



July 1, 2015

Ms. Karen Waters-Husted
CH2M HILL Plateau Remediation Company
2420 Stevens Center
Richland, WA 99352

Re: ALS Workorder: 1505067
Project Name: RCRA, May 2015
Project Number: W15-005

Dear Ms. Waters-Husted:

Two water samples were received from CH2M HILL Plateau Remediation Company, on 5/5/2015. The samples were scheduled for the following analyses:

Total Organic Carbon

The results for this analysis are contained in the enclosed reports.

This report was originally submitted on 5/19/2015. It is being re-submitted to evaluate the results down to the MDL.

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

Sincerely,

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
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 (MO)	175
Nebraska(NE)	NE-OS-24-13
Nevada (NV)	CO000782008A
New Jersey (NJ)	CO003
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

Problem and Discrepancy Report

ALS

SDG ALS1505067

06/10/15

The data package has the following issues:

Please re-evaluate the TOC results for non-detects at the MDL instead of the PQL. Please report the corrected hardcopy and electronic results.

Resolution: *Provide correction.*

Lab Response: Result have been re-evaluated and re-reported to the MDL.

Please report and re-submit the hard copy and electronic data package.

ALS Environmental -- FC

Sample Number(s) Cross-Reference Table

OrderNum: 1505067

Client Name: CH2M HILL Plateau Remediation Company

Client Project Name: RCRA, MAY 2015

Client Project Number: W15-005

Client PO Number: BOA 54854

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
B314P1	1505067-1		WATER	04-May-15	8:46
B314P6	1505067-2		WATER	04-May-15	10:55

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W15-005-152

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July 01, 2015

Collector: K.C. Patterson
 SAF No.: W15-005
 Project Title: RCRA, MAY 2015
 Shipped To (Lab): ALS Environmental Ft. Collins
 Protocol: RCRA

Contact/Requester: Karen Waters-Husted
 Sampling Origin: Hanford Site
 Logbook No.: HNF-N-506 74 / 70
 Method of Shipment: Commercial Carrier
 Priority: 30 Days

Telephone No.: 509-376-4650
 Purchase Order/Charge Code: 300071
 Ice Chest No.: 6005-356
 Bill of Lading/Air Bill No.: 77352167447
 Offsite Property No.: 5810

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

SPECIAL INSTRUCTIONS
 N/A

Total Activity Exemption: Yes No

Sample No.	Filter	* Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B314P1	N	W 5-4-15	0846	1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2/Cool <=6C

ALS1505067_R1

Relinquished By	Print	Date/Time	Received By	Print	Date/Time	Matrix *
K.C. Patterson CHPRC		MAY 04 2015 1120	L.D. Wall CHPRC		MAY 04 2015 1120	DS = Drum Solids DL = Drum Liquids T = Tissue WI = Wipe L = Liquid V = Vegetation X = Other
Relinquished By L.D. Wall CHPRC		MAY 04 2015 1400	Received By C. Trumble C. Trumble	FEDEX	5-5-15 0940	S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air
Relinquished By FED EX			Received By			

Rev. 1

Disposal Method (e.g., Return to customer, per lab procedure, used in process)

Disposed By

Date/Time

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W15-005-156

Page 1 of 1

July 01, 2015

Collector: K.C. Patterson
 CHPRC
 SAF No.: W15-005
 Project Title: RCRA, MAY 2015
 Shipped To (Lab): ALS Environmental Ft. Collins
 Protocol: RCRA

Contact/Requester: Karen Waters-Husted
 Sampling Origin: Hanford Site
 Logbook No.: HNF-N-506 14170
 Method of Shipment: Commercial Carrier
 Priority: 30 Days **PRIORITY**

Telephone No.: 509-376-4650
 Purchase Order/Charge Code: 300071
 Ice Chest No.: 605-356
 Bill of Lading/Air Bill No.: 735a167427
 Offsite Property No.: 5610

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

Total Activity Exemption: Yes No

SPECIAL INSTRUCTIONS
 N/A

Sample No.	Filter	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B314P6	N	5-4-15	1055	1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2/Cool <=6C

ALS1505067_R1

Relinquished By K.C. Patterson CHPRC	Print <i>[Signature]</i>	Sign	Received By L.D. Wall CHPRC	Print <i>[Signature]</i>	Sign	Date/Time MAY 04 2015 1120	Date/Time MAY 04 2015 1120
Relinquished By L.D. Wall CHPRC	Print <i>[Signature]</i>	Sign	Received By FEDEX	Print FEDEX	Sign	Date/Time MAY 04 2015 1400	Date/Time MAY 04 2015 1400
Relinquished By	Print	Sign	Received By eTrumble C Jumble	Print <i>[Signature]</i>	Sign	Date/Time 5-5-15 0940	Date/Time 5-5-15 0940

Rev. 1

Disposal Method (e.g., Return to customer, per lab procedure, used in process)

Date/Time

Disposed By



ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client: CHPRC

Workorder No: 1505067

Project Manager: JF

Initials: CDT Date: 5-5-15

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 Amount of sediment: ___ dusting ___ moderate ___ heavy	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>3.6</u>			
No. of custody seals on cooler: <u>1</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.)			

