ALS Environmental

Tuesday, April 19, 2016

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

Re: ALS Workorder: 1604194
Project Name: FY15 100-K AB Waste Sites - Soil
Project Number: F16-002

Dear Mr. Todak:

Two soil samples were received from CH2M HILL Plateau Remediation Company, on 3/22/2016. 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,

ALS Environmental
Julie Ellingson
Project Manager

SAMPLE ISSUE RESOLUTION

SIR NUM	SIR16-301
REV NUM	0
DATE INITIATED	4/5/2016

SAMPLE EVENT INFORMATION

SAF NUM(S)	F16-002
OPERABLE UNIT(S)	100-KR-2
PROJECT(S)	100-KE FSB
SAMPLE EVENT TITLE(S)	Characterization Boreholes in UPR-100-K-1 and 1116-KE-3 Waste Sites
LABORATORY	ALS Environmental Ft. Collins

SAMPLING INFORMATION

NUMBER OF SAMPLES	2
SAMPLE NUMBERS	B33W66, B33W81
SAMPLE MATRIX	SOIL
COLLECTION DATE	1/21/2016 - 3/17/2016
SDG NUM	ALS1601268, ALS1603381

ISSUE BACKGROUND

CLASS	General Laboratory Direction
TYPE	Addition of Analyses
DESCRIPTION	The project determined a need to have have TCLP metals run on samples B33W81 and B33W66.

DISPOSITION

DESCRIPTION	Please add TCLP metals to samples B33W81 and B33W66 and report the standard TCLP metals list.
JUSTIFICATION	Final Disposition: Sample have been reclogged into SDG ALS1604194 for TCLP metals analysis. Report will be ready on 4/18/16. We will document in the narrative that the Hg holding time for sample B33W66 was exceeded before analysis requested was made.

SUBMITTED BY: Scot Fitzgerald DATE: 04/05/2016
ACCEPTED BY: Julie Ellingson DATE: 04/12/2016

ALS Environmental -- FC

Sample Number(s) Cross-Reference Table

OrderNum: 1604194
Client Name: CH2M HILL Plateau Remediation Company
Client Project Name: FY15 100-K AB Waste Sites - Soil
Client Project Number: F16-002
Client PO Number: BOA 54854

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
B33W66	1604194-1		SOIL	21-Jan-16	10:30
B33W81	1604194-2		SOIL	17-Mar-16	11:34
B33W66	1604194-3		LEACHAT	21-Jan-16	10:30
B33W81	1604194-4		LEACHAT	17-Mar-16	11:34

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F16-002-019 | PAGE 1 OF 1

COLLECTOR Frank Hall CHPRC	**COMPANY CONTACT** TODAK, D	**TELEPHONE NO.** 376-6427	**PROJECT COORDINATOR** TODAK, D
SAMPLING LOCATION 100-KE, AB waste sites, Sample 19	**PROJECT DESIGNATION** FY15 100-K AB Waste Sites - Soil		**SAF NO.** F16-002
ICE CHEST NO. GWS-401	**FIELD LOGBOOK NO.** HNF-N-507-32-GL	**ACTUAL SAMPLE DEPTH** SURFACE	**COA** 303808
SHIPPED TO ALS Environmental Ft. Collins	**OFFSITE PROPERTY NO.** 6298		**BILL OF LADING/AIR BILL NO.** 7754 7096 7110

PRICE CODE C05 | **DATA TURNAROUND** 7 Days / 7 Days

AIR QUALITY ☐

METHOD OF SHIPMENT FEDERAL EXPRESS

ORIGINAL

1601268 relog
1604194
4/13/16

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

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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None	Cool <=6C	Cool <=6C
HOLDING TIME	6 Months	28 Days	30 Days	28 Days/48 Hours
TYPE OF CONTAINER	G/P	G	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	60mL	60mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	7471_MERCURY_CV: COMMON (SOLIDS) (Mercury);	7196_CR6: COMMON (Hexavalent Chromium);	SEE ITEM (2) IN SPECIAL INSTRUCTIONS
SAMPLE NO.	**MATRIX***	**SAMPLE DATE**	**SAMPLE TIME**		
B33W66 (3) (3)	SOIL	JAN 2 1 2016	1030	✓	✓ ✓ ✓

CHAIN OF POSSESSION / **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Frank Hall	JAN 2 1 2016 1400	FEDEX	1/21/16 JAN 2 1 2016
Fedex		Rebecca Meola	1/25/16 0900

