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gel.com

March 14, 2018

Mr. Scot Fitzgerald
CH2MHill Plateau Remediation Company
MSIN R3-50 CHPRC
PO Box 1600
Richland, Washington 99352

Re: CHPRC SAF W18-002
Work Order: 443840
SDG: GEL443840

Dear Mr. Fitzgerald:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on February 15, 2018. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4505.

Sincerely,

Heather Shaffer
Project Manager

Purchase Order: 300071 -7H
Chain of Custody: W18-002-052, W18-002-053, W18-002-054, W18-002-055, W18-002-056, W18-002-060,
W18-002-066, W18-002-067, W18-002-074, W18-002-092, W18-002-093, W18-002-094, W18-002-095,
W18-002-097, W18-002-102, W18-002-115 and W18-002-181
Enclosures

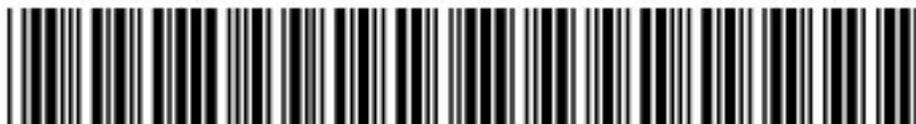


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Case Narrative

**General Narrative
for
CH2MHill Plateau Remediation Company
CHPRC SAF W18-002
SDG: GEL443840**

March 14, 2018

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt

The sample(s) arrived at GEL Laboratories, LLC, Charleston, South Carolina on February 15, 2018, for analysis. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. There are no additional comments concerning sample receipt.

Items of Note All efforts were made by the lab to meet any short hold times. Samples that were analyzed outside of the initial hold time but still within 2X hold time will be noted in the lab case narrative.

Sample Identification

The laboratory received the following samples:

<u>Laboratory Identification</u>	<u>Sample Description</u>
443840001	B3H322
443840002	B3H328
443840003	B3H335
443840004	B3H340
443840005	B3H3F3
443840006	B3H364
443840007	B3H3B4
443840008	B3HM07
443840009	B3H321
443840010	B3H330
443840011	B3H326
443840012	B3H333
443840013	B3H337
443840014	B3H339
443840015	B3H341
443840016	B3H343
443840017	B3H3C7
443840018	B3H3F2
443840019	B3H3F4
443840020	B3H362
443840021	B3H365
443840022	B3H363

443840023 B3H366
443840024 B3H3B3

Case Narrative

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Data Package

The enclosed data package contains the following sections: General Narrative, Chain of Custody and Supporting Documentation, and data from the following fractions: General Chemistry and Metals.

We certify that this 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.



Heather Shaffer
Project Manager

Technical Case Narrative
CH2MHill Plateau Remediation Company (CPRC)
SDG #: GEL443840
Work Order #: 443840

Metals

Determination of Metals by ICP

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Determination of Metals by ICP-MS

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Quality Control (QC) Information

Method Blank (MB) Statement

The method blanks (MB) analyzed with this SDG met the acceptance criteria. However, where there were positive hits in the method blank, the results were evaluated and appropriately flagged on the data.

Sample	Analyte	Value
1203972333 (MB)	Molybdenum	0.208 between (0.2 - 0.25)
	Tin	1.37 between (1 - 2.5)

Technical Information

Sample Dilutions

Samples 443840020 (B3H362), 443840021 (B3H365) and 443840022 (B3H363) were diluted to ensure that the analyte concentrations were within the linear calibration range of the instrument.

Analyte	443840		
	020	021	022
Strontium	20X	20X	20X

General Chemistry

Carbon, Total Organic

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Cyanide, Total

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Sample Dilutions

The following samples 443840020 (B3H362), 443840021 (B3H365) and 443840023 (B3H366) were diluted because target analyte concentrations exceeded the calibration range.

Analyte	443840		
	020	021	023
Cyanide, Total	5X	5X	5X

Sample Re-analysis

Sample 443840022 (B3H363) was re-analyzed due to instrument failure. The results from the reanalysis are reported.

Cyanide, Total

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Sample Dilutions

The following samples 443840018 (B3H3F2) and 443840019 (B3H3F4) were diluted because target analyte concentrations exceeded the calibration range.

Analyte	443840	
	018	019
Cyanide, Total	5X	5X

Cyanide, Chlorinated

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Cyanide, Amenable to Chlorination

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Cyanide, Chlorinated

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information**Sample Dilutions**

The following samples 1203974050 (B3H362DUP), 443840018 (B3H3F2), 443840019 (B3H3F4), 443840020 (B3H362), 443840021 (B3H365), 443840022 (B3H363) and 443840023 (B3H366) were diluted because target analyte concentrations exceeded the calibration range.

Analyte	443840					
	018	019	020	021	022	023
Cyanide, Chlorinated	5X	5X	5X	5X	5X	5X

Cyanide, Amenable to Chlorination

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Cyanide, Free

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Miscellaneous Information**Additional Comments**

Total CN levels above the MDL for Free CN were detected in samples . Free CN was performed per SOP (GL-GC-E-073).

Cyanide, Free

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Ion Chromatography

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information**Sample Dilutions**

The following samples 1203972280 (Non SDG 443834001DUP), 1203972281 (Non SDG 443834001PS), 443840001 (B3H322), 443840002 (B3H328), 443840003 (B3H335), 443840004 (B3H340), 443840005 (B3H3F3), 443840006 (B3H364), 443840007 (B3H3B4) and 443840008 (B3HM07) were diluted because target analyte concentrations exceeded the calibration range.

Analyte	443840							
	001	002	003	004	005	006	007	008
Severall	20X 10X 1X	10X 1X	10X 1X	10X 1X	20X 10X 1X	100X 1X	20X 10X 1X	100X 1X

Alkalinity

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Chain of Custody and Supporting Documentation

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST 443840	C.O.C. # W18-002-092 Page 1 of 1
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Collector: Daniel Klug CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 509-376-4650
SAF No.: W18-002	Sampling Origin: Hanford Site 98/39	Purchase Order/Charge Code: 300071
Project Title: RCRA, February 2018 GEL	Logbook No.: HNF-N-506	Ice Chest No.: TLB N/A 2-14-18 GWS-748
Shipped To (Lab): TestAmerica Incorporated, Rich KS 2/13/18	Method of Shipment: GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.: TLB N/A 2-14-18 7714834632 99
Protocol: RCRA	Priority: 30 Days	Offsite Property No.: TLB N/A 2-14-18 9057

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
B3H322	N	W	FEB 14 2018	0830	1x125-mL P	300.0_ANIONS_IC: COMMON	48 Hours	Cool <=6C

Relinquished By: Daniel Klug CHPRC D. Klug FEB 14 2018 1050 Print First and Last Name Signature Date/Time	Received By: Troy Bacon CHPRC Troy L Bacon FEB 14 2018 1050 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
Relinquished By: Troy Bacon CHPRC Troy L Bacon FEB 14 2018 1400 Print First and Last Name Signature Date/Time	Received By: FEDEX Print First and Last Name Signature Date/Time	
Relinquished By: FedEx Print First and Last Name Signature Date/Time	Received By: C. Tarplin C. Tarplin 2/15/18 0905 Print First and Last Name Signature Date/Time	
Relinquished By: Print First and Last Name Signature Date/Time	Received By: Print First and Last Name Signature Date/Time	
FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process):		Disposed By: _____ Date/Time: _____

MARCH 14, 2018

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CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST 443840				C.O.C. # W18-002-093
						Page 1 of 1
Collector: Daniel Klug CHPRC		Contact/Requester: Karen Waters-Husted		Telephone No.: 509-376-4650		
SAF No.: W18-002		Sampling Origin: Hanford Site		Purchase Order/Charge Code: 300071		
Project Title: RCRA, February 2018 GEL		Logbook No.: HNF-N-506 98/39		Ice Chest No.: 2-17-18 ^{PCB} GWS-748		
Shipped To (Lab): TestAmerica Incorporated, Rich		Method of Shipment: GOVERNMENT VEHICLE		Bill of Lading/Air Bill No.: N/A ²⁻¹⁴⁻¹⁸ 771483463299		
Protocol: RCRA KS 2/15/18		Priority: 30 Days		Offsite Property No.: N/A ²⁻¹⁷⁻¹⁸ 9057		
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
B3H328	N	W	FEB 14 2018	0932	1x125-mL P	300.0_ANIONS_IC: COMMON	48 Hours	Cool <=6C

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Relinquished By: Daniel Klug CHPRC D. Klug Print First and Last Name Signature Date/Time: FEB 14 2018 1050	Received By: Troy Bacon CHPRC Troy L. Bacon Print First and Last Name Signature Date/Time: FEB 14 2018 1050	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	
Relinquished By: Troy Bacon CHPRC Troy L. Bacon Print First and Last Name Signature Date/Time: FEB 14 2018 1400	Received By: FEDEX Print First and Last Name Signature Date/Time:		
Relinquished By: FedEx Print First and Last Name Signature Date/Time:	Received By: C. Carplin C. Carplin Print First and Last Name Signature Date/Time: 2/15/18 0905		
Relinquished By: Print First and Last Name Signature Date/Time:	Received By: Print First and Last Name Signature Date/Time:		
FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process):		Disposed By:	Date/Time:

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CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST 443840		C.O.C.# W18-002-094
				Page 1 of 1
Collector: Daniel Klug CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 509-376-4650		
SAF No.: W18-002	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300071		
Project Title: RCRA, February 2018 GEL	Logbook No.: HNF-N-506 98/39	Ice Chest No.: N/A GWS-601		
Shipped To (Lab): TestAmerica Incorporated, Rich	Method of Shipment: GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.: N/A 7714 8512 9655		
Protocol: RCRA KS 2/2/18	Priority: 30 Days	Offsite Property No.: N/A 9060		

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
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Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B3H335	N	W	FEB 14 2018	1118	1x125-mL P	300.0_ANIONS_IC: COMMON	48 Hours	Cool <=6C

Relinquished By: Daniel Klug CHPRC D.Klug Signature: _____ Date/Time: FEB 14 2018 12:45	Received By: Lesly Wall CHPRC Lesly Wall Signature: _____ Date/Time: FEB 14 2018 12:45	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
Relinquished By: Lesly Wall CHPRC Lesly Wall Signature: _____ Date/Time: FEB 14 2018 1400	Received By: FEDEX Signature: _____ Date/Time: _____	
Relinquished By: FedEx Signature: _____ Date/Time: _____	Received By: C. Amplin C. Amplin Signature: _____ Date/Time: 2/15/18 0905	
Relinquished By: _____ Signature: _____ Date/Time: _____	Received By: _____ 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		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST <i>443840</i>				C.O.C.# W18-002-095		
						Page 1 of 1		
Collector: Daniel Klug CHPRC		Contact/Requester: Karen Waters-Husted		Telephone No.: 509-376-4650				
SAF No.: W18-002		Sampling Origin: Hanford Site		Purchase Order/Charge Code: 300071				
Project Title: RCRA, February 2018 <i>GEL</i>		Logbook No.: HNF-N-506 <i>98/39</i>		Ice Chest No.: <i>N/A</i> <i>TLB</i> <i>2-14-18</i> <i>GWS-748</i>				
Shipped To (Lab): TestAmerica Incorporated, Rich		Method of Shipment: GOVERNMENT VEHICLE		Bill of Lading/Air Bill No.: <i>N/A</i> <i>TLB</i> <i>2-14-18</i> <i>771483463299</i>				
Protocol: RCRA <i>KS 2/2/18</i>		Priority: 30 Days		Offsite Property No.: <i>N/A</i> <i>TLB</i> <i>2-14-18</i> <i>9057</i>				
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
B3H340	N	W	FEB 14 2018	1029	1x125-mL P	300.0_ANIONS_IC: COMMON	48 Hours	Cool <=6C

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Relinquished By: Daniel Klug CHPRC <i>D. Klug</i> <i>FEB 14 2018 1050</i> Print First and Last Name Signature Date/Time			Received By: Troy Bacon CHPRC <i>Troy L. Bacon</i> <i>FFR 11 701R 1050</i> 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		
Relinquished By: Troy Bacon CHPRC <i>Troy L. Bacon</i> <i>FEB 14 2018 1400</i> Print First and Last Name Signature Date/Time			Received By: FEDEX Print First and Last Name Signature Date/Time					
Relinquished By: FedEx Print First and Last Name Signature Date/Time			Received By: C. Tarplin <i>C. Tarplin</i> <i>2/15/18</i> Print First and Last Name Signature Date/Time					
Relinquished By: Print First and Last Name Signature Date/Time			Received By: Print First and Last Name Signature Date/Time					
FINAL SAMPLE DISPOSITION		Disposal Method (e.g., Return to customer, per lab procedure, used in process):				Disposed By:		Date/Time:

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Collector: Daniel Klug CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 509-376-4650
SAF No.: W18-002	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300071
Project Title: RCRA; February 2018	Logbook No.: HNF-N-506 98/39	Ice Chest No.: N/A 605-601
Shipped To (Lab): <u>PestAmerica Incorporated, Rich</u>	Method of Shipment: GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.: N/A 771485129635
Protocol: RCRA	Priority: 30 Days	Offsite Property No.: N/A 9060

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
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Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B3H3F3	N	W	FEB 14 2018	1204	1x125-mL P	300.0_ANTONS_IC; COMMON	48 Hours	Cool <=6C

Relinquished By: Daniel Klug CHPRC <i>D. Klug</i> Print First and Last Name Signature Date/Time: FEB 14 2018 1245	Received By: Lesly Wall CHPRC <i>Lesly Wall</i> Print First and Last Name Signature Date/Time: FEB 14 2018 1245	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
Relinquished By: Lesly Wall CHPRC <i>Lesly Wall</i> Print First and Last Name Signature Date/Time: FEB 14 2018 1400	Received By: FEDEX Print First and Last Name Signature Date/Time:	
Relinquished By: FedEx Print First and Last Name Signature Date/Time:	Received By: C. Turpin <i>C. Turpin</i> Print First and Last Name Signature Date/Time: 2/15/18 0905	
Relinquished By: Print First and Last Name Signature Date/Time:	Received By: Print First and Last Name Signature Date/Time:	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process):	Disposed By:	Date/Time:
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MARCH 14, 2018

REV. 0

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST 443840			C.O.C.# W18-002-102			
Page 1 of 1								
Collector: Daniel Klug CHPRC	Contact/Requester: Karen Waters-Husted		Telephone No.: 509-376-4650					
SAF No.: W18-002	Sampling Origin: Hanford Site		Purchase Order/Charge Code: 300071					
Project Title: RCRA, February 2018	Logbook No.: HNF-N-506 98/38	Ice Chest No.: ^{TLB} N/A ²⁻¹⁴⁻¹⁸ GWS-732						
Shipped To (Lab): <u>TestAmerica Incorporated, Rich</u>	Method of Shipment: GOVERNMENT VEHICLE		Bill of Lading/Air Bill No.: ^{TLB} N/A ²⁻¹⁴⁻¹⁸ 17714 8004 8406					
Protocol: RCRA KS 2/13	Priority: 30 Days		Offsite Property No.: ^{TLB} N/A ²⁻¹⁴⁻¹⁸ 9054					
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
B3H364	N	W	FEB 13 2018	1215	1x125-mL P	300.0_ANIONS_IC: COMMON	48 Hours	Cool <=6C

MARCH 14, 2018

Relinquished By: Daniel Klug CHPRC D.Klug Print First and Last Name Signature Date/Time: FEB 13 2018 1410	Received By: SSU-1 Print First and Last Name Signature Date/Time: FEB 13 2018 1410	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
Relinquished By: SSU-1 Print First and Last Name Signature Date/Time: FEB 14 2018 0715	Received By: Troy Bacon CHPRC Troy L. Bacon Print First and Last Name Signature Date/Time: FEB 14 2018 0715	
Relinquished By: Troy Bacon CHPRC Troy L. Bacon Print First and Last Name Signature Date/Time: FEB 14 2018 1400	Received By: FEDEX Print First and Last Name Signature Date/Time:	
Relinquished By: FedEx Print First and Last Name Signature Date/Time:	Received By: C. Tardin C. Tardin Print First and Last Name Signature Date/Time: 2/15/18 8:05	
FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process):		Disposed By: Date/Time:

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CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST 443840	C.O.C.# W18-002-115 Page 1 of 1
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Collector: Juan Aguilar /CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 509-376-4650
SAF No.: W18-002	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300071
Project Title: RCRA, February 2018 GEL	Logbook No.: HNF-N-506-95194	Ice Chest No.: ^{TLB} N/A ₂₋₁₄₋₁₈ GWS-732
Shipped To (Lab): TestAmerica Incorporated, Rich	Method of Shipment: GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.: ^{TLB} N/A ₂₋₁₄₋₁₈ 771480048406
Protocol: RCRA KS 2/12/18	Priority: 30 Days	Offsite Property No.: ^{TLB} N/A ₂₋₁₄₋₁₈ 9054

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
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Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B3H3B4	N	W	2-13-18	1403	1x125-mL P	300.0_ANIONS_IC: COMMON	48 Hours	Cool <=6C

Relinquished By: Juan Aguilar <small>CHPRC</small> Print First and Last Name Signature Date/Time: FEB 13 2018 1420	Received By: SSU #1 Print First and Last Name Signature Date/Time: FEB 13 2018 1420	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
Relinquished By: SSU-1 Print First and Last Name Signature Date/Time: FEB 14 2018 0715	Received By: Troy L. Bacon <small>CHPRC</small> Print First and Last Name Signature Date/Time: FEB 14 2018 0715	
Relinquished By: Troy L. Bacon <small>CHPRC</small> Print First and Last Name Signature Date/Time: FEB 14 2018 1400	Received By: FEDEX Print First and Last Name Signature Date/Time:	
Relinquished By: FedEx Print First and Last Name Signature Date/Time:	Received By: C. Gardin Print First and Last Name Signature Date/Time: 2/15/18 0905	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process):	Disposed By:	Date/Time:
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REV. 0

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST 443840	C.O.C. # W18-002-181 Page 1 of 1
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Collector: Daniel Klug CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 509-376-4650
SAF No.: W18-002	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300071
Project Title: RCRA, February 2018 GEL	Logbook No.: HNF-N-506 98/38	Ice Chest No.: N/A GWS-732
Shipped To (Lab): TestAmerica Incorporated, Rich	Method of Shipment: GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.: N/A 771480048406
Protocol: RCRA KS 2/2/18	Priority: 30 Days	Offsite Property No.: N/A 9054

