



June 26, 2017

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

Re: CHPRC SAF W17-006
Work Order: 425231
SDG: GEL425231

Dear Mr. Fitzgerald:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on June 10, 2017. 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,


Brielle Luthman for
Heather Shaffer
Project Manager

Purchase Order: 300071-7H
Chain of Custody: W17-006-074, W17-006-080, W17-006-135, W17-006-136, W17-006-139 and W17-006-144

Enclosures



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Case Narrative

June 29, 2017

General Narrative
for
CH2MHill Plateau Remediation Company
CHPRC SAF W17-006
SDG: GEL425231

June 26, 2017

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 June 10, 2017, 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>
425231001	B39P36
425231002	B39P41
425231003	B39P51
425231004	B39P68
425231005	B39P35
425231006	B39P67

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.

June 29, 2017

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.

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.


Brielle Luthman for
Heather Shaffer
Project Manager

June 29, 2017

**General Chemistry
Technical Case Narrative
CH2MHill Plateau Remediation Company (CPRC)
SDG #: GEL425231
Work Order #: 425231**

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 sample 425231003 (B39P51) was diluted because target analyte concentrations exceeded the calibration range.

Analyte	425231
	003
Chloride	10X
Nitrate	10X
Sulfate	10X

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

June 29, 2017

CH2M Hill Plateau Remediation Company		C.O.C. # W17-006-135	
425231		Page 1 of 1	
Collector: Juan Aguilar /CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No. 509-376-4650	
SAF No. W17-006	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300071	
Project Title: RCRA, JUNE 2017	Logbook No. HNF-N-506 88/77	Ice Chest No. 6205453	
Shipped To (Lab): GEL Laboratories, LLC	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No. 1793 48351029	
Protocol: RCRA	Priority: 30 Days	Offsite Property No. 8023	
POSSIBLE SAMPLE HAZARDS/REMARKS		Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
*** 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 438.1			
Sample No. B39F36	Filter: N	Time: 6-9-17 1039	No/Type Container: 1x125-mL G/P
Sample Analysis: 9056_ANIONS_IC: COMMON		Holding Time: 48 Hours	Preservative: Cool <=6C

SPECIAL INSTRUCTIONS: N/A		Hold Time	
Received By: Janelle Zunker /CHPRC		Date/Time: JUN 09 2017 1321	
Received By: FEDEX		Date/Time: JUN 09 2017 1400	
Received By: 148 B - STACY BOONE		Date/Time: 6/10/17 8:45	
Matrix *		Date/Time	
S = Soil	DS = Drum Solids		
SE = Sediment	DL = Drum Liquids		
SO = Solid	T = Tissue		
SL = Sludge	WI = Wipe		
W = Water	L = Liquid		
O = Oil	V = Vegetation		
A = Air	X = Other		
Disposal Method (e.g., Return to customer, per lab procedure, used in process)		Disposed By	
Date/Time		Date/Time	

June 29, 2017

CH2M Hill Plateau Remediation Company		C.O.C.# W17-006-136	
425231		Page 1 of 1	
Collector	Juan Aguilar /CHPRC	Contact/Requester	Karen Waters-Husted
SAF No.	W17-006	Telephone No.	509-376-4650
Project Title	RCRA, JUNE 2017	Sampling Origin	Hanford Site
Shipped To (Lab)	GEL Laboratories, LLC	Logbook No.	HNF-N-506 08/77
Protocol	RCRA	Method of Shipment	Commercial Carrier
POSSIBLE SAMPLE HAZARDS/REMARKS		Priority:	30 Days
*** 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	Hold Time
		N/A	
Sample No.	Filter	Date	Time
B39P41	N	6.9-17	08417
No/Type Container	1x125-mL G/P		
Sample Analysis	9056_ANIONS_IC: COMMON		
Holding Time	48 Hours		
Preservative	Cool <=6C		
Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Offsite Property No. 8023	
Purchase Order/Charge Code 300071		Ice Chest No. 124947	
Bill of Lading/Air Bill No. 7793 4835 0833		GWS-547 545	