SPECIAL INSTRUCTIONS
TRVL-16-026
(1) 6020_METALS_ICPMS: COMMON {Aluminum, Antimony, Barium, Beryllium, Cadmium, Chromium, Cobalt, Copper, Lead, Molybdenum, Selenium, Silver}; 6020_METALS_ICPMS: COMMON (Add-on) {Arsenic, Iron, Manganese, Nickel, Sodium, Strontium, Tin, Uranium, Vanadium, Zinc};
(2) 300.0_ANIONS_IC: COMMON {Chloride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate};

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

PRINTED ON 11/18/2015 | **FSR ID = FSR10593** | **TRVL NUM = TRVL-16-026** | A-6003-618 (REV 2)

April 19, 2016
ALS1604194

4912

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F16-002-034 PAGE 1 OF 1

COLLECTOR K.C. Patterson/CHPRC	**COMPANY CONTACT** TODAK, D	**TELEPHONE NO.** 376-6427	**PROJECT COORDINATOR** TODAK, D
SAMPLING LOCATION 100-KE, AB waste sites, Sample 32	**PROJECT DESIGNATION** FY15 100-K AB Waste Sites - Soil		**SAF NO.** F16-002
ICE CHEST NO. GWS-007	**FIELD LOGBOOK NO.** HNF-N-807-30-82	**ACTUAL SAMPLE DEPTH** 0-6"	**COA** 303808
SHIPPED TO ALS Environmental Ft. Collins	**OFFSITE PROPERTY NO.** 6451		**BILL OF LADING/AIR BILL NO.** 7759 1949 8309

PRICE CODE C05 **DATA TURNAROUND** 7 Days / 7 Days

AIR QUALITY ☐

METHOD OF SHIPMENT FEDERAL EXPRESS

ORIGINAL

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

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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None	Cool <=6C	Cool <=6C
HOLDING TIME	6 Months	28 Days	30 Days	28 Days/48 Hours
TYPE OF CONTAINER	G/P	G	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	60mL	60mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	7471_MERCURY_CV: COMMON (SOLIDS) {Mercury};	7196_CR6: COMMON {Hexavalent Chromium};	SEE ITEM (2) IN SPECIAL INSTRUCTIONS

1603381 4/15/16
1604194, 2 labs

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B33W81 (1) (2) (4)	SOIL	MAR 17 2016	1134	✓	✓	✓	✓

April 19, 2016
ALS1604194

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
K.C. Patterson/CHPRC	MAR 17 2016 1350	SSU-1	MAR 17 2016 1350
SSU-1	MAR 21 2016 0800	CHRIS FULTON CHPRC	MAR 21 2016 0800
CHRIS FULTON CHPRC	MAR 21 2016 1400	FEDEX	
Fedex	3-22-16 0920	Scott Mally	03-22-16 0920

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
TRVL-16-026
(1) 6020_METALS_ICPMS: COMMON {Aluminum, Antimony, Barium, Beryllium, Cadmium, Chromium, Cobalt, Copper, Lead, Molybdenum, Selenium, Silver}; 6020_METALS_ICPMS: COMMON (Add-on) {Arsenic, Iron, Manganese, Nickel, Sodium, Strontium, Tin, Uranium, Vanadium, Zinc};
(2) 300.0_ANIONS_IC: COMMON {Chloride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate};

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

5 6 7 8

PRINTED ON 11/18/2015 **FSR ID = FSR10617** **TRVL NUM = TRVL-16-026** A-6003-618 (REV 2)

ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM 1604194/rcl09

Client: CHPRC Workorder No: 1603381

Project Manager: JNE Initials: SDM Date: 3-22-16

1. Does this project require any special handling in addition to standard ALS procedures?		YES	(NO)
2. Are custody seals on shipping containers intact?	NONE	(YES)	NO
3. Are Custody seals on sample containers intact?	NONE	(YES)	NO
4. Is there a COC (Chain-of-Custody) present or other representative documents?		(YES)	NO
5. Are the COC and bottle labels complete and legible?		(YES)	NO
6. Is the COC in agreement with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		(YES)	NO
7. Were airbills / shipping documents present and/or removable?	DROP OFF	(YES)	NO
8. Are all aqueous samples requiring preservation preserved correctly? (excluding volatiles)	(N/A)	YES	NO
9. Are all aqueous non-preserved samples pH 4-9?	(N/A)	YES	NO
10. Is there sufficient sample for the requested analyses?		(YES)	NO
11. Were all samples placed in the proper containers for the requested analyses?		(YES)	NO
12. Are all samples within holding times for the requested analyses?		(YES)	NO
13. Were all sample containers received intact? (not broken or leaking, etc.)		(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)	YES	NO
15. Do any water samples contain sediment? Amount Amount of sediment: ____ dusting ____ moderate ____ heavy	(N/A)	YES	NO
16. Were the samples shipped on ice?		(YES)	NO
17. Were cooler temperatures measured at 0.1-6.0°C? IR gun used*: (#2) #4	RAD ONLY	(YES)	NO

