

April 27, 2016
ALS1604027



Ft. Collins, Colorado

LIMS Version: 6.811

Page 1 of 1

Tuesday, April 26, 2016

Dave Todak
CH2M HILL Plateau Remediation Company
2420 Stevens Center
Richland, WA 99352

Re: ALS Workorder: 1604027
Project Name: FY2016 200-UP-1 Remedial Action Wells Sampling and Analysis-Wa
Project Number: F16-007

Dear Mr. Todak:

Two water samples were received from CH2M HILL Plateau Remediation Company, on 4/2/2016. The samples were scheduled for the following analyses:

GC/MS Volatiles

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".

ALS Environmental
Julie Ellingson
Project Manager

April 27, 2016
ALS1604027

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
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

April 27, 2016

ALS1604027

ALS Environmental -- FC

Sample Number(s) Cross-Reference Table

OrderNum: 1604027

Client Name: CH2M HILL Plateau Remediation Company

Client Project Name: FY2016 200-UP-1 Remedial Action Wells Sampling and Analysis-

Client Project Number: F16-007

Client PO Number: BOA 54854

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
B34HR4	1604027-1		WATER	31-Mar-16	11:51
B34HR5	1604027-2		WATER	31-Mar-16	11:51

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		PAGE 1 OF 1
COLLECTOR M.A. White/CHPRC	COMPANY CONTACT TODAK, D	TELEPHONE NO. 376-6427	PROJECT COORDINATOR TODAK, D	PRICE CODE 7H
SAMPLING LOCATION C9412 CONTINGENCY 2 Post Development	PROJECT DESIGNATION FY2016 200-UP-1 Remedial Action Wells Sampling and Analysis - Water	FIELD LOGBOOK NO. HWF-N-645-3 pg 5-9	SAF NO. F16-007	AIR QUALITY <input type="checkbox"/>
ICE CHEST NO. GWS-086-493	ACTUAL SAMPLE DATE 3-3-16	OFFSITE PROPERTY NO. 6403	COA 300192	METHOD OF SHIPMENT FEDERAL EXPRESS
SHIPPED TO ALS Environmental Ft. Collins		BILL OF LADING/AIR BILL NO. 717602118 60217		

MATRIX* A=Air DL=Drum L=Liquids DS=Drum S=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. NA	PRESERVATION HMO3 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
SPECIAL HANDLING AND/OR STORAGE	SAMPLE DATE MAR 31 2016	SAMPLE TIME 15:1	B34HR4 ①				

1604027

CHAIN OF POSSESSION		SIGN / PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM M.A. White/CHPRC	DATE/TIME MAR 31 2016 15:15	RECEIVED BY/STORED IN SSU-1	DATE/TIME MAR 31 2016 15:15	(1) 6020_METALS_ICPMS: COMMON (Add-on) {Manganese, Uranium};	
RELINQUISHED BY/REMOVED FROM M.A. White/CHPRC	DATE/TIME APR 01 2016 09:00	RECEIVED BY/STORED IN M.A. White/CHPRC	DATE/TIME APR 01 2016 09:00		
RELINQUISHED BY/REMOVED FROM M.A. White/CHPRC	DATE/TIME APR 01 2016 14:00	RECEIVED BY/STORED IN FEDEX	DATE/TIME APR 01 2016 14:00		
RELINQUISHED BY/REMOVED FROM M.A. White/CHPRC	DATE/TIME 4-2-16 09:15	RECEIVED BY/STORED IN Sgt M. Ly	DATE/TIME 4-2-16 09:15		
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 4 of 6	RECEIVED BY	TITLE	DATE/TIME
INTERNAL SAMPLE DISPOSITION 6	DISPOSAL METHOD	DISPOSED BY	DATE/TIME
PRINTED ON 2/3/2016	FSR ID = FSR24959	TRVL NUM = TRVL-16-057	A-6003-618 (REV 2)

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		PAGE 1 OF 1	
COLLECTOR M.A. White/CHPRC	COMPANY CONTACT TODAK, D	TELEPHONE NO. 376-6427	PROJECT COORDINATOR TODAK, D	PRICE CODE 7H	DATA TURNAROUND 30 Days / 30 Days
SAMPLING LOCATION C9412 CONTINGENCY-2 Post Development	PROJECT DESIGNATION FY2016 200-UP-1 Remedial Action Wells Sampling and Analysis - Water	FIELD LOGBOOK NO. HNF-N-645-3 pg 59	SAF NO. F16-007	AIR QUALITY	
ICE CHEST NO. GW5-086 493	ACTUAL SAMPLE DEPT 375-5310.76	OFFSITE PROPERTY NO. 6483	COA 300192	METHOD OF SHIPMENT FEDERAL EXPRESS	ORIGINAL
SHIPPED TO ALS Environmental Ft. Collins BILL OF LADING/AIR BILL NO. N76021186217					