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	Matrix *
Juan Aguilar /CHPRC			JUN 09 2017 0950	Janelle Zunker /CHPRC			JUN 09 2017 0950	S = Soil DS = Drum Solids
Relinquished By			JUN 09 2017 1100	Received By	FEDEX			DL = Drum Liquids
Janelle Zunker /CHPRC			JUN 09 2017 1100	Received By	AT&T STACY BOONS			T = Tissue
Relinquished By				Received By				WI = Wipe
Janelle Zunker /CHPRC				Received By				L = Liquid
Relinquished By				Received By				O = Oil
Janelle Zunker /CHPRC				Received By				V = Vegetation
Relinquished By				Received By				A = Air
Janelle Zunker /CHPRC				Received By				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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June 29, 2017

CH2M Hill Plateau Remediation Company		C.O.C. # W17-006-139	
425231		Page 1 of 1	
Collector	Juan Aguilar /CHPRC	Contact/Requester	Karen Waters-Husted
SAF No.	W17-006	Telephone No.	509-376-4650
Project Title	RCRA, JUNE 2017	Sampling Origin	Hanford Site
Shipped To (Lab)	GEL Laboratories, LLC	Logbook No.	HNF-N-506 88/77
Protocol	RCRA	Method of Shipment	Commercial Carrier
POSSIBLE SAMPLE HAZARDS/REMARKS		Priority:	30 Days
*** 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	PRIORITY
Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Hold Time	
Sample No.	B39P51	No/Type Container	1x125-mL G/P
Filter	N	Time	6-9-17 1013
Sample Analysis	9056_ANIONS_IC: COMMON	Holding Time	48 Hours
Preservative		Cool <=6C	

Relinquished By	Juan Aguilar /CHPRC	Print	Juan Aguilar	Sign	Juan Aguilar	Date/Time	JUN 09 2017 1321
Relinquished By	Janelle Zunker /CHPRC	Print	Janelle Zunker /CHPRC	Sign	Janelle Zunker	Date/Time	JUN 09 2017 1321
Relinquished By	Janelle Zunker /CHPRC	Print	Janelle Zunker /CHPRC	Sign	Janelle Zunker	Date/Time	JUN 09 2017 1420
Relinquished By		Print		Sign		Date/Time	
Received By	Janelle Zunker /CHPRC	Print	Janelle Zunker /CHPRC	Sign	Janelle Zunker	Date/Time	JUN 09 2017 1321
Received By		Print		Sign		Date/Time	
Received By	Stacy Boone	Print	Stacy Boone	Sign	Stacy Boone	Date/Time	6/10/17 8:45
Received By		Print		Sign		Date/Time	

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FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time
PRINTED ON 5/8/2017	FRS ID = FSR32064		

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W17-006-144

Page 1 of 1

4252281

Collector: Juan Aguilar /CHPRC
 Contact/Requester: Karen Waters-Husted
 Telephone No. 509-376-4650
 SAF No. W17-006
 Sampling Origin: Hanford Site
 Purchase Order/Charge Code: 300071
 Project Title: RCRA, JUNE 2017
 Logbook No. HNF-N-506 88 / 77
 Ice Chest No. CWS-545
 Shipped To (Lab): GEL Laboratories, LLC
 Method of Shipment: Commercial Carrier
 Bill of Lading/Air Bill No. 779348350833
 Protocol: RCRA
 Priority: 30 Days
 Offsite Property No. 8023

POSSIBLE SAMPLE HAZARDS/REMARKS
 *** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1
 SPECIAL INSTRUCTIONS: Hold Time
 Low Volume Wells. Do not use for QC.
 Total Activity Exemption: Yes No

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B39P68	N	W	6-9-17	0823	1x60-mL G/P	9056_ANIONS_IC: COMMON	48 Hours	Cool <=6C