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
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Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B3HM07	N	W	FEB 13 2018	1215	1x125-mL P	300.0_ANIONS_IC: COMMON	48 Hours	Cool <=6C

Relinquished By: Daniel Klug CHPRC DKL Print First and Last Name Signature	Received By: SSU-1 Print First and Last Name Signature	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
Relinquished By: SSU-1 Print First and Last Name Signature	Received By: Troy Bacon CHPRC Troy L. Bacon Print First and Last Name Signature	
Relinquished By: Troy Bacon CHPRC Troy L. Bacon Print First and Last Name Signature	Received By: FEDEX Print First and Last Name Signature	
Relinquished By: FedEx Print First and Last Name Signature	Received By: C. Carplin Print First and Last Name Signature	
FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process):		Disposed By: _____ Date/Time: _____

MARCH 14, 2018

REV. 0

Collector: Daniel Klug CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 509-376-4650
SAF No.: W18-002	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300071
Project Title: RCRA, February 2018	Logbook No.: HNF-N-506 98/39	Ice Chest No.: GWS-683
Shipped To (Lab): GEL Laboratories, LLC	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 77148377 8109
Protocol: RCRA	Priority: 30 Days	Offsite Property No.: 9056

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
B3H321	N	W	FEB 14 2018	0830	1x250-mL G/P	2320_ALKALINITY: GW 01	14 Days	Cool <=6C
B3H321	N	W	/	/	1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2 / Cool <=6C

Relinquished By: Daniel Klug CHPRC D. Klug Print First and Last Name Signature	FEB 14 2018 Date/Time	1050 Date/Time	Received By: Troy Bacon CHPRC Troy L. Bacon Print First and Last Name Signature	FEB 14 2018 Date/Time	1050 Date/Time
Relinquished By: Troy Bacon CHPRC Troy L. Bacon Print First and Last Name Signature	FEB 14 2018 Date/Time	1400 Date/Time	Received By: FEDEX Print First and Last Name Signature	Date/Time	
Relinquished By: FedEx Print First and Last Name Signature	Date/Time		Received By: C. Tamplin Print First and Last Name Signature	2/15/18 Date/Time	
Relinquished By: Print First and Last Name Signature	Date/Time		Received By: 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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MARCH 14, 2018

REV. 0

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST 443840	C.O.C. # W18-002-053 Page 1 of 1
Collector: Daniel Klug CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 509-376-4650
SAF No.: W18-002	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300071
Project Title: RCRA, February 2018	Logbook No.: HNF-N-506 98/39	Ice Chest No.: GWS-683
Shipped To (Lab): GEL Laboratories, LLC	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 771483778109
Protocol: RCRA	Priority: 30 Days	Offsite Property No.: 9056

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
B3H330	Y	W	FEB 14 2018	0932	1x500-mL aG	9014_CN (FREE): COMMON; 9012_CYANIDE (TOTAL): COMMON; 9012_CN (AMENABLE): COMMON	14 Days	NaOH to pH >=12 / Cool <=6C
B3H326	N	W	/	/	1x500-mL aG	9014_CN (FREE): COMMON; 9012_CYANIDE (TOTAL): COMMON; 9012_CN (AMENABLE): COMMON	14 Days	NaOH to pH >=12 / Cool <=6C

MARCH 14, 2018

Relinquished By: Daniel Klug CHPRC <i>D. Klug</i> FEB 14 2018 1050 <small>Print First and Last Name Signature Date/Time</small>	Received By: Troy Bacon CHPRC <i>Troy L. Bacon</i> FEB 14 2018 1050 <small>Print First and Last Name Signature Date/Time</small>	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	
Relinquished By: Troy Bacon CHPRC <i>Troy L. Bacon</i> FEB 14 2018 1400 <small>Print First and Last Name Signature Date/Time</small>	Received By: FEDEX <small>Print First and Last Name Signature Date/Time</small>		
Relinquished By: Fedex <small>Print First and Last Name Signature Date/Time</small>	Received By: C. Tamplin <small>Print First and Last Name Signature Date/Time</small>		
Relinquished By: <small>Print First and Last Name Signature Date/Time</small>	Received By: <small>Print First and Last Name Signature Date/Time</small>		
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process):	Disposed By:	Date/Time:

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REV. 0

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST 443840	C.O.C.# W18-002-054 Page 1 of 1
Collector: Daniel Klug CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 509-376-4650
SAF No.: W18-002	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300071
Project Title: RCRA, February 2018	Logbook No.: HNF-N-506 98/39	Ice Chest No.: GWS-601
Shipped To (Lab): GEL Laboratories, LLC	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 771485129655
Protocol: RCRA	Priority: 30 Days	Offsite Property No.: 9060

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
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Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B3H333	N	W	FEB 14 2018	1118	1x500-mL aG	9014_CN (FREE): COMMON; 9012_CYANIDE (TOTAL): COMMON; 9012_CN (AMENABLE): COMMON	14 Days	NaOH to pH >=12 / Cool <=6C
B3H337	Y	W			1x500-mL aG	9014_CN (FREE): COMMON; 9012_CYANIDE (TOTAL): COMMON; 9012_CN (AMENABLE): COMMON	14 Days	NaOH to pH >=12 / Cool <=6C

MARCH 14, 2018

Relinquished By: Daniel Klug CHPRC <i>D.Klug</i> Print First and Last Name Signature Date/Time: FEB 14 2018 1245	Received By: Lesly Wall CHPRC <i>Lesly Wall</i> Print First and Last Name Signature Date/Time: FEB 14 2018 1245	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
Relinquished By: Lesly Wall CHPRC <i>Lesly Wall</i> Print First and Last Name Signature Date/Time: FEB 14 2018 1400	Received By: FEDEX Print First and Last Name Signature Date/Time:	
Relinquished By: FedEx Print First and Last Name Signature Date/Time:	Received By: C. Trappin <i>C. Trappin</i> Print First and Last Name Signature Date/Time: 2/15/18 0709	
Relinquished By: Print First and Last Name Signature Date/Time:	Received By: Print First and Last Name Signature Date/Time:	
FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process):		Disposed By: Date/Time:

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REV. 0

Collector: Daniel Klug CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 509-376-4650
SAF No.: W18-002	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300071
Project Title: RCRA, February 2018	Logbook No.: HNF-N-506 98/39	Ice Chest No.: GWS-683
Shipped To (Lab): GEL Laboratories, LLC	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 77148377 8109
Protocol: RCRA	Priority: 30 Days	Offsite Property No.: 9056

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
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Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B3H339	N	W	FEB 14 2018	1029	1x500-mL G/P	6010_METALS_ICP: GW 04; 6020_METALS_ICPMS: GW 01	6 Months	HNO3 to pH <2
B3H339	N	W			1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2 / Cool <=6C
B3H341	Y	W			1x500-mL G/P	6010_METALS_ICP: GW 04; 6020_METALS_ICPMS: GW 01	6 Months	HNO3 to pH <2

Relinquished By: Daniel Klug CHPRC <i>D. Klug</i> Signature FEB 14 2018 1050 Date/Time	Received By: Troy Bacon CHPRC <i>Troy L. Bacon</i> Signature FEB 14 2018 1050 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
Relinquished By: Troy Bacon CHPRC <i>Troy L. Bacon</i> Signature FEB 14 2018 1400 Date/Time	Received By: FEDEX Print First and Last Name Signature Date/Time	
Relinquished By: FedEx Print First and Last Name Signature Date/Time	Received By: C-Tamplin <i>C-Tamplin</i> Signature 2/15/18 Date/Time 0905	
Relinquished By: Print First and Last Name Signature Date/Time	Received By: Print First and Last Name 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	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST 443840	C.O.C.# W18-002-056 Page 1 of 1
Collector: Daniel Klug CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 509-376-4650
SAF No.: W18-002	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300071
Project Title: RCRA, February 2018	Logbook No.: HNF-N-506 98/38	Ice Chest No.: GWS-732
Shipped To (Lab): GEL Laboratories, LLC	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 771480048406
Protocol: RCRA	Priority: 30 Days	Offsite Property No.: 9054

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
B3H343	N	W	FEB 13 2018	1307	1x500-mL aG	9014_CN (FREE): COMMON; 9012_CYANIDE (TOTAL): COMMON; 9012_CN (AMENABLE): COMMON	14 Days	NaOH to pH >=12 / Cool <=6C
B3H3C7	Y	W			1x500-mL aG	9014_CN (FREE): COMMON; 9012_CYANIDE (TOTAL): COMMON; 9012_CN (AMENABLE): COMMON	14 Days	NaOH to pH >=12 / Cool <=6C

MARCH 14, 2018

Relinquished By: Daniel Klug CHPRC D. Klug Print First and Last Name Signature Date/Time: FEB 13 2018 1410	Received By: SSU-1 Print First and Last Name Signature Date/Time: FEB 13 2018 1410	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
Relinquished By: SSU-1 Print First and Last Name Signature Date/Time: FEB 14 2018 0715	Received By: Troy L. Bacon CHPRC Troy L. Bacon Print First and Last Name Signature Date/Time: FEB 14 2018 0715	
Relinquished By: Troy L. Bacon CHPRC Troy L. Bacon Print First and Last Name Signature Date/Time: FEB 14 2018 1400	Received By: FEDEX Print First and Last Name Signature Date/Time:	
Relinquished By: FedEx Print First and Last Name Signature Date/Time:	Received By: C. Taplin Print First and Last Name Signature Date/Time: 2/15/18 0905	
FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process):		Disposed By: Date/Time:

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST 443840	C.O.C.# W18-002-060 Page 1 of 1
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Collector: Daniel Klug CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 509-376-4650
SAF No.: W18-002	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300071
Project Title: RCRA, February 2018	Logbook No.: HNF-N-506 98/39	Ice Chest No.: 6WS-601
Shipped To (Lab): GEL Laboratories, LLC	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 77148512 9655
Protocol: RCRA	Priority: 30 Days	Offsite Property No.: 9060

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
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Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B3H3F2	N	W	FEB 14 2018	1204	1x250-mL G/P	2320_ALKALINITY: GW 01	14 Days	Cool <=6C
B3H3F2	N	W			1x500-mL G/P	6010_METALS_ICP: GW 04; 6020_METALS_ICPMS: GW 01	6 Months	HNO3 to pH <2
B3H3F2	N	W			1x500-mL aG	9014_CN (FREE): COMMON; 9012_CYANIDE (TOTAL): COMMON; 9012_CN (AMENABLE): COMMON	14 Days	NaOH to pH >=12 / Cool <=6C
B3H3F2	N	W			1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2 / Cool <=6C
B3H3F4	Y	W			1x500-mL G/P	6010_METALS_ICP: GW 04; 6020_METALS_ICPMS: GW 01	6 Months	HNO3 to pH <2
B3H3F4	Y	W			1x500-mL aG	9014_CN (FREE): COMMON; 9012_CYANIDE (TOTAL): COMMON; 9012_CN (AMENABLE): COMMON	14 Days	NaOH to pH >=12 / Cool <=6C

MARCH 14, 2018

Relinquished By: Daniel Klug CHPRC D.Klug Print First and Last Name Signature Date/Time FEB 14 2018 1245	Received By: Lesly Wall CHPRC Lesly Wall Print First and Last Name Signature Date/Time FEB 14 2018 1245	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
Relinquished By: Lesly Wall CHPRC Lesly Wall Print First and Last Name Signature Date/Time FEB 14 2018 1400	Received By: FEDEX Print First and Last Name Signature Date/Time	
Relinquished By: FedEx Print First and Last Name Signature Date/Time	Received By: C. Tamplin Print First and Last Name Signature Date/Time 2/15/18 0905	
Relinquished By: Print First and Last Name Signature Date/Time	Received By: Print First and Last Name Signature Date/Time	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process):	Disposed By:	Date/Time:
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Collector: Daniel Klug CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 509-376-4650
SAF No.: W18-002	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300071
Project Title: RCRA, February 2018	Logbook No.: HNF-N-506 98/38	Ice Chest No.: GWS-732
Shipped To (Lab): GEL Laboratories, LLC	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 771480048406
Protocol: RCRA	Priority: 30 Days	Offsite Property No.: 9054

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
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Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B3H362	N	W	FEB 13 2018	12:15	1x250-mL G/P	2320_ALKALINITY: GW 01	14 Days	Cool <=6C
B3H362	N	W			1x500-mL G/P	6010_METALS_ICP: GW 04; 6020_METALS_ICPMS: GW 01	6 Months	HNO3 to pH <2
B3H362	N	W			1x500-mL aG	9014_CN (FREE): COMMON; 9012_CYANIDE (TOTAL): COMMON; 9012_CN (AMENABLE): COMMON	14 Days	NaOH to pH >=12 / Cool <=6C
B3H362	N	W			1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2 / Cool <=6C
B3H365	Y	W			1x500-mL G/P	6010_METALS_ICP: GW 04; 6020_METALS_ICPMS: GW 01	6 Months	HNO3 to pH <2
B3H365	Y	W			1x500-mL aG	9014_CN (FREE): COMMON; 9012_CYANIDE (TOTAL): COMMON; 9012_CN (AMENABLE): COMMON	14 Days	NaOH to pH >=12 / Cool <=6C

MARCH 14, 2018

Relinquished By: Daniel Klug CHPRC <i>D. Klug</i> Signature FEB 13 2018 1410 Date/Time	Received By: SSU-1 Signature FEB 13 2018 1410 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
Relinquished By: SSU-1 Signature FEB 14 2018 0715 Date/Time	Received By: Troy Bacon CHPRC <i>Troy L. Bacon</i> Signature FEB 14 2018 0715 Date/Time	
Relinquished By: Troy Bacon CHPRC <i>Troy L. Bacon</i> Signature FEB 14 2018 1400 Date/Time	Received By: FEDEX Signature Date/Time	
Relinquished By: FedEx Signature Date/Time	Received By: C. Tomplin Signature 2/15/18 0905 Date/Time	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process):	Disposed By:	Date/Time:
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REV. 0

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST <i>443840</i>		C.O.C.# W18-002-067
				Page 1 of 1
Collector: Daniel Klug CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 509-376-4650		
SAF No.: W18-002	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300071		
Project Title: RCRA, February 2018	Logbook No.: HNF-N-506 <i>98/38</i>	Ice Chest No.: <i>GWS-732</i>		
Shipped To (Lab): GEL Laboratories, LLC	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: <i>7714 8004 8406</i>		
Protocol: RCRA	Priority: 30 Days	Offsite Property No.: <i>9054</i>		

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
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Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B3H363	N	W	<i>FEB 13 2018</i>	<i>12/15</i>	1x250-mL G/P	2320_ALKALINITY: GW 01	14 Days	Cool <=6C
B3H363	N	W			1x500-mL G/P	6010_METALS_ICP: GW 04; 6020_METALS_ICPMS: GW 01	6 Months	HNO3 to pH <2
B3H363	N	W			1x500-mL aG	9014_CN (FREE): COMMON; 9012_CYANIDE (TOTAL): COMMON; 9012_CN (AMENABLE): COMMON	14 Days	NaOH to pH >=12 / Cool <=6C
B3H363	N	W			1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2 / Cool <=6C
B3H366	<i>Y</i>	W			1x500-mL G/P	6010_METALS_ICP: GW 04; 6020_METALS_ICPMS: GW 01	6 Months	HNO3 to pH <2
B3H366	<i>Y</i>	W			1x500-mL aG	9014_CN (FREE): COMMON; 9012_CYANIDE (TOTAL): COMMON; 9012_CN (AMENABLE): COMMON	14 Days	NaOH to pH >=12 / Cool <=6C

MARCH 14, 2018

Relinquished By: Daniel Klug CHPRC <i>D. Klug</i> Signature	<i>FEB 13 2018</i> Date/Time	Received By: SSU-1 <i>SSU-1</i> Signature	<i>FEB 13 2018</i> 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
Relinquished By: SSU-1 Signature	<i>FEB 14 2018</i> Date/Time	Received By: Troy Bacon CHPRC <i>Troy L. Bacon</i> Signature	<i>FEB 14 2018</i> Date/Time	
Relinquished By: Troy Bacon CHPRC <i>Troy L. Bacon</i> Signature	<i>FEB 14 2018</i> Date/Time	Received By: FEDEX Signature		
Relinquished By: FEDEX Signature		Received By: C. Tamplin <i>C. Tamplin</i> Signature	<i>2/15/18</i> Date/Time	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process):	Disposed By:	Date/Time:
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REV. 0

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST 443840	C.O.C.# W18-002-074 Page 1 of 1
Collector: Juan Aguilar CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 509-376-4650
SAF No.: W18-002	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300071
Project Title: RCRA, February 2018	Logbook No.: HNF-N-506-95/94	Ice Chest No.: GWS - 732
Shipped To (Lab): GEL Laboratories, LLC	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7714 8004 8406
Protocol: RCRA	Priority: 30 Days	Offsite Property No.: 9054

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
B3H3B3	N	W	2-13-18	1403	1x250-mL G/P	2320_ALKALINITY: COMMON	14 Days	Cool <=6C
B3H3B3	N	W	2-13-18	1403	1x500-mL G/P	6010_METALS_ICP: COMMON; 6020_METALS_ICPMS: Chromium (1)	6 Months	HNO3 to pH <2

Relinquished By: Juan Aguilar Signature: <i>[Signature]</i> Date/Time: FEB 13 2018 1420	Received By: SSU #1 Signature: <i>[Signature]</i> Date/Time: FEB 13 2018 1420	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
Relinquished By: SSU-1 Signature: <i>[Signature]</i> Date/Time: FEB 14 2018 0715	Received By: Troy Bacon Signature: <i>[Signature]</i> Date/Time: FEB 14 2018 0715	
Relinquished By: Troy Bacon Signature: <i>[Signature]</i> Date/Time: FEB 14 2018 1400	Received By: FEDEX Signature: <i>[Signature]</i> Date/Time:	
Relinquished By: FedEx Signature: <i>[Signature]</i> Date/Time:	Received By: C. Tarplin Signature: <i>[Signature]</i> Date/Time: 2/15/18 0900	
FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process):		Disposed By: _____ Date/Time: _____