MATRIX* A=Air DL=Drum 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. NA	PRESERVATION HCl or H2SO4 to pH <2/Cool 14 Days	HOLDING TIME	TYPE OF CONTAINER 8Gs*	NO. OF CONTAINER(S) 3	VOLUME 40mL	SAMPLE ANALYSIS SEE ITEM (1) IN SPECIAL INSTRUCTIONS
SPECIAL HANDLING AND/OR STORAGE							
SAMPLE NO. B34HR5 (7)	MATRIX* WATER	SAMPLE DATE MAR 31 2016	SAMPLE TIME 1151				

1604027

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM M.A. White/CHPRC	DATE/TIME MAR 31 2016 15	RECEIVED BY/STORED IN SSU-1	DATE/TIME MAR 31 2016 15	(1) 8260_VOA_GCMS: COMMON {Carbon tetrachloride, Trichloroethene};	
RELINQUISHED BY/REMOVED FROM SSU-1	DATE/TIME APR 01 2016 0900	RECEIVED BY/STORED IN M.A. White	DATE/TIME APR 01 2016 0900		
RELINQUISHED BY/REMOVED FROM M.A. White	DATE/TIME APR 01 2016 1400	RECEIVED BY/STORED IN SSU-1	DATE/TIME APR 01 2016 1400		
RELINQUISHED BY/REMOVED FROM Felix	DATE/TIME 4-2-16 0915	RECEIVED BY/STORED IN SSU-1	DATE/TIME 4-2-16 0915		
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
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME



ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client: CHPRC Workorder No: 1604027
Project Manager: JME Initials: SDM Date: 4-2-16

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?		<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		N/A	<input checked="" type="radio"/> 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>0.2</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 <input type="radio"/> NO <input type="radio"/> 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] 4/3/16

April 27, 2016
ALS1604027

1604027

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ORIGIN ID:PSCA (509) 528-9426
LESLY WALL
CH2M
6267 LATAH ST.
6269 LATAH ST.
RICHLAND, WA 99354
UNITED STATES US

SHIP DATE: 01APR16
ACTWGT: 73.00 LB
CAD: 107066051/INET3730

BILL THIRD PARTY

TO JULIE ELLINGSON
ALS GLOBAL
225 COMMERCE DRIVE

FORT COLLINS CO 80524

(970) 490-1511

REF: PTR#6483, COOLER#GWS-493

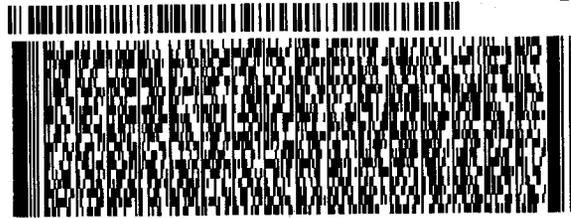
INV:

DEPT:

PO:

10
-2
0.20

54011CF34727F



FedEx Express



SATURDAY 12:00P

PRIORITY OVERNIGHT

TRK# 7760 2118 6217

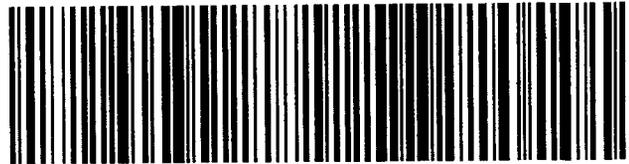
0201

DSR

X0 FTCA

80524

CO-US DEN





GC/MS Volatiles Case Narrative

CH2M HILL Plateau Remediation Company FY2016 200-UP-1 Remedial Action Wells Sampling and Analysis-Water -- F16-007

Work Order Number: 1604027

1. This report consists of 1 water sample. The sample was received cool and intact by ALS on 04/02/16.

The sample was free of headspace prior to analysis and had a pH < 2 at the time of analysis.