Cooler #:	1	2							
Temperature (°C):	1.2	4.1							
No. of custody seals on cooler:	2	2							
DOT Survey/ Acceptance Information — External µR/hr reading:	9	10							
Background µR/hr reading:	8								

Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? (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: 3/22/16

*IR Gun #2: Oakton, SN 29922500201-0066
*IR Gun #4: Oakton, SN 2372220101-0002

ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM 1604194 wo log

Client: CHPRC Workorder No: 1601268

Project Manager: JE Initials: RLR Date: 1/25/16

1. Does this project require any special handling in addition to standard ALS procedures?		YES	(NO)
2. Are custody seals on shipping containers intact?	NONE	(YES)	NO
3. Are Custody seals on sample containers intact?	NONE	(YES)	NO
4. Is there a COC (Chain-of-Custody) present or other representative documents?		(YES)	NO
5. Are the COC and bottle labels complete and legible?		(YES)	NO
6. Is the COC in agreement with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		(YES)	NO
7. Were airbills / shipping documents present and/or removable?	DROP OFF	(YES)	NO
8. Are all aqueous samples requiring preservation preserved correctly? (excluding volatiles)	(N/A)	YES	NO
9. Are all aqueous non-preserved samples pH 4-9?	(N/A)	YES	NO
10. Is there sufficient sample for the requested analyses?		(YES)	NO
11. Were all samples placed in the proper containers for the requested analyses?		(YES)	NO
12. Are all samples within holding times for the requested analyses?		(YES)	NO
13. Were all sample containers received intact? (not broken or leaking, etc.)		(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)	YES	NO
15. Do any water samples contain sediment? Amount Amount of sediment: ____ dusting ____ moderate ____ heavy	(N/A)	YES	NO
16. Were the samples shipped on ice?		(YES)	NO
17. Were cooler temperatures measured at 0.1-6.0°C? IR gun used*: #2 (#4)	RAD ONLY	(YES)	NO

Cooler #:	1							
Temperature (°C):	2.8°C							
No. of custody seals on cooler:	2							
DOT Survey/ Acceptance Information — External µR/hr reading:	10							
Background µR/hr reading:	11							

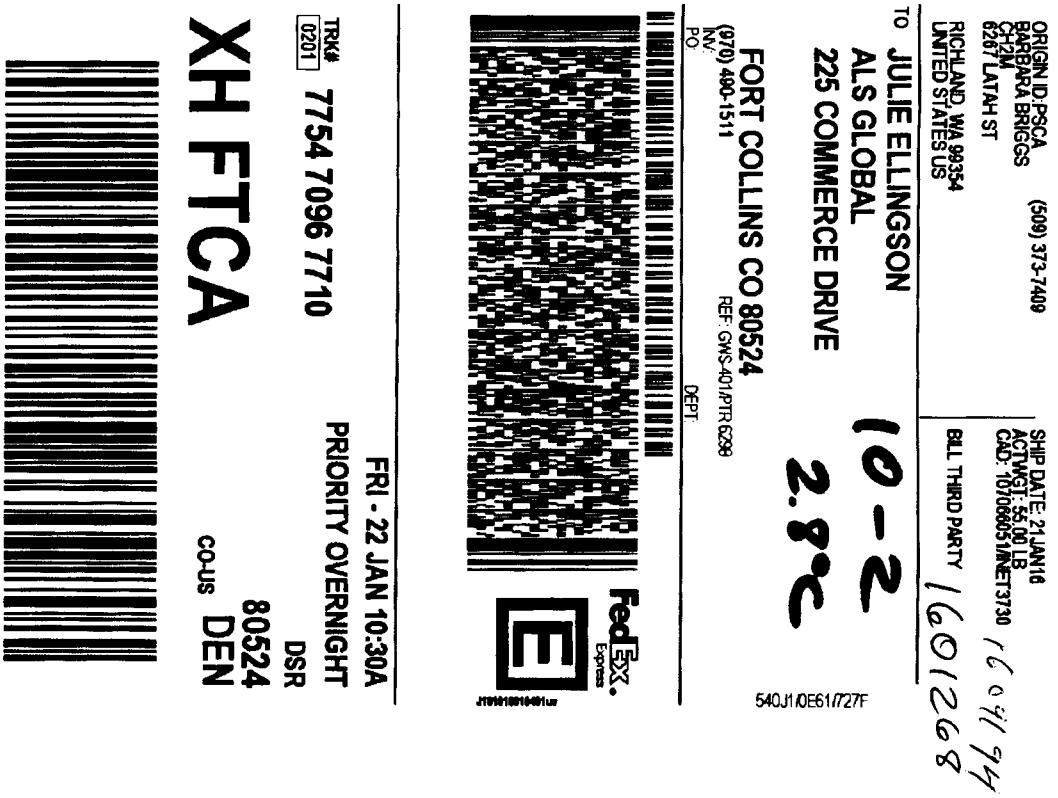
Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? (YES) / NO / NA (If no, see Form 008.)