SAMPLE RECEIPT & REVIEW FORM

#5

Client: <u>CPRC</u>		SDG/AR/COC/Work Order: <u>443840</u>		
Received By: <u>C. Tarplin</u>		Date Received: <u>15 Feb 2018</u>		
Carrier and Tracking Number		Circle Applicable: <input checked="" type="checkbox"/> FedEx Express <input type="checkbox"/> FedEx Ground <input type="checkbox"/> UPS <input type="checkbox"/> Field Services <input type="checkbox"/> Courier <input type="checkbox"/> Other <u>771480048406</u> <u>771482218489</u> <u>771483778109</u> <u>771483463299</u> <u>771485129455</u>		
Suspected Hazard Information	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.		
Shipped as a DOT Hazardous?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Hazard Class Shipped: _____ UN#: _____		
COC/Samples marked or classified as radioactive?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>0</u> (CPM) mR/Hr Classified as: <u>Rad 1</u> Rad 2 Rad 3		
Is package, COC, and/or Samples marked HAZ?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, select Hazards below, and contact the GEL Safety Group. <input checked="" type="checkbox"/> PCB's <input type="checkbox"/> Flammable <input type="checkbox"/> Foreign Soil <input type="checkbox"/> RCRA <input type="checkbox"/> Asbestos <input type="checkbox"/> Beryllium Other: _____		
Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2 Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>			
3 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	<input checked="" type="checkbox"/>			Preservation Method: <u>Wet Ice</u> Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP: <u>2C</u>
4 Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>			Temperature Device Serial #: _____ IR4-17 Secondary Temperature Device Serial # (If Applicable): _____
5 Sample containers intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6 Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>			Sample ID's and Containers Affected: If Preservation added, Lot#: _____
7 Do any samples require Volatile Analysis?	<input checked="" type="checkbox"/>			If Yes, Are Encores or Soil Kits present? Yes _____ No <input checked="" type="checkbox"/> (if yes, take to VOA Freezer) Do VOA vials contain acid preservation? Yes <input checked="" type="checkbox"/> No _____ N/A _____ (if unknown, select No) VOA vials free of headspace? Yes _____ No <input checked="" type="checkbox"/> N/A _____ Sample ID's and containers affected: <u>B3H7X7 has one vial w/ headspace</u> <u>B3H4R4 has two vials w/ headspace</u>
8 Samples received within holding time?	<input checked="" type="checkbox"/>			ID's and tests affected:
9 Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>			Sample ID's and containers affected:
10 Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>			Sample ID's affected:
11 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>			Sample ID's affected:
12 Are sample containers identifiable as GEL provided?			<input checked="" type="checkbox"/>	
13 COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>			
Comments (Use Continuation Form if needed):				

PM (or PMA) review: Initials MEH Date 02/16/18 Page 1 of 1

Data Review Qualifier Definitions

Project Specific Qualifier Definitions for GEL Client Code: CPRC

Qualifier	Qualifier Definition	Department	Fraction
U	Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.		
J	The analyte was detected at a value less than the contract required detection limit (RDL), but greater than or equal to the IDL/MDL (as appropriate). Value is estimated	Organics	
P	Aroclor target analyte with greater than 25% difference between column analyses.	Organics	
C	Analyte has been confirmed by GC/MS analysis	Organics	Pesticide
B	The analyte was detected in both the associated QC blank and in the sample.	Organics	
E	Concentration exceeds the calibration range of the instrument	Organics	
A	The TIC is a suspected aldol-condensation product	Organics	Semi-Volatile
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier		
N	Spike Sample recovery is outside control limits.		
*	Duplicate analysis not within control limits	Inorganics	
>	Result greater than quantifiable range or greater than upper limit of the analysis range	General Chemistry	
Z	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier		
B	The analyte was detected at a value less than the contract required detection limit (RDL), but greater than or equal to the IDL/MDL (as appropriate).	Inorganics	Metals
D	Results are reported from a diluted aliquot of sample.		
E	Reported value is estimated due to interferences. See comment in narrative.	Inorganics	Metals
M	Duplicate precision not met.	Inorganics	Metals
o	Analyte failed to recover within LCS limits (Organics only)	Organics	
S	Reported value determined by the Method of Standard Additions (MSA)	Inorganics	
T	Spike and/or spike duplicate sample recovery is outside control limits.	Organics	
W	Post-digestion spike recovery for GFAA out of control limit. Sample absorbency < 50% of spike absorbency.	Inorganics	
B	The analyte was detected in the associated method blank \geq MDC or $>$ 5% sample activity.	Radiological	
Y	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier		
+	Correlation coefficient for Method of Standard Additions (MSA) is < 0.995	Inorganics	
B	The analyte was detected at a value less than the contract required detection limit (RDL), but greater than or equal to the IDL/MDL (as appropriate).	General Chemistry	
C	Target analyte was detected in the sample and the associated blank. The associated blank concentration is \geq EQL or is $>$ 5% of the measured concentration and/or decision level for associated samples.	Inorganics	Metals
C	Target analyte was detected in the sample and the associated blank. The associated blank concentration is \geq EQL or is $>$ 5% of the measured concentration and/or decision level for associated samples.	General Chemistry	
<	Sample is below the EPA guidance level for Reactive Releasable Cyanide and/or Reactive Releasable Sulfide	General Chemistry	
UX	Gamma Spectroscopy--Uncertain identification	Radiological	

Laboratory Certifications

List of current GEL Certifications as of 14 March 2018

State	Certification
Alaska	17-018
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
Delaware	SC00012
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho Chemistry	SC00012
Idaho Radiochemistry	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana NELAP	03046 (AI33904)
Louisiana SDWA	LA180011
Maryland	270
Massachusetts	M-SC012
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122018-1
New Hampshire NELAP	205415
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	9904
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-18-13
Utah NELAP	SC000122017-25
Vermont	VT87156
Virginia NELAP	460202
Washington	C780
West Virginia	997404

Metals Analysis

Case Narrative

Metals
Technical Case Narrative
CH2MHill Plateau Remediation Company (CPRC)
SDG #: GEL443840
Work Order #: 443840

Product: Determination of Metals by ICP**Analytical Method:** SW846 3005A/6010D**Analytical Procedure:** GL-MA-E-013 REV# 30**Analytical Batch:** 1739445**Product: Determination of Metals by ICP-MS****Analytical Method:** SW846 3005A/6020B**Analytical Procedure:** GL-MA-E-014 REV# 32**Analytical Batch:** 1739449**Preparation Method:** SW846 3005A**Preparation Procedure:** GL-MA-E-006 REV# 14**Preparation Batches:** 1739444 and 1739448

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
443840014	B3H339
443840015	B3H341
443840018	B3H3F2
443840019	B3H3F4
443840020	B3H362
443840021	B3H365
443840022	B3H363
443840023	B3H366
443840024	B3H3B3
1203972323	Method Blank (MB) ICP
1203972324	Laboratory Control Sample (LCS)
1203972327	443840014(B3H339L) Serial Dilution (SD)
1203972325	443840014(B3H339S) Matrix Spike (MS)
1203972326	443840014(B3H339SD) Matrix Spike Duplicate (MSD)
1203972333	Method Blank (MB) ICP-MS
1203972334	Laboratory Control Sample (LCS)
1203972337	443840014(B3H339L) Serial Dilution (SD)
1203972335	443840014(B3H339S) Matrix Spike (MS)
1203972336	443840014(B3H339SD) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Calibration Information

ICSA/ICSAB Statement

For the ICP-MS analysis, the ICSA solution contains analyte concentrations which are verified trace impurities indigenous to the purchased standard.

Quality Control (QC) Information**Method Blank (MB) Statement**

The method blanks (MB) analyzed with this SDG met the acceptance criteria. However, where there were positive hits in the method blank, the results were evaluated and appropriately flagged on the data.

Sample	Analyte	Value
1203972333 (MB)	Molybdenum	0.208 between (0.2 - 0.25)
	Tin	1.37 between (1 - 2.5)

Technical Information**Sample Dilutions**

Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. Samples 443840020 (B3H362), 443840021 (B3H365) and 443840022 (B3H363)-ICP-MS were diluted to ensure that the analyte concentrations were within the linear calibration range of the instrument.

Analyte	443840		
	020	021	022
Strontium	20X	20X	20X

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

**Qualifier Definition Report
for**

CPRC001 CH2MHill Plateau Remediation Company

Client SDG: GEL443840 GEL Work Order: 443840

The Qualifiers in this report are defined as follows:

- * Duplicate analysis not within control limits
- B The analyte was detected at a value less than the contract required detection limit (RDL), but greater than or equal to the IDL/MDL (as appropriate).
- D Results are reported from a diluted aliquot of sample.
- N Spike Sample recovery is outside control limits.
- U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: **Name: Nik-Cole Elmore****Date: 14 MAR 2018****Title: Data Validator**

Sample Data Summary

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: GEL443840

CONTRACT: CPRCOW18002

METHOD TYPE: SW846

SAMPLE ID: 443840014

BASIS: As Received

DATE COLLECTED 14-FEB-18

CLIENT ID: B3H339

LEVEL: Low

DATE RECEIVED 15-FEB-18

MATRIX: WATER

%SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50	50	1	MS	BAJ	03/09/18 18:09	180309-2	1739449
7440-36-0	Antimony	1	ug/L	U	1	3	3	1	MS	BAJ	03/12/18 10:45	180312-3	1739449
7440-38-2	Arsenic	7.31	ug/L		2	5	5	1	MS	BAJ	03/09/18 18:09	180309-2	1739449
7440-39-3	Barium	44.5	ug/L		0.67	2	2	1	MS	BAJ	03/09/18 18:09	180309-2	1739449
7440-41-7	Beryllium	0.20	ug/L	U	0.2	0.5	0.5	1	MS	BAJ	03/09/18 18:09	180309-2	1739449
7440-42-8	Boron	15	ug/L	U	15	50	50	1	P	HSC	03/02/18 15:32	030218-1	1739445
7440-43-9	Cadmium	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	03/09/18 18:09	180309-2	1739449
7440-70-2	Calcium	39800	ug/L		50	200	200	1	P	HSC	03/02/18 15:32	030218-1	1739445
7440-47-3	Chromium	8.94	ug/L	B	3	10	10	1	MS	BAJ	03/09/18 18:09	180309-2	1739449
7440-48-4	Cobalt	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	03/09/18 18:09	180309-2	1739449
7440-50-8	Copper	0.606	ug/L	B	0.3	1	1	1	MS	BAJ	03/09/18 18:09	180309-2	1739449
7439-89-6	Iron	36.8	ug/L	B	30	100	100	1	P	HSC	03/02/18 15:32	030218-1	1739445
7439-92-1	Lead	0.50	ug/L	U	0.5	2	2	1	MS	BAJ	03/09/18 18:09	180309-2	1739449
7439-95-4	Magnesium	12000	ug/L		110	300	300	1	P	HSC	03/02/18 15:32	030218-1	1739445
7439-96-5	Manganese	1	ug/L	U	1	5	5	1	MS	BAJ	03/12/18 10:45	180312-3	1739449
7439-98-7	Molybdenum	6.75	ug/L		0.2	0.5	0.5	1	MS	BAJ	03/09/18 18:09	180309-2	1739449
7440-02-0	Nickel	3.25	ug/L		0.6	2	2	1	MS	BAJ	03/09/18 18:09	180309-2	1739449
7440-09-7	Potassium	6620	ug/L		50	150	150	1	P	HSC	03/02/18 15:32	030218-1	1739445
7782-49-2	Selenium	4.1	ug/L	B	2	5	5	1	MS	BAJ	03/09/18 18:09	180309-2	1739449
7440-22-4	Silver	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	03/09/18 18:09	180309-2	1739449
7440-23-5	Sodium	22200	ug/L		100	300	300	1	P	HSC	03/02/18 15:32	030218-1	1739445
7440-24-6	Strontium	220	ug/L		2	10	10	1	MS	BAJ	03/09/18 18:09	180309-2	1739449
7440-28-0	Thallium	0.60	ug/L	U	0.6	2	2	1	MS	BAJ	03/09/18 18:09	180309-2	1739449
7440-29-1	Thorium	0.70	ug/L	U	0.7	2	2	1	MS	BAJ	03/09/18 18:09	180309-2	1739449
7440-31-5	Tin	1	ug/L	U	1	5	5	1	MS	BAJ	03/09/18 18:09	180309-2	1739449
7440-61-1	Uranium	11.2	ug/L		0.067	0.2	0.2	1	MS	BAJ	03/12/18 10:45	180312-3	1739449
7440-62-2	Vanadium	18.2	ug/L		1	5	5	1	P	HSC	03/02/18 15:32	030218-1	1739445
7440-66-6	Zinc	3.3	ug/L	U	3.3	10	10	1	MS	BAJ	03/09/18 18:09	180309-2	1739449

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
1739445	1739444	SW846 3005A	50	mL	50	mL	02/15/18	JXM8
1739449	1739448	SW846 3005A	50	mL	50	mL	02/15/18	JXM8

*Analytical Methods:

METALS

-1-

INORGANICS ANALYSIS DATA PACKAGE

P SW846 3005A/6010D
MS SW846 3005A/6020B

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: GEL443840

CONTRACT: CPRCOW18002

METHOD TYPE: SW846

SAMPLE ID: 443840015

BASIS: As Received

DATE COLLECTED 14-FEB-18

CLIENT ID: B3H341

LEVEL: Low

DATE RECEIVED 15-FEB-18

MATRIX: WATER

%SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50	50	1	MS	BAJ	03/09/18 18:32	180309-2	1739449
7440-36-0	Antimony	1	ug/L	U	1	3	3	1	MS	BAJ	03/12/18 10:58	180312-3	1739449
7440-38-2	Arsenic	7	ug/L		2	5	5	1	MS	BAJ	03/09/18 18:32	180309-2	1739449
7440-39-3	Barium	43.3	ug/L		0.67	2	2	1	MS	BAJ	03/09/18 18:32	180309-2	1739449
7440-41-7	Beryllium	0.20	ug/L	U	0.2	0.5	0.5	1	MS	BAJ	03/09/18 18:32	180309-2	1739449
7440-42-8	Boron	15	ug/L	U	15	50	50	1	P	HSC	03/02/18 15:42	030218-1	1739445
7440-43-9	Cadmium	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	03/09/18 18:32	180309-2	1739449
7440-70-2	Calcium	39000	ug/L		50	200	200	1	P	HSC	03/02/18 15:42	030218-1	1739445
7440-47-3	Chromium	5.09	ug/L	B	3	10	10	1	MS	BAJ	03/09/18 18:32	180309-2	1739449
7440-48-4	Cobalt	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	03/09/18 18:32	180309-2	1739449
7440-50-8	Copper	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	03/09/18 18:32	180309-2	1739449
7439-89-6	Iron	30	ug/L	U	30	100	100	1	P	HSC	03/02/18 15:42	030218-1	1739445
7439-92-1	Lead	0.50	ug/L	U	0.5	2	2	1	MS	BAJ	03/09/18 18:32	180309-2	1739449
7439-95-4	Magnesium	11700	ug/L		110	300	300	1	P	HSC	03/02/18 15:42	030218-1	1739445
7439-96-5	Manganese	1	ug/L	U	1	5	5	1	MS	BAJ	03/12/18 10:58	180312-3	1739449
7439-98-7	Molybdenum	6.54	ug/L		0.2	0.5	0.5	1	MS	BAJ	03/09/18 18:32	180309-2	1739449
7440-02-0	Nickel	1.96	ug/L	B	0.6	2	2	1	MS	BAJ	03/09/18 18:32	180309-2	1739449
7440-09-7	Potassium	6480	ug/L		50	150	150	1	P	HSC	03/02/18 15:42	030218-1	1739445
7782-49-2	Selenium	3.58	ug/L	B	2	5	5	1	MS	BAJ	03/09/18 18:32	180309-2	1739449
7440-22-4	Silver	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	03/09/18 18:32	180309-2	1739449
7440-23-5	Sodium	21800	ug/L		100	300	300	1	P	HSC	03/02/18 15:42	030218-1	1739445
7440-24-6	Strontium	214	ug/L		2	10	10	1	MS	BAJ	03/09/18 18:32	180309-2	1739449
7440-28-0	Thallium	0.60	ug/L	U	0.6	2	2	1	MS	BAJ	03/09/18 18:32	180309-2	1739449
7440-29-1	Thorium	0.70	ug/L	U	0.7	2	2	1	MS	BAJ	03/09/18 18:32	180309-2	1739449
7440-31-5	Tin	1	ug/L	U	1	5	5	1	MS	BAJ	03/09/18 18:32	180309-2	1739449
7440-61-1	Uranium	11	ug/L		0.067	0.2	0.2	1	MS	BAJ	03/12/18 10:58	180312-3	1739449
7440-62-2	Vanadium	17.3	ug/L		1	5	5	1	P	HSC	03/02/18 15:42	030218-1	1739445
7440-66-6	Zinc	3.3	ug/L	U	3.3	10	10	1	MS	BAJ	03/09/18 18:32	180309-2	1739449

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
1739445	1739444	SW846 3005A	50	mL	50	mL	02/15/18	JXM8
1739449	1739448	SW846 3005A	50	mL	50	mL	02/15/18	JXM8

*Analytical Methods:

METALS

-1-

INORGANICS ANALYSIS DATA PACKAGE

P SW846 3005A/6010D
MS SW846 3005A/6020B

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: GEL443840

CONTRACT: CPRCOW18002

METHOD TYPE: SW846

SAMPLE ID: 443840018

BASIS: As Received

DATE COLLECTED 14-FEB-18

CLIENT ID: B3H3F2

LEVEL: Low

DATE RECEIVED 15-FEB-18

MATRIX: WATER

%SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50	50	1	MS	BAJ	03/09/18 18:35	180309-2	1739449
7440-36-0	Antimony	1	ug/L	U	1	3	3	1	MS	BAJ	03/12/18 11:00	180312-3	1739449
7440-38-2	Arsenic	8.45	ug/L		2	5	5	1	MS	BAJ	03/09/18 18:35	180309-2	1739449
7440-39-3	Barium	43	ug/L		0.67	2	2	1	MS	BAJ	03/09/18 18:35	180309-2	1739449
7440-41-7	Beryllium	0.20	ug/L	U	0.2	0.5	0.5	1	MS	BAJ	03/09/18 18:35	180309-2	1739449
7440-42-8	Boron	15	ug/L	U	15	50	50	1	P	HSC	03/02/18 15:50	030218-1	1739445
7440-43-9	Cadmium	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	03/09/18 18:35	180309-2	1739449
7440-70-2	Calcium	83900	ug/L		50	200	200	1	P	HSC	03/02/18 15:50	030218-1	1739445
7440-47-3	Chromium	12.9	ug/L		3	10	10	1	MS	BAJ	03/09/18 18:35	180309-2	1739449
7440-48-4	Cobalt	0.319	ug/L	B	0.3	1	1	1	MS	BAJ	03/09/18 18:35	180309-2	1739449
7440-50-8	Copper	0.727	ug/L	B	0.3	1	1	1	MS	BAJ	03/09/18 18:35	180309-2	1739449
7439-89-6	Iron	153	ug/L		30	100	100	1	P	HSC	03/02/18 15:50	030218-1	1739445
7439-92-1	Lead	0.50	ug/L	U	0.5	2	2	1	MS	BAJ	03/09/18 18:35	180309-2	1739449
7439-95-4	Magnesium	21300	ug/L		110	300	300	1	P	HSC	03/02/18 15:50	030218-1	1739445
7439-96-5	Manganese	1.4	ug/L	B	1	5	5	1	MS	BAJ	03/12/18 11:00	180312-3	1739449
7439-98-7	Molybdenum	5.44	ug/L		0.2	0.5	0.5	1	MS	BAJ	03/09/18 18:35	180309-2	1739449
7440-02-0	Nickel	5.18	ug/L		0.6	2	2	1	MS	BAJ	03/09/18 18:35	180309-2	1739449
7440-09-7	Potassium	7790	ug/L		50	150	150	1	P	HSC	03/02/18 15:50	030218-1	1739445
7782-49-2	Selenium	7.39	ug/L		2	5	5	1	MS	BAJ	03/09/18 18:35	180309-2	1739449
7440-22-4	Silver	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	03/09/18 18:35	180309-2	1739449
7440-23-5	Sodium	59300	ug/L		100	300	300	1	P	HSC	03/02/18 15:50	030218-1	1739445
7440-24-6	Strontium	485	ug/L		2	10	10	1	MS	BAJ	03/09/18 18:35	180309-2	1739449
7440-28-0	Thallium	0.60	ug/L	U	0.6	2	2	1	MS	BAJ	03/09/18 18:35	180309-2	1739449
7440-29-1	Thorium	0.70	ug/L	U	0.7	2	2	1	MS	BAJ	03/09/18 18:35	180309-2	1739449
7440-31-5	Tin	1	ug/L	U	1	5	5	1	MS	BAJ	03/09/18 18:35	180309-2	1739449
7440-61-1	Uranium	28.2	ug/L		0.067	0.2	0.2	1	MS	BAJ	03/12/18 11:00	180312-3	1739449
7440-62-2	Vanadium	19.1	ug/L		1	5	5	1	P	HSC	03/02/18 15:50	030218-1	1739445
7440-66-6	Zinc	3.3	ug/L	U	3.3	10	10	1	MS	BAJ	03/09/18 18:35	180309-2	1739449

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
1739445	1739444	SW846 3005A	50	mL	50	mL	02/15/18	JXM8
1739449	1739448	SW846 3005A	50	mL	50	mL	02/15/18	JXM8

*Analytical Methods:

METALS

-1-

INORGANICS ANALYSIS DATA PACKAGE

P SW846 3005A/6010D
MS SW846 3005A/6020B

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: GEL443840

CONTRACT: CPRCOW18002

METHOD TYPE: SW846

SAMPLE ID: 443840019

BASIS: As Received

DATE COLLECTED 14-FEB-18

CLIENT ID: B3H3F4

LEVEL: Low

DATE RECEIVED 15-FEB-18

MATRIX: WATER

%SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50	50	1	MS	BAJ	03/09/18 18:39	180309-2	1739449
7440-36-0	Antimony	1	ug/L	U	1	3	3	1	MS	BAJ	03/12/18 11:01	180312-3	1739449
7440-38-2	Arsenic	9.26	ug/L		2	5	5	1	MS	BAJ	03/09/18 18:39	180309-2	1739449
7440-39-3	Barium	43.3	ug/L		0.67	2	2	1	MS	BAJ	03/09/18 18:39	180309-2	1739449
7440-41-7	Beryllium	0.20	ug/L	U	0.2	0.5	0.5	1	MS	BAJ	03/09/18 18:39	180309-2	1739449
7440-42-8	Boron	15	ug/L	U	15	50	50	1	P	HSC	03/02/18 15:53	030218-1	1739445
7440-43-9	Cadmium	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	03/09/18 18:39	180309-2	1739449
7440-70-2	Calcium	84200	ug/L		50	200	200	1	P	HSC	03/02/18 15:53	030218-1	1739445
7440-47-3	Chromium	7.12	ug/L	B	3	10	10	1	MS	BAJ	03/09/18 18:39	180309-2	1739449
7440-48-4	Cobalt	0.395	ug/L	B	0.3	1	1	1	MS	BAJ	03/09/18 18:39	180309-2	1739449
7440-50-8	Copper	0.477	ug/L	B	0.3	1	1	1	MS	BAJ	03/09/18 18:39	180309-2	1739449
7439-89-6	Iron	121	ug/L		30	100	100	1	P	HSC	03/02/18 15:53	030218-1	1739445
7439-92-1	Lead	0.50	ug/L	U	0.5	2	2	1	MS	BAJ	03/09/18 18:39	180309-2	1739449
7439-95-4	Magnesium	21500	ug/L		110	300	300	1	P	HSC	03/02/18 15:53	030218-1	1739445
7439-96-5	Manganese	1.1	ug/L	B	1	5	5	1	MS	BAJ	03/12/18 11:01	180312-3	1739449
7439-98-7	Molybdenum	5.79	ug/L		0.2	0.5	0.5	1	MS	BAJ	03/09/18 18:39	180309-2	1739449
7440-02-0	Nickel	3.64	ug/L		0.6	2	2	1	MS	BAJ	03/09/18 18:39	180309-2	1739449
7440-09-7	Potassium	7850	ug/L		50	150	150	1	P	HSC	03/02/18 15:53	030218-1	1739445
7782-49-2	Selenium	7.32	ug/L		2	5	5	1	MS	BAJ	03/09/18 18:39	180309-2	1739449
7440-22-4	Silver	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	03/09/18 18:39	180309-2	1739449
7440-23-5	Sodium	59700	ug/L		100	300	300	1	P	HSC	03/02/18 15:53	030218-1	1739445
7440-24-6	Strontium	498	ug/L		2	10	10	1	MS	BAJ	03/09/18 18:39	180309-2	1739449
7440-28-0	Thallium	0.60	ug/L	U	0.6	2	2	1	MS	BAJ	03/09/18 18:39	180309-2	1739449
7440-29-1	Thorium	0.70	ug/L	U	0.7	2	2	1	MS	BAJ	03/09/18 18:39	180309-2	1739449
7440-31-5	Tin	1	ug/L	U	1	5	5	1	MS	BAJ	03/09/18 18:39	180309-2	1739449
7440-61-1	Uranium	29.6	ug/L		0.067	0.2	0.2	1	MS	BAJ	03/12/18 11:01	180312-3	1739449
7440-62-2	Vanadium	18.4	ug/L		1	5	5	1	P	HSC	03/02/18 15:53	030218-1	1739445
7440-66-6	Zinc	3.3	ug/L	U	3.3	10	10	1	MS	BAJ	03/09/18 18:39	180309-2	1739449

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
1739445	1739444	SW846 3005A	50	mL	50	mL	02/15/18	JXM8
1739449	1739448	SW846 3005A	50	mL	50	mL	02/15/18	JXM8

*Analytical Methods:

METALS

-1-

INORGANICS ANALYSIS DATA PACKAGE

P SW846 3005A/6010D
MS SW846 3005A/6020B

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: GEL443840

CONTRACT: CPRCOW18002

METHOD TYPE: SW846

SAMPLE ID: 443840020

BASIS: As Received

DATE COLLECTED 13-FEB-18

CLIENT ID: B3H362

LEVEL: Low

DATE RECEIVED 15-FEB-18

MATRIX: WATER

%SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50	50	1	MS	BAJ	03/09/18 18:42	180309-2	1739449
7440-36-0	Antimony	1	ug/L	U	1	3	3	1	MS	BAJ	03/12/18 11:03	180312-3	1739449
7440-38-2	Arsenic	7	ug/L		2	5	5	1	MS	BAJ	03/09/18 18:42	180309-2	1739449
7440-39-3	Barium	93.2	ug/L		0.67	2	2	1	MS	BAJ	03/09/18 18:42	180309-2	1739449
7440-41-7	Beryllium	0.20	ug/L	U	0.2	0.5	0.5	1	MS	BAJ	03/09/18 18:42	180309-2	1739449
7440-42-8	Boron	15	ug/L	U	15	50	50	1	P	HSC	03/02/18 15:56	030218-1	1739445
7440-43-9	Cadmium	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	03/09/18 18:42	180309-2	1739449
7440-70-2	Calcium	172000	ug/L		50	200	200	1	P	HSC	03/02/18 15:56	030218-1	1739445
7440-47-3	Chromium	33.8	ug/L		3	10	10	1	MS	BAJ	03/09/18 18:42	180309-2	1739449
7440-48-4	Cobalt	0.814	ug/L	B	0.3	1	1	1	MS	BAJ	03/09/18 18:42	180309-2	1739449
7440-50-8	Copper	0.307	ug/L	B	0.3	1	1	1	MS	BAJ	03/09/18 18:42	180309-2	1739449
7439-89-6	Iron	238	ug/L		30	100	100	1	P	HSC	03/02/18 15:56	030218-1	1739445
7439-92-1	Lead	0.50	ug/L	U	0.5	2	2	1	MS	BAJ	03/09/18 18:42	180309-2	1739449
7439-95-4	Magnesium	49300	ug/L		110	300	300	1	P	HSC	03/02/18 15:56	030218-1	1739445
7439-96-5	Manganese	1	ug/L	U	1	5	5	1	MS	BAJ	03/12/18 11:03	180312-3	1739449
7439-98-7	Molybdenum	5.78	ug/L		0.2	0.5	0.5	1	MS	BAJ	03/09/18 18:42	180309-2	1739449
7440-02-0	Nickel	0.973	ug/L	B	0.6	2	2	1	MS	BAJ	03/09/18 18:42	180309-2	1739449
7440-09-7	Potassium	17900	ug/L		50	150	150	1	P	HSC	03/02/18 15:56	030218-1	1739445
7782-49-2	Selenium	21	ug/L		2	5	5	1	MS	BAJ	03/09/18 18:42	180309-2	1739449
7440-22-4	Silver	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	03/09/18 18:42	180309-2	1739449
7440-23-5	Sodium	220000	ug/L		100	300	300	1	P	HSC	03/02/18 15:56	030218-1	1739445
7440-24-6	Strontium	975	ug/L	D	40	200	200	20	MS	BAJ	03/12/18 11:17	180312-3	1739449
7440-28-0	Thallium	0.60	ug/L	U	0.6	2	2	1	MS	BAJ	03/09/18 18:42	180309-2	1739449
7440-29-1	Thorium	0.70	ug/L	U	0.7	2	2	1	MS	BAJ	03/09/18 18:42	180309-2	1739449
7440-31-5	Tin	1	ug/L	U	1	5	5	1	MS	BAJ	03/09/18 18:42	180309-2	1739449
7440-61-1	Uranium	91.2	ug/L		0.067	0.2	0.2	1	MS	BAJ	03/12/18 11:03	180312-3	1739449
7440-62-2	Vanadium	12	ug/L		1	5	5	1	P	HSC	03/02/18 15:56	030218-1	1739445
7440-66-6	Zinc	3.3	ug/L	U	3.3	10	10	1	MS	BAJ	03/09/18 18:42	180309-2	1739449

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
1739445	1739444	SW846 3005A	50	mL	50	mL	02/15/18	JXM8
1739449	1739448	SW846 3005A	50	mL	50	mL	02/15/18	JXM8

***Analytical Methods:**

METALS

-1-

INORGANICS ANALYSIS DATA PACKAGE

P SW846 3005A/6010D
MS SW846 3005A/6020B

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: GEL443840

CONTRACT: CPRCOW18002

METHOD TYPE: SW846

SAMPLE ID: 443840021

BASIS: As Received

DATE COLLECTED 13-FEB-18

CLIENT ID: B3H365

LEVEL: Low

DATE RECEIVED 15-FEB-18

MATRIX: WATER

%SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50	50	1	MS	BAJ	03/09/18 18:45	180309-2	1739449
7440-36-0	Antimony	1	ug/L	U	1	3	3	1	MS	BAJ	03/12/18 11:05	180312-3	1739449
7440-38-2	Arsenic	7.12	ug/L		2	5	5	1	MS	BAJ	03/09/18 18:45	180309-2	1739449
7440-39-3	Barium	96.5	ug/L		0.67	2	2	1	MS	BAJ	03/09/18 18:45	180309-2	1739449
7440-41-7	Beryllium	0.20	ug/L	U	0.2	0.5	0.5	1	MS	BAJ	03/09/18 18:45	180309-2	1739449
7440-42-8	Boron	15	ug/L	U	15	50	50	1	P	HSC	03/02/18 15:59	030218-1	1739445
7440-43-9	Cadmium	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	03/09/18 18:45	180309-2	1739449
7440-70-2	Calcium	170000	ug/L		50	200	200	1	P	HSC	03/02/18 15:59	030218-1	1739445
7440-47-3	Chromium	32.9	ug/L		3	10	10	1	MS	BAJ	03/09/18 18:45	180309-2	1739449
7440-48-4	Cobalt	0.813	ug/L	B	0.3	1	1	1	MS	BAJ	03/09/18 18:45	180309-2	1739449
7440-50-8	Copper	0.316	ug/L	B	0.3	1	1	1	MS	BAJ	03/09/18 18:45	180309-2	1739449
7439-89-6	Iron	238	ug/L		30	100	100	1	P	HSC	03/02/18 15:59	030218-1	1739445
7439-92-1	Lead	0.50	ug/L	U	0.5	2	2	1	MS	BAJ	03/09/18 18:45	180309-2	1739449
7439-95-4	Magnesium	49000	ug/L		110	300	300	1	P	HSC	03/02/18 15:59	030218-1	1739445
7439-96-5	Manganese	1	ug/L	U	1	5	5	1	MS	BAJ	03/12/18 11:05	180312-3	1739449
7439-98-7	Molybdenum	5.54	ug/L		0.2	0.5	0.5	1	MS	BAJ	03/09/18 18:45	180309-2	1739449
7440-02-0	Nickel	0.804	ug/L	B	0.6	2	2	1	MS	BAJ	03/09/18 18:45	180309-2	1739449
7440-09-7	Potassium	17700	ug/L		50	150	150	1	P	HSC	03/02/18 15:59	030218-1	1739445
7782-49-2	Selenium	22	ug/L		2	5	5	1	MS	BAJ	03/09/18 18:45	180309-2	1739449
7440-22-4	Silver	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	03/09/18 18:45	180309-2	1739449
7440-23-5	Sodium	216000	ug/L		100	300	300	1	P	HSC	03/02/18 15:59	030218-1	1739445
7440-24-6	Strontium	1060	ug/L	D	40	200	200	20	MS	BAJ	03/12/18 11:19	180312-3	1739449
7440-28-0	Thallium	0.60	ug/L	U	0.6	2	2	1	MS	BAJ	03/09/18 18:45	180309-2	1739449
7440-29-1	Thorium	0.70	ug/L	U	0.7	2	2	1	MS	BAJ	03/09/18 18:45	180309-2	1739449
7440-31-5	Tin	1	ug/L	U	1	5	5	1	MS	BAJ	03/09/18 18:45	180309-2	1739449
7440-61-1	Uranium	94.5	ug/L		0.067	0.2	0.2	1	MS	BAJ	03/12/18 11:05	180312-3	1739449
7440-62-2	Vanadium	12.4	ug/L		1	5	5	1	P	HSC	03/02/18 15:59	030218-1	1739445
7440-66-6	Zinc	3.3	ug/L	U	3.3	10	10	1	MS	BAJ	03/09/18 18:45	180309-2	1739449

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
1739445	1739444	SW846 3005A	50	mL	50	mL	02/15/18	JXM8
1739449	1739448	SW846 3005A	50	mL	50	mL	02/15/18	JXM8

***Analytical Methods:**

METALS

-1-

INORGANICS ANALYSIS DATA PACKAGE

P SW846 3005A/6010D
MS SW846 3005A/6020B

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: GEL443840

CONTRACT: CPRCOW18002

METHOD TYPE: SW846

SAMPLE ID: 443840022

BASIS: As Received

DATE COLLECTED 13-FEB-18

CLIENT ID: B3H363

LEVEL: Low

DATE RECEIVED 15-FEB-18

MATRIX: WATER

%SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50	50	1	MS	BAJ	03/09/18 18:49	180309-2	1739449
7440-36-0	Antimony	1	ug/L	U	1	3	3	1	MS	BAJ	03/12/18 11:07	180312-3	1739449
7440-38-2	Arsenic	7.48	ug/L		2	5	5	1	MS	BAJ	03/09/18 18:49	180309-2	1739449
7440-39-3	Barium	97.3	ug/L		0.67	2	2	1	MS	BAJ	03/09/18 18:49	180309-2	1739449
7440-41-7	Beryllium	0.20	ug/L	U	0.2	0.5	0.5	1	MS	BAJ	03/09/18 18:49	180309-2	1739449
7440-42-8	Boron	15	ug/L	U	15	50	50	1	P	HSC	03/02/18 16:02	030218-1	1739445
7440-43-9	Cadmium	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	03/09/18 18:49	180309-2	1739449
7440-70-2	Calcium	164000	ug/L		50	200	200	1	P	HSC	03/02/18 16:02	030218-1	1739445
7440-47-3	Chromium	33.6	ug/L		3	10	10	1	MS	BAJ	03/09/18 18:49	180309-2	1739449
7440-48-4	Cobalt	0.828	ug/L	B	0.3	1	1	1	MS	BAJ	03/09/18 18:49	180309-2	1739449
7440-50-8	Copper	0.305	ug/L	B	0.3	1	1	1	MS	BAJ	03/09/18 18:49	180309-2	1739449
7439-89-6	Iron	231	ug/L		30	100	100	1	P	HSC	03/02/18 16:02	030218-1	1739445
7439-92-1	Lead	0.50	ug/L	U	0.5	2	2	1	MS	BAJ	03/09/18 18:49	180309-2	1739449
7439-95-4	Magnesium	47100	ug/L		110	300	300	1	P	HSC	03/02/18 16:02	030218-1	1739445
7439-96-5	Manganese	1	ug/L	U	1	5	5	1	MS	BAJ	03/12/18 11:07	180312-3	1739449
7439-98-7	Molybdenum	5.48	ug/L		0.2	0.5	0.5	1	MS	BAJ	03/09/18 18:49	180309-2	1739449
7440-02-0	Nickel	1.03	ug/L	B	0.6	2	2	1	MS	BAJ	03/09/18 18:49	180309-2	1739449
7440-09-7	Potassium	17200	ug/L		50	150	150	1	P	HSC	03/02/18 16:02	030218-1	1739445
7782-49-2	Selenium	21.6	ug/L		2	5	5	1	MS	BAJ	03/09/18 18:49	180309-2	1739449
7440-22-4	Silver	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	03/09/18 18:49	180309-2	1739449
7440-23-5	Sodium	209000	ug/L		100	300	300	1	P	HSC	03/02/18 16:02	030218-1	1739445
7440-24-6	Strontium	1140	ug/L	D	40	200	200	20	MS	BAJ	03/12/18 11:20	180312-3	1739449
7440-28-0	Thallium	0.60	ug/L	U	0.6	2	2	1	MS	BAJ	03/09/18 18:49	180309-2	1739449
7440-29-1	Thorium	0.70	ug/L	U	0.7	2	2	1	MS	BAJ	03/09/18 18:49	180309-2	1739449
7440-31-5	Tin	1	ug/L	U	1	5	5	1	MS	BAJ	03/09/18 18:49	180309-2	1739449
7440-61-1	Uranium	96.9	ug/L		0.067	0.2	0.2	1	MS	BAJ	03/12/18 11:07	180312-3	1739449
7440-62-2	Vanadium	11.2	ug/L		1	5	5	1	P	HSC	03/02/18 16:02	030218-1	1739445
7440-66-6	Zinc	3.3	ug/L	U	3.3	10	10	1	MS	BAJ	03/09/18 18:49	180309-2	1739449