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] 5/5/15

From: (500) 373-3547
Chris Aiken
CH204
6267 Latah st
richland, WA 99354

Origin ID: PSCA



Ship Date: 04MAY15
ActWgt: 17.0 LB
CAC: 107066051/NET3610

1505067

Delivery Address Bar Code



SHIP TO: (378) 430-1511
Julie Ellingson

BILL THIRD PARTY

Ref # ptr#5010
Invoice #
PO #
Dept #

225 Commerca Drive
FORT COLLINS, CO 80524

TUE - 05 MAY 10:30A
PRIORITY OVERNIGHT

TRK# 7735 2167 7427
E201

DSR
80524
CO-US
DEN



XH FTCA



53711252EE-08

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-1
3.6'

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Organic Carbon Case Narrative

CH2M HILL Plateau Remediation Company

RCRA, MAY 2015 -- W15-005

Work Order Number: 1505067

1. This report consists of two water samples.
2. The samples were received cool and intact by ALS on 05/05/15.
3. The samples had been correctly preserved for the requested analysis.
4. The samples were prepared for analysis based on SW-846, 3rd Edition procedures.
5. The samples were analyzed following SW-846, 3rd Edition procedures for the current revision of the following SOP and method:

<u>Analyte</u>	<u>Method</u>	<u>SOP #</u>
TOC (Total Organic Carbon)	9060	670

6. All standards and solutions were used within their recommended shelf life.
7. The samples were prepared and analyzed within the established hold time for TOC analysis.

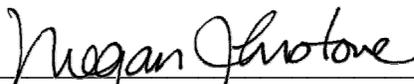
All in house quality control procedures were followed, as described below.

8. General quality control procedures.
 - n A preparation (method) blank, laboratory control sample (LCS), and laboratory control sample duplicate (LCSD) were prepared and analyzed with the samples in this preparation batch.
 - n The method blank associated with this batch was below the reporting limit for the requested analyte.
 - n All laboratory control sample criteria were met.



- n All initial and continuing calibration verifications were within the acceptance criteria for the requested analyte.
9. Matrix specific quality control procedures.
- Per method requirements, matrix QC was performed for this analysis. Since a sample from this project name and number was not the selected quality control (QC) sample, matrix specific QC results are not included in this report.
10. Sample dilutions were not required for the requested analysis.

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.



Megan Johnstone
Organics Primary Data Reviewer

7/1/15
Date



Julie Elliza
Organics Final Data Reviewer

7/1/15
Date



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.
 - 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.
 - 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.

Organic Carbon

Method SW9060

Method Blank

Lab Name: ALS Environmental -- FC

Work Order Number: 1505067

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: RCRA, MAY 2015 W15-005

Lab ID: MO150506-2MB

Sample Matrix: WATER
 % Moisture: N/A
 Date Collected: N/A
 Date Extracted: 06-May-15
 Date Analyzed: 06-May-15

Prep Batch: MO150506-2
 QCBatchID: MO150506-2-1
 Run ID: MO150506-1A2
 Cleanup: NONE
 Basis: N/A
 File Name: 05061017

Sample Aliquot: 40 ml
 Final Volume: 40 ml
 Result Units: MG/L
 Clean DF: 1

CASNO	Target Analyte	DF	Result	RptLimit/ LOQ/LOD	MDL/DL	Result Qualifier	EPA Qualifier
10-35-5	TOTAL ORGANIC CARBON	1	0.3	1	0.3	U	

Data Package ID: MO1505067-1

TOTAL ORGANIC CARBON**Method SW9060****Sample Results****Lab Name:** ALS Environmental -- FC**Client Name:** CH2M HILL Plateau Remediation Company**Client Project ID:** RCRA, MAY 2015 W15-005**Work Order Number:** 1505067**Final Volume:** 40 ml**Reporting Basis:** As Received**Matrix:** WATER**Analyst:** Steven D. White**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
B314P1	1505067-1	5/4/2015	5/6/2015	05/06/2015	N/A	1	0.36	1	0.3	B	40 ml
B314P6	1505067-2	5/4/2015	5/6/2015	05/06/2015	N/A	1	0.3	1	0.3	U	40 ml

Comments:

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

Data Package ID: *MO1505067-1*

Organic Carbon

Method SW9060

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Environmental -- FC

Work Order Number: 1505067

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: RCRA, MAY 2015 W15-005

Lab ID: MO150506-2LCS	Sample Matrix: WATER % Moisture: N/A Date Collected: N/A Date Extracted: 05/06/2015 Date Analyzed: 05/06/2015 Prep Method: NONE	Prep Batch: MO150506-2 QCBatchID: MO150506-2-1 Run ID: MO150506-1A2 Cleanup: NONE Basis: N/A File Name: 05061017	Sample Aliquot: 40 ml Final Volume: 40 ml Result Units: MG/L Clean DF: 1
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CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
10-35-5	TOTAL ORGANIC CARBON	15	15.5	1		103	85 - 115%

Lab ID: MO150506-2LCSD	Sample Matrix: WATER % Moisture: N/A Date Collected: N/A Date Extracted: 05/06/2015 Date Analyzed: 05/06/2015 Prep Method: NONE	Prep Batch: MO150506-2 QCBatchID: MO150506-2-1 Run ID: MO150506-1A2 Cleanup: NONE Basis: N/A File Name: 05061017	Sample Aliquot: 40 ml Final Volume: 40 ml Result Units: MG/L Clean DF: 1
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CASNO	Target Analyte	Spike Added	LCSD Result	Reporting Limit	Result Qualifier	LCSD % Rec.	RPD Limit	RPD
10-35-5	TOTAL ORGANIC CARBON	15	15.5	1		103	20	0

Data Package ID: MO1505067-1