



Thursday, July 19, 2018

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

Re: ALS Workorder: 1806445
Project Name: RCRA, JULY 2018
Project Number: W18-007

Dear Ms. Waters-Husted:

Five water samples were received from CH2M HILL Plateau Remediation Company, on 6/20/2018. The samples were scheduled for the following analyses:

Herbicides
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 method employed.

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

Sincerely,

ALS Environmental
Katie M. O'Brien
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.

ALS -- Fort Collins

Sample Number(s) Cross-Reference Table

OrderNum: 1806445

Client Name: CH2M HILL Plateau Remediation Company

Client Project Name: RCRA, JULY 2018

Client Project Number: W18-007

Client PO Number: BOA 54854

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
B3JMV9	1806445-1		WATER	18-Jun-18	11:32
B3JMV5	1806445-2		WATER	18-Jun-18	11:32
B3JV76	1806445-3		WATER	19-Jun-18	8:52
B3JV80	1806445-4		WATER	18-Jun-18	13:08
B3JMT1	1806445-5		WATER	18-Jun-18	13:08

CH2M Hill Plateau Remediation Company		1806445		C.O.C.# W18-007-008 Page 1 of 1			
Collector: WILLIAM COLLINS CHPRG		Contact/Requester: Karen Waters-Husted		Telephone No.: 509-376-4650			
SAF No.: W18-007		Sampling Origin: Hanford Site		Purchase Order/Charge Code: 300071			
Project Title: RCRA, JULY 2018		Logbook No.: HNF-N-506 100/44		Ice Chest No.: GWS-563			
Shipped To (Lab): ALS Environmental Ft. Collins		Method of Shipment: Commercial Carrier		Bill of Lading/Air Bill No.: 772509854569			
Protocol: RCRA		Priority: 30 Days		Offsite Property No.: 9570			
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
B3JMV9	Y	JUN 18 2018	132	1x500-mL G/P	6010_METALS_ICP: COMMON	6 Months	HNO3 to pH <2
B3JMV5	N	JUN 18 2018	132	1x500-mL G/P	6010_METALS_ICP: COMMON	6 Months	HNO3 to pH <2

Relinquished By: WILLIAM COLLINS CHPRG	Signature	JUN 18 2018	Date/Time	Received By: SSU-1 Print First and Last Name	Signature	JUN 18 2018	Date/Time	Matrix *
Relinquished By: SSU-1	Signature	JUN 19 2018	Date/Time	Received By: DANIEL KING CHPRG	Signature	JUN 19 2018	Date/Time	S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air
Relinquished By: DANIEL KING CHPRG	Signature	JUN 19 2018	Date/Time	Received By: FEDEX	Signature		Date/Time	DS = Drum Solids DL = Drum Liquids T = Tissue WI = Wipe L = Liquid V = Vegetation X = Other
Relinquished By: FED EX	Signature		Date/Time	Received By: C. Trumble	Signature		Date/Time	
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process):			Disposed By:		Date/Time:		

CH2M Hill Plateau Remediation Company		C.O.C.# W18-007-258 Page 1 of 1	
Collector: WILLIAM COLLINS CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 509-376-4650	
SAF No.: W18-007	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300071	
Project Title: RCRA, JULY 2018	Logbook No.: HNF-N-506 100/44	Ice Chest No.: GWS-563	
Shipped To (Lab): ALS Environmental Ft. Collins	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 772509834569	
Protocol: RCRA	Priority: 30 Days	Offsite Property No.: 9570	

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	* Time	No/Type Container
B3JV80	N	1308 JUN 18 2018	1x500-mL G/P 6010_METALS_ICP: COMMON
B3JMT1	Y	1308 JUN 18 2018	1x500-mL G/P 6010_METALS_ICP: COMMON
		Sample Analysis	Holding Time
			6 Months HNO3 to pH <2
			6 Months HNO3 to pH <2

Relinquished By: <i>William Collins</i>	Signature	Received By: SSU-1	Signature	Date/Time
<i>William Collins</i>		<i>Daniel Klug</i>		JUN 18 2018 1408
Relinquished By: SSU-1	Signature	Received By: SSU-1	Signature	Date/Time
<i>D. Klug</i>		<i>D. Klug</i>		JUN 19 2018 0719
Relinquished By: FED	Signature	Received By: FEDEX	Signature	Date/Time
<i>FED</i>		<i>FEDEX</i>		JUN 19 2018 0720
Relinquished By: FED	Signature	Received By: FEDEX	Signature	Date/Time
<i>FED</i>		<i>FEDEX</i>		JUN 19 2018 0720
Relinquished By: FED	Signature	Received By: FEDEX	Signature	Date/Time
<i>FED</i>		<i>FEDEX</i>		JUN 19 2018 0720



ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client: CHPRC

Workorder No: 1806445

Project Manager: KO

Initials: CDT Date: 6-20-18

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?	N/A	<input checked="" type="radio"/> YES	NO
10. Is there sufficient sample for the requested analyses?		<input checked="" type="radio"/> YES	NO
11. Were all samples placed in the proper containers for the requested analyses?		<input checked="" type="radio"/> YES	NO
12. Are all samples within holding times for the requested analyses?		<input checked="" type="radio"/> YES	NO
13. Were all sample containers received intact? (not broken or leaking, etc.)		<input checked="" type="radio"/> YES	NO
14. Are all samples requiring no headspace (VOC, GRO, RSK/MEE, Rx CN/S, radon) headspace free? Size of bubble: ___ < green pea ___ > green pea	<input checked="" type="radio"/> N/A	YES	NO
15. Do any water samples contain sediment? Amount of sediment: ___ dusting ___ moderate ___ heavy	Amount N/A	YES	<input checked="" type="radio"/> NO
16. Were the samples shipped on ice?		<input checked="" type="radio"/> YES	<input checked="" type="radio"/> NO
17. Were cooler temperatures measured at 0.1-6.0°C?	IR gun used*: #1 #3 #4	RAD ONLY	<input checked="" type="radio"/> YES
Cooler #: <u>1 2</u>			
Temperature (°C): <u>Amb 1.4</u>			
No. of custody seals on cooler: <u>2 2</u>			
External µR/hr reading: <u>12 10</u>			
Background µR/hr reading: <u>12</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] 6/21/18

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

SHIP DATE: 19 JUN 18
ACTWGT: 35.00 LB
CAD: 10706605/INLET3980
BILL THIRD PARTY

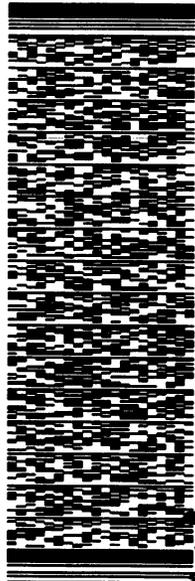
TO JULIE ELLINGSON
ALS GLOBAL
225 COMMERCE DRIVE

12-2

FORT COLLINS CO 80524
(970) 490-1511
INV
PO

REF: PTR#957000OLE# GWS-566

DEPT



J18118912891ur

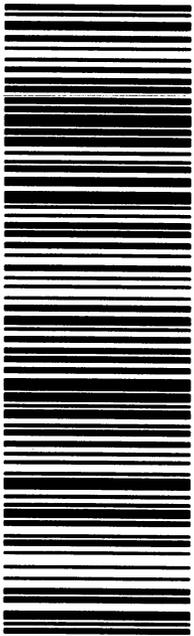
552J293DF/DCA5

TRK# 0201 7725 0983 4569

WED - 20 JUN 10:30A
PRIORITY OVERNIGHT
DSR

XH FTCA

80524
DEN
CO-US



1806445

After printing this label:

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

1806445

Page 1 of 1

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

SHIP DATE: 19 JUN 18
ACTWGT: 60.00 LB
CAD: 107066051/NET3980

BILL THIRD PARTY

TO JULIE ELLINGSON
ALS GLOBAL
225 COMMERCE DRIVE

10-2
1.40
562,0930F DCA6

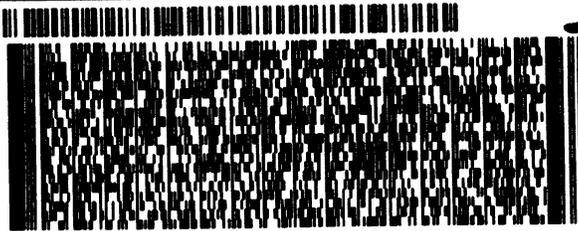
FORT COLLINS CO 80524

(970) 490-1511

REF PTR# 9576/COOLER# GWS-722

INV

DEPT



WED - 20 JUN 10:30A

PRIORITY OVERNIGHT

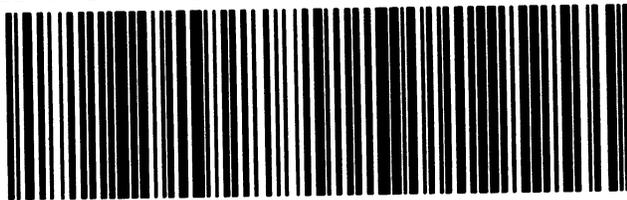
TRK# 7725 1253 2027
0201

DSR

80524

CO-US DEN

XH FTCA





Herbicides Case Narrative

CH2M HILL Plateau Remediation Company

RCRA, JULY 2018 -- W18-007

Work Order Number: 1806445

1. This sample was extracted according to SW-846, 3rd Edition procedures. Specifically, the water sample was extracted using separatory funnels according to the current revision of SOP 664 based on Method 8151A.
2. The extracts were then analyzed using GC/ECD (electron capture detectors) according to the current revision of SOP 434 based on SW-846 Method 8151A. All positive results were then confirmed on a second column. Unless interferences were present, the quantitation of each analyte is the higher of the concentrations obtained from each column that met initial and continuing calibration criteria. Note that analyst raw data annotation may provide further clarification.
3. All initial and continuing calibration criteria were met with the following exceptions:

07/03/2018

- Continuing calibration CCV (data file 12263) - Dinoseb was out high on column 1.
- Continuing calibration CCV (data file 12272) - Dinoseb was out high on column 2.

Quantitation for each analyte was reported from the column that passed initial and continuing calibration criteria.

4. The method blank associated with this project was below the MDL for all analytes.
5. All laboratory control sample recoveries were within the acceptance criteria.
6. Sample 1806445-3 was designated as the quality control sample for this analysis.

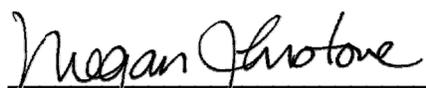
Similarity of matrix and therefore relevance of the QC results should not be automatically inferred for any sample other than the native sample selected for QC.

All matrix spike and matrix spike duplicate recoveries and RPDs were within acceptance criteria.



7. The sample was extracted and analyzed within the established holding times.
8. All surrogate recoveries were within acceptance criteria.
9. Manual integrations are performed when needed to provide consistent and defensible data following the guidelines in the current revision of SOP 939.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.