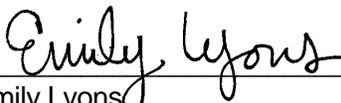
2. The sample was prepared according to SW-846, 3rd Edition procedures. Specifically, the water sample was prepared using purge and trap procedures based on Method 5030C.
3. The sample was analyzed using GC/MS with an RTX-624, RTX-VMS, or equivalent capillary column according to the current revision of SOP 525 based on SW-846 Method 8260. All positive results were quantitated against the initial calibration standards using the internal standard technique. The identification of positive results was achieved by a comparison of the retention time and mass spectrum of the sample versus the daily calibration standard.
4. All initial calibration criteria were met.
5. All initial calibrations are verified by comparing a second source standard calibration verification (ICV) against the calibration curve. All criteria for initial calibration verification were met.
6. All compounds in the daily (continuing) calibration verifications were within 20%D.
7. Methylene chloride, acetone and 2-butanone are common laboratory contaminants. In order to minimize the levels of these compounds detected in the gc/ms analysis, ALS has designated its volatile laboratory as a restricted access area. In addition, the laboratory has been equipped with a dedicated, air intake and exhaust system that operates under positive pressure in order to minimize cross contamination of these compounds. Due to fluctuations in ambient laboratory conditions, reported sample values for common laboratory contaminants may be due to lab contamination even if the compound in question is not detected in the associated method blank.



All method blank criteria were met.

8. All laboratory control sample and laboratory control sample duplicate recoveries and RPDs were within the acceptance criteria.
9. A matrix spike and matrix spike duplicate were not performed because of insufficient sample. A laboratory control sample and laboratory control sample duplicate were performed instead.
10. The sample was analyzed within the established holding time.
11. All surrogate recoveries were within acceptance criteria.
12. All internal standard recoveries were within acceptance criteria.
13. Manual integrations are performed when needed to provide consistent and defensible data following the guidelines in the current revision of SOP 939.

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.



Emily Lyons
Organics Primary Data Reviewer

4/15/16
Date



April E. Ellinger
Organics Final Data Reviewer

4/26/16
Date

ALS
Data Qualifier Flags
Organics

- U or ND:** This flag indicates that the compound was analyzed for but not detected.
- J:** This flag indicates an estimated value. This flag is used as follows : (1) when estimating a concentration for tentatively identified compounds (TICs) where a 1:1 response is assumed; (2) when the mass spectral and retention time data indicate the presence of a compound that meets the volatile and semivolatile GC/MS identification criteria, and the result is less than the reporting limit (RL) but greater than the method detection limit (MDL); (3) when the retention time data indicate the presence of a compound that meets the GC identification criteria, and the result is less than the RL but greater than the MDL; and (4) the reported value is estimated.
- B:** This flag is used when the analyte is detected in the associated method blank as well as in the sample. It indicates probable blank contamination and warns the data user. This flag shall be used for a tentatively identified compound (TIC) as well as for a positively identified target compound.
- E:** This flag identifies compounds whose concentration exceeds the upper level of the calibration range.
- A:** This flag indicates that a tentatively identified compound is a suspected aldol-condensation product.
- X:** This flag indicates that the analyte was diluted below an accurate quantitation level.
- *:** This flag indicates that a spike recovery is equal to or outside the control criteria used.
- +:** This flag indicates that the relative percent difference (RPD) equals or exceeds the control criteria.

April 27, 2016
ALS1604027
GC/MS Volatiles

Method SW8260_25C

Method Blank

Lab Name: ALS Environmental -- FC

Work Order Number: 1604027

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: FY2016 200-UP-1 Remedial Action Wells Sampling and Analysis

Lab ID: VL160406-3MB

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 06-Apr-16

Date Analyzed: 06-Apr-16

Prep Batch: VL160406-3

QCBatchID: VL160406-3-2

Run ID: VL160406-3A

Cleanup: NONE

Basis: N/A

File Name: C67494

Sample Aliquot: 10 ml

Final Volume: 10 ml

Result Units: UG/L

Clean DF: 1

CASNO	Target Analyte	DF	Result	RptLimit/ LOQ/LOD	MDL/DL	Result Qualifier	EPA Qualifier
56-23-5	CARBON TETRACHLORIDE	1	0.3	1	0.3	U	
79-01-6	TRICHLOROETHENE	1	0.3	1	0.3	U	

Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
460-00-4	4-BROMOFLUOROBENZENE	25.8		25	103	85 - 115
1868-53-7	DIBROMOFLUOROMETHANE	25.1		25	100	84 - 118
2037-26-5	TOLUENE-D8	25.1		25	100	85 - 115

