Ft. Collins, Colorado LIMS Version: 6.906

Wednesday, August 14, 2019

Karen Waters-Husted
CH2M HILL Plateau Remediation Company
825 Jadwin Avenue
Richland, WA 99352

Re: ALS Workorder: 1907442
Project Name: RCRA, July 2019
Project Number: W19-007

Dear Ms. Waters-Husted:

Six water samples were received from CH2M HILL Plateau Remediation Company, on 7/23/2019. The samples were scheduled for the following analyses:

Inorganics
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
Katie M. OBrien
Project Manager

We certify that this data package is in compliance with the SOW, both technically and for completeness, including a full description of, explanation of, and corrective actions for, any and all deviations, from either the analyses requested or the case narrative requested. Release of the data contained in this hard copy data package has been authorized by the Laboratory Analytical Manager (or designee) and the laboratory's client services representative as verified by their signatures on this report.

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

Sample Number(s) Cross-Reference Table

OrderNum: 1907442
Client Name: CH2M HILL Plateau Remediation Company
Client Project Name: RCRA, July 2019
Client Project Number: W19-007
Client PO Number: BOA 54854

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
B3PKT6	1907442-1		WATER	19-Jul-19	7:00
B3PKT7	1907442-2		WATER	19-Jul-19	7:45
B3PJW2	1907442-3		WATER	19-Jul-19	9:59
B3PJW7	1907442-4		WATER	19-Jul-19	9:59
B3PJY8	1907442-5		WATER	19-Jul-19	8:10
B3PK01	1907442-6		WATER	19-Jul-19	8:10

ALS1907442

Aug. 15, 2019

Rev. 0

CH2MHill Plateau Remediation Company	21165	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	1907442 C.O.C. # W19-007-012 Page 1 of 1

Collector:	Ed Kauer CHPRC	**Contact/Requester:**	Karen Waters-Husted	**Telephone No.:**	509-376-4650
SAF No.:	W19-007	**Sampling Origin:**	Hanford Site	**Purchase Order/Charge Code:**	300071
Project Title:	RCRA, July 2019	**Logbook No.:**	HNF-N-506 -109-17	**Ice Chest No.:**	GWS-699
Shipped To (Lab):	ALS Environmental Ft. Collins	**Method of Shipment**	Commercial Carrier	**Bill of Lading/Air Bill No.:**	7757 9730 0203
Protocol:	RCRA	**Priority:**	30 Days	**Offsite Property No.:**	11354

POSSIBLE SAMPLE HAZARDS/REMARK
** ** 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

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B3PKT6	N		JUL 19 2019	0700	1x250-mL G/P	2320_ALKALINITY: GW 01	14 Days	Cool <=6C

Relinquished By:	Print First and Last Name	Signature	Date/Time	Received By:	Print First and Last Name	Signature	Date/Time
	Ed Kauer CHPRC		JUL 19 2019 1027		SSU-1		JUL 19 2019 1015
	SSU-1		JUN 22 2019 0730		Janelle Zunker CHPRC		JUN 22 2019 0730
	Janelle Zunker CHPRC		JUN 22 2019 1400		FEDEX		
	FEDEX				Nick Jostes		7.23.19 0945

Matrix *

S = Soil	DS = Drum Solids
SE = Sediment	DL = Drum Liquid
SO = Solid	T = Tissue
SL = Sludge	WI = Wipe
W = Water	L = Liquid
O = Oil	V = Vegetation
A = Air	X = Other

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process):	Disposed By:	Date/Time:

Printed On 5/15/2019 FSR ID = FSR80433 A-6004-842 (REV 3)

1907442

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C.# W19-007-013 Page 1 of 1

Collector:	Ed Kauer CHPRC	**Contact/Requester:**	Karen Waters-Husted	**Telephone No.:**	509-376-4650
SAF No.:	W19-007	**Sampling Origin:**	Hanford Site	**Purchase Order/Charge Code:**	300071
Project Title:	RCRA, July 2019	**Logbook No.:**	HNF-N-506 -109/17	**Ice Chest No.:**	GWS-699
Shipped To (Lab):	ALS Environmental Ft. Collins	**Method of Shipment**	Commercial Carrier	**Bill of Lading/Air Bill No.:**	775797300283
Protocol:	RCRA	**Priority:**	30 Days	**Offsite Property No.:**	71354

POSSIBLE SAMPLE HAZARDS/REMARK
** ** 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

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B3PKT7	N		JUL 19 2019	0745	1x250-mL G/P	2320_ALKALINITY: GW 01	14 Days	Cool <=6C

Relinquished By:	Received By:
Ed Kauer CHPRC — Print First and Last Name; Signature; JUL 19 2019 1015 — Date/Time	SSU-1 — Print First and Last Name; Signature; JUL 19 2019 1015 — Date/Time
SSU-1 — Print First and Last Name; Signature; JUN 22 2019 0730 — Date/Time	Janelle Zunker CHPRC — Print First and Last Name; Signature; JUN 22 2019 0730 — Date/Time
Janelle Zunker CHPRC — Print First and Last Name; Signature; JUN 22 2019 1400 — Date/Time	FEDEX — Print First and Last Name; Signature; Date/Time
FEDEX — Print First and Last Name; Signature; Date/Time	Nick Jostes — Print First and Last Name; Signature; 7.23.19 0945 — Date/Time

Matrix *

S = Soil	DS = Drum Solids
SE = Sediment	DL = Drum Liquid
SO = Solid	T = Tissue
SL = Sludge	WI = Wipe
W = Water	L = Liquid
O = Oil	V = Vegetation
A = Air	X = Other

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process):	Disposed By:	Date/Time:

Printed On 5/15/2019 FSR ID = FSR80434 A-6004-842 (REV 3)

ALS1907442 Aug. 15, 2019 Rev. 0

ALS1907442

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	1907442 C.O.C.# W19-007-010 Page 1 of 1

Collector:	Ed Kauer CHPRC	**Contact/Requester:**	Karen Waters-Husted	**Telephone No.:**	509-376-4650
SAF No.:	W19-007	**Sampling Origin:**	Hanford Site	**Purchase Order/Charge Code:**	300071
Project Title:	RCRA, July 2019	**Logbook No.:**	HNF-N-506 ~109/17	**Ice Chest No.:**	GWS-699
Shipped To (Lab):	ALS Environmental Ft. Collins	**Method of Shipment**	Commercial Carrier	**Bill of Lading/Air Bill No.:**	775797300203
Protocol:	RCRA	**Priority:**	30 Days	**Offsite Property No.:**	11354

POSSIBLE SAMPLE HAZARDS/REMARK
** ** 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

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B3PJW2	N	W	JUL 19 2019	0951	1x500-mL G/P	6020_METALS_ICPMS: GW 01; 6010_METALS_ICP: GW 04	6 Months	HNO3 to pH <2
B3PJW7	Y	W	↓	↓	1x500-mL G/P	6020_METALS_ICPMS: GW 01; 6010_METALS_ICP: GW 04	6 Months	HNO3 to pH <2

Relinquished By:	Signature	Date/Time	Received By:	Signature	Date/Time
Ed Kauer CHPRC		JUL 19 2019 1015	SSU-1		JUL 19 2019 1015
SSU-1		JUN 22 2019 0730	Janelle Zunker CHPRC		JUN 22 2019 0730
Janelle Zunker CHPRC		JUN 22 2019 1410	FEDEX		
FEDEX			Nick Jostes		7-23-19 0945

Matrix *

S = Soil	DS = Drum Solids
SE = Sediment	DL = Drum Liquid
SO = Solid	T = Tissue
SL = Sludge	WI = Wipe
W = Water	L = Liquid
O = Oil	V = Vegetation
A = Air	X = Other

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process):	Disposed By:	Date/Time:

Printed On 6/25/2019 FSR ID = FSR81330 A-6004-842 (REV 3)

Aug. 15, 2019

Rev. 0

1907442

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # W19-007-011 Page 1 of 1

Collector:	Ed Kauer CHPRC	**Contact/Requester:**	Karen Waters-Husted	**Telephone No.:**	509-376-4650
SAF No.:	W19-007	**Sampling Origin:**	Hanford Site	**Purchase Order/Charge Code:**	300071
Project Title:	RCRA, July 2019	**Logbook No.:**	HNF-N-506 -109/17	**Ice Chest No.:**	GWS-699
Shipped To (Lab):	ALS Environmental Ft. Collins	**Method of Shipment**	Commercial Carrier	**Bill of Lading/Air Bill No.:**	775797300203
Protocol:	RCRA	**Priority:**	30 Days	**Offsite Property No.:**	11554