Megan Johnstone
Organics Primary Data Reviewer

7/11/18

Date



Organics Final Data Reviewer

7/19/18

Date

ALS
Data Qualifier Flags
Organics

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

Chlorinated Herbicides by GC/ECD

Method SW8151A

Method Blank

Lab Name: ALS -- Fort Collins

Work Order Number: 1806445

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: RCRA, JULY 2018 W18-007

Lab ID: EX180626-3MB

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 26-Jun-18

Date Analyzed: 03-Jul-18

Prep Batch: EX180626-3

QCBatchID: EX180626-3-1

Run ID: PT180703-10

Cleanup: NONE

Basis: N/A

File Name: 12266.dat

Sample Aliquot: 1000 ml

Final Volume: 10 ml

Result Units: UG/L

Clean DF: 1

CASNO	Target Analyte	DF	Result	Result Qualifier	Reporting Limit	MDL
75-99-0	DALAPON	1	1.2	U	4	1.2
1918-00-9	DICAMBA	1	0.06	U	0.2	0.06
93-65-2	MCPP	1	30	U	100	30
94-74-6	MCPA	1	30	U	100	30
120-36-5	DICHLOROPROP	1	0.3	U	1	0.3
94-75-7	2,4-D	1	0.3	U	1	0.3
93-72-1	SILVEX	1	0.03	U	0.1	0.03
93-76-5	2,4,5-T	1	0.03	U	0.1	0.03
94-82-6	2,4-DB	1	0.3	U	1	0.3
88-85-7	DINOSEB	1	0.32	U	1	0.32

Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
19719-28-9	2,4-DICHLOROPHENYLACETIC ACID	1.61		2	80	56 - 140

Data Package ID: PT1806445-1

Chlorinated Herbicides by GC/ECD

Method SW8151A

Sample Results

Lab Name: ALS -- Fort Collins

Work Order Number: 1806445

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: RCRA, JULY 2018 W18-007

Field ID:	B3JV76
Lab ID:	1806445-3

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 19-Jun-18
Date Extracted: 26-Jun-18
Date Analyzed: 03-Jul-18
Prep Method: METHOD

Prep Batch: EX180626-3
QCBatchID: EX180626-3-1
Run ID: PT180703-10
Cleanup: NONE
Basis: As Received
File Name: 12269.dat

Analyst: Dan Sheneman
Sample Aliquot: 1080 ml
Final Volume: 10 ml
Result Units: UG/L
Clean DF: 1

Analysis ReqCode: 8151_HERBICID

CASNO	Target Analyte	Dilution Factor	Result	Result Qualifier	Reporting Limit	MDL
75-99-0	DALAPON	1	1.1	U	3.7	1.1
1918-00-9	DICAMBA	1	0.056	U	0.19	0.056
93-65-2	MCPPP	1	28	U	93	28
94-74-6	MCPA	1	28	U	93	28
120-36-5	DICHLOROPROP	1	0.28	U	0.93	0.28
94-75-7	2,4-D	1	0.28	U	0.93	0.28
93-72-1	SILVEX	1	0.028	U	0.093	0.028
93-76-5	2,4,5-T	1	0.028	U	0.093	0.028
94-82-6	2,4-DB	1	0.28	U	0.93	0.28
88-85-7	DINOSEB	1	0.3	U	0.93	0.3

Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
19719-28-9	2,4-DICHLOROPHENYLACETIC ACID	1.47		1.85	80	56 - 140

Data Package ID: PT1806445-1

Surrogate Summary for Chlorinated Herbicides by GC/ECD

Method SW8151A

Lab Name: ALS -- Fort Collins

Work Order Number: 1806445

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: RCRA, JULY 2018 W18-007

PrepBatchID: EX180626-3
QC Batch ID: EX180626-3-1
Date Extracted: 6/26/2018

Surrogate Compound	Control Limits	
	Lower	Upper
2,4-dichlorophenylacetic ac	56	140

Lab ID	Client Sample ID	Date Collected	Date Received	% Recovery
EX180626-3LCS	XXXXXXX	6/26/2018	6/20/2018	90
EX180626-3MB	XXXXXXX	6/26/2018	6/20/2018	80
1806445-3	B3JV76	6/19/2018	6/20/2018	80
1806445-3MS	B3JV76	6/19/2018	6/20/2018	89
1806445-3MSD	B3JV76	6/19/2018	6/20/2018	93

Data Package ID: PT1806445-1

Chlorinated Herbicides by GC/ECD

Method SW8151A Laboratory Control Sample

Lab Name: ALS -- Fort Collins

Work Order Number: 1806445

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: RCRA, JULY 2018 W18-007

Lab ID: EX180626-3LCS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 06/26/2018

Date Analyzed: 07/03/2018

Prep Method: METHOD

Prep Batch: EX180626-3

QCBatchID: EX180626-3-1

Run ID: PT180703-10

Cleanup: NONE

Basis: N/A

File Name: 12264.dat

Sample Aliquot: 1000 ml

Final Volume: 10 ml

Result Units: UG/L

Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
75-99-0	DALAPON	18.8	5.46	4		29	17 - 100%
1918-00-9	DICAMBA	0.25	0.19	0.2	J	76	55 - 117%
93-65-2	MCPP	250	193	100		77	19 - 150%
94-74-6	MCPA	250	219	100		88	54 - 122%
120-36-5	DICHLOROPROP	2.5	2.02	1		81	63 - 136%
94-75-7	2,4-D	2.5	2.06	1		82	60 - 135%
93-72-1	SILVEX	0.25	0.213	0.1		85	58 - 123%
93-76-5	2,4,5-T	0.25	0.218	0.1		87	62 - 128%
94-82-6	2,4-DB	2.5	2.28	1		91	18 - 153%
88-85-7	DINOSEB	3.75	3.32	1		89	36 - 100%

Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
19719-28-9	2,4-DICHLOROPHENYLACETIC ACID	1.8		2	90	56 - 140

Data Package ID: PT1806445-1

Chlorinated Herbicides by GC/ECD

Method SW8151A

Matrix Spike And Matrix Spike Duplicate

Lab Name: ALS -- Fort Collins

Work Order Number: 1806445

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: RCRA, JULY 2018 W18-007

Field ID: B3JV76
LabID: 1806445-3MS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 19-Jun-18
Date Extracted: 26-Jun-18
Date Analyzed: 03-Jul-18
Prep Method: METHOD

Prep Batch: EX180626-3
QC BatchID: EX180626-3-1
Run ID: PT180703-10
Cleanup: NONE
Basis: As Received

Sample Aliquot: 1080 ml
Final Volume: 10 ml
Result Units: UG/L
File Name: 12270.dat

CASNO	Target Analyte	Sample Result	Samp Qual	MS Result	MS Qual	Reporting Limit	Spike Added	MS % Rec.	Control Limits
75-99-0	DALAPON	1.11	U	3.92		3.7	17.4	23	17 - 100%
1918-00-9	DICAMBA	0.0556	U	0.177	J	0.185	0.231	76	55 - 117%
93-65-2	MCPPP	27.8	U	185		92.6	231	80	19 - 150%
94-74-6	MCPA	27.8	U	202		92.6	231	87	54 - 122%
120-36-5	DICHLOROPROP	0.278	U	1.92		0.926	2.31	83	63 - 136%
94-75-7	2,4-D	0.278	U	1.96		0.926	2.31	85	60 - 135%
93-72-1	SILVEX	0.0278	U	0.195		0.0926	0.231	84	58 - 123%
93-76-5	2,4,5-T	0.0278	U	0.216		0.0926	0.231	93	76 - 127%
94-82-6	2,4-DB	0.278	U	2.12		0.926	2.31	92	18 - 153%
88-85-7	DINOSEB	0.296	U	3.26		0.926	3.47	94	36 - 100%

Data Package ID: PT1806445-1

Chlorinated Herbicides by GC/ECD

Method SW8151A

Matrix Spike And Matrix Spike Duplicate

Lab Name: ALS -- Fort Collins

Work Order Number: 1806445

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: RCRA, JULY 2018 W18-007

Field ID: B3JV76
LabID: 1806445-3MSD

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 19-Jun-18

Date Extracted: 26-Jun-18

Date Analyzed: 03-Jul-18

Prep Method: METHOD

Prep Batch: EX180626-3

QCBatchID: EX180626-3-1

Run ID: PT180703-10

Cleanup: NONE

Basis: As Received

Sample Aliquot: 1060 ml

Final Volume: 10 ml

Result Units: UG/L

File Name: 12271.dat

CASNO	Target Analyte	MSD Result	MSD Qual	Spike Added	MSD % Rec.	Reporting Limit	RPD Limit	RPD
75-99-0	DALAPON	4.23		17.7	24	3.77	30	7
1918-00-9	DICAMBA	0.188	J	0.236	80	0.189	30	6
93-65-2	MCPD	193		236	82	94.3	30	4
94-74-6	MCPA	214		236	91	94.3	30	6
120-36-5	DICHLOROPROP	2.09		2.36	88	0.943	30	8
94-75-7	2,4-D	2.06		2.36	87	0.943	30	5
93-72-1	SILVEX	0.211		0.236	89	0.0943	30	8
93-76-5	2,4,5-T	0.228		0.236	97	0.0943	30	5
94-82-6	2,4-DB	2.33		2.36	99	0.943	30	10
88-85-7	DINOSEB	3.11		3.54	88	0.943	30	5

Surrogate Recovery MS/MSD

CASNO	Target Analyte	Spike Added	MS % Rec.	MS Flag	MSD % Rec.	MSD Flag	Control Limits
19719-28-9	2,4-DICHLOROPHENYLACETIC ACID	1.85	89		93		56 - 140

Data Package ID: PT1806445-1

Prep Batch ID: EX180626-3

Start Date: 06/26/18	End Date: 06/27/18	Concentration Method: CKIS	Batch Created By: JMD
Start Time: 15:00	End Time: 14:45	Extract Method: METHOD	Date Created: 06/26/18
Prep Analyst: Joe M. Dowling		Initial Volume Units: ml	Time Created: 14:03
Comments:		Final Volume Units: ml	Validated By: JMD
<div style="border: 1px solid black; height: 30px; width: 100%;"></div>			Date Validated: 06/28/18
			Time Validated: 11:49

QC Batch ID: EX180626-3-1

Lab ID	QC Type	Field ID	Matrix	Date Collected	Initial Wt/Vol	Final Wt/Vol	Cleanup Method	Cleanup DF	Order Number
EX180626-3	MB	XXXXXX	WATER	XXXXXX	1000	10	NONE	1	1806445
EX180626-3	LCS	XXXXXX	WATER	XXXXXX	1000	10	NONE	1	1806445
1806445-3	MS	B3JV76	WATER	6/19/2018	1080	10	NONE	1	1806445
1806445-3	MSD	B3JV76	WATER	6/19/2018	1060	10	NONE	1	1806445
1806445-3	SMP	B3JV76	WATER	6/19/2018	1080	10	NONE	1	1806445
1806529-1	SMP	XXXXXX	WATER	XXXXXX	1075	10	NONE	1	1806529
1806562-3	SMP	XXXXXX	WATER	XXXXXX	1070	10	NONE	1	1806562
1806562-4	SMP	XXXXXX	WATER	XXXXXX	1075	10	NONE	1	1806562

In generating this benchsheet, prep analyst states that all aspects of sample preparation as set forth in the appropriate SOP's (including Kuderna-Danish temperatures, proper flow settings on the N-evap, and final volumes) were properly adhered to (unless otherwise noted herein).