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
1739445	1739444	SW846 3005A	50	mL	50	mL	02/15/18	JXM8
1739449	1739448	SW846 3005A	50	mL	50	mL	02/15/18	JXM8

*Analytical Methods:

METALS

-1-

INORGANICS ANALYSIS DATA PACKAGE

P SW846 3005A/6010D
MS SW846 3005A/6020B

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: GEL443840

CONTRACT: CPRCOW18002

METHOD TYPE: SW846

SAMPLE ID: 443840023

BASIS: As Received

DATE COLLECTED 13-FEB-18

CLIENT ID: B3H366

LEVEL: Low

DATE RECEIVED 15-FEB-18

MATRIX: WATER

%SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50	50	1	MS	BAJ	03/09/18 18:52	180309-2	1739449
7440-36-0	Antimony	1	ug/L	U	1	3	3	1	MS	BAJ	03/12/18 11:08	180312-3	1739449
7440-38-2	Arsenic	6.81	ug/L		2	5	5	1	MS	BAJ	03/09/18 18:52	180309-2	1739449
7440-39-3	Barium	92.8	ug/L		0.67	2	2	1	MS	BAJ	03/09/18 18:52	180309-2	1739449
7440-41-7	Beryllium	0.20	ug/L	U	0.2	0.5	0.5	1	MS	BAJ	03/09/18 18:52	180309-2	1739449
7440-42-8	Boron	15	ug/L	U	15	50	50	1	P	HSC	03/02/18 16:05	030218-1	1739445
7440-43-9	Cadmium	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	03/09/18 18:52	180309-2	1739449
7440-70-2	Calcium	168000	ug/L		50	200	200	1	P	HSC	03/02/18 16:05	030218-1	1739445
7440-47-3	Chromium	32.7	ug/L		3	10	10	1	MS	BAJ	03/09/18 18:52	180309-2	1739449
7440-48-4	Cobalt	0.789	ug/L	B	0.3	1	1	1	MS	BAJ	03/09/18 18:52	180309-2	1739449
7440-50-8	Copper	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	03/09/18 18:52	180309-2	1739449
7439-89-6	Iron	234	ug/L		30	100	100	1	P	HSC	03/02/18 16:05	030218-1	1739445
7439-92-1	Lead	0.50	ug/L	U	0.5	2	2	1	MS	BAJ	03/09/18 18:52	180309-2	1739449
7439-95-4	Magnesium	48300	ug/L		110	300	300	1	P	HSC	03/02/18 16:05	030218-1	1739445
7439-96-5	Manganese	1	ug/L	U	1	5	5	1	MS	BAJ	03/12/18 11:08	180312-3	1739449
7439-98-7	Molybdenum	5.19	ug/L		0.2	0.5	0.5	1	MS	BAJ	03/09/18 18:52	180309-2	1739449
7440-02-0	Nickel	0.986	ug/L	B	0.6	2	2	1	MS	BAJ	03/09/18 18:52	180309-2	1739449
7440-09-7	Potassium	17500	ug/L		50	150	150	1	P	HSC	03/02/18 16:05	030218-1	1739445
7782-49-2	Selenium	21.6	ug/L		2	5	5	1	MS	BAJ	03/09/18 18:52	180309-2	1739449
7440-22-4	Silver	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	03/09/18 18:52	180309-2	1739449
7440-23-5	Sodium	213000	ug/L		100	300	300	1	P	HSC	03/02/18 16:05	030218-1	1739445
7440-24-6	Strontium	990	ug/L		2	10	10	1	MS	BAJ	03/09/18 18:52	180309-2	1739449
7440-28-0	Thallium	0.60	ug/L	U	0.6	2	2	1	MS	BAJ	03/09/18 18:52	180309-2	1739449
7440-29-1	Thorium	0.70	ug/L	U	0.7	2	2	1	MS	BAJ	03/09/18 18:52	180309-2	1739449
7440-31-5	Tin	1	ug/L	U	1	5	5	1	MS	BAJ	03/09/18 18:52	180309-2	1739449
7440-61-1	Uranium	91.8	ug/L		0.067	0.2	0.2	1	MS	BAJ	03/12/18 11:08	180312-3	1739449
7440-62-2	Vanadium	11.8	ug/L		1	5	5	1	P	HSC	03/02/18 16:05	030218-1	1739445
7440-66-6	Zinc	3.3	ug/L	U	3.3	10	10	1	MS	BAJ	03/09/18 18:52	180309-2	1739449

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
1739445	1739444	SW846 3005A	50	mL	50	mL	02/15/18	JXM8
1739449	1739448	SW846 3005A	50	mL	50	mL	02/15/18	JXM8

*Analytical Methods:

METALS

-1-

INORGANICS ANALYSIS DATA PACKAGE

P SW846 3005A/6010D
MS SW846 3005A/6020B

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: GEL443840

CONTRACT: CPRCOW18002

METHOD TYPE: SW846

SAMPLE ID: 443840024

BASIS: As Received

DATE COLLECTED 13-FEB-18

CLIENT ID: B3H3B3

LEVEL: Low

DATE RECEIVED 15-FEB-18

MATRIX: WATER

%SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440-36-0	Antimony	3.5	ug/L	U	3.5	10	10	1	P	HSC	03/02/18 16:08	030218-1	1739445
7440-38-2	Arsenic	5	ug/L	U	5	30	30	1	P	HSC	03/02/18 16:08	030218-1	1739445
7440-39-3	Barium	79.4	ug/L		1	5	5	1	P	HSC	03/02/18 16:08	030218-1	1739445
7440-43-9	Cadmium	1	ug/L	U	1	5	5	1	P	HSC	03/02/18 16:08	030218-1	1739445
7440-70-2	Calcium	72400	ug/L		50	200	200	1	P	HSC	03/02/18 16:08	030218-1	1739445
7440-47-3	Chromium	55.4	ug/L		1	5	5	1	P	HSC	03/02/18 16:08	030218-1	1739445
7440-47-3	Chromium	59.1	ug/L		3	10	10	1	MS	BAJ	03/09/18 18:55	180309-2	1739449
7440-48-4	Cobalt	1	ug/L	U	1	5	5	1	P	HSC	03/02/18 16:08	030218-1	1739445
7440-50-8	Copper	3	ug/L	U	3	10	10	1	P	HSC	03/02/18 16:08	030218-1	1739445
7439-89-6	Iron	652	ug/L		30	100	100	1	P	HSC	03/02/18 16:08	030218-1	1739445
7439-95-4	Magnesium	23700	ug/L		110	300	300	1	P	HSC	03/02/18 16:08	030218-1	1739445
7439-96-5	Manganese	17.6	ug/L		2	10	10	1	P	HSC	03/02/18 16:08	030218-1	1739445
7440-02-0	Nickel	4	ug/L	B	1.5	5	5	1	P	HSC	03/02/18 16:08	030218-1	1739445
7440-09-7	Potassium	5280	ug/L		50	150	150	1	P	HSC	03/02/18 16:08	030218-1	1739445
7440-22-4	Silver	1	ug/L	U	1	5	5	1	P	HSC	03/02/18 16:08	030218-1	1739445
7440-23-5	Sodium	26800	ug/L		100	300	300	1	P	HSC	03/02/18 16:08	030218-1	1739445
7440-62-2	Vanadium	29.7	ug/L		1	5	5	1	P	HSC	03/02/18 16:08	030218-1	1739445
7440-66-6	Zinc	18	ug/L		3.3	10	10	1	P	HSC	03/02/18 16:08	030218-1	1739445

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
1739445	1739444	SW846 3005A	50	mL	50	mL	02/15/18	JXM8
1739449	1739448	SW846 3005A	50	mL	50	mL	02/15/18	JXM8

***Analytical Methods:**

P SW846 3005A/6010D
MS SW846 3005A/6020B

Quality Control Summary

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: March 14, 2018

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CH2M Hill Plateau Remediation Company

MSIN R3-50 CHPRC

PO Box 1600

Richland, Washington

Contact: Mr. Scot Fitzgerald

Workorder: 443840

Parmname	NOM	Sample	Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	1739449										
QC1203972334	LCS										
Aluminum	2000			1980	ug/L		98.8	(80%-120%)	BAJ	03/09/18	18:06
Antimony	50.0			53.3	ug/L		107	(80%-120%)		03/12/18	10:43
Arsenic	50.0			50.9	ug/L		102	(80%-120%)		03/09/18	18:06
Barium	50.0			50.0	ug/L		99.9	(80%-120%)			
Beryllium	50.0			55.2	ug/L		110	(80%-120%)			
Cadmium	50.0			49.6	ug/L		99.1	(80%-120%)			
Chromium	50.0			52.7	ug/L		105	(80%-120%)			
Cobalt	50.0			52.5	ug/L		105	(80%-120%)			
Copper	50.0			50.4	ug/L		101	(80%-120%)			
Lead	50.0			49.5	ug/L		98.9	(80%-120%)			
Manganese	50.0			53.1	ug/L		106	(80%-120%)		03/12/18	10:43
Molybdenum	50.0			51.0	ug/L		102	(80%-120%)		03/09/18	18:06
Nickel	50.0			51.6	ug/L		103	(80%-120%)			

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QC Summary

Workorder: 443840

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Parmname	NOM	Sample	Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	1739449										
Selenium	50.0			51.0	ug/L		102	(80%-120%)	BAJ	03/09/18	18:06
Silver	50.0			51.7	ug/L		103	(80%-120%)			
Strontium	50.0			50.8	ug/L		102	(80%-120%)			
Thallium	50.0			48.6	ug/L		97.2	(80%-120%)			
Thorium	50.0			49.4	ug/L		98.8	(80%-120%)			
Tin	50.0			50.2	ug/L		100	(80%-120%)			
Uranium	50.0			51.9	ug/L		104	(80%-120%)		03/12/18	10:43
Zinc	50.0			51.6	ug/L		103	(80%-120%)		03/09/18	18:06
QC1203972333	MB										
Aluminum			U	19.3	ug/L					03/09/18	18:03
Antimony			U	1.00	ug/L					03/12/18	10:42
Arsenic			U	2.00	ug/L					03/09/18	18:03
Barium			U	0.670	ug/L						
Beryllium			U	0.200	ug/L						
Cadmium			U	0.300	ug/L						
Chromium			U	3.00	ug/L						

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QC Summary

Workorder: 443840

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Parmname	NOM	Sample	Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	1739449										
Cobalt			U	0.300	ug/L				BAJ	03/09/18	18:03
Copper			U	0.300	ug/L						
Lead			U	0.500	ug/L						
Manganese			U	1.00	ug/L					03/12/18	10:42
Molybdenum			B	0.208	ug/L					03/09/18	18:03
Nickel			U	0.600	ug/L						
Selenium			U	2.00	ug/L						
Silver			U	0.300	ug/L						
Strontium			U	2.00	ug/L						
Thallium			U	0.600	ug/L						
Thorium			U	0.700	ug/L						
Tin			B	1.37	ug/L						
Uranium			U	0.067	ug/L					03/12/18	10:42
Zinc			U	3.30	ug/L					03/09/18	18:03
QC1203972335 443840014 MS											
Aluminum	2000	U	19.3	2100	ug/L		105	(75%-125%)		03/09/18	18:13

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QC Summary

Workorder: 443840

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Parmname	NOM		Sample	Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS												
Batch	1739449											
Antimony	50.0	U	1.00		54.7	ug/L		109	(75%-125%)	BAJ	03/12/18	10:47
Arsenic	50.0		7.31		57.0	ug/L		99.5	(75%-125%)		03/09/18	18:13
Barium	50.0		44.5		89.8	ug/L		90.5	(75%-125%)			
Beryllium	50.0	U	0.200		56.6	ug/L		113	(75%-125%)			
Cadmium	50.0	U	0.300		49.5	ug/L		98.9	(75%-125%)			
Chromium	50.0	B	8.94		61.3	ug/L		105	(75%-125%)			
Cobalt	50.0	U	0.300		51.1	ug/L		102	(75%-125%)			
Copper	50.0	B	0.606		49.8	ug/L		98.4	(75%-125%)			
Lead	50.0	U	0.500		46.7	ug/L		93.2	(75%-125%)			
Manganese	50.0	U	1.00		52.7	ug/L		104	(75%-125%)		03/12/18	10:47
Molybdenum	50.0		6.75		58.0	ug/L		103	(75%-125%)		03/09/18	18:13
Nickel	50.0		3.25		54.9	ug/L		103	(75%-125%)			
Selenium	50.0	B	4.10		52.0	ug/L		95.7	(75%-125%)			
Silver	50.0	U	0.300		48.9	ug/L		97.7	(75%-125%)			
Strontium	50.0		220		273	ug/L		N/A	(75%-125%)			

GEL LABORATORIES LLC

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QC Summary

Workorder: 443840

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Parmname	NOM		Sample	Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS												
Batch	1739449											
Thallium	50.0	U	0.600		45.3	ug/L		90.6	(75%-125%)	BAJ	03/09/18	18:13
Thorium	50.0	U	0.700		48.1	ug/L		95.3	(75%-125%)			
Tin	50.0	U	1.00		50.4	ug/L		100	(75%-125%)			
Uranium	50.0		11.2		64.4	ug/L		106	(75%-125%)		03/12/18	10:47
Zinc	50.0	U	3.30		49.3	ug/L		94.7	(75%-125%)		03/09/18	18:13
QC1203972336 443840014 MSD												
Aluminum	2000	U	19.3		1960	ug/L	6.86	97.9	(0%-20%)		03/09/18	18:16
Antimony	50.0	U	1.00		55.5	ug/L	1.41	110	(0%-20%)		03/12/18	10:49
Arsenic	50.0		7.31		59.0	ug/L	3.34	103	(0%-20%)		03/09/18	18:16
Barium	50.0		44.5		90.5	ug/L	0.748	91.9	(0%-20%)			
Beryllium	50.0	U	0.200		55.4	ug/L	2	111	(0%-20%)			
Cadmium	50.0	U	0.300		47.8	ug/L	3.36	95.6	(0%-20%)			
Chromium	50.0	B	8.94		58.0	ug/L	5.46	98.2	(0%-20%)			
Cobalt	50.0	U	0.300		51.5	ug/L	0.711	103	(0%-20%)			
Copper	50.0	B	0.606		48.4	ug/L	2.84	95.6	(0%-20%)			
Lead	50.0	U	0.500		46.6	ug/L	0.253	93	(0%-20%)			

GEL LABORATORIES LLC

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QC Summary

Workorder: 443840

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Parmname	NOM	Sample	Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	1739449										
Manganese	50.0	U	1.00		56.4	ug/L	6.78	111	(0%-20%)	BAJ	03/12/18 10:49
Molybdenum	50.0		6.75		55.9	ug/L	3.68	98.4	(0%-20%)		03/09/18 18:16
Nickel	50.0		3.25		53.2	ug/L	3.09	99.9	(0%-20%)		
Selenium	50.0	B	4.10		54.8	ug/L	5.31	101	(0%-20%)		
Silver	50.0	U	0.300		48.5	ug/L	0.834	96.9	(0%-20%)		
Strontium	50.0		220		273	ug/L	0.137	N/A	(0%-20%)		
Thallium	50.0	U	0.600		44.8	ug/L	1.22	89.5	(0%-20%)		
Thorium	50.0	U	0.700		48.4	ug/L	0.58	95.9	(0%-20%)		
Tin	50.0	U	1.00		47.2	ug/L	6.41	93.8	(0%-20%)		
Uranium	50.0		11.2		67.3	ug/L	4.45	112	(0%-20%)		03/12/18 10:49
Zinc	50.0	U	3.30		50.5	ug/L	2.32	97	(0%-20%)		03/09/18 18:16
QC1203972337 443840014 SDILT											
Aluminum		U	6.57	DU	96.5	ug/L	N/A		(0%-20%)		03/09/18 18:22
Antimony		U	0.342	DU	5.00	ug/L	N/A		(0%-20%)		03/12/18 10:52
Arsenic			7.31	DU	10.0	ug/L	N/A		(0%-20%)		03/09/18 18:22
Barium			44.5	D	8.72	ug/L	2.15		(0%-20%)		

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QC Summary

Workorder: 443840

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Parmname	NOM	Sample	Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	1739449										
Beryllium	U	0.030	DU	1.00	ug/L	N/A		(0%-20%)	BAJ	03/09/18	18:22
Cadmium	U	0.032	DU	1.50	ug/L	N/A		(0%-20%)			
Chromium	B	8.94	DU	15.0	ug/L	N/A		(0%-20%)			
Cobalt	U	0.074	DU	1.50	ug/L	N/A		(0%-20%)			
Copper	B	0.606	DU	1.50	ug/L	N/A		(0%-20%)			
Lead	U	0.094	DU	2.50	ug/L	N/A		(0%-20%)			
Manganese	U	0.882	DU	5.00	ug/L	N/A		(0%-20%)		03/12/18	10:52
Molybdenum		6.75	D	1.30	ug/L	3.97		(0%-20%)		03/09/18	18:22
Nickel		3.25	BD	0.671	ug/L	3.14		(0%-20%)			
Selenium	B	4.10	DU	10.0	ug/L	N/A		(0%-20%)			
Silver	U	0.043	DU	1.50	ug/L	N/A		(0%-20%)			
Strontium		220	D	41.5	ug/L	5.85		(0%-20%)			
Thallium	U	0.041	DU	3.00	ug/L	N/A		(0%-20%)			
Thorium	U	0.488	DU	3.50	ug/L	N/A		(0%-20%)			
Tin	U	0.331	DU	5.00	ug/L	N/A		(0%-20%)			