POSSIBLE SAMPLE HAZARDS/REMARK
** ** 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

	Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
5	B3PJY8	N		JUL 19 2019	0810	1x250-mL G/P	2320_ALKALINITY: GW 01	14 Days	Cool <=6C
1	B3PJY8	N	W	↓	↓	1x500-mL G/P	6020_METALS_ICPMS: GW 01; 6010_METALS_ICP: GW 04	6 Months	HNO3 to pH <2
6	B3PK01	Y		JUL 19 2019	0810	1x500-mL G/P	6020_METALS_ICPMS: GW 01; 6010_METALS_ICP: GW 04	6 Months	HNO3 to pH <2

Relinquished By:	Received By:
Ed Kauer CHPRC — JUL 19 2019 1615 (Print First and Last Name / Signature / Date/Time)	SSU-1 — JUL 19 2019 1615 (Print First and Last Name / Signature / Date/Time)
SSU-1 — JUN 22 2019 0730 (Print First and Last Name / Signature / Date/Time)	Janelle Zunker CHPRC — JUN 22 2019 0730 (Print First and Last Name / Signature / Date/Time)
Janelle Zunker CHPRC — JUN 22 2019 1400 (Print First and Last Name / Signature / Date/Time)	FEDEX (Print First and Last Name / Signature / Date/Time)
FEDEX (Print First and Last Name / Signature / Date/Time)	Nick Jastes — 7.23.19 0945 (Print First and Last Name / Signature / Date/Time)

Matrix *

S = Soil	DS = Drum Solids
SE = Sediment	DL = Drum Liquid
SO = Solid	T = Tissue
SL = Sludge	WI = Wipe
W = Water	L = Liquid
O = Oil	V = Vegetation
A = Air	X = Other

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process):	Disposed By:	Date/Time:

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ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client: CHPRC Workorder No: 1907442

Project Manager: KO Initials: NJ Date: 7.23.19

1. Are airbills / shipping documents present and/or removable?		DROP OFF	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?			YES	NO *
5. Is the COC in agreement with samples received? (IDs, dates, times, # of samples, # of containers, matrix, requested analyses, etc.)			YES	NO *
6. Are short-hold samples present?			YES	NO
7. Are all samples within holding times for the requested analyses?			YES	NO *
8. Were all sample containers received intact? (not broken or leaking)			YES	NO *
9. Is there sufficient sample for the requested analyses?			YES	NO *
10. Are all samples in the proper containers for the requested analyses?			YES	NO *
11. Are all aqueous samples preserved correctly, if required? (excluding volatiles)		N/A	YES	NO *
12. Are all aqueous non-preserved samples pH 4-9?		N/A	YES	NO *
13. Are all samples requiring no headspace (VOC, GRO, RSK/MEE, radon) free of bubbles > 6 mm (1/4 inch) diameter? (i.e. size of green pea)		N/A	YES	NO
14. Were the samples shipped on ice?			YES	NO
15. Were cooler temperatures measured at 0.1-6.0°C?	IR gun used*: #1 #3 #4	RAD ONLY	YES	NO

Cooler #:	1							
Temperature (°C):	5.9							
No. of custody seals on cooler:	2							
DOT Survey/ Acceptance Information — External µR/hr reading:	8							
Background µR/hr reading:	9							

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

*** Please provide details here for NO responses to gray boxes above - for 2 thru 5 & 7 thru 12, notify PM & continue w/ login.**

All client bottle ID's vs ALS lab ID's double-checked by: NJ

If applicable, was the client contacted? **YES / NO / NA** Contact: _____ Date/Time: _____

Project Manager Signature / Date: [signature] 7/24/19

Form 201r27.xls
(02/11/2019)

*IR Gun #1, VWR SN 170560549
*IR Gun #3, VWR SN 170647571
*IR Gun #4, Oakton, SN 2372220101-0002

1907442

ORIGIN ID:PSCA (509) 373-3580
JANELLE ZUNKER
CH2M
6269 LATAH ST.
RICHLAND, WA 99354
UNITED STATES US

SHIP DATE: 22JUL19
ACTWGT: 21.00 LB
CAD: 107086605/INET4160

BILL THIRD PARTY

TO JULIE ELLINGSON
ALS GLOBAL
225 COMMERCE DRIVE
FORT COLLINS CO 80524
(970) 490-1511
REF: 11354
INV:
PO:
DEPT:

8-2

5.90

567J2/A6F9/05A2

FedEx Express

TUE - 23 JUL 10:30A
PRIORITY OVERNIGHT
DSR
80524
CO-US DEN

TRK# 0201 7757 9730 0203

XH FTCA

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Inorganics

Case Narrative

CH2M HILL Plateau Remediation Company

RCRA, July 2019 -- W19-007

Work Order Number: 1907442

1. The samples were prepared for analysis based on Standard Methods for the Examination of Water and Wastewater, 20th Edition 1998 procedures.

2. The samples were analyzed following Standard Method procedures for the current revisions of the following SOP and methods:

Analyte	Method	SOP #
Alkalinity	SM2320B	1106
Bicarbonate	SM2320B	1106
Carbonate	SM2320B	1106
Hydroxide	SM2320BH	1106

3. All standards and solutions were used within their recommended shelf life.

4. The samples were prepared and analyzed within the established hold time for this analysis.

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

5. General quality control procedures.

   - 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.

   - The method blank associated with this batch was below the reporting limit for the requested analytes. Sample results have been compared to the blank results and are flagged as appropriate.

   - All laboratory control sample criteria were met.

6. Matrix specific quality control procedures.

Sample 1907488-2 was designated as the quality control sample for this analysis. Results for the shared quality control samples from the batch are included at the client's request.

7. Reduced aliquots were taken of samples 1907442-2 and -5 for the total alkalinity analysis. Reporting limits were elevated accordingly.

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.

Melinda Greubel — 8/2/19
Melinda Greubel
Inorganics Primary Data Reviewer
Date

8/6/19
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.

- Concentration qualifier -- A “J” is entered if the reported value was obtained from a reading that was less than the Reporting Limit but greater than or equal to ALS’s Method Detection Limit. If the analyte was analyzed for but not detected a “U” is entered.

- 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.

BICARBONATE AS CaCO3

Method SM2320B

Sample Results

Lab Name: **ALS -- Fort Collins**
Client Name: CH2M HILL Plateau Remediation Company
Client Project ID: RCRA, July 2019 W19-007
Work Order Number: 1907442 **Final Volume:** 100 ml
Reporting Basis: As Received **Matrix:** WATER
Prep Method: NONE **Result Units:** MG/L
Analyst: Lisa M. Champagne

Client Sample ID	Lab ID	Date Collected	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	RptLimit/ LOQ/LOD	Flag	Sample Aliquot
B3PKT6	1907442-1	07/19/2019	07/31/2019	07/31/2019	N/A	1	5	5	U	100 ml
B3PKT7	1907442-2	07/19/2019	07/31/2019	07/31/2019	N/A	1	96	20		25 ml
B3PJY8	1907442-5	07/19/2019	07/31/2019	07/31/2019	N/A	1	78	20		25 ml

Comments:

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

Data Package ID: *AK1907442-1*

CARBONATE AS CaCO3

Method SM2320B

Sample Results

Lab Name: **ALS -- Fort Collins**
Client Name: CH2M HILL Plateau Remediation Company
Client Project ID: RCRA, July 2019 W19-007
Work Order Number: 1907442 **Final Volume:** 100 ml
Reporting Basis: As Received **Matrix:** WATER
Prep Method: NONE **Result Units:** MG/L
Analyst: Lisa M. Champagne

Client Sample ID	Lab ID	Date Collected	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	RptLimit/ LOQ/LOD	Flag	Sample Aliquot
B3PKT6	1907442-1	07/19/2019	07/31/2019	07/31/2019	N/A	1	5	5	U	100 ml
B3PKT7	1907442-2	07/19/2019	07/31/2019	07/31/2019	N/A	1	20	20	U	25 ml
B3PJY8	1907442-5	07/19/2019	07/31/2019	07/31/2019	N/A	1	20	20	U	25 ml