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: _____

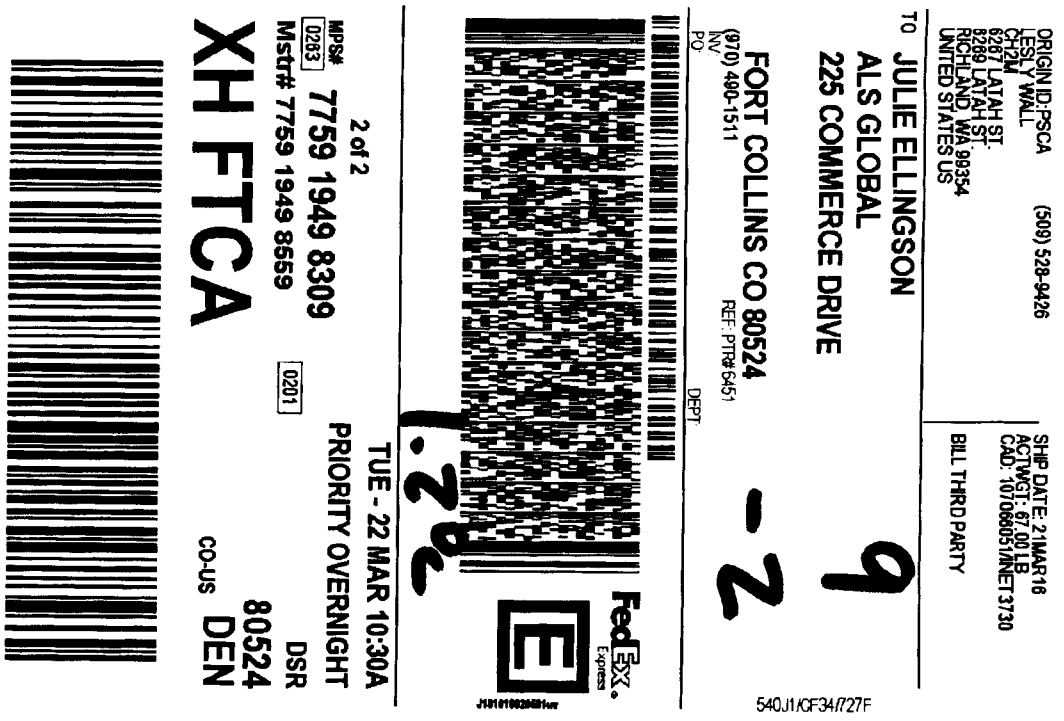
Project Manager Signature / Date: 1/25/16

*IR Gun #2: Oakton, SN 29922500201-0066
*IR Gun #4: Oakton, SN 2372220101-0002



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 ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.