Data Package ID: VL1604027-1

April 27, 2016
ALS1604027
GC/MS Volatiles

Method SW8260_25C

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1604027

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: FY2016 200-UP-1 Remedial Action Wells Sampling and Analysis

Field ID:	B34HR5
Lab ID:	1604027-2

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 31-Mar-16
Date Extracted: 06-Apr-16
Date Analyzed: 06-Apr-16
Prep Method: SW5030 Rev C

Prep Batch: VL160406-3
QCBatchID: VL160406-3-2
Run ID: VL160406-3A
Cleanup: NONE
Basis: As Received
File Name: C67502

Analyst: Joe Kostelnik
Sample Aliquot: 10 ml
Final Volume: 10 ml
Result Units: UG/L
Clean DF: 1

Analysis ReqCode: 8260_VOA_GCM

CASNO	Target Analyte	Dilution Factor	Result	RptLimit/LOQ/LOD	MDL/DL	Result Qualifier	EPA Qualifier
56-23-5	CARBON TETRACHLORIDE	1	17	1	0.3		
79-01-6	TRICHLOROETHENE	1	2.6	1	0.3		

Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
460-00-4	4-BROMOFLUOROBENZENE	25.8		25	103	85 - 115
1868-53-7	DIBROMOFLUOROMETHANE	25		25	100	84 - 118
2037-26-5	TOLUENE-D8	24.9		25	100	85 - 115

Data Package ID: VL1604027-1

April 27, 2016
ALS1604027
GC/MS Volatiles

Method SW8260_25C

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Environmental -- FC

Work Order Number: 1604027

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: FY2016 200-UP-1 Remedial Action Wells Sampling and Analysis

Lab ID: VL160406-3LCS

Sample Matrix: WATER
 % Moisture: N/A
 Date Collected: N/A
 Date Extracted: 04/06/2016
 Date Analyzed: 04/06/2016
 Prep Method: SW5030C

Prep Batch: VL160406-3
 QCBatchID: VL160406-3-2
 Run ID: VL160406-3A
 Cleanup: NONE
 Basis: N/A
 File Name: C67491

Sample Aliquot: 10 ml
 Final Volume: 10 ml
 Result Units: UG/L
 Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
56-23-5	CARBON TETRACHLORIDE	10	10.7	1		107	77 - 122%
79-01-6	TRICHLOROETHENE	10	10.3	1		103	83 - 117%

Lab ID: VL160406-3LCSD

Sample Matrix: WATER
 % Moisture: N/A
 Date Collected: N/A
 Date Extracted: 04/06/2016
 Date Analyzed: 04/06/2016
 Prep Method: SW5030C

Prep Batch: VL160406-3
 QCBatchID: VL160406-3-2
 Run ID: VL160406-3A
 Cleanup: NONE
 Basis: N/A
 File Name: C67492

Sample Aliquot: 10 ml
 Final Volume: 10 ml
 Result Units: UG/L
 Clean DF: 1

CASNO	Target Analyte	Spike Added	LCSD Result	Reporting Limit	Result Qualifier	LCSD % Rec.	RPD Limit	RPD
56-23-5	CARBON TETRACHLORIDE	10	10.4	1		104	20	3
79-01-6	TRICHLOROETHENE	10	10	1		100	20	3

Surrogate Recovery LCS/LCSD

CASNO	Target Analyte	Spike Added	LCS % Rec.	LCS Flag	LCSD % Rec.	LCSD Flag	Control Limits
460-00-4	4-BROMOFLUOROBENZENE	25	99		100		85 - 115
1868-53-7	DIBROMOFLUOROMETHANE	25	101		101		84 - 118
2037-26-5	TOLUENE-D8	25	101		100		85 - 115

Data Package ID: VL1604027-1



Metals Case Narrative

CH2M HILL Plateau Remediation Company

FY2016 200-UP-1 Remedial Action Wells Sampling and Analysis- Water -- F16-007

Work Order Number: 1604027

1. This report consists of 1 water sample.
2. The sample was received cool and intact by ALS on 04/02/16.
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 ICP-MS, the sample was digested following method 3005A and the current revision of SOP 806.

5. 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. Uranium 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 associated with Method 6020A were analyzed.

9. Matrix specific quality control procedures.

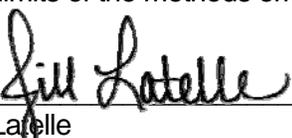
Sample 1604027-1 was designated as the quality control sample for this analysis.

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

4/11/16
Date



Julie Elliza
Inorganics Final Data Reviewer

4/26/16
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 $\leq 5X$ 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.