June 29, 2017

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	Matrix *
Juan Aguilar /CHPRC			JUN 09 2017 0950	Janelle Zunker /CHPRC			JUN 09 2017 0950	S = Soil, SE = Sediment, SO = Solid, SL = Sludge, W = Water, O = Oil, A = Air, DS = Drum Solids, DL = Drum Liquids, T = Tissue, WI = Wipe, L = Liquid, V = Vegetation, X = Other
Janelle Zunker /CHPRC			JUN 09 2017 1400	Janelle Zunker /CHPRC	FEDEX			
Janelle Zunker /CHPRC			JUN 09 2017 1400	KEA - STACY BOONE	FEDEX		6/10/17 8:45	
Janelle Zunker /CHPRC			JUN 09 2017 1400	Janelle Zunker /CHPRC				

FINAL SAMPLE DISPOSITION: Disposed By: Stacy Boone, Date/Time: 6/10/17 8:45

June 29, 2017

CH2M Hill Plateau Remediation Company		C.O.C. # W17-006-074	
Collector: Juan Aguilar /CHPRC		Page 1 of 1	
Contact/Requester: Karen Waters-Husted		Telephone No. 509-376-4650	
Sampling Origin: Hanford Site		Purchase Order/Charge Code: 300071	
Logbook No. HNF-N-506 88/77		Ice Chest No. 625-483	
Method of Shipment: Commercial Carrier		Bill of Lading/Air Bill No. 779348351027	
Priority: 30 Days		Offsite Property No. 8023	
SPECIAL INSTRUCTIONS: N/A		Hold Time	
POSSIBLE SAMPLE HAZARDS/REMARKS: *** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1		Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Sample No. B39P35	Filter: N	Date: 6-9-17	Time: 1039
No/Type Container: 1x250-mL G/P	Sample Analysis: 2320_AKALINITY: COMMON		Preservative: Cool <=6C
Holding Time: 14 Days		Preservative: Cool <=6C	

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		425231	
Relinquished By: Juan Aguilar /CHPRC	Print: <i>[Signature]</i>	Received By: Janelle Zunker /CHPRC	Sign: <i>[Signature]</i>
Date/Time: JUN 09 2017 1321	Date/Time: JUN 09 2017 1321	Date/Time: JUN 09 2017 1321	Date/Time: JUN 09 2017 1321
Relinquished By: Janelle Zunker /CHPRC	Print: <i>[Signature]</i>	Received By: <i>[Signature]</i>	Sign: <i>[Signature]</i>
Date/Time: JUN 09 2017 1400	Date/Time: JUN 09 2017 1400	Date/Time: JUN 09 2017 1400	Date/Time: JUN 09 2017 1400
Relinquished By: <i>[Signature]</i>	Print: <i>[Signature]</i>	Received By: <i>[Signature]</i>	Sign: <i>[Signature]</i>
Date/Time: FED EX	Date/Time: FED EX	Date/Time: 6/10/17 8:45	Date/Time: 6/10/17 8:45
FINAL SAMPLE DISPOSITION		Disposal Method (e.g., Return to customer, per lab procedure, used in process)	
PRINTED ON 4/26/2017		FSR ID = FSR44560	

June 29, 2017

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				C.O.C.# W17-006-080
		425231				Page 1 of 1
Collector	Juan Aguilar CHPRC	Contact/Requester	Karen Waters-Husted		Telephone No.	509-376-4650
SAF No.	W17-006	Sampling Origin	Hanford Site		Purchase Order/Charge Code	300071
Project Title	RCRA, JUNE 2017	Logbook No.	HNF-N-506 88 / 77		Ice Chest No.	6ws-545
Shipped To (Lab)	GEL Laboratories, LLC	Method of Shipment	Commercial Carrier		Bill of Lading/Air Bill No.	7793 4835 0833
Protocol	RCRA	Priority:	30 Days	PRIORITY	Offsite Property No.	8023
POSSIBLE SAMPLE HAZARDS/REMARKS		SPECIAL INSTRUCTIONS		Hold Time		Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
*** 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		Low Volume Wells. Do not use for QC.				
Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis
B39P67	N	W	6-9-17	0823	1x125-mL G/P	2320_ALKALINITY: COMMON
						Holding Time
						14 Days
						Preservative
						Cool <=6C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	Matrix *
Juan Aguilar CHPRC			JUN 09 2017 0950	Janelle Zimker CHPRC			JUN 09 2017 0950	S = Soil DS = Drum Solids SE = Sediment DL = Drum Liquids SO = Solid T = Tissue SL = Sludge WI = Wipe W = Water L = Liquid O = Oil V = Vegetation A = Air X = Other
Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	
Janelle Zimker CHPRC			JUN 09 2017 1400					
Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	
			FED EX					
Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	