Comments:

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

Data Package ID: *AK1907442-1*

HYDROXIDE AS CACO3

Method SM2320BH

Sample Results

Lab Name: **ALS -- Fort Collins**
Client Name: CH2M HILL Plateau Remediation Company
Client Project ID: RCRA, July 2019 W19-007
Work Order Number: 1907442 **Final Volume:** 100 ml
Reporting Basis: As Received **Matrix:** WATER
Prep Method: NONE **Result Units:** MG/L
Analyst: Lisa M. Champagne

Client Sample ID	Lab ID	Date Collected	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	RptLimit/ LOQ/LOD	Flag	Sample Aliquot
B3PKT6	1907442-1	07/19/2019	07/31/2019	07/31/2019	N/A	1	5	5	U	100 ml
B3PKT7	1907442-2	07/19/2019	07/31/2019	07/31/2019	N/A	1	20	20	U	25 ml
B3PJY8	1907442-5	07/19/2019	07/31/2019	07/31/2019	N/A	1	20	20	U	25 ml

Comments:

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

Data Package ID: *AK1907442-1*

TOTAL ALKALINITY AS CaCO3

Method SM2320B

Sample Results

Lab Name: **ALS -- Fort Collins**
Client Name: CH2M HILL Plateau Remediation Company
Client Project ID: RCRA, July 2019 W19-007
Work Order Number: 1907442 **Final Volume:** 100 ml
Reporting Basis: As Received **Matrix:** WATER
Prep Method: NONE **Result Units:** MG/L
Analyst: Lisa M. Champagne

Client Sample ID	Lab ID	Date Collected	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	RptLimit/ LOQ/LOD	Flag	Sample Aliquot
B3PKT6	1907442-1	07/19/2019	07/31/2019	07/31/2019	N/A	1	5	5	U	100 ml
B3PKT7	1907442-2	07/19/2019	07/31/2019	07/31/2019	N/A	1	96	20		25 ml
B3PJY8	1907442-5	07/19/2019	07/31/2019	07/31/2019	N/A	1	78	20		25 ml

Comments:

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

Data Package ID: *AK1907442-1*

BICARBONATE AS CaCO3

Method SM2320B

Method Blank

Lab Name: **ALS -- Fort Collins**
Work Order Number: 1907442
Client Name: CH2M HILL Plateau Remediation Company
ClientProject ID: RCRA, July 2019 W19-007

Lab ID: AK190731-1MB

Sample Matrix: WATER
% Moisture: N/A

Prep Batch: AK190731-1
QCBatchID: AK190731-1-1
Run ID: AK190731-1A1
Cleanup: NONE
Basis: N/A

Sample Aliquot: 100 ml
Final Volume: 100 ml
Result Units: MG/L

Lab ID	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	RptLimit/ LOQ	Flag
AK190731-1MB	7/31/2019	07/31/2019	N/A	1	5	5	U

Comments:

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

Data Package ID: *AK1907442-1*

CARBONATE AS CaCO3

Method SM2320B

Method Blank

Lab Name: **ALS -- Fort Collins**
Work Order Number: 1907442
Client Name: CH2M HILL Plateau Remediation Company
ClientProject ID: RCRA, July 2019 W19-007

Lab ID: AK190731-1MB

Sample Matrix: WATER
% Moisture: N/A

Prep Batch: AK190731-1
QCBatchID: AK190731-1-1
Run ID: AK190731-1A1
Cleanup: NONE
Basis: N/A

Sample Aliquot: 100 ml
Final Volume: 100 ml
Result Units: MG/L

Lab ID	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	RptLimit/ LOQ	Flag
AK190731-1MB	7/31/2019	07/31/2019	N/A	1	5	5	U

Comments:

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

Data Package ID: *AK1907442-1*

HYDROXIDE AS CACO3

Method SM2320BH

Method Blank

Lab Name: **ALS -- Fort Collins**
Work Order Number: 1907442
Client Name: CH2M HILL Plateau Remediation Company
ClientProject ID: RCRA, July 2019 W19-007

Lab ID: AK190731-1MB

Sample Matrix: WATER
% Moisture: N/A

Prep Batch: AK190731-1
QCBatchID: AK190731-1-2
Run ID: AK190731-1A1
Cleanup: NONE
Basis: N/A

Sample Aliquot: 100 ml
Final Volume: 100 ml
Result Units: MG/L

Lab ID	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	RptLimit/ LOQ	Flag
AK190731-1MB	7/31/2019	07/31/2019	N/A	1	5	5	U

Comments:

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

Data Package ID: *AK1907442-1*

TOTAL ALKALINITY AS CaCO3

Method SM2320B

Method Blank

Lab Name: ALS -- Fort Collins
Work Order Number: 1907442
Client Name: CH2M HILL Plateau Remediation Company
ClientProject ID: RCRA, July 2019 W19-007

Lab ID: AK190731-1MB

Sample Matrix: WATER
% Moisture: N/A

Prep Batch: AK190731-1
QCBatchID: AK190731-1-1
Run ID: AK190731-1A1
Cleanup: NONE
Basis: N/A

Sample Aliquot: 100 ml
Final Volume: 100 ml
Result Units: MG/L

Lab ID	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	RptLimit/ LOQ	Flag
AK190731-1MB	7/31/2019	07/31/2019	N/A	1	5	5	U

Comments:

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

Data Package ID: *AK1907442-1*

TOTAL ALKALINITY AS CaCO3

Method SM2320B

Laboratory Control Sample

Lab Name: **ALS -- Fort Collins**
Work Order Number: 1907442
Client Name: CH2M HILL Plateau Remediation Company
ClientProject ID: RCRA, July 2019 W19-007

Lab ID: AK190731-1LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 07/31/2019
Date Analyzed: 07/31/2019

Prep Batch: AK190731-1
QCBatchID: AK190731-1-1
Run ID: AK190731-1A1
Cleanup: NONE
Basis: N/A

Sample Aliquot: 100 ml
Final Volume: 100 ml
Result Units: MG/L

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
	TOTAL ALKALINITY AS CaCO3	100	105	5		105	85 - 115

Data Package ID: *AK1907442-1*

BICARBONATE AS CaCO3

Method SM2320B

Duplicate Sample Results

Lab Name: **ALS -- Fort Collins**
Work Order Number: 1907442
Client Name: CH2M HILL Plateau Remediation Company
ClientProject ID: RCRA, July 2019 W19-007

Reporting Basis: As Received
Sample Aliquot: 25 ml
Final Volume: 100ml
Matrix: WATER
Result Units MG/L

Client Sample ID	Lab ID	Date Prepared	Date Analyzed	Dilution Factor	Duplicate Result	Dup Qual	Sample Result	Samp Qual	Reporting Limit	RPD	RPD Limit
SHARED QC	1907488-2D	07/31/2019	07/31/2019	1	227		230		20	0	15

Comments:

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

Data Package ID: *AK1907442-1*

CARBONATE AS CaCO3

Method SM2320B

Duplicate Sample Results

Lab Name: **ALS -- Fort Collins**
Work Order Number: 1907442
Client Name: CH2M HILL Plateau Remediation Company
ClientProject ID: RCRA, July 2019 W19-007

Reporting Basis: As Received
Sample Aliquot: 25 ml
Final Volume: 100ml
Matrix: WATER
Result Units MG/L

Client Sample ID	Lab ID	Date Prepared	Date Analyzed	Dilution Factor	Duplicate Result	Dup Qual	Sample Result	Samp Qual	Reporting Limit	RPD	RPD Limit
SHARED QC	1907488-2D	07/31/2019	07/31/2019	1	20	U	20	U	20		15

Comments:

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

Data Package ID: *AK1907442-1*

TOTAL ALKALINITY AS CaCO3

Method SM2320B

Duplicate Sample Results

Lab Name: **ALS -- Fort Collins**
Work Order Number: 1907442
Client Name: CH2M HILL Plateau Remediation Company
ClientProject ID: RCRA, July 2019 W19-007