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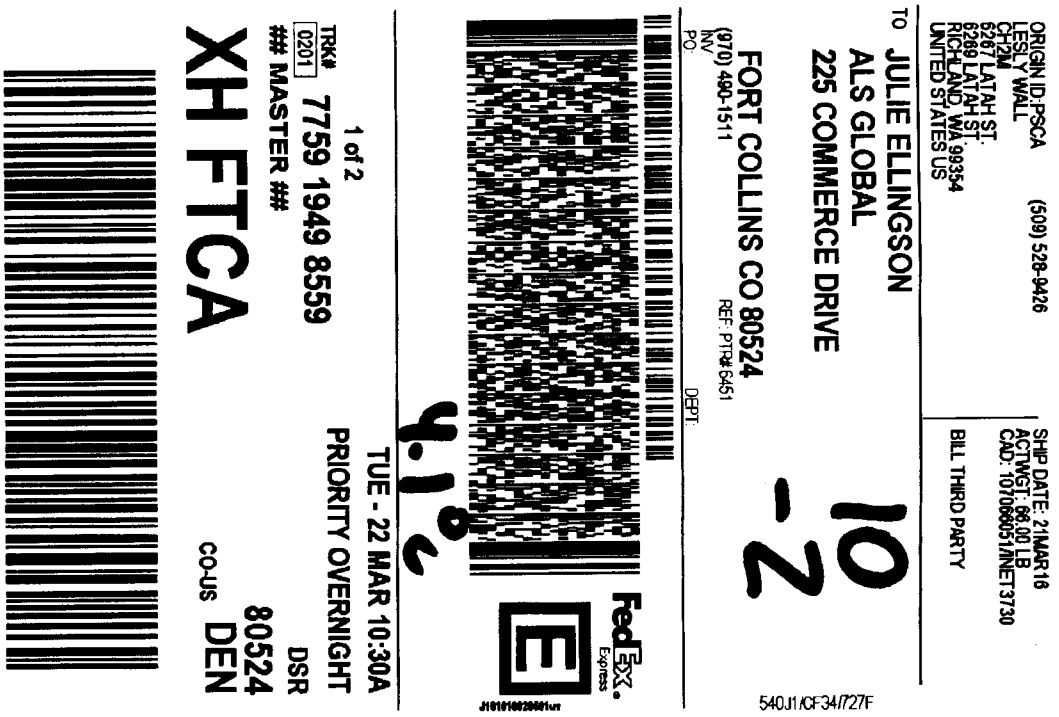
Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you 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 ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.



1609474
1603381

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 ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

Metals

Case Narrative

CH2M HILL Plateau Remediation Company

FY15 100-K AB Waste Sites - Soil – F16-002

Work Order Number: 1604194

1. This report consists of 2 TCLP samples. This report is a re-log from work orders1601268 and 1603381 for additional metals.

2. The samples were received cool and intact by ALS on 01/25/2016 and 03/22/16.

3. The samples were prepared and analyzed based on SW-846, 3rd Edition procedures.

   The samples for TCLP analysis were processed through the TCLP leaching procedure based on method 1311. The leachates were then digested at a ten-fold dilution.

   For analysis by Trace ICP, the leachates were digested following method 3010A and the current revision of SOP 806.

   For analysis by Cold Vapor AA (CVAA), the leachates were digested following method 7470A and the current revision of SOP 812.

4. Analysis by Trace ICP followed method 6010B and the current revision of SOP 834. The analysis of silver was done by Trace ICP.

   Analysis by CVAA followed method 7470A and the current revision of SOP 812.

5. All standards and solutions are NIST traceable and were used within their recommended shelf life.

6. The samples were prepared and analyzed within the established hold times, times with the exception of mercury. The request for additional analyses came in with little to no hold time remaining for mercury.

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

7. General quality control procedures.

   - A preparation (method) blank and laboratory control sample 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. 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.

8. Matrix specific quality control procedures.

   Sample 1604194-3 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 the ICP batch. All acceptance criteria were met.

9. Sample dilutions were not required for the requested analyses.

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 — 4/19/16
Jill Latelle
Inorganics Primary Data Reviewer
Date

Julie Ellison — 4/19/2016
Inorganics Final Data Reviewer
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 <=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.

ALS Environmental -- FC

Sample Number(s) Cross-Reference Table

OrderNum: 1604194
Client Name: CH2M HILL Plateau Remediation Company
Client Project Name: FY15 100-K AB Waste Sites - Soil
Client Project Number: F16-002
Client PO Number: BOA 54854

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
B33W66	1604194-1		SOIL	21-Jan-16	10:30
B33W81	1604194-2		SOIL	17-Mar-16	11:34
B33W66	1604194-3		LEACHAT	21-Jan-16	10:30
B33W81	1604194-4		LEACHAT	17-Mar-16	11:34

TCLP ICP Metals

Method SW6010B --TCLP Leachate

Sample Results

Lab Name: ALS Environmental -- FC
Work Order Number: 1604194
Client Name: CH2M HILL Plateau Remediation Company
ClientProject ID: FY15 100-K AB Waste Sites - Soil F16-002

Field ID: B33W66
Lab ID: 1604194-3

LEACH DATE: 4/14/2016

Sample Matrix: LEACHATE
% Moisture: N/A
Date Collected: 21-Jan-16
Date Extracted: 15-Apr-16
Date Analyzed: 15-Apr-16
Prep Method: SW3010 Rev A

Prep Batch: IP160415-2
QCBatchID: IP160415-2-1
Run ID: IT160415-1A3
Cleanup: NONE
Basis: As Received
File Name: 160415A.

