A

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1504170

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: 200W Pump & Treat - Treatment Plant Water Sampling F15-005

Field ID:	B310X2
Lab ID:	1504170-1

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 06-Apr-15

Date Extracted: 10-Apr-15

Date Analyzed: 17-Apr-15

Prep Method: SW3005 Rev A

Prep Batch: IP150410-1

QCBatchID: IP150410-1-4

Run ID: IM150417-10A6

Cleanup: NONE

Basis: As Received

File Name: 028SMPL_

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	
7440-47-3	CHROMIUM	10	51	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	3.8	1	0.44		
7440-02-0	NICKEL	10	2.3	5	2.3	U	
7782-49-2	SELENIUM	10	3.7	1	0.42		
7440-61-1	URANIUM	10	1.8	0.1	0.046		
7440-66-6	ZINC	10	7.1	20	7.1	U	

Data Package ID: IM1504170-1

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ICP Metals

Method SW6010B

Method Blank

Lab Name: ALS Environmental -- FC

Work Order Number: 1504170

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: 200W Pump & Treat - Treatment Plant Water Sampling F15-005

Lab ID: FP150410-1MB

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 10-Apr-15

Date Analyzed: 10-Apr-15

Prep Batch: IP150410-1

QCBatchID: IP150410-1-6

Run ID: IT150410-1A4

Cleanup: NONE

Basis: N/A

File Name: 150410A.

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	-8.7	30	6.8	B	
7440-70-2	CALCIUM	1	21	1000	18	B	
7439-89-6	IRON	1	16	50	16	U	
7439-95-4	MAGNESIUM	1	93	750	22	B	
7440-09-7	POTASSIUM	1	190	1000	190	U	
7440-23-5	SODIUM	1	54	500	49	B	

Data Package ID: IT1504170-1

Date Printed: Monday, April 20, 2015

ALS Environmental -- FC

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ALS1504170

ICP Metals

Method SW6010B

Laboratory Control Sample

Lab Name: ALS Environmental -- FC

Work Order Number: 1504170

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: 200W Pump & Treat - Treatment Plant Water Sampling F15-005

Lab ID: FP150410-1LCS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 04/10/2015

Date Analyzed: 04/10/2015

Prep Method: SW3005A

Prep Batch: IP150410-1

QCBatchID: IP150410-1-6

Run ID: IT150410-1A4

Cleanup: NONE

Basis: N/A

File Name: 150410A.

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	1080	30		108	80 - 120%
7440-70-2	CALCIUM	40000	40400	1000		101	80 - 120%
7439-89-6	IRON	1000	966	50		97	80 - 120%
7439-95-4	MAGNESIUM	40000	40800	750		102	80 - 120%
7440-09-7	POTASSIUM	40000	41500	1000		104	80 - 120%
7440-23-5	SODIUM	40000	41500	500		104	80 - 120%

Data Package ID: IT1504170-1

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ALS1504170

ICP Metals

Method SW6010B

Matrix Spike And Matrix Spike Duplicate

Lab Name: ALS Environmental -- FC

Work Order Number: 1504170

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: 200W Pump & Treat - Treatment Plant Water Sampling F15-

Field ID: B310X2	Sample Matrix: WATER	Prep Batch: IP150410-1	Sample Aliquot: 50 ml
LabID: 1504170-1MS	% Moisture: N/A	QCBatchID: IP150410-1-6	Final Volume: 50 ml
	Date Collected: 06-Apr-15	Run ID: IT150410-1A4	Result Units: UG/L
	Date Extracted: 10-Apr-15	Cleanup: NONE	File Name: 150410A.
	Date Analyzed: 10-Apr-15	Basis: As Received	
	Prep Method: SW3005 Rev A		

CASNO	Target Analyte	Sample Result	Samp Qual	MS Result	MS Qual	Reporting Limit	Spike Added	MS % Rec.	Control Limits
7440-42-8	BORON	7.4	B	1060		30	1000	106	80 - 120%
7440-70-2	CALCIUM	66000		104000		1000	40000	96	80 - 120%
7439-89-6	IRON	21	B	916		50	1000	90	80 - 120%
7439-95-4	MAGNESIUM	22000		61100		750	40000	97	80 - 120%
7440-09-7	POTASSIUM	5800		49200		1000	40000	108	80 - 120%
7440-23-5	SODIUM	30000		74800		500	40000	111	80 - 120%

Field ID: B310X2	Sample Matrix: WATER	Prep Batch: IP150410-1	Sample Aliquot: 50 ml
LabID: 1504170-1MSD	% Moisture: N/A	QCBatchID: IP150410-1-6	Final Volume: 50 ml
	Date Collected: 06-Apr-15	Run ID: IT150410-1A4	Result Units: UG/L
	Date Extracted: 10-Apr-15	Cleanup: NONE	File Name: 150410A.
	Date Analyzed: 10-Apr-15	Basis: As Received	
	Prep Method: SW3005 Rev A		

CASNO	Target Analyte	MSD Result	MSD Qual	Spike Added	MSD % Rec.	Reporting Limit	RPD Limit	RPD
7440-42-8	BORON	1070		1000	106	30	20	0
7440-70-2	CALCIUM	106000		40000	100	1000	20	1
7439-89-6	IRON	931		1000	91	50	20	2
7439-95-4	MAGNESIUM	61600		40000	99	750	20	1
7440-09-7	POTASSIUM	49800		40000	110	1000	20	1
7440-23-5	SODIUM	75200		40000	112	500	20	1

Data Package ID: IT1504170-1

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ICPMS Metals

Method SW6020A

Method Blank

Lab Name: ALS Environmental -- FC

Work Order Number: 1504170

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: 200W Pump & Treat - Treatment Plant Water Sampling F15-005