Reporting Basis: As Received
Sample Aliquot: 25 ml
Final Volume: 100ml
Matrix: WATER
Result Units MG/L

Client Sample ID	Lab ID	Date Prepared	Date Analyzed	Dilution Factor	Duplicate Result	Dup Qual	Sample Result	Samp Qual	Reporting Limit	RPD	RPD Limit
SHARED QC	1907488-2D	07/31/2019	07/31/2019	1	227		230		20	0	15

Comments:

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

Data Package ID: *AK1907442-1*

Prep Batch ID: AK190731-1

Start Date: 07/31/19
Start Time: 10:25
Prep Analyst: Lisa M. Champagne

End Date: 07/31/19
End Time: 12:00

Concentration Method: NONE
Extract Method: NONE
Initial Volume Units: ml
Final Volume Units: ml

Batch Created By: lmc
Date Created: 07/31/19
Time Created: 10:25
Validated By: lmc
Date Validated: 07/31/19
Time Validated: 15:20

Comments:

QC Batch ID: AK190731-1-1

Lab ID	QC Type	Field ID	Matrix	Date Collected	Initial Wt/Vol	Final Wt/Vol	Cleanup Method	Cleanup DF	Order Number
AK190731-1	MB	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1907488
AK190731-1	LCS	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1907488
1907488-2	DUP	XXXXXX	WATER	XXXXXX	25	100	NONE	1	1907488
1907442-1	SMP	B3PKT6	WATER	7/19/2019	100	100	NONE	1	1907442
1907442-2	SMP	B3PKT7	WATER	7/19/2019	25	100	NONE	1	1907442
1907442-5	SMP	B3PJY8	WATER	7/19/2019	25	100	NONE	1	1907442
1907445-1	SMP	XXXXXX	WATER	XXXXXX	25	100	NONE	1	1907445
1907488-16	SMP	XXXXXX	WATER	XXXXXX	25	100	NONE	1	1907488
1907488-2	SMP	XXXXXX	WATER	XXXXXX	25	100	NONE	1	1907488
1907488-9	SMP	XXXXXX	WATER	XXXXXX	25	100	NONE	1	1907488
1907516-5	SMP	XXXXXX	WATER	XXXXXX	25	100	NONE	1	1907516
1907517-2	SMP	XXXXXX	WATER	XXXXXX	25	100	NONE	1	1907517
1907517-9	SMP	XXXXXX	WATER	XXXXXX	25	100	NONE	1	1907517
1907519-11	SMP	XXXXXX	WATER	XXXXXX	25	100	NONE	1	1907519
1907519-18	SMP	XXXXXX	WATER	XXXXXX	25	100	NONE	1	1907519
1907519-2	SMP	XXXXXX	WATER	XXXXXX	25	100	NONE	1	1907519
1907560-5	SMP	XXXXXX	WATER	XXXXXX	25	100	NONE	1	1907560
1907577-12	SMP	XXXXXX	WATER	XXXXXX	25	100	NONE	1	1907577
1907577-30	SMP	XXXXXX	WATER	XXXXXX	25	100	NONE	1	1907577
1907605-3	SMP	XXXXXX	WATER	XXXXXX	25	100	NONE	1	1907605

Prep Batch ID: AK190731-1

Start Date: 07/31/19
Start Time: 10:25
Prep Analyst: Lisa M. Champagne

End Date: 07/31/19
End Time: 12:00

Concentration Method: NONE
Extract Method: NONE
Initial Volume Units: ml
Final Volume Units: ml

Batch Created By: lmc
Date Created: 07/31/19
Time Created: 10:25
Validated By: lmc
Date Validated: 07/31/19
Time Validated: 15:20

Comments:

QC Types

CAR	Carrier reference sample		DLS	Detection Limit Standard	
DUP	Laboratory Duplicate		LCS	Laboratory Control Sample	
LCSD	Laboratory Control Sample Duplicat		LODV	Limit of Detection Verification	
LOQV	Limit of Quantitation Verification		MB	Method Blank	
MS	Laboratory Matrix Spike		MSD	Laboratory Matrix Spike Duplicate	
REP	Sample replicate		RVS	Reporting Level Verification Standar	
SMP	Field Sample		SYS	Sample Yield Spike	

Prep Batch ID: AK190731-1

Start Date: 07/31/19
Start Time: 10:25
Prep Analyst: Lisa M. Champagne

End Date: 07/31/19
End Time: 12:00

Concentration Method: NONE
Extract Method: NONE
Initial Volume Units: ml
Final Volume Units: ml

Batch Created By: lmc
Date Created: 07/31/19
Time Created: 10:25
Validated By: lmc
Date Validated: 07/31/19
Time Validated: 15:20

Comments:

QC Batch ID: AK190731-1-2

Lab ID	QC Type	Field ID	Matrix	Date Collected	Initial Wt/Vol	Final Wt/Vol	Cleanup Method	Cleanup DF	Order Number
AK190731-1	MB	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1907442
AK190731-1	LCS	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1907442
1907442-1	SMP	B3PKT6	WATER	7/19/2019	25	100	NONE	1	1907442
1907442-2	SMP	B3PKT7	WATER	7/19/2019	25	100	NONE	1	1907442
1907442-5	SMP	B3PJY8	WATER	7/19/2019	25	100	NONE	1	1907442

QC Types

CAR	Carrier reference sample	DLS	Detection Limit Standard
DUP	Laboratory Duplicate	LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicat	LODV	Limit of Detection Verification
LOQV	Limit of Quantitation Verification	MB	Method Blank
MS	Laboratory Matrix Spike	MSD	Laboratory Matrix Spike Duplicate
REP	Sample replicate	RVS	Reporting Level Verification Standar
SMP	Field Sample	SYS	Sample Yield Spike

Metals

Case Narrative

CH2M HILL Plateau Remediation Company

RCRA, July 2019 – W19-007

Work Order Number: 1907442

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

   For analysis by Trace ICP and ICP-MS, the samples were digested following method 3005A and the current revision of SOP 806.

2. Analysis by ICP-MS followed method 6020B and the current revision of SOP 827.

   Analysis by Trace ICP followed method 6010D and the current revision of SOP 834.

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

4. The samples were prepared and analyzed within the established hold time.

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

5. General quality control procedures.

   - A preparation (method) blank and laboratory control sample were digested and analyzed with the samples in this digestion batch.
   - The preparation (method) blank associated with this digestion batch was below the reporting limit for the requested analytes. Sample results have been compared to the blank results and are flagged as appropriate. Potassium, sodium, aluminum, copper, tin and zinc were detected above the MDL.
   - 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 read-backs associated with Method 6010D were within acceptance criteria.
- The interference check samples associated with Method 6020B were analyzed.

6. Matrix specific quality control procedures.

   Sample 1907442-3 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 and precision were met.
   - A serial dilution was analyzed with each ICP batch. All acceptance criteria were met with the following exception:

Analyte	Sample ID
Vanadium	1907442-3L

   The native sample result is flagged for serial dilution failure.

7. 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.

Megan Johnstone — 8/13/19
Megan Johnstone
Inorganics Primary Data Reviewer
Date

Kath M. O — 8/14/19
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 <=20X the blank concentration.

  D - Analyte was reported at a secondary dilution factor, typically DF>1 (i.e., the primary preparation required dilution to either bring the analyte within the calibration range or to minimize interference). Required for organics/wetchem if the sample was diluted.

Total Recoverable ICP Metals

Method SW6010D

Sample Results

Lab Name: **ALS -- Fort Collins**
Work Order Number: 1907442
Client Name: CH2M HILL Plateau Remediation Company
ClientProject ID: RCRA, July 2019 W19-007

Field ID: B3PJW2
Lab ID: 1907442-3

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 19-Jul-19
Date Extracted: 02-Aug-19
Date Analyzed: 05-Aug-19
Prep Method: SW3005 Rev A

Prep Batch: IP190802-1
QCBatchID: IP190802-1-2
Run ID: IT190805-1A2
Cleanup: NONE
Basis: As Received
File Name: 190805A.