GEL LABORATORIES LLC

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QC Summary

Workorder: 443840

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Parname	NOM	Sample	Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	1739449										
Uranium		11.2	D	2.17	ug/L	3.19		(0%-20%)	BAJ	03/12/18	10:52
Zinc	U	2.01	DU	16.5	ug/L	N/A		(0%-20%)		03/09/18	18:22
Metals Analysis-ICP											
Batch	1739445										
QC1203972324	LCS										
Antimony	500			457	ug/L		91.5	(80%-120%)	HSC	03/02/18	15:30
Arsenic	500			470	ug/L		94	(80%-120%)			
Barium	500			462	ug/L		92.4	(80%-120%)			
Boron	500			459	ug/L		91.7	(80%-120%)			
Cadmium	500			453	ug/L		90.7	(80%-120%)			
Calcium	5000			4590	ug/L		91.7	(80%-120%)			
Chromium	500			457	ug/L		91.4	(80%-120%)			
Cobalt	500			465	ug/L		92.9	(80%-120%)			
Copper	500			460	ug/L		91.9	(80%-120%)			
Iron	5000			4560	ug/L		91.2	(80%-120%)			
Magnesium	5000			4610	ug/L		92.2	(80%-120%)			
Manganese	500			464	ug/L		92.7	(80%-120%)			

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Workorder: 443840

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Parmname	NOM	Sample	Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1739445										
Nickel	500			448	ug/L		89.7	(80%-120%)	HSC	03/02/18	15:30
Potassium	5000			4910	ug/L		98.2	(80%-120%)			
Silver	500			454	ug/L		90.9	(80%-120%)			
Sodium	5000			4560	ug/L		91.2	(80%-120%)			
Vanadium	500			461	ug/L		92.2	(80%-120%)			
Zinc	500			451	ug/L		90.2	(80%-120%)			
QC1203972323 MB											
Antimony			U	3.50	ug/L					03/02/18	15:27
Arsenic			U	5.00	ug/L						
Barium			U	1.00	ug/L						
Boron			U	15.0	ug/L						
Cadmium			U	1.00	ug/L						
Calcium			U	50.0	ug/L						
Chromium			U	1.00	ug/L						
Cobalt			U	1.00	ug/L						
Copper			U	3.00	ug/L						

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QC Summary

Workorder: 443840

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Parmname	NOM	Sample	Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1739445										
Iron			U	30.0	ug/L				HSC	03/02/18	15:27
Magnesium			U	110	ug/L						
Manganese			U	2.00	ug/L						
Nickel			U	1.50	ug/L						
Potassium			U	50.0	ug/L						
Silver			U	1.00	ug/L						
Sodium			U	100	ug/L						
Vanadium			U	1.00	ug/L						
Zinc			U	3.30	ug/L						
QC1203972325 443840014 MS											
Antimony	500	U	3.50	473	ug/L		94.5	(75%-125%)		03/02/18	15:35
Arsenic	500	B	6.15	499	ug/L		98.5	(75%-125%)			
Barium	500		44.5	514	ug/L		93.9	(75%-125%)			
Boron	500	U	15.0	499	ug/L		97	(75%-125%)			
Cadmium	500	U	1.00	462	ug/L		92.4	(75%-125%)			
Calcium	5000		39800	44700	ug/L		N/A	(75%-125%)			

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QC Summary

Workorder: 443840

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Parmname	NOM	Sample	Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1739445										
Chromium	500		8.99	475	ug/L		93.2	(75%-125%)	HSC	03/02/18	15:35
Cobalt	500	U	1.00	465	ug/L		92.9	(75%-125%)			
Copper	500	B	-3.08	476	ug/L		95.2	(75%-125%)			
Iron	5000	B	36.8	4710	ug/L		93.5	(75%-125%)			
Magnesium	5000		12000	16700	ug/L		95.2	(75%-125%)			
Manganese	500	U	2.00	467	ug/L		93.4	(75%-125%)			
Nickel	500	B	3.54	453	ug/L		89.8	(75%-125%)			
Potassium	5000		6620	11700	ug/L		102	(75%-125%)			
Silver	500	U	1.00	469	ug/L		93.8	(75%-125%)			
Sodium	5000		22200	27200	ug/L		N/A	(75%-125%)			
Vanadium	500		18.2	493	ug/L		95	(75%-125%)			
Zinc	500	U	3.30	462	ug/L		92.1	(75%-125%)			
QC1203972326 443840014 MSD											
Antimony	500	U	3.50	471	ug/L	0.426	94.1	(0%-20%)		03/02/18	15:37
Arsenic	500	B	6.15	494	ug/L	0.902	97.6	(0%-20%)			
Barium	500		44.5	511	ug/L	0.505	93.4	(0%-20%)			

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QC Summary

Workorder: 443840

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Parmname	NOM	Sample	Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1739445										
Boron	500	U	15.0	497	ug/L	0.281	96.7	(0%-20%)	HSC	03/02/18	15:37
Cadmium	500	U	1.00	459	ug/L	0.679	91.8	(0%-20%)			
Calcium	5000		39800	44800	ug/L	0.239	N/A	(0%-20%)			
Chromium	500		8.99	473	ug/L	0.418	92.8	(0%-20%)			
Cobalt	500	U	1.00	461	ug/L	0.86	92.2	(0%-20%)			
Copper	500	B	-3.08	473	ug/L	0.592	94.6	(0%-20%)			
Iron	5000	B	36.8	4650	ug/L	1.37	92.2	(0%-20%)			
Magnesium	5000		12000	16600	ug/L	0.599	93.2	(0%-20%)			
Manganese	500	U	2.00	463	ug/L	1.01	92.4	(0%-20%)			
Nickel	500	B	3.54	448	ug/L	0.977	89	(0%-20%)			
Potassium	5000		6620	11700	ug/L	0.0597	102	(0%-20%)			
Silver	500	U	1.00	466	ug/L	0.695	93.2	(0%-20%)			
Sodium	5000		22200	27200	ug/L	0.022	N/A	(0%-20%)			
Vanadium	500		18.2	487	ug/L	1.35	93.7	(0%-20%)			
Zinc	500	U	3.30	459	ug/L	0.717	91.5	(0%-20%)			

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QC Summary

Workorder: 443840

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Parmname	NOM	Sample	Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1739445										
	QC1203972327 443840014 SDILT										
Antimony	U	0.725	DU	17.5	ug/L	N/A		(0%-20%)	HSC	03/02/18	15:39
Arsenic	B	6.15	DU	25.0	ug/L	N/A		(0%-20%)			
Barium		44.5	D	8.96	ug/L	.624		(0%-20%)			
Boron	U	13.7	DU	75.0	ug/L	N/A		(0%-20%)			
Cadmium	U	0.208	DU	5.00	ug/L	N/A		(0%-20%)			
Calcium		39800	D	8010	ug/L	.724		(0%-20%)			
Chromium		8.99	BD	1.72	ug/L	4.54		(0%-20%)			
Cobalt	U	-0.188	DU	5.00	ug/L	N/A		(0%-20%)			
Copper	B	-3.08	DU	15.0	ug/L	N/A		(0%-20%)			
Iron	B	36.8	DU	150	ug/L	N/A		(0%-20%)			
Magnesium		12000	D	2440	ug/L	1.97		(0%-20%)			
Manganese	U	0.566	DU	10.0	ug/L	N/A		(0%-20%)			
Nickel	B	3.54	DU	7.50	ug/L	N/A		(0%-20%)			
Potassium		6620	D	1360	ug/L	2.34		(0%-20%)			
Silver	U	-0.051	DU	5.00	ug/L	N/A		(0%-20%)			

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QC Summary

Workorder: 443840

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Paramname	NOM	Sample	Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1739445										
Sodium		22200	D	4520	ug/L	1.59		(0%-20%)	HSC	03/02/18	15:39
Vanadium		18.2	BD	3.91	ug/L	7.12		(0%-20%)			
Zinc	U	1.36	DU	16.5	ug/L	N/A		(0%-20%)			

Notes:

The Qualifiers in this report are defined as follows:

- * Duplicate analysis not within control limits
- + Correlation coefficient for Method of Standard Additions (MSA) is < 0.995
- B The analyte was detected at a value less than the contract required detection limit (RDL), but greater than or equal to the IDL/MDL (as appropriate).
- C Target analyte was detected in the sample and the associated blank. The associated blank concentration is >= EQL or is > 5% of the measured concentration and/or decision level for associated samples.
- D Results are reported from a diluted aliquot of sample.
- E Reported value is estimated due to interferences. See comment in narrative.
- M Duplicate precision not met.
- N Spike Sample recovery is outside control limits.
- S Reported value determined by the Method of Standard Additions (MSA)
- U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
- W Post-digestion spike recovery for GFAA out of control limit. Sample absorbency < 50% of spike absorbency.
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Y Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Z Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.
 ^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

* Indicates that a Quality Control parameter was not within specifications.
 For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

General Chem Analysis

Case Narrative

**General Chemistry
 Technical Case Narrative
 CH2MHill Plateau Remediation Company (CPRC)
 SDG #: GEL443840
 Work Order #: 443840**

Product: Carbon, Total Organic

Analytical Method: SW846 9060A

Analytical Procedure: GL-GC-E-093 REV# 15

Analytical Batch: 1740028

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
443840009	B3H321
443840014	B3H339
443840018	B3H3F2
443840020	B3H362
443840022	B3H363
1203973942	Method Blank (MB)
1203973943	Laboratory Control Sample (LCS)
1203973944	443758012(B3H3C8) Sample Duplicate (DUP)
1203973945	443758012(B3H3C8) Post Spike (PS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: Cyanide, Free

Analytical Method: 9014_CYANIDE

Analytical Procedure: GL-GC-E-073 REV# 8

Analytical Batches: 1740078 and 1740079

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
443840010	B3H330
443840011	B3H326
443840012	B3H333
443840013	B3H337
443840016	B3H343
443840017	B3H3C7
443840018	B3H3F2
443840019	B3H3F4
443840020	B3H362
443840021	B3H365
443840022	B3H363
443840023	B3H366
1203974063	Method Blank (MB)
1203974064	Laboratory Control Sample (LCS)
1203974065	443785005(NonSDG) Sample Duplicate (DUP)
1203974066	443758011(B3H3D0) Sample Duplicate (DUP)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Miscellaneous Information

Additional Comments

Total CN levels above the MDL for Free CN were detected in samples . Free CN was performed per SOP (GL-GC-E-073).

Product: Cyanide, Amenable to Chlorination

Analytical Method: 9012_CYANIDE

Analytical Procedure: GL-GC-E-107 REV# 10

Analytical Batches: 1740066, 1740069, 1740065, 1740068, 1740064 and 1740067

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
443840010	B3H330
443840011	B3H326
443840012	B3H333
443840013	B3H337
443840016	B3H343
443840017	B3H3C7
443840018	B3H3F2
443840019	B3H3F4
443840020	B3H362
443840021	B3H365
443840022	B3H363
443840023	B3H366

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: Cyanide, Total

Analytical Method: 9012_CYANIDE

Analytical Procedure: GL-GC-E-095 REV# 21

Analytical Batches: 1740054, 1740056, 1740053 and 1740055

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
443840010	B3H330
443840011	B3H326
443840012	B3H333
443840013	B3H337
443840016	B3H343
443840017	B3H3C7
443840018	B3H3F2
443840019	B3H3F4
443840020	B3H362
443840021	B3H365
443840022	B3H363
443840023	B3H366
1203974014	Method Blank (MB)
1203974015	Laboratory Control Sample (LCS)
1203974016	443785005(NonSDG) Sample Duplicate (DUP)
1203974017	443840016(B3H343) Sample Duplicate (DUP)
1203974018	443785005(NonSDG) Matrix Spike (MS)
1203974019	443840016(B3H343) Matrix Spike (MS)
1203974020	Method Blank (MB)
1203974021	Laboratory Control Sample (LCS)
1203974022	443758011(B3H3D0) Sample Duplicate (DUP)
1203974023	443871007(NonSDG) Sample Duplicate (DUP)
1203974024	443758011(B3H3D0) Matrix Spike (MS)
1203974025	443871007(NonSDG) Matrix Spike (MS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Sample Dilutions

The following samples 443840020 (B3H362), 443840021 (B3H365), 443840023 (B3H366), 443840018 (B3H3F2) and 443840019 (B3H3F4) were diluted because target analyte concentrations exceeded the calibration range. Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range.

Analyte	443840				
	018	019	020	021	023
Cyanide, Total	5X	5X	5X	5X	5X

Sample Re-analysis

Samples 443840022 (B3H363) were re-analyzed due to instrument failure. The results from the reanalysis are reported.

Product: Cyanide, Chlorinated

Analytical Method: 9012_CYANIDE

Analytical Procedure: GL-GC-E-095 REV# 21

Analytical Batches: 1740065, 1740068, 1740064 and 1740067

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
443840010	B3H330
443840011	B3H326
443840012	B3H333
443840013	B3H337
443840016	B3H343
443840017	B3H3C7
443840018	B3H3F2
443840019	B3H3F4
443840020	B3H362
443840021	B3H365
443840022	B3H363
443840023	B3H366
1203974044	Method Blank (MB)
1203974045	Laboratory Control Sample (LCS)
1203974046	443785005(NonSDG) Sample Duplicate (DUP)
1203974047	443758011(B3H3D0) Sample Duplicate (DUP)
1203974048	Method Blank (MB)
1203974049	Laboratory Control Sample (LCS)
1203974050	443840020(B3H362) Sample Duplicate (DUP)
1203974051	443871007(NonSDG) Sample Duplicate (DUP)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Sample Dilutions

The following samples 1203974050 (B3H362DUP), 443840018 (B3H3F2), 443840019 (B3H3F4), 443840020 (B3H362), 443840021 (B3H365), 443840022 (B3H363) and 443840023 (B3H366) were diluted because target analyte concentrations exceeded the calibration range. Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range.

Analyte	443840					
	018	019	020	021	022	023
Cyanide, Chlorinated	5X	5X	5X	5X	5X	5X

Product: Ion Chromatography

Analytical Method: 9056_ANIONS_IC

Analytical Procedure: GL-GC-E-086 REV# 25

Analytical Batch: 1739427

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
443840001	B3H322
443840002	B3H328
443840003	B3H335
443840004	B3H340
443840005	B3H3F3
443840006	B3H364
443840007	B3H3B4
443840008	B3HM07
1203972278	Method Blank (MB)
1203972279	Laboratory Control Sample (LCS)
1203972280	443834001(NonSDG) Sample Duplicate (DUP)
1203972281	443834001(NonSDG) Post Spike (PS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Sample Dilutions

The following samples 1203972280 (Non SDG 443834001DUP), 1203972281 (Non SDG 443834001PS), 443840001 (B3H322), 443840002 (B3H328), 443840003 (B3H335), 443840004 (B3H340), 443840005 (B3H3F3), 443840006 (B3H364), 443840007 (B3H3B4) and 443840008 (B3HM07) were diluted because target analyte concentrations exceeded the calibration range. Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range.

Analyte	443840							
	001	002	003	004	005	006	007	008
Several	20X 10X 1X	10X 1X	10X 1X	10X 1X	20X 10X 1X	100X 1X	20X 10X 1X	100X 1X

Product: Alkalinity**Analytical Method:** 2320_ALKALINITY**Analytical Procedure:** GL-GC-E-033 REV# 13**Analytical Batch:** 1740628

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
443840009	B3H321
443840018	B3H3F2
443840020	B3H362
443840022	B3H363
443840024	B3H3B3
1203975520	Laboratory Control Sample (LCS)
1203975521	443644008(NonSDG) Sample Duplicate (DUP)
1203975522	443936013(B3H375) Sample Duplicate (DUP)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

**Qualifier Definition Report
for**

CPRC001 CH2MHill Plateau Remediation Company

Client SDG: GEL443840 GEL Work Order: 443840

The Qualifiers in this report are defined as follows:

B The analyte was detected at a value less than the contract required detection limit (RDL), but greater than or equal to the IDL/MDL (as appropriate).

D Results are reported from a diluted aliquot of sample.