Lab ID: FP150410-1MB

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 10-Apr-15

Date Analyzed: 17-Apr-15

Prep Batch: IP150410-1

QCBatchID: IP150410-1-4

Run ID: IM150417-10A6

Cleanup: NONE

Basis: N/A

File Name: 026SMPL_

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	
7440-47-3	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	0.44	1	0.44	U	
7440-02-0	NICKEL	10	2.3	5	2.3	U	
7782-49-2	SELENIUM	10	0.42	1	0.42	U	
7440-61-1	URANIUM	10	0.046	0.1	0.046	U	
7440-66-6	ZINC	10	7.9	20	7.1	B	

Data Package ID: IM1504170-1

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ALS1504170
ICPMS Metals
Method SW6020A
Laboratory Control Sample

Lab Name: ALS Environmental -- FC

Work Order Number: 1504170

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: 200W Pump & Treat - Treatment Plant Water Sampling F15-005

Lab ID: FM150410-1LCS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 04/10/2015

Date Analyzed: 04/17/2015

Prep Method: SW3005A

Prep Batch: IP150410-1

QCBatchID: IP150410-1-4

Run ID: IM150417-10A6

Cleanup: NONE

Basis: N/A

File Name: 027SMPL_

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	50		97	80 - 120%
7440-47-3	CHROMIUM	500	497	10		99	80 - 120%
7440-48-4	COBALT	100	102	1		102	80 - 120%
7440-50-8	COPPER	1000	1050	8		105	80 - 120%
7439-96-5	MANGANESE	100	98.9	5		99	80 - 120%
7439-98-7	MOLYBDENUM	100	97.5	1		98	80 - 120%
7440-02-0	NICKEL	500	510	5		102	80 - 120%
7782-49-2	SELENIUM	100	106	1		106	80 - 120%
7440-61-1	URANIUM	10	10.1	0.1		101	80 - 120%
7440-66-6	ZINC	2000	2020	20		101	80 - 120%

Data Package ID: IM1504170-1

April 21, 2015

ALS1504170

ICPMS Metals

Method SW6020A

Matrix Spike And Matrix Spike Duplicate

Lab Name: ALS Environmental -- FC

Work Order Number: 1504170

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: 200W Pump & Treat - Treatment Plant Water Sampling F15-

Field ID: B310X2	Sample Matrix: WATER	Prep Batch: IP150410-1	Sample Aliquot: 50 ml
LabID: 1504170-1MS	% Moisture: N/A	QCBatchID: IP150410-1-4	Final Volume: 50 ml
	Date Collected: 06-Apr-15	Run ID: IM150417-10A6	Result Units: UG/L
	Date Extracted: 10-Apr-15	Cleanup: NONE	File Name: 031SMPL_
	Date Analyzed: 17-Apr-15	Basis: As Received	
	Prep Method: SW3005 Rev A		

CASNO	Target Analyte	Sample Result	Samp Qual	MS Result	MS Qual	Reporting Limit	Spike Added	MS % Rec.	Control Limits
7429-90-5	ALUMINUM	19	U	4830		50	5000	97	75 - 125%
7440-47-3	CHROMIUM	51		538		10	500	97	75 - 125%
7440-48-4	COBALT	0.21	U	100		1	100	100	75 - 125%
7440-50-8	COPPER	2	U	1020		8	1000	102	75 - 125%
7439-96-5	MANGANESE	0.74	U	99.3		5	100	99	75 - 125%
7439-98-7	MOLYBDENUM	3.8		104		1	100	100	75 - 125%
7440-02-0	NICKEL	2.3	U	496		5	500	99	75 - 125%
7782-49-2	SELENIUM	3.7		105		1	100	101	75 - 125%
7440-61-1	URANIUM	1.8		12.1		0.1	10	103	75 - 125%
7440-66-6	ZINC	7.1	U	2000		20	2000	100	75 - 125%

Data Package ID: IM1504170-1

April 21, 2015

ALS1504170

ICPMS Metals

Method SW6020A

Matrix Spike And Matrix Spike Duplicate

Lab Name: ALS Environmental -- FC

Work Order Number: 1504170

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: 200W Pump & Treat - Treatment Plant Water Sampling F15-

Field ID: B310X2	Sample Matrix: WATER	Prep Batch: IP150410-1	Sample Aliquot: 50 ml
LabID: 1504170-1MSD	% Moisture: N/A	QCBatchID: IP150410-1-4	Final Volume: 50 ml
	Date Collected: 06-Apr-15	Run ID: IM150417-10A6	Result Units: UG/L
	Date Extracted: 10-Apr-15	Cleanup: NONE	File Name: 032SMPL_
	Date Analyzed: 17-Apr-15	Basis: As Received	
	Prep Method: SW3005 Rev A		

CASNO	Target Analyte	MSD Result	MSD Qual	Spike Added	MSD % Rec.	Reporting Limit	RPD Limit	RPD
7429-90-5	ALUMNUM	5040		5000	101	50	20	4
7440-47-3	CHROMIUM	552		500	100	10	20	2
7440-48-4	COBALT	102		100	102	1	20	2
7440-50-8	COPPER	1050		1000	105	8	20	2
7439-96-5	MANGANESE	103		100	103	5	20	4
7439-98-7	MOLYBDENUM	106		100	102	1	20	2
7440-02-0	NICKEL	512		500	102	5	20	3
7782-49-2	SELENIUM	111		100	107	1	20	6
7440-61-1	URANIUM	12.3		10	105	0.1	20	1
7440-66-6	ZINC	2030		2000	101	20	20	2

Data Package ID: IM1504170-1