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

CASNO	Target Analyte	Dilution Factor	Result	Result Qualifier	Reporting Limit	MDL
7440-42-8	BORON	1	36	U	50	36
7440-70-2	CALCIUM	1	46000		1000	210
7439-89-6	IRON	1	160		50	30
7439-95-4	MAGNESIUM	1	15000		750	89
7440-09-7	POTASSIUM	1	5400	C	1000	130
7440-23-5	SODIUM	1	23000		500	38
7440-62-2	VANADIUM	1	23	E	10	0.43

Data Package ID: *IT1907442-1*

Dissolved ICP Metals

Method SW6010D

Sample Results

Lab Name: **ALS -- Fort Collins**
Work Order Number: 1907442
Client Name: CH2M HILL Plateau Remediation Company
ClientProject ID: RCRA, July 2019 W19-007

Field ID: B3PJW7
Lab ID: 1907442-4

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 19-Jul-19
Date Extracted: 02-Aug-19
Date Analyzed: 05-Aug-19
Prep Method: SW3005 Rev A

Prep Batch: IP190802-1
QCBatchID: IP190802-1-2
Run ID: IT190805-1A2
Cleanup: NONE
Basis: As Received
File Name: 190805A.

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

CASNO	Target Analyte	Dilution Factor	Result	Result Qualifier	Reporting Limit	MDL
7440-42-8	BORON	1	36	U	50	36
7440-70-2	CALCIUM	1	46000		1000	210
7439-89-6	IRON	1	30	U	50	30
7439-95-4	MAGNESIUM	1	15000		750	89
7440-09-7	POTASSIUM	1	5300	C	1000	130
7440-23-5	SODIUM	1	22000		500	38
7440-62-2	VANADIUM	1	22		10	0.43

Data Package ID: *IT1907442-1*

Total Recoverable ICP Metals

Method SW6010D

Sample Results

Lab Name: **ALS -- Fort Collins**
Work Order Number: 1907442
Client Name: CH2M HILL Plateau Remediation Company
ClientProject ID: RCRA, July 2019 W19-007

Field ID: B3PJY8
Lab ID: 1907442-5

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 19-Jul-19
Date Extracted: 02-Aug-19
Date Analyzed: 05-Aug-19
Prep Method: SW3005 Rev A

Prep Batch: IP190802-1
QCBatchID: IP190802-1-2
Run ID: IT190805-1A2
Cleanup: NONE
Basis: As Received
File Name: 190805A.

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

CASNO	Target Analyte	Dilution Factor	Result	Result Qualifier	Reporting Limit	MDL
7440-42-8	BORON	1	36	U	50	36
7440-70-2	CALCIUM	1	36000		1000	210
7439-89-6	IRON	1	1100		50	30
7439-95-4	MAGNESIUM	1	16000		750	89
7440-09-7	POTASSIUM	1	5700	C	1000	130
7440-23-5	SODIUM	1	24000		500	38
7440-62-2	VANADIUM	1	18		10	0.43

Data Package ID: *IT1907442-1*

Dissolved ICP Metals

Method SW6010D

Sample Results

Lab Name: **ALS -- Fort Collins**
Work Order Number: 1907442
Client Name: CH2M HILL Plateau Remediation Company
ClientProject ID: RCRA, July 2019 W19-007

Field ID: B3PK01
Lab ID: 1907442-6

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 19-Jul-19
Date Extracted: 02-Aug-19
Date Analyzed: 05-Aug-19
Prep Method: SW3005 Rev A

Prep Batch: IP190802-1
QCBatchID: IP190802-1-2
Run ID: IT190805-1A2
Cleanup: NONE
Basis: As Received
File Name: 190805A.

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

CASNO	Target Analyte	Dilution Factor	Result	Result Qualifier	Reporting Limit	MDL
7440-42-8	BORON	1	36	U	50	36
7440-70-2	CALCIUM	1	37000		1000	210
7439-89-6	IRON	1	30	U	50	30
7439-95-4	MAGNESIUM	1	15000		750	89
7440-09-7	POTASSIUM	1	5500	C	1000	130
7440-23-5	SODIUM	1	24000		500	38
7440-62-2	VANADIUM	1	15		10	0.43

Data Package ID: *IT1907442-1*

Total Recoverable ICPMS Metals

Method SW6020B

Sample Results

Lab Name: ALS -- Fort Collins
Work Order Number: 1907442
Client Name: CH2M HILL Plateau Remediation Company
ClientProject ID: RCRA, July 2019 W19-007

Field ID: B3PJW2
Lab ID: 1907442-3

Analysis ReqCode: 6020_METALS_I

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 19-Jul-19
Date Extracted: 02-Aug-19
Date Analyzed: 05-Aug-19
Prep Method: SW3005 Rev A

Prep Batch: IP190802-1
QCBatchID: IP190802-1-1
Run ID: IM190805-10A4
Cleanup: NONE
Basis: As Received
File Name: 025SMPL_

Analyst: Nicole C. Chirban
Sample Aliquot: 50 ml
Final Volume: 50 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Result Qualifier	Reporting Limit	MDL
7429-90-5	ALUMINUM	10	58	BC	100	10
7440-36-0	ANTIMONY	10	0.12	U	1	0.12
7440-38-2	ARSENIC	10	1.4	B	2	0.39
7440-39-3	BARIUM	10	50		5	0.56
7440-41-7	BERYLLIUM	10	0.054	U	0.5	0.054
7440-43-9	CADMIUM	10	0.083	U	2	0.083
7440-47-3	CHROMIUM	10	7.4	B	10	0.46
7440-48-4	COBALT	10	0.11	U	5	0.11
7440-50-8	COPPER	10	0.36	BC	8	0.32
7439-92-1	LEAD	10	0.079	U	2	0.079
7439-96-5	MANGANESE	10	3.5	B	5	0.36
7439-98-7	MOLYBDENUM	10	3.9		2	0.079
7440-02-0	NICKEL	10	1.5	B	20	0.92
7782-49-2	SELENIUM	10	2.3	B	10	0.65
7440-22-4	SILVER	10	0.04	B	0.5	0.029
7440-24-6	STRONTIUM	10	170		5	0.32
7440-28-0	THALLIUM	10	0.0041	U	0.1	0.0041
7440-29-1	THORIUM	10	0.02	B	0.2	0.016
7440-31-5	TIN	10	0.48	BC	10	0.12
7440-61-1	URANIUM	10	3.7		0.1	0.0049
7440-66-6	ZINC	10	3	BC	100	1.4

Data Package ID: *IM1907442-1*

Dissolved ICPMS Metals

Method SW6020B

Sample Results

Lab Name: ALS -- Fort Collins
Work Order Number: 1907442
Client Name: CH2M HILL Plateau Remediation Company
ClientProject ID: RCRA, July 2019 W19-007

Field ID: B3PJW7
Lab ID: 1907442-4

Analysis ReqCode: 6020_METALS_I

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 19-Jul-19
Date Extracted: 02-Aug-19
Date Analyzed: 05-Aug-19
Prep Method: SW3005 Rev A

Prep Batch: IP190802-1
QCBatchID: IP190802-1-1
Run ID: IM190805-10A4
Cleanup: NONE
Basis: As Received
File Name: 030SMPL_

Analyst: Nicole C. Chirban
Sample Aliquot: 50 ml
Final Volume: 50 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Result Qualifier	Reporting Limit	MDL
7429-90-5	ALUMINUM	10	10	BC	100	10
7440-36-0	ANTIMONY	10	0.12	U	1	0.12
7440-38-2	ARSENIC	10	1.6	B	2	0.39
7440-39-3	BARIUM	10	47		5	0.56
7440-41-7	BERYLLIUM	10	0.054	U	0.5	0.054
7440-43-9	CADMIUM	10	0.083	U	2	0.083
7440-47-3	CHROMIUM	10	6.4	B	10	0.46
7440-48-4	COBALT	10	0.12	B	5	0.11
7440-50-8	COPPER	10	0.32	U	8	0.32
7439-92-1	LEAD	10	0.079	U	2	0.079
7439-96-5	MANGANESE	10	0.36	U	5	0.36
7439-98-7	MOLYBDENUM	10	3.8		2	0.079
7440-02-0	NICKEL	10	0.92	U	20	0.92
7782-49-2	SELENIUM	10	2	B	10	0.65
7440-22-4	SILVER	10	0.029	U	0.5	0.029
7440-24-6	STRONTIUM	10	170		5	0.32
7440-28-0	THALLIUM	10	0.0041	U	0.1	0.0041
7440-29-1	THORIUM	10	0.016	U	0.2	0.016
7440-31-5	TIN	10	0.38	BC	10	0.12
7440-61-1	URANIUM	10	3.6		0.1	0.0049
7440-66-6	ZINC	10	3.1	BC	100	1.4