QC Types

CAR	Carrier reference sample	DUP	Laboratory Duplicate
LCS	Laboratory Control Sample	LCSD	Laboratory Control Sample Duplicat
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 2018 – W18-007

Work Order Number: 1806445

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

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

2. Analysis by Trace ICP followed method 6010B 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 analyte. Sample results have been compared to the blank results and are flagged as appropriate. Antimony, copper, magnesium, silver 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 6010B were within acceptance criteria.

6. Matrix specific quality control procedures.

Sample 1806445-1 was designated as the quality control sample for this analysis.

Similarity of matrix and therefore relevance of the QC results should not be automatically inferred for any sample other than the native sample selected for QC.

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

<u>Analyte</u>	<u>Sample ID</u>
Magnesium	-1

The associated sample results are flagged for serial dilution failure.

7. 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.



Emily Lyons
Inorganics Primary Data Reviewer

7/17/18
Date



Inorganics Final Data Reviewer

7/19/18
Date



Inorganic Data Reporting Qualifiers

The following qualifiers are used as needed by the laboratory when reporting results of inorganic analyses.

- Result qualifier -- A “B” is entered if the reported value was obtained from a reading that was less than the Reporting Limit but greater than or equal to the Method Detection Limit (MDL). If the analyte was analyzed for but not detected a “U” is entered. For samples, negative values are reported as non-detects (“U” flagged). For blanks, if the absolute value of the negative value is above the MDL and below the reporting limit, then the result is “B” flagged.
- QC qualifier -- Specified entries and their meanings are as follows:
 - E - The reported value is estimated because of the presence of interference. An explanatory note may be included in the narrative.
 - M - Duplicate injection precision was not met.
 - N - Spiked sample recovery not within control limits. A post spike is analyzed for all ICP analyses when the matrix spike and or spike duplicate fail and the native sample concentration is less than four times the spike added concentration.
 - Z - Spiked recovery not within control limits. An explanatory note may be included in the narrative.
 - * - Duplicate analysis (relative percent difference) not within control limits.
 - S - SAR value is estimated as one or more analytes used in the calculation were not detected above the detection limit.
 - C - The analyte was detected in both the sample and the associated QC blank, and the sample concentration was $\leq 20X$ 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.

Dissolved ICP Metals

Method SW6010B

Sample Results

Lab Name: ALS -- Fort Collins

Work Order Number: 1806445

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: RCRA, JULY 2018 W18-007

Field ID:	B3JMV9
Lab ID:	1806445-1

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 18-Jun-18

Date Extracted: 27-Jun-18

Date Analyzed: 29-Jun-18

Prep Method: SW3005 Rev A

Prep Batch: IP180627-4

QC Batch ID: IP180627-4-1

Run ID: IP180629-1A2

Cleanup: NONE

Basis: As Received

File Name:

Analyst: Amanda J. Lynn

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
7440-36-0	ANTIMONY	1	3.4	BC	20	0.75
7440-38-2	ARSENIC	1	8	B	10	0.46
7440-39-3	BARIUM	1	66		20	2.6
7440-43-9	CADMIUM	1	0.11	U	5	0.11
7440-70-2	CALCIUM	1	36000		1000	210
7440-47-3	CHROMIUM	1	7.2	B	10	2.4
7440-48-4	COBALT	1	0.19	U	10	0.19
7440-50-8	COPPER	1	0.82	BC	8	0.51
7439-89-6	IRON	1	98		50	30
7439-95-4	MAGNESIUM	1	13000	E	750	89
7439-96-5	MANGANESE	1	0.49	U	5	0.49
7440-02-0	NICKEL	1	16	B	20	1.1
7440-09-7	POTASSIUM	1	4300		1000	130
7440-22-4	SILVER	1	1.6	BC	10	0.73
7440-23-5	SODIUM	1	20000		500	38
7440-62-2	VANADIUM	1	17		10	0.43
7440-66-6	ZINC	1	1.7	BC	20	0.62

Data Package ID: IP1806445-1

Total Recoverable ICP Metals

Method SW6010B

Sample Results

Lab Name: ALS -- Fort Collins

Work Order Number: 1806445

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: RCRA, JULY 2018 W18-007

Field ID:	B3JMV5
Lab ID:	1806445-2

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 18-Jun-18
Date Extracted: 27-Jun-18
Date Analyzed: 29-Jun-18
Prep Method: SW3005 Rev A

Prep Batch: IP180627-4
QCBatchID: IP180627-4-1
Run ID: IP180629-1A2
Cleanup: NONE
Basis: As Received
File Name:

Analyst: Amanda J. Lynn
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
7440-36-0	ANTIMONY	1	0.97	BC	20	0.75
7440-38-2	ARSENIC	1	8.6	B	10	0.46
7440-39-3	BARIUM	1	69		20	2.6
7440-43-9	CADMIUM	1	0.11	U	5	0.11
7440-70-2	CALCIUM	1	35000		1000	210
7440-47-3	CHROMIUM	1	9.1	B	10	2.4
7440-48-4	COBALT	1	0.19	U	10	0.19
7440-50-8	COPPER	1	1.5	BC	8	0.51
7439-89-6	IRON	1	41	B	50	30
7439-95-4	MAGNESIUM	1	12000		750	89
7439-96-5	MANGANESE	1	0.53	B	5	0.49
7440-02-0	NICKEL	1	3.8	B	20	1.1
7440-09-7	POTASSIUM	1	4400		1000	130
7440-22-4	SILVER	1	1.1	BC	10	0.73
7440-23-5	SODIUM	1	21000		500	38
7440-62-2	VANADIUM	1	16		10	0.43
7440-66-6	ZINC	1	3.1	BC	20	0.62

Data Package ID: IP1806445-1

Total Recoverable ICP Metals

Method SW6010B

Sample Results

Lab Name: ALS -- Fort Collins

Work Order Number: 1806445

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: RCRA, JULY 2018 W18-007

Field ID:	B3JV80
Lab ID:	1806445-4

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 18-Jun-18
Date Extracted: 27-Jun-18
Date Analyzed: 29-Jun-18
Prep Method: SW3005 Rev A

Prep Batch: IP180627-4
QCBatchID: IP180627-4-1
Run ID: IP180629-1A2
Cleanup: NONE
Basis: As Received
File Name:

Analyst: Amanda J. Lynn
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
7440-36-0	ANTIMONY	1	0.75	U	20	0.75
7440-38-2	ARSENIC	1	8.6	B	10	0.46
7440-39-3	BARIUM	1	57		20	2.6
7440-43-9	CADMIUM	1	0.14	B	5	0.11
7440-70-2	CALCIUM	1	41000		1000	210
7440-47-3	CHROMIUM	1	9.2	B	10	2.4
7440-48-4	COBALT	1	0.19	U	10	0.19
7440-50-8	COPPER	1	0.51	U	8	0.51
7439-89-6	IRON	1	360		50	30
7439-95-4	MAGNESIUM	1	14000		750	89
7439-96-5	MANGANESE	1	7.7		5	0.49
7440-02-0	NICKEL	1	2.3	B	20	1.1
7440-09-7	POTASSIUM	1	4400		1000	130
7440-22-4	SILVER	1	1	BC	10	0.73
7440-23-5	SODIUM	1	20000		500	38
7440-62-2	VANADIUM	1	23		10	0.43
7440-66-6	ZINC	1	4.3	BC	20	0.62

Data Package ID: IP1806445-1

Dissolved ICP Metals

Method SW6010B

Sample Results

Lab Name: ALS -- Fort Collins

Work Order Number: 1806445

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: RCRA, JULY 2018 W18-007

Field ID:	B3JMT1
Lab ID:	1806445-5

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 18-Jun-18

Date Extracted: 27-Jun-18

Date Analyzed: 29-Jun-18

Prep Method: SW3005 Rev A

Prep Batch: IP180627-4

QC Batch ID: IP180627-4-1

Run ID: IP180629-1A2

Cleanup: NONE

Basis: As Received

File Name:

Analyst: Amanda J. Lynn

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
7440-36-0	ANTIMONY	1	1.8	BC	20	0.75
7440-38-2	ARSENIC	1	7.7	B	10	0.46
7440-39-3	BARIUM	1	54		20	2.6
7440-43-9	CADMIUM	1	0.11	U	5	0.11
7440-70-2	CALCIUM	1	41000		1000	210
7440-47-3	CHROMIUM	1	6.1	B	10	2.4
7440-48-4	COBALT	1	0.19	U	10	0.19
7440-50-8	COPPER	1	0.51	U	8	0.51
7439-89-6	IRON	1	30	U	50	30
7439-95-4	MAGNESIUM	1	14000		750	89
7439-96-5	MANGANESE	1	0.49	U	5	0.49
7440-02-0	NICKEL	1	1.9	B	20	1.1
7440-09-7	POTASSIUM	1	4400		1000	130
7440-22-4	SILVER	1	0.73	U	10	0.73
7440-23-5	SODIUM	1	21000		500	38
7440-62-2	VANADIUM	1	22		10	0.43
7440-66-6	ZINC	1	0.83	BC	20	0.62

Data Package ID: IP1806445-1

ICP Metals

Method SW6010B

Method Blank

Lab Name: ALS -- Fort Collins

Work Order Number: 1806445

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: RCRA, JULY 2018 W18-007

Lab ID: IP180627-4MB

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 27-Jun-18

Date Analyzed: 29-Jun-18

Prep Batch: IP180627-4

QCBatchID: IP180627-4-1

Run ID: IP180629-1A2

Cleanup: NONE

Basis: N/A

File Name:

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
7440-36-0	ANTIMONY	1	2.9	B	20	0.75
7440-38-2	ARSENIC	1	0.46	U	10	0.46
7440-39-3	BARIUM	1	2.6	U	20	2.6
7440-43-9	CADMIUM	1	0.11	U	5	0.11
7440-70-2	CALCIUM	1	210	U	1000	210
7440-47-3	CHROMIUM	1	2.4	U	10	2.4
7440-48-4	COBALT	1	0.19	U	10	0.19
7440-50-8	COPPER	1	0.76	B	8	0.51
7439-89-6	IRON	1	30	U	50	30
7439-95-4	MAGNESIUM	1	100	B	750	89
7439-96-5	MANGANESE	1	0.49	U	5	0.49
7440-02-0	NICKEL	1	1.1	U	20	1.1
7440-09-7	POTASSIUM	1	130	U	1000	130
7440-22-4	SILVER	1	0.89	B	10	0.73
7440-23-5	SODIUM	1	38	U	500	38
7440-62-2	VANADIUM	1	0.43	U	10	0.43
7440-66-6	ZINC	1	3.1	B	20	0.62

Data Package ID: IP1806445-1

ICP Metals

Method SW6010B Laboratory Control Sample

Lab Name: ALS -- Fort Collins

Work Order Number: 1806445

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: RCRA, JULY 2018 W18-007

Lab ID: IP180627-4LCS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 06/27/2018

Date Analyzed: 06/29/2018

Prep Method: SW3005A

Prep Batch: IP180627-4

QCBatchID: IP180627-4-1

Run ID: IP180629-1A2

Cleanup: NONE

Basis: N/A

File Name:

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
7440-36-0	ANTIMONY	500	483	20		97	80 - 120%
7440-38-2	ARSENIC	1000	1010	10		101	80 - 120%
7440-39-3	BARIUM	1000	983	20		98	80 - 120%
7440-43-9	CADMIUM	50	48.5	5		97	80 - 120%
7440-70-2	CALCIUM	40000	36600	1000		91	80 - 120%
7440-47-3	CHROMIUM	200	192	10		96	80 - 120%
7440-48-4	COBALT	500	495	10		99	80 - 120%
7440-50-8	COPPER	250	242	8		97	80 - 120%
7439-89-6	IRON	1000	1040	50		104	80 - 120%
7439-95-4	MAGNESIUM	40000	36700	750		92	80 - 120%
7439-96-5	MANGANESE	500	493	5		99	80 - 120%
7440-02-0	NICKEL	500	504	20		101	80 - 120%
7440-09-7	POTASSIUM	40000	39800	1000		100	80 - 120%
7440-22-4	SILVER	100	94.7	10		95	80 - 120%
7440-23-5	SODIUM	40000	40600	500		101	80 - 120%
7440-62-2	VANADIUM	500	482	10		96	80 - 120%
7440-66-6	ZINC	500	520	20		104	80 - 120%

Data Package ID: IP1806445-1

ICP Metals

Method SW6010B

Matrix Spike And Matrix Spike Duplicate

Lab Name: ALS -- Fort Collins

Work Order Number: 1806445

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: RCRA, JULY 2018 W18-007

Field ID: B3JMV9	Sample Matrix: WATER	Prep Batch: IP180627-4	Sample Aliquot: 50 ml
LabID: 1806445-1MS	% Moisture: N/A	QC BatchID: IP180627-4-1	Final Volume: 50 ml
	Date Collected: 18-Jun-18	Run ID: IP180629-1A2	Result Units: UG/L
	Date Extracted: 27-Jun-18	Cleanup: NONE	File Name:
	Date Analyzed: 29-Jun-18	Basis: As Received	
	Prep Method: SW3005 Rev A		

CASNO	Target Analyte	Sample Result	Samp Qual	MS Result	MS Qual	Reporting Limit	Spike Added	MS % Rec.	Control Limits
7440-36-0	ANTIMONY	3.4	BC	490		20	500	97	80 - 120%
7440-38-2	ARSENIC	8	B	1050		10	1000	105	80 - 120%
7440-39-3	BARIUM	66		1040		20	1000	98	80 - 120%
7440-43-9	CADMIUM	0.11	U	48.8		5	50	98	80 - 120%
7440-70-2	CALCIUM	36000		74800		1000	40000	97	80 - 120%
7440-47-3	CHROMIUM	7.2	B	195		10	200	94	80 - 120%
7440-48-4	COBALT	0.19	U	489		10	500	98	80 - 120%
7440-50-8	COPPER	0.82	BC	243		8	250	97	80 - 120%
7439-89-6	IRON	98		986		50	1000	89	80 - 120%
7439-95-4	MAGNESIUM	13000		50400		750	40000	94	80 - 120%
7439-96-5	MANGANESE	0.49	U	490		5	500	98	80 - 120%
7440-02-0	NICKEL	16	B	511		20	500	99	80 - 120%
7440-09-7	POTASSIUM	4300		45500		1000	40000	103	80 - 120%
7440-22-4	SILVER	1.6	BC	95.5		10	100	94	80 - 120%
7440-23-5	SODIUM	20000		63000		500	40000	106	80 - 120%
7440-62-2	VANADIUM	17		498		10	500	96	80 - 120%
7440-66-6	ZINC	1.7	BC	525		20	500	105	80 - 120%

Data Package ID: IP1806445-1

ICP Metals

Method SW6010B

Matrix Spike And Matrix Spike Duplicate

Lab Name: ALS -- Fort Collins

Work Order Number: 1806445

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: RCRA, JULY 2018 W18-007

Field ID: B3JMV9	Sample Matrix: WATER	Prep Batch: IP180627-4	Sample Aliquot: 50 ml
LabID: 1806445-1MSD	% Moisture: N/A	QC BatchID: IP180627-4-1	Final Volume: 50 ml
	Date Collected: 18-Jun-18	Run ID: IP180629-1A2	Result Units: UG/L
	Date Extracted: 27-Jun-18	Cleanup: NONE	File Name:
	Date Analyzed: 29-Jun-18	Basis: As Received	
	Prep Method: SW3005 Rev A		