Analyst: Steve Workman
Sample Aliquot: 5 ml
Final Volume: 50 ml
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	RptLimit/ LOQ/LOD	MDL/DL	Result Qualifier	EPA Qualifier
7440-38-2	ARSENIC	1	0.039	0.1	0.039	U	
7440-39-3	BARIUM	1	0.017	1	0.0048	B	
7440-43-9	CADMIUM	1	0.006	0.05	0.006	U	
7440-47-3	CHROMIUM	1	0.0069	0.1	0.0069	U	
7439-92-1	LEAD	1	0.022	0.03	0.022	U	
7782-49-2	SELENIUM	1	0.037	0.05	0.037	U	
7440-22-4	SILVER	1	0.018	0.1	0.018	U	

Data Package ID: *IT1604194-1*

TCLP ICP Metals

Method SW6010B --TCLP Leachate

Sample Results

Lab Name: ALS Environmental -- FC
Work Order Number: 1604194
Client Name: CH2M HILL Plateau Remediation Company
ClientProject ID: FY15 100-K AB Waste Sites - Soil F16-002

Field ID: B33W81
Lab ID: 1604194-4

LEACH DATE: 4/14/2016

Sample Matrix: LEACHATE
% Moisture: N/A
Date Collected: 17-Mar-16
Date Extracted: 15-Apr-16
Date Analyzed: 15-Apr-16
Prep Method: SW3010 Rev A

Prep Batch: IP160415-2
QCBatchID: IP160415-2-1
Run ID: IT160415-1A3
Cleanup: NONE
Basis: As Received
File Name: 160415A.

Analyst: Steve Workman
Sample Aliquot: 5 ml
Final Volume: 50 ml
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	RptLimit/ LOQ/LOD	MDL/DL	Result Qualifier	EPA Qualifier
7440-38-2	ARSENIC	1	0.039	0.1	0.039	U	
7440-39-3	BARIUM	1	0.12	1	0.0048	B	
7440-43-9	CADMIUM	1	0.006	0.05	0.006	U	
7440-47-3	CHROMIUM	1	0.0069	0.1	0.0069	U	
7439-92-1	LEAD	1	0.022	0.03	0.022	U	
7782-49-2	SELENIUM	1	0.054	0.05	0.037		
7440-22-4	SILVER	1	0.018	0.1	0.018	U	

Data Package ID: *IT1604194-1*

TCLP MERCURY

Method SW7470A

Sample Results

Lab Name: ALS Environmental -- FC
Client Name: CH2M HILL Plateau Remediation Company
Client Project ID: FY15 100-K AB Waste Sites - Soil F16-002
Work Order Number: 1604194 **Final Volume:** 10 ml
Reporting Basis: As Received **Matrix:** LEACHATE
Analyst: Nathan A. Quatier **Result Units:** MG/L

Client Sample ID	Lab ID	Date Collected	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	RptLimit/ LOQ/LOD	MDL/DL	Flag	Sample Aliquot
B33W66	1604194-3	1/21/2016	4/18/2016	04/18/2016	N/A	1	0.0006	0.002	0.0006	U	1 ml
B33W81	1604194-4	3/17/2016	4/18/2016	04/18/2016	N/A	1	0.071	0.002	0.0006		1 ml

Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: *HG1604194-1*

ICP Metals

Method SW6010B --Leachate

Method Blank

Lab Name: ALS Environmental -- FC
Work Order Number: 1604194
Client Name: CH2M HILL Plateau Remediation Company
ClientProject ID: FY15 100-K AB Waste Sites - Soil F16-002

Lab ID: EX160414-2MB

LEACH DATE: 4/14/2016

Sample Matrix: LEACHATE
% Moisture: N/A
Date Collected: N/A
Date Extracted: 15-Apr-16
Date Analyzed: 15-Apr-16

Prep Batch: IP160415-2
QCBatchID: IP160415-2-1
Run ID: IT160415-1A3
Cleanup: NONE
Basis: N/A
File Name: 160415A.