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

Disposed By

Date/Time

FRS ID = FSR45120

PRINTED ON 5/11/2017

A-6004-842 (REV 2)

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 associated QC sample blank has a result $\geq 2X$ the MDA and, after corrections, result is \geq MDA for this sample	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 26 June 2017

State	Certification
Alaska	UST-0110
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	LA170010
Maryland	270
Massachusetts	M-SC012
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122017-1
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
S.Carolina Radchem	10120002
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-17-12
Utah NELAP	SC000122017-22
Vermont	VT87156
Virginia NELAP	460202
Washington	C780
West Virginia	997404

June 29, 2017

General Chem Analysis

Case Narrative

General Chemistry
Technical Case Narrative
CH2MHill Plateau Remediation Company (CPRC)
SDG #: GEL425231
Work Order #: 425231

Product: Ion Chromatography

Analytical Method: 9056_ANIONS_IC

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

Analytical Batch: 1673045

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
425231001	B39P36
425231002	B39P41
425231003	B39P51
425231004	B39P68
1203808986	Method Blank (MB)
1203808987	Laboratory Control Sample (LCS)
1203808988	425231004(B39P68) Sample Duplicate (DUP)
1203808989	425231004(B39P68) 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 sample 425231003 (B39P51) was 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	425231
	003
Chloride	10X
Nitrate	10X
Sulfate	10X

Product: Alkalinity

Analytical Method: 2320_ALKALINITY

Analytical Procedure: GL-GC-E-033 REV# 13

Analytical Batch: 1675815

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
425231005	B39P35
425231006	B39P67
1203815591	Laboratory Control Sample (LCS)
1203815592	425100005(NonSDG) 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.

June 29, 2017

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: GEL425231 GEL Work Order: 425231

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.