April 27, 2016

ALS1604027

Total Recoverable ICPMS Metals

Method SW6020A

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1604027

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: FY2016 200-UP-1 Remedial Action Wells Sampling and Analysis

Field ID:	B34HR4
Lab ID:	1604027-1

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 31-Mar-16

Date Extracted: 05-Apr-16

Date Analyzed: 05-Apr-16

Prep Method: SW3005 Rev A

Prep Batch: IP160405-1

QCBatchID: IP160405-1-7

Run ID: IM160405-10A12

Cleanup: NONE

Basis: As Received

File Name: 035SMPL_

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
7439-96-5	MANGANESE	10	49	5	0.3		
7440-61-1	URANIUM	10	10	0.1	0.027		

Data Package ID: *im1604027-1*

April 27, 2016
ALS1604027
ICPMS Metals

Method SW6020A
Method Blank

Lab Name: ALS Environmental -- FC

Work Order Number: 1604027

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: FY2016 200-UP-1 Remedial Action Wells Sampling and Analysis

Lab ID: IP160405-1MB

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 05-Apr-16

Date Analyzed: 05-Apr-16

Prep Batch: IP160405-1

QCBatchID: IP160405-1-7

Run ID: IM160405-10A12

Cleanup: NONE

Basis: N/A

File Name: 010SMPL_

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
7439-96-5	MANGANESE	10	0.3	5	0.3	U	
7440-61-1	URANIUM	10	0.03	0.1	0.027	B	

Data Package ID: *im1604027-1*

April 27, 2016
ALS1604027
ICPMS Metals

Method SW6020A
Laboratory Control Sample

Lab Name: ALS Environmental -- FC

Work Order Number: 1604027

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: FY2016 200-UP-1 Remedial Action Wells Sampling and Analysis

Lab ID: IM160405-1LCS	Sample Matrix: WATER	Prep Batch: IP160405-1	Sample Aliquot: 50 ml
	% Moisture: N/A	QCBatchID: IP160405-1-7	Final Volume: 50 ml
	Date Collected: N/A	Run ID: IM160405-10A12	Result Units: UG/L
	Date Extracted: 04/05/2016	Cleanup: NONE	Clean DF: 1
	Date Analyzed: 04/05/2016	Basis: N/A	
	Prep Method: SW3005A	File Name: 011SMPL_	

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
7439-96-5	MANGANESE	100	104	5		104	80 - 120%
7440-61-1	URANIUM	10	10.4	0.1		104	80 - 120%

Data Package ID: *im1604027-1*

April 27, 2016
ALS1604027
ICPMS Metals

Method SW6020A
Matrix Spike And Matrix Spike Duplicate

Lab Name: ALS Environmental -- FC
Work Order Number: 1604027
Client Name: CH2M HILL Plateau Remediation Company
ClientProject ID: FY2016 200-UP-1 Remedial Action Wells Sampling and Anal

Field ID: B34HR4
LabID: 1604027-1MS

Sample Matrix: WATER	Prep Batch: IP160405-1	Sample Aliquot: 50 ml
% Moisture: N/A	QCBatchID: IP160405-1-7	Final Volume: 50 ml
Date Collected: 31-Mar-16	Run ID: IM160405-10A12	Result Units: UG/L
Date Extracted: 05-Apr-16	Cleanup: NONE	File Name: 038SMPL_
Date Analyzed: 05-Apr-16	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
7439-96-5	MANGANESE	49		149		5	100	100	75 - 125%
7440-61-1	URANIUM	10		21.1		0.1	10	107	75 - 125%

Field ID: B34HR4
LabID: 1604027-1MSD

Sample Matrix: WATER	Prep Batch: IP160405-1	Sample Aliquot: 50 ml
% Moisture: N/A	QCBatchID: IP160405-1-7	Final Volume: 50 ml
Date Collected: 31-Mar-16	Run ID: IM160405-10A12	Result Units: UG/L
Date Extracted: 05-Apr-16	Cleanup: NONE	File Name: 039SMPL_
Date Analyzed: 05-Apr-16	Basis: As Received	
Prep Method: SW3005 Rev A		

CASNO	Target Analyte	MSD Result	MSD Qual	Spike Added	MSD % Rec.	Reporting Limit	RPD Limit	RPD
7439-96-5	MANGANESE	153		100	104	5	20	3
7440-61-1	URANIUM	21.2		10	108	0.1	20	0

Data Package ID: *im1604027-1*