CASNO	Target Analyte	MSD Result	MSD Qual	Spike Added	MSD % Rec.	Reporting Limit	RPD Limit	RPD
7440-36-0	ANTIMONY	489		500	97	20	20	0
7440-38-2	ARSENIC	1050		1000	104	10	20	1
7440-39-3	BARIUM	1030		1000	96	20	20	1
7440-43-9	CADMIUM	48.7		50	97	5	20	0
7440-70-2	CALCIUM	73800		40000	95	1000	20	1
7440-47-3	CHROMIUM	193		200	93	10	20	1
7440-48-4	COBALT	487		500	97	10	20	0
7440-50-8	COPPER	244		250	97	8	20	0
7439-89-6	IRON	997		1000	90	50	20	1
7439-95-4	MAGNESIUM	49700		40000	92	750	20	2
7439-96-5	MANGANESE	485		500	97	5	20	1
7440-02-0	NICKEL	507		500	98	20	20	1
7440-09-7	POTASSIUM	44800		40000	101	1000	20	2
7440-22-4	SILVER	94.5		100	93	10	20	1
7440-23-5	SODIUM	62000		40000	104	500	20	2
7440-62-2	VANADIUM	496		500	96	10	20	1
7440-66-6	ZINC	523		500	104	20	20	0

Data Package ID: IP1806445-1

ICP Metals

Method SW6010

Duplicate Sample Results

Lab Name: ALS -- Fort Collins

Work Order Number: 1806445

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: RCRA, JULY 2018 W18-007

Field ID:	B3JMV9
Lab ID:	1806445-1D

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 06/18/2018
Date Extracted: 06/27/2018
Date Analyzed: 06/29/2018

Prep Batch: IP180627-4
QCBatchID: IP180627-4-1
Run ID: IP180629-1A2
Cleanup: NONE
Basis: As Received
File Name:

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

CASNO	Target Analyte	Sample Result	Samp Qual	Duplicate Result	Dup Qual	Reporting Limit	Dilution Factor	RPD	RPD Limit
7440-36-0	ANTIMONY	3.4	BC	0.75	U	20	1		20
7440-38-2	ARSENIC	8	B	7.63	B	10	1		20
7440-39-3	BARIUM	66		66		20	1		20
7440-43-9	CADMIUM	0.11	U	0.11	U	5	1		20
7440-70-2	CALCIUM	36000		35400		1000	1	1	20
7440-47-3	CHROMIUM	7.2	B	7.32	B	10	1		20
7440-48-4	COBALT	0.19	U	0.19	U	10	1		20
7440-50-8	COPPER	0.82	BC	0.51	U	8	1		20
7439-89-6	IRON	98		30	U	50	1		20
7439-95-4	MAGNESIUM	13000		12600		750	1	1	20
7439-96-5	MANGANESE	0.49	U	0.49	U	5	1		20
7440-02-0	NICKEL	16	B	2.86	B	20	1		20
7440-09-7	POTASSIUM	4300		4280		1000	1		20
7440-22-4	SILVER	1.6	BC	1.67	B	10	1		20
7440-23-5	SODIUM	20000		20700		500	1	1	20
7440-62-2	VANADIUM	17		16.4		10	1		20
7440-66-6	ZINC	1.7	BC	0.62	U	20	1		20

Data Package ID: IP1806445-1

Prep Batch ID: IP180627-4

Start Date: 06/27/18	End Date: 06/27/18	Concentration Method: NONE	Batch Created By: jml
Start Time: 16:16	End Time: 18:16	Extract Method: SW3005A	Date Created: 06/27/18
Prep Analyst: Jill M. Latelle		Initial Volume Units: ml	Time Created: 16:16
Comments:		Final Volume Units: ml	Validated By: jml
<div style="border: 1px solid black; height: 30px; width: 100%;"></div>			Date Validated: 06/27/18
			Time Validated: 17:39

QC Batch ID: IP180627-4-1

Lab ID	QC Type	Field ID	Matrix	Date Collected	Initial Wt/Vol	Final Wt/Vol	Cleanup Method	Cleanup DF	Order Number
IP180627-4	MB	XXXXXX	WATER	XXXXXX	50	50	NONE	1	1806445
IP180627-4	LCS	XXXXXX	WATER	XXXXXX	50	50	NONE	1	1806445
1806445-1	MS	B3JMV9	WATER	6/18/2018	50	50	NONE	1	1806445
1806445-1	MSD	B3JMV9	WATER	6/18/2018	50	50	NONE	1	1806445
1806445-1	DUP	B3JMV9	WATER	6/18/2018	50	50	NONE	1	1806445
1806445-1	SMP	B3JMV9	WATER	6/18/2018	50	50	NONE	1	1806445
1806445-2	SMP	B3JMV5	WATER	6/18/2018	50	50	NONE	1	1806445
1806445-4	SMP	B3JV80	WATER	6/18/2018	50	50	NONE	1	1806445
1806445-5	SMP	B3JMT1	WATER	6/18/2018	50	50	NONE	1	1806445
1806508-1	SMP	XXXXXX	WATER	XXXXXX	50	50	NONE	1	1806508
1806508-2	SMP	XXXXXX	WATER	XXXXXX	50	50	NONE	1	1806508

QC Types

CAR	Carrier reference sample	DUP	Laboratory Duplicate
LCS	Laboratory Control Sample	LCSD	Laboratory Control Sample Duplicat
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		