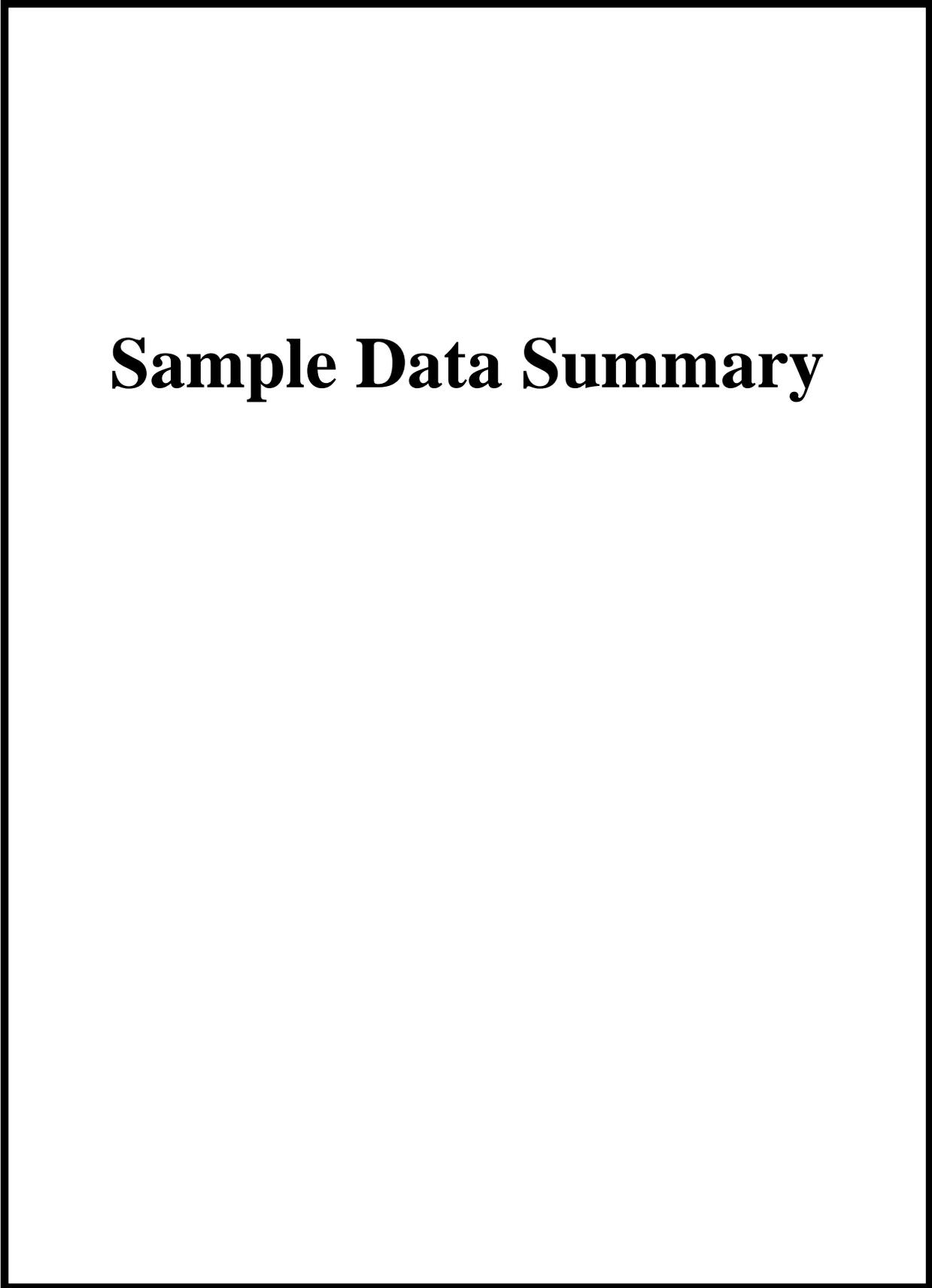
The following data validator verified the information presented in this data report:

Signature: 

Name: Kristen Mizzell

Date: 26 JUN 2017

Title: Analyst I



Sample Data Summary

Certificate of Analysis

Report Date: June 26, 2017

Company : CH2MHill Plateau Remediation Company
 Address : MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF W17-006

Client Sample ID: B39P36	Project: CPRCOW17006
Sample ID: 425231001	Client ID: CPRC001
Matrix: WATER	
Collect Date: 09-JUN-17 10:39	
Receive Date: 10-JUN-17	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
9056_ANIONS_IC: COMMON "As Received"												
Chloride		7100	67.0	200	ug/L		1	MAR1	06/10/17	1323	1673045	1
Fluoride		536	33.0	500	ug/L		1					
Nitrate-N		4750	33.0	250	ug/L		1					
Nitrite-N	U	33.0	33.0	250	ug/L		1					
Sulfate		17800	133	500	ug/L		1					

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	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 |

Certificate of Analysis

Report Date: June 26, 2017

Company : CH2MHill Plateau Remediation Company
 Address : MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF W17-006

Client Sample ID: B39P41	Project: CPRCOW17006
Sample ID: 425231002	Client ID: CPRC001
Matrix: WATER	
Collect Date: 09-JUN-17 08:47	
Receive Date: 10-JUN-17	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
9056_ANIONS_IC: COMMON "As Received"												
Chloride		7160	67.0	200	ug/L		1	MAR1	06/10/17	1352	1673045	1
Fluoride	B	490	33.0	500	ug/L		1					
Nitrate-N		2000	33.0	250	ug/L		1					
Nitrite-N	U	33.0	33.0	250	ug/L		1					
Sulfate		16600	133	500	ug/L		1					

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	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

Certificate of Analysis

Report Date: June 26, 2017

Company : CH2MHill Plateau Remediation Company
 Address : MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF W17-006