Data Package ID: *IM1907442-1*

Total Recoverable ICPMS Metals

Method SW6020B

Sample Results

Lab Name: ALS -- Fort Collins
Work Order Number: 1907442
Client Name: CH2M HILL Plateau Remediation Company
ClientProject ID: RCRA, July 2019 W19-007

Field ID: B3PJY8
Lab ID: 1907442-5

Analysis ReqCode: 6020_METALS_I

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 19-Jul-19
Date Extracted: 02-Aug-19
Date Analyzed: 05-Aug-19
Prep Method: SW3005 Rev A

Prep Batch: IP190802-1
QCBatchID: IP190802-1-1
Run ID: IM190805-10A4
Cleanup: NONE
Basis: As Received
File Name: 031SMPL_

Analyst: Nicole C. Chirban
Sample Aliquot: 50 ml
Final Volume: 50 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Result Qualifier	Reporting Limit	MDL
7429-90-5	ALUMINUM	10	350		100	10
7440-36-0	ANTIMONY	10	0.12	U	1	0.12
7440-38-2	ARSENIC	10	1.3	B	2	0.39
7440-39-3	BARIUM	10	71		5	0.56
7440-41-7	BERYLLIUM	10	0.054	U	0.5	0.054
7440-43-9	CADMIUM	10	0.083	U	2	0.083
7440-47-3	CHROMIUM	10	30		10	0.46
7440-48-4	COBALT	10	0.58	B	5	0.11
7440-50-8	COPPER	10	18	C	8	0.32
7439-92-1	LEAD	10	0.31	B	2	0.079
7439-96-5	MANGANESE	10	29		5	0.36
7439-98-7	MOLYBDENUM	10	7.7		2	0.079
7440-02-0	NICKEL	10	17	B	20	0.92
7782-49-2	SELENIUM	10	5.3	B	10	0.65
7440-22-4	SILVER	10	0.11	B	0.5	0.029
7440-24-6	STRONTIUM	10	190		5	0.32
7440-28-0	THALLIUM	10	0.0041	U	0.1	0.0041
7440-29-1	THORIUM	10	0.12	B	0.2	0.016
7440-31-5	TIN	10	0.43	BC	10	0.12
7440-61-1	URANIUM	10	1.1		0.1	0.0049
7440-66-6	ZINC	10	41	B	100	1.4

Data Package ID: *IM1907442-1*

Dissolved ICPMS Metals

Method SW6020B

Sample Results

Lab Name: ALS -- Fort Collins
Work Order Number: 1907442
Client Name: CH2M HILL Plateau Remediation Company
ClientProject ID: RCRA, July 2019 W19-007

Field ID: B3PK01
Lab ID: 1907442-6

Analysis ReqCode: 6020_METALS_I

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 19-Jul-19
Date Extracted: 02-Aug-19
Date Analyzed: 05-Aug-19
Prep Method: SW3005 Rev A

Prep Batch: IP190802-1
QCBatchID: IP190802-1-1
Run ID: IM190805-10A4
Cleanup: NONE
Basis: As Received
File Name: 032SMPL_

Analyst: Nicole C. Chirban
Sample Aliquot: 50 ml
Final Volume: 50 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Result Qualifier	Reporting Limit	MDL
7429-90-5	ALUMINUM	10	15	BC	100	10
7440-36-0	ANTIMONY	10	0.12	U	1	0.12
7440-38-2	ARSENIC	10	1.2	B	2	0.39
7440-39-3	BARIUM	10	65		5	0.56
7440-41-7	BERYLLIUM	10	0.054	U	0.5	0.054
7440-43-9	CADMIUM	10	0.083	U	2	0.083
7440-47-3	CHROMIUM	10	9.6	B	10	0.46
7440-48-4	COBALT	10	0.11	U	5	0.11
7440-50-8	COPPER	10	0.45	BC	8	0.32
7439-92-1	LEAD	10	0.079	U	2	0.079
7439-96-5	MANGANESE	10	0.97	B	5	0.36
7439-98-7	MOLYBDENUM	10	6.5		2	0.079
7440-02-0	NICKEL	10	4	B	20	0.92
7782-49-2	SELENIUM	10	5.6	B	10	0.65
7440-22-4	SILVER	10	0.029	U	0.5	0.029
7440-24-6	STRONTIUM	10	180		5	0.32
7440-28-0	THALLIUM	10	0.0041	U	0.1	0.0041
7440-29-1	THORIUM	10	0.016	U	0.2	0.016
7440-31-5	TIN	10	0.35	BC	10	0.12
7440-61-1	URANIUM	10	1		0.1	0.0049
7440-66-6	ZINC	10	2.4	BC	100	1.4

Data Package ID: *IM1907442-1*

ICP Metals

Method SW6010D
Method Blank

Lab Name: **ALS -- Fort Collins**
Work Order Number: 1907442
Client Name: CH2M HILL Plateau Remediation Company
ClientProject ID: RCRA, July 2019 W19-007

Lab ID: IP190802-1MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 02-Aug-19
Date Analyzed: 05-Aug-19

Prep Batch: IP190802-1
QCBatchID: IP190802-1-2
Run ID: IT190805-1A2
Cleanup: NONE
Basis: N/A
File Name: 190805A.

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

CASNO	Target Analyte	DF	Result	Result Qualifier	Reporting Limit	MDL
7440-42-8	BORON	1	36	U	50	36
7440-70-2	CALCIUM	1	210	U	1000	210
7439-89-6	IRON	1	30	U	50	30
7439-95-4	MAGNESIUM	1	89	U	750	89
7440-09-7	POTASSIUM	1	440	B	1000	130
7440-23-5	SODIUM	1	130	B	500	38
7440-62-2	VANADIUM	1	0.43	U	10	0.43

Data Package ID: *IT1907442-1*

ICP Metals

Method SW6010D

Laboratory Control Sample

Lab Name: ALS -- Fort Collins
Work Order Number: 1907442
Client Name: CH2M HILL Plateau Remediation Company
ClientProject ID: RCRA, July 2019 W19-007

Lab ID: IP190802-1LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 08/02/2019
Date Analyzed: 08/05/2019
Prep Method: SW3005A

Prep Batch: IP190802-1
QCBatchID: IP190802-1-2
Run ID: IT190805-1A2
Cleanup: NONE
Basis: N/A
File Name: 190805A.

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	996	50		100	80 - 120%
7440-70-2	CALCIUM	40000	39300	1000		98	80 - 120%
7439-89-6	IRON	1000	983	50		98	80 - 120%
7439-95-4	MAGNESIUM	40000	40400	750		101	80 - 120%
7440-09-7	POTASSIUM	40000	42200	1000		105	80 - 120%
7440-23-5	SODIUM	40000	42900	500		107	80 - 120%
7440-62-2	VANADIUM	500	488	10		98	80 - 120%

Data Package ID: *IT1907442-1*

ICP Metals

Method SW6010D

Matrix Spike And Matrix Spike Duplicate

Lab Name: ALS -- Fort Collins
Work Order Number: 1907442
Client Name: CH2M HILL Plateau Remediation Company
ClientProject ID: RCRA, July 2019 W19-007

Field ID: B3PJW2
LabID: 1907442-3MS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 19-Jul-19
Date Extracted: 02-Aug-19
Date Analyzed: 05-Aug-19
Prep Method: SW3005 Rev A

Prep Batch: IP190802-1
QCBatchID: IP190802-1-2
Run ID: IT190805-1A2
Cleanup: NONE
Basis: As Received

Sample Aliquot: 50 ml
Final Volume: 50 ml
Result Units: UG/L
File Name: 190805A.