Sample Aliquot: 5 ml
Final Volume: 50 ml
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	DF	Result	RptLimit/ LOQ/LOD	MDL/DL	Result Qualifier	EPA Qualifier
7440-38-2	ARSENIC	1	0.039	0.1	0.039	U	
7440-39-3	BARIUM	1	0.0065	1	0.0048	B	
7440-43-9	CADMIUM	1	0.006	0.05	0.006	U	
7440-47-3	CHROMIUM	1	0.0069	0.1	0.0069	U	
7439-92-1	LEAD	1	0.022	0.03	0.022	U	
7782-49-2	SELENIUM	1	0.037	0.05	0.037	U	
7440-22-4	SILVER	1	0.018	0.1	0.018	U	

Data Package ID: *IT1604194-1*

ICP Metals

Method SW6010B --Leachate

Laboratory Control Sample

Lab Name: ALS Environmental -- FC

Work Order Number: 1604194

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: FY15 100-K AB Waste Sites - Soil F16-002

Lab ID: IP160415-2LCS

LEACH DATE: 4/14/2016

Sample Matrix: LEACHATE
% Moisture: N/A
Date Collected: N/A
Date Extracted: 04/15/2016
Date Analyzed: 04/15/2016
Prep Method: SW3010A

Prep Batch: IP160415-2
QCBatchID: IP160415-2-1
Run ID: IT160415-1A3
Cleanup: NONE
Basis: N/A
File Name: 160415A.

Sample Aliquot: 5 ml
Final Volume: 50 ml
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
7440-38-2	ARSENIC	10	9.92	0.1		99	80 - 120%
7440-39-3	BARIUM	10	10.7	1		107	80 - 120%
7440-43-9	CADMIUM	0.5	0.51	0.05		102	80 - 120%
7440-47-3	CHROMIUM	2	2.11	0.1		105	80 - 120%
7439-92-1	LEAD	5	5.21	0.03		104	80 - 120%
7782-49-2	SELENIUM	20	19.7	0.05		98	80 - 120%
7440-22-4	SILVER	1	0.993	0.1		99	80 - 120%

Data Package ID: *IT1604194-1*

ICP Metals

Method SW6010B --Leachate
Matrix Spike And Matrix Spike Duplicate

Lab Name: ALS Environmental -- FC
Work Order Number: 1604194
Client Name: CH2M HILL Plateau Remediation Company
ClientProject ID: FY15 100-K AB Waste Sites - Soil F16-002

Field ID: B33W66
LabID: 1604194-3MS

LEACH DATE: 4/14/2016

Sample Matrix: LEACHATE
% Moisture: N/A
Date Collected: 21-Jan-16
Date Extracted: 15-Apr-16
Date Analyzed: 15-Apr-16
Prep Method: SW3010 Rev A

Prep Batch: IP160415-2
QCBatchID: IP160415-2-1
Run ID: IT160415-1A3
Cleanup: NONE
Basis: As Received

Sample Aliquot: 5 ml
Final Volume: 50 ml
Result Units: MG/L
File Name: 160415A.

CASNO	Target Analyte	Sample Result	Samp Qual	MS Result	MS Qual	Reporting Limit	Spike Added	MS % Rec.	Control Limits
7440-38-2	ARSENIC	0.039	U	9.93		0.1	10	99	80 - 120%
7440-39-3	BARIUM	0.017	B	10.5		1	10	105	80 - 120%
7440-43-9	CADMIUM	0.006	U	0.513		0.05	0.5	103	80 - 120%
7440-47-3	CHROMIUM	0.0069	U	2.06		0.1	2	103	80 - 120%
7439-92-1	LEAD	0.022	U	5.23		0.03	5	105	80 - 120%
7782-49-2	SELENIUM	0.037	U	20		0.05	20	100	80 - 120%
7440-22-4	SILVER	0.018	U	0.981		0.1	1	98	80 - 120%

Field ID: B33W66
LabID: 1604194-3MSD

LEACH DATE: 4/14/2016

Sample Matrix: LEACHATE
% Moisture: N/A
Date Collected: 21-Jan-16
Date Extracted: 15-Apr-16
Date Analyzed: 15-Apr-16
Prep Method: SW3010 Rev A

Prep Batch: IP160415-2
QCBatchID: IP160415-2-1
Run ID: IT160415-1A3
Cleanup: NONE
Basis: As Received

Sample Aliquot: 5 ml
Final Volume: 50 ml
Result Units: MG/L
File Name: 160415A.