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: 

Name: Kristen Mizzell

Date: 01 MAR 2018

Title: Team Leader

Sample Data Summary

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: March 1, 2018

Company : CH2MHill Plateau Remediation Company
 Address : MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF W18-002

Client Sample ID: B3H322 Project: CPRCOW18002
 Sample ID: 443840001 Client ID: CPRC001
 Matrix: WATER
 Collect Date: 14-FEB-18 08:38
 Receive Date: 15-FEB-18
 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
9056_ANIONS_IC: COMMON "As Received"												
Fluoride	B	327	33.0	500	ug/L		1	MAR1	02/15/18	1631	1739427	1
Nitrite-N	U	33.0	33.0	250	ug/L		1					
Chloride	D	22200	670	2000	ug/L		10	MAR1	02/15/18	2247	1739427	2
Sulfate	D	117000	1330	4000	ug/L		10					
Nitrate-N	D	57700	660	2000	ug/L		20	MAR1	02/16/18	0827	1739427	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	9056_ANIONS_IC	
2	9056_ANIONS_IC	
3	9056_ANIONS_IC	

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
 DL: Detection Limit PF: Prep Factor
 MDA: Minimum Detectable Activity RL: Reporting Limit
 MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: March 1, 2018

Company : CH2MHill Plateau Remediation Company
 Address : MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF W18-002

Client Sample ID: B3H328 Project: CPRCOW18002
 Sample ID: 443840002 Client ID: CPRC001
 Matrix: WATER
 Collect Date: 14-FEB-18 09:32
 Receive Date: 15-FEB-18
 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
9056_ANIONS_IC: COMMON "As Received"												
Fluoride	B	422	33.0	500	ug/L		1	MAR1	02/15/18	1700	1739427	1
Nitrite-N	U	33.0	33.0	250	ug/L		1					
Chloride	D	14300	670	2000	ug/L		10	MAR1	02/15/18	2315	1739427	2
Nitrate-N	D	17100	330	1000	ug/L		10					
Sulfate	D	75100	1330	4000	ug/L		10					

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	9056_ANIONS_IC	
2	9056_ANIONS_IC	

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
 DL: Detection Limit PF: Prep Factor
 MDA: Minimum Detectable Activity RL: Reporting Limit
 MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: March 1, 2018

Company : CH2MHill Plateau Remediation Company
 Address : MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF W18-002

Client Sample ID: B3H335 Project: CPRCOW18002
 Sample ID: 443840003 Client ID: CPRC001
 Matrix: WATER
 Collect Date: 14-FEB-18 11:18
 Receive Date: 15-FEB-18
 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
9056_ANIONS_IC: COMMON "As Received"												
Fluoride		505	33.0	500	ug/L		1	MAR1	02/15/18	1729	1739427	1
Nitrite-N	U	33.0	33.0	250	ug/L		1					
Chloride	D	11700	670	2000	ug/L		10	MAR1	02/15/18	2344	1739427	2
Nitrate-N	D	10200	330	1000	ug/L		10					
Sulfate	D	51100	1330	4000	ug/L		10					

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	9056_ANIONS_IC		
2	9056_ANIONS_IC		

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
 DL: Detection Limit PF: Prep Factor
 MDA: Minimum Detectable Activity RL: Reporting Limit
 MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: March 1, 2018

Company : CH2MHill Plateau Remediation Company
 Address : MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF W18-002

Client Sample ID: B3H340 Project: CPRCOW18002
 Sample ID: 443840004 Client ID: CPRC001
 Matrix: WATER
 Collect Date: 14-FEB-18 10:29
 Receive Date: 15-FEB-18
 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
9056_ANIONS_IC: COMMON "As Received"												
Fluoride		520	33.0	500	ug/L		1	MAR1	02/15/18	1757	1739427	1
Nitrite-N	U	33.0	33.0	250	ug/L		1					
Chloride	D	10900	670	2000	ug/L		10	MAR1	02/16/18	0013	1739427	2
Nitrate-N	D	9450	330	1000	ug/L		10					
Sulfate	D	47800	1330	4000	ug/L		10					

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	9056_ANIONS_IC		
2	9056_ANIONS_IC		

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
 DL: Detection Limit PF: Prep Factor
 MDA: Minimum Detectable Activity RL: Reporting Limit
 MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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 Address : MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF W18-002

Client Sample ID: B3H3F3 Project: CPRCOW18002
 Sample ID: 443840005 Client ID: CPRC001
 Matrix: WATER
 Collect Date: 14-FEB-18 12:04
 Receive Date: 15-FEB-18
 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
9056_ANIONS_IC: COMMON "As Received"												
Fluoride	B	445	33.0	500	ug/L		1	MAR1	02/15/18	1826	1739427	1
Nitrite-N	U	33.0	33.0	250	ug/L		1					
Chloride	D	18400	670	2000	ug/L		10	MAR1	02/16/18	0042	1739427	2
Sulfate	D	108000	1330	4000	ug/L		10					
Nitrate-N	D	61400	660	2000	ug/L		20	MAR1	02/16/18	0856	1739427	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	9056_ANIONS_IC	
2	9056_ANIONS_IC	
3	9056_ANIONS_IC	

Notes:

Column headers are defined as follows:

- DF: Dilution Factor
- DL: Detection Limit
- MDA: Minimum Detectable Activity
- MDC: Minimum Detectable Concentration
- Lc/LC: Critical Level
- PF: Prep Factor
- RL: Reporting Limit
- SQL: Sample Quantitation Limit

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Company : CH2MHill Plateau Remediation Company
 Address : MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF W18-002

Client Sample ID: B3H364 Project: CPRCOW18002
 Sample ID: 443840006 Client ID: CPRC001
 Matrix: WATER
 Collect Date: 13-FEB-18 12:15
 Receive Date: 15-FEB-18
 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
9056_ANIONS_IC: COMMON "As Received"												
Fluoride	B	318	33.0	500	ug/L		1	MAR1	02/15/18	1045	1739427	1
Nitrite-N	U	33.0	33.0	250	ug/L		1					
Chloride	D	38900	6700	20000	ug/L		100	MAR1	02/15/18	1212	1739427	2
Nitrate-N	D	223000	3300	10000	ug/L		100					
Sulfate	D	225000	13300	40000	ug/L		100					

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	9056_ANIONS_IC	
2	9056_ANIONS_IC	

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
 DL: Detection Limit PF: Prep Factor
 MDA: Minimum Detectable Activity RL: Reporting Limit
 MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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 Address : MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF W18-002

Client Sample ID: B3H3B4 Project: CPRCOW18002
 Sample ID: 443840007 Client ID: CPRC001
 Matrix: WATER
 Collect Date: 13-FEB-18 14:03
 Receive Date: 15-FEB-18
 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
9056_ANIONS_IC: COMMON "As Received"												
Fluoride	B	462	33.0	500	ug/L		1	MAR1	02/15/18	1143	1739427	1
Nitrite-N	U	33.0	33.0	250	ug/L		1					
Chloride	D	19000	670	2000	ug/L		10	MAR1	02/15/18	1309	1739427	2
Sulfate	D	44900	1330	4000	ug/L		10					
Nitrate-N	D	51300	660	2000	ug/L		20	MAR1	02/15/18	1407	1739427	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	9056_ANIONS_IC	
2	9056_ANIONS_IC	
3	9056_ANIONS_IC	

Notes:

Column headers are defined as follows:

- | | |
|---------------------------------------|--------------------------------|
| DF: Dilution Factor | Lc/LC: Critical Level |
| DL: Detection Limit | PF: Prep Factor |
| MDA: Minimum Detectable Activity | RL: Reporting Limit |
| MDC: Minimum Detectable Concentration | SQL: Sample Quantitation Limit |

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 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF W18-002

Client Sample ID: B3HM07 Project: CPRCOW18002
 Sample ID: 443840008 Client ID: CPRC001
 Matrix: WATER
 Collect Date: 13-FEB-18 12:15
 Receive Date: 15-FEB-18
 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
9056_ANIONS_IC: COMMON "As Received"												
Fluoride	B	336	33.0	500	ug/L		1	MAR1	02/15/18	1114	1739427	1
Nitrite-N	U	33.0	33.0	250	ug/L		1					
Chloride	D	39200	6700	20000	ug/L		100	MAR1	02/15/18	1240	1739427	2
Nitrate-N	D	222000	3300	10000	ug/L		100					
Sulfate	D	228000	13300	40000	ug/L		100					

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	9056_ANIONS_IC	
2	9056_ANIONS_IC	

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
 DL: Detection Limit PF: Prep Factor
 MDA: Minimum Detectable Activity RL: Reporting Limit
 MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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 Address : MSIN R3-50 CHPRC
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 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF W18-002

Client Sample ID: B3H321 Project: CPRCOW18002
 Sample ID: 443840009 Client ID: CPRC001
 Matrix: WATER
 Collect Date: 14-FEB-18 08:38
 Receive Date: 15-FEB-18
 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Carbon Analysis												
9060_TOC: COMMON "As Received"												
Total Organic Carbon #1	B	454	330	1000	ug/L		1	TSM	02/24/18	0156	1740028	1
Total Organic Carbon #2	B	501	330	1000	ug/L		1					
Total Organic Carbon #3	B	511	330	1000	ug/L		1					
Total Organic Carbon #4	B	508	330	1000	ug/L		1					
Total Organic Carbon Average	B	493	330	1000	ug/L		1					
Titration and Ion Analysis												
2320_ALKALINITY: GW 01 "As Received"												
Alkalinity, Total as CaCO3		109000	1450	4000	ug/L			RXB5	02/23/18	1521	1740628	2
Bicarbonate alkalinity (CaCO3)		109000	1450	4000	ug/L							
Carbonate alkalinity (CaCO3)	U	1450	1450	4000	ug/L							
Hydroxide alkalinity as CaCO3	U	1450	1450	4000	ug/L							

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9060A		
2	2320_ALKALINITY		

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
 DL: Detection Limit PF: Prep Factor
 MDA: Minimum Detectable Activity RL: Reporting Limit
 MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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 Address : MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF W18-002

Client Sample ID: B3H330 Project: CPRCOW18002
 Sample ID: 443840010 Client ID: CPRC001
 Matrix: WATER
 Collect Date: 14-FEB-18 09:32
 Receive Date: 15-FEB-18
 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Flow Injection Analysis												
9012_CYANIDE (TOTAL): COMMON "As Received"												
Cyanide, Total		28.4	1.67	5.00	ug/L	1.00	1	AXH3	02/20/18	0940	1740056	1
9014_CN (FREE): COMMON "As Received"												
Free Cyanide	U	3.00	3.00	10.0	ug/L		1	AXH3	02/21/18	1212	1740078	2
9012_CN (AMENABLE): COMMON "See Parent Products"												
Cyanide amenable to chlorination		6.30	1.67	5.00	ug/L		1	AXH3	02/21/18	1157	1740069	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010C Distillation	SW846 9010C Prep	AXH3	02/20/18	0915	1740055
SW846 9012B	SW846 9012B Cyanide, Chlorinated Prep	AXH3	02/21/18	0750	1740067

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	9012_CYANIDE	
2	9014_CYANIDE	
3	9012_CYANIDE	

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
 DL: Detection Limit PF: Prep Factor
 MDA: Minimum Detectable Activity RL: Reporting Limit
 MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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 Address : MSIN R3-50 CHPRC
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 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF W18-002

Client Sample ID: B3H326 Project: CPRCOW18002
 Sample ID: 443840011 Client ID: CPRC001
 Matrix: WATER
 Collect Date: 14-FEB-18 09:32
 Receive Date: 15-FEB-18
 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Flow Injection Analysis												
9012_CYANIDE (TOTAL): COMMON "As Received"												
Cyanide, Total		28.6	1.67	5.00	ug/L	1.00	1	AXH3	02/20/18	0941	1740056	1
9014_CN (FREE): COMMON "As Received"												
Free Cyanide	U	3.00	3.00	10.0	ug/L		1	AXH3	02/21/18	1212	1740078	2
9012_CN (AMENABLE): COMMON "See Parent Products"												
Cyanide amenable to chlorination		5.50	1.67	5.00	ug/L		1	AXH3	02/21/18	1157	1740069	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010C Distillation	SW846 9010C Prep	AXH3	02/20/18	0915	1740055
SW846 9012B	SW846 9012B Cyanide, Chlorinated Prep	AXH3	02/21/18	0750	1740067

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	9012_CYANIDE	
2	9014_CYANIDE	
3	9012_CYANIDE	

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
 DL: Detection Limit PF: Prep Factor
 MDA: Minimum Detectable Activity RL: Reporting Limit
 MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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Company : CH2MHill Plateau Remediation Company
 Address : MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF W18-002

Client Sample ID: B3H333 Project: CPRCOW18002
 Sample ID: 443840012 Client ID: CPRC001
 Matrix: WATER
 Collect Date: 14-FEB-18 11:18
 Receive Date: 15-FEB-18
 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Flow Injection Analysis												
9012_CYANIDE (TOTAL): COMMON "As Received"												
Cyanide, Total		5.38	1.67	5.00	ug/L	1.00	1	AXH3	02/20/18	0942	1740056	1
9014_CN (FREE): COMMON "As Received"												
Free Cyanide	U	3.00	3.00	10.0	ug/L		1	AXH3	02/21/18	1212	1740078	2
9012_CN (AMENABLE): COMMON "See Parent Products"												
Cyanide amenable to chlorination	U	1.67	1.67	5.00	ug/L		1	AXH3	02/21/18	1157	1740069	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010C Distillation	SW846 9010C Prep	AXH3	02/20/18	0915	1740055
SW846 9012B	SW846 9012B Cyanide, Chlorinated Prep	AXH3	02/21/18	0750	1740067

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	9012_CYANIDE	
2	9014_CYANIDE	
3	9012_CYANIDE	

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
 DL: Detection Limit PF: Prep Factor
 MDA: Minimum Detectable Activity RL: Reporting Limit
 MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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 Address : MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF W18-002

Client Sample ID: B3H337 Project: CPRCOW18002
 Sample ID: 443840013 Client ID: CPRC001
 Matrix: WATER
 Collect Date: 14-FEB-18 11:18
 Receive Date: 15-FEB-18
 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Flow Injection Analysis												
9012_CYANIDE (TOTAL): COMMON "As Received"												
Cyanide, Total		5.10	1.67	5.00	ug/L	1.00	1	AXH3	02/20/18	0943	1740056	1
9014_CN (FREE): COMMON "As Received"												
Free Cyanide	U	3.00	3.00	10.0	ug/L		1	AXH3	02/21/18	1212	1740078	2
9012_CN (AMENABLE): COMMON "See Parent Products"												
Cyanide amenable to chlorination	U	1.67	1.67	5.00	ug/L		1	AXH3	02/21/18	1157	1740069	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010C Distillation	SW846 9010C Prep	AXH3	02/20/18	0915	1740055
SW846 9012B	SW846 9012B Cyanide, Chlorinated Prep	AXH3	02/21/18	0750	1740067

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	9012_CYANIDE	
2	9014_CYANIDE	
3	9012_CYANIDE	

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
 DL: Detection Limit PF: Prep Factor
 MDA: Minimum Detectable Activity RL: Reporting Limit
 MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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 Address : MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF W18-002

Client Sample ID: B3H339 Project: CPRCOW18002
 Sample ID: 443840014 Client ID: CPRC001
 Matrix: WATER
 Collect Date: 14-FEB-18 10:29
 Receive Date: 15-FEB-18
 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Carbon Analysis												
9060_TOC: COMMON "As Received"												
Total Organic Carbon #1	U	330	330	1000	ug/L		1	TSM	02/24/18	0235	1740028	1
Total Organic Carbon #2	U	330	330	1000	ug/L		1					
Total Organic Carbon #3	U	330	330	1000	ug/L		1					
Total Organic Carbon #4	U	330	330	1000	ug/L		1					
Total Organic Carbon Average	U	330	330	1000	ug/L		1					

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9060A		

Notes:

Column headers are defined as follows:

- DF: Dilution Factor
- DL: Detection Limit
- MDA: Minimum Detectable Activity
- MDC: Minimum Detectable Concentration
- Lc/LC: Critical Level
- PF: Prep Factor
- RL: Reporting Limit
- SQL: Sample Quantitation Limit

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 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF W18-002

Client Sample ID: B3H343 Project: CPRCOW18002
 Sample ID: 443840016 Client ID: CPRC001
 Matrix: WATER
 Collect Date: 13-FEB-18 13:07
 Receive Date: 15-FEB-18
 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Flow Injection Analysis												
9012_CYANIDE (TOTAL): COMMON "As Received"												
Cyanide, Total		99.8	1.67	5.00	ug/L	1.00	1	AXH3	02/20/18	0904	1740054	1
9014_CN (FREE): COMMON "As Received"												
Free Cyanide	B	3.96	3.00	10.0	ug/L		1	AXH3	02/21/18	1212	1740078	2
9012_CN (AMENABLE): COMMON "See Parent Products"												
Cyanide amenable to chlorination		6.70	1.67	5.00	ug/L		1	AXH3	02/21/18	1157	1740066	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010C Distillation	SW846 9010C Prep	AXH3	02/20/18	0810	1740053
SW846 9012B	SW846 9012B Cyanide, Chlorinated Prep	AXH3	02/21/18	0750	1740064

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	9012_CYANIDE	
2	9014_CYANIDE	
3	9012_CYANIDE	

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
 DL: Detection Limit PF: Prep Factor
 MDA: Minimum Detectable Activity RL: Reporting Limit
 MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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 Address : MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF W18-002

Client Sample ID: B3H3C7 Project: CPRCOW18002
 Sample ID: 443840017 Client ID: CPRC001
 Matrix: WATER
 Collect Date: 13-FEB-18 13:07
 Receive Date: 15-FEB-18
 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Flow Injection Analysis												
9012_CYANIDE (TOTAL): COMMON "As Received"												
Cyanide, Total		79.1	1.67	5.00	ug/L	1.00	1	AXH3	02/20/18	0912	1740054	1
9014_CN (FREE): COMMON "As Received"												
Free Cyanide	B	6.91	3.00	10.0	ug/L		1	AXH3	02/21/18	1212	1740078	2
9012_CN (AMENABLE): COMMON "See Parent Products"												
Cyanide amenable to chlorination		10.4	1.67	5.00	ug/L		1	AXH3	02/21/18	1157	1740066	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010C Distillation	SW846 9010C Prep	AXH3	02/20/18	0810	1740053
SW846 9012B	SW846 9012B Cyanide, Chlorinated Prep	AXH3	02/21/18	0750	1740064

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	9012_CYANIDE	
2	9014_CYANIDE	
3	9012_CYANIDE	

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
 DL: Detection Limit PF: Prep Factor
 MDA: Minimum Detectable Activity RL: Reporting Limit
 MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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Company : CH2MHill Plateau Remediation Company
 Address : MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF W18-002

Client Sample ID: B3H3F2 Project: CPRCOW18002
 Sample ID: 443840018 Client ID: CPRC001
 Matrix: WATER
 Collect Date: 14-FEB-18 12:04
 Receive Date: 15-FEB-18
 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method	
Carbon Analysis													
9060_TOC: COMMON "As Received"													
Total Organic Carbon #1	B	435	330	1000	ug/L		1	TSM	02/24/18	0314	1740028	1	
Total Organic Carbon #2	B	473	330	1000	ug/L		1						
Total Organic Carbon #3	B	489	330	1000	ug/L		1						
Total Organic Carbon #4	B	478	330	1000	ug/L		1						
Total Organic Carbon Average	B	469	330	1000	ug/L		1						
Flow Injection Analysis													
9012_CYANIDE (TOTAL): COMMON "As Received"													
Cyanide, Total	D	282	8.35	25.0	ug/L	1.00	5	AXH3	02/20/18	1003	1740056	2	
9014_CN (FREE): COMMON "As Received"													
Free Cyanide	U	3.00	3.00	10.0	ug/L			1	AXH3	02/21/18	1212	1740078	3
9012_CN (AMENABLE): COMMON "See Parent Products"													
Cyanide amenable to chlorination		35.0	8.35	25.0	ug/L			1	AXH3	02/21/18	1157	1740069	4
Titration and Ion Analysis													
2320_ALKALINITY: GW 01 "As Received"													
Alkalinity, Total as CaCO3		111000	1450	4000	ug/L				RXB5	02/23/18	1523	1740628	5
Bicarbonate alkalinity (CaCO3)		111000	1450	4000	ug/L								
Carbonate alkalinity (CaCO3)	U	1450	1450	4000	ug/L								
Hydroxide alkalinity as CaCO3	U	1450	1450	4000	ug/L								