CASNO	Target Analyte	Sample Result	Samp Qual	MS Result	MS Qual	Reporting Limit	Spike Added	MS % Rec.	Control Limits
7440-42-8	BORON	36	U	1020		50	1000	102	80 - 120%
7440-70-2	CALCIUM	46000		85400		1000	40000	99	80 - 120%
7439-89-6	IRON	160		1120		50	1000	96	80 - 120%
7439-95-4	MAGNESIUM	15000		55500		750	40000	101	80 - 120%
7440-09-7	POTASSIUM	5400	C	48000		1000	40000	106	80 - 120%
7440-23-5	SODIUM	23000		60900		500	40000	96	80 - 120%
7440-62-2	VANADIUM	23		503		10	500	96	80 - 120%

Field ID: B3PJW2
LabID: 1907442-3MSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 19-Jul-19
Date Extracted: 02-Aug-19
Date Analyzed: 05-Aug-19
Prep Method: SW3005 Rev A

Prep Batch: IP190802-1
QCBatchID: IP190802-1-2
Run ID: IT190805-1A2
Cleanup: NONE
Basis: As Received

Sample Aliquot: 50 ml
Final Volume: 50 ml
Result Units: UG/L
File Name: 190805A.

CASNO	Target Analyte	MSD Result	MSD Qual	Spike Added	MSD % Rec.	Reporting Limit	RPD Limit	RPD
7440-42-8	BORON	1020		1000	102	50	20	0
7440-70-2	CALCIUM	85500		40000	100	1000	20	0
7439-89-6	IRON	1130		1000	97	50	20	1
7439-95-4	MAGNESIUM	55600		40000	101	750	20	0
7440-09-7	POTASSIUM	48000		40000	107	1000	20	0
7440-23-5	SODIUM	60700		40000	95	500	20	0
7440-62-2	VANADIUM	506		500	97	10	20	1

Data Package ID: *IT1907442-1*

Prep Batch ID: IP190802-1

Start Date: 08/02/19
Start Time: 10:53
Prep Analyst: Jill M. Latelle

End Date: 08/02/19
End Time: 18:00

Concentration Method: NONE
Extract Method: SW3005A
Initial Volume Units: ml
Final Volume Units: ml

Batch Created By: jml
Date Created: 08/02/19
Time Created: 11:13
Validated By: jml
Date Validated: 08/02/19
Time Validated: 12:48

Comments:

QC Batch ID: IP190802-1-2

Lab ID	QC Type	Field ID	Matrix	Date Collected	Initial Wt/Vol	Final Wt/Vol	Cleanup Method	Cleanup DF	Order Number
IP190802-1	MB	XXXXXX	WATER	XXXXXX	50	50	NONE	1	1907442
IP190802-1	LCS	XXXXXX	WATER	XXXXXX	50	50	NONE	1	1907442
1907442-3	MS	B3PJW2	WATER	7/19/2019	50	50	NONE	1	1907442
1907442-3	MSD	B3PJW2	WATER	7/19/2019	50	50	NONE	1	1907442
1907442-3	SMP	B3PJW2	WATER	7/19/2019	50	50	NONE	1	1907442
1907442-4	SMP	B3PJW7	WATER	7/19/2019	50	50	NONE	1	1907442
1907442-5	SMP	B3PJY8	WATER	7/19/2019	50	50	NONE	1	1907442
1907442-6	SMP	B3PK01	WATER	7/19/2019	50	50	NONE	1	1907442
1907500-11	SMP	XXXXXX	WATER	XXXXXX	50	50	NONE	1	1907500
1907500-12	SMP	XXXXXX	WATER	XXXXXX	50	50	NONE	1	1907500
1907500-13	SMP	XXXXXX	WATER	XXXXXX	50	50	NONE	1	1907500

QC Types

CAR	Carrier reference sample	DLS	Detection Limit Standard	
DUP	Laboratory Duplicate	LCS	Laboratory Control Sample	
LCSD	Laboratory Control Sample Duplicat	LODV	Limit of Detection Verification	
LOQV	Limit of Quantitation Verification	MB	Method Blank	
MS	Laboratory Matrix Spike	MSD	Laboratory Matrix Spike Duplicate	
REP	Sample replicate	RVS	Reporting Level Verification Standar	
SMP	Field Sample	SYS	Sample Yield Spike	

ICPMS Metals

Method SW6020B

Method Blank

Lab Name: ALS -- Fort Collins
Work Order Number: 1907442
Client Name: CH2M HILL Plateau Remediation Company
ClientProject ID: RCRA, July 2019 W19-007

Lab ID: IP190802-1MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 02-Aug-19
Date Analyzed: 05-Aug-19

Prep Batch: IP190802-1
QCBatchID: IP190802-1-1
Run ID: IM190805-10A4
Cleanup: NONE
Basis: N/A
File Name: 023SMPL_

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

CASNO	Target Analyte	DF	Result	Result Qualifier	Reporting Limit	MDL
7429-90-5	ALUMINUM	10	13	B	100	10
7440-36-0	ANTIMONY	10	0.12	U	1	0.12
7440-38-2	ARSENIC	10	0.39	U	2	0.39
7440-39-3	BARIUM	10	0.56	U	5	0.56
7440-41-7	BERYLLIUM	10	0.054	U	0.5	0.054
7440-43-9	CADMIUM	10	0.083	U	2	0.083
7440-47-3	CHROMIUM	10	0.46	U	10	0.46
7440-48-4	COBALT	10	0.11	U	5	0.11
7440-50-8	COPPER	10	4.4	B	8	0.32
7439-92-1	LEAD	10	0.079	U	2	0.079
7439-96-5	MANGANESE	10	0.36	U	5	0.36
7439-98-7	MOLYBDENUM	10	0.079	U	2	0.079
7440-02-0	NICKEL	10	0.92	U	20	0.92
7782-49-2	SELENIUM	10	0.65	U	10	0.65
7440-22-4	SILVER	10	0.029	U	0.5	0.029
7440-24-6	STRONTIUM	10	0.32	U	5	0.32
7440-29-1	THORIUM	10	0.016	U	0.2	0.016
7440-31-5	TIN	10	0.79	B	10	0.12
7440-61-1	URANIUM	10	0.0049	U	0.1	0.0049
7440-66-6	ZINC	10	1.4	B	100	1.4

Data Package ID: *IM1907442-1*

ICPMS Metals

Method SW6020B

Method Blank

Lab Name: **ALS -- Fort Collins**
Work Order Number: 1907442
Client Name: CH2M HILL Plateau Remediation Company
ClientProject ID: RCRA, July 2019 W19-007

Lab ID: IP190802-1MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 02-Aug-19
Date Analyzed: 08-Aug-19

Prep Batch: IP190802-1
QCBatchID: IP190802-1-1
Run ID: IM190808-20A3
Cleanup: NONE
Basis: N/A
File Name: 043SMPL_

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

CASNO	Target Analyte	DF	Result	Result Qualifier	Reporting Limit	MDL
7440-28-0	THALLIUM	10	0.0041	U	0.1	0.0041

Data Package ID: *IM1907442-1*

ICPMS Metals

Method SW6020B

Laboratory Control Sample

Lab Name: ALS -- Fort Collins
Work Order Number: 1907442
Client Name: CH2M HILL Plateau Remediation Company
ClientProject ID: RCRA, July 2019 W19-007

Lab ID: IM190802-1LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 08/02/2019
Date Analyzed: 08/05/2019
Prep Method: SW3005A

Prep Batch: IP190802-1
QCBatchID: IP190802-1-1
Run ID: IM190805-10A4
Cleanup: NONE
Basis: N/A
File Name: 024SMPL_

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	4370	100		87	80 - 120%
7440-36-0	ANTIMONY	30	27.5	1		92	80 - 120%
7440-38-2	ARSENIC	100	96.7	2		97	80 - 120%
7440-39-3	BARIUM	100	93.5	5		93	80 - 120%
7440-41-7	BERYLLIUM	50	49.4	0.5		99	80 - 120%
7440-43-9	CADMIUM	30	28.8	2		96	80 - 120%
7440-47-3	CHROMIUM	500	470	10		94	80 - 120%
7440-48-4	COBALT	100	93.5	5		93	80 - 120%
7440-50-8	COPPER	1000	962	8		96	80 - 120%
7439-92-1	LEAD	50	49	2		98	80 - 120%
7439-96-5	MANGANESE	100	92.5	5		93	80 - 120%
7439-98-7	MOLYBDENUM	100	95.4	2		95	80 - 120%
7440-02-0	NICKEL	500	478	20		96	80 - 120%
7782-49-2	SELENIUM	100	101	10		101	80 - 120%
7440-22-4	SILVER	10	9.77	0.5		98	80 - 120%
7440-24-6	STRONTIUM	100	93.5	5		94	80 - 120%
7440-28-0	THALLIUM	2	2.07	0.1		103	80 - 120%
7440-29-1	THORIUM	10	9.88	0.2		99	80 - 120%
7440-31-5	TIN	500	474	10		95	80 - 120%
7440-61-1	URANIUM	10	9.21	0.1		92	80 - 120%
7440-66-6	ZINC	2000	1880	100		94	80 - 120%