CASNO	Target Analyte	MSD Result	MSD Qual	Spike Added	MSD % Rec.	Reporting Limit	RPD Limit	RPD
7440-38-2	ARSENIC	10		10	100	0.1	20	1
7440-39-3	BARIUM	10.6		10	106	1	20	1
7440-43-9	CADMIUM	0.52		0.5	104	0.05	20	1
7440-47-3	CHROMIUM	2.08		2	104	0.1	20	1
7439-92-1	LEAD	5.29		5	106	0.03	20	1
7782-49-2	SELENIUM	20.4		20	102	0.05	20	2
7440-22-4	SILVER	1		1	100	0.1	20	2

Data Package ID: *IT1604194-1*

Mercury

Method SW7470A

Method Blank

Lab Name: ALS Environmental -- FC
Work Order Number: 1604194
Client Name: CH2M HILL Plateau Remediation Company
ClientProject ID: FY15 100-K AB Waste Sites - Soil F16-002

Lab ID: EX160414-2MB

Sample Matrix: LEACHATE
% Moisture: N/A
Date Collected: N/A
Date Extracted: 18-Apr-16
Date Analyzed: 18-Apr-16

Prep Batch: HG160418-1
QCBatchID: HG160418-1-1
Run ID: HG160418-1A2
Cleanup: NONE
Basis: N/A
File Name: HG160418-1

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

CASNO	Target Analyte	DF	Result	RptLimit/ LOQ/LOD	MDL/DL	Result Qualifier	EPA Qualifier
7439-97-6	MERCURY	1	0.0006	0.002	0.0006	U	

Data Package ID: *HG1604194-1*

Mercury

Method SW7470A

Laboratory Control Sample

Lab Name: ALS Environmental -- FC

Work Order Number: 1604194

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: FY15 100-K AB Waste Sites - Soil F16-002

Lab ID: HG160418-1LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 04/18/2016
Date Analyzed: 04/18/2016
Prep Method: METHOD

Prep Batch: HG160418-1
QCBatchID: HG160418-1-1
Run ID: HG160418-1A2
Cleanup: NONE
Basis: N/A
File Name: HG160418-1

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

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
7439-97-6	MERCURY	0.001	0.000981	0.0002		98	80 - 120%

Data Package ID: *HG1604194-1*

Mercury

Method SW7470A

Matrix Spike And Matrix Spike Duplicate

Lab Name: ALS Environmental -- FC
Work Order Number: 1604194
Client Name: CH2M HILL Plateau Remediation Company
ClientProject ID: FY15 100-K AB Waste Sites - Soil F16-002

Field ID: B33W66
LabID: 1604194-3MS

Sample Matrix: LEACHATE
% Moisture: N/A
Date Collected: 21-Jan-16
Date Extracted: 18-Apr-16
Date Analyzed: 18-Apr-16
Prep Method: METHOD

Prep Batch: HG160418-1
QCBatchID: HG160418-1-1
Run ID: HG160418-1A2
Cleanup: NONE
Basis: As Received

Sample Aliquot: 1 ml
Final Volume: 10 ml
Result Units: MG/L
File Name: HG160418-1

CASNO	Target Analyte	Sample Result	Samp Qual	MS Result	MS Qual	Reporting Limit	Spike Added	MS % Rec.	Control Limits
7439-97-6	MERCURY	0.0006	U	0.019		0.002	0.02	95	80 - 120%

Field ID: B33W66
LabID: 1604194-3MSD

Sample Matrix: LEACHATE
% Moisture: N/A
Date Collected: 21-Jan-16
Date Extracted: 18-Apr-16
Date Analyzed: 18-Apr-16
Prep Method: METHOD

Prep Batch: HG160418-1
QCBatchID: HG160418-1-1
Run ID: HG160418-1A2
Cleanup: NONE
Basis: As Received

Sample Aliquot: 1 ml
Final Volume: 10 ml
Result Units: MG/L
File Name: HG160418-1

CASNO	Target Analyte	MSD Result	MSD Qual	Spike Added	MSD % Rec.	Reporting Limit	RPD Limit	RPD
7439-97-6	MERCURY	0.0186		0.02	93	0.002	20	2

Data Package ID: *HG1604194-1*