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010C Distillation	SW846 9010C Prep	AXH3	02/20/18	0915	1740055
SW846 9012B	SW846 9012B Cyanide, Chlorinated Prep	AXH3	02/21/18	0750	1740067

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9060A	
2	9012_CYANIDE	
3	9014_CYANIDE	
4	9012_CYANIDE	
5	2320_ALKALINITY	

Notes:

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Certificate of Analysis

Report Date: March 1, 2018

Company : CH2MHill Plateau Remediation Company
 Address : MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF W18-002

Client Sample ID: B3H3F2	Project: CPRCOW18002
Sample ID: 443840018	Client ID: CPRC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: March 1, 2018

Company : CH2MHill Plateau Remediation Company
 Address : MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF W18-002

Client Sample ID: B3H3F4 Project: CPRCOW18002
 Sample ID: 443840019 Client ID: CPRC001
 Matrix: WATER
 Collect Date: 14-FEB-18 12:04
 Receive Date: 15-FEB-18
 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Flow Injection Analysis												
9012_CYANIDE (TOTAL): COMMON "As Received"												
Cyanide, Total	D	276	8.35	25.0	ug/L	1.00	5	AXH3	02/20/18	1008	1740056	1
9014_CN (FREE): COMMON "As Received"												
Free Cyanide	B	4.80	3.00	10.0	ug/L		1	AXH3	02/21/18	1212	1740078	2
9012_CN (AMENABLE): COMMON "See Parent Products"												
Cyanide amenable to chlorination		43.0	8.35	25.0	ug/L		1	AXH3	02/21/18	1157	1740069	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010C Distillation	SW846 9010C Prep	AXH3	02/20/18	0915	1740055
SW846 9012B	SW846 9012B Cyanide, Chlorinated Prep	AXH3	02/21/18	0750	1740067

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	9012_CYANIDE	
2	9014_CYANIDE	
3	9012_CYANIDE	

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
 DL: Detection Limit PF: Prep Factor
 MDA: Minimum Detectable Activity RL: Reporting Limit
 MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: March 1, 2018

Company : CH2MHill Plateau Remediation Company
 Address : MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF W18-002

Client Sample ID: B3H362 Project: CPRCOW18002
 Sample ID: 443840020 Client ID: CPRC001
 Matrix: WATER
 Collect Date: 13-FEB-18 12:15
 Receive Date: 15-FEB-18
 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method	
Carbon Analysis													
9060_TOC: COMMON "As Received"													
Total Organic Carbon #1	B	790	330	1000	ug/L		1	TSM	02/24/18	0353	1740028	1	
Total Organic Carbon #2	B	817	330	1000	ug/L		1						
Total Organic Carbon #3	B	827	330	1000	ug/L		1						
Total Organic Carbon #4	B	832	330	1000	ug/L		1						
Total Organic Carbon Average	B	817	330	1000	ug/L		1						
Flow Injection Analysis													
9012_CYANIDE (TOTAL): COMMON "As Received"													
Cyanide, Total	D	620	8.35	25.0	ug/L	1.00	5	AXH3	02/20/18	0919	1740054	2	
9014_CN (FREE): COMMON "As Received"													
Free Cyanide	B	4.38	3.00	10.0	ug/L			1	AXH3	02/21/18	1212	1740078	3
9012_CN (AMENABLE): COMMON "See Parent Products"													
Cyanide amenable to chlorination		65.0	8.35	25.0	ug/L			1	AXH3	02/21/18	1157	1740069	4
Titration and Ion Analysis													
2320_ALKALINITY: GW 01 "As Received"													
Alkalinity, Total as CaCO3		101000	1450	4000	ug/L				RXB5	02/23/18	1525	1740628	5
Bicarbonate alkalinity (CaCO3)		101000	1450	4000	ug/L								
Carbonate alkalinity (CaCO3)	U	1450	1450	4000	ug/L								
Hydroxide alkalinity as CaCO3	U	1450	1450	4000	ug/L								

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010C Distillation	SW846 9010C Prep	AXH3	02/20/18	0810	1740053
SW846 9012B	SW846 9012B Cyanide, Chlorinated Prep	AXH3	02/21/18	0750	1740067

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9060A	
2	9012_CYANIDE	
3	9014_CYANIDE	
4	9012_CYANIDE	
5	2320_ALKALINITY	

Notes:

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Report Date: March 1, 2018

Company : CH2MHill Plateau Remediation Company
 Address : MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF W18-002

Client Sample ID: B3H362	Project: CPRCOW18002
Sample ID: 443840020	Client ID: CPRC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Report Date: March 1, 2018

Company : CH2MHill Plateau Remediation Company
 Address : MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF W18-002

Client Sample ID: B3H365 Project: CPRCOW18002
 Sample ID: 443840021 Client ID: CPRC001
 Matrix: WATER
 Collect Date: 13-FEB-18 12:15
 Receive Date: 15-FEB-18
 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Flow Injection Analysis												
9012_CYANIDE (TOTAL): COMMON "As Received"												
Cyanide, Total	D	665	8.35	25.0	ug/L	1.00	5	AXH3	02/20/18	0924	1740054	1
9014_CN (FREE): COMMON "As Received"												
Free Cyanide	B	4.80	3.00	10.0	ug/L		1	AXH3	02/21/18	1212	1740078	2
9012_CN (AMENABLE): COMMON "See Parent Products"												
Cyanide amenable to chlorination		85.0	8.35	25.0	ug/L		1	AXH3	02/21/18	1157	1740069	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010C Distillation	SW846 9010C Prep	AXH3	02/20/18	0810	1740053
SW846 9012B	SW846 9012B Cyanide, Chlorinated Prep	AXH3	02/21/18	0750	1740067

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	9012_CYANIDE	
2	9014_CYANIDE	
3	9012_CYANIDE	

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
 DL: Detection Limit PF: Prep Factor
 MDA: Minimum Detectable Activity RL: Reporting Limit
 MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: March 1, 2018

Company : CH2MHill Plateau Remediation Company
 Address : MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF W18-002

Client Sample ID: B3H363 Project: CPRCOW18002
 Sample ID: 443840022 Client ID: CPRC001
 Matrix: WATER
 Collect Date: 13-FEB-18 12:15
 Receive Date: 15-FEB-18
 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Carbon Analysis												
9060_TOC: COMMON "As Received"												
Total Organic Carbon #1	B	759	330	1000	ug/L		1	TSM	02/24/18	0433	1740028	1
Total Organic Carbon #2	B	795	330	1000	ug/L		1					
Total Organic Carbon #3	B	797	330	1000	ug/L		1					
Total Organic Carbon #4	B	808	330	1000	ug/L		1					
Total Organic Carbon Average	B	790	330	1000	ug/L		1					
Flow Injection Analysis												
9012_CYANIDE (TOTAL): COMMON "As Received"												
Cyanide, Total	U	1.67	1.67	5.00	ug/L	1.00	1	AXH3	02/20/18	0918	1740054	2
9014_CN (FREE): COMMON "As Received"												
Free Cyanide	U	3.00	3.00	10.0	ug/L		1	AXH3	02/20/18	1147	1740079	3
9012_CN (AMENABLE): COMMON "See Parent Products"												
Cyanide amenable to chlorination	U	8.35	8.35	25.0	ug/L		1	AXH3	02/21/18	1157	1740069	4
Titration and Ion Analysis												
2320_ALKALINITY: GW 01 "As Received"												
Alkalinity, Total as CaCO3		100000	1450	4000	ug/L			RXB5	02/23/18	1528	1740628	5
Bicarbonate alkalinity (CaCO3)		100000	1450	4000	ug/L							
Carbonate alkalinity (CaCO3)	U	1450	1450	4000	ug/L							
Hydroxide alkalinity as CaCO3	U	1450	1450	4000	ug/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010C Distillation	SW846 9010C Prep	AXH3	02/20/18	0810	1740053
SW846 9012B	SW846 9012B Cyanide, Chlorinated Prep	AXH3	02/21/18	0750	1740067

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9060A	
2	9012_CYANIDE	
3	9014_CYANIDE	
4	9012_CYANIDE	
5	2320_ALKALINITY	

Notes:

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Certificate of Analysis

Report Date: March 1, 2018

Company : CH2MHill Plateau Remediation Company
 Address : MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF W18-002

Client Sample ID: B3H363	Project: CPRCOW18002
Sample ID: 443840022	Client ID: CPRC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: March 1, 2018

Company : CH2MHill Plateau Remediation Company
 Address : MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF W18-002

Client Sample ID: B3H366 Project: CPRCOW18002
 Sample ID: 443840023 Client ID: CPRC001
 Matrix: WATER
 Collect Date: 13-FEB-18 12:15
 Receive Date: 15-FEB-18
 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Flow Injection Analysis												
9012_CYANIDE (TOTAL): COMMON "As Received"												
Cyanide, Total	D	665	8.35	25.0	ug/L	1.00	5	AXH3	02/20/18	0925	1740054	1
9014_CN (FREE): COMMON "As Received"												
Free Cyanide	U	3.00	3.00	10.0	ug/L		1	AXH3	02/21/18	1212	1740078	2
9012_CN (AMENABLE): COMMON "See Parent Products"												
Cyanide amenable to chlorination		90.0	8.35	25.0	ug/L		1	AXH3	02/21/18	1157	1740069	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010C Distillation	SW846 9010C Prep	AXH3	02/20/18	0810	1740053
SW846 9012B	SW846 9012B Cyanide, Chlorinated Prep	AXH3	02/21/18	0750	1740067

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	9012_CYANIDE	
2	9014_CYANIDE	
3	9012_CYANIDE	

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
 DL: Detection Limit PF: Prep Factor
 MDA: Minimum Detectable Activity RL: Reporting Limit
 MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: March 1, 2018

Company : CH2MHill Plateau Remediation Company
 Address : MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF W18-002

Client Sample ID:	B3H3B3	Project:	CPRCOW18002
Sample ID:	443840024	Client ID:	CPRC001
Matrix:	WATER		
Collect Date:	13-FEB-18 14:03		
Receive Date:	15-FEB-18		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
2320_ALKALINITY: COMMON (Alkalinity only) "As Received"												
Alkalinity, Total as CaCO3		114000	1450	4000	ug/L			RXB5	02/23/18	1530	1740628	1

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	2320_ALKALINITY		

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

Quality Control Summary

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: March 1, 2018

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CH2M Hill Plateau Remediation Company

MSIN R3-50 CHPRC

PO Box 1600

Richland, Washington

Contact: Mr. Scot Fitzgerald

Workorder: 443840

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Carbon Analysis											
Batch	1740028										
QC1203973944	443758012	DUP									
Total Organic Carbon Average		U	330	U	330	ug/L	N/A		TSM	02/24/18	00:37
QC1203973943	LCS										
Total Organic Carbon Average	10000				10600	ug/L	106	(80%-120%)		02/23/18	23:48
QC1203973942	MB										
Total Organic Carbon Average			U		330	ug/L				02/23/18	23:39
QC1203973945	443758012	PS									
Total Organic Carbon Average	10.0	U	0.293		11.6	mg/L	113	(75%-125%)		02/24/18	01:16
Flow Injection Analysis											
Batch	1740054										
QC1203974016	443785005	DUP									
Cyanide, Total			101		102	ug/L	0.985	(0%-20%)	AXH3	02/20/18	08:44
QC1203974017	443840016	DUP									
Cyanide, Total			99.8		103	ug/L	3.16	(0%-20%)		02/20/18	09:10
QC1203974015	LCS										
Cyanide, Total	50.0				50.1	ug/L	100	(80%-120%)		02/20/18	08:42
QC1203974014	MB										
Cyanide, Total			U		1.67	ug/L				02/20/18	08:40
QC1203974018	443785005	MS									
Cyanide, Total	100		101		212	ug/L	111	(75%-125%)		02/20/18	08:45

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QC Summary

Workorder: 443840

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Flow Injection Analysis											
Batch	1740054										
QC1203974019	443840016	MS									
Cyanide, Total	100	99.8		211	ug/L		111	(75%-125%)	AXH3	02/20/18	09:11
<hr/>											
Batch	1740056										
QC1203974022	443758011	DUP									
Cyanide, Total		7.83		8.37	ug/L	6.67 ^		(+/-5.00)	AXH3	02/20/18	09:29
QC1203974023	443871007	DUP									
Cyanide, Total	U	1.67	B	2.05	ug/L	39.8 ^		(+/-5.00)		02/20/18	09:47
QC1203974021	LCS										
Cyanide, Total	50.0			50.3	ug/L		101	(80%-120%)		02/20/18	09:27
QC1203974020	MB										
Cyanide, Total			U	1.67	ug/L					02/20/18	09:26
QC1203974024	443758011	MS									
Cyanide, Total	100	7.83		112	ug/L		104	(75%-125%)		02/20/18	09:31
QC1203974025	443871007	MS									
Cyanide, Total	100	U	1.67	113	ug/L		112	(75%-125%)		02/20/18	09:48
<hr/>											
Batch	1740065										
QC1203974046	443785005	DUP									
Cyanide, Chlorinated		93.0		90.2	ug/L	3.06		(0%-20%)	AXH3	02/21/18	09:04
QC1203974047	443758011	DUP									
Cyanide, Chlorinated		5.63	B	4.99	ug/L	12.1 ^		(+/-5.00)		02/21/18	08:59
QC1203974045	LCS										
Cyanide, Chlorinated	50.0		U	1.67	ug/L		0	(-200%-200%)		02/21/18	08:57
QC1203974044	MB										
Cyanide, Chlorinated			U	1.67	ug/L					02/21/18	08:56

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QC Summary

Workorder: 443840

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Flow Injection Analysis											
Batch	1740068										
QC1203974050	443840020	DUP									
Cyanide, Chlorinated	D	555	D	585	ug/L	5.26		(0%-20%)	AXH3	02/21/18	09:44
QC1203974051	443871007	DUP									
Cyanide, Chlorinated	B	2.57	B	2.20	ug/L	15.5 ^		(+/-5.00)		02/21/18	09:49
QC1203974049	LCS										
Cyanide, Chlorinated	50.0		U	1.67	ug/L		0	(-200%-200%)		02/21/18	09:31
QC1203974048	MB										
Cyanide, Chlorinated			U	1.67	ug/L					02/21/18	09:30
Batch	1740078										
QC1203974065	443785005	DUP									
Free Cyanide	U	3.00	U	3.00	ug/L	N/A			AXH3	02/21/18	12:12
QC1203974066	443758011	DUP									
Free Cyanide	U	3.00	U	3.00	ug/L	N/A				02/21/18	12:12
QC1203974064	LCS										
Free Cyanide	100			99.7	ug/L		99.7	(80%-120%)		02/21/18	12:12
QC1203974063	MB										
Free Cyanide			U	3.00	ug/L					02/21/18	12:12
Ion Chromatography											
Batch	1739427										
QC1203972280	443834001	DUP									
Chloride	D	42300	D	42300	ug/L	0.00237		(0%-20%)	MAR1	02/15/18	21:20
Fluoride	B	300	B	304	ug/L	1.33 ^		(+/-500)		02/15/18	18:55
Nitrate-N		4150		4170	ug/L	0.505		(0%-20%)			

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QC Summary

Workorder: 443840

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	1739427										
Nitrite-N		421		411	ug/L	2.31 ^		(+/-250)	MAR1	02/15/18	18:55
Sulfate	D	96300	D	96500	ug/L	0.177		(0%-20%)		02/15/18	21:20
QC1203972279	LCS										
Chloride	5000			4820	ug/L		96.4	(80%-120%)		02/15/18	16:02
Fluoride	2500			2560	ug/L		102	(80%-120%)			
Nitrate-N	2500			2490	ug/L		99.4	(80%-120%)			
Nitrite-N	2500			2420	ug/L		96.6	(80%-120%)			
Sulfate	10000			9870	ug/L		98.7	(80%-120%)			
QC1203972278	MB										
Chloride			U	67.0	ug/L					02/15/18	10:14
Fluoride			U	33.0	ug/L						
Nitrate-N			U	33.0	ug/L						
Nitrite-N			U	33.0	ug/L						
Sulfate			U	133	ug/L						
QC1203972281	443834001 PS										
Chloride	5.00	D	4.23	D	9.28	mg/L		101	(75%-125%)	02/15/18	21:49
Fluoride	2.50	B	0.300		2.88	mg/L		103	(75%-125%)	02/15/18	19:24
Nitrate-N	2.50		4.15		6.86	mg/L		109	(75%-125%)		

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QC Summary

Workorder: 443840

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	1739427										
Nitrite-N	2.50	0.421		2.88	mg/L		98.4	(75%-125%)	MAR1	02/15/18	19:24
Sulfate	10.0	D 9.63	D	19.9	mg/L		102	(75%-125%)		02/15/18	21:49
Titration and Ion Analysis											
Batch	1740628										
QC1203975521	443644008	DUP									
Alkalinity, Total as CaCO3		174000		175000	ug/L	0.344		(0%-20%)	RXB5	02/23/18	13:41
Bicarbonate alkalinity (CaCO3)		174000		175000	ug/L	0.344		(0%-20%)			
Carbonate alkalinity (CaCO3)		U 1450	U	1450	ug/L	N/A					
Hydroxide alkalinity as CaCO3		U 1450	U	1450	ug/L	N/A					
QC1203975522	443936013	DUP									
Alkalinity, Total as CaCO3		118000		118000	ug/L	0		(0%-20%)		02/23/18	16:46
Bicarbonate alkalinity (CaCO3)		118000		118000	ug/L	0		(0%-20%)			
Carbonate alkalinity (CaCO3)		U 1450	U	1450	ug/L	N/A					
Hydroxide alkalinity as CaCO3		U 1450	U	1450	ug/L	N/A					
QC1203975520	LCS										
Alkalinity, Total as CaCO3	100000			108000	ug/L		108	(80%-120%)		02/23/18	13:37

Notes:

The Qualifiers in this report are defined as follows:

- < Sample is below the EPA guidance level for Reactive Releasable Cyanide and/or Reactive Releasable Sulfide
- > Result greater than quantifiable range or greater than upper limit of the analysis range
- B The analyte was detected at a value less than the contract required detection limit (RDL), but greater than or equal to the IDL/MDL (as appropriate).
- C Target analyte was detected in the sample and the associated blank. The associated blank concentration is >= EQL or is > 5% of the measured