Data Package ID: *IM1907442-1*

ICPMS Metals

Method SW6020B

Matrix Spike And Matrix Spike Duplicate

Lab Name: ALS -- Fort Collins
Work Order Number: 1907442
Client Name: CH2M HILL Plateau Remediation Company
ClientProject ID: RCRA, July 2019 W19-007

Field ID: B3PJW2
LabID: 1907442-3MS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 19-Jul-19
Date Extracted: 02-Aug-19
Date Analyzed: 05-Aug-19
Prep Method: SW3005 Rev A

Prep Batch: IP190802-1
QCBatchID: IP190802-1-1
Run ID: IM190805-10A4
Cleanup: NONE
Basis: As Received

Sample Aliquot: 50 ml
Final Volume: 50 ml
Result Units: UG/L
File Name: 027SMPL_

CASNO	Target Analyte	Sample Result	Samp Qual	MS Result	MS Qual	Reporting Limit	Spike Added	MS % Rec.	Control Limits
7429-90-5	ALUMINUM	58	BC	4520		100	5000	89	75 - 125%
7440-36-0	ANTIMONY	0.12	U	27.7		1	30	92	75 - 125%
7440-38-2	ARSENIC	1.4	B	99.4		2	100	98	75 - 125%
7440-39-3	BARIUM	50		142		5	100	92	75 - 125%
7440-41-7	BERYLLIUM	0.054	U	48.8		0.5	50	98	75 - 125%
7440-43-9	CADMIUM	0.083	U	29.6		2	30	99	75 - 125%
7440-47-3	CHROMIUM	7.4	B	482		10	500	95	75 - 125%
7440-48-4	COBALT	0.11	U	92.2		5	100	92	75 - 125%
7440-50-8	COPPER	0.36	BC	949		8	1000	95	75 - 125%
7439-92-1	LEAD	0.079	U	48.7		2	50	97	75 - 125%
7439-96-5	MANGANESE	3.5	B	95.8		5	100	92	75 - 125%
7439-98-7	MOLYBDENUM	3.9		99.8		2	100	96	75 - 125%
7440-02-0	NICKEL	1.5	B	480		20	500	96	75 - 125%
7782-49-2	SELENIUM	2.3	B	104		10	100	102	75 - 125%
7440-22-4	SILVER	0.04	B	9.9		0.5	10	99	75 - 125%
7440-24-6	STRONTIUM	170		261		5	100	93	75 - 125%
7440-28-0	THALLIUM	0.0041	U	2.09		0.1	2	104	75 - 125%
7440-29-1	THORIUM	0.02	B	9.84		0.2	10	98	75 - 125%
7440-31-5	TIN	0.48	BC	483		10	500	96	75 - 125%
7440-61-1	URANIUM	3.7		12.8		0.1	10	91	75 - 125%
7440-66-6	ZINC	3	BC	1870		100	2000	94	75 - 125%

Data Package ID: *IM1907442-1*

ICPMS Metals

Method SW6020B

Matrix Spike And Matrix Spike Duplicate

Lab Name: ALS -- Fort Collins
Work Order Number: 1907442
Client Name: CH2M HILL Plateau Remediation Company
ClientProject ID: RCRA, July 2019 W19-007

Field ID: B3PJW2
LabID: 1907442-3MSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 19-Jul-19
Date Extracted: 02-Aug-19
Date Analyzed: 05-Aug-19
Prep Method: SW3005 Rev A

Prep Batch: IP190802-1
QCBatchID: IP190802-1-1
Run ID: IM190805-10A4
Cleanup: NONE
Basis: As Received

Sample Aliquot: 50 ml
Final Volume: 50 ml
Result Units: UG/L
File Name: 028SMPL_

CASNO	Target Analyte	MSD Result	MSD Qual	Spike Added	MSD % Rec.	Reporting Limit	RPD Limit	RPD
7429-90-5	ALUMINUM	4400		5000	87	100	20	3
7440-36-0	ANTIMONY	27.2		30	91	1	20	2
7440-38-2	ARSENIC	99.5		100	98	2	20	0
7440-39-3	BARIUM	144		100	94	5	20	1
7440-41-7	BERYLLIUM	48		50	96	0.5	20	2
7440-43-9	CADMIUM	28.9		30	96	2	20	2
7440-47-3	CHROMIUM	475		500	93	10	20	2
7440-48-4	COBALT	91.5		100	92	5	20	1
7440-50-8	COPPER	938		1000	94	8	20	1
7439-92-1	LEAD	48.3		50	97	2	20	1
7439-96-5	MANGANESE	95.5		100	92	5	20	0
7439-98-7	MOLYBDENUM	99		100	95	2	20	1
7440-02-0	NICKEL	474		500	94	20	20	1
7782-49-2	SELENIUM	98.4		100	96	10	20	6
7440-22-4	SILVER	9.62		10	96	0.5	20	3
7440-24-6	STRONTIUM	255		100	87	5	20	2
7440-28-0	THALLIUM	2.15		2	108	0.1	20	3
7440-29-1	THORIUM	9.82		10	98	0.2	20	0
7440-31-5	TIN	484		500	97	10	20	0
7440-61-1	URANIUM	12.8		10	91	0.1	20	0
7440-66-6	ZINC	1840		2000	92	100	20	2

Data Package ID: *IM1907442-1*

Prep Batch ID: IP190802-1

Start Date: 08/02/19
Start Time: 10:53
Prep Analyst: Jill M. Latelle

End Date: 08/02/19
End Time: 18:00

Concentration Method: NONE
Extract Method: SW3005A
Initial Volume Units: ml
Final Volume Units: ml

Batch Created By: jml
Date Created: 08/02/19
Time Created: 11:13
Validated By: jml
Date Validated: 08/02/19
Time Validated: 12:48

Comments:

QC Batch ID: IP190802-1-1

Lab ID	QC Type	Field ID	Matrix	Date Collected	Initial Wt/Vol	Final Wt/Vol	Cleanup Method	Cleanup DF	Order Number
IP190802-1	MB	XXXXXX	WATER	XXXXXX	50	50	NONE	1	1907442
IM190802-1	LCS	XXXXXX	WATER	XXXXXX	50	50	NONE	1	1907442
1907442-3	MS	B3PJW2	WATER	7/19/2019	50	50	NONE	1	1907442
1907442-3	MSD	B3PJW2	WATER	7/19/2019	50	50	NONE	1	1907442
1907442-3	SMP	B3PJW2	WATER	7/19/2019	50	50	NONE	1	1907442
1907442-4	SMP	B3PJW7	WATER	7/19/2019	50	50	NONE	1	1907442
1907442-5	SMP	B3PJY8	WATER	7/19/2019	50	50	NONE	1	1907442
1907442-6	SMP	B3PK01	WATER	7/19/2019	50	50	NONE	1	1907442
1907500-11	SMP	XXXXXX	WATER	XXXXXX	50	50	NONE	1	1907500
1907500-12	SMP	XXXXXX	WATER	XXXXXX	50	50	NONE	1	1907500
1907500-13	SMP	XXXXXX	WATER	XXXXXX	50	50	NONE	1	1907500

QC Types

CAR	Carrier reference sample	DLS	Detection Limit Standard	
DUP	Laboratory Duplicate	LCS	Laboratory Control Sample	
LCSD	Laboratory Control Sample Duplicat	LODV	Limit of Detection Verification	
LOQV	Limit of Quantitation Verification	MB	Method Blank	
MS	Laboratory Matrix Spike	MSD	Laboratory Matrix Spike Duplicate	
REP	Sample replicate	RVS	Reporting Level Verification Standar	
SMP	Field Sample	SYS	Sample Yield Spike	