Client Sample ID: B39P51	Project: CPRCOW17006
Sample ID: 425231003	Client ID: CPRC001
Matrix: WATER	
Collect Date: 09-JUN-17 10:13	
Receive Date: 10-JUN-17	
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	388	33.0	500	ug/L		1	MAR1	06/10/17	1421	1673045	1
Nitrite-N	U	33.0	33.0	250	ug/L		1					
Chloride	D	11900	670	2000	ug/L		10	MAR1	06/10/17	1548	1673045	2
Nitrate-N	D	11100	330	1000	ug/L		10					
Sulfate	D	33900	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 |

Certificate of Analysis

Report Date: June 26, 2017

Company : CH2MHill Plateau Remediation Company
 Address : MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF W17-006

Client Sample ID: B39P68	Project: CPRCOW17006
Sample ID: 425231004	Client ID: CPRC001
Matrix: WATER	
Collect Date: 09-JUN-17 08:23	
Receive Date: 10-JUN-17	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
9056_ANIONS_IC: COMMON "As Received"												
Chloride		9330	67.0	200	ug/L		1	MAR1	06/10/17	1255	1673045	1
Fluoride	B	463	33.0	500	ug/L		1					
Nitrate-N		2090	33.0	250	ug/L		1					
Nitrite-N	U	33.0	33.0	250	ug/L		1					
Sulfate		18500	133	500	ug/L		1					

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	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 |

Certificate of Analysis

Report Date: June 26, 2017

Company : CH2MHill Plateau Remediation Company
 Address : MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF W17-006

Client Sample ID: B39P35	Project: CPRCOW17006
Sample ID: 425231005	Client ID: CPRC001
Matrix: WATER	
Collect Date: 09-JUN-17 10:39	
Receive Date: 10-JUN-17	
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		112000	1450	4000	ug/L			RXB5	06/22/17	1817	1675815	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

Certificate of Analysis

Report Date: June 26, 2017

Company : CH2MHill Plateau Remediation Company
 Address : MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF W17-006

Client Sample ID: B39P67	Project: CPRCOW17006
Sample ID: 425231006	Client ID: CPRC001
Matrix: WATER	
Collect Date: 09-JUN-17 08:23	
Receive Date: 10-JUN-17	
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		102000	1450	4000	ug/L			RXB5	06/22/17	1820	1675815	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

June 29, 2017

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QC Summary

Report Date: June 26, 2017

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CH2MHill Plateau Remediation Company
 MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington

Contact: Mr. Scot Fitzgerald

Workorder: 425231

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	1673045										
QC1203808988	425231004	DUP									
Chloride		9330		9350	ug/L	0.165		(0%-20%)	MAR1	06/10/17	19:10
Fluoride	B	463	B	463	ug/L	0.0648	^	(+/-500)			
Nitrate-N		2090		2090	ug/L	0.125		(0%-20%)			
Nitrite-N	U	33.0	U	33.0	ug/L	N/A					
Sulfate		18500		18400	ug/L	0.306		(0%-20%)			
QC1203808987	LCS										
Chloride	5000			4870	ug/L		97.5	(80%-120%)		06/10/17	18:41
Fluoride	2500			2550	ug/L		102	(80%-120%)			
Nitrate-N	2500			2460	ug/L		98.2	(80%-120%)			
Nitrite-N	2500			2510	ug/L		100	(80%-120%)			
Sulfate	10000			10100	ug/L		101	(80%-120%)			
QC1203808986	MB										
Chloride			U	67.0	ug/L					06/10/17	18:12
Fluoride			U	33.0	ug/L						
Nitrate-N			U	33.0	ug/L						

June 29, 2017

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QC Summary

Workorder: 425231

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Table with columns: Parmname, NOM, Sample, Qual, QC, Units, RPD%, REC%, Range, Anlst, Date, Time. Rows include Ion Chromatography results for Nitrite-N, Sulfate, Chloride, Fluoride, Nitrate-N, and Sulfate.

Titration and Ion Analysis

Table with columns: Batch, QC, Sample, Qual, QC, Units, RPD%, REC%, Range, Anlst, Date, Time. Rows include Alkalinity, Total as CaCO3 results for two different samples.

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 concentration and/or decision level for associated samples.
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.
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier

June 29, 2017

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QC Summary

Workorder: 425231